WOOD BUFFALO
ENVIRONMENTAL ASSOCIATION

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Wood Buffalo Environmental Association

MARCH 2025

MONTHLY REPORT

CONTINUOUS MONITORING

April 30, 2025

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

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April 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 March 2025
Wood Buffalo Environmental Association

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

The continuous ambient air quality monitoring network stations are:

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

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	

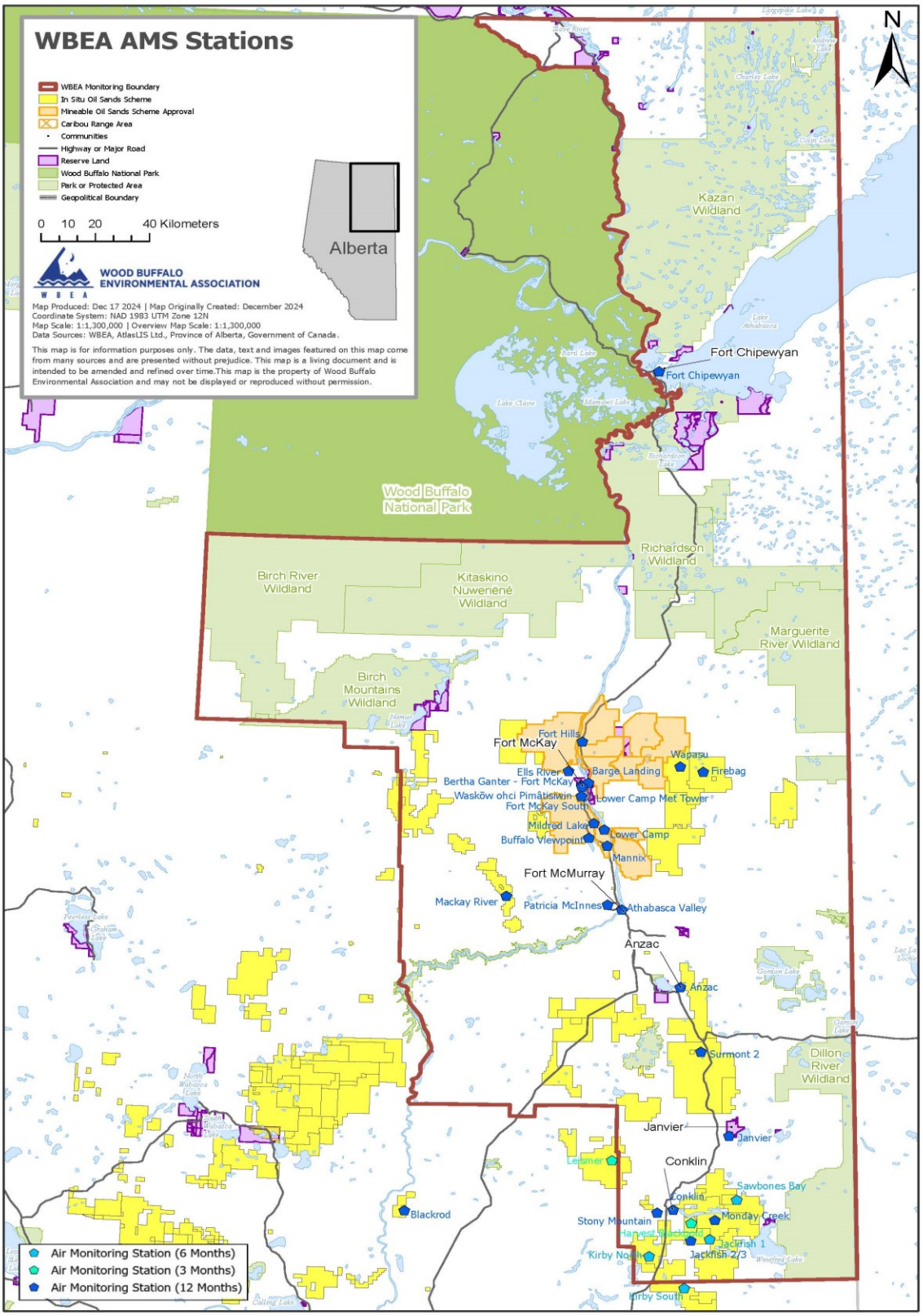


Figure 1. Map of WBEA Continuous Monitoring Network

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

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

There were no ambient concentrations in excess of the Alberta Ambient Air Quality Objectives or Guidelines (AAAQO/AAAQG) as indicated in the Air Monitoring Directive Section RC 15-F for CO, NH_3, NO_2, O_3, SO_2 and TRS.

There were two ground-level concentrations in excess of the 1-hour H_2S objective reported to AEPA; following data validation and processing, one exceedance was confirmed.

There were twenty-three ambient ground-level concentrations in excess of the 1-hour $PM_{2.5}$ guideline reported to AEPA; following data validation and processing, twenty-two exceedances were confirmed.

There were six ambient ground-level concentrations in excess of the 24-hour $PM_{2.5}$ objective reported to AEPA; following data validation and processing, four exceedance was confirmed.

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

Site	Parameter	Date / Time	Reference	Period	Reported	Final	Status*
Barge Landing	PM2.5	12Mar25, 20:00	438586	1-hr	99	99.0	exc
Barge Landing	PM2.5	12Mar25, 21:00	438586	1-hr	113	113.4	exc
Fort Hills	TRS	15Mar25, 13:00		30-min	5	5.3	exc
Ells River	TRS	15Mar25, 20:30		30-min	6	6.2	exc
Fort Hills	TRS	16Mar25, 11:00		30-min	21	21.1	exc
Fort Hills	TRS	16Mar25, 11:30		30-min	6	6.2	exc
Fort Hills	TRS	18Mar25, 10:00		30-min	9	8.9	exc
Fort Hills	TRS	18Mar25, 10:30		30-min	11	11.4	exc
Fort Hills	TRS	18Mar25, 11:00		30-min	7	6.8	exc
Fort Hills	TRS	18Mar25, 11:30		30-min	5	5.5	exc
Ft. McKay S	TRS	19Mar25, 11:00		30-min	5	5.1	exc
Fort Hills	TRS	19Mar25, 14:00		30-min	5	5.0	nae
Fort Hills	PM2.5	20Mar25, 24:00	438801	1-hr	115	114.7	exc
Fort Hills	PM2.5	21Mar25, 01:00	438802	1-hr	87	86.7	exc
Ells River	TRS	22Mar25, 04:30		30-min	11	11.4	exc
Ells River	TRS	22Mar25, 05:00		30-min	11	10.9	exc
Ells River	TRS	22Mar25, 05:30		30-min	14	14.5	exc
Ells River	TRS	22Mar25, 06:00		30-min	17	17.3	exc

Ells River	TRS	22Mar25, 06:30		30-min	15	14.8	exc
Ells River	TRS	22Mar25, 07:00		30-min	9	9.0	exc
Ells River	TRS	22Mar25, 07:30		30-min	7	6.9	exc
Ells River	TRS	22Mar25, 08:00		30-min	11	10.7	exc
Ells River	TRS	22Mar25, 08:30		30-min	8	8.4	exc
Ells River	TRS	22Mar25, 09:00		30-min	11	11.3	exc
Ells River	TRS	22Mar25, 09:30		30-min	16	15.7	exc
Ells River	TRS	22Mar25, 10:00		30-min	13	13.5	exc
Ells River	TRS	22Mar25, 10:30		30-min	13	13.5	exc
Ells River	TRS	22Mar25, 11:00		30-min	15	15.3	exc
Ells River	TRS	22Mar25, 11:30		30-min	11	11.2	exc
Barge Landing	PM2.5	22Mar25, 24:00		24-hr	0	0	nae
Barge Landing	PM2.5	23Mar25, 24:00		24-hr	0	0	nae
Ft. McKay S	TRS	24Mar25, 10:30		30-min	9	8.7	exc
Fort Hills	TRS	24Mar25, 10:30		30-min	5	5.4	exc
Ft. McKay S	TRS	24Mar25, 11:00		30-min	5	5.0	nae
Ft. McKay S	TRS	24Mar25, 14:30		30-min	11	10.6	exc
Ft. McKay S	TRS	24Mar25, 15:00		30-min	13	12.5	exc
Ft. McKay S	TRS	24Mar25, 15:30		30-min	16	16.1	exc
Ft. McKay S	TRS	24Mar25, 16:00		30-min	5	4.9	nae
Buffalo Viewpoint	H2S	24Mar25, 20:00	438895	1-hr	12	12.2	exc
Buffalo Viewpoint	H2S	24Mar25, 21:00	438895	1-hr	10	9.8	nae
Ft. McKay S	TRS	25Mar25, 11:30		30-min	5	5.4	exc
Fort Hills	PM2.5	28Mar25, 04:00	439040	1-hr	87	86.7	exc
Fort Hills	PM2.5	28Mar25, 05:00	439040	1-hr	131	130.8	exc
Fort Hills	PM2.5	28Mar25, 09:00	439072	1-hr	106	106.2	exc
Fort Hills	PM2.5	28Mar25, 10:00	439072	1-hr	111	110.9	exc
Fort Hills	PM2.5	28Mar25, 24:00	439072	1-hr	122	121.6	exc
Fort Hills	PM2.5	28Mar25, 24:00	439072	24-hr	58	57.5	exc
Fort Hills	PM2.5	29Mar25, 04:00	439089	1-hr	170	170.3	exc
Fort Hills	PM2.5	29Mar25, 05:00	439089	1-hr	162	162.1	exc
Fort Hills	PM2.5	29Mar25, 11:00	439089	1-hr	104	104.0	exc
Fort Hills	PM2.5	29Mar25, 12:00	439089	1-hr	91	91.4	exc
Fort Hills	PM2.5	29Mar25, 24:00	439089	24-hr	60	59.9	exc
Fort Hills	PM2.5	30Mar25, 04:00	439100	1-hr	140	140.4	exc
Fort Hills	PM2.5	30Mar25, 05:00	439100	1-hr	122	122.0	exc
Fort Hills	PM2.5	30Mar25, 06:00	439100	1-hr	91	91.1	exc
Fort Hills	PM2.5	30Mar25, 07:00	439100	1-hr	107	106.5	exc
Fort Hills	PM2.5	30Mar25, 08:00	439100	1-hr	173	172.8	exc

Fort Hills	PM2.5	30Mar25, 09:00	439100	1-hr	111	111.2	exc
Fort Hills	PM2.5	30Mar25, 10:00	439100	1-hr	88	88.0	exc
Fort Hills	PM2.5	30Mar25, 11:00	439100	1-hr	96	95.9	exc
Fort Hills	PM2.5	30Mar25, 12:00	439100	1-hr	125	125.2	exc
Fort Hills	PM2.5	30Mar25, 24:00	439100	24-hr	66	65.8	exc
Barge Landing	PM2.5	30Mar25, 24:00	439101	24-hr	33	32.7	exc
Barge Landing	PM2.5	30Mar25, 24:00		24-hr	0	0	nae

*status legend:

late exceedance, raw values were not found to be in exceedance in real time, and/or were not reported, but final values were found to be an exceedance after data processing.

exc exceedance, raw values reported in real time were confirmed to be in exceedance after data processing.

nae not an exceedance, raw values reported in real time were found not in exceedance after data processing.

ret retracted, reported exceedance was found to be not an exceedance after investigation of measurement system status and/or validation of raw data in conjunction with all associated measurement 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, NO_2 concentrations are re-calculated from baseline-corrected NO_X and NO concentrations. Specifically, the NO concentration is subtracted from the NO_X concentration to determine the NO_2 concentration.

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

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

3.0 Operational Status

3.1 Continuous Monitoring

In March 2025, there was 1 instance of monitoring instruments operating less than 90% of the time.

Station	Parameter	Details
Barge Landing	Particulate Matter ($PM_{2.5}$)	The PM2.5 analyzer at Barge Landing air monitoring station (AMS) operated for less than 90% of March 2025, which is a contravention of the Air Monitoring Directive (2016, as amended), Chapter 6, Clause DQ 4-C. This incident was reported to Alberta Environment and Protected Areas (AB EPA) on April 2, 2025 (reference number 439190). On March 24, during the daily system check, the WBEA reviewed the PM2.5 data to confirm the validity of two Alberta Ambient Air Quality Objective (AAAQO) exceedances that had been reported on March 22 and 23. An unusual cyclical pattern in the PM2.5 data was noted; therefore, instrument maintenance was conducted that day which included cleaning of the optical chamber and standard checks to ensure proper performance of the analyzer. It was determined the reported AAAQO exceedances were not valid and both AB EPA and the associated approval holder were notified. The monthly data validation process confirmed unstable operation of the PM2.5 analyzer from March 20 to March 24, resulting in a total of 85 hours of invalid data and an operational time of 89% for the month of March.

3.2 Intermittent Monitoring

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

3.3 General Network Notes

The Ammonia (NH_3) analyzer currently operates on a 0 to 2500 ppb operating range with a detection level of 5 ppb in the WBEA network. In data processing, values less than five ppb have been considered below detection levels and are reported as zero.

Total hydrocarbon (THC), non-methane hydrocarbon (NMHC), and methane (CH_4) measurements are collected at some air monitoring stations in the WBEA network using the Thermo Environmental model 55i direct THC/CH_4/NMHC analyzer. This analyzer uses a Gas Chromatography (GC) based system, which resets the baseline value at the start of every run. This may cause the ambient background to indicate a response below the expected 1.8 ppm background level. When all measurable criteria indicate valid data during the QAQC and validation process, the data is reported without any additional flags. However, a response below the expected 1.8 ppm triggers an investigation of the analyzer to determine if there is an issue.

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

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

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

these stations will continue to follow their site-specific reporting protocols as directed by the Alberta Energy Regulator.

Station 1, Bertha Ganter – Fort McKay

The NH_3 analyzer required additional time to stabilize to levels below ambient concentrations following the automated daily spans and routine monthly multipoint calibrations. Additional time is required for stabilization after exposure to high concentrations of NH_3 gas, and this is an inherent behavior in the NH_3 analyzer operations due to the properties of the NH_3 gas. Data for 1 hour following the daily spans have been reported as invalid for a total of 30 hours this month.

Flatline in the output signal of all parameters on March 7 resulted in 1 hour of invalid data.

Maintenance to improve response of the THC/NMHC/CH_4 analyzer and subsequent stabilization on March 7 through 9 resulted in 38 hours of downtime.

Maintenance to complete calibration of the NH_3 analyzer over two days on March 12 and 13 resulted in 18 hours of downtime.

Maintenance to improve response of the TRS analyzer and subsequent stabilization on March 19 and 20 resulted in 18 hours of downtime.

Flatline in the output signal of the TRS analyzer on March 24 resulted in 4 hours of invalid data. A subsequent maintenance to reboot the TRS analyzer on March 24 resulted in additional 1 hour of downtime.

Analyzer failure due to motherboard failure of the TRS analyzer on March 26 and 27 resulted in 31 hours of invalid data. Subsequent maintenance to replace the TRS analyzer on March 27 resulted in additional 1 hour of downtime.

Unstable operation due to excessive baseline noise of the $PM_{2.5}$ analyzer on March 31 resulted in 24 hours of invalid data.

Intermittent flatlines in the output signal of the wind sensor throughout the month resulted in 15 hours of invalid data.

Maintenance to replace the Solar Global Radiation sensor on March 19 resulted in 1 hour of downtime.

Station 2, Mildred Lake

The station power failure on March 7 interrupted the normal operations of all parameters for 1 hour.

Unstable operation due to excessive baseline drift of the SO_2 analyzer on March 6 to 7 resulted in 22 hours of invalid data.

Maintenance to replace support gas cylinders for the THC/NMHC/CH_4 analyzer on March 6 resulted in 5 hours of downtime.

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 21 hours of invalid data.

Flatline in the output signal of all meteorological sensors on March 7 resulted in 1 hour of invalid data.

Station 4, Buffalo Viewpoint

Cleaning of the manifold on March 26 interrupted the normal operations of all gaseous analyzers for 1 hour.

Maintenance to replace support gas cylinders for the THC/NMHC/CH_4 analyzer on March 26 resulted in 1 hours of 3 downtime.

Flatlines in the output signal of the wind sensor from March 6 and 15 resulted in 3 hours of invalid data.

Station 5, Mannix

Flatline in the output signal of the wind sensor at 45-meter elevation on March 27 resulted in 1 hour of invalid data.

Station 6, Patricia McInnes

The NH_3 analyzer required additional time to stabilize to levels below ambient concentrations following the automated daily spans and routine monthly multipoint calibrations. NH_3 analyzers require additional time for stabilization after being exposed to high concentrations, this is due to the physical properties of the NH_3 gas. Data for 1 hour following each daily span has been reported as invalid for a total of 31 hours this month.

Unstable operation due to pump failing of the SO_2 analyzer on March 13 resulted in 9 hours of invalid data.

Maintenance to replace the THC/NMHC/CH_4 analyzer on March 13 to 14 resulted in 17 hours of invalid data. Subsequent maintenance to replace support gas cylinder on March 21 resulted in additional 3 hours of downtime.

Cleaning of the manifold on March 17 interrupted the normal operations of all gaseous analyzers for 1 hour.

Maintenance to verify daily QA response of the TRS analyzer on March 25 resulted in 2 hours of downtime.

Station 7, Athabasca Valley

Note: The TRS daily span check in early March was elevated due to the recent replacement of the scrubber beads. The process of replacing the beads required some time to stabilize, however the issue has since been resolved, and normal operations have resumed.

Unstable operation due to excessive baseline noise of the $NO_X/NO/NO_2$ analyzer on March 1 resulted in 4 hours of invalid data.

Cleaning of the manifold on March 24 interrupted the normal operations of all gaseous analyzers, except for CO analyzer, for 1 hour.

Unstable operation due to excessive baseline noise of the $PM_{2.5}$ analyzer on March 29 to April 1 resulted in 62 hours of invalid data.

Station 8, Fort Chipewyan

The station power failure on March 1, 29 and 30 interrupted the normal operations of all air quality analyzers for 1-2 hours each day.

An internal audit on March 4 interrupted the normal operations of all air quality analyzers for 2-3 hours.

Maintenance to remove and thaw the precipitation collector sensor overnight on March 4 to 5 resulted in 15 hours of downtime.

Station 9, Barge Landing

Maintenance to replace support gas cylinder of the $THC/NMHC/CH_4$ analyzer on March 14 resulted in 3 hours of downtime.

Cleaning of the manifold on March 17 interrupted the normal operations of all gaseous analyzers except for $NO_X/NO/NO_2$ analyzer for 1 hour.

Unstable operation due to excessive baseline noise of the $PM_{2.5}$ analyzer on March 21 to 24 resulted in 83 hours of downtime. Subsequent maintenance to clean optical chamber of the instrument on March 24 resulted in additional 2 hours of downtime.

Analyzer failure due to inoperable internal lamp of the TRS analyzer on March 22 to 24 resulted in 54 hours of invalid data.

Note: Relative humidity and temperatures can affect the performance of the SOX scrubbers, causing sulfur concentrations to take longer to stabilize during daily span checks. As a result, remote QA checks were conducted on March 29, 30, and 31 to assess the analyzer's response, resulting in a total of 3 hours of downtime.

Flatlines in the output signal of the wind sensor at 10-meter elevation throughout the month resulted in 5 hours of invalid data.

Station 11, Lower Camp

Note: The $THC/NMHC/CH_4$ daily span checks on March 3 and 16 did not meet AMD criteria. This was due to the recent replacement of the calibration gas cylinder on March 3, which required time for the analyzer to stabilize, and an unresponsive analyzer on March 16.

Unstable operation due to excessive baseline noise of the THC/NMHC/CH_4 analyzer on March 2 to 3 resulted in 21 hours of invalid data.

Unstable operation due to flatline in the output signal of the THC/NMHC/CH_4 analyzer on March 16 resulted in 14 hours of invalid data.

Flatlines in the output signal of the wind sensor on March 1 to 3 resulted in 7 hours of invalid data.

Station 13, Fort McKay South

Cleaning of the manifold on March 18 interrupted the normal operations of all gaseous analyzers except for NO_X/NO/NO_2 analyzer for 1 hour.

Flatlines in the output signal of the wind sensor throughout the March resulted in 7 hours of invalid data.

Station 14, Anzac

Maintenance to replace support gas cylinders for the THC/NMHC/CH_4 analyzer on March 14 resulted in 3 hours of downtime.

Station 17, Wapasu

Unstable operation due sample pump failing of the O_3 analyzer on March 13 resulted in 9 hours of invalid data.

Maintenance to empty bucket of the precipitation collector on March 3 resulted in 2 hours of downtime.

Flatline in the output signal of the wind sensor on March 7 resulted in 1 hour of invalid data.

Note: The H_2S span was out of limits on March 1 due to the re-purging of the cylinder system at the station. Corrective actions have been taken to restore normal operating conditions.

Station 18, Stony Mountain

Unstable operation due to excessive baseline drift of the THC/NMHC/CH_4 analyzer on March 10 through 12 resulted in 56 hours of invalid data. A subsequent maintenance to replace the THC/NMHC/CH_4 analyzer on March 18 resulted in an additional 2 hours of downtime.

The daily span check for the CO_2 analyzer was outside the 10% AMD criteria on From March 1 through 27 due to malfunction of the nitrogen generator used to conduct the daily QA check.

Station 19, Firebag

Unstable operation due to flatline in the output signal of the THC/NMHC/CH_4 analyzer on March 9 to 10 resulted in 15 hours of downtime. Subsequent maintenance to reboot the analyzer on March 10 resulted in additional 2 hours of downtime.

Unstable operation due AMD non-compliance of the THC/NMHC/CH_4 analyzer on March 14 to 15 resulted in 33 hours of downtime.

Flatlines in the output signal of the wind sensor on March 25 and 28 resulted in 10 hours of invalid data.

Station 20, MacKay River

Unstable operation due to flatline in the output signal of THC analyzer on March 6 resulted in 1 hour of downtime.

Cleaning of the manifold on March 10 interrupted the normal operations the H_2S and NO_X/NO/NO_2 analyzers for 1 hour.

Maintenance to recalibrate and adjust the span and zero of the THC analyzer on March 21 resulted in 3 hours of downtime.

Maintenance to empty bucket of the precipitation collector on March 21 resulted in 1 hour of downtime.

Flatlines in the output signal of the wind sensor throughout the month resulted in 7 hours of invalid data.

Station 21, Conklin

Cleaning of the manifold on March 17 interrupted the normal operations of NO_X/NO/NO_2, O_3, and TRS analyzers for 2 hours.

The station power failure on March 30 and 31 interrupted the normal operations of all air quality analyzers for 16 hours.

A flatline in the output signal of the wind sensor on March 16 and 19 resulted in 3 hours of invalid data.

Station 22, Janvier

An internal audit on March 13 interrupted the normal operations of all air quality analyzers for 1 to 3 hours.

Maintenance to replace the NO_X/NO/NO_2 analyzer and subsequent stabilization of the analyzer on March 24 and 25 resulted in 19 hours of downtime.

A flatline in the output signal of the wind sensor at the 20-meter elevation on March 15 and 16 resulted in 2 hours of invalid data.

Station 23, Fort Hills

Cleaning of the manifold on March 17 interrupted the normal operations of all gaseous analyzers for 1 hour.

Flatline in the output signal of the wind sensor on March 3 and 18 resulted in 2 hours of invalid data.

Station 25, Waskōw ohci Pimâtisiwin

Cleaning of the manifold on March 25 interrupted the normal operations of all gaseous analyzers for 1 hour.

Intermittent flatlines in the output signal of the wind sensor throughout the month resulted in 25 hours of invalid data.

Station 27, Jackfish 2/3

Maintenance to verify QA response and clean sample manifold on March 26 interrupted the normal operations of all gaseous analyzers for 1 hour.

Station 29, Surmont 2

Cleaning of the manifold on March 17 interrupted the normal operations of the H_2S and NO_X/NO/NO_2 analyzers for 1 hour.

Maintenance to replace sample pump of the NO_X/NO/NO_2 analyzer and subsequent stabilization of the analyzer on March 24 and 25 resulted in 19 hours of downtime.

Station 30, Ells River

Note: The daily zero/span checks for SO2, TRS, and THC/NMHC/CH4 on March 6 were outside the 10% criteria due to a station temperature issue. This issue has been addressed, and normal operations have now resumed.

Unstable operation due to excessive baseline drift of the THC/NMHC/CH_4 analyzer on March 6 resulted in 5 hours of invalid data.

Failure to record data of SO_2 analyzer on March 11 resulted in 1 hour of invalid data.

Maintenance to tighten valve connection in response to a leak of the SO2 analyzer on March 11 resulted in 3 hours of downtime.

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

Station 31, Blackrod

Cleaning of the manifold on March 25 interrupted the normal operations the H_2S and SO_2 analyzers for 2 hours.

Station 33, Monday Creek

Cleaning of the manifold on March 13 interrupted the normal operations the H_2S and SO_2 analyzers for 1 hour.

Station 506, Jackfish 1

Cleaning of the manifold on March 25 interrupted the normal operations of H_2S and SO_2 analyzers for 2 hours.

Station 508, Kirby North

Maintenance to replace station modem on March 13 interrupted the normal operations of all gaseous analyzers for 1 hour.

The daily span check for the $NO_X/NO/NO_2$ analyzer was outside the 10% AMD criteria on March 13 and 14 due to settling of the calibration gas cylinder following its replacement on March 12.

Station 512, Hangingstone Expansion

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

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

Yours sincerely,

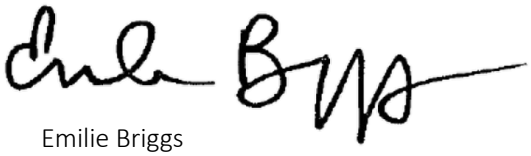
Wood Buffalo Environmental Association
The representative of the Person Responsible for this monitoring program is Emilie Briggs, Operations Manager, WBEA.

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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Wood Buffalo Environmental Association
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E: ahidayat@wbea.org

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Wood Buffalo Environmental Association
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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.



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March 2025

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APPROVAL NUMBERS	REPORT DATE MONTH	YEAR
289664-00-00	3	2025
241311-00-00		
20809-02-00		
149968-01-00		
237382-00-00		
48522-01-00		
240008-00-00		

CONTINUOUS AMBIENT MONITORING

PARAMETER	STN. NO.	% TIME OPERATIONAL	30-MIN AVERAGE		ONE-HOUR AVERAGE		24-HOUR AVERAGE	
			MAXIMUM CONCENTRATION	NO. READINGS > REGULATION	MAXIMUM CONCENTRATION	NO. READINGS > REGULATION	MAXIMUM CONCENTRATION	NO. READINGS > REGULATION
SO2(ppb)	1	100	-	-	28	0	5.5	0
SO2(ppb)	2	97	-	-	77.0	0	9.1	0
SO2(ppb)	4	100	-	-	89.5	0	12.1	0
SO2(ppb)	5	100	-	-	43.3	0	8.9	0
SO2(ppb)	6	99	-	-	31.0	0	4.1	0
SO2(ppb)	7	100	-	-	9.9	0	2.3	0
SO2(ppb)	8	99	-	-	0.8	0	0.4	0
SO2(ppb)	9	100	-	-	24.5	0	4.2	0
SO2(ppb)	11	100	-	-	93.6	0	11.3	0
SO2(ppb)	13	100	-	-	41.7	0	9.0	0
SO2(ppb)	14	100	-	-	10.9	0	2.4	0
SO2(ppb)	17	100	-	-	17.9	0	3.6	0
SO2(ppb)	18	100	-	-	4.1	0	0.8	0
SO2(ppb)	19	100	-	-	16.2	0	4.6	0
SO2(ppb)	20	100	-	-	29.6	0	7.5	0
SO2(ppb)	21	98	-	-	3.0	0	0.9	0
SO2(ppb)	22	100	-	-	3.1	0	0.6	0
SO2(ppb)	23	100	-	-	19.9	0	4.7	0
SO2(ppb)	25	100	-	-	26.3	0	5.5	0
SO2(ppb)	27	100	-	-	9.6	0	1.4	0
SO2(ppb)	29	100	-	-	8.4	0	1.7	0
SO2(ppb)	30	99	-	-	22.3	0	3.3	0
SO2(ppb)	31	100	-	-	5.4	0	2.3	0
SO2(ppb)	33	100	-	-	10.4	0	2.0	0
SO2(ppb)	506	100	-	-	10.2	0	2.3	0
SO2(ppb)	508	100	-	-	9.8	0	2.3	0
SO2(ppb)	512	100	-	-	78.1	0	9.1	0
H2S(ppb)	1	100	-	-	3.3	0	1.1	0
H2S(ppb)	2	100	-	-	7.4	0	1.5	0
H2S(ppb)	4	100	-	-	12.2	1	1.6	0
H2S(ppb)	5	100	-	-	8.4	0	1.3	0
H2S(ppb)	11	100	-	-	3.2	0	1.0	0
H2S(ppb)	17	100	-	-	1.5	0	0.4	0
H2S(ppb)	19	100	-	-	3.4	0	0.5	0
H2S(ppb)	20	100	-	-	5.9	0	1.2	0
H2S(ppb)	25	100	-	-	3.8	0	1.1	0
H2S(ppb)	27	100	-	-	0.7	0	0.2	0
H2S(ppb)	29	100	-	-	0.7	0	0.1	0
H2S(ppb)	31	100	-	-	1.0	0	0.3	0
H2S(ppb)	33	100	-	-	0.5	0	0.2	0
H2S(ppb)	506	100	-	-	0.5	0	0.2	0
H2S(ppb)	508	100	-	-	1.1	0	0.1	0
H2S(ppb)	512	100	-	-	1.5	0	0.3	0
TRS(ppb)	1	92	4.5	0	3.6	-	1.4	-
TRS(ppb)	6	100	3.4	0	3.3	-	0.6	-
TRS(ppb)	7	100	4.6	0	3.7	-	0.7	-
TRS(ppb)	8	99	0.3	0	0.3	-	0.2	-
TRS(ppb)	9	92	4.6	0	3.8	-	1.2	-
TRS(ppb)	13	100	16.1	6	11.6	-	1.9	-
TRS(ppb)	14	100	1.2	0	1.1	-	0.4	-
TRS(ppb)	18	100	0.8	0	0.7	-	0.5	-
TRS(ppb)	21	98	0.5	0	0.5	-	0.3	-
TRS(ppb)	22	100	0.6	0	0.5	-	0.2	-
TRS(ppb)	23	100	21.1	8	12.8	-	1.6	-
TRS(ppb)	30	100	17.3	16	15.9	-	4.6	-
THC(ppm)	1	95	-	-	5.5	-	3.0	-
THC(ppm)	2	99	-	-	3.9	-	2.6	-
THC(ppm)	4	99	-	-	3.6	-	2.3	-
THC(ppm)	5	100	-	-	3.7	-	2.4	-
THC(ppm)	6	97	-	-	2.8	-	2.2	-
THC(ppm)	7	100	-	-	2.7	-	2.3	-
THC(ppm)	9	99	-	-	5.7	-	2.4	-

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APPROVAL NUMBERS	REPORT DATE MONTH	YEAR
289664-00-00	3	2025
241311-00-00		
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149968-01-00		
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48522-01-00		

CONTINUOUS AMBIENT MONITORING

PARAMETER	STN. NO.	% TIME OPERATIONAL	30-MIN AVERAGE		ONE-HOUR AVERAGE		24-HOUR AVERAGE	
			MAXIMUM CONCENTRATION	NO. READINGS > REGULATION	MAXIMUM CONCENTRATION	NO. READINGS > REGULATION	MAXIMUM CONCENTRATION	NO. READINGS > REGULATION
THC(ppm)	11	95	-	-	4.0	-	2.5	-
THC(ppm)	13	100	-	-	3.9	-	2.7	-
THC(ppm)	14	100	-	-	2.4	-	2.1	-
THC(ppm)	17	100	-	-	2.9	-	2.4	-
THC(ppm)	18	92	-	-	2.2	-	2.0	-
THC(ppm)	19	93	-	-	2.8	-	2.3	-
THC(ppm)	20	99	-	-	3.4	-	2.6	-
THC(ppm)	21	98	-	-	2.3	-	2.1	-
THC(ppm)	22	100	-	-	2.2	-	2.0	-
THC(ppm)	23	100	-	-	6.8	-	3.8	-
THC(ppm)	29	100	-	-	2.8	-	2.4	-
THC(ppm)	30	99	-	-	7.2	-	3.2	-
THC(ppm)	508	100	-	-	2.6	-	2.3	-
O3(ppb)	1	100	-	-	41.2	0	32.7	-
O3(ppb)	4	100	-	-	44.9	0	38.4	-
O3(ppb)	6	100	-	-	49.0	0	41.3	-
O3(ppb)	7	100	-	-	49.4	0	39.9	-
O3(ppb)	8	99	-	-	45.1	0	39.9	-
O3(ppb)	13	100	-	-	43.5	0	31.8	-
O3(ppb)	14	100	-	-	49.0	0	41.0	-
O3(ppb)	17	99	-	-	50.1	0	46.5	-
O3(ppb)	18	100	-	-	48.1	0	43.3	-
O3(ppb)	21	98	-	-	52.6	0	43.1	-
O3(ppb)	22	100	-	-	53.8	0	46.2	-
NO2(ppb)	1	100	-	-	41.5	0	19.3	-
NO2(ppb)	4	100	-	-	38.8	0	17.7	-
NO2(ppb)	6	100	-	-	37.9	0	16.5	-
NO2(ppb)	7	99	-	-	38.1	0	14.7	-
NO2(ppb)	8	99	-	-	8.7	0	1.9	-
NO2(ppb)	9	100	-	-	41.5	0	23.8	-
NO2(ppb)	13	100	-	-	42.3	0	18.7	-
NO2(ppb)	14	100	-	-	34.5	0	11.7	-
NO2(ppb)	17	100	-	-	38.1	0	9.7	-
NO2(ppb)	18	100	-	-	5.2	0	1.8	-
NO2(ppb)	19	100	-	-	38.4	0	15.8	-
NO2(ppb)	20	100	-	-	33.8	0	15.1	-
NO2(ppb)	21	98	-	-	14.9	0	3.7	-
NO2(ppb)	22	97	-	-	15.1	0	2.8	-
NO2(ppb)	23	100	-	-	56.8	0	31.8	-
NO2(ppb)	27	100	-	-	12.6	0	3.0	-
NO2(ppb)	29	97	-	-	33.1	0	6.1	-
NO2(ppb)	30	100	-	-	40.3	0	19.7	-
NO2(ppb)	31	100	-	-	27.8	0	9.8	-
NO2(ppb)	33	100	-	-	23.2	0	10.7	-
NO2(ppb)	506	100	-	-	11.6	0	3.9	-
NO2(ppb)	508	100	-	-	9.8	0	3.0	-
NO2(ppb)	512	100	-	-	32.9	0	5.4	-
CO(ppm)	1	100	-	-	0.4	0	0.3	-
CO(ppm)	7	100	-	-	0.5	0	0.2	-
CO(ppm)	8	99	-	-	0.2	0	0.1	-
CO(ppm)	18	100	-	-	0.2	0	0.2	-
CO2(ppm)	1	100	-	-	481.7	-	463.5	-
CO2(ppm)	8	99	-	-	446.5	-	438.1	-
CO2(ppm)	18	100	-	-	458.1	-	449.7	-
NH3(ppb)	1	93	-	-	0.0	0	0.0	-
NH3(ppb)	6	96	-	-	0.0	0	0.0	-
PM2.5(ug/m3)	1	97	-	-	40.5	0	22.8	0
PM2.5(ug/m3)	4	100	-	-	63.7	0	19.3	0
PM2.5(ug/m3)	6	100	-	-	71.5	0	13.0	0
PM2.5(ug/m3)	7	92	-	-	25.6	0	9.3	0
PM2.5(ug/m3)	8	99	-	-	18.4	0	3.6	0
PM2.5(ug/m3)	9	89	-	-	113.4	2	32.7	1

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APPROVAL NUMBERS	REPORT DATE MONTH	YEAR
289664-00-00	3	2025
241311-00-00		
20809-02-00		
149968-01-00		
237382-00-00		
48522-01-00		

CONTINUOUS AMBIENT MONITORING

PARAMETER	STN. NO.	% TIME OPERATIONAL	30-MIN AVERAGE MAXIMUM CONCENTRATION	30-MIN AVERAGE NO. READINGS > REGULATION	ONE-HOUR AVERAGE MAXIMUM CONCENTRATION	ONE-HOUR AVERAGE NO. READINGS > REGULATION	24-HOUR AVERAGE MAXIMUM CONCENTRATION	24-HOUR AVERAGE NO. READINGS > REGULATION
PM2.5(ug/m3)	13	100	-	-	52.3	0	15.7	0
PM2.5(ug/m3)	14	100	-	-	14.8	0	5.3	0
PM2.5(ug/m3)	17	100	-	-	41.3	0	11.1	0
PM2.5(ug/m3)	18	100	-	-	6.3	0	4.1	0
PM2.5(ug/m3)	21	98	-	-	27.4	0	7.3	0
PM2.5(ug/m3)	22	100	-	-	25.7	0	3.9	0
PM2.5(ug/m3)	23	100	-	-	172.8	20	65.8	3
PM2.5(ug/m3)	29	100	-	-	46.9	0	11.8	0
PM2.5(ug/m3)	30	100	-	-	49.9	0	18.1	0
WS(km/h)	1	98	-	-	-	-	-	-
WS(km/h)	2	100	-	-	-	-	-	-
WS(km/h)	4	100	-	-	-	-	-	-
WS(km/h)	5	100	-	-	-	-	-	-
WS(km/h)	6	100	-	-	-	-	-	-
WS(km/h)	7	100	-	-	-	-	-	-
WS(km/h)	8	100	-	-	-	-	-	-
WS(km/h)	9	100	-	-	-	-	-	-
WS(km/h)	11	99	-	-	-	-	-	-
WS(km/h)	13	99	-	-	-	-	-	-
WS(km/h)	14	100	-	-	-	-	-	-
WS(km/h)	17	100	-	-	-	-	-	-
WS(km/h)	18	100	-	-	-	-	-	-
WS(km/h)	19	99	-	-	-	-	-	-
WS(km/h)	20	99	-	-	-	-	-	-
WS(km/h)	21	100	-	-	-	-	-	-
WS(km/h)	22	100	-	-	-	-	-	-
WS(km/h)	23	100	-	-	-	-	-	-
WS(km/h)	25	97	-	-	-	-	-	-
WS(km/h)	27	100	-	-	-	-	-	-
WS(km/h)	29	100	-	-	-	-	-	-
WS(km/h)	30	97	-	-	-	-	-	-
WS(km/h)	31	100	-	-	-	-	-	-
WS(km/h)	33	100	-	-	-	-	-	-
WS(km/h)	506	100	-	-	-	-	-	-
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
MARCH 2025

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

April 30, 2025

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

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 30-Min Value	30-Min Exceedances	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2(ppb) Average	706	38	38	100	-	-	27.6	0	5.5	0
H2S(ppb) Average	706	37	38	99.87	-	-	3.3	0	1.1	0
TRS(ppb) Average	645	43	99	92.47	4.5	0	3.6	0	1.4	0
THC(ppm) Average	665	41	79	94.89	-	-	5.5	-	3	-
NMHC(ppm) Average	665	41	79	94.89	-	-	1.13	-	0.307	-
CH4(ppm) Average	665	41	79	94.89	-	-	4.8	-	2.7	-
O3 (ppb) Average	708	35	36	99.87	-	-	41.2	0	32.7	-
NO2 (ppb) Average	706	37	38	99.87	-	-	41.5	0	19.3	-
NO (ppb) Average	706	37	38	99.87	-	-	110.9	-	23.1	-
NOX (ppb) Average	706	37	38	99.87	-	-	145.2	-	41.8	-
NH3 (ppb) Average	653	42	91	93.41	-	-	0	0	0	-
PM2.5 (ug/m3) Average	718	1	26	96.64	-	-	40.5	0	22.8	0
CO(ppm) Average	708	35	36	99.87	-	-	0.4	0	0.3	0
CO2(ppm) Average	708	35	36	99.87	-	-	481.7	0	463.5	0
Temperature 2 m (C) Average	743	0	1	99.87	-	-	10.2	-	1.5	-
Temperature 10 m (C) Average	743	0	1	99.87	-	-	10.4	-	1.8	-
Relative Humidity (%) Average	743	0	1	99.87	-	-	93	-	78.2	-
Wind Speed 10 m (km/h) Average	729	0	15	97.98	-	-	22	-	14	-
Wind Direction 10 m (deg) Average	729	0	15	97.98	-	-	-	-	-	-
Precipitation (mm) Total	743	0	1	99.87	-	-	0.5	-	2	-
Leaf Wetness (% of range) Average	743	0	1	99.87	-	-	35.4	-	7.5	-
Global Solar Radiation (W/m2) Average	742	0	2	99.73	-	-	685.9	-	220	-

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

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

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	706	1.49	3.7	-	0	0	0.1	0.2	0.9	3.6	27.6
H2S (ppb) Average	706	0.34	0.4	-	0	0.1	0.1	0.2	0.4	0.7	3.3
TRS (ppb) Average	645	0.69	0.4	-	0.2	0.4	0.5	0.6	0.7	1.1	3.6
THC (ppm) Average	665	2.23	0.3	-	1.9	2	2	2.1	2.3	2.5	5.5
NMHC(ppm) Average	665	0.073	0.12	-	0	0	0	0	0.1	0.2	1.13
CH4(ppm) Average	665	2.15	0.2	-	1.9	2	2	2.1	2.2	2.4	
O3 (ppb) Average	708	21.08	9.9	-	0.5	4.5	14.7	23.2	28.6	32.8	41.2
NO2 (ppb) Average	706	12.37	8.6	-	0	3	5.6	10.2	17.9	24.6	41.5
NO (ppb) Average	706	4.47	10.2	-	0	0	0	1.2	4.7	11.8	110.9
NOX (ppb) Average	706	16.84	15.8	-	0	3.9	6.6	12.9	22.5	34.3	145.2
NH3 (ppb) Average	653	0	0	-	0	0	0	0	0	0	0
PM2.5 (ug/m3) Average	718	8.51	6.4	-	0.9	3	4.1	6.3	10.6	16.8	40.5
CO(ppm) Average	708	0.21	0	-	0.1	0.2	0.2	0.2	0.2	0.3	0.4
CO2(ppm) Average	708	448.21	7.6	-	437	441.2	443.4	446	451	458.7	481.7
Temperature 2 m (C) Average	743	-8.07	7.4	-	-26.3	-18.3	-13.8	-7.9	-2.3	1.5	10.2
Temperature 10 m (C) Average	743	-8.1	7.4	-	-26	-18.3	-13.8	-8.1	-2.1	1.5	10.4
Relative Humidity (%) Average	743	64.87	14.4	-	27.8	44.8	54.5	66.7	76.2	82.4	93
Wind Speed 10 m (km/h) Average	729	7.8	4	-	0	2	4	7	11	14	22
Wind Direction 10 m (deg) Average	729	-	-	-	-	-	-	-	-	-	-
Precipitation (mm) Total	743	-	-	5.38	-	-	-	-	-	-	-
Leaf Wetness (% of range) Average	743	2.99	2.7	-	1.3	1.9	2.2	2.6	2.8	3.7	35.4
Global Solar Radiation (W/m2) Average	742	132.81	188.7	-	0	0	0	4.4	240.6	456.2	685.9

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

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL PARAMETERS	07 Mar 2025 01:00	07 Mar 2025 01:00	1	Unstable Operation - flatline in output signal
THC/NMHC/CH4	07 Mar 2025 22:00	09 Mar 2025 11:00	38	Maintenance - stabilization post maintenance
TRS	19 Mar 2025 18:00	20 Mar 2025 11:00	18	Maintenance - stabilization post maintenance
TRS	24 Mar 2025 07:00	24 Mar 2025 10:00	4	Unstable Operation - flatline in analyzer output signal
TRS	24 Mar 2025 11:00	24 Mar 2025 11:00	1	Maintenance - analyzer rebooted
TRS	26 Mar 2025 04:00	27 Mar 2025 10:00	31	Analyzer Failure - motherboard failure
TRS	27 Mar 2025 11:00	27 Mar 2025 11:00	1	Maintenance - analyzer replaced
NH3	01 Mar 2025 05:00	31 Mar 2025 05:00	30	Stabilization after daily QA check
NH3	12 Mar 2025 18:00	13 Mar 2025 11:00	18	Maintenance - calibration in progress
PM2.5	31 Mar 2025 01:00	01 Apr 2025 00:00	24	Unstable Operation - excessive baseline noise
Wind Speed, Wind Direction	01 Mar 2025 21:00	28 Mar 2025 07:00	15	Flat line in sensor output signal - Sensor frozen
Solar Global Radiation	19 Mar 2025 15:00	19 Mar 2025 15:00	1	Maintenance - sensor replaced

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Fort McKay - Bertha Ganter - March 2025

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

Maximum Value: 27.6 ppb on Mar 1 15:00 Maximum Daily Average: 5.5 ppb on Mar 19

Minimum Value: 0.0 ppb on Mar 7 21:00 Minimum Daily Average: 0.0 ppb on Mar 20

Maximum Diurnal Average: 4.9 ppb at hour 15 Minimum Diurnal Average: 0.2 ppb at hour 7

Monthly Average: 1.49 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.2 Q_3 = 0.9 P_{90} = 3.6 P_{99} = 20.5

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	38
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	1.5	4.6	6.1	15.5	27.6	17.4	10.5	5.2	2.6	1.5	1.0	0.8	0.7	0.7	4.2	27.6
2-Mar	0.6	Z	0.8	0.6	0.5	0.3	0.3	0.4	1.1	1.2	1.6	1.6	1.1	0.7	0.4	0.3	0.3	0.2	0.1	0.1	0.0	0.1	0.1	0.2	0.6	1.6
3-Mar	0.0	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.2	0.2	0.3	0.1	1.9	2.3	2.0	3.3	1.5	0.6	0.4	0.3	0.2	0.6	3.3
4-Mar	0.5	0.4	0.4	Z	0.3	0.2	0.2	0.1	0.2	0.3	0.3	0.4	2.3	3.6	3.4	1.0	0.3	0.2	0.3	0.2	0.7	0.7	0.5	0.3	0.7	3.6
5-Mar	0.3	0.2	0.2	0.2	Z	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.5	4.2	21.7	14.3	11.2	7.1	2.4	0.8	0.6	0.6	0.6	2.9	21.7
6-Mar	0.4	0.3	0.3	0.2	0.2	Z	0.3	0.4	0.5	0.6	0.9	9.7	23.5	16.1	16.9	11.5	8.0	4.7	1.7	1.3	1.3	1.0	1.2	4.9	4.6	23.5
7-Mar	Z	1.3	0.7	0.5	0.4	0.3	0.5	0.8	0.9	1.1	1.3	3.3	C	C	C	C	C	C	C	0.1	0.0	0.5	0.4	0.1	--	3.3
8-Mar	0.2	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.2
9-Mar	0.1	0.1	Z	0.1	0.1	0.1	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
10-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.2	3.4	14.9	10.9	10.6	14.0	9.0	12.9	9.0	5.5	4.8	3.1	3.1	2.6	2.5	4.6	14.9
11-Mar	2.4	2.0	1.6	1.1	Z	0.8	0.7	0.6	0.5	0.5	0.4	0.5	0.5	0.4	0.5	0.4	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.6	2.4
12-Mar	0.0	0.1	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.3	2.6	0.8	1.3	1.0	0.8	0.4	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.4	2.6
13-Mar	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.8	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.8
14-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	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	0.1	0.2
15-Mar	0.0	0.1	Z	1.3	0.7	0.4	0.4	0.5	0.7	0.4	0.5	0.5	1.2	1.3	1.1	0.9	1.1	1.4	2.4	1.2	0.5	0.3	0.4	1.3	0.8	2.4
16-Mar	1.1	1.1	1.2	Z	1.1	1.1	1.1	1.2	1.4	1.9	5.3	14.4	5.9	4.9	4.1	3.4	4.2	1.6	0.6	0.4	0.3	0.3	0.3	0.3	2.5	14.4
17-Mar	0.2	0.2	0.2	0.2	Z	0.2	0.1	0.3	0.5	0.4	0.7	1.5	1.3	0.6	0.6	0.5	0.5	0.5	0.3	0.2	0.1	0.1	0.1	0.1	0.4	1.5
18-Mar	0.0	0.0	0.0	0.1	0.1	Z	0.0	0.1	0.3	1.4	3.1	0.2	0.1	0.2	0.5	1.6	2.5	5.4	4.4	2.6	1.2	0.4	0.1	0.1	1.1	5.4
19-Mar	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	2.7	9.0	19.5	22.9	22.0	20.6	19.9	4.9	2.5	1.0	0.4	0.2	0.0	0.0	5.5	22.9
20-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1
21-Mar	0.1	0.1	Z	0.2	0.2	0.0	0.1	0.0	0.3	3.4	8.7	8.5	8.0	8.6	8.7	6.6	6.5	2.4	0.2	0.1	0.1	0.1	0.1	0.3	2.8	8.7
22-Mar	0.2	0.1	0.6	Z	0.2	0.1	0.1	0.1	0.7	2.1	2.5	4.2	17.1	19.5	6.8	9.0	7.2	6.2	1.7	0.4	0.2	0.7	0.8	0.6	3.5	19.5
23-Mar	0.5	0.5	0.4	0.3	Z	0.3	0.2	0.3	0.5	0.6	0.5	0.4	1.2	11.8	24.9	9.6	2.2	2.7	2.5	2.3	1.5	0.8	0.6	0.4	2.8	24.9
24-Mar	0.3	0.3	0.2	0.2	0.1	Z	0.2	0.2	0.3	0.5	1.0	0.6	1.1	4.0	0.8	0.5	0.4	0.2	0.7	0.2	0.1	0.1	0.0	0.1	0.5	4.0
25-Mar	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	2.2	2.1	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.3	2.2
26-Mar	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	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.2
27-Mar	0.1	0.1	Z	0.1	0.1	0.1	0.0	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	0.1	0.0	0.0	0.1	0.2
28-Mar	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.5	1.6	2.2	0.7	0.2	0.2	0.1	0.1	0.1	0.1	0.3	2.2
29-Mar	0.0	0.0	0.1	0.1	Z	0.1	0.1	0.0	0.1	0.2	0.3	0.7	1.8	2.1	1.7	4.7	16.2	21.3	6.2	3.1	0.9	0.3	0.3	0.1	2.6	21.3
30-Mar	0.1	0.1	0.0	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.3	0.6	1.6	4.6	5.6	5.9	3.6	2.9	1.6	0.8	0.4	0.3	0.3	0.3	1.3	5.9
31-Mar	Z	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.8	1.7	5.9	1.5	1.5	1.6	2.0	1.6	2.1	1.4	0.1	0.0	0.0	0.0	0.0	0.0	1.0	5.9
	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.6	1.4	2.6	3.6	4.5	4.9	4.4	4.0	2.8	1.5	0.8	0.4	0.4	0.3	0.4	Diurnal Average	
	2.4	2.0	1.6	1.3	1.1	1.1	1.1	1.2	1.4	3.4	8.7	14.9	23.5	22.9	27.6	21.7	19.9	21.3	7.1	4.8	3.1	3.1	2.6	4.9	Diurnal Maximum	

Z - zerospan C - Calibration

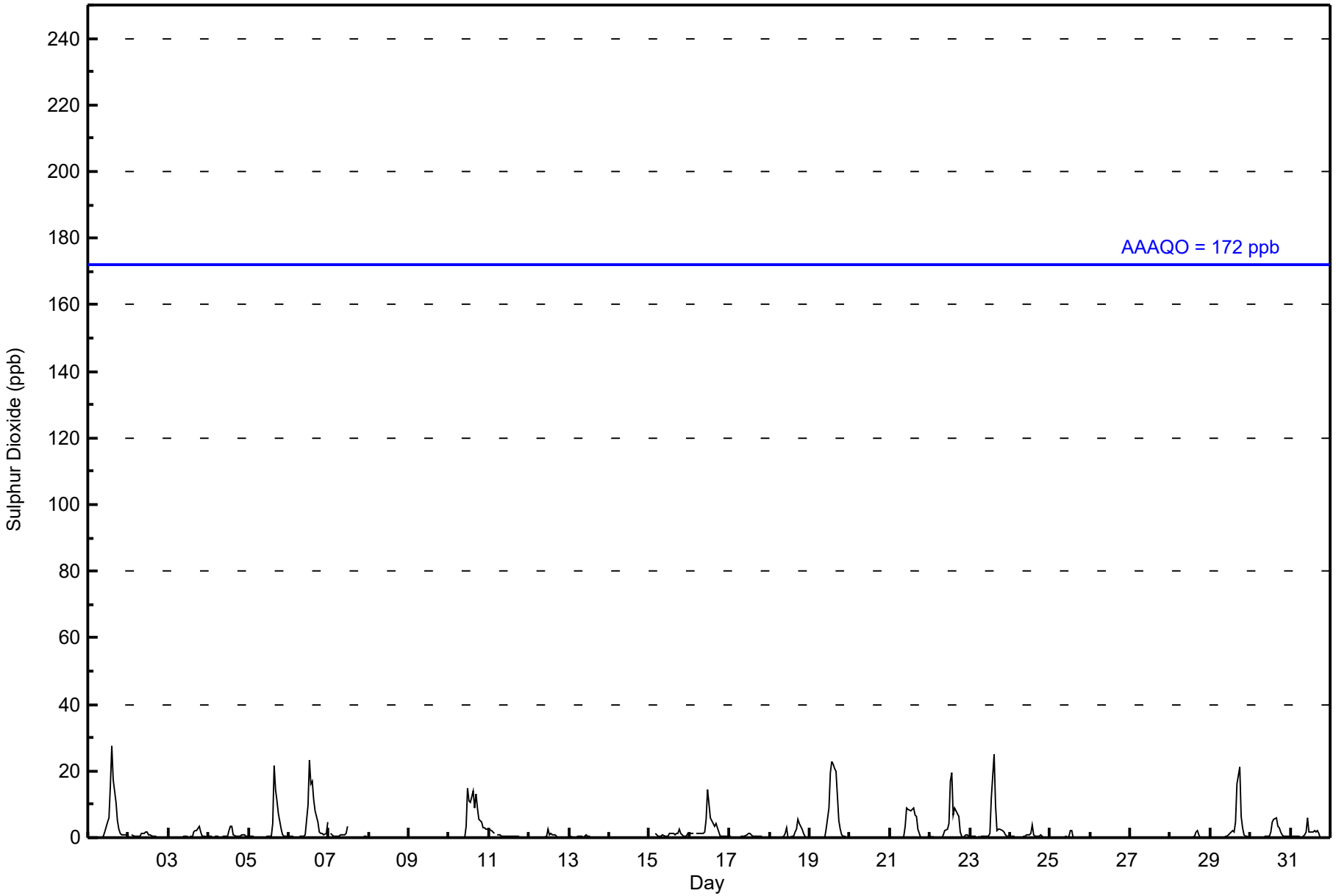
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Fort McKay - Bertha Ganter - March 2025



Sulphur Dioxide (SO_2) - ppb

Fort McKay - Bertha Ganter - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	678	96.03	96.03
11 - 20	20	2.83	98.87
21 - 60	8	1.13	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Fort McKay - Bertha Ganter - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	154	131	25	15	11	13	30	77	70	13	9	12	10	33	22	39	664
11 - 20	0	0	0	1	0	0	3	13	3	0	0	0	0	0	0	0	20
21 - 60	0	0	0	0	0	0	1	6	1	0	0	0	0	0	0	0	8
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	154	131	25	16	11	13	34	96	74	13	9	12	10	33	22	39	692

Total Number of Valid Hours: 692

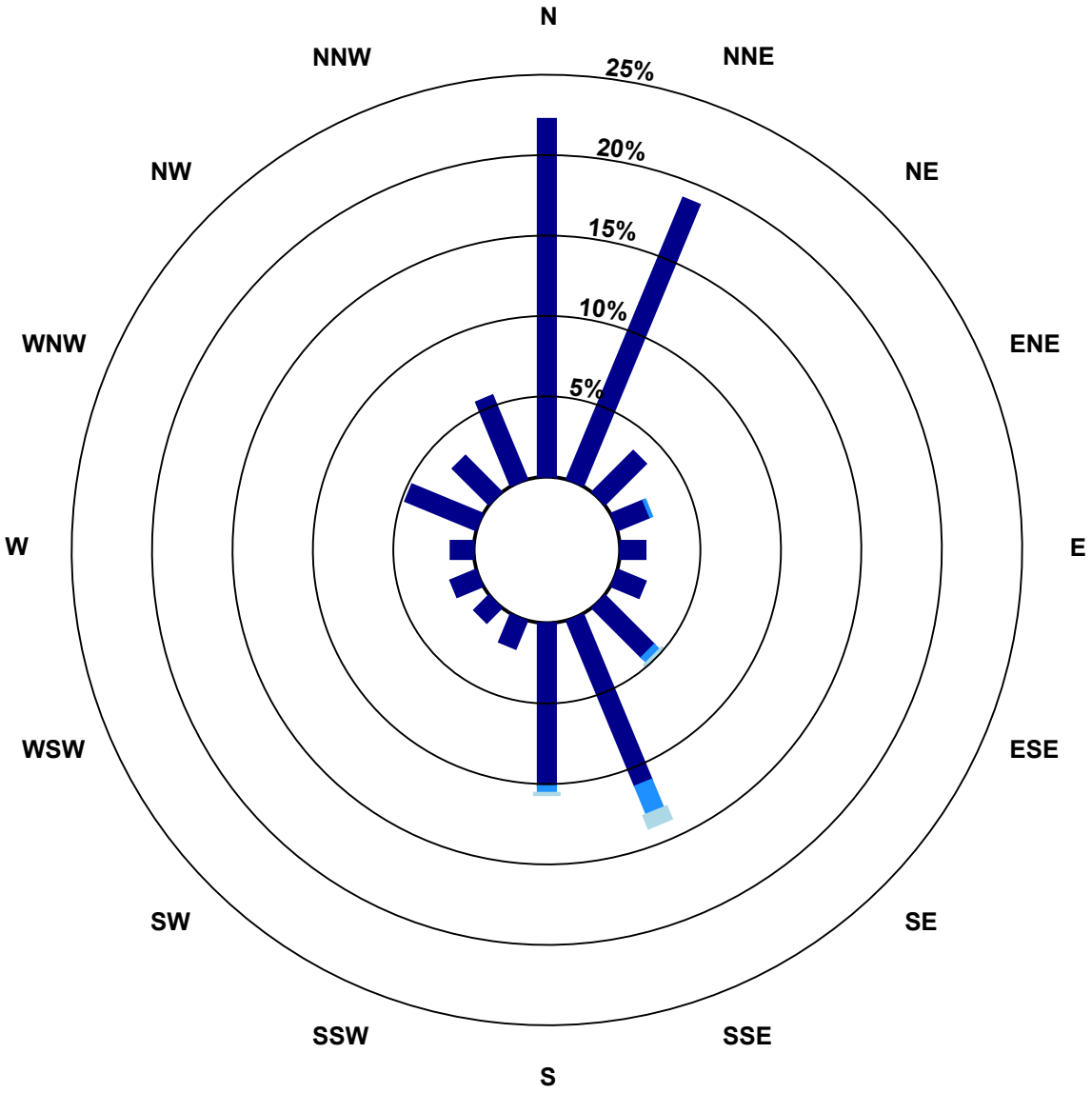
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Sulphur Dioxide (SO_2) - ppb

Fort McKay - Bertha Ganter



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

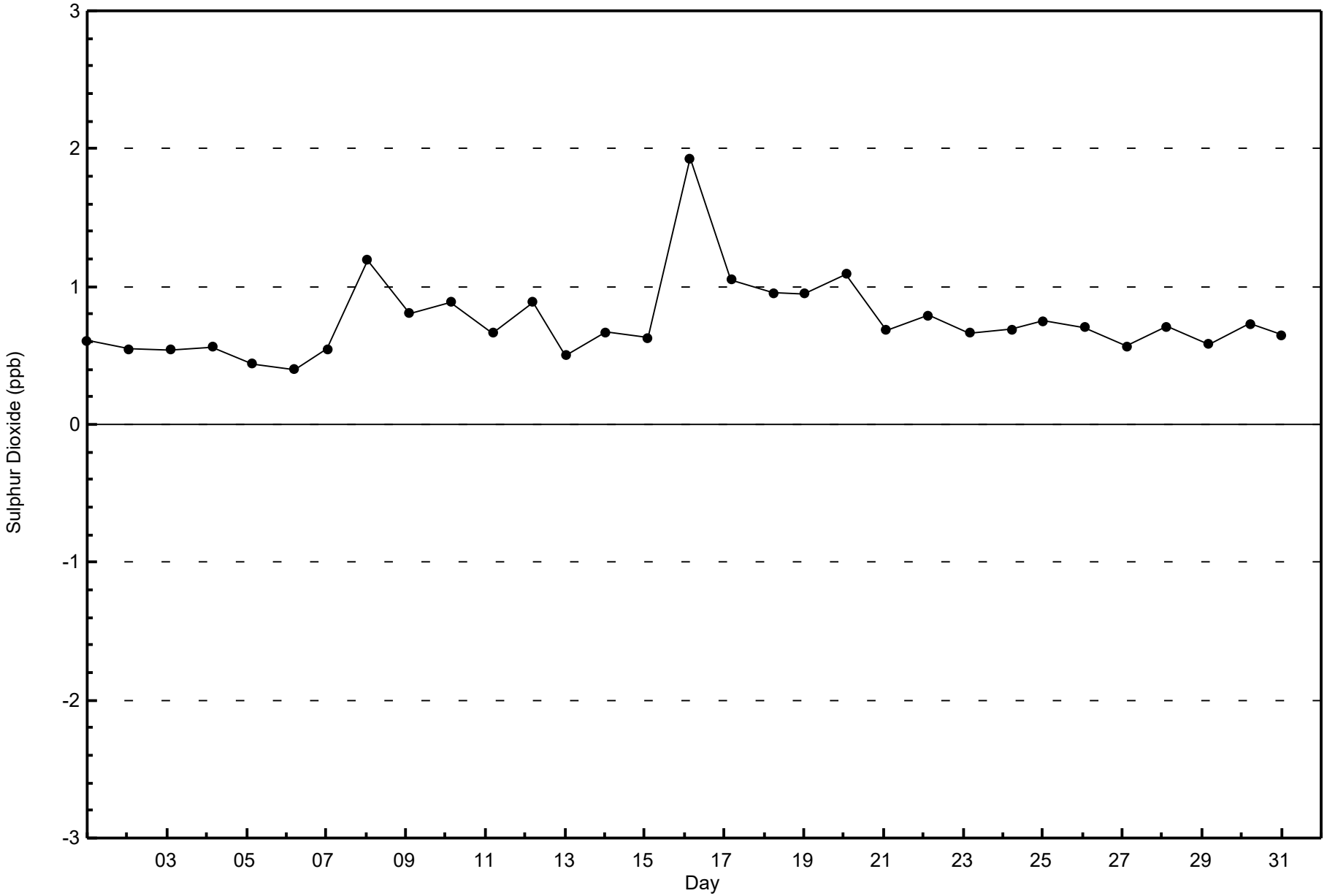
Total Number of Valid Hours: 692

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Fort McKay - Bertha Ganter - March 2025

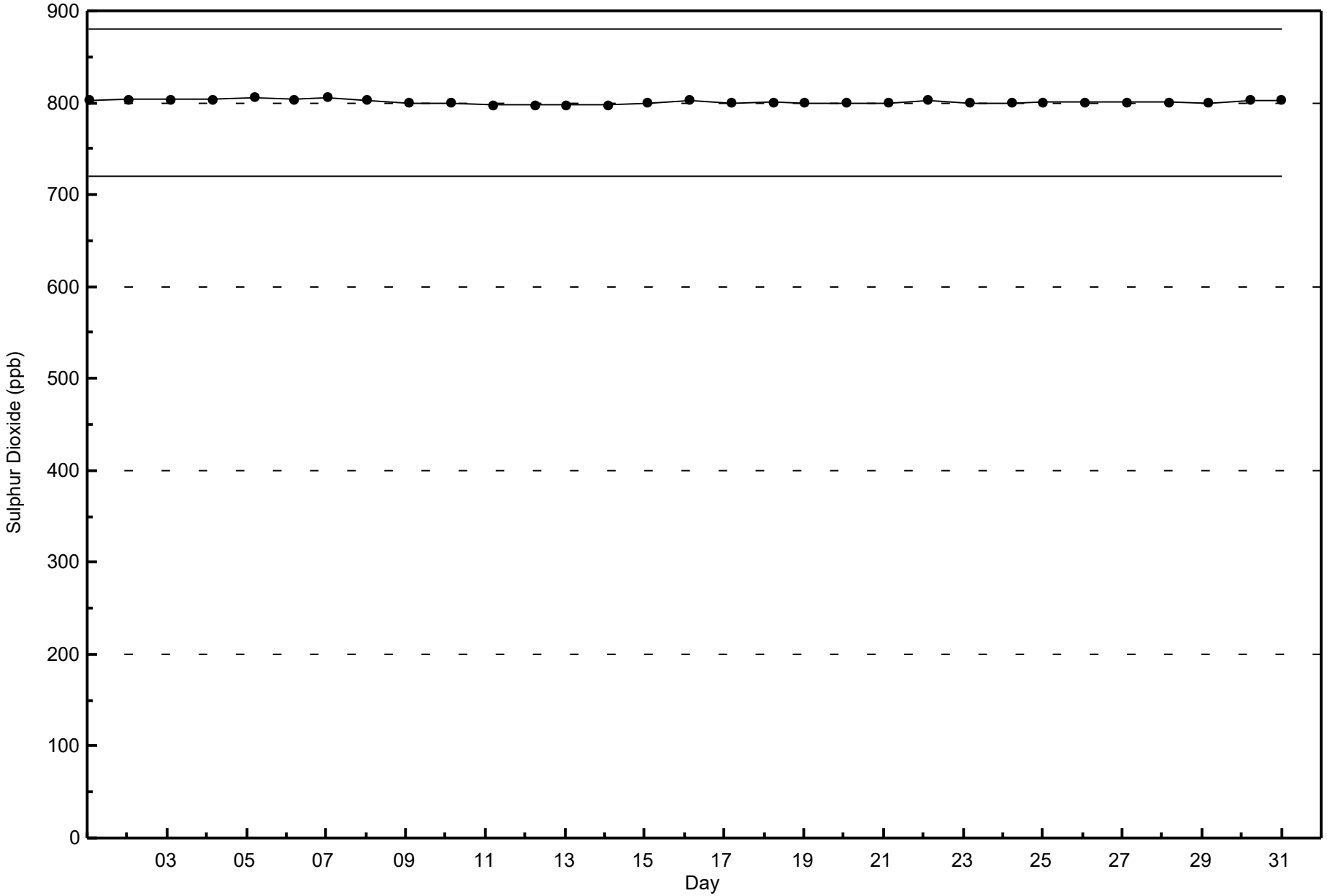


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Fort McKay - Bertha Ganter - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Fort McKay - Bertha Ganter - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.3 ppb on Mar 25 12:00 Maximum Daily Average: 1.1 ppb on Mar 4

Minimum Value: 0.0 ppb on Mar 16 21:00
Maximum Diurnal Average: 0.6 ppb at hour 12
Monthly Average: 0.34 ppb

Minimum Daily Average: 0.1 ppb on Mar 27
Minimum Diurnal Average: 0.2 ppb at hour 7
Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.1 Median = 0.2 Q_3 = 0.4 P_{90} = 0.7 P_{99} = 2.2

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	37
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.3	Z	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.4	1.1	2.3	1.9	1.2	2.7	1.8	1.6	1.3	1.3	1.3	1.2	1.1	0.9	1.0	2.7
2-Mar	0.8	1.0	Z	0.9	0.8	0.6	0.6	0.8	1.8	2.1	2.1	1.3	0.7	0.2	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.6	2.1
3-Mar	0.1	0.1	0.2	Z	0.2	0.2	0.2	0.2	0.3	0.3	0.3	1.2	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.2	0.2	0.4	1.0	1.6	0.4	1.6
4-Mar	2.9	2.9	2.7	2.0	Z	1.4	0.9	1.5	2.1	1.4	1.0	1.1	1.5	0.7	0.7	0.5	0.0	0.0	0.1	0.0	0.2	0.3	0.2	0.2	1.1	2.9
5-Mar	0.2	0.2	0.2	0.2	0.2	Z	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.1	0.3	0.4	0.4	0.6	0.5	0.5	0.6	0.5	0.4	0.4	0.3	0.6
6-Mar	Z	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.6	1.7	0.4	0.4	0.5	0.4	0.3	0.3	0.3	0.5	0.3	0.4	0.9	1.3	0.6	0.7	0.5	1.7
7-Mar	UO	Z	0.2	0.2	0.2	0.1	0.2	0.2	0.3	0.4	0.4	0.4	0.6	0.6	0.7	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.7
8-Mar	0.2	0.2	Z	0.2	0.2	0.4	0.3	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.4
9-Mar	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2
10-Mar	0.2	0.2	0.2	0.2	Z	0.3	0.3	0.3	0.4	0.4	0.4	0.6	0.7	0.6	0.3	0.3	0.3	0.3	0.4	0.5	0.4	0.3	0.4	0.4	0.4	0.7
11-Mar	0.4	0.3	0.3	0.3	0.3	Z	0.2	0.2	0.3	0.4	0.4	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4
12-Mar	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.3	0.3	0.2	0.2	0.3
13-Mar	0.2	Z	0.3	0.2	0.3	0.4	0.3	0.3	0.2	0.6	1.3	0.5	0.3	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.8	0.6	0.3	0.2	0.3	1.3
14-Mar	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.9	0.6	0.5	0.3	0.3	0.4	0.4	0.2	2.2	2.5	1.6	0.4	0.1	0.0	0.5	2.5
15-Mar	0.1	0.2	0.3	Z	0.1	0.1	0.0	0.1	0.1	0.2	1.2	0.7	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.4	0.3	1.1	1.5	0.4	1.5
16-Mar	0.7	0.6	0.3	0.3	Z	0.2	0.3	0.3	0.5	0.8	0.5	0.9	0.3	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.9
17-Mar	0.0	0.0	0.0	0.0	0.1	Z	0.1	0.2	0.9	0.4	0.5	0.5	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.3	0.3	0.2	0.9
18-Mar	Z	0.4	0.8	1.1	1.0	0.4	0.3	0.5	0.4	0.5	0.4	0.1	0.2	0.1	0.1	0.2	0.3	0.2	0.1	0.1	0.3	0.4	0.2	0.1	0.4	1.1
19-Mar	0.1	Z	0.1	0.2	0.3	0.3	0.2	0.2	0.3	0.4	C	C	C	C	C	C	0.4	1.5	1.1	0.3	0.1	0.3	0.4	0.3	--	1.5
20-Mar	0.1	0.5	Z	1.3	1.0	0.3	0.4	0.4	0.8	0.6	0.7	0.2	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.3	0.4	0.2	0.2	0.3	0.4	1.3
21-Mar	0.1	0.1	0.0	Z	0.1	0.0	0.1	0.1	0.1	0.4	0.6	0.5	0.3	0.7	0.3	0.2	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
22-Mar	0.0	0.1	0.3	0.4	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.7	0.5	0.2	0.3	0.4	0.6	0.2	0.1	0.2	0.4	0.4	0.3	0.3	0.7
23-Mar	0.3	0.3	0.2	0.2	0.2	Z	0.2	0.3	0.3	0.3	0.7	1.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.4	0.7	0.4	0.4	0.3	0.3	1.3
24-Mar	Z	0.3	0.3	0.3	0.3	0.2	0.4	0.4	0.4	0.3	2.1	1.7	1.5	0.4	0.8	1.5	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.1	0.5	2.1
25-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.2	0.1	3.3	0.6	0.2	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	3.3
26-Mar	0.1	0.0	Z	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	0.1	0.1	0.1	0.0	0.1	0.2	0.1	0.0	0.1	0.2
27-Mar	0.0	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
28-Mar	0.1	0.2	0.2	0.2	Z	0.2	0.2	0.3	0.5	0.5	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.5
29-Mar	0.2	0.1	0.1	0.1	0.1	Z	0.2	0.1	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.3
30-Mar	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.3	0.3	0.4	0.4	0.5	0.3	0.3	0.4	0.3	0.1	0.1	0.2	0.2	0.3	0.5
31-Mar	0.2	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.3	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	0.1	0.1	0.4
	0.3	0.3	0.3	0.4	0.3	0.3	0.2	0.3	0.4	0.5	0.6	0.6	0.5	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	Diurnal Average	
	2.9	2.9	2.7	2.0	1.0	1.4	0.9	1.5	2.1	2.1	2.1	3.3	2.3	1.9	1.2	2.7	1.8	1.6	2.2	2.5	1.6	1.3	1.1	1.6	Diurnal Maximum	

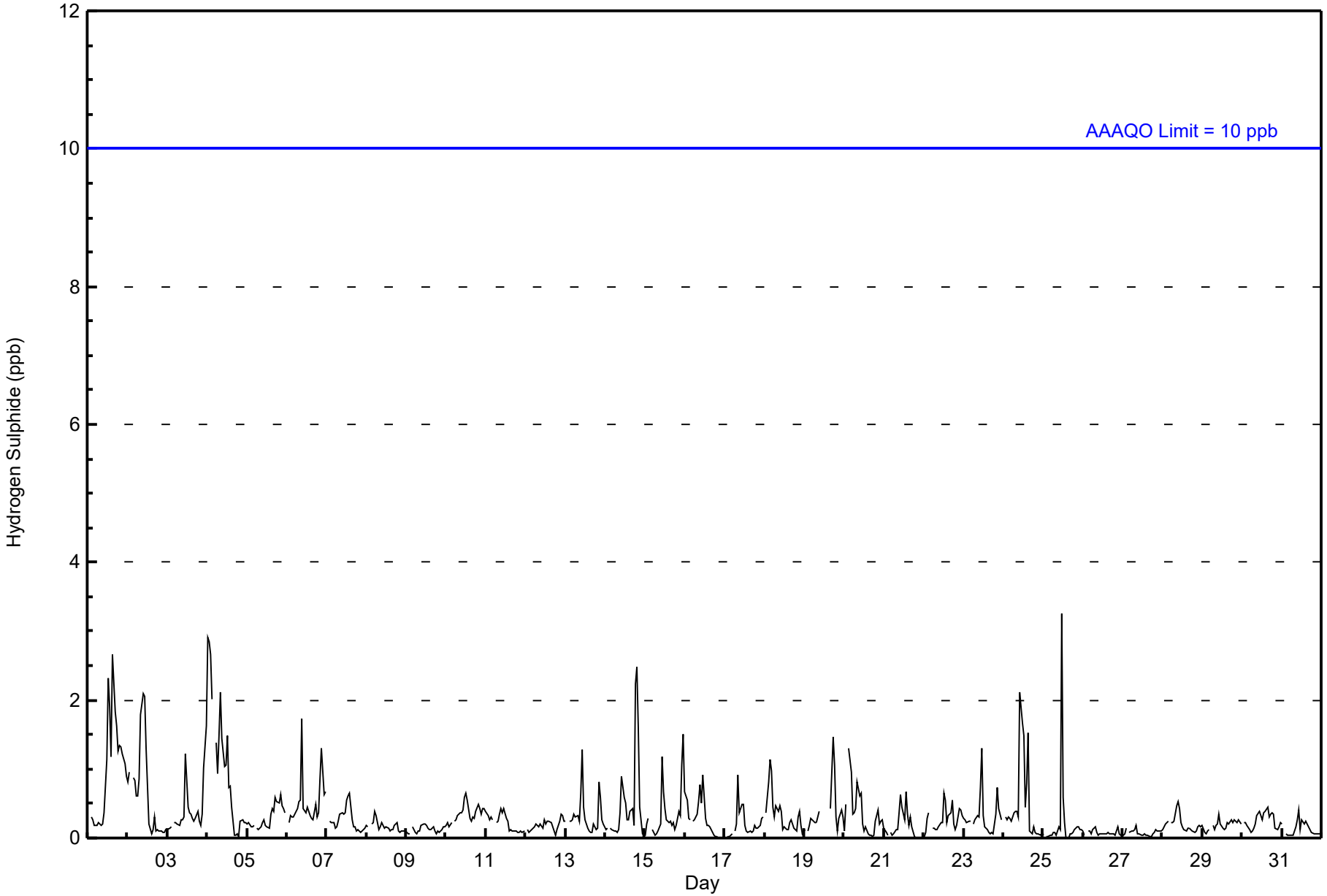
Z - zerospan C - Calibration UO - Unstable Operation
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Fort McKay - Bertha Ganter - March 2025



Hydrogen Sulphide (H_2S) - ppb

Fort McKay - Bertha Ganter - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	701	99.29	99.29
3 - 4	5	0.71	100.00
5 - 7	0	0.00	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Fort McKay - Bertha Ganter - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	158	130	26	16	12	12	34	89	70	13	11	10	10	33	24	39	687
3 - 4	0	0	0	0	0	0	0	2	2	1	0	0	0	0	0	0	5
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	158	130	26	16	12	12	34	91	72	14	11	10	10	33	24	39	692

Total Number of Valid Hours: 692

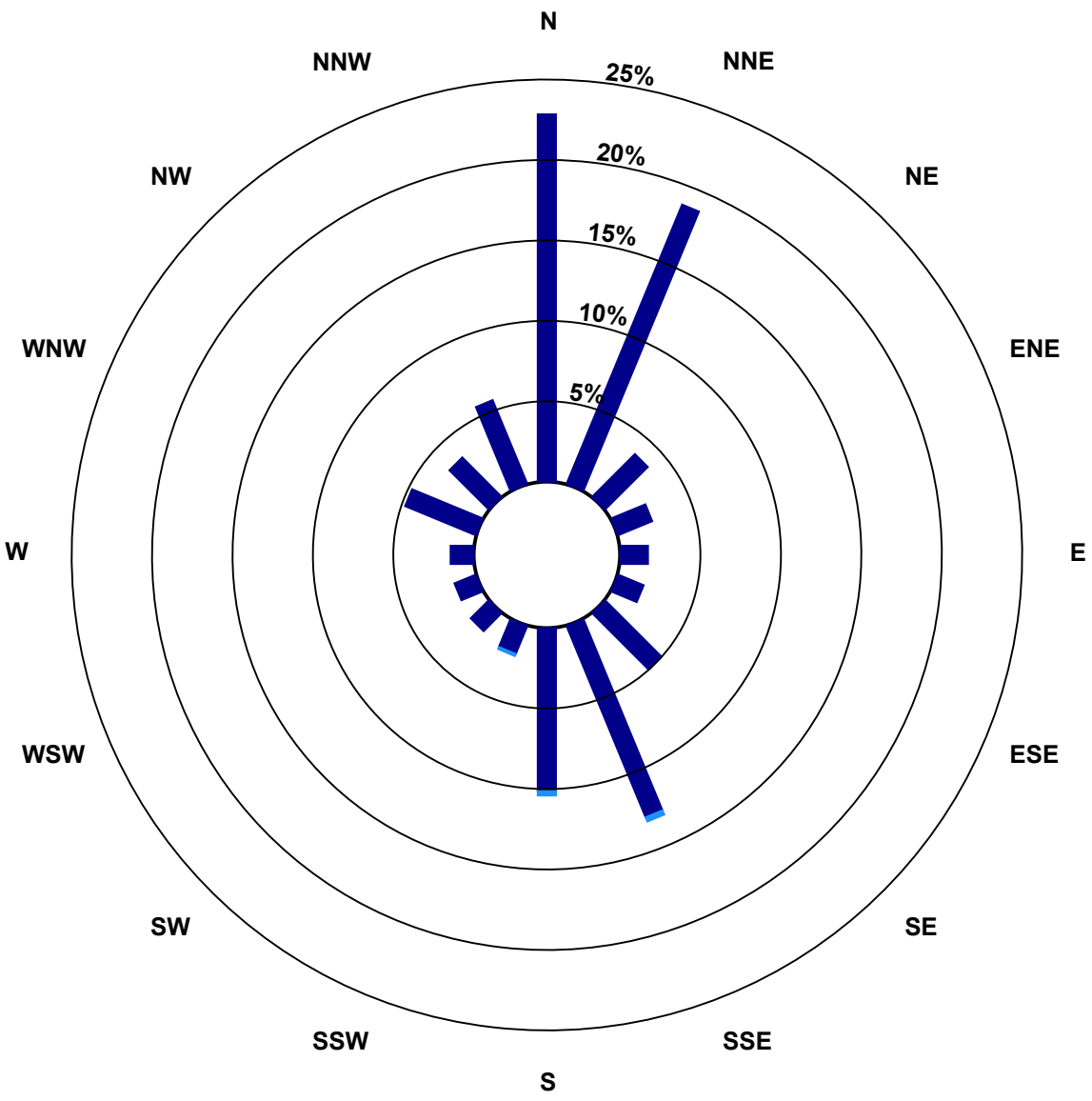
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Hydrogen Sulphide (H_2S) - ppb

Fort McKay - Bertha Ganter



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

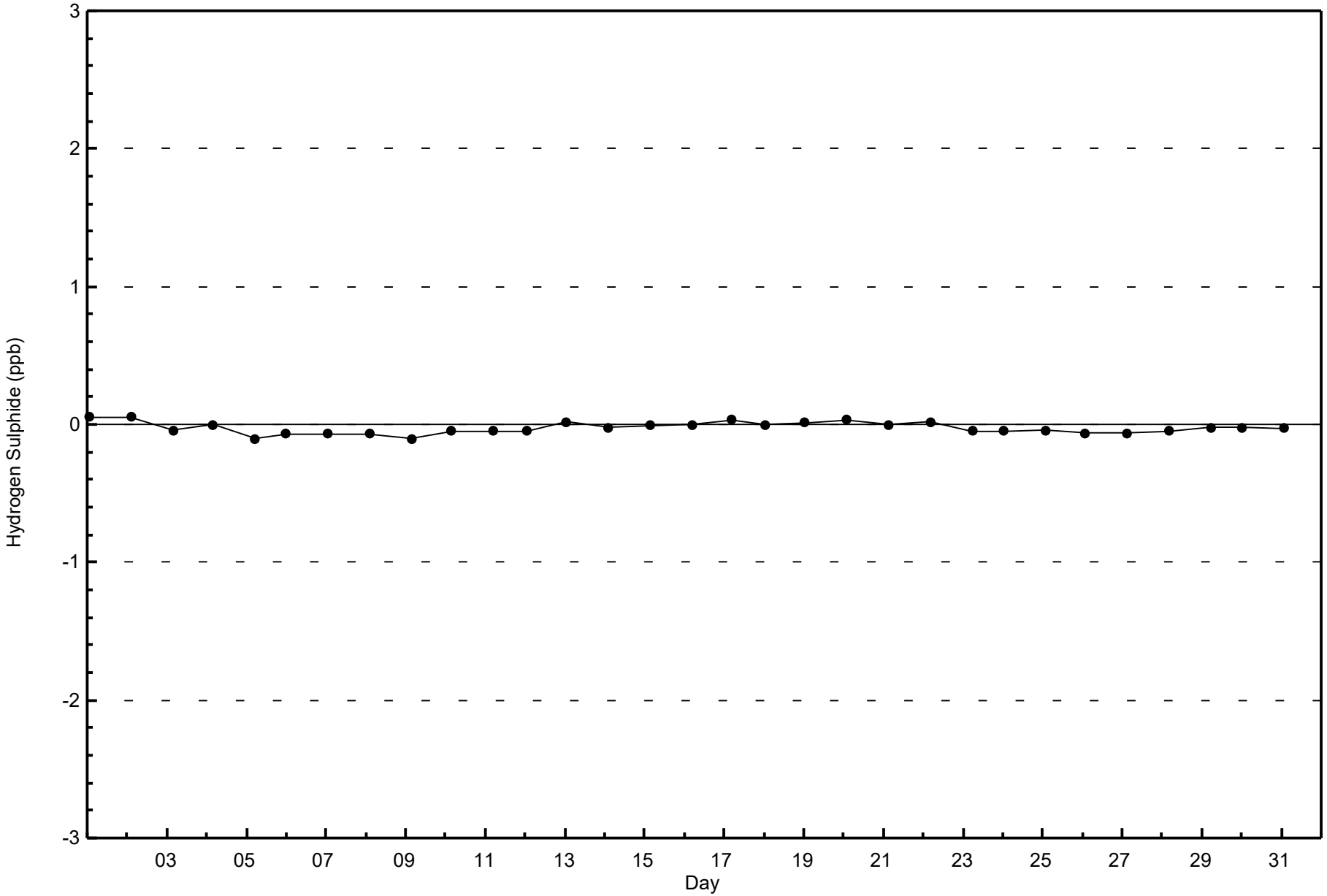
Total Number of Valid Hours: 692

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Fort McKay - Bertha Ganter - March 2025

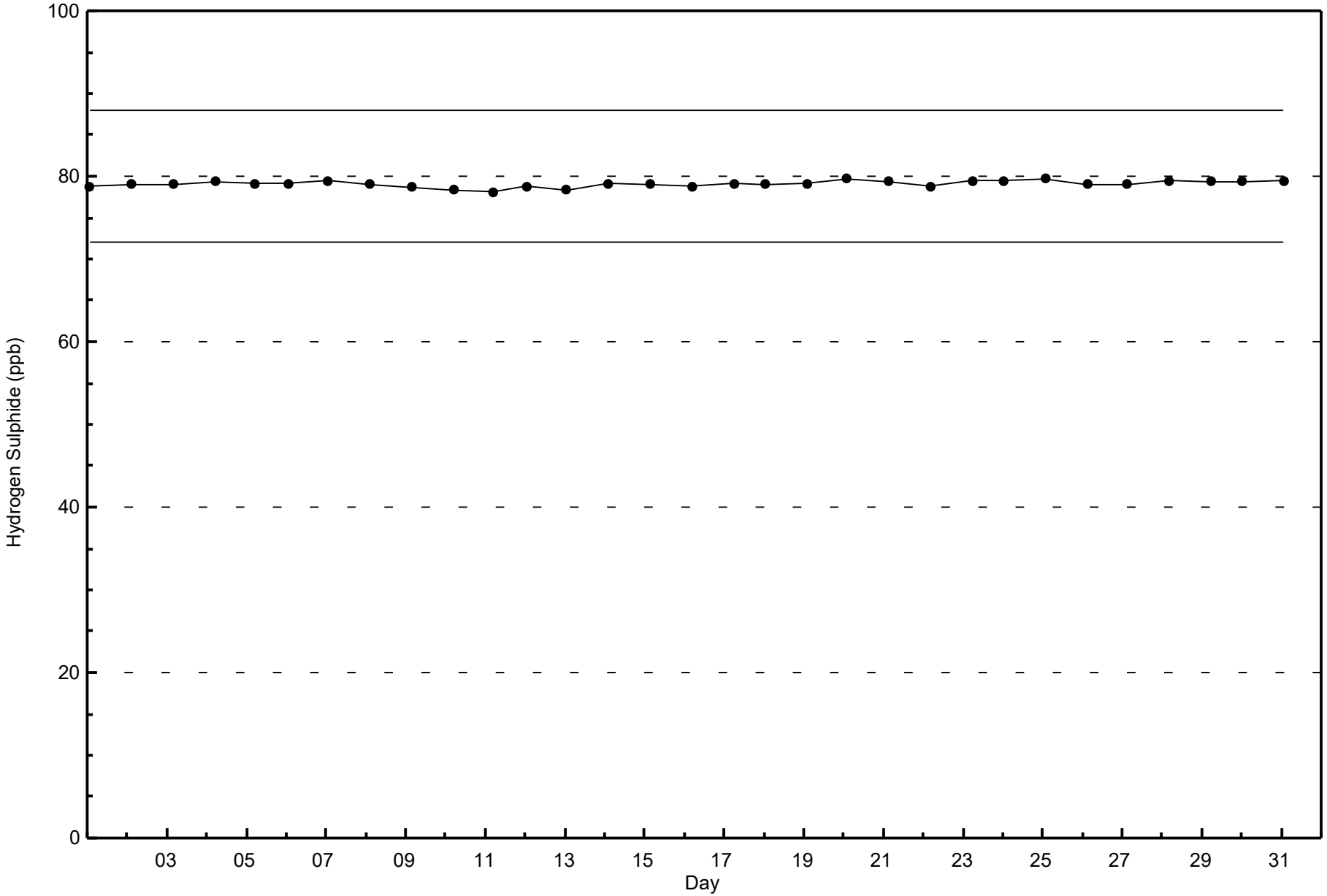


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Fort McKay - Bertha Ganter - March 2025



Number of Exceedences (AAAQG): 30-Min: 0

Maximum Value: 4.5 ppb on Mar 25 12:00 Maximum Daily Average: 1.4 ppb on Mar 4

Minimum Value: 0.2 ppb on Mar 27 16:30 Minimum Daily Average: 0.4 ppb on Mar 9

Maximum Diurnal Average: 1.0 ppb at hour 12 Minimum Diurnal Average: 0.6 ppb at hour 7

Monthly Average: 0.69 ppb Percentiles: P_1 = 0.3 P_{10} = 0.4 Q_1 = 0.5 Median = 0.5 Q_3 = 0.7 P_{90} = 1.0 P_{99} = 2.9

Periods in Service:	1488
Periods of Valid Data:	1289
Periods of Invalid Data:	199
Periods of Calibration:	86
Percent Operational Time:	92.4

Day	Period Ending At (MST) 00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00	Daily Average	Daily Maximum
1-Mar	0.6	Z	0.7	0.6	0.5	0.5	0.6	0.5	0.6	0.5	0.7	0.8	2.9	2.4	1.6	3.1	2.4	2.2	1.7	1.8	1.8	1.7	1.6	1.3	1.3	3.2
	0.6	SP	0.6	0.6	0.5	0.6	0.6	0.6	0.5	0.6	0.8	2.2	2.6	2.3	1.7	3.2	2.1	1.9	1.7	1.7	1.7	1.6	1.4	1.3		
2-Mar	1.2	1.2	Z	1.3	1.3	1.0	1.0	1.0	1.6	2.0	2.1	1.5	1.1	0.6	0.4	0.4	0.8	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.9	2.1
	1.2	1.4	SP	1.1	1.0	0.9	0.9	1.3	1.9	2.0	2.0	1.2	0.9	0.5	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4		
3-Mar	0.4	0.4	0.4	Z	0.5	0.5	0.5	0.5	0.6	0.5	0.5	1.5	0.8	0.7	0.8	0.7	0.7	0.6	0.9	0.7	0.6	0.7	1.1	1.9	0.8	2.2
	0.5	0.5	0.5	SP	0.6	0.5	0.5	0.5	0.5	0.5	0.7	1.6	0.7	0.7	0.7	0.7	0.6	0.8	0.7	0.6	0.6	0.9	1.8	2.2		
4-Mar	3.3	3.1	3.0	2.7	Z	1.6	1.5	1.3	2.8	2.1	1.6	1.3	2.1	1.3	1.0	1.2	0.4	0.4	0.4	0.4	0.6	0.6	0.6	0.5	1.4	3.3
	3.0	3.2	2.8	2.1	SP	1.8	1.1	2.5	2.1	1.5	1.3	1.5	1.7	1.1	1.2	0.5	0.4	0.4	0.4	0.4	0.6	0.6	0.5	0.5		
5-Mar	0.5	0.5	0.5	0.5	0.5	Z	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.8	0.7	0.9	0.9	0.8	0.9	0.8	0.7	0.6	0.6	1.0
	0.5	0.5	0.5	0.5	0.5	SP	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.7	0.7	0.8	1.0	0.9	0.9	0.9	0.7	0.7	0.7		
6-Mar	Z	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.9	1.0	0.6	0.8	0.8	0.7	0.6	0.6	0.9	0.6	0.7	0.9	1.8	1.1	1.1	0.8	2.9
	SP	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7	2.9	0.6	0.8	0.8	0.7	0.7	0.6	0.6	0.8	0.7	0.7	1.6	1.6	0.9	1.0		
7-Mar	UO	Z	0.6	0.6	0.6	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.9	0.9	1.0	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	1.0
	UO	SP	0.6	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.7	1.0	0.9	0.8	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		
8-Mar	0.5	0.5	Z	0.5	0.5	0.6	0.6	0.5	0.4	0.5	0.5	0.5	0.4	0.4	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.6
	0.5	0.5	SP	0.5	0.5	0.6	0.5	0.4	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	0.4		
9-Mar	0.5	0.4	0.4	Z	0.4	0.4	0.5	0.5	0.4	0.5	0.4	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.5	0.5	0.4	0.5
	0.4	0.4	0.4	SP	0.5	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	0.4	0.4	0.4	0.5	0.5	0.5		
10-Mar	0.5	0.5	0.4	0.5	Z	0.5	0.5	0.5	0.5	0.6	0.5	0.8	0.9	0.9	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.6	0.7	0.6	0.6	0.9
	0.5	0.5	0.5	0.5	SP	0.5	0.5	0.5	0.6	0.5	0.7	0.8	0.9	0.8	0.6	0.6	0.6	0.6	0.7	0.8	0.7	0.7	0.7	0.7		
11-Mar	0.6	0.6	0.6	0.6	0.5	Z	0.6	0.5	0.6	0.7	0.6	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.7
	0.6	0.6	0.6	0.5	0.5	SP	0.5	0.5	0.7	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5		
12-Mar	Z	0.6	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.5	0.5	0.6	0.6	0.6	0.5	0.7
	SP	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	0.6	0.5	0.5	0.4	0.5	0.6	0.7	0.6	0.5		
13-Mar	0.5	Z	0.6	0.5	0.5	0.6	0.5	0.6	0.5	0.6	1.1	0.8	0.6	0.6	0.5	0.5	0.4	0.5	0.5	0.5	0.8	0.9	0.7	0.6	0.6	1.5
	0.6	SP	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.8	1.1	0.5	0.6	0.5	0.5	0.5	0.5	0.7	0.5	0.5	1.5	1.0	0.6	0.6		
14-Mar	0.5	0.5	Z	0.6	0.5	0.5	0.5	0.5	0.5	0.5	1.5	0.7	0.9	0.6	0.6	0.8	0.8	0.5	1.5	3.9	0.6	1.2	0.5	0.4	0.9	3.9
	0.5	0.5	SP	0.5	0.5	0.5	0.5	0.4	0.5	1.0	1.0	1.2	0.9	0.7	0.6	0.8	0.8	0.6	3.6	1.9	3.3	0.5	0.4	0.4		
15-Mar	0.5	0.6	0.6	Z	0.5	0.5	0.4	0.4	0.5	0.4	1.6	1.0	0.9	0.7	0.6	0.7	0.6	0.6	0.5	0.5	0.7	0.8	0.9	1.8	0.7	1.9
	0.4	0.6	0.7	SP	0.5	0.4	0.4	0.4	0.4	0.6	1.3	1.0	0.8	0.7	0.6	0.6	0.6	0.6	0.5	0.6	0.7	0.6	1.9	1.9		

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort McKay - Bertha Ganter - March 2025

Day	Period Ending At (MST) 00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00	Daily Average	Daily Maximum
16-Mar	1.0	0.9	0.6	0.6	Z	0.5	0.6	0.6	0.8	1.2	0.9	1.2	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.7	1.4
	1.0	0.8	0.6	0.5	SP	0.6	0.5	0.7	0.9	1.0	0.8	1.4	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.5	0.5	0.5		
17-Mar	0.5	0.5	0.5	0.5	0.5	Z	0.6	0.7	1.4	0.8	0.8	1.2	0.6	0.6	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	1.4
	0.5	0.5	0.5	0.5	0.5	SP	0.6	0.7	1.3	0.8	0.9	0.7	0.6	0.5	0.5	0.6	0.5	0.5	0.7	0.5	0.6	0.6	0.7	0.7		
18-Mar	Z	0.7	1.1	1.3	1.5	0.8	0.7	0.6	0.7	0.8	0.8	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.6	0.6	0.6	0.8	0.7	0.5	0.7	1.6
	SP	0.9	1.3	1.6	1.0	0.6	0.6	0.8	0.7	0.9	0.7	0.5	0.6	0.6	0.6	0.7	0.8	0.6	0.6	0.6	0.9	0.7	0.5	0.5		
19-Mar	0.5	Z	0.5	0.6	0.7	0.6	0.6	0.6	0.6	0.7	0.6	C	C	C	C	C	C	M	M	M	M	M	M	M	--	0.7
	0.5	SP	0.5	0.6	0.6	0.6	0.6	0.5	0.6	0.6	C	C	C	C	C	C	M	M	M	M	M	M	M	M		
20-Mar	M	M	M	M	M	M	M	M	M	M	M	C	C	C	C	0.5	0.4	0.4	0.4	0.5	0.8	0.6	0.5	0.6	--	0.8
	M	M	M	M	M	M	M	M	M	M	C	C	C	C	0.5	0.4	0.4	0.4	0.4	0.7	0.7	0.6	0.6	0.6		
21-Mar	0.5	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.5	1.0	0.9	0.6	1.0	M	0.5	0.7	0.6	0.4	0.4	0.4	0.4	0.3	0.3	0.5	1.0
	0.5	0.4	0.4	SP	0.4	0.4	0.4	0.4	0.5	0.9	1.0	0.7	0.6	M	0.7	0.5	0.7	0.5	0.4	0.4	0.3	0.3	0.3	0.3		
22-Mar	0.4	0.4	0.5	0.8	Z	0.5	0.5	0.5	0.4	0.5	0.6	0.5	0.9	1.6	0.9	0.7	0.7	1.0	0.7	0.5	0.5	0.8	0.8	0.7	0.7	1.6
	0.4	0.4	0.8	0.7	SP	0.5	0.5	0.5	0.5	0.6	0.6	0.6	1.2	1.6	0.6	0.7	0.8	1.0	0.5	0.5	0.6	0.8	0.8	0.7		
23-Mar	0.7	0.6	0.6	0.6	0.6	Z	0.6	0.6	0.6	0.7	0.6	2.2	0.8	0.6	0.6	0.5	0.5	0.5	0.5	0.7	1.3	0.9	0.8	0.7	0.7	2.2
	0.7	0.6	0.6	0.6	0.6	SP	0.6	0.6	0.7	0.6	1.6	1.1	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.9	1.0	0.9	0.7	0.7		
24-Mar	Z	0.8	0.7	0.7	0.7	0.7	0.8	UO	UO	UO	M	2.2	2.4	1.0	1.6	0.6	0.6	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.9	3.3
	SP	0.7	0.7	0.8	0.7	0.7	UO	UO	UO	UO	M	2.0	1.4	0.8	0.9	3.3	0.5	0.5	0.7	0.5	0.5	0.5	0.5	0.5		
25-Mar	0.5	Z	0.5	0.4	0.4	0.5	0.5	0.5	0.4	0.5	0.5	2.7	1.4	0.9	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.6	4.5
	0.5	SP	0.4	0.4	0.5	0.4	0.5	0.5	0.4	0.6	0.5	4.5	0.7	0.5	0.4	0.4	0.5	0.4	0.5	0.6	0.5	0.5	0.5	0.5		
26-Mar	0.5	0.4	Z	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	0.5
	0.5	0.4	SP	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF		
27-Mar	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	M	C	C	C	C	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	--	0.4
	AF	AF	AF	AF	AF	AF	AF	AF	AF	M	M	C	C	C	C	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4		
28-Mar	0.4	0.4	0.4	0.5	Z	0.5	0.5	0.4	0.5	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.7
	0.4	0.4	0.4	0.5	SP	0.4	0.5	0.5	0.7	0.7	0.6	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.5		
29-Mar	0.5	0.5	0.4	0.5	0.5	Z	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.7	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.7
	0.5	0.4	0.4	0.5	0.5	SP	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.5	0.6	0.6	0.5		
30-Mar	Z	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.8	0.7	0.6	0.7	0.7	0.5	0.4	0.5	0.5	0.6	0.8
	SP	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.8	0.7	0.7	0.6	0.6	0.4	0.5	0.5	0.5		
31-Mar	0.5	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.8	0.5	0.6	0.5	0.5	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.8
	0.5	SP	0.4	0.4	0.4	0.4	0.4	0.4	0.6	0.6	0.7	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4		
	0.7	0.7	0.6	0.7	0.6	0.6	0.6	0.6	0.7	0.8	0.8	1.0	0.9	0.7	0.7	0.7	0.6	0.6	0.6	0.7	0.7	0.7	0.6	0.7	Diurnal Average	
	3.3	3.2	3.0	2.7	1.5	1.8	1.5	2.5	2.8	2.9	2.1	4.5	2.9	2.4	1.7	3.3	2.4	2.2	3.6	3.9	3.3	1.8	1.9	2.2	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance AF - Analyzer Failure UO - Unstable Operation SP - Span

Alberta Ambient Air Quality Guideline (AAAQG): 30-Min: 5 ppb

Wood Buffalo Environmental Association

Summary of Hour Averages

Total Reduced Sulphur (TRS) - ppb

Fort McKay - Bertha Ganter - March 2025

Maximum Value: 3.6 ppb on Mar 25 12:00

Maximum Daily Average: 1.4 ppb on Mar 4

Minimum Value: 0.2 ppb on Mar 27 17:00

Minimum Daily Average: 0.4 ppb on Mar 9

Maximum Diurnal Average: 1.0 ppb at hour 12

Minimum Diurnal Average: 0.6 ppb at hour 7

Monthly Average: 0.69 ppb

Percentiles: $P_1 = 0.3$ $P_{10} = 0.4$ $Q_1 = 0.5$ Median = 0.6 $Q_3 = 0.7$ $P_{90} = 1.1$ $P_{99} = 2.7$

Hours in Service:	744
Hours of Data:	645
Hours of Missing Data:	99
Hours of Calibration:	43
Percent Operational Time:	92.5

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.6	Z	0.6	0.6	0.5	0.5	0.6	0.6	0.5	0.6	0.7	1.5	2.8	2.3	1.6	3.1	2.3	2.1	1.7	1.8	1.8	1.7	1.5	1.3	1.3	3.1
2-Mar	1.2	1.3	Z	1.2	1.2	1.0	0.9	1.1	1.7	2.0	2.0	1.3	1.0	0.5	0.4	0.4	0.6	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.9	2.0
3-Mar	0.5	0.4	0.5	Z	0.6	0.5	0.5	0.5	0.5	0.5	0.6	1.5	0.8	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.6	0.8	1.5	2.1	0.8	2.1
4-Mar	3.2	3.2	2.9	2.4	Z	1.7	1.3	1.9	2.4	1.8	1.4	1.4	1.9	1.2	1.1	0.8	0.4	0.4	0.4	0.4	0.6	0.6	0.5	0.5	1.4	3.2
5-Mar	0.5	0.5	0.5	0.5	0.5	Z	0.5	0.4	0.5	0.6	0.5	0.5	0.5	0.5	0.7	0.8	0.7	0.9	0.9	0.8	0.9	0.8	0.7	0.6	0.6	0.9
6-Mar	Z	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	1.9	0.8	0.7	0.8	0.7	0.7	0.6	0.6	0.9	0.7	0.7	1.2	1.7	1.0	1.0	0.8	1.9
7-Mar	UO	Z	0.6	0.6	0.6	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.9	0.9	0.9	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.9
8-Mar	0.5	0.5	Z	0.5	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	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.6
9-Mar	0.4	0.4	0.4	Z	0.5	0.4	0.4	0.5	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	0.5	0.5	0.5	0.4	0.5
10-Mar	0.5	0.5	0.5	0.5	Z	0.5	0.5	0.5	0.5	0.6	0.6	0.8	0.9	0.8	0.6	0.6	0.6	0.6	0.7	0.8	0.7	0.7	0.7	0.6	0.6	0.9
11-Mar	0.6	0.6	0.6	0.6	0.5	Z	0.6	0.5	0.6	0.7	0.6	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.7
12-Mar	Z	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.5	0.5	0.7	0.6	0.5	0.5	0.7
13-Mar	0.6	Z	0.6	0.5	0.5	0.6	0.6	0.5	0.5	0.7	1.1	0.7	0.6	0.5	0.5	0.5	0.5	0.6	0.5	0.5	1.1	1.0	0.6	0.6	0.6	1.1
14-Mar	0.5	0.5	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.7	1.3	1.0	0.9	0.7	0.6	0.8	0.8	0.5	2.6	2.9	2.0	0.8	0.4	0.4	0.9	2.9
15-Mar	0.4	0.6	0.7	Z	0.5	0.4	0.4	0.4	0.4	0.5	1.5	1.0	0.8	0.7	0.6	0.6	0.6	0.6	0.5	0.6	0.7	0.7	1.4	1.9	0.7	1.9
16-Mar	1.0	0.9	0.6	0.5	Z	0.6	0.5	0.7	0.9	1.1	0.9	1.3	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.7	1.3
17-Mar	0.5	0.5	0.5	0.5	0.5	Z	0.6	0.7	1.4	0.8	0.8	0.9	0.6	0.5	0.5	0.6	0.5	0.5	0.6	0.5	0.6	0.6	0.6	0.7	0.6	1.4
18-Mar	Z	0.8	1.2	1.4	1.3	0.7	0.6	0.7	0.7	0.8	0.8	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.6	0.6	0.7	0.8	0.6	0.5	0.7	1.4
19-Mar	0.5	Z	0.5	0.6	0.6	0.6	0.6	0.5	0.6	0.7	C	C	C	C	C	C	C	M	M	M	M	M	M	M	--	0.7
20-Mar	M	M	M	M	M	M	M	M	M	M	M	C	C	C	0.5	0.4	0.4	0.4	0.4	0.6	0.8	0.6	0.6	0.6	--	0.8
21-Mar	0.5	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.5	0.7	1.0	0.8	0.6	1.0	0.7	0.5	0.7	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.5	1.0
22-Mar	0.4	0.4	0.6	0.7	Z	0.5	0.5	0.5	0.5	0.5	0.6	0.6	1.0	1.6	0.8	0.7	0.8	1.0	0.6	0.5	0.6	0.8	0.8	0.7	0.7	1.6
23-Mar	0.7	0.6	0.6	0.6	0.6	Z	0.6	0.6	0.6	0.7	1.1	1.7	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.8	1.2	0.9	0.8	0.7	0.7	1.7
24-Mar	Z	0.7	0.7	0.8	0.7	0.7	UO	UO	UO	UO	M	2.1	1.9	0.9	1.2	1.9	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.9	2.1
25-Mar	0.5	Z	0.5	0.4	0.4	0.4	0.5	0.5	0.4	0.6	0.5	3.6	1.0	0.7	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	3.6
26-Mar	0.5	0.4	Z	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	0.5
27-Mar	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	M	C	C	C	C	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	--	0.4
28-Mar	0.4	0.4	0.4	0.5	Z	0.5	0.5	0.5	0.6	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.7
29-Mar	0.5	0.5	0.4	0.5	0.5	Z	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.6	0.5	0.6	0.6	0.6	0.5	0.5	0.6	0.5	0.5	0.6
30-Mar	Z	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.5	0.5	0.5	0.5	0.6	0.8
31-Mar	0.5	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.7	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.7
	0.7	0.7	0.6	0.7	0.6	0.6	0.6	0.6	0.7	0.8	0.8	1.0	0.9	0.7	0.7	0.7	0.6	0.6	0.6	0.7	0.7	0.7	0.6	0.7	Diurnal Average	
	3.2	3.2	2.9	2.4	1.3	1.7	1.3	1.9	2.4	2.0	2.0	3.6	2.8	2.3	1.6	3.1	2.3	2.1	2.6	2.9	2.0	1.7	1.5	2.1	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance AF - Analyzer Failure UO - Unstable Operation

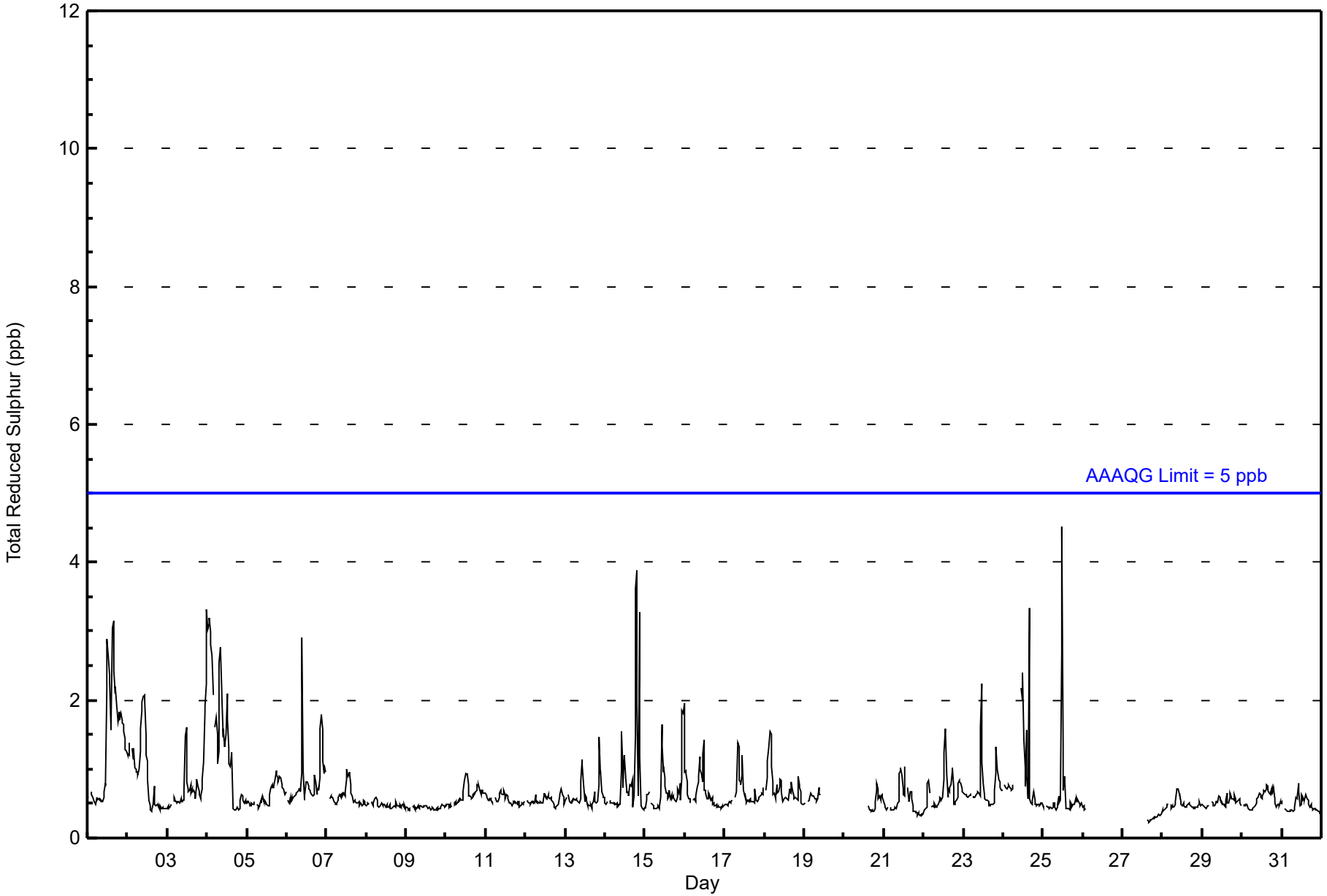
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Fort McKay - Bertha Ganter - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	637	98.76	98.76
3 - 4	8	1.24	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: 645

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Fort McKay - Bertha Ganter - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	136	101	21	14	12	12	34	85	70	13	10	10	10	33	24	38	623
3 - 4	2	0	0	0	0	0	0	3	2	1	0	0	0	0	0	0	8
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	138	101	21	14	12	12	34	88	72	14	10	10	10	33	24	38	631

Total Number of Valid Hours: 631

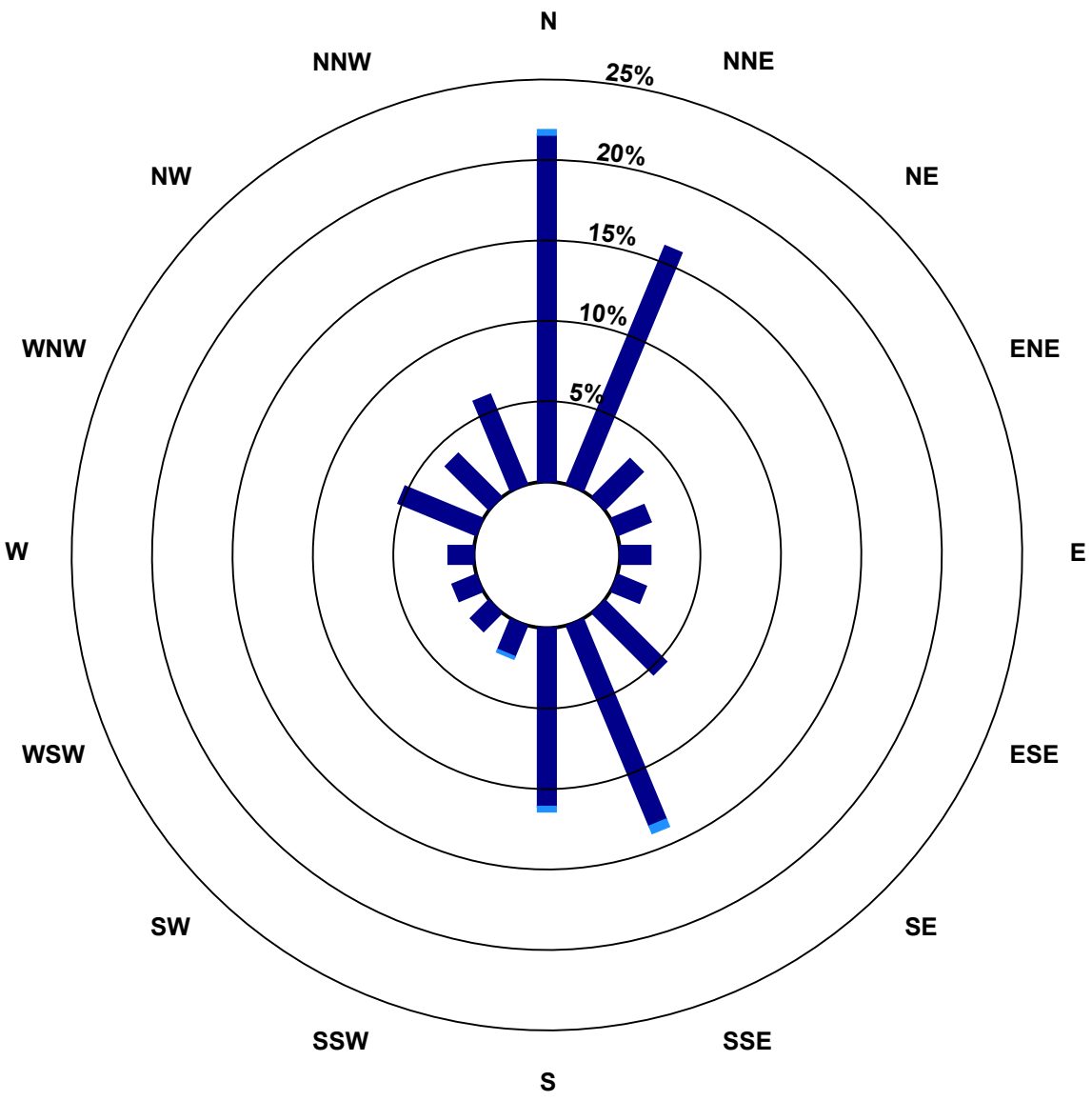
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Total Reduced Sulphur (TRS) - ppb

Fort McKay - Bertha Ganter



Classes (ppb)

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

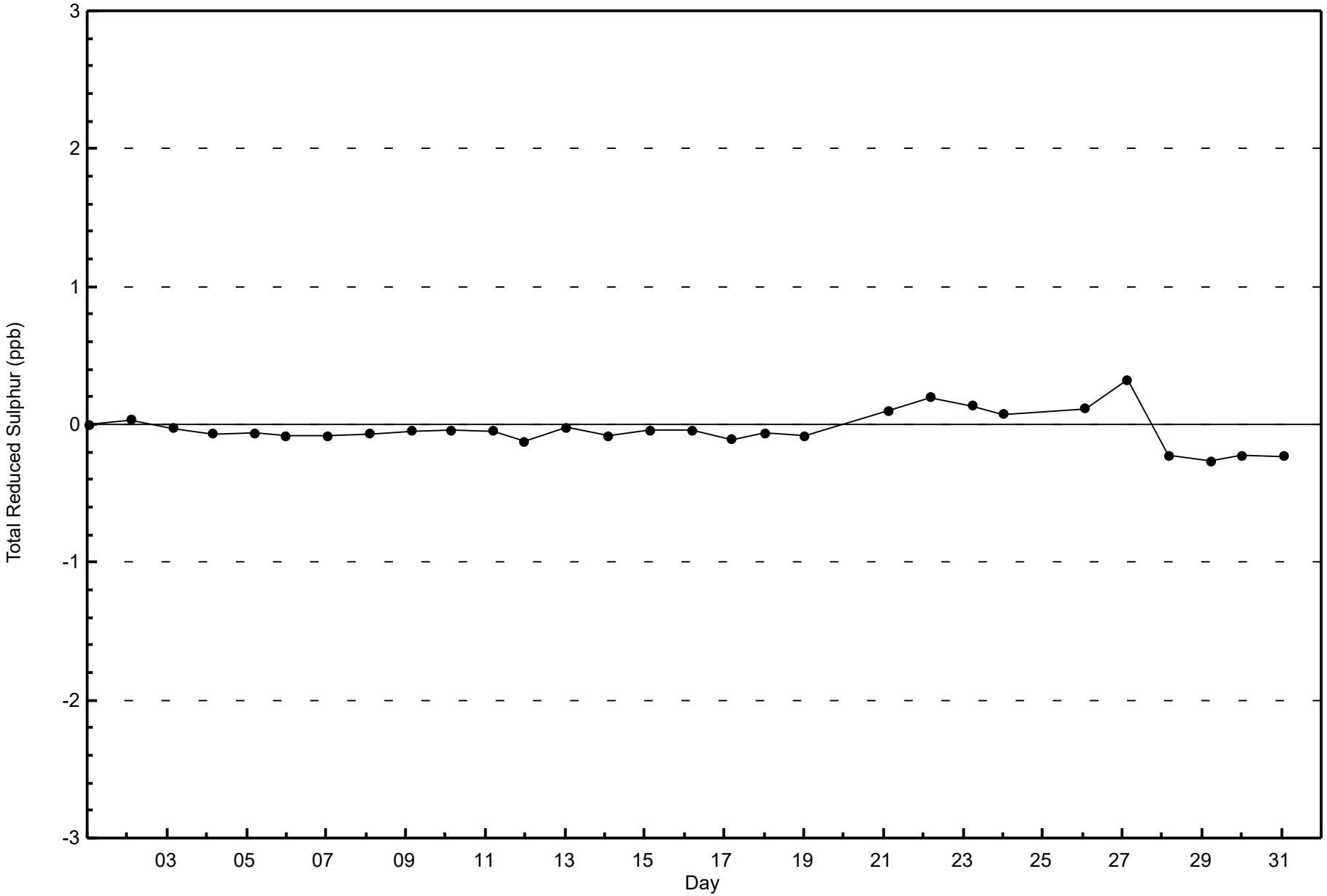
Total Number of Valid Hours: 631

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Fort McKay - Bertha Ganter - March 2025

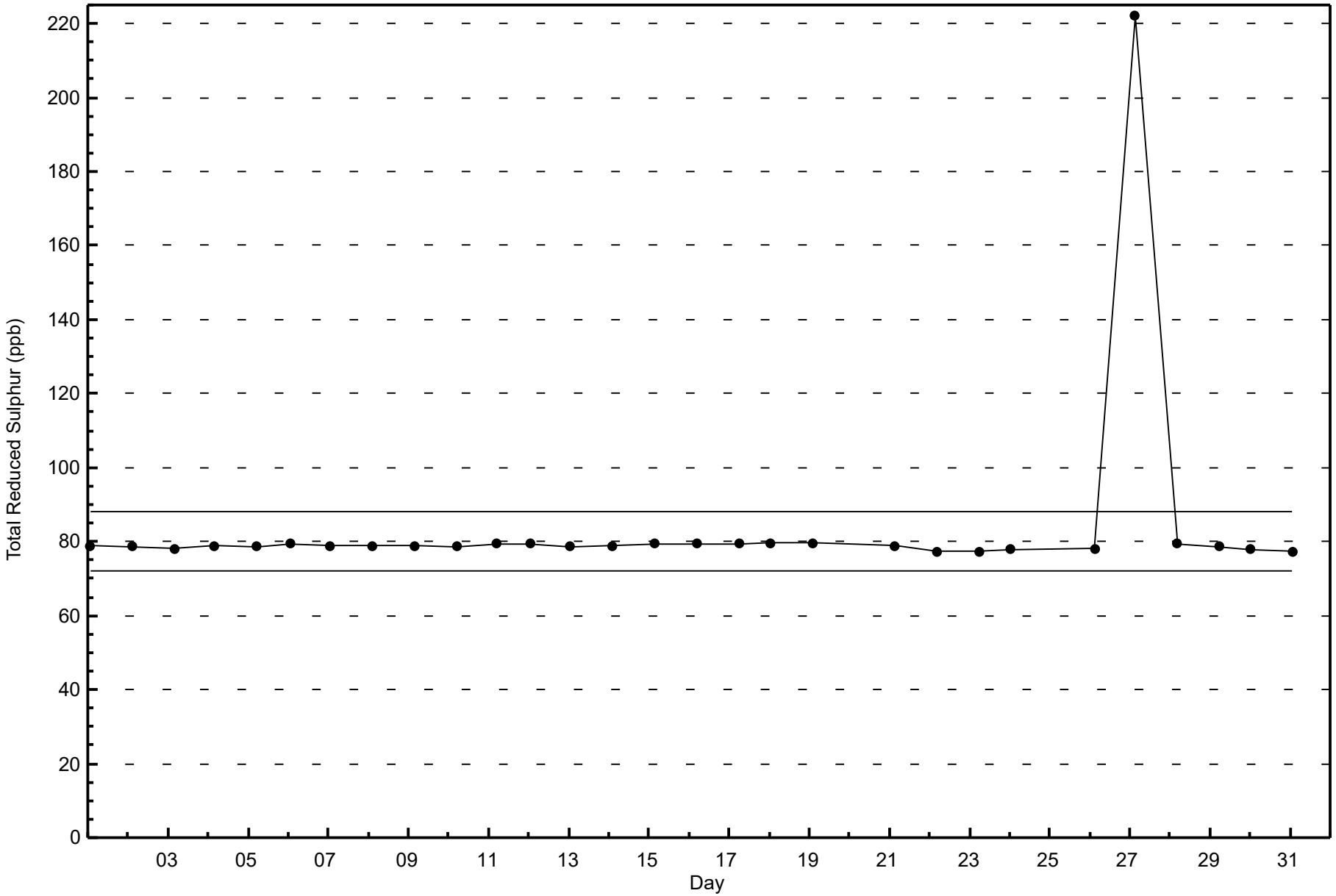


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Fort McKay - Bertha Ganter - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Fort McKay - Bertha Ganter - March 2025

Maximum Value: 5.5 ppm on Mar 2 10:00

Maximum Daily Average: 3.0 ppm on Mar 2

Minimum Value: 1.9 ppm on Mar 4 18:00

Minimum Daily Average: 2.0 ppm on Mar 31

Maximum Diurnal Average: 2.4 ppm at hour 11

Minimum Diurnal Average: 2.1 ppm at hour 19

Monthly Average: 2.23 ppm

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

Hours in Service:	744
Hours of Data:	665
Hours of Missing Data:	79
Hours of Calibration:	41
Percent Operational Time:	94.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	Z	2.4	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.2	2.2	2.1	2.2	2.3	2.3	2.4	2.5	2.9	3.0	2.3	3.0
2-Mar	3.1	Z	3.5	3.2	3.1	2.7	2.6	3.2	5.0	5.5	5.2	4.1	3.2	2.2	2.0	2.2	2.8	2.2	2.1	2.2	2.3	2.0	2.0	2.2	3.0	5.5
3-Mar	2.2	2.4	Z	2.3	2.4	2.2	2.1	2.1	2.3	2.3	2.3	2.4	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.2	2.4	2.5	2.5	2.2	2.5
4-Mar	3.0	2.9	3.0	Z	2.8	2.8	2.7	2.6	2.5	2.5	2.4	2.2	2.3	2.3	2.4	2.2	2.0	1.9	2.0	2.0	2.3	2.2	2.2	2.2	2.4	3.0
5-Mar	2.3	2.3	2.1	2.0	Z	2.0	2.0	2.0	2.3	2.2	2.2	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.8	3.1	2.5	2.4	2.4	2.2	3.1
6-Mar	2.4	2.2	2.4	2.3	2.3	Z	2.6	2.6	2.5	2.8	2.1	2.2	2.3	2.2	2.1	2.1	2.0	2.0	2.1	2.2	2.5	2.6	2.5	2.7	2.3	2.8
7-Mar	Z	2.2	2.4	2.5	2.4	2.1	2.2	2.3	2.3	2.5	2.6	2.5	C	C	C	C	C	C	C	C	C	M	M	M	--	2.6
8-Mar	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--
9-Mar	M	M	M	M	M	M	M	M	M	M	M	C	C	C	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.2	--	2.2
10-Mar	2.1	2.2	2.2	Z	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.5	2.4	2.3	2.1	2.1	2.1	2.1	2.4	2.6	2.4	2.5	2.5	2.3	2.3	2.6
11-Mar	2.3	2.3	2.3	2.3	Z	2.2	2.2	2.2	2.2	2.4	2.4	2.4	2.3	2.2	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.4
12-Mar	2.1	2.1	2.1	2.1	2.1	Z	2.2	2.2	2.2	2.2	2.1	2.1	2.3	2.3	2.2	2.1	2.1	2.0	2.0	2.0	2.2	2.4	2.4	2.3	2.2	2.4
13-Mar	Z	2.4	2.4	2.5	2.6	2.7	2.6	2.6	2.4	2.6	3.9	2.4	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.4	3.9
14-Mar	2.1	Z	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.1
15-Mar	2.0	2.3	Z	2.2	2.2	2.1	2.0	2.1	2.1	2.2	2.7	2.3	2.2	2.1	2.0	2.1	2.0	2.0	2.0	2.1	2.2	2.3	2.4	2.1	2.2	2.7
16-Mar	2.2	2.2	2.2	Z	2.4	2.7	2.7	2.6	2.4	2.5	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.7
17-Mar	2.0	2.0	2.0	2.0	Z	2.1	2.1	2.2	2.2	2.1	2.6	2.5	2.2	2.2	2.3	2.2	2.1	2.1	2.3	2.4	2.7	3.4	2.7	2.7	2.3	3.4
18-Mar	2.6	2.6	2.4	2.7	2.9	Z	2.5	2.5	2.7	2.6	2.3	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	2.3	2.9
19-Mar	Z	2.2	2.2	2.4	2.6	2.5	2.4	2.3	2.2	2.3	2.4	2.6	2.3	2.2	2.1	2.1	2.2	2.4	2.2	2.2	2.1	2.0	2.0	2.0	2.3	2.6
20-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.1	2.2
21-Mar	2.1	2.0	Z	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
22-Mar	2.1	2.2	2.2	Z	2.0	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.1	2.2	2.6	2.1	2.0	2.0	2.2	2.2	2.1	2.1	2.6
23-Mar	2.0	2.0	2.0	2.1	Z	2.3	2.2	2.3	2.4	2.3	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.4	2.5	2.5	2.4	2.4	2.2	2.5
24-Mar	2.5	2.5	2.5	2.6	2.7	Z	2.8	2.9	2.7	2.2	2.2	2.3	2.4	2.1	2.0	2.0	2.0	2.0	2.2	2.1	2.0	2.0	2.0	2.0	2.3	2.9
25-Mar	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.0	2.1	2.2	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
26-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.2	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.0	2.2	2.2	2.2	2.1	2.1	2.1	2.2
27-Mar	2.1	2.2	Z	2.0	2.0	2.0	2.0	2.2	2.2	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2
28-Mar	2.1	2.2	2.2	Z	2.3	2.3	2.4	2.4	2.5	2.7	2.5	2.3	2.2	2.1	2.0	2.0	2.0	2.2	2.2	2.1	2.1	2.2	2.4	2.1	2.2	2.7
29-Mar	2.2	2.1	2.2	2.4	Z	2.4	2.4	2.2	2.4	2.4	2.4	2.2	2.1	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.2	2.3	2.3	2.2	2.2	2.4
30-Mar	2.2	2.2	2.3	2.3	2.1	Z	2.3	2.4	2.5	2.5	2.5	2.4	2.3	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.2	2.4	2.2	2.3	2.3	2.5
31-Mar	Z	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
	2.2	2.2	2.3	2.3	2.3	2.2	2.3	2.3	2.4	2.4	2.4	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.2	Diurnal Average	
	3.1	2.9	3.5	3.2	3.1	2.8	2.8	3.2	5.0	5.5	5.2	4.1	3.2	2.5	2.5	2.4	2.8	2.6	2.4	2.8	3.1	3.4	2.9	3.0	Diurnal Maximum	

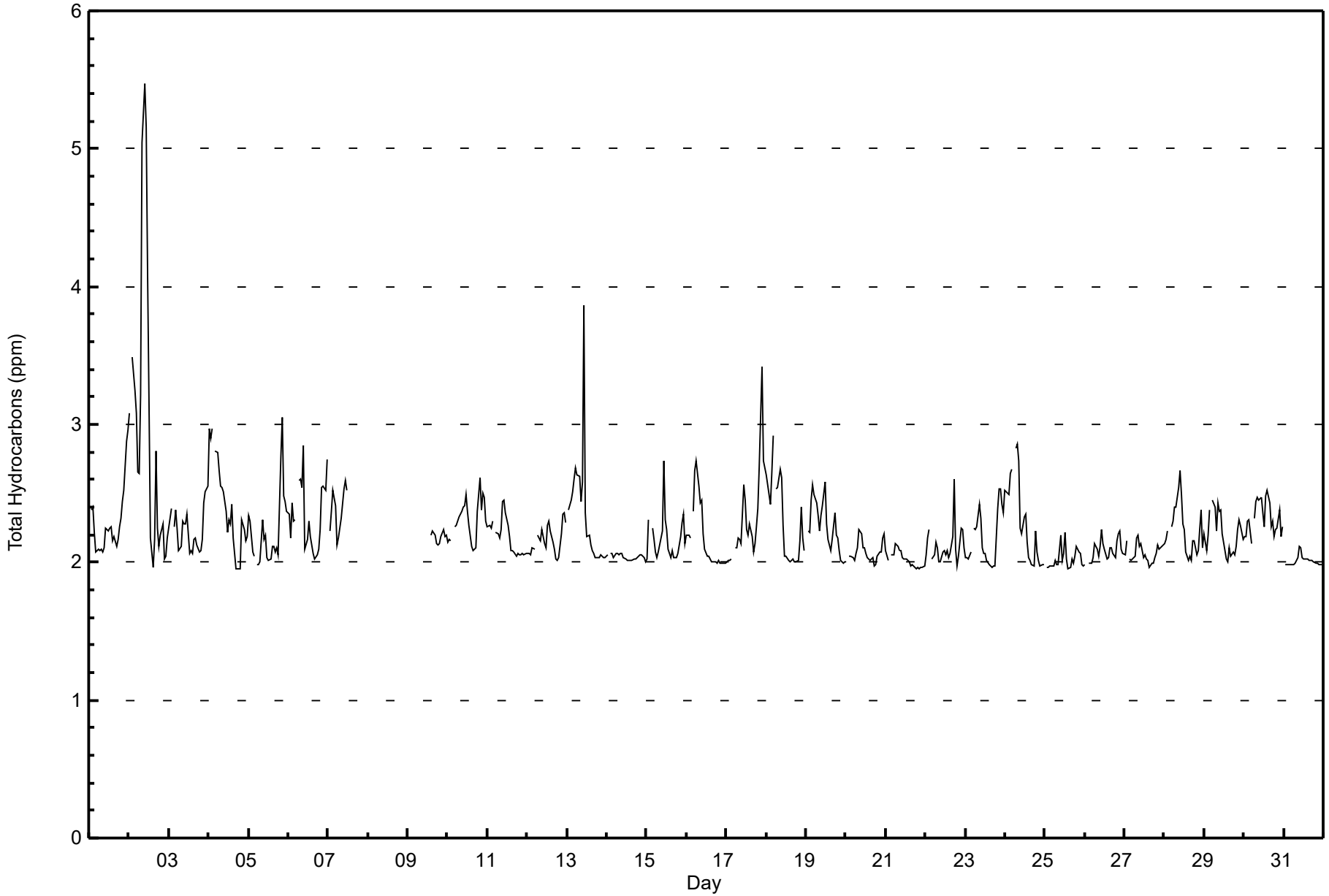
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Fort McKay - Bertha Ganter - March 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	188	28.27	28.27
2.1 - 3.0	464	69.77	98.05
3.1 - 10.0	13	1.95	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 665

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Fort McKay - Bertha Ganter - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	38	26	2	7	6	5	13	33	28	2	3	7	1	9	3	3	186
2.1 - 3.0	96	87	19	9	5	8	21	60	41	11	6	5	8	24	18	34	452
3.1 - 10.0	2	2	0	0	0	0	0	3	5	0	0	0	1	0	0	0	13
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	136	115	21	16	11	13	34	96	74	13	9	12	10	33	21	37	651

Total Number of Valid Hours: 651

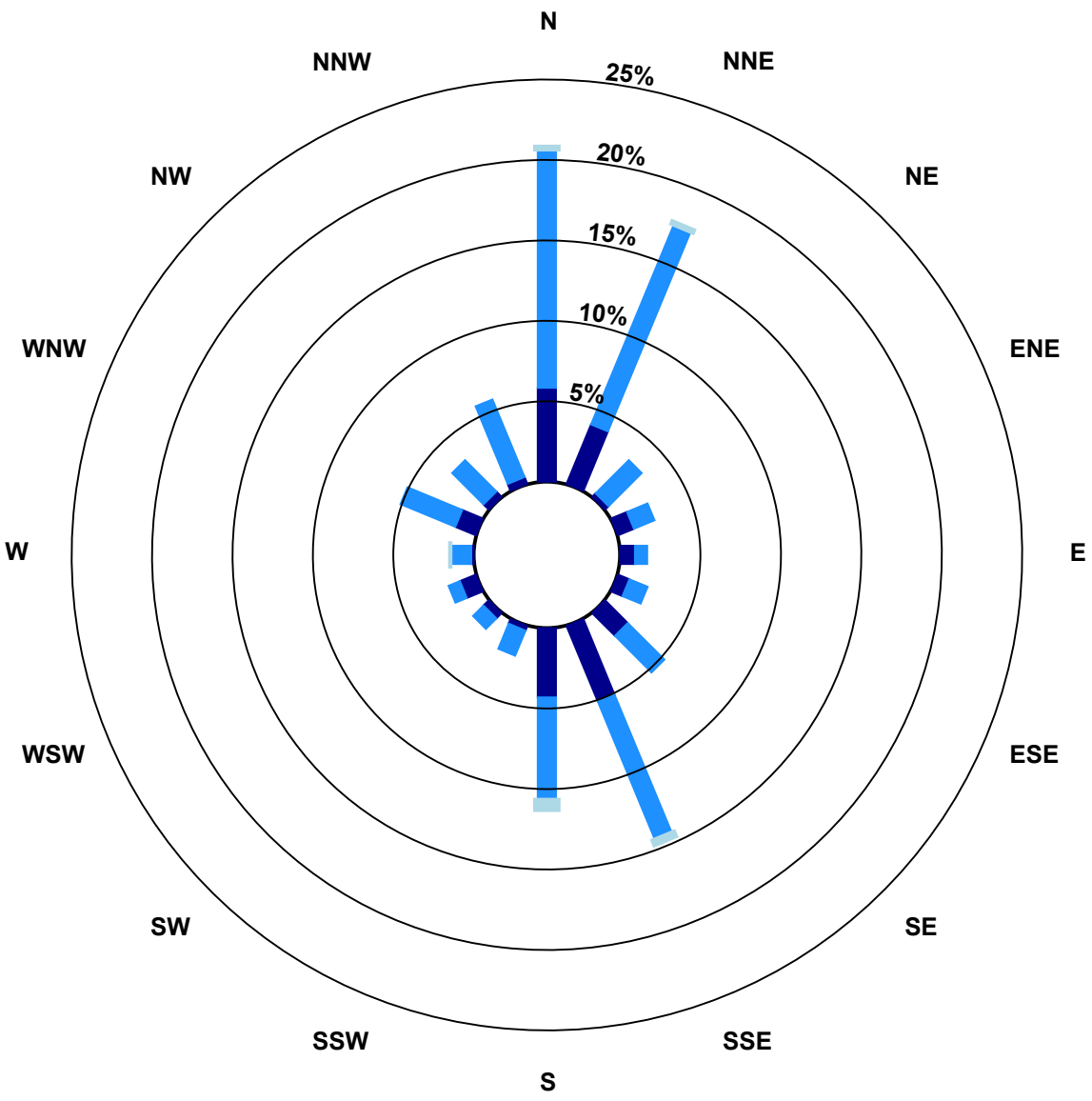
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Total Hydrocarbons (THC) - ppm

Fort McKay - Bertha Ganter



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

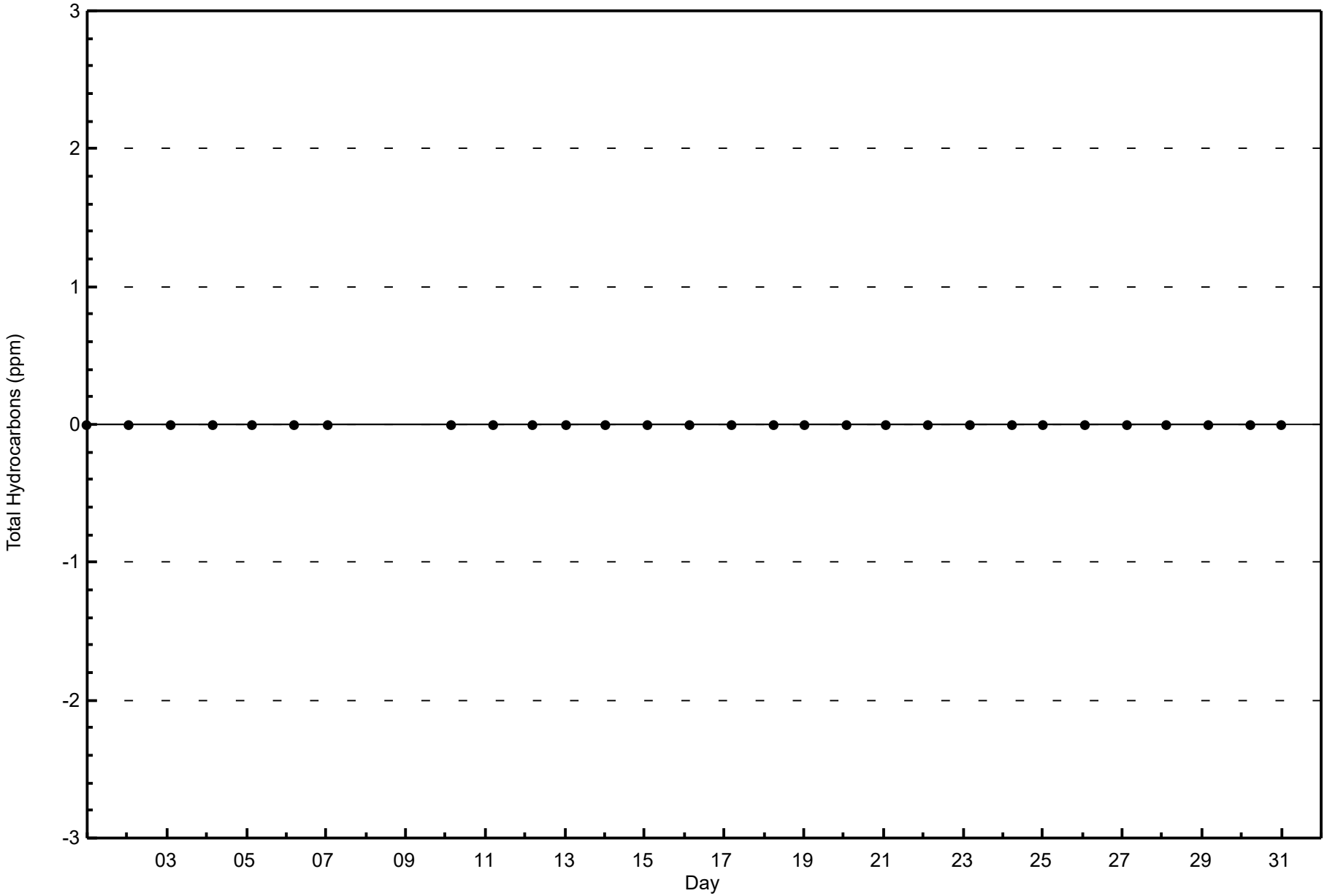
Total Number of Valid Hours: 651

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Fort McKay - Bertha Ganter - March 2025

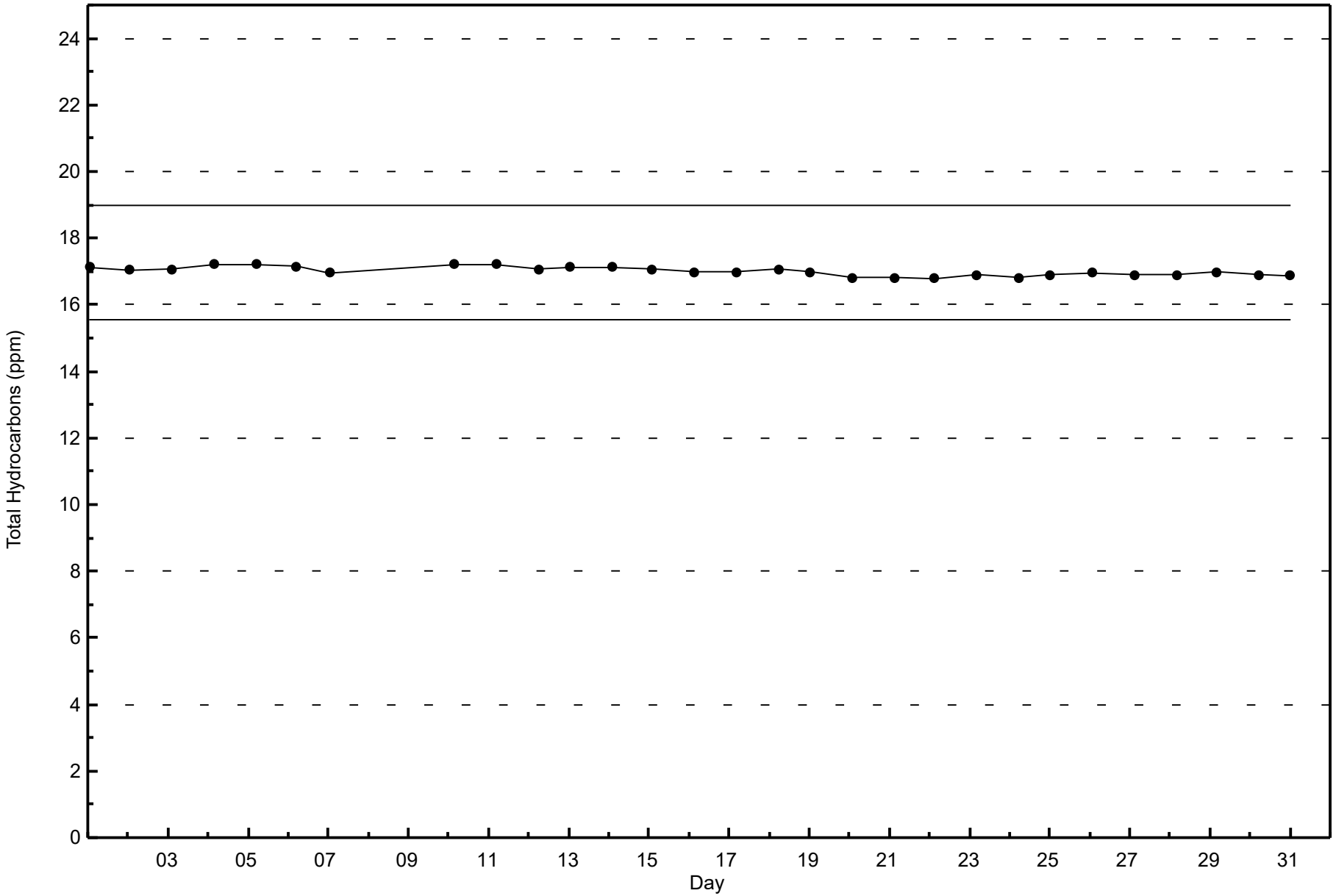


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Fort McKay - Bertha Ganter - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay - Bertha Ganter - March 2025

Maximum Value: 1.130 ppm on Mar 17 22:00

Maximum Daily Average: 0.307 ppm on Mar 2

Minimum Value: 0.000 ppm on Mar 1 05:00

Minimum Daily Average: 0.001 ppm on Mar 14

Maximum Diurnal Average: 0.149 ppm at hour 11

Minimum Diurnal Average: 0.020 ppm at hour 19

Monthly Average: 0.073 ppm

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} = 0.6

Hours in Service:	744
Hours of Data:	665
Hours of Missing Data:	79
Hours of Calibration:	41
Percent Operational Time:	94.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	Z	0.191	0.214	0.074	0.000	0.000	0.000	0.000	0.000	0.032	0.124	0.109	0.087	0.110	0.044	0.026	0.008	0.041	0.047	0.073	0.173	0.213	0.365	0.417	0.102	0.417
2-Mar	0.479	Z	0.548	0.434	0.327	0.196	0.204	0.362	0.734	0.677	0.691	0.577	0.399	0.064	0.000	0.083	0.514	0.159	0.001	0.205	0.276	0.000	0.010	0.121	0.307	0.734
3-Mar	0.228	0.351	Z	0.199	0.249	0.111	0.000	0.012	0.183	0.154	0.116	0.121	0.000	0.000	0.000	0.089	0.132	0.093	0.017	0.039	0.074	0.240	0.311	0.318	0.132	0.351
4-Mar	0.428	0.388	0.368	Z	0.240	0.207	0.168	0.128	0.119	0.113	0.077	0.037	0.146	0.168	0.266	0.096	0.003	0.000	0.000	0.000	0.113	0.077	0.033	0.050	0.140	0.428
5-Mar	0.123	0.059	0.000	0.000	Z	0.000	0.000	0.001	0.262	0.073	0.091	0.000	0.000	0.000	0.060	0.100	0.048	0.041	0.006	0.499	0.683	0.217	0.184	0.142	0.113	0.683
6-Mar	0.119	0.011	0.114	0.063	0.020	Z	0.106	0.135	0.117	0.177	0.006	0.119	0.226	0.146	0.110	0.025	0.002	0.000	0.000	0.037	0.201	0.233	0.176	0.254	0.104	0.254
7-Mar	Z	0.053	0.114	0.358	0.101	0.049	0.090	0.141	0.162	0.265	0.325	0.313	C	C	C	C	C	C	C	C	C	M	M	M	--	0.358
8-Mar	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--
9-Mar	M	M	M	M	M	M	M	M	M	M	M	C	C	C	0.122	0.139	0.115	0.053	0.002	0.005	0.082	0.021	0.011	0.007	--	0.139
10-Mar	0.000	0.002	0.015	Z	0.001	0.002	0.001	0.008	0.027	0.043	0.057	0.084	0.080	0.064	0.028	0.003	0.004	0.003	0.071	0.103	0.069	0.193	0.170	0.061	0.047	0.193
11-Mar	0.025	0.004	0.005	0.017	Z	0.017	0.043	0.033	0.064	0.203	0.243	0.121	0.072	0.038	0.002	0.001	0.000	0.002	0.001	0.000	0.000	0.000	0.001	0.001	0.039	0.243
12-Mar	0.001	0.000	0.001	0.002	0.000	Z	0.052	0.003	0.001	0.003	0.007	0.003	0.134	0.130	0.070	0.038	0.013	0.000	0.000	0.000	0.012	0.061	0.075	0.076	0.030	0.134
13-Mar	Z	0.085	0.071	0.073	0.089	0.082	0.080	0.070	0.022	0.093	0.807	0.033	0.060	0.109	0.055	0.034	0.020	0.001	0.000	0.000	0.000	0.000	0.001	0.000	0.078	0.807
14-Mar	0.002	Z	0.002	0.001	0.001	0.001	0.000	0.000	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.001	0.006	0.000	0.000	0.002	0.000	0.000	0.001	0.000	0.001	0.006
15-Mar	0.000	0.000	Z	0.002	0.001	0.001	0.000	0.000	0.000	0.030	0.444	0.208	0.156	0.041	0.000	0.000	0.000	0.000	0.001	0.007	0.022	0.052	0.198	0.036	0.052	0.444
16-Mar	0.013	0.011	0.008	Z	0.009	0.046	0.058	0.040	0.046	0.067	0.046	0.001	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.016	0.067
17-Mar	0.000	0.000	0.000	0.000	Z	0.010	0.001	0.020	0.004	0.008	0.058	0.290	0.151	0.143	0.225	0.142	0.002	0.014	0.034	0.081	0.401	1.130	0.507	0.472	0.160	1.130
18-Mar	0.405	0.318	0.238	0.298	0.177	Z	0.036	0.054	0.050	0.055	0.049	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.030	0.064	0.013	0.000	0.078	0.405
19-Mar	Z	0.005	0.000	0.005	0.044	0.047	0.080	0.058	0.029	0.057	0.097	0.164	0.096	0.080	0.059	0.047	0.094	0.096	0.060	0.070	0.025	0.001	0.000	0.001	0.053	0.164
20-Mar	0.001	Z	0.002	0.002	0.001	0.001	0.010	0.025	0.106	0.088	0.045	0.065	0.050	0.046	0.021	0.022	0.036	0.000	0.000	0.014	0.024	0.023	0.041	0.069	0.030	0.106
21-Mar	0.010	0.000	Z	0.004	0.001	0.000	0.000	0.000	0.014	0.028	0.000	0.000	0.001	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.028
22-Mar	0.004	0.006	0.102	Z	0.014	0.001	0.018	0.007	0.000	0.000	0.018	0.005	0.011	0.001	0.000	0.000	0.040	0.129	0.029	0.000	0.011	0.071	0.138	0.031	0.028	0.138
23-Mar	0.002	0.000	0.000	0.015	Z	0.096	0.107	0.118	0.085	0.086	0.013	0.000	0.008	0.025	0.000	0.000	0.000	0.000	0.000	0.185	0.126	0.176	0.154	0.147	0.058	0.185
24-Mar	0.242	0.249	0.221	0.226	0.205	Z	0.212	0.212	0.174	0.085	0.064	0.062	0.084	0.071	0.001	0.000	0.000	0.000	0.012	0.009	0.002	0.000	0.002	0.000	0.093	0.249
25-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.019	0.004	0.000	0.096	0.000	0.000	0.085	0.033	0.000	0.000	0.029	0.013	0.036	0.099	0.047	0.028	0.000	0.000	0.021	0.099
26-Mar	0.000	Z	0.000	0.000	0.000	0.017	0.077	0.076	0.017	0.121	0.204	0.122	0.064	0.000	0.030	0.082	0.084	0.010	0.002	0.169	0.143	0.047	0.004	0.001	0.055	0.204
27-Mar	0.001	0.152	Z	0.013	0.001	0.000	0.007	0.116	0.106	0.108	0.132	0.052	0.070	0.040	0.039	0.004	0.026	0.030	0.054	0.033	0.028	0.019	0.059	0.072	0.051	0.152
28-Mar	0.055	0.021	0.016	Z	0.022	0.011	0.044	0.012	0.080	0.284	0.291	0.193	0.194	0.041	0.000	0.045	0.012	0.122	0.114	0.023	0.022	0.112	0.264	0.020	0.087	0.291
29-Mar	0.012	0.000	0.000	0.011	Z	0.025	0.045	0.031	0.045	0.052	0.157	0.104	0.035	0.000	0.000	0.033	0.027	0.045	0.020	0.051	0.095	0.179	0.137	0.045	0.050	0.179
30-Mar	0.030	0.011	0.012	0.010	0.000	Z	0.000	0.018	0.017	0.089	0.130	0.092	0.088	0.252	0.234	0.135	0.076	0.166	0.068	0.072	0.063	0.264	0.063	0.055	0.084	0.264
31-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.037	0.028	0.000	0.000	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
	0.095	0.077	0.082	0.075	0.063	0.038	0.050	0.058	0.085	0.108	0.149	0.099	0.082	0.057	0.047	0.039	0.045	0.035	0.020	0.061	0.094	0.118	0.101	0.083	Diurnal Average	
	0.479	0.388	0.548	0.434	0.327	0.207	0.212	0.362	0.734	0.677	0.807	0.577	0.399	0.252	0.266	0.142	0.514	0.166	0.114	0.499	0.683	1.130	0.507	0.472	Diurnal Maximum	

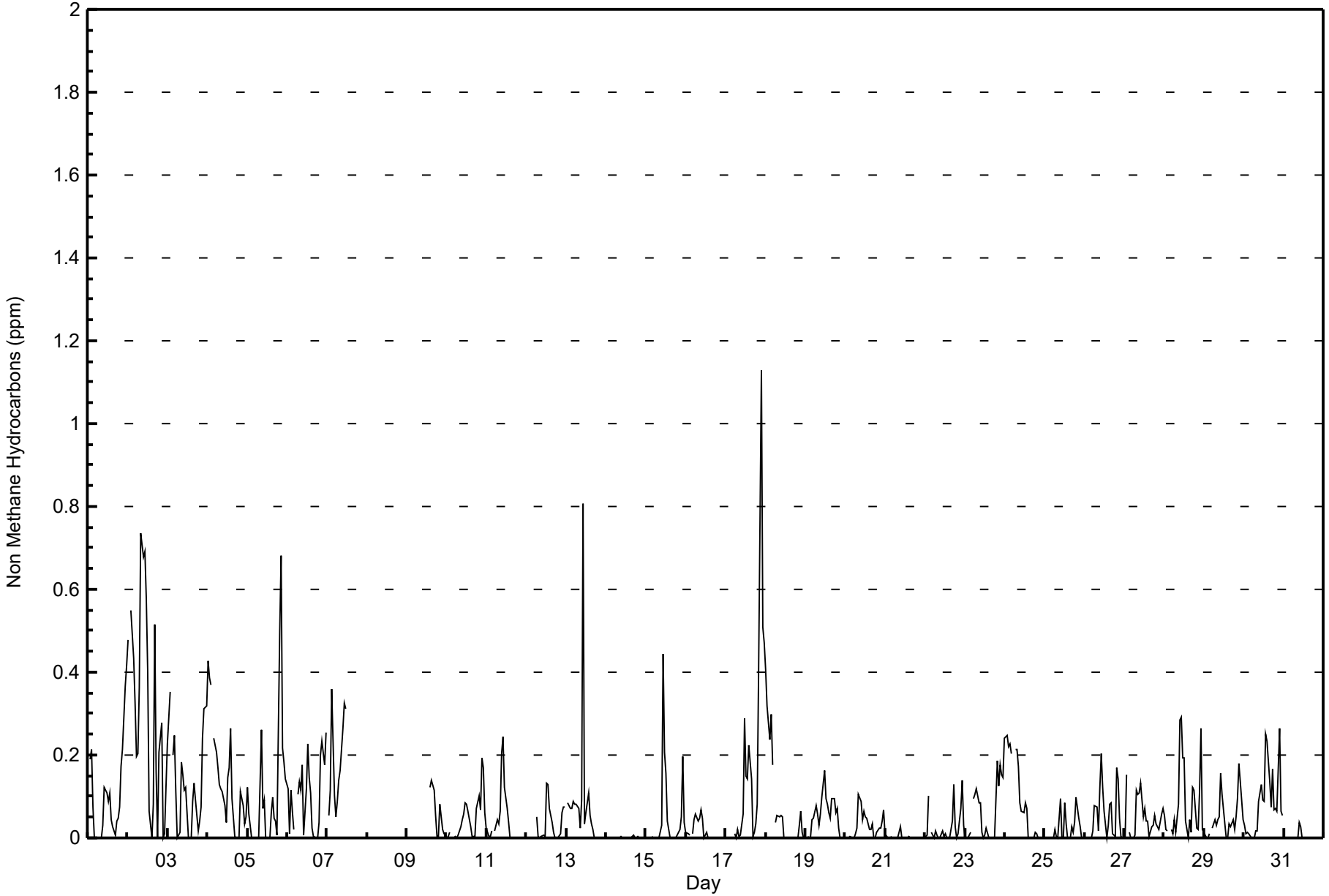
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay - Bertha Ganter - March 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay - Bertha Ganter - March 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	244	36.69	36.69
0.006 - 0.05	170	25.56	62.26
0.06 - 0.1	149	22.41	84.66
> 0.1	102	15.34	100.00

Total Number of Valid Hours: 665

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay - Bertha Ganter - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.005	61	21	3	7	5	6	15	38	37	2	3	7	3	16	6	7	237
0.006 - 0.05	32	31	6	4	2	4	7	23	15	3	1	3	4	9	11	10	165
0.06 - 0.1	25	38	8	4	3	0	9	26	6	5	3	1	0	6	2	13	149
> 0.1	18	25	4	1	1	3	3	9	16	3	2	1	3	2	2	7	100
Totals	136	115	21	16	11	13	34	96	74	13	9	12	10	33	21	37	651

Total Number of Valid Hours: 651

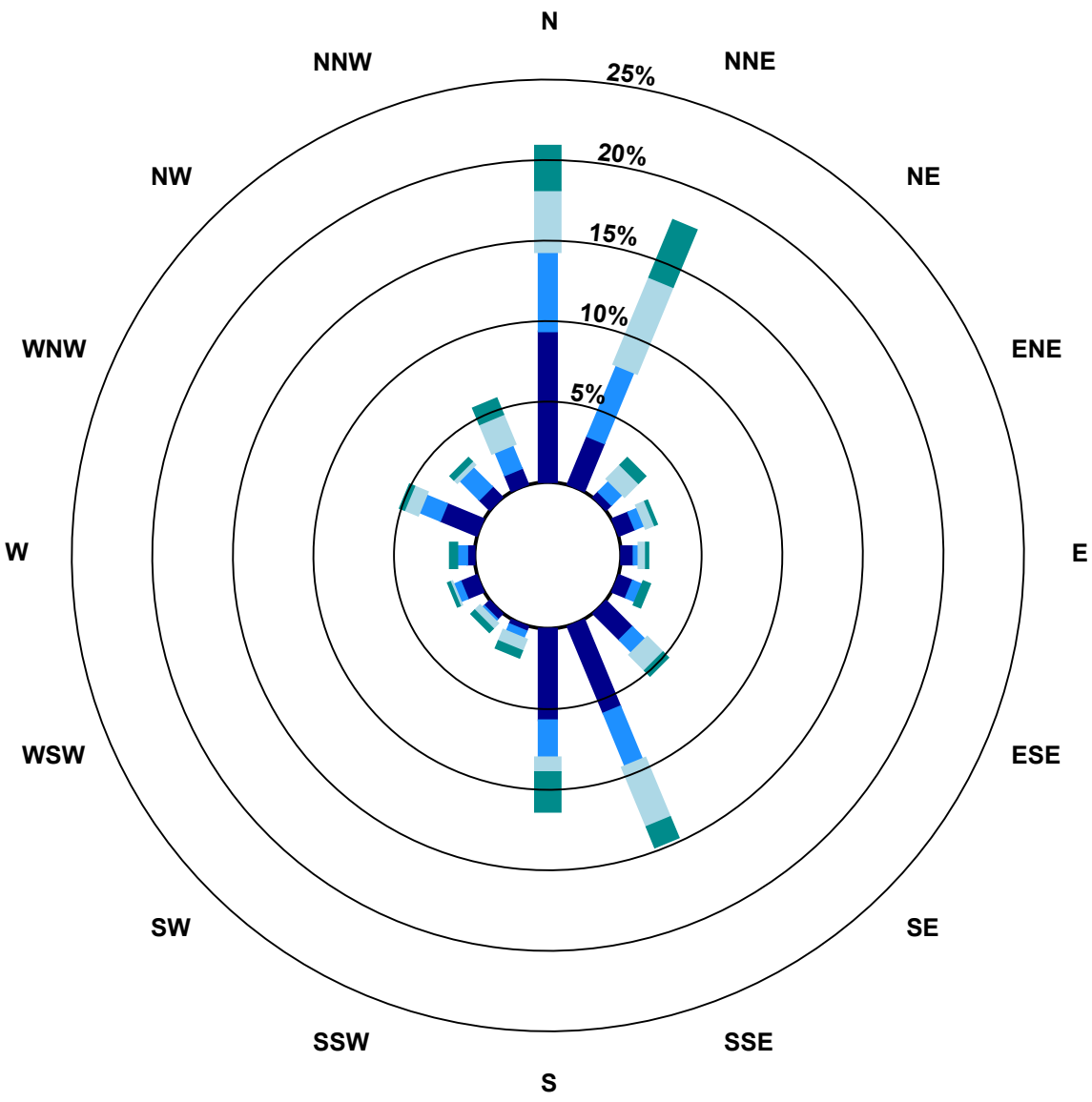
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay - Bertha Ganter



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

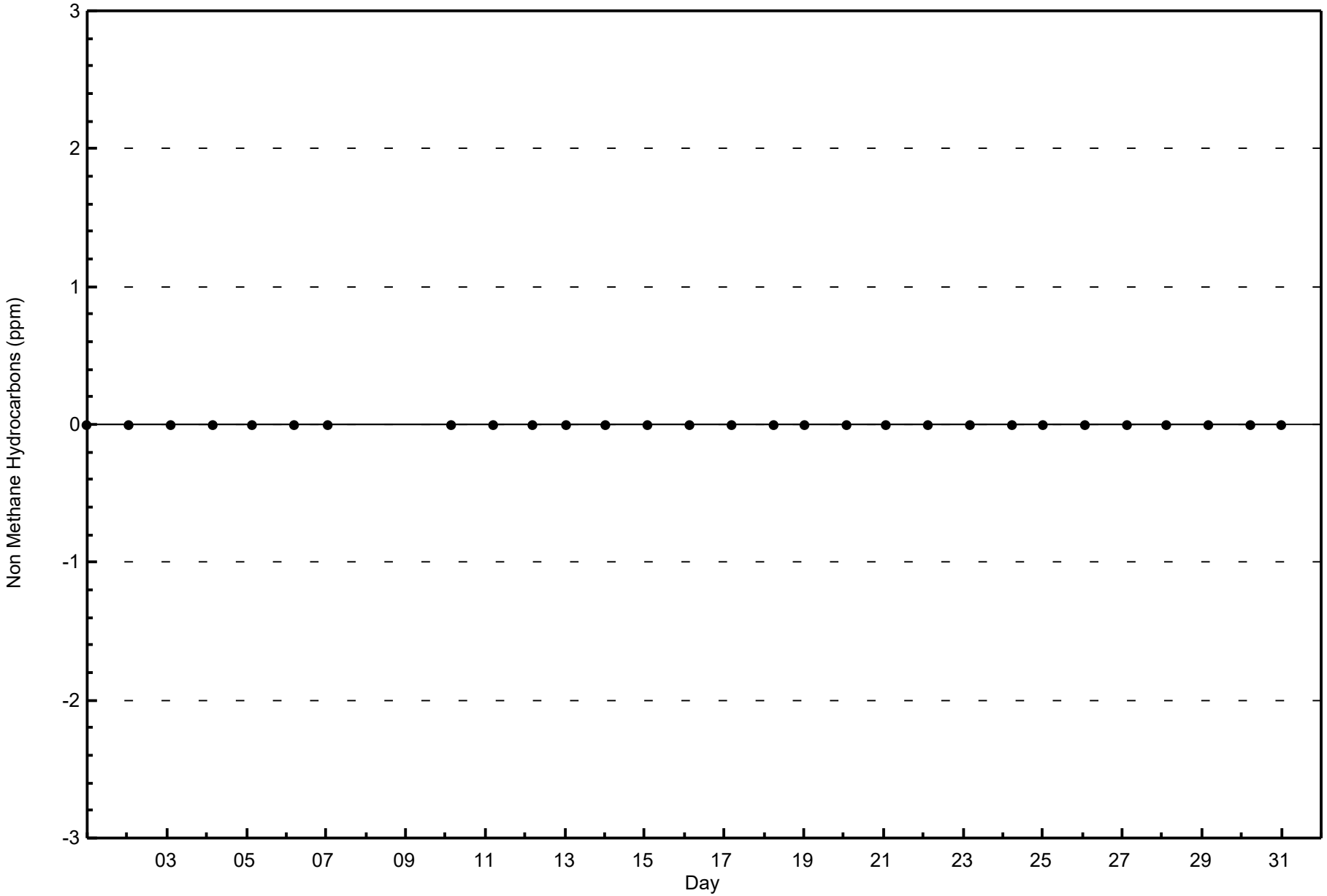
Total Number of Valid Hours: 651

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay - Bertha Ganter - March 2025

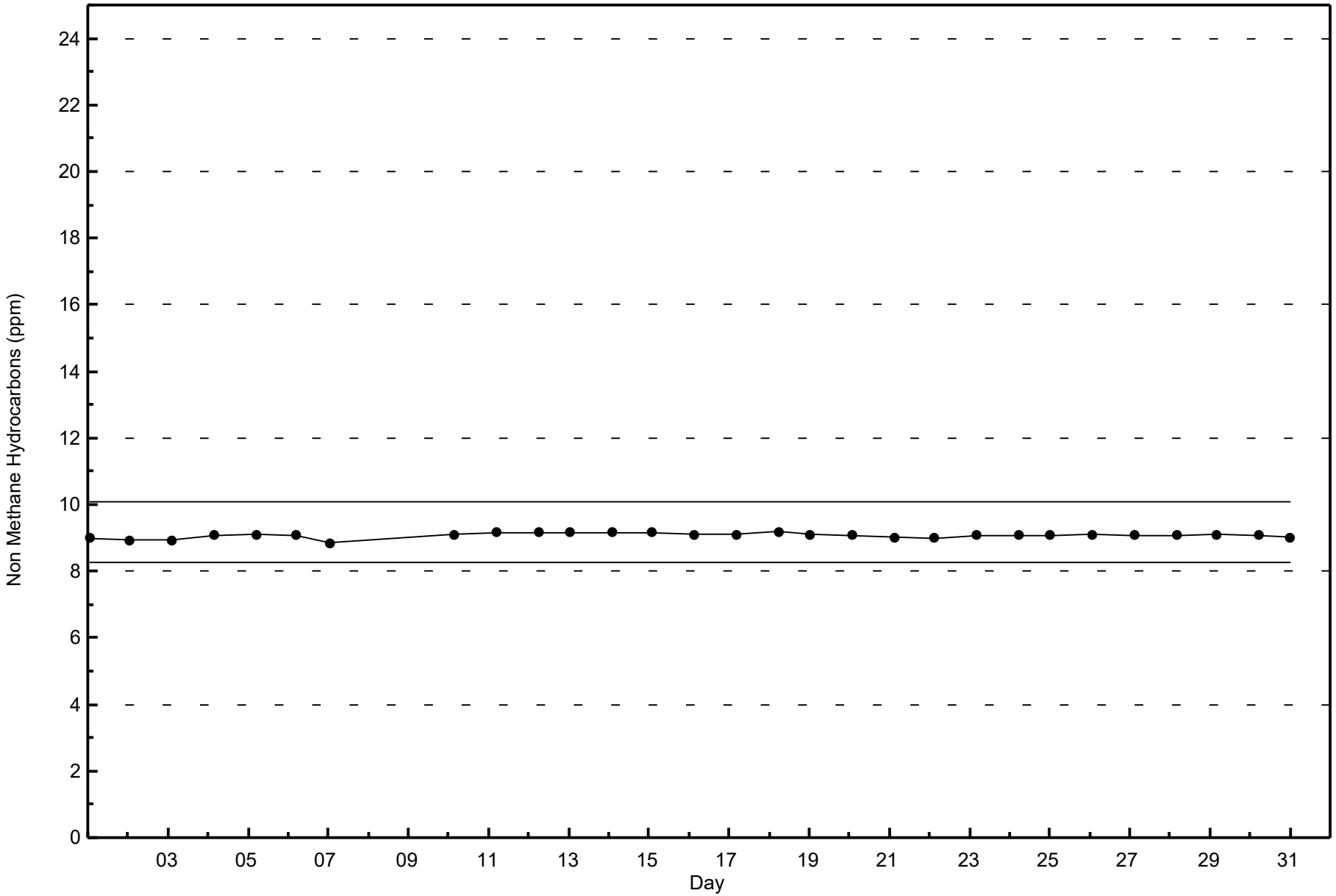


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay - Bertha Ganter - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Fort McKay - Bertha Ganter - March 2025

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

Maximum Value: 4.8 ppm on Mar 2 10:00 Maximum Daily Average: 2.7 ppm on Mar 2

Minimum Value: 1.9 ppm on Mar 4 17:00 Minimum Daily Average: 2.0 ppm on Mar 25

Maximum Diurnal Average: 2.3 ppm at hour 10 Minimum Diurnal Average: 2.0 ppm at hour 17

Monthly Average: 2.15 ppm Percentiles: P_1 = 2.0 P_{10} = 2.0 Q_1 = 2.0 Median = 2.1 Q_3 = 2.2 P_{90} = 2.4 P_{99} = 2.8

Hours in Service:	744
Hours of Data:	665
Hours of Missing Data:	79
Hours of Calibration:	41
Percent Operational Time:	94.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	Z	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	2.1	2.2	2.1	2.1	2.2	2.2	2.3	2.3	2.5	2.5	2.2	2.5
2-Mar	2.6	Z	2.9	2.8	2.8	2.5	2.4	2.9	4.3	4.8	4.5	3.5	2.8	2.1	2.0	2.1	2.3	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.7	4.8
3-Mar	2.0	2.0	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.0	2.1	2.2	2.2	2.2	2.1	2.2
4-Mar	2.5	2.5	2.6	Z	2.6	2.6	2.5	2.4	2.4	2.4	2.3	2.2	2.2	2.1	2.2	2.1	1.9	1.9	2.0	2.0	2.2	2.2	2.1	2.1	2.3	2.6
5-Mar	2.2	2.2	2.1	2.0	Z	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.0	2.3	2.4	2.3	2.3	2.2	2.1	2.4
6-Mar	2.2	2.2	2.3	2.2	2.3	Z	2.5	2.5	2.4	2.7	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.3	2.3	2.3	2.5	2.2	2.7
7-Mar	Z	2.2	2.3	2.2	2.3	2.1	2.1	2.1	2.2	2.3	2.3	2.2	C	C	C	C	C	C	C	C	C	M	M	M	--	2.3
8-Mar	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--
9-Mar	M	M	M	M	M	M	M	M	M	M	M	C	C	C	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	--	2.2
10-Mar	2.1	2.2	2.1	Z	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.4	2.3	2.2	2.1	2.1	2.1	2.1	2.3	2.5	2.3	2.3	2.3	2.2	2.3	2.5
11-Mar	2.2	2.3	2.2	2.3	Z	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3
12-Mar	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.2	2.3	2.3	2.2	2.1	2.3
13-Mar	Z	2.3	2.4	2.4	2.5	2.6	2.6	2.6	2.4	2.5	3.1	2.3	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.3	3.1
14-Mar	2.1	Z	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.1
15-Mar	2.0	2.3	Z	2.2	2.2	2.1	2.0	2.1	2.1	2.2	2.3	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.1	2.2	2.2	2.2	2.1	2.1	2.3
16-Mar	2.2	2.2	2.2	Z	2.4	2.6	2.7	2.5	2.4	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	2.2	2.7
17-Mar	2.0	2.0	2.0	2.0	Z	2.1	2.1	2.2	2.2	2.1	2.5	2.2	2.1	2.1	2.1	2.0	2.1	2.1	2.2	2.3	2.3	2.3	2.2	2.2	2.1	2.5
18-Mar	2.2	2.2	2.2	2.4	2.7	Z	2.5	2.5	2.6	2.6	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.2	2.1	2.2	2.7
19-Mar	Z	2.2	2.2	2.4	2.5	2.4	2.3	2.3	2.2	2.3	2.3	2.4	2.2	2.1	2.1	2.0	2.1	2.3	2.1	2.1	2.1	2.0	2.0	2.0	2.2	2.5
20-Mar	2.0	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	2.1	2.1	2.1	2.1	2.0	2.1
21-Mar	2.1	2.0	Z	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
22-Mar	2.1	2.2	2.1	Z	2.0	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.0	2.1	2.0	2.1	2.2	2.5	2.1	2.0	2.0	2.2	2.1	2.1	2.1	2.5
23-Mar	2.0	2.0	2.0	2.1	Z	2.2	2.1	2.1	2.3	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.4	2.4	2.3	2.2	2.1	2.4
24-Mar	2.3	2.3	2.3	2.4	2.5	Z	2.6	2.6	2.6	2.2	2.1	2.3	2.3	2.1	2.0	2.0	2.0	2.0	2.2	2.1	2.0	2.0	2.0	2.0	2.2	2.6
25-Mar	Z	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
26-Mar	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	2.1	2.0	2.0	2.1	2.2	2.1	2.0	2.2
27-Mar	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	2.1	2.1	2.1	2.1	2.0	2.1
28-Mar	2.1	2.1	2.2	Z	2.2	2.3	2.4	2.4	2.5	2.4	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.5
29-Mar	2.2	2.1	2.2	2.4	Z	2.4	2.4	2.2	2.4	2.3	2.2	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.4
30-Mar	2.2	2.2	2.3	2.3	2.1	Z	2.3	2.4	2.5	2.4	2.3	2.3	2.2	2.2	2.3	2.3	2.2	2.1	2.1	2.2	2.2	2.1	2.1	2.2	2.2	2.5
31-Mar	Z	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	2.0	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	2.2	2.2	2.3	2.3	2.3	2.2	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	Diurnal Average	
	2.6	2.5	2.9	2.8	2.8	2.6	2.7	2.9	4.3	4.8	4.5	3.5	2.8	2.2	2.3	2.3	2.3	2.5	2.3	2.5	2.4	2.4	2.5	2.5	Diurnal Maximum	

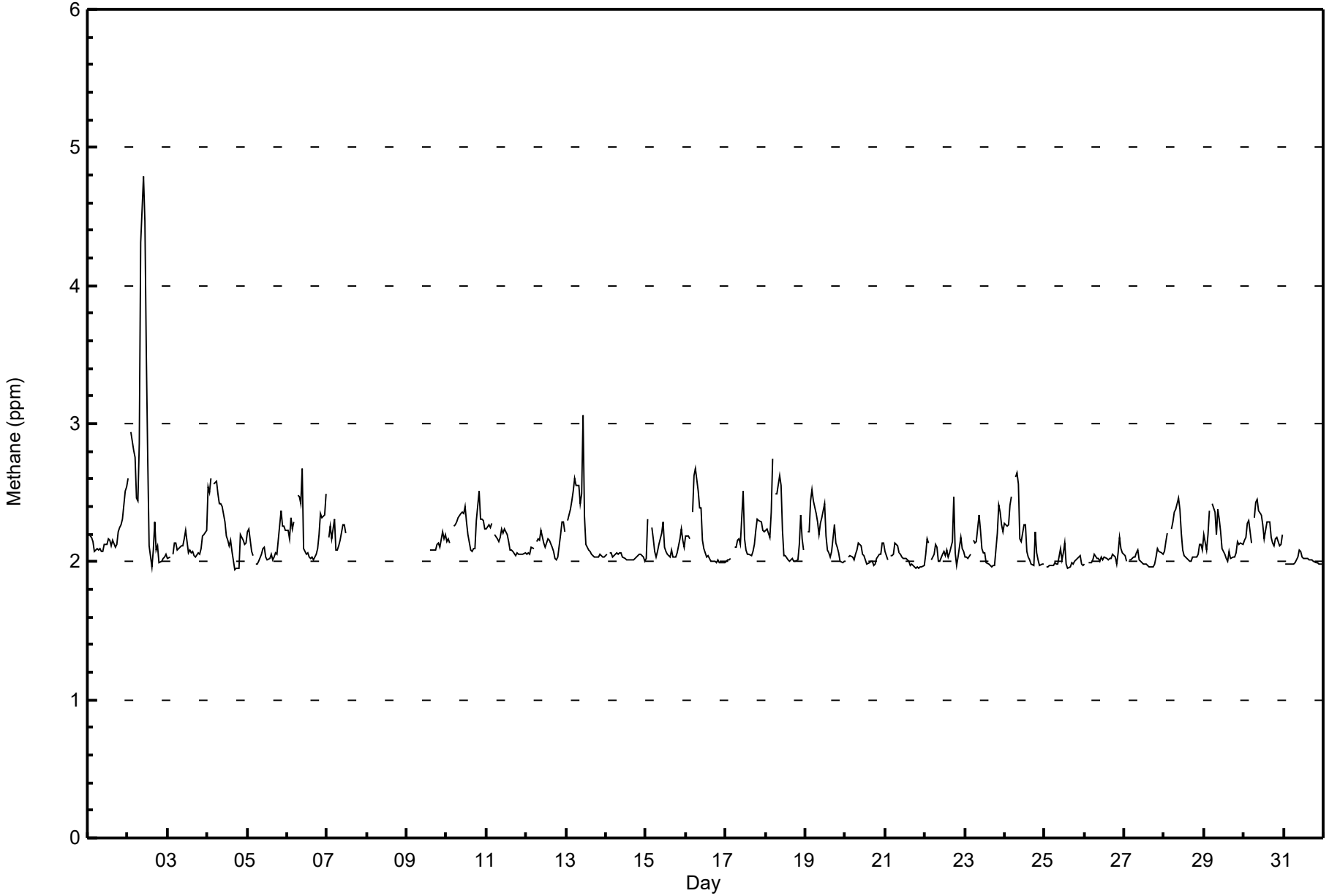
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Fort McKay - Bertha Ganter - March 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	234	35.19	35.19
2.1 - 3.0	426	64.06	99.25
3.1 - 10.0	5	0.75	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 665

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Fort McKay - Bertha Ganter - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	45	47	6	8	6	5	13	43	31	2	3	7	1	9	3	3	232
2.1 - 3.0	90	67	15	8	5	8	21	51	42	11	6	5	9	24	18	34	414
3.1 - 10.0	1	1	0	0	0	0	0	2	1	0	0	0	0	0	0	0	5
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	136	115	21	16	11	13	34	96	74	13	9	12	10	33	21	37	651

Total Number of Valid Hours: 651

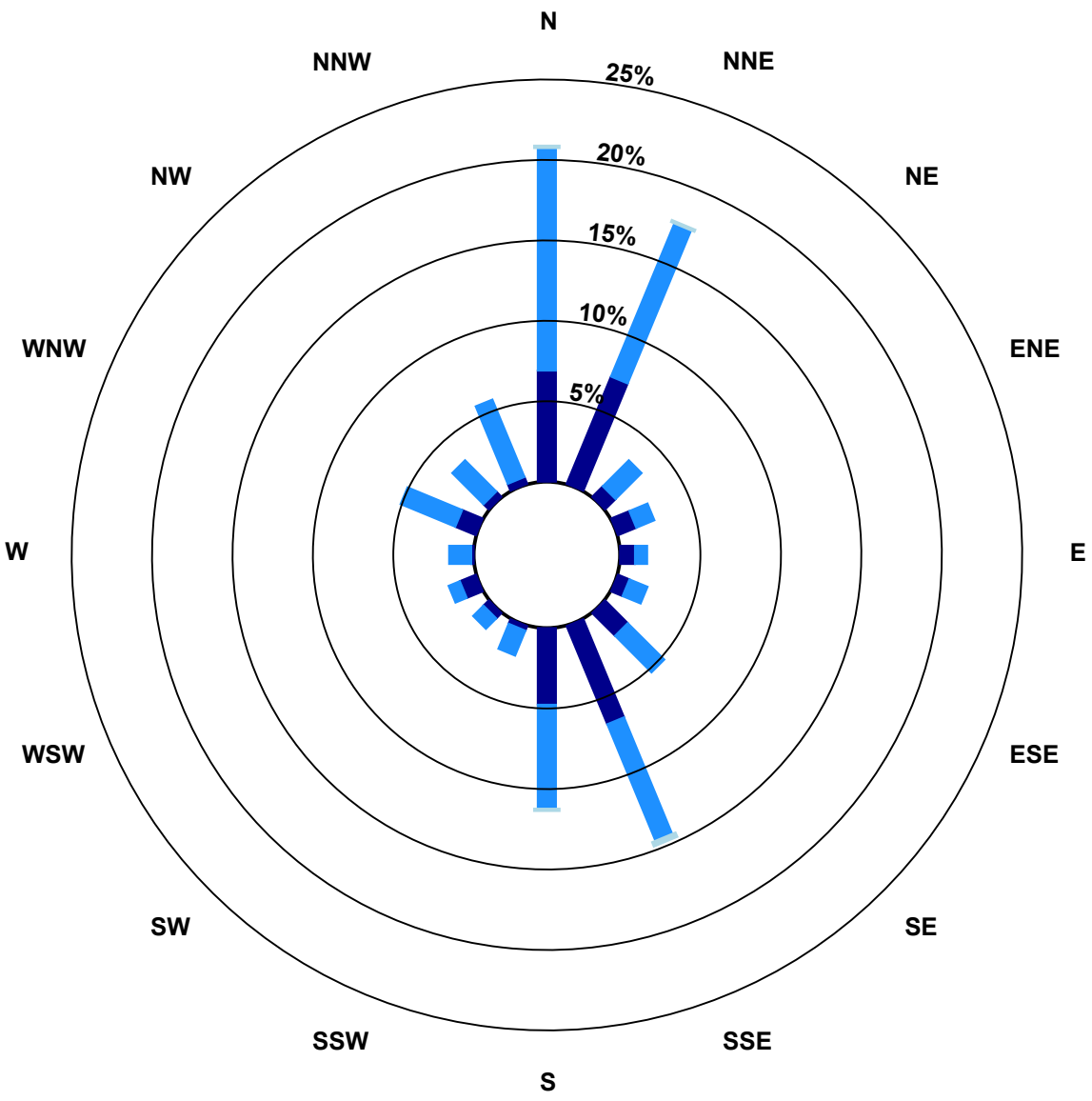
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Methane (CH_4) - ppm

Fort McKay - Bertha Ganter



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

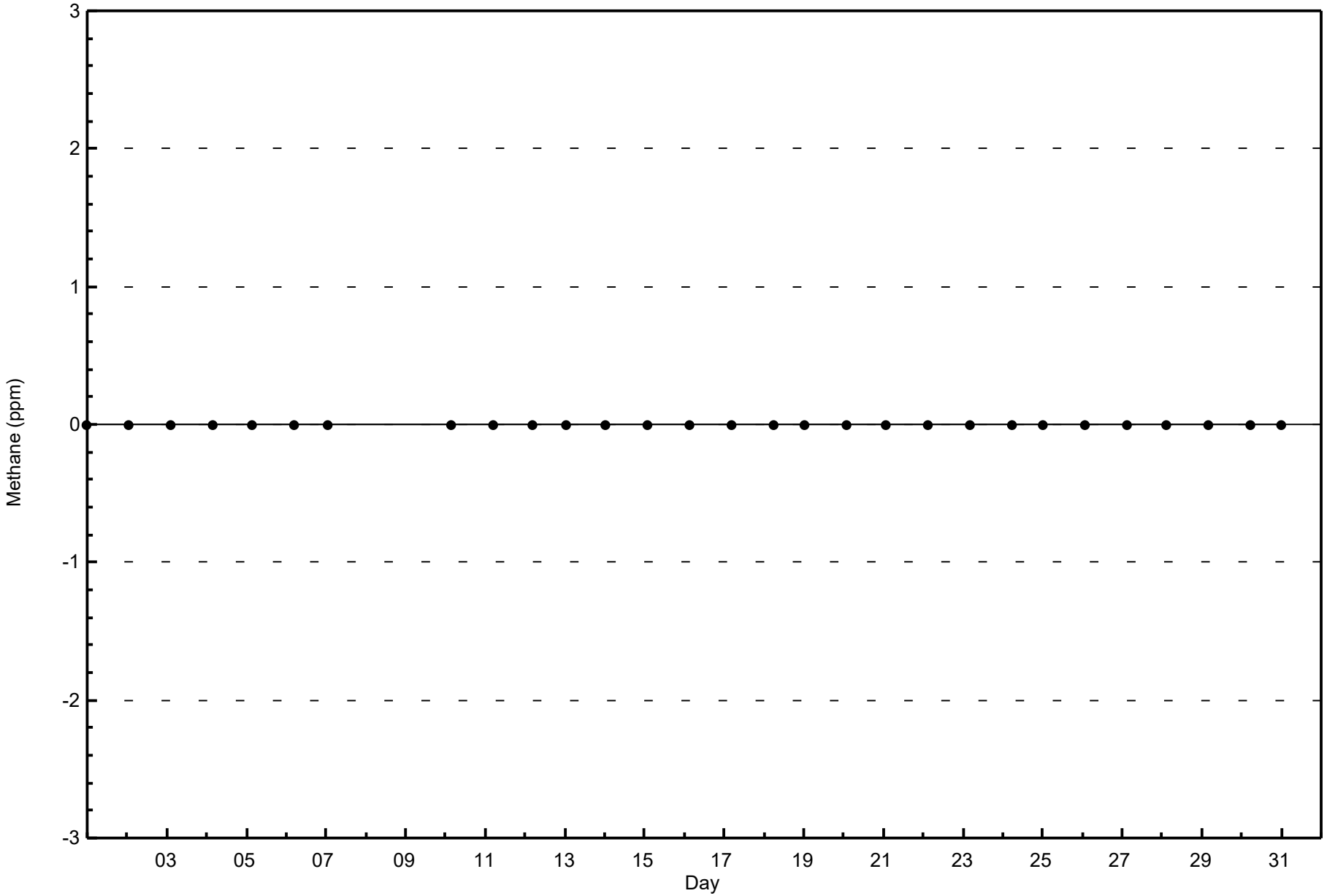
Total Number of Valid Hours: 651

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Fort McKay - Bertha Ganter - March 2025

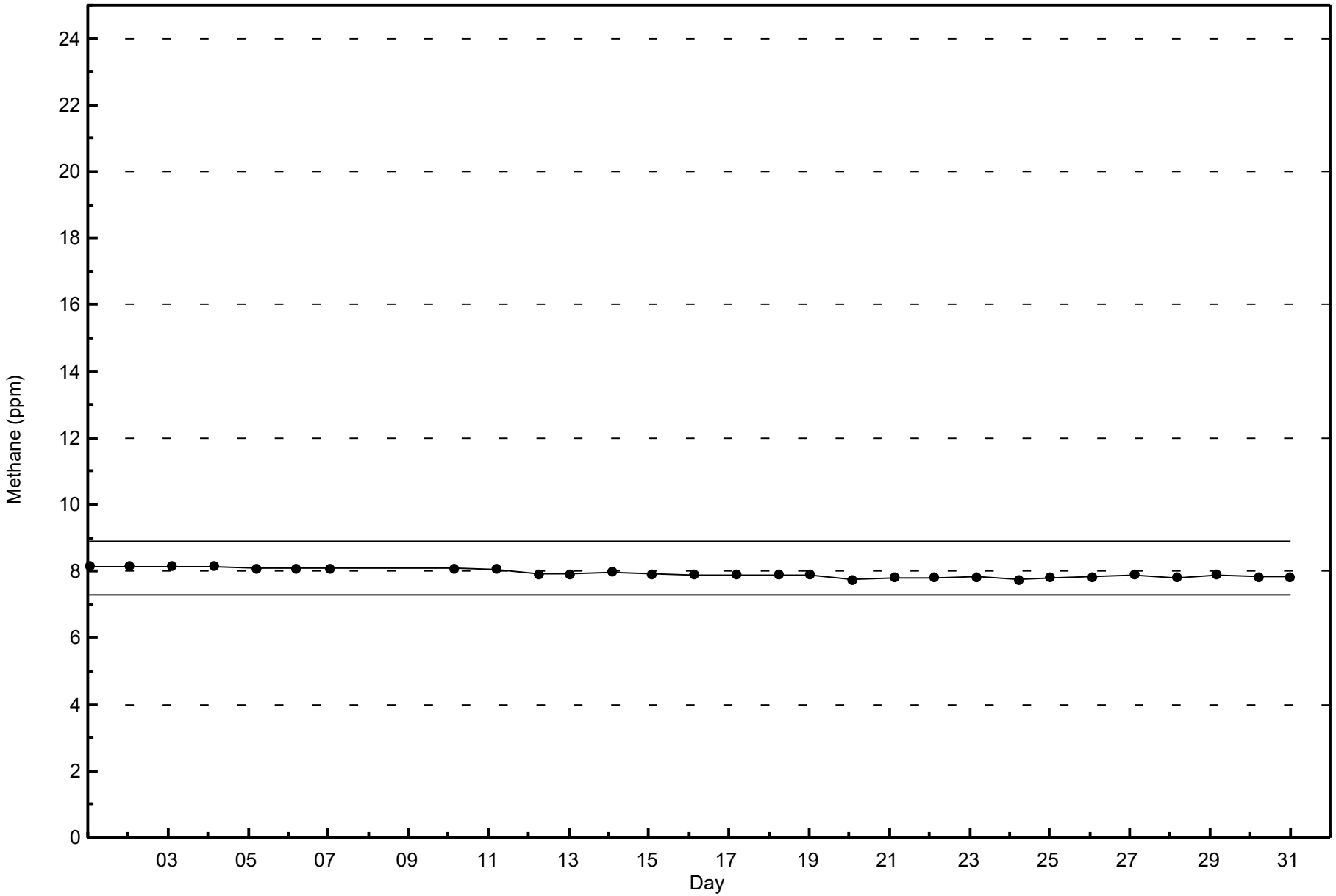


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Fort McKay - Bertha Ganter - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Fort McKay - Bertha Ganter - March 2025

Maximum Value: 110.9 ppb on Mar 2 10:00

Maximum Daily Average: 23.1 ppb on Mar 2

Minimum Value: 0.0 ppb on Mar 1 01:00

Minimum Daily Average: 1.0 ppb on Mar 31

Maximum Diurnal Average: 15.5 ppb at hour 11

Minimum Diurnal Average: 0.4 ppb at hour 20

Monthly Average: 4.47 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 1.2 Q_3 = 4.7 P_{90} = 11.8 P_{99} = 39.3

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	37
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	1.6	4.0	7.3	8.8	10.7	11.0	8.3	8.1	3.2	0.8	0.0	0.0	0.4	1.2	3.9	9.7	3.4	11.0
2-Mar	4.2	13.4	21.5	15.0	9.7	Z	1.2	22.4	103.7	110.9	105.8	69.2	29.9	6.3	1.0	3.9	11.3	0.6	0.4	0.2	0.2	0.1	0.0	0.1	23.1	110.9
3-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.4	3.9	6.5	8.4	11.8	6.9	7.1	1.9	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.5	2.6	2.2	11.8
4-Mar	48.0	Z	50.9	20.7	36.7	32.8	22.9	7.5	25.5	19.7	8.5	7.6	6.7	4.6	5.1	2.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.0	50.9
5-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	1.3	3.8	5.5	4.3	2.7	1.8	1.7	2.6	1.1	0.5	0.0	1.2	8.1	4.0	4.1	3.0	2.0	8.1
6-Mar	2.4	0.9	7.8	Z	2.1	6.5	12.1	25.4	33.4	35.2	6.8	6.3	6.4	5.6	4.7	3.5	1.3	0.0	0.0	0.0	0.0	0.0	0.5	7.1	7.3	35.2
7-Mar	UO	0.0	0.1	0.0	Z	0.0	0.0	1.4	13.1	16.8	16.2	14.5	9.5	20.4	33.7	7.9	4.1	5.2	0.2	0.0	0.0	0.0	0.0	0.0	6.5	33.7
8-Mar	0.0	0.0	0.0	0.2	1.2	Z	8.3	0.4	7.8	10.6	6.4	4.4	6.4	3.9	2.3	1.6	2.9	3.8	5.1	0.0	0.0	0.0	0.0	0.0	2.8	10.6
9-Mar	Z	1.4	1.7	1.7	1.6	0.9	1.6	2.5	3.4	13.3	13.6	14.0	12.8	9.0	7.2	5.8	11.5	4.1	1.2	0.6	0.6	0.7	0.0	1.3	4.8	14.0
10-Mar	1.7	Z	1.2	8.0	5.7	4.1	7.1	13.4	18.9	21.8	19.4	18.3	15.1	9.9	5.8	3.2	3.5	1.5	2.4	4.7	0.2	1.8	8.1	8.9	8.0	21.8
11-Mar	8.1	5.5	Z	7.4	3.3	2.6	0.1	2.8	8.3	18.4	C	C	C	C	C	C	0.8	0.3	0.0	0.0	0.0	0.0	0.0	0.0	--	18.4
12-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.3	1.6	3.7	6.7	5.3	3.8	6.1	8.7	9.0	5.6	3.7	0.5	0.0	0.0	0.4	0.8	0.7	0.2	2.5	9.0
13-Mar	0.6	0.3	0.9	2.5	Z	16.0	13.8	16.7	14.2	39.4	92.9	30.3	9.4	4.3	2.6	1.6	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.7	92.9
14-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.4	1.1	4.0	4.4	3.2	2.3	2.3	1.6	1.5	2.0	1.4	0.9	0.5	0.3	0.0	0.1	0.2	1.6	1.2	4.4
15-Mar	Z	2.0	1.6	1.4	1.1	0.8	1.2	1.6	3.5	6.8	15.0	5.3	4.4	3.4	3.0	2.6	1.6	1.1	0.9	0.9	1.7	0.4	0.2	0.2	2.6	15.0
16-Mar	0.1	Z	0.2	0.2	0.0	0.5	5.0	8.2	5.3	11.2	8.8	8.6	3.0	2.6	1.4	0.3	0.2	0.0	0.0	0.2	0.4	0.3	0.4	0.2	2.5	11.2
17-Mar	0.1	0.0	Z	0.1	0.1	0.0	0.0	0.5	2.9	2.6	15.5	9.8	5.4	1.8	1.5	0.9	0.8	0.5	0.0	0.0	0.0	0.0	0.0	0.4	1.9	15.5
18-Mar	0.3	0.4	0.0	Z	16.1	7.3	3.7	15.4	18.1	16.4	11.9	3.7	3.1	1.1	0.7	1.1	1.0	0.7	0.3	0.3	0.9	1.1	0.0	0.0	4.5	18.1
19-Mar	0.1	0.2	0.0	0.0	Z	1.3	2.6	7.8	13.0	11.8	20.0	30.6	16.5	11.5	10.7	7.8	6.6	14.2	1.7	0.4	0.4	0.2	0.0	0.0	6.8	30.6
20-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.3	4.2	12.2	12.9	8.9	6.4	4.2	3.7	2.3	2.2	1.7	0.4	0.0	0.0	0.0	0.0	0.0	0.2	2.6	12.9
21-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	1.4	2.8	3.5	8.0	5.5	4.4	5.3	2.4	1.3	0.4	0.0	0.0	0.0	0.3	0.7	0.7	0.5	1.6	8.0
22-Mar	0.4	Z	0.2	0.0	0.0	0.0	0.0	0.0	0.0	3.5	3.7	1.5	6.0	5.4	1.4	3.0	2.2	8.8	0.9	0.0	0.0	0.0	0.0	0.0	1.6	8.8
23-Mar	0.0	0.0	Z	0.1	0.0	0.1	1.4	7.8	12.0	9.4	4.7	3.0	1.0	1.1	1.8	0.2	0.0	0.7	1.0	1.0	3.4	0.5	0.4	0.3	2.2	12.0
24-Mar	0.3	0.3	0.3	Z	1.7	1.8	12.5	17.7	17.1	5.9	4.4	3.0	2.5	1.6	1.1	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	17.7
25-Mar	0.0	1.2	1.8	1.9	Z	2.2	4.1	4.8	2.4	7.3	3.2	6.6	1.3	0.4	0.3	1.5	2.4	1.5	1.2	0.6	0.4	0.1	0.0	0.0	2.0	7.3
26-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.7	3.5	3.6	1.6	2.9	3.0	3.1	2.7	2.3	2.7	2.2	1.2	0.1	0.0	0.0	0.2	0.0	0.0	1.3	3.6
27-Mar	Z	0.4	0.0	0.0	0.1	0.3	0.3	2.2	5.0	2.3	1.7	1.1	1.8	1.6	1.1	1.0	1.4	1.4	1.4	1.0	0.3	0.0	0.0	0.0	1.1	5.0
28-Mar	0.0	Z	0.8	4.9	2.3	2.0	6.3	12.6	25.1	27.3	20.4	9.6	5.8	3.6	2.3	2.0	1.6	1.1	0.5	0.0	0.0	0.0	0.0	0.0	5.6	27.3
29-Mar	0.1	0.0	Z	0.3	0.0	0.0	2.1	2.4	8.3	10.0	18.3	8.7	3.5	1.7	0.6	1.4	0.8	1.5	0.0	0.0	0.0	0.0	0.0	0.0	2.6	18.3
30-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.2	2.6	6.2	12.7	15.8	11.2	8.4	11.4	10.3	10.1	5.3	3.3	1.7	1.1	0.9	0.9	1.0	1.0	4.5	15.8
31-Mar	1.1	0.8	0.6	0.3	Z	0.3	0.9	1.2	1.6	2.7	3.4	0.4	0.6	0.6	1.0	0.6	0.4	0.1	0.0	0.8	1.1	1.3	1.3	1.4	1.0	3.4
	2.7	1.0	3.4	2.5	3.3	3.1	3.5	6.1	12.3	14.8	15.5	10.5	6.7	5.1	4.3	2.9	2.4	1.8	0.6	0.4	0.6	0.5	0.7	1.3	Diurnal Average	
	48.0	13.4	50.9	20.7	36.7	32.8	22.9	25.4	103.7	110.9	105.8	69.2	29.9	20.4	33.7	10.1	11.5	14.2	5.1	4.7	8.1	4.0	8.1	9.7	Diurnal Maximum	

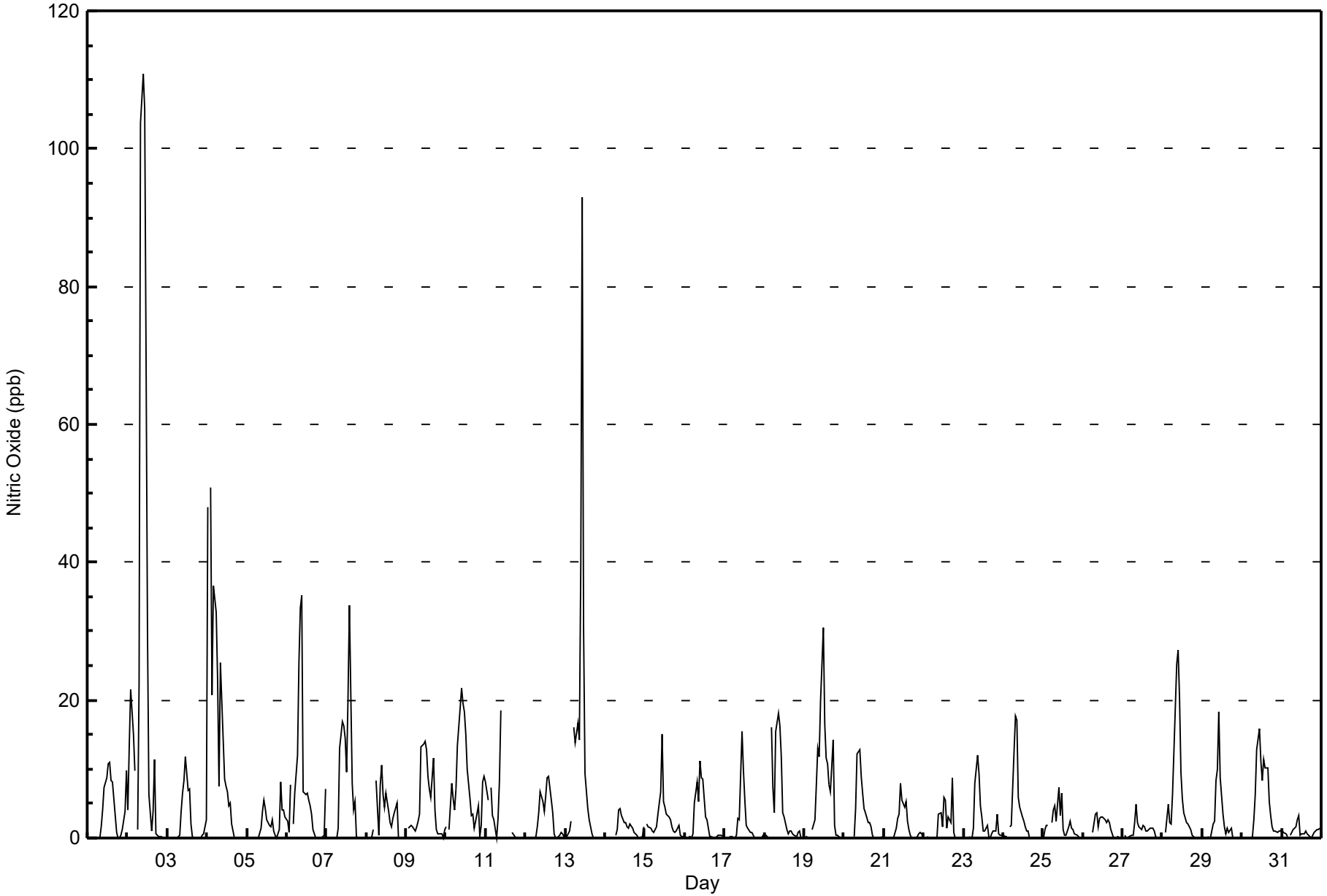
Z - zerospan C - Calibration UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Fort McKay - Bertha Ganter - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	681	96.46	96.46
21 - 40	18	2.55	99.01
11 - 80	3	0.42	99.43
81 - 159	4	0.57	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	149	127	24	15	11	12	35	89	66	12	10	12	11	30	27	39	669
21 - 40	2	3	1	1	0	0	0	4	6	0	1	0	0	0	0	0	18
11 - 80	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	3
81 - 159	1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	4
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	152	131	25	16	11	12	35	95	74	13	11	12	11	30	27	39	694

Total Number of Valid Hours: 694

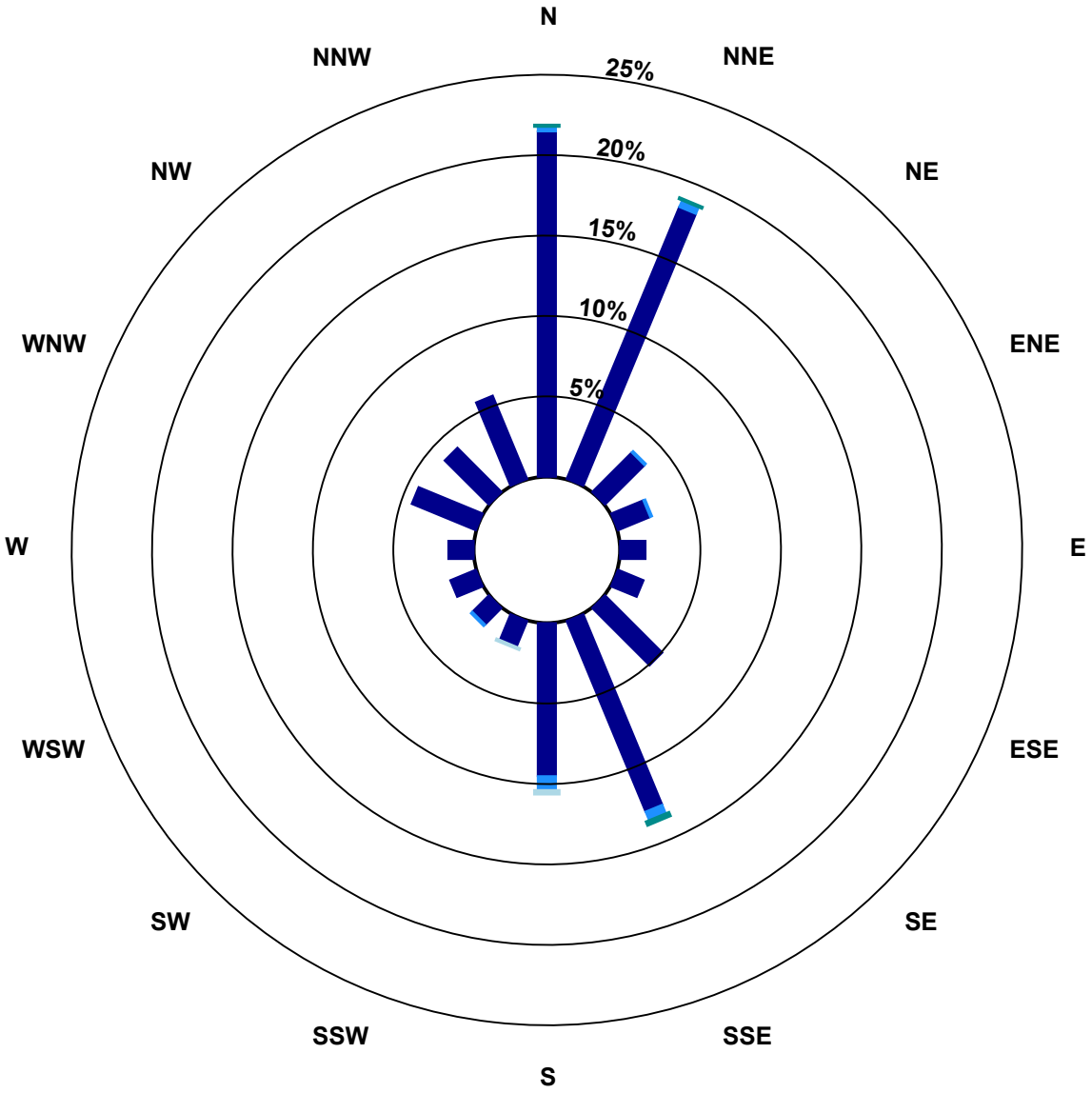
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitric Oxide (NO) - ppb

Fort McKay - Bertha Ganter



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

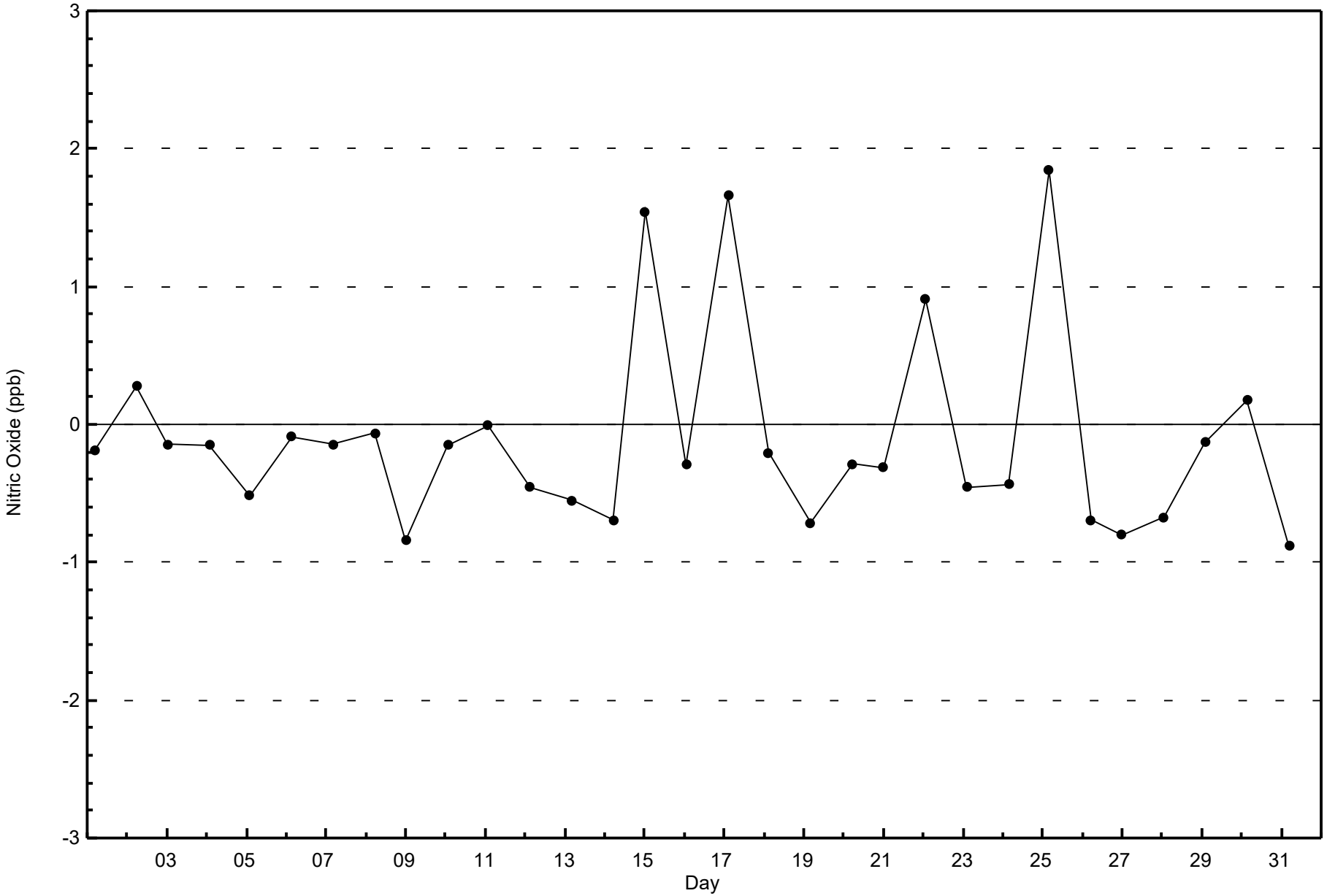
Total Number of Valid Hours: 694

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Fort McKay - Bertha Ganter - March 2025

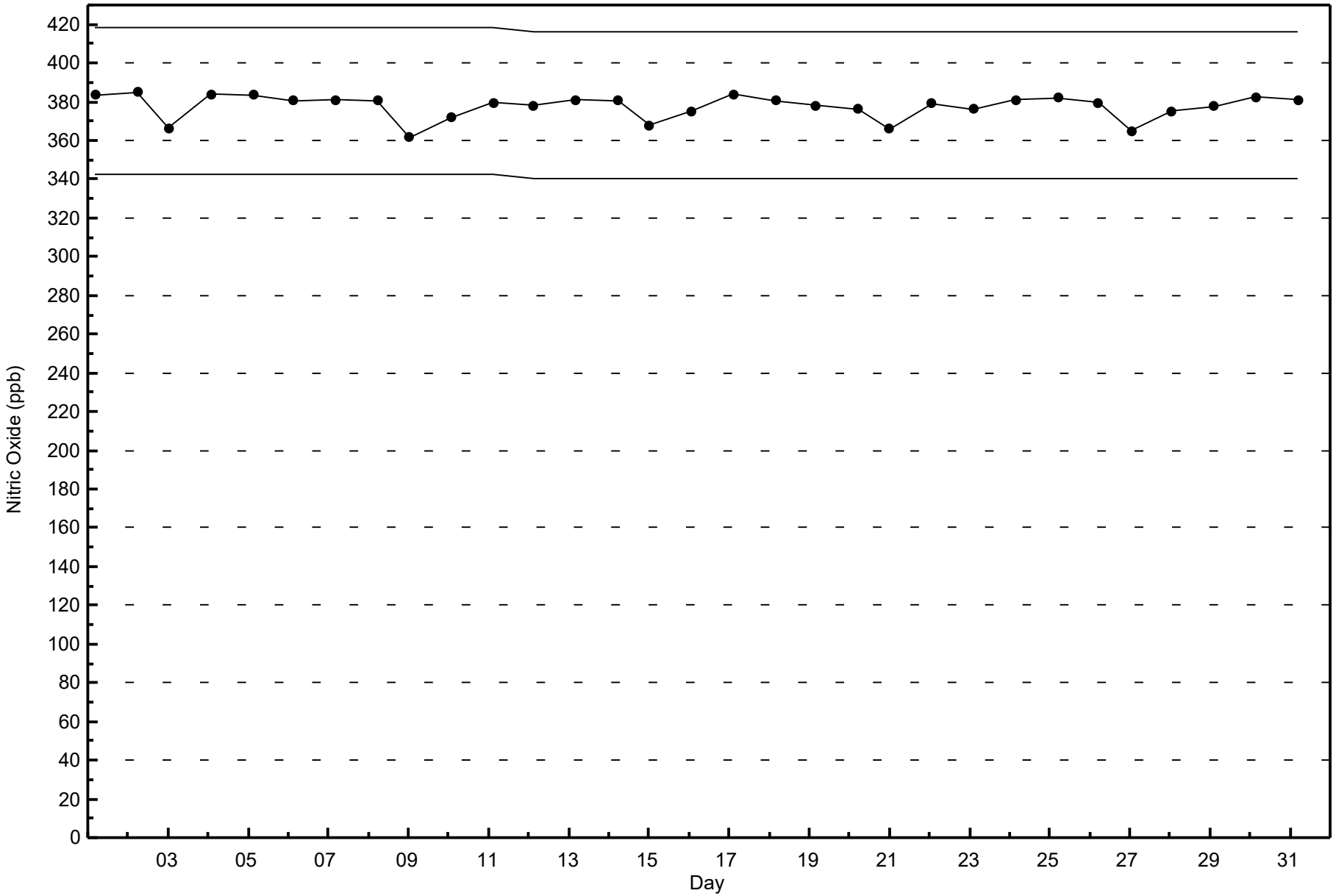


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Fort McKay - Bertha Ganter - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Fort McKay - Bertha Ganter - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 41.5 ppb on Mar 5 21:00 Maximum Daily Average: 19.3 ppb on Mar 6

Minimum Value: 0.0 ppb on Mar 24 18:00
Maximum Diurnal Average: 17.3 ppb at hour 1
Monthly Average: 12.37 ppb

Minimum Daily Average: 4.0 ppb on Mar 25
Minimum Diurnal Average: 6.8 ppb at hour 16
Percentiles: P_1 = 0.5 P_{10} = 3.0 Q_1 = 5.6 Median = 10.2 Q_3 = 17.9 P_{90} = 24.6 P_{99} = 36.7

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	37
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	17.0	17.9	17.6	12.9	Z	8.1	7.8	6.8	7.0	7.0	8.9	9.6	12.0	14.2	15.0	16.7	16.0	17.3	17.6	18.5	21.7	20.2	22.3	19.5	14.4	22.3
2-Mar	18.5	23.8	26.1	23.4	24.9	Z	22.1	22.7	31.5	34.3	37.4	35.5	28.7	10.9	2.0	5.4	24.1	9.1	10.2	6.7	8.0	5.5	9.8	10.7	18.8	37.4
3-Mar	Z	12.6	16.0	13.4	16.5	19.1	14.7	13.0	19.0	15.6	14.8	17.0	11.1	11.2	7.3	4.8	5.0	8.9	16.6	14.4	15.4	20.5	21.6	24.8	14.5	24.8
4-Mar	32.1	Z	28.8	25.5	27.4	26.5	23.8	23.3	25.0	20.9	14.8	13.6	11.4	10.5	11.9	6.0	0.8	1.9	5.6	3.4	19.8	17.3	16.5	17.6	16.7	32.1
5-Mar	19.8	24.8	Z	7.1	5.8	3.9	1.7	5.1	11.2	13.3	11.9	7.6	6.1	5.8	6.8	8.8	10.3	16.2	14.8	27.5	41.5	40.1	37.6	35.3	15.8	41.5
6-Mar	34.7	28.9	35.7	Z	30.6	29.4	28.2	27.3	22.2	24.7	9.1	8.7	9.3	8.9	8.7	8.7	7.9	8.8	13.4	13.4	13.1	17.1	18.8	35.2	19.3	35.7
7-Mar	UO	20.5	23.3	15.0	Z	15.8	17.7	23.4	26.2	24.6	19.7	18.5	16.3	26.3	32.7	14.7	10.5	9.1	7.7	11.2	7.7	10.8	11.9	17.7	17.3	32.7
8-Mar	26.5	24.6	25.6	29.6	33.7	Z	41.2	11.9	11.1	17.0	13.3	12.0	10.6	8.3	5.5	6.5	7.5	13.7	19.8	8.3	5.2	5.6	7.6	7.7	15.3	41.2
9-Mar	Z	2.5	2.0	5.2	7.7	4.1	4.0	6.1	5.9	8.4	9.1	10.1	7.7	6.3	5.7	6.5	8.8	5.0	5.3	9.2	10.6	11.6	10.3	19.8	7.5	19.8
10-Mar	21.4	Z	21.3	23.4	22.7	22.1	22.3	20.9	18.4	15.9	13.5	12.2	10.6	7.6	6.9	5.9	8.7	10.5	23.9	28.6	24.6	21.3	27.9	27.7	18.2	28.6
11-Mar	27.1	27.2	Z	29.4	29.3	28.7	22.5	19.6	17.6	19.3	C	C	C	C	C	C	4.4	4.0	4.1	4.6	5.7	5.0	5.9	7.2	--	29.4
12-Mar	6.9	6.4	5.0	Z	13.2	17.2	23.0	18.0	14.4	14.7	9.8	7.1	9.6	10.9	10.9	9.3	9.2	4.9	2.8	9.4	22.2	25.4	23.8	19.5	12.8	25.4
13-Mar	22.4	23.1	22.5	23.6	Z	25.1	24.2	19.8	14.5	21.1	39.7	19.5	13.1	9.2	7.2	6.4	5.2	5.1	2.9	3.7	4.6	4.0	4.0	5.7	14.2	39.7
14-Mar	11.2	12.6	9.2	10.5	7.8	Z	12.4	6.5	8.4	6.7	4.5	3.0	2.8	2.4	1.8	2.9	3.1	3.3	6.2	6.5	10.3	8.0	5.3	1.7	6.4	12.6
15-Mar	Z	11.7	10.3	9.9	7.0	3.0	1.6	3.2	5.8	8.9	15.1	6.4	5.0	3.8	3.0	3.2	2.8	3.0	4.1	8.4	27.9	18.0	14.5	20.8	8.6	27.9
16-Mar	24.3	Z	21.1	21.3	23.5	27.8	29.3	22.5	12.1	13.1	11.5	10.4	5.7	6.5	4.5	3.0	4.2	3.9	1.6	0.8	1.8	1.1	1.3	1.9	11.0	29.3
17-Mar	2.5	2.7	Z	3.8	6.2	7.0	6.4	5.6	8.6	7.8	17.8	12.2	7.8	6.0	6.1	5.2	5.4	6.8	14.1	15.3	17.3	25.0	25.4	23.9	10.4	25.4
18-Mar	22.7	21.0	16.0	Z	31.5	34.7	32.7	27.9	20.4	15.5	11.4	4.1	4.4	2.1	1.2	2.2	3.5	5.5	5.6	4.9	12.6	35.1	16.9	8.3	14.8	35.1
19-Mar	16.2	22.2	8.6	13.3	Z	21.7	20.0	14.5	14.7	13.5	16.8	22.7	15.7	12.7	13.3	12.8	15.1	28.2	22.2	16.3	12.7	7.5	5.6	6.0	15.3	28.2
20-Mar	7.0	9.9	11.4	14.4	12.3	Z	14.5	16.7	17.9	14.8	10.1	7.6	5.4	5.0	3.8	4.6	5.5	4.2	6.1	9.0	13.8	15.1	24.5	22.8	11.1	24.5
21-Mar	Z	7.8	5.8	6.8	5.9	5.1	8.0	8.7	8.0	7.5	11.7	9.2	8.4	9.7	6.9	6.2	5.5	2.5	0.1	3.1	1.8	1.2	1.1	2.2	5.8	11.7
22-Mar	5.9	Z	9.3	7.5	3.9	4.4	5.5	6.1	7.7	8.3	9.1	7.8	10.4	10.0	5.4	8.6	12.7	40.6	9.4	0.8	3.4	16.8	13.9	12.4	9.6	40.6
23-Mar	5.6	8.7	Z	8.8	11.6	12.8	13.2	13.4	15.4	12.2	7.5	6.1	3.0	3.7	6.6	5.3	1.4	2.9	4.3	25.7	36.8	34.2	28.6	18.1	12.4	36.8
24-Mar	22.2	20.1	18.7	Z	21.9	20.2	21.0	18.1	18.2	12.6	10.2	9.6	9.1	6.4	5.5	5.1	0.2	0.0	6.5	5.7	1.9	1.3	1.8	2.5	10.4	22.2
25-Mar	1.1	0.4	0.5	0.2	Z	2.2	8.0	8.1	1.0	7.3	3.0	6.5	3.1	1.5	0.0	0.4	2.8	3.6	6.3	8.7	10.3	9.5	2.5	4.0	4.0	10.3
26-Mar	4.3	4.7	5.3	8.1	7.2	Z	12.2	8.8	6.6	3.6	5.1	4.8	4.6	4.8	6.0	8.2	8.3	8.4	6.0	4.2	14.3	18.3	9.9	8.0	7.5	18.3
27-Mar	Z	8.1	11.1	3.2	3.8	5.1	6.2	11.9	14.2	6.2	4.5	3.1	3.2	2.8	2.1	1.5	1.4	1.8	4.6	8.9	16.9	13.2	12.3	12.6	6.9	16.9
28-Mar	16.0	Z	27.9	30.8	26.7	27.8	24.3	19.0	21.9	22.4	20.1	12.7	8.8	5.9	4.9	5.6	5.8	9.0	11.1	9.2	13.5	21.2	21.8	15.9	16.6	30.8
29-Mar	24.4	10.9	Z	12.7	15.2	18.8	16.8	8.6	11.2	11.0	19.4	12.1	6.4	4.3	2.9	5.6	6.9	12.1	7.7	9.4	16.7	17.5	20.4	17.4	12.5	24.4
30-Mar	22.1	21.8	28.6	Z	10.4	6.5	11.1	10.4	10.8	16.5	18.5	14.8	12.6	18.0	18.8	19.0	14.6	17.1	19.4	26.9	17.9	15.4	17.7	21.6	17.0	28.6
31-Mar	20.5	2.2	2.1	1.8	Z	1.6	2.2	2.7	3.9	6.8	9.9	3.1	3.3	3.1	4.1	3.8	4.1	4.2	2.5	2.4	4.0	1.5	1.8	1.5	4.0	20.5
	17.3	14.5	15.8	13.9	16.3	15.3	16.1	13.9	13.9	13.9	13.6	10.9	8.9	8.0	7.3	6.8	7.2	8.8	9.1	10.5	14.0	15.0	14.3	14.5	Diurnal Average	
	34.7	28.9	35.7	30.8	33.7	34.7	41.2	27.9	31.5	34.3	39.7	35.5	28.7	26.3	32.7	19.0	24.1	40.6	23.9	28.6	41.5	40.1	37.6	35.3	Diurnal Maximum	

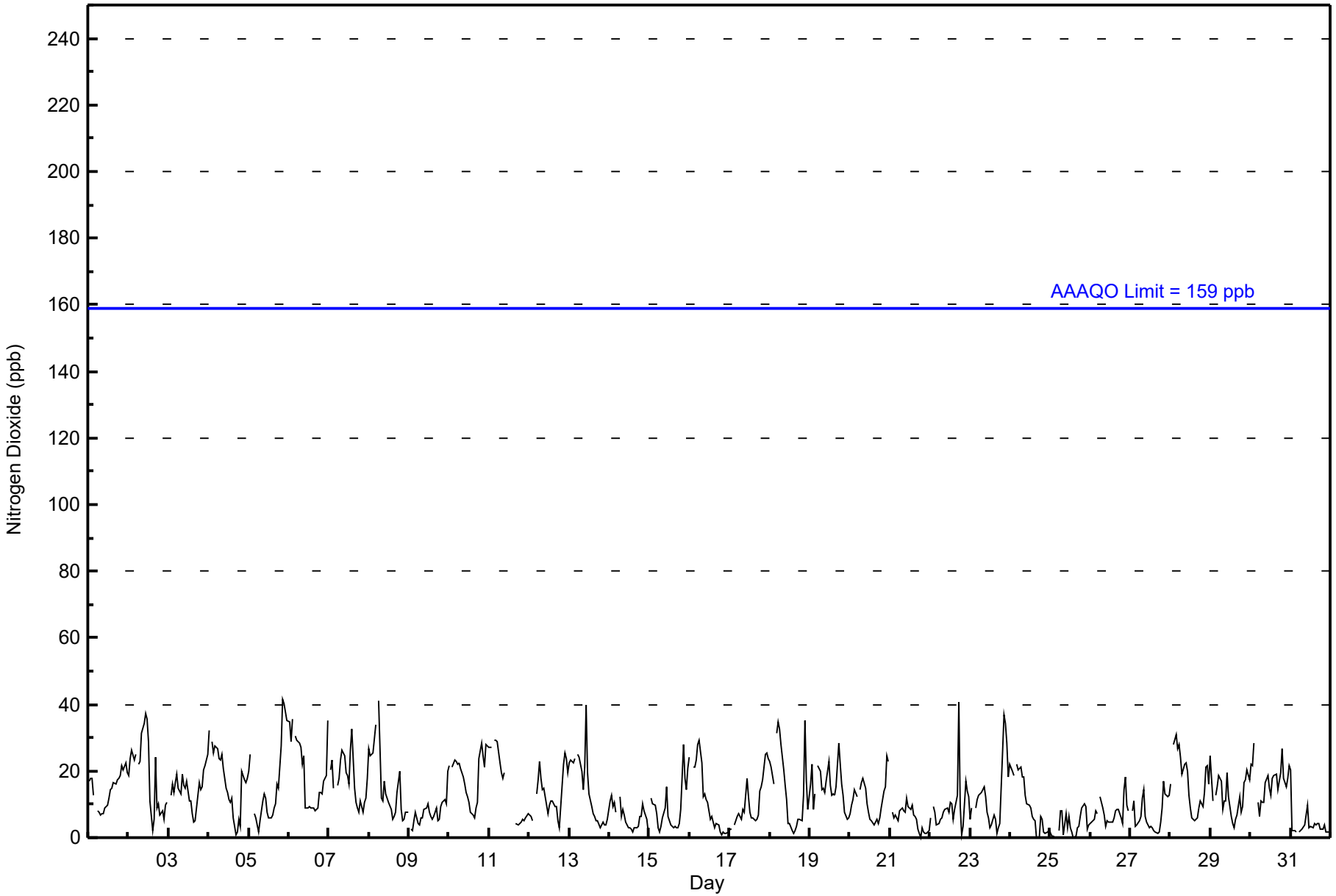
Z - zerospan C - Calibration UO - Unstable Operation
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Fort McKay - Bertha Ganter - March 2025



Nitrogen Dioxide (NO_2) - ppb

Fort McKay - Bertha Ganter - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	570	80.74	80.74
21 - 40	133	18.84	99.58
11 - 80	3	0.42	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Fort McKay - Bertha Ganter - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	120	113	21	16	10	12	35	87	61	7	6	9	7	21	19	20	564
21 - 40	31	17	4	0	1	0	0	8	13	6	5	3	4	9	7	19	127
11 - 80	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	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	152	131	25	16	11	12	35	95	74	13	11	12	11	30	27	39	694

Total Number of Valid Hours: 694

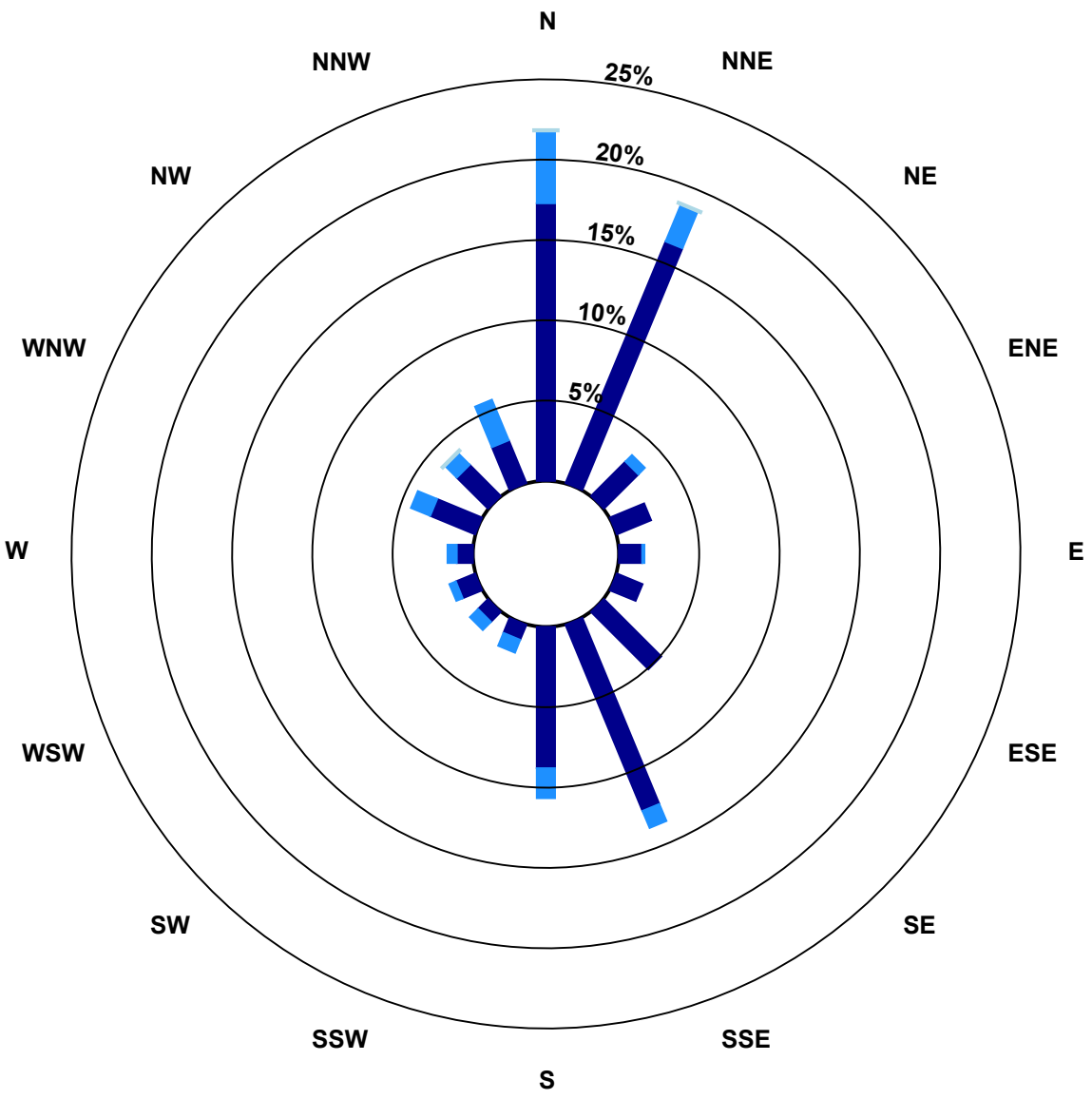
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Dioxide (NO_2) - ppb

Fort McKay - Bertha Ganter



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

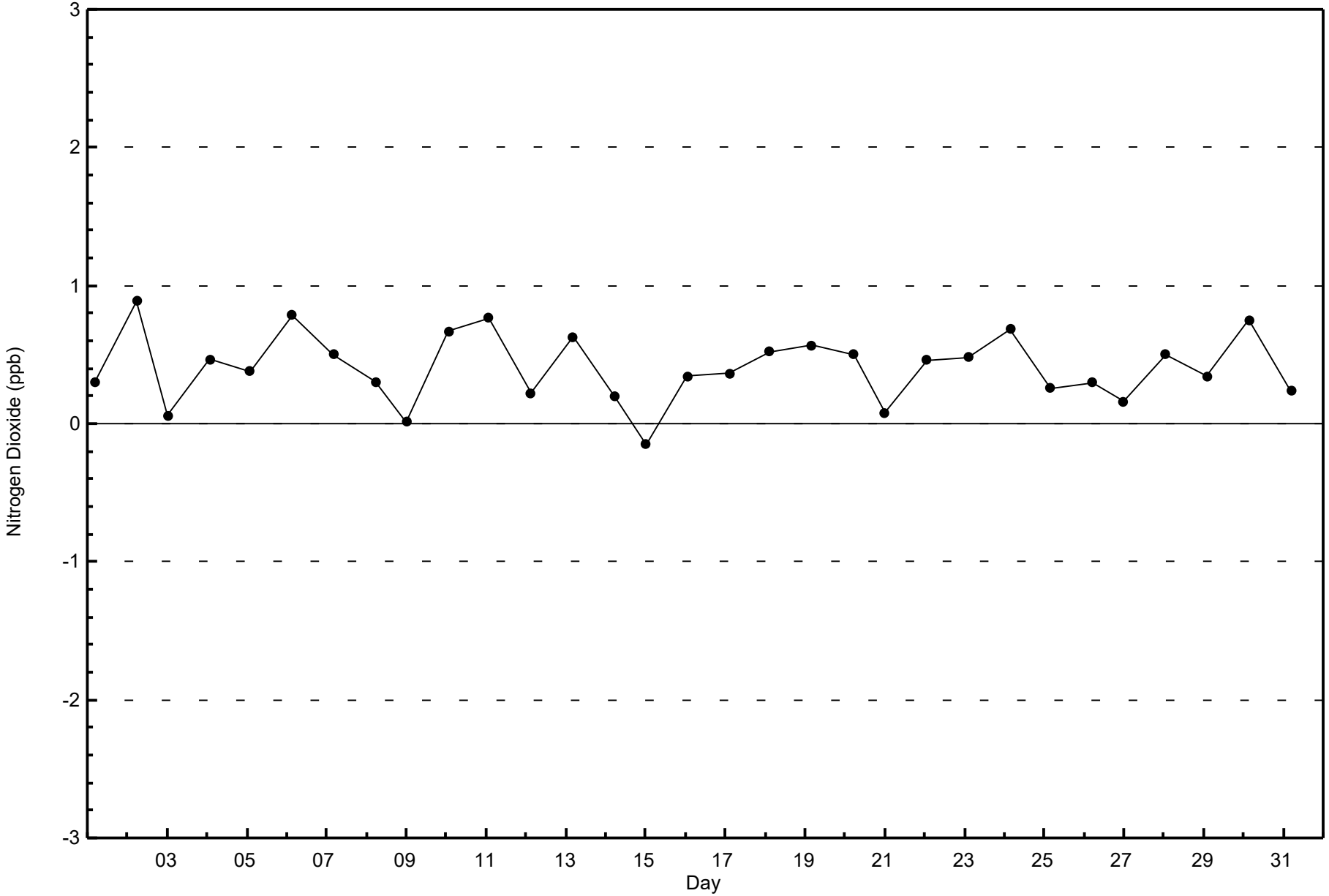
Total Number of Valid Hours: 694

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Fort McKay - Bertha Ganter - March 2025

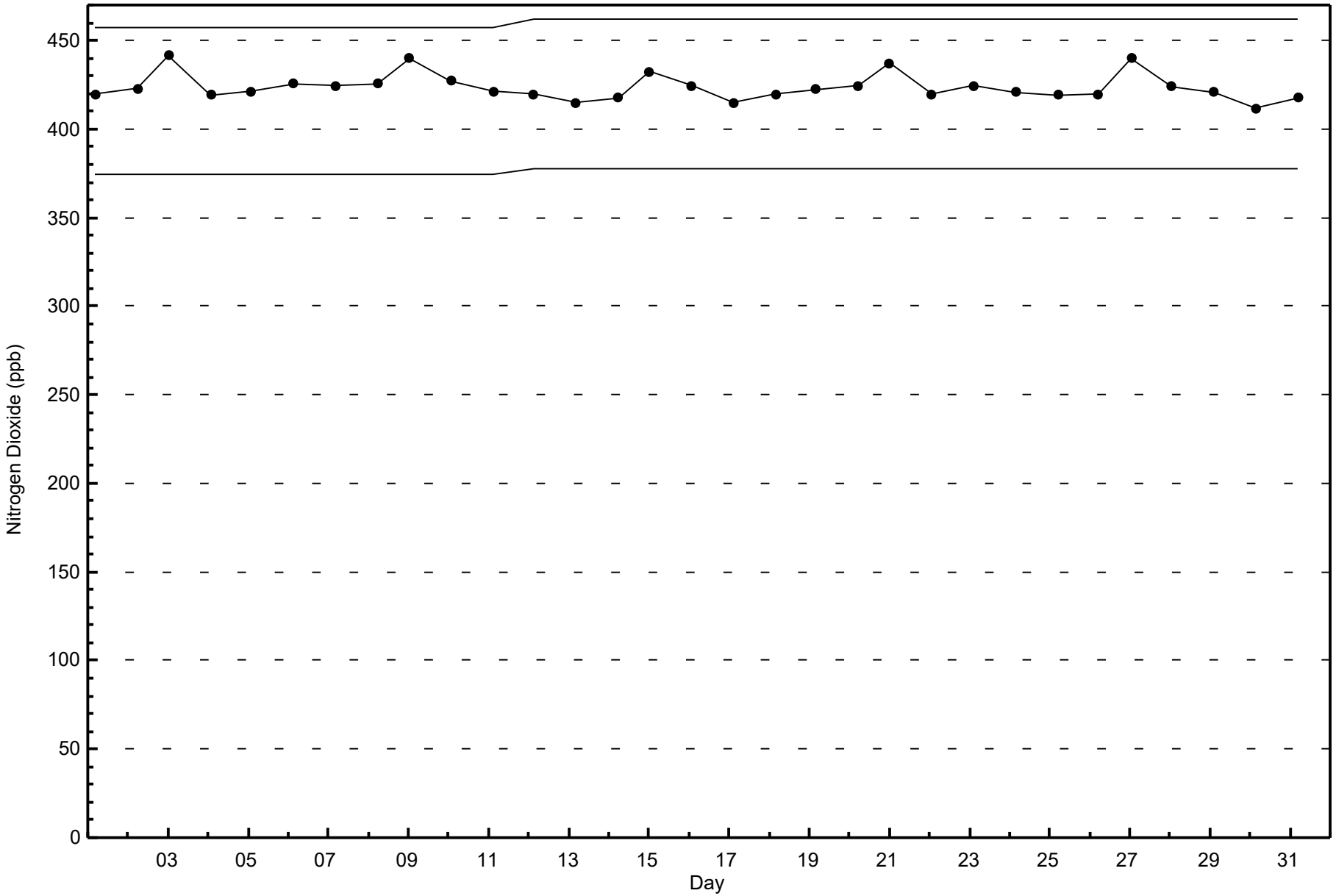


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Fort McKay - Bertha Ganter - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Fort McKay - Bertha Ganter - March 2025

Maximum Value: 145.2 ppb on Mar 2 10:00

Maximum Daily Average: 41.8 ppb on Mar 2

Minimum Value: 0.0 ppb on Mar 24 18:00

Minimum Daily Average: 5.0 ppb on Mar 31

Maximum Diurnal Average: 29.1 ppb at hour 11

Minimum Diurnal Average: 9.5 ppb at hour 17

Monthly Average: 16.84 ppb

Percentiles: P_1 = 1.1 P_{10} = 3.9 Q_1 = 6.6 Median = 12.9 Q_3 = 22.5 P_{90} = 34.3 P_{99} = 66.3

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	37
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	17.0	17.9	17.6	12.9	Z	8.1	7.8	6.8	8.6	11.0	16.2	18.4	22.7	25.2	23.3	24.8	19.2	18.1	17.6	18.5	22.1	21.4	26.2	29.2	17.8	29.2
2-Mar	22.7	37.2	47.6	38.4	34.6	Z	23.3	45.1	135.2	145.2	143.2	104.7	58.6	17.2	3.0	9.3	35.4	9.7	10.6	6.9	8.2	5.6	9.8	10.8	41.8	145.2
3-Mar	Z	12.6	16.0	13.4	16.5	19.1	14.7	13.4	22.9	22.1	23.2	28.8	18.0	18.3	9.2	4.9	5.0	8.9	16.6	14.4	15.4	20.8	22.1	27.4	16.7	28.8
4-Mar	80.1	Z	79.7	46.2	64.1	59.3	46.7	30.8	50.5	40.6	23.3	21.2	18.1	15.1	17.0	8.1	0.9	1.9	5.6	3.4	19.8	17.3	16.5	17.6	29.7	80.1
5-Mar	19.8	24.8	Z	7.1	5.8	3.9	1.7	5.1	12.5	17.1	17.4	11.9	8.8	7.6	8.5	11.4	11.4	16.7	14.8	28.7	49.6	44.1	41.7	38.3	17.8	49.6
6-Mar	37.1	29.8	43.5	Z	32.7	35.9	40.3	52.7	55.6	59.9	15.9	15.0	15.7	14.5	13.4	12.2	9.2	8.8	13.4	13.4	13.1	17.1	19.3	42.3	26.6	59.9
7-Mar	UO	20.5	23.4	15.0	Z	15.8	17.7	24.8	39.3	41.4	35.9	33.0	25.8	46.7	66.4	22.6	14.6	14.3	7.9	11.2	7.7	10.8	11.9	17.7	23.8	66.4
8-Mar	26.5	24.6	25.6	29.8	34.9	Z	49.5	12.3	18.9	27.6	19.7	16.4	17.0	12.2	7.8	8.1	10.4	17.5	24.9	8.3	5.2	5.6	7.6	7.7	18.2	49.5
9-Mar	Z	3.9	3.7	6.9	9.3	5.0	5.6	8.6	9.3	21.7	22.7	24.1	20.5	15.3	12.9	12.3	20.3	9.1	6.5	9.8	11.2	12.3	10.3	21.1	12.3	24.1
10-Mar	23.1	Z	22.5	31.4	28.4	26.2	29.4	34.3	37.3	37.7	32.9	30.5	25.7	17.5	12.7	9.1	12.2	12.0	26.3	33.3	24.8	23.1	36.0	36.6	26.2	37.7
11-Mar	35.2	32.7	Z	36.8	32.6	31.3	22.6	22.4	25.9	37.7	C	C	C	C	C	C	5.2	4.3	4.1	4.6	5.7	5.0	5.9	7.2	--	37.7
12-Mar	6.9	6.4	5.0	Z	13.2	17.2	23.3	19.6	18.1	21.4	15.1	10.9	15.7	19.6	19.9	14.9	12.9	5.4	2.8	9.4	22.6	26.2	24.5	19.7	15.2	26.2
13-Mar	23.0	23.4	23.4	26.1	Z	41.1	38.0	36.5	28.7	60.5	132.6	49.8	22.5	13.5	9.8	8.0	5.9	5.1	2.9	3.7	4.6	4.0	4.0	5.7	24.9	132.6
14-Mar	11.2	12.6	9.2	10.5	7.8	Z	12.8	7.6	12.4	11.1	7.7	5.3	5.1	4.0	3.3	4.9	4.5	4.2	6.7	6.8	10.3	8.1	5.5	3.3	7.6	12.8
15-Mar	Z	13.7	11.9	11.3	8.1	3.8	2.8	4.8	9.3	15.7	30.1	11.7	9.4	7.2	6.0	5.8	4.4	4.1	5.0	9.3	29.6	18.4	14.7	21.0	11.2	30.1
16-Mar	24.4	Z	21.3	21.5	23.5	28.3	34.3	30.7	17.4	24.3	20.3	19.0	8.7	9.1	5.9	3.3	4.4	3.9	1.6	1.0	2.2	1.4	1.7	2.1	13.5	34.3
17-Mar	2.6	2.7	Z	3.9	6.3	7.0	6.4	6.1	11.5	10.4	33.3	22.0	13.2	7.8	7.6	6.1	6.2	7.3	14.1	15.3	17.3	25.0	25.4	24.3	12.3	33.3
18-Mar	23.0	21.4	16.0	Z	47.6	42.0	36.4	43.3	38.5	31.9	23.3	7.8	7.5	3.2	1.9	3.3	4.5	6.2	5.9	5.2	13.5	36.2	16.9	8.3	19.3	47.6
19-Mar	16.3	22.4	8.6	13.3	Z	23.0	22.6	22.3	27.7	25.3	36.8	53.3	32.2	24.2	24.0	20.6	21.7	42.4	23.9	16.7	13.1	7.7	5.6	6.0	22.2	53.3
20-Mar	7.0	9.9	11.4	14.4	12.3	Z	14.8	20.9	30.1	27.7	19.0	14.0	9.6	8.7	6.1	6.8	7.2	4.6	6.1	9.0	13.8	15.1	24.5	23.0	13.7	30.1
21-Mar	Z	7.8	5.8	6.8	5.9	5.1	8.0	10.1	10.8	11.0	19.7	14.7	12.8	15.0	9.3	7.5	5.9	2.5	0.1	3.1	2.1	1.9	1.8	2.7	7.4	19.7
22-Mar	6.3	Z	9.5	7.5	3.9	4.4	5.5	6.1	7.7	11.8	12.8	9.3	16.4	15.4	6.8	11.6	14.9	49.4	10.3	0.8	3.4	16.8	13.9	12.4	11.2	49.4
23-Mar	5.6	8.7	Z	8.9	11.6	12.9	14.6	21.2	27.4	21.6	12.2	9.1	4.0	4.8	8.4	5.5	1.4	3.6	5.3	26.7	40.2	34.7	29.0	18.4	14.6	40.2
24-Mar	22.5	20.4	19.0	Z	23.6	22.0	33.5	35.8	35.3	18.5	14.6	12.6	11.6	8.0	6.6	6.1	0.2	0.0	6.5	5.7	1.9	1.3	1.8	2.5	13.5	35.8
25-Mar	1.1	1.6	2.3	2.1	Z	4.4	12.1	12.9	3.4	14.6	6.2	13.1	4.4	1.9	0.3	1.9	5.2	5.1	7.5	9.3	10.7	9.6	2.5	4.0	5.9	14.6
26-Mar	4.3	4.7	5.3	8.1	7.2	Z	12.9	12.3	10.2	5.2	8.0	7.8	7.7	7.5	8.3	10.9	10.5	9.6	6.1	4.2	14.3	18.5	9.9	8.0	8.8	18.5
27-Mar	Z	8.5	11.1	3.2	3.9	5.4	6.5	14.1	19.2	8.5	6.2	4.2	5.0	4.4	3.2	2.5	2.8	3.2	6.0	9.9	17.2	13.2	12.3	12.6	8.0	19.2
28-Mar	16.0	Z	28.7	35.7	29.0	29.8	30.6	31.6	47.0	49.7	40.5	22.3	14.6	9.5	7.2	7.6	7.4	10.1	11.6	9.2	13.5	21.2	21.8	15.9	22.2	49.7
29-Mar	24.5	10.9	Z	13.0	15.2	18.8	18.9	11.0	19.5	21.0	37.7	20.8	9.9	6.0	3.5	7.0	7.7	13.6	7.7	9.4	16.7	17.5	20.4	17.4	15.1	37.7
30-Mar	22.1	21.8	28.6	Z	10.4	6.5	11.3	13.0	17.0	29.2	34.3	26.0	21.0	29.4	29.1	29.1	19.9	20.4	21.1	28.0	18.8	16.3	18.7	22.6	21.5	34.3
31-Mar	21.6	3.0	2.7	2.1	Z	1.9	3.1	3.9	5.5	9.5	13.3	3.5	3.9	3.7	5.1	4.4	4.5	4.3	2.5	3.2	5.1	2.8	3.1	2.9	5.0	21.6
	20.0	15.5	19.2	16.4	19.5	18.4	19.6	20.0	26.2	28.7	29.1	21.4	15.5	13.1	11.5	9.7	9.5	10.5	9.7	10.9	14.6	15.5	15.0	15.8	Diurnal Average	
	80.1	37.2	79.7	46.2	64.1	59.3	49.5	52.7	135.2	145.2	143.2	104.7	58.6	46.7	66.4	29.1	35.4	49.4	26.3	33.3	49.6	44.1	41.7	42.3	Diurnal Maximum	

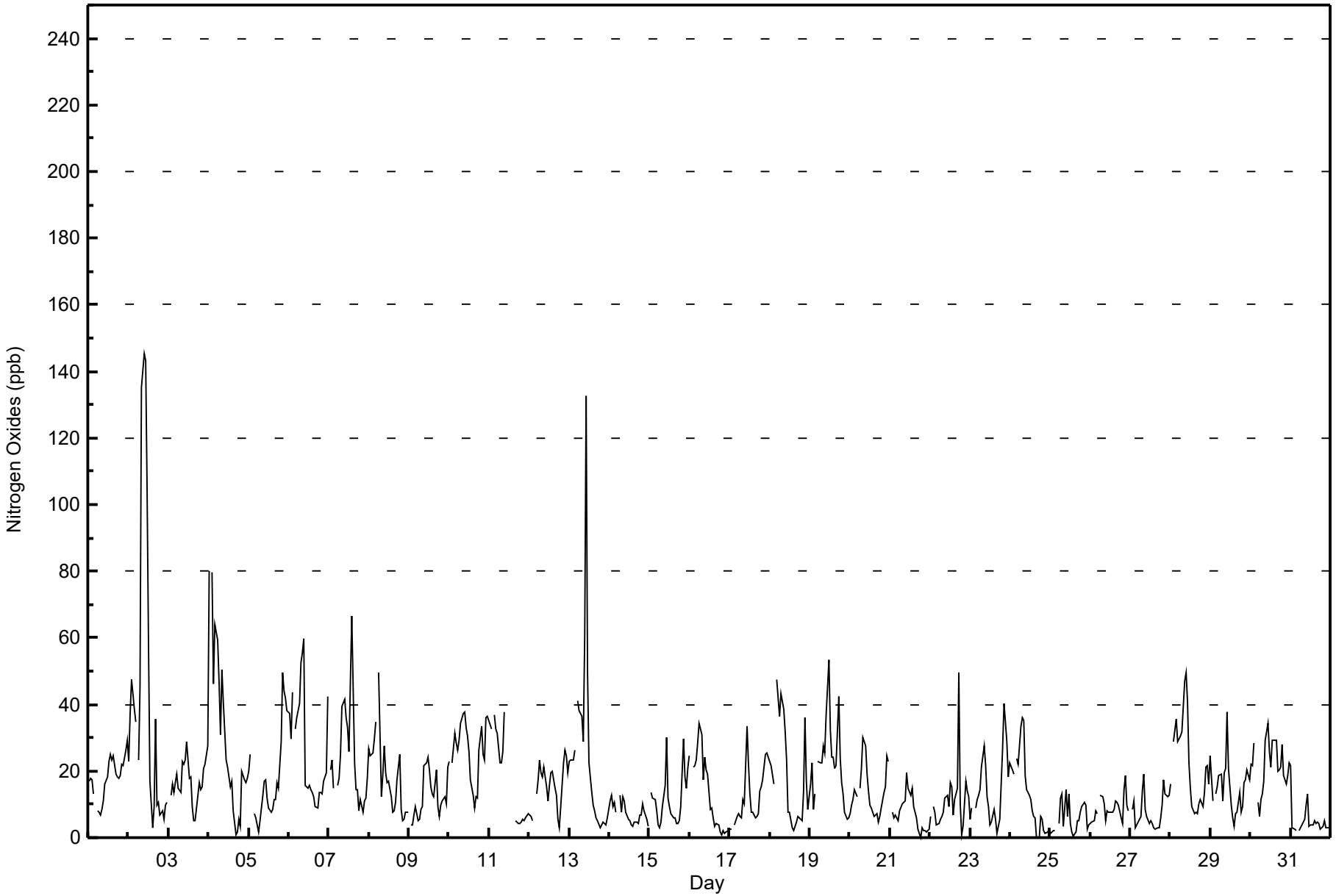
Z - zerospan C - Calibration UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Fort McKay - Bertha Ganter - March 2025



Nitrogen Oxides (NO_X) - ppb

Fort McKay - Bertha Ganter - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	494	69.97	69.97
21 - 40	172	24.36	94.33
11 - 80	35	4.96	99.29
81 - 159	5	0.71	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Fort McKay - Bertha Ganter - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	108	101	16	12	8	10	21	74	56	5	6	7	7	21	18	18	488
21 - 40	35	25	6	4	2	2	14	13	10	7	4	5	4	8	8	19	166
11 - 80	8	4	3	0	1	0	0	6	7	1	1	0	0	1	1	2	35
81 - 159	1	1	0	0	0	0	0	2	1	0	0	0	0	0	0	0	5
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	152	131	25	16	11	12	35	95	74	13	11	12	11	30	27	39	694

Total Number of Valid Hours: 694

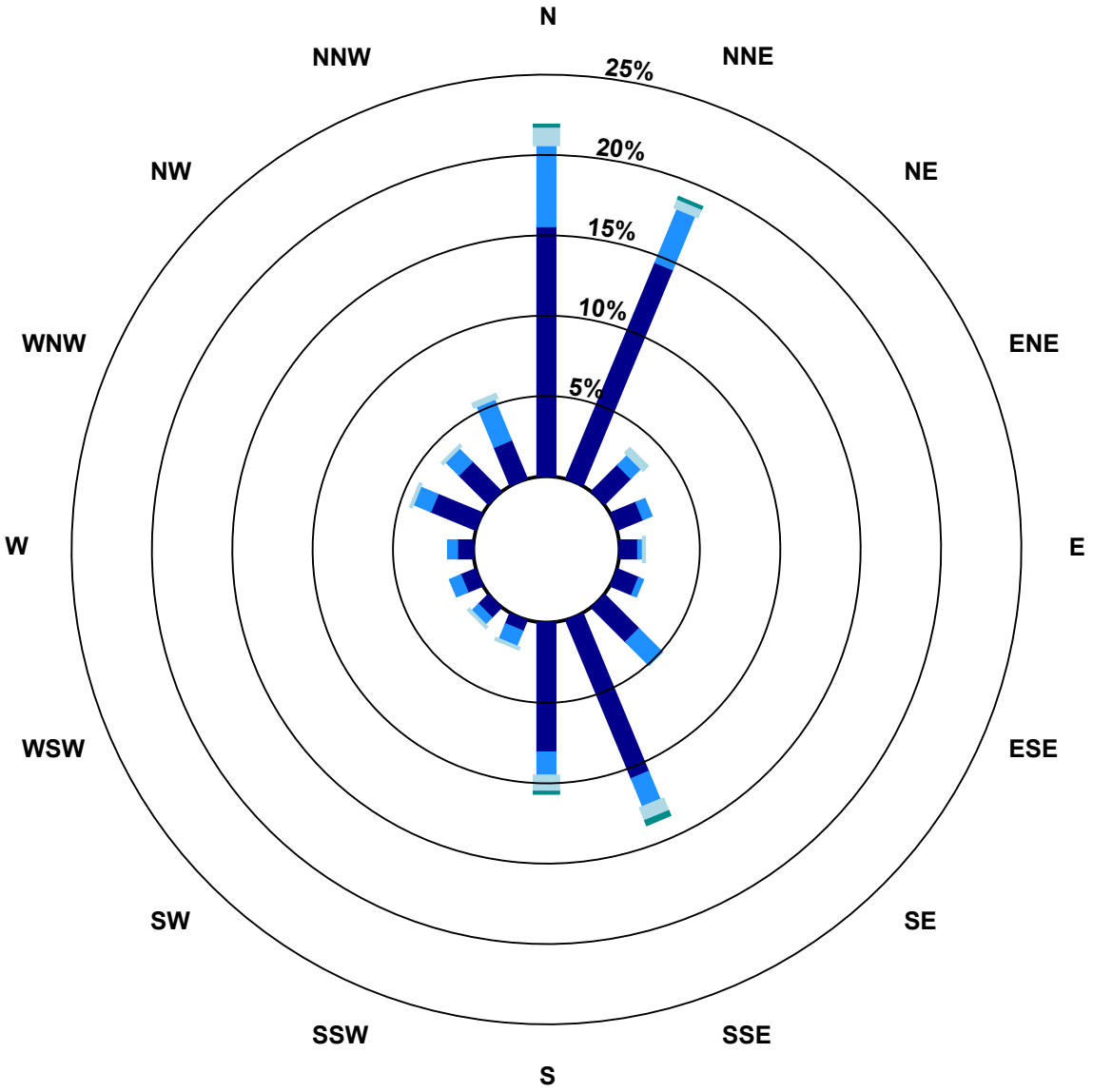
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Oxides (NO_X) - ppb

Fort McKay - Bertha Ganter



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

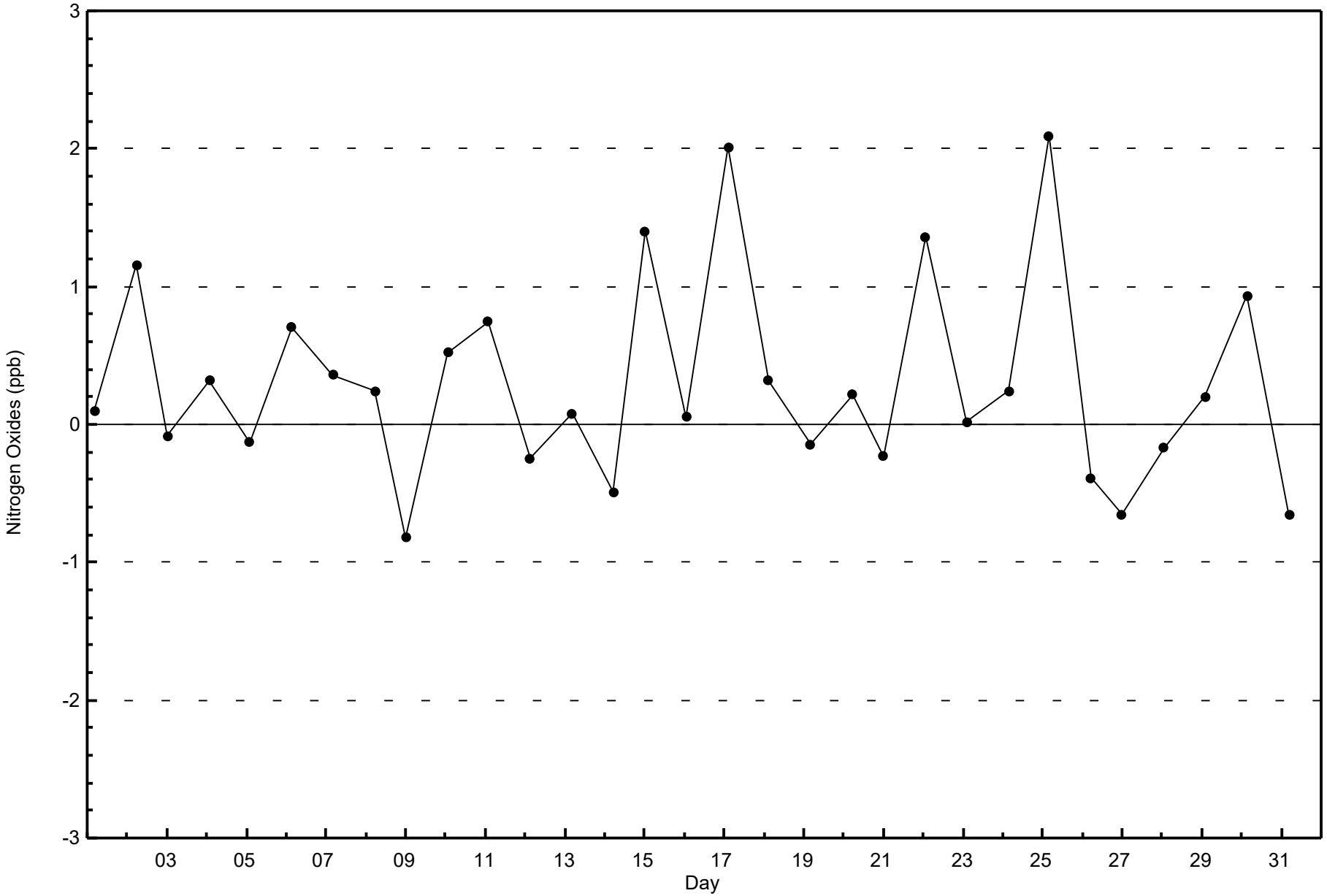
Total Number of Valid Hours: 694

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Fort McKay - Bertha Ganter - March 2025

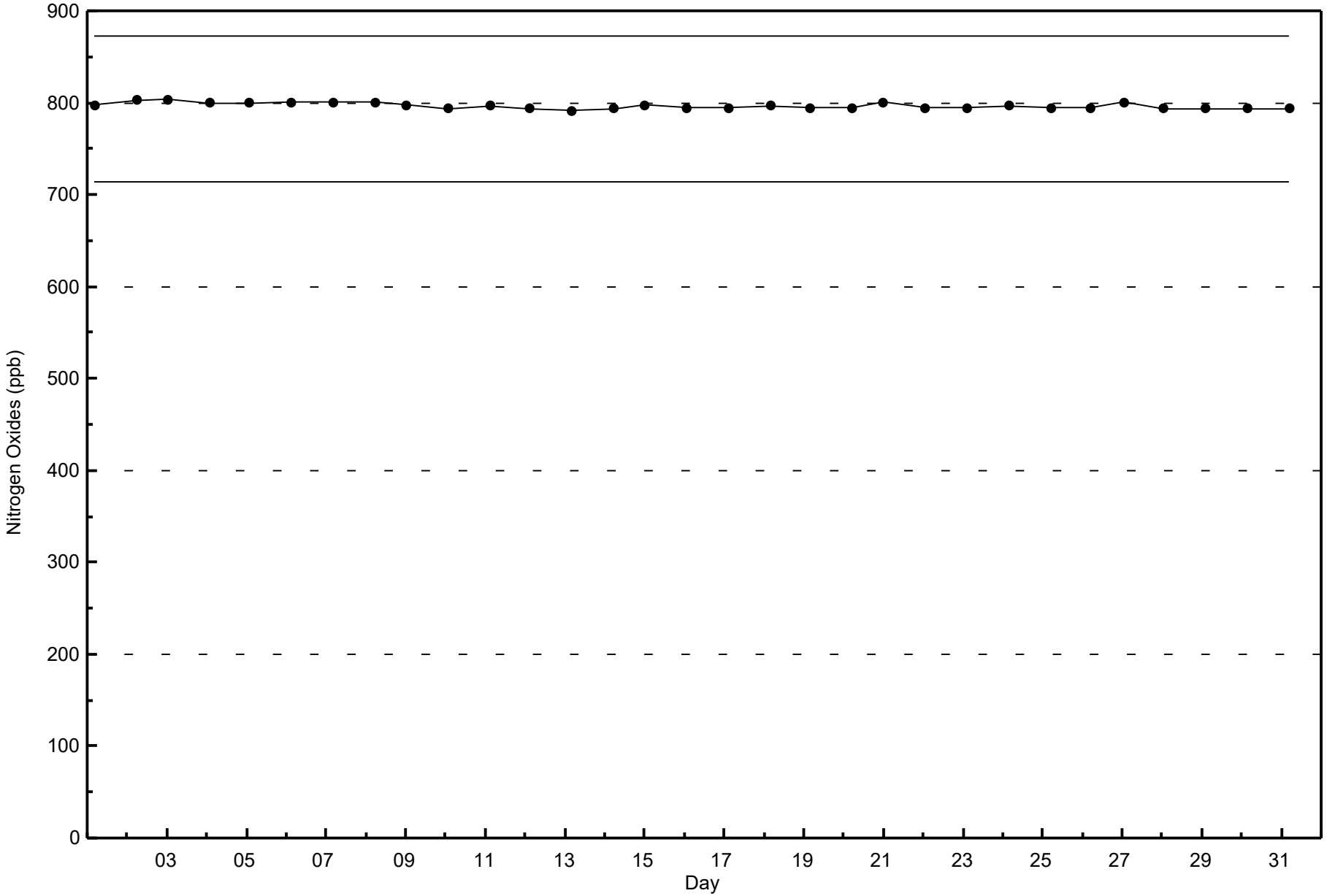


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Fort McKay - Bertha Ganter - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Fort McKay - Bertha Ganter - March 2025

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

Maximum Value: 41.2 ppb on Mar 25 15:00

Maximum Daily Average: 32.7 ppb on Mar 31

Minimum Value: 0.5 ppb on Mar 4 03:00

Minimum Daily Average: 8.0 ppb on Mar 10

Maximum Diurnal Average: 30.2 ppb at hour 16

Minimum Diurnal Average: 13.0 ppb at hour 7

Monthly Average: 21.08 ppb

Percentiles: P_1 = 0.6 P_{10} = 4.5 Q_1 = 14.7 Median = 23.2 Q_3 = 28.6 P_{90} = 32.8 P_{99} = 36.0

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	9.7	9.7	Z	15.6	21.1	19.0	19.0	20.2	20.8	21.6	20.9	21.3	21.0	21.7	23.9	22.6	22.2	18.4	15.7	10.9	5.9	3.6	1.2	1.0	16.0	23.9
2-Mar	1.2	0.7	0.5	Z	2.2	5.3	3.7	1.3	0.7	1.0	2.6	6.0	11.8	28.0	37.5	32.2	17.9	27.3	26.4	29.3	28.9	30.6	25.9	24.7	15.0	37.5
3-Mar	24.8	20.9	17.7	19.8	Z	14.6	17.5	18.2	14.6	17.5	17.6	16.7	23.7	26.4	30.3	33.5	32.1	27.4	17.2	16.9	14.9	9.4	7.2	3.2	19.2	33.5
4-Mar	1.1	1.1	0.5	1.2	1.0	Z	3.6	6.5	7.1	13.3	19.3	20.4	24.7	26.4	26.2	33.8	39.9	37.5	32.8	33.6	15.4	17.6	17.8	16.1	17.2	39.9
5-Mar	Z	10.6	23.5	27.1	28.0	30.8	32.9	29.9	28.3	26.6	28.0	31.8	C	C	C	C	29.6	24.2	23.0	8.9	1.0	1.1	1.4	1.6	20.4	32.9
6-Mar	2.1	Z	2.7	3.7	2.7	1.3	0.9	2.3	5.5	10.6	26.9	28.5	28.9	29.2	29.4	29.0	29.7	28.2	22.6	20.0	16.9	11.1	10.6	1.6	15.0	29.7
7-Mar	UO	14.5	Z	19.0	14.4	18.1	16.2	12.6	12.3	15.2	20.6	21.1	22.8	16.8	12.6	25.3	28.2	30.0	29.4	26.2	30.0	26.7	25.0	18.8	20.7	30.0
8-Mar	12.0	14.3	12.7	Z	6.0	0.7	1.0	26.0	27.4	21.5	24.3	25.8	28.3	31.6	34.1	33.9	31.0	24.3	19.5	29.0	30.6	28.2	24.6	22.8	22.2	34.1
9-Mar	21.9	24.4	23.5	21.5	Z	25.9	26.4	24.7	24.8	22.3	20.5	19.3	20.4	21.6	23.5	20.7	19.4	20.9	20.4	15.6	13.4	11.1	12.1	2.9	19.9	26.4
10-Mar	2.1	2.9	2.1	0.6	0.6	Z	0.5	2.6	5.3	7.8	11.2	13.6	16.0	19.3	21.8	22.0	20.2	17.8	4.7	1.5	4.5	6.6	0.8	0.6	8.0	22.0
11-Mar	Z	1.0	1.2	0.6	1.2	2.2	7.0	11.0	13.7	14.1	16.3	14.3	18.8	20.3	24.7	25.0	26.3	26.8	27.9	27.3	25.9	26.3	25.4	24.1	16.6	27.9
12-Mar	25.1	Z	27.9	24.3	19.3	14.1	8.1	12.3	16.0	18.0	22.9	25.7	24.7	24.6	24.6	25.7	25.4	29.3	28.9	21.7	9.5	6.6	5.7	7.3	19.5	29.3
13-Mar	4.1	3.7	Z	1.1	0.5	0.6	0.8	4.9	10.4	8.7	5.9	20.1	24.5	27.0	28.4	28.5	29.7	28.5	30.8	29.4	28.4	28.4	28.3	26.4	17.4	30.8
14-Mar	21.5	21.0	23.9	Z	24.9	24.3	20.1	24.9	22.4	23.5	26.0	27.4	28.8	28.8	28.5	28.5	28.7	30.5	29.2	27.9	24.9	26.4	30.3	33.0	26.3	33.0
15-Mar	31.9	21.3	23.6	20.7	Z	25.7	26.4	22.5	19.1	19.5	23.7	31.0	31.7	31.8	32.7	33.4	33.5	33.7	31.8	25.8	11.9	18.4	21.2	15.2	25.5	33.7
16-Mar	11.8	12.0	13.2	11.9	9.7	Z	2.0	8.8	19.6	21.1	24.7	26.7	31.9	31.3	32.5	33.8	33.0	32.4	34.4	35.2	33.8	33.9	33.9	33.0	24.4	35.2
17-Mar	Z	31.0	28.5	27.8	25.2	23.3	19.1	20.4	20.7	23.0	17.5	24.1	27.7	30.1	30.2	30.1	29.8	28.7	21.7	19.3	17.2	10.0	8.3	6.8	22.6	31.0
18-Mar	5.8	Z	13.7	4.4	1.9	1.5	2.9	6.5	14.7	19.2	23.2	30.4	30.7	32.7	33.2	33.0	31.7	30.3	29.1	28.5	18.6	3.8	18.6	25.3	19.1	33.2
19-Mar	17.8	13.5	Z	17.9	7.1	6.0	5.8	9.7	13.7	17.7	16.8	17.0	22.6	24.2	23.9	24.7	23.0	13.0	16.1	20.0	22.4	27.1	28.0	27.3	18.0	28.0
20-Mar	26.2	23.8	22.2	Z	21.0	22.5	19.3	18.4	18.8	21.4	25.7	28.0	29.4	31.1	33.8	33.4	33.6	34.9	32.8	28.8	23.5	22.2	13.0	12.6	25.1	34.9
21-Mar	20.9	27.4	27.0	23.7	Z	23.8	17.9	18.4	24.2	28.9	26.4	29.0	29.7	28.9	31.5	31.8	32.9	34.8	34.9	32.6	33.2	33.7	31.5	29.1	28.4	34.9
22-Mar	25.7	21.7	22.9	23.3	28.1	Z	26.8	26.8	27.5	27.0	26.7	27.2	26.5	28.1	33.0	31.3	27.5	7.3	31.7	30.7	20.2	17.1	21.6	23.2	25.3	33.0
23-Mar	Z	24.3	21.5	16.0	11.1	7.7	5.1	7.5	13.4	19.2	27.7	32.3	35.4	36.0	33.6	34.4	36.8	35.8	32.1	12.1	3.8	4.0	6.4	10.2	20.3	36.8
24-Mar	6.7	Z	8.4	4.3	3.3	3.9	1.4	3.7	8.3	19.2	23.9	25.1	26.6	31.4	32.8	33.4	34.4	34.6	30.4	31.4	32.7	29.6	27.0	20.7	20.6	34.6
25-Mar	25.2	25.1	Z	24.5	22.0	18.6	13.3	12.6	19.6	17.1	22.0	22.5	30.2	37.2	41.2	39.5	34.9	29.3	25.9	23.8	23.2	24.4	30.3	29.1	25.7	41.2
26-Mar	28.2	26.1	24.6	Z	21.5	18.2	16.4	19.9	21.0	25.0	25.0	26.9	27.7	28.3	28.8	26.9	26.0	25.4	27.5	28.6	20.6	17.6	25.2	26.5	24.4	28.8
27-Mar	27.2	25.5	24.1	30.8	Z	28.5	27.4	21.8	21.3	28.8	30.1	31.1	31.8	32.1	32.6	32.5	31.4	33.2	31.0	27.7	19.6	21.4	20.8	18.4	27.3	33.2
28-Mar	15.5	10.2	5.3	2.5	3.0	Z	4.5	10.3	11.3	13.2	17.2	25.5	29.7	33.5	34.5	34.0	34.4	30.5	27.1	25.3	18.8	12.5	12.3	15.8	18.6	34.5
29-Mar	Z	22.9	23.4	15.8	9.6	5.4	8.2	17.9	17.0	18.2	19.4	27.0	32.3	35.0	35.7	34.2	33.2	29.9	32.2	23.9	18.8	18.2	14.4	15.3	22.1	35.7
30-Mar	11.7	Z	7.4	11.1	22.1	23.2	16.1	18.0	19.3	18.5	18.2	23.0	25.3	23.5	23.7	23.3	26.5	23.9	20.7	13.8	23.6	24.3	20.8	16.0	19.8	26.5
31-Mar	17.6	35.3	Z	35.3	34.8	34.7	34.0	33.6	32.0	29.5	26.5	32.5	34.2	34.8	34.8	35.0	34.8	34.8	35.5	34.4	31.2	31.5	32.6	33.5	32.7	35.5
	15.9	17.1	16.1	15.6	13.2	15.4	13.0	15.3	17.1	19.0	21.2	24.2	26.6	28.4	29.8	30.2	29.6	27.9	26.6	23.9	20.1	18.8	18.8	17.5	Diurnal Average	
	31.9	35.3	28.5	35.3	34.8	34.7	34.0	33.6	32.0	29.5	30.1	32.5	35.4	37.2	41.2	39.5	39.9	37.5	35.5	35.2	33.8	33.9	33.9	33.5	Diurnal Maximum	

Z - zerospan C - Calibration UO - Unstable Operation

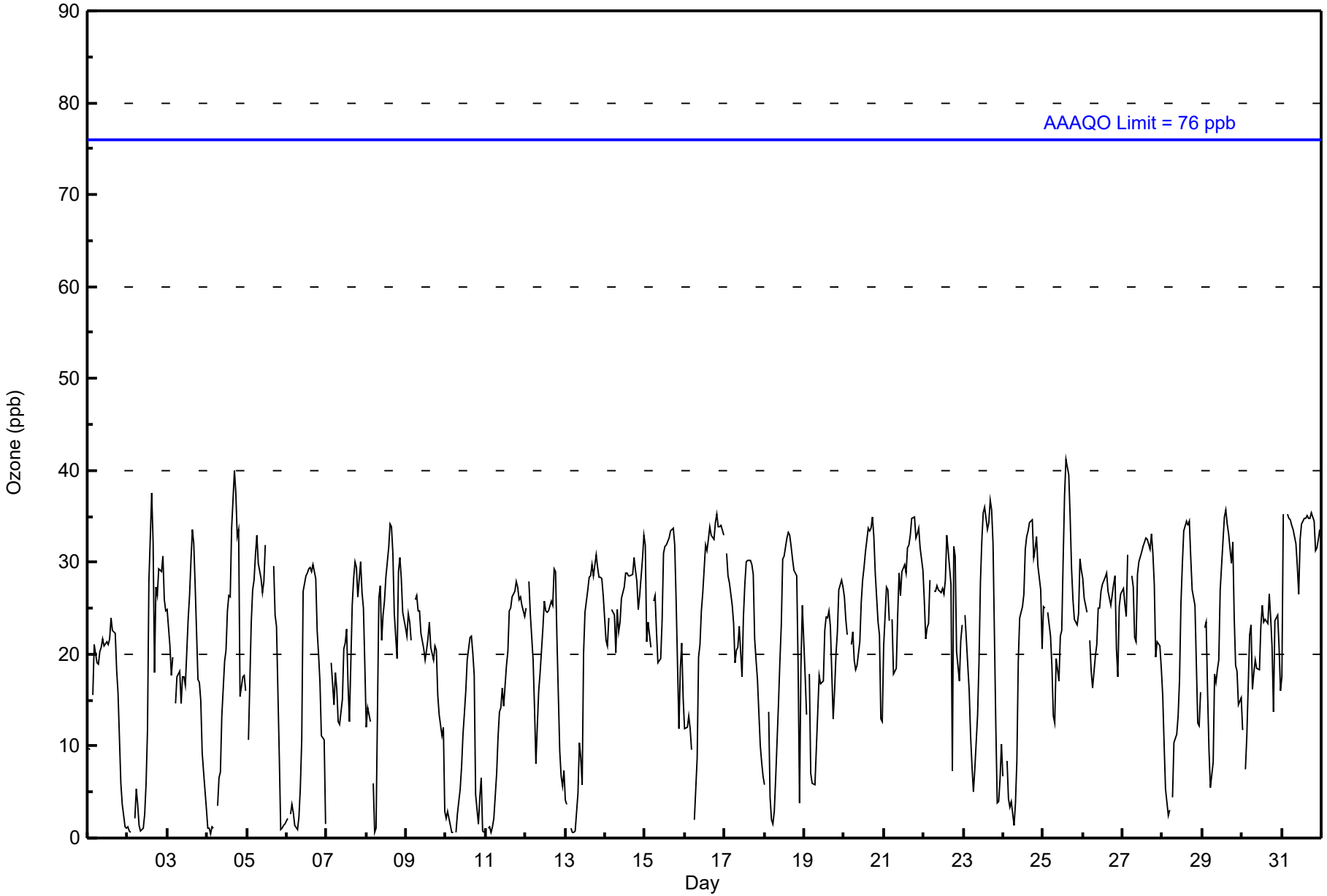
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Fort McKay - Bertha Ganter - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	285	40.25	40.25
21 - 50	423	59.75	100.00
51 - 82	0	0.00	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	69	36	7	3	2	4	13	19	24	10	5	5	10	20	17	31	275
21 - 50	88	95	18	13	9	8	21	73	50	4	6	5	1	12	8	8	419
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	157	131	25	16	11	12	34	92	74	14	11	10	11	32	25	39	694

Total Number of Valid Hours: 694

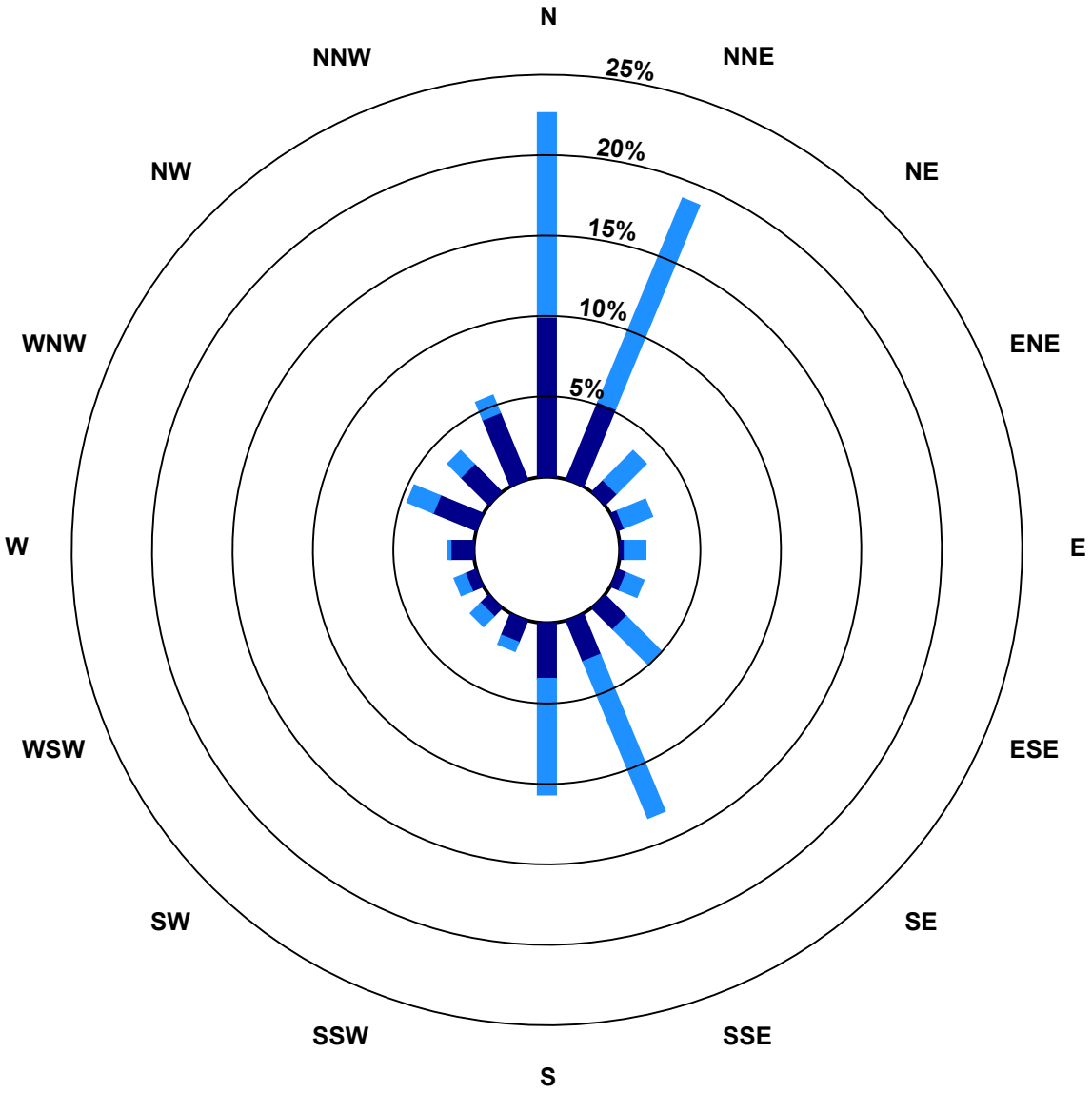
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Ozone (O_3) - ppb

Fort McKay - Bertha Ganter



Classes (ppb)

0 - 20

21 - 50

51 - 82

> 83

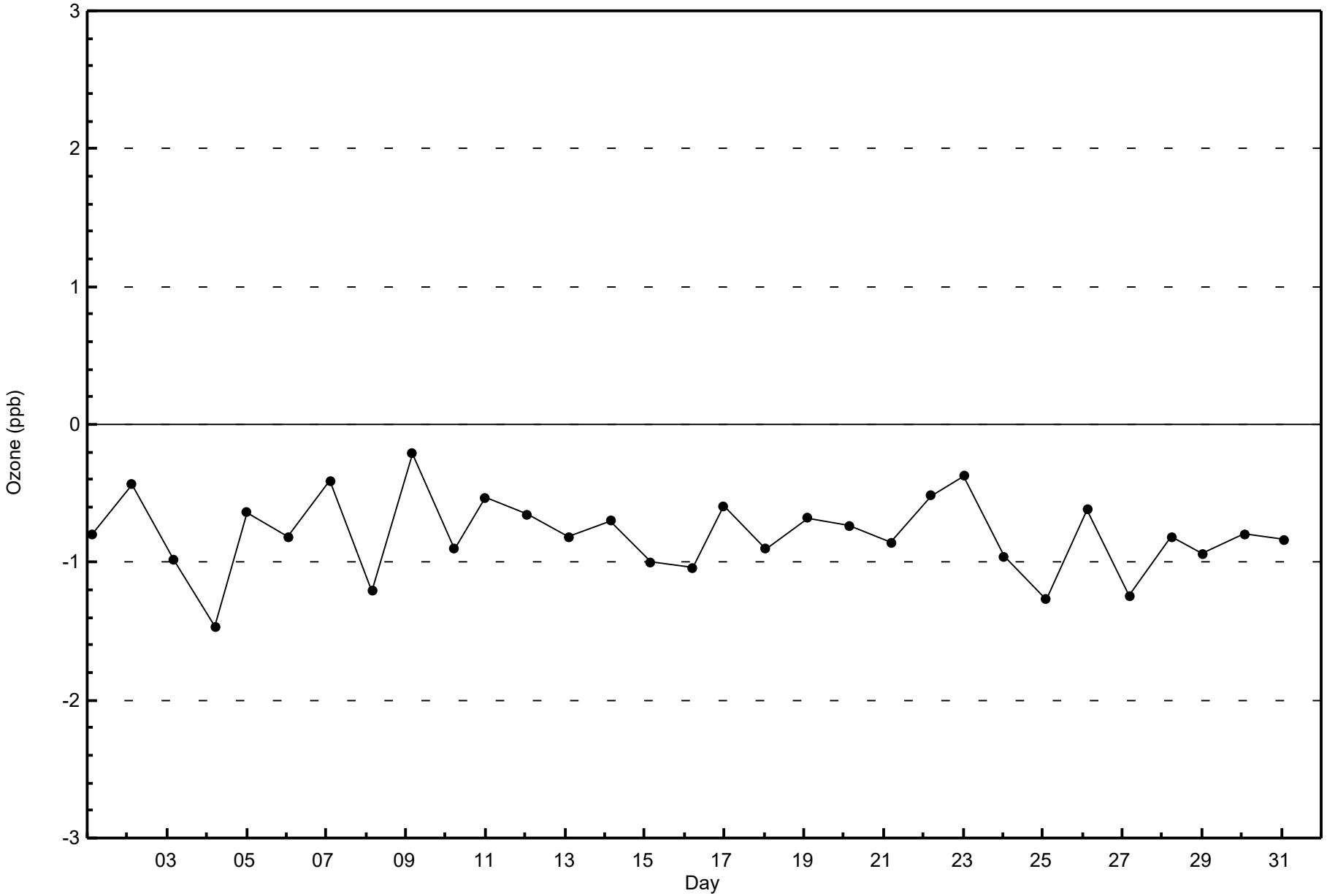
Total Number of Valid Hours: 694

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Fort McKay - Bertha Ganter - March 2025

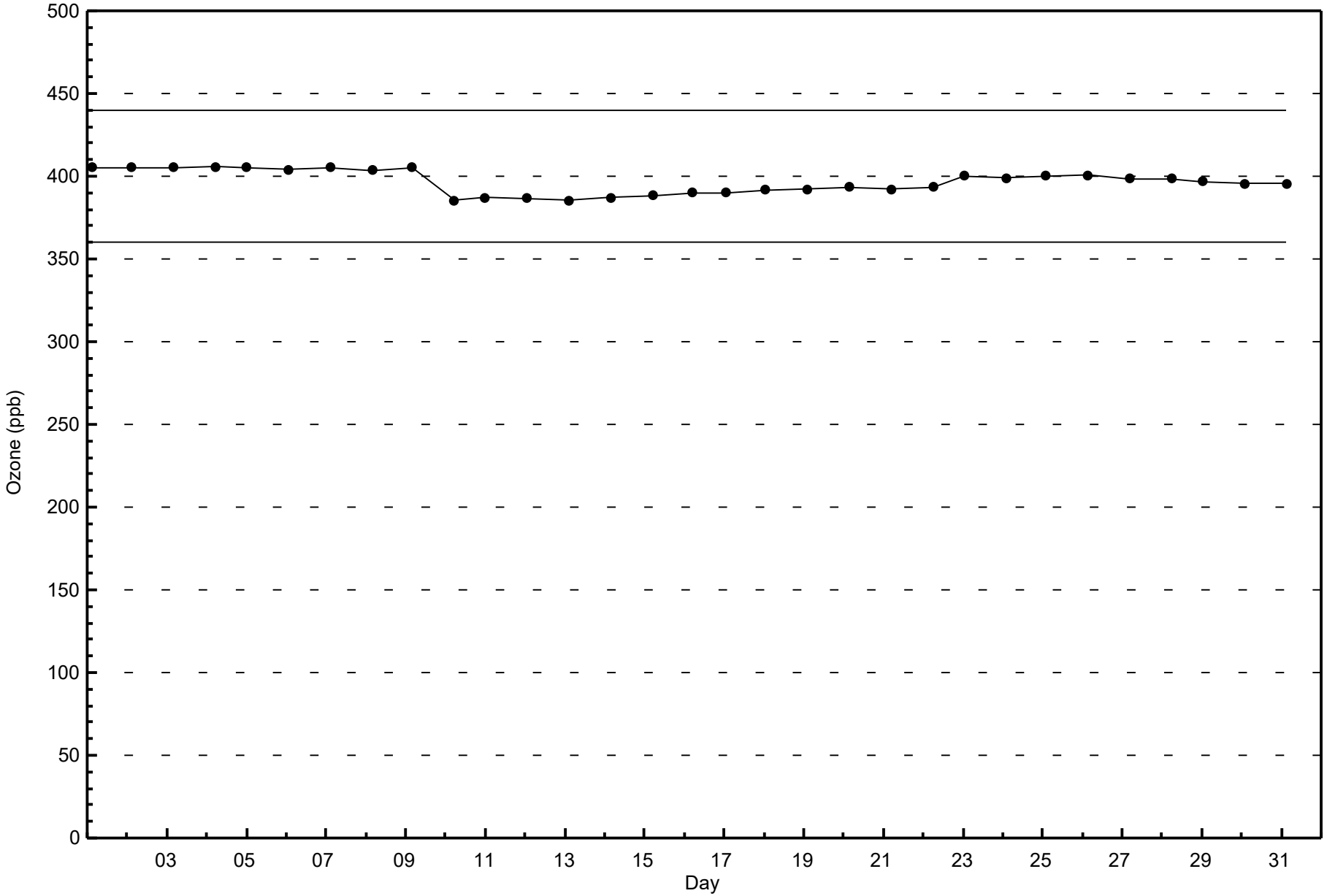


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Fort McKay - Bertha Ganter - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Fort McKay - Bertha Ganter - March 2025

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

Maximum Value: 40.5 $\mu g/m^3$ on Mar 28 09:00

Maximum Daily Average: 22.8 $\mu g/m^3$ on Mar 30

Minimum Value: 0.9 $\mu g/m^3$ on Mar 25 16:00

Minimum Daily Average: 3.1 $\mu g/m^3$ on Mar 25

Maximum Diurnal Average: 10.6 $\mu g/m^3$ at hour 11

Minimum Diurnal Average: 6.4 $\mu g/m^3$ at hour 18

Monthly Average: 8.51 $\mu g/m^3$

Percentiles: P_1 = 1.6 P_{10} = 3.0 Q_1 = 4.1 Median = 6.3 Q_3 = 10.6 P_{90} = 16.8 P_{99} = 31.2

Hours in Service:	744
Hours of Data:	718
Hours of Missing Data:	26
Hours of Calibration:	1
Percent Operational Time:	96.6

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	8.1	8.7	8.1	7.0	5.2	5.8	5.9	5.1	5.6	5.4	6.1	7.5	8.6	10.6	11.1	11.1	6.5	6.9	6.1	6.5	7.8	14.8	10.2	18.3	8.2	18.3
2-Mar	14.5	12.1	10.8	9.2	8.1	9.3	9.4	8.6	10.7	11.6	13.6	10.3	7.2	3.9	1.4	1.1	4.4	2.8	2.8	2.4	2.3	2.6	2.9	3.4	6.9	14.5
3-Mar	4.3	4.5	4.7	4.5	4.8	4.8	4.4	5.3	5.7	5.7	5.9	6.7	4.5	3.6	3.1	4.3	4.3	4.2	4.4	4.8	9.5	18.6	11.3	16.0	6.2	18.6
4-Mar	12.0	16.4	5.6	5.7	10.2	11.0	6.6	7.6	7.3	5.5	4.3	4.1	4.9	5.3	5.6	3.1	1.6	1.4	1.4	1.1	4.7	4.3	3.5	3.2	5.7	16.4
5-Mar	3.8	3.8	2.5	2.5	2.7	2.3	2.3	2.7	4.0	4.9	5.0	4.1	3.8	3.3	3.8	8.8	9.4	7.9	5.7	5.7	5.5	4.6	4.2	3.8	4.5	9.4
6-Mar	4.0	5.0	8.8	8.0	5.8	5.8	7.1	7.8	17.7	8.1	5.2	6.5	9.2	11.2	13.5	13.6	9.4	4.8	5.3	5.4	6.5	6.5	6.0	9.0	7.9	17.7
7-Mar	UO	5.2	4.0	3.7	3.7	5.5	7.1	9.5	11.3	12.1	10.8	10.2	8.2	13.5	14.7	5.3	3.6	3.5	3.8	3.8	3.3	5.2	6.4	8.2	7.1	14.7
8-Mar	12.1	13.4	15.4	16.2	18.1	19.8	8.1	2.6	2.5	3.0	2.7	2.7	2.5	2.0	2.2	3.1	3.0	4.8	6.0	4.7	4.4	4.7	5.7	5.6	6.9	19.8
9-Mar	8.8	4.1	3.7	4.6	6.0	5.0	5.4	5.6	5.4	6.0	6.4	10.0	6.9	7.3	7.2	8.3	7.6	7.9	10.6	11.4	9.7	15.6	17.4	17.1	8.3	17.4
10-Mar	18.1	16.8	14.2	14.5	11.1	8.7	10.0	13.7	18.7	18.8	14.6	14.1	12.1	9.6	10.6	7.3	10.8	10.5	27.1	31.4	14.8	13.2	12.9	12.2	14.4	31.4
11-Mar	10.6	9.4	10.1	11.9	12.1	11.7	8.9	7.5	6.0	6.2	5.3	6.0	5.3	6.6	5.0	4.9	4.7	4.1	3.4	3.3	3.1	2.8	2.7	2.6	6.4	12.1
12-Mar	2.3	2.3	1.9	2.4	2.8	4.1	4.4	3.5	3.2	3.7	3.2	2.9	3.5	5.0	6.7	8.3	9.4	4.2	2.6	15.0	21.3	21.2	16.5	14.1	6.8	21.3
13-Mar	12.6	10.9	9.5	8.9	10.0	11.6	9.3	8.4	6.3	14.1	32.1	12.6	10.3	8.5	8.8	8.4	8.0	9.4	7.4	6.0	8.2	8.0	7.3	5.6	10.1	32.1
14-Mar	5.0	4.3	3.5	3.7	3.3	3.4	3.8	3.2	3.8	4.1	3.8	3.7	3.8	3.7	3.9	3.9	3.7	3.4	2.8	2.9	2.8	2.7	2.1	1.9	3.5	5.0
15-Mar	1.9	2.7	2.8	2.8	2.6	2.1	1.8	2.2	2.8	3.6	4.6	3.5	3.5	3.4	3.1	3.2	3.2	3.3	3.5	4.8	8.7	7.1	6.3	6.6	3.8	8.7
16-Mar	6.6	5.9	5.4	5.4	5.5	7.9	6.3	7.1	7.6	8.4	6.7	5.5	4.7	5.3	5.0	4.0	4.1	4.1	3.1	2.5	2.4	2.3	2.8	3.0	5.1	8.4
17-Mar	3.7	3.6	3.6	3.9	4.9	5.5	5.3	5.4	5.8	4.7	6.7	5.6	4.8	4.0	4.3	5.1	5.6	6.9	9.3	15.2	16.4	28.5	13.5	15.1	7.8	28.5
18-Mar	16.3	11.4	9.8	27.0	17.5	11.6	8.5	10.2	8.4	7.8	8.0	5.2	6.3	5.5	4.5	5.5	5.8	8.1	8.1	9.7	10.5	24.2	13.6	9.4	10.5	27.0
19-Mar	12.1	15.1	5.2	5.2	10.3	8.1	8.0	10.1	9.7	14.7	16.3	24.8	21.8	17.9	21.1	19.8	20.2	11.1	6.5	6.4	5.4	5.1	4.8	4.9	11.9	24.8
20-Mar	5.4	5.8	6.3	6.3	6.4	6.4	7.9	11.6	13.6	12.1	10.7	9.3	7.6	C	4.9	5.1	5.0	5.3	9.1	15.3	21.4	21.7	32.8	28.4	11.2	32.8
21-Mar	15.1	7.1	5.2	6.2	4.9	4.4	5.6	5.5	10.5	15.7	24.6	19.7	18.6	24.9	13.4	10.1	6.0	3.6	2.9	3.1	2.7	2.6	2.7	3.5	9.1	24.9
22-Mar	7.8	13.0	11.2	9.9	5.1	7.0	6.6	6.2	7.3	7.4	7.2	10.6	14.8	11.4	7.4	9.1	7.2	11.3	5.2	3.8	3.5	7.9	8.9	8.6	8.3	14.8
23-Mar	9.4	7.1	7.6	7.8	7.3	7.9	8.8	9.2	10.1	10.0	6.6	5.6	5.3	6.8	8.0	8.9	3.3	3.8	5.0	6.2	6.6	6.0	5.6	5.1	7.0	10.1
24-Mar	5.2	5.0	4.7	4.9	5.0	10.4	9.2	10.1	10.4	7.4	6.4	5.7	5.7	6.0	4.0	2.8	3.1	3.4	3.1	3.0	2.6	3.3	4.8	15.1	5.9	15.1
25-Mar	2.8	2.8	2.5	2.3	2.4	3.0	4.4	4.1	2.5	5.1	2.9	2.6	4.1	3.3	1.4	0.9	2.3	3.6	3.8	3.7	3.7	3.8	3.2	3.2	3.1	5.1
26-Mar	3.5	3.9	4.1	4.5	4.8	6.7	5.4	4.5	5.0	5.1	5.2	5.0	4.3	3.7	3.5	3.8	3.7	4.0	3.1	3.4	4.8	6.1	6.0	6.3	4.6	6.7
27-Mar	6.9	5.0	6.5	5.1	5.7	6.4	7.4	7.9	8.9	6.4	6.5	6.1	5.6	4.8	4.0	4.2	3.5	3.6	4.2	6.8	10.0	9.4	11.7	11.9	6.6	11.9
28-Mar	16.6	27.8	29.0	32.6	25.2	28.0	26.6	29.3	40.5	36.6	28.2	19.4	16.3	9.4	7.9	6.2	7.1	7.1	8.1	8.5	11.9	17.5	18.4	20.6	20.0	40.5
29-Mar	26.6	11.8	8.4	12.7	11.7	16.6	14.6	14.8	21.8	20.5	26.0	17.3	10.7	9.8	9.4	11.7	11.3	16.8	12.8	14.5	14.3	12.4	15.4	18.8	15.0	26.6
30-Mar	27.7	31.0	31.8	27.7	18.5	12.2	13.4	12.2	19.8	28.0	31.3	25.4	22.7	28.6	26.2	30.8	27.6	20.5	19.9	18.0	16.8	15.5	16.8	25.1	22.8	31.8
31-Mar	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
	9.8	9.2	8.2	8.9	8.1	8.4	7.7	8.1	9.8	10.1	10.6	9.1	8.3	8.2	7.5	7.4	6.8	6.4	6.6	7.6	8.2	9.9	9.2	10.2	Diurnal Average	
	27.7	31.0	31.8	32.6	25.2	28.0	26.6	29.3	40.5	36.6	32.1	25.4	22.7	28.6	26.2	30.8	27.6	20.5	27.1	31.4	21.4	28.5	32.8	28.4	Diurnal Maximum	

C - Calibration UO - Unstable Operation

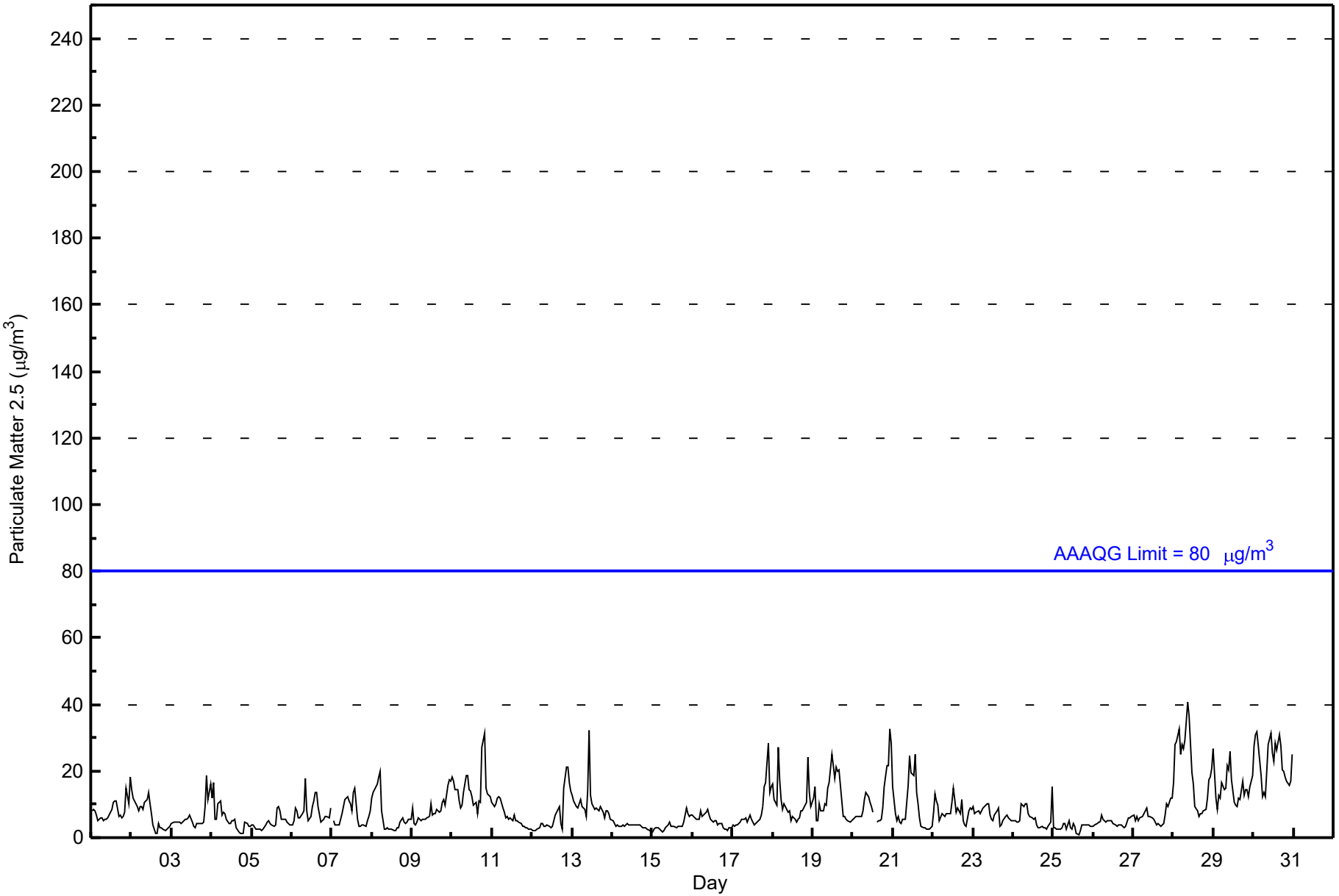
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Fort McKay - Bertha Ganter - March 2025



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

Fort McKay - Bertha Ganter - March 2025

Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	298	41.50	41.50
6 - 15	332	46.24	87.74
16 - 25	60	8.36	96.10
26 - 80	28	3.90	100.00
> 81.0	0	0.00	100.00

Total Number of Valid Hours: 718

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

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

Fort McKay - Bertha Ganter - March 2025

Concentration Ranges ($\mu g/m^3$)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	80	62	10	6	6	7	9	29	24	2	5	7	3	17	10	17	294
6 - 15	68	55	11	6	5	0	18	51	41	11	6	4	6	15	10	19	326
16 - 25	13	11	1	2	1	2	2	7	8	1	0	1	1	0	4	5	59
26 - 80	2	8	3	2	0	1	0	0	0	0	0	0	1	3	3	2	25
> 81.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	163	136	25	16	12	10	29	87	73	14	11	12	11	35	27	43	704

Total Number of Valid Hours: 704

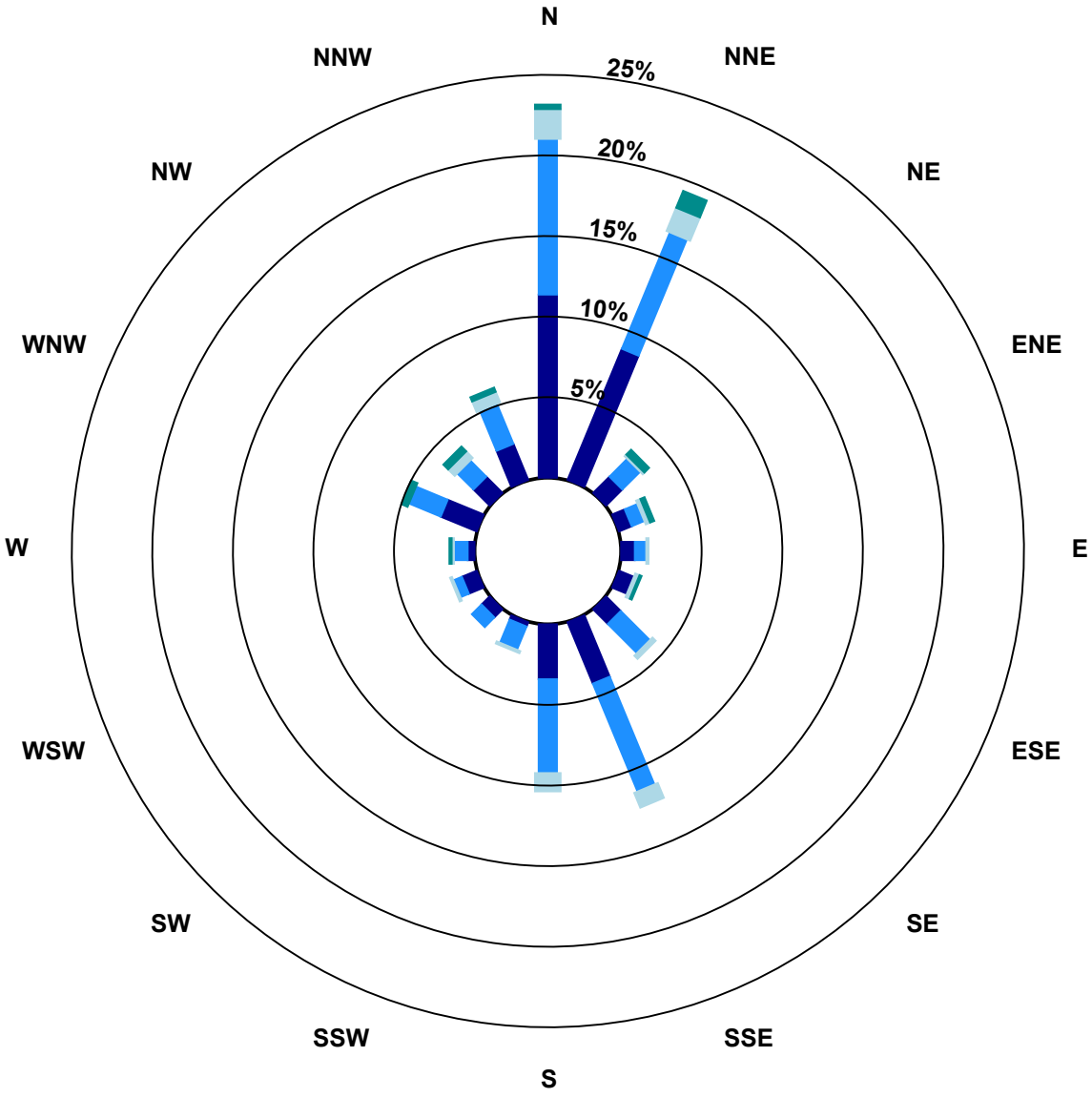
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

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

Fort McKay - Bertha Ganter



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

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

Total Number of Valid Hours: 704

Wood Buffalo Environmental Association

Summary of Hour Averages

Carbon Monoxide (CO) - ppm

Fort McKay - Bertha Ganter - March 2025

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

Maximum Value: 0.4 ppm on Mar 4 01:00

Maximum Daily Average: 0.3 ppm on Mar 24

Minimum Value: 0.1 ppm on Mar 30 06:00

Minimum Daily Average: 0.2 ppm on Mar 9

Maximum Diurnal Average: 0.2 ppm at hour 7

Minimum Diurnal Average: 0.2 ppm at hour 4

Monthly Average: 0.21 ppm

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} = 0.4

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.2	0.2	0.2	0.2	0.2	Z	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	0.4	0.4	0.3	0.4	0.3	0.4
2-Mar	Z	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	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4
3-Mar	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	C	C	C	C	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.2	0.4
4-Mar	0.4	0.3	Z	0.2	0.3	0.2	0.3	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	0.3	0.2	0.2	0.2	0.3	0.4
5-Mar	0.3	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.3
6-Mar	0.2	0.2	0.2	0.2	Z	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3
7-Mar	UO	0.2	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	0.3
8-Mar	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
9-Mar	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2
10-Mar	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	0.2	0.2	0.2
11-Mar	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
12-Mar	0.2	0.2	0.2	0.2	Z	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
13-Mar	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
14-Mar	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
15-Mar	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
16-Mar	0.2	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
17-Mar	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.3
18-Mar	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-Mar	0.2	0.2	0.2	0.2	0.3	Z	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
20-Mar	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-Mar	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	0.1	0.2	0.2
22-Mar	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	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3
23-Mar	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.2	0.3	0.4
24-Mar	0.2	0.2	0.2	0.2	Z	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4
25-Mar	0.3	0.2	0.2	0.2	0.2	Z	0.3	0.3	0.2	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
26-Mar	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
27-Mar	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-Mar	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
29-Mar	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
30-Mar	0.2	0.2	0.2	0.2	Z	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
31-Mar	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Diurnal Average	
	0.4	0.3	0.3	0.3	0.3	0.3	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	0.4	0.4	0.3	0.4	Diurnal Maximum	

Z - zerospan C - Calibration UO - Unstable Operation

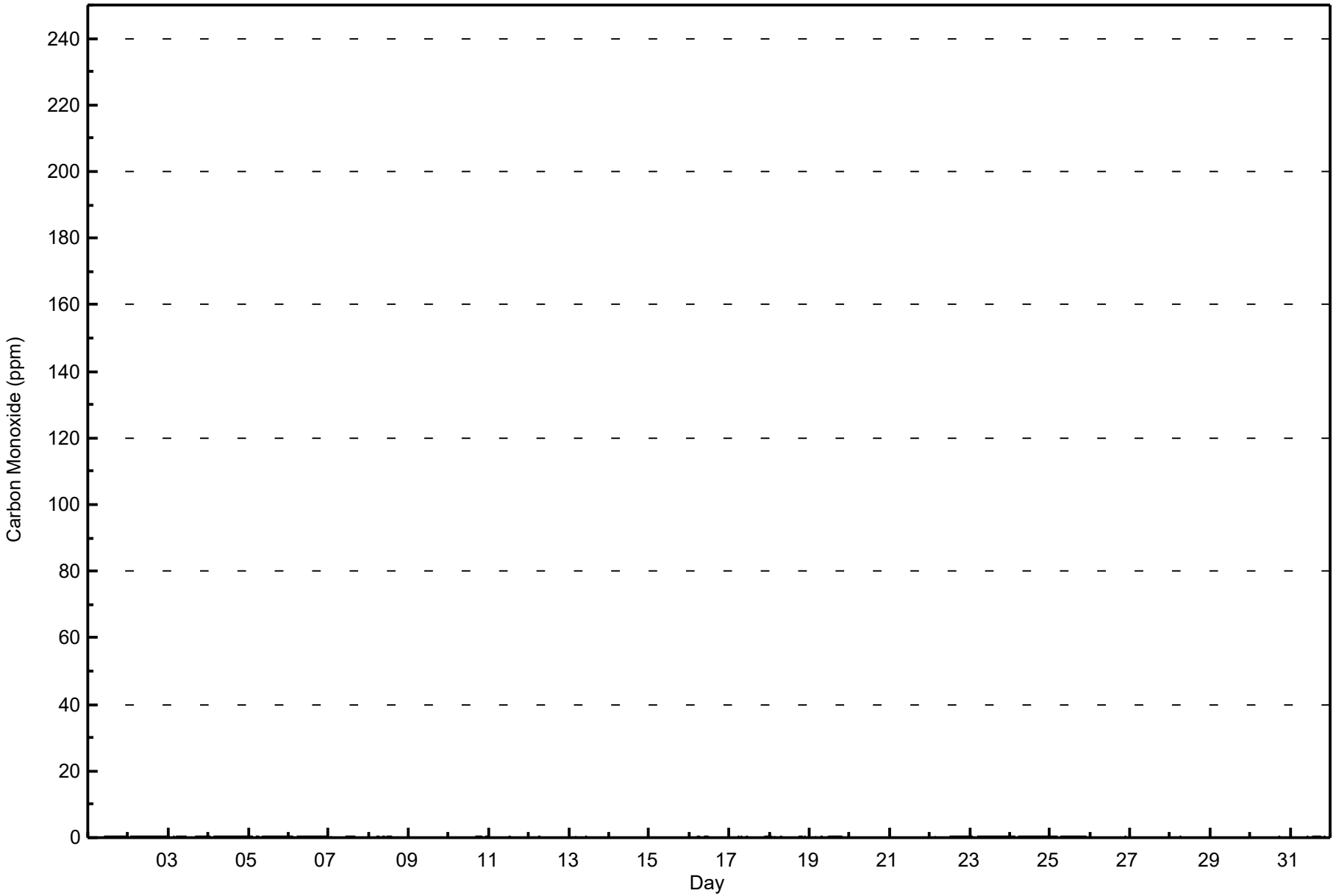
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm

Wood Buffalo Environmental Association

Hourly Averages

Carbon Monoxide (CO) - ppm

Fort McKay - Bertha Ganter - March 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.3	698	98.59	98.59
0.4 - 0.5	10	1.41	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: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Carbon Monoxide (CO) - ppm

Fort McKay - Bertha Ganter - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.3	153	133	26	16	12	13	33	92	71	12	9	9	10	32	24	41	686
0.4 - 0.5	1	0	0	0	0	0	0	2	1	2	1	1	0	0	0	1	9
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	154	133	26	16	12	13	33	94	72	14	10	10	10	32	24	42	695

Total Number of Valid Hours: 695

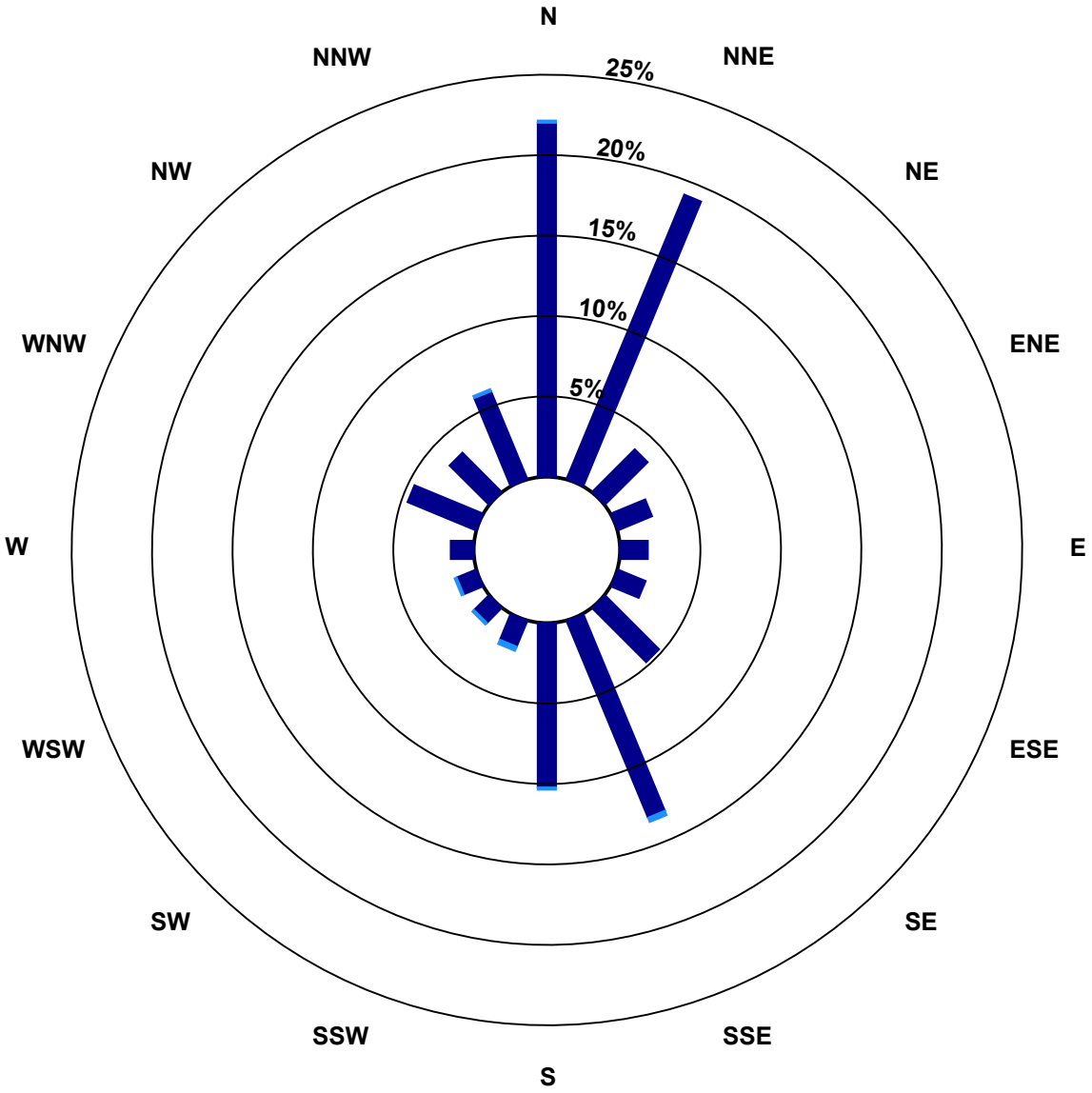
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Carbon Monoxide (CO) - ppm

Fort McKay - Bertha Ganter



Classes (ppm)

0 - 0.3

0.4 - 0.5

0.6 - 0.7

0.8 - 1.4

1.5 - 10

> 10

Total Number of Valid Hours: 695

Wood Buffalo Environmental Association

Summary of Hour Averages

Carbon Dioxide (CO_2) - ppm

Fort McKay - Bertha Ganter - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 481.7 ppm on Mar 2 00:00 Maximum Daily Average: 463.5 ppm on Mar 1

Minimum Value: 437.0 ppm on Mar 4 17:00 Minimum Daily Average: 439.4 ppm on Mar 27
Maximum Diurnal Average: 451.3 ppm at hour 8 Minimum Diurnal Average: 445.2 ppm at hour 19
Monthly Average: 448.21 ppm Percentiles: P_1 = 438.4 P_{10} = 441.2 Q_1 = 443.4 Median = 446.0 Q_3 = 451.0 P_{90} = 458.7 P_{99} = 476.9

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	451.3	449.3	448.6	448.7	448.7	Z	450.6	450.1	450.7	456.9	466.1	465.9	471.3	475.2	471.9	472.8	468.1	468.0	464.8	467.0	476.3	479.2	477.0	481.7	463.5	481.7
2-Mar	Z	473.0	473.7	475.3	470.3	462.9	463.6	466.9	478.1	478.8	479.6	468.5	461.2	447.9	441.8	442.1	447.6	444.4	443.6	442.3	441.8	442.1	442.3	443.0	457.9	479.6
3-Mar	443.4	Z	443.8	443.8	444.2	445.4	445.6	446.1	446.9	447.2	447.3	446.7	443.8	442.8	442.4	442.9	443.0	446.6	449.7	450.1	451.2	457.1	455.7	458.4	447.1	458.4
4-Mar	462.1	460.6	Z	458.8	462.7	462.7	460.5	456.9	461.4	453.1	448.8	448.2	C	C	C	C	437.0	437.4	439.4	440.3	451.5	449.4	447.8	448.9	452.0	462.7
5-Mar	451.1	448.3	443.9	Z	444.7	443.5	440.9	440.3	441.2	443.8	444.4	442.7	442.5	442.7	443.1	448.5	449.4	452.8	452.5	452.3	452.0	451.8	453.8	454.7	447.0	454.7
6-Mar	452.7	447.4	450.2	450.2	Z	459.3	464.1	469.7	474.7	462.7	453.6	461.2	461.8	459.9	459.5	459.0	455.4	453.3	453.3	456.1	461.4	464.1	459.8	464.2	458.9	474.7
7-Mar	UO	454.4	453.9	449.9	449.5	Z	453.5	454.8	454.6	453.3	454.5	459.0	460.7	462.6	463.0	450.1	445.8	445.5	445.2	445.3	443.7	444.8	450.1	447.0	451.9	463.0
8-Mar	Z	449.6	450.7	449.7	451.1	452.5	452.0	446.5	446.9	450.8	448.7	447.2	445.8	444.4	443.9	441.8	444.0	443.2	443.7	443.3	442.2	440.5	439.9	439.7	446.0	452.5
9-Mar	439.5	Z	439.0	439.1	441.5	439.4	438.9	440.4	441.3	441.8	440.9	440.9	441.4	441.2	441.8	440.9	442.3	441.3	440.1	440.4	442.4	441.5	441.8	441.9	440.9	442.4
10-Mar	442.5	443.4	Z	445.4	443.8	443.5	444.2	445.3	445.7	446.2	446.8	449.0	447.9	447.4	450.0	448.6	452.2	450.4	453.2	452.4	450.3	447.5	450.3	452.4	447.8	453.2
11-Mar	453.2	451.1	450.7	Z	450.9	449.9	451.5	450.1	449.1	451.5	451.9	452.1	446.4	444.7	444.6	443.3	443.3	444.3	443.3	442.7	443.5	442.1	443.3	442.3	447.2	453.2
12-Mar	442.8	443.2	441.9	443.0	Z	446.4	454.8	445.5	443.7	444.1	444.4	445.5	445.5	447.2	448.9	447.6	448.4	441.6	441.2	442.4	446.5	449.6	449.6	449.4	445.8	454.8
13-Mar	449.8	449.1	450.9	450.7	455.4	Z	455.2	456.0	452.1	454.1	460.7	451.5	450.5	446.5	444.4	443.2	442.4	444.0	442.9	443.3	442.4	442.3	443.7	444.5	448.5	460.7
14-Mar	Z	445.9	446.4	445.6	446.0	444.9	444.0	442.3	444.0	445.6	444.1	442.9	444.1	441.8	442.0	442.8	442.0	443.0	441.8	441.1	441.8	443.2	441.4	441.0	443.4	446.4
15-Mar	441.3	Z	442.4	445.0	444.9	443.5	443.6	445.7	448.9	447.7	445.2	443.0	443.6	443.7	443.2	442.5	443.0	443.3	444.3	445.1	445.5	444.0	442.8	444.8	444.2	448.9
16-Mar	444.9	445.3	Z	446.4	447.6	452.6	456.1	454.5	451.9	454.4	462.4	461.4	447.8	448.3	446.7	445.9	447.0	445.3	443.7	443.2	444.4	444.0	443.9	443.9	448.8	462.4
17-Mar	444.4	445.0	446.2	Z	446.8	447.7	448.8	448.9	447.5	446.9	449.9	447.1	447.7	444.0	443.5	443.6	443.8	443.2	443.4	443.9	443.8	449.8	446.7	451.6	446.3	451.6
18-Mar	455.6	453.2	445.5	451.1	Z	448.0	447.4	453.7	448.6	448.4	450.4	443.4	443.5	442.3	442.1	442.9	444.1	445.6	445.8	445.8	447.1	450.7	445.2	442.4	447.1	455.6
19-Mar	444.6	444.4	442.4	444.2	453.0	Z	459.3	461.3	454.2	449.2	453.1	467.6	460.2	459.5	461.0	458.6	458.4	457.7	447.3	445.4	445.2	444.8	443.8	444.9	452.2	467.6
20-Mar	Z	444.8	443.4	442.6	443.5	444.8	446.5	447.3	449.3	451.2	450.1	445.6	444.2	443.7	442.1	442.1	442.0	441.1	441.0	442.7	443.5	443.5	445.9	447.0	444.7	451.2
21-Mar	445.1	Z	445.4	445.8	446.0	446.4	449.7	449.5	449.2	448.8	454.3	453.0	452.2	454.2	452.4	449.5	448.4	446.3	444.7	447.0	445.6	445.2	445.2	445.9	448.2	454.3
22-Mar	449.1	449.2	Z	454.3	449.5	449.0	449.3	448.9	449.9	457.1	458.9	454.5	466.6	463.9	453.2	453.0	453.4	456.9	446.6	445.2	447.6	450.2	451.6	451.7	452.6	466.6
23-Mar	448.9	447.8	450.1	Z	452.4	453.1	456.0	462.0	455.6	451.9	448.7	445.6	445.4	450.0	450.2	447.8	443.9	445.1	446.5	450.2	452.9	454.0	453.8	454.6	450.7	462.0
24-Mar	455.6	456.2	456.0	459.9	Z	463.0	478.0	479.9	472.8	459.9	456.8	453.3	452.5	451.2	447.0	443.9	443.2	442.6	445.0	443.6	443.7	445.6	447.2	450.8	454.3	479.9
25-Mar	447.0	445.5	445.5	445.6	446.9	Z	457.3	458.9	447.4	448.6	446.1	446.2	444.9	441.3	439.5	439.3	440.7	444.2	440.6	440.4	439.8	439.3	438.5	440.9	444.5	458.9
26-Mar	Z	438.1	439.0	441.9	441.3	439.6	439.0	441.3	439.9	438.4	437.9	439.0	440.9	443.2	443.8	444.5	441.7	440.7	438.4	440.5	439.9	440.0	438.5	443.5	440.5	444.5
27-Mar	439.0	Z	440.7	439.2	438.5	439.0	438.6	439.9	440.4	440.5	440.0	441.1	439.2	438.9	439.3	439.3	439.5	439.2	438.4	438.2	438.5	438.4	439.1	440.7	439.4	441.1
28-Mar	442.0	444.0	Z	447.9	452.4	447.9	453.0	448.1	447.8	450.3	445.4	443.4	442.5	446.2	444.6	445.5	444.3	442.7	441.3	441.4	441.5	442.7	444.4	442.7	445.3	453.0
29-Mar	443.7	441.9	443.8	Z	452.3	452.3	453.1	447.4	447.4	447.1	454.4	448.6	443.2	442.3	441.7	444.4	447.2	450.2	445.2	446.7	443.8	443.3	444.7	444.0	446.5	454.4
30-Mar	444.2	444.3	444.9	444.7	Z	444.0	448.7	447.0	445.8	446.0	447.4	446.7	445.8	446.6	450.7	452.1	448.0	450.1	449.5	448.0	444.4	445.7	444.4	445.8	446.7	452.1
31-Mar	446.2	443.7	443.6	443.8	443.7	Z	444.1	444.1	444.9	446.5	451.2	446.4	446.6	445.9	447.0	446.6	446.4	445.9	445.0	445.7	447.6	445.9	446.0	446.0	445.8	451.2
	447.2	448.4	447.0	448.2	448.8	448.9	451.2	451.3	450.7	450.4	451.1	449.9	449.0	448.3	447.5	446.8	446.3	446.3	445.2	445.5	446.5	447.2	447.0	448.1	Diurnal Average	
	462.1	473.0	473.7	475.3	470.3	463.0	478.0	479.9	478.1	478.8	479.6	468.5	471.3	475.2	471.9	472.8	468.1	468.0	464.8	467.0	476.3	479.2	477.0	481.7	Diurnal Maximum	

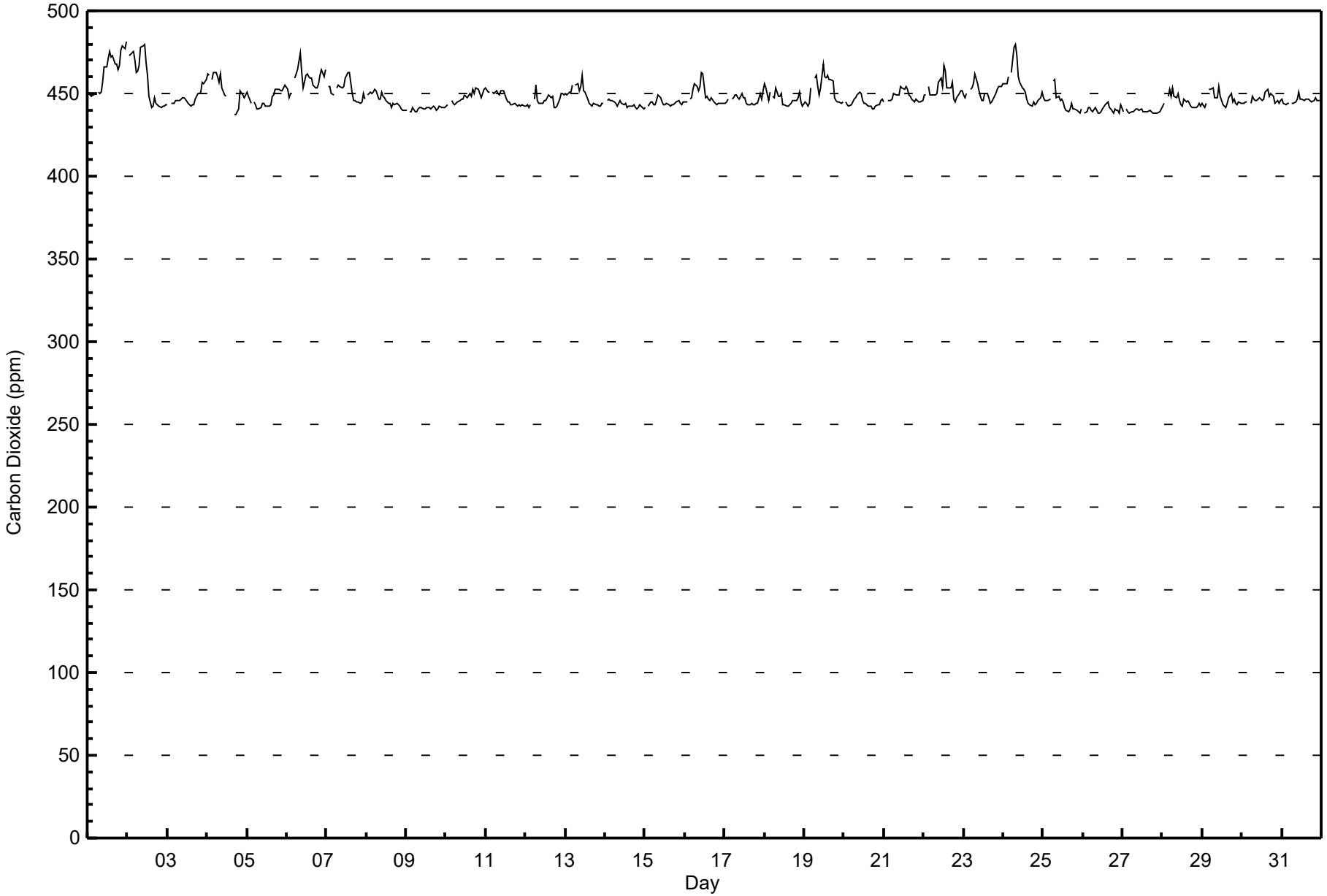
Z - zerospan C - Calibration UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Carbon Dioxide (CO_2) - ppm

Fort McKay - Bertha Ganter - March 2025



Carbon Dioxide (CO_2) - ppm
Fort McKay - Bertha Ganter - March 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
400 - 420	0	0.00	0.00
420 - 440	54	7.63	7.63
440 - 460	597	84.32	91.95
460 - 480	56	7.91	99.86
480 - 500	1	0.14	100.00
> 500	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Carbon Dioxide (CO_2) - ppm

Fort McKay - Bertha Ganter - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
400 - 420	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
420 - 440	4	42	2	0	0	0	0	0	0	0	1	2	0	2	1	0	54
440 - 460	147	89	24	16	11	13	32	73	61	10	6	6	9	27	20	41	585
460 - 480	3	2	0	0	1	0	1	20	12	4	2	2	1	3	3	1	55
480 - 500	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
> 500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	154	133	26	16	12	13	33	93	74	14	9	10	10	32	24	42	695

Total Number of Valid Hours: 695

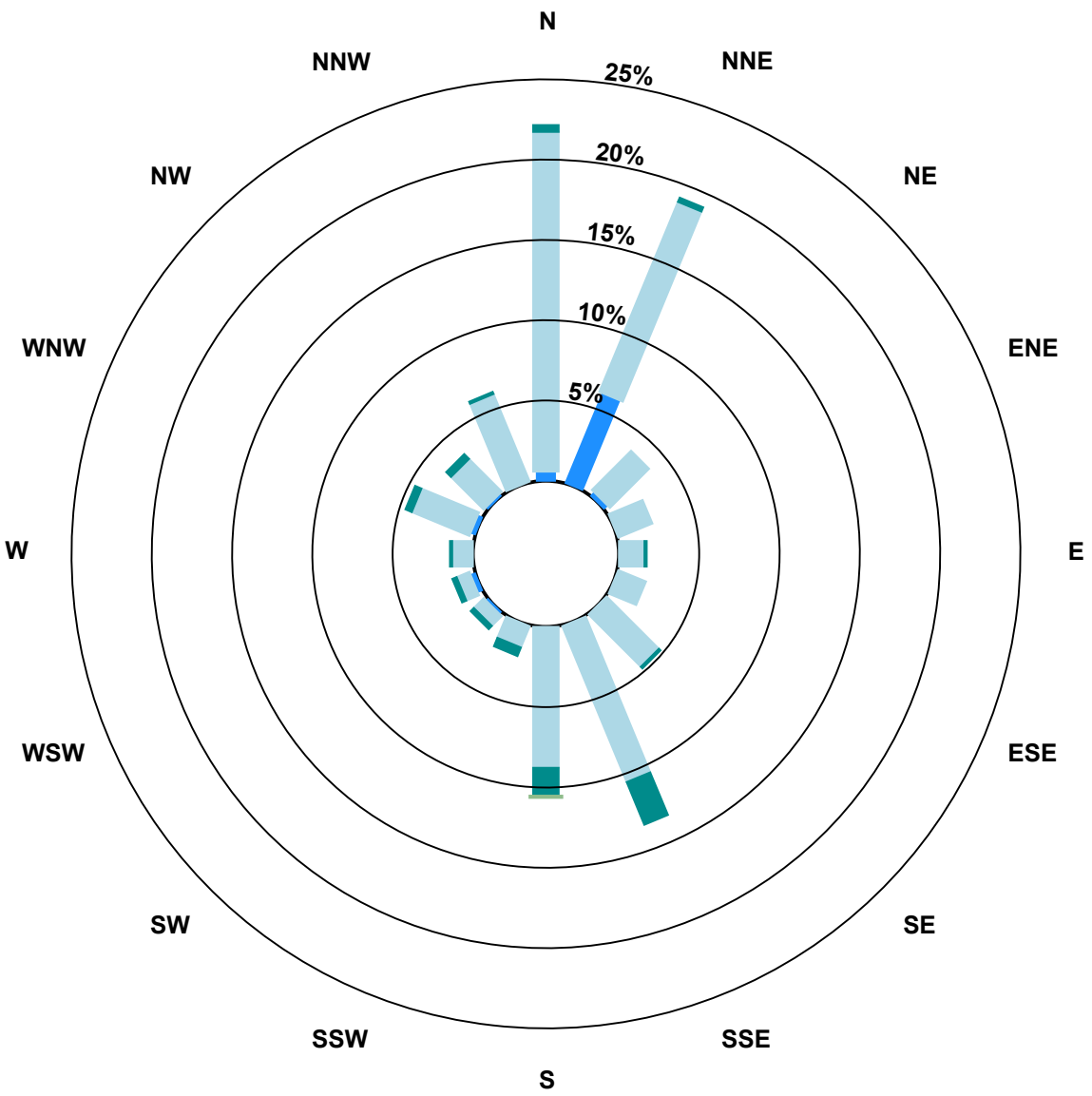
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Carbon Dioxide (CO_2) - ppm

Fort McKay - Bertha Ganter



Classes (ppm)

400 - 420

420 - 440

440 - 460

460 - 480

480 - 500

> 500

Total Number of Valid Hours: 695

Wood Buffalo Environmental Association

Summary of Hour Averages

Ammonia (NH_3) - ppb

Fort McKay - Bertha Ganter - March 2025

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

Maximum Value: 0.0 ppb on Mar 1 01:00

Maximum Daily Average: 0.0 ppb on Mar 1

Minimum Value: 0.0 ppb on Mar 1 01:00

Minimum Daily Average: 0.0 ppb on Mar 1

Maximum Diurnal Average: 0.0 ppb at hour 1

Minimum Diurnal Average: 0.0 ppb at hour 1

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

Hours in Service:	744
Hours of Data:	653
Hours of Missing Data:	91
Hours of Calibration:	42
Percent Operational Time:	93.4

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	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
2-Mar	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
3-Mar	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
4-Mar	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
5-Mar	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
6-Mar	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
7-Mar	UO	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
8-Mar	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
9-Mar	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
10-Mar	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
11-Mar	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
12-Mar	0.0	0.0	Z	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C	C	C	C	C	C	M	M	M	M	M	M	M	--	0.0
13-Mar	M	M	M	M	M	M	M	M	M	M	M	C	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.0
14-Mar	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
15-Mar	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
16-Mar	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
17-Mar	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
18-Mar	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
19-Mar	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
20-Mar	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
21-Mar	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
22-Mar	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
23-Mar	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
24-Mar	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
25-Mar	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
26-Mar	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
27-Mar	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
28-Mar	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
29-Mar	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
30-Mar	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
31-Mar	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
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Diurnal Average	
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 Maximum	

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

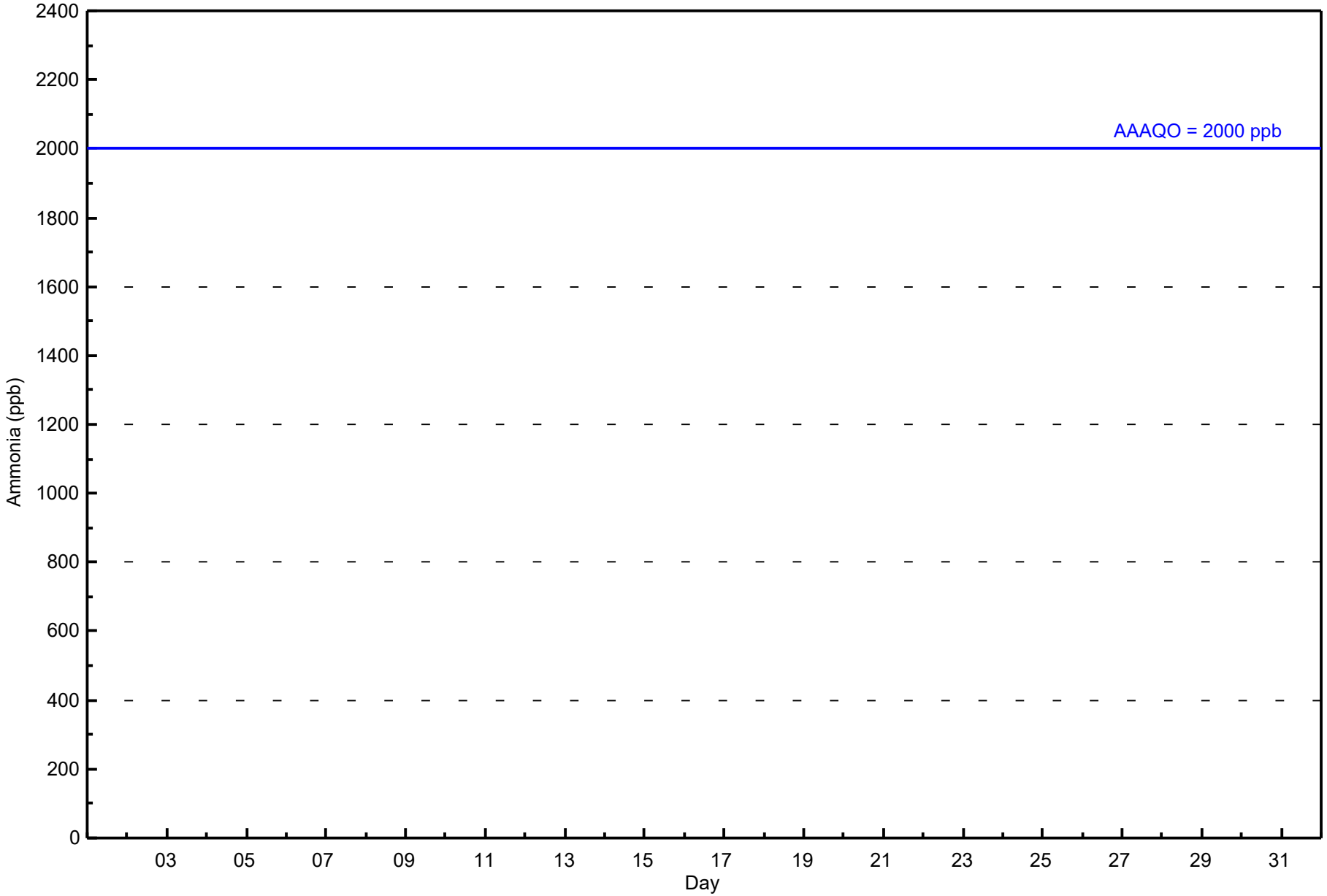
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 2000 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ammonia (NH_3) - ppb

Fort McKay - Bertha Ganter - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 5	653	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: 653

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Ammonia (NH_3) - ppb

Fort McKay - Bertha Ganter - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	140	124	23	12	9	11	34	94	72	11	11	11	11	25	23	31	642
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	140	124	23	12	9	11	34	94	72	11	11	11	11	25	23	31	642

Total Number of Valid Hours: 642

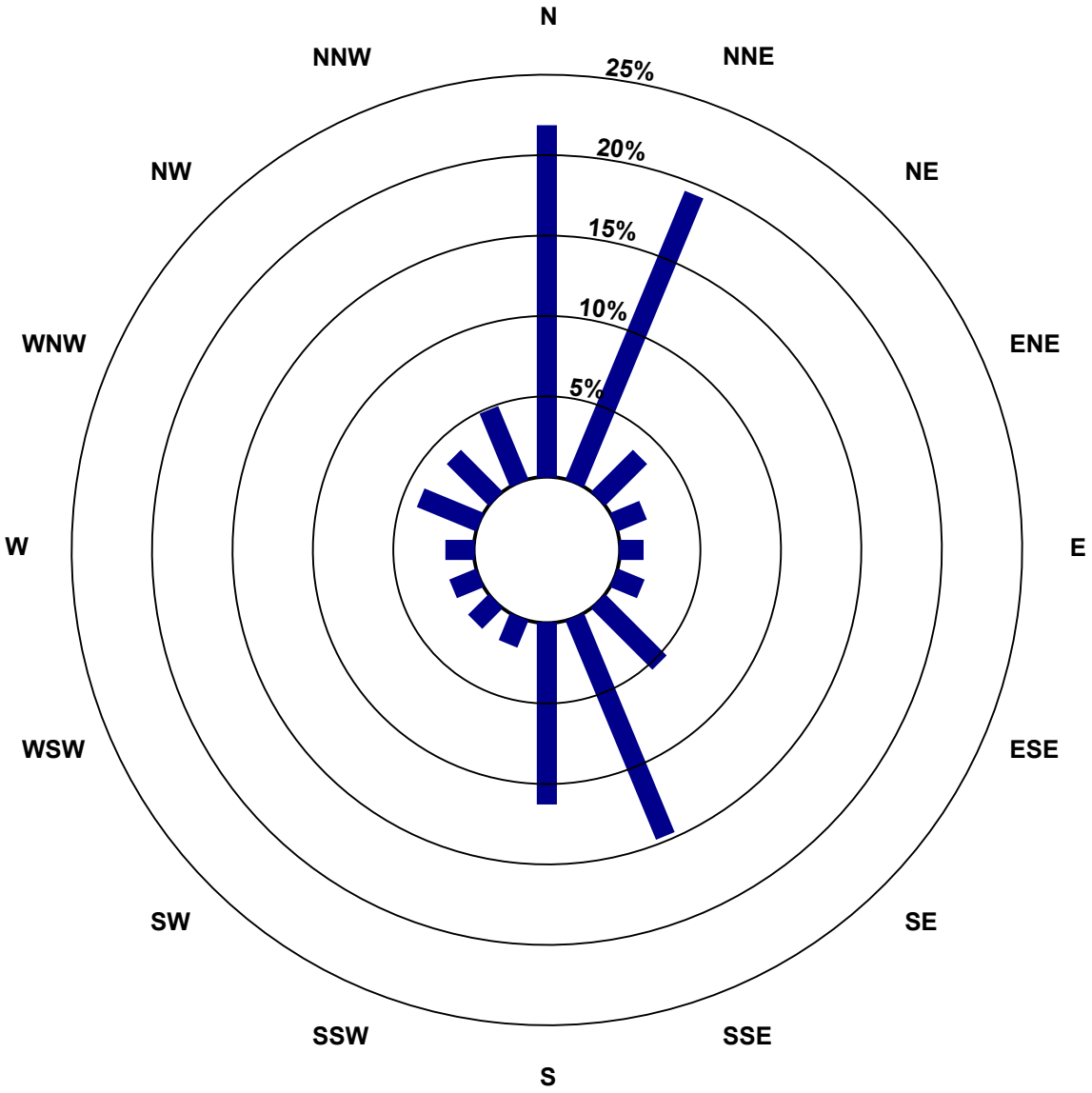
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Ammonia (NH_3) - ppb

Fort McKay - Bertha Ganter



Classes (ppb)

0 - 5

6 - 10

11 - 15

16 - 20

21 - 25

> 26

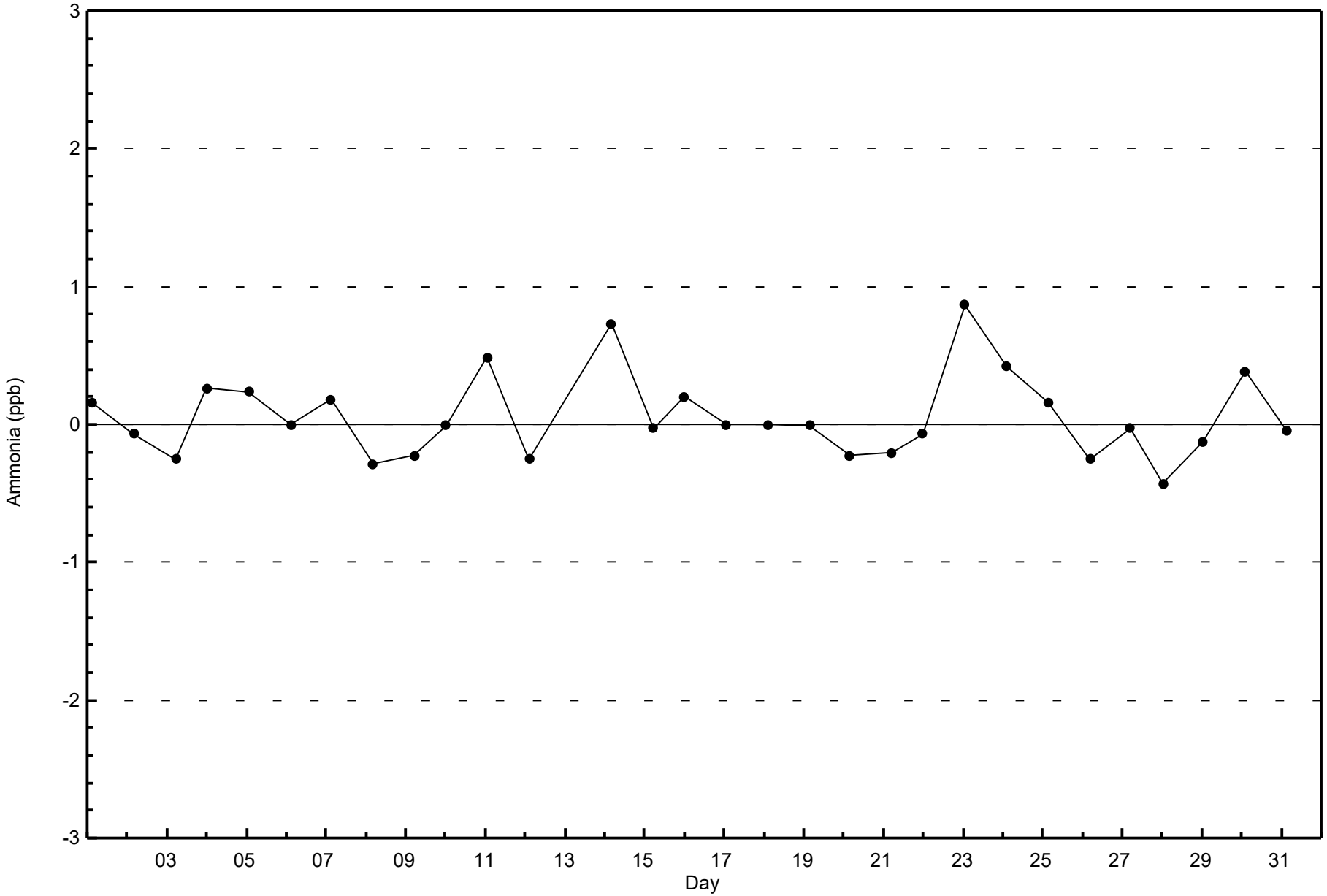
Total Number of Valid Hours: 642

Wood Buffalo Environmental Association

Zero Responses

Ammonia (NH_3) - ppb

Fort McKay - Bertha Ganter - March 2025

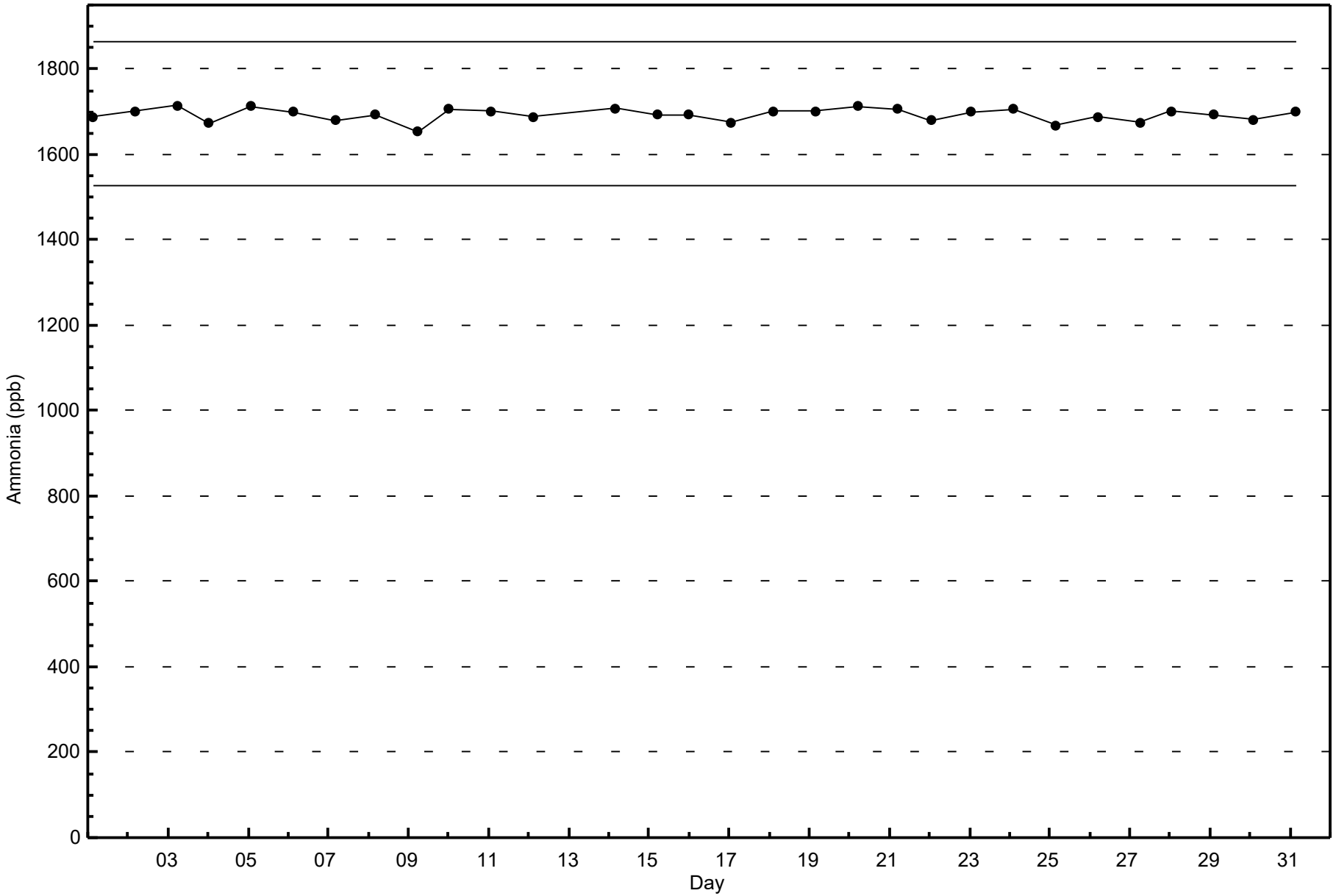


Wood Buffalo Environmental Association

Span Responses

Ammonia (NH_3) - ppb

Fort McKay - Bertha Ganter - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 10m (AT10) - C

Fort McKay - Bertha Ganter - March 2025

Maximum Value: 10.4 C on Mar 25 15:00

Maximum Daily Average: 1.8 C on Mar 23

Minimum Value: -26.0 C on Mar 13 07:00

Minimum Daily Average: -21.2 C on Mar 9

Maximum Diurnal Average: -3.0 C at hour 17

Minimum Diurnal Average: -12.8 C at hour 7

Monthly Average: -8.10 C

Percentiles: P_1 = -23.1 P_{10} = -18.3 Q_1 = -13.8 Median = -8.1 Q_3 = -2.1 P_{90} = 1.5 P_{99} = 7.0

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-9.7	-10.2	-10.5	-10.8	-10.9	-11.4	-12.2	-12.3	-11.2	-9.1	-6.7	-3.6	-0.7	1.8	4.3	5.7	6.2	4.9	3.2	0.9	-0.4	-1.4	-1.7	-1.8	-4.1	6.2
2-Mar	-1.7	-0.8	-0.8	-1.1	-0.8	-0.8	-0.6	-0.5	-0.1	0.2	1.4	4.1	4.7	6.6	7.8	7.7	3.6	1.6	0.5	-0.3	-0.5	-1.4	-2.1	-2.9	1.0	7.8
3-Mar	-4.5	-5.3	-5.6	-5.9	-6.1	-6.2	-6.2	-6.1	-5.8	-5.5	-4.7	-3.7	-2.1	-0.8	-0.3	-0.1	0.5	0.6	-0.6	-1.3	-1.8	-2.7	-3.2	-4.6	-3.4	0.6
4-Mar	-5.2	-6.7	-7.0	-8.0	-8.6	-9.2	-9.2	-9.3	-7.9	-6.1	-4.0	-1.9	-0.1	1.5	3.2	5.9	7.1	6.4	5.2	4.2	2.4	1.0	-0.1	-1.3	-2.0	7.1
5-Mar	-2.2	-2.8	-3.0	-3.2	-4.4	-5.0	-5.8	-6.7	-7.2	-7.2	-6.3	-5.2	-4.3	-3.7	-3.0	-1.8	-1.0	-1.1	-1.8	-2.6	-3.4	-4.0	-4.5	-5.2	-4.0	-1.0
6-Mar	-6.8	-7.7	-8.5	-9.6	-10.8	-12.2	-13.6	-13.7	-12.5	-10.2	-7.3	-5.1	-3.1	-1.3	0.3	1.8	3.2	3.0	1.8	0.1	-1.5	-1.9	-1.7	-2.6	-5.0	3.2
7-Mar	UO	-3.9	-4.3	-4.9	-5.4	-6.0	-6.9	-7.1	-6.8	-6.0	-4.3	-3.0	-1.2	-0.5	-0.9	-0.9	-1.7	-2.8	-4.0	-4.7	-5.4	-6.1	-7.0	-7.5	-4.4	-0.5
8-Mar	-8.0	-8.1	-8.2	-8.4	-8.5	-8.4	-8.6	-8.8	-8.5	-7.4	-6.5	-6.4	-6.9	-8.5	-9.1	-9.4	-10.2	-10.5	-11.0	-12.4	-14.4	-15.9	-17.2	-19.1	-10.0	-6.4
9-Mar	-20.4	-21.4	-22.1	-22.8	-23.1	-23.2	-23.0	-23.1	-23.0	-22.7	-22.6	-22.2	-21.5	-21.0	-19.9	-19.3	-19.0	-19.0	-19.3	-19.4	-19.9	-20.2	-20.6	-20.9	-21.2	-19.0
10-Mar	-21.4	-21.7	-21.8	-21.8	-21.8	-21.8	-21.7	-21.5	-20.9	-20.1	-19.1	-18.2	-16.7	-15.2	-14.5	-13.7	-13.0	-12.9	-13.6	-14.1	-14.6	-15.0	-15.5	-16.0	-17.8	-12.9
11-Mar	-16.9	-18.1	-18.9	-19.1	-18.8	-18.7	-18.6	-18.7	-18.6	-17.8	-16.9	-15.9	-14.7	-14.0	-13.8	-13.7	-13.9	-14.9	-15.8	-16.4	-17.1	-17.7	-18.0	-18.4	-16.9	-13.7
12-Mar	-18.5	-18.4	-18.3	-18.4	-18.7	-19.5	-20.1	-19.7	-18.5	-17.5	-16.7	-16.1	-15.3	-14.4	-13.7	-13.2	-13.0	-13.5	-14.5	-15.4	-16.3	-17.2	-19.6	-21.0	-17.0	-13.0
13-Mar	-21.6	-21.8	-22.4	-23.8	-24.7	-25.4	-26.0	-26.0	-24.2	-21.2	-17.6	-15.4	-14.2	-13.2	-12.5	-12.0	-12.0	-12.7	-13.2	-13.2	-13.3	-14.0	-14.7	-14.9	-17.9	-12.0
14-Mar	-15.1	-15.3	-15.4	-15.5	-15.5	-15.7	-16.0	-16.3	-16.5	-15.4	-13.8	-13.0	-12.5	-11.9	-11.8	-11.5	-11.7	-12.0	-12.3	-12.8	-13.2	-13.5	-13.8	-14.2	-13.9	-11.5
15-Mar	-14.7	-15.0	-15.5	-17.6	-19.1	-19.2	-19.0	-18.7	-17.8	-16.0	-13.7	-12.3	-11.6	-11.4	-10.6	-10.1	-10.1	-10.3	-10.6	-11.5	-12.3	-12.9	-13.4	-14.0	-14.1	-10.1
16-Mar	-14.6	-15.0	-15.4	-15.8	-16.3	-16.7	-17.5	-17.8	-17.6	-15.7	-13.2	-10.7	-9.3	-8.7	-8.2	-7.7	-7.6	-7.6	-7.8	-8.2	-8.6	-8.9	-9.1	-9.2	-12.0	-7.6
17-Mar	-9.5	-9.6	-9.9	-9.9	-10.0	-10.0	-10.4	-10.1	-9.3	-8.5	-8.5	-8.3	-8.0	-8.1	-8.1	-7.8	-7.9	-8.0	-9.3	-10.7	-11.6	-12.6	-13.2	-13.9	-9.7	-7.8
18-Mar	-13.8	-14.1	-13.9	-13.5	-14.1	-14.5	-14.5	-14.4	-12.5	-11.3	-9.1	-6.4	-5.1	-4.0	-3.2	-3.0	-2.6	-2.6	-3.0	-4.2	-5.7	-7.0	-8.7	-9.9	-8.8	-2.6
19-Mar	-11.0	-11.6	-12.7	-13.7	-15.0	-16.5	-17.8	-17.7	-15.1	-12.5	-9.2	-6.4	-3.8	-1.7	0.1	1.6	2.7	0.4	-1.4	-2.8	-4.5	-7.0	-9.5	-11.1	-8.2	2.7
20-Mar	-12.0	-12.8	-13.4	-14.1	-14.8	-15.6	-16.3	-16.2	-15.3	-13.7	-12.2	-11.1	-9.8	-8.5	-7.3	-6.6	-6.5	-7.1	-8.2	-9.6	-10.6	-11.7	-13.4	-14.4	-11.7	-6.5
21-Mar	-14.1	-14.4	-15.2	-17.1	-17.0	-18.4	-19.1	-17.4	-14.1	-11.9	-9.3	-7.0	-4.9	-3.1	-1.6	-0.2	0.8	1.2	0.2	-1.4	-2.7	-3.4	-3.9	-4.3	-8.3	1.2
22-Mar	-4.6	-4.9	-4.8	-5.0	-5.2	-6.0	-6.0	-5.7	-5.2	-3.8	-1.8	-0.8	2.0	3.8	5.4	6.6	6.9	5.6	4.4	3.1	2.4	1.5	0.3	-0.4	-0.5	6.9
23-Mar	-0.6	-0.8	-1.0	-1.2	-1.5	-2.4	-2.8	-1.8	-0.5	0.4	1.8	3.2	4.3	5.2	6.2	6.6	7.3	7.6	6.2	4.1	2.7	1.7	0.2	-2.0	1.8	7.6
24-Mar	-3.0	-3.0	-4.1	-4.9	-5.5	-6.1	-5.8	-5.0	-3.8	-1.6	1.0	2.6	2.9	3.3	4.5	5.3	6.5	6.2	5.3	4.5	3.5	2.1	1.8	1.3	0.3	6.5
25-Mar	1.1	0.2	0.0	-0.7	-1.3	-1.5	-2.2	-1.6	0.1	1.0	2.8	4.5	6.3	9.2	10.4	8.9	6.6	1.4	-0.3	-2.2	-3.3	-4.5	-5.8	-6.6	0.9	10.4
26-Mar	-7.4	-8.2	-9.1	-10.0	-10.9	-11.5	-11.8	-11.5	-11.1	-10.5	-9.9	-9.0	-8.0	-7.1	-6.4	-5.7	-5.8	-6.0	-6.1	-6.2	-6.5	-6.9	-7.2	-7.6	-8.4	-5.7
27-Mar	-8.2	-8.5	-8.8	-9.1	-9.4	-9.8	-10.0	-10.3	-10.2	-9.7	-9.4	-8.7	-7.7	-7.1	-7.1	-7.0	-7.2	-7.6	-8.5	-9.7	-10.7	-11.5	-12.4	-13.6	-9.3	-7.0
28-Mar	-14.7	-15.6	-16.7	-17.2	-18.2	-19.1	-19.6	-18.0	-14.6	-12.4	-10.4	-9.2	-8.4	-7.5	-6.7	-5.8	-5.6	-5.5	-6.2	-7.6	-8.9	-9.7	-10.9	-12.6	-11.7	-5.5
29-Mar	-13.3	-14.4	-15.0	-15.8	-18.0	-19.0	-19.3	-17.9	-14.0	-11.0	-8.2	-5.9	-4.4	-3.5	-2.7	-2.1	-1.5	-1.5	-2.1	-3.3	-4.6	-5.6	-6.5	-8.0	-9.1	-1.5
30-Mar	-9.1	-9.6	-10.2	-10.9	-11.7	-12.6	-13.3	-12.3	-9.7	-7.4	-5.4	-3.4	-1.7	-0.1	0.5	1.3	2.0	1.7	0.7	0.3	-0.3	-0.8	-1.5	-2.0	-4.8	2.0
31-Mar	-2.1	-2.0	-2.7	-3.4	-3.9	-4.3	-4.7	-4.8	-3.9	-2.3	-1.1	0.0	0.9	1.4	2.1	2.3	2.6	2.6	2.0	0.8	-0.4	-1.2	-1.6	-2.1	-1.1	2.6
	-10.1	-10.4	-10.8	-11.4	-11.9	-12.5	-12.8	-12.6	-11.5	-10.1	-8.4	-6.9	-5.6	-4.6	-3.8	-3.2	-3.0	-3.6	-4.5	-5.6	-6.5	-7.4	-8.2	-9.1	Diurnal Average	
	1.1	0.2	0.0	-0.7	-0.8	-0.8	-0.6	-0.5	0.1	1.0	2.8	4.5	6.3	9.2	10.4	8.9	7.3	7.6	6.2	4.5	3.5	2.1	1.8	1.3	Diurnal Maximum	

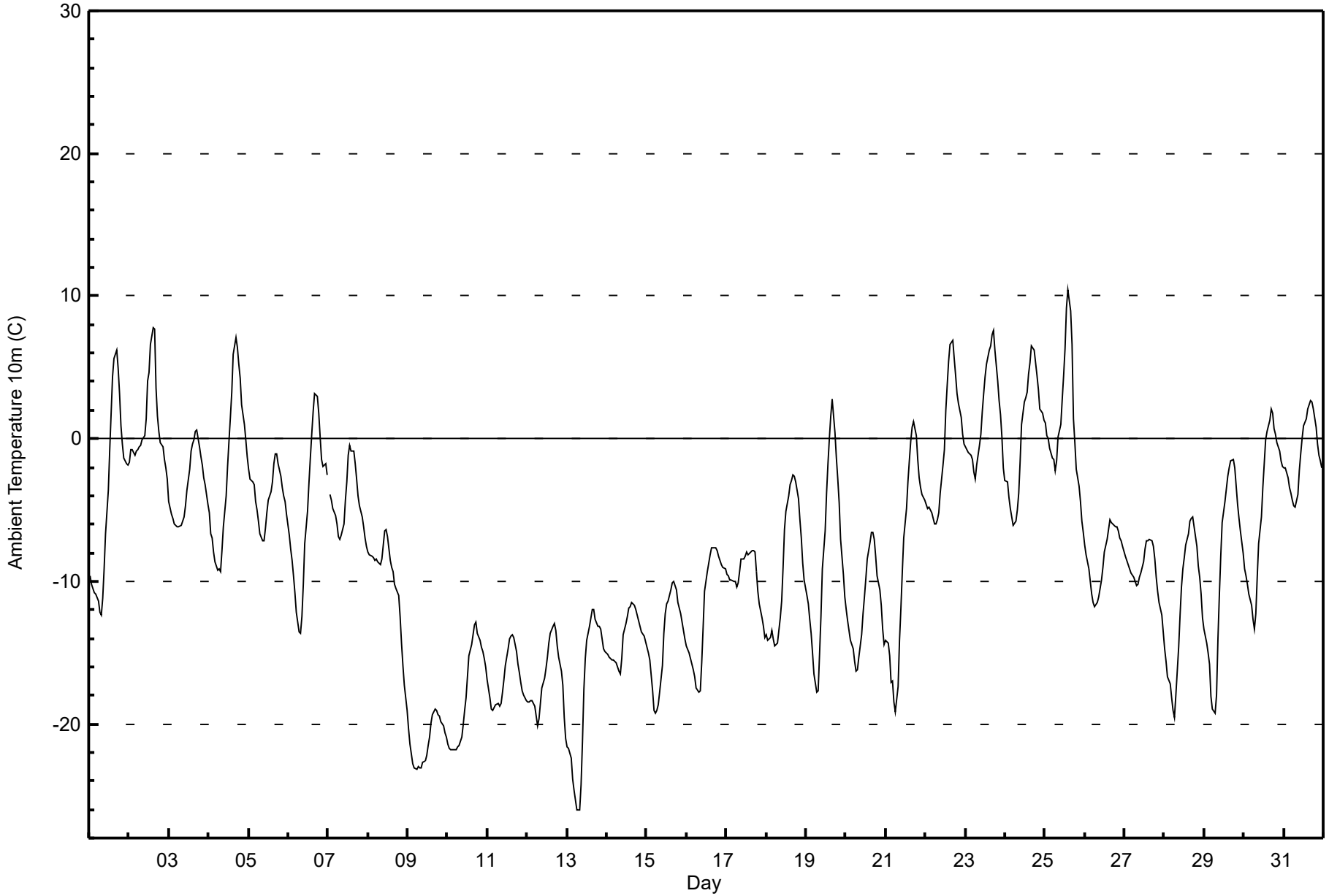
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 10m (AT10) - C

Fort McKay - Bertha Ganter - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	39	5.25	5.25
-20 - 0	596	80.22	85.46
0 - 10	107	14.40	99.87
10 - 20	1	0.13	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 743

Total Number of Hours: 744

Maximum Value: 10.2 C on Mar 25 15:00

Maximum Daily Average: 1.5 C on Mar 23

Minimum Value: -26.3 C on Mar 13 08:00

Minimum Daily Average: -20.9 C on Mar 9

Maximum Diurnal Average: -2.7 C at hour 16

Minimum Diurnal Average: -13.1 C at hour 7

Monthly Average: -8.07 C

Percentiles: P_1 = -22.8 P_{10} = -18.3 Q_1 = -13.8 Median = -7.9 Q_3 = -2.3 P_{90} = 1.5 P_{99} = 7.1

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-10.1	-10.3	-10.5	-10.7	-10.8	-11.5	-12.2	-12.2	-10.7	-8.6	-6.0	-2.9	-0.3	2.3	4.8	6.0	6.2	3.1	0.7	-0.9	-1.9	-2.5	-2.7	-2.2	-4.3	6.2
2-Mar	-2.0	-1.3	-1.1	-1.3	-0.9	-0.7	-0.7	-0.5	-0.1	0.3	1.7	4.8	4.8	7.0	7.8	7.4	3.6	1.7	0.6	-0.2	-0.4	-1.3	-1.9	-2.7	1.0	7.8
3-Mar	-4.2	-5.1	-5.4	-5.8	-5.9	-6.0	-6.0	-5.8	-5.4	-5.0	-4.1	-3.1	-1.5	-0.1	0.2	0.3	0.8	0.8	-0.8	-1.7	-2.5	-3.5	-4.8	-5.9	-3.3	0.8
4-Mar	-6.9	-7.7	-8.6	-9.0	-10.1	-10.9	-10.6	-9.4	-7.9	-5.9	-3.6	-1.4	0.4	2.0	3.5	6.1	7.1	6.1	4.6	3.6	2.4	1.0	-0.4	-1.8	-2.4	7.1
5-Mar	-3.0	-3.3	-3.1	-3.1	-4.2	-4.9	-5.6	-6.5	-6.9	-6.7	-5.6	-4.6	-3.6	-3.1	-2.6	-1.2	-0.6	-0.9	-1.9	-2.9	-3.4	-4.0	-4.7	-5.8	-3.8	-0.6
6-Mar	-7.5	-8.1	-9.9	-11.1	-12.3	-13.3	-14.1	-14.2	-12.4	-9.5	-6.7	-4.5	-2.6	-0.7	0.8	2.2	3.3	2.6	1.2	-1.3	-2.9	-3.2	-2.5	-2.6	-5.4	3.3
7-Mar	UO	-3.8	-4.3	-4.8	-5.4	-5.9	-6.7	-6.9	-6.5	-5.7	-3.8	-2.1	-0.4	0.1	-0.6	-0.6	-1.6	-2.7	-3.9	-4.6	-5.3	-6.0	-6.8	-7.3	-4.2	0.1
8-Mar	-7.7	-7.9	-8.0	-8.1	-8.3	-8.2	-8.4	-8.6	-8.2	-7.1	-6.1	-6.0	-6.6	-8.2	-8.8	-9.1	-9.9	-10.3	-10.8	-12.2	-14.1	-15.6	-16.9	-18.8	-9.7	-6.0
9-Mar	-20.1	-21.2	-21.9	-22.5	-22.8	-22.8	-22.7	-22.8	-22.7	-22.3	-22.1	-21.7	-21.0	-20.5	-19.4	-18.9	-18.6	-18.7	-19.0	-19.2	-19.6	-19.9	-20.4	-20.7	-20.9	-18.6
10-Mar	-21.2	-21.5	-21.6	-21.5	-21.5	-21.5	-21.0	-21.2	-20.6	-19.5	-18.3	-17.3	-15.7	-14.3	-13.6	-13.0	-12.4	-12.5	-13.5	-13.9	-14.4	-14.7	-15.2	-15.8	-17.3	-12.4
11-Mar	-16.7	-18.0	-18.8	-18.8	-18.6	-18.4	-18.4	-18.5	-18.3	-17.5	-16.5	-15.5	-14.3	-13.7	-13.5	-13.4	-13.7	-14.7	-15.6	-16.2	-16.9	-17.4	-17.8	-18.1	-16.6	-13.4
12-Mar	-18.2	-18.2	-18.1	-18.2	-19.0	-20.5	-20.3	-19.5	-18.2	-17.0	-15.9	-15.3	-14.4	-13.7	-13.4	-12.7	-12.7	-13.4	-15.2	-16.8	-17.6	-19.0	-20.9	-21.9	-17.1	-12.7
13-Mar	-22.4	-22.0	-23.0	-24.2	-25.0	-25.9	-26.3	-26.3	-24.0	-20.9	-17.2	-14.9	-13.8	-12.8	-12.2	-11.8	-11.8	-12.5	-13.0	-13.0	-13.1	-13.8	-14.5	-14.7	-17.9	-11.8
14-Mar	-14.9	-15.1	-15.1	-15.3	-15.3	-15.5	-15.8	-16.2	-16.3	-15.2	-13.5	-12.7	-12.1	-11.6	-11.5	-11.2	-11.5	-11.8	-12.2	-12.6	-13.0	-13.4	-13.8	-14.3	-13.7	-11.2
15-Mar	-14.9	-15.4	-16.2	-18.5	-20.0	-19.3	-18.9	-18.4	-17.3	-15.4	-13.3	-11.7	-10.6	-10.7	-9.8	-9.4	-9.6	-10.1	-10.5	-11.5	-12.2	-12.8	-13.3	-13.9	-13.9	-9.4
16-Mar	-14.4	-15.0	-15.3	-16.0	-16.5	-17.0	-17.6	-17.4	-17.2	-15.1	-12.4	-10.1	-8.7	-8.1	-7.5	-7.1	-7.3	-7.4	-7.7	-8.1	-8.5	-8.8	-8.9	-9.0	-11.7	-7.1
17-Mar	-9.3	-9.4	-9.7	-9.7	-9.8	-9.7	-10.5	-10.1	-9.2	-8.2	-8.2	-8.0	-7.7	-7.8	-7.8	-7.5	-7.6	-7.9	-9.7	-11.6	-12.6	-14.4	-14.2	-14.4	-9.8	-7.5
18-Mar	-14.0	-14.3	-13.9	-13.6	-14.1	-14.5	-14.4	-14.0	-12.5	-10.7	-8.2	-5.7	-4.4	-3.2	-2.4	-2.3	-2.1	-2.5	-3.6	-5.6	-6.7	-7.1	-8.9	-10.2	-8.7	-2.1
19-Mar	-11.3	-12.2	-13.8	-15.0	-16.6	-17.8	-18.9	-18.2	-14.8	-11.8	-8.4	-5.6	-3.1	-0.7	0.9	2.4	3.1	0.4	-1.4	-2.9	-4.5	-6.9	-9.4	-10.9	-8.2	3.1
20-Mar	-11.9	-12.7	-13.4	-14.0	-14.8	-15.5	-16.3	-16.1	-15.0	-13.5	-11.9	-10.7	-9.4	-8.1	-7.0	-6.3	-6.4	-7.1	-8.3	-9.9	-10.9	-11.9	-13.7	-15.4	-11.7	-6.3
21-Mar	-15.7	-15.7	-17.1	-18.6	-18.7	-19.4	-20.3	-17.8	-13.7	-11.2	-8.5	-6.2	-4.2	-2.2	-0.9	0.4	1.2	1.2	-0.1	-1.9	-3.0	-3.6	-4.4	-5.0	-8.6	1.2
22-Mar	-5.0	-5.1	-5.2	-5.3	-5.5	-6.1	-5.9	-5.5	-5.0	-3.3	-1.2	-0.3	2.6	4.5	6.1	7.1	6.9	5.2	4.2	2.4	1.7	1.5	0.4	-0.3	-0.5	7.1
23-Mar	-0.7	-0.7	-0.8	-1.3	-1.5	-3.0	-3.9	-2.2	-0.1	1.4	2.8	3.9	5.0	5.8	6.5	6.7	7.4	7.7	4.8	2.4	0.9	-0.3	-1.8	-3.0	1.5	7.7
24-Mar	-3.5	-4.3	-5.0	-6.4	-7.1	-6.9	-6.1	-5.1	-3.4	-1.1	1.6	3.0	3.1	3.6	4.9	5.7	6.6	6.0	5.1	4.3	2.9	1.0	1.0	0.6	0.0	6.6
25-Mar	0.7	-0.1	-0.4	-1.0	-2.0	-2.6	-3.2	-1.9	0.7	1.9	3.7	5.1	6.6	9.1	10.2	8.7	6.6	1.5	-0.2	-2.0	-3.2	-4.3	-5.6	-6.5	0.9	10.2
26-Mar	-7.3	-8.0	-9.0	-9.8	-10.8	-11.5	-11.7	-11.2	-10.7	-10.1	-9.5	-8.5	-7.6	-6.4	-5.9	-5.2	-5.5	-5.7	-5.9	-6.0	-6.3	-6.7	-7.0	-7.4	-8.1	-5.2
27-Mar	-8.0	-8.3	-8.6	-8.9	-9.2	-9.5	-9.7	-10.0	-9.9	-9.3	-9.0	-8.2	-7.3	-6.6	-6.7	-6.6	-6.8	-7.3	-8.3	-9.5	-10.6	-11.4	-12.4	-14.5	-9.0	-6.6
28-Mar	-15.5	-16.0	-17.5	-18.1	-19.1	-20.4	-20.3	-17.9	-14.2	-12.0	-9.8	-8.7	-7.9	-6.7	-6.2	-5.1	-5.0	-5.2	-6.3	-8.3	-9.4	-10.2	-11.7	-13.5	-11.9	-5.0
29-Mar	-14.0	-14.7	-16.6	-17.6	-18.7	-19.7	-20.1	-17.7	-13.2	-9.8	-7.0	-4.8	-3.3	-2.4	-1.8	-1.3	-1.1	-1.3	-2.3	-4.4	-4.6	-5.7	-6.7	-8.3	-9.1	-1.1
30-Mar	-9.4	-10.1	-10.7	-11.5	-12.2	-13.7	-14.1	-12.0	-8.9	-6.7	-5.1	-3.1	-1.4	0.3	0.8	1.5	2.3	1.9	0.8	0.2	-0.3	-0.8	-1.5	-1.9	-4.8	2.3
31-Mar	-2.1	-2.1	-2.9	-3.5	-3.9	-4.2	-4.6	-4.5	-3.0	-1.3	-0.4	0.9	1.8	2.2	2.9	2.9	3.1	2.7	1.9	0.4	-1.2	-1.9	-2.1	-2.4	-0.9	3.1
	-10.4	-10.6	-11.1	-11.7	-12.3	-12.8	-13.1	-12.5	-11.2	-9.6	-7.8	-6.3	-5.1	-4.0	-3.3	-2.7	-2.8	-3.6	-4.7	-5.9	-6.8	-7.7	-8.5	-9.3	Diurnal Average	
	0.7	-0.1	-0.4	-1.0	-0.9	-0.7	-0.7	-0.5	0.7	1.9	3.7	5.1	6.6	9.1	10.2	8.7	7.4	7.7	5.1	4.3	2.9	1.5	1.0	0.6	Diurnal Maximum	

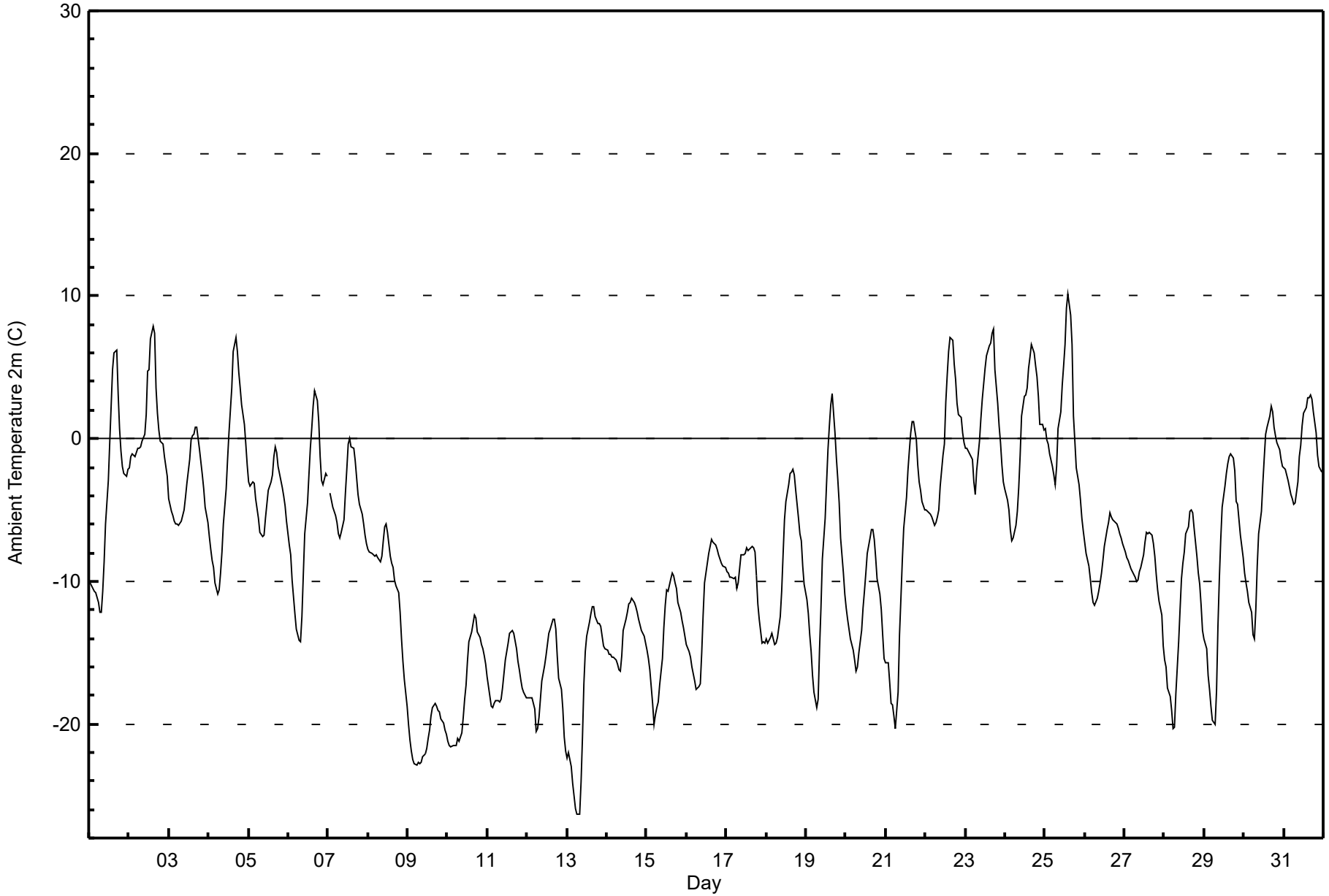
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Fort McKay - Bertha Ganter - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	44	5.92	5.92
-20 - 0	592	79.68	85.60
0 - 10	106	14.27	99.87
10 - 20	1	0.13	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 743

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Fort McKay - Bertha Ganter - March 2025

Maximum Value: 93.0 % on Mar 23 07:00

Maximum Daily Average: 78.2 % on Mar 2

Minimum Value: 27.8 % on Mar 25 15:00

Minimum Daily Average: 48.2 % on Mar 21

Maximum Diurnal Average: 77.6 % at hour 7

Minimum Diurnal Average: 49.5 % at hour 17

Monthly Average: 64.87 %

Percentiles: P_1 = 31.7 P_{10} = 44.8 Q_1 = 54.5 Median = 66.7 Q_3 = 76.2 P_{90} = 82.4 P_{99} = 90.2

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	86.8	84.8	82.9	82.2	81.5	82.5	84.3	83.1	77.9	72.9	67.4	62.0	58.5	54.8	50.2	48.5	48.7	62.1	69.6	79.0	82.9	85.7	87.0	84.7	73.3	87.0
2-Mar	83.5	81.3	80.6	82.9	82.3	85.7	88.3	90.0	89.1	87.7	81.0	67.7	67.9	60.7	54.7	53.9	69.2	75.0	78.9	81.9	82.4	83.8	86.0	83.6	78.2	90.0
3-Mar	82.4	80.4	79.0	78.7	78.9	78.8	78.5	78.0	76.6	76.0	74.2	72.4	70.9	68.1	70.2	72.0	69.8	70.5	75.9	79.6	83.3	86.6	89.1	90.9	77.5	90.9
4-Mar	91.0	90.5	90.1	90.2	89.1	88.5	88.6	88.3	85.7	82.3	76.6	71.3	65.0	60.2	56.7	46.0	39.0	41.5	46.8	50.3	59.4	65.1	69.4	73.4	71.0	91.0
5-Mar	76.4	78.0	77.9	77.3	78.4	75.1	73.7	73.2	73.9	72.0	66.7	59.6	57.1	56.0	56.4	53.2	50.9	52.6	56.7	63.4	66.4	68.2	71.4	72.4	67.0	78.4
6-Mar	77.3	75.4	81.6	85.4	86.3	85.3	83.7	82.1	78.5	74.2	65.2	60.8	57.7	54.0	52.1	50.0	47.7	50.1	55.7	65.3	70.8	72.7	69.1	66.9	68.7	86.3
7-Mar	UO	69.3	70.9	71.5	73.9	74.4	75.9	75.2	72.4	68.8	61.4	58.2	55.2	57.3	61.5	58.5	58.9	61.2	66.7	70.9	74.1	77.0	79.3	80.8	68.4	80.8
8-Mar	81.6	81.8	82.0	82.6	84.3	85.5	85.2	84.6	83.6	80.8	77.7	79.5	77.4	75.5	74.7	71.4	69.3	70.3	71.0	72.9	75.5	75.6	73.9	70.4	77.8	85.5
9-Mar	64.9	65.1	66.8	67.0	67.5	67.3	67.0	68.4	67.9	64.9	64.6	60.0	61.0	58.5	54.6	55.4	54.3	54.0	55.0	57.0	59.7	61.0	63.0	64.3	62.0	68.4
10-Mar	65.7	67.2	66.8	66.9	68.7	70.6	71.6	71.8	71.1	70.2	68.1	66.5	62.4	58.0	56.3	56.1	55.3	55.2	62.5	65.1	68.1	73.0	77.6	76.9	66.3	77.6
11-Mar	76.6	74.6	72.8	71.8	72.3	73.6	76.3	77.7	75.5	72.3	72.1	72.4	72.6	73.1	72.3	72.6	71.8	73.9	74.8	75.2	75.6	73.7	72.9	70.5	73.6	77.7
12-Mar	71.5	69.2	64.1	65.6	67.5	73.1	75.1	74.3	69.6	61.4	54.6	50.4	48.3	45.2	45.7	45.4	45.8	44.8	50.3	54.7	59.6	64.6	69.0	71.6	60.1	75.1
13-Mar	73.5	72.9	74.0	75.1	73.6	74.2	73.3	73.0	71.5	67.8	62.6	51.5	50.2	48.3	47.4	46.7	47.4	50.1	51.0	52.2	54.7	66.9	78.2	79.6	63.1	79.6
14-Mar	79.9	79.9	79.6	79.0	78.5	79.2	78.9	77.7	74.2	70.7	66.2	62.3	63.2	62.5	64.4	64.8	66.0	70.7	69.1	76.0	79.2	81.7	81.1	82.2	73.6	82.2
15-Mar	82.5	82.8	82.2	80.9	80.1	79.6	79.2	78.8	78.0	76.1	69.5	60.6	56.7	56.0	51.4	48.9	49.1	49.2	51.4	57.0	63.0	68.2	71.2	73.2	67.7	82.8
16-Mar	75.3	76.9	78.3	80.4	80.9	81.0	79.8	78.5	76.0	69.4	59.2	50.0	43.7	43.4	42.5	41.0	42.1	46.4	46.5	48.9	51.9	56.1	59.5	62.5	61.3	81.0
17-Mar	72.3	77.2	81.7	82.2	83.7	84.4	87.1	86.0	82.1	76.8	76.7	70.5	66.4	65.4	62.8	60.0	57.2	54.9	58.2	63.0	65.2	71.7	72.0	74.7	72.2	87.1
18-Mar	74.2	74.9	71.7	72.1	76.3	80.2	79.9	78.9	72.3	65.6	56.5	46.8	44.0	43.0	42.0	42.2	41.5	42.6	45.4	51.7	57.0	60.1	57.8	58.1	59.8	80.2
19-Mar	60.9	63.8	68.0	72.9	77.5	78.9	80.0	78.8	71.2	65.1	58.9	55.9	48.9	44.1	41.7	38.3	37.4	47.9	50.8	53.0	57.1	64.2	73.1	77.2	61.1	80.0
20-Mar	77.8	78.2	78.0	77.8	78.1	78.6	78.1	75.9	71.9	66.9	62.6	58.1	52.4	43.5	37.2	34.7	32.2	31.3	35.8	43.2	47.5	49.0	54.0	58.6	58.4	78.6
21-Mar	58.2	57.9	60.0	66.5	65.4	67.1	70.1	63.4	52.8	45.6	41.7	38.8	37.9	37.0	36.1	35.4	34.3	34.0	35.6	38.5	40.6	42.8	47.2	49.0	48.2	70.1
22-Mar	52.0	56.2	58.7	60.7	63.0	64.2	64.8	66.4	66.5	63.0	61.7	64.6	62.5	58.8	54.7	51.9	52.8	63.5	75.0	86.8	91.7	80.1	74.9	79.4	65.6	91.7
23-Mar	83.0	79.5	80.3	84.6	86.4	90.2	93.0	87.9	75.7	69.4	63.4	58.2	53.1	47.8	42.2	43.6	41.8	39.1	47.6	56.5	61.8	66.4	71.9	75.4	66.6	93.0
24-Mar	78.2	80.4	82.8	87.3	88.7	88.2	87.6	85.7	79.9	71.9	63.2	57.0	67.2	76.1	77.1	77.0	66.3	66.6	71.9	74.7	78.9	87.4	87.6	87.6	77.9	88.7
25-Mar	83.4	86.5	86.8	87.0	88.9	91.2	92.3	88.7	75.0	70.1	62.2	58.1	53.5	37.7	27.8	36.2	42.0	62.3	67.0	70.1	70.4	70.8	70.4	69.9	68.7	92.3
26-Mar	66.9	63.7	67.5	69.9	73.1	75.5	75.3	70.4	68.7	65.2	63.7	60.4	58.6	54.3	51.7	51.9	53.0	53.5	53.4	54.6	54.2	56.2	55.8	57.4	61.5	75.5
27-Mar	57.6	58.8	58.3	55.9	55.2	58.6	58.6	60.4	59.4	56.8	56.1	54.6	51.6	50.6	49.5	47.8	47.5	46.7	47.3	48.5	53.8	55.9	58.0	63.4	54.6	63.4
28-Mar	66.2	68.1	73.0	74.5	77.4	77.7	77.5	75.3	66.0	63.3	55.1	47.0	42.1	36.2	34.3	32.7	29.7	32.8	37.3	41.9	49.1	53.0	56.6	60.1	55.3	77.7
29-Mar	60.7	63.1	68.8	72.3	76.1	77.6	76.9	69.4	56.3	50.4	43.4	34.5	31.5	31.5	30.7	31.9	31.0	30.5	32.7	42.5	43.8	46.4	48.3	51.7	50.1	77.6
30-Mar	53.2	53.8	54.9	56.7	57.3	63.3	68.2	60.3	52.4	47.8	46.0	41.4	43.8	41.5	40.8	39.0	37.3	38.8	43.2	45.0	40.1	40.1	44.8	49.5	48.3	68.2
31-Mar	52.6	49.5	50.4	50.7	51.6	53.7	55.5	55.4	53.7	54.4	58.6	54.8	50.4	48.8	46.7	46.8	46.7	47.1	49.4	52.9	59.2	62.2	62.4	61.9	53.1	62.4
	72.2	72.3	73.2	74.5	75.6	76.9	77.6	76.1	71.8	67.7	63.1	58.3	55.9	53.2	51.2	50.1	49.5	52.2	55.9	60.4	63.8	66.7	68.8	70.3	Diurnal Average	
	91.0	90.5	90.1	90.2	89.1	91.2	93.0	90.0	89.1	87.7	81.0	79.5	77.4	76.1	77.1	77.0	71.8	75.0	78.9	86.8	91.7	87.4	89.1	90.9	Diurnal Maximum	

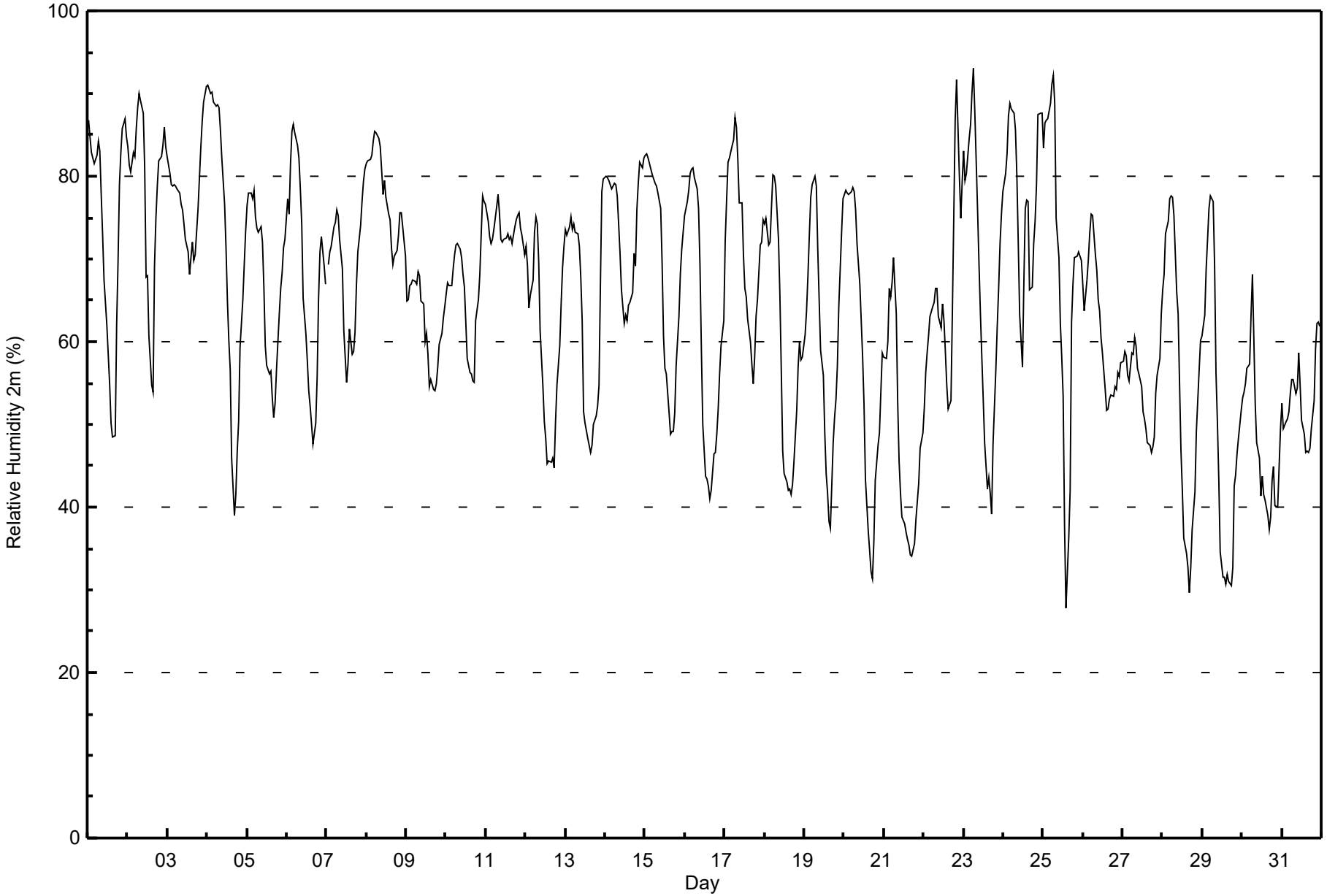
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Fort McKay - Bertha Ganter - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Precipitation (PC) - mm

Fort McKay - Bertha Ganter - March 2025

Maximum Value: 0.5 mm on Mar 14 00:00

Maximum Daily Total: 2.0 mm on Mar 14

Minimum Value: 0.0 mm on Mar 1 01:00

Minimum Daily Total: 0.0 mm on Mar 1

Maximum Diurnal Total: 0.7 mm at hour 23

Minimum Diurnal Total: 0.0 mm at hour 10

Monthly Total: 5.38 mm

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

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Total	Maximum
1-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	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	0.0	0.2	0.1
3-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
10-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.3	0.1
11-Mar	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	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2
12-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	0.5	1.2	0.5
14-Mar	0.4	0.3	0.2	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	2.0	0.4
15-Mar	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
16-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2
18-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	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	0.0	0.1	0.0	0.0	0.0	0.2	0.2
23-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.3
25-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.5	0.4	0.2	0.1	0.2	0.4	0.3	0.2	0.3	0.0	0.1	0.0	0.3	0.4	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.4	0.7	0.6	Diurnal Average	
	0.4	0.3	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.0	0.1	0.0	0.3	0.3	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.2	0.5	0.5	Diurnal Maximum	

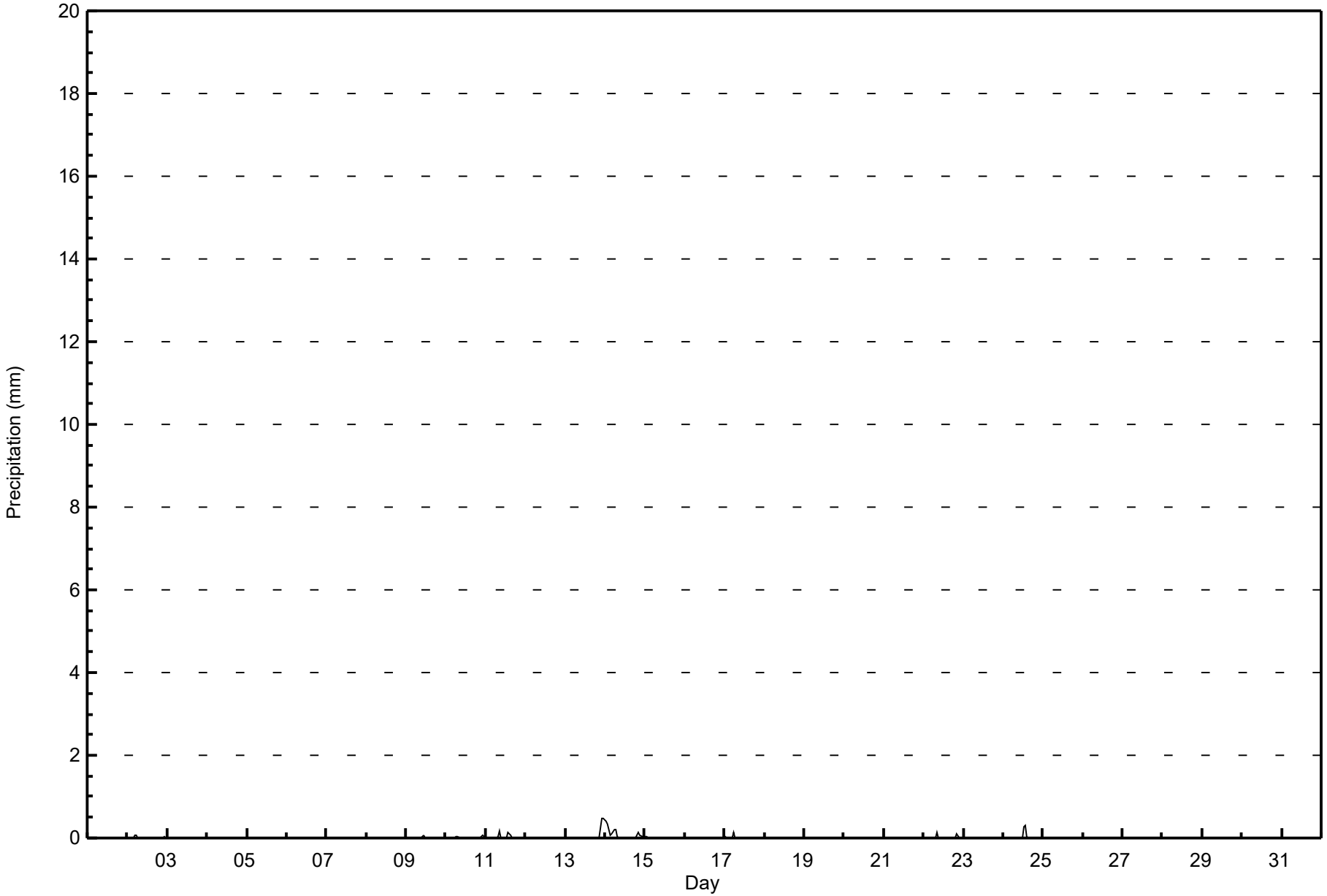
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Precipitation (PC) - mm

Fort McKay - Bertha Ganter - March 2025



Concentration Ranges (mm)	Number of Hours	%	Cumulative %
0 - 0.3	740	99.60	99.60
0.4 - 0.5	3	0.40	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: 743

Total Number of Hours: 744

Maximum Value: 35.4 % on Mar 2 10:00

Maximum Daily Average: 7.5 % on Mar 2

Minimum Value: 1.3 % on Mar 25 15:00

Minimum Daily Average: 2.0 % on Mar 30

Maximum Diurnal Average: 4.0 % at hour 10

Minimum Diurnal Average: 2.0 % at hour 17

Monthly Average: 2.99 %

Percentiles: P_1 = 1.4 P_{10} = 1.9 Q_1 = 2.2 Median = 2.6 Q_3 = 2.8 P_{90} = 3.7 P_{99} = 16.5

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	4.3	4.6	4.7	4.8	4.7	4.8	5.0	5.2	5.1	4.2	2.6	2.3	2.1	2.0	1.9	1.7	1.9	2.4	2.7	2.9	3.2	3.2	3.3	2.9	3.4	5.2
2-Mar	2.8	2.8	3.0	3.0	6.3	9.6	10.3	9.9	9.7	35.4	26.5	20.2	12.1	2.6	1.9	2.1	2.3	2.4	2.5	2.6	2.6	2.7	2.9	2.7	7.5	35.4
3-Mar	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.6	2.5	2.4	2.3	2.2	2.1	2.2	2.3	2.3	2.4	2.7	2.9	3.1	3.4	3.9	4.4	2.7	4.4
4-Mar	4.8	5.3	5.7	6.0	6.3	6.5	6.7	6.9	6.9	6.6	5.4	3.1	2.3	2.2	2.1	1.9	1.8	1.9	2.1	2.2	2.2	2.3	2.5	2.7	4.0	6.9
5-Mar	2.9	2.9	2.7	2.6	2.7	2.7	2.7	2.7	2.7	2.5	2.2	2.0	2.0	2.1	2.2	2.0	2.0	2.2	2.3	2.4	2.5	2.6	2.6	2.8	2.4	2.9
6-Mar	3.1	3.3	3.6	3.9	4.2	4.5	4.7	4.9	4.9	4.4	2.6	2.2	2.0	1.9	1.9	1.9	1.9	2.2	2.3	2.6	2.7	2.6	2.5	2.5	3.1	4.9
7-Mar	UO	2.6	2.6	2.6	2.6	2.6	2.7	2.7	2.6	2.4	2.1	1.9	1.9	2.0	2.2	2.1	2.2	2.3	2.5	2.5	2.6	2.6	2.7	2.7	2.4	2.7
8-Mar	2.7	2.7	2.8	2.8	2.8	2.8	2.8	2.8	2.7	2.6	2.5	2.5	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.7	2.7	2.8	2.8	2.8	2.7	2.8
9-Mar	2.7	2.7	2.8	2.8	2.8	2.8	2.8	2.8	2.7	2.7	2.7	2.6	2.5	2.5	2.3	2.4	2.5	2.6	2.6	2.6	2.6	2.7	2.7	2.7	2.6	2.8
10-Mar	2.7	2.8	2.8	2.8	2.7	2.8	2.8	2.8	2.7	2.8	2.9	2.8	2.7	2.5	2.6	2.5	2.5	2.6	2.8	2.8	2.8	2.9	3.0	3.0	2.8	3.0
11-Mar	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.2	3.1	3.0	3.0	2.9	2.9	2.8	2.6	2.6	2.7	2.7	2.8	2.8	2.8	2.8	2.8	2.8	2.9	3.2
12-Mar	2.8	2.8	2.7	2.7	2.8	2.9	3.0	2.9	2.7	2.5	2.4	2.2	2.1	2.0	2.0	2.0	2.1	2.4	2.5	2.6	2.7	2.8	2.9	3.0	2.6	3.0
13-Mar	3.0	3.0	3.1	3.2	3.3	3.4	3.4	3.4	3.4	3.0	2.5	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.5	2.7	2.7	2.8	3.4
14-Mar	2.7	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.7	2.6	2.4	2.4	2.3	2.4	2.4	2.4	2.5	2.6	2.6	2.7	2.8	2.8	2.9	3.1	2.7	3.1
15-Mar	3.2	3.5	3.7	3.9	4.1	4.1	4.2	4.3	4.2	4.0	3.4	2.9	2.6	2.5	2.3	2.2	2.2	2.4	2.4	2.5	2.6	2.6	2.7	2.7	3.1	4.3
16-Mar	2.7	2.8	2.9	2.9	3.1	3.2	3.3	3.4	3.3	2.7	2.2	1.9	2.0	2.0	1.9	1.9	2.1	2.2	2.3	2.3	2.4	2.4	2.4	2.4	2.5	3.4
17-Mar	2.5	2.6	2.7	2.7	2.8	2.8	3.0	3.0	2.8	2.7	2.5	2.3	2.2	2.3	2.3	2.3	2.3	2.4	2.6	2.7	2.8	2.9	2.8	2.8	2.6	3.0
18-Mar	2.8	2.8	2.7	2.8	2.8	2.9	2.9	2.8	2.8	2.4	1.9	1.7	1.8	1.8	1.8	1.7	1.8	2.0	2.2	2.4	2.4	2.4	2.5	2.5	2.4	2.9
19-Mar	2.6	2.7	2.9	3.0	3.1	3.2	3.4	3.4	3.2	2.4	2.1	1.9	1.7	1.5	1.4	1.3	1.4	1.9	2.1	2.1	2.2	2.3	2.5	2.6	2.4	3.4
20-Mar	2.7	2.7	2.8	2.9	3.0	3.1	3.2	3.2	2.8	2.5	2.2	2.1	2.0	2.0	1.9	1.9	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.4	3.2
21-Mar	2.6	2.6	2.7	2.7	2.7	2.8	2.8	2.6	2.4	2.2	1.9	1.8	1.7	1.6	1.6	1.5	1.6	1.8	1.9	2.1	2.1	2.1	2.2	2.2	2.2	2.8
22-Mar	2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.3	2.1	1.9	2.1	1.8	1.7	1.6	1.6	1.7	17.5	24.9	21.0	15.2	11.0	2.8	2.6	5.4	24.9
23-Mar	2.8	2.7	2.7	2.8	2.8	3.3	3.9	4.3	6.4	2.8	2.1	1.7	1.6	1.6	1.6	8.9	2.1	1.6	2.0	2.2	2.4	2.4	2.5	2.4	2.9	8.9
24-Mar	2.4	2.8	3.1	3.7	4.2	4.3	4.1	3.8	2.6	2.4	2.1	2.3	28.4	22.6	13.1	7.4	2.4	2.1	2.3	2.4	2.8	6.4	6.5	3.6	5.7	28.4
25-Mar	3.0	3.9	3.5	3.7	4.2	4.5	4.9	5.0	9.9	7.4	1.8	1.7	2.0	1.6	1.3	1.5	1.6	2.0	2.2	2.3	2.4	2.4	2.4	2.5	3.2	9.9
26-Mar	2.4	2.4	2.5	2.5	2.6	2.7	2.7	2.6	2.4	2.3	2.2	2.1	1.9	1.9	1.9	2.0	2.1	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.7
27-Mar	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.3	2.3	2.4	2.4	2.5	2.2	2.5
28-Mar	2.6	2.7	2.9	3.1	3.2	3.4	3.5	3.6	3.2	2.3	1.9	1.8	1.8	1.6	1.6	1.5	1.5	1.8	2.0	2.2	2.2	2.3	2.4	2.5	2.4	3.6
29-Mar	2.6	2.6	2.7	2.9	3.1	3.3	3.4	3.4	2.6	2.0	1.6	1.4	1.3	1.4	1.4	1.4	1.5	1.7	1.9	2.1	2.1	2.1	2.1	2.2	2.2	3.4
30-Mar	2.3	2.4	2.4	2.4	2.5	2.6	2.6	2.5	2.1	1.8	1.7	1.5	1.4	1.4	1.4	1.4	1.3	1.6	1.8	1.9	1.9	1.9	1.9	2.0	2.0	2.6
31-Mar	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.1	1.9	1.8	1.8	1.7	1.6	1.6	1.6	1.6	1.6	1.8	2.0	2.2	2.3	2.4	2.4	2.4	2.0	2.4
	2.8	2.9	3.0	3.1	3.2	3.5	3.6	3.6	3.6	4.0	3.2	2.7	3.2	2.7	2.3	2.4	2.0	2.7	3.1	3.0	2.9	2.9	2.8	2.7	Diurnal Average	
	4.8	5.3	5.7	6.0	6.3	9.6	10.3	9.9	9.9	35.4	26.5	20.2	28.4	22.6	13.1	8.9	2.7	17.5	24.9	21.0	15.2	11.0	6.5	4.4	Diurnal Maximum	

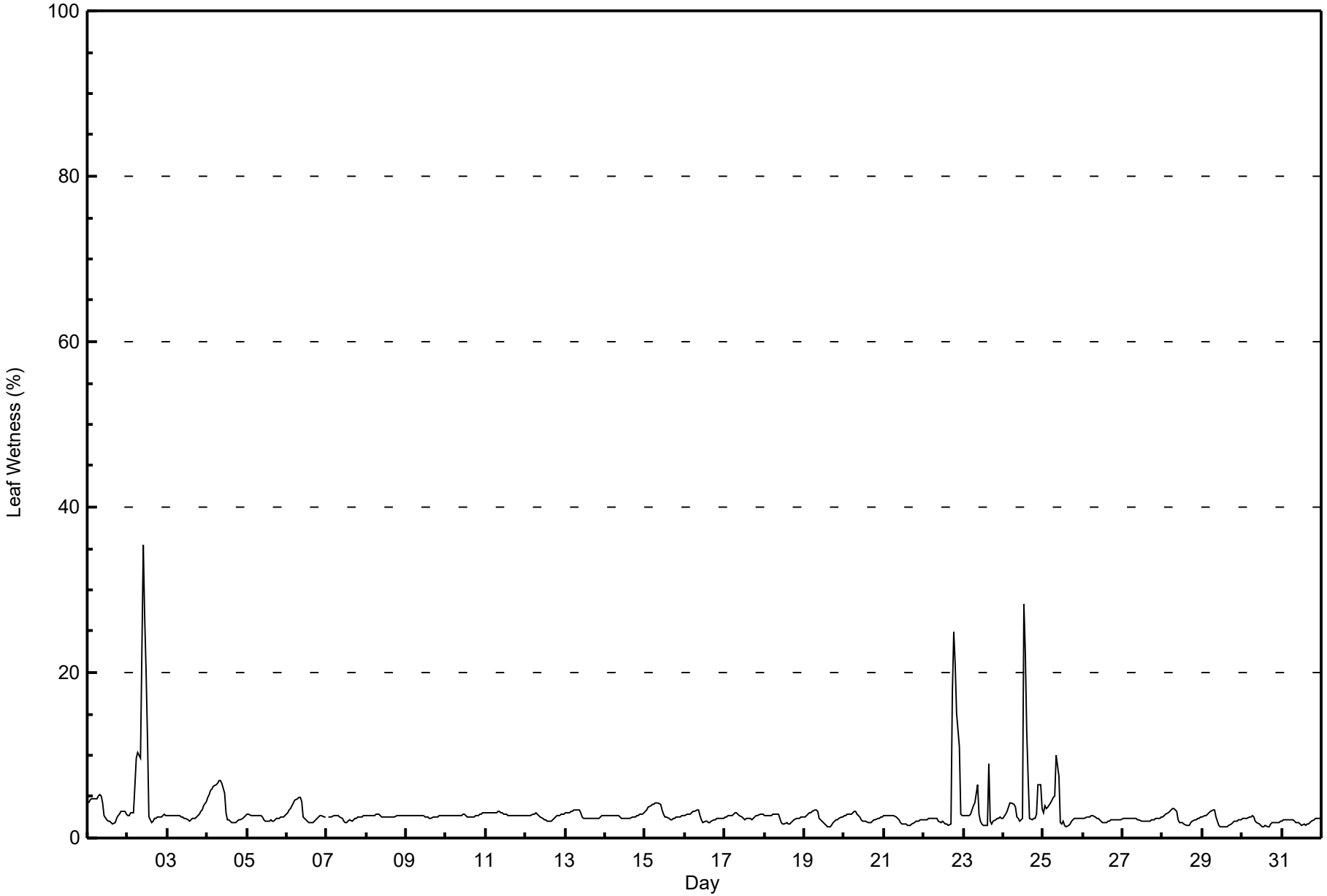
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Leaf Wetness (LW) - %

Fort McKay - Bertha Ganter - March 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 0.3	0	0.00	0.00
0.4 - 0.5	0	0.00	0.00
0.6 - 0.7	0	0.00	0.00
0.8 - 1.4	14	1.88	1.88
1.5 - 10	712	95.83	97.71
> 10	13	1.75	99.46

Total Number of Valid Hours: 743

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Global Radiation (GR) - W/m2

Fort McKay - Bertha Ganter - March 2025

Maximum Value: 685.9 W/m2 on Mar 29 13:00

Maximum Daily Average: 220.0 W/m2 on Mar 29

Minimum Value: 0.0 W/m2 on Mar 1 03:00

Minimum Daily Average: 50.6 W/m2 on Mar 8

Maximum Diurnal Average: 461.3 W/m2 at hour 13

Minimum Diurnal Average: 0.0 W/m2 at hour 21

Monthly Average: 132.81 W/m2

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 4.4 Q_3 = 240.6 P_{90} = 456.2 P_{99} = 655.1

Hours in Service:	744
Hours of Data:	742
Hours of Missing Data:	2
Hours of Calibration:	0
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.1	0.1	0.0	0.0	0.0	0.0	0.1	26.4	159.5	272.0	354.7	416.6	416.2	410.0	354.7	282.7	84.1	20.4	0.1	0.0	0.0	0.0	0.0	0.0	116.6	416.6
2-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	14.0	42.7	152.2	302.2	246.5	392.3	165.6	75.5	42.5	11.8	0.3	0.0	0.0	0.0	0.0	0.0	60.4	392.3
3-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.3	60.6	134.2	181.9	228.3	335.4	442.4	280.2	209.6	112.4	38.3	1.5	0.0	0.0	0.0	0.0	0.0	85.1	442.4
4-Mar	0.0	0.0	0.1	0.1	0.0	0.0	0.3	63.7	128.1	189.6	135.4	186.6	304.9	248.0	238.1	233.5	156.3	40.0	1.6	0.0	0.0	0.0	0.0	0.0	80.3	304.9
5-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.9	172.2	199.5	346.9	460.2	372.8	315.8	253.7	328.2	200.6	55.6	1.6	0.0	0.0	0.0	0.0	0.0	113.7	460.2
6-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.4	64.3	145.7	306.2	374.7	458.6	507.2	471.9	432.4	322.0	161.9	24.6	2.3	0.0	0.0	0.0	0.0	0.0	136.3	507.2
7-Mar	UO	0.0	0.0	0.0	0.0	0.0	0.2	17.3	76.5	196.3	393.6	351.3	313.9	280.8	248.9	285.9	130.0	35.0	1.7	0.0	0.0	0.0	0.0	0.0	101.4	393.6
8-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.2	21.5	84.1	119.3	168.5	195.9	109.9	137.4	147.5	111.2	80.1	36.7	1.5	0.0	0.0	0.0	0.0	0.0	50.6	195.9
9-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.4	19.1	71.4	165.4	152.8	235.1	302.5	314.9	403.2	220.9	136.1	48.6	3.5	0.0	0.0	0.0	0.0	0.0	86.4	403.2
10-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.6	20.9	76.7	153.1	213.0	280.7	341.7	449.0	295.8	237.7	163.2	55.6	2.8	0.0	0.0	0.0	0.0	0.0	95.5	449.0
11-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.8	22.8	88.3	197.9	207.9	249.4	269.3	233.4	192.7	170.5	101.5	37.5	4.1	0.0	0.0	0.0	0.0	0.0	74.0	269.3
12-Mar	0.0	0.0	0.0	0.0	0.0	0.0	1.1	21.3	74.9	150.4	229.4	278.0	347.2	450.8	465.3	354.6	213.8	33.5	4.1	0.0	0.0	0.0	0.0	0.0	109.4	465.3
13-Mar	0.0	0.0	0.0	0.0	0.0	0.0	2.9	60.6	154.5	197.1	255.2	406.2	295.1	204.5	180.4	113.2	54.0	21.9	1.7	0.0	0.0	0.0	0.0	0.0	81.1	406.2
14-Mar	0.0	0.0	0.0	0.0	0.0	0.0	2.6	36.3	103.1	272.9	432.3	431.7	526.8	379.8	300.7	238.3	127.2	48.0	5.6	0.0	0.0	0.0	0.0	0.0	121.1	526.8
15-Mar	0.0	0.0	0.0	0.0	0.0	0.0	2.1	33.0	89.4	175.6	492.1	660.7	638.6	486.0	466.8	352.2	184.8	51.5	6.5	0.0	0.0	0.0	0.0	0.0	151.6	660.7
16-Mar	0.0	0.0	0.0	0.0	0.0	0.0	4.7	44.9	167.1	383.5	378.6	483.8	526.4	428.1	458.2	364.8	167.6	57.2	6.2	0.0	0.0	0.0	0.0	0.0	144.6	526.4
17-Mar	0.0	0.0	0.0	0.0	0.0	0.0	3.8	45.6	107.7	120.0	261.4	433.6	492.0	262.1	255.4	192.8	163.9	66.8	8.2	0.0	0.0	0.0	0.0	0.0	100.6	492.0
18-Mar	0.0	0.0	0.0	0.0	0.0	0.0	4.2	56.2	254.4	381.5	484.8	582.7	543.1	464.0	389.3	384.9	153.9	78.6	8.7	0.0	0.0	0.0	0.0	0.0	157.8	582.7
19-Mar	0.0	0.0	0.0	0.0	0.0	0.0	9.1	88.8	206.4	271.3	368.0	501.9	576.7	572.5	M	354.6	215.3	59.7	8.0	0.0	0.0	0.0	0.0	0.0	140.5	576.7
20-Mar	0.0	0.0	0.0	0.0	0.0	0.0	12.5	133.0	274.5	386.1	465.6	526.9	548.9	545.4	531.0	414.7	250.9	64.4	9.6	0.0	0.0	0.0	0.0	0.0	173.5	548.9
21-Mar	0.0	0.0	0.0	0.0	0.0	0.0	26.1	117.8	255.2	418.0	520.1	595.6	619.5	599.6	537.5	417.7	276.0	82.1	11.5	0.2	0.0	0.0	0.0	0.0	186.5	619.5
22-Mar	0.0	0.0	0.0	0.0	0.0	0.0	5.5	24.3	108.6	298.3	301.6	290.3	547.0	615.2	554.8	436.9	181.1	31.2	10.0	0.0	0.0	0.0	0.0	0.0	141.9	615.2
23-Mar	0.0	0.0	0.0	0.0	0.0	0.0	27.4	233.8	368.1	460.2	552.6	619.0	655.9	640.4	396.8	192.2	294.4	99.0	13.4	0.0	0.0	0.0	0.0	0.0	189.7	655.9
24-Mar	0.0	0.0	0.0	0.0	0.0	0.0	12.6	55.0	126.9	210.8	308.5	197.5	207.5	235.8	262.8	292.0	241.4	91.4	22.1	0.2	0.0	0.0	0.0	0.0	94.3	308.5
25-Mar	0.0	0.0	0.0	0.0	0.0	0.0	12.4	138.3	318.0	324.8	496.2	571.9	342.4	401.4	525.0	307.7	235.2	93.8	15.4	0.2	0.0	0.0	0.0	0.0	157.6	571.9
26-Mar	0.0	0.0	0.0	0.0	0.0	0.1	35.2	167.9	326.0	344.0	418.7	533.4	643.2	505.8	333.0	313.2	196.3	85.5	21.5	0.0	0.0	0.0	0.0	0.0	163.5	643.2
27-Mar	0.0	0.0	0.0	0.0	0.0	0.0	14.3	77.3	203.0	314.6	327.5	413.1	586.1	657.3	594.3	476.6	326.2	126.0	18.6	0.5	0.0	0.0	0.0	0.0	172.3	657.3
28-Mar	0.0	0.0	0.0	0.0	0.0	0.1	43.7	208.8	374.7	485.1	571.5	626.1	659.9	663.3	586.0	474.5	323.3	127.7	20.6	0.8	0.0	0.0	0.0	0.0	215.2	663.3
29-Mar	0.0	0.0	0.0	0.0	0.0	0.3	43.1	197.4	362.7	492.1	595.2	650.6	685.9	678.0	605.4	477.0	334.2	136.0	20.3	0.6	0.0	0.0	0.0	0.0	220.0	685.9
30-Mar	0.0	0.0	0.0	0.0	0.0	0.5	46.4	185.4	346.8	467.2	539.0	596.9	685.0	608.2	522.0	451.6	316.2	122.2	21.0	0.4	0.0	0.0	0.0	0.0	204.5	685.0
31-Mar	0.0	0.0	0.0	0.0	0.0	0.4	17.7	104.2	328.2	456.7	349.4	594.0	654.0	617.2	566.9	412.7	297.7	136.1	28.1	1.2	0.0	0.0	0.0	0.0	190.2	654.0
	0.0	0.0	0.0	0.0	0.0	0.0	10.7	75.2	181.5	277.0	355.8	430.9	461.3	442.3	384.8	306.4	191.0	65.1	9.1	0.1	0.0	0.0	0.0	0.0	Diurnal Average	
	0.1	0.1	0.1	0.1	0.0	0.5	46.4	233.8	374.7	492.1	595.2	660.7	685.9	678.0	605.4	477.0	334.2	136.1	28.1	1.2	0.0	0.0	0.0	0.0	Diurnal Maximum	

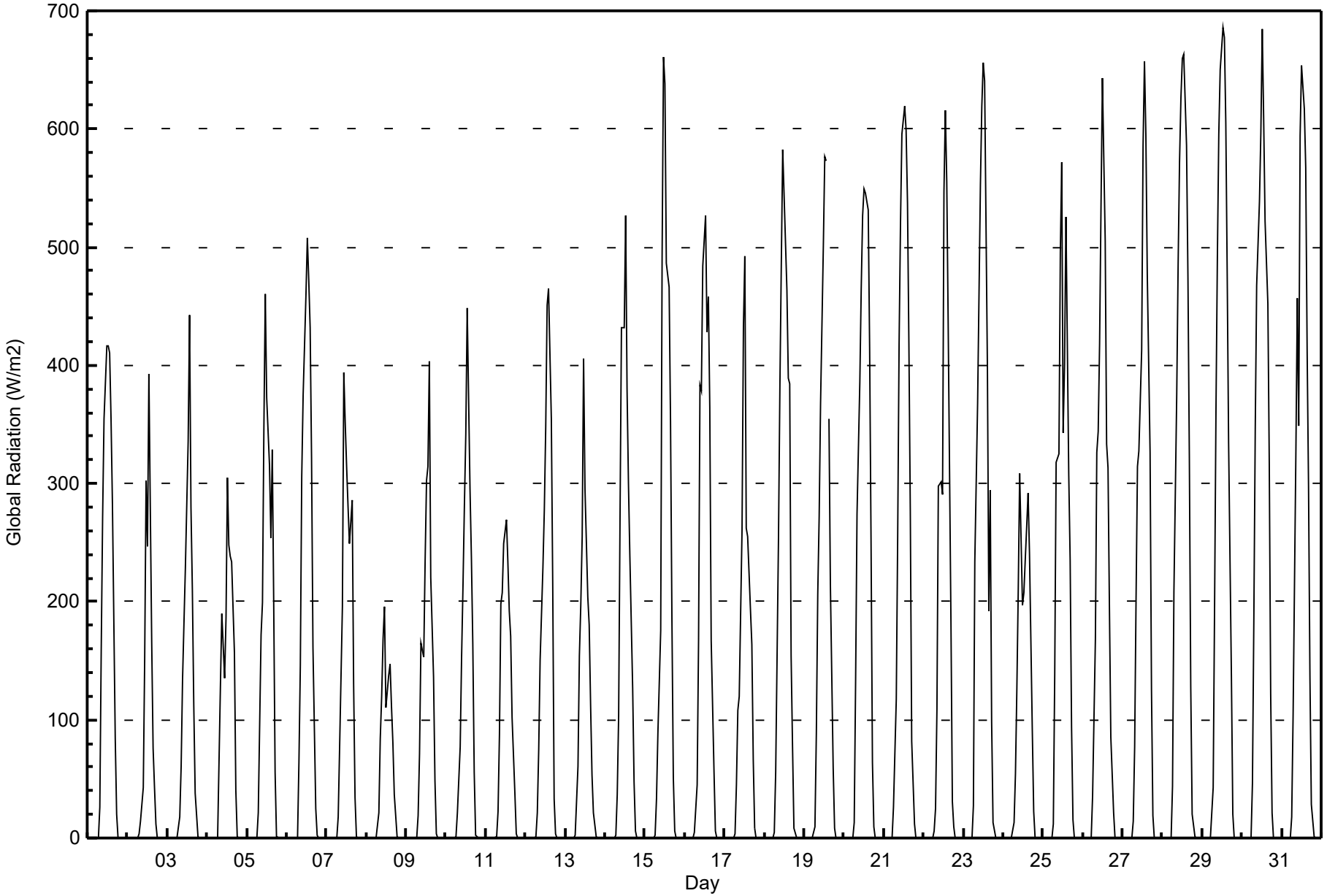
M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Global Radiation (GR) - W/m2

Fort McKay - Bertha Ganter - March 2025



Concentration Ranges (W/m2)	Number of Hours	%	Cumulative %
0 - 20	398	53.64	53.64
21 - 100	67	9.03	62.67
101 - 300	124	16.71	79.38
301 - 600	133	17.92	97.30
601 - 900	20	2.70	100.00
> 900	0	0.00	100.00

Total Number of Valid Hours: 742

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Fort McKay - Bertha Ganter - March 2025

Maximum Speed: 22 km/h on Mar 25 16:00

Maximum Daily Speed Average: 13.7 km/h on Mar 14

Minimum Speed Value: 0 km/h on Mar 12 10:00

Minimum Daily Speed Average: 0.5 km/h on Mar 15

Maximum Diurnal Speed Average: 6.7 km/h at hour 21

Minimum Diurnal Speed Average: 1.8 km/h at hour 9

Monthly Average Velocity: 2.9 km/h 26.4 deg

Percentiles: P_1 = 1 P_{10} = 2 Q_1 = 4 Median = 7 Q_3 = 11 P_{90} = 14 P_{99} = 18

Hours in Service:	744
Hours of Data:	729
Hours of Missing Data:	15
Percent Operational Time:	98.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	S6	S7	S9	S9	S9	SSE7	S7	S7	S10	SSE10	SSE12	SSE12	SSE11	SSE11	S8	SSE7	S4	SSE2	WNW2	NW4	UO	WSW2	WNW1	S3	S6.4	SSE12
2-Mar	S3	SSW4	S2	S3	S5	S1	W2	N6	N4	SSE0	SSE2	S5	SSE8	SE5	WNW4	NNW10	NNE14	NNE11	NE10	NNE9	NNE10	NNE11	N9	NNE12	NNE2.7	NNE14
3-Mar	NNE11	NNE9	NNE8	NNE6	NNE5	N3	N3	NW0	SSE4	SE5	SE6	SSE8	S8	S10	S11	SSE11	SSE8	S5	S6	S3	SSW2	SSW2	SSW3	UO	SE2.5	S11
4-Mar	SSW2	S4	S5	S5	S4	S5	S7	S7	S5	SSE7	S8	S6	SSE10	S9	SSE8	SW7	WSW8	WSW5	SW5	WNW5	N14	N8	N6	N6	S2.9	N14
5-Mar	N3	N8	N11	N14	N14	N16	N16	NNE11	NE8	ENE6	E6	E5	SE5	SSE11	SSE11	SSE11	S8	SSE7	SSE1	N6	NNE4	N2	N3	NNW4	NE3.6	N16
6-Mar	NNW4	NNW5	WNW4	WNW3	W2	SW2	SSW2	SW2	SSE2	SSE6	SSE12	SSE13	SSE13	SSE13	SSE14	SSE13	S9	S6	S6	W3	NW1	WNW3	N5	N7	S3.4	SSE14
7-Mar	UO	NNE5	NNE5	NNE4	N6	N8	N6	NNW4	NNE4	NE3	E4	SE7	SE5	E4	NNE15	NNE13	N16	N14	N15	N13	N12	N10	N9	N8	NNE7.0	N16
8-Mar	N8	N6	NNW6	N7	N7	N7	NW7	NNW8	N7	N5	N5	N13	N16	N18	N19	NNE16	N15	NNE11	N9	NE11	NNE12	NNE13	NNE13	NNE16	N10.3	N19
9-Mar	NNE14	NNE15	NNE12	NNE12	NE12	NNE11	NNE10	NE8	NNE11	NE10	NNE11	NNE11	NNE8	NNE9	NE7	NNE9	NNE10	NNE9	NNE7	NNE8	NNE8	NNE6	N5	N6	NNE9.5	NNE15
10-Mar	N5	NNW5	NW5	NNW4	NNE4	NNE3	UO	UO	N1	ENE2	SE3	SE8	SE6	SSE6	S8	SSE7	SE5	ENE3	NNE4	NNE6	NNE5	N8	N8	N8	NE1.8	NNW8
11-Mar	N9	NNW9	N7	N8	N7	N7	N6	N9	N10	N10	N9	N12	NNE14	N15	N16	N18	N19	N17	N17	N17	N16	N18	N15	N14	N12.4	N19
12-Mar	N14	N12	N11	N8	N5	NW3	SW3	W2	WNW3	N0	ESE4	ESE6	E4	ENE6	NE6	E6	ENE7	ENE5	NE3	N4	N4	NNW3	NNW3	WNW1	NNE3.4	N14
13-Mar	NW2	NNW3	WNW2	N3	WNW2	NNW4	NNW2	N3	NE2	NNE3	NNE7	N11	N13	NNE12	NNE15	NNE15	N16	N16	N17	N16	N16	N16	N16	N14	N9.2	N17
14-Mar	N14	N16	N18	N17	N16	N16	N13	N14	N14	NNE14	NNE16	NNE17	N19	NNE18	N18	NNE15	NNE15	N14	N11	N9	N8	NNW8	NNW8	NNW6	N13.7	N19
15-Mar	WNW6	WNW7	NW6	WNW5	WNW4	WNW4	WNW3	UO	SE1	ESE1	ESE4	E6	SE7	SE8	SSE11	SSE10	SSE8	SSE7	SE5	NE4	NNE6	NNE8	N9	NNW7	ESE0.5	SSE11
16-Mar	NNW7	NNW5	WNW4	WNW3	WNW2	WSW2	SSW2	S5	SSE8	SSE7	SSE6	SSE8	S14	S13	S12	S11	SSE10	SSE10	ESE6	ESE6	SE5	SE7	SSE8	SSE6	SSE5.0	S14
17-Mar	SSE7	SSE5	SSE4	S4	S5	S2	UO	WNW1	UO	NNW5	NNE10	NNE11	NNE12	NNE13	NNE10	NNE11	NE7	NE6	NNE6	NNE6	N5	W3	W3	SW2	NNE3.5	NNE13
18-Mar	S2	NNE2	N2	NNW2	N4	NNW4	WNW2	SSE2	SE2	SE5	SE8	SSE7	S12	S11	S9	SSE10	SSE9	SSE8	SSE3	UO	N8	N8	NNW8	NNW8	SSE1.6	S12
19-Mar	NNW7	NW6	NNW4	UO	UO	WSW1	SSW2	SSW2	SSE4	SSE7	SSE8	SSE10	SSE10	SE8	SSE9	SSE6	ENE2	N14	N13	NNE13	NNE13	N18	N20	N20	NNE3.4	N20
20-Mar	N16	N13	N9	N9	N9	N11	N11	N12	N10	NNE10	NNE11	N13	N12	N15	N14	NNE14	N13	N12	N10	N8	N9	N7	N4	N3	N10.6	N16
21-Mar	NE1	SE2	NNW1	N3	NW4	NW4	WNW4	NW1	S3	S10	S11	S12	S11	S13	S14	S13	S14	S10	SSE6	SSE5	SSE6	SE5	UO	N2	S5.0	S14
22-Mar	SSW2	SSW1	SW3	S4	S8	S9	S10	S13	S13	SSE11	SSE11	S11	SSE11	SSE12	S11	S12	SSW2	N5	NW12	WSW3	NNW5	N11	NNE3	SE5	S4.8	S13
23-Mar	E1	ENE2	S1	N2	N3	NW3	WNW3	WSW0	SE3	SE6	SE9	SSE11	SSE11	SSE12	SSE11	SE2	ENE4	ENE3	E2	N2	N3	NE1	N2	NNW4	SE2.1	SSE12
24-Mar	NNW4	NNW4	NNW4	NNW2	NW4	NW1	SW1	NNW0	SSE3	SSE9	SSE8	SSE7	SSE9	S8	S7	S6	WNW8	WNW10	N8	NW12	WNW5	W2	SW2	SW2	WSW1.4	NW12
25-Mar	SW4	WSW4	WSW4	WSW4	E1	WSW1	SSW2	WNW0	E1	SE4	SSE8	SSE12	SSE9	NW10	WNW19	NW22	N17	NNE15	NNE13	NNE13	NNE14	NNE14	NNE17	N16	N4.5	NW22
26-Mar	N17	N14	NNE12	N10	N8	NNE7	N7	NNE11	NNE12	NNE12	NNE11	NE8	NE8	ENE7	NE5	NE8	NNE9	NE9	NNE8	NNE8	NNE9	NNE9	NNE9	NNE9	NNE9.1	N17
27-Mar	NNE10	NNE9	NNE11	NNE12	NNE12	NNE11	NNE12	N13	NNE15	NNE15	NNE16	NNE14	NNE15	NNE14	NNE15	NNE15	NNE17	NNE16	NNE14	NNE11	NNE10	N11	NNE7	NNW7	NNE12.4	NNE17
28-Mar	NW7	UO	UO	WNW2	WSW3	WNW4	UO	NNE3	NE2	NNE6	NE6	NNE6	NNE7	ENE6	ENE6	E5	ENE5	NNE6	N8	N7	N8	N8	NNW6	NW5	NNE4.1	N8
29-Mar	NNW6	NNE2	WNW4	WNW3	W2	W2	W4	WNW4	ESE1	SE3	ESE4	E4	SE6	SSE11	SSE12	SSE13	SSE14	SSE13	SSE7	NNE6	NNE10	N9	NNW7	NW7	SE1.4	SSE14
30-Mar	NW6	NW5	NW5	WNW5	NW4	NW4	W3	NNW2	ESE1	ENE2	NE6	NE5	NNE3	NNE4	ENE5	NNE4	NNE5	NNE6	NNE8	NNE8	NNE8	NNE7	NNE5	NNE4	N3.7	NNE8
31-Mar	NE3	ESE6	ESE5	SE6	ESE5	SE8	SSE7	SSE6	SSE8	SSE10	SSE12	SSE13	S12	S13	S12	S14	S13	SSE11	SSE10	SE5	SE5	SE4	SE6	SSE6	SSE7.6	S14
	N4.5	N4.1	N3.6	N3.2	N2.8	N2.7	NNW2.0	N2.1	NE1.8	E2.6	E3.5	ESE3.5	ESE3.2	ESE3.1	E2.2	E2.5	NE3.0	NNE3.8	NNE4.8	N5.9	N6.7	N6.3	N5.9	N5.5	Diurnal Average	
	N17	N16	N18	N17	N16	N16	N16	N14	NNE15	NNE15	NNE16	NNE17	N19	NNE18	WNW19	NW22	N19	N17	N17	N17	N16	N18	N20	N20	Diurnal Maximum	

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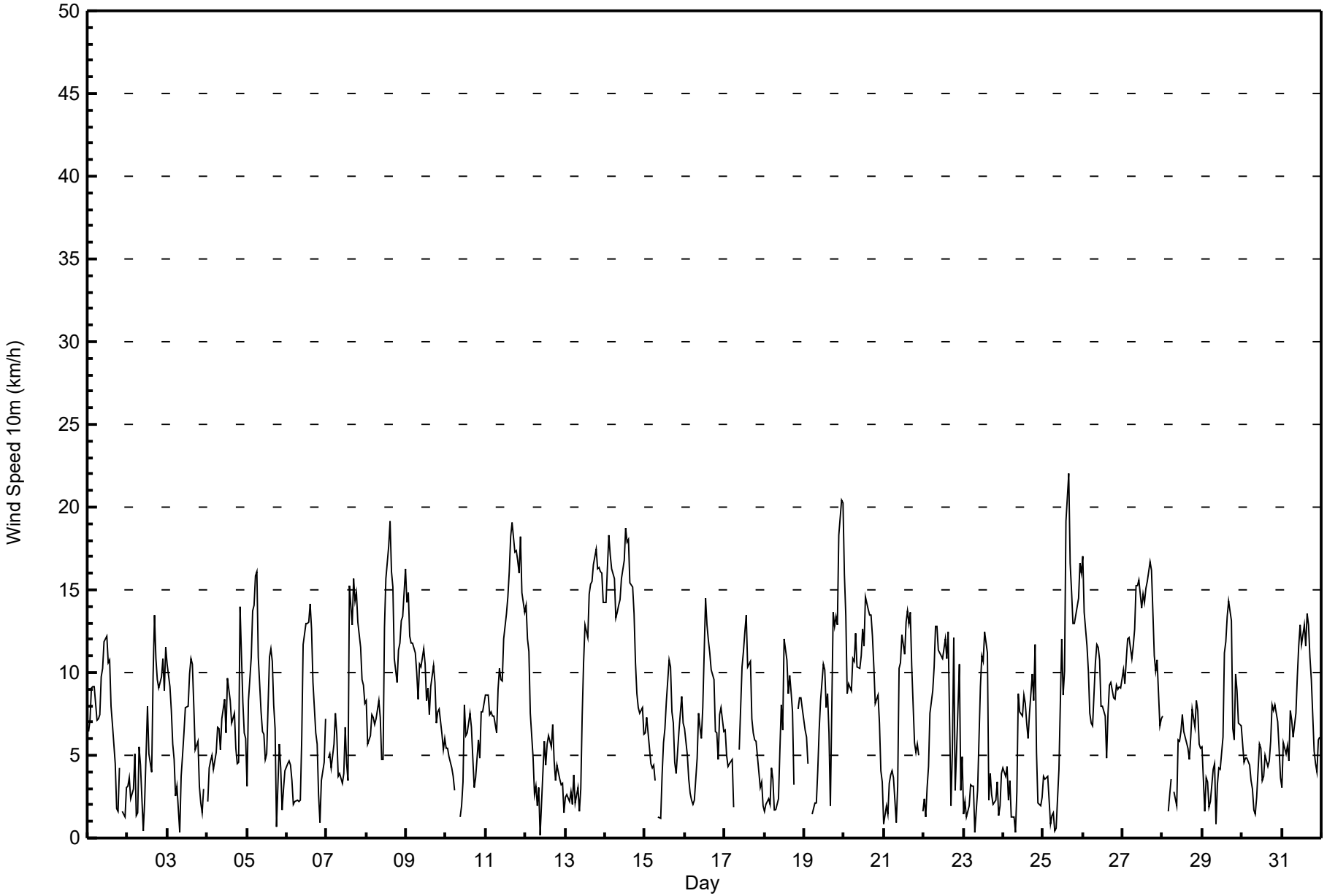
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Fort McKay - Bertha Ganter - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	265	36.35	36.35
6 - 11	305	41.84	78.19
12 - 19	156	21.40	99.59
20 - 28	3	0.41	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 729

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Fort McKay - Bertha Ganter - March 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	31	21	10	10	10	8	21	13	24	13	10	11	11	30	17	25	265
6 - 11	64	64	15	6	2	5	14	66	37	1	1	1	0	4	7	18	305
12 - 19	67	51	1	0	0	0	0	17	17	0	0	0	0	1	2	0	156
20 - 28	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	164	136	26	16	12	13	35	96	78	14	11	12	11	35	27	43	729

Total Number of Valid Hours: 729

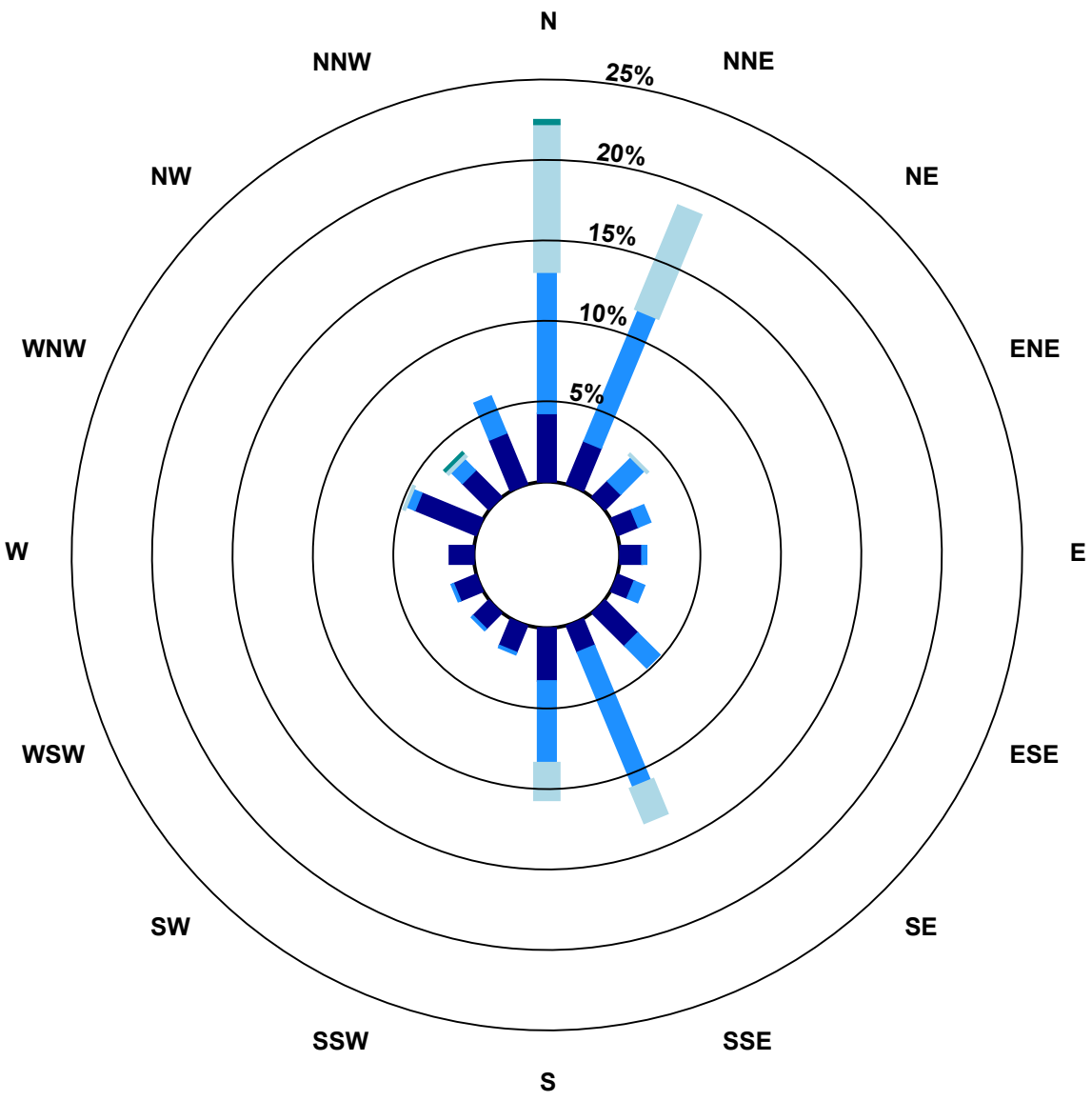
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 10m (WS10) - km/h

Fort McKay - Bertha Ganter



Classes (km/h)

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

Total Number of Valid Hours: 729

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Fort McKay - Bertha Ganter - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8 km/h on Mar 25 14:00

Minimum Value: 1 km/h on Mar 21 05:00

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

Hours in Service:	744
Hours of Data:	729
Hours of Missing Data:	15
Hours of Calibration:	0
Percent Operational Time:	98.0

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

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Fort McKay - Bertha Ganter - March 2025

Direction of Maximum Speed: 322 deg on Mar 25 16:00
Direction of Maximum Daily Speed Average: 4.3 deg on Mar 14

Direction of Minimum Speed: 2 deg on Mar 12 10:00

Direction of Minimum Daily Speed Average: 0.5 deg on Mar 15

Monthly Average Direction: 26.4 deg

Hours in Service:	744
Hours of Data:	729
Hours of Missing Data:	15
Percent Operational Time:	98.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	170	177	176	176	174	168	181	180	174	163	163	167	161	163	178	163	181	157	296	312	UO	238	283	185	173.1
2-Mar	190	197	185	183	172	185	281	349	352	168	168	170	156	140	286	330	13	29	36	17	18	15	8	22	20.2
3-Mar	23	31	21	23	28	355	6	312	164	143	144	150	184	172	169	162	166	169	183	189	203	195	213	UO	144.2
4-Mar	201	181	182	176	178	177	178	180	174	164	170	173	161	169	161	216	240	239	232	297	4	10	356	354	187.6
5-Mar	359	7	0	8	8	8	5	15	44	70	97	82	135	159	161	157	169	158	152	356	14	6	6	328	37.4
6-Mar	335	328	301	299	262	228	193	218	168	158	161	159	157	158	160	165	174	191	185	279	308	294	358	1	176.4
7-Mar	UO	23	28	33	0	357	357	337	18	47	87	146	144	79	14	23	11	5	5	3	3	5	357	358	13.5
8-Mar	354	354	341	358	353	359	325	343	358	9	7	355	4	8	10	17	9	18	11	40	33	31	26	20	9.2
9-Mar	27	27	26	27	41	29	25	34	32	38	21	17	27	16	40	17	29	24	32	15	19	18	6	349	25.2
10-Mar	353	327	323	347	13	13	UO	UO	360	68	126	145	137	156	170	150	138	77	17	26	32	9	8	349	45.1
11-Mar	351	348	354	1	6	359	8	357	9	9	6	10	13	11	10	11	10	8	9	9	7	7	5	4	6.4
12-Mar	6	3	4	5	354	321	232	270	289	2	110	104	100	67	49	83	59	68	42	356	351	329	328	300	21.5
13-Mar	315	340	291	354	301	344	342	353	45	29	28	3	3	17	12	15	9	4	9	9	10	8	6	5	6.6
14-Mar	359	6	0	2	360	358	357	358	6	17	17	16	4	12	5	16	15	5	7	9	353	341	338	331	4.3
15-Mar	300	303	319	285	291	295	295	UO	138	107	108	101	133	146	153	158	166	166	139	53	26	18	3	338	109.8
16-Mar	336	334	303	301	287	254	196	180	168	151	149	158	174	176	172	171	168	151	112	121	136	146	148	151	163.2
17-Mar	158	161	152	169	169	175	UO	303	UO	340	12	26	29	13	31	17	46	39	19	17	356	278	275	230	26.6
18-Mar	191	17	355	330	354	329	283	156	129	140	135	158	170	183	185	156	167	157	168	UO	351	350	332	343	163.0
19-Mar	335	325	330	UO	UO	252	206	211	154	156	155	151	155	143	149	148	73	7	11	12	12	8	4	1	26.7
20-Mar	357	6	11	5	357	1	356	8	6	14	14	7	357	4	6	12	5	1	6	349	350	356	9	8	3.7
21-Mar	53	130	333	353	318	325	303	313	187	169	175	175	174	174	171	172	176	173	149	149	149	135	UO	354	171.7
22-Mar	209	194	218	178	174	174	170	169	172	163	156	170	167	168	175	174	208	5	315	242	330	10	22	130	173.0
23-Mar	79	59	187	6	2	307	286	238	128	140	142	163	154	158	164	146	65	73	98	5	5	35	4	347	135.2
24-Mar	348	341	345	332	321	316	224	345	155	166	160	161	158	171	181	169	283	289	352	316	294	265	223	236	241.6
25-Mar	226	252	246	245	80	248	202	294	91	134	147	152	165	311	300	322	351	26	25	26	19	16	16	11	357.4
26-Mar	7	2	14	8	6	13	7	26	28	25	16	40	36	66	50	46	32	38	21	16	18	27	24	28	22.7
27-Mar	31	21	23	24	29	28	28	10	14	20	18	27	16	26	29	33	25	20	16	16	14	9	13	334	20.5
28-Mar	323	UO	UO	292	253	289	UO	16	43	23	44	31	31	78	59	80	76	24	358	1	0	5	328	319	14.3
29-Mar	332	14	300	292	265	265	273	296	115	126	121	100	127	153	149	151	158	168	147	16	14	358	335	310	142.1
30-Mar	313	322	304	299	309	308	281	341	118	58	54	50	19	28	61	32	26	28	14	21	17	13	16	22	8.6
31-Mar	54	115	120	125	118	137	147	154	159	159	158	168	169	176	179	174	172	166	149	128	140	128	140	154	155.2
	356.3	2.0	355.3	0.7	2.6	355.1	346.4	4.7	54.0	90.3	98.7	107.1	114.4	113.2	100.8	80.2	43.0	31.8	19.4	11.2	10.9	9.7	3.8	359.9	
	Diurnal Average																								

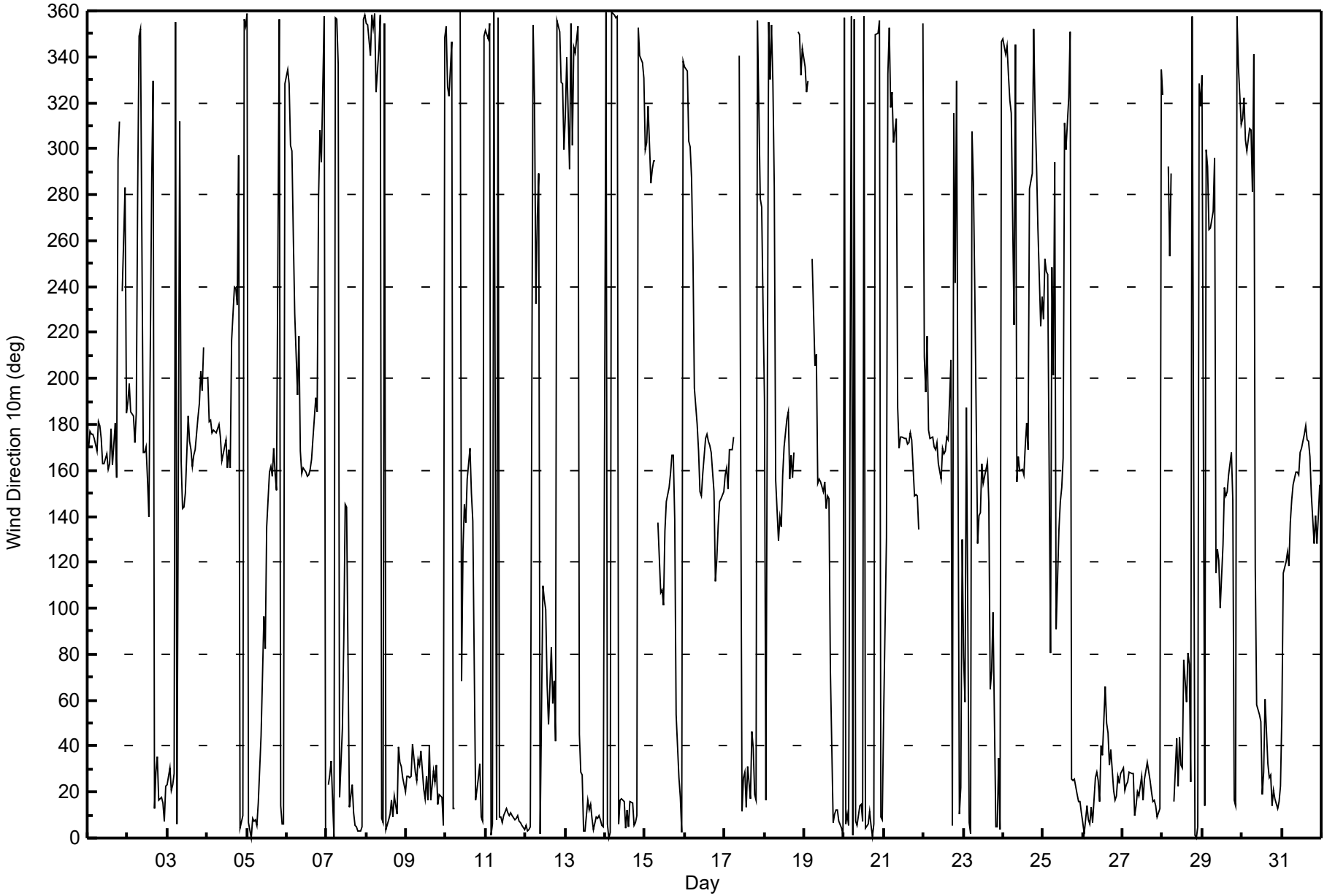
UO - Unstable Operation
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Fort McKay - Bertha Ganter - March 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Fort McKay - Bertha Ganter - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 100 deg on Mar 25 09:00

Minimum Value: 8 deg on Mar 4 10:00

Percentiles: P_1 = 10 P_{10} = 13 Q_1 = 17 Median = 23 Q_3 = 32 P_{90} = 51 P_{99} = 88

Hours in Service:	744
Hours of Data:	729
Hours of Missing Data:	15
Hours of Calibration:	0
Percent Operational Time:	98.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	10	12	11	12	11	12	12	14	13	11	13	12	10	13	16	17	42	85	27	18	UO	50	39	18	85
2-Mar	29	20	55	53	29	79	77	25	26	93	58	35	10	56	65	25	22	19	18	21	23	21	24	24	93
3-Mar	22	19	24	32	21	34	23	70	32	14	11	12	23	20	19	10	12	15	17	14	32	60	22	UO	70
4-Mar	63	9	13	10	17	25	11	10	13	8	10	16	12	11	10	51	47	31	28	42	25	20	24	23	63
5-Mar	78	23	25	24	24	23	24	19	27	33	26	44	49	13	12	13	16	22	84	32	16	29	32	21	84
6-Mar	17	17	9	15	32	53	53	30	32	12	11	12	12	11	10	12	15	36	12	56	89	33	49	25	89
7-Mar	UO	17	31	21	28	24	27	25	33	43	47	17	51	64	21	20	22	23	23	25	26	26	24	25	64
8-Mar	23	27	19	25	24	27	22	20	24	31	37	24	26	23	23	22	23	22	23	22	19	19	18	23	37
9-Mar	19	18	20	19	21	20	20	23	22	23	25	24	30	28	34	35	22	23	20	22	17	18	26	24	35
10-Mar	55	20	18	25	21	32	UO	UO	44	57	44	15	50	49	20	20	21	39	32	26	27	23	23	24	57
11-Mar	25	21	25	24	22	25	23	26	24	25	25	23	22	22	24	23	22	23	22	22	22	23	24	25	26
12-Mar	23	22	24	25	31	59	36	39	46	94	40	31	41	34	30	38	28	30	27	22	37	34	58	67	94
13-Mar	49	29	43	39	62	27	70	33	36	37	18	25	26	25	22	19	20	23	22	20	20	23	21	23	70
14-Mar	25	23	25	26	24	24	25	25	23	19	23	22	25	23	25	22	22	23	23	23	22	15	13	20	26
15-Mar	13	14	18	15	15	11	17	UO	47	48	35	25	30	40	18	23	25	12	17	38	30	18	25	23	48
16-Mar	15	17	18	41	32	44	24	10	14	11	17	20	15	19	18	16	14	16	16	14	12	11	14	16	44
17-Mar	11	14	13	13	15	27	UO	61	UO	41	23	26	19	25	23	24	29	22	23	18	25	27	29	38	61
18-Mar	58	79	66	55	33	32	39	63	41	11	9	64	24	28	40	28	17	12	21	UO	21	22	12	20	79
19-Mar	14	15	18	UO	UO	40	60	47	19	10	14	16	12	15	14	17	68	22	20	20	20	23	23	25	68
20-Mar	23	22	19	23	26	23	27	22	22	24	22	27	25	26	26	25	25	25	23	23	24	30	36	24	36
21-Mar	66	56	73	36	17	19	12	80	56	17	18	16	20	18	16	17	14	13	18	13	15	13	UO	45	80
22-Mar	55	59	18	8	9	11	11	12	12	11	12	12	15	14	13	13	84	56	23	60	45	20	64	17	84
23-Mar	67	37	53	52	31	33	17	88	16	10	9	14	12	11	13	89	46	57	43	36	34	68	65	27	89
24-Mar	24	25	31	41	40	44	37	62	38	13	13	13	12	14	29	51	35	22	31	10	46	21	56	37	62
25-Mar	48	47	45	33	93	75	67	95	100	19	15	11	16	84	19	15	37	19	19	17	18	19	18	21	100
26-Mar	23	24	21	24	23	22	24	20	23	29	28	39	34	32	50	36	22	20	19	20	17	19	17	17	50
27-Mar	18	20	19	17	18	18	17	22	19	21	22	23	25	22	23	20	20	21	19	19	19	21	21	22	25
28-Mar	14	UO	UO	56	34	24	UO	57	59	35	45	43	43	46	43	42	49	48	25	29	28	22	27	14	59
29-Mar	11	46	15	13	49	47	17	15	84	46	33	37	35	14	16	14	13	12	34	24	16	25	16	9	84
30-Mar	17	15	13	22	15	12	19	69	73	60	27	29	55	53	36	49	41	20	17	18	22	21	26	41	73
31-Mar	51	14	14	14	18	14	13	16	18	16	13	15	23	19	21	15	15	13	13	20	18	17	11	13	51
	78	79	73	56	93	79	77	95	100	94	58	64	55	84	65	89	84	85	84	60	89	68	65	67	
	Diurnal Maximum																								

UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS02
MILDRED LAKE
MARCH 2025

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

April 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MILDRED LAKE (AMS02)
MARCH 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	37	60	96.91	77	0	9.1	0
H2S (ppb) Average	707	36	37	99.87	7.4	0	1.5	0
THC (ppm) Average	701	37	43	99.19	3.9	-	2.6	-
NMHC(ppm) Average	701	37	43	99.19	0.257	-	0.049	-
CH4(ppm) Average	701	37	43	99.19	3.7	-	2.6	-
Temperature (C) Average	743	0	1	99.87	8.8	-	1.5	-
Relative Humidity (%) Average	743	0	1	99.87	92.8	-	82.6	-
Wind Speed 10 m (km/h) Average	743	0	1	99.87	21	-	13	-
Wind Direction 10 m (deg) Average	743	0	1	99.87	-	-	-	-

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

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

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
Temperature 20 m (C) Average	722	-7.7	7.4	-	-25.8	-17.9	-13.3	-7.3	-2.1	1.7	10.5
Temperature 45 m (C) Average	743	-7.33	7.4	-	-25.4	-17.6	-12.9	-7.2	-1.6	2.3	10.2
Temperature 100 m (C) Average	743	-7.44	7.4	-	-23.7	-17.2	-13.1	-7.6	-1.8	2.2	9.6
Temperature 163 m (C) Average	743	-7.64	7.5	-	-24.4	-17.1	-13.5	-7.8	-1.9	2.9	9
Relative Humidity 20 m (%) Average	722	63.65	14.9	-	24.1	43.2	51.8	65.7	76.1	81.9	90.2
Relative Humidity 45 m (%) Average	743	62.28	14.6	-	23.4	42.3	51.1	64.2	74.7	80.7	88.2
Relative Humidity 100 m (%) Average	743	62.67	14.6	-	24.3	43.3	51.4	64	74.9	81.6	89.9
Relative Humidity 163 m (%) Average	743	60.99	15	-	23.5	41.6	49.5	61.7	74.1	80.5	89.6
Wind Speed 20 m (km/h) Average	743	7.2	4	-	0	2	4	7	11	13	22
Wind Speed 45 m (km/h) Average	743	10.4	6	-	0	3	6	10	15	19	30
Wind Speed 100 m (km/h) Average	743	12.9	7	-	0	4	8	12	18	23	34
Wind Speed 163 m (km/h) Average	743	15.1	8	-	1	6	9	15	21	25	37
Wind Direction 20 m (deg) Average	743	-	-	-	-	-	-	-	-	-	-
Wind Direction 45 m (deg) Average	743	-	-	-	-	-	-	-	-	-	-
Wind Direction 100 m (deg) Average	743	-	-	-	-	-	-	-	-	-	-
Wind Direction 163 m (deg) Average	743	-	-	-	-	-	-	-	-	-	-
Vertical Wind Speed 20 m (km/h) Average	743	-0.15	0.2	-	-0.9	-0.4	-0.3	-0.1	0	0.1	0.5
Vertical Wind Speed 45 m (km/h) Average	743	0.19	0.2	-	-0.7	-0.1	0.1	0.2	0.3	0.5	1.1
Vertical Wind Speed 100 m (km/h) Average	743	0.06	0.4	-	-1.1	-0.3	-0.1	0	0.2	0.6	2.7
Vertical Wind Speed 163 m (km/h) Average	743	0.29	0.6	-	-1	-0.2	0	0.2	0.5	0.9	3.7

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

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL PARAMETERS	07 Mar 2025 01:00	07 Mar 2025 01:00	1	Station power failure
SO2	06 Mar 2025 03:00	07 Mar 2025 00:00	22	Unstable Operation - excessive baseline drift
THC/NMHC/CH4	06 Mar 2025 11:00	06 Mar 2025 15:00	5	Maintenance - calibration gas cylinder replaced

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Mildred Lake - March 2025

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

Maximum Value: 77.0 ppb on Mar 29 15:00

Maximum Daily Average: 9.1 ppb on Mar 29

Minimum Value: 0.0 ppb on Mar 1 07:00

Minimum Daily Average: 0.0 ppb on Mar 9

Maximum Diurnal Average: 4.9 ppb at hour 15

Minimum Diurnal Average: 0.2 ppb at hour 3

Monthly Average: 1.16 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.2 Q_3 = 0.6 P_{90} = 2.0 P_{99} = 14.3

Hours in Service:	744
Hours of Data:	684
Hours of Missing Data:	60
Hours of Calibration:	37
Percent Operational Time:	96.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.0	0.1	Z	0.3	0.1	0.2	0.0	0.0	0.2	0.1	0.8	1.3	3.7	8.8	2.8	1.1	1.9	1.7	1.3	1.2	1.1	1.3	1.2	0.9	1.3	8.8
2-Mar	0.6	0.5	0.5	Z	0.5	0.6	0.4	0.5	1.0	1.0	1.2	1.2	1.8	1.2	1.3	0.5	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.6	1.8
3-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.5	0.5	C	C	C	C	C	C	0.8	0.3	0.2	0.4	0.2	0.0	0.0	--	0.8
4-Mar	0.1	0.0	0.0	0.1	0.0	Z	0.1	0.4	0.0	0.0	0.5	0.4	0.5	0.2	0.4	1.8	1.0	0.8	0.8	0.7	1.5	1.1	0.8	0.5	0.5	1.8
5-Mar	Z	0.3	0.2	0.3	0.3	0.2	0.2	0.3	0.1	0.2	0.3	0.3	13.7	22.5	8.7	6.3	6.8	5.6	3.1	1.9	1.3	1.4	0.9	0.5	3.3	22.5
6-Mar	0.1	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	0.1
7-Mar	PF	1.3	Z	1.6	0.0	0.0	0.3	0.2	0.0	0.2	1.3	2.0	6.0	8.0	6.7	5.2	3.1	0.6	0.2	0.2	0.3	0.2	0.3	0.2	1.7	8.0
8-Mar	0.2	0.2	0.1	Z	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.8	0.6	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.8
9-Mar	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
10-Mar	0.0	0.0	0.0	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.0	0.1	0.3	0.4	2.1	1.8	6.3	3.2	1.0	2.4	3.6	1.2	1.1	0.8	1.1	6.3
11-Mar	Z	0.7	0.8	1.0	0.8	0.6	0.5	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.1	0.0	0.0	0.1	0.2	0.3	1.0
12-Mar	0.1	Z	0.2	0.0	0.1	0.1	0.4	0.2	0.0	0.2	0.2	0.1	0.4	6.2	15.1	28.7	13.7	0.4	0.5	0.4	0.3	0.3	0.2	0.2	3.0	28.7
13-Mar	0.1	0.1	Z	0.3	0.5	0.7	0.7	0.6	0.6	0.4	0.2	0.2	0.3	0.3	0.2	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.7
14-Mar	0.0	0.0	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
15-Mar	0.0	0.0	0.1	0.1	Z	0.1	0.5	0.3	0.1	0.4	0.3	0.1	0.9	4.0	12.7	2.7	1.7	1.5	3.6	3.3	3.2	2.2	1.6	0.6	1.7	12.7
16-Mar	0.3	0.2	0.2	0.1	0.4	Z	0.4	0.4	0.7	1.2	2.1	2.0	1.2	0.6	0.7	0.9	0.7	0.7	0.4	0.4	0.3	0.8	0.3	0.1	0.7	2.1
17-Mar	Z	0.3	0.2	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.4	0.8	0.7	0.6	0.4	0.4	0.3	0.3	0.2	0.1	0.1	0.0	0.0	0.2	0.8
18-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.7	1.4	0.1	0.0	0.0	1.6	1.4	0.3	0.3	0.0	0.0	0.0	0.1	0.1	0.0	0.3	1.6
19-Mar	0.0	0.0	Z	0.0	0.1	0.4	0.6	0.7	0.6	0.3	1.2	1.3	3.2	4.1	2.7	11.0	14.2	8.7	2.8	0.9	0.2	0.0	0.0	0.0	2.3	14.2
20-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.4	0.3	0.3	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.2	1.6
21-Mar	3.9	4.3	1.5	5.6	Z	0.7	0.0	0.0	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.6	4.0	1.5	0.3	0.3	0.2	0.2	0.3	1.1	5.6
22-Mar	0.1	0.3	0.3	0.3	0.2	Z	0.3	0.4	0.3	0.4	0.4	0.3	0.2	0.4	0.6	0.4	0.3	1.9	3.3	0.5	0.3	0.4	0.3	0.2	0.5	3.3
23-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	5.0	3.6	0.6	2.6	2.3	0.6	0.8	0.4	0.3	0.4	0.5	0.1	0.3	0.3	0.8	5.0
24-Mar	0.4	Z	0.1	0.2	0.2	0.3	0.3	0.4	0.3	0.3	0.4	0.6	0.3	0.5	0.2	1.1	2.2	0.3	0.1	0.0	0.0	0.0	0.1	0.0	0.4	2.2
25-Mar	0.0	0.2	Z	0.8	0.6	0.1	0.9	0.5	1.7	1.1	1.7	0.4	0.6	0.5	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.2	0.4	1.7
26-Mar	0.2	0.2	0.2	Z	0.2	0.3	0.2	0.3	0.2	0.3	0.3	0.2	0.3	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.2	0.3
27-Mar	0.0	0.1	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
28-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.4	0.4	0.4	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.4
29-Mar	Z	0.1	0.1	0.2	0.3	0.4	0.4	0.4	0.3	0.5	1.0	1.7	22.1	68.8	77.0	11.9	6.7	4.7	3.0	2.7	4.4	2.6	0.7	0.4	9.1	77.0
30-Mar	0.3	Z	0.2	0.3	0.3	0.4	0.5	0.5	0.5	3.7	9.1	14.0	26.5	8.8	5.0	0.9	1.2	1.4	1.0	1.4	0.7	0.6	0.6	4.6	3.6	26.5
31-Mar	2.3	0.8	Z	0.6	0.9	1.9	0.7	1.0	0.7	0.5	0.4	0.3	0.2	0.2	0.5	0.4	0.1	0.0	0.6	1.1	1.2	0.6	0.2	0.3	0.7	2.3
	0.4	0.4	0.2	0.5	0.2	0.3	0.3	0.3	0.3	0.5	1.0	1.1	2.9	4.8	4.9	2.7	2.2	1.3	0.8	0.6	0.7	0.5	0.3	0.4	Diurnal Average	
	3.9	4.3	1.5	5.6	0.9	1.9	0.9	1.0	1.7	3.7	9.1	14.0	26.5	68.8	77.0	28.7	14.2	8.7	3.6	3.3	4.4	2.6	1.6	4.6	Diurnal Maximum	

Z - zerospan C - Calibration UO - Unstable Operation PF - Power Failure

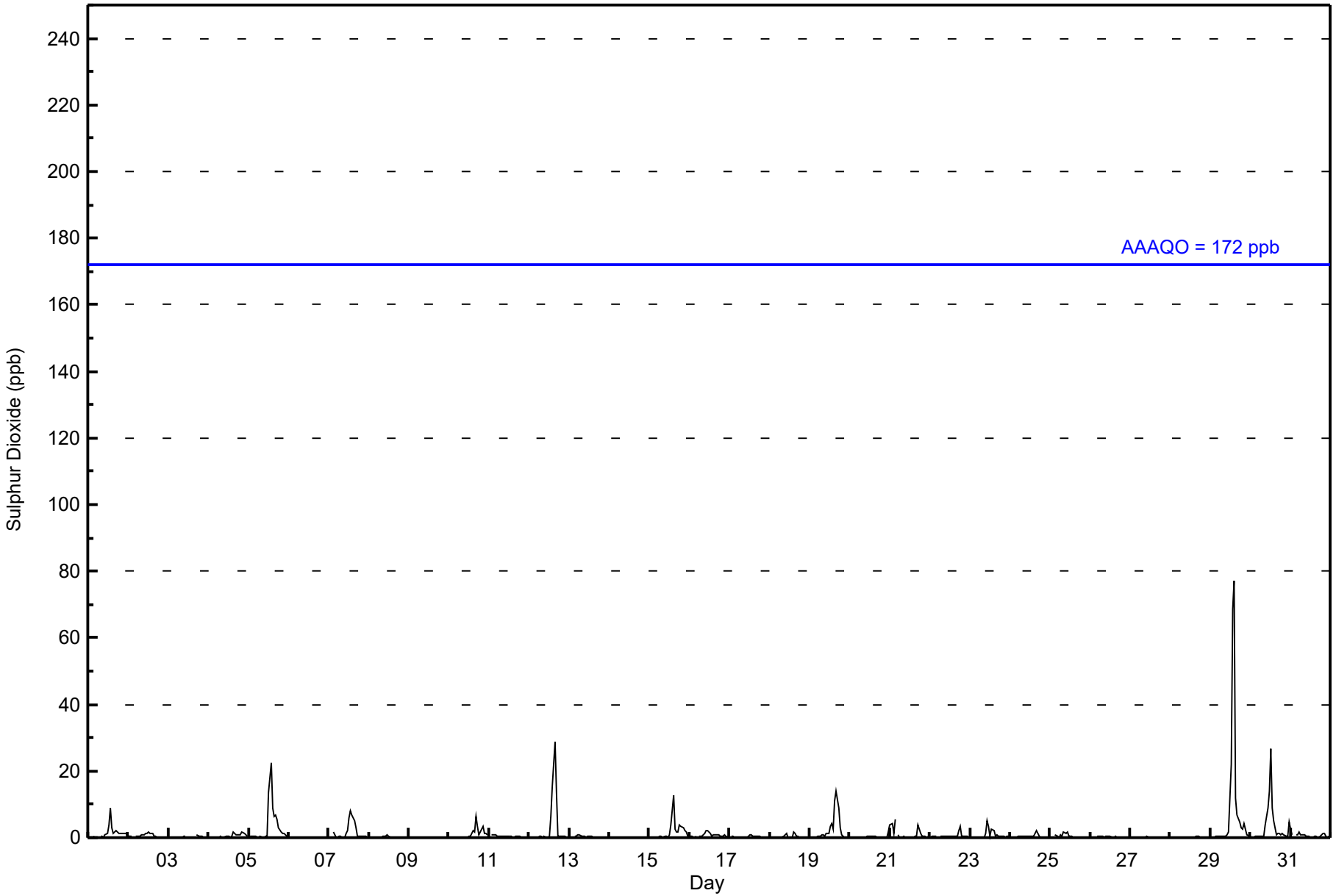
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Mildred Lake - March 2025



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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	670	97.95	97.95
11 - 20	8	1.17	99.12
21 - 60	4	0.58	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: 684

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Mildred Lake - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	192	96	12	5	13	25	64	76	39	24	15	10	8	8	28	55	670
11 - 20	0	0	0	0	0	0	1	3	0	1	0	2	0	0	0	1	8
21 - 60	0	0	0	0	0	0	0	1	0	1	2	0	0	0	0	0	4
61 - 110	0	0	0	0	0	0	0	1	0	1	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	192	96	12	5	13	25	65	81	39	27	17	12	8	8	28	56	684

Total Number of Valid Hours: 684

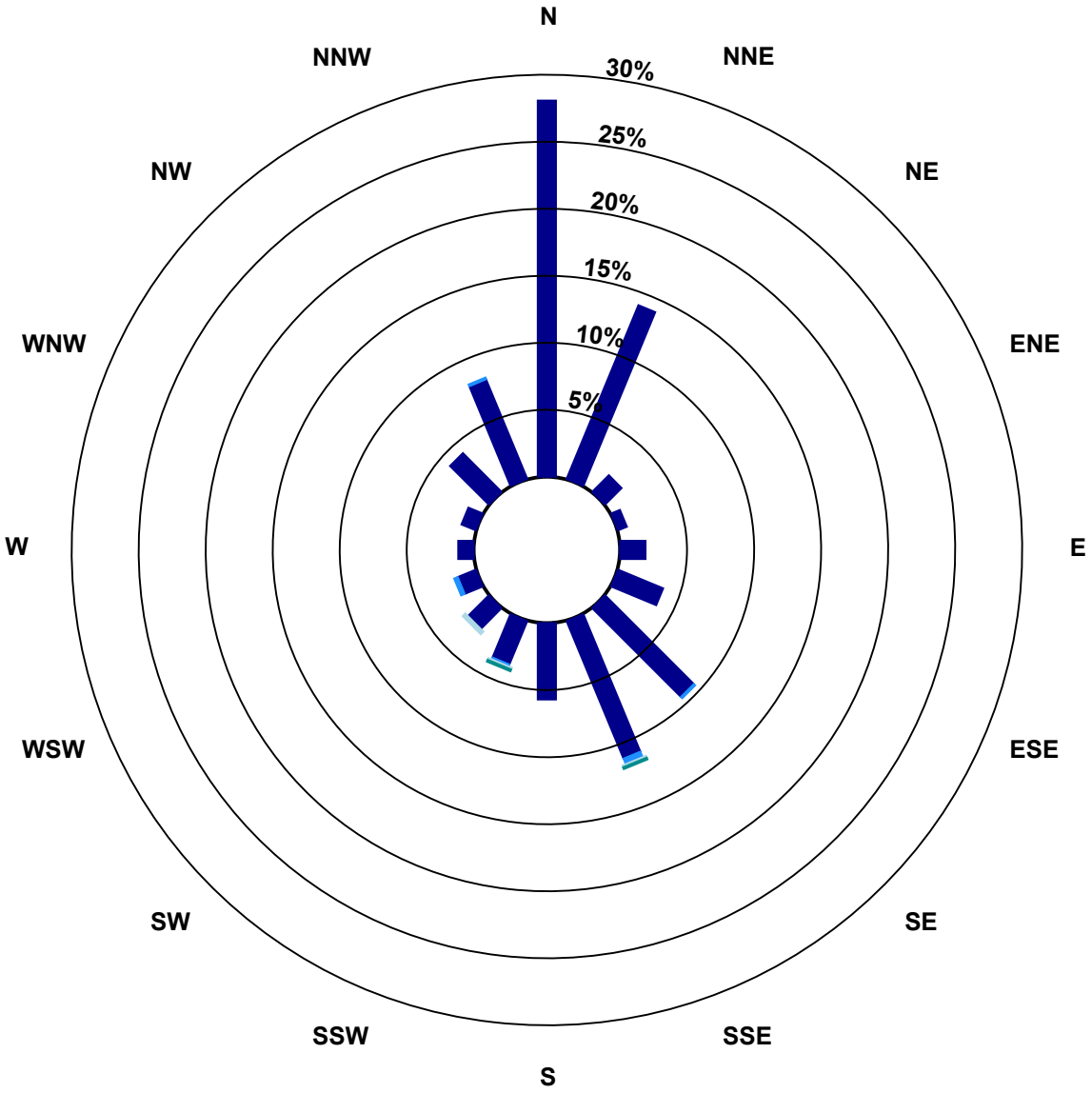
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Sulphur Dioxide (SO_2) - ppb

Mildred Lake



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

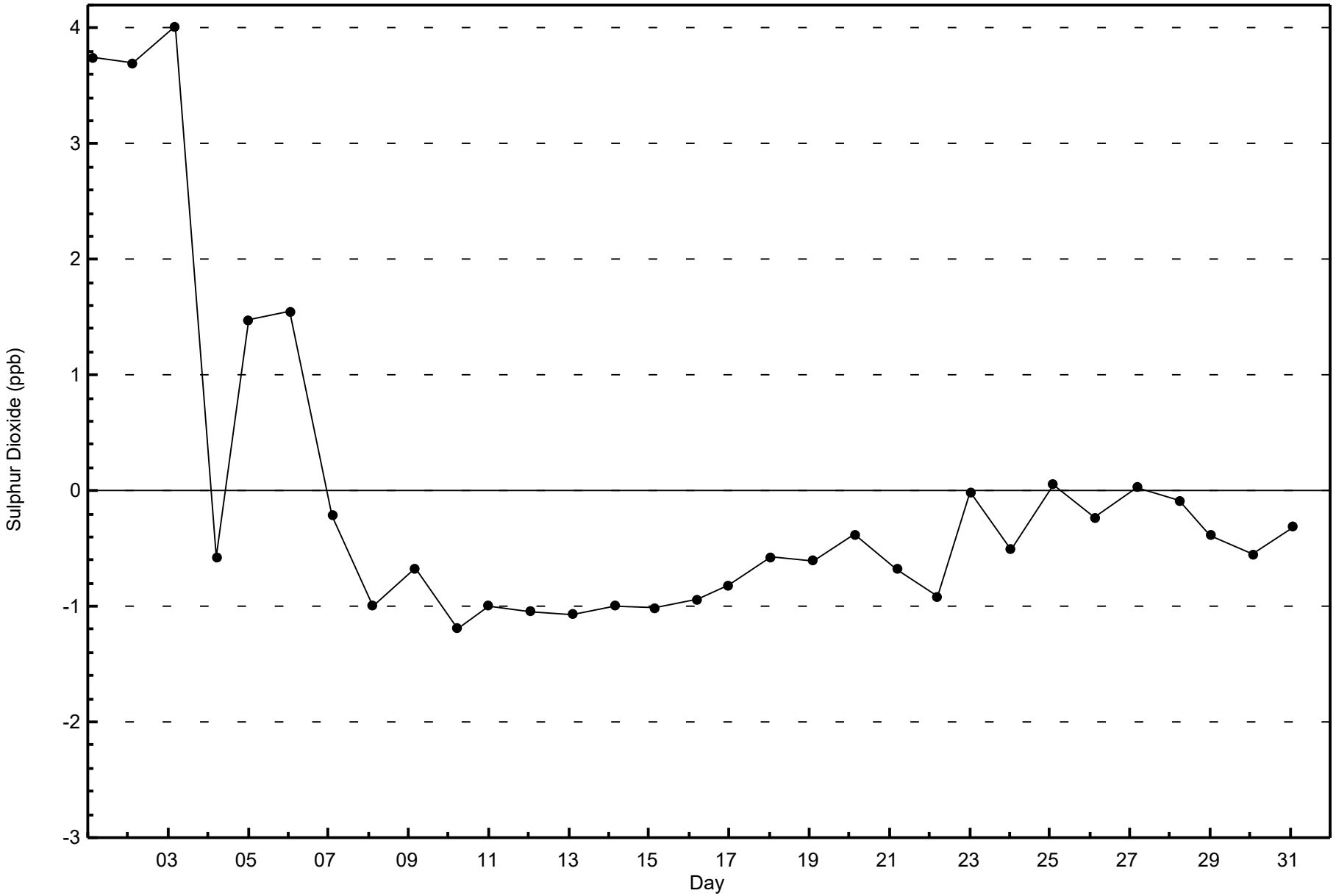
Total Number of Valid Hours: 684

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Mildred Lake - March 2025

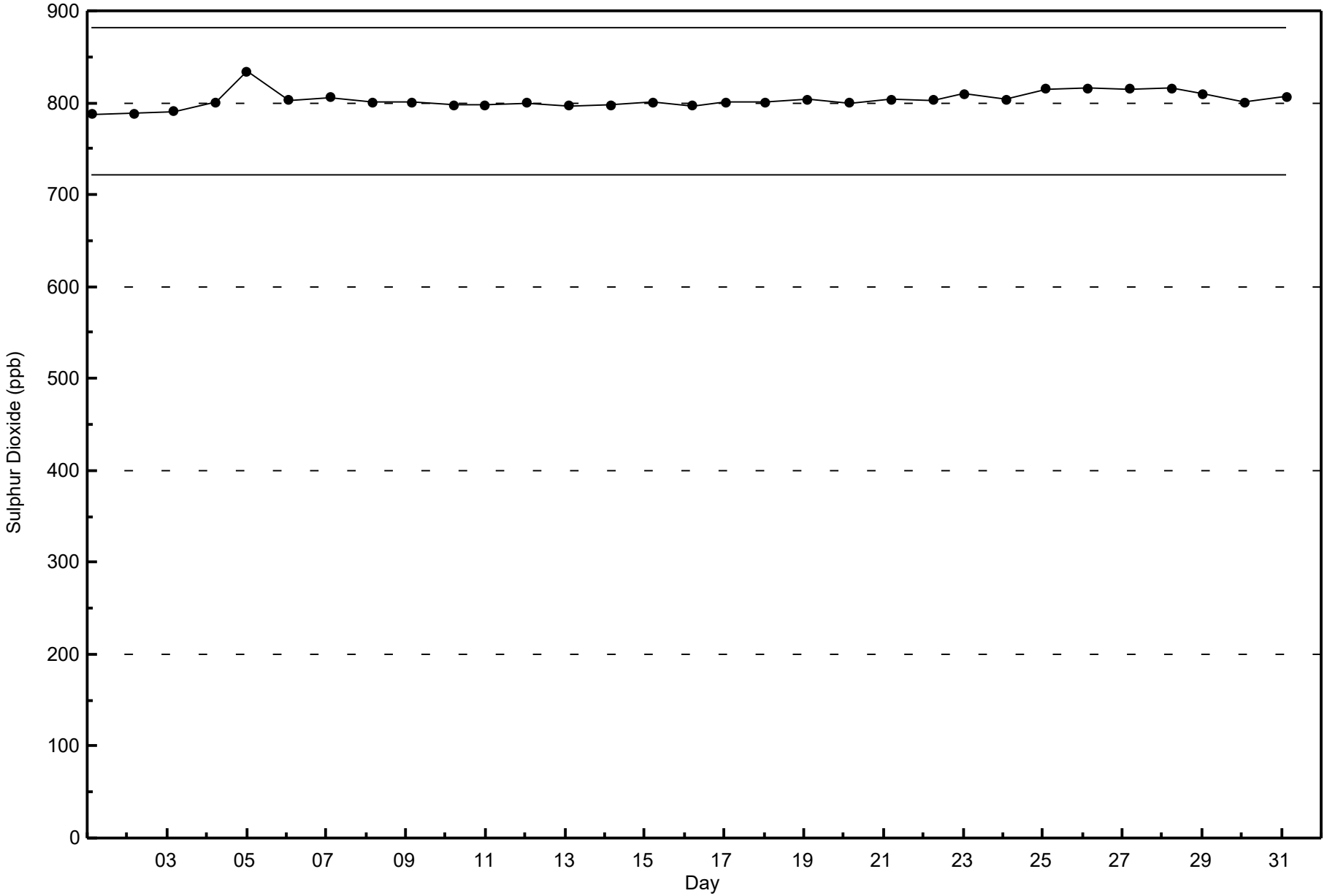


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Mildred Lake - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Mildred Lake - March 2025

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

Maximum Value: 7.4 ppb on Mar 25 03:00

Maximum Daily Average: 1.5 ppb on Mar 25

Minimum Value: 0.0 ppb on Mar 16 14:00

Minimum Daily Average: 0.1 ppb on Mar 9

Maximum Diurnal Average: 0.7 ppb at hour 7

Minimum Diurnal Average: 0.2 ppb at hour 4

Monthly Average: 0.42 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} = 3.4

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.1	0.1	0.1	Z	0.1	0.1	0.3	0.1	0.2	0.2	0.8	0.8	1.5	2.9	0.7	0.4	0.8	0.9	1.0	1.1	1.0	1.6	1.4	1.4	0.8	2.9
2-Mar	3.2	1.2	0.4	0.2	Z	0.4	0.3	0.7	1.5	1.5	1.5	1.1	1.4	0.6	0.7	1.6	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.8	3.2
3-Mar	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.3	0.4	0.5	0.9	0.5	0.2	0.2	0.6	0.7	1.2	1.4	1.2	1.0	0.5	0.3	0.2	0.5	1.4
4-Mar	Z	0.1	0.1	0.0	0.0	0.3	0.4	1.0	0.6	0.6	0.7	0.6	0.3	0.3	0.3	0.6	0.1	0.1	0.0	0.0	1.1	0.4	0.3	0.2	0.4	1.1
5-Mar	0.1	Z	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.3	0.3	0.4	0.6	0.3	0.3	0.3	0.3	0.5	0.5	0.2	0.6
6-Mar	0.6	0.6	Z	0.3	2.2	5.1	5.7	4.3	2.1	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.4	0.4	0.4	0.5	0.3	0.6	1.4	1.5	1.2	5.7
7-Mar	PF	0.2	0.2	Z	0.1	0.1	0.2	0.2	0.3	0.4	0.3	0.5	1.1	1.3	0.9	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	1.3
8-Mar	0.1	0.1	0.1	0.2	Z	0.3	0.3	0.4	0.3	0.2	0.9	0.8	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	0.9
9-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
10-Mar	Z	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.3	0.4	0.3	0.4	0.6	0.5	0.4	0.3	0.3	0.3	0.6
11-Mar	0.3	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3
12-Mar	0.1	0.1	Z	0.1	0.1	0.1	0.6	0.5	0.2	0.7	0.3	0.2	0.3	0.4	0.4	0.6	0.4	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.3	0.7
13-Mar	0.2	0.2	0.3	Z	0.6	0.8	0.8	0.6	0.8	0.5	0.5	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	0.3	0.8
14-Mar	0.0	0.1	0.1	0.1	Z	0.1	0.1	0.5	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.9	0.7	0.1	0.9
15-Mar	0.2	0.2	0.1	0.2	0.7	Z	0.7	0.4	0.3	0.8	1.2	0.6	0.5	0.3	0.4	0.2	0.1	0.1	0.4	0.3	0.2	0.1	0.3	0.2	0.4	1.2
16-Mar	Z	1.0	0.7	0.7	1.0	0.8	0.6	0.3	0.3	0.4	0.9	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.3	1.0
17-Mar	0.3	Z	0.2	0.1	0.0	0.0	0.0	0.0	0.7	0.3	0.1	1.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	1.1
18-Mar	0.7	1.1	Z	0.7	1.1	1.1	1.0	0.9	1.6	2.1	0.8	0.1	0.1	0.1	0.2	0.4	0.2	0.3	0.3	0.3	0.4	0.5	1.0	0.2	0.7	2.1
19-Mar	0.1	0.1	0.2	Z	0.5	0.9	1.7	2.3	2.0	1.2	1.5	0.7	0.5	0.5	0.4	1.0	1.3	1.1	0.4	0.2	0.1	0.1	0.1	0.1	0.7	2.3
20-Mar	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.2	0.2	0.3	0.5	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.5
21-Mar	0.3	0.4	0.4	0.3	0.3	Z	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.2	0.3	0.6	0.2	0.2	0.2	0.2	0.6
22-Mar	Z	0.2	0.2	0.0	0.1	0.1	0.0	0.1	0.1	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.6	0.4	0.5	0.3	2.3	2.1	0.3	0.3	0.4	2.3
23-Mar	0.3	Z	0.3	0.3	0.7	0.7	1.5	3.5	1.7	1.2	0.4	0.6	0.3	0.1	0.1	0.2	0.3	0.7	0.4	0.3	0.3	0.1	0.1	0.1	0.6	3.5
24-Mar	0.2	0.3	Z	0.2	0.3	0.6	0.8	0.7	0.4	0.4	0.5	0.6	0.5	0.4	0.3	0.4	0.4	4.6	0.1	0.1	0.1	3.3	1.2	1.2	0.8	4.6
25-Mar	2.1	1.5	7.4	Z	6.1	1.3	3.1	1.7	2.3	1.4	1.3	0.3	0.6	3.4	1.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.5	7.4
26-Mar	0.1	0.1	0.1	0.0	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.2
27-Mar	0.1	0.0	0.1	0.2	0.1	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2
28-Mar	Z	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3
29-Mar	0.1	Z	0.2	0.1	0.1	0.3	0.4	0.3	0.3	1.0	2.2	1.3	0.9	1.2	0.8	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.2	0.2	0.5	2.2
30-Mar	0.3	0.2	Z	0.2	0.3	0.3	0.5	0.4	0.5	2.2	1.4	1.5	2.0	1.0	0.4	0.1	0.1	0.2	0.2	0.3	0.1	0.1	0.1	0.2	0.5	2.2
31-Mar	0.2	0.2	0.2	Z	0.1	0.4	0.3	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.3	0.3	0.1	0.2	0.1	0.2	0.4
	0.4	0.3	0.5	0.2	0.6	0.6	0.7	0.7	0.6	0.6	0.6	0.5	0.4	0.5	0.3	0.3	0.2	0.4	0.2	0.2	0.3	0.4	0.3	0.3	Diurnal Average	
	3.2	1.5	7.4	0.7	6.1	5.1	5.7	4.3	2.3	2.2	2.2	1.5	2.0	3.4	1.0	1.6	1.3	4.6	1.4	1.2	2.3	3.3	1.4	1.5	Diurnal Maximum	

Z - zerospan C - Calibration PF - Power Failure

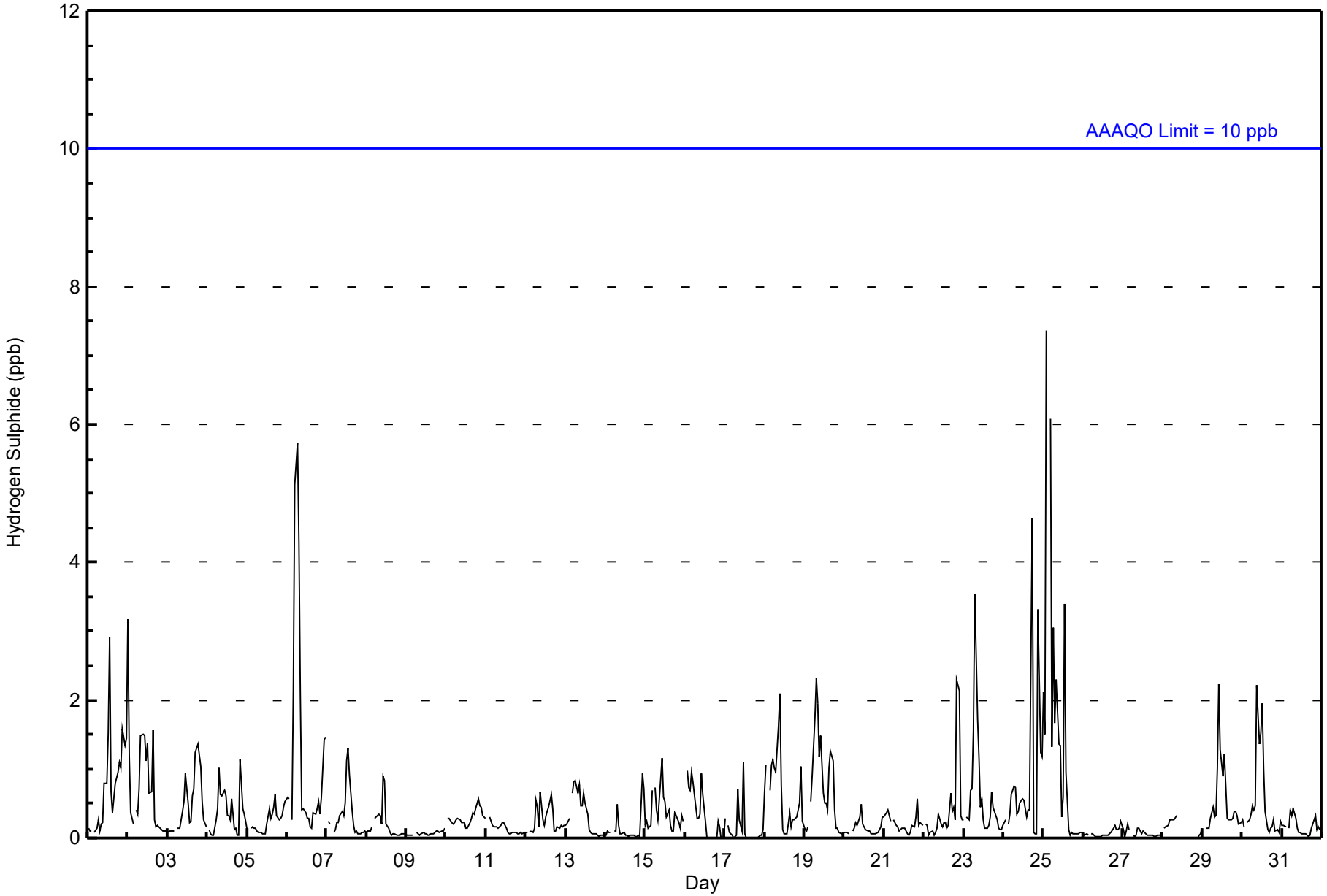
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Mildred Lake - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	695	98.30	98.30
3 - 4	7	0.99	99.29
5 - 7	5	0.71	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Mildred Lake - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	189	97	13	5	13	29	66	88	42	30	15	12	7	8	23	58	695
3 - 4	0	0	0	0	0	0	1	0	1	2	1	0	1	0	1	0	7
5 - 7	0	0	0	0	0	0	0	0	2	1	0	0	1	1	0	0	5
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	189	97	13	5	13	29	67	88	45	33	16	12	9	9	24	58	707

Total Number of Valid Hours: 707

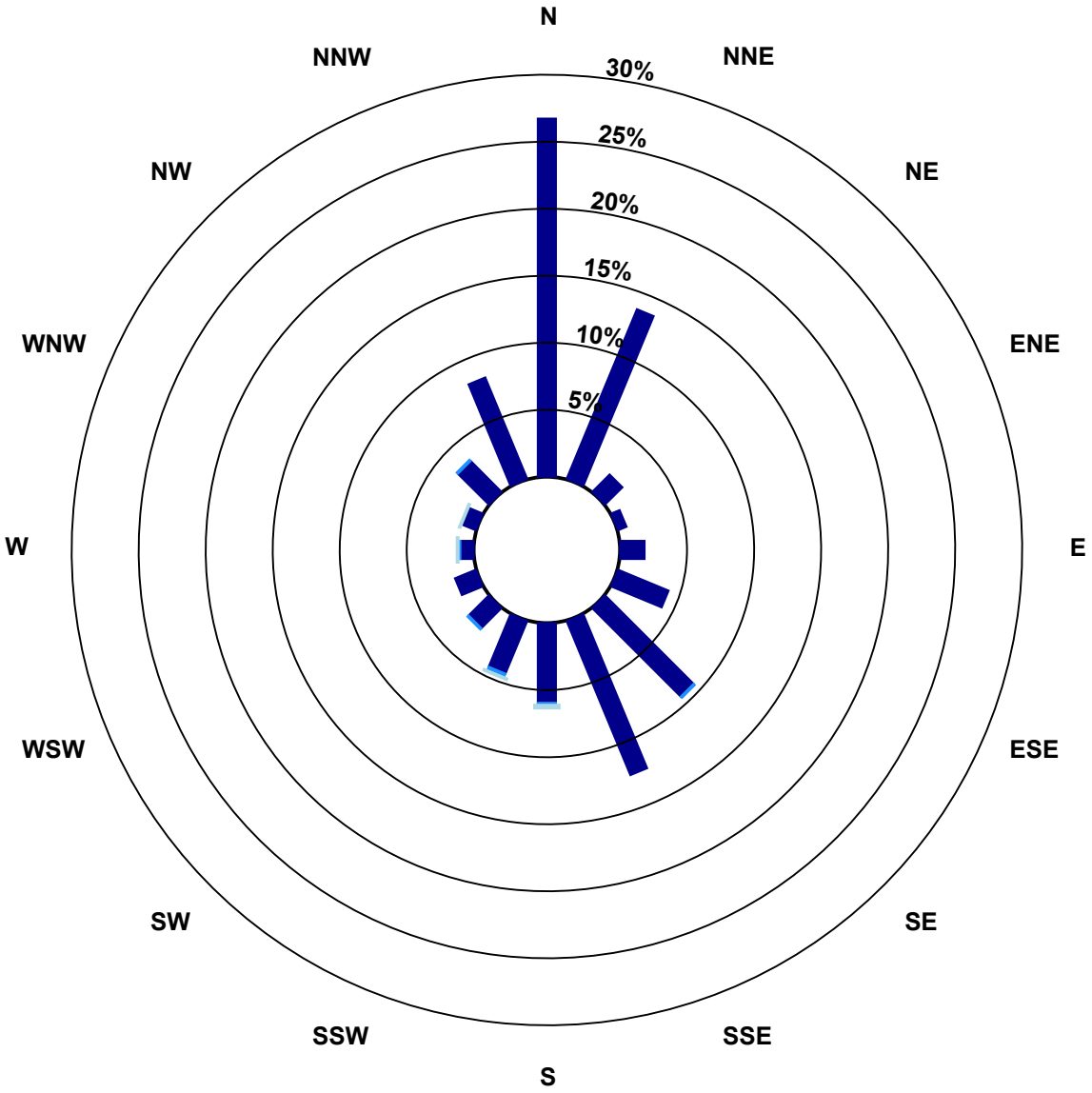
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Hydrogen Sulphide (H_2S) - ppb

Mildred Lake



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

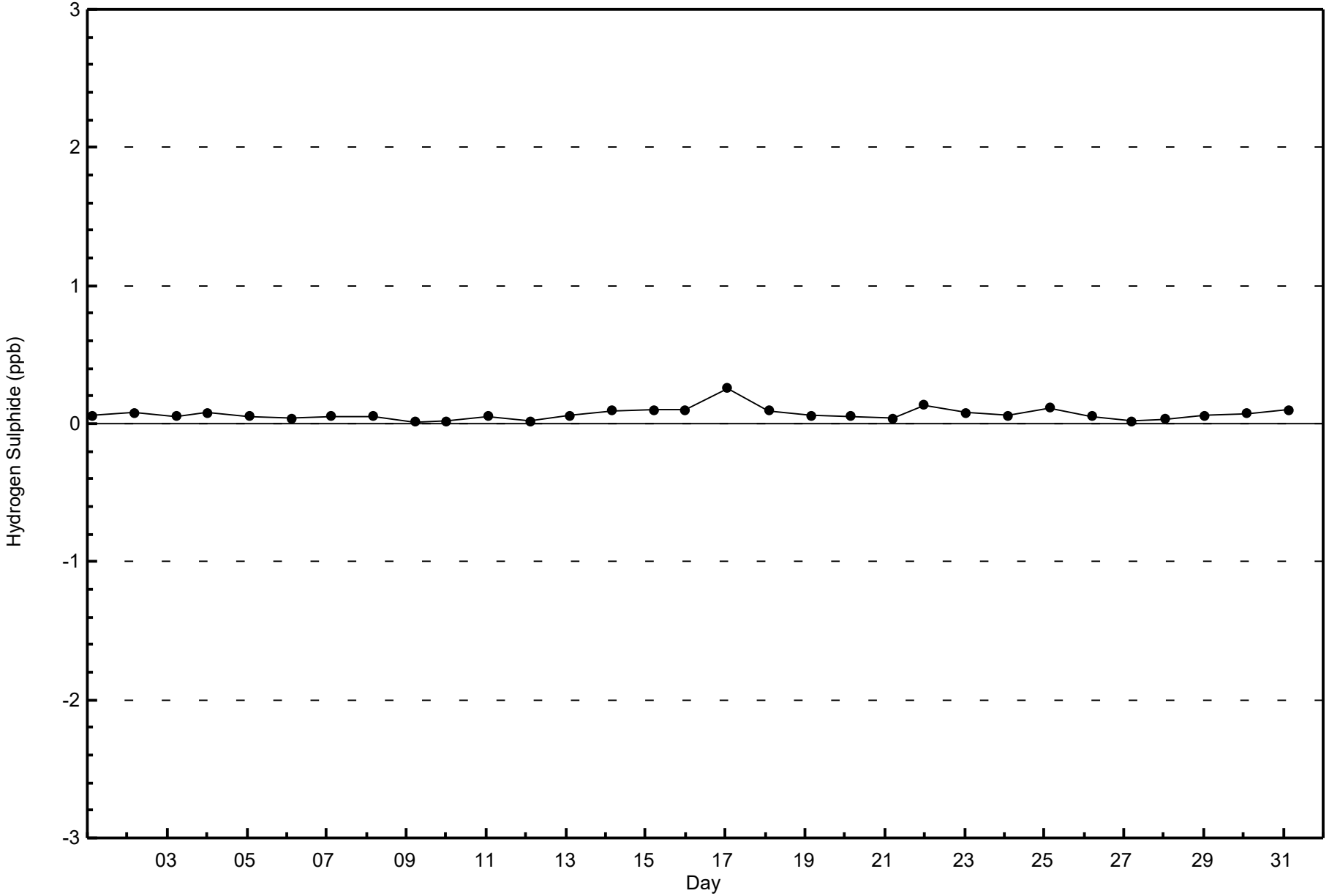
Total Number of Valid Hours: 707

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Mildred Lake - March 2025

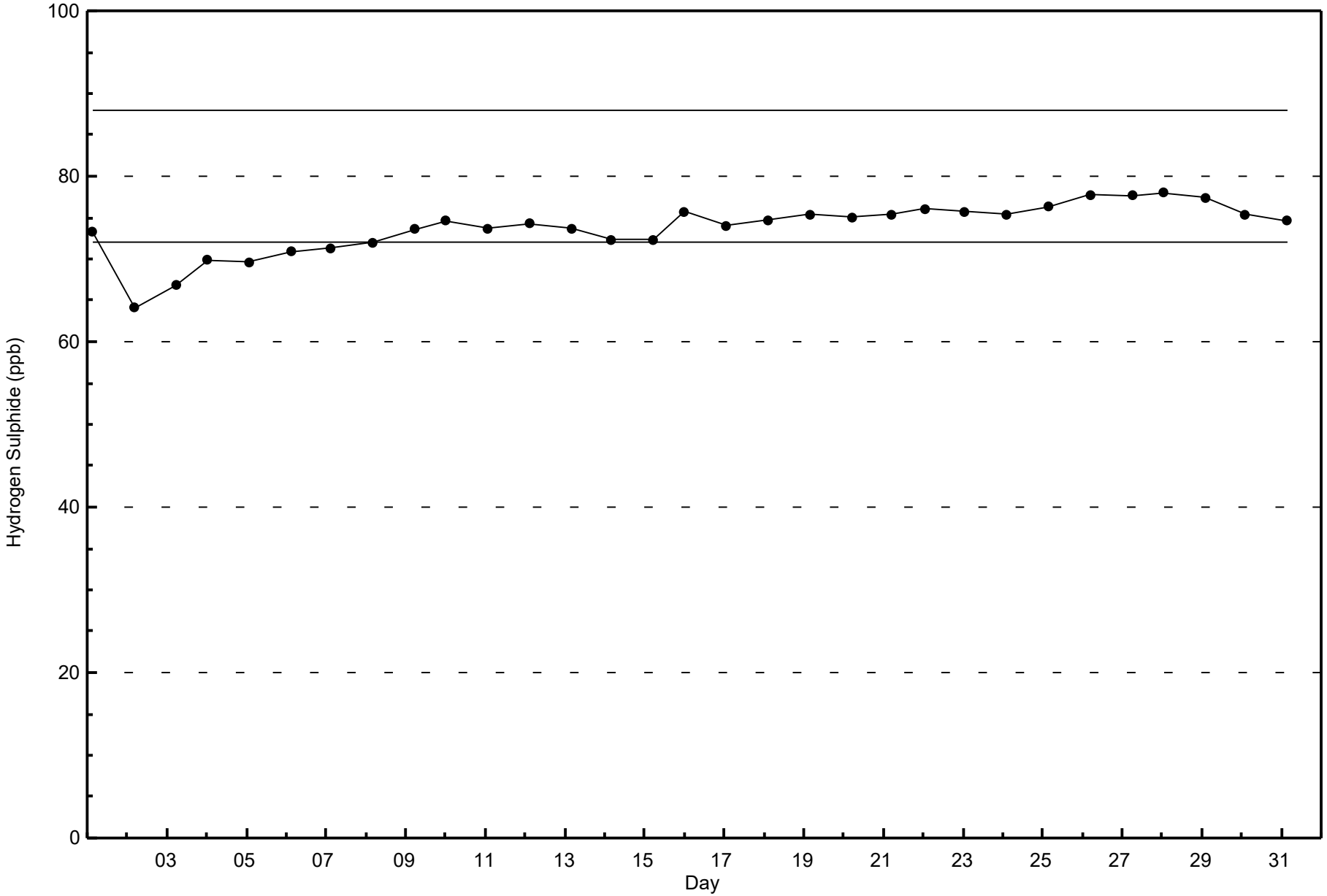


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Mildred Lake - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Mildred Lake - March 2025

Maximum Value: 3.9 ppm on Mar 2 11:00

Maximum Daily Average: 2.6 ppm on Mar 6

Minimum Value: 2.0 ppm on Mar 27 07:00

Minimum Daily Average: 2.0 ppm on Mar 27

Maximum Diurnal Average: 2.3 ppm at hour 10

Minimum Diurnal Average: 2.1 ppm at hour 15

Monthly Average: 2.17 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} = 3.1

Hours in Service:	744
Hours of Data:	701
Hours of Missing Data:	43
Hours of Calibration:	37
Percent Operational Time:	99.2

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	2.3	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.5	2.5	2.8	2.4	2.7	2.6	2.6	3.0	2.9	2.8	3.2	3.1	3.1	2.5	3.2
2-Mar	2.8	2.9	2.9	Z	2.2	2.5	2.3	2.4	3.4	3.8	3.9	3.7	2.7	2.3	2.2	2.5	2.4	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.6	3.9
3-Mar	2.1	2.1	2.0	2.1	Z	2.0	2.0	2.1	2.2	2.3	2.3	C	C	C	C	C	C	2.3	2.3	2.4	2.9	2.4	2.1	2.1	--	2.9
4-Mar	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.7	2.5	2.9	2.5	2.3	2.2	2.3	2.2	2.1	2.0	2.0	2.0	2.1	2.3	2.4	2.3	2.2	2.2	2.9
5-Mar	Z	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.4	2.3	2.1	2.4
6-Mar	2.3	Z	2.3	2.3	3.0	3.3	3.1	2.8	2.4	2.2	M	M	M	M	M	2.2	2.2	2.6	2.8	2.9	2.3	2.5	3.5	2.8	2.6	3.5
7-Mar	PF	2.1	Z	2.0	2.0	2.1	2.3	2.3	2.4	2.5	2.3	2.5	2.5	2.5	2.5	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.5
8-Mar	2.0	2.1	2.0	Z	2.3	2.2	2.2	2.5	2.6	2.4	2.7	2.4	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.7
9-Mar	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
10-Mar	2.0	2.0	2.0	2.1	2.1	Z	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
11-Mar	Z	2.1	2.2	2.2	2.1	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
12-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	2.2	2.1	2.2	2.2	2.2	2.3	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3
13-Mar	2.0	2.0	Z	2.3	2.3	2.5	2.5	2.6	2.5	2.4	2.4	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	2.6
14-Mar	2.0	2.1	2.0	Z	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1
15-Mar	2.0	2.1	2.2	2.2	Z	2.2	2.4	2.3	2.3	2.5	2.4	2.2	2.2	2.0	2.0	2.0	2.0	2.1	2.7	3.1	2.6	2.1	2.2	2.1	2.3	3.1
16-Mar	2.1	2.2	2.2	2.2	2.3	Z	2.3	2.8	2.7	2.4	2.3	2.3	2.2	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.1	2.0	2.2	2.8
17-Mar	Z	2.2	2.1	2.6	2.0	2.0	2.0	2.0	2.1	2.6	2.1	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	2.1	2.6
18-Mar	2.2	Z	2.1	2.1	2.2	3.0	3.0	2.8	2.8	2.8	2.4	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.4	2.2	2.3	3.0
19-Mar	2.1	2.1	Z	2.2	2.3	2.3	2.4	2.7	2.6	2.3	2.7	2.4	2.1	2.1	2.1	2.1	2.3	2.4	2.1	2.0	2.0	2.0	2.0	2.0	2.2	2.7
20-Mar	2.1	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.2
21-Mar	2.1	2.1	2.1	2.0	Z	2.1	2.2	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.2	2.7	2.3	2.1	2.7
22-Mar	2.6	2.6	2.1	2.0	2.0	Z	2.0	2.0	2.0	2.4	2.3	2.3	2.3	2.1	2.0	2.4	2.6	2.2	2.3	2.1	2.4	2.4	2.2	2.1	2.2	2.6
23-Mar	Z	2.0	2.0	2.0	2.1	2.2	2.9	2.4	2.1	2.2	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	2.9
24-Mar	2.1	Z	2.1	2.1	2.3	2.7	2.6	2.6	2.0	2.1	2.4	2.6	2.3	2.2	2.1	2.4	2.2	2.7	2.1	2.0	2.2	2.7	2.1	2.1	2.3	2.7
25-Mar	2.1	2.0	Z	2.2	2.1	2.2	2.2	2.0	2.1	2.1	2.0	2.0	2.2	2.3	2.3	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3
26-Mar	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
27-Mar	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
28-Mar	2.0	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
29-Mar	Z	2.1	2.2	2.2	2.2	2.2	2.3	2.7	2.7	2.7	2.8	2.7	2.3	2.3	2.1	2.0	2.1	2.1	2.2	2.2	2.1	2.0	2.0	2.0	2.3	2.8
30-Mar	2.1	Z	2.4	2.4	2.3	2.3	2.2	2.3	2.5	2.7	2.5	2.5	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.2	2.7
31-Mar	2.0	2.1	Z	2.1	2.0	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	2.2	2.2	2.1	2.1	2.0	2.1	2.2
	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	Diurnal Average	
	2.8	2.9	2.9	2.6	3.0	3.3	3.1	2.8	3.4	3.8	3.9	3.7	2.7	2.8	2.5	2.7	2.6	2.7	3.0	3.1	2.9	3.2	3.5	3.1	Diurnal Maximum	

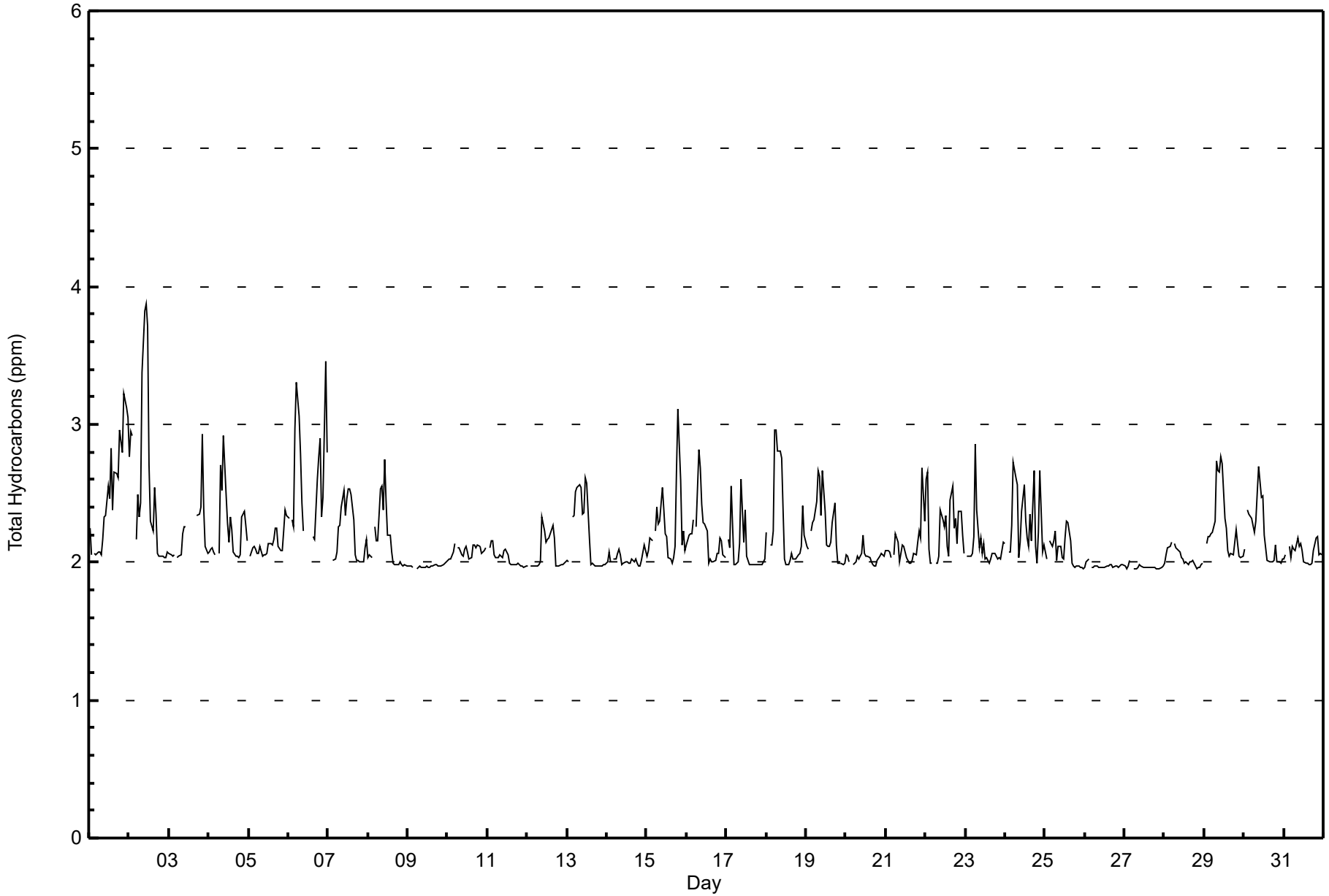
Z - zerospan C - Calibration M - Maintenance PF - Power Failure

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Mildred Lake - March 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	297	42.37	42.37
2.1 - 3.0	393	56.06	98.43
3.1 - 10.0	11	1.57	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 701

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Mildred Lake - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	117	77	7	3	4	5	20	19	11	5	5	1	0	1	11	11	297
2.1 - 3.0	75	19	5	2	9	19	47	62	29	25	12	11	8	8	16	46	393
3.1 - 10.0	1	0	0	0	0	2	0	1	2	1	0	0	0	0	2	2	11
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	193	96	12	5	13	26	67	82	42	31	17	12	8	9	29	59	701

Total Number of Valid Hours: 701

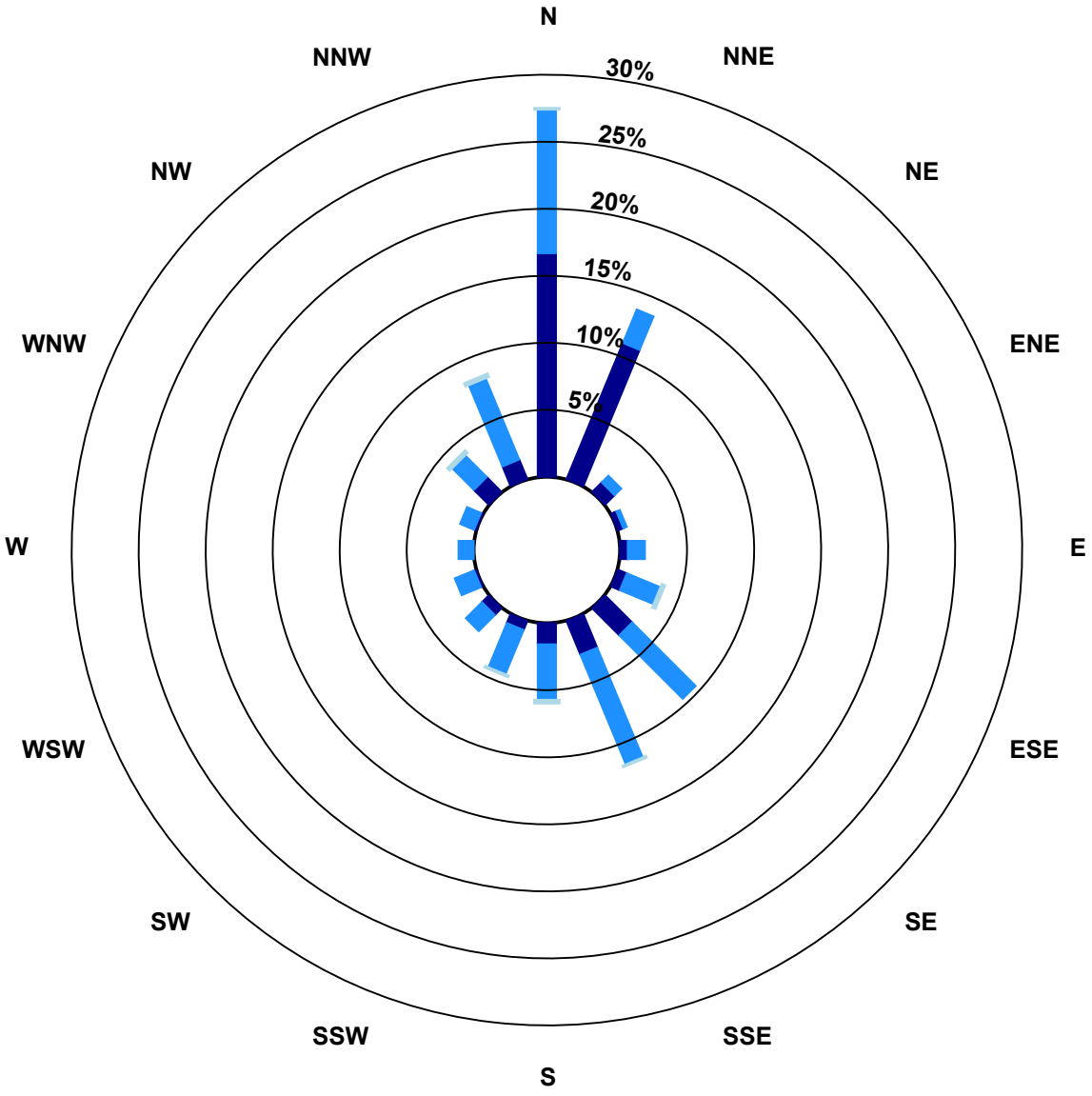
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Total Hydrocarbons (THC) - ppm

Mildred Lake



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

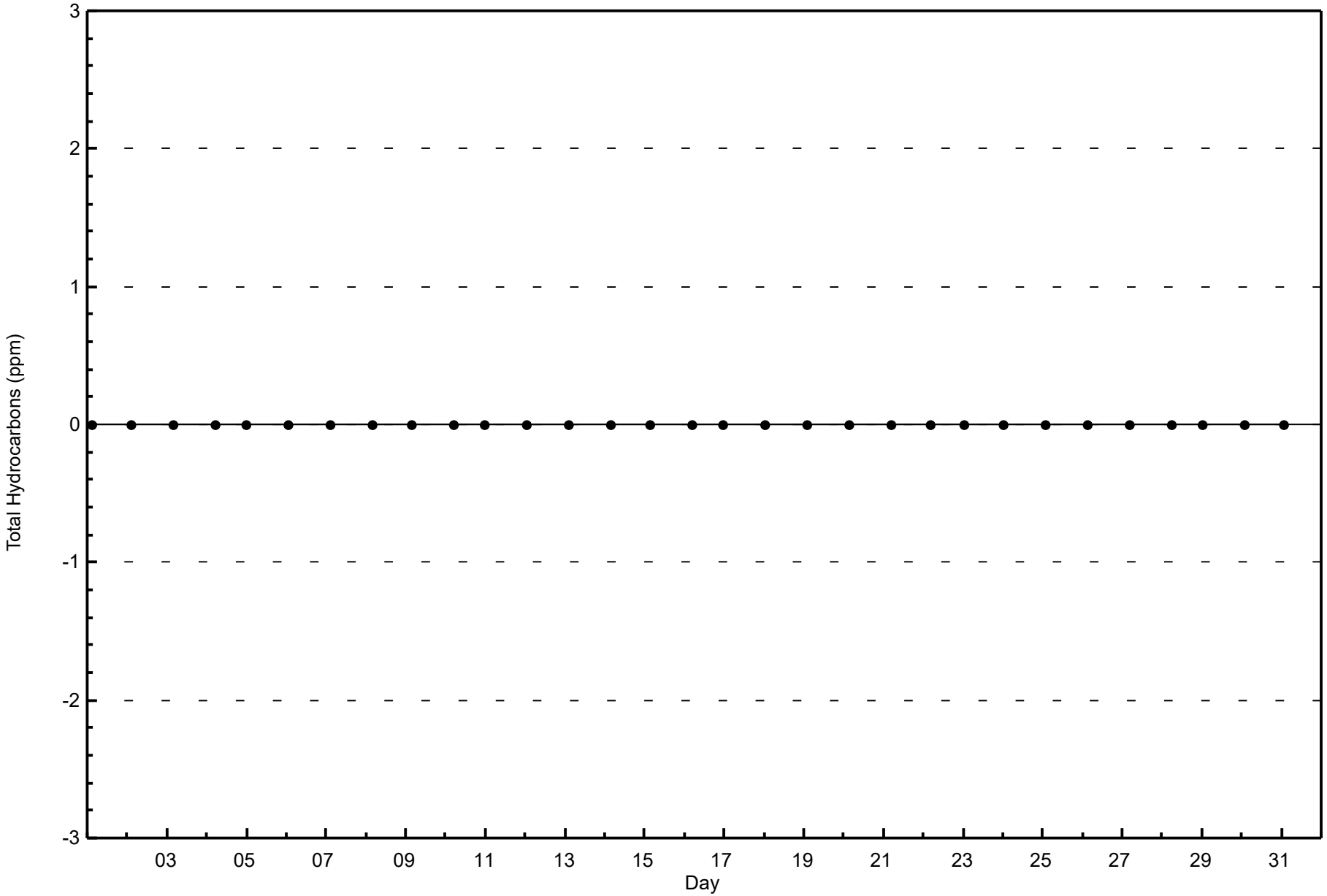
Total Number of Valid Hours: 701

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Mildred Lake - March 2025

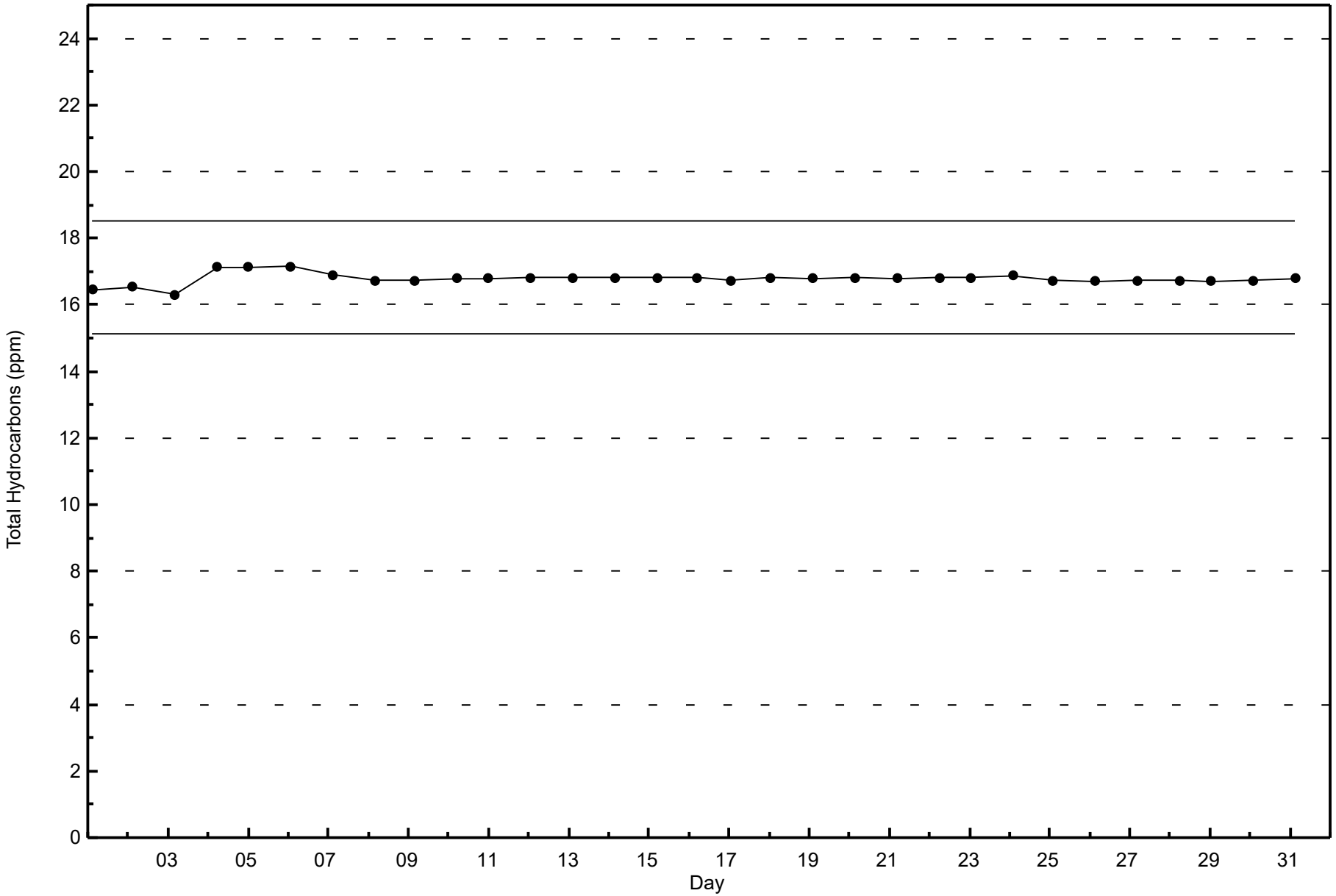


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Mildred Lake - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Mildred Lake - March 2025

Maximum Value: 0.257 ppm on Mar 2 11:00

Maximum Daily Average: 0.049 ppm on Mar 2

Minimum Value: 0.000 ppm on Mar 2 19:00

Minimum Daily Average: 0.000 ppm on Mar 9

Maximum Diurnal Average: 0.046 ppm at hour 12

Minimum Diurnal Average: 0.009 ppm at hour 4

Monthly Average: 0.020 ppm

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

Hours in Service:	744
Hours of Data:	701
Hours of Missing Data:	43
Hours of Calibration:	37
Percent Operational Time:	99.2

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.047	0.002	Z	0.002	0.002	0.002	0.014	0.001	0.008	0.015	0.023	0.040	0.067	0.084	0.072	0.038	0.050	0.070	0.079	0.069	0.053	0.059	0.075	0.092	0.042	0.092
2-Mar	0.051	0.063	0.041	Z	0.029	0.037	0.028	0.025	0.053	0.150	0.257	0.212	0.057	0.029	0.012	0.021	0.064	0.001	0.000	0.000	0.000	0.001	0.000	0.001	0.049	0.257
3-Mar	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.001	0.039	0.061	0.062	C	C	C	C	C	C	0.123	0.106	0.123	0.130	0.039	0.038	0.005	--	0.130
4-Mar	0.004	0.010	0.009	0.010	0.001	Z	0.003	0.057	0.075	0.091	0.080	0.065	0.024	0.044	0.021	0.008	0.000	0.000	0.000	0.000	0.034	0.078	0.053	0.019	0.030	0.091
5-Mar	Z	0.000	0.008	0.006	0.003	0.001	0.001	0.025	0.001	0.001	0.000	0.001	0.027	0.027	0.019	0.025	0.023	0.040	0.005	0.003	0.008	0.040	0.079	0.061	0.017	0.079
6-Mar	0.073	Z	0.056	0.012	0.046	0.045	0.048	0.062	0.035	0.028	M	M	M	M	M	0.005	0.019	0.041	0.049	0.078	0.039	0.035	0.027	0.057	0.042	0.078
7-Mar	PF	0.015	Z	0.000	0.000	0.003	0.038	0.046	0.102	0.138	0.065	0.097	0.101	0.082	0.087	0.071	0.003	0.000	0.000	0.000	0.000	0.000	0.020	0.012	0.040	0.138
8-Mar	0.002	0.000	0.000	Z	0.040	0.013	0.006	0.111	0.130	0.144	0.100	0.032	0.017	0.094	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.031	0.144
9-Mar	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10-Mar	0.000	0.000	0.000	0.013	0.042	Z	0.001	0.000	0.000	0.001	0.008	0.022	0.000	0.000	0.001	0.010	0.002	0.008	0.020	0.019	0.002	0.002	0.001	0.002	0.007	0.042
11-Mar	Z	0.001	0.004	0.003	0.000	0.000	0.000	0.000	0.000	0.001	0.006	0.011	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.011
12-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.095	0.089	0.087	0.082	0.081	0.088	0.091	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.029	0.095
13-Mar	0.000	0.000	Z	0.040	0.032	0.027	0.019	0.037	0.031	0.012	0.026	0.107	0.162	0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.023	0.162
14-Mar	0.001	0.005	0.000	Z	0.001	0.001	0.005	0.046	0.029	0.000	0.000	0.000	0.000	0.000	0.004	0.024	0.000	0.000	0.000	0.000	0.000	0.003	0.061	0.035	0.009	0.061
15-Mar	0.012	0.000	0.000	0.001	Z	0.001	0.000	0.000	0.003	0.058	0.114	0.092	0.072	0.007	0.013	0.000	0.000	0.001	0.030	0.037	0.024	0.004	0.023	0.002	0.021	0.114
16-Mar	0.028	0.067	0.053	0.047	0.066	Z	0.041	0.040	0.027	0.025	0.051	0.045	0.013	0.000	0.001	0.001	0.000	0.000	0.005	0.016	0.056	0.031	0.000	0.000	0.027	0.067
17-Mar	Z	0.023	0.006	0.021	0.001	0.000	0.001	0.000	0.003	0.004	0.000	0.050	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.050
18-Mar	0.000	Z	0.000	0.000	0.019	0.219	0.121	0.081	0.087	0.064	0.025	0.000	0.000	0.000	0.012	0.021	0.001	0.015	0.014	0.011	0.014	0.026	0.059	0.001	0.034	0.219
19-Mar	0.000	0.001	Z	0.000	0.028	0.029	0.052	0.039	0.058	0.028	0.072	0.037	0.029	0.022	0.015	0.020	0.064	0.044	0.016	0.000	0.000	0.000	0.000	0.000	0.024	0.072
20-Mar	0.001	0.001	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.003	0.044	0.007	0.008	0.006	0.006	0.000	0.000	0.000	0.000	0.009	0.007	0.012	0.005	0.000	0.005	0.044
21-Mar	0.008	0.010	0.001	0.000	Z	0.000	0.028	0.016	0.000	0.000	0.003	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.036	0.066	0.011	0.040	0.019	0.011	0.066
22-Mar	0.010	0.026	0.009	0.000	0.000	Z	0.000	0.000	0.014	0.030	0.010	0.009	0.021	0.003	0.007	0.013	0.042	0.019	0.054	0.025	0.040	0.032	0.096	0.014	0.021	0.096
23-Mar	Z	0.001	0.001	0.002	0.003	0.010	0.022	0.018	0.003	0.013	0.022	0.026	0.021	0.001	0.001	0.002	0.012	0.031	0.034	0.012	0.003	0.000	0.000	0.000	0.010	0.034
24-Mar	0.000	Z	0.000	0.011	0.034	0.083	0.069	0.073	0.012	0.039	0.045	0.063	0.013	0.035	0.017	0.030	0.017	0.019	0.001	0.000	0.000	0.030	0.005	0.014	0.026	0.083
25-Mar	0.013	0.001	Z	0.009	0.008	0.017	0.010	0.000	0.012	0.012	0.006	0.000	0.000	0.012	0.003	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.017
26-Mar	0.000	0.000	0.019	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.019
27-Mar	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-Mar	0.000	0.000	0.025	0.014	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	0.000	0.000	0.002	0.025
29-Mar	Z	0.019	0.001	0.000	0.001	0.002	0.001	0.020	0.025	0.092	0.180	0.254	0.124	0.085	0.035	0.012	0.008	0.001	0.000	0.026	0.000	0.001	0.000	0.000	0.038	0.254
30-Mar	0.020	Z	0.043	0.001	0.001	0.000	0.000	0.000	0.014	0.077	0.070	0.074	0.033	0.017	0.001	0.000	0.000	0.009	0.012	0.033	0.002	0.000	0.000	0.007	0.018	0.077
31-Mar	0.000	0.000	Z	0.050	0.011	0.036	0.044	0.029	0.023	0.014	0.002	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000	0.012	0.033	0.000	0.000	0.000	0.011	0.050
	0.011	0.009	0.011	0.009	0.014	0.020	0.018	0.023	0.025	0.039	0.045	0.046	0.030	0.023	0.015	0.013	0.012	0.014	0.014	0.016	0.017	0.013	0.019	0.011	Diurnal Average	
	0.073	0.067	0.056	0.050	0.066	0.219	0.121	0.111	0.130	0.150	0.257	0.254	0.162	0.094	0.088	0.091	0.064	0.123	0.106	0.123	0.130	0.078	0.096	0.092	Diurnal Maximum	

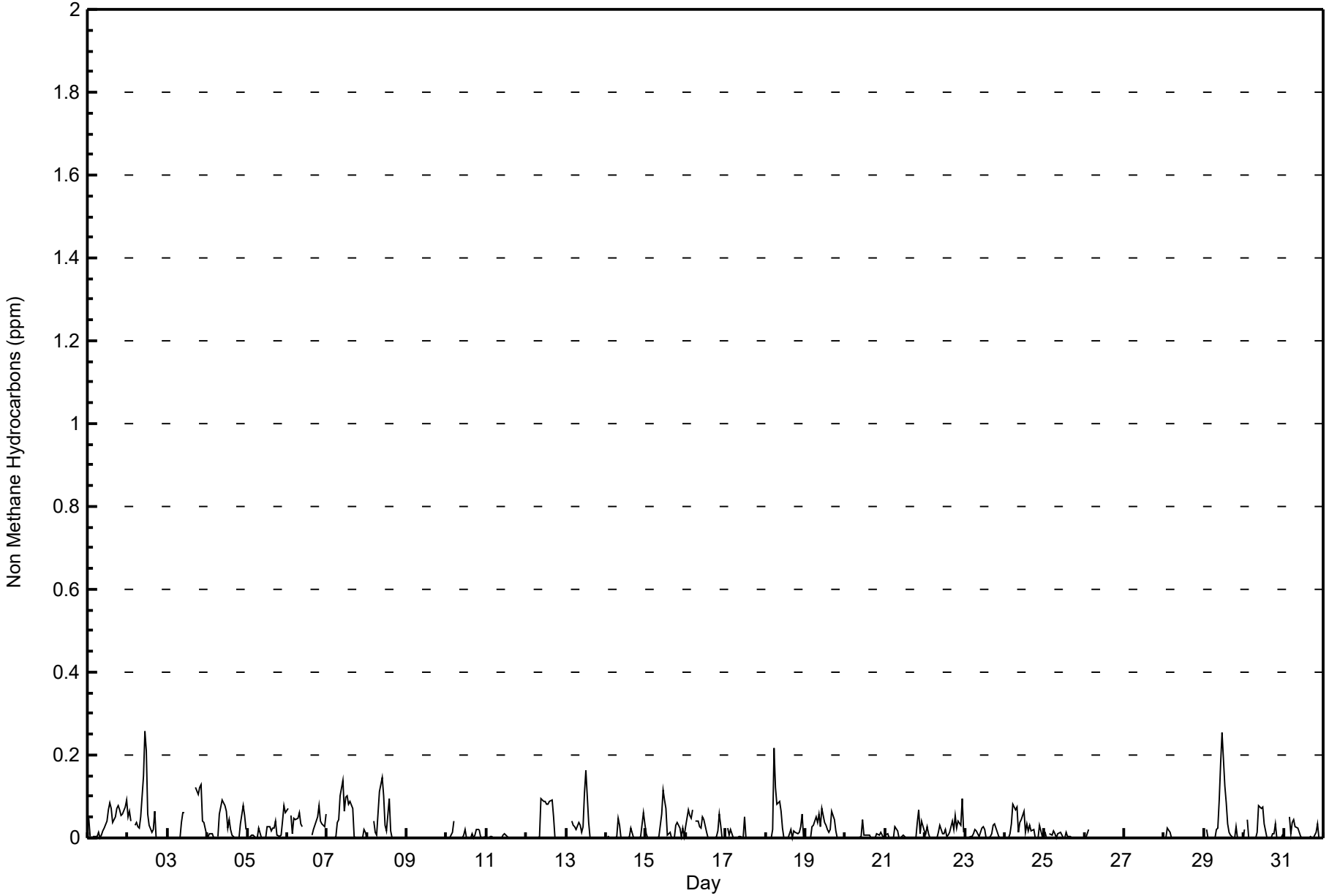
Z - zerospan C - Calibration M - Maintenance PF - Power Failure

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Mildred Lake - March 2025



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

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	385	54.92	54.92
0.006 - 0.05	229	32.67	87.59
0.06 - 0.1	81	11.55	99.14
> 0.1	6	0.86	100.00

Total Number of Valid Hours: 701

Total Number of Hours: 744

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.005	142	87	11	4	4	5	32	20	17	9	9	3	0	2	16	24	385
0.006 - 0.05	40	5	1	1	9	16	27	46	18	11	5	5	8	6	9	22	229
0.06 - 0.1	11	4	0	0	0	5	8	16	7	9	3	4	0	1	3	10	81
> 0.1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	3	6
Totals	193	96	12	5	13	26	67	82	42	31	17	12	8	9	29	59	701

Total Number of Valid Hours: 701

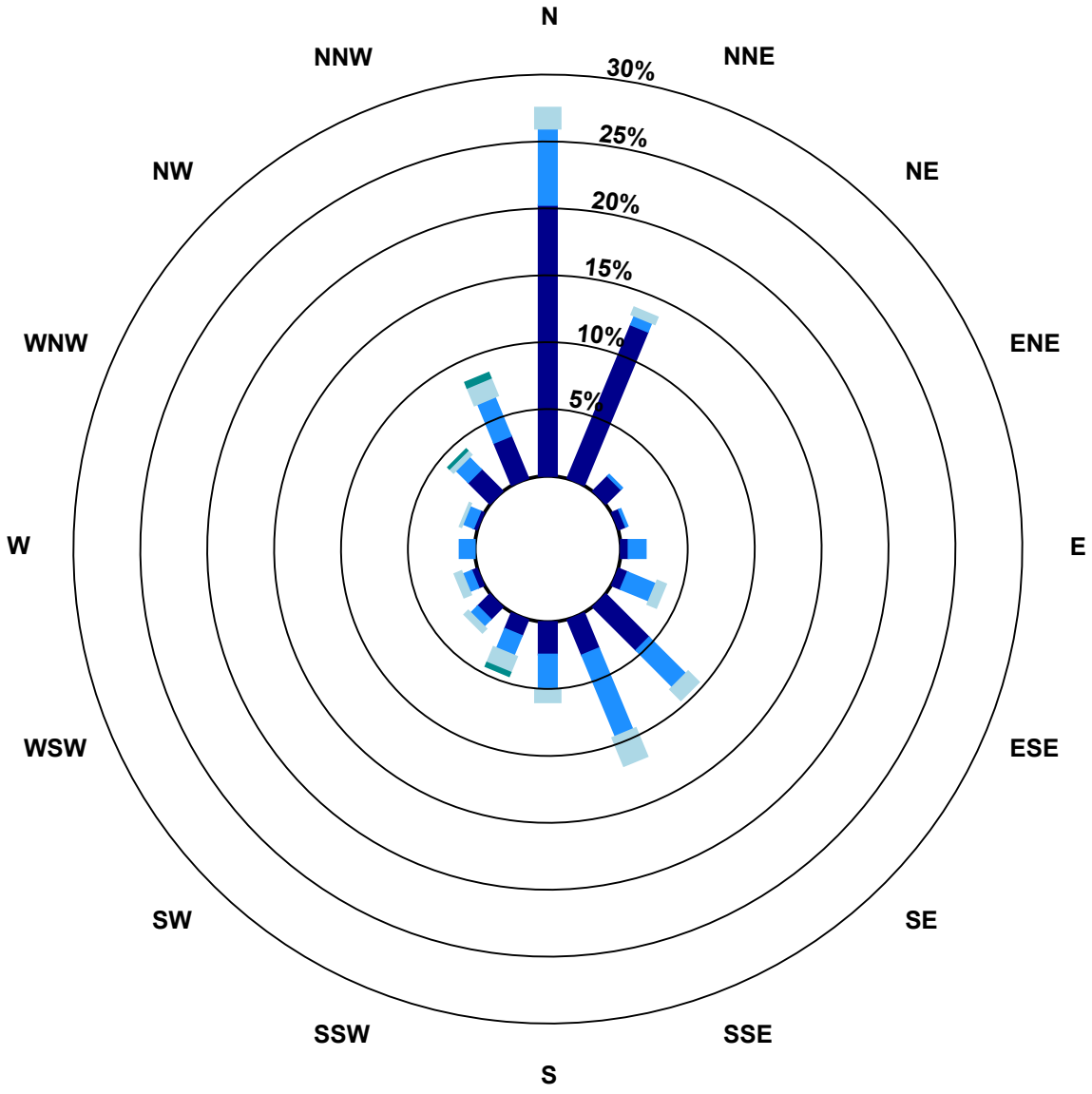
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Non Methane Hydrocarbons (NMHC) - ppm

Mildred Lake



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

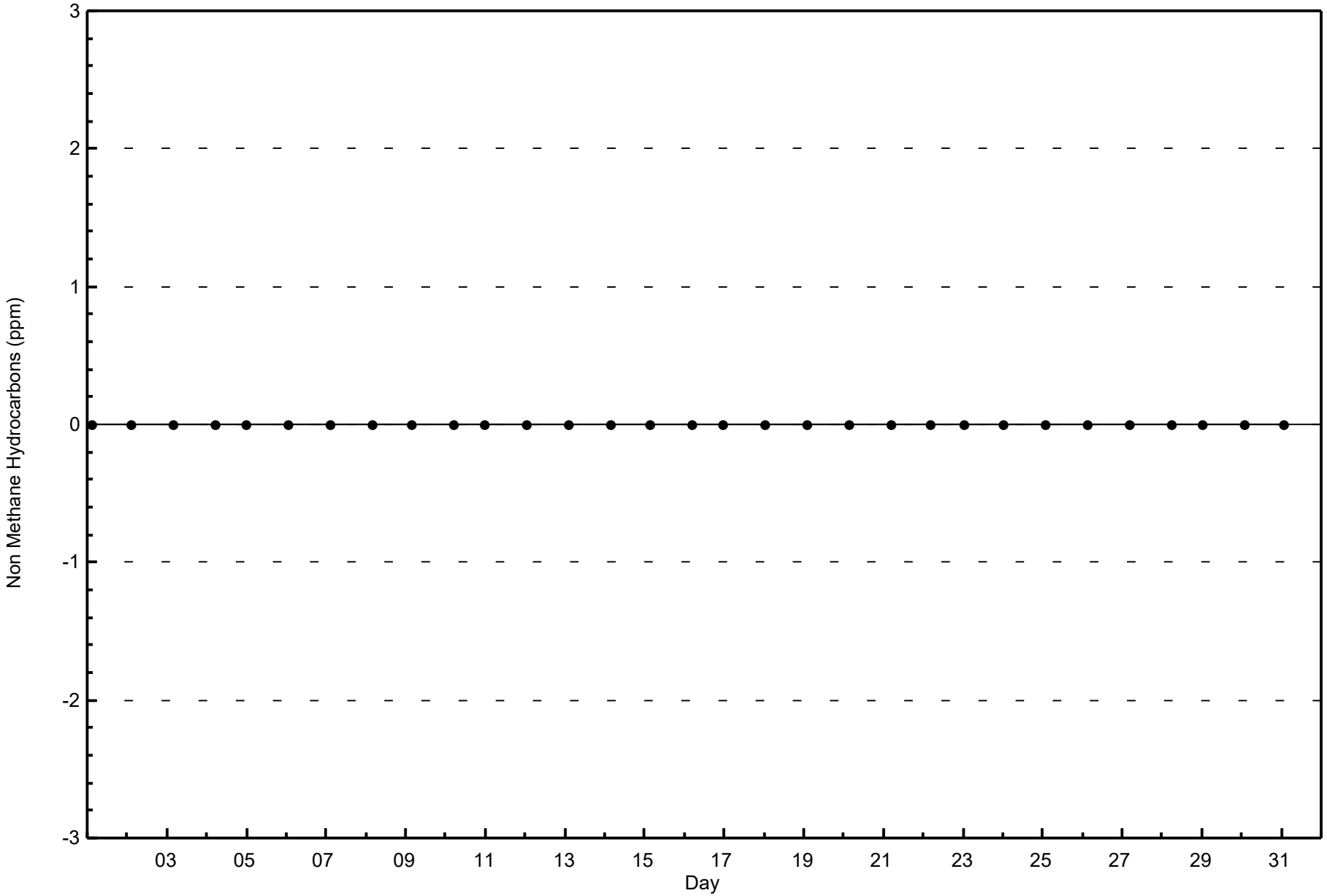
Total Number of Valid Hours: 701

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Mildred Lake - March 2025

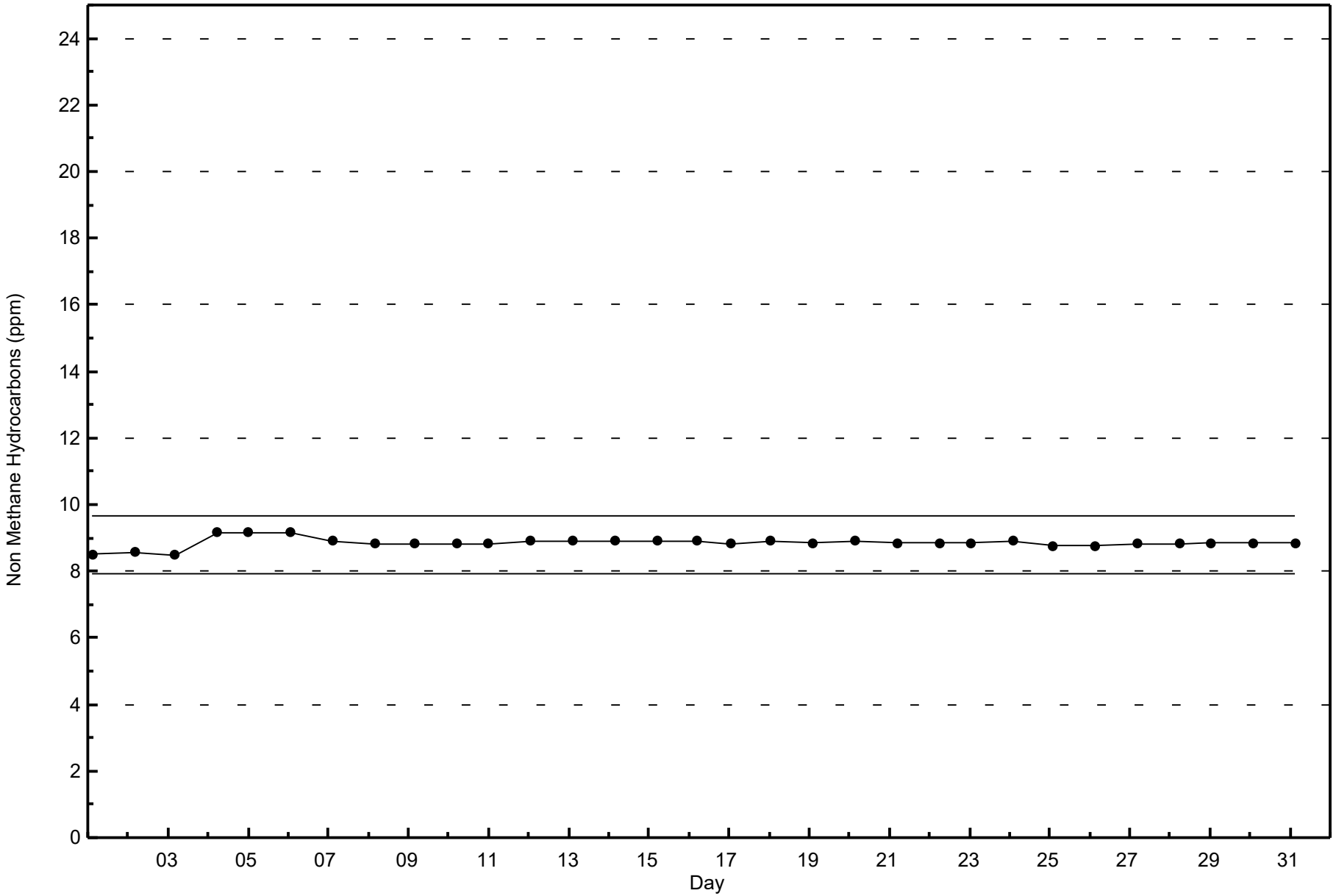


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Mildred Lake - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Mildred Lake - March 2025

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

Maximum Value: 3.7 ppm on Mar 2 10:00 Maximum Daily Average: 2.6 ppm on Mar 6

Minimum Value: 2.0 ppm on Mar 27 07:00 Minimum Daily Average: 2.0 ppm on Mar 27

Maximum Diurnal Average: 2.3 ppm at hour 10 Minimum Diurnal Average: 2.1 ppm at hour 15

Monthly Average: 2.15 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} = 3.1

Hours in Service:	744
Hours of Data:	701
Hours of Missing Data:	43
Hours of Calibration:	37
Percent Operational Time:	99.2

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	2.2	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.5	2.4	2.7	2.3	2.6	2.6	2.5	2.9	2.8	2.7	3.2	3.1	3.0	2.5	3.2
2-Mar	2.7	2.9	2.9	Z	2.1	2.4	2.3	2.4	3.3	3.7	3.6	3.5	2.6	2.3	2.2	2.5	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.5	3.7
3-Mar	2.1	2.1	2.0	2.1	Z	2.0	2.0	2.1	2.2	2.2	2.2	C	C	C	C	C	C	2.2	2.2	2.3	2.8	2.4	2.1	2.1	--	2.8
4-Mar	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.7	2.5	2.8	2.4	2.2	2.1	2.3	2.2	2.1	2.0	2.0	2.0	2.1	2.3	2.3	2.2	2.1	2.2	2.8
5-Mar	Z	2.0	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	2.2	2.2	2.1	2.1	2.1	2.2	2.3	2.3	2.1	2.3
6-Mar	2.3	Z	2.2	2.2	2.9	3.3	3.0	2.7	2.4	2.2	M	M	M	M	M	2.2	2.2	2.6	2.7	2.8	2.3	2.4	3.4	2.7	2.6	3.4
7-Mar	PF	2.1	Z	2.0	2.0	2.1	2.2	2.2	2.3	2.4	2.3	2.4	2.4	2.5	2.4	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.5
8-Mar	2.0	2.1	2.0	Z	2.2	2.1	2.1	2.4	2.4	2.2	2.6	2.4	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.6
9-Mar	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
10-Mar	2.0	2.0	2.0	2.1	2.1	Z	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
11-Mar	Z	2.1	2.2	2.2	2.1	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
12-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
13-Mar	2.0	2.0	Z	2.3	2.3	2.5	2.5	2.5	2.5	2.3	2.3	2.5	2.4	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.5
14-Mar	2.0	2.1	2.0	Z	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1
15-Mar	2.0	2.1	2.2	2.2	Z	2.2	2.4	2.3	2.3	2.5	2.3	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.6	3.1	2.6	2.1	2.2	2.1	2.2	3.1
16-Mar	2.1	2.1	2.2	2.2	2.2	Z	2.2	2.8	2.7	2.4	2.2	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.0	2.2	2.8
17-Mar	Z	2.1	2.1	2.5	2.0	2.0	2.0	2.0	2.1	2.6	2.1	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	2.6
18-Mar	2.2	Z	2.1	2.1	2.2	2.7	2.8	2.7	2.7	2.7	2.4	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3	2.2	2.2	2.8
19-Mar	2.1	2.1	Z	2.2	2.3	2.3	2.4	2.6	2.6	2.3	2.6	2.3	2.1	2.1	2.1	2.1	2.2	2.4	2.1	2.0	2.0	2.0	2.0	2.0	2.2	2.6
20-Mar	2.1	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
21-Mar	2.1	2.1	2.1	2.0	Z	2.1	2.2	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.2	2.6	2.3	2.1	2.6
22-Mar	2.6	2.6	2.1	2.0	2.0	Z	2.0	2.0	2.0	2.3	2.3	2.3	2.3	2.1	2.0	2.4	2.5	2.2	2.3	2.1	2.3	2.3	2.1	2.1	2.2	2.6
23-Mar	Z	2.0	2.0	2.0	2.1	2.2	2.8	2.4	2.1	2.2	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.8
24-Mar	2.1	Z	2.1	2.1	2.2	2.6	2.5	2.5	2.0	2.1	2.3	2.5	2.3	2.1	2.1	2.3	2.1	2.6	2.1	2.0	2.2	2.6	2.1	2.1	2.3	2.6
25-Mar	2.1	2.0	Z	2.1	2.1	2.1	2.2	2.0	2.1	2.1	2.0	2.0	2.2	2.3	2.3	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3
26-Mar	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
27-Mar	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
28-Mar	2.0	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
29-Mar	Z	2.1	2.2	2.2	2.2	2.2	2.3	2.7	2.6	2.6	2.6	2.5	2.2	2.2	2.1	2.0	2.1	2.1	2.2	2.2	2.1	2.0	2.0	2.0	2.2	2.7
30-Mar	2.1	Z	2.3	2.4	2.3	2.3	2.2	2.3	2.5	2.6	2.4	2.4	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.2	2.6
31-Mar	2.0	2.1	Z	2.1	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	2.1	2.2	2.2	2.1	2.1	2.0	2.1	2.2
	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	Diurnal Average	
	2.7	2.9	2.9	2.5	2.9	3.3	3.0	2.8	3.3	3.7	3.6	3.5	2.6	2.7	2.4	2.6	2.6	2.6	2.9	3.1	2.8	3.2	3.4	3.0	Diurnal Maximum	

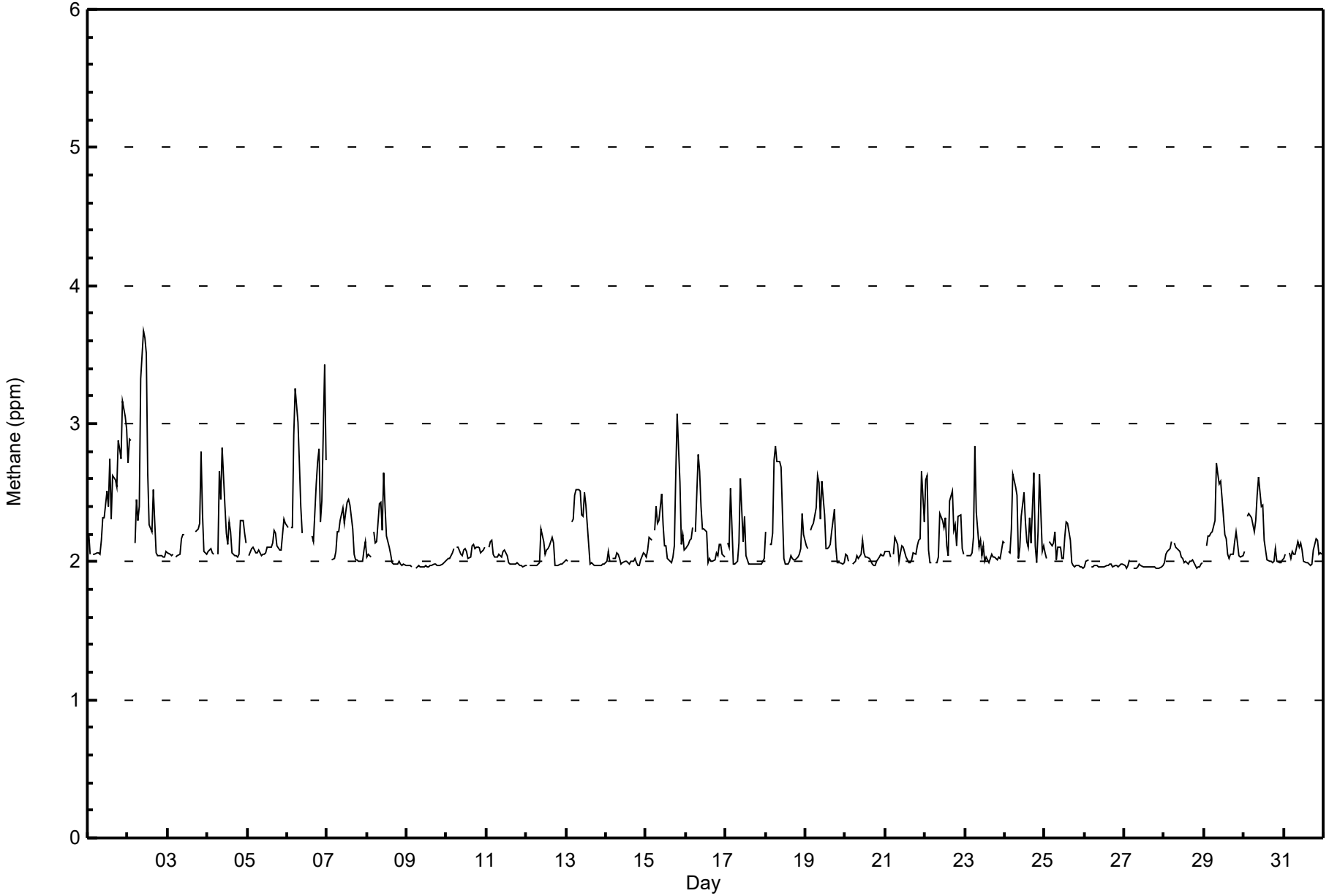
Z - zerospan C - Calibration M - Maintenance PF - Power Failure

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Mildred Lake - March 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	306	43.65	43.65
2.1 - 3.0	386	55.06	98.72
3.1 - 10.0	9	1.28	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 701

Total Number of Hours: 744

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	118	78	8	3	6	7	21	19	12	5	5	1	0	1	11	11	306
2.1 - 3.0	74	18	4	2	7	17	46	62	29	26	12	11	8	8	16	46	386
3.1 - 10.0	1	0	0	0	0	2	0	1	1	0	0	0	0	0	2	2	9
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	193	96	12	5	13	26	67	82	42	31	17	12	8	9	29	59	701

Total Number of Valid Hours: 701

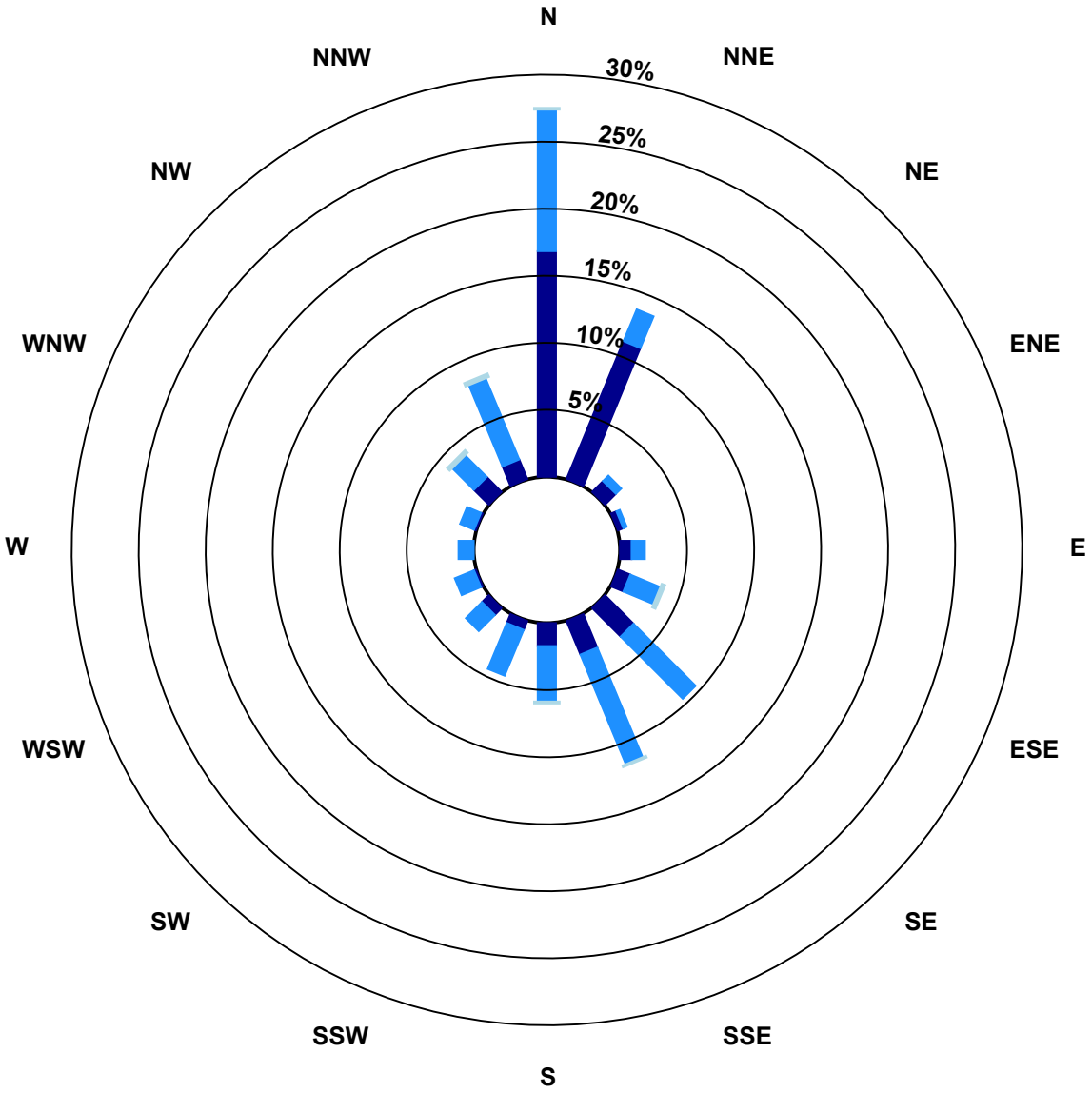
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Methane (CH_4) - ppm

Mildred Lake



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

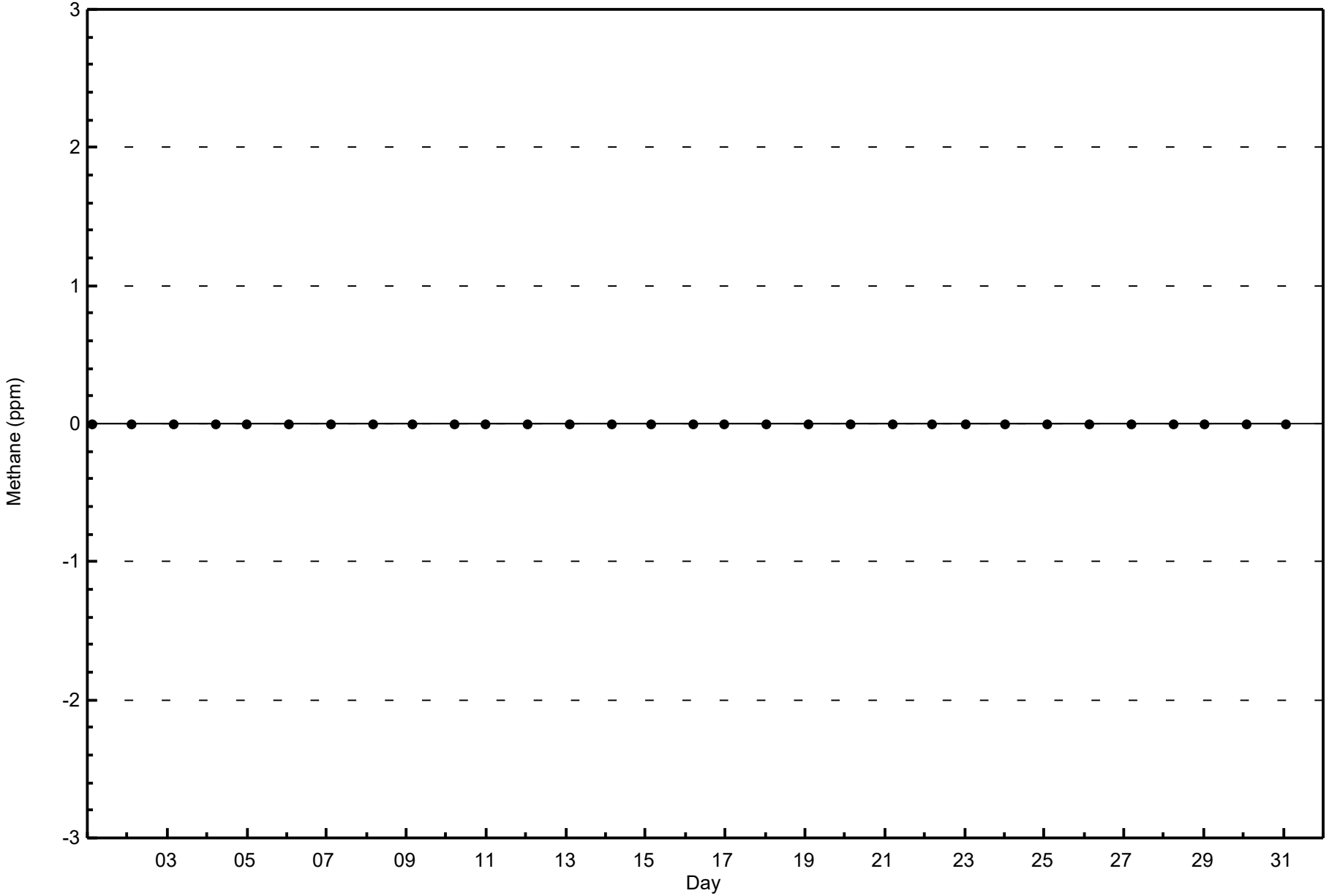
Total Number of Valid Hours: 701

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Mildred Lake - March 2025

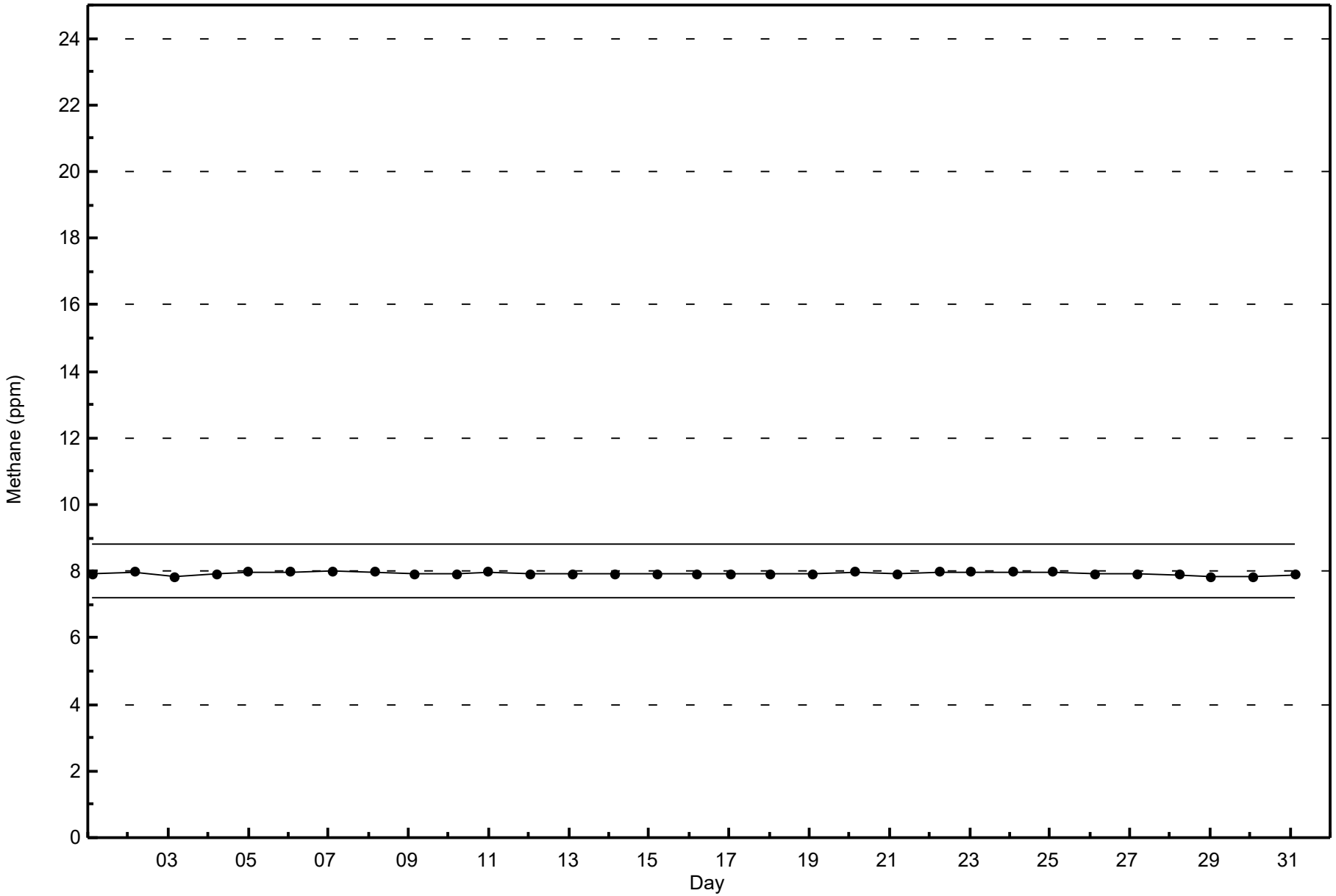


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Mildred Lake - March 2025



Maximum Value: 8.8 C on Mar 25 15:00

Maximum Daily Average: 1.5 C on Mar 2

Minimum Value: -24.3 C on Mar 13 05:00

Minimum Daily Average: -21.2 C on Mar 9

Maximum Diurnal Average: -2.8 C at hour 17

Minimum Diurnal Average: -12.7 C at hour 7

Monthly Average: -7.92 C

Percentiles: P_1 = -23.2 P_{10} = -18.0 Q_1 = -13.5 Median = -7.7 Q_3 = -2.2 P_{90} = 1.9 P_{99} = 6.9

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-9.0	-9.6	-9.7	-10.2	-10.4	-11.1	-12.0	-11.4	-10.2	-8.6	-5.8	-2.8	0.0	2.3	4.5	5.5	5.5	4.9	2.0	-0.4	-1.7	0.5	0.0	-0.4	-3.7	5.5
2-Mar	-0.6	0.3	0.9	0.3	0.6	0.4	0.4	0.3	0.4	0.8	1.9	3.1	4.7	6.2	7.5	7.2	6.0	2.7	0.9	0.0	-0.7	-1.7	-2.2	-3.0	1.5	7.5
3-Mar	-4.2	-5.5	-6.0	-6.5	-6.7	-6.6	-6.8	-6.6	-5.9	-5.2	-4.3	-3.6	-3.1	-2.2	-1.0	-0.4	-0.4	-0.7	-2.2	-2.7	-3.3	-3.3	-3.6	-4.5	-4.0	-0.4
4-Mar	-5.9	-6.5	-6.5	-5.5	-5.4	-7.1	-9.2	-9.0	-7.3	-5.0	-3.1	-1.7	0.3	2.4	5.3	6.3	6.8	5.4	4.2	3.2	2.9	1.2	0.0	-1.3	-1.5	6.8
5-Mar	-2.2	-2.7	-2.9	-3.1	-4.0	-5.2	-5.8	-6.2	-7.1	-7.0	-6.0	-4.8	-4.0	-2.7	-2.5	-1.9	-1.9	-2.1	-2.6	-3.5	-4.3	-4.5	-5.0	-6.5	-4.1	-1.9
6-Mar	-8.5	-10.2	-10.0	-10.5	-12.6	-13.2	-13.8	-13.3	-12.1	-9.0	-6.6	-4.0	-2.1	-0.7	0.8	2.2	3.1	2.4	0.1	-1.0	-2.4	-2.7	-0.8	-1.2	-5.3	3.1
7-Mar	PF	-3.2	-3.9	-4.7	-5.4	-5.9	-6.3	-6.5	-6.4	-5.6	-4.0	-2.7	-0.8	0.4	1.2	0.7	-0.4	-1.8	-3.1	-4.1	-5.0	-5.8	-6.4	-7.0	-3.8	1.2
8-Mar	-7.6	-8.1	-8.3	-8.3	-8.4	-8.4	-8.6	-8.4	-8.0	-7.6	-6.5	-5.1	-5.3	-6.6	-8.0	-9.2	-9.6	-10.5	-11.3	-12.3	-14.0	-15.4	-16.8	-18.8	-9.6	-5.1
9-Mar	-20.2	-21.5	-22.2	-23.0	-23.2	-23.4	-23.5	-23.4	-23.1	-22.8	-22.3	-22.1	-21.1	-20.3	-19.7	-19.1	-18.6	-18.7	-19.3	-19.7	-20.0	-20.3	-20.7	-20.9	-21.2	-18.6
10-Mar	-21.2	-21.5	-21.5	-21.6	-21.6	-21.6	-21.6	-21.3	-20.5	-19.1	-18.4	-16.7	-15.5	-14.6	-13.7	-13.3	-13.0	-13.1	-14.5	-14.2	-14.5	-15.0	-15.4	-15.9	-17.5	-13.0
11-Mar	-16.3	-17.0	-18.0	-18.8	-18.9	-19.0	-19.2	-19.1	-18.6	-17.2	-16.1	-15.2	-13.8	-13.1	-13.2	-12.6	-12.9	-13.9	-15.0	-16.0	-16.8	-17.5	-18.1	-18.4	-16.5	-12.6
12-Mar	-18.6	-18.7	-18.9	-18.9	-19.5	-21.8	-22.6	-20.4	-18.5	-17.4	-16.8	-15.8	-14.4	-13.6	-12.6	-12.1	-12.5	-13.3	-14.7	-16.5	-17.3	-19.2	-20.4	-22.2	-17.4	-12.1
13-Mar	-21.2	-21.9	-21.9	-22.8	-24.3	-23.8	-23.8	-23.2	-21.7	-19.2	-16.8	-14.9	-13.9	-13.3	-12.2	-11.5	-11.5	-12.0	-12.6	-13.4	-13.9	-14.3	-14.6	-14.9	-17.2	-11.5
14-Mar	-14.9	-15.0	-15.4	-15.4	-15.7	-16.0	-16.3	-16.7	-16.9	-16.5	-14.8	-13.3	-12.3	-11.9	-11.7	-11.8	-12.0	-12.3	-12.6	-13.1	-13.5	-13.9	-14.2	-14.9	-14.2	-11.7
15-Mar	-15.0	-15.7	-16.6	-18.1	-19.8	-19.5	-19.7	-17.7	-16.5	-15.1	-13.6	-12.5	-11.6	-11.8	-12.3	-11.3	-9.9	-10.8	-12.0	-12.7	-12.5	-12.8	-13.5	-14.1	-14.4	-9.9
16-Mar	-14.4	-14.8	-15.3	-16.1	-16.2	-16.9	-17.9	-18.7	-17.7	-15.5	-13.2	-10.6	-9.2	-8.6	-7.8	-7.6	-7.7	-7.9	-8.4	-9.0	-9.0	-9.2	-9.1	-9.1	-12.1	-7.6
17-Mar	-9.4	-9.5	-9.6	-9.6	-9.8	-10.1	-10.6	-10.4	-9.2	-8.9	-8.0	-7.2	-6.5	-6.5	-7.4	-7.5	-7.7	-8.3	-9.1	-10.5	-11.2	-12.3	-12.3	-12.4	-9.3	-6.5
18-Mar	-12.1	-11.9	-12.0	-12.1	-12.8	-13.8	-14.0	-13.8	-12.2	-9.7	-7.6	-5.8	-4.7	-3.6	-3.1	-3.0	-2.7	-2.8	-4.0	-5.9	-7.6	-7.5	-8.3	-9.8	-8.4	-2.7
19-Mar	-11.1	-12.5	-13.9	-14.9	-16.6	-16.6	-16.7	-15.1	-11.6	-9.7	-7.4	-5.2	-2.6	-0.6	1.1	2.6	2.3	1.9	-0.8	-2.6	-4.1	-5.8	-8.1	-10.3	-7.4	2.6
20-Mar	-11.7	-12.8	-13.9	-14.8	-15.4	-16.1	-16.9	-16.5	-15.0	-12.9	-11.5	-10.0	-9.2	-8.0	-6.8	-6.0	-6.1	-6.8	-8.0	-9.2	-10.4	-11.8	-14.1	-13.0	-11.5	-6.0
21-Mar	-12.8	-13.3	-13.9	-14.3	-14.6	-15.2	-15.3	-14.6	-13.0	-10.9	-8.8	-6.3	-3.9	-2.4	-1.0	0.1	1.0	0.6	-1.2	-3.2	-4.2	-4.1	-4.6	-4.5	-7.5	1.0
22-Mar	-4.7	-4.7	-4.4	-4.6	-5.5	-5.8	-6.1	-6.0	-5.2	-3.5	-1.7	0.0	1.7	3.7	5.7	6.3	6.7	6.4	4.6	3.3	2.1	2.4	0.6	-0.2	-0.4	6.7
23-Mar	-0.8	-1.2	-1.2	-2.0	-2.2	-2.1	-3.7	-2.3	-0.8	0.5	2.2	3.3	4.6	5.6	6.4	6.8	6.9	6.3	4.0	0.4	-1.2	-1.9	-2.5	-3.0	0.9	6.9
24-Mar	-4.2	-5.6	-5.4	-6.1	-5.8	-4.0	-3.6	-2.6	-1.1	0.4	1.7	2.9	2.7	3.5	4.8	4.8	5.8	5.2	4.7	3.7	2.8	2.2	1.9	2.0	0.4	5.8
25-Mar	1.3	0.0	-0.4	-0.9	-0.7	-1.8	-2.4	-1.1	0.6	2.0	4.1	5.8	7.0	8.1	8.8	8.7	8.1	3.4	-0.1	-2.2	-3.6	-4.6	-5.9	-6.9	1.1	8.8
26-Mar	-7.7	-8.3	-9.1	-10.3	-11.3	-12.0	-12.3	-11.9	-11.1	-10.2	-9.6	-8.5	-7.4	-5.7	-5.2	-4.9	-4.9	-5.3	-5.8	-6.2	-6.6	-7.0	-7.5	-7.8	-8.2	-4.9
27-Mar	-8.2	-8.5	-8.8	-9.1	-9.3	-9.5	-9.7	-9.8	-9.5	-9.0	-8.2	-7.8	-7.1	-6.1	-5.8	-5.9	-6.3	-7.0	-8.2	-9.7	-11.0	-12.2	-13.3	-14.0	-8.9	-5.8
28-Mar	-14.8	-15.6	-16.2	-17.3	-17.7	-18.4	-18.4	-16.7	-14.1	-12.2	-10.2	-9.0	-7.7	-6.7	-5.9	-5.6	-5.2	-5.6	-6.1	-7.5	-8.6	-9.9	-10.5	-11.8	-11.3	-5.2
29-Mar	-12.8	-14.2	-15.9	-17.4	-18.0	-18.5	-17.7	-15.2	-13.1	-10.0	-7.9	-5.4	-3.6	-2.8	-2.0	-1.6	-1.5	-2.0	-3.0	-4.3	-4.7	-5.7	-6.9	-7.8	-8.8	-1.5
30-Mar	-8.8	-9.8	-10.7	-11.4	-13.0	-13.4	-13.8	-10.5	-8.0	-6.0	-3.7	-1.2	-0.3	0.9	1.7	1.9	2.3	2.1	0.9	0.3	-0.3	-1.0	-0.9	-1.1	-4.3	2.3
31-Mar	-1.6	-2.1	-2.8	-3.5	-4.2	-5.0	-5.2	-4.6	-2.9	-1.9	-1.3	0.5	1.4	2.0	2.5	2.8	2.8	2.4	1.4	0.4	0.0	-0.4	-1.3	-1.6	-0.9	2.8
	-10.0	-10.4	-10.8	-11.3	-11.9	-12.3	-12.7	-12.0	-10.8	-9.4	-7.9	-6.3	-5.1	-4.1	-3.3	-2.9	-2.8	-3.6	-4.9	-6.1	-6.9	-7.5	-8.2	-8.9	Diurnal Average	
	1.3	0.3	0.9	0.3	0.6	0.4	0.4	0.3	0.6	2.0	4.1	5.8	7.0	8.1	8.8	8.7	8.1	6.4	4.7	3.7	2.9	2.4	1.9	2.0	Diurnal Maximum	

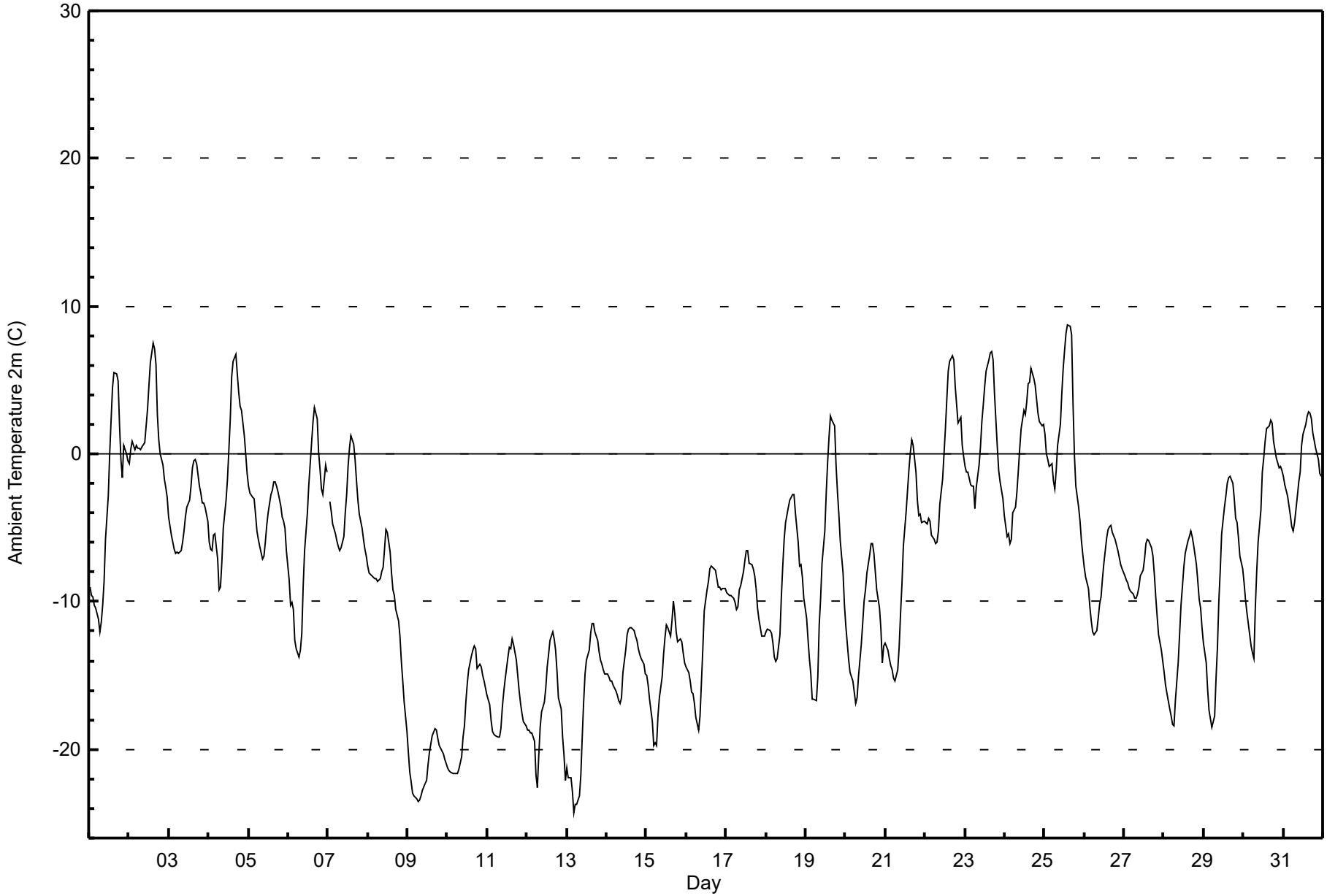
PF - Power Failure

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Mildred Lake - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	40	5.38	5.38
-20 - 0	583	78.47	83.85
0 - 10	120	16.15	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 743

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Mildred Lake - March 2025

Maximum Value: 92.8 % on Mar 23 07:00

Maximum Daily Average: 82.6 % on Mar 3

Minimum Value: 27.9 % on Mar 29 16:00

Minimum Daily Average: 48.8 % on Mar 21

Maximum Diurnal Average: 79.1 % at hour 7

Minimum Diurnal Average: 51.1 % at hour 17

Monthly Average: 66.21 %

Percentiles: P_1 = 34.5 P_{10} = 45.9 Q_1 = 55.4 Median = 67.9 Q_3 = 78.1 P_{90} = 83.9 P_{99} = 90.5

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	77.3	80.1	79.2	80.8	80.5	81.8	83.9	83.0	77.6	74.2	68.7	64.9	62.1	58.7	50.8	48.5	50.6	53.1	64.8	75.2	81.0	70.7	71.9	75.2	70.6	83.9
2-Mar	75.3	72.6	71.8	74.3	74.9	78.3	78.8	81.5	83.6	83.1	78.6	74.7	67.6	63.1	58.5	56.7	58.9	71.1	80.9	79.5	85.1	91.4	90.4	90.5	75.9	91.4
3-Mar	88.0	85.5	84.5	84.5	83.1	82.8	84.2	83.3	80.1	78.2	75.7	77.7	83.2	83.1	78.0	76.1	75.7	77.1	83.6	86.6	89.3	88.1	85.5	87.7	82.6	89.3
4-Mar	91.9	91.0	84.5	79.5	77.5	82.8	89.0	91.2	84.6	79.4	74.3	71.0	65.3	59.7	51.2	46.1	44.2	48.3	51.6	52.4	55.0	65.6	68.9	71.4	69.9	91.9
5-Mar	72.6	75.3	79.0	79.3	79.9	78.0	76.3	77.0	75.6	72.3	66.1	61.0	59.7	56.2	57.5	58.0	58.7	59.1	59.0	63.2	67.0	69.2	72.0	75.7	68.7	79.9
6-Mar	82.5	86.9	87.8	86.4	90.8	90.0	89.6	88.8	85.7	75.4	67.0	59.8	56.8	55.1	53.5	52.0	51.5	56.1	63.6	67.4	71.1	73.7	64.7	64.4	71.7	90.8
7-Mar	PF	66.0	68.2	72.1	74.6	75.6	76.4	76.3	78.6	74.5	66.1	64.4	59.0	57.7	56.1	55.1	55.8	58.2	63.5	68.1	72.9	76.7	79.9	82.3	68.6	82.3
8-Mar	83.4	84.6	85.1	85.7	86.0	86.3	88.2	89.4	86.5	85.0	82.3	80.2	78.9	78.5	75.5	74.4	69.2	68.2	71.1	73.6	75.7	76.3	76.0	74.1	79.8	89.4
9-Mar	68.7	67.0	68.0	69.5	67.9	68.2	69.5	69.4	69.8	65.5	63.5	65.5	57.2	54.7	54.0	52.3	52.1	53.2	56.7	59.8	61.4	63.6	65.5	66.9	62.9	69.8
10-Mar	68.7	69.7	70.0	71.5	74.4	76.5	77.5	77.2	75.6	71.3	70.4	66.8	62.9	59.5	58.9	59.6	57.9	56.8	65.8	69.0	69.5	74.3	79.0	82.1	69.4	82.1
11-Mar	83.2	82.6	82.5	80.9	78.9	79.1	79.5	79.7	78.4	75.1	75.1	75.5	74.6	76.0	77.2	77.7	78.6	78.0	79.1	79.6	78.9	78.1	77.8	76.5	78.4	83.2
12-Mar	74.7	75.8	72.1	68.8	70.2	78.3	81.8	80.6	70.6	67.2	59.8	55.5	52.9	51.0	47.5	46.2	44.9	46.3	50.9	57.5	58.4	63.7	67.9	73.1	63.1	81.8
13-Mar	72.0	72.7	74.2	76.3	79.7	79.7	78.2	77.0	74.4	65.8	58.0	53.5	51.7	50.6	46.4	45.0	45.7	46.8	50.2	62.0	75.8	81.7	82.6	83.0	66.0	83.0
14-Mar	83.5	83.1	82.9	82.7	82.3	82.3	82.3	82.7	80.9	77.7	74.1	72.0	69.5	67.5	69.5	73.9	76.7	79.6	81.5	78.3	80.4	83.7	86.4	86.9	79.2	86.9
15-Mar	86.5	86.2	85.9	85.4	83.7	83.4	82.9	84.3	84.1	82.3	73.4	66.2	60.9	55.4	60.0	55.6	47.9	52.3	58.3	62.1	62.2	63.3	69.7	75.3	71.1	86.5
16-Mar	78.5	80.4	82.4	84.7	85.5	85.3	83.8	80.9	73.1	65.8	60.5	52.7	48.1	46.4	45.5	43.9	48.3	51.3	52.7	55.5	58.9	61.9	65.2	68.8	65.0	85.5
17-Mar	73.6	78.0	80.4	82.5	84.4	85.5	87.7	85.9	80.9	80.3	78.1	72.3	63.8	62.0	62.9	60.7	59.1	57.4	57.8	58.9	59.4	65.5	66.6	68.3	71.3	87.7
18-Mar	68.9	69.9	71.0	68.7	71.2	76.5	80.3	80.8	73.7	62.5	54.1	45.8	43.2	43.1	43.7	43.7	44.8	44.9	47.8	54.9	61.7	61.1	65.2	63.3	60.0	80.8
19-Mar	63.3	67.0	72.0	76.2	82.5	83.0	84.7	81.1	69.2	62.1	59.4	54.8	49.2	45.6	42.3	39.7	44.5	46.0	49.1	50.3	54.8	61.0	68.8	77.9	61.9	84.7
20-Mar	82.8	83.8	84.2	85.3	84.7	83.5	83.9	81.4	75.2	66.9	63.8	56.5	54.1	48.9	40.4	36.1	32.8	30.1	31.0	36.4	42.5	48.1	57.0	53.7	60.1	85.3
21-Mar	52.0	53.0	55.5	56.3	56.3	59.4	59.3	56.8	52.4	47.7	44.8	42.9	40.6	38.9	38.8	36.9	36.7	36.9	45.0	46.3	50.7	51.7	55.1	57.5	48.8	59.4
22-Mar	59.6	62.8	62.7	61.9	62.1	64.5	65.9	67.3	66.4	64.8	66.9	68.4	68.1	63.6	57.2	54.9	53.3	55.0	64.0	75.2	82.8	74.8	73.4	75.8	65.5	82.8
23-Mar	80.8	85.5	85.6	88.0	90.1	86.8	92.8	82.9	74.2	70.6	65.6	61.8	55.9	49.7	44.3	42.6	42.2	43.1	49.4	61.6	72.0	71.3	74.2	75.4	68.6	92.8
24-Mar	81.6	87.0	85.7	85.8	86.2	79.6	79.9	77.2	69.8	66.6	62.7	60.5	73.2	76.7	76.5	76.1	74.0	73.1	72.2	74.5	79.9	83.6	84.5	83.1	77.1	87.0
25-Mar	85.0	90.2	89.4	89.7	86.0	89.3	92.1	83.8	75.5	70.6	63.0	55.5	52.9	48.1	35.5	35.2	36.1	54.1	65.8	70.9	71.3	71.2	72.5	72.8	69.0	92.1
26-Mar	74.5	68.9	68.4	71.5	74.4	77.5	77.3	73.2	67.1	63.1	61.2	58.4	55.4	52.5	49.8	48.6	49.5	47.2	50.7	54.3	54.7	56.5	58.2	59.9	61.4	77.5
27-Mar	58.8	57.8	59.5	60.3	56.7	54.0	55.8	56.2	56.2	54.0	51.9	50.2	48.3	45.0	43.8	43.7	43.8	45.3	47.4	48.9	53.1	57.5	60.4	63.5	53.0	63.5
28-Mar	65.9	69.5	72.6	76.7	77.1	78.1	77.4	72.1	65.1	60.3	53.4	50.2	42.6	38.7	38.1	37.5	35.0	37.1	36.0	37.3	39.9	45.9	48.4	53.5	54.5	78.1
29-Mar	60.9	65.8	70.2	75.6	76.6	78.8	76.3	65.9	58.8	53.7	52.6	46.1	37.0	33.4	29.2	27.9	29.3	34.2	40.7	43.6	38.3	41.2	48.5	51.0	51.5	78.8
30-Mar	55.7	59.8	64.6	63.7	72.2	72.4	75.3	58.7	49.8	51.5	46.9	46.9	48.8	44.6	40.1	42.8	39.9	38.9	43.1	41.4	38.5	40.1	44.6	49.3	51.2	75.3
31-Mar	52.6	54.5	56.1	56.0	56.0	59.7	60.5	59.6	61.6	62.7	61.7	56.0	52.1	50.1	48.9	47.9	47.6	49.1	53.1	56.5	58.6	59.0	62.3	61.7	56.0	62.7
	73.4	74.6	75.3	76.1	77.0	78.0	79.1	76.9	72.7	68.7	64.5	60.9	57.9	55.3	52.6	51.5	51.1	53.1	57.6	61.3	64.5	66.8	69.1	71.0	Diurnal Average	
	91.9	91.0	89.4	89.7	90.8	90.0	92.8	91.2	86.5	85.0	82.3	80.2	83.2	83.1	78.0	77.7	78.6	79.6	83.6	86.6	89.3	91.4	90.4	90.5	Diurnal Maximum	

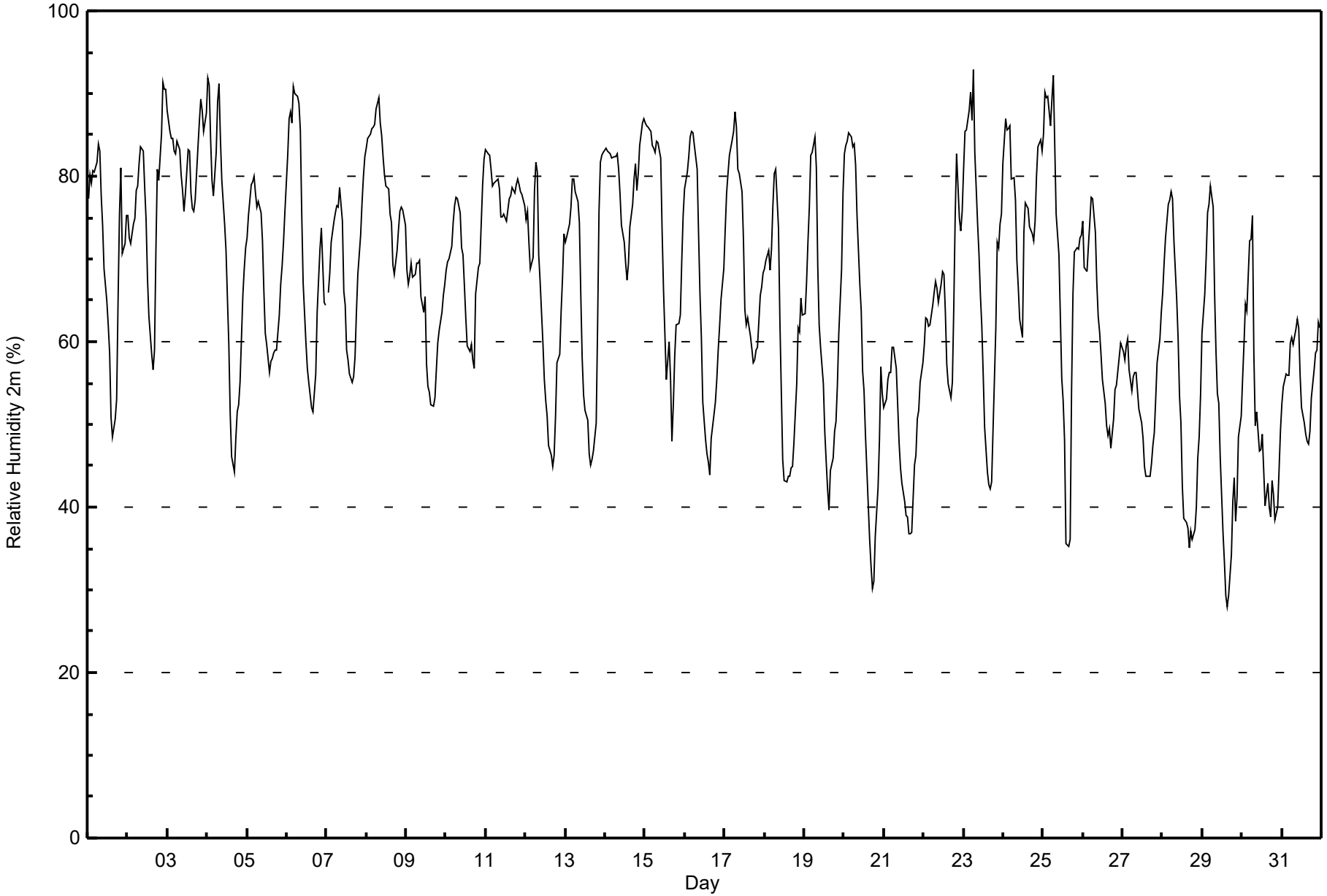
PF - Power Failure

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Mildred Lake - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Mildred Lake - March 2025

Maximum Speed: 21 km/h on Mar 8 15:00

Maximum Daily Speed Average: 13.0 km/h on Mar 11

Minimum Speed Value: 0 km/h on Mar 19 05:00

Minimum Daily Speed Average: 0.3 km/h on Mar 29

Maximum Diurnal Speed Average: 5.8 km/h at hour 21

Minimum Diurnal Speed Average: 0.0 km/h at hour 12

Monthly Average Velocity: 2.8 km/h 22.4 deg

Percentiles: $P_1 = 1$ $P_{10} = 3$ $Q_1 = 5$ Median = 8 $Q_3 = 11$ $P_{90} = 14$ $P_{99} = 17$

Hours in Service: 744

Hours of Data: 743

Hours of Missing Data: 1

Percent Operational Time: 99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	S8	S9	S10	S10	S11	S8	S7	S10	SSE7	S10	SE8	SE8	SSE6	SE8	SSE7	SE8	SE5	SE3	SSE4	ESE2	E4	ESE5	SSE3	SSW4	SSE6.4	S11
2-Mar	S4	SSE7	S5	S4	SSE4	ESE4	S1	NNW5	NNW11	N8	NNW6	NW8	S4	WSW4	W7	WNW7	NNW12	NNE15	NNE12	NNE14	NNE8	N8	NNE8	NNE9	N3.6	NNE15
3-Mar	NNE12	NNE11	NNE9	NNE7	N8	N6	NNE3	SSW1	S2	SSE2	S4	S4	SSW5	SSE6	SE7	ESE9	ESE9	ESE7	ESE4	SE4	SSE4	S5	S7	S7	ESE1.9	NNE12
4-Mar	SSW5	SSW5	SSW5	SW6	SW6	SSW3	SSW3	S3	SSE7	SSE8	SSE9	SE9	SE9	SSE9	SSW7	WSW6	WSW6	SW8	SW8	WSW7	NW11	N10	N9	N8	SSW3.0	NW11
5-Mar	NNE7	N9	N10	N12	N15	N15	N14	N12	NE10	NE10	N7	WNW6	WSW5	S3	SSE9	SSE12	SE12	E8	ENE5	NE3	N2	NNW3	N4	N5	NNE4.7	N15
6-Mar	NNW5	NNW5	NNW6	NNW4	SSW4	S3	S3	SSW4	SSW7	S9	SSE10	SSE10	SSE11	SSE12	SSE12	SE11	SE10	SSE6	ESE3	SSW5	WNW2	NNW4	NW7	N8	SSE3.0	SSE12
7-Mar	PF	N10	NNE6	N10	N7	N8	N7	NNW5	NNW6	NNW4	NNE3	SSW8	SE1	NNE1	NNE6	N15	N14	N11	N11	N11	N10	N10	N11	N10	N7.2	N15
8-Mar	N7	N7	N5	N8	N8	N7	NNW8	NNW9	NNW8	NW6	WNW5	NNW10	N16	N18	N21	N20	N16	NNE11	NNE10	NNE14	NNE13	NNE12	NNE12	NNE14	N10.4	N21
9-Mar	NNE15	NNE13	NNE9	NNE11	NE11	NNE11	NNE11	NE10	NE10	NNE11	NE11	NNE9	N11	N11	N8	N8	NNE10	NNE9	NNE8	N8	N7	N8	N9	N7	NNE9.6	NNE15
10-Mar	N8	N8	N6	N6	N6	N5	N4	NE1	SSE2	SSW3	SSE6	SSE6	SSE7	SE6	SSE8	SSE7	SE6	E5	E3	N3	NNE7	N8	N6	N7	NE1.9	N8
11-Mar	N8	N10	N11	N12	N11	N11	N8	N10	N12	N10	N14	NNW14	N15	N17	N17	N14	N16	N18	N17	N17	N16	N13	N13	N12	N13.0	N18
12-Mar	N11	N11	N9	N9	N6	NNE3	SW1	WNW2	NNW4	WSW3	N4	NNE4	SSW5	SW6	WSW6	SW7	NNW3	NE5	NNE5	NNE6	NNE5	NNE5	NNE6	NNE3	N3.2	N11
13-Mar	N5	NNE5	N7	N6	N4	N6	N6	N7	N7	NNW7	NNW9	NW12	NNW14	NNW12	N14	N14	N14	NNE13	N14	N14	N11	N12	N14	N15	N9.8	N15
14-Mar	N14	N16	N16	N14	N15	N13	N15	N14	N13	N14	NNE14	N14	N16	N17	N16	N17	N15	N12	N10	N10	N10	N6	NNW6	NNW5	N12.9	N17
15-Mar	NNW6	NNW7	NNW6	NNW4	W2	NW3	N4	N4	NNW4	SE1	WSW2	NW5	WSW6	SW1	SSE6	ESE5	SE7	SE7	SE8	ESE6	SE6	ESE3	N4	NNW6	NNE0.5	SE8
16-Mar	NNW6	N5	NNE2	SE2	S3	SSE4	SSE4	SSE6	SSE8	SSE6	SSE6	S7	SSE10	SSE11	SSE10	SE9	SE10	SE9	E9	ESE8	ESE10	ESE10	SE14	SE12	SE6.1	SE14
17-Mar	ESE7	SE6	SE5	SSE6	S5	SSE4	S3	SSW4	SW3	NW9	NNW10	N11	N11	NNE11	NNE12	NNE12	NNE10	NNE7	NNE7	NNE7	NNE4	NW2	NNW4	S3	NNE3.1	NNE12
18-Mar	SSW3	SSW4	SW3	NNE4	N4	NNW5	NNW3	N2	S2	S3	S4	S5	SE3	S8	SSE8	SE10	SE7	ESE7	E5	ESE3	NE3	NNW4	NNW10	NNW13	ESE0.9	NNW13
19-Mar	NNW10	NNW7	NNW7	NNW5	WNW0	SW1	SSE3	E3	S3	SSE5	SSE8	SSE11	SE9	SE8	SE7	SE7	SSE7	ENE0	N13	N16	N15	N14	N16	N15	NNE2.7	N16
20-Mar	N14	N13	N13	N11	N11	N13	N8	N9	N9	NNW9	NW13	NNW14	NW17	NW16	NNW14	NNW15	NNW14	NNW13	N10	N11	N11	NNE7	E2	SE8	NNW10.3	NW17
21-Mar	SE9	SE10	SE7	SE8	SE11	SE7	SSE9	SE10	SE16	SSE11	S10	S11	SSE13	SSE15	SSE15	SSE16	SE13	SE11	SE6	ESE5	SE4	SSE8	SSE7	SSE7	SSE9.7	SSE16
22-Mar	SE9	SSE9	S8	S12	S11	S10	S10	SSE9	SSE9	SSE13	SSE13	SSE10	SSE12	SE12	SE11	SSE13	SE9	N6	NNW8	NNW3	WSW2	NW12	N12	N5	SSE5.4	SSE13
23-Mar	ESE2	N2	NNE3	ENE1	WSW2	WNW3	W2	SSW3	SSW5	SSW5	S5	SSE8	SSE9	SE11	SSE12	SE11	SE10	ESE6	E4	E5	NE4	ENE5	E6	ESE4	SE3.6	SSE12
24-Mar	NE3	NE5	NE4	NNE3	SSE3	SE2	SSE1	SSE5	S9	SSE9	SSE9	SSE8	SE9	SSE9	SSE8	SSE4	W3	WNW10	NW14	NW11	NW7	W5	SW5	W7	SSW1.5	NW14
25-Mar	WSW8	SSW5	SSW4	SSW5	W2	WNW3	SW4	SW4	W4	W5	SSW5	S8	SSE10	NW5	NW16	NW18	NW18	NNE16	NNE17	NNE14	NNE14	N13	N15	N17	NNW4.5	NW18
26-Mar	N11	N11	N11	NNE9	NNE8	NE6	NNE6	NNE10	NNE12	NNE11	NNE9	N7	NE4	NNW5	NNW8	N8	N10	NNE11	N10	N11	N10	NNE10	NNE10	NNE9	NNE8.9	NNE12
27-Mar	NNE12	NNE10	NNE12	N12	NNE11	NNE12	NNE11	NNE12	NNE13	NNE15	NNE15	N16	NNE15	NNE14	NNE15	NNE15	NNE15	NNE14	N14	N14	N12	N11	N10	N8	NNE12.7	N16
28-Mar	N8	N7	N6	N5	N6	N7	N8	N5	NNW4	NW7	NW8	NW12	N9	NNW9	NW12	NW14	NW12	NW14	N9	NNE7	NNE8	N9	N10	N10	NNW8.1	NW14
29-Mar	N7	N7	N6	N5	N6	N2	NNW3	NNW4	NW3	SSW4	SSW5	SSW6	SW6	SSW6	SSE5	SSE8	SSE11	SSE12	SE10	ESE5	N7	N7	N9	NNW8	NE0.3	SSE12
30-Mar	N5	NNW4	NW4	NNW4	NNE1	NNW3	SW1	NNE3	SW2	S4	SSW4	SSW5	SSW8	S8	S8	S8	SE7	E6	NNE5	NNE8	NNE8	N6	E9	ESE14	ESE1.3	ESE14
31-Mar	SE11	SE11	SE10	ESE7	ESE8	ESE6	ESE7	SE6	SSE9	SSE11	SE12	SSE11	SSE11	SSE12	SSE12	SSE12	SE13	SE12	SE8	ESE9	SE12	SE14	ESE10	SE12	SE9.9	SE14
	NNE4.1	NNE4.1	N3.8	N3.5	NNE2.5	NNE3.1	NNE2.2	NNE2.0	NE1.4	NE0.6	ENE0.6	ESE0.0	SE0.7	E1.2	ENE1.0	ENE1.9	NE3.1	NE4.4	NNE5.3	NNE5.8	NNE5.8	NNE5.3	NNE5.4	NNE4.6	Diurnal Average	
	NNE15	N16	N16	N14	N15	N15	N15	N14	SE16	NNE15	NNE15	N16	NW17	N18	N21	N20	NW18	N18	NNE17	NNE17	N16	N14	N16	N17	Diurnal Maximum	

PF - Power Failure

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

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

Maximum Value: 6 km/h on Mar 8 16:00

Minimum Value: 1 km/h on Mar 16 03:00

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

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

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

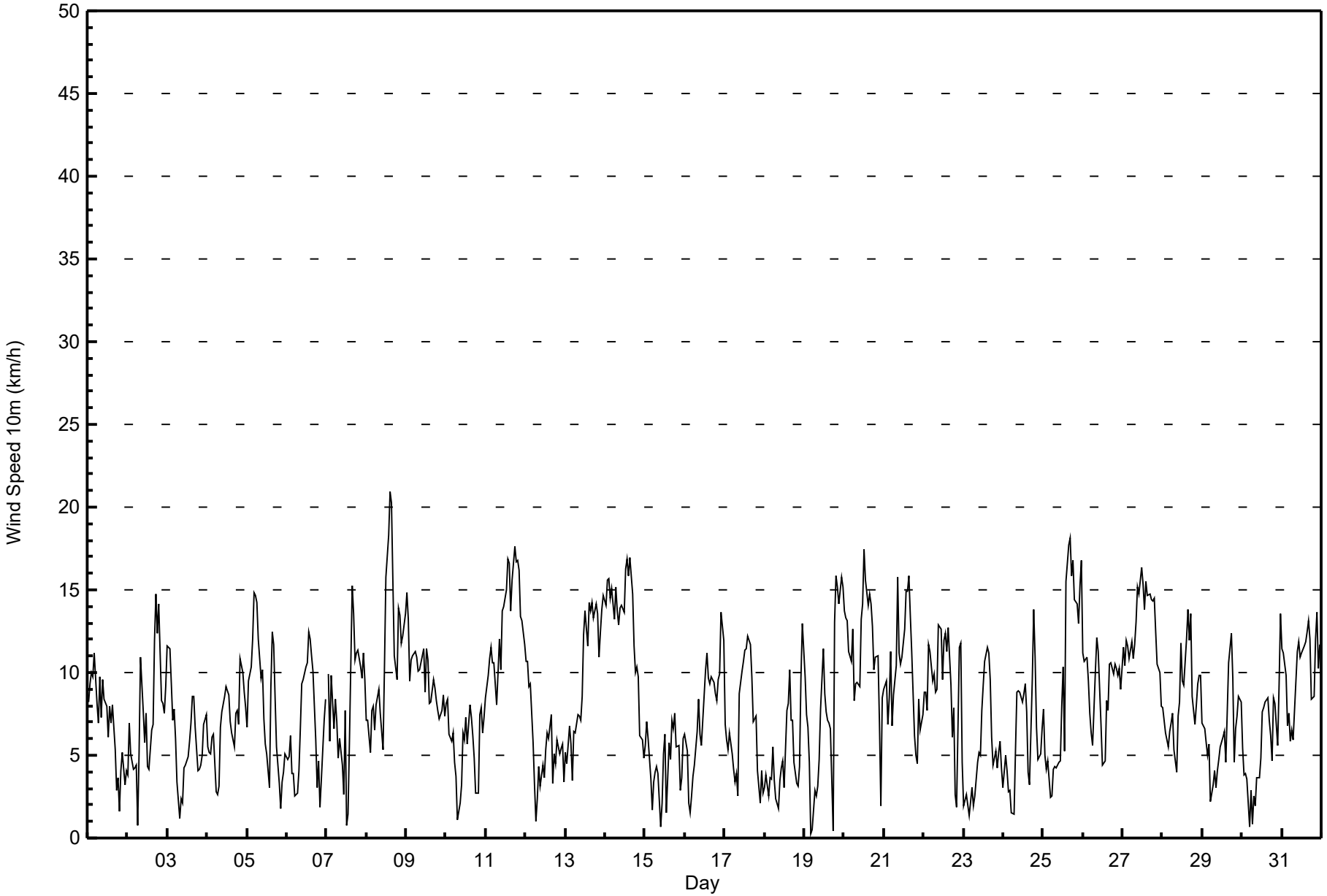
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Mildred Lake - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	212	28.53	28.53
6 - 11	373	50.20	78.73
12 - 19	156	21.00	99.73
20 - 28	2	0.27	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 743

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Mildred Lake - March 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	23	19	7	5	8	12	10	18	20	29	10	6	7	6	6	26	212
6 - 11	110	47	7	0	5	17	48	55	25	6	7	6	2	3	9	26	373
12 - 19	68	34	0	0	0	1	12	16	1	0	0	0	0	0	14	10	156
20 - 28	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	203	100	14	5	13	30	70	89	46	35	17	12	9	9	29	62	743

Total Number of Valid Hours: 743

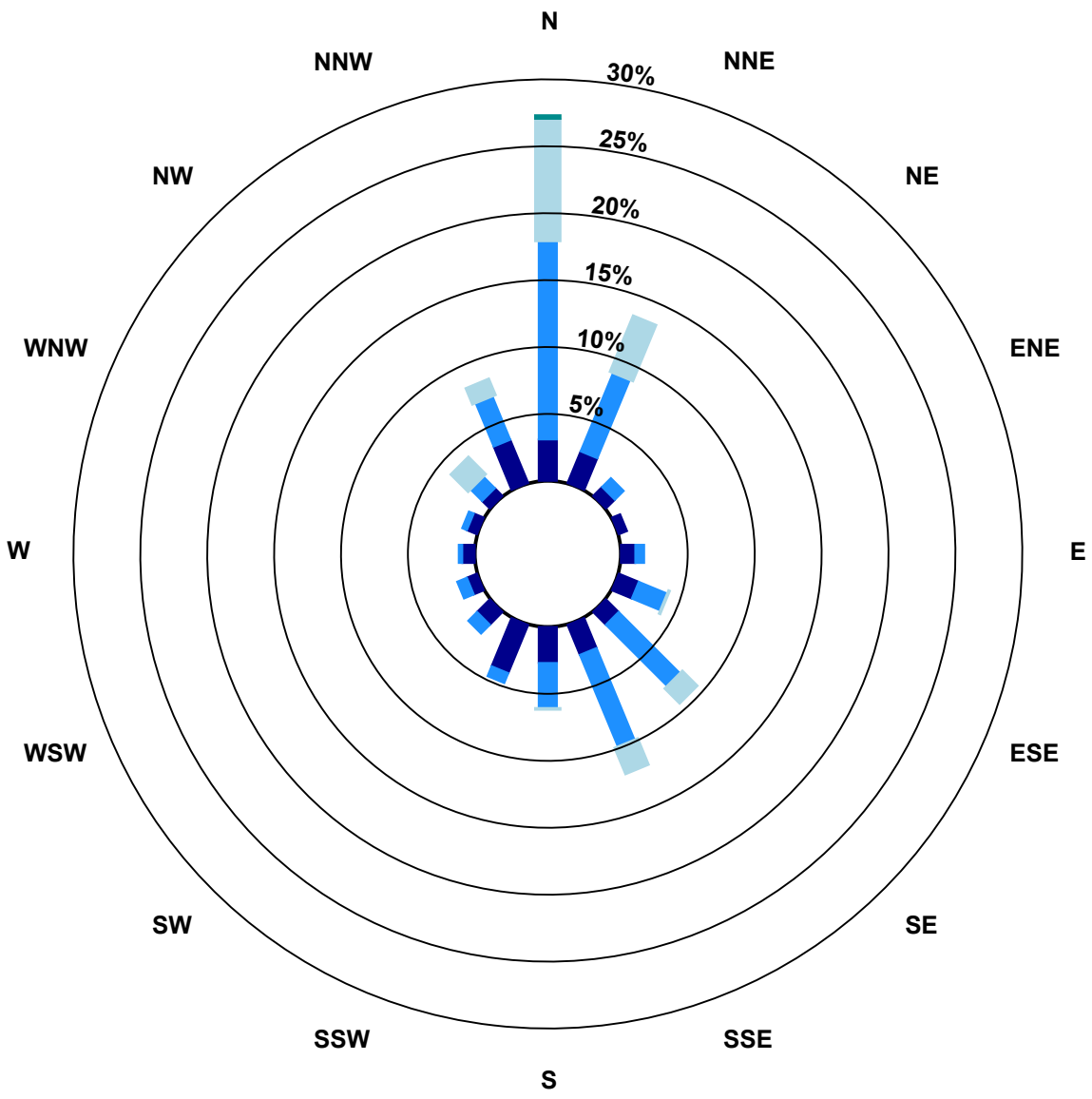
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 10m (WS10) - km/h

Mildred Lake



Classes (km/h)

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

Total Number of Valid Hours: 743

Direction of Maximum Speed: 357 deg on Mar 8 15:00
Direction of Maximum Daily Speed Average: 0.4 deg on Mar 11

Direction of Minimum Speed: 290 deg on Mar 19 05:00

Direction of Minimum Daily Speed Average: 0.3 deg on Mar 29

Monthly Average Direction: 22.4 deg

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	171	185	176	174	177	181	176	182	163	169	145	142	168	141	149	142	131	145	165	122	80	117	167	210	162.3
2-Mar	180	160	169	180	165	116	174	328	347	352	340	311	191	244	278	301	343	13	15	15	30	10	20	32	358.2
3-Mar	17	12	13	14	3	7	15	213	177	160	189	189	199	156	136	123	116	114	104	146	166	191	180	181	106.2
4-Mar	192	195	211	220	218	197	194	182	164	147	152	145	143	153	198	250	251	217	220	239	324	352	356	354	203.0
5-Mar	15	4	359	358	4	6	0	4	40	35	11	295	248	169	152	151	129	92	77	36	1	338	354	357	21.9
6-Mar	348	346	343	338	201	181	172	198	193	179	166	157	161	154	149	135	134	153	120	201	295	333	319	352	161.9
7-Mar	PF	6	13	359	357	2	2	348	334	340	23	199	144	30	14	3	5	4	356	355	0	352	356	9	359.5
8-Mar	7	350	350	2	5	0	333	340	334	326	300	330	354	2	357	2	10	18	17	29	21	13	27	26	2.2
9-Mar	19	30	18	29	35	20	27	36	36	32	42	23	357	359	3	358	30	31	18	6	8	11	358	358	19.8
10-Mar	354	357	5	2	358	1	3	34	151	198	162	158	154	131	164	164	125	92	80	7	32	360	5	356	47.8
11-Mar	354	355	358	357	358	1	8	357	358	355	353	348	356	358	355	4	357	4	9	11	9	5	9	3	0.4
12-Mar	3	5	2	8	7	20	224	298	329	244	350	19	211	231	241	214	327	44	17	17	28	13	17	18	353.6
13-Mar	350	22	3	2	357	360	360	4	1	346	335	324	334	347	359	9	11	12	4	7	5	3	2	0	358.2
14-Mar	358	3	355	356	355	357	354	353	2	356	12	10	1	1	352	356	356	356	360	11	5	354	338	333	358.3
15-Mar	336	334	343	331	281	316	351	349	345	140	254	311	241	236	150	118	146	133	137	123	136	122	1	338	11.8
16-Mar	348	353	19	130	185	153	157	156	149	156	155	175	163	147	147	135	140	137	97	103	114	120	140	139	137.3
17-Mar	123	133	142	168	174	167	176	193	225	318	338	11	352	12	13	18	29	30	25	31	22	323	337	187	21.0
18-Mar	213	204	223	28	4	348	347	349	190	179	170	191	130	181	157	136	136	119	86	102	46	348	340	346	114.3
19-Mar	347	332	334	339	290	220	168	98	169	161	158	148	144	141	141	142	158	68	355	3	5	7	5	360	27.0
20-Mar	355	0	358	358	356	354	356	358	350	336	319	327	317	325	330	329	330	346	8	3	359	16	86	131	345.9
21-Mar	124	124	128	129	142	139	151	146	144	165	171	169	165	152	154	151	136	127	131	105	137	155	156	163	146.3
22-Mar	142	156	177	173	178	176	172	166	160	151	150	150	152	143	134	149	132	2	339	330	249	325	360	6	153.4
23-Mar	118	356	31	69	249	299	281	203	196	198	190	153	149	143	150	139	127	123	92	85	56	77	88	114	134.3
24-Mar	45	41	42	25	156	142	154	166	172	159	155	147	144	150	159	166	260	301	314	316	316	279	224	259	194.3
25-Mar	244	202	206	204	274	283	230	234	279	262	203	172	152	317	310	315	322	15	21	26	14	8	10	11	338.1
26-Mar	10	4	6	15	12	35	27	25	25	13	15	9	40	337	342	9	6	26	9	4	4	17	18	16	12.5
27-Mar	27	20	16	4	13	22	22	27	33	21	13	10	18	18	24	16	20	16	5	3	9	3	358	0	15.3
28-Mar	359	3	6	5	5	359	2	358	335	319	321	318	350	348	321	319	325	326	358	13	13	8	5	358	345.9
29-Mar	360	354	355	3	1	353	332	330	324	193	200	205	218	199	168	151	157	154	144	118	4	1	353	348	39.8
30-Mar	353	346	306	337	14	347	234	13	219	174	196	201	192	178	182	172	141	94	13	16	24	10	88	121	113.0
31-Mar	136	139	131	119	112	110	108	126	150	155	146	163	152	164	152	148	145	143	124	119	133	136	122	126	138.2
	13.6	13.4	7.9	10.7	12.5	12.6	11.8	13.9	37.0	49.2	68.2	102.6	133.5	93.1	65.5	59.1	48.0	39.1	22.9	20.7	18.3	11.6	13.8	16.4	
	Diurnal Average																								

PF - Power Failure
All monthly, daily, and diurnal averages have been calculated using vector methods

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

Maximum Value: 95 deg on Mar 7 13:00

Minimum Value: 7 deg on Mar 15 06:00

Percentiles: P_1 = 9 P_{10} = 13 Q_1 = 15 Median = 18 Q_3 = 25 P_{90} = 45 P_{99} = 84

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	12	10	12	12	13	15	13	15	16	14	15	16	26	16	16	17	17	62	29	60	15	14	34	13	62
2-Mar	22	16	21	24	33	34	92	39	13	14	23	15	41	44	32	18	31	18	20	19	25	20	19	19	92
3-Mar	20	18	18	19	18	18	21	87	45	48	21	21	18	18	17	19	18	18	14	19	14	11	10	10	87
4-Mar	15	16	21	28	22	59	53	49	14	14	12	15	15	11	28	27	32	24	26	31	37	13	13	14	59
5-Mar	17	16	17	16	19	19	17	24	24	22	36	59	54	75	17	13	21	13	23	19	25	21	19	11	75
6-Mar	9	9	7	57	16	38	33	15	16	14	17	15	17	13	14	15	16	62	44	19	69	22	25	12	69
7-Mar	UO	16	21	17	18	15	16	20	15	35	69	20	95	81	81	18	16	22	17	16	19	14	13	17	95
8-Mar	19	15	19	17	20	18	13	13	17	28	32	18	17	20	19	18	21	21	19	18	20	24	22	22	32
9-Mar	23	19	20	19	21	22	21	23	24	24	23	29	26	32	37	40	28	24	19	19	17	17	12	14	40
10-Mar	12	14	16	14	13	17	18	68	53	36	17	30	29	50	23	25	31	17	33	69	17	13	14	10	69
11-Mar	11	13	13	12	13	14	16	13	14	16	14	14	16	18	15	19	16	17	17	18	19	19	19	17	19
12-Mar	18	19	18	17	18	21	83	35	22	56	57	64	43	41	42	22	61	26	15	11	13	14	14	52	83
13-Mar	14	12	12	15	27	22	14	12	13	14	13	12	16	17	19	19	18	19	16	18	17	16	16	15	27
14-Mar	14	16	15	15	15	15	14	15	17	16	20	22	20	21	18	18	18	15	16	17	16	18	11	10	22
15-Mar	9	8	8	20	29	7	11	9	12	87	74	53	30	77	15	24	17	16	14	19	16	27	30	11	87
16-Mar	11	16	40	41	25	18	14	11	11	24	26	19	18	19	27	22	17	22	14	16	17	18	15	16	41
17-Mar	17	19	15	14	23	36	31	30	54	12	24	26	27	27	23	22	25	21	18	17	37	37	15	53	54
18-Mar	32	31	68	37	50	18	54	52	86	35	28	75	76	31	39	17	18	19	23	17	32	80	12	10	86
19-Mar	13	13	10	12	94	76	45	37	28	21	22	15	24	25	20	19	18	92	15	17	18	17	18	17	94
20-Mar	15	16	14	15	13	13	14	16	11	19	12	16	10	15	17	14	13	16	17	15	14	27	56	17	56
21-Mar	17	18	18	21	15	18	14	16	15	19	17	18	17	13	15	11	20	19	20	12	21	17	21	20	21
22-Mar	17	12	18	12	12	14	13	16	16	14	15	17	16	16	17	13	19	64	11	73	63	35	16	28	73
23-Mar	47	46	63	62	57	51	60	69	17	19	27	17	16	15	17	16	22	21	19	10	20	18	12	17	69
24-Mar	22	13	20	24	53	66	74	25	15	14	13	14	15	16	18	45	58	17	10	9	12	36	19	25	74
25-Mar	21	23	24	45	77	70	31	34	43	44	36	25	13	63	14	18	27	21	20	22	22	20	19	19	77
26-Mar	19	17	20	20	20	26	23	23	25	27	34	44	64	86	36	38	27	21	18	16	16	19	20	19	86
27-Mar	19	19	19	16	18	19	20	21	23	21	23	21	24	28	27	24	22	22	17	17	17	16	14	16	28
28-Mar	15	16	14	17	11	13	13	19	50	13	24	16	38	37	22	16	19	14	17	16	16	16	17	14	50
29-Mar	13	10	9	13	12	34	14	14	23	40	29	28	30	26	51	24	14	13	12	45	17	11	12	11	51
30-Mar	15	22	21	58	68	45	71	31	63	48	43	33	19	20	27	21	27	24	30	20	17	15	27	18	71
31-Mar	18	16	17	22	17	15	16	23	17	15	15	17	21	18	20	20	16	17	18	16	19	16	18	18	23
	47	46	68	62	94	76	92	87	86	87	74	75	95	86	81	45	61	92	44	73	69	80	56	53	
	Diurnal Maximum																								

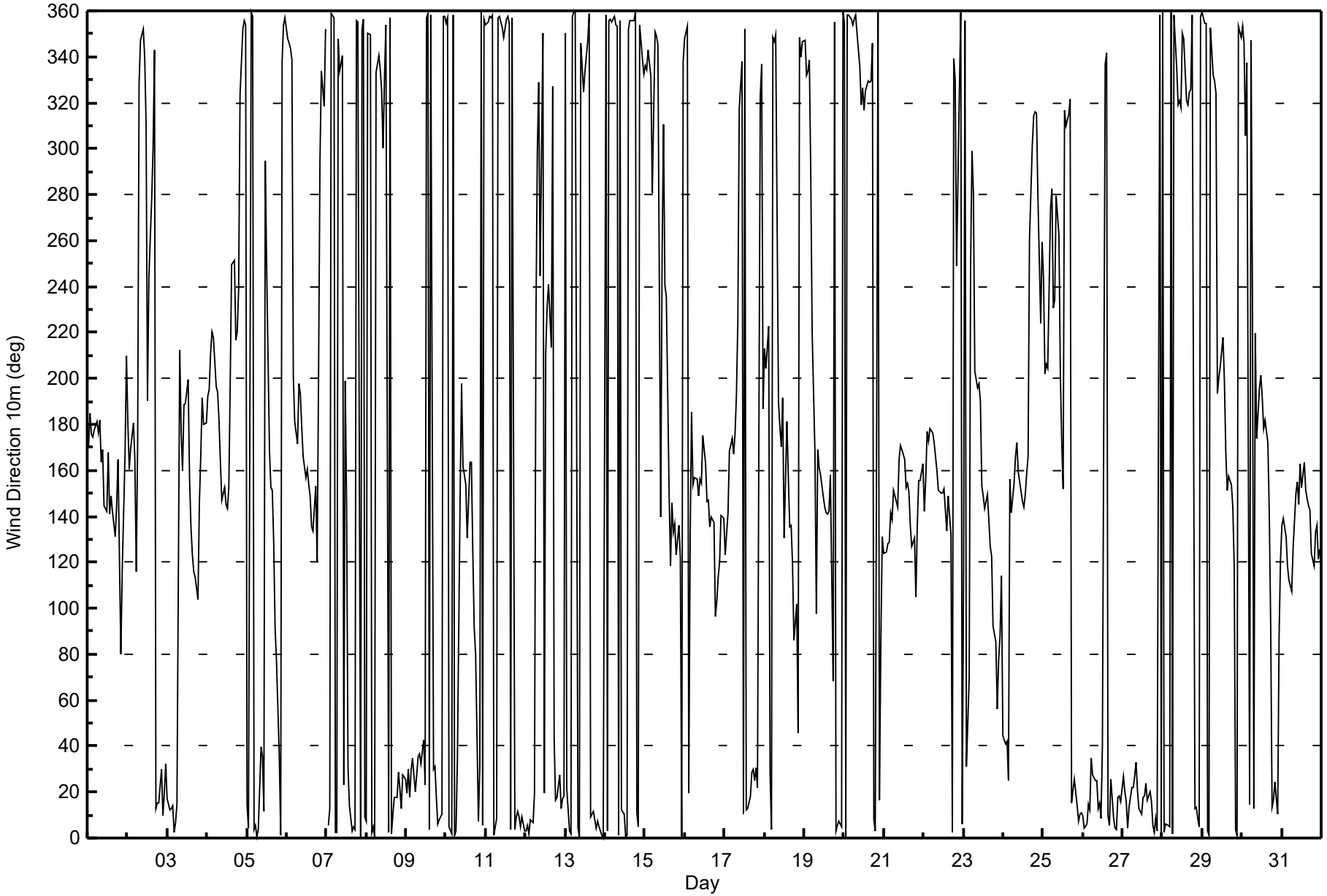
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Mildred Lake - March 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS03
LOWER CAMP METEOROLOGY
MARCH 2025

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

April 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - LOWER CAMP MET TOWER (AMS03)
MARCH 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	722	0	22	97.04	10.5	-	1.7	-
Temperature 45 m (C) Average	743	0	1	99.87	10.2	-	2.2	-
Temperature 100 m (C) Average	743	0	1	99.87	9.6	-	2.2	-
Temperature 163 m (C) Average	743	0	1	99.87	9	-	2.4	-
Relative Humidity 20 m (%) Average	722	0	22	97.04	90.2	-	77.9	-
Relative Humidity 45 m (%) Average	743	0	1	99.87	88.2	-	76.8	-
Relative Humidity 100 m (%) Average	743	0	1	99.87	89.9	-	79.2	-
Relative Humidity 163 m (%) Average	743	0	1	99.87	89.6	-	80.0	-
Wind Speed 20 m (km/h) Average	743	0	1	99.87	22	-	12.0	-
Wind Speed 45 m (km/h) Average	743	0	1	99.87	30	-	18.0	-
Wind Speed 100 m (km/h) Average	743	0	1	99.87	34	-	22.0	-
Wind Speed 163 m (km/h) Average	743	0	1	99.87	37	-	27.0	-
Wind Direction 20 m (deg) Average	743	0	1	99.87	-	-	-	-
Wind Direction 45 m (deg) Average	743	0	1	99.87	-	-	-	-
Wind Direction 100 m (deg) Average	743	0	1	99.87	-	-	-	-
Wind Direction 163 m (deg) Average	743	0	1	99.87	-	-	-	-
Vertical Wind Speed 20 m (km/h) Average	743	0	1	99.87	0.5	-	-0.1	-
Vertical Wind Speed 45 m (km/h) Average	743	0	1	99.87	1.1	-	0.4	-
Vertical Wind Speed 100 m (km/h) Average	743	0	1	99.87	2.7	-	0.8	-
Vertical Wind Speed 163 m (km/h) Average	743	0	1	99.87	3.7	-	1.0	-

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

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

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
Temperature 20 m (C) Average	722	-7.7	7.4	-	-25.8	-17.9	-13.3	-7.3	-2.1	1.7	10.5
Temperature 45 m (C) Average	743	-7.33	7.4	-	-25.4	-17.6	-12.9	-7.2	-1.6	2.3	10.2
Temperature 100 m (C) Average	743	-7.44	7.4	-	-23.7	-17.2	-13.1	-7.6	-1.8	2.2	9.6
Temperature 163 m (C) Average	743	-7.64	7.5	-	-24.4	-17.1	-13.5	-7.8	-1.9	2.9	9
Relative Humidity 20 m (%) Average	722	63.65	14.9	-	24.1	43.2	51.8	65.7	76.1	81.9	90.2
Relative Humidity 45 m (%) Average	743	62.28	14.6	-	23.4	42.3	51.1	64.2	74.7	80.7	88.2
Relative Humidity 100 m (%) Average	743	62.67	14.6	-	24.3	43.3	51.4	64	74.9	81.6	89.9
Relative Humidity 163 m (%) Average	743	60.99	15	-	23.5	41.6	49.5	61.7	74.1	80.5	89.6
Wind Speed 20 m (km/h) Average	743	7.2	4	-	0	2	4	7	11	13	22
Wind Speed 45 m (km/h) Average	743	10.4	6	-	0	3	6	10	15	19	30
Wind Speed 100 m (km/h) Average	743	12.9	7	-	0	4	8	12	18	23	34
Wind Speed 163 m (km/h) Average	743	15.1	8	-	1	6	9	15	21	25	37
Wind Direction 20 m (deg) Average	743	-	-	-	-	-	-	-	-	-	-
Wind Direction 45 m (deg) Average	743	-	-	-	-	-	-	-	-	-	-
Wind Direction 100 m (deg) Average	743	-	-	-	-	-	-	-	-	-	-
Wind Direction 163 m (deg) Average	743	-	-	-	-	-	-	-	-	-	-
Vertical Wind Speed 20 m (km/h) Average	743	-0.15	0.2	-	-0.9	-0.4	-0.3	-0.1	0	0.1	0.5
Vertical Wind Speed 45 m (km/h) Average	743	0.19	0.2	-	-0.7	-0.1	0.1	0.2	0.3	0.5	1.1
Vertical Wind Speed 100 m (km/h) Average	743	0.06	0.4	-	-1.1	-0.3	-0.1	0	0.2	0.6	2.7
Vertical Wind Speed 163 m (km/h) Average	743	0.29	0.6	-	-1	-0.2	0	0.2	0.5	0.9	3.7

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

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL METEOROLOGICAL SENSORS	07 Mar 2025 05:00	07 Mar 2025 05:00	1	Flat line in sensor output signal
Relative Humidity, Temeprature, 20m	04 Mar 2025 12:00	04 Mar 2025 12:00	1	DAS Failure - data not recorded
Relative Humidity, Temeprature, 20m	05 Mar 2025 12:00	05 Mar 2025 12:00	1	DAS Failure - data not recorded
Relative Humidity, Temeprature, 20m	05 Mar 2025 16:00	05 Mar 2025 17:00	2	DAS Failure - data not recorded
Relative Humidity, Temeprature, 20m	22 Mar 2025 10:00	22 Mar 2025 10:00	1	DAS Failure - data not recorded
Relative Humidity, Temeprature, 20m	24 Mar 2025 09:00	24 Mar 2025 15:00	7	DAS Failure - data not recorded
Relative Humidity, Temeprature, 20m	24 Mar 2025 19:00	24 Mar 2025 20:00	2	DAS Failure - data not recorded
Relative Humidity, Temeprature, 20m	25 Mar 2025 10:00	25 Mar 2025 11:00	2	DAS Failure - data not recorded
Relative Humidity, Temeprature, 20m	31 Mar 2025 10:00	31 Mar 2025 13:00	4	DAS Failure - data not recorded
Relative Humidity, Temeprature, 20m	31 Mar 2025 21:00	31 Mar 2025 21:00	1	DAS Failure - data not recorded

Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 20m (AT20) - C

Lower Camp Met Tower - March 2025

Maximum Value: 10.5 C on Mar 25 15:00

Maximum Daily Average: 1.7 C on Mar 23

Minimum Value: -25.8 C on Mar 13 08:00

Minimum Daily Average: -20.6 C on Mar 9

Maximum Diurnal Average: -2.3 C at hour 17

Minimum Diurnal Average: -12.4 C at hour 7

Monthly Average: -7.70 C

Percentiles: P_1 = -22.9 P_{10} = -17.9 Q_1 = -13.3 Median = -7.3 Q_3 = -2.1 P_{90} = 1.7 P_{99} = 7.2

Hours in Service:	744
Hours of Data:	722
Hours of Missing Data:	22
Hours of Calibration:	0
Percent Operational Time:	97.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-8.5	-9.3	-9.9	-10.4	-11.1	-11.4	-12.0	-12.2	-11.7	-9.8	-7.0	-3.9	-0.8	1.5	4.1	5.6	5.9	5.6	3.7	0.9	-0.8	-0.6	-0.7	-1.6	-3.9	5.9
2-Mar	-0.2	-0.5	-0.4	-0.2	0.1	0.3	0.3	-0.1	0.1	0.5	1.4	3.7	4.4	5.9	7.1	7.1	6.6	3.5	1.5	0.7	-0.2	-1.3	-1.9	-2.5	1.5	7.1
3-Mar	-3.9	-5.1	-5.6	-6.0	-6.1	-6.1	-6.1	-6.1	-5.6	-5.0	-4.4	-3.8	-2.9	-2.2	-1.3	-0.5	-0.2	0.0	-0.4	-1.3	-1.4	-1.2	-1.9	-2.7	-3.3	0.0
4-Mar	-3.1	-4.1	-5.4	-6.2	-6.8	-6.9	-7.0	-8.5	-7.3	-6.0	-4.1	DF	0.2	3.0	5.3	6.1	6.3	5.9	5.5	4.7	3.2	1.9	0.8	-0.8	-1.0	6.3
5-Mar	-1.8	-2.7	-2.6	-2.5	-3.4	-4.6	-5.2	-5.7	-6.5	-5.8	-4.1	DF	-4.2	-2.6	-2.5	DF	DF	-1.2	-1.7	-2.3	-3.0	-3.6	-4.2	-4.9	-3.6	-1.2
6-Mar	-6.0	-7.8	-9.5	-10.2	-11.3	-11.8	-13.1	-13.3	-11.9	-9.5	-6.7	-3.8	-1.9	-0.1	1.0	2.2	3.4	3.8	2.4	1.8	-0.3	-1.8	-1.7	-2.4	-4.5	3.8
7-Mar	-2.7	-2.8	-3.6	-4.2	UO	-5.4	-5.8	-6.1	-6.0	-4.9	-3.2	-2.5	-0.5	0.5	1.7	1.7	0.3	-1.0	-2.1	-3.3	-4.2	-5.0	-5.9	-6.5	-3.1	1.7
8-Mar	-6.9	-7.3	-7.7	-7.9	-7.9	-8.0	-8.1	-8.0	-7.4	-6.7	-6.2	-4.5	-4.6	-5.8	-7.5	-8.6	-9.3	-10.3	-11.2	-12.0	-13.6	-14.9	-16.5	-18.4	-9.1	-4.5
9-Mar	-19.8	-21.0	-21.8	-22.5	-22.8	-22.9	-22.9	-22.9	-22.7	-22.3	-21.7	-21.6	-19.9	-19.1	-18.6	-17.8	-18.0	-18.0	-18.7	-19.2	-19.3	-19.7	-20.0	-20.3	-20.6	-17.8
10-Mar	-20.7	-21.1	-21.3	-21.3	-21.3	-21.2	-21.2	-21.0	-20.4	-19.0	-17.8	-16.5	-15.5	-14.3	-13.7	-13.2	-12.4	-12.3	-12.8	-13.4	-14.0	-14.2	-14.7	-15.1	-17.0	-12.3
11-Mar	-15.5	-16.3	-17.4	-18.1	-18.4	-18.4	-18.5	-18.4	-17.5	-16.0	-14.8	-14.2	-12.3	-12.3	-12.1	-11.7	-11.9	-12.9	-14.1	-15.3	-16.2	-16.9	-17.5	-17.9	-15.6	-11.7
12-Mar	-18.1	-18.3	-18.4	-18.4	-18.9	-19.9	-20.4	-21.0	-19.3	-17.6	-16.5	-15.5	-14.1	-14.5	-13.6	-12.8	-11.6	-12.2	-13.7	-15.2	-15.6	-17.2	-19.7	-20.7	-16.8	-11.6
13-Mar	-21.8	-21.9	-22.8	-22.9	-23.9	-24.9	-25.6	-25.8	-23.7	-20.9	-17.2	-13.5	-13.0	-12.2	-11.3	-10.8	-10.7	-11.3	-11.7	-12.7	-13.3	-13.7	-14.0	-14.3	-17.3	-10.7
14-Mar	-14.4	-14.5	-14.7	-14.8	-15.0	-15.6	-15.9	-16.3	-16.4	-16.0	-15.0	-13.2	-11.5	-11.0	-10.7	-10.8	-11.3	-11.6	-12.1	-12.6	-13.0	-13.5	-13.7	-14.0	-13.6	-10.7
15-Mar	-14.3	-15.2	-15.8	-16.8	-18.4	-19.6	-20.8	-20.3	-18.3	-16.3	-14.9	-13.4	-12.6	-11.5	-10.8	-10.4	-9.4	-10.2	-10.7	-11.3	-11.5	-12.0	-13.0	-13.6	-14.2	-9.4
16-Mar	-13.9	-14.3	-14.7	-15.5	-16.0	-16.9	-18.1	-19.3	-18.3	-16.3	-13.6	-10.5	-9.1	-8.4	-7.8	-7.4	-7.3	-7.3	-7.6	-8.2	-8.3	-8.6	-8.6	-8.6	-11.9	-7.3
17-Mar	-8.8	-8.8	-8.8	-9.0	-8.8	-8.8	-9.2	-9.6	-8.8	-8.5	-7.0	-5.8	-5.4	-5.7	-6.7	-7.0	-7.1	-7.2	-8.2	-9.7	-10.7	-11.1	-12.2	-12.1	-8.5	-5.4
18-Mar	-11.6	-11.6	-11.4	-12.3	-12.7	-13.4	-13.7	-13.6	-11.8	-10.4	-7.3	-6.3	-4.7	-3.8	-3.7	-2.7	-2.1	-2.1	-2.3	-3.7	-5.5	-6.7	-7.9	-10.1	-8.0	-2.1
19-Mar	-11.2	-12.1	-13.2	-14.8	-16.3	-17.6	-17.7	-17.1	-14.3	-10.1	-7.9	-5.3	-2.5	-0.7	1.1	2.4	2.9	3.2	0.5	-1.9	-3.5	-5.2	-7.3	-9.5	-7.4	3.2
20-Mar	-11.1	-12.5	-13.6	-14.6	-15.3	-16.0	-16.6	-16.1	-14.5	-11.5	-10.0	-8.9	-7.6	-6.8	-5.7	-4.3	-4.0	-5.2	-7.1	-8.9	-10.4	-12.2	-12.7	-11.3	-10.7	-4.0
21-Mar	-11.9	-12.4	-12.7	-13.4	-13.6	-14.0	-14.9	-14.3	-12.8	-10.5	-8.3	-6.0	-4.1	-2.4	-0.9	0.4	1.2	0.9	-0.2	-1.7	-2.8	-3.3	-3.9	-4.1	-6.9	1.2
22-Mar	-3.7	-3.7	-3.7	-4.0	-4.7	-5.5	-6.1	-6.3	-5.3	DF	-1.8	-0.1	2.0	3.9	5.4	6.5	7.5	7.5	6.0	4.4	3.3	3.4	1.0	0.4	0.3	7.5
23-Mar	0.2	-0.4	-0.7	-1.1	-1.3	-1.4	-2.4	-2.3	-1.5	-0.3	2.0	3.4	4.5	5.6	6.1	6.8	7.2	7.3	6.9	3.9	1.2	-0.5	-1.0	-1.4	1.7	7.3
24-Mar	-3.1	-4.6	-5.0	-5.4	-5.2	-5.9	-5.4	-3.6	DF	DF	DF	DF	DF	DF	DF	5.1	5.5	6.0	DF	DF	4.2	2.9	2.3	2.3	--	6.0
25-Mar	1.7	1.0	0.5	0.0	-0.3	-0.8	-1.0	-0.6	0.4	DF	DF	5.2	7.0	8.3	10.5	9.8	9.5	4.2	0.8	-1.5	-3.0	-4.0	-5.3	-6.3	1.6	10.5
26-Mar	-7.2	-7.9	-8.7	-9.7	-10.7	-11.6	-11.8	-11.2	-10.4	-9.9	-9.0	-7.8	-6.6	-5.2	-4.3	-4.0	-4.1	-4.6	-5.2	-5.6	-5.9	-6.4	-6.9	-7.3	-7.6	-4.0
27-Mar	-7.7	-8.0	-8.2	-8.4	-8.7	-8.9	-9.0	-9.1	-8.9	-8.1	-7.4	-7.1	-6.4	-5.3	-5.1	-5.2	-5.5	-6.1	-7.4	-9.0	-10.4	-11.4	-12.4	-13.5	-8.2	-5.1
28-Mar	-14.6	-15.4	-16.5	-17.5	-17.9	-18.7	-18.9	-16.6	-13.9	-11.0	-9.0	-7.6	-6.9	-5.5	-5.1	-4.5	-4.2	-4.0	-5.3	-6.7	-7.7	-9.2	-10.7	-12.3	-10.8	-4.0
29-Mar	-13.5	-14.5	-15.3	-16.5	-17.4	-18.6	-18.6	-16.0	-14.0	-10.8	-8.8	-6.7	-4.6	-3.2	-2.1	-1.4	-1.4	-1.4	-1.6	-2.2	-4.0	-4.7	-6.0	-7.3	-8.8	-1.4
30-Mar	-8.5	-9.3	-10.0	-10.9	-11.6	-12.5	-12.9	-10.2	-8.5	-6.5	-3.7	-1.9	-0.4	0.6	1.4	2.0	2.7	3.0	2.2	0.8	0.4	-0.3	-0.1	-0.5	-3.9	3.0
31-Mar	-1.0	-1.5	-2.1	-2.9	-3.7	-4.2	-4.5	-4.3	-3.0	DF	DF	DF	DF	1.6	2.3	2.6	2.9	2.9	2.4	1.4	DF	0.1	-0.6	-0.9	-0.7	2.9
	-9.1	-9.8	-10.4	-10.9	-11.6	-12.0	-12.4	-12.1	-11.3	-10.7	-8.7	-7.0	-5.3	-4.1	-3.2	-2.5	-2.3	-2.7	-4.1	-5.3	-6.2	-6.8	-7.6	-8.3	Diurnal Average	
	1.7	1.0	0.5	0.0	0.1	0.3	0.3	-0.1	0.4	0.5	2.0	5.2	7.0	8.3	10.5	9.8	9.5	7.5	6.9	4.7	4.2	3.4	2.3	2.3	Diurnal Maximum	

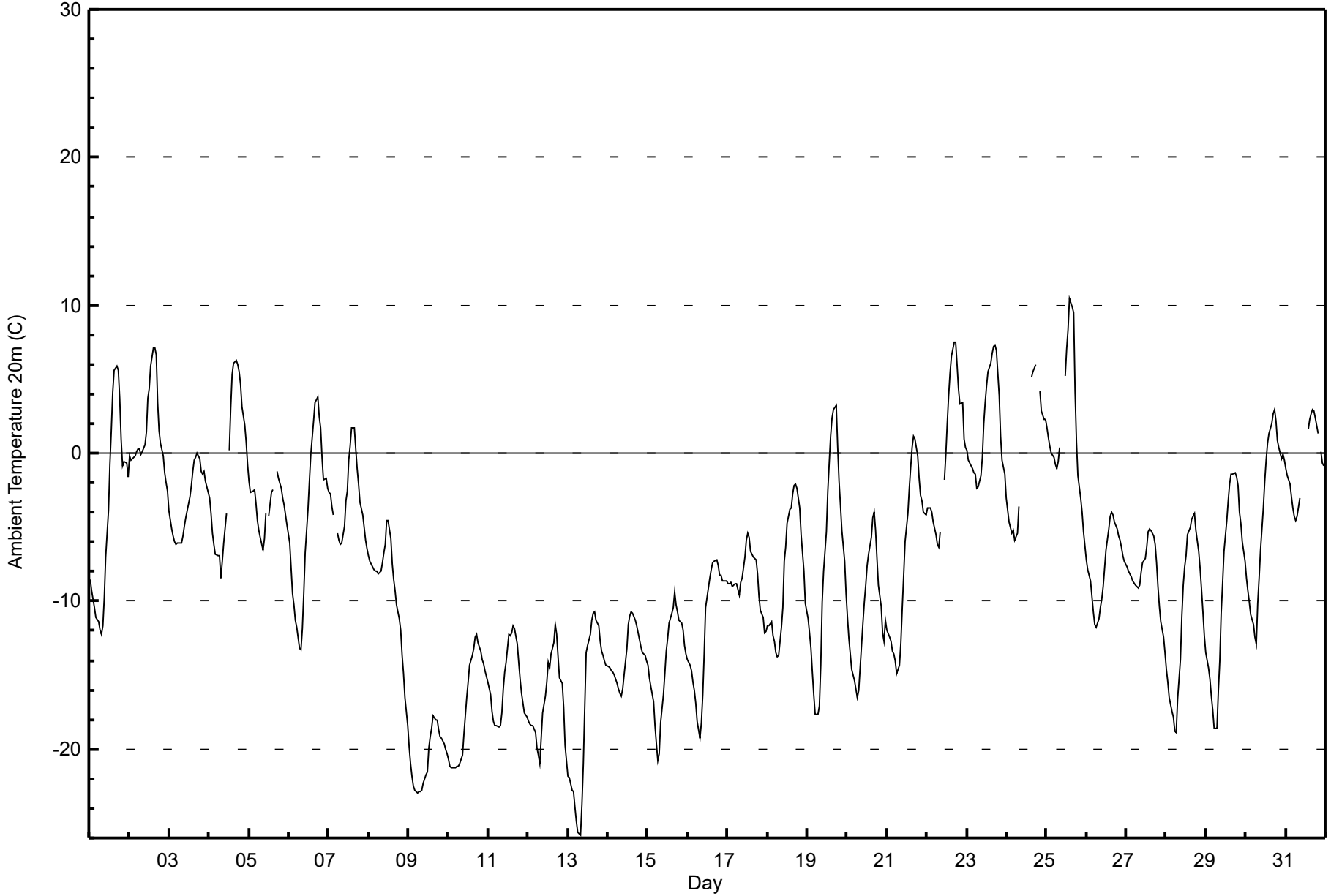
DF - DAS Failure UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 20m (AT20) - C

Lower Camp Met Tower - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	37	5.12	5.12
-20 - 0	573	79.36	84.49
0 - 10	111	15.37	99.86
10 - 20	1	0.14	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 722

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 45m (AT45) - C

Lower Camp Met Tower - March 2025

Maximum Value: 10.2 C on Mar 25 15:00

Maximum Daily Average: 2.2 C on Mar 23

Minimum Value: -25.4 C on Mar 13 08:00

Minimum Daily Average: -20.8 C on Mar 9

Maximum Diurnal Average: -2.4 C at hour 17

Minimum Diurnal Average: -11.9 C at hour 7

Monthly Average: -7.33 C

Percentiles: P_1 = -22.9 P_{10} = -17.6 Q_1 = -12.9 Median = -7.2 Q_3 = -1.6 P_{90} = 2.3 P_{99} = 7.2

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-8.2	-8.8	-9.3	-9.9	-10.7	-10.8	-11.6	-11.8	-11.5	-9.8	-7.0	-3.8	-0.7	1.7	4.1	5.8	6.3	6.0	5.1	3.6	1.4	1.3	0.8	0.9	-3.2	6.3
2-Mar	0.2	0.0	0.0	0.2	0.5	0.7	0.8	0.3	0.2	0.5	1.5	3.5	4.3	5.7	7.2	7.6	6.8	3.4	1.5	0.6	-0.3	-1.5	-2.1	-2.7	1.6	7.6
3-Mar	-4.0	-5.3	-5.7	-6.0	-6.2	-6.2	-6.2	-6.2	-5.8	-5.1	-4.3	-3.9	-3.2	-2.4	-1.4	-0.6	-0.4	-0.1	-0.1	-0.2	-0.6	-0.5	-0.9	-1.8	-3.2	-0.1
4-Mar	-2.5	-3.4	-4.3	-5.0	-4.8	-5.3	-6.2	-7.0	-6.6	-5.6	-3.8	-2.2	0.1	3.0	5.4	6.4	6.5	6.5	6.2	5.1	3.5	2.0	0.9	-0.3	-0.5	6.5
5-Mar	-1.5	-2.2	-2.5	-2.5	-3.5	-4.7	-5.3	-5.8	-6.8	-6.2	-4.5	-3.8	-4.5	-2.8	-2.7	-2.6	-1.8	-1.3	-1.6	-2.0	-2.5	-3.0	-3.8	-4.5	-3.4	-1.3
6-Mar	-5.7	-6.6	-8.1	-9.4	-9.8	-10.5	-10.8	-11.2	-11.3	-9.2	-6.9	-4.1	-2.2	-0.3	0.9	2.2	3.4	4.1	3.3	2.7	1.1	-0.5	-0.1	-0.7	-3.7	4.1
7-Mar	-2.2	-2.8	-3.7	-4.3	UO	-5.4	-5.9	-6.3	-6.2	-5.1	-3.4	-2.6	-0.8	0.5	1.6	1.5	0.0	-1.1	-2.2	-3.4	-4.3	-5.1	-6.0	-6.6	-3.2	1.6
8-Mar	-7.0	-7.5	-7.8	-8.0	-8.1	-8.1	-8.2	-8.1	-7.6	-6.8	-6.4	-4.9	-4.9	-6.1	-7.8	-8.9	-9.6	-10.5	-11.3	-12.1	-13.8	-15.0	-16.7	-18.5	-9.3	-4.9
9-Mar	-20.0	-21.1	-21.9	-22.5	-22.9	-23.1	-23.1	-23.1	-22.9	-22.6	-22.0	-21.9	-20.3	-19.6	-18.9	-18.1	-18.4	-18.3	-18.8	-19.3	-19.4	-19.8	-20.2	-20.4	-20.8	-18.1
10-Mar	-20.8	-21.2	-21.4	-21.4	-21.4	-21.3	-21.3	-21.1	-20.4	-19.1	-18.0	-16.7	-15.7	-14.5	-13.9	-13.4	-12.6	-12.4	-12.7	-12.9	-14.0	-14.3	-14.8	-15.1	-17.1	-12.4
11-Mar	-15.5	-16.3	-17.3	-18.1	-18.5	-18.6	-18.7	-18.6	-17.7	-16.2	-15.1	-14.4	-12.6	-12.7	-12.4	-12.0	-12.1	-13.1	-14.3	-15.4	-16.4	-17.0	-17.7	-18.0	-15.8	-12.0
12-Mar	-18.3	-18.4	-18.5	-18.5	-18.8	-19.2	-19.4	-19.3	-19.1	-17.7	-16.6	-15.6	-14.4	-14.6	-13.7	-13.0	-11.9	-12.2	-13.1	-14.4	-15.4	-16.2	-17.6	-19.1	-16.5	-11.9
13-Mar	-19.9	-19.9	-21.0	-22.4	-22.5	-23.6	-25.1	-25.4	-23.8	-21.1	-17.2	-13.7	-13.3	-12.5	-11.7	-11.0	-10.8	-11.4	-11.8	-12.8	-13.4	-13.8	-14.1	-14.4	-16.9	-10.8
14-Mar	-14.5	-14.6	-14.8	-14.9	-15.1	-15.6	-15.9	-16.3	-16.5	-16.2	-15.3	-13.6	-12.1	-11.5	-11.0	-11.1	-11.5	-11.8	-12.2	-12.6	-13.1	-13.4	-13.6	-13.9	-13.8	-11.0
15-Mar	-14.2	-14.6	-15.3	-15.9	-16.6	-17.4	-18.0	-18.5	-17.9	-16.5	-14.7	-13.4	-12.7	-11.6	-10.9	-10.5	-9.6	-10.3	-10.7	-11.1	-11.3	-11.8	-12.6	-13.2	-13.7	-9.6
16-Mar	-13.8	-14.3	-14.5	-15.3	-15.7	-16.8	-18.0	-19.1	-18.0	-16.0	-13.7	-10.8	-9.4	-8.8	-8.2	-7.7	-7.5	-7.3	-7.7	-8.2	-8.3	-8.6	-8.6	-8.7	-11.9	-7.3
17-Mar	-8.9	-8.9	-8.8	-9.0	-8.9	-8.9	-9.1	-9.4	-8.9	-8.7	-7.4	-6.2	-5.8	-6.1	-7.1	-7.3	-7.4	-7.4	-8.1	-9.5	-10.5	-10.8	-11.7	-11.5	-8.6	-5.8
18-Mar	-11.1	-11.2	-11.0	-11.9	-12.2	-13.4	-13.7	-13.7	-11.9	-10.6	-7.9	-6.5	-5.0	-4.0	-4.0	-3.1	-2.4	-2.2	-2.3	-3.1	-4.1	-5.4	-7.5	-9.5	-7.8	-2.2
19-Mar	-10.6	-11.5	-12.5	-13.0	-13.5	-14.8	-15.1	-14.9	-13.3	-10.4	-8.2	-5.5	-2.8	-0.9	0.9	2.3	2.9	3.3	0.6	-1.8	-3.5	-5.2	-7.4	-9.6	-6.9	3.3
20-Mar	-11.2	-12.5	-13.6	-14.4	-15.1	-15.8	-16.4	-16.1	-14.4	-11.6	-10.4	-9.2	-8.0	-7.2	-6.1	-4.8	-4.4	-5.5	-7.1	-8.5	-9.8	-11.1	-11.8	-10.9	-10.7	-4.4
21-Mar	-11.9	-12.3	-12.7	-13.4	-13.5	-13.9	-14.4	-14.2	-13.0	-10.8	-8.7	-6.4	-4.5	-2.8	-1.3	0.1	0.9	0.9	0.0	-1.6	-2.7	-3.3	-3.9	-4.0	-7.0	0.9
22-Mar	-3.5	-3.5	-3.5	-3.9	-4.6	-5.4	-6.1	-6.2	-5.5	-3.9	-2.0	-0.2	1.8	3.7	5.3	6.5	7.4	7.4	6.2	4.8	4.1	3.6	0.9	0.3	0.2	7.4
23-Mar	0.3	0.0	-0.3	-0.7	-0.9	-1.2	-2.2	-2.3	-1.6	-0.4	2.0	3.2	4.4	5.4	6.0	6.5	7.1	7.3	7.1	6.0	3.6	2.0	0.8	0.4	2.2	7.3
24-Mar	-0.6	-1.7	-1.9	-3.1	-3.1	-3.9	-3.6	-2.7	-1.7	0.2	1.7	2.9	3.4	4.2	4.7	5.2	5.5	6.1	6.1	5.1	4.4	3.4	2.4	2.3	1.5	6.1
25-Mar	1.7	1.1	0.7	0.2	-0.2	-0.4	-0.7	-0.6	0.3	1.6	3.3	5.3	7.1	8.4	10.2	9.7	9.2	4.0	0.7	-1.6	-3.1	-4.1	-5.4	-6.4	1.7	10.2
26-Mar	-7.3	-8.0	-8.7	-9.8	-10.8	-11.7	-11.9	-11.4	-10.9	-10.3	-9.3	-8.0	-6.9	-5.5	-4.6	-4.3	-4.4	-4.9	-5.3	-5.7	-6.0	-6.5	-7.0	-7.4	-7.8	-4.3
27-Mar	-7.8	-8.1	-8.3	-8.5	-8.8	-9.0	-9.1	-9.3	-9.2	-8.5	-7.9	-7.6	-6.9	-5.9	-5.7	-5.7	-6.0	-6.5	-7.5	-9.1	-10.4	-11.4	-12.4	-13.4	-8.5	-5.7
28-Mar	-14.4	-15.0	-16.0	-16.9	-17.2	-18.4	-18.7	-17.3	-14.8	-11.4	-9.3	-8.0	-7.3	-5.9	-5.4	-4.9	-4.6	-4.3	-5.3	-6.6	-7.7	-9.1	-10.5	-11.7	-10.9	-4.3
29-Mar	-12.7	-14.0	-15.1	-15.8	-16.7	-17.2	-17.9	-16.3	-13.8	-10.8	-8.9	-6.8	-4.7	-3.4	-2.3	-1.5	-1.7	-1.5	-1.7	-2.2	-3.8	-4.6	-5.9	-7.1	-8.6	-1.5
30-Mar	-8.2	-8.9	-9.1	-9.6	-10.7	-11.7	-11.7	-10.2	-8.6	-6.3	-3.7	-1.9	-0.5	0.4	1.1	1.7	2.5	2.8	2.4	1.0	0.3	-0.3	0.0	-0.6	-3.7	2.8
31-Mar	-1.1	-1.5	-2.2	-3.0	-3.8	-4.3	-4.6	-4.4	-3.2	-2.2	-1.2	0.0	0.6	1.2	1.9	2.3	2.7	2.7	2.4	1.7	1.0	0.3	-0.5	-0.8	-0.7	2.7
	-8.9	-9.5	-10.0	-10.5	-11.1	-11.5	-11.9	-11.8	-11.1	-9.6	-7.9	-6.4	-5.1	-4.0	-3.2	-2.7	-2.4	-2.8	-3.6	-4.6	-5.6	-6.4	-7.3	-8.0	Diurnal Average	
	1.7	1.1	0.7	0.2	0.5	0.7	0.8	0.3	0.3	1.6	3.3	5.3	7.1	8.4	10.2	9.7	9.2	7.4	7.1	6.0	4.4	3.6	2.4	2.3	Diurnal Maximum	

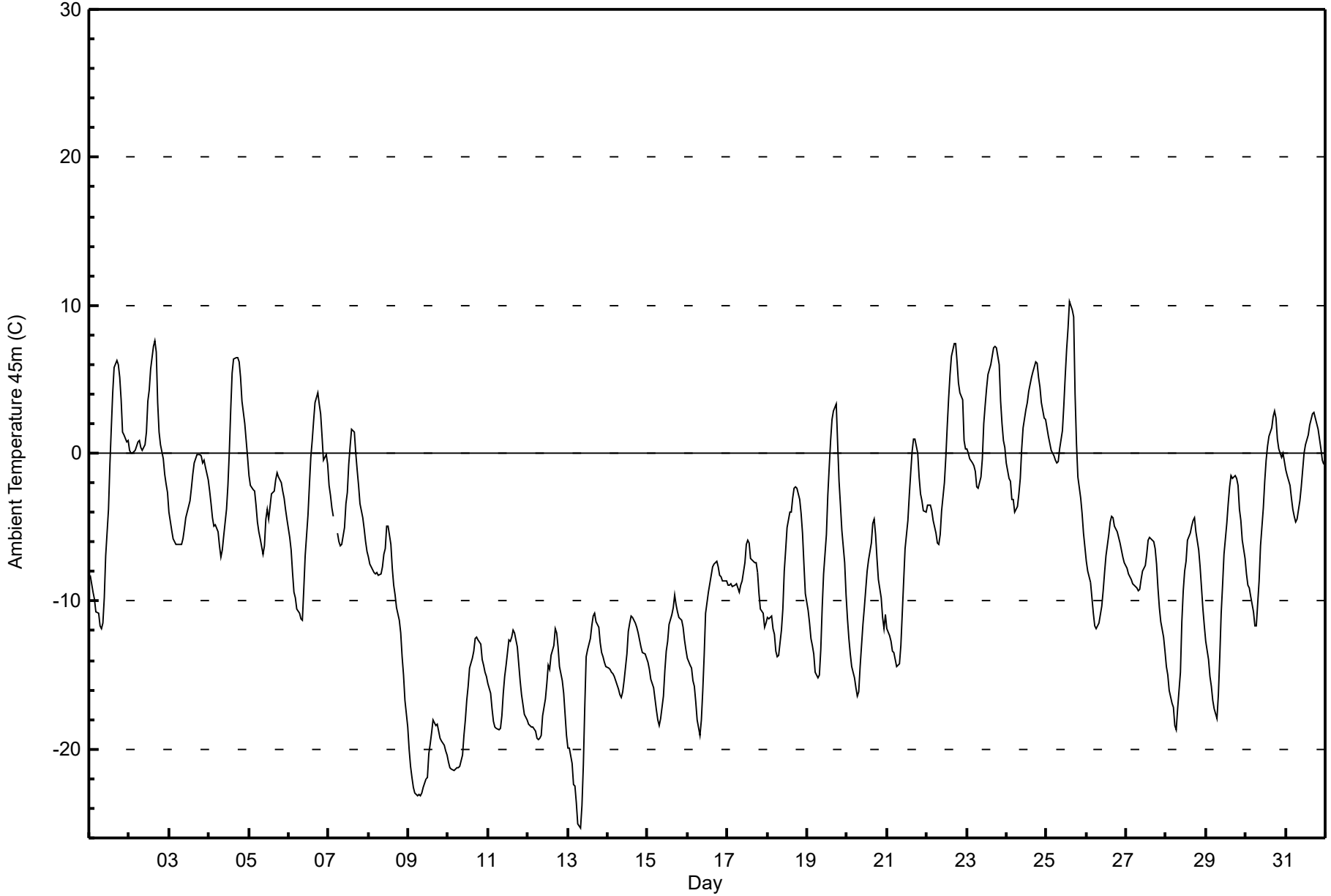
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 45m (AT45) - C

Lower Camp Met Tower - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	31	4.17	4.17
-20 - 0	576	77.52	81.70
0 - 10	135	18.17	99.87
10 - 20	1	0.13	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 743

Total Number of Hours: 744

Maximum Value: 9.6 C on Mar 25 15:00

Maximum Daily Average: 2.2 C on Mar 23

Minimum Value: -23.7 C on Mar 9 07:00

Minimum Daily Average: -21.4 C on Mar 9

Maximum Diurnal Average: -3.0 C at hour 17

Minimum Diurnal Average: -11.4 C at hour 7

Monthly Average: -7.44 C

Percentiles: P_1 = -22.6 P_{10} = -17.2 Q_1 = -13.1 Median = -7.6 Q_3 = -1.8 P_{90} = 2.2 P_{99} = 6.9

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-7.8	-8.4	-8.8	-9.4	-9.8	-10.1	-10.8	-10.1	-10.5	-8.8	-6.6	-3.5	-0.5	1.9	4.0	5.7	6.4	6.7	6.2	5.2	3.8	3.8	3.0	2.1	-2.3	6.7
2-Mar	2.1	2.1	2.2	1.8	2.1	3.0	2.6	1.9	0.2	0.7	1.9	2.8	3.8	5.5	6.8	7.5	6.6	2.9	0.9	0.1	-0.9	-1.9	-2.6	-3.2	2.0	7.5
3-Mar	-4.6	-5.8	-6.3	-6.5	-6.7	-6.7	-6.7	-6.7	-6.3	-5.6	-4.9	-4.5	-3.9	-2.8	-1.8	-1.2	-0.9	-0.5	-0.1	0.2	0.2	-0.1	-0.4	-0.9	-3.5	0.2
4-Mar	-1.3	-2.0	-2.6	-3.3	-3.6	-4.4	-4.2	-4.3	-4.5	-3.8	-3.0	-2.2	0.0	3.0	5.3	6.3	6.3	6.4	6.3	5.6	3.8	1.6	0.5	-0.6	0.2	6.4
5-Mar	-1.6	-2.3	-2.8	-3.0	-4.1	-5.2	-5.8	-6.3	-7.5	-6.9	-5.1	-4.4	-5.1	-3.4	-3.3	-3.0	-2.3	-1.9	-2.0	-2.2	-2.7	-2.9	-3.7	-4.0	-3.8	-1.6
6-Mar	-4.7	-5.5	-6.8	-7.6	-8.2	-8.6	-8.7	-9.0	-9.1	-8.0	-6.6	-4.6	-2.7	-1.0	0.3	1.9	3.3	4.1	3.9	3.7	2.4	1.0	1.2	-0.3	-2.9	4.1
7-Mar	-2.2	-3.3	-4.1	-4.8	UO	-5.9	-6.4	-6.8	-6.6	-5.6	-3.9	-3.1	-1.3	-0.1	1.3	1.1	-0.4	-1.6	-2.7	-3.9	-4.9	-5.7	-6.6	-7.1	-3.7	1.3
8-Mar	-7.6	-8.0	-8.4	-8.6	-8.7	-8.7	-8.7	-8.7	-8.2	-7.6	-7.0	-5.6	-5.6	-6.8	-8.5	-9.5	-10.2	-11.0	-11.9	-12.7	-14.3	-15.5	-17.2	-19.1	-9.9	-5.6
9-Mar	-20.6	-21.7	-22.4	-23.1	-23.5	-23.7	-23.7	-23.7	-23.5	-23.2	-22.7	-22.5	-21.0	-20.3	-19.6	-18.7	-19.0	-18.8	-19.4	-19.8	-20.0	-20.3	-20.7	-21.0	-21.4	-18.7
10-Mar	-21.4	-21.6	-21.9	-21.9	-21.9	-21.9	-21.8	-21.6	-21.1	-19.9	-18.6	-17.3	-16.4	-15.3	-14.7	-14.0	-13.2	-12.9	-12.9	-13.1	-14.3	-14.8	-15.2	-15.5	-17.6	-12.9
11-Mar	-15.9	-16.5	-17.5	-18.6	-19.0	-19.0	-19.1	-19.0	-18.3	-16.7	-15.7	-14.8	-13.2	-13.2	-13.0	-12.5	-12.7	-13.6	-14.8	-15.9	-16.9	-17.6	-18.2	-18.6	-16.3	-12.5
12-Mar	-18.8	-18.9	-19.0	-19.1	-19.2	-19.3	-19.7	-19.4	-19.0	-18.4	-17.2	-16.2	-15.2	-15.0	-14.0	-13.2	-12.4	-12.7	-13.2	-14.2	-15.3	-16.2	-16.5	-17.4	-16.6	-12.4
13-Mar	-18.2	-19.4	-19.4	-19.0	-20.5	-21.5	-20.7	-20.6	-20.3	-19.0	-17.7	-14.7	-14.0	-13.1	-12.2	-11.6	-11.3	-11.9	-12.3	-13.3	-13.9	-14.2	-14.6	-14.9	-16.2	-11.3
14-Mar	-15.0	-15.1	-15.3	-15.4	-15.6	-16.1	-16.4	-16.8	-17.0	-16.7	-15.9	-14.1	-12.6	-12.0	-11.7	-11.8	-12.1	-12.3	-12.7	-13.1	-13.5	-13.8	-13.9	-14.1	-14.3	-11.7
15-Mar	-14.3	-14.6	-15.0	-15.7	-16.1	-16.4	-16.8	-17.0	-16.9	-15.7	-14.9	-13.8	-13.0	-12.1	-11.5	-10.9	-10.4	-10.7	-11.1	-11.3	-11.6	-12.1	-12.7	-13.3	-13.7	-10.4
16-Mar	-14.2	-14.7	-15.0	-15.2	-15.7	-16.1	-17.2	-18.2	-17.5	-15.9	-14.1	-11.4	-10.1	-9.5	-8.9	-8.3	-8.1	-7.8	-8.2	-8.6	-8.8	-9.1	-9.1	-9.1	-12.1	-7.8
17-Mar	-9.4	-9.4	-9.3	-9.2	-9.2	-9.3	-9.5	-9.7	-9.4	-9.1	-8.0	-6.8	-6.4	-6.7	-7.7	-7.9	-7.9	-7.9	-8.5	-9.7	-10.8	-11.0	-11.2	-11.3	-9.0	-6.4
18-Mar	-10.8	-11.3	-11.1	-11.6	-11.6	-13.2	-13.9	-13.9	-12.5	-11.2	-8.9	-7.2	-5.8	-4.7	-4.7	-3.8	-3.0	-2.8	-2.7	-2.8	-3.6	-4.8	-6.8	-9.2	-8.0	-2.7
19-Mar	-10.4	-11.3	-11.7	-12.2	-12.7	-12.4	-13.3	-12.3	-11.6	-10.6	-8.6	-5.8	-3.7	-1.8	0.1	1.7	2.5	3.0	0.3	-2.3	-4.0	-5.7	-7.8	-10.1	-6.7	3.0
20-Mar	-11.7	-13.0	-13.9	-14.7	-15.4	-16.2	-16.7	-16.6	-14.6	-12.4	-11.3	-10.0	-8.7	-7.9	-6.9	-5.6	-5.0	-6.0	-7.5	-8.7	-10.0	-11.0	-10.9	-11.0	-11.1	-5.0
21-Mar	-12.2	-12.7	-13.0	-13.6	-13.7	-14.0	-14.2	-14.4	-13.5	-11.4	-9.4	-7.2	-5.2	-3.6	-1.9	-0.5	0.4	0.5	-0.3	-1.7	-2.7	-3.5	-4.1	-3.8	-7.3	0.5
22-Mar	-3.6	-3.3	-3.2	-3.7	-4.3	-5.4	-6.1	-6.2	-5.5	-3.3	-2.1	-0.6	1.3	3.2	4.9	6.1	6.9	7.0	5.9	4.5	4.2	3.4	0.4	-0.2	0.0	7.0
23-Mar	-0.2	-0.3	-0.4	-0.6	-0.8	-1.1	-1.8	-1.8	-1.8	-0.7	1.4	2.6	3.9	4.9	5.5	6.0	6.6	6.8	6.7	6.2	4.7	3.1	2.4	1.3	2.2	6.8
24-Mar	0.8	-0.6	-0.9	-1.0	-1.3	-2.1	-2.7	-2.1	-1.1	0.2	1.6	2.7	3.4	4.0	4.5	4.9	5.3	5.9	5.9	5.0	4.3	4.1	3.1	2.2	1.9	5.9
25-Mar	1.6	1.1	0.7	0.2	0.0	0.3	-0.5	-0.9	-0.2	1.1	2.8	5.0	7.1	8.4	9.6	9.2	8.6	3.5	0.2	-2.2	-3.6	-4.6	-6.0	-7.0	1.4	9.6
26-Mar	-7.8	-8.5	-9.2	-10.3	-11.3	-12.0	-12.4	-12.0	-11.4	-10.9	-10.0	-8.7	-7.6	-6.4	-5.3	-5.0	-5.0	-5.5	-5.9	-6.3	-6.6	-7.1	-7.6	-8.0	-8.4	-5.0
27-Mar	-8.4	-8.7	-8.9	-9.1	-9.4	-9.6	-9.7	-9.9	-9.8	-9.1	-8.5	-8.3	-7.5	-6.5	-6.3	-6.3	-6.6	-7.1	-8.1	-9.6	-10.9	-11.8	-12.8	-13.6	-9.0	-6.3
28-Mar	-14.4	-15.1	-15.6	-16.4	-17.3	-17.6	-17.4	-16.5	-15.2	-12.3	-9.8	-8.6	-8.1	-6.8	-6.2	-5.7	-5.4	-5.1	-5.9	-7.0	-8.1	-9.4	-10.7	-11.5	-11.1	-5.1
29-Mar	-12.4	-13.2	-13.8	-14.4	-15.0	-15.6	-15.7	-15.1	-13.3	-11.6	-9.3	-7.2	-5.4	-4.1	-2.9	-2.2	-2.3	-2.1	-2.1	-2.4	-3.3	-4.8	-6.1	-7.3	-8.4	-2.1
30-Mar	-8.2	-8.8	-9.1	-9.6	-10.1	-10.6	-10.7	-9.4	-8.5	-6.8	-4.4	-2.6	-1.2	-0.2	0.4	1.0	1.8	2.2	2.1	0.8	-0.1	-0.6	-0.4	-1.1	-3.9	2.2
31-Mar	-1.6	-2.0	-2.6	-3.5	-4.2	-4.7	-5.1	-4.9	-3.8	-2.7	-1.7	-0.6	0.0	0.6	1.3	1.7	2.0	2.2	2.0	1.5	0.8	0.2	-0.6	-1.1	-1.1	2.2
	-8.9	-9.4	-9.8	-10.3	-10.9	-11.1	-11.4	-11.4	-10.9	-9.7	-8.3	-6.9	-5.6	-4.6	-3.8	-3.2	-3.0	-3.3	-3.9	-4.8	-5.7	-6.5	-7.3	-8.0	Diurnal Average	
	2.1	2.1	2.2	1.8	2.1	3.0	2.6	1.9	0.2	1.1	2.8	5.0	7.1	8.4	9.6	9.2	8.6	7.0	6.7	6.2	4.7	4.1	3.1	2.2	Diurnal Maximum	

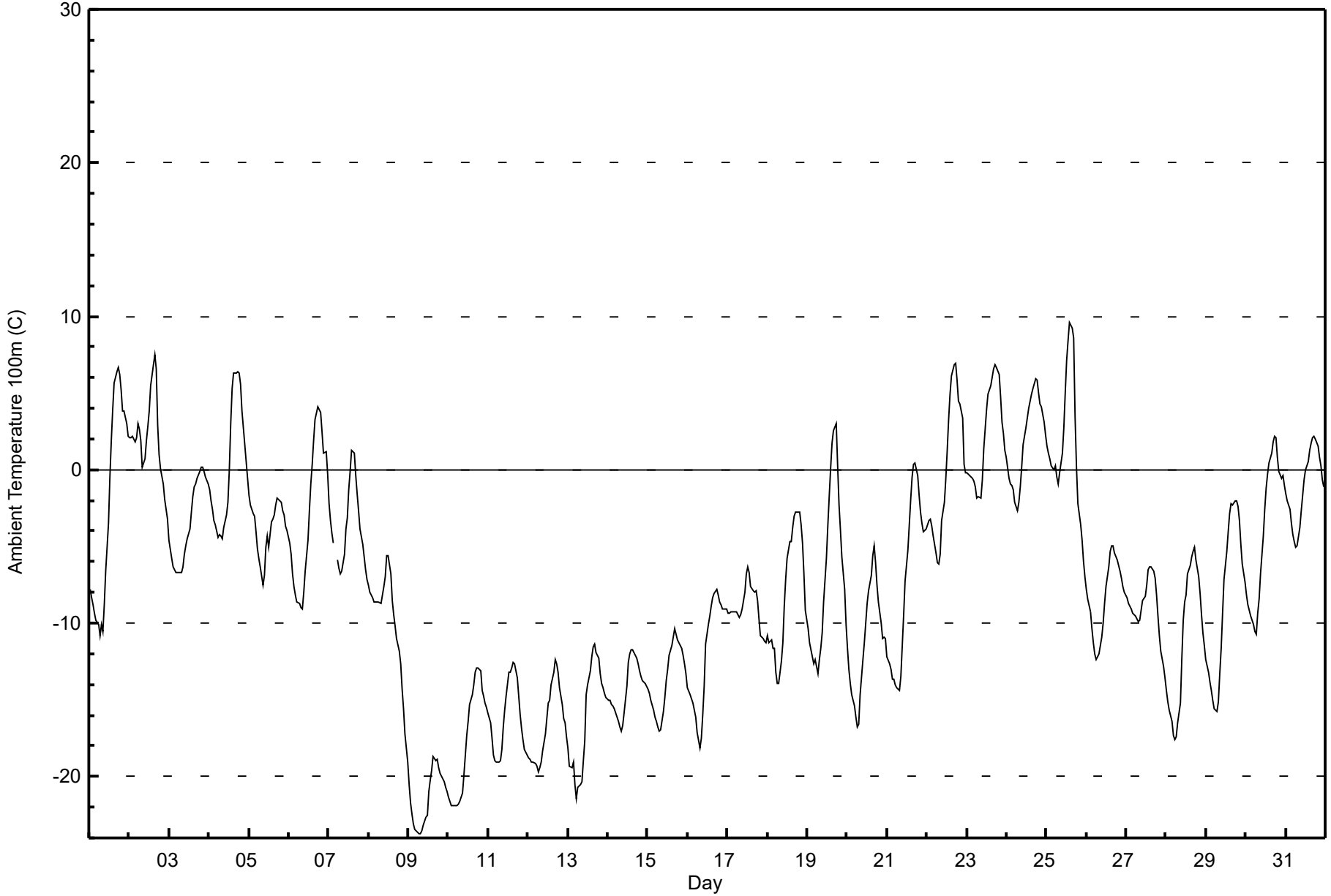
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 100m (AT100) - C

Lower Camp Met Tower - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	31	4.17	4.17
-20 - 0	580	78.06	82.23
0 - 10	132	17.77	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 743

Total Number of Hours: 744

Maximum Value: 9.0 C on Mar 25 15:00

Maximum Daily Average: 2.4 C on Mar 2

Minimum Value: -24.4 C on Mar 9 08:00

Minimum Daily Average: -22.1 C on Mar 9

Maximum Diurnal Average: -3.5 C at hour 17

Minimum Diurnal Average: -11.3 C at hour 8

Monthly Average: -7.64 C

Percentiles: P_1 = -23.3 P_{10} = -17.1 Q_1 = -13.5 Median = -7.8 Q_3 = -1.9 P_{90} = 2.9 P_{99} = 7.0

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-8.0	-8.6	-8.6	-9.0	-8.6	-9.6	-8.7	-7.8	-7.8	-7.3	-4.5	-1.9	0.8	2.9	4.5	6.1	6.6	7.3	7.4	7.0	5.8	5.9	5.7	5.0	-1.1	7.4
2-Mar	4.4	4.0	4.8	4.0	3.9	3.6	3.5	2.5	1.2	1.9	1.8	2.5	3.5	5.1	6.3	7.1	6.1	2.2	0.3	-0.6	-1.6	-2.5	-3.2	-3.9	2.4	7.1
3-Mar	-5.3	-6.5	-7.0	-7.2	-7.4	-7.4	-7.3	-7.3	-7.0	-6.0	-5.6	-5.0	-4.4	-3.2	-2.0	-0.8	-1.0	-0.7	-0.3	0.2	0.5	0.1	0.2	-0.2	-3.8	0.5
4-Mar	-1.2	-2.4	-2.6	-2.3	-3.3	-4.0	-3.5	-3.3	-3.5	-3.5	-2.2	-1.6	0.3	3.1	4.9	5.6	5.8	5.9	5.8	5.8	3.7	1.0	-0.1	-1.2	0.3	5.9
5-Mar	-1.8	-2.6	-3.4	-3.6	-4.8	-5.8	-6.5	-7.0	-8.1	-7.5	-5.8	-5.2	-5.7	-4.2	-3.7	-3.4	-2.9	-2.5	-2.3	-2.6	-2.9	-3.2	-3.7	-4.0	-4.3	-1.8
6-Mar	-4.3	-4.9	-5.5	-6.0	-6.7	-7.3	-7.8	-8.6	-8.9	-8.1	-7.0	-5.1	-3.1	-1.5	-0.1	1.6	3.5	4.4	4.6	4.8	4.3	3.0	1.5	-0.5	-2.4	4.8
7-Mar	-2.6	-3.9	-4.8	-5.5	UO	-6.5	-6.9	-7.3	-7.2	-6.3	-4.3	-3.7	-1.9	-0.4	1.0	0.5	-1.1	-2.2	-3.4	-4.6	-5.5	-6.3	-7.2	-7.8	-4.2	1.0
8-Mar	-8.2	-8.7	-8.9	-9.1	-9.0	-9.0	-8.9	-9.2	-8.8	-8.2	-7.7	-6.3	-6.2	-7.5	-9.2	-10.2	-10.9	-11.7	-12.6	-13.4	-15.1	-16.3	-18.0	-19.8	-10.5	-6.2
9-Mar	-21.3	-22.4	-23.1	-23.8	-24.2	-24.4	-24.4	-24.4	-24.3	-23.9	-23.3	-23.2	-21.7	-20.8	-20.2	-19.4	-19.6	-19.5	-20.1	-20.5	-20.7	-21.0	-21.4	-21.6	-22.1	-19.4
10-Mar	-21.8	-21.9	-22.0	-22.3	-22.1	-22.2	-22.1	-21.6	-21.0	-20.3	-19.3	-18.0	-17.1	-15.9	-15.3	-14.6	-13.9	-13.6	-13.6	-13.6	-14.5	-15.0	-15.5	-15.7	-18.0	-13.6
11-Mar	-15.8	-16.4	-17.6	-18.2	-17.9	-18.7	-19.1	-18.5	-18.5	-17.0	-16.2	-15.2	-13.8	-13.8	-13.6	-13.2	-13.3	-14.3	-15.5	-16.6	-17.5	-18.3	-19.0	-19.3	-16.5	-13.2
12-Mar	-19.5	-19.6	-19.7	-19.8	-19.8	-19.9	-19.9	-19.7	-19.4	-19.0	-17.8	-16.9	-16.0	-15.4	-14.5	-13.5	-12.7	-13.3	-13.8	-14.2	-14.7	-15.4	-16.1	-16.2	-17.0	-12.7
13-Mar	-16.5	-17.2	-18.1	-18.6	-17.9	-18.2	-19.3	-19.4	-19.2	-18.1	-16.1	-15.1	-14.6	-13.7	-12.9	-12.3	-12.0	-12.6	-12.9	-13.9	-14.5	-14.8	-15.3	-15.5	-15.8	-12.0
14-Mar	-15.6	-15.7	-15.9	-16.0	-16.3	-16.7	-17.0	-17.4	-17.7	-17.4	-16.5	-14.8	-13.2	-12.7	-12.4	-12.4	-12.8	-13.0	-13.3	-13.8	-14.1	-14.3	-14.5	-14.6	-14.9	-12.4
15-Mar	-14.8	-15.0	-15.2	-15.7	-16.0	-16.2	-16.6	-16.7	-16.3	-15.7	-15.2	-14.3	-13.2	-12.6	-11.9	-11.5	-11.0	-11.3	-11.6	-11.8	-12.1	-12.7	-13.2	-13.8	-13.9	-11.0
16-Mar	-14.5	-15.1	-15.5	-15.7	-15.7	-15.9	-16.6	-17.8	-16.8	-16.2	-14.2	-11.9	-10.8	-10.2	-9.6	-9.0	-8.7	-8.5	-8.8	-9.2	-9.4	-9.7	-9.7	-9.7	-12.5	-8.5
17-Mar	-10.0	-10.0	-9.7	-9.5	-9.6	-9.8	-9.9	-9.7	-9.8	-9.7	-8.7	-7.5	-6.9	-7.2	-8.3	-8.5	-8.6	-8.6	-9.1	-10.1	-10.9	-11.1	-11.3	-11.6	-9.4	-6.9
18-Mar	-11.2	-11.0	-11.0	-11.9	-11.8	-12.7	-13.5	-13.3	-13.1	-11.3	-9.5	-7.8	-6.4	-5.3	-5.3	-4.4	-3.6	-3.4	-3.3	-3.2	-3.7	-4.7	-6.7	-9.2	-8.2	-3.2
19-Mar	-10.5	-11.2	-11.3	-11.6	-12.1	-12.3	-12.5	-12.2	-11.5	-10.7	-8.8	-6.1	-4.3	-2.3	-0.4	1.4	2.2	2.6	-0.3	-2.9	-4.6	-6.3	-8.5	-10.7	-6.9	2.6
20-Mar	-12.3	-13.6	-14.4	-15.2	-15.8	-16.5	-17.2	-17.0	-14.9	-12.4	-11.8	-10.6	-9.3	-8.5	-7.3	-6.1	-5.5	-6.6	-8.1	-9.2	-10.4	-10.7	-10.6	-11.5	-11.5	-5.5
21-Mar	-12.7	-13.1	-13.2	-14.0	-14.0	-14.5	-14.4	-14.5	-13.8	-12.0	-10.1	-7.9	-5.9	-4.3	-2.6	-1.1	-0.3	-0.1	-0.8	-2.0	-2.8	-3.5	-3.7	-3.2	-7.7	-0.1
22-Mar	-3.0	-2.5	-2.9	-3.7	-4.1	-5.0	-6.1	-6.4	-5.5	-3.1	-2.2	-1.0	0.7	2.7	4.5	5.6	6.4	6.4	5.3	3.9	3.7	2.9	-0.2	-0.7	-0.2	6.4
23-Mar	-0.6	-0.7	-0.6	-0.8	-0.7	-1.0	-1.9	-1.8	-1.5	-0.9	0.7	2.1	3.4	4.4	4.9	5.4	6.0	6.2	6.1	6.3	5.5	4.2	3.4	2.9	2.1	6.3
24-Mar	1.7	0.3	0.2	-0.2	-0.7	-1.5	-1.9	-2.0	-1.2	0.0	1.1	2.5	3.0	3.6	4.1	4.6	4.9	5.4	5.4	4.5	4.1	4.4	4.2	3.1	2.1	5.4
25-Mar	2.2	1.6	1.0	0.7	0.5	0.5	0.0	-0.8	-0.4	0.8	2.4	4.7	7.0	8.0	9.0	8.6	7.9	2.8	-0.5	-2.9	-4.3	-5.3	-6.7	-7.6	1.2	9.0
26-Mar	-8.5	-9.1	-9.9	-11.0	-11.9	-12.5	-13.0	-12.8	-12.0	-11.5	-10.6	-9.3	-8.2	-7.1	-6.1	-5.6	-5.6	-6.1	-6.6	-7.0	-7.3	-7.8	-8.0	-8.6	-9.0	-5.6
27-Mar	-9.1	-9.4	-9.6	-9.8	-10.1	-10.3	-10.4	-10.6	-10.5	-9.8	-9.2	-9.0	-8.2	-7.2	-7.0	-7.0	-7.2	-7.7	-8.8	-10.2	-11.5	-12.5	-13.3	-13.8	-9.7	-7.0
28-Mar	-14.2	-15.0	-15.4	-15.6	-15.8	-15.7	-15.5	-14.5	-13.1	-12.6	-10.8	-9.3	-8.9	-7.5	-7.0	-6.4	-6.0	-5.7	-6.5	-7.4	-8.3	-9.3	-10.6	-10.8	-10.9	-5.7
29-Mar	-11.7	-12.8	-12.6	-13.6	-13.7	-14.3	-14.3	-15.3	-14.6	-12.1	-9.5	-7.4	-5.9	-4.5	-3.4	-2.7	-2.8	-2.7	-2.6	-2.7	-3.5	-4.8	-6.5	-7.3	-8.4	-2.6
30-Mar	-7.6	-8.6	-9.1	-9.2	-9.5	-10.3	-10.6	-10.2	-9.4	-7.4	-5.2	-3.1	-1.9	-0.8	-0.2	0.4	1.2	1.5	1.6	0.7	0.0	-0.4	-1.0	-1.7	-4.2	1.6
31-Mar	-2.1	-2.4	-3.1	-3.9	-4.7	-5.3	-5.6	-5.5	-4.4	-3.1	-2.3	-1.3	-0.7	-0.1	0.6	1.0	1.4	1.5	1.3	1.0	0.4	-0.1	-0.9	-1.5	-1.7	1.5
	-8.9	-9.5	-9.8	-10.3	-10.7	-10.9	-11.2	-11.3	-10.9	-10.0	-8.7	-7.3	-6.1	-5.1	-4.3	-3.7	-3.5	-3.8	-4.4	-5.1	-5.9	-6.6	-7.4	-8.1	Diurnal Average	
	4.4	4.0	4.8	4.0	3.9	3.6	3.5	2.5	1.2	1.9	2.4	4.7	7.0	8.0	9.0	8.6	7.9	7.3	7.4	7.0	5.8	5.9	5.7	5.0	Diurnal Maximum	

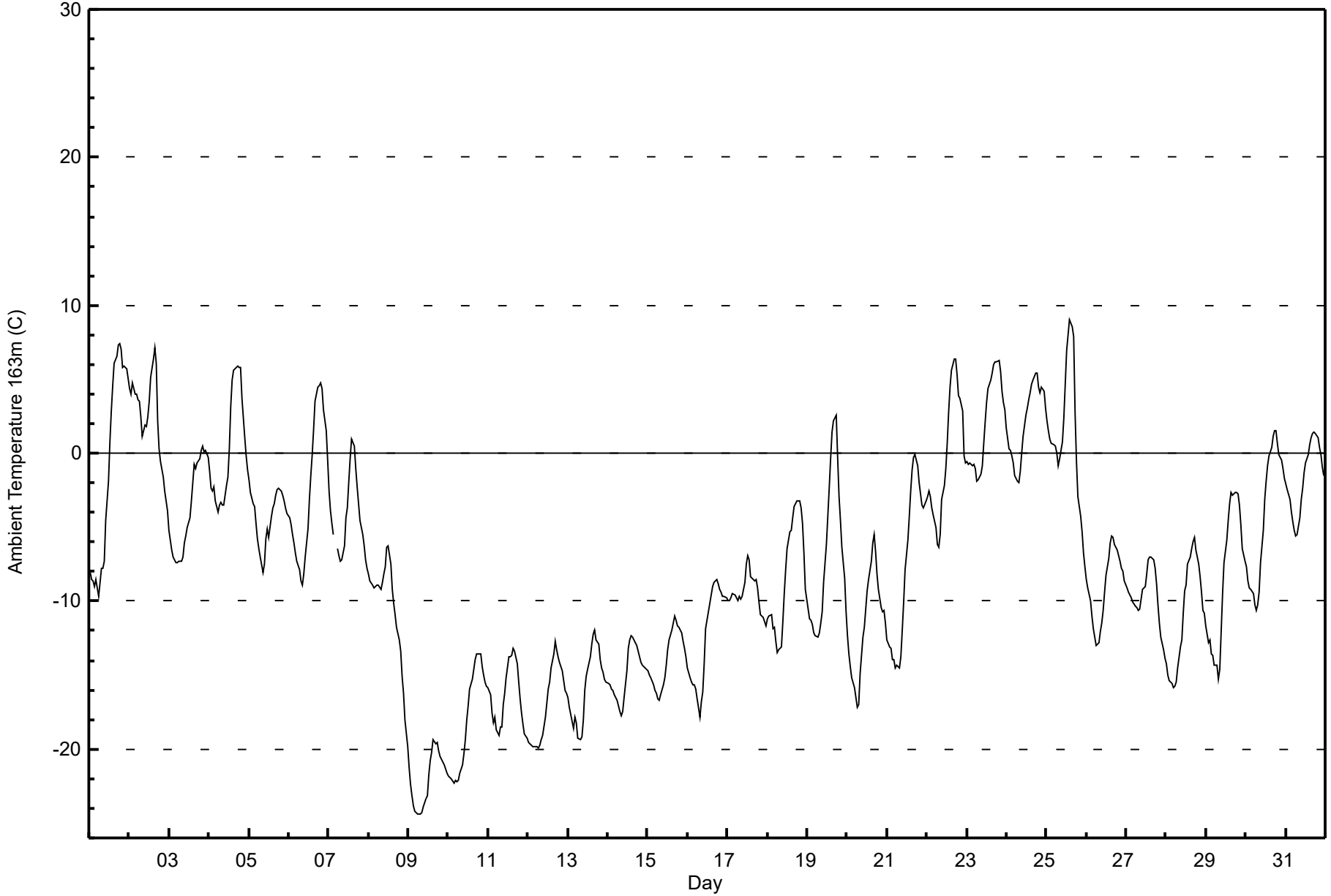
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 163m (AT163) - C

Lower Camp Met Tower - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	31	4.17	4.17
-20 - 0	586	78.87	83.04
0 - 10	126	16.96	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 743

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 20m (RH20) - %

Lower Camp Met Tower - March 2025

Maximum Value: 90.2 % on Mar 4 03:00

Maximum Daily Average: 77.9 % on Mar 3

Minimum Value: 24.1 % on Mar 29 16:00

Minimum Daily Average: 44.9 % on Mar 21

Maximum Diurnal Average: 76.3 % at hour 7

Minimum Diurnal Average: 47.9 % at hour 17

Monthly Average: 63.65 %

Percentiles: P_1 = 29.4 P_{10} = 43.2 Q_1 = 51.8 Median = 65.7 Q_3 = 76.1 P_{90} = 81.9 P_{99} = 88.1

Hours in Service:	744
Hours of Data:	722
Hours of Missing Data:	22
Hours of Calibration:	0
Percent Operational Time:	97.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	74.4	76.8	78.3	79.7	80.2	80.4	81.5	81.5	78.3	72.6	67.3	63.1	58.9	53.8	49.3	46.1	47.2	50.8	62.1	74.3	82.9	81.6	78.6	82.0	70.1	82.9
2-Mar	72.2	73.2	73.0	72.3	72.3	71.8	72.2	75.1	81.2	83.3	80.3	71.4	68.7	63.2	59.9	57.5	57.9	67.0	76.7	76.5	80.1	88.3	86.1	83.7	73.5	88.3
3-Mar	82.1	79.9	79.3	78.8	77.9	78.1	78.0	78.8	76.0	74.2	73.7	77.7	80.5	79.7	76.3	74.4	73.6	73.1	75.0	80.4	80.7	78.1	80.5	81.7	77.9	82.1
4-Mar	83.0	86.9	90.2	89.7	88.1	86.2	84.7	87.0	83.5	79.8	75.8	DF	64.0	55.2	49.1	45.4	44.9	45.4	45.6	44.8	52.1	62.1	65.2	70.2	68.6	90.2
5-Mar	72.0	74.3	76.1	75.6	75.6	74.7	70.9	71.9	70.1	65.6	56.6	DF	60.3	54.3	55.9	DF	DF	53.7	54.3	55.2	59.3	62.6	66.2	69.8	65.5	76.1
6-Mar	75.5	82.7	88.0	88.5	88.7	88.8	88.4	86.4	81.7	77.2	69.2	60.9	55.7	52.4	50.8	50.0	49.8	50.2	55.4	58.7	63.9	70.3	69.8	71.2	69.8	88.8
7-Mar	69.0	63.3	66.5	69.8	UO	73.1	73.9	73.9	73.1	68.0	62.2	64.8	59.8	55.1	51.8	50.9	53.1	55.6	59.4	65.4	68.8	72.4	75.5	78.2	65.4	78.2
8-Mar	79.3	80.2	81.0	81.3	80.8	81.4	82.9	84.5	82.3	78.8	79.1	74.4	75.0	74.7	71.9	71.2	66.8	66.0	68.4	70.3	71.5	72.9	71.1	68.2	75.6	84.5
9-Mar	65.5	62.0	63.1	65.7	63.3	63.8	64.4	64.4	64.5	59.1	58.3	61.7	51.1	48.7	48.3	46.8	48.4	49.9	54.4	57.6	59.1	61.2	62.9	64.3	58.7	65.7
10-Mar	65.3	66.9	68.2	68.8	70.7	73.0	74.7	75.3	76.1	72.2	69.5	65.2	59.9	57.4	57.7	55.0	53.3	52.7	55.6	59.9	66.4	70.1	74.5	78.0	66.1	78.0
11-Mar	80.4	81.0	80.5	79.3	76.6	77.4	77.5	76.8	74.8	69.3	69.8	71.8	69.0	71.0	72.2	73.2	74.0	74.5	75.9	76.9	76.3	74.9	75.0	73.3	75.1	81.0
12-Mar	72.0	72.4	70.5	66.8	67.8	72.4	74.4	76.8	73.8	67.2	59.2	56.0	49.7	54.4	50.8	49.3	41.8	43.5	47.4	52.3	50.7	56.7	66.2	69.9	60.9	76.8
13-Mar	72.6	73.1	76.0	76.6	78.0	78.5	77.2	76.6	74.2	67.1	57.4	46.9	46.9	46.2	43.5	42.9	44.0	46.1	48.1	65.9	79.6	82.6	81.7	81.7	65.1	82.6
14-Mar	82.3	82.4	80.9	79.7	79.5	79.7	80.2	77.4	75.8	72.3	70.6	68.9	64.3	61.1	60.5	64.3	73.9	73.6	72.3	74.7	78.0	80.1	83.4	85.5	75.0	85.5
15-Mar	86.2	85.6	86.5	84.7	84.1	81.8	80.4	81.0	81.7	80.5	76.4	70.1	66.8	54.4	51.0	48.0	43.9	49.1	51.8	54.6	56.3	59.0	65.0	68.8	68.7	86.5
16-Mar	73.9	76.7	76.2	75.0	75.2	75.5	77.1	77.9	72.6	66.7	61.7	50.1	44.5	44.3	41.9	40.8	44.6	47.7	47.9	52.2	55.0	58.6	61.8	65.8	61.0	77.9
17-Mar	69.7	73.6	75.4	79.6	81.9	82.0	83.2	81.9	78.9	78.1	72.8	66.0	60.9	57.4	59.4	57.2	55.8	52.6	53.3	56.1	56.6	57.5	62.6	62.9	67.3	83.2
18-Mar	62.4	65.0	63.8	69.5	71.6	73.8	77.2	77.7	68.9	67.0	51.9	45.5	41.7	42.6	44.6	41.2	41.5	41.0	41.7	46.5	52.8	58.1	62.7	68.9	57.4	77.7
19-Mar	68.7	70.2	72.6	77.1	83.2	83.4	83.6	80.8	73.7	60.2	60.3	54.5	47.9	45.6	42.1	39.0	38.4	39.3	44.2	48.1	52.9	58.6	65.9	74.1	61.0	83.6
20-Mar	78.6	80.5	82.0	83.4	84.4	82.5	81.9	76.2	68.4	60.3	54.5	49.9	45.7	42.4	35.4	30.8	26.0	26.8	29.3	34.9	40.4	47.2	51.6	46.3	55.8	84.4
21-Mar	47.5	48.2	49.2	50.7	50.8	52.4	54.7	53.7	49.9	45.1	42.0	39.5	37.8	36.9	37.9	36.3	35.0	36.9	38.7	40.2	44.1	46.4	50.5	53.4	44.9	54.7
22-Mar	54.9	56.6	59.4	61.0	61.4	64.2	64.8	65.3	64.4	DF	61.4	65.3	65.2	63.5	60.1	55.1	51.8	51.5	57.6	68.9	78.6	70.6	72.7	75.0	63.0	78.6
23-Mar	74.5	79.2	80.7	83.4	87.1	83.4	84.6	81.9	79.2	74.0	66.4	60.2	54.7	48.8	42.8	41.5	39.6	39.5	39.4	51.9	60.7	67.8	69.0	71.2	65.1	87.1
24-Mar	77.3	84.8	85.6	86.0	84.9	86.0	84.8	79.0	DF	DF	DF	DF	DF	DF	DF	71.9	72.3	69.3	M	M	73.1	78.4	81.1	84.0	--	86.0
25-Mar	85.1	86.1	86.5	85.2	82.7	83.4	83.1	80.7	75.3	DF	DF	57.6	50.7	47.3	30.7	30.1	31.4	51.6	63.2	67.7	67.9	68.5	70.1	70.9	66.2	86.5
26-Mar	72.3	70.2	67.4	69.0	72.0	75.0	74.6	69.5	64.5	60.7	58.3	54.0	50.6	46.3	43.4	42.6	44.3	46.3	49.9	52.0	53.2	53.7	54.9	55.6	58.3	75.0
27-Mar	55.4	56.2	56.5	57.0	54.2	52.2	53.1	53.1	52.0	49.2	47.6	48.2	45.9	43.4	43.2	43.2	43.2	43.9	46.8	50.7	52.9	56.7	59.5	63.6	51.2	63.6
28-Mar	70.7	74.8	76.5	79.2	82.7	83.9	82.4	73.0	66.1	56.8	48.1	42.7	39.7	35.4	34.1	31.9	31.2	32.1	34.2	37.1	39.1	45.8	52.9	63.5	54.8	83.9
29-Mar	67.2	71.9	76.8	84.3	83.7	83.8	82.7	73.8	64.4	56.8	53.7	44.1	37.6	30.2	26.9	24.1	27.4	26.4	28.4	32.0	36.1	40.0	46.4	54.6	52.2	84.3
30-Mar	57.6	59.4	64.3	71.9	78.7	81.9	80.7	68.0	51.8	49.9	48.3	49.2	47.9	42.1	40.6	40.5	37.1	34.9	37.3	41.8	34.9	39.1	41.8	47.7	52.0	81.9
31-Mar	48.7	50.3	51.7	50.0	51.5	52.5	54.2	55.9	58.6	DF	DF	DF	DF	49.6	47.7	46.0	45.2	45.2	48.0	51.4	M	57.7	59.2	58.9	51.7	59.2
	70.9	72.4	73.6	74.8	75.7	76.0	76.3	74.7	71.2	67.1	62.6	58.5	55.2	51.9	49.3	48.2	47.9	49.5	52.1	56.6	60.8	63.8	66.6	69.1	Diurnal Average	
	86.2	86.9	90.2	89.7	88.7	88.8	88.4	87.0	83.5	83.3	80.3	77.7	80.5	79.7	76.3	74.4	74.0	74.5	76.7	80.4	82.9	88.3	86.1	85.5	Diurnal Maximum	

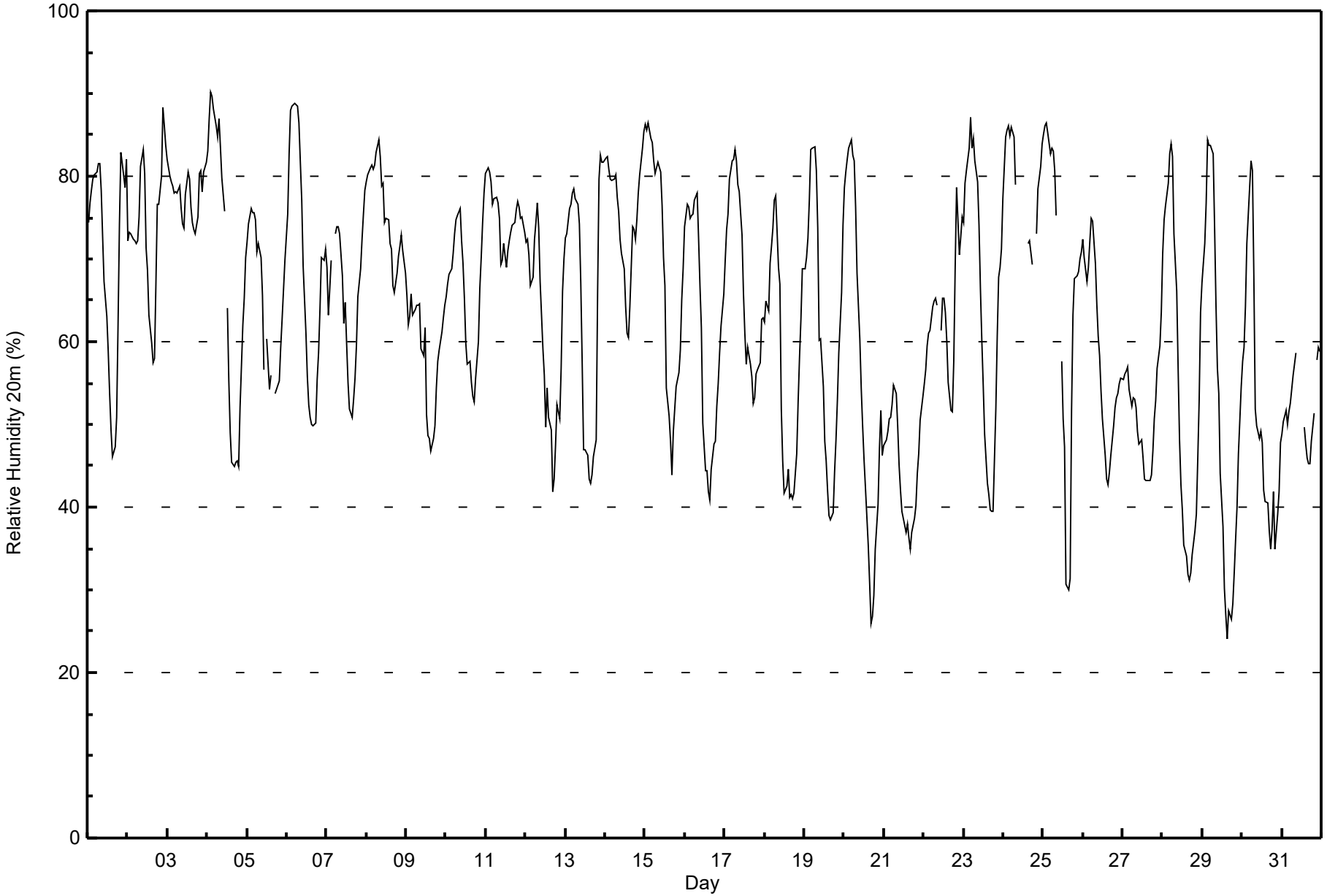
M - Maintenance DF - DAS Failure UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 20m (RH20) - %

Lower Camp Met Tower - March 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	47	6.51	6.51
40 - 60	247	34.21	40.72
60 - 80	315	43.63	84.35
80 - 100	113	15.65	100.00

Total Number of Valid Hours: 722

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 45m (RH45) - %

Lower Camp Met Tower - March 2025

Maximum Value: 88.2 % on Mar 2 22:00

Maximum Daily Average: 76.8 % on Mar 3

Minimum Value: 23.4 % on Mar 29 16:00

Minimum Daily Average: 43.8 % on Mar 21

Maximum Diurnal Average: 75.3 % at hour 7

Minimum Diurnal Average: 47.6 % at hour 17

Monthly Average: 62.28 %

Percentiles: P_1 = 28.8 P_{10} = 42.3 Q_1 = 51.1 Median = 64.2 Q_3 = 74.7 P_{90} = 80.7 P_{99} = 85.4

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	73.6	74.9	76.6	78.0	79.7	79.5	81.1	81.0	78.1	73.0	67.7	63.3	58.2	53.3	48.6	45.2	45.7	48.3	51.4	58.5	70.5	68.2	70.7	68.0	66.4	81.1
2-Mar	69.4	69.8	70.6	70.4	70.0	69.5	70.6	72.4	80.6	82.9	79.8	72.6	69.0	63.8	59.3	54.6	56.5	67.0	76.8	76.3	80.2	88.2	85.9	83.7	72.5	88.2
3-Mar	82.2	80.1	79.3	78.7	77.8	78.1	77.8	78.3	76.4	74.7	73.3	77.8	81.7	80.9	76.9	74.6	73.8	73.0	73.1	73.7	76.3	73.3	74.3	77.0	76.8	82.2
4-Mar	80.7	83.8	85.6	84.1	78.7	79.0	81.3	83.1	81.3	78.2	73.7	70.6	63.4	55.0	48.2	42.6	42.4	41.2	40.6	41.4	49.8	60.8	63.8	66.7	65.7	85.6
5-Mar	69.1	72.1	75.7	75.6	75.9	74.7	70.8	72.1	71.4	66.6	56.9	54.9	60.4	54.1	55.4	57.3	55.5	53.4	53.5	53.5	54.6	57.7	63.1	66.2	63.4	75.9
6-Mar	72.1	74.7	80.5	84.6	84.9	86.9	88.0	86.5	81.6	75.9	69.5	60.8	55.6	52.1	49.4	48.0	47.9	48.2	51.1	53.8	57.9	63.9	61.7	61.9	66.6	88.0
7-Mar	65.0	62.6	66.4	69.6	UO	72.8	73.8	74.1	73.0	68.1	62.2	64.6	60.4	54.3	51.2	50.3	52.4	54.8	59.2	65.2	69.0	72.6	75.8	78.5	65.0	78.5
8-Mar	79.6	80.5	81.4	81.7	81.2	81.9	83.2	85.1	83.2	78.9	79.9	75.3	75.9	75.5	72.5	71.4	66.7	65.7	68.2	70.2	71.4	72.9	71.1	68.1	75.9	85.1
9-Mar	65.2	61.5	62.6	65.2	63.0	63.6	64.3	64.3	64.2	58.8	58.0	61.3	50.8	48.4	47.8	46.1	47.9	49.5	53.5	57.0	58.3	60.6	62.4	63.9	58.3	65.2
10-Mar	64.8	66.6	67.9	68.7	70.5	72.8	74.7	75.3	75.4	72.1	69.9	65.4	60.1	57.2	57.9	55.1	53.2	52.6	54.4	56.9	65.3	69.5	74.5	77.6	65.8	77.6
11-Mar	80.1	80.8	80.0	78.8	76.6	77.3	77.4	77.0	75.3	69.6	70.4	72.1	69.8	71.6	72.6	73.4	74.3	74.5	75.9	77.0	76.3	74.9	74.6	73.1	75.1	80.8
12-Mar	71.8	72.2	70.1	66.4	66.9	69.6	71.2	71.2	72.2	67.6	59.0	55.6	49.5	53.6	49.3	46.8	41.7	42.0	42.8	46.5	49.0	51.5	55.2	59.3	58.4	72.2
13-Mar	62.9	62.6	69.0	75.2	75.9	77.2	76.9	76.0	74.7	67.9	56.4	46.2	47.0	45.9	42.9	41.8	42.5	44.7	47.0	64.9	78.8	82.1	81.4	81.4	63.4	82.1
14-Mar	82.0	81.9	80.5	79.4	79.2	79.3	79.8	77.2	75.8	72.8	71.2	69.7	65.0	61.9	60.8	64.6	74.3	73.4	71.8	73.9	77.3	79.4	82.7	84.3	74.9	84.3
15-Mar	85.4	84.8	85.0	84.4	83.9	82.9	82.4	81.5	81.0	80.9	76.7	68.8	66.0	53.8	50.6	47.4	43.9	48.4	50.7	52.6	53.9	56.2	61.7	65.6	67.8	85.4
16-Mar	73.3	76.1	76.9	74.8	76.1	75.4	77.2	78.0	73.3	66.6	61.7	50.2	44.3	44.4	41.9	40.8	44.3	46.9	47.4	51.8	54.5	58.1	61.4	65.5	60.9	78.0
17-Mar	69.6	73.6	75.5	79.9	82.0	82.0	83.2	81.4	79.8	78.7	74.0	66.7	61.9	58.0	59.8	57.3	55.8	52.4	52.5	54.8	55.1	55.2	59.1	59.1	67.0	83.2
18-Mar	59.9	63.5	61.1	65.4	67.6	72.5	77.7	78.1	69.7	67.3	53.4	45.6	41.9	42.3	44.3	41.2	41.4	40.5	41.2	44.6	47.6	51.8	60.5	64.4	56.0	78.1
19-Mar	64.5	66.1	69.2	70.2	71.9	76.5	78.8	75.6	69.8	62.7	60.4	54.2	48.3	45.7	42.1	38.5	37.9	38.4	42.7	47.5	52.5	58.5	65.8	74.3	58.8	78.8
20-Mar	78.9	80.7	82.0	82.9	83.5	82.0	81.1	76.2	68.3	60.3	55.4	50.3	45.9	42.6	35.3	30.7	25.2	26.0	28.1	32.6	38.1	43.1	46.2	43.9	55.0	83.5
21-Mar	46.4	47.3	48.4	49.7	49.6	51.1	52.8	53.2	49.7	44.9	41.8	39.2	37.0	36.0	35.8	34.9	33.3	34.0	36.6	38.7	42.6	45.9	49.5	51.9	43.8	53.2
22-Mar	53.3	54.9	57.5	60.2	61.1	63.2	64.0	64.9	64.8	63.4	61.9	65.9	65.8	63.5	59.5	54.1	51.3	51.3	57.0	67.5	73.5	68.3	72.8	75.0	62.3	75.0
23-Mar	74.3	76.3	78.0	80.7	84.8	82.1	83.5	82.0	79.3	74.4	66.4	60.3	54.3	48.1	42.3	41.2	38.9	38.5	37.9	41.8	48.1	51.7	58.4	59.9	61.8	84.8
24-Mar	64.4	68.1	67.6	73.7	74.6	77.9	76.8	73.4	71.6	62.2	57.1	55.5	63.9	71.2	72.8	71.6	72.0	68.2	65.4	67.7	72.1	75.7	81.3	84.0	70.4	84.0
25-Mar	85.2	85.8	85.4	84.0	82.0	81.6	81.2	80.5	75.5	71.2	65.0	56.8	49.7	45.7	30.4	29.8	31.3	51.6	62.7	67.4	67.6	68.2	69.9	70.4	65.8	85.8
26-Mar	71.9	69.5	66.8	68.6	71.6	74.6	74.2	70.1	65.5	61.2	58.6	54.0	50.6	46.3	43.3	42.1	43.6	45.4	49.0	51.2	52.2	52.9	53.9	54.7	58.0	74.6
27-Mar	54.9	55.6	55.7	56.4	53.4	51.5	52.4	52.5	51.4	48.8	46.9	47.7	45.4	43.0	42.7	42.4	42.5	43.0	45.6	49.3	52.1	55.9	58.6	62.5	50.4	62.5
28-Mar	68.3	68.8	71.4	73.8	76.1	82.4	81.2	75.2	69.0	55.9	47.9	42.5	39.4	34.9	33.7	31.6	31.0	31.6	32.5	35.0	37.5	44.3	49.7	57.2	53.0	82.4
29-Mar	58.3	65.6	77.6	82.3	83.7	84.6	83.5	76.5	62.1	55.6	53.3	43.3	36.7	29.8	26.4	23.4	25.5	25.3	26.9	30.0	33.3	36.0	42.2	51.7	50.6	84.6
30-Mar	53.4	53.8	57.7	60.3	73.1	77.3	78.7	67.6	52.3	48.4	47.3	48.5	47.1	41.4	40.0	40.2	36.7	34.6	35.2	37.8	33.6	36.5	40.5	46.2	49.5	78.7
31-Mar	47.3	48.7	50.4	49.3	50.7	52.3	53.9	56.0	59.0	60.4	58.7	53.8	51.8	49.7	47.6	45.6	44.7	44.6	46.9	49.7	53.6	55.4	57.4	57.4	51.9	60.4
	68.6	69.8	71.4	72.7	73.5	74.6	75.3	74.1	71.1	66.8	62.4	58.5	55.4	52.4	49.7	47.9	47.6	48.7	50.9	54.5	58.2	60.9	64.1	66.2	Diurnal Average	
	85.4	85.8	85.6	84.6	84.9	86.9	88.0	86.5	83.2	82.9	79.9	77.8	81.7	80.9	76.9	74.6	74.3	74.5	76.8	77.0	80.2	88.2	85.9	84.3	Diurnal Maximum	

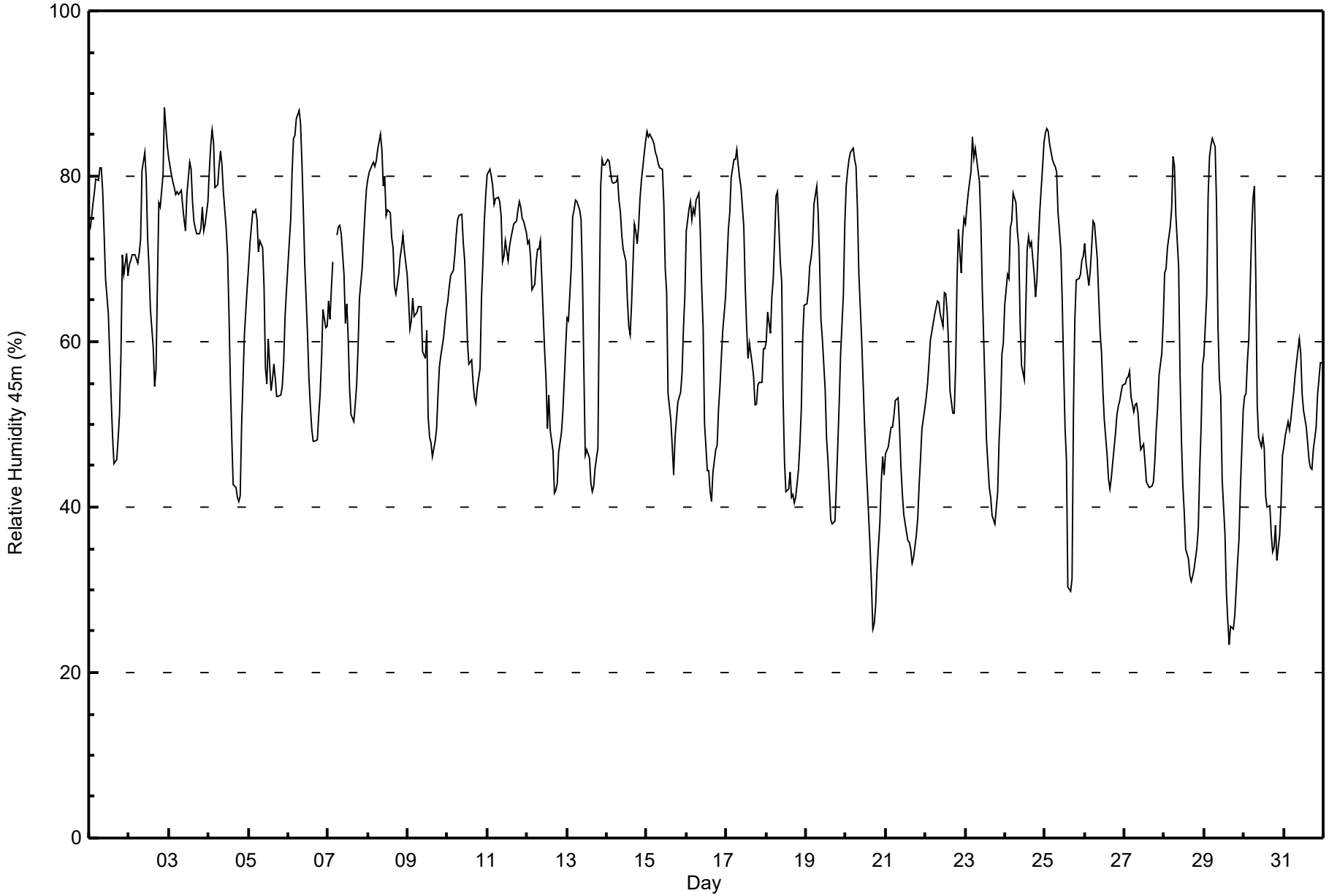
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 45m (RH45) - %

Lower Camp Met Tower - March 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	51	6.86	6.86
40 - 60	267	35.94	42.80
60 - 80	339	45.63	88.43
80 - 100	86	11.57	100.00

Total Number of Valid Hours: 743

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 100m (RH100) - %

Lower Camp Met Tower - March 2025

Maximum Value: 89.9 % on Mar 2 22:00

Maximum Daily Average: 79.2 % on Mar 8

Minimum Value: 24.3 % on Mar 29 16:00

Minimum Daily Average: 44.2 % on Mar 21

Maximum Diurnal Average: 74.2 % at hour 7

Minimum Diurnal Average: 49.0 % at hour 17

Monthly Average: 62.67 %

Percentiles: P_1 = 28.3 P_{10} = 43.3 Q_1 = 51.4 Median = 64.0 Q_3 = 74.9 P_{90} = 81.6 P_{99} = 86.4

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	74.8	74.7	75.3	77.1	78.6	79.1	80.9	80.7	80.6	77.0	71.5	68.3	61.3	54.7	49.9	46.4	45.2	46.4	48.3	50.8	55.3	56.4	57.2	61.3	64.7	80.9
2-Mar	63.9	64.7	66.1	67.7	67.7	66.5	69.7	72.3	82.4	82.6	78.3	76.1	71.3	65.6	60.7	53.5	56.8	69.4	79.6	78.7	83.1	89.9	88.3	86.5	72.6	89.9
3-Mar	85.3	83.3	82.4	81.7	80.6	81.0	80.6	80.9	79.7	77.4	77.3	80.2	86.0	84.2	79.7	77.3	76.5	75.4	73.5	72.4	70.0	69.7	70.0	70.8	78.2	86.0
4-Mar	69.5	69.3	69.7	70.5	70.9	73.6	74.4	73.9	76.0	74.3	71.9	71.5	64.2	54.6	46.7	40.9	41.1	39.4	38.5	37.8	47.6	62.0	65.0	66.9	61.3	76.0
5-Mar	69.6	73.3	77.9	78.1	78.8	77.3	73.1	74.8	75.0	70.1	59.1	56.8	62.6	56.8	57.2	58.1	57.3	55.4	54.3	54.6	56.1	56.7	60.6	60.8	64.8	78.8
6-Mar	63.3	66.0	74.2	75.4	80.2	84.5	81.9	77.1	75.3	75.1	69.8	62.5	57.4	54.4	51.7	49.4	47.7	46.7	48.0	47.3	51.4	57.4	54.8	58.3	62.9	84.5
7-Mar	63.5	64.3	69.0	72.5	UO	75.3	76.4	76.9	75.6	71.1	64.4	66.7	62.7	56.8	52.9	51.6	53.9	56.3	61.4	67.5	71.8	75.5	78.8	81.3	67.2	81.3
8-Mar	82.7	83.9	84.8	85.0	84.6	85.4	86.3	88.9	86.8	83.8	83.8	79.0	79.1	78.8	75.7	74.4	69.4	68.4	71.1	73.2	74.6	75.9	74.0	71.2	79.2	88.9
9-Mar	68.0	64.2	65.6	68.2	66.1	66.8	67.3	67.3	67.2	61.6	60.5	63.8	53.4	50.7	50.3	48.4	50.0	51.7	55.8	59.3	60.7	63.1	65.1	66.6	60.9	68.2
10-Mar	67.5	68.6	70.2	71.8	73.6	75.8	77.8	78.2	78.3	76.0	73.0	68.8	63.2	60.7	61.4	58.1	55.9	55.3	55.9	57.8	66.7	71.1	75.7	78.6	68.3	78.6
11-Mar	81.0	83.0	82.4	81.6	80.3	80.5	80.7	80.6	78.7	73.1	73.7	74.7	72.8	74.5	75.4	76.2	77.2	77.4	78.8	80.0	79.3	78.0	77.4	76.0	78.1	83.0
12-Mar	74.7	75.3	73.1	69.2	69.0	70.6	73.9	73.4	71.2	70.9	61.4	57.8	52.7	54.2	49.2	45.1	42.9	42.9	42.7	45.1	49.4	52.2	53.6	56.2	59.5	75.3
13-Mar	57.5	59.6	59.4	58.9	66.2	70.3	64.8	62.4	61.6	58.0	58.0	49.8	49.3	47.8	44.5	43.2	43.7	46.1	48.6	66.8	80.2	83.8	83.5	83.7	60.3	83.8
14-Mar	84.0	83.7	82.8	81.9	81.8	81.7	82.2	79.9	79.1	76.3	74.5	72.3	67.5	64.7	63.7	67.2	77.0	75.7	74.0	75.9	78.8	80.9	84.4	84.1	77.3	84.4
15-Mar	86.5	86.0	85.7	85.5	85.2	84.5	84.0	83.5	83.2	83.7	81.0	71.4	66.1	54.7	52.6	48.1	47.1	50.1	51.4	52.1	54.0	56.4	60.4	64.7	69.1	86.5
16-Mar	75.9	78.7	81.1	80.6	83.0	82.0	81.5	79.0	73.7	68.6	65.4	51.6	46.4	46.6	44.1	42.8	46.0	48.2	48.9	53.5	56.3	60.1	63.4	67.9	63.6	83.0
17-Mar	72.3	76.4	78.4	82.7	84.3	84.5	85.5	84.0	83.0	81.8	77.6	69.8	64.3	60.4	61.9	59.4	58.1	54.8	54.1	55.2	55.6	55.5	56.7	58.8	69.0	85.5
18-Mar	58.0	65.2	58.8	63.1	66.0	70.2	80.0	81.0	74.4	70.9	56.2	47.9	44.4	44.1	45.8	43.2	43.2	41.8	42.6	43.2	47.1	50.2	59.1	61.9	56.6	81.0
19-Mar	63.1	65.1	64.6	65.6	68.7	67.8	72.9	72.5	69.6	66.5	62.6	55.6	51.0	48.1	44.5	40.0	38.5	37.7	43.4	49.0	54.3	60.6	68.4	77.4	58.7	77.4
20-Mar	82.2	84.0	84.9	85.1	85.1	84.5	83.2	79.9	72.7	64.9	58.9	53.0	48.5	44.7	37.0	32.1	26.2	26.8	29.0	32.8	38.3	43.2	44.1	43.8	56.9	85.1
21-Mar	47.0	48.2	49.0	50.3	50.0	51.7	52.1	53.8	51.1	47.0	43.7	40.6	38.1	37.0	36.0	35.3	33.6	33.7	36.9	37.8	41.9	45.9	49.5	50.7	44.2	53.8
22-Mar	53.1	55.3	56.8	61.0	62.4	64.2	65.5	67.3	67.1	63.9	65.5	69.0	68.7	65.6	60.6	55.2	52.5	52.5	58.6	69.7	72.7	68.2	75.4	77.5	63.7	77.5
23-Mar	77.6	78.2	79.9	81.7	83.6	81.3	84.1	82.8	81.3	76.9	69.3	62.6	55.7	48.9	43.7	42.4	40.0	39.2	38.7	39.4	43.0	47.5	49.8	55.7	61.8	84.1
24-Mar	58.3	62.7	63.2	64.0	66.7	71.3	73.8	72.7	67.6	61.9	56.9	57.0	67.2	72.2	73.2	73.5	74.5	68.6	66.2	69.8	73.0	72.7	79.1	83.8	68.8	83.8
25-Mar	86.7	86.5	85.9	83.9	81.5	78.8	80.7	82.0	77.1	73.0	66.6	57.5	48.1	43.5	31.0	30.4	32.3	53.3	64.6	69.7	69.6	70.5	72.2	72.7	66.6	86.7
26-Mar	74.3	71.2	68.8	71.0	73.7	75.8	76.3	73.2	67.9	63.7	60.9	56.4	52.9	49.2	45.3	43.8	45.1	46.6	50.3	52.4	53.4	54.7	54.9	55.7	59.9	76.3
27-Mar	56.4	57.3	57.2	57.7	54.9	53.2	54.2	54.4	53.3	50.2	48.3	49.0	46.8	44.3	43.8	43.4	43.7	44.3	46.8	50.2	53.8	57.3	60.3	62.8	51.8	62.8
28-Mar	64.6	66.5	67.7	71.0	73.7	76.0	74.3	67.0	68.5	58.6	49.2	43.8	41.4	36.8	35.3	33.2	32.4	32.9	33.3	35.2	38.3	44.5	48.5	51.8	51.9	76.0
29-Mar	55.6	60.9	64.0	64.0	67.7	69.5	68.0	64.3	60.6	59.0	53.8	43.3	36.9	30.8	27.0	24.3	25.9	26.0	26.5	27.9	29.6	35.9	42.1	47.5	46.3	69.5
30-Mar	49.5	55.4	56.2	53.2	53.7	55.8	59.5	48.4	48.9	50.4	49.7	51.0	49.0	42.5	40.6	41.7	38.3	36.0	35.2	35.5	33.4	36.5	41.3	46.7	46.2	59.5
31-Mar	47.8	49.4	51.0	50.3	52.1	54.5	56.2	59.1	61.5	62.6	60.8	55.9	53.9	51.8	49.6	47.5	46.3	46.0	47.6	50.0	53.1	54.4	57.1	57.7	53.2	62.6
	68.2	69.7	70.5	71.3	72.4	73.3	74.2	73.3	71.9	68.7	64.6	60.8	57.5	54.2	51.3	49.2	49.0	49.8	51.8	54.5	57.8	60.9	63.6	65.8	Diurnal Average	
	86.7	86.5	85.9	85.5	85.2	85.4	86.3	88.9	86.8	83.8	83.8	80.2	86.0	84.2	79.7	77.3	77.2	77.4	79.6	80.0	83.1	89.9	88.3	86.5	Diurnal Maximum	

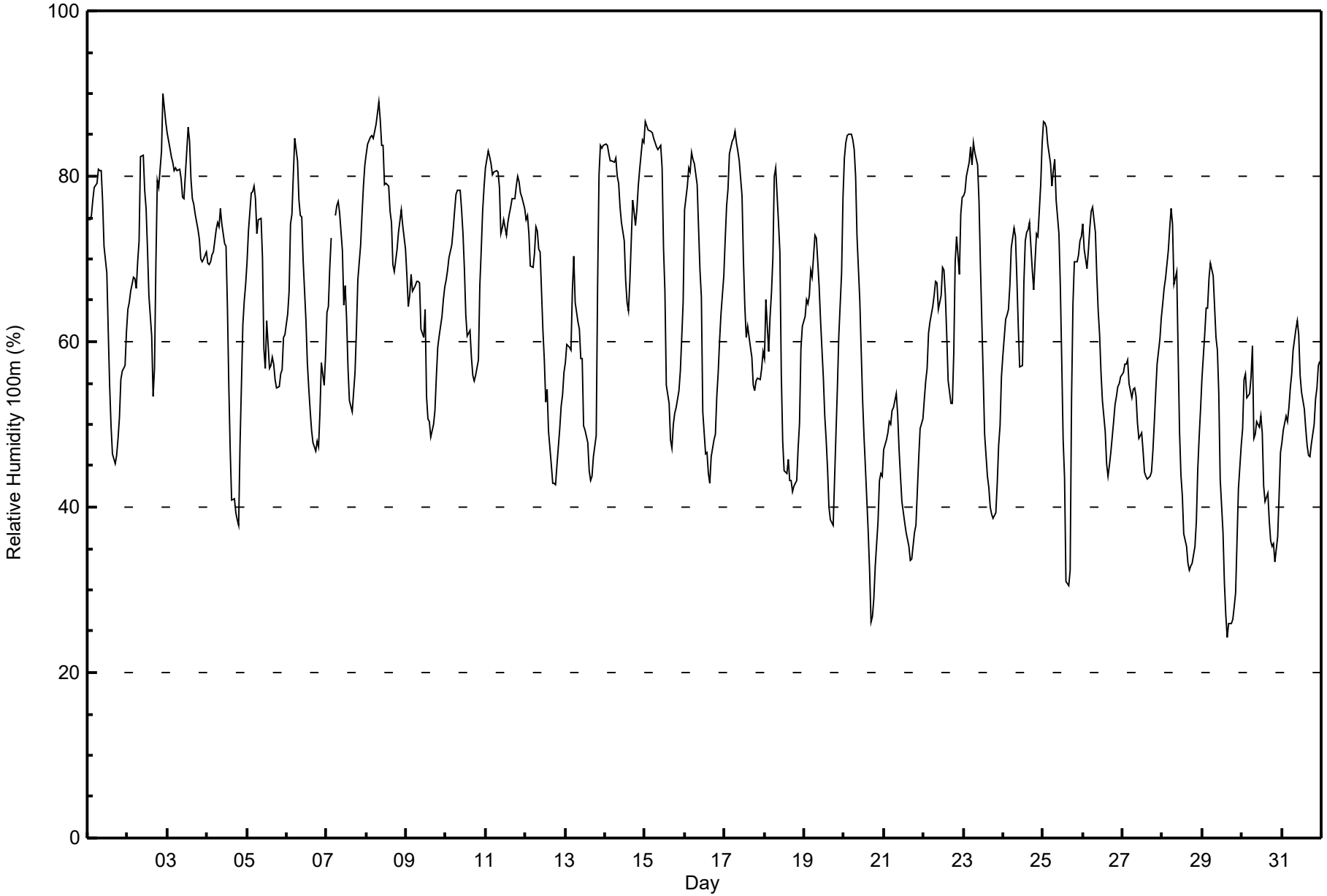
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 100m (RH100) - %

Lower Camp Met Tower - March 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	52	7.00	7.00
40 - 60	267	35.94	42.93
60 - 80	322	43.34	86.27
80 - 100	102	13.73	100.00

Total Number of Valid Hours: 743

Total Number of Hours: 744

Maximum Value: 89.6 % on Mar 2 22:00

Maximum Daily Average: 80.0 % on Mar 8

Minimum Value: 23.5 % on Mar 29 16:00

Minimum Daily Average: 40.8 % on Mar 29

Maximum Diurnal Average: 71.8 % at hour 8

Minimum Diurnal Average: 48.4 % at hour 17

Monthly Average: 60.99 %

Percentiles: P_1 = 26.4 P_{10} = 41.6 Q_1 = 49.5 Median = 61.7 Q_3 = 74.1 P_{90} = 80.5 P_{99} = 85.9

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	74.1	75.6	76.2	77.0	78.5	80.7	80.6	79.1	79.9	76.6	70.6	64.7	57.4	51.9	50.1	46.1	45.4	43.7	41.8	43.0	45.8	46.7	47.8	52.1	61.9	80.7
2-Mar	55.9	55.1	55.1	57.6	59.0	62.6	65.0	71.0	75.6	73.0	76.5	76.2	70.9	64.9	60.4	51.4	56.2	70.2	80.8	79.6	84.4	89.6	88.6	87.5	69.5	89.6
3-Mar	86.8	84.8	83.8	82.9	81.6	82.0	81.7	81.7	80.9	77.9	79.0	79.9	86.1	84.3	78.6	73.3	75.4	73.8	72.1	68.8	63.3	64.7	63.2	62.7	77.0	86.8
4-Mar	63.1	66.3	65.6	63.2	66.6	69.7	68.8	68.8	72.6	71.0	65.6	67.8	60.6	50.6	44.5	40.5	40.2	38.6	37.4	34.3	46.3	61.9	64.8	66.1	58.1	72.6
5-Mar	68.0	73.2	78.6	79.0	79.9	78.0	73.5	75.5	75.6	70.0	59.5	57.6	62.1	57.4	56.4	57.4	57.1	55.3	52.5	53.2	56.0	56.1	57.8	58.1	64.5	79.9
6-Mar	59.2	62.0	60.2	56.8	65.5	70.9	70.7	72.4	75.3	74.0	68.5	62.4	57.2	54.4	51.5	48.3	42.6	39.9	40.4	39.2	40.3	45.6	49.2	55.5	56.7	75.3
7-Mar	61.8	64.2	69.5	73.9	UO	75.4	76.6	76.9	75.3	71.4	63.3	66.7	62.9	55.5	52.5	51.4	54.1	56.4	61.9	68.2	72.6	76.3	79.9	82.5	67.4	82.5
8-Mar	83.8	84.9	85.5	85.5	85.3	85.6	86.2	89.4	87.9	84.8	85.3	80.9	80.3	80.0	76.7	75.4	70.2	69.2	71.9	74.2	75.5	76.5	74.5	71.9	80.0	89.4
9-Mar	68.3	64.5	65.9	68.6	66.6	67.3	67.8	67.6	67.3	61.6	60.1	63.3	53.2	49.9	49.9	48.0	49.7	51.5	55.9	59.4	60.8	63.1	65.2	66.1	60.9	68.6
10-Mar	66.5	67.3	66.5	68.9	70.0	72.8	74.2	76.0	76.4	75.2	73.8	69.8	64.0	60.3	61.6	58.2	55.8	55.3	56.0	57.3	64.1	67.5	71.5	74.4	66.8	76.4
11-Mar	75.1	77.1	80.1	78.7	75.7	77.7	79.0	78.1	78.0	72.8	74.2	74.7	72.6	74.7	75.9	76.6	77.7	77.9	79.3	80.3	79.7	78.4	77.6	76.3	77.0	80.3
12-Mar	74.8	75.7	73.5	69.3	68.5	70.9	73.7	71.2	66.3	70.6	60.7	57.3	52.9	52.4	47.9	42.9	40.7	41.7	42.2	42.2	45.8	48.6	49.3	49.9	57.9	75.7
13-Mar	49.0	50.3	54.0	54.7	53.7	53.4	55.8	56.0	55.6	53.9	48.6	48.1	48.4	46.9	44.0	42.8	42.9	45.7	48.4	66.9	78.9	82.1	82.5	82.8	56.1	82.8
14-Mar	83.0	82.7	82.4	81.8	81.6	81.4	81.6	79.9	79.7	77.0	75.1	72.0	67.4	64.9	63.8	67.3	77.1	75.7	74.0	75.2	77.7	79.8	83.1	82.5	76.9	83.1
15-Mar	84.0	84.3	83.7	84.1	83.8	83.3	82.8	82.2	81.7	81.5	79.7	73.0	64.6	53.7	50.8	46.4	46.7	49.7	50.2	50.8	51.9	55.0	59.0	62.6	67.7	84.3
16-Mar	72.0	78.3	80.5	81.7	83.2	83.9	83.2	77.9	70.2	71.1	65.9	49.1	45.8	46.4	43.9	42.7	45.9	47.5	48.2	52.9	56.0	59.8	63.5	68.4	63.2	83.9
17-Mar	73.4	77.4	78.7	82.1	84.1	84.6	85.4	82.8	82.1	82.5	78.6	70.3	64.0	60.3	62.2	59.7	58.4	54.8	53.7	52.5	51.9	51.3	52.6	55.3	68.3	85.4
18-Mar	53.2	52.7	53.6	62.0	64.2	66.3	76.0	76.1	76.9	64.7	54.8	47.5	44.1	43.4	45.1	42.9	42.5	41.6	42.0	41.6	44.2	47.3	55.1	61.2	54.1	76.9
19-Mar	59.4	60.0	65.0	66.8	68.6	69.4	69.3	74.8	72.5	66.7	61.9	55.3	50.6	47.3	43.6	39.2	37.4	36.7	43.1	48.9	54.4	60.9	69.2	78.6	58.3	78.6
20-Mar	83.4	85.0	85.1	84.8	84.0	83.2	82.4	80.3	74.1	63.5	58.2	52.1	47.6	43.8	35.6	30.9	25.5	26.1	28.6	32.3	37.9	40.1	40.8	42.4	56.2	85.1
21-Mar	44.7	46.4	47.7	49.3	49.8	50.7	49.6	50.5	49.8	47.1	43.2	40.2	37.7	36.3	34.9	34.1	32.6	31.6	35.2	37.1	40.2	42.7	45.4	47.4	42.7	50.7
22-Mar	51.2	54.5	57.9	60.8	62.6	63.2	64.7	67.8	66.4	66.1	68.2	70.2	69.6	65.5	59.9	54.6	51.6	52.0	58.5	70.6	72.9	68.6	75.9	77.5	63.8	77.5
23-Mar	77.7	78.5	78.6	80.6	80.5	79.7	84.6	82.2	78.5	76.3	70.3	62.6	55.0	48.1	43.6	41.8	39.8	38.7	37.9	36.5	36.5	40.7	43.6	48.1	60.0	84.6
24-Mar	52.1	56.8	56.6	59.0	61.8	66.5	68.3	70.6	65.3	58.2	55.9	56.2	69.4	72.4	73.3	73.5	74.4	67.6	65.3	70.2	72.0	68.1	70.2	73.4	65.7	74.4
25-Mar	77.8	80.1	80.0	77.8	74.7	74.9	75.0	77.5	74.8	69.4	64.5	56.1	44.5	41.8	30.1	29.8	32.0	53.3	65.2	70.4	70.0	71.2	72.8	73.0	64.0	80.1
26-Mar	74.8	70.6	68.7	71.3	73.6	74.8	76.4	73.8	67.9	63.6	60.9	56.3	52.6	49.4	45.4	43.6	44.8	46.4	50.1	52.0	53.0	54.3	50.5	53.2	59.5	76.4
27-Mar	55.6	57.0	56.7	56.9	54.5	52.8	53.9	54.3	53.3	50.0	48.1	48.7	46.5	44.0	43.3	42.8	43.1	43.8	46.5	49.4	53.5	56.2	58.8	60.0	51.2	60.0
28-Mar	60.0	62.9	63.8	63.7	64.5	64.2	62.9	58.9	54.0	55.2	50.2	43.3	41.3	36.5	34.7	32.6	31.5	32.0	32.4	33.6	36.3	40.9	43.6	42.3	47.6	64.5
29-Mar	46.1	51.9	47.2	50.3	52.9	56.4	55.5	62.4	64.0	54.8	47.1	40.1	33.9	29.9	26.2	23.5	25.1	25.1	25.7	24.6	26.7	32.6	38.0	39.9	40.8	64.0
30-Mar	41.0	44.8	49.0	48.4	48.2	53.9	57.4	49.5	52.7	51.1	50.6	51.0	49.0	41.8	39.3	41.4	37.9	35.4	33.9	31.5	30.8	34.4	40.9	45.7	44.1	57.4
31-Mar	46.5	48.2	50.2	50.2	52.1	55.2	57.9	60.9	61.7	62.8	61.1	56.1	54.1	52.0	49.6	47.6	46.3	45.9	46.3	48.3	50.6	52.0	54.8	56.6	52.8	62.8
	65.2	66.9	67.7	68.6	69.2	70.7	71.6	71.8	70.7	67.6	63.9	60.3	57.0	53.6	50.8	48.6	48.4	49.1	50.9	53.1	55.8	58.5	61.0	63.0	Diurnal Average	
	86.8	85.0	85.5	85.5	85.3	85.6	86.2	89.4	87.9	84.8	85.3	80.9	86.1	84.3	78.6	76.6	77.7	77.9	80.8	80.3	84.4	89.6	88.6	87.5	Diurnal Maximum	

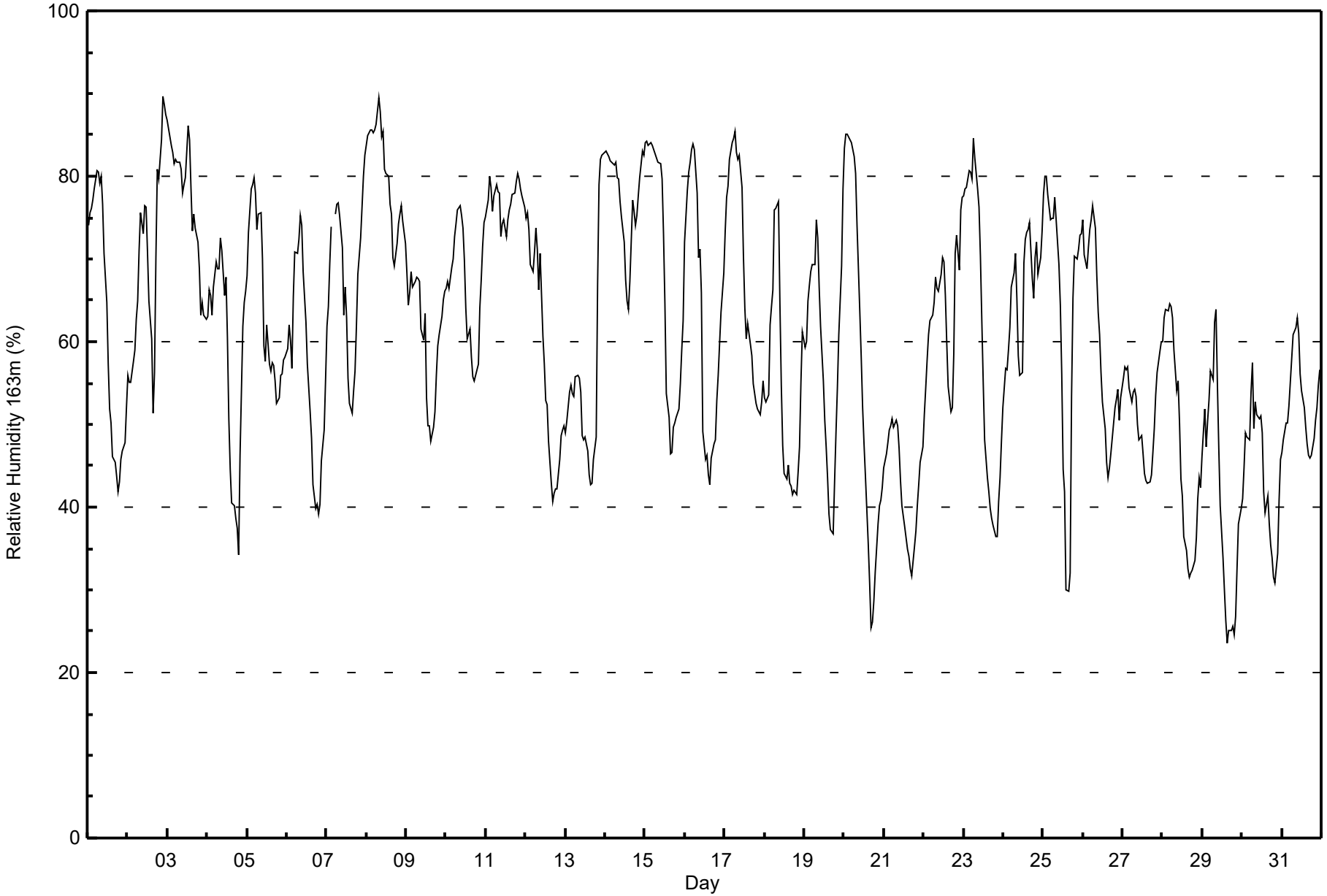
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 163m (RH163) - %

Lower Camp Met Tower - March 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	58	7.81	7.81
40 - 60	296	39.84	47.64
60 - 80	307	41.32	88.96
80 - 100	82	11.04	100.00

Total Number of Valid Hours: 743

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 20m (WS20) - km/h

Lower Camp Met Tower - March 2025

Maximum Speed: 22 km/h on Mar 8 15:00

Maximum Daily Speed Average: 11.9 km/h on Mar 27

Minimum Speed Value: 0 km/h on Mar 6 08:00

Minimum Daily Speed Average: 0.4 km/h on Mar 29

Maximum Diurnal Speed Average: 4.7 km/h at hour 21

Minimum Diurnal Speed Average: 1.0 km/h at hour 13

Monthly Average Velocity: 2.2 km/h 14.4 deg

Percentiles: $P_1 = 0$ $P_{10} = 2$ $Q_1 = 4$ Median = 7 $Q_3 = 11$ $P_{90} = 13$ $P_{99} = 17$

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	SE6	SE5	SE7	SE9	SE12	SE10	SE9	SE9	SE10	SE10	SE9	SE9	SE10	SE10	SE5	SE8	SE6	SSE3	SSW2	NW1	NNW2	WSW1	W0	SSW1	SE6.0	SE12
2-Mar	SE6	SE8	ESE4	SE4	SE8	SE10	SE7	N1	NW5	NNW2	NW4	NW3	SW3	SSE2	SW7	WSW6	NNW8	NNW12	N13	N12	N8	N6	NNE6	NNE11	NNE1.9	N13
3-Mar	N12	N10	N8	NNW7	NNW6	N5	NNW5	W2	WSW1	NNE1	SW3	SW5	SSW2	SE6	SE9	SE9	ESE8	SE5	NW1	SSW1	SSW0	ENE1	SE2	SSE6	NE1.1	N12
4-Mar	SSE5	SE5	SE8	SE10	SE12	SE10	SE9	SE7	SE11	SE12	SE10	SE9	SE10	SE8	SE5	SW11	SW10	SW10	SW11	SW13	WNW9	NNW6	NNW7	NNW5	SSE4.7	SW13
5-Mar	NNW5	NNW4	NNW8	NNW10	NNW13	NNW11	NNW13	N10	NNE9	N9	NNW8	NNW4	SW8	SSW3	SE9	SE16	SE11	ESE5	E0	NNW3	WNW1	NNW2	NW2	NW2	N3.0	SE16
6-Mar	WNW2	NW2	NW3	WNW3	SSW0	SSW2	S1	WSW0	SE3	SE7	SE10	SE9	SE10	SE9	SE13	SE13	SE11	SE10	ESE1	SSE3	NW2	NW3	WNW1	NNW5	SE3.3	SE13
7-Mar	NNW6	NNW8	NNW6	NNW8	UO	NNW5	NNW6	NNW4	N6	N5	NW2	SSW7	SSE1	NNW3	NNW3	N15	N14	N9	NNW10	NNW11	NNW9	NNW8	NNW11	NNW8	NNW6.5	N15
8-Mar	NNW6	NNW5	NNW5	NNW6	NNW5	NNW4	NW5	NNW6	NW6	NNW5	W5	N6	NNW13	NNW18	NNW22	N19	N16	N12	NNE10	NNE12	NNE15	N11	NNE14	NNE16	N9.4	NNW22
9-Mar	NNE13	NNE12	N8	NNE8	NNE10	N12	NNE10	NNE8	NNE10	NNE10	NNE10	NNE9	NNW9	N11	NNW8	N6	N10	N9	N9	NNW8	N7	NNW7	NNW6	NNW5	N8.7	NNE13
10-Mar	NNW5	NNW5	NNW3	NNW4	NNW4	NNW3	NW3	NW2	N2	N3	E0	SE4	SSE7	ESE5	SE6	SE7	SE4	SE3	ESE1	NNW4	NNW4	NNW5	NNW5	NNW4	NNE1.1	SE7
11-Mar	NNW4	NNW5	NNW7	NNW5	NNW7	NNW7	NNW4	NNW7	NNW7	NNW7	NNW6	NW8	NNW13	NNW17	NNW15	N14	NNW15	NNW15	NNW16	NNW15	NNW15	N12	N12	NNW11	NNW10.1	NNW17
12-Mar	NNW10	NNW9	NNW8	NNW8	NNW4	NW2	W2	NW3	WNW2	SW2	NW3	WNW3	W5	SW13	SW11	WSW11	WNW3	NNW1	NW2	NNW3	NW3	NNW6	NNW5	NNW4	WNW3.4	SW13
13-Mar	NNW4	NNW4	NW3	WNW3	NW3	NW4	NW4	NW4	NNW4	N7	N8	NNW8	NW12	NNW8	N13	N14	N13	N13	N12	N11	NNW7	NNW9	NNW11	NNW10	NNW7.5	N14
14-Mar	NNW10	NNW12	NNW11	NNW11	NNW10	NNW9	NNW9	NNW15	NNW11	NNW13	N14	N12	N17	N17	NNW17	NNW17	NNW13	NNW13	N12	N10	NNW8	NNW6	NW4	NW2	NNW11.2	N17
15-Mar	WNW2	NNW3	WNW3	WNW2	NW2	NW3	NNW2	WNW1	NW1	SW1	SW6	SW10	SW11	SW7	SW8	S2	SSE4	SE9	SE9	SE5	SE5	SSE1	NNW3	NNW3	SW1.8	SW11
16-Mar	NW2	NNW1	SE3	SE6	SE7	SE9	SE11	SE10	SE9	SSE8	SE6	SE7	SE13	SE11	ESE13	ESE12	SE9	ESE9	E8	SE5	SE9	ESE11	ESE11	SE10	SE7.9	SE13
17-Mar	ESE8	SE6	SSE6	SSE4	S4	S4	S2	SSW2	SW2	W5	NNW7	NNW10	N11	N11	N12	N13	N10	N9	N8	NNW4	NW4	NW3	W2	S1	N2.8	N13
18-Mar	ESE1	NNE1	ESE2	NNW3	N2	NW5	NNW3	NNW2	SSW1	SW3	SSW3	SW6	SW5	SSE5	ESE10	ESE7	ESE5	ESE6	ESE4	NNW1	NNW2	NNW2	WNW2	NW3	SE0.6	ESE10
19-Mar	NNW5	NW2	WNW3	WNW1	NW0	ESE0	ESE2	NNW1	SSW1	ESE2	SE9	SE10	SE7	SE6	SSE5	SSE7	SSE8	SSE1	NNW11	NNW14	NNW15	NNW16	NNW16	NNW12	N2.0	NNW16
20-Mar	NNW11	NNW11	NNW9	NNW7	NW3	NNW6	NNW4	NNW5	N8	N9	NW9	NW11	NW12	NW13	NW13	NW10	NNW11	NNW12	NNW9	NNW7	N7	N4	WSW1	ESE12	NNW7.1	NW13
21-Mar	ESE14	ESE14	ESE11	ESE13	ESE12	ESE11	ESE3	SE2	ESE11	SE11	SE12	ESE12	SE16	SE14	SE17	SE17	SE16	SE13	ESE3	SSE2	S3	WNW2	SSE1	SW1	SE9.3	SE17
22-Mar	SE5	SE6	SE5	ESE6	SE5	SE3	SE7	SE9	ESE5	SE10	SE9	SE10	SE13	SE14	SE13	SE14	SE8	N4	NNW7	W4	WSW4	WNW11	NNW11	NW4	SE4.4	SE14
23-Mar	W2	NNW3	NW1	W0	NW1	W3	W5	WSW4	SW8	SW7	S3	SE7	SE9	SE10	SE13	ESE10	SE9	SE5	SE0	SSW0	NNW3	NW2	NW2	W2	SSE2.1	SE13
24-Mar	NW3	W0	NNW2	NNW4	NW1	NNW4	WNW2	SSE2	ESE5	SE14	SE12	SE12	SE11	SE10	SE8	SE5	ESE2	WNW8	NW14	NW10	WNW5	W4	W3	W3	SSE1.0	SE14
25-Mar	WSW3	W2	SSE0	SSE1	SW4	SW6	WSW3	SW1	WSW6	WSW7	SW5	SE10	SE13	ESE4	NW13	NW16	NW17	N15	N13	NNE14	N12	N10	N13	N15	NNW4.0	NW17
26-Mar	N13	N13	NNW12	N10	N7	NNE6	NNE4	N8	NNE12	NNE11	N9	NNW9	NNW7	NNW8	NNW7	NNW9	N10	N11	NNW11	NNW11	N10	N10	NNE12	NNE11	N9.2	N13
27-Mar	N8	N9	N9	NNW11	N12	N9	N8	NNE12	NNE14	N13	N17	N16	N16	N15	N17	N17	N17	N16	N15	N11	NNW10	NNW8	NNW5	NNW4	N11.9	N17
28-Mar	NNW5	N4	N5	NNW5	N4	NNW3	N3	N3	N3	NNW5	NNW6	NNW6	NW8	NNW9	WNW10	NW9	NW11	NNW10	NNW11	NNW6	NNW7	NNW6	NNW5	N5	NNW5.9	NW11
29-Mar	N4	NW3	NW3	NNW3	NNW3	NNW3	N3	N2	N3	E2	SSW4	SW5	SW6	SW7	WSW4	E2	SE11	SSE14	SSE13	SE7	NNW6	N4	N6	NNW5	SSW0.4	SSE14
30-Mar	NNW4	NNW2	NW1	NNW1	NW1	NW1	N1	N0	NE2	SE1	ENE2	NW0	SSE6	SSE6	SE9	SE9	SE6	SE4	NNW4	N6	N7	N5	ESE9	ESE16	ESE1.9	ESE16
31-Mar	ESE16	SE15	SE9	E4	E6	ESE6	ESE8	ESE8	SE8	SE13	SE14	SE13	SE13	ESE12	SE14	ESE15	ESE14	ESE15	ESE12	ESE7	SE12	SE9	ESE7	ESE10	ESE10.6	ESE16
	N2.8	N2.8	N2.4	N2.4	NNE1.8	NNE1.7	NNE1.3	N1.7	NNE1.9	ENE1.5	ENE1.1	ESE1.0	ESE1.0	ENE1.3	ENE1.2	ENE1.9	NE2.8	NNE3.2	N4.6	N4.5	N4.7	N4.5	N4.3	N3.5	Diurnal Average	
	ESE16	SE15	NNW12	ESE13	NNW13	NNE12	NNW13	NNW15	NNE14	SE14	N17	N16	N17	NNW18	NNW22	N19	N17	N16	NNW16	NNW15	NNW15	NNW16	NNW16	NNE16	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

Lower Camp Met Tower - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7 km/h on Mar 25 17:00

Minimum Value: 0 km/h on Mar 15 08:00

Percentiles: P_1 = 1 P_{10} = 1 Q_1 = 2 Median = 2 Q_3 = 4 P_{90} = 5 P_{99} = 6

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

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

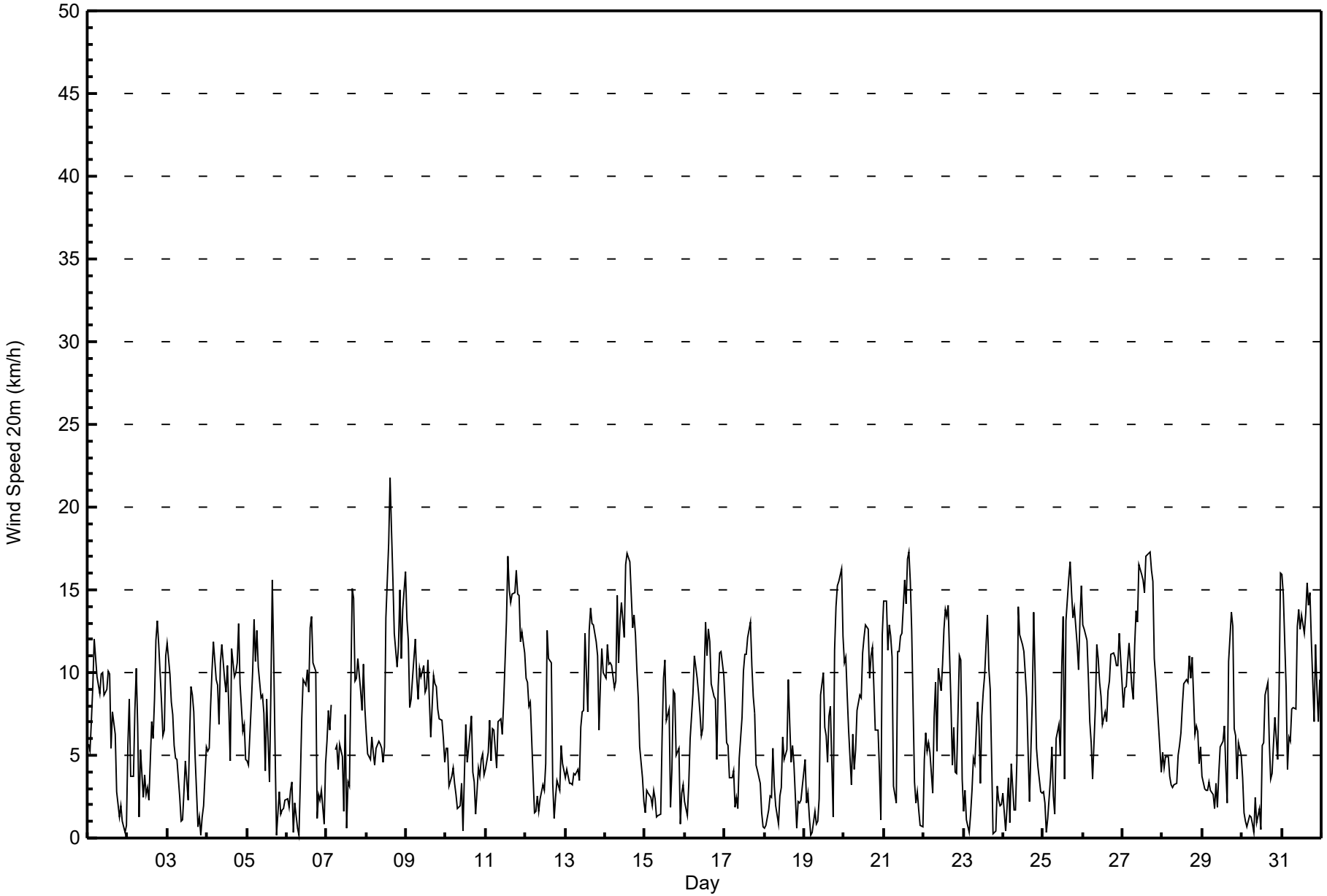
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 20m (WS20) - km/h

Lower Camp Met Tower - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	303	40.78	40.78
6 - 11	302	40.65	81.43
12 - 19	137	18.44	99.87
20 - 28	1	0.13	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 743

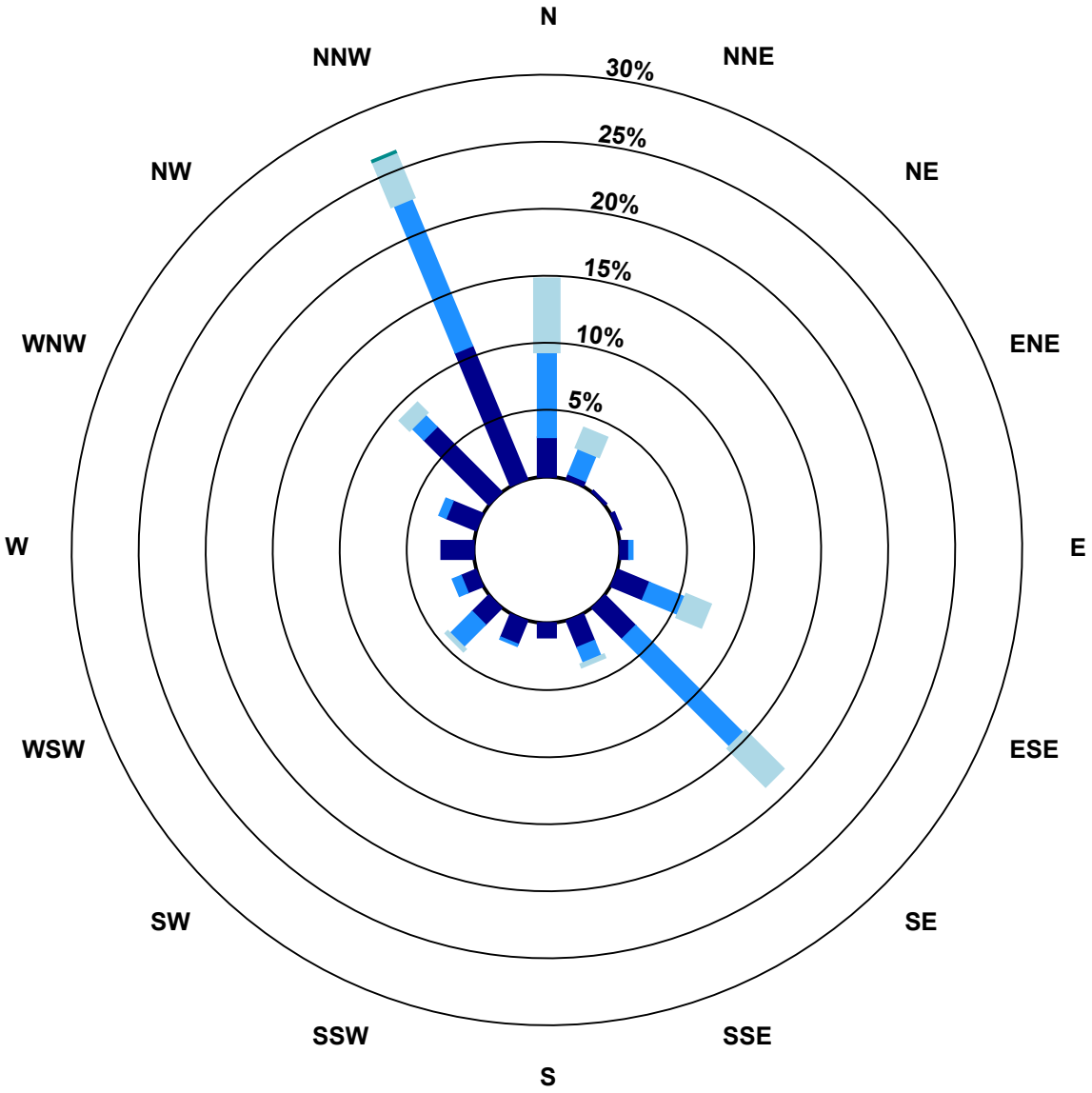
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 20m (WS20) - km/h

Lower Camp Met Tower



Classes (km/h)

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

Total Number of Valid Hours: 743

Maximum Speed: 30 km/h on Mar 8 15:00

Maximum Daily Speed Average: 17.5 km/h on Mar 27

Minimum Speed Value: 0 km/h on Mar 1 20:00

Minimum Daily Speed Average: 0.4 km/h on Mar 29

Maximum Diurnal Speed Average: 7.2 km/h at hour 19

Minimum Diurnal Speed Average: 1.4 km/h at hour 13

Monthly Average Velocity: 3.9 km/h 16.2 deg

Percentiles: P_1 = 1 P_{10} = 3 Q_1 = 6 Median = 10 Q_3 = 15 P_{90} = 19 P_{99} = 25

Hours in Service: 744

Hours of Data: 743

Hours of Missing Data: 1

Percent Operational Time: 99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	SE9	SE9	SE10	SE11	SE14	SE11	SE11	SE12	SE10	SE11	ESE9	SE9	SE11	SE11	SE6	SE8	SE9	SSE5	SE4	SW0	N2	SE5	SE5	SSE5	SE8.0	SE14
2-Mar	SE8	ESE10	ESE6	SE6	SE10	ESE13	SE8	ESE1	NNW10	NW5	NW6	NW5	WSW4	SSW3	WSW9	W8	NNW14	N18	N19	N20	N13	N10	N10	N16	N3.9	N20
3-Mar	N18	N15	N13	N11	NNW9	N8	N8	WNW3	WNW1	N2	SW3	SW5	SSW3	SE6	SE10	ESE12	ESE12	ESE8	ESE2	SE4	SE4	SE4	SE6	SE10	NE2.4	N18
4-Mar	SE10	SE9	SE11	SE15	SE13	SE10	SE13	SE13	SE14	SE14	SE15	SE15	SE13	SE8	SSE5	SW16	SW13	SW14	SW15	SW18	WNW14	NNW10	NNW12	NNW9	SSE5.9	SW18
5-Mar	N9	NNW10	NNW13	NNW16	NNW20	NNW16	NNW19	N16	NNE12	N12	N10	NNW6	WSW9	SSW3	SE9	SE18	SE15	ESE9	E3	N2	N2	N4	NNW5	NNW6	N5.7	NNW20
6-Mar	NNW5	NNW4	NNW5	NW4	WSW5	SSE2	SSE1	SSW2	SE7	SE11	SE13	SE11	SE12	SE9	SE15	SE15	SE16	SE14	ESE5	SE7	ESE1	NW4	WSW5	NNW10	SE4.4	SE16
7-Mar	NNW10	NNW11	NNW10	NNW12	UO	NNW10	NNW9	NNW6	NNW8	NNW6	NW3	SSW7	SE1	N5	NNW5	N22	N23	N16	N15	N16	NNW13	NNW12	NNW15	N12	NNW10.0	N23
8-Mar	NNW9	NNW8	NNW6	NNW9	NNW8	NNW6	NW8	NNW9	NW7	NNW6	W6	N8	NNW19	N25	NNW30	N28	N24	N19	NNE16	N18	NNE23	N17	NNE20	NNE22	N13.9	NNW30
9-Mar	N20	NNE17	N11	NNE12	NNE14	N17	NNE14	NNE11	NNE15	NNE15	NNE15	NNE12	N12	N14	N10	N9	N14	N14	N14	NNW12	N12	N10	NNW10	NNW7	N12.7	N20
10-Mar	NNW9	NNW9	NNW5	NNW5	NNW6	NNW5	NNW3	NW2	N2	NNW3	E1	SE4	SSE8	ESE5	SE7	SE8	ESE4	ESE4	E4	NNW4	N6	NNW8	NNW8	NNW7	N2.2	NNW9
11-Mar	NNW7	NNW9	NNW9	NNW8	NNW10	NNW10	NNW7	NNW10	NNW11	NNW10	NNW9	NNW11	NNW18	N24	N21	N21	N21	NNW21	N24	N22	N22	N18	N19	NNW16	NNW14.8	N24
12-Mar	NNW15	N15	NNW12	NNW12	NNW7	N5	NW3	WNW4	WSW5	WSW2	NW4	WNW4	WNW5	SW12	WSW10	WSW10	NW4	N3	NNE5	N7	N4	N6	NNE5	NNE2	NW4.6	N15
13-Mar	NNW8	N7	N9	NNW6	NNW6	NNW7	NNW8	NNW9	NW5	NW5	NNW6	NNW10	NW15	NNW11	N19	N22	N21	N21	N18	N18	NNW11	NNW14	NNW16	NNW16	NNW11.7	N22
14-Mar	NNW15	NNW18	NNW17	NNW17	NNW16	NNW14	NNW16	NNW22	N16	N19	N22	N18	N24	N25	NNW23	NNW24	NNW19	N20	N19	N17	NNW13	NNW10	NNW7	NNW6	N17.1	N25
15-Mar	NNW5	NW6	NNW7	WNW3	W3	NNW2	NNW3	NNW4	NNW3	WNW2	WSW5	WSW9	SW11	SW7	SW8	S2	SE4	SE11	SE11	SE9	SE8	SE2	NNW1	NNW5	SW1.5	SE11
16-Mar	NW5	NNW4	E1	ESE7	SE7	ESE9	SE14	SE15	SE10	SE7	SE6	SE9	SE16	ESE14	ESE17	ESE17	SE12	ESE14	E13	ESE8	SE13	ESE17	ESE18	ESE15	ESE10.4	ESE18
17-Mar	ESE13	SE9	SE7	SSE5	SSE6	SSE6	SE3	SSE4	SW2	W6	NNW10	NNW13	N15	N16	N19	N20	N16	N13	N11	N7	NNW5	NW5	NNW2	SE1	N4.6	N20
18-Mar	SW4	SW2	S2	N2	NNW3	NW9	NNW6	NW3	WSW1	SW3	SW4	SW6	SW6	SE6	ESE12	ESE9	ESE6	ESE9	ESE6	ESE2	NE3	N2	NNW6	NNW8	SE0.5	ESE12
19-Mar	NNW8	NW5	NW3	WNW3	NW2	E1	SE5	ESE3	SE3	ESE4	SE10	SE12	ESE7	SE6	SE5	SE7	SE8	SE1	NNW18	NNW21	NNW23	NNW22	N24	NNW19	N3.9	N24
20-Mar	NNW16	NNW17	NNW14	NNW11	NNW8	NNW10	NNW7	NNW7	NNW8	NNW10	NW10	NW13	NW14	NW15	NW16	NW12	N15	NNW16	NNW15	NNW12	NNW11	N10	E2	ESE20	NNW10.2	ESE20
21-Mar	ESE22	ESE22	ESE18	ESE21	ESE20	ESE19	ESE10	SE6	ESE18	SE15	ESE16	ESE17	SE21	ESE20	SE24	SE25	SE22	SE20	ESE7	ESE5	ESE5	ESE2	SE1	SE2	ESE14.9	SE25
22-Mar	SE7	SE9	SE10	SE8	SE7	ESE5	ESE9	SE10	ESE8	SE15	SE12	SE13	SE15	SE17	SE16	SE18	ESE12	N7	NNW12	WNW6	WSW7	WNW18	NNW17	NNW6	SE5.4	SE18
23-Mar	WNW1	NW5	NNW3	WSW1	WSW5	WSW5	WSW8	WSW6	WSW8	SW7	S3	SE8	SE9	SE11	SE15	ESE14	SE11	SE6	ESE2	SE2	NE2	E2	ESE3	SSE2	SSE2.8	SE15
24-Mar	NNW2	NNW5	NW4	WNW2	S1	NNW3	NNW2	SE5	SE9	SE14	SE12	SE12	SE14	SSE12	SE10	SE6	SE3	WNW14	NW20	NW15	NW10	W7	WSW8	WSW5	SSW1.1	NW20
25-Mar	WSW7	WSW5	SW3	SW4	WSW7	SW9	WSW6	SW4	WSW7	WSW8	SW6	SE10	SE14	ESE4	NW19	NW22	NW24	N22	N21	NNE20	N17	N16	N20	N25	NNW6.4	N25
26-Mar	N19	N19	N17	N14	N11	NNE9	NNE6	N11	NNE16	NNE15	N12	NNW10	NNW9	NNW10	NNW9	NNW11	N13	N16	N15	N16	N15	N15	NNE17	NNE16	N13.0	N19
27-Mar	N11	N12	N14	N16	N17	N13	N13	NNE17	NNE20	N19	N23	N22	N21	N20	N24	N25	N26	N25	N24	N17	NNW15	N13	NNW10	NNW7	N17.5	N26
28-Mar	NNW9	NNW7	N9	NNW9	NNW7	NNW6	NNW6	NNW4	NW3	NNW6	NNW7	NNW7	NW10	NNW12	WNW11	NW12	NW14	NNW13	N17	NNW11	NNW11	NNW11	NNW8	NNW11	NNW8.8	N17
29-Mar	NNW9	NNW6	NNW4	NW4	NW3	WNW1	NW3	NW1	N3	E2	SSW4	SW5	SW5	WSW6	SW5	E2	SE12	SSE15	SSE15	SE9	N9	N6	N10	NNW8	WNW0.4	SSE15
30-Mar	NNW7	NNW4	WNW3	W2	NW1	WNW1	WNW1	NNW1	NNE2	ESE1	NE2	NNW1	SSE6	SE6	SE11	SE11	SE7	ESE5	N4	N11	N11	NNE7	ESE14	SE25	E2.5	ESE25
31-Mar	ESE24	ESE24	ESE16	E8	E12	ESE9	ESE11	ESE11	SE9	SE15	SE17	SE16	SE16	ESE17	ESE18	ESE21	ESE20	ESE22	ESE18	ESE15	SE20	ESE16	ESE14	ESE17	ESE16.0	ESE24
	N4.9	N4.8	N4.1	N3.7	NNE2.7	NNE2.9	NNE2.5	NNE2.4	NNE2.7	NE2.2	NE1.9	ENE1.7	ENE1.4	NE2.6	NE2.5	NE3.6	NE4.9	NNE5.6	N7.2	N6.8	N6.9	N6.8	N6.5	NNE5.6	Diurnal Average	
	ESE24	ESE24	ESE18	ESE21	NNW20	ESE19	NNW19	NNW22	NNE20	N19	N23	N22	N24	N25	NNW30	N28	N26	N25	N24	N22	NNE23	NNW22	N24	N25	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

Lower Camp Met Tower - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7 km/h on Mar 22 23:00

Minimum Value: 0 km/h on Mar 30 06:00

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

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

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

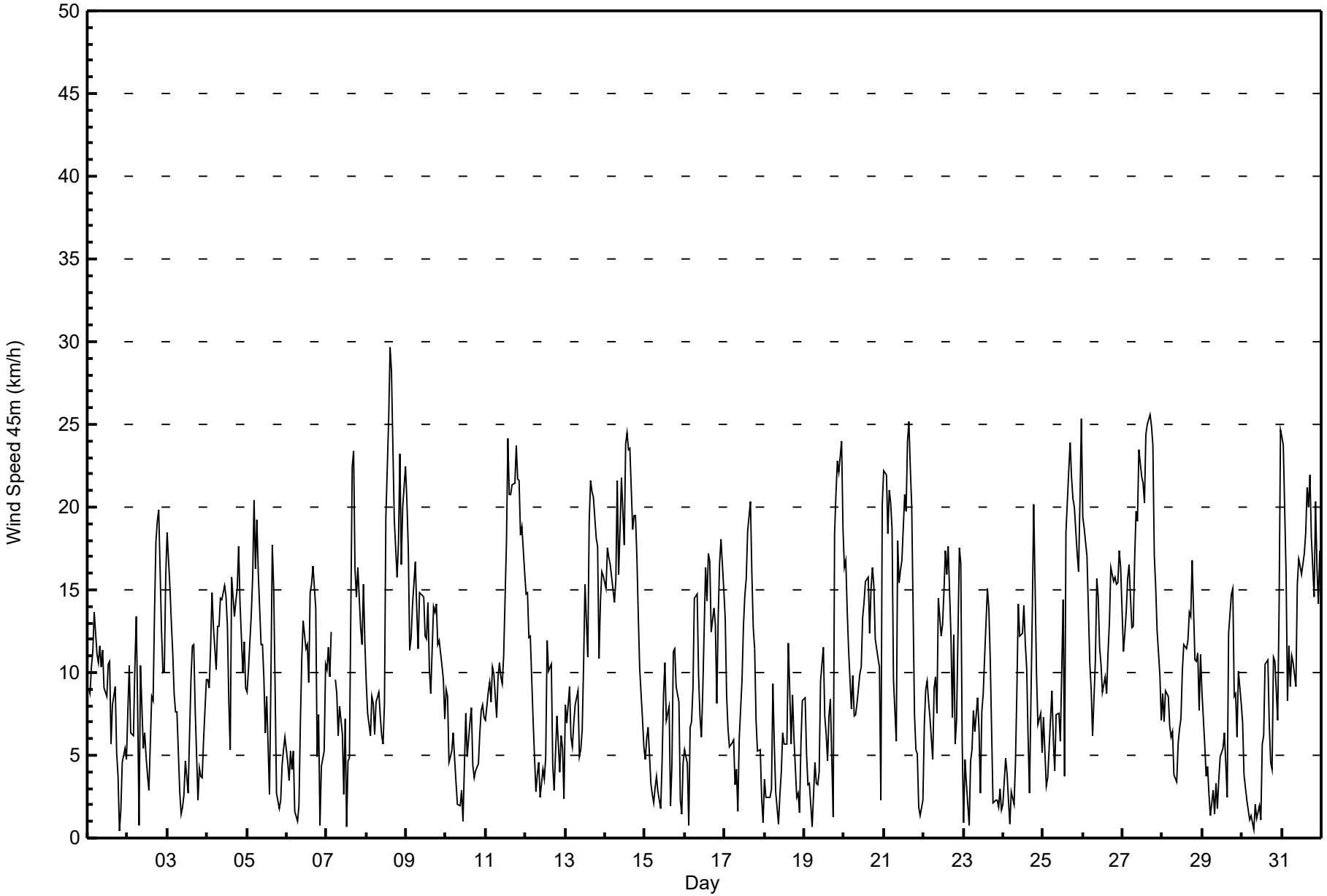
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 45m (WS45) - km/h

Lower Camp Met Tower - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	186	25.03	25.03
6 - 11	269	36.20	61.24
12 - 19	217	29.21	90.44
20 - 28	70	9.42	99.87
29 - 38	1	0.13	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 743

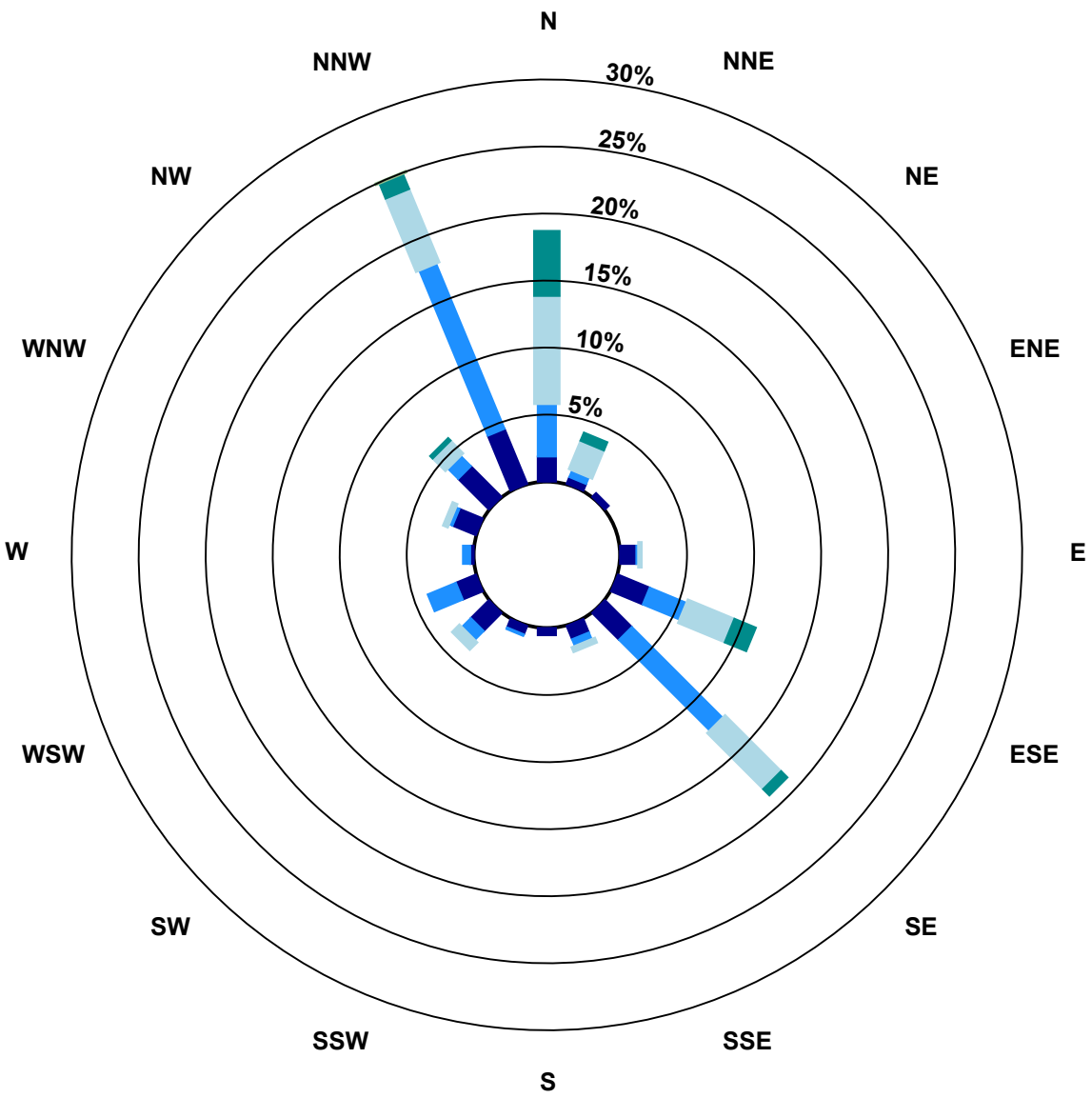
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 45m (WS45) - km/h

Lower Camp Met Tower



Classes (km/h)

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

Total Number of Valid Hours: 743

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 100m (WS100) - km/h

Lower Camp Met Tower - March 2025

Maximum Speed: 34 km/h on Mar 8 15:00

Maximum Daily Speed Average: 21.6 km/h on Mar 21

Minimum Speed Value: 0 km/h on Mar 29 10:00

Minimum Daily Speed Average: 1.1 km/h on Mar 18

Maximum Diurnal Speed Average: 8.1 km/h at hour 19

Minimum Diurnal Speed Average: 1.3 km/h at hour 13

Monthly Average Velocity: 4.4 km/h 21.2 deg

Percentiles: P_1 = 1 P_{10} = 4 Q_1 = 8 Median = 12 Q_3 = 18 P_{90} = 23 P_{99} = 30

Hours in Service: 744

Hours of Data: 743

Hours of Missing Data: 1

Percent Operational Time: 99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	SSE13	SSE12	SSE13	SSE14	SSE14	SSE12	SSE10	SSE14	SSE10	SSE10	SE10	SE9	SE11	SE12	SSE7	SE10	SE12	SE9	SSE5	SE2	SE9	SE13	SE13	SE9	SSE10.4	SSE14
2-Mar	SE12	SE15	SSE10	S7	S10	SSE8	SSW6	NW6	NNW18	NNW12	NNW13	NW7	WSW5	WSW8	WSW10	WNW13	NNW19	N20	N21	N22	N15	N12	N12	NNE18	N5.3	N22
3-Mar	N21	N17	N16	N13	N12	N9	N9	NW2	NW2	N1	WSW3	WSW5	SW4	SSE6	SE9	ESE12	ESE14	ESE11	ESE8	SE10	SSE11	SSE10	S10	S9	ENE2.3	N21
4-Mar	S8	S7	S7	SSW8	SSW9	SSW7	S4	S11	SSE12	SSE11	SE13	SE18	SE13	S9	SSW9	SW21	SW18	WSW20	SW21	WSW28	WNW20	NNW15	N15	N13	SW7.0	WSW28
5-Mar	NNE16	N16	NNW20	N21	N25	N21	NNW25	N20	NNE13	NNE13	N11	NNW8	WSW8	WSW3	SE9	SE17	SE16	ESE13	ESE9	SE3	NNW1	N2	N5	E2	NNE7.3	NNW25
6-Mar	NE1	NNE2	NNW7	NNW6	SW4	SW4	SE5	SSE6	SSE9	SE17	SSE15	SSE11	SSE11	SE9	SE13	SE14	SE17	SE14	SE9	S9	SSE3	WSW1	NW6	NNW15	SE5.3	SE17
7-Mar	N15	N15	N11	N14	UO	NNW13	NNW11	NNW8	NNW8	NNW5	NNW3	S8	SSE2	NNE6	N7	N22	N23	N19	N17	N18	NNW15	NNW14	NNW18	N13	N11.4	N23
8-Mar	N10	NNW9	NNW6	NNW9	NNW10	NNW8	NNW11	NNW13	NNW8	NW5	W6	NNW9	NNW21	N27	NNW34	N31	N26	N21	NNE17	NNE20	NNE26	N19	NNE23	NNE25	N15.7	NNW34
9-Mar	NNE25	NNE21	NNE15	NNE15	NNE17	NNE19	NNE16	NNE14	NNE16	NNE17	NNE16	NNE13	N14	N15	N11	N11	N15	N15	N16	N14	N14	N11	N12	N9	N14.8	NNE25
10-Mar	NNW12	NNW12	NNW7	NNW7	NNW8	NNW6	NNW5	NW2	W2	WSW3	SSE2	SE5	SSE8	ESE5	SE8	SE8	ESE5	ESE4	E7	NE3	NE12	N9	N9	N9	NNE3.0	NNW12
11-Mar	N10	N13	N14	N13	N13	N13	N10	N12	N13	NNW11	NNW12	NNW13	N20	N24	N22	N23	N24	N25	N27	N25	N25	N21	N22	N20	N17.7	N27
12-Mar	N18	N18	N15	N15	N10	NNE10	NNE7	NNW4	NW4	W3	NW4	NW5	WNW5	WSW10	WSW8	WSW7	NNW6	NE6	NE9	NNE13	NE9	NE5	E6	ESE6	N5.5	N18
13-Mar	E3	ENE4	NE8	NNE6	N5	N4	ENE5	NE6	NNE9	NNW10	NW7	NNW10	NW18	NNW14	N21	N23	N22	N23	N21	N21	N15	N17	N20	N20	N12.0	N23
14-Mar	N20	N22	N22	N22	N21	N20	NNW21	N28	N19	N21	N24	N20	N26	N26	NNW27	N27	NNW23	N23	N23	N21	N17	N16	NNW13	N11	N21.2	N28
15-Mar	NNW10	NNW13	NNW13	NNW9	NW8	NNW8	NNW7	NNW8	NNW7	N5	NW5	W7	WSW8	WSW6	SW8	S2	SSE5	SE12	SSE15	SSE15	SSE12	SE6	S3	W3	W1.6	SSE15
16-Mar	NW8	NNW9	NNW3	SSE1	SSW5	SSE5	SSE7	SE11	SSE8	SE7	SE7	SE13	SE18	ESE17	ESE20	ESE19	SE16	ESE18	ESE18	ESE13	ESE18	ESE21	SE23	SE19	SE10.7	SE23
17-Mar	ESE19	SE13	SE10	SE11	SSE9	SSE9	SSE8	SSE8	SW3	NW8	NNW10	N14	N15	N17	N21	N21	N17	NNE14	NNE15	NNE12	NNE9	N6	NNW6	SW3	NNE5.2	N21
18-Mar	SW10	SW11	SW7	NNW2	W6	NNW11	NNW9	NNW5	W2	SW4	WSW6	SW7	SW7	SSE5	ESE12	ESE10	ESE7	ESE11	ESE8	SE6	ESE5	SE2	NNW11	NNW20	SW1.1	NNW20
19-Mar	NNW18	NNW12	NNW14	NNW11	NNW6	NW2	SSE3	SE3	SE2	SE4	SE10	SSE12	ESE8	ESE7	ESE6	ESE8	ESE7	E3	N22	N25	N25	N24	N27	N23	N6.6	N27
20-Mar	NNW22	N20	N19	N17	N13	N14	N10	NNW9	NNW8	NNW9	NW11	NW15	NW15	NW17	NW19	NNW15	N16	N19	N19	N18	NNW15	N10	ESE10	SE27	NNW12.1	SE27
21-Mar	SE30	SE30	ESE27	SE30	SE29	SE26	SE22	SE15	SE24	SE20	SE18	ESE21	SE23	SE23	SE26	SE28	SE26	SE24	ESE14	ESE16	ESE16	ESE12	SE8	SE14	SE21.6	SE30
22-Mar	SE15	SE18	SSE15	SSE11	SSE11	SSE10	SE12	SE13	SE12	SSE17	SE13	SE12	SE15	SE17	SE16	SE17	SE14	N8	NNW16	NNW9	W7	NW23	N21	N8	SE6.6	NW23
23-Mar	ENE1	NW3	N2	S2	WSW12	WSW10	W7	W4	WSW5	SSW6	SSE3	SE8	SE8	SE10	SE14	ESE15	SE12	ESE8	ESE4	ESE6	ESE7	ESE12	ESE19	ESE13	SE4.8	ESE19
24-Mar	ESE10	E6	ESE6	SE3	SE11	SE7	SE6	SSE6	SSE13	SSE13	SSE10	SSE11	SSE17	SSE15	SSE13	S8	SW3	WNW21	NW29	NW20	NW16	WNW13	WSW20	WSW14	SSW3.6	NW29
25-Mar	WSW17	WSW16	SW13	WSW14	WSW15	W8	WSW12	WSW11	WSW10	W9	WSW7	SSE10	SSE14	WSW3	NW24	NW29	NW31	N24	N23	NNE23	N22	N19	N25	N31	NW8.6	N31
26-Mar	N24	N22	N21	N17	NNE16	NNE16	NNE9	N12	NNE16	NNE16	N13	NNW11	NNW9	NNW10	NNW10	N12	N14	N17	N17	N17	N16	NNE17	NNE21	NNE20	N15.1	N24
27-Mar	N14	N14	N16	N18	N19	N15	NNE15	NNE19	NNE21	N21	N24	N24	N24	N23	N27	N28	N28	N27	N28	N22	N19	N17	N14	N12	N20.3	N28
28-Mar	N13	N9	N8	N8	N7	NNW9	N10	NNW5	NW4	NW5	NNW7	NNW8	NW11	NNW12	NW12	NW13	NW15	NNW16	N19	N14	N16	N16	N13	N14	NNW10.5	N19
29-Mar	N10	NNW10	N10	NNW12	NNW8	NNW7	WNW4	WNW1	NW1	NW0	SSW3	WSW3	WSW5	SW6	WSW4	ESE2	SE11	SSE15	SSE18	SSE13	NNE10	N6	N11	NNW13	NNW1.5	SSE18
30-Mar	NNW13	NW7	NW5	NW6	NNW3	NNW1	WSW1	N3	N1	ESE1	NNW1	WNW2	SSE6	SE6	SE11	SE12	ESE8	ESE7	NE4	NNE17	NNE15	NE8	ESE20	SE30	E3.5	SE30
31-Mar	SE30	SE29	ESE22	ESE15	ESE16	ESE15	ESE16	ESE15	ESE10	SE16	SE18	SE20	SE17	ESE20	ESE22	ESE23	ESE23	ESE26	ESE24	ESE22	SE29	SE26	ESE24	ESE25	ESE20.8	SE30
	NNE5.9	NNE5.3	N5.0	N5.0	N3.2	N3.7	N2.9	NNE2.6	NNE2.5	NE1.8	NNE1.9	ENE1.4	ENE1.3	NE2.3	NNE2.9	NE4.2	NE5.7	NNE6.7	NNE8.1	NNE7.8	NNE7.9	NNE7.1	NNE7.2	NNE6.8	Diurnal Average	
	SE30	SE30	ESE27	SE30	SE29	SE26	NNW25	N28	SE24	N21	N24	N24	N26	N27	NNW34	N31	NW31	N27	NW29	WSW28	SE29	SE26	N27	N31	Diurnal Maximum	

UO - Unstable Operation

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

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8 km/h on Mar 22 23:00

Minimum Value: 0 km/h on Mar 15 09:00

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

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

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

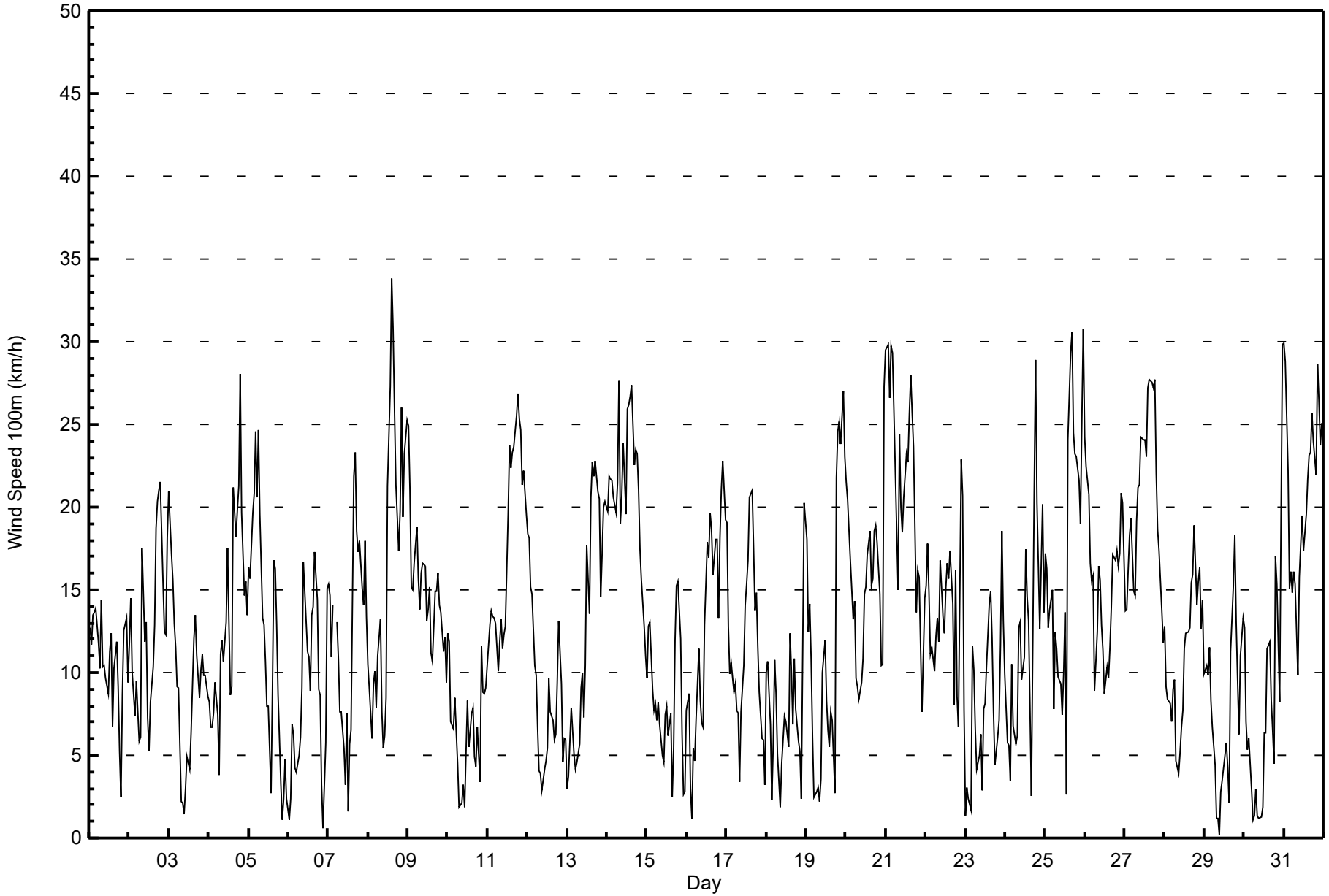
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 100m (WS100) - km/h

Lower Camp Met Tower - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	107	14.40	14.40
6 - 11	237	31.90	46.30
12 - 19	251	33.78	80.08
20 - 28	134	18.03	98.12
29 - 38	14	1.88	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 743

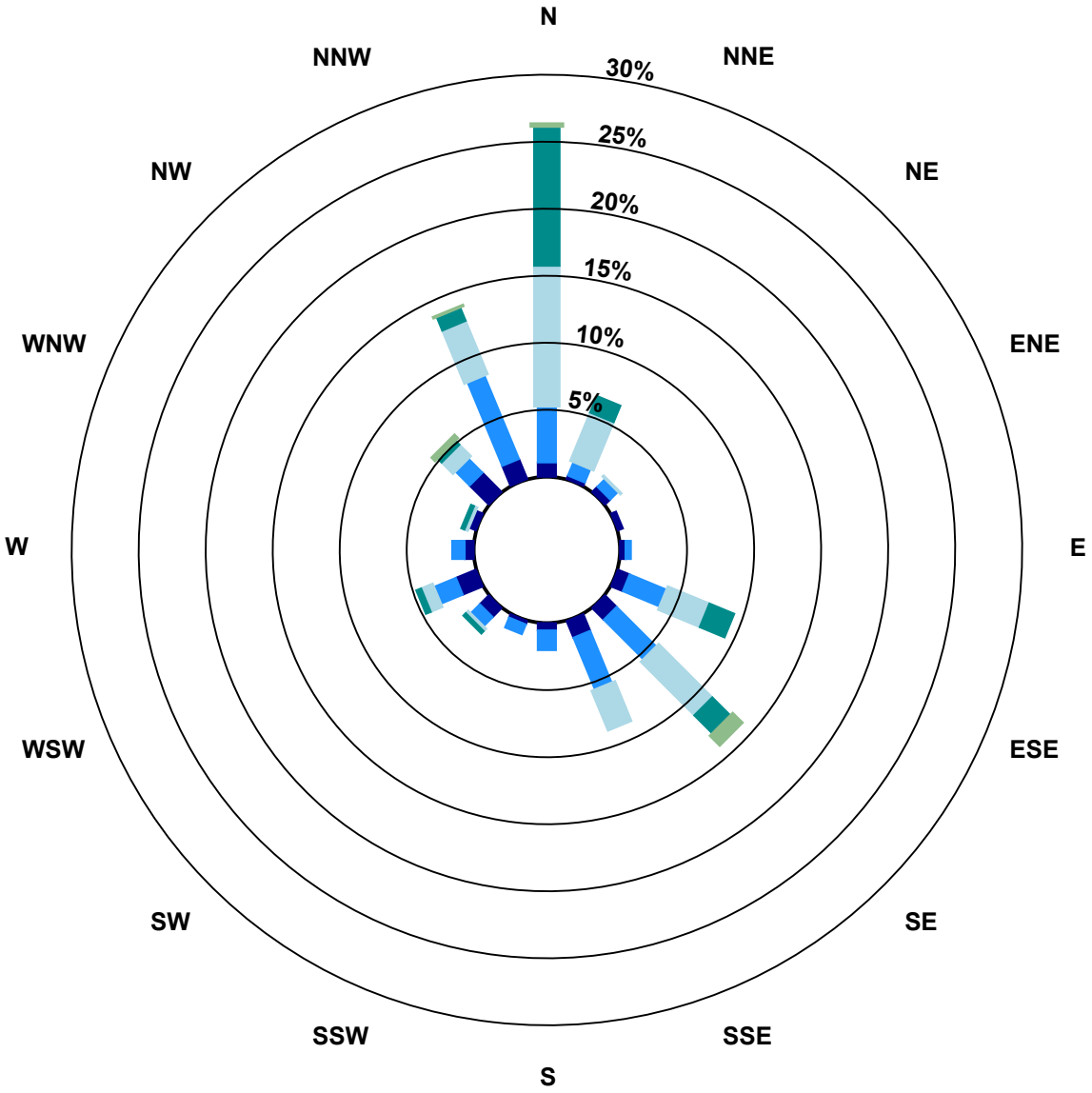
Total Number of Hours: 744

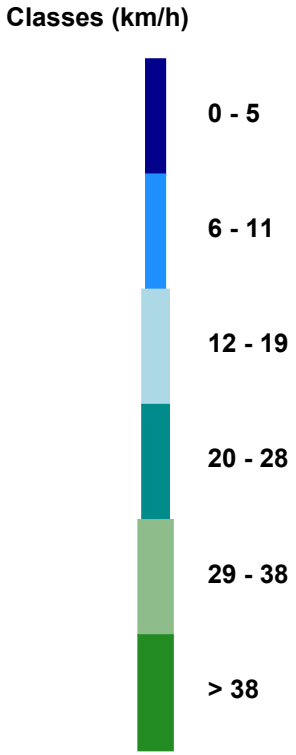
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 100m (WS100) - km/h

Lower Camp Met Tower





Total Number of Valid Hours: 743

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 163m (WS163) - km/h

Lower Camp Met Tower - March 2025

Maximum Speed: 37 km/h on Mar 26 00:00

Maximum Daily Speed Average: 26.9 km/h on Mar 21

Minimum Speed Value: 1 km/h on Mar 3 10:00

Minimum Daily Speed Average: 1.0 km/h on Mar 29

Maximum Diurnal Speed Average: 8.7 km/h at hour 21

Minimum Diurnal Speed Average: 0.9 km/h at hour 13

Monthly Average Velocity: 4.7 km/h 41.0 deg

Percentiles: P_1 = 1 P_{10} = 6 Q_1 = 9 Median = 15 Q_3 = 21 P_{90} = 25 P_{99} = 34

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	SSE13	SSE13	SSE14	SSE18	SSE19	SSE12	SSE16	SSE24	SSE19	SSE21	SSE14	SE12	ESE13	ESE12	SE11	SE12	SE11	SSE12	SSE15	SSE13	S16	SSE20	SSE19	SSE16	SSE14.8	SSE24
2-Mar	SSE17	SSE25	SSE17	S15	SSW11	SW8	WSW12	NW14	N27	NNE25	N21	NNW10	W8	WSW12	W12	WNW18	NNW21	NNE22	NNE23	NNE24	NNE18	N15	NNE14	NNE20	NNW6.5	N27
3-Mar	NNE22	NNE18	N16	N14	N14	N10	NNE10	NNW3	NW2	WNW1	W4	W6	SW7	S7	S8	SSE8	SE13	SE14	SE12	SSE13	S16	S14	SSW12	SW11	ESE1.0	NNE22
4-Mar	SW12	SW13	SW13	WSW20	WSW22	WSW22	WSW12	SW9	SW12	SSW10	S9	SSE14	SSE12	SSW12	SW13	WSW22	WSW21	WSW22	WSW25	WSW34	WNW23	N17	N18	N18	WSW11.4	WSW34
5-Mar	NNE28	N25	N23	N24	N27	N23	N28	NNE22	NNE15	NNE13	N11	NNW9	W7	WSW3	SSE9	SE15	SE17	ESE15	ESE15	SE9	SSE2	SSW2	ESE1	SE6	NNE8.3	NNE28
6-Mar	SE6	SE4	ESE4	SE9	S10	SSE8	SE11	SE10	SSE14	SSE19	SSE17	SSE13	SSE11	SSE9	SSE12	SSE14	SSE15	SSE17	S8	SSW10	WSW10	NW12	NW15	NNE17	SSE7.2	SSE19
7-Mar	N17	N16	NNE12	N14	UO	N14	NNE10	N7	NNW8	NNW5	NNE4	S9	S2	NNE6	N7	NNE21	N22	N19	N20	N19	N15	N14	N18	N14	N11.7	N22
8-Mar	N10	N10	N6	N8	N10	NNE9	N9	NNW16	NNW8	NNW5	WNW7	NNW9	N21	N27	N34	N31	N27	NNE22	NNE19	NNE21	NNE28	NNE22	NNE26	NNE28	N16.4	N34
9-Mar	NNE28	NNE25	NNE18	NNE19	NNE19	NNE21	NNE16	NNE15	NNE16	NNE17	NNE17	NNE13	N14	N15	N11	N11	NNE15	NNE15	N17	N15	NNE15	NNE11	N13	NNE11	NNE15.9	NNE28
10-Mar	NNE14	N12	NNE11	NNE9	N9	N8	NE5	SE1	S7	SSW6	S5	SSE6	SSE8	SE6	SE8	SE8	ESE6	E4	E6	ENE5	ENE13	ENE7	ENE9	ENE7	ENE4.1	NNE14
11-Mar	ENE8	NE12	NNE16	NNE16	NE14	NNE13	NE12	NNE12	NNE13	NNE11	N15	N15	N19	N22	N22	N23	N23	N26	N28	N26	N25	N23	N24	N21	NNE17.9	N28
12-Mar	N20	N20	N16	N16	NNE14	NNE16	NNE13	NNE7	NNW6	WNW3	NNW5	NNW5	NW6	W8	W7	W5	N7	NE7	NE8	NE12	NE14	E11	ESE14	SE15	NNE6.7	N20
13-Mar	SE14	ESE14	ESE4	ENE5	SE11	ESE17	ESE16	ESE15	E8	ENE5	N8	NNW11	NNW18	N14	NNE21	NNE23	NNE22	NNE25	NNE24	NNE24	NNE17	NNE20	N23	N23	NNE11.1	NNE25
14-Mar	N22	N24	N24	N24	N23	N23	N25	N32	N21	N22	N24	N21	N26	N25	N28	N29	N23	N25	N26	N25	N22	N22	N18	N18	N23.7	N32
15-Mar	N14	N15	N16	N15	N13	N9	N9	N8	N6	N6	NW6	WNW7	W6	WSW6	WSW6	SSW3	S7	SE12	SSE17	S19	SSE16	SSE10	S6	SW5	NNW1.1	S19
16-Mar	WNW5	NNW8	N3	S1	SSW7	SSW5	SSE5	S12	S13	SE9	SE8	SE17	SE19	ESE17	ESE21	ESE19	SE18	SE21	ESE22	ESE20	SE22	SE26	SE27	SE23	SE12.4	SE27
17-Mar	SE21	SE16	SE15	SE14	SE11	SSE11	SSE12	S13	SW7	NW10	NNW11	N14	N16	NNE17	NNE20	N20	NNE17	NNE15	NNE18	NE21	NE19	NE10	NNE5	W1	NE6.2	SE21
18-Mar	SW10	SW14	SW13	W7	W10	NW6	NNW7	NW4	WSW6	WSW9	WSW7	SW9	WSW9	S6	SE12	SE10	SE7	SE11	SE9	SSE8	SE7	S5	NNW8	N22	SW3.2	N22
19-Mar	N20	N19	N17	N14	N9	N4	SW1	S2	S3	S6	SSE11	SSE15	SE10	SE7	SE6	ESE6	ESE5	ENE4	N24	N27	N27	NNE26	N29	N25	NNE8.1	N29
20-Mar	N22	N23	N23	NNE22	NNE19	NNE18	NNE14	NE13	NE9	N8	NNW11	NNW14	NNW15	NNW17	NNW18	NNW15	N15	N18	N19	N20	N14	E7	SE22	SE32	N12.3	SE32
21-Mar	SE34	SE35	SE32	SE35	SE34	SE29	SE33	SE25	SE29	SE22	SE20	SE21	SE24	SE24	SE27	SE30	SE29	SE27	ESE18	ESE19	SE23	SE24	SE25	SE28	SE26.9	SE35
22-Mar	SE25	SE22	SSE18	SSE16	SSE16	SSE16	SSE16	SE15	SSE17	SSE22	SSE16	SSE13	SSE16	SE15	SE15	SE17	SE14	NNE8	N18	NNW11	W6	NW24	N23	NNE11	SE8.4	SE25
23-Mar	ENE5	NW2	SW2	SW5	W14	WNW10	NW7	NW5	W1	S6	S4	SSE8	SSE9	SSE10	SE13	SE15	SE13	ESE9	ESE7	ESE13	ESE16	SE17	SE21	SE22	SE6.0	SE22
24-Mar	SE20	ESE16	ESE17	SE15	SE19	SE15	SE13	SSE11	SSE16	S14	S10	S10	S21	S19	S16	SW9	WSW7	WNW26	NW34	NNW24	NNW22	NW18	W17	W19	SSW4.9	NW34
25-Mar	WSW23	WSW23	WSW20	WSW21	W18	WNW9	W12	WSW14	W10	W9	SW9	S10	S14	W9	NW28	NW34	NNW33	NNE27	NNE26	NNE27	NNE25	NNE20	NNE29	NNE37	NW11.2	NNE37
26-Mar	NNE29	N28	N25	NNE20	NNE22	NNE22	NNE14	NNE16	NNE16	NNE16	N13	N11	NNW9	NNW10	NNW10	N11	NNE14	NNE17	N16	N19	NNE18	NNE19	NE26	NNE25	NNE17.2	NNE29
27-Mar	NNE16	NNE15	NNE18	NNE20	NNE21	NNE18	NNE17	NNE20	NNE22	NNE21	NNE23	N24	N24	N23	N27	NNE27	NNE28	NNE27	NNE31	NNE27	NNE24	NNE22	NNE20	NNE19	NNE22.2	NNE31
28-Mar	NNE18	NNE11	NE10	NE8	NE7	NNE7	NE8	NE10	NNE8	NW6	NNW6	NNW8	NW12	NNW12	NW13	NW13	NW15	NNW17	N20	NNE21	NNE24	NNE24	NNE19	NNE18	N11.5	NNE24
29-Mar	NNE16	NNE12	NE7	NE4	NNW5	N5	W3	W6	WNW6	NW2	SW2	WNW3	W4	SW5	WSW4	SE2	SE10	SSE16	SSE19	SSE18	ENE6	NE7	N7	NNW7	ENE1.0	SSE19
30-Mar	NW9	NNW8	WNW4	WNW6	NNW4	SSW1	SW4	NW4	WSW2	S3	WSW1	WNW2	SSE7	SE6	SE12	SE13	SE10	ESE8	E7	NE20	NE17	E12	ESE24	SE34	ESE4.4	SE34
31-Mar	SE35	SE32	SE26	SE21	SE20	SE18	SE17	SE16	SE10	SE15	SE18	SE20	SE17	ESE20	SE22	SE24	SE25	SE28	SE28	SE27	SE36	SE34	SE30	SE30	SE23.6	SE36
	NE6.8	NE5.9	NE5.1	NE4.5	NE3.4	NE4.3	NE3.4	NE2.8	ENE2.2	ENE1.4	NNE1.7	ENE1.2	ENE0.9	NNE1.9	NNE2.8	NE4.2	NE5.6	NE6.9	NNE8.4	NNE8.6	NE8.7	NE7.7	NE8.1	NE8.3	Diurnal Average	
	SE35	SE35	SE32	SE35	SE34	SE29	SE33	N32	SE29	NNE25	N24	N24	N26	N27	N34	NW34	NNW33	SE28	NW34	WSW34	SE36	SE34	SE30	NNE37	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 - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 9 km/h on Mar 22 23:00

Minimum Value: 0 km/h on Mar 15 09:00

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

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

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

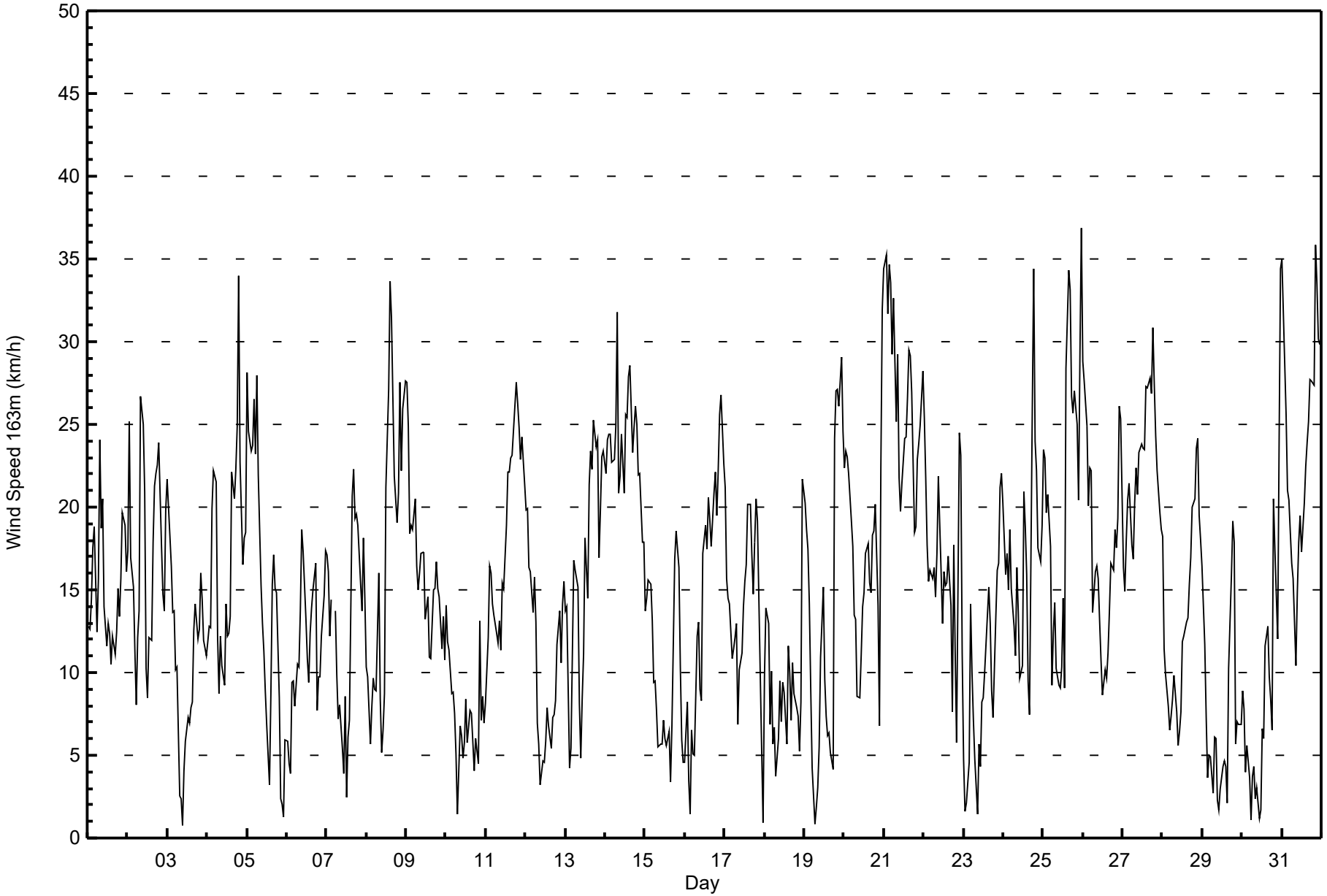
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 163m (WS163) - km/h

Lower Camp Met Tower - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	70	9.42	9.42
6 - 11	193	25.98	35.40
12 - 19	263	35.40	70.79
20 - 28	186	25.03	95.83
29 - 38	31	4.17	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 743

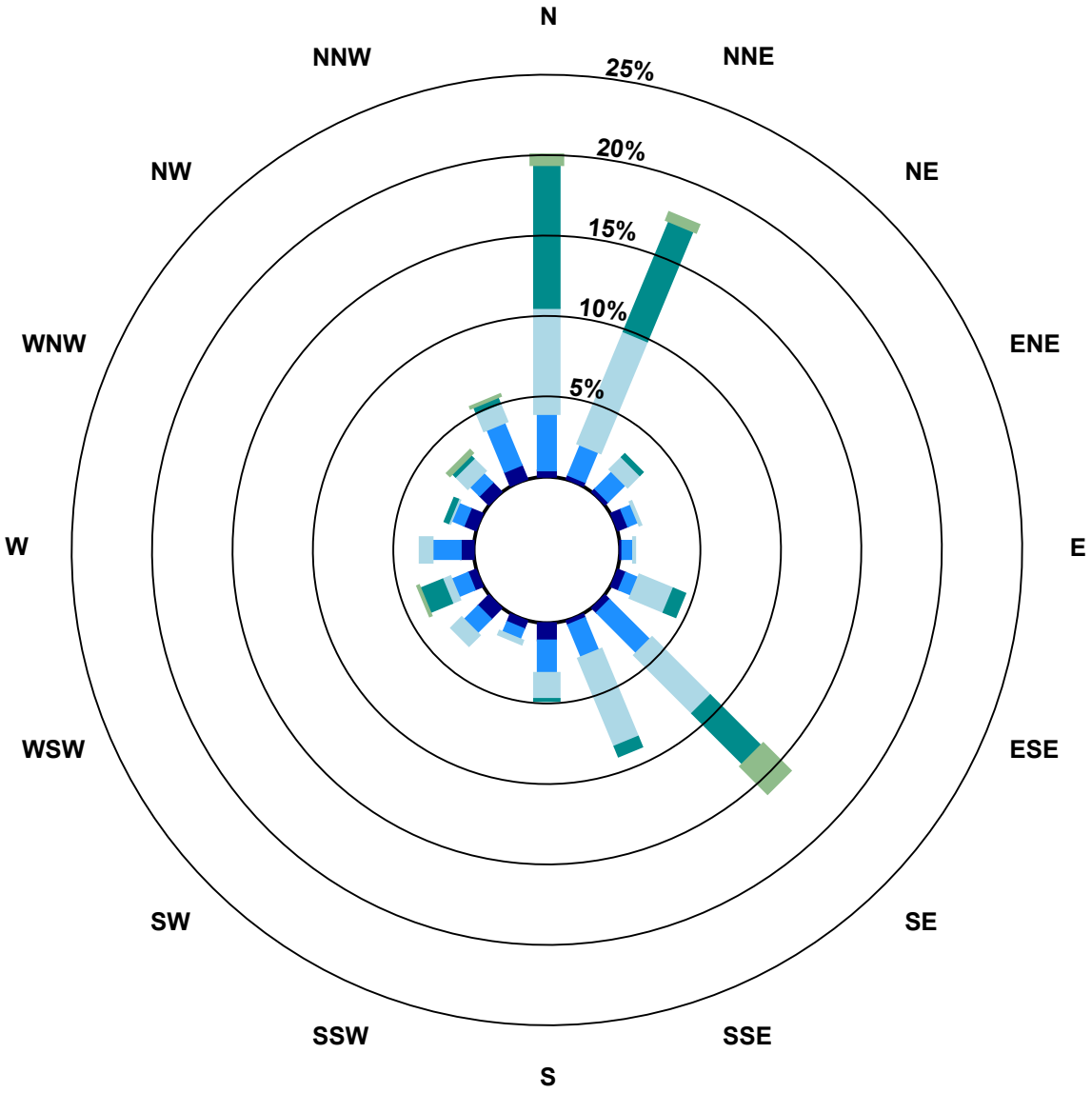
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 163m (WS163) - km/h

Lower Camp Met Tower



Classes (km/h)

0 - 5

6 - 11

12 - 19

20 - 28

29 - 38

> 38

Total Number of Valid Hours: 743

Direction of Maximum Speed: 344 deg on Mar 8 15:00
Direction of Maximum Daily Speed Average: 356.3 deg on Mar 27

Direction of Minimum Speed: 258 deg on Mar 6 08:00
Direction of Minimum Daily Speed Average: 0.4 deg on Mar 29

Monthly Average Direction: 14.4 deg

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	131	127	125	128	132	126	133	131	133	134	135	136	139	136	140	133	142	157	203	315	327	242	266	202	134.8
2-Mar	146	133	122	144	135	132	130	7	326	330	322	316	223	167	227	247	336	348	356	2	10	2	14	13	14.5
3-Mar	5	3	359	347	340	349	344	278	254	18	215	222	202	133	135	125	115	124	324	208	192	68	144	148	49.7
4-Mar	153	146	145	142	133	137	134	128	133	132	134	129	136	132	137	235	230	232	225	233	290	346	339	336	163.1
5-Mar	345	334	331	340	343	342	336	354	22	4	348	333	234	201	137	137	131	102	80	348	297	329	323	309	354.6
6-Mar	297	310	315	299	200	213	184	258	136	131	130	134	136	142	139	139	133	134	107	156	316	317	290	340	138.5
7-Mar	342	344	343	346	UO	339	339	327	353	349	315	199	147	335	327	353	356	350	347	346	342	336	339	347	343.3
8-Mar	343	334	327	338	333	329	307	330	321	329	272	350	346	348	344	355	5	9	14	14	15	11	14	13	353.3
9-Mar	12	12	9	15	23	11	12	16	17	27	16	12	344	351	346	352	4	4	3	343	357	345	338	332	4.8
10-Mar	332	346	335	328	336	333	326	319	11	354	87	139	151	112	137	140	129	131	109	343	346	343	338	332	13.7
11-Mar	341	336	345	335	337	336	337	338	338	334	331	323	344	348	347	350	346	344	348	345	348	356	353	345	344.0
12-Mar	341	345	340	343	332	308	272	325	287	227	318	283	277	224	234	241	297	331	323	334	324	348	342	331	303.4
13-Mar	335	337	319	297	318	325	312	311	344	350	354	333	318	332	360	2	2	4	354	354	339	344	344	339	344.2
14-Mar	338	343	339	339	340	338	336	342	347	348	357	7	4	349	345	345	343	346	349	359	345	341	317	314	346.5
15-Mar	298	341	297	291	313	326	341	298	311	220	229	233	233	227	224	179	148	133	139	135	131	156	336	342	215.4
16-Mar	322	335	130	129	131	129	130	136	135	147	143	130	134	128	109	116	135	115	96	127	129	118	122	128	126.0
17-Mar	123	140	157	157	174	177	172	199	219	270	335	344	351	5	2	354	4	5	8	335	309	323	278	184	355.4
18-Mar	116	26	112	337	350	323	339	336	196	228	204	225	222	148	122	119	115	117	120	347	343	331	294	323	140.4
19-Mar	334	317	301	297	319	116	108	331	203	123	137	134	124	138	150	149	149	162	342	344	345	343	347	344	7.7
20-Mar	338	341	342	339	326	342	340	347	354	349	312	304	313	315	311	319	348	344	341	344	350	352	256	114	335.0
21-Mar	115	115	110	116	121	116	112	139	120	129	126	119	129	127	131	128	128	130	116	159	173	292	163	227	124.1
22-Mar	139	141	136	121	132	127	127	137	117	128	129	135	141	133	137	136	131	356	330	265	247	299	338	317	132.9
23-Mar	273	337	326	273	315	278	259	245	236	233	177	135	133	132	137	121	139	144	124	204	330	306	307	267	168.0
24-Mar	324	277	329	346	319	330	295	156	120	136	134	133	133	145	132	129	113	297	309	310	303	261	277	279	155.4
25-Mar	246	277	163	155	228	229	238	226	246	246	227	134	134	106	311	315	324	356	3	14	357	360	0	6	337.9
26-Mar	10	351	346	7	11	33	25	356	16	17	2	337	333	330	334	341	5	4	348	348	355	10	18	16	359.7
27-Mar	356	349	351	345	349	356	3	12	12	5	358	358	358	354	353	1	358	1	0	352	341	346	334	335	356.3
28-Mar	342	4	3	345	350	343	349	352	350	340	347	334	313	339	300	307	308	327	347	341	338	338	344	358	334.7
29-Mar	350	326	323	327	344	343	349	10	8	81	201	220	224	231	240	98	137	157	150	144	346	354	353	342	191.8
30-Mar	347	334	319	345	319	312	356	353	37	128	59	313	162	154	133	143	137	131	347	4	1	5	112	123	101.8
31-Mar	123	124	126	88	91	106	120	121	127	138	137	127	139	119	126	123	123	122	115	106	125	126	119	116	123.0
	9.9	10.0	4.0	5.6	24.0	13.4	15.5	7.8	32.5	57.7	63.5	103.4	120.7	72.7	67.3	57.5	41.6	24.0	359.9	350.2	349.3	349.6	356.1	8.4	
	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 20m (WD20) - deg

Lower Camp Met Tower - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 104 deg on Mar 25 03:00

Minimum Value: 5 deg on Mar 4 07:00

Percentiles: P_1 = 7 P_{10} = 11 Q_1 = 15 Median = 20 Q_3 = 33 P_{90} = 64 P_{99} = 97

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	9	10	7	8	6	8	7	12	14	12	16	10	10	8	12	9	9	27	21	50	38	43	93	88	93
2-Mar	14	14	58	29	13	10	22	81	22	38	41	57	51	43	26	18	34	16	18	17	24	24	22	16	81
3-Mar	20	20	20	14	21	18	18	32	80	75	26	12	41	29	9	15	18	22	86	33	98	51	41	10	98
4-Mar	9	7	9	8	7	8	5	8	6	7	16	17	9	12	33	12	17	8	7	9	35	16	16	18	35
5-Mar	14	15	18	16	19	16	16	21	23	22	18	64	18	42	17	8	18	25	98	16	47	43	24	29	98
6-Mar	25	35	21	12	95	28	66	91	34	13	15	16	13	16	9	9	13	14	74	39	40	48	88	31	95
7-Mar	30	19	16	15	UO	18	17	22	15	19	71	20	89	72	92	15	16	21	21	16	16	16	15	15	92
8-Mar	17	21	19	17	21	27	19	19	22	24	29	50	17	15	13	18	18	19	17	18	19	21	19	18	50
9-Mar	22	19	21	20	25	21	21	24	22	27	24	24	24	21	21	33	20	24	17	14	20	15	21	21	33
10-Mar	20	19	27	25	18	27	31	40	41	42	98	51	36	36	30	16	31	24	59	25	34	18	17	18	98
11-Mar	14	40	11	19	18	20	21	18	18	18	19	18	16	14	14	17	16	14	14	14	14	17	17	17	40
12-Mar	16	19	15	14	35	55	70	34	54	93	50	57	56	9	8	10	67	78	34	26	24	10	23	17	93
13-Mar	20	10	22	17	26	14	17	24	44	11	11	23	18	22	19	17	16	16	17	17	21	15	14	15	44
14-Mar	17	14	16	16	16	16	16	14	17	14	18	20	18	15	17	16	15	15	15	17	13	21	25	34	34
15-Mar	23	15	23	34	22	9	12	34	33	56	13	9	7	11	10	41	26	15	15	49	39	85	35	18	85
16-Mar	27	91	81	6	7	8	9	21	11	14	13	27	20	23	19	21	19	23	18	34	17	15	17	16	91
17-Mar	19	23	14	37	21	33	65	50	72	45	23	18	19	23	19	17	20	17	14	15	24	29	44	82	82
18-Mar	86	75	68	83	83	18	42	46	81	40	40	20	37	44	19	21	21	21	13	84	32	79	37	36	86
19-Mar	19	41	26	63	97	88	60	92	64	43	15	13	24	22	21	11	11	83	15	14	13	12	13	16	97
20-Mar	16	15	13	19	27	19	21	15	11	14	26	19	19	15	18	25	16	14	15	16	10	33	83	14	83
21-Mar	15	16	19	17	16	19	62	74	25	22	19	20	18	18	15	15	16	15	59	66	47	54	96	85	96
22-Mar	13	9	20	12	12	35	13	8	25	18	18	15	13	12	11	10	49	74	13	60	25	30	17	25	74
23-Mar	47	34	72	103	63	52	20	29	9	10	34	12	11	14	10	17	13	35	104	85	34	56	43	44	104
24-Mar	35	96	80	25	85	53	87	56	23	8	8	9	11	15	14	23	72	23	14	14	14	33	73	69	96
25-Mar	103	85	104	78	84	26	62	93	34	25	26	9	6	79	20	20	27	20	18	19	18	20	20	18	104
26-Mar	16	18	13	17	20	25	34	22	24	25	26	21	30	33	30	19	22	18	14	13	16	15	15	19	34
27-Mar	20	14	18	16	15	19	21	21	21	22	18	19	20	22	18	19	18	19	17	18	15	16	19	20	22
28-Mar	15	14	13	11	9	14	13	38	32	32	38	38	34	25	28	23	20	20	16	16	16	19	20	10	38
29-Mar	13	19	25	22	7	11	15	27	47	54	32	20	24	20	63	73	19	13	9	65	13	20	12	11	73
30-Mar	15	59	55	83	38	51	75	90	54	75	70	94	27	33	27	19	29	43	65	30	21	16	34	16	94
31-Mar	15	17	24	56	34	23	18	21	20	13	14	22	18	21	20	19	19	17	15	19	15	22	24	20	56
	103	96	104	103	97	88	87	93	81	93	98	94	89	79	92	73	72	83	104	85	98	85	96	88	
	Diurnal Maximum																								

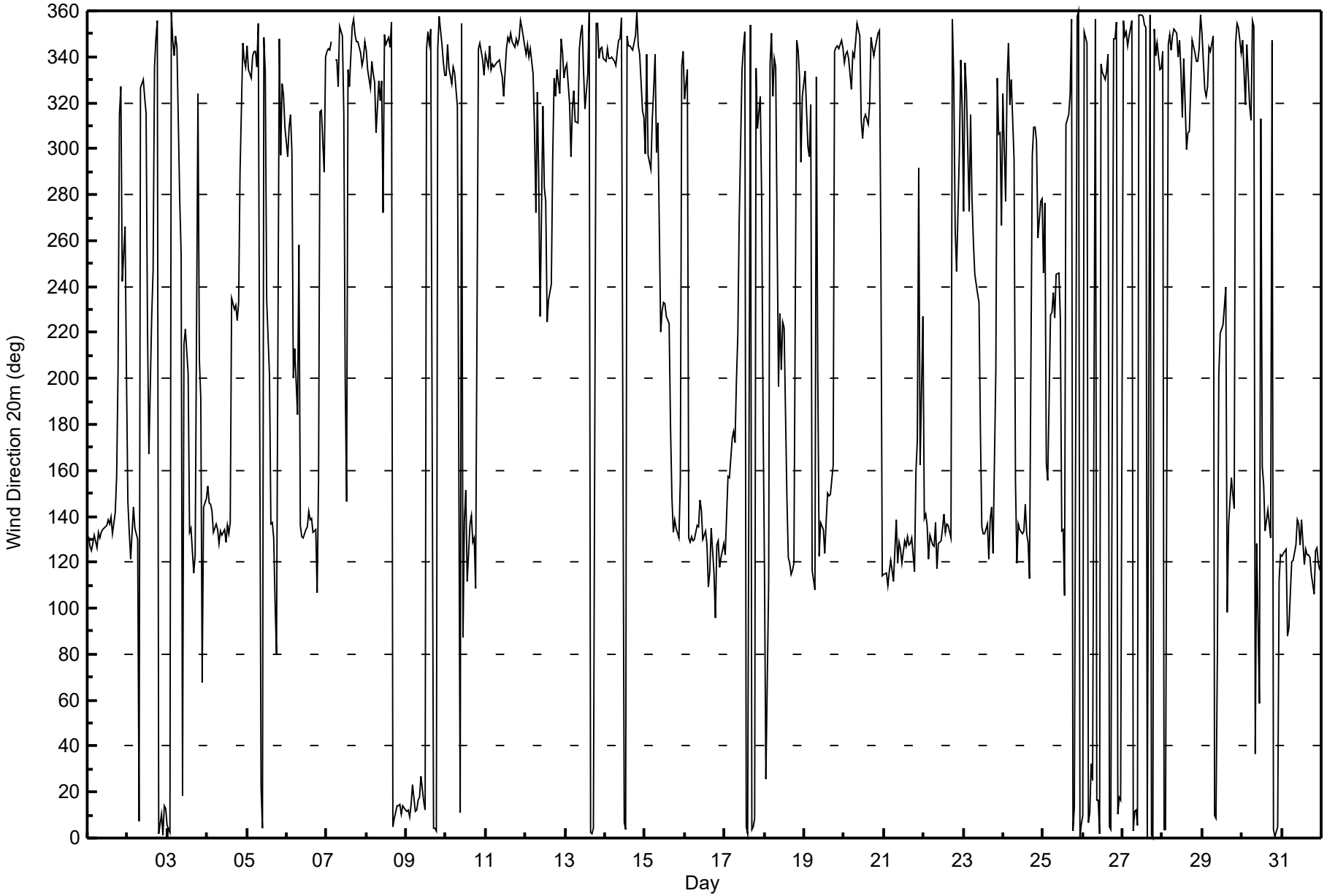
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 20m (WD20) - deg

Lower Camp Met Tower - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 45m (WD45) - deg

Lower Camp Met Tower - March 2025

Direction of Maximum Speed: 346 deg on Mar 8 15:00
Direction of Maximum Daily Speed Average: 358.9 deg on Mar 27

Direction of Minimum Speed: 215 deg on Mar 1 20:00
Direction of Minimum Daily Speed Average: 0.4 deg on Mar 29

Monthly Average Direction: 16.2 deg

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	130	131	131	136	131	132	129	130	126	125	123	125	132	126	138	125	134	150	138	215	349	130	127	152	130.6
2-Mar	129	123	117	124	124	122	129	120	330	324	312	313	244	202	240	262	339	353	359	2	7	2	11	10	9.0
3-Mar	5	4	1	350	344	351	349	296	300	6	228	222	211	130	128	119	115	117	109	129	128	140	136	133	54.6
4-Mar	140	132	128	133	130	124	125	128	126	125	127	124	130	135	165	232	227	230	225	231	287	341	341	335	157.4
5-Mar	352	339	336	343	345	345	339	359	22	6	353	337	240	212	131	133	126	103	93	11	358	353	347	337	0.8
6-Mar	336	327	332	310	243	160	152	193	133	126	128	130	135	138	135	138	132	132	121	139	114	326	253	332	134.5
7-Mar	337	347	347	348	UO	340	340	329	348	348	316	196	126	354	340	357	358	352	350	350	343	339	342	350	346.5
8-Mar	348	336	330	339	334	333	316	330	325	327	273	349	347	350	346	356	4	8	12	11	13	8	13	13	354.3
9-Mar	11	12	10	13	23	11	12	18	19	28	15	12	349	355	349	358	5	6	3	348	358	350	342	338	6.0
10-Mar	336	344	334	333	337	337	333	320	357	330	88	135	147	108	129	135	119	116	95	340	8	348	343	338	9.4
11-Mar	341	335	339	337	339	340	342	342	341	339	335	328	346	351	350	354	350	347	351	349	351	357	356	348	346.9
12-Mar	344	349	343	346	342	356	319	293	248	244	320	301	290	229	238	245	310	9	21	352	360	359	17	18	323.9
13-Mar	340	349	350	345	334	334	341	341	323	314	336	332	318	334	0	2	2	4	356	358	342	348	347	342	347.5
14-Mar	341	346	343	343	343	342	339	345	352	350	358	6	4	352	346	346	346	350	352	359	348	347	332	334	348.8
15-Mar	329	326	341	292	278	328	331	329	332	290	253	239	234	228	223	177	141	128	142	144	138	140	330	329	222.4
16-Mar	325	336	101	122	138	120	128	129	125	139	134	126	128	121	109	114	125	114	98	118	124	118	118	122	120.0
17-Mar	117	129	143	147	162	158	144	164	216	281	334	346	354	5	2	356	5	7	9	353	335	323	335	132	8.4
18-Mar	224	220	181	10	329	326	332	324	251	234	223	231	229	142	119	116	114	111	116	108	42	4	342	328	124.6
19-Mar	332	313	305	289	311	92	137	117	139	115	130	134	117	126	133	135	138	128	346	346	348	347	350	346	7.8
20-Mar	339	346	344	344	331	341	336	337	343	341	311	307	314	314	312	321	352	347	343	341	343	350	98	119	337.4
21-Mar	118	117	113	120	123	121	122	133	119	124	121	118	124	122	126	126	125	126	114	110	122	113	144	127	121.6
22-Mar	136	134	140	129	131	123	121	128	116	128	125	133	136	130	131	131	123	0	336	295	244	301	342	335	124.0
23-Mar	288	324	348	245	258	254	250	250	241	229	169	132	130	130	132	120	131	128	115	133	38	89	115	158	155.6
24-Mar	346	342	320	285	174	340	336	129	128	139	134	129	138	149	135	136	126	296	308	312	312	262	254	253	195.4
25-Mar	248	253	217	218	242	236	237	234	254	252	236	132	133	105	308	315	326	1	4	12	0	1	3	6	333.8
26-Mar	9	354	352	8	11	30	19	2	15	15	1	340	332	331	334	344	4	4	352	352	358	9	16	18	1.3
27-Mar	1	353	355	351	355	358	6	13	14	6	0	360	357	357	356	1	0	3	2	357	345	353	342	340	358.9
28-Mar	342	348	353	346	345	341	343	328	317	329	341	336	314	337	302	308	309	328	350	348	342	342	339	347	334.5
29-Mar	347	340	327	314	313	292	307	324	6	81	213	227	232	237	231	98	133	154	150	141	351	351	353	333	289.7
30-Mar	338	336	287	276	308	300	296	339	32	108	40	328	156	143	128	135	129	118	351	9	11	14	113	124	90.1
31-Mar	121	121	118	99	99	107	114	117	124	134	132	124	134	116	120	121	121	120	116	113	124	119	111	115	119.3
	9.3	8.5	6.3	7.7	13.3	15.1	12.9	16.8	31.5	45.9	42.1	65.2	68.0	46.7	43.2	41.8	37.1	26.0	6.8	0.2	358.3	357.0	4.1	13.1	
	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 45m (WD45) - deg

Lower Camp Met Tower - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 104 deg on Mar 21 23:00

Minimum Value: 3 deg on Mar 4 08:00

Percentiles: P_1 = 4 P_{10} = 7 Q_1 = 9 Median = 12 Q_3 = 22 P_{90} = 47 P_{99} = 88

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	7	6	10	11	6	11	7	9	11	8	14	7	6	6	11	6	4	14	11	75	69	26	10	11	75
2-Mar	8	8	12	15	6	7	13	89	10	17	15	43	32	51	15	19	30	11	12	10	17	15	13	10	89
3-Mar	12	13	12	9	14	13	11	31	68	43	33	12	33	21	7	8	8	11	53	12	17	23	9	5	68
4-Mar	5	6	3	4	6	10	3	3	4	5	5	6	5	9	33	10	14	6	5	5	40	10	9	11	40
5-Mar	9	8	12	10	13	11	11	16	17	16	12	59	15	75	14	5	12	12	42	44	32	14	6	6	75
6-Mar	14	14	7	42	10	36	53	40	9	7	9	10	11	14	5	6	5	6	24	7	85	29	37	6	85
7-Mar	11	11	10	9	UO	10	9	12	8	10	58	20	91	65	86	10	8	13	13	10	11	10	10	9	91
8-Mar	10	13	12	12	13	15	15	12	16	17	23	39	11	9	8	11	11	12	10	11	12	13	13	12	39
9-Mar	14	13	16	15	17	14	15	18	16	16	18	18	18	17	17	23	14	17	10	8	10	9	10	12	23
10-Mar	11	11	18	12	11	12	18	34	42	47	81	44	32	29	25	13	25	23	33	61	22	12	10	9	81
11-Mar	8	18	7	10	11	11	12	11	10	12	14	13	9	8	8	11	10	10	8	7	8	10	11	12	18
12-Mar	10	11	10	8	11	10	49	16	23	79	40	48	49	9	8	9	51	79	22	9	23	11	13	31	79
13-Mar	10	7	6	12	7	5	11	8	15	14	17	16	13	15	12	9	7	9	10	9	13	9	9	9	17
14-Mar	10	8	9	10	9	10	9	8	10	9	11	12	11	8	11	10	10	10	8	9	7	10	11	13	13
15-Mar	7	9	6	22	21	24	15	9	14	39	23	13	6	11	9	43	28	11	17	31	22	83	66	32	83
16-Mar	8	20	82	8	12	6	4	4	7	16	12	26	15	18	13	13	15	14	11	18	11	9	8	10	82
17-Mar	11	16	11	19	14	22	36	28	64	36	18	12	15	15	13	9	12	11	9	11	24	19	46	65	65
18-Mar	24	46	63	70	89	8	34	33	101	37	31	19	30	45	14	15	17	13	13	45	27	84	17	12	101
19-Mar	10	30	18	26	32	88	29	70	44	27	11	11	19	19	20	8	10	85	9	8	7	6	7	11	88
20-Mar	10	8	8	10	11	12	9	8	7	9	17	14	16	12	13	22	12	9	7	8	6	7	84	9	84
21-Mar	8	8	10	10	8	8	22	35	15	15	13	14	12	13	9	7	9	7	57	38	38	86	104	83	104
22-Mar	11	8	7	8	7	12	9	7	18	10	11	10	11	7	8	6	31	68	9	52	11	27	11	19	68
23-Mar	64	18	24	65	26	31	12	14	8	15	48	12	10	9	7	10	12	25	27	26	47	58	59	79	79
24-Mar	72	22	45	47	99	78	47	43	13	6	6	10	10	19	13	20	72	15	9	10	8	34	30	65	99
25-Mar	47	81	65	63	39	15	36	60	19	20	23	10	5	90	14	18	25	14	11	13	13	13	12	8	90
26-Mar	9	10	9	11	13	18	21	16	17	17	22	16	22	26	26	16	16	9	9	8	9	9	10	11	26
27-Mar	14	10	11	10	10	13	13	14	14	14	11	12	13	16	12	12	11	11	9	11	10	12	10	9	16
28-Mar	9	9	6	7	9	10	7	15	26	23	33	34	30	20	21	16	14	16	11	9	12	11	10	5	34
29-Mar	5	11	9	12	20	54	34	40	52	60	45	23	25	20	51	62	17	15	7	49	10	12	4	8	62
30-Mar	8	12	21	32	33	39	76	88	58	70	71	84	28	26	22	17	24	39	62	21	18	13	21	8	88
31-Mar	7	7	13	25	11	14	12	12	14	8	10	15	16	16	15	12	11	8	8	5	7	11	12	10	25
	72	81	82	70	99	88	76	89	101	79	81	84	91	90	86	62	72	85	62	75	85	86	104	83	
	Diurnal Maximum																								

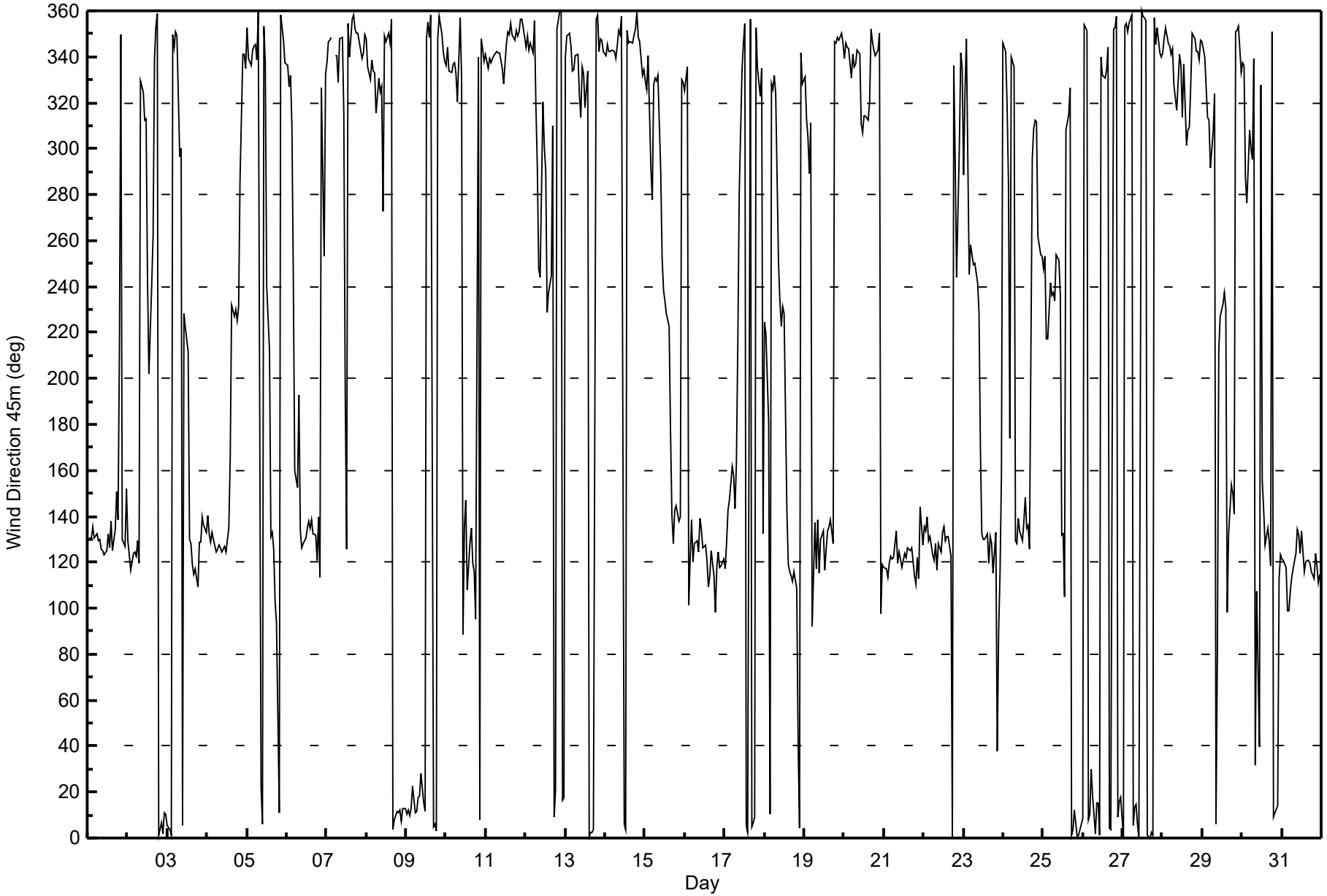
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 45m (WD45) - deg

Lower Camp Met Tower - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 100m (WD100) - deg

Lower Camp Met Tower - March 2025

Direction of Maximum Speed: 348 deg on Mar 8 15:00
Direction of Maximum Daily Speed Average: 125.3 deg on Mar 21

Direction of Minimum Speed: 325 deg on Mar 29 10:00
Direction of Minimum Daily Speed Average: 1.1 deg on Mar 18

Monthly Average Direction: 21.2 deg

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	150	160	164	166	163	162	165	160	151	153	142	146	137	135	152	140	129	133	147	144	136	141	139	142	149.0
2-Mar	144	144	150	170	169	157	203	313	339	346	343	306	252	243	256	293	342	3	6	6	10	5	10	12	349.3
3-Mar	8	8	4	355	352	355	360	312	313	357	250	244	217	154	144	117	118	121	122	141	154	164	169	172	76.4
4-Mar	186	191	181	210	211	213	181	171	167	154	138	135	140	173	212	234	232	237	235	242	291	348	352	351	215.3
5-Mar	12	359	347	350	350	352	346	4	26	13	1	343	252	240	136	134	127	108	102	131	338	350	351	100	11.7
6-Mar	37	22	344	344	236	229	144	154	166	146	149	148	147	146	141	143	136	141	138	169	165	255	307	348	146.0
7-Mar	354	356	359	350	UO	345	346	338	336	338	333	184	147	17	356	3	2	360	357	357	348	347	347	357	353.3
8-Mar	357	341	338	344	344	343	327	332	333	320	276	338	348	351	348	358	5	9	13	14	14	10	15	15	356.7
9-Mar	13	15	13	18	23	17	16	19	25	25	16	15	352	357	352	0	8	9	4	355	5	359	352	351	9.6
10-Mar	346	345	347	342	344	343	345	323	277	244	161	146	147	113	127	129	113	102	92	38	41	10	7	2	26.0
11-Mar	360	353	355	350	354	354	359	353	355	347	345	341	352	354	355	0	356	353	357	357	356	359	359	354	354.7
12-Mar	351	352	349	352	357	15	15	338	311	268	324	320	297	241	244	254	336	40	42	30	42	53	99	114	355.5
13-Mar	81	64	42	28	4	11	62	53	14	346	310	330	326	341	5	8	9	10	5	7	355	357	356	353	1.8
14-Mar	349	353	353	351	351	351	347	349	359	352	360	6	5	353	347	349	348	353	355	3	357	356	343	351	353.4
15-Mar	336	328	335	331	325	327	327	337	337	360	307	262	240	239	226	191	153	134	157	160	150	143	183	278	277.2
16-Mar	322	336	331	153	202	163	159	144	158	135	133	131	128	119	113	116	125	119	103	118	122	122	124	124	124.0
17-Mar	120	124	131	134	148	148	150	167	220	304	334	349	357	9	6	1	9	14	17	21	21	353	340	227	27.5
18-Mar	234	236	215	327	267	334	334	330	262	223	241	232	233	159	119	117	121	116	121	131	115	140	328	333	230.2
19-Mar	337	332	332	335	327	309	151	137	145	129	137	150	122	122	118	116	120	81	356	355	357	358	357	352	4.8
20-Mar	346	353	357	358	353	350	352	347	346	335	315	316	321	320	321	327	355	351	350	349	346	357	120	127	346.9
21-Mar	125	124	123	126	129	130	130	128	125	129	124	122	125	124	127	128	126	127	115	113	120	122	126	128	125.3
22-Mar	134	131	148	161	160	149	141	135	143	153	139	143	140	133	133	133	127	6	346	332	266	308	349	357	133.7
23-Mar	70	313	354	190	249	252	264	264	241	200	162	146	139	139	132	122	126	117	108	110	110	109	112	113	139.3
24-Mar	108	100	114	134	135	140	140	147	157	158	154	149	160	168	157	177	219	298	310	322	318	283	243	246	202.1
25-Mar	242	244	236	241	249	259	246	237	254	259	238	148	156	248	308	316	326	9	11	16	5	4	7	9	316.2
26-Mar	10	358	355	8	14	25	16	8	17	16	3	345	337	328	334	349	8	6	356	360	4	13	21	22	5.1
27-Mar	11	2	2	0	5	7	12	17	17	9	4	3	2	359	359	5	5	7	6	4	359	1	357	357	4.7
28-Mar	353	355	353	1	2	348	354	346	314	316	346	340	318	332	310	312	315	330	354	0	0	360	357	350	343.0
29-Mar	350	347	355	344	347	336	301	285	326	325	208	245	252	230	241	118	133	157	155	148	25	360	351	336	346.7
30-Mar	336	326	305	322	329	337	255	358	2	105	343	300	147	139	127	134	121	114	50	24	28	51	118	125	80.9
31-Mar	124	125	123	111	112	119	118	123	123	135	134	127	134	118	120	123	123	122	122	122	130	127	123	123	123.7
	18.4	12.3	9.5	4.7	1.0	7.1	9.9	19.1	25.7	36.9	27.6	64.8	61.3	38.6	33.3	37.1	38.7	33.2	18.7	16.1	17.5	14.6	18.8	25.8	
	Diurnal Average																								

UO - Unstable Operation
All monthly, daily, and diurnal averages have been calculated using vector methods

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

Maximum Value: 115 deg on Mar 29 10:00

Minimum Value: 2 deg on Mar 15 08:00

Percentiles: P_1 = 4 P_{10} = 6 Q_1 = 7 Median = 10 Q_3 = 16 P_{90} = 31 P_{99} = 80

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	8	6	5	8	7	7	6	7	16	14	17	10	9	7	8	8	6	9	24	41	5	6	7	7	41
2-Mar	10	11	11	13	13	23	23	52	7	7	12	25	23	22	7	15	26	10	10	8	14	10	11	8	52
3-Mar	9	10	9	7	11	10	10	32	52	43	53	20	25	16	10	7	6	7	11	7	8	11	8	7	53
4-Mar	10	12	11	14	13	23	57	4	9	13	6	6	7	16	19	9	10	6	6	3	43	7	7	10	57
5-Mar	7	7	8	8	10	8	8	14	13	13	11	51	14	72	12	6	8	10	10	32	52	40	15	51	72
6-Mar	79	24	6	11	23	21	35	12	7	6	11	15	11	15	8	7	5	6	9	15	51	96	24	7	96
7-Mar	10	9	9	7	UO	6	4	9	8	13	61	19	87	30	69	8	6	10	10	10	8	8	7	7	87
8-Mar	9	9	13	10	10	10	12	7	12	20	25	33	7	6	5	8	8	9	8	8	9	11	11	10	33
9-Mar	11	10	12	13	14	11	13	13	14	12	14	16	15	14	14	16	10	13	7	6	8	8	6	9	16
10-Mar	6	7	10	7	5	8	12	30	32	40	91	32	28	24	16	12	22	15	6	44	13	19	9	8	91
11-Mar	7	6	6	6	7	6	8	8	6	8	9	10	6	6	7	8	9	8	6	6	6	8	9	8	10
12-Mar	7	7	7	6	10	5	16	15	33	52	36	34	43	15	14	17	41	33	9	5	11	12	11	15	52
13-Mar	39	14	12	15	31	14	39	27	7	12	14	18	10	11	11	8	8	7	9	8	8	7	7	6	39
14-Mar	6	5	7	6	6	6	6	6	8	8	8	9	8	6	8	8	6	7	6	7	5	5	6	6	9
15-Mar	6	4	4	6	5	4	5	2	7	12	25	20	11	20	8	46	20	12	15	10	17	27	39	54	54
16-Mar	7	4	36	71	11	19	9	8	13	12	11	19	12	12	9	9	10	9	8	10	7	6	5	6	71
17-Mar	5	8	7	11	8	9	12	16	43	19	16	9	12	13	10	8	10	11	7	10	18	17	17	25	43
18-Mar	9	11	25	84	36	6	10	17	64	23	19	16	22	43	11	10	16	14	13	13	13	83	8	3	84
19-Mar	3	10	5	4	14	30	52	50	22	25	14	11	11	15	13	12	8	57	8	6	5	6	6	7	57
20-Mar	5	5	5	5	7	6	7	11	8	13	14	11	13	9	8	17	9	8	4	5	3	17	48	5	48
21-Mar	4	5	5	5	4	3	9	14	6	10	8	8	7	8	6	5	6	5	11	6	7	12	32	10	32
22-Mar	8	5	10	7	7	11	8	12	14	6	17	12	12	7	8	7	18	67	10	52	20	26	8	17	67
23-Mar	61	56	20	60	7	13	15	27	16	15	47	12	11	13	8	8	10	23	19	14	17	9	5	8	61
24-Mar	13	18	31	56	22	30	19	18	10	10	13	13	11	20	11	19	54	9	5	6	5	24	4	16	56
25-Mar	16	14	13	27	11	12	14	18	14	14	27	11	10	96	11	17	24	11	10	11	10	9	9	7	96
26-Mar	7	8	7	9	10	9	13	12	13	13	16	15	22	22	26	17	14	7	7	7	7	7	7	8	26
27-Mar	11	9	9	9	10	12	12	12	11	10	9	10	11	14	10	9	9	8	7	8	8	9	7	7	14
28-Mar	6	8	5	5	12	6	6	19	22	22	26	29	23	21	17	12	8	12	9	7	11	9	10	4	29
29-Mar	7	4	4	5	5	10	10	29	64	115	42	46	26	20	58	72	13	13	5	20	23	15	5	4	115
30-Mar	3	11	13	17	13	72	60	23	57	75	80	68	18	18	19	13	17	23	37	16	13	21	10	5	80
31-Mar	5	4	5	11	7	8	6	7	11	8	8	12	15	12	11	9	8	6	5	4	4	5	6	5	15
	79	56	36	84	36	72	60	52	64	115	91	68	87	96	69	72	54	67	37	52	52	96	48	54	
	Diurnal Maximum																								

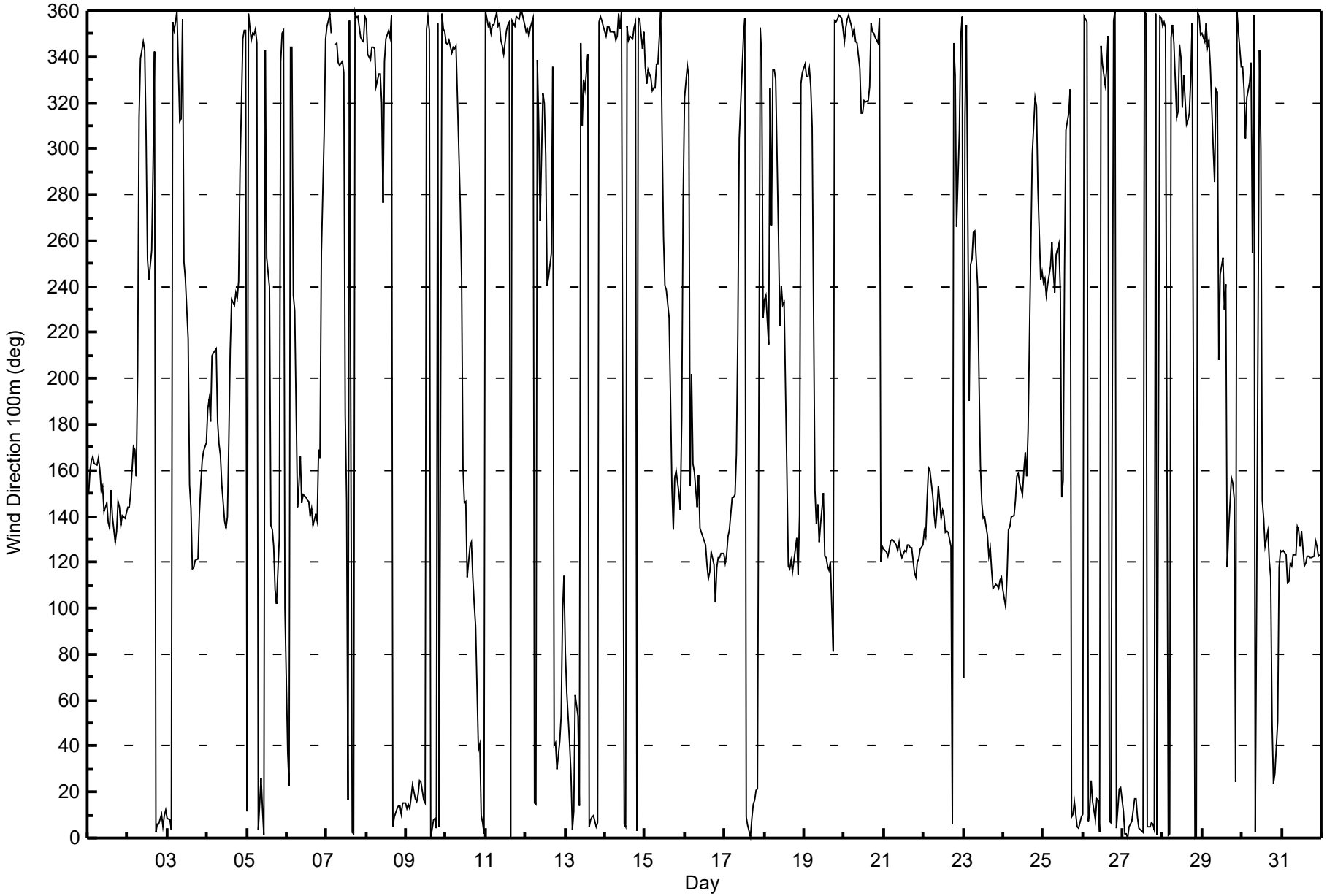
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 100m (WD100) - deg

Lower Camp Met Tower - March 2025



Direction of Maximum Speed: 14 deg on Mar 26 00:00
Direction of Maximum Daily Speed Average: 132.4 deg on Mar 21

Direction of Minimum Speed: 303 deg on Mar 3 10:00

Direction of Minimum Daily Speed Average: 1.0 deg on Mar 29

Monthly Average Direction: 41.0 deg

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	160	158	157	160	155	151	150	161	157	166	155	138	121	122	138	144	142	147	165	168	170	159	157	161	154.3
2-Mar	154	158	163	185	213	230	244	306	351	13	5	329	264	257	267	303	347	15	18	15	20	11	13	18	348.6
3-Mar	15	14	11	3	3	2	12	335	312	303	267	277	231	187	184	154	133	136	135	161	169	182	201	221	109.7
4-Mar	229	231	229	245	241	243	238	214	214	206	176	149	166	212	229	239	239	243	244	252	303	5	5	10	242.4
5-Mar	17	10	0	359	358	1	356	12	30	20	9	347	262	254	151	142	134	116	115	131	165	194	114	124	24.0
6-Mar	145	144	119	125	170	165	144	144	156	154	166	167	165	163	157	149	155	168	189	203	245	323	323	15	161.2
7-Mar	11	9	14	360	UO	1	12	360	338	345	18	175	182	15	6	12	10	10	7	9	2	1	355	10	6.3
8-Mar	11	353	4	5	11	19	352	342	345	329	283	327	353	357	355	4	11	13	17	20	19	16	22	21	5.5
9-Mar	18	22	21	25	29	25	25	26	33	28	23	21	357	3	355	10	15	16	11	7	15	15	9	19	18.1
10-Mar	14	11	23	27	9	10	35	125	178	194	182	164	152	130	126	126	116	95	99	73	66	58	59	58	69.6
11-Mar	63	37	32	32	42	31	36	32	20	12	5	1	4	4	5	11	7	5	8	9	7	7	7	3	13.8
12-Mar	0	1	360	4	13	28	33	12	346	284	335	335	304	265	267	273	355	48	53	48	49	96	113	126	19.3
13-Mar	125	118	103	67	126	116	116	114	96	73	354	342	338	353	14	18	21	18	16	18	12	12	7	7	31.7
14-Mar	3	5	7	3	2	2	358	357	9	360	5	9	8	1	352	355	356	359	2	11	7	6	354	3	2.1
15-Mar	1	349	355	353	1	358	2	10	358	352	326	286	265	257	248	204	170	146	167	171	163	161	179	228	328.4
16-Mar	298	339	350	182	213	213	163	169	171	140	144	134	130	121	119	121	128	126	111	122	125	129	130	130	131.3
17-Mar	129	132	133	139	144	150	159	188	227	316	337	356	2	15	14	10	17	22	25	38	38	35	20	276	46.8
18-Mar	229	231	216	265	268	311	338	317	252	240	254	233	237	190	127	124	134	128	134	156	139	185	329	349	221.6
19-Mar	355	354	355	360	10	5	224	181	188	178	162	159	137	135	132	102	108	75	9	9	10	12	8	4	17.7
20-Mar	357	6	11	13	16	16	24	34	52	354	330	328	332	333	336	340	2	360	2	4	10	82	135	135	9.5
21-Mar	134	132	136	132	137	133	136	134	135	138	131	129	129	128	131	132	130	129	122	123	134	135	134	135	132.4
22-Mar	138	141	151	155	152	160	159	146	161	160	159	150	147	145	142	140	143	12	353	348	277	316	0	24	142.2
23-Mar	61	311	231	235	259	284	312	308	281	191	185	162	155	153	138	132	129	116	110	117	115	130	130	136	142.3
24-Mar	127	119	121	132	134	138	139	158	160	189	188	188	180	185	180	215	253	301	313	328	327	312	265	271	201.1
25-Mar	258	258	254	255	267	293	260	254	265	267	227	177	186	269	309	318	328	19	18	23	14	13	14	14	317.7
26-Mar	14	3	1	14	17	23	21	16	23	21	7	353	345	335	335	356	14	14	7	11	14	21	34	30	12.6
27-Mar	26	16	13	14	18	20	24	26	25	20	14	11	11	7	7	13	13	15	13	14	13	16	18	26	15.7
28-Mar	33	31	45	51	43	32	44	35	23	322	345	343	325	337	320	321	326	341	2	17	22	29	32	33	10.3
29-Mar	32	29	41	35	334	4	279	280	300	321	229	299	273	228	237	141	138	162	158	157	59	39	9	331	75.3
30-Mar	311	343	301	296	327	213	225	317	237	174	252	294	147	139	129	137	125	118	82	40	51	92	123	129	104.8
31-Mar	131	134	131	125	126	130	133	136	138	144	143	132	138	123	124	127	127	126	129	130	136	135	133	131	131.4
	45.6	38.8	38.7	34.0	36.8	37.8	51.4	47.4	61.8	65.5	30.3	69.4	71.5	32.7	33.7	38.9	45.1	44.2	31.4	33.3	36.1	38.5	42.7	49.2	
	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 163m (WD163) - deg

Lower Camp Met Tower - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 94 deg on Mar 29 10:00

Minimum Value: 2 deg on Mar 4 20:00

Percentiles: P_1 = 3 P_{10} = 5 Q_1 = 6 Median = 9 Q_3 = 14 P_{90} = 25 P_{99} = 75

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	6	7	7	5	4	6	7	4	5	5	6	9	3	6	7	5	6	10	4	5	4	5	4	3	10
2-Mar	5	4	7	8	17	33	15	21	13	5	5	18	25	16	7	10	25	9	10	8	13	11	9	7	33
3-Mar	8	9	9	7	9	9	8	25	61	85	21	18	22	16	10	17	8	6	7	6	4	13	12	7	85
4-Mar	10	7	11	4	4	4	9	13	9	13	11	7	12	12	13	9	10	5	6	2	42	8	7	8	42
5-Mar	3	5	6	7	9	8	7	13	11	11	11	49	17	57	14	7	7	9	6	9	23	45	81	18	81
6-Mar	6	11	19	8	11	15	13	8	7	6	10	12	11	13	11	9	9	7	13	11	27	10	11	8	27
7-Mar	9	8	8	7	UO	10	7	10	7	24	42	17	86	32	73	7	6	9	9	10	9	10	5	8	86
8-Mar	10	8	15	12	18	14	20	5	10	24	26	27	7	6	5	7	8	7	7	7	7	9	8	9	27
9-Mar	10	9	11	11	13	11	13	12	13	11	11	14	14	14	15	17	8	11	6	7	8	10	8	9	17
10-Mar	5	12	7	12	5	9	21	51	12	28	35	29	25	20	13	17	16	12	9	18	7	25	14	15	51
11-Mar	13	13	9	11	10	11	11	15	4	9	7	8	7	6	8	9	8	8	7	7	6	8	8	8	15
12-Mar	7	7	6	8	9	3	5	8	16	39	27	40	39	25	18	30	37	22	6	6	6	18	6	8	40
13-Mar	6	9	19	20	4	6	7	10	8	22	13	16	9	10	10	7	9	6	8	7	7	6	6	6	22
14-Mar	5	5	7	6	6	5	6	5	8	9	6	8	7	7	7	8	6	6	6	6	5	4	6	4	9
15-Mar	5	8	6	4	4	6	3	7	7	6	10	20	17	25	16	20	13	14	8	5	13	18	11	23	25
16-Mar	26	6	27	93	11	8	17	6	13	9	13	13	10	10	8	7	9	6	6	7	6	5	4	4	93
17-Mar	4	4	4	7	7	8	7	12	26	11	16	9	12	12	8	8	9	10	5	5	7	9	15	76	76
18-Mar	7	6	9	25	22	18	13	26	11	9	24	15	20	38	14	14	18	14	11	11	11	42	15	4	42
19-Mar	4	5	3	3	7	7	68	44	25	20	16	8	13	16	16	14	13	42	10	6	6	7	6	6	68
20-Mar	4	6	4	4	5	6	6	8	10	18	10	11	10	8	9	15	10	9	5	5	10	34	8	5	34
21-Mar	4	3	5	4	4	3	4	5	7	10	8	7	7	6	5	5	4	3	6	3	5	5	7	3	10
22-Mar	3	4	5	4	4	5	12	10	8	7	8	11	13	9	8	8	17	72	10	25	30	26	10	17	72
23-Mar	15	86	26	14	6	14	8	15	55	12	30	13	13	15	9	8	9	13	12	5	8	5	3	4	86
24-Mar	6	3	5	8	11	9	12	11	8	18	15	20	12	14	9	18	24	7	3	6	3	16	7	15	24
25-Mar	10	11	5	8	10	23	15	12	12	19	28	13	11	52	9	16	24	9	9	9	10	11	9	5	52
26-Mar	5	7	6	7	6	4	11	10	12	12	15	17	23	22	23	19	12	7	8	7	7	7	5	5	23
27-Mar	10	10	8	9	9	11	10	11	10	11	9	10	12	13	9	9	8	8	6	6	7	7	6	6	13
28-Mar	6	9	6	6	11	8	9	9	9	22	23	26	20	17	15	10	9	10	9	7	7	7	8	5	26
29-Mar	5	5	17	25	16	10	29	16	19	94	46	48	29	27	44	72	15	9	4	9	61	17	9	15	94
30-Mar	15	11	28	13	15	61	30	10	42	32	85	63	26	16	15	12	15	14	18	13	9	20	7	4	85
31-Mar	4	4	4	5	5	5	5	4	12	8	11	13	17	12	9	8	7	4	3	3	3	4	4	4	17
	26	86	28	93	22	61	68	51	61	94	85	63	86	57	73	72	37	72	18	25	61	45	81	76	
	Diurnal Maximum																								

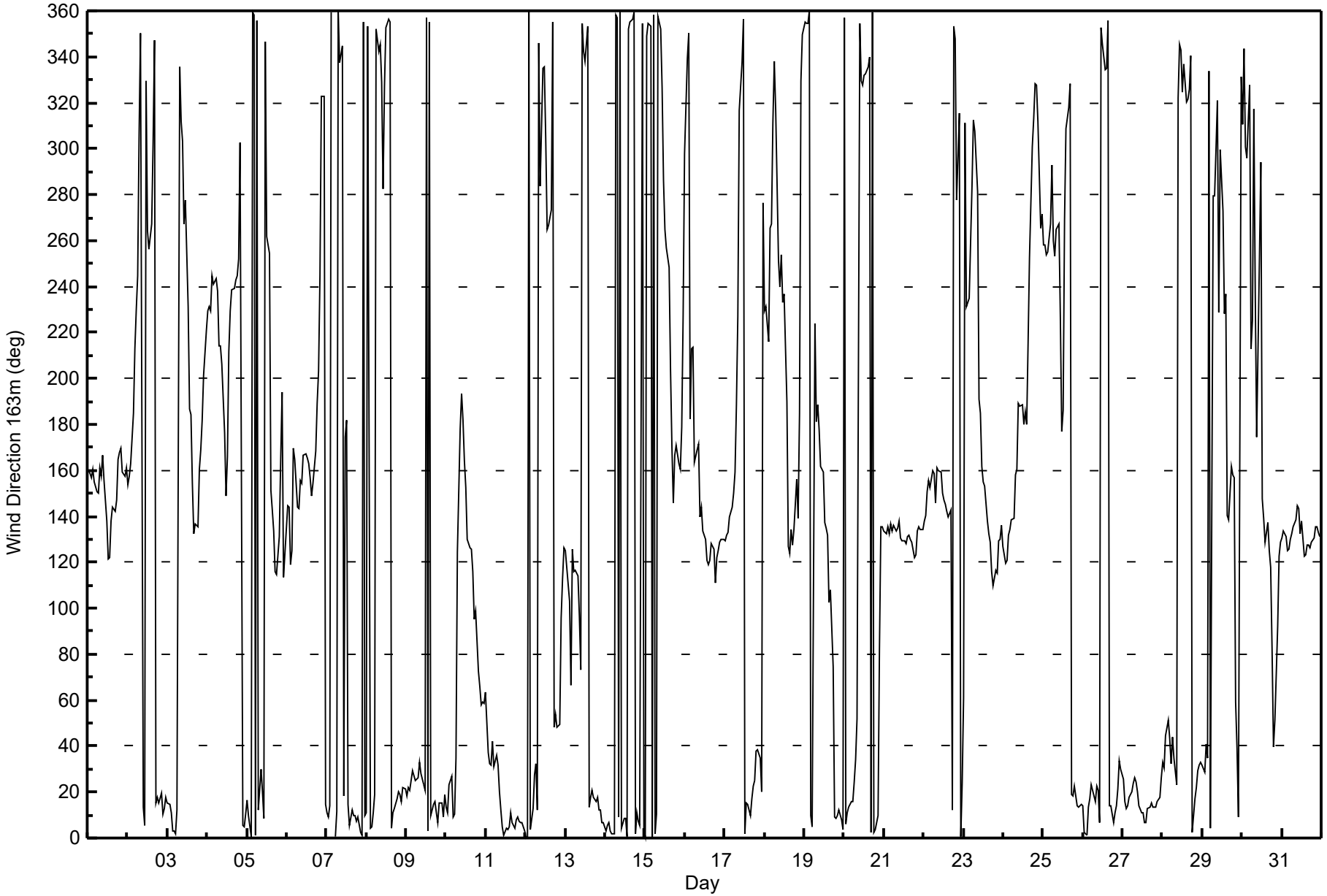
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 163m (WD163) - deg

Lower Camp Met Tower - March 2025



Maximum Value: 0.5 km/h on Mar 4 05:00

Maximum Daily Average: -0.1 km/h on Mar 10

Minimum Value: -0.9 km/h on Mar 12 14:00

Minimum Daily Average: -0.3 km/h on Mar 20

Maximum Diurnal Average: 0.0 km/h at hour 7

Minimum Diurnal Average: -0.4 km/h at hour 14

Monthly Average: -0.15 km/h

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

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

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

UO - Unstable Operation

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.4 km/h on Mar 25 17:00

Minimum Value: 0.1 km/h on Mar 19 06:00

Percentiles: P_1 = 0.1 P_{10} = 0.3 Q_1 = 0.6 Median = 1.2 Q_3 = 1.9 P_{90} = 2.4 P_{99} = 3.1

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

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

UO - Unstable Operation

Vertical Wind Speed 45m (VW45) - km/h
Lower Camp Met Tower - March 2025

Maximum Value: 1.1 km/h on Mar 4 04:00

Maximum Daily Average: 0.4 km/h on Mar 4

Minimum Value: -0.7 km/h on Mar 20 14:00

Minimum Daily Average: 0.1 km/h on Mar 20

Maximum Diurnal Average: 0.3 km/h at hour 17

Minimum Diurnal Average: 0.0 km/h at hour 14

Monthly Average: 0.19 km/h

Percentiles: P_1 = -0.5 P_{10} = -0.1 Q_1 = 0.1 Median = 0.2 Q_3 = 0.3 P_{90} = 0.5 P_{99} = 0.8

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

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

UO - Unstable Operation

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.8 km/h on Mar 25 17:00

Minimum Value: 0.1 km/h on Mar 19 06:00

Percentiles: P_1 = 0.2 P_{10} = 0.4 Q_1 = 0.7 Median = 1.2 Q_3 = 1.8 P_{90} = 2.2 P_{99} = 2.8

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

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

UO - Unstable Operation

Maximum Value: 2.7 km/h on Mar 21 20:00

Maximum Daily Average: 0.8 km/h on Mar 21

Minimum Value: -1.1 km/h on Mar 24 19:00

Minimum Daily Average: -0.2 km/h on Mar 20

Maximum Diurnal Average: 0.3 km/h at hour 20

Minimum Diurnal Average: -0.1 km/h at hour 16

Monthly Average: 0.06 km/h

Percentiles: P_1 = -0.9 P_{10} = -0.3 Q_1 = -0.1 Median = 0.0 Q_3 = 0.2 P_{90} = 0.6 P_{99} = 1.6

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.4	-0.2	0.0	-0.5	0.8	-0.3	-0.3	0.4	0.3	0.3	0.0	0.0	0.3	0.0	0.0	0.2	0.3	0.4	0.1	0.0	0.3	0.5	0.6	0.3	0.2	0.8
2-Mar	0.3	0.3	0.4	-0.1	-0.1	0.0	-0.1	-0.2	-0.2	0.0	-0.1	0.3	0.1	0.5	-0.2	-0.2	0.4	-0.3	-0.2	0.2	0.1	0.8	0.0	-0.1	0.1	0.8
3-Mar	0.2	0.1	-0.1	0.0	-0.3	-0.1	0.0	0.0	-0.1	0.4	-0.3	-0.3	-0.5	0.0	0.1	-0.1	0.2	0.1	0.2	0.3	0.1	0.1	-0.2	-0.1	0.0	0.4
4-Mar	-0.2	0.0	-0.1	0.0	0.0	0.1	0.1	-0.2	0.1	0.1	0.8	0.7	0.3	-0.3	-0.2	0.2	0.4	0.0	0.1	-0.1	-0.1	0.0	-0.1	-0.1	0.1	0.8
5-Mar	-0.1	0.0	0.0	0.2	-0.2	0.0	0.2	0.3	0.2	0.0	-0.7	0.1	-0.5	-0.2	0.0	0.0	0.4	0.7	0.3	0.1	0.0	-0.1	0.0	0.0	0.0	0.7
6-Mar	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	-0.2	0.9	0.8	0.4	-0.2	0.2	0.0	0.2	1.0	0.2	0.3	-0.1	0.1	0.0	-0.1	-0.3	0.1	1.0
7-Mar	0.0	-0.1	-0.1	-0.3	UO	0.0	-0.1	0.0	-0.3	-0.4	-0.1	0.1	-0.3	-0.4	-0.1	-0.3	-0.1	0.4	0.1	-0.1	0.0	0.0	-0.1	0.1	-0.1	0.4
8-Mar	-0.1	0.1	-0.2	-0.1	0.0	-0.1	-0.2	-0.1	0.3	-0.7	0.0	0.2	-0.3	0.0	-0.6	-0.3	-0.1	0.6	0.1	0.4	0.2	0.0	-0.3	-0.7	-0.1	0.6
9-Mar	0.2	0.0	0.3	-0.2	-0.2	0.4	0.9	0.3	0.2	0.4	0.2	0.1	0.3	-0.3	-0.7	0.3	-0.2	0.1	0.3	0.0	0.1	0.1	0.1	0.0	0.1	0.9
10-Mar	0.0	-0.1	-0.1	0.0	-0.1	0.0	0.1	-0.2	0.0	0.1	-0.2	-0.1	0.5	-0.3	-0.3	-0.3	0.2	0.0	0.2	0.1	0.7	0.0	-0.1	0.0	0.0	0.7
11-Mar	0.0	0.0	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	0.1	0.3	0.1	0.1	-0.3	-0.5	0.0	0.3	0.3	0.1	0.0	0.2	0.3	0.7	0.6	0.4	0.1	0.7
12-Mar	0.0	-0.2	0.0	-0.2	0.0	0.2	0.0	-0.1	-0.1	0.6	-0.4	0.7	1.1	-0.5	-0.8	-0.3	0.7	0.8	0.1	0.3	0.2	0.2	0.2	0.1	0.1	1.1
13-Mar	0.1	0.0	-0.1	0.0	0.0	0.1	0.0	0.0	0.0	-0.3	-0.2	0.0	-0.7	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.1	0.0	-0.1	-0.1	0.0	0.2
14-Mar	-0.2	-0.2	0.3	0.1	0.0	-0.1	0.0	-0.1	0.0	-0.2	-0.3	-0.1	-0.6	-0.7	-0.3	-0.4	-0.1	-0.4	-0.1	0.0	-0.1	0.1	-0.1	0.0	-0.2	0.3
15-Mar	0.0	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	0.0	-0.1	-0.5	-0.4	-0.9	-0.8	-0.3	-0.4	-0.4	0.2	0.2	0.8	1.5	0.7	0.0	-0.1	-0.1	-0.1	1.5
16-Mar	-0.2	0.0	0.0	0.0	0.2	-0.1	-0.2	0.2	0.3	0.1	-0.1	0.3	0.3	1.6	1.1	0.2	1.3	0.7	0.2	0.4	-0.1	-0.2	1.0	0.9	0.3	1.6
17-Mar	0.7	0.4	0.2	0.4	0.1	0.7	-0.7	-0.3	-0.1	-0.1	0.0	-0.3	-0.4	0.0	0.6	0.3	0.0	0.1	-0.1	-0.2	-0.3	-0.1	0.0	0.0	0.0	0.7
18-Mar	-0.1	-0.5	0.2	-0.1	0.1	-0.2	-0.1	0.0	-0.2	-0.1	-0.8	-0.5	-1.1	0.1	0.1	0.2	-0.2	0.5	0.3	0.0	0.2	0.1	0.0	0.0	-0.1	0.5
19-Mar	0.0	-0.2	0.0	0.1	-0.1	0.0	0.0	0.1	0.0	0.1	0.0	-0.2	0.6	0.0	-0.3	0.0	0.0	0.0	0.2	-0.1	-0.1	0.0	-0.2	-0.1	0.0	0.6
20-Mar	-0.1	0.0	0.1	0.2	0.0	-0.2	-0.1	-0.2	-0.3	-0.6	-0.1	-0.8	-0.5	-1.1	-0.8	0.1	-0.1	0.1	0.2	0.1	-0.2	0.2	0.1	0.1	-0.2	0.2
21-Mar	-0.2	0.0	0.8	0.5	0.5	-0.1	1.3	1.0	0.5	1.0	0.7	0.9	0.7	1.1	0.3	-0.3	0.0	0.2	0.9	2.7	2.1	2.1	0.6	0.8	0.8	2.7
22-Mar	0.0	0.0	0.7	-0.1	0.3	0.3	-0.4	-0.9	0.4	0.7	-0.1	0.0	0.6	-0.7	0.0	0.0	0.9	0.2	0.0	-0.1	0.1	-0.7	-0.2	0.0	0.0	0.9
23-Mar	-0.1	-0.1	0.0	0.0	0.0	-0.5	0.0	0.0	0.0	-0.4	0.3	-0.3	-0.3	-0.6	-0.2	0.1	0.7	0.3	0.0	0.2	0.3	0.4	0.8	0.6	0.1	0.8
24-Mar	0.3	-0.1	0.0	0.1	0.2	0.2	0.0	-0.3	0.0	-0.2	-0.3	-0.4	-0.1	0.0	0.0	-0.2	0.1	-0.9	-1.1	-0.5	-0.5	-0.3	0.3	-0.4	-0.2	0.3
25-Mar	1.3	1.1	0.7	0.9	0.3	0.0	-0.3	-0.3	-0.2	-0.5	-0.6	-0.1	-0.1	-0.3	-1.0	-1.1	-0.7	1.2	0.4	0.0	0.3	0.4	0.6	0.6	0.1	1.3
26-Mar	0.1	-0.1	-0.1	-0.4	0.2	0.2	-0.1	0.0	0.2	-0.5	0.1	-0.6	-0.3	0.6	-0.2	-0.3	0.0	-0.1	-0.1	-0.1	0.0	-0.3	0.2	0.6	0.0	0.6
27-Mar	0.0	-0.1	0.2	0.2	0.1	0.2	-0.1	0.0	-0.2	0.2	-0.4	0.2	0.3	0.1	0.1	-0.2	0.2	0.6	-0.2	0.3	0.1	-0.1	0.1	-0.1	0.1	0.6
28-Mar	-0.2	-0.2	-0.2	-0.1	-0.1	0.0	0.0	-0.1	-0.1	-0.5	0.5	0.7	0.4	0.0	0.3	-0.6	-0.7	0.3	-0.1	0.1	-0.6	0.0	-0.1	-0.2	-0.1	0.7
29-Mar	-0.1	-0.1	0.0	0.0	0.1	0.0	-0.1	0.0	0.1	1.0	-0.3	-0.6	-0.5	-0.6	-0.3	-0.5	0.1	0.2	0.8	1.5	-0.4	-0.1	-0.2	-0.1	0.0	1.5
30-Mar	0.0	-0.1	-0.1	-0.1	-0.1	0.0	0.0	0.1	0.3	0.0	0.3	0.5	-0.8	-0.2	0.0	0.2	0.3	0.5	0.2	0.7	0.1	0.0	0.3	0.1	0.1	0.7
31-Mar	0.6	1.1	2.1	1.3	0.8	-0.5	0.0	-0.2	-0.2	0.0	-0.2	0.5	0.5	0.9	1.4	0.2	0.5	0.2	0.0	0.6	0.7	2.1	2.1	1.7	0.7	2.1
	0.1	0.0	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	-0.1	-0.1	-0.1	-0.1	0.2	0.2	0.1	0.3	0.1	0.2	0.2	0.1	Diurnal Average	
	1.3	1.1	2.1	1.3	0.8	0.7	1.3	1.0	0.5	1.0	0.8	0.9	1.1	1.6	1.4	0.3	1.3	1.2	0.9	2.7	2.1	2.1	2.1	1.7	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 - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.6 km/h on Mar 25 17:00

Minimum Value: 0.1 km/h on Mar 19 06:00

Percentiles: P_1 = 0.2 P_{10} = 0.4 Q_1 = 0.7 Median = 1.2 Q_3 = 1.9 P_{90} = 2.4 P_{99} = 3.2

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

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

UO - Unstable Operation

Maximum Value: 3.7 km/h on Mar 25 02:00

Maximum Daily Average: 1.0 km/h on Mar 21

Minimum Value: -1.0 km/h on Mar 9 00:00

Minimum Daily Average: -0.2 km/h on Mar 14

Maximum Diurnal Average: 0.5 km/h at hour 20

Minimum Diurnal Average: 0.1 km/h at hour 16

Monthly Average: 0.29 km/h

Percentiles: P_1 = -0.8 P_{10} = -0.2 Q_1 = 0.0 Median = 0.2 Q_3 = 0.5 P_{90} = 0.9 P_{99} = 2.8

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.5	0.5	1.0	0.4	2.1	0.5	0.7	1.4	0.9	0.9	0.4	0.6	0.3	0.0	0.3	0.6	0.7	0.8	0.6	0.1	0.3	0.8	0.7	0.7	0.7	2.1
2-Mar	0.7	1.2	0.7	0.2	0.5	0.4	0.6	0.3	0.0	0.2	-0.1	0.4	0.8	1.5	0.4	0.4	0.7	-0.7	-0.5	0.0	0.2	0.8	0.1	-0.3	0.4	1.5
3-Mar	0.1	-0.1	0.0	-0.1	-0.3	0.0	0.0	0.2	0.0	0.3	0.1	0.1	0.2	0.1	0.4	0.1	0.2	0.2	0.5	0.4	0.4	0.6	0.5	0.6	0.2	0.6
4-Mar	0.4	0.7	0.6	1.0	1.3	1.2	0.7	0.5	0.6	0.2	0.5	0.9	0.3	0.2	0.5	1.2	1.5	1.1	1.2	1.6	1.1	0.3	-0.1	-0.1	0.7	1.6
5-Mar	0.0	0.0	0.0	0.2	-0.3	-0.2	0.3	0.5	0.4	-0.1	-0.9	0.2	0.1	0.2	0.2	0.3	0.5	0.7	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.7
6-Mar	0.3	0.3	0.1	0.2	0.2	0.1	0.5	0.7	0.5	1.7	1.6	0.6	-0.2	0.2	0.1	0.0	1.3	0.3	0.2	0.4	0.6	0.1	0.1	-0.1	0.4	1.7
7-Mar	0.0	-0.1	0.0	-0.1	UO	0.1	0.0	0.1	0.0	-0.1	0.1	0.4	0.0	-0.1	0.1	-0.2	-0.1	0.5	0.1	0.0	0.1	0.2	0.1	0.0	0.0	0.5
8-Mar	0.0	0.1	0.1	0.1	0.0	0.1	0.2	0.2	0.3	-0.2	0.2	0.2	-0.1	0.3	-0.6	-0.4	-0.3	0.7	0.1	0.3	0.0	-0.2	-0.5	-1.0	0.0	0.7
9-Mar	-0.3	-0.1	0.1	-0.1	0.0	0.0	0.6	0.1	-0.1	0.0	0.0	0.3	0.1	0.0	-0.6	0.6	-0.5	0.2	0.1	0.0	0.2	0.3	0.2	0.1	0.0	0.6
10-Mar	0.0	0.0	0.2	0.1	0.0	0.1	0.1	0.1	0.3	0.1	0.0	0.3	1.0	-0.5	-0.3	-0.2	0.1	0.2	0.2	0.2	0.5	0.2	-0.2	0.0	0.1	1.0
11-Mar	0.0	0.0	0.1	-0.3	-0.2	0.1	-0.1	0.1	0.6	0.4	0.3	0.1	-0.3	-0.6	-0.1	0.5	0.6	0.1	-0.2	0.0	0.1	0.8	0.2	0.4	0.1	0.8
12-Mar	-0.1	-0.2	0.1	-0.1	0.1	0.3	0.2	0.0	0.2	0.9	-0.1	1.2	2.4	0.2	-0.5	0.0	0.6	1.1	0.0	0.0	0.2	0.4	0.3	0.3	0.3	2.4
13-Mar	0.2	0.2	0.1	-0.1	0.2	0.1	0.0	0.0	-0.1	0.0	0.2	0.5	-0.3	0.4	0.4	0.2	0.6	0.2	0.3	0.1	0.2	-0.1	-0.1	-0.1	0.1	0.6
14-Mar	-0.3	-0.4	0.2	0.1	-0.1	-0.2	0.0	-0.2	0.2	-0.1	-0.3	-0.3	-0.9	-0.8	-0.3	-0.5	0.3	-0.5	-0.4	-0.2	-0.2	0.0	-0.1	-0.1	-0.2	0.3
15-Mar	0.1	0.1	0.0	0.1	0.1	0.3	0.3	0.4	0.2	0.1	-0.4	-0.9	-0.5	0.0	0.0	-0.4	0.5	0.5	1.9	2.7	1.4	0.1	0.3	0.3	0.3	2.7
16-Mar	0.3	0.2	0.1	0.2	0.4	0.3	0.2	1.0	0.5	0.6	0.3	0.5	0.5	2.0	0.8	0.2	2.1	0.7	0.0	0.9	0.0	-0.6	1.3	1.3	0.6	2.1
17-Mar	0.9	0.6	0.3	0.8	0.4	1.0	-0.4	0.1	0.5	0.0	0.0	-0.1	-0.4	-0.1	0.6	0.2	-0.2	0.1	-0.1	-0.6	-0.6	-0.1	0.2	0.2	0.1	1.0
18-Mar	0.5	0.5	1.2	0.3	0.8	0.0	0.2	0.2	0.4	0.7	0.0	-0.2	-0.9	0.3	0.0	-0.1	-0.1	0.6	0.4	0.2	0.5	0.5	0.2	0.3	0.3	1.2
19-Mar	0.2	0.1	0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.7	-0.2	0.6	-0.2	-0.1	0.0	-0.1	0.1	0.3	-0.3	-0.3	-0.2	-0.3	-0.1	0.1	0.7
20-Mar	-0.1	-0.2	0.1	0.4	0.3	0.0	0.1	0.0	-0.6	-0.5	0.1	-0.3	-0.2	-0.7	-0.3	0.6	0.1	0.5	0.2	0.0	-0.1	0.2	0.2	0.1	0.0	0.6
21-Mar	-0.1	0.0	1.6	0.6	0.9	0.0	1.9	1.7	0.7	1.4	0.6	0.9	0.5	0.8	0.0	-0.7	-0.3	-0.2	1.4	3.0	2.8	3.6	1.6	1.7	1.0	3.6
22-Mar	0.9	0.6	1.4	1.0	1.1	1.0	0.5	0.4	1.3	1.4	0.9	0.6	0.9	-0.7	0.1	-0.4	1.9	0.5	0.2	0.2	0.6	0.0	-0.3	0.1	0.6	1.9
23-Mar	-0.2	0.2	0.2	0.3	1.0	0.1	0.2	0.1	0.2	0.1	0.1	-0.2	-0.2	-1.0	-0.4	0.0	0.9	0.4	0.4	0.5	0.5	0.5	0.5	1.1	0.2	1.1
24-Mar	0.7	0.3	0.2	0.4	0.7	0.8	0.5	0.3	0.6	0.2	-0.1	-0.2	0.2	0.6	0.3	0.4	0.4	-0.1	-0.3	0.2	0.1	0.4	1.4	0.8	0.4	1.4
25-Mar	3.6	3.7	2.8	2.8	1.7	0.3	0.3	0.6	0.6	0.1	0.5	-0.1	0.1	0.4	0.0	0.0	0.2	1.7	0.5	-0.2	0.1	0.5	0.8	0.7	0.9	3.7
26-Mar	0.1	-0.1	-0.2	-0.1	0.8	0.4	0.1	-0.3	0.2	-0.6	0.1	-0.5	-0.3	1.5	0.0	-0.1	0.0	-0.2	-0.2	-0.1	0.0	-0.2	0.0	1.0	0.1	1.5
27-Mar	0.4	-0.2	0.2	0.4	0.2	0.2	-0.1	-0.1	-0.4	0.1	-0.1	0.4	0.4	0.0	-0.2	-0.7	0.0	0.8	-0.2	0.7	0.1	0.0	0.1	0.3	0.1	0.8
28-Mar	0.0	-0.1	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	-0.3	1.3	1.0	1.2	0.6	0.8	-0.2	-0.5	0.9	-0.1	0.3	-0.7	0.2	0.1	-0.1	0.2	1.3
29-Mar	0.3	0.1	-0.1	0.1	0.2	0.1	0.2	0.2	0.0	0.5	0.1	-0.4	-0.3	-0.5	0.0	-0.3	0.1	0.6	0.7	2.9	-0.2	0.1	0.0	0.1	0.2	2.9
30-Mar	0.1	0.2	0.2	0.2	0.1	0.2	0.3	0.1	0.2	0.1	0.7	0.3	-0.8	-0.2	-0.3	0.6	0.4	0.9	0.4	0.7	-0.2	0.0	0.2	-0.2	0.2	0.9
31-Mar	0.4	1.5	3.0	2.3	1.0	-0.5	0.1	0.1	0.3	0.5	0.1	0.5	1.0	1.0	1.4	-0.1	0.5	0.0	-0.2	0.4	1.1	3.2	3.0	2.5	1.0	3.2
	0.3	0.3	0.5	0.4	0.4	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.4	0.4	0.2	0.5	0.3	0.4	0.4	0.3	Diurnal Average	
	3.6	3.7	3.0	2.8	2.1	1.2	1.9	1.7	1.3	1.7	1.6	1.2	2.4	2.0	1.4	1.2	2.1	1.7	1.9	3.0	2.8	3.6	3.0	2.5	Diurnal Maximum	

UO - Unstable Operation

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

Maximum Value: 4.0 km/h on Mar 27 13:00

Minimum Value: 0.1 km/h on Mar 19 06:00

Percentiles: P_1 = 0.2 P_{10} = 0.4 Q_1 = 0.7 Median = 1.2 Q_3 = 1.9 P_{90} = 2.5 P_{99} = 3.5

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	1.1	0.7	0.8	0.8	1.0	0.6	0.6	1.7	1.2	1.3	1.0	0.5	0.4	0.4	0.6	0.9	0.7	0.5	0.3	0.5	0.4	0.9	0.9	0.6	1.7
2-Mar	0.7	1.1	0.8	0.6	0.9	0.6	0.5	0.6	0.5	0.7	0.8	1.0	1.2	0.8	1.0	1.3	2.0	2.5	2.9	2.3	2.6	2.1	1.5	2.0	2.9
3-Mar	2.6	2.3	2.0	1.4	1.3	0.8	0.7	0.4	0.5	0.7	0.7	0.4	0.7	0.8	0.7	0.9	0.8	0.8	0.7	0.6	0.8	1.5	1.0	0.6	2.6
4-Mar	0.7	0.9	0.7	1.1	1.0	1.3	0.9	0.6	0.7	0.5	0.9	1.0	1.0	0.8	0.9	1.0	1.1	0.5	0.5	0.5	1.9	1.5	1.6	1.6	1.9
5-Mar	1.1	1.3	1.5	1.7	2.5	2.5	2.3	2.0	2.1	2.3	1.5	2.3	1.8	1.7	1.0	1.3	1.7	1.1	0.9	0.7	0.3	0.6	0.2	0.2	2.5
6-Mar	0.3	0.3	0.2	0.3	0.3	0.4	0.6	0.6	0.7	1.3	1.5	1.6	1.7	1.9	1.6	1.4	1.3	1.2	1.0	0.8	0.9	0.9	1.4	0.7	1.9
7-Mar	1.0	1.2	1.1	0.9	UO	0.4	0.4	0.3	0.4	0.4	0.8	1.3	1.2	0.7	0.9	2.0	2.1	2.3	2.3	2.3	1.3	0.8	0.8	1.1	2.3
8-Mar	0.9	0.6	0.4	0.3	0.7	0.5	0.4	0.7	1.2	0.8	1.0	1.6	1.5	2.0	2.4	3.0	2.9	2.4	1.9	2.4	2.4	2.4	2.7	3.4	3.4
9-Mar	3.6	3.1	2.7	2.5	3.3	3.2	3.0	2.8	2.4	2.6	2.7	2.4	2.6	2.9	2.0	2.7	2.3	1.9	1.6	1.2	1.7	1.0	0.9	0.6	3.6
10-Mar	0.4	0.4	0.6	0.3	0.4	0.4	0.3	0.3	0.7	1.3	1.3	1.7	2.2	1.8	1.7	1.2	1.0	0.7	0.5	0.6	0.7	0.6	0.5	0.7	2.2
11-Mar	0.5	0.8	0.6	0.6	0.7	0.5	0.6	0.6	0.7	0.9	1.0	1.3	1.4	1.7	2.1	2.6	2.5	2.3	2.2	2.2	2.1	2.7	2.8	2.2	2.8
12-Mar	1.7	1.4	1.1	1.0	1.0	0.5	0.6	0.2	0.3	1.2	1.4	1.9	2.2	2.3	1.5	1.2	2.0	1.4	0.4	0.3	0.7	0.6	0.7	0.7	2.3
13-Mar	0.5	0.8	0.4	0.5	0.3	0.3	0.4	0.4	0.7	0.4	0.7	1.8	1.8	1.9	2.4	2.5	2.0	2.2	2.0	2.1	1.4	1.5	1.7	1.6	2.5
14-Mar	1.4	1.5	2.0	1.7	1.5	1.4	1.4	1.5	2.2	2.1	2.0	2.5	3.0	2.5	2.3	2.2	1.7	2.0	1.7	2.0	1.4	0.8	0.9	0.5	3.0
15-Mar	0.7	0.5	0.3	0.2	0.3	0.3	0.2	0.3	0.1	0.2	0.9	1.3	0.8	1.2	0.8	0.5	1.6	1.4	1.2	0.9	1.9	1.7	0.9	0.7	1.9
16-Mar	0.5	0.3	0.2	0.3	0.4	0.4	0.5	1.1	1.1	0.6	1.0	1.9	2.8	2.9	3.2	2.9	2.1	1.3	1.1	1.7	1.8	1.8	1.7	1.4	3.2
17-Mar	1.1	1.0	0.9	1.1	1.2	1.3	1.2	1.4	0.8	1.2	1.7	1.7	2.3	2.9	2.6	2.5	2.4	1.7	0.8	0.9	1.1	0.7	0.3	0.3	2.9
18-Mar	0.4	0.5	0.8	1.0	1.1	0.8	0.7	0.7	0.5	0.6	1.1	1.4	1.7	1.7	2.1	1.5	1.0	1.3	0.8	1.2	0.7	0.7	0.4	0.5	2.1
19-Mar	0.4	0.5	0.3	0.2	0.2	0.1	0.2	0.3	0.3	0.5	1.1	1.6	1.4	1.2	1.0	0.7	0.6	0.5	1.7	2.3	2.1	2.3	2.2	1.9	2.3
20-Mar	0.9	1.2	1.1	1.2	1.2	1.1	1.0	0.7	0.6	1.4	2.3	1.9	2.3	1.9	1.9	2.2	1.9	1.6	0.9	1.0	0.6	0.7	2.0	2.1	2.3
21-Mar	1.6	1.5	2.0	1.9	2.2	1.2	2.2	1.7	2.1	2.7	2.3	2.5	2.9	2.9	2.4	2.1	1.9	1.2	1.9	1.0	1.4	1.5	2.1	1.5	2.9
22-Mar	1.5	1.3	1.1	0.8	0.8	0.9	1.0	1.0	1.3	1.4	1.5	1.2	1.9	1.7	1.7	2.1	2.1	1.7	0.8	0.7	0.8	2.0	1.5	1.0	2.1
23-Mar	0.6	0.4	0.4	0.5	0.8	0.7	0.7	0.5	0.4	0.6	1.0	1.2	1.3	1.5	1.7	1.7	1.7	0.9	0.8	0.4	0.6	0.6	0.6	1.1	1.7
24-Mar	0.9	0.8	1.3	1.4	1.0	0.9	0.5	0.7	1.2	1.2	1.0	1.4	1.5	1.3	0.7	0.6	1.4	1.2	1.1	1.0	0.5	1.1	1.4	1.6	1.6
25-Mar	2.0	2.0	1.1	1.3	1.2	0.9	1.3	1.4	1.1	0.9	0.9	1.0	1.3	2.0	2.5	2.7	3.1	3.0	3.3	3.4	3.3	3.1	3.3	2.7	3.4
26-Mar	1.9	2.1	1.8	1.8	1.5	0.8	1.7	2.1	3.2	3.0	2.7	2.3	2.5	3.7	2.9	2.1	1.9	1.8	1.7	1.9	1.9	1.7	1.0	1.5	3.7
27-Mar	1.9	1.7	2.0	2.2	2.5	2.5	2.3	2.9	3.1	3.3	3.2	3.5	4.0	3.8	3.7	3.8	3.5	3.6	2.3	2.1	2.3	2.1	1.4	1.0	4.0
28-Mar	0.7	0.8	0.4	0.3	0.4	0.3	0.3	0.4	0.3	1.7	3.0	3.3	3.5	3.5	3.3	2.3	1.9	2.4	1.3	1.0	2.3	1.8	1.5	0.6	3.5
29-Mar	0.5	0.5	0.3	0.3	0.3	0.2	0.2	0.2	0.5	1.2	1.0	1.4	1.7	1.5	2.0	1.7	1.5	2.2	1.6	1.4	1.4	1.2	0.4	0.4	2.2
30-Mar	0.7	0.3	0.3	0.3	0.2	0.1	0.3	0.2	0.6	0.8	1.2	1.2	1.3	1.4	1.8	2.2	1.8	1.5	0.6	1.5	1.1	1.0	2.3	2.1	2.3
31-Mar	1.8	1.6	1.4	1.5	1.5	1.1	0.9	0.8	1.3	1.6	2.3	3.0	2.9	3.1	3.5	3.0	2.5	2.1	1.1	1.0	1.5	2.0	1.7	1.6	3.5
	3.6	3.1	2.7	2.5	3.3	3.2	3.0	2.9	3.2	3.3	3.2	3.5	4.0	3.8	3.7	3.8	3.5	3.6	3.3	3.4	3.3	3.1	3.3	3.4	
	Diurnal Maximum																								

UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS04
BUFFALO VIEWPOINT
MARCH 2025

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

April 30, 2025

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

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	709	34	35	99.87	89.5	0	12.1	0
H2S (ppb) Average	707	36	37	99.87	12.2	1	1.6	0
THC (ppm) Average	706	34	38	99.46	3.6	-	2.3	-
NMHC(ppm) Average	706	34	38	99.46	0.647	-	0.071	-
CH4(ppm) Average	706	34	38	99.46	3.5	-	2.3	-
O3(ppb) Average	709	34	35	99.87	44.9	0	38.4	-
NO2(ppb) Average	707	36	37	99.87	38.8	0	17.7	-
NO(ppb) Average	707	36	37	99.87	63.2	-	12.2	-
NOX(ppb) Average	707	36	37	99.87	99.5	-	29.2	-
PM2.5(ug/m3) Average	742	2	2	100	63.7	0	19.3	0
Temperature (C) Average	744	0	0	100	10.4	-	1.9	-
Relative Humidity (%) Average	744	0	0	100	93.4	-	79.9	-
Wind Speed 10 m (km/h) Average	741	0	3	99.6	24	-	14	-
Wind Direction 10 m (deg) Average	741	0	3	99.6	-	-	-	-

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

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

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	709	1.26	5.4	-	0	0	0.1	0.2	0.5	2	89.5
H2S (ppb) Average	707	0.42	1	-	0	0.1	0.1	0.1	0.3	0.9	12.2
THC (ppm) Average	706	2.14	0.2	-	2	2	2	2.1	2.2	2.4	3.6
NMHC(ppm) Average	706	0.007	0.044	-	0	0	0	0	0	0	0.647
CH4(ppm) Average	706	2.13	0.2	-	2	2	2	2.1	2.2	2.4	3.5
O3(ppb) Average	709	27.6	10.2	-	1	10.6	22	30	35	38.5	44.9
NO2(ppb) Average	707	9.11	9.3	-	0.1	1.1	2.1	5.2	13.1	24.4	38.8
NO(ppb) Average	707	3.43	8.3	-	0	0.1	0.2	0.6	2.2	8.9	63.2
NOX(ppb) Average	707	12.54	16	-	0.3	1.4	2.5	6.3	17	30.1	99.5
PM2.5(ug/m3) Average	742	4.7	5.2	-	0.5	1.6	2.5	3.2	5	8.7	63.7
Temperature 2 m (C) Average	744	-7.71	7.5	-	-23.7	-17.8	-13.6	-7.4	-2	2.4	10.4
Relative Humidity (%) Average	744	65.23	14.4	-	26.2	44.9	54	67	77.2	82.8	93.4
Wind Speed 10 m (km/h) Average	741	8.1	4	-	0	4	5	7	10	14	24
Wind Direction 10 m (deg) Average	741	-	-	-	-	-	-	-	-	-	-

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

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL GASEOUS ANALYZERS	26 Mar 2025 08:00	26 Mar 2025 08:00	1	Maintenance - sample manifold cleaned
THC/NMHC/CH4	26 Mar 2025 08:00	26 Mar 2025 11:00	3	Maintenance - calibration gas cylinder replaced
Wind Speed, Wind Direction	06 Mar 2025 01:00	06 Mar 2025 01:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	15 Mar 2025 06:00	15 Mar 2025 07:00	2	Flat line in sensor output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Buffalo Viewpoint - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 89.5 ppb on Mar 29 13:00
Maximum Daily Average: 12.1 ppb on Mar 29

Minimum Value: 0.0 ppb on Mar 4 17:00
Minimum Daily Average: 0.0 ppb on Mar 27
Maximum Diurnal Average: 6.0 ppb at hour 13
Minimum Diurnal Average: 0.1 ppb at hour 7
Monthly Average: 1.26 ppb
Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.2 Q_3 = 0.5 P_{90} = 2.0 P_{99} = 17.1

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	34
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.1	0.0	0.1	0.1	0.1	Z	0.1	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.3	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.2	0.4
2-Mar	Z	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.6	0.8	1.2	2.0	1.3	0.6	0.4	0.3	0.5	0.3	0.3	0.3	0.1	0.2	0.2	0.2	0.5	2.0
3-Mar	0.2	Z	0.2	0.2	0.1	0.2	0.1	0.2	0.4	0.4	0.3	0.2	0.2	0.3	0.2	0.3	0.5	0.7	0.4	0.2	0.1	0.2	0.1	0.1	0.3	0.7
4-Mar	0.1	0.1	Z	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.1	0.2
5-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	10.9	8.2	7.1	5.2	5.5	3.4	2.4	2.1	1.9	1.5	2.0	2.0	2.5	10.9
6-Mar	1.6	0.5	0.4	0.4	0.1	0.2	Z	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.3	0.3	1.6
7-Mar	2.6	1.4	0.9	0.4	0.2	Z	0.2	0.5	0.6	0.5	0.8	3.7	2.9	5.9	14.1	5.0	3.1	1.0	0.4	0.3	0.3	0.2	0.2	0.2	2.0	14.1
8-Mar	Z	0.2	0.2	0.2	0.2	0.1	0.1	0.6	2.0	1.5	1.9	3.2	4.8	0.5	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.7	4.8
9-Mar	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
10-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.2	0.3	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.8	2.8	1.4	0.8	0.6	0.4	2.8
11-Mar	0.4	0.5	0.7	Z	0.9	0.6	0.5	0.3	0.3	0.2	0.3	0.3	0.2	0.3	0.2	0.1	0.1	0.2	0.3	0.1	0.0	0.0	0.0	0.0	0.3	0.9
12-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	1.2	7.4	1.8	1.9	8.9	16.3	26.1	13.1	9.1	11.9	10.4	3.9	0.8	0.5	0.2	4.9	26.1
13-Mar	0.2	0.1	0.0	0.0	0.0	Z	0.1	0.2	0.2	0.1	0.0	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2
14-Mar	Z	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
15-Mar	0.1	Z	0.4	0.4	0.2	0.0	0.1	0.1	0.3	0.6	0.7	4.9	14.4	4.5	1.1	0.9	1.1	1.0	3.2	2.5	2.5	2.0	2.0	1.7	1.9	14.4
16-Mar	0.6	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.4	0.8	1.1	1.2	0.6	0.5	0.3	0.3	0.7	0.5	0.3	0.1	0.0	0.0	0.0	0.0	0.3	1.2
17-Mar	0.1	0.1	0.2	Z	0.2	0.1	0.1	0.1	0.1	0.2	0.7	0.7	0.7	1.0	0.8	0.6	0.4	0.4	0.3	0.2	0.3	0.1	0.1	0.1	0.3	1.0
18-Mar	0.2	0.3	0.2	0.7	Z	0.2	0.2	0.2	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.7
19-Mar	0.1	0.3	0.5	0.3	0.1	Z	0.0	0.2	0.5	C	C	C	5.7	3.6	1.7	1.4	1.2	0.9	1.3	0.9	0.4	0.3	0.4	0.2	1.0	5.7
20-Mar	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.5	1.4	0.4	1.4	6.6	0.8	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.6	6.6
21-Mar	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
22-Mar	0.0	0.0	Z	0.1	0.0	0.1	0.0	0.0	0.2	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.6	1.4	2.8	3.2	2.1	0.6	0.8	0.6	0.7	3.2
23-Mar	0.6	0.5	0.5	Z	0.2	0.2	0.1	0.2	0.2	1.9	2.6	3.4	0.7	0.5	0.4	0.3	0.3	0.4	0.3	0.3	0.5	0.5	0.4	0.6	0.7	3.4
24-Mar	0.6	0.9	0.5	0.3	Z	0.3	0.4	0.5	0.5	0.5	0.6	0.5	0.3	0.2	0.2	0.1	0.2	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.3	0.9
25-Mar	0.1	0.2	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.2	0.1	0.1	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.3
26-Mar	Z	0.2	0.1	0.1	0.1	0.1	0.1	M	0.2	0.2	0.1	0.1	1.0	9.4	17.1	9.9	0.3	0.1	0.1	0.1	0.1	0.1	0.0	0.0	1.8	17.1
27-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.3	3.8	6.8	46.1	9.9	7.7	28.7	13.4	13.7	0.5	0.2	0.1	0.0	0.0	0.0	5.7	46.1
29-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.1	16.3	12.7	25.0	89.5	73.7	21.5	9.0	7.0	4.8	4.0	3.7	3.0	4.1	1.8	0.8	12.1	89.5
30-Mar	0.6	0.4	0.3	0.3	Z	0.2	0.1	0.3	0.7	1.7	1.2	0.9	2.7	0.5	0.6	0.6	0.6	0.4	0.3	0.8	0.5	0.3	0.4	0.6	0.6	2.7
31-Mar	0.6	0.6	0.4	0.4	0.3	Z	0.3	0.3	0.3	0.4	0.5	0.3	0.2	0.3	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.3	0.6
	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.3	1.0	1.2	2.1	6.0	4.2	3.0	3.2	1.6	1.3	1.0	0.9	0.6	0.4	0.4	0.3	Diurnal Average	
	2.6	1.4	0.9	0.7	0.9	0.6	0.5	0.6	2.0	16.3	12.7	25.0	89.5	73.7	21.5	28.7	13.4	13.7	11.9	10.4	3.9	4.1	2.0	2.0	Diurnal Maximum	

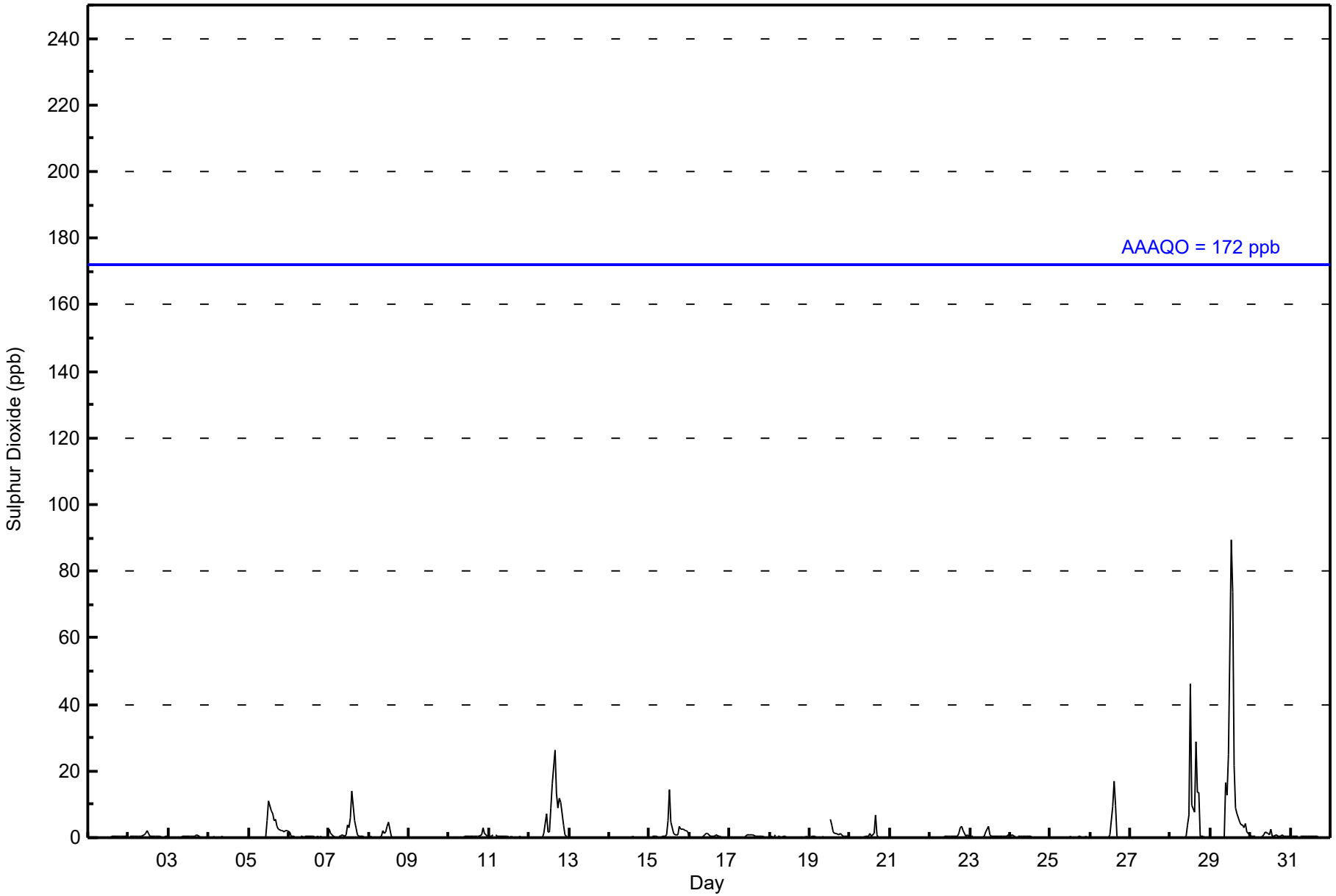
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Buffalo Viewpoint - March 2025



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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	691	97.46	97.46
11 - 20	11	1.55	99.01
21 - 60	5	0.71	99.72
61 - 110	2	0.28	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Buffalo Viewpoint - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	213	72	14	4	16	55	75	74	15	16	9	18	21	18	27	41	688
11 - 20	4	0	1	0	0	0	0	0	0	0	0	0	0	2	3	1	11
21 - 60	1	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	5
61 - 110	1	1	0	0	0	0	0	0	0	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	219	74	15	4	16	55	75	74	15	16	9	18	21	20	33	42	706

Total Number of Valid Hours: 706

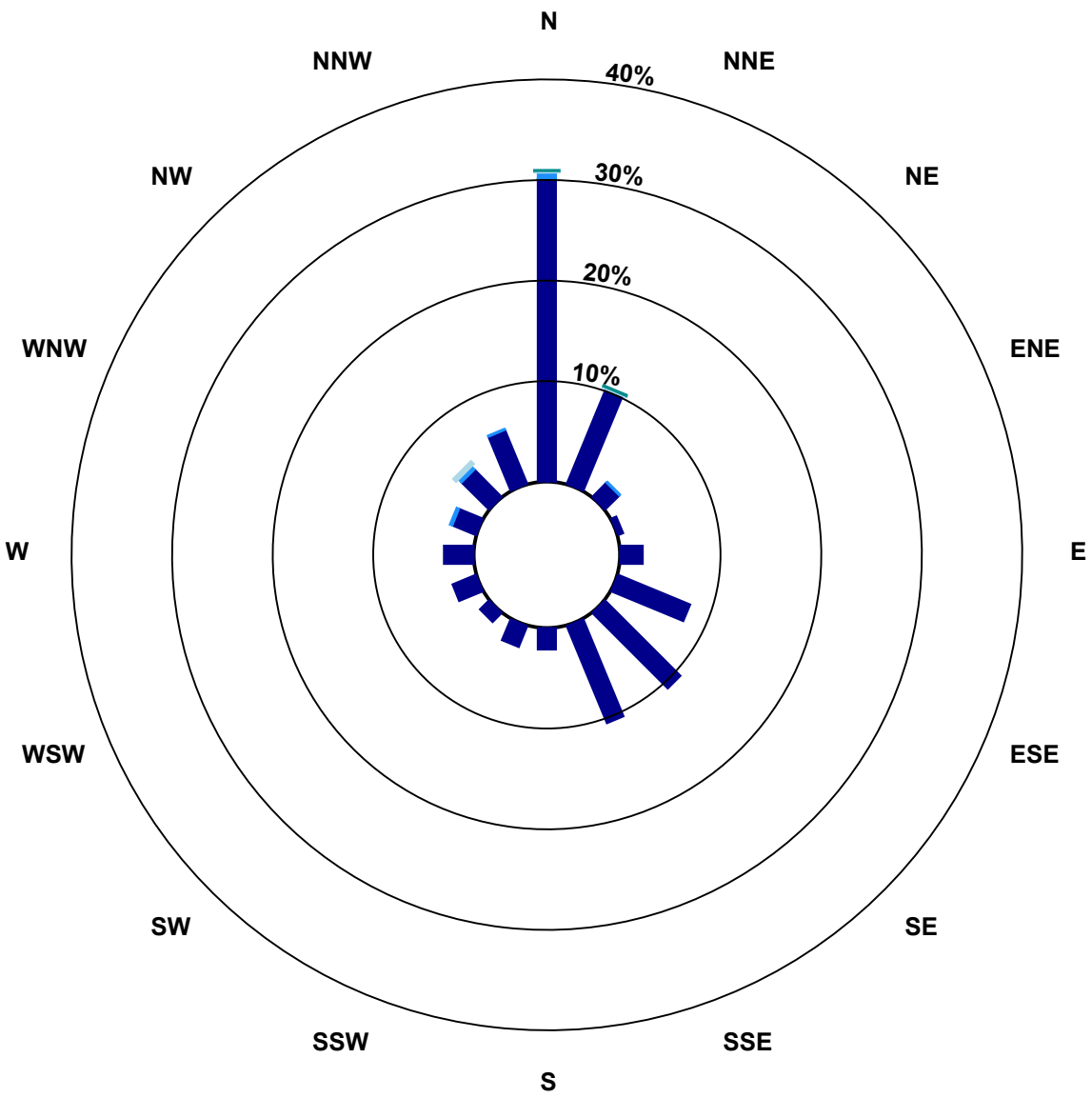
Total Number of Hours: 744

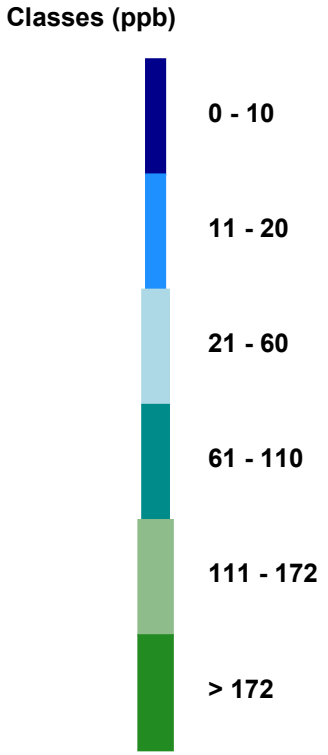
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Sulphur Dioxide (SO_2) - ppb

Buffalo Viewpoint





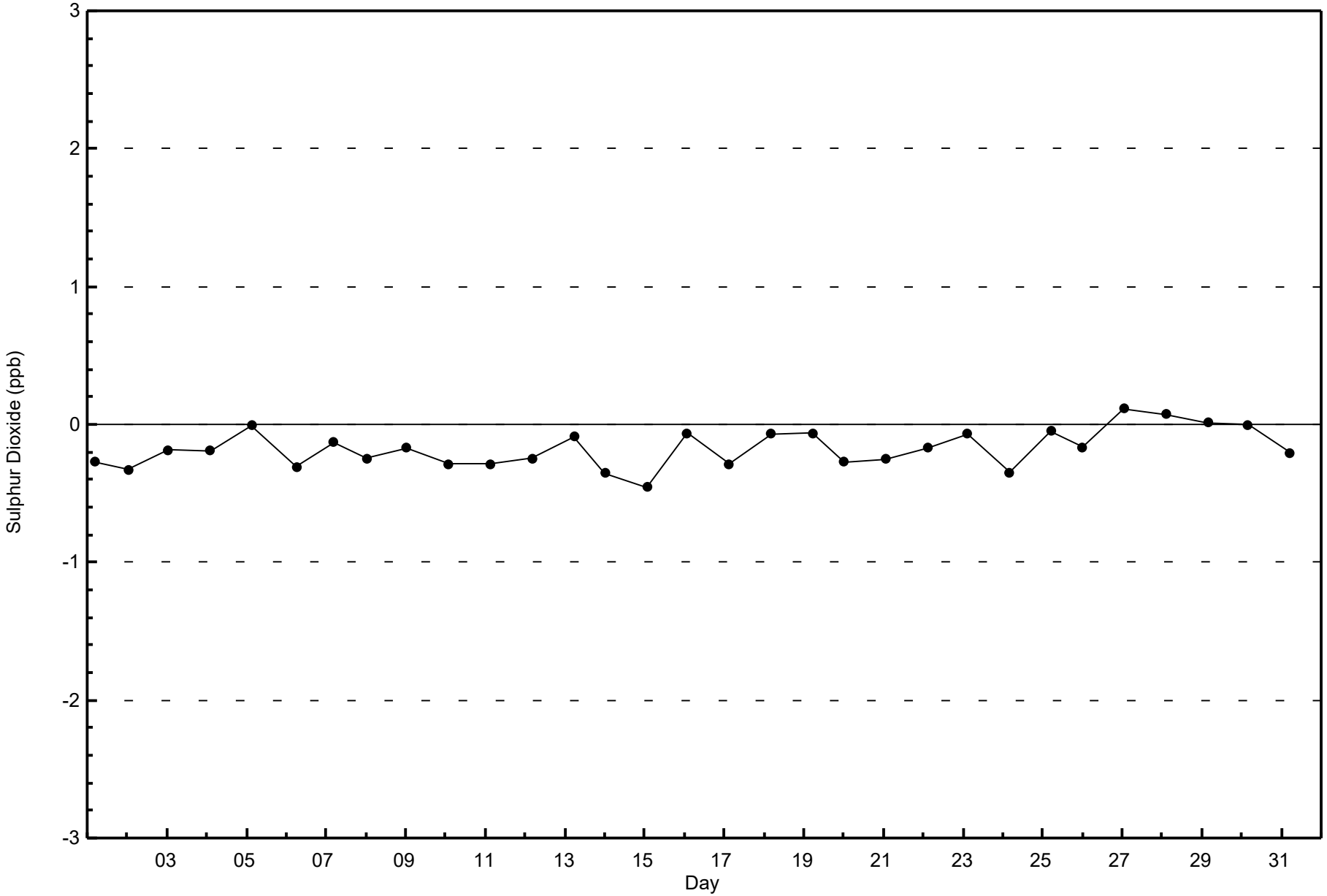
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Buffalo Viewpoint - March 2025

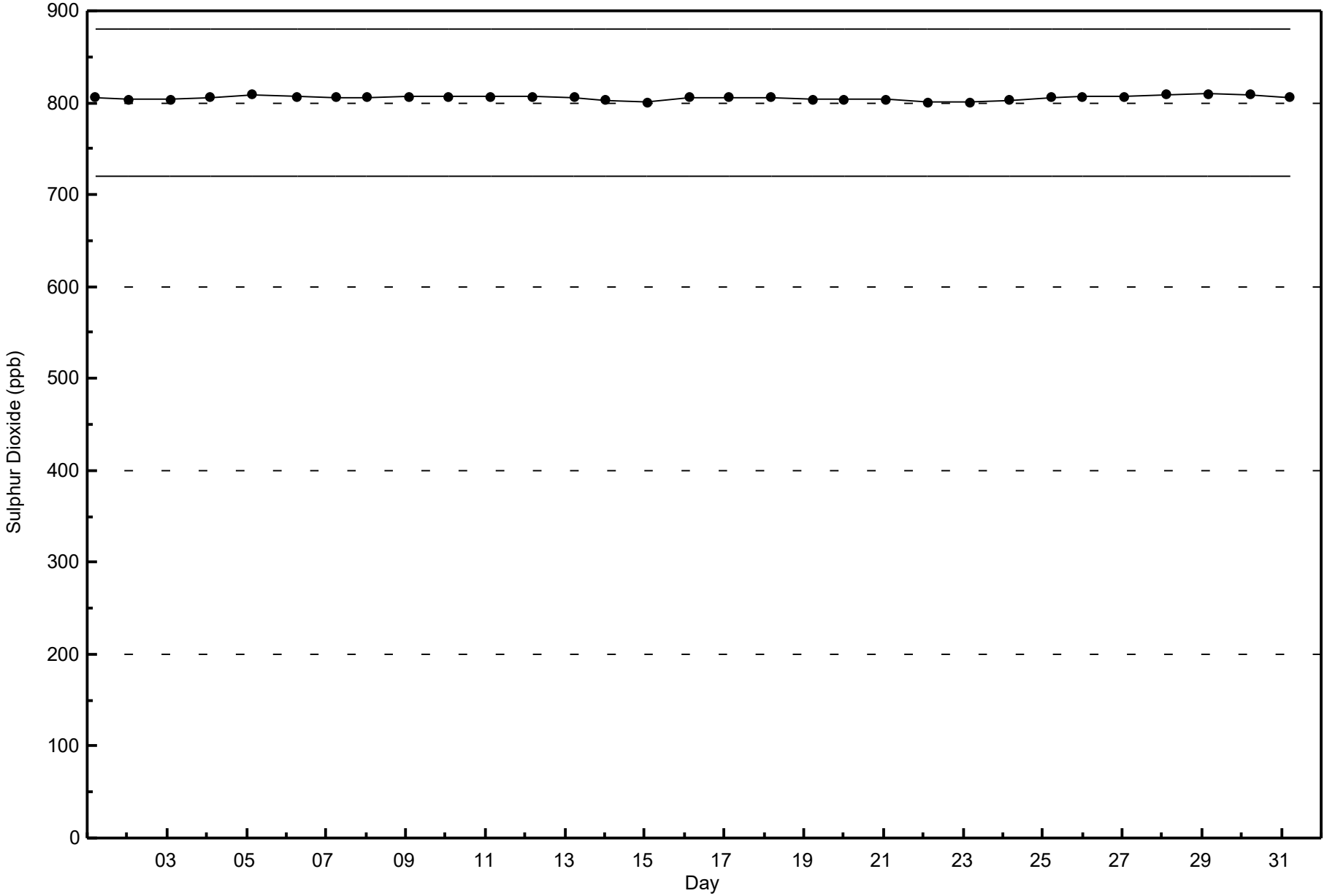


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Buffalo Viewpoint - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Buffalo Viewpoint - March 2025

Number of Exceedences (AAAQO): 1-hr: 1 24-hr: 0
Maximum Value: 12.2 ppb on Mar 24 20:00 Maximum Daily Average: 1.6 ppb on Mar 24

Minimum Value: 0.0 ppb on Mar 18 14:00 Minimum Daily Average: 0.0 ppb on Mar 9
Maximum Diurnal Average: 0.8 ppb at hour 11 Minimum Diurnal Average: 0.2 ppb at hour 1
Monthly Average: 0.42 ppb Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.1 Median = 0.1 Q_3 = 0.3 P_{90} = 0.9 P_{99} = 4.1

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.5	0.4	0.2	0.2	0.2	0.5
2-Mar	0.2	Z	0.1	0.1	0.1	0.1	0.1	0.4	2.6	1.3	2.2	2.3	0.4	0.2	0.1	0.2	4.0	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.7	4.0
3-Mar	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.2	0.1	0.1	0.1	0.3	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.4
4-Mar	0.1	0.1	0.1	Z	0.1	0.1	0.2	0.3	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.4	0.2	0.1	0.4
5-Mar	0.2	0.1	0.1	0.2	Z	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.2	0.3	0.2	0.2	0.2	0.2	0.6	0.6	0.4	0.5	0.2	0.5	0.2	0.6
6-Mar	0.6	0.6	1.5	8.3	1.2	0.8	0.9	Z	1.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.1	1.2	0.2	1.5	0.8	8.3
7-Mar	Z	0.3	0.2	0.2	0.1	0.2	0.2	0.3	0.3	0.5	0.5	1.1	1.7	1.3	1.3	0.6	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.4	1.7
8-Mar	0.1	Z	0.2	0.2	0.3	0.3	0.4	0.8	1.9	4.0	2.9	1.2	0.9	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.6	4.0
9-Mar	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1
10-Mar	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	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.4	0.3	0.2	0.4
11-Mar	0.3	0.3	0.4	0.3	Z	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.4
12-Mar	0.1	0.1	0.0	0.0	0.1	Z	0.1	0.1	0.3	0.8	1.0	0.4	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.3	1.0
13-Mar	Z	0.2	0.2	0.2	0.3	0.4	0.7	0.7	0.7	0.6	0.3	0.5	0.5	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.7
14-Mar	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.8	1.0	0.2	1.0
15-Mar	0.5	0.9	Z	3.1	2.1	0.9	1.0	1.3	1.6	2.4	2.7	1.1	1.3	0.6	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.9	3.1
16-Mar	0.1	0.9	0.9	Z	0.7	0.5	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.9
17-Mar	0.0	0.0	0.1	0.1	Z	0.1	0.1	0.2	0.2	0.6	1.3	1.0	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	1.3
18-Mar	0.2	0.2	0.1	0.1	0.3	Z	1.4	C	C	C	C	C	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.9	1.3	0.3	1.4
19-Mar	Z	0.6	2.8	3.7	3.5	2.5	1.3	1.7	1.0	0.7	1.0	0.7	0.5	0.4	0.3	0.3	0.4	0.3	0.5	0.2	0.2	0.1	0.1	0.1	1.0	3.7
20-Mar	0.2	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.3	0.4	0.3	0.2	0.5	2.0	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.3	2.0
21-Mar	0.1	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1
22-Mar	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	0.3	0.6	6.6	2.0	1.9	0.5	0.4	0.6	6.6
23-Mar	0.3	0.3	0.4	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.1	0.4	0.2	0.1	0.1	0.1	0.1	0.3	0.5	0.6	0.9	1.0	0.8	0.7	0.3	1.0
24-Mar	0.4	0.6	0.7	0.4	0.3	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	2.1	7.6	12.2	9.8	1.3	0.1	0.1	1.6	12.2
25-Mar	Z	0.1	0.1	0.1	0.1	0.1	0.9	0.1	0.1	0.1	0.1	0.1	0.4	0.1	1.1	2.6	5.1	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.5	5.1
26-Mar	0.1	Z	0.1	0.1	0.1	0.1	0.1	M	0.1	0.1	0.1	0.1	0.1	0.3	1.6	1.7	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	1.7
27-Mar	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.2
28-Mar	0.1	0.2	0.2	Z	0.3	0.3	0.3	0.4	0.3	0.3	0.4	0.3	0.5	0.3	0.3	0.5	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.3	0.5
29-Mar	0.1	0.2	0.5	0.3	Z	1.1	1.3	1.2	1.0	4.1	8.7	3.9	2.0	0.9	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	1.2	8.7
30-Mar	0.4	0.6	1.7	1.1	0.9	Z	0.9	0.9	1.2	1.5	1.1	0.7	1.1	0.2	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.2	0.2	0.1	0.6	1.7
31-Mar	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
	0.2	0.3	0.4	0.8	0.4	0.3	0.4	0.4	0.5	0.6	0.8	0.5	0.4	0.2	0.3	0.3	0.4	0.2	0.4	0.8	0.6	0.3	0.2	0.3	Diurnal Average	
	0.6	0.9	2.8	8.3	3.5	2.5	1.4	1.7	2.6	4.1	8.7	3.9	2.0	1.3	1.6	2.6	5.1	2.1	7.6	12.2	9.8	1.9	0.9	1.5	Diurnal Maximum	

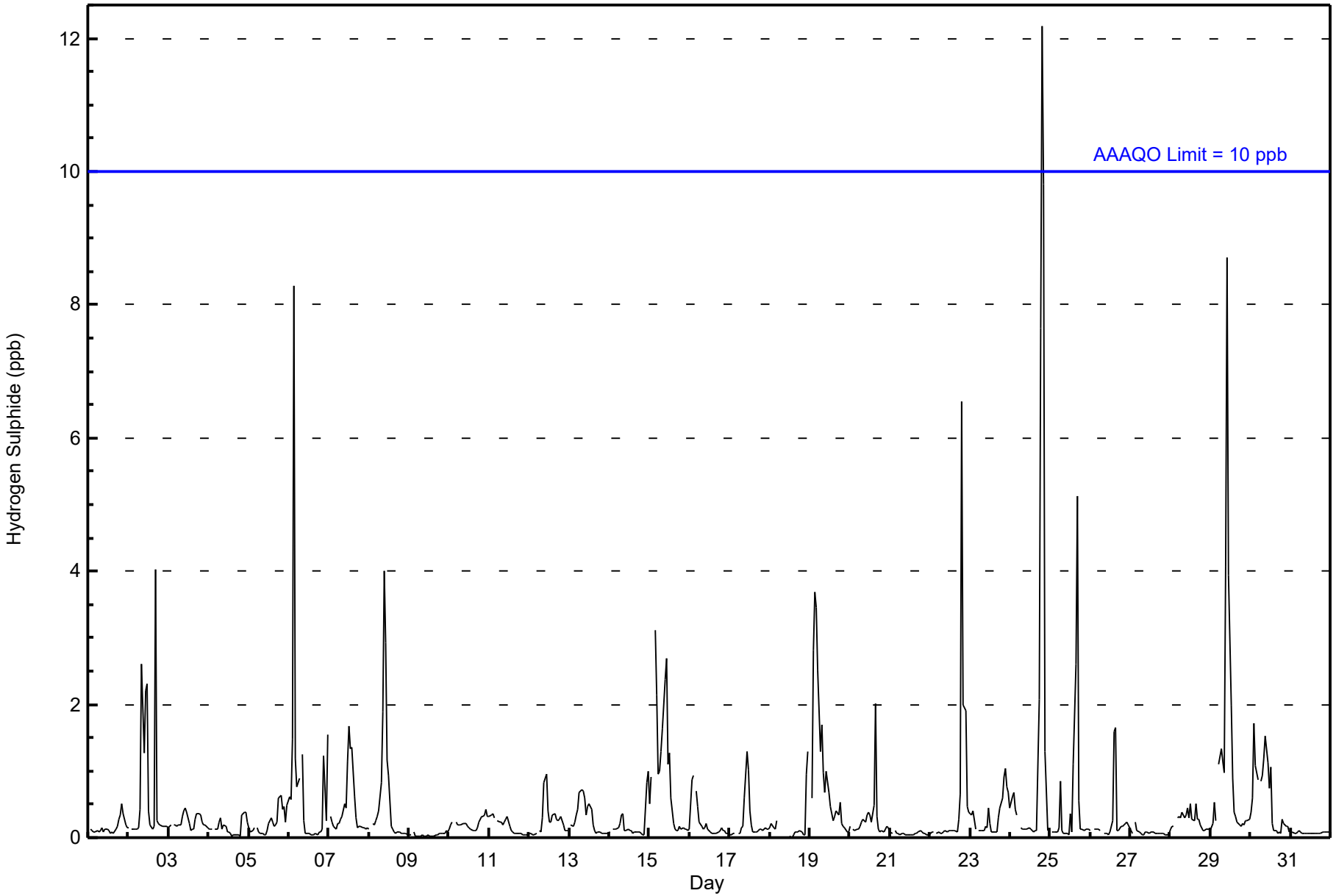
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Buffalo Viewpoint - March 2025



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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	687	97.17	97.17
3 - 4	13	1.84	99.01
5 - 7	2	0.28	99.29
8 - 11	4	0.57	99.86
> 11	1	0.14	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Buffalo Viewpoint - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	217	74	15	5	16	55	77	75	15	15	8	17	18	18	24	35	684
3 - 4	1	1	0	0	0	0	0	1	0	0	0	0	0	0	7	3	13
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
8 - 11	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	4
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Totals	219	75	15	5	16	55	77	76	15	15	8	17	18	20	35	38	704

Total Number of Valid Hours: 704

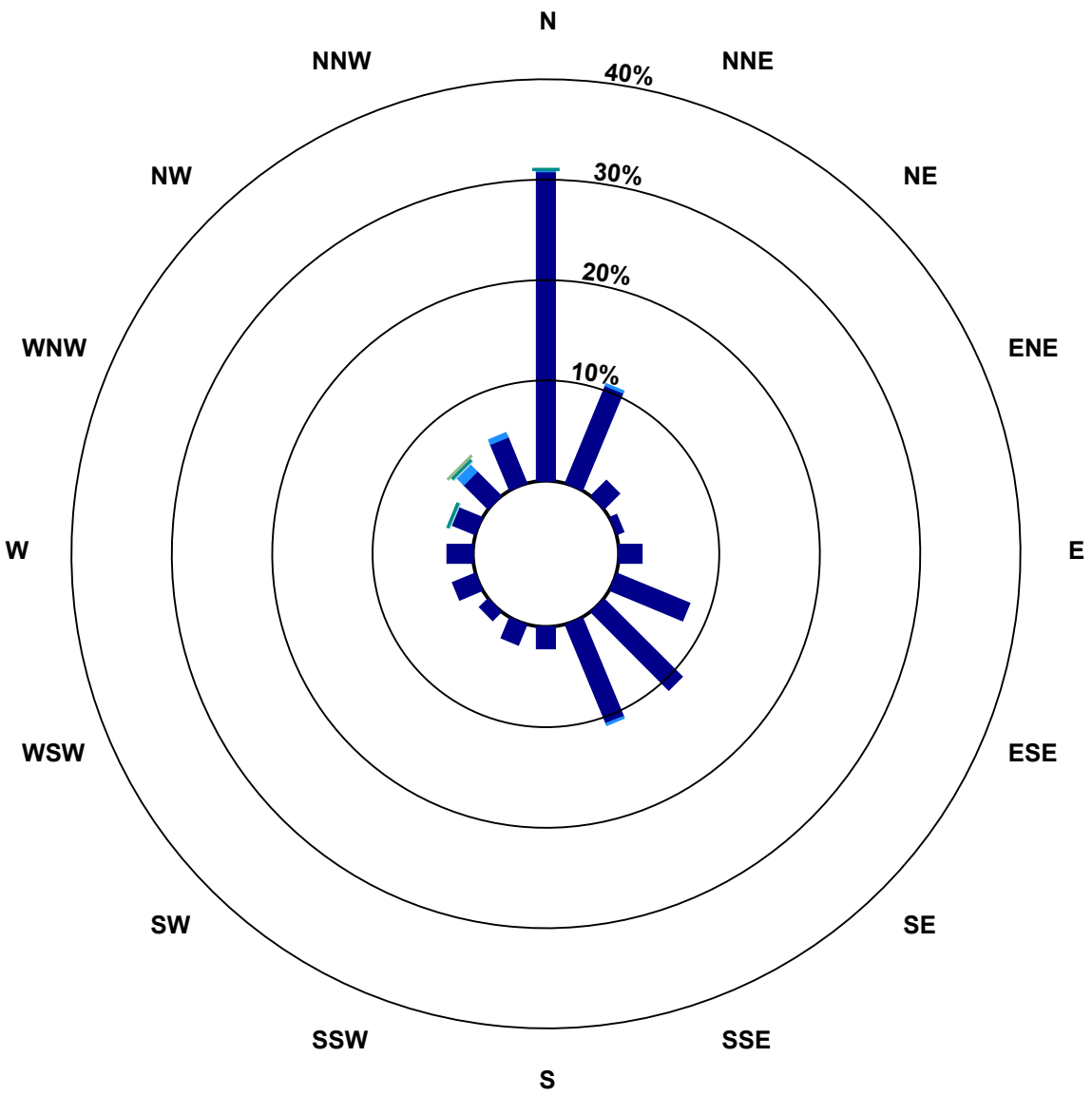
Total Number of Hours: 744

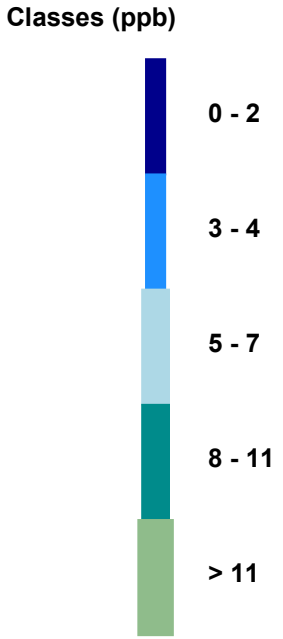
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Hydrogen Sulphide (H_2S) - ppb

Buffalo Viewpoint





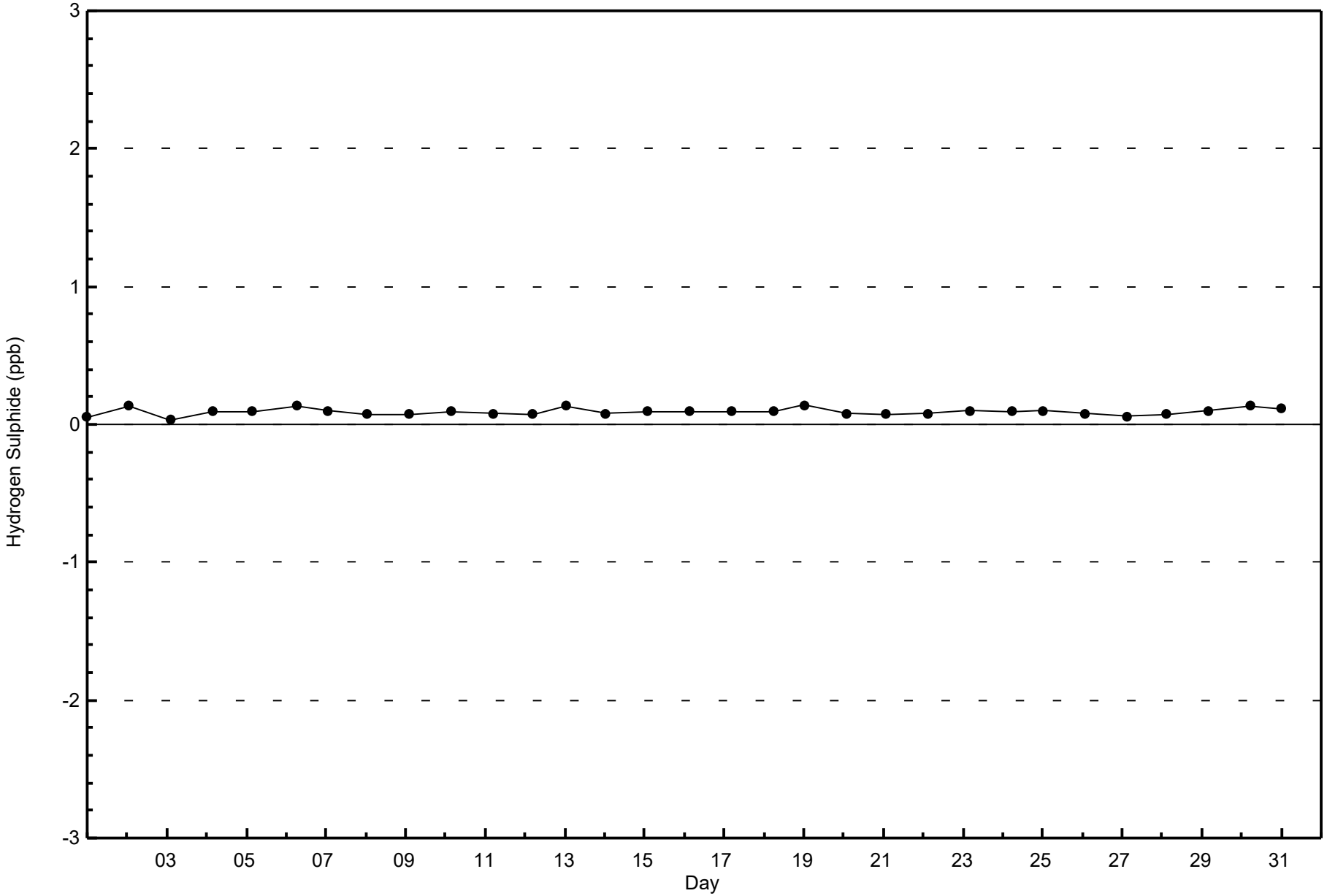
Total Number of Valid Hours: 704

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Buffalo Viewpoint - March 2025

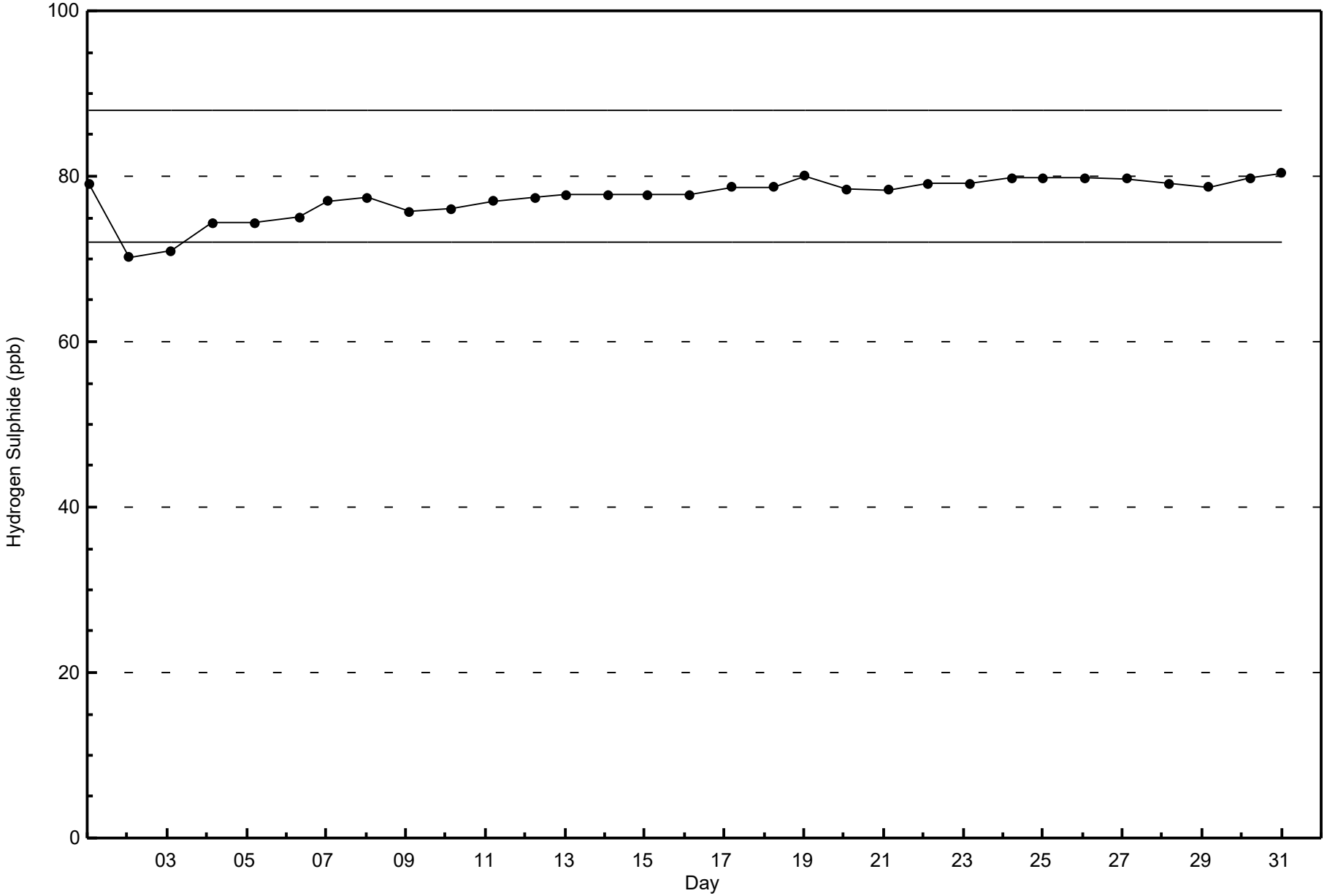


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Buffalo Viewpoint - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Buffalo Viewpoint - March 2025

Maximum Value: 3.6 ppm on Mar 2 11:00

Maximum Daily Average: 2.3 ppm on Mar 29

Minimum Value: 2.0 ppm on Mar 4 15:00

Minimum Daily Average: 2.0 ppm on Mar 9

Maximum Diurnal Average: 2.3 ppm at hour 11

Minimum Diurnal Average: 2.1 ppm at hour 15

Monthly Average: 2.14 ppm

Percentiles: P_1 = 2.0 P_{10} = 2.0 Q_1 = 2.0 Median = 2.1 Q_3 = 2.2 P_{90} = 2.4 P_{99} = 3.1

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	34
Percent Operational Time:	99.5

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	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	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.2
2-Mar	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.2	3.3	3.3	3.6	2.9	2.2	2.0	2.0	2.0	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.3	3.6
3-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.1	2.2
4-Mar	2.0	2.0	Z	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.2	2.1	2.0	2.2
5-Mar	2.1	2.0	2.0	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.8	2.6	2.2	2.3	2.1	2.6	2.1	2.8
6-Mar	2.7	2.5	2.4	3.5	2.5	2.4	Z	2.2	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	2.2	2.7	2.3	3.5
7-Mar	2.6	2.2	2.1	2.1	2.0	Z	2.2	2.3	2.3	2.4	2.4	2.6	2.4	2.6	2.6	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.6
8-Mar	Z	2.1	2.1	2.1	2.3	2.3	2.4	2.5	2.7	2.5	2.4	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.7
9-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	2.0	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.2	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.3
11-Mar	2.1	2.1	2.2	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2
12-Mar	2.0	2.1	2.0	2.0	Z	2.0	2.0	2.0	2.1	2.2	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.3
13-Mar	2.0	2.1	2.1	2.1	2.2	Z	2.5	2.5	2.5	2.4	2.2	2.3	2.5	2.3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.5
14-Mar	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1
15-Mar	2.1	Z	2.6	2.7	2.4	2.3	2.3	2.4	2.5	2.9	2.9	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.9
16-Mar	2.1	2.2	Z	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.2	2.0	2.0	2.0	2.0	2.1	2.3
17-Mar	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.1	2.2	2.3	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.3
18-Mar	2.1	2.1	2.1	2.0	Z	2.4	3.1	2.8	2.8	2.5	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.2	2.2	2.0	2.0	2.0	2.5	2.7	2.3	3.1
19-Mar	2.5	2.4	2.5	2.6	2.5	Z	2.3	2.4	2.3	C	C	C	2.1	2.1	2.1	2.2	2.4	2.4	2.4	2.1	2.1	2.1	2.1	2.1	2.3	2.6
20-Mar	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
21-Mar	2.0	Z	2.0	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
22-Mar	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	2.2	2.5	2.6	2.2	2.2	2.2	2.2	2.1	2.6
23-Mar	2.2	2.2	2.2	Z	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	2.3	2.3	2.3	2.9	3.4	2.7	2.6	2.3	3.4
24-Mar	2.4	2.7	2.6	2.3	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.3	2.4	2.3	2.2	2.1	2.0	2.0	2.2	2.7
25-Mar	2.0	2.0	2.0	2.0	2.0	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.2	2.0	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
26-Mar	Z	2.1	2.1	2.0	2.0	2.0	2.0	M	M	M	M	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
27-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	2.0	2.1	Z	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.1	2.3
29-Mar	2.1	2.2	2.4	Z	2.3	2.3	2.5	2.4	2.6	3.1	3.5	3.2	2.5	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	3.5
30-Mar	2.3	2.3	2.4	2.3	Z	2.3	2.3	2.3	2.4	2.4	2.3	2.3	2.3	2.1	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.2	2.4
31-Mar	2.0	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	2.1
	2.1	2.1	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	Diurnal Average	
	2.7	2.7	2.6	3.5	2.5	2.4	3.1	2.8	3.3	3.3	3.6	3.2	2.5	2.6	2.6	2.3	2.4	2.4	2.8	2.6	2.9	3.4	2.7	2.7	Diurnal Maximum	

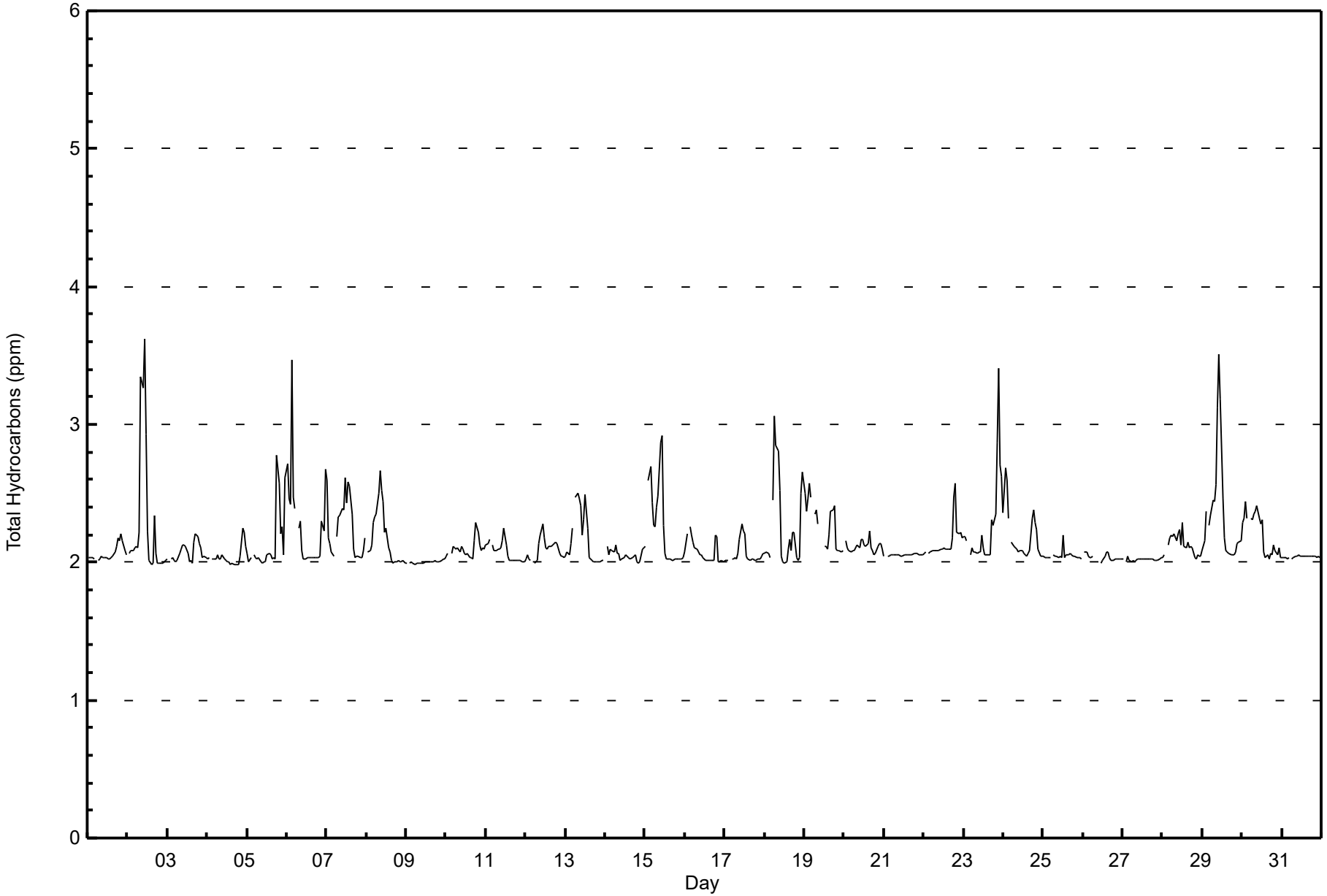
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Buffalo Viewpoint - March 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	307	43.48	43.48
2.1 - 3.0	390	55.24	98.73
3.1 - 10.0	9	1.27	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Buffalo Viewpoint - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	98	52	6	1	0	20	43	42	2	5	6	8	13	4	4	3	307
2.1 - 3.0	117	19	9	3	16	34	32	32	13	11	3	10	8	16	26	38	387
3.1 - 10.0	3	1	0	0	0	1	0	0	0	0	0	0	0	0	3	1	9
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	218	72	15	4	16	55	75	74	15	16	9	18	21	20	33	42	703

Total Number of Valid Hours: 703

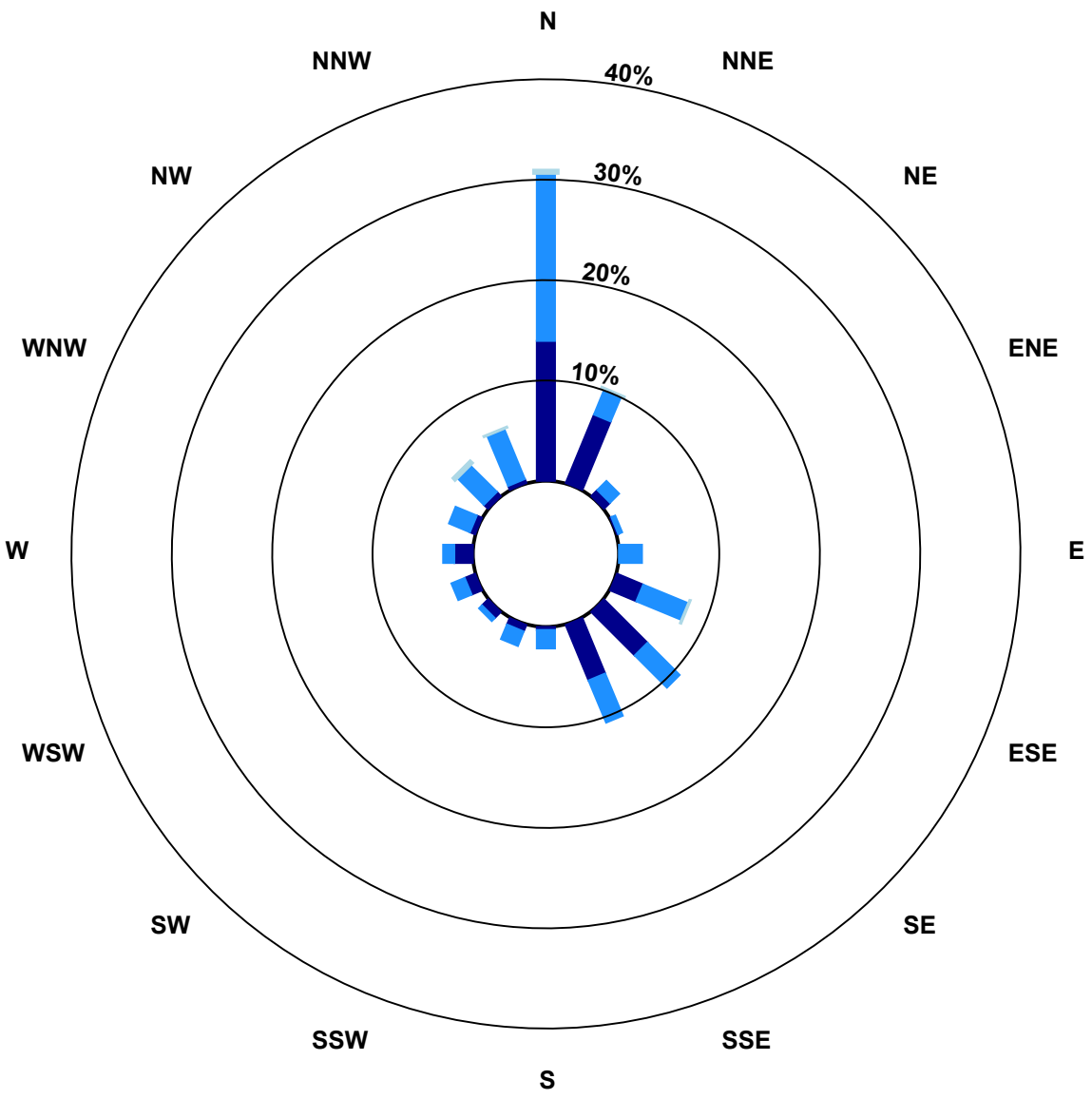
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Total Hydrocarbons (THC) - ppm

Buffalo Viewpoint



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

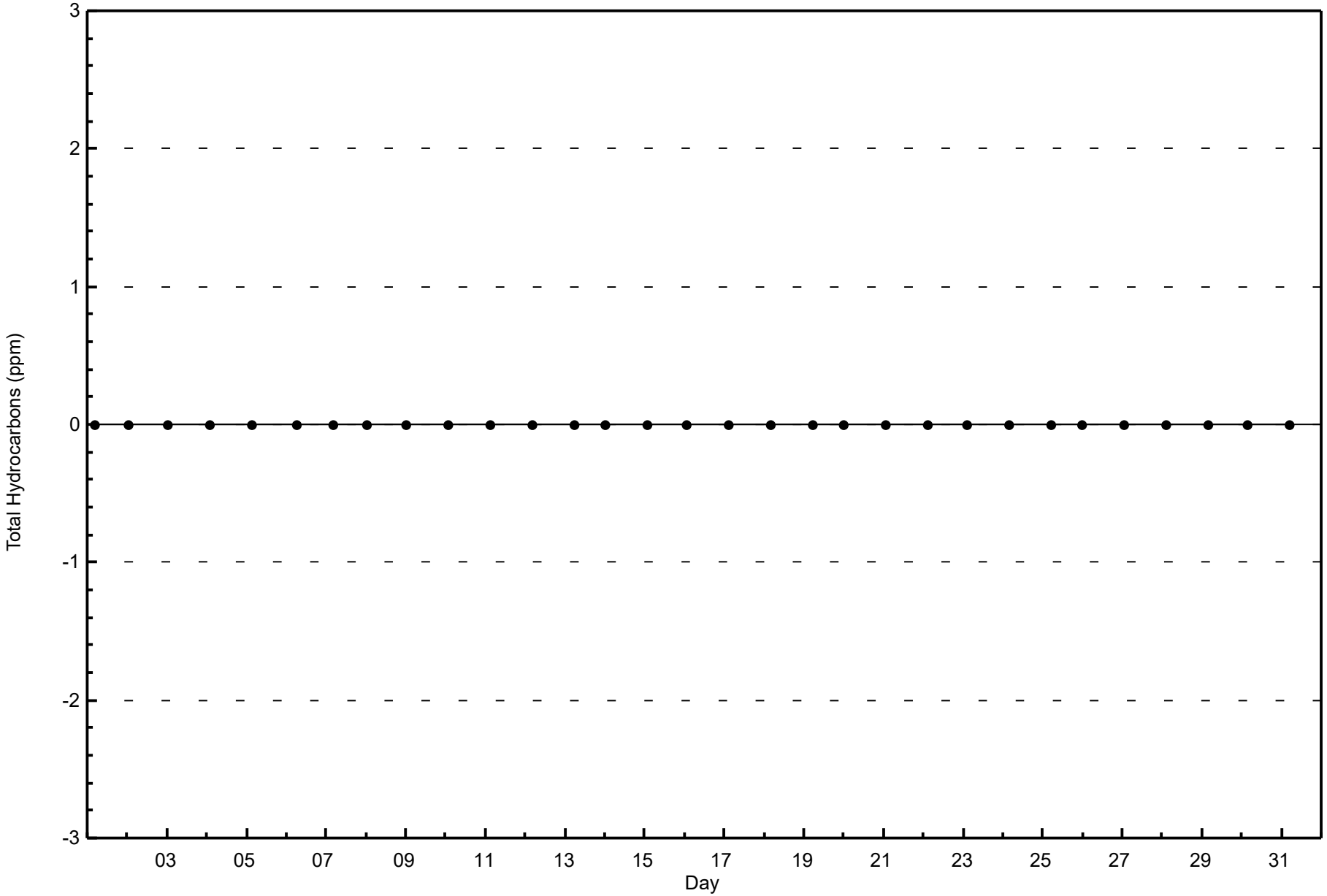
Total Number of Valid Hours: 703

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Buffalo Viewpoint - March 2025

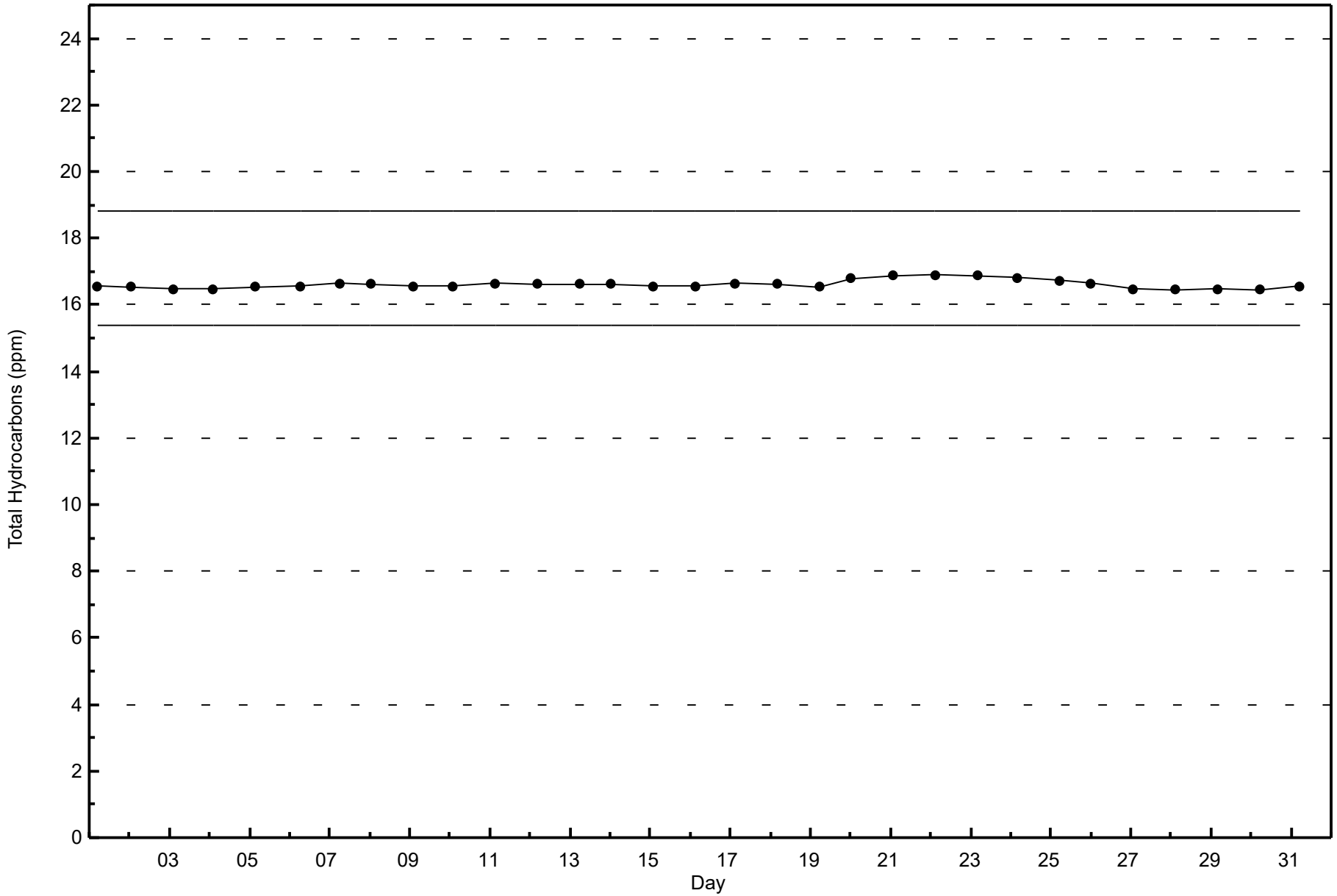


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Buffalo Viewpoint - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Buffalo Viewpoint - March 2025

Maximum Value: 0.647 ppm on Mar 29 11:00

Maximum Daily Average: 0.071 ppm on Mar 29

Minimum Value: 0.000 ppm on Mar 1 01:00

Minimum Daily Average: 0.000 ppm on Mar 1

Maximum Diurnal Average: 0.034 ppm at hour 11

Minimum Diurnal Average: 0.000 ppm at hour 3

Monthly Average: 0.007 ppm

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

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	34
Percent Operational Time:	99.5

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.393	0.230	0.326	0.083	0.000	0.000	0.000	0.000	0.053	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.393
3-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	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	0.050	0.000	0.000	0.000	0.000	0.021	0.003	0.050
6-Mar	0.027	0.000	0.000	0.000	0.007	0.002	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.027
7-Mar	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.010	0.000	0.148	0.049	0.136	0.113	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.148
8-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.086	0.000	0.000	0.000	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.086
9-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12-Mar	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-Mar	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.011	0.077	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.077
14-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.012
18-Mar	0.000	0.000	0.000	0.000	Z	0.141	0.279	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.019	0.279
19-Mar	0.007	0.040	0.000	0.000	0.000	Z	0.000	0.000	0.000	C	C	C	0.000	0.000	0.000	0.000	0.000	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.040
20-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.021	0.065	0.000	0.000	0.000	0.000	0.000	0.004	0.065
23-Mar	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	0.077	0.008	0.070	0.189	0.158	0.025	0.023	0.024	0.189
24-Mar	0.000	0.011	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.011
25-Mar	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
26-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.000	M	M	M	M	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.068	0.000	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.068
29-Mar	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.351	0.647	0.484	0.122	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.071	0.647
30-Mar	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.002	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	0.001	0.016
31-Mar	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	0.002	0.000	0.000	0.000	0.006	0.009	0.001	0.016	0.021	0.034	0.025	0.011	0.005	0.004	0.000	0.002	0.003	0.003	0.004	0.006	0.005	0.001	0.001	Diurnal Average	
	0.027	0.040	0.000	0.000	0.007	0.141	0.279	0.026	0.393	0.351	0.647	0.484	0.122	0.136	0.113	0.007	0.053	0.077	0.050	0.070	0.189	0.158	0.025	0.023	Diurnal Maximum	

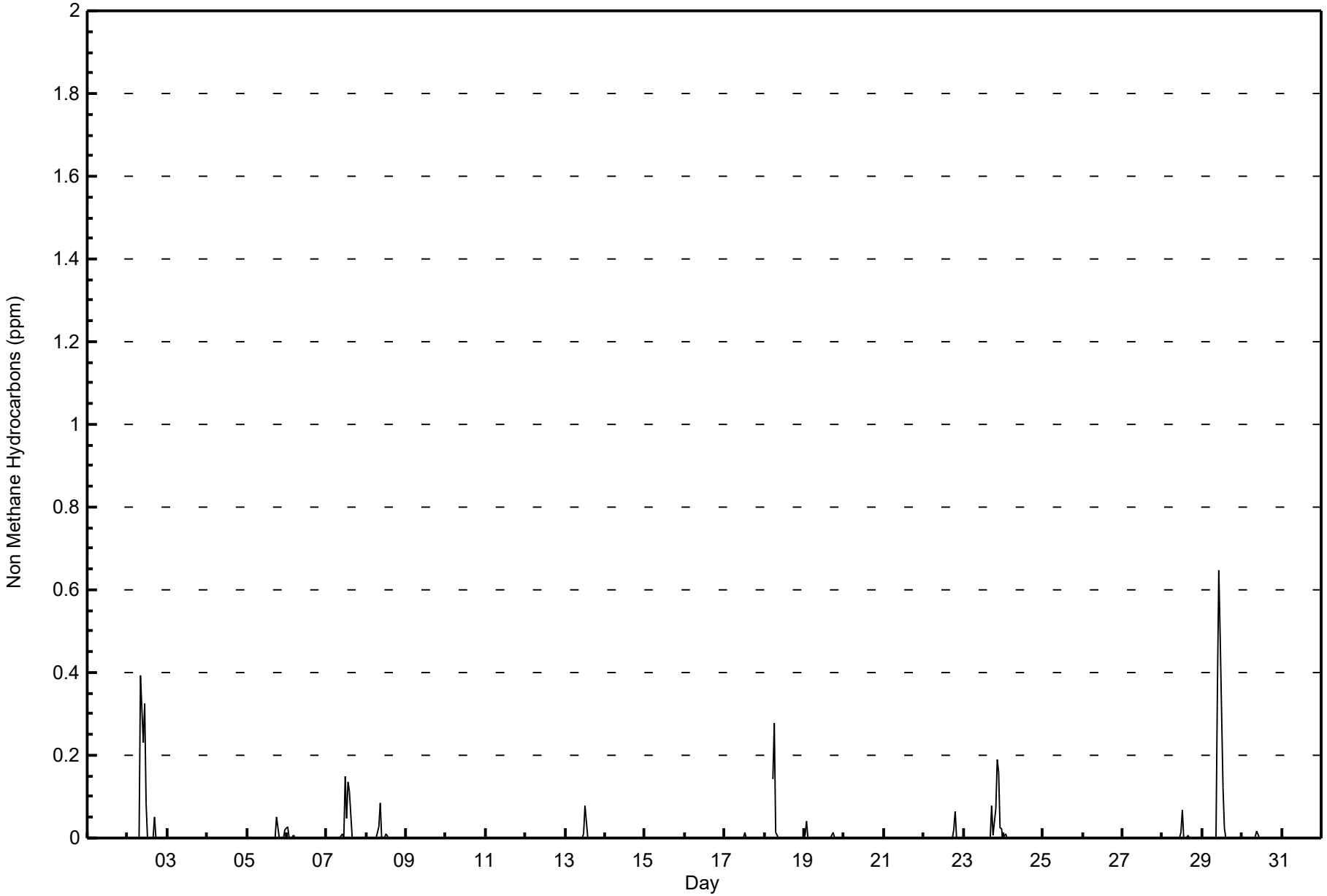
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Buffalo Viewpoint - March 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	661	93.63	93.63
0.006 - 0.05	24	3.40	97.03
0.06 - 0.1	12	1.70	98.73
> 0.1	9	1.27	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Buffalo Viewpoint - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.005	209	70	12	3	12	51	73	73	15	15	9	18	21	19	28	31	659
0.006 - 0.05	5	0	1	1	2	3	1	1	0	0	0	0	0	0	1	8	23
0.06 - 0.1	1	1	2	0	1	0	1	0	0	1	0	0	0	1	2	2	12
> 0.1	3	1	0	0	1	1	0	0	0	0	0	0	0	0	2	1	9
Totals	218	72	15	4	16	55	75	74	15	16	9	18	21	20	33	42	703

Total Number of Valid Hours: 703

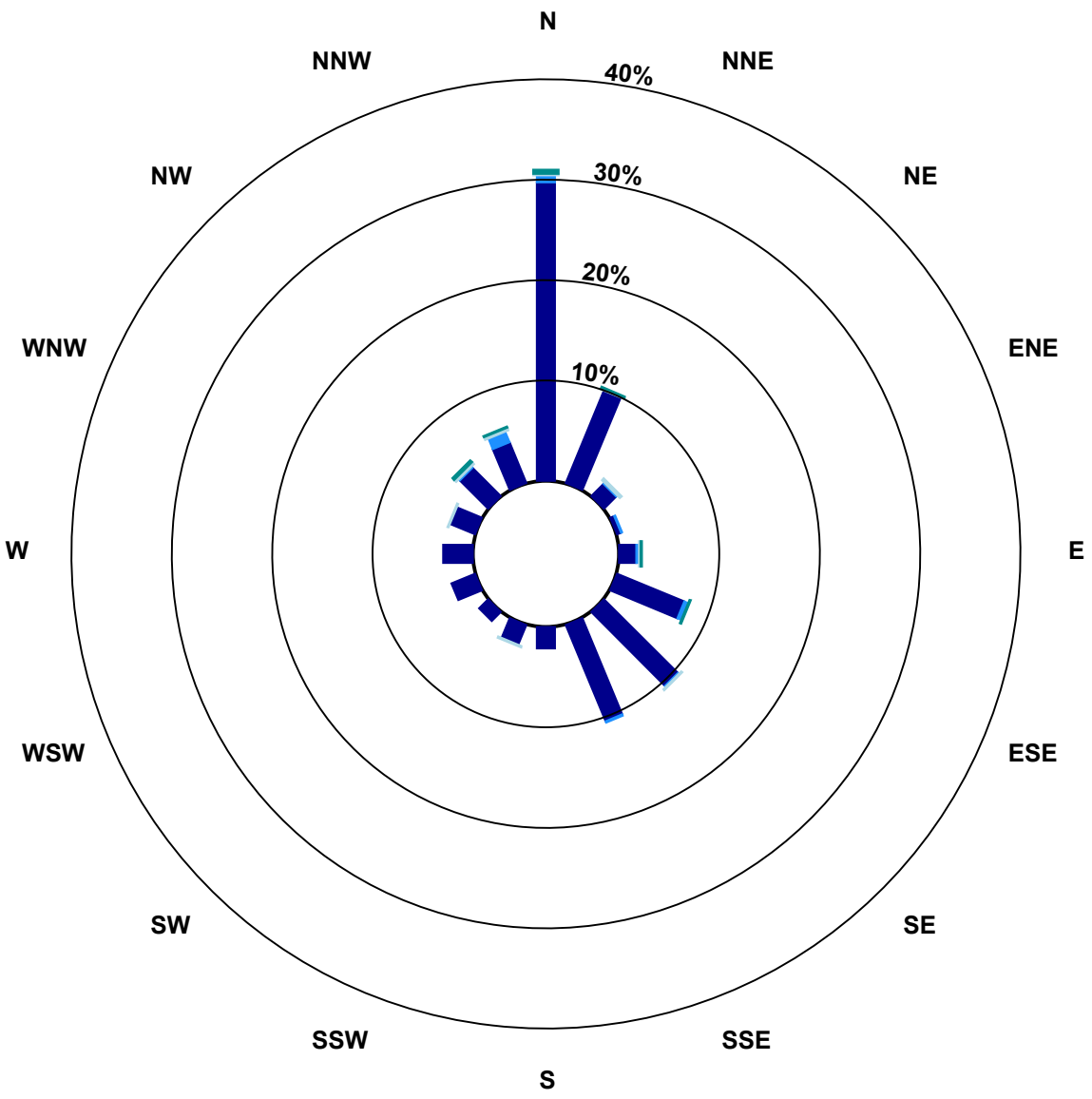
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Non Methane Hydrocarbons (NMHC) - ppm

Buffalo Viewpoint



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

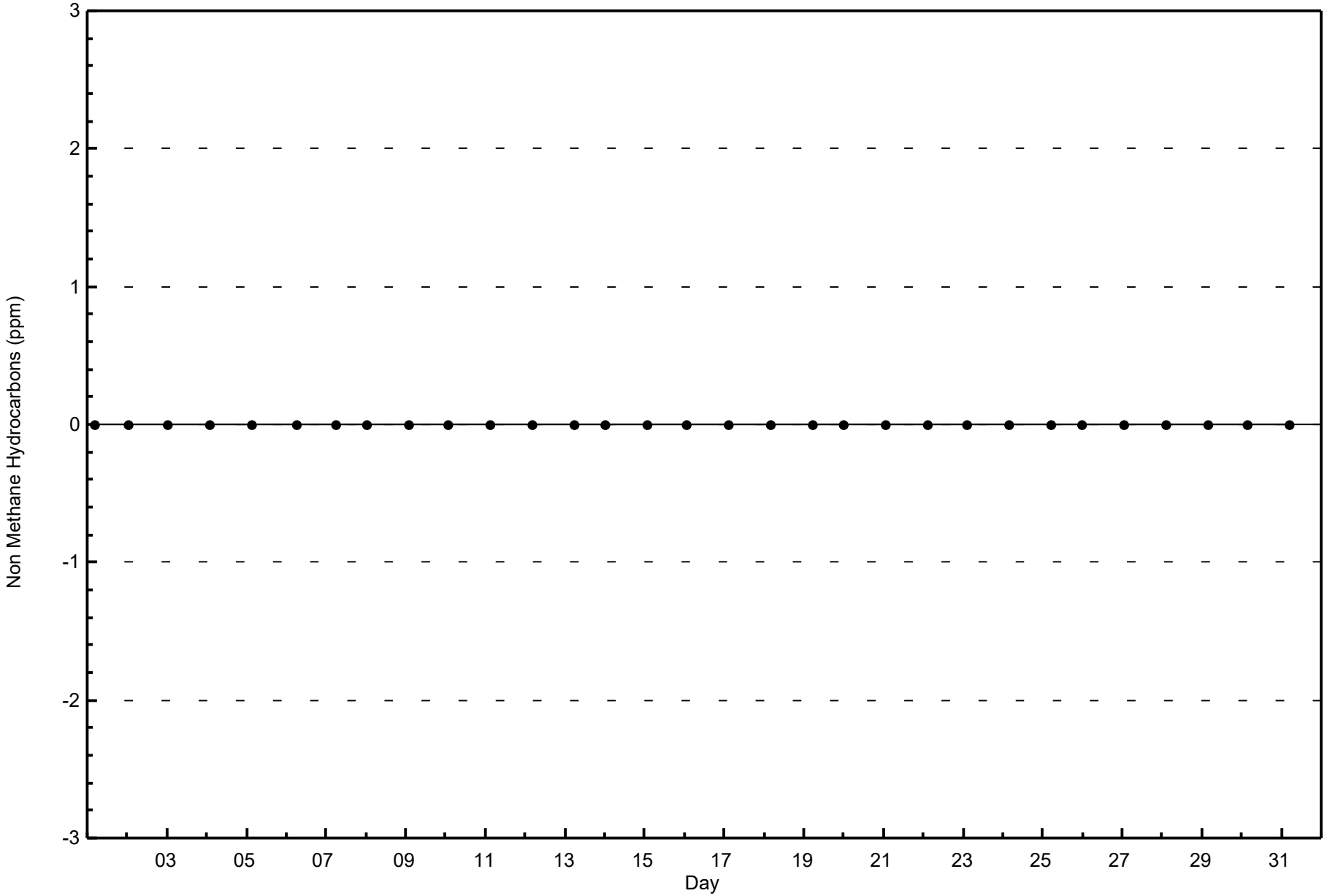
Total Number of Valid Hours: 703

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Buffalo Viewpoint - March 2025

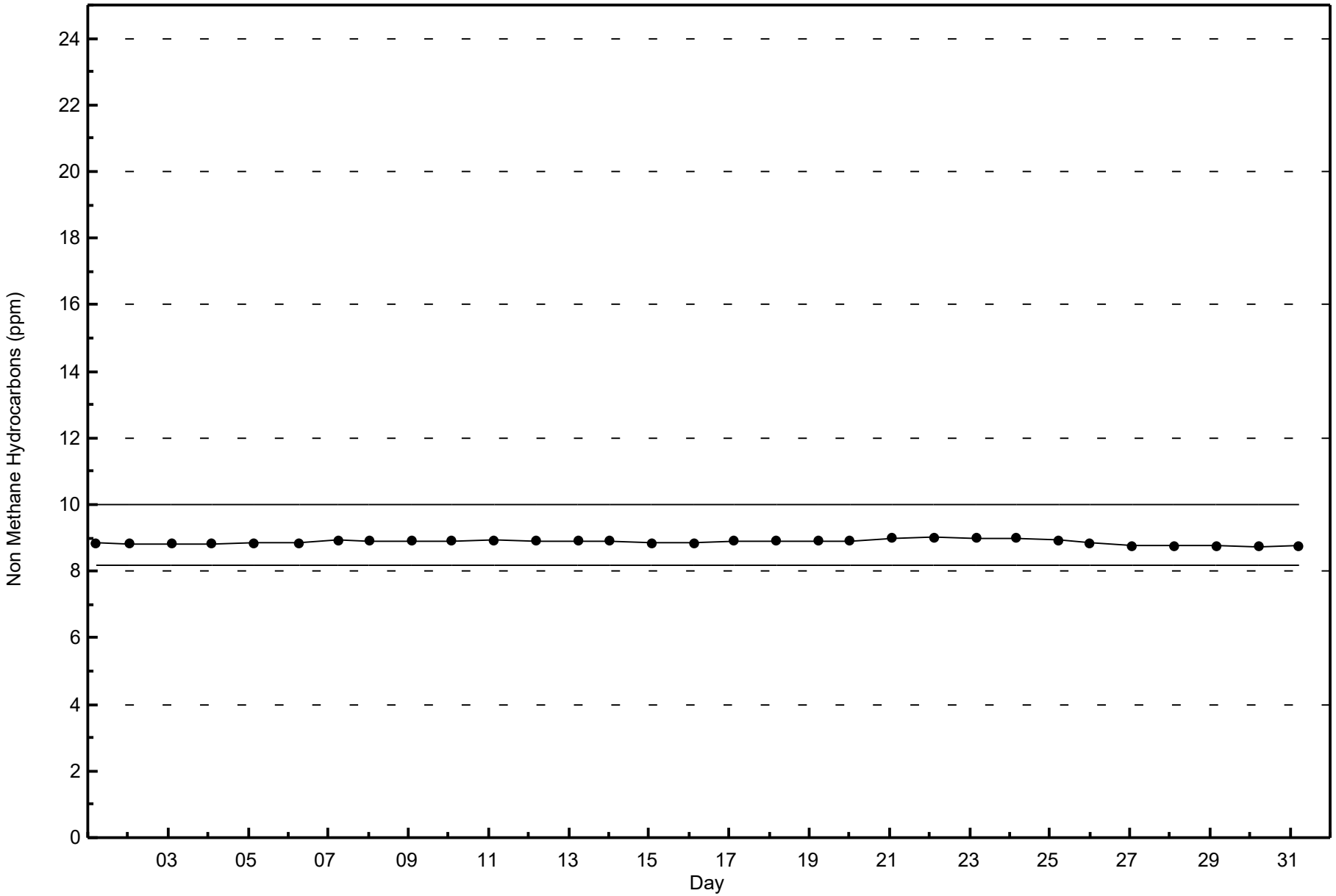


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Buffalo Viewpoint - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Buffalo Viewpoint - March 2025

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

Maximum Value: 3.5 ppm on Mar 6 04:00

Maximum Daily Average: 2.3 ppm on Mar 29

Minimum Value: 2.0 ppm on Mar 4 15:00

Minimum Daily Average: 2.0 ppm on Mar 9

Maximum Diurnal Average: 2.2 ppm at hour 10

Minimum Diurnal Average: 2.1 ppm at hour 15

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} = 2.4 P_{99} = 2.9

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	34
Percent Operational Time:	99.5

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	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	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.2
2-Mar	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.2	3.0	3.0	3.3	2.8	2.2	2.0	2.0	2.0	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.2	3.3
3-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.1	2.2
4-Mar	2.0	2.0	Z	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.2	2.1	2.0	2.2
5-Mar	2.1	2.0	2.0	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.7	2.6	2.2	2.3	2.1	2.6	2.1	2.7
6-Mar	2.7	2.5	2.4	3.5	2.5	2.4	Z	2.2	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	2.2	2.7	2.3	3.5
7-Mar	2.6	2.2	2.1	2.1	2.0	Z	2.2	2.3	2.3	2.4	2.4	2.5	2.4	2.5	2.4	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.6
8-Mar	Z	2.1	2.1	2.1	2.3	2.3	2.4	2.5	2.6	2.5	2.4	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.6
9-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	2.0	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.2	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.3
11-Mar	2.1	2.1	2.2	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2
12-Mar	2.0	2.1	2.0	2.0	Z	2.0	2.0	2.0	2.1	2.2	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.3
13-Mar	2.0	2.1	2.1	2.1	2.2	Z	2.5	2.5	2.5	2.4	2.2	2.3	2.4	2.3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.5
14-Mar	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1
15-Mar	2.1	Z	2.6	2.7	2.4	2.3	2.3	2.4	2.5	2.9	2.9	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.9
16-Mar	2.1	2.2	Z	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.2	2.0	2.0	2.0	2.0	2.1	2.3
17-Mar	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.1	2.2	2.3	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.3
18-Mar	2.1	2.1	2.1	2.0	Z	2.3	2.8	2.8	2.8	2.5	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.2	2.2	2.0	2.0	2.0	2.5	2.7	2.2	2.8
19-Mar	2.5	2.3	2.5	2.6	2.5	Z	2.3	2.4	2.3	C	C	C	2.1	2.1	2.1	2.2	2.4	2.4	2.4	2.1	2.1	2.1	2.1	2.1	2.3	2.6
20-Mar	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
21-Mar	2.0	Z	2.0	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
22-Mar	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	2.2	2.5	2.5	2.2	2.2	2.2	2.2	2.1	2.5
23-Mar	2.2	2.2	2.2	Z	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	2.3	2.3	2.7	3.2	2.7	2.6	2.2	3.2
24-Mar	2.4	2.7	2.6	2.3	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.3	2.4	2.3	2.2	2.1	2.0	2.0	2.2	2.7
25-Mar	2.0	2.0	2.0	2.0	2.0	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.2	2.0	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
26-Mar	Z	2.1	2.1	2.0	2.0	2.0	2.0	M	M	M	M	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
27-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	2.0	2.1	Z	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.1	2.2
29-Mar	2.1	2.2	2.4	Z	2.3	2.3	2.5	2.4	2.6	2.8	2.9	2.7	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.9
30-Mar	2.3	2.3	2.4	2.3	Z	2.3	2.3	2.3	2.4	2.4	2.3	2.3	2.3	2.1	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.2	2.4
31-Mar	2.0	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	2.1
	2.1	2.1	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	Diurnal Average	
	2.7	2.7	2.6	3.5	2.5	2.4	2.8	2.8	3.0	3.0	3.3	2.8	2.4	2.5	2.4	2.3	2.4	2.4	2.7	2.6	2.7	3.2	2.7	2.7	Diurnal Maximum	

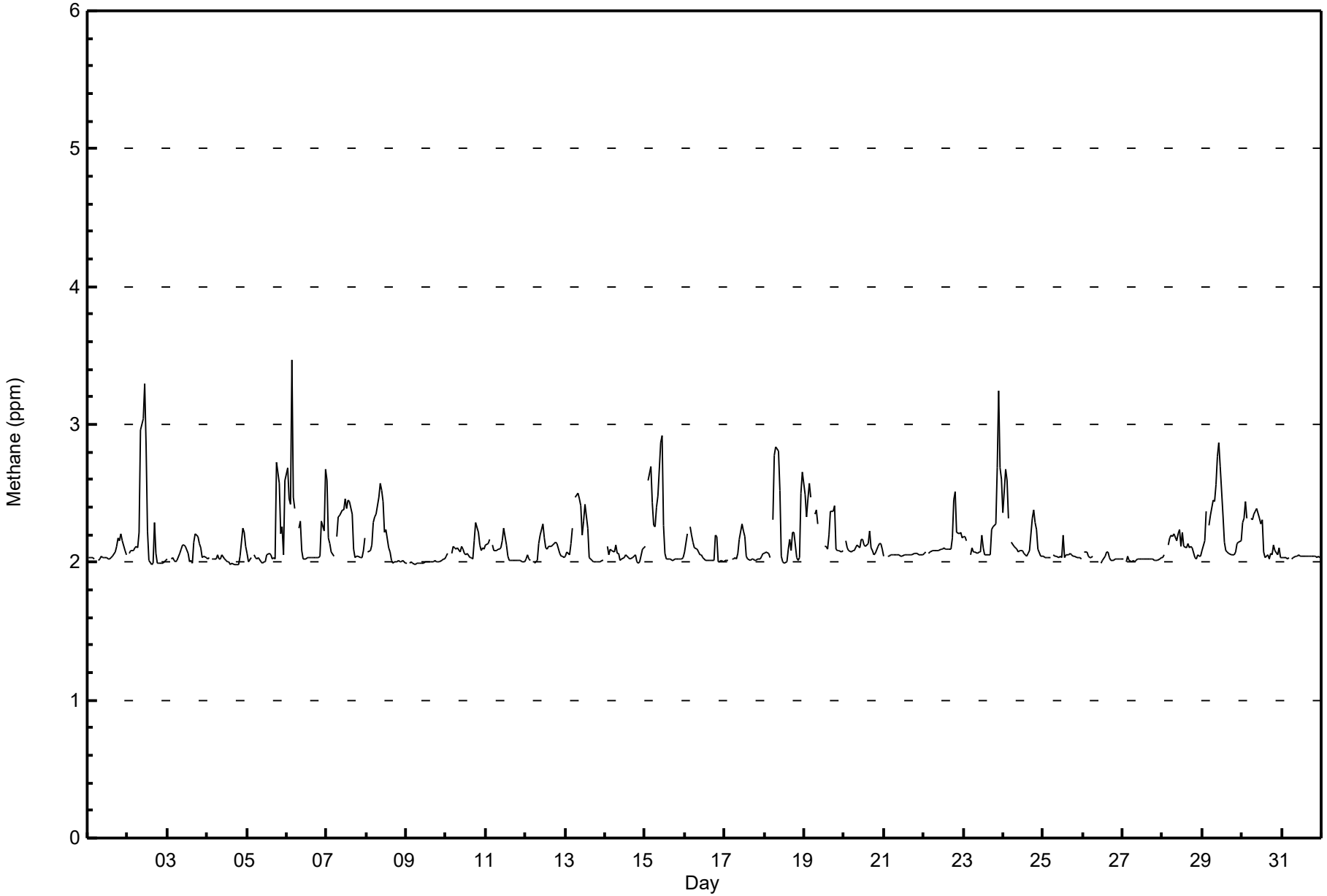
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Buffalo Viewpoint - March 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	307	43.48	43.48
2.1 - 3.0	396	56.09	99.58
3.1 - 10.0	3	0.42	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Buffalo Viewpoint - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	98	52	6	1	0	20	43	42	2	5	6	8	13	4	4	3	307
2.1 - 3.0	120	20	9	3	16	34	32	32	13	11	3	10	8	16	27	39	393
3.1 - 10.0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	3
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	218	72	15	4	16	55	75	74	15	16	9	18	21	20	33	42	703

Total Number of Valid Hours: 703

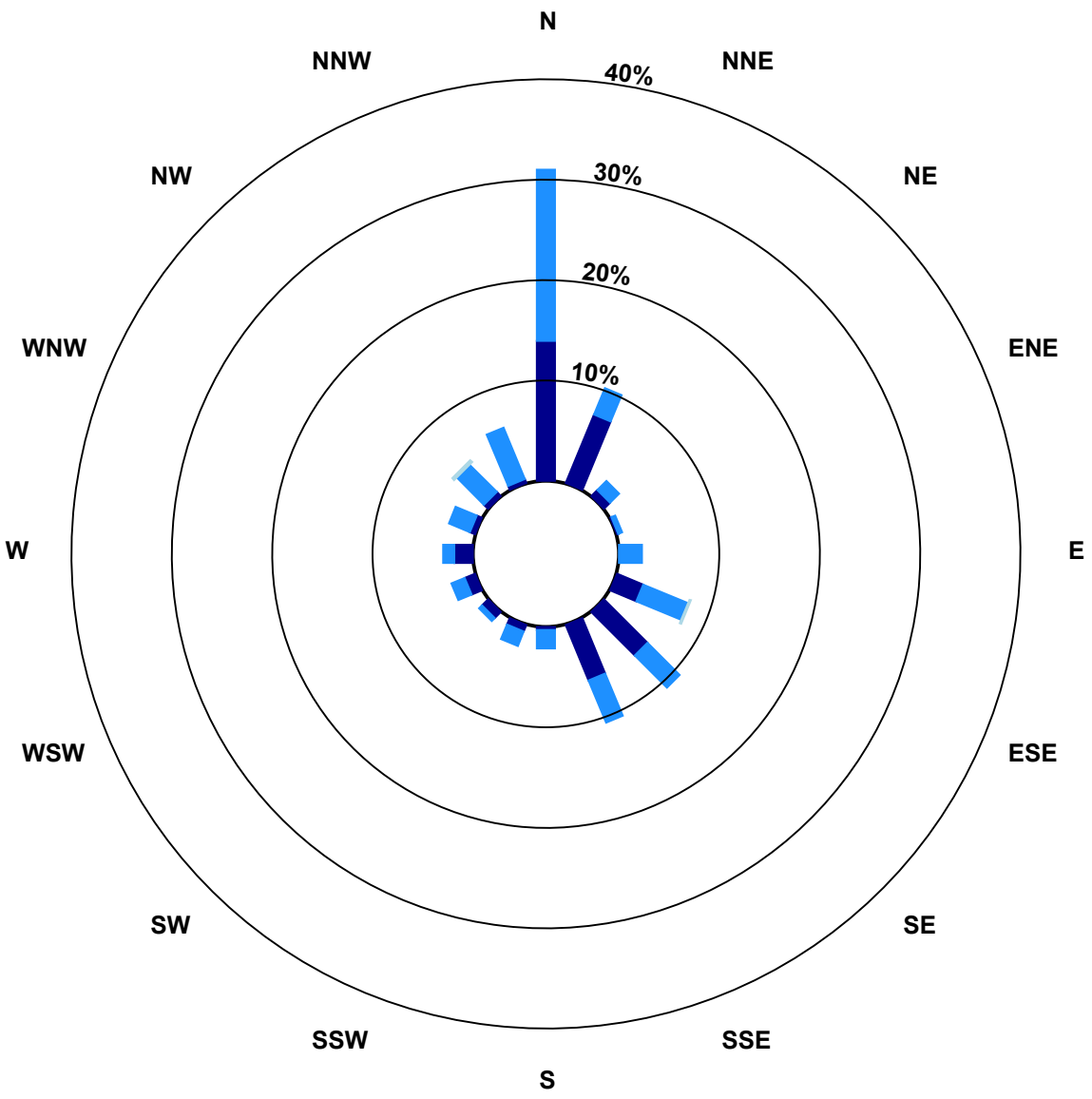
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Methane (CH_4) - ppm

Buffalo Viewpoint



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

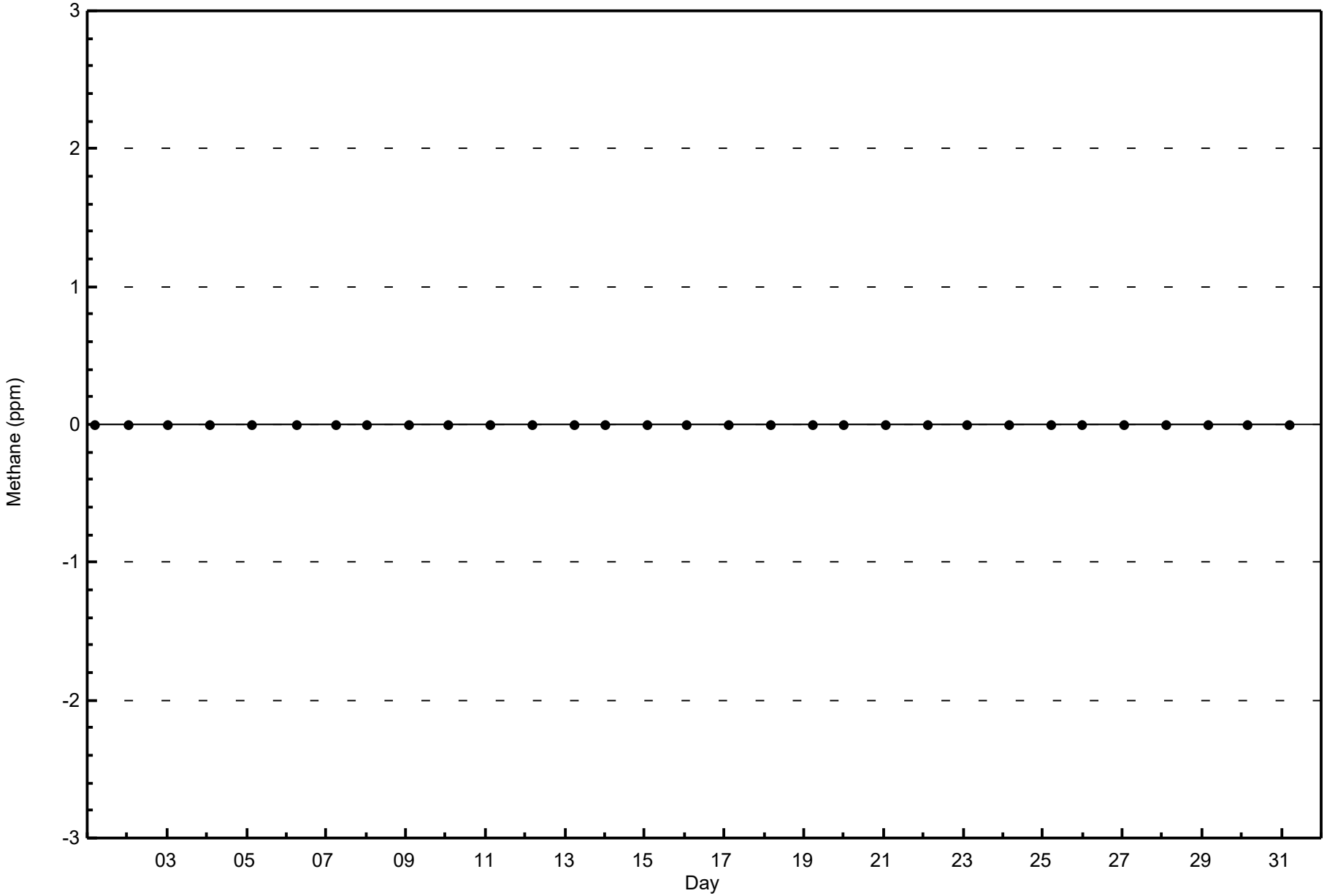
Total Number of Valid Hours: 703

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Buffalo Viewpoint - March 2025

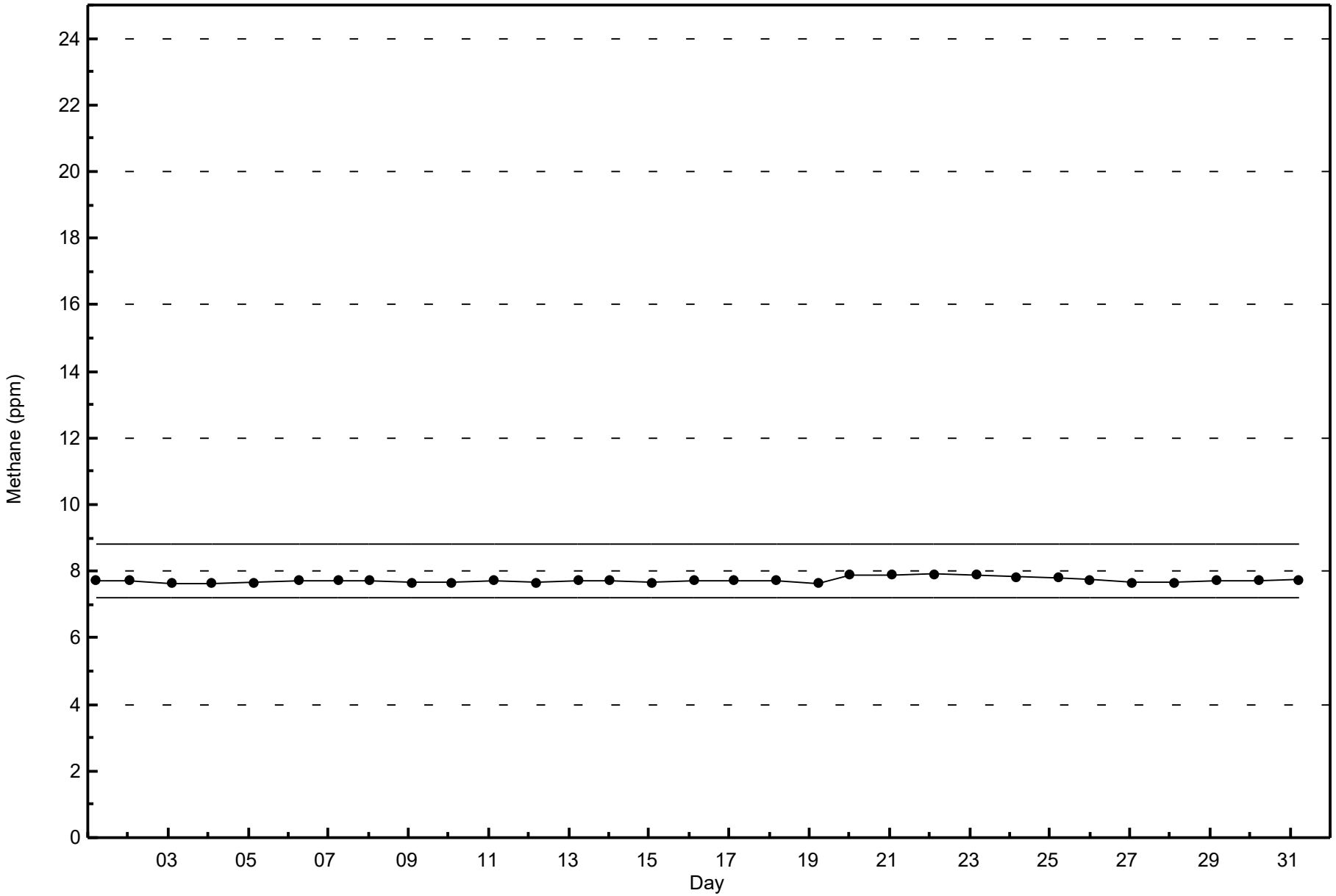


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Buffalo Viewpoint - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Buffalo Viewpoint - March 2025

Maximum Value: 63.2 ppb on Mar 15 11:00

Maximum Daily Average: 12.2 ppb on Mar 13

Minimum Value: 0.0 ppb on Mar 7 20:00

Minimum Daily Average: 0.2 ppb on Mar 25

Maximum Diurnal Average: 11.6 ppb at hour 11

Minimum Diurnal Average: 0.4 ppb at hour 2

Monthly Average: 3.43 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.2 Median = 0.6 Q_3 = 2.2 P_{90} = 8.9 P_{99} = 47.6

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.1	0.1	Z	0.3	0.1	0.1	0.1	0.2	0.9	1.8	2.5	2.4	2.0	0.9	1.2	0.9	2.4	3.3	9.0	9.3	29.1	11.2	0.7	0.4	3.4	29.1
2-Mar	0.3	0.2	0.1	Z	0.3	0.1	0.3	1.0	23.7	37.5	59.2	39.1	6.3	0.5	0.1	0.1	4.9	1.0	0.2	0.1	0.1	0.0	0.1	0.2	7.6	59.2
3-Mar	0.0	0.2	0.1	0.2	Z	0.4	0.4	0.5	1.1	3.0	5.0	3.5	1.5	0.7	0.9	0.8	7.5	13.7	13.9	6.7	1.5	1.2	1.1	0.8	2.8	13.9
4-Mar	0.8	1.0	0.8	0.8	0.8	Z	1.6	5.9	2.5	3.4	5.1	2.2	1.8	1.4	0.5	0.4	0.3	0.3	0.3	0.1	0.2	0.7	0.8	0.4	1.4	5.9
5-Mar	Z	0.3	0.3	0.2	0.3	0.2	0.2	0.5	0.6	0.6	0.8	1.6	2.7	3.3	1.6	1.7	2.6	0.9	0.8	0.7	0.9	0.8	0.2	1.5	1.0	3.3
6-Mar	0.9	Z	2.5	25.0	3.2	0.7	1.4	5.3	13.3	3.0	0.7	0.6	0.7	0.7	0.6	0.5	0.8	0.6	0.1	0.1	0.3	1.2	0.3	5.2	2.9	25.0
7-Mar	6.6	0.3	Z	0.2	0.1	0.2	0.5	1.4	5.4	25.5	21.6	20.5	18.5	17.0	18.4	11.6	2.8	0.6	0.2	0.0	0.2	0.1	0.2	0.4	6.6	25.5
8-Mar	0.2	0.3	0.2	Z	0.7	1.1	1.2	11.2	18.6	14.1	18.2	9.1	9.0	4.6	3.7	0.8	0.4	0.3	0.1	0.1	0.0	0.0	0.1	0.0	4.1	18.6
9-Mar	0.0	0.2	0.0	0.1	Z	0.2	0.0	0.2	0.3	0.5	0.6	0.7	1.0	1.3	1.1	1.3	0.8	0.7	0.1	0.1	0.0	0.2	0.1	0.2	0.4	1.3
10-Mar	0.4	0.6	0.4	0.4	1.3	Z	1.0	3.5	5.0	6.2	5.4	3.9	3.9	3.5	2.8	2.7	1.8	1.5	1.0	1.7	1.2	0.7	0.9	1.1	2.2	6.2
11-Mar	Z	1.3	2.9	2.3	1.0	0.7	0.9	3.0	5.0	7.4	9.9	14.6	6.0	2.1	1.6	0.9	0.7	0.5	0.0	0.0	0.0	0.0	0.0	0.0	2.6	14.6
12-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.2	0.9	2.6	8.7	19.4	11.3	7.8	6.8	8.9	7.9	5.1	2.7	0.7	2.6	0.6	0.3	0.4	0.3	3.8	19.4
13-Mar	0.4	1.2	Z	2.0	5.4	15.2	43.4	51.8	49.4	33.9	13.0	18.7	24.8	15.5	2.7	1.3	0.9	0.5	0.4	0.0	0.1	0.1	0.2	0.1	12.2	51.8
14-Mar	0.2	0.4	0.3	Z	0.6	0.5	C	C	C	C	C	3.0	2.9	2.9	1.7	1.5	1.7	1.2	0.3	0.0	0.0	0.1	0.3	0.5	1.0	3.0
15-Mar	0.6	0.7	24.7	29.9	Z	2.3	1.9	7.9	30.3	58.4	63.2	19.2	6.4	2.7	1.6	0.9	0.6	0.2	0.2	0.2	0.2	0.2	0.2	0.0	11.0	63.2
16-Mar	0.1	0.6	0.9	0.6	0.5	Z	0.4	1.4	2.3	2.3	1.7	1.2	0.6	0.4	0.3	0.8	0.2	0.2	0.4	0.2	0.1	0.2	0.0	0.2	0.7	2.3
17-Mar	Z	0.1	0.2	0.1	0.2	0.3	0.2	0.5	0.7	2.3	11.5	7.4	8.5	1.9	1.2	1.1	0.9	0.7	0.8	0.3	0.5	0.4	0.3	0.4	1.8	11.5
18-Mar	0.4	Z	0.5	0.3	0.3	10.3	38.3	45.3	47.7	28.2	2.2	0.1	0.1	0.1	2.1	3.5	1.8	0.9	0.2	0.0	0.0	0.0	3.6	2.3	8.2	47.7
19-Mar	0.4	0.2	Z	29.1	22.6	13.6	9.8	19.5	13.7	8.1	11.0	9.3	6.1	4.3	2.7	3.1	5.4	1.9	1.4	0.1	0.0	0.0	0.0	0.0	7.1	29.1
20-Mar	0.2	0.2	0.1	Z	0.1	0.1	0.4	2.7	6.0	4.4	7.4	7.1	6.4	4.6	6.0	5.9	2.8	0.8	0.4	0.4	0.2	0.6	0.6	0.5	2.5	7.4
21-Mar	0.2	0.3	0.4	0.4	Z	0.6	0.4	0.6	0.9	1.1	1.0	1.0	0.7	0.7	0.9	0.6	1.7	1.7	1.1	0.5	0.3	0.1	0.2	0.2	0.7	1.7
22-Mar	0.2	0.3	0.4	0.1	0.3	Z	0.2	0.4	0.5	0.5	0.7	0.9	1.0	0.5	0.4	0.5	0.4	0.6	2.2	0.5	0.5	0.5	0.5	0.6	0.6	2.2
23-Mar	Z	0.5	0.6	0.2	0.3	0.3	0.3	0.6	0.5	0.8	0.8	2.3	0.5	0.4	0.5	0.3	0.4	1.4	1.5	1.0	1.9	0.9	1.3	0.9	0.8	2.3
24-Mar	0.6	Z	0.6	0.5	0.6	0.3	0.3	0.6	0.7	0.7	0.7	0.8	0.4	0.1	0.0	0.0	0.3	0.8	1.3	0.1	0.6	0.2	0.0	0.1	0.5	1.3
25-Mar	0.1	0.1	Z	0.1	0.0	0.1	0.2	0.3	0.1	0.1	0.1	0.2	0.4	0.1	0.2	0.3	0.3	0.5	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.5
26-Mar	0.1	0.3	0.3	Z	0.3	0.3	0.6	M	0.6	0.9	0.5	0.6	0.8	1.9	2.8	2.3	0.7	0.3	0.2	0.1	0.1	0.2	0.1	0.1	0.6	2.8
27-Mar	0.2	0.0	0.1	0.0	Z	0.1	0.1	0.2	0.3	1.1	1.5	1.1	1.3	0.7	0.5	0.4	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.4	1.5
28-Mar	0.0	0.1	0.3	0.3	0.9	Z	6.0	12.5	9.5	7.6	8.6	5.7	8.3	4.6	4.9	4.7	2.3	1.7	0.8	0.3	0.0	0.2	0.1	0.1	3.5	12.5
29-Mar	Z	0.5	1.1	0.7	0.6	1.6	9.6	14.1	20.7	42.7	63.1	50.6	34.6	12.5	4.4	2.6	1.4	0.9	0.2	0.0	0.0	0.3	0.2	0.3	11.4	63.1
30-Mar	0.3	Z	3.0	1.8	1.5	2.6	3.7	8.8	14.2	16.9	12.7	6.0	5.9	1.0	0.6	1.4	0.0	0.5	0.4	0.4	0.1	0.1	0.2	0.1	3.6	16.9
31-Mar	0.1	0.0	Z	0.1	0.2	0.3	0.3	0.6	0.4	0.4	0.4	0.3	0.1	0.2	0.3	0.2	0.1	0.3	0.1	0.2	0.2	0.1	0.2	0.1	0.2	0.6
	0.5	0.4	1.6	3.7	1.6	2.0	4.1	7.0	9.3	10.7	11.6	7.9	5.5	3.1	2.4	2.0	1.7	1.3	1.2	0.8	1.3	0.7	0.4	0.6	Diurnal Average	
	6.6	1.3	24.7	29.9	22.6	15.2	43.4	51.8	49.4	58.4	63.2	50.6	34.6	17.0	18.4	11.6	7.5	13.7	13.9	9.3	29.1	11.2	3.6	5.2	Diurnal Maximum	

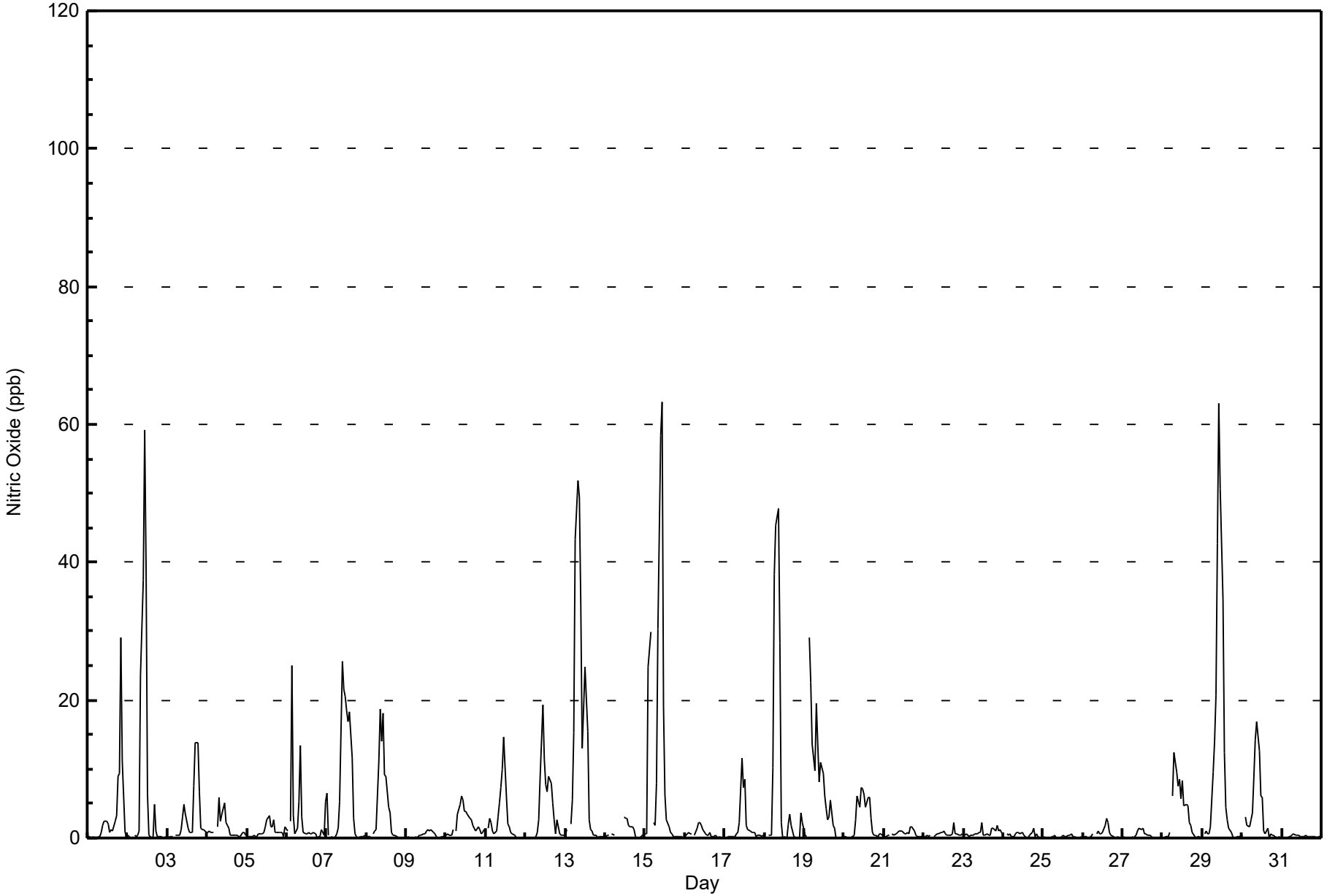
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Buffalo Viewpoint - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	678	95.90	95.90
21 - 40	18	2.55	98.44
11 - 80	11	1.56	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Buffalo Viewpoint - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	203	71	15	5	15	55	75	81	13	16	6	18	20	19	26	37	675
21 - 40	5	2	0	0	0	0	1	0	0	0	1	0	0	1	5	3	18
11 - 80	6	1	0	0	0	0	0	0	0	0	0	0	1	0	2	1	11
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	214	74	15	5	15	55	76	81	13	16	7	18	21	20	33	41	704

Total Number of Valid Hours: 704

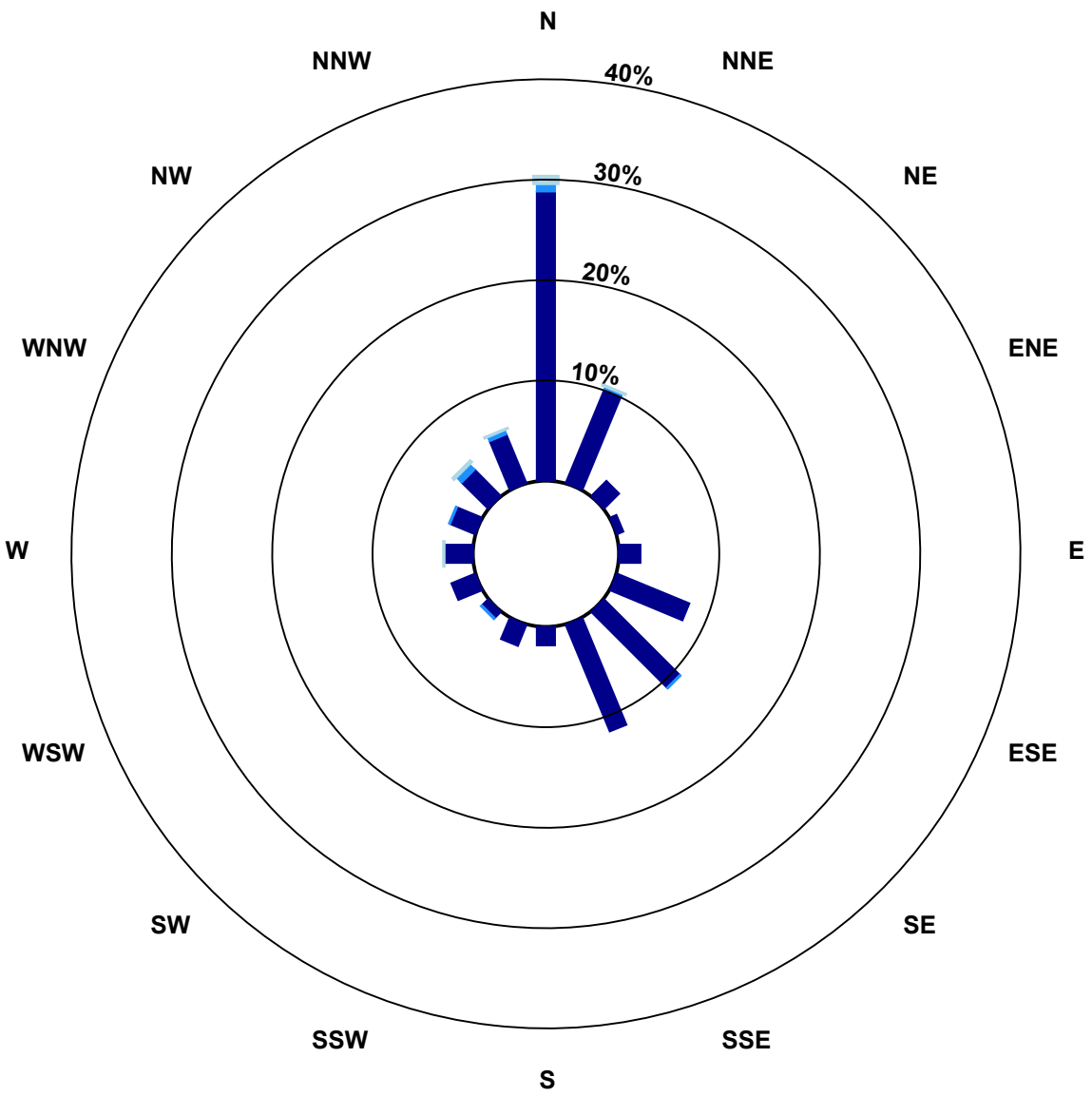
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitric Oxide (NO) - ppb

Buffalo Viewpoint



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

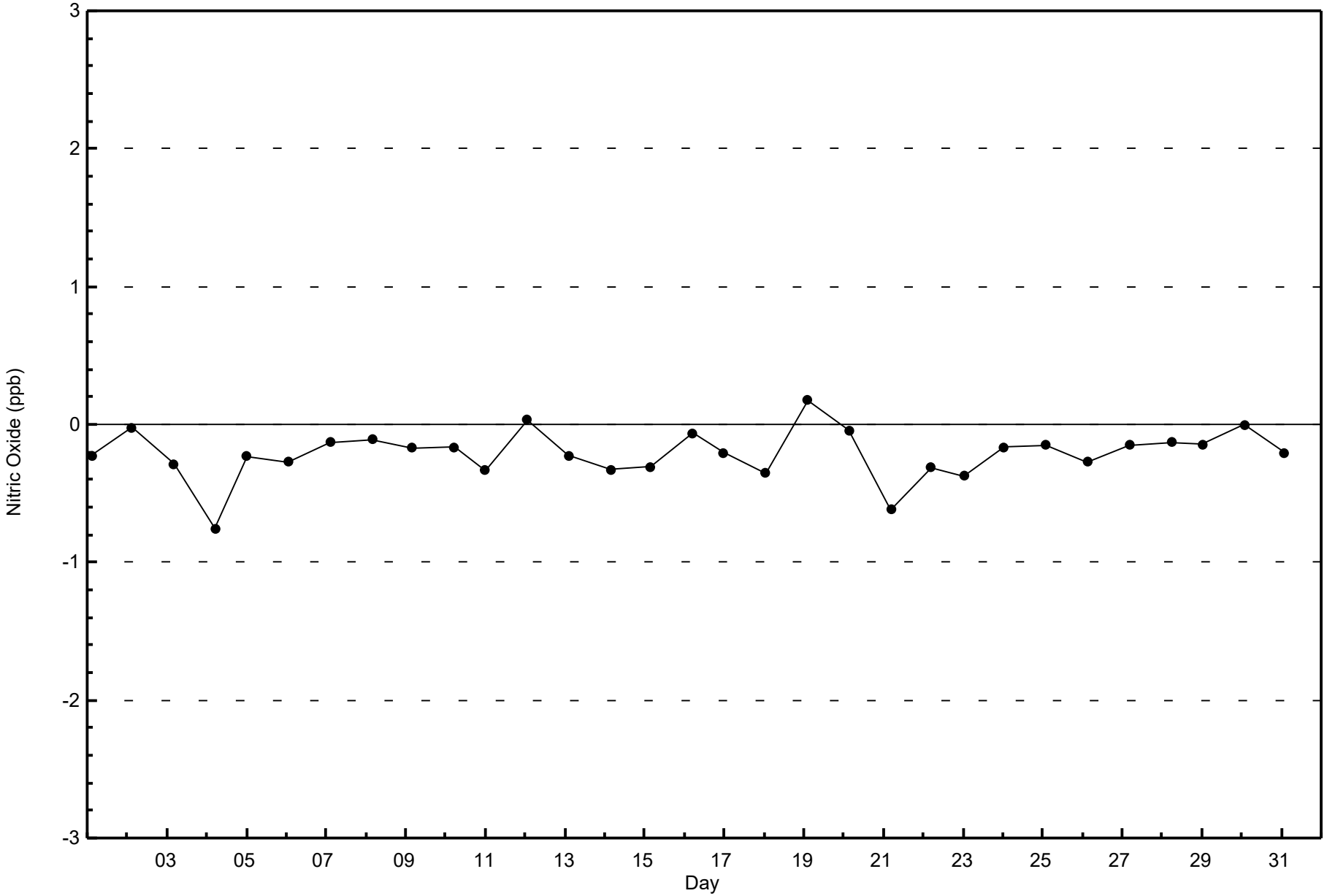
Total Number of Valid Hours: 704

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Buffalo Viewpoint - March 2025

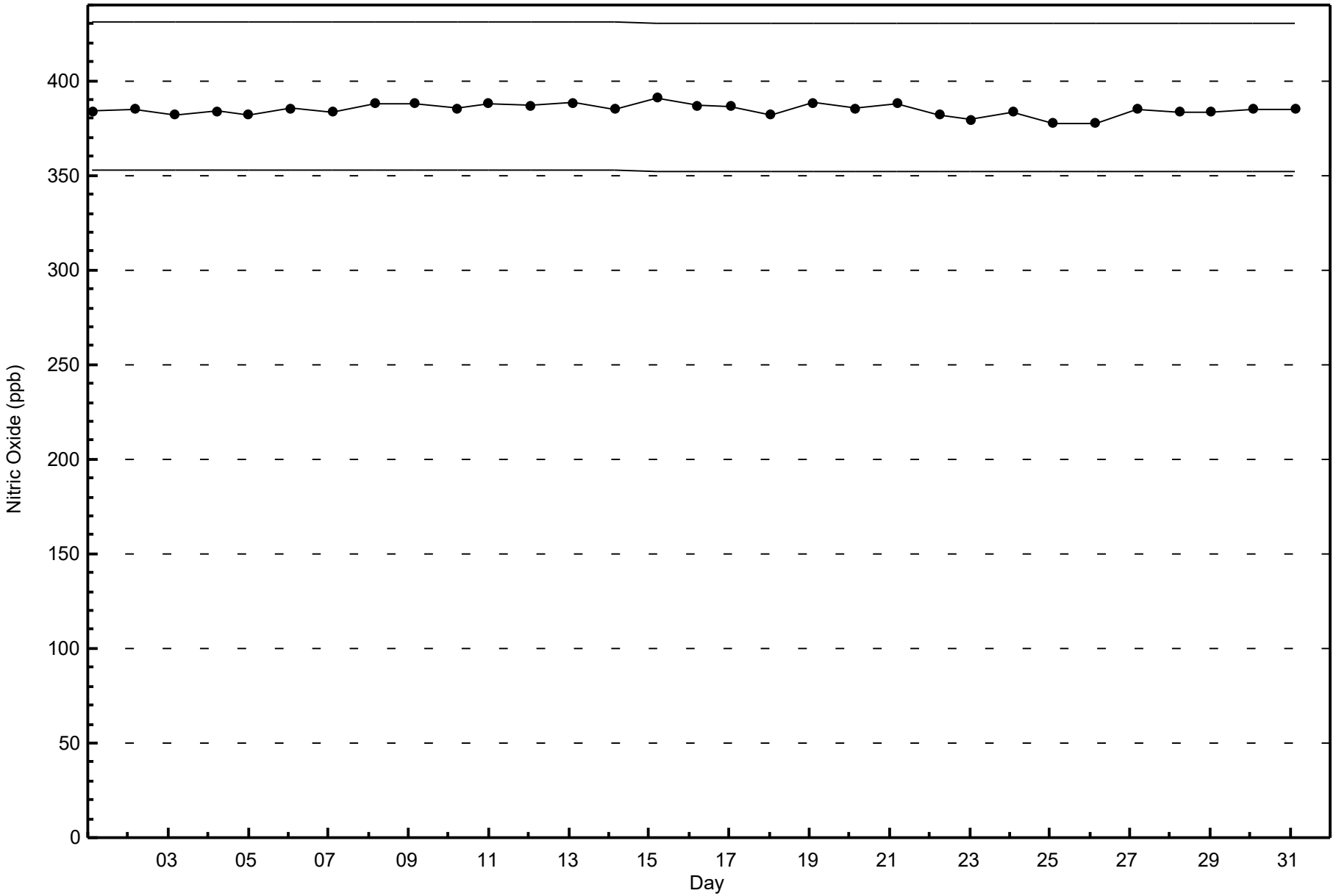


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Buffalo Viewpoint - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Buffalo Viewpoint - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 38.8 ppb on Mar 3 19:00 Maximum Daily Average: 17.7 ppb on Mar 29

Minimum Value: 0.1 ppb on Mar 21 02:00 Minimum Daily Average: 1.3 ppb on Mar 25
Maximum Diurnal Average: 12.7 ppb at hour 8 Minimum Diurnal Average: 4.6 ppb at hour 16
Monthly Average: 9.11 ppb Percentiles: P_1 = 0.3 P_{10} = 1.1 Q_1 = 2.1 Median = 5.2 Q_3 = 13.1 P_{90} = 24.4 P_{99} = 36.4

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	3.1	3.3	Z	2.6	1.9	2.7	2.5	3.3	4.1	4.0	4.0	3.8	3.2	2.0	3.0	3.7	11.1	20.3	37.4	37.0	36.9	31.1	20.8	14.1	11.1	37.4
2-Mar	10.2	7.5	6.0	Z	6.4	6.4	7.5	8.6	28.4	29.8	35.5	31.8	12.9	1.7	0.7	0.9	19.0	9.6	2.6	1.9	1.3	1.5	1.3	3.0	10.2	35.5
3-Mar	2.5	1.6	2.6	3.3	Z	1.8	3.2	5.4	7.5	8.9	10.0	7.4	3.4	1.5	1.8	2.2	17.2	32.3	38.8	36.1	25.6	18.8	16.0	9.4	11.2	38.8
4-Mar	6.3	7.8	7.1	4.9	4.7	Z	15.8	25.5	9.0	7.2	10.3	4.6	3.0	2.4	0.4	0.5	0.7	0.7	0.3	0.8	2.9	22.4	22.4	13.4	7.5	25.5
5-Mar	Z	2.2	4.9	9.5	7.0	4.9	4.5	5.9	3.8	1.8	2.4	3.4	5.2	6.4	4.2	5.0	8.7	8.7	18.4	25.2	27.5	23.6	8.3	19.9	9.2	27.5
6-Mar	26.9	Z	27.4	34.4	19.9	14.9	16.6	14.0	12.4	6.2	2.0	1.1	1.4	1.4	1.5	2.2	4.5	5.0	9.2	9.9	9.5	12.2	12.2	28.2	11.9	34.4
7-Mar	35.5	12.9	Z	6.1	4.6	6.4	15.6	18.3	21.2	28.8	23.4	23.8	22.0	24.6	27.1	22.8	12.0	4.9	6.2	4.0	3.8	4.3	7.6	16.5	15.3	35.5
8-Mar	8.9	7.0	7.8	Z	20.9	24.5	24.5	34.1	32.0	26.1	27.1	14.1	16.7	11.0	9.4	3.4	1.7	2.2	3.1	2.8	1.9	1.5	2.1	1.2	12.3	34.1
9-Mar	1.4	1.6	2.6	2.2	Z	0.8	1.8	1.8	1.3	1.2	1.2	1.6	1.4	1.7	1.5	2.5	2.6	3.2	3.4	5.8	4.2	4.5	7.2	7.9	2.8	7.9
10-Mar	11.3	14.5	13.9	14.2	19.6	Z	19.5	16.5	10.6	7.7	6.7	4.6	4.3	3.5	3.3	4.0	4.5	7.3	13.1	22.6	18.8	17.3	18.5	19.3	12.0	22.6
11-Mar	Z	21.2	23.6	23.3	16.2	13.3	15.6	14.7	10.8	10.6	13.1	15.9	8.0	4.1	4.5	3.0	2.6	3.0	2.9	2.0	1.1	2.1	1.1	0.9	9.3	23.6
12-Mar	2.3	Z	3.4	2.4	2.2	7.6	12.1	10.4	9.8	14.2	20.9	15.0	10.2	8.8	11.2	12.4	13.1	14.3	16.9	20.4	16.7	10.8	12.3	11.7	11.3	20.9
13-Mar	13.8	21.5	Z	25.4	29.1	31.7	36.0	34.6	32.0	27.1	16.1	18.1	26.7	23.4	7.2	5.2	4.9	3.4	2.4	2.1	1.3	1.2	1.2	1.9	15.9	36.0
14-Mar	3.0	10.3	4.7	Z	10.3	9.0	C	C	C	C	C	3.7	3.6	4.0	3.7	3.2	4.9	6.3	7.8	1.9	0.7	2.7	12.8	18.1	6.2	18.1
15-Mar	17.9	19.1	37.2	38.3	Z	26.8	24.3	23.3	30.1	34.4	32.6	16.3	8.7	4.6	2.8	1.9	1.4	1.3	3.9	3.9	4.2	3.3	3.3	2.6	14.9	38.3
16-Mar	4.1	24.5	25.6	22.0	18.6	Z	7.2	7.8	5.1	3.8	3.2	2.1	1.2	1.0	1.3	2.4	1.3	1.6	8.9	9.4	4.6	6.6	0.5	0.3	7.1	25.6
17-Mar	Z	1.2	1.6	1.6	1.4	1.9	3.7	4.3	3.4	6.2	15.6	8.9	9.5	4.0	2.9	3.0	3.0	4.4	11.1	4.8	5.4	11.3	7.8	5.7	5.3	15.6
18-Mar	5.4	Z	4.4	3.7	3.9	21.5	36.0	35.4	30.9	22.0	3.5	0.6	0.4	0.2	4.4	8.5	7.0	6.6	7.9	8.3	10.9	5.3	27.5	30.0	12.4	36.0
19-Mar	16.7	17.2	Z	36.5	36.1	33.9	31.4	25.9	17.8	11.6	14.6	11.7	9.0	7.1	5.9	7.7	14.6	12.5	20.4	6.4	4.2	3.6	2.6	3.2	15.2	36.5
20-Mar	12.0	12.1	5.0	Z	4.4	6.6	8.4	11.6	12.4	7.7	9.8	9.8	8.0	6.9	10.3	11.4	7.5	4.3	4.3	4.5	5.6	10.7	10.6	3.5	8.1	12.4
21-Mar	0.4	0.1	0.3	0.2	Z	0.2	0.4	0.6	1.5	1.6	1.2	1.0	0.8	0.8	1.5	1.1	4.4	7.4	10.7	6.5	2.1	0.4	0.3	0.3	1.9	10.7
22-Mar	1.4	2.9	2.9	1.4	1.9	Z	2.4	2.4	2.0	1.6	2.0	2.8	2.3	1.6	1.5	1.7	1.6	4.1	23.7	19.9	12.0	5.9	11.9	8.8	5.2	23.7
23-Mar	Z	6.0	6.6	1.0	1.8	0.8	0.6	1.9	1.4	2.0	2.3	5.1	1.7	1.3	1.2	1.2	2.7	10.2	21.0	28.5	36.3	28.5	29.6	24.7	9.4	36.3
24-Mar	16.7	Z	18.4	10.7	10.3	5.0	3.8	3.9	3.8	2.5	2.6	3.4	2.3	0.7	0.9	1.0	2.4	6.8	18.7	5.9	16.1	6.7	1.6	1.0	6.3	18.7
25-Mar	1.7	2.3	Z	1.6	0.7	1.1	1.3	1.7	0.6	0.6	0.6	0.4	2.3	0.5	1.4	1.4	0.9	2.8	2.7	1.9	1.9	0.6	0.5	0.3	1.3	2.8
26-Mar	1.0	4.6	5.0	Z	1.5	2.1	5.7	M	1.3	2.0	1.2	1.4	1.7	3.9	5.9	5.6	3.3	2.8	3.9	5.5	3.8	3.8	4.6	5.9	3.5	5.9
27-Mar	6.4	1.0	2.5	7.5	Z	2.7	1.3	1.3	1.0	2.8	2.8	2.6	2.6	1.8	1.5	1.4	1.6	1.9	1.5	1.0	0.5	1.3	1.6	2.7	2.2	7.5
28-Mar	4.5	6.3	10.4	15.7	23.0	Z	26.4	21.5	14.5	11.2	12.0	8.7	12.4	7.8	8.9	10.2	7.4	8.5	9.8	4.6	3.4	5.5	5.2	6.2	10.6	26.4
29-Mar	Z	15.8	28.2	23.7	19.5	20.1	24.9	16.4	19.5	28.7	36.4	34.6	28.4	17.7	9.6	7.3	6.3	5.9	6.8	7.2	7.6	17.1	13.0	13.5	17.7	36.4
30-Mar	17.3	Z	30.7	24.5	28.3	26.4	18.8	14.8	15.8	18.5	16.3	10.6	11.3	3.2	2.2	4.4	0.9	4.1	5.1	12.1	6.9	4.1	5.6	2.1	12.3	30.7
31-Mar	0.7	0.8	Z	0.7	6.1	10.0	3.8	2.7	1.6	1.8	1.4	1.1	1.1	1.1	1.1	1.0	0.8	0.9	1.5	1.6	0.9	0.6	0.7	0.7	1.9	10.0
	8.9	8.7	11.3	12.2	11.6	10.9	12.5	12.7	11.5	11.1	11.0	8.7	7.3	5.2	4.6	4.6	5.6	6.7	10.5	9.8	9.0	8.7	8.7	8.9	Diurnal Average	
	35.5	24.5	37.2	38.3	36.1	33.9	36.0	35.4	32.0	34.4	36.4	34.6	28.4	24.6	27.1	22.8	19.0	32.3	38.8	37.0	36.9	31.1	29.6	30.0	Diurnal Maximum	

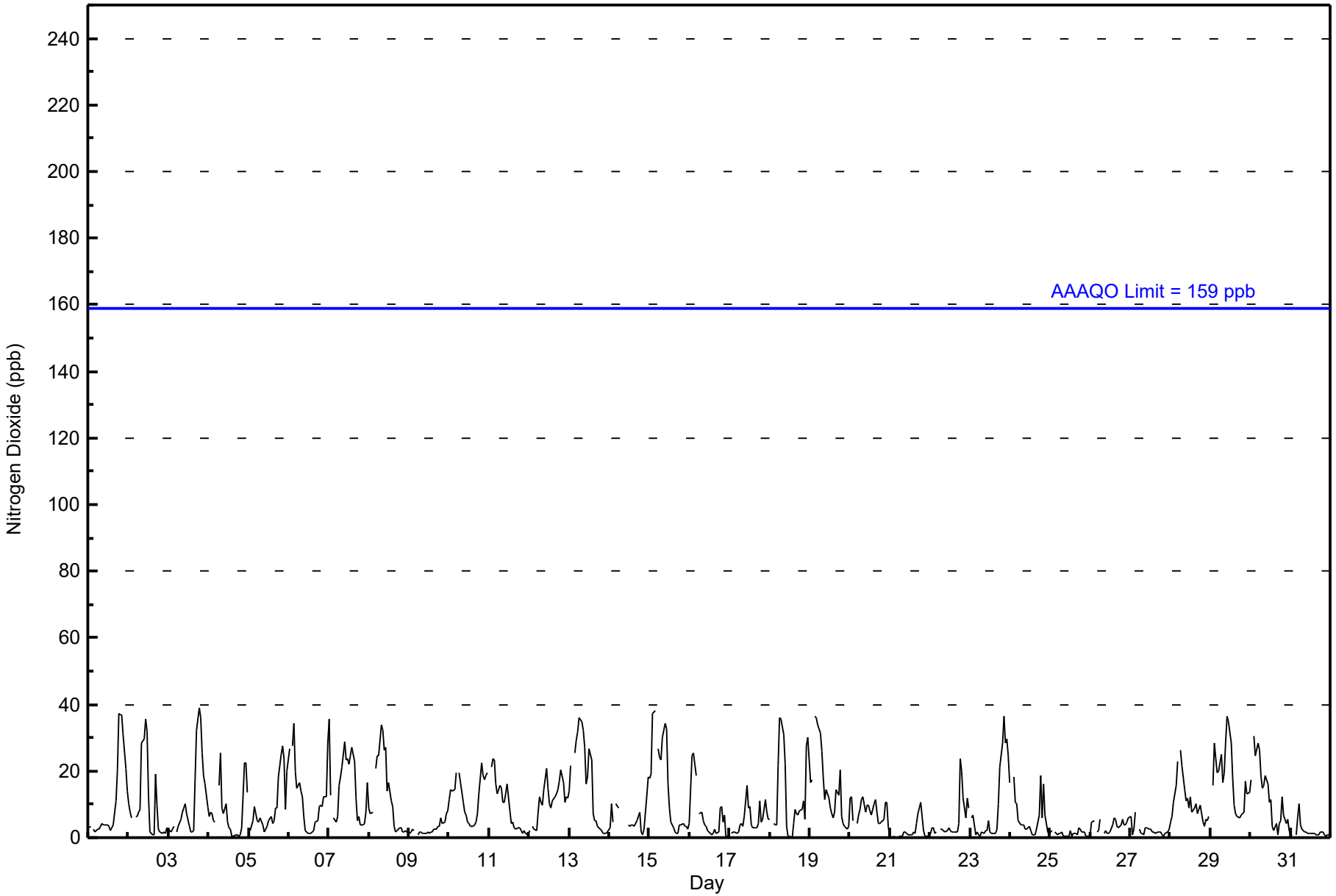
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Buffalo Viewpoint - March 2025



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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	609	86.14	86.14
21 - 40	98	13.86	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Buffalo Viewpoint - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	188	67	12	3	12	52	65	74	13	14	5	18	20	18	23	25	609
21 - 40	26	7	3	2	3	3	11	7	0	2	2	0	1	2	10	16	95
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	214	74	15	5	15	55	76	81	13	16	7	18	21	20	33	41	704

Total Number of Valid Hours: 704

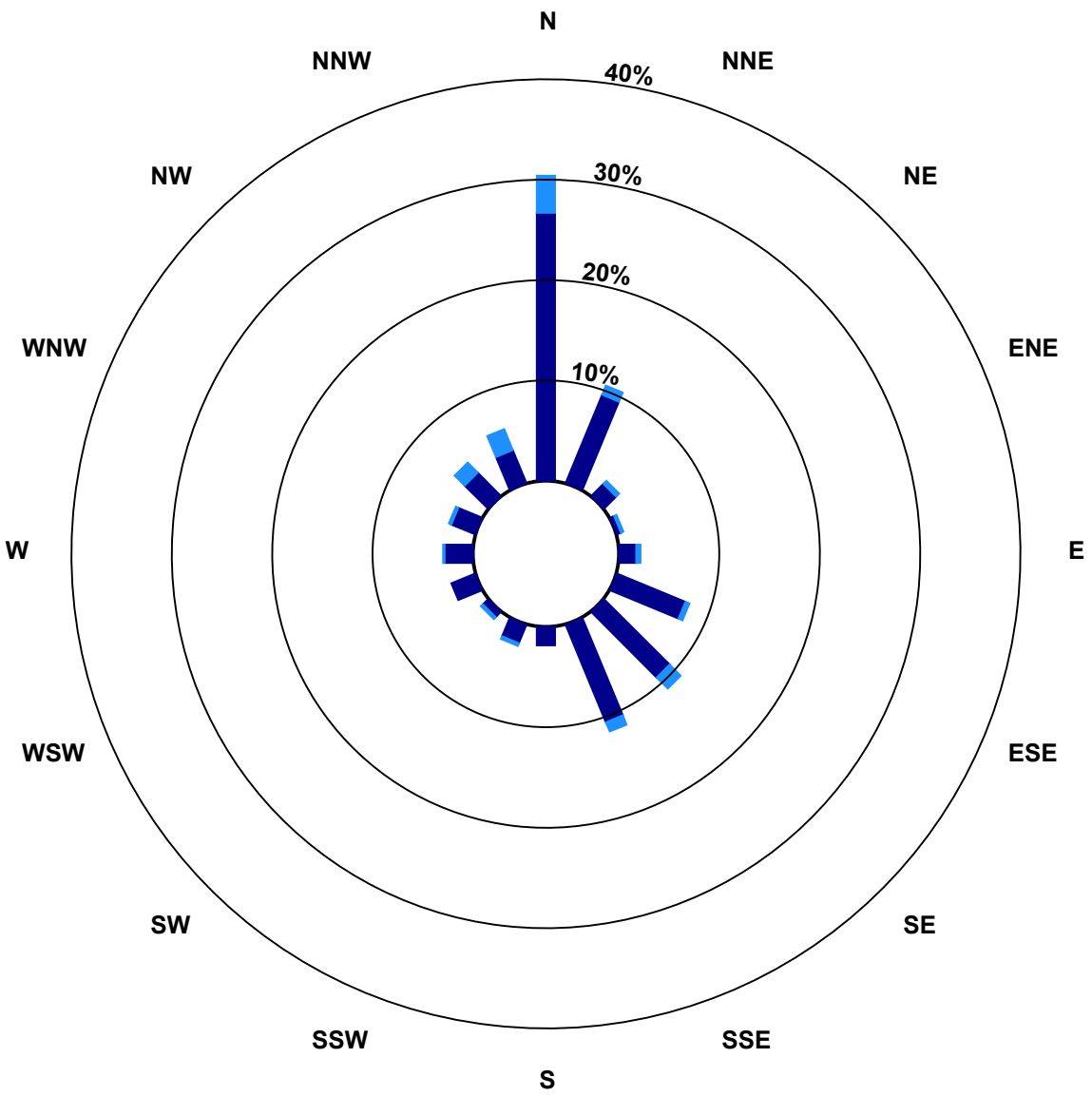
Total Number of Hours: 744

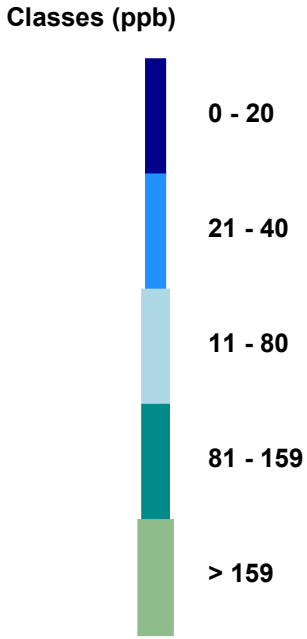
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Dioxide (NO_2) - ppb

Buffalo Viewpoint





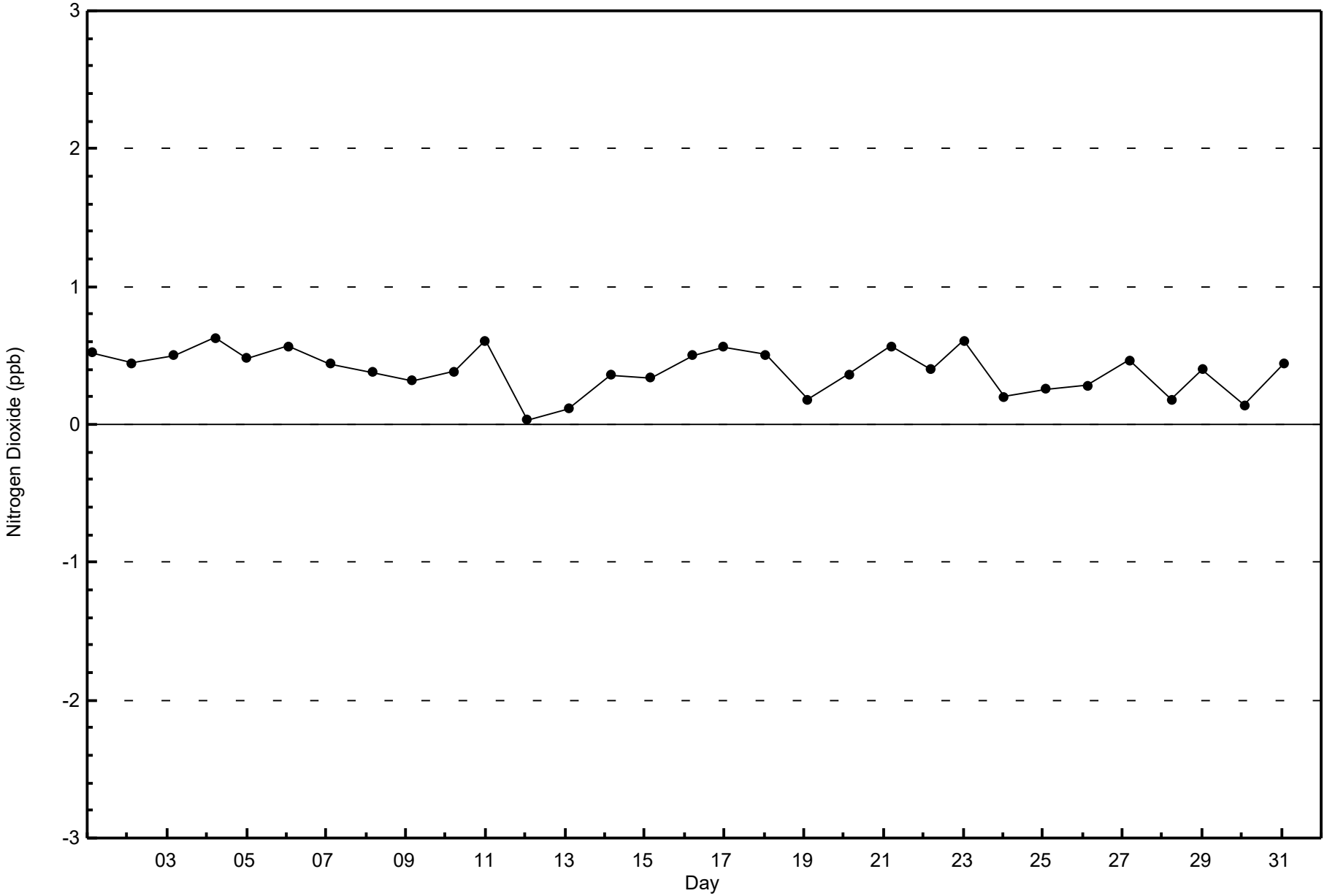
Total Number of Valid Hours: 704

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Buffalo Viewpoint - March 2025

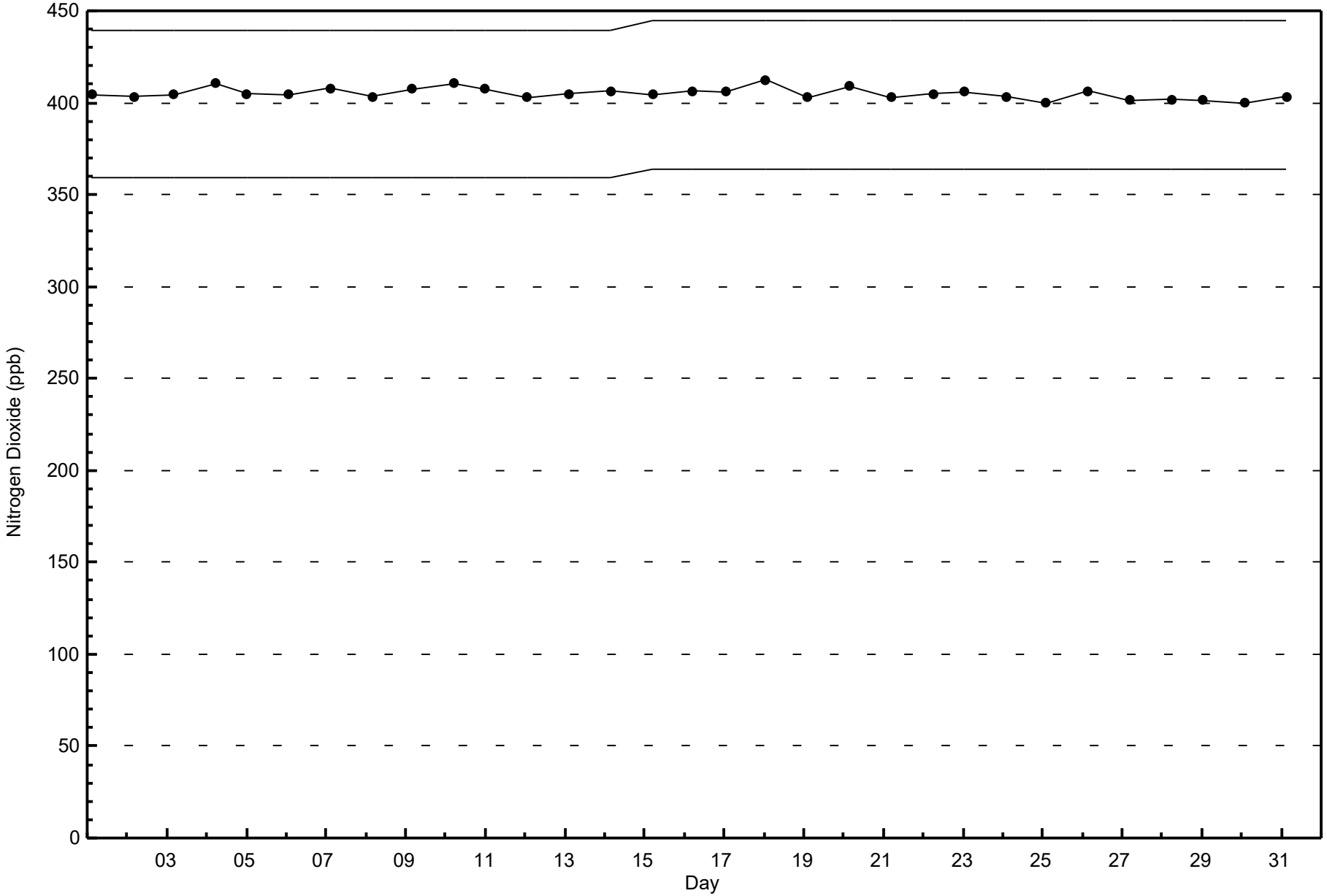


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Buffalo Viewpoint - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Buffalo Viewpoint - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 99.5 ppb on Mar 29 11:00 Maximum Daily Average: 29.2 ppb on Mar 29

Minimum Value: 0.3 ppb on Mar 18 14:00 Minimum Daily Average: 1.5 ppb on Mar 25
Maximum Diurnal Average: 22.6 ppb at hour 11 Minimum Diurnal Average: 6.6 ppb at hour 16
Monthly Average: 12.54 ppb Percentiles: P_1 = 0.5 P_{10} = 1.4 Q_1 = 2.5 Median = 6.3 Q_3 = 17.0 P_{90} = 30.1 P_{99} = 80.6

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	3.2	3.4	Z	2.9	2.0	2.8	2.6	3.5	5.0	5.8	6.5	6.2	5.2	2.9	4.2	4.6	13.5	23.6	46.4	46.3	66.0	42.3	21.5	14.5	14.6	66.0
2-Mar	10.5	7.7	6.1	Z	6.7	6.5	7.8	9.6	52.1	67.3	94.7	70.9	19.2	2.2	0.8	1.0	23.9	10.6	2.8	2.0	1.4	1.5	1.4	3.2	17.8	94.7
3-Mar	2.5	1.8	2.7	3.5	Z	2.2	3.6	5.9	8.6	11.9	15.0	10.9	4.9	2.2	2.7	3.0	24.7	46.0	52.7	42.8	27.1	20.0	17.1	10.2	14.0	52.7
4-Mar	7.1	8.8	7.9	5.7	5.5	Z	17.4	31.4	11.5	10.6	15.4	6.8	4.8	3.8	0.9	0.9	1.0	1.0	0.6	0.9	3.1	23.1	23.2	13.8	8.9	31.4
5-Mar	Z	2.5	5.2	9.7	7.3	5.1	4.7	6.4	4.4	2.4	3.2	5.0	7.9	9.7	5.8	6.7	11.3	9.6	19.2	25.9	28.4	24.4	8.5	21.4	10.2	28.4
6-Mar	27.8	Z	29.9	59.4	23.1	15.6	18.0	19.3	25.7	9.2	2.7	1.7	2.1	2.1	2.1	2.7	5.3	5.6	9.3	10.0	9.8	13.4	12.5	33.4	14.8	59.4
7-Mar	42.1	13.2	Z	6.3	4.7	6.6	16.1	19.7	26.6	54.3	45.0	44.3	40.5	41.6	45.5	34.4	14.8	5.5	6.4	4.0	4.0	4.4	7.8	16.9	22.0	54.3
8-Mar	9.1	7.3	8.0	Z	21.6	25.6	25.7	45.3	50.6	40.2	45.3	23.2	25.7	15.6	13.1	4.2	2.1	2.5	3.2	2.9	1.9	1.5	2.2	1.2	16.4	50.6
9-Mar	1.4	1.8	2.6	2.3	Z	1.0	1.8	2.0	1.6	1.7	1.8	2.3	2.4	3.0	2.6	3.8	3.4	3.9	3.5	5.9	4.2	4.7	7.3	8.1	3.2	8.1
10-Mar	11.7	15.1	14.3	14.6	20.9	Z	20.5	20.0	15.6	13.9	12.1	8.5	8.2	7.0	6.1	6.7	6.3	8.8	14.1	24.3	20.0	18.0	19.4	20.4	14.2	24.3
11-Mar	Z	22.5	26.5	25.6	17.2	14.0	16.5	17.7	15.8	18.0	23.0	30.5	14.0	6.2	6.1	3.9	3.3	3.5	2.9	2.0	1.1	2.1	1.1	0.9	11.9	30.5
12-Mar	2.3	Z	3.4	2.4	2.2	7.6	12.3	11.3	12.4	22.9	40.3	26.3	18.0	15.6	20.1	20.3	18.2	17.0	17.6	23.0	17.3	11.1	12.7	12.0	15.0	40.3
13-Mar	14.2	22.7	Z	27.4	34.5	46.9	79.4	86.4	81.4	61.0	29.1	36.8	51.5	38.9	9.9	6.5	5.8	3.9	2.8	2.1	1.4	1.3	1.4	2.0	28.1	86.4
14-Mar	3.2	10.7	5.0	Z	10.9	9.5	C	C	C	C	C	6.7	6.5	6.9	5.4	4.7	6.6	7.5	8.1	1.9	0.7	2.8	13.1	18.6	7.1	18.6
15-Mar	18.5	19.8	61.9	68.2	Z	29.1	26.2	31.2	60.4	92.8	95.8	35.5	15.1	7.3	4.4	2.8	2.0	1.5	4.1	4.1	4.4	3.5	3.5	2.6	25.9	95.8
16-Mar	4.2	25.1	26.5	22.6	19.1	Z	7.6	9.2	7.4	6.1	4.9	3.3	1.8	1.4	1.6	3.2	1.5	1.8	9.3	9.6	4.7	6.8	0.5	0.5	7.8	26.5
17-Mar	Z	1.3	1.8	1.7	1.6	2.2	3.9	4.8	4.1	8.5	27.1	16.3	18.0	5.9	4.1	4.1	3.9	5.1	11.9	5.1	5.9	11.7	8.1	6.1	7.1	27.1
18-Mar	5.8	Z	4.9	4.0	4.2	31.8	74.3	80.7	78.6	50.2	5.7	0.7	0.5	0.3	6.5	12.0	8.8	7.5	8.1	8.3	10.9	5.3	31.1	32.3	20.5	80.7
19-Mar	17.1	17.4	Z	65.6	58.7	47.5	41.2	45.4	31.5	19.7	25.6	21.0	15.1	11.4	8.6	10.8	20.0	14.4	21.8	6.5	4.2	3.6	2.6	3.2	22.3	65.6
20-Mar	12.2	12.3	5.1	Z	4.5	6.7	8.8	14.3	18.4	12.1	17.2	16.9	14.4	11.5	16.3	17.3	10.3	5.1	4.7	4.9	5.8	11.3	11.2	4.0	10.7	18.4
21-Mar	0.6	0.4	0.7	0.6	Z	0.8	0.8	1.2	2.4	2.7	2.2	2.0	1.5	1.5	2.4	1.7	6.1	9.1	11.8	7.0	2.4	0.5	0.5	0.5	2.6	11.8
22-Mar	1.6	3.2	3.3	1.5	2.2	Z	2.6	2.8	2.5	2.1	2.7	3.7	3.3	2.1	1.9	2.2	2.0	4.7	25.9	20.4	12.5	6.4	12.4	9.4	5.7	25.9
23-Mar	Z	6.5	7.2	1.2	2.1	1.1	0.9	2.5	1.9	2.8	3.1	7.4	2.2	1.7	1.7	1.5	3.1	11.6	22.5	29.5	38.2	29.4	30.9	25.6	10.2	38.2
24-Mar	17.3	Z	19.0	11.2	10.9	5.3	4.1	4.5	4.5	3.2	3.3	4.2	2.7	0.8	0.9	1.0	2.7	7.6	20.0	6.0	16.7	6.9	1.6	1.1	6.8	20.0
25-Mar	1.8	2.4	Z	1.7	0.7	1.2	1.5	2.0	0.7	0.7	0.7	0.6	2.7	0.6	1.6	1.7	1.2	3.3	2.9	2.1	2.0	0.7	0.6	0.5	1.5	3.3
26-Mar	1.1	4.9	5.3	Z	1.8	2.4	6.3	M	1.9	2.9	1.7	2.0	2.5	5.8	8.7	7.9	4.0	3.1	4.1	5.6	3.9	4.0	4.7	6.0	4.1	8.7
27-Mar	6.6	1.0	2.6	7.5	Z	2.8	1.4	1.5	1.3	3.9	4.3	3.7	3.9	2.5	2.0	1.8	2.0	2.1	1.5	1.0	0.5	1.3	1.6	2.8	2.6	7.5
28-Mar	4.5	6.4	10.7	16.0	23.9	Z	32.4	34.0	24.0	18.8	20.6	14.4	20.7	12.4	13.8	14.9	9.7	10.2	10.6	4.9	3.4	5.7	5.3	6.3	14.1	34.0
29-Mar	Z	16.3	29.3	24.4	20.1	21.7	34.5	30.5	40.2	71.4	99.5	85.2	63.0	30.2	14.0	9.9	7.7	6.8	7.0	7.2	7.6	17.4	13.2	13.8	29.2	99.5
30-Mar	17.6	Z	33.7	26.3	29.8	29.0	22.5	23.6	30.0	35.4	29.0	16.6	17.2	4.2	2.8	5.8	0.9	4.6	5.5	12.5	7.0	4.2	5.8	2.2	15.9	35.4
31-Mar	0.8	0.8	Z	0.8	6.3	10.3	4.1	3.3	2.0	2.2	1.8	1.4	1.2	1.3	1.4	1.2	0.9	1.2	1.6	1.8	1.1	0.7	0.9	0.8	2.1	10.3
	9.4	9.1	12.9	15.9	13.2	12.9	16.7	19.7	20.8	21.8	22.6	16.6	12.8	8.3	7.0	6.6	7.3	8.0	11.7	10.7	10.3	9.4	9.2	9.5	Diurnal Average	
	42.1	25.1	61.9	68.2	58.7	47.5	79.4	86.4	81.4	92.8	99.5	85.2	63.0	41.6	45.5	34.4	24.7	46.0	52.7	46.3	66.0	42.3	31.1	33.4	Diurnal Maximum	

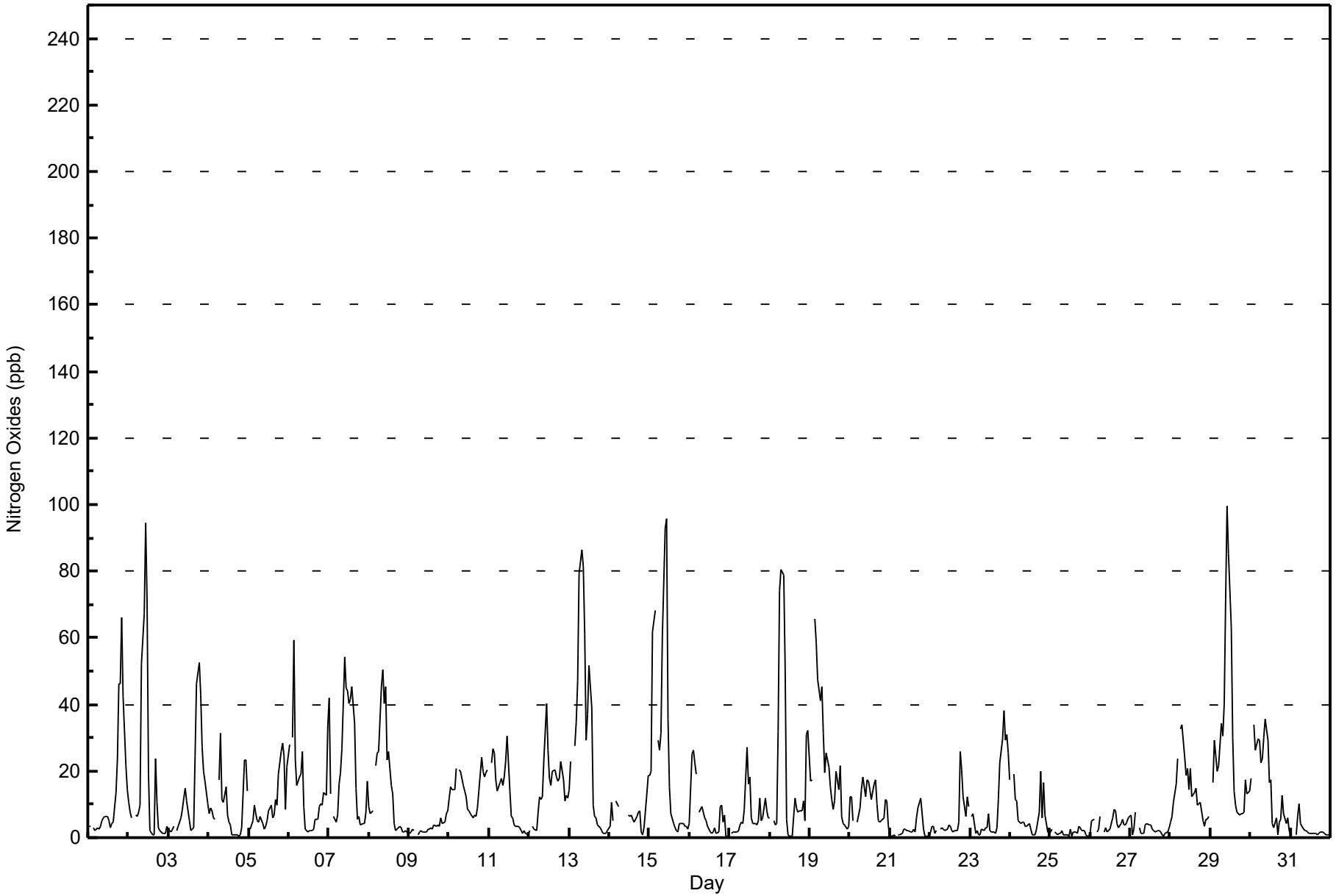
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Buffalo Viewpoint - March 2025



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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	575	81.33	81.33
21 - 40	87	12.31	93.64
11 - 80	37	5.23	98.87
81 - 159	6	0.85	99.72
> 159	0	0.00	99.72

Total Number of Valid Hours: 707

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Buffalo Viewpoint - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	176	66	11	3	12	51	62	72	12	14	5	17	19	14	21	20	575
21 - 40	25	5	2	2	3	4	8	5	1	1	1	1	1	6	4	15	84
11 - 80	8	2	2	0	0	0	6	4	0	1	1	0	1	0	7	5	37
81 - 159	3	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	6
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	212	74	15	5	15	55	76	81	13	16	7	18	21	20	33	41	702

Total Number of Valid Hours: 704

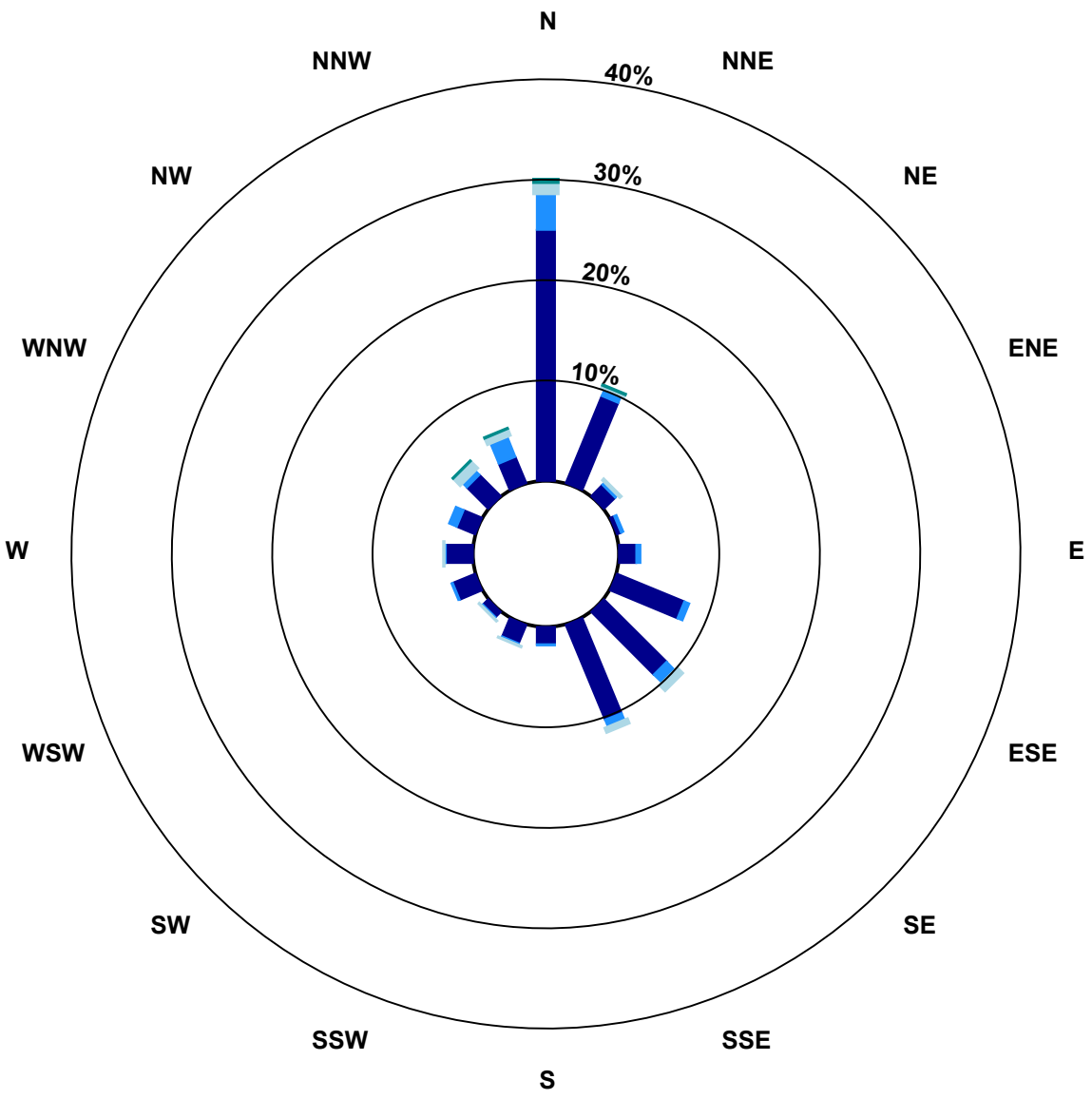
Total Number of Hours: 744

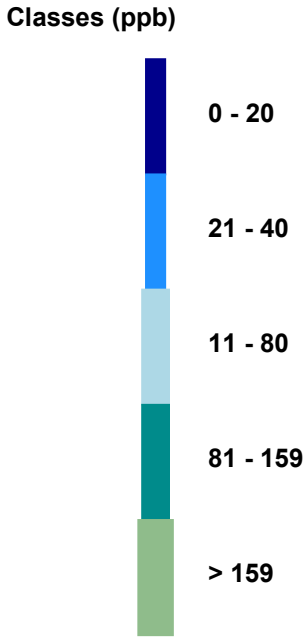
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Oxides (NO_X) - ppb

Buffalo Viewpoint





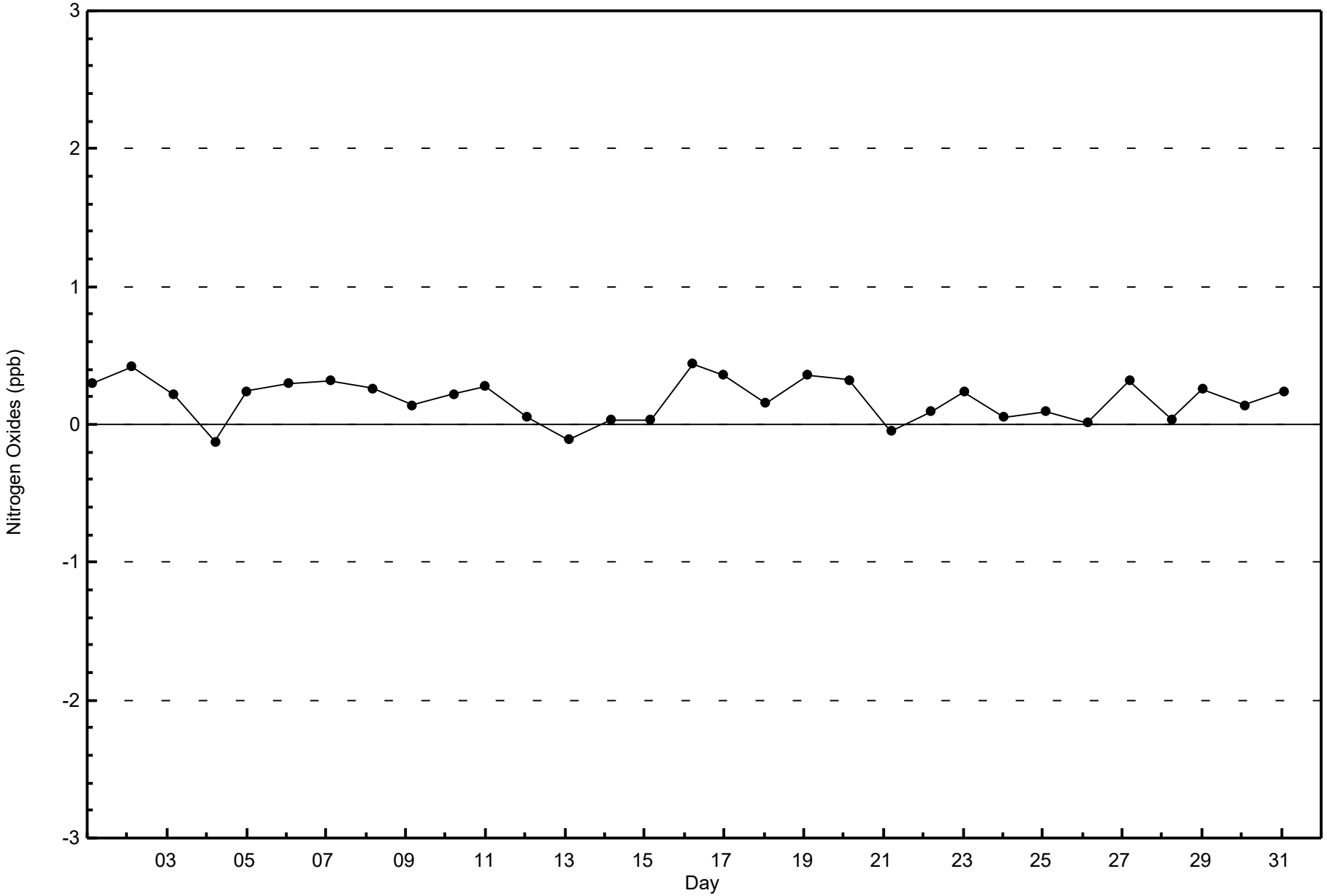
Total Number of Valid Hours: 704

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Buffalo Viewpoint - March 2025

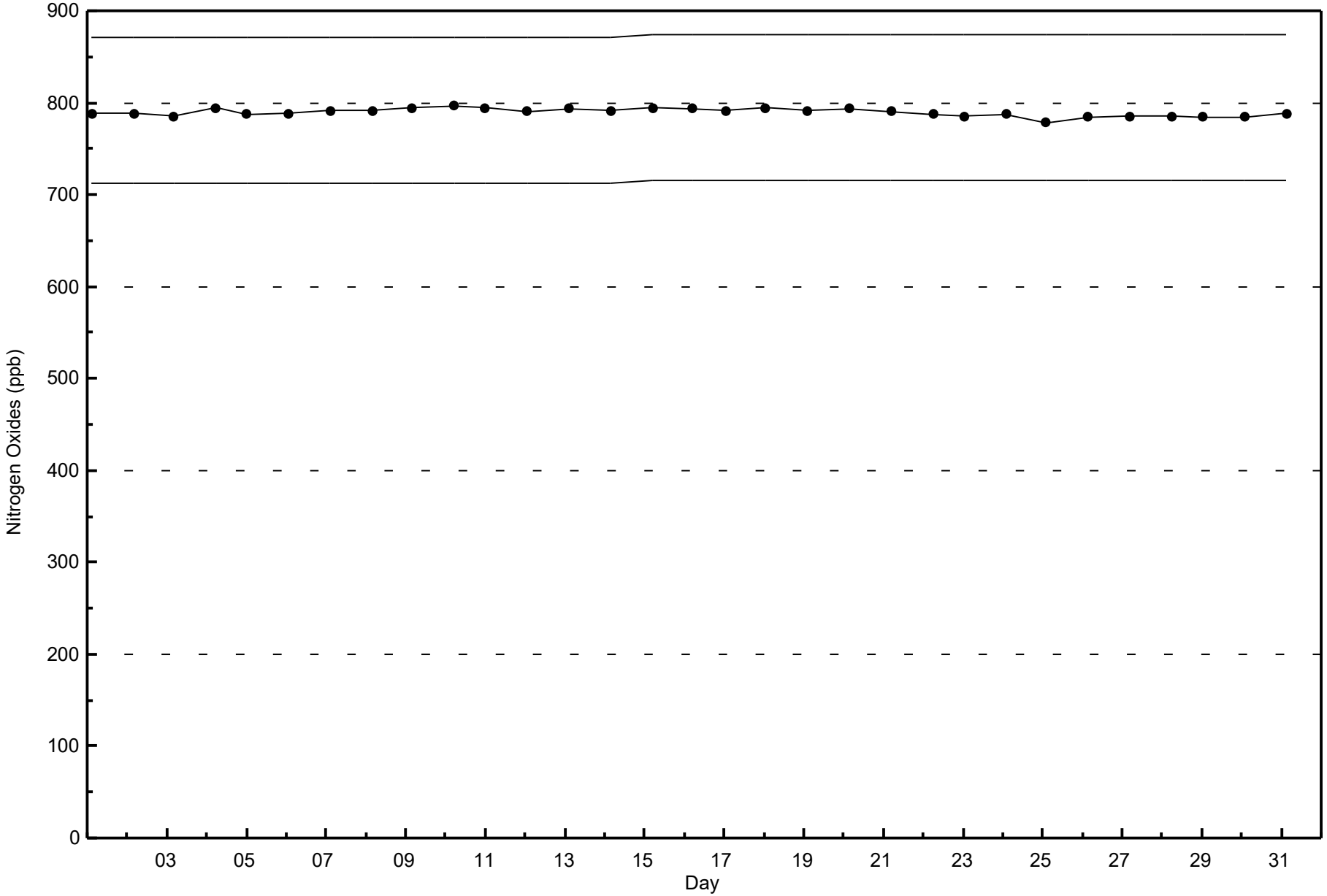


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Buffalo Viewpoint - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Buffalo Viewpoint - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 44.9 ppb on Mar 30 17:00
Maximum Daily Average: 38.4 ppb on Mar 31

Minimum Value: 1.0 ppb on Mar 19 06:00
Maximum Diurnal Average: 35.3 ppb at hour 16
Monthly Average: 27.60 ppb
Minimum Daily Average: 15.3 ppb on Mar 10
Minimum Diurnal Average: 21.1 ppb at hour 8
Percentiles: P_1 = 2.2 P_{10} = 10.6 Q_1 = 22.0 Median = 30.0 Q_3 = 35.0 P_{90} = 38.5 P_{99} = 42.8

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	34
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	26.4	Z	26.6	28.2	29.0	28.1	27.9	26.3	25.6	26.5	27.1	27.8	30.7	34.2	33.5	33.1	27.0	18.6	4.2	3.9	5.7	10.5	16.4	21.1	23.4	34.2
2-Mar	21.1	25.3	Z	28.6	27.2	24.6	24.0	20.8	5.3	4.8	5.9	11.9	30.5	41.4	43.3	41.8	22.0	30.6	34.9	36.6	38.5	37.9	36.0	33.3	27.2	43.3
3-Mar	32.6	32.5	31.2	Z	32.7	32.0	29.6	26.9	25.6	23.8	23.4	27.2	33.0	37.1	36.5	36.1	20.6	7.4	2.6	3.7	9.6	17.9	19.1	21.8	24.5	37.1
4-Mar	24.0	19.7	20.5	23.5	Z	26.3	17.3	9.6	22.9	22.8	24.5	31.3	33.6	36.0	42.7	41.8	42.3	42.7	42.6	41.9	38.0	13.9	14.7	22.8	28.5	42.7
5-Mar	29.1	34.8	31.7	26.7	30.6	Z	35.4	33.6	38.5	40.5	39.7	39.1	37.2	36.6	38.7	37.0	34.1	32.6	22.7	14.9	14.2	15.7	31.2	16.4	30.9	40.5
6-Mar	Z	7.5	6.2	2.0	4.0	6.5	4.3	5.8	10.1	27.9	36.9	38.0	37.3	37.5	37.5	37.7	35.7	35.3	31.4	29.2	28.8	25.6	27.9	9.8	22.7	38.0
7-Mar	3.8	Z	25.7	30.5	31.8	29.6	19.7	18.1	16.3	11.7	17.6	20.7	20.7	20.3	17.4	19.2	28.4	34.9	33.7	35.1	35.7	35.8	31.8	22.9	24.4	35.8
8-Mar	30.1	30.5	Z	25.7	16.3	12.7	11.6	6.4	10.7	16.0	14.8	26.2	24.2	30.9	33.6	39.6	39.9	38.3	36.1	36.7	38.2	36.9	34.2	32.0	27.0	39.9
9-Mar	30.5	27.6	26.2	Z	29.1	30.8	30.8	30.6	30.5	29.2	28.5	26.8	27.1	28.6	27.1	26.1	26.0	25.6	24.0	20.2	21.6	20.1	16.5	16.2	26.1	30.8
10-Mar	12.9	9.9	11.4	10.6	Z	4.9	5.7	9.0	15.5	18.0	19.4	22.2	23.3	24.6	25.7	26.2	25.7	23.0	17.7	8.7	11.2	10.1	9.1	7.6	15.3	26.2
11-Mar	4.6	4.9	3.1	3.7	10.7	Z	12.6	14.0	18.8	20.1	18.8	17.8	24.6	28.6	28.5	29.4	30.0	29.9	30.5	32.2	33.3	32.0	32.7	32.4	21.4	33.3
12-Mar	Z	28.9	31.9	33.6	32.9	27.4	23.5	24.6	23.8	20.6	16.4	22.6	26.8	28.8	27.5	27.5	26.5	24.7	21.6	17.2	20.8	24.1	21.9	21.5	25.0	33.6
13-Mar	18.6	Z	12.0	6.8	3.1	1.5	1.6	3.3	6.2	11.0	21.6	20.0	16.3	19.2	31.9	33.8	34.2	34.3	34.3	34.0	34.7	34.8	34.6	33.4	20.9	34.8
14-Mar	32.1	25.6	Z	25.8	25.7	26.0	20.3	23.6	24.1	28.8	28.4	28.8	29.4	30.5	30.8	29.9	28.8	28.0	28.4	35.8	37.1	34.8	23.2	17.6	28.0	37.1
15-Mar	18.4	17.0	2.1	Z	3.6	9.7	10.4	11.1	9.4	9.2	12.0	26.8	34.3	37.1	37.5	37.9	38.4	38.1	35.0	34.0	33.5	34.0	34.2	34.4	24.3	38.4
16-Mar	29.1	10.8	9.9	10.6	Z	15.6	22.4	23.4	27.9	31.6	33.4	35.8	37.4	37.9	38.0	37.4	37.3	37.3	30.6	30.4	34.0	33.2	38.2	37.6	29.5	38.2
17-Mar	36.8	35.8	34.4	34.0	34.4	Z	30.7	29.6	30.8	27.5	20.1	26.1	28.6	33.0	34.9	35.0	34.6	32.6	26.3	32.4	31.5	26.2	29.5	29.1	31.0	36.8
18-Mar	Z	27.8	28.5	30.6	28.9	11.1	1.9	4.1	9.2	17.7	35.0	37.7	37.9	38.3	34.6	31.6	32.7	33.2	31.0	29.9	27.4	32.0	9.0	6.2	25.0	38.3
19-Mar	18.6	Z	3.8	1.4	1.2	1.0	C	C	C	24.0	22.7	25.7	29.2	31.3	33.8	32.5	27.8	29.6	19.2	31.9	32.7	33.2	34.1	32.8	23.3	34.1
20-Mar	23.2	23.6	Z	31.6	30.5	28.4	26.3	23.1	23.2	27.6	27.1	28.5	30.0	31.4	29.3	30.0	33.9	36.4	36.4	36.1	33.5	28.2	28.0	35.2	29.6	36.4
21-Mar	39.9	39.9	39.8	Z	39.2	39.1	38.7	38.2	37.1	37.8	38.4	38.6	39.2	39.6	39.5	40.2	37.7	33.7	29.7	32.9	36.7	39.2	39.4	39.1	38.0	40.2
22-Mar	37.1	35.1	34.9	36.2	Z	36.8	35.9	35.2	35.9	37.0	36.7	36.5	37.9	40.0	41.5	42.0	42.8	38.8	19.0	22.4	29.5	32.5	28.5	30.2	34.9	42.8
23-Mar	31.6	30.4	29.2	35.5	34.4	Z	33.5	32.0	33.0	34.6	37.1	36.8	40.2	41.3	42.4	42.0	39.8	33.6	23.2	14.7	6.9	14.5	10.3	15.8	30.1	42.4
24-Mar	Z	22.4	18.9	25.4	18.1	26.8	30.0	31.0	32.2	36.2	36.4	35.5	39.8	44.2	44.3	43.1	40.4	31.3	21.3	33.4	24.6	34.1	33.4	29.6	31.8	44.3
25-Mar	28.4	Z	28.5	28.4	29.5	27.6	27.3	28.2	31.8	33.6	36.1	39.2	40.0	41.8	41.8	44.2	44.7	35.1	33.3	33.5	34.5	35.6	36.0	36.4	34.6	44.7
26-Mar	35.9	30.6	Z	30.5	30.0	28.3	24.6	M	28.3	28.4	31.1	32.7	32.7	33.2	31.7	32.0	33.2	34.6	32.5	30.3	31.7	31.7	31.2	29.4	31.1	35.9
27-Mar	30.3	35.6	32.8	Z	33.9	34.7	32.1	32.1	32.3	32.5	34.4	34.4	34.7	36.6	37.0	35.5	34.3	34.2	35.4	37.5	37.7	35.7	33.9	31.4	34.3	37.7
28-Mar	29.0	25.8	21.1	15.5	Z	6.5	7.3	12.9	21.5	27.1	27.4	30.4	29.9	32.5	32.1	32.5	33.8	32.9	29.8	33.8	33.0	29.6	29.3	28.3	26.2	33.8
29-Mar	24.8	15.7	6.0	11.3	12.8	Z	5.3	9.3	13.1	11.9	10.8	15.2	20.3	30.8	35.7	37.9	38.1	37.8	36.1	34.5	32.6	21.7	22.3	20.9	21.9	38.1
30-Mar	Z	8.4	4.8	7.4	4.0	3.5	9.0	11.4	16.1	18.9	23.5	29.9	31.2	39.7	41.1	40.1	44.9	40.6	39.9	27.9	32.7	35.2	35.2	40.4	25.5	44.9
31-Mar	41.1	Z	41.1	40.6	33.1	29.1	35.5	36.7	37.5	36.8	36.8	38.8	39.6	41.1	41.3	41.2	41.6	41.0	39.2	37.4	37.8	38.8	38.5	38.4	38.4	41.6
	26.5	24.2	21.6	22.5	23.3	21.1	21.2	21.1	23.1	25.0	26.5	29.3	31.5	34.3	35.2	35.3	34.1	32.5	28.5	28.5	29.0	28.6	27.7	26.6	Diurnal Average	
	41.1	39.9	41.1	40.6	39.2	39.1	38.7	38.2	38.5	40.5	39.7	39.2	40.2	44.2	44.3	44.2	44.9	42.7	42.6	41.9	38.5	39.2	39.4	40.4	Diurnal Maximum	

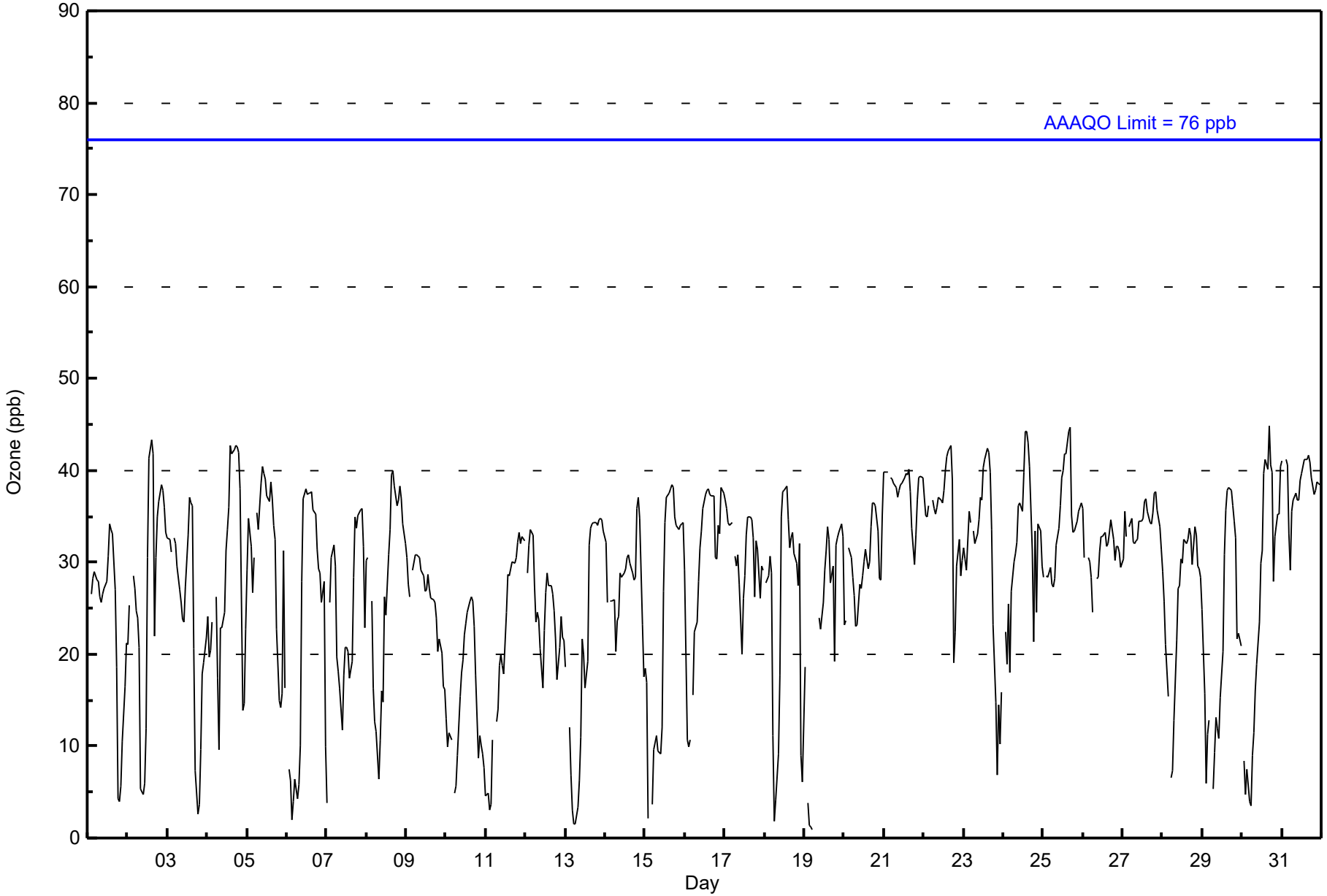
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Buffalo Viewpoint - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	158	22.28	22.28
21 - 50	551	77.72	100.00
51 - 82	0	0.00	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	52	10	5	1	4	2	16	13	2	4	2	1	2	4	11	27	156
21 - 50	167	65	10	4	12	52	60	63	14	10	7	17	19	14	23	14	551
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	219	75	15	5	16	54	76	76	16	14	9	18	21	18	34	41	707

Total Number of Valid Hours: 707

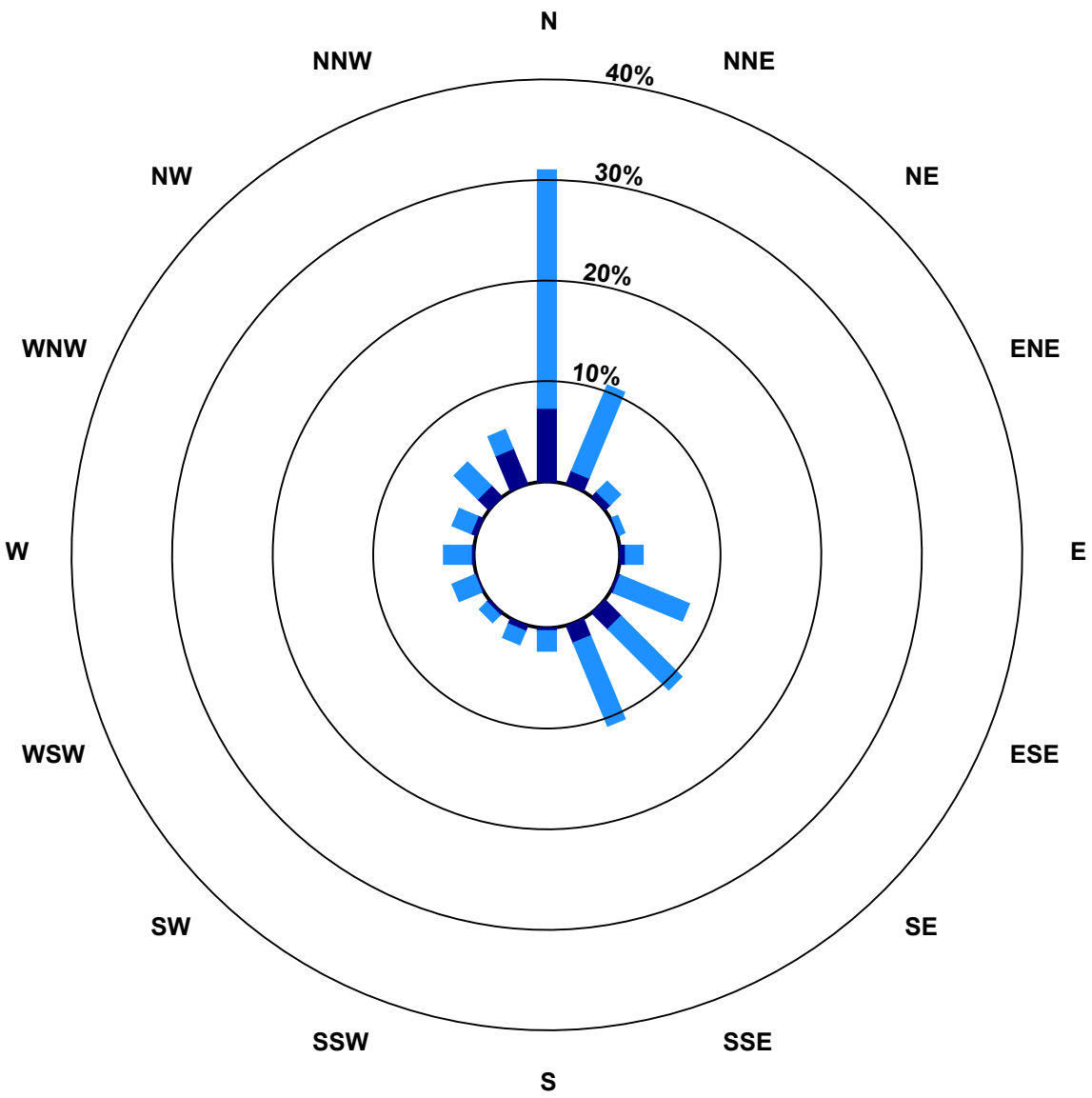
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Ozone (O_3) - ppb

Buffalo Viewpoint



Classes (ppb)

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

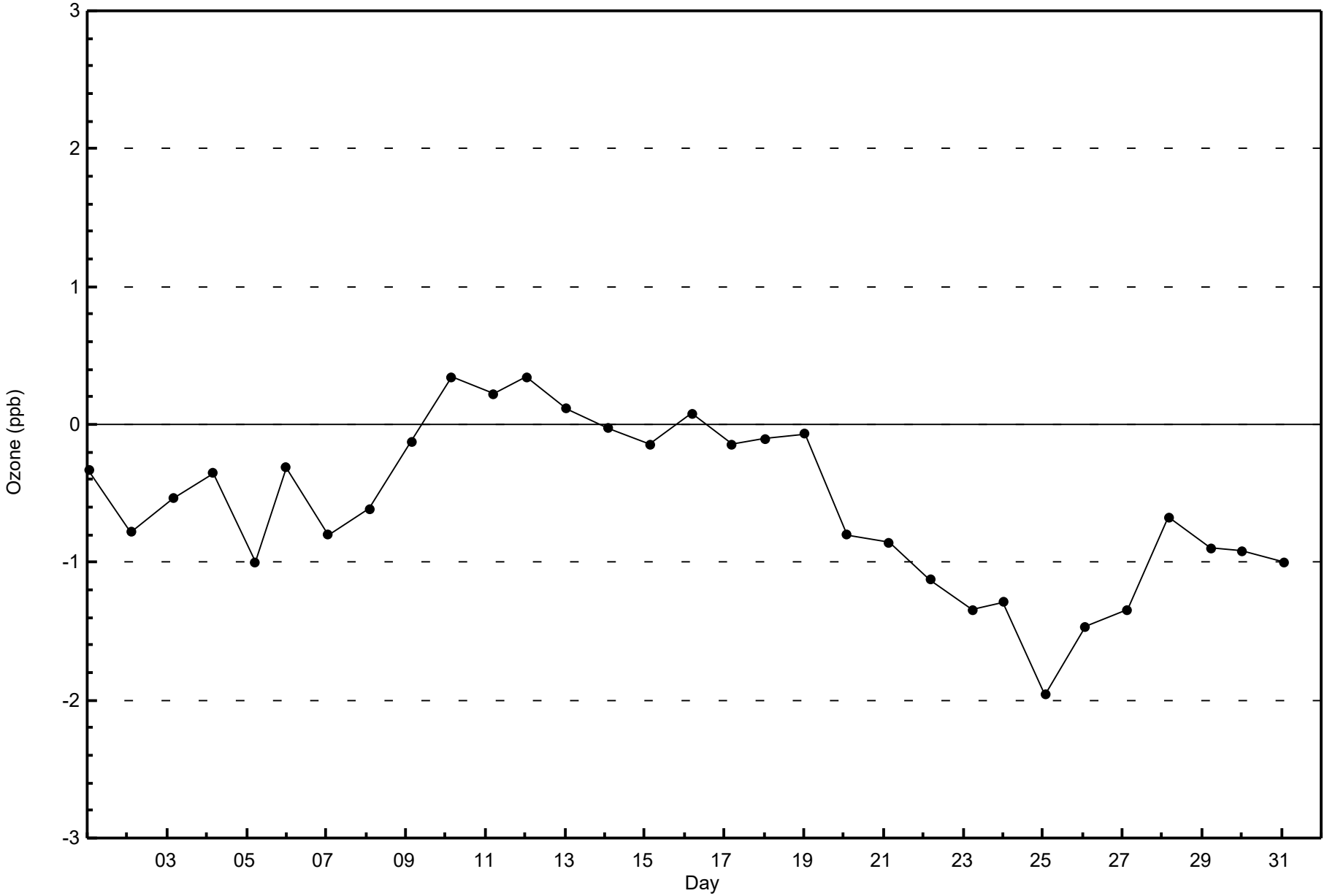
Total Number of Valid Hours: 707

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Buffalo Viewpoint - March 2025

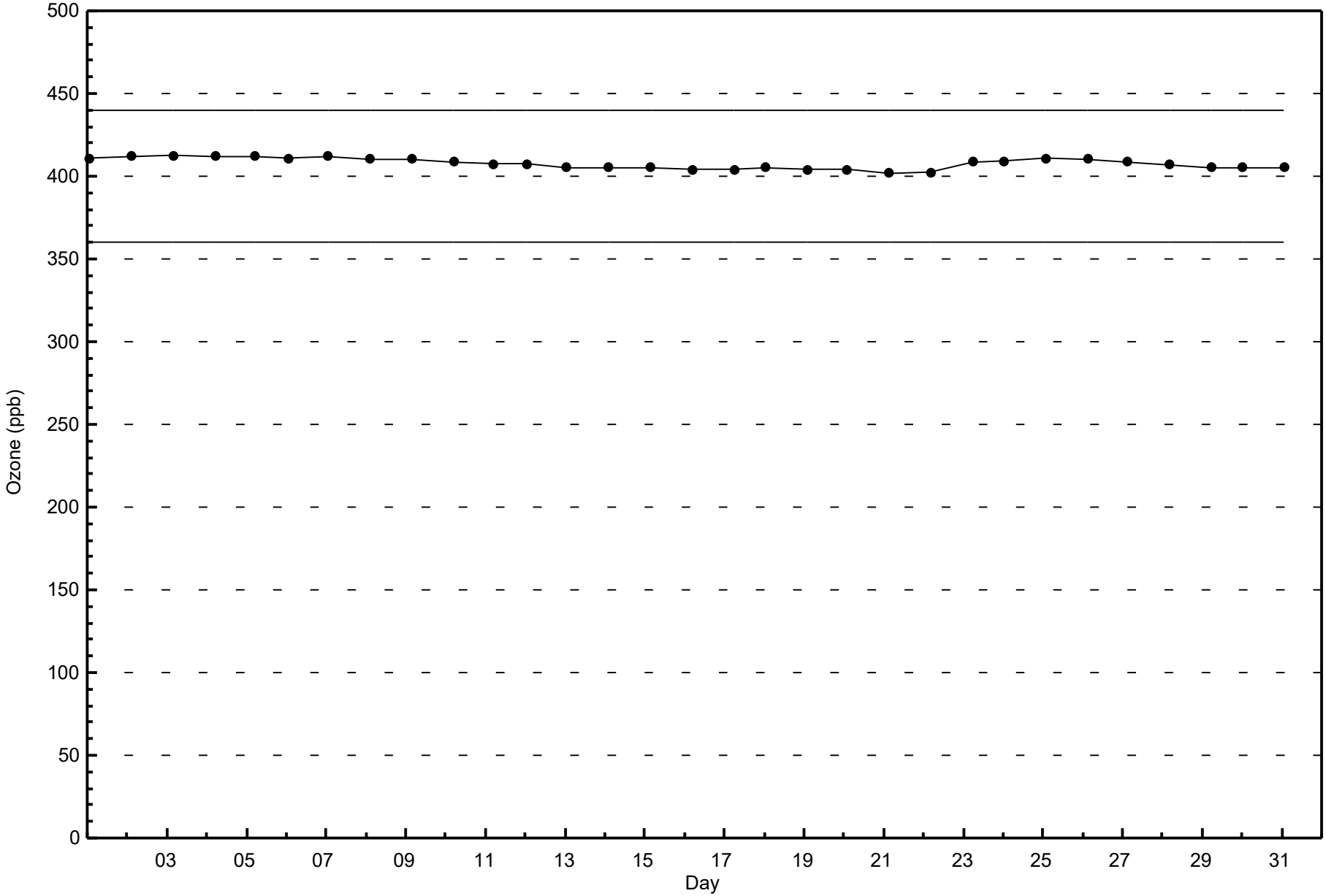


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Buffalo Viewpoint - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Buffalo Viewpoint - March 2025

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

Maximum Value: 63.7 $\mu g/m^3$ on Mar 29 11:00

Maximum Daily Average: 19.3 $\mu g/m^3$ on Mar 29

Minimum Value: 0.5 $\mu g/m^3$ on Mar 25 14:00

Minimum Daily Average: 1.3 $\mu g/m^3$ on Mar 25

Maximum Diurnal Average: 6.7 $\mu g/m^3$ at hour 11

Minimum Diurnal Average: 3.2 $\mu g/m^3$ at hour 17

Monthly Average: 4.70 $\mu g/m^3$

Percentiles: P_1 = 0.6 P_{10} = 1.6 Q_1 = 2.5 Median = 3.2 Q_3 = 5.0 P_{90} = 8.7 P_{99} = 22.9

Hours in Service:	744
Hours of Data:	742
Hours of Missing Data:	2
Hours of Calibration:	2
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	3.5	3.3	3.2	3.0	2.8	2.8	2.8	2.9	3.1	3.3	3.1	3.2	3.2	2.8	2.9	3.0	3.6	3.7	4.5	4.8	5.1	5.0	4.8	4.7	3.5	5.1
2-Mar	4.2	3.6	3.4	3.6	3.6	3.3	3.3	3.4	7.0	6.8	7.4	6.4	3.6	1.6	0.8	0.6	1.6	2.5	2.1	1.7	1.3	1.3	1.6	2.3	3.2	7.4
3-Mar	2.8	3.2	3.3	3.2	3.1	2.8	3.0	3.2	4.4	5.3	5.2	4.4	3.2	2.2	1.9	1.9	3.7	4.4	4.0	3.5	3.4	3.1	2.7	2.7	3.4	5.3
4-Mar	2.9	3.2	3.4	3.2	2.7	2.0	2.0	2.1	1.7	1.7	1.7	2.0	2.1	1.6	0.6	0.6	0.6	0.6	1.1	1.0	1.0	4.1	3.6	2.6	2.0	4.1
5-Mar	1.9	1.3	1.4	2.2	2.1	1.7	1.5	2.0	1.8	1.6	1.6	4.1	2.9	3.0	2.9	3.1	4.0	3.7	4.7	4.8	4.2	4.5	3.2	4.5	2.9	4.8
6-Mar	5.1	4.6	4.7	6.1	5.1	5.0	5.6	5.5	5.1	3.6	1.5	1.7	2.6	2.5	2.0	2.4	2.8	3.1	4.2	4.2	4.2	2.5	1.7	3.6	3.7	6.1
7-Mar	6.6	3.9	3.4	2.4	2.0	2.2	3.4	4.3	5.6	8.2	7.6	9.0	7.7	10.1	16.1	7.9	4.5	2.7	2.2	2.1	2.0	2.0	2.2	3.5	5.1	16.1
8-Mar	2.8	2.6	2.9	3.3	4.6	4.9	5.6	8.8	6.0	4.9	6.7	5.0	4.5	2.2	2.2	1.7	1.2	1.3	1.5	1.2	1.1	1.3	2.0	1.9	3.3	8.8
9-Mar	2.1	2.1	2.0	2.3	2.5	1.7	1.7	1.9	2.0	1.9	2.0	2.4	2.5	3.1	3.0	3.6	3.4	2.8	2.6	2.6	2.6	2.8	3.2	3.6	2.5	3.6
10-Mar	4.0	6.3	7.6	7.3	10.2	9.6	7.4	6.2	5.0	6.2	5.8	4.2	3.7	3.5	3.4	4.3	3.1	3.9	5.8	12.8	9.8	5.5	5.3	5.8	6.1	12.8
11-Mar	5.9	5.3	6.0	6.1	4.9	4.0	3.9	3.9	3.1	3.0	3.3	4.3	3.0	2.4	2.2	1.8	1.8	2.0	1.8	1.6	1.2	1.2	0.9	0.8	3.1	6.1
12-Mar	0.9	1.2	1.1	1.0	0.8	1.0	1.3	1.3	2.5	4.3	4.4	3.5	3.9	5.0	6.1	6.3	5.1	4.7	5.2	5.6	4.3	4.6	3.7	4.3	3.4	6.3
13-Mar	3.7	4.8	4.2	6.6	9.7	11.1	17.1	17.1	14.2	10.2	5.4	8.3	12.2	12.2	3.6	3.4	3.6	2.9	2.7	3.5	2.5	2.2	2.5	2.5	6.9	17.1
14-Mar	2.4	2.8	2.4	2.7	2.7	2.5	2.8	3.0	3.2	2.8	2.9	2.9	3.2	3.1	2.9	3.6	3.3	3.3	3.0	1.8	1.4	1.4	2.4	2.7	2.7	3.6
15-Mar	2.6	2.8	3.8	3.5	3.1	2.7	3.3	3.4	3.7	4.7	5.8	4.1	6.1	4.0	2.8	2.5	2.3	2.3	3.3	3.5	3.5	3.2	3.0	2.9	3.5	6.1
16-Mar	3.1	5.8	6.0	6.0	5.7	4.8	3.6	3.3	3.1	2.9	3.1	2.9	2.5	2.3	2.3	2.7	2.1	2.1	6.1	7.0	2.6	3.3	1.8	1.8	3.6	7.0
17-Mar	1.9	2.4	2.8	2.6	2.5	2.6	2.9	3.0	3.0	3.9	5.2	4.3	4.4	3.5	3.0	2.9	3.1	3.2	3.8	2.8	3.1	3.7	3.4	2.9	3.2	5.2
18-Mar	3.4	3.8	3.1	2.7	3.2	10.6	20.0	18.6	21.2	15.5	3.9	2.8	2.5	2.6	4.6	5.7	3.9	5.6	6.0	4.3	4.4	3.7	10.8	13.6	7.4	21.2
19-Mar	8.8	8.8	20.8	25.5	19.0	14.6	11.8	12.7	10.1	7.7	8.8	7.9	5.8	5.1	4.7	4.9	6.2	5.1	6.5	3.6	3.1	3.0	2.8	2.5	8.7	25.5
20-Mar	4.3	4.4	3.2	2.6	2.7	3.2	3.4	3.9	4.1	4.0	5.2	5.6	4.7	4.6	5.7	13.6	4.5	3.2	3.1	3.5	5.3	9.3	8.6	4.5	4.9	13.6
21-Mar	1.5	1.6	1.8	1.7	1.6	2.0	2.0	1.8	1.9	2.2	2.2	1.9	2.1	2.2	3.1	2.7	3.6	4.2	5.4	5.4	3.7	2.2	1.6	1.6	2.5	5.4
22-Mar	2.0	2.6	2.9	2.4	2.5	2.5	2.6	2.9	2.9	3.1	3.4	3.9	3.8	3.3	3.2	3.0	2.9	3.6	6.9	6.5	5.7	3.6	6.3	5.5	3.7	6.9
23-Mar	5.7	5.6	5.6	3.0	2.9	3.0	2.9	3.0	3.0	3.6	3.7	5.7	3.3	2.6	2.2	1.8	1.8	2.7	3.4	4.8	4.9	3.6	3.2	3.3	3.6	5.7
24-Mar	3.2	5.2	6.0	4.2	3.2	2.7	2.6	2.8	2.8	2.4	2.2	2.7	1.9	1.2	1.1	1.2	1.4	2.4	3.2	2.1	2.6	2.3	1.6	1.6	2.6	6.0
25-Mar	1.4	1.1	1.1	1.0	0.8	0.7	0.7	0.7	0.6	0.6	0.6	0.5	1.6	0.5	0.5	0.6	0.5	2.4	2.8	2.8	2.3	2.1	2.2	2.0	1.3	2.8
26-Mar	1.9	3.0	3.2	2.5	2.7	2.9	3.0	C	C	3.1	3.1	3.0	3.1	4.9	7.1	5.1	2.6	2.4	2.4	2.7	2.5	2.7	2.9	3.6	3.2	7.1
27-Mar	3.6	2.0	3.0	3.8	3.4	3.0	2.7	2.8	2.7	3.8	4.1	3.7	3.7	3.3	2.8	2.8	2.7	2.7	2.6	1.9	1.7	2.0	2.3	2.7	2.9	4.1
28-Mar	3.4	4.3	5.7	9.5	13.5	14.2	13.9	10.8	8.6	9.2	10.1	6.1	11.8	7.6	7.3	9.5	5.8	5.8	4.7	3.2	2.7	3.3	3.5	4.3	7.4	14.2
29-Mar	5.1	14.1	28.0	21.9	16.0	16.0	21.7	17.1	21.6	44.5	63.7	50.5	41.9	21.6	9.6	7.5	6.4	5.8	6.6	5.4	5.2	16.1	9.8	7.2	19.3	63.7
30-Mar	10.9	22.5	25.6	19.8	19.5	17.4	14.8	13.9	16.4	23.2	18.4	10.2	12.8	6.2	5.5	10.7	3.6	6.1	5.8	7.8	5.9	4.0	8.2	5.1	12.3	25.6
31-Mar	3.0	2.9	2.7	2.7	7.0	11.1	4.2	3.7	3.8	3.9	4.3	4.9	4.9	4.5	4.4	3.7	3.0	2.4	1.8	1.6	1.4	1.4	1.4	1.4	3.6	11.1
	3.7	4.6	5.6	5.4	5.4	5.4	5.7	5.7	5.8	6.5	6.7	5.9	5.7	4.4	3.9	4.0	3.2	3.3	3.9	3.9	3.4	3.6	3.7	3.6	Diurnal Average	
	10.9	22.5	28.0	25.5	19.5	17.4	21.7	18.6	21.6	44.5	63.7	50.5	41.9	21.6	16.1	13.6	6.4	6.1	6.9	12.8	9.8	16.1	10.8	13.6	Diurnal Maximum	

C - Calibration

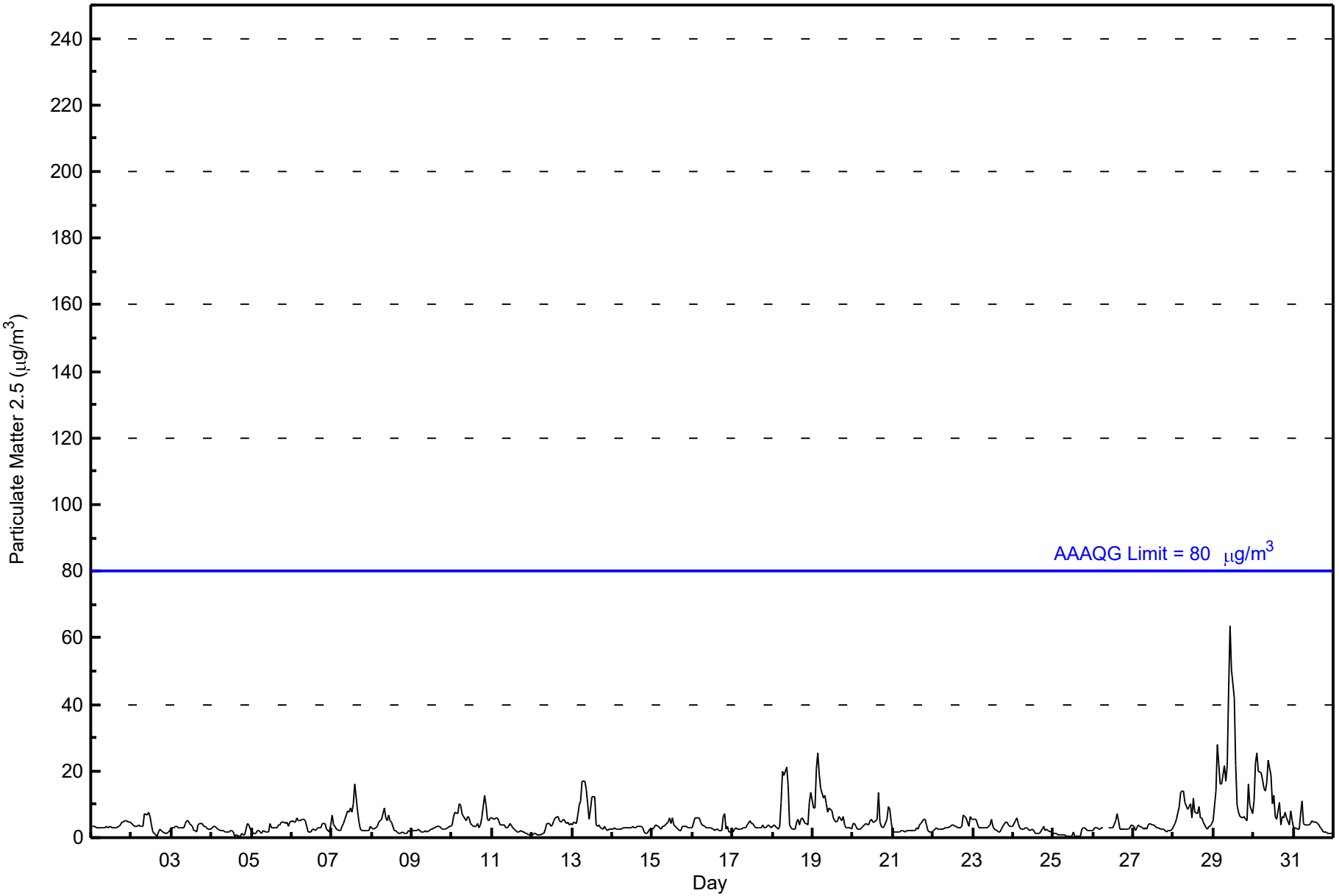
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Buffalo Viewpoint - March 2025



Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	585	78.84	78.84
6 - 15	127	17.12	95.96
16 - 25	24	3.23	99.19
26 - 80	6	0.81	100.00
> 81.0	0	0.00	100.00

Total Number of Valid Hours: 742

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

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

Buffalo Viewpoint - March 2025

Concentration Ranges ($\mu g/m^3$)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	188	63	11	1	9	47	72	73	14	12	7	17	18	13	21	16	582
6 - 15	35	10	3	4	7	8	7	8	2	4	1	1	2	2	10	23	127
16 - 25	6	2	1	0	0	0	0	2	0	0	1	0	2	4	3	3	24
26 - 80	1	2	0	0	0	0	0	0	0	0	0	0	0	1	1	1	6
> 81.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	230	77	15	5	16	55	79	83	16	16	9	18	22	20	35	43	739

Total Number of Valid Hours: 739

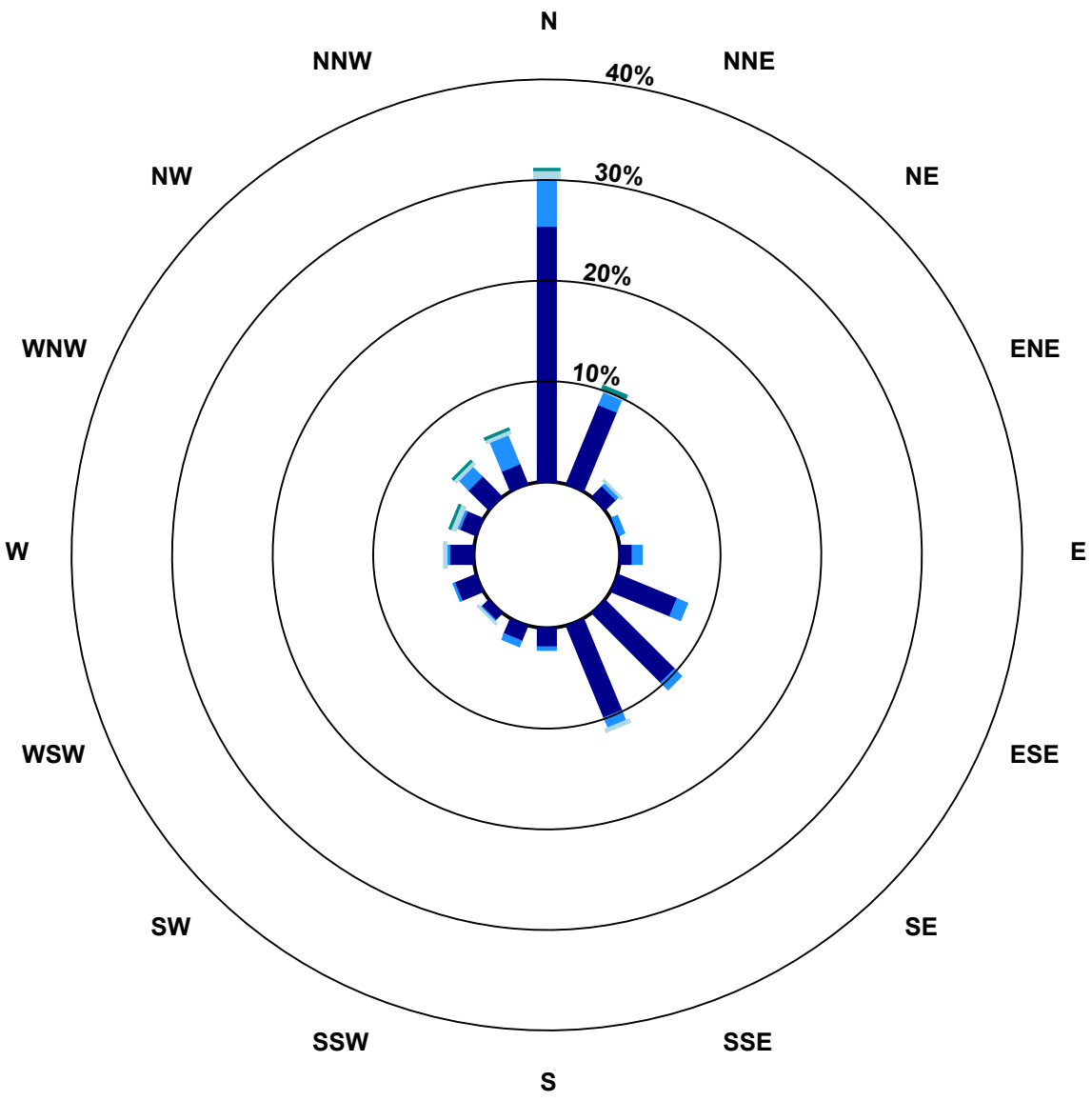
Total Number of Hours: 744

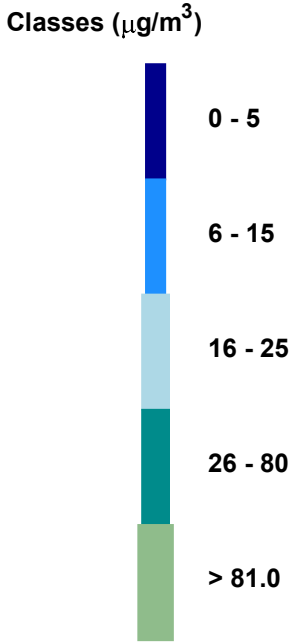
Wood Buffalo Environmental Association

Wind Rose Mar 2025

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

Buffalo Viewpoint





Total Number of Valid Hours: 739

Maximum Value: 10.4 C on Mar 25 14:00

Maximum Daily Average: 1.9 C on Mar 23

Minimum Value: -23.7 C on Mar 13 07:00

Minimum Daily Average: -21.1 C on Mar 9

Maximum Diurnal Average: -2.4 C at hour 16

Minimum Diurnal Average: -12.7 C at hour 7

Monthly Average: -7.71 C

Percentiles: P_1 = -23.1 P_{10} = -17.8 Q_1 = -13.6 Median = -7.4 Q_3 = -2.0 P_{90} = 2.4 P_{99} = 7.7

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

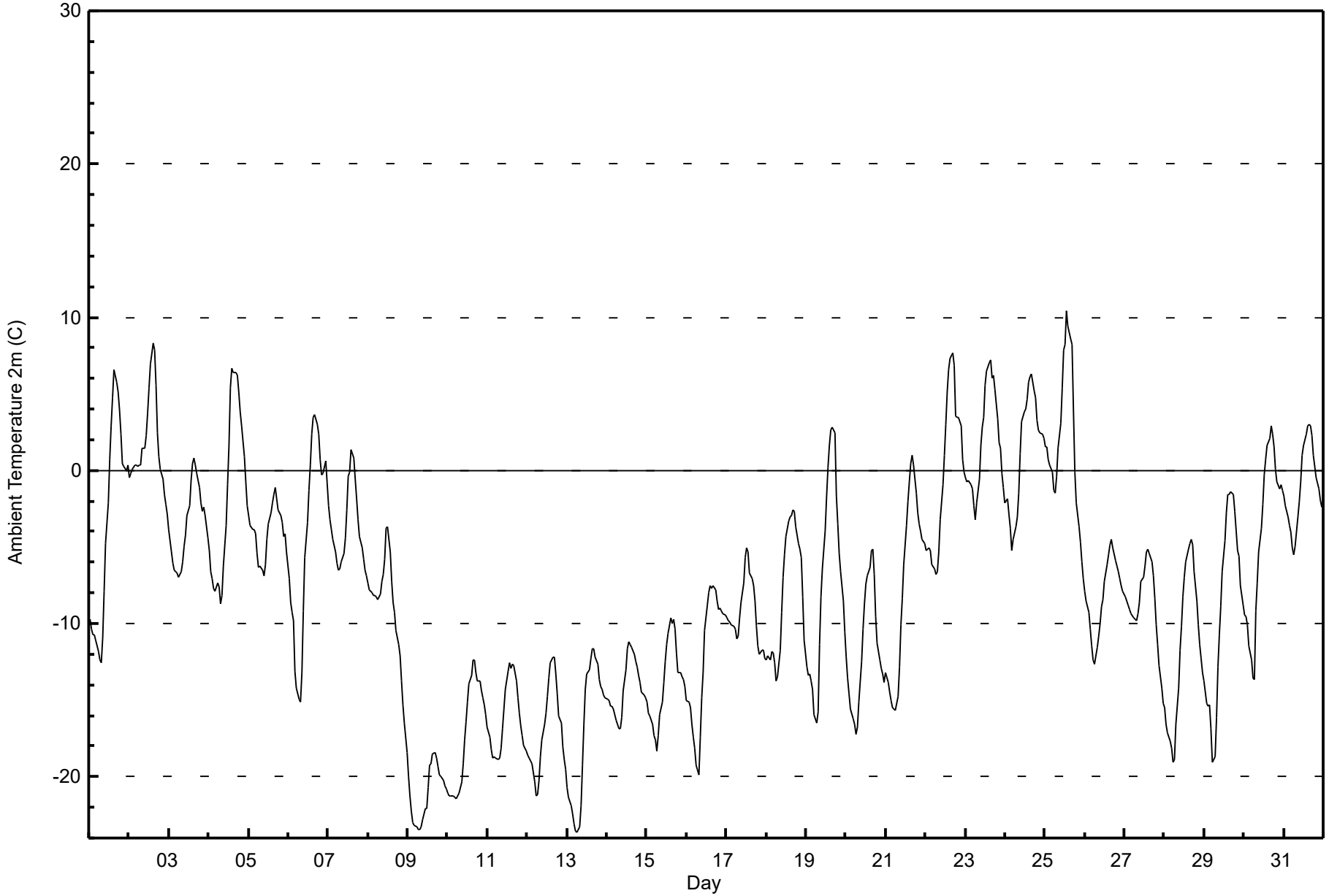
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-9.7	-10.4	-10.7	-10.7	-11.1	-11.8	-12.4	-12.5	-10.9	-7.9	-4.8	-2.1	0.7	2.9	4.8	6.6	5.7	5.1	3.9	2.3	0.5	0.2	0.0	0.3	-3.4	6.6
2-Mar	-0.4	-0.2	0.1	0.3	0.4	0.2	0.4	0.3	1.4	1.4	2.3	3.8	5.4	6.9	8.3	7.9	5.5	2.5	0.9	0.1	-0.6	-1.6	-2.2	-2.8	1.7	8.3
3-Mar	-3.9	-5.3	-6.0	-6.5	-6.7	-6.7	-6.9	-6.6	-6.0	-5.0	-4.2	-3.0	-2.3	-0.7	0.5	0.8	0.3	-0.2	-1.2	-2.2	-2.6	-2.4	-2.9	-4.4	-3.5	0.8
4-Mar	-5.3	-6.6	-7.1	-7.7	-7.9	-7.4	-7.6	-8.7	-8.2	-6.3	-3.6	-1.0	1.7	5.4	6.7	6.4	6.4	6.2	5.1	3.8	2.9	0.9	-0.7	-2.3	-1.5	6.7
5-Mar	-3.0	-3.6	-3.9	-3.9	-4.1	-5.5	-6.3	-6.3	-6.5	-6.9	-6.1	-4.5	-3.5	-2.8	-2.1	-1.6	-1.1	-1.8	-2.6	-2.9	-3.4	-4.3	-4.1	-5.3	-4.0	-1.1
6-Mar	-7.1	-8.6	-9.2	-9.9	-13.1	-14.2	-15.0	-15.1	-13.2	-9.1	-5.7	-3.4	-1.3	0.4	2.4	3.4	3.7	3.0	2.4	0.7	-0.3	-0.2	0.6	-0.9	-4.6	3.7
7-Mar	-2.4	-3.2	-3.9	-4.5	-5.3	-6.0	-6.5	-6.5	-5.9	-5.5	-4.4	-2.5	-0.3	-0.1	1.3	0.8	-0.5	-1.9	-3.2	-4.3	-5.0	-5.8	-6.5	-6.9	-3.7	1.3
8-Mar	-7.4	-7.8	-8.0	-8.2	-8.2	-8.3	-8.5	-8.1	-7.3	-6.7	-5.8	-3.7	-3.7	-5.4	-7.3	-8.6	-9.2	-10.5	-11.3	-12.1	-13.8	-15.3	-16.5	-18.4	-9.2	-3.7
9-Mar	-19.9	-21.2	-22.2	-23.0	-23.2	-23.3	-23.4	-23.4	-23.2	-22.8	-22.0	-22.0	-20.7	-19.3	-19.1	-18.5	-18.4	-18.8	-19.3	-19.9	-20.0	-20.2	-20.6	-20.8	-21.1	-18.4
10-Mar	-21.1	-21.2	-21.3	-21.3	-21.4	-21.4	-21.3	-21.0	-20.4	-19.1	-17.6	-16.4	-15.1	-14.0	-13.3	-12.4	-12.4	-13.2	-13.8	-13.8	-14.4	-14.8	-15.3	-16.0	-17.2	-12.4
11-Mar	-16.8	-17.4	-18.2	-18.8	-18.7	-18.7	-18.9	-18.8	-18.2	-16.9	-15.5	-14.3	-13.1	-12.5	-13.0	-12.6	-12.8	-13.8	-14.9	-15.9	-16.7	-17.3	-17.9	-18.3	-16.2	-12.5
12-Mar	-18.6	-18.7	-19.0	-19.1	-20.3	-21.3	-21.2	-20.2	-18.7	-17.6	-16.6	-15.8	-14.8	-13.6	-12.6	-12.2	-12.2	-13.3	-14.6	-16.1	-16.5	-18.1	-18.9	-19.5	-17.1	-12.2
13-Mar	-20.7	-21.3	-21.9	-22.5	-23.1	-23.6	-23.7	-23.3	-21.9	-19.3	-16.5	-14.3	-13.3	-13.1	-12.3	-11.7	-11.7	-12.2	-12.7	-13.7	-14.1	-14.3	-14.6	-14.9	-17.1	-11.7
14-Mar	-14.9	-15.0	-15.4	-15.4	-15.6	-16.3	-16.6	-16.8	-16.9	-16.1	-14.4	-13.0	-11.6	-11.2	-11.4	-11.5	-12.0	-12.4	-12.9	-13.3	-13.8	-14.4	-14.6	-14.9	-14.2	-11.2
15-Mar	-15.2	-15.9	-16.1	-16.6	-17.3	-17.6	-18.4	-17.3	-16.0	-15.1	-13.8	-12.5	-11.4	-10.7	-9.7	-10.0	-9.8	-10.4	-11.9	-13.2	-13.2	-13.4	-13.7	-14.1	-13.9	-9.7
16-Mar	-15.0	-15.2	-15.5	-16.6	-17.4	-18.2	-19.3	-19.9	-17.4	-14.8	-13.2	-10.5	-8.8	-8.0	-7.6	-7.7	-7.5	-7.8	-8.5	-9.0	-9.0	-9.2	-9.4	-9.4	-12.3	-7.5
17-Mar	-9.7	-9.8	-9.9	-10.1	-10.2	-10.4	-11.0	-10.8	-9.7	-8.6	-7.4	-5.7	-5.1	-5.3	-6.7	-7.1	-7.5	-8.6	-10.2	-11.5	-12.0	-11.8	-11.7	-12.3	-9.3	-5.1
18-Mar	-12.4	-12.1	-12.4	-11.8	-11.9	-12.6	-13.8	-13.5	-11.7	-9.3	-6.9	-5.5	-4.4	-3.3	-3.0	-2.9	-2.5	-2.7	-3.7	-4.8	-5.1	-5.7	-8.3	-11.1	-8.0	-2.5
19-Mar	-12.8	-13.4	-13.3	-13.7	-14.3	-15.9	-16.5	-15.7	-11.4	-8.3	-6.5	-4.0	-1.7	0.2	1.6	2.6	2.8	2.4	-1.6	-3.5	-5.4	-6.6	-8.6	-10.6	-7.3	2.8
20-Mar	-12.2	-13.6	-14.6	-15.5	-16.2	-16.6	-17.3	-16.8	-15.1	-12.5	-10.3	-8.7	-7.4	-6.9	-6.3	-5.2	-5.2	-6.8	-9.5	-11.3	-12.4	-12.9	-13.3	-13.8	-11.7	-5.2
21-Mar	-13.2	-13.8	-14.5	-15.0	-15.5	-15.6	-15.6	-14.8	-12.8	-10.1	-8.3	-6.1	-3.6	-2.0	-0.7	0.5	1.0	0.4	-1.5	-2.8	-3.5	-4.0	-4.5	-4.8	-7.5	1.0
22-Mar	-5.2	-5.1	-5.0	-5.2	-6.1	-6.4	-6.8	-6.6	-5.3	-3.2	-0.9	0.9	3.0	5.1	6.5	7.3	7.7	6.9	3.5	3.5	3.4	2.9	0.7	-0.1	-0.2	7.7
23-Mar	-0.5	-0.7	-0.7	-0.9	-1.2	-2.3	-3.2	-2.1	-0.6	1.6	2.8	3.5	5.5	6.5	7.0	7.2	6.0	6.2	5.3	3.4	1.8	1.4	-0.2	-1.1	1.9	7.2
24-Mar	-2.1	-1.8	-2.9	-3.8	-5.2	-4.5	-3.7	-3.0	-1.5	1.1	3.2	3.8	4.0	4.7	5.8	6.1	6.3	5.2	4.7	3.3	2.6	2.5	2.4	2.1	1.2	6.3
25-Mar	1.5	1.5	0.7	0.4	-0.2	-1.3	-1.5	-0.4	1.4	3.1	5.4	7.8	8.2	10.4	9.4	8.6	8.2	3.9	-0.1	-2.1	-3.7	-4.7	-6.0	-7.0	1.8	10.4
26-Mar	-7.9	-8.6	-9.3	-10.4	-11.5	-12.3	-12.7	-11.5	-10.9	-10.0	-8.9	-8.4	-7.3	-6.2	-5.5	-4.9	-4.5	-5.1	-5.8	-6.2	-6.6	-7.0	-7.5	-7.9	-8.2	-4.5
27-Mar	-8.3	-8.5	-8.8	-9.1	-9.4	-9.6	-9.7	-9.8	-9.4	-8.6	-7.2	-7.0	-6.2	-5.3	-5.1	-5.4	-6.0	-6.9	-8.3	-10.1	-11.3	-12.8	-14.2	-15.2	-8.8	-5.1
28-Mar	-15.5	-16.6	-17.2	-17.7	-18.1	-19.1	-18.9	-16.5	-14.2	-11.7	-10.2	-8.2	-7.0	-6.0	-5.2	-4.8	-4.5	-4.9	-6.6	-8.5	-10.1	-11.4	-12.3	-13.2	-11.6	-4.5
29-Mar	-13.8	-15.2	-15.4	-15.3	-16.9	-19.0	-18.7	-16.2	-12.8	-10.7	-8.9	-6.6	-4.6	-2.8	-1.6	-1.5	-1.4	-1.6	-2.7	-4.0	-5.3	-5.6	-7.5	-8.8	-9.0	-1.4
30-Mar	-9.4	-9.5	-10.1	-11.4	-12.4	-13.6	-13.7	-9.2	-7.4	-5.3	-3.8	-2.2	-0.3	0.7	1.7	2.1	2.9	2.4	1.5	0.1	-0.7	-1.2	-0.9	-1.3	-4.2	2.9
31-Mar	-1.7	-2.3	-3.1	-3.6	-4.1	-5.1	-5.5	-4.9	-3.1	-2.0	-0.7	1.0	1.7	2.4	2.9	3.0	2.9	2.3	1.0	-0.5	-0.8	-1.2	-2.0	-2.4	-1.1	3.0
	-9.8	-10.4	-10.8	-11.2	-11.8	-12.4	-12.7	-12.1	-10.8	-9.1	-7.4	-5.8	-4.4	-3.3	-2.7	-2.4	-2.6	-3.4	-4.8	-6.0	-6.7	-7.4	-8.1	-8.9	Diurnal Average	
	1.5	1.5	0.7	0.4	0.4	0.2	0.4	0.3	1.4	3.1	5.4	7.8	8.2	10.4	9.4	8.6	8.2	6.9	5.3	3.8	3.4	2.9	2.4	2.1	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Buffalo Viewpoint - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	38	5.11	5.11
-20 - 0	577	77.55	82.66
0 - 10	128	17.20	99.87
10 - 20	1	0.13	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Buffalo Viewpoint - March 2025

Maximum Value: 93.4 % on Mar 2 23:00

Maximum Daily Average: 79.9 % on Mar 3

Minimum Value: 26.2 % on Mar 29 16:00

Minimum Daily Average: 43.9 % on Mar 21

Maximum Diurnal Average: 78.0 % at hour 7

Minimum Diurnal Average: 49.9 % at hour 16

Monthly Average: 65.23 %

Percentiles: P_1 = 32.9 P_{10} = 44.9 Q_1 = 54.0 Median = 67.0 Q_3 = 77.2 P_{90} = 82.8 P_{99} = 89.2

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

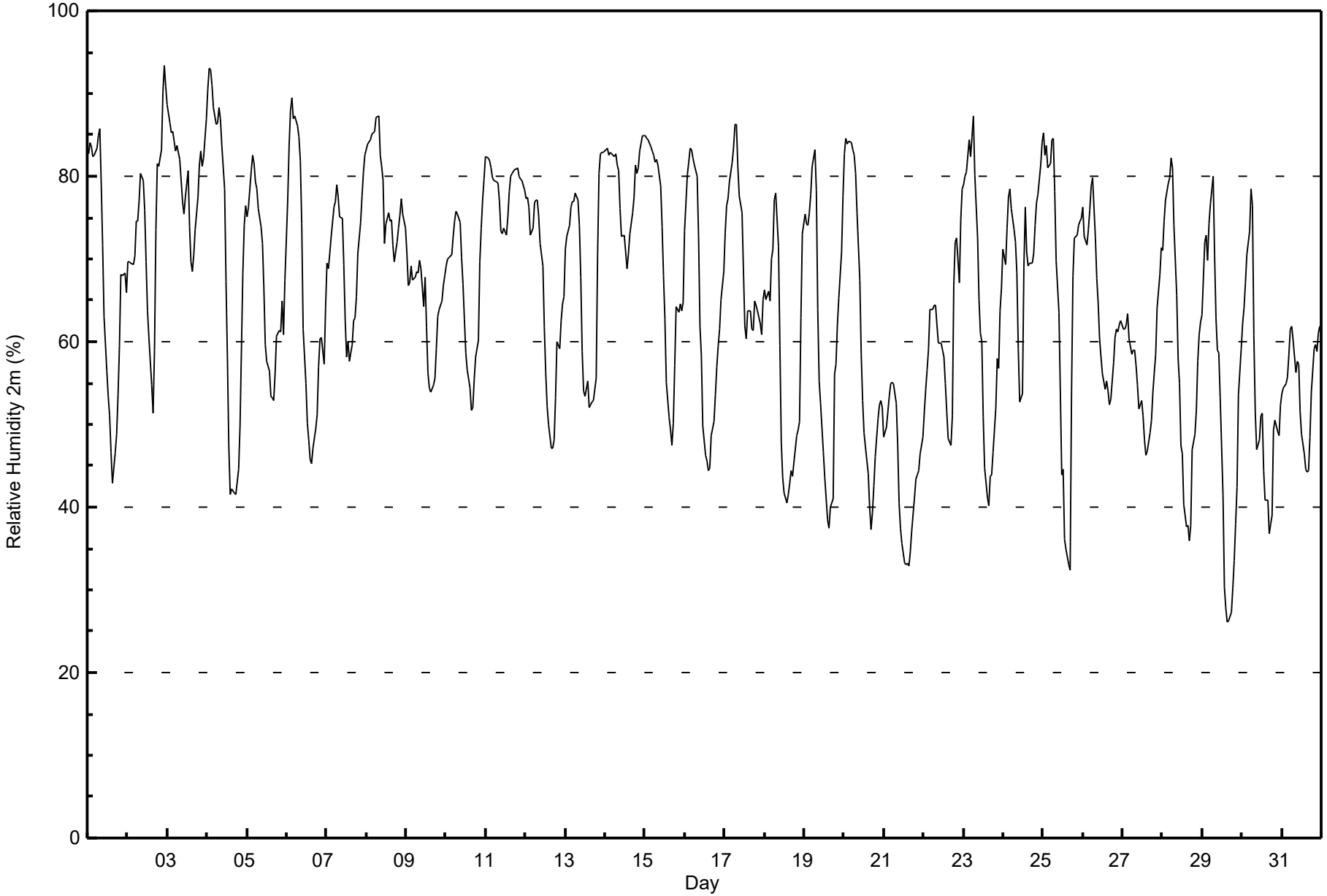
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	82.7	84.1	83.6	82.3	82.5	83.4	84.9	85.7	79.2	71.8	63.1	56.5	53.5	51.0	46.6	42.9	46.7	48.8	53.6	59.6	68.2	68.0	68.2	65.9	67.2	85.7
2-Mar	69.6	69.6	69.6	69.3	70.4	74.5	74.5	77.0	80.3	79.4	76.0	69.7	63.7	60.5	54.7	51.3	59.0	73.5	81.6	81.3	83.2	90.2	93.4	90.8	73.5	93.4
3-Mar	88.7	86.5	85.3	85.5	84.3	83.1	83.7	82.0	79.6	76.9	75.5	77.5	80.6	73.9	69.7	68.4	70.4	73.5	77.4	81.4	83.0	81.2	82.2	86.9	79.9	88.7
4-Mar	90.5	93.0	92.9	91.0	88.2	86.3	86.4	88.4	87.0	83.8	78.5	67.3	57.9	47.3	41.6	42.1	41.6	41.5	43.1	44.6	49.8	68.4	74.1	76.4	69.2	93.0
5-Mar	75.1	76.3	80.7	82.6	81.6	79.4	78.4	76.1	73.8	71.8	66.5	59.6	57.7	56.4	53.4	53.2	52.9	56.1	60.6	61.3	61.3	64.8	60.9	67.5	67.0	82.6
6-Mar	77.0	83.8	88.0	89.5	86.9	87.3	86.1	84.7	81.8	74.3	61.6	55.0	50.2	48.1	45.8	45.3	47.2	49.5	51.2	57.0	60.4	60.5	57.4	64.0	66.4	89.5
7-Mar	69.5	68.8	70.7	72.7	76.2	77.0	79.1	77.4	75.0	74.9	69.3	62.5	58.1	59.9	57.6	59.6	62.5	62.9	65.4	70.7	74.4	77.7	80.4	82.5	70.2	82.5
8-Mar	83.1	83.8	84.3	85.0	85.3	85.5	87.1	87.3	82.6	81.1	79.5	71.9	74.2	75.6	74.7	74.7	71.6	69.7	72.0	73.7	75.3	77.3	75.5	73.8	78.5	87.3
9-Mar	70.7	66.9	67.1	69.2	67.5	67.8	68.5	68.3	69.8	68.9	64.3	67.9	61.7	56.2	54.4	53.9	54.8	55.5	59.2	63.0	63.9	64.9	66.7	68.0	64.1	70.7
10-Mar	69.2	70.0	70.1	70.6	72.7	74.6	75.8	75.4	74.3	70.2	66.9	62.7	58.6	56.7	54.3	51.7	52.0	55.5	58.1	60.2	69.6	73.8	77.2	79.6	66.7	79.6
11-Mar	82.4	82.3	81.8	81.0	79.9	79.5	79.4	79.2	76.9	73.4	73.0	73.7	72.8	75.1	78.1	80.0	80.4	80.9	80.9	81.0	79.9	79.7	79.4	78.3	78.7	82.4
12-Mar	77.3	77.5	76.2	72.8	73.8	76.7	77.1	77.2	75.0	71.9	69.2	61.7	56.3	52.3	50.1	47.1	47.2	48.1	53.2	60.1	59.2	62.5	64.6	65.4	64.7	77.5
13-Mar	71.2	72.7	74.0	76.3	77.0	77.0	77.9	77.1	74.0	67.8	58.8	54.1	53.4	55.3	52.1	52.3	52.7	52.9	55.6	70.5	80.4	82.6	82.8	82.8	68.0	82.8
14-Mar	83.2	83.3	82.5	82.9	82.7	82.4	82.7	81.4	80.7	76.1	72.8	72.9	70.8	68.8	70.6	73.0	75.5	77.5	81.4	80.3	81.0	83.0	84.9	84.9	79.0	84.9
15-Mar	85.0	84.5	84.4	83.6	83.1	82.6	81.6	82.0	81.3	78.8	73.9	67.9	62.8	55.2	50.8	49.3	47.4	50.2	57.1	64.3	63.6	64.6	63.7	64.7	69.3	85.0
16-Mar	73.4	80.1	81.8	83.3	83.2	82.2	81.4	79.9	72.7	61.9	58.2	49.8	46.3	45.7	44.3	44.8	48.7	50.4	53.6	57.0	59.5	61.6	65.1	68.6	63.9	83.3
17-Mar	73.2	76.4	77.3	79.2	81.7	83.5	86.4	86.3	81.2	77.6	75.6	68.6	61.9	60.3	63.7	63.8	61.6	61.3	64.9	64.3	63.7	62.2	60.9	65.1	70.9	86.4
18-Mar	66.2	65.0	66.0	64.9	69.9	71.3	77.1	78.0	71.5	59.5	47.8	43.6	41.7	40.5	41.5	42.9	44.5	43.7	45.3	48.6	49.3	50.3	62.9	73.1	56.9	78.0
19-Mar	75.4	74.2	74.1	75.5	77.8	81.3	83.2	78.3	64.0	55.2	52.5	46.7	43.6	41.0	38.5	37.5	39.9	40.9	56.1	57.3	62.1	65.2	70.9	77.6	61.2	83.2
20-Mar	82.7	84.5	83.9	84.2	84.1	83.2	82.5	80.4	75.5	67.5	58.5	52.9	48.9	47.3	44.0	39.9	37.4	39.3	42.6	46.1	50.7	52.3	52.9	52.0	61.4	84.5
21-Mar	48.5	49.6	51.5	53.4	54.9	55.0	54.9	52.6	47.7	40.6	37.4	35.5	33.3	33.1	33.3	32.8	34.6	37.1	41.2	43.4	44.0	44.3	46.4	48.4	43.9	55.0
22-Mar	51.6	54.3	56.6	59.2	63.8	63.8	64.5	64.5	62.1	59.9	59.8	59.0	58.1	54.9	51.5	48.3	47.5	51.0	66.7	72.1	72.6	67.0	74.8	78.5	60.9	78.5
23-Mar	79.0	80.0	80.5	84.4	82.4	84.8	87.3	80.2	72.5	65.1	61.0	60.0	50.8	44.8	41.1	40.1	43.7	43.9	46.6	52.1	58.0	56.7	63.7	66.4	63.5	87.3
24-Mar	71.2	69.3	73.8	77.4	78.5	76.1	73.6	72.1	68.3	59.2	52.7	53.7	69.0	76.2	70.9	69.1	69.5	69.5	70.6	74.1	76.8	77.8	81.3	84.0	71.4	84.0
25-Mar	85.3	82.6	83.8	80.9	81.6	84.5	84.6	78.1	69.9	63.6	53.9	43.9	44.5	36.1	35.0	33.0	32.3	54.1	68.0	72.5	72.9	74.1	74.7	74.9	65.2	85.3
26-Mar	76.3	72.8	71.7	73.5	75.9	78.8	79.8	72.5	67.6	64.6	60.4	58.1	56.2	54.2	55.3	54.1	52.4	53.0	57.5	60.4	61.6	61.1	62.0	62.6	64.3	79.8
27-Mar	61.5	61.5	62.0	63.5	60.3	58.5	59.1	59.0	57.1	54.7	51.9	52.8	51.1	48.1	46.3	46.7	49.0	50.6	53.9	56.3	58.5	64.0	68.1	71.4	56.9	71.4
28-Mar	71.1	74.6	77.1	79.2	79.9	82.2	81.0	74.1	65.6	57.9	54.9	47.4	46.4	40.4	37.6	37.7	35.9	37.7	47.0	48.8	51.7	57.6	60.9	62.4	58.7	82.2
29-Mar	63.2	72.1	72.9	69.8	74.3	76.7	80.0	70.6	62.9	59.0	58.7	53.3	41.5	30.4	27.8	26.2	26.3	27.2	30.2	33.6	38.0	42.3	53.6	59.1	52.1	80.0
30-Mar	62.3	64.0	67.1	70.6	73.4	78.5	76.5	60.9	51.5	46.9	48.1	51.0	51.4	44.5	40.9	40.8	36.8	37.9	39.0	49.3	50.5	49.2	48.6	52.3	53.8	78.5
31-Mar	53.7	54.4	54.9	55.8	58.4	61.5	61.9	60.2	56.2	57.7	57.3	51.4	48.9	46.4	44.6	44.3	44.4	48.4	54.0	59.1	59.6	58.8	60.9	61.9	54.8	61.9
	73.2	74.1	75.0	75.8	76.5	77.4	78.0	75.7	71.5	66.8	62.5	58.3	55.7	52.8	50.7	49.9	50.5	53.0	57.7	61.4	64.0	65.9	68.4	70.6	Diurnal Average	
	90.5	93.0	92.9	91.0	88.2	87.3	87.3	88.4	87.0	83.8	79.5	77.5	80.6	76.2	78.1	80.0	80.4	80.9	81.6	81.4	83.2	90.2	93.4	90.8	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Buffalo Viewpoint - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Buffalo Viewpoint - March 2025

Maximum Speed: 24 km/h on Mar 25 17:00

Maximum Daily Speed Average: 13.9 km/h on Mar 14

Minimum Speed Value: 0 km/h on Mar 4 06:00

Minimum Daily Speed Average: 0.7 km/h on Mar 15

Maximum Diurnal Speed Average: 4.9 km/h at hour 19

Minimum Diurnal Speed Average: 1.6 km/h at hour 9

Monthly Average Velocity: 3.3 km/h 17.8 deg

Percentiles: P_1 = 1 P_{10} = 4 Q_1 = 5 Median = 7 Q_3 = 10 P_{90} = 14 P_{99} = 19

Hours in Service: 744

Hours of Data: 741

Hours of Missing Data: 3

Percent Operational Time: 99.6

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	SSE6	SSE6	SSE7	SSE10	SSE10	SSE9	SSE9	SSE9	SSE10	SSE9	SE7	SE7	SE6	SE8	SE6	SE6	SE7	SE7	SSE6	SE7	SE9	SE9	SE5	S5	SSE7.2	SSE10
2-Mar	SSE7	SSE8	SSE5	S6	SSE6	SSE7	SSE7	NNW3	NNW9	N9	NW5	NW7	WSW8	W7	WNW6	NW9	NNW10	N13	NNE13	N12	NNE7	NNE9	NNE8	NNE11	N3.0	N13
3-Mar	NNE14	NNE12	NNE9	N8	N9	N7	N3	SSW0	SSW2	SSW1	N3	W2	WSW4	SSW4	ENE1	ESE7	ESE8	SE8	SE6	SSE5	SSE6	SE6	SSE7	SSE8	ENE2.0	NNE14
4-Mar	SSE7	SSE8	SSE7	SSE7	SSW6	SW0	SE6	SE8	SE8	SE7	SE6	ESE6	SE5	SW2	WSW12	WSW11	WSW9	SW7	SW8	SW10	W11	N10	N9	N9	SSW2.8	WSW12
5-Mar	NNE9	N11	N13	N11	N15	N17	N20	NNE17	NE12	NE9	NE4	NNE4	N6	NE5	ESE9	ESE10	SE8	ESE7	E5	E4	SE4	E2	ESE4	NE4	NNE6.3	N20
6-Mar	UO	NNW1	NNW4	NW3	SSE4	SE5	SE5	S3	S5	SSE7	SSE8	SSE8	SSE7	SSE9	SE8	SE8	ESE8	SE5	SE6	SSE7	SW2	WNW6	WNW7	N8	SSE3.3	SSE9
7-Mar	N11	N9	N5	N7	NNW7	N7	N6	NNW5	N4	N6	NNE4	SSW6	ENE3	NE7	NE4	N12	N12	N11	NNW12	N11	N10	N9	N11	N8	N7.0	N12
8-Mar	N8	NNW7	N5	N8	N8	N5	NNW6	NNW7	NNW7	NW7	NW5	NW6	N14	N19	N22	N24	N19	N13	NNE10	NNE10	NNE14	N12	NNE14	NNE16	N10.5	N24
9-Mar	NNE16	NNE16	NNE12	NNE11	NNE12	NNE12	NNE13	NE12	NE11	NNE12	NNE11	NNE11	NNE8	N11	N8	N8	N9	N9	N9	N8	N7	N8	N9	N6	NNE10.1	NNE16
10-Mar	N7	N6	N5	N5	N6	N4	NNW2	SSW0	SSW3	SSW4	S5	S7	SSE6	E3	ESE8	ESE7	ESE6	E4	E4	NE5	NE8	NNE7	NNE7	NNE6	NE2.2	ESE8
11-Mar	NNE7	NNE8	N9	N10	N8	N9	N7	N9	N10	N11	N12	N11	N14	N14	N15	N15	N15	N16	N16	N16	N18	N17	N15	N14	N12.3	N18
12-Mar	N13	N12	N11	N10	N7	N5	NE2	W4	W3	WNW4	NW5	N4	N5	N5	NW5	NW4	N4	NW2	WNW3	N5	NE4	NNE5	NNE7	NE5	N4.8	N13
13-Mar	NNW5	N5	N3	NNW3	N2	N6	N6	NNW5	N5	N5	N7	NNW8	N12	N12	N13	N12	N16	N16	N14	N14	N12	N14	N15	N14	N9.3	N16
14-Mar	N13	N15	N18	N15	N15	N14	N16	N18	N15	N14	N14	N15	N16	N17	N17	N18	N16	N13	N11	N13	N11	N7	N7	N6	N13.9	N18
15-Mar	N5	NNW6	NNW6	NW5	NW5	UO	UO	NNW3	NNW2	N3	N5	N4	N6	N5	NW3	SE4	SE5	SE5	SE6	SSE4	SSE5	SSE4	S5	S4	NNE0.7	SE6
16-Mar	NNW3	NNW4	ENE1	SSW4	SSE4	SE6	SSE7	S6	SSE5	ESE5	ESE7	SE8	ESE9	SE9	ESE10	ESE8	SSE7	ESE7	E6	ESE7	SE8	SE9	SE8	SE7	SE5.5	ESE10
17-Mar	SE6	SSE4	SE3	S4	S5	SSE4	SSE5	SE4	WSW2	NW6	NNW7	N10	N11	N10	N13	N11	NNE10	NNE8	NNE7	NNE8	NNE5	N1	WNW2	SSW3	NNE2.9	N13
18-Mar	SSW6	SW4	SSW6	WNW3	NW6	NNW4	N4	N3	W3	SW5	W6	WSW7	WSW10	W8	E3	E7	NE6	E7	ESE6	SE5	ESE3	SE2	NNE5	NNW7	W0.8	WSW10
19-Mar	NNW6	NNW7	NNW8	NW5	NW2	SSE2	SE4	SSE3	SSE3	SSE3	SE6	SE9	ESE8	ESE7	ESE6	ESE7	ENE6	ESE5	N11	N15	N14	N15	N15	N13	NNE3.4	N15
20-Mar	N12	N12	N12	N8	N11	N11	N8	N7	NNE7	N6	N8	N9	N8	N10	NNW10	NNW9	NNW10	N10	N9	N8	N7	N6	E3	SE8	N8.0	N12
21-Mar	SE11	SE13	SE10	SE10	SE8	SE11	SE10	SE8	ESE7	SE7	ESE8	ESE11	SSE9	ESE11	ESE12	ESE12	ESE12	ESE12	ESE10	SE8	SE10	SE12	SE9	SSE7	SE9.7	SE13
22-Mar	SSE6	SSE7	SSE6	SSE6	SSE5	S7	SSE8	SSE8	SSE8	SSE9	SSE8	ESE8	ESE9	SE9	SE10	SE10	SSE9	NW3	NNW8	WNW5	W8	NW12	N11	N5	SSE3.5	NW12
23-Mar	S3	ESE1	W2	W7	W5	WNW7	W4	WSW4	WNW5	NW4	W2	NNE6	ESE5	ESE10	ESE10	ESE11	ESE9	E6	ESE6	SE5	E5	ESE4	ESE5	SE4	ESE1.9	ESE11
24-Mar	ESE4	E4	SE1	SE2	SSE6	SSE6	SSE5	SSE4	S6	S6	S5	SE6	S7	SSW9	SSW6	WSW1	WSW5	NW10	NW11	NW11	WNW9	WSW6	WSW5	W10	SW2.2	NW11
25-Mar	W11	W14	W11	W12	W12	NW5	WSW6	WSW6	W8	W8	WSW6	SSW7	WSW5	W20	WNW14	NW21	NW24	N18	NNE19	NNE17	NNE15	N16	N17	N18	NW8.6	NW24
26-Mar	N13	N13	N13	N11	N9	NNE6	NNE6	NNE9	NNE13	NNE9	N8	N7	N6	NW6	WNW8	NW6	N9	N11	N11	N10	N11	NNE11	NNE11	NNE10	N8.9	N13
27-Mar	NNE12	NNE11	NNE14	NNE15	NNE14	NNE14	NNE14	NNE14	NNE14	NNE14	NNE15	N16	N17	N14	N16	N16	N17	N17	N16	N15	N14	N9	N7	N8	NNE13.7	N17
28-Mar	N9	N6	N7	N8	N7	N6	N6	N3	NNW3	N5	NNE6	NNW6	NW6	NNW7	NW6	NW7	NW6	NNW8	N9	NNE9	NNE8	N9	N10	N5	N6.4	N10
29-Mar	N7	N7	NNW5	NNE5	N5	WNW3	WNW4	WNW3	WNW4	NW3	N5	NNE6	NNE6	N2	N4	ESE8	ESE8	SE9	SSE7	S6	NNE3	NNE6	N6	NNW7	NNE2.3	SE9
30-Mar	NNW6	NW4	WNW3	SW2	SSE1	SSE3	WSW2	N0	W2	NNW3	N6	NNE8	NNE7	E4	ESE7	ESE7	SSE6	E6	ENE7	NNE8	NNE9	NE8	E8	SE11	ENE2.6	SE11
31-Mar	SE9	SE9	SE8	SE7	SE5	SSE5	SSE5	SSE6	SSE7	SE8	SE10	SSE9	SSE8	SSE10	SSE10	SSE10	SSE10	ESE12	ESE8	SE7	SE9	SE9	SE9	SE10	SE8.2	ESE12
	NNE4.0	N3.7	N3.6	N3.0	N2.9	NNE2.7	NNE2.0	NNE2.0	NNE1.6	NNE1.9	NNE2.3	NNE2.3	NNE2.6	N2.6	NNE2.9	NNE3.1	NNE3.6	NNE4.7	NNE4.9	NNE4.6	NNE4.5	NNE4.8	NNE4.9	NNE4.0	Diurnal Average	
	NNE16	NNE16	N18	N15	N15	N17	N20	N18	N15	NNE14	NNE15	N16	N17	W20	N22	N24	NW24	N18	NNE19	NNE17	N18	N17	N17	N18	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 - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7 km/h on Mar 25 17:00

Minimum Value: 1 km/h on Mar 30 02:00

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

Hours in Service:	744
Hours of Data:	741
Hours of Missing Data:	3
Hours of Calibration:	0
Percent Operational Time:	99.6

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

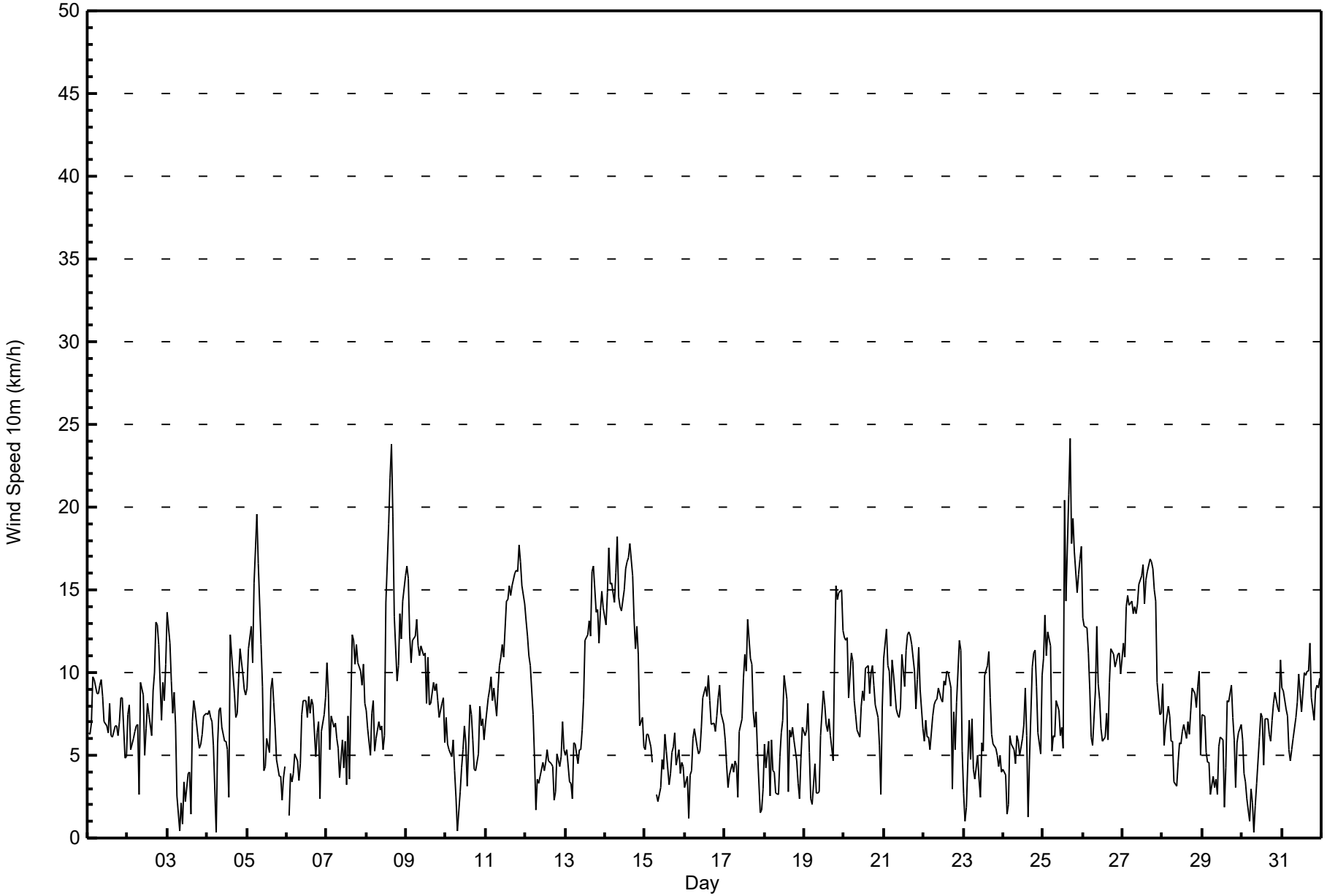
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Buffalo Viewpoint - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	202	27.26	27.26
6 - 11	405	54.66	81.92
12 - 19	128	17.27	99.19
20 - 28	6	0.81	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 741

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Buffalo Viewpoint - March 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	35	8	8	3	11	9	18	25	8	9	6	8	8	12	17	17	202
6 - 11	108	42	6	2	5	41	59	58	8	7	3	9	10	7	15	25	405
12 - 19	84	29	1	0	0	5	2	0	0	0	0	1	3	1	1	1	128
20 - 28	3	0	0	0	0	0	0	0	0	0	0	0	1	0	2	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	230	79	15	5	16	55	79	83	16	16	9	18	22	20	35	43	741

Total Number of Valid Hours: 741

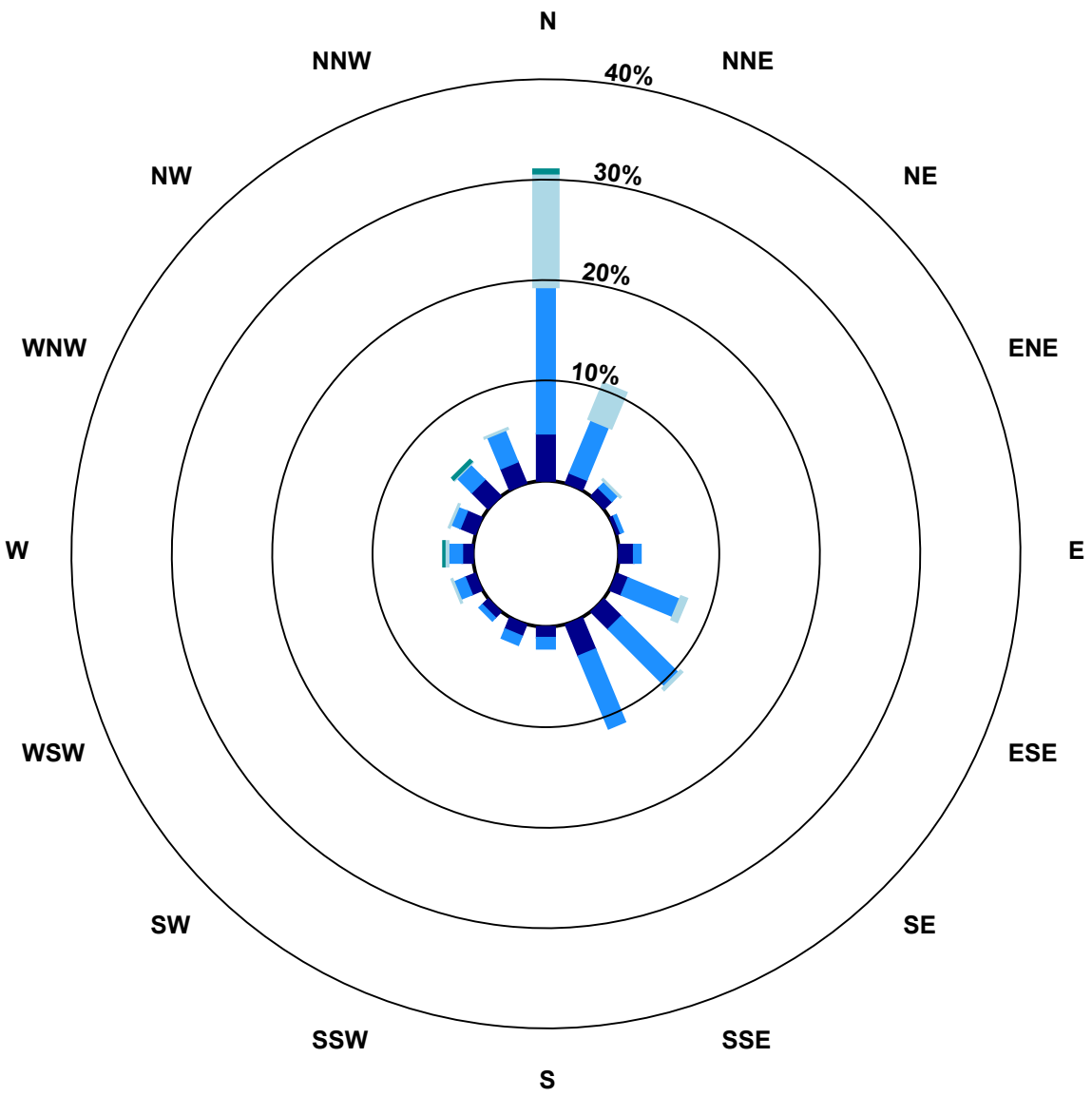
Total Number of Hours: 744

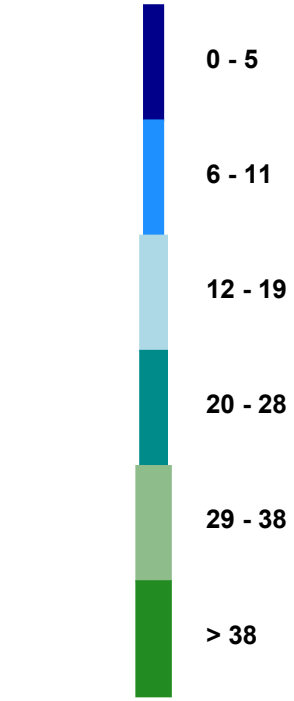
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 10m (WS10) - km/h

Buffalo Viewpoint





Total Number of Valid Hours: 741

Direction of Maximum Speed: 313 deg on Mar 25 17:00
Direction of Maximum Daily Speed Average: 357.4 deg on Mar 14

Direction of Minimum Speed: 218 deg on Mar 4 06:00

Direction of Minimum Daily Speed Average: 0.7 deg on Mar 15

Monthly Average Direction: 17.8 deg

Hours in Service:	744
Hours of Data:	741
Hours of Missing Data:	3
Percent Operational Time:	99.6

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	152	159	161	166	158	153	154	156	159	159	142	124	127	127	132	135	132	133	159	144	133	131	140	186	147.0
2-Mar	149	147	162	172	166	154	151	339	339	353	321	305	256	281	297	306	334	10	15	8	17	18	17	18	352.1
3-Mar	18	23	20	11	7	358	2	205	201	197	10	281	246	211	78	121	123	129	124	149	162	146	148	152	78.3
4-Mar	150	157	148	159	204	218	127	135	143	135	125	123	129	225	247	240	243	236	233	234	278	349	355	359	198.0
5-Mar	17	11	4	356	3	7	6	12	34	39	42	12	1	37	113	121	137	110	84	95	130	90	110	48	32.2
6-Mar	UO	345	344	319	157	144	139	169	173	161	168	165	163	148	140	128	123	137	146	154	220	282	288	350	156.7
7-Mar	1	2	11	355	345	353	350	348	2	10	17	198	60	45	50	351	3	353	348	349	353	350	356	360	358.8
8-Mar	357	347	355	8	358	351	327	340	327	312	305	309	358	353	354	360	10	11	20	24	12	8	25	21	359.6
9-Mar	13	18	17	21	31	20	28	34	38	28	22	21	21	357	7	353	359	11	3	0	354	6	359	354	15.0
10-Mar	353	353	358	355	360	358	340	211	192	206	185	178	164	84	113	118	112	92	83	49	36	15	26	15	52.8
11-Mar	24	18	6	2	357	360	5	357	357	358	356	351	354	355	357	0	356	356	3	1	360	359	357	354	359.2
12-Mar	354	357	354	358	359	7	51	267	265	282	315	359	359	354	326	305	356	320	302	358	46	21	31	45	352.8
13-Mar	337	11	355	347	349	356	356	345	2	356	359	348	354	351	352	1	4	9	5	5	1	3	5	4	359.5
14-Mar	359	2	3	359	360	1	355	357	1	355	354	360	355	351	352	354	354	353	354	6	2	358	0	4	357.4
15-Mar	356	334	327	322	315	UO	UO	344	346	355	7	351	5	10	308	146	145	146	144	152	151	158	169	174	13.0
16-Mar	329	328	63	196	149	139	159	169	153	111	116	125	123	143	113	116	153	117	101	122	128	127	134	140	130.5
17-Mar	146	151	143	179	177	167	165	146	256	320	336	355	359	360	10	7	23	14	12	30	21	2	290	211	12.6
18-Mar	212	219	207	283	310	345	9	11	277	232	271	257	255	259	90	87	47	92	116	136	115	140	13	346	268.7
19-Mar	333	331	333	320	304	163	145	150	158	165	131	141	119	109	110	110	66	114	359	3	360	5	358	352	27.4
20-Mar	349	354	357	357	3	8	10	8	12	4	358	357	352	355	347	336	348	353	359	353	349	4	88	133	358.8
21-Mar	129	132	133	131	133	134	135	127	121	145	115	114	148	117	117	111	113	117	118	130	146	138	140	153	128.0
22-Mar	159	167	166	161	168	173	165	164	158	154	157	116	121	124	124	144	166	325	337	285	265	315	353	354	155.6
23-Mar	182	116	259	271	271	292	273	243	282	309	280	14	102	112	120	118	112	98	113	125	100	109	111	124	121.5
24-Mar	123	82	127	126	155	157	154	148	170	170	187	136	171	197	192	238	255	319	321	316	300	258	253	271	219.4
25-Mar	262	259	270	272	276	309	251	258	264	274	253	209	256	263	300	306	313	8	15	17	16	4	4	7	312.6
26-Mar	6	358	358	11	11	18	24	16	15	23	9	11	360	306	285	316	353	7	2	2	2	14	13	14	3.5
27-Mar	21	15	14	13	14	14	18	21	28	20	13	6	4	2	9	11	5	10	9	9	10	3	356	358	11.4
28-Mar	11	355	358	5	10	356	1	356	338	357	13	347	316	343	326	313	322	335	357	16	15	7	6	353	354.1
29-Mar	10	349	347	20	11	301	289	290	301	323	9	15	14	5	7	116	122	145	157	170	16	27	350	347	17.9
30-Mar	337	321	301	225	163	152	245	9	277	347	11	13	19	84	111	120	163	81	71	33	29	37	96	131	58.9
31-Mar	137	140	143	142	139	150	150	159	151	144	141	155	165	150	153	150	150	118	117	125	136	143	141	146	142.9
	13.5	9.5	4.3	359.0	4.3	19.2	31.0	22.1	16.1	15.5	18.8	26.9	16.6	9.1	24.4	31.4	25.0	31.3	23.8	20.4	15.1	15.2	17.5	16.3	
	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

Buffalo Viewpoint - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 100 deg on Mar 10 08:00

Minimum Value: 5 deg on Mar 4 02:00

Percentiles: P_1 = 7 P_{10} = 14 Q_1 = 18 Median = 21 Q_3 = 29 P_{90} = 42 P_{99} = 88

Hours in Service:	744
Hours of Data:	741
Hours of Missing Data:	3
Hours of Calibration:	0
Percent Operational Time:	99.6

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	22	21	22	19	19	19	16	14	15	23	28	22	25	20	21	22	16	11	13	15	7	11	51	17	51
2-Mar	17	14	17	21	26	27	26	81	17	14	26	23	16	26	27	22	22	19	21	23	28	20	20	20	81
3-Mar	21	19	22	17	17	17	35	92	29	87	56	52	44	43	84	21	18	16	11	16	14	10	7	6	92
4-Mar	6	5	13	16	25	88	33	12	17	16	27	28	27	94	21	22	20	16	13	16	41	17	15	11	94
5-Mar	17	19	17	19	21	20	21	20	21	21	38	37	30	46	21	23	29	22	26	25	27	42	19	21	46
6-Mar	UO	19	8	24	35	14	17	26	27	27	33	35	34	32	32	24	22	50	10	5	70	24	13	23	70
7-Mar	18	19	27	19	20	15	14	18	19	18	35	42	66	31	69	21	21	20	19	20	21	17	17	19	69
8-Mar	19	20	19	18	18	15	18	19	21	26	25	26	21	21	21	23	21	21	20	22	23	24	23	23	26
9-Mar	25	21	19	22	21	23	20	20	19	21	23	20	26	21	26	20	24	21	21	19	19	19	17	19	26
10-Mar	17	22	17	17	17	20	23	100	44	35	41	38	51	81	26	31	27	28	27	9	16	18	18	15	100
11-Mar	13	15	16	15	20	15	16	15	16	15	18	18	18	21	20	21	20	21	20	19	21	20	19	19	21
12-Mar	19	19	20	19	17	14	76	24	40	44	43	40	30	27	39	34	18	41	61	34	22	17	8	15	76
13-Mar	19	9	20	22	31	7	12	15	15	17	19	19	19	21	20	22	21	20	20	21	20	19	19	21	31
14-Mar	21	22	22	20	19	18	19	21	19	20	20	20	20	20	20	20	21	20	19	18	17	13	13	11	22
15-Mar	13	13	13	11	17	UO	UO	16	22	30	22	42	27	32	69	53	36	28	26	25	19	51	9	14	69
16-Mar	46	14	63	21	17	9	7	17	28	29	24	29	30	40	26	33	38	29	22	27	26	25	26	29	63
17-Mar	29	29	23	23	23	21	14	18	55	21	27	19	20	20	21	23	24	20	16	16	18	75	38	48	75
18-Mar	15	41	26	73	43	40	24	28	31	37	38	48	29	35	89	31	32	20	15	13	37	49	18	12	89
19-Mar	11	15	14	14	34	75	38	53	35	61	42	31	27	27	28	20	29	39	16	18	17	18	19	20	75
20-Mar	17	16	17	12	14	19	17	18	13	19	22	22	26	21	23	23	21	17	13	11	11	19	57	23	57
21-Mar	27	27	27	29	28	28	29	26	28	38	27	22	38	26	21	17	18	21	21	30	31	28	28	31	38
22-Mar	26	24	26	24	22	22	22	26	27	28	33	30	26	30	27	29	28	82	22	28	25	28	20	25	82
23-Mar	61	90	97	15	34	20	56	26	25	42	75	20	59	20	22	23	20	19	16	13	40	27	31	29	97
24-Mar	18	26	69	56	35	24	21	26	25	30	35	41	34	22	31	73	40	17	17	14	15	34	27	12	73
25-Mar	14	13	12	14	15	50	32	34	20	27	35	38	76	16	25	22	20	23	20	19	21	21	21	21	76
26-Mar	20	21	20	17	17	18	32	22	20	28	29	31	31	38	25	42	22	21	21	19	19	20	19	19	42
27-Mar	20	19	19	19	20	19	20	21	21	22	23	24	22	23	23	21	21	21	20	18	19	17	14	12	24
28-Mar	17	17	13	8	9	9	13	29	40	34	24	39	44	42	43	36	33	27	17	17	11	13	16	22	44
29-Mar	14	10	9	19	11	39	20	25	31	62	18	20	21	92	62	28	31	30	28	22	81	21	13	10	92
30-Mar	13	13	19	41	77	63	60	79	76	40	20	19	36	61	40	30	46	30	12	23	16	13	36	28	79
31-Mar	31	28	28	30	41	53	32	31	34	31	32	41	48	38	36	38	35	22	23	25	26	28	27	27	53
	61	90	97	73	77	88	76	100	76	87	75	52	76	94	89	73	46	82	61	34	81	75	57	48	
	Diurnal Maximum																								

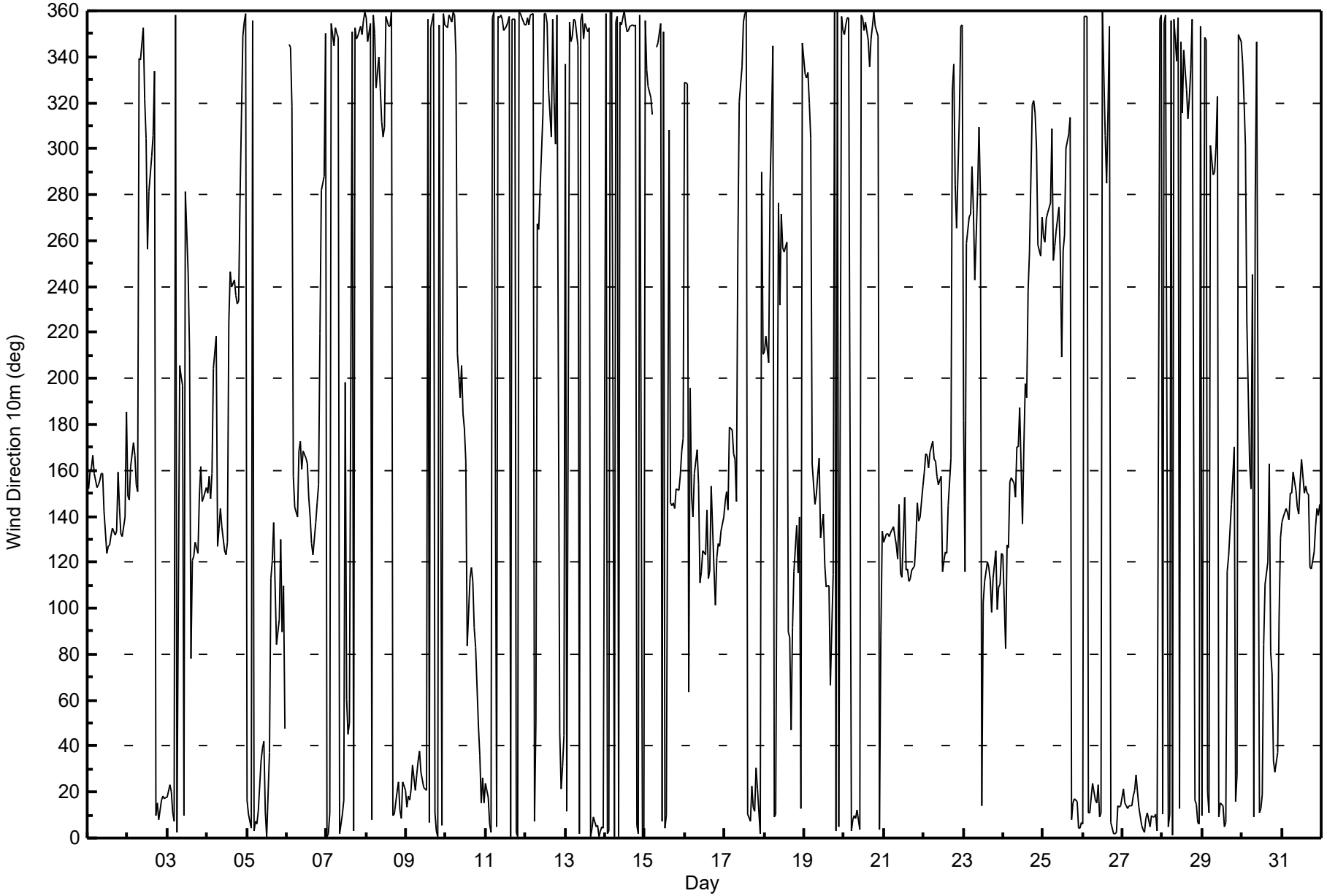
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Buffalo Viewpoint - March 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS05
MANNIX
MARCH 2025

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

April 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MANNIX (AMS05)
MARCH 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	709	35	35	100	43.3	0	8.9	0
H2S (ppb) Average	707	37	37	100	8	0	1.3	0
THC (ppm) Average	709	35	35	100	3.7	-	2.4	-
NMHC(ppm) Average	709	35	35	100	0.244	-	0.044	-
CH4(ppm) Average	709	35	35	100	3.7	-	2.4	-
Temperature 2 m (C) Average	744	0	0	100	9.6	-	1.6	-
Temperature 20 m (C) Average	744	0	0	100	9.3	-	2.1	-
Temperature 45 m (C) Average	744	0	0	100	9.3	-	1.9	-
Temperature 75 m (C) Average	744	0	0	100	9.3	-	2.6	-
Temperature 90 m (C) Average	744	0	0	100	8.7	-	2	-
Relative Humidity 2 m (%) Average	744	0	0	100	96	-	81	-
Relative Humidity 20 m (%) Average	744	0	0	100	87	-	80	-
Relative Humidity 45 m (%) Average	744	0	0	100	89	-	80	-
Relative Humidity 75 m (%) Average	744	0	0	100	91	-	82	-
Relative Humidity 90 m (%) Average	744	0	0	100	92	-	83	-
Wind Speed 20 m (km/h) Average	744	0	0	100	26	-	17	-
Wind Speed 45 m (km/h) Average	743	0	1	99.87	35	-	21	-
Wind Speed 75 m (km/h) Average	744	0	0	100	38	-	24	-
Wind Speed 90 m (km/h) Average	744	0	0	100	41	-	25	-
Wind Direction 20 m (deg) Average	744	0	0	100	-	-	-	-
Wind Direction 45 m (deg) Average	743	0	1	99.87	-	-	-	-
Wind Direction 75 m (deg) Average	744	0	0	100	-	-	-	-
Wind Direction 90 m (deg) Average	744	0	0	100	-	-	-	-
Vertical Wind Speed 20 m (km/h) Average	744	0	0	100	1.2	-	0.7	-
Vertical Wind Speed 45 m (km/h) Average	743	0	1	99.87	1.8	-	1	-
Vertical Wind Speed 75 m (km/h) Average	744	0	0	100	1.2	-	0.1	-
Vertical Wind Speed 90 m (km/h) Average	744	0	0	100	2	-	0.7	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MANNIX (AMS05)
MARCH 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	709	1.73	4	-	0	0.1	0.2	0.4	1.2	4.6	43.3
H2S (ppb) Average	707	0.44	0.7	-	0	0.1	0.1	0.2	0.5	0.9	8.4
THC (ppm) Average	709	2.14	0.2	-	1.9	2	2	2.1	2.2	2.4	3.7
NMHC(ppm) Average	709	0.019	0.031	-	0	0	0	0	0	0.1	0.244
CH4(ppm) Average	709	2.12	0.2	-	1.9	2	2	2.1	2.1	2.4	3.7
Temperature 2 m (C) Average	744	-7.54	7.2	-	-23.6	-17.2	-13	-7.3	-2.2	1.7	9.6
Temperature 20 m (C) Average	744	-7.6	7.3	-	-23.9	-17.2	-13.3	-7.6	-2	2	9.3
Temperature 45 m (C) Average	744	-7.93	7.5	-	-24.7	-17.6	-13.8	-8.2	-2.3	2.2	9.3
Temperature 75 m (C) Average	744	-7.5	7.4	-	-24.3	-16.8	-13.4	-7.9	-1.9	3.1	9.3
Temperature 90 m (C) Average	744	-8.47	7.6	-	-25.9	-18.1	-14.6	-8.7	-2.7	2.3	8.7
Relative Humidity 2 m (%) Average	744	66.3	14	-	26	47	55	68	78	84	96
Relative Humidity 20 m (%) Average	744	63.1	14	-	23	44	52	64	75	81	87
Relative Humidity 45 m (%) Average	744	62.4	15	-	23	43	51	63	75	81	89
Relative Humidity 75 m (%) Average	744	62.7	15	-	23	43	52	63	75	82	91
Relative Humidity 90 m (%) Average	744	62.8	15	-	23	42	52	63	75	83	92
Wind Speed 20 m (km/h) Average	744	10	5	-	0	3	6	9	14	17	26
Wind Speed 45 m (km/h) Average	743	12.9	7	-	0	4	8	12	18	22	35
Wind Speed 75 m (km/h) Average	744	14.1	8	-	0	4	8	13	20	25	38
Wind Speed 90 m (km/h) Average	744	14.9	8	-	0	4	9	14	21	26	41
Wind Direction 20 m (deg) Average	744	-	-	-	-	-	-	-	-	-	-
Wind Direction 45 m (deg) Average	743	-	-	-	-	-	-	-	-	-	-
Wind Direction 75 m (deg) Average	744	-	-	-	-	-	-	-	-	-	-
Wind Direction 90 m (deg) Average	744	-	-	-	-	-	-	-	-	-	-
Vertical Wind Speed 20 m (km/h) Average	744	0.01	0.4	-	-1	-0.5	-0.3	-0.1	0.4	0.6	1.2
Vertical Wind Speed 45 m (km/h) Average	743	0.02	0.7	-	-1.7	-0.9	-0.5	0	0.6	1	1.8
Vertical Wind Speed 75 m (km/h) Average	744	-0.14	0.4	-	-1.4	-0.7	-0.4	-0.1	0.1	0.3	1.2
Vertical Wind Speed 90 m (km/h) Average	744	0.27	0.4	-	-1.6	-0.1	0.1	0.3	0.5	0.7	2

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MANNIX (AMS05)
MARCH 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
Wind Speed, Wind Direction, Vertical Wind Speed, 45m	27 Mar 2025 12:00	27 Mar 2025 12:00	1	Flat line in sensor output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Mannix - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 43.3 ppb on Mar 11 21:00 Maximum Daily Average: 8.9 ppb on Mar 11

Minimum Value: 0.0 ppb on Mar 1 02:00 Minimum Daily Average: 0.1 ppb on Mar 21
Maximum Diurnal Average: 3.6 ppb at hour 14 Minimum Diurnal Average: 0.3 ppb at hour 8
Monthly Average: 1.73 ppb Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.2 Median = 0.4 Q_3 = 1.2 P_{90} = 4.6 P_{99} = 23.5

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.6	0.6	0.7	0.9	0.7	0.3	0.3	0.2	0.2	0.2	0.3	0.9
2-Mar	0.2	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.4	6.9	4.1	1.4	2.8	1.4	0.8	0.4	0.9	0.3	0.2	0.1	0.2	0.3	0.4	0.1	0.9	6.9
3-Mar	0.1	0.1	Z	0.8	1.3	1.2	0.7	0.4	0.3	0.5	0.5	0.8	1.0	0.6	0.5	0.5	0.8	0.4	0.4	0.4	0.2	0.1	0.1	0.1	0.5	1.3
4-Mar	0.1	0.2	0.1	Z	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.3	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	7.0	7.7	2.4	0.9	7.7
5-Mar	0.6	0.3	1.2	1.2	Z	4.8	2.8	0.8	0.4	1.3	1.4	5.3	14.2	12.1	6.8	7.1	5.7	3.0	2.1	1.9	1.6	1.6	1.4	1.3	3.4	14.2
6-Mar	0.8	0.5	0.4	0.2	0.1	Z	0.3	0.1	0.1	0.1	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.7	0.3	0.8
7-Mar	Z	3.2	1.9	0.9	0.6	0.4	0.5	0.6	0.8	1.2	2.1	2.2	2.9	6.2	7.5	7.9	5.2	4.6	7.9	8.5	12.3	1.1	0.6	0.6	3.5	12.3
8-Mar	0.1	Z	0.4	0.5	0.7	0.8	0.2	0.1	0.3	0.2	2.4	2.9	2.4	1.5	0.2	3.2	0.9	0.1	0.0	0.0	0.2	0.3	0.0	0.0	0.8	3.2
9-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	4.9	2.2	1.3	1.5	0.1	0.3	1.6	1.3	0.1	0.3	0.1	0.6	4.9
10-Mar	0.4	0.4	0.3	Z	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.4	1.1	0.9	0.6	0.5	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.4	1.1
11-Mar	0.2	0.3	0.2	0.5	Z	0.7	0.6	0.6	1.1	0.9	2.1	1.7	3.7	10.9	11.0	4.7	8.0	14.2	8.3	15.0	43.3	27.8	28.0	21.9	8.9	43.3
12-Mar	7.9	9.9	16.5	11.9	1.8	0.6	0.4	Z	0.5	0.6	C	C	C	C	5.0	5.2	5.0	4.7	3.4	2.8	0.5	0.3	0.2	0.2	4.1	16.5
13-Mar	Z	0.2	0.2	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.4	1.3	0.3	0.9	2.9	0.4	0.3	0.1	0.1	0.2	0.0	0.2	3.2	13.9	1.2	13.9
14-Mar	16.6	12.5	11.4	10.1	23.6	7.7	1.3	Z	7.9	6.9	7.1	11.6	7.5	7.5	2.5	1.1	4.7	2.8	4.4	0.7	0.8	0.3	0.7	0.7	6.5	23.6
15-Mar	0.9	0.9	Z	0.3	0.2	0.2	0.4	0.3	0.3	0.5	0.8	0.7	1.7	25.4	5.0	2.4	1.8	4.2	3.7	2.8	2.9	4.0	4.2	2.9	2.9	25.4
16-Mar	1.8	1.0	0.5	Z	0.3	0.3	0.3	0.5	0.9	0.9	1.2	1.3	0.8	0.5	0.5	0.7	0.7	0.6	0.3	0.2	0.2	0.2	0.2	0.1	0.6	1.8
17-Mar	0.1	0.1	0.1	0.0	Z	0.1	0.1	0.1	0.1	0.2	1.9	1.7	1.5	1.1	1.2	0.9	0.8	0.7	0.5	0.5	0.4	0.3	0.2	0.2	0.6	1.9
18-Mar	0.2	0.3	0.2	0.3	0.5	Z	0.4	0.8	0.9	0.7	0.5	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	0.4	0.9
19-Mar	Z	0.2	0.2	0.2	0.3	0.3	0.5	0.6	0.7	0.8	1.1	1.3	1.7	1.1	1.2	1.1	1.1	1.1	4.8	18.8	29.0	11.5	24.5	20.8	5.3	29.0
20-Mar	1.6	Z	7.5	3.0	2.8	2.8	0.4	1.3	1.1	0.7	0.9	0.9	0.6	0.3	0.3	0.2	0.2	0.1	0.6	3.8	6.6	0.8	0.3	0.2	1.6	7.5
21-Mar	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	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.2
22-Mar	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.2	0.4	0.5	0.5	0.7	0.8	0.6	0.7	0.7	0.6	2.4	2.1	1.0	0.4	1.5	0.6	0.6	2.4
23-Mar	0.4	0.2	0.2	0.1	Z	0.0	0.0	0.1	0.4	1.8	5.8	1.4	0.6	0.5	0.4	0.2	0.3	0.3	0.3	0.3	0.1	0.2	0.6	0.8	0.7	5.8
24-Mar	0.4	0.4	0.3	0.2	0.2	Z	0.2	0.2	0.3	0.4	0.4	0.4	0.3	0.3	0.4	0.3	0.4	0.3	1.7	1.9	0.9	0.3	0.2	0.2	0.5	1.9
25-Mar	Z	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.1	0.1	1.2	0.7	1.7	0.1	0.0	0.0	0.3	0.3	0.1	0.3	1.7
26-Mar	0.0	Z	3.4	2.8	0.2	0.0	0.0	0.1	0.1	0.1	0.8	7.8	3.2	0.6	1.4	2.6	0.7	0.4	1.3	4.3	0.6	0.2	0.2	0.2	1.3	7.8
27-Mar	0.3	0.4	Z	2.4	2.4	0.6	0.3	0.3	0.2	0.1	0.2	3.2	3.0	0.9	4.8	6.6	4.4	0.6	0.5	0.5	1.9	0.3	0.4	0.7	1.5	6.6
28-Mar	0.1	0.1	0.0	Z	0.2	0.1	0.3	0.2	0.5	6.0	1.3	2.2	1.9	1.7	0.8	1.9	1.0	0.4	0.6	0.1	0.2	0.6	0.2	0.1	0.9	6.0
29-Mar	0.1	0.1	0.2	0.0	Z	0.3	0.3	0.4	0.3	0.9	4.3	6.5	15.1	24.6	9.5	4.6	5.3	3.8	3.2	2.3	1.7	2.7	2.6	1.2	3.9	24.6
30-Mar	0.3	0.2	0.1	0.1	0.2	Z	0.3	0.5	0.4	0.4	0.4	0.5	0.3	0.2	0.4	0.4	0.3	0.2	0.2	0.1	0.2	0.1	0.3	0.3	0.3	0.5
31-Mar	Z	0.3	0.2	0.1	0.1	0.1	0.0	0.1	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.3
	1.3	1.2	1.8	1.4	1.4	0.8	0.4	0.3	0.6	1.1	1.4	1.9	2.3	3.6	2.2	1.9	1.7	1.5	1.6	2.3	3.5	2.0	2.6	2.3	Diurnal Average	
	16.6	12.5	16.5	11.9	23.6	7.7	2.8	1.3	7.9	6.9	7.1	11.6	15.1	25.4	11.0	7.9	8.0	14.2	8.3	18.8	43.3	27.8	28.0	21.9	Diurnal Maximum	

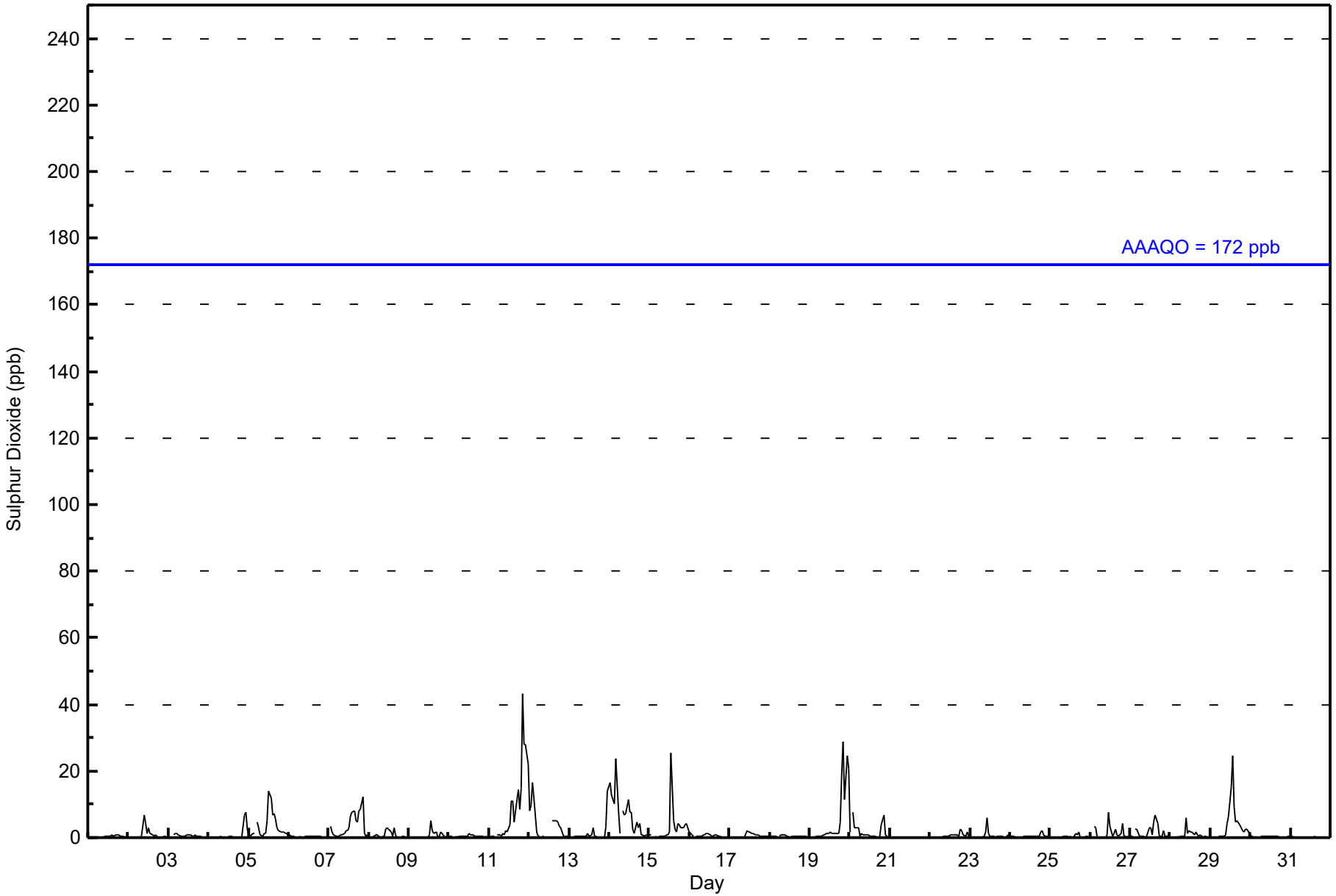
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Mannix - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	682	96.19	96.19
11 - 20	17	2.40	98.59
21 - 60	10	1.41	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Mannix - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	109	103	13	4	10	15	106	107	25	17	13	22	29	40	29	40	682
11 - 20	11	2	0	0	0	1	0	0	0	0	0	0	0	1	1	1	17
21 - 60	8	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	10
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	128	105	13	4	10	16	106	107	25	17	13	22	29	43	30	41	709

Total Number of Valid Hours: 709

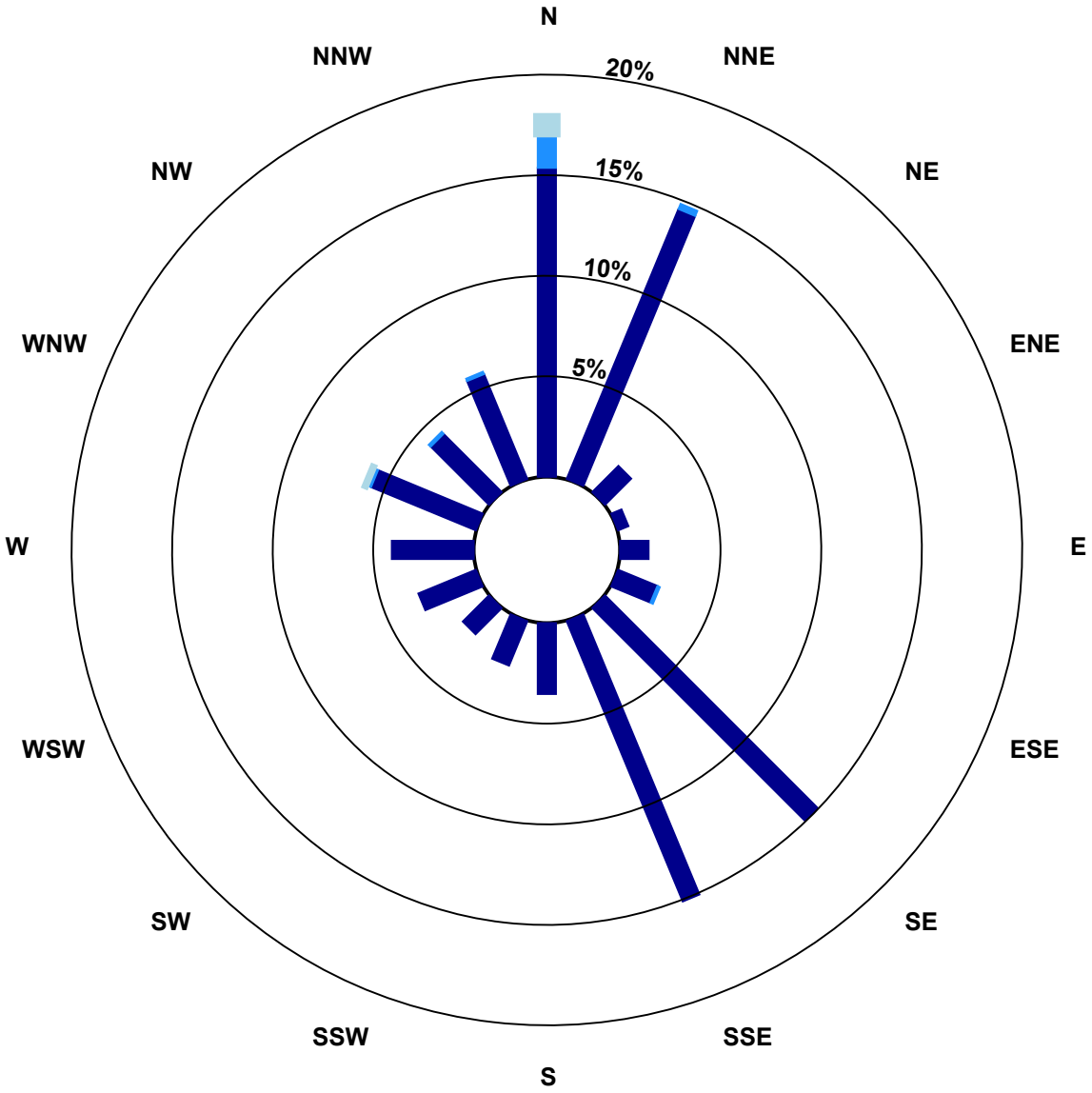
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Sulphur Dioxide (SO_2) - ppb

Mannix



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

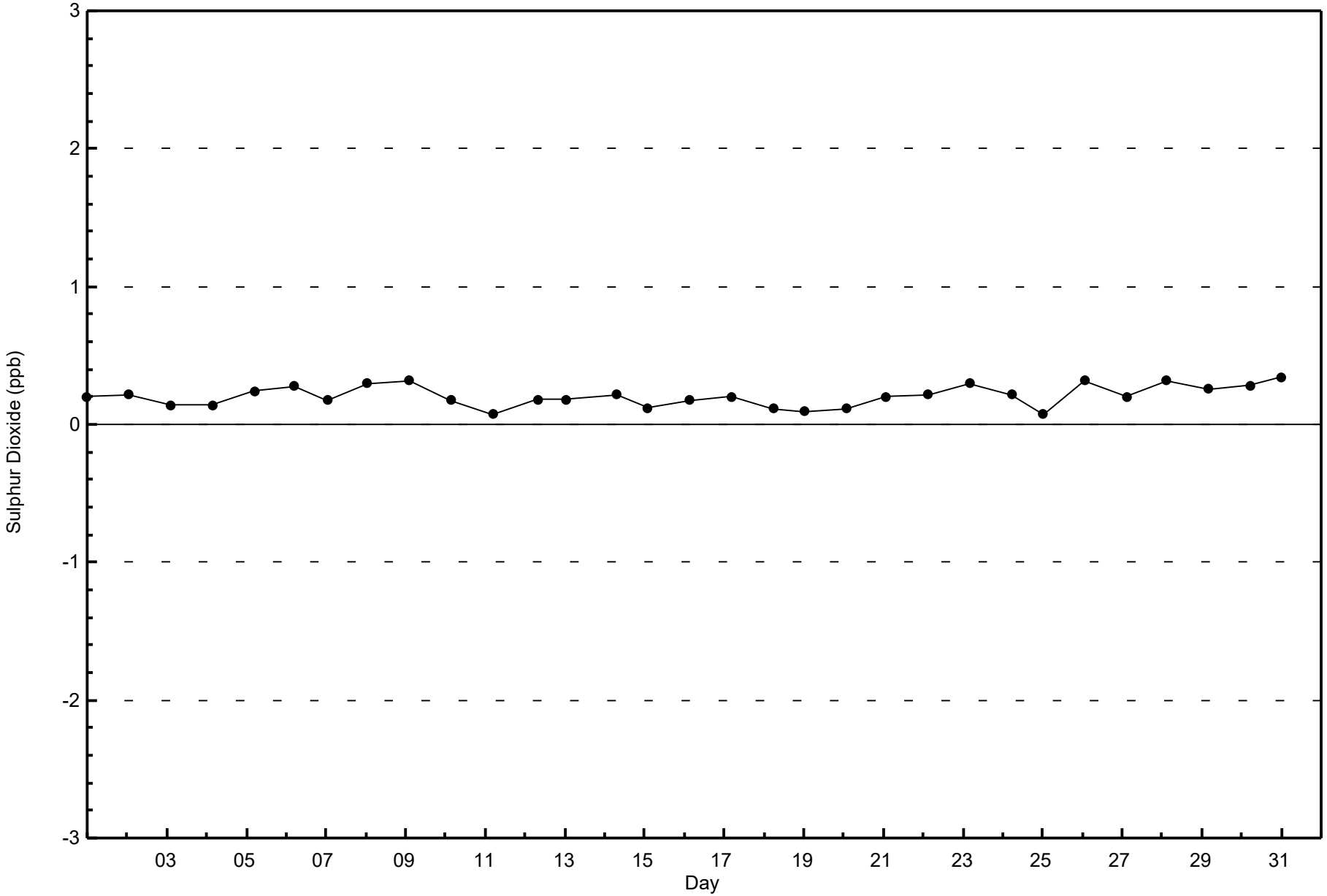
Total Number of Valid Hours: 709

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Mannix - March 2025

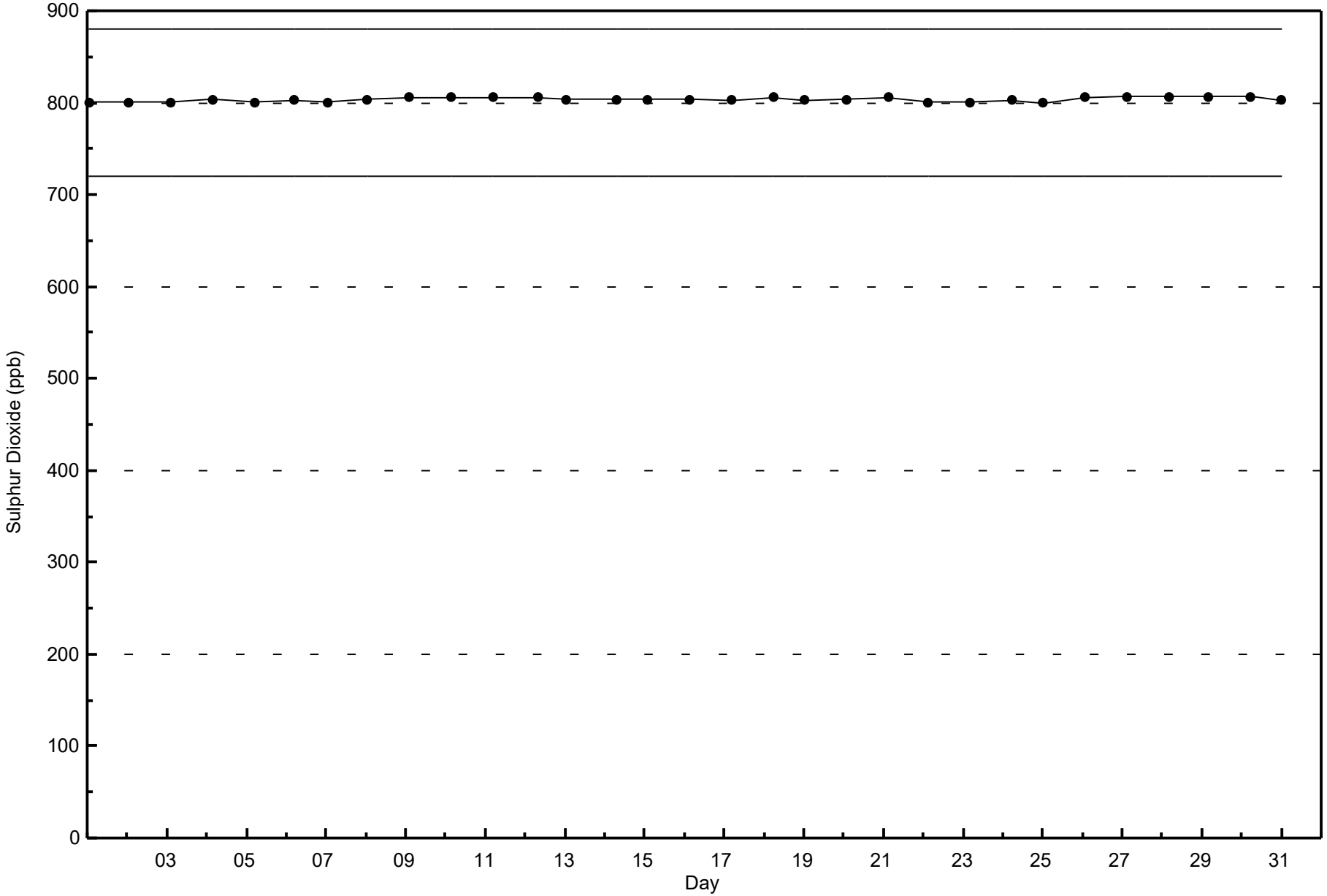


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Mannix - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Mannix - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8.4 ppb on Mar 24 21:00 Maximum Daily Average: 1.3 ppb on Mar 24

Minimum Value: 0.0 ppb on Mar 13 16:00 Minimum Daily Average: 0.1 ppb on Mar 31
Maximum Diurnal Average: 0.7 ppb at hour 21 Minimum Diurnal Average: 0.3 ppb at hour 15
Monthly Average: 0.44 ppb Percentiles: P_1 = 0.1 P_{10} = 0.1 Q_1 = 0.1 Median = 0.2 Q_3 = 0.5 P_{90} = 0.9 P_{99} = 3.1

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.1	Z	0.2	0.1	0.1	0.2	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.6	0.5	0.7	1.1	1.1	0.4	0.3	0.6	0.2	0.2	0.4	1.1
2-Mar	0.2	0.2	Z	0.1	0.2	0.2	0.2	0.3	1.1	1.9	1.6	1.0	1.2	0.2	0.1	0.2	1.3	0.4	0.3	0.3	0.2	0.2	0.2	0.3	0.5	1.9
3-Mar	0.3	0.4	0.3	Z	0.2	0.2	0.3	0.3	0.2	0.3	0.4	0.3	0.3	0.2	0.2	0.3	0.6	0.5	0.4	0.5	0.2	0.1	0.2	0.2	0.3	0.6
4-Mar	0.2	0.3	0.3	0.4	Z	0.5	0.3	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	1.1	0.6	0.2	0.3	1.1
5-Mar	0.2	0.3	0.4	0.3	0.3	Z	0.2	0.2	0.4	0.3	C	C	C	C	C	C	0.2	0.3	0.3	0.4	0.3	0.2	0.2	0.3	--	0.4
6-Mar	Z	0.3	0.3	0.7	0.5	3.1	2.4	0.4	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	0.5	0.9	1.6	0.5	3.1
7-Mar	1.1	Z	0.2	0.3	0.4	0.3	0.4	0.5	0.6	0.5	1.0	0.9	0.8	1.8	2.1	1.0	0.4	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.6	2.1
8-Mar	0.2	0.2	Z	0.4	0.5	0.4	0.5	0.6	0.6	0.6	2.5	1.9	1.7	0.3	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.1	0.2	0.3	0.5	2.5
9-Mar	0.1	0.1	0.1	Z	0.3	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.3
10-Mar	0.5	0.5	0.4	0.3	Z	0.3	0.3	0.4	0.4	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.5	0.5	0.8	0.5	0.4	0.5	0.3	0.8
11-Mar	0.6	0.7	0.6	0.8	0.9	Z	1.3	1.0	2.2	0.8	0.7	0.3	0.7	0.3	0.3	0.2	0.3	0.3	0.2	0.3	0.8	0.6	0.6	0.5	0.7	2.2
12-Mar	0.7	0.4	Z	0.5	0.1	0.1	0.3	0.2	0.2	0.1	0.2	0.3	0.3	0.2	0.3	0.3	0.4	0.5	0.4	0.4	0.2	0.7	0.8	0.9	0.4	0.9
13-Mar	0.9	Z	0.8	1.0	1.4	2.2	1.7	1.2	1.3	1.4	0.4	0.4	0.4	0.4	0.2	0.0	0.3	0.3	0.1	0.1	0.1	0.1	0.2	0.6	0.7	2.2
14-Mar	1.1	0.3	0.5	0.7	0.8	0.6	0.3	0.2	Z	0.3	0.3	0.2	0.3	0.2	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.3	1.1
15-Mar	0.1	0.2	0.5	Z	0.5	0.8	1.6	1.5	0.9	1.3	1.2	0.4	0.3	1.3	0.5	0.2	0.1	0.2	0.3	0.4	0.3	0.3	0.2	0.2	0.6	1.6
16-Mar	0.2	0.3	0.4	0.6	Z	0.5	0.4	0.4	0.4	0.3	0.3	0.3	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	0.6
17-Mar	0.1	0.1	0.1	0.1	0.1	Z	0.3	0.2	0.2	0.2	1.0	0.7	0.8	0.2	0.1	0.1	0.1	0.3	0.2	0.2	0.3	0.1	0.2	0.2	0.3	1.0
18-Mar	Z	0.1	0.1	0.1	0.2	0.6	1.4	1.6	1.9	1.8	0.9	0.2	0.0	0.2	0.3	0.1	0.1	0.0	0.2	0.2	0.1	0.1	0.1	0.9	0.5	1.9
19-Mar	0.9	Z	0.5	0.6	0.9	1.4	1.6	1.2	1.5	1.1	0.7	0.5	0.5	0.3	0.5	0.5	0.4	0.2	0.8	1.2	1.1	0.3	0.7	0.8	0.8	1.6
20-Mar	0.3	0.8	Z	0.3	1.3	0.8	0.5	0.7	0.6	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.5	0.4	0.3	0.1	0.4	1.3
21-Mar	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	0.1	0.2	0.1	0.1	0.1	0.1	0.2
22-Mar	0.1	0.2	0.1	0.1	Z	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.6	2.6	6.2	0.9	0.8	0.5	0.6	6.2
23-Mar	0.6	0.4	0.4	0.4	0.2	Z	0.2	0.5	0.2	1.1	1.2	0.2	0.1	0.1	0.1	0.1	0.2	0.3	0.9	0.6	0.4	0.5	0.3	0.2	0.4	1.2
24-Mar	Z	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	0.3	0.2	0.4	1.1	4.9	5.9	8.4	6.0	0.3	0.2	1.3	8.4
25-Mar	0.2	Z	0.1	0.2	0.3	0.9	0.5	0.5	0.2	0.1	0.2	0.2	0.2	0.1	0.2	3.1	2.5	0.8	0.2	0.2	0.2	0.2	0.2	0.1	0.5	3.1
26-Mar	0.2	0.2	Z	0.3	0.3	0.4	0.2	0.4	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.4	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.4
27-Mar	0.1	0.1	0.2	Z	0.1	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.3
28-Mar	0.2	0.1	0.1	0.4	Z	0.5	0.8	1.2	0.8	0.4	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.3	1.2
29-Mar	0.2	0.4	0.5	0.3	0.5	Z	1.3	0.9	1.4	3.0	3.5	1.8	0.6	0.5	0.2	0.1	0.2	0.2	0.1	0.2	0.3	0.5	0.9	0.5	0.8	3.5
30-Mar	Z	0.3	0.5	1.0	0.7	0.7	0.7	0.8	1.4	2.2	1.3	0.6	0.2	0.1	0.2	0.1	0.1	0.2	0.5	0.2	0.3	0.6	0.2	0.1	0.6	2.2
31-Mar	0.1	Z	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	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	0.6	0.6	0.6	0.6	0.6	0.7	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.5	0.7	0.5	0.3	0.3	Diurnal Average	
	1.1	0.8	0.8	1.0	1.4	3.1	2.4	1.6	2.2	3.0	3.5	1.9	1.7	1.8	2.1	3.1	2.5	1.1	4.9	5.9	8.4	6.0	0.9	1.6	Diurnal Maximum	

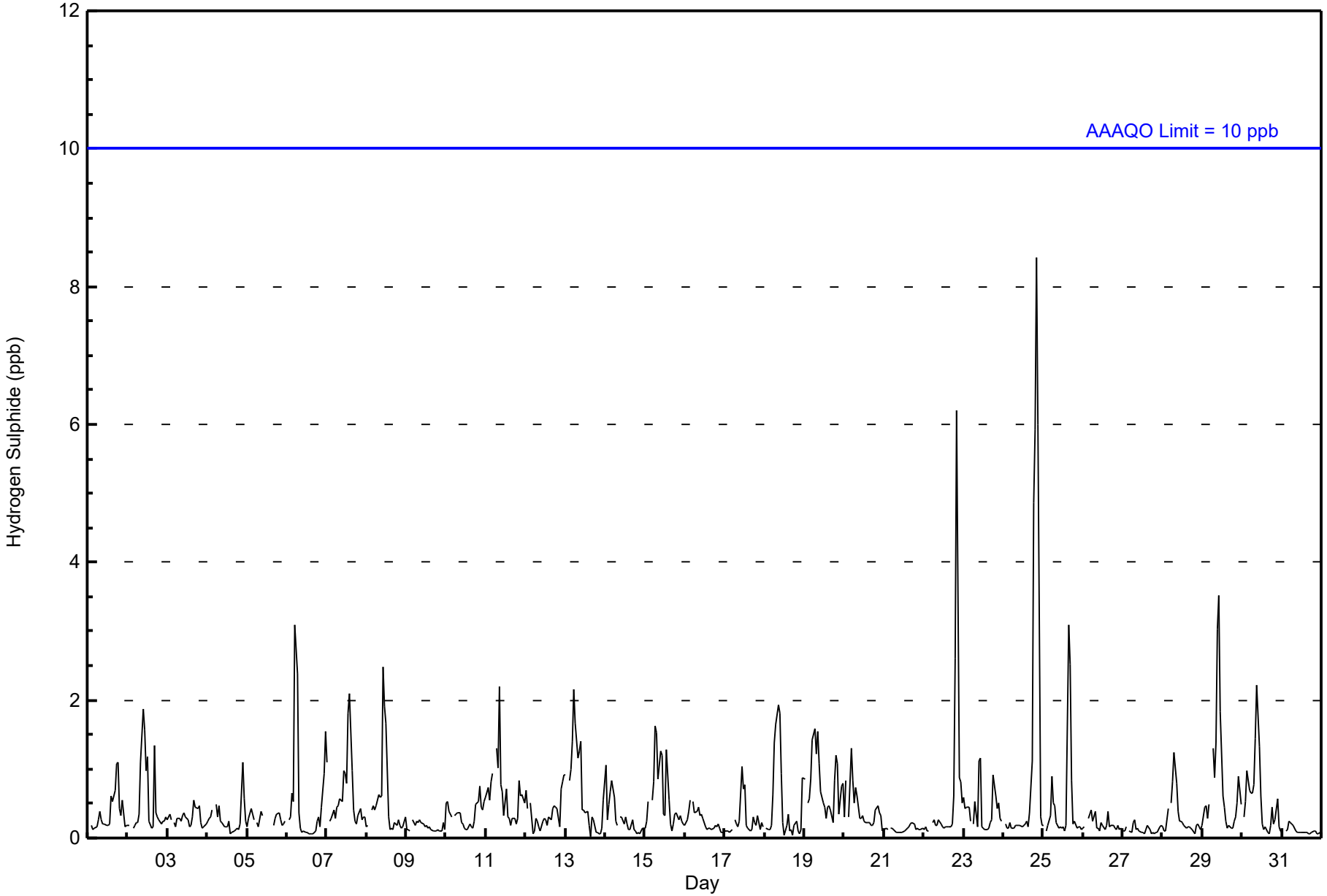
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Mannix - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	696	98.44	98.44
3 - 4	6	0.85	99.29
5 - 7	4	0.57	99.86
8 - 11	1	0.14	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Mannix - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	129	102	13	4	10	14	104	108	23	17	12	24	27	41	24	44	696
3 - 4	0	0	0	0	0	0	0	0	0	1	0	0	2	1	2	0	6
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	4
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	129	102	13	4	10	14	104	108	23	18	12	24	31	43	28	44	707

Total Number of Valid Hours: 707

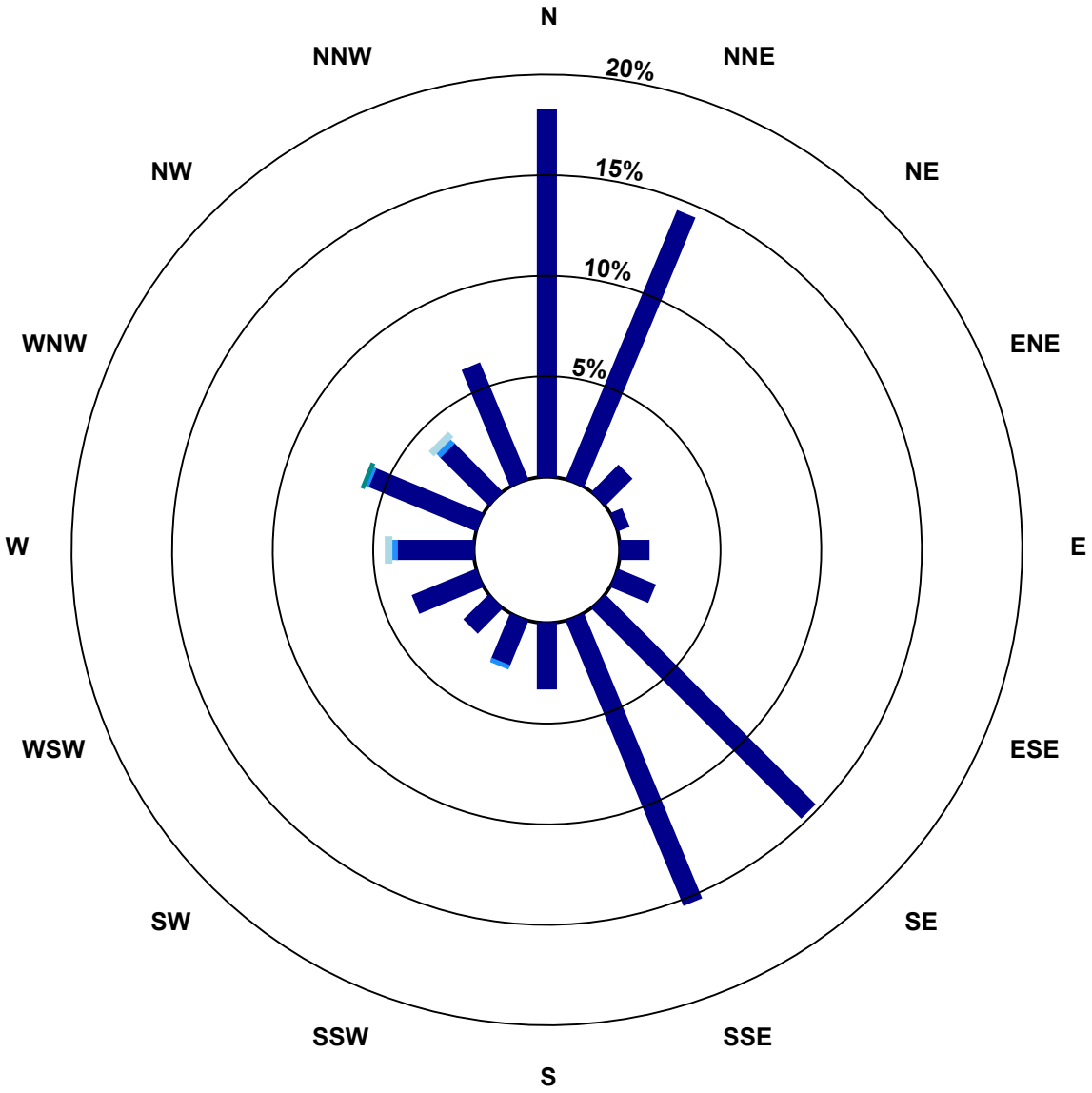
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Hydrogen Sulphide (H_2S) - ppb

Mannix



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

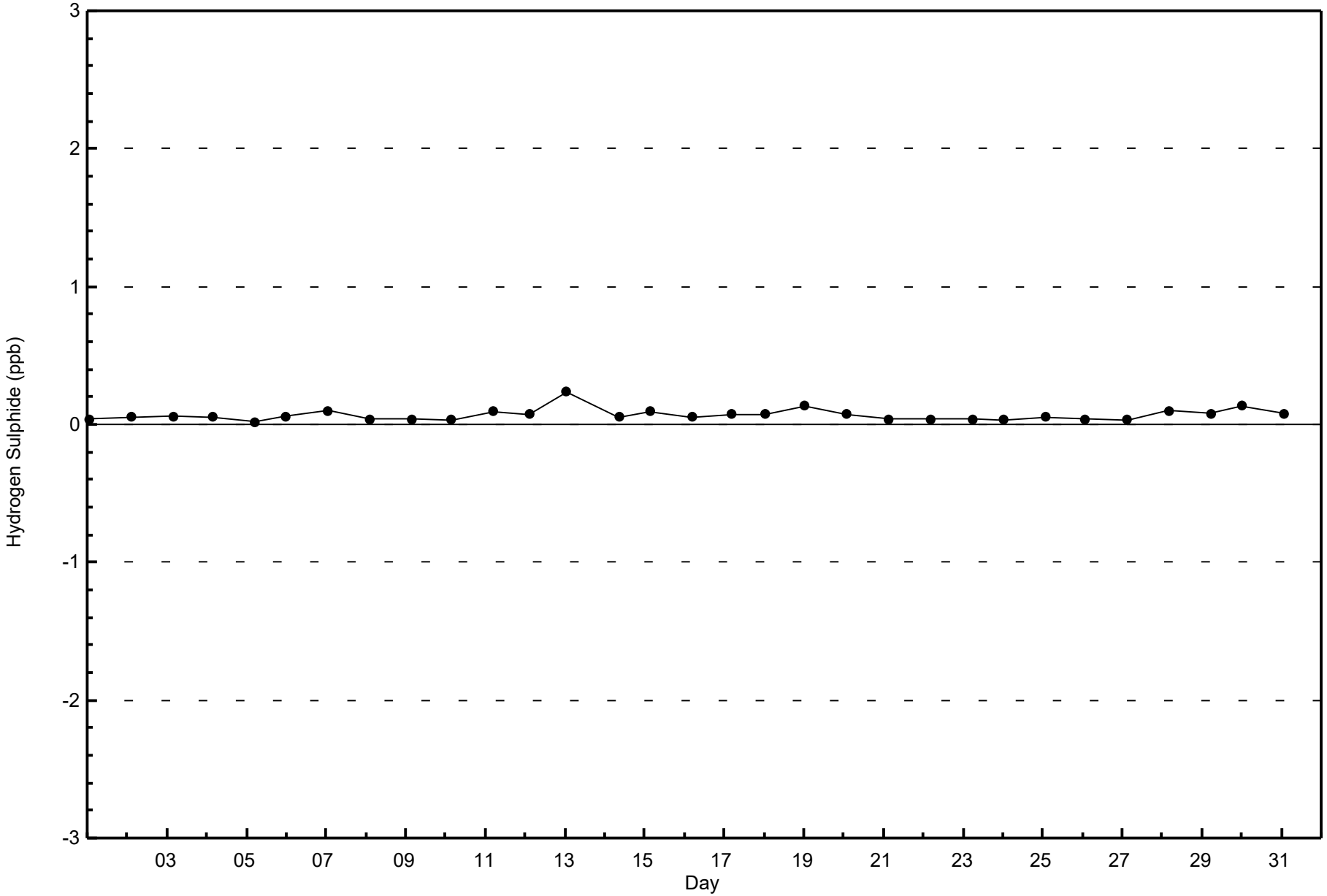
Total Number of Valid Hours: 707

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Mannix - March 2025

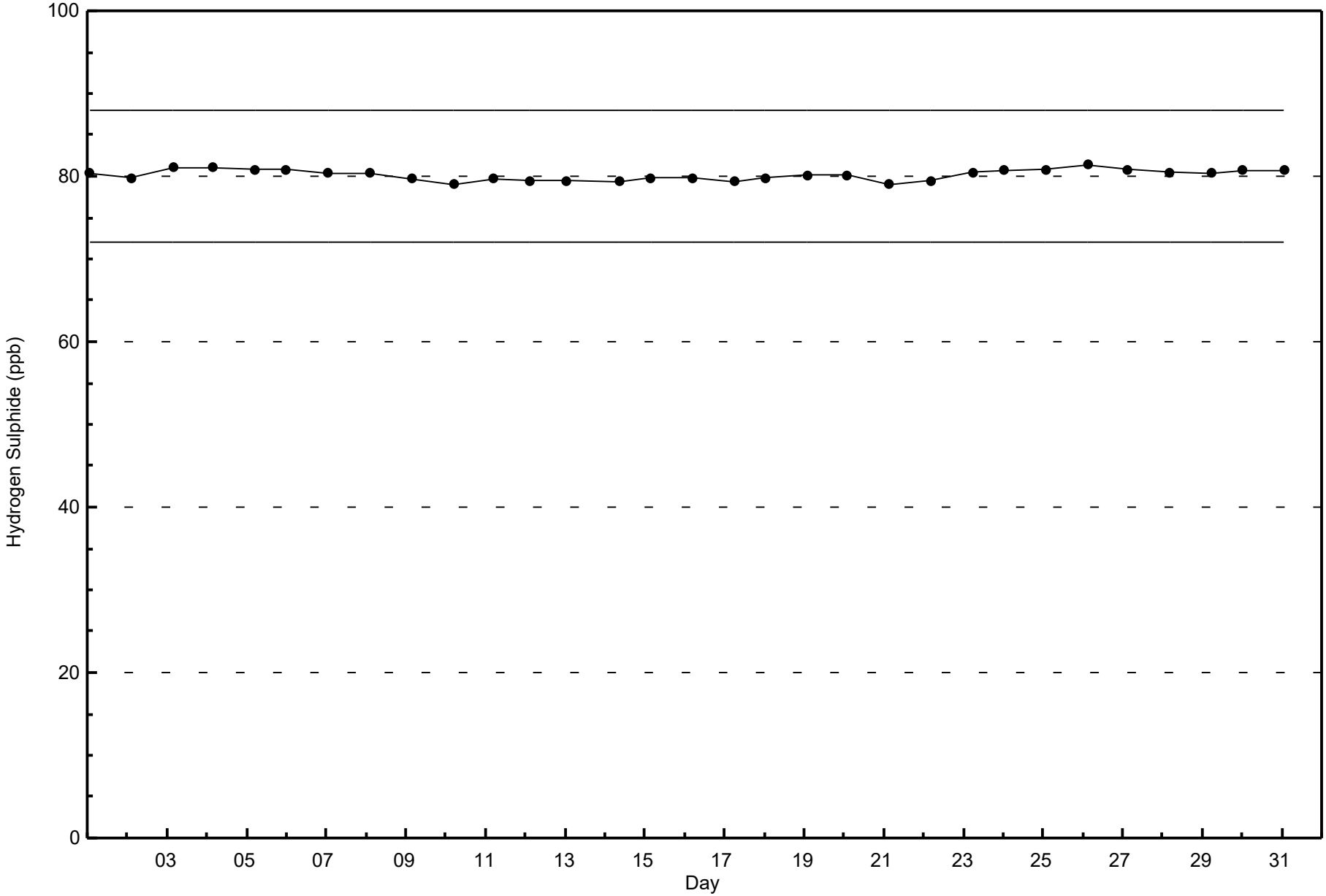


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Mannix - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Mannix - March 2025

Maximum Value: 3.7 ppm on Mar 19 05:00

Maximum Daily Average: 2.4 ppm on Mar 19

Minimum Value: 1.9 ppm on Mar 9 10:00

Minimum Daily Average: 2.0 ppm on Mar 9

Maximum Diurnal Average: 2.3 ppm at hour 9

Minimum Diurnal Average: 2.1 ppm at hour 1

Monthly Average: 2.14 ppm

Percentiles: P_1 = 1.9 P_{10} = 2.0 Q_1 = 2.0 Median = 2.1 Q_3 = 2.2 P_{90} = 2.4 P_{99} = 3.0

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	Z	2.0	2.0	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	2.3	2.4	2.1	2.0	2.1	2.0	2.0	2.1	2.4
2-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.9	3.0	2.9	3.3	2.5	2.0	1.9	2.0	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.2	3.3
3-Mar	2.0	2.1	Z	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.3	2.2	2.1	2.1	2.0	1.9	1.9	1.9	2.1	2.3
4-Mar	2.0	2.0	2.0	Z	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.2	2.1	2.0	2.0	2.2
5-Mar	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	2.0	2.1	2.1	2.0	2.0	2.0	2.1	2.0	2.1
6-Mar	2.0	2.0	2.0	2.3	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	2.2	2.7	2.0	2.7
7-Mar	Z	2.2	2.0	2.0	2.3	2.2	2.1	2.5	2.8	2.5	2.3	2.4	2.3	2.5	2.8	2.4	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.8
8-Mar	2.0	Z	2.1	2.3	2.1	2.2	2.4	2.8	3.1	3.0	2.5	2.6	2.3	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	3.1
9-Mar	2.0	2.0	Z	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	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
10-Mar	2.0	2.0	2.0	Z	2.0	2.1	2.1	2.2	2.1	2.0	2.0	2.0	1.9	1.9	2.0	2.0	1.9	2.0	2.0	2.3	2.3	2.1	2.1	2.1	2.1	2.3
11-Mar	2.2	2.3	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	1.9	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.3
12-Mar	2.1	2.0	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	C	C	C	C	2.4	2.3	2.3	2.3	2.3	2.5	2.2	2.4	2.5	2.4	2.2	2.5
13-Mar	Z	2.5	2.5	2.5	2.8	2.7	2.5	2.5	2.5	2.4	2.3	2.9	2.5	2.4	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.3	2.9
14-Mar	2.1	2.1	2.1	2.2	2.2	2.2	2.2	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	2.1	2.1	2.1	2.1	2.1	2.2
15-Mar	2.1	2.1	Z	2.9	3.0	3.2	2.7	2.9	2.3	2.5	2.6	2.5	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.4	3.2
16-Mar	2.1	2.1	2.2	Z	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.2
17-Mar	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.9	2.5	2.4	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.9
18-Mar	2.1	2.1	2.1	2.1	2.1	Z	2.9	2.9	3.4	2.7	2.3	2.1	2.0	2.1	2.2	2.1	2.1	2.1	2.3	2.2	2.1	2.1	2.1	3.0	2.3	3.4
19-Mar	Z	3.2	2.9	2.9	3.7	2.5	2.4	2.4	2.7	2.4	2.3	2.2	2.1	2.1	2.2	2.2	2.3	2.4	2.3	2.2	2.1	2.1	2.1	2.2	2.4	3.7
20-Mar	2.1	Z	2.1	2.1	2.2	2.3	2.2	2.2	2.3	2.1	2.4	2.4	2.2	2.2	2.2	2.1	2.1	2.4	2.1	2.1	2.1	2.1	2.1	2.0	2.2	2.4
21-Mar	2.0	2.1	Z	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	2.1	2.1	2.1	2.1	2.1	2.1
22-Mar	2.1	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	2.1	2.1	2.1	2.2	2.5	2.6	2.5	2.1	2.3	2.3	2.1	2.6
23-Mar	2.2	2.3	2.2	2.1	Z	2.0	2.0	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.4	2.4	2.2	2.3	2.2	2.1	2.1	2.4
24-Mar	2.1	2.1	2.1	2.1	2.1	Z	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.4	2.4	2.3	2.2	2.0	2.0	2.1	2.4
25-Mar	Z	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
26-Mar	2.1	Z	2.1	2.1	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1
27-Mar	2.1	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1
28-Mar	2.1	2.1	2.1	Z	2.1	2.2	2.1	2.3	2.1	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.3
29-Mar	2.1	2.1	2.2	2.2	Z	2.3	2.3	2.3	2.7	2.7	2.6	2.5	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.2	2.7
30-Mar	2.4	2.1	2.2	2.3	2.3	Z	2.3	2.3	2.3	2.4	2.3	2.2	2.1	2.0	2.1	2.0	2.0	2.1	2.1	2.1	2.2	2.3	2.1	2.0	2.2	2.4
31-Mar	Z	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	2.0	2.0	2.0	2.0	2.0	2.0	2.1
	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	Diurnal Average	
	2.4	3.2	2.9	2.9	3.7	3.2	2.9	2.9	3.4	3.0	2.9	3.3	2.5	2.5	2.8	2.4	2.3	2.4	2.5	2.6	2.5	2.4	2.5	3.0	Diurnal Maximum	

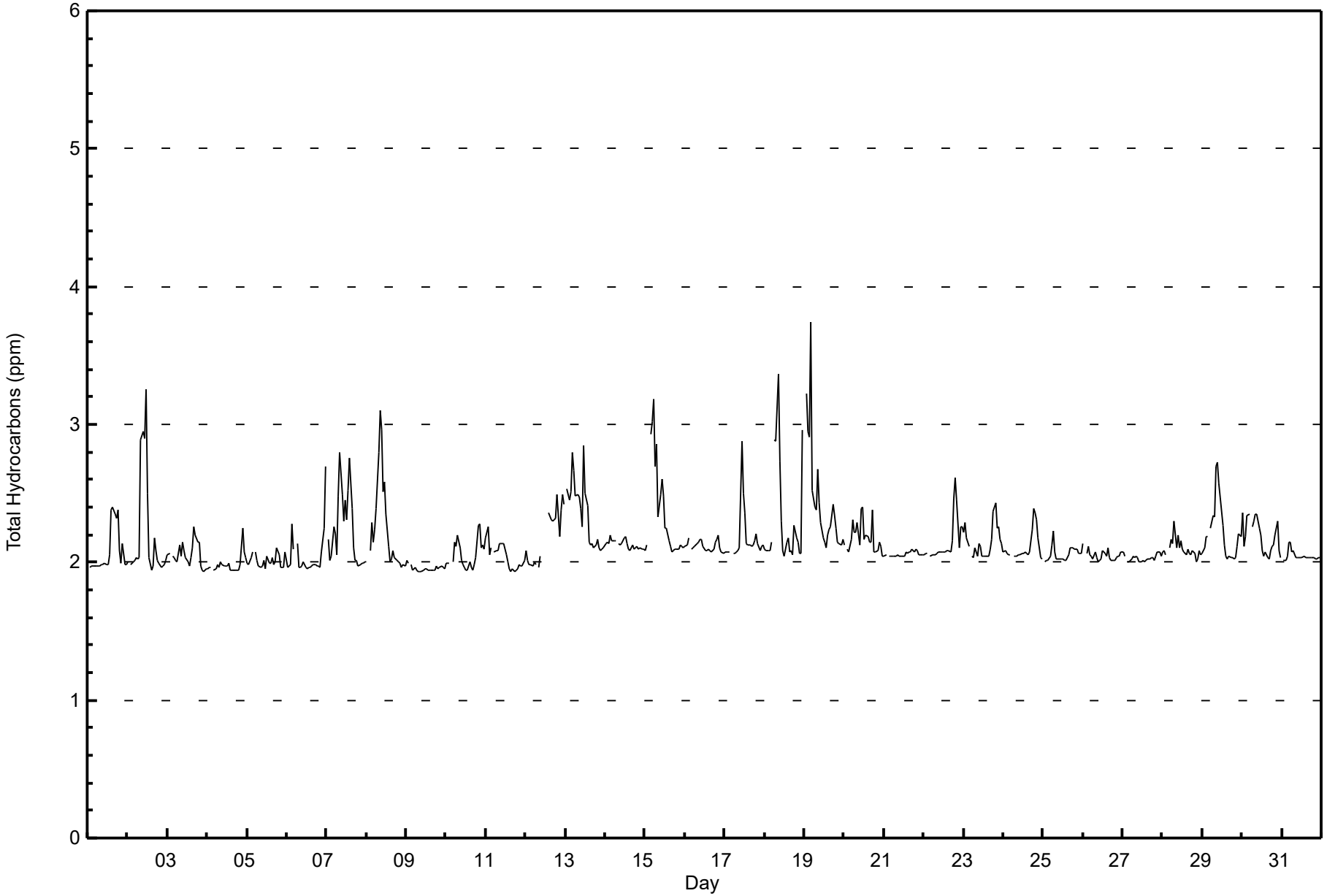
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Mannix - March 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	280	39.49	39.49
2.1 - 3.0	423	59.66	99.15
3.1 - 10.0	6	0.85	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Mannix - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	58	49	5	0	1	4	43	61	15	8	5	9	6	6	2	8	280
2.1 - 3.0	70	56	8	4	9	12	63	46	10	9	8	13	22	35	25	33	423
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	0	6
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	128	105	13	4	10	16	106	107	25	17	13	22	29	43	30	41	709

Total Number of Valid Hours: 709

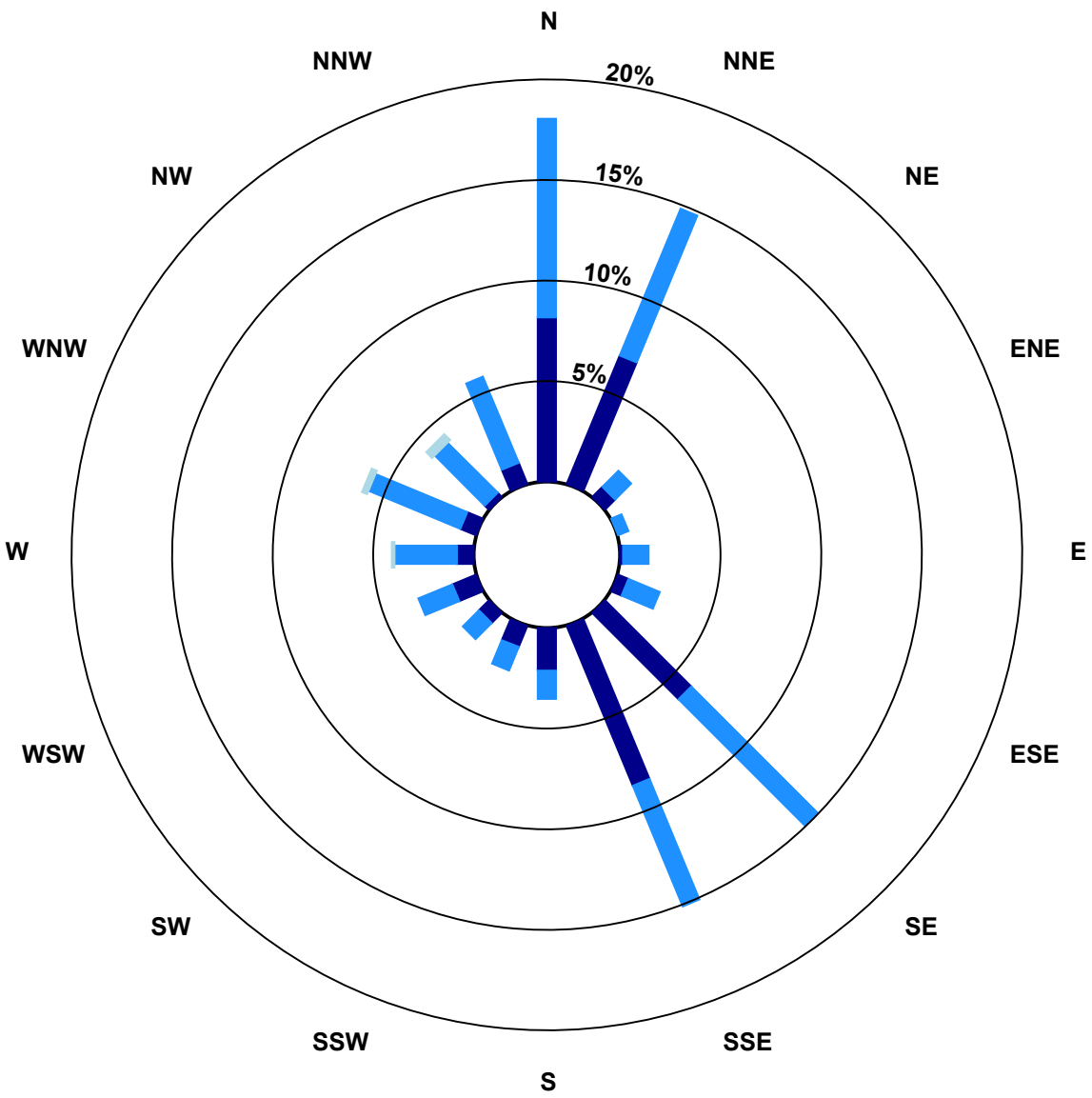
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Total Hydrocarbons (THC) - ppm

Mannix



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

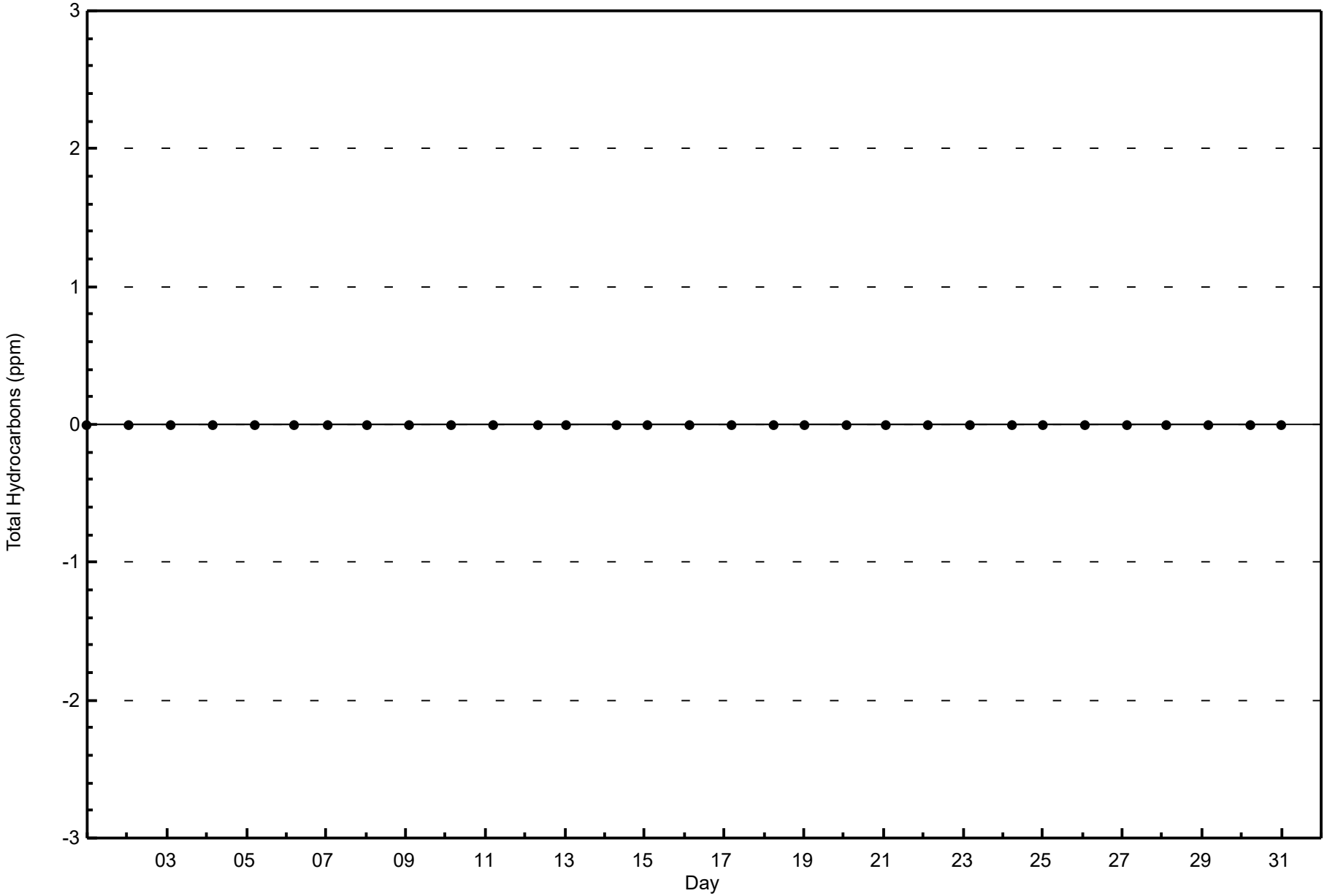
Total Number of Valid Hours: 709

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Mannix - March 2025

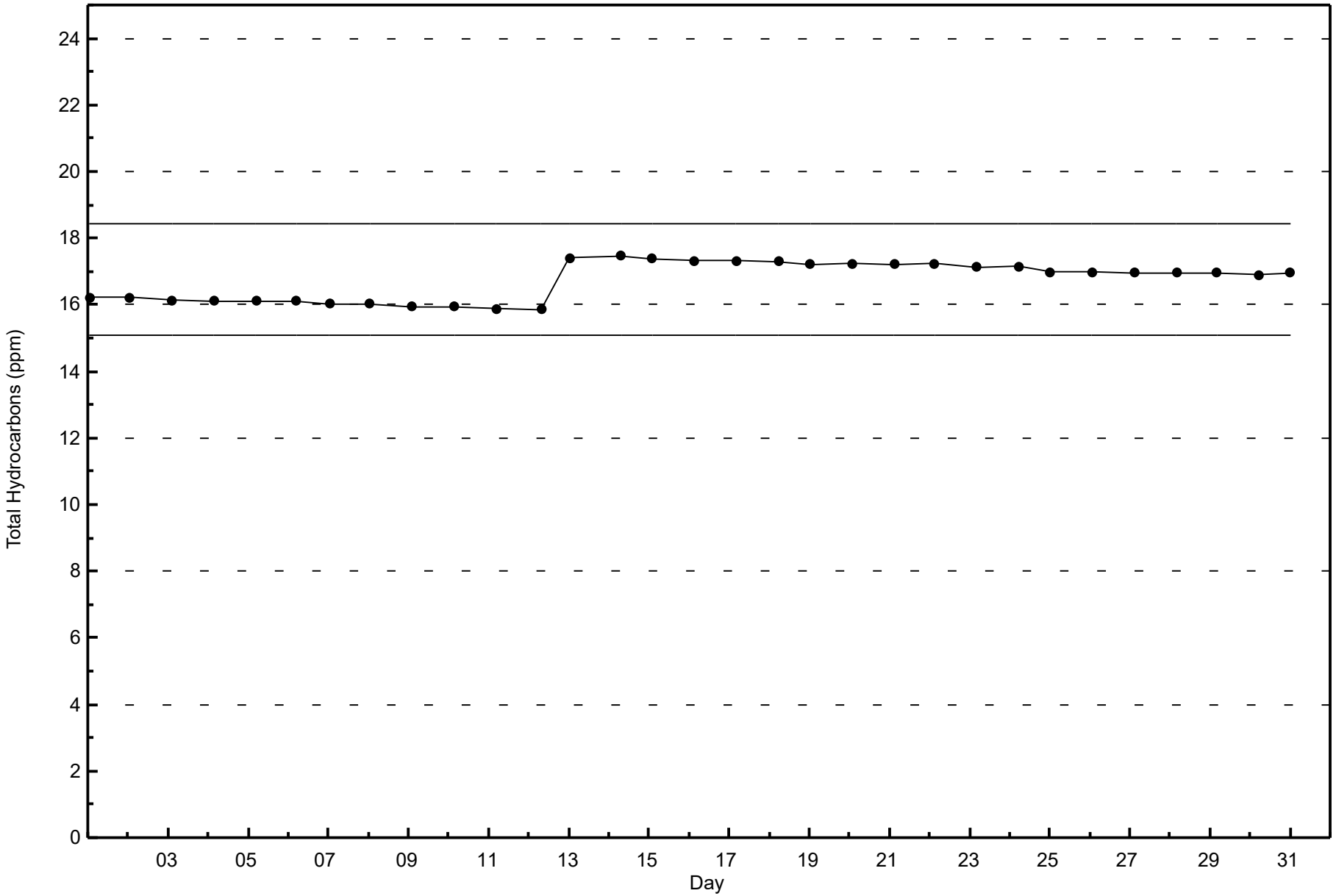


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Mannix - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Mannix - March 2025

Maximum Value: 0.244 ppm on Mar 19 18:00

Maximum Daily Average: 0.044 ppm on Mar 18

Minimum Value: 0.000 ppm on Mar 1 02:00

Minimum Daily Average: 0.000 ppm on Mar 31

Maximum Diurnal Average: 0.031 ppm at hour 22

Minimum Diurnal Average: 0.008 ppm at hour 3

Monthly Average: 0.019 ppm

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

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.042	0.001	0.055	0.062	0.010	0.000	0.000	0.000	0.117	0.000	0.000	0.012	0.117
2-Mar	0.000	Z	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.095	0.122	0.125	0.022	0.000	0.000	0.029	0.018	0.042	0.033	0.041	0.021	0.028	0.021	0.052	0.028	0.125
3-Mar	0.081	0.095	Z	0.082	0.066	0.035	0.001	0.000	0.002	0.024	0.013	0.001	0.001	0.000	0.072	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.022	0.095
4-Mar	0.000	0.000	0.000	Z	0.000	0.011	0.018	0.000	0.025	0.000	0.000	0.000	0.000	0.023	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.045	0.028	0.034	0.008	0.045
5-Mar	0.006	0.018	0.021	0.032	Z	0.132	0.026	0.027	0.033	0.037	0.060	0.000	0.000	0.000	0.016	0.001	0.000	0.002	0.010	0.000	0.000	0.000	0.000	0.073	0.022	0.132
6-Mar	0.000	0.000	0.000	0.012	0.001	Z	0.003	0.000	0.000	0.000	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.031	0.000	0.024	0.004	0.031
7-Mar	Z	0.037	0.014	0.000	0.000	0.000	0.007	0.000	0.024	0.011	0.049	0.042	0.025	0.058	0.010	0.069	0.064	0.040	0.046	0.005	0.000	0.002	0.000	0.029	0.023	0.069
8-Mar	0.011	Z	0.000	0.003	0.000	0.000	0.009	0.004	0.057	0.136	0.050	0.039	0.017	0.020	0.003	0.066	0.149	0.103	0.075	0.071	0.064	0.028	0.048	0.046	0.044	0.149
9-Mar	0.088	0.073	Z	0.070	0.026	0.044	0.017	0.006	0.010	0.004	0.011	0.018	0.028	0.001	0.001	0.001	0.006	0.012	0.037	0.007	0.020	0.018	0.000	0.008	0.022	0.088
10-Mar	0.000	0.000	0.000	Z	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.027	0.003	0.000	0.018	0.038	0.033	0.079	0.028	0.000	0.003	0.010	0.079
11-Mar	0.010	0.001	0.000	0.000	Z	0.000	0.023	0.002	0.007	0.000	0.006	0.000	0.001	0.000	0.003	0.003	0.012	0.003	0.005	0.003	0.009	0.019	0.019	0.013	0.006	0.023
12-Mar	0.022	0.023	0.002	0.003	0.046	0.078	0.044	Z	0.005	0.000	C	C	C	C	0.054	0.056	0.056	0.051	0.020	0.031	0.023	0.101	0.062	0.013	0.036	0.101
13-Mar	Z	0.015	0.006	0.017	0.054	0.013	0.082	0.075	0.059	0.008	0.001	0.000	0.026	0.046	0.029	0.034	0.018	0.024	0.044	0.061	0.008	0.000	0.000	0.004	0.027	0.082
14-Mar	0.007	0.039	0.022	0.006	0.002	0.000	0.001	Z	0.023	0.017	0.001	0.070	0.088	0.037	0.001	0.008	0.011	0.013	0.043	0.057	0.031	0.040	0.007	0.002	0.023	0.088
15-Mar	0.000	0.000	Z	0.006	0.012	0.004	0.000	0.028	0.078	0.093	0.071	0.020	0.017	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.093
16-Mar	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.016	0.033	0.011	0.001	0.010	0.009	0.001	0.000	0.000	0.019	0.001	0.000	0.000	0.000	0.000	0.004	0.033
17-Mar	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.011	0.039	0.000	0.045	0.050	0.040	0.052	0.093	0.130	0.053	0.004	0.001	0.000	0.022	0.130
18-Mar	0.000	0.000	0.000	0.000	0.000	Z	0.154	0.182	0.157	0.101	0.019	0.000	0.000	0.017	0.029	0.005	0.012	0.000	0.169	0.069	0.041	0.002	0.000	0.047	0.044	0.182
19-Mar	Z	0.028	0.031	0.017	0.019	0.001	0.000	0.044	0.112	0.017	0.014	0.000	0.001	0.001	0.029	0.023	0.032	0.244	0.030	0.011	0.021	0.053	0.043	0.015	0.034	0.244
20-Mar	0.000	Z	0.000	0.000	0.028	0.194	0.114	0.044	0.084	0.023	0.000	0.001	0.000	0.001	0.009	0.003	0.001	0.000	0.005	0.009	0.010	0.058	0.022	0.000	0.026	0.194
21-Mar	0.000	0.000	Z	0.001	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.014	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.014
22-Mar	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	0.042	0.051	0.011	0.000	0.045	0.006	0.007	0.051
23-Mar	0.000	0.007	0.025	0.001	Z	0.000	0.000	0.062	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.002	0.008	0.000	0.000	0.019	0.025	0.000	0.000	0.007	0.062
24-Mar	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.004	0.000	0.002	0.018	0.018	0.006	0.082	0.064	0.000	0.000	0.000	0.008	0.082
25-Mar	Z	0.000	0.000	0.001	0.011	0.092	0.000	0.000	0.000	0.000	0.002	0.001	0.000	0.000	0.001	0.015	0.007	0.055	0.085	0.079	0.081	0.061	0.051	0.052	0.026	0.092
26-Mar	0.121	Z	0.054	0.100	0.031	0.030	0.019	0.065	0.018	0.003	0.003	0.014	0.001	0.000	0.000	0.000	0.005	0.007	0.000	0.000	0.014	0.028	0.026	0.057	0.026	0.121
27-Mar	0.060	0.031	Z	0.001	0.002	0.016	0.037	0.019	0.038	0.029	0.007	0.001	0.005	0.000	0.007	0.004	0.009	0.019	0.020	0.008	0.033	0.070	0.062	0.032	0.022	0.070
28-Mar	0.061	0.065	0.019	Z	0.000	0.000	0.001	0.034	0.000	0.007	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.047	0.004	0.008	0.068	0.036	0.016	0.068
29-Mar	0.001	0.000	0.000	0.000	Z	0.006	0.000	0.000	0.056	0.087	0.000	0.014	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.012	0.047	0.000	0.010	0.087
30-Mar	0.000	0.000	0.009	0.002	0.000	Z	0.000	0.000	0.000	0.035	0.034	0.048	0.005	0.004	0.003	0.002	0.001	0.023	0.084	0.072	0.058	0.189	0.002	0.001	0.025	0.189
31-Mar	Z	0.000	0.000	0.000	0.002	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	0.007
	0.019	0.016	0.008	0.014	0.012	0.024	0.018	0.020	0.025	0.024	0.018	0.014	0.009	0.010	0.011	0.015	0.017	0.024	0.030	0.028	0.022	0.031	0.018	0.018	Diurnal Average	
	0.121	0.095	0.054	0.100	0.066	0.194	0.154	0.182	0.157	0.136	0.122	0.125	0.088	0.058	0.072	0.069	0.149	0.244	0.169	0.130	0.081	0.189	0.068	0.073	Diurnal Maximum	

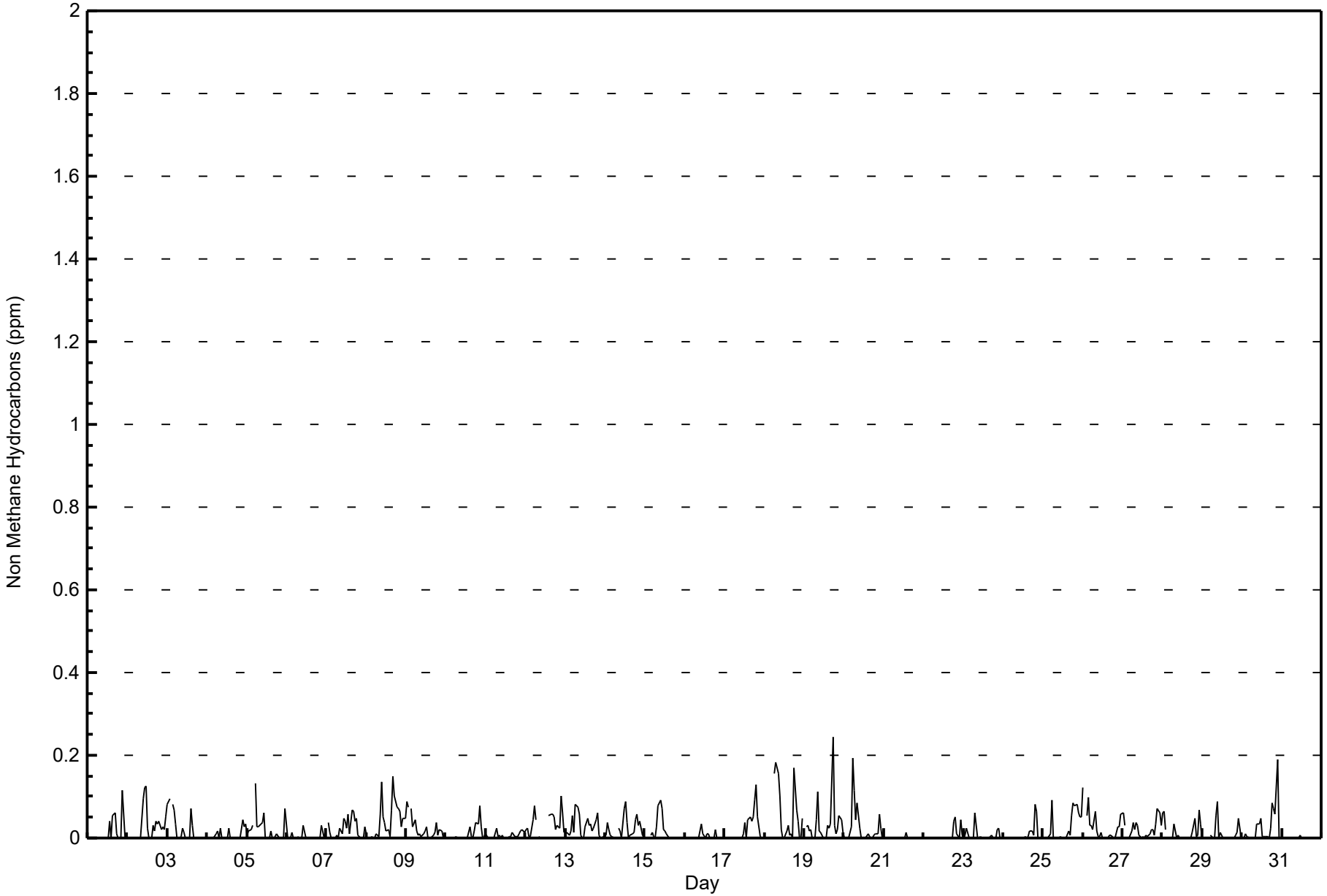
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Mannix - March 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Mannix - March 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	393	55.43	55.43
0.006 - 0.05	235	33.15	88.58
0.06 - 0.1	74	10.44	99.01
> 0.1	7	0.99	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.005	50	2	1	0	1	5	88	95	21	16	11	18	17	27	16	25	393
0.006 - 0.05	70	63	6	3	6	8	14	11	4	1	1	4	10	9	11	14	235
0.06 - 0.1	7	39	6	0	3	2	4	0	0	0	1	0	1	7	3	1	74
> 0.1	1	1	0	1	0	1	0	1	0	0	0	0	1	0	0	1	7
Totals	128	105	13	4	10	16	106	107	25	17	13	22	29	43	30	41	709

Total Number of Valid Hours: 709

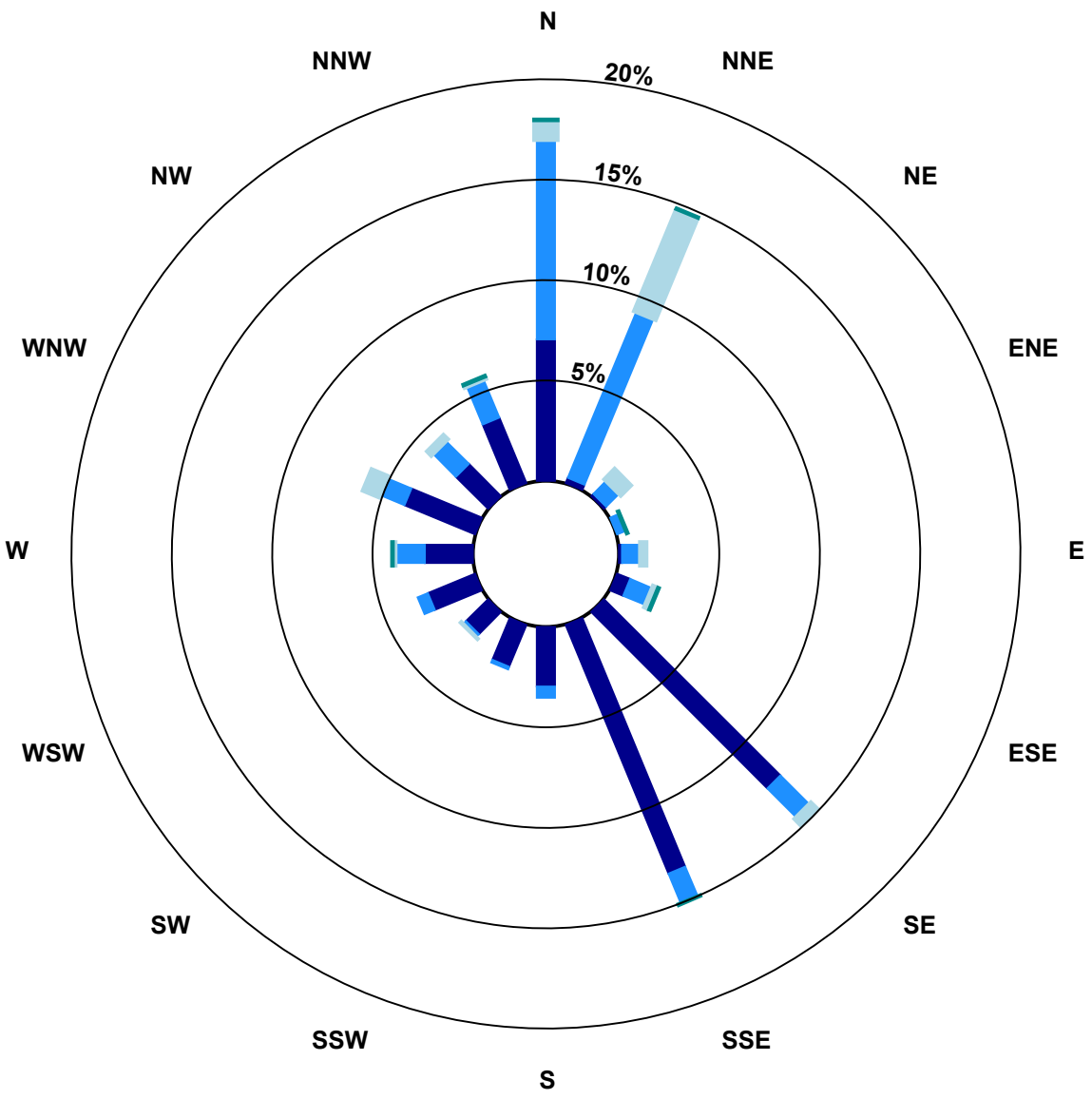
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Non Methane Hydrocarbons (NMHC) - ppm

Mannix



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

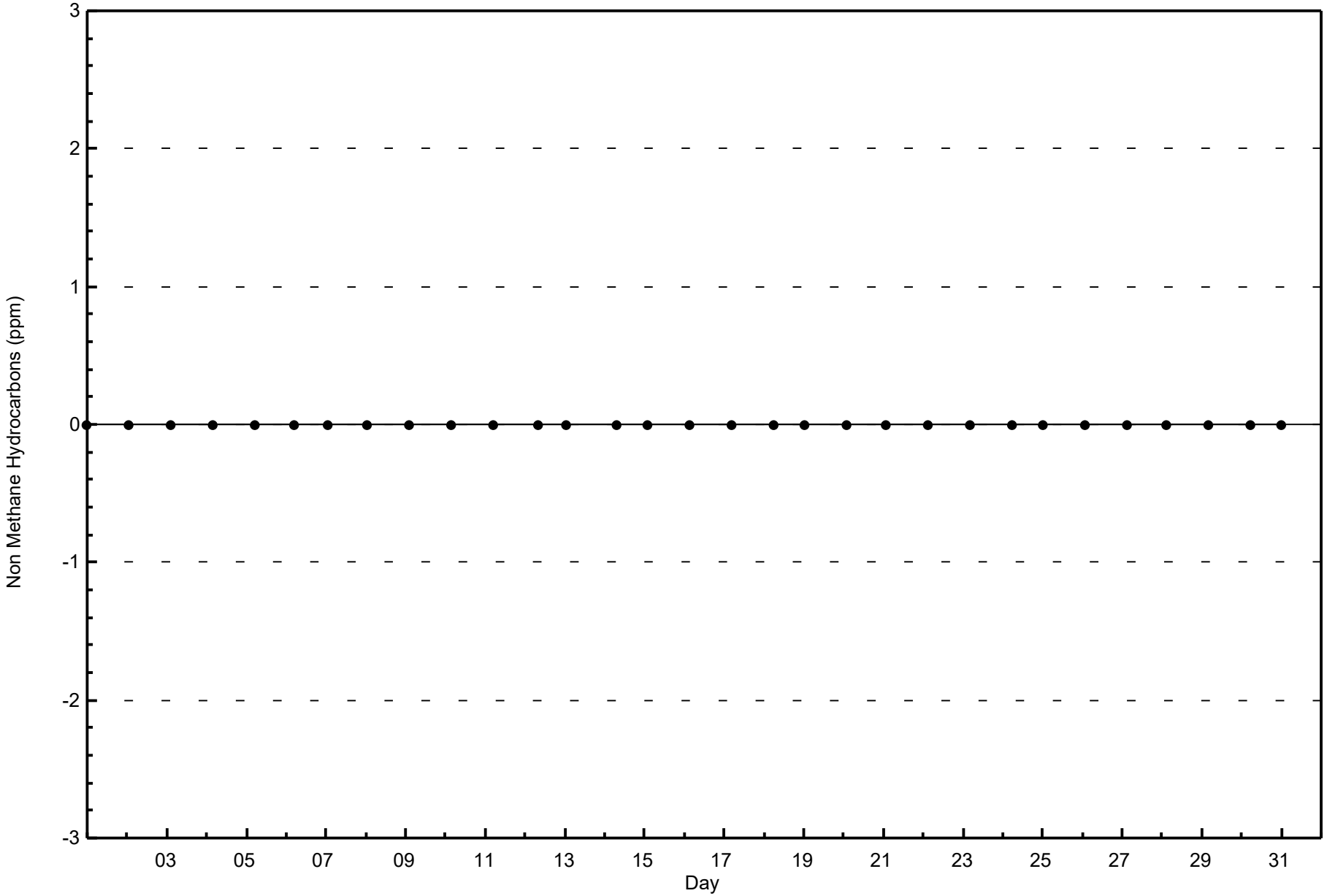
Total Number of Valid Hours: 709

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Mannix - March 2025

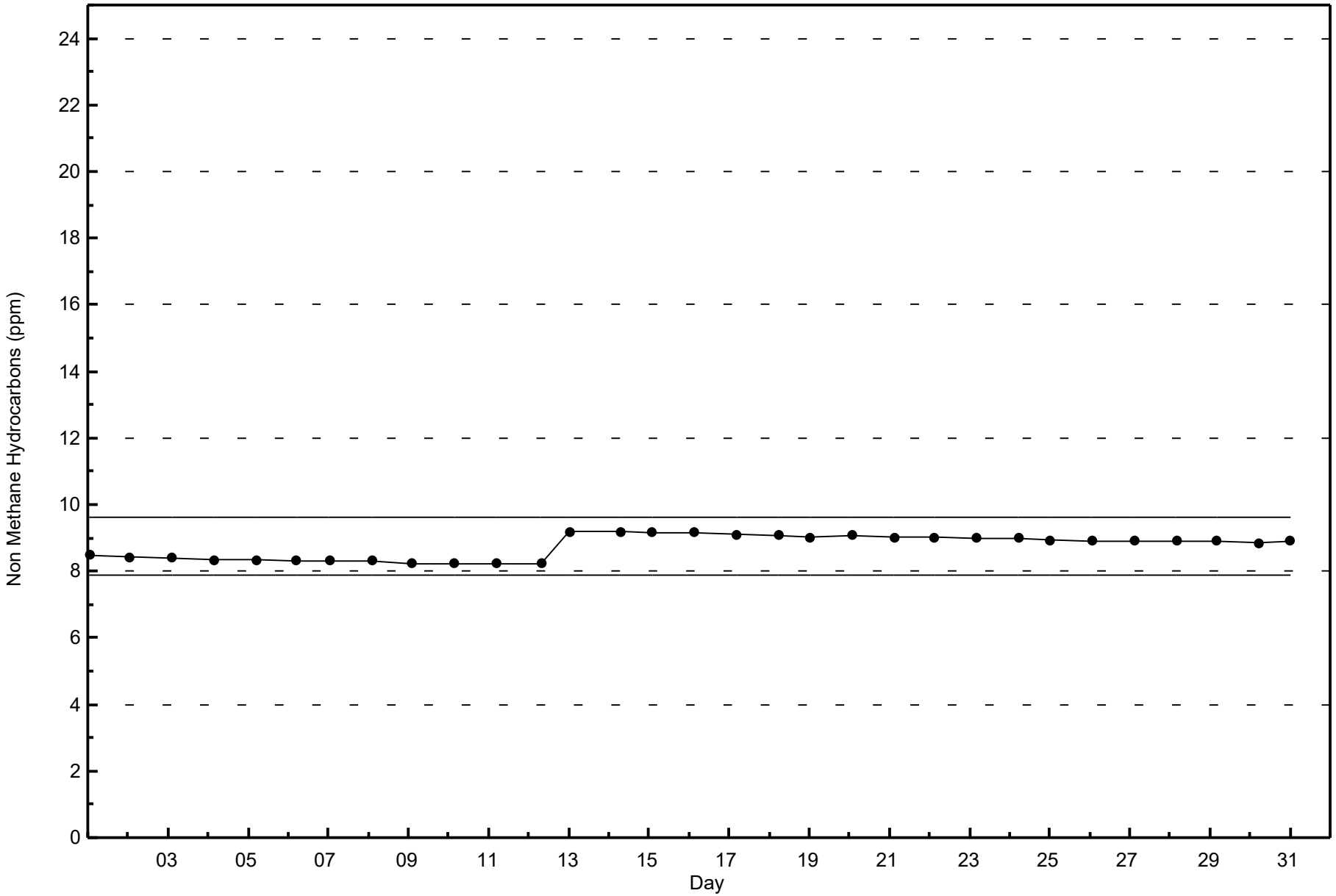


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Mannix - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Mannix - March 2025

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

Maximum Value: 3.7 ppm on Mar 19 05:00

Maximum Daily Average: 2.4 ppm on Mar 19

Minimum Value: 1.9 ppm on Mar 9 04:00

Minimum Daily Average: 1.9 ppm on Mar 9

Maximum Diurnal Average: 2.2 ppm at hour 9

Minimum Diurnal Average: 2.1 ppm at hour 22

Monthly Average: 2.12 ppm

Percentiles: P_1 = 1.9 P_{10} = 2.0 Q_1 = 2.0 Median = 2.1 Q_3 = 2.1 P_{90} = 2.4 P_{99} = 2.9

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

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

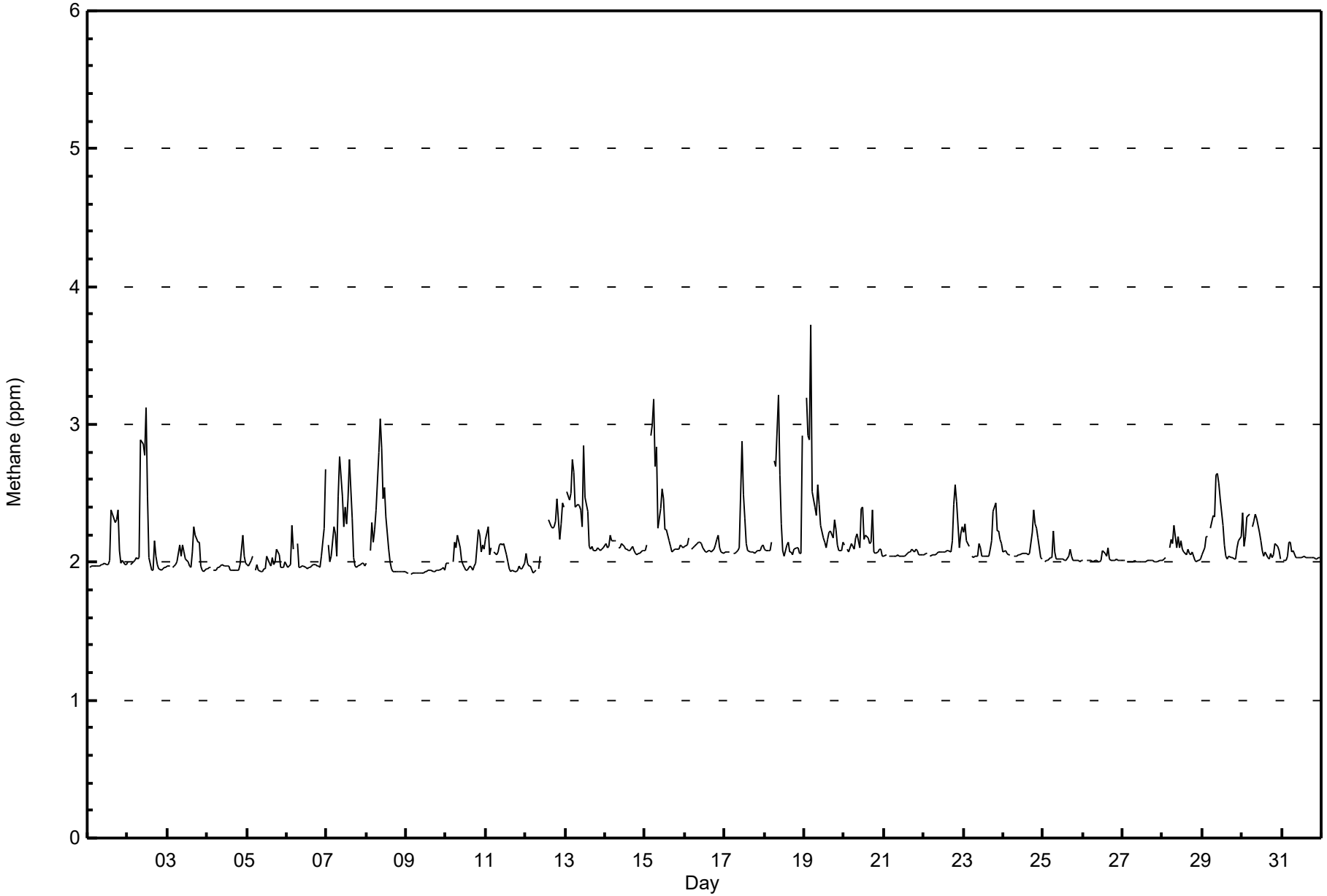
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Mannix - March 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	318	44.85	44.85
2.1 - 3.0	386	54.44	99.29
3.1 - 10.0	5	0.71	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	65	72	5	0	2	5	46	61	15	8	5	9	6	9	2	8	318
2.1 - 3.0	63	33	8	4	8	11	60	46	10	9	8	13	22	32	26	33	386
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	0	5
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	128	105	13	4	10	16	106	107	25	17	13	22	29	43	30	41	709

Total Number of Valid Hours: 709

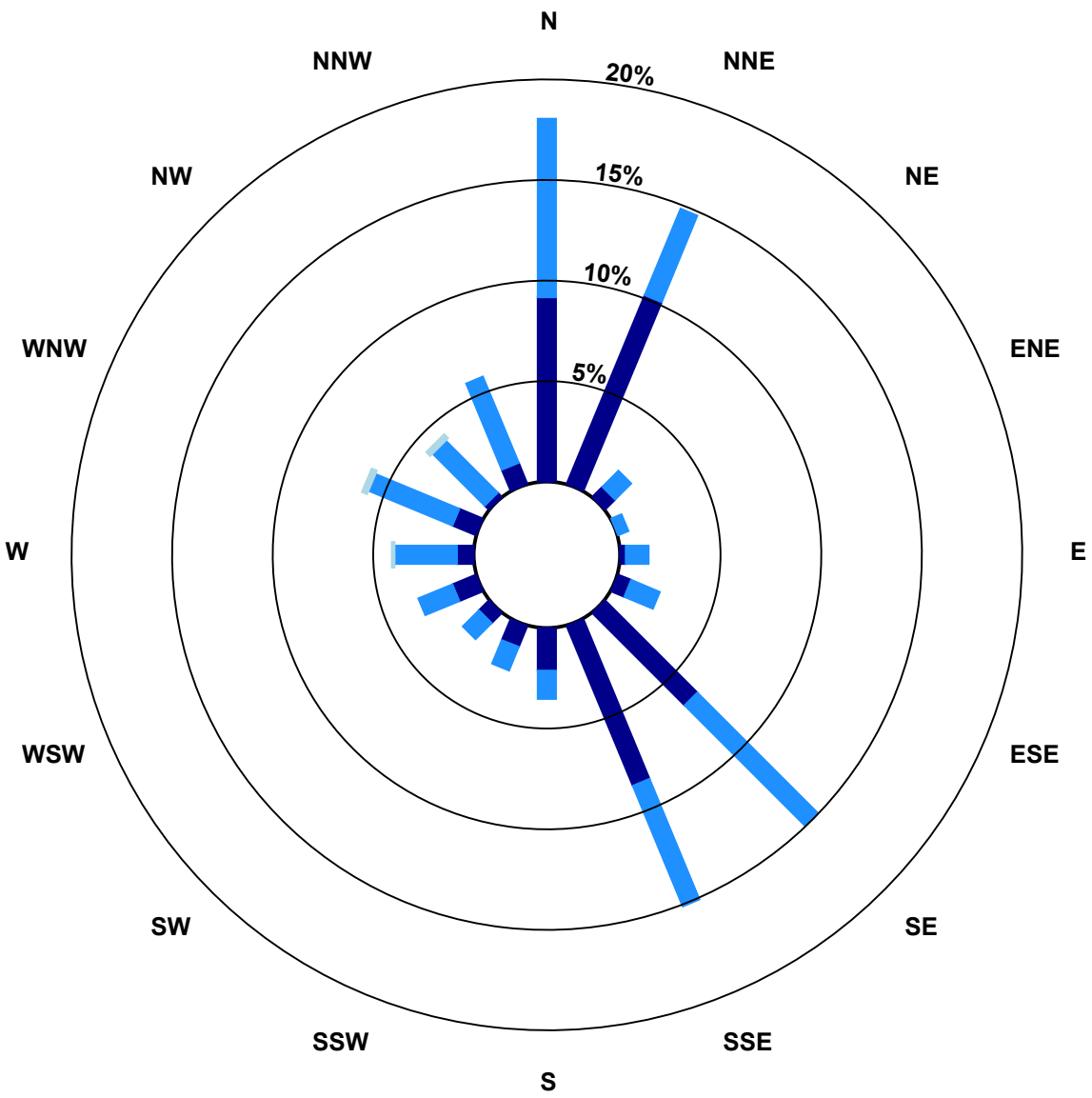
Total Number of Hours: 744

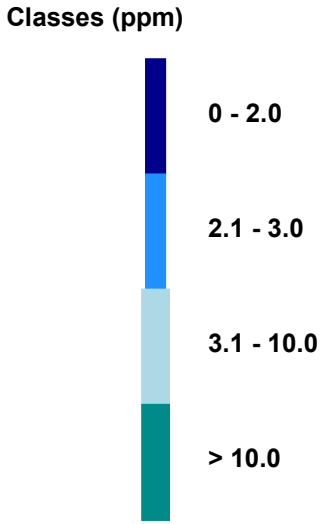
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Methane (CH_4) - ppm

Mannix





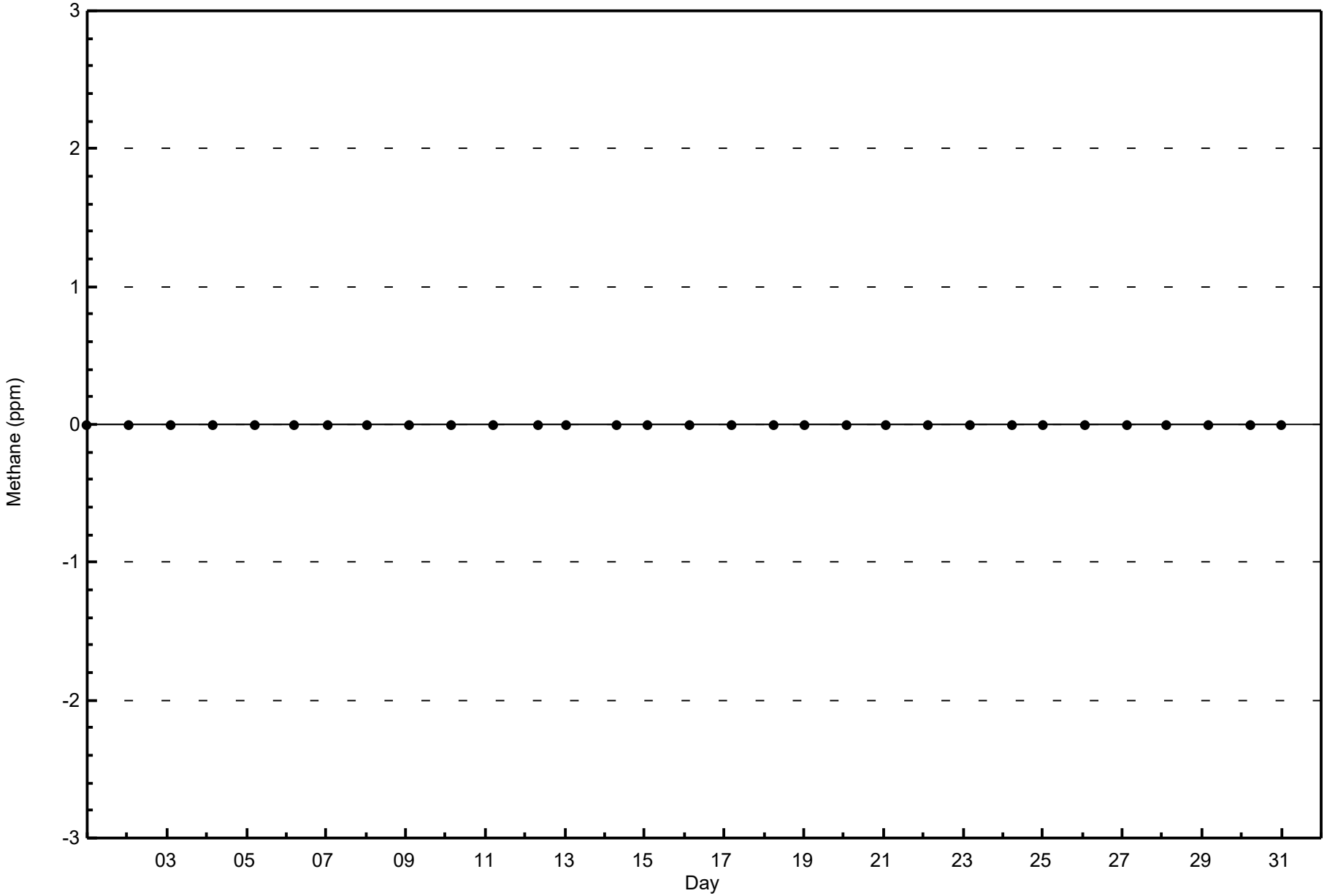
Total Number of Valid Hours: 709

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Mannix - March 2025

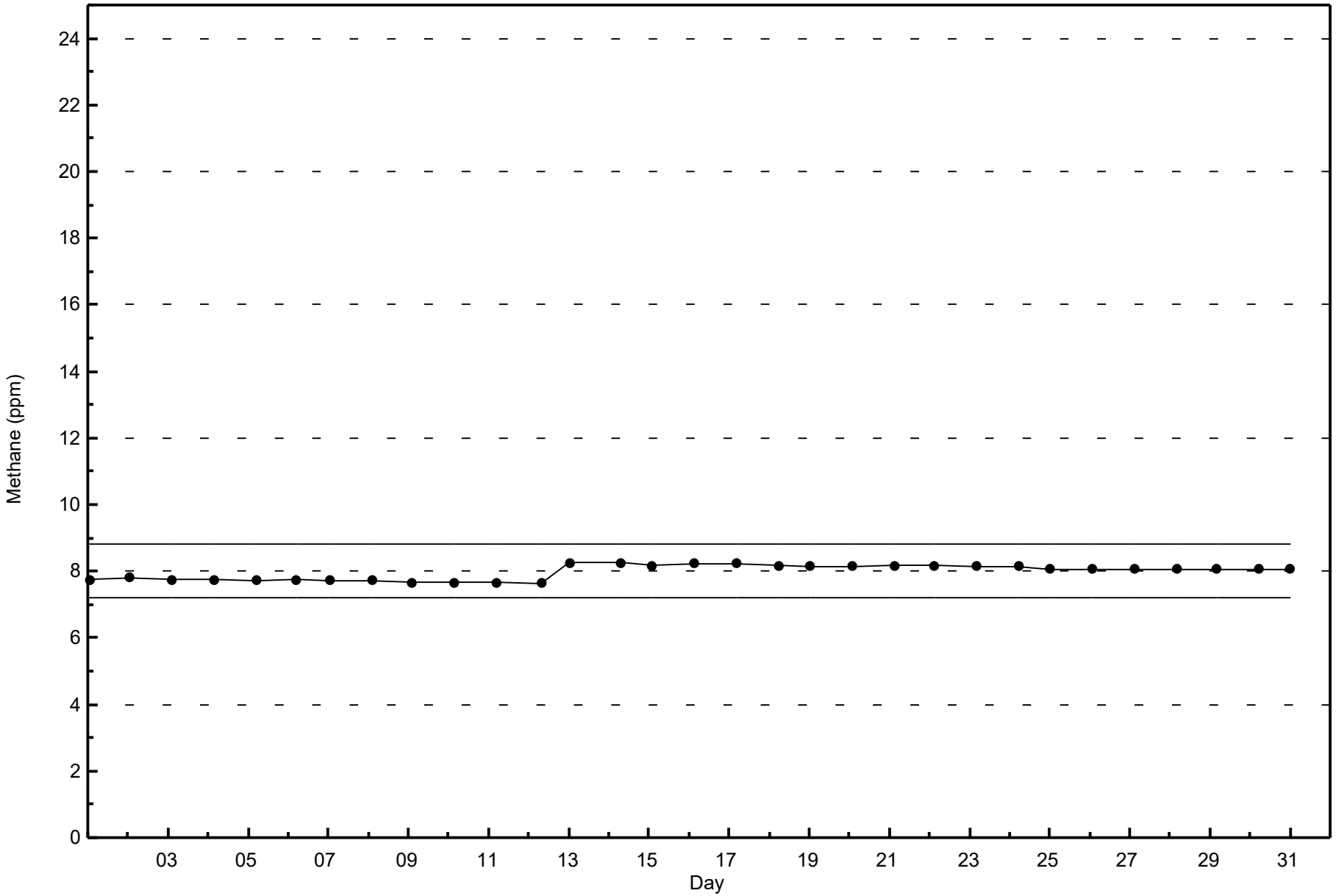


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Mannix - March 2025



Summary of Hour Averages

Mannix - March 2025

Maximum Value: 9.6 C on Mar 25 14:00

Maximum Daily Average: 1.6 C on Mar 2

Minimum Value: -23.6 C on Mar 13 04:00

Minimum Daily Average: -20.9 C on Mar 9

Maximum Diurnal Average: -2.7 C at hour 16

Minimum Diurnal Average: -12.2 C at hour 7

Monthly Average: -7.54 C

Percentiles: P_1 = -22.9 P_{10} = -17.2 Q_1 = -13.0 Median = -7.3 Q_3 = -2.2 P_{90} = 1.7 P_{99} = 6.8

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

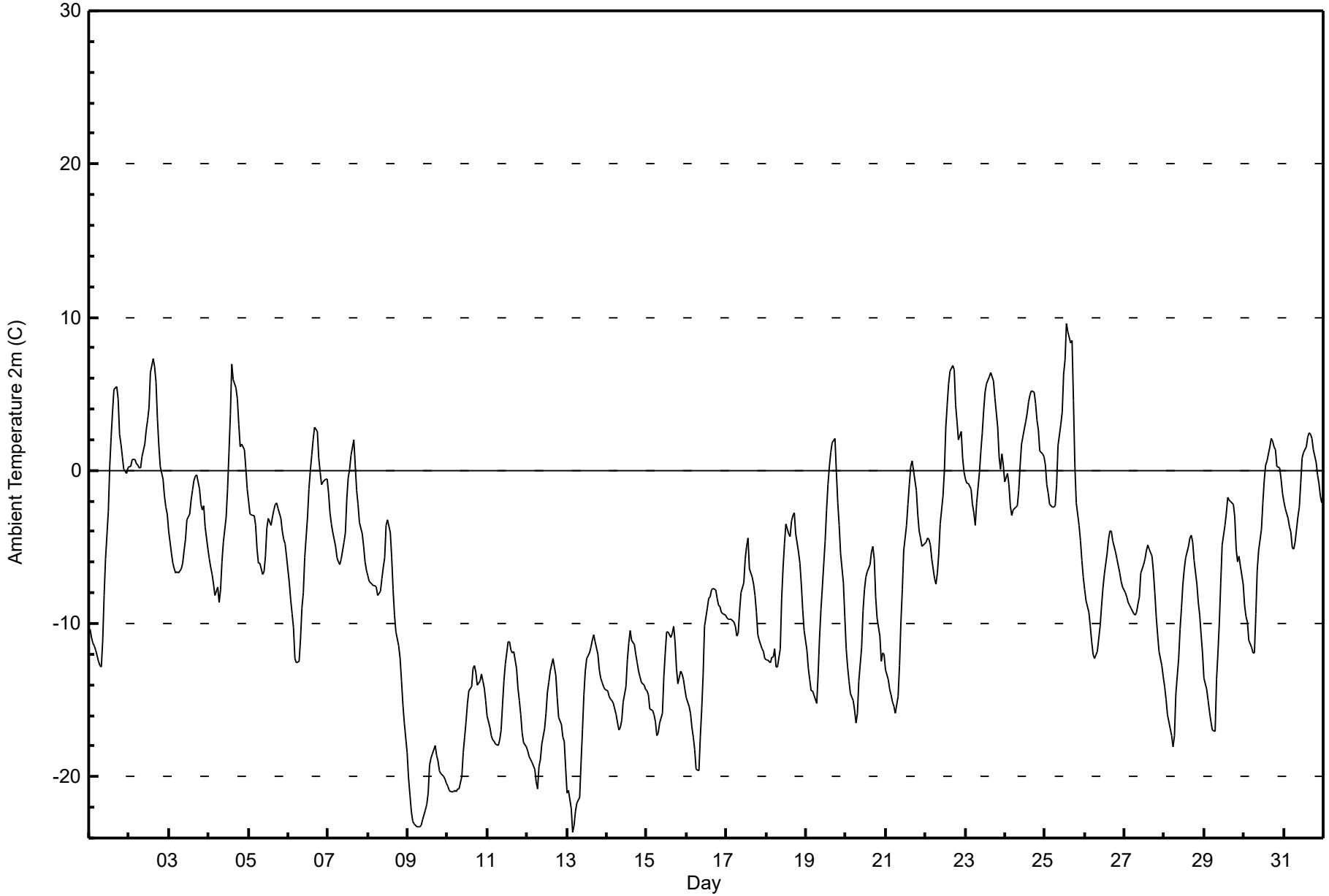
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-10.4	-10.9	-11.3	-11.5	-11.7	-12.4	-12.7	-12.8	-11.1	-8.2	-5.8	-2.6	0.3	2.2	3.9	5.3	5.4	4.6	2.4	1.7	0.9	0.1	-0.2	0.1	-4.0	5.4
2-Mar	0.2	0.2	0.7	0.7	0.5	0.3	0.2	0.2	0.9	1.7	2.6	3.3	4.1	6.3	7.3	6.8	5.7	3.4	1.6	0.3	-0.6	-1.7	-2.4	-2.9	1.6	7.3
3-Mar	-3.9	-5.4	-6.1	-6.4	-6.7	-6.6	-6.7	-6.4	-6.0	-5.3	-4.5	-3.2	-2.9	-1.9	-1.3	-0.7	-0.4	-0.3	-1.2	-2.2	-2.6	-2.3	-3.7	-5.1	-3.8	-0.3
4-Mar	-5.8	-6.3	-6.8	-7.4	-8.2	-7.6	-8.6	-7.8	-6.0	-4.7	-3.0	-1.2	1.1	3.6	6.9	6.0	5.4	4.7	3.0	1.5	1.7	1.4	0.2	-1.2	-1.6	6.9
5-Mar	-2.0	-2.8	-3.0	-2.9	-3.6	-5.1	-6.1	-6.1	-6.8	-6.6	-5.6	-3.7	-3.2	-3.5	-3.1	-2.5	-2.2	-2.1	-2.5	-3.1	-3.9	-4.5	-4.8	-5.6	-4.0	-2.0
6-Mar	-7.3	-8.5	-9.3	-10.3	-12.3	-12.6	-12.4	-11.0	-9.0	-7.9	-5.7	-3.0	-1.2	-0.1	1.0	2.0	2.9	2.5	0.8	-0.1	-1.0	-0.8	-0.6	-0.6	-4.4	2.9
7-Mar	-1.5	-2.7	-3.5	-4.1	-4.9	-5.7	-6.0	-6.2	-5.7	-4.7	-4.0	-1.8	-0.4	0.1	1.0	2.0	0.3	-1.3	-2.2	-3.4	-4.1	-4.9	-6.0	-6.5	-3.2	2.0
8-Mar	-6.9	-7.2	-7.4	-7.5	-7.5	-7.6	-8.2	-7.9	-7.1	-6.3	-5.7	-3.6	-3.2	-4.0	-5.7	-7.8	-9.5	-10.6	-11.5	-12.3	-13.7	-15.3	-16.5	-18.4	-8.8	-3.2
9-Mar	-20.0	-21.1	-22.2	-22.9	-23.0	-23.2	-23.3	-23.3	-23.2	-22.8	-22.2	-21.8	-21.0	-19.3	-18.8	-18.5	-18.0	-18.6	-19.0	-19.6	-19.8	-20.0	-20.2	-20.4	-20.9	-18.0
10-Mar	-20.6	-20.9	-20.9	-20.9	-20.9	-21.0	-20.8	-20.8	-20.0	-18.4	-17.4	-16.4	-15.2	-14.4	-14.1	-12.9	-12.8	-13.2	-14.1	-13.7	-13.3	-13.8	-14.2	-15.0	-16.9	-12.8
11-Mar	-16.1	-16.8	-17.3	-17.6	-17.7	-17.8	-18.0	-17.6	-17.0	-15.3	-13.8	-12.6	-11.2	-11.1	-11.7	-11.9	-11.9	-12.9	-14.2	-15.1	-15.9	-17.1	-17.7	-18.1	-15.3	-11.1
12-Mar	-18.3	-18.7	-18.9	-19.0	-19.5	-20.3	-20.8	-19.3	-18.9	-17.9	-16.8	-15.8	-14.5	-13.8	-13.1	-12.3	-12.8	-13.4	-14.8	-16.1	-16.6	-17.4	-17.7	-19.5	-16.9	-12.3
13-Mar	-21.0	-20.9	-22.0	-23.6	-23.2	-22.3	-21.7	-21.4	-19.1	-16.9	-14.7	-13.1	-12.3	-11.9	-11.6	-11.1	-10.7	-11.2	-12.0	-13.0	-13.6	-13.9	-14.1	-14.3	-16.2	-10.7
14-Mar	-14.4	-14.8	-14.9	-15.0	-15.2	-16.0	-16.5	-16.9	-16.8	-16.3	-15.1	-14.2	-12.4	-11.3	-10.4	-11.1	-11.4	-12.0	-12.6	-13.1	-13.5	-13.9	-14.0	-14.3	-14.0	-10.4
15-Mar	-14.4	-14.6	-15.6	-15.7	-16.0	-16.4	-17.3	-17.2	-16.5	-15.8	-13.5	-11.9	-10.6	-10.6	-10.9	-10.6	-10.1	-11.2	-13.0	-13.9	-13.1	-13.3	-13.7	-14.3	-13.7	-10.1
16-Mar	-14.9	-15.4	-15.9	-16.8	-17.4	-18.3	-19.5	-19.6	-17.5	-15.6	-13.3	-10.2	-9.0	-8.4	-8.2	-7.8	-7.7	-7.8	-8.4	-8.8	-8.9	-9.3	-9.4	-9.4	-12.4	-7.7
17-Mar	-9.6	-9.7	-9.8	-9.8	-9.9	-10.2	-10.9	-10.6	-9.1	-8.0	-7.3	-5.8	-5.0	-4.4	-6.4	-7.0	-7.4	-8.2	-9.3	-10.7	-11.1	-11.6	-11.8	-12.3	-9.0	-4.4
18-Mar	-12.4	-12.4	-12.5	-12.2	-12.2	-11.6	-12.8	-12.9	-11.7	-8.3	-6.3	-4.8	-3.5	-4.2	-4.4	-3.3	-2.9	-2.8	-4.2	-5.3	-6.0	-7.4	-9.1	-10.4	-8.1	-2.8
19-Mar	-11.7	-12.9	-13.7	-14.4	-14.4	-14.7	-15.2	-13.3	-10.9	-9.0	-7.6	-4.6	-2.6	-0.9	0.2	1.2	1.8	2.1	-0.1	-2.2	-3.6	-5.4	-7.3	-9.5	-7.0	2.1
20-Mar	-11.6	-12.8	-13.8	-14.6	-15.1	-15.7	-16.5	-15.8	-13.8	-11.5	-9.2	-7.8	-7.0	-6.6	-6.2	-5.3	-5.0	-5.8	-8.3	-9.7	-10.8	-12.5	-11.9	-12.0	-10.8	-5.0
21-Mar	-13.0	-13.6	-14.3	-14.7	-15.2	-15.4	-15.8	-14.7	-12.8	-9.9	-7.8	-5.2	-3.6	-2.3	-1.0	0.2	0.6	0.0	-1.3	-2.8	-3.9	-4.4	-5.0	-4.8	-7.5	0.6
22-Mar	-4.7	-4.4	-4.5	-4.9	-5.8	-7.0	-7.4	-6.7	-5.4	-3.5	-1.6	0.0	2.8	4.2	5.7	6.5	6.8	6.5	4.3	3.2	2.0	2.6	0.8	-0.1	-0.4	6.8
23-Mar	-0.6	-0.8	-0.9	-1.2	-2.2	-2.8	-3.6	-2.1	-0.1	1.3	2.4	3.9	5.1	5.6	6.1	6.4	6.1	5.8	4.7	2.8	0.9	0.1	1.1	0.4	1.6	6.4
24-Mar	-0.7	-0.2	-0.9	-2.3	-2.9	-2.6	-2.4	-2.3	-1.3	0.3	1.8	2.7	3.2	3.8	4.4	4.9	5.2	5.1	4.3	3.3	2.6	1.2	1.1	0.9	1.2	5.2
25-Mar	0.4	-0.9	-1.5	-2.2	-2.4	-2.4	-2.3	-1.0	1.7	3.0	3.9	6.3	7.2	9.6	9.0	8.3	8.5	4.6	0.4	-2.1	-3.6	-4.6	-5.9	-7.0	1.1	9.6
26-Mar	-7.8	-8.5	-9.3	-10.1	-11.2	-12.0	-12.3	-11.8	-11.0	-10.2	-8.9	-7.7	-6.8	-5.5	-4.5	-4.0	-3.9	-4.6	-5.3	-5.8	-6.3	-6.7	-7.3	-7.7	-7.9	-3.9
27-Mar	-8.0	-8.3	-8.6	-8.8	-9.0	-9.3	-9.5	-9.3	-8.7	-8.2	-6.7	-6.1	-5.8	-5.2	-4.9	-5.1	-5.6	-6.6	-8.0	-9.5	-10.7	-11.8	-12.7	-13.5	-8.3	-4.9
28-Mar	-14.1	-15.0	-15.9	-16.9	-17.3	-18.1	-17.3	-14.6	-12.3	-10.4	-8.9	-7.4	-6.4	-5.7	-5.0	-4.4	-4.3	-4.7	-5.9	-7.4	-8.6	-9.5	-10.7	-11.9	-10.5	-4.3
29-Mar	-13.6	-14.3	-15.0	-15.8	-16.4	-16.9	-17.0	-13.6	-12.0	-9.9	-7.4	-4.9	-3.6	-2.7	-1.8	-2.0	-2.0	-2.2	-3.0	-5.1	-6.0	-5.6	-6.2	-7.4	-8.5	-1.8
30-Mar	-8.8	-9.5	-9.9	-11.1	-11.6	-11.9	-12.0	-9.3	-6.5	-5.2	-3.9	-2.2	-0.7	0.4	0.7	1.6	2.1	1.9	1.5	1.4	0.3	0.1	-0.6	-1.5	-3.9	2.1
31-Mar	-2.0	-2.5	-3.1	-3.6	-4.1	-5.1	-5.2	-4.7	-3.0	-2.4	-0.9	0.8	1.2	1.5	2.2	2.4	2.4	2.1	1.3	0.5	-0.3	-0.9	-1.6	-2.1	-1.1	2.4
	-9.5	-10.1	-10.6	-11.1	-11.5	-11.9	-12.2	-11.5	-10.2	-8.8	-7.3	-5.6	-4.4	-3.6	-3.0	-2.7	-2.8	-3.4	-4.7	-5.8	-6.6	-7.2	-7.8	-8.5	Diurnal Average	
	0.4	0.2	0.7	0.7	0.5	0.3	0.2	0.2	1.7	3.0	3.9	6.3	7.2	9.6	9.0	8.3	8.5	6.5	4.7	3.3	2.6	2.6	1.1	0.9	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Mannix - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	33	4.44	4.44
-20 - 0	581	78.09	82.53
0 - 10	130	17.47	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Maximum Value: 9.3 C on Mar 25 14:00

Maximum Daily Average: 2.1 C on Mar 23

Minimum Value: -23.9 C on Mar 9 08:00

Minimum Daily Average: -21.6 C on Mar 9

Maximum Diurnal Average: -3.1 C at hour 17

Minimum Diurnal Average: -11.8 C at hour 7

Monthly Average: -7.60 C

Percentiles: P_1 = -22.8 P_{10} = -17.2 Q_1 = -13.3 Median = -7.6 Q_3 = -2.0 P_{90} = 2.0 P_{99} = 6.7

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

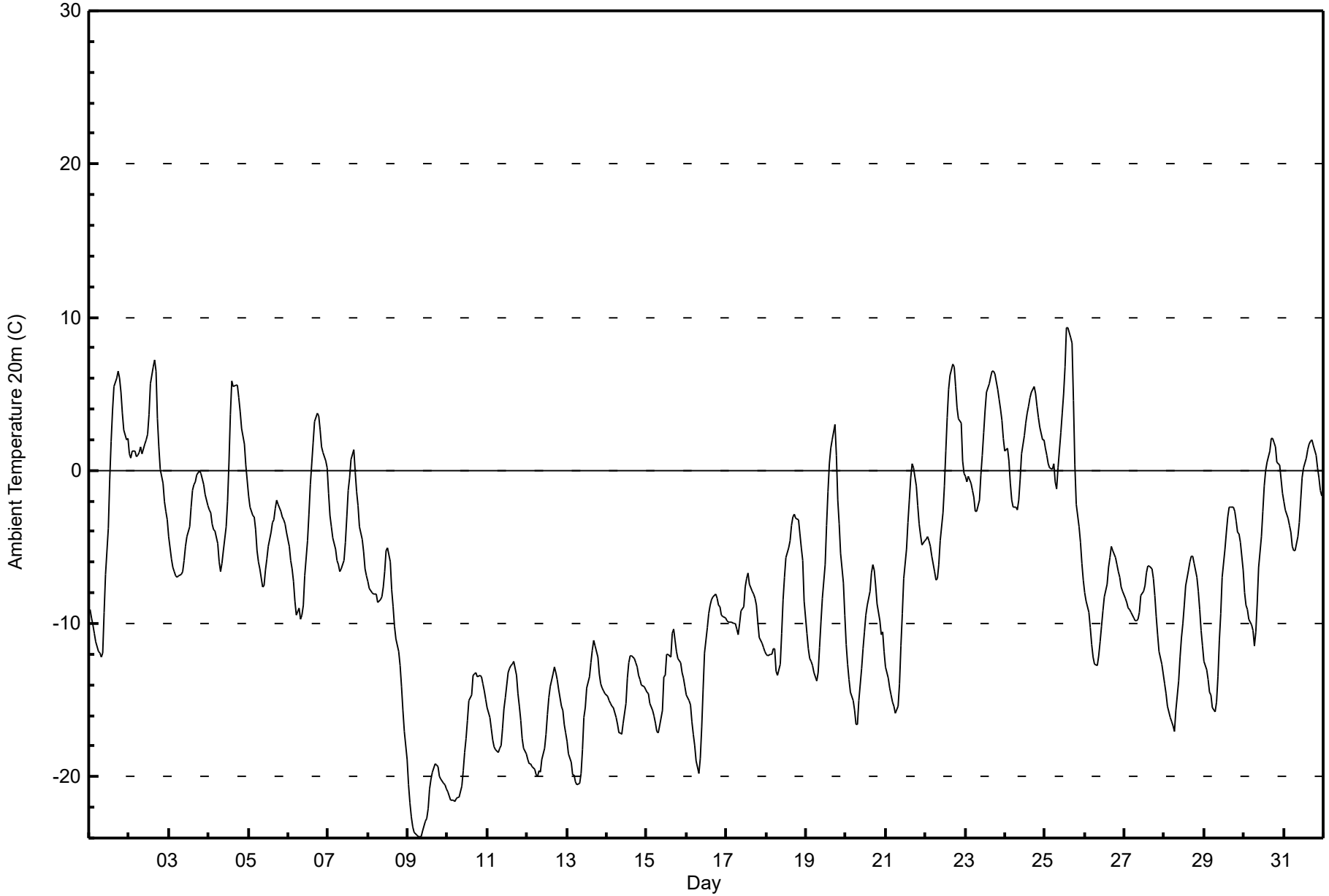
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-9.1	-9.6	-10.1	-10.6	-11.2	-11.8	-12.0	-12.2	-11.9	-9.3	-6.8	-3.8	-0.6	1.9	3.9	5.5	6.0	6.4	6.0	5.1	3.7	2.6	2.0	2.1	-3.1	6.4
2-Mar	1.1	0.8	1.3	1.2	0.9	1.0	1.2	1.5	1.1	1.7	2.0	2.4	3.7	5.7	6.7	7.2	6.5	3.4	1.5	0.1	-0.9	-2.0	-2.7	-3.2	1.8	7.2
3-Mar	-4.3	-5.8	-6.4	-6.7	-6.9	-6.9	-6.9	-6.8	-6.6	-5.9	-5.0	-4.3	-3.7	-2.4	-1.3	-1.0	-0.8	-0.3	0.0	-0.2	-0.6	-1.0	-1.6	-2.3	-3.6	0.0
4-Mar	-2.5	-2.8	-3.5	-3.9	-3.9	-4.7	-6.0	-6.6	-6.1	-5.2	-3.6	-2.0	0.5	3.7	5.8	5.5	5.6	5.6	4.7	3.8	2.7	1.7	0.3	-0.7	-0.5	5.8
5-Mar	-1.7	-2.4	-3.0	-3.1	-3.9	-5.2	-6.0	-6.4	-7.6	-7.5	-6.5	-5.8	-5.0	-4.1	-3.4	-3.3	-2.5	-1.9	-2.3	-2.6	-3.0	-3.2	-3.5	-4.1	-4.1	-1.7
6-Mar	-4.9	-5.9	-6.4	-7.3	-8.5	-9.4	-9.0	-9.7	-9.5	-8.8	-6.9	-4.6	-2.9	-1.0	0.4	1.8	3.1	3.8	3.5	2.6	1.5	1.2	0.7	0.2	-3.2	3.8
7-Mar	-1.5	-3.0	-3.7	-4.4	-5.2	-5.9	-6.1	-6.6	-6.4	-5.9	-4.7	-3.1	-1.3	-0.4	0.7	1.4	-0.1	-1.4	-2.3	-3.7	-4.5	-5.4	-6.4	-6.8	-3.6	1.4
8-Mar	-7.3	-7.7	-8.0	-8.1	-8.1	-8.1	-8.6	-8.5	-8.2	-7.6	-6.6	-5.2	-5.0	-5.9	-7.8	-8.9	-10.2	-11.0	-11.9	-12.7	-14.1	-15.6	-17.0	-18.9	-9.6	-5.0
9-Mar	-20.5	-21.7	-22.6	-23.3	-23.6	-23.8	-23.9	-23.9	-23.9	-23.5	-22.9	-22.7	-22.1	-20.8	-20.1	-19.7	-19.1	-19.2	-19.4	-19.9	-20.2	-20.4	-20.5	-20.8	-21.6	-19.1
10-Mar	-20.9	-21.3	-21.6	-21.5	-21.6	-21.5	-21.3	-21.4	-20.7	-19.6	-18.5	-17.5	-16.3	-15.0	-14.7	-13.4	-13.3	-13.2	-13.5	-13.3	-13.5	-13.9	-14.4	-14.9	-17.4	-13.2
11-Mar	-15.5	-16.2	-16.9	-17.6	-18.1	-18.2	-18.4	-18.2	-18.0	-16.9	-15.6	-14.8	-13.2	-12.9	-12.8	-12.6	-12.4	-13.3	-14.5	-15.4	-16.3	-17.5	-18.1	-18.5	-15.9	-12.4
12-Mar	-18.9	-19.1	-19.2	-19.3	-19.5	-19.9	-19.9	-19.6	-19.7	-18.9	-18.1	-17.2	-16.0	-14.8	-14.1	-13.3	-12.8	-13.2	-13.7	-14.3	-15.4	-15.7	-16.6	-17.2	-16.9	-12.8
13-Mar	-17.7	-18.5	-19.1	-19.8	-19.8	-20.3	-20.5	-20.4	-19.8	-18.2	-16.1	-15.5	-14.2	-13.4	-12.5	-11.8	-11.1	-11.5	-12.2	-13.3	-13.9	-14.2	-14.4	-14.6	-16.0	-11.1
14-Mar	-14.7	-15.1	-15.3	-15.4	-15.5	-16.1	-16.6	-17.1	-17.2	-17.3	-16.5	-15.2	-13.6	-12.5	-12.1	-12.1	-12.3	-12.6	-12.9	-13.3	-13.7	-14.0	-14.1	-14.3	-14.6	-12.1
15-Mar	-14.4	-14.6	-15.2	-15.7	-16.1	-16.5	-17.1	-17.1	-16.7	-15.6	-13.5	-13.3	-12.0	-12.0	-12.2	-10.6	-10.4	-11.1	-11.8	-12.2	-12.5	-13.2	-13.6	-14.1	-13.8	-10.4
16-Mar	-14.7	-15.1	-15.3	-16.4	-17.2	-18.0	-19.0	-19.8	-18.8	-16.8	-14.3	-12.0	-10.3	-9.3	-8.8	-8.4	-8.2	-8.1	-8.4	-8.8	-8.9	-9.4	-9.6	-9.6	-12.7	-8.1
17-Mar	-9.8	-9.9	-9.9	-9.9	-10.0	-10.0	-10.4	-10.7	-10.0	-9.2	-8.9	-7.6	-7.1	-6.7	-7.5	-7.9	-8.1	-8.4	-8.8	-9.9	-10.9	-11.3	-11.5	-11.8	-9.4	-6.7
18-Mar	-12.0	-12.1	-12.0	-12.1	-11.7	-11.7	-13.1	-13.3	-12.6	-10.6	-8.5	-7.0	-5.7	-5.1	-4.6	-3.6	-3.0	-2.9	-3.2	-3.2	-4.1	-5.0	-5.9	-8.5	-8.0	-2.9
19-Mar	-10.6	-11.7	-12.3	-12.5	-12.8	-13.2	-13.8	-13.2	-11.5	-9.9	-8.3	-6.1	-3.6	-1.4	0.4	1.5	2.0	3.0	1.0	-1.9	-3.5	-5.4	-7.3	-9.4	-6.7	3.0
20-Mar	-11.4	-12.6	-13.6	-14.5	-15.0	-15.7	-16.6	-16.5	-15.0	-12.9	-11.6	-10.6	-9.5	-8.8	-7.9	-6.7	-6.2	-6.5	-7.5	-8.7	-9.8	-10.7	-10.5	-11.8	-11.3	-6.2
21-Mar	-12.9	-13.6	-14.2	-14.7	-15.1	-15.4	-15.9	-15.4	-13.9	-11.5	-9.4	-7.1	-5.2	-3.4	-1.9	-0.5	0.4	0.2	-1.0	-2.3	-3.5	-4.3	-4.9	-4.6	-7.9	0.4
22-Mar	-4.5	-4.3	-4.6	-5.0	-5.6	-6.6	-7.2	-7.1	-6.2	-4.6	-2.8	-1.0	1.3	3.4	5.3	6.2	6.9	6.8	5.5	4.1	3.3	3.1	0.7	-0.2	-0.5	6.9
23-Mar	-0.4	-0.7	-0.3	-0.8	-1.3	-1.8	-2.7	-2.7	-2.0	-0.3	1.0	2.4	3.9	5.1	5.7	6.1	6.5	6.5	6.3	5.3	4.7	4.0	3.2	2.1	2.1	6.5
24-Mar	1.2	1.4	0.7	-0.9	-2.0	-2.4	-2.4	-2.6	-2.0	-0.6	1.0	2.3	3.1	3.7	4.2	4.7	5.1	5.5	5.0	4.2	3.5	2.8	2.0	2.0	1.7	5.5
25-Mar	1.5	1.0	0.4	0.2	0.1	0.4	-0.7	-1.2	0.2	2.4	3.7	5.0	6.8	9.3	9.3	8.7	8.3	4.5	0.3	-2.2	-3.7	-4.7	-6.1	-7.1	1.5	9.3
26-Mar	-7.9	-8.6	-9.2	-10.3	-11.4	-12.2	-12.6	-12.7	-12.1	-11.1	-10.2	-9.1	-8.3	-7.4	-6.3	-5.7	-4.9	-5.3	-5.7	-6.1	-6.6	-7.0	-7.6	-7.9	-8.6	-4.9
27-Mar	-8.3	-8.6	-9.0	-9.1	-9.3	-9.6	-9.8	-9.8	-9.7	-9.3	-8.2	-7.9	-7.5	-6.7	-6.2	-6.3	-6.4	-7.1	-8.1	-9.6	-10.7	-11.8	-12.7	-13.3	-9.0	-6.2
28-Mar	-14.0	-14.6	-15.4	-16.1	-16.4	-16.7	-17.1	-15.6	-13.7	-12.2	-11.0	-10.0	-8.8	-7.5	-6.5	-5.9	-5.6	-5.6	-6.1	-7.0	-7.9	-9.1	-10.5	-11.5	-11.0	-5.6
29-Mar	-12.5	-13.0	-13.7	-14.5	-14.6	-15.4	-15.8	-15.1	-13.4	-11.1	-9.3	-7.0	-5.1	-4.1	-3.0	-2.4	-2.4	-2.4	-2.6	-3.3	-4.1	-4.1	-4.7	-6.5	-8.3	-2.4
30-Mar	-8.0	-8.8	-9.1	-9.8	-10.1	-10.5	-11.5	-10.5	-8.6	-6.3	-4.3	-2.7	-1.0	0.0	0.5	1.3	2.1	2.1	1.9	1.5	0.5	0.4	-0.5	-1.5	-3.9	2.1
31-Mar	-2.1	-2.5	-3.1	-3.6	-4.1	-5.0	-5.2	-5.2	-4.4	-3.4	-2.0	-0.5	0.2	0.8	1.3	1.7	1.9	2.0	1.7	1.0	0.1	-0.5	-1.3	-1.7	-1.4	2.0
	-9.0	-9.6	-10.0	-10.5	-10.9	-11.3	-11.8	-11.8	-11.1	-9.9	-8.5	-7.2	-5.8	-4.6	-3.9	-3.3	-3.1	-3.4	-4.1	-5.0	-5.9	-6.6	-7.3	-8.1	Diurnal Average	
	1.5	1.4	1.3	1.2	0.9	1.0	1.2	1.5	1.1	2.4	3.7	5.0	6.8	9.3	9.3	8.7	8.3	6.8	6.3	5.3	4.7	4.0	3.2	2.1	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 20m (AT20) - C

Mannix - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	31	4.17	4.17
-20 - 0	576	77.42	81.59
0 - 10	137	18.41	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Maximum Value: 9.3 C on Mar 25 15:00

Maximum Daily Average: 1.9 C on Mar 2

Minimum Value: -24.7 C on Mar 9 08:00

Minimum Daily Average: -22.4 C on Mar 9

Maximum Diurnal Average: -3.5 C at hour 17

Minimum Diurnal Average: -11.9 C at hour 8

Monthly Average: -7.93 C

Percentiles: P_1 = -23.7 P_{10} = -17.6 Q_1 = -13.8 Median = -8.2 Q_3 = -2.3 P_{90} = 2.2 P_{99} = 6.6

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

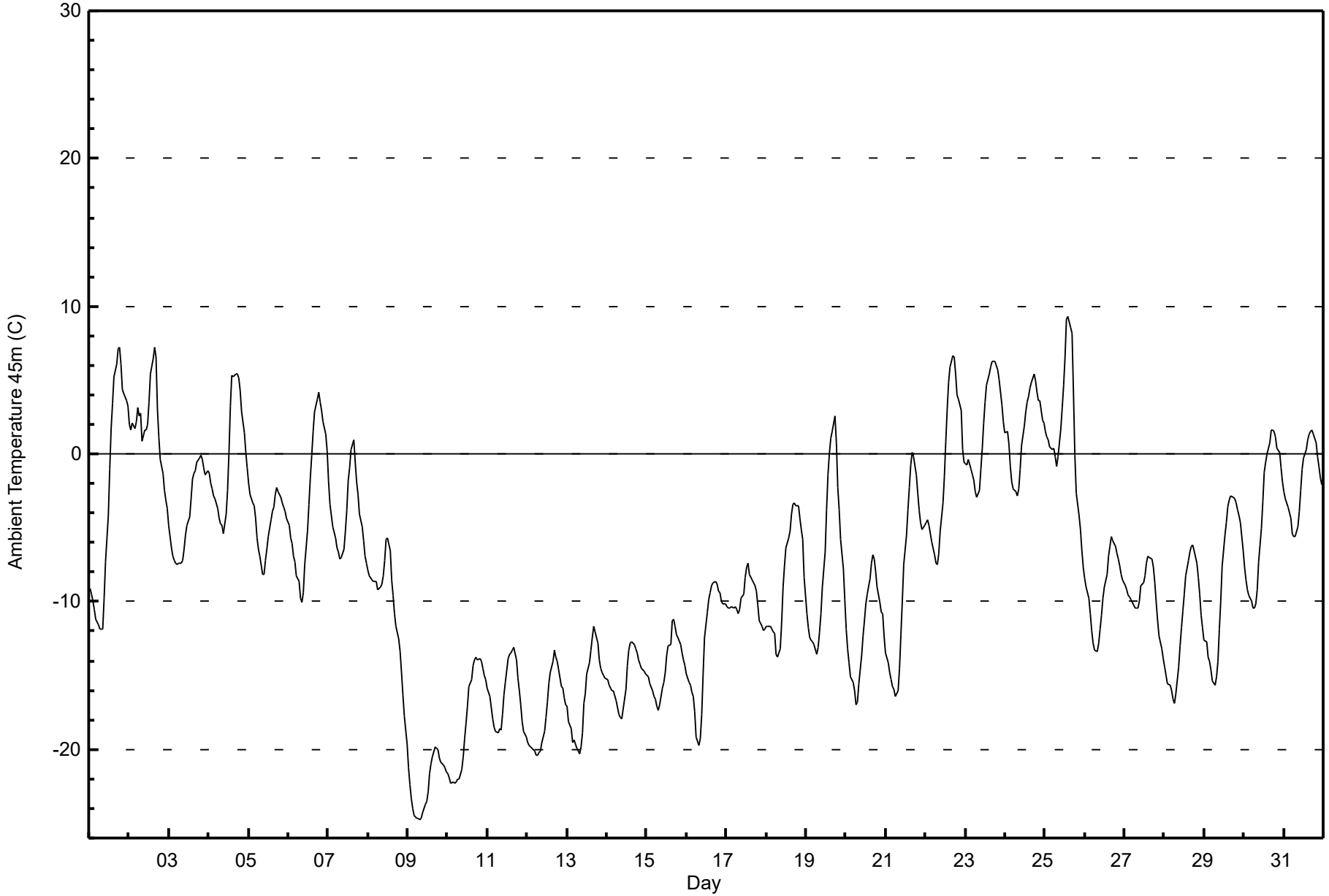
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-9.1	-9.5	-9.9	-10.6	-11.2	-11.6	-11.8	-11.8	-11.9	-9.8	-7.3	-4.2	-1.0	1.7	3.4	5.2	6.1	7.1	7.2	6.0	4.4	4.1	3.6	3.2	-2.8	7.2
2-Mar	2.0	1.6	2.1	1.8	2.2	3.2	2.6	2.8	0.8	1.6	1.7	2.0	3.5	5.4	6.5	7.2	6.6	3.1	1.1	-0.4	-1.3	-2.5	-3.1	-3.7	1.9	7.2
3-Mar	-4.8	-6.3	-6.9	-7.2	-7.4	-7.5	-7.4	-7.4	-7.2	-6.4	-5.5	-4.8	-4.3	-3.0	-1.7	-1.3	-1.1	-0.6	-0.3	-0.1	-0.3	-0.9	-1.4	-1.1	-4.0	-0.1
4-Mar	-1.4	-2.0	-2.3	-2.8	-3.1	-3.7	-4.3	-4.7	-4.8	-5.4	-4.1	-2.5	0.1	3.3	5.3	5.2	5.4	5.5	5.1	4.3	2.9	1.4	0.1	-0.9	-0.1	5.5
5-Mar	-2.0	-2.7	-3.3	-3.5	-4.4	-5.7	-6.4	-6.9	-8.2	-8.2	-7.2	-6.5	-5.6	-4.4	-3.9	-3.6	-2.8	-2.2	-2.6	-2.9	-3.3	-3.6	-3.9	-4.3	-4.5	-2.0
6-Mar	-4.8	-5.7	-6.1	-6.9	-7.3	-8.3	-8.6	-9.8	-10.1	-9.4	-7.4	-5.2	-3.4	-1.6	-0.1	1.5	2.9	3.7	4.2	3.6	3.0	2.2	1.3	0.2	-3.0	4.2
7-Mar	-1.9	-3.4	-4.2	-4.9	-5.7	-6.3	-6.6	-7.1	-7.0	-6.4	-5.2	-3.8	-1.8	-0.9	0.3	0.9	-0.6	-1.9	-2.7	-4.1	-5.0	-5.9	-6.9	-7.4	-4.1	0.9
8-Mar	-7.8	-8.3	-8.5	-8.6	-8.7	-8.6	-9.2	-9.0	-8.8	-8.2	-7.2	-5.8	-5.6	-6.6	-8.5	-9.6	-10.9	-11.7	-12.5	-13.4	-14.8	-16.3	-17.8	-19.7	-10.3	-5.6
9-Mar	-21.3	-22.4	-23.3	-24.0	-24.4	-24.7	-24.7	-24.7	-24.7	-24.3	-23.8	-23.5	-22.9	-21.6	-20.9	-20.5	-19.9	-19.9	-20.1	-20.6	-20.9	-21.1	-21.2	-21.5	-22.4	-19.9
10-Mar	-21.6	-21.9	-22.3	-22.2	-22.3	-22.2	-22.0	-22.0	-21.4	-20.5	-19.3	-18.2	-17.1	-15.8	-15.3	-14.3	-13.9	-13.8	-13.9	-13.9	-14.1	-14.5	-15.0	-15.3	-18.0	-13.8
11-Mar	-15.9	-16.5	-17.2	-18.0	-18.5	-18.7	-18.9	-18.6	-18.7	-17.6	-16.3	-15.5	-13.9	-13.6	-13.5	-13.3	-13.1	-13.9	-15.2	-16.0	-16.9	-18.1	-18.8	-19.1	-16.5	-13.1
12-Mar	-19.5	-19.8	-19.8	-19.9	-20.1	-20.4	-20.4	-20.2	-20.1	-19.6	-18.8	-17.9	-16.8	-15.5	-14.8	-14.0	-13.3	-13.7	-14.1	-14.6	-15.8	-15.8	-16.5	-17.0	-17.4	-13.3
13-Mar	-17.1	-18.2	-18.6	-19.5	-19.4	-19.6	-19.9	-20.3	-19.8	-18.8	-16.9	-16.2	-14.9	-14.1	-13.2	-12.4	-11.7	-12.1	-12.8	-13.9	-14.5	-14.8	-15.0	-15.2	-16.2	-11.7
14-Mar	-15.3	-15.6	-15.9	-16.0	-16.1	-16.7	-17.2	-17.7	-17.8	-18.0	-17.2	-15.9	-14.3	-13.3	-12.8	-12.7	-12.9	-13.2	-13.4	-13.9	-14.2	-14.5	-14.7	-14.9	-15.2	-12.7
15-Mar	-15.0	-15.1	-15.6	-16.0	-16.5	-16.6	-17.1	-17.4	-17.0	-15.9	-15.5	-14.8	-13.7	-13.0	-12.9	-11.3	-11.2	-11.7	-12.2	-12.4	-12.9	-13.4	-14.0	-14.4	-14.4	-11.2
16-Mar	-14.9	-15.4	-15.7	-16.1	-16.4	-17.5	-19.2	-19.7	-19.3	-17.6	-14.9	-12.4	-10.7	-9.9	-9.4	-8.9	-8.7	-8.6	-8.8	-9.3	-9.4	-10.0	-10.1	-10.2	-13.0	-8.6
17-Mar	-10.4	-10.5	-10.4	-10.3	-10.4	-10.4	-10.5	-10.8	-10.5	-9.8	-9.5	-8.3	-7.7	-7.4	-8.1	-8.6	-8.7	-8.9	-9.3	-10.3	-11.3	-11.7	-11.9	-11.9	-9.9	-7.4
18-Mar	-11.7	-11.6	-11.6	-11.8	-12.0	-12.1	-13.6	-13.7	-13.2	-11.3	-9.0	-7.6	-6.3	-5.7	-5.2	-4.1	-3.4	-3.3	-3.5	-3.5	-4.3	-5.1	-5.8	-8.3	-8.2	-3.3
19-Mar	-10.8	-11.8	-12.4	-12.6	-12.7	-12.9	-13.6	-13.1	-12.0	-10.8	-9.0	-6.7	-3.8	-1.4	0.0	1.0	1.6	2.6	0.7	-2.2	-3.8	-5.8	-7.7	-9.9	-7.0	2.6
20-Mar	-11.9	-13.1	-14.1	-15.0	-15.5	-16.1	-16.9	-16.7	-15.6	-13.6	-12.4	-11.3	-10.2	-9.5	-8.5	-7.4	-6.8	-7.1	-7.9	-9.0	-10.1	-10.7	-10.9	-12.3	-11.8	-6.8
21-Mar	-13.4	-14.1	-14.8	-15.2	-15.7	-15.9	-16.4	-16.0	-14.5	-12.2	-9.9	-7.5	-5.5	-3.8	-2.3	-0.8	0.1	-0.2	-1.4	-2.6	-3.8	-4.6	-5.1	-4.9	-8.4	0.1
22-Mar	-4.7	-4.4	-4.9	-5.4	-6.0	-6.8	-7.4	-7.5	-6.7	-5.2	-3.3	-1.5	0.8	3.1	4.8	5.8	6.6	6.5	5.4	4.0	3.7	3.0	0.3	-0.6	-0.8	6.6
23-Mar	-0.7	-0.8	-0.3	-1.0	-1.4	-1.8	-2.6	-2.9	-2.4	-1.0	0.4	2.0	3.6	4.6	5.4	5.9	6.2	6.2	6.3	5.7	5.0	4.1	3.4	2.2	1.9	6.3
24-Mar	1.5	1.5	0.7	-0.9	-1.9	-2.4	-2.6	-2.9	-2.4	-1.1	0.6	1.9	2.8	3.5	3.9	4.4	4.9	5.4	5.0	4.2	3.6	3.6	2.3	2.1	1.6	5.4
25-Mar	1.5	1.1	1.0	0.5	0.3	0.4	-0.2	-0.9	-0.2	1.7	3.1	4.6	6.5	9.1	9.3	8.6	8.1	4.2	-0.1	-2.7	-4.1	-5.1	-6.6	-7.6	1.4	9.3
26-Mar	-8.5	-9.0	-9.8	-10.8	-12.0	-12.8	-13.2	-13.4	-12.8	-11.9	-10.9	-9.8	-9.0	-8.1	-7.0	-6.3	-5.5	-5.9	-6.2	-6.7	-7.1	-7.6	-8.1	-8.5	-9.2	-5.5
27-Mar	-8.9	-9.2	-9.5	-9.7	-9.9	-10.2	-10.4	-10.4	-10.4	-10.0	-8.9	-8.7	-8.3	-7.4	-7.0	-7.0	-7.1	-7.7	-8.7	-10.1	-11.2	-12.3	-13.2	-13.9	-9.6	-7.0
28-Mar	-14.4	-15.0	-15.6	-15.7	-16.1	-16.6	-16.9	-16.2	-14.4	-13.0	-11.7	-10.7	-9.5	-8.2	-7.2	-6.6	-6.2	-6.2	-6.6	-7.4	-8.3	-9.5	-10.9	-11.7	-11.4	-6.2
29-Mar	-12.6	-12.7	-13.8	-14.1	-14.6	-15.4	-15.7	-15.1	-14.0	-11.8	-9.9	-7.6	-5.5	-4.6	-3.6	-3.2	-2.9	-2.9	-3.0	-3.3	-3.8	-4.2	-4.6	-6.5	-8.6	-2.9
30-Mar	-7.7	-8.5	-9.2	-9.5	-10.0	-10.4	-10.5	-10.2	-9.2	-7.3	-5.0	-3.2	-1.2	-0.6	0.0	0.8	1.6	1.7	1.5	1.2	0.4	0.1	-1.0	-1.9	-4.1	1.7
31-Mar	-2.5	-3.0	-3.6	-4.0	-4.3	-5.4	-5.5	-5.6	-4.9	-3.9	-2.5	-1.0	-0.3	0.3	0.9	1.4	1.5	1.6	1.3	0.7	-0.2	-0.8	-1.6	-2.1	-1.8	1.6
	-9.2	-9.8	-10.2	-10.6	-11.0	-11.4	-11.8	-11.9	-11.6	-10.5	-9.1	-7.8	-6.3	-5.1	-4.4	-3.8	-3.5	-3.8	-4.4	-5.3	-6.1	-6.8	-7.6	-8.3	Diurnal Average	
	2.0	1.6	2.1	1.8	2.2	3.2	2.6	2.8	0.8	1.7	3.1	4.6	6.5	9.1	9.3	8.6	8.1	7.1	7.2	6.0	5.0	4.1	3.6	3.2	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 45m (AT45) - C

Mannix - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	38	5.11	5.11
-20 - 0	578	77.69	82.80
0 - 10	128	17.20	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Maximum Value: 9.3 C on Mar 25 15:00

Maximum Daily Average: 2.6 C on Mar 2

Minimum Value: -24.3 C on Mar 9 08:00

Minimum Daily Average: -22.0 C on Mar 9

Maximum Diurnal Average: -3.3 C at hour 17

Minimum Diurnal Average: -11.2 C at hour 8

Monthly Average: -7.50 C

Percentiles: P_1 = -23.2 P_{10} = -16.8 Q_1 = -13.4 Median = -7.9 Q_3 = -1.9 P_{90} = 3.1 P_{99} = 7.0

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

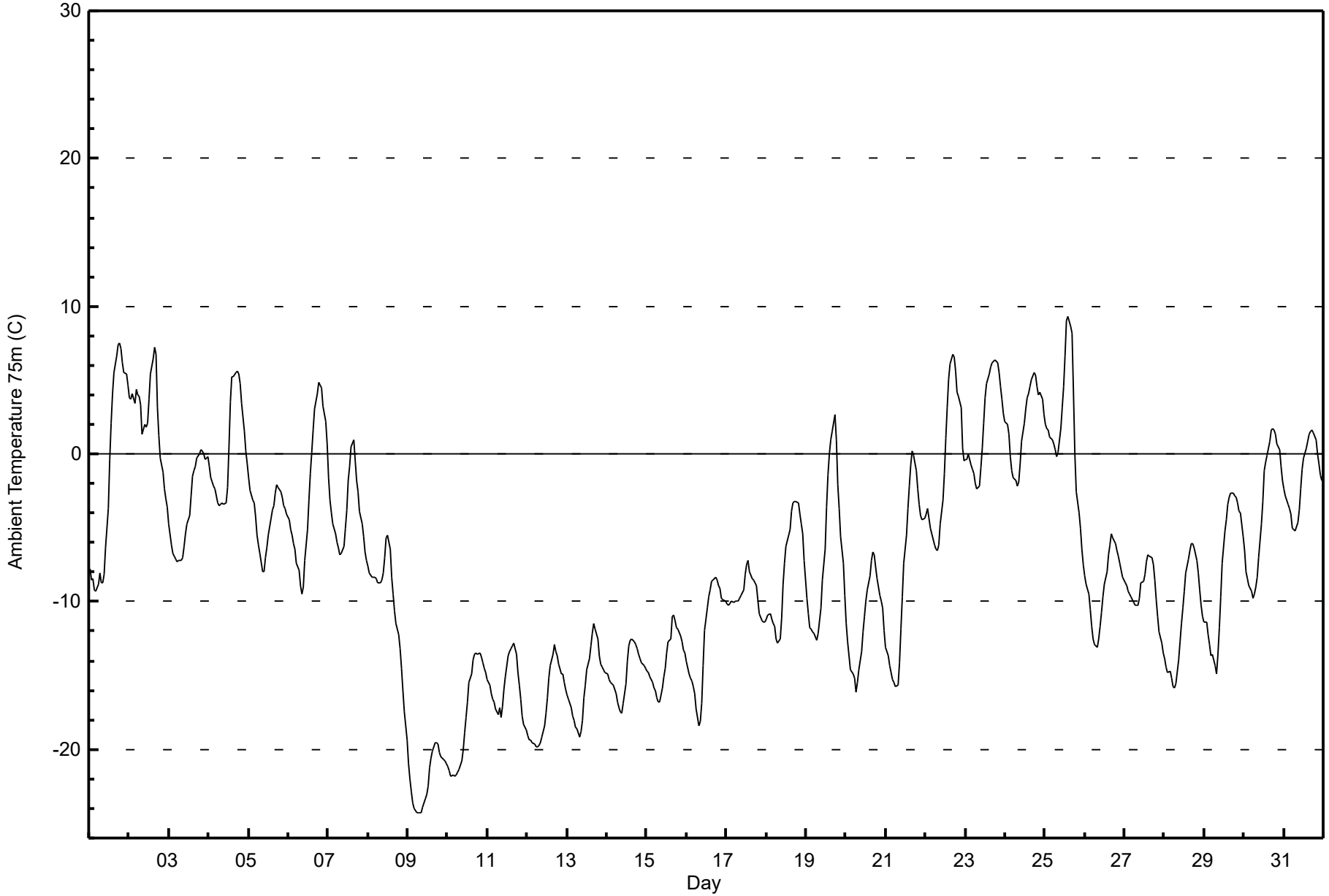
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-7.8	-8.6	-8.5	-9.2	-9.3	-8.8	-8.0	-8.7	-8.7	-8.1	-6.4	-3.7	-0.4	2.1	4.1	5.5	6.6	7.4	7.5	7.2	6.1	5.5	5.4	4.6	-1.4	7.5
2-Mar	3.8	3.7	4.1	3.5	4.4	4.0	3.9	3.3	1.3	2.0	1.8	2.1	3.7	5.4	6.5	7.2	6.7	3.2	1.2	-0.3	-1.2	-2.3	-3.0	-3.6	2.6	7.2
3-Mar	-4.7	-6.2	-6.7	-6.9	-7.2	-7.3	-7.2	-7.2	-7.0	-6.3	-5.4	-4.8	-4.1	-2.9	-1.5	-1.2	-0.9	-0.2	0.0	0.3	0.2	0.0	-0.3	-0.2	-3.7	0.3
4-Mar	-0.9	-1.6	-1.9	-2.2	-2.3	-3.3	-3.5	-3.4	-3.3	-3.4	-3.3	-2.3	0.4	3.5	5.2	5.3	5.5	5.6	5.4	4.8	3.4	1.6	0.2	-0.7	0.4	5.6
5-Mar	-1.6	-2.4	-3.1	-3.3	-4.2	-5.5	-6.1	-6.7	-8.0	-8.0	-7.0	-6.3	-5.5	-4.4	-3.7	-3.5	-2.7	-2.1	-2.3	-2.5	-3.0	-3.5	-3.7	-4.1	-4.3	-1.6
6-Mar	-4.5	-5.1	-5.5	-6.1	-6.5	-7.4	-7.9	-8.9	-9.5	-9.0	-7.2	-5.1	-3.1	-1.3	0.1	1.6	3.0	4.1	4.9	4.6	4.5	3.3	2.2	0.6	-2.4	4.9
7-Mar	-1.6	-3.1	-4.0	-4.7	-5.4	-6.0	-6.4	-6.8	-6.8	-6.3	-5.0	-3.8	-1.8	-0.8	0.4	1.0	-0.5	-1.8	-2.6	-3.9	-4.7	-5.6	-6.6	-7.2	-3.9	1.0
8-Mar	-7.6	-8.0	-8.3	-8.4	-8.4	-8.4	-8.7	-8.7	-8.6	-8.0	-7.1	-5.7	-5.5	-6.4	-8.4	-9.5	-10.7	-11.4	-12.2	-13.1	-14.5	-16.0	-17.4	-19.3	-10.0	-5.5
9-Mar	-20.9	-22.0	-22.9	-23.6	-24.0	-24.2	-24.3	-24.3	-24.3	-23.9	-23.4	-23.1	-22.5	-21.2	-20.6	-20.1	-19.5	-19.5	-19.7	-20.2	-20.5	-20.7	-20.8	-21.0	-22.0	-19.5
10-Mar	-21.1	-21.4	-21.8	-21.7	-21.8	-21.7	-21.5	-21.3	-20.8	-20.0	-18.8	-17.8	-16.8	-15.5	-14.9	-13.9	-13.5	-13.4	-13.6	-13.5	-13.8	-14.2	-14.5	-14.8	-17.6	-13.4
11-Mar	-15.3	-15.6	-16.2	-16.6	-16.8	-17.2	-17.6	-17.2	-17.8	-17.1	-15.9	-15.0	-13.6	-13.3	-13.2	-13.0	-12.8	-13.6	-14.8	-15.7	-16.6	-17.7	-18.4	-18.7	-15.8	-12.8
12-Mar	-19.1	-19.3	-19.4	-19.5	-19.6	-19.9	-19.8	-19.8	-19.5	-19.2	-18.4	-17.5	-16.5	-15.1	-14.3	-13.6	-12.9	-13.4	-13.7	-14.2	-14.9	-14.9	-15.5	-16.0	-16.9	-12.9
13-Mar	-16.3	-16.6	-17.2	-17.7	-18.0	-18.5	-18.6	-19.1	-18.8	-18.0	-16.5	-15.6	-14.6	-13.8	-13.0	-12.2	-11.5	-11.8	-12.5	-13.6	-14.2	-14.5	-14.6	-14.8	-15.5	-11.5
14-Mar	-14.9	-15.2	-15.5	-15.6	-15.6	-16.3	-16.8	-17.2	-17.4	-17.6	-16.9	-15.5	-14.0	-13.0	-12.6	-12.5	-12.7	-12.9	-13.1	-13.6	-13.9	-14.1	-14.3	-14.5	-14.8	-12.5
15-Mar	-14.7	-14.8	-15.1	-15.5	-15.8	-16.1	-16.5	-16.8	-16.8	-15.8	-15.1	-14.5	-13.5	-12.7	-12.5	-11.0	-10.9	-11.3	-11.8	-11.9	-12.3	-12.7	-13.3	-13.5	-14.0	-10.9
16-Mar	-14.0	-14.9	-15.1	-15.4	-15.7	-16.2	-17.3	-18.4	-18.1	-16.9	-14.3	-12.0	-10.5	-9.6	-9.2	-8.7	-8.5	-8.4	-8.6	-9.0	-9.1	-9.7	-9.8	-9.9	-12.5	-8.4
17-Mar	-10.1	-10.2	-10.1	-10.0	-10.0	-9.9	-10.0	-9.9	-9.8	-9.6	-9.2	-8.1	-7.5	-7.2	-8.0	-8.4	-8.5	-8.7	-8.9	-9.8	-10.9	-11.3	-11.3	-11.4	-9.5	-7.2
18-Mar	-11.2	-10.9	-10.8	-11.2	-11.5	-11.6	-12.5	-12.8	-12.5	-11.1	-8.8	-7.4	-6.2	-5.5	-5.1	-3.9	-3.3	-3.2	-3.2	-3.3	-4.1	-4.8	-5.4	-7.2	-7.8	-3.2
19-Mar	-9.8	-10.8	-11.7	-11.8	-12.0	-12.1	-12.6	-12.1	-11.3	-10.4	-8.6	-6.4	-3.6	-1.4	0.0	1.0	1.6	2.6	1.0	-2.0	-3.6	-5.5	-7.4	-9.6	-6.5	2.6
20-Mar	-11.5	-12.8	-13.7	-14.6	-14.9	-15.2	-16.1	-15.4	-14.7	-13.3	-12.0	-11.0	-10.0	-9.2	-8.3	-7.2	-6.6	-6.8	-7.6	-8.5	-9.6	-9.9	-10.4	-11.9	-11.3	-6.6
21-Mar	-13.1	-13.7	-14.3	-14.8	-15.3	-15.5	-15.8	-15.6	-14.1	-11.9	-9.7	-7.4	-5.5	-3.7	-2.2	-0.7	0.2	-0.1	-1.2	-2.3	-3.5	-4.1	-4.5	-4.3	-8.0	0.2
22-Mar	-4.1	-3.7	-4.4	-5.0	-5.4	-6.2	-6.4	-6.6	-6.2	-4.7	-3.1	-1.4	1.0	3.2	5.0	6.0	6.7	6.6	5.6	4.2	3.9	3.1	0.4	-0.4	-0.5	6.7
23-Mar	-0.4	-0.4	0.0	-0.8	-1.0	-1.3	-2.0	-2.3	-2.2	-0.9	0.3	2.1	3.8	4.8	5.5	5.9	6.2	6.3	6.3	6.1	5.5	4.5	3.7	2.7	2.2	6.3
24-Mar	2.1	2.0	1.3	-0.2	-1.1	-1.6	-1.8	-2.2	-1.9	-0.7	0.9	2.1	3.0	3.8	4.0	4.5	5.0	5.5	5.3	4.5	4.0	4.2	3.7	2.6	2.1	5.5
25-Mar	2.0	1.7	1.6	1.1	0.9	0.7	0.3	-0.2	0.1	1.7	3.2	4.6	6.7	9.1	9.3	8.7	8.2	4.2	0.0	-2.6	-4.0	-5.0	-6.4	-7.5	1.6	9.3
26-Mar	-8.2	-8.8	-9.5	-10.6	-11.7	-12.6	-12.9	-13.1	-12.5	-11.6	-10.7	-9.7	-8.8	-8.0	-6.8	-6.2	-5.4	-5.7	-6.1	-6.5	-6.9	-7.4	-7.9	-8.3	-9.0	-5.4
27-Mar	-8.7	-9.0	-9.3	-9.4	-9.6	-10.0	-10.2	-10.2	-10.2	-9.8	-8.8	-8.6	-8.2	-7.3	-6.9	-6.9	-7.0	-7.5	-8.5	-9.8	-11.0	-12.0	-12.8	-13.4	-9.4	-6.9
28-Mar	-13.9	-14.4	-14.8	-14.7	-15.1	-15.7	-15.9	-15.5	-14.0	-12.7	-11.5	-10.5	-9.3	-8.1	-7.1	-6.5	-6.1	-6.0	-6.4	-7.2	-8.0	-9.2	-10.2	-11.0	-11.0	-6.0
29-Mar	-11.3	-11.4	-12.2	-12.9	-13.7	-13.6	-14.3	-14.9	-13.6	-11.7	-9.7	-7.4	-5.2	-4.5	-3.4	-3.0	-2.6	-2.7	-2.8	-2.9	-3.4	-3.8	-4.0	-5.6	-7.9	-2.6
30-Mar	-6.5	-8.0	-8.5	-8.9	-9.3	-9.8	-9.5	-9.0	-8.3	-7.0	-4.7	-3.2	-1.2	-0.6	-0.1	0.8	1.7	1.7	1.7	1.3	0.6	0.3	-0.8	-1.8	-3.7	1.7
31-Mar	-2.4	-2.8	-3.4	-3.7	-4.1	-5.1	-5.1	-5.2	-4.6	-3.8	-2.4	-1.0	-0.2	0.3	0.9	1.3	1.5	1.6	1.4	0.9	0.0	-0.6	-1.4	-1.8	-1.7	1.6
	-8.7	-9.2	-9.6	-10.0	-10.3	-10.7	-11.0	-11.2	-11.0	-10.1	-8.8	-7.6	-6.1	-5.0	-4.2	-3.6	-3.3	-3.6	-4.2	-4.9	-5.7	-6.4	-7.1	-7.8	Diurnal Average	
	3.8	3.7	4.1	3.5	4.4	4.0	3.9	3.3	1.3	2.0	3.2	4.6	6.7	9.1	9.3	8.7	8.2	7.4	7.5	7.2	6.1	5.5	5.4	4.6	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 75m (AT75) - C

Mannix - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	31	4.17	4.17
-20 - 0	578	77.69	81.85
0 - 10	135	18.15	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Maximum Value: 8.7 C on Mar 25 15:00

Maximum Daily Average: 2.0 C on Mar 2

Minimum Value: -25.9 C on Mar 9 08:00

Minimum Daily Average: -23.5 C on Mar 9

Maximum Diurnal Average: -4.3 C at hour 17

Minimum Diurnal Average: -12.1 C at hour 8

Monthly Average: -8.47 C

Percentiles: P_1 = -24.8 P_{10} = -18.1 Q_1 = -14.6 Median = -8.7 Q_3 = -2.7 P_{90} = 2.3 P_{99} = 6.4

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

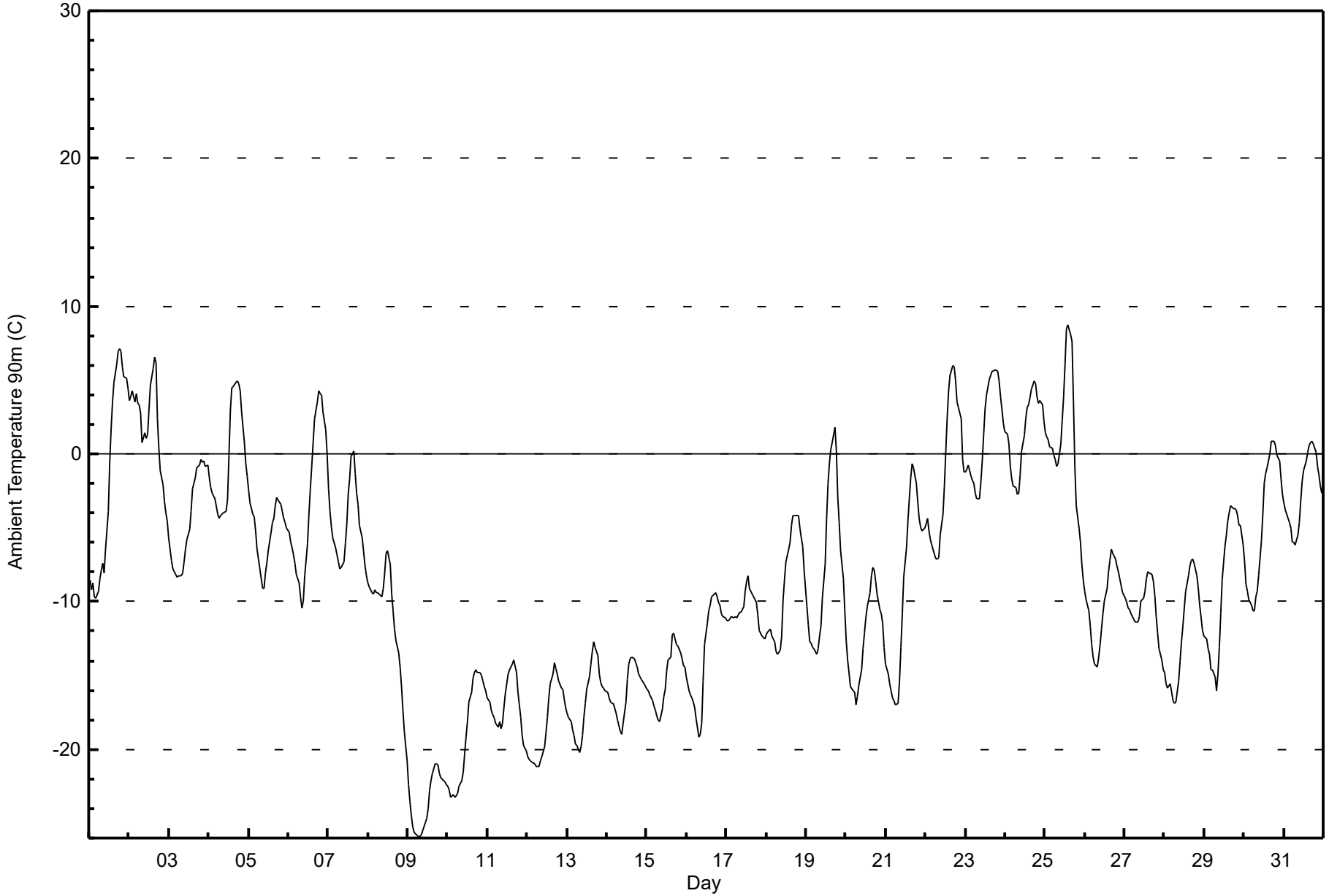
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-8.5	-9.2	-8.7	-9.7	-9.7	-9.3	-8.5	-7.9	-7.4	-8.1	-6.4	-3.9	-0.5	1.7	3.6	4.9	6.1	6.9	7.1	6.9	5.9	5.2	5.1	4.5	-1.7	7.1
2-Mar	3.6	3.9	4.2	3.5	4.0	3.5	3.3	2.7	0.8	1.4	1.1	1.3	3.0	4.7	5.8	6.6	6.2	2.4	0.4	-1.2	-2.1	-3.2	-3.9	-4.6	2.0	6.6
3-Mar	-5.7	-7.2	-7.7	-8.0	-8.2	-8.4	-8.3	-8.2	-8.0	-7.3	-6.5	-5.8	-5.1	-3.9	-2.4	-2.0	-1.6	-0.9	-0.7	-0.4	-0.5	-0.5	-0.8	-0.8	-4.5	-0.4
4-Mar	-1.6	-2.2	-2.6	-2.8	-3.0	-4.1	-4.3	-4.2	-4.1	-4.0	-3.9	-3.0	-0.1	2.9	4.5	4.6	4.9	4.9	4.8	4.3	2.9	0.8	-0.6	-1.5	-0.3	4.9
5-Mar	-2.4	-3.3	-4.0	-4.3	-5.2	-6.5	-7.1	-7.8	-9.1	-9.1	-8.1	-7.4	-6.6	-5.3	-4.6	-4.4	-3.5	-3.0	-3.2	-3.4	-3.8	-4.4	-4.6	-5.0	-5.3	-2.4
6-Mar	-5.3	-6.0	-6.3	-6.8	-7.4	-8.2	-8.7	-9.7	-10.5	-10.0	-8.2	-6.1	-4.1	-2.3	-0.8	0.8	2.3	3.5	4.3	4.1	4.0	2.8	1.7	-0.1	-3.2	4.3
7-Mar	-2.4	-3.9	-5.0	-5.7	-6.3	-6.9	-7.3	-7.8	-7.7	-7.3	-6.0	-4.7	-2.7	-1.7	-0.2	0.2	-1.4	-2.7	-3.4	-4.9	-5.7	-6.6	-7.6	-8.2	-4.8	0.2
8-Mar	-8.7	-9.0	-9.4	-9.5	-9.2	-9.4	-9.4	-9.6	-9.6	-9.1	-8.1	-6.7	-6.6	-7.5	-9.5	-10.6	-11.8	-12.6	-13.4	-14.4	-15.8	-17.3	-18.8	-20.8	-11.1	-6.6
9-Mar	-22.4	-23.6	-24.5	-25.2	-25.6	-25.8	-25.9	-25.9	-25.9	-25.5	-24.9	-24.6	-24.0	-22.8	-22.1	-21.6	-20.9	-21.0	-21.1	-21.6	-21.9	-22.1	-22.2	-22.4	-23.5	-20.9
10-Mar	-22.5	-22.8	-23.2	-23.1	-23.3	-23.1	-22.9	-22.5	-22.1	-21.5	-20.3	-19.2	-18.1	-16.8	-16.1	-15.2	-14.8	-14.6	-14.8	-14.8	-15.0	-15.4	-15.8	-16.1	-18.9	-14.6
11-Mar	-16.5	-16.8	-17.4	-17.6	-17.9	-18.2	-18.5	-18.2	-18.6	-18.3	-17.2	-16.3	-14.9	-14.6	-14.4	-14.2	-14.0	-14.8	-16.1	-17.0	-17.9	-19.1	-19.7	-20.1	-17.0	-14.0
12-Mar	-20.5	-20.7	-20.8	-20.9	-21.0	-21.2	-21.2	-21.1	-20.8	-20.5	-19.9	-18.9	-17.8	-16.5	-15.5	-14.9	-14.2	-14.6	-14.9	-15.4	-15.9	-16.0	-16.6	-17.2	-18.2	-14.2
13-Mar	-17.6	-17.8	-18.1	-18.7	-19.1	-19.6	-19.8	-20.2	-19.9	-19.1	-17.9	-16.9	-15.9	-15.1	-14.2	-13.4	-12.7	-13.1	-13.7	-14.9	-15.4	-15.7	-15.8	-16.1	-16.7	-12.7
14-Mar	-16.2	-16.5	-16.8	-16.9	-16.9	-17.5	-18.1	-18.5	-18.8	-18.9	-18.2	-16.8	-15.3	-14.3	-13.9	-13.7	-13.9	-14.1	-14.4	-14.9	-15.1	-15.3	-15.6	-15.8	-16.1	-13.7
15-Mar	-16.0	-16.0	-16.4	-16.7	-17.1	-17.3	-17.8	-18.0	-18.1	-17.3	-16.4	-15.9	-14.7	-13.9	-13.7	-12.2	-12.2	-12.5	-12.9	-13.0	-13.4	-13.8	-14.4	-14.4	-15.2	-12.2
16-Mar	-15.1	-16.0	-16.3	-16.5	-16.8	-17.2	-18.0	-19.2	-19.0	-18.2	-15.4	-12.9	-11.5	-10.6	-10.2	-9.7	-9.6	-9.4	-9.6	-10.0	-10.2	-10.9	-11.0	-11.1	-13.5	-9.4
17-Mar	-11.2	-11.3	-11.2	-11.0	-11.1	-11.0	-11.1	-10.9	-10.7	-10.7	-10.4	-9.3	-8.6	-8.3	-9.1	-9.5	-9.7	-9.9	-10.0	-10.9	-12.0	-12.4	-12.4	-12.5	-10.6	-8.3
18-Mar	-12.3	-12.1	-11.9	-12.3	-12.6	-12.8	-13.3	-13.6	-13.3	-12.3	-9.9	-8.5	-7.3	-6.5	-6.0	-4.9	-4.2	-4.1	-4.2	-4.2	-5.0	-5.7	-6.3	-7.8	-8.8	-4.1
19-Mar	-10.3	-11.5	-12.7	-12.8	-13.1	-13.2	-13.5	-13.2	-12.3	-11.7	-9.8	-7.5	-4.5	-2.1	-0.6	0.3	0.8	1.9	0.2	-2.9	-4.6	-6.5	-8.4	-10.6	-7.5	1.9
20-Mar	-12.6	-13.9	-14.8	-15.8	-16.0	-16.1	-16.9	-16.4	-15.7	-14.6	-13.2	-12.2	-11.1	-10.3	-9.4	-8.3	-7.7	-7.9	-8.7	-9.5	-10.6	-10.8	-11.5	-13.1	-12.4	-7.7
21-Mar	-14.2	-14.9	-15.6	-16.1	-16.5	-16.7	-17.0	-16.9	-15.3	-13.1	-10.8	-8.3	-6.3	-4.6	-3.1	-1.6	-0.7	-0.9	-2.0	-3.2	-4.3	-4.9	-5.2	-5.1	-9.1	-0.7
22-Mar	-4.8	-4.4	-5.2	-5.8	-6.2	-6.9	-7.1	-7.1	-7.0	-5.5	-4.1	-2.2	0.2	2.4	4.3	5.3	6.0	5.9	5.0	3.5	3.2	2.4	-0.4	-1.2	-1.2	6.0
23-Mar	-1.2	-1.1	-0.8	-1.5	-1.8	-2.0	-2.6	-3.0	-3.1	-1.9	-0.5	1.3	3.0	4.0	5.0	5.3	5.6	5.6	5.7	5.6	5.0	3.9	3.0	2.1	1.5	5.7
24-Mar	1.5	1.3	0.7	-0.9	-1.7	-2.2	-2.3	-2.8	-2.6	-1.4	0.2	1.3	2.4	3.1	3.4	3.8	4.4	4.9	4.7	3.9	3.4	3.6	3.3	2.2	1.4	4.9
25-Mar	1.4	1.1	0.9	0.5	0.4	-0.1	-0.4	-0.9	-0.6	0.7	2.3	3.9	6.1	8.4	8.7	8.1	7.6	3.5	-0.9	-3.5	-5.0	-6.0	-7.4	-8.5	0.8	8.7
26-Mar	-9.3	-9.9	-10.6	-11.7	-12.9	-13.8	-14.2	-14.4	-13.8	-12.9	-11.9	-10.8	-9.9	-9.1	-7.9	-7.2	-6.5	-6.8	-7.1	-7.6	-8.0	-8.5	-9.0	-9.4	-10.1	-6.5
27-Mar	-9.8	-10.1	-10.5	-10.6	-10.8	-11.2	-11.4	-11.4	-11.4	-11.0	-9.9	-9.7	-9.3	-8.4	-8.0	-8.0	-8.1	-8.6	-9.6	-11.0	-12.2	-13.2	-14.0	-14.6	-10.5	-8.0
28-Mar	-14.8	-15.5	-15.8	-15.6	-16.1	-16.7	-16.9	-16.8	-15.3	-14.0	-12.7	-11.6	-10.5	-9.3	-8.2	-7.6	-7.2	-7.1	-7.4	-8.2	-9.1	-10.2	-11.1	-12.0	-12.1	-7.1
29-Mar	-12.3	-12.5	-13.2	-13.6	-14.6	-14.6	-15.1	-16.0	-14.9	-13.1	-10.8	-8.5	-6.2	-5.5	-4.5	-4.0	-3.5	-3.7	-3.7	-3.8	-4.2	-4.8	-4.8	-6.2	-8.9	-3.5
30-Mar	-7.3	-8.8	-9.3	-9.9	-10.2	-10.6	-10.6	-9.7	-9.3	-8.2	-5.8	-4.1	-2.0	-1.4	-0.9	0.0	0.9	0.9	0.9	0.5	-0.1	-0.5	-1.7	-2.7	-4.6	0.9
31-Mar	-3.3	-3.8	-4.4	-4.7	-5.1	-6.0	-6.0	-6.2	-5.5	-4.7	-3.2	-1.9	-1.1	-0.4	0.1	0.6	0.7	0.9	0.7	0.1	-0.8	-1.4	-2.2	-2.7	-2.5	0.9
	-9.6	-10.1	-10.6	-11.0	-11.3	-11.7	-12.0	-12.1	-11.9	-11.2	-9.9	-8.6	-7.1	-5.9	-5.2	-4.6	-4.3	-4.5	-5.1	-5.9	-6.6	-7.3	-8.0	-8.8	Diurnal Average	
	3.6	3.9	4.2	3.5	4.0	3.5	3.3	2.7	0.8	1.4	2.3	3.9	6.1	8.4	8.7	8.1	7.6	6.9	7.1	6.9	5.9	5.2	5.1	4.5	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 90m (AT90) - C

Mannix - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	48	6.45	6.45
-20 - 0	579	77.82	84.27
0 - 10	117	15.73	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity (RH) - %

Mannix - March 2025

Maximum Value: 96 % on Mar 25 04:00

Maximum Daily Average: 81.3 % on Mar 3

Minimum Value: 26 % on Mar 29 16:00

Minimum Daily Average: 47.8 % on Mar 21

Maximum Diurnal Average: 79.1 % at hour 7

Minimum Diurnal Average: 51.9 % at hour 17

Monthly Average: 66.3 %

Percentiles: P_1 = 35 P_{10} = 47 Q_1 = 55 Median = 68 Q_3 = 78 P_{90} = 84 P_{99} = 93

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

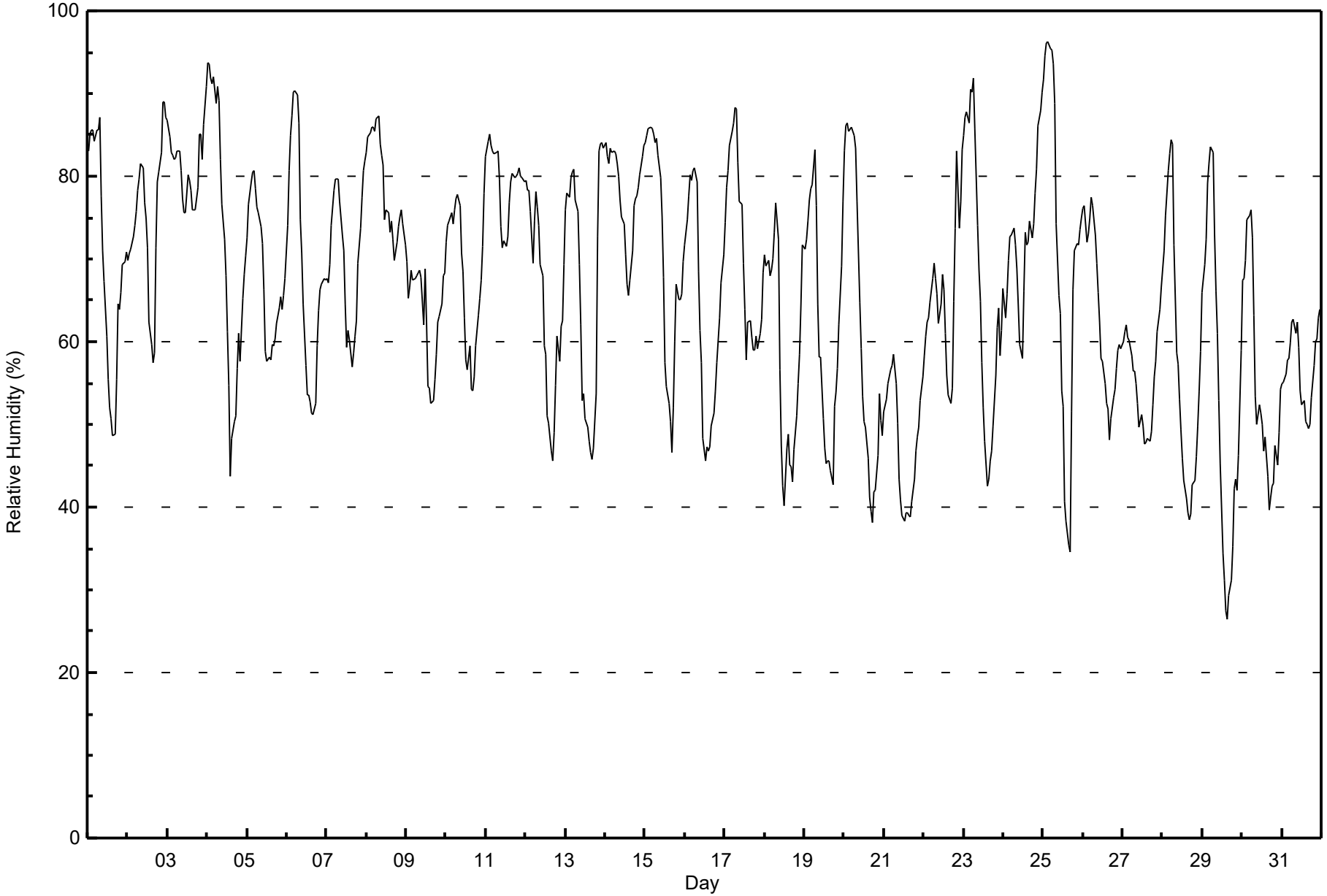
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	83	85	86	86	84	86	86	87	78	71	67	61	55	52	51	49	49	55	65	64	66	69	70	71	69.8	87
2-Mar	70	71	71	73	74	76	78	80	82	81	77	75	71	62	60	58	59	71	79	80	83	89	89	87	74.8	89
3-Mar	87	85	83	83	82	82	83	83	81	77	76	76	80	79	78	76	76	76	79	85	85	82	86	91	81.3	91
4-Mar	94	94	92	91	92	89	91	89	82	77	72	68	61	55	44	48	50	51	57	61	58	65	68	70	71.6	94
5-Mar	73	77	79	81	81	79	76	76	74	72	66	59	58	58	58	60	60	60	62	64	65	64	66	68	68.0	81
6-Mar	74	81	85	87	90	90	90	86	75	71	65	57	54	54	53	51	51	53	60	64	66	67	68	67	69.0	90
7-Mar	68	67	69	74	78	80	80	80	77	73	71	65	59	61	60	57	59	61	63	70	74	77	81	82	70.1	82
8-Mar	83	85	85	86	86	85	87	87	84	82	81	75	76	76	73	75	72	70	72	74	75	76	74	72	78.8	87
9-Mar	70	65	67	69	67	68	68	68	69	68	62	69	62	55	54	53	53	55	59	62	63	65	68	68	63.6	70
10-Mar	72	74	75	76	74	76	77	78	76	71	68	63	58	57	59	54	54	56	60	63	65	68	72	78	67.6	78
11-Mar	82	84	85	84	83	83	83	83	80	74	71	72	71	73	77	79	80	80	80	80	81	80	80	79	79.4	85
12-Mar	79	78	78	76	69	75	78	76	74	69	68	60	58	51	50	47	46	49	55	61	58	62	63	69	64.5	79
13-Mar	76	78	77	80	81	81	77	76	69	62	53	54	51	50	48	47	46	47	54	73	83	84	84	83	67.2	84
14-Mar	84	82	82	83	83	83	83	82	80	77	75	74	71	67	66	67	71	76	77	78	79	80	82	84	77.7	84
15-Mar	84	85	86	86	86	85	84	85	82	80	75	68	57	55	53	50	47	52	60	67	65	65	66	70	70.5	86
16-Mar	72	75	78	80	80	81	81	79	68	61	57	48	46	47	47	47	50	51	54	57	60	63	67	71	63.4	81
17-Mar	74	79	81	84	85	86	88	88	82	77	77	69	64	58	62	62	61	59	59	61	59	61	63	68	71.1	88
18-Mar	70	69	70	68	69	70	73	77	72	57	47	43	40	47	49	45	45	43	47	51	55	58	64	72	58.4	77
19-Mar	71	72	74	77	78	79	83	76	65	58	58	51	47	45	46	46	44	43	52	54	57	62	69	77	61.9	83
20-Mar	83	86	87	85	86	85	85	83	77	65	59	53	50	50	46	41	39	38	42	42	46	54	50	49	61.8	87
21-Mar	52	53	55	56	57	57	59	55	50	43	41	39	38	39	39	39	39	41	43	47	49	50	53	56	47.8	59
22-Mar	58	61	62	63	65	68	70	68	66	62	65	68	66	61	56	54	53	54	65	74	83	74	77	83	65.6	83
23-Mar	85	87	88	87	90	90	92	86	74	69	65	58	52	48	43	43	46	47	50	56	62	64	58	61	66.6	92
24-Mar	66	63	66	70	73	73	74	72	69	64	60	58	66	73	72	72	75	73	74	78	81	86	88	90	72.3	90
25-Mar	92	95	96	96	96	95	94	89	74	66	63	54	52	41	38	35	35	52	66	71	72	72	74	75	70.5	96
26-Mar	76	76	72	73	75	78	76	73	69	66	62	58	58	55	52	52	48	51	53	54	57	59	60	59	63.0	78
27-Mar	60	61	62	61	60	58	56	56	55	52	50	51	50	48	48	48	48	49	52	56	58	61	64	67	55.5	67
28-Mar	69	71	75	81	83	84	84	72	59	57	53	49	46	43	41	39	39	39	43	43	46	50	54	59	57.4	84
29-Mar	66	69	72	79	82	84	83	73	66	61	53	45	34	31	27	26	29	31	35	42	43	42	46	59	53.4	84
30-Mar	67	68	70	75	75	76	73	63	53	50	52	51	50	47	49	44	40	41	43	43	47	45	49	54	55.2	76
31-Mar	55	55	56	58	58	60	62	63	61	62	59	54	52	53	50	50	49	50	53	57	60	60	63	64	56.9	64
	74.0	75.2	76.2	77.6	78.1	78.7	79.1	77.0	71.7	67.0	63.6	59.5	56.6	54.5	53.2	52.1	51.9	54.0	58.4	62.3	64.5	66.3	68.2	71.1	Diurnal Average	
	94	95	96	96	96	95	94	89	84	82	81	76	80	79	78	79	80	80	80	85	85	89	89	91	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity (RH) - %

Mannix - March 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	22	2.96	2.96
40 - 60	243	32.66	35.62
60 - 80	332	44.62	80.24
80 - 100	147	19.76	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Maximum Value: 87 % on Mar 2 22:00

Maximum Daily Average: 79.6 % on Mar 11

Minimum Value: 23 % on Mar 29 16:00

Minimum Daily Average: 44.9 % on Mar 21

Maximum Diurnal Average: 74.6 % at hour 8

Minimum Diurnal Average: 49.1 % at hour 17

Monthly Average: 63.1 %

Percentiles: P_1 = 31 P_{10} = 44 Q_1 = 52 Median = 64 Q_3 = 75 P_{90} = 81 P_{99} = 86

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

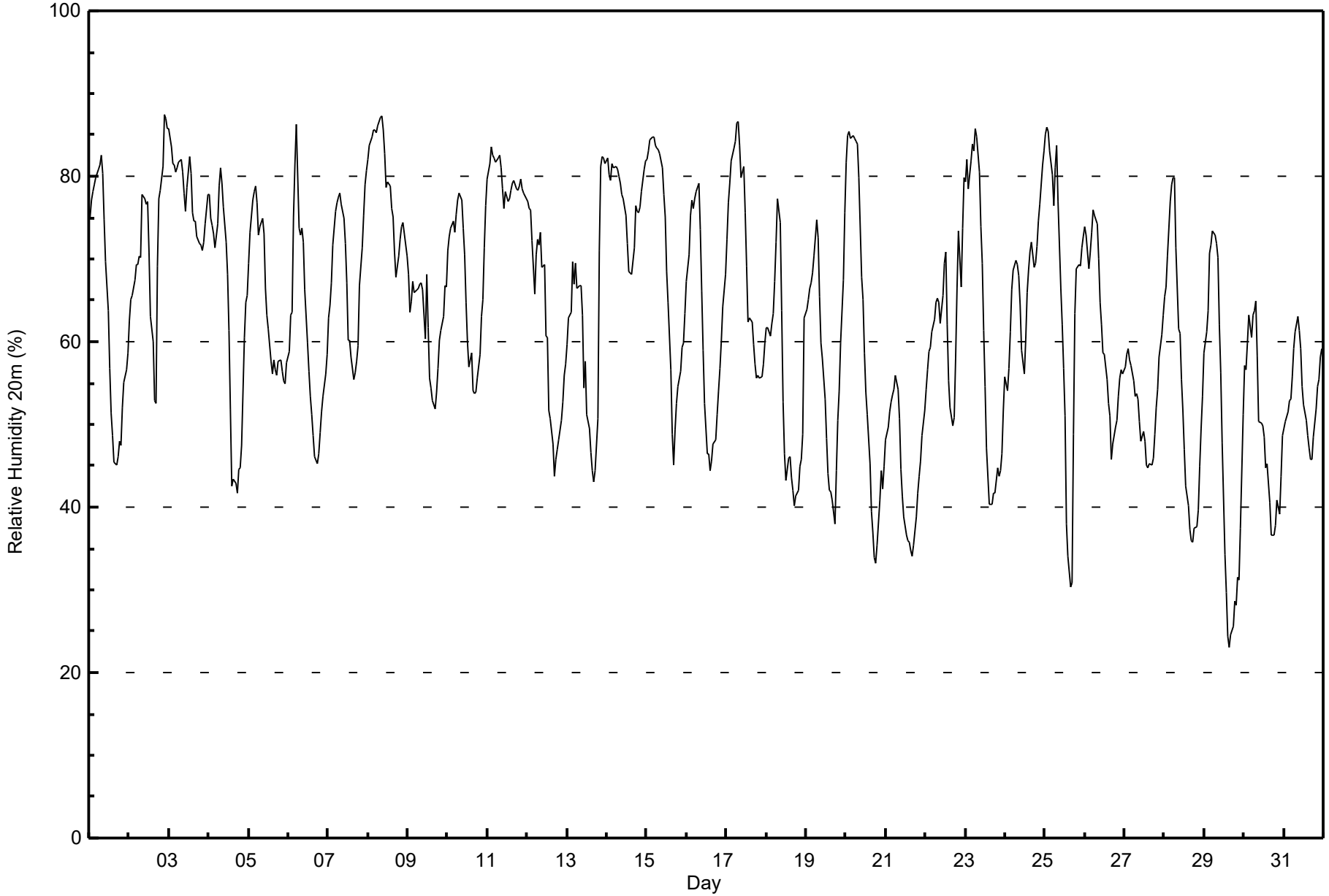
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	75	77	78	79	80	81	81	83	80	75	70	64	57	51	49	45	45	46	48	48	52	55	57	59	63.9	83
2-Mar	63	65	66	67	69	69	70	70	78	77	77	77	71	63	60	53	53	69	77	78	81	87	87	86	71.4	87
3-Mar	86	84	82	81	80	81	82	82	81	78	76	79	82	80	76	75	75	73	72	72	71	72	74	78	77.9	86
4-Mar	78	75	74	73	71	74	79	81	79	76	72	68	61	52	42	43	43	42	45	45	47	61	65	66	63.0	81
5-Mar	69	73	77	78	79	77	73	74	75	73	66	63	62	58	56	58	57	56	58	58	57	55	55	57	65.1	79
6-Mar	59	63	64	75	81	86	74	73	74	72	66	60	56	53	51	49	46	45	46	49	51	53	56	58	60.9	86
7-Mar	63	64	67	72	76	77	77	78	77	75	72	67	60	60	58	55	56	58	60	67	71	75	79	81	68.5	81
8-Mar	82	84	85	86	86	85	86	87	87	86	83	79	79	79	76	75	71	68	70	72	74	74	73	70	79.0	87
9-Mar	68	64	65	67	66	66	66	67	67	66	60	68	62	56	54	53	52	54	57	60	61	63	67	67	62.3	68
10-Mar	71	73	74	75	73	75	77	78	77	74	70	65	60	57	59	54	54	54	56	59	63	65	71	76	67.0	78
11-Mar	80	82	84	83	82	82	82	83	81	78	76	78	77	77	78	79	79	78	78	79	80	79	78	77	79.6	84
12-Mar	77	76	76	72	66	71	72	72	73	69	69	61	61	52	51	48	44	46	47	48	50	53	56	57	61.0	77
13-Mar	60	63	64	70	67	70	66	67	67	63	54	58	51	50	47	44	43	44	51	71	81	82	82	82	62.3	82
14-Mar	82	80	79	82	81	81	81	80	79	78	77	75	72	69	68	68	71	76	76	76	76	78	81	82	77.0	82
15-Mar	82	83	84	85	85	84	83	83	83	81	78	75	68	65	57	49	45	49	53	55	56	59	60	63	69.4	85
16-Mar	67	70	75	77	76	77	78	79	74	66	59	53	47	46	44	46	48	48	51	54	57	60	64	68	61.9	79
17-Mar	72	77	79	82	83	84	86	87	84	80	81	76	69	62	63	62	60	57	56	56	56	56	57	60	70.2	87
18-Mar	62	62	61	62	63	67	72	77	74	64	53	47	43	46	46	43	42	40	41	42	45	46	49	63	54.6	77
19-Mar	64	65	66	67	68	70	75	73	65	60	58	53	48	44	42	42	41	38	44	50	54	60	67	76	58.0	76
20-Mar	82	85	85	85	85	85	84	84	80	68	65	59	54	51	45	40	37	34	33	35	41	44	42	45	60.3	85
21-Mar	48	50	51	53	54	54	56	54	51	45	41	39	37	36	36	35	34	35	39	42	44	46	49	52	44.9	56
22-Mar	54	57	59	59	61	63	65	65	65	62	66	70	71	62	55	52	50	51	58	67	73	67	74	80	62.7	80
23-Mar	79	82	78	82	84	83	86	85	81	74	69	61	55	47	40	40	40	42	42	45	44	44	46	52	61.7	86
24-Mar	56	54	57	61	66	69	70	69	68	64	59	56	60	66	69	71	72	69	69	72	75	77	81	83	67.2	83
25-Mar	85	86	86	83	80	76	81	84	77	66	62	57	51	38	34	30	31	49	63	69	69	69	71	73	65.5	86
26-Mar	74	73	69	71	73	76	75	74	70	65	62	59	58	55	53	51	46	48	50	51	53	56	57	56	61.4	76
27-Mar	57	58	59	58	57	55	53	54	53	50	48	49	48	45	45	45	45	46	49	52	54	58	61	63	52.6	63
28-Mar	65	67	70	77	79	80	80	71	61	61	55	52	47	43	40	37	36	36	37	38	40	45	49	53	55.0	80
29-Mar	59	61	64	71	72	73	73	72	70	62	56	48	34	30	24	23	24	26	29	28	32	31	37	51	47.9	73
30-Mar	57	57	60	63	61	63	64	65	58	50	50	50	48	45	45	40	37	37	37	38	41	39	44	49	49.9	65
31-Mar	50	50	51	53	53	56	59	61	63	61	59	55	52	50	49	47	46	46	48	52	55	55	58	59	53.7	63
	68.5	69.6	70.6	72.5	72.8	73.9	74.5	74.6	72.6	68.4	64.9	61.8	58.1	54.4	52.0	50.1	49.1	50.3	52.9	55.6	58.2	60.2	62.8	65.8	Diurnal Average	
	86	86	86	86	86	86	86	87	87	86	83	79	82	80	78	79	79	78	78	79	81	87	87	86	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 20m (RH20) - %

Mannix - March 2025



Relative Humidity 20m (RH20) - %

Mannix - March 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	40	5.38	5.38
40 - 60	275	36.96	42.34
60 - 80	333	44.76	87.10
80 - 100	96	12.90	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Maximum Value: 89 % on Mar 8 09:00

Maximum Daily Average: 80.0 % on Mar 8

Minimum Value: 23 % on Mar 29 16:00

Minimum Daily Average: 44.3 % on Mar 21

Maximum Diurnal Average: 73.5 % at hour 8

Minimum Diurnal Average: 48.7 % at hour 17

Monthly Average: 62.4 %

Percentiles: P_1 = 28 P_{10} = 43 Q_1 = 51 Median = 63 Q_3 = 75 P_{90} = 81 P_{99} = 87

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

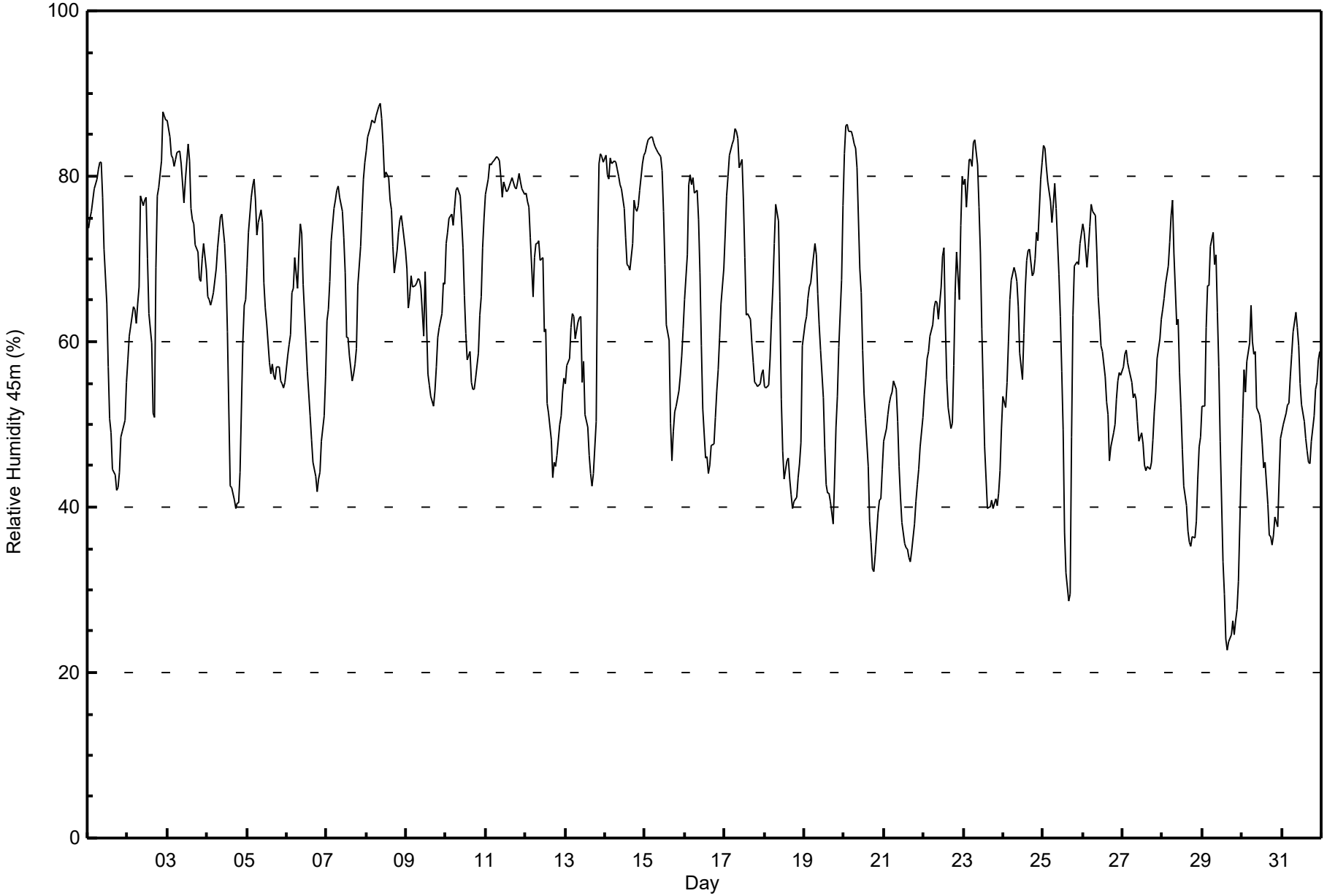
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	74	75	76	77	78	80	81	82	82	77	71	65	57	51	49	45	44	42	42	44	49	49	51	55	62.2	82
2-Mar	58	61	62	64	64	62	65	67	78	76	77	77	70	63	60	51	51	69	78	79	82	88	87	87	69.8	88
3-Mar	87	85	82	82	81	82	83	83	82	79	77	80	84	82	76	75	74	72	71	68	67	70	72	69	77.6	87
4-Mar	65	65	64	65	66	69	71	73	75	75	72	68	61	52	42	42	41	40	40	41	44	60	64	65	59.3	75
5-Mar	69	73	77	79	80	77	73	74	76	74	67	64	62	57	56	57	56	55	57	57	55	55	54	55	65.1	80
6-Mar	58	60	61	66	66	70	66	71	74	73	67	60	56	54	51	48	45	44	42	43	44	48	51	56	57.3	74
7-Mar	63	64	67	72	76	77	78	79	77	76	73	68	61	60	58	55	56	57	59	67	72	76	80	82	68.9	82
8-Mar	83	85	86	87	87	86	87	88	89	87	84	80	80	80	77	76	71	68	71	73	75	75	74	71	80.0	89
9-Mar	69	64	65	68	67	67	67	68	67	66	61	68	62	56	55	53	52	54	57	61	62	63	67	67	62.8	69
10-Mar	72	73	75	75	74	76	78	79	78	75	71	66	61	58	59	55	54	54	56	59	63	65	71	75	67.6	79
11-Mar	78	80	81	81	82	82	82	82	82	80	77	79	78	78	79	79	80	79	79	79	80	79	79	78	79.7	82
12-Mar	78	77	76	73	65	70	72	72	72	70	70	61	61	52	51	48	44	45	45	46	50	51	54	56	60.9	78
13-Mar	55	57	58	62	63	63	60	62	63	63	55	58	51	50	46	44	42	44	50	71	81	83	82	82	60.3	83
14-Mar	82	80	80	82	82	82	82	81	80	79	78	76	73	69	69	69	72	77	76	76	77	78	81	82	77.6	82
15-Mar	83	84	84	85	85	84	84	83	83	82	81	76	69	62	60	50	46	49	51	52	54	56	58	61	69.3	85
16-Mar	65	70	79	80	79	80	78	78	75	68	59	52	46	46	44	45	47	48	51	54	57	60	65	69	62.3	80
17-Mar	73	78	80	83	84	84	86	85	85	81	82	77	70	63	63	63	60	58	55	55	55	55	56	57	70.3	86
18-Mar	55	54	55	58	63	67	72	77	75	65	53	47	43	46	46	43	42	40	41	41	44	45	48	60	53.2	77
19-Mar	62	63	65	67	67	69	72	71	66	62	59	53	47	43	42	42	41	38	43	50	53	59	67	76	57.4	76
20-Mar	83	86	86	85	85	85	84	83	81	69	66	59	54	51	45	38	36	33	32	34	39	41	41	45	60.0	86
21-Mar	48	49	51	52	53	54	55	54	50	45	41	38	36	35	35	34	33	35	38	41	43	45	47	51	44.3	55
22-Mar	54	56	58	59	61	62	64	65	65	63	67	70	71	62	55	52	49	50	57	66	71	65	74	80	62.3	80
23-Mar	79	80	76	82	82	81	84	84	81	76	71	62	54	47	40	40	40	41	40	41	40	42	44	50	60.7	84
24-Mar	53	52	55	60	65	67	69	68	67	64	59	55	61	66	70	71	71	68	68	70	73	72	80	82	66.2	82
25-Mar	84	83	81	79	77	74	77	79	76	68	63	57	49	37	32	29	30	48	63	69	70	69	72	73	64.2	84
26-Mar	74	73	69	71	74	77	76	75	71	65	63	59	59	56	53	51	46	47	49	50	53	55	56	56	61.6	77
27-Mar	57	58	59	57	57	55	53	54	53	50	48	49	48	45	44	45	45	45	48	51	54	58	60	63	52.4	63
28-Mar	64	65	67	69	72	75	77	71	62	63	56	52	47	43	40	37	36	35	36	36	38	43	47	48	53.4	77
29-Mar	52	52	62	67	67	71	73	69	70	64	57	48	33	30	24	23	24	25	26	25	26	28	31	45	45.5	73
30-Mar	51	57	54	58	60	64	60	59	59	52	51	50	48	45	45	40	37	36	35	37	39	38	43	48	48.5	64
31-Mar	49	50	51	52	53	56	59	61	64	62	59	55	52	50	48	47	45	45	48	51	54	55	58	59	53.5	64
	67.0	68.0	69.2	70.9	71.4	72.6	73.2	73.5	72.8	69.4	65.7	62.2	58.3	54.5	52.1	50.0	48.7	49.7	51.8	54.4	56.9	59.0	61.8	64.5	Diurnal Average	
	87	86	86	87	87	86	87	88	89	87	84	80	84	82	79	79	80	79	79	79	82	88	87	87	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 45m (RH45) - %

Mannix - March 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	48	6.45	6.45
40 - 60	278	37.37	43.82
60 - 80	325	43.68	87.50
80 - 100	93	12.50	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Maximum Value: 91 % on Mar 8 09:00

Maximum Daily Average: 81.9 % on Mar 8

Minimum Value: 23 % on Mar 29 16:00

Minimum Daily Average: 43.3 % on Mar 29

Maximum Diurnal Average: 73.3 % at hour 8

Minimum Diurnal Average: 49.5 % at hour 17

Monthly Average: 62.7 %

Percentiles: P_1 = 27 P_{10} = 43 Q_1 = 52 Median = 63 Q_3 = 75 P_{90} = 82 P_{99} = 89

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

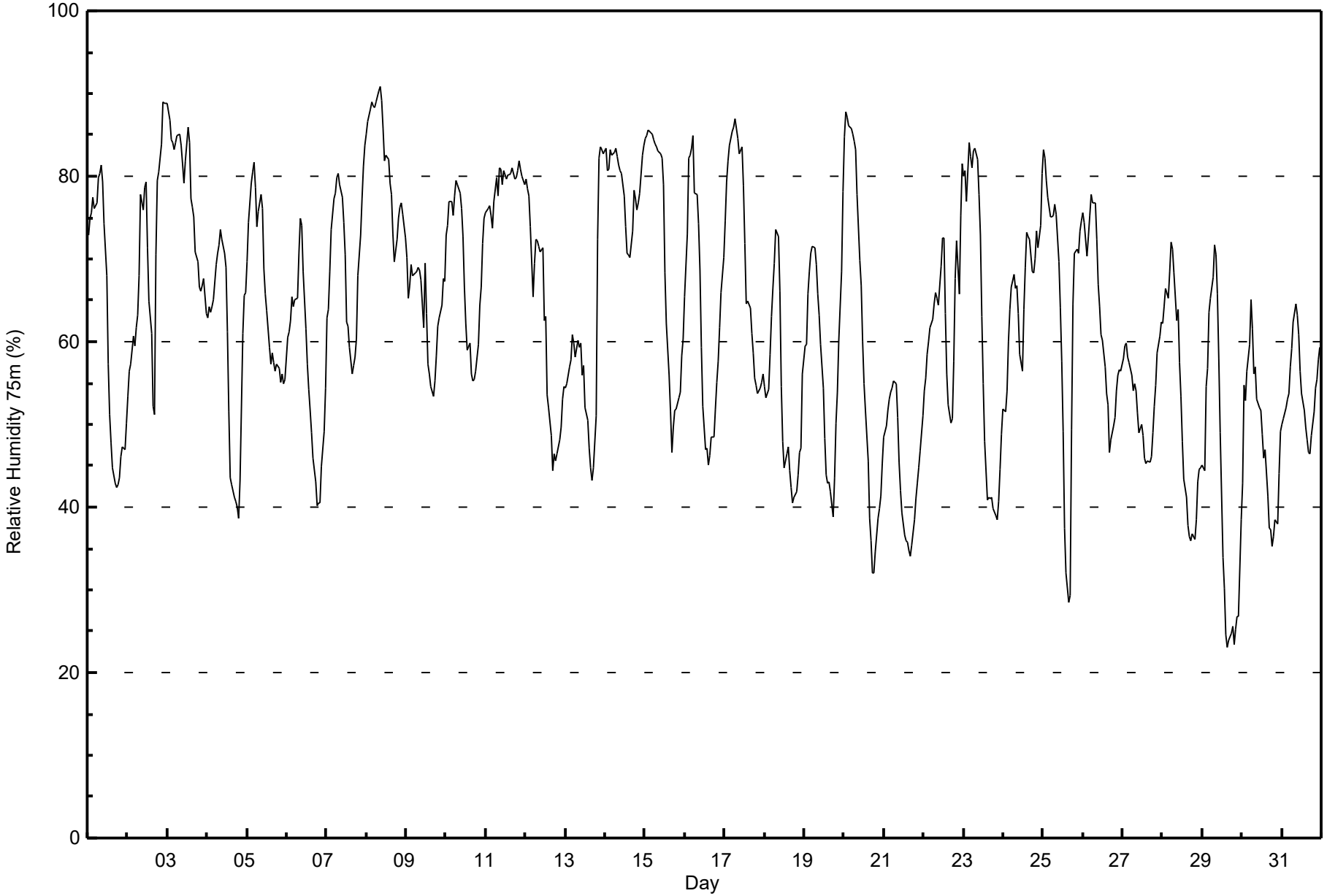
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	73	75	76	77	76	77	80	80	81	79	74	68	57	51	48	45	43	42	43	44	46	47	47	50	61.7	81
2-Mar	53	57	57	61	59	62	63	68	78	76	79	79	71	65	61	52	51	70	80	80	84	89	89	89	69.8	89
3-Mar	89	87	84	84	83	84	85	85	84	81	79	82	86	84	77	76	75	71	70	67	66	67	68	63	78.2	89
4-Mar	63	64	64	64	65	69	71	72	74	72	71	69	61	52	44	43	41	41	40	39	43	61	66	66	58.9	74
5-Mar	70	74	79	81	82	79	74	76	78	76	69	66	64	59	57	59	57	56	57	57	55	56	55	56	66.3	82
6-Mar	60	61	62	65	64	65	65	71	75	74	68	61	57	54	52	49	46	43	40	40	40	45	49	54	56.9	75
7-Mar	63	64	68	74	77	78	80	80	79	77	74	70	62	62	59	56	57	58	60	68	73	77	81	84	70.2	84
8-Mar	85	87	88	89	88	88	89	90	91	89	86	82	82	82	79	78	73	70	72	75	76	77	75	73	81.9	91
9-Mar	70	65	67	69	68	68	69	69	69	67	62	69	63	57	56	55	53	55	58	62	63	64	68	67	64.0	70
10-Mar	73	74	77	77	75	78	80	79	78	76	73	67	62	59	60	56	55	55	56	60	64	67	72	75	68.7	80
11-Mar	76	76	76	75	74	77	80	78	81	81	79	81	80	80	80	80	81	80	80	81	82	81	80	79	79.0	82
12-Mar	80	79	78	74	66	70	72	72	71	71	71	63	63	53	52	49	44	46	46	46	48	50	53	55	61.3	80
13-Mar	54	55	57	58	61	60	58	60	59	60	56	57	52	51	47	45	43	45	51	72	82	83	83	83	59.7	83
14-Mar	83	81	81	83	82	83	83	82	81	81	80	78	74	71	71	70	73	78	77	76	77	78	83	84	78.8	84
15-Mar	85	85	86	85	85	84	84	84	83	83	82	79	68	62	56	51	47	50	52	52	53	54	58	60	69.5	86
16-Mar	65	73	82	83	83	85	78	78	74	69	59	52	47	47	45	46	49	48	52	55	58	62	66	70	63.6	85
17-Mar	75	79	82	84	85	86	87	86	85	83	84	79	72	65	65	64	61	59	56	55	54	54	55	56	71.2	87
18-Mar	55	53	54	58	63	66	69	74	73	66	55	48	45	46	47	44	42	41	41	42	44	47	47	56	53.2	74
19-Mar	60	60	66	68	71	72	71	69	66	63	60	54	48	44	43	43	42	39	43	50	54	60	68	78	58.0	78
20-Mar	85	88	87	86	86	85	84	83	78	70	67	60	55	52	46	39	36	32	32	35	39	40	41	45	60.4	88
21-Mar	48	50	52	53	54	54	55	55	51	45	42	39	37	36	36	35	34	35	38	41	43	45	47	51	44.9	55
22-Mar	54	56	58	60	62	63	65	66	65	64	69	73	73	63	56	52	50	51	58	68	72	66	75	81	63.3	81
23-Mar	80	81	77	84	82	81	83	83	82	78	73	63	55	48	41	41	41	41	40	39	38	41	45	49	61.1	84
24-Mar	52	52	54	60	64	67	68	66	67	63	58	56	64	69	73	73	72	69	68	70	73	71	74	80	66.0	80
25-Mar	83	82	79	77	75	75	75	77	75	70	64	58	49	37	32	29	29	49	65	71	71	71	73	75	64.2	83
26-Mar	76	74	70	73	75	78	77	77	72	67	64	61	60	57	54	52	47	48	50	51	54	56	57	56	62.7	78
27-Mar	58	59	60	58	58	56	54	55	54	51	49	50	49	46	45	46	45	46	49	52	55	59	61	62	53.2	62
28-Mar	62	64	67	65	69	72	71	68	63	64	57	53	48	43	41	38	36	36	37	36	38	43	45	45	52.6	72
29-Mar	45	44	55	57	64	65	68	72	71	66	58	49	34	30	25	23	24	25	26	23	25	27	27	38	43.3	72
30-Mar	43	55	53	57	60	65	61	56	57	53	52	52	49	46	47	41	37	37	35	36	39	38	44	49	48.4	65
31-Mar	50	51	52	53	54	57	59	62	65	63	61	56	54	52	50	48	47	46	49	51	54	55	58	59	54.4	65
	66.7	67.9	69.3	70.7	71.3	72.5	72.9	73.3	72.8	70.3	66.9	63.7	59.4	55.6	53.0	50.9	49.5	50.5	52.3	54.6	57.0	59.0	61.6	64.2	Diurnal Average	
	89	88	88	89	88	88	89	90	91	89	86	82	86	84	80	80	81	80	80	81	84	89	89	89	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 75m (RH75) - %

Mannix - March 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	48	6.45	6.45
40 - 60	282	37.90	44.35
60 - 80	304	40.86	85.22
80 - 100	110	14.78	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 90m (RH90) - %

Mannix - March 2025

Maximum Value: 92 % on Mar 8 09:00

Maximum Daily Average: 82.9 % on Mar 8

Minimum Value: 23 % on Mar 29 20:00

Minimum Daily Average: 42.5 % on Mar 29

Maximum Diurnal Average: 73.5 % at hour 8

Minimum Diurnal Average: 49.4 % at hour 17

Monthly Average: 62.8 %

Percentiles: $P_1 = 25$ $P_{10} = 42$ $Q_1 = 52$ Median = 63 $Q_3 = 75$ $P_{90} = 83$ $P_{99} = 90$

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

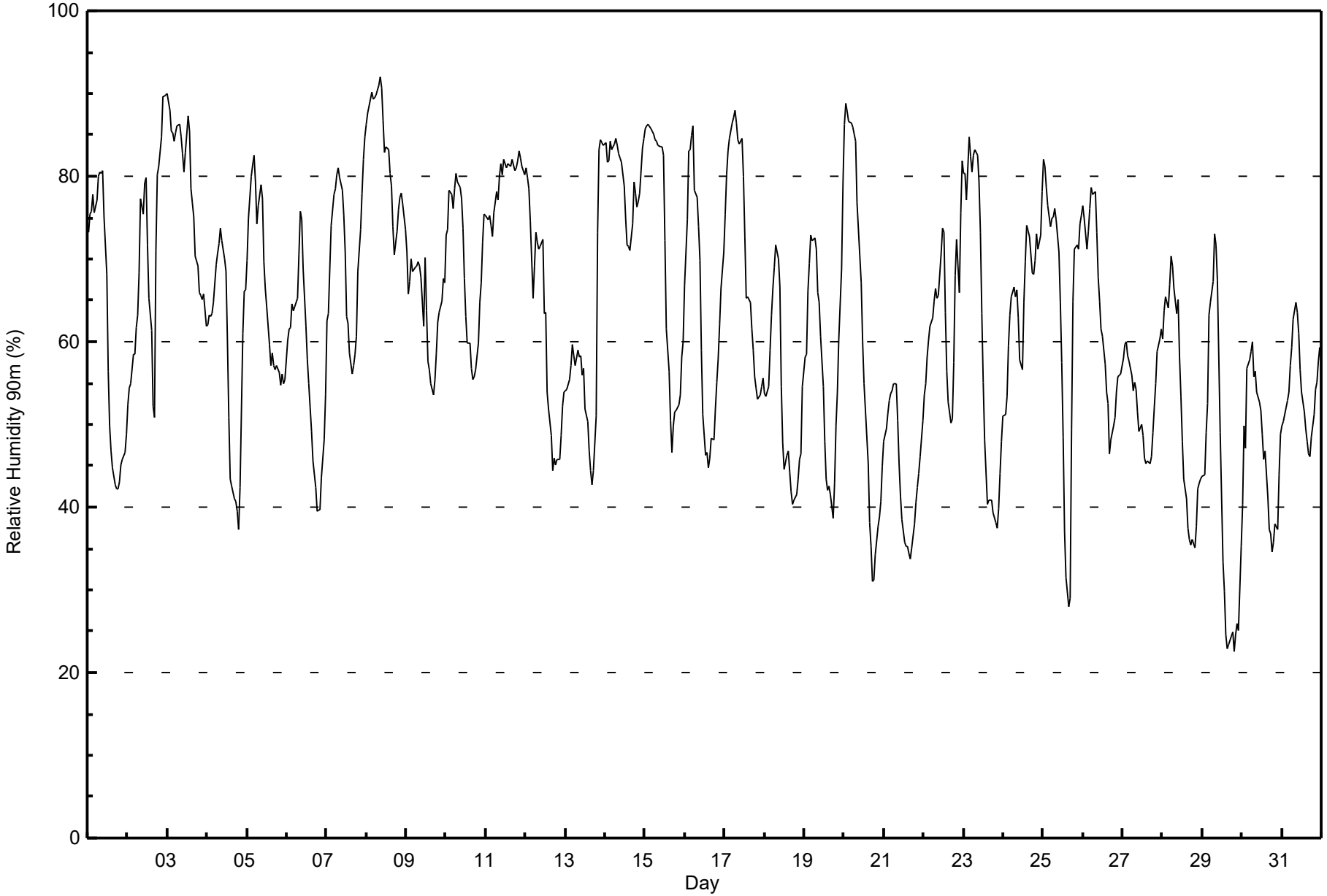
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	73	75	76	78	76	77	80	80	80	81	75	68	56	50	47	45	43	42	42	43	45	46	47	49	61.4	81
2-Mar	52	54	55	58	58	62	63	68	77	75	79	80	72	65	61	52	51	71	80	81	85	90	90	90	69.6	90
3-Mar	90	88	85	85	84	85	86	86	85	83	81	83	87	86	79	77	75	70	69	66	66	65	66	62	78.7	90
4-Mar	62	63	63	63	65	69	71	72	74	72	70	68	60	51	43	43	41	41	40	37	42	61	66	66	58.5	74
5-Mar	70	75	80	81	83	79	74	76	79	77	70	66	64	60	57	59	57	57	57	56	55	56	55	55	66.6	83
6-Mar	60	62	62	65	64	64	65	71	76	75	69	62	58	55	52	49	46	42	39	40	40	44	48	54	56.6	76
7-Mar	62	63	69	74	78	78	80	81	80	78	75	71	63	62	59	56	57	58	61	68	74	78	82	85	70.5	85
8-Mar	86	88	89	90	89	89	90	91	92	91	87	83	84	83	80	79	74	70	73	76	77	78	77	73	82.9	92
9-Mar	71	66	67	70	69	69	69	70	69	68	62	70	64	58	57	55	54	55	59	62	63	65	68	67	64.4	71
10-Mar	73	74	78	78	76	78	80	79	79	77	74	68	63	60	60	57	56	56	57	60	65	67	72	75	69.2	80
11-Mar	75	75	75	74	73	76	78	77	80	82	80	82	81	81	81	81	82	81	81	82	83	82	81	80	79.3	83
12-Mar	81	80	78	75	65	69	73	72	71	71	72	63	64	54	52	49	44	46	45	46	46	49	52	54	61.3	81
13-Mar	54	54	55	57	60	58	57	59	58	58	56	57	52	50	47	44	43	44	51	73	83	84	84	84	59.3	84
14-Mar	84	82	82	84	83	84	85	84	83	82	82	79	75	72	71	71	74	79	78	76	77	78	83	85	79.7	85
15-Mar	86	86	86	86	85	85	84	84	84	84	84	83	72	62	56	50	47	50	52	52	52	54	58	60	70.1	86
16-Mar	67	75	83	83	85	86	78	78	74	70	59	51	46	47	45	46	48	48	52	55	58	62	66	71	63.9	86
17-Mar	75	80	83	85	86	87	88	86	84	84	85	80	73	65	65	65	62	59	56	54	53	54	55	56	71.6	88
18-Mar	54	53	55	59	63	66	69	72	70	67	55	48	45	46	47	44	42	40	41	41	43	46	46	55	52.8	72
19-Mar	58	58	66	70	73	72	73	71	66	65	61	55	48	43	42	43	42	39	43	50	54	60	69	79	58.3	79
20-Mar	86	89	88	87	86	86	85	84	77	70	67	60	55	52	45	38	35	31	31	34	38	39	41	45	60.4	89
21-Mar	48	49	51	53	54	54	55	55	50	45	41	38	36	35	35	34	34	35	38	41	42	44	46	51	44.4	55
22-Mar	54	55	58	60	62	63	65	66	65	66	71	74	73	64	56	53	50	51	57	68	72	66	76	82	63.6	82
23-Mar	80	80	77	85	82	80	83	83	83	79	73	63	55	48	40	41	41	41	39	38	38	40	44	48	60.9	85
24-Mar	51	51	53	59	63	65	67	65	66	63	58	57	65	70	74	73	73	68	68	70	73	71	73	78	65.6	78
25-Mar	82	81	79	76	74	75	75	76	75	71	65	57	49	37	32	28	29	49	65	71	72	71	74	75	64.1	82
26-Mar	76	75	71	73	76	79	78	78	73	68	65	62	61	57	54	52	46	48	50	51	54	56	56	56	63.2	79
27-Mar	58	60	60	58	58	56	54	55	54	51	49	50	49	46	45	46	45	46	49	52	55	59	60	61	53.2	61
28-Mar	60	64	66	64	67	70	69	66	63	65	58	53	48	43	41	38	36	36	36	35	38	42	43	43	51.9	70
29-Mar	44	44	49	53	63	65	67	73	72	68	58	49	33	30	25	23	23	24	25	23	25	26	25	35	42.5	73
30-Mar	40	50	47	57	58	59	60	56	56	54	53	52	49	46	47	41	37	37	35	36	38	37	44	49	47.3	60
31-Mar	50	50	52	53	54	57	59	63	65	64	61	57	54	52	50	48	46	46	48	51	54	55	58	59	54.4	65
	66.6	67.7	69.0	70.7	71.3	72.4	73.0	73.5	72.9	71.1	67.5	64.1	59.7	55.8	53.1	50.9	49.4	50.4	52.1	54.5	56.7	58.9	61.4	63.9	Diurnal Average	
	90	89	89	90	89	89	90	91	92	91	87	83	87	86	81	81	82	81	81	82	85	90	90	90	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 90m (RH90) - %

Mannix - March 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	53	7.12	7.12
40 - 60	278	37.37	44.49
60 - 80	288	38.71	83.20
80 - 100	125	16.80	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 20m (WS20) - km/h

Mannix - March 2025

Maximum Speed: 26 km/h on Mar 25 17:00

Maximum Daily Speed Average: 17.0 km/h on Mar 27

Minimum Speed Value: 0 km/h on Mar 25 10:00

Minimum Daily Speed Average: 0.6 km/h on Mar 29

Maximum Diurnal Speed Average: 5.6 km/h at hour 19

Minimum Diurnal Speed Average: 0.3 km/h at hour 13

Monthly Average Velocity: 2.6 km/h 36.2 deg

Percentiles: P_1 = 1 P_{10} = 3 Q_1 = 6 Median = 9 Q_3 = 14 P_{90} = 17 P_{99} = 23

Hours in Service: 744

Hours of Data: 744

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	SSE12	SSE11	S12	S11	SSE14	S13	SSE10	SSE7	SSE8	SSE9	SSE8	SSE7	SSE6	SE5	SSE5	SE6	SE2	SSE8	S8	S6	SSE5	SE8	SSE11	SSE9	SSE8.3	SSE14
2-Mar	SSE11	SSE13	SSE11	SSE9	SSE8	SSE8	S7	WSW2	NNW11	N12	NNW9	WNW9	W7	W6	WNW9	WNW11	NW13	NNE19	NNE18	NNE20	NNE14	NNE13	NNE12	NNE13	N3.9	NNE20
3-Mar	NNE18	NNE17	NNE17	NNE14	N12	NNE8	N2	W4	W3	W1	SSW1	WSW3	S3	S3	ESE4	ESE6	SE8	SE8	SE7	SE8	S9	S7	S8	S9	ENE2.2	NNE18
4-Mar	SSE9	S10	SSE11	S9	S9	SSE10	SSE10	SSE12	SSE10	SSE8	SSE11	SE10	SSE7	S4	SSW12	SSW11	SW8	SSW7	SSW9	SW11	W12	N15	N15	N13	S5.2	N15
5-Mar	N15	N13	N11	N15	N14	NNE23	N21	N16	NNE13	NNE13	NNE8	NW7	NW5	ESE3	ESE6	SE12	SE12	ESE10	ESE9	SSE8	SSE6	SE5	SSE6	ESE3	NNE5.7	NNE23
6-Mar	S4	SSW2	WNW1	N3	WSW5	SSW4	SE8	SSE10	SSE13	SSE13	SSE12	SSE12	SSE11	SSE11	SSE11	SE7	SE9	SSE8	SSE8	S7	SSW3	WNW7	W11	NNW8	SSE5.4	SSE13
7-Mar	N11	N12	N6	NNW7	NNW6	NNW9	N6	NW5	WNW4	NW4	NNE4	S7	SSE1	NE6	ENE3	N9	N15	NNE16	N18	N16	N13	NNW10	NNW13	N9	N7.6	N18
8-Mar	N8	NNW7	NW4	NNW6	NNW5	NNW4	WNW8	NW7	NW7	WNW7	W8	NW7	NNW14	NNW17	NNW20	N21	NNE25	NNE18	NNE13	NNE14	NNE18	NNE18	NNE19	NNE20	N10.7	NNE25
9-Mar	NNE19	NNE17	NNE17	NNE15	NNE16	NNE19	NNE17	NE14	NNE16	NE14	NNE14	NNE11	NNE9	N8	N7	N8	N10	N12	N12	N13	N14	NNE11	N10	N9	NNE12.8	NNE19
10-Mar	N7	NNW5	NNW5	NW5	NNW5	NW3	WNW3	SW4	S5	SSW4	SSE7	SSE8	SSE7	SE4	SE7	SSE5	SE5	E2	NE1	NE4	NE8	ESE3	NNW2	N3	ESE0.7	SSE8
11-Mar	N4	NNW5	N8	N9	N7	N8	N8	N8	N8	N8	NNW7	NNW9	N12	NNW13	N14	N17	N17	N21	N24	N22	N19	N18	N20	N15	N12.5	N24
12-Mar	NNW10	N12	N10	N10	NNE15	NNE11	N6	N5	W5	WNW4	NNW4	W4	WSW3	W3	W4	W4	WNW1	WSW3	NW4	NNW5	NNE7	NE5	NE4	NNE4	N4.5	NNE15
13-Mar	NNW4	NNE5	N5	NNE4	NE3	NNE6	NE7	NNE5	N6	N5	NNW5	NW8	NW12	NNW10	N14	N15	NNE15	NNE15	NNE13	N16	N15	N17	N18	N19	N9.4	N19
14-Mar	N13	N24	N23	N15	N15	N15	NNW16	NNW18	N17	N14	N13	NNE17	NNE19	N15	NNW14	N16	N15	N12	N13	NNE17	NNE16	NNE14	N9	N10	N15.3	N24
15-Mar	N9	NNW8	NW9	NW8	NW4	WNW3	NW4	NNE2	NE1	E1	WNW3	W5	WNW5	WNW4	NW4	SSE4	SSE8	SSE12	SSE10	SSE9	SSE10	SSE9	S8	S7	SW1.3	SSE12
16-Mar	S6	SW4	SW3	S7	S7	SSE9	SSE9	SSE11	SSE8	SE5	SE5	SSE8	SE9	SE10	ESE11	SE12	SE13	SE12	E12	SE17	SE18	SE17	SE14	SE15	SE9.4	SE18
17-Mar	SE14	SE10	SSE9	SSE9	S5	SSE7	SSW4	SSW5	SSW4	WNW7	NW8	NNW6	NNW10	NNW10	NNE16	NNE15	NNE15	NNE9	NNE11	NNE10	NNE8	N5	NW1	WSW5	NNE2.6	NNE16
18-Mar	WSW9	SW7	SSW6	WSW4	WNW3	WNW7	NNW3	N2	W2	SW4	WSW2	WSW6	WSW8	SE3	ENE8	SE5	ESE7	SE8	SSE3	SE5	SE4	SSE7	SSW4	NNW7	SSW2.0	WSW9
19-Mar	NW10	NW10	NNW6	NNW6	NW5	WSW2	SW3	S1	SE3	SE4	SE7	SSE9	SE7	SE7	E6	E7	ENE6	ESE2	N12	N20	N24	NNE22	N21	N14	NNE4.6	N24
20-Mar	NNW14	N11	N13	N14	N12	NNE15	NNE11	N12	NNE9	N7	WNW10	NW11	WNW11	WNW13	WNW14	WNW12	WNW12	NW10	N10	N12	N7	NNE6	SE12	SE18	NNW7.4	SE18
21-Mar	SE17	SE19	SE18	SE18	SE18	SE20	SSE17	SE19	SE18	SE12	SE11	SE13	SE15	SE15	SE19	SE18	SE18	SE16	SE15	SE12	SE12	SE15	SSE15	SSE14	SE15.9	SE20
22-Mar	SE14	SSE14	SSE13	SSE13	SSE13	SSE12	SSE11	SSE11	SSE11	SSE10	SE10	SSE13	SSE12	SSE11	SSE12	SSE12	SSE12	SSW3	N10	W7	W6	WNW17	NNW16	NNW6	SSE6.6	WNW17
23-Mar	SSW1	WSW4	WSW5	W8	WSW7	WSW8	W5	WNW1	WSW2	S3	SSE8	SSE7	SSE7	SSE8	SE10	SE11	SE10	ESE5	ESE5	SE5	SE8	SE9	SE12	SE12	SSE4.6	SE12
24-Mar	SE12	SE13	SE12	SSE11	SSE13	SSE13	SSE11	SSE9	SSE11	SSE8	SSE9	SSE10	SE7	SE6	SE6	SE3	SW2	WNW12	NW15	NW16	WNW12	W11	WSW10	WSW9	S4.4	NW16
25-Mar	WSW10	SW6	SW6	SSW4	SSE2	N2	W8	SW4	WSW3	SW0	SE4	SSE9	SSE12	WSW24	W21	WNW25	NW26	N21	NNE24	NNE20	NNE18	NNE20	NNE22	NNE22	NNW5.9	NW26
26-Mar	NNE20	N16	N14	NNE16	NE12	NE10	NNE13	NNE14	NNE14	NNE12	N7	N4	WNW6	WNW10	WNW9	NW9	N8	N13	N13	N17	NNE15	NNE15	NNE16	NNE14	N11.1	NNE20
27-Mar	NNE13	NNE13	N15	N17	N19	NNE16	NNE16	NNE15	NNE17	NNE16	NNE16	N16	N17	N15	N19	N21	N20	NNE22	N21	N21	NNE22	NNE18	NNE14	NNE13	NNE17.0	NNE22
28-Mar	NNE11	NNE9	NNE9	N6	N4	N4	N6	NNE4	NNE3	W2	NNW5	WNW7	WNW7	WNW6	WSW8	WNW8	WNW9	WNW10	NNW11	N12	N12	N14	NNE13	NNE12	NNW6.2	N14
29-Mar	N9	N8	NW4	WNW4	N2	S2	W2	W2	W2	NW1	W3	W4	WNW2	WNW4	WNW3	SSE6	SSE8	SSE11	SSE10	SSE10	SSE3	N3	NNE3	NW5	SW0.6	SSE11
30-Mar	WNW5	W6	W5	WSW5	W4	WSW3	WSW6	W3	SSW3	SE4	ESE4	E4	ESE3	SE6	E6	SE7	SE6	E7	E8	E11	NNE8	ENE9	ESE17	SE21	ESE3.1	SE21
31-Mar	SE20	SE19	SE17	SE14	SE17	SE13	SE13	SE13	SE11	SE10	SE10	SSE12	SE12	SE13	SE17	SE17	SE18	SE18	SE16	SE15	SE17	SE18	SE17	SE16	SE15.0	SE20
	NE3.1	NNE3.1	NNE2.5	NNE2.3	NE1.9	NE2.2	NE1.5	ENE1.5	ENE1.7	ENE1.5	ENE1.1	S0.8	ENE0.3	NNW0.6	NNE1.4	NE2.0	NE2.7	NE4.2	NNE5.6	NNE5.5	NNE5.6	NNE5.4	NE4.8	NE4.2	Diurnal Average	
	SE20	N24	N23	SE18	N19	NNE23	N21	SE19	SE18	NNE16	NNE16	NNE17	NNE19	WSW24	W21	WNW25	NW26	NNE22	NNE24	N22	N24	NNE22	NNE22	NNE22	Diurnal Maximum	

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

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8 km/h on Mar 25 14:00

Minimum Value: 1 km/h on Mar 15 10:00

Percentiles: P_1 = 1 P_{10} = 1 Q_1 = 2 Median = 3 Q_3 = 4 P_{90} = 5 P_{99} = 6

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

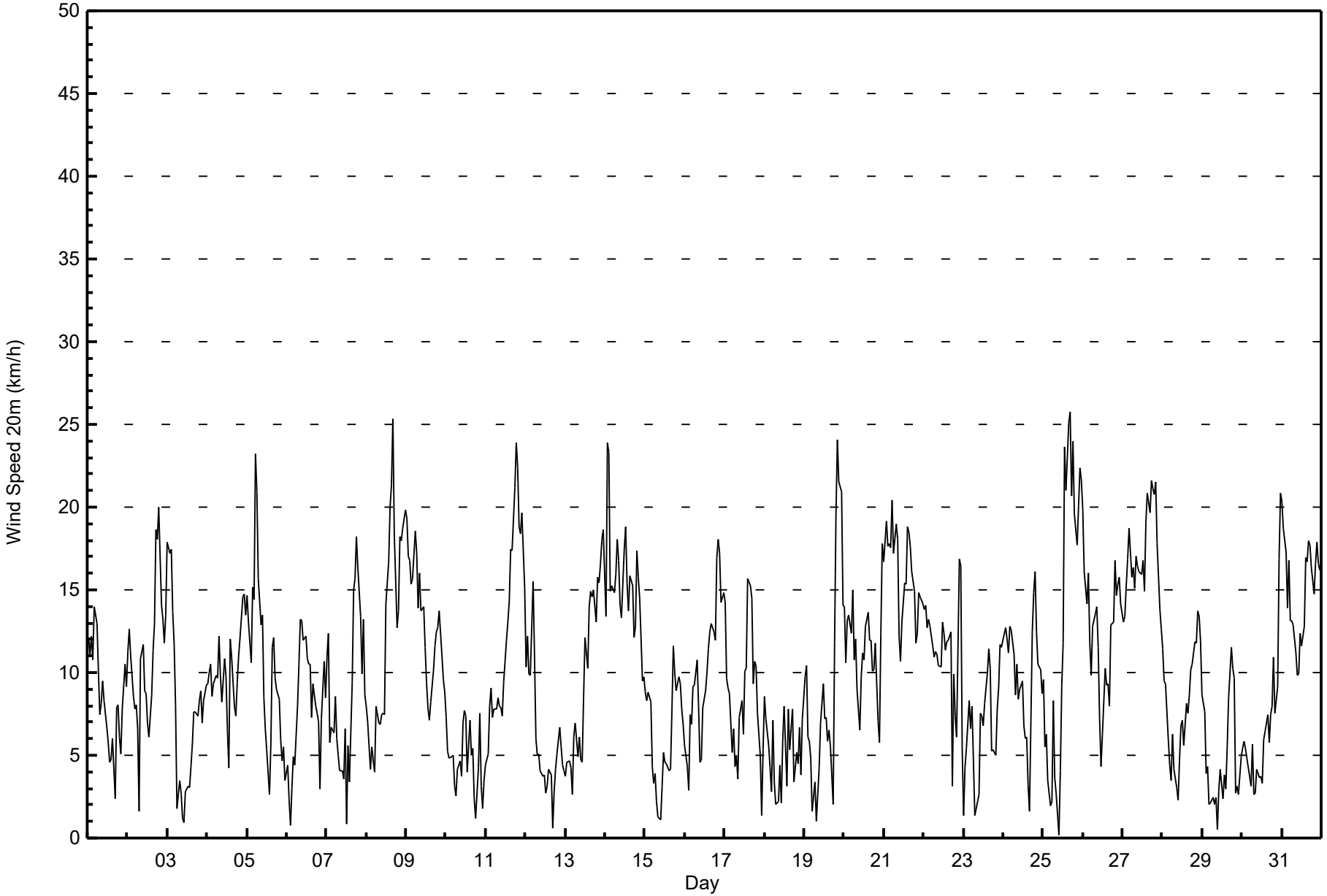
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	2	2	2	2	2	2	2	4	2	3	3	3	2	2	2	2	1	1	1	2	1	2	2	1	4
2-Mar	2	3	2	2	3	4	2	2	4	4	3	2	2	2	2	2	3	4	4	6	5	5	3	4	6
3-Mar	5	4	4	4	4	4	1	2	1	1	1	2	2	2	2	2	2	2	2	1	1	2	2	1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

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 20m (WS20) - km/h

Mannix - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	177	23.79	23.79
6 - 11	286	38.44	62.23
12 - 19	244	32.80	95.03
20 - 28	37	4.97	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 20m (WS20) - km/h

Mannix - March 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	15	9	6	1	3	9	16	10	8	13	8	15	19	17	15	13	177
6 - 11	40	19	4	3	6	6	33	75	17	4	5	10	10	19	13	22	286
12 - 19	66	66	3	0	1	1	56	27	2	1	0	0	1	7	4	9	244
20 - 28	16	13	0	0	0	0	3	0	0	0	0	1	1	1	1	1	37
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	137	107	13	4	10	16	108	112	27	18	13	26	31	44	33	45	744

Total Number of Valid Hours: 744

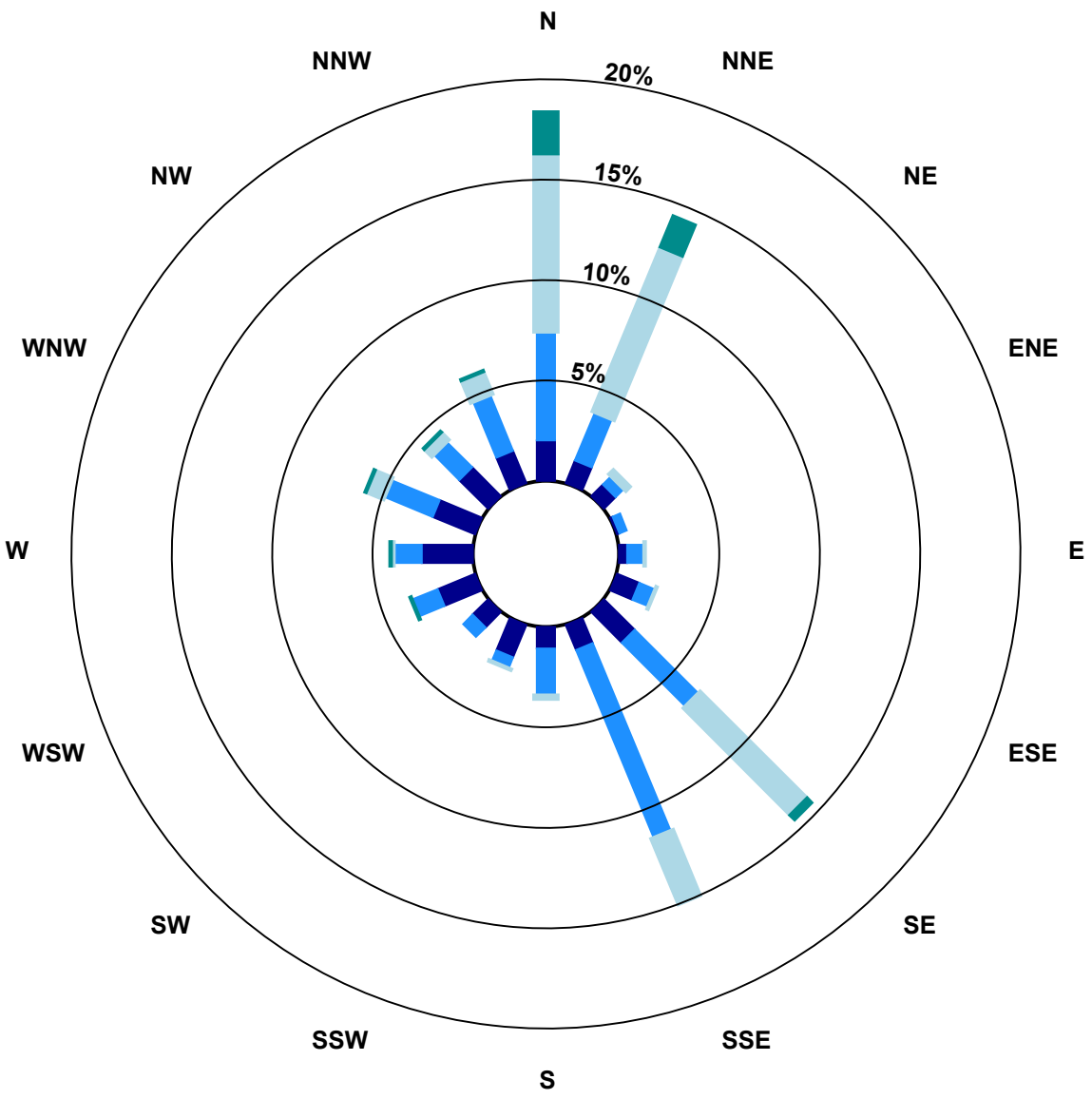
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 20m (WS20) - km/h

Mannix



Classes (km/h)

0 - 5

6 - 11

12 - 19

20 - 28

29 - 38

> 38

Total Number of Valid Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 45m (WS45) - km/h

Mannix - March 2025

Maximum Speed: 35 km/h on Mar 25 17:00

Maximum Daily Speed Average: 21.3 km/h on Mar 27

Minimum Speed Value: 0 km/h on Mar 15 10:00

Minimum Daily Speed Average: 0.6 km/h on Mar 29

Maximum Diurnal Speed Average: 7.4 km/h at hour 19

Minimum Diurnal Speed Average: 0.3 km/h at hour 13

Monthly Average Velocity: 3.5 km/h 33.1 deg

Percentiles: P_1 = 1 P_{10} = 4 Q_1 = 8 Median = 12 Q_3 = 18 P_{90} = 22 P_{99} = 30

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	SSE18	SSE17	SSE17	SSE17	SSE21	SSE19	SSE16	SSE15	SSE13	SSE14	SSE11	SSE8	SSE7	SE6	SSE6	SE8	SE6	SE11	SSE11	SSE10	S13	SSE14	SE17	SE14	SSE12.7	SSE21
2-Mar	SE17	SSE21	SSE20	SSE16	S14	SSE8	S11	WNW6	NNW16	N18	NNW12	WNW12	W10	W8	WNW11	WNW15	NW19	N24	NNE24	NNE26	NNE17	NNE17	NNE15	NNE16	N4.7	NNE26
3-Mar	NNE22	NNE22	NNE22	NNE18	N15	N10	NNW3	W4	W3	W1	SSW1	WSW3	S4	S4	SE4	ESE5	SE8	SE10	SE10	SE13	SSE16	SSE13	SSE14	S15	E2.8	NNE22
4-Mar	SSW11	SSW10	SSW11	SSW11	SW13	S10	SSE12	SSE16	S13	SSE11	SE15	SE12	SSE9	SSW8	SSW18	SSW17	SW13	SSW12	SSW17	SW18	W18	N20	N20	N19	SSW7.3	N20
5-Mar	N21	N18	N14	NNW20	N19	NNE30	N29	N20	NNE16	NNE15	NNE10	NW8	NW6	ESE2	ESE6	SE13	SE14	ESE11	ESE11	SE10	SE9	SE5	SE6	SE5	NNE7.6	NNE30
6-Mar	SSE7	SSE6	E2	NNE3	S6	SSE9	SE15	SSE16	SSE17	SSE15	SSE13	SSE14	SSE12	SSE12	SSE12	SE9	SE11	SE12	SSE11	S15	SW10	WNW14	WNW16	NNW13	SSE7.3	SSE17
7-Mar	N15	N17	N9	NNW9	NNW8	NNW12	N8	NW6	NW5	NNW5	NNE3	S8	S1	NE6	NE4	N12	N19	N20	N23	N22	N18	NNW13	NNW18	N11	N10.1	N23
8-Mar	N9	NNW9	NW5	NNW6	NNW6	NNW5	WNW10	NW9	NW8	WNW8	W8	WNW9	NNW17	NNW21	NNW25	N27	NNE31	NNE24	NNE16	NNE17	NNE23	NNE23	NNE24	NNE25	N13.5	NNE31
9-Mar	NNE24	NNE21	NNE21	NNE19	NNE20	NNE22	NNE21	NNE16	NNE19	NNE17	NNE16	NNE13	NNE11	N9	NNW9	N10	N12	N14	N15	N16	N17	N13	N12	N11	NNE15.5	NNE24
10-Mar	N10	NNW7	NNW6	NW6	NNW5	NW4	NW3	WSW4	SSE6	S5	SSE8	SSE9	SSE9	SSE5	ESE8	SSE6	SE5	E3	ENE2	NE4	ENE8	ESE4	NNE2	NNE3	ESE1.1	N10
11-Mar	NNE7	N9	NNE11	N13	N11	N11	N10	N10	N10	N10	NNW9	NNW11	N14	NNW16	N19	N23	N23	N29	N33	N30	N25	N24	N26	N20	N16.5	N33
12-Mar	N13	N16	N14	N13	N20	NNE15	NNE9	N6	WNW4	WNW4	NW5	W4	SW3	W3	W4	W4	WNW0	WSW2	NNW4	N6	NNE9	NE8	ENE6	E2	N5.6	N20
13-Mar	NE3	NE6	NNE4	NNE7	E5	NE8	ENE10	NE7	NE6	N5	NNW5	NW9	NW14	NNW13	N18	N18	NNE18	NNE19	NNE17	N20	N20	N22	N24	N24	NNE11.5	N24
14-Mar	N18	N31	N30	N20	N21	N20	NNW22	NNW26	N22	N19	N18	N22	N24	N19	NNW18	N20	N19	N16	N17	NNE23	N21	N20	N14	N14	N20.3	N31
15-Mar	N12	N11	NNW11	NNW11	NNW7	NNW5	NNW5	NNE4	N3	SSE0	WNW3	W5	WNW5	WNW5	NW5	SSE5	S9	SSE13	SSE13	SSE14	SSE14	SSE14	SSE12	S12	SSW1.2	SSE14
16-Mar	SSW10	WSW4	WNW3	S8	SSW8	S10	SSE14	SSE16	SSE12	SE5	SE5	SE10	SE10	SE11	ESE13	SE14	SE15	SE16	E14	SE19	SE20	SE21	SE18	SE19	SE10.9	SE21
17-Mar	SE17	SE12	SE11	SE12	SSE8	SSE9	S8	SSW11	S6	WNW9	NW11	NNW8	NNW12	NNW12	N19	NNE19	N18	NNE12	NNE15	NNE15	NNE12	NNE6	N1	WSW6	NNE3.2	NNE19
18-Mar	WSW11	WSW13	SSW11	SW10	WNW6	WNW11	NW5	NNW3	WSW3	SSW5	WSW2	WSW7	WSW10	SE3	ENE9	SE6	ESE7	SE9	SE5	SE7	SE7	SE9	S5	NNW11	SSW2.9	WSW13
19-Mar	NNW15	NNW16	NNW11	NNW10	NNW8	NNW4	SW2	WSW1	SSE2	SSE4	SE8	SSE11	SE8	SE8	E6	E7	ENE6	SE2	N15	N27	N32	N29	N29	N19	N7.4	N32
20-Mar	NNW20	N15	N19	N19	N17	N20	N16	N15	NNE9	N7	NW10	NW13	WNW12	WNW14	WNW15	WNW14	WNW14	NNW13	N14	N18	N12	NE6	SE16	SE23	NNW9.8	SE23
21-Mar	SE21	SE24	SE22	SE22	SE22	SE25	SE23	SE23	SE20	SE14	SE12	SE15	SE17	SE18	SE20	SE20	SE19	SE18	SE19	SE16	SE17	SE20	SE21	SE20	SE19.5	SE25
22-Mar	SE20	SE21	SE18	SSE17	SE18	SSE16	SSE15	SSE15	SSE13	SE13	SE13	SSE15	SSE14	SE13	SSE14	SSE14	SSE15	S6	N14	W10	W11	WNW22	NNW19	NNW8	SSE8.3	WNW22
23-Mar	ESE1	SW7	WSW8	W12	WSW10	W12	W9	W4	WSW3	S3	SSE8	SSE8	SSE7	SSE9	SE11	SE13	SE12	ESE7	ESE8	SE8	SE12	SE13	SE15	SE16	SSE5.3	SE16
24-Mar	SE16	SE17	SE17	SE16	SE17	SE18	SSE16	SSE13	SSE14	SSE10	SSE10	SSE11	SE9	SSE8	SSE8	SE4	WSW4	WNW18	NW22	NW23	NW19	W17	WSW15	W14	S5.1	NW23
25-Mar	WSW16	WSW11	WSW13	WSW8	WSW5	NNW4	W12	WSW8	WSW5	WSW1	SE4	SSE10	SSE14	WSW28	W27	WNW33	WNW35	N27	NNE31	NNE25	NNE22	NNE26	N28	N28	NW8.8	WNW35
26-Mar	NNE25	N21	N19	NNE21	NNE15	NNE13	NNE16	NNE16	NNE17	NNE14	N8	N6	WNW7	WNW12	WNW11	NW11	N10	N16	N17	N21	N18	N18	NNE19	NNE17	N14.0	NNE25
27-Mar	NNE16	NNE16	N19	N22	N24	NNE19	NNE20	NNE19	NNE21	NNE20	NNE19	UO	N21	N18	N23	N26	N25	N27	N28	N26	N27	NNE23	NNE18	NNE16	N21.3	N28
28-Mar	NNE15	NNE12	NNE10	NNE9	NNE6	N5	NNE9	NE6	NNE3	W4	NNW5	WNW8	WNW8	WNW7	WSW9	WNW9	WNW10	WNW12	NNW14	N16	N16	N18	NNE18	NNE16	N8.0	N18
29-Mar	N13	N12	NNW7	N3	N4	E1	SE0	W1	NW3	WNW1	W3	W4	W2	W4	WNW3	SSE7	SE9	SSE13	SSE13	SSE14	SSE9	N3	ENE1	NNW6	SE0.6	SSE14
30-Mar	NW7	NW4	W6	W7	WNW6	NNW1	W4	W3	SSW3	SSE5	ESE3	E4	SE4	SE7	E7	SE9	SE7	E9	E10	E14	NE9	E12	ESE19	SE24	ESE3.8	SE24
31-Mar	SE24	SE22	SE21	SE17	SE18	SE16	SE16	SE15	SE12	SE11	SE11	SE14	SE13	ESE14	SE19	SE18	SE21	SE21	SE19	SE19	SE21	SE23	SE21	SE22	SE17.8	SE24
	NNE4.6	NNE4.4	NNE3.6	NNE3.3	NNE2.8	NE3.4	NE2.4	ENE1.8	ENE2.0	NE1.7	ENE1.2	S1.2	NE0.3	NNW0.9	NNE1.8	NNE2.5	NE3.5	NE5.4	NNE7.4	NNE7.0	NNE6.7	NNE7.0	NNE6.3	NE5.6	Diurnal Average	
	NNE25	N31	N30	SE22	N24	NNE30	N29	NNW26	N22	NNE20	NNE19	N22	N24	WSW28	W27	WNW33	WNW35	N29	N33	N30	N32	N29	N29	N28	Diurnal Maximum	

UO - Unstable Operation

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

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8 km/h on Mar 25 14:00

Minimum Value: 0 km/h on Mar 29 07:00

Percentiles: P_1 = 1 P_{10} = 1 Q_1 = 2 Median = 3 Q_3 = 4 P_{90} = 5 P_{99} = 6

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

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

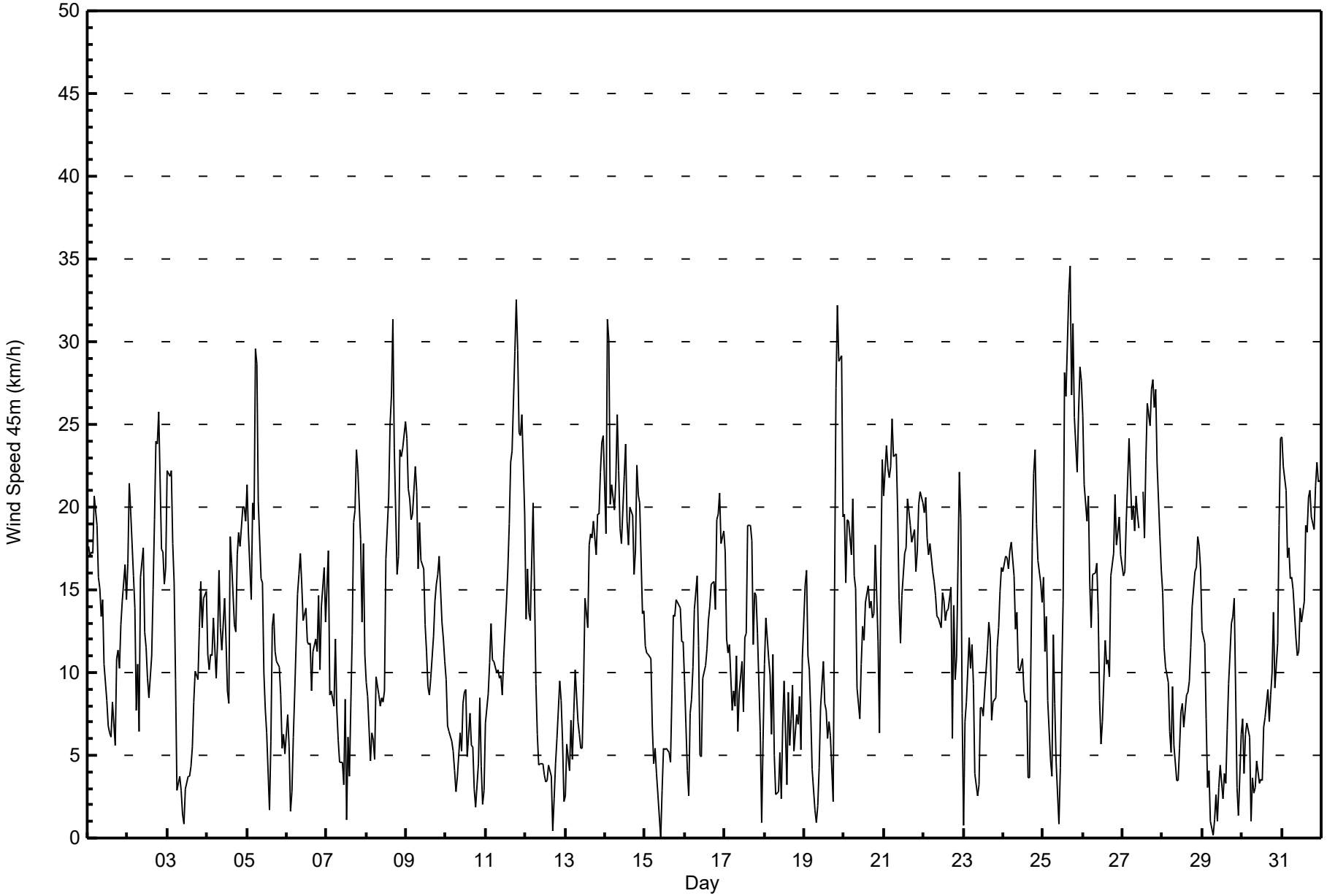
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 45m (WS45) - km/h

Mannix - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	120	16.15	16.15
6 - 11	216	29.07	45.22
12 - 19	277	37.28	82.50
20 - 28	116	15.61	98.12
29 - 38	14	1.88	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 743

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 45m (WS45) - km/h

Mannix - March 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	7	7	3	2	6	5	13	6	6	3	2	12	16	10	9	13	120
6 - 11	22	13	9	5	5	7	33	33	10	9	3	10	8	16	11	22	216
12 - 19	60	46	0	0	3	3	56	53	6	4	3	4	6	13	3	17	277
20 - 28	47	26	0	0	0	0	29	3	0	0	0	1	1	1	2	6	116
29 - 38	9	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	14
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	145	95	12	7	14	15	131	95	22	16	8	27	31	42	25	58	743

Total Number of Valid Hours: 743

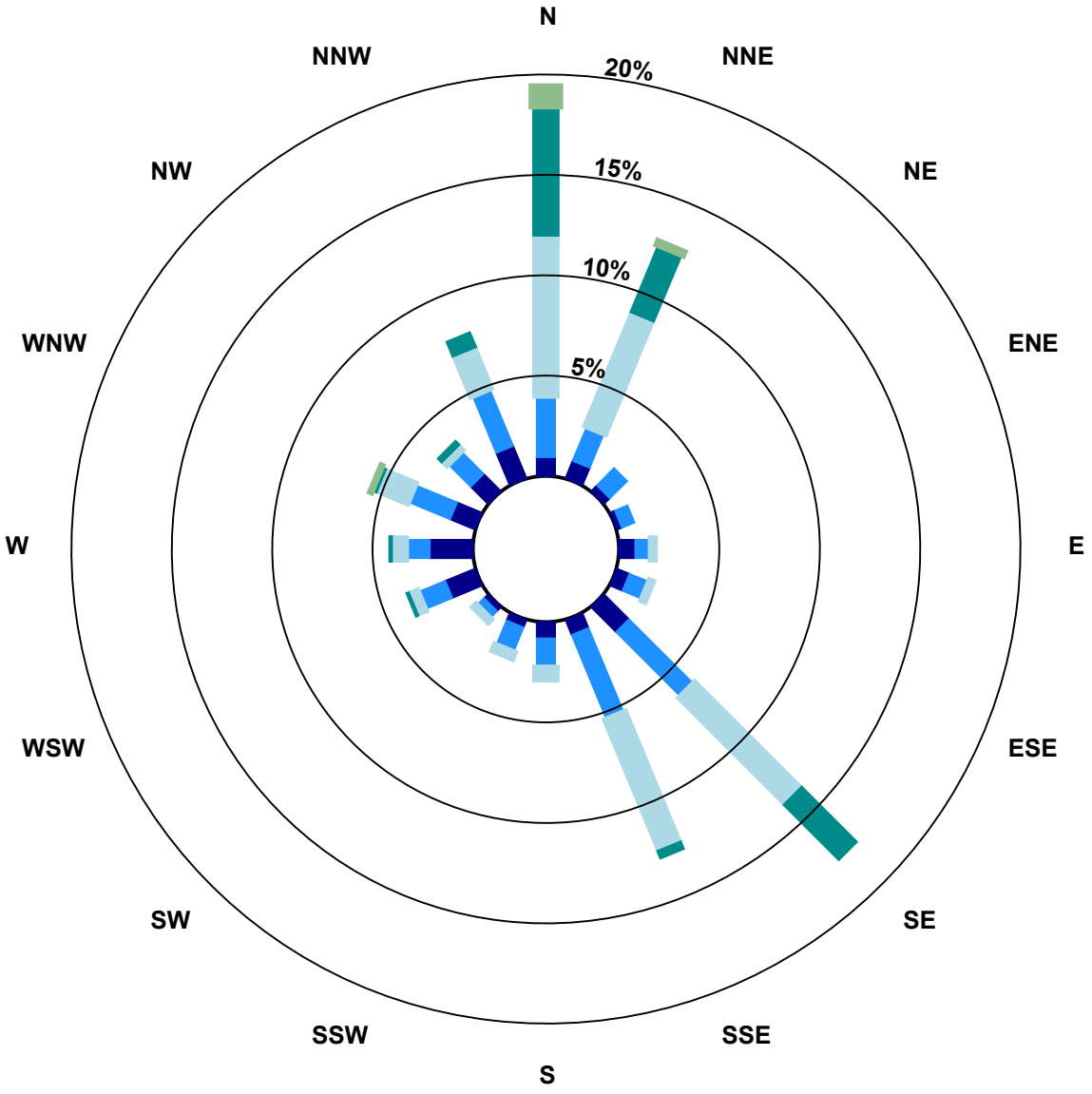
Total Number of Hours: 744

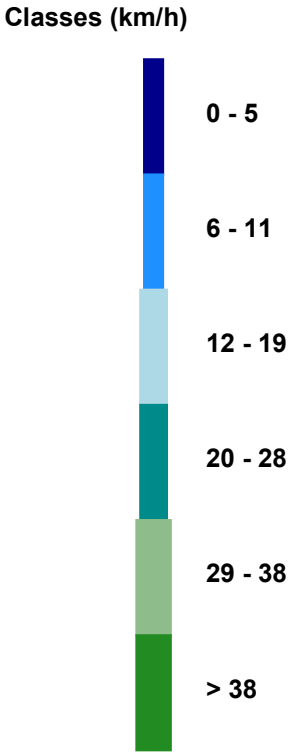
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 45m (WS45) - km/h

Mannix





Total Number of Valid Hours: 743

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 75m (WS75) - km/h

Mannix - March 2025

Maximum Speed: 38 km/h on Mar 25 17:00

Maximum Daily Speed Average: 23.6 km/h on Mar 14

Minimum Speed Value: 0 km/h on Mar 15 10:00

Minimum Daily Speed Average: 1.2 km/h on Mar 15

Maximum Diurnal Speed Average: 8.5 km/h at hour 19

Minimum Diurnal Speed Average: 0.5 km/h at hour 13

Monthly Average Velocity: 4.3 km/h 41.0 deg

Percentiles: P_1 = 1 P_{10} = 4 Q_1 = 8 Median = 13 Q_3 = 20 P_{90} = 25 P_{99} = 34

Hours in Service: 744

Hours of Data: 744

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	SE23	SSE18	SSE17	SSE19	SSE25	SSE23	SE21	SSE23	SSE22	SSE22	SSE14	SSE12	SE8	SE7	SSE9	SSE11	SE11	SSE13	SSE13	SSE16	S18	SSE19	SSE23	SSE19	SSE16.8	SSE25
2-Mar	SSE23	SSE26	SSE23	S21	SSW13	SW5	SSW8	WNW12	N20	N23	N15	NW12	W11	W10	WNW11	WNW16	NW22	NNE26	NNE27	NNE29	NNE20	NNE21	NNE18	NNE19	N5.7	NNE29
3-Mar	NNE25	NNE25	NNE26	NNE21	NNE18	NNE11	N3	W3	WNW3	WSW1	SSW1	WSW3	S4	S4	SSE5	SE4	SE6	SE11	SE10	SSE14	SSE18	SSE17	S15	SSW10	E2.9	NNE26
4-Mar	SW10	SW10	SW12	SW14	WSW17	SW9	S8	SSW12	SSW10	S10	SSE17	SE16	SSE13	SSW13	SSW20	SW19	SW15	SW13	SW19	WSW24	W22	N23	NNE22	NNE23	SW8.2	WSW24
5-Mar	NNE27	NNE22	N17	N23	N22	NNE34	N33	N23	NNE17	NNE17	NNE11	NNW8	NW6	E2	SE5	SE11	SE13	ESE8	ESE8	SE8	SE10	SSE6	SE6	SE5	NNE9.0	NNE34
6-Mar	SSE8	SE5	ENE4	NE2	SSE7	SSE13	SE18	SE21	SSE21	SSE18	SSE15	SSE15	SSE12	SSE12	SSE13	SSE10	SSE14	SSE16	S11	SSW13	WSW14	NW20	NW19	NNW16	SSE7.6	SSE21
7-Mar	N18	NNE20	NNE10	N10	N8	N14	N10	NNW5	NW4	NNW4	NNE3	S9	S1	NE7	NE4	N14	NNE22	NNE22	NNE25	N24	N20	N14	N20	NNE12	N11.5	NNE25
8-Mar	N10	NNW9	NNW4	N6	N7	N5	NW9	NNW9	NW8	NW8	W8	NW9	N18	N23	N28	NNE30	NNE35	NNE27	NNE18	NNE20	NNE27	NNE25	NNE26	NNE29	N15.0	NNE35
9-Mar	NNE28	NNE24	NNE23	NNE22	NNE22	NNE25	NNE23	NE17	NE21	NE19	NE18	NNE14	NNE12	N10	N9	N10	NNE13	NNE15	NNE17	NNE17	NNE18	NNE14	NNE13	NNE11	NNE17.0	NNE28
10-Mar	N11	N8	N7	NNW6	NNW6	NNW4	NNW2	SSW2	SSE8	S6	SSE9	SSE9	S9	SSE5	SE7	SSE6	SE5	ESE3	E3	ENE5	ENE9	ESE5	ENE2	ENE3	ESE2.0	N11
11-Mar	NE8	NNE10	NE11	NE12	NE12	NE12	NE11	NE10	NNE12	N11	N9	N11	N15	N18	N21	NNE26	NNE26	NNE33	NNE36	NNE33	N28	NNE27	NNE29	N22	NNE17.9	NNE36
12-Mar	N15	N19	N16	N15	NNE23	NNE19	NNE14	NNE8	NNW2	NW4	NNW5	WNW4	SW3	W3	WNW4	W3	NE0	SSW1	N4	NNE7	NE13	E10	E5	ESE4	NNE6.4	NNE23
13-Mar	E3	E5	E3	ENE4	ESE6	E10	E10	E9	E9	ENE6	NNE5	NNW8	NNW15	N13	NNE19	NNE21	NE20	NNE22	NNE19	NNE22	NNE22	NNE24	NNE27	NNE27	NNE11.7	NNE27
14-Mar	NNE22	NNE35	N33	N24	N26	N23	N25	N31	NNE25	N21	N20	NNE25	NNE27	N21	N19	N22	N21	N18	NNE21	NNE27	NNE25	NNE26	N16	N17	N23.6	NNE35
15-Mar	N14	N13	N13	N12	N8	NNE7	N5	NNE6	NNE4	SW0	WNW2	WNW5	NW5	WNW6	NW5	SSE5	S9	SSE14	S17	S19	S18	S18	S14	SSW11	S1.2	S19
16-Mar	SW10	WNW4	NW2	SSW5	SSW7	SSW6	S13	S16	SSE15	SE6	SE7	SE10	SE10	SE11	ESE11	SE12	SE14	SE14	ESE11	SE14	SE13	SE20	SE18	SE20	SSE9.6	SE20
17-Mar	SE19	SE14	SE14	SE15	SSE10	SSE10	SSE10	S13	SSW10	WNW9	NW11	N8	N12	NNW12	NNE20	NNE20	NNE19	NNE14	NNE18	NNE19	NE17	NE9	ENE3	SW5	NE4.3	NNE20
18-Mar	WSW11	SW14	SSW14	SW13	WNW10	WNW13	NW7	WNW5	WSW4	SW6	SW2	WSW7	WSW10	SSE3	E9	SE6	SE8	SSE10	SSE7	SSE10	SSE9	SE8	S5	NNW11	SSW4.0	SW14
19-Mar	N20	NNW20	N14	N11	N7	NNE3	W1	W1	SSW2	S4	SSE9	SSE12	SSE9	SE8	E5	E7	ENE7	SE2	N17	N31	NNE36	NNE32	NNE33	N23	NNE8.9	NNE36
20-Mar	N23	N19	N23	N22	N20	NNE22	NNE18	NE13	ENE9	NNE7	NNW9	NW12	WNW11	NW14	NW15	WNW14	WNW14	NNW15	N16	NNE20	NNE15	ENE7	SE17	SE23	N10.4	SE23
21-Mar	SE21	SE22	SE21	SE20	SE23	SE25	SE27	SE23	SE16	SE15	SE11	SE14	SE15	SE14	SE15	SE15	SE14	SE14	SE14	SE12	SE17	SE24	SE26	SE25	SE18.4	SE27
22-Mar	SE23	SE22	SE22	SSE21	SE22	SSE21	SE18	SSE20	SSE16	SSE17	SSE15	SSE17	SSE15	SSE14	SSE14	SSE15	SSE16	S8	N16	WNW11	W12	WNW24	N23	N9	SSE9.7	WNW24
23-Mar	ENE3	SSW7	WSW9	W14	W13	W13	WNW12	WNW8	W4	S3	S8	SSE8	SSE7	SSE9	SE11	SE12	SE11	ESE7	ESE7	SE9	SE12	SE11	SE11	SE15	S4.5	SE15
24-Mar	SE12	SE13	SE17	SE16	SE17	SE21	SE19	SSE18	SSE17	SSE12	SSE10	SSE11	SSE11	S11	S10	SSE4	WSW6	NW21	NW26	NW28	NW23	WNW18	W19	W19	SSW4.8	NW28
25-Mar	W21	W17	WSW18	W13	W12	NW5	W14	WSW12	W8	WSW1	SSE4	S11	S15	WSW30	WNW29	WNW36	NW38	NNE30	NNE35	NNE30	NNE25	NNE29	NNE31	NNE31	NW10.4	NW38
26-Mar	NNE30	N25	N22	NNE24	NNE19	NE17	NNE20	NNE18	NNE18	NNE15	NNE9	N6	NW7	NW12	WNW11	NW11	N10	NNE17	N18	NNE22	NNE19	NNE20	NNE22	NNE20	NNE15.9	NNE30
27-Mar	NNE18	NNE17	NNE21	NNE24	NNE26	NNE21	NNE23	NE21	NNE23	NNE21	NNE20	N20	NNE22	NNE20	NNE25	NNE28	NNE27	NNE29	NNE30	NNE29	NNE30	NNE27	NNE22	NNE19	NNE23.3	NNE30
28-Mar	NNE16	NE12	NE8	NE8	NE8	NE6	NE9	NE8	NNE3	WNW2	NNW5	NW8	NW8	WNW7	W8	WNW9	WNW9	WNW11	N16	NNE20	NNE19	NNE21	NNE21	NNE16	N8.1	NNE21
29-Mar	NNE13	NE9	NNE7	ENE3	N3	NNE1	NNW3	NW2	N2	NW1	W2	WNW4	W2	WNW3	WNW2	SSE7	SSE9	SSE14	SSE16	SSE18	SSE14	NNE1	SSE3	N4	SE1.8	SSE18
30-Mar	NW5	N2	WNW3	WNW7	NW6	NNW1	SW1	NW0	S3	SSE5	SE3	ESE4	SE3	SE6	E7	SE9	SE7	E9	E11	E13	ENE10	E11	ESE14	SE19	ESE4.1	SE19
31-Mar	SE20	SE20	SE21	SE15	SE11	SE15	SE11	SE13	SE13	SE11	SE11	SSE14	SSE13	SE12	SE15	SE16	SE17	SE19	SE16	SE16	SE22	SE24	SE24	SE24	SE16.3	SE24
	NE6.2	NE5.7	NE4.7	NNE4.0	NNE3.9	NE4.9	ENE3.7	E2.8	E2.8	ENE2.3	E1.7	SE1.0	ENE0.5	NNW1.1	NNE2.2	NNE3.0	NE4.1	NE6.3	NNE8.5	NNE8.3	NNE7.9	NE8.2	NE7.3	NE6.8	Diurnal Average	
	NNE30	NNE35	N33	NNE24	NNE26	NNE34	N33	N31	NNE25	N23	N20	NNE25	NNE27	WSW30	WNW29	WNW36	NW38	NNE33	NNE36	NNE33	NNE36	NNE32	NNE33	NNE31	Diurnal Maximum	

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

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 75m (WS75) - km/h

Mannix - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 9 km/h on Mar 19 19:00

Minimum Value: 1 km/h on Mar 28 06:00

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

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

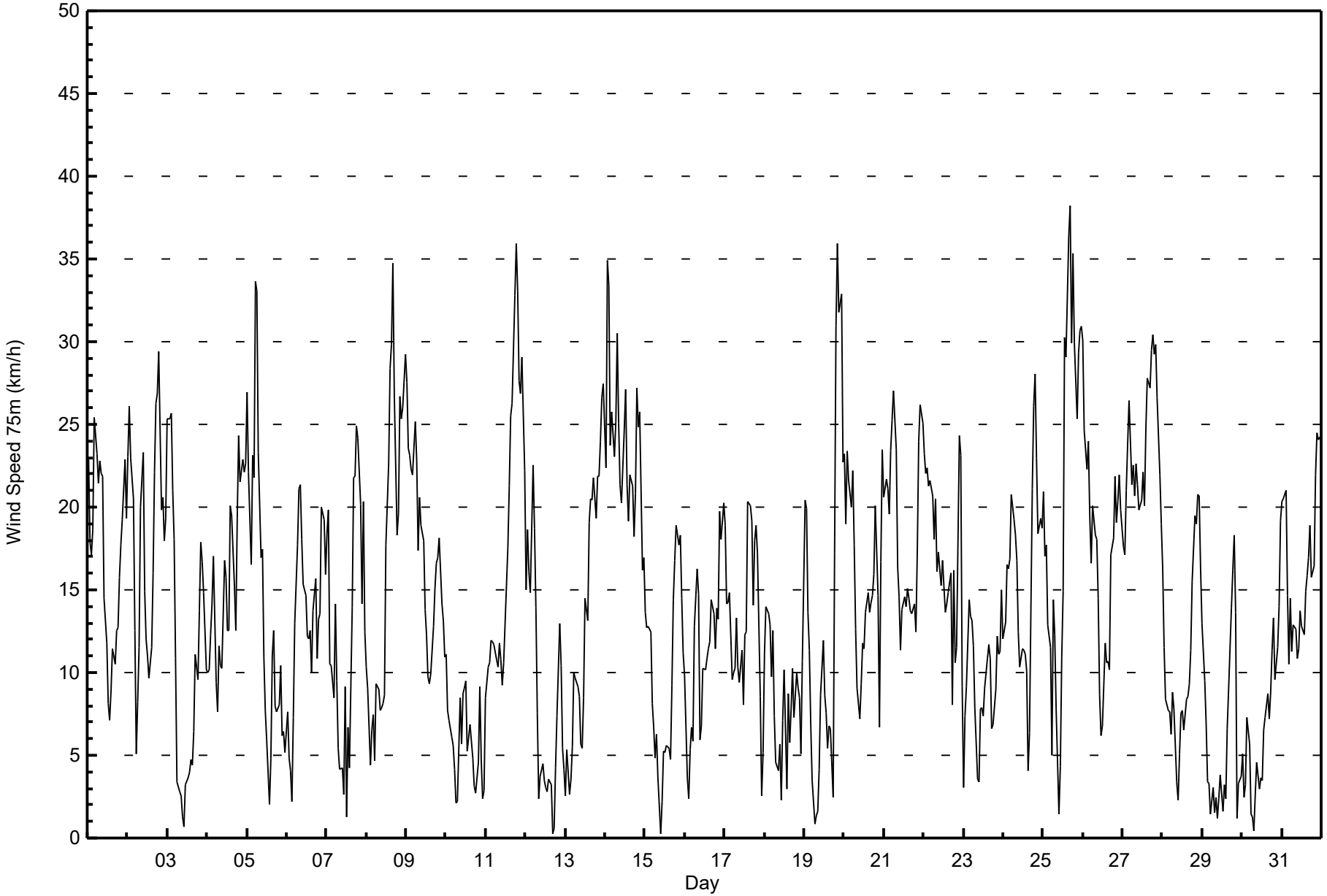
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	2	1	2	3	2	2	2	2	2	2	2	5	2	3	1	2	2	1	1	1	1	2	2	2	5
2-Mar	2	2	1	3	4	3	2	4	6	4	4	2	2	3	2	3	2	3	4	6	5	5	3	4	6
3-Mar	4	4	4	4	4	4	2	2	1	1	1	2	2	2	2	2	3	4	2	1	1	1	3	1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

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 75m (WS75) - km/h

Mannix - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	115	15.46	15.46
6 - 11	199	26.75	42.20
12 - 19	231	31.05	73.25
20 - 28	167	22.45	95.70
29 - 38	32	4.30	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 75m (WS75) - km/h

Mannix - March 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	8	7	2	9	7	4	8	8	7	5	6	4	8	12	10	10	115
6 - 11	21	13	13	6	11	8	32	28	11	8	5	5	5	13	12	8	199
12 - 19	28	43	10	0	1	1	48	45	11	5	8	4	10	7	6	4	231
20 - 28	32	76	3	0	0	0	29	13	1	1	0	1	2	1	6	2	167
29 - 38	4	24	0	0	0	0	0	0	0	0	0	1	0	2	1	0	32
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	93	163	28	15	19	13	117	94	30	19	19	15	25	35	35	24	744

Total Number of Valid Hours: 744

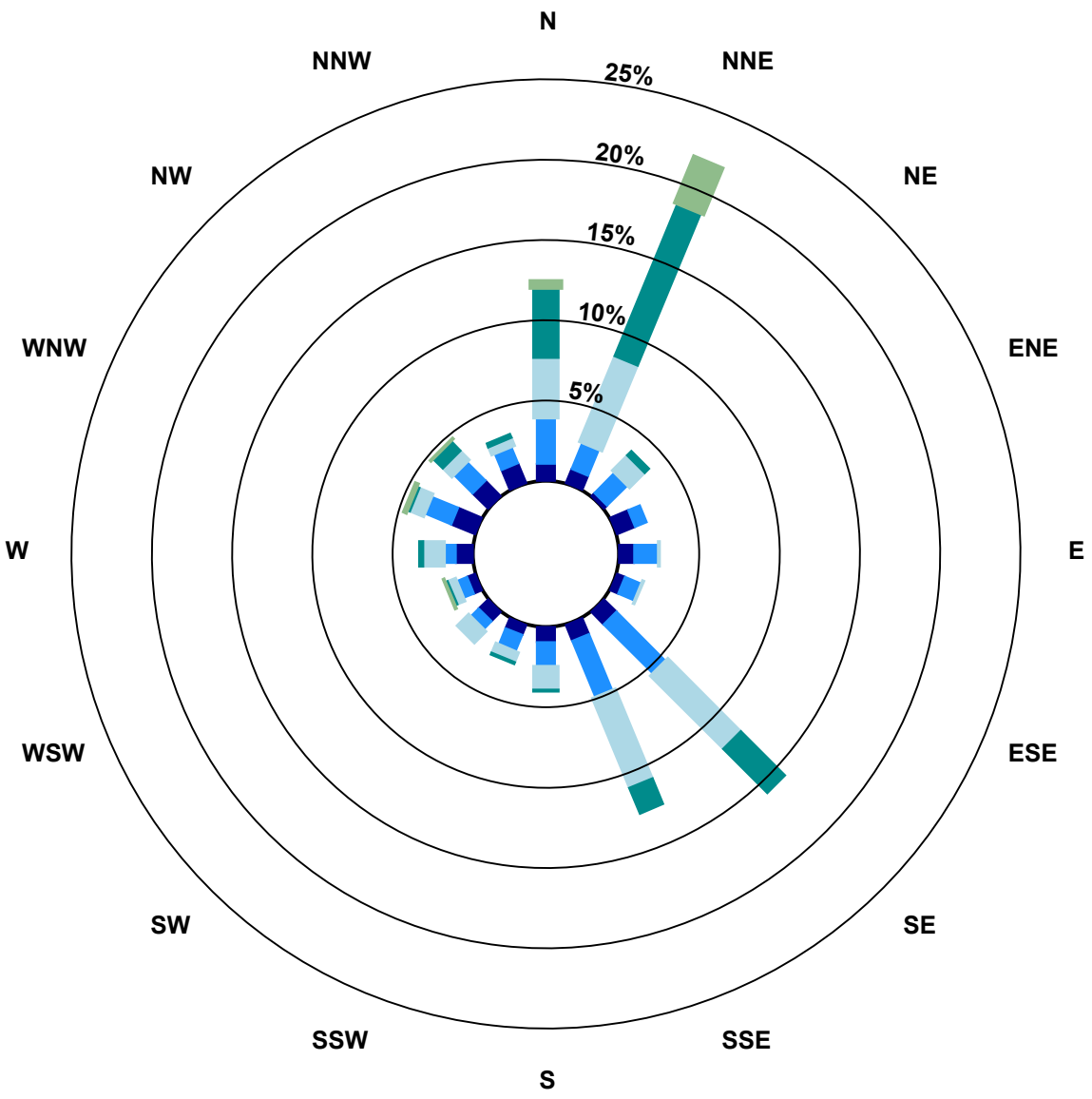
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 75m (WS75) - km/h

Mannix



Classes (km/h)

0 - 5

6 - 11

12 - 19

20 - 28

29 - 38

> 38

Total Number of Valid Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 90m (WS90) - km/h

Mannix - March 2025

Maximum Speed: 41 km/h on Mar 25 17:00

Maximum Daily Speed Average: 24.8 km/h on Mar 14

Minimum Speed Value: 0 km/h on Mar 30 08:00

Minimum Daily Speed Average: 1.0 km/h on Mar 15

Maximum Diurnal Speed Average: 8.7 km/h at hour 20

Minimum Diurnal Speed Average: 0.2 km/h at hour 13

Monthly Average Velocity: 4.4 km/h 40.0 deg

Percentiles: P_1 = 1 P_{10} = 4 Q_1 = 9 Median = 14 Q_3 = 21 P_{90} = 26 P_{99} = 35

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	SE22	SSE18	SE17	SSE18	SSE26	SE24	SSE22	SSE26	SSE25	SSE26	SSE14	SSE13	SE8	SE8	SSE10	SSE13	SSE12	SSE13	SSE13	SSE16	SSE19	SSE22	SSE22	SSE21	SSE17.7	SSE26
2-Mar	SSE25	SSE24	S20	S18	SW12	WSW6	SW9	WNW14	NNW22	N26	N16	NW13	W12	W11	WNW12	WNW17	NW24	NNE26	NNE27	NNE30	NNE21	NNE21	NNE19	NNE20	NNW7.0	NNE30
3-Mar	NNE26	NNE26	NNE26	NNE22	NNE19	NNE12	N4	W3	WNW3	WSW1	SW1	WSW4	SSW4	SSW4	SSE5	SE5	SE7	SE12	SE11	SSE13	SSE17	S16	S13	SW10	ENE2.5	NNE26
4-Mar	SW11	SW11	SW14	WSW17	WSW20	SW10	SSW7	SW12	SW10	S8	SSE15	SSE18	S13	SSW14	SSW20	SW20	SW16	SW12	SW20	WSW27	W24	N24	N22	NNE24	SW9.1	WSW27
5-Mar	N29	N23	N17	N25	N23	NNE34	N35	N24	NNE17	NNE18	NNE11	NW8	NW6	E2	SE6	SE12	SE14	ESE11	ESE11	SE10	SE11	SSE7	SE7	SE6	NNE9.2	N35
6-Mar	SE8	SE6	ENE5	ENE2	SSE8	SSE13	SE19	SE23	SSE22	SE19	SSE16	SSE14	SSE12	SSE12	SSE13	SSE11	SSE15	SSE16	SSW10	SSW11	WSW13	NW23	NW20	NNW17	SSE7.5	NW23
7-Mar	N19	NNE20	NNE11	N11	N9	N15	N10	NNW5	NNW4	NNW4	N2	S9	SSW2	NE7	NE5	N15	NNE23	NNE22	N25	N25	N20	N15	N21	NNE13	N11.9	NNE25
8-Mar	N11	N9	NNW5	N7	N8	N5	NW8	NNW9	NW8	WNW8	W9	WNW9	NNW18	N24	N30	N31	NNE35	NNE28	NNE19	NNE20	NNE27	NNE26	NNE26	NNE30	N15.7	NNE35
9-Mar	NNE28	NNE24	NNE24	NNE23	NNE22	NNE26	NNE23	NE17	NNE21	NNE19	NNE18	NNE14	NNE12	N10	N10	N10	NNE13	NNE15	NNE17	N17	NNE18	NNE14	NNE13	NNE11	NNE17.3	NNE28
10-Mar	N12	N8	N7	NNW7	NNW6	NNW5	N2	SSE3	SSE9	S6	SSE9	SSE9	SSE9	SSE5	ESE7	SSE6	SE5	ESE3	E3	ENE4	ENE9	ESE5	ENE2	ENE3	ESE2.2	N12
11-Mar	ENE9	NE10	NE10	NE11	NE11	NE11	NE10	NE10	NNE13	NNE11	N10	N11	N16	N18	N22	NNE26	NNE27	N33	N36	N34	N29	N27	N30	N23	NNE17.9	NNE36
12-Mar	N16	N19	N17	N15	NNE23	NNE20	NNE15	NNE8	NNW2	NW4	NNW5	WNW4	SW3	W3	WNW3	W3	ENE0	SE0	N4	NNE8	NE14	E11	ESE7	ESE6	NNE6.7	NNE23
13-Mar	ESE3	E7	ESE5	E5	ESE9	E11	ESE11	E11	E10	ENE6	NNE5	NNW8	NNW15	N14	NNE19	NNE21	NE21	NNE22	NNE20	NNE22	NNE23	NNE24	N27	N28	NNE11.6	N28
14-Mar	N24	N36	N35	N25	N28	N25	N27	N32	N26	N22	N21	N25	N28	N22	N20	N23	N22	N19	NNE22	NNE29	NNE26	NNE27	N17	N18	N24.8	N36
15-Mar	N15	N13	N14	N13	N9	NNE8	N5	NNE7	N4	W1	WNW2	WNW6	NW5	WNW6	NW6	SSE5	S9	SSE14	S17	S19	S19	S19	S14	SW10	SW1.0	S19
16-Mar	WSW10	NW5	NW3	S5	SSW6	S6	S11	S16	SSE15	SE7	SE10	SE11	SE11	SE12	ESE14	SE13	SE16	SE16	ESE15	SE18	ESE19	SE22	SE20	SE22	SE10.5	SE22
17-Mar	SE21	SE16	SE16	SE16	SSE10	SSE11	SSE11	S14	SSW10	WNW10	NW12	NNW8	N13	NNW13	NNE21	NNE20	NNE19	NNE15	NNE18	NNE20	NNE19	NE10	NE4	SSW5	NE4.4	SE21
18-Mar	SW11	SW13	SSW13	SW14	WNW11	WNW13	WNW9	WNW6	WSW6	SW6	SW3	WSW8	WSW10	SSE4	E9	SE6	SE8	SSE11	SSE8	SSE11	SSE10	SE8	S5	NNW9	SW4.5	SW14
19-Mar	N21	N20	N15	N12	N6	NNE3	W1	W1	SSW2	S4	SSE9	SSE12	SSE9	SE8	ESE6	E7	E7	SE4	N17	N32	N37	NNE32	N34	N24	NNE9.1	N37
20-Mar	N24	N20	N25	N22	N21	NNE22	NNE18	NE12	ENE9	NNE7	NNW9	NW12	WNW12	NW14	NW15	WNW14	WNW15	NNW15	N17	N20	NNE14	E8	SE18	SE25	N10.5	N25
21-Mar	SE23	SE25	SE24	SE23	SE26	SE28	SE29	SE26	SE20	SE15	SE12	SE15	SE17	SE17	SE18	SE18	SE18	SE17	SE16	SE15	SE19	SE25	SE29	SE28	SE20.9	SE29
22-Mar	SE26	SE23	SE24	SE22	SE22	SE22	SE20	SE21	SSE17	SSE19	SSE16	SSE17	SSE15	SSE14	SSE14	SSE15	SSE16	S9	N17	WNW12	W12	WNW26	N25	N10	SSE10.1	SE26
23-Mar	ENE4	SSW7	WSW10	W15	W15	W15	WNW13	WNW9	W5	SSW3	S7	SSE8	SSE7	SSE9	SE11	SE13	SE12	ESE9	ESE10	ESE11	SE14	SE14	SE15	SE18	SSE4.6	SE18
24-Mar	SE15	SE17	SE19	SE18	SE19	SE22	SE19	SE21	SSE18	SSE12	SSE10	SSE11	S12	S12	S10	S4	W8	WNW23	NW28	NW30	NW25	WNW19	W19	W21	S4.7	NW30
25-Mar	W24	W20	WSW20	W16	W15	WNW6	W16	WSW14	W10	WSW2	SSE5	S11	S15	WSW31	WNW31	WNW39	NW41	N31	NNE36	NNE32	NNE26	NNE30	NNE31	NNE32	NW11.9	NW41
26-Mar	NNE31	N26	N23	NNE25	NNE21	NNE18	NNE22	NNE19	NNE18	NNE15	N9	N6	NW7	NW12	WNW11	NW11	N10	NNE17	N18	N22	NNE19	NNE21	NNE23	NNE21	NNE16.6	NNE31
27-Mar	NNE18	NNE18	NNE21	NNE24	NNE27	NNE22	NNE23	NNE21	NNE23	NNE22	NNE20	N21	NNE22	NNE20	NNE25	N28	NNE28	NNE30	NNE31	NNE30	NNE30	NNE28	NNE23	NNE20	NNE23.9	NNE31
28-Mar	NE16	NE12	ENE9	ENE7	NE7	NNE6	NE8	ENE8	NNE3	WNW3	NNW5	NW8	NW8	WNW7	W9	WNW9	WNW10	WNW12	N16	NNE21	NNE20	NNE22	NNE21	NE15	N7.8	NNE22
29-Mar	NNE11	NNE9	NE6	E4	NNE1	SE0	NNW3	NW2	N3	WNW1	W2	WNW4	WSW2	W3	WNW2	SSE7	SSE9	SSE14	SSE17	SSE19	SSE15	ENE1	SSE4	NNE1	SE2.3	SSE19
30-Mar	NW4	NNW3	WNW4	WNW8	NW7	NNW3	SW1	E0	S3	S4	SE3	ESE4	SE4	SE7	E8	SE9	SE8	E9	E13	E17	ENE10	E14	ESE19	SE24	ESE4.8	SE24
31-Mar	SE23	SE23	SE22	SE17	ESE15	SE16	SE14	SE15	SE13	SE11	SE12	SSE14	SE14	SE15	SE18	SE18	SE20	SE20	SE18	SE19	SE25	SE27	SE27	SE27	SE18.4	SE27
	NE6.5	NE6.0	NE5.0	NNE4.1	NNE4.1	NE5.1	NE3.8	E2.8	E2.7	ENE2.1	E1.5	SE1.0	ENE0.2	NNW1.0	NNE2.2	NNE2.9	NE4.0	NE6.4	NNE8.7	NNE8.7	NNE8.1	NE8.3	NE7.6	NE7.0	Diurnal Average	
	NNE31	N36	N35	N25	N28	NNE34	N35	N32	N26	SSE26	N21	N25	NNE28	WSW31	WNW31	WNW39	NW41	N33	NNE36	N34	N37	NNE32	N34	NNE32	Diurnal Maximum	

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

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 9 km/h on Mar 19 19:00

Minimum Value: 0 km/h on Mar 29 06:00

Percentiles: P_1 = 1 P_{10} = 1 Q_1 = 2 Median = 3 Q_3 = 4 P_{90} = 5 P_{99} = 6

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

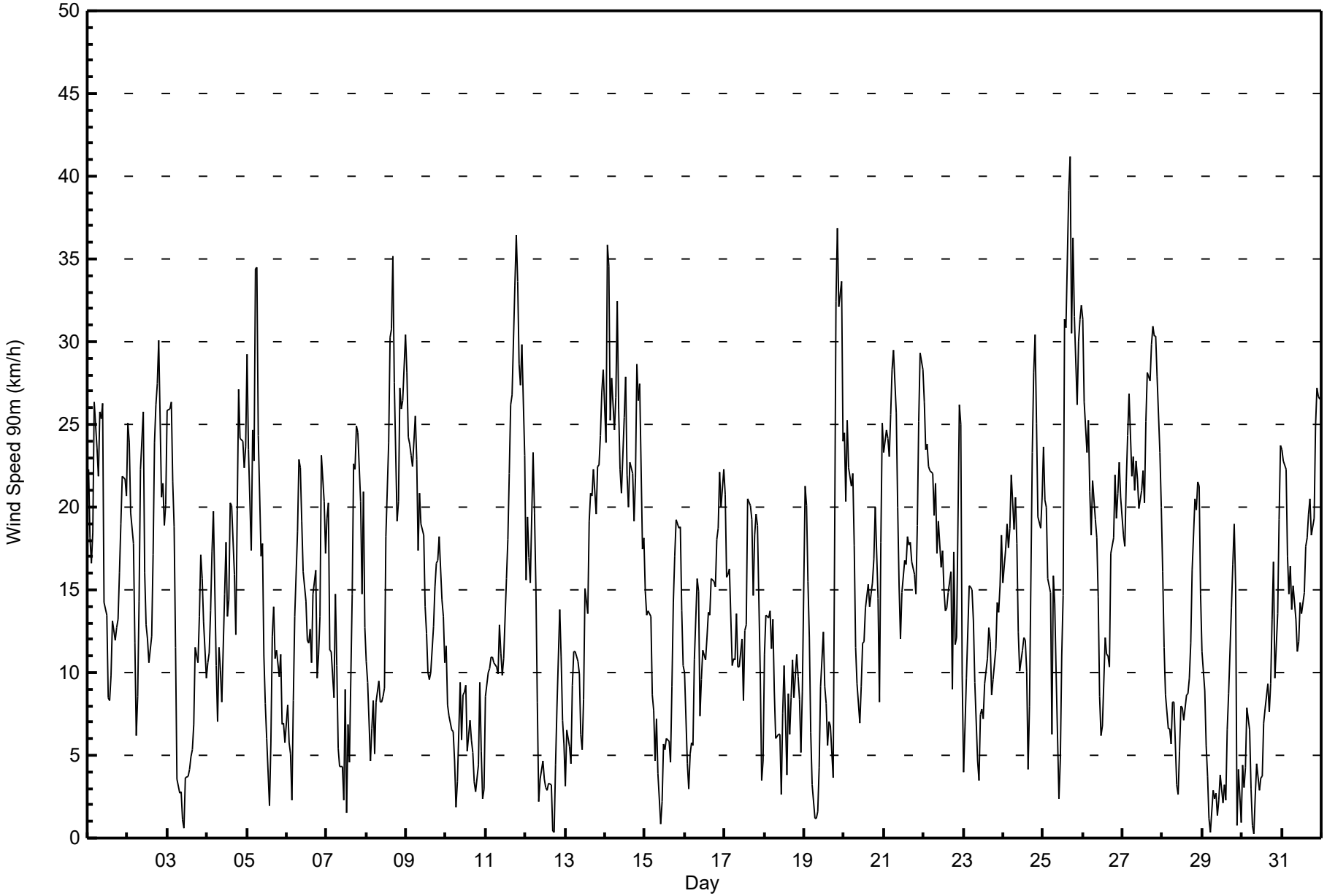
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	2	2	2	4	2	2	2	2	2	3	2	4	2	2	1	1	1	1	1	1	1	2	2	2	4
2-Mar	2	3	2	5	2	2	2	4	6	4	4	2	2	3	3	3	2	3	4	6	5	5	3	4	6
3-Mar	4	4	3	3	4	4	2	2	1	1	1	2	2	1	2	1	2	4	2	1	2	1	3	1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

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 90m (WS90) - km/h

Mannix - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	102	13.71	13.71
6 - 11	191	25.67	39.38
12 - 19	227	30.51	69.89
20 - 28	185	24.87	94.76
29 - 38	37	4.97	99.73
> 38	2	0.27	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 90m (WS90) - km/h

Mannix - March 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	8	5	2	8	5	5	7	7	6	6	4	4	9	9	6	11	102
6 - 11	20	12	12	8	11	11	24	25	10	6	9	6	5	15	10	7	191
12 - 19	29	35	6	0	3	5	51	41	14	2	7	3	9	11	6	5	227
20 - 28	43	72	1	0	0	0	38	11	1	1	2	3	4	2	5	2	185
29 - 38	14	18	0	0	0	0	2	0	0	0	0	1	0	1	1	0	37
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
Totals	114	142	21	16	19	21	122	84	31	15	22	17	27	39	29	25	744

Total Number of Valid Hours: 744

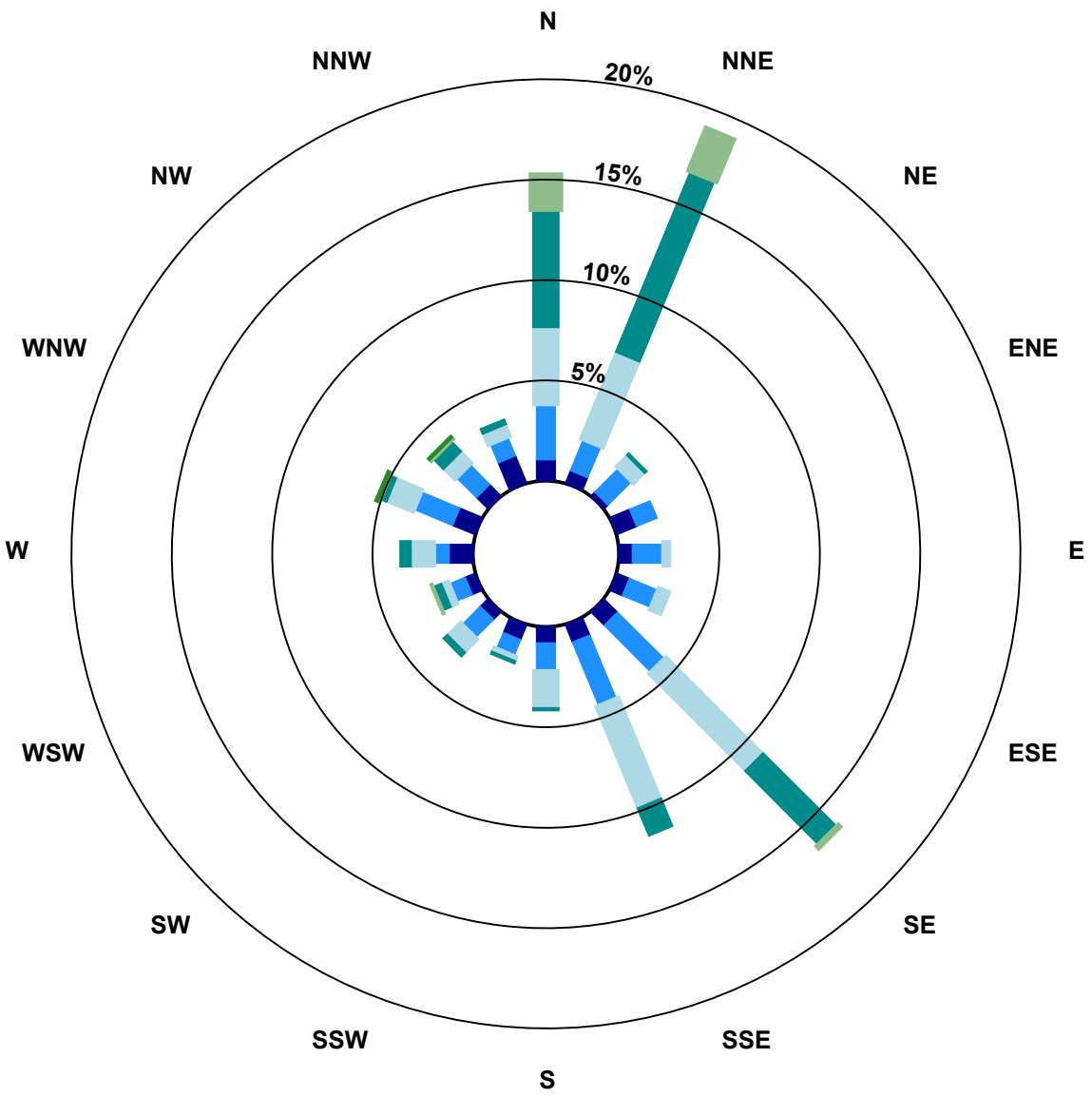
Total Number of Hours: 744

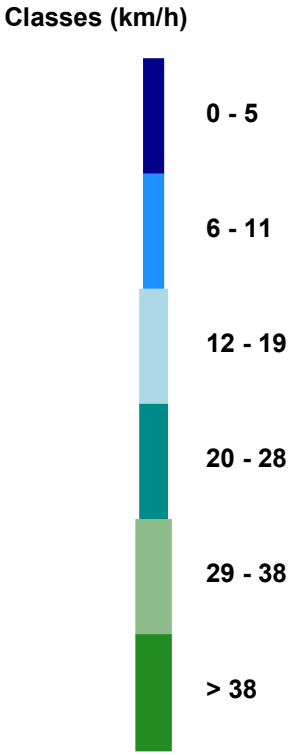
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 90m (WS90) - km/h

Mannix





Total Number of Valid Hours: 744

Direction of Maximum Speed: 305 deg on Mar 25 17:00
Direction of Maximum Daily Speed Average: 13.0 deg on Mar 27

Direction of Minimum Speed: 215 deg on Mar 25 10:00

Direction of Minimum Daily Speed Average: 0.6 deg on Mar 29

Monthly Average Direction: 36.2 deg

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	165	167	170	170	165	170	162	166	151	157	149	155	153	142	167	142	142	153	169	183	159	142	150	157	160.2
2-Mar	153	148	147	161	162	156	172	242	336	356	345	299	272	270	289	288	309	13	17	18	20	18	14	22	0.5
3-Mar	21	22	22	17	11	13	1	259	264	267	206	248	174	171	121	122	134	138	137	146	169	172	170	171	76.3
4-Mar	168	170	167	174	191	158	149	162	156	148	149	144	147	188	199	209	214	205	209	230	276	5	10	9	178.0
5-Mar	8	8	11	351	357	18	354	5	30	30	19	319	313	105	119	134	131	116	112	148	157	145	147	118	32.6
6-Mar	176	193	296	357	242	207	143	160	162	155	157	158	158	156	150	138	143	148	158	179	211	292	280	330	167.4
7-Mar	1	9	2	339	327	343	359	317	302	325	24	182	156	52	62	358	9	12	11	4	357	344	347	9	359.5
8-Mar	5	327	317	344	333	333	294	314	308	302	281	306	345	343	341	9	18	21	19	25	18	15	21	29	357.7
9-Mar	19	21	20	24	29	25	31	35	31	35	29	21	22	359	356	355	4	8	11	8	11	12	8	7	18.9
10-Mar	355	342	334	326	332	317	295	236	180	198	161	157	166	145	127	161	145	99	50	34	52	114	344	351	116.3
11-Mar	10	346	6	4	3	5	8	4	357	350	336	327	352	348	4	11	10	8	9	9	9	10	10	1	3.2
12-Mar	347	359	357	357	14	16	7	6	278	292	327	272	248	260	279	272	291	239	315	343	23	45	51	31	349.6
13-Mar	347	26	356	16	38	26	38	18	10	352	341	311	321	341	7	11	33	26	14	11	9	8	8	8	7.2
14-Mar	3	11	7	352	353	349	345	345	8	357	355	14	12	7	347	360	1	3	7	17	12	12	355	358	1.9
15-Mar	355	348	321	320	309	297	308	26	41	89	283	269	290	298	324	150	166	155	161	164	167	163	173	184	216.4
16-Mar	190	225	232	174	177	167	154	147	154	146	146	156	140	134	120	134	138	135	101	135	132	136	135	137	142.6
17-Mar	139	141	147	153	169	160	195	212	196	288	315	340	348	330	13	15	14	28	21	20	30	9	312	248	20.7
18-Mar	241	236	205	255	299	292	327	357	264	221	251	245	246	133	78	126	121	146	151	142	133	156	199	327	205.8
19-Mar	316	318	327	328	305	253	217	175	139	135	142	149	138	131	85	89	70	121	1	4	9	12	11	355	14.8
20-Mar	344	354	359	2	9	18	16	11	19	9	303	305	298	303	301	291	296	324	355	3	9	22	145	142	345.4
21-Mar	139	137	136	136	138	141	147	137	135	145	140	140	137	134	135	135	133	134	140	140	142	146	148	147	139.0
22-Mar	146	147	149	154	149	156	162	161	156	147	145	150	155	147	152	157	163	197	356	276	268	288	343	330	159.7
23-Mar	212	247	237	259	240	254	266	286	243	174	157	151	150	152	140	135	137	116	120	134	137	137	135	138	160.3
24-Mar	146	136	146	153	155	157	157	161	154	152	152	155	140	144	146	139	230	301	310	306	302	271	252	256	180.3
25-Mar	249	236	234	199	152	7	269	216	241	215	134	156	158	254	278	299	305	10	19	21	19	16	13	14	331.6
26-Mar	19	358	5	21	34	37	28	25	30	31	8	357	287	300	297	314	357	10	6	5	12	14	14	21	8.8
27-Mar	19	13	10	7	8	15	26	31	20	20	19	4	7	8	9	6	8	12	9	10	12	14	17	14	13.0
28-Mar	18	19	12	3	2	356	11	31	28	273	336	297	301	291	252	300	286	287	343	11	6	11	17	15	348.3
29-Mar	7	359	325	288	353	173	261	263	281	313	268	266	286	288	295	159	147	153	153	159	159	9	28	312	221.2
30-Mar	284	266	263	258	266	256	257	265	213	145	113	98	115	130	92	129	136	83	79	86	33	78	120	133	119.7
31-Mar	135	137	140	139	136	137	143	141	146	142	146	149	140	126	135	135	134	136	136	138	138	138	136	136	137.9
	33.9	29.4	29.4	16.9	34.6	48.0	39.6	60.8	67.0	60.9	71.2	175.8	73.3	339.3	33.2	42.0	47.4	45.4	31.0	28.1	25.9	27.4	33.8	38.4	
	Diurnal Average																								

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

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 106 deg on Mar 25 10:00

Minimum Value: 4 deg on Mar 4 00:00

Percentiles: P_1 = 6 P_{10} = 8 Q_1 = 10 Median = 14 Q_3 = 22 P_{90} = 40 P_{99} = 84

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

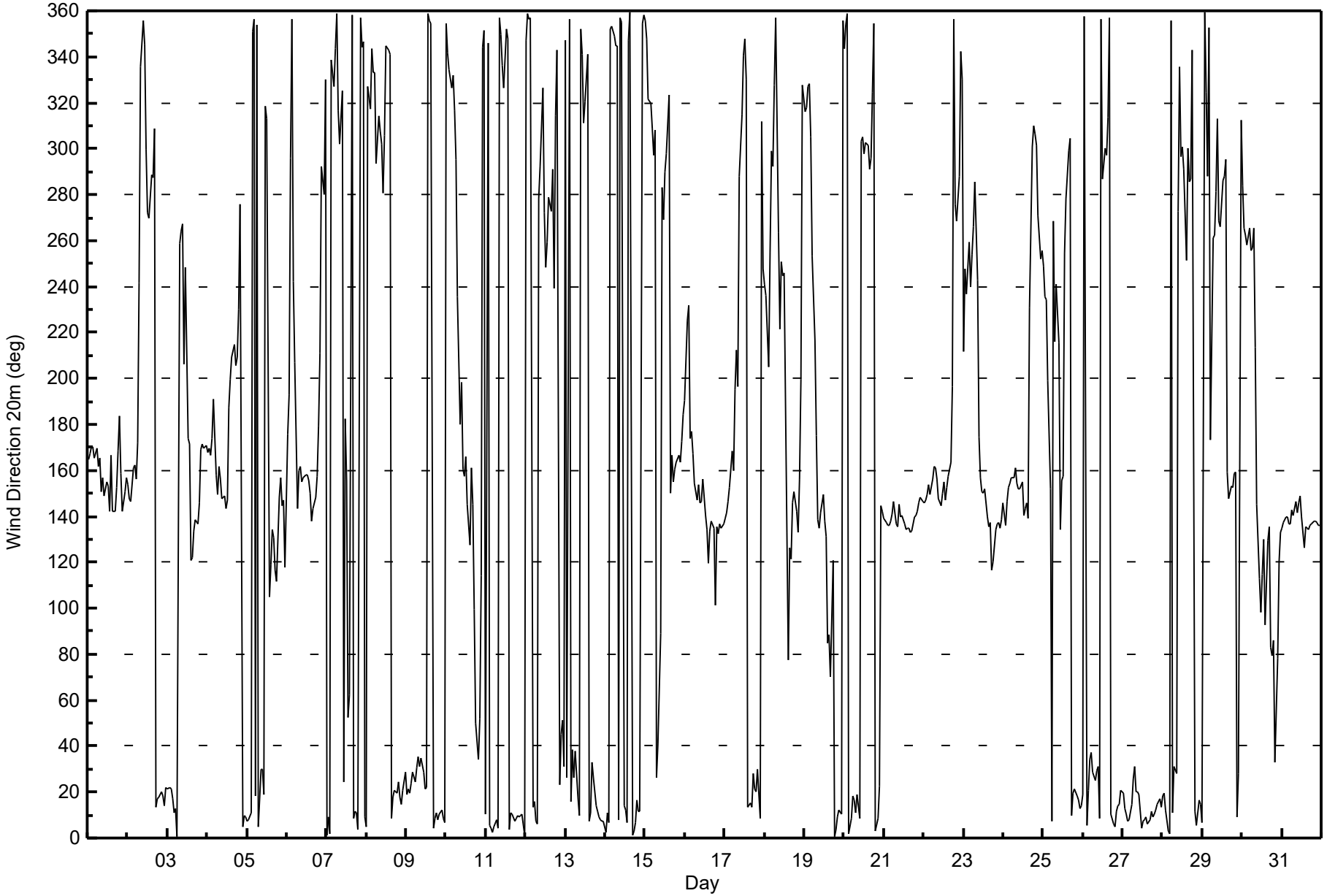
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	7	7	5	7	7	7	8	18	11	11	11	17	18	19	14	13	49	7	8	14	11	11	7	6	49
2-Mar	9	9	8	9	14	25	21	67	14	16	21	16	14	24	12	10	21	9	12	12	16	17	15	13	67
3-Mar	12	11	11	11	12	15	79	46	60	50	67	36	39	45	24	19	11	10	9	8	7	6	6	4	79
4-Mar	4	5	6	12	9	16	6	5	8	9	9	11	14	49	16	12	14	11	10	7	28	15	11	11	49
5-Mar	11	11	14	16	16	11	14	19	14	14	32	28	28	66	22	10	7	21	21	14	12	10	8	30	66
6-Mar	29	58	70	44	15	19	8	10	12	8	11	16	12	12	12	12	9	7	8	21	55	39	9	24	70
7-Mar	15	11	19	15	13	21	15	23	28	31	36	34	88	37	53	28	13	10	10	12	18	17	13	12	88
8-Mar	17	17	18	25	20	25	17	15	12	18	13	22	14	15	13	16	10	12	15	14	12	13	15	14	25
9-Mar	13	14	12	14	14	14	13	15	13	14	17	16	22	30	34	31	15	12	11	12	11	11	10	10	34
10-Mar	13	21	14	14	15	26	27	22	23	39	27	16	23	49	25	31	21	50	75	14	14	45	68	27	75
11-Mar	35	28	9	9	14	16	12	12	13	20	19	15	15	16	14	11	11	11	10	10	11	11	10	15	35
12-Mar	13	19	15	15	9	9	22	16	31	30	39	35	55	55	41	28	96	63	30	35	9	13	11	10	96
13-Mar	21	11	21	22	29	9	12	15	15	20	27	13	16	21	13	11	16	14	14	10	9	9	9	11	29
14-Mar	16	9	13	14	14	12	12	14	11	16	15	11	13	16	18	16	15	15	13	11	12	12	16	13	18
15-Mar	11	14	13	10	16	29	26	40	47	42	71	26	40	31	21	48	22	8	6	5	6	6	9	11	71
16-Mar	17	13	25	8	8	7	9	6	11	23	25	15	19	23	22	14	9	12	17	8	8	9	8	8	25
17-Mar	8	10	10	9	11	9	12	23	29	27	14	31	28	24	13	11	12	15	10	10	21	16	70	13	70
18-Mar	9	7	57	55	53	20	24	41	28	21	60	53	26	77	22	28	30	12	71	13	26	15	47	17	77
19-Mar	12	12	22	11	20	85	46	84	26	29	24	14	14	10	19	14	23	40	26	11	10	9	10	17	85
20-Mar	11	15	14	12	11	9	11	8	11	17	16	11	17	11	11	14	16	16	12	13	14	25	12	9	25
21-Mar	9	8	9	9	9	10	10	9	9	15	15	12	12	13	10	9	10	9	9	10	10	9	10	10	15
22-Mar	8	9	8	8	8	7	6	7	12	10	11	11	11	11	10	8	11	74	11	33	38	13	17	23	74
23-Mar	84	42	18	9	13	12	26	73	39	51	11	11	13	14	10	9	11	20	17	21	26	12	8	10	84
24-Mar	9	8	10	10	10	7	8	16	11	10	10	9	11	15	10	41	70	12	9	8	10	20	7	9	70
25-Mar	8	12	21	46	68	87	14	50	38	106	23	12	11	27	16	14	12	17	12	13	13	11	11	12	106
26-Mar	11	17	15	15	15	16	13	15	16	16	35	48	44	16	27	16	24	13	12	10	9	9	10	10	48
27-Mar	10	10	10	10	10	10	12	16	14	14	15	15	15	19	14	12	13	12	11	10	10	10	10	9	19
28-Mar	9	7	8	8	24	34	7	17	45	90	44	29	26	37	21	27	24	18	28	10	10	8	8	8	90
29-Mar	7	8	27	9	49	51	28	32	83	92	40	33	70	46	68	32	15	11	8	8	75	81	44	13	92
30-Mar	11	7	10	11	12	26	12	28	41	26	33	39	52	32	32	30	27	22	13	11	26	29	16	8	52
31-Mar	8	8	8	9	8	8	8	8	10	13	16	20	22	19	13	10	8	8	7	7	8	8	7	8	22
	84	58	70	55	68	87	79	84	83	106	71	53	88	77	68	48	96	74	75	35	75	81	70	30	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 20m (WD20) - deg

Mannix - March 2025



Direction of Maximum Speed: 302 deg on Mar 25 17:00
Direction of Maximum Daily Speed Average: 10.9 deg on Mar 27

Direction of Minimum Speed: 149 deg on Mar 15 10:00

Direction of Minimum Daily Speed Average: 0.6 deg on Mar 29

Monthly Average Direction: 33.1 deg

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	153	162	163	165	158	160	156	165	155	162	153	153	152	135	158	141	133	141	149	165	171	154	143	138	155.2
2-Mar	141	148	147	164	170	163	175	282	336	357	346	301	271	271	285	284	310	11	14	14	16	15	13	20	356.1
3-Mar	19	18	18	14	10	8	347	260	271	268	200	241	177	176	130	122	129	135	132	145	163	165	166	178	84.4
4-Mar	194	195	195	208	218	185	155	167	169	152	146	141	147	196	197	209	214	206	213	233	269	3	7	7	196.5
5-Mar	6	7	4	348	354	14	352	1	26	24	13	318	311	105	118	131	129	113	110	136	145	142	138	130	26.0
6-Mar	158	159	81	33	180	160	142	151	156	150	152	156	155	154	148	139	141	146	162	176	227	301	289	330	162.2
7-Mar	358	8	4	343	331	345	358	316	306	329	13	180	182	45	56	358	6	8	8	2	357	346	346	8	358.2
8-Mar	2	329	322	346	336	332	295	316	308	301	276	302	343	342	340	6	15	17	17	21	14	12	17	23	356.1
9-Mar	16	18	17	21	25	22	26	30	27	30	26	18	18	358	347	354	3	6	10	6	8	9	4	7	15.7
10-Mar	356	344	340	324	332	323	304	237	165	190	162	156	165	151	120	160	142	95	68	42	58	111	13	17	107.5
11-Mar	26	5	13	5	3	4	8	5	354	349	342	329	351	347	2	8	8	5	6	6	4	6	6	360	2.5
12-Mar	349	358	357	357	10	14	16	6	291	294	325	277	235	267	276	267	299	237	329	359	30	56	66	95	356.5
13-Mar	41	48	26	33	86	55	64	50	39	8	346	316	321	341	6	8	30	23	13	10	7	6	4	4	11.9
14-Mar	2	7	4	354	356	351	344	344	5	355	353	10	9	3	344	357	359	2	7	13	9	9	355	1	360.0
15-Mar	354	349	336	335	329	345	335	21	3	149	285	277	297	291	320	153	169	152	162	162	165	161	167	186	201.2
16-Mar	201	255	288	184	193	175	159	156	158	140	135	145	140	129	115	130	134	129	101	129	126	133	131	132	141.0
17-Mar	135	136	140	145	161	158	180	198	189	287	310	338	346	329	11	12	11	25	19	18	27	18	354	237	27.4
18-Mar	246	238	208	232	292	294	326	340	249	212	238	244	238	134	75	127	123	143	142	142	141	144	177	333	210.4
19-Mar	327	327	332	336	328	341	226	246	148	153	144	148	138	131	83	82	66	125	359	2	5	9	7	354	6.6
20-Mar	345	354	358	360	3	11	10	11	25	7	310	304	294	300	299	289	294	327	356	2	6	37	137	137	347.9
21-Mar	134	132	132	131	134	135	140	134	130	142	138	135	132	129	129	129	126	127	133	133	136	140	140	139	133.7
22-Mar	138	138	143	148	146	151	151	153	156	146	146	147	151	143	151	152	160	185	355	280	272	288	343	340	153.9
23-Mar	122	221	238	266	251	264	271	273	244	177	164	151	149	149	137	131	133	113	116	124	132	130	128	130	159.5
24-Mar	133	127	135	141	144	143	147	153	151	153	150	153	146	154	153	142	241	298	308	304	304	280	255	261	179.4
25-Mar	252	253	247	242	253	327	264	241	245	248	139	161	159	252	277	296	302	7	15	18	15	13	10	10	319.5
26-Mar	14	356	4	16	25	30	25	24	25	26	4	355	291	299	295	311	356	8	3	3	8	11	13	18	6.0
27-Mar	18	12	8	5	6	12	22	27	18	19	16	UO	6	8	7	5	5	8	7	7	10	12	14	12	10.9
28-Mar	13	18	17	14	22	8	19	36	13	280	335	299	300	292	252	298	285	284	344	11	5	9	15	14	351.8
29-Mar	11	9	343	355	4	83	137	277	306	289	260	266	278	281	287	161	143	149	150	156	161	5	73	327	129.2
30-Mar	309	304	281	273	289	346	269	270	194	156	123	96	133	125	90	127	133	79	82	88	40	81	116	129	106.7
31-Mar	130	132	135	134	128	132	133	133	141	138	142	146	139	122	130	130	130	132	131	132	133	134	133	132	132.9
	32.4	28.8	27.8	15.8	26.8	41.2	50.0	66.4	68.6	56.1	61.4	174.8	50.1	331.6	19.1	27.8	35.2	40.4	28.1	27.8	23.8	25.6	33.3	38.2	
	Diurnal Average																								

UO - Unstable Operation
All monthly, daily, and diurnal averages have been calculated using vector methods

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 107 deg on Mar 15 10:00

Minimum Value: 3 deg on Mar 1 02:00

Percentiles: P_1 = 4 P_{10} = 6 Q_1 = 7 Median = 11 Q_3 = 18 P_{90} = 34 P_{99} = 86

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	3	3	4	6	5	4	4	7	4	7	9	22	14	14	15	10	10	4	5	5	5	10	7	9	22
2-Mar	9	4	6	5	14	27	20	41	11	10	17	14	12	21	10	8	20	5	9	8	12	13	11	10	41
3-Mar	8	8	7	8	10	14	47	40	38	39	86	33	33	38	22	17	9	9	5	6	4	4	4	6	86
4-Mar	6	7	8	11	8	12	4	4	10	7	6	7	10	24	9	7	11	6	8	4	30	11	7	7	30
5-Mar	7	7	10	12	12	7	11	17	10	11	27	19	22	84	22	7	5	17	16	10	9	11	7	21	84
6-Mar	9	15	58	36	15	13	6	6	8	7	10	13	9	8	9	9	7	6	11	12	30	9	8	25	58
7-Mar	10	6	12	12	15	18	10	18	28	25	46	22	90	32	52	21	10	7	6	8	14	13	11	12	90
8-Mar	14	15	17	24	15	20	15	12	9	14	11	17	11	12	9	13	7	8	11	10	9	10	11	11	24
9-Mar	10	10	9	11	11	10	10	11	9	11	13	14	17	25	30	27	12	9	8	9	7	8	6	8	30
10-Mar	8	20	10	12	12	21	26	34	21	31	18	12	18	42	25	28	19	41	61	14	12	38	76	66	76
11-Mar	17	12	12	7	10	11	7	11	10	14	14	12	11	11	10	6	7	5	5	6	7	7	7	11	17
12-Mar	11	14	12	11	5	6	15	15	26	24	31	31	44	41	35	28	100	74	31	35	8	12	12	20	100
13-Mar	37	16	27	14	20	12	10	13	18	14	19	13	13	18	8	8	15	12	10	8	5	4	5	7	37
14-Mar	10	5	9	11	10	10	9	10	8	13	12	8	9	12	15	14	11	12	10	8	9	8	12	10	15
15-Mar	8	9	9	9	13	24	21	15	52	107	69	23	28	30	19	35	19	7	4	3	5	5	6	8	107
16-Mar	16	22	71	18	13	16	6	5	7	22	19	15	17	21	21	13	7	10	14	6	7	7	5	5	71
17-Mar	6	7	8	10	7	7	5	13	18	26	11	26	22	19	10	8	8	12	8	6	13	14	92	11	92
18-Mar	6	5	12	38	23	16	18	48	24	16	57	50	24	77	18	29	30	10	39	10	13	9	41	19	77
19-Mar	9	8	9	7	10	58	70	89	60	33	22	10	12	10	16	12	21	56	24	7	6	5	5	13	89
20-Mar	7	11	9	6	7	5	6	7	13	16	14	8	14	9	8	11	14	15	9	8	8	34	8	7	34
21-Mar	7	7	7	7	7	8	7	7	9	13	12	11	9	11	8	7	9	9	6	7	8	6	7	7	13
22-Mar	6	6	6	5	5	4	5	8	9	7	9	8	8	9	8	6	9	69	9	32	23	12	14	20	69
23-Mar	85	27	15	5	11	10	14	29	27	40	12	10	10	13	7	9	8	18	17	15	9	10	6	7	85
24-Mar	6	5	6	8	8	7	6	12	7	9	9	7	10	15	10	54	64	11	5	4	6	24	6	6	64
25-Mar	5	4	9	22	72	61	12	34	25	79	19	14	12	22	15	11	10	14	8	10	10	8	7	8	79
26-Mar	9	15	11	12	11	12	10	11	12	12	31	40	39	14	23	15	21	8	6	5	6	6	6	7	40
27-Mar	8	8	7	6	6	7	10	12	11	11	12	UO	12	14	10	8	9	8	7	7	7	8	7	7	14
28-Mar	5	5	5	7	9	23	11	13	56	61	38	23	23	32	19	24	21	16	26	7	7	5	6	4	61
29-Mar	5	4	12	15	12	32	101	79	68	94	40	30	83	50	57	29	11	9	6	7	65	87	62	13	101
30-Mar	5	18	7	9	11	81	18	23	32	25	38	42	48	30	29	28	24	19	10	9	25	23	14	6	81
31-Mar	6	6	5	8	7	6	7	7	8	9	12	19	22	18	11	9	7	5	5	6	6	6	5	5	22
	85	27	71	38	72	81	101	89	68	107	86	50	90	84	57	54	100	74	61	35	65	87	92	66	
	Diurnal Maximum																								

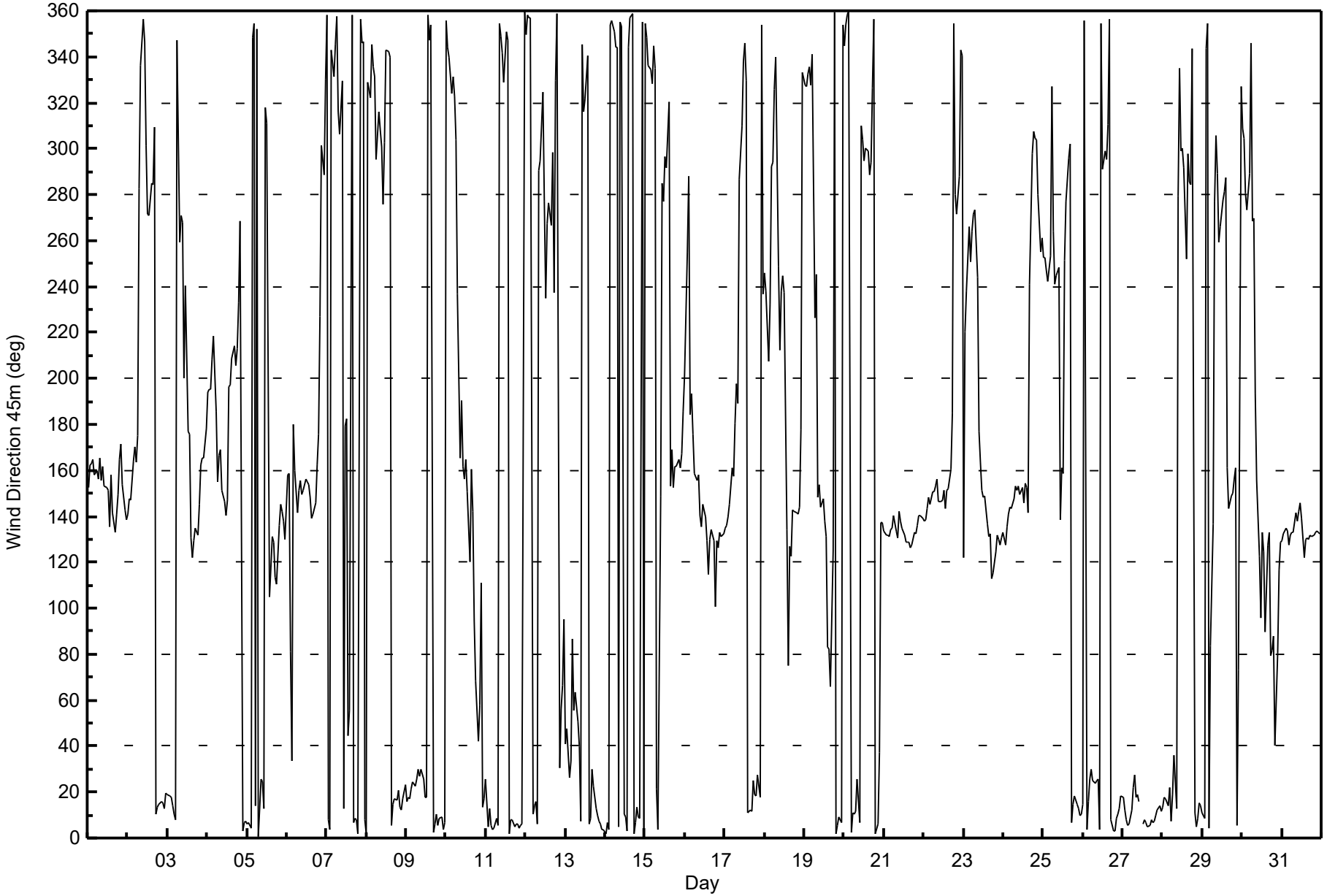
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 45m (WD45) - deg

Mannix - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 75m (WD75) - deg

Mannix - March 2025

Direction of Maximum Speed: 308 deg on Mar 25 17:00
Direction of Maximum Daily Speed Average: 8.1 deg on Mar 14

Direction of Minimum Speed: 230 deg on Mar 15 10:00

Direction of Minimum Daily Speed Average: 1.2 deg on Mar 15

Monthly Average Direction: 41.0 deg

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	145	157	150	159	154	147	145	160	153	167	166	154	146	137	150	150	145	150	152	166	170	157	155	152	154.4
2-Mar	152	161	166	174	200	216	213	298	349	7	358	314	277	276	290	290	319	20	22	22	24	22	20	27	357.6
3-Mar	26	25	24	20	16	15	357	262	286	256	192	246	188	186	150	133	133	143	141	153	164	168	181	209	79.1
4-Mar	219	220	219	235	238	216	184	201	207	176	153	146	160	204	203	214	221	219	224	242	272	11	13	15	218.8
5-Mar	14	14	9	357	1	19	0	9	31	29	19	328	323	101	126	136	137	117	118	133	145	150	144	138	27.4
6-Mar	149	138	65	53	160	154	143	145	153	148	153	160	157	158	154	149	148	154	183	197	253	313	305	342	162.1
7-Mar	7	16	14	359	351	1	11	335	325	348	14	180	172	45	56	9	14	16	14	11	5	358	359	17	9.1
8-Mar	11	346	343	3	356	350	312	330	324	305	276	307	350	353	350	13	21	24	23	27	21	19	24	29	6.1
9-Mar	23	26	24	28	31	30	31	37	34	36	34	26	25	8	355	6	14	17	19	14	17	19	13	22	24.0
10-Mar	7	3	358	338	347	336	340	193	153	182	162	159	169	156	124	160	144	103	80	61	74	118	58	57	104.2
11-Mar	54	32	47	40	37	34	36	42	12	8	0	350	0	357	10	16	15	12	14	14	11	12	12	9	15.7
12-Mar	2	8	8	9	18	25	31	22	327	311	339	295	235	267	284	268	45	213	3	26	50	79	99	123	16.4
13-Mar	89	90	91	75	108	88	93	85	80	60	12	341	334	353	15	17	38	31	24	19	17	16	12	12	26.4
14-Mar	12	13	11	4	7	2	354	355	12	3	1	16	15	10	352	3	7	10	15	19	17	16	5	11	8.1
15-Mar	5	1	352	353	353	15	5	22	12	230	300	292	307	299	325	163	175	157	169	170	172	171	180	213	186.7
16-Mar	232	301	324	196	210	197	178	172	167	140	140	141	144	133	119	133	138	134	109	132	128	137	139	139	147.4
17-Mar	140	140	142	145	157	154	168	184	196	293	317	350	355	340	20	21	21	32	27	30	35	37	57	222	52.4
18-Mar	237	230	210	229	291	298	304	301	246	224	230	247	239	165	84	136	134	148	152	151	150	142	184	343	213.5
19-Mar	349	347	351	359	357	15	260	265	192	174	152	153	147	141	99	87	77	126	9	11	13	17	13	4	17.0
20-Mar	357	4	10	9	10	18	23	46	65	27	328	313	301	308	305	297	303	340	9	12	17	77	139	140	3.1
21-Mar	137	136	136	135	139	138	141	139	135	145	143	140	136	133	133	132	130	130	134	132	138	141	141	140	137.4
22-Mar	140	139	142	148	146	149	144	147	160	156	156	151	152	148	155	154	162	182	2	300	279	296	353	360	151.2
23-Mar	71	204	248	278	260	277	285	290	264	183	177	159	153	152	141	135	136	116	118	127	136	131	131	135	170.8
24-Mar	132	131	136	139	140	139	143	149	158	164	159	159	165	179	169	159	258	304	314	312	316	296	267	269	191.6
25-Mar	259	261	256	260	263	307	262	250	261	255	155	174	169	256	282	302	308	14	22	26	22	20	18	17	320.2
26-Mar	20	4	10	21	29	34	30	30	32	31	13	10	306	307	303	321	6	17	11	12	17	19	22	27	14.5
27-Mar	28	23	18	15	16	21	31	34	27	27	24	10	15	16	15	12	14	16	14	15	18	21	24	22	19.3
28-Mar	28	41	50	48	46	35	45	55	25	295	346	311	308	302	260	303	291	290	355	19	15	20	31	32	9.5
29-Mar	29	35	30	66	10	15	335	305	355	308	271	288	266	288	297	167	147	153	154	161	164	33	159	356	130.0
30-Mar	312	351	302	285	309	336	229	307	172	168	136	107	134	130	93	132	135	87	92	97	60	92	121	133	109.2
31-Mar	136	137	139	136	126	136	132	136	144	143	144	151	147	127	133	135	135	137	135	135	139	140	140	140	137.8
	40.2	38.7	42.2	30.5	32.2	49.0	56.6	80.8	83.4	73.0	80.0	125.7	73.4	340.2	18.8	27.2	35.1	43.3	31.8	31.8	32.3	35.3	38.9	43.5	
	Diurnal Average																								

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

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 75m (WD75) - deg

Mannix - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 106 deg on Mar 12 17:00

Minimum Value: 2 deg on Mar 3 22:00

Percentiles: P_1 = 3 P_{10} = 5 Q_1 = 7 Median = 10 Q_3 = 17 P_{90} = 31 P_{99} = 89

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

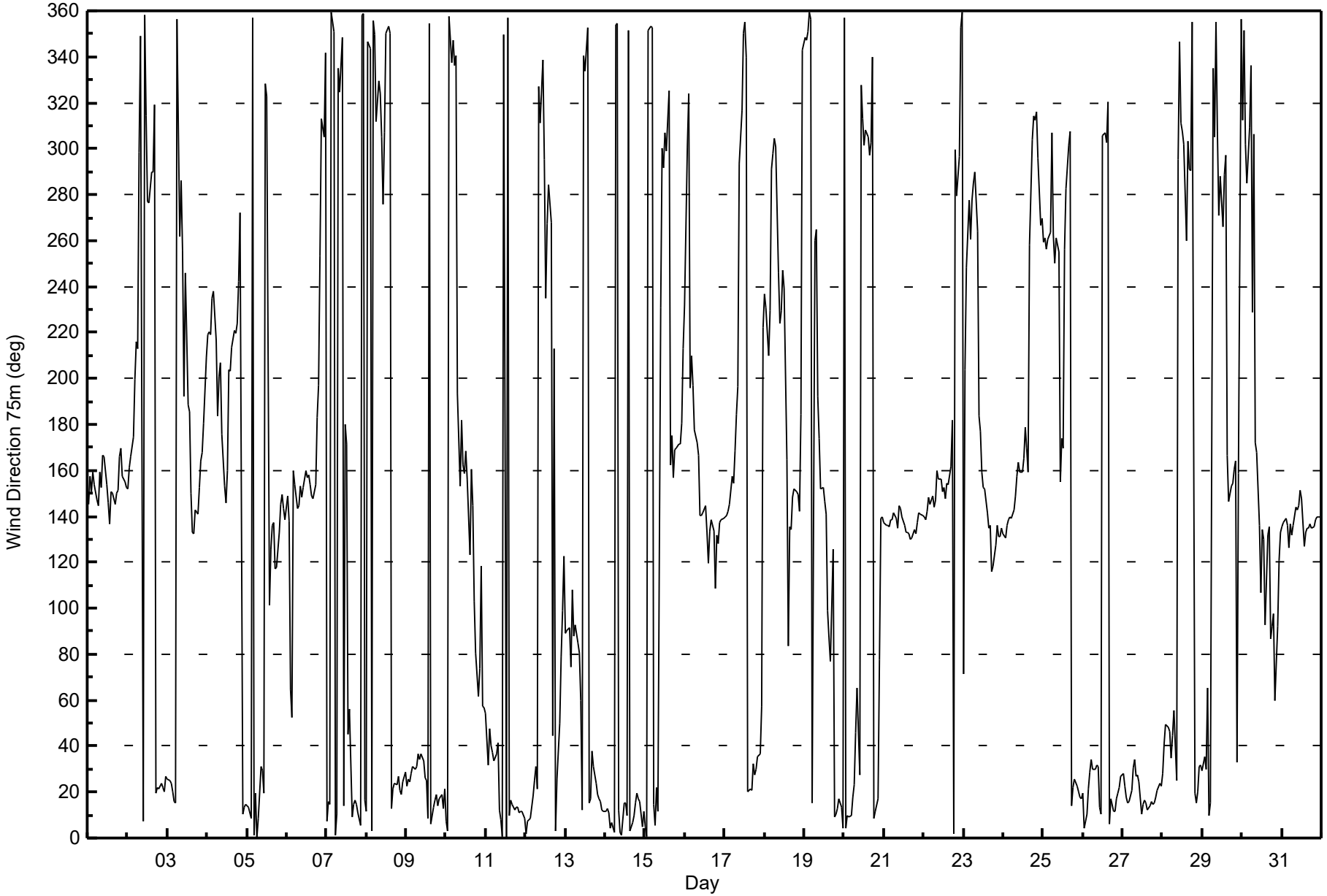
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	3	6	7	9	6	3	4	7	9	7	6	14	11	11	7	7	6	4	4	5	4	5	3	5	14
2-Mar	5	4	4	7	22	29	24	26	11	8	14	16	14	19	10	8	21	5	7	6	11	11	9	8	29
3-Mar	6	6	6	6	8	14	48	39	43	63	87	45	30	30	21	15	12	10	6	6	3	2	16	8	87
4-Mar	7	7	9	10	4	10	10	8	15	15	5	6	9	15	8	6	10	8	8	4	32	9	6	5	32
5-Mar	6	6	9	10	11	6	9	16	8	9	24	19	26	72	19	9	6	17	16	12	11	12	9	16	72
6-Mar	6	14	23	56	10	11	6	4	6	6	10	11	7	7	8	9	6	8	15	13	22	7	9	26	56
7-Mar	6	5	10	10	14	15	8	21	27	23	63	22	86	26	49	18	8	6	5	5	11	11	9	13	86
8-Mar	12	13	18	25	12	24	16	10	10	13	11	17	10	10	8	11	6	6	9	8	7	8	8	9	25
9-Mar	8	9	8	9	9	8	8	8	7	9	11	11	13	24	28	25	10	8	7	7	6	7	7	9	28
10-Mar	6	20	8	14	14	25	39	82	18	22	14	11	15	38	24	24	18	32	23	18	10	32	90	41	90
11-Mar	10	10	16	7	10	12	14	16	10	10	12	11	9	10	8	5	5	4	4	5	6	5	5	9	16
12-Mar	10	11	8	10	4	3	8	15	40	28	27	36	45	54	30	34	106	91	28	29	6	16	14	20	106
13-Mar	40	16	45	38	16	8	11	10	9	20	20	16	11	16	6	6	13	11	9	6	4	3	4	4	45
14-Mar	8	3	7	9	8	9	7	7	6	11	10	7	8	11	14	14	12	12	7	6	7	4	11	9	14
15-Mar	7	7	7	7	12	12	15	10	28	95	68	23	24	30	25	32	17	7	3	3	5	3	7	13	95
16-Mar	13	22	57	31	5	10	8	5	7	19	14	12	14	18	21	14	7	11	14	10	11	8	6	5	57
17-Mar	5	6	6	7	5	6	4	6	16	19	12	24	20	19	9	6	7	10	6	5	9	15	85	15	85
18-Mar	5	5	10	21	13	13	16	30	17	23	55	45	23	74	14	28	25	10	18	8	8	5	31	36	74
19-Mar	6	5	8	4	6	22	90	86	63	31	18	10	12	12	19	12	19	18	24	6	4	4	4	10	90
20-Mar	5	9	7	6	6	4	7	13	11	20	17	10	13	8	8	10	13	15	7	7	7	32	8	6	32
21-Mar	8	8	8	9	6	7	6	7	11	10	11	12	11	12	10	11	12	11	9	11	8	5	5	4	12
22-Mar	4	5	4	4	4	4	5	7	5	6	8	7	7	8	7	6	8	68	11	33	25	12	12	17	68
23-Mar	42	25	21	5	12	7	7	15	27	32	12	13	10	12	8	10	10	16	16	16	9	14	11	9	42
24-Mar	10	10	8	9	11	5	6	8	7	7	12	6	12	15	7	40	30	10	5	4	5	22	7	5	40
25-Mar	5	3	5	8	30	48	10	22	13	68	22	14	13	20	15	10	10	13	6	8	8	7	6	7	68
26-Mar	7	14	10	10	10	10	7	9	9	11	28	33	40	15	21	15	21	7	5	4	6	5	5	5	40
27-Mar	6	8	6	6	6	6	9	10	9	8	11	9	10	12	8	7	8	6	5	6	6	6	5	5	12
28-Mar	6	7	11	11	8	6	13	12	45	94	40	23	22	31	17	23	19	15	25	5	6	5	7	3	94
29-Mar	3	5	12	23	12	36	32	57	54	84	49	37	95	53	72	26	12	8	5	6	60	90	22	56	95
30-Mar	21	29	19	10	10	77	38	87	39	26	37	37	37	30	26	26	25	15	8	8	24	17	15	9	87
31-Mar	7	7	5	10	12	8	11	10	8	8	11	18	22	17	12	11	8	7	8	9	7	6	4	4	22
	42	29	57	56	30	77	90	87	63	95	87	45	95	74	72	40	106	91	28	33	60	90	90	56	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 75m (WD75) - deg

Mannix - March 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 90m (WD90) - deg

Mannix - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 106 deg on Mar 12 17:00

Minimum Value: 2 deg on Mar 15 22:00

Percentiles: P_1 = 3 P_{10} = 5 Q_1 = 6 Median = 9 Q_3 = 16 P_{90} = 29 P_{99} = 85

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

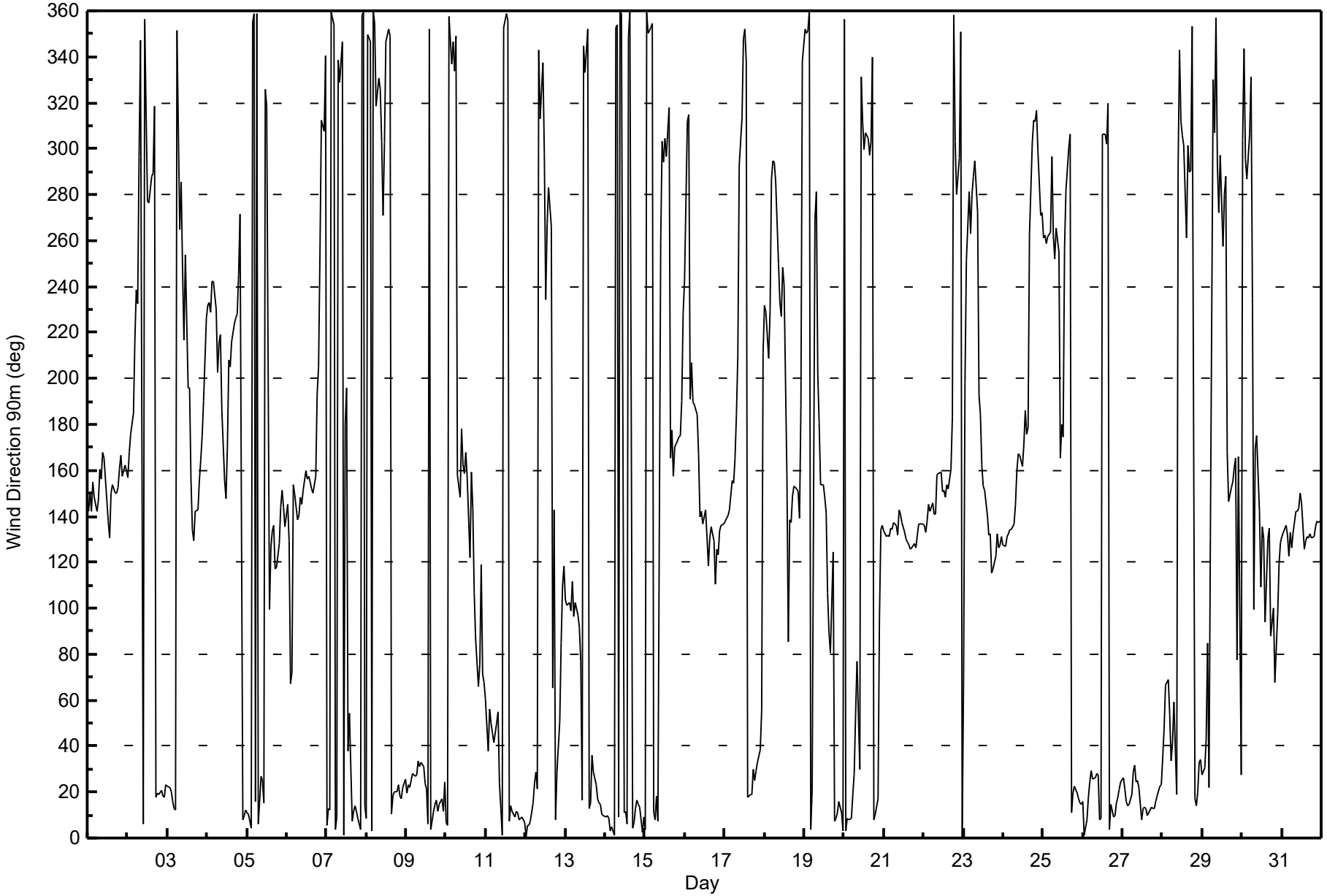
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	3	5	5	9	6	3	4	6	7	6	6	12	10	7	7	7	5	3	5	4	3	3	3	4	12
2-Mar	4	5	4	9	22	27	21	22	13	7	12	15	13	18	9	8	21	5	6	6	10	10	9	7	27
3-Mar	5	5	5	5	7	13	43	37	39	67	94	39	27	28	22	14	10	10	5	8	4	3	20	10	94
4-Mar	7	7	8	7	3	8	11	6	14	19	6	4	11	10	8	6	10	8	8	3	32	8	5	5	32
5-Mar	5	6	8	10	10	6	8	15	8	9	22	17	22	76	16	8	5	12	10	7	12	11	10	11	76
6-Mar	6	15	17	53	8	9	6	3	6	6	10	10	7	7	8	8	5	10	16	13	24	6	10	25	53
7-Mar	5	5	9	10	12	13	7	19	26	21	74	21	91	23	49	15	7	5	5	5	10	10	8	12	91
8-Mar	11	13	17	27	11	23	18	7	9	13	10	16	10	9	7	10	5	6	8	7	6	8	7	8	27
9-Mar	7	8	8	8	9	7	8	9	7	8	11	11	12	22	27	23	10	8	7	7	6	7	7	8	27
10-Mar	5	18	7	12	12	24	53	43	16	21	13	11	16	38	22	24	19	32	26	23	11	30	78	34	78
11-Mar	11	8	15	7	8	8	14	17	10	12	11	10	9	10	7	4	5	3	4	5	5	5	5	8	17
12-Mar	9	9	8	9	4	3	5	16	46	29	25	36	52	50	33	32	106	99	26	28	5	19	10	15	106
13-Mar	71	19	19	29	10	7	10	9	8	18	20	15	11	16	5	5	12	10	9	6	4	3	4	4	71
14-Mar	7	3	6	9	7	9	7	7	6	9	9	6	7	11	13	13	12	12	7	6	6	3	12	8	13
15-Mar	6	7	7	7	11	10	13	7	32	96	52	21	23	29	25	34	17	7	3	3	4	2	8	13	96
16-Mar	12	14	57	25	8	11	11	6	7	16	10	12	14	16	18	12	6	9	11	7	7	7	5	3	57
17-Mar	3	5	4	7	4	4	4	3	17	16	12	23	19	18	8	6	7	9	6	6	8	14	85	16	85
18-Mar	4	5	11	19	11	12	9	16	10	21	50	41	24	73	15	27	22	10	12	7	8	6	28	38	73
19-Mar	6	4	7	4	6	24	79	86	69	32	15	10	12	13	18	14	19	15	25	5	4	4	4	9	86
20-Mar	4	8	6	6	5	7	8	16	11	23	17	10	12	8	7	9	12	14	7	6	8	28	8	6	28
21-Mar	6	6	6	6	6	6	5	6	9	10	10	12	9	10	8	8	9	8	7	8	6	4	3	3	12
22-Mar	2	3	4	4	3	3	4	5	5	5	8	7	7	7	7	6	8	65	11	32	27	11	11	17	65
23-Mar	38	27	22	5	10	5	6	16	24	29	13	14	11	13	8	9	9	12	12	12	6	10	9	6	38
24-Mar	6	6	5	7	9	4	6	8	7	7	12	8	13	15	6	30	23	9	5	4	4	20	7	5	30
25-Mar	5	3	4	6	13	39	9	18	8	49	23	14	13	19	15	10	9	12	6	7	8	7	6	7	49
26-Mar	6	13	10	9	9	9	6	8	8	10	27	31	38	15	18	15	20	6	4	5	5	5	5	4	38
27-Mar	6	8	5	5	6	6	8	10	9	8	11	9	10	12	8	7	7	5	5	6	5	6	5	4	12
28-Mar	6	6	10	15	14	9	13	11	46	78	38	22	21	28	17	22	18	15	24	4	6	5	6	4	78
29-Mar	5	7	15	19	54	82	16	44	51	76	58	40	81	56	68	27	14	7	4	6	59	93	20	71	93
30-Mar	25	18	13	9	7	37	55	89	38	27	42	38	35	28	26	26	23	14	6	5	25	16	11	6	89
31-Mar	6	5	4	8	8	6	7	8	8	8	11	19	22	15	10	10	6	6	6	7	6	5	3	4	22
	71	27	57	53	54	82	79	89	69	96	94	41	91	76	68	34	106	99	26	32	59	93	85	71	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 90m (WD90) - deg

Mannix - March 2025



Maximum Value: 1.2 km/h on Mar 23 23:00

Maximum Daily Average: 0.7 km/h on Mar 21

Minimum Value: -1.0 km/h on Mar 14 02:00

Minimum Daily Average: -0.5 km/h on Mar 27

Maximum Diurnal Average: 0.2 km/h at hour 10

Minimum Diurnal Average: -0.1 km/h at hour 21

Monthly Average: 0.01 km/h

Percentiles: P_1 = -0.8 P_{10} = -0.5 Q_1 = -0.3 Median = -0.1 Q_3 = 0.4 P_{90} = 0.6 P_{99} = 0.9

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

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

Summary of Hour Standard Deviations

Mannix - March 2025

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

Maximum Value: 3.1 km/h on Mar 25 19:00

Minimum Value: 0.1 km/h on Mar 16 03:00

Percentiles: P_1 = 0.2 P_{10} = 0.4 Q_1 = 0.8 Median = 1.3 Q_3 = 1.8 P_{90} = 2.3 P_{99} = 2.9

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

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

Wood Buffalo Environmental Association

Summary of Hour Averages

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

Mannix - March 2025

Maximum Value: 1.8 km/h on Mar 2 02:00

Maximum Daily Average: 1.0 km/h on Mar 21

Minimum Value: -1.7 km/h on Mar 11 19:00

Minimum Daily Average: -1.0 km/h on Mar 27

Maximum Diurnal Average: 0.2 km/h at hour 10

Minimum Diurnal Average: -0.2 km/h at hour 20

Monthly Average: 0.02 km/h

Percentiles: P_1 = -1.5 P_{10} = -0.9 Q_1 = -0.5 Median = 0.0 Q_3 = 0.6 P_{90} = 1.0 P_{99} = 1.4

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

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

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

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

Mannix - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.5 km/h on Mar 8 15:00

Minimum Value: 0.1 km/h on Mar 30 07:00

Percentiles: P_1 = 0.2 P_{10} = 0.4 Q_1 = 0.7 Median = 1.4 Q_3 = 2.0 P_{90} = 2.4 P_{99} = 2.9

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

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

UO - Unstable Operation

Maximum Value: 1.2 km/h on Mar 23 18:00

Maximum Daily Average: 0.1 km/h on Mar 29

Minimum Value: -1.4 km/h on Mar 31 18:00

Minimum Daily Average: -0.7 km/h on Mar 31

Maximum Diurnal Average: 0.1 km/h at hour 14

Minimum Diurnal Average: -0.3 km/h at hour 23

Monthly Average: -0.14 km/h

Percentiles: P_1 = -1.2 P_{10} = -0.7 Q_1 = -0.4 Median = -0.1 Q_3 = 0.1 P_{90} = 0.3 P_{99} = 0.9

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-0.4	0.2	-0.1	0.1	0.0	-0.1	-0.2	0.3	0.0	0.4	0.2	0.1	-0.4	-0.3	-0.1	-0.1	-0.2	0.0	-0.1	0.4	0.3	0.3	0.1	0.1	0.0	0.4
2-Mar	0.0	0.7	0.5	0.3	0.1	0.0	0.0	0.1	-0.3	-0.3	-0.1	0.1	0.3	0.2	0.1	0.3	0.1	-0.6	-0.4	-0.7	-0.7	-0.4	-0.3	-0.3	-0.1	0.7
3-Mar	-0.4	-0.3	-0.4	-0.2	-0.1	-0.2	0.1	0.2	-0.4	0.1	0.5	0.1	0.1	0.3	0.6	0.5	0.3	0.0	-0.2	0.0	0.5	0.3	0.1	0.0	0.1	0.6
4-Mar	0.0	0.0	0.0	0.1	0.1	0.0	0.3	-0.1	0.0	0.1	0.0	-0.1	0.2	0.3	0.0	0.2	0.1	0.2	0.1	0.2	0.4	0.0	-0.4	-0.2	0.1	0.4
5-Mar	-0.7	-0.5	-0.3	-0.1	0.5	-0.5	-0.6	-0.3	-0.1	-0.2	0.0	-0.4	0.2	0.2	0.2	-0.9	-1.0	-0.2	0.2	-0.2	-0.1	0.0	-0.3	0.2	-0.2	0.5
6-Mar	0.1	-0.1	0.0	0.0	0.1	0.0	-0.3	-0.3	-0.1	-0.3	0.0	0.1	-0.1	0.1	-0.2	0.2	-0.1	0.0	0.1	0.2	0.5	0.1	0.3	-0.1	0.0	0.5
7-Mar	-0.2	0.2	-0.2	0.0	0.1	-0.2	-0.4	-0.1	0.1	0.1	-0.2	0.5	-0.2	-0.3	-0.1	0.0	-0.1	-1.0	-0.6	-0.5	-0.1	-0.1	-0.3	-0.2	-0.2	0.5
8-Mar	-0.3	-0.1	0.0	0.1	0.0	0.0	0.3	0.1	0.1	0.2	0.0	0.0	-0.4	0.1	0.0	-0.2	-0.7	-0.5	0.1	-0.1	-0.6	-0.6	-0.4	-0.1	-0.1	0.3
9-Mar	-0.4	-0.2	-0.3	-0.5	-0.5	-0.8	-0.7	-0.3	-0.9	0.0	-0.5	-0.3	-0.4	0.0	0.1	0.2	-0.2	-0.5	0.0	-0.4	-0.4	-0.4	-0.2	-0.2	-0.3	0.2
10-Mar	-0.1	0.0	-0.2	0.0	0.0	0.2	0.1	-0.1	0.0	0.2	0.2	-0.5	-0.2	0.1	0.5	0.3	0.1	0.4	0.2	0.0	0.2	0.5	0.2	0.0	0.1	0.5
11-Mar	0.1	0.2	-0.2	-0.4	-0.2	-0.1	-0.2	-0.3	0.1	0.1	0.2	0.2	-0.1	0.0	-0.3	-0.5	-0.4	-0.6	-0.9	-1.1	-0.3	-0.3	-0.6	-0.3	-0.2	0.2
12-Mar	0.3	0.1	0.3	0.3	-1.1	-0.5	-0.3	-0.2	0.0	-0.1	-0.2	-0.4	0.9	0.4	-0.1	0.3	0.3	0.1	0.2	-0.2	-0.5	-0.5	-0.3	0.0	0.0	0.9
13-Mar	-0.1	-0.1	0.0	-0.1	-0.1	-0.5	-0.5	-0.4	-0.7	-0.1	0.2	0.0	0.1	0.2	-0.4	-0.5	-0.2	-0.4	-0.3	-0.7	-0.8	-0.7	-0.8	-0.8	-0.3	0.2
14-Mar	-0.1	-1.1	-1.0	0.1	0.2	0.0	-0.5	-0.4	-0.3	-0.2	-0.2	-0.5	-0.3	0.3	1.1	0.3	1.0	0.3	0.2	-0.9	-0.5	-0.3	0.2	0.1	-0.1	1.1
15-Mar	-0.3	-0.4	-0.6	-0.3	-0.1	-0.3	-0.1	-0.1	-0.1	0.5	0.1	-0.3	-0.4	0.2	-0.2	0.3	0.4	0.1	0.3	0.3	0.4	0.4	0.2	0.0	0.0	0.5
16-Mar	0.1	0.0	0.0	0.1	-0.1	0.1	0.0	0.2	0.2	0.1	0.2	-0.4	-0.1	0.4	0.0	-0.4	-1.0	-0.2	0.3	-1.4	-1.2	-1.3	-1.1	-0.8	-0.3	0.4
17-Mar	-0.8	-0.6	-0.3	-0.3	0.0	0.0	0.1	0.4	0.2	0.4	0.2	0.4	0.8	0.4	-0.4	-0.8	-0.7	-0.2	-0.4	-0.4	-0.4	-0.4	-0.1	0.0	-0.1	0.8
18-Mar	0.1	0.1	0.1	0.2	0.2	0.4	0.1	0.1	0.1	0.0	0.1	0.2	0.2	0.3	-0.2	-0.2	0.2	-0.1	-0.1	-0.1	0.1	-0.1	0.0	0.2	0.1	0.4
19-Mar	0.3	0.5	0.8	0.0	-0.1	0.0	0.0	0.1	0.0	0.0	0.0	-0.2	-0.4	-0.2	-0.2	-0.3	0.2	0.2	-0.4	-0.6	-0.9	-0.7	-0.7	-0.1	-0.1	0.8
20-Mar	0.0	0.2	0.0	-0.5	-0.5	-0.4	-0.3	-0.5	-0.3	0.1	0.1	0.0	0.3	-0.3	0.3	0.7	0.7	-0.2	-0.2	0.0	0.0	-0.2	-0.7	-0.9	-0.1	0.7
21-Mar	-1.0	-0.9	-0.9	-0.9	-1.0	-1.0	-0.8	-1.1	-0.9	-0.2	-0.3	-0.5	-0.8	-0.1	-0.9	-0.6	-0.4	0.2	-0.8	-0.5	-0.6	-0.5	-0.8	-0.8	-0.7	0.2
22-Mar	-0.7	-0.7	-0.5	-0.2	-0.3	-0.2	-0.4	-0.4	0.2	0.3	0.3	0.1	-0.2	0.1	0.0	0.0	0.3	0.4	-0.3	0.2	0.3	0.5	-0.5	0.0	-0.1	0.5
23-Mar	-0.2	0.3	0.1	0.4	0.1	0.2	0.3	0.2	0.1	0.3	-0.2	-0.5	-0.4	-0.2	-0.7	-0.4	0.4	1.2	0.5	0.4	0.0	-0.2	0.0	-0.1	0.1	1.2
24-Mar	-0.3	-0.5	-0.6	-0.5	-0.4	-0.6	-0.5	-0.2	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.2	0.5	0.3	0.4	0.1	0.1	0.2	0.2	-0.1	0.5
25-Mar	0.3	0.3	0.4	0.3	0.3	-0.2	0.2	0.3	0.2	0.2	0.2	0.4	0.5	0.6	1.0	0.9	0.8	-0.4	-0.9	-0.7	-0.8	-1.0	-1.2	-1.3	0.0	1.0
26-Mar	-1.1	0.1	0.9	0.1	-0.2	-0.3	-0.5	-0.3	-0.6	-0.2	0.2	-0.2	-0.2	0.4	0.0	0.1	0.3	-0.6	-0.7	-0.8	-0.6	-0.6	-0.7	-0.5	-0.3	0.9
27-Mar	-0.5	-0.3	-0.5	-0.6	-0.6	-0.8	-0.7	-0.3	-0.7	-0.5	-0.3	-0.5	-0.6	-0.3	-1.0	-1.3	-0.9	-1.0	-0.6	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.3
28-Mar	-0.4	-0.2	-0.2	-0.1	-0.1	-0.2	-0.4	-0.2	0.6	0.9	0.3	0.1	0.0	-0.4	0.4	0.1	0.8	0.4	-0.2	-0.2	-0.4	-0.5	-0.5	-0.4	0.0	0.9
29-Mar	-0.3	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	-0.3	0.3	0.2	0.4	0.7	-0.1	-0.4	-0.1	0.1	0.3	0.7	0.1	0.1	-0.1	0.1	0.7
30-Mar	0.0	-0.1	0.0	0.1	-0.1	0.0	-0.1	0.1	0.7	0.0	-0.1	-0.2	0.4	0.2	0.2	-0.4	0.2	0.1	-0.4	-0.9	0.0	0.0	-0.3	-1.1	-0.1	0.7
31-Mar	-1.1	-0.8	-1.0	-0.8	-0.5	-0.9	-0.6	-0.8	-0.3	-0.3	-0.6	0.3	0.1	0.2	-1.1	-0.5	-1.3	-1.4	-1.3	-1.2	-1.1	-1.1	-1.0	-0.8	-0.7	0.3
	-0.3	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.1	-0.1	0.1	0.0	-0.1	0.0	0.1	0.0	-0.1	0.0	-0.1	-0.2	-0.3	-0.2	-0.3	-0.3	-0.3	Diurnal Average	
	0.3	0.7	0.9	0.4	0.5	0.4	0.3	0.4	0.7	0.9	0.5	0.5	0.9	0.6	1.1	0.9	1.0	1.2	0.5	0.4	0.7	0.5	0.3	0.2	Diurnal Maximum	

Summary of Hour Standard Deviations

Mannix - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.4 km/h on Mar 31 14:00

Minimum Value: 0.1 km/h on Mar 29 07:00

Percentiles: P_1 = 0.2 P_{10} = 0.4 Q_1 = 0.7 Median = 1.3 Q_3 = 1.9 P_{90} = 2.4 P_{99} = 3.0

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

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

Wood Buffalo Environmental Association

Summary of Hour Averages

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

Mannix - March 2025

Maximum Value: 2.0 km/h on Mar 14 17:00

Maximum Daily Average: 0.7 km/h on Mar 14

Minimum Value: -1.6 km/h on Mar 16 20:00

Minimum Daily Average: -0.3 km/h on Mar 31

Maximum Diurnal Average: 0.4 km/h at hour 10

Minimum Diurnal Average: 0.2 km/h at hour 20

Monthly Average: 0.27 km/h

Percentiles: P_1 = -1.0 P_{10} = -0.1 Q_1 = 0.1 Median = 0.3 Q_3 = 0.5 P_{90} = 0.7 P_{99} = 1.2

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

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

Summary of Hour Standard Deviations

Mannix - March 2025

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

Maximum Value: 3.5 km/h on Mar 27 14:00

Minimum Value: 0.1 km/h on Mar 16 05:00

Percentiles: P_1 = 0.2 P_{10} = 0.4 Q_1 = 0.7 Median = 1.3 Q_3 = 1.9 P_{90} = 2.5 P_{99} = 3.1

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS06
PATRICIA MCINNES
MARCH 2025

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

April 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - PATRICIA McINNES (AMS06)
MARCH 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	697	37	47	98.66	-	-	31	0	4.1	0
TRS (ppb) Average	704	37	40	99.6	3.4	0	3.3	0	0.6	0
THC (ppm) Average	681	42	63	97.18	-	-	2.8	-	2.2	-
NMHC(ppm) Average	681	42	63	97.18	-	-	0.257	-	0.077	-
CH4(ppm) Average	681	42	63	97.18	-	-	2.6	-	2.2	-
O3 (ppb) Average	708	35	36	99.87	-	-	49	0	41.3	-
NO2 (ppb) Average	706	37	38	99.87	-	-	37.9	0	16.5	-
NO (ppb) Average	706	37	38	99.87	-	-	36	-	7.2	-
NOX (ppb) Average	706	37	38	99.87	-	-	63.6	-	23.8	-
NH3 (ppb) Average	667	45	77	95.7	-	-	0	0	0	-
PM2.5 (ug/m3) Average	743	1	1	100	-	-	71.5	0	13	0
Temperature 2 m (C) Average	744	0	0	100	-	-	10	-	2.1	-
Relative Humidity (%) Average	744	0	0	100	-	-	92	-	78.6	-
Wind Speed 10 m (km/h) Average	744	0	0	100	-	-	28	-	16	-
Wind Direction 10 m (deg) Average	744	0	0	100	-	-	-	-	-	-

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

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

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	697	1.09	2.4	-	0	0	0.1	0.3	1	2.7	31
TRS (ppb) Average	704	0.26	0.3	-	0	0.1	0.1	0.2	0.3	0.5	3.3
THC (ppm) Average	681	2.05	0.1	-	1.9	2	2	2	2.1	2.2	2.8
NMHC(ppm) Average	681	0.01	0.037	-	0	0	0	0	0	0	0.257
CH4(ppm) Average	681	2.04	0.1	-	1.9	2	2	2	2.1	2.1	2.6
O3 (ppb) Average	708	31.57	9.1	-	2.7	18.4	27	32.9	38.2	41.6	49
NO2 (ppb) Average	706	7.35	6.4	-	0.1	1.7	2.9	5.3	9.6	16.7	37.9
NO (ppb) Average	706	2.28	3.8	-	0	0	0.3	0.9	2.6	6	36
NOX (ppb) Average	706	9.62	9	-	0.1	2.2	3.8	6.5	12.1	20.9	63.6
NH3 (ppb) Average	667	0	0	-	0	0	0	0	0	0	0
PM2.5 (ug/m3) Average	743	4.23	4.6	-	0.3	1.5	2.4	3.2	4.7	6.8	71.5
Temperature 2 m (C) Average	744	-7.34	7.7	-	-24.7	-17.9	-13.1	-6.8	-1.3	2.7	10
Relative Humidity (%) Average	744	64.64	14.7	-	26.2	44.4	53.4	66.1	76.7	82.8	92
Wind Speed 10 m (km/h) Average	744	9.4	5	-	0	4	6	9	13	16	28
Wind Direction 10 m (deg) Average	744	-	-	-	-	-	-	-	-	-	-

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

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL GASEOUS ANALYZERS	17 Mar 2025 14:00	17 Mar 2025 14:00	1	Maintenance - sample manifold cleaned
NH3	01 Mar 2025 05:00	31 Mar 2025 05:00	31	Stabilization after daily span
SO2	13 Mar 2025 02:00	13 Mar 2025 10:00	9	Unstable Operation - pump failure
THC/NMHC/CH4	13 Mar 2025 17:00	14 Mar 2025 09:00	17	Maintenance - replaced analyzer
THC/NMHC/CH4	21 Mar 2025 11:00	21 Mar 2025 13:00	3	Maintenance - replaced support gas cylinder
TRS	25 Mar 2025 08:00	25 Mar 2025 09:00	2	Maintenance - reinitiated daily QA check

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Patricia McInnes - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 31.0 ppb on Mar 29 12:00 Maximum Daily Average: 4.1 ppb on Mar 12

Minimum Value: 0.0 ppb on Mar 9 00:00 Minimum Daily Average: 0.1 ppb on Mar 27
Maximum Diurnal Average: 2.4 ppb at hour 15 Minimum Diurnal Average: 0.4 ppb at hour 8
Monthly Average: 1.09 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.3 Q_3 = 1.0 P_{90} = 2.7 P_{99} = 10.5

Hours in Service:	744
Hours of Data:	697
Hours of Missing Data:	47
Hours of Calibration:	37
Percent Operational Time:	98.7

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	Z	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.1	0.2	0.3	0.3	0.5	0.7	0.7	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.7
2-Mar	0.2	Z	0.2	0.2	0.2	0.1	0.0	0.3	0.2	0.9	3.1	2.0	8.3	1.3	0.4	0.3	0.3	0.2	0.8	0.2	0.1	0.1	0.1	0.1	0.9	8.3
3-Mar	0.2	0.2	Z	0.5	0.8	0.3	0.3	0.3	1.3	1.6	1.9	1.4	0.7	0.6	0.5	0.3	0.4	0.4	0.2	0.1	0.3	0.3	0.2	0.1	0.6	1.9
4-Mar	0.2	0.1	0.2	Z	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	1.2	1.4	0.3	1.4
5-Mar	1.1	0.4	0.4	0.4	Z	0.4	0.2	0.8	0.7	1.5	2.1	3.5	4.6	5.6	4.3	3.2	2.2	1.6	1.5	2.0	1.9	1.3	0.8	0.5	1.8	5.6
6-Mar	0.3	0.2	0.2	0.2	0.3	Z	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.2	0.3	0.4	0.3	0.3	0.5	0.4	0.3	0.3	0.5
7-Mar	Z	4.2	10.3	8.7	2.8	1.4	0.8	1.2	2.7	2.8	2.4	2.5	2.9	2.5	2.5	2.3	8.2	6.5	3.7	1.7	2.1	1.9	1.3	1.3	3.3	10.3
8-Mar	1.4	Z	1.8	0.9	0.8	1.3	1.0	0.8	2.0	2.0	3.0	2.3	2.3	6.9	5.2	1.4	1.8	0.5	0.1	0.1	0.1	0.1	0.0	0.0	1.5	6.9
9-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	1.0	0.7	5.4	2.5	2.8	0.9	0.5	0.4	0.7	0.6	0.5	0.7	5.4
10-Mar	0.7	1.0	1.1	Z	0.8	0.9	0.5	0.8	0.4	0.3	0.3	0.7	0.9	1.0	0.5	0.4	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.5	1.1
11-Mar	0.0	0.0	0.0	0.0	Z	0.7	0.4	0.4	0.3	0.5	0.6	1.4	1.6	2.6	4.9	4.2	1.3	1.2	2.1	1.3	1.6	2.2	3.0	3.5	1.5	4.9
12-Mar	2.6	2.2	1.9	0.9	0.6	Z	0.7	0.0	0.0	0.4	3.0	4.2	2.5	8.7	16.8	14.6	10.5	8.0	5.8	4.1	2.7	1.7	1.0	0.4	4.1	16.8
13-Mar	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	C	C	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	--	0.2
14-Mar	1.2	Z	0.2	0.8	1.3	1.9	1.6	0.5	2.4	1.3	1.3	2.2	8.5	5.2	2.3	0.9	0.2	0.9	0.2	0.2	0.2	0.1	0.3	0.0	1.5	8.5
15-Mar	0.0	0.1	Z	0.1	0.1	0.1	0.0	0.1	0.2	0.3	1.0	1.3	2.3	8.1	13.6	11.0	8.1	4.1	2.8	1.6	1.1	1.3	0.7	0.5	2.5	13.6
16-Mar	0.5	0.4	0.4	Z	0.3	0.4	0.3	0.2	0.6	0.8	1.0	0.9	1.2	1.1	1.3	0.9	0.7	0.5	0.4	0.4	0.3	0.2	0.1	0.1	0.6	1.3
17-Mar	0.1	0.1	0.0	0.1	Z	0.1	0.0	0.0	0.1	0.2	0.3	0.2	0.9	M	5.7	2.9	1.2	0.8	0.7	0.7	0.5	0.5	0.5	0.4	0.7	5.7
18-Mar	0.3	0.3	0.4	0.4	0.5	Z	0.9	0.7	0.8	0.5	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.2	0.9
19-Mar	Z	0.0	0.7	2.0	2.5	2.5	2.8	2.6	2.2	1.7	3.3	5.6	3.9	3.4	2.3	1.4	1.4	1.3	1.0	2.0	3.1	3.0	2.1	2.3	2.3	5.6
20-Mar	0.9	Z	1.1	0.8	0.5	0.4	0.5	0.5	0.3	0.2	0.1	0.0	0.1	0.0	0.2	1.9	1.1	1.9	6.8	3.4	0.5	0.3	0.2	0.1	0.9	6.8
21-Mar	0.1	0.2	Z	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.2	0.3	0.2	0.1	0.2	0.2	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.3
22-Mar	0.2	0.2	0.1	Z	0.1	0.2	0.1	0.2	0.3	0.3	0.5	0.5	1.0	0.9	1.2	1.0	0.8	0.8	1.3	4.0	1.4	0.5	0.4	24.5	1.8	24.5
23-Mar	9.0	3.3	0.7	0.6	Z	0.1	0.2	0.5	0.7	0.5	0.5	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.6	0.6	0.8	0.9	9.0
24-Mar	0.6	0.4	0.5	0.5	0.5	Z	0.4	0.4	0.4	0.4	0.5	0.4	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.2	0.0	0.0	0.1	0.1	0.3	0.6
25-Mar	Z	0.4	0.4	0.4	0.2	0.2	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.4	0.1	0.1	0.1	0.1	0.0	0.2	0.4
26-Mar	0.1	Z	1.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.6	1.4	3.1	5.2	2.9	0.6	0.7	0.6	0.1	0.2	0.8	5.2
27-Mar	0.2	0.1	Z	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.2	0.1	0.2
28-Mar	0.2	0.3	0.2	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	4.9	1.4	0.2	0.3	0.5	0.4	4.9
29-Mar	0.3	0.4	0.3	0.1	Z	0.0	0.1	0.2	0.2	0.3	7.9	31.0	11.5	6.4	5.8	4.4	2.8	2.7	2.4	1.8	1.5	0.8	0.4	0.3	3.6	31.0
30-Mar	0.1	0.2	0.2	0.1	0.1	Z	0.2	0.4	0.6	0.2	0.2	0.2	0.3	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.5	0.3	0.6
31-Mar	Z	0.6	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.4	0.3	0.3	0.4	0.4	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.6
	0.8	0.6	0.9	0.7	0.5	0.5	0.4	0.4	0.6	0.6	1.2	2.1	1.9	2.0	2.4	2.0	1.6	1.3	1.2	1.0	0.7	0.6	0.5	1.3	Diurnal Average	
	9.0	4.2	10.3	8.7	2.8	2.5	2.8	2.6	2.7	2.8	7.9	31.0	11.5	8.7	16.8	14.6	10.5	8.0	6.8	4.9	3.1	3.0	3.0	24.5	Diurnal Maximum	

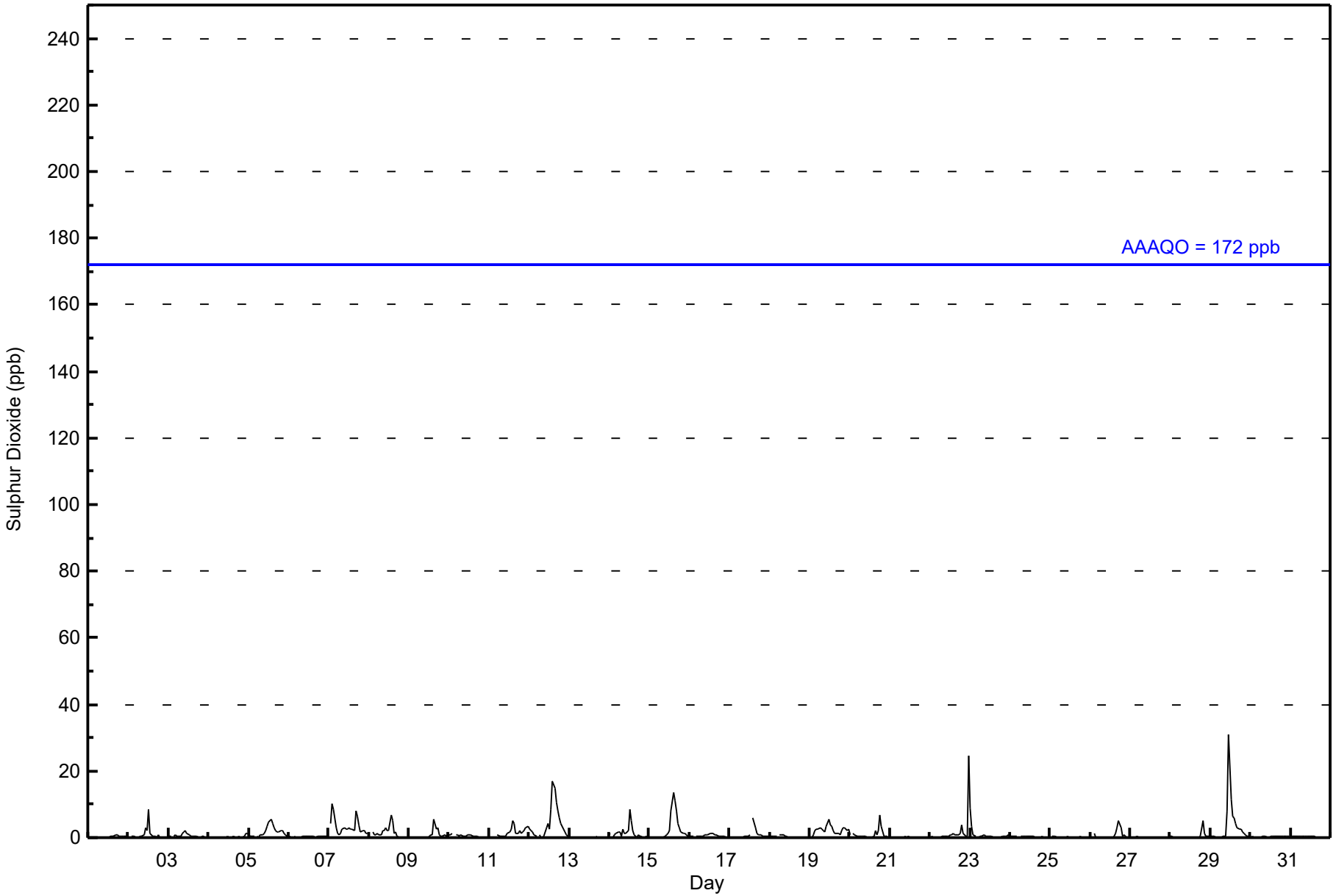
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Patricia McInnes - March 2025



Sulphur Dioxide (SO_2) - ppb

Patricia McInnes - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	690	99.00	99.00
11 - 20	5	0.72	99.71
21 - 60	2	0.29	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: 697

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Patricia McInnes - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	129	73	13	19	26	81	61	38	24	21	30	37	20	15	25	78	690
11 - 20	0	0	3	0	1	0	1	0	0	0	0	0	0	0	0	0	5
21 - 60	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	129	73	17	19	27	81	62	38	24	21	30	37	20	15	25	79	697

Total Number of Valid Hours: 697

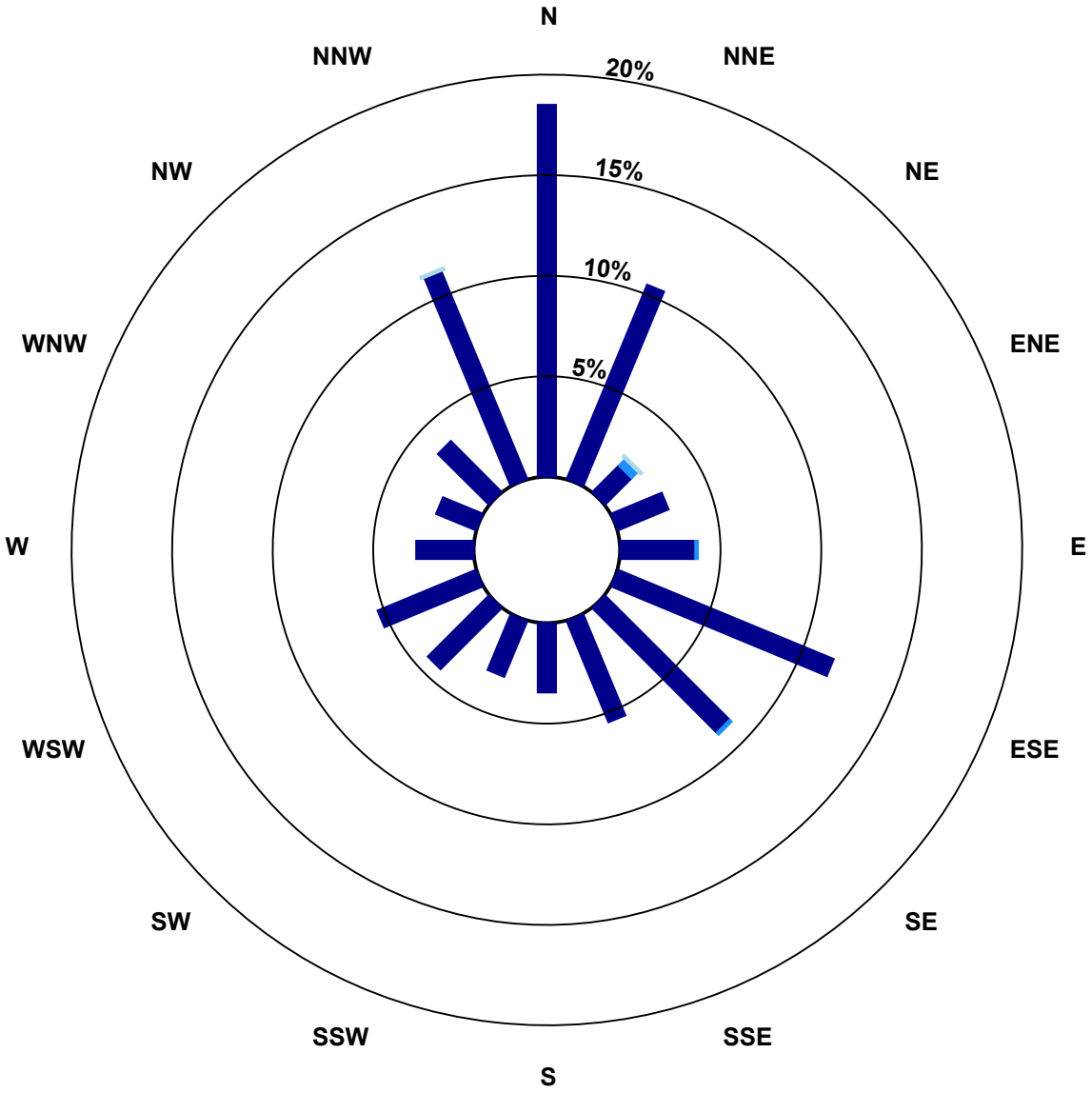
Total Number of Hours: 744

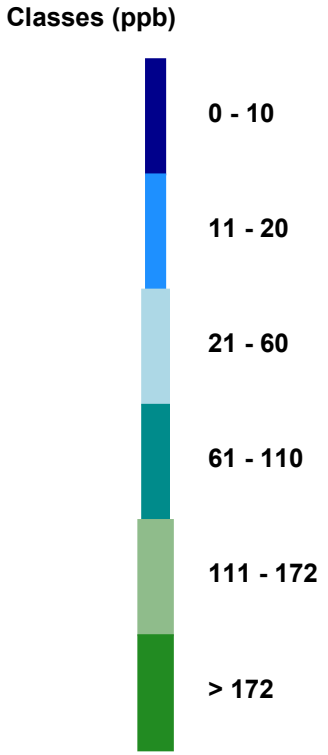
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Sulphur Dioxide (SO_2) - ppb

Patricia McInnes





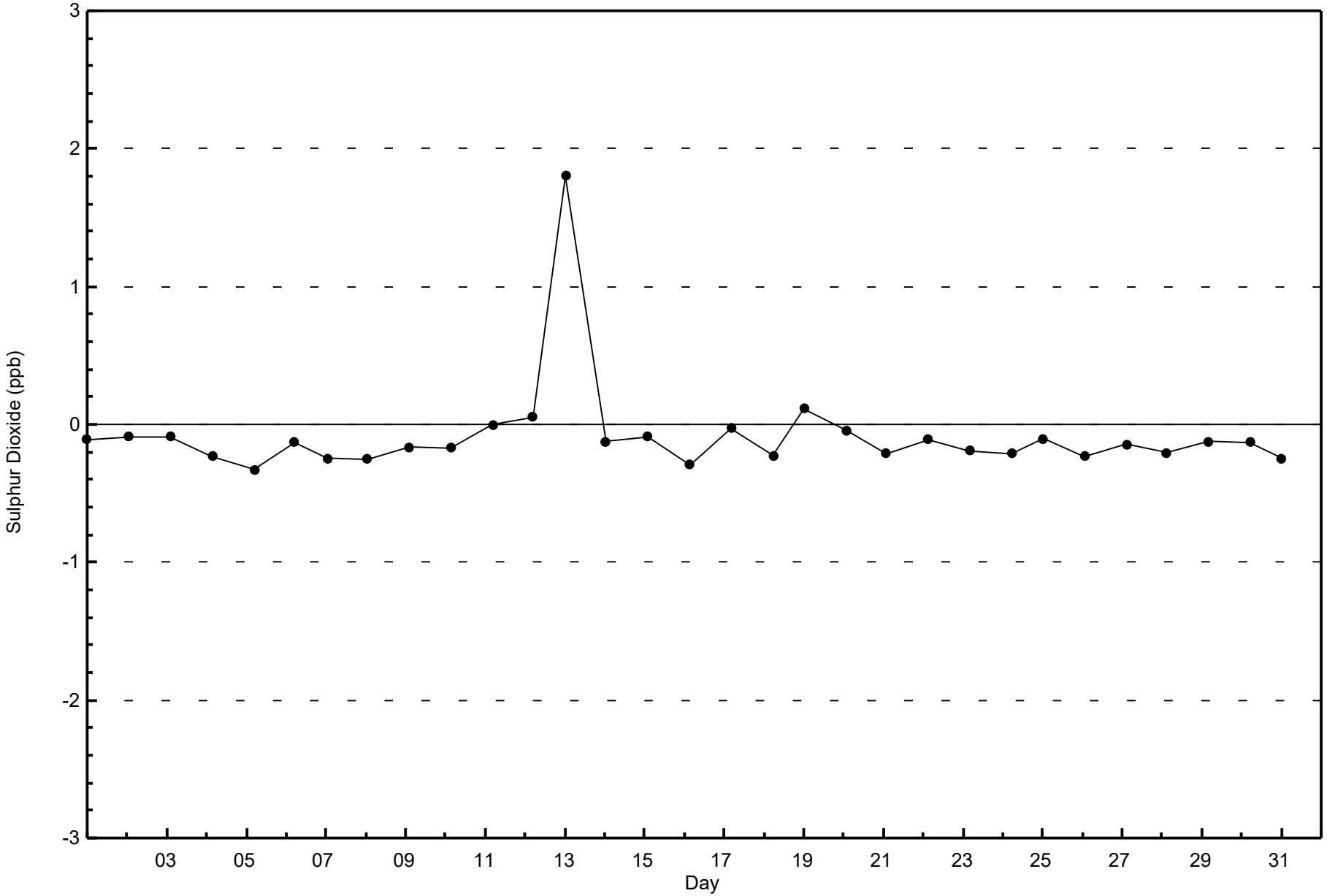
Total Number of Valid Hours: 697

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Patricia McInnes - March 2025

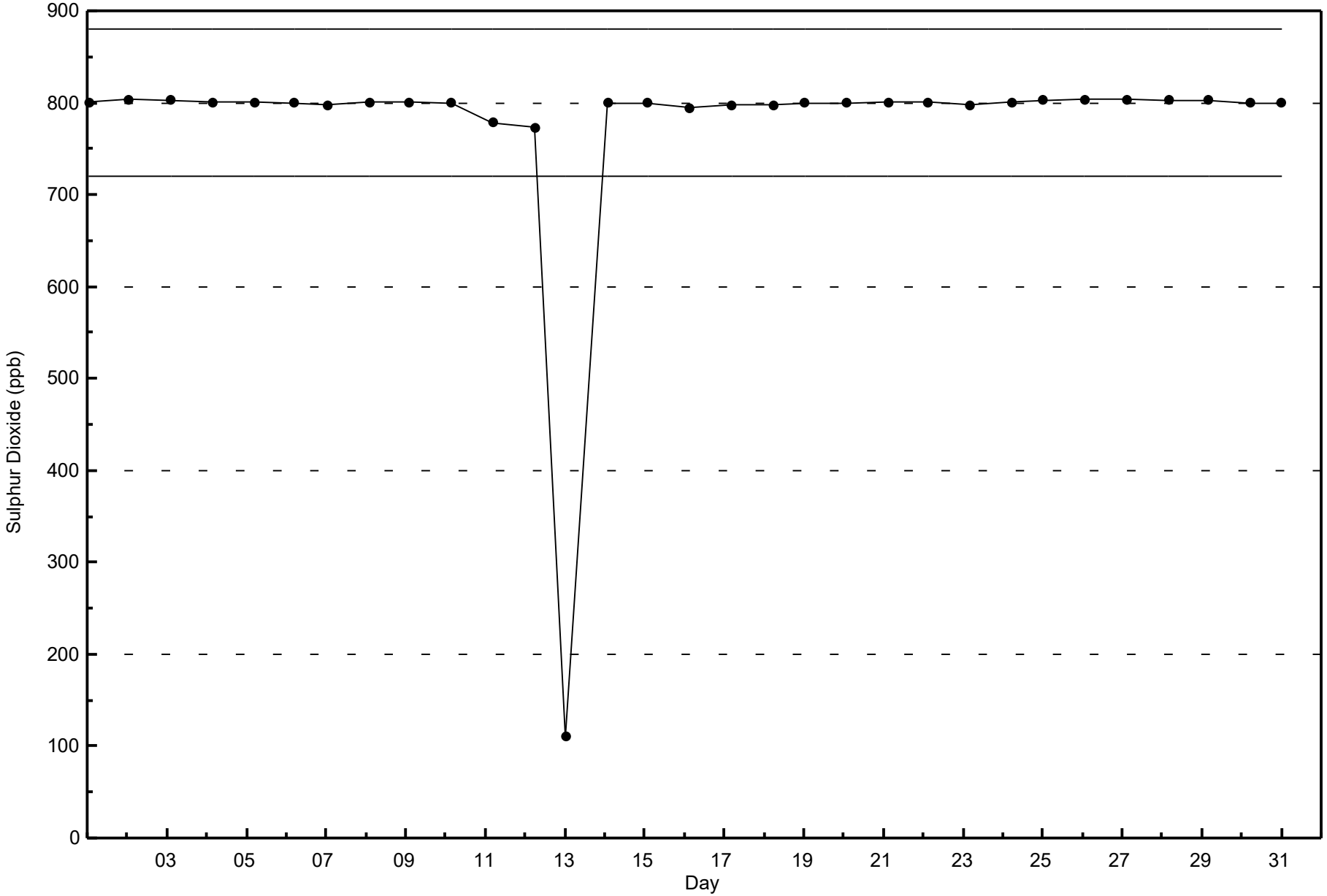


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Patricia McInnes - March 2025



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Patricia McInnes - March 2025

Number of Exceedences (AAAQG): 30-Min: 0

Maximum Value: 3.4 ppb on Mar 8 09:00

Maximum Daily Average: 0.6 ppb on Mar 19

Minimum Value: 0.0 ppb on Mar 21 00:00

Minimum Daily Average: 0.1 ppb on Mar 21

Maximum Diurnal Average: 0.4 ppb at hour 9

Minimum Diurnal Average: 0.2 ppb at hour 22

Monthly Average: 0.26 ppb

Percentiles: P_1 = 0.1 P_{10} = 0.1 Q_1 = 0.1 Median = 0.2 Q_3 = 0.3 P_{90} = 0.5 P_{99} = 1.4

Periods in Service:	1488
Periods of Valid Data:	1408
Periods of Invalid Data:	80
Periods of Calibration:	75
Percent Operational Time:	99.7

Period Ending At (MST)

Day	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00	Daily Average	Daily Maximum
1-Mar	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	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	0.1	SP	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2		
2-Mar	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.1	0.1	0.7	0.8	0.6	0.5	0.2	0.1	0.1	0.1	0.1	0.7	0.2	0.3	0.2	0.2	0.2	0.3	1.1
	0.2	0.2	SP	0.1	0.2	0.2	0.2	0.1	0.1	1.1	0.8	0.6	0.3	0.2	0.1	0.1	0.1	0.2	0.4	0.3	0.2	0.2	0.2	0.2		
3-Mar	0.2	0.2	0.2	Z	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.3	0.2	0.3	0.4	0.2	0.2	0.5	0.2	0.2	0.2	0.1	0.3	0.5
	0.3	0.2	0.2	SP	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.3	0.3	0.4	0.3	0.3	0.2	0.2	0.5	0.2	0.2	0.2	0.2		
4-Mar	0.2	0.2	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.4	0.1	0.5
	0.1	0.1	0.1	0.1	SP	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.3		
5-Mar	0.3	0.2	0.2	0.2	0.2	Z	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.3
	0.2	0.2	0.3	0.2	0.2	SP	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2		
6-Mar	Z	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.2
	SP	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1		
7-Mar	0.1	Z	1.1	0.8	0.5	0.4	0.3	0.4	0.6	0.7	0.6	0.6	0.6	0.5	0.7	0.7	1.4	0.6	0.4	0.3	0.2	0.3	0.3	0.3	0.5	1.4
	0.3	SP	0.9	0.9	0.4	0.3	0.3	0.5	0.7	0.7	0.5	0.6	0.6	0.6	0.7	0.8	0.9	0.4	0.3	0.2	0.3	0.3	0.3	0.3		
8-Mar	0.3	0.4	Z	0.3	0.3	0.4	0.5	0.7	3.3	1.6	0.6	0.6	0.5	0.8	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.5	3.4
	0.4	0.5	SP	0.3	0.2	0.6	0.6	0.8	3.4	0.7	0.6	0.6	0.5	0.6	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2		
9-Mar	0.2	0.2	0.2	Z	0.3	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	0.3
	0.2	0.2	0.2	SP	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		
10-Mar	0.2	0.2	0.2	0.3	Z	1.1	0.5	0.7	0.4	0.3	0.3	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	0.3	1.1
	0.2	0.2	0.3	0.2	SP	0.9	0.7	0.7	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1		
11-Mar	0.1	0.1	0.1	0.1	0.2	Z	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.5
	0.2	0.2	0.1	0.1	0.2	SP	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.3		
12-Mar	Z	0.3	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.4	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.5
	SP	0.3	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.3		
13-Mar	0.3	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.3	0.3	0.3	0.3	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.4
	0.2	SP	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.3	0.2	0.3	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2		
14-Mar	0.3	0.3	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.3	0.3	0.3	0.5	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.5
	0.3	0.2	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.3	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1		
15-Mar	0.2	0.3	0.7	Z	0.4	0.3	0.2	0.2	0.2	0.4	0.5	0.4	0.4	0.6	0.5	0.4	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.8
	0.3	0.4	0.8	SP	0.3	0.3	0.2	0.2	0.3	0.4	0.5	0.3	0.5	0.7	0.4	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2		

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Patricia McInnes - March 2025

Day	Period Ending At (MST) 00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00	Daily Average	Daily Maximum
16-Mar	0.2	0.1	0.1	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	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	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	0.2	0.1	0.1	0.1		
17-Mar	0.1	0.2	0.1	0.2	0.2	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	M	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5
	0.2	0.2	0.2	0.1	0.2	SP	0.2	0.2	0.2	0.2	0.3	0.2	0.2	M	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
18-Mar	Z	0.3	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	0.2	0.1	0.1	0.1	0.1	0.1	0.3
	SP	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		
19-Mar	0.1	Z	0.5	1.0	1.3	1.2	1.1	1.1	1.1	1.1	0.9	0.7	0.6	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.4	0.4	0.3	0.4	0.6	1.3
	1.0	SP	1.0	1.1	1.2	1.1	1.1	1.1	1.2	1.0	0.8	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.5	0.3	0.3	0.3	0.3		
20-Mar	0.2	0.2	Z	0.3	0.3	0.3	0.3	0.3	0.3	C	C	C	C	C	C	C	0.2	0.1	1.4	1.0	0.2	0.2	0.2	0.0	--	1.8
	0.2	0.2	SP	0.3	0.2	0.3	0.3	0.4	0.3	C	C	C	C	C	C	0.3	0.1	0.4	1.8	0.3	0.2	0.2	0.1	0.0		
21-Mar	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	0.1	0.1	0.1	0.1	0.1	0.1	0.2
	0.0	0.1	0.1	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		
22-Mar	0.1	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.2	3.1	0.7	0.2	0.2	1.0	0.3	3.1
	0.1	0.1	0.1	0.1	SP	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.2	1.9	1.5	0.5	0.1	0.2	1.0		
23-Mar	0.9	0.9	0.5	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.3	1.5
	0.9	1.5	0.2	0.2	0.2	SP	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1		
24-Mar	Z	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.2
	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1		
25-Mar	0.1	Z	0.2	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	0.1	0.3	0.3	0.2	0.2	0.3	0.2	0.1	0.3
	0.1	SP	0.1	0.1	0.1	0.1	0.1	M	M	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.2	0.2	0.2	0.2		
26-Mar	0.2	0.2	Z	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	0.3	0.7	0.2	0.2	0.2	0.2	0.3	0.2	0.7
	0.2	0.2	SP	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	0.4	0.4	0.2	0.2	0.2	0.2	0.2		
27-Mar	0.2	0.2	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	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	0.2	0.2	0.1	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	0.2	0.2	0.2	0.3	0.2		
28-Mar	0.2	0.3	0.2	0.2	Z	0.3	0.3	0.6	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.3	0.2	0.2	0.2	0.2	0.2	0.6
	0.2	0.2	0.3	0.2	SP	0.3	0.4	0.5	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2		
29-Mar	0.2	0.2	0.4	1.4	1.0	Z	1.7	2.0	1.0	0.7	0.9	1.1	0.5	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.6	2.0
	0.2	0.3	0.7	1.2	0.9	SP	1.8	1.4	0.9	0.7	1.0	0.7	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.1		
30-Mar	Z	0.2	0.3	0.7	1.2	1.5	0.8	0.6	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	0.4	1.6
	SP	0.4	0.4	1.1	1.6	1.2	0.7	1.0	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		
31-Mar	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
	0.1	SP	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		
	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	Diurnal Average	
	1.0	1.5	1.1	1.4	1.6	1.5	1.8	2.0	3.4	1.6	1.0	1.1	0.6	0.8	0.7	0.8	1.4	0.6	1.9	3.1	0.7	0.4	0.5	1.0	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 - March 2025

Maximum Value: 3.3 ppb on Mar 8 09:00

Maximum Daily Average: 0.6 ppb on Mar 19

Minimum Value: 0.0 ppb on Mar 21 00:00

Minimum Daily Average: 0.1 ppb on Mar 21

Maximum Diurnal Average: 0.4 ppb at hour 9

Minimum Diurnal Average: 0.2 ppb at hour 22

Monthly Average: 0.26 ppb

Percentiles: P_1 = 0.1 P_{10} = 0.1 Q_1 = 0.1 Median = 0.2 Q_3 = 0.3 P_{90} = 0.5 P_{99} = 1.3

Hours in Service:	744
Hours of Data:	704
Hours of Missing Data:	40
Hours of Calibration:	37
Percent Operational Time:	99.6

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	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	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
2-Mar	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.1	0.1	0.9	0.8	0.6	0.4	0.2	0.1	0.1	0.1	0.1	0.5	0.3	0.2	0.2	0.2	0.2	0.3	0.9
3-Mar	0.2	0.2	0.2	Z	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.5	0.2	0.2	0.2	0.1	0.3	0.5
4-Mar	0.1	0.2	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.4	0.1	0.4
5-Mar	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
6-Mar	Z	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2
7-Mar	0.2	Z	1.0	0.9	0.5	0.3	0.3	0.5	0.7	0.7	0.6	0.6	0.6	0.5	0.7	0.8	1.1	0.5	0.3	0.2	0.3	0.3	0.3	0.3	0.5	1.1
8-Mar	0.3	0.5	Z	0.3	0.2	0.5	0.6	0.7	3.3	1.1	0.6	0.6	0.5	0.7	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	3.3
9-Mar	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
10-Mar	0.2	0.2	0.2	0.3	Z	1.0	0.6	0.7	0.4	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	1.0
11-Mar	0.1	0.2	0.1	0.1	0.2	Z	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.5
12-Mar	Z	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5
13-Mar	0.3	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.3	0.3	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3
14-Mar	0.3	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.3	0.3	0.3	0.4	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4
15-Mar	0.2	0.3	0.7	Z	0.4	0.3	0.2	0.2	0.3	0.4	0.5	0.4	0.5	0.7	0.5	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.7
16-Mar	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	0.1	0.2	0.1	0.2	0.1	0.2	0.2
17-Mar	0.2	0.2	0.1	0.1	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	M	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4
18-Mar	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
19-Mar	0.5	Z	0.8	1.0	1.2	1.2	1.1	1.1	1.2	1.0	0.9	0.6	0.6	0.5	0.3	0.3	0.3	0.2	0.2	0.4	0.4	0.3	0.3	0.3	0.6	1.2
20-Mar	0.2	0.2	Z	0.3	0.2	0.3	0.3	0.3	0.3	C	C	C	C	C	C	0.4	0.1	0.3	1.6	0.6	0.2	0.2	0.1	0.0	--	1.6
21-Mar	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	0.1	0.1	0.1	0.1
22-Mar	0.1	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.2	1.1	2.3	0.6	0.2	0.2	1.0	0.3	2.3
23-Mar	0.9	1.2	0.4	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.3	1.2
24-Mar	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2
25-Mar	0.1	Z	0.1	0.1	0.1	0.1	0.1	M	M	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.3
26-Mar	0.2	0.2	Z	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.4	0.5	0.2	0.2	0.2	0.2	0.3	0.2	0.5
27-Mar	0.2	0.2	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2
28-Mar	0.2	0.3	0.3	0.2	Z	0.3	0.4	0.5	0.3	0.3	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	0.5
29-Mar	0.2	0.2	0.5	1.3	1.0	Z	1.8	1.7	0.9	0.7	1.0	0.9	0.5	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.6	1.8
30-Mar	Z	0.3	0.4	0.9	1.4	1.3	0.8	0.8	0.8	0.6	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	1.4
31-Mar	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	Diurnal Average	
	0.9	1.2	1.0	1.3	1.4	1.3	1.8	1.7	3.3	1.1	1.0	0.9	0.6	0.7	0.7	0.8	1.1	0.5	1.6	2.3	0.6	0.3	0.4	1.0	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

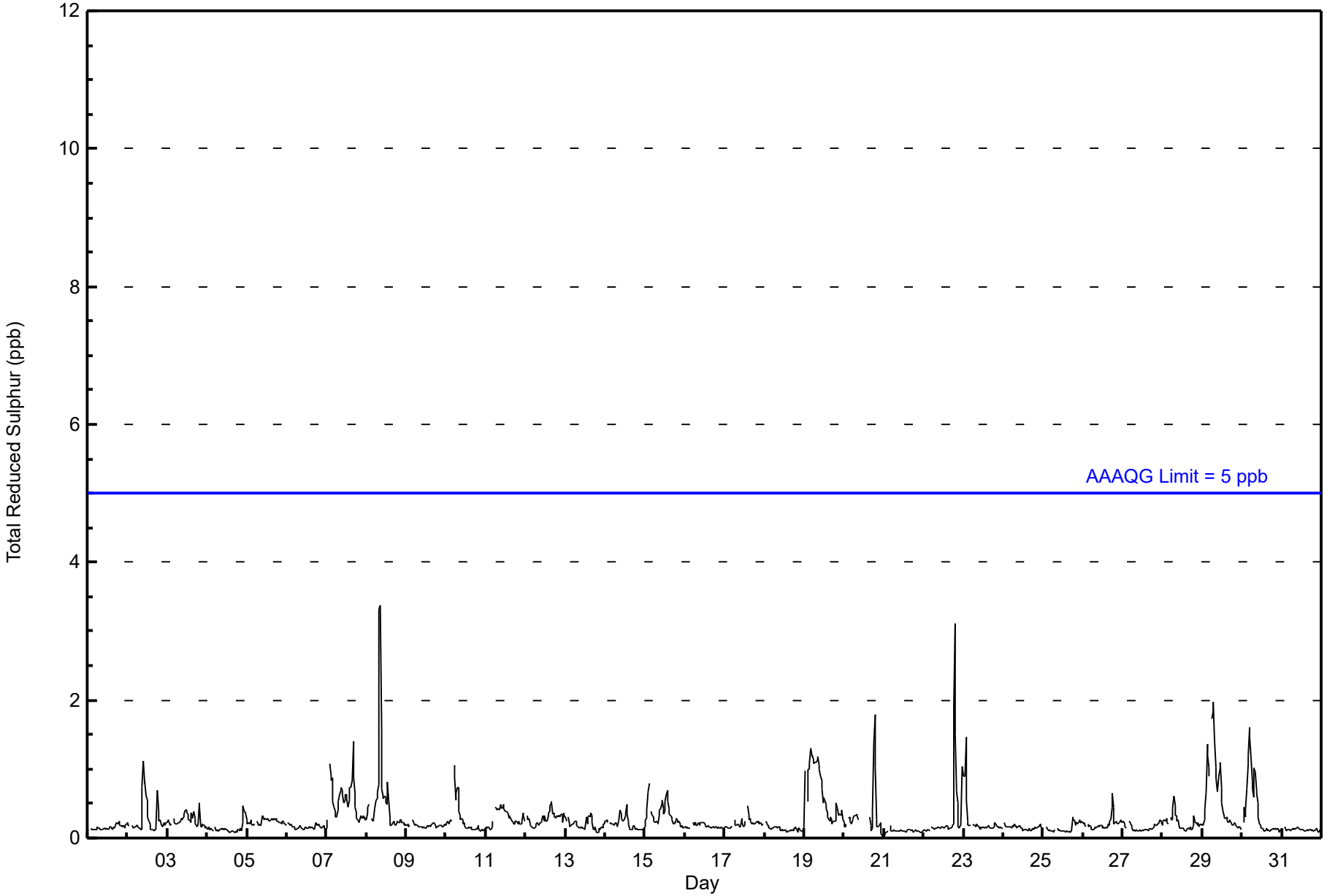
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Patricia McInnes - March 2025



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

Total Number of Valid Hours: 704

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Patricia McInnes - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	127	81	18	18	26	81	64	38	23	22	27	38	21	14	24	81	703
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	127	81	18	18	26	81	64	38	23	22	27	38	21	14	24	82	704

Total Number of Valid Hours: 704

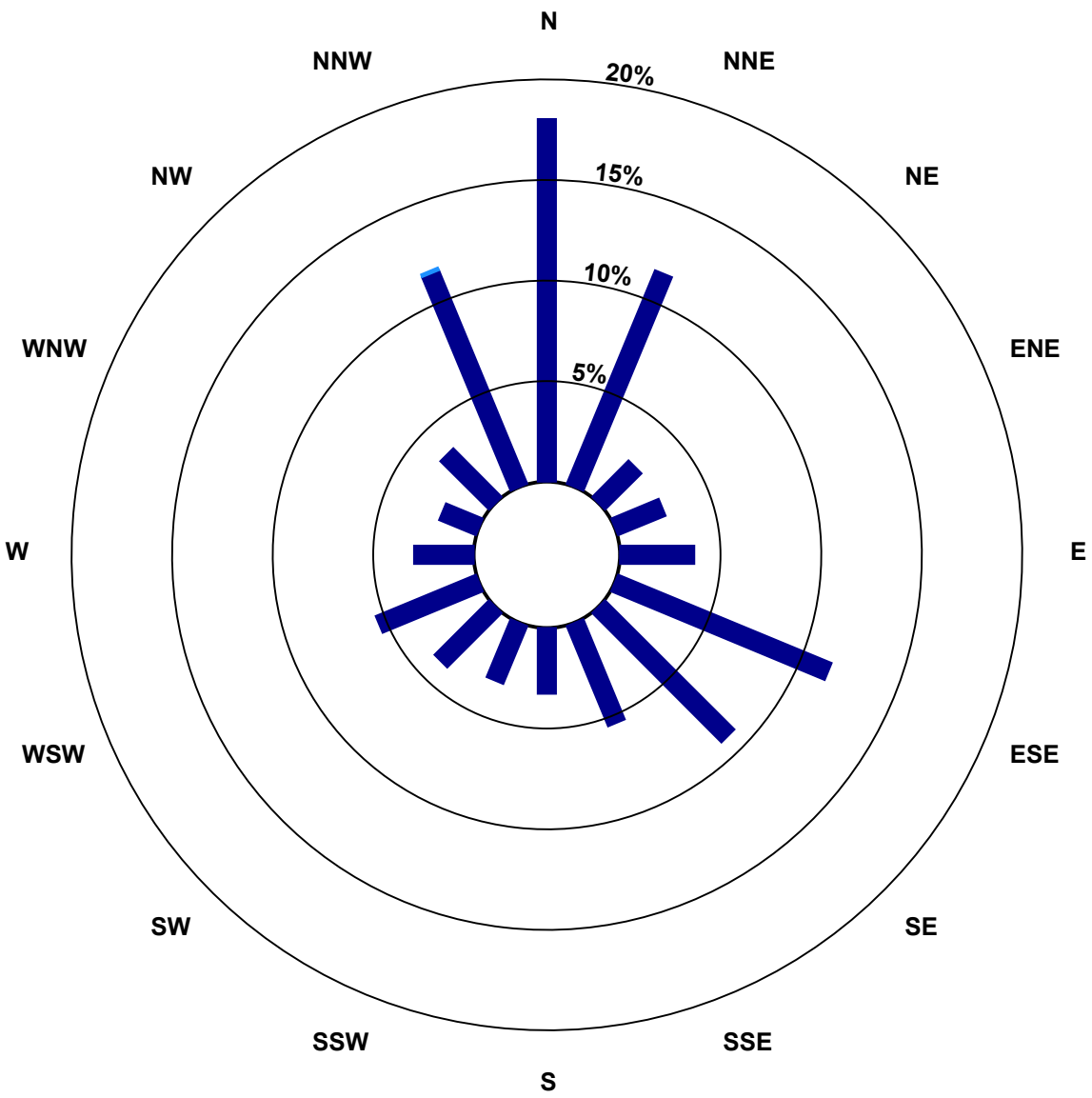
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Total Reduced Sulphur (TRS) - ppb

Patricia McInnes



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

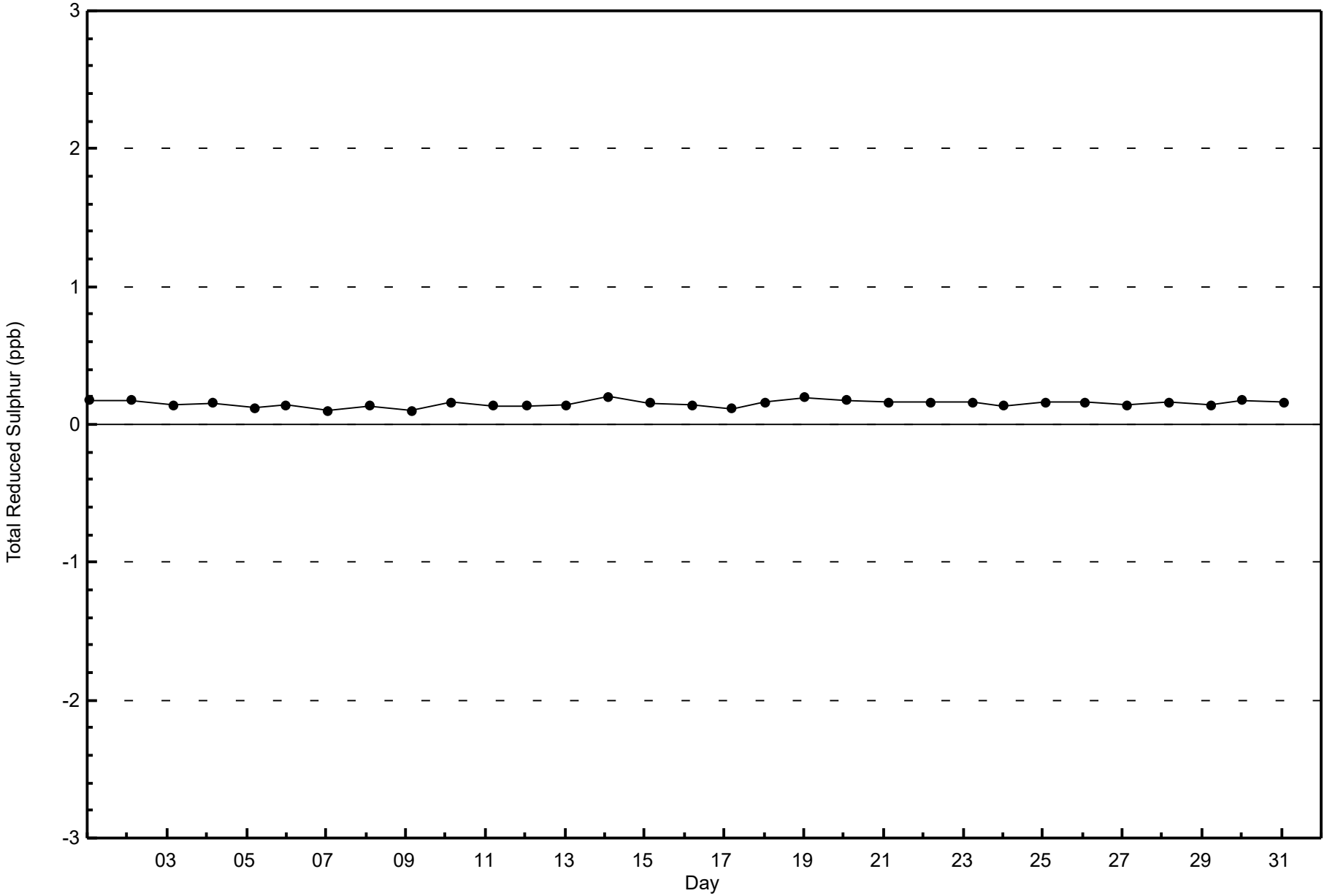
Total Number of Valid Hours: 704

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Patricia McInnes - March 2025

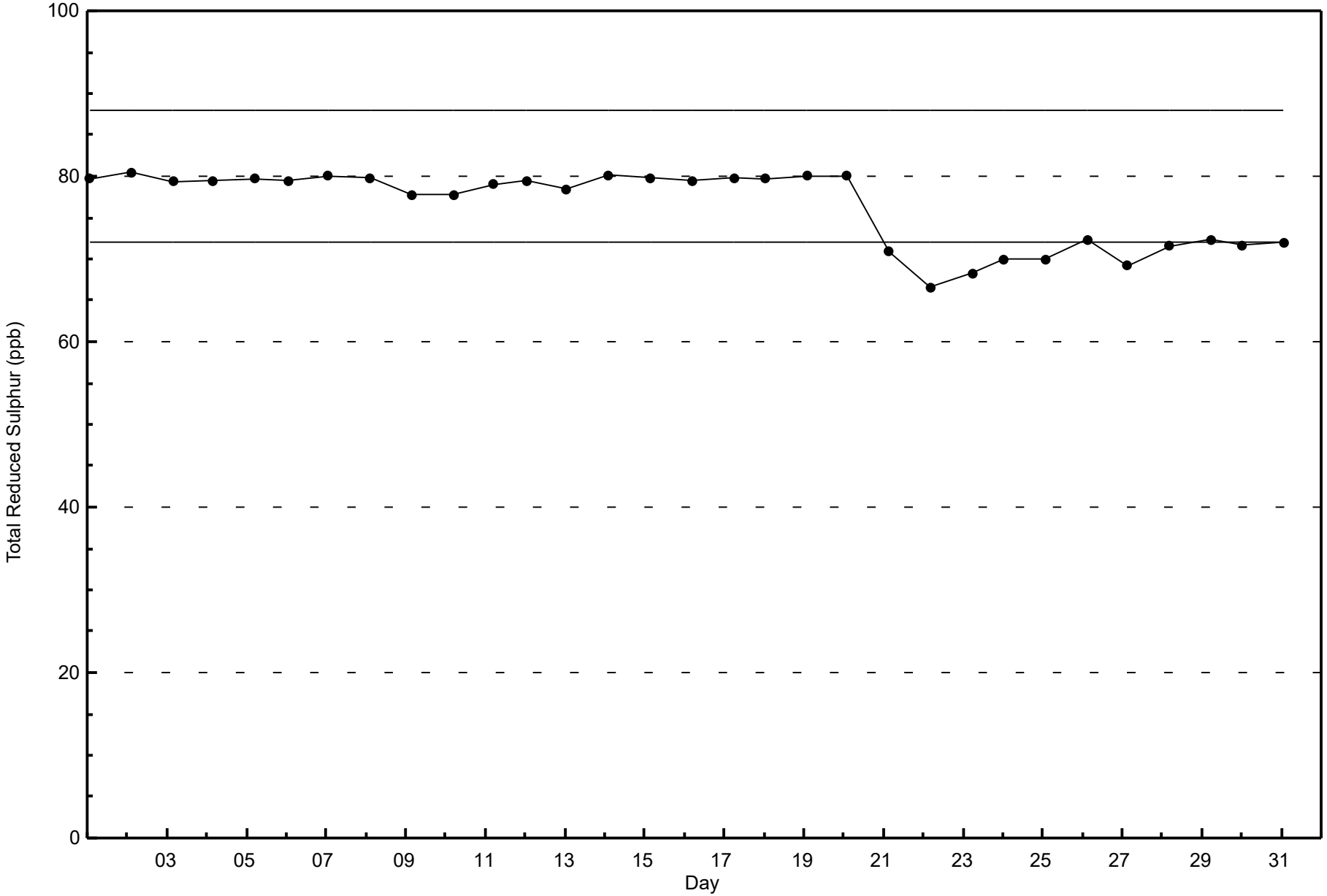


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Patricia McInnes - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Patricia McInnes - March 2025

Maximum Value: 2.8 ppm on Mar 7 02:00

Maximum Daily Average: 2.2 ppm on Mar 19

Minimum Value: 1.9 ppm on Mar 6 22:00

Minimum Daily Average: 2.0 ppm on Mar 9

Maximum Diurnal Average: 2.1 ppm at hour 8

Minimum Diurnal Average: 2.0 ppm at hour 18

Monthly Average: 2.05 ppm

Percentiles: $P_1 = 1.9$ $P_{10} = 2.0$ $Q_1 = 2.0$ Median = 2.0 $Q_3 = 2.1$ $P_{90} = 2.2$ $P_{99} = 2.5$

Hours in Service:	744
Hours of Data:	681
Hours of Missing Data:	63
Hours of Calibration:	42
Percent Operational Time:	97.2

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	Z	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.1	2.1	2.1	2.2	2.1	2.2
2-Mar	2.2	Z	2.2	2.0	2.0	2.2	2.1	2.0	2.0	2.5	2.6	2.5	2.3	2.0	1.9	1.9	1.9	2.0	2.2	2.0	2.0	2.0	2.0	2.0	2.1	2.6
3-Mar	2.0	2.0	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1
4-Mar	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	1.9	2.0	2.2	2.1	2.0	2.2
5-Mar	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1
6-Mar	2.1	2.1	2.1	2.1	2.0	Z	2.1	2.1	2.2	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.2
7-Mar	Z	2.8	2.6	2.3	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.6	2.1	2.0	2.0	2.0	2.0	2.0	1.9	2.1	2.8
8-Mar	2.0	Z	2.0	2.0	2.0	2.2	2.4	2.4	2.6	2.6	2.4	2.4	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.6
9-Mar	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-Mar	2.0	2.0	2.0	Z	2.1	2.3	2.3	2.4	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.4
11-Mar	1.9	1.9	1.9	1.9	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	1.9	2.0	2.0	2.0	2.0	2.0	2.1
12-Mar	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	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.1
13-Mar	Z	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	C	C	C	C	C	C	C	M	M	M	M	M	M	M	M	--	2.0
14-Mar	M	M	M	M	M	M	M	M	M	C	C	C	C	C	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	--	2.2
15-Mar	2.1	2.1	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.3
16-Mar	2.1	2.1	2.1	Z	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2
17-Mar	2.0	2.0	2.0	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	M	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
18-Mar	2.1	2.1	2.1	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.1
19-Mar	Z	2.3	2.3	2.4	2.5	2.5	2.5	2.5	2.5	2.4	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.5
20-Mar	2.0	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	2.1	2.0	2.0	2.1	2.1	2.0	2.1	2.1	2.0	2.1	2.1
21-Mar	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	M	M	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
22-Mar	2.0	2.0	2.0	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	2.1	2.2	2.0	2.0	2.0	2.4	2.0	2.4
23-Mar	2.4	2.4	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.0	2.1	2.4
24-Mar	2.1	2.2	2.0	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	2.2
25-Mar	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
26-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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
27-Mar	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	2.0	2.1
28-Mar	2.0	2.1	2.1	Z	2.1	2.1	2.1	2.3	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3
29-Mar	2.0	2.0	2.1	2.3	Z	2.4	2.4	2.4	2.3	2.3	2.3	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.4
30-Mar	2.0	2.0	2.0	2.1	2.1	Z	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
31-Mar	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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	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	Diurnal Average	
	2.4	2.8	2.6	2.4	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.5	2.3	2.2	2.1	2.3	2.6	2.1	2.2	2.2	2.1	2.1	2.2	2.4	Diurnal Maximum	

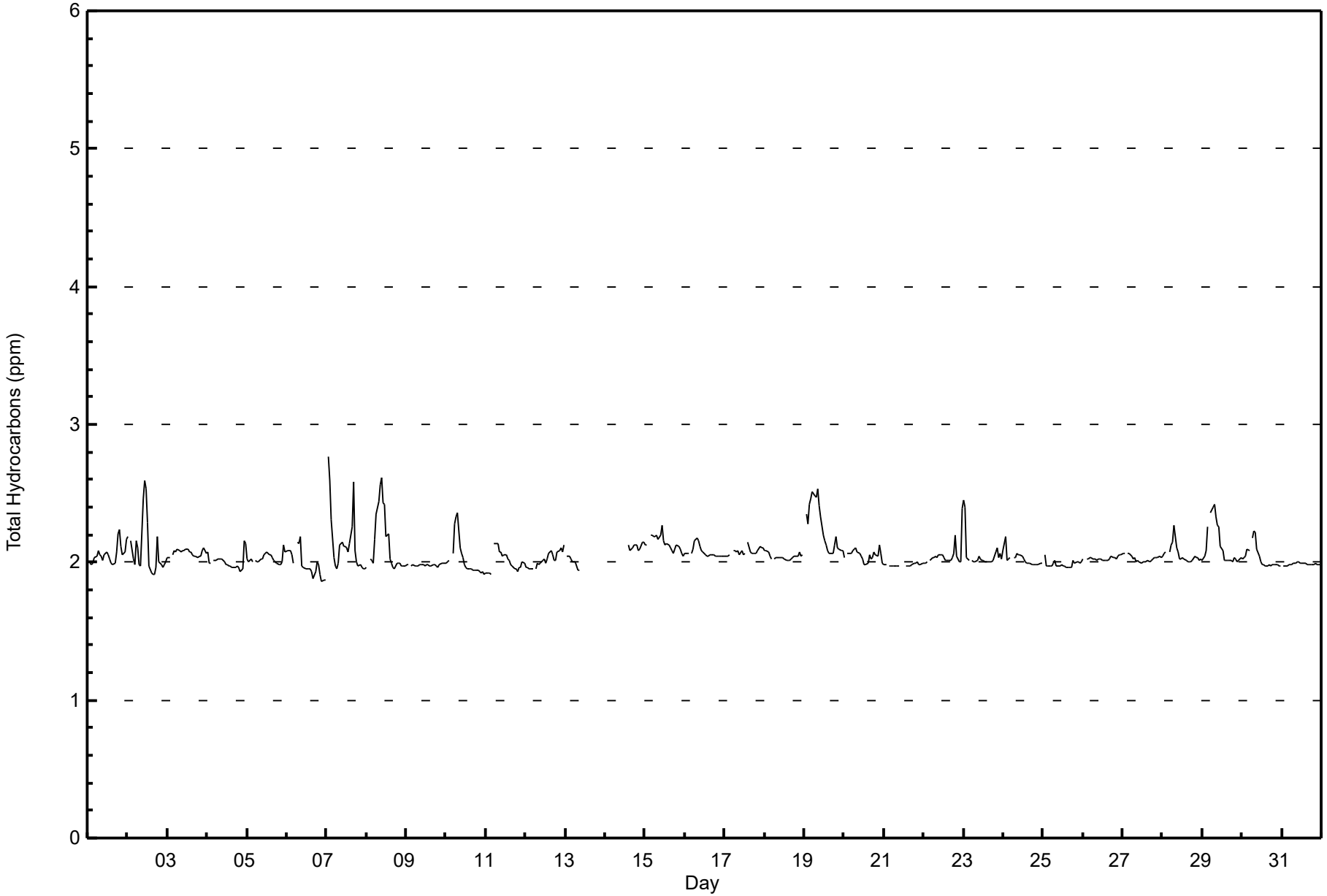
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Patricia McInnes - March 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	430	63.14	63.14
2.1 - 3.0	251	36.86	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 681

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Patricia McInnes - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	65	57	8	12	15	65	43	21	9	7	24	28	16	7	10	43	430
2.1 - 3.0	53	17	10	6	11	13	19	17	15	14	6	9	4	8	15	34	251
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	118	74	18	18	26	78	62	38	24	21	30	37	20	15	25	77	681

Total Number of Valid Hours: 681

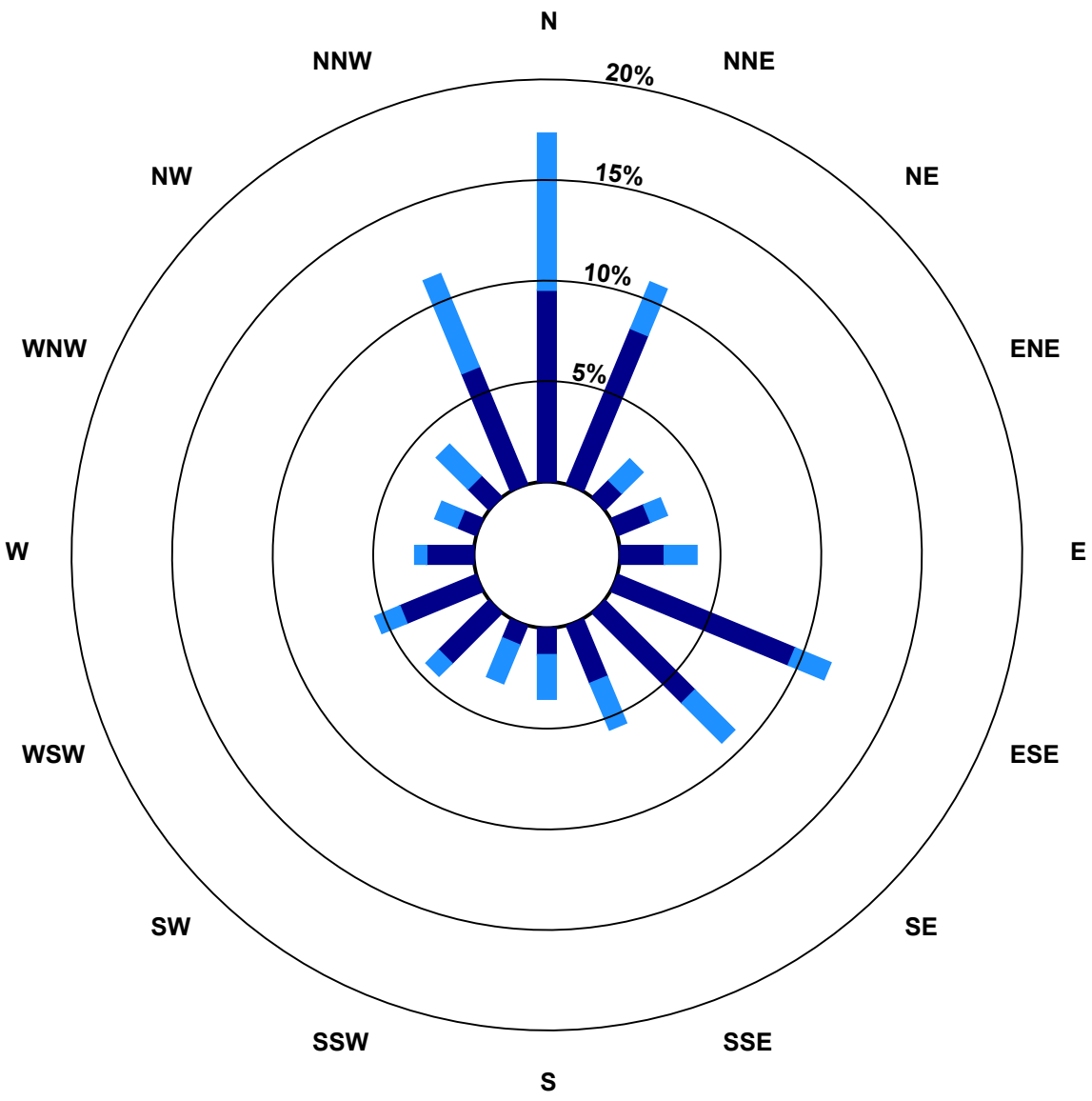
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Total Hydrocarbons (THC) - ppm

Patricia McInnes



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

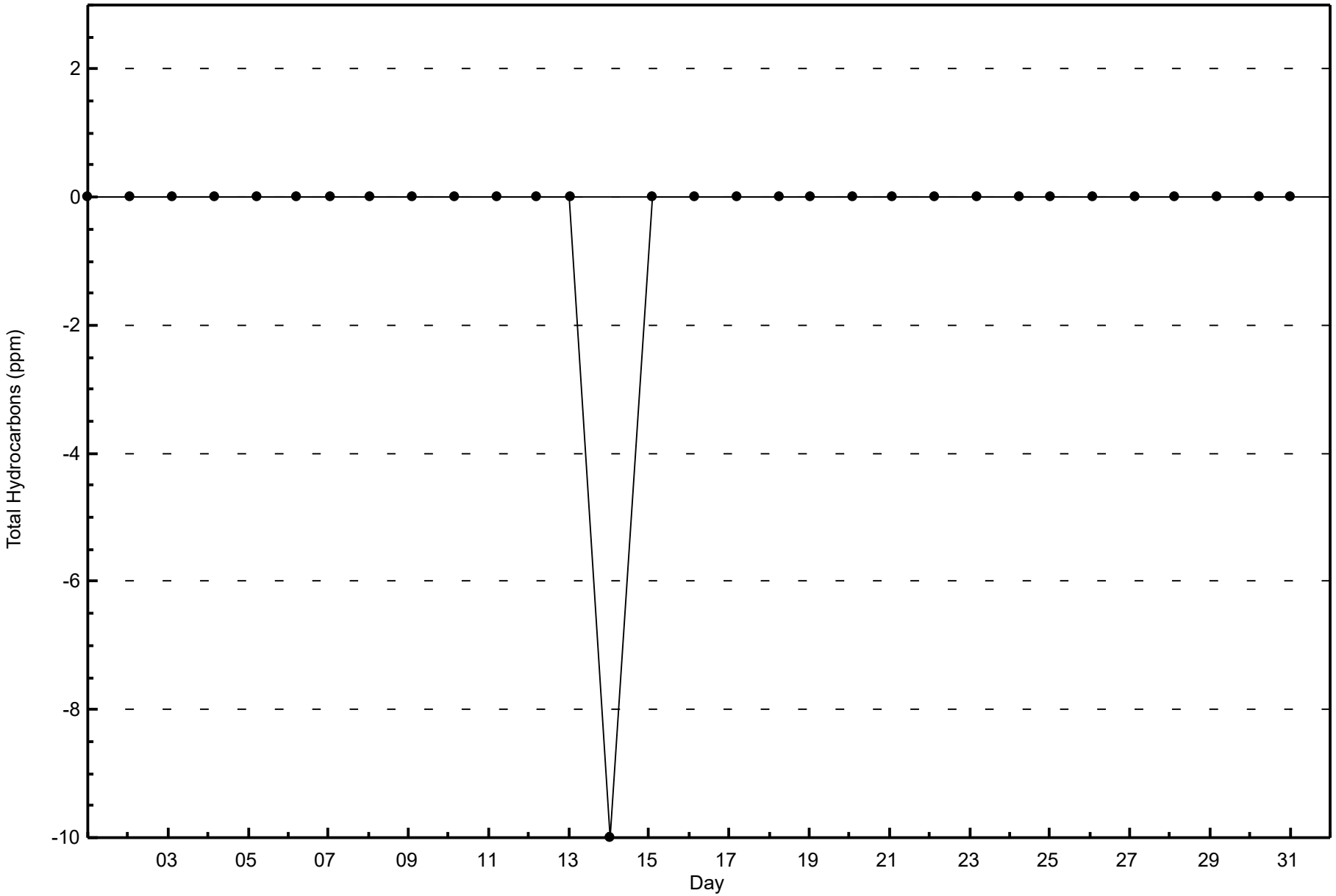
Total Number of Valid Hours: 681

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Patricia McInnes - March 2025

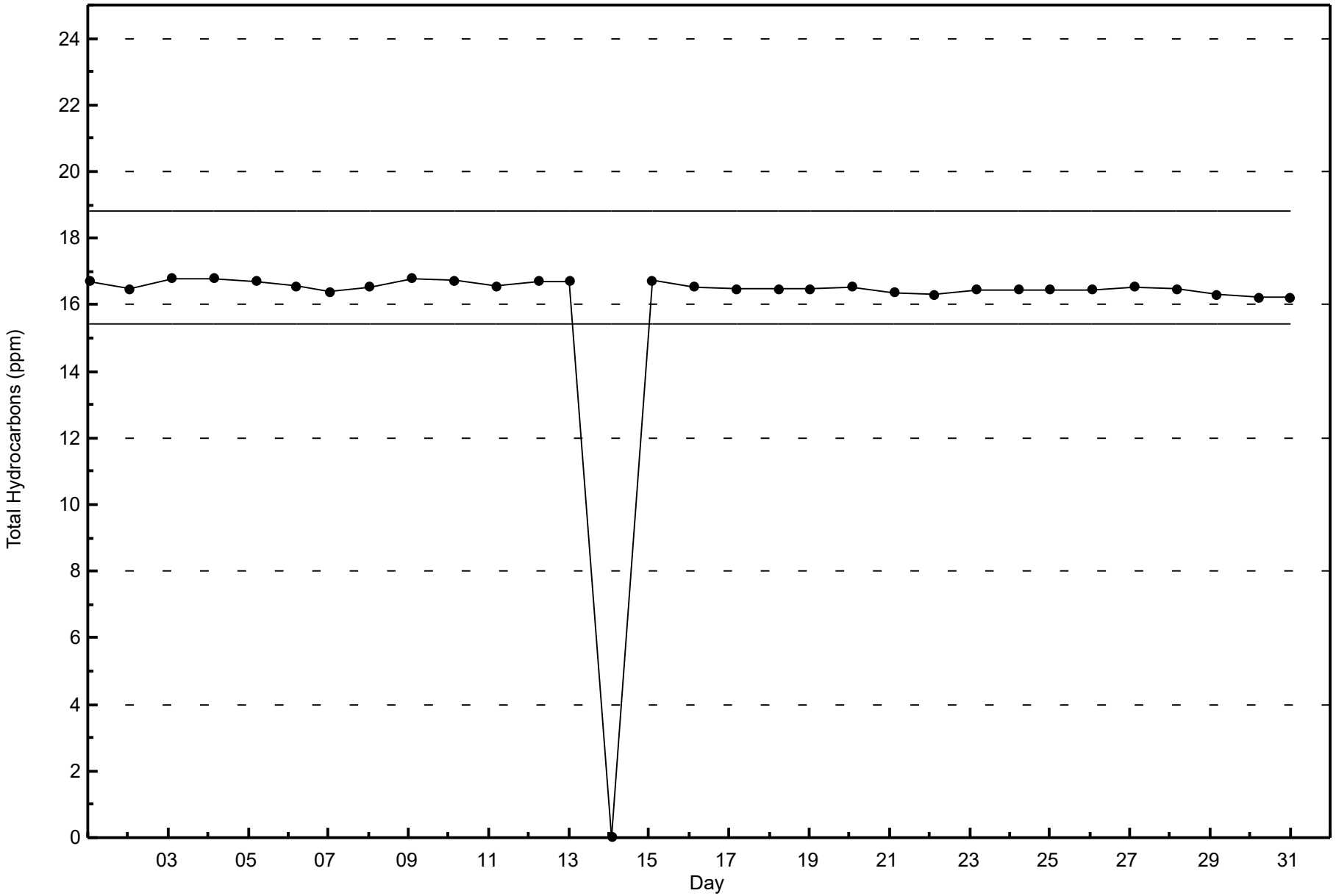


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Patricia McInnes - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Patricia McInnes - March 2025

Maximum Value: 0.257 ppm on Mar 19 06:00

Maximum Daily Average: 0.077 ppm on Mar 19

Minimum Value: 0.000 ppm on Mar 1 02:00

Minimum Daily Average: 0.000 ppm on Mar 9

Maximum Diurnal Average: 0.025 ppm at hour 8

Minimum Diurnal Average: 0.001 ppm at hour 15

Monthly Average: 0.010 ppm

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

Hours in Service:	744
Hours of Data:	681
Hours of Missing Data:	63
Hours of Calibration:	42
Percent Operational Time:	97.2

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.004	0.002	0.023	0.078	0.167	0.200	0.070	0.030	0.017	0.049	0.028	0.200
2-Mar	0.065	Z	0.001	0.000	0.000	0.000	0.002	0.000	0.000	0.086	0.148	0.147	0.096	0.000	0.000	0.000	0.000	0.012	0.034	0.000	0.000	0.000	0.000	0.000	0.026	0.148
3-Mar	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	0.004	0.000	0.003	0.000	0.002	0.005	0.000	0.001	0.005
4-Mar	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	0.006	0.006	0.001	0.006
5-Mar	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	0.001	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.010	0.001	0.001	0.010
6-Mar	0.005	0.005	0.002	0.000	0.000	Z	0.027	0.000	0.012	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.034	0.052	0.017	0.002	0.000	0.000	0.000	0.007	0.052
7-Mar	Z	0.208	0.165	0.064	0.000	0.000	0.000	0.000	0.025	0.042	0.016	0.004	0.004	0.003	0.004	0.070	0.224	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.036	0.224
8-Mar	0.000	Z	0.000	0.001	0.000	0.094	0.192	0.188	0.232	0.231	0.095	0.080	0.025	0.054	0.010	0.000	0.000	0.000	0.001	0.003	0.000	0.000	0.000	0.000	0.052	0.232
9-Mar	0.000	0.000	Z	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
10-Mar	0.000	0.000	0.000	Z	0.026	0.084	0.096	0.125	0.022	0.001	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.015	0.125
11-Mar	0.000	0.000	0.000	0.000	Z	0.025	0.032	0.034	0.003	0.013	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	0.005	0.034
12-Mar	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.006	0.000	0.001	0.009	0.005	0.009	0.009	0.006	0.002	0.009
13-Mar	Z	0.006	0.000	0.000	0.001	0.014	0.015	0.000	0.000	C	C	C	C	C	C	C	M	M	M	M	M	M	M	M	--	0.015
14-Mar	M	M	M	M	M	M	M	M	M	C	C	C	C	C	0.000	0.000	0.004	0.000	0.014	0.000	0.000	0.000	0.000	0.000	--	0.014
15-Mar	0.001	0.001	Z	0.000	0.000	0.002	0.000	0.001	0.000	0.000	0.024	0.010	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.001	0.003	0.002	0.000	0.002	0.024
16-Mar	0.000	0.000	0.000	Z	0.000	0.001	0.002	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007
17-Mar	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.011	0.000	0.000	0.000	0.001	0.003	M	0.002	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.001	0.011
18-Mar	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	0.004	0.006	0.000	0.000	0.000	0.006
19-Mar	Z	0.002	0.042	0.172	0.222	0.257	0.238	0.235	0.249	0.134	0.110	0.048	0.000	0.000	0.000	0.000	0.000	0.005	0.013	0.033	0.000	0.000	0.000	0.000	0.077	0.257
20-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	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	0.011	0.000	0.000	0.001	0.011
21-Mar	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	M	M	M	0.000	0.003	0.004	0.000	0.000	0.000	0.000	0.017	0.000	0.000	0.000	0.001	0.017
22-Mar	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.007	0.001	0.052	0.000	0.000	0.000	0.182	0.011	0.182
23-Mar	0.212	0.155	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.016	0.212
24-Mar	0.000	0.006	0.000	0.000	0.000	Z	0.000	0.000	0.006	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.006
25-Mar	Z	0.011	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.011
26-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
27-Mar	0.001	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	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
28-Mar	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.088	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	0.004	0.088
29-Mar	0.000	0.000	0.000	0.021	Z	0.009	0.007	0.043	0.003	0.000	0.000	0.000	0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.005	0.043
30-Mar	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.011	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.014
31-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.001	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.003
	0.012	0.015	0.008	0.010	0.010	0.019	0.021	0.025	0.019	0.018	0.014	0.010	0.006	0.002	0.001	0.003	0.009	0.005	0.009	0.011	0.003	0.002	0.002	0.008	Diurnal Average	
	0.212	0.208	0.165	0.172	0.222	0.257	0.238	0.235	0.249	0.231	0.148	0.147	0.096	0.054	0.010	0.070	0.224	0.078	0.167	0.200	0.070	0.030	0.017	0.182	Diurnal Maximum	

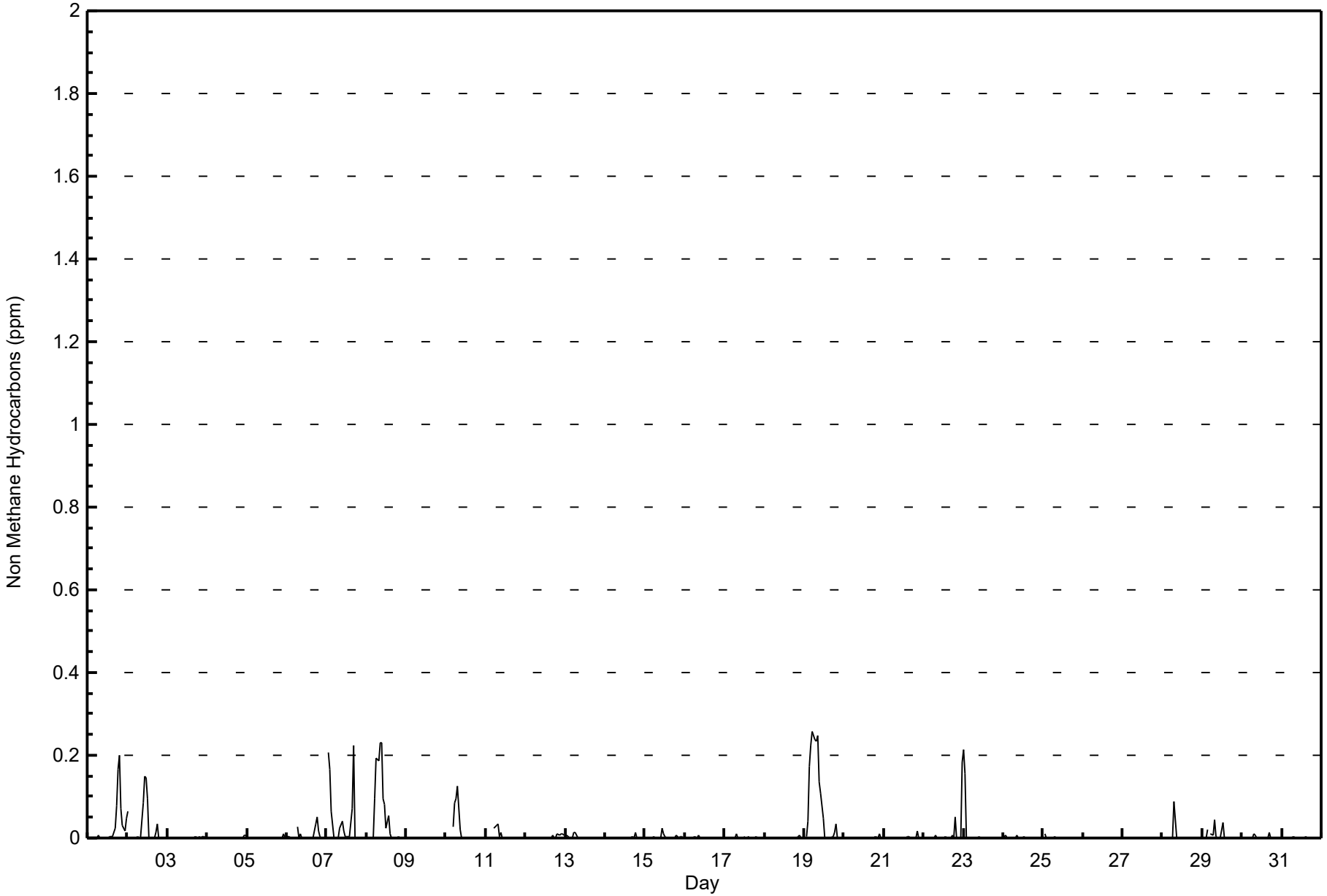
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Patricia McInnes - March 2025



Non Methane Hydrocarbons (NMHC) - ppm

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	584	85.76	85.76
0.006 - 0.05	61	8.96	94.71
0.06 - 0.1	18	2.64	97.36
> 0.1	18	2.64	100.00

Total Number of Valid Hours: 681

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Patricia McInnes - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.005	98	65	16	17	24	74	53	30	20	17	27	34	20	11	19	59	584
0.006 - 0.05	13	6	2	1	1	3	7	8	2	2	1	2	0	4	4	5	61
0.06 - 0.1	5	3	0	0	1	0	1	0	1	0	1	0	0	0	1	5	18
> 0.1	2	0	0	0	0	1	1	0	1	2	1	1	0	0	1	8	18
Totals	118	74	18	18	26	78	62	38	24	21	30	37	20	15	25	77	681

Total Number of Valid Hours: 681

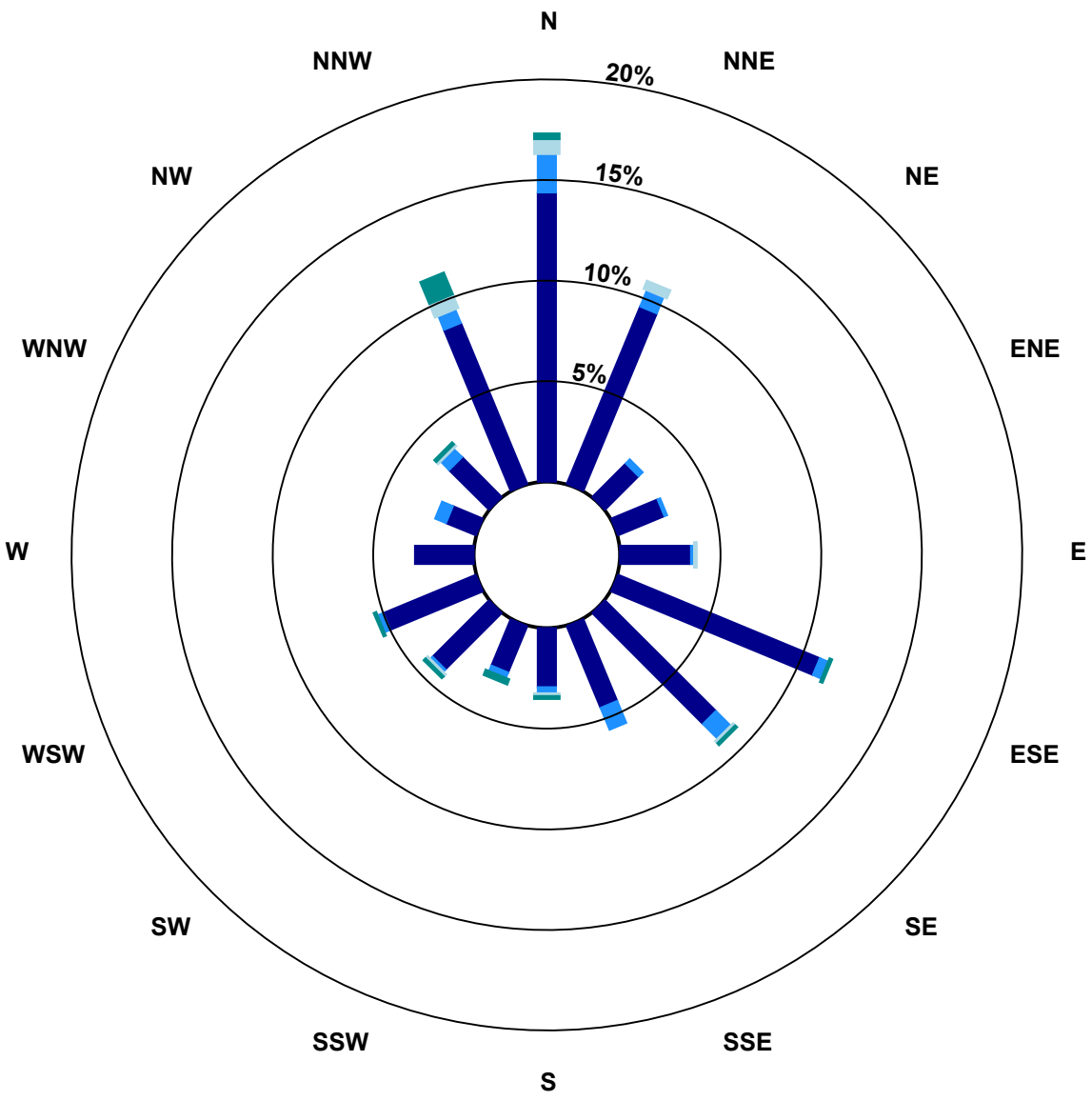
Total Number of Hours: 744

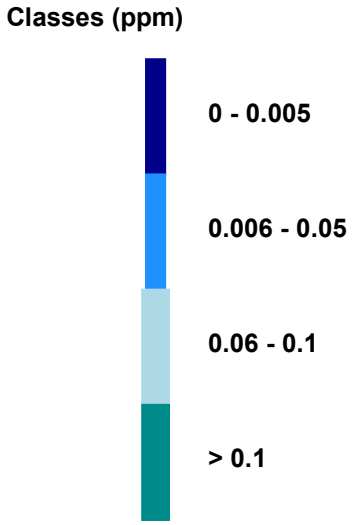
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Non Methane Hydrocarbons (NMHC) - ppm

Patricia McInnes





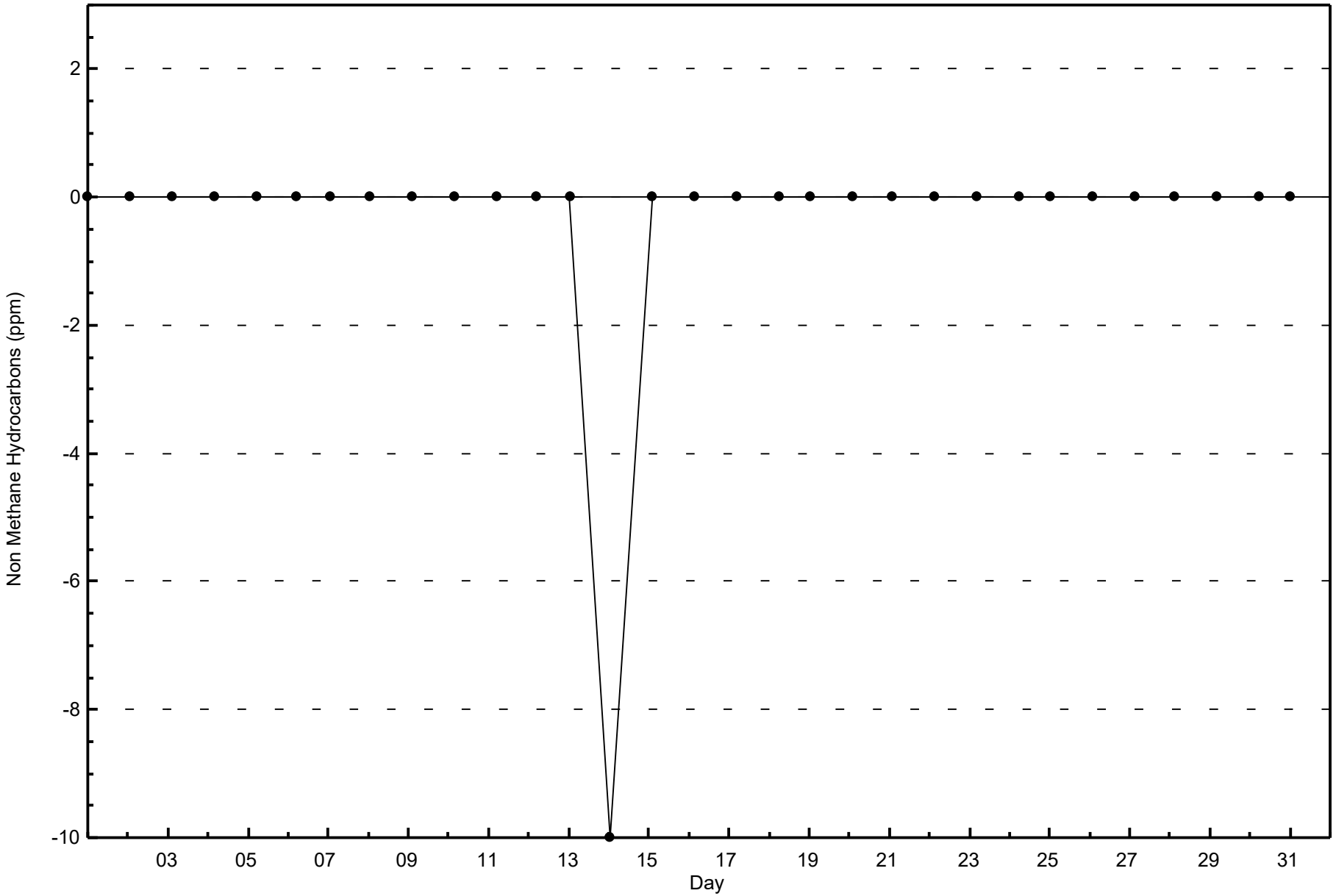
Total Number of Valid Hours: 681

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Patricia McInnes - March 2025

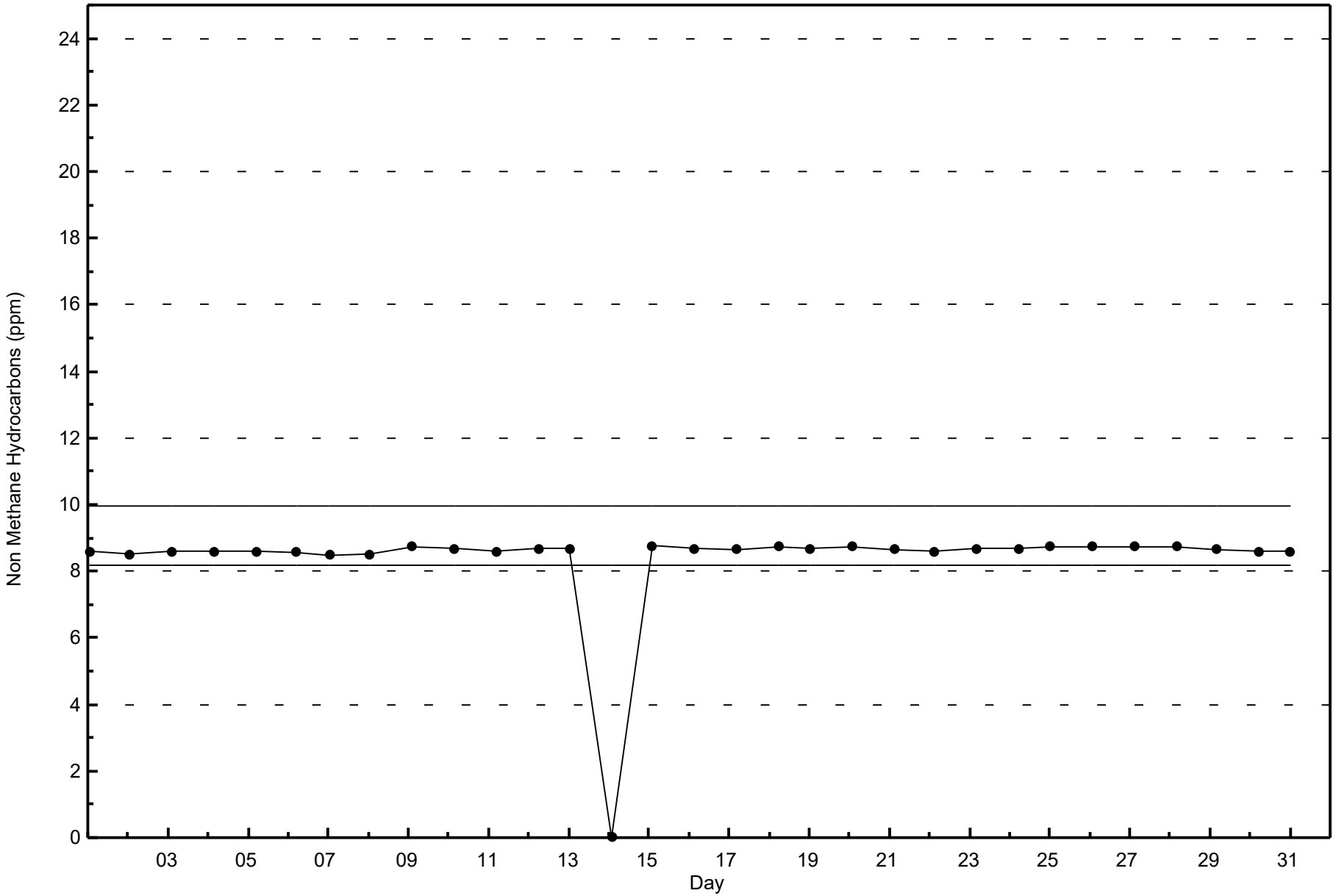


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Patricia McInnes - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Patricia McInnes - March 2025

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

Maximum Value: 2.6 ppm on Mar 7 02:00

Maximum Daily Average: 2.2 ppm on Mar 19

Minimum Value: 1.9 ppm on Mar 6 22:00

Minimum Daily Average: 2.0 ppm on Mar 9

Maximum Diurnal Average: 2.1 ppm at hour 10

Minimum Diurnal Average: 2.0 ppm at hour 18

Monthly Average: 2.04 ppm

Percentiles: P_1 = 1.9 P_{10} = 2.0 Q_1 = 2.0 Median = 2.0 Q_3 = 2.1 P_{90} = 2.1 P_{99} = 2.4

Hours in Service:	744
Hours of Data:	681
Hours of Missing Data:	63
Hours of Calibration:	42
Percent Operational Time:	97.2

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	Z	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.0	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-Mar	2.1	Z	2.2	2.0	2.0	2.2	2.1	2.0	2.0	2.4	2.4	2.4	2.2	2.0	1.9	1.9	1.9	2.0	2.2	2.0	2.0	2.0	2.0	2.0	2.1	2.4
3-Mar	2.0	2.0	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1
4-Mar	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	1.9	2.0	2.1	2.1	2.0	2.1
5-Mar	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1
6-Mar	2.1	2.1	2.1	2.1	2.0	Z	2.1	2.1	2.2	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.2
7-Mar	Z	2.6	2.4	2.2	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.4	2.1	2.0	2.0	2.0	2.0	2.0	1.9	2.1	2.6
8-Mar	2.0	Z	2.0	2.0	2.0	2.1	2.2	2.3	2.3	2.4	2.3	2.3	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.4
9-Mar	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-Mar	2.0	2.0	2.0	Z	2.0	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.2
11-Mar	1.9	1.9	1.9	1.9	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	1.9	2.0	2.0	2.0	2.0	2.0	2.1
12-Mar	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	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.1
13-Mar	Z	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	C	C	C	C	C	C	C	M	M	M	M	M	M	M	M	--	2.0
14-Mar	M	M	M	M	M	M	M	M	M	C	C	C	C	C	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	--	2.2
15-Mar	2.1	2.1	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.2
16-Mar	2.1	2.1	2.1	Z	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2
17-Mar	2.0	2.0	2.0	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	M	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
18-Mar	2.1	2.1	2.1	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.1
19-Mar	Z	2.3	2.2	2.3	2.2	2.3	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.3
20-Mar	2.0	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	2.1	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.0	2.0	2.1
21-Mar	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	M	M	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
22-Mar	2.0	2.0	2.0	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	2.1	2.1	2.0	2.0	2.0	2.2	2.0	2.2
23-Mar	2.2	2.2	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.0	2.0	2.2
24-Mar	2.1	2.2	2.0	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	2.2
25-Mar	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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
27-Mar	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	2.0	2.1
28-Mar	2.0	2.1	2.1	Z	2.1	2.1	2.1	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2
29-Mar	2.0	2.0	2.1	2.2	Z	2.4	2.4	2.4	2.3	2.3	2.3	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.4
30-Mar	2.0	2.0	2.0	2.1	2.1	Z	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
31-Mar	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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	2.1	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	Diurnal Average	
	2.2	2.6	2.4	2.3	2.2	2.4	2.4	2.4	2.3	2.4	2.4	2.4	2.2	2.2	2.1	2.2	2.4	2.1	2.2	2.2	2.1	2.1	2.2	2.2	Diurnal Maximum	

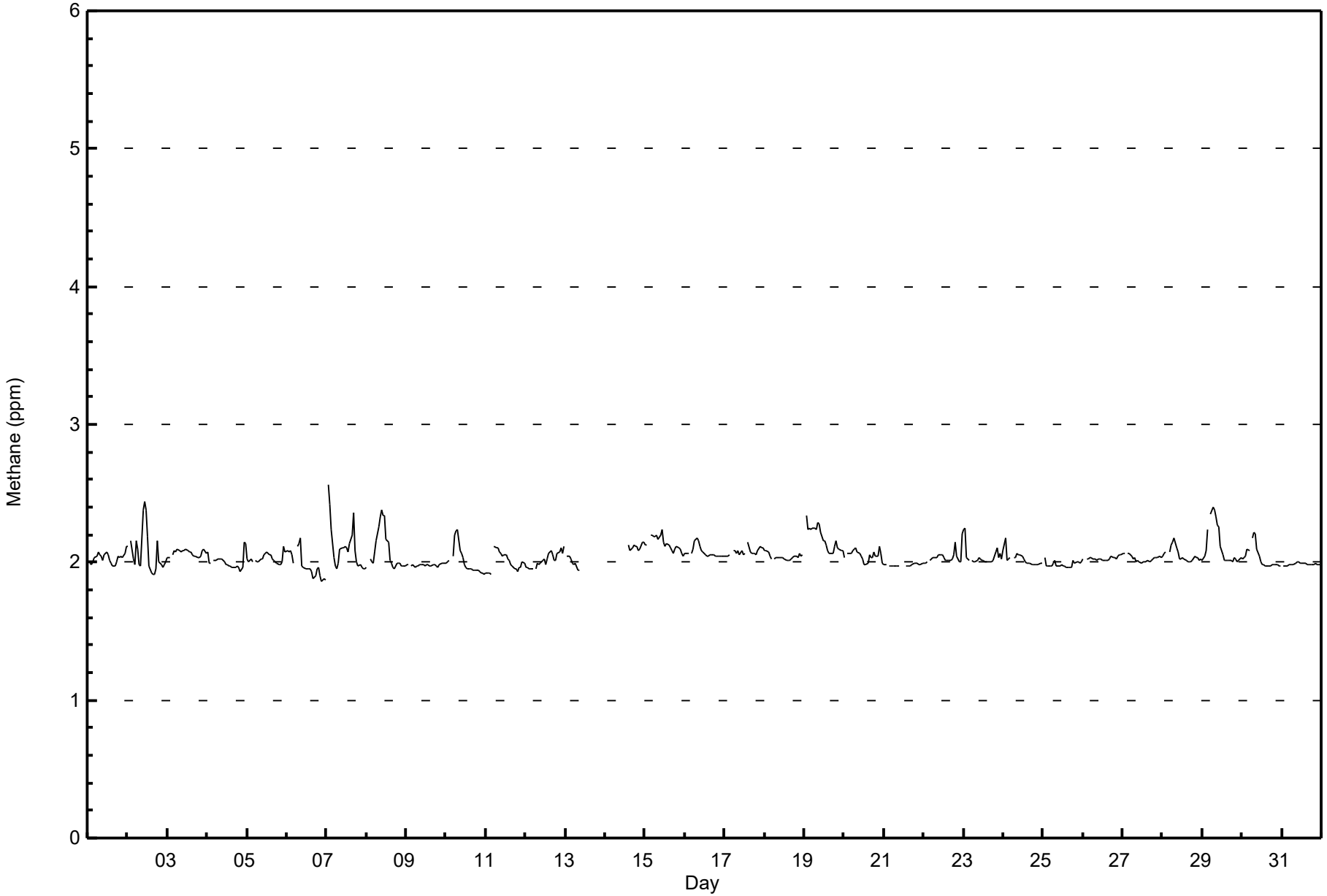
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Patricia McInnes - March 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	438	64.32	64.32
2.1 - 3.0	243	35.68	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 681

Total Number of Hours: 744

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	65	58	8	12	15	65	44	22	10	7	25	29	16	7	10	45	438
2.1 - 3.0	53	16	10	6	11	13	18	16	14	14	5	8	4	8	15	32	243
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	118	74	18	18	26	78	62	38	24	21	30	37	20	15	25	77	681

Total Number of Valid Hours: 681

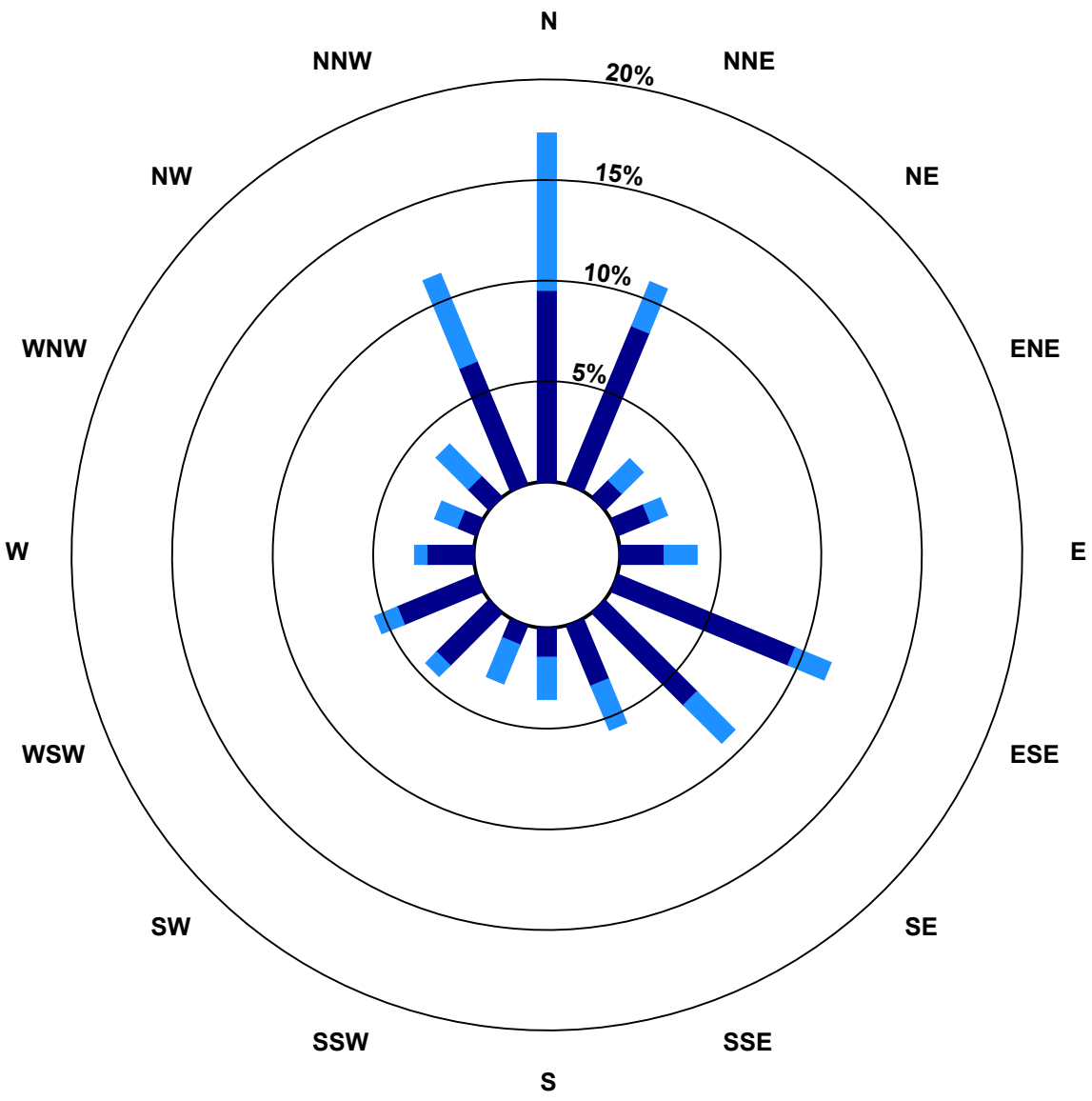
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Methane (CH_4) - ppm

Patricia McInnes



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

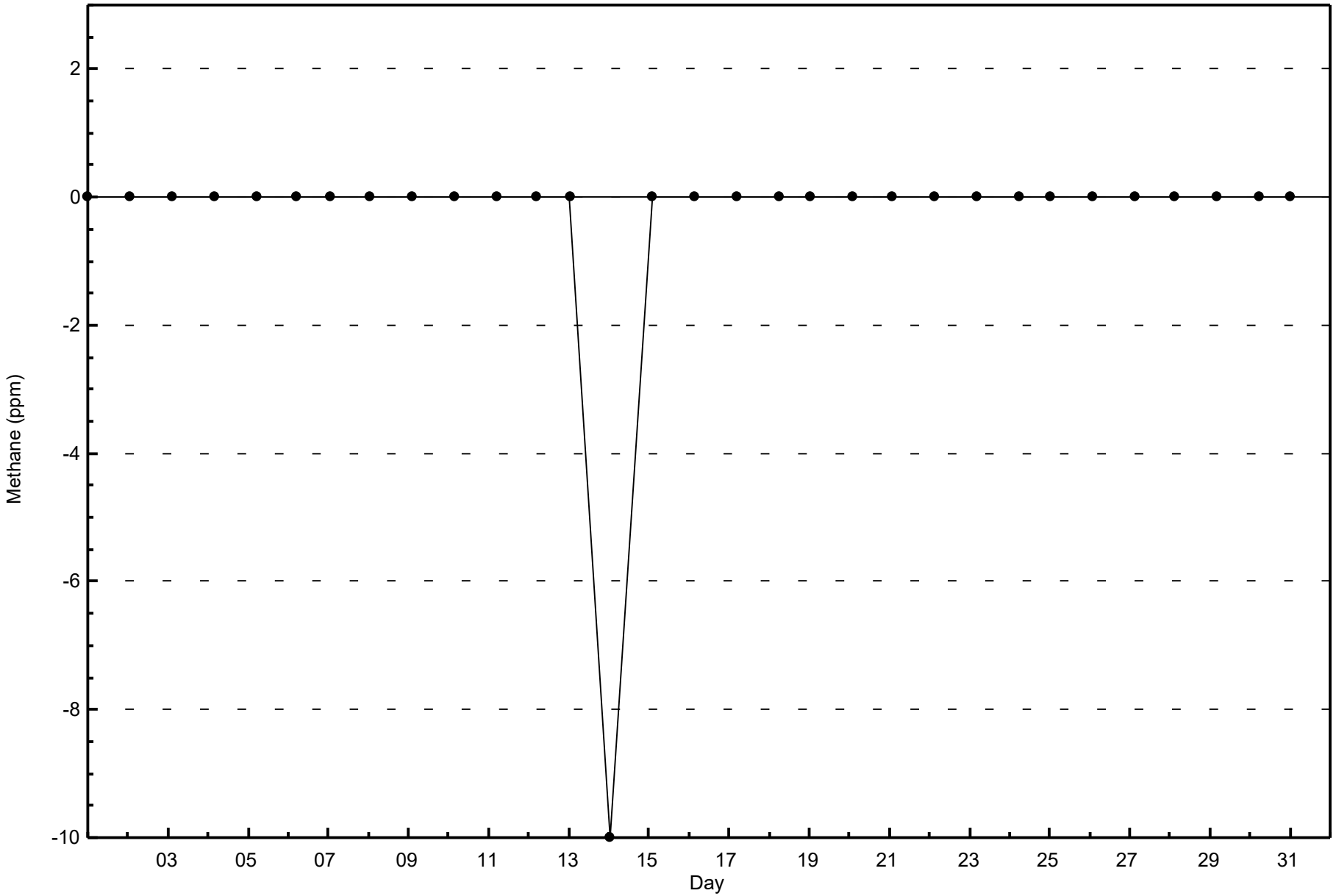
Total Number of Valid Hours: 681

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Patricia McInnes - March 2025

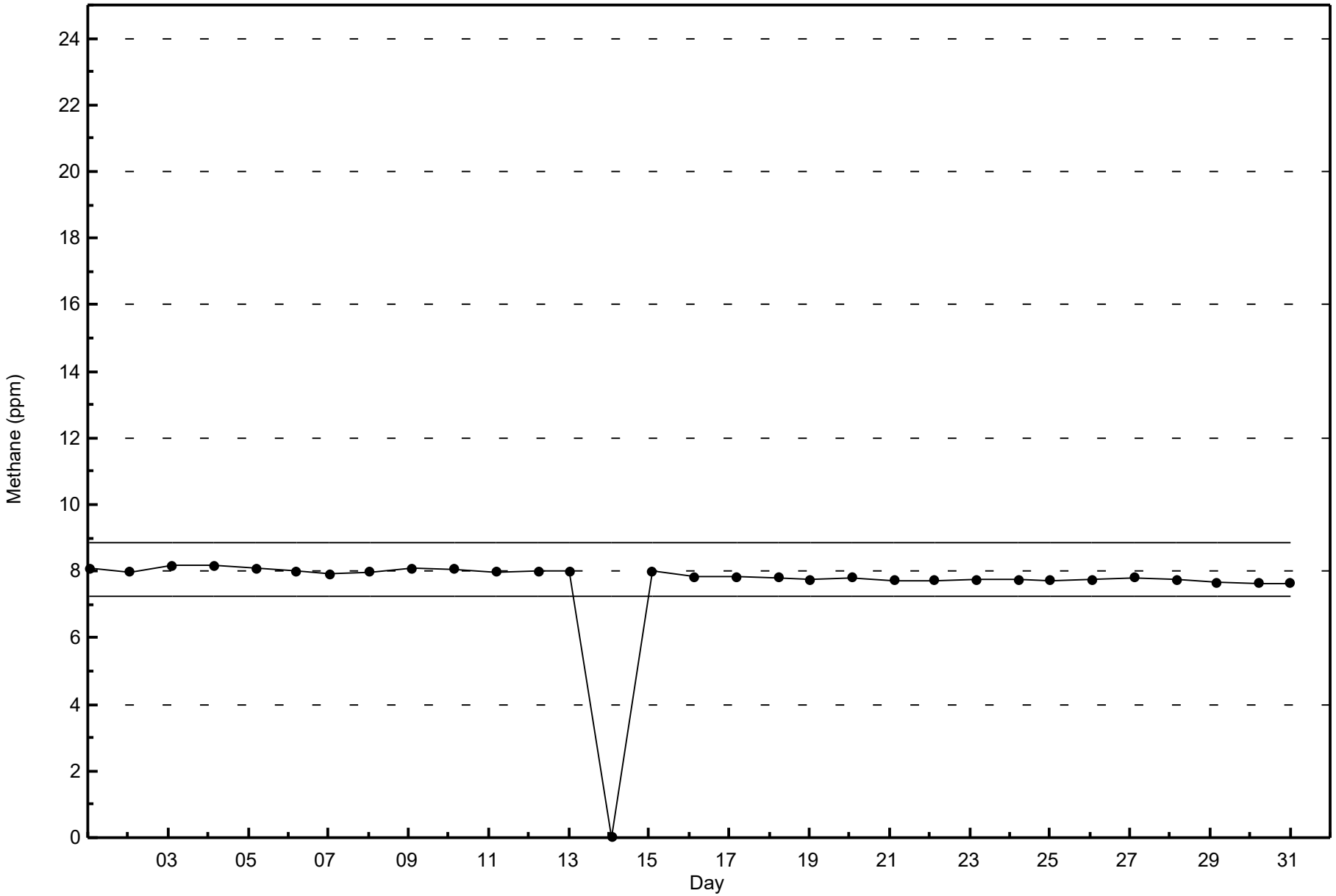


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Patricia McInnes - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Patricia McInnes - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 49.0 ppb on Mar 24 15:00
Maximum Daily Average: 41.3 ppb on Mar 21

Minimum Value: 2.7 ppb on Mar 29 06:00
Maximum Diurnal Average: 38.2 ppb at hour 16
Monthly Average: 31.57 ppb
Minimum Daily Average: 21.0 ppb on Mar 1
Minimum Diurnal Average: 23.5 ppb at hour 7
Percentiles: P_1 = 6.0 P_{10} = 18.4 Q_1 = 27.0 Median = 32.9 Q_3 = 38.2 P_{90} = 41.6 P_{99} = 47.9

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	30.9	29.4	Z	26.8	16.3	9.2	4.4	11.5	17.4	22.5	23.9	25.4	26.6	31.0	34.6	38.4	32.8	21.7	13.4	10.4	19.2	13.6	14.3	8.2	21.0	38.4
2-Mar	10.2	15.4	10.8	Z	26.7	16.1	20.6	32.1	30.0	16.2	16.9	21.0	30.0	41.0	45.4	45.9	43.6	41.3	23.9	33.5	37.8	41.2	40.1	38.2	29.5	45.9
3-Mar	36.2	34.2	32.8	32.6	Z	30.4	29.8	29.5	28.3	28.2	28.2	26.1	30.1	33.0	33.8	32.7	31.1	30.1	25.6	26.3	25.9	12.6	12.5	21.9	28.3	36.2
4-Mar	23.8	38.6	38.2	37.9	37.1	Z	35.2	34.1	35.1	36.1	36.8	39.3	43.1	44.7	44.1	45.2	44.0	40.2	38.6	40.0	43.7	42.0	24.4	23.5	37.6	45.2
5-Mar	Z	33.8	33.9	36.0	37.7	35.4	37.9	38.9	37.3	39.3	39.6	39.6	39.7	39.9	39.1	38.3	37.3	35.2	33.4	35.3	33.7	24.1	20.6	24.8	35.3	39.9
6-Mar	22.9	Z	22.6	23.0	26.7	19.5	14.0	10.3	21.0	34.0	36.8	37.1	38.4	38.8	39.2	40.1	44.5	30.7	18.4	15.2	27.7	38.9	39.2	41.1	29.6	44.5
7-Mar	39.3	2.8	Z	11.5	26.0	28.4	30.0	28.9	29.0	28.7	28.1	27.0	28.6	31.4	26.9	19.8	16.4	27.1	33.1	35.1	34.3	34.8	35.4	35.6	27.7	39.3
8-Mar	35.2	31.5	28.7	Z	27.2	22.3	17.5	15.5	16.6	15.4	19.1	22.9	27.5	29.5	33.5	38.7	40.8	40.5	37.8	36.5	36.6	37.9	37.0	34.3	29.7	40.8
9-Mar	31.8	29.2	26.3	23.4	Z	26.8	27.8	29.2	27.3	27.7	27.7	27.9	27.6	29.1	29.2	28.9	27.1	25.6	26.0	25.7	23.0	20.9	20.4	19.7	26.4	31.8
10-Mar	17.6	16.3	16.3	16.6	14.5	Z	3.9	8.3	13.0	16.4	20.6	24.1	27.1	28.9	29.5	30.4	30.7	28.5	27.5	27.7	27.4	32.9	33.8	33.7	22.9	33.8
11-Mar	Z	31.0	28.3	29.0	19.1	6.5	7.6	11.8	17.2	20.0	20.7	22.4	24.1	24.4	27.0	29.2	29.7	30.1	29.2	30.4	30.9	31.9	29.1	28.9	24.3	31.9
12-Mar	30.6	Z	31.6	32.8	32.8	33.1	30.8	27.2	29.9	30.6	31.0	32.5	35.3	33.0	31.0	32.0	32.3	31.3	30.4	26.5	24.3	19.0	19.3	15.5	29.2	35.3
13-Mar	18.6	17.7	18.8	17.1	Z	13.3	17.3	25.1	30.2	32.2	32.6	35.0	36.3	37.2	23.7	21.7	26.2	37.2	35.7	34.3	33.1	29.9	26.5	29.9	27.4	37.2
14-Mar	31.2	30.1	30.4	Z	32.0	31.4	31.5	31.6	29.6	29.0	29.9	31.4	30.7	32.7	33.9	35.2	32.3	32.6	32.2	32.8	36.5	37.6	37.7	37.8	32.6	37.8
15-Mar	35.5	31.4	24.0	21.3	Z	20.1	19.4	14.2	25.3	29.5	30.4	36.1	37.3	36.3	36.4	36.4	36.7	36.4	22.3	9.5	14.5	24.5	33.9	35.7	28.1	37.3
16-Mar	31.6	30.0	31.4	31.0	28.6	Z	6.0	13.4	22.6	32.4	35.4	36.9	38.7	39.7	39.5	39.6	40.0	38.7	38.8	39.7	39.8	40.5	40.0	39.6	33.6	40.5
17-Mar	Z	38.7	37.7	36.7	31.0	24.3	27.2	26.0	25.3	C	C	C	C	M	31.1	35.5	36.5	35.8	33.7	33.1	28.9	26.1	30.1	31.3	31.6	38.7
18-Mar	31.3	Z	28.0	34.4	38.1	38.1	37.0	35.4	34.3	37.6	39.8	40.8	41.6	41.9	41.8	41.0	39.0	35.1	22.2	24.6	29.3	25.0	28.4	28.9	34.5	41.9
19-Mar	21.7	9.7	Z	12.2	7.7	5.5	6.4	10.5	14.2	18.9	23.1	28.8	30.2	31.9	34.5	37.7	36.0	30.8	20.2	22.7	29.6	30.6	29.7	32.0	22.8	37.7
20-Mar	35.4	33.6	31.5	Z	30.2	27.1	24.6	26.2	30.8	34.4	37.2	39.5	42.8	43.5	41.2	35.4	36.8	34.3	27.3	32.4	36.7	29.2	32.3	41.6	34.1	43.5
21-Mar	42.0	41.7	41.4	40.7	Z	39.3	39.5	39.2	39.3	40.3	41.0	41.4	42.8	43.5	44.1	44.3	43.5	40.9	39.4	38.4	40.2	41.7	42.3	42.1	41.3	44.3
22-Mar	41.4	41.6	39.9	38.8	38.5	Z	36.1	35.9	36.0	35.0	35.2	37.3	41.5	43.3	45.1	45.7	42.7	39.5	38.3	34.0	41.0	44.3	44.5	25.3	39.2	45.7
23-Mar	Z	17.9	36.9	37.0	34.3	33.3	34.4	33.5	32.9	35.9	42.1	42.3	43.1	44.8	45.9	45.6	44.9	43.6	37.8	24.0	27.1	35.5	35.0	39.7	36.8	45.9
24-Mar	35.5	Z	42.4	40.8	39.8	38.5	36.9	35.5	35.2	34.6	36.8	39.5	47.0	48.4	49.0	47.9	45.2	43.1	42.7	41.0	36.2	33.7	28.8	28.5	39.4	49.0
25-Mar	31.5	28.5	Z	34.2	33.5	32.4	30.3	27.2	32.2	33.4	35.3	36.5	38.9	42.8	46.0	48.1	48.3	48.2	37.5	36.1	36.1	36.9	36.6	36.5	36.8	48.3
26-Mar	37.0	35.7	34.4	Z	28.9	26.4	26.2	27.5	29.3	30.7	33.0	34.4	33.9	33.9	35.2	35.5	34.9	35.9	36.1	34.4	32.4	31.3	31.4	31.3	32.6	37.0
27-Mar	31.4	29.5	31.5	31.6	Z	29.4	32.9	34.1	36.9	36.6	39.6	41.5	40.5	40.4	40.8	39.5	37.7	35.6	34.0	32.5	34.5	34.5	33.1	31.5	35.2	41.5
28-Mar	30.1	26.8	23.4	24.2	22.4	Z	16.2	22.2	28.4	29.8	35.8	38.1	36.9	38.4	40.7	42.0	41.8	39.8	35.4	31.9	34.4	35.4	35.4	32.0	32.2	42.0
29-Mar	Z	31.5	25.5	9.4	6.9	2.7	5.5	10.9	19.0	20.1	23.2	25.4	34.0	39.0	40.4	41.0	41.1	41.1	38.4	24.3	26.5	33.1	25.6	25.4	25.7	41.1
30-Mar	31.3	Z	18.4	16.5	11.2	3.3	6.6	11.1	18.5	27.1	32.3	39.0	42.2	45.4	47.3	47.9	48.2	47.5	43.9	40.4	41.3	42.9	45.8	45.1	32.8	48.2
31-Mar	45.0	44.4	Z	43.1	40.3	37.7	35.1	36.5	37.3	35.1	37.0	37.3	38.4	41.2	43.5	44.5	44.0	42.6	41.1	40.0	40.4	41.0	41.2	40.8	40.3	45.0
	31.1	28.9	29.4	28.4	27.5	24.2	23.5	25.0	27.7	29.6	31.6	33.5	35.8	37.6	37.8	38.2	37.6	36.2	32.1	30.6	32.4	32.4	31.8	31.6	Diurnal Average	
	45.0	44.4	42.4	43.1	40.3	39.3	39.5	39.2	39.3	40.3	42.1	42.3	47.0	48.4	49.0	48.1	48.3	48.2	43.9	41.0	43.7	44.3	45.8	45.1	Diurnal Maximum	

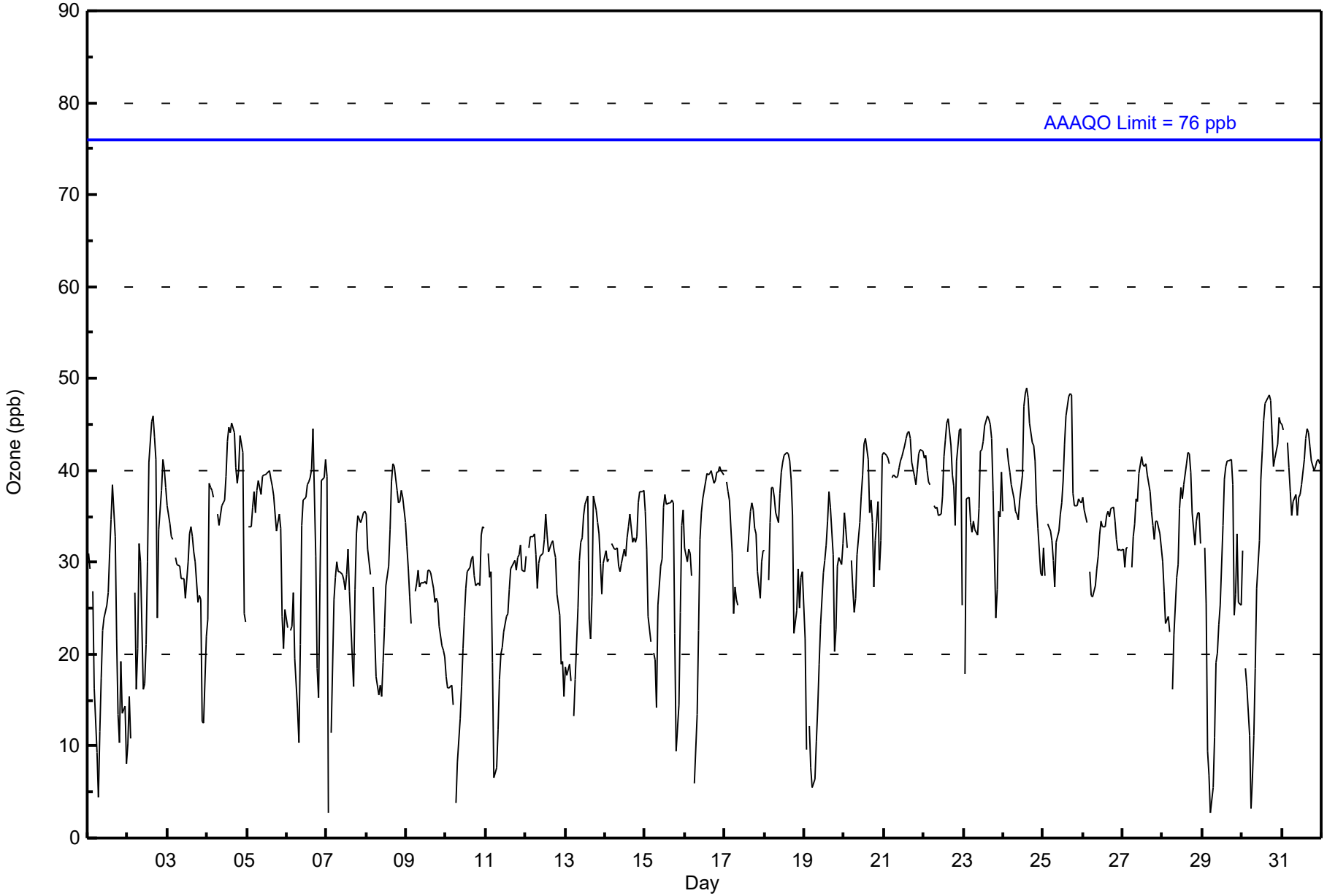
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Patricia McInnes - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	91	12.85	12.85
21 - 50	617	87.15	100.00
51 - 82	0	0.00	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Ozone (O_3) - ppb

Patricia McInnes - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	15	6	1	1	2	1	4	10	10	6	3	6	1	3	4	18	91
21 - 50	112	77	18	18	25	79	60	28	14	14	27	33	19	11	19	63	617
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	127	83	19	19	27	80	64	38	24	20	30	39	20	14	23	81	708

Total Number of Valid Hours: 708

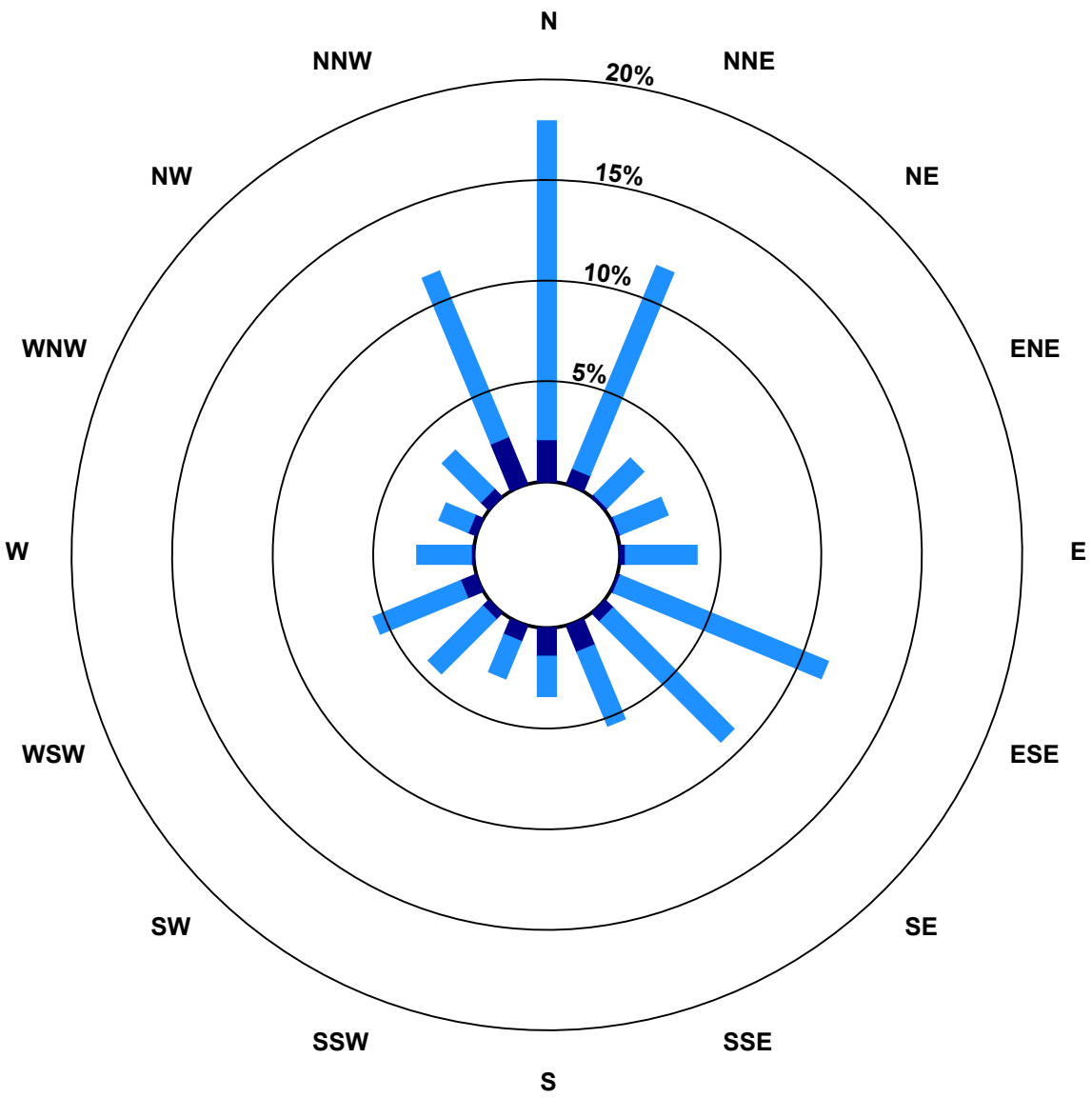
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Ozone (O_3) - ppb

Patricia McInnes



Classes (ppb)

0 - 20

21 - 50

51 - 82

> 83

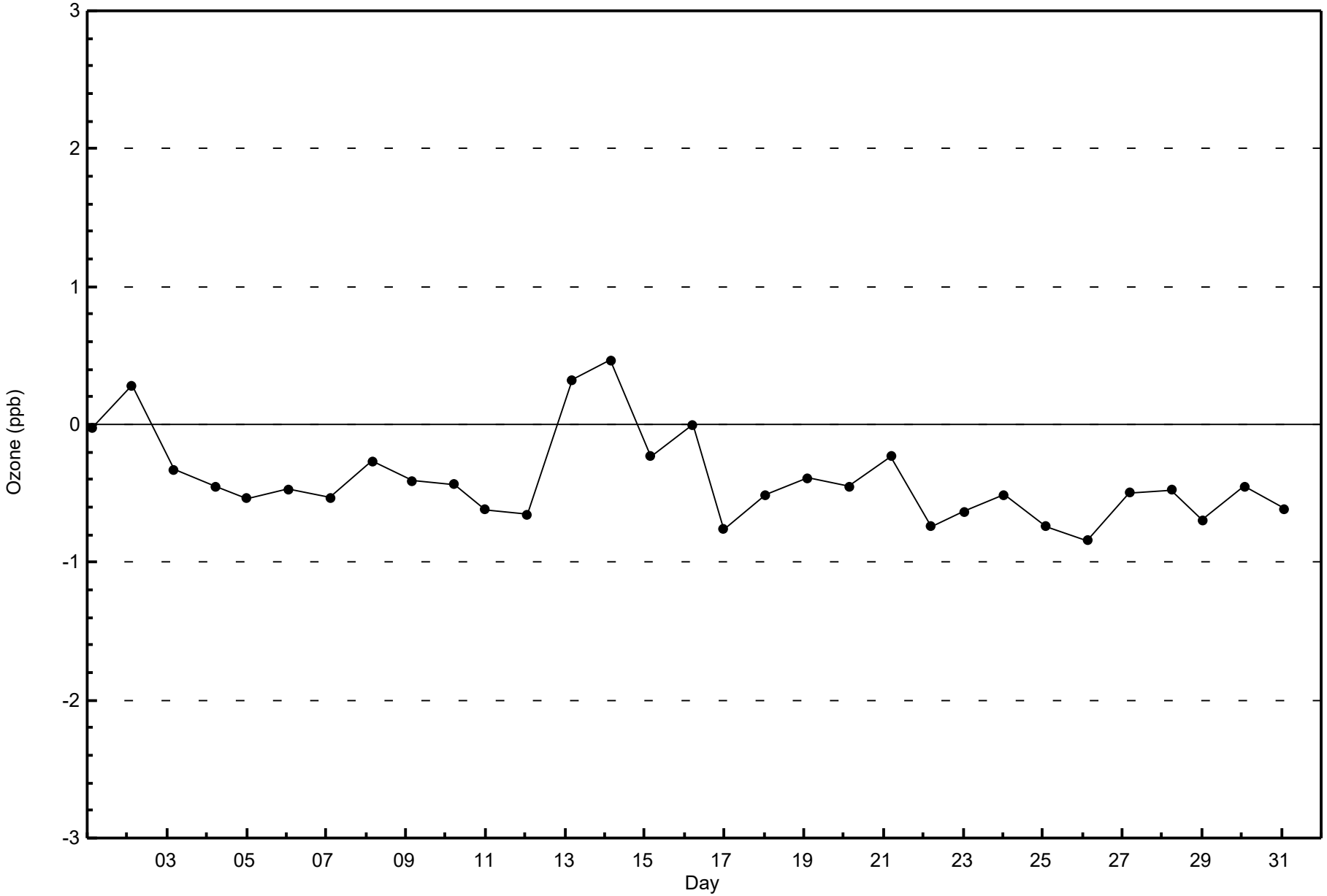
Total Number of Valid Hours: 708

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Patricia McInnes - March 2025

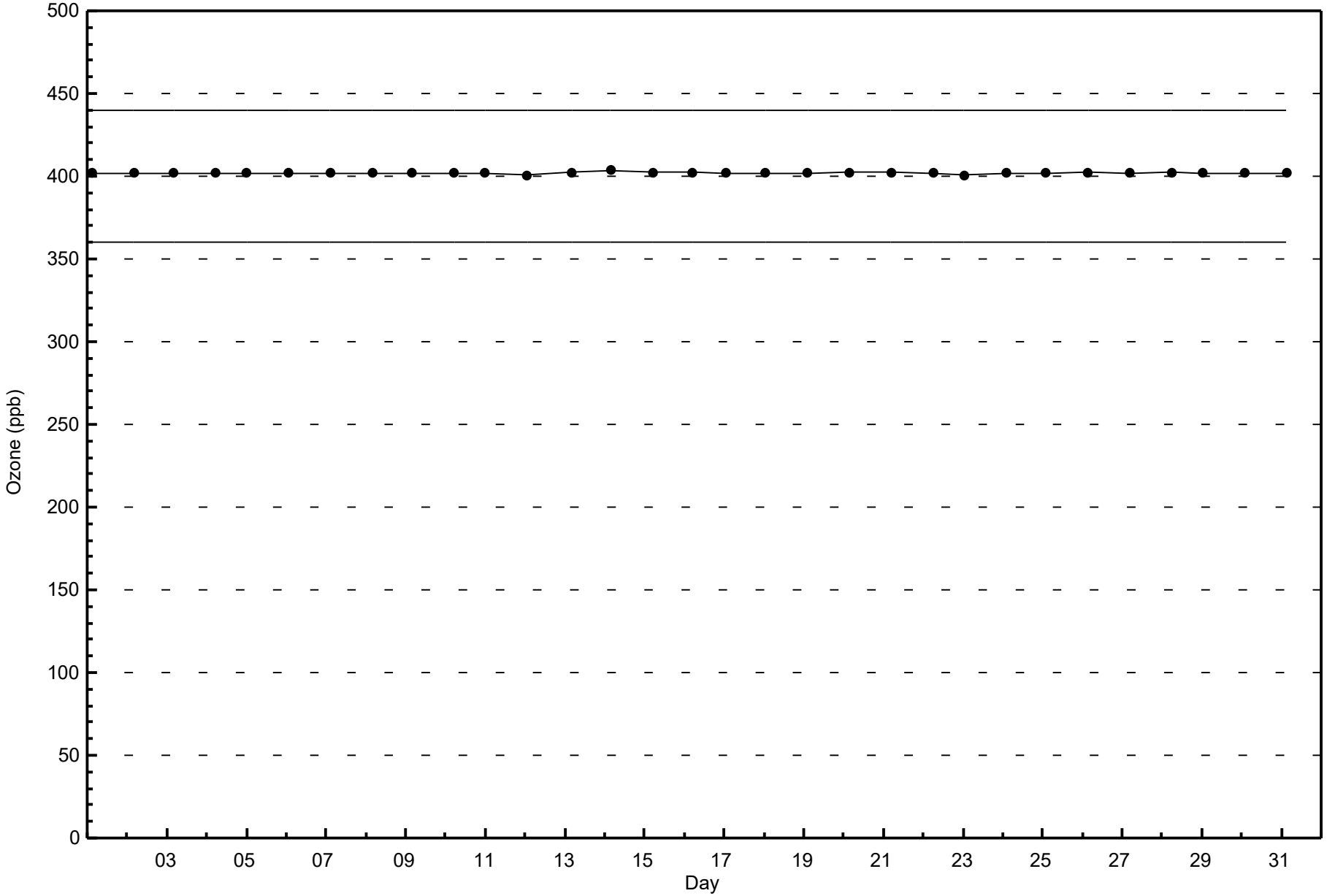


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Patricia McInnes - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Patricia McInnes - March 2025

Maximum Value: 36.0 ppb on Mar 19 09:00

Maximum Daily Average: 7.2 ppb on Mar 19

Minimum Value: 0.0 ppb on Mar 2 23:00

Minimum Daily Average: 0.2 ppb on Mar 25

Maximum Diurnal Average: 6.0 ppb at hour 9

Minimum Diurnal Average: 0.3 ppb at hour 2

Monthly Average: 2.28 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.3 Median = 0.9 Q_3 = 2.6 P_{90} = 6.0 P_{99} = 21.2

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	37
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.6	0.3	0.4	0.7	Z	4.3	9.8	5.8	6.5	6.0	5.8	5.0	5.2	3.2	2.8	1.7	2.8	3.3	2.8	7.0	0.2	4.2	4.5	5.4	3.8	9.8
2-Mar	3.7	1.2	2.0	0.3	0.6	Z	1.8	0.3	0.8	8.1	10.4	11.0	7.9	1.7	0.1	0.1	0.3	0.2	0.5	0.2	0.1	0.2	0.0	0.1	2.2	11.0
3-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6	1.0	1.5	5.2	3.0	2.6	2.7	3.1	3.5	3.3	3.5	1.4	2.1	3.2	1.8	1.2	1.7	5.2
4-Mar	0.9	Z	0.2	0.4	0.5	0.5	0.5	0.7	0.7	0.4	C	C	C	C	C	C	0.2	0.3	0.3	0.1	0.0	0.0	0.0	0.0	--	0.9
5-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.5	1.5	2.1	2.7	2.9	2.5	3.0	2.8	2.2	1.7	1.9	1.4	1.4	0.8	3.6	1.5	1.4	3.6
6-Mar	0.0	0.0	0.0	Z	0.1	0.0	3.4	5.6	7.4	2.7	1.4	2.0	1.4	1.3	1.7	1.4	0.4	4.9	3.8	3.3	0.2	0.4	0.6	0.4	1.8	7.4
7-Mar	0.5	2.4	1.6	0.2	Z	0.2	0.2	0.5	1.7	2.7	5.2	8.3	7.4	5.2	7.1	12.5	13.1	1.6	0.0	0.0	0.0	0.0	0.2	0.2	3.1	13.1
8-Mar	0.1	0.0	0.0	0.1	0.2	Z	0.4	3.4	14.7	25.2	16.1	17.9	11.7	9.4	6.5	2.1	0.9	0.7	0.5	0.1	0.1	0.0	0.0	0.1	4.8	25.2
9-Mar	Z	0.0	0.0	0.2	0.5	0.6	0.3	0.7	1.7	1.7	2.3	2.4	3.1	3.7	2.5	1.9	1.7	1.0	0.1	0.0	0.2	0.1	0.0	0.1	1.1	3.7
10-Mar	0.1	Z	0.3	0.3	0.1	1.3	2.4	6.8	9.8	9.9	6.7	3.9	2.6	2.6	3.0	2.6	2.0	3.3	1.1	0.8	1.5	0.3	0.4	0.5	2.7	9.9
11-Mar	0.3	0.4	Z	0.7	0.7	2.9	2.4	4.5	6.5	8.4	9.5	11.1	10.7	8.5	5.0	2.8	1.6	0.9	0.8	0.4	0.3	0.3	0.2	0.3	3.4	11.1
12-Mar	0.4	0.4	0.3	Z	0.5	0.5	1.3	2.3	2.5	2.9	3.8	5.1	3.1	7.2	9.8	7.7	6.2	2.1	0.5	0.4	0.3	0.7	0.9	0.2	2.6	9.8
13-Mar	0.2	0.3	0.2	1.3	2.1	2.9	Z	2.3	2.6	2.4	2.9	1.7	2.3	1.3	9.8	6.8	3.0	1.9	1.1	0.6	0.2	0.4	0.4	0.2	2.0	9.8
14-Mar	0.1	0.2	0.3	0.1	0.2	Z	0.3	1.2	1.8	3.4	4.2	3.8	5.7	3.5	2.0	1.0	1.3	0.7	0.2	0.5	0.2	0.1	0.0	0.1	1.3	5.7
15-Mar	Z	0.1	0.2	0.3	0.2	0.6	2.1	9.3	4.9	5.1	7.5	4.9	4.6	5.6	4.7	3.3	3.0	2.0	3.7	9.1	5.4	3.0	0.3	0.2	3.5	9.3
16-Mar	0.4	Z	0.5	0.4	0.7	2.0	14.8	9.7	12.3	4.0	2.3	2.8	2.8	2.2	1.9	1.2	1.1	2.0	1.1	0.8	0.7	0.6	0.4	0.5	2.8	14.8
17-Mar	0.6	0.5	Z	0.7	1.0	2.9	0.8	5.7	5.0	1.4	5.3	2.0	1.3	M	6.0	2.2	1.6	1.4	1.0	0.6	0.8	1.0	0.5	0.3	1.9	6.0
18-Mar	0.2	0.2	0.7	Z	0.1	0.1	0.1	0.8	1.5	0.7	0.4	0.3	0.2	0.1	0.4	0.9	1.4	1.9	6.6	4.7	2.2	1.6	0.6	0.0	1.1	6.6
19-Mar	0.3	0.5	0.2	0.2	Z	7.0	6.0	21.2	36.0	23.4	15.7	11.8	10.0	8.6	6.5	3.3	4.5	5.3	3.8	0.6	0.2	0.3	0.3	0.3	7.2	36.0
20-Mar	0.3	0.3	0.3	0.4	0.6	Z	1.4	4.1	4.7	3.3	2.1	2.2	2.0	1.0	1.5	3.9	2.5	1.8	1.3	0.3	0.2	2.0	0.5	0.4	1.6	4.7
21-Mar	Z	0.6	0.6	0.8	0.8	1.7	1.2	1.6	1.5	1.3	1.3	1.5	1.1	1.0	1.5	1.1	1.2	2.0	1.3	1.2	1.5	0.6	0.4	0.3	1.1	2.0
22-Mar	0.3	Z	0.4	0.5	0.7	0.9	1.1	1.0	1.9	2.3	3.3	2.7	1.6	1.5	1.1	1.1	2.2	2.6	0.6	0.4	0.0	0.0	0.0	0.0	1.1	3.3
23-Mar	0.1	0.3	Z	0.1	0.3	0.2	0.2	0.3	1.2	0.8	0.5	0.2	0.5	0.5	0.7	0.9	0.7	0.6	1.3	0.9	1.0	0.5	1.0	0.3	0.6	1.3
24-Mar	0.0	0.0	0.3	Z	0.5	0.5	0.5	1.4	1.8	2.8	1.6	1.0	0.3	0.3	0.3	0.2	0.0	0.2	0.0	0.2	0.1	0.1	0.1	0.0	0.5	2.8
25-Mar	0.2	0.2	0.0	0.0	Z	0.3	0.4	2.1	0.6	0.6	0.7	0.2	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.2	2.1
26-Mar	0.0	0.0	0.0	0.0	0.3	Z	0.9	1.7	1.5	1.4	1.2	1.1	1.7	2.0	1.2	0.8	1.1	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.7	2.0
27-Mar	Z	0.0	0.0	0.1	0.3	0.5	0.7	1.2	1.1	1.5	1.3	0.8	1.3	1.1	1.0	0.9	0.8	0.8	0.4	0.5	0.2	0.2	0.1	0.0	0.6	1.5
28-Mar	0.1	Z	0.3	0.2	0.4	0.6	2.5	6.5	6.6	8.1	4.2	2.9	4.0	3.8	2.4	1.4	1.3	1.3	0.6	0.4	0.1	0.1	0.1	0.1	2.1	8.1
29-Mar	0.0	0.1	Z	1.6	0.5	3.1	9.8	25.3	20.7	21.0	18.5	21.3	8.7	4.1	3.5	2.6	2.3	2.0	1.2	2.5	1.2	0.2	0.3	0.4	6.6	25.3
30-Mar	0.0	0.0	0.2	Z	0.1	3.5	5.3	22.3	24.1	8.9	4.7	1.9	1.2	0.4	0.3	0.2	0.5	1.2	0.9	1.3	0.6	0.1	0.0	0.1	3.4	24.1
31-Mar	0.1	0.1	0.2	0.2	Z	1.2	1.7	1.7	2.0	8.5	6.0	9.6	10.2	5.0	1.0	1.2	1.1	0.8	1.2	1.1	0.7	0.2	0.2	0.2	2.4	10.2
	0.4	0.3	0.4	0.4	0.5	1.5	2.4	4.8	6.0	5.5	4.9	4.9	4.0	3.1	3.0	2.4	2.1	1.7	1.4	1.3	0.7	0.7	0.6	0.4	Diurnal Average	
	3.7	2.4	2.0	1.6	2.1	7.0	14.8	25.3	36.0	25.2	18.5	21.3	11.7	9.4	9.8	12.5	13.1	5.3	6.6	9.1	5.4	4.2	4.5	5.4	Diurnal Maximum	

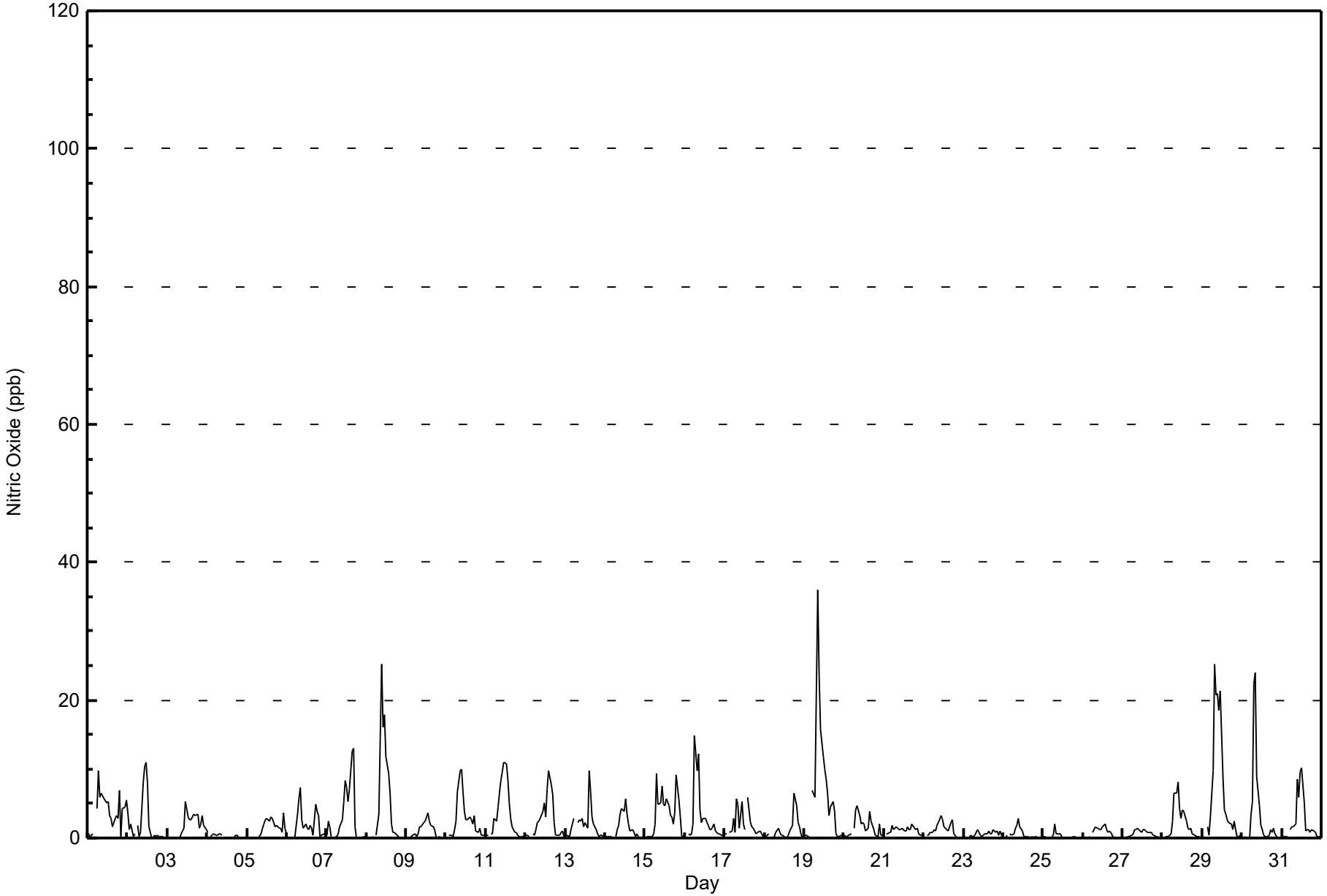
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Patricia McInnes - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	696	98.58	98.58
21 - 40	10	1.42	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

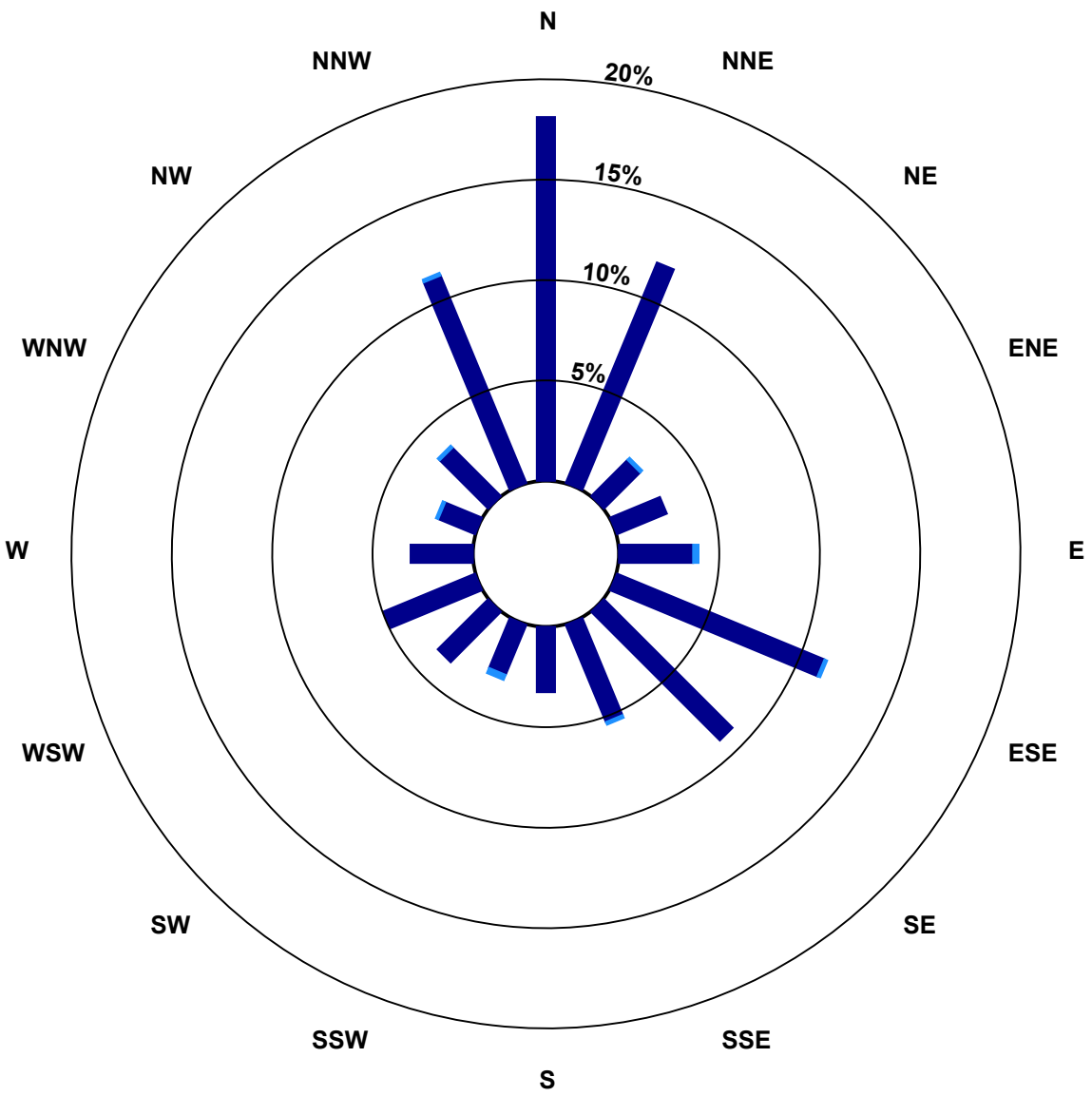
Total Number of Valid Hours: 706

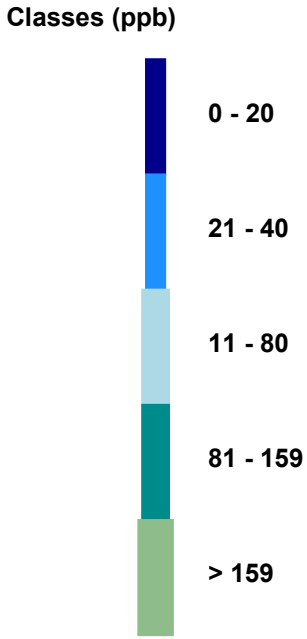
Total Number of Hours: 744

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	128	84	18	19	26	79	64	37	23	19	25	35	22	14	24	79	696
21 - 40	0	0	1	0	2	1	0	1	0	2	0	0	0	1	1	1	10
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	128	84	19	19	28	80	64	38	23	21	25	35	22	15	25	80	706

Total Number of Valid Hours: 706

Total Number of Hours: 744





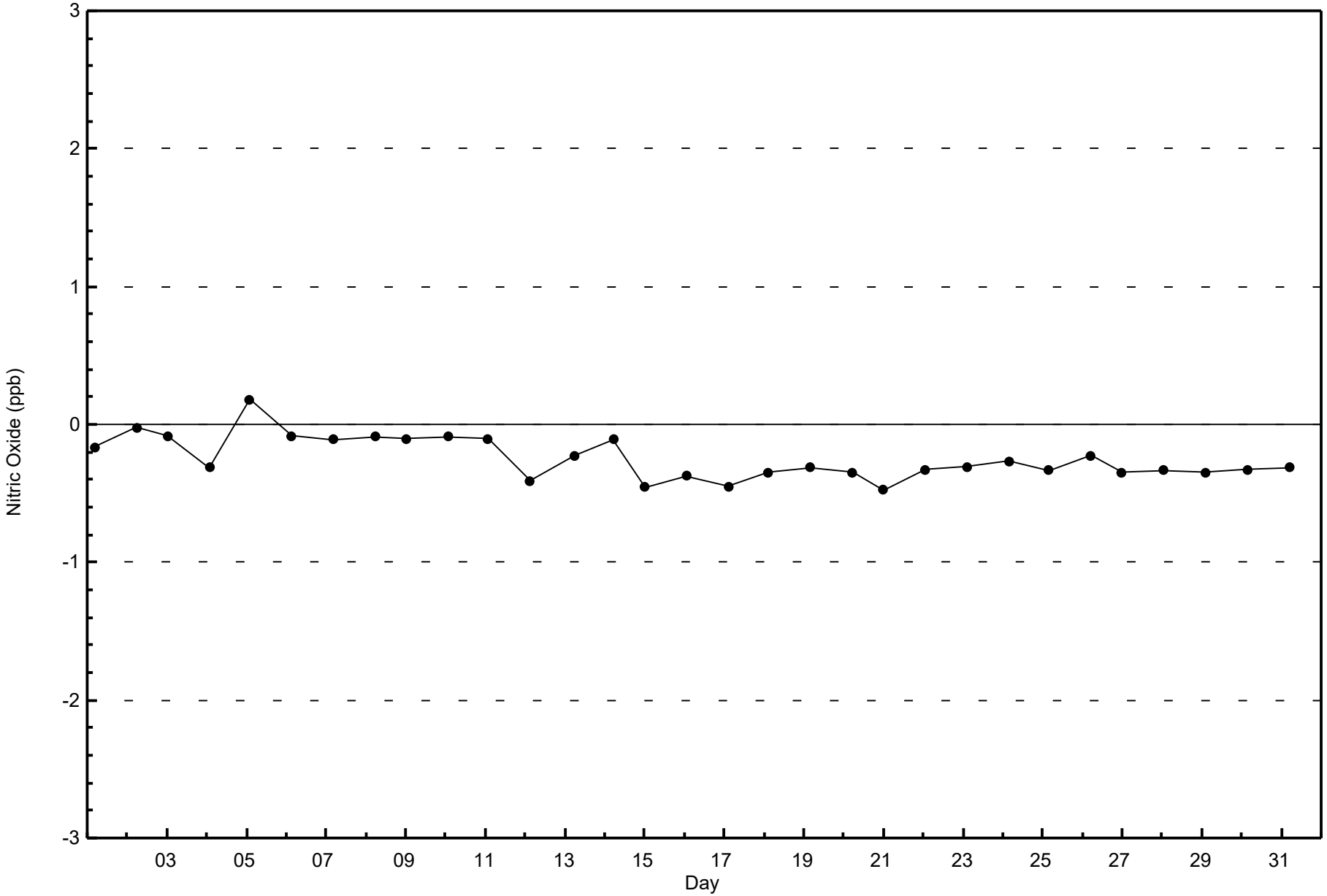
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Patricia McInnes - March 2025

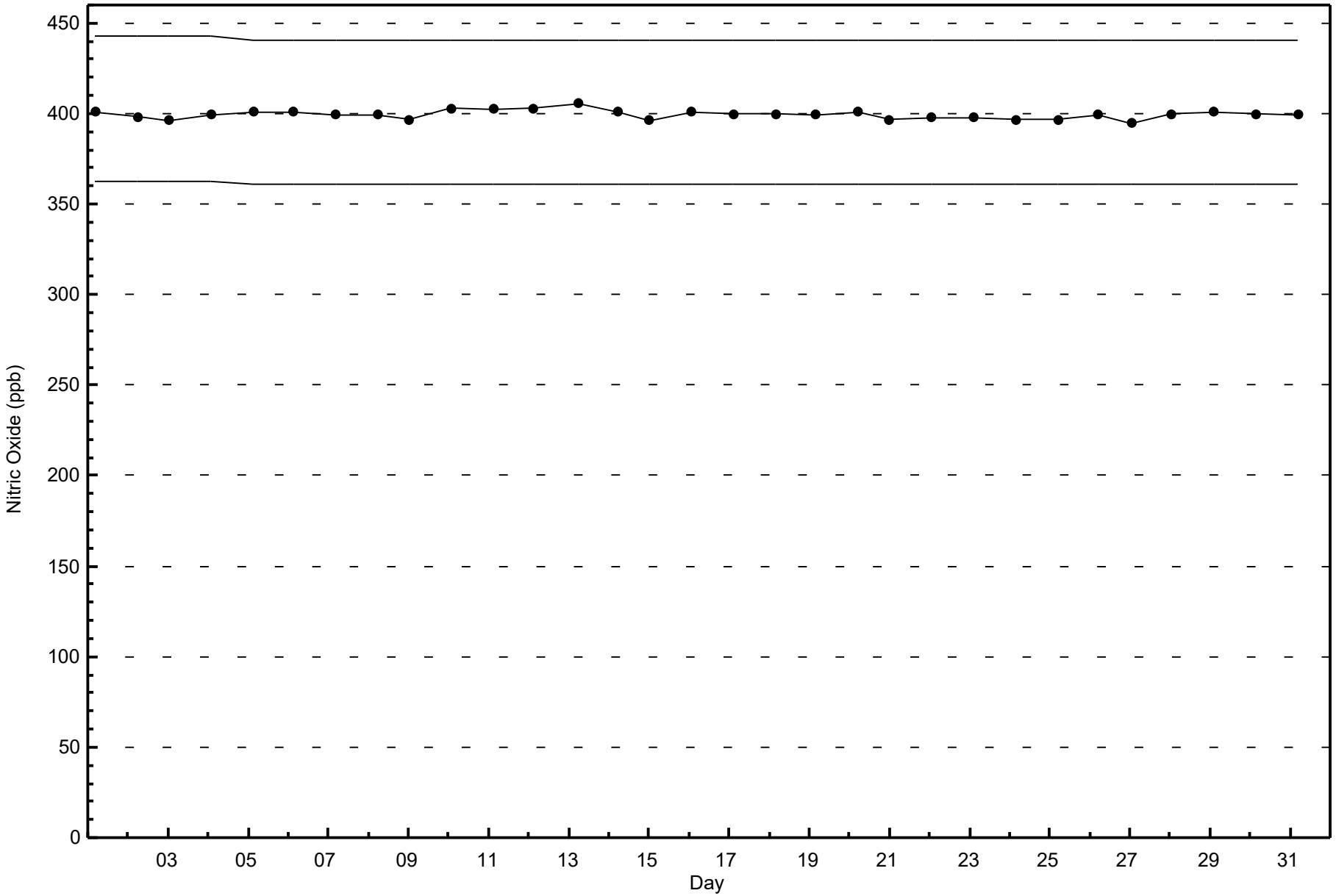


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Patricia McInnes - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Patricia McInnes - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 37.9 ppb on Mar 7 02:00 Maximum Daily Average: 16.5 ppb on Mar 19

Minimum Value: 0.1 ppb on Mar 25 16:00 Minimum Daily Average: 1.8 ppb on Mar 25
Maximum Diurnal Average: 10.7 ppb at hour 7 Minimum Diurnal Average: 4.0 ppb at hour 14
Monthly Average: 7.35 ppb Percentiles: P_1 = 0.4 P_{10} = 1.7 Q_1 = 2.9 Median = 5.3 Q_3 = 9.6 P_{90} = 16.7 P_{99} = 28.5

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	37
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	3.7	5.1	3.5	6.7	Z	23.5	29.8	20.1	12.8	8.2	6.5	5.6	6.1	5.2	5.9	5.5	13.1	26.2	30.9	27.1	12.7	17.7	15.8	21.3	13.6	30.9
2-Mar	23.2	16.8	22.9	5.9	9.7	Z	14.3	3.6	5.7	20.5	22.8	21.9	15.0	3.4	0.3	0.2	1.8	3.4	16.9	5.2	3.5	2.1	1.9	2.3	9.7	23.2
3-Mar	Z	2.5	2.8	2.6	3.1	2.7	3.6	3.6	4.9	4.3	4.0	8.3	5.8	4.9	5.2	7.4	9.9	12.1	17.0	15.6	16.2	28.5	22.4	14.0	8.8	28.5
4-Mar	14.2	Z	1.8	0.9	1.0	1.5	1.8	2.6	1.7	0.9	C	C	C	C	C	C	1.8	4.4	5.9	4.7	1.0	1.8	13.3	13.3	--	14.2
5-Mar	6.4	4.9	Z	1.4	0.7	3.8	3.1	2.6	4.4	4.3	4.3	4.7	4.9	4.8	5.5	5.9	6.9	8.6	11.1	8.7	10.4	18.6	16.0	6.9	6.5	18.6
6-Mar	4.0	3.6	4.4	Z	4.2	2.8	6.3	12.6	14.0	6.3	3.0	2.7	2.6	2.6	2.8	3.1	0.6	14.1	25.4	26.9	11.0	3.1	2.7	0.7	6.9	26.9
7-Mar	3.3	37.9	35.2	25.3	Z	8.3	6.9	8.5	8.6	9.4	10.2	11.7	10.1	7.8	12.6	20.7	26.4	13.5	7.5	5.3	5.7	5.2	5.0	5.3	12.6	37.9
8-Mar	5.3	8.1	9.8	10.1	9.5	Z	17.0	19.6	22.1	25.9	21.5	17.7	12.0	11.5	10.4	5.7	3.6	3.4	4.7	5.1	4.8	3.8	3.6	3.1	10.4	25.9
9-Mar	Z	2.9	3.0	5.1	6.4	4.9	4.6	5.2	5.9	5.0	4.2	3.6	3.6	2.8	2.2	2.7	3.3	4.5	3.8	3.6	4.4	5.2	5.5	5.8	4.3	6.4
10-Mar	6.9	Z	8.2	8.3	10.5	19.1	23.1	18.6	13.8	9.9	5.9	3.6	2.8	2.5	3.3	3.7	3.8	5.8	6.9	7.0	6.9	3.1	3.1	3.0	7.8	23.1
11-Mar	3.4	4.7	Z	5.6	11.0	22.3	21.1	17.1	12.7	10.8	10.9	9.9	9.3	9.4	7.9	5.4	4.7	4.6	5.5	4.2	4.6	4.1	6.0	6.0	8.7	22.3
12-Mar	4.5	4.2	3.7	Z	4.1	4.2	5.8	9.0	6.2	5.3	5.2	4.8	2.9	6.6	9.6	9.7	10.2	10.1	9.0	9.2	8.6	11.5	14.1	13.3	7.5	14.1
13-Mar	10.1	11.3	7.2	12.4	20.0	22.2	Z	11.8	6.2	3.7	4.0	1.9	2.0	2.2	16.4	19.0	14.0	5.8	6.9	6.4	5.7	8.1	8.7	6.6	9.2	22.2
14-Mar	5.4	5.8	5.2	4.2	4.6	Z	4.9	4.6	5.6	5.3	4.0	3.3	4.9	3.7	2.8	1.7	2.7	3.3	3.4	4.5	3.1	3.3	2.7	2.6	4.0	5.8
15-Mar	Z	6.5	11.6	14.7	12.2	10.5	9.9	18.2	9.0	9.6	10.0	5.6	5.2	7.2	6.6	6.5	6.3	6.5	22.3	34.1	22.9	16.6	6.8	3.9	11.4	34.1
16-Mar	7.9	Z	6.9	5.1	7.9	12.1	32.0	15.5	15.5	5.6	3.4	3.4	3.1	2.4	2.3	2.3	2.8	4.6	4.5	3.7	2.7	1.9	2.0	2.4	6.5	32.0
17-Mar	2.2	2.5	Z	3.6	9.4	15.7	8.9	8.7	13.5	3.1	8.0	3.0	1.5	M	8.8	5.5	4.8	5.5	7.1	6.9	10.3	12.6	7.5	4.8	7.0	15.7
18-Mar	3.9	6.3	10.5	Z	1.8	1.4	1.7	3.2	4.1	1.5	0.6	0.4	0.2	0.2	0.5	1.4	3.6	7.7	22.6	18.6	14.1	14.5	7.3	3.4	5.6	22.6
19-Mar	12.1	26.5	20.5	25.0	Z	31.3	27.2	23.1	27.6	19.5	16.0	11.7	10.3	9.7	9.1	6.4	8.3	14.8	24.6	19.5	11.0	9.3	9.5	7.5	16.5	31.3
20-Mar	4.1	4.8	6.2	6.9	6.8	Z	12.1	11.5	7.9	4.3	2.5	2.4	1.4	1.2	2.0	6.3	5.5	7.9	16.3	10.9	5.9	13.8	6.9	2.1	6.5	16.3
21-Mar	Z	1.6	1.6	2.1	2.4	3.4	3.1	2.8	2.5	1.9	1.7	1.8	1.4	1.2	1.6	1.7	2.6	3.4	4.2	5.1	3.2	1.8	1.5	1.7	2.4	5.1
22-Mar	2.3	Z	3.5	4.2	4.3	6.3	5.9	5.6	5.4	6.3	6.4	4.9	2.7	2.5	2.8	2.8	5.8	10.0	9.5	12.1	4.8	0.3	0.5	15.8	5.4	15.8
23-Mar	16.4	17.0	Z	3.5	5.1	3.4	1.0	1.0	2.4	0.9	0.7	0.5	0.8	0.8	1.1	1.6	1.8	2.9	8.1	18.9	16.2	9.3	8.1	5.2	5.5	18.9
24-Mar	5.9	8.4	2.8	Z	4.3	4.9	5.9	7.1	6.9	6.9	3.6	2.9	1.7	1.4	0.9	0.5	0.4	0.4	0.4	0.9	2.2	0.5	1.9	2.5	3.2	8.4
25-Mar	3.1	6.2	0.5	1.1	Z	1.4	3.0	5.5	1.2	1.0	1.1	0.6	0.5	0.4	0.4	0.1	0.1	0.4	3.6	2.7	2.5	2.2	2.2	2.4	1.8	6.2
26-Mar	2.6	3.1	2.8	3.5	5.7	Z	6.3	4.7	3.1	3.1	2.2	2.3	2.9	3.6	3.0	3.0	4.5	6.1	5.2	5.3	5.6	6.9	7.0	6.2	4.3	7.0
27-Mar	Z	8.5	7.1	6.6	6.6	8.7	6.4	5.8	2.8	2.6	1.8	1.3	2.0	1.8	1.9	1.9	1.9	2.9	4.2	5.9	4.9	4.5	5.2	5.9	4.4	8.7
28-Mar	6.4	Z	12.4	10.6	10.4	9.1	13.6	13.5	9.9	9.5	5.4	3.7	5.0	5.2	3.9	2.9	2.9	4.9	8.7	11.0	7.2	5.0	3.5	6.1	7.4	13.6
29-Mar	4.4	5.9	Z	24.9	15.5	23.8	18.9	21.4	18.9	17.5	15.5	18.4	11.1	6.4	5.9	5.5	5.9	6.4	8.7	22.9	19.7	12.0	15.6	15.1	13.9	24.9
30-Mar	2.4	2.1	6.2	Z	10.5	16.5	12.9	18.7	21.8	11.0	6.5	3.3	2.2	1.3	1.1	1.1	1.5	3.1	6.3	9.2	7.7	5.1	1.5	1.5	6.7	21.8
31-Mar	1.6	1.9	1.9	2.4	Z	7.8	9.8	7.0	4.7	6.7	5.4	7.6	7.8	4.0	2.0	1.8	1.8	2.2	3.4	3.8	3.3	2.6	2.3	2.5	4.1	9.8
	6.4	8.0	7.8	7.8	7.2	10.4	10.7	10.1	9.1	7.4	6.6	5.8	4.7	4.0	4.6	4.7	5.3	6.8	10.1	10.5	7.8	7.6	6.8	6.2	Diurnal Average	
	23.2	37.9	35.2	25.3	20.0	31.3	32.0	23.1	27.6	25.9	22.8	21.9	15.0	11.5	16.4	20.7	26.4	26.2	30.9	34.1	22.9	28.5	22.4	21.3	Diurnal Maximum	

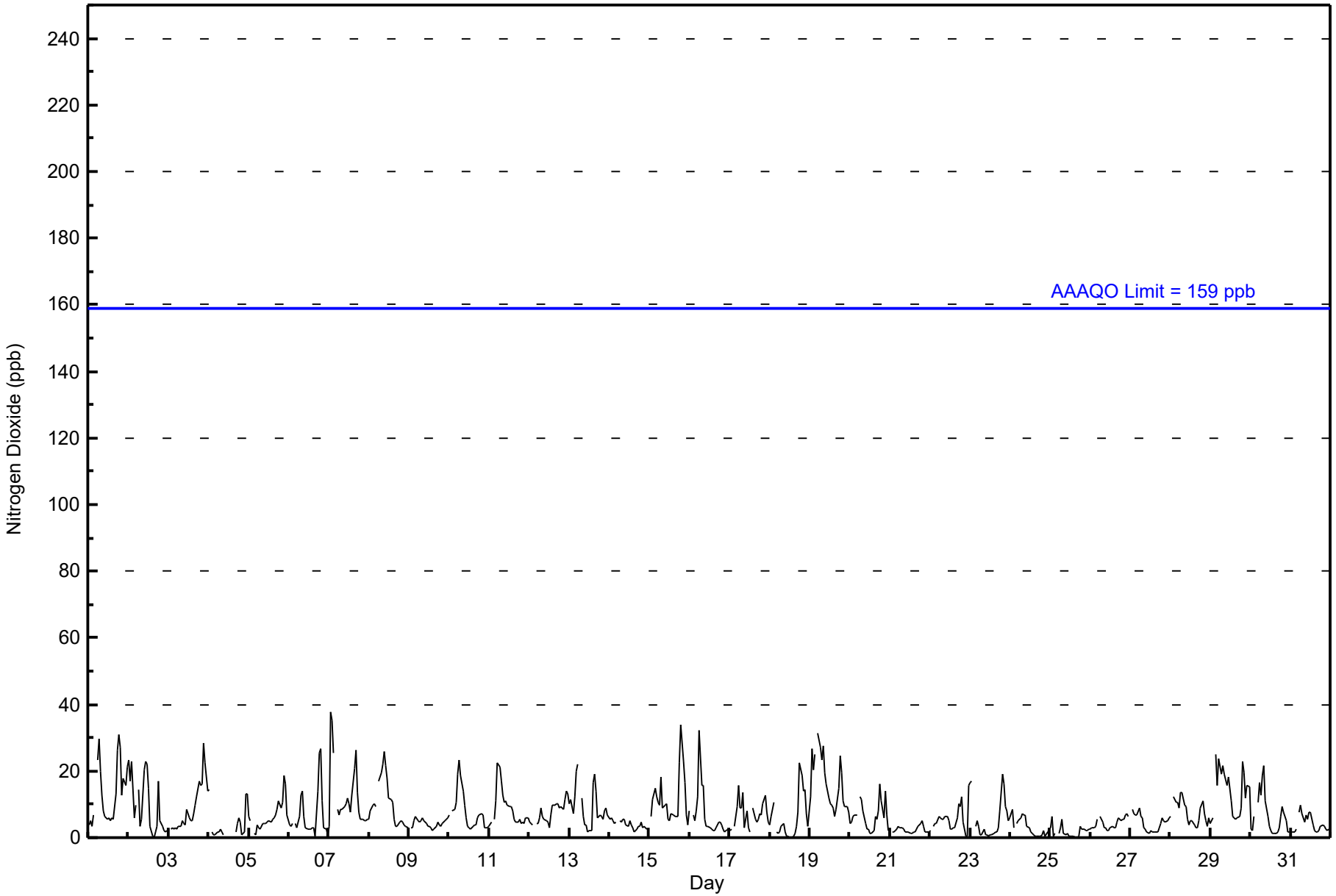
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Patricia McInnes - March 2025



Nitrogen Dioxide (NO_2) - ppb

Patricia McInnes - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	661	93.63	93.63
21 - 40	45	6.37	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Patricia McInnes - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	120	82	19	19	28	78	62	32	17	16	24	35	22	15	23	69	661
21 - 40	8	2	0	0	0	2	2	6	6	5	1	0	0	0	2	11	45
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	128	84	19	19	28	80	64	38	23	21	25	35	22	15	25	80	706

Total Number of Valid Hours: 706

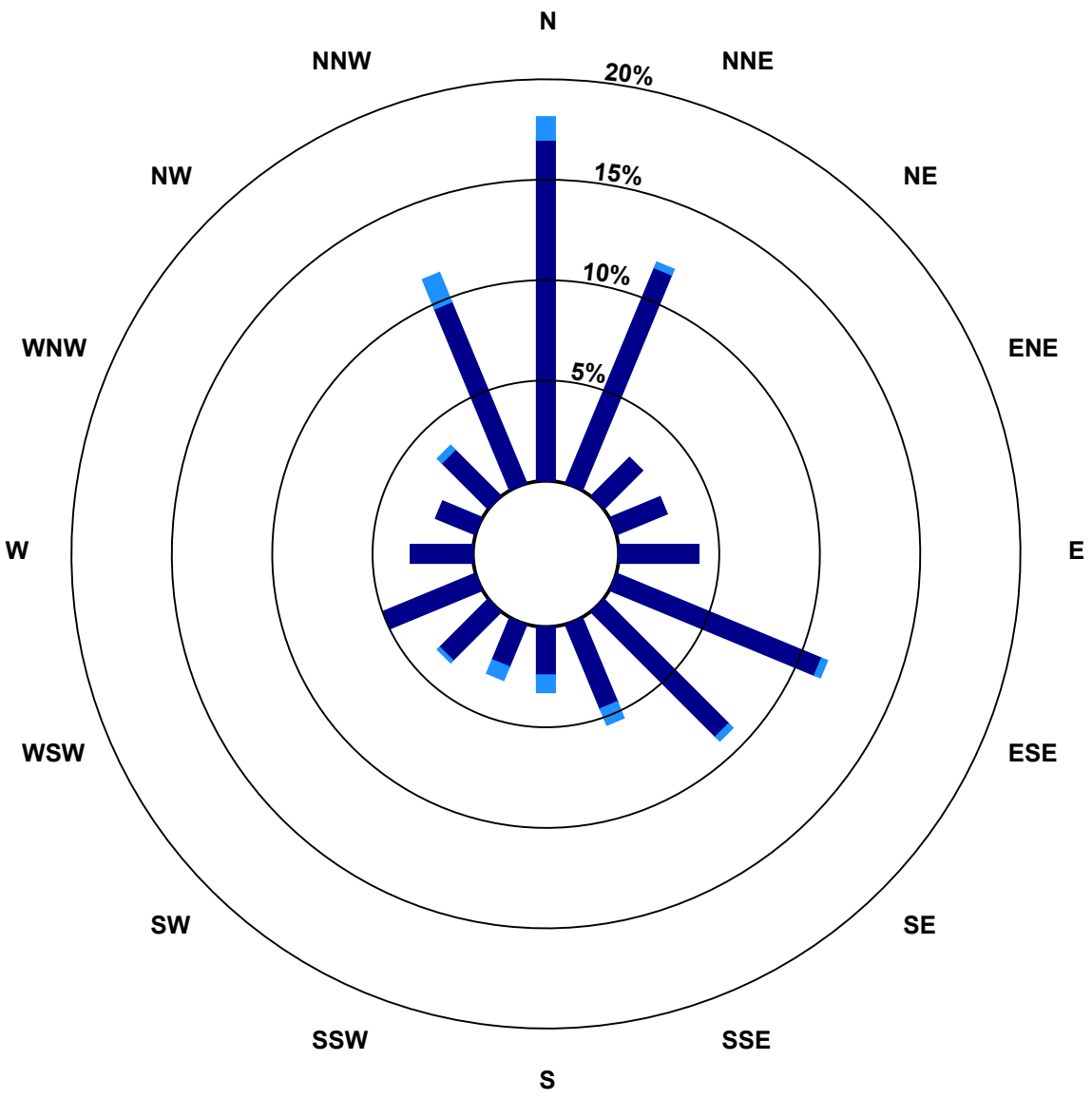
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Dioxide (NO_2) - ppb

Patricia McInnes



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

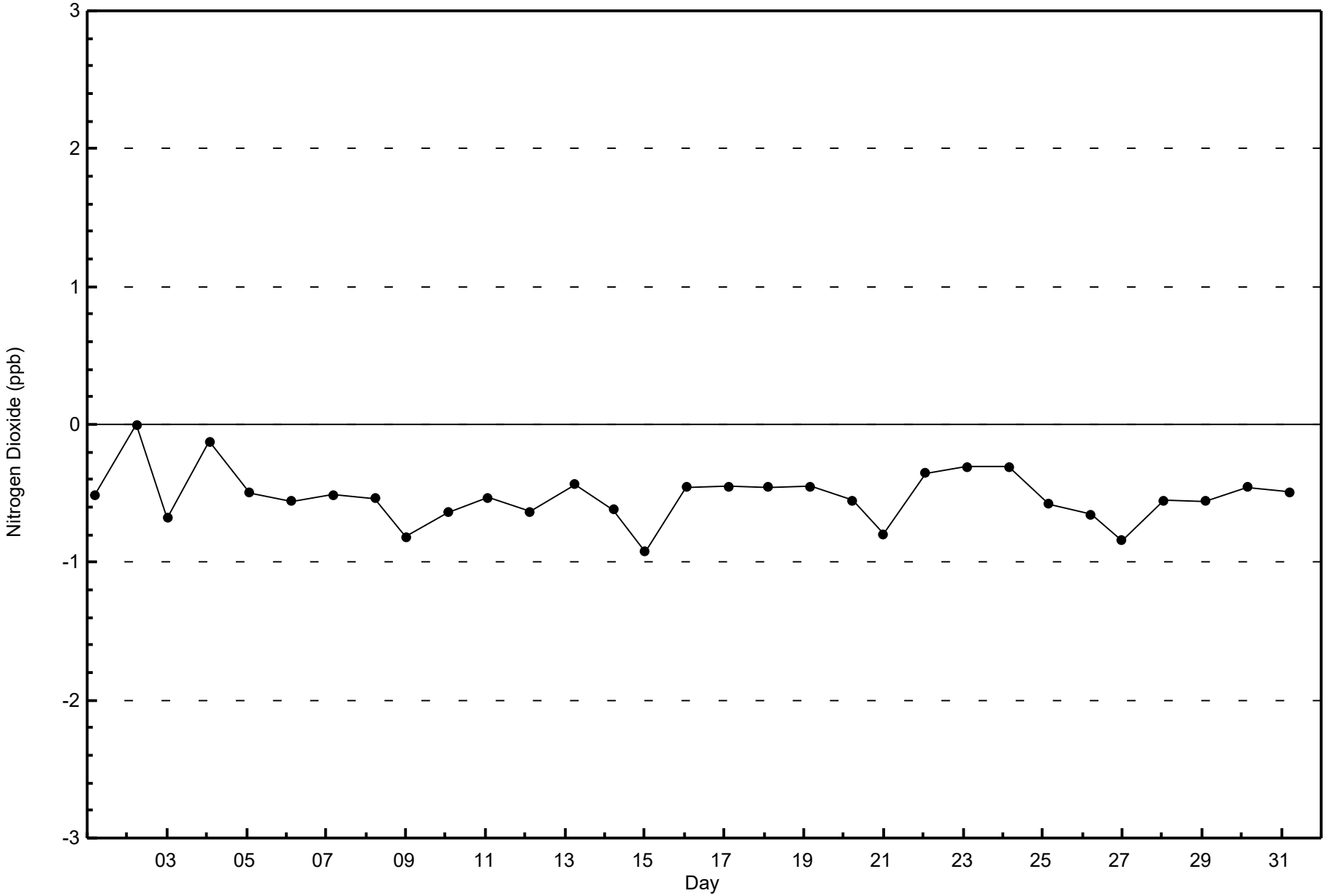
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Patricia McInnes - March 2025

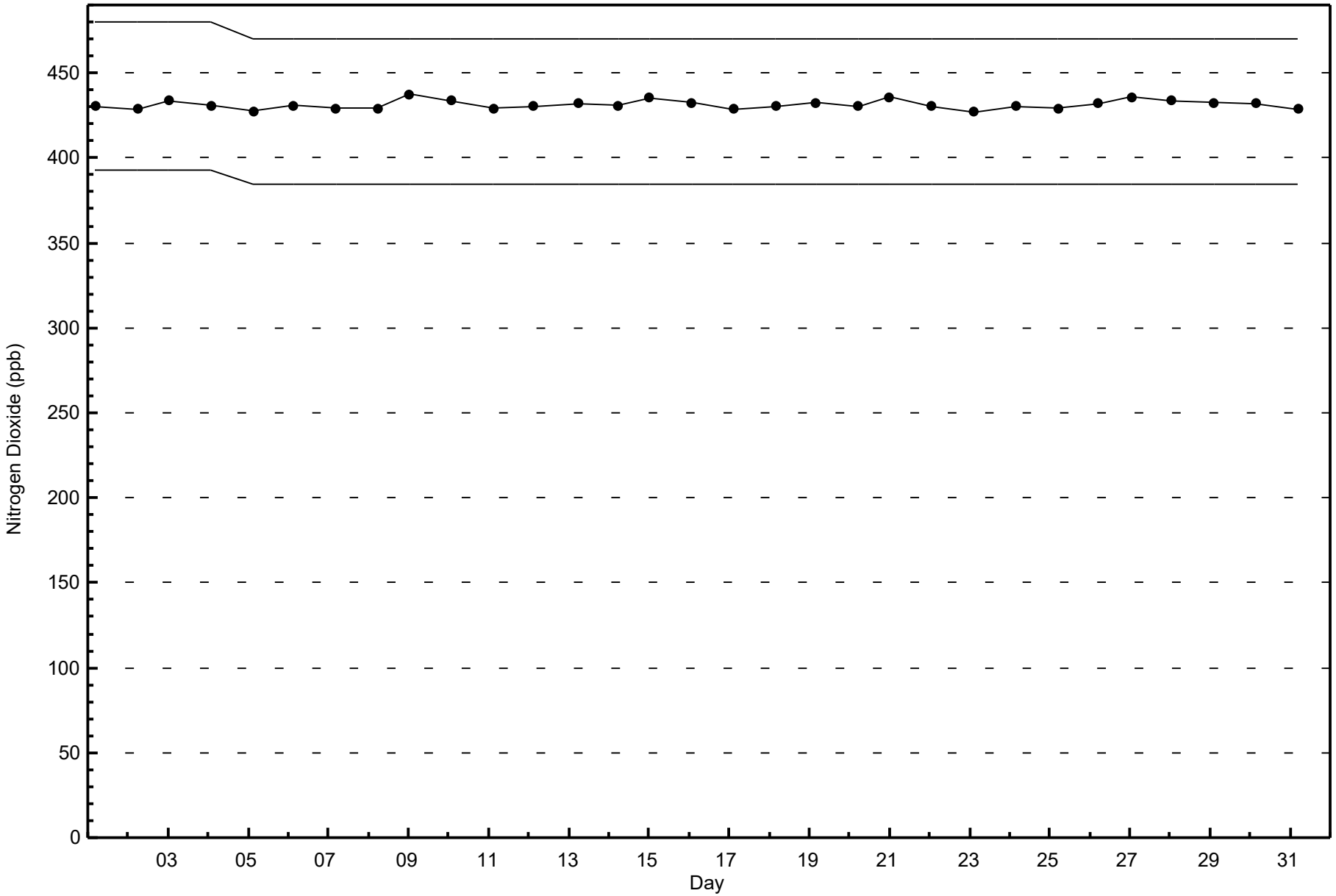


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Patricia McInnes - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Patricia McInnes - March 2025

Maximum Value: 63.6 ppb on Mar 19 09:00

Maximum Daily Average: 23.8 ppb on Mar 19

Minimum Value: 0.1 ppb on Mar 25 17:00

Minimum Daily Average: 2.1 ppb on Mar 25

Maximum Diurnal Average: 15.1 ppb at hour 9

Minimum Diurnal Average: 6.7 ppb at hour 24

Monthly Average: 9.62 ppb

Percentiles: P_1 = 0.4 P_{10} = 2.2 Q_1 = 3.8 Median = 6.5 Q_3 = 12.1 P_{90} = 20.9 P_{99} = 42.8

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	37
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	4.3	5.4	3.9	7.4	Z	27.8	39.6	25.9	19.3	14.2	12.3	10.6	11.3	8.4	8.7	7.2	15.9	29.5	33.7	34.1	12.9	21.9	20.3	26.7	17.4	39.6
2-Mar	26.9	18.0	24.9	6.2	10.3	Z	16.1	3.9	6.5	28.6	33.2	32.9	22.9	5.1	0.4	0.3	2.1	3.6	17.4	5.4	3.6	2.3	1.9	2.4	11.9	33.2
3-Mar	Z	2.5	2.8	2.6	3.1	2.7	3.6	3.7	5.5	5.3	5.5	13.5	8.8	7.5	7.9	10.5	13.4	15.4	20.5	17.0	18.3	31.7	24.2	15.2	10.5	31.7
4-Mar	15.1	Z	2.0	1.3	1.5	2.0	2.3	3.3	2.4	1.3	C	C	C	C	C	C	2.0	4.7	6.2	4.8	1.0	1.8	13.3	13.3	--	15.1
5-Mar	6.4	4.9	Z	1.4	0.7	3.8	3.1	2.6	4.9	5.8	6.4	7.4	7.8	7.3	8.5	8.7	9.1	10.3	13.0	10.1	11.8	19.4	19.6	8.4	7.9	19.6
6-Mar	4.0	3.6	4.4	Z	4.3	2.8	9.7	18.2	21.4	9.0	4.4	4.7	4.0	3.9	4.5	4.5	1.0	19.0	29.2	30.2	11.2	3.5	3.3	1.1	8.8	30.2
7-Mar	3.8	40.3	36.8	25.5	Z	8.5	7.1	9.0	10.3	12.1	15.4	20.0	17.5	13.0	19.7	33.2	39.5	15.1	7.5	5.3	5.7	5.2	5.2	5.5	15.7	40.3
8-Mar	5.4	8.1	9.8	10.2	9.7	Z	17.4	23.0	36.8	51.1	37.6	35.6	23.7	20.9	16.9	7.8	4.5	4.1	5.2	5.2	4.9	3.8	3.6	3.2	15.2	51.1
9-Mar	Z	2.9	3.0	5.3	6.9	5.5	4.9	5.9	7.6	6.7	6.5	6.0	6.7	6.5	4.7	4.6	5.0	5.5	3.9	3.6	4.6	5.3	5.5	5.9	5.3	7.6
10-Mar	7.0	Z	8.5	8.6	10.6	20.4	25.5	25.4	23.6	19.8	12.6	7.5	5.4	5.1	6.3	6.3	5.8	9.1	8.0	7.8	8.4	3.4	3.5	3.5	10.5	25.5
11-Mar	3.7	5.1	Z	6.3	11.7	25.2	23.5	21.6	19.2	19.2	20.4	21.0	20.0	17.9	12.9	8.2	6.3	5.5	6.3	4.6	4.9	4.4	6.2	6.3	12.2	25.2
12-Mar	4.9	4.6	4.0	Z	4.6	4.7	7.1	11.3	8.7	8.2	9.0	9.9	6.0	13.8	19.4	17.4	16.4	12.2	9.5	9.6	8.9	12.2	15.0	13.5	10.0	19.4
13-Mar	10.3	11.6	7.4	13.7	22.1	25.1	Z	14.1	8.8	6.1	6.9	3.6	4.3	3.5	26.2	25.8	17.0	7.7	8.0	7.0	5.9	8.5	9.1	6.8	11.3	26.2
14-Mar	5.5	6.0	5.5	4.3	4.8	Z	5.2	5.8	7.4	8.7	8.2	7.1	10.6	7.2	4.8	2.7	4.0	4.0	3.6	5.0	3.3	3.4	2.7	2.7	5.3	10.6
15-Mar	Z	6.6	11.8	15.0	12.4	11.1	12.0	27.5	13.9	14.7	17.5	10.5	9.8	12.8	11.3	9.8	9.3	8.5	26.0	43.2	28.3	19.6	7.1	4.1	14.9	43.2
16-Mar	8.3	Z	7.4	5.5	8.6	14.1	46.8	25.2	27.8	9.6	5.7	6.2	5.9	4.6	4.2	3.5	3.9	6.6	5.6	4.5	3.4	2.5	2.4	2.9	9.3	46.8
17-Mar	2.8	3.0	Z	4.3	10.4	18.6	9.7	14.4	18.5	4.5	13.3	5.0	2.8	M	14.8	7.7	6.4	6.9	8.1	7.5	11.1	13.6	8.0	5.1	8.9	18.6
18-Mar	4.1	6.5	11.2	Z	1.9	1.5	1.8	4.0	5.6	2.2	1.0	0.7	0.4	0.3	0.9	2.3	5.0	9.6	29.2	23.3	16.3	16.1	7.9	3.4	6.7	29.2
19-Mar	12.4	27.0	20.7	25.2	Z	38.3	33.2	44.3	63.6	42.9	31.7	23.5	20.3	18.3	15.6	9.7	12.8	20.1	28.4	20.1	11.2	9.6	9.8	7.8	23.8	63.6
20-Mar	4.4	5.1	6.5	7.3	7.4	Z	13.5	15.6	12.6	7.6	4.6	4.6	3.4	2.2	3.5	10.2	8.0	9.7	17.6	11.2	6.1	15.8	7.4	2.5	8.1	17.6
21-Mar	Z	2.2	2.2	2.9	3.2	5.1	4.3	4.4	4.0	3.2	3.0	3.3	2.5	2.2	3.1	2.8	3.8	5.4	5.5	6.3	4.7	2.4	1.9	2.0	3.5	6.3
22-Mar	2.6	Z	3.9	4.7	5.0	7.2	7.0	6.6	7.3	8.6	9.7	7.6	4.3	4.0	3.9	3.9	8.0	12.6	10.1	12.5	4.8	0.3	0.5	15.8	6.6	15.8
23-Mar	16.5	17.3	Z	3.6	5.4	3.6	1.2	1.3	3.6	1.7	1.2	0.7	1.3	1.3	1.8	2.5	2.5	3.5	9.4	19.8	17.2	9.8	9.1	5.5	6.1	19.8
24-Mar	5.9	8.4	3.1	Z	4.8	5.4	6.4	8.5	8.7	9.7	5.2	3.9	2.0	1.7	1.2	0.7	0.4	0.6	0.4	1.1	2.3	0.6	2.0	2.5	3.7	9.7
25-Mar	3.3	6.4	0.5	1.1	Z	1.7	3.4	7.6	1.8	1.6	1.8	0.8	0.6	0.4	0.4	0.2	0.1	0.4	3.7	2.8	2.5	2.2	2.2	2.4	2.1	7.6
26-Mar	2.6	3.1	2.8	3.5	6.0	Z	7.2	6.4	4.6	4.5	3.4	3.4	4.6	5.6	4.2	3.8	5.6	6.8	5.2	5.3	5.6	6.9	7.0	6.2	5.0	7.2
27-Mar	Z	8.5	7.1	6.7	6.9	9.2	7.1	7.0	3.9	4.1	3.1	2.1	3.3	2.9	2.9	2.8	2.7	3.7	4.6	6.4	5.1	4.7	5.3	5.9	5.0	9.2
28-Mar	6.5	Z	12.7	10.8	10.8	9.7	16.1	20.0	16.5	17.6	9.6	6.6	9.0	9.0	6.3	4.3	4.2	6.2	9.3	11.4	7.3	5.1	3.6	6.2	9.5	20.0
29-Mar	4.4	6.0	Z	26.5	16.0	26.9	28.7	46.7	39.6	38.5	34.0	39.7	19.8	10.5	9.4	8.1	8.2	8.4	9.9	25.4	20.9	12.2	15.9	15.5	20.5	46.7
30-Mar	2.4	2.1	6.4	Z	10.6	20.0	18.2	41.0	45.9	19.9	11.2	5.2	3.4	1.7	1.4	1.3	2.0	4.3	7.2	10.5	8.3	5.2	1.5	1.6	10.0	45.9
31-Mar	1.7	2.0	2.1	2.6	Z	9.0	11.5	8.7	6.7	15.2	11.4	17.2	18.0	9.0	3.0	3.0	2.9	3.0	4.6	4.9	4.0	2.8	2.5	2.7	6.5	18.0
	6.7	8.4	8.1	8.2	7.7	11.9	13.1	14.9	15.1	13.0	11.5	10.7	8.7	7.1	7.6	7.1	7.4	8.4	11.5	11.8	8.5	8.3	7.3	6.7	Diurnal Average	
	26.9	40.3	36.8	26.5	22.1	38.3	46.8	46.7	63.6	51.1	37.6	39.7	23.7	20.9	26.2	33.2	39.5	29.5	33.7	43.2	28.3	31.7	24.2	26.7	Diurnal Maximum	

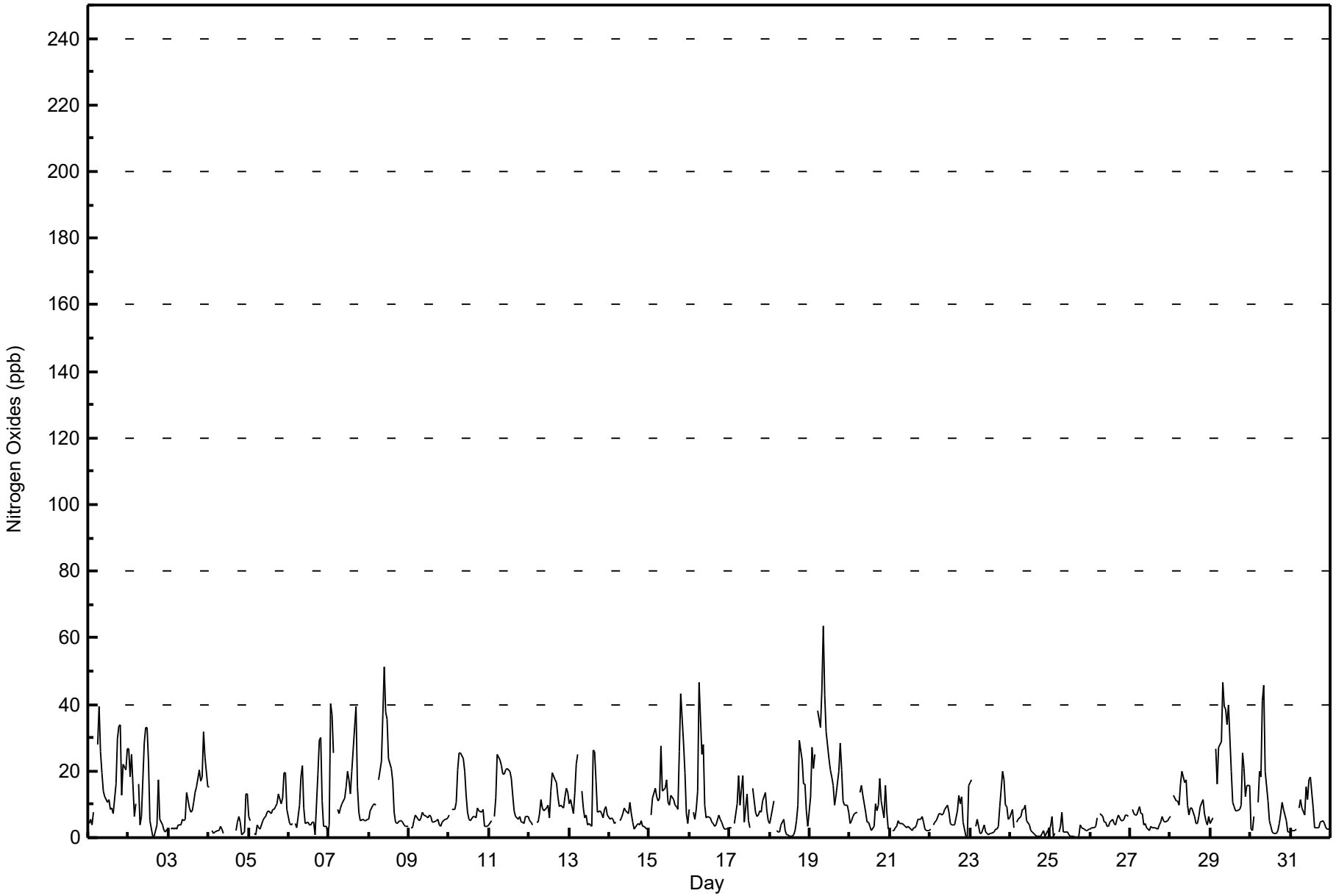
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Patricia McInnes - March 2025



Nitrogen Oxides (NO_X) - ppb

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	631	89.38	89.38
21 - 40	66	9.35	98.73
11 - 80	9	1.27	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Patricia McInnes - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	117	77	17	19	26	77	57	29	16	14	24	35	22	13	21	67	631
21 - 40	11	7	2	0	1	2	7	7	6	5	1	0	0	1	4	12	66
11 - 80	0	0	0	0	1	1	0	2	1	2	0	0	0	1	0	1	9
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	128	84	19	19	28	80	64	38	23	21	25	35	22	15	25	80	706

Total Number of Valid Hours: 706

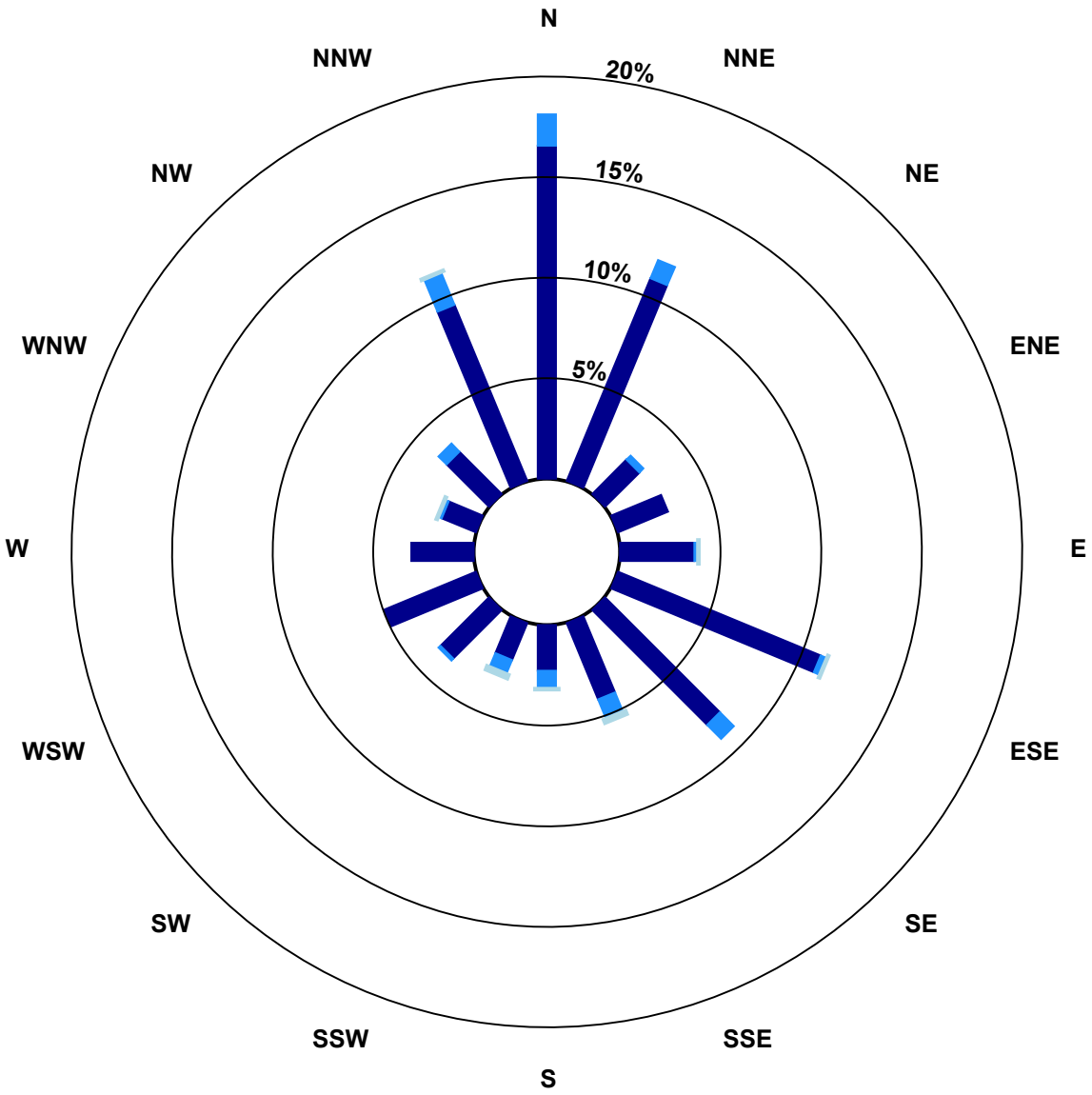
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Oxides (NO_X) - ppb

Patricia McInnes



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

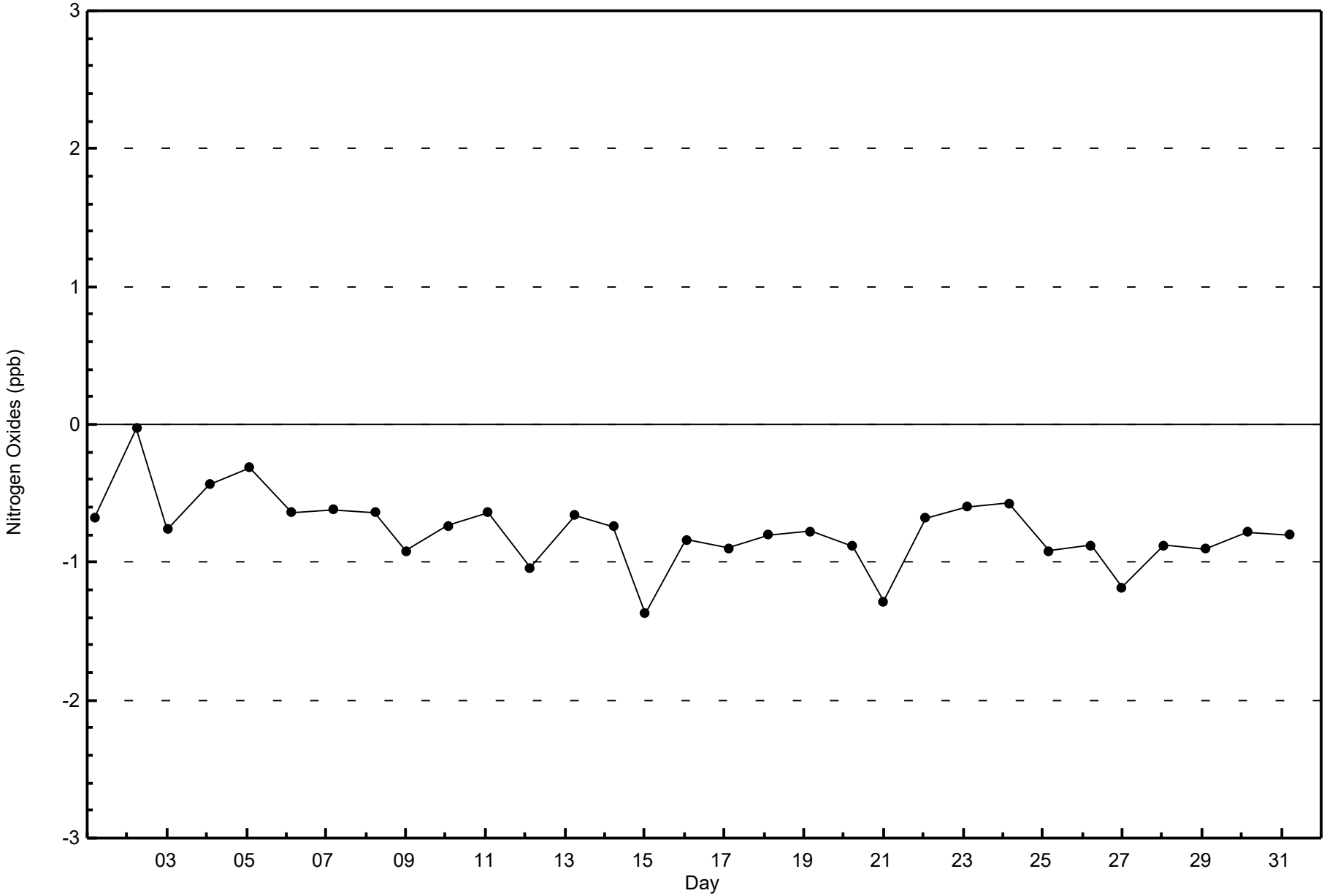
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Patricia McInnes - March 2025

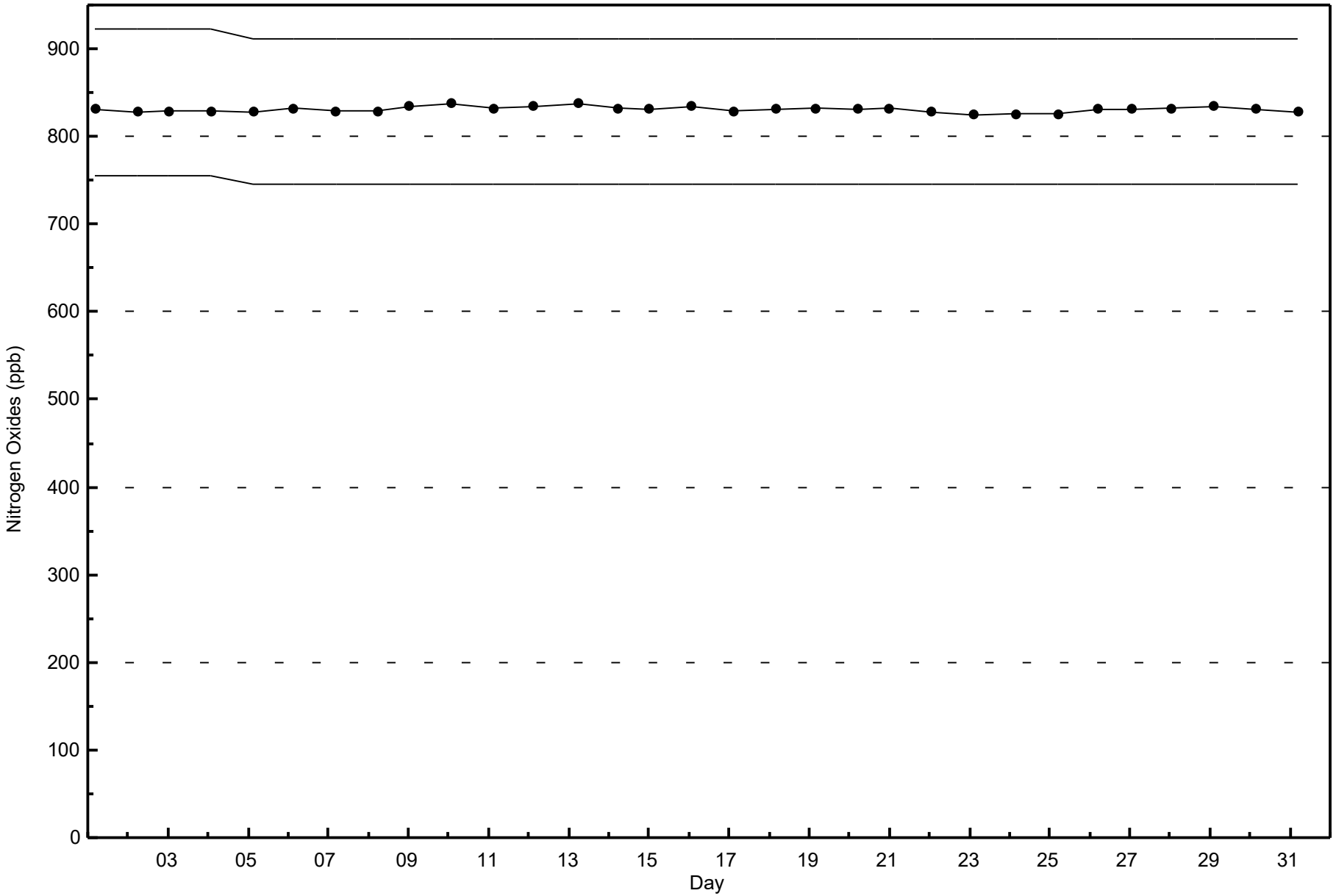


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Patricia McInnes - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ammonia (NH_3) - ppb

Patricia McInnes - March 2025

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

Maximum Value: 0.0 ppb on Mar 1 01:00

Maximum Daily Average: 0.0 ppb on Mar 1

Minimum Value: 0.0 ppb on Mar 1 01:00

Minimum Daily Average: 0.0 ppb on Mar 1

Maximum Diurnal Average: 0.0 ppb at hour 1

Minimum Diurnal Average: 0.0 ppb at hour 1

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

Hours in Service:	744
Hours of Data:	667
Hours of Missing Data:	77
Hours of Calibration:	45
Percent Operational Time:	95.7

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	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
2-Mar	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
3-Mar	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
4-Mar	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
5-Mar	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
6-Mar	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
7-Mar	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
8-Mar	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
9-Mar	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
10-Mar	Z	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.0
11-Mar	0.0	Z	RE	0.0	0.0	0.0	0.0	0.0	C	C	C	C	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.0
12-Mar	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
13-Mar	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
14-Mar	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
15-Mar	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
16-Mar	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
17-Mar	0.0	Z	RE	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	0.0
18-Mar	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
19-Mar	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
20-Mar	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
21-Mar	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
22-Mar	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
23-Mar	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
24-Mar	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
25-Mar	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
26-Mar	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
27-Mar	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
28-Mar	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
29-Mar	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
30-Mar	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
31-Mar	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
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Diurnal Average	
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 Maximum	

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

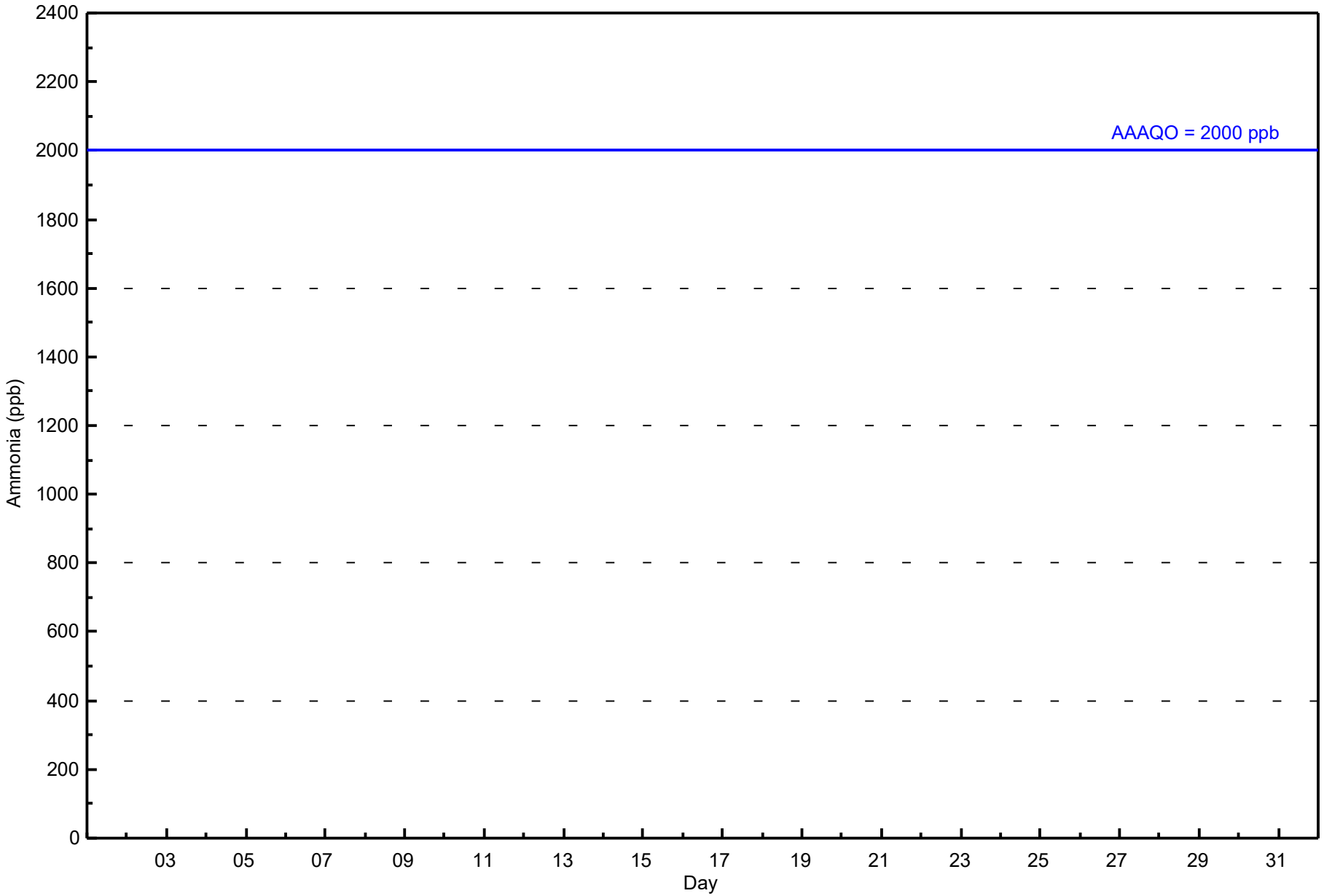
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 2000 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ammonia (NH_3) - ppb

Patricia McInnes - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 5	667	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: 667

Total Number of Hours: 744

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	118	78	19	16	28	78	59	35	22	20	28	32	22	13	25	74	667
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	118	78	19	16	28	78	59	35	22	20	28	32	22	13	25	74	667

Total Number of Valid Hours: 667

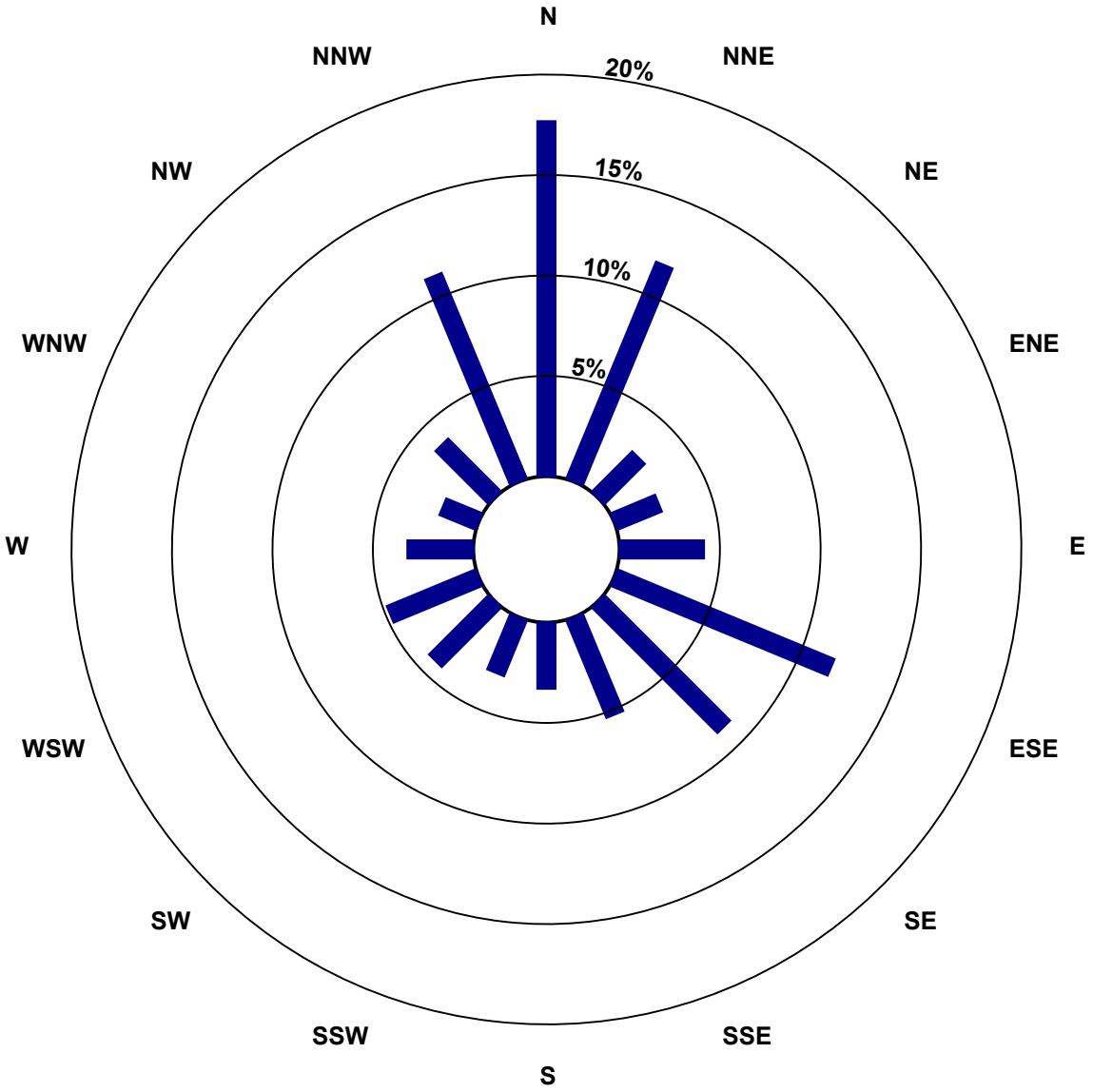
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Ammonia (NH_3) - ppb

Patricia McInnes



Classes (ppb)

0 - 5

6 - 10

11 - 15

16 - 20

21 - 25

> 26

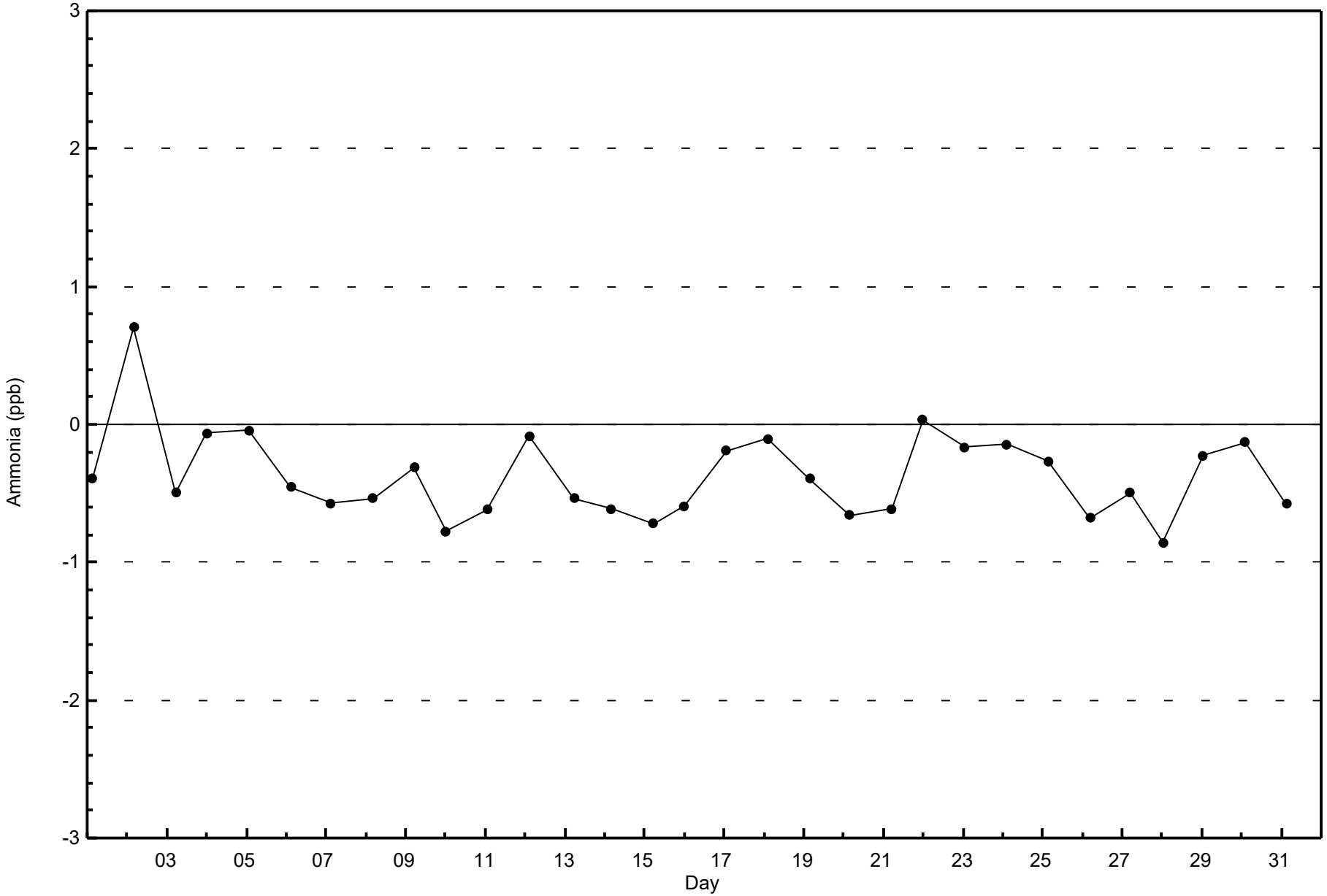
Total Number of Valid Hours: 667

Wood Buffalo Environmental Association

Zero Responses

Ammonia (NH_3) - ppb

Patricia McInnes - March 2025

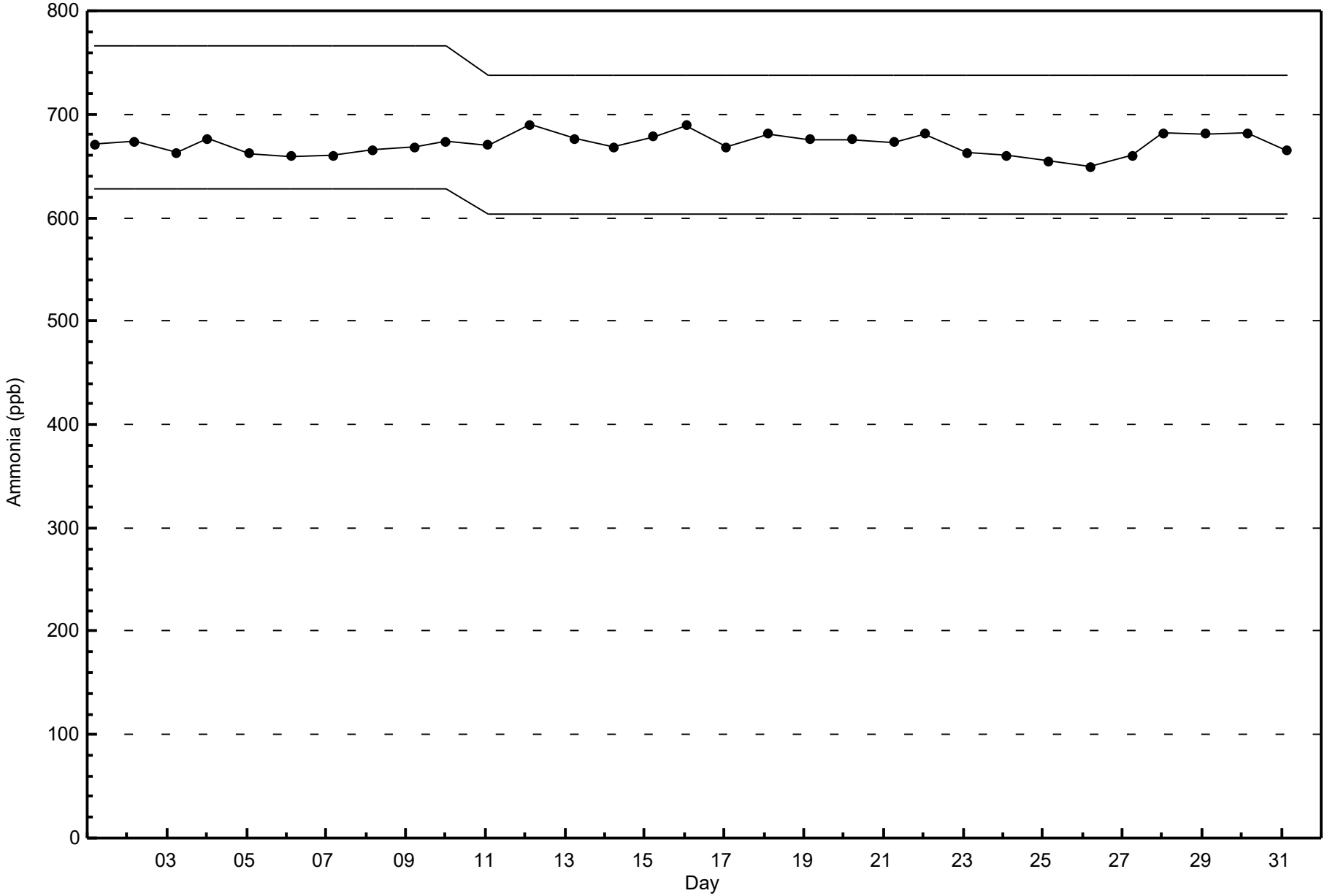


Wood Buffalo Environmental Association

Span Responses

Ammonia (NH_3) - ppb

Patricia McInnes - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Patricia McInnes - March 2025

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

Maximum Value: 71.5 $\mu g/m^3$ on Mar 30 07:00

Maximum Daily Average: 13.0 $\mu g/m^3$ on Mar 30

Minimum Value: 0.3 $\mu g/m^3$ on Mar 25 17:00

Minimum Daily Average: 1.3 $\mu g/m^3$ on Mar 25

Maximum Diurnal Average: 7.0 $\mu g/m^3$ at hour 7

Minimum Diurnal Average: 3.4 $\mu g/m^3$ at hour 1

Monthly Average: 4.23 $\mu g/m^3$

Percentiles: $P_1 = 0.5$ $P_{10} = 1.5$ $Q_1 = 2.4$ Median = 3.2 $Q_3 = 4.7$ $P_{90} = 6.8$ $P_{99} = 21.4$

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	1
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	3.6	5.3	2.6	2.8	3.5	4.4	4.6	4.0	4.3	4.1	4.3	4.2	4.4	4.0	5.3	4.8	6.1	11.9	11.6	13.5	6.4	10.2	8.9	9.7	6.0	13.5
2-Mar	10.2	5.6	5.5	3.0	2.9	3.1	4.9	1.7	2.0	5.3	4.7	4.1	5.9	2.1	0.8	0.6	0.5	0.5	2.9	3.1	2.6	1.3	1.6	2.2	3.2	10.2
3-Mar	2.9	3.2	3.5	3.5	3.3	3.3	3.2	3.1	5.0	5.0	4.7	5.7	4.5	4.0	3.6	3.5	3.7	3.1	3.1	3.4	4.3	7.4	4.8	6.0	4.1	7.4
4-Mar	4.4	1.1	0.5	0.5	0.5	0.6	0.7	0.7	0.9	1.2	1.1	0.9	0.8	0.6	1.4	2.1	2.0	2.1	2.6	0.8	0.6	0.9	3.0	3.1	1.4	4.4
5-Mar	2.2	1.9	1.7	1.4	1.1	1.8	1.3	1.1	1.6	2.4	2.9	3.3	3.4	3.7	4.0	3.6	3.7	3.5	3.6	3.5	3.8	5.4	5.3	3.0	2.9	5.4
6-Mar	3.4	4.1	4.0	2.9	2.8	2.3	3.0	5.1	4.9	2.9	2.7	3.0	2.8	2.7	2.8	3.1	1.8	5.0	6.1	6.8	3.0	0.9	0.8	0.8	3.2	6.8
7-Mar	0.9	5.4	6.5	5.3	3.4	2.7	2.6	3.1	3.8	4.8	4.5	4.9	5.6	4.4	5.1	6.7	10.1	4.5	3.3	2.4	1.9	1.9	2.3	2.2	4.1	10.1
8-Mar	2.2	2.5	2.8	3.0	2.9	5.0	5.4	6.6	9.5	9.0	7.2	6.6	5.0	5.6	4.9	2.3	1.8	2.5	3.7	3.1	4.5	2.4	3.4	3.9	4.4	9.5
9-Mar	4.2	4.3	4.9	5.6	4.4	4.4	4.8	4.0	4.1	4.5	3.0	2.7	3.2	2.7	2.6	2.6	2.9	3.2	2.8	2.6	2.3	2.2	3.1	3.4	3.5	5.6
10-Mar	3.2	3.1	3.3	3.3	4.4	8.0	9.5	9.8	7.5	6.2	4.7	3.8	2.9	2.8	3.0	2.7	2.6	2.5	2.9	2.7	2.2	1.8	1.2	1.2	4.0	9.8
11-Mar	1.2	1.3	1.0	1.1	2.9	6.0	5.6	6.0	5.5	5.2	5.2	4.6	4.0	3.3	2.8	2.6	2.3	2.5	2.6	2.3	2.0	1.8	2.3	2.1	3.2	6.0
12-Mar	1.5	1.2	1.0	0.9	1.0	1.6	1.9	2.1	2.5	1.9	1.9	2.2	2.0	3.4	4.4	4.3	4.3	3.4	3.3	3.2	3.2	4.7	6.5	4.5	2.8	6.5
13-Mar	3.9	3.5	2.4	2.0	3.2	7.0	5.3	3.7	2.9	2.6	2.6	2.2	1.5	2.0	6.6	9.0	7.1	2.4	1.7	1.7	2.2	2.9	3.0	2.8	3.5	9.0
14-Mar	2.6	2.8	2.7	2.5	2.3	3.5	3.0	2.8	3.3	3.1	2.9	3.0	3.5	3.0	2.9	2.5	3.1	3.1	3.0	2.9	2.7	2.4	1.6	1.8	2.8	3.5
15-Mar	1.9	2.1	2.6	2.6	2.5	2.5	2.4	5.5	2.8	3.6	3.6	3.1	2.9	3.3	4.1	4.7	4.5	4.8	8.3	5.8	3.9	5.3	3.8	2.5	3.7	8.3
16-Mar	3.9	2.2	2.2	2.1	2.0	2.3	6.8	4.7	4.5	3.3	3.2	3.1	2.8	2.4	2.4	2.3	2.2	2.3	2.4	2.0	1.6	1.6	1.8	2.0	2.8	6.8
17-Mar	2.2	2.2	2.2	2.2	2.6	2.9	3.5	2.7	3.7	3.0	3.5	3.5	3.7	5.3	C	5.1	4.5	4.5	4.5	6.0	9.9	9.7	7.0	6.3	4.4	9.9
18-Mar	5.0	3.6	3.4	2.6	2.3	2.2	2.6	2.8	3.3	2.9	2.6	2.5	2.3	2.2	2.4	3.1	3.4	4.0	5.8	5.9	4.8	5.0	3.6	2.9	3.4	5.9
19-Mar	5.2	8.7	8.9	11.6	11.2	11.6	11.0	10.6	15.2	12.6	11.7	11.3	9.1	7.5	6.3	5.0	4.8	4.7	6.9	6.7	3.7	3.8	3.7	3.2	8.1	15.2
20-Mar	2.4	2.6	2.9	2.9	2.9	3.1	3.4	3.6	3.7	3.6	3.1	3.4	1.9	2.0	2.1	4.4	4.1	4.6	10.4	6.1	3.2	5.9	10.1	1.6	3.9	10.4
21-Mar	1.1	1.2	1.2	1.5	1.8	2.0	2.3	2.7	2.6	2.6	2.7	2.5	2.1	2.6	2.7	2.7	2.7	2.8	3.2	3.3	2.6	2.4	2.0	1.9	2.3	3.3
22-Mar	1.9	2.2	2.4	2.5	2.6	2.6	2.7	3.0	3.3	3.7	3.9	4.1	3.7	3.4	3.4	3.3	3.7	4.7	5.8	5.1	3.0	1.8	2.2	11.3	3.6	11.3
23-Mar	10.7	9.4	3.3	2.5	2.6	2.5	2.2	1.9	2.3	2.3	2.5	2.1	2.1	1.8	1.8	2.1	1.8	2.1	2.8	3.8	3.4	2.4	2.9	2.1	3.1	10.7
24-Mar	3.0	3.2	2.5	2.5	2.4	2.6	2.6	2.8	3.1	3.2	3.0	2.3	1.3	1.5	1.1	1.0	1.2	1.1	0.8	0.8	1.0	1.0	1.2	1.2	1.9	3.2
25-Mar	1.1	3.3	0.7	0.5	0.5	0.5	0.7	0.9	0.6	0.6	1.1	0.7	0.8	0.7	0.4	0.3	0.3	0.4	2.8	3.0	2.9	2.5	2.7	2.6	1.3	3.3
26-Mar	2.4	2.4	2.2	2.6	3.1	3.9	4.3	3.9	3.9	4.4	4.0	3.8	4.1	4.4	4.0	3.3	3.4	4.6	3.9	3.0	2.5	3.3	4.3	4.5	3.6	4.6
27-Mar	4.6	8.8	6.3	5.8	5.5	6.6	5.2	5.5	3.3	4.9	4.9	3.5	4.8	3.7	3.4	3.7	3.5	3.7	3.9	4.7	4.3	4.3	4.6	4.6	4.8	8.8
28-Mar	4.1	6.4	7.5	5.9	5.4	6.2	8.1	11.3	11.7	13.0	7.8	5.7	9.1	11.4	7.7	5.5	5.6	7.0	8.3	8.1	4.7	4.0	3.7	3.9	7.2	13.0
29-Mar	3.4	3.8	6.1	17.3	16.6	21.8	26.7	41.4	20.8	18.6	16.6	9.3	5.8	4.2	4.4	4.8	4.9	5.1	5.7	12.0	10.0	5.5	5.0	5.7	11.5	41.4
30-Mar	3.1	4.7	12.5	19.2	33.9	44.1	71.5	40.3	22.7	8.2	5.7	4.2	3.9	3.4	3.4	3.2	3.3	3.4	4.3	4.3	3.9	3.4	2.6	2.5	13.0	71.5
31-Mar	2.6	2.7	2.7	2.8	3.7	4.0	4.7	5.9	4.3	4.2	4.4	5.0	4.9	4.6	4.1	3.3	2.9	2.7	2.6	2.7	2.7	2.3	2.1	2.8	3.5	5.9
	3.4	3.7	3.6	4.0	4.5	5.6	7.0	6.6	5.5	4.9	4.4	3.9	3.7	3.5	3.5	3.5	3.5	3.6	4.4	4.4	3.5	3.6	3.6	3.5	Diurnal Average	
	10.7	9.4	12.5	19.2	33.9	44.1	71.5	41.4	22.7	18.6	16.6	11.3	9.1	11.4	7.7	9.0	10.1	11.9	11.6	13.5	10.0	10.2	10.1	11.3	Diurnal Maximum	

C - Calibration

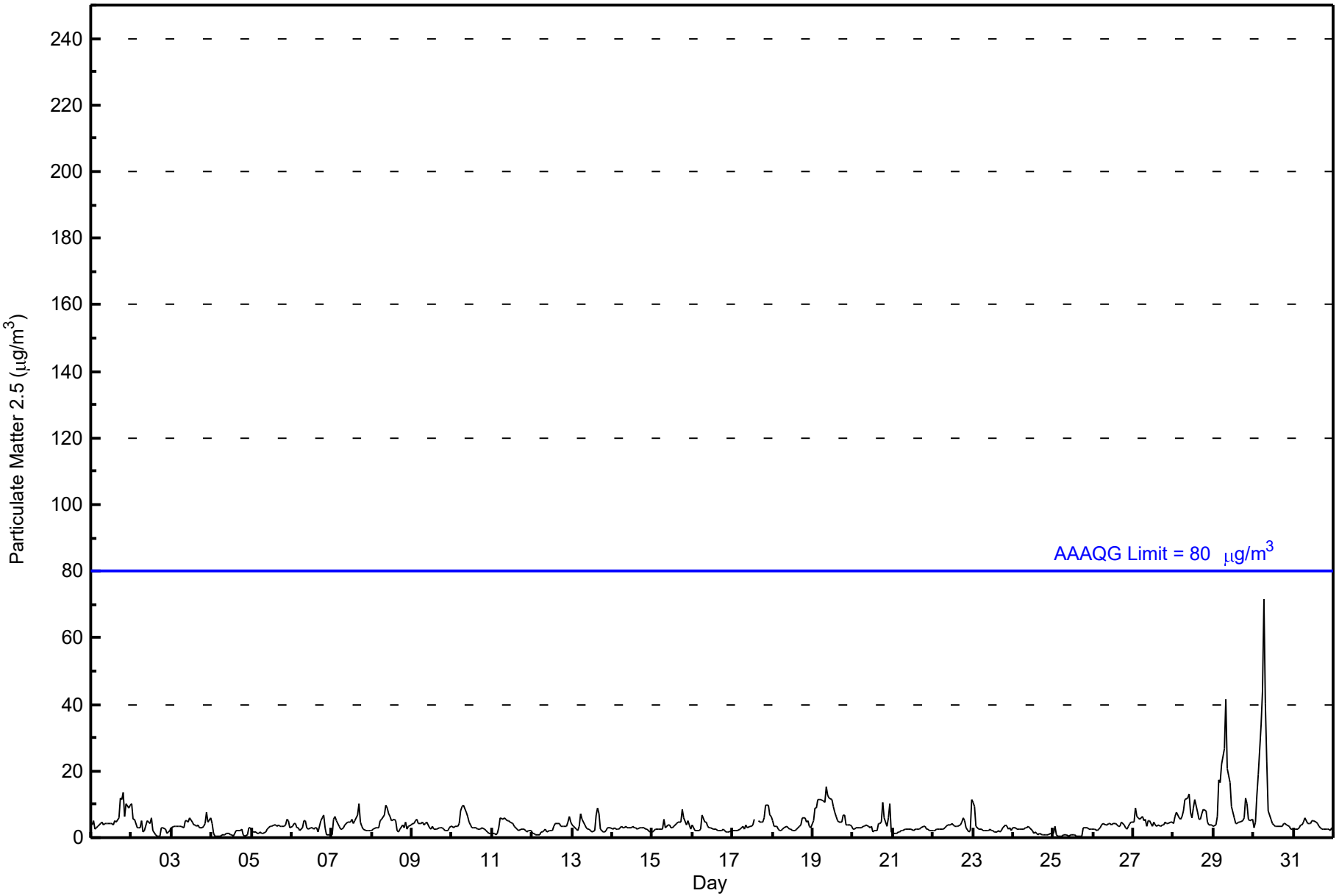
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Patricia McInnes - March 2025



Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	619	83.31	83.31
6 - 15	110	14.80	98.12
16 - 25	8	1.08	99.19
26 - 80	6	0.81	100.00
> 81.0	0	0.00	100.00

Total Number of Valid Hours: 743

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

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

Patricia McInnes - March 2025

Concentration Ranges ($\mu g/m^3$)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	113	70	16	12	25	76	58	32	16	16	27	36	22	12	19	69	619
6 - 15	23	14	3	7	2	6	9	6	8	5	3	2	0	1	4	17	110
16 - 25	1	1	1	0	1	0	0	1	0	0	0	0	0	0	3	0	8
26 - 80	0	0	0	0	0	0	0	0	0	1	0	3	0	2	0	0	6
> 81.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	137	85	20	19	28	82	67	39	24	22	30	41	22	15	26	86	743

Total Number of Valid Hours: 743

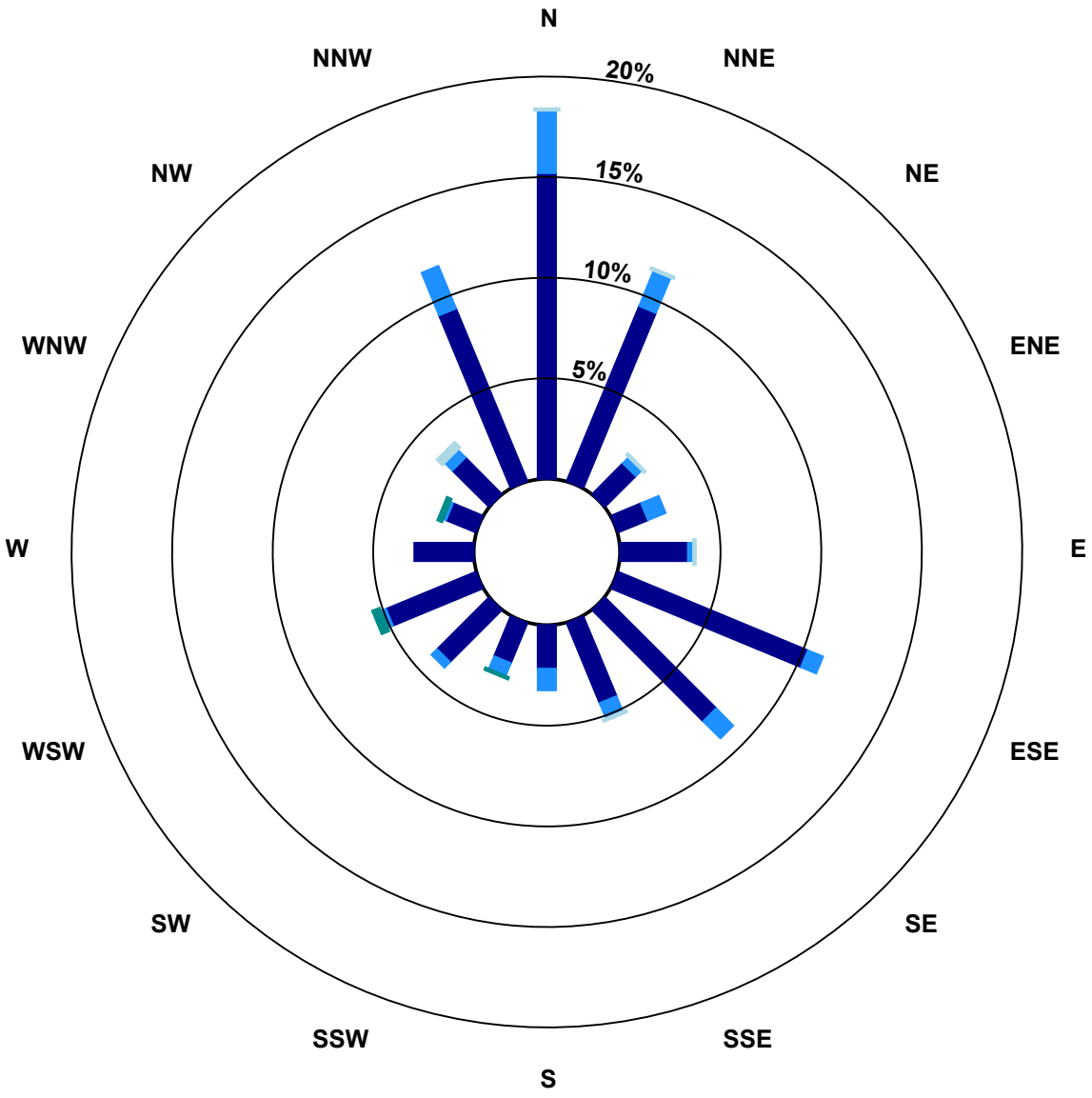
Total Number of Hours: 744

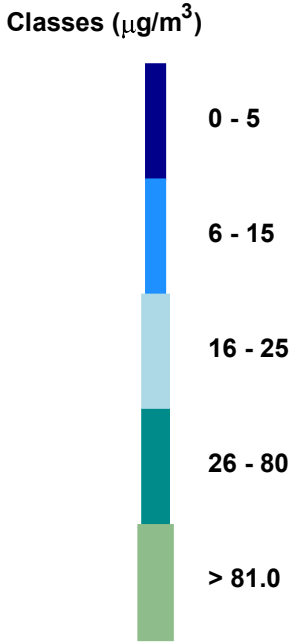
Wood Buffalo Environmental Association

Wind Rose Mar 2025

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

Patricia McInnes





Total Number of Valid Hours: 743

Maximum Value: 10.0 C on Mar 25 15:00

Maximum Daily Average: 2.1 C on Mar 25

Minimum Value: -24.7 C on Mar 16 08:00

Minimum Daily Average: -20.6 C on Mar 9

Maximum Diurnal Average: -2.0 C at hour 16

Minimum Diurnal Average: -12.6 C at hour 7

Monthly Average: -7.34 C

Percentiles: P_1 = -22.9 P_{10} = -17.9 Q_1 = -13.1 Median = -6.8 Q_3 = -1.3 P_{90} = 2.7 P_{99} = 7.7

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

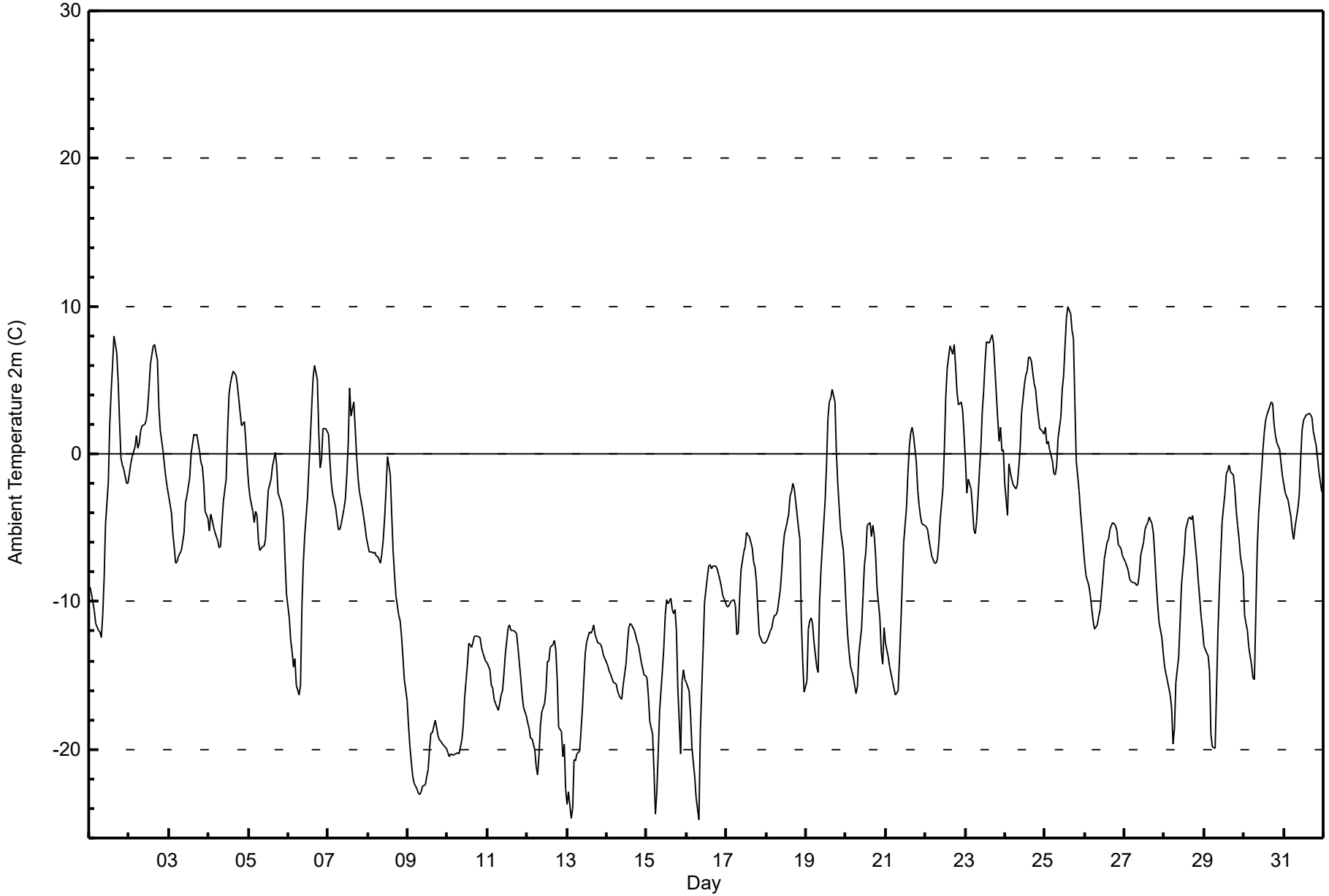
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-9.0	-9.5	-10.1	-10.6	-11.5	-11.9	-12.1	-12.4	-10.9	-8.4	-4.8	-1.9	2.0	4.2	5.9	7.9	6.8	4.9	2.2	-0.3	-0.8	-1.0	-1.9	-2.0	-3.5	7.9
2-Mar	-1.3	-0.7	-0.2	0.5	1.2	0.4	0.7	1.6	1.9	2.0	2.3	3.1	4.5	6.1	7.4	7.4	6.8	6.3	3.3	1.6	0.2	-0.7	-1.6	-2.2	2.1	7.4
3-Mar	-2.8	-4.0	-5.4	-6.3	-7.4	-7.3	-6.9	-6.6	-6.0	-5.3	-3.3	-2.8	-1.6	0.0	0.7	1.3	1.3	1.3	0.2	-0.6	-0.8	-2.0	-3.9	-4.4	-3.0	1.3
4-Mar	-5.2	-4.1	-4.4	-4.9	-5.4	-5.9	-6.4	-6.2	-4.6	-3.3	-1.7	1.6	4.0	4.7	5.3	5.6	5.4	4.7	3.7	2.7	1.9	2.2	0.9	-0.8	-0.4	5.6
5-Mar	-2.1	-3.0	-3.9	-4.7	-3.9	-4.2	-5.9	-6.5	-6.3	-6.2	-5.8	-4.0	-2.5	-1.7	-0.9	-0.3	0.1	-0.8	-2.6	-3.3	-3.7	-4.6	-7.2	-9.5	-3.9	0.1
6-Mar	-11.1	-12.6	-13.4	-14.4	-13.9	-15.6	-16.3	-15.7	-10.3	-7.4	-5.5	-3.0	-0.9	1.0	3.2	5.2	6.0	5.0	1.5	-1.0	-0.4	1.8	1.8	1.6	-4.8	6.0
7-Mar	1.3	-0.6	-2.0	-2.8	-3.6	-4.3	-5.1	-5.2	-4.7	-3.7	-3.0	-1.4	0.7	4.4	2.6	3.5	1.7	-0.1	-1.6	-2.6	-3.6	-4.3	-5.0	-5.7	-1.9	4.4
8-Mar	-6.2	-6.6	-6.6	-6.7	-6.7	-6.9	-6.9	-7.4	-6.7	-5.8	-4.3	-2.4	-0.2	-1.4	-4.1	-6.6	-8.2	-9.6	-10.9	-11.3	-12.3	-13.8	-15.3	-16.7	-7.7	-0.2
9-Mar	-18.4	-19.9	-20.9	-21.8	-22.3	-22.6	-22.9	-23.1	-22.9	-22.5	-22.4	-21.9	-21.4	-19.9	-18.9	-18.9	-18.0	-18.5	-19.1	-19.4	-19.4	-19.7	-19.8	-19.9	-20.6	-18.0
10-Mar	-20.2	-20.5	-20.3	-20.4	-20.3	-20.3	-20.3	-20.3	-19.4	-18.4	-16.5	-15.4	-14.2	-12.8	-13.1	-12.7	-12.3	-12.3	-12.4	-12.4	-13.1	-13.5	-13.8	-14.0	-16.2	-12.3
11-Mar	-14.2	-14.6	-15.6	-15.9	-16.6	-16.9	-17.3	-16.9	-16.3	-16.0	-14.9	-13.6	-11.8	-11.6	-11.9	-11.9	-11.9	-12.2	-13.1	-14.1	-15.2	-16.4	-17.2	-17.8	-14.7	-11.6
12-Mar	-18.2	-18.6	-19.2	-19.3	-20.0	-21.1	-21.8	-20.4	-18.4	-17.5	-16.9	-16.0	-14.1	-14.0	-13.1	-12.9	-12.6	-13.3	-15.3	-18.5	-18.8	-20.5	-19.6	-22.7	-17.6	-12.6
13-Mar	-23.7	-22.8	-24.7	-24.0	-20.7	-20.8	-20.3	-20.2	-18.7	-17.1	-15.3	-13.5	-12.7	-12.1	-12.1	-12.0	-11.6	-12.3	-12.8	-12.8	-12.9	-13.2	-13.6	-13.9	-16.4	-11.6
14-Mar	-14.3	-14.7	-14.9	-15.1	-15.4	-15.6	-16.1	-16.4	-16.5	-16.6	-15.7	-14.2	-12.9	-11.8	-11.4	-11.6	-12.0	-12.3	-12.7	-13.0	-13.6	-14.1	-15.0	-15.0	-14.2	-11.4
15-Mar	-15.2	-16.4	-18.2	-18.9	-21.6	-24.4	-22.8	-20.2	-17.4	-14.6	-13.0	-10.9	-9.9	-10.2	-9.8	-10.5	-10.8	-10.5	-12.1	-16.0	-20.3	-15.4	-14.6	-15.2	-15.4	-9.8
16-Mar	-15.4	-16.1	-17.5	-19.8	-20.9	-21.8	-23.3	-24.7	-18.9	-15.9	-13.2	-10.0	-8.4	-7.5	-7.5	-7.8	-7.6	-7.6	-7.8	-8.1	-8.6	-9.0	-9.6	-10.0	-13.2	-7.5
17-Mar	-10.4	-10.4	-10.2	-10.0	-9.9	-10.2	-12.3	-12.2	-9.9	-7.8	-6.7	-6.3	-5.3	-5.5	-5.6	-6.4	-7.3	-7.7	-8.6	-10.5	-12.2	-12.7	-12.8	-12.8	-9.3	-5.3
18-Mar	-12.7	-12.5	-11.9	-11.8	-11.2	-11.0	-10.9	-10.6	-9.2	-7.9	-6.4	-5.4	-5.0	-4.1	-2.8	-2.6	-2.0	-2.3	-3.2	-5.0	-5.7	-11.3	-14.0	-16.1	-8.2	-2.0
19-Mar	-15.3	-11.8	-11.2	-11.1	-11.4	-12.7	-14.4	-14.8	-10.1	-7.9	-6.2	-3.1	-0.7	2.4	3.5	3.8	4.3	3.5	0.1	-2.0	-3.6	-5.1	-6.6	-8.3	-5.8	4.3
20-Mar	-10.5	-12.2	-13.4	-14.3	-15.1	-15.7	-16.2	-15.7	-13.5	-11.7	-9.5	-7.5	-6.6	-4.8	-4.7	-5.6	-4.8	-5.5	-6.9	-9.1	-11.1	-13.4	-14.3	-11.8	-10.6	-4.7
21-Mar	-12.8	-13.7	-14.4	-14.9	-15.4	-15.9	-16.3	-16.1	-13.9	-11.4	-8.7	-5.9	-3.6	-1.3	0.5	1.5	1.8	1.3	-0.6	-2.5	-3.5	-4.3	-4.7	-4.8	-7.5	1.8
22-Mar	-4.9	-5.2	-5.7	-6.4	-6.9	-7.4	-7.4	-7.1	-6.1	-4.5	-2.3	0.4	3.9	5.8	6.6	7.3	6.8	7.4	5.9	4.1	3.3	3.5	3.0	1.3	-0.2	7.4
23-Mar	-0.5	-2.6	-1.7	-2.4	-3.6	-5.1	-5.4	-4.5	-1.1	0.5	2.8	4.3	6.2	7.6	7.5	7.8	8.1	7.5	5.8	2.4	0.9	1.8	0.2	0.3	1.5	8.1
24-Mar	-2.0	-4.2	-0.7	-1.3	-1.7	-2.0	-2.3	-2.1	-1.0	0.4	2.8	4.7	5.4	5.6	6.5	6.5	6.2	4.8	4.4	3.4	2.5	1.8	1.5	1.3	1.7	6.5
25-Mar	1.8	0.6	0.9	0.3	-0.4	-1.3	-1.4	-0.8	1.1	2.5	4.4	5.3	7.3	9.2	10.0	9.5	8.3	7.8	3.5	-0.5	-2.5	-3.9	-5.0	-6.3	2.1	10.0
26-Mar	-7.4	-8.2	-8.9	-9.6	-10.5	-11.3	-11.8	-11.6	-11.0	-10.5	-9.4	-8.3	-7.1	-6.0	-5.7	-5.2	-4.9	-4.7	-4.8	-5.2	-6.1	-6.3	-6.5	-6.9	-7.8	-4.7
27-Mar	-7.3	-7.6	-7.8	-8.4	-8.7	-8.7	-8.7	-8.9	-8.8	-8.1	-6.8	-6.0	-5.1	-4.8	-4.6	-4.2	-4.7	-5.4	-6.9	-8.7	-10.2	-11.4	-12.5	-13.4	-7.8	-4.2
28-Mar	-14.4	-14.9	-15.3	-16.4	-17.3	-19.6	-18.6	-15.5	-13.8	-11.4	-8.9	-7.8	-6.7	-5.1	-4.3	-4.2	-4.4	-4.1	-5.2	-7.3	-8.6	-9.8	-11.0	-11.8	-10.7	-4.1
29-Mar	-13.0	-13.5	-13.6	-14.7	-18.9	-19.9	-20.0	-16.0	-12.1	-9.2	-6.8	-4.5	-2.7	-1.3	-1.1	-0.7	-1.2	-1.4	-2.4	-3.8	-4.9	-5.7	-7.0	-8.2	-8.4	-0.7
30-Mar	-10.9	-11.5	-12.0	-13.1	-14.3	-15.2	-15.3	-10.8	-6.4	-4.0	-1.3	0.2	1.4	2.3	2.7	3.3	3.6	3.4	2.0	1.2	0.8	0.2	-0.6	-1.5	-4.0	3.6
31-Mar	-2.1	-2.7	-3.2	-3.7	-4.3	-5.2	-5.8	-4.9	-3.7	-2.7	-0.3	1.6	2.3	2.7	2.7	2.7	2.7	2.5	1.5	0.6	-0.3	-1.2	-1.9	-2.6	-1.1	2.7
	-9.6	-10.2	-10.5	-11.1	-11.6	-12.3	-12.6	-12.0	-10.2	-8.7	-7.0	-5.3	-3.7	-2.6	-2.1	-2.0	-2.1	-2.6	-4.0	-5.5	-6.5	-7.2	-8.0	-8.7	Diurnal Average	
	1.8	0.6	0.9	0.5	1.2	0.4	0.7	1.6	1.9	2.5	4.4	5.3	7.3	9.2	10.0	9.5	8.3	7.8	5.9	4.1	3.3	3.5	3.0	1.6	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Patricia McInnes - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	41	5.51	5.51
-20 - 0	557	74.87	80.38
0 - 10	146	19.62	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Maximum Value: 92.0 % on Mar 23 07:00

Maximum Daily Average: 78.6 % on Mar 14

Minimum Value: 26.2 % on Mar 29 16:00

Minimum Daily Average: 46.2 % on Mar 21

Maximum Diurnal Average: 77.6 % at hour 7

Minimum Diurnal Average: 49.5 % at hour 16

Monthly Average: 64.64 %

Percentiles: P_1 = 32.2 P_{10} = 44.4 Q_1 = 53.4 Median = 66.1 Q_3 = 76.7 P_{90} = 82.8 P_{99} = 88.3

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

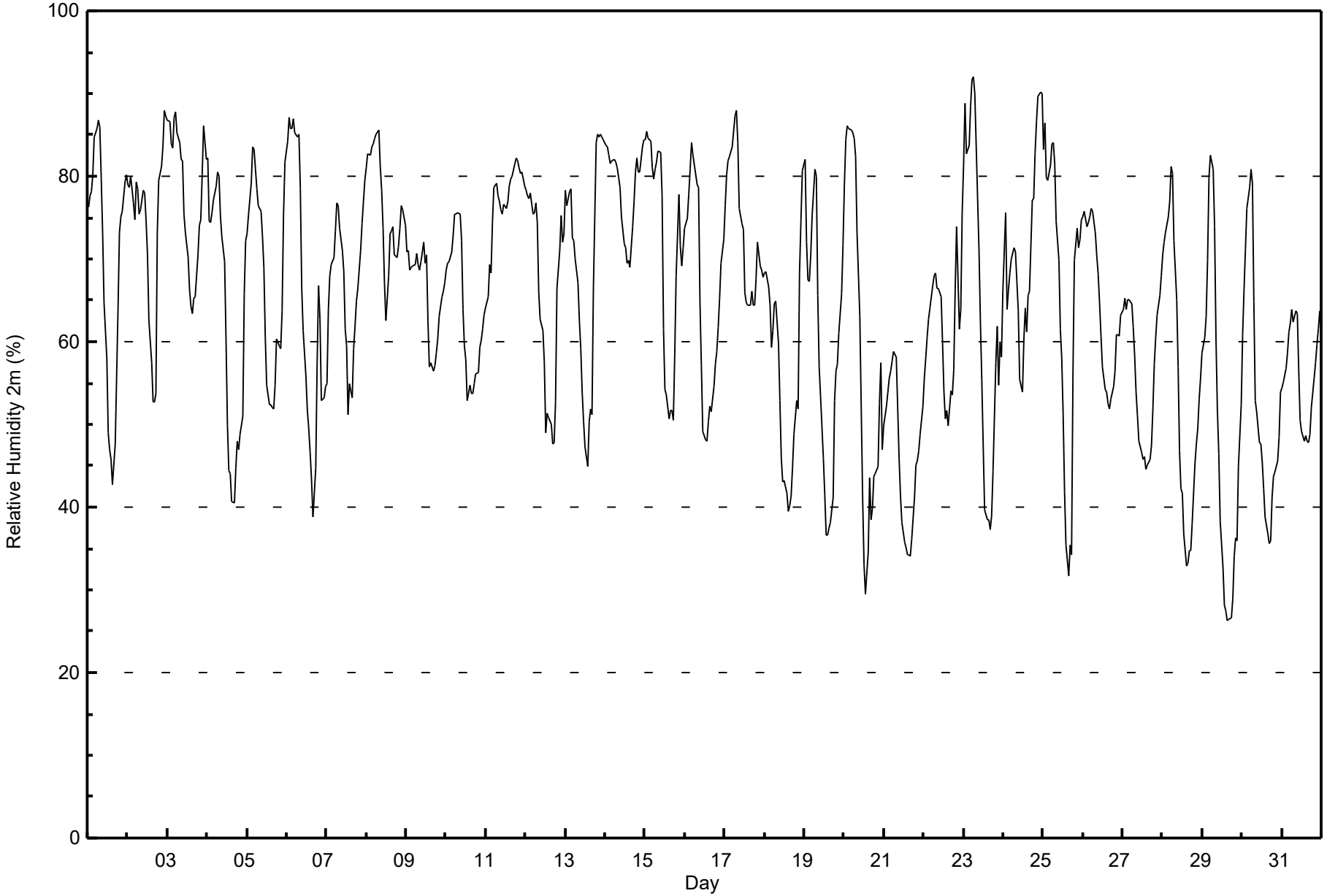
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	76.2	77.6	78.2	80.2	84.7	85.8	86.8	86.0	79.8	73.3	64.7	57.9	49.0	46.9	45.8	42.7	47.7	55.9	64.1	73.2	75.1	75.8	79.2	80.2	69.5	86.8
2-Mar	79.0	78.6	80.1	76.7	74.7	79.3	78.4	75.5	76.0	78.4	78.0	74.6	70.6	62.5	57.5	52.7	52.7	53.7	73.3	79.5	81.3	83.6	88.0	87.2	73.8	88.0
3-Mar	86.7	86.6	84.0	83.4	87.1	87.8	85.3	84.0	82.0	81.9	75.5	73.3	70.1	66.3	64.3	63.4	65.2	65.4	70.5	74.1	74.8	80.2	86.1	82.1	77.5	87.8
4-Mar	82.3	74.5	74.4	75.6	77.2	78.8	80.6	79.9	75.2	72.7	69.6	60.3	49.9	44.4	44.1	40.7	40.4	44.7	47.9	46.9	48.8	51.0	65.7	72.2	62.4	82.3
5-Mar	73.0	75.2	79.2	83.6	83.2	80.9	78.6	76.5	75.8	72.8	69.1	60.6	54.7	52.4	52.4	52.0	51.9	54.7	60.3	59.5	59.1	63.7	75.3	81.7	67.8	83.6
6-Mar	84.2	87.1	85.8	85.8	86.9	85.3	84.7	85.1	78.4	66.5	61.4	55.7	51.6	49.5	46.7	43.3	38.9	44.7	57.6	66.7	62.8	53.0	53.3	54.6	65.4	87.1
7-Mar	54.9	63.9	68.0	69.3	70.2	73.4	76.8	76.5	73.7	71.1	68.5	61.5	59.4	51.2	55.0	53.3	59.2	61.9	64.8	66.5	71.0	74.2	76.9	79.4	66.7	79.4
8-Mar	81.0	82.8	82.5	83.6	83.9	84.6	85.1	85.6	81.1	78.3	73.7	67.1	62.5	67.9	73.0	73.4	73.9	70.4	70.3	71.6	73.7	76.4	75.9	74.1	76.4	85.6
9-Mar	70.8	71.1	68.7	69.0	69.2	69.4	70.7	69.4	68.7	69.6	72.1	69.5	70.6	62.6	56.9	57.5	56.5	57.2	58.6	60.3	63.0	65.3	66.2	67.1	65.8	72.1
10-Mar	68.7	69.4	69.7	70.8	72.8	75.4	75.3	75.5	75.4	72.2	63.9	59.6	57.8	52.8	54.7	53.7	53.7	55.0	56.0	56.3	59.4	60.2	61.6	63.2	63.9	75.5
11-Mar	64.0	65.4	69.4	68.3	74.4	78.6	79.1	77.7	77.0	75.9	75.5	76.6	76.0	76.9	78.8	79.7	80.1	81.5	82.2	81.8	81.0	80.3	80.5	78.8	76.6	82.2
12-Mar	78.3	77.6	77.4	78.0	75.4	75.5	76.8	74.5	66.0	62.7	61.3	57.5	49.0	51.4	50.9	50.0	47.7	47.8	52.7	66.5	71.0	75.3	72.1	73.1	65.4	78.3
13-Mar	78.3	76.4	78.1	78.4	72.5	72.1	70.0	67.2	62.6	59.2	54.0	50.3	47.3	45.0	50.3	51.8	51.2	66.4	84.1	85.0	84.7	85.1	84.8	84.4	68.3	85.1
14-Mar	83.8	83.6	82.5	81.6	81.9	82.0	81.7	81.0	79.8	78.7	75.1	71.8	71.3	69.4	69.9	69.1	73.8	76.9	80.5	82.1	80.5	80.5	83.6	84.4	78.6	84.4
15-Mar	84.5	85.4	84.6	84.2	81.0	79.6	80.9	81.7	83.1	82.9	77.6	61.6	54.2	53.6	50.7	51.7	51.6	50.4	58.3	68.0	77.8	71.6	69.1	71.4	70.7	85.4
16-Mar	73.8	74.9	77.8	80.8	84.0	82.5	81.3	79.0	78.6	64.8	57.1	49.1	48.1	47.9	50.3	52.1	51.6	54.5	57.3	58.8	61.7	65.2	69.5	72.4	65.6	84.0
17-Mar	76.4	80.2	81.8	82.4	83.6	85.4	87.3	87.9	84.1	76.1	74.2	73.6	65.9	64.7	64.3	64.3	66.1	64.4	64.5	67.7	71.9	69.2	68.6	67.8	73.9	87.9
18-Mar	68.2	68.5	66.6	64.4	59.3	61.3	64.5	64.9	59.8	52.8	46.0	43.1	43.2	41.7	39.4	40.2	41.3	44.7	48.8	53.0	51.8	68.4	74.6	80.6	56.1	80.6
19-Mar	82.0	72.1	67.4	67.3	70.6	75.3	80.8	80.0	65.5	57.0	53.5	46.0	41.5	36.6	36.6	37.5	38.1	41.3	52.9	56.4	57.3	61.0	65.7	71.6	58.9	82.0
20-Mar	78.9	84.4	86.1	85.8	85.5	85.2	84.7	82.3	73.2	63.1	52.1	41.2	33.1	29.5	34.5	43.6	38.4	39.8	43.7	44.1	44.8	52.5	57.4	47.0	58.8	86.1
21-Mar	49.8	52.1	53.9	55.6	56.5	57.6	58.8	58.2	52.1	46.0	41.4	38.1	35.8	35.1	34.3	34.3	34.0	36.2	41.1	45.1	45.7	46.8	48.8	52.2	46.2	58.8
22-Mar	55.6	57.9	60.4	62.7	64.0	66.8	68.0	68.2	66.5	66.4	65.3	59.8	53.8	50.6	51.7	49.8	54.1	53.6	56.6	66.3	74.0	61.6	63.8	75.7	61.4	75.7
23-Mar	81.3	88.9	82.7	83.7	88.5	91.8	92.0	89.9	77.3	71.0	62.4	55.3	47.3	39.6	38.6	38.4	37.3	38.9	44.3	57.4	61.8	54.8	60.0	58.2	64.2	92.0
24-Mar	66.1	75.5	63.9	66.3	68.4	70.0	71.3	70.8	67.4	63.7	55.5	53.9	60.4	64.0	61.2	65.5	66.1	77.1	77.3	82.8	86.6	89.6	90.1	90.0	71.0	90.1
25-Mar	83.2	86.4	79.8	79.4	81.3	83.9	84.0	81.5	74.5	69.7	61.5	58.0	51.2	41.9	35.4	31.7	35.5	34.2	56.1	69.9	73.7	71.4	72.4	74.7	65.5	86.4
26-Mar	75.1	75.8	73.8	74.4	75.1	76.1	75.7	73.0	70.3	68.1	64.6	60.6	57.0	54.3	53.8	52.6	51.9	53.0	54.6	56.5	60.9	60.8	60.8	63.2	64.3	76.1
27-Mar	63.9	65.3	63.9	65.1	65.0	64.6	61.6	58.4	53.9	51.0	48.0	46.6	45.8	46.0	44.6	45.0	45.8	47.5	51.8	57.3	60.5	63.2	65.6	67.9	56.2	67.9
28-Mar	70.5	72.1	73.3	75.0	76.9	81.2	80.3	72.2	65.1	56.9	46.8	42.2	41.7	36.7	32.9	33.1	34.8	34.7	37.9	45.2	47.7	49.5	53.1	55.6	54.8	81.2
29-Mar	58.7	60.5	63.0	69.8	79.8	82.5	80.9	73.8	60.3	51.6	46.5	38.4	32.8	28.2	27.4	26.2	26.5	26.6	29.0	34.0	36.2	35.9	44.9	52.4	48.6	82.5
30-Mar	60.8	66.2	71.2	76.2	78.6	80.8	79.2	65.0	52.9	51.6	47.9	47.7	45.3	42.2	38.8	36.7	35.5	36.0	41.2	43.7	44.2	45.7	48.4	53.9	53.7	80.8
31-Mar	54.4	55.2	56.7	58.6	61.1	62.2	63.9	62.4	63.8	63.4	56.6	50.5	49.1	48.0	48.7	48.0	47.8	48.8	52.0	55.6	57.4	59.6	61.5	63.7	56.2	63.9
	72.4	73.9	73.7	74.7	75.9	77.3	77.6	75.6	71.0	66.7	61.9	56.8	53.1	50.3	49.8	49.5	50.0	52.2	57.8	62.3	64.5	65.5	68.5	70.3	Diurnal Average	
	86.7	88.9	86.1	85.8	88.5	91.8	92.0	89.9	84.1	82.9	78.0	76.6	76.0	76.9	78.8	79.7	80.1	81.5	84.1	85.0	86.6	89.6	90.1	90.0	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Patricia McInnes - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Patricia McInnes - March 2025

Maximum Speed: 28 km/h on Mar 8 15:00

Maximum Daily Speed Average: 15.5 km/h on Mar 14

Minimum Speed Value: 0 km/h on Mar 3 11:00

Minimum Daily Speed Average: 1.1 km/h on Mar 29

Maximum Diurnal Speed Average: 4.5 km/h at hour 1

Minimum Diurnal Speed Average: 1.6 km/h at hour 8

Monthly Average Velocity: 3.2 km/h 18.9 deg

Percentiles: P_1 = 1 P_{10} = 4 Q_1 = 6 Median = 9 Q_3 = 13 P_{90} = 16 P_{99} = 21

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	SE8	SSE7	SSE8	SSE5	S4	SSE5	SSE5	S6	S6	S6	SSE6	SSE7	SE6	SSE7	SSE7	SE6	ESE5	NNE4	SE5	S4	SW3	SSE2	S2	SSE4	SSE4.7	SE8
2-Mar	S5	SSE5	S5	SSW8	SSE8	SSE6	SSW9	SW10	WSW4	N15	NNW11	NNW10	NW9	W10	WNW12	WNW13	W9	NW11	NNW16	N17	N17	NNE15	N14	N12	NW5.2	N17
3-Mar	N15	NNE17	NNE15	N10	NW6	WNW5	WSW5	W4	W3	SW4	SE0	ENE7	E4	SSE2	E5	E6	E8	ESE7	ESE5	ESE5	SE4	S3	SSW4	SSW5	NE1.9	NNE17
4-Mar	SSW5	WSW12	WSW12	WSW14	SW14	SW14	WSW16	SW10	SW12	SW15	WSW12	SW14	SW19	SW17	SW13	SW14	SW9	SW8	SW8	WSW10	WSW12	NW14	N14	N9	WSW10.5	SW19
5-Mar	N10	N8	NNW8	NW9	NNW11	NNE14	N16	N10	NNE13	NNE11	NE9	ENE5	ESE4	ESE4	E9	ESE9	ESE9	SE9	ESE10	ESE10	SE7	S4	SE1	NNW1	NE4.5	N16
6-Mar	E0	NW2	NNE3	NNW5	NW4	W3	SE2	S4	SSE6	SE9	SE9	SE7	SSE7	SSE9	SSE10	SSE7	W11	SSE1	SE4	SW2	WSW5	W9	WNW7	NW7	S2.2	W11
7-Mar	NNW9	N11	NNW9	NNW7	NNW8	N9	NNW9	NNW7	WNW3	SSW1	NNE7	ENE2	S8	NNE4	NNE9	NNE7	N15	N17	N13	NNW14	NNW14	N14	N13	N11	N8.1	N17
8-Mar	NNW9	NNW9	N7	NNE7	N8	N8	NNW7	NNW8	NNW11	NNW10	NNW8	NNE7	NNE13	N22	N28	N27	NNE22	N16	NNE13	N11	N12	N17	N20	N20	N13.0	N28
9-Mar	N23	N22	N20	NNE18	NNE18	NNE19	NNE15	NNE15	NNE15	NNE15	NNE13	N13	NNE12	NNE11	NNE10	NNE9	N9	NNW10	NNW9	NNW9	NNW11	NNW10	NNW9	NNW9	N13.0	N23
10-Mar	NNW8	NNW6	NNW8	NNW7	NNW6	N7	N6	NNW2	SE6	SSE5	SE5	SSE4	SE7	ENE5	ENE7	E7	E8	ESE6	ESE6	ENE7	ENE9	E9	E8	E7	ENE3.4	ENE9
11-Mar	E8	ENE7	NE8	NE8	N7	N8	N9	N7	N8	N12	N12	N12	N13	N15	N16	N15	N15	N17	N18	N19	NNW19	NNW21	N20	N20	N12.4	NNW21
12-Mar	NNW20	NNW19	NNW16	NNW13	NNW11	NNW9	NNW8	NNW8	N7	N7	NNE7	NE6	NNE5	NE8	NE7	NE9	NE8	NNE7	WNW4	NW3	NNW2	N5	ENE6	NE2	N7.3	NNW20
13-Mar	N4	NNE4	NNE5	N6	NNE6	N6	NNE7	NE8	NNE7	NNE8	NNE8	NE11	NE14	E14	NNE12	NNE11	NNE8	E10	ENE11	NNE12	NNE13	NNE14	N15	N13	NNE8.7	NNE15
14-Mar	N13	N14	N16	N19	N16	N16	N17	N19	N18	NNW17	NNW18	N20	N20	N19	N18	NNW19	NNW18	N15	N13	N12	N12	N10	NNW9	NNW7	N15.5	N20
15-Mar	NNW7	NW7	NW8	NW7	NW6	WNW4	WSW3	SSW1	WNW2	NW1	NW1	N2	NNE2	E4	NE2	SE1	S6	S6	S6	S5	SSW5	S6	SSW6	SSW3	WSW1.4	NW8
16-Mar	S5	SSW5	SSW7	SSW7	SW6	SSW5	SSE4	SSE4	SE4	ESE5	SE5	ESE10	ESE11	ESE12	ESE14	ESE14	ESE14	ESE15	ESE12	SE12	SE12	SE14	SE12	ESE11	SE7.8	ESE15
17-Mar	SE11	SE11	SE8	SE8	SE5	SE4	SW2	WSW3	S4	W3	NE7	N9	N9	N16	NNE13	NNE16	NNE16	NNE13	N8	NNW7	N8	NNW5	NW5	NW4	NNE4.2	NNE16
18-Mar	W5	WSW4	SW6	WSW10	W12	WSW12	WSW12	WSW6	NNW2	NW3	WSW5	SW7	SW11	WSW11	SW7	SSE7	SE6	SE8	ESE6	SE7	SSE6	NNE3	W3	WSW5	SW4.3	WSW12
19-Mar	NNW8	NNW11	NNW10	NNW6	WSW3	SSW2	NW1	SSW2	ESE3	E5	SE4	SE6	SE4	ENE2	ESE4	SE7	E6	ENE5	NNW1	NNW15	NNW19	N17	N14	NNW19	N3.9	NNW19
20-Mar	NNW18	NNW16	NNW15	N13	NNW13	N12	N10	N9	NNE7	N8	NNE8	NE9	NE11	ENE9	NNE9	N11	NNE7	N8	N7	NNW8	NNW6	NNE3	SE6	ESE16	N7.9	NNW18
21-Mar	ESE16	ESE16	ESE17	ESE15	ESE17	ESE17	ESE17	ESE16	ESE13	ESE13	ESE13	ESE14	ESE16	ESE15	ESE14	ESE15	ESE13	E11	ESE10	ESE11	SE11	SE14	SE15	SE12	ESE14.2	ESE17
22-Mar	SE10	SE11	SE9	SE8	SE10	SE8	SE9	SSE9	SSE9	SSE6	SSE7	ESE6	ESE7	ESE10	ESE11	SE10	SE8	ESE5	WNW7	WNW11	W9	W12	WNW13	NNW10	SE4.0	WNW13
23-Mar	NNW3	SW4	WSW8	WSW9	WSW7	WSW7	WSW9	WSW8	S4	S7	SSE7	S7	SSE7	ESE6	E10	E10	ESE9	SE9	ESE7	SE5	SE8	SE8	ESE8	ESE8	SSE3.9	E10
24-Mar	E4	ESE5	SE11	SE8	SE9	SE9	SE9	SSE7	SSE7	SSE8	SSE7	S7	SSW11	SW9	SW12	WSW12	W12	W13	W15	W12	W9	W11	WSW9	SW8	SSW4.8	W15
25-Mar	W6	WSW8	W13	WSW12	WSW10	WSW8	WSW4	SW8	WSW10	SW10	SW11	SSW12	SW14	WSW16	W18	NW26	NW18	NW20	N17	N21	N17	N19	N17	NNE17	WNW7.6	NW26
26-Mar	NNE17	NNE18	N13	N7	NNE8	NNE12	NNE11	NNE14	NNE14	NNE14	N10	NNE8	NNE5	N7	NNW7	N6	N7	N7	NNW7	NNW9	NNW10	NNW12	N12	N12	N9.9	NNE18
27-Mar	N13	N12	N14	N14	N13	NNE12	NNE16	NNE16	NNE17	NNE17	NNE16	NNE19	NNE16	NNE19	NNE16	N18	N21	N21	N18	N15	N14	N13	N12	N12	N15.2	N21
28-Mar	N10	N7	N6	N7	N5	N5	N7	N6	NE7	NNE5	ENE4	ENE5	NNE7	NE4	ENE6	N4	NNE6	NNE6	N8	NNW10	NNW9	NNW8	NNW9	NNW8	N6.1	N10
29-Mar	NNW9	NNW9	N7	N5	NNE3	NW2	WNW3	SSW2	NW3	E2	NE4	NE4	E3	NNE2	NW3	S2	E7	E9	ESE7	SSE5	SSW6	SSW6	SSW4	N4	NE1.1	E9
30-Mar	WNW4	WNW5	WSW1	NW3	WSW2	WSW2	WSW2	WNW0	SSE1	SE3	ENE4	NNE4	ESE7	ENE4	ESE2	E9	ESE10	ESE10	E8	E9	ENE7	ESE9	SE15	ESE16	ESE3.8	ESE16
31-Mar	SE16	SE13	SE12	ESE11	ESE9	ESE9	ESE7	ESE7	ESE9	ESE9	ESE9	ESE10	ESE15	ESE17	ESE19	ESE19	ESE19	ESE17	ESE16	SE14	SE13	SE11	SE11	ESE11	ESE12.5	ESE19
	N4.5	N4.1	N3.5	N3.1	NNW2.6	N2.4	N2.3	N1.6	NNE2.0	NNE2.2	NE2.9	NE3.0	ENE2.6	NE3.1	NE3.6	NNE3.8	NE4.2	NE4.4	NNE4.0	N4.3	N4.2	N4.5	N4.2	NNE4.4	Diurnal Average	
	N23	N22	N20	N19	NNE18	NNE19	N17	N19	N18	NNW17	NNW18	N20	N20	N22	N28	N27	NNE22	N21	N18	N21	NNW19	NNW21	N20	N20	Diurnal Maximum	

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

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7 km/h on Mar 25 16:00

Minimum Value: 0 km/h on Mar 12 19:00

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

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

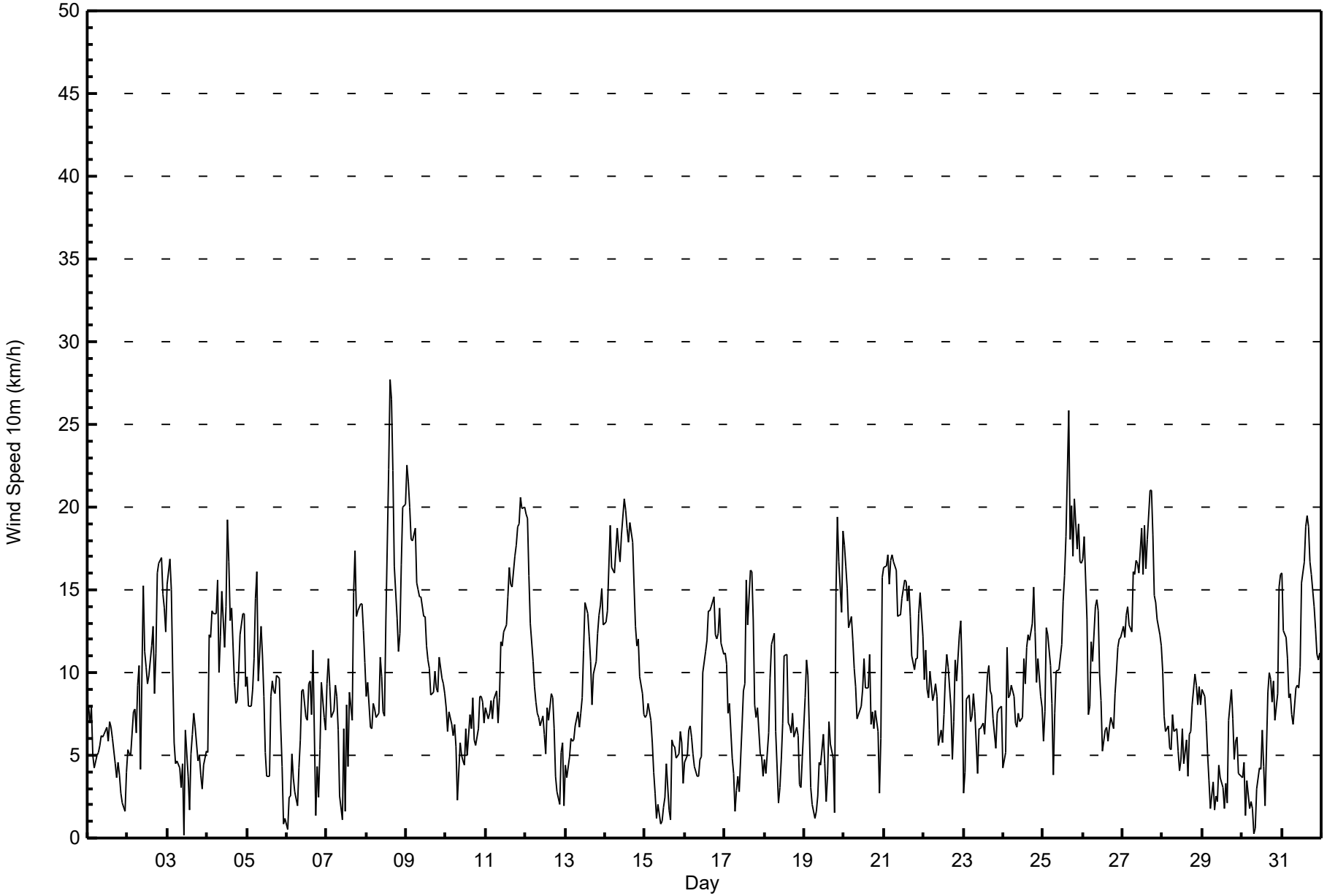
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	2	2	2	2	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	0	1	1	1	2
2-Mar	1	1	1	1	1	1	2	1	3	3	3	2	2	2	3	3	1	3	3	3	3	3	3	3	3
3-Mar	3	4	3	3	1	1	1	1	1	1	1	2	1	2	2	1	1	1	1	1	1	1	1	1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

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Patricia McInnes - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	166	22.31	22.31
6 - 11	346	46.51	68.82
12 - 19	212	28.49	97.31
20 - 28	20	2.69	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Patricia McInnes - March 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	8	14	5	9	8	11	16	14	13	13	5	14	6	9	13	8	166
6 - 11	47	29	14	10	19	38	39	25	11	8	15	15	8	3	9	56	346
12 - 19	68	42	1	0	1	33	12	0	0	1	10	12	8	3	2	19	212
20 - 28	14	1	0	0	0	0	0	0	0	0	0	0	0	0	2	3	20
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	137	86	20	19	28	82	67	39	24	22	30	41	22	15	26	86	744

Total Number of Valid Hours: 744

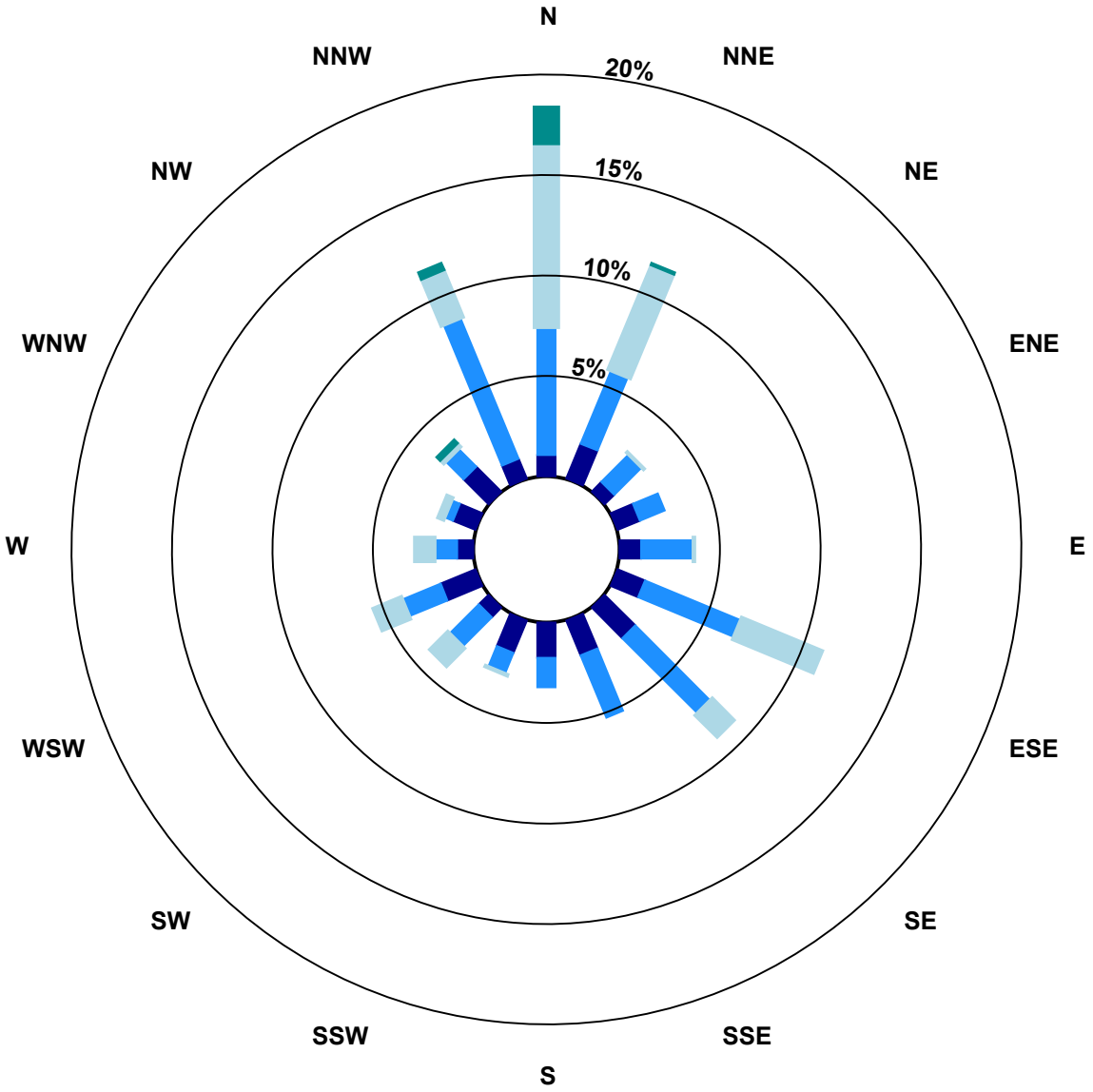
Total Number of Hours: 744

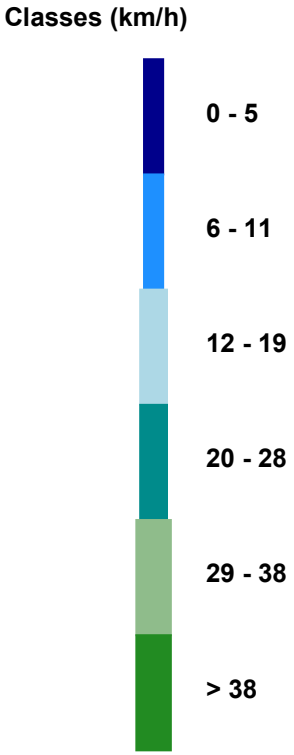
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 10m (WS10) - km/h

Patricia McInnes





Total Number of Valid Hours: 744

Direction of Maximum Speed: 352 deg on Mar 8 15:00
Direction of Maximum Daily Speed Average: 352.3 deg on Mar 14

Direction of Minimum Speed: 131 deg on Mar 3 11:00

Direction of Minimum Daily Speed Average: 1.1 deg on Mar 29

Monthly Average Direction: 18.9 deg

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	144	149	147	153	186	168	153	175	175	172	147	152	138	147	155	135	108	29	133	183	235	165	178	159	153.5
2-Mar	189	166	173	200	161	155	206	225	256	350	346	330	312	277	303	303	271	309	348	355	1	12	10	9	323.6
3-Mar	9	14	17	356	324	294	256	265	268	227	131	74	100	151	99	93	98	116	122	104	135	181	204	199	42.7
4-Mar	204	239	238	238	235	236	238	230	224	233	238	229	234	233	233	225	224	217	229	242	251	312	349	358	240.7
5-Mar	357	354	346	326	336	14	7	352	17	20	37	69	114	110	95	109	110	125	116	123	132	175	131	327	41.3
6-Mar	92	309	21	345	307	269	142	188	161	143	131	144	150	160	159	156	264	164	134	221	248	268	290	323	190.9
7-Mar	341	351	336	335	341	359	342	338	293	208	26	57	183	19	32	21	355	357	353	348	347	351	353	350	352.3
8-Mar	345	343	352	21	349	5	338	344	341	332	342	23	15	3	352	350	14	6	17	8	358	6	10	10	0.1
9-Mar	9	9	8	15	21	19	17	24	29	18	16	11	14	17	14	12	1	348	336	332	347	339	338	343	8.1
10-Mar	337	330	342	344	340	353	1	333	144	150	139	168	137	75	70	86	92	109	105	67	76	88	89	93	68.2
11-Mar	81	60	37	46	356	8	8	353	2	2	355	6	6	355	354	356	350	352	357	355	345	348	349	349	359.9
12-Mar	348	348	348	346	343	340	336	344	349	4	13	35	28	37	52	35	34	12	298	316	334	10	75	49	1.2
13-Mar	353	24	20	11	17	7	19	38	21	25	32	40	51	82	21	12	30	90	58	32	18	18	11	2	29.6
14-Mar	353	356	359	351	349	355	351	353	356	341	341	349	3	7	355	345	344	357	349	3	356	354	336	344	352.3
15-Mar	334	315	314	324	311	286	252	207	283	321	306	351	33	84	51	142	186	170	178	187	202	188	192	210	254.7
16-Mar	188	204	193	209	224	205	157	163	146	122	131	117	112	104	109	115	114	111	122	128	129	127	125	123	130.7
17-Mar	127	132	136	135	135	131	227	243	190	260	36	6	7	4	20	16	22	22	2	347	355	329	320	320	25.9
18-Mar	274	237	221	245	259	257	256	253	336	310	250	220	225	240	215	168	132	126	113	127	152	24	268	243	227.6
19-Mar	328	334	338	327	252	213	314	194	114	99	130	139	138	71	103	139	101	64	332	346	345	350	350	347	358.6
20-Mar	346	348	346	349	347	349	355	3	23	11	25	53	55	74	14	359	14	11	10	348	348	12	132	119	10.9
21-Mar	118	120	120	123	121	121	121	123	118	120	120	112	120	116	111	108	104	101	104	111	129	129	130	134	118.5
22-Mar	136	138	142	134	135	142	144	148	148	151	147	121	121	116	121	131	124	106	302	295	276	281	297	338	144.6
23-Mar	332	229	250	242	241	245	253	248	172	176	168	173	159	111	97	100	120	134	121	125	129	130	112	111	158.4
24-Mar	99	117	134	125	134	138	145	148	153	150	153	179	199	231	230	258	280	262	277	277	272	271	251	224	212.6
25-Mar	265	251	265	255	241	247	254	218	238	233	216	211	223	239	272	307	311	326	1	6	7	11	11	12	295.7
26-Mar	16	15	6	6	14	26	19	17	19	18	10	22	19	7	336	4	11	6	345	347	332	345	356	358	7.1
27-Mar	2	6	8	4	3	13	31	32	32	29	26	22	18	12	19	359	356	5	3	1	359	358	352	349	10.6
28-Mar	353	359	3	353	3	359	355	5	40	31	65	58	29	45	78	9	16	27	11	345	348	340	334	340	7.1
29-Mar	334	342	357	8	16	308	291	198	308	87	45	55	96	29	317	183	94	100	111	160	197	205	193	357	38.6
30-Mar	282	303	237	304	238	257	255	302	152	139	74	25	103	66	113	100	120	106	90	81	68	105	129	120	103.2
31-Mar	125	127	124	118	104	113	118	121	123	120	111	118	104	111	111	112	112	114	118	124	124	126	125	122	117.3
	8.2	4.0	2.0	349.5	342.6	358.9	351.7	0.4	33.5	30.2	42.9	55.9	73.4	49.3	37.6	31.1	35.3	36.6	28.4	10.8	359.2	0.6	8.8	16.0	
	Diurnal Average																								

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

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 104 deg on Mar 3 11:00

Minimum Value: 4 deg on Mar 15 03:00

Percentiles: P_1 = 7 P_{10} = 10 Q_1 = 12 Median = 15 Q_3 = 23 P_{90} = 44 P_{99} = 90

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

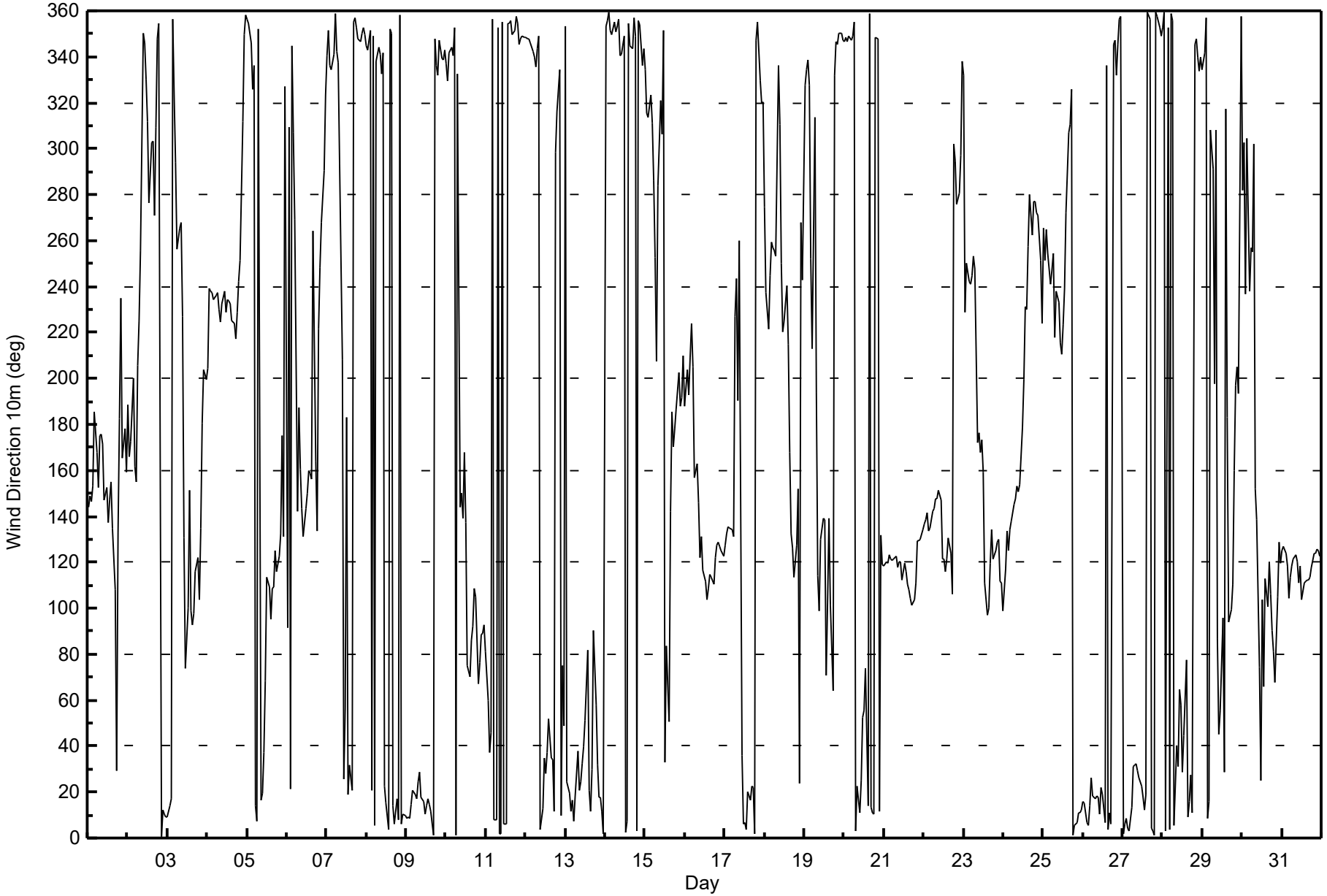
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	16	14	15	22	9	13	17	9	11	12	20	16	20	13	16	13	15	40	25	9	24	30	51	24	51
2-Mar	18	24	26	18	21	16	15	11	52	15	18	9	15	18	13	13	10	26	12	14	16	14	14	13	52
3-Mar	12	14	13	14	15	25	22	34	25	19	104	23	43	92	35	15	12	13	12	10	23	27	12	18	104
4-Mar	16	9	8	8	8	9	9	18	11	11	13	11	12	12	12	10	10	10	10	8	10	29	14	13	29
5-Mar	13	15	13	11	10	15	15	21	17	15	19	38	63	61	20	18	13	13	11	14	15	13	39	72	72
6-Mar	91	37	38	11	24	34	38	13	21	17	17	21	21	16	15	26	22	72	30	66	15	14	8	8	91
7-Mar	21	12	12	19	11	14	12	13	54	89	27	89	23	86	13	46	15	15	13	15	15	16	16	13	89
8-Mar	12	14	16	18	13	13	19	15	9	10	14	21	17	15	17	15	14	16	12	16	16	14	12	14	21
9-Mar	14	14	14	14	13	12	12	15	13	16	14	16	17	23	25	24	24	14	12	10	13	11	12	10	25
10-Mar	12	17	12	14	10	15	19	55	24	32	40	56	28	51	24	21	18	19	13	21	19	13	13	16	56
11-Mar	12	16	16	14	18	13	14	14	16	14	14	13	14	14	15	15	13	13	15	15	11	13	14	13	18
12-Mar	11	12	12	12	9	11	11	14	14	18	23	26	44	25	23	21	19	19	27	61	49	12	25	35	61
13-Mar	24	35	10	11	11	10	16	11	14	15	17	16	15	15	23	13	27	16	16	12	11	11	11	14	35
14-Mar	13	14	15	15	13	14	12	14	15	12	10	14	16	17	16	14	13	15	13	13	15	13	8	11	17
15-Mar	9	8	4	5	13	15	40	51	32	54	44	74	88	46	91	92	17	16	10	18	12	11	15	66	92
16-Mar	36	20	13	17	15	18	16	7	22	26	27	19	20	16	18	17	14	14	12	12	12	12	12	12	36
17-Mar	12	12	13	14	13	11	54	40	20	54	32	24	29	17	19	12	10	10	15	9	12	21	19	25	54
18-Mar	10	37	32	12	7	7	8	75	77	63	65	45	25	26	44	26	24	16	9	10	47	40	35	19	77
19-Mar	24	7	9	13	43	26	69	42	55	33	32	27	36	66	45	19	30	34	61	11	10	14	12	12	69
20-Mar	11	13	11	11	11	12	13	15	13	19	22	28	22	25	25	17	22	15	12	10	13	53	63	11	63
21-Mar	11	11	12	13	12	12	13	13	14	15	15	15	17	16	16	13	15	14	14	11	13	12	13	12	17
22-Mar	13	13	12	11	11	11	12	12	11	19	28	24	27	17	16	14	16	35	68	11	18	9	16	10	68
23-Mar	63	45	10	12	11	9	11	14	37	15	19	22	27	35	18	17	16	19	9	7	8	10	11	12	63
24-Mar	40	22	13	12	12	13	12	15	15	15	17	29	19	28	23	16	15	9	11	8	10	8	15	20	40
25-Mar	54	23	8	9	10	19	69	28	13	12	13	13	12	13	20	19	13	18	16	14	14	12	13	13	69
26-Mar	12	12	16	35	25	11	12	15	15	15	26	24	49	37	30	33	27	21	15	19	10	12	14	13	49
27-Mar	13	13	11	13	14	12	11	12	13	15	15	16	21	17	19	17	16	16	14	14	15	14	12	11	21
28-Mar	13	14	10	10	10	10	11	18	15	26	52	66	66	75	54	74	53	26	12	10	11	6	5	11	75
29-Mar	7	11	13	13	18	44	14	27	37	75	37	61	81	83	59	76	30	16	14	22	10	10	49	45	83
30-Mar	29	12	44	17	29	41	46	99	96	62	49	43	43	63	102	28	27	14	13	14	18	26	15	11	102
31-Mar	12	13	12	11	11	14	12	13	15	17	24	34	18	18	16	14	13	13	12	11	11	11	11	9	34
	91	45	44	35	43	44	69	99	96	89	104	89	88	92	102	92	53	72	68	66	49	53	63	72	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Patricia McInnes - March 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS07
ATHABASCA VALLEY
MARCH 2025

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

April 30, 2025

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

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 30-Min Value	30-Min Exceedances	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	708	35	36	99.87	-	-	9.9	0	2.3	0
TRS (ppb) Average	706	37	38	99.87	4.6	0	3.7	0	0.7	0
THC (ppm) Average	707	36	37	99.87	-	-	2.7	-	2.3	-
NMHC (ppm) Average	707	36	37	99.87	-	-	0.182	-	0.008	-
CH4(ppm) Average	707	36	37	99.87	-	-	2.7	-	2.3	-
O3 (ppb) Average	708	35	36	99.87	-	-	49.4	0	39.9	-
NO2 (ppb) Average	702	37	42	99.33	-	-	38.1	0	14.7	-
NO (ppb) Average	702	37	42	99.33	-	-	29.8	-	8	-
NOX (ppb) Average	702	37	42	99.33	-	-	61	-	22.7	-
PM2.5 (ug/m3) Average	680	2	64	91.67	-	-	25.6	0	9.3	0
CO(ppm) Average	708	36	36	100	-	-	0.5	0	0.2	-
Temperature 2 m (C) Average	744	0	0	100	-	-	10.8	-	2.6	-
Relative Humidity (%) Average	744	0	0	100	-	-	90.3	-	75.3	-
Barometric Pressure (inHg) Average	744	0	0	100	-	-	29.4	-	29.4	-
Wind Speed 10 m (km/h) Average	744	0	0	100	-	-	28	-	16	-
Wind Direction 10 m (deg) Average	744	0	0	100	-	-	-	-	-	-

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

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

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	708	0.56	1.2	-	0	0	0.1	0.1	0.4	1.5	9.9
TRS (ppb) Average	706	0.26	0.3	-	0.1	0.1	0.1	0.2	0.3	0.5	3.7
THC (ppm) Average	707	2.12	0.1	-	2	2	2.1	2.1	2.1	2.2	2.7
NMHC (ppm) Average	707	0.001	0.009	-	0	0	0	0	0	0	0.182
CH4(ppm) Average	707	2.11	0.1	-	2	2	2.1	2.1	2.1	2.2	2.7
O3 (ppb) Average	708	29.76	8.8	-	3.2	17.1	24.4	30.6	36.1	40.7	49.4
NO2 (ppb) Average	702	8.93	6.6	-	0.4	2.6	4.5	7.2	12	18	38.1
NO (ppb) Average	702	2.65	4.2	-	0	0	0.2	1	3	7.4	29.8
NOX (ppb) Average	702	11.58	9.5	-	0.4	3.1	5.3	8.4	14.8	23.9	61
PM2.5 (ug/m3) Average	680	4.7	2.7	-	1.2	2.4	2.9	3.9	5.8	8	25.6
CO(ppm) Average	708	0.16	0	-	0.1	0.1	0.1	0.1	0.2	0.2	0.5
Temperature 2 m (C) Average	744	-7.02	7.6	-	-24.1	-17.5	-12.9	-6.4	-1.3	3	10.8
Relative Humidity (%) Average	744	61.91	14.3	-	20.8	41.9	51.4	63.5	73.7	79	90.3
Barometric Pressure (inHg) Average	744	28.99	0.2	-	28.7	28.8	28.8	29	29.1	29.3	29.4
Wind Speed 10 m (km/h) Average	744	8	5	-	0	2	4	7	11	15	28
Wind Direction 10 m (deg) Average	744	-	-	-	-	-	-	-	-	-	-

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

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL GASEOUS ANALYZERS (except CO)	24 Mar 2025 15:00	24 Mar 2025 15:00	1	Maintenance - sample manifold cleaned
NO2	01 Mar 2025 10:00	01 Mar 2025 11:00	2	Unstable Operations - excessive baseline noise
NO2	01 Mar 2025 13:00	01 Mar 2025 14:00	2	Unstable Operations - excessive baseline noise
PM2.5	29 Mar 2025 11:00	01 Apr 2025 00:00	62	Unstable Operations - excessive baseline noise

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Athabasca Valley - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 9.9 ppb on Mar 29 13:00 Maximum Daily Average: 2.3 ppb on Mar 15

Minimum Value: 0.0 ppb on Mar 1 02:00 Minimum Daily Average: 0.0 ppb on Mar 27
Maximum Diurnal Average: 1.7 ppb at hour 15 Minimum Diurnal Average: 0.1 ppb at hour 6
Monthly Average: 0.56 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.1 Q_3 = 0.4 P_{90} = 1.5 P_{99} = 7.4

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.2	0.2	0.3	0.2	0.6	0.6	1.1	1.2	0.8	0.6	0.5	0.2	0.1	0.1	0.1	0.1	0.3	1.2
2-Mar	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.8	0.7	1.2	4.0	3.8	1.4	0.5	0.3	0.3	0.1	0.1	0.0	0.0	0.0	0.6	4.0
3-Mar	0.0	Z	0.1	0.0	0.0	0.1	0.1	0.4	0.4	1.5	2.1	1.3	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.4	2.1
4-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.9	0.3	0.1	0.9
5-Mar	0.2	0.1	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.1	0.2	1.8	3.0	3.9	3.9	2.8	2.0	1.7	1.5	1.9	1.7	1.4	0.9	0.4	1.2	3.9
6-Mar	0.2	0.2	0.1	0.1	Z	0.1	0.1	0.0	0.1	0.1	0.1	0.2	0.3	0.4	0.5	0.8	0.8	0.7	0.6	0.4	0.2	0.2	0.2	0.2	0.3	0.8
7-Mar	0.2	1.4	2.9	1.5	0.8	Z	0.6	0.4	0.5	0.9	1.4	1.7	2.0	2.0	2.2	2.0	8.6	3.3	3.0	1.2	0.5	0.4	0.4	0.4	1.7	8.6
8-Mar	Z	0.4	0.4	0.3	0.3	0.2	0.2	0.4	0.7	1.1	1.6	3.0	2.9	5.6	7.4	2.7	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.2	7.4
9-Mar	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	1.3	1.9	1.7	1.3	0.5	0.2	0.1	0.2	0.0	0.3	1.9
10-Mar	0.1	0.4	Z	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.6	0.6	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.3	0.6
11-Mar	0.1	0.0	0.0	Z	0.1	0.1	0.2	0.3	0.3	C	C	C	C	0.4	0.6	1.2	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.2	1.2
12-Mar	0.7	0.9	0.5	0.5	Z	0.3	0.0	0.2	0.1	0.1	0.1	0.0	0.2	8.0	7.6	6.1	4.4	0.7	2.3	0.9	0.6	0.3	0.2	0.1	1.5	8.0
13-Mar	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
14-Mar	Z	0.1	0.1	0.1	0.2	0.1	0.1	0.4	0.3	0.1	0.7	2.2	0.2	0.2	0.2	0.4	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	2.2
15-Mar	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.2	2.6	9.8	9.6	8.5	7.0	3.6	3.4	1.9	1.8	1.2	0.8	2.3	9.8
16-Mar	0.8	0.7	Z	0.3	0.3	0.2	0.2	0.2	0.3	0.4	0.5	0.6	0.8	1.1	1.1	0.8	0.6	0.5	0.5	0.3	0.2	0.2	0.1	0.1	0.5	1.1
17-Mar	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	1.5	4.3	5.8	2.4	0.8	0.6	0.6	0.5	0.3	0.1	0.1	0.1	0.8	5.8
18-Mar	0.1	0.1	0.1	0.2	Z	0.3	0.4	0.4	0.5	0.6	0.6	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.2	0.6
19-Mar	0.0	0.0	0.1	0.0	0.0	Z	0.0	0.1	0.2	0.5	1.6	3.2	4.0	2.9	2.1	1.7	1.5	1.3	0.8	0.7	1.9	0.7	0.3	0.2	1.0	4.0
20-Mar	Z	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	0.1	0.4	0.3	0.4	2.7	3.7	1.9	0.9	0.3	0.1	0.6	3.7
21-Mar	0.1	Z	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
22-Mar	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.6	1.0	1.1	0.9	0.7	0.6	0.5	3.0	1.3	0.6	0.4	1.3	0.6	3.0
23-Mar	1.5	0.7	0.7	Z	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.3	1.5
24-Mar	0.1	0.2	0.1	0.1	Z	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.3	0.4	M	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.4
25-Mar	0.1	0.1	0.0	0.1	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1
26-Mar	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	0.5	1.4	2.9	2.9	0.6	0.4	0.2	0.1	0.1	0.4	2.9
27-Mar	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
28-Mar	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	2.2	1.7	0.3	0.1	0.0	0.2	2.2
29-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.5	3.4	9.9	2.3	1.5	1.7	3.2	2.6	2.0	1.9	1.0	0.5	0.2	0.2	1.3	9.9
30-Mar	0.1	0.1	0.1	0.1	Z	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.2	0.4	0.2	0.4
31-Mar	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	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.5
	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.7	1.0	1.3	1.7	1.3	1.2	0.9	0.8	0.7	0.5	0.3	0.2	0.2	Diurnal Average	
	1.5	1.4	2.9	1.5	0.8	0.3	0.6	0.4	0.7	1.5	2.1	3.4	9.9	8.0	9.8	9.6	8.6	7.0	3.6	3.7	1.9	1.8	1.2	1.3	Diurnal Maximum	

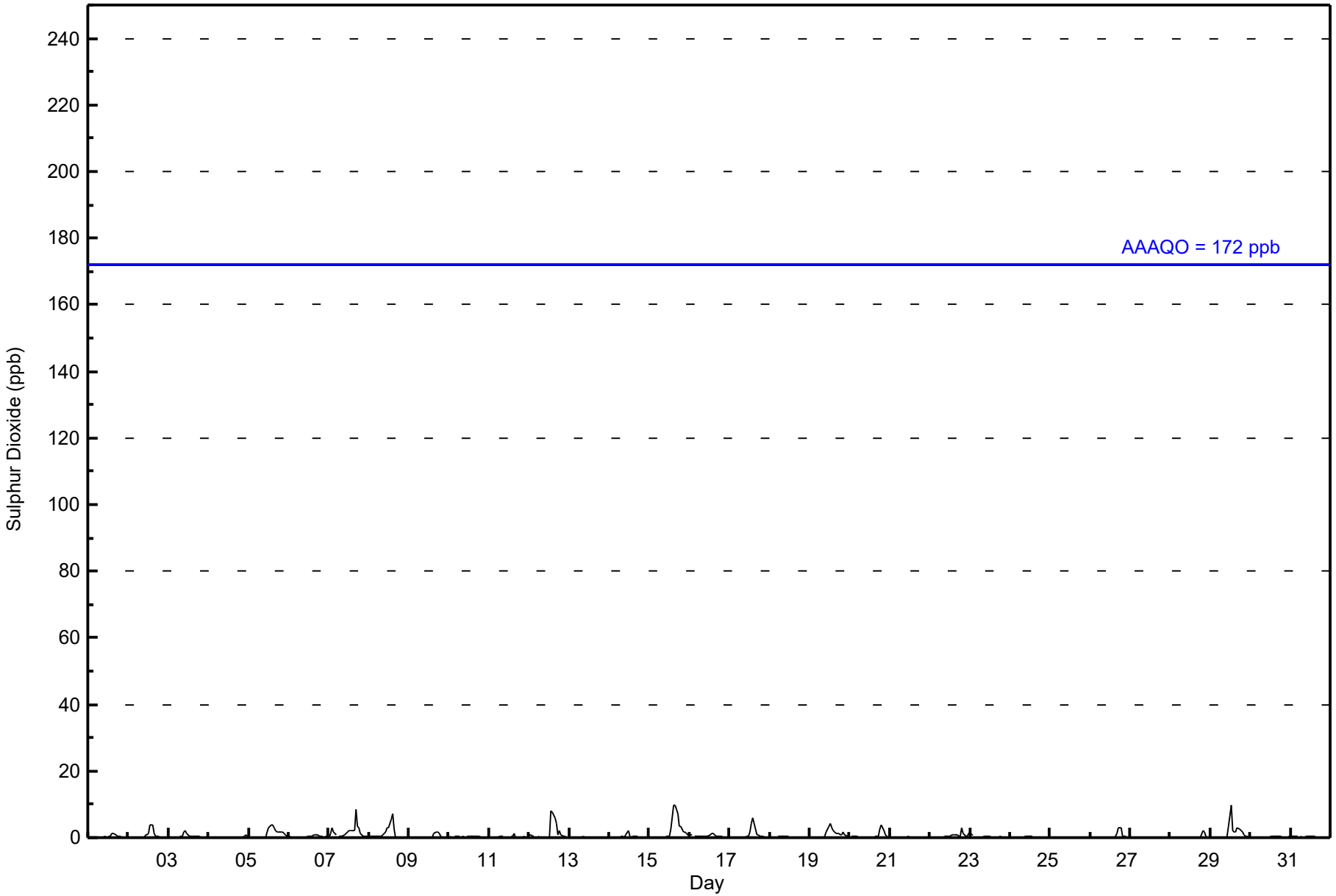
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Athabasca Valley - March 2025



Sulphur Dioxide (SO_2) - ppb
Athabasca Valley - March 2025

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

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Athabasca Valley - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	37	18	13	45	30	112	49	21	20	30	19	16	17	25	99	157	708
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	37	18	13	45	30	112	49	21	20	30	19	16	17	25	99	157	708

Total Number of Valid Hours: 708

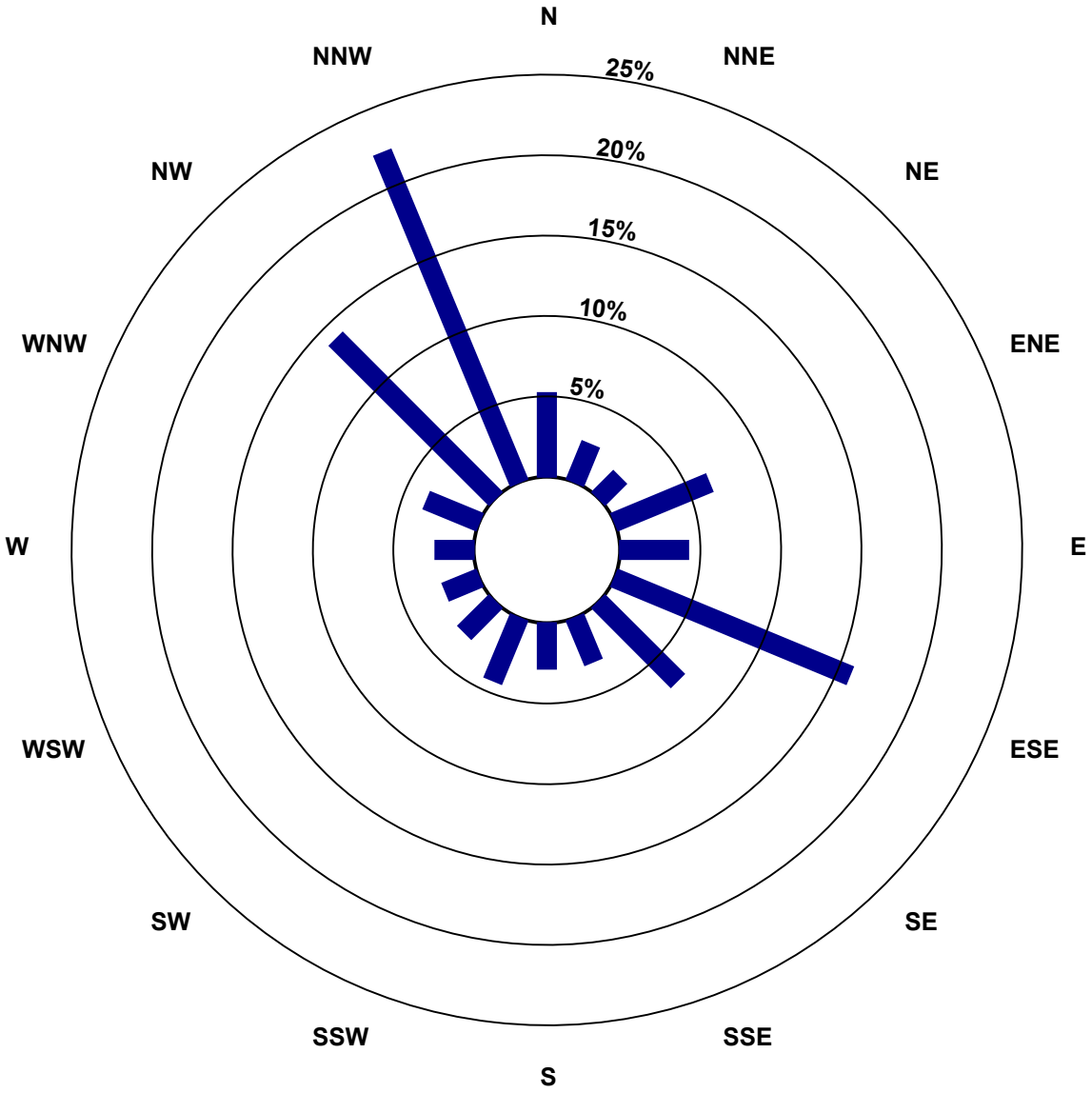
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Sulphur Dioxide (SO_2) - ppb

Athabasca Valley



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

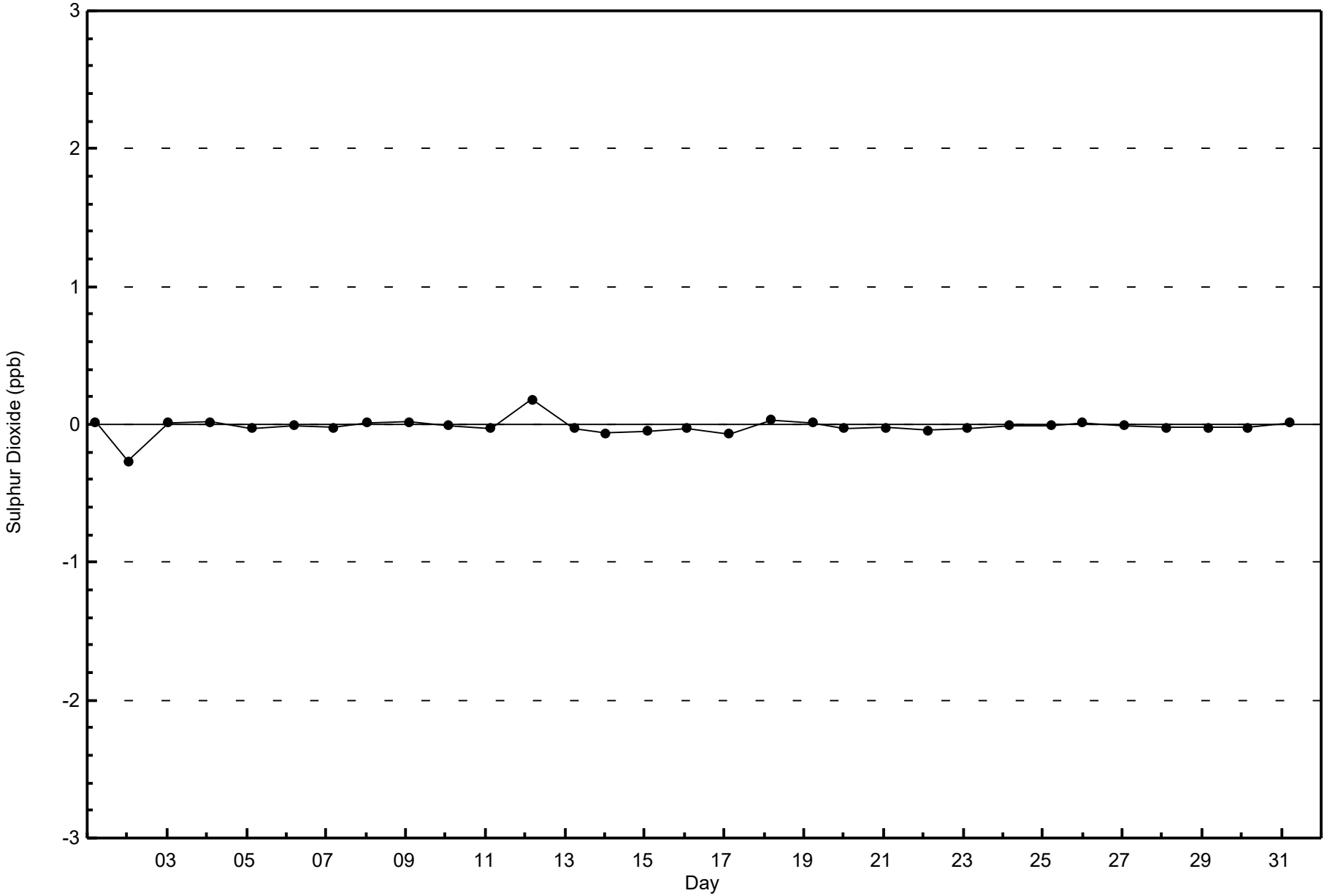
Total Number of Valid Hours: 708

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Athabasca Valley - March 2025

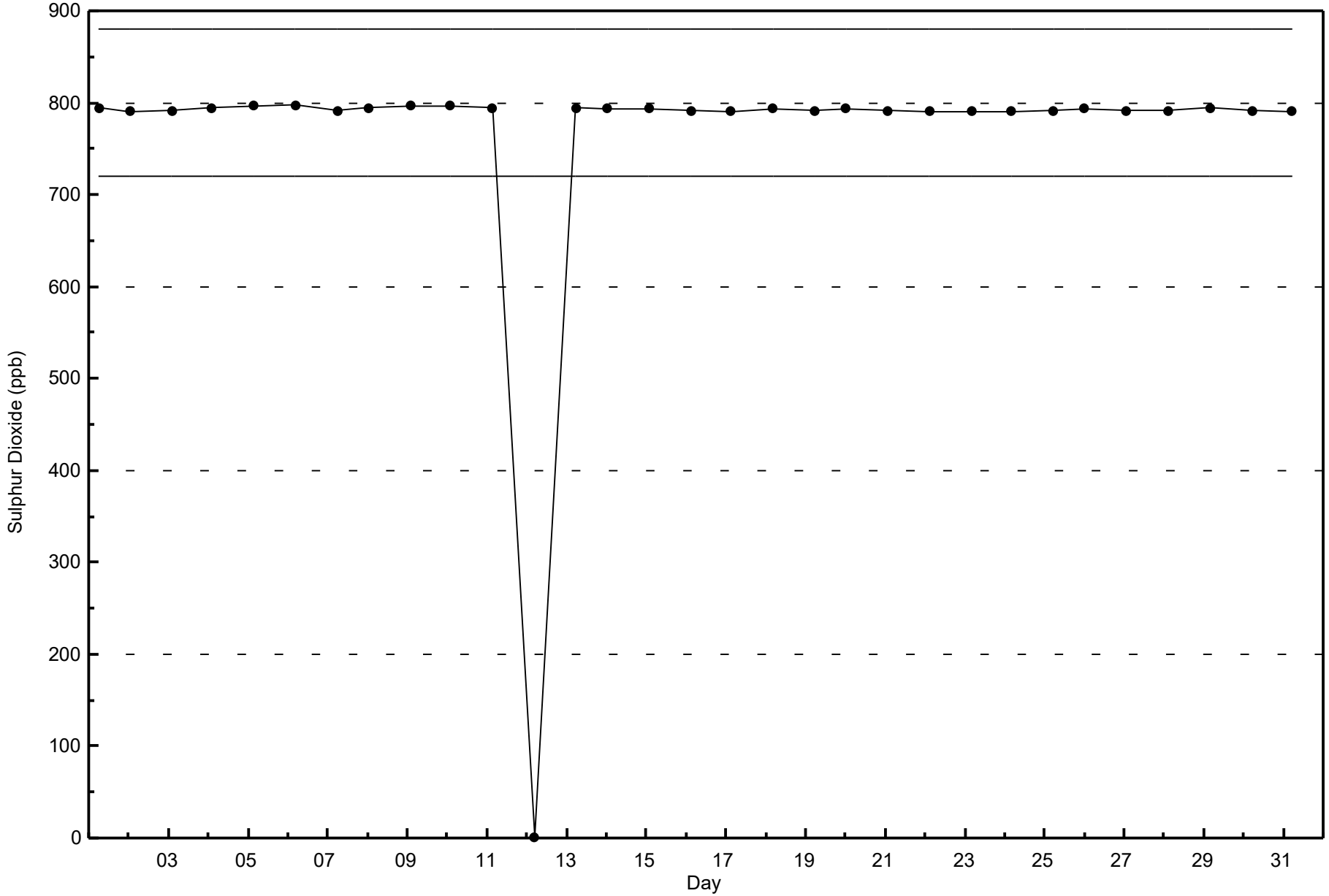


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Athabasca Valley - March 2025



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Athabasca Valley - March 2025

Number of Exceedences (AAAQG): 30-Min: 0

Maximum Value: 4.6 ppb on Mar 8 10:00

Maximum Daily Average: 0.7 ppb on Mar 8

Minimum Value: 0.1 ppb on Mar 25 15:00

Minimum Daily Average: 0.1 ppb on Mar 31

Maximum Diurnal Average: 0.4 ppb at hour 10

Minimum Diurnal Average: 0.2 ppb at hour 18

Monthly Average: 0.26 ppb

Percentiles: P_1 = 0.1 P_{10} = 0.1 Q_1 = 0.1 Median = 0.2 Q_3 = 0.3 P_{90} = 0.5 P_{99} = 1.4

Periods in Service:	1488
Periods of Valid Data:	1414
Periods of Invalid Data:	74
Periods of Calibration:	73
Percent Operational Time:	99.9

Day	Period Ending At (MST) 00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00	Daily Average	Daily Maximum
1-Mar	Z	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.3	0.2	0.2	0.5	0.4	0.2	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.1	0.2	0.2	0.5
	SP	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.3	0.2	0.4	0.2	0.4	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.2		
2-Mar	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.9	1.1	1.2	0.7	0.5	0.4	0.2	0.1	0.5	0.5	0.2	0.2	0.1	0.4	0.4	1.4
	0.1	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.8	1.1	1.4	0.8	0.7	0.4	0.3	0.1	0.2	0.7	0.3	0.2	0.1	0.2	0.2		
3-Mar	0.2	0.2	Z	0.3	0.3	0.4	0.3	0.3	0.3	0.5	0.5	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.6
	0.2	0.1	SP	0.3	0.4	0.3	0.3	0.2	0.3	0.6	0.6	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1		
4-Mar	0.2	0.1	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.8	0.5	0.2	0.8
	0.1	0.1	0.2	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.6	0.4		
5-Mar	0.3	0.3	0.4	0.4	Z	0.2	0.2	0.2	0.2	0.1	C	C	C	C	C	C	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	--	0.4
	0.4	0.3	0.4	0.4	SP	0.3	0.2	0.2	0.1	0.1	C	C	C	C	C	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1		
6-Mar	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	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	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		
7-Mar	Z	1.1	0.8	0.6	0.4	0.4	0.5	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.7	0.8	1.5	0.8	0.4	0.3	0.3	0.2	0.3	0.4	0.5	1.5
	SP	0.9	0.7	0.5	0.5	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.8	0.9	1.4	0.5	0.3	0.3	0.3	0.2	0.3	0.3		
8-Mar	0.4	Z	0.5	0.3	0.4	0.2	0.3	0.4	0.7	2.7	3.0	1.9	1.2	0.9	0.7	0.4	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.7	4.6
	0.4	SP	0.4	0.3	0.3	0.3	0.4	0.4	1.4	4.6	2.4	1.1	0.7	0.7	0.6	0.2	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.2		
9-Mar	0.2	0.2	Z	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.3
	0.2	0.2	SP	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3		
10-Mar	0.3	0.3	0.3	Z	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4
	0.3	0.3	0.3	SP	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		
11-Mar	0.1	0.1	0.1	0.1	Z	0.3	0.5	0.7	0.6	0.6	0.7	0.6	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.3	0.4	0.3	0.2	0.2	0.3	0.7
	0.1	0.1	0.1	0.1	SP	0.4	0.5	0.6	0.6	0.7	0.6	0.5	0.4	0.4	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2		
12-Mar	0.3	0.2	0.2	0.3	0.2	Z	0.3	0.3	0.5	0.4	0.2	0.2	0.3	0.3	0.4	0.3	0.4	0.2	0.4	0.3	0.3	0.3	0.4	0.3	0.3	0.7
	0.2	0.2	0.2	0.3	0.2	SP	0.3	0.3	0.7	0.3	0.2	0.3	0.3	0.3	0.3	0.6	0.3	0.2	0.4	0.3	0.3	0.3	0.4	0.2		
13-Mar	Z	0.4	0.3	0.3	0.4	0.2	0.3	0.3	0.8	0.5	0.4	0.5	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.8
	SP	0.3	0.3	0.3	0.2	0.2	0.4	0.5	0.5	0.4	0.6	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3		
14-Mar	0.3	Z	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.3	0.2	0.4	0.2	0.4
	0.3	SP	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.3	0.2	0.4	0.3		
15-Mar	0.4	0.2	Z	0.4	0.3	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.5
	0.3	0.2	SP	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2		

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Athabasca Valley - March 2025

Day	Period Ending At (MST) 00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00	Daily Average	Daily Maximum
16-Mar	0.2	0.2	0.1	Z	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
	0.2	0.1	0.1	SP	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	0.1	0.1	0.1	0.1	0.1	0.1		
17-Mar	0.1	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.5	0.5	0.2	0.2	0.2	0.1	0.2	0.4	0.5	0.3	0.3	0.2	0.8
	0.1	0.1	0.1	0.1	SP	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.8	0.3	0.2	0.2	0.2	0.2	0.2	0.6	0.3	0.2	0.2		
18-Mar	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.2	0.3
	0.2	0.2	0.2	0.2	0.2	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	0.3	0.1	0.1		
19-Mar	Z	0.2	0.4	0.3	0.4	0.4	0.5	0.8	0.8	0.7	0.9	0.8	0.5	0.5	0.4	0.3	0.3	0.2	0.5	0.7	0.8	0.5	0.4	0.4	0.5	0.9
	SP	0.3	0.4	0.4	0.4	0.4	0.6	0.7	0.8	0.8	0.8	0.7	0.5	0.4	0.3	0.3	0.3	0.3	0.4	0.7	0.7	0.5	0.4	0.3		
20-Mar	0.3	Z	0.4	0.3	0.3	0.4	0.4	0.4	0.6	0.6	0.4	0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.4	1.6	1.2	0.8	0.6	0.2	0.4	1.6
	0.4	SP	0.3	0.3	0.3	0.4	0.4	0.5	0.6	0.5	0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.2	1.3	1.3	1.0	0.8	0.5	0.1		
21-Mar	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
	0.1	0.1	SP	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		
22-Mar	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	2.6	1.1	0.4	0.1	0.8	0.3	2.6
	0.1	0.1	0.1	SP	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.2	2.0	0.9	0.1	0.1	0.7		
23-Mar	0.6	0.6	0.6	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	1.4	0.7	0.3	0.3	0.3	1.4
	0.6	0.6	0.5	0.1	SP	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.6	0.7	0.4	0.2	1.0		
24-Mar	1.5	1.1	0.4	0.2	0.2	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	M	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.3	1.7
	1.7	0.5	0.3	0.2	0.2	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		
25-Mar	Z	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.2
	SP	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1		
26-Mar	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.5
	0.1	SP	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	0.3	0.5	0.3	0.3	0.3	0.3	0.4		
27-Mar	0.3	0.2	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	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.4
	0.2	0.2	SP	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	0.4	0.2	0.3	0.3		
28-Mar	0.3	0.4	0.4	Z	0.5	0.2	0.3	0.3	0.5	0.3	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.4	0.2	0.2	0.2	0.5
	0.4	0.4	0.4	SP	0.3	0.3	0.3	0.3	0.4	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.3	0.2	0.2	0.2		
29-Mar	0.2	0.2	0.2	0.1	Z	0.2	0.2	0.1	0.1	0.2	0.5	0.3	0.4	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5
	0.2	0.2	0.2	0.1	SP	0.2	0.1	0.1	0.2	0.3	0.5	0.3	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
30-Mar	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	0.1	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	0.1	SP	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		
31-Mar	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
	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		
	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	Diurnal Average	
	1.7	1.1	0.8	0.6	0.5	0.4	0.6	0.8	1.4	4.6	3.0	1.9	1.2	0.9	0.8	0.9	1.5	0.8	1.3	2.6	1.4	0.8	0.8	1.0	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance SP - Span

Alberta Ambient Air Quality Guideline (AAAQG): 30-Min: 5 ppb

Wood Buffalo Environmental Association

Summary of Hour Averages

Total Reduced Sulphur (TRS) - ppb

Athabasca Valley - March 2025

Maximum Value: 3.7 ppb on Mar 8 10:00

Maximum Daily Average: 0.7 ppb on Mar 8

Minimum Value: 0.1 ppb on Mar 25 15:00

Minimum Daily Average: 0.1 ppb on Mar 31

Maximum Diurnal Average: 0.4 ppb at hour 10

Minimum Diurnal Average: 0.2 ppb at hour 18

Monthly Average: 0.26 ppb

Percentiles: P_1 = 0.1 P_{10} = 0.1 Q_1 = 0.1 Median = 0.2 Q_3 = 0.3 P_{90} = 0.5 P_{99} = 1.3

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	37
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	Z	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.3	0.2	0.4	0.4	0.2	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.1	0.2	0.2	0.4
2-Mar	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.7	1.0	1.3	1.0	0.7	0.4	0.3	0.2	0.1	0.6	0.4	0.2	0.2	0.2	0.3	0.4	1.3
3-Mar	0.2	0.1	Z	0.3	0.4	0.3	0.3	0.3	0.3	0.5	0.6	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.6
4-Mar	0.1	0.1	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.7	0.4	0.2	0.7
5-Mar	0.4	0.3	0.4	0.4	Z	0.2	0.2	0.2	0.2	0.1	C	C	C	C	C	C	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	--	0.4
6-Mar	0.1	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
7-Mar	Z	1.0	0.8	0.6	0.5	0.4	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.8	0.9	1.4	0.6	0.4	0.3	0.3	0.2	0.3	0.3	0.5	1.4
8-Mar	0.4	Z	0.4	0.3	0.3	0.3	0.3	0.4	1.1	3.7	2.7	1.5	0.9	0.8	0.7	0.3	0.1	0.1	0.1	0.2	0.3	0.3	0.2	0.2	0.7	3.7
9-Mar	0.2	0.2	Z	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.3
10-Mar	0.3	0.3	0.3	Z	0.4	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	0.2	0.4
11-Mar	0.1	0.1	0.1	0.1	Z	0.3	0.5	0.6	0.6	0.6	0.6	0.6	0.4	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.6
12-Mar	0.2	0.2	0.2	0.3	0.2	Z	0.3	0.3	0.6	0.4	0.2	0.3	0.3	0.3	0.4	0.5	0.3	0.2	0.4	0.3	0.3	0.3	0.4	0.3	0.3	0.6
13-Mar	Z	0.4	0.3	0.3	0.3	0.2	0.4	0.4	0.6	0.5	0.5	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.6
14-Mar	0.3	Z	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.3	0.3	0.3	0.2	0.3
15-Mar	0.3	0.2	Z	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.5	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.5
16-Mar	0.2	0.2	0.1	Z	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
17-Mar	0.1	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.6	0.4	0.2	0.2	0.2	0.2	0.2	0.5	0.4	0.3	0.3	0.2	0.6
18-Mar	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2
19-Mar	Z	0.2	0.4	0.3	0.4	0.4	0.5	0.7	0.8	0.8	0.8	0.7	0.5	0.4	0.4	0.3	0.3	0.3	0.4	0.7	0.8	0.5	0.4	0.3	0.5	0.8
20-Mar	0.3	Z	0.3	0.3	0.3	0.4	0.4	0.5	0.6	0.5	0.3	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.9	1.5	1.1	0.8	0.5	0.2	0.4	1.5
21-Mar	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
22-Mar	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2	2.3	1.0	0.3	0.1	0.7	0.3	2.3
23-Mar	0.6	0.6	0.6	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	0.2	0.4	1.1	0.6	0.3	0.7	0.3	1.1
24-Mar	1.6	0.8	0.4	0.2	0.2	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	M	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	1.6
25-Mar	Z	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.2
26-Mar	0.1	Z	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	0.2	0.2	0.3	0.5	0.4	0.3	0.3	0.3	0.3	0.2	0.5
27-Mar	0.3	0.2	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	0.1	0.1	0.3	0.2	0.3	0.3	0.2	0.3
28-Mar	0.3	0.4	0.4	Z	0.4	0.3	0.3	0.3	0.4	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.3	0.2	0.2	0.2	0.4
29-Mar	0.2	0.2	0.2	0.1	Z	0.2	0.1	0.1	0.1	0.3	0.5	0.3	0.3	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5
30-Mar	0.2	0.2	0.2	0.2	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	0.2	0.1	0.1	0.1	0.2
31-Mar	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
	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	Diurnal Average	
	1.6	1.0	0.8	0.6	0.5	0.4	0.5	0.7	1.1	3.7	2.7	1.5	1.0	0.8	0.8	0.9	1.4	0.6	0.9	2.3	1.1	0.8	0.7	0.7	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

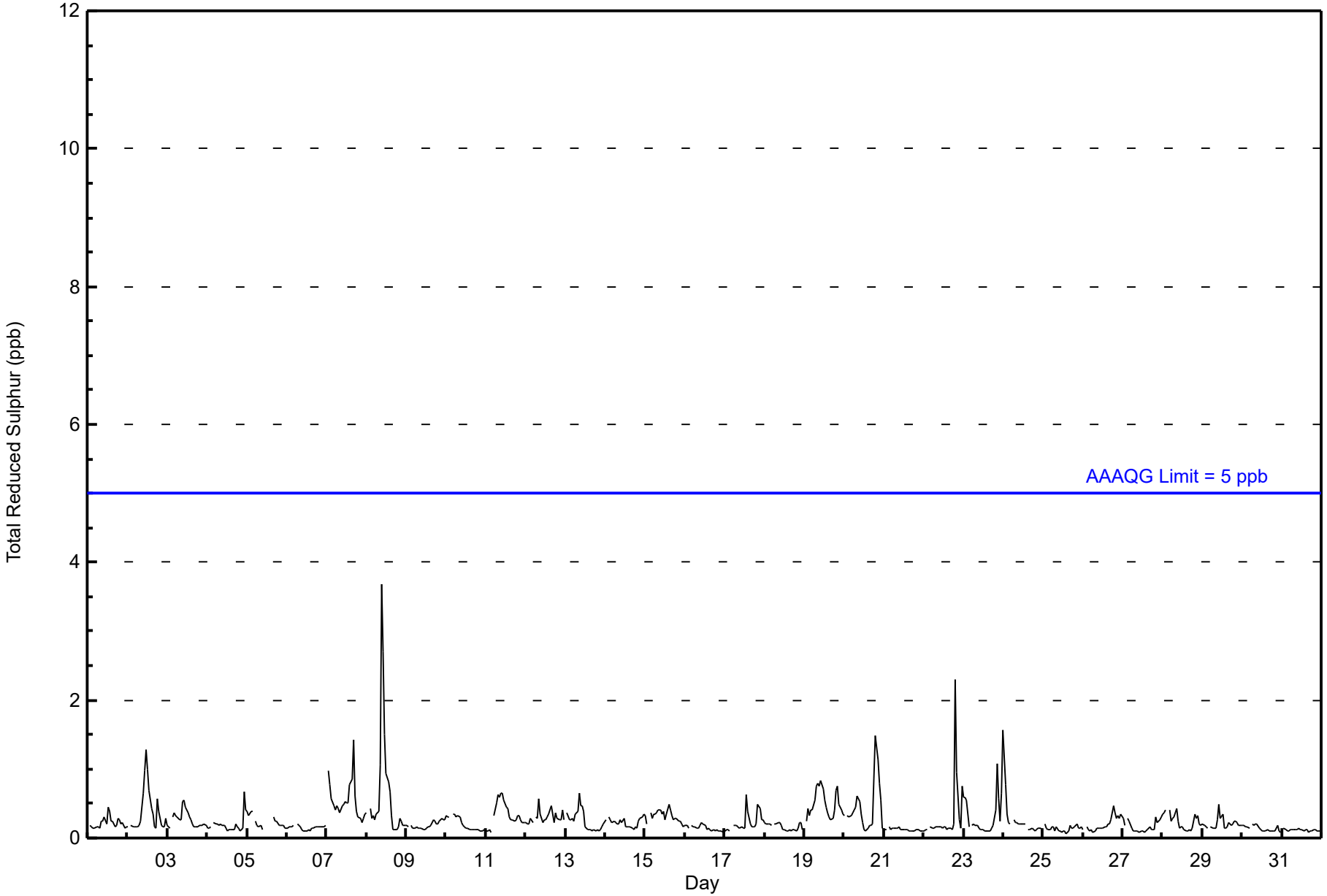
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Athabasca Valley - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	704	99.72	99.72
3 - 4	2	0.28	100.00
5 - 7	0	0.00	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Athabasca Valley - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	37	17	12	44	29	113	47	22	22	27	19	17	18	25	95	160	704
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	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	37	17	12	44	29	113	47	22	22	27	19	17	18	25	95	162	706

Total Number of Valid Hours: 706

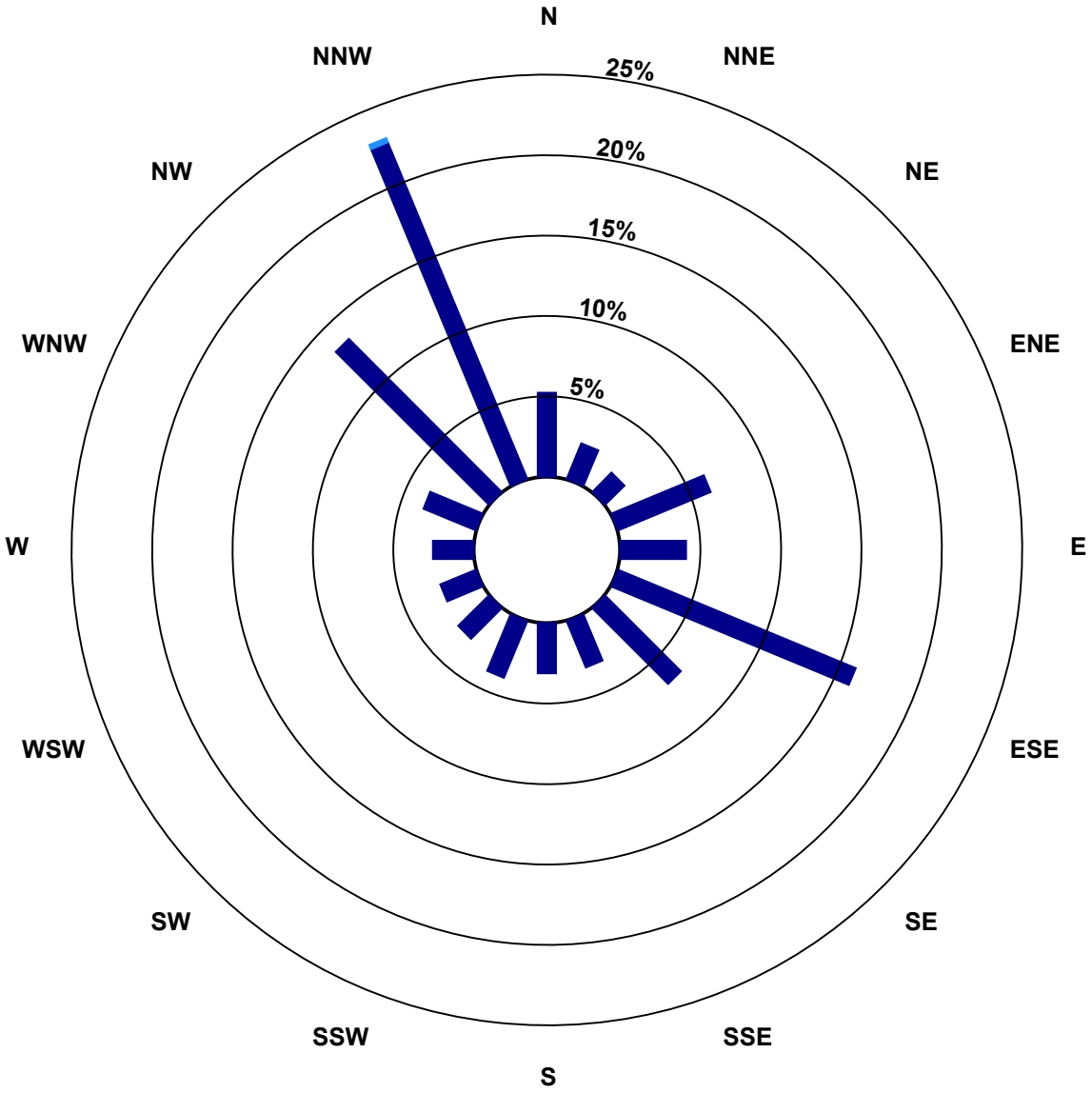
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Total Reduced Sulphur (TRS) - ppb

Athabasca Valley



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

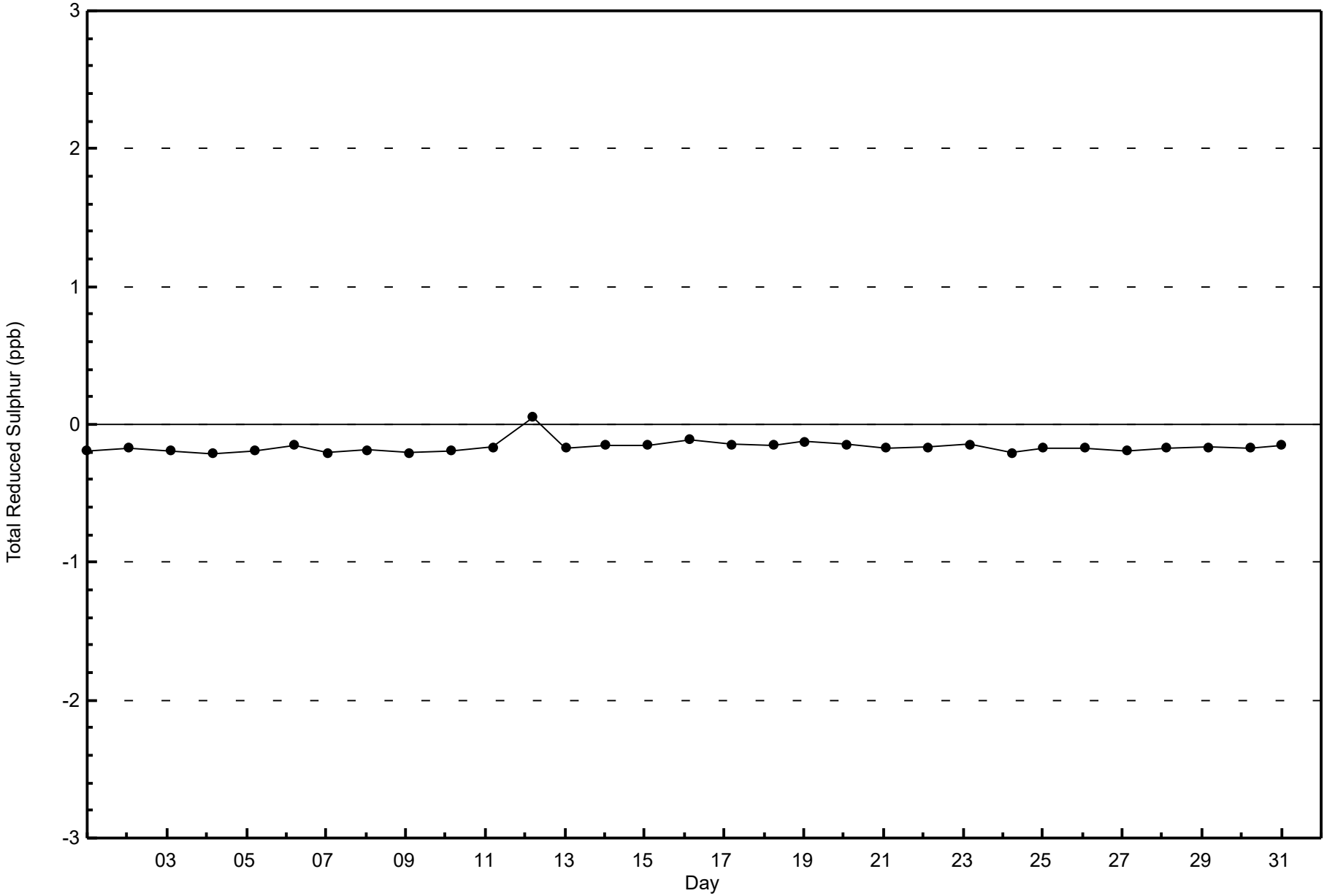
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Athabasca Valley - March 2025

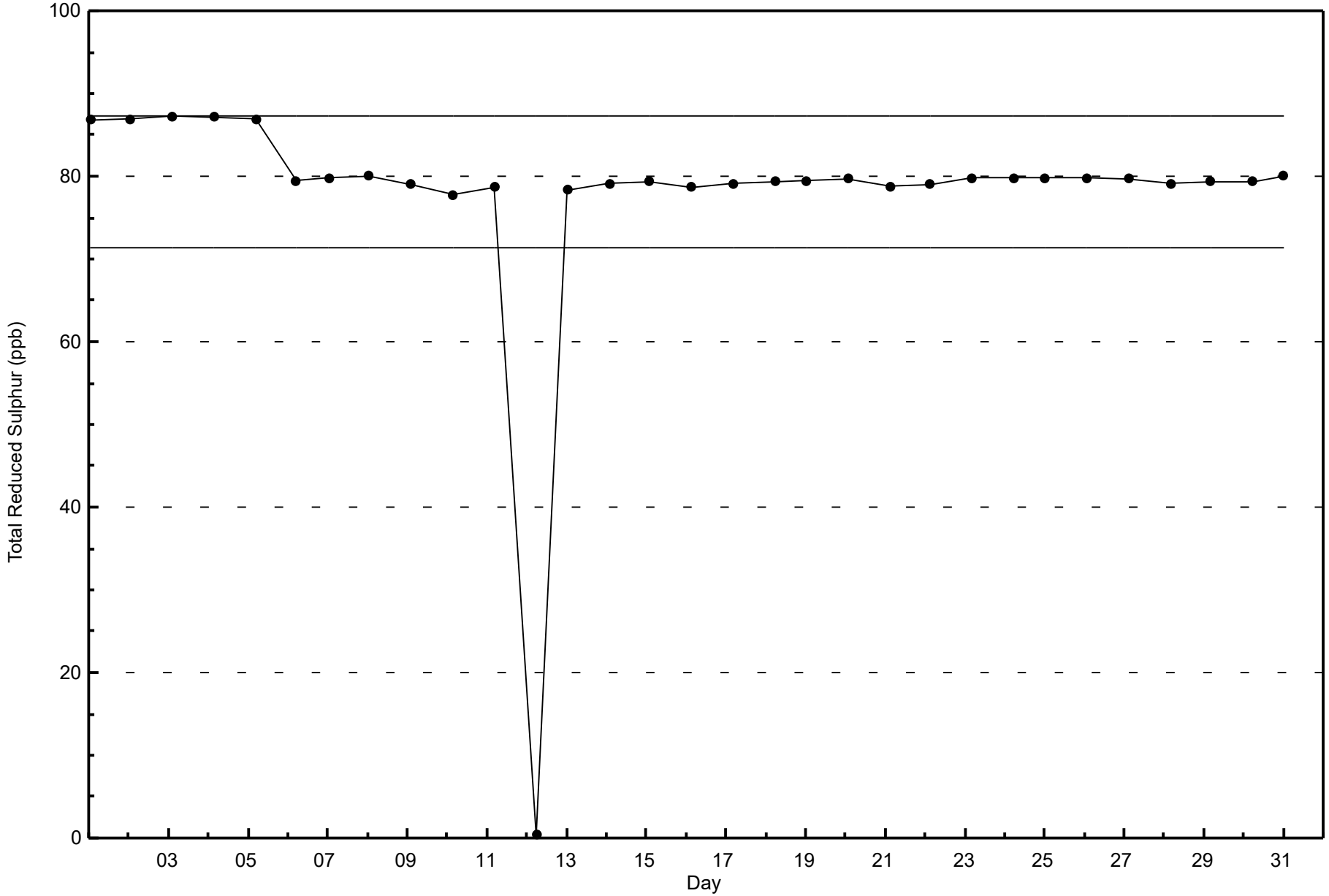


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Athabasca Valley - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Athabasca Valley - March 2025

Maximum Value: 2.7 ppm on Mar 8 10:00

Maximum Daily Average: 2.3 ppm on Mar 7

Minimum Value: 2.0 ppm on Mar 27 15:00

Minimum Daily Average: 2.0 ppm on Mar 27

Maximum Diurnal Average: 2.2 ppm at hour 9

Minimum Diurnal Average: 2.1 ppm at hour 18

Monthly Average: 2.12 ppm

Percentiles: P_1 = 2.0 P_{10} = 2.0 Q_1 = 2.1 Median = 2.1 Q_3 = 2.1 P_{90} = 2.2 P_{99} = 2.5

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	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	2.2	2.1	2.1	2.2	2.2	2.2	2.1	2.2	2.2	2.3	2.1	2.3
2-Mar	Z	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.5	2.5	2.6	2.6	2.3	2.3	2.1	2.1	2.3	2.1	2.1	2.1	2.1	2.1	2.2	2.6
3-Mar	2.1	Z	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.2
4-Mar	2.2	2.1	Z	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.3
5-Mar	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	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2
6-Mar	2.1	2.2	2.2	2.2	Z	2.3	2.3	2.4	2.4	2.2	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.2	2.3	2.3	2.2	2.4
7-Mar	2.3	2.6	2.5	2.4	2.3	Z	2.3	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.3	2.4	2.6	2.3	2.2	2.1	2.1	2.1	2.2	2.2	2.3	2.6
8-Mar	Z	2.2	2.3	2.2	2.3	2.2	2.3	2.3	2.5	2.7	2.6	2.6	2.4	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.7
9-Mar	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	2.2	2.2	2.2	2.1	2.2
10-Mar	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
11-Mar	2.1	2.1	2.1	Z	2.1	2.3	2.4	2.4	2.4	C	C	C	C	C	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.4
12-Mar	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.2
13-Mar	2.1	2.2	2.1	2.1	2.2	Z	2.2	2.2	2.4	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.4
14-Mar	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	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
15-Mar	2.1	Z	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.3
16-Mar	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
17-Mar	2.0	2.0	2.0	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.2
18-Mar	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
19-Mar	2.1	2.1	2.2	2.2	2.2	Z	2.2	2.2	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.2	2.3
20-Mar	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
21-Mar	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.1
22-Mar	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.0	2.2	2.1	2.3
23-Mar	2.2	2.2	2.2	Z	2.0	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
24-Mar	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	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1
25-Mar	2.0	2.1	2.1	2.0	2.1	Z	2.2	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
26-Mar	Z	2.0	2.0	2.0	2.0	2.0	2.0	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	2.0	2.1
27-Mar	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	2.1	2.1	2.1	2.1	2.0	2.1
28-Mar	2.1	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	2.0	2.1	2.1	2.1	2.1	2.1	2.2
29-Mar	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.1	2.2
30-Mar	2.2	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	2.1	2.1	2.1	2.1	2.2
31-Mar	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	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	2.2	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	Diurnal Average	
	2.3	2.6	2.5	2.4	2.3	2.3	2.4	2.4	2.5	2.7	2.6	2.6	2.6	2.6	2.3	2.4	2.6	2.3	2.3	2.2	2.2	2.2	2.3	2.3	Diurnal Maximum	

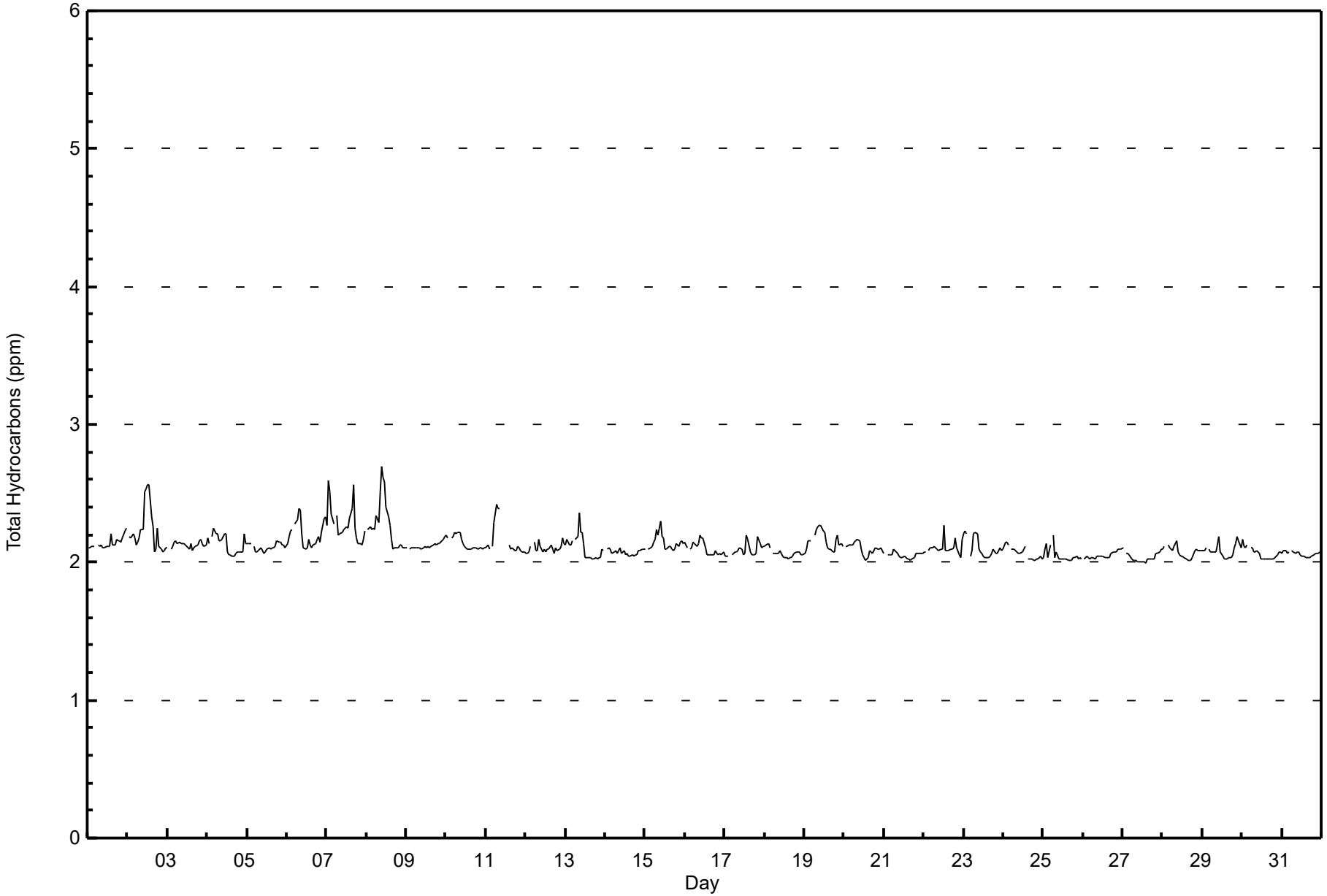
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Athabasca Valley - March 2025



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

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	135	19.09	19.09
2.1 - 3.0	572	80.91	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Athabasca Valley - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	8	9	0	15	9	15	1	1	5	9	3	6	5	12	15	22	135
2.1 - 3.0	29	9	13	30	21	97	48	20	15	21	16	10	12	13	84	134	572
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	37	18	13	45	30	112	49	21	20	30	19	16	17	25	99	156	707

Total Number of Valid Hours: 707

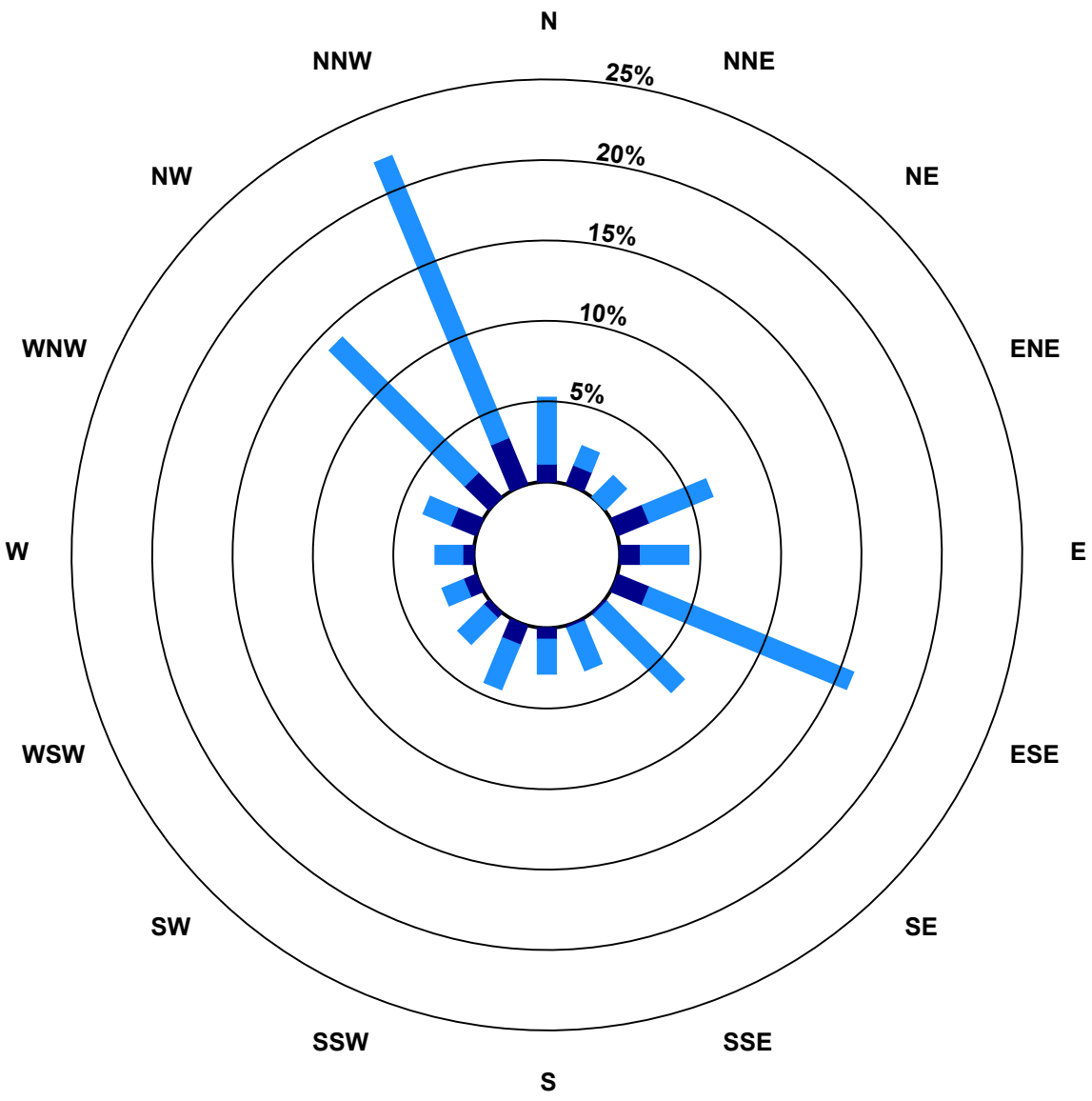
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Total Hydrocarbons (THC) - ppm

Athabasca Valley



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

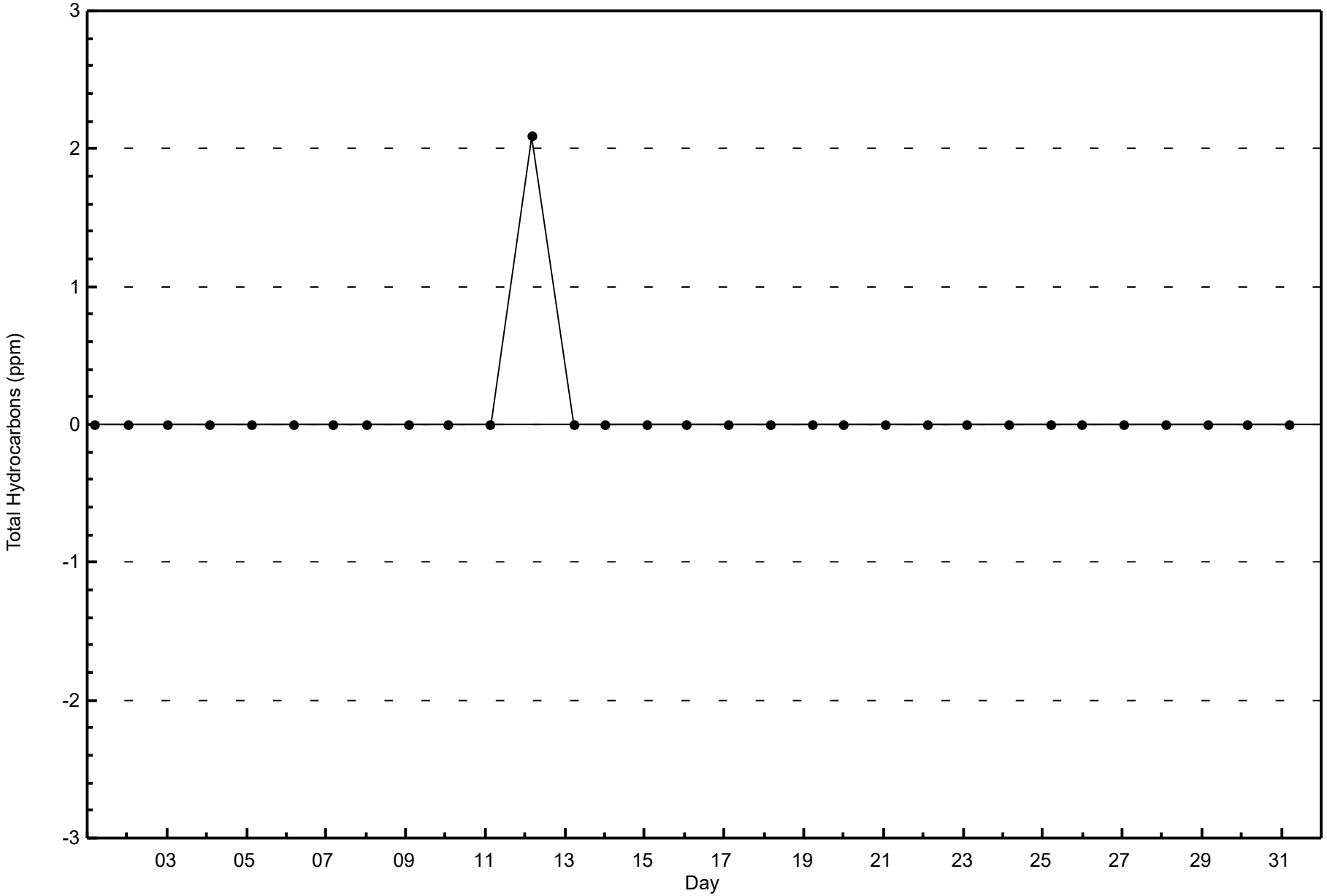
Total Number of Valid Hours: 707

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Athabasca Valley - March 2025

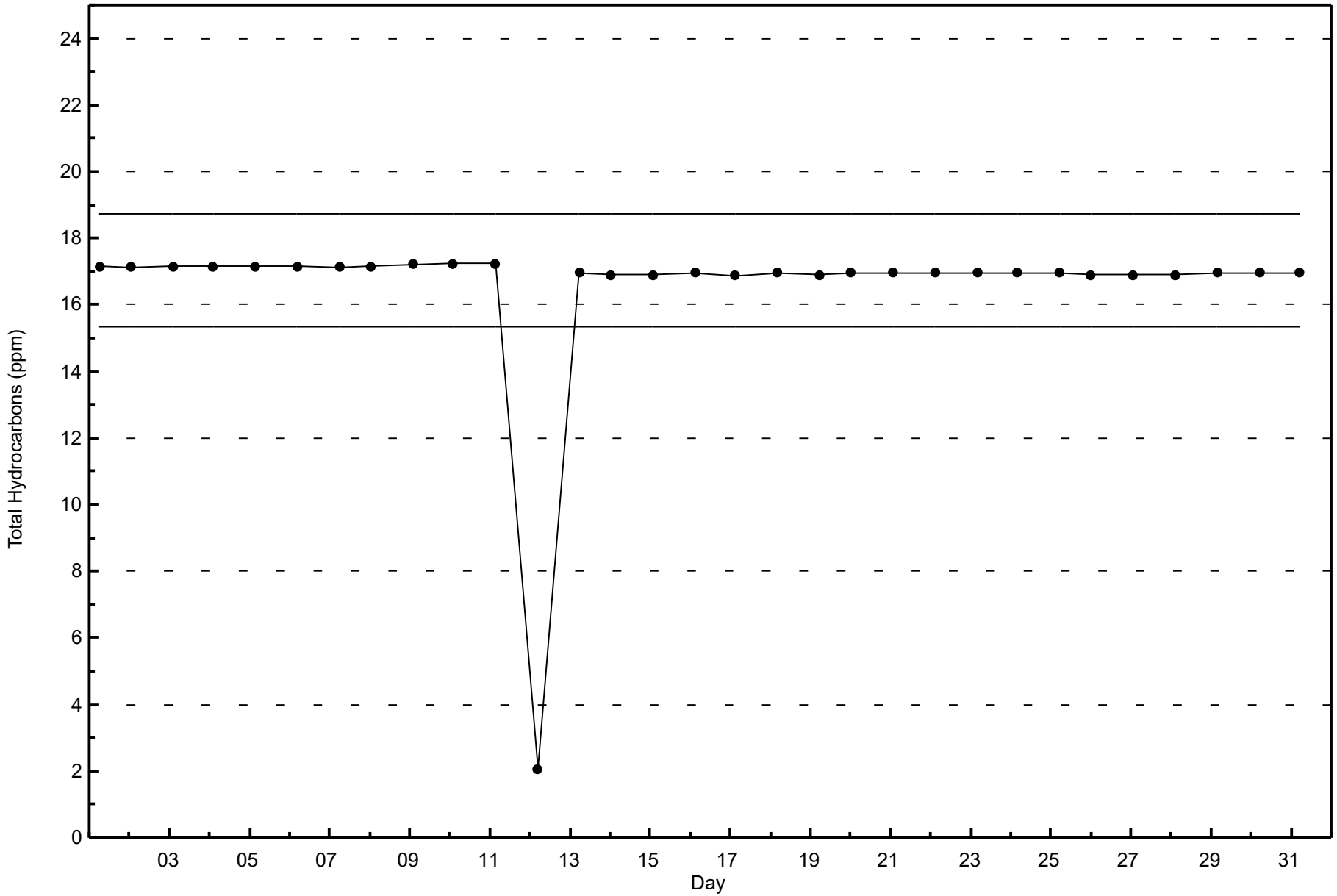


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Athabasca Valley - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Athabasca Valley - March 2025

Maximum Value: 0.182 ppm on Mar 22 13:00

Maximum Daily Average: 0.008 ppm on Mar 22

Minimum Value: 0.000 ppm on Mar 1 01:00

Minimum Daily Average: 0.000 ppm on Mar 4

Maximum Diurnal Average: 0.008 ppm at hour 13

Minimum Diurnal Average: 0.000 ppm at hour 4

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 in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	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	0.095	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.095
2-Mar	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	0.063	0.002	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.063
3-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.022
4-Mar	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
6-Mar	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	0.065	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.065
7-Mar	0.000	0.015	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.015
8-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.022	0.001	0.002	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.022
9-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	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	0.000
12-Mar	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-Mar	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.001	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.045
14-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005
17-Mar	0.000	0.000	0.000	Z	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.020
18-Mar	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-Mar	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.003	0.000	0.005	0.000	0.055	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.003	0.055
20-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.001
22-Mar	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.182	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.008	0.182
23-Mar	0.043	0.030	0.026	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.043
24-Mar	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.001	0.000	M	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
25-Mar	0.000	0.002	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	0.002
26-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.000	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
27-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	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-Mar	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
31-Mar	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
	0.002	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.001	0.008	0.005	0.005	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	Diurnal Average	
	0.043	0.030	0.026	0.000	0.000	0.000	0.001	0.001	0.045	0.002	0.005	0.022	0.182	0.065	0.095	0.001	0.001	0.047	0.003	0.000	0.002	0.000	0.000	0.000	Diurnal Maximum	

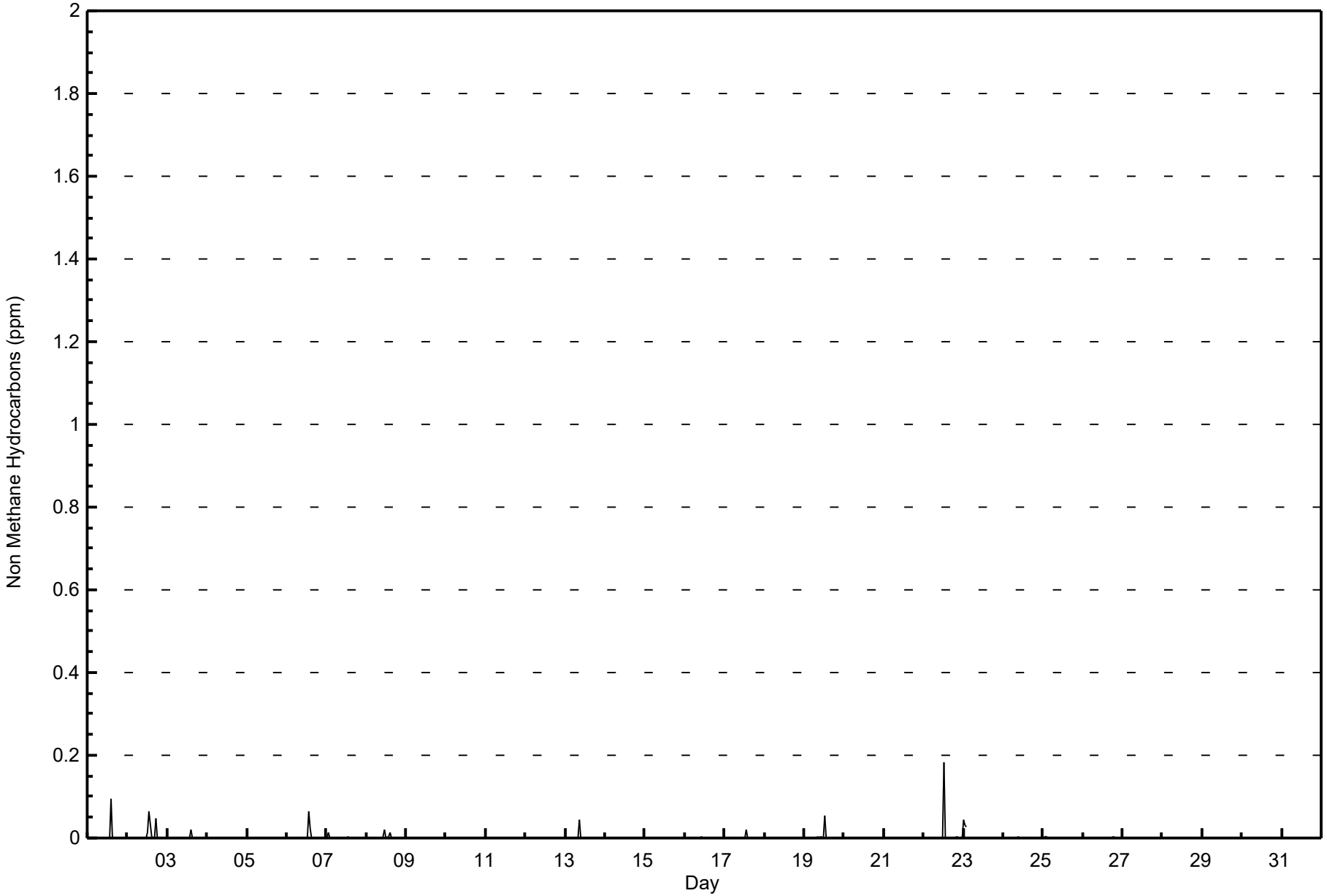
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Athabasca Valley - March 2025



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

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	690	97.60	97.60
0.006 - 0.05	12	1.70	99.29
0.06 - 0.1	4	0.57	99.86
> 0.1	1	0.14	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Athabasca Valley - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.005	37	18	12	43	30	110	46	20	20	30	18	16	16	25	97	152	690
0.006 - 0.05	0	0	1	1	0	1	0	1	0	0	1	0	1	0	2	4	12
0.06 - 0.1	0	0	0	1	0	1	2	0	0	0	0	0	0	0	0	0	4
> 0.1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Totals	37	18	13	45	30	112	49	21	20	30	19	16	17	25	99	156	707

Total Number of Valid Hours: 707

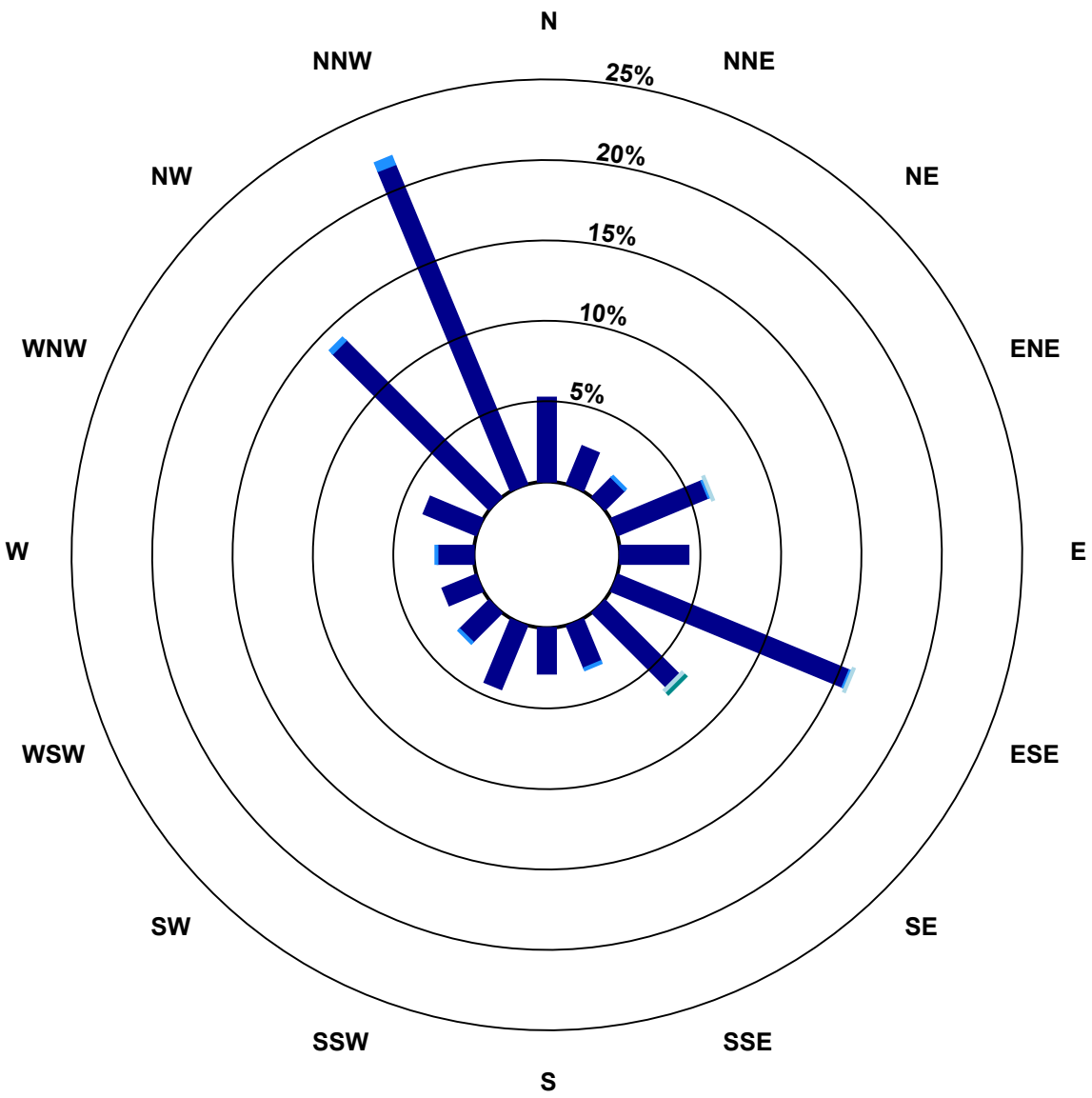
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Non Methane Hydrocarbons (NMHC) - ppm

Athabasca Valley



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

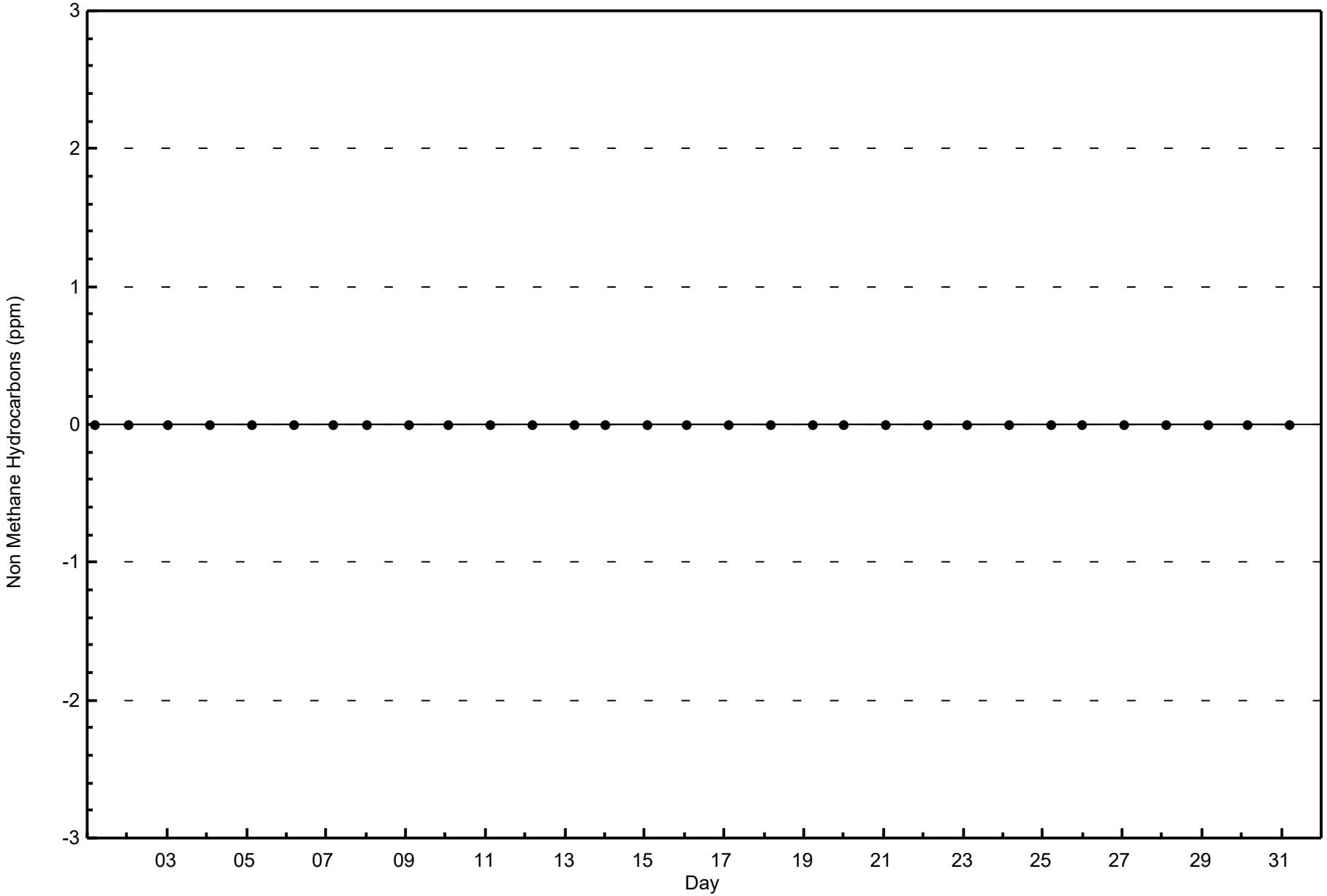
Total Number of Valid Hours: 707

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Athabasca Valley - March 2025

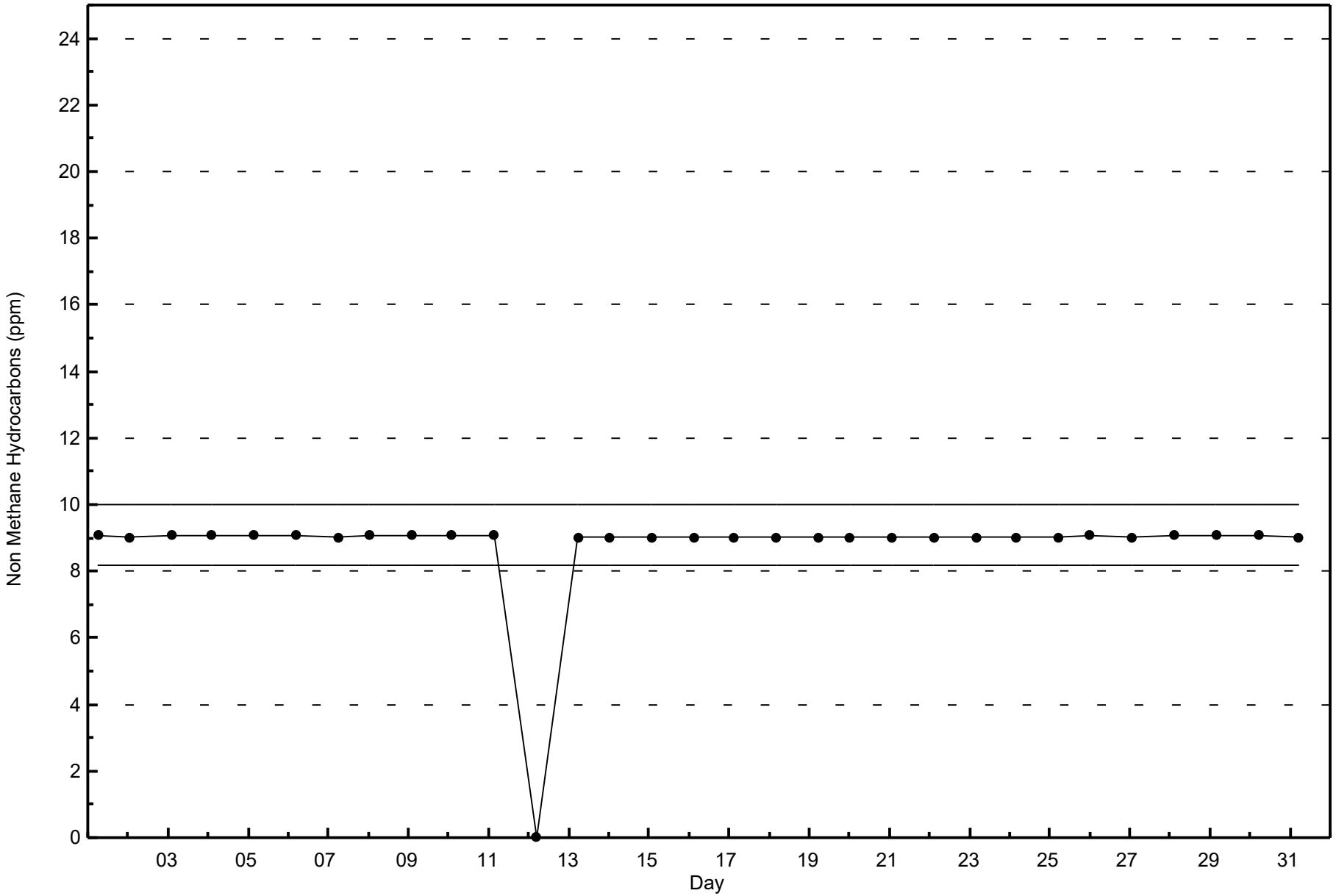


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Athabasca Valley - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Athabasca Valley - March 2025

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

Maximum Value: 2.7 ppm on Mar 8 10:00

Maximum Daily Average: 2.3 ppm on Mar 7

Minimum Value: 2.0 ppm on Mar 27 15:00

Minimum Daily Average: 2.0 ppm on Mar 27

Maximum Diurnal Average: 2.2 ppm at hour 9

Minimum Diurnal Average: 2.1 ppm at hour 18

Monthly Average: 2.11 ppm

Percentiles: P_1 = 2.0 P_{10} = 2.0 Q_1 = 2.1 Median = 2.1 Q_3 = 2.1 P_{90} = 2.2 P_{99} = 2.5

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	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	2.2	2.2	2.2	2.1	2.2	2.2	2.3	2.1	2.3
2-Mar	Z	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.5	2.5	2.5	2.5	2.3	2.3	2.1	2.0	2.3	2.1	2.1	2.1	2.1	2.1	2.2	2.5
3-Mar	2.1	Z	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.2
4-Mar	2.2	2.1	Z	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.3
5-Mar	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	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2
6-Mar	2.1	2.2	2.2	2.2	Z	2.3	2.3	2.4	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.2	2.3	2.3	2.2	2.4
7-Mar	2.3	2.6	2.5	2.4	2.3	Z	2.3	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.3	2.4	2.6	2.3	2.2	2.1	2.1	2.1	2.2	2.2	2.3	2.6
8-Mar	Z	2.2	2.3	2.2	2.3	2.2	2.3	2.3	2.5	2.7	2.6	2.6	2.4	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.7
9-Mar	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	2.2	2.2	2.2	2.1	2.2
10-Mar	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
11-Mar	2.1	2.1	2.1	Z	2.1	2.3	2.4	2.4	2.4	C	C	C	C	C	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.4
12-Mar	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.2
13-Mar	2.1	2.2	2.1	2.1	2.2	Z	2.2	2.2	2.3	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.3
14-Mar	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	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
15-Mar	2.1	Z	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.3
16-Mar	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
17-Mar	2.0	2.0	2.0	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.2
18-Mar	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
19-Mar	2.1	2.1	2.2	2.2	2.2	Z	2.2	2.2	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.2	2.3
20-Mar	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
21-Mar	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.1
22-Mar	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	2.2	2.1	2.1	2.0	2.2	2.1	2.2
23-Mar	2.2	2.2	2.2	Z	2.0	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
24-Mar	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	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1
25-Mar	2.0	2.1	2.1	2.0	2.1	Z	2.2	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
26-Mar	Z	2.0	2.0	2.0	2.0	2.0	2.0	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	2.0	2.1
27-Mar	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	2.1	2.1	2.1	2.1	2.0	2.1
28-Mar	2.1	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	2.0	2.1	2.1	2.1	2.1	2.1	2.2
29-Mar	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.1	2.2
30-Mar	2.2	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	2.1	2.1	2.1	2.1	2.2
31-Mar	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	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	2.2	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	Diurnal Average	
	2.3	2.6	2.5	2.4	2.3	2.3	2.4	2.4	2.5	2.7	2.6	2.6	2.5	2.5	2.3	2.4	2.6	2.3	2.3	2.2	2.2	2.2	2.3	2.3	Diurnal Maximum	

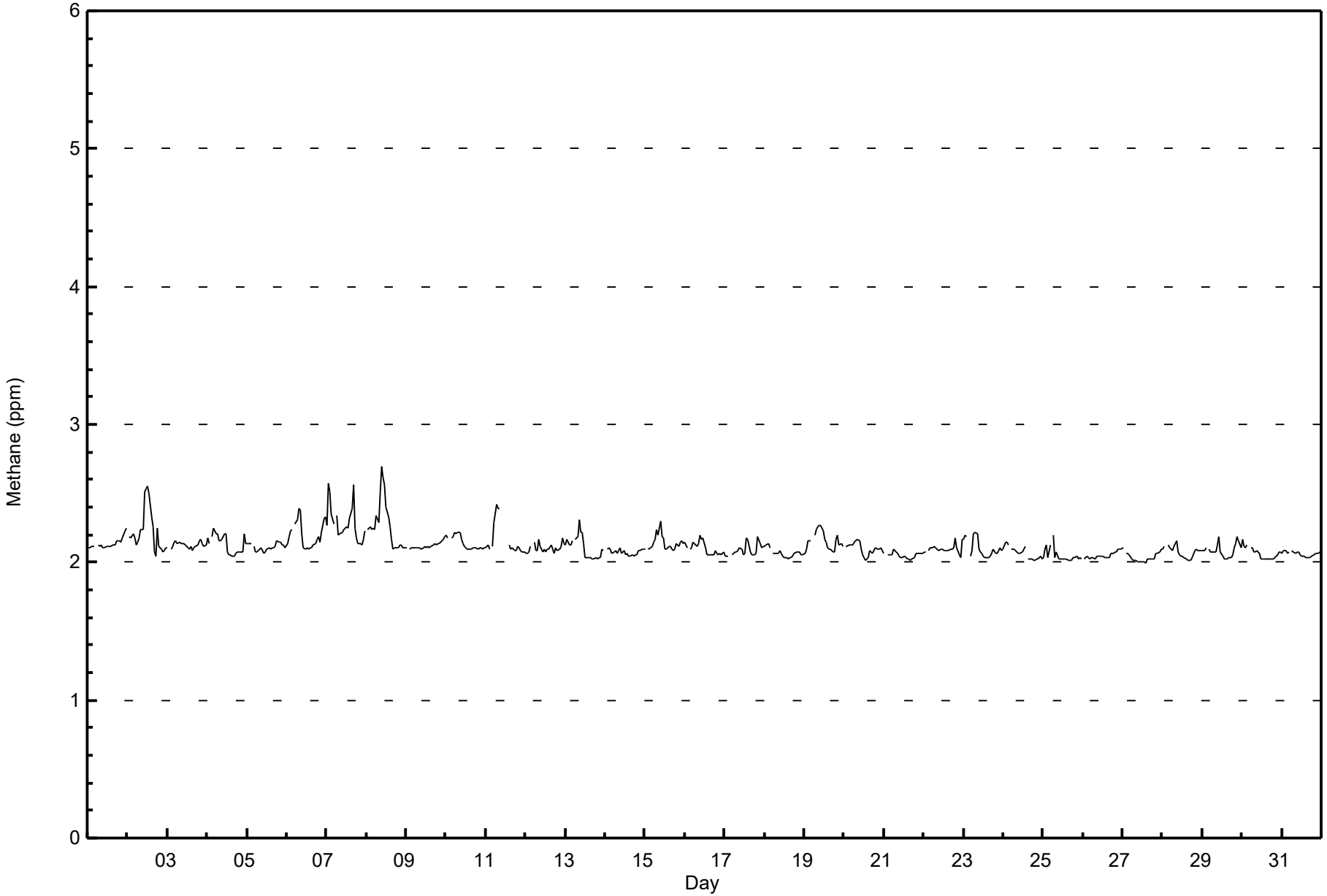
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Athabasca Valley - March 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	136	19.24	19.24
2.1 - 3.0	571	80.76	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Athabasca Valley - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	8	9	0	15	9	15	1	1	5	9	3	6	6	12	15	22	136
2.1 - 3.0	29	9	13	30	21	97	48	20	15	21	16	10	11	13	84	134	571
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	37	18	13	45	30	112	49	21	20	30	19	16	17	25	99	156	707

Total Number of Valid Hours: 707

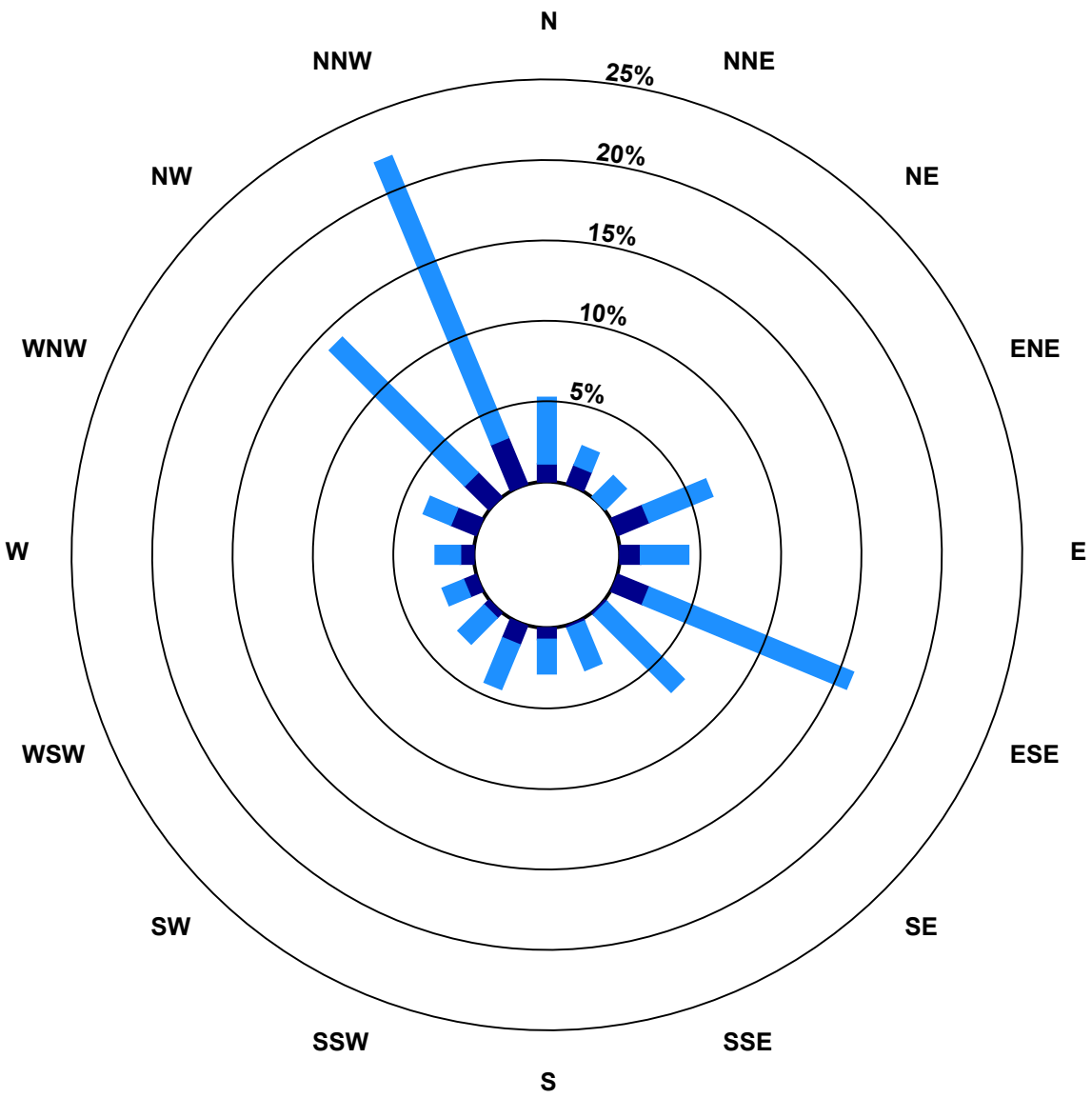
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Methane (CH_4) - ppm

Athabasca Valley



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

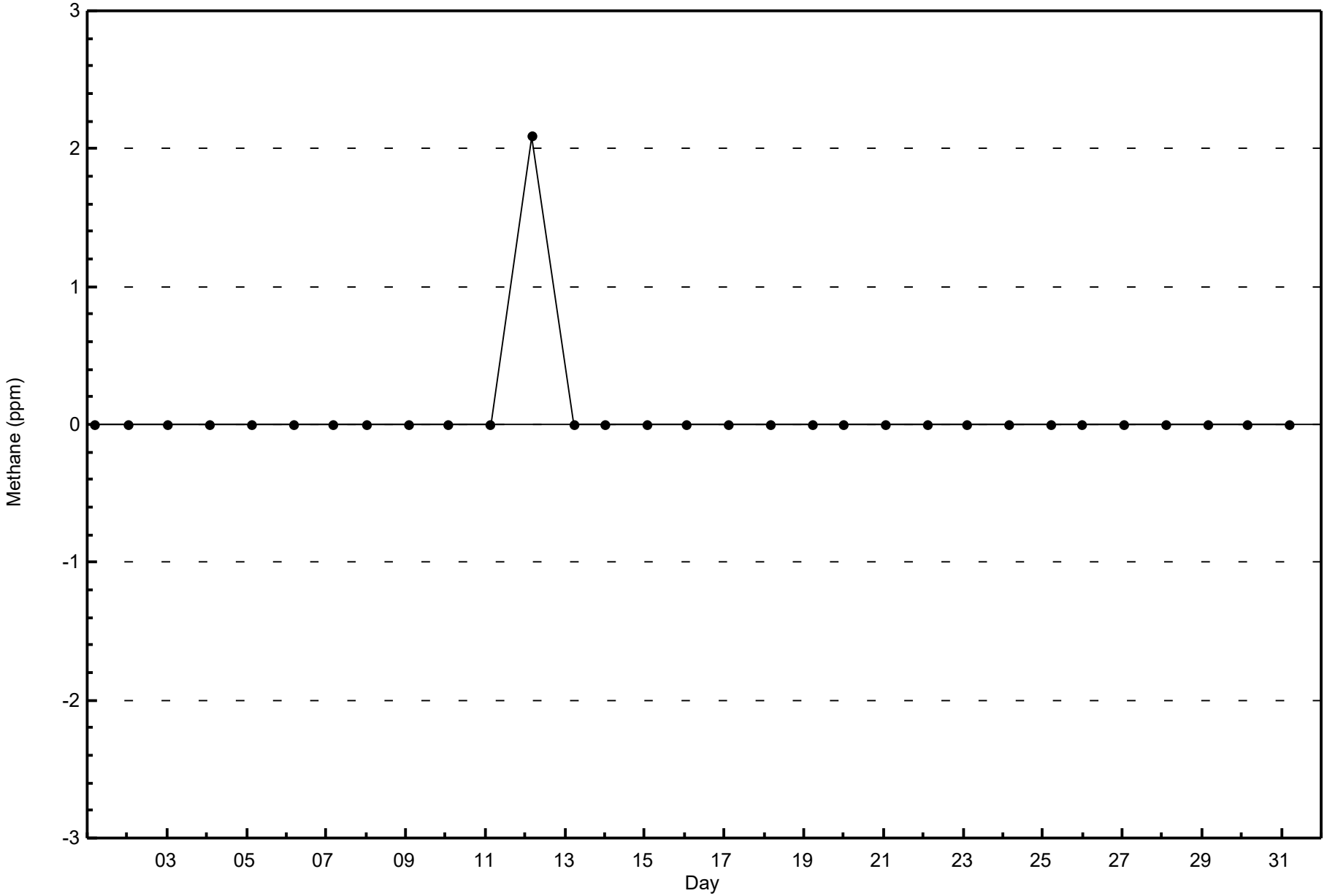
Total Number of Valid Hours: 707

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Athabasca Valley - March 2025

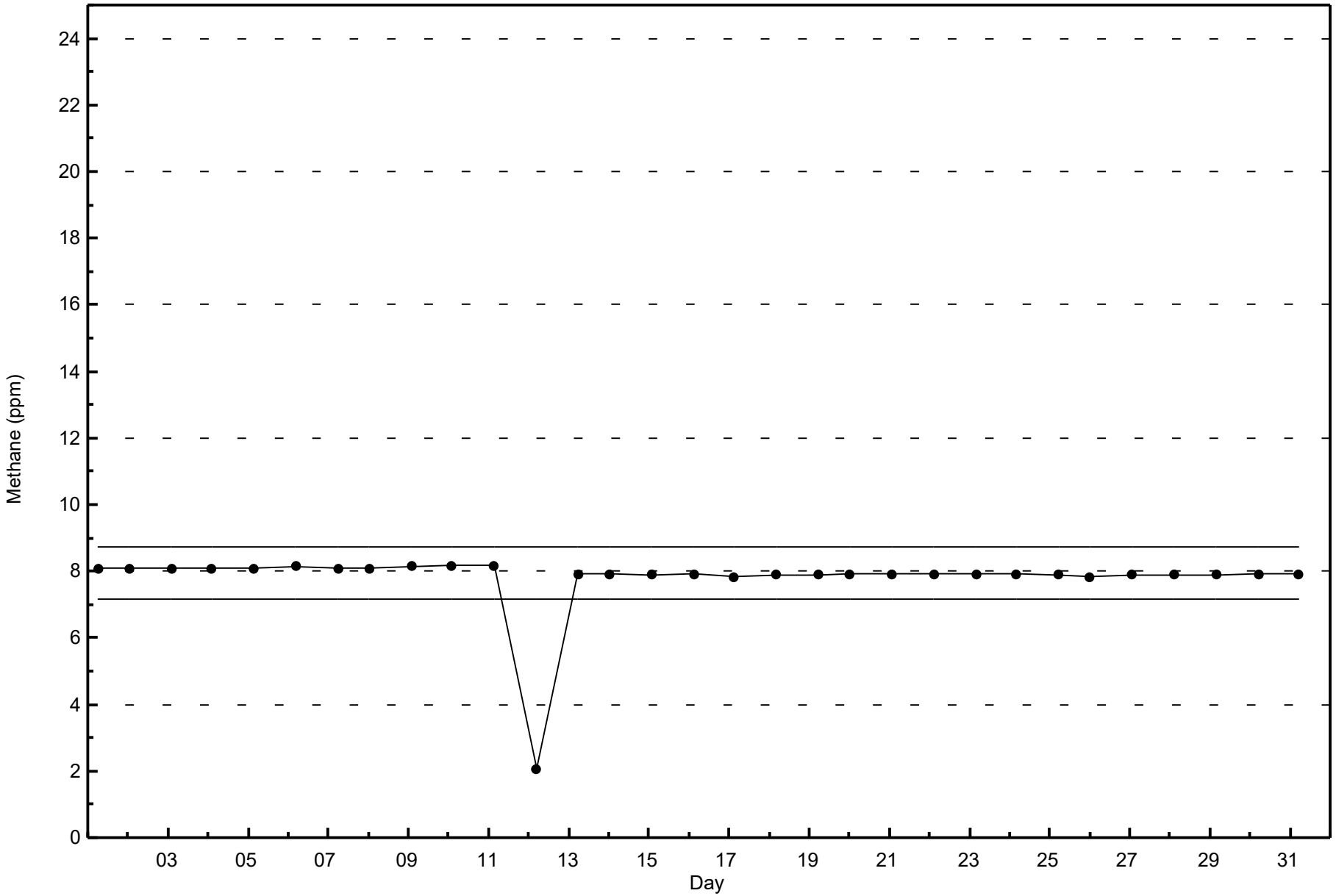


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Athabasca Valley - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Athabasca Valley - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 49.4 ppb on Mar 30 18:00
Maximum Daily Average: 39.9 ppb on Mar 31

Minimum Value: 3.2 ppb on Mar 11 07:00
Maximum Diurnal Average: 37.0 ppb at hour 16
Monthly Average: 29.76 ppb
Minimum Daily Average: 22.8 ppb on Mar 19
Minimum Diurnal Average: 22.7 ppb at hour 7
Percentiles: P_1 = 8.5 P_{10} = 17.1 Q_1 = 24.4 Median = 30.6 Q_3 = 36.1 P_{90} = 40.7 P_{99} = 47.0

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	30.2	Z	29.2	29.6	27.8	26.5	25.3	24.5	21.2	23.9	22.1	26.2	20.4	24.3	30.2	28.3	33.5	26.0	8.0	9.5	14.8	7.9	21.3	22.2	23.2	33.5
2-Mar	24.0	29.0	Z	28.9	29.4	29.2	26.4	22.9	18.2	17.9	12.7	13.8	16.1	22.1	27.7	17.5	32.0	35.5	22.4	31.4	37.5	41.1	40.4	38.0	26.7	41.1
3-Mar	36.9	34.1	33.3	Z	30.9	31.0	30.7	27.9	27.7	27.1	26.7	29.4	33.3	32.9	31.3	35.1	34.1	28.1	30.9	27.8	24.6	25.2	20.8	22.1	29.6	36.9
4-Mar	23.3	26.4	20.1	14.8	Z	10.1	8.5	10.2	13.4	18.2	20.2	24.9	38.0	40.4	39.6	39.1	34.9	19.8	20.0	30.6	41.0	41.2	28.2	31.0	25.8	41.2
5-Mar	31.1	30.4	30.5	29.4	34.5	Z	38.2	35.9	37.9	40.3	40.2	39.8	39.5	39.2	38.7	38.4	37.3	32.4	30.9	30.5	30.2	25.8	30.6	28.5	34.4	40.3
6-Mar	Z	25.8	24.7	23.2	19.7	16.9	15.8	15.1	19.2	27.0	35.4	36.6	36.5	38.8	37.8	34.9	26.4	22.5	20.0	20.6	19.7	16.7	19.9	18.1	24.8	38.8
7-Mar	25.4	Z	8.8	22.2	26.3	27.8	22.4	24.7	26.7	26.6	27.5	26.7	25.6	27.1	24.6	16.8	12.3	25.1	28.9	32.3	34.1	34.7	32.9	31.3	25.7	34.7
8-Mar	29.5	28.1	Z	30.2	27.8	26.5	21.1	21.4	18.7	16.8	14.8	19.5	25.3	28.1	30.8	38.5	40.7	39.4	37.8	36.5	35.0	36.4	35.8	33.4	29.2	40.7
9-Mar	30.8	27.9	25.0	Z	22.8	25.4	27.0	29.0	28.2	27.7	27.0	27.3	27.8	28.3	28.0	27.6	26.3	24.4	23.6	23.0	19.8	17.2	16.4	13.0	24.9	30.8
10-Mar	13.1	14.0	14.2	14.8	Z	11.8	10.3	12.6	15.1	19.0	22.8	26.0	27.8	29.5	31.1	31.4	31.6	30.4	31.1	31.4	32.8	33.6	35.0	30.9	23.9	35.0
11-Mar	30.8	29.4	31.0	32.4	27.3	Z	3.2	7.8	12.0	15.7	17.0	20.1	23.6	24.1	26.2	28.5	28.3	29.0	28.2	26.8	27.9	30.4	29.8	29.0	24.3	32.4
12-Mar	Z	29.4	28.5	27.6	27.9	19.3	19.6	16.5	17.7	25.0	30.8	30.2	33.8	32.7	32.6	34.5	35.3	33.6	15.7	22.4	19.9	18.9	14.1	14.9	25.3	35.3
13-Mar	13.8	Z	15.9	14.2	11.9	9.3	5.1	10.0	10.5	17.4	21.0	25.5	36.0	39.0	40.1	40.6	42.3	40.8	39.7	38.0	34.7	32.6	28.8	30.7	26.0	42.3
14-Mar	31.0	31.2	Z	31.9	32.4	30.3	30.5	32.1	31.3	30.1	31.3	31.0	32.7	33.6	34.6	35.2	32.3	34.0	33.2	33.4	32.0	32.5	32.0	31.0	32.2	35.2
15-Mar	29.8	29.4	30.4	Z	23.5	20.1	17.2	16.2	17.6	17.8	22.9	30.9	36.0	37.0	36.2	35.6	35.3	31.3	16.6	21.4	24.6	23.3	25.2	28.0	26.4	37.0
16-Mar	24.4	28.9	32.9	32.0	Z	27.4	25.0	25.9	25.6	24.7	28.0	30.6	34.8	38.2	37.7	37.6	37.6	37.1	36.0	34.0	34.1	36.8	37.1	37.0	32.3	38.2
17-Mar	36.1	35.1	34.6	34.0	31.9	Z	30.1	31.1	30.3	31.1	C	C	C	C	31.6	35.1	36.6	37.0	35.9	32.0	16.6	14.1	17.7	16.1	29.8	37.0
18-Mar	Z	18.7	20.7	24.4	26.5	32.8	32.5	28.4	29.3	30.5	34.3	38.9	40.7	41.0	40.1	40.7	40.8	37.7	31.5	30.0	23.6	23.3	24.6	28.5	31.3	41.0
19-Mar	26.8	Z	22.9	20.0	16.1	12.7	12.4	14.3	16.1	20.5	22.1	25.0	28.4	31.0	34.7	34.5	30.4	31.5	11.0	5.2	20.4	29.0	27.7	31.8	22.8	34.7
20-Mar	32.4	31.0	Z	28.0	22.5	20.7	19.5	22.9	25.3	28.7	34.2	37.2	41.2	44.9	40.8	36.2	37.8	34.5	29.5	18.2	21.5	24.1	22.7	34.4	29.9	44.9
21-Mar	38.1	37.8	38.3	Z	34.7	35.0	32.4	31.8	32.9	35.9	37.3	40.3	40.5	42.4	43.0	43.7	44.0	41.6	38.5	34.2	25.5	33.0	38.6	39.0	37.3	44.0
22-Mar	39.4	39.4	39.0	38.3	Z	35.0	34.7	33.8	34.2	35.3	36.4	37.2	39.3	39.0	42.6	41.5	39.9	34.7	28.4	34.8	34.6	40.9	43.3	32.2	37.1	43.3
23-Mar	31.3	23.3	22.9	36.6	35.4	Z	13.8	19.2	20.6	31.4	35.5	39.8	43.0	45.8	46.2	45.7	42.3	31.0	16.7	12.5	14.7	18.9	26.7	28.4	29.6	46.2
24-Mar	Z	24.6	27.5	33.6	34.5	32.7	31.3	31.9	34.9	35.1	34.6	33.4	31.6	25.1	M	47.0	41.9	41.1	40.9	39.8	36.9	34.1	29.0	32.4	34.3	47.0
25-Mar	26.2	Z	25.5	24.9	17.9	5.7	8.8	27.1	19.4	31.8	34.4	34.9	37.9	40.8	43.6	47.6	46.5	47.2	38.5	36.0	36.4	37.2	37.4	38.5	32.4	47.6
26-Mar	38.7	37.5	Z	34.1	33.0	30.6	28.9	28.2	28.7	29.1	31.1	32.0	32.9	33.1	33.2	33.2	34.6	36.0	35.4	32.6	29.7	28.9	28.9	28.7	32.1	38.7
27-Mar	28.5	29.6	30.4	Z	29.9	36.2	38.1	39.0	40.7	40.8	42.4	43.3	43.2	42.3	43.5	40.1	37.6	36.8	35.8	33.9	31.0	31.6	30.3	30.3	36.3	43.5
28-Mar	29.7	26.3	20.2	16.8	Z	15.8	17.3	18.3	24.2	34.1	36.5	35.9	36.2	39.1	42.0	43.6	43.1	42.4	35.0	25.9	27.4	24.9	23.0	21.5	29.5	43.6
29-Mar	19.8	18.1	16.4	19.0	17.2	Z	18.2	20.3	26.3	27.2	28.7	36.0	38.9	42.9	44.4	45.3	43.0	43.8	35.5	14.6	14.3	17.9	20.2	28.5	27.7	45.3
30-Mar	Z	27.5	28.1	27.3	26.5	21.9	22.1	27.3	27.8	29.7	34.0	42.6	44.8	46.1	47.9	48.4	47.6	49.4	48.5	46.7	45.9	42.7	44.4	44.2	37.9	49.4
31-Mar	43.5	Z	42.5	41.3	38.6	38.7	36.8	36.5	36.4	35.8	38.1	42.6	43.4	43.1	43.7	44.2	43.3	42.3	40.2	36.5	35.4	38.0	37.3	39.4	39.9	44.2
	29.4	28.5	26.7	27.3	27.2	24.2	22.7	24.0	24.8	27.5	29.3	31.9	34.3	35.7	36.8	37.0	36.4	34.7	29.8	28.5	28.3	28.8	29.0	29.4	Diurnal Average	
	43.5	39.4	42.5	41.3	38.6	38.7	38.2	39.0	40.7	40.8	42.4	43.3	44.8	46.1	47.9	48.4	47.6	49.4	48.5	46.7	45.9	42.7	44.4	44.2	Diurnal Maximum	

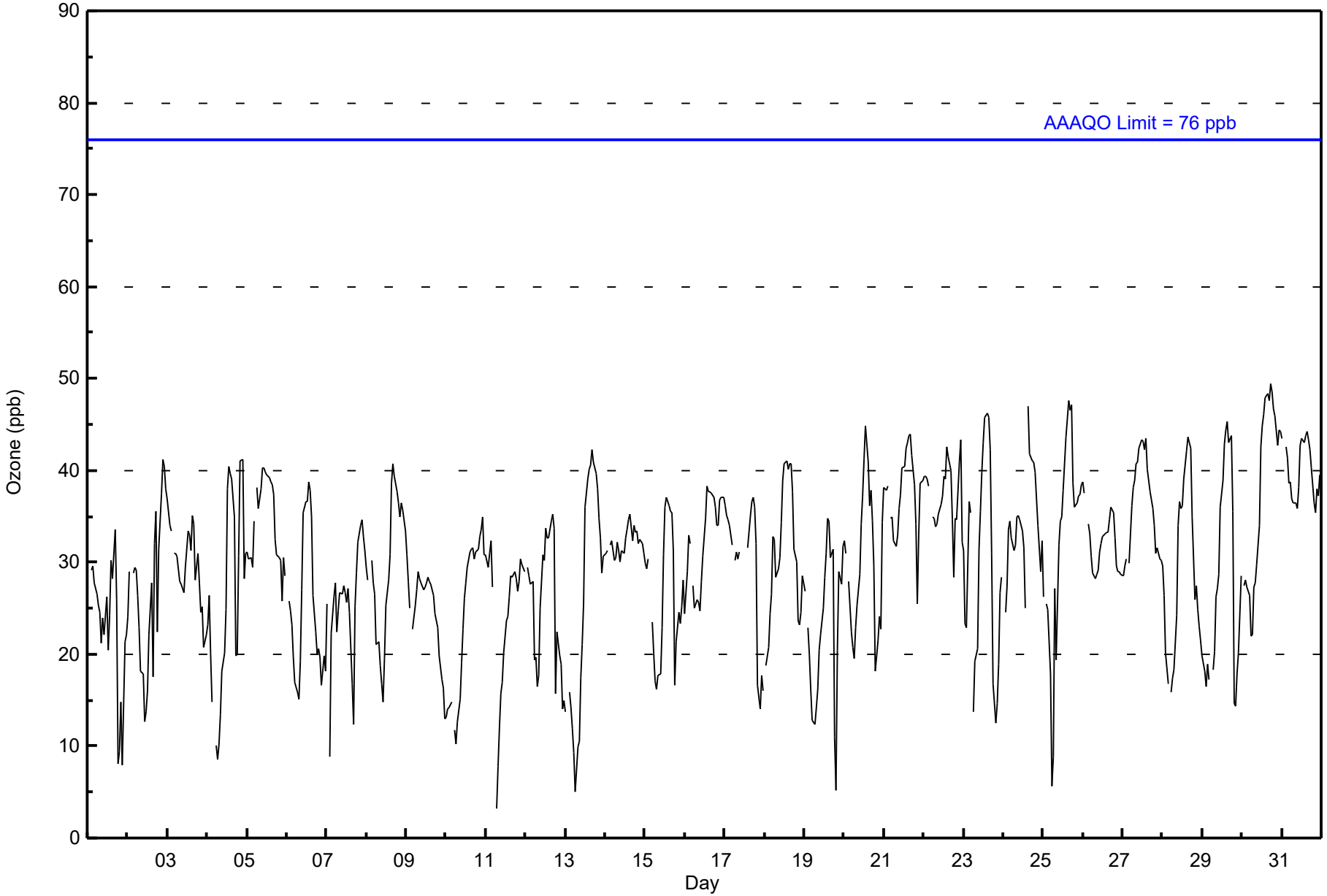
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Athabasca Valley - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	123	17.37	17.37
21 - 50	585	82.63	100.00
51 - 82	0	0.00	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	9	4	5	6	3	9	11	8	8	4	3	3	4	2	16	28	123
21 - 50	26	14	8	39	28	104	36	13	15	24	15	13	14	23	80	133	585
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	35	18	13	45	31	113	47	21	23	28	18	16	18	25	96	161	708

Total Number of Valid Hours: 708

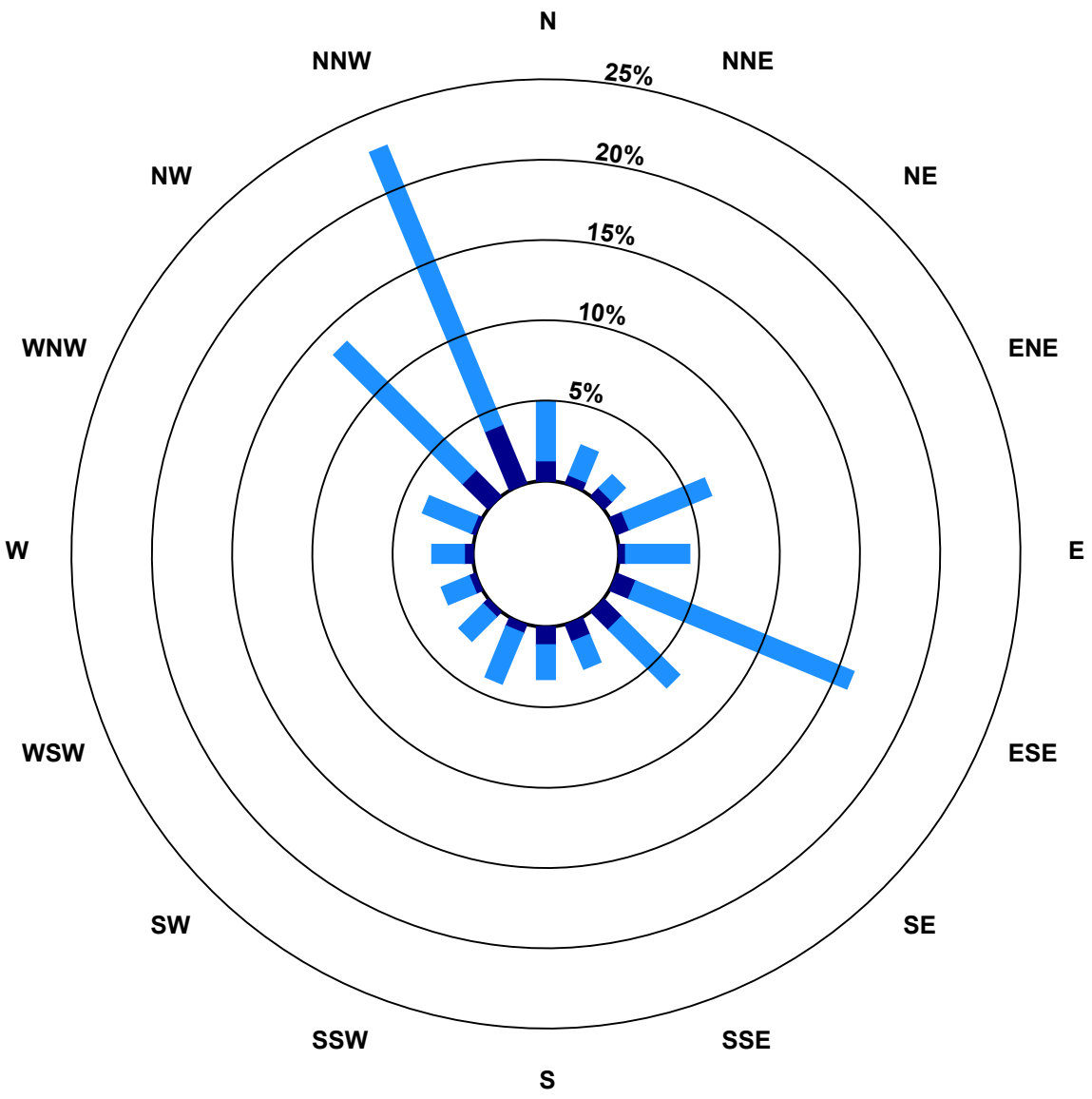
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Ozone (O_3) - ppb

Athabasca Valley



Classes (ppb)

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

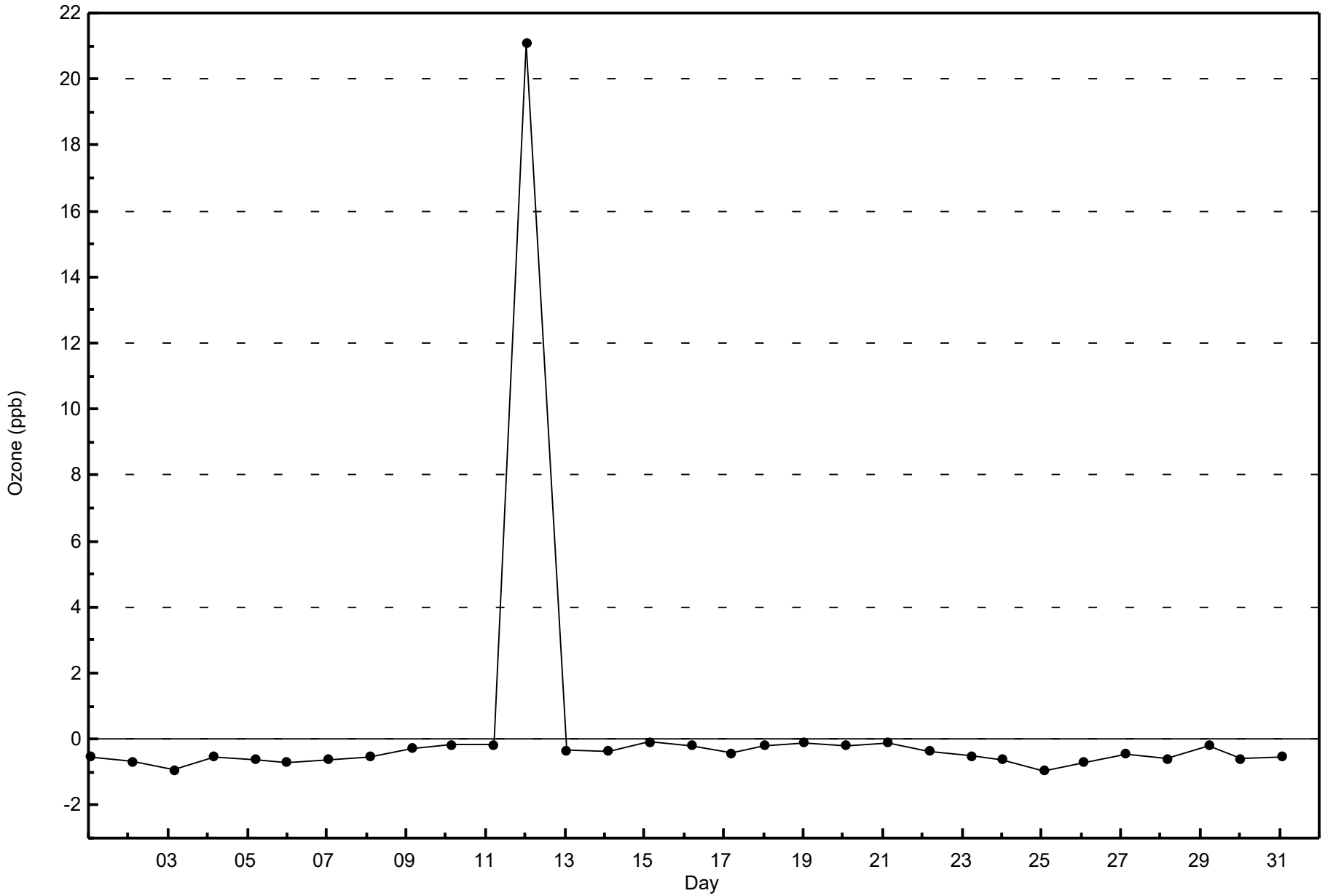
Total Number of Valid Hours: 708

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Athabasca Valley - March 2025

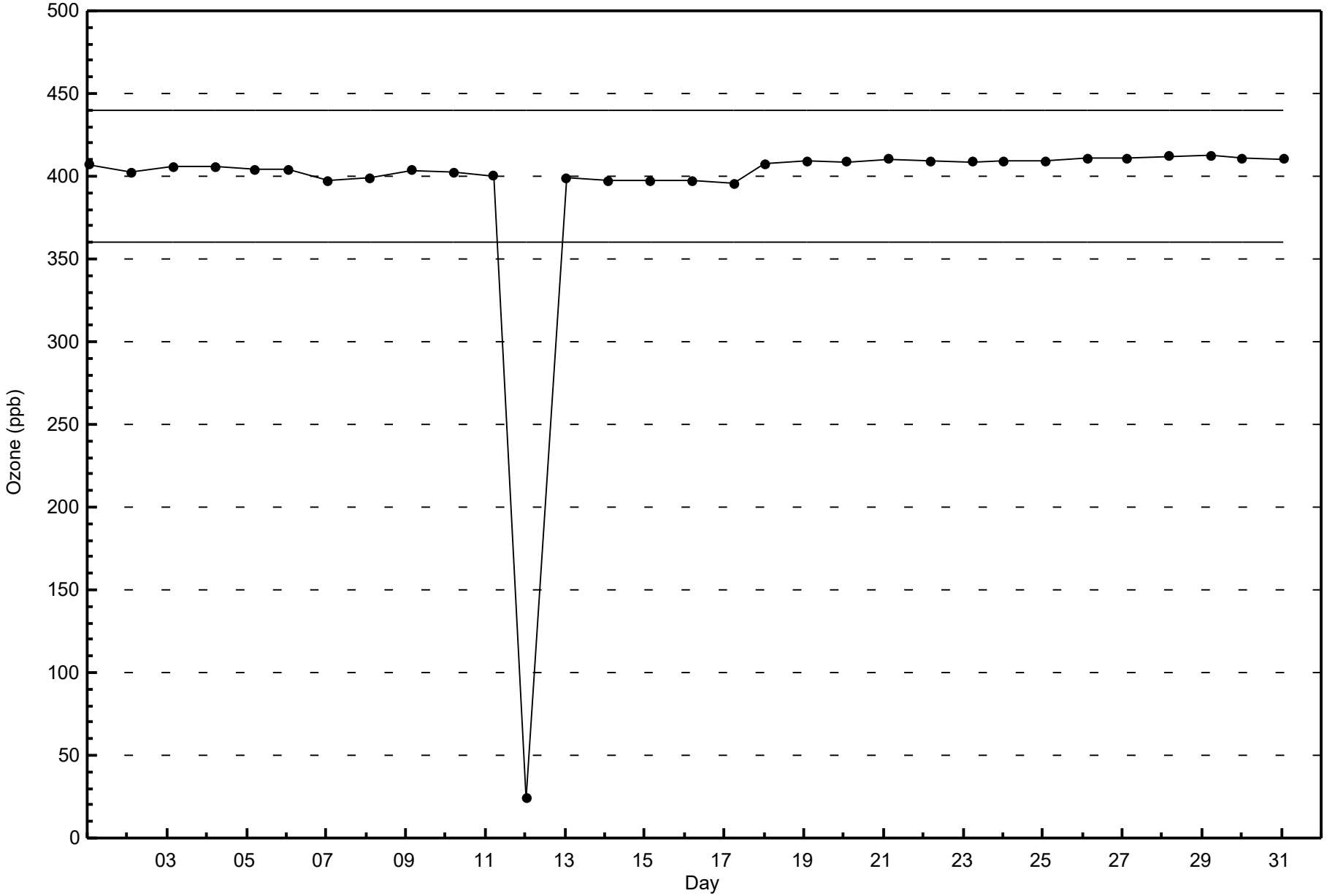


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Athabasca Valley - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Athabasca Valley - March 2025

Maximum Value: 29.8 ppb on Mar 13 09:00

Maximum Daily Average: 8.0 ppb on Mar 1

Minimum Value: 0.0 ppb on Mar 3 01:00

Minimum Daily Average: 0.3 ppb on Mar 27

Maximum Diurnal Average: 6.9 ppb at hour 9

Minimum Diurnal Average: 0.2 ppb at hour 3

Monthly Average: 2.65 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.2 Median = 1.0 Q_3 = 3.0 P_{90} = 7.4 P_{99} = 20.8

Hours in Service:	744
Hours of Data:	702
Hours of Missing Data:	42
Hours of Calibration:	37
Percent Operational Time:	99.3

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.8	0.5	0.8	Z	1.1	1.2	1.0	1.8	18.7	UO	UO	9.7	UO	UO	23.8	29.5	3.1	4.6	23.9	15.7	6.6	9.1	0.5	0.4	8.0	29.5
2-Mar	0.7	0.4	0.4	0.3	Z	0.7	0.8	1.7	4.8	6.4	13.2	15.4	20.2	19.2	9.5	18.6	2.5	0.5	0.1	0.0	0.0	0.0	0.0	0.0	5.0	20.2
3-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.6	1.1	2.1	3.2	2.4	1.1	2.7	5.3	2.1	2.0	2.6	0.9	1.1	1.5	1.6	3.2	3.8	1.6	5.3
4-Mar	Z	0.1	1.1	0.7	1.5	4.8	6.8	6.3	10.1	9.6	9.6	8.5	2.9	1.5	2.2	1.9	2.7	16.2	9.3	1.6	0.3	0.0	0.0	0.0	4.3	16.2
5-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.3	0.6	1.0	1.6	2.3	2.7	2.6	2.9	2.7	2.3	2.2	1.2	1.0	0.5	0.9	0.3	0.2	1.1	2.9
6-Mar	0.1	0.2	Z	0.1	1.4	1.6	1.8	3.0	4.3	4.0	3.0	2.9	3.5	2.4	2.7	3.9	7.9	4.7	5.4	2.5	2.3	3.2	1.0	1.5	2.7	7.9
7-Mar	0.0	0.7	0.1	Z	0.0	0.0	0.0	0.7	1.9	3.6	5.2	7.8	11.0	9.2	9.4	17.1	21.6	2.1	0.1	0.0	0.0	0.0	0.0	0.0	3.9	21.6
8-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.1	1.6	9.6	17.8	26.4	23.7	15.8	10.5	8.4	2.1	0.7	0.6	0.2	0.1	0.0	0.1	0.1	0.1	5.1	26.4
9-Mar	0.0	0.0	0.0	0.1	0.1	Z	0.1	0.4	1.3	1.9	2.2	2.5	2.5	3.5	2.9	1.8	1.8	1.1	0.2	0.1	0.0	0.1	0.1	0.0	1.0	3.5
10-Mar	Z	0.1	0.1	0.1	0.1	0.3	0.8	2.8	6.3	5.7	C	C	C	C	C	C	1.1	1.4	0.7	0.5	0.3	0.3	0.3	0.1	--	6.3
11-Mar	0.2	Z	0.1	0.0	0.0	0.3	1.6	7.3	10.5	11.7	12.3	11.8	10.0	7.4	4.1	2.2	1.4	0.7	0.1	0.1	0.1	0.0	0.0	0.0	3.6	12.3
12-Mar	0.0	0.0	Z	0.0	0.0	0.2	1.3	8.3	11.7	6.8	2.9	5.4	3.7	5.7	6.0	4.7	2.2	1.0	2.3	0.1	1.5	0.3	0.8	0.0	2.8	11.7
13-Mar	0.1	0.2	0.0	Z	0.9	1.5	6.7	11.8	29.8	20.8	16.2	12.8	1.6	0.7	0.3	0.9	0.3	0.7	0.7	0.3	0.2	0.1	0.0	0.0	4.6	29.8
14-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.4	1.1	2.2	2.0	3.0	1.2	1.1	0.8	0.8	0.9	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.6	3.0
15-Mar	0.0	0.1	0.0	0.4	0.3	Z	1.8	4.7	9.4	16.6	12.1	8.9	4.6	3.9	4.9	4.3	3.5	3.6	7.9	1.5	1.4	0.9	1.9	0.4	4.0	16.6
16-Mar	Z	0.4	0.2	0.6	0.9	1.9	3.2	2.5	3.5	7.7	7.8	7.0	4.1	2.5	2.6	2.3	1.8	1.8	1.0	1.0	1.1	0.7	0.6	0.6	2.4	7.8
17-Mar	0.7	Z	0.9	1.0	0.9	1.1	1.3	1.9	2.5	2.9	4.8	2.1	1.7	6.1	5.2	1.7	0.9	0.5	0.4	0.1	0.7	0.8	0.2	0.4	1.7	6.1
18-Mar	0.3	0.0	Z	0.9	0.5	0.8	0.7	1.4	3.2	5.2	4.7	1.2	1.1	0.9	2.3	1.0	1.2	1.4	1.4	1.1	1.8	0.7	0.2	0.1	1.4	5.2
19-Mar	0.1	0.0	0.1	Z	1.1	2.7	1.8	8.2	16.8	16.0	14.9	16.5	14.1	9.6	5.7	5.3	7.3	3.6	8.6	5.4	0.3	0.1	0.0	0.0	6.0	16.8
20-Mar	0.0	0.0	0.0	0.0	Z	0.2	0.8	4.1	7.4	8.2	4.7	2.9	1.5	0.7	1.2	3.4	2.1	1.7	0.8	1.3	0.3	0.2	0.6	0.6	1.9	8.2
21-Mar	0.5	0.6	0.7	0.8	1.5	Z	2.5	4.9	6.7	6.2	5.8	3.0	3.9	2.7	3.0	1.8	0.9	0.8	0.9	0.7	1.8	1.2	0.5	0.6	2.3	6.7
22-Mar	Z	0.6	0.5	0.2	0.4	0.4	1.8	3.8	6.6	4.2	3.1	2.9	3.2	3.8	2.7	3.3	2.9	3.8	1.8	0.1	0.1	0.0	0.0	0.2	2.0	6.6
23-Mar	0.0	Z	0.3	0.2	0.1	2.2	6.3	5.3	8.8	3.5	2.7	2.0	1.2	0.8	0.8	0.8	2.1	4.9	13.7	4.1	8.1	1.1	0.3	0.0	3.0	13.7
24-Mar	0.1	0.1	Z	0.1	0.5	1.5	5.2	4.7	3.9	5.1	6.3	5.9	4.9	10.7	M	0.6	1.5	0.5	0.2	0.2	0.2	0.1	0.4	0.2	2.4	10.7
25-Mar	1.0	4.7	0.2	Z	2.2	7.1	6.3	3.5	13.7	2.4	2.2	2.6	1.9	1.7	0.7	0.2	0.3	0.2	0.1	0.0	0.1	0.0	0.0	0.0	2.2	13.7
26-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.3	1.3	1.9	2.2	2.5	2.6	2.3	2.4	2.2	2.1	1.1	0.7	0.5	0.0	0.0	0.0	0.1	0.0	1.0	2.6
27-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.7	0.4	0.4	0.5	0.4	0.4	0.6	0.5	0.7	0.9	1.1	0.6	0.3	0.1	0.0	0.1	0.0	0.0	0.3	1.1
28-Mar	Z	0.0	0.1	0.6	1.1	0.5	2.1	7.1	7.6	3.4	2.4	3.6	4.2	3.0	1.5	0.7	0.7	0.5	0.6	0.2	0.1	0.4	0.1	0.1	1.8	7.6
29-Mar	0.1	Z	0.0	0.2	0.1	0.2	1.0	4.2	4.0	7.5	9.1	4.0	4.7	1.3	0.8	0.9	1.3	0.9	4.3	7.0	5.1	3.1	1.7	0.0	2.7	9.1
30-Mar	1.2	0.2	Z	0.5	0.2	0.6	1.4	1.8	3.1	4.1	2.7	0.3	0.1	0.1	0.1	0.3	1.1	0.4	0.2	0.2	0.2	0.1	0.3	0.3	0.8	4.1
31-Mar	0.3	0.2	0.2	Z	0.4	0.5	1.3	2.8	3.5	4.1	3.0	1.2	1.1	1.2	1.2	1.3	1.2	1.0	0.7	0.6	0.7	0.4	0.3	0.5	1.2	4.1
	0.2	0.4	0.2	0.3	0.6	1.2	1.9	3.5	6.9	6.4	6.4	5.8	4.5	4.1	3.9	4.0	2.6	2.1	2.9	1.5	1.1	0.8	0.4	0.3	Diurnal Average	
	1.2	4.7	1.1	1.0	2.2	7.1	6.8	11.8	29.8	20.8	26.4	23.7	20.2	19.2	23.8	29.5	21.6	16.2	23.9	15.7	8.1	9.1	3.2	3.8	Diurnal Maximum	

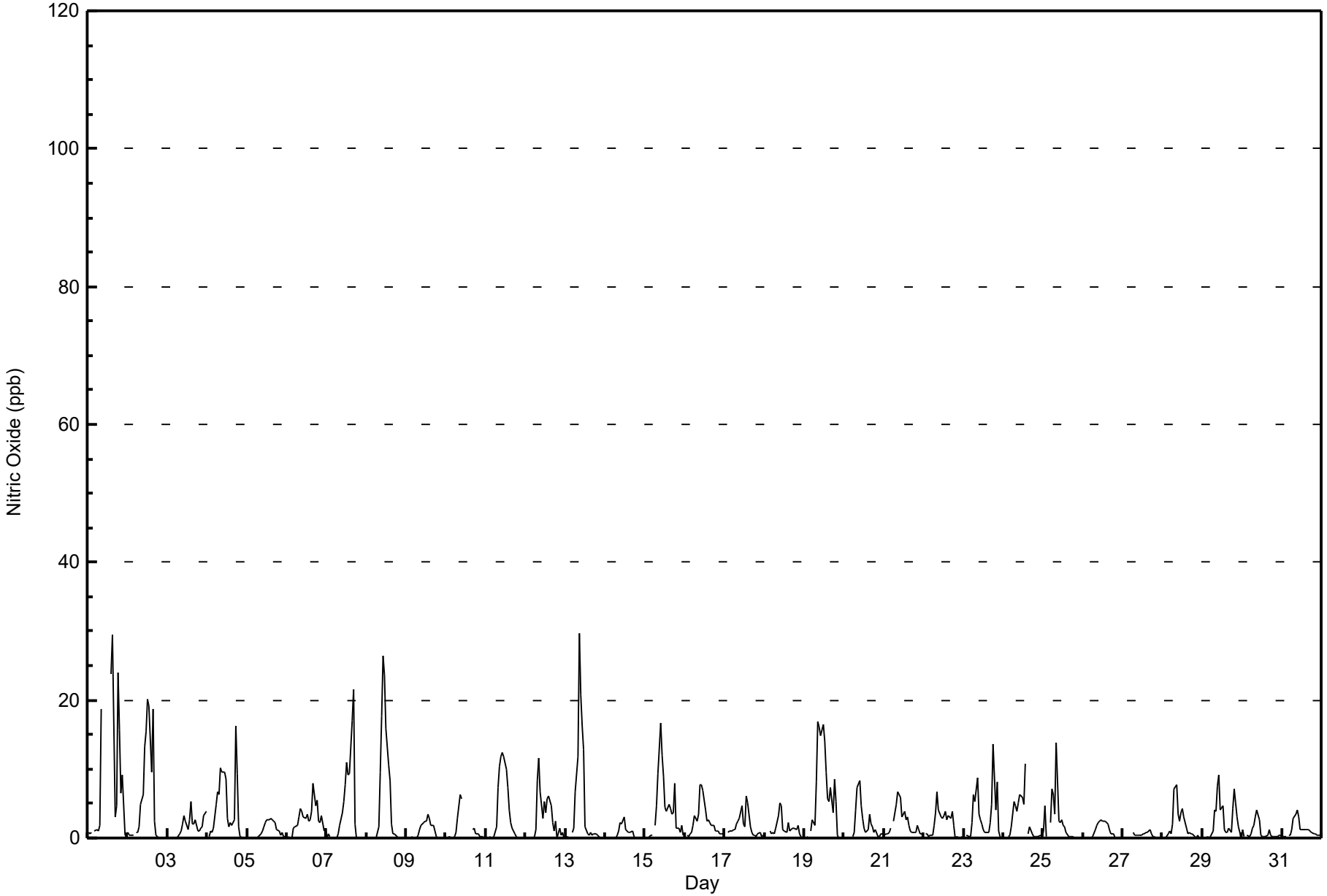
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Athabasca Valley - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	694	98.86	98.86
21 - 40	8	1.14	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 702

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Athabasca Valley - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	35	17	10	45	29	105	47	22	21	27	18	17	18	24	95	164	694
21 - 40	0	0	1	0	0	2	0	0	0	1	0	0	0	0	2	2	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	35	17	11	45	29	107	47	22	21	28	18	17	18	24	97	166	702

Total Number of Valid Hours: 702

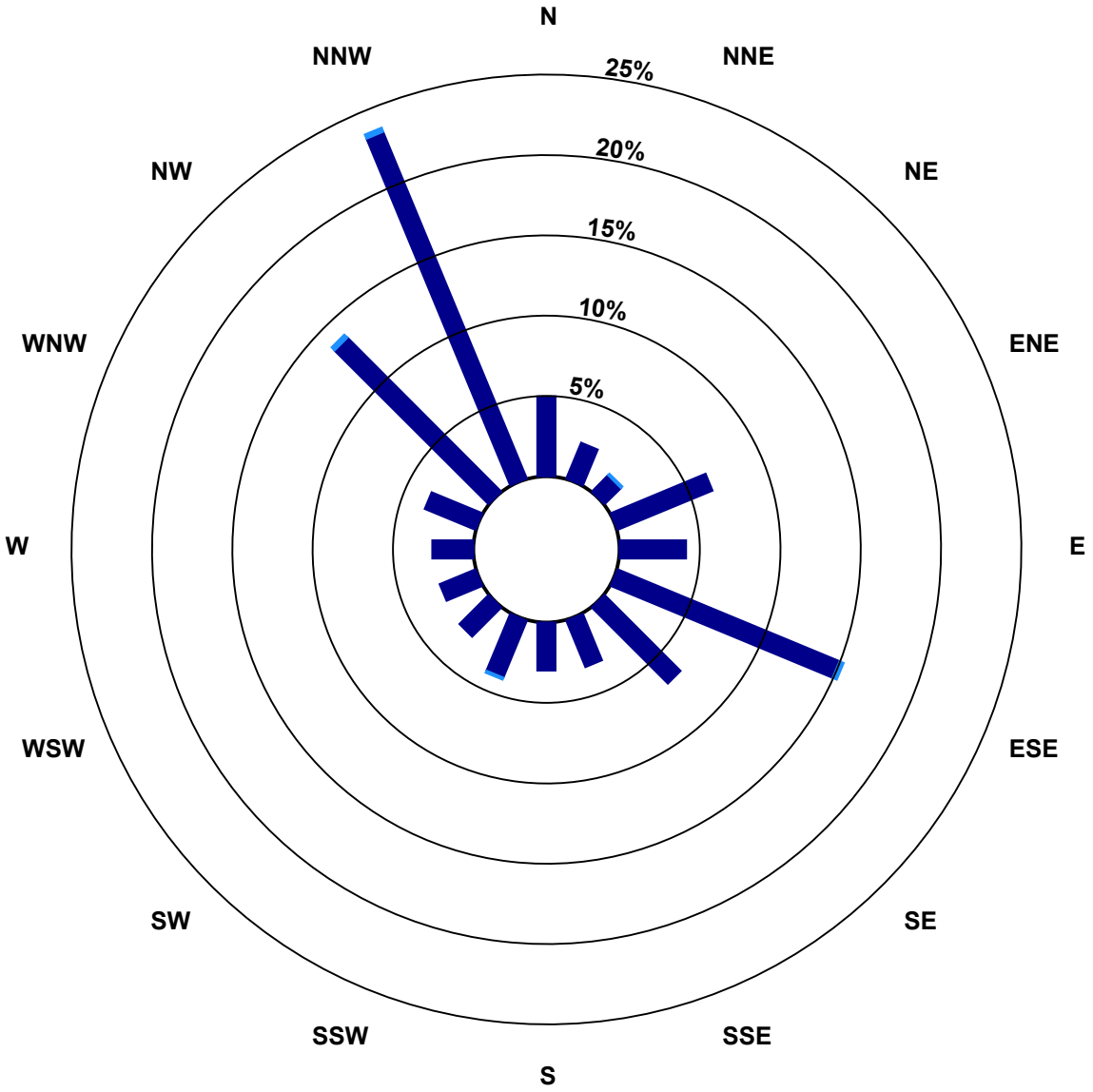
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitric Oxide (NO) - ppb

Athabasca Valley



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

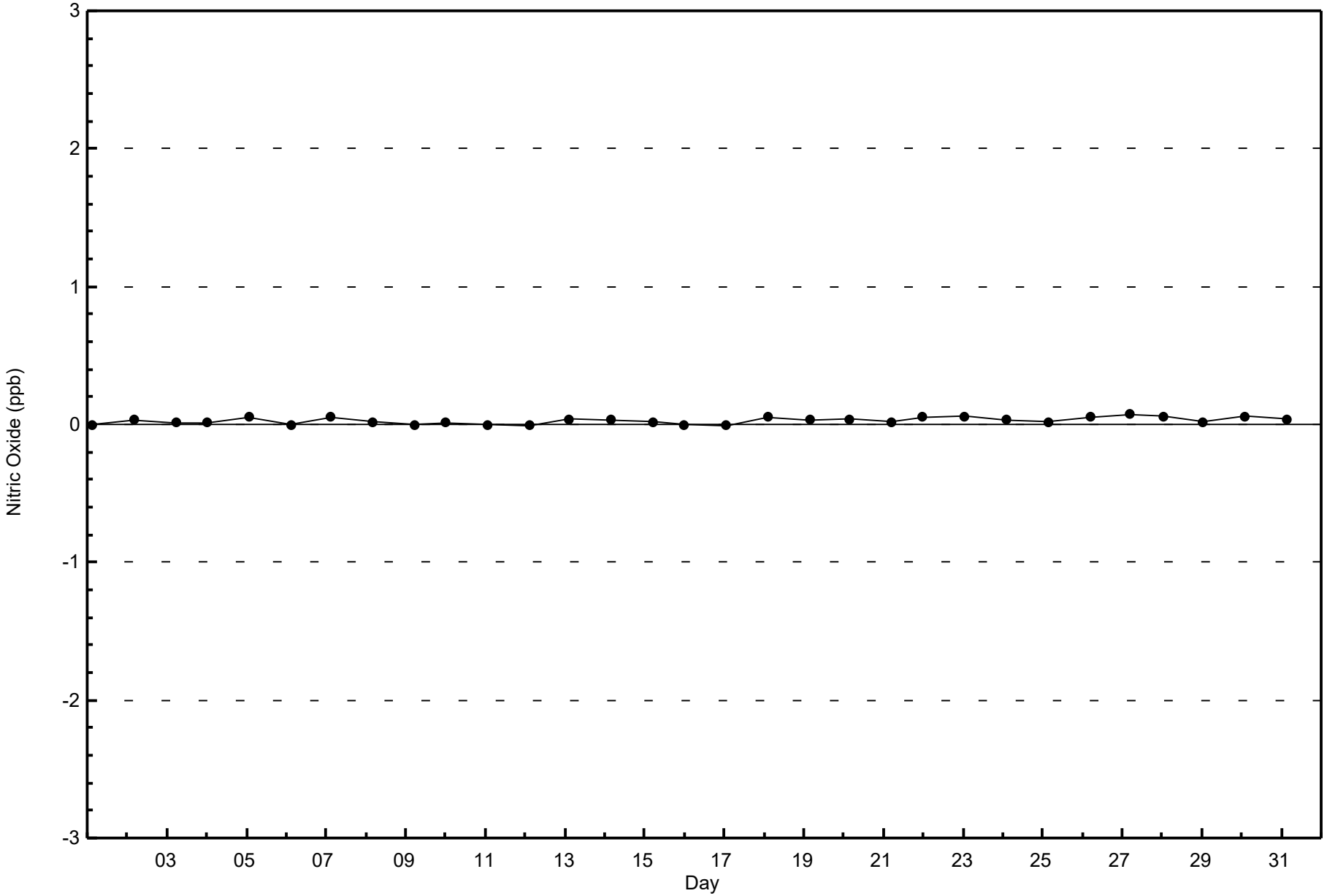
Total Number of Valid Hours: 702

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Athabasca Valley - March 2025

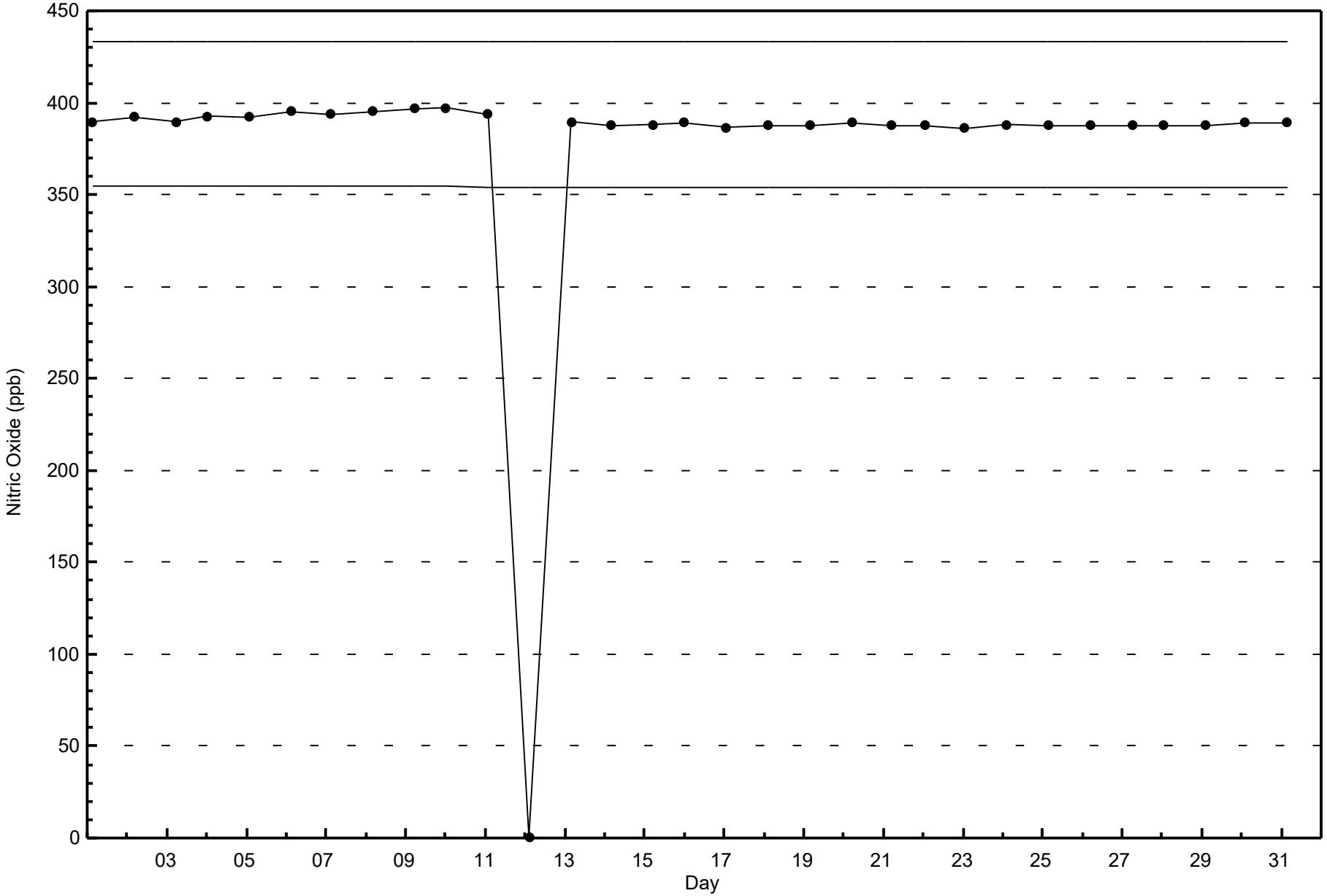


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Athabasca Valley - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Athabasca Valley - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 38.1 ppb on Mar 19 20:00 Maximum Daily Average: 14.7 ppb on Mar 1

Minimum Value: 0.4 ppb on Mar 11 04:00
Maximum Diurnal Average: 13.0 ppb at hour 20
Monthly Average: 8.93 ppb

Minimum Daily Average: 4.3 ppb on Mar 30
Minimum Diurnal Average: 5.8 ppb at hour 15
Percentiles: P_1 = 0.8 P_{10} = 2.6 Q_1 = 4.5 Median = 7.2 Q_3 = 12.0 P_{90} = 18.0 P_{99} = 32.3

Hours in Service:	744
Hours of Data:	702
Hours of Missing Data:	42
Hours of Calibration:	37
Percent Operational Time:	99.3

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	6.1	6.2	6.6	Z	7.2	8.0	8.5	7.9	11.4	UO	UO	6.9	UO	UO	16.9	21.6	14.2	19.2	37.1	30.9	22.1	28.0	11.3	9.3	14.7	37.1
2-Mar	9.7	6.7	5.7	5.6	Z	6.8	9.2	12.1	15.8	15.5	22.7	22.3	24.8	24.6	18.8	31.1	13.9	9.2	19.6	8.7	4.1	2.8	2.6	3.4	12.9	31.1
3-Mar	3.0	3.7	3.5	3.5	4.9	Z	5.4	7.5	7.7	8.3	8.7	5.4	3.0	5.1	8.8	6.0	9.0	15.8	12.9	15.0	16.7	15.2	16.8	12.0	8.6	16.8
4-Mar	Z	4.0	8.9	15.1	18.5	18.9	19.9	15.9	15.3	13.8	15.2	11.9	4.5	3.3	5.1	6.3	11.4	28.6	26.7	13.2	2.0	2.8	11.0	7.5	12.2	28.6
5-Mar	7.4	Z	8.0	9.0	4.8	2.2	3.1	5.3	4.1	2.6	3.2	4.0	4.7	5.5	5.8	6.5	7.7	13.0	14.6	14.5	13.6	17.9	9.2	6.4	7.5	17.9
6-Mar	5.4	4.8	Z	3.1	5.4	7.4	8.0	8.9	7.8	6.4	5.3	4.5	5.4	4.6	5.1	8.6	18.4	23.0	25.0	21.2	18.9	22.3	19.5	19.9	11.3	25.0
7-Mar	10.8	30.2	29.0	Z	9.5	8.3	13.4	12.3	11.2	12.0	10.9	11.8	14.1	12.6	15.0	24.3	32.7	15.9	11.6	8.0	6.1	5.6	7.4	8.8	14.0	32.7
8-Mar	10.2	11.0	9.8	7.8	Z	9.3	14.2	13.9	19.1	24.6	28.5	23.5	15.6	13.2	12.5	5.3	3.2	3.8	4.8	5.0	6.2	4.9	4.6	4.5	11.1	28.5
9-Mar	4.0	4.6	4.6	6.9	6.4	Z	5.6	4.8	4.9	5.0	5.1	4.1	3.7	3.3	3.0	3.1	4.0	5.6	6.3	6.6	8.0	9.3	10.0	13.1	5.7	13.1
10-Mar	Z	10.6	10.4	9.7	11.1	13.4	15.6	12.9	9.9	7.0	C	C	C	C	C	C	1.9	3.3	2.8	2.1	1.3	2.0	1.2	4.6	--	15.6
11-Mar	3.9	Z	1.8	0.4	4.5	19.7	24.0	20.1	15.9	13.8	13.8	12.1	9.6	9.4	7.8	5.4	5.6	5.5	6.0	7.2	6.9	5.2	4.7	4.9	9.1	24.0
12-Mar	4.9	4.9	Z	7.3	7.9	18.0	17.1	18.4	19.0	11.7	5.0	6.7	4.4	6.5	6.8	7.4	5.8	6.5	25.6	14.0	14.6	15.2	18.7	14.7	11.4	25.6
13-Mar	14.7	16.8	12.1	Z	16.4	18.4	24.3	19.1	23.7	17.7	15.4	11.8	2.5	0.5	0.6	1.3	0.7	1.3	1.7	2.8	4.8	6.4	8.3	6.7	9.9	24.3
14-Mar	6.0	5.4	7.2	5.3	Z	6.8	6.1	4.0	4.0	4.8	2.6	3.3	1.6	1.6	1.5	2.0	3.0	1.5	2.6	3.0	5.6	6.5	7.6	8.5	4.4	8.5
15-Mar	9.1	7.6	4.6	7.7	7.8	Z	12.1	12.7	13.1	17.0	11.9	8.9	5.3	4.8	6.5	7.2	7.4	11.7	28.1	20.3	13.0	14.0	11.3	7.6	10.9	28.1
16-Mar	Z	7.6	2.4	2.5	3.4	4.9	7.2	5.8	4.5	6.7	8.3	7.1	4.9	3.4	3.8	4.6	4.9	5.7	7.5	9.6	9.0	5.6	5.0	4.9	5.6	9.6
17-Mar	5.5	Z	6.7	7.2	9.6	10.3	10.9	8.5	8.1	6.8	8.5	3.6	2.7	8.8	9.0	5.6	4.5	4.1	4.6	8.3	23.4	22.8	16.8	18.9	9.4	23.4
18-Mar	16.6	14.4	Z	11.0	10.2	5.1	5.8	9.8	8.6	8.4	5.9	2.0	1.6	1.6	3.0	2.1	1.9	5.1	12.2	13.3	18.8	17.5	12.2	6.0	8.4	18.8
19-Mar	6.7	4.8	9.3	Z	14.1	17.9	15.9	14.5	15.7	14.0	14.3	13.6	12.3	10.5	8.1	9.3	15.4	13.4	33.9	38.1	21.5	11.2	11.6	7.8	14.5	38.1
20-Mar	7.3	8.1	7.8	9.5	Z	15.9	17.0	13.6	11.5	9.7	5.6	3.8	2.1	1.4	2.3	6.5	5.2	8.5	13.0	24.2	18.0	12.2	11.9	9.1	9.7	24.2
21-Mar	6.5	6.5	5.8	8.1	8.9	Z	11.1	12.1	10.6	7.5	6.4	3.8	4.9	3.8	3.4	2.7	1.8	3.0	5.9	10.2	19.2	11.4	6.3	5.8	7.2	19.2
22-Mar	Z	5.1	5.2	5.1	6.2	7.4	6.9	8.8	8.3	6.8	6.1	5.5	6.1	6.4	5.9	8.0	10.5	15.6	20.5	11.8	10.7	3.8	2.0	10.7	8.0	20.5
23-Mar	10.7	Z	13.2	3.5	4.6	16.6	19.3	11.3	11.1	5.3	4.2	3.4	2.6	1.8	1.6	2.0	5.6	17.8	32.3	33.3	26.1	19.6	8.5	7.6	11.4	33.3
24-Mar	14.4	13.1	Z	4.5	6.4	9.7	12.5	10.2	7.4	8.5	8.2	9.4	12.0	21.8	M	2.3	6.5	3.6	3.2	3.2	3.0	3.2	4.6	1.9	7.7	21.8
25-Mar	6.6	11.9	5.8	Z	12.5	22.6	18.8	6.6	14.5	4.0	3.1	3.8	3.1	2.9	1.9	1.1	2.2	1.8	3.2	3.4	2.7	2.6	2.4	1.8	6.1	22.6
26-Mar	1.9	1.9	2.0	2.0	Z	2.7	3.7	3.8	3.9	4.3	3.9	4.0	3.8	4.4	5.2	5.7	4.7	5.5	7.3	7.8	9.2	9.8	9.7	8.8	5.0	9.8
27-Mar	9.0	8.7	8.3	8.3	8.4	Z	1.8	1.0	0.7	0.9	0.7	0.5	0.8	1.1	1.1	2.0	2.9	3.0	3.5	5.0	7.9	7.5	8.3	7.8	4.3	9.0
28-Mar	Z	9.4	14.2	16.4	18.4	12.3	11.0	13.0	10.4	4.9	3.4	4.8	5.4	4.5	2.8	1.9	2.5	3.0	9.4	17.0	14.7	13.7	10.1	8.2	9.2	18.4
29-Mar	8.3	Z	6.6	4.0	5.9	6.2	5.4	7.5	5.3	8.5	9.7	5.4	6.4	2.4	2.0	2.3	4.5	4.5	13.4	35.3	33.1	27.1	20.6	9.5	10.2	35.3
30-Mar	16.1	7.0	Z	8.5	3.6	7.5	5.8	4.2	4.6	5.6	3.8	1.0	0.8	0.8	0.9	1.4	3.6	2.1	1.9	2.6	3.0	4.7	4.2	4.1	4.3	16.1
31-Mar	4.2	4.5	5.0	Z	7.9	7.3	8.9	9.4	8.1	8.5	5.7	2.6	2.6	2.9	3.1	3.3	3.4	3.7	4.9	7.6	9.0	6.7	7.2	5.8	5.8	9.4
	8.0	8.4	7.9	6.9	8.6	10.9	11.2	10.2	10.2	9.0	8.5	7.1	5.9	6.0	5.8	6.6	7.1	8.5	13.0	13.0	12.0	10.9	9.2	8.1	Diurnal Average	
	16.6	30.2	29.0	16.4	18.5	22.6	24.3	20.1	23.7	24.6	28.5	23.5	24.8	24.6	18.8	31.1	32.7	28.6	37.1	38.1	33.1	28.0	20.6	19.9	Diurnal Maximum	

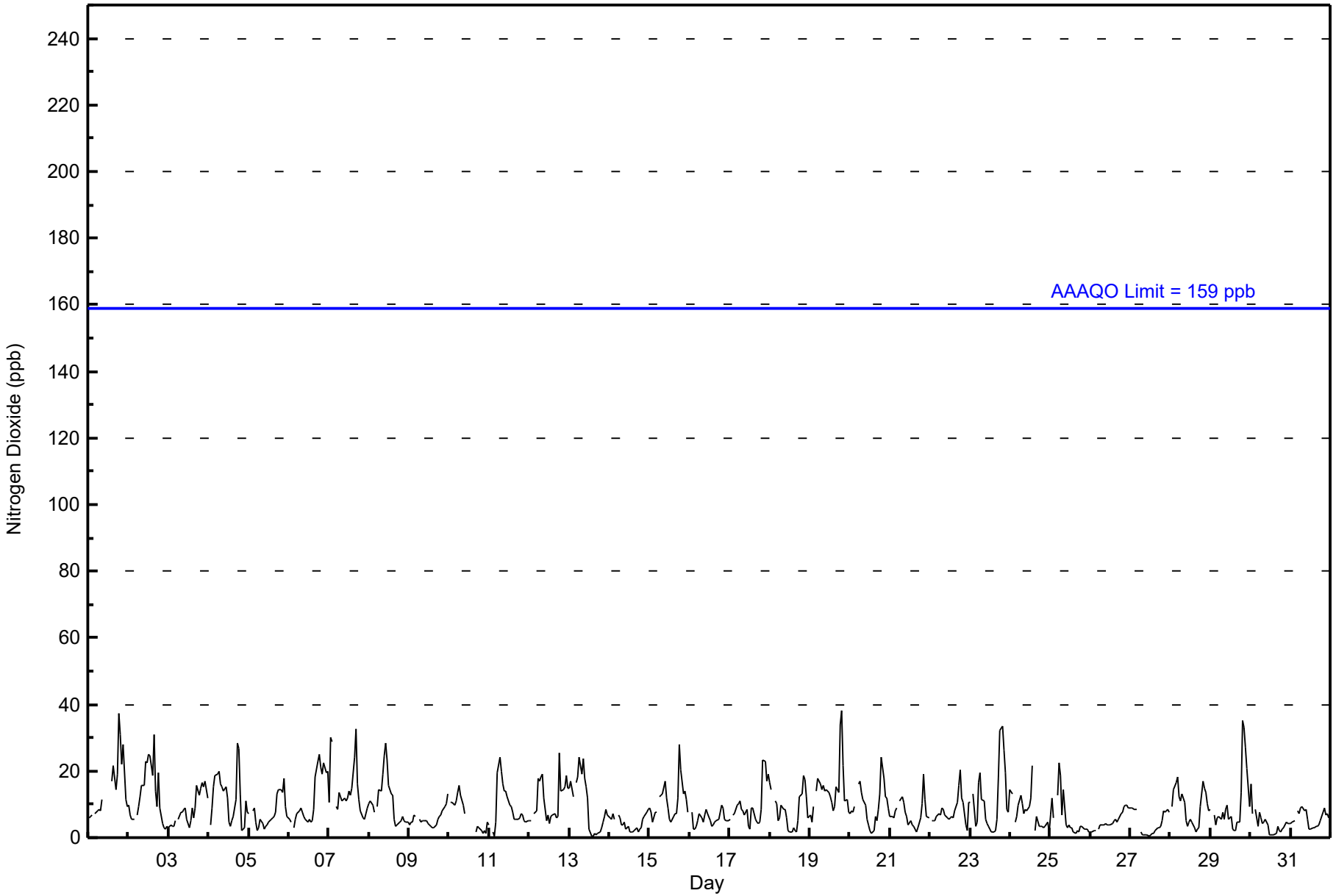
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Athabasca Valley - March 2025



Nitrogen Dioxide (NO_2) - ppb
Athabasca Valley - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	658	93.73	93.73
21 - 40	44	6.27	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 702

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Athabasca Valley - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	34	16	10	44	29	101	41	19	16	27	18	16	17	23	91	156	658
21 - 40	1	1	1	1	0	6	6	3	5	1	0	1	1	1	6	10	44
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	35	17	11	45	29	107	47	22	21	28	18	17	18	24	97	166	702

Total Number of Valid Hours: 702

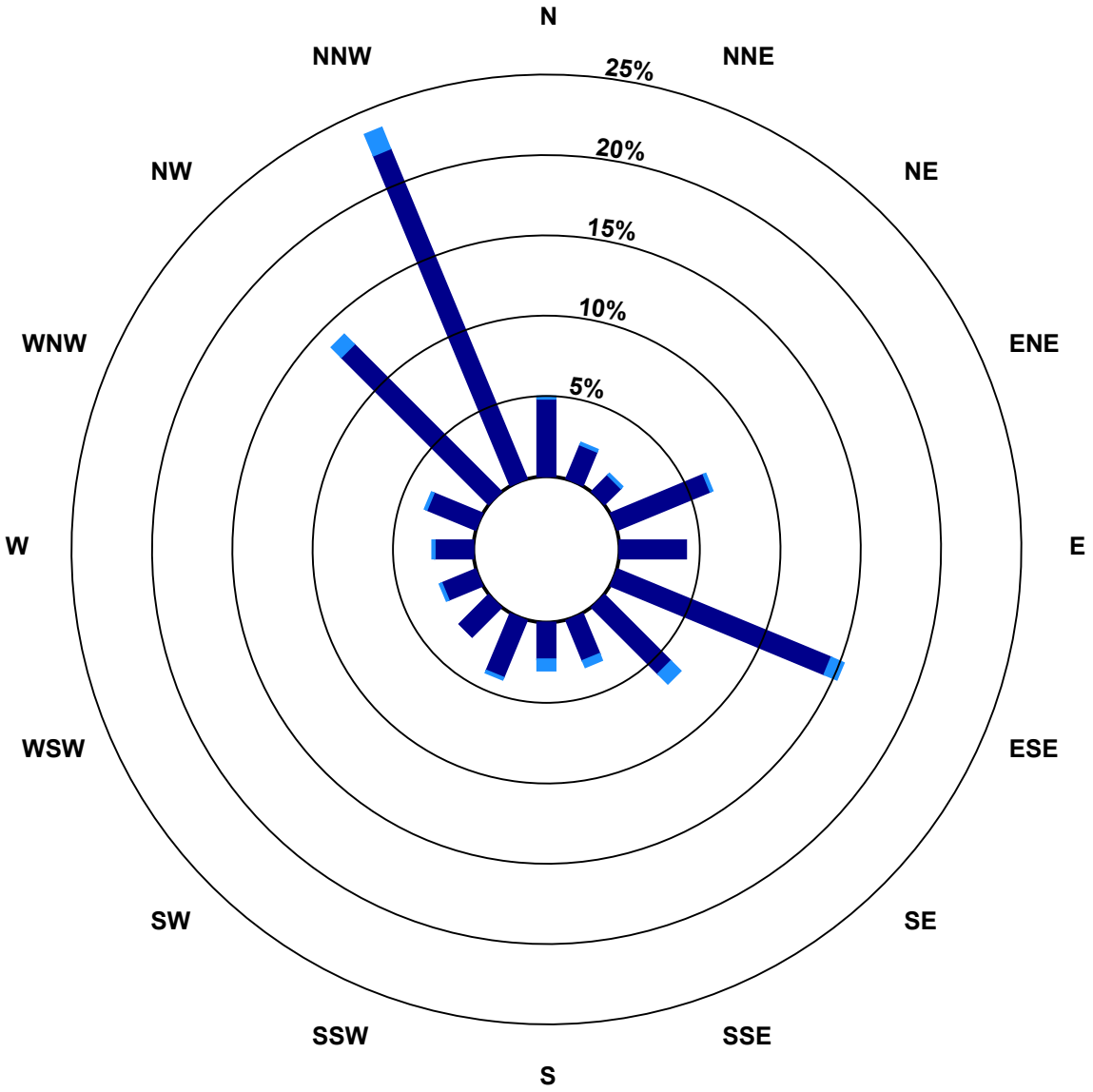
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Dioxide (NO_2) - ppb

Athabasca Valley



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

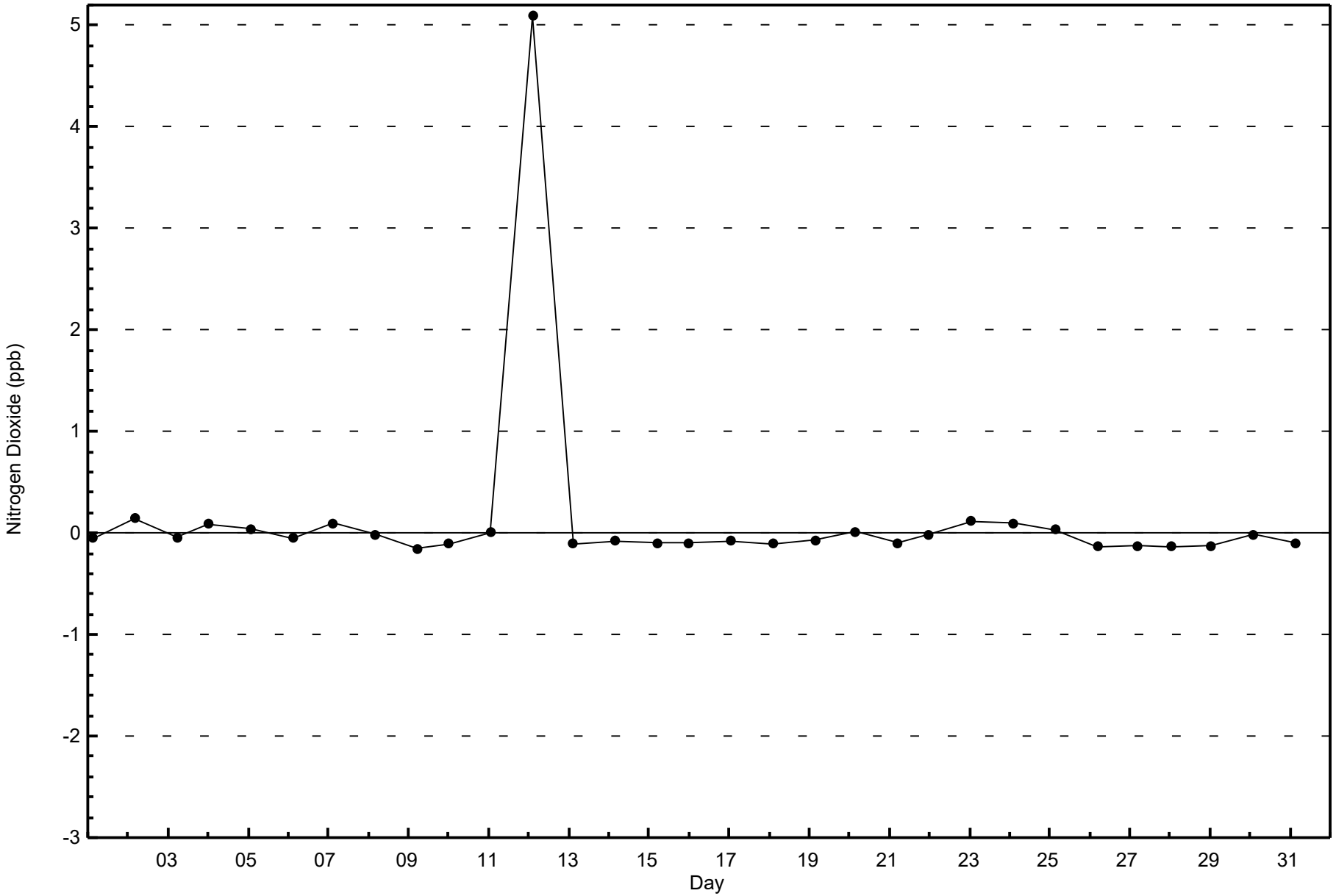
Total Number of Valid Hours: 702

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Athabasca Valley - March 2025

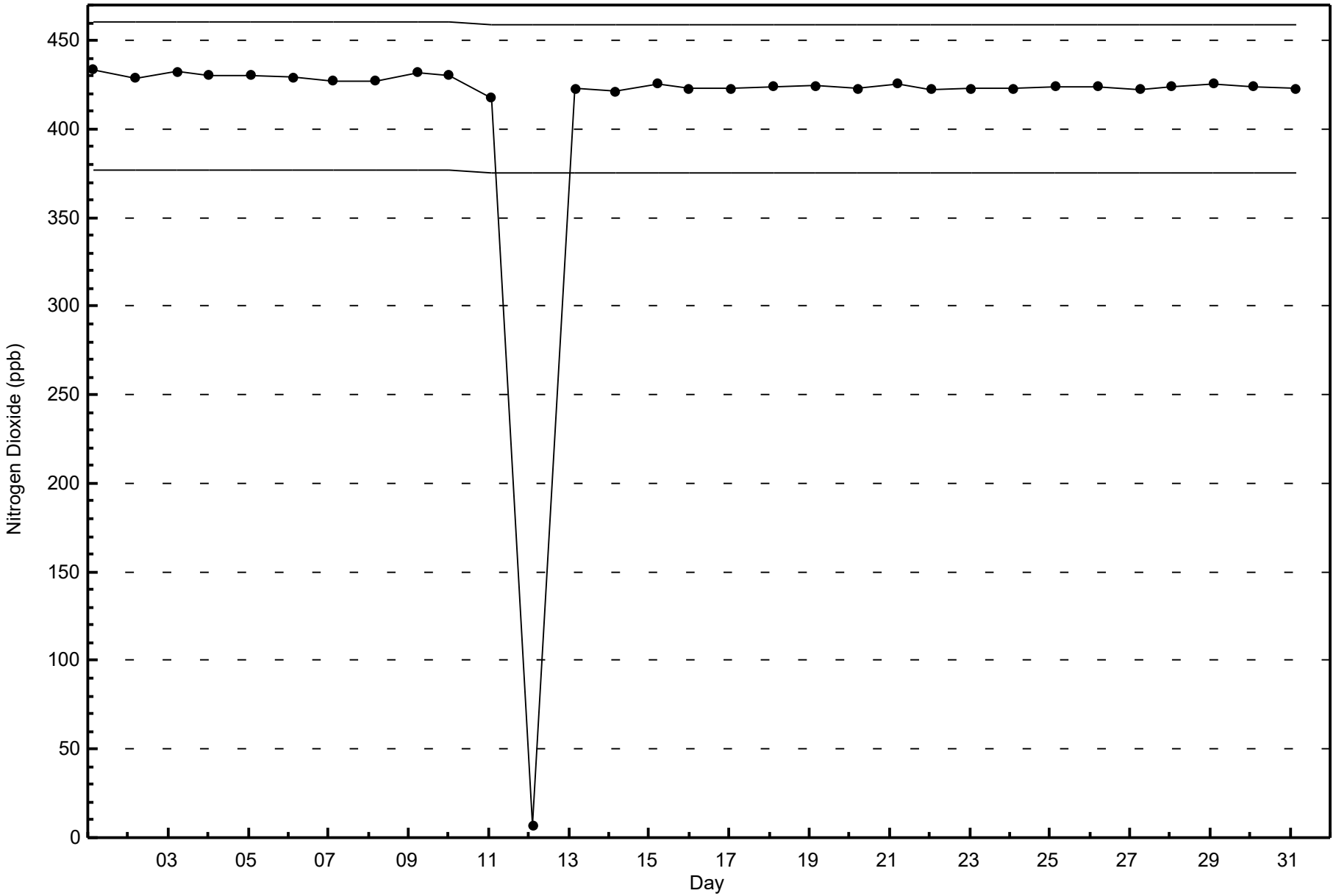


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Athabasca Valley - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Athabasca Valley - March 2025

Maximum Value: 61.0 ppb on Mar 1 19:00

Maximum Daily Average: 22.7 ppb on Mar 1

Minimum Value: 0.4 ppb on Mar 11 04:00

Minimum Daily Average: 4.6 ppb on Mar 27

Maximum Diurnal Average: 17.1 ppb at hour 9

Minimum Diurnal Average: 7.1 ppb at hour 4

Monthly Average: 11.58 ppb

Percentiles: P_1 = 1.1 P_{10} = 3.1 Q_1 = 5.3 Median = 8.4 Q_3 = 14.8 P_{90} = 23.9 P_{99} = 46.6

Hours in Service:	744
Hours of Data:	702
Hours of Missing Data:	42
Hours of Calibration:	37
Percent Operational Time:	99.3

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	6.9	6.7	7.4	Z	8.3	9.2	9.5	9.7	30.1	UO	UO	16.6	UO	UO	40.7	51.1	17.3	23.8	61.0	46.6	28.7	37.1	11.8	9.7	22.7	61.0
2-Mar	10.4	7.1	6.1	5.9	Z	7.5	10.0	13.8	20.6	21.9	35.9	37.7	45.0	43.8	28.3	49.7	16.4	9.7	19.7	8.7	4.1	2.8	2.6	3.4	17.9	49.7
3-Mar	3.0	3.7	3.5	3.5	4.9	Z	5.4	8.1	8.8	10.4	11.9	7.8	4.1	7.8	14.1	8.1	11.0	18.4	13.8	16.1	18.2	16.8	20.0	15.8	10.2	20.0
4-Mar	Z	4.1	10.0	15.8	20.0	23.7	26.7	22.2	25.4	23.4	24.8	20.4	7.4	4.8	7.3	8.2	14.1	44.8	36.0	14.8	2.3	2.8	11.0	7.5	16.4	44.8
5-Mar	7.4	Z	8.0	9.0	4.8	2.2	3.1	5.6	4.7	3.6	4.8	6.3	7.4	8.1	8.7	9.2	10.0	15.2	15.8	15.5	14.1	18.8	9.5	6.6	8.6	18.8
6-Mar	5.5	5.0	Z	3.2	6.8	9.0	9.8	11.9	12.1	10.4	8.3	7.4	8.9	7.0	7.8	12.5	26.3	27.7	30.4	23.7	21.2	25.5	20.5	21.4	14.0	30.4
7-Mar	10.8	30.9	29.1	Z	9.5	8.3	13.4	13.0	13.1	15.6	16.1	19.6	25.1	21.8	24.4	41.4	54.3	18.0	11.7	8.0	6.1	5.6	7.4	8.8	17.9	54.3
8-Mar	10.2	11.0	9.8	7.8	Z	9.3	14.3	15.5	28.7	42.4	54.9	47.2	31.4	23.7	20.9	7.4	3.9	4.4	5.0	5.1	6.2	5.0	4.7	4.6	16.2	54.9
9-Mar	4.0	4.6	4.6	7.0	6.5	Z	5.7	5.2	6.2	6.9	7.3	6.6	6.2	6.8	5.9	4.9	5.8	6.7	6.5	6.7	8.0	9.4	10.1	13.1	6.7	13.1
10-Mar	Z	10.7	10.5	9.8	11.2	13.7	16.4	15.7	16.2	12.7	C	C	C	C	C	C	3.0	4.7	3.5	2.6	1.6	2.3	1.5	4.7	--	16.4
11-Mar	4.1	Z	1.9	0.4	4.5	20.0	25.6	27.4	26.4	25.5	26.1	23.9	19.6	16.8	11.9	7.6	7.0	6.2	6.1	7.3	7.0	5.2	4.7	4.9	12.6	27.4
12-Mar	4.9	4.9	Z	7.3	7.9	18.2	18.4	26.7	30.7	18.5	7.9	12.1	8.1	12.2	12.8	12.1	8.0	7.5	27.9	14.1	16.1	15.5	19.5	14.7	14.2	30.7
13-Mar	14.8	17.0	12.1	Z	17.3	19.9	31.0	30.9	53.5	38.5	31.6	24.6	4.1	1.2	0.9	2.2	1.0	2.0	2.4	3.1	5.0	6.5	8.3	6.7	14.5	53.5
14-Mar	6.0	5.4	7.2	5.3	Z	6.8	6.2	4.4	5.1	7.0	4.6	6.3	2.8	2.7	2.3	2.8	3.9	1.7	2.6	3.0	5.6	6.5	7.6	8.5	5.0	8.5
15-Mar	9.1	7.7	4.6	8.1	8.1	Z	13.9	17.4	22.5	33.6	24.0	17.8	9.9	8.7	11.4	11.5	10.9	15.3	36.0	21.8	14.4	14.9	13.2	8.0	14.9	36.0
16-Mar	Z	8.0	2.6	3.1	4.3	6.8	10.4	8.3	8.0	14.4	16.1	14.1	9.0	5.9	6.4	6.9	6.7	7.5	8.5	10.6	10.1	6.3	5.6	5.5	8.1	16.1
17-Mar	6.2	Z	7.6	8.2	10.5	11.4	12.2	10.4	10.6	9.7	13.3	5.7	4.4	14.9	14.2	7.3	5.4	4.6	5.0	8.4	24.1	23.6	17.0	19.3	11.0	24.1
18-Mar	16.9	14.4	Z	11.9	10.7	5.9	6.5	11.2	11.8	13.6	10.6	3.2	2.7	2.5	5.3	3.1	3.1	6.5	13.6	14.4	20.6	18.2	12.4	6.1	9.8	20.6
19-Mar	6.8	4.8	9.4	Z	15.2	20.6	17.7	22.7	32.5	30.0	29.2	30.1	26.4	20.1	13.8	14.6	22.7	17.0	42.5	43.5	21.8	11.3	11.6	7.8	20.5	43.5
20-Mar	7.3	8.1	7.8	9.5	Z	16.1	17.8	17.7	18.9	17.9	10.3	6.7	3.6	2.1	3.5	9.9	7.3	10.2	13.8	25.5	18.3	12.4	12.5	9.7	11.6	25.5
21-Mar	7.0	7.1	6.5	8.9	10.4	Z	13.6	17.0	17.3	13.7	12.2	6.8	8.8	6.5	6.4	4.5	2.7	3.8	6.8	10.9	21.0	12.6	6.8	6.4	9.5	21.0
22-Mar	Z	5.7	5.7	5.3	6.6	7.8	8.7	12.6	14.9	11.0	9.2	8.4	9.3	10.2	8.6	11.3	13.4	19.4	22.3	11.9	10.8	3.8	2.0	10.9	10.0	22.3
23-Mar	10.7	Z	13.5	3.7	4.7	18.8	25.6	16.6	19.9	8.8	6.9	5.4	3.8	2.6	2.4	2.8	7.7	22.7	46.0	37.4	34.2	20.7	8.8	7.6	14.4	46.0
24-Mar	14.5	13.2	Z	4.6	6.9	11.2	17.7	14.9	11.3	13.6	14.5	15.3	16.9	32.5	M	2.9	8.0	4.1	3.4	3.4	3.2	3.3	5.0	2.1	10.1	32.5
25-Mar	7.6	16.6	6.0	Z	14.7	29.7	25.1	10.1	28.3	6.4	5.3	6.4	5.0	4.6	2.6	1.3	2.5	2.0	3.3	3.4	2.8	2.6	2.4	1.8	8.3	29.7
26-Mar	1.9	1.9	2.0	2.0	Z	2.7	4.0	5.1	5.8	6.5	6.4	6.6	6.1	6.8	7.4	7.8	5.8	6.2	7.8	7.8	9.2	9.8	9.8	8.8	6.0	9.8
27-Mar	9.0	8.7	8.3	8.3	8.4	Z	2.5	1.4	1.1	1.4	1.1	0.9	1.4	1.6	1.8	2.9	4.0	3.6	3.8	5.1	7.9	7.6	8.3	7.8	4.6	9.0
28-Mar	Z	9.4	14.3	17.0	19.5	12.8	13.1	20.1	18.0	8.3	5.8	8.4	9.6	7.5	4.3	2.6	3.2	3.5	10.0	17.2	14.8	14.1	10.2	8.3	10.9	20.1
29-Mar	8.4	Z	6.6	4.2	6.0	6.4	6.4	11.7	9.3	16.0	18.8	9.4	11.1	3.7	2.8	3.2	5.8	5.4	17.7	42.3	38.2	30.2	22.3	9.5	12.8	42.3
30-Mar	17.3	7.2	Z	9.0	3.8	8.1	7.2	6.0	7.7	9.7	6.5	1.3	0.9	0.9	1.0	1.7	4.7	2.5	2.1	2.8	3.2	4.8	4.5	4.4	5.1	17.3
31-Mar	4.5	4.7	5.2	Z	8.3	7.8	10.2	12.2	11.6	12.6	8.7	3.8	3.7	4.1	4.3	4.6	4.6	4.7	5.6	8.2	9.7	7.1	7.5	6.3	7.0	12.6
	8.3	8.8	8.1	7.1	9.2	12.1	13.2	13.7	17.1	15.5	14.9	12.9	10.4	10.1	9.7	10.5	9.7	10.6	15.8	14.5	13.2	11.7	9.6	8.4	Diurnal Average	
	17.3	30.9	29.1	17.0	20.0	29.7	31.0	30.9	53.5	42.4	54.9	47.2	45.0	43.8	40.7	51.1	54.3	44.8	61.0	46.6	38.2	37.1	22.3	21.4	Diurnal Maximum	

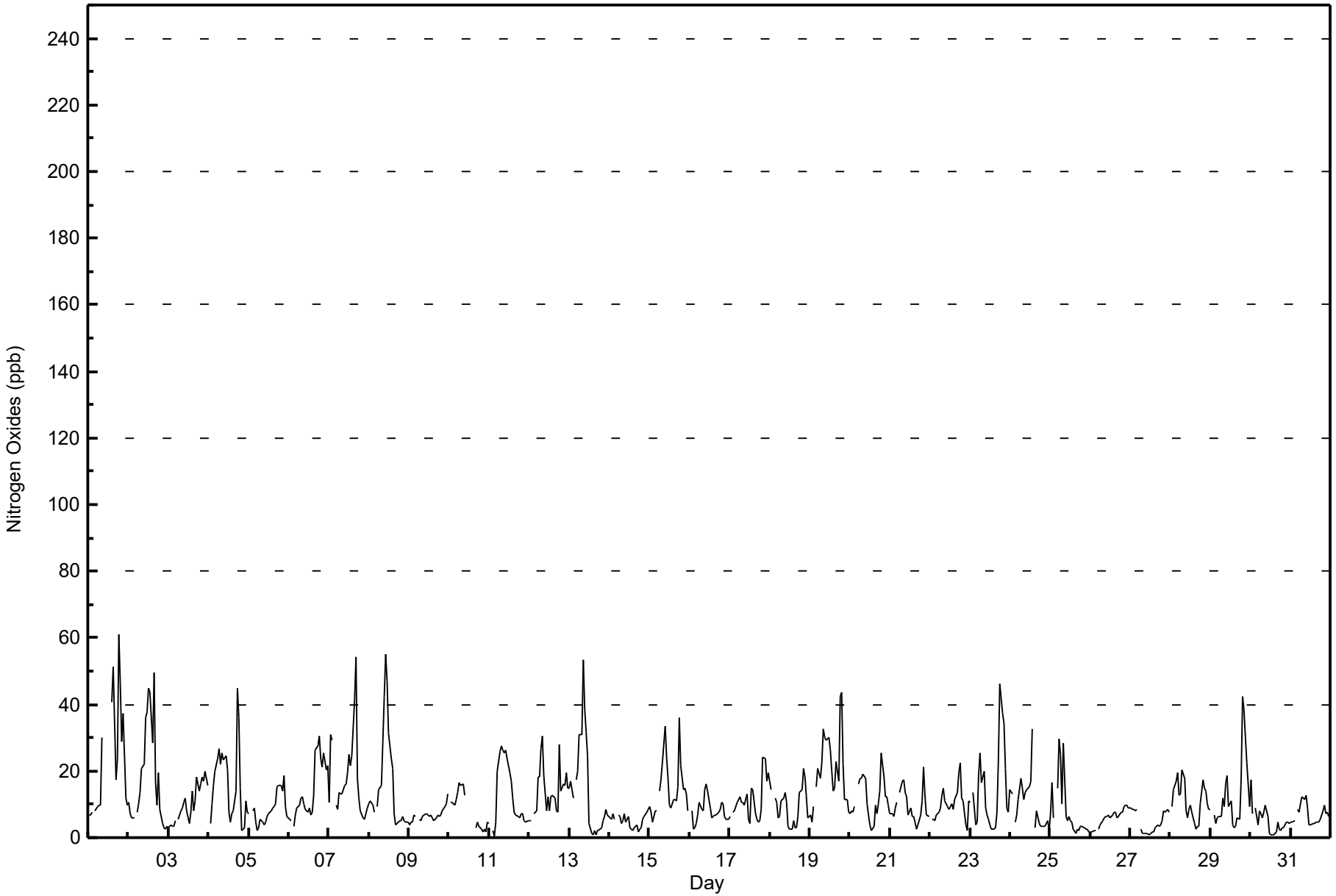
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Athabasca Valley - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	606	86.32	86.32
21 - 40	78	11.11	97.44
11 - 80	18	2.56	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 702

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Athabasca Valley - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	31	15	9	40	24	93	33	16	15	27	18	15	12	23	88	147	606
21 - 40	4	2	1	4	5	11	13	5	4	0	0	2	6	1	6	14	78
11 - 80	0	0	1	1	0	3	1	1	2	1	0	0	0	0	3	5	18
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	35	17	11	45	29	107	47	22	21	28	18	17	18	24	97	166	702

Total Number of Valid Hours: 702

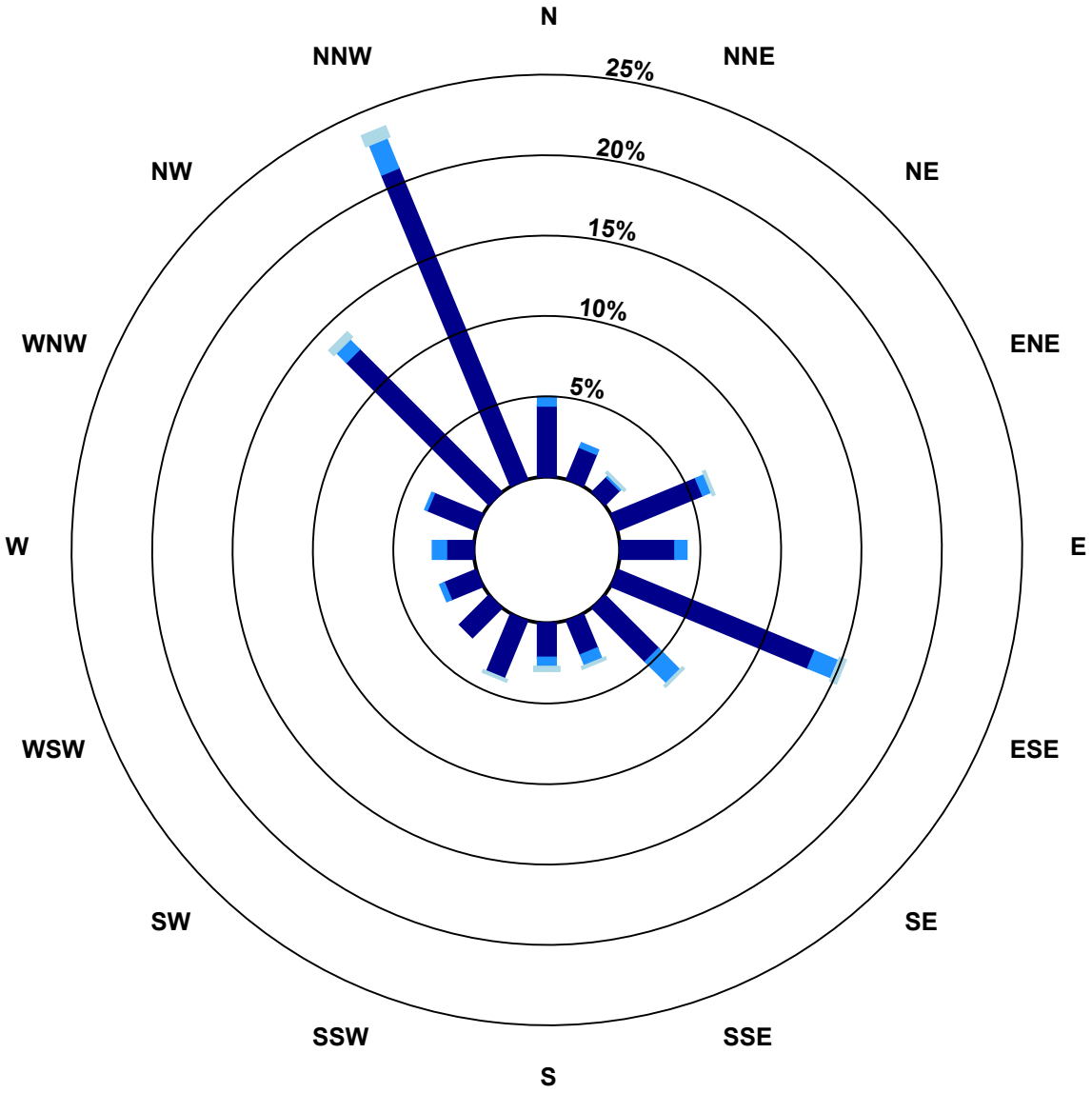
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Oxides (NO_X) - ppb

Athabasca Valley



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

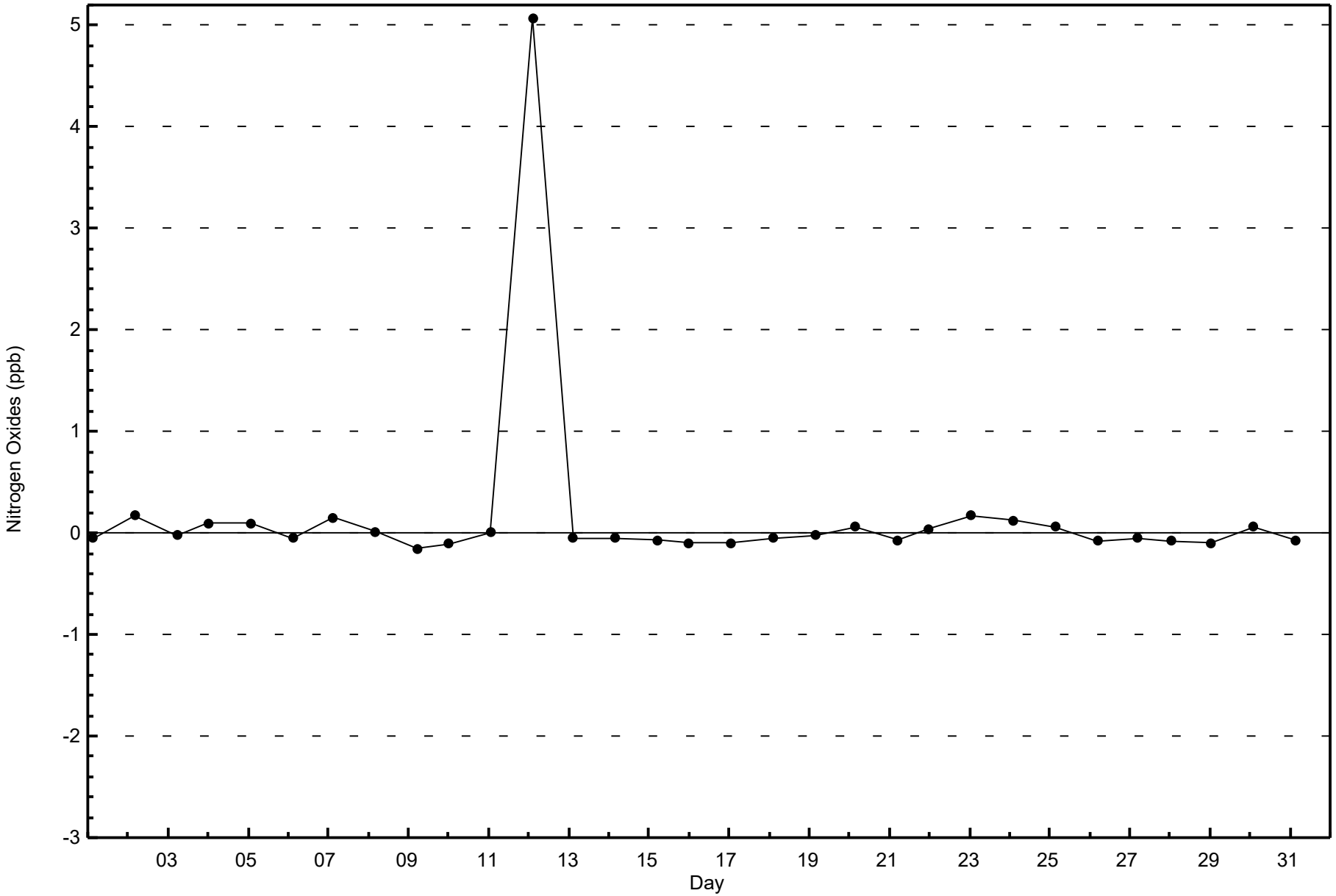
Total Number of Valid Hours: 702

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Athabasca Valley - March 2025

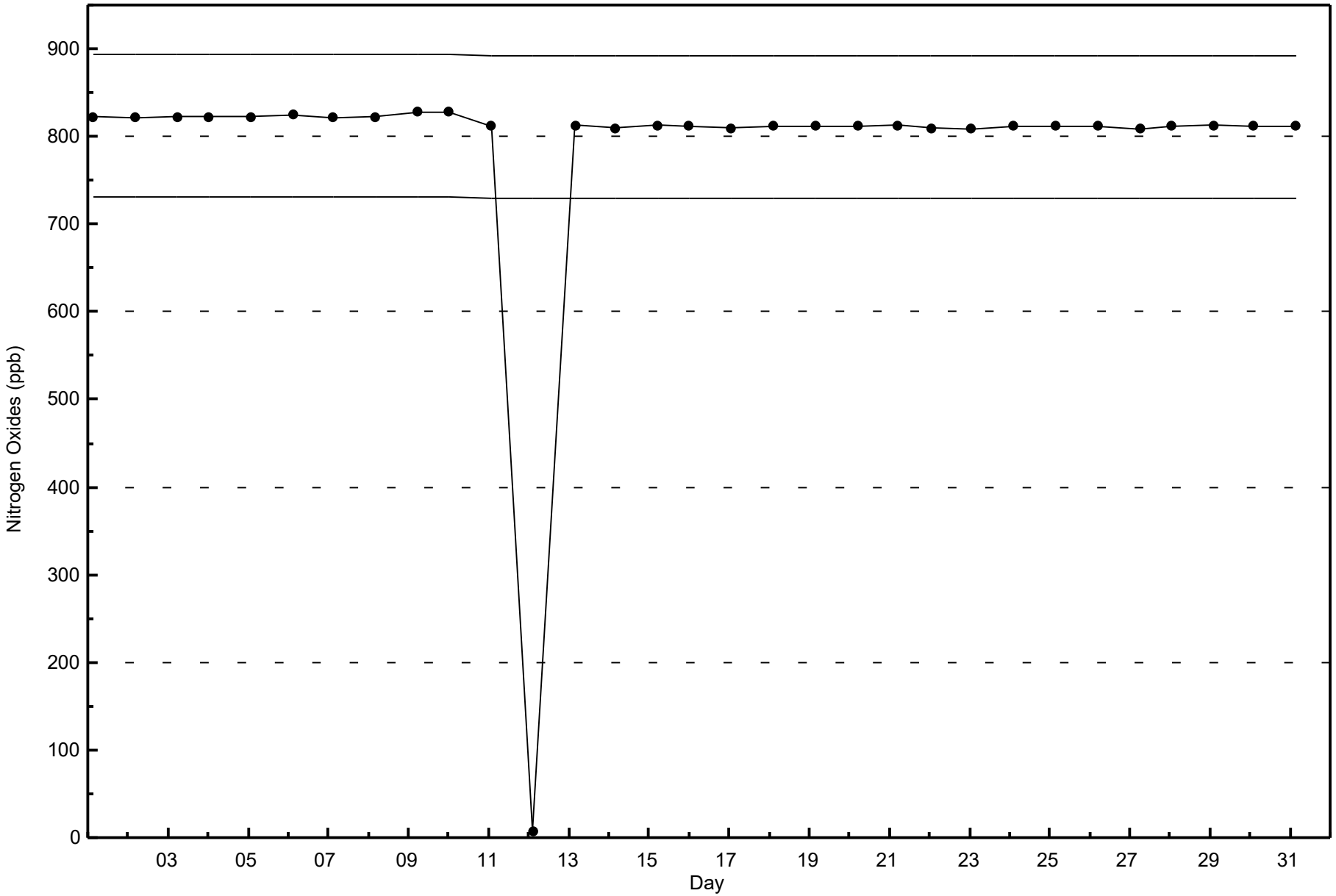


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Athabasca Valley - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Athabasca Valley - March 2025

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

Maximum Value: 25.6 $\mu g/m^3$ on Mar 13 09:00

Maximum Daily Average: 9.3 $\mu g/m^3$ on Mar 19

Minimum Value: 1.2 $\mu g/m^3$ on Mar 10 23:00

Minimum Daily Average: 2.4 $\mu g/m^3$ on Mar 25

Maximum Diurnal Average: 5.9 $\mu g/m^3$ at hour 9

Minimum Diurnal Average: 4.0 $\mu g/m^3$ at hour 16

Monthly Average: 4.70 $\mu g/m^3$

Percentiles: P_1 = 1.4 P_{10} = 2.4 Q_1 = 2.9 Median = 3.9 Q_3 = 5.8 P_{90} = 8.0 P_{99} = 13.8

Hours in Service:	744
Hours of Data:	680
Hours of Missing Data:	64
Hours of Calibration:	2
Percent Operational Time:	91.7

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	3.0	3.2	3.1	2.9	2.8	2.9	3.0	3.1	3.3	3.3	3.9	4.1	4.7	4.8	6.2	6.4	5.5	5.9	7.6	7.1	6.5	6.5	7.1	5.2	4.7	7.6
2-Mar	4.0	3.2	3.0	3.2	3.4	3.8	3.4	3.3	3.5	3.7	5.5	7.0	7.6	8.0	6.8	7.5	4.3	2.5	3.7	2.8	2.2	1.4	1.4	2.3	4.1	8.0
3-Mar	2.6	3.1	3.3	3.5	4.0	3.9	3.6	3.8	3.9	5.5	6.6	5.8	3.7	3.9	4.1	3.3	2.8	2.9	3.4	3.6	3.6	3.1	3.1	3.0	3.8	6.6
4-Mar	2.5	1.7	2.2	2.5	2.7	2.7	2.9	2.6	3.0	3.1	2.7	3.0	2.5	1.8	2.3	2.8	3.4	4.3	3.5	2.9	1.3	1.2	3.0	2.8	2.6	4.3
5-Mar	2.9	2.5	2.5	2.7	2.2	1.6	1.5	1.9	2.1	1.7	2.5	3.0	3.5	3.8	3.7	3.5	3.2	3.7	3.9	4.1	4.1	4.8	3.7	3.2	3.0	4.8
6-Mar	3.0	2.9	2.6	2.6	3.0	3.3	3.9	4.8	4.7	3.3	3.2	3.2	3.6	2.8	2.4	2.8	4.2	4.6	4.6	4.5	4.9	4.2	3.5	3.3	3.6	4.9
7-Mar	3.4	5.1	7.1	6.0	4.7	3.8	4.4	3.5	3.7	4.3	4.3	6.0	7.2	6.5	6.4	7.8	13.6	5.3	4.4	3.4	2.7	2.7	3.2	3.5	5.1	13.6
8-Mar	3.9	4.1	3.7	3.4	3.9	3.5	4.3	4.4	7.7	10.4	12.0	9.7	6.2	6.2	3.7	2.1	3.1	2.8	3.9	4.7	5.8	3.9	4.9	4.0	5.1	12.0
9-Mar	4.2	4.6	4.4	4.8	4.7	4.6	4.8	5.4	3.6	4.7	3.5	2.7	2.9	2.9	2.7	2.8	3.4	4.1	3.4	3.3	4.0	5.0	5.5	8.1	4.2	8.1
10-Mar	7.0	5.3	5.1	4.4	4.4	4.9	6.1	6.2	5.8	4.3	3.1	2.7	2.6	2.5	2.3	2.1	2.7	3.5	3.2	2.9	1.8	1.3	1.2	1.9	3.6	7.0
11-Mar	2.0	1.7	1.4	1.4	2.1	6.3	7.0	7.1	7.3	7.0	6.8	6.7	4.7	4.1	3.3	2.7	2.4	2.2	2.2	2.5	2.4	2.2	1.9	1.5	3.7	7.3
12-Mar	1.4	1.5	1.4	1.4	1.4	1.6	2.0	2.8	2.9	3.0	2.2	3.2	2.8	3.4	3.7	3.9	3.3	3.0	9.6	5.8	5.9	5.8	7.2	6.5	3.6	9.6
13-Mar	6.2	5.9	4.4	4.6	4.8	5.1	6.9	10.9	25.6	14.1	9.5	10.1	3.2	1.4	1.7	2.4	2.2	2.0	1.8	1.9	2.0	2.5	3.5	3.1	5.7	25.6
14-Mar	3.4	3.4	3.3	2.9	2.8	3.0	3.1	2.9	3.1	3.5	3.5	3.7	3.3	3.3	3.0	2.8	3.3	3.3	3.5	3.6	3.4	3.2	3.0	2.7	3.2	3.7
15-Mar	3.0	3.1	2.7	2.8	2.9	3.1	3.4	3.8	3.5	4.4	3.9	4.3	3.6	3.8	4.8	5.6	5.9	6.1	7.1	6.7	5.5	5.4	5.3	4.4	4.4	7.1
16-Mar	5.2	4.0	2.7	2.7	2.7	2.9	3.2	3.2	3.6	4.8	6.5	5.9	4.5	3.1	3.1	3.0	2.7	2.8	3.0	3.2	2.7	2.4	2.5	2.5	3.5	6.5
17-Mar	2.5	2.4	2.5	2.6	2.8	3.0	3.1	3.0	3.1	3.4	4.3	4.7	5.3	7.0	7.5	5.1	4.3	4.4	4.7	6.2	10.1	12.0	11.0	13.5	5.4	13.5
18-Mar	12.4	11.3	10.2	8.0	6.1	3.8	3.6	4.4	4.9	6.1	5.9	4.1	3.7	3.5	3.7	3.6	3.7	4.0	5.4	4.9	5.9	5.8	6.1	4.5	5.7	12.4
19-Mar	4.2	4.4	6.3	7.3	9.2	9.6	11.0	12.9	13.6	15.2	15.4	14.7	11.9	10.6	8.1	7.3	7.3	6.9	13.7	11.3	6.5	5.3	5.7	5.5	9.3	15.4
20-Mar	4.2	4.0	4.5	4.6	4.4	5.2	5.9	6.2	7.5	8.0	6.0	5.9	3.8	2.3	3.0	5.7	4.6	5.2	9.2	16.6	13.5	10.2	8.9	3.7	6.4	16.6
21-Mar	2.4	1.9	1.9	3.1	4.0	4.7	5.8	6.7	8.1	7.2	6.5	4.2	3.9	3.5	2.8	2.9	2.6	2.6	2.8	3.2	5.7	4.1	2.9	2.7	4.0	8.1
22-Mar	2.6	2.6	2.6	2.9	3.2	3.9	4.1	5.2	6.0	6.1	5.2	5.9	5.5	5.3	5.1	5.4	5.6	6.4	6.9	7.4	6.5	3.9	3.3	9.4	5.0	9.4
23-Mar	9.7	14.4	12.2	3.9	3.6	4.4	5.3	5.2	5.4	4.5	4.5	4.4	4.0	3.2	2.8	2.6	3.2	5.3	6.8	8.7	7.3	4.6	3.2	2.8	5.5	14.4
24-Mar	3.5	3.7	3.8	3.6	3.8	3.9	4.1	4.4	4.7	4.7	5.0	5.2	5.3	C	C	2.8	3.1	3.2	2.6	2.3	2.0	2.2	2.4	2.0	3.6	5.3
25-Mar	2.4	2.8	2.2	1.6	2.2	3.6	3.3	1.6	3.1	2.0	1.7	2.4	2.5	2.2	2.0	1.3	1.4	1.3	2.9	3.4	3.4	2.8	2.9	2.8	2.4	3.6
26-Mar	2.7	2.6	3.0	2.9	3.0	3.5	3.8	3.7	4.2	5.0	5.2	5.5	5.4	5.8	5.8	4.9	4.0	5.5	6.3	4.7	4.3	5.7	7.1	6.9	4.6	7.1
27-Mar	8.0	10.1	7.7	7.3	7.7	4.9	3.2	3.3	2.9	3.0	2.7	3.0	2.9	3.5	2.8	4.2	4.6	4.7	5.1	7.3	7.1	8.5	9.8	9.0	5.6	10.1
28-Mar	8.0	9.0	11.3	11.5	12.4	9.3	8.5	12.7	12.7	8.4	6.5	10.1	10.4	10.9	8.0	5.4	5.1	6.1	9.1	9.9	7.1	8.4	8.6	8.1	9.1	12.7
29-Mar	8.3	8.3	10.1	6.6	6.6	6.1	6.5	7.0	6.5	11.5	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	11.5
30-Mar	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
31-Mar	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
	4.4	4.6	4.5	4.1	4.2	4.2	4.5	5.0	5.9	5.7	5.3	5.4	4.7	4.4	4.1	4.0	4.1	4.1	5.2	5.3	4.9	4.6	4.7	4.6	Diurnal Average	
	12.4	14.4	12.2	11.5	12.4	9.6	11.0	12.9	25.6	15.2	15.4	14.7	11.9	10.9	8.1	7.8	13.6	6.9	13.7	16.6	13.5	12.0	11.0	13.5	Diurnal Maximum	

C - Calibration UO - Unstable Operation

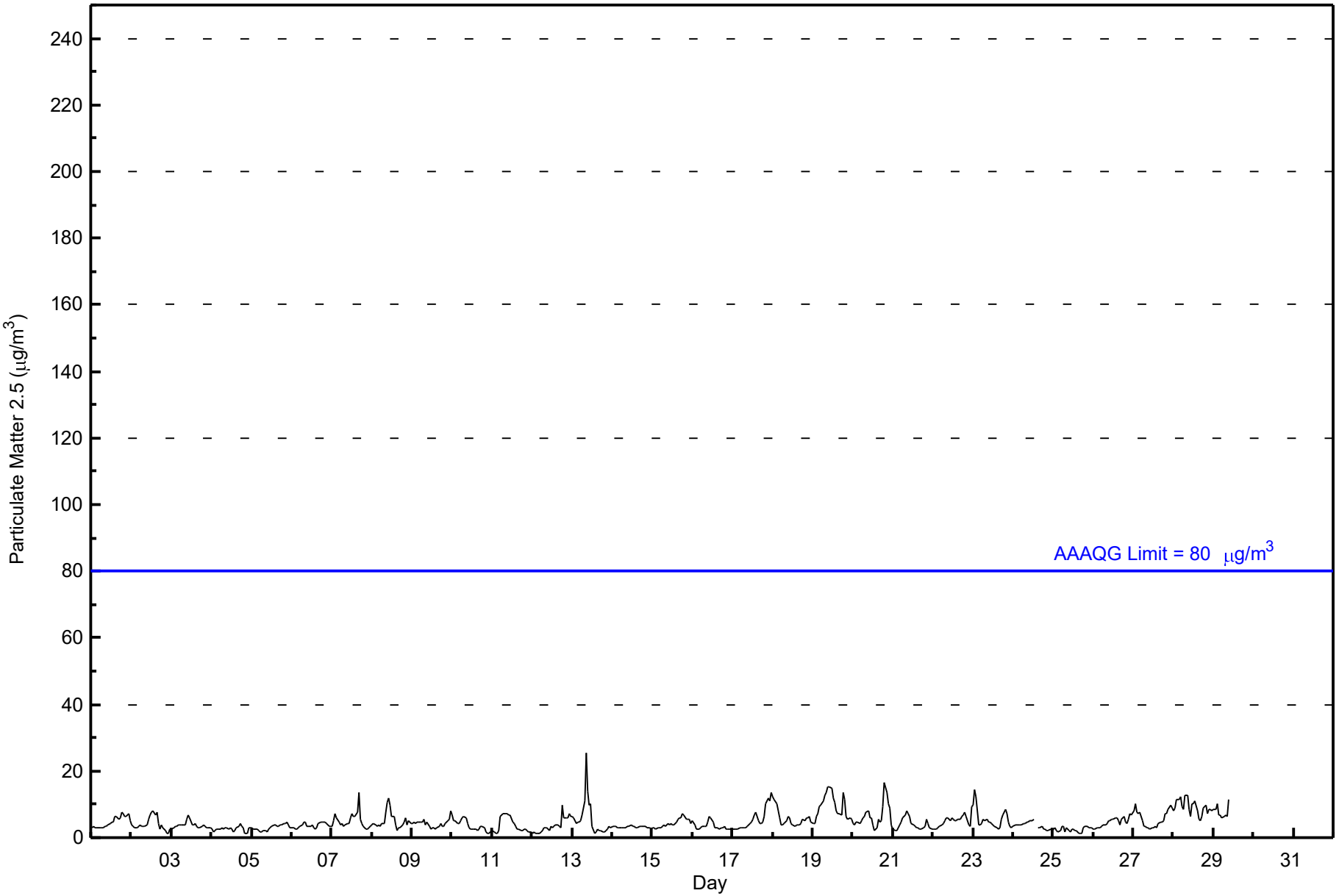
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Athabasca Valley - March 2025



Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	496	72.94	72.94
6 - 15	182	26.76	99.71
16 - 25	1	0.15	99.85
26 - 80	1	0.15	100.00
> 81.0	0	0.00	100.00

Total Number of Valid Hours: 680

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

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

Athabasca Valley - March 2025

Concentration Ranges ($\mu g/m^3$)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	26	16	5	29	19	78	39	11	17	25	16	13	9	12	66	115	496
6 - 15	9	2	6	12	4	11	9	9	7	5	4	4	7	9	27	57	182
16 - 25	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
26 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
> 81.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	36	18	11	41	23	89	48	20	24	30	20	17	16	21	94	172	680

Total Number of Valid Hours: 680

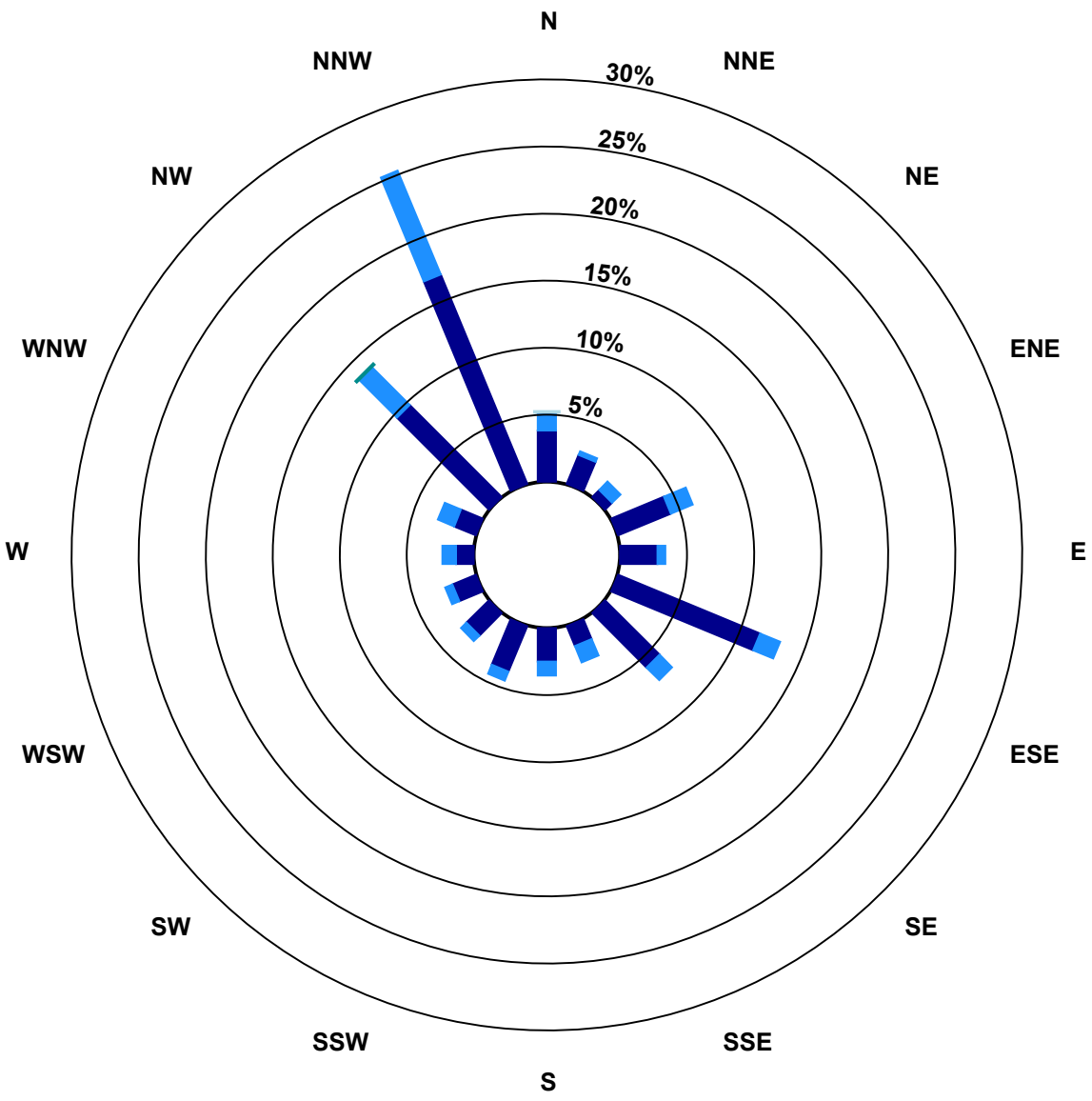
Total Number of Hours: 744

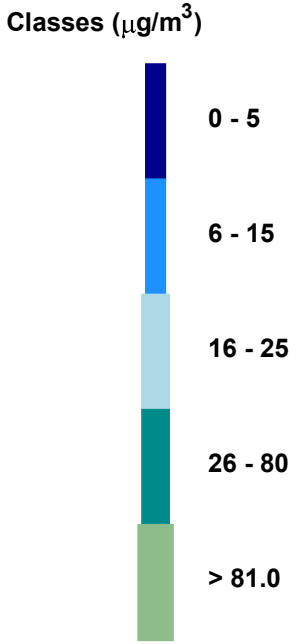
Wood Buffalo Environmental Association

Wind Rose Mar 2025

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

Athabasca Valley





Total Number of Valid Hours: 680

Wood Buffalo Environmental Association

Summary of Hour Averages

Carbon Monoxide (CO) - ppm

Athabasca Valley - March 2025

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

Maximum Value: 0.5 ppm on Mar 1 20:00

Maximum Daily Average: 0.2 ppm on Mar 1

Minimum Value: 0.1 ppm on Mar 16 05:00

Minimum Daily Average: 0.1 ppm on Mar 9

Maximum Diurnal Average: 0.2 ppm at hour 20

Minimum Diurnal Average: 0.1 ppm at hour 4

Monthly Average: 0.16 ppm

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 in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

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

Z - zerospan C - Calibration

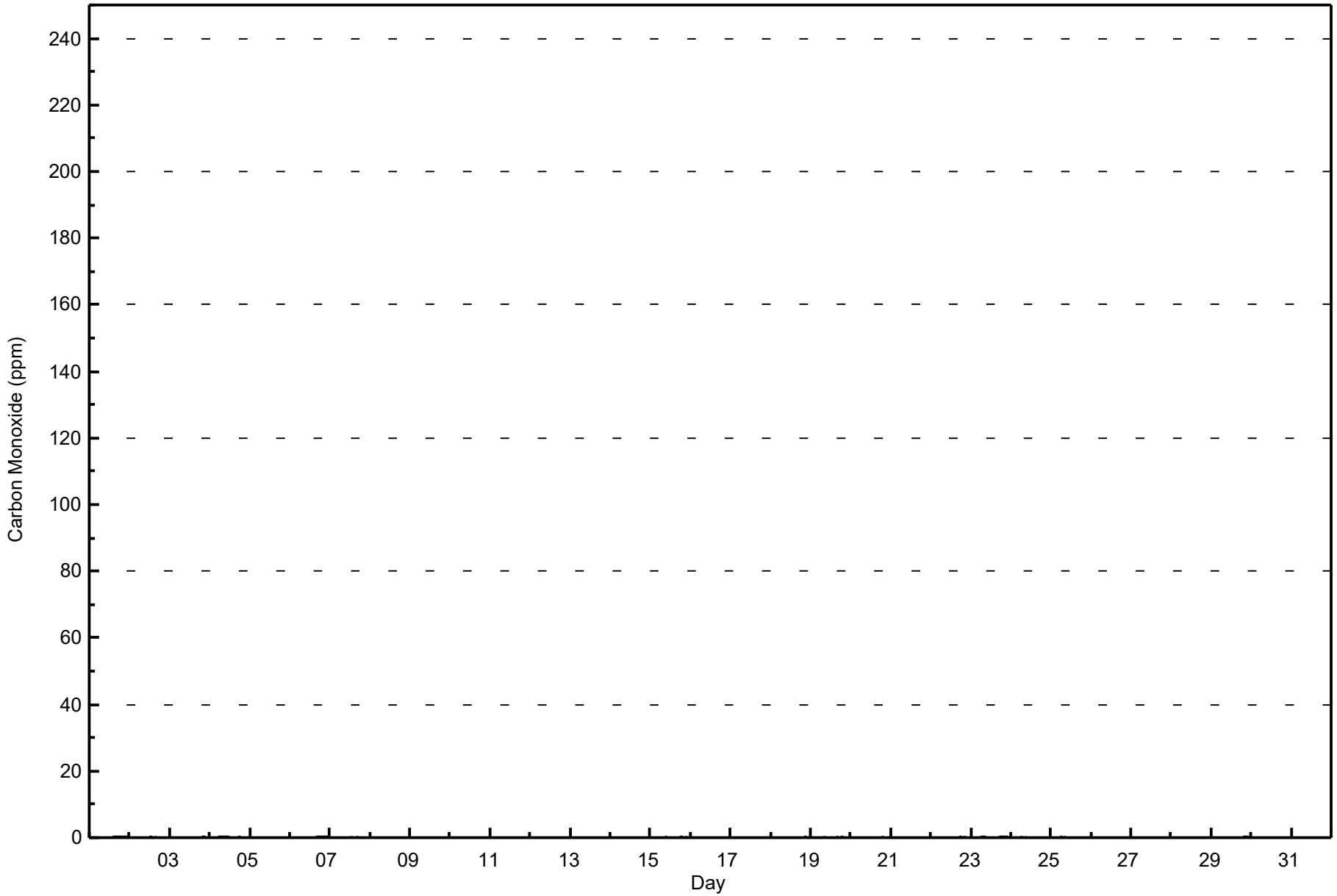
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm

Wood Buffalo Environmental Association

Hourly Averages

Carbon Monoxide (CO) - ppm

Athabasca Valley - March 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.3	705	99.58	99.58
0.4 - 0.5	3	0.42	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: 708

Total Number of Hours: 744

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.3	38	16	13	45	30	108	49	18	21	28	20	16	18	25	95	165	705
0.4 - 0.5	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	3
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	38	16	13	45	30	108	49	18	23	29	20	16	18	25	95	165	708

Total Number of Valid Hours: 708

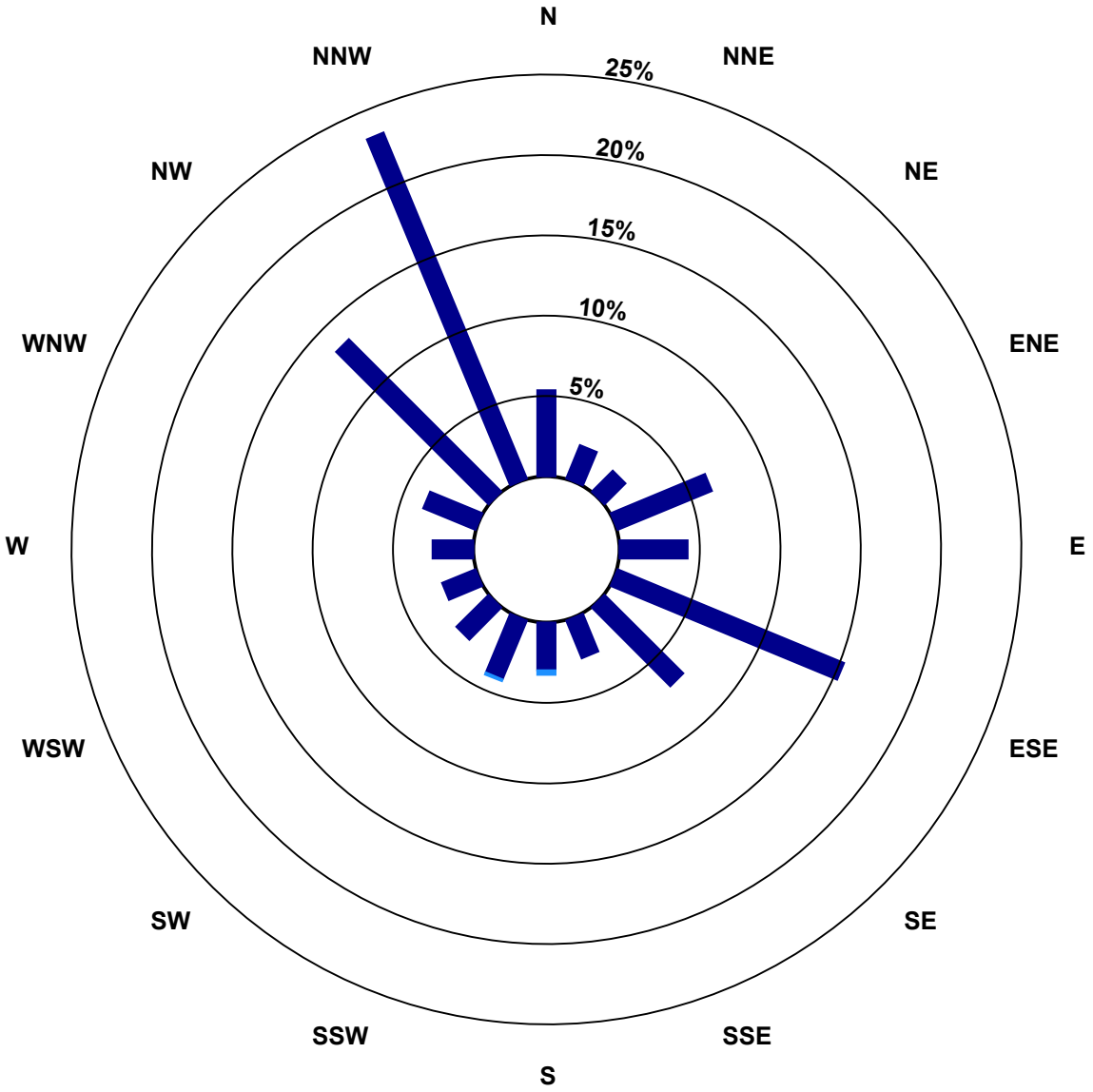
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Carbon Monoxide (CO) - ppm

Athabasca Valley



Classes (ppm)

0 - 0.3

0.4 - 0.5

0.6 - 0.7

0.8 - 1.4

1.5 - 10

> 10

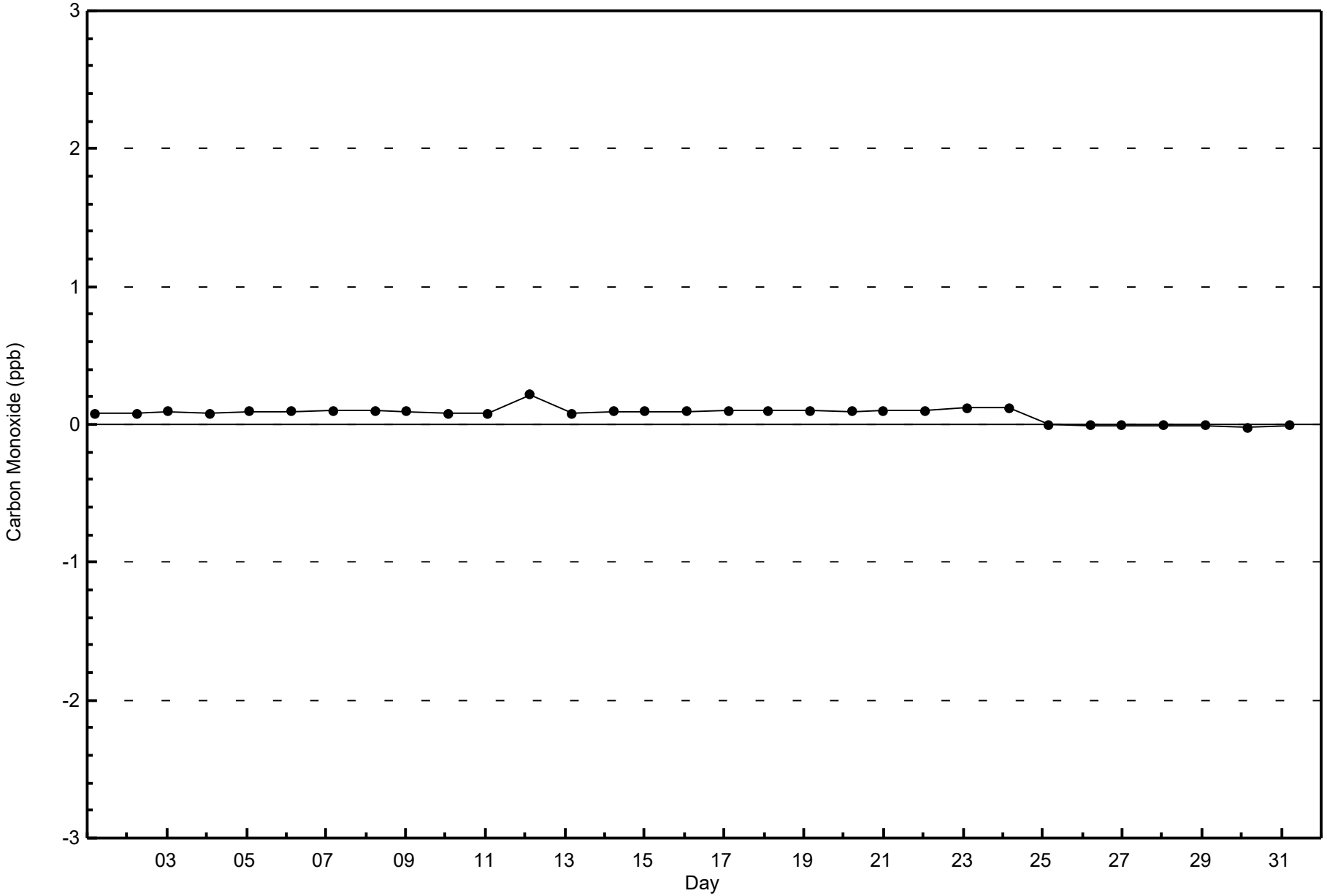
Total Number of Valid Hours: 708

Wood Buffalo Environmental Association

Zero Responses

Carbon Monoxide (CO) - ppb

Athabasca Valley - March 2025

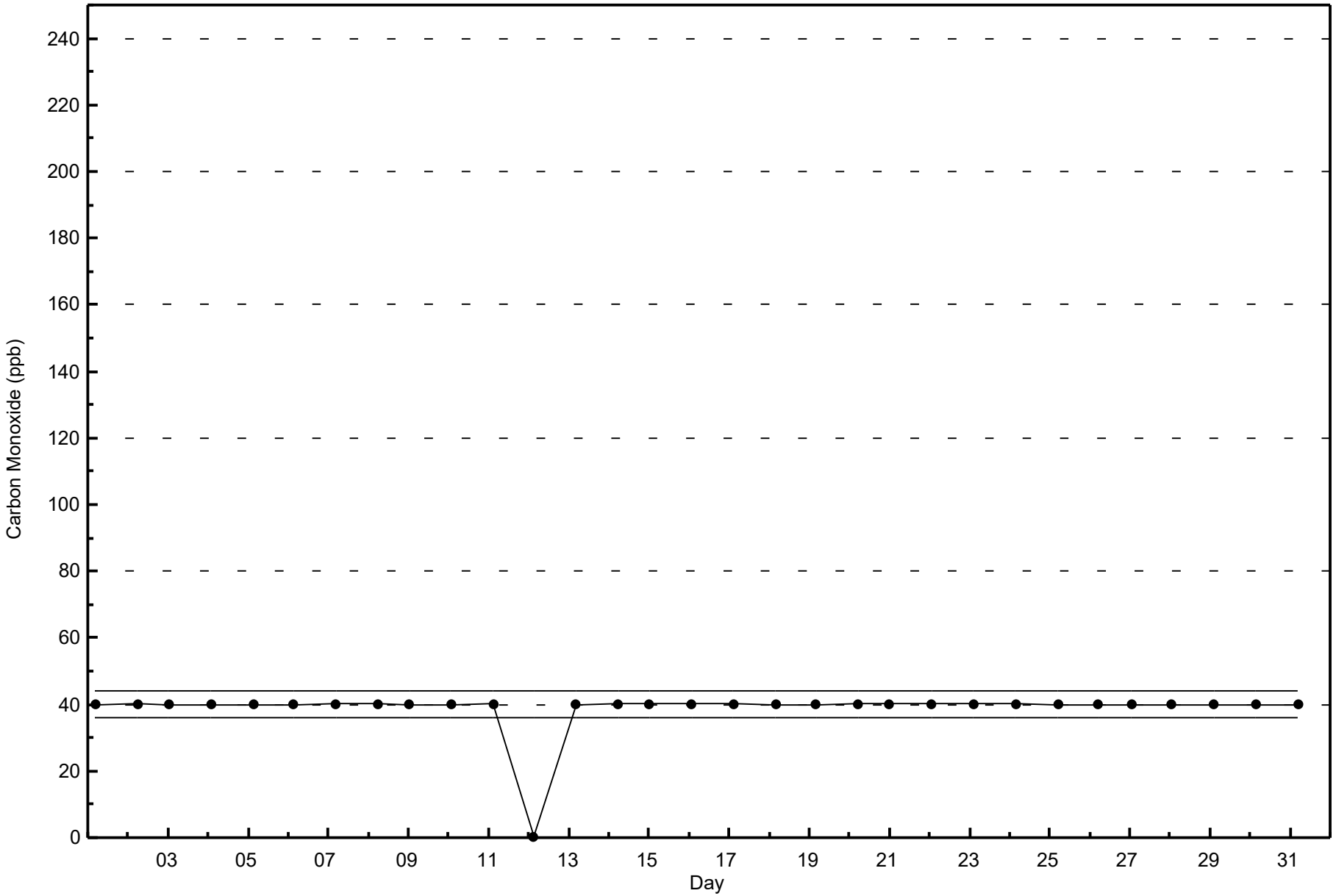


Wood Buffalo Environmental Association

Span Responses

Carbon Monoxide (CO) - ppb

Athabasca Valley - March 2025



Maximum Value: 10.8 C on Mar 25 15:00

Maximum Daily Average: 2.6 C on Mar 25

Minimum Value: -24.1 C on Mar 13 06:00

Minimum Daily Average: -19.6 C on Mar 9

Maximum Diurnal Average: -1.4 C at hour 17

Minimum Diurnal Average: -12.4 C at hour 7

Monthly Average: -7.02 C

Percentiles: P_1 = -23.1 P_{10} = -17.5 Q_1 = -12.9 Median = -6.4 Q_3 = -1.3 P_{90} = 3.0 P_{99} = 8.1

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

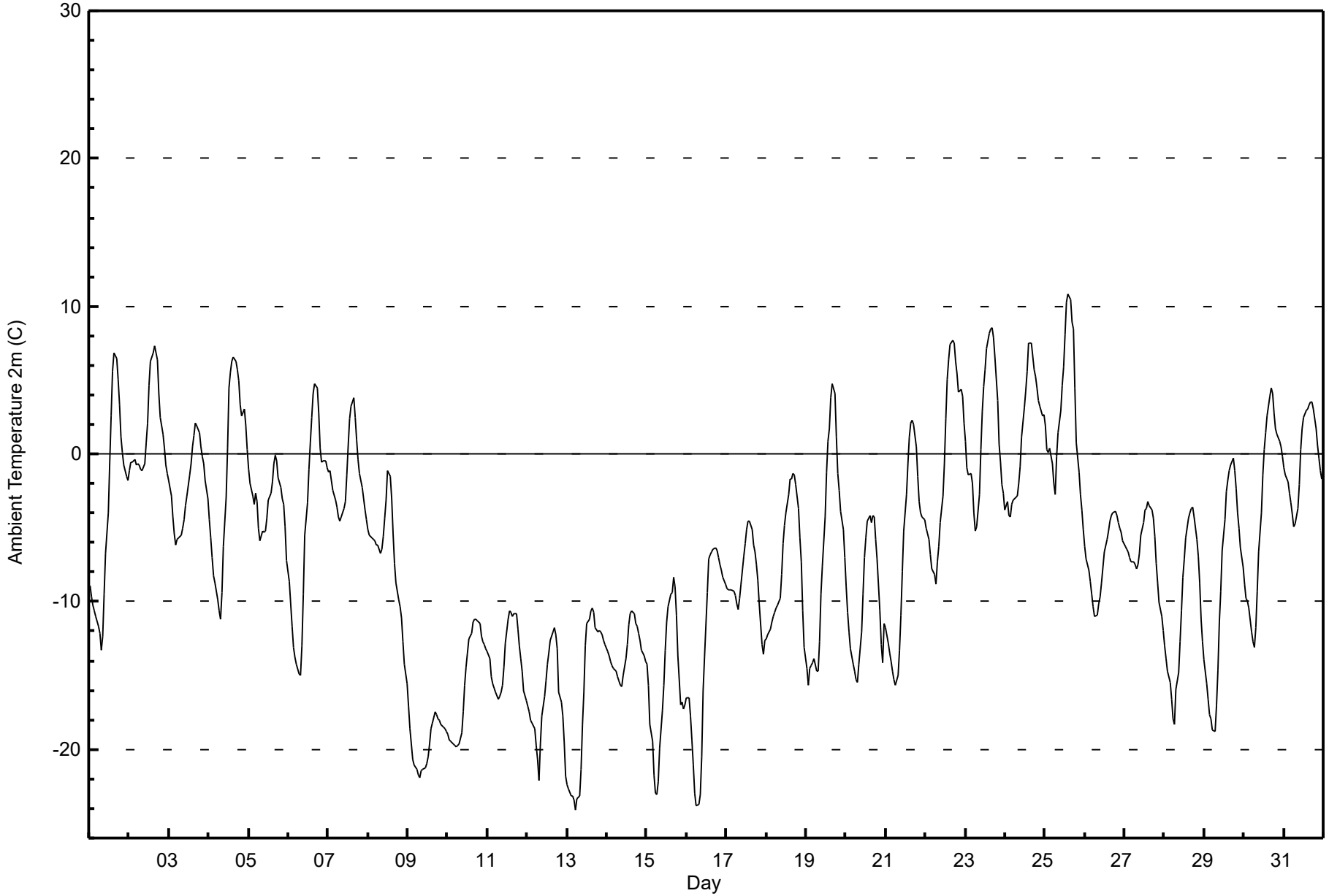
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-8.9	-9.7	-10.2	-10.6	-11.0	-11.6	-12.1	-13.3	-12.4	-9.5	-6.7	-4.0	-0.6	2.6	5.6	6.9	6.5	5.1	3.3	1.2	0.1	-0.7	-1.5	-1.8	-3.9	6.9
2-Mar	-1.1	-0.6	-0.5	-0.4	-0.7	-0.7	-0.8	-1.0	-1.1	-0.7	0.8	2.1	4.6	6.2	6.9	7.3	6.8	6.4	4.1	2.5	1.3	0.4	-0.7	-1.3	1.7	7.3
3-Mar	-1.8	-2.9	-4.3	-5.4	-6.2	-5.8	-5.7	-5.5	-5.0	-4.5	-3.5	-2.9	-1.4	-0.6	0.5	1.3	2.1	1.9	1.4	0.5	-0.1	-0.7	-1.8	-3.1	-2.2	2.1
4-Mar	-4.5	-5.7	-7.0	-8.3	-8.7	-9.8	-10.6	-11.2	-9.4	-6.2	-2.9	0.4	4.4	5.5	6.2	6.5	6.3	5.7	4.9	3.3	2.6	3.0	1.9	0.3	-1.4	6.5
5-Mar	-1.1	-2.0	-2.8	-3.4	-2.6	-3.3	-5.1	-5.8	-5.2	-5.3	-5.2	-4.3	-3.1	-2.6	-1.9	-0.6	-0.1	-0.4	-1.6	-2.3	-3.0	-3.4	-4.9	-7.2	-3.2	-0.1
6-Mar	-8.6	-10.2	-11.7	-13.1	-13.8	-14.2	-14.9	-15.0	-13.0	-9.5	-5.5	-3.3	-1.0	0.8	2.4	4.1	4.7	4.4	2.8	0.4	-0.5	-0.5	-0.5	-1.0	-4.9	4.7
7-Mar	-1.2	-1.1	-1.8	-2.4	-3.2	-3.6	-4.3	-4.5	-4.3	-3.7	-3.2	-1.4	0.5	2.4	3.2	3.8	2.4	0.9	-0.4	-1.3	-2.3	-3.1	-3.8	-4.5	-1.5	3.8
8-Mar	-5.1	-5.5	-5.7	-5.8	-5.9	-6.1	-6.2	-6.7	-6.4	-5.6	-4.4	-3.1	-1.1	-1.5	-3.0	-5.4	-7.4	-8.7	-9.9	-10.3	-11.1	-12.7	-14.2	-15.5	-7.0	-1.1
9-Mar	-17.1	-18.6	-19.6	-20.7	-21.1	-21.3	-21.8	-21.9	-21.5	-21.3	-21.3	-21.0	-20.5	-19.6	-18.6	-18.2	-17.5	-17.6	-17.9	-18.0	-18.3	-18.5	-18.6	-18.8	-19.6	-17.1
10-Mar	-19.0	-19.3	-19.4	-19.6	-19.7	-19.8	-19.8	-19.6	-18.9	-17.5	-15.7	-14.5	-13.5	-12.5	-12.1	-11.4	-11.2	-11.2	-11.3	-11.5	-12.3	-12.7	-12.9	-13.2	-15.4	-11.2
11-Mar	-13.4	-13.9	-15.1	-15.6	-15.8	-16.1	-16.6	-16.4	-16.1	-15.6	-14.4	-12.8	-11.2	-10.6	-10.8	-11.0	-10.8	-10.8	-11.9	-13.0	-13.8	-14.7	-16.1	-16.7	-13.9	-10.6
12-Mar	-17.0	-17.4	-18.0	-18.3	-18.6	-19.7	-20.7	-22.1	-19.6	-17.7	-16.4	-15.4	-14.2	-13.5	-12.7	-12.1	-11.8	-12.3	-13.2	-16.1	-16.8	-17.8	-19.6	-21.8	-16.8	-11.8
13-Mar	-22.4	-22.7	-23.2	-23.1	-23.4	-24.1	-23.4	-23.2	-21.3	-18.3	-16.1	-13.0	-11.5	-11.2	-10.7	-10.4	-10.7	-11.8	-12.0	-12.0	-12.0	-12.3	-12.6	-12.9	-16.4	-10.4
14-Mar	-13.4	-13.7	-14.0	-14.3	-14.5	-14.7	-15.1	-15.4	-15.7	-15.7	-15.0	-13.9	-12.9	-11.5	-10.8	-10.6	-10.8	-11.4	-11.7	-12.1	-12.6	-13.3	-13.6	-14.0	-13.4	-10.6
15-Mar	-14.2	-15.6	-18.4	-19.4	-21.8	-23.0	-23.1	-22.2	-20.0	-17.4	-15.7	-13.3	-11.3	-10.3	-9.5	-9.4	-8.3	-9.0	-10.9	-13.7	-17.0	-16.8	-17.3	-17.0	-15.6	-8.3
16-Mar	-16.5	-16.5	-17.7	-19.4	-21.1	-22.9	-23.8	-23.7	-23.1	-20.5	-16.0	-13.7	-9.4	-7.1	-6.9	-6.7	-6.4	-6.4	-6.5	-7.0	-7.5	-7.9	-8.4	-8.8	-13.5	-6.4
17-Mar	-9.1	-9.2	-9.2	-9.2	-9.3	-9.6	-10.1	-10.5	-9.8	-8.8	-6.9	-6.1	-5.1	-4.6	-4.6	-5.1	-6.1	-6.7	-7.5	-8.6	-10.1	-12.9	-13.5	-12.6	-8.5	-4.6
18-Mar	-12.5	-12.2	-11.9	-11.4	-11.0	-10.8	-10.5	-10.3	-9.8	-8.1	-6.1	-4.9	-3.9	-2.7	-1.7	-1.7	-1.3	-1.4	-2.1	-3.7	-5.7	-7.3	-10.6	-13.1	-7.3	-1.3
19-Mar	-14.5	-15.6	-14.6	-14.4	-14.1	-13.8	-14.7	-14.7	-12.7	-9.5	-7.6	-4.3	-1.2	0.9	1.8	3.8	4.8	4.1	1.2	-1.4	-2.5	-3.8	-5.1	-7.0	-6.5	4.8
20-Mar	-9.0	-10.8	-12.1	-13.2	-14.2	-14.7	-15.3	-15.4	-14.2	-12.1	-9.5	-7.0	-5.7	-4.5	-4.2	-4.6	-4.2	-4.2	-5.8	-7.1	-10.6	-12.9	-14.2	-11.5	-9.9	-4.2
21-Mar	-11.8	-12.8	-13.5	-14.1	-14.7	-15.3	-15.7	-15.0	-13.3	-10.9	-8.0	-5.2	-2.7	-0.7	1.1	2.1	2.3	2.0	0.5	-1.5	-3.2	-4.0	-4.3	-4.5	-6.8	2.3
22-Mar	-5.0	-5.4	-5.8	-6.8	-7.8	-8.2	-8.8	-7.3	-6.2	-4.7	-2.9	-0.7	2.4	5.1	6.4	7.4	7.7	7.5	6.2	5.5	4.2	4.4	3.9	2.1	-0.3	7.7
23-Mar	0.9	-0.9	-1.4	-1.3	-1.9	-4.0	-5.2	-4.9	-2.7	0.3	2.8	4.6	5.7	7.2	8.2	8.5	8.6	7.9	6.5	3.6	0.6	-0.6	-2.1	-2.7	1.6	8.6
24-Mar	-3.7	-3.2	-4.2	-4.2	-3.4	-3.1	-3.0	-2.9	-1.9	-0.9	1.1	3.1	4.3	5.6	7.5	7.5	7.5	5.7	5.2	4.5	3.6	3.2	2.6	2.6	1.4	7.5
25-Mar	1.9	0.3	0.1	0.4	-0.7	-2.0	-2.7	-0.2	1.4	3.0	4.6	5.8	8.0	10.3	10.8	10.4	8.9	8.4	4.5	0.8	-1.2	-2.7	-3.8	-5.1	2.6	10.8
26-Mar	-6.3	-7.1	-7.8	-8.7	-9.5	-10.3	-11.0	-10.9	-10.1	-9.7	-8.7	-7.7	-6.7	-5.8	-5.2	-4.5	-4.1	-4.0	-3.8	-4.2	-4.6	-5.0	-5.3	-5.8	-7.0	-3.8
27-Mar	-6.3	-6.4	-6.6	-7.0	-7.3	-7.3	-7.5	-7.8	-7.5	-6.7	-5.5	-4.6	-3.8	-3.7	-3.3	-3.5	-3.8	-4.3	-5.6	-7.4	-8.7	-10.0	-11.0	-12.0	-6.6	-3.3
28-Mar	-13.0	-13.9	-14.7	-15.5	-16.6	-18.0	-18.3	-15.9	-14.8	-12.7	-10.6	-8.4	-7.1	-5.7	-4.4	-3.9	-3.7	-3.6	-4.3	-5.8	-6.9	-8.7	-11.2	-12.7	-10.4	-3.6
29-Mar	-14.0	-15.6	-16.6	-17.6	-17.9	-18.6	-18.8	-17.0	-14.6	-11.4	-9.3	-6.5	-4.4	-2.5	-1.8	-1.2	-0.7	-0.3	-1.1	-2.3	-4.0	-5.1	-6.4	-7.7	-9.0	-0.3
30-Mar	-8.8	-9.8	-10.0	-10.5	-12.0	-12.7	-13.1	-11.7	-9.3	-6.6	-4.0	-1.4	0.3	1.4	2.6	3.9	4.4	4.1	2.7	1.7	1.3	0.8	0.5	-0.2	-3.6	4.4
31-Mar	-0.9	-1.4	-1.9	-2.6	-3.3	-4.1	-4.9	-4.8	-3.7	-2.1	0.3	1.7	2.5	3.0	3.0	3.3	3.6	3.5	3.0	1.7	0.6	-0.2	-1.1	-1.7	-0.3	3.6
	-9.0	-9.7	-10.3	-10.8	-11.4	-11.9	-12.4	-12.2	-11.0	-9.4	-7.5	-5.7	-3.9	-2.6	-1.8	-1.4	-1.4	-1.8	-2.9	-4.3	-5.5	-6.3	-7.3	-8.0	Diurnal Average	
	1.9	0.3	0.1	0.4	-0.7	-0.7	-0.8	-0.2	1.4	3.0	4.6	5.8	8.0	10.3	10.8	10.4	8.9	8.4	6.5	5.5	4.2	4.4	3.9	2.6	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Athabasca Valley - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	32	4.30	4.30
-20 - 0	572	76.88	81.18
0 - 10	137	18.41	99.60
10 - 20	3	0.40	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Maximum Value: 29.4 inHg on Mar 26 10:00

Maximum Daily Average: 29.4 inHg on Mar 26

Minimum Value: 28.7 inHg on Mar 22 03:00

Minimum Daily Average: 28.7 inHg on Mar 22

Maximum Diurnal Average: 29.0 inHg at hour 9

Minimum Diurnal Average: 29.0 inHg at hour 18

Monthly Average: 28.99 inHg

Percentiles: P_1 = 28.7 P_{10} = 28.8 Q_1 = 28.8 Median = 29.0 Q_3 = 29.1 P_{90} = 29.3 P_{99} = 29.4

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

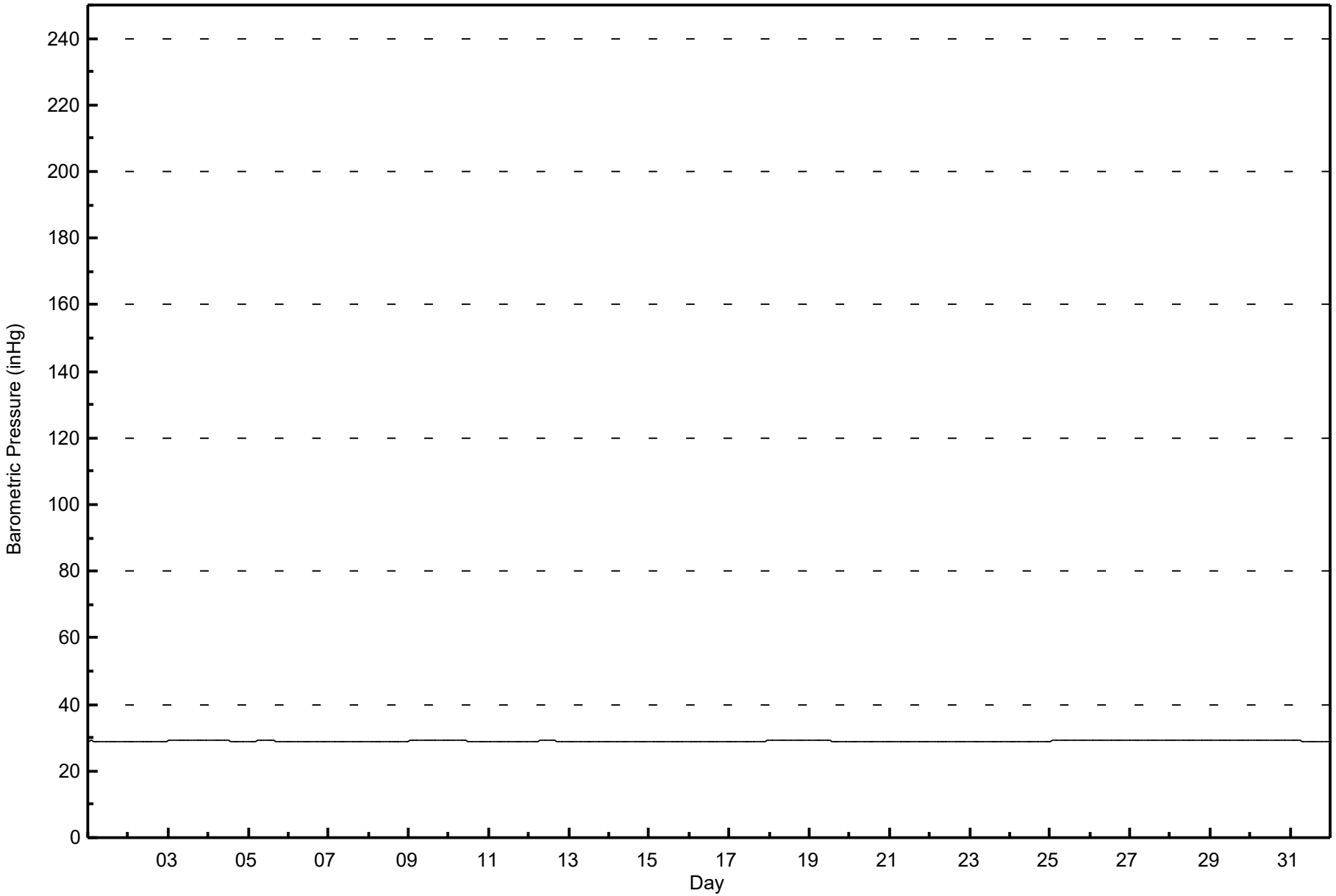
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9	29.0
2-Mar	28.8	28.8	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	29.0	29.0	29.0	28.8	29.0
3-Mar	29.0	29.1	29.1	29.1	29.1	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2
4-Mar	29.2	29.2	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.9	29.0	29.2
5-Mar	29.0	29.0	29.0	29.0	29.0	29.0	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	29.0	29.0	28.9	28.9	28.9	29.0	29.1
6-Mar	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.8	28.9
7-Mar	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.7	28.8
8-Mar	28.8	28.8	28.8	28.8	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.8	28.8	28.9	28.9	28.9	29.0	29.0	29.0	29.0	29.0	28.8	29.0
9-Mar	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	29.0	29.0	29.0	29.0	29.0	29.0	29.1	29.1
10-Mar	29.0	29.0	29.1	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0	29.1
11-Mar	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9	28.9	28.9	28.8	28.9
12-Mar	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	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.1
13-Mar	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	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9	29.0
14-Mar	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0	29.0	29.0	28.9	29.0
15-Mar	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	29.0
16-Mar	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	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9	29.0
17-Mar	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9	28.9	28.9	28.9	28.9	28.9	29.0	29.0	29.0	29.0	29.0	28.9	29.0
18-Mar	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	29.0	29.1	29.1	29.1	29.1	29.1	29.1	29.1
19-Mar	29.1	29.1	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.1	29.1	29.1	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0	29.2
20-Mar	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0	28.9	29.0
21-Mar	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.8	28.9
22-Mar	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.8	28.8	28.8	28.8	28.8	28.7	28.8
23-Mar	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8
24-Mar	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	29.0	29.0	29.0	29.0	28.9	29.0
25-Mar	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	29.2	29.2	29.2	29.3	29.3	29.3	29.1	29.3
26-Mar	29.3	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.4	29.4
27-Mar	29.3	29.3	29.3	29.3	29.3	29.3	29.3	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	29.4	29.4	29.4	29.3	29.4
28-Mar	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.4	29.4
29-Mar	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
30-Mar	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	29.1	29.2	29.3
31-Mar	29.1	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9	29.1
	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	Diurnal Average	
	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.3	29.3	29.3	29.3	29.4	29.4	29.4	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Barometric Pressure (BP) - inHg

Athabasca Valley - March 2025



Maximum Value: 90.3 % on Mar 25 07:00

Maximum Daily Average: 75.3 % on Mar 14

Minimum Value: 20.8 % on Mar 29 18:00

Minimum Daily Average: 42.3 % on Mar 21

Maximum Diurnal Average: 73.3 % at hour 7

Minimum Diurnal Average: 46.5 % at hour 16

Monthly Average: 61.91 %

Percentiles: P_1 = 30.1 P_{10} = 41.9 Q_1 = 51.4 Median = 63.5 Q_3 = 73.7 P_{90} = 79.0 P_{99} = 87.2

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

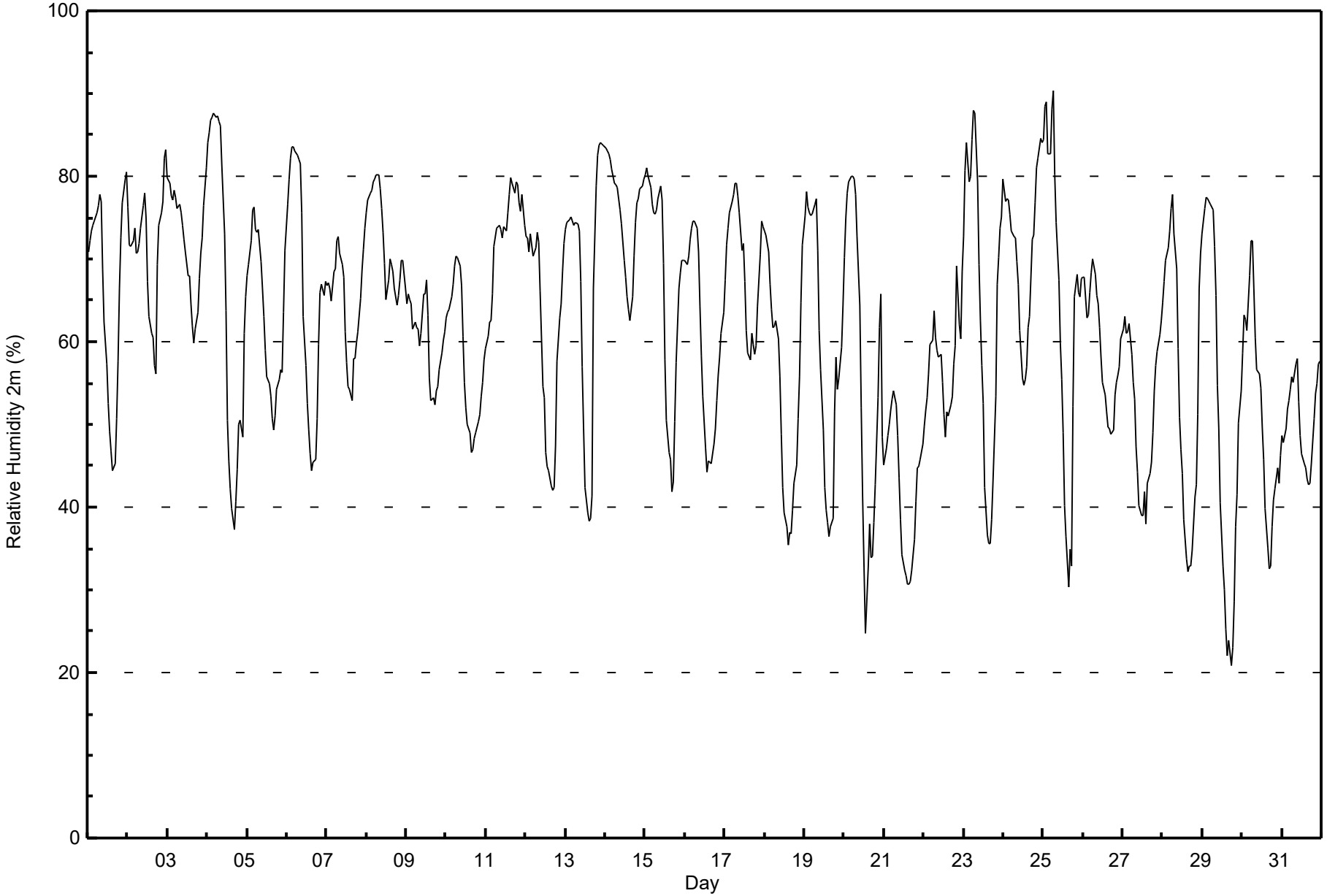
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	70.8	72.2	73.5	74.1	74.6	75.6	76.5	77.9	77.0	68.9	62.4	57.4	52.6	49.1	46.8	44.4	45.2	50.7	57.7	66.4	72.6	76.8	79.5	80.5	65.9	80.5
2-Mar	76.2	71.7	71.6	72.2	73.8	70.6	70.9	71.9	73.7	76.4	78.0	74.9	67.3	63.1	61.0	60.5	57.2	56.1	69.3	74.0	75.5	76.9	82.3	83.2	71.2	83.2
3-Mar	79.9	79.2	77.6	77.1	78.2	77.5	76.2	76.6	75.6	74.1	72.4	70.9	68.0	67.9	64.6	61.9	59.9	61.5	63.5	67.7	70.7	72.6	76.5	81.1	72.1	81.1
4-Mar	84.1	85.3	86.7	87.2	87.6	87.2	87.3	86.7	86.0	81.3	73.1	63.8	50.6	45.6	42.2	39.8	37.3	40.6	44.5	49.9	50.5	48.4	61.1	65.5	65.5	87.6
5-Mar	68.0	69.4	72.1	76.0	76.3	73.5	73.2	73.6	69.7	66.4	63.1	58.9	55.8	54.8	53.4	50.7	49.3	51.0	54.2	55.3	56.7	56.4	63.5	71.0	63.0	76.3
6-Mar	76.7	79.7	82.3	83.5	83.5	83.1	82.6	82.1	81.6	75.6	63.1	57.1	52.6	49.3	46.4	44.5	45.5	45.8	50.7	59.6	66.0	66.9	65.7	67.2	66.3	83.5
7-Mar	66.7	67.1	66.4	64.9	68.4	68.8	72.1	72.8	70.6	69.3	67.7	61.1	57.5	54.6	54.2	52.9	58.0	57.9	59.8	61.2	65.3	68.6	71.1	73.8	64.6	73.8
8-Mar	75.5	77.2	78.0	78.4	79.2	79.7	80.2	80.1	78.5	76.1	73.2	69.5	65.1	67.4	70.0	69.4	68.4	66.4	64.5	65.6	67.5	69.9	69.9	66.4	72.3	80.2
9-Mar	64.5	65.7	65.1	64.6	61.5	62.4	61.7	61.5	59.5	61.0	65.8	65.8	67.4	63.2	55.7	52.9	53.2	52.3	54.0	54.7	56.7	58.7	60.2	61.1	60.4	67.4
10-Mar	62.9	63.5	63.8	65.4	67.0	69.1	70.3	70.1	69.1	66.8	60.8	55.0	52.0	50.0	49.0	46.6	47.0	48.4	49.0	50.3	51.1	53.4	55.1	57.8	58.1	70.3
11-Mar	59.2	60.6	62.4	62.5	65.8	71.4	73.7	73.9	74.1	73.5	72.5	73.9	73.4	75.6	77.8	79.9	79.1	78.0	79.3	79.0	76.7	75.7	77.8	74.1	72.9	79.9
12-Mar	72.7	72.5	70.8	73.0	70.4	70.9	71.4	73.3	72.0	66.1	54.5	53.2	46.6	45.0	44.5	42.6	42.1	42.4	47.5	57.6	62.8	64.6	68.5	71.9	60.7	73.3
13-Mar	73.5	74.5	74.7	75.1	74.6	74.1	74.4	74.2	73.4	67.3	57.0	49.5	42.4	39.3	38.3	38.7	41.3	66.5	78.9	82.6	83.7	84.0	83.9	83.7	66.9	84.0
14-Mar	83.4	83.1	82.7	82.0	80.8	79.2	78.9	78.7	77.3	75.9	74.3	69.9	67.8	65.4	63.9	62.6	65.4	70.4	74.3	76.7	77.4	78.4	78.7	79.6	75.3	83.4
15-Mar	80.2	81.0	80.0	78.7	76.6	75.6	75.4	75.9	77.3	78.9	77.1	69.5	57.7	50.5	46.6	45.7	41.9	43.0	50.3	57.4	66.4	68.3	69.8	69.9	66.4	81.0
16-Mar	69.8	69.3	70.4	72.4	73.7	74.6	74.5	73.8	70.8	64.2	58.3	53.4	47.1	44.2	45.7	45.3	45.2	47.6	49.6	52.8	55.9	58.1	61.0	63.5	60.0	74.6
17-Mar	67.4	71.8	73.8	75.6	77.0	77.8	79.2	79.1	77.6	75.6	71.0	71.9	67.3	61.4	58.6	57.7	61.0	59.7	58.5	59.5	64.2	70.5	74.6	73.9	69.4	79.2
18-Mar	73.4	72.9	70.9	67.0	63.9	61.6	61.9	62.5	60.4	55.7	48.8	42.4	39.4	37.6	35.4	37.0	36.8	39.7	42.8	45.1	50.6	55.7	64.8	71.7	54.1	73.4
19-Mar	75.3	78.2	76.3	75.6	75.3	75.4	76.7	77.3	71.1	61.3	56.6	49.3	42.4	39.7	38.2	36.5	37.6	38.7	51.5	58.1	54.2	55.6	59.3	64.5	59.4	78.2
20-Mar	70.2	74.9	78.0	79.3	80.0	80.0	79.6	77.8	72.7	64.5	52.0	41.2	32.7	24.8	32.7	37.9	33.9	34.1	38.1	42.8	53.3	61.7	65.7	48.5	56.5	80.0
21-Mar	45.0	47.2	48.7	50.1	51.6	53.1	54.0	52.4	48.7	43.5	38.5	34.3	32.3	31.8	30.7	30.7	31.1	32.4	36.1	40.6	44.7	44.8	45.7	47.6	42.3	54.0
22-Mar	49.8	51.7	53.2	56.0	59.7	60.2	63.7	60.6	58.9	58.2	58.4	55.2	51.2	48.4	51.5	51.0	52.4	53.4	57.2	59.5	69.2	62.1	60.4	68.5	57.1	69.2
23-Mar	72.7	80.7	84.1	79.3	80.1	84.5	87.9	87.6	79.4	69.4	62.6	57.1	52.6	42.4	36.7	35.6	35.6	38.5	43.3	53.3	66.9	70.2	73.7	75.0	64.5	87.9
24-Mar	79.6	76.9	77.3	77.0	75.4	73.4	72.6	72.5	69.6	66.9	61.4	55.7	54.8	55.4	57.0	61.7	63.1	72.4	72.8	76.8	81.0	82.2	84.6	84.1	71.0	84.6
25-Mar	84.3	88.4	89.0	82.7	82.8	88.1	90.3	80.2	74.4	67.5	59.9	55.5	49.0	40.1	36.4	30.3	35.0	32.9	52.2	65.3	68.2	66.0	65.4	67.6	64.6	90.3
26-Mar	67.8	67.8	62.9	63.2	65.9	68.3	70.0	68.2	65.6	64.6	61.7	58.2	55.0	53.5	51.5	49.7	49.5	48.8	49.4	53.5	55.1	55.9	57.0	60.3	59.3	70.0
27-Mar	61.5	63.1	61.0	61.2	62.1	58.5	55.1	53.0	47.3	44.2	40.2	39.0	38.9	41.8	38.0	42.9	44.1	45.3	48.9	54.1	57.1	58.8	60.8	62.6	51.6	63.1
28-Mar	64.8	67.3	69.9	71.4	73.4	76.2	77.7	73.0	68.9	59.2	50.9	47.0	44.1	38.5	33.7	32.3	32.9	32.8	34.8	41.2	42.7	51.1	66.5	70.7	55.0	77.7
29-Mar	73.1	76.1	77.4	77.3	77.0	76.7	75.9	71.5	65.6	54.8	49.5	40.4	32.8	29.9	25.3	22.0	23.8	20.8	23.1	28.6	37.7	41.5	50.1	54.1	50.2	77.4
30-Mar	58.6	63.2	62.7	61.3	68.0	72.2	72.2	66.4	60.5	56.7	56.1	54.4	49.6	45.7	39.8	35.1	32.6	32.9	37.6	40.8	42.2	44.8	42.9	46.3	51.8	72.2
31-Mar	48.6	47.7	49.5	51.9	52.8	54.2	55.8	55.0	57.3	57.9	52.7	48.7	46.4	45.2	44.7	43.5	42.7	42.8	45.2	50.7	53.7	55.0	57.3	57.6	50.7	57.9
	69.6	71.0	71.4	71.5	72.2	72.7	73.3	72.3	69.8	65.9	61.1	56.6	52.0	49.1	47.4	46.5	46.7	48.5	52.9	57.5	61.2	63.0	66.2	67.8	Diurnal Average	
	84.3	88.4	89.0	87.2	87.6	88.1	90.3	87.6	86.0	81.3	78.0	74.9	73.4	75.6	77.8	79.9	79.1	78.0	79.3	82.6	83.7	84.0	84.6	84.1	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Athabasca Valley - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Athabasca Valley - March 2025

Maximum Speed: 28 km/h on Mar 8 16:00

Maximum Daily Speed Average: 15.6 km/h on Mar 14

Minimum Speed Value: 0 km/h on Mar 18 08:00

Minimum Daily Speed Average: 1.1 km/h on Mar 15

Maximum Diurnal Speed Average: 4.3 km/h at hour 21

Minimum Diurnal Speed Average: 1.8 km/h at hour 4

Monthly Average Velocity: 2.6 km/h 353.5 deg

Percentiles: P_1 = 1 P_{10} = 2 Q_1 = 4 Median = 7 Q_3 = 11 P_{90} = 15 P_{99} = 21

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	SE10	ESE7	SE8	SE9	SE8	ESE10	SE8	ESE5	ESE6	SE9	ESE7	ESE10	ESE8	ESE7	ESE6	ESE7	ESE8	E4	SSW2	S3	S3	S2	SSW3	SSE2	SE5.9	ESE10
2-Mar	SSE4	SE7	SE7	SSE5	ESE6	SE10	SE8	ESE7	ESE5	NNW8	NW7	NNW2	NE2	ENE5	ENE6	SE4	SW7	W8	NW19	NW20	NNW16	NNW14	NNW14	NW14	NNW2.5	NW20
3-Mar	NNW15	NNW15	NNW14	NW12	WNW8	WNW9	WNW6	WSW6	NW3	W2	NE3	NW5	NW2	NNE2	ENE5	ENE6	ESE6	ESE9	ESE8	ESE5	ESE4	SE4	S3	SSW4	NNW2.4	NNW15
4-Mar	SSW4	SSW5	S3	SE3	SE4	SE3	SE3	SE2	ESE2	E5	ESE6	E6	SSW12	SW14	SW10	SSW8	SW7	S5	S5	SSW7	SW13	W15	NW16	NW9	SSW3.5	NW16
5-Mar	NW7	NW8	NW8	NW7	NW11	NNW14	NNW13	NW10	NNW10	NNW12	NNW10	NNW6	NNE2	ENE6	ENE6	E9	ESE11	ESE12	ESE10	ESE7	E3	S5	ENE2	WSW3	N3.5	NNW14
6-Mar	SW3	SW4	SW5	WSW5	SW3	SSW1	SE1	SSW1	NE1	SE3	SE10	SE11	SE9	SE10	ESE10	ESE9	ESE9	SE10	ESE7	ESE4	SSE2	SE3	SE4	SE3	SE4.2	SE11
7-Mar	N2	NNW10	NNW9	NNW8	NW7	NNW8	NW8	NW6	N4	N5	NW8	NW1	E5	N6	NW9	NW9	NW16	NW20	NNW14	NNW15	NNW15	NNW13	NNW13	NNW10	NNW8.8	NW20
8-Mar	NNW10	NNW8	NW7	NNW6	NNW10	NNW8	NNW8	NNW9	NNW10	NNW9	NNW8	NNW9	NW16	NW27	NNW22	NW28	NNW18	NNW14	N10	NNW10	NW13	NNW15	NNW16	NNW18	NNW12.7	NW28
9-Mar	NNW17	NNW16	NNW18	NNW13	N10	N11	NNW13	NNW11	N8	N9	NNW10	NNW11	NNW11	NW12	NW11	NW8	NW10	NNW9	WNW9	NW10	NW10	NW10	NW8	NNW7	NNW10.4	NNW18
10-Mar	NNW8	NW7	NNW7	NNW6	NNW5	N5	N5	N3	ESE2	E6	ESE6	E7	E8	ENE7	NW6	NNE4	ENE8	ENE5	ENE5	NE5	ENE7	ENE7	ENE7	NE2	NE3.6	E8
11-Mar	ESE1	NE2	NNE5	N7	NNW9	NNW10	NNW10	NNW10	NNW10	NNW11	NNW10	NNW11	NNW14	NNW17	NNW18	NNW18	NNW16	NNW15	NW21	NW22	NW21	NNW20	NNW22	NNW21	NNW13.1	NW22
12-Mar	NNW18	NNW16	NNW14	NW10	NNW9	NW7	NNW5	W2	W3	NW6	NW8	NW6	NW6	NW8	NW7	NW8	NNW9	NNW5	WSW2	WNW4	NW2	NNW3	N3	NW2	NW6.4	NNW18
13-Mar	NW4	N1	NNE1	N2	NNE3	NNW3	NNE2	NNW3	NW3	NE2	N2	W3	ENE12	ENE14	ENE13	ENE11	ENE15	ENE10	NNE7	N7	NNW8	NNW8	NNW9	NNW12	NNE4.7	ENE15
14-Mar	NNW12	NNW13	NNW16	NW19	NNW17	NW19	NW20	NNW18	NNW20	NW21	NNW15	NNW15	NNW20	NNW19	NNW18	NW21	NW19	NW17	NW14	NNW10	NW12	NNW9	NW7	NW6	NNW15.6	NW21
15-Mar	NNW5	W3	SW4	SW4	S1	SSW2	NNW0	SW0	W1	NNE1	W2	NW5	NNW7	NNW6	WNW3	NW2	SSW1	ESE2	SSE4	ESE1	SSW2	SSE2	S4	SSW2	W1.1	NNW7
16-Mar	SE3	SSE5	S7	S10	SSW8	SSW8	SSW7	SSW5	SW4	WSW3	NNW1	WNW3	NE4	E11	ESE13	ESE12	ESE12	ESE11	ESE11	ESE9	ESE9	ESE12	ESE12	ESE13	SE5.6	ESE13
17-Mar	ESE12	ESE12	ESE10	ESE11	SE8	ESE7	ESE6	ESE5	E3	N1	N2	NW9	N8	NNW12	NNW12	N13	NNW12	NNW11	NNW8	NNW6	NNW8	WNW3	WSW3	SW4	NNE2.7	N13
18-Mar	SSW2	SSE2	S5	S3	S4	SSW11	SW7	WSW0	WNW2	NE2	ENE6	ESE4	SSW12	SW7	S4	ENE8	ENE7	E6	ESE8	ESE7	SSE3	NNW3	SSW1	S2	SSE2.0	SSW12
19-Mar	NW5	WSW5	SW4	S1	SSE1	WSW2	N2	ENE4	ENE6	E6	ENE4	SE3	SE7	W1	WNW4	ESE3	SE6	NNW2	NNW2	NNW9	NW16	NNW14	NNW12	NNW14	NNW2.4	NW16
20-Mar	NNW11	NNW15	NNW13	NNW9	NW14	NNW16	NNW14	NNW13	NNW9	NNW10	NW6	SW4	N1	ENE11	NNW8	NNW9	NNW8	N3	NNW8	N6	NNW3	N1	E1	ESE7	NNW7.0	NNW16
21-Mar	ESE8	SE8	ESE10	SE8	SE10	SE11	SSE8	SSE8	SE6	SSE10	SE9	ESE11	ESE11	ESE12	E12	E13	E12	E10	E8	ESE6	SSE4	SSE7	SE10	SE13	ESE8.7	SE13
22-Mar	ESE13	ESE14	SE11	ESE7	ESE7	ESE7	ESE6	ESE9	SE10	SE12	ESE10	ESE10	SE8	SE9	ESE11	SE10	ESE9	ESE6	SE1	W17	WSW6	WSW9	W11	NW12	SE5.4	W17
23-Mar	NW5	SW2	SSE3	S6	S4	S3	S2	SSE1	ENE2	ENE5	ENE5	ENE5	ENE9	ENE6	E5	E6	ESE7	SE8	ESE5	W1	NW1	N2	ENE4	N3	E2.2	ENE9
24-Mar	N4	ENE2	ESE3	E5	ESE6	ESE7	ESE8	ESE8	ESE10	ESE11	ESE9	ESE9	ESE7	ESE5	SSW9	WSW9	WNW6	WSW14	WSW19	WSW18	WSW12	SW5	S5	SSW6	S3.4	WSW19
25-Mar	S4	SSE3	SSE5	S6	SSE5	ESE5	E2	SSW11	ESE4	SSW9	SSW10	SSW8	SSW10	SSW9	WSW15	WNW26	WNW18	NW20	NNW19	NNW17	NNW13	NNW15	NNW13	NNW15	WNW4.9	WNW26
26-Mar	N13	N14	NNW12	NNW14	N11	N7	NNW6	NNW8	NNW10	NW12	NW11	NW8	WNW6	WNW7	NW8	NW7	NW7	NNW6	NNW4	NNW8	NW9	NNW10	NNW8	NNW9	NNW8.5	N14
27-Mar	NNW9	NNW9	NW11	NW12	NNW9	N8	NNE9	NNE10	NNE11	NNE13	NNE13	NNE13	NNE11	NNW16	NNE12	NW18	NW22	NNW21	NNW15	NNW13	NNW12	NNW11	NNW10	NNW10	NNW11.3	NW22
28-Mar	NNW11	NNW7	NNW7	NNW7	NNW4	NW3	NW3	N4	NW4	W3	WNW4	W4	NW9	WNW7	W5	WNW6	NW7	NNW8	NNW6	NNW8	NW9	NNW4	NW4	WNW2	NW5.2	NNW11
29-Mar	WNW3	NE3	ENE3	ENE2	NE1	NE2	ENE3	ENE6	ENE7	NNE3	NW6	NW5	WNW4	W4	W4	WNW4	NW4	ENE5	E5	SSE4	SSE4	SE5	SE5	NE3	NE1.2	ENE7
30-Mar	SE3	N1	ESE4	ESE5	E3	E2	E4	E6	ENE6	NE6	NW4	NW6	WNW5	WNW6	NW6	N2	ESE6	ENE9	ENE8	ENE2	N6	E6	ESE15	ESE16	ENE3.1	ESE16
31-Mar	ESE14	ESE10	ESE10	ESE9	ESE8	ESE9	ESE7	ESE6	E5	ESE6	ESE9	ESE12	E14	ESE14	ESE18	ESE17	ESE17	ESE18	ESE14	ESE9	ESE7	ESE8	ESE7	ESE11	ESE10.7	ESE18
	N3.0	N2.7	NNW2.0	NNW1.8	N1.8	N1.8	N2.1	N1.8	NNE2.5	NNE2.4	NNE2.5	NNE1.8	NNE1.9	N3.0	N2.5	N3.3	N3.1	N3.1	N3.1	NNW4.1	NW4.3	NNW3.7	NNW3.3	NNW3.3	Diurnal Average	
	NNW18	NNW16	NNW18	NW19	NNW17	NW19	NW20	NNW18	NNW20	NW21	NNW15	NNW15	NNW20	NW27	NNW22	NW28	NW22	NNW21	NW21	NW22	NW21	NNW20	NNW22	NNW21	Diurnal Maximum	

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

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

Minimum Value: 0 km/h on Mar 29 01:00

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

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

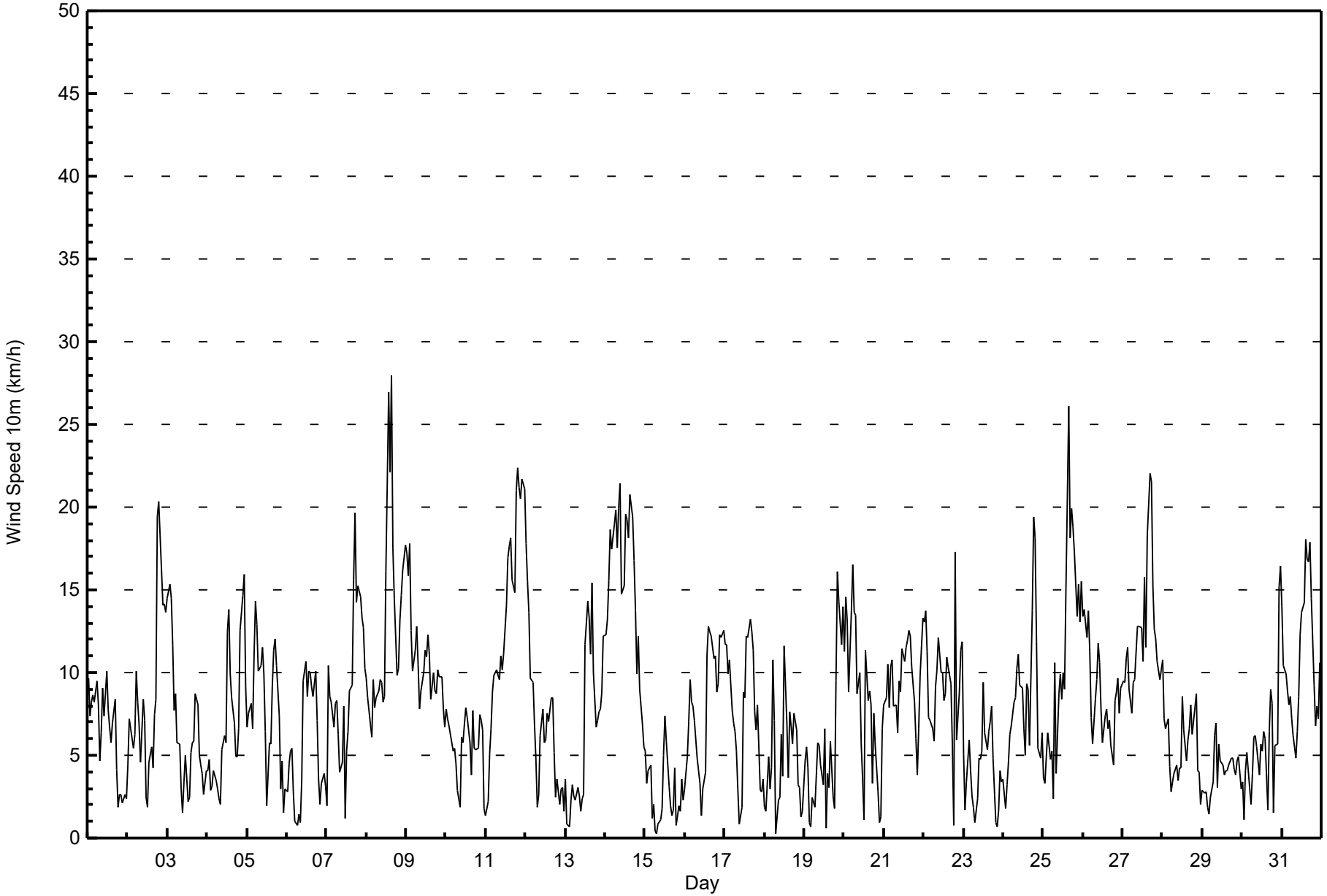
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	2	2	2	2	2	2	2	2	3	2	2	3	2	2	2	2	2	2	1	1	1	1	1	2	3
2-Mar	1	3	2	2	2	2	2	2	2	2	3	1	1	2	1	1	3	3	3	3	5	4	3	2	5
3-Mar	3	4	4	3	2	2	1	2	1	1	1	1	1	2	1	1	1	2	2	1	1	1	2	2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

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Athabasca Valley - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	251	33.74	33.74
6 - 11	336	45.16	78.90
12 - 19	137	18.41	97.31
20 - 28	20	2.69	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Athabasca Valley - March 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	22	9	12	19	14	20	18	18	21	14	13	8	14	13	19	17	251
6 - 11	14	5	1	23	13	75	31	4	3	15	5	4	2	10	50	81	336
12 - 19	3	4	0	4	4	22	2	0	0	2	2	5	2	1	19	67	137
20 - 28	0	0	0	0	0	0	0	0	0	0	0	0	0	1	12	7	20
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	39	18	13	46	31	117	51	22	24	31	20	17	18	25	100	172	744

Total Number of Valid Hours: 744

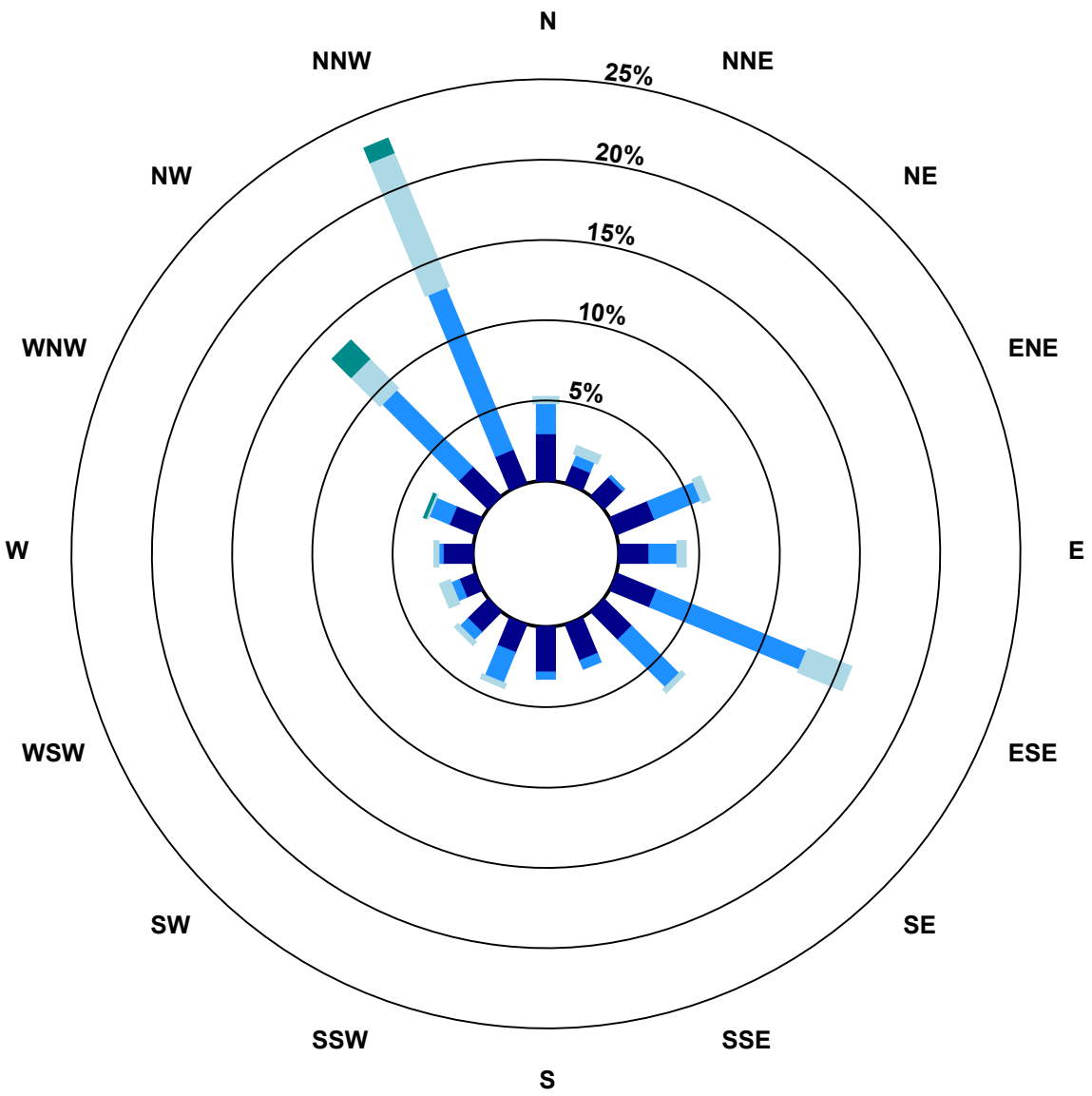
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 10m (WS10) - km/h

Athabasca Valley



Classes (km/h)

0 - 5

6 - 11

12 - 19

20 - 28

29 - 38

> 38

Total Number of Valid Hours: 744

Direction of Maximum Speed: 324 deg on Mar 8 16:00
Direction of Maximum Daily Speed Average: 326.6 deg on Mar 14

Direction of Minimum Speed: 243 deg on Mar 18 08:00

Direction of Minimum Daily Speed Average: 1.1 deg on Mar 15

Monthly Average Direction: 353.5 deg

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	126	112	124	127	131	120	126	102	111	133	122	121	119	109	120	123	118	82	196	180	189	189	198	156	125.2
2-Mar	147	127	129	152	113	125	125	118	120	327	320	330	54	76	78	133	233	267	323	323	333	338	327	323	344.5
3-Mar	328	338	330	321	301	291	285	256	305	271	34	322	304	18	58	59	104	111	112	103	110	131	182	192	341.4
4-Mar	195	193	180	144	136	144	142	125	110	90	106	94	206	218	214	206	214	182	178	209	222	277	320	324	209.6
5-Mar	317	321	316	310	322	346	335	325	337	336	333	337	25	60	63	99	114	119	105	106	91	173	59	241	2.1
6-Mar	235	224	226	246	214	194	125	203	43	132	126	127	132	126	115	111	122	124	120	117	159	135	131	131	136.7
7-Mar	9	329	328	333	322	336	325	325	350	351	325	314	83	350	320	321	325	325	329	327	335	335	331	337	331.6
8-Mar	331	331	324	334	328	338	335	338	337	340	343	343	324	325	335	324	346	348	349	328	322	332	335	339	333.7
9-Mar	341	334	330	341	4	353	341	337	10	358	342	327	328	320	315	322	324	327	299	304	317	323	313	335	332.0
10-Mar	329	314	328	333	344	349	355	7	121	99	111	99	86	59	314	32	69	70	69	50	74	71	70	36	41.0
11-Mar	122	43	18	350	339	339	337	335	341	335	337	335	328	329	331	329	331	334	325	323	325	329	328	327	332.1
12-Mar	330	336	335	322	327	324	329	267	261	322	322	314	307	322	306	322	327	340	253	286	313	330	354	316	322.9
13-Mar	325	4	12	356	29	344	32	337	320	55	351	272	61	63	60	60	70	77	27	354	346	348	339	327	27.7
14-Mar	331	330	327	326	328	324	326	333	328	324	333	333	329	327	329	321	320	326	323	331	323	327	321	317	326.6
15-Mar	327	265	220	217	183	196	332	219	263	24	277	314	337	328	301	316	208	110	153	121	213	147	182	193	268.0
16-Mar	132	155	184	191	203	202	203	200	226	254	336	302	52	99	114	114	102	102	107	112	114	110	108	109	129.8
17-Mar	112	119	122	118	124	116	116	107	97	2	2	324	351	346	341	349	336	332	342	339	332	290	252	236	19.9
18-Mar	199	151	179	176	177	211	223	243	290	43	60	106	210	233	171	67	66	87	111	105	155	348	205	189	155.4
19-Mar	309	242	235	191	167	237	353	67	64	83	57	142	127	280	293	109	135	328	346	335	324	333	334	342	342.6
20-Mar	335	331	330	336	326	327	333	335	343	333	322	233	358	68	348	334	327	358	334	350	337	360	80	114	338.5
21-Mar	114	126	118	133	132	132	149	153	145	151	131	104	108	105	97	92	80	88	97	118	158	152	126	126	118.8
22-Mar	121	122	125	111	116	110	103	122	124	126	117	120	125	131	121	127	121	108	144	266	252	244	263	318	132.0
23-Mar	320	233	162	189	186	183	181	156	75	61	63	61	63	73	83	95	118	146	121	276	319	355	60	351	96.9
24-Mar	3	62	107	79	107	114	121	120	121	116	116	116	105	118	212	242	287	243	251	245	238	222	184	203	180.1
25-Mar	186	158	162	177	148	106	97	201	112	197	199	201	208	213	243	288	296	306	329	334	338	336	339	341	284.3
26-Mar	350	352	347	345	350	357	342	337	327	324	320	321	297	303	310	318	326	332	341	333	305	327	342	336	332.9
27-Mar	334	335	324	326	331	2	18	20	16	27	28	13	21	338	24	326	321	328	342	342	327	334	341	339	347.1
28-Mar	334	334	339	341	344	320	319	8	319	279	283	262	312	293	261	291	317	330	328	327	326	340	315	292	319.1
29-Mar	283	37	66	73	35	56	65	67	65	32	325	306	293	266	281	288	311	71	91	147	155	136	129	39	42.2
30-Mar	128	357	109	114	98	98	91	80	72	53	321	305	287	301	307	4	116	78	74	57	354	92	109	106	78.1
31-Mar	110	105	109	112	108	111	115	122	85	123	116	103	94	103	107	112	108	106	108	112	113	112	117	120	108.8
	349.8	349.9	346.3	342.5	356.0	0.1	358.7	9.2	19.2	14.1	13.4	13.2	16.3	3.7	356.5	351.3	6.8	9.7	357.5	327.0	322.2	333.3	342.6	345.0	
	Diurnal Average																								

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

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 100 deg on Mar 13 02:00

Minimum Value: 8 deg on Mar 2 20:00

Percentiles: P_1 = 9 P_{10} = 12 Q_1 = 15 Median = 19 Q_3 = 34 P_{90} = 64 P_{99} = 96

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

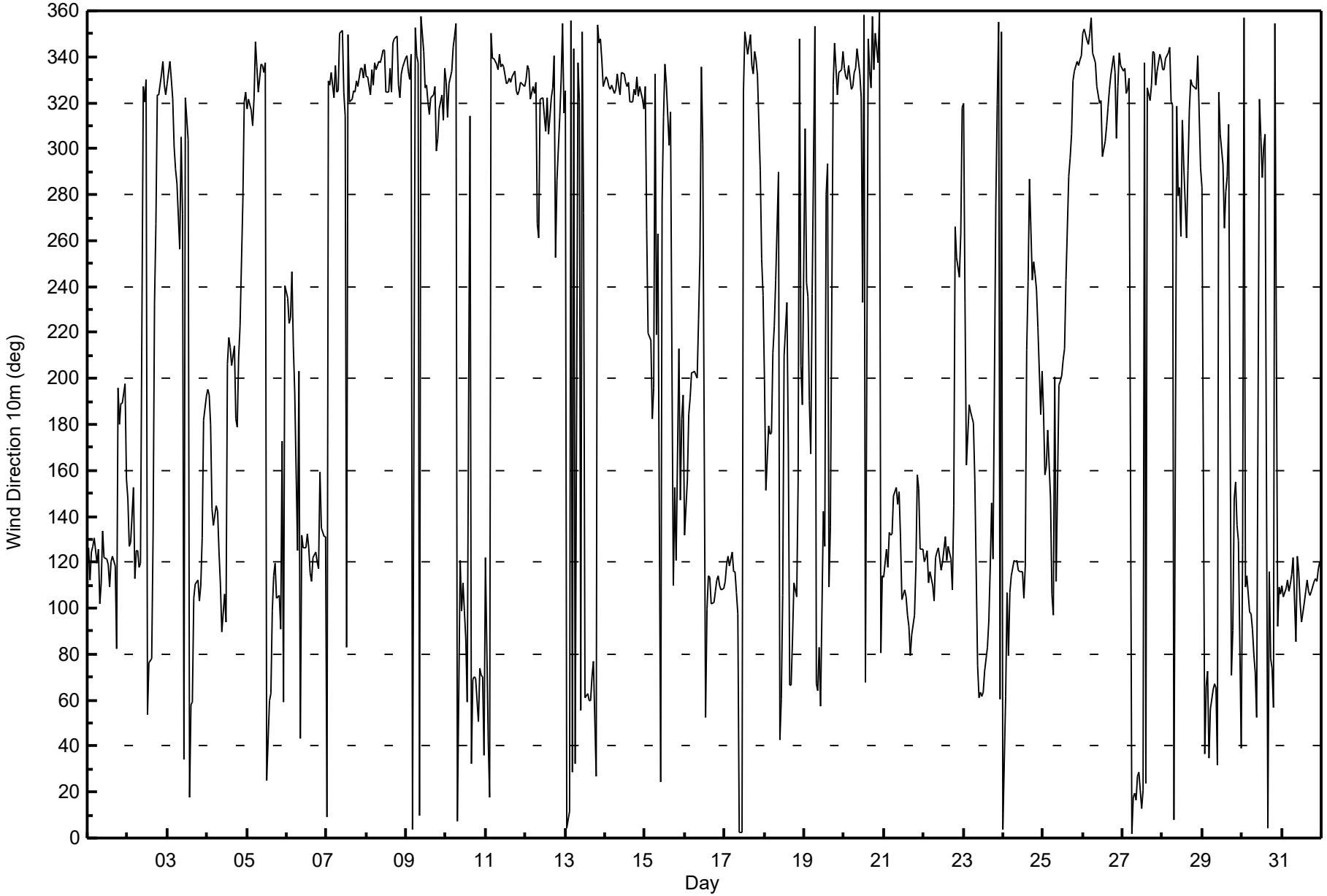
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	14	20	18	19	16	17	23	48	63	18	26	16	17	24	31	19	14	45	62	21	32	29	24	58	63
2-Mar	34	25	31	39	36	15	16	19	62	17	16	52	57	25	20	43	19	40	8	8	17	17	18	9	62
3-Mar	13	17	14	14	18	11	19	30	50	58	37	19	76	59	12	9	22	15	16	20	25	37	58	44	76
4-Mar	26	31	32	39	23	26	34	46	88	28	26	24	53	12	12	15	16	14	17	15	10	32	10	13	88
5-Mar	15	16	14	14	19	18	17	19	20	21	18	26	88	18	19	23	15	12	17	18	52	17	76	43	88
6-Mar	42	14	14	9	54	80	88	79	96	73	18	16	20	17	16	15	15	9	23	51	77	45	37	39	96
7-Mar	75	15	17	19	14	16	14	19	42	43	12	99	34	45	8	19	13	9	14	13	16	17	15	16	99
8-Mar	15	16	16	21	14	19	18	16	14	14	19	18	11	10	16	11	18	20	19	19	9	16	16	18	21
9-Mar	18	16	13	21	25	23	20	17	24	21	19	10	13	13	18	19	16	19	11	10	17	14	18	16	25
10-Mar	17	19	21	14	18	15	20	39	97	28	35	35	33	34	49	45	15	21	12	14	16	19	16	85	97
11-Mar	80	60	31	22	15	13	14	13	13	14	14	14	12	11	13	11	15	15	10	8	10	11	12	11	80
12-Mar	13	17	16	14	12	11	35	63	50	17	14	29	21	16	21	12	11	22	43	41	70	47	43	75	75
13-Mar	25	100	94	44	47	58	36	38	36	77	64	59	56	13	13	13	11	14	18	16	17	15	19	11	100
14-Mar	14	13	11	9	11	8	10	15	12	9	15	15	12	11	12	11	10	11	9	15	9	15	11	10	15
15-Mar	12	17	27	24	74	80	97	95	79	79	32	29	19	36	55	97	90	67	25	95	79	86	70	82	97
16-Mar	68	34	23	14	12	10	12	53	34	28	60	29	67	24	18	16	18	17	12	14	15	14	13	12	68
17-Mar	13	12	14	14	21	16	17	25	83	88	64	18	19	19	19	17	16	14	19	13	14	67	58	33	88
18-Mar	85	68	53	45	33	16	63	96	47	49	15	64	23	44	61	12	14	17	17	26	74	42	95	85	96
19-Mar	42	23	21	90	89	22	52	41	19	27	47	75	26	91	20	87	25	74	73	25	13	15	14	18	91
20-Mar	17	14	15	21	11	8	11	12	15	11	36	40	82	18	35	15	11	68	13	17	36	93	91	21	93
21-Mar	23	19	18	29	22	18	26	29	31	18	26	21	24	25	21	21	17	20	22	22	34	23	18	11	34
22-Mar	13	12	16	21	22	26	27	17	16	13	18	16	18	18	15	15	14	39	96	8	29	11	22	17	96
23-Mar	27	84	46	49	65	60	71	97	39	9	17	14	11	31	34	25	26	15	17	80	84	65	31	28	97
24-Mar	23	87	52	41	24	21	17	16	14	14	16	14	26	35	19	28	81	12	9	10	36	30	48	37	87
25-Mar	31	52	34	31	48	28	91	39	43	23	9	12	12	21	17	18	12	20	14	17	18	18	18	18	91
26-Mar	17	17	17	20	19	19	19	16	14	12	15	23	26	21	20	16	19	18	19	14	14	16	20	17	26
27-Mar	16	16	11	10	16	22	22	20	20	20	23	22	36	22	30	13	13	12	19	16	14	16	18	16	36
28-Mar	14	17	16	17	39	50	43	38	23	20	18	29	19	24	40	25	28	23	18	12	9	16	11	59	59
29-Mar	20	49	42	71	74	37	59	16	13	66	24	21	16	36	26	17	33	34	29	18	26	15	19	44	74
30-Mar	37	77	42	22	34	62	33	20	18	11	44	17	15	11	45	93	42	20	13	86	25	83	12	11	93
31-Mar	12	17	13	13	18	18	25	23	34	23	24	22	21	22	16	18	17	15	15	14	18	20	22	13	34
	85	100	94	90	89	80	97	97	97	88	64	99	88	91	61	97	90	74	96	95	84	93	95	85	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Athabasca Valley - March 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS08
FORT CHIPEWYAN
MARCH 2025

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

April 30, 2025

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

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 30-Min Value	30-Min Exceedances	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2(ppb) Average	704	34	40	99.19	-	-	0.8	0	0.4	0
TRS (ppb) Average	701	37	43	99.19	0.3	0	0.3	0	0.2	0
O3(ppb) Average	702	36	42	99.19	-	-	45.1	0	39.9	-
NO2(ppb) Average	701	36	43	99.06	-	-	8.7	0	1.9	-
NO(ppb) Average	701	36	43	99.06	-	-	3.2	-	0.3	-
NOX(ppb) Average	701	36	43	99.06	-	-	8.9	-	2.2	-
PM2.5(ug/m3) Average	736	2	8	99.19	-	-	18.4	0	3.6	0
CO(ppm) Average	703	35	41	99.19	-	-	0.2	0	0.1	-
CO2(ppm) Average	704	35	40	99.33	-	-	446.5	-	438.1	-
Temperature 2 m (C) Average	744	0	0	100	-	-	1.3	-	-5.5	-
Relative Humidity (%) Average	744	0	0	100	-	-	92.6	-	84.6	-
Wind Speed 10 m (km/h) Average	744	0	0	100	-	-	35	-	27	-
Wind Direction 10 m (deg) Average	744	0	0	100	-	-	-	-	-	-
PC(mm) Total	728	0	16	97.85	-	-	0.7	-	1.4	-
Leaf Wetness (% of range) Average	744	0	0	100	-	-	47.1	-	6	-
Global Solar Radiation (W/m2) Average	744	0	0	100	-	-	698.5	-	225.3	-

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

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

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2(ppb) Average	704	0.06	0.1	-	0	0	0	0	0.1	0.1	0.8
TRS (ppb) Average	701	0.17	0	-	0	0.1	0.2	0.2	0.2	0.2	0.3
O3(ppb) Average	702	34.27	5	-	13.3	28.5	32	34.8	37.9	39.9	45.1
NO2(ppb) Average	701	0.85	1.1	-	0.2	0.2	0.3	0.5	0.8	1.7	8.7
NO(ppb) Average	701	0.1	0.2	-	0	0	0	0	0.1	0.2	3.2
NOX(ppb) Average	701	0.94	1.2	-	0.2	0.3	0.3	0.5	0.9	2	8.9
PM2.5(ug/m3) Average	736	2.51	1.3	-	0.5	1.1	1.8	2.4	3	3.6	18.4
CO(ppm) Average	703	0.09	0	-	0	0	0.1	0.1	0.1	0.1	0.2
CO2(ppm) Average	704	435.01	2.8	-	428.4	430.9	433.1	435.5	436.8	438.1	446.5
Temperature 2 m (C) Average	744	-15.23	6.8	-	-33.7	-24.6	-19.8	-15.2	-10.1	-6.3	1.3
Relative Humidity (%) Average	744	71.24	10.6	-	42.5	56.7	63.2	72.9	80	84.1	92.6
Wind Speed 10 m (km/h) Average	744	11.3	7	-	0	4	6	10	15	22	35
Wind Direction 10 m (deg) Average	744	-	-	-	-	-	-	-	-	-	-
Precipitation (mm) Total	728	-	-	4.2	-	-	-	-	-	-	-
Leaf Wetness (% of range) Average	744	2.17	2	-	1.1	1.6	1.8	1.9	2.2	2.7	47.1
Global Solar Radiation (W/m2) Average	744	143.78	196	-	0	0	0	6.4	277.6	474.3	698.5

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

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
AIR QUALITY ANALYZERS	01 Mar 2025 18:00	01 Mar 2025 18:00	1	Station power failure
AIR QUALITY ANALYZERS	04 Mar 2025 17:00	04 Mar 2025 18:00	2-3	Maintenance - WBEA internal audit
AIR QUALITY ANALYZERS	29 Mar 2025 13:00	29 Mar 2025 13:00	1	Station power failure
AIR QUALITY ANALYZERS	30 Mar 2025 22:00	30 Mar 2025 23:00	1-2	Station power failure
Precipitation Collector	04 Mar 2025 18:00	05 Mar 2025 08:00	15	Maintenance - sensor thawed overnight

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Fort Chipewyan - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 0.8 ppb on Mar 1 09:00 Maximum Daily Average: 0.4 ppb on Mar 1

Minimum Value: 0.0 ppb on Mar 3 11:00 Minimum Daily Average: 0.0 ppb on Mar 26
Maximum Diurnal Average: 0.1 ppb at hour 24 Minimum Diurnal Average: 0.0 ppb at hour 18
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} = 0.5

Hours in Service:	744
Hours of Data:	704
Hours of Missing Data:	40
Hours of Calibration:	34
Percent Operational Time:	99.2

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

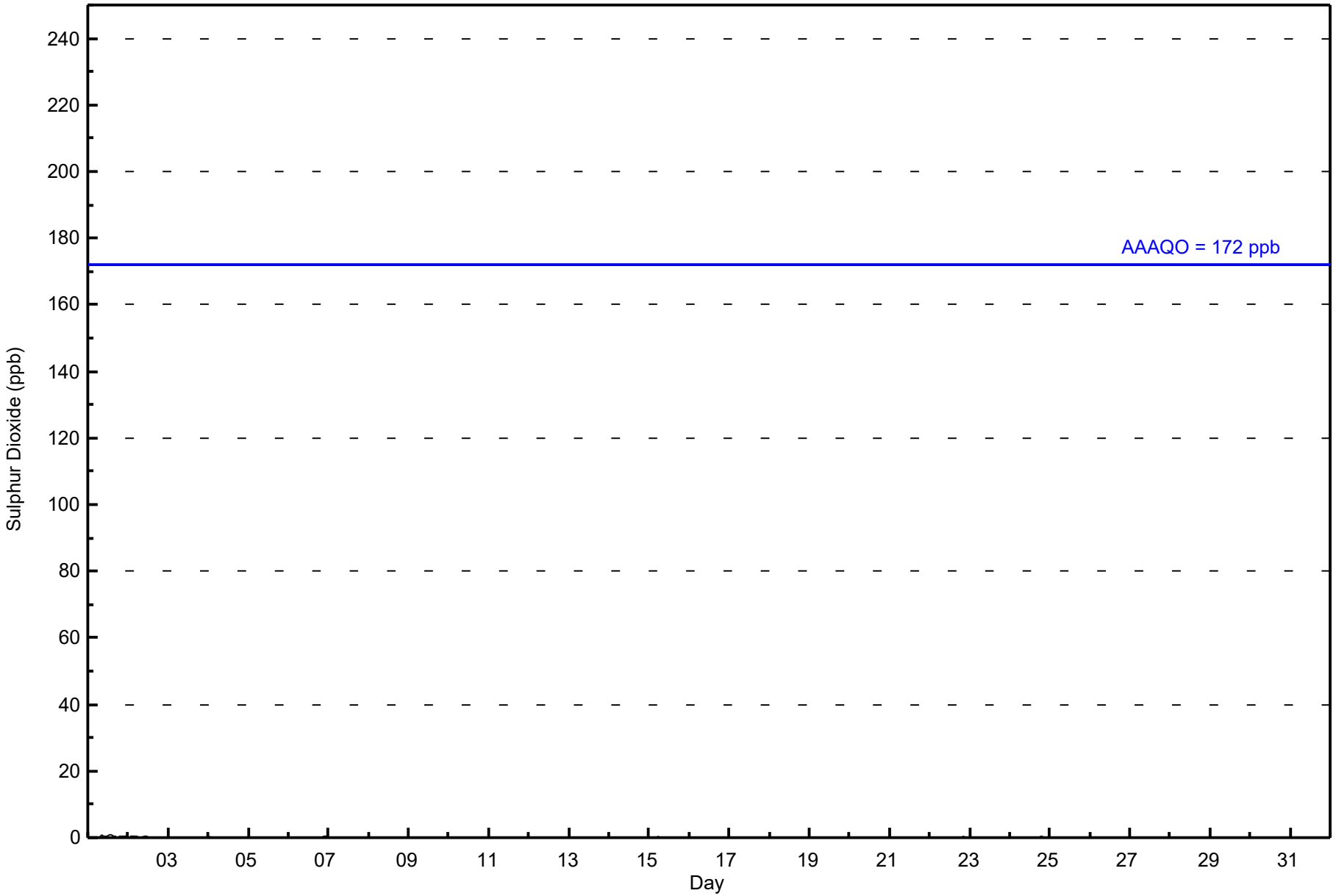
Z - zerospan C - Calibration M - Maintenance PF - Power Failure
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Fort Chipewyan - March 2025



Sulphur Dioxide (SO_2) - ppb
Fort Chipewyan - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	704	100.00	100.00
11 - 20	0	0.00	100.00
21 - 60	0	0.00	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 704

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Fort Chipewyan - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	17	12	16	145	247	11	5	2	0	7	13	24	37	35	85	48	704
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	17	12	16	145	247	11	5	2	0	7	13	24	37	35	85	48	704

Total Number of Valid Hours: 704

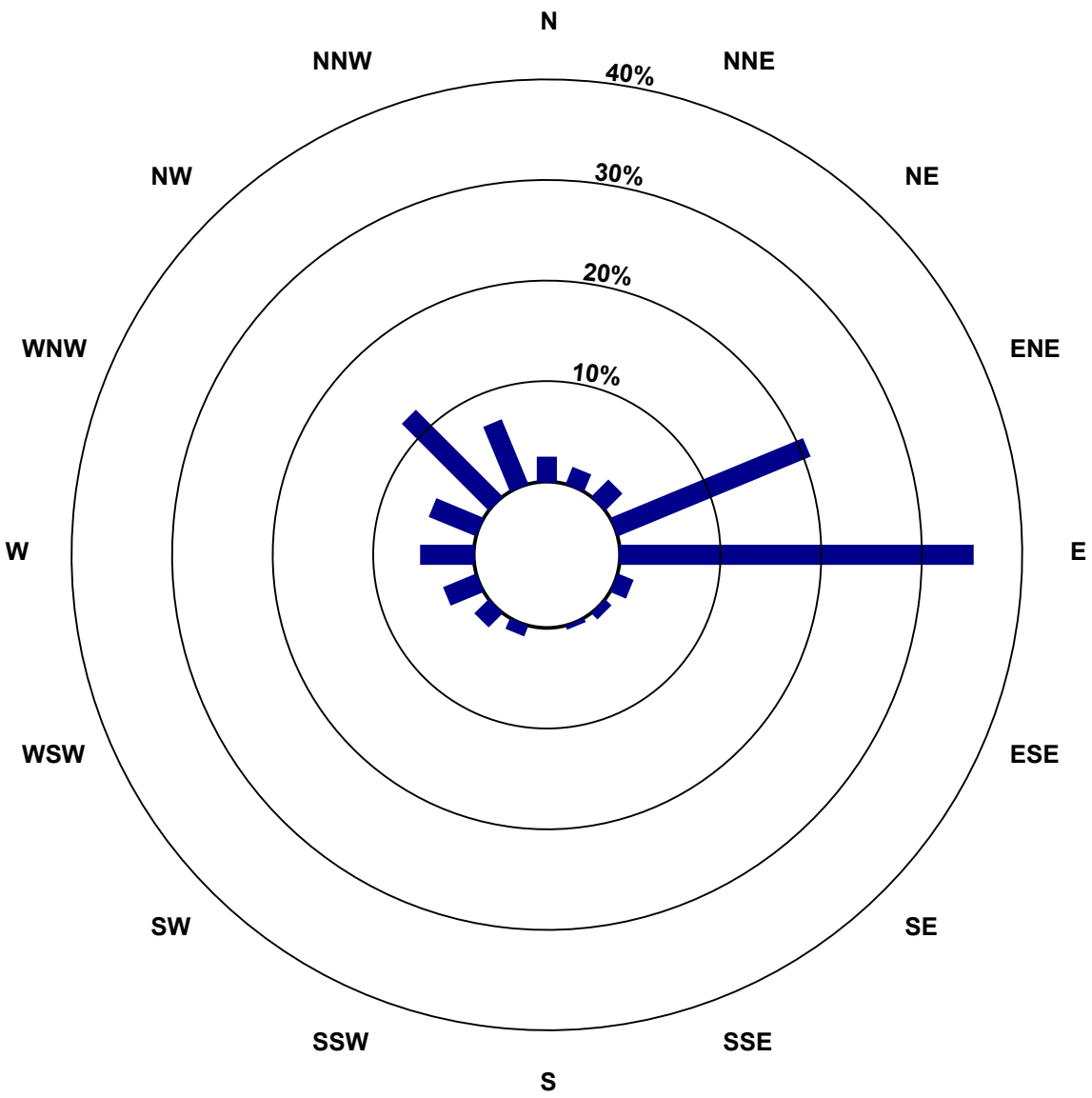
Total Number of Hours: 744

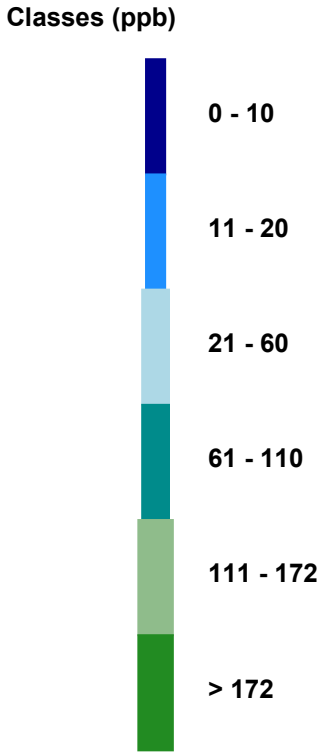
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Sulphur Dioxide (SO_2) - ppb

Fort Chipewyan





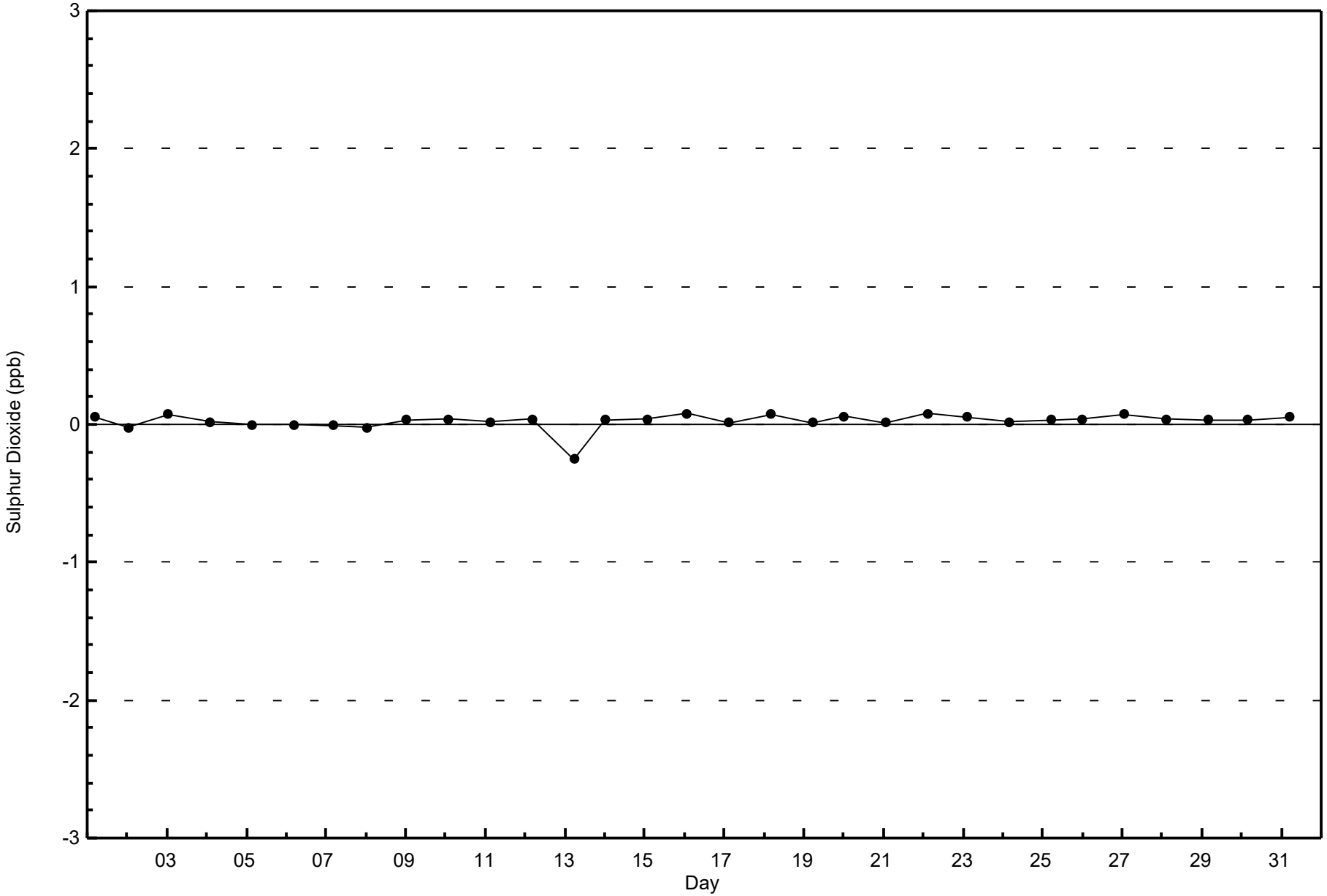
Total Number of Valid Hours: 704

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Fort Chipewyan - March 2025

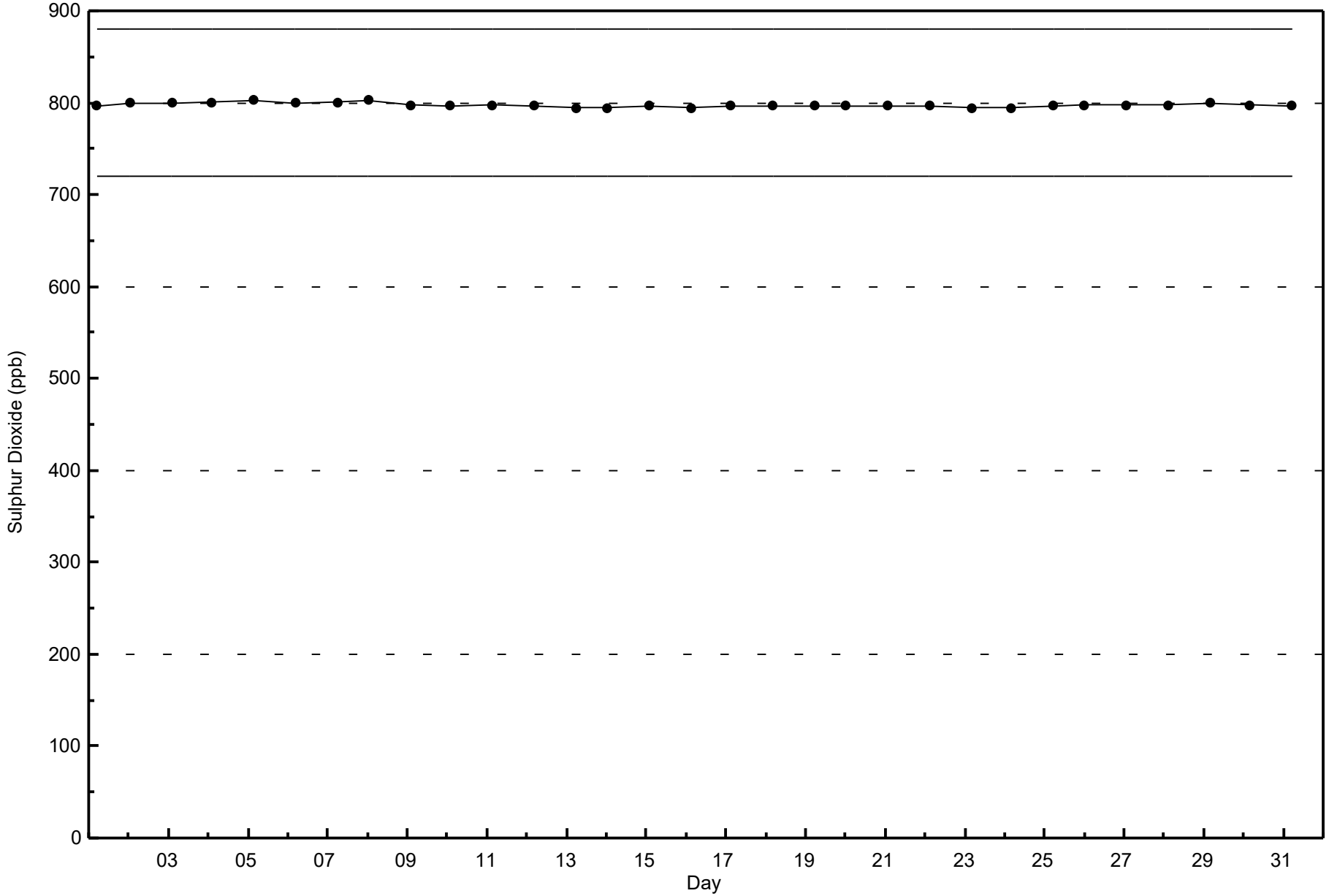


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Fort Chipewyan - March 2025



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort Chipewyan - March 2025

Number of Exceedences (AAAQG): 30-Min: 0

Maximum Value: 0.3 ppb on Mar 2 13:30

Maximum Daily Average: 0.2 ppb on Mar 12

Minimum Value: 0.0 ppb on Mar 10 19:30

Minimum Daily Average: 0.1 ppb on Mar 26

Maximum Diurnal Average: 0.2 ppb at hour 6

Minimum Diurnal Average: 0.2 ppb at hour 1

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} = 0.2

Periods in Service:	1488
Periods of Valid Data:	1405
Periods of Invalid Data:	83
Periods of Calibration:	73
Percent Operational Time:	99.3

Day	Period Ending At (MST) 00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00	Daily Average	Daily Maximum
1-Mar	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	PF	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	PF	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
2-Mar	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.3
	0.1	SP	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1		
3-Mar	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
	0.2	0.2	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
4-Mar	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	M	M	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2
	0.2	0.2	0.2	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	M	M	M	0.2	0.2	0.2	0.2	0.2	0.2	0.1		
5-Mar	0.1	0.1	0.1	0.1	Z	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	0.1	0.1	0.1	0.1	SP	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
6-Mar	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	0.2	0.2	0.2	0.2	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
7-Mar	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	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.2
	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1		
8-Mar	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	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.2
	0.1	SP	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2		
9-Mar	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	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	0.2	0.2	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	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
10-Mar	0.2	0.1	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	C	C	C	C	C	0.1	0.1	0.0	0.0	0.1	0.1	0.1	--	0.2
	0.2	0.2	0.2	SP	0.2	0.2	0.2	0.2	0.2	0.1	0.2	C	C	C	C	C	C	0.0	0.0	0.0	0.1	0.1	0.1	0.1		
11-Mar	0.1	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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	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		
12-Mar	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	0.2	0.2	0.2	0.2	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
13-Mar	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	0.1	0.1	0.2	0.2
	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1		
14-Mar	0.1	Z	0.2	0.1	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2
	0.1	SP	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2		
15-Mar	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	0.1	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	SP	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	0.2	0.2	0.2	0.2	0.2	0.2		



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort Chipewyan - March 2025

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

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

Alberta Ambient Air Quality Guideline (AAAQG): 30-Min: 5 ppb

Wood Buffalo Environmental Association

Summary of Hour Averages

Total Reduced Sulphur (TRS) - ppb

Fort Chipewyan - March 2025

Maximum Value: 0.3 ppb on Mar 2 14:00

Maximum Daily Average: 0.2 ppb on Mar 12

Minimum Value: 0.0 ppb on Mar 10 20:00

Minimum Daily Average: 0.1 ppb on Mar 26

Maximum Diurnal Average: 0.2 ppb at hour 6

Minimum Diurnal Average: 0.2 ppb at hour 1

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} = 0.2

Hours in Service:	744
Hours of Data:	701
Hours of Missing Data:	43
Hours of Calibration:	37
Percent Operational Time:	99.2

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	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	PF	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
2-Mar	0.2	Z	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.3
3-Mar	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
4-Mar	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	M	M	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2
5-Mar	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
6-Mar	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
7-Mar	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	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2
8-Mar	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	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.2
9-Mar	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
10-Mar	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.1	0.1	C	C	C	C	C	C	0.1	0.0	0.0	0.0	0.1	0.1	0.1	--	0.2
11-Mar	0.1	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
12-Mar	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
13-Mar	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	0.1	0.1	0.2	0.2
14-Mar	0.1	Z	0.2	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.2
15-Mar	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
16-Mar	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
17-Mar	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
18-Mar	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
19-Mar	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
20-Mar	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.2
21-Mar	0.1	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
22-Mar	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2
23-Mar	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
24-Mar	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
25-Mar	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	0.1	0.1	0.1	0.1	0.1	0.2	0.2
26-Mar	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.2
27-Mar	0.2	0.2	Z	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	0.1	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2
28-Mar	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
29-Mar	0.2	0.2	0.2	0.2	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	PF	0.2	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-Mar	0.2	0.1	0.1	0.1	0.1	Z	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	PF	PF	0.2	0.2	0.2
31-Mar	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
	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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	
	0.2	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Diurnal Maximum	

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

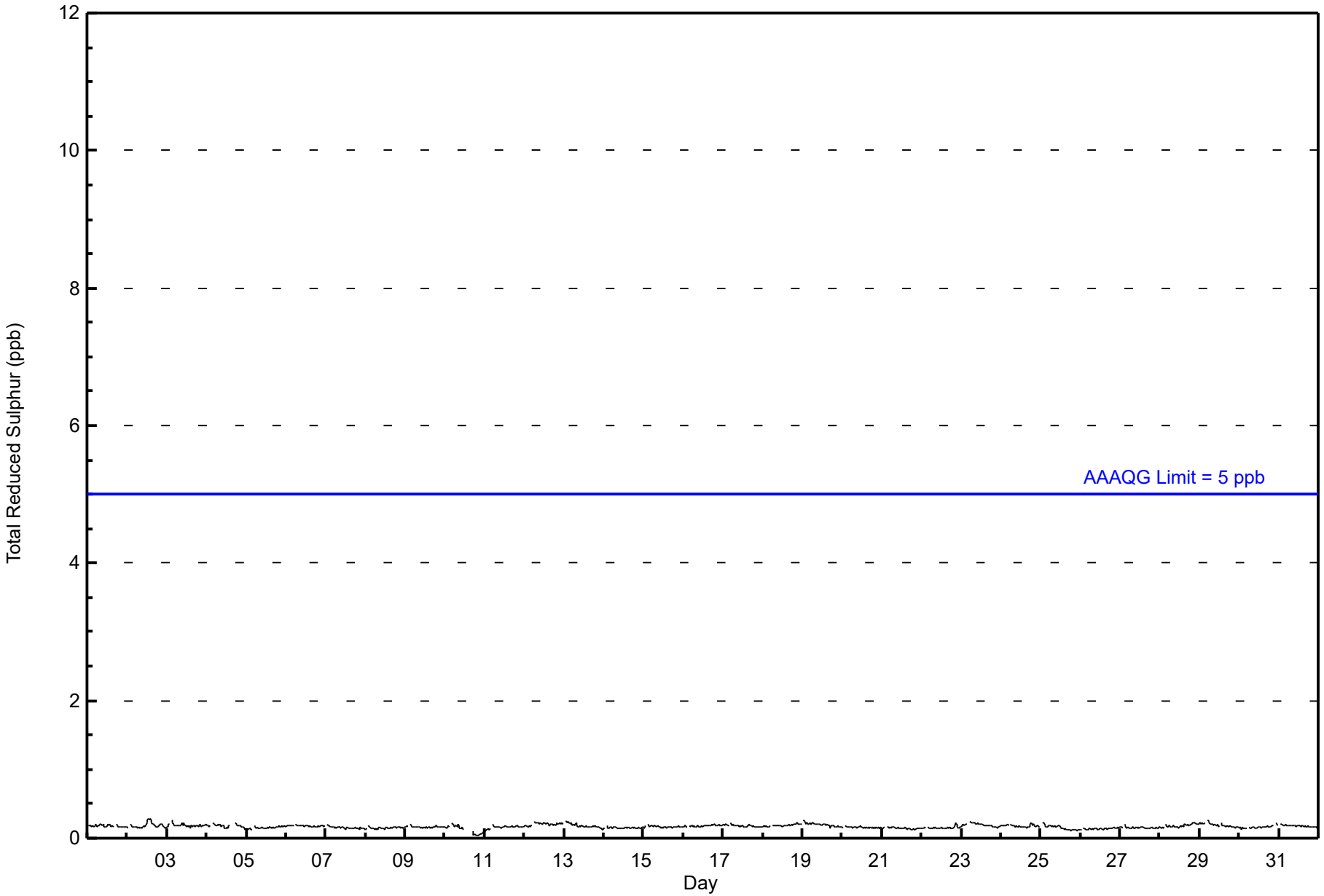
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Fort Chipewyan - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	701	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: 701

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Fort Chipewyan - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	17	11	18	145	240	11	5	2	0	7	13	25	36	36	85	50	701
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	17	11	18	145	240	11	5	2	0	7	13	25	36	36	85	50	701

Total Number of Valid Hours: 701

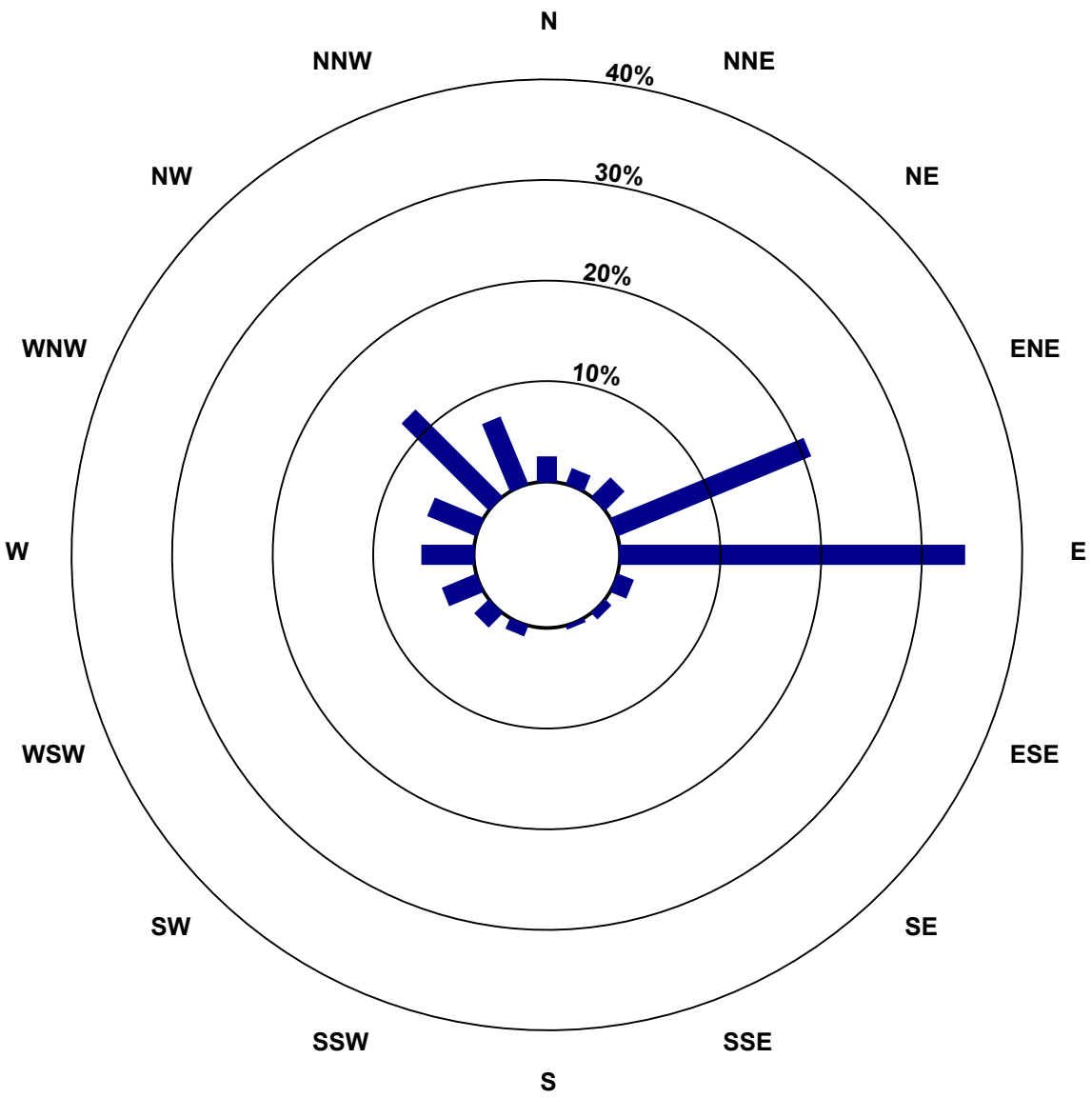
Total Number of Hours: 744

Wood Buffalo Environmental Association

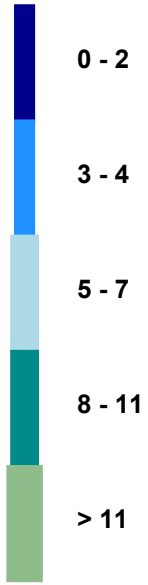
Wind Rose Mar 2025

Total Reduced Sulphur (TRS) - ppb

Fort Chipewyan



Classes (ppb)



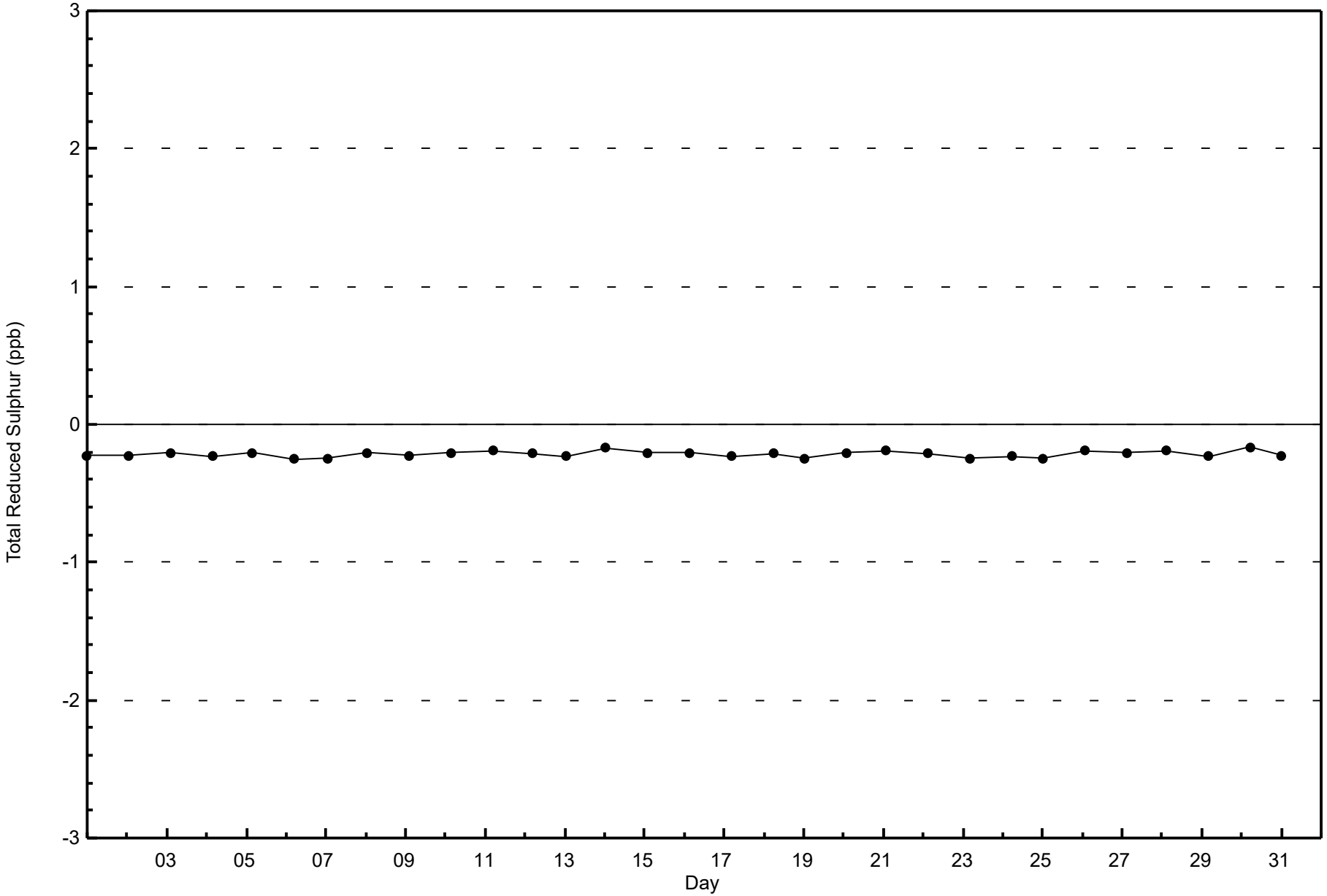
Total Number of Valid Hours: 701

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Fort Chipewyan - March 2025

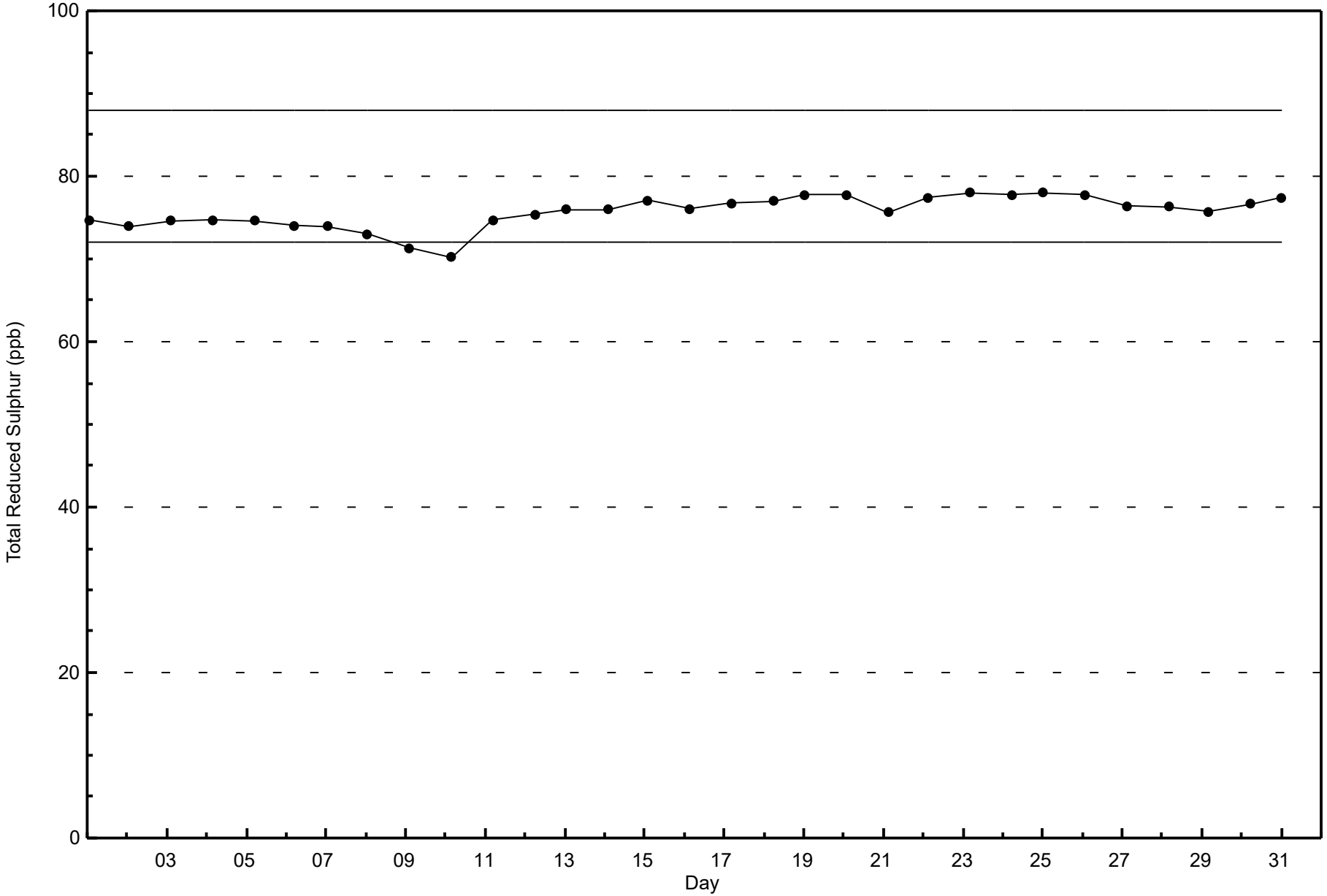


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Fort Chipewyan - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Fort Chipewyan - March 2025

Maximum Value: 3.2 ppb on Mar 10 09:00

Maximum Daily Average: 0.3 ppb on Mar 10

Minimum Value: 0.0 ppb on Mar 3 19:00

Minimum Daily Average: 0.0 ppb on Mar 15

Maximum Diurnal Average: 0.4 ppb at hour 9

Minimum Diurnal Average: 0.0 ppb at hour 1

Monthly Average: 0.10 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.1 P_{90} = 0.2 P_{99} = 1.1

Hours in Service:	744
Hours of Data:	701
Hours of Missing Data:	43
Hours of Calibration:	36
Percent Operational Time:	99.1

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.5	0.5	0.3	0.4	0.7	0.8	0.6	0.3	0.1	PF	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8
2-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.3	0.5	0.7	0.4	0.3	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.7
3-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.8	0.2	0.2	0.4	0.0	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8
4-Mar	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.3	1.0	0.3	0.2	0.2	0.4	1.0	1.2	M	M	M	0.1	0.1	0.1	0.0	0.0	0.0	0.2	1.2
5-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
6-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
7-Mar	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.3	1.6	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.6
8-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.6	0.4	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.6
9-Mar	0.0	0.0	0.1	0.0	0.1	Z	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.3
10-Mar	Z	0.0	0.0	0.0	0.0	0.2	0.4	0.9	3.2	1.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	3.2
11-Mar	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	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1
12-Mar	0.0	0.1	Z	0.0	0.0	0.0	0.3	1.3	0.6	0.1	0.2	0.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.3
13-Mar	0.0	0.0	0.0	Z	0.1	0.0	0.1	2.0	0.3	0.9	0.4	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	0.2	2.0
14-Mar	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.2	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2
15-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
16-Mar	Z	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
17-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
18-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.3	1.8	1.7	1.1	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.3	1.8
19-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
20-Mar	0.0	0.0	0.0	0.1	Z	0.0	0.1	0.1	0.0	0.0	C	C	C	C	C	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2
21-Mar	0.1	0.1	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
22-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.6	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.6
23-Mar	0.0	Z	0.0	0.1	0.0	0.1	0.0	0.1	0.4	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
24-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.3
25-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
26-Mar	0.0	0.0	0.0	0.1	Z	0.0	0.0	0.1	0.1	0.3	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	0.1	0.4
27-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
28-Mar	Z	0.0	0.0	0.0	0.0	0.1	0.6	0.2	0.9	0.2	0.1	0.1	0.1	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.9
29-Mar	0.0	Z	0.0	0.0	0.0	0.1	0.2	0.4	0.0	0.1	0.1	0.1	PF	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
30-Mar	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	0.0	0.0	0.0	0.0	PF	PF	0.0	0.0	0.1
31-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2
	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.4	0.3	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Diurnal Average	
	0.1	0.1	0.1	0.1	0.1	0.2	0.6	2.0	3.2	1.8	1.7	1.1	0.7	1.0	1.2	0.3	0.2	0.3	0.3	0.2	0.2	0.1	0.1	0.1	Diurnal Maximum	

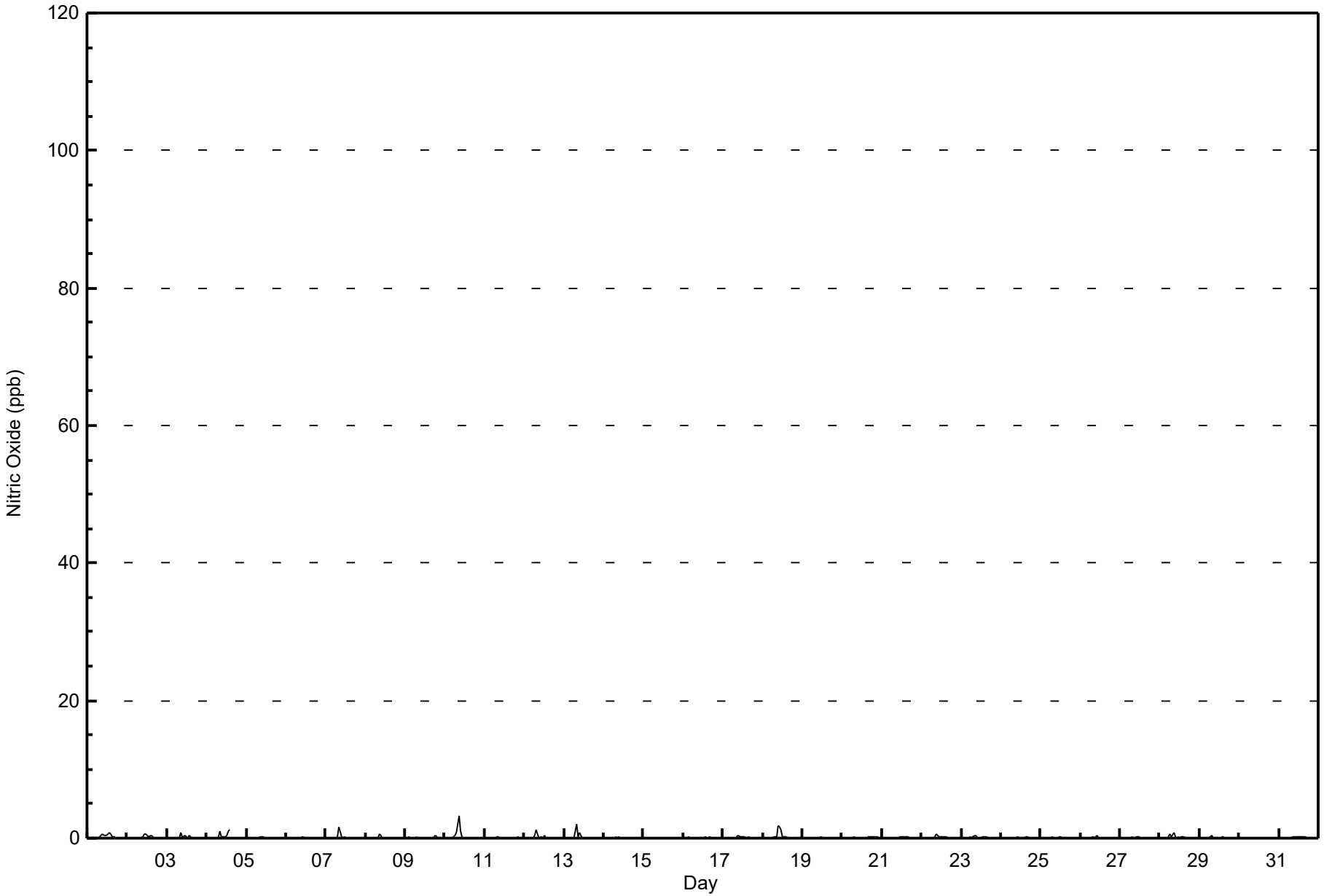
Z - zerospan C - Calibration M - Maintenance PF - Power Failure

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Fort Chipewyan - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	701	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 701

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Fort Chipewyan - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	17	12	18	145	240	11	4	2	0	7	12	25	36	36	88	48	701
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	17	12	18	145	240	11	4	2	0	7	12	25	36	36	88	48	701

Total Number of Valid Hours: 701

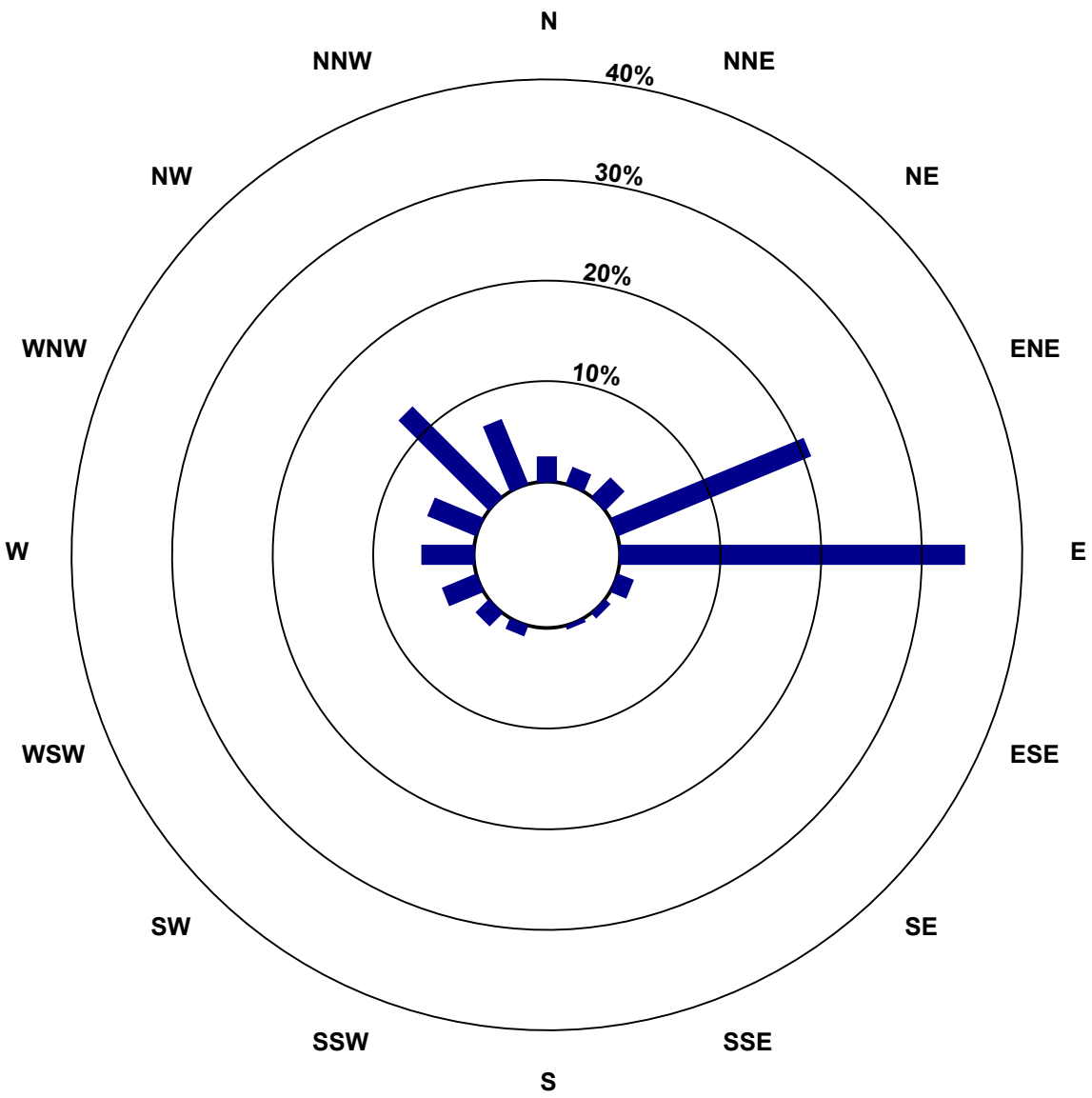
Total Number of Hours: 744

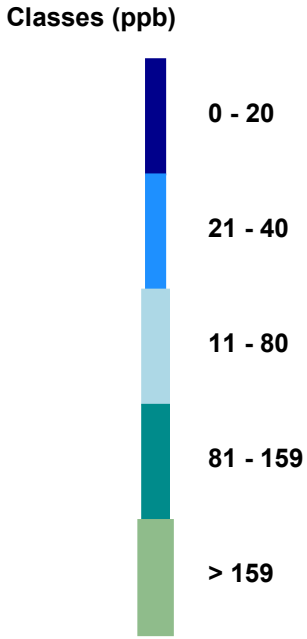
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitric Oxide (NO) - ppb

Fort Chipewyan





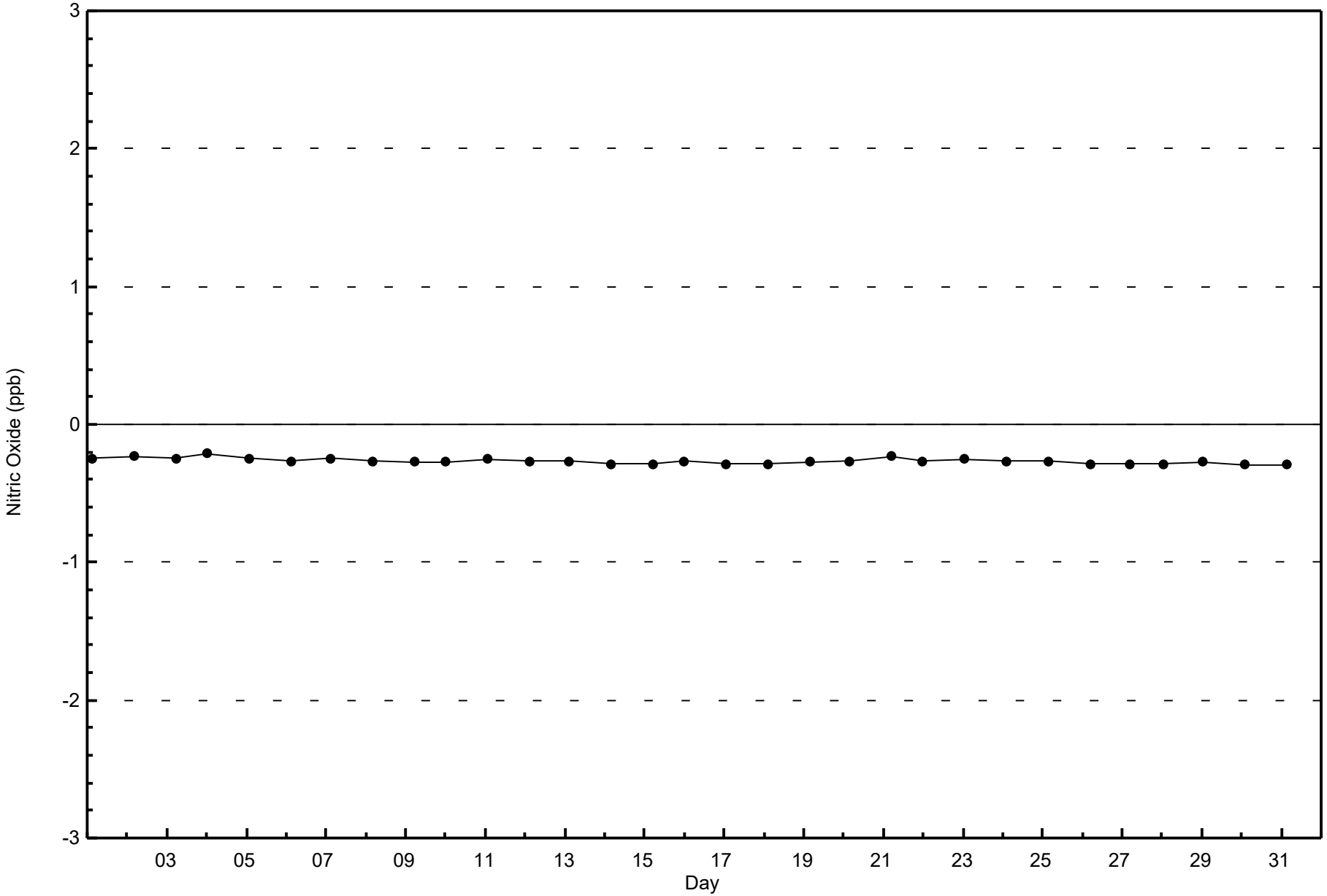
Total Number of Valid Hours: 701

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Fort Chipewyan - March 2025

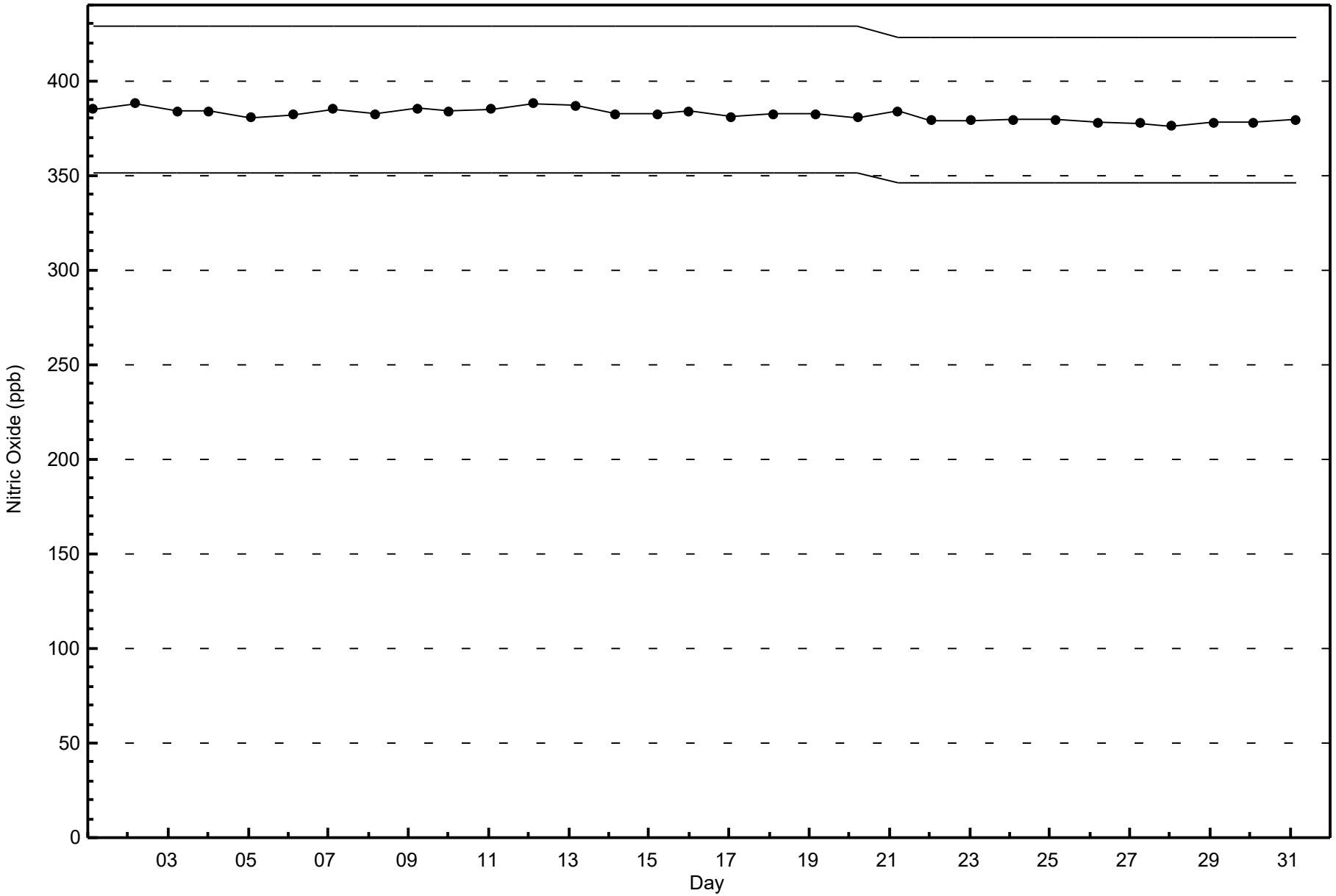


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Fort Chipewyan - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Fort Chipewyan - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8.7 ppb on Mar 10 06:00 Maximum Daily Average: 1.9 ppb on Mar 13

Minimum Value: 0.2 ppb on Mar 5 12:00 Minimum Daily Average: 0.3 ppb on Mar 21
Maximum Diurnal Average: 1.8 ppb at hour 6 Minimum Diurnal Average: 0.4 ppb at hour 16
Monthly Average: 0.85 ppb Percentiles: P_1 = 0.2 P_{10} = 0.2 Q_1 = 0.3 Median = 0.5 Q_3 = 0.8 P_{90} = 1.7 P_{99} = 5.9

Hours in Service:	744
Hours of Data:	701
Hours of Missing Data:	43
Hours of Calibration:	36
Percent Operational Time:	99.1

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.4	0.5	0.6	Z	1.1	1.4	0.8	1.4	1.7	1.0	0.6	0.6	1.0	1.1	1.2	0.8	0.7	PF	0.9	0.7	0.8	0.8	0.6	0.6	0.9	1.7
2-Mar	0.5	0.5	0.5	0.8	Z	0.4	0.5	0.6	0.8	1.2	1.5	1.3	1.0	0.8	0.9	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.3	0.7	1.5
3-Mar	0.4	0.4	0.5	0.4	0.4	Z	0.4	0.7	2.6	0.8	0.6	0.5	0.3	0.5	0.5	0.4	0.4	0.3	0.4	0.4	0.3	0.3	0.7	3.3	0.7	3.3
4-Mar	Z	2.7	1.4	0.7	0.7	0.7	0.7	1.7	3.7	0.8	0.4	0.4	0.6	1.6	1.9	M	M	M	2.1	1.1	1.5	0.9	0.4	0.2	1.2	3.7
5-Mar	0.3	Z	0.3	0.3	0.2	0.2	0.3	0.7	0.9	0.5	0.4	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.8	0.5	0.3	0.3	0.4	0.9
6-Mar	0.4	0.5	Z	0.3	0.3	0.3	0.4	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	0.8	3.4	1.1	1.2	0.5	3.4
7-Mar	1.1	1.3	1.1	Z	0.9	1.0	1.6	4.4	6.1	0.8	0.4	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.8	0.4	0.4	1.0	6.1
8-Mar	2.0	1.4	0.7	0.2	Z	0.2	0.3	0.7	3.5	1.5	0.2	0.2	0.2	0.4	0.2	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.6	3.5
9-Mar	0.3	0.3	0.6	0.5	0.6	Z	1.6	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.8	1.6	0.9	0.3	0.7	0.5	0.6	0.5	1.6
10-Mar	Z	0.4	0.7	4.0	6.6	8.7	7.4	2.1	3.5	0.9	0.3	0.2	0.3	0.2	0.3	0.2	0.3	0.6	1.3	0.3	0.6	0.8	1.6	2.1	1.9	8.7
11-Mar	1.9	Z	1.0	0.3	1.7	0.3	0.5	0.7	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	1.8	1.6	0.8	0.7	0.4	0.6	1.9
12-Mar	0.5	1.0	Z	0.2	0.2	0.4	3.3	3.8	1.3	0.3	0.2	0.3	0.6	0.2	0.2	0.2	0.2	0.2	0.2	0.6	0.9	0.6	0.9	0.4	0.7	3.8
13-Mar	0.4	3.3	4.2	Z	5.7	1.5	2.9	6.9	0.7	1.0	0.4	0.2	0.2	0.3	0.3	0.4	0.3	0.4	1.7	1.3	3.9	6.6	1.3	0.8	1.9	6.9
14-Mar	0.7	1.8	1.2	2.8	Z	2.6	1.5	0.9	0.3	0.4	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.5	0.3	0.3	0.2	0.2	0.4	0.7	2.8
15-Mar	0.3	0.3	0.6	0.9	0.4	Z	0.4	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.5	1.6	4.5	3.1	2.2	0.8	4.5
16-Mar	Z	5.2	1.5	5.8	1.2	2.1	1.1	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.2	0.2	0.5	0.5	0.7	0.7	0.6	0.6	0.5	0.5	1.0	5.8
17-Mar	0.6	Z	0.9	0.7	2.2	5.4	4.3	0.3	0.4	0.6	0.4	0.3	0.3	0.4	0.2	0.4	0.2	0.3	0.4	0.3	0.2	0.2	0.2	0.4	0.9	5.4
18-Mar	0.3	0.3	Z	0.2	0.3	0.5	0.5	0.8	0.7	2.1	1.7	1.3	0.5	0.4	0.4	0.3	0.4	0.4	0.3	0.8	4.4	2.9	0.3	0.3	0.9	4.4
19-Mar	2.2	1.4	0.9	Z	0.5	1.1	3.1	0.4	0.3	0.2	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.6	0.9	0.5	4.1	1.6	0.8	0.9	4.1
20-Mar	4.0	1.2	1.9	2.7	Z	1.6	1.7	0.7	0.3	0.3	C	C	C	C	C	0.2	0.3	0.6	0.8	0.6	1.0	0.5	0.4	0.4	1.1	4.0
21-Mar	0.3	0.4	0.3	0.2	0.2	Z	0.3	0.3	0.3	0.3	0.2	0.3	0.4	0.4	0.4	0.5	0.5	0.4	0.5	0.5	0.3	0.3	0.3	0.3	0.3	0.5
22-Mar	Z	0.3	0.4	0.4	0.3	0.4	0.5	0.6	0.5	0.8	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.8	0.8	1.6	1.6	0.7	0.6	0.6	1.6
23-Mar	0.6	Z	0.7	1.2	1.3	1.9	0.8	1.1	1.4	0.8	0.6	0.5	0.6	0.8	0.7	0.7	0.6	0.6	0.7	0.7	1.0	1.4	0.6	0.4	0.9	1.9
24-Mar	0.4	0.4	Z	0.5	0.4	0.4	0.5	0.4	0.4	0.3	0.5	0.4	0.5	0.5	0.5	0.8	0.7	0.7	1.1	1.6	0.9	0.7	0.7	0.6	0.6	1.6
25-Mar	0.7	0.6	0.5	Z	0.5	0.4	0.5	0.6	0.4	0.4	0.3	0.6	0.5	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.4	0.7
26-Mar	0.3	0.3	0.3	0.4	Z	0.5	0.4	0.4	0.3	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.4	2.3	2.0	1.3	0.6	0.6	2.3
27-Mar	0.6	1.2	1.1	4.2	0.8	Z	0.5	0.8	0.3	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	4.4	1.3	0.4	0.5	2.0	0.9	4.4
28-Mar	Z	3.0	2.0	0.6	2.4	5.9	5.0	0.5	1.3	0.4	0.3	0.4	0.3	0.6	0.5	0.3	0.4	0.3	0.4	2.1	3.6	5.0	4.5	0.9	1.8	5.9
29-Mar	3.9	Z	1.2	4.1	3.3	7.1	1.3	1.2	0.3	0.3	0.3	0.3	PF	0.4	0.5	0.4	0.4	0.4	0.9	2.5	0.8	0.3	0.3	0.3	1.4	7.1
30-Mar	0.3	0.3	Z	1.0	1.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.6	0.5	PF	PF	0.4	0.4	1.0
31-Mar	0.5	0.4	0.4	Z	0.5	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.9	0.8	0.6	0.6	0.4	0.5	0.9
	0.9	1.1	1.0	1.3	1.3	1.8	1.4	1.1	1.1	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.7	0.9	1.1	1.4	0.8	0.7	Diurnal Average	
	4.0	5.2	4.2	5.8	6.6	8.7	7.4	6.9	6.1	2.1	1.7	1.3	1.0	1.6	1.9	0.8	0.7	0.8	2.1	4.4	4.4	6.6	4.5	3.3	Diurnal Maximum	

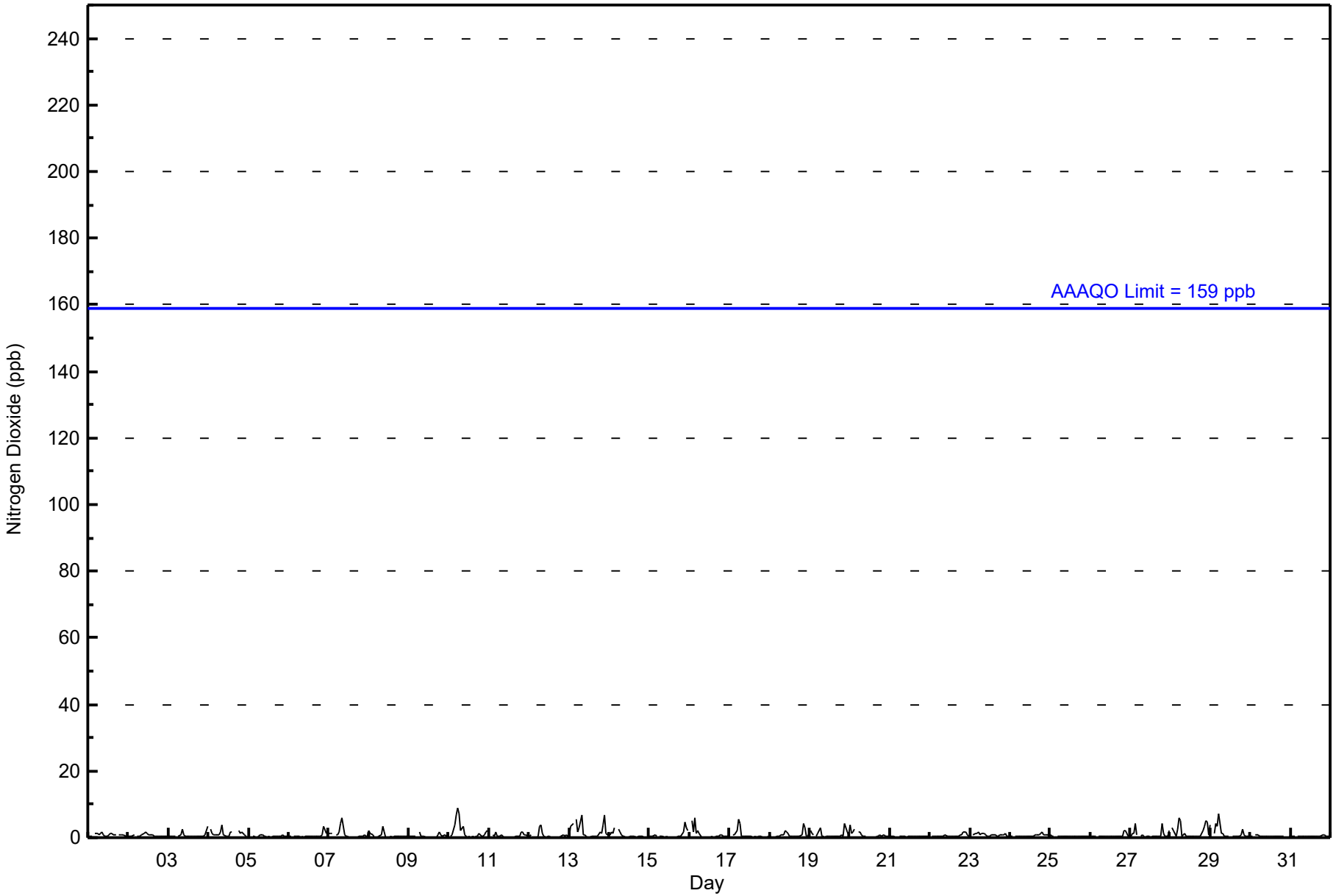
Z - zerospan C - Calibration M - Maintenance PF - Power Failure
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Fort Chipewyan - March 2025



Nitrogen Dioxide (NO_2) - ppb
Fort Chipewyan - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	701	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 701

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Fort Chipewyan - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	17	12	18	145	240	11	4	2	0	7	12	25	36	36	88	48	701
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	17	12	18	145	240	11	4	2	0	7	12	25	36	36	88	48	701

Total Number of Valid Hours: 701

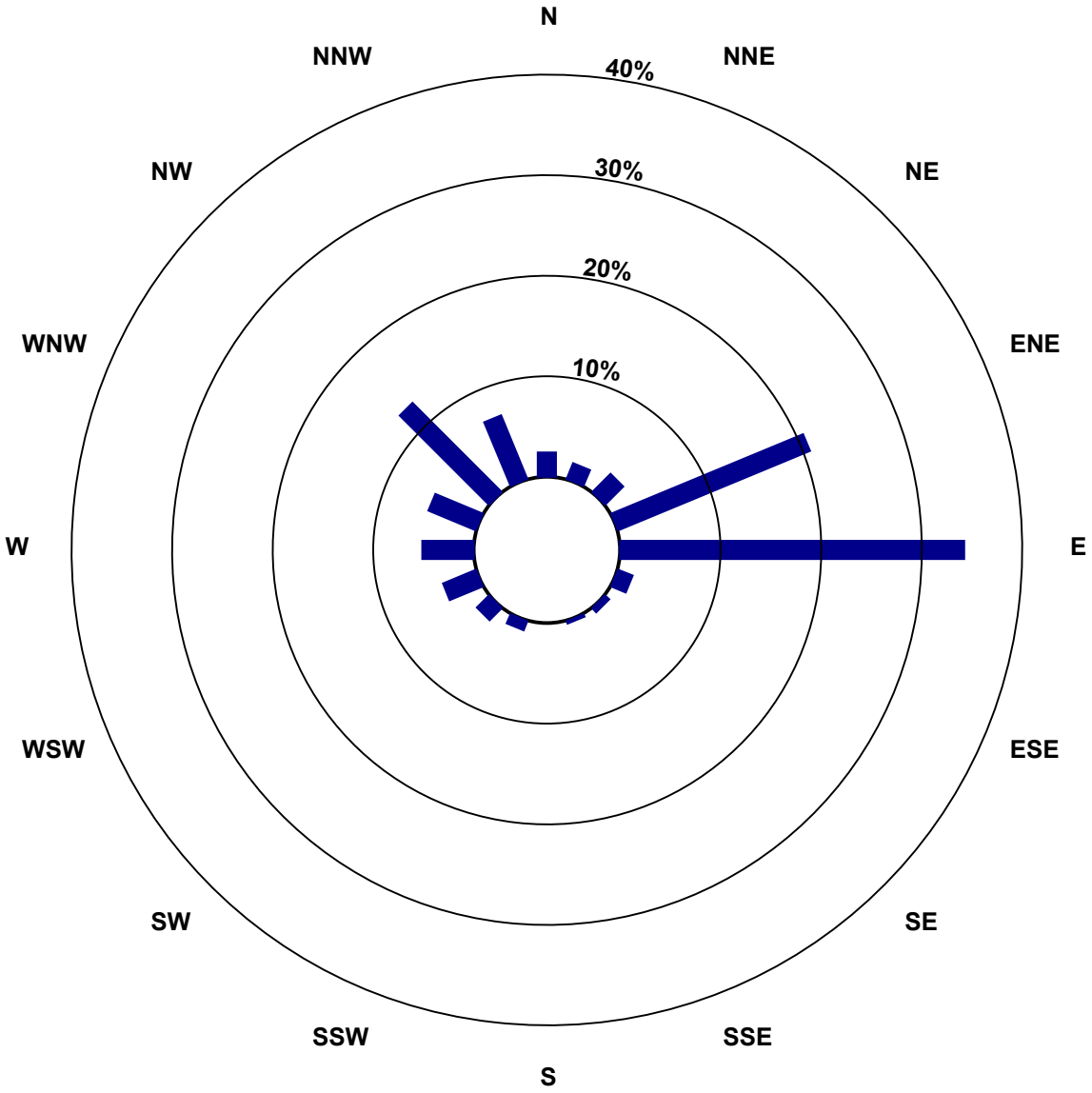
Total Number of Hours: 744

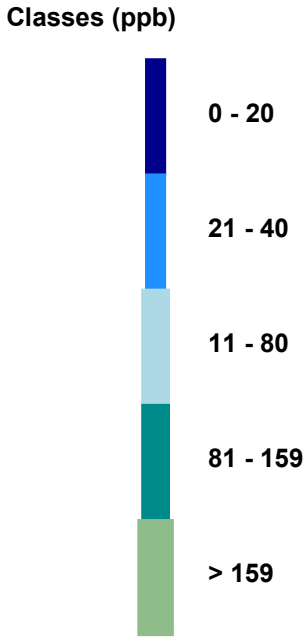
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Dioxide (NO_2) - ppb

Fort Chipewyan





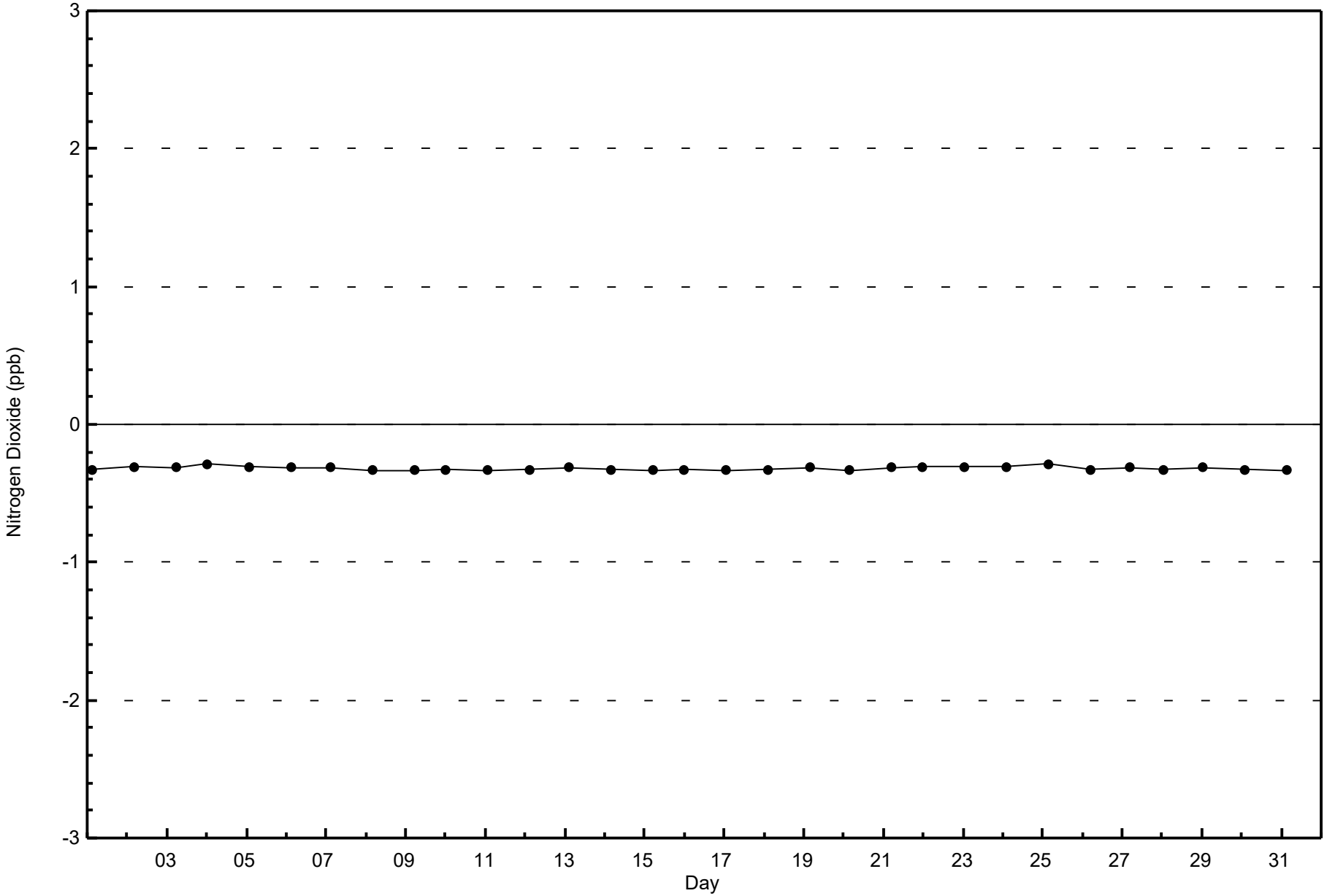
Total Number of Valid Hours: 701

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Fort Chipewyan - March 2025

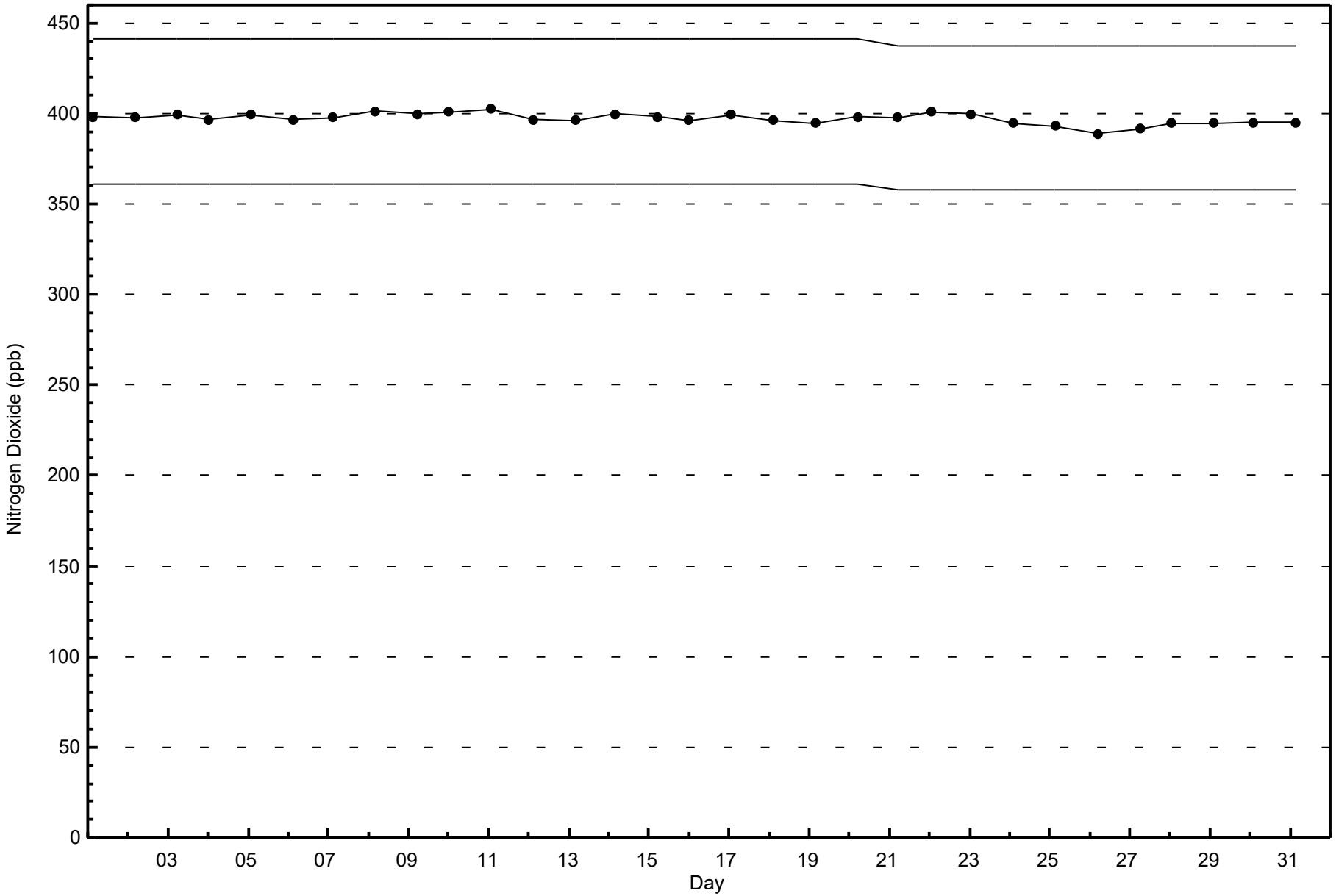


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Fort Chipewyan - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Fort Chipewyan - March 2025

Maximum Value: 8.9 ppb on Mar 13 08:00

Maximum Daily Average: 2.2 ppb on Mar 10

Minimum Value: 0.2 ppb on Mar 11 16:00

Minimum Daily Average: 0.4 ppb on Mar 21

Maximum Diurnal Average: 1.8 ppb at hour 6

Minimum Diurnal Average: 0.4 ppb at hour 17

Monthly Average: 0.94 ppb

Percentiles: P_1 = 0.2 P_{10} = 0.3 Q_1 = 0.3 Median = 0.5 Q_3 = 0.9 P_{90} = 2.0 P_{99} = 6.6

Hours in Service:	744
Hours of Data:	701
Hours of Missing Data:	43
Hours of Calibration:	36
Percent Operational Time:	99.1

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.4	0.5	0.6	Z	1.1	1.4	0.8	1.5	2.2	1.5	0.9	1.0	1.7	1.9	1.8	1.1	0.8	PF	0.9	0.7	0.8	0.8	0.6	0.6	1.1	2.2
2-Mar	0.5	0.5	0.5	0.8	Z	0.4	0.5	0.6	0.9	1.5	2.0	2.0	1.4	1.1	1.3	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.4	0.9	2.0
3-Mar	0.4	0.4	0.5	0.4	0.4	Z	0.5	0.8	3.4	1.0	0.8	0.9	0.3	1.0	0.6	0.4	0.4	0.3	0.4	0.4	0.3	0.3	0.7	3.3	0.8	3.4
4-Mar	Z	2.8	1.4	0.7	0.7	0.7	0.7	2.0	4.7	1.1	0.6	0.6	1.0	2.6	3.1	M	M	M	2.2	1.2	1.6	0.9	0.4	0.2	1.5	4.7
5-Mar	0.3	Z	0.3	0.3	0.2	0.2	0.3	0.7	1.1	0.7	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.8	0.5	0.3	0.3	0.4	1.1
6-Mar	0.4	0.5	Z	0.3	0.3	0.3	0.4	0.2	0.4	0.2	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.8	3.4	1.1	1.2	0.6	3.4
7-Mar	1.1	1.3	1.1	Z	0.9	1.1	1.7	4.7	7.7	1.0	0.5	0.6	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.8	0.4	0.4	1.1	7.7
8-Mar	2.0	1.4	0.7	0.2	Z	0.2	0.3	0.7	4.1	1.9	0.2	0.2	0.2	0.5	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.7	4.1
9-Mar	0.3	0.3	0.7	0.5	0.7	Z	1.8	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	1.1	1.9	1.1	0.4	0.8	0.6	0.7	0.6	1.9
10-Mar	Z	0.4	0.7	4.0	6.6	8.9	7.8	3.0	6.7	2.0	0.5	0.3	0.4	0.3	0.3	0.2	0.3	0.7	1.3	0.3	0.6	0.8	1.6	2.1	2.2	8.9
11-Mar	1.9	Z	1.0	0.3	1.7	0.4	0.5	0.8	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	1.9	1.7	0.9	0.8	0.4	0.7	1.9
12-Mar	0.5	1.1	Z	0.2	0.2	0.4	3.6	5.1	1.9	0.4	0.4	0.4	1.0	0.2	0.2	0.2	0.2	0.2	0.2	0.6	0.9	0.6	0.9	0.4	0.9	5.1
13-Mar	0.4	3.3	4.2	Z	5.8	1.5	3.0	8.9	1.0	1.9	0.8	0.2	0.3	0.4	0.4	0.5	0.3	0.4	1.7	1.3	3.9	6.6	1.3	0.8	2.1	8.9
14-Mar	0.7	1.8	1.2	2.8	Z	2.7	1.6	1.1	0.3	0.5	0.3	0.2	0.4	0.3	0.3	0.4	0.2	0.3	0.5	0.3	0.3	0.2	0.2	0.5	0.7	2.8
15-Mar	0.3	0.3	0.6	0.9	0.4	Z	0.5	0.4	0.3	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.5	0.5	1.6	4.5	3.1	2.2	0.8	4.5
16-Mar	Z	5.2	1.5	5.9	1.2	2.1	1.1	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.3	0.3	0.6	0.6	0.8	0.7	0.6	0.6	0.5	0.5	1.1	5.9
17-Mar	0.6	Z	0.9	0.7	2.2	5.4	4.3	0.3	0.5	1.0	0.6	0.5	0.5	0.5	0.3	0.6	0.3	0.3	0.4	0.3	0.2	0.2	0.2	0.4	0.9	5.4
18-Mar	0.3	0.3	Z	0.2	0.3	0.5	0.5	0.9	1.0	3.9	3.4	2.4	0.7	0.6	0.5	0.4	0.4	0.4	0.3	0.8	4.4	3.0	0.3	0.3	1.1	4.4
19-Mar	2.2	1.4	0.9	Z	0.5	1.1	3.2	0.4	0.3	0.2	0.3	0.5	0.4	0.3	0.3	0.3	0.3	0.4	0.6	0.9	0.5	4.1	1.6	0.8	0.9	4.1
20-Mar	4.0	1.2	1.9	2.8	Z	1.6	1.8	0.8	0.3	0.3	C	C	C	C	C	0.4	0.5	0.8	1.0	0.8	1.2	0.6	0.5	0.5	1.2	4.0
21-Mar	0.4	0.5	0.3	0.2	0.2	Z	0.3	0.3	0.3	0.3	0.3	0.4	0.6	0.5	0.5	0.7	0.6	0.5	0.5	0.5	0.3	0.3	0.3	0.3	0.4	0.7
22-Mar	Z	0.3	0.4	0.4	0.3	0.4	0.5	0.7	0.6	1.4	0.9	0.8	0.8	0.7	0.6	0.6	0.6	0.6	0.8	0.8	1.6	1.7	0.7	0.6	0.7	1.7
23-Mar	0.6	Z	0.7	1.3	1.3	2.0	0.8	1.2	1.8	0.9	0.7	0.6	0.7	1.0	0.8	0.8	0.7	0.7	0.7	0.7	1.0	1.4	0.6	0.4	0.9	2.0
24-Mar	0.4	0.4	Z	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.6	0.5	0.6	0.6	0.6	1.1	0.8	0.7	1.2	1.7	0.9	0.7	0.7	0.6	0.7	1.7
25-Mar	0.7	0.6	0.5	Z	0.5	0.4	0.6	0.7	0.4	0.5	0.4	0.7	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.5	0.7
26-Mar	0.3	0.3	0.3	0.5	Z	0.5	0.4	0.5	0.4	0.8	0.8	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.4	2.3	2.0	1.3	0.6	0.6	2.3
27-Mar	0.6	1.2	1.1	4.2	0.8	Z	0.6	1.1	0.4	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.3	4.4	1.3	0.4	0.5	2.0	0.9	4.4
28-Mar	Z	3.0	2.0	0.6	2.4	6.0	5.6	0.7	2.2	0.6	0.4	0.5	0.4	0.9	0.7	0.4	0.4	0.3	0.4	2.1	3.6	5.0	4.5	0.9	1.9	6.0
29-Mar	3.9	Z	1.2	4.1	3.3	7.2	1.5	1.6	0.3	0.4	0.4	0.4	PF	0.5	0.6	0.5	0.4	0.4	0.9	2.5	0.8	0.3	0.3	0.3	1.5	7.2
30-Mar	0.3	0.3	Z	1.0	1.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.4	0.5	0.6	0.5	PF	PF	0.4	0.4	1.0
31-Mar	0.5	0.4	0.4	Z	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.9	0.8	0.6	0.6	0.4	0.6	0.9
	0.9	1.1	1.0	1.4	1.3	1.8	1.5	1.3	1.5	0.9	0.6	0.6	0.5	0.6	0.6	0.4	0.4	0.5	0.7	0.9	1.1	1.4	0.9	0.7	Diurnal Average	
	4.0	5.2	4.2	5.9	6.6	8.9	7.8	8.9	7.7	3.9	3.4	2.4	1.7	2.6	3.1	1.1	0.8	1.1	2.2	4.4	4.4	6.6	4.5	3.3	Diurnal Maximum	

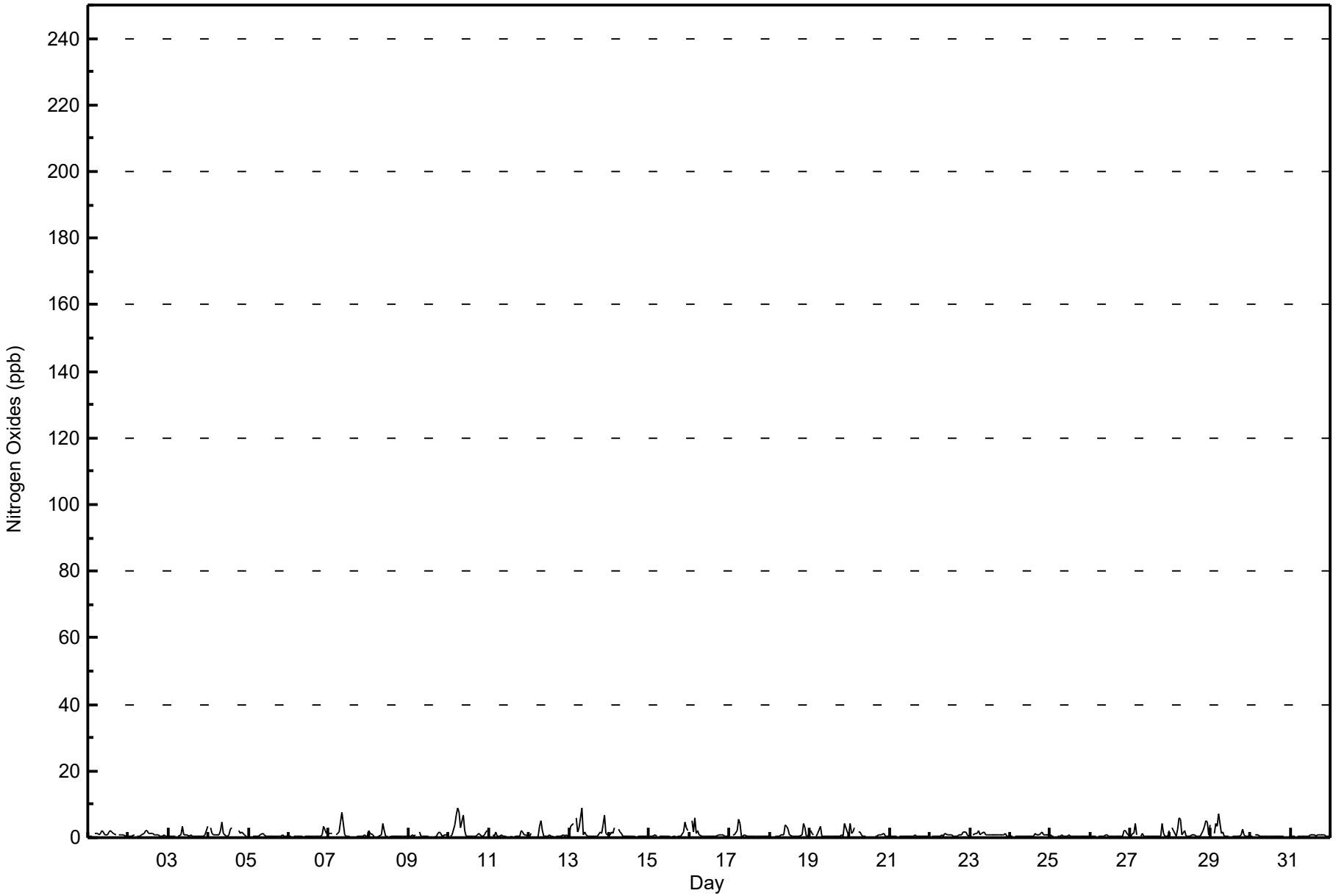
Z - zerospan C - Calibration M - Maintenance PF - Power Failure

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Fort Chipewyan - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	701	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 701

Total Number of Hours: 744

Nitrogen Oxides (NO_X) - ppb
Fort Chipewyan - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	17	12	18	145	240	11	4	2	0	7	12	25	36	36	88	48	701
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	17	12	18	145	240	11	4	2	0	7	12	25	36	36	88	48	701

Total Number of Valid Hours: 701

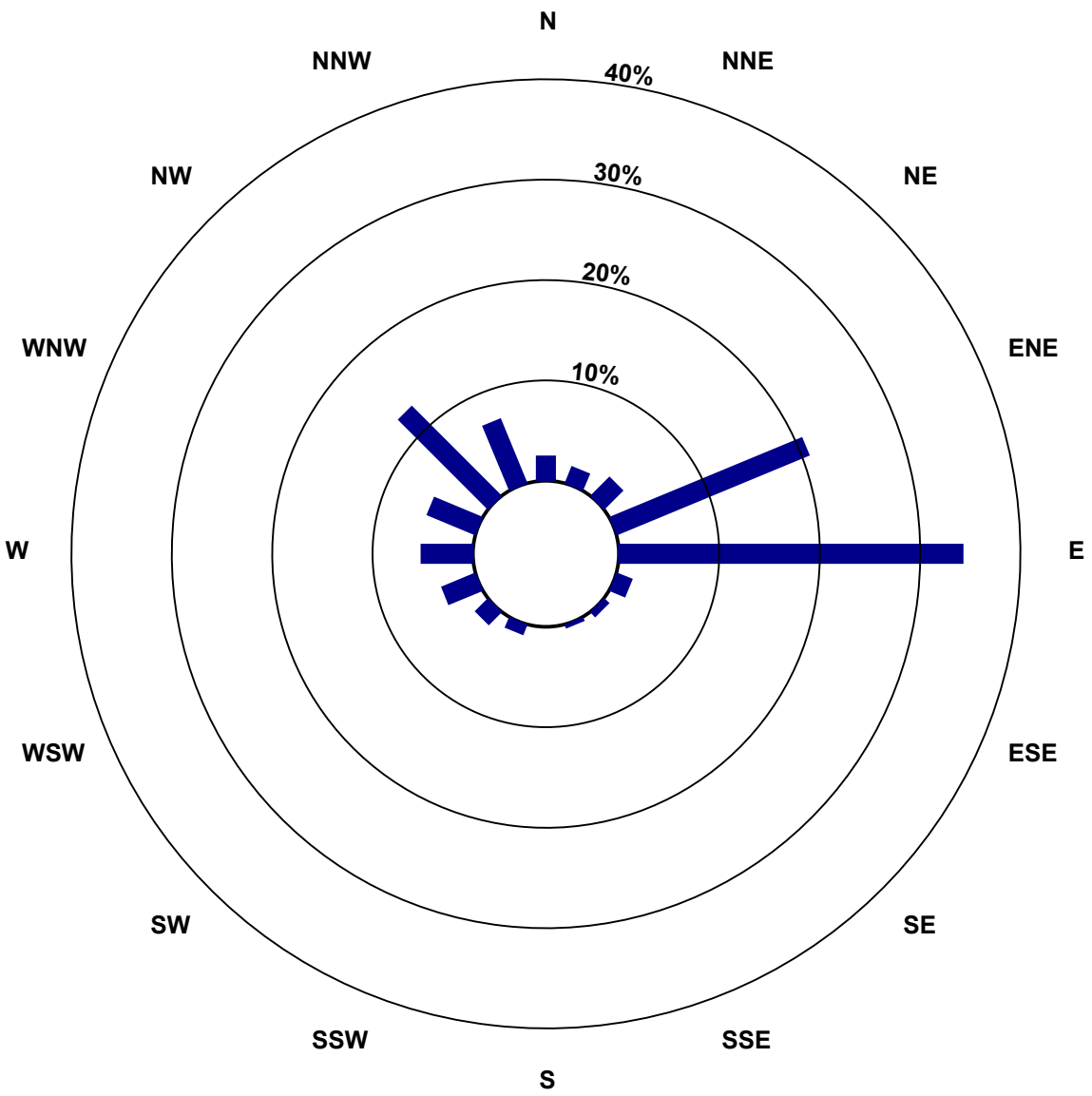
Total Number of Hours: 744

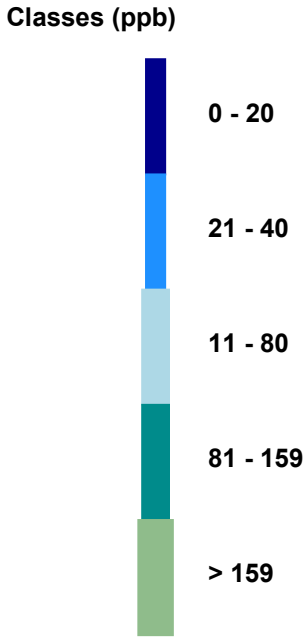
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Oxides (NO_X) - ppb

Fort Chipewyan





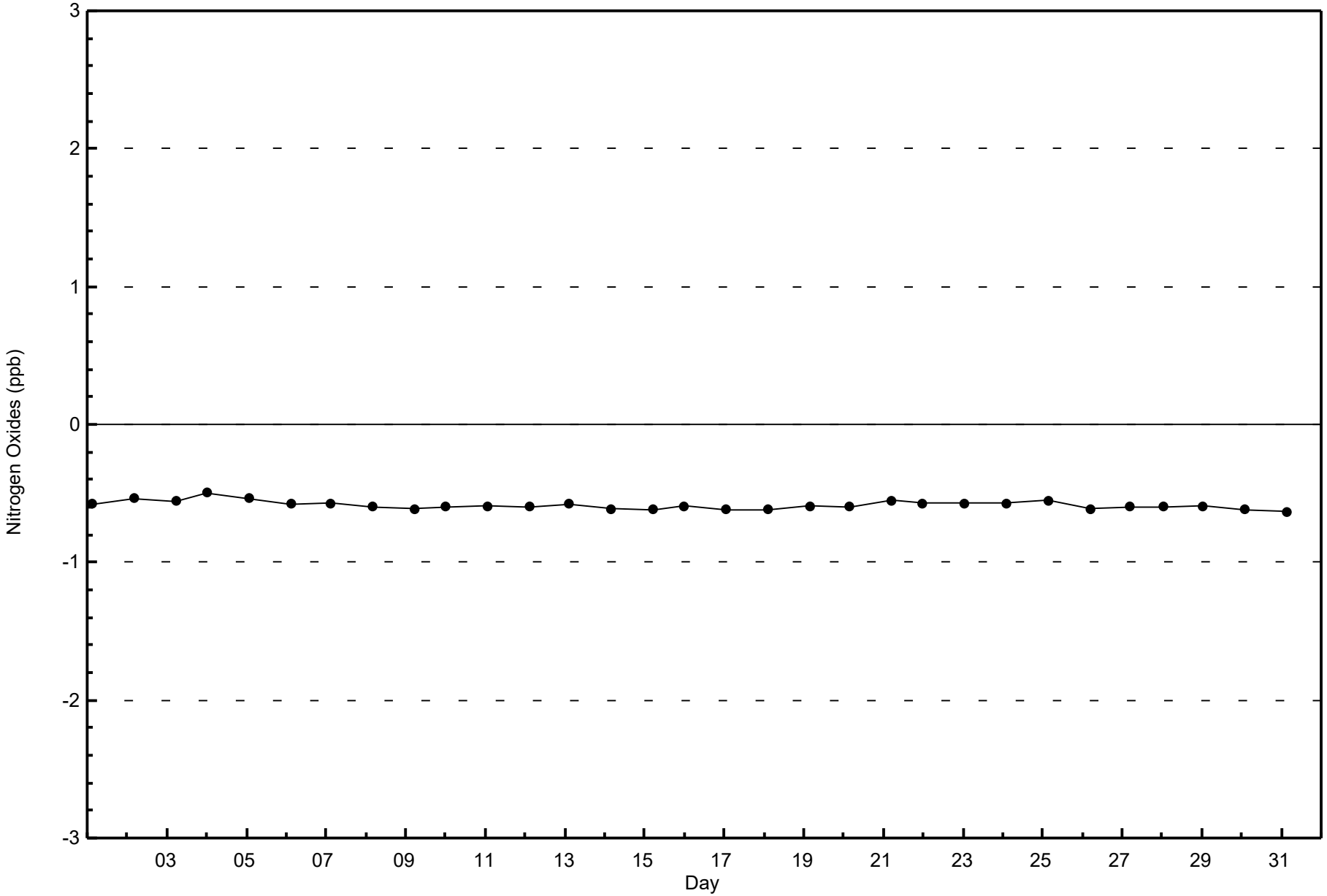
Total Number of Valid Hours: 701

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Fort Chipewyan - March 2025

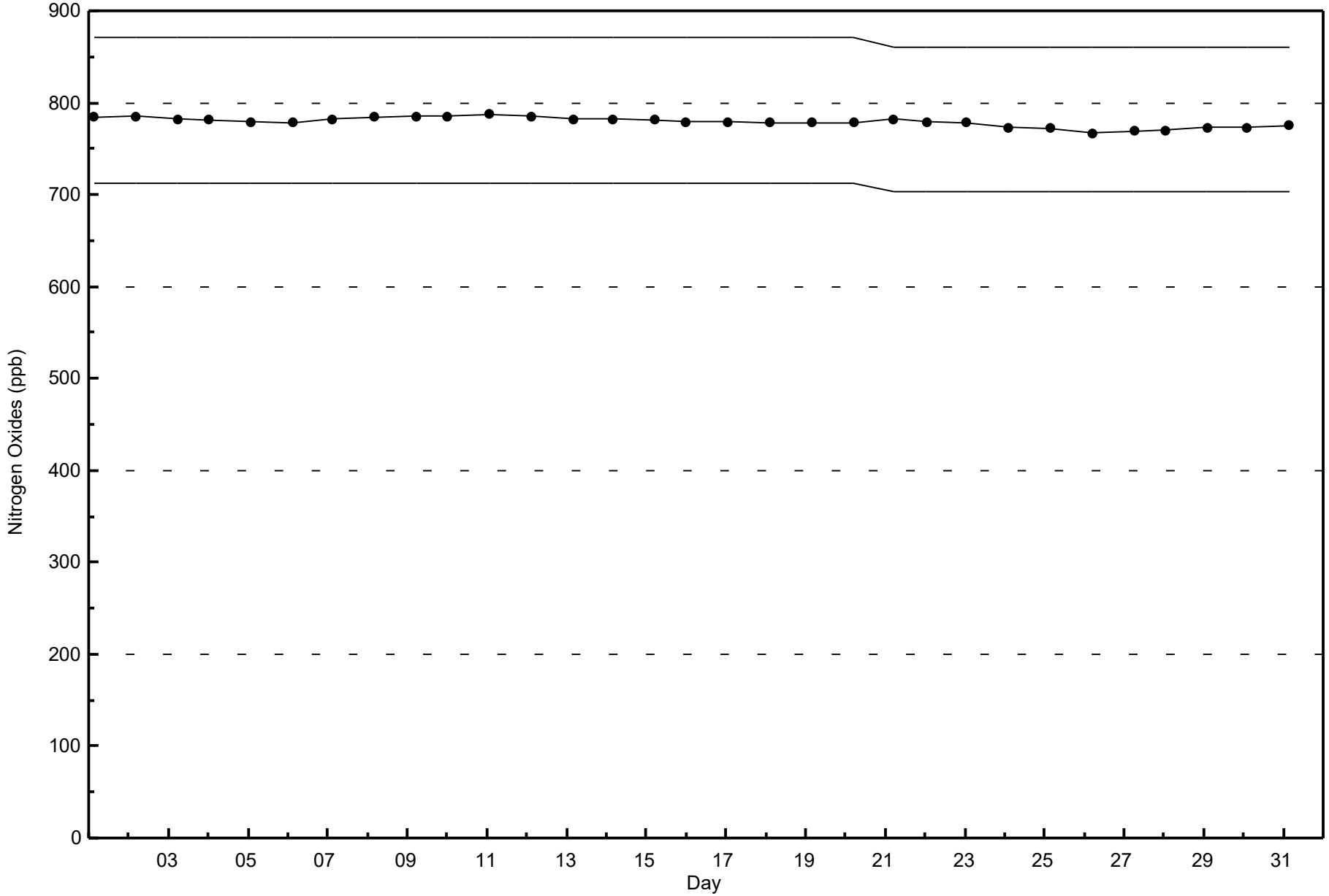


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Fort Chipewyan - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Fort Chipewyan - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 45.1 ppb on Mar 5 00:00 Maximum Daily Average: 39.9 ppb on Mar 30

Minimum Value: 13.3 ppb on Mar 10 07:00 Minimum Daily Average: 21.4 ppb on Mar 9
Maximum Diurnal Average: 36.1 ppb at hour 18 Minimum Diurnal Average: 32.5 ppb at hour 7
Monthly Average: 34.27 ppb Percentiles: P_1 = 18.5 P_{10} = 28.5 Q_1 = 32.0 Median = 34.8 Q_3 = 37.9 P_{90} = 39.9 P_{99} = 42.5

Hours in Service:	744
Hours of Data:	702
Hours of Missing Data:	42
Hours of Calibration:	36
Percent Operational Time:	99.2

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	34.3	Z	34.9	33.4	33.0	32.5	33.6	31.4	30.5	31.8	33.9	34.0	34.1	33.9	34.5	35.7	36.3	PF	36.8	37.1	36.6	36.3	36.2	36.3	34.4	37.1
2-Mar	36.3	36.3	Z	36.1	36.0	36.8	36.4	35.6	33.0	30.8	29.3	30.0	32.7	34.1	35.8	36.1	35.0	34.0	33.2	33.4	33.3	32.6	33.3	34.8	34.1	36.8
3-Mar	34.7	34.2	33.6	Z	34.3	33.8	33.3	32.8	30.8	33.0	33.9	34.0	34.4	34.9	35.9	35.7	35.7	35.7	34.8	34.7	35.4	35.0	34.6	30.2	34.1	35.9
4-Mar	26.6	31.4	34.4	35.6	Z	34.9	34.7	34.4	30.5	34.4	35.5	35.0	34.3	33.1	32.5	33.7	34.4	M	M	34.7	33.9	34.2	38.0	45.1	34.3	45.1
5-Mar	41.7	39.0	38.4	38.2	38.0	Z	39.8	39.1	38.1	38.4	38.6	38.1	37.7	37.7	37.8	38.2	37.9	38.2	39.2	39.4	41.2	41.0	40.3	39.7	38.9	41.7
6-Mar	Z	39.8	40.0	40.3	40.5	40.2	40.5	40.4	39.9	39.8	40.0	39.8	39.8	39.8	39.8	40.0	40.3	40.2	40.2	40.1	39.4	34.7	37.2	36.6	39.5	40.5
7-Mar	35.4	Z	33.9	34.9	34.4	32.5	33.6	29.7	28.7	36.4	38.9	40.0	39.7	39.5	39.7	40.0	40.5	41.2	39.4	40.2	41.1	41.6	41.4	39.8	37.5	41.6
8-Mar	38.0	38.6	Z	41.2	40.2	40.2	39.8	39.8	37.0	39.3	40.3	40.0	37.9	38.0	39.2	37.7	34.7	33.1	32.0	28.5	25.3	24.5	26.0	26.8	35.6	41.2
9-Mar	26.5	26.5	26.6	Z	26.7	26.3	24.3	24.9	24.0	20.0	16.7	17.3	16.7	18.5	19.3	19.2	20.3	19.1	18.4	19.2	20.2	20.4	20.7	20.7	21.4	26.7
10-Mar	19.8	21.4	21.6	18.4	Z	13.6	13.3	18.8	19.9	19.3	20.0	20.8	22.2	22.4	24.6	29.9	32.0	32.7	32.8	29.7	29.1	28.6	29.2	28.7	23.9	32.8
11-Mar	29.0	29.2	29.3	28.5	28.5	Z	28.8	C	C	C	C	C	31.3	31.2	32.0	32.4	32.8	32.3	32.1	29.7	30.1	30.8	30.3	31.3	30.5	32.8
12-Mar	Z	30.5	30.0	31.0	31.3	30.0	27.3	27.4	29.0	29.3	29.9	30.7	30.7	31.0	31.5	32.6	33.6	34.2	34.1	33.5	33.0	33.6	33.3	33.2	31.3	34.2
13-Mar	33.4	Z	28.5	28.5	28.6	28.2	28.7	25.6	30.6	29.6	29.6	34.1	34.6	34.6	35.0	34.7	34.9	35.3	33.5	32.3	29.3	25.5	29.5	30.2	31.1	35.3
14-Mar	29.7	27.6	Z	27.1	25.4	26.5	27.8	28.2	30.5	31.2	31.5	32.8	33.5	33.6	34.4	35.9	37.8	37.8	38.1	38.5	38.4	38.1	38.5	39.2	33.1	39.2
15-Mar	37.8	38.0	37.1	Z	36.7	35.4	35.5	34.2	33.1	31.4	31.2	31.2	32.5	32.6	32.5	32.9	32.9	35.0	34.1	32.0	32.1	29.0	29.5	30.0	33.3	38.0
16-Mar	29.3	27.7	28.2	25.7	Z	30.3	30.1	29.2	29.3	29.0	29.1	28.6	29.8	32.5	31.8	33.2	33.6	33.2	33.4	32.1	31.8	33.3	34.1	34.1	30.8	34.1
17-Mar	34.1	33.9	34.6	34.2	31.5	Z	28.3	31.5	31.9	32.0	32.8	34.3	36.5	36.7	38.2	37.3	37.9	38.1	36.6	35.9	34.8	34.2	34.0	34.5	34.5	38.2
18-Mar	Z	36.8	37.5	36.9	36.3	35.5	35.3	35.2	35.4	34.7	35.7	35.6	35.3	36.4	37.4	37.1	36.7	37.5	37.2	36.3	32.1	32.8	34.9	34.8	35.8	37.5
19-Mar	34.7	Z	34.8	35.2	34.8	34.6	32.8	34.9	35.2	34.6	36.1	36.5	37.2	37.0	37.0	37.2	37.2	37.0	36.6	36.4	37.0	33.0	35.3	36.0	35.7	37.2
20-Mar	32.9	35.6	Z	34.4	34.9	34.8	34.1	34.9	35.9	37.0	36.6	36.3	36.8	37.2	36.6	36.4	37.4	38.7	35.9	25.4	24.0	27.0	28.5	30.8	34.0	38.7
21-Mar	31.7	32.3	32.8	Z	32.9	32.0	32.7	33.4	31.8	30.4	31.4	32.1	33.6	34.8	37.0	37.8	38.6	39.3	39.7	39.6	39.8	39.6	39.8	40.0	35.4	40.0
22-Mar	40.1	39.9	39.1	38.1	Z	37.5	37.0	36.8	36.4	35.7	35.0	34.9	34.9	34.9	34.0	34.5	34.8	35.0	34.9	34.5	34.0	33.4	37.1	37.4	36.1	40.1
23-Mar	36.7	35.8	35.4	34.4	32.9	Z	33.4	33.3	32.8	35.4	37.3	38.8	40.0	40.1	40.0	40.3	40.2	40.2	40.1	40.0	39.6	38.8	39.5	40.0	37.6	40.3
24-Mar	Z	39.8	38.8	38.8	38.3	38.2	38.0	38.0	38.2	38.4	38.8	38.7	39.2	39.3	39.3	38.7	38.5	39.2	41.5	41.5	43.0	43.0	42.3	41.5	39.6	43.0
25-Mar	39.9	Z	36.8	35.0	34.1	33.4	32.8	32.5	33.4	33.8	34.8	35.0	34.9	34.8	34.2	33.4	32.8	33.2	33.3	35.7	32.9	34.1	32.3	29.7	34.0	39.9
26-Mar	28.3	28.4	Z	28.3	27.9	27.5	27.5	27.9	30.0	33.0	34.6	35.4	35.4	35.3	34.8	31.6	34.4	37.0	37.7	37.9	36.0	36.0	36.0	36.3	32.9	37.9
27-Mar	36.1	35.1	33.5	Z	32.1	31.9	31.3	30.5	31.0	32.0	32.3	32.6	33.0	33.3	33.4	33.5	33.4	33.3	33.4	29.9	33.1	34.2	34.1	31.1	32.8	36.1
28-Mar	31.4	31.1	31.2	33.8	Z	24.1	25.2	29.5	31.1	30.1	32.0	30.8	33.8	35.5	36.5	37.3	38.0	38.6	38.1	36.2	34.9	33.0	33.4	35.6	33.1	38.6
29-Mar	32.1	36.3	36.1	33.5	33.8	Z	33.0	31.9	34.9	36.3	35.4	35.9	PF	38.6	40.4	41.3	40.3	39.6	38.8	37.0	37.6	37.6	38.3	38.3	36.7	41.3
30-Mar	Z	39.3	38.3	38.1	37.9	38.1	38.0	38.3	38.5	38.7	39.6	40.5	40.5	40.9	41.2	41.5	41.2	40.9	41.0	40.7	40.7	PF	PF	43.9	39.9	43.9
31-Mar	43.3	Z	42.5	42.0	41.7	41.2	39.9	39.1	38.3	37.8	37.8	37.1	37.3	37.5	37.5	38.2	38.5	38.7	39.3	40.6	41.6	42.1	42.6	42.8	39.9	43.3
	33.6	33.8	34.1	33.9	34.0	32.7	32.5	32.6	32.7	33.1	33.6	34.0	34.3	34.8	35.3	35.6	35.9	36.1	35.9	34.9	34.6	33.9	34.7	35.1	Diurnal Average	
	43.3	39.9	42.5	42.0	41.7	41.2	40.5	40.4	39.9	39.8	40.3	40.5	40.5	40.9	41.2	41.5	41.2	41.2	41.5	41.5	43.0	43.0	42.6	45.1	Diurnal Maximum	

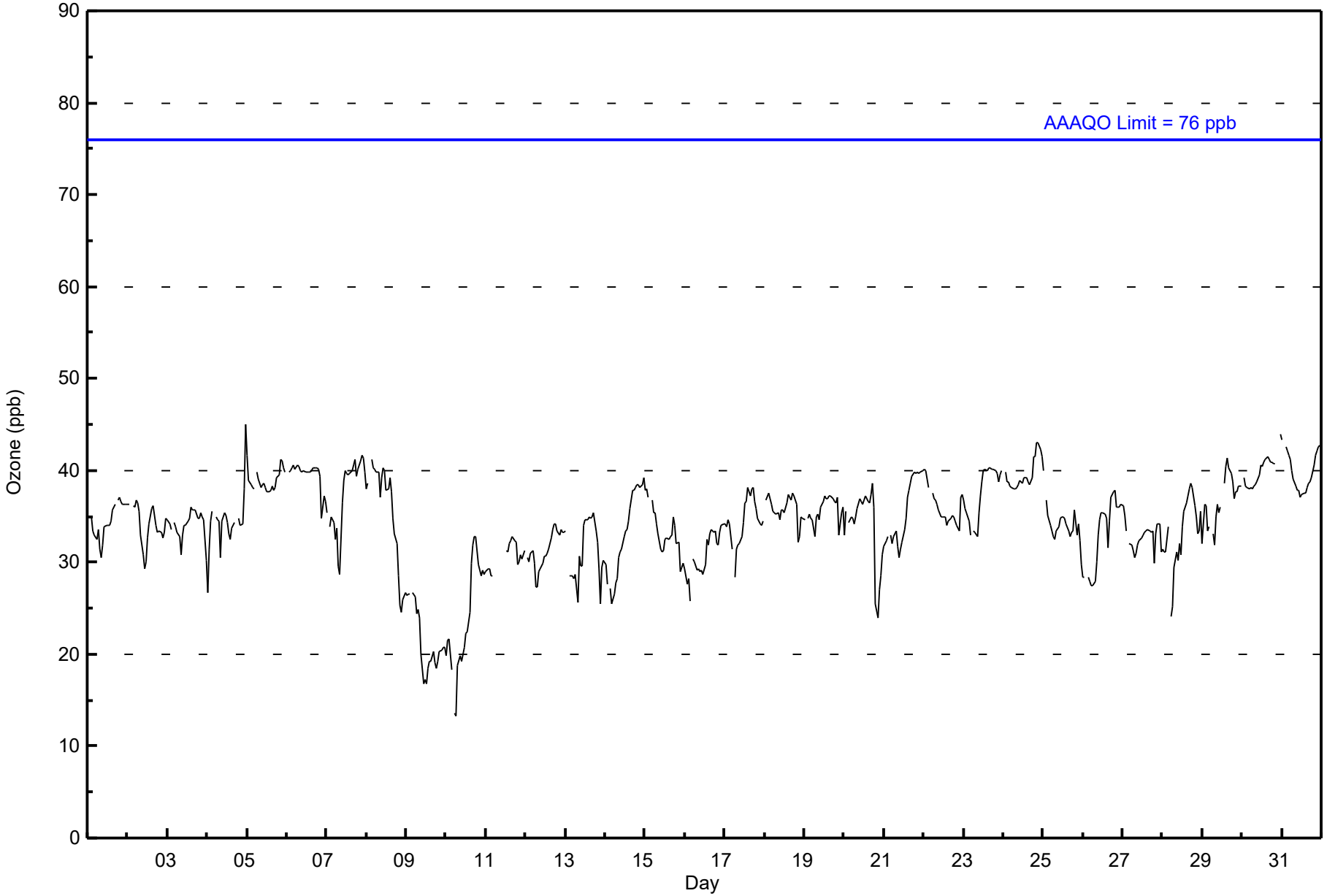
Z - zerospan C - Calibration M - Maintenance PF - Power Failure
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Fort Chipewyan - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	21	2.99	2.99
21 - 50	681	97.01	100.00
51 - 82	0	0.00	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 702

Total Number of Hours: 744

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	0	1	0	2	4	0	0	0	0	1	1	4	2	3	3	0	21
21 - 50	17	10	17	147	232	11	5	2	0	6	12	21	35	32	83	51	681
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	17	11	17	149	236	11	5	2	0	7	13	25	37	35	86	51	702

Total Number of Valid Hours: 702

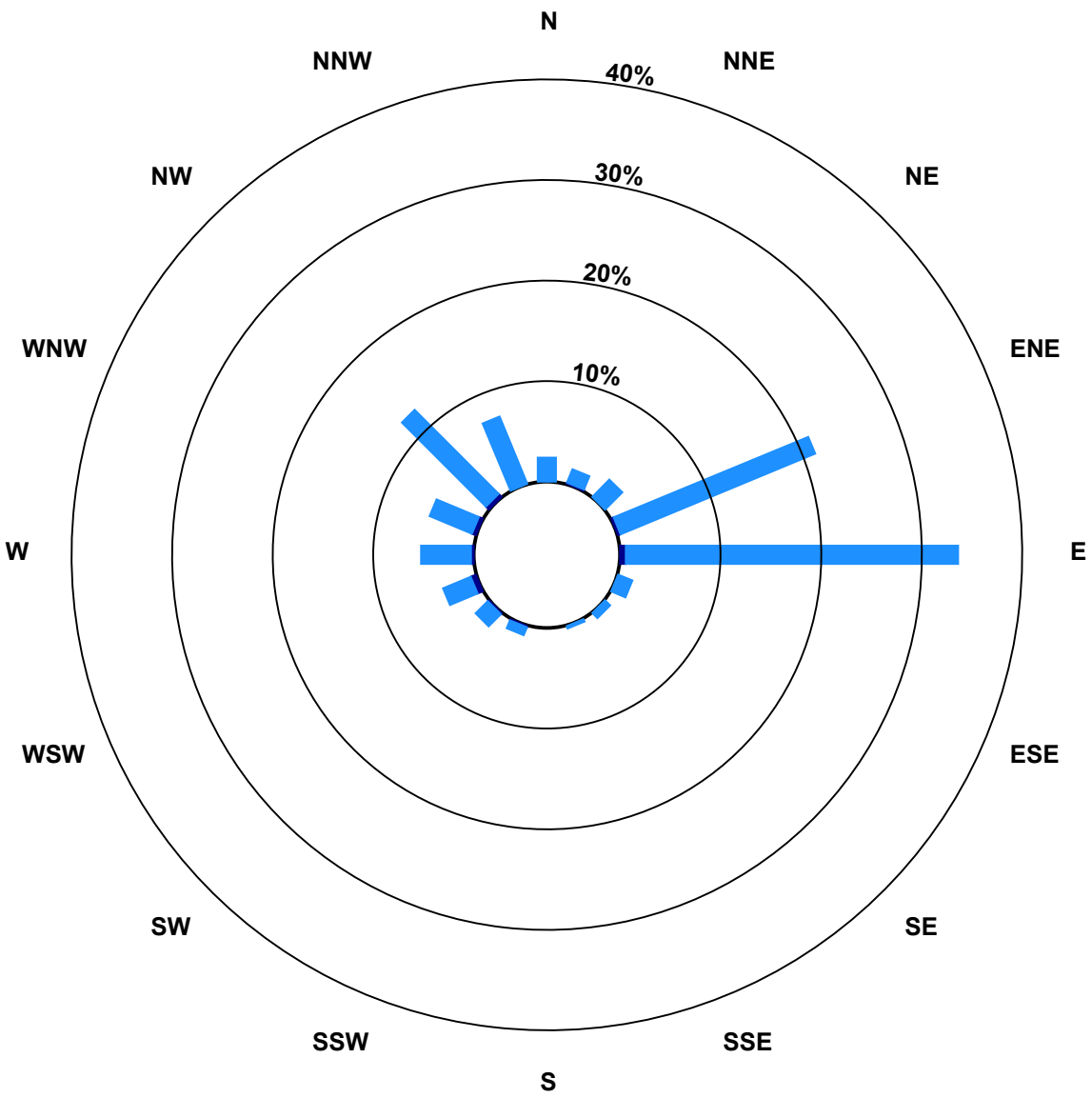
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Ozone (O_3) - ppb

Fort Chipewyan



Classes (ppb)

0 - 20

21 - 50

51 - 82

> 83

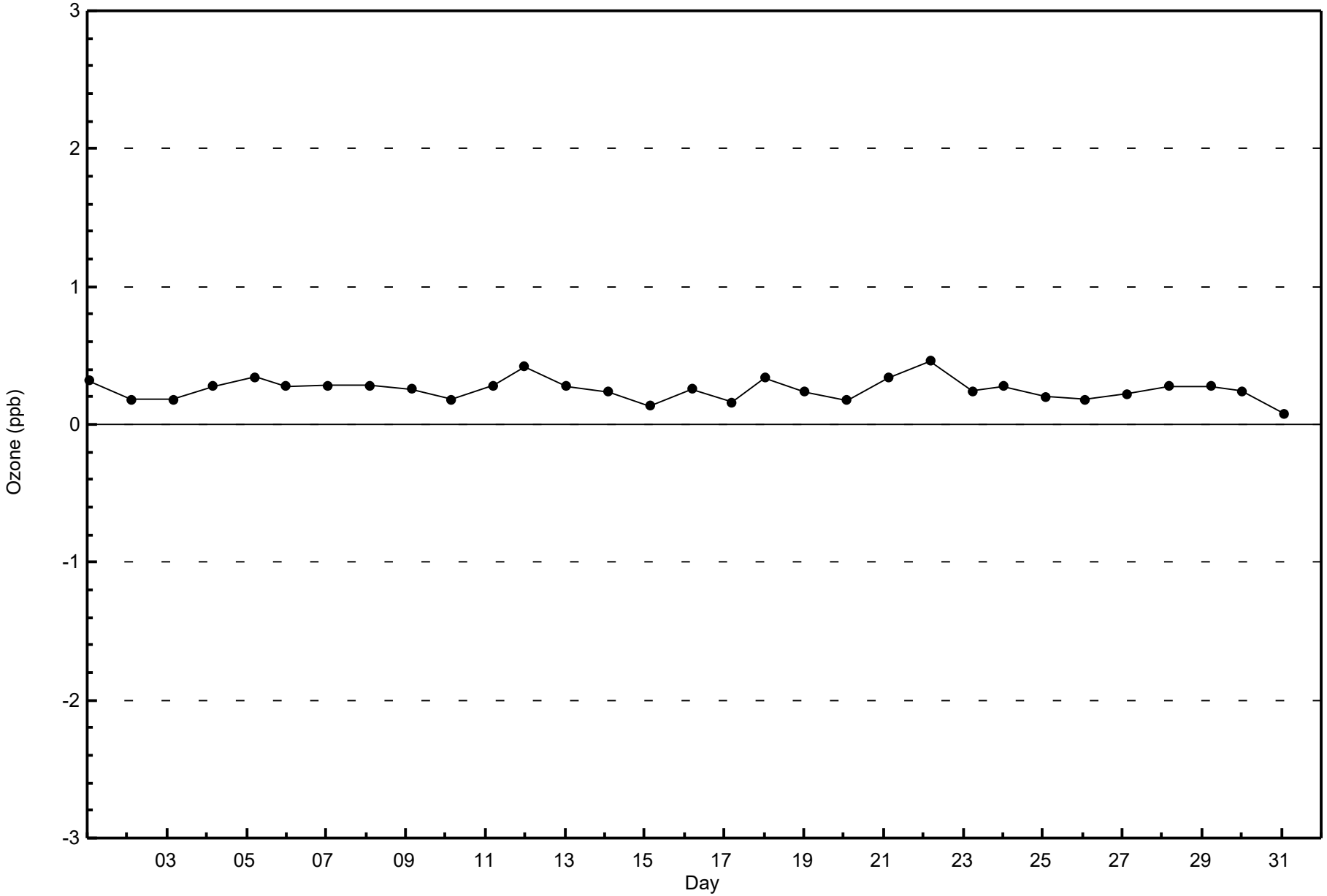
Total Number of Valid Hours: 702

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Fort Chipewyan - March 2025

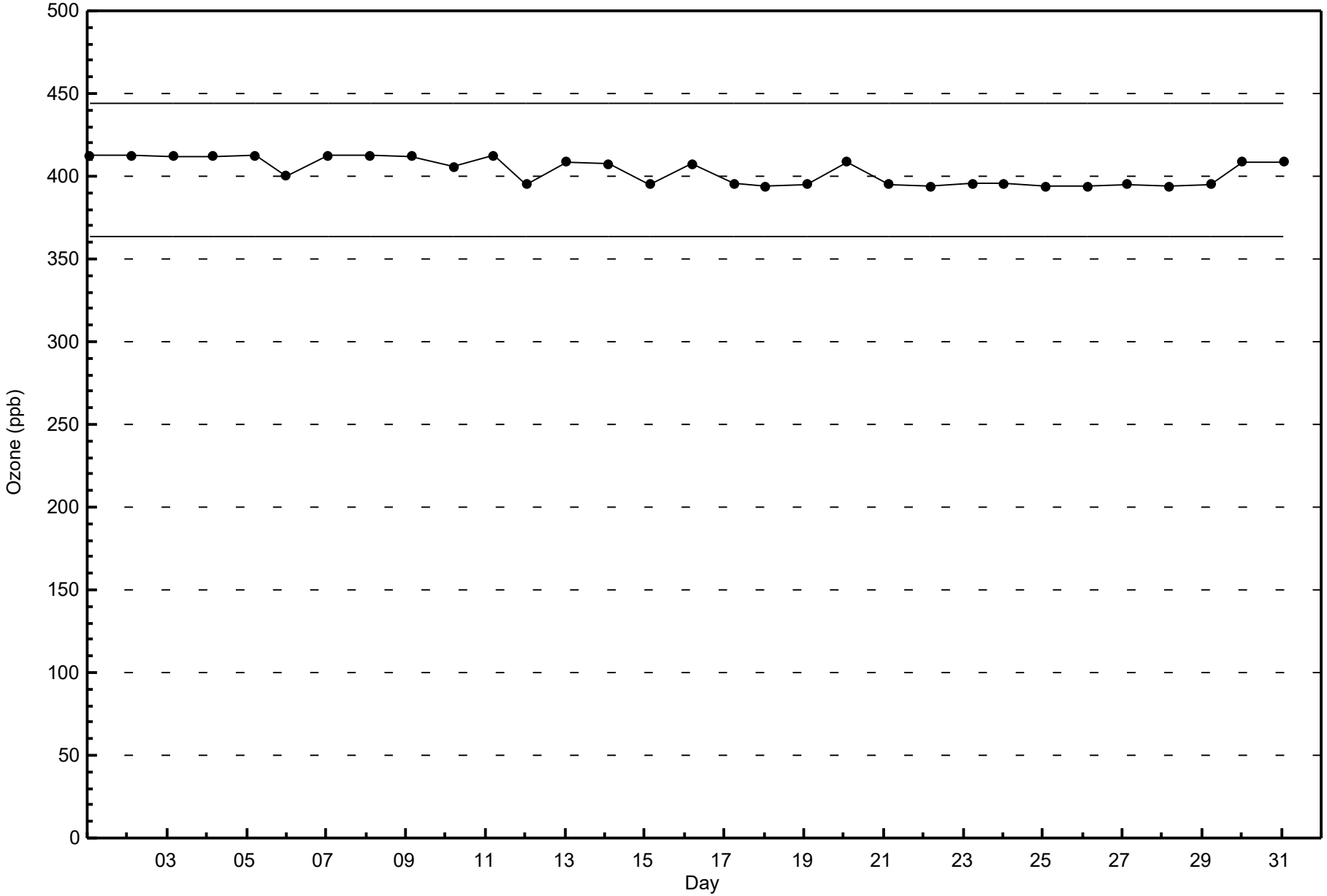


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Fort Chipewyan - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Fort Chipewyan - March 2025

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

Maximum Value: 18.4 $\mu g/m^3$ on Mar 15 00:00

Maximum Daily Average: 3.6 $\mu g/m^3$ on Mar 14

Minimum Value: 0.5 $\mu g/m^3$ on Mar 7 18:00

Minimum Daily Average: 1.2 $\mu g/m^3$ on Mar 8

Maximum Diurnal Average: 3.3 $\mu g/m^3$ at hour 22

Minimum Diurnal Average: 2.0 $\mu g/m^3$ at hour 16

Monthly Average: 2.51 $\mu g/m^3$

Percentiles: P_1 = 0.6 P_{10} = 1.1 Q_1 = 1.8 Median = 2.4 Q_3 = 3.0 P_{90} = 3.6 P_{99} = 6.8

Hours in Service:	744
Hours of Data:	736
Hours of Missing Data:	8
Hours of Calibration:	2
Percent Operational Time:	99.2

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	2.6	2.6	2.7	2.8	2.8	3.1	2.7	3.1	3.4	3.0	2.8	2.8	3.0	3.3	3.3	2.9	2.9	PF	3.6	3.6	3.5	3.4	3.2	3.1	3.1	3.6
2-Mar	3.1	3.0	3.0	3.0	3.0	2.8	2.8	2.9	3.0	3.2	3.5	3.5	3.1	2.8	2.4	2.9	3.9	4.6	4.1	3.9	3.6	4.0	4.3	3.1	3.3	4.6
3-Mar	3.3	3.1	3.0	2.8	2.8	2.7	2.7	2.8	2.8	2.7	2.7	2.7	2.7	2.5	2.3	2.2	1.9	1.8	1.7	1.7	1.4	1.3	1.5	2.5	2.4	3.3
4-Mar	2.8	2.4	1.6	1.1	1.1	1.2	2.1	1.5	3.2	2.0	1.2	1.2	1.5	1.7	2.2	2.2	2.3	2.3	2.3	2.4	1.9	2.5	2.0	1.0	1.9	3.2
5-Mar	1.3	1.9	1.7	1.6	2.0	1.8	1.5	2.0	1.6	1.5	1.5	M	1.6	1.5	1.4	1.5	1.6	1.5	1.5	1.6	1.7	1.6	1.3	1.2	1.6	2.0
6-Mar	1.3	1.0	0.9	0.9	0.8	0.9	0.9	0.8	0.8	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.6	0.7	1.3	4.8	3.8	4.8	1.3	4.8
7-Mar	3.1	1.1	2.3	5.0	1.9	2.0	1.4	2.4	6.0	2.6	1.2	1.0	0.7	0.5	0.5	0.6	0.5	0.5	0.7	0.5	0.6	0.9	0.6	0.7	1.5	6.0
8-Mar	3.1	2.5	1.9	0.5	0.7	0.6	0.6	0.7	0.7	0.6	0.6	0.6	0.6	0.7	0.8	0.8	1.0	1.1	1.0	1.3	1.6	1.8	1.9	2.0	1.2	3.1
9-Mar	2.1	2.0	1.7	1.8	1.8	1.7	1.7	1.5	1.4	1.1	0.9	1.0	0.8	0.9	0.9	1.0	1.0	1.1	2.9	3.7	1.1	4.4	2.8	2.3	1.7	4.4
10-Mar	1.1	0.7	1.2	1.8	6.8	9.7	4.3	2.8	5.7	3.0	1.4	1.2	1.3	1.4	1.5	1.6	1.6	1.8	2.3	1.4	1.6	2.2	5.3	3.8	2.7	9.7
11-Mar	2.6	2.1	1.5	1.2	4.7	1.6	1.1	1.5	1.1	0.9	0.7	0.6	0.7	C	C	0.6	0.7	0.8	1.0	4.7	6.0	2.6	2.4	0.8	1.8	6.0
12-Mar	1.3	3.6	3.6	1.3	1.1	1.2	2.1	3.1	2.0	1.5	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.2	2.0	2.9	3.8	4.6	2.3	2.0	4.6
13-Mar	1.4	2.5	3.6	3.0	6.6	2.0	1.7	3.1	1.7	1.7	1.3	1.0	1.1	1.0	1.2	1.6	1.6	2.5	3.4	3.4	3.1	3.5	3.6	4.0	2.5	6.6
14-Mar	3.3	3.2	3.0	4.5	3.4	3.4	3.7	3.3	2.9	3.0	3.0	2.9	2.9	3.0	2.8	2.5	2.0	1.9	2.2	2.6	2.6	2.5	2.5	18.4	3.6	18.4
15-Mar	2.3	2.3	2.3	2.3	2.5	12.6	5.2	2.7	2.4	2.4	2.4	2.1	1.7	1.8	1.7	1.7	1.7	2.1	2.5	1.9	4.1	7.8	5.0	5.0	3.3	12.6
16-Mar	3.5	7.9	3.8	4.3	2.6	3.0	2.2	2.2	2.0	2.0	2.1	2.2	2.0	1.8	1.9	2.1	2.1	2.2	2.6	2.7	2.5	2.3	2.2	2.0	2.7	7.9
17-Mar	2.0	2.2	1.9	2.3	2.0	1.9	2.0	1.9	1.9	2.0	2.1	2.0	1.6	1.6	1.6	1.6	1.7	1.7	1.9	1.8	1.9	1.9	2.0	2.1	1.9	2.3
18-Mar	2.2	2.5	2.4	2.4	2.5	2.5	2.6	3.0	3.4	3.0	3.0	2.8	2.6	2.5	2.4	2.3	2.3	2.2	2.2	2.7	7.3	8.8	2.6	2.5	3.0	8.8
19-Mar	4.5	4.0	3.5	2.0	2.3	3.1	4.6	2.2	2.1	1.9	1.8	2.0	1.7	1.9	1.9	2.2	2.1	2.4	2.6	3.0	4.3	2.9	2.4	2.3	2.7	4.6
20-Mar	2.1	2.5	2.6	3.8	3.3	2.8	3.1	2.6	2.3	2.3	2.4	2.3	2.3	2.3	2.3	2.5	2.7	2.9	3.2	4.1	4.8	4.0	3.9	3.5	2.9	4.8
21-Mar	3.1	3.0	2.9	2.8	2.8	2.9	2.8	2.8	3.4	3.9	3.5	3.4	3.2	2.8	2.6	2.6	2.5	2.5	2.2	2.0	2.0	2.0	1.9	2.3	2.8	3.9
22-Mar	1.7	1.9	2.1	2.3	2.5	2.8	2.9	3.0	2.8	2.8	3.0	3.3	3.3	3.3	3.3	3.3	3.3	3.4	3.5	3.6	4.1	3.8	3.2	3.2	3.0	4.1
23-Mar	3.2	3.4	3.2	3.1	3.1	3.2	3.1	3.2	3.7	3.6	3.2	3.4	3.5	3.3	3.4	3.4	3.5	3.5	3.4	3.7	3.5	4.2	3.1	3.0	3.4	4.2
24-Mar	3.1	2.9	3.0	3.1	3.0	3.0	3.0	2.8	2.8	2.9	2.9	2.8	2.8	2.8	2.8	2.8	3.0	3.0	2.9	2.9	1.7	1.2	1.3	1.3	2.7	3.1
25-Mar	3.0	1.9	2.3	2.7	3.3	3.0	2.8	3.1	3.1	3.0	2.9	3.0	2.8	2.5	2.4	2.4	2.7	2.6	2.7	2.1	2.1	2.0	2.2	2.4	2.6	3.3
26-Mar	2.5	2.5	2.6	2.6	2.6	2.6	2.6	2.6	2.5	2.5	2.4	2.2	2.3	2.3	2.4	2.5	2.4	2.0	2.3	2.3	6.3	5.1	5.6	3.9	2.9	6.3
27-Mar	4.0	2.2	2.4	2.9	3.2	2.3	2.5	3.1	2.4	2.3	2.4	2.4	2.3	2.2	2.2	2.1	2.1	2.1	2.2	4.9	4.0	2.4	2.4	4.6	2.7	4.9
28-Mar	3.9	3.7	2.9	2.2	2.7	4.1	4.4	2.6	2.9	2.7	2.5	2.2	2.0	2.2	2.1	2.1	2.0	2.0	2.1	4.3	5.9	6.1	5.0	3.7	3.2	6.1
29-Mar	6.1	2.8	2.9	2.9	3.6	UO	3.4	3.3	2.3	2.2	2.2	2.3	PF	2.1	2.1	2.1	2.0	2.1	2.6	4.6	2.7	2.0	2.2	2.1	2.8	6.1
30-Mar	2.1	2.3	2.3	2.3	2.6	2.1	2.0	2.0	2.0	2.0	2.0	1.8	1.9	2.1	2.3	2.1	2.1	2.6	2.9	2.7	2.2	PF	PF	2.2	2.2	2.9
31-Mar	2.1	2.1	2.1	2.2	2.2	2.4	2.5	2.6	2.7	2.6	2.6	2.9	2.9	2.8	3.0	3.0	2.9	2.7	2.9	2.9	2.8	2.7	2.6	2.3	2.6	3.0
	2.7	2.6	2.5	2.5	2.8	3.0	2.6	2.5	2.6	2.3	2.1	2.1	2.0	2.0	2.1	2.0	2.1	2.1	2.4	2.8	3.1	3.3	2.9	3.2	Diurnal Average	
	6.1	7.9	3.8	5.0	6.8	12.6	5.2	3.3	6.0	3.9	3.5	3.5	3.5	3.3	3.4	3.4	3.9	4.6	4.1	4.9	7.3	8.8	5.6	18.4	Diurnal Maximum	

C - Calibration M - Maintenance UO - Unstable Operation PF - Power Failure

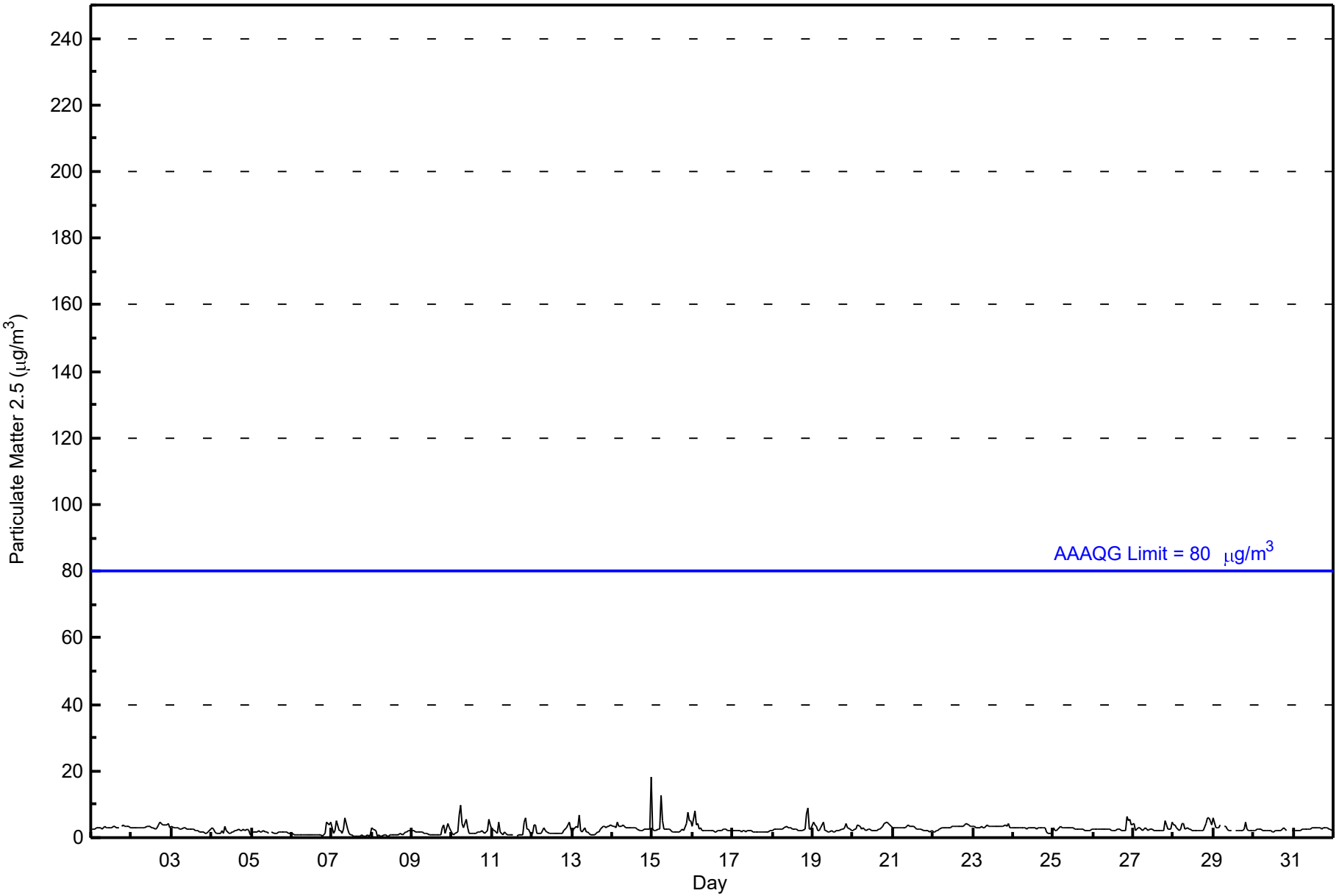
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Fort Chipewyan - March 2025





Wood Buffalo Environmental Association

Cumulative Frequency Distribution

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

Fort Chipewyan - March 2025

Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	719	97.69	97.69
6 - 15	16	2.17	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: 736

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

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

Fort Chipewyan - March 2025

Concentration Ranges ($\mu g/m^3$)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	18	11	19	144	248	11	5	2	0	6	13	25	38	37	92	50	719
6 - 15	0	1	0	11	2	0	0	0	0	0	0	0	0	1	1	0	16
16 - 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	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	18	12	19	155	250	11	5	2	0	6	13	25	38	38	93	51	736

Total Number of Valid Hours: 736

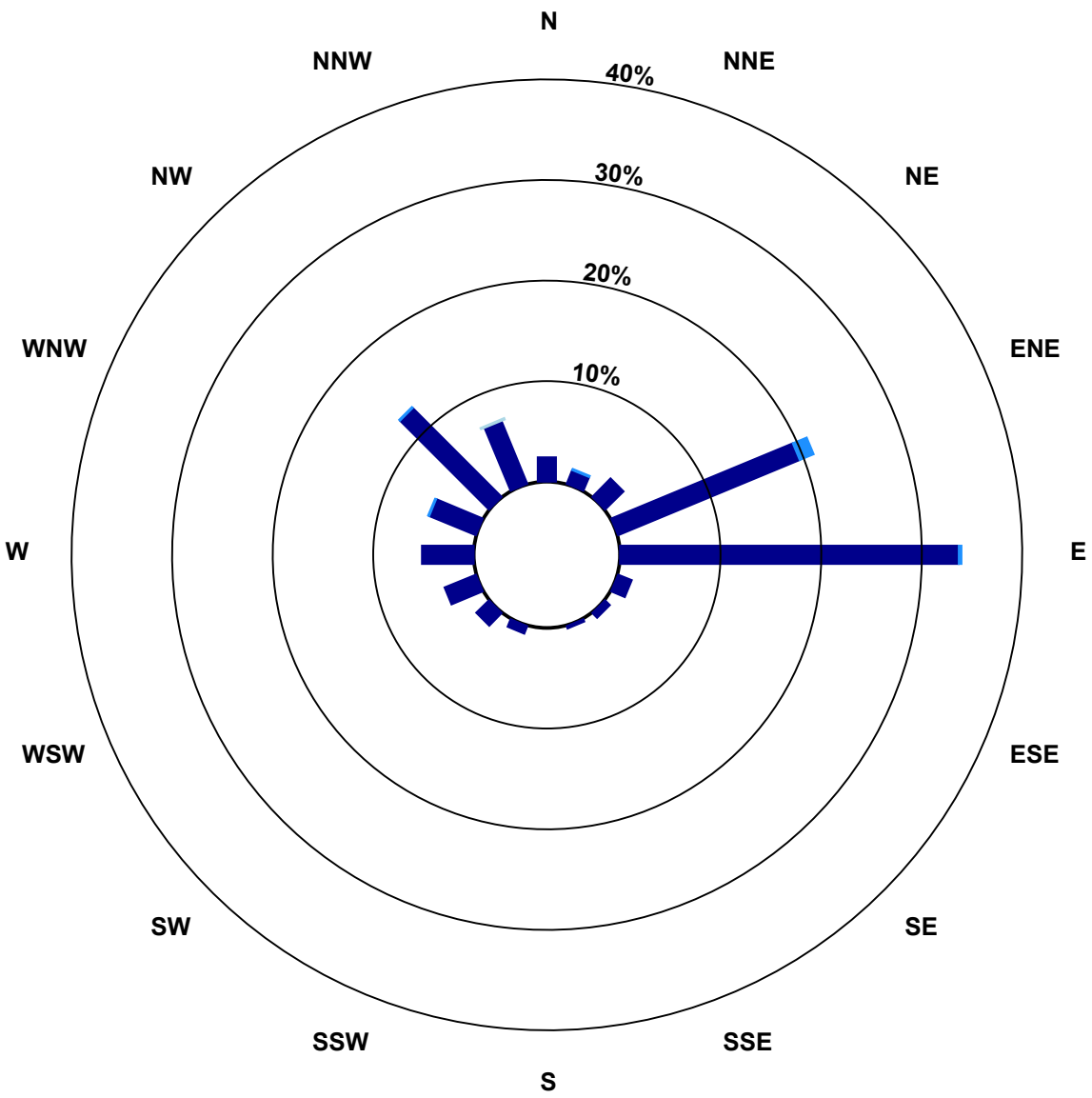
Total Number of Hours: 744

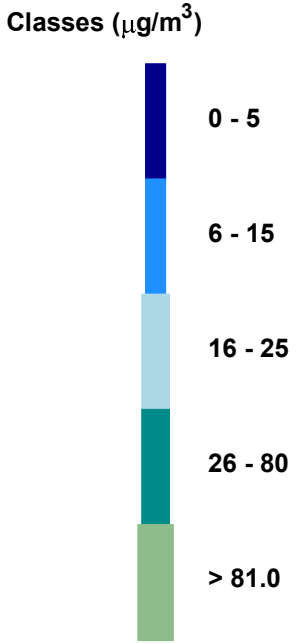
Wood Buffalo Environmental Association

Wind Rose Mar 2025

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

Fort Chipewyan





Total Number of Valid Hours: 736

Wood Buffalo Environmental Association

Summary of Hour Averages

Carbon Monoxide (CO) - ppm

Fort Chipewyan - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 0.2 ppm on Mar 10 09:00
Maximum Daily Average: 0.1 ppm on Mar 10

Minimum Value: 0.0 ppm on Mar 3 13:00
Minimum Daily Average: 0.0 ppm on Mar 4
Maximum Diurnal Average: 0.1 ppm at hour 6
Minimum Diurnal Average: 0.1 ppm at hour 14
Monthly Average: 0.09 ppm
Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.1 Q_3 = 0.1 P_{90} = 0.1 P_{99} = 0.2

Hours in Service:	744
Hours of Data:	703
Hours of Missing Data:	41
Hours of Calibration:	35
Percent Operational Time:	99.2

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	PF	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
2-Mar	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	0.0	0.0	0.1	0.0	0.1
3-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4-Mar	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	M	M	0.0	0.0	0.0	0.0	0.0	0.0	0.1
5-Mar	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
6-Mar	0.1	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
7-Mar	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
8-Mar	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
9-Mar	Z	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	0.2	0.1	0.2	0.1	0.1	0.1	0.2
10-Mar	0.1	Z	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2
11-Mar	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2
12-Mar	0.1	0.1	0.1	Z	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
13-Mar	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
14-Mar	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	0.2	0.1	0.2
15-Mar	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2
16-Mar	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	0.1	0.1	0.1	0.1	0.2
17-Mar	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	C	C	C	C	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2
18-Mar	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2
19-Mar	0.2	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
20-Mar	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	0.1	0.1	0.1	0.2
21-Mar	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
22-Mar	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
23-Mar	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
24-Mar	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	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1
25-Mar	0.0	0.0	0.0	0.1	Z	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
26-Mar	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2
27-Mar	Z	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
28-Mar	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2
29-Mar	0.2	0.1	Z	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	PF	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
30-Mar	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	0.1	0.1	PF	PF	0.1	0.1	0.2
31-Mar	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	Diurnal Average	
	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	Diurnal Maximum	

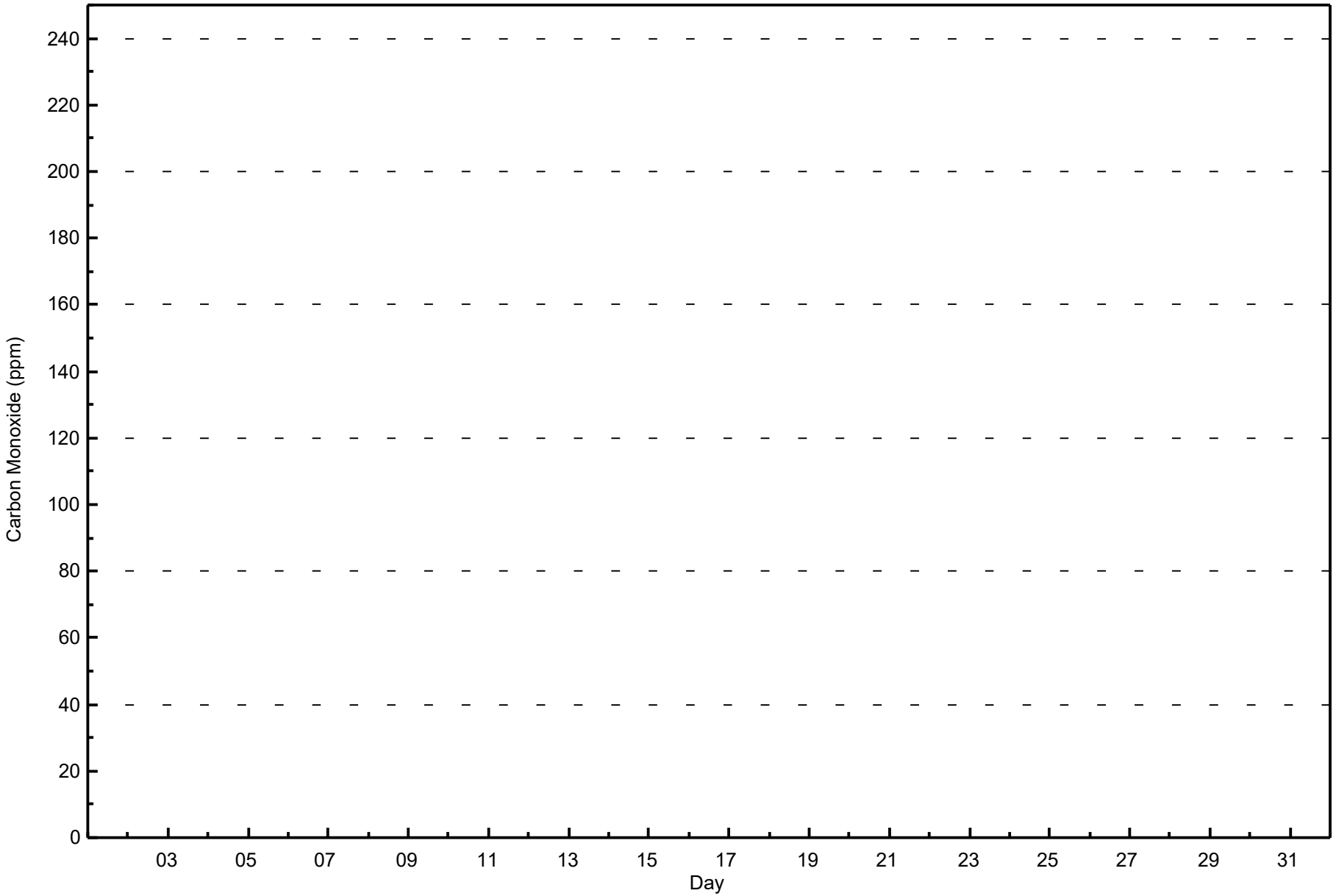
Z - zerospan C - Calibration M - Maintenance PF - Power Failure
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm

Wood Buffalo Environmental Association

Hourly Averages

Carbon Monoxide (CO) - ppm

Fort Chipewyan - March 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.3	703	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: 703

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

Carbon Monoxide (CO) - ppm

Fort Chipewyan - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.3	18	11	19	147	244	11	5	2	0	7	13	24	36	35	85	46	703
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	18	11	19	147	244	11	5	2	0	7	13	24	36	35	85	46	703

Total Number of Valid Hours: 703

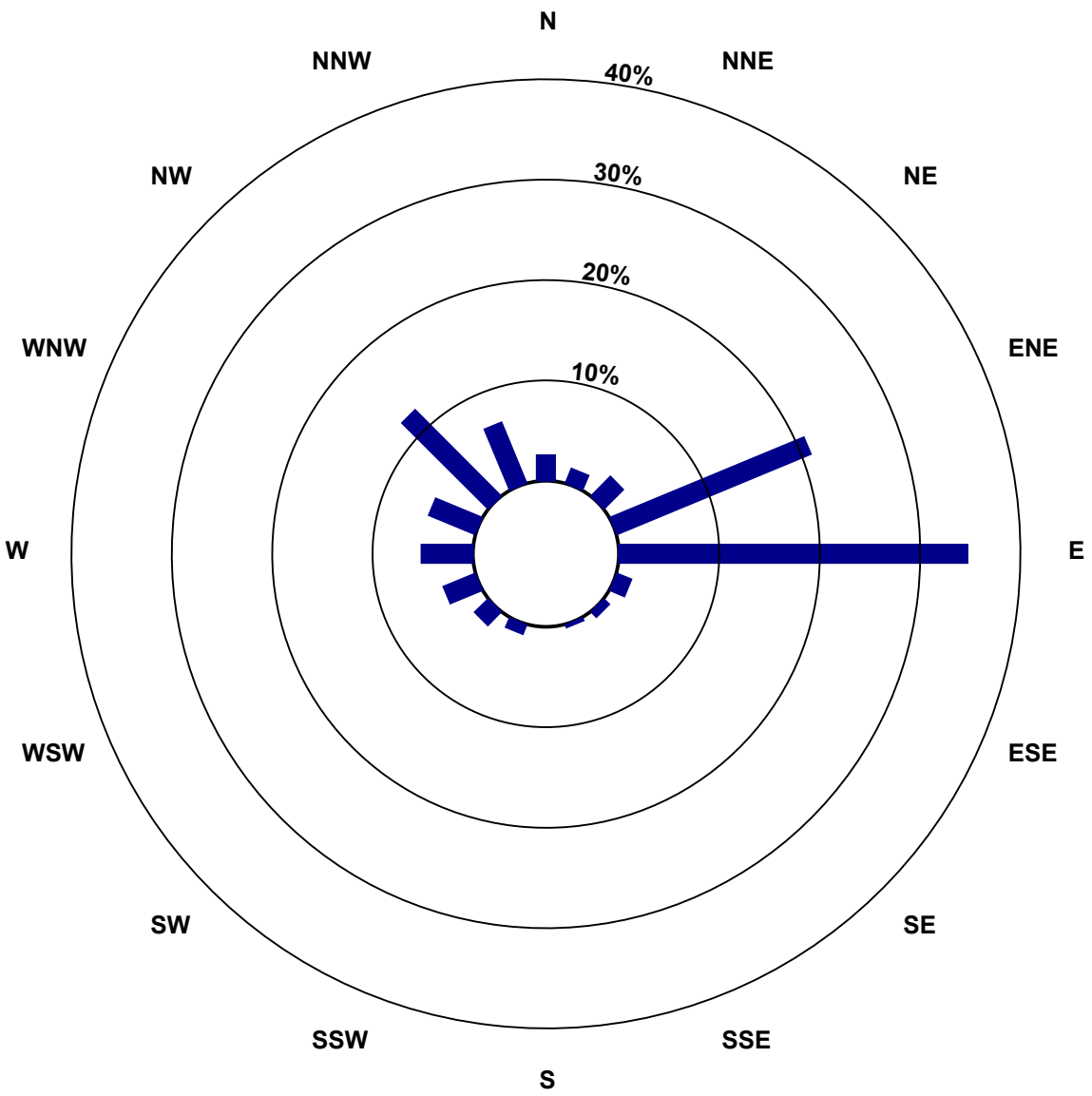
Total Number of Hours: 744

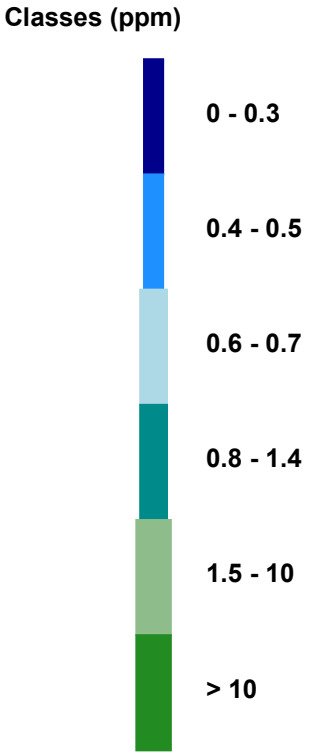
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Carbon Monoxide (CO) - ppm

Fort Chipewyan





Total Number of Valid Hours: 703

Wood Buffalo Environmental Association

Summary of Hour Averages

Carbon Dioxide (CO_2) - ppm

Fort Chipewyan - March 2025

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

Maximum Value: 446.5 ppm on Mar 13 08:00

Maximum Daily Average: 438.1 ppm on Mar 13

Minimum Value: 428.4 ppm on Mar 26 12:00

Minimum Daily Average: 429.2 ppm on Mar 26

Maximum Diurnal Average: 436.1 ppm at hour 6

Minimum Diurnal Average: 434.2 ppm at hour 18

Monthly Average: 435.01 ppm

Percentiles: P_1 = 428.7 P_{10} = 430.9 Q_1 = 433.1 Median = 435.5 Q_3 = 436.8 P_{90} = 438.1 P_{99} = 441.4

Hours in Service:	744
Hours of Data:	704
Hours of Missing Data:	40
Hours of Calibration:	35
Percent Operational Time:	99.3

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	434.2	434.4	434.4	435.0	Z	435.6	435.6	436.8	437.7	437.2	436.3	436.6	437.1	437.4	437.4	436.4	436.0	PF	436.9	436.8	437.0	437.1	437.0	436.9	436.4	437.7
2-Mar	437.0	437.1	437.1	437.6	437.4	Z	436.8	437.1	438.2	439.5	440.2	440.3	438.4	437.2	436.3	435.7	435.8	435.9	435.8	435.5	435.2	435.2	434.6	433.7	436.8	440.3
3-Mar	Z	433.6	433.7	433.7	433.5	433.5	433.4	433.5	433.9	433.4	433.1	433.3	433.1	433.6	433.1	433.2	433.2	433.3	433.8	433.8	433.6	434.0	434.1	435.0	433.6	435.0
4-Mar	436.3	Z	434.8	434.7	435.3	435.6	435.9	436.3	441.1	436.9	436.8	437.3	438.1	439.0	440.0	439.3	438.4	438.7	438.5	436.8	436.7	436.1	434.6	432.1	436.9	441.1
5-Mar	432.6	433.1	Z	432.7	432.5	432.3	432.2	432.4	M	433.5	433.0	436.6	433.0	433.1	433.2	433.1	433.3	433.3	433.1	433.4	433.3	433.5	433.8	434.1	433.2	436.6
6-Mar	434.3	434.3	434.5	Z	434.8	435.1	435.3	435.5	435.7	435.9	436.1	436.4	436.7	437.1	437.1	437.0	437.0	436.8	436.7	436.8	437.6	441.0	438.8	439.2	436.5	441.0
7-Mar	439.5	440.5	440.9	440.4	Z	442.0	439.7	440.8	442.0	438.0	437.1	436.4	436.1	435.9	435.5	435.3	435.0	434.8	435.2	434.9	434.9	435.5	435.1	435.4	437.4	442.0
8-Mar	437.5	436.6	436.4	435.6	436.8	Z	436.5	436.9	436.5	436.3	436.1	436.0	436.5	436.1	435.2	435.8	441.1	437.2	433.9	433.4	433.3	433.2	432.9	432.7	435.8	441.1
9-Mar	Z	432.6	432.9	432.8	433.1	432.8	434.0	433.1	433.0	432.9	433.0	433.1	433.0	433.0	433.1	433.2	433.4	433.7	435.0	434.4	433.6	433.9	434.0	433.9	433.4	435.0
10-Mar	434.4	Z	434.0	438.1	438.9	443.4	443.2	438.6	443.0	440.2	439.8	440.2	439.6	437.7	436.7	435.1	435.5	434.6	435.3	434.3	434.7	435.3	436.3	436.9	437.6	443.4
11-Mar	437.0	437.1	Z	435.4	437.0	435.4	435.5	437.1	438.7	438.3	437.4	436.8	436.3	437.3	437.0	435.2	435.1	435.1	435.2	436.6	436.8	435.8	436.1	435.7	436.4	438.7
12-Mar	435.5	436.8	437.0	Z	435.0	435.2	436.1	436.0	435.3	435.2	435.3	435.2	435.1	434.9	434.9	434.7	434.8	434.8	434.9	435.3	435.7	435.4	435.8	435.3	435.4	437.0
13-Mar	435.2	438.5	439.8	439.4	Z	439.8	441.2	446.5	438.5	439.3	439.7	437.2	436.8	437.0	436.6	437.0	436.6	436.5	438.1	437.0	436.7	436.8	436.3	436.4	438.1	446.5
14-Mar	436.5	437.3	437.1	438.1	438.8	Z	438.1	437.8	436.9	436.5	436.5	436.3	436.3	436.1	436.1	436.0	435.7	435.7	436.0	435.9	435.8	435.7	435.6	436.1	436.6	438.8
15-Mar	Z	435.8	436.4	436.8	436.2	438.3	436.8	436.8	436.9	436.5	436.8	436.6	435.8	435.8	436.0	435.9	435.7	435.5	435.9	436.4	437.6	441.4	439.5	438.3	436.9	441.4
16-Mar	439.5	Z	438.1	444.2	438.3	439.4	438.5	437.6	437.1	437.1	437.4	437.5	437.4	437.1	437.2	437.4	437.4	437.6	437.9	437.9	438.0	437.9	438.0	437.9	438.1	444.2
17-Mar	438.1	438.8	Z	438.5	438.3	438.6	438.5	438.0	437.9	438.8	439.0	439.6	439.0	438.6	438.0	437.4	436.9	436.7	436.8	436.5	436.1	436.1	436.2	436.3	437.8	439.6
18-Mar	436.0	435.7	435.6	Z	435.6	435.8	435.6	435.9	436.4	436.0	436.0	436.2	436.0	436.2	436.4	436.0	435.5	435.3	435.3	435.4	439.9	438.5	435.5	435.4	436.1	439.9
19-Mar	437.6	436.9	436.2	435.0	Z	436.0	439.5	436.0	435.7	437.0	436.7	437.3	C	C	C	C	430.8	430.9	431.3	431.9	431.4	431.3	431.3	431.5	434.4	439.5
20-Mar	432.5	432.8	432.5	435.4	434.3	Z	434.1	432.9	432.2	431.8	432.5	432.8	433.1	432.1	432.2	431.5	431.6	431.9	432.4	432.2	432.7	432.3	432.4	432.5	432.6	435.4
21-Mar	Z	433.0	433.0	432.9	433.0	433.2	433.4	433.5	433.7	433.8	433.8	434.0	434.3	434.5	434.2	434.4	434.8	434.9	435.0	435.1	435.1	435.2	435.3	435.5	434.1	435.5
22-Mar	435.5	Z	435.9	436.0	435.9	436.1	436.2	436.4	436.3	436.4	436.3	436.4	436.4	436.3	435.9	435.7	435.5	435.2	435.1	435.2	436.5	437.1	435.2	434.8	435.9	437.1
23-Mar	434.9	435.2	Z	436.3	436.8	437.5	436.2	436.5	437.9	436.4	436.1	435.9	435.6	435.6	435.8	435.9	435.9	435.9	435.9	435.9	436.3	437.0	435.8	435.5	436.1	437.9
24-Mar	435.5	435.7	436.0	Z	436.3	436.5	437.1	436.9	437.1	437.2	437.2	437.1	437.0	436.7	436.4	436.2	435.9	435.9	437.9	437.9	435.8	435.3	435.3	435.4	436.4	437.9
25-Mar	436.0	435.8	435.0	434.5	Z	433.1	433.0	433.0	432.6	433.0	432.8	432.6	432.7	432.6	432.2	431.7	431.5	431.0	430.7	430.3	430.2	429.7	429.5	429.5	432.3	436.0
26-Mar	429.4	429.2	429.1	429.4	429.4	Z	429.0	429.0	428.8	428.7	428.5	428.4	428.5	428.7	428.9	429.1	428.8	428.7	429.0	428.8	431.2	430.9	430.3	429.4	429.2	431.2
27-Mar	Z	429.2	429.9	432.5	430.3	430.3	429.7	429.8	429.2	429.4	429.5	429.1	428.7	428.6	428.5	428.6	428.6	428.7	428.8	433.0	429.9	428.9	428.9	431.7	429.7	433.0
28-Mar	432.3	Z	431.5	429.1	432.8	437.9	437.7	432.1	431.9	432.0	431.2	433.3	430.6	430.2	430.2	430.1	430.1	429.9	430.0	432.3	434.5	436.4	436.5	431.1	432.3	437.9
29-Mar	435.2	430.6	Z	435.3	434.8	439.6	432.5	433.1	430.7	430.4	430.9	431.1	PF	431.1	430.7	430.5	430.4	430.4	431.1	433.6	431.1	430.7	430.6	430.6	432.0	439.6
30-Mar	430.7	430.7	431.9	Z	432.1	431.2	431.2	431.5	431.5	431.2	431.2	431.1	431.3	431.5	431.5	431.5	431.6	431.8	432.0	432.3	432.3	PF	PF	432.5	431.6	432.5
31-Mar	432.8	432.9	433.1	433.3	Z	433.5	433.8	434.0	434.2	434.4	434.6	434.9	435.2	435.5	435.7	436.0	436.2	436.2	436.4	436.8	436.8	437.0	437.0	436.8	435.1	437.0
	435.2	434.8	434.9	435.5	435.1	436.1	435.7	435.5	435.7	435.3	435.2	435.3	435.1	434.9	434.7	434.5	434.4	434.2	434.5	434.7	434.9	435.1	434.7	434.4	Diurnal Average	
	439.5	440.5	440.9	444.2	438.9	443.4	443.2	446.5	443.0	440.2	440.2	440.3	439.6	439.0	440.0	439.3	441.1	438.7	438.5	437.9	439.9	441.4	439.5	439.2	Diurnal Maximum	

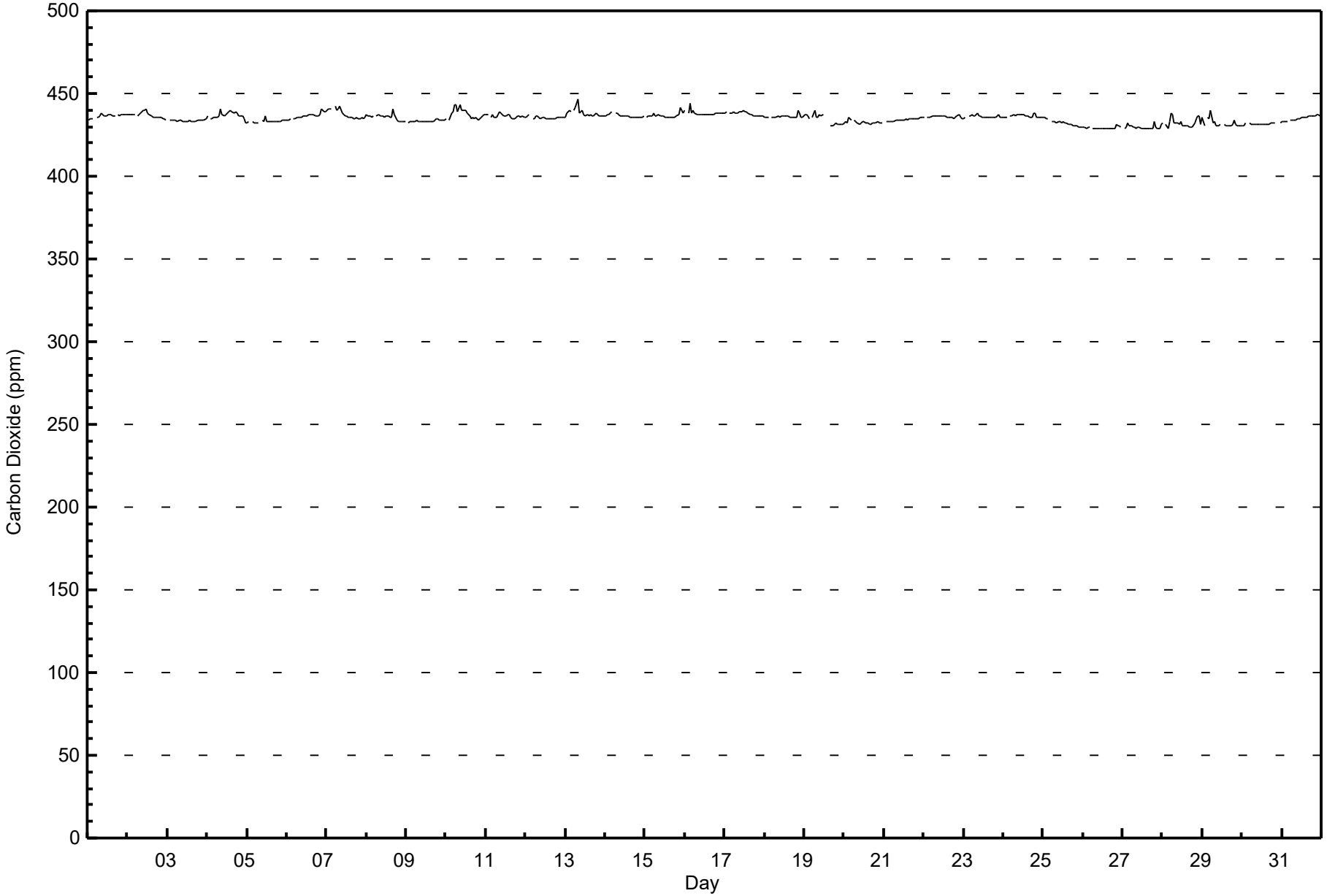
Z - zerospan C - Calibration M - Maintenance PF - Power Failure

Wood Buffalo Environmental Association

Hourly Averages

Carbon Dioxide (CO_2) - ppm

Fort Chipewyan - March 2025



Carbon Dioxide (CO_2) - ppm
Fort Chipewyan - March 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
400 - 420	0	0.00	0.00
420 - 440	690	98.01	98.01
440 - 460	14	1.99	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: 704

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

Carbon Dioxide (CO_2) - ppm

Fort Chipewyan - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
400 - 420	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
420 - 440	16	10	19	141	240	11	5	2	0	7	13	23	36	35	86	46	690
440 - 460	2	1	0	6	2	0	0	0	0	0	0	1	0	0	1	1	14
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	18	11	19	147	242	11	5	2	0	7	13	24	36	35	87	47	704

Total Number of Valid Hours: 704

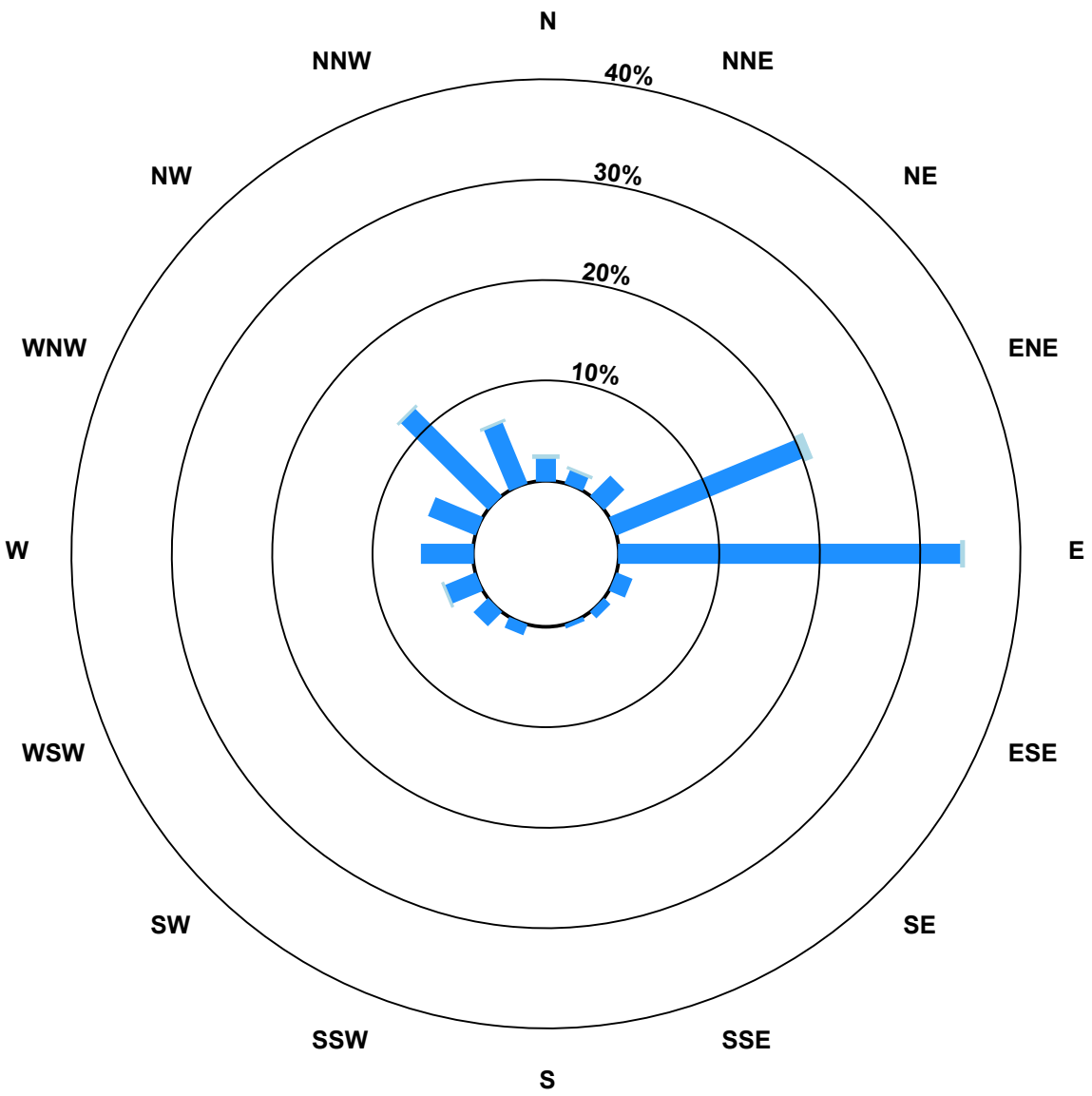
Total Number of Hours: 744

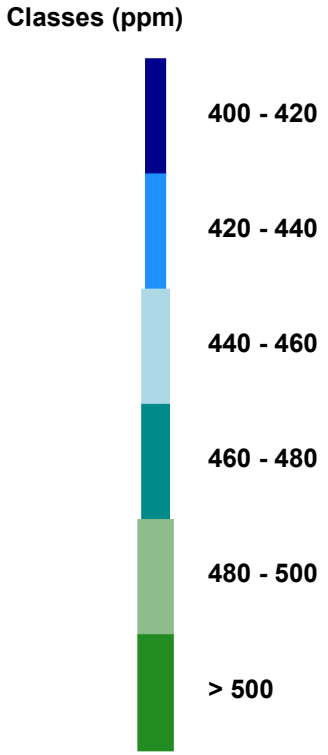
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Carbon Dioxide (CO_2) - ppm

Fort Chipewyan





Total Number of Valid Hours: 704

Maximum Value: 1.3 C on Mar 24 21:00

Maximum Daily Average: -5.5 C on Mar 23

Minimum Value: -33.7 C on Mar 10 07:00

Minimum Daily Average: -28.5 C on Mar 10

Maximum Diurnal Average: -12.1 C at hour 16

Minimum Diurnal Average: -19.1 C at hour 7

Monthly Average: -15.23 C

Percentiles: P_1 = -31.0 P_{10} = -24.6 Q_1 = -19.8 Median = -15.2 Q_3 = -10.1 P_{90} = -6.3 P_{99} = -1.1

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

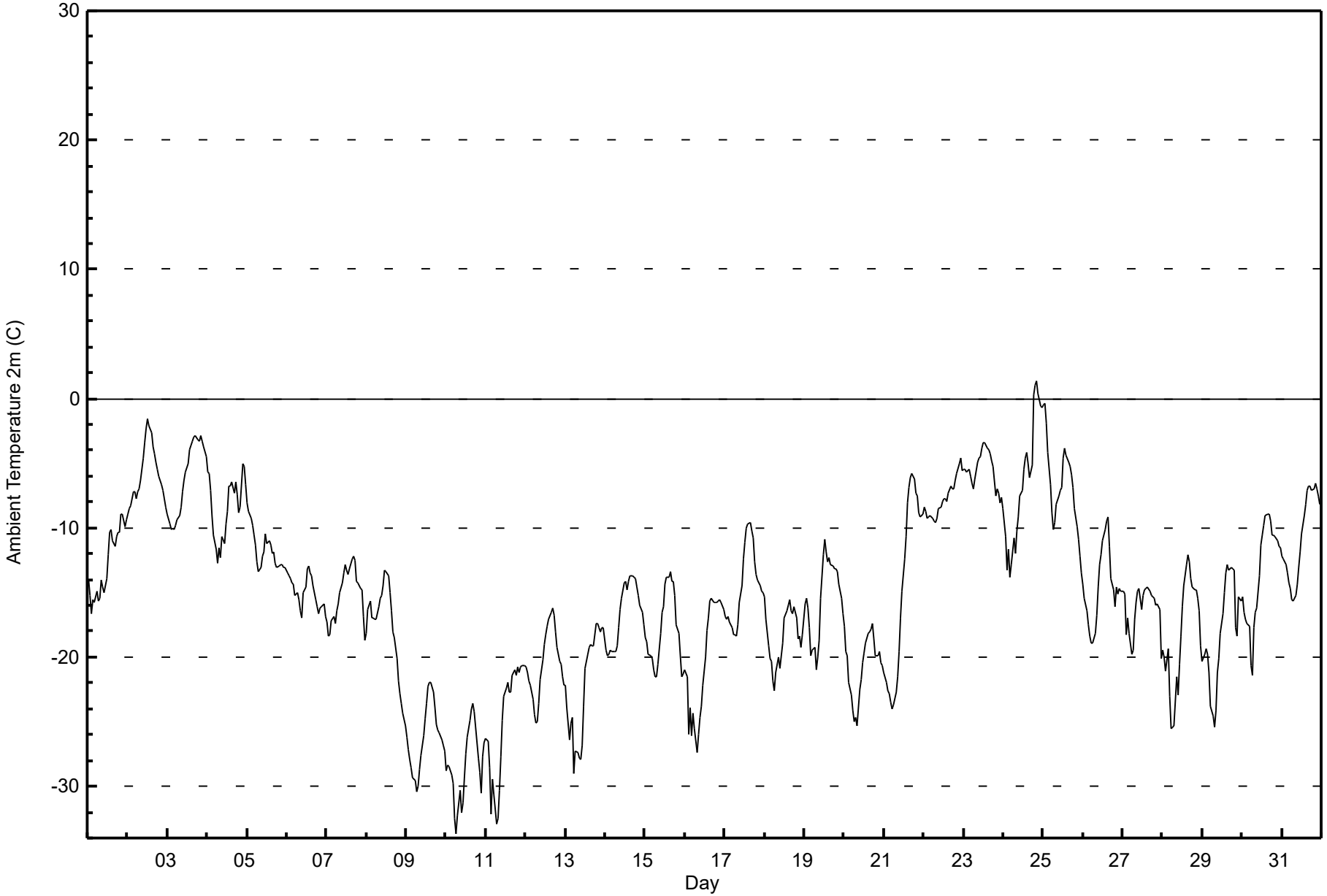
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-14.1	-15.2	-16.6	-15.5	-15.8	-14.9	-15.7	-15.4	-14.0	-14.6	-15.1	-14.0	-12.0	-10.4	-10.1	-11.0	-11.5	-10.7	-10.4	-10.4	-9.0	-8.9	-9.9	-9.4	-12.7	-8.9
2-Mar	-8.9	-8.5	-8.3	-7.2	-7.2	-7.8	-7.2	-7.0	-6.4	-4.6	-3.4	-2.3	-1.6	-2.1	-2.6	-3.7	-4.3	-4.9	-5.5	-6.0	-6.7	-7.1	-7.8	-8.4	-5.8	-1.6
3-Mar	-9.0	-9.7	-10.1	-10.1	-10.1	-9.8	-9.4	-9.1	-8.4	-7.2	-6.4	-5.7	-5.0	-4.0	-3.6	-3.3	-3.0	-2.9	-3.2	-3.3	-2.8	-3.3	-3.8	-4.5	-6.1	-2.8
4-Mar	-5.7	-5.8	-7.1	-9.1	-10.6	-11.6	-12.7	-11.5	-12.3	-10.7	-11.3	-9.7	-8.7	-6.7	-6.8	-6.4	-7.3	-6.4	-7.4	-8.8	-8.4	-5.0	-5.2	-6.7	-8.4	-5.0
5-Mar	-8.0	-8.8	-9.2	-9.8	-10.5	-11.4	-12.6	-13.4	-13.1	-12.2	-11.9	-10.4	-11.2	-11.0	-11.4	-11.9	-11.9	-12.7	-13.0	-12.9	-12.8	-12.8	-13.1	-13.1	-11.6	-8.0
6-Mar	-13.5	-13.7	-13.9	-14.2	-14.4	-15.2	-15.0	-15.5	-16.5	-17.0	-15.0	-14.6	-13.2	-13.0	-13.5	-13.7	-14.5	-15.5	-16.1	-16.6	-16.3	-16.1	-15.9	-16.9	-15.0	-13.0
7-Mar	-17.3	-18.4	-18.3	-17.1	-16.9	-17.5	-16.4	-15.8	-15.0	-14.2	-13.5	-12.8	-13.3	-13.6	-13.1	-12.4	-12.2	-12.5	-14.1	-14.3	-14.7	-14.8	-16.9	-18.7	-15.2	-12.2
8-Mar	-18.2	-16.3	-15.7	-17.0	-17.0	-17.1	-17.1	-16.1	-15.5	-15.2	-14.5	-13.3	-13.4	-13.7	-15.1	-16.5	-18.0	-18.5	-20.1	-21.9	-22.8	-23.6	-24.3	-25.3	-17.8	-13.3
9-Mar	-26.2	-27.1	-27.9	-28.5	-29.3	-29.5	-30.4	-30.0	-28.7	-27.6	-26.1	-24.8	-23.6	-22.3	-22.0	-22.0	-22.7	-23.9	-25.2	-25.7	-25.9	-26.4	-26.9	-27.3	-26.3	-22.0
10-Mar	-28.7	-28.4	-28.5	-29.1	-29.7	-32.5	-33.7	-32.2	-30.3	-32.1	-31.3	-29.3	-27.5	-26.2	-24.9	-24.0	-23.5	-24.2	-25.5	-27.8	-28.9	-30.5	-27.7	-26.6	-28.5	-23.5
11-Mar	-26.3	-26.5	-28.6	-32.1	-29.5	-30.7	-33.0	-32.5	-30.3	-27.7	-24.9	-23.0	-22.4	-22.0	-22.8	-22.7	-21.4	-21.0	-21.5	-20.8	-21.2	-20.8	-20.7	-20.7	-25.1	-20.7
12-Mar	-20.8	-21.2	-21.9	-22.2	-23.3	-24.5	-25.1	-25.0	-23.6	-21.7	-20.2	-19.0	-18.2	-17.6	-17.1	-16.5	-16.2	-16.7	-18.1	-19.3	-20.3	-20.5	-21.5	-22.1	-20.5	-16.2
13-Mar	-22.1	-23.9	-26.4	-25.1	-24.7	-29.0	-27.3	-27.4	-27.9	-27.9	-26.8	-23.8	-20.9	-19.8	-19.3	-19.1	-19.2	-19.2	-17.5	-17.4	-17.7	-18.0	-17.7	-17.7	-22.3	-17.4
14-Mar	-19.5	-19.9	-19.8	-19.5	-19.6	-19.6	-19.6	-19.1	-17.7	-16.3	-15.5	-14.3	-14.2	-14.8	-14.1	-13.7	-13.8	-13.9	-13.9	-14.6	-15.2	-15.9	-16.5	-17.5	-16.6	-13.7
15-Mar	-18.5	-18.8	-19.7	-19.9	-20.2	-21.0	-21.5	-21.6	-20.6	-18.2	-16.6	-16.1	-14.4	-13.9	-13.9	-13.4	-14.2	-14.2	-15.2	-17.5	-18.2	-19.8	-21.5	-21.3	-17.9	-13.4
16-Mar	-21.0	-21.6	-26.0	-24.0	-26.1	-24.4	-25.6	-27.4	-26.0	-24.7	-23.8	-22.1	-20.0	-17.9	-16.9	-15.7	-15.5	-15.8	-15.8	-15.8	-15.7	-15.5	-15.7	-16.4	-20.4	-15.5
17-Mar	-16.8	-17.1	-16.9	-17.3	-17.8	-18.3	-18.3	-18.4	-17.6	-15.8	-14.4	-12.4	-11.1	-10.1	-9.7	-9.6	-10.2	-10.8	-12.7	-13.6	-14.1	-14.5	-14.9	-15.0	-14.5	-9.6
18-Mar	-15.3	-17.1	-19.1	-20.1	-20.3	-21.9	-22.6	-21.2	-20.0	-20.9	-19.9	-18.9	-16.9	-16.4	-16.0	-15.6	-16.4	-16.7	-16.1	-17.0	-18.6	-18.4	-19.2	-18.2	-18.4	-15.3
19-Mar	-15.8	-15.4	-16.2	-17.7	-19.9	-19.5	-19.3	-20.9	-20.0	-18.7	-15.5	-12.1	-10.9	-11.9	-12.6	-12.3	-12.9	-13.0	-13.2	-13.2	-13.3	-14.3	-15.4	-16.7	-15.4	-10.9
20-Mar	-17.6	-19.6	-19.9	-21.9	-22.9	-24.1	-25.0	-24.7	-25.4	-22.5	-21.7	-20.4	-19.7	-18.9	-18.2	-18.1	-17.9	-17.4	-18.6	-19.9	-19.9	-19.6	-20.4	-20.7	-20.6	-17.4
21-Mar	-21.2	-22.0	-22.6	-22.8	-23.5	-24.0	-23.7	-22.7	-21.6	-19.6	-17.0	-15.0	-12.4	-10.7	-8.1	-6.9	-6.1	-5.8	-6.3	-7.3	-7.5	-8.8	-9.1	-8.9	-14.7	-5.8
22-Mar	-8.4	-8.8	-9.2	-9.2	-9.1	-9.2	-9.5	-9.6	-9.2	-8.5	-8.4	-8.0	-7.8	-7.7	-8.0	-7.3	-6.7	-7.0	-7.0	-6.3	-5.8	-5.0	-4.6	-5.5	-7.7	-4.6
23-Mar	-5.5	-5.5	-5.7	-5.5	-6.0	-6.5	-7.0	-6.3	-4.9	-4.6	-4.5	-3.8	-3.5	-3.4	-3.9	-4.0	-4.2	-4.9	-5.3	-7.5	-7.0	-7.3	-8.0	-7.7	-5.5	-3.4
24-Mar	-8.5	-10.7	-13.2	-11.7	-13.8	-12.8	-10.8	-12.0	-10.3	-9.2	-7.5	-7.1	-5.5	-4.6	-4.1	-5.0	-6.1	-5.2	0.3	1.0	1.3	0.4	-0.6	-0.7	-6.5	1.3
25-Mar	-0.5	-0.4	-1.9	-4.2	-6.7	-8.8	-10.2	-9.6	-8.2	-7.5	-7.1	-6.9	-4.6	-3.9	-4.4	-4.9	-5.2	-5.9	-6.9	-8.6	-10.0	-10.9	-12.1	-13.5	-6.8	-0.4
26-Mar	-14.4	-15.4	-16.4	-17.6	-18.3	-18.9	-18.9	-18.1	-16.8	-14.6	-12.8	-12.0	-11.0	-10.1	-9.5	-9.2	-11.5	-14.0	-14.8	-16.1	-14.6	-15.2	-14.7	-14.9	-14.6	-9.2
27-Mar	-14.9	-15.1	-18.3	-16.9	-18.1	-19.8	-19.4	-17.1	-15.8	-14.9	-14.6	-16.3	-15.3	-14.8	-14.7	-14.6	-14.9	-15.3	-15.4	-15.5	-16.0	-15.9	-16.3	-20.1	-16.3	-14.6
28-Mar	-19.4	-20.0	-21.1	-19.4	-23.1	-25.5	-25.4	-25.4	-21.5	-22.9	-20.6	-18.4	-16.1	-14.4	-12.8	-12.1	-12.6	-13.9	-14.6	-14.8	-14.8	-15.4	-16.4	-19.1	-18.3	-12.1
29-Mar	-20.3	-19.8	-19.4	-19.8	-21.2	-23.8	-24.5	-25.4	-24.1	-21.2	-20.1	-18.1	-16.6	-15.0	-13.5	-12.9	-13.2	-13.0	-13.2	-13.2	-17.7	-18.4	-15.3	-15.7	-18.1	-12.9
30-Mar	-15.3	-16.5	-17.1	-17.4	-17.6	-20.7	-21.4	-17.8	-16.5	-16.2	-13.7	-11.3	-10.6	-9.8	-9.0	-8.9	-8.9	-9.5	-10.5	-10.6	-10.6	-11.0	-11.4	-11.6	-13.5	-8.9
31-Mar	-12.2	-12.4	-12.9	-13.5	-14.3	-14.7	-15.6	-15.6	-15.3	-14.3	-13.1	-11.9	-10.5	-9.1	-8.2	-7.1	-6.8	-6.7	-7.1	-7.0	-6.6	-7.0	-7.5	-8.2	-10.7	-6.6
	-15.6	-16.1	-17.0	-17.3	-18.0	-18.9	-19.1	-18.8	-17.8	-16.9	-15.7	-14.4	-13.3	-12.6	-12.3	-12.1	-12.4	-12.6	-13.0	-13.6	-13.9	-14.2	-14.6	-15.1	Diurnal Average	
	-0.5	-0.4	-1.9	-4.2	-6.0	-6.5	-7.0	-6.3	-4.9	-4.6	-3.4	-2.3	-1.6	-2.1	-2.6	-3.3	-3.0	-2.9	0.3	1.0	1.3	0.4	-0.6	-0.7	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Fort Chipewyan - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	175	23.52	23.52
-20 - 0	565	75.94	99.46
0 - 10	4	0.54	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Fort Chipewyan - March 2025

Maximum Value: 92.6 % on Mar 4 06:00

Maximum Daily Average: 84.6 % on Mar 4

Minimum Value: 42.5 % on Mar 30 16:00

Minimum Daily Average: 53.3 % on Mar 30

Maximum Diurnal Average: 78.8 % at hour 7

Minimum Diurnal Average: 65.5 % at hour 18

Monthly Average: 71.24 %

Percentiles: P_1 = 47.1 P_{10} = 56.7 Q_1 = 63.2 Median = 72.9 Q_3 = 80.0 P_{90} = 84.1 P_{99} = 90.2

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

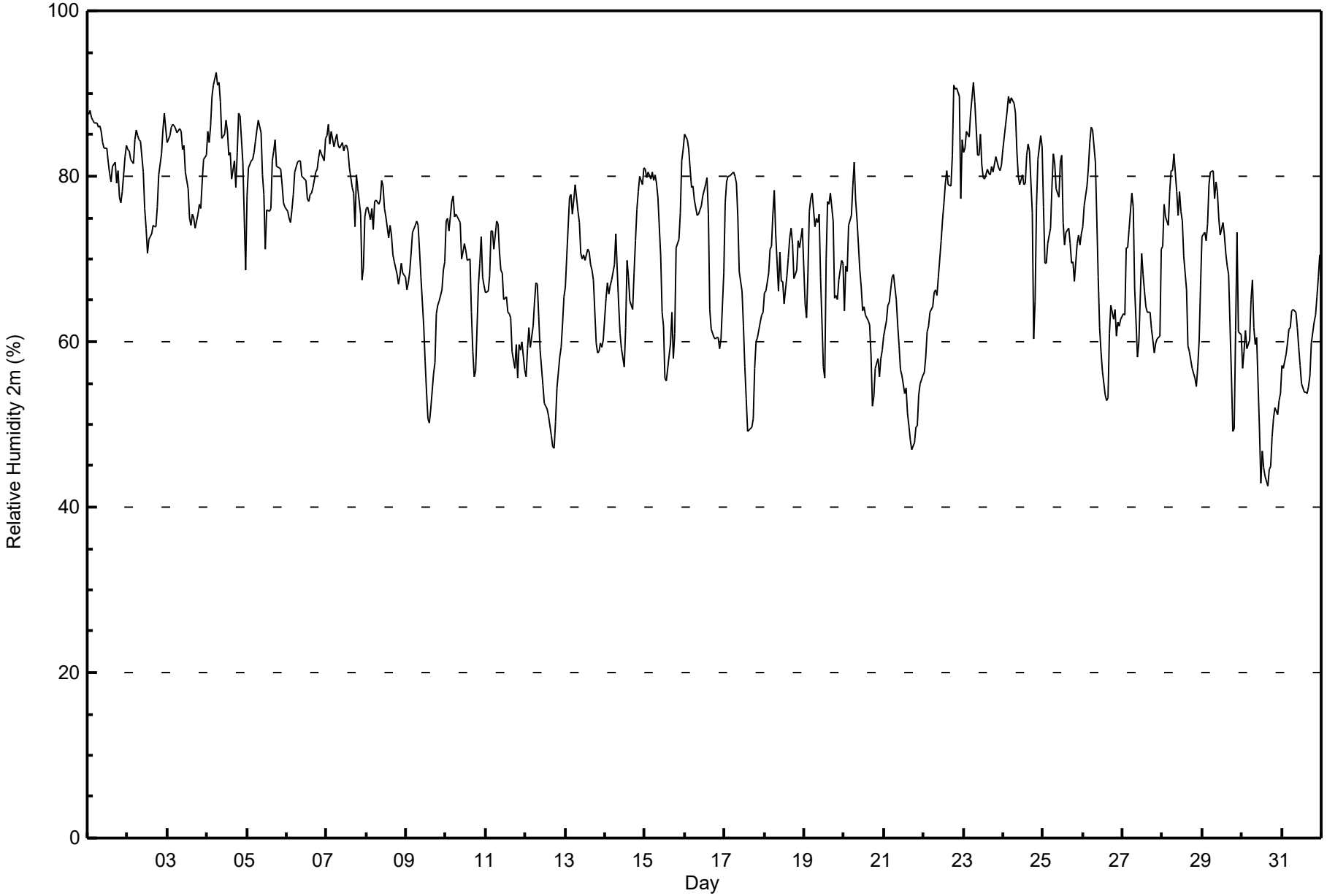
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	87.4	88.0	87.1	86.8	86.4	86.5	86.0	86.0	85.4	84.1	83.4	83.4	81.7	80.3	79.4	81.1	81.6	79.1	80.7	77.4	76.8	78.2	82.4	83.7	83.0	88.0
2-Mar	83.2	83.0	82.0	81.4	84.4	85.6	84.9	84.4	84.2	80.4	76.1	73.8	70.7	72.4	73.0	74.1	73.9	73.9	76.2	80.1	82.8	85.7	87.6	85.7	80.0	87.6
3-Mar	84.1	85.0	85.9	86.2	86.2	85.7	85.2	85.7	85.4	83.2	83.7	80.6	78.4	75.0	74.1	75.4	74.9	73.7	75.4	76.5	76.0	79.4	82.1	82.6	80.8	86.2
4-Mar	85.4	84.0	86.1	89.7	91.1	92.6	91.1	91.4	89.0	84.6	85.0	86.9	85.4	82.6	82.9	79.7	81.8	78.7	82.9	87.7	87.2	81.8	75.0	68.6	84.6	92.6
5-Mar	77.6	81.0	81.8	82.0	82.9	84.2	85.5	86.7	85.3	80.1	77.7	71.1	76.0	75.7	76.2	81.9	83.1	84.4	81.2	81.1	80.8	79.1	76.9	76.2	80.4	86.7
6-Mar	75.7	74.9	74.4	75.9	77.9	80.5	81.7	81.8	81.8	80.0	79.9	79.5	77.4	76.9	77.9	77.9	78.7	80.6	80.9	82.2	83.2	82.7	81.9	84.5	79.5	84.5
7-Mar	84.9	86.2	84.0	85.4	83.6	84.4	85.0	83.7	83.5	84.0	83.0	83.7	83.8	83.0	81.0	78.6	78.0	74.0	80.1	78.5	75.4	67.4	68.9	75.0	80.6	86.2
8-Mar	76.1	76.4	74.8	76.1	73.6	77.0	77.1	76.6	77.2	79.5	78.8	76.0	75.0	72.5	74.1	72.9	70.5	69.7	68.1	66.9	67.9	69.6	68.3	67.8	73.4	79.5
9-Mar	66.3	67.1	68.6	70.7	73.3	74.0	74.6	74.1	71.1	67.9	61.8	57.6	53.9	50.6	50.1	51.8	56.1	57.5	63.3	64.4	64.8	66.3	68.6	69.7	64.4	74.6
10-Mar	74.6	74.9	73.4	77.0	77.6	75.1	75.4	75.2	74.5	70.0	70.8	71.9	71.1	69.9	70.0	63.5	58.8	55.7	56.4	66.7	69.6	72.7	67.8	66.7	70.0	77.6
11-Mar	65.9	66.1	68.0	73.5	73.4	71.2	74.6	74.3	70.9	68.7	68.2	65.1	65.4	63.6	63.3	62.9	58.9	56.8	59.6	55.6	59.7	59.0	60.0	56.6	65.1	74.6
12-Mar	55.7	59.1	61.7	59.4	61.8	64.8	67.0	66.9	63.1	59.0	54.7	52.6	52.2	51.9	51.1	48.6	47.2	47.2	50.4	54.5	58.2	59.4	62.2	65.5	57.3	67.0
13-Mar	66.6	70.3	77.4	77.8	75.4	77.2	79.0	75.8	74.4	70.7	70.0	70.6	69.9	71.2	70.8	69.3	68.6	67.5	59.9	58.7	58.8	59.8	59.3	60.1	69.1	79.0
14-Mar	65.2	67.0	65.7	66.7	67.5	69.3	73.1	68.6	64.5	61.0	59.1	57.0	61.6	69.9	67.7	65.0	64.0	68.4	72.2	75.9	78.1	80.1	78.9	81.1	68.6	81.1
15-Mar	80.9	79.9	80.5	79.7	80.5	79.5	80.1	79.2	77.4	70.3	63.6	61.9	55.5	55.3	58.4	59.9	63.5	58.0	61.0	71.4	72.4	75.6	81.9	83.2	71.2	83.2
16-Mar	85.1	84.4	83.2	80.9	78.6	78.9	77.1	75.3	75.4	75.9	76.5	77.6	79.0	79.9	75.4	63.9	61.6	60.6	60.3	60.5	60.5	59.2	60.3	68.3	72.4	85.1
17-Mar	76.8	79.3	80.0	80.0	80.3	80.5	79.9	79.1	75.1	68.4	66.1	61.8	56.9	53.0	49.2	49.5	49.7	50.6	56.7	60.0	60.5	62.4	63.1	63.5	65.9	80.5
18-Mar	65.9	66.2	68.3	71.2	71.4	75.4	78.4	73.1	66.1	70.8	67.3	67.3	64.5	68.0	70.2	72.6	73.6	71.8	67.7	68.7	72.2	71.3	72.5	73.7	70.3	78.4
19-Mar	64.5	62.9	68.3	75.8	77.3	78.0	73.8	74.9	74.5	75.4	67.7	56.9	55.6	70.0	76.9	76.6	78.0	74.6	65.2	65.5	65.2	67.5	69.9	69.5	70.2	78.0
20-Mar	63.7	69.1	68.4	74.1	75.2	78.8	81.7	77.1	74.7	68.6	66.7	63.7	64.2	63.2	62.6	62.0	58.3	52.1	53.5	56.9	57.9	55.8	58.0	58.9	65.2	81.7
21-Mar	60.7	62.5	64.3	64.8	66.2	67.8	68.2	65.1	62.0	59.4	56.7	56.0	53.8	54.3	51.4	49.9	48.1	47.0	47.8	49.7	49.8	53.6	54.9	56.0	57.1	68.2
22-Mar	56.3	58.1	61.3	61.9	63.6	64.3	65.9	66.3	65.6	67.8	72.2	74.7	76.8	79.1	80.6	78.9	78.7	82.6	91.0	90.5	90.7	89.7	77.2	84.4	74.1	91.0
23-Mar	82.8	83.5	85.5	84.7	87.7	89.5	91.4	89.0	82.5	82.6	85.1	81.4	79.9	79.7	80.9	80.4	80.2	81.1	80.6	82.4	81.7	81.0	80.7	81.4	83.2	91.4
24-Mar	83.2	86.3	87.8	89.6	88.9	89.5	88.8	87.7	83.0	79.9	79.0	80.1	79.0	79.1	82.5	83.8	83.0	75.7	60.4	65.0	76.5	82.0	84.9	83.6	81.6	89.6
25-Mar	76.3	69.5	69.5	71.8	73.7	78.6	82.7	81.5	78.5	77.4	81.7	82.5	74.3	71.7	73.3	73.7	71.9	69.5	69.7	67.3	71.8	72.8	71.7	73.1	74.4	82.7
26-Mar	73.9	76.4	78.8	81.0	84.2	85.9	85.5	81.7	75.0	67.7	61.7	58.9	56.4	53.5	52.8	53.2	61.0	64.4	62.7	63.9	60.6	62.3	61.9	62.7	67.8	85.9
27-Mar	63.4	63.2	71.4	71.3	73.6	78.0	76.3	66.5	62.3	58.2	60.0	70.6	68.1	66.1	64.2	63.6	63.5	61.6	60.1	58.7	59.8	60.3	60.7	71.3	65.5	78.0
28-Mar	71.5	76.7	75.1	74.1	78.2	80.7	80.7	82.7	78.2	75.2	78.2	75.7	74.6	70.3	66.3	59.5	58.8	57.8	56.8	55.5	54.5	56.9	60.1	66.8	69.4	82.7
29-Mar	72.7	73.2	72.3	74.2	79.0	80.5	80.7	77.2	79.3	78.1	74.9	72.9	74.3	72.9	70.7	69.2	68.2	55.9	49.2	49.5	61.3	73.3	61.2	60.9	70.1	80.7
30-Mar	56.9	58.8	61.3	59.2	60.1	65.1	67.5	61.6	59.7	60.5	49.4	42.9	46.8	44.7	43.8	42.5	44.6	44.9	48.5	50.7	52.1	51.2	52.9	53.8	53.3	67.5
31-Mar	57.1	56.8	58.4	59.8	61.6	61.8	63.8	63.9	63.5	61.6	59.3	57.1	54.9	53.9	53.8	53.7	54.5	56.0	59.8	62.3	63.2	65.4	67.8	70.5	60.0	70.5
	72.3	73.2	74.4	75.6	76.6	78.1	78.8	77.2	74.9	72.6	70.9	69.4	68.3	68.1	67.9	67.0	66.9	65.5	65.7	67.2	68.7	69.7	69.7	71.1	Diurnal Average	
	87.4	88.0	87.8	89.7	91.1	92.6	91.4	91.4	89.0	84.6	85.1	86.9	85.4	83.0	82.9	83.8	83.1	84.4	91.0	90.5	90.7	89.7	87.6	85.7	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Fort Chipewyan - March 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	0	0.00	0.00
40 - 60	129	17.34	17.34
60 - 80	430	57.80	75.13
80 - 100	185	24.87	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Maximum Value: 47.1 % on Mar 23 12:00

Maximum Daily Average: 6.0 % on Mar 23

Minimum Value: 1.1 % on Mar 26 11:00

Minimum Daily Average: 1.7 % on Mar 30

Maximum Diurnal Average: 3.1 % at hour 12

Minimum Diurnal Average: 1.8 % at hour 10

Monthly Average: 2.17 %

Percentiles: P_1 = 1.3 P_{10} = 1.6 Q_1 = 1.8 Median = 1.9 Q_3 = 2.2 P_{90} = 2.7 P_{99} = 4.6

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

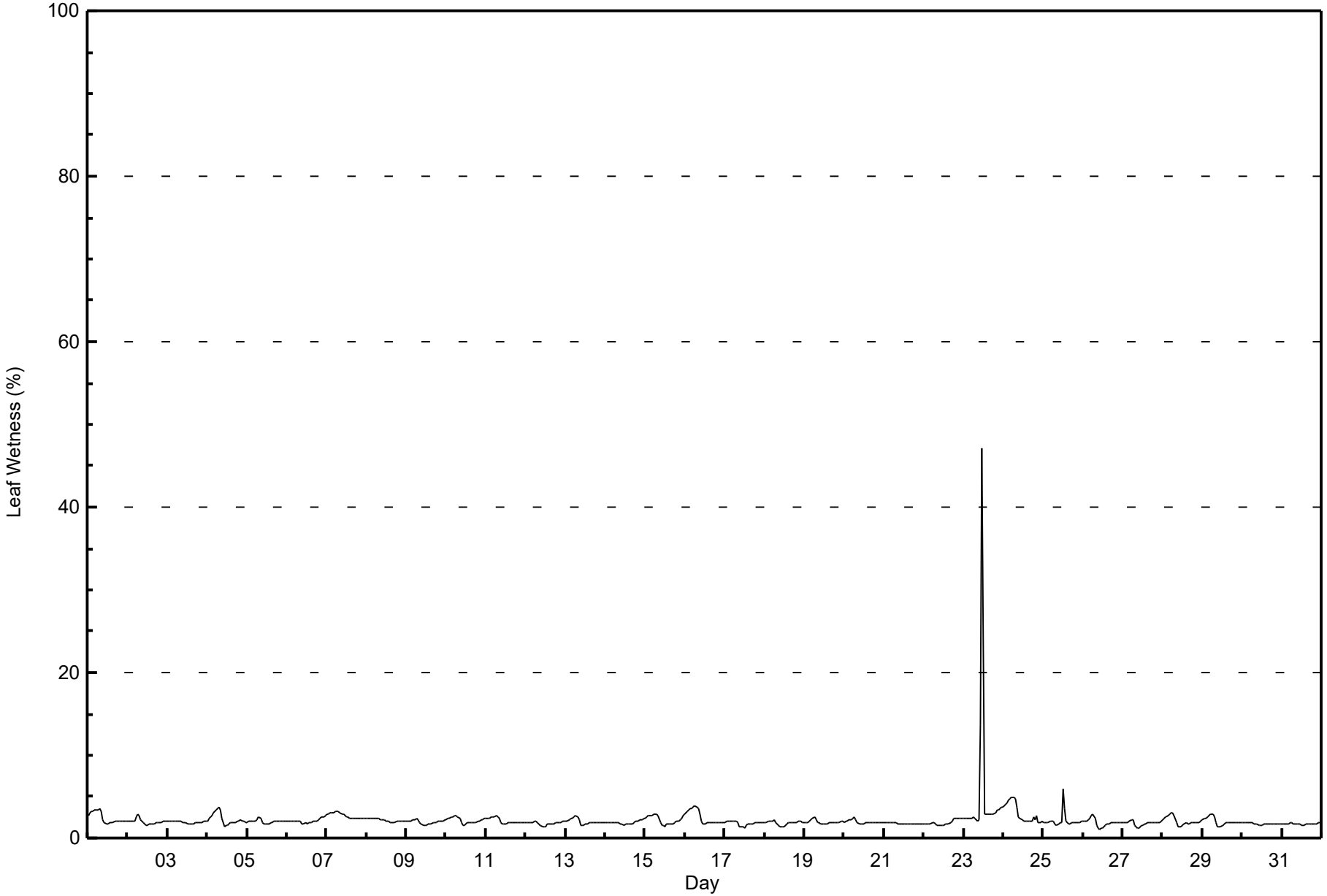
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	2.7	3.0	3.2	3.3	3.4	3.4	3.4	3.5	3.2	2.3	1.8	1.7	1.8	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.4	3.5
2-Mar	2.0	2.0	2.0	2.0	2.0	2.5	2.9	2.7	2.3	1.9	1.8	1.6	1.6	1.6	1.7	1.7	1.8	1.8	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.9
3-Mar	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.8	1.7	1.7	1.7	1.7	1.8	1.8	1.9	1.9	1.9	1.9	2.0	2.1	1.9	2.1
4-Mar	2.1	2.4	2.5	2.8	3.0	3.3	3.6	3.7	3.4	2.4	1.4	1.5	1.5	1.7	1.8	1.8	1.9	1.9	2.0	2.1	2.1	2.1	2.0	1.9	2.3	3.7
5-Mar	1.9	2.0	2.0	2.0	2.0	2.0	2.2	2.5	2.4	1.8	1.8	1.7	1.7	1.8	1.8	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.5
6-Mar	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.8	1.7	1.8	1.7	1.9	1.9	1.9	2.0	2.0	2.1	2.2	2.4	2.5	2.6	2.7	2.0	2.7
7-Mar	2.8	2.9	3.0	3.0	3.1	3.1	3.2	3.2	3.1	2.9	2.8	2.8	2.6	2.5	2.4	2.4	2.4	2.3	2.4	2.4	2.3	2.3	2.3	2.3	2.7	3.2
8-Mar	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.1	2.1	2.1	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3
9-Mar	2.0	2.0	2.0	2.1	2.2	2.3	2.3	2.3	1.9	1.8	1.6	1.5	1.6	1.7	1.8	1.8	1.8	1.9	1.9	2.0	2.0	2.1	2.1	2.2	1.9	2.3
10-Mar	2.3	2.3	2.4	2.5	2.6	2.6	2.7	2.6	2.3	1.8	1.6	1.6	1.6	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.2	2.3	2.3	2.1	2.7
11-Mar	2.3	2.4	2.4	2.5	2.6	2.6	2.7	2.6	2.3	1.8	1.8	1.7	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.7
12-Mar	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.8	1.7	1.5	1.3	1.3	1.4	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.9	1.9	2.0	2.0	1.8	2.0
13-Mar	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.5	2.1	1.6	1.6	1.6	1.6	1.7	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.6
14-Mar	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.7	1.7	1.6	1.6	1.7	1.7	1.8	1.8	1.9	2.0	2.1	2.1	2.2	2.3	2.4	1.9	2.4
15-Mar	2.5	2.6	2.6	2.7	2.8	2.8	2.9	2.8	2.7	1.9	1.5	1.5	1.4	1.7	1.7	1.7	1.8	1.8	1.9	2.0	2.0	2.2	2.4	2.7	2.2	2.9
16-Mar	3.0	3.2	3.4	3.5	3.6	3.7	3.8	3.7	3.5	2.8	2.0	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.5	3.8
17-Mar	1.9	2.0	2.0	2.0	2.0	2.1	2.1	2.1	1.8	1.4	1.3	1.3	1.2	1.6	1.6	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.1
18-Mar	1.8	1.9	2.0	2.0	2.0	2.1	2.2	1.9	1.5	1.3	1.3	1.3	1.4	1.7	1.8	1.8	1.8	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.8	2.2
19-Mar	1.9	1.9	1.9	2.0	2.2	2.4	2.5	2.3	1.9	1.8	1.8	1.7	1.7	1.7	1.8	1.8	1.9	1.9	1.9	1.8	1.8	1.9	2.0	2.0	1.9	2.5
20-Mar	1.9	2.0	2.0	2.2	2.3	2.4	2.5	2.2	1.8	1.7	1.7	1.6	1.7	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.9	1.8	1.9	1.9	1.9	2.5
21-Mar	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.7	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.9
22-Mar	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.6	1.4	1.5	1.5	1.5	1.7	1.7	1.8	1.8	2.1	2.4	2.5	2.4	2.4	2.3	2.4	1.9	2.5
23-Mar	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.4	2.1	2.2	13.7	47.1	24.3	2.9	2.9	2.9	2.9	2.9	2.9	3.1	3.3	3.5	3.6	3.8	6.0	47.1
24-Mar	3.8	4.0	4.3	4.5	4.7	4.9	5.0	4.8	3.7	2.6	2.5	2.2	2.0	2.1	2.1	2.1	2.1	2.0	2.5	2.2	2.7	1.9	1.9	2.0	3.0	5.0
25-Mar	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.7	1.5	1.6	1.8	1.9	6.0	3.5	2.0	1.7	1.7	1.8	1.8	1.9	1.9	1.9	1.9	2.0	2.1	6.0
26-Mar	2.0	2.0	2.1	2.2	2.4	2.7	2.8	2.4	1.6	1.2	1.1	1.1	1.2	1.6	1.6	1.7	1.7	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	2.8
27-Mar	1.9	1.9	1.9	1.9	2.0	2.2	2.2	1.6	1.3	1.1	1.2	1.4	1.5	1.7	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	2.1	1.8	2.2
28-Mar	2.2	2.4	2.5	2.7	2.8	3.0	3.0	2.7	1.8	1.3	1.4	1.4	1.5	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2.0	2.0	3.0
29-Mar	2.2	2.3	2.4	2.6	2.7	2.9	2.9	2.5	1.9	1.4	1.3	1.4	1.5	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	2.0	2.9
30-Mar	1.8	1.8	1.9	1.9	1.9	1.9	1.8	1.7	1.7	1.7	1.6	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.9
31-Mar	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.7	1.8
	2.2	2.2	2.3	2.3	2.4	2.5	2.6	2.4	2.2	1.8	2.1	3.1	2.5	1.9	1.8	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.1	2.1	Diurnal Average	
	3.8	4.0	4.3	4.5	4.7	4.9	5.0	4.8	3.7	2.9	13.7	47.1	24.3	3.5	2.9	2.9	2.9	2.9	2.9	3.1	3.3	3.5	3.6	3.8	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Leaf Wetness (LW) - %

Fort Chipewyan - March 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 0.3	0	0.00	0.00
0.4 - 0.5	0	0.00	0.00
0.6 - 0.7	0	0.00	0.00
0.8 - 1.4	28	3.76	3.76
1.5 - 10	703	94.49	98.25
> 10	3	0.40	98.66

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Precipitation (PC) - mm

Fort Chipewyan - March 2025

Maximum Value: 0.7 mm on Mar 22 18:00

Maximum Daily Total: 1.4 mm on Mar 22

Minimum Value: 0.0 mm on Mar 1 01:00

Minimum Daily Total: 0.0 mm on Mar 6

Maximum Diurnal Total: 0.8 mm at hour 19

Minimum Diurnal Total: 0.0 mm at hour 1

Monthly Total: 4.20 mm

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

Hours in Service:	744
Hours of Data:	728
Hours of Missing Data:	16
Hours of Calibration:	0
Percent Operational Time:	97.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	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
2-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.2	0.7	0.3
3-Mar	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
4-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	M	M	M	M	M	M	M	--	0.0
5-Mar	M	M	M	M	M	M	M	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.0
6-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2
8-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.4	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.4
9-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1
15-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
16-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1
18-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	1.4	0.7
23-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	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	0.0	0.1	0.1
25-Mar	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	0.3
26-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
31-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.1	0.1	0.0	0.2	0.1	0.2	0.3	0.7	0.2	0.1	0.0	0.2	0.0	0.0	0.7	0.8	0.0	0.0	0.2	0.3	0.2	Diurnal Average	
	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.3	0.4	0.2	0.1	0.0	0.2	0.0	0.0	0.7	0.7	0.0	0.0	0.2	0.3	0.2	Diurnal Maximum	

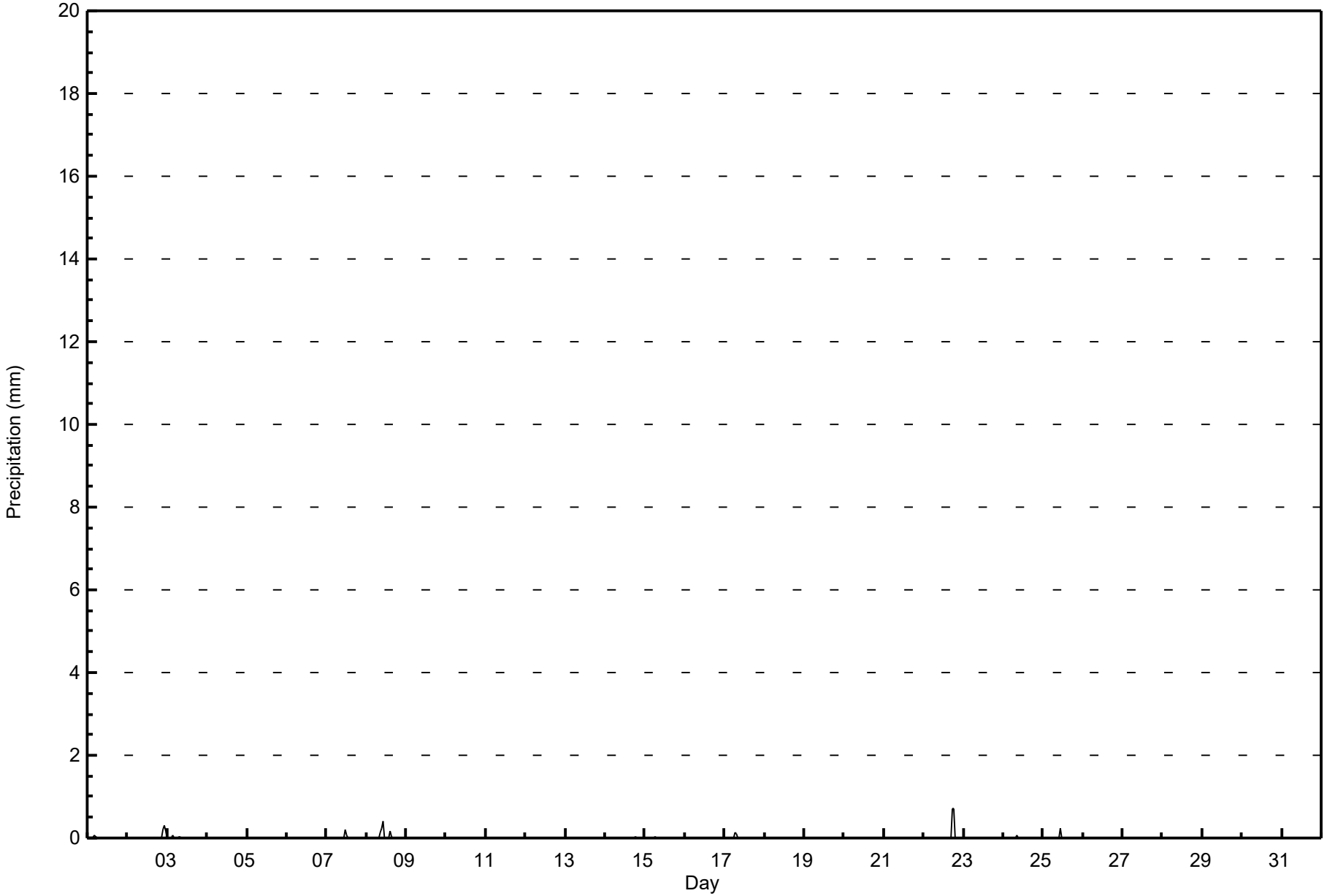
M - Maintenance PF - Power Failure

Wood Buffalo Environmental Association

Hourly Averages

Precipitation (PC) - mm

Fort Chipewyan - March 2025



Concentration Ranges (mm)	Number of Hours	%	Cumulative %
0 - 0.3	725	99.59	99.59
0.4 - 0.5	1	0.14	99.73
0.6 - 0.7	2	0.27	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: 728

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Global Radiation (GR) - W/m2

Fort Chipewyan - March 2025

Maximum Value: 698.5 W/m2 on Mar 28 13:00

Maximum Daily Average: 225.3 W/m2 on Mar 29

Minimum Value: 0.0 W/m2 on Mar 1 03:00

Minimum Daily Average: 65.3 W/m2 on Mar 7

Maximum Diurnal Average: 505.4 W/m2 at hour 13

Minimum Diurnal Average: 0.0 W/m2 at hour 1

Monthly Average: 143.78 W/m2

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 6.4 Q_3 = 277.6 P_{90} = 474.3 P_{99} = 657.6

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

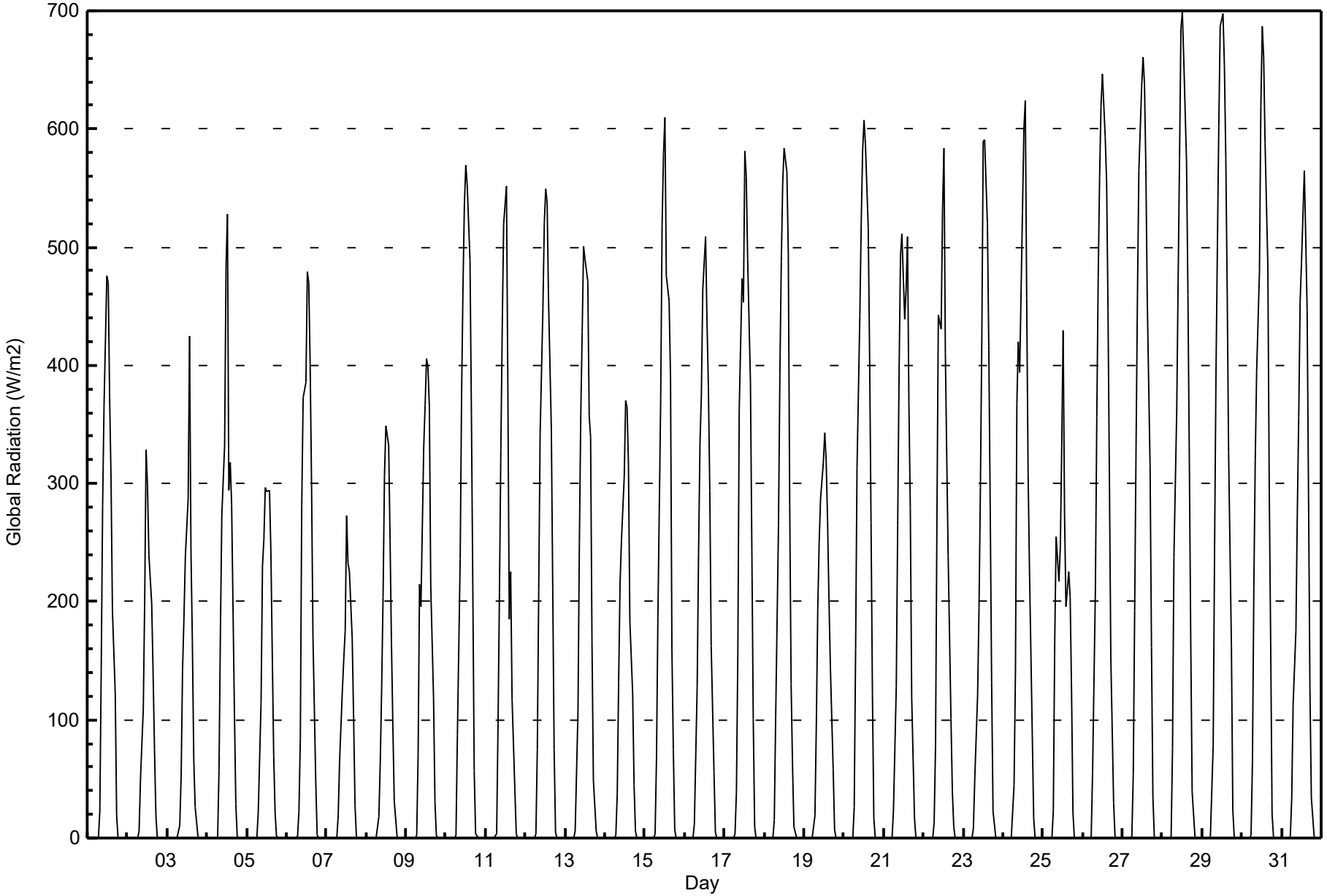
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.0	142.0	280.9	364.9	475.4	470.0	372.3	303.9	192.6	122.7	19.2	0.2	0.0	0.0	0.0	0.0	0.0	115.3	475.4
2-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	49.9	108.9	200.5	328.4	298.2	239.6	197.9	138.3	74.5	18.9	0.5	0.0	0.0	0.0	0.0	0.0	69.2	328.4
3-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.1	10.4	51.8	141.9	186.5	238.6	286.6	424.2	243.2	166.1	66.7	25.9	1.0	0.0	0.0	0.0	0.0	0.0	76.8	424.2
4-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.6	56.5	174.0	272.5	332.7	482.2	528.3	294.5	317.9	282.5	105.9	28.6	1.2	0.0	0.0	0.0	0.0	0.0	119.9	528.3
5-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.5	22.5	115.3	230.0	253.2	297.2	293.3	294.8	242.2	154.4	70.4	21.8	0.9	0.0	0.0	0.0	0.0	0.0	83.2	297.2
6-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.6	22.7	84.7	281.6	372.0	386.0	479.8	469.6	400.5	299.3	170.7	47.6	1.9	0.0	0.0	0.0	0.0	0.0	125.7	479.8
7-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.6	18.8	65.4	125.6	151.3	176.2	272.4	232.6	225.1	168.7	100.9	27.5	1.2	0.0	0.0	0.0	0.0	0.0	65.3	272.4
8-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.4	17.4	64.4	127.3	204.1	305.9	349.1	332.5	251.5	164.0	93.5	31.3	1.4	0.0	0.0	0.0	0.0	0.0	81.0	349.1
9-Mar	0.0	0.0	0.0	0.0	0.0	0.0	1.9	70.7	215.0	195.4	330.4	367.1	406.2	398.9	365.4	213.1	118.8	30.3	2.9	0.0	0.0	0.0	0.0	0.0	113.2	406.2
10-Mar	0.0	0.0	0.0	0.0	0.0	0.0	2.4	86.6	236.7	375.0	466.5	536.6	570.0	552.8	488.2	359.6	212.3	57.5	3.0	0.0	0.0	0.0	0.1	0.0	164.5	570.0
11-Mar	0.0	0.0	0.0	0.0	0.0	0.0	4.1	97.2	207.4	328.6	433.0	519.7	551.2	379.2	185.1	224.9	117.7	40.7	3.3	0.0	0.0	0.0	0.0	0.0	128.8	551.2
12-Mar	0.0	0.0	0.0	0.0	0.0	0.0	3.9	74.4	209.1	342.1	448.7	520.6	548.8	538.0	456.1	346.7	211.3	74.8	4.9	0.0	0.0	0.0	0.0	0.0	157.5	548.8
13-Mar	0.0	0.0	0.0	0.0	0.0	0.0	6.2	106.9	250.2	358.9	428.4	501.1	490.1	471.2	357.6	339.4	164.5	48.5	6.5	0.0	0.0	0.0	0.0	0.0	147.1	501.1
14-Mar	0.0	0.0	0.0	0.0	0.0	0.0	2.0	37.3	131.6	214.8	251.1	305.6	369.7	363.7	317.4	184.3	122.3	44.8	5.9	0.0	0.0	0.0	0.0	0.0	97.9	369.7
15-Mar	0.0	0.0	0.0	0.0	0.0	0.0	3.8	67.1	187.5	372.4	518.3	579.0	610.0	476.3	453.8	389.6	159.4	75.3	6.9	0.0	0.0	0.0	0.0	0.0	162.5	610.0
16-Mar	0.0	0.0	0.0	0.0	0.0	0.0	11.8	128.6	241.0	333.7	374.8	463.4	508.7	438.2	382.2	293.9	162.6	55.8	4.9	0.0	0.0	0.0	0.0	0.0	141.6	508.7
17-Mar	0.0	0.0	0.0	0.0	0.0	0.0	3.5	39.1	155.6	363.4	473.2	453.1	581.5	560.0	489.6	385.1	244.2	100.5	9.7	0.0	0.0	0.0	0.0	0.0	160.8	581.5
18-Mar	0.0	0.0	0.0	0.0	0.0	0.0	15.1	103.8	264.3	394.0	488.2	553.7	583.6	563.1	494.8	282.9	130.2	62.0	9.5	0.0	0.0	0.0	0.0	0.0	164.4	583.6
19-Mar	0.0	0.0	0.0	0.0	0.0	0.0	18.6	97.7	193.2	249.9	287.0	318.2	342.8	319.1	267.8	201.8	144.6	58.3	7.6	0.0	0.0	0.0	0.0	0.0	104.5	342.8
20-Mar	0.0	0.0	0.0	0.0	0.0	0.0	25.6	160.1	313.6	441.5	521.1	580.9	607.2	587.1	515.6	405.9	267.0	121.1	16.1	0.0	0.0	0.0	0.0	0.0	190.1	607.2
21-Mar	0.0	0.0	0.0	0.0	0.0	0.0	23.5	128.5	264.7	394.2	491.9	511.9	439.6	464.2	508.5	367.3	278.3	118.3	16.7	0.1	0.0	0.0	0.0	0.0	167.0	511.9
22-Mar	0.0	0.0	0.0	0.0	0.0	0.0	12.7	78.4	271.8	442.6	430.4	531.2	583.5	410.6	321.4	237.9	100.4	38.8	9.9	0.0	0.0	0.0	0.0	0.0	144.6	583.5
23-Mar	0.0	0.0	0.0	0.0	0.0	0.1	8.7	51.4	120.9	194.7	296.8	422.8	590.2	590.5	519.3	412.6	277.3	132.0	22.8	0.3	0.0	0.0	0.0	0.0	151.7	590.5
24-Mar	0.0	0.0	0.0	0.0	0.0	0.3	45.5	142.5	367.6	420.1	393.8	529.8	599.6	623.6	457.3	310.2	226.7	86.5	17.0	0.2	0.0	0.0	0.0	0.0	175.9	623.6
25-Mar	0.0	0.0	0.0	0.0	0.0	0.3	23.4	166.1	255.1	216.7	246.4	330.9	430.1	274.2	196.1	225.5	204.2	123.6	21.4	0.5	0.0	0.0	0.0	0.0	113.1	430.1
26-Mar	0.0	0.0	0.0	0.0	0.0	0.6	55.5	211.0	355.9	474.7	558.7	619.7	646.4	593.6	554.7	446.5	303.7	153.2	29.2	0.6	0.0	0.0	0.0	0.0	208.5	646.4
27-Mar	0.0	0.0	0.0	0.0	0.0	0.8	53.1	192.0	331.1	460.0	564.5	635.4	660.9	638.2	565.5	454.3	314.2	161.8	36.0	1.0	0.0	0.1	0.1	0.0	211.2	660.9
28-Mar	0.0	0.0	0.0	0.1	0.0	1.1	75.7	236.8	361.6	471.1	575.1	684.4	698.5	660.2	571.4	459.4	319.6	167.1	39.0	1.1	0.0	0.1	0.1	0.0	221.8	698.5
29-Mar	0.0	0.0	0.0	0.0	0.0	1.5	78.3	245.3	392.3	500.7	601.5	687.1	697.4	654.1	575.1	461.3	326.0	162.9	23.7	0.8	0.0	0.0	0.0	0.0	225.3	697.4
30-Mar	0.0	0.0	0.0	0.0	0.0	2.1	64.5	212.2	320.0	395.2	479.5	619.0	686.5	660.6	588.5	482.8	292.6	166.6	20.1	0.7	0.0	0.0	0.0	0.0	208.0	686.5
31-Mar	0.0	0.0	0.0	0.0	0.0	1.3	33.3	113.1	175.1	275.7	355.4	453.1	488.0	565.3	508.3	446.1	290.4	125.4	35.0	1.0	0.0	0.0	0.0	0.0	161.1	565.3
	0.0	0.0	0.0	0.0	0.0	0.3	18.6	97.5	211.9	315.6	389.7	465.0	505.4	465.9	397.5	306.3	186.9	78.3	11.6	0.2	0.0	0.0	0.0	0.0	Diurnal Average	
	0.0	0.0	0.0	0.1	0.0	2.1	78.3	245.3	392.3	500.7	601.5	687.1	698.5	660.6	588.5	482.8	326.0	167.1	39.0	1.1	0.0	0.1	0.1	0.0	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Global Radiation (GR) - W/m2

Fort Chipewyan - March 2025



Concentration Ranges (W/m2)	Number of Hours	%	Cumulative %
0 - 20	392	52.69	52.69
21 - 100	59	7.93	60.62
101 - 300	124	16.67	77.29
301 - 600	151	20.30	97.58
601 - 900	18	2.42	100.00
> 900	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Fort Chipewyan - March 2025

Maximum Speed: 35 km/h on Mar 31 03:00

Maximum Daily Speed Average: 26.5 km/h on Mar 31

Minimum Speed Value: 0 km/h on Mar 14 05:00

Minimum Daily Speed Average: 2.1 km/h on Mar 4

Maximum Diurnal Speed Average: 7.8 km/h at hour 14

Minimum Diurnal Speed Average: 5.1 km/h at hour 5

Monthly Average Velocity: 6.2 km/h 61.7 deg

Percentiles: $P_1 = 1$ $P_{10} = 4$ $Q_1 = 6$ Median = 10 $Q_3 = 15$ $P_{90} = 22$ $P_{99} = 30$

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	E13	E13	E10	E13	E13	E14	E18	E16	E16	E16	E17	E17	E17	E20	E18	E18	E18	ENE12	E14	E18	E14	E17	E16	E17	E15.5	E20
2-Mar	E15	E16	E17	WSW2	E2	E8	SE2	WSW5	WNW10	WNW11	NW11	NW14	NW13	NW15	NW14	NW14	NW13	WNW13	WNW12	NW11	NW11	NW8	NW12	NW13	NW6.3	E17
3-Mar	NW11	WNW10	W11	W14	W12	WNW11	WNW12	WNW12	WNW13	W15	W16	W13	W13	W13	WSW11	WSW11	WSW10	W8	SW7	SW7	SW10	SW10	SSW10	SW9	W10.2	W16
4-Mar	SW9	W7	W9	WNW9	WNW6	W7	W5	NW3	E2	SSE1	E2	ENE6	ENE7	ENE8	ENE8	ENE8	ENE7	ENE5	E7	E6	NNW2	NNW11	NNW12	NW18	N2.1	NW18
5-Mar	NNW14	NNW11	NNW11	NW11	NW10	NW11	NW9	NW5	NW3	SSW4	SW7	SSW4	E4	ESE5	E8	E8	E9	E13	E12	ENE13	ENE15	ENE16	ENE20	ENE21	NE4.8	ENE21
6-Mar	ENE21	ENE21	E22	ENE21	ENE21	ENE21	ENE18	E19	E21	E19	E18	E17	E16	E14	E14	ESE12	ESE9	E8	E9	E6	NE1	N3	NNW3	NW5	E13.3	E22
7-Mar	NW4	NW4	WSW4	NNW2	WNW4	NNW3	N5	N3	ENE3	E11	E13	ENE12	E14	E14	E15	E13	E12	E11	E11	E10	E8	ENE12	E10	ENE6	E6.7	E15
8-Mar	NE6	ENE6	E13	E16	ENE11	E15	E12	ENE8	NNE7	NNE9	N7	NNW10	NNW13	NNW15	NNW15	NW19	NW17	NW16	NW16	NW13	NW10	NW9	NW11	NW10	N7.2	NW19
9-Mar	NW10	NW9	NW8	WNW8	WNW9	NW9	NW7	NNW8	NNW6	NW6	NW5	SW6	SSW10	WSW6	WSW10	WSW10	WSW11	W7	WNW7	WNW6	WNW8	NW6	NW3	W2	WNW6.1	WSW11
10-Mar	W5	WNW5	N4	E3	ENE3	NNE1	ENE2	E3	ENE6	E9	E9	E11	E8	E9	E13	E16	ENE14	ENE9	E8	E8	ENE7	ENE10	ENE10	ENE10	ENE6.5	E16
11-Mar	ENE10	ENE10	ENE9	ENE8	ENE9	E7	ENE8	ENE8	E7	E12	E16	E21	E23	E22	E21	E16	ENE14	E11	ENE7	WNW2	WNW7	WNW9	NW6	NNW5	ENE9.0	E23
12-Mar	NW4	W6	NW7	NNW8	NW9	NW8	WNW6	WNW7	W10	W11	WSW12	WSW12	WSW15	WSW16	WSW16	W16	WSW13	WSW11	WSW9	W6	W6	NW9	WNW6	WNW6	W8.6	WSW16
13-Mar	N4	E2	ENE3	NE3	E5	ENE7	ENE5	E5	ENE6	ENE5	ENE6	ENE7	E6	E7	E9	E10	E12	E9	ENE8	N5	N8	NNE5	NE11	NE10	ENE5.9	E12
14-Mar	ENE4	NNW3	N4	NE3	W0	W1	W4	NW5	N5	N4	NNW6	NNW7	E4	ESE9	E8	ESE10	ESE7	SE3	WNW3	NNW7	NNW7	N7	N7	NNW6	NNE2.6	ESE10
15-Mar	NNW6	NNW5	NW2	NW2	NNW5	NW4	NNW5	NNW6	NNW10	NNW5	SSW5	SW10	WSW9	SW12	WSW11	WSW9	WSW9	WNW6	W6	WNW5	N3	ENE5	ENE7	E5	WNW3.3	SW12
16-Mar	ENE6	ENE7	E8	ENE6	E8	E7	E6	E6	E8	E9	E11	E13	E17	E17	E17	E20	ENE17	ENE20	NE17	ENE20	ENE22	ENE21	ENE18	ENE19	ENE13.0	ENE22
17-Mar	ENE17	ENE16	ENE12	NE10	NNE5	NNE4	NNW5	NNW5	NNW5	NW5	NW8	NW7	NNW10	NW10	NW13	NW12	NW16	NNW10	NW8	NNW7	NNW7	NNW6	NNW5	NW5	NNW6.3	ENE17
18-Mar	NW7	NNW8	NNW9	NNW7	NW5	NW4	NNW3	N1	SE1	E5	E7	E8	E8	E11	E10	E9	E8	E7	E5	E7	ENE6	ENE5	E6	E5	ENE3.9	E11
19-Mar	NE7	E2	E6	E11	E10	E9	E10	E14	E14	E11	E10	ENE12	ENE15	E18	E17	E18	E20	ENE17	ENE17	ENE12	NE9	NNE8	NNE10	NNE12	ENE11.0	E20
20-Mar	NE8	ENE6	NE2	NE8	ENE5	E1	ENE3	E4	E12	E19	E22	E22	E23	E20	E18	E21	ENE18	ENE22	ENE19	ENE22	ENE20	ENE25	E24	ENE26	ENE15.1	ENE26
21-Mar	ENE27	E23	E24	E26	E26	E29	E28	E27	E27	E28	E29	ENE28	ENE25	ENE24	ENE21	ENE21	ENE19	ENE20	E21	E23	E29	E26	E24	E23	E24.8	E29
22-Mar	E21	E22	E23	E23	E22	E20	E17	E16	E15	E14	E14	E12	E12	E15	E16	E14	ESE11	E6	ESE2	NE1	W5	W6	NW8	NW5	E11.6	E23
23-Mar	NNW5	WNW6	WNW5	WNW4	WNW6	WNW7	WNW5	WNW3	SSW1	SE2	E6	E8	E8	E10	E10	E11	E11	ENE16	ENE15	E12	ENE12	ENE10	E12	E14	ENE5.2	ENE16
24-Mar	E15	E14	E14	E16	E17	E20	ENE21	E22	E23	E22	E20	E19	E14	E11	E11	E10	E8	ENE4	W9	W10	W13	W12	W13	W9	E8.9	E23
25-Mar	NW9	NW10	NW14	NW11	NW13	WNW10	W9	W8	NNW5	SW7	SSE3	ESE4	WSW5	NW11	NW13	NW14	NW14	NW15	NW15	NW13	NW11	NW15	NW15	NW13	NW9.7	NW15
26-Mar	NW12	NW11	NW12	NW13	NW10	NW8	NW11	NW10	NNW8	NW7	NW5	N7	NNE6	NNE6	SW4	SW11	E7	ENE15	ENE12	E9	ENE6	E1	ENE1	W3	NNW4.1	ENE15
27-Mar	NW3	NNW6	ENE4	NE2	NNW5	N5	N4	N3	NNW8	NNW8	ENE6	E12	E17	E16	ESE14	E14	E11	E10	E6	E4	SSW0	W3	WNW3	ENE6	ENE4.7	E17
28-Mar	E1	NNE3	WSW3	W2	ENE2	ENE4	ENE5	ENE6	NE2	E7	E7	E8	E9	E9	E10	E10	E12	E14	E12	ENE8	ENE7	ENE7	E5	E6	ENE6.0	E14
29-Mar	E3	SE1	WSW3	ENE4	E3	E4	ENE8	ENE7	E7	ENE6	ENE6	ENE7	ENE9	E12	E12	E12	E15	ENE15	ENE11	ENE10	E10	E12	E11	E13	E8.2	E15
30-Mar	E12	E12	ENE11	ENE9	ENE10	E11	E15	E19	E21	E21	E22	ENE23	E23	ENE23	NE24	ENE27	ENE23	NE23	NE25	ENE28	ENE30	ENE34	ENE33	ENE31	ENE20.9	ENE34
31-Mar	ENE30	ENE32	ENE35	ENE35	ENE29	ENE30	ENE28	ENE29	ENE28	ENE25	ENE23	ENE23	ENE22	ENE24	ENE25	ENE26	ENE26	ENE23	NE25	ENE24	ENE25	E25	E23	E23	ENE26.5	ENE35
	NE6.0	NE5.4	NE5.3	NE5.3	NE5.1	NE5.3	ENE5.2	ENE5.3	ENE6.0	ENE6.2	ENE6.8	ENE7.4	ENE7.6	ENE7.8	ENE7.5	ENE7.4	ENE7.5	ENE7.6	NE6.4	NE6.4	NE5.8	NE5.9	NE6.3	NE6.2	Diurnal Average	
	ENE30	ENE32	ENE35	ENE35	ENE29	ENE30	E28	ENE29	ENE28	E28	E29	ENE28	ENE25	ENE24	ENE25	ENE27	ENE26	ENE23	NE25	ENE28	ENE30	ENE34	ENE33	ENE31	Diurnal Maximum	

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

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7 km/h on Mar 8 16:00

Minimum Value: 1 km/h on Mar 29 06:00

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

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

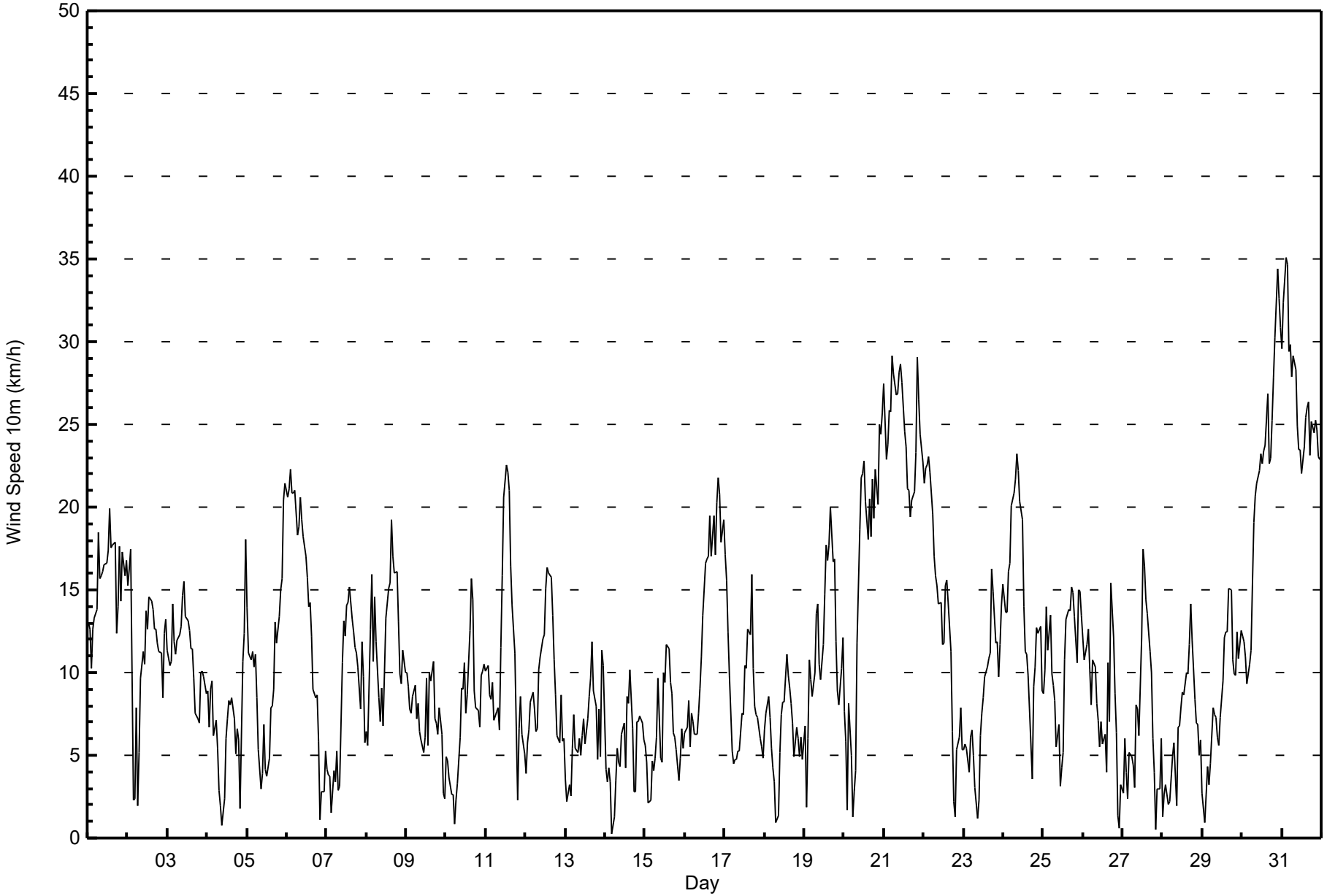
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	1	2	2	1	2	2	2	2	2	2	1	2	1	2	2	1	1	4	3	2	3	2	1	1	4
2-Mar	1	2	3	2	3	3	2	1	2	2	3	4	4	4	4	5	4	3	3	3	3	3	5	5	5
3-Mar	4	3	3	3	2	2	2	3	3	3	4	3	3	3	3	3	2	2	2	2	3	1	1	1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

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Fort Chipewyan - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	149	20.03	20.03
6 - 11	299	40.19	60.22
12 - 19	190	25.54	85.75
20 - 28	92	12.37	98.12
29 - 38	14	1.88	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Fort Chipewyan - March 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	13	5	7	19	24	3	5	2	0	5	1	6	10	10	20	19	149
6 - 11	5	6	8	55	84	6	0	0	0	2	11	13	17	23	42	27	299
12 - 19	0	1	1	30	97	2	0	0	0	0	1	6	11	5	31	5	190
20 - 28	0	0	3	44	45	0	0	0	0	0	0	0	0	0	0	0	92
29 - 38	0	0	0	11	3	0	0	0	0	0	0	0	0	0	0	0	14
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	18	12	19	159	253	11	5	2	0	7	13	25	38	38	93	51	744

Total Number of Valid Hours: 744

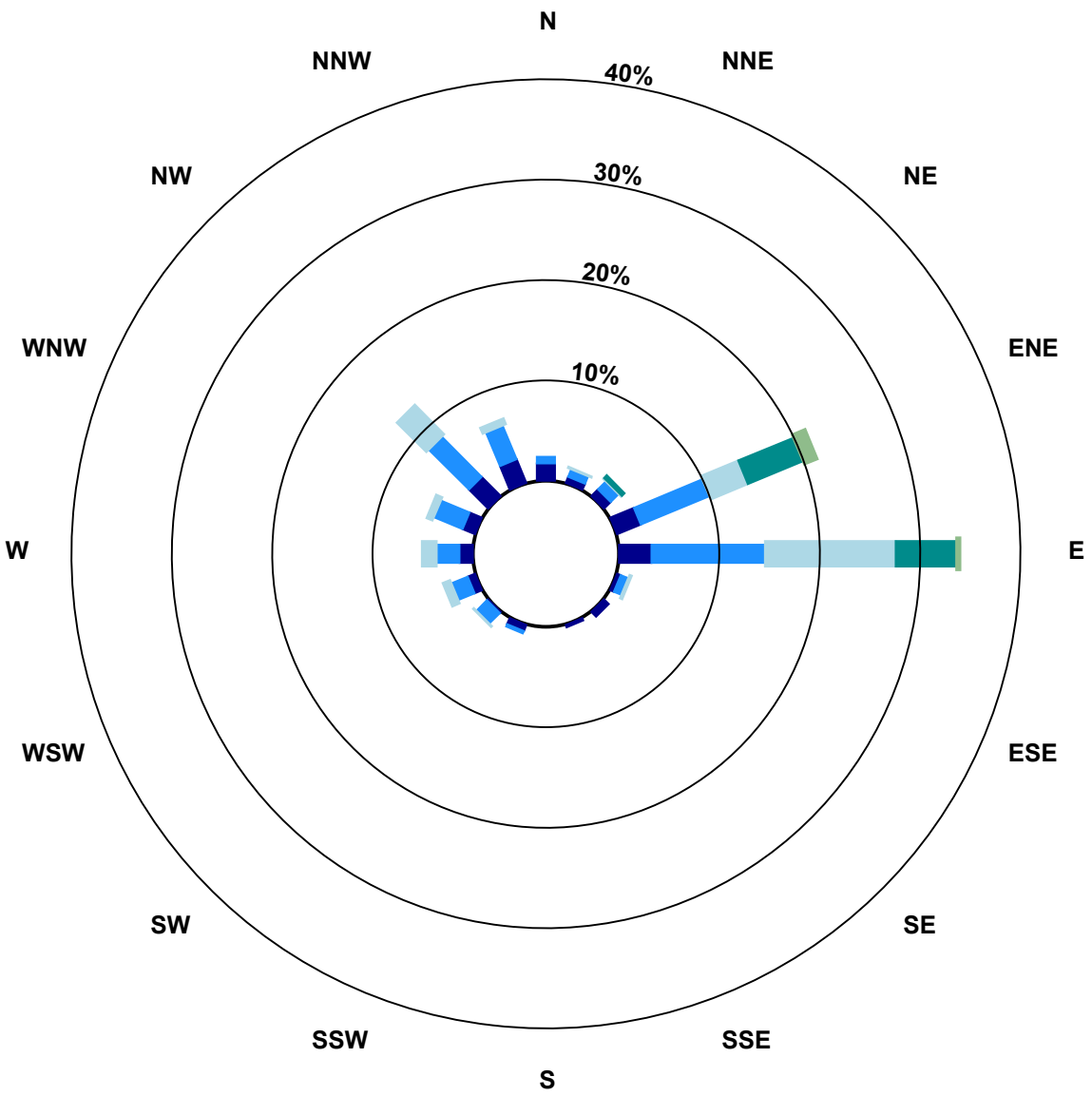
Total Number of Hours: 744

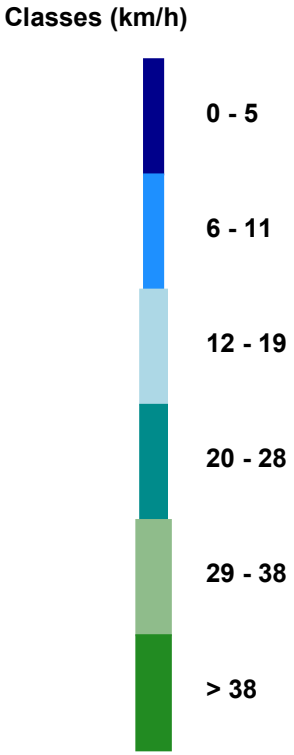
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 10m (WS10) - km/h

Fort Chipewyan





Total Number of Valid Hours: 744

Direction of Maximum Speed: 67 deg on Mar 31 03:00
Direction of Maximum Daily Speed Average: 64.9 deg on Mar 31

Direction of Minimum Speed: 276 deg on Mar 14 05:00

Direction of Minimum Daily Speed Average: 2.1 deg on Mar 4

Monthly Average Direction: 61.7 deg

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	80	82	84	85	85	84	81	85	85	91	95	92	87	86	83	92	89	78	89	86	84	86	90	93	86.6
2-Mar	90	88	88	258	88	91	145	249	282	296	306	310	310	307	309	311	310	302	298	314	319	313	316	324	320.0
3-Mar	315	298	272	278	276	282	282	283	282	280	279	276	270	261	253	257	258	261	235	235	236	220	210	223	266.6
4-Mar	230	259	273	286	289	279	265	312	85	156	81	69	72	76	77	78	78	75	86	90	335	331	328	325	349.9
5-Mar	334	333	329	322	324	326	325	313	312	212	225	208	92	123	98	89	83	93	84	75	70	73	75	76	46.4
6-Mar	74	78	80	78	76	75	76	81	84	85	88	90	85	91	100	109	105	97	96	98	41	350	344	304	82.8
7-Mar	315	311	256	336	295	327	2	2	72	89	80	76	94	89	89	90	96	89	98	90	84	77	99	70	80.8
8-Mar	55	71	92	85	71	94	80	67	19	19	4	341	332	329	331	316	322	320	316	316	317	309	316	306	353.2
9-Mar	309	322	315	289	298	312	306	327	328	324	321	231	212	249	244	242	252	261	289	285	302	309	307	279	287.3
10-Mar	269	293	7	88	65	32	74	88	67	90	88	91	88	91	87	85	77	77	83	79	75	75	66	64	77.9
11-Mar	68	62	75	73	64	83	72	68	86	82	87	91	88	86	84	82	77	87	74	293	298	287	318	328	75.5
12-Mar	325	278	308	335	318	307	289	284	281	269	253	247	254	258	256	261	247	252	257	269	271	304	302	300	272.9
13-Mar	3	96	63	50	82	77	73	86	75	60	77	73	84	82	84	87	83	81	59	3	4	29	35	48	64.5
14-Mar	73	338	7	39	276	268	272	321	350	2	331	347	80	108	101	109	103	127	287	330	335	357	8	327	17.2
15-Mar	332	332	306	313	331	324	328	331	332	340	206	216	245	226	237	254	252	289	279	298	5	74	73	86	283.5
16-Mar	69	76	79	72	80	84	86	92	93	101	97	88	87	86	81	79	69	61	55	58	59	64	66	70	74.1
17-Mar	67	66	65	53	29	14	340	343	348	325	323	319	331	315	319	312	308	328	319	331	338	338	329	308	347.8
18-Mar	311	328	329	329	325	320	330	357	137	89	86	83	80	83	87	87	84	83	80	85	75	75	92	85	60.8
19-Mar	50	93	89	90	86	82	80	80	87	82	82	76	78	84	83	80	81	76	64	57	39	14	12	17	71.5
20-Mar	40	59	50	53	74	98	76	86	83	84	83	81	88	84	84	83	72	63	58	65	64	75	79	77	74.9
21-Mar	76	81	84	85	86	86	89	88	85	83	80	77	78	78	76	75	73	74	79	82	83	85	87	91	82.0
22-Mar	91	85	80	79	81	80	81	81	81	86	90	93	92	90	91	93	104	92	102	45	274	278	325	326	83.2
23-Mar	346	290	287	288	298	297	296	293	198	143	100	89	90	95	87	84	81	77	78	82	75	74	79	84	73.5
24-Mar	84	85	88	88	88	81	78	85	86	85	86	94	98	101	95	94	84	73	263	275	264	261	276	281	86.6
25-Mar	309	311	313	305	308	301	277	278	327	229	164	110	254	307	317	322	321	319	314	317	310	317	320	310	308.7
26-Mar	316	323	320	308	304	311	317	313	330	315	325	352	25	20	216	220	101	76	76	80	67	99	75	269	340.4
27-Mar	321	343	72	34	346	350	349	359	346	338	65	93	89	95	105	96	87	81	82	84	207	265	288	75	67.0
28-Mar	81	13	241	264	66	74	78	75	41	81	79	79	80	80	85	94	79	81	79	69	69	71	90	87	78.4
29-Mar	85	141	251	70	82	80	73	78	79	73	77	72	72	87	87	84	80	76	75	68	82	90	82	83	79.9
30-Mar	80	79	75	73	71	82	84	82	84	84	79	78	80	69	56	60	57	48	51	57	63	70	69	68	69.1
31-Mar	61	64	67	66	59	63	64	65	66	66	66	59	60	59	59	61	63	57	56	59	75	79	80	85	64.9
	48.9	48.3	54.7	52.4	48.7	56.2	57.1	60.4	61.1	70.2	76.0	76.2	77.4	76.7	75.1	74.8	68.8	61.4	56.1	52.2	47.7	51.4	50.4	51.6	
	Diurnal Average																								

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

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 99 deg on Mar 14 05:00

Minimum Value: 3 deg on Mar 11 13:00

Percentiles: P_1 = 4 P_{10} = 5 Q_1 = 6 Median = 11 Q_3 = 20 P_{90} = 38 P_{99} = 80

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

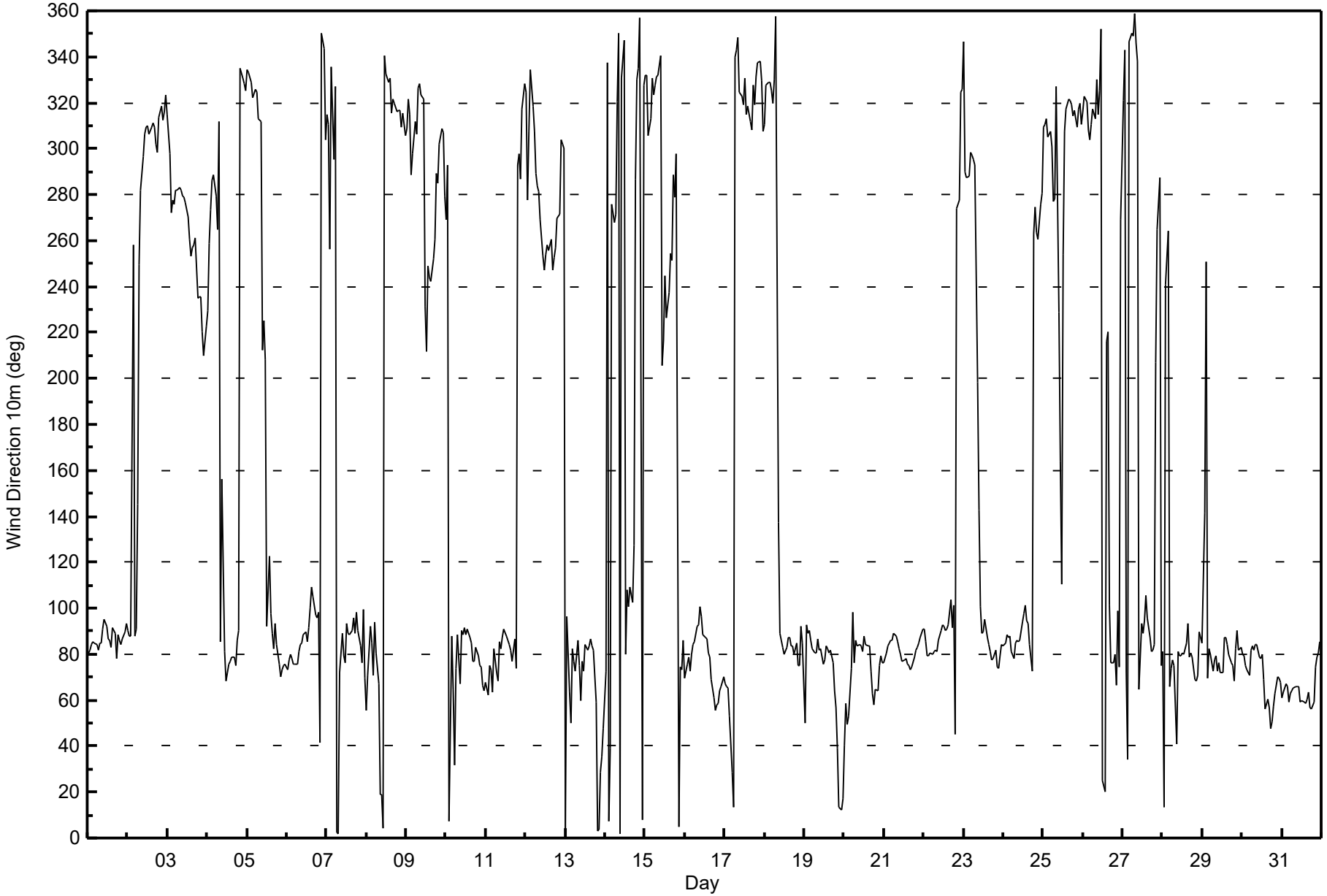
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	4	4	4	4	5	5	5	5	5	6	8	4	3	4	4	3	3	10	10	5	5	4	4	4	10
2-Mar	5	6	6	68	77	41	77	28	14	15	16	18	19	16	19	18	19	15	16	19	21	21	20	21	77
3-Mar	20	18	14	13	13	13	12	14	14	14	13	16	16	16	17	21	15	14	13	15	15	9	8	12	21
4-Mar	10	22	14	11	14	15	14	66	50	48	12	11	8	6	5	8	10	11	8	10	76	21	22	20	76
5-Mar	23	23	22	21	21	21	34	37	69	68	23	23	53	27	16	8	5	7	7	6	6	6	6	6	69
6-Mar	6	7	5	5	5	6	6	6	5	5	7	6	5	4	5	7	5	7	7	13	83	54	69	19	83
7-Mar	42	81	36	85	64	44	26	35	36	7	9	12	5	4	4	4	5	6	9	7	13	15	35	17	85
8-Mar	8	17	13	6	9	4	7	18	26	19	29	28	25	26	24	19	21	20	20	21	21	18	18	17	29
9-Mar	17	19	17	12	18	16	14	14	22	24	36	35	10	53	25	19	16	16	12	13	6	13	61	46	61
10-Mar	20	19	31	25	29	78	75	34	12	7	10	9	12	9	6	4	4	9	13	11	14	10	6	6	78
11-Mar	8	5	13	8	6	13	12	12	17	10	4	3	3	5	4	4	6	6	54	26	6	10	18	18	54
12-Mar	20	8	20	21	20	15	15	12	13	20	16	18	18	14	15	14	15	12	12	9	13	12	17	20	21
13-Mar	19	50	25	12	21	14	12	20	11	16	16	10	12	9	8	11	5	13	7	43	21	41	10	8	50
14-Mar	39	51	30	32	99	71	51	31	28	33	30	27	63	11	10	8	11	57	56	16	16	18	13	13	99
15-Mar	18	27	59	56	33	25	36	29	23	38	56	10	32	15	19	36	18	36	16	66	68	15	15	16	68
16-Mar	6	10	7	7	5	5	5	8	9	6	6	4	7	6	4	4	9	8	8	7	7	7	8	6	10
17-Mar	7	6	9	7	14	23	21	23	25	45	27	39	32	32	27	29	16	21	17	18	17	17	17	21	45
18-Mar	17	14	13	15	32	35	80	71	70	11	8	9	8	4	7	6	12	7	8	11	12	14	9	9	80
19-Mar	7	31	25	12	14	11	6	5	6	7	11	5	5	4	5	5	4	5	7	8	11	13	15	15	31
20-Mar	30	24	75	19	13	84	22	21	8	4	5	5	4	4	5	5	9	7	8	6	6	6	5	5	84
21-Mar	5	7	6	5	5	6	6	6	5	6	6	5	5	5	5	5	4	4	5	5	5	5	5	5	7
22-Mar	5	7	7	7	8	6	7	6	6	4	4	5	4	4	5	3	11	11	50	38	33	22	23	26	50
23-Mar	39	12	12	9	7	9	14	18	64	39	11	9	9	6	6	6	5	4	5	6	10	9	8	7	64
24-Mar	6	5	9	5	6	7	7	6	6	5	6	5	5	5	4	5	6	70	9	12	15	13	13	12	70
25-Mar	20	18	19	16	16	17	13	16	38	38	36	20	56	22	23	25	23	23	21	23	19	19	20	16	56
26-Mar	18	19	18	12	14	16	14	19	25	35	56	42	58	60	95	14	65	4	5	5	11	65	90	28	95
27-Mar	22	19	34	48	29	32	51	43	20	23	60	8	5	6	9	8	4	6	7	12	84	13	48	7	84
28-Mar	32	18	52	47	77	26	14	17	50	39	10	6	7	10	7	8	8	4	5	6	7	4	18	8	77
29-Mar	36	67	15	11	8	10	7	8	8	7	8	6	5	10	6	6	4	3	7	5	8	7	6	6	67
30-Mar	6	6	8	9	8	8	6	5	5	7	6	6	6	9	8	7	8	8	8	8	8	7	7	7	9
31-Mar	8	7	7	7	7	7	7	7	7	7	7	8	7	7	7	7	7	10	8	8	7	6	5	6	10
	42	81	75	85	99	84	80	71	70	68	60	42	63	60	95	36	65	70	56	66	84	65	90	46	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Fort Chipewyan - March 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS09
BARGE LANDING
MARCH 2025

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

April 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BARGE LANDING (AMS09)
MARCH 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 30-Min Value	30-Min Exceedances	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	706	37	38	99.87	-	-	24.5	0	4.2	0
TRS(ppb) Average	647	38	97	92.07	4.6	0	3.8	0	1.2	0
THC(ppm) Average	703	37	41	99.46	-	-	5.7	-	2.4	-
NMHC(ppm) Average	703	37	41	99.46	-	-	3.83	-	0.291	-
CH4(ppm) Average	703	37	41	99.46	-	-	4.4	-	2.4	-
NO2 (ppb) Average	708	36	36	100	-	-	41.5	0	23.8	-
NO (ppb) Average	708	36	36	100	-	-	105.6	-	22	-
NOX (ppb) Average	708	36	36	100	-	-	146.7	-	45.8	-
PM2.5(ug/m3) Average	658	1	86	88.58	-	-	113.4	2	32.7	1
Temperature (C) Average	744	0	0	100	-	-	11	-	2	-
Relative Humidity (%) Average	744	0	0	100	-	-	96.1	-	79.7	-
Barometric Pressure (inHg) Average	744	0	0	100	-	-	29.4	-	29.3	-
Wind Speed 10 m (km/h) Average	739	0	5	99.33	-	-	14	-	8	-
Wind Direction 10 m (deg) Average	739	0	5	99.33	-	-	-	-	-	-
Wind Speed 20 m (km/h) Average	744	0	0	100	-	-	25	-	16	-
Wind Direction 20 m (deg) Average	744	0	0	100	-	-	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BARGE LANDING (AMS09)
MARCH 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

						Percentile				
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	706	1.03	2.7	-	0	0	0	0.2	0.5	2.6	24.5
TRS(ppb) Average	647	0.53	0.4	-	0	0.3	0.3	0.4	0.6	0.9	3.8
THC(ppm) Average	703	2.06	0.3	-	1.8	1.8	1.9	2	2.1	2.3	5.7
NMHC(ppm) Average	703	0.041	0.192	-	0	0	0	0	0	0.1	3.83
CH4(ppm) Average	703	2.02	0.2	-	1.8	1.8	1.9	2	2.1	2.2	4.4
NO2 (ppb) Average	708	15.27	9.9	-	0.2	3.7	7.2	12.7	22	30.4	41.5
NO (ppb) Average	708	6.75	14.2	-	0	0.1	0.2	2	6.2	16.9	105.6
NOX (ppb) Average	708	22.03	21.2	-	0.2	4.6	9.3	15.6	27.9	44.6	146.7
PM2.5(ug/m3) Average	658	10.88	11.5	-	0.5	3.1	4.3	6.9	12.9	21.8	113.4
Temperature (C) Average	744	-7.72	7.6	-	-25.7	-18.1	-13.7	-7.3	-2.1	2.1	11
Relative Humidity (%) Average	744	66.42	15.2	-	27.1	45.1	54.9	68.4	79	84.6	96.1
Barometric Pressure (inHg) Average	744	28.9	0.2	-	28.6	28.7	28.7	28.9	29	29.2	29.4
Wind Speed 10 m (km/h) Average	739	5.2	3	-	0	2	3	5	7	9	14
Wind Direction 10 m (deg) Average	739	55.5	-	-	-	-	-	-	-	-	-
Wind Speed 20 m (km/h) Average	744	9.4	5	-	0	4	6	9	12	16	25
Wind Direction 20 m (deg) Average	744	52.2	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BARGE LANDING (AMS09)
MARCH 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL GASEOUS ANALYZERS	17 Mar 2025 12:00	17 Mar 2025 12:00	1	Maintenance - sample manifold cleaned
THC/ NMHC/ CH4	14 Mar 2025 10:00	14 Mar 2025 12:00	3	Maintenance - replaced support gas cylinder
TRS	22 Mar 2025 05:00	24 Mar 2025 10:00	54	Analyzer Failure - lamp failure
TRS	29 Mar 2025 08:00	29 Mar 2025 08:00	1	Maintenance - reinitiated daily QA check
TRS	30 Mar 2025 10:00	30 Mar 2025 10:00	1	Maintenance - reinitiated daily QA check
TRS	31 Mar 2025 08:00	31 Mar 2025 09:00	2	Maintenance - reinitiated daily QA check
PM2.5	21 Mar 2025 01:00	24 Mar 2025 11:00	83	Unstable Operation - excessive baseline noise
PM2.5	24 Mar 2025 12:00	24 Mar 2025 13:00	2	Maintenance - optical chamber cleaned
Wind Speed, Wind Direction 10m	01 Mar 2025 22:00	01 Mar 2025 23:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction 10m	15 Mar 2025 08:00	15 Mar 2025 08:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction 10m	17 Mar 2025 08:00	17 Mar 2025 08:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction 10m	28 Mar 2025 04:00	28 Mar 2025 04:00	1	Flat line in sensor output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Barge Landing - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 24.5 ppb on Mar 22 14:00 Maximum Daily Average: 4.2 ppb on Mar 22

Minimum Value: 0.0 ppb on Mar 2 19:00 Minimum Daily Average: 0.0 ppb on Mar 27
Maximum Diurnal Average: 3.1 ppb at hour 15 Minimum Diurnal Average: 0.1 ppb at hour 6
Monthly Average: 1.03 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.2 Q_3 = 0.5 P_{90} = 2.6 P_{99} = 13.4

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	37
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.3	0.2	0.5	2.2	5.5	10.2	8.0	21.5	21.6	8.0	3.9	3.2	3.9	2.0	1.4	1.3	0.8	4.2	21.6
2-Mar	Z	0.7	0.6	0.6	0.3	0.2	0.1	0.3	0.5	0.5	0.8	0.8	0.8	0.6	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.8
3-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.2	0.2	0.1	0.2	0.6	1.4	2.6	3.1	1.6	0.6	0.4	0.3	0.2	0.5	3.1
4-Mar	0.2	0.3	Z	0.3	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	1.0	1.8	1.3	0.5	0.1	0.2	0.1	0.1	0.3	0.3	0.1	0.1	0.4	1.8
5-Mar	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	0.8	10.9	12.5	9.4	3.7	0.4	0.1	0.1	0.0	0.1	1.7	12.5
6-Mar	0.0	0.0	0.0	0.0	Z	0.4	0.5	0.4	0.4	2.2	C	C	C	C	C	C	13.2	7.4	3.6	2.0	1.0	1.0	1.3	2.2	--	13.2
7-Mar	1.0	0.4	0.4	0.2	0.2	Z	0.3	0.4	0.5	0.6	0.8	2.9	10.3	5.3	4.8	2.4	0.9	0.5	0.4	0.4	0.3	0.1	0.1	0.2	1.5	10.3
8-Mar	Z	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.2
9-Mar	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
10-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	6.6	13.4	12.7	9.5	6.4	10.0	6.2	4.6	3.4	2.2	1.9	1.2	1.3	3.5	13.4
11-Mar	1.3	1.2	1.0	Z	0.5	0.5	0.4	0.4	0.3	0.4	0.3	0.4	0.3	0.3	0.3	0.4	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.4	1.3
12-Mar	0.1	0.0	0.0	0.0	Z	0.1	0.2	0.0	0.1	0.1	0.0	0.1	0.3	0.8	0.7	0.3	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.8
13-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	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	0.0	0.0	0.0	0.3
14-Mar	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
15-Mar	0.0	Z	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.6	0.7	0.6	0.4	0.6	0.3	0.6	0.2	0.1	0.0	0.0	0.0	0.2	0.7
16-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.2	0.0	0.2	1.1	3.7	7.4	1.3	0.9	0.9	0.4	1.1	1.0	0.3	0.1	0.0	0.1	0.0	0.0	0.8	7.4
17-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.4	0.0	0.6	M	0.7	0.4	0.5	0.5	0.3	0.3	0.1	0.2	0.3	0.2	0.1	0.1	0.2	0.7
18-Mar	0.1	0.1	0.2	0.3	Z	0.3	0.1	0.1	0.0	1.7	2.1	0.5	0.1	0.3	0.3	1.5	1.4	4.1	4.4	1.5	0.8	0.3	0.1	0.1	0.9	4.4
19-Mar	0.0	0.1	0.1	0.1	0.2	Z	0.3	0.3	0.2	0.7	4.1	3.4	10.8	13.2	15.0	10.8	9.2	3.4	1.7	0.7	0.3	0.3	0.0	0.0	3.3	15.0
20-Mar	Z	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.2
21-Mar	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.4	4.0	2.9	5.9	4.4	5.2	2.9	0.4	0.4	0.3	0.2	0.1	0.1	0.1	0.1	1.2	5.9
22-Mar	0.2	0.3	Z	0.2	0.3	0.2	0.2	0.3	0.5	1.8	5.2	4.4	14.7	24.5	11.2	13.7	11.0	3.7	1.5	0.3	0.2	0.6	0.7	0.5	4.2	24.5
23-Mar	0.4	0.3	0.2	Z	0.2	0.2	0.2	0.2	0.3	0.7	0.7	0.4	0.5	7.5	12.4	4.3	2.2	3.4	2.7	1.7	1.0	0.6	0.5	0.3	1.8	12.4
24-Mar	0.2	0.2	0.3	0.2	Z	0.4	0.4	0.2	0.3	1.7	1.5	0.7	1.2	2.4	0.8	0.4	0.4	0.2	0.4	0.3	0.3	0.2	0.1	0.2	0.6	2.4
25-Mar	0.2	0.2	0.1	0.1	0.1	Z	0.3	0.1	0.1	0.2	0.2	0.2	1.4	1.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.2	1.4
26-Mar	Z	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
27-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.3	0.8	0.6	0.4	0.2	0.1	0.0	0.1	0.1	0.1	0.2	0.8
29-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.8	1.5	1.4	3.7	7.1	17.5	8.3	4.2	0.3	0.1	0.1	0.0	2.0	17.5
30-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.7	3.0	4.3	4.2	3.3	2.5	1.1	0.4	0.3	0.2	0.2	0.2	0.9	4.3
31-Mar	0.4	0.4	0.4	0.3	0.2	Z	0.1	0.2	1.4	2.5	6.9	2.2	1.2	1.0	0.6	1.1	0.4	1.0	0.2	0.2	0.0	0.0	0.0	0.1	0.9	6.9
	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.5	1.2	1.4	2.6	3.0	3.1	2.9	2.7	2.2	1.3	0.7	0.3	0.3	0.2	0.2	Diurnal Average	
	1.3	1.2	1.0	0.6	0.5	0.5	0.5	0.4	1.4	2.5	6.9	7.4	14.7	24.5	21.5	21.6	13.2	17.5	8.3	4.2	2.2	1.9	1.3	2.2	Diurnal Maximum	

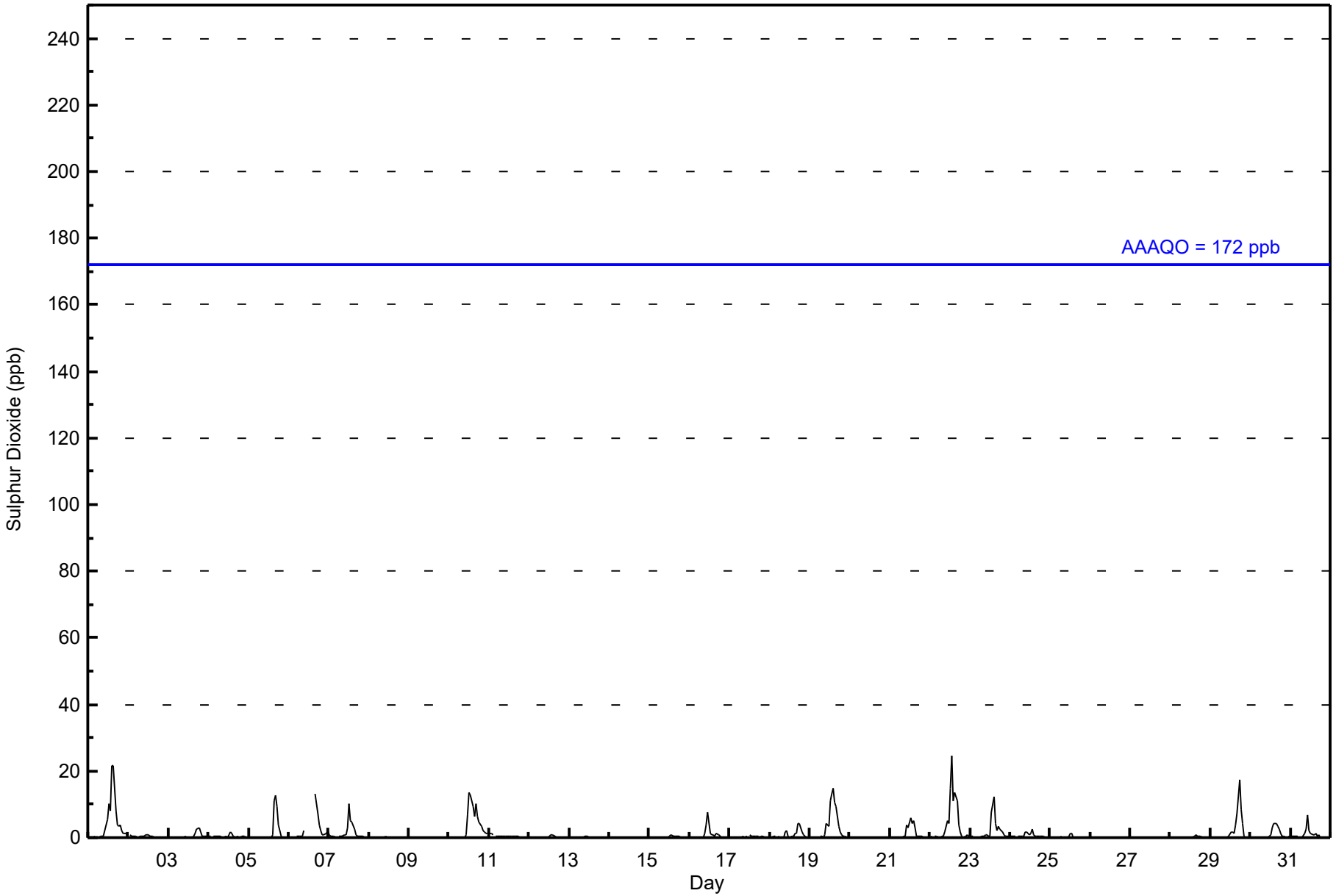
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Barge Landing - March 2025



Sulphur Dioxide (SO_2) - ppb
Barge Landing - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	688	97.45	97.45
11 - 20	15	2.12	99.58
21 - 60	3	0.42	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Barge Landing - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	108	144	44	23	9	15	45	56	50	28	17	15	13	15	29	77	688
11 - 20	0	0	0	0	0	0	1	7	4	1	1	0	1	0	0	0	15
21 - 60	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	3
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	108	144	44	23	9	15	46	64	54	31	18	15	14	15	29	77	706

Total Number of Valid Hours: 706

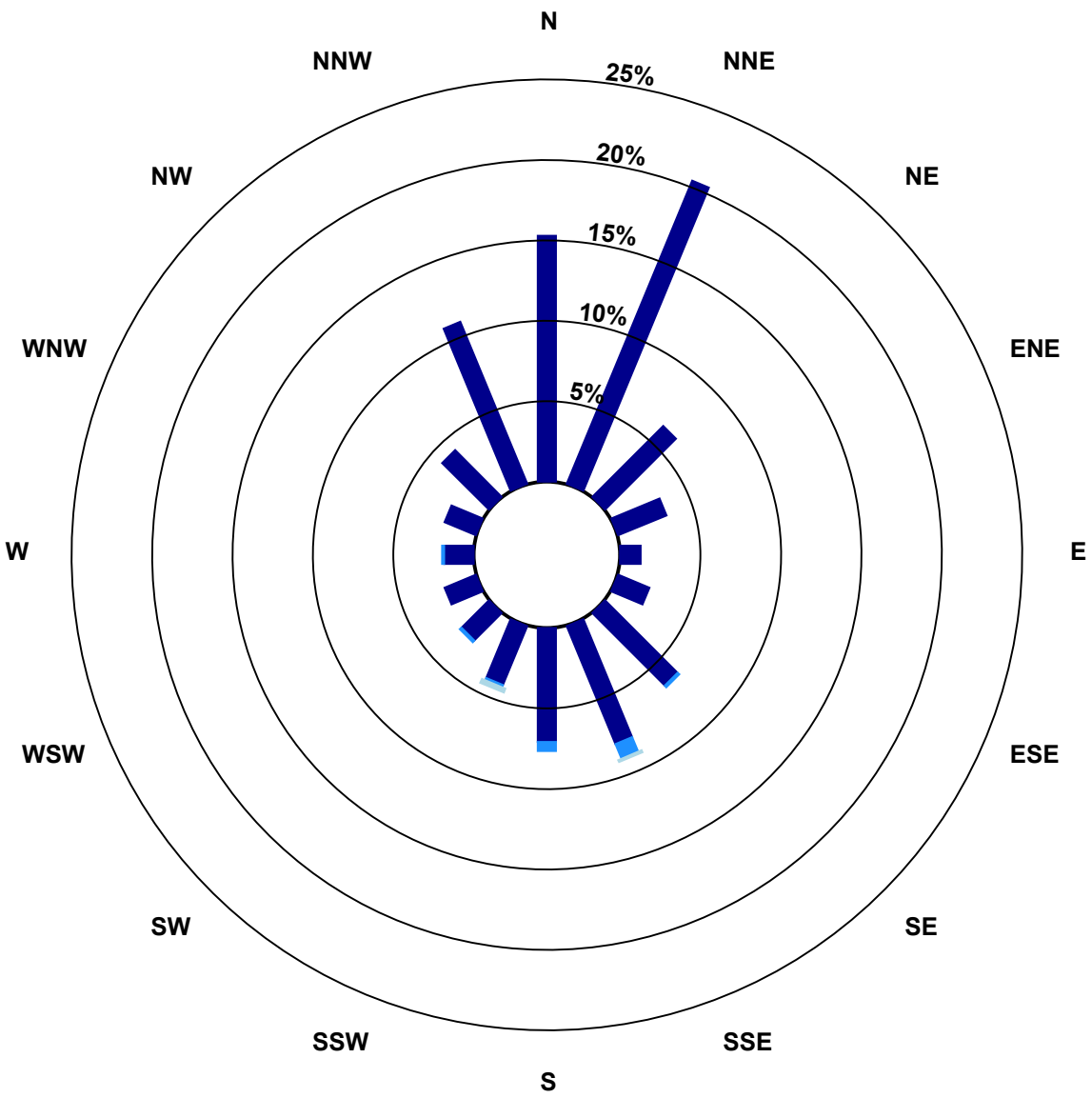
Total Number of Hours: 744

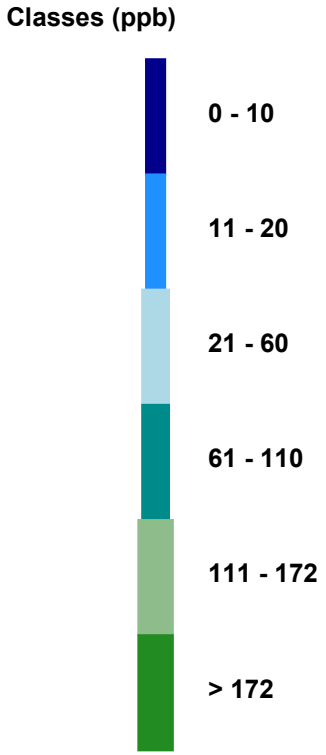
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Sulphur Dioxide (SO_2) - ppb

Barge Landing





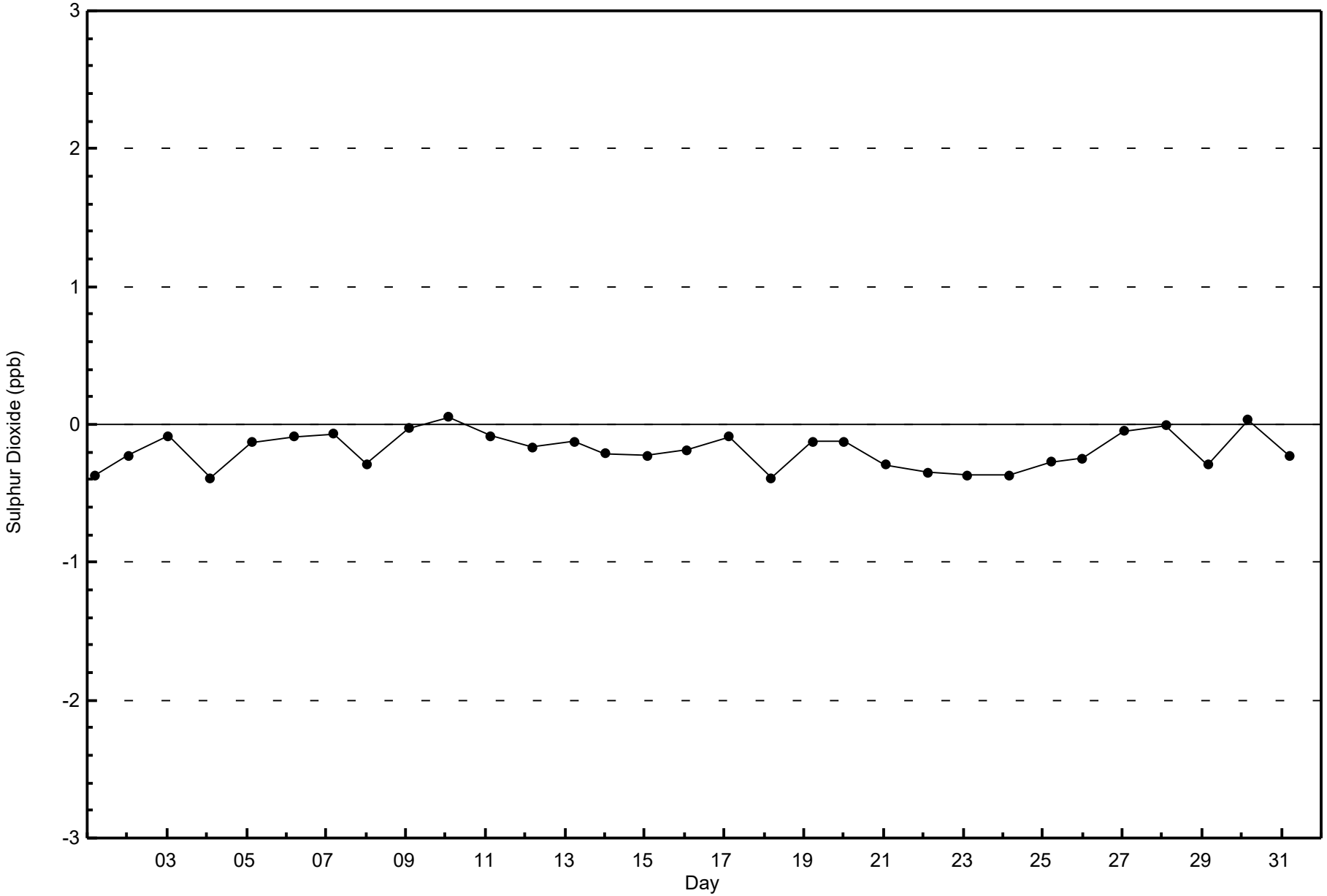
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Barge Landing - March 2025

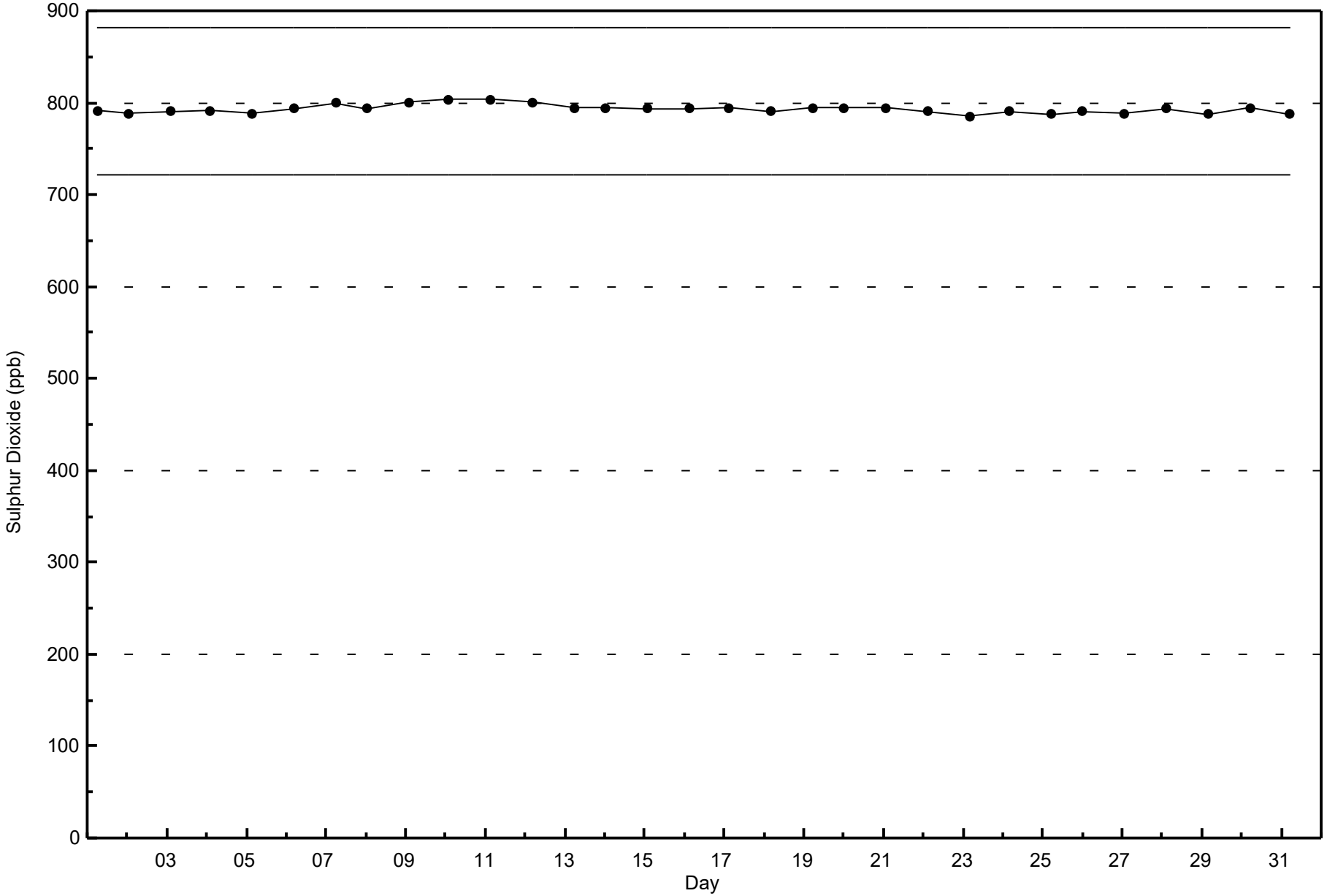


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Barge Landing - March 2025



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Barge Landing - March 2025

Number of Exceedences (AAAQG): 30-Min: 0

Maximum Value: 4.6 ppb on Mar 4 11:30

Maximum Daily Average: 1.2 ppb on Mar 1

Minimum Value: 0.0 ppb on Mar 24 18:00

Minimum Daily Average: 0.3 ppb on Mar 27

Maximum Diurnal Average: 0.8 ppb at hour 12

Minimum Diurnal Average: 0.4 ppb at hour 2

Monthly Average: 0.53 ppb

Percentiles: P_1 = 0.2 P_{10} = 0.3 Q_1 = 0.3 Median = 0.4 Q_3 = 0.5 P_{90} = 0.9 P_{99} = 2.4

Periods in Service:	1488
Periods of Valid Data:	1297
Periods of Invalid Data:	191
Periods of Calibration:	75
Percent Operational Time:	92.2

Day	Period Ending At (MST) 00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00	Daily Average	Daily Maximum
1-Mar	Z	0.5	0.7	0.5	0.5	0.4	0.5	0.5	0.5	0.4	0.4	0.7	2.8	1.4	1.3	2.4	2.1	1.9	1.7	1.8	1.6	1.7	1.6	1.5	1.2	2.8
	SP	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.6	2.4	1.6	1.1	1.4	2.4	1.8	1.9	1.6	1.8	1.7	1.7	1.5	1.5		
2-Mar	1.4	Z	1.2	1.1	0.9	0.7	0.8	0.8	1.8	1.7	1.5	1.1	0.9	0.5	0.3	0.3	0.5	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.8	1.8
	1.3	SP	1.2	0.9	0.7	0.8	0.8	1.3	1.7	1.7	1.4	0.9	0.8	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.4		
3-Mar	0.3	0.3	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	1.0	0.5	0.6	0.5	0.4	0.4	0.7	0.8	0.5	0.5	0.6	0.6	0.5	1.0
	0.3	0.4	SP	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	1.0	0.6	0.5	0.5	0.5	0.4	0.5	0.9	0.6	0.5	0.5	0.6	0.6		
4-Mar	0.5	0.8	1.6	Z	0.9	0.7	0.7	0.8	1.8	2.6	1.7	4.6	1.2	0.9	0.9	1.2	0.2	0.3	0.2	0.2	0.4	0.5	0.4	0.4	1.0	4.6
	0.7	1.3	1.1	SP	0.9	0.9	0.7	1.1	2.9	2.1	2.0	3.1	0.9	0.8	1.1	0.5	0.2	0.3	0.2	0.2	0.5	0.4	0.4	0.4		
5-Mar	0.4	0.4	0.3	0.3	Z	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.5	0.5	0.8	0.8	0.6	0.7	0.7	0.6	0.6	0.5	0.9
	0.4	0.4	0.4	0.4	SP	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.4	0.6	0.7	0.8	0.6	0.7	0.9	0.6	0.5	0.5		
6-Mar	0.4	0.4	0.5	0.5	0.5	Z	1.0	0.8	1.0	1.8	1.1	0.6	0.7	0.7	0.6	0.6	0.5	1.0	1.1	1.1	1.0	0.9	0.8	1.0	0.8	1.8
	0.4	0.5	0.4	0.4	0.7	SP	0.8	0.9	0.7	1.3	0.7	0.7	0.7	0.7	0.6	0.5	0.8	1.0	1.2	1.0	1.0	0.8	0.9	0.7		
7-Mar	Z	0.4	0.4	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.8	0.7	0.4	0.3	0.4	0.4	0.3	0.3	0.4	0.3	0.4	0.5	0.8
	SP	0.4	0.4	0.5	0.4	0.5	0.6	0.6	0.4	0.5	0.7	0.5	0.7	0.7	0.4	0.4	0.3	0.4	0.3	0.4	0.3	0.4	0.3	0.4		
8-Mar	0.4	Z	0.4	0.3	0.4	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5
	0.4	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	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3		
9-Mar	0.3	0.3	Z	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	0.4	0.4	0.5	0.3	0.5
	0.3	0.3	SP	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.4	0.5	0.4		
10-Mar	0.4	0.5	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.7	0.8	0.5	0.5	0.5	0.5	0.5	0.8	0.5	0.6	0.6	0.5	0.5	0.8
	0.4	0.5	0.3	SP	0.4	0.4	0.4	0.4	0.5	0.5	0.7	0.7	0.8	0.7	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.6	0.7	0.5		
11-Mar	0.5	0.5	0.4	0.5	Z	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.4	0.6
	0.5	0.5	0.5	0.4	SP	0.5	0.4	0.4	0.4	0.5	0.6	0.6	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3		
12-Mar	0.4	0.3	0.4	0.4	0.3	Z	0.7	0.4	0.3	C	C	C	C	C	0.4	0.4	0.3	0.3	0.2	0.3	0.5	0.8	0.6	0.4	0.4	0.8
	0.3	0.3	0.4	0.4	0.3	SP	0.5	0.3	0.3	C	C	C	C	0.5	0.3	0.3	0.3	0.2	0.3	0.4	0.6	0.7	0.5	0.4		
13-Mar	Z	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.7	0.9	0.6	0.5	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.4	0.4	0.3	0.4	0.4	1.0
	SP	0.4	0.4	0.5	0.4	0.5	0.4	0.4	0.5	1.0	0.8	0.5	0.5	0.3	0.3	0.3	0.5	0.3	0.3	0.3	0.4	0.3	0.4	0.4		
14-Mar	1.4	Z	0.3	1.5	0.5	0.8	1.4	0.3	1.9	1.3	0.3	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	3.1	0.5	0.3	0.7	3.1
	2.3	SP	1.1	0.8	0.9	1.3	0.5	0.3	1.6	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	1.2	0.3	0.3		
15-Mar	0.3	0.3	Z	0.5	0.4	0.4	0.4	0.3	0.4	1.7	3.3	1.3	1.5	0.8	0.5	0.5	0.4	0.4	0.4	0.4	0.6	0.8	0.4	2.0	0.7	3.3
	0.3	0.3	SP	0.4	0.5	0.4	0.4	0.3	0.4	2.3	2.4	1.6	0.9	0.5	0.4	0.5	0.4	0.5	0.4	0.5	0.7	0.4	0.5	1.2		

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Barge Landing - March 2025

Day	Period Ending At (MST) 00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00	Daily Average	Daily Maximum
16-Mar	0.6	0.3	0.3	Z	0.4	0.4	0.6	0.6	1.0	1.0	0.9	0.9	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	1.1
	0.4	0.4	0.3	SP	0.4	0.4	0.6	0.8	1.1	1.0	0.9	0.8	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3		
17-Mar	0.3	0.3	0.3	0.3	Z	0.4	0.4	0.3	0.9	1.0	0.9	M	0.5	0.4	0.3	0.3	0.4	0.4	0.4	0.6	0.4	0.6	0.5	0.6	0.5	3.0
	0.3	0.3	0.3	0.3	SP	0.4	0.4	0.4	1.4	0.6	3.0	M	0.4	0.3	0.3	0.4	0.4	0.4	0.6	0.5	0.6	0.6	0.6	0.6		
18-Mar	0.6	0.5	0.7	1.8	1.4	Z	0.6	0.4	0.4	0.9	0.5	0.4	0.3	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4	3.7	0.6	0.4	0.7	3.7
	0.6	0.6	1.6	1.7	0.7	SP	0.5	0.4	1.0	0.6	0.5	0.3	0.4	0.3	0.3	0.5	0.5	0.4	0.4	0.4	1.2	3.0	0.4	0.4		
19-Mar	Z	0.4	0.4	0.3	0.5	0.9	1.4	1.2	0.8	0.5	1.5	1.8	1.1	0.8	0.8	0.6	0.6	0.7	0.5	0.3	0.3	0.3	0.4	0.3	0.7	2.3
	SP	0.4	0.4	0.4	0.7	1.2	1.4	1.2	0.6	0.7	2.3	1.2	0.9	0.8	0.7	0.6	0.8	0.6	0.4	0.3	0.3	0.3	0.3	0.3		
20-Mar	0.5	Z	0.4	0.3	0.3	0.3	0.5	0.5	1.0	1.8	1.0	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	2.4
	0.6	SP	0.3	0.3	0.3	0.7	0.6	0.5	2.4	1.7	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.4	0.3		
21-Mar	0.3	0.3	Z	0.3	0.3	0.3	0.4	0.4	0.3	0.4	0.7	0.5	0.4	0.6	0.5	0.4	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.3	0.7
	0.2	0.3	SP	0.3	0.3	0.3	0.4	0.3	0.3	0.4	0.6	0.4	0.4	0.6	0.6	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
22-Mar	0.2	0.2	0.4	Z	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	0.4
	0.2	0.3	0.4	SP	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF		
23-Mar	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--
	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-Mar	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	C	C	C	C	1.1	1.0	1.3	0.0	0.1	0.1	0.2	0.2	0.2	0.3	--	2.2
	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	C	C	C	C	2.2	0.2	0.1	0.0	0.1	0.2	0.2	0.2	0.2	0.3		
25-Mar	Z	0.3	0.2	0.2	0.2	0.2	0.4	0.3	0.2	0.3	0.3	1.8	1.4	0.6	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.3	0.4	3.7
	SP	0.3	0.3	0.2	0.3	0.3	0.4	0.3	0.2	0.3	0.3	3.7	0.5	0.3	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3		
26-Mar	0.3	Z	0.3	0.4	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.4
	0.3	SP	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3		
27-Mar	0.4	0.4	Z	0.5	0.4	0.4	0.5	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.6
	0.4	0.6	SP	0.5	0.4	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3		
28-Mar	0.3	0.3	0.3	Z	0.4	0.4	0.6	0.3	0.4	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.6	0.4	0.4	0.4	0.6
	0.3	0.2	0.3	SP	0.4	0.4	0.4	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	0.4	0.6	0.4	0.3		
29-Mar	0.3	0.3	0.3	0.3	Z	0.4	0.3	M	0.4	0.5	0.6	0.4	0.4	0.3	0.3	0.4	0.3	0.4	0.4	0.5	0.5	0.6	0.5	0.4	0.4	0.6
	0.3	0.3	0.3	0.3	SP	0.4	0.3	M	0.3	0.6	0.5	0.4	0.4	0.3	0.3	0.4	0.3	0.4	0.4	0.6	0.5	0.5	0.5	0.3		
30-Mar	0.3	0.3	0.4	0.3	0.3	Z	0.4	0.3	0.4	M	0.5	0.5	1.0	0.7	0.5	0.5	0.5	0.5	0.6	0.4	0.4	0.4	0.3	0.5	0.5	1.0
	0.3	0.3	0.3	0.3	0.4	SP	0.3	0.3	0.4	M	0.5	0.5	0.8	0.6	0.6	0.5	0.5	0.5	0.6	0.5	0.3	0.4	0.4	0.4		
31-Mar	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	M	0.6	0.9	0.4	0.5	0.3	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.9
	SP	0.3	0.2	0.2	0.2	0.2	0.2	M	0.6	0.6	0.7	0.7	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2		
	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.7	0.8	0.8	0.8	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.6	0.4	0.5	Diurnal Average	
	2.3	1.3	1.6	1.8	1.4	1.3	1.4	1.3	2.9	2.6	3.3	4.6	2.8	1.4	2.2	2.4	2.1	1.9	1.7	1.8	1.7	3.7	1.6	2.0	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance AF - Analyzer Failure SP - Span

Alberta Ambient Air Quality Guideline (AAAQG): 30-Min: 5 ppb

Wood Buffalo Environmental Association

Summary of Hour Averages

Total Reduced Sulphur (TRS) - ppb

Barge Landing - March 2025

Maximum Value: 3.8 ppb on Mar 4 12:00

Maximum Daily Average: 1.2 ppb on Mar 1

Minimum Value: 0.0 ppb on Mar 24 18:00

Minimum Daily Average: 0.3 ppb on Mar 27

Maximum Diurnal Average: 0.8 ppb at hour 12

Minimum Diurnal Average: 0.4 ppb at hour 2

Monthly Average: 0.53 ppb

Percentiles: P_1 = 0.2 P_{10} = 0.3 Q_1 = 0.3 Median = 0.4 Q_3 = 0.6 P_{90} = 0.9 P_{99} = 2.3

Hours in Service:	744
Hours of Data:	647
Hours of Missing Data:	97
Hours of Calibration:	38
Percent Operational Time:	92.1

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	Z	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	1.5	2.2	1.2	1.3	2.4	2.0	1.9	1.7	1.8	1.6	1.7	1.6	1.5	1.2	2.4
2-Mar	1.4	Z	1.2	1.0	0.8	0.7	0.8	1.0	1.7	1.7	1.4	1.0	0.9	0.5	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.8	1.7
3-Mar	0.3	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.8	0.8	0.5	0.5	0.5	0.4	0.5	0.8	0.7	0.5	0.5	0.6	0.6	0.5	0.8
4-Mar	0.6	1.0	1.4	Z	0.9	0.8	0.7	0.9	2.4	2.3	1.8	3.8	1.1	0.8	1.0	0.8	0.2	0.3	0.2	0.2	0.5	0.4	0.4	0.4	1.0	3.8
5-Mar	0.4	0.4	0.3	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.4	0.5	0.6	0.8	0.7	0.7	0.8	0.7	0.6	0.6	0.5	0.8
6-Mar	0.4	0.4	0.5	0.5	0.6	Z	0.9	0.8	0.9	1.5	0.9	0.6	0.7	0.7	0.6	0.5	0.7	1.0	1.2	1.1	1.0	0.9	0.9	0.9	0.8	1.5
7-Mar	Z	0.4	0.4	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.8	0.6	0.4	0.3	0.4	0.4	0.4	0.3	0.4	0.3	0.4	0.5	0.8
8-Mar	0.4	Z	0.4	0.4	0.4	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5
9-Mar	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	0.4	0.5	0.5	0.3	0.5
10-Mar	0.4	0.5	0.4	Z	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.8	0.7	0.5	0.5	0.5	0.5	0.6	0.7	0.5	0.6	0.6	0.5	0.5	0.8
11-Mar	0.5	0.5	0.4	0.5	Z	0.5	0.5	0.5	0.4	0.5	0.6	0.6	0.4	0.3	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.4	0.6
12-Mar	0.4	0.3	0.4	0.4	0.3	Z	0.6	0.4	0.3	C	C	C	C	C	0.4	0.3	0.3	0.3	0.2	0.4	0.5	0.8	0.5	0.4	0.4	0.8
13-Mar	Z	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.5	0.8	0.8	0.6	0.5	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.4	0.4	0.3	0.4	0.4	0.8
14-Mar	1.9	Z	0.7	1.1	0.7	1.0	1.0	0.3	1.8	0.8	0.4	0.5	0.5	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.4	2.1	0.4	0.3	0.7	2.1
15-Mar	0.3	0.3	Z	0.4	0.5	0.4	0.4	0.3	0.4	2.0	2.9	1.4	1.2	0.6	0.4	0.5	0.4	0.5	0.4	0.5	0.6	0.6	0.4	1.6	0.7	2.9
16-Mar	0.5	0.3	0.3	Z	0.4	0.4	0.6	0.7	1.1	1.0	0.9	0.8	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	1.1
17-Mar	0.3	0.3	0.3	0.3	Z	0.4	0.4	0.4	1.2	0.8	1.9	M	0.4	0.4	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.5	0.6	0.5	1.9
18-Mar	0.6	0.6	1.1	1.7	1.0	Z	0.6	0.4	0.7	0.8	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.8	3.3	0.5	0.4	0.7	3.3
19-Mar	Z	0.4	0.4	0.4	0.6	1.1	1.4	1.2	0.7	0.6	1.9	1.5	1.0	0.8	0.7	0.6	0.7	0.7	0.4	0.3	0.3	0.3	0.3	0.3	0.7	1.9
20-Mar	0.5	Z	0.3	0.3	0.3	0.5	0.6	0.5	1.7	1.8	0.7	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	0.5	1.8
21-Mar	0.3	0.3	Z	0.3	0.3	0.3	0.4	0.3	0.3	0.4	0.6	0.5	0.4	0.6	0.5	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.6
22-Mar	0.2	0.3	0.4	Z	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	0.4
23-Mar	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-Mar	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	C	C	C	C	1.6	0.6	0.7	0.0	0.1	0.2	0.2	0.2	0.2	0.3	--	1.6
25-Mar	Z	0.3	0.3	0.2	0.2	0.3	0.4	0.3	0.2	0.3	0.3	2.8	1.0	0.5	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	2.8
26-Mar	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
27-Mar	0.4	0.5	Z	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.5
28-Mar	0.3	0.3	0.3	Z	0.4	0.4	0.5	0.3	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.6	0.4	0.3	0.4	0.6
29-Mar	0.3	0.3	0.3	0.3	Z	0.4	0.3	M	0.4	0.6	0.5	0.4	0.4	0.3	0.3	0.4	0.3	0.4	0.4	0.6	0.5	0.5	0.5	0.3	0.4	0.6
30-Mar	0.3	0.3	0.4	0.3	0.4	Z	0.3	0.3	0.4	M	0.5	0.5	0.9	0.6	0.6	0.5	0.5	0.5	0.6	0.5	0.4	0.4	0.4	0.4	0.5	0.9
31-Mar	Z	0.3	0.2	0.2	0.2	0.2	0.2	M	M	0.6	0.8	0.6	0.4	0.3	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.8
	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.7	0.8	0.8	0.8	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.6	0.4	0.5	Diurnal Average	
	1.9	1.0	1.4	1.7	1.0	1.1	1.4	1.2	2.4	2.3	2.9	3.8	2.2	1.2	1.6	2.4	2.0	1.9	1.7	1.8	1.6	3.3	1.6	1.6	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance AF - Analyzer Failure

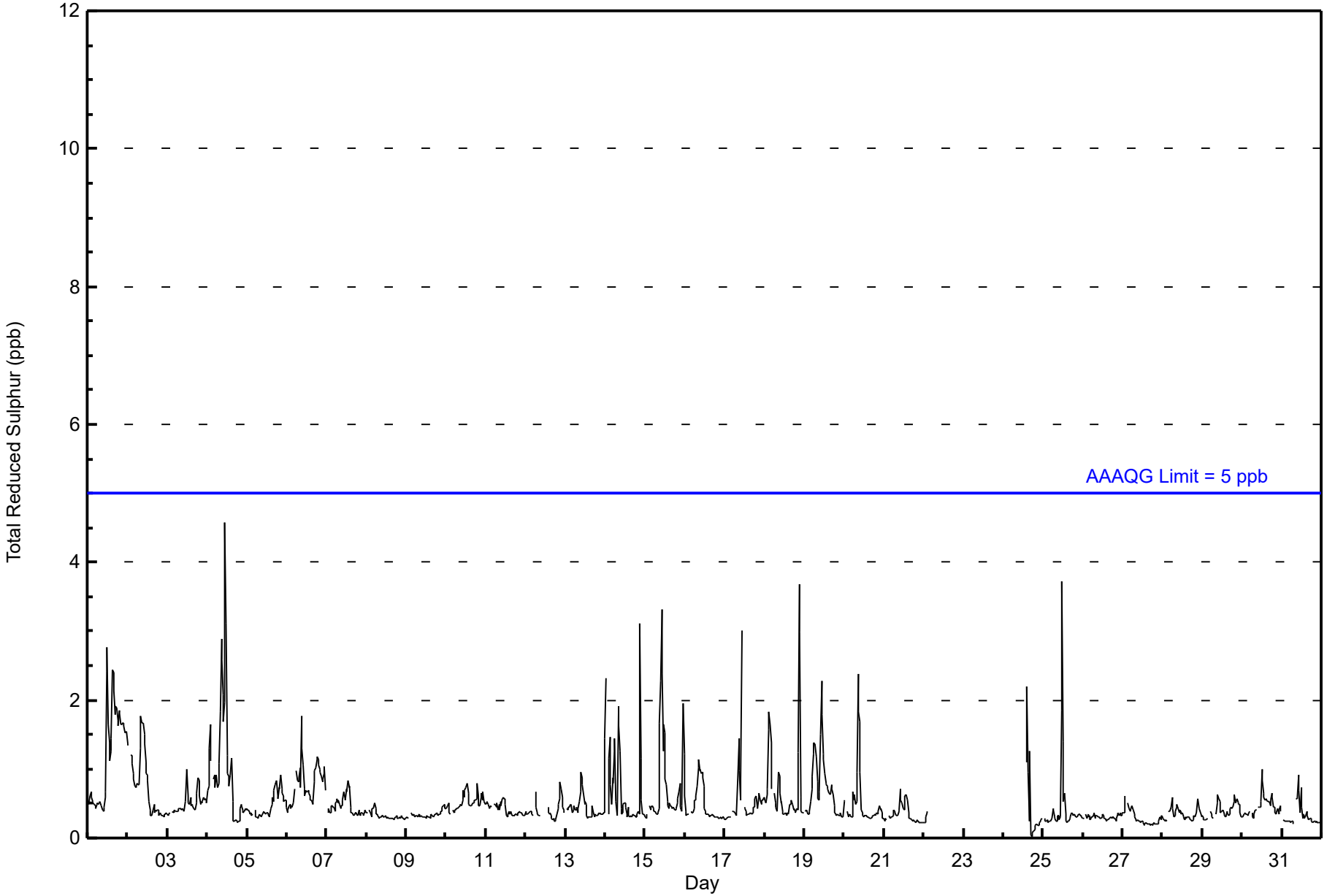
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Barge Landing - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	643	99.38	99.38
3 - 4	4	0.62	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: 647

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Barge Landing - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	105	142	42	14	4	13	40	49	52	25	18	15	12	14	26	72	643
3 - 4	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	1	4
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	105	142	42	15	4	13	40	50	52	26	18	15	12	14	26	73	647

Total Number of Valid Hours: 647

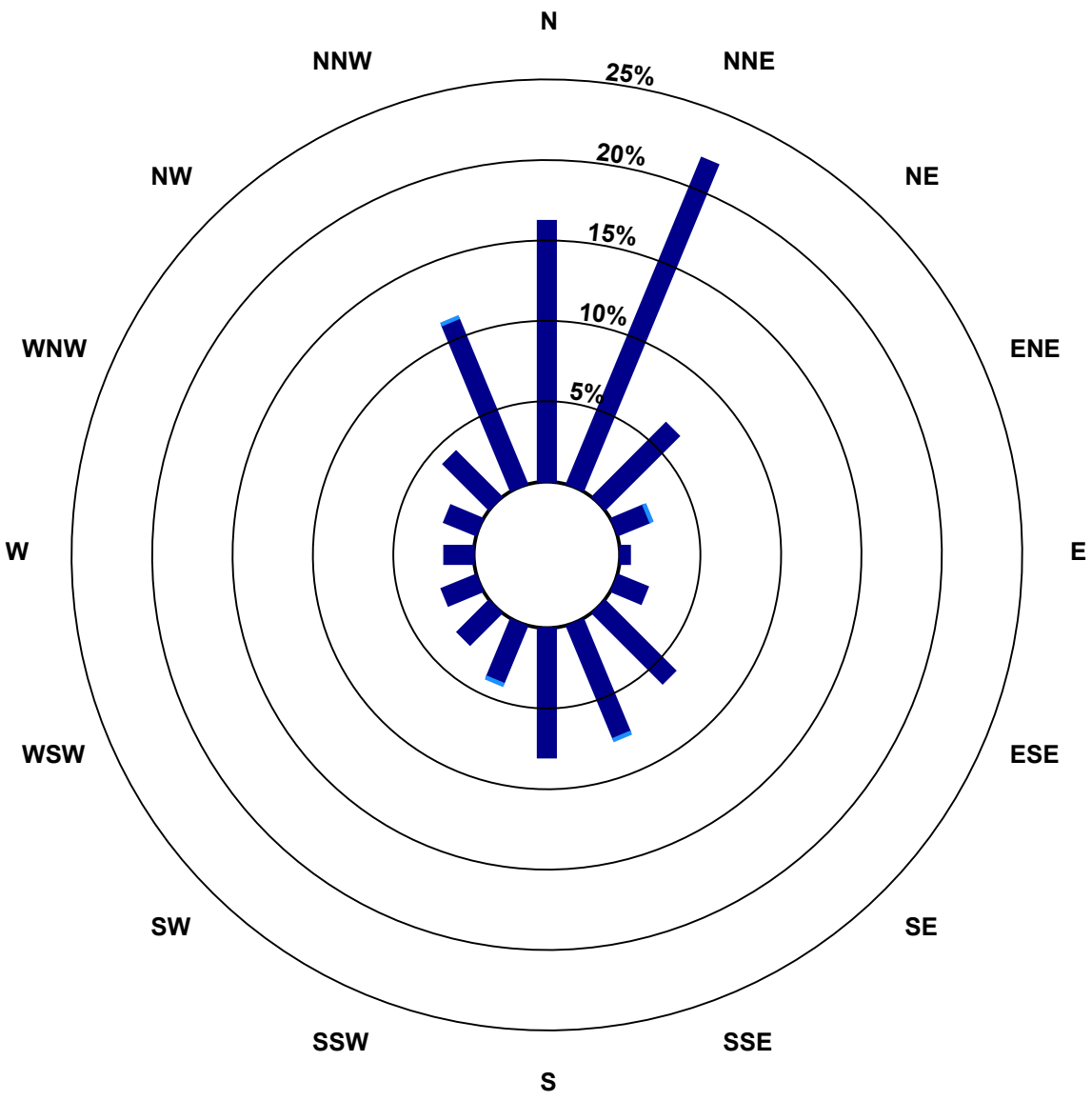
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Total Reduced Sulphur (TRS) - ppb

Barge Landing



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

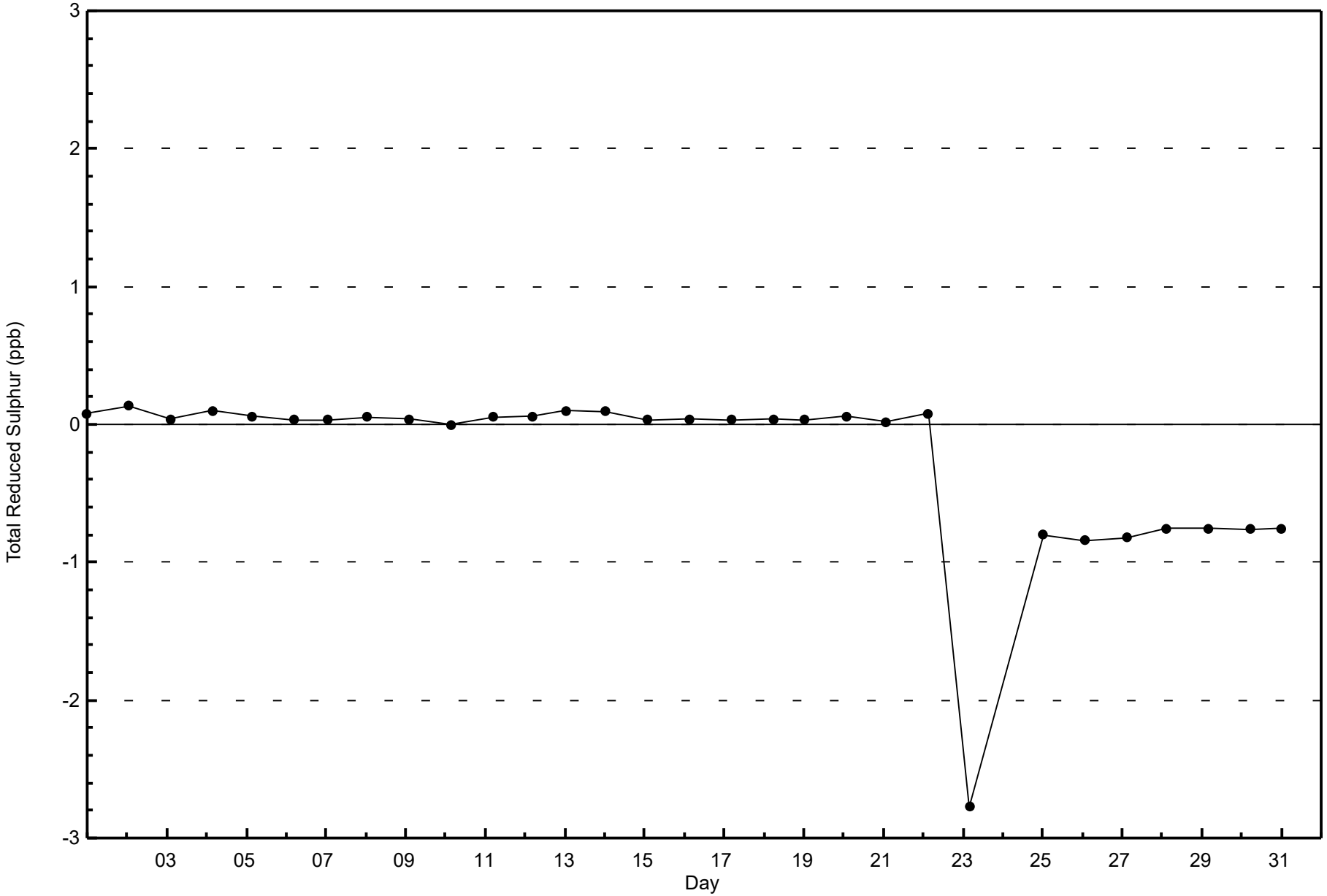
Total Number of Valid Hours: 647

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Barge Landing - March 2025

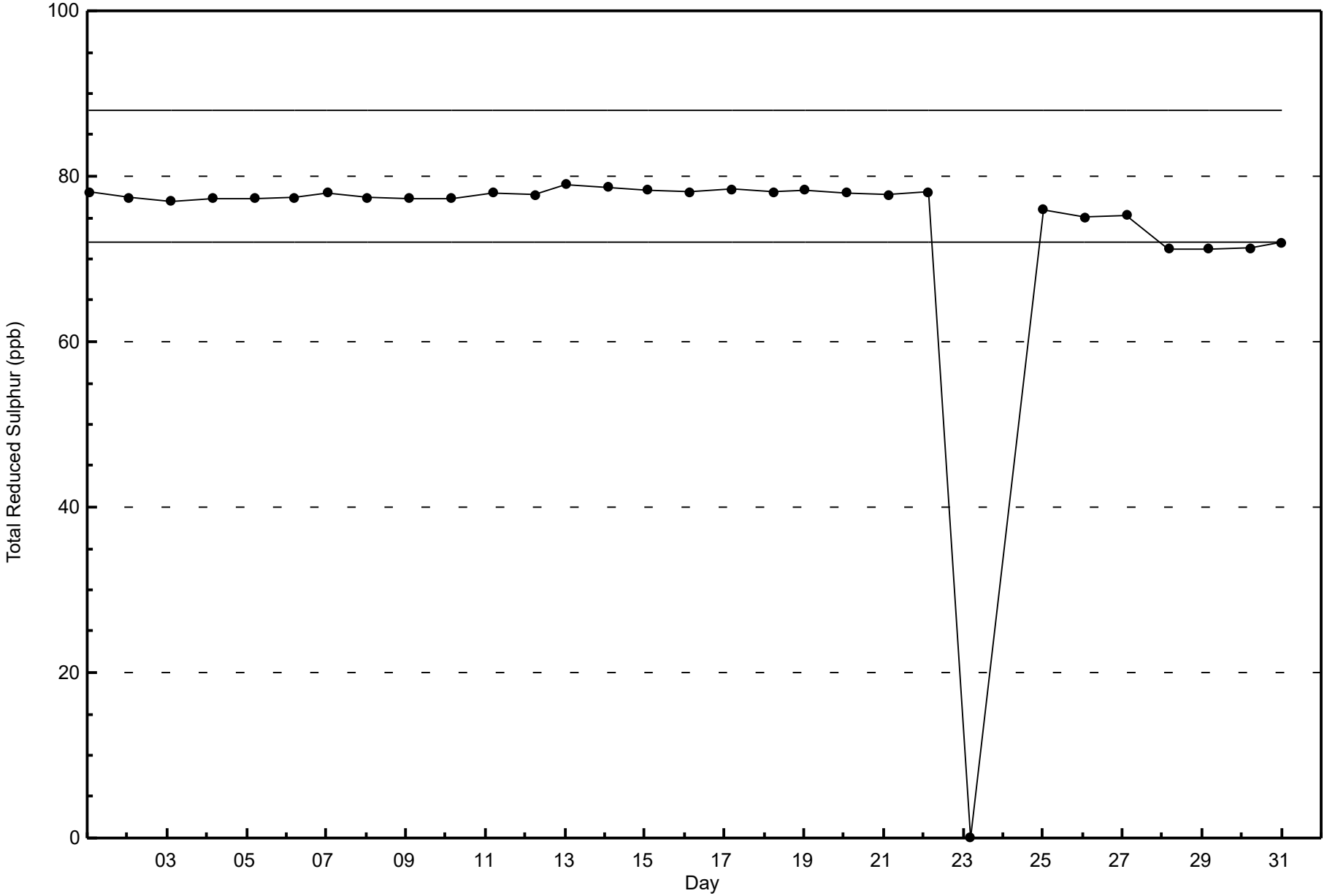


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Barge Landing - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Barge Landing - March 2025

Maximum Value: 5.7 ppm on Mar 23 13:00

Maximum Daily Average: 2.4 ppm on Mar 2

Minimum Value: 1.8 ppm on Mar 31 07:00

Minimum Daily Average: 1.8 ppm on Mar 31

Maximum Diurnal Average: 2.2 ppm at hour 12

Minimum Diurnal Average: 1.9 ppm at hour 16

Monthly Average: 2.06 ppm

Percentiles: P_1 = 1.8 P_{10} = 1.8 Q_1 = 1.9 Median = 2.0 Q_3 = 2.1 P_{90} = 2.3 P_{99} = 3.0

Hours in Service:	744
Hours of Data:	703
Hours of Missing Data:	41
Hours of Calibration:	37
Percent Operational Time:	99.5

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	1.9	2.0	2.0	2.0	2.0	Z	2.0	2.0	1.9	1.9	2.0	2.0	2.0	1.9	2.0	2.0	1.9	2.0	2.3	2.2	2.6	2.8	2.8	2.9	2.1	2.9
2-Mar	Z	2.7	2.5	2.3	2.1	2.2	2.2	3.2	4.4	3.9	3.5	3.0	2.5	2.0	1.8	2.0	2.3	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.4	4.4
3-Mar	1.9	Z	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	2.0
4-Mar	2.0	2.0	Z	2.1	2.1	2.0	2.0	2.1	2.4	2.2	2.0	2.0	2.0	1.9	2.0	1.9	1.8	1.8	1.8	1.8	2.0	2.1	2.2	2.5	2.0	2.5
5-Mar	2.5	2.2	1.9	Z	1.9	2.0	1.8	2.0	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.8	1.9	1.9	2.2	2.5	2.5	1.9	1.9	2.0	2.0	2.5
6-Mar	2.0	2.1	2.2	2.1	Z	2.6	2.4	2.2	2.2	2.2	C	C	C	C	C	C	2.0	2.0	2.1	2.1	2.2	2.2	2.5	2.5	--	2.6
7-Mar	2.3	2.3	2.2	2.2	2.2	Z	2.4	2.3	2.2	2.3	2.9	2.4	2.2	2.9	2.5	2.1	2.1	2.4	2.5	2.5	2.3	2.5	2.1	2.2	2.3	2.9
8-Mar	Z	2.0	2.1	2.1	2.3	2.5	2.3	2.1	2.0	2.1	2.2	2.1	2.1	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.5
9-Mar	2.0	Z	2.0	2.0	1.9	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.1	2.1	2.0	2.1
10-Mar	2.1	2.2	Z	2.0	2.0	2.0	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.0	2.1	2.2	2.1	2.1	2.2
11-Mar	2.1	2.2	2.2	Z	2.1	2.3	2.2	2.1	2.2	2.3	2.5	2.9	2.2	2.1	2.2	2.3	2.1	2.0	2.0	2.2	2.1	2.1	2.0	2.1	2.2	2.9
12-Mar	2.2	2.3	2.2	2.5	Z	2.2	2.2	2.0	2.0	2.0	2.1	2.1	2.3	2.2	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.1	2.1	2.5
13-Mar	2.1	2.2	2.3	2.3	2.2	Z	2.2	2.1	2.2	3.0	3.0	2.4	2.1	2.0	2.0	1.9	2.0	2.2	2.2	2.3	2.4	2.5	2.3	2.4	2.3	3.0
14-Mar	Z	1.9	2.0	1.9	2.0	1.9	1.9	2.0	2.0	M	M	M	1.9	1.9	1.9	2.0	2.1	2.0	2.1	2.1	2.2	2.0	2.0	2.0	2.0	2.2
15-Mar	1.9	Z	2.0	2.0	2.1	2.1	2.1	2.0	2.3	2.5	2.6	2.6	2.2	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.1	1.9	2.2	2.0	2.1	2.6
16-Mar	2.0	2.0	Z	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1
17-Mar	1.9	1.9	1.9	Z	1.9	2.0	1.9	1.9	2.0	2.1	2.4	M	2.1	2.0	1.9	2.0	1.9	1.9	2.0	2.0	2.2	2.6	2.5	2.4	2.1	2.6
18-Mar	2.4	2.3	2.7	3.0	Z	2.5	2.3	2.2	2.4	2.3	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.3	2.1	2.1	2.2	3.0
19-Mar	2.1	2.1	2.0	2.0	2.2	Z	2.4	2.3	2.1	2.1	2.2	2.2	2.1	2.0	1.9	1.9	2.1	2.1	2.0	1.9	2.0	2.0	2.0	1.9	2.1	2.4
20-Mar	Z	2.1	2.0	2.1	2.0	2.2	2.4	2.1	2.1	2.2	2.2	2.0	1.9	2.0	1.9	1.9	1.9	2.0	2.1	2.3	2.1	2.2	2.2	1.9	2.1	2.4
21-Mar	1.9	Z	1.8	1.9	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	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9
22-Mar	1.9	2.0	Z	2.1	2.2	2.1	2.1	2.0	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.1	2.3	2.0	1.9	1.9	2.1	2.0	1.9	2.0	2.3
23-Mar	1.9	1.9	1.9	Z	2.0	2.0	2.0	2.1	2.2	2.1	2.0	4.5	5.7	2.1	1.8	1.8	1.8	1.8	2.0	2.3	2.2	2.1	2.1	2.1	2.3	5.7
24-Mar	2.2	2.0	2.1	2.3	Z	2.4	2.3	2.3	2.1	1.9	2.0	2.0	2.0	1.8	1.8	1.8	1.8	1.8	1.9	2.0	2.2	1.9	1.8	1.8	2.0	2.4
25-Mar	1.8	1.8	1.8	1.8	1.8	Z	1.8	1.8	1.8	2.0	1.8	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.8	2.0
26-Mar	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	1.8	1.9	1.9	1.9	1.9	1.9	2.0	1.8	1.8	2.0	1.9	2.0
27-Mar	2.0	Z	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.0	1.9	1.9	2.0
28-Mar	2.0	1.9	Z	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.0	2.1	2.1	2.0	2.0	2.1
29-Mar	1.9	1.9	1.9	Z	2.0	2.0	2.1	2.1	2.0	2.4	2.3	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	2.0	2.0	2.1	2.1	2.0	2.0	2.4
30-Mar	1.9	2.0	2.2	2.1	Z	2.1	2.0	2.0	2.1	2.1	2.1	2.0	2.9	2.5	2.1	2.0	2.0	2.0	2.0	2.1	1.9	2.0	2.1	2.1	2.1	2.9
31-Mar	1.8	1.8	1.8	1.8	1.8	Z	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9
	2.0	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.1	2.1	2.1	Diurnal Average	
	2.5	2.7	2.7	3.0	2.3	2.6	2.4	3.2	4.4	3.9	3.5	4.5	5.7	2.9	2.5	2.3	2.3	2.4	2.5	2.5	2.6	2.8	2.8	2.9	Diurnal Maximum	

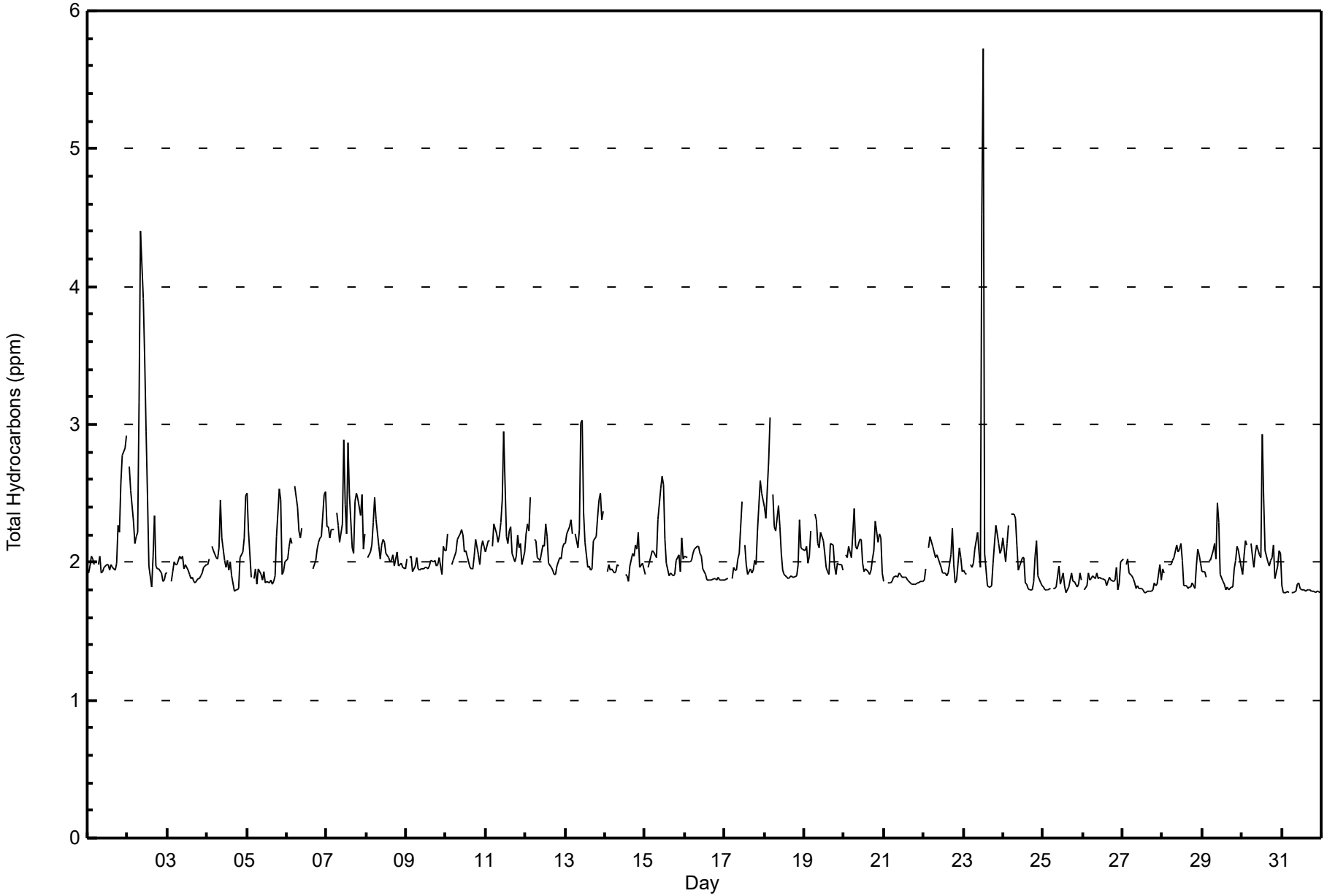
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Barge Landing - March 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm

Barge Landing - March 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	440	62.59	62.59
2.1 - 3.0	257	36.56	99.15
3.1 - 10.0	6	0.85	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 703

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Barge Landing - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	43	104	33	11	3	14	43	43	39	24	14	10	5	6	15	33	440
2.1 - 3.0	64	38	11	12	6	1	3	19	15	7	4	5	9	9	13	41	257
3.1 - 10.0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	3	6
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	107	142	44	23	9	15	46	64	54	31	18	15	14	15	29	77	703

Total Number of Valid Hours: 703

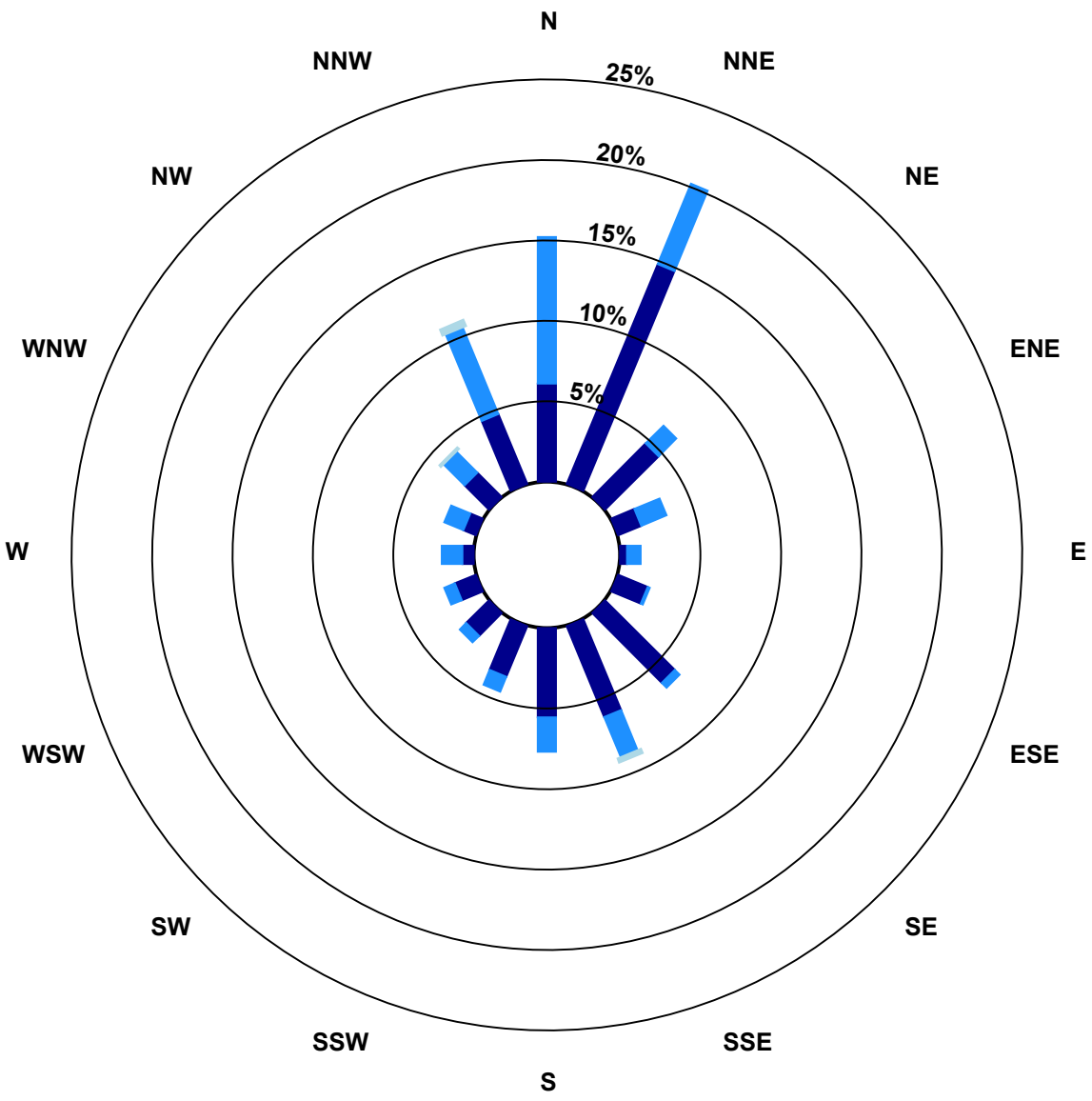
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Total Hydrocarbons (THC) - ppm

Barge Landing



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

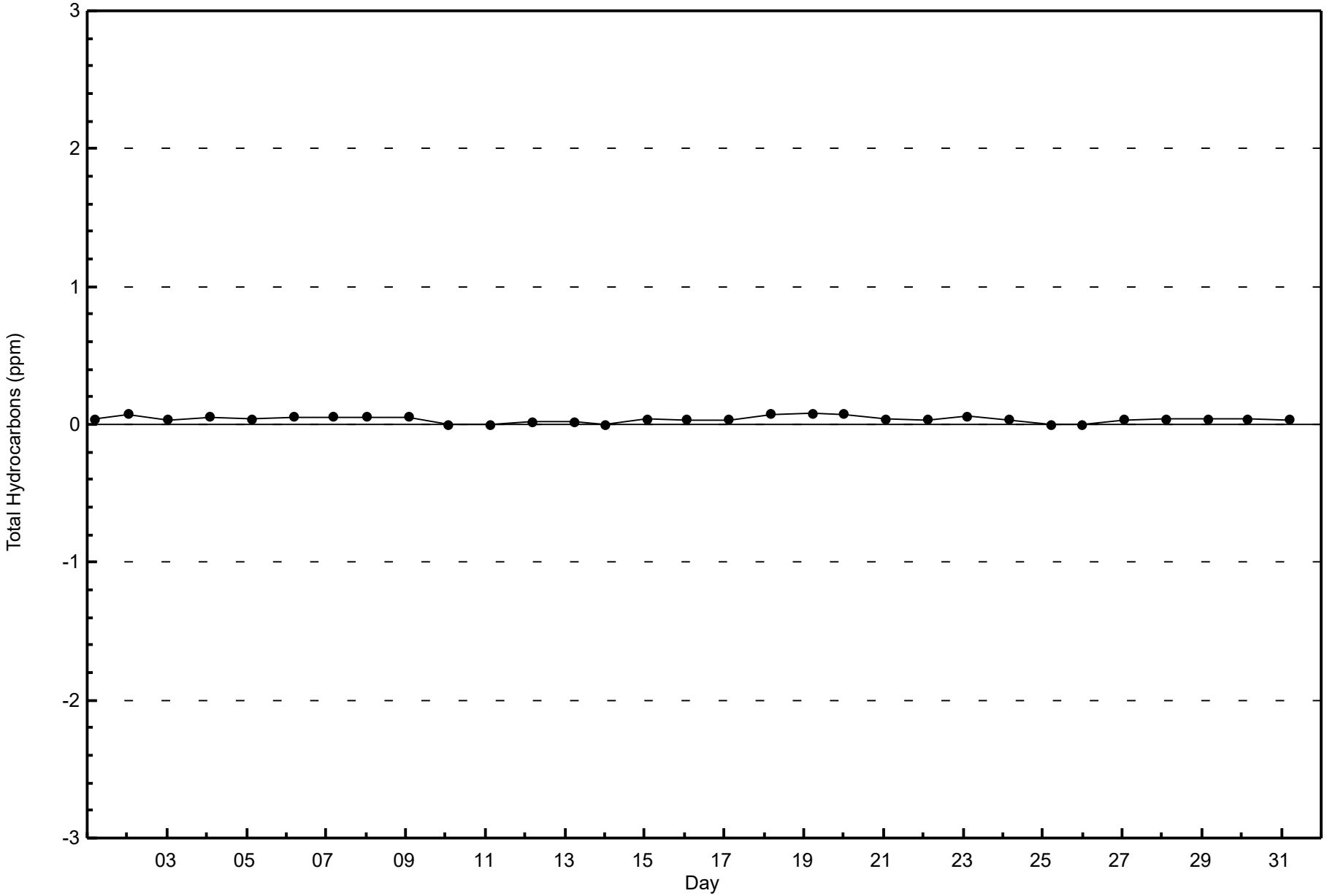
Total Number of Valid Hours: 703

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Barge Landing - March 2025

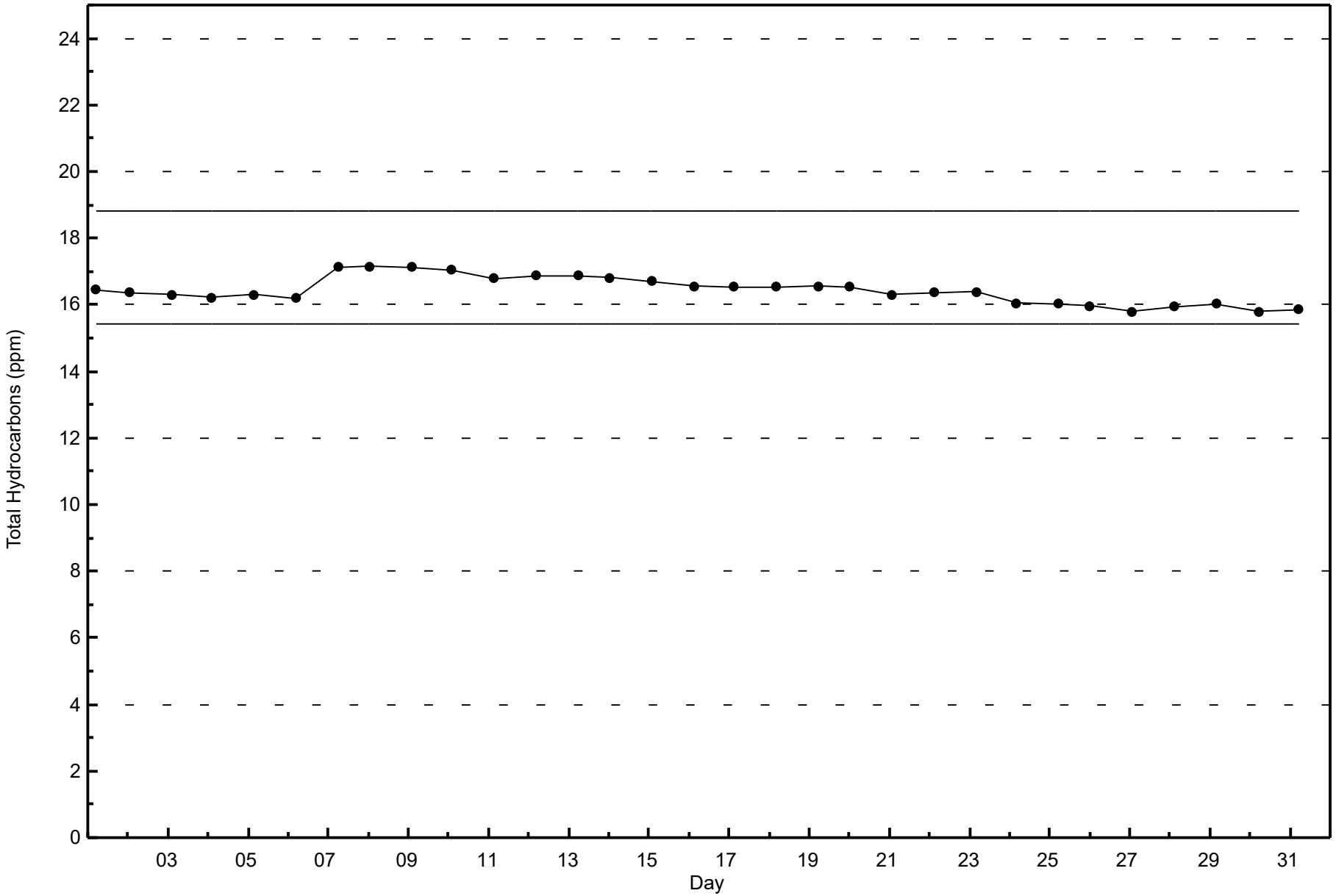


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Barge Landing - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Barge Landing - March 2025

Maximum Value: 3.830 ppm on Mar 23 13:00

Maximum Daily Average: 0.291 ppm on Mar 23

Minimum Value: 0.000 ppm on Mar 1 01:00

Minimum Daily Average: 0.000 ppm on Mar 16

Maximum Diurnal Average: 0.180 ppm at hour 13

Minimum Diurnal Average: 0.002 ppm at hour 9

Monthly Average: 0.041 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} = 0.5

Hours in Service:	744
Hours of Data:	703
Hours of Missing Data:	41
Hours of Calibration:	37
Percent Operational Time:	99.5

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	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	0.057	0.086	0.000	0.000	0.025	0.007	0.086
2-Mar	Z	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	0.057	0.119	0.004	0.000	0.000	0.000	0.004	0.000	0.001	0.008	0.119
3-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.041	0.026	0.030	0.062	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.062
4-Mar	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.057	0.171	0.327	0.024	0.327
5-Mar	0.326	0.196	0.000	Z	0.025	0.077	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.044	0.047	0.000	0.000	0.000	0.031	0.326
6-Mar	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	C	C	C	C	C	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	--	0.000
7-Mar	0.002	0.000	0.000	0.000	0.000	Z	0.056	0.008	0.000	0.002	0.185	0.113	0.053	0.272	0.127	0.000	0.071	0.393	0.454	0.342	0.285	0.401	0.000	0.000	0.120	0.454
8-Mar	Z	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.013	0.005	0.000	0.000	0.000	0.027	0.029	0.059	0.000	0.000	0.000	0.000	0.035	0.006	0.000	0.008	0.059
9-Mar	0.000	Z	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	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.002	0.030
10-Mar	0.000	0.129	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.129
11-Mar	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.113	0.169	0.633	0.139	0.163	0.231	0.254	0.097	0.044	0.068	0.221	0.137	0.160	0.017	0.090	0.110	0.633
12-Mar	0.220	0.331	0.247	0.470	Z	0.000	0.036	0.001	0.000	0.000	0.112	0.092	0.167	0.041	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.075	0.470
13-Mar	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.003	0.122	0.233	0.015	0.085	0.000	0.039	0.000	0.024	0.194	0.225	0.355	0.470	0.516	0.319	0.351	0.128	0.516
14-Mar	Z	0.000	0.035	0.000	0.001	0.000	0.000	0.000	0.000	M	M	M	0.057	0.046	0.010	0.090	0.165	0.138	0.202	0.147	0.236	0.000	0.000	0.000	0.056	0.236
15-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.066	0.357	0.569	0.203	0.061	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.081	0.045	0.060	0.569
16-Mar	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.063	M	0.124	0.065	0.000	0.010	0.000	0.000	0.000	0.000	0.000	0.069	0.140	0.138	0.028	0.140
18-Mar	0.177	0.175	0.263	0.402	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.044	0.402
19-Mar	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	0.009	0.002	0.000	0.000	0.000	0.027	0.014	0.000	0.002	0.027
20-Mar	Z	0.055	0.045	0.095	0.071	0.271	0.370	0.138	0.011	0.066	0.113	0.046	0.028	0.035	0.031	0.018	0.038	0.094	0.132	0.308	0.191	0.238	0.139	0.001	0.110	0.370
21-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.096	0.019	0.000	0.005	0.096
23-Mar	0.000	0.000	0.000	Z	0.001	0.000	0.000	0.000	0.002	0.000	0.000	2.605	3.830	0.231	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.019	0.291	3.830
24-Mar	0.078	0.028	0.066	0.120	Z	0.101	0.087	0.066	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	0.024	0.120
25-Mar	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.057	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.010	0.066	0.029	0.007	0.066
26-Mar	Z	0.000	0.011	0.060	0.030	0.000	0.037	0.031	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.060
27-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.029	0.000	0.000	0.000	0.000	0.001	0.029
28-Mar	0.001	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.141	0.241	0.156	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.052	0.067	0.029	0.241
29-Mar	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.219	0.168	0.018	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.049	0.086	0.014	0.024	0.219
30-Mar	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.016	0.553	0.297	0.000	0.000	0.000	0.066	0.003	0.000	0.000	0.006	0.002	0.000	0.041	0.553
31-Mar	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
	0.031	0.036	0.026	0.044	0.005	0.018	0.020	0.009	0.002	0.024	0.054	0.155	0.180	0.040	0.016	0.016	0.019	0.030	0.035	0.048	0.047	0.054	0.036	0.036	Diurnal Average	
	0.326	0.331	0.263	0.470	0.071	0.271	0.370	0.138	0.030	0.219	0.357	2.605	3.830	0.297	0.231	0.254	0.165	0.393	0.454	0.355	0.470	0.516	0.319	0.351	Diurnal Maximum	

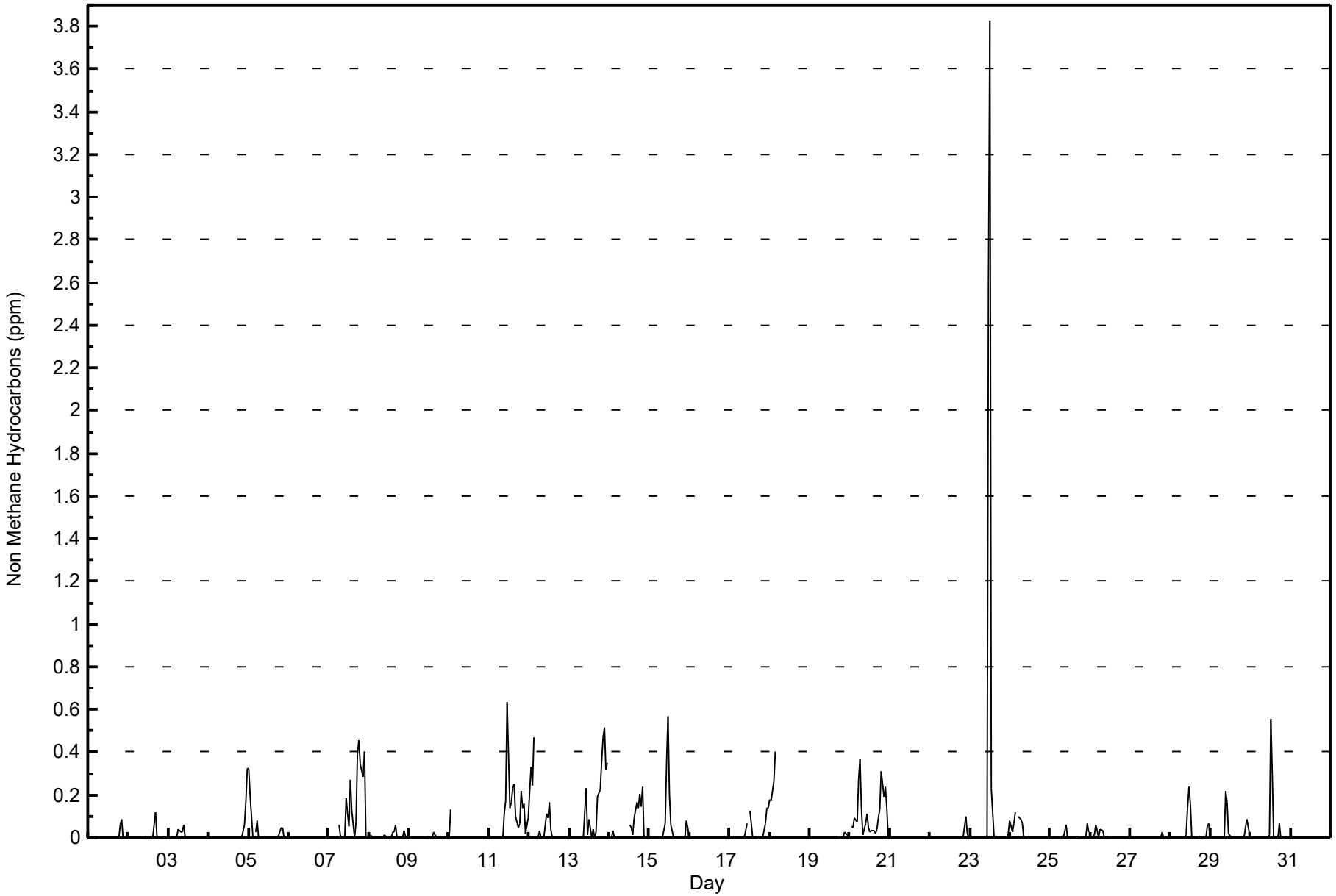
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Barge Landing - March 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Barge Landing - March 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	532	75.68	75.68
0.006 - 0.05	57	8.11	83.78
0.06 - 0.1	59	8.39	92.18
> 0.1	55	7.82	100.00

Total Number of Valid Hours: 703

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Barge Landing - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.005	41	95	35	15	5	15	41	59	54	27	17	13	13	13	26	63	532
0.006 - 0.05	16	23	4	1	0	0	2	2	0	1	0	0	1	0	1	6	57
0.06 - 0.1	23	14	3	1	3	0	3	0	0	3	1	1	0	0	2	5	59
> 0.1	27	10	2	6	1	0	0	3	0	0	0	1	0	2	0	3	55
Totals	107	142	44	23	9	15	46	64	54	31	18	15	14	15	29	77	703

Total Number of Valid Hours: 703

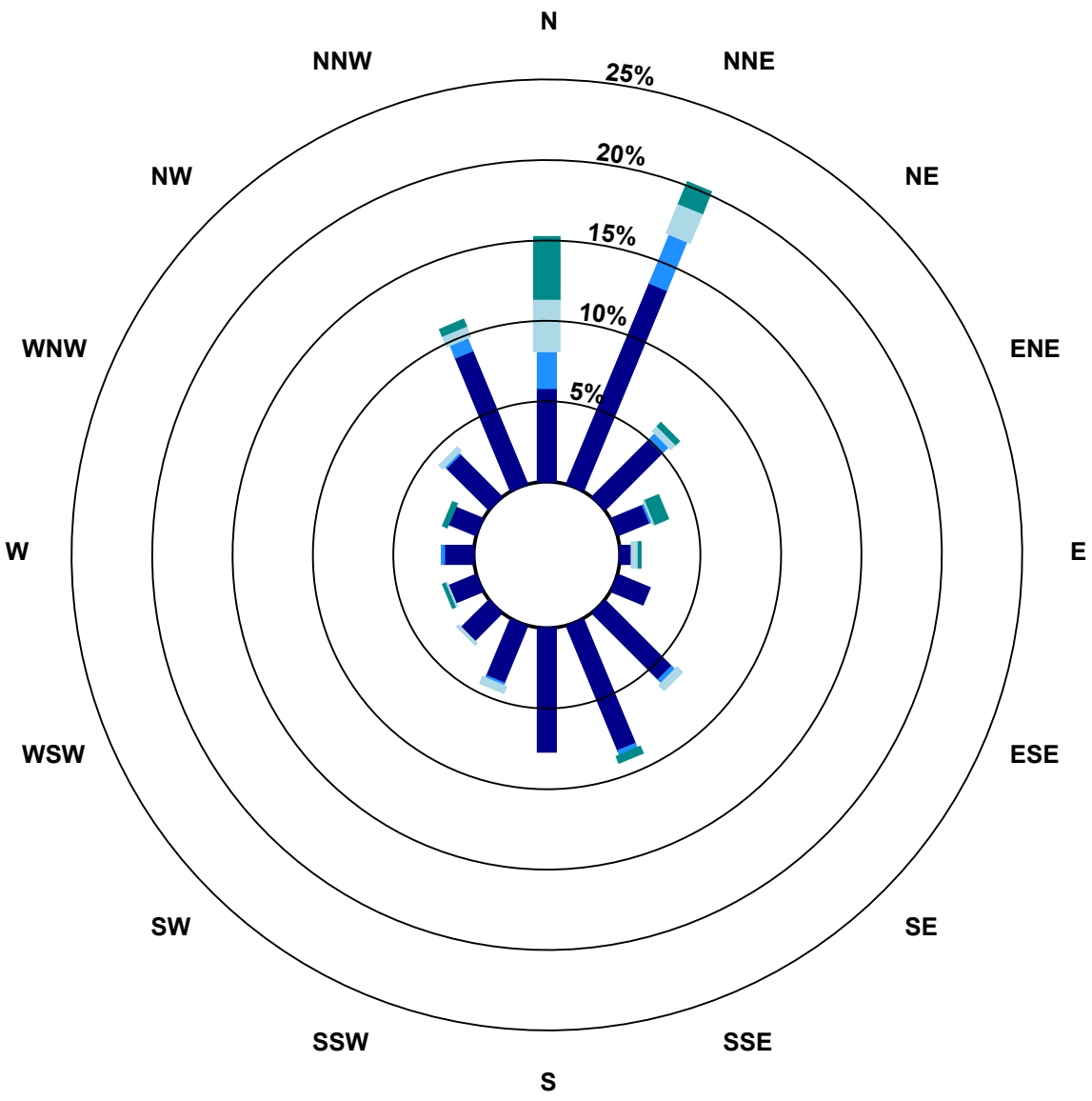
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Non Methane Hydrocarbons (NMHC) - ppm

Barge Landing



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

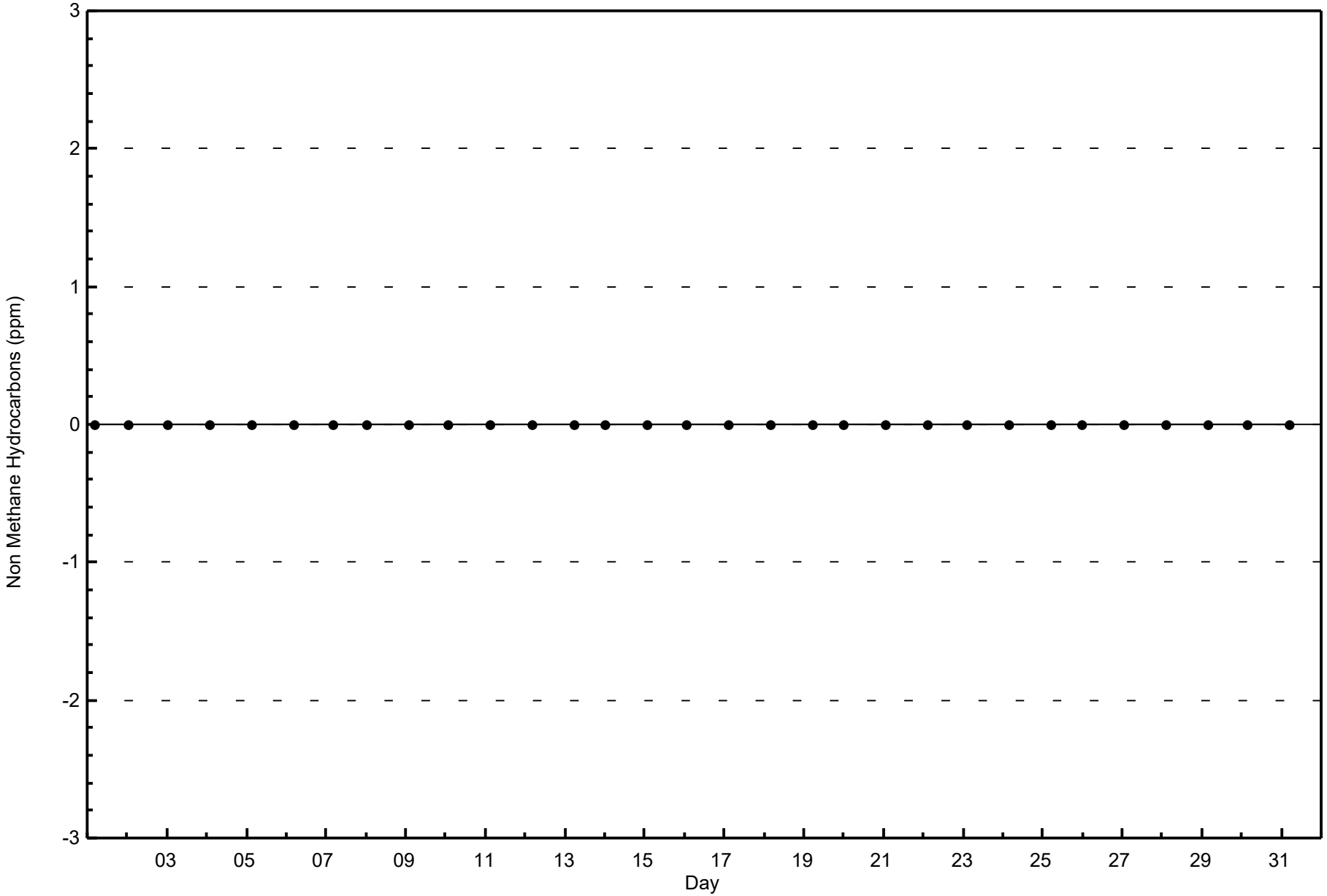
Total Number of Valid Hours: 703

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Barge Landing - March 2025

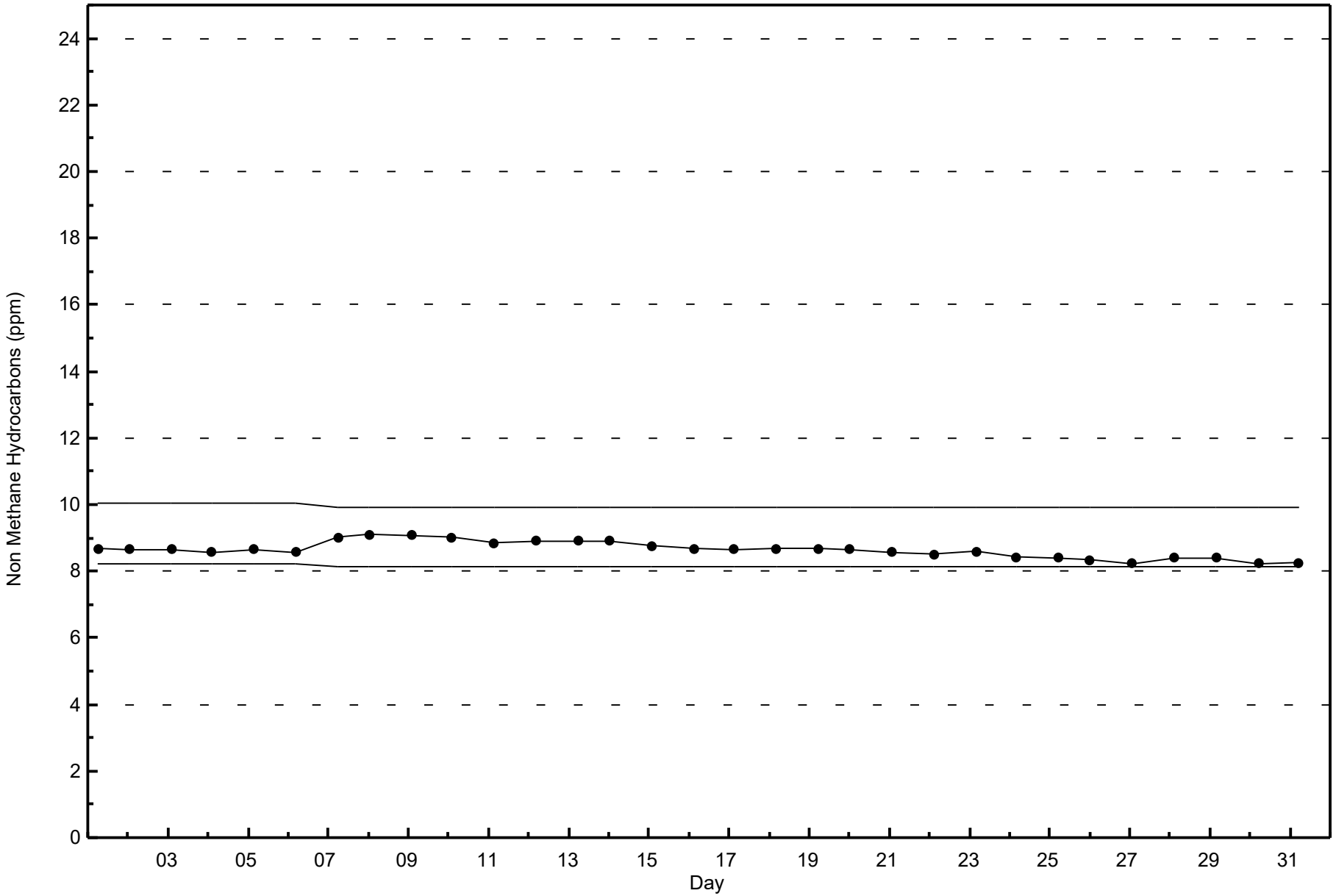


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Barge Landing - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Barge Landing - March 2025

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

Maximum Value: 4.4 ppm on Mar 2 09:00 Maximum Daily Average: 2.4 ppm on Mar 2

Minimum Value: 1.8 ppm on Mar 31 07:00 Minimum Daily Average: 1.8 ppm on Mar 31

Maximum Diurnal Average: 2.2 ppm at hour 10 Minimum Diurnal Average: 1.9 ppm at hour 16

Monthly Average: 2.02 ppm Percentiles: P_1 = 1.8 P_{10} = 1.8 Q_1 = 1.9 Median = 2.0 Q_3 = 2.1 P_{90} = 2.2 P_{99} = 2.8

Hours in Service:	744
Hours of Data:	703
Hours of Missing Data:	41
Hours of Calibration:	37
Percent Operational Time:	99.5

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	1.9	2.0	2.0	2.0	2.0	Z	2.0	2.0	1.9	1.9	2.0	2.0	2.0	1.9	2.0	2.0	1.9	2.0	2.3	2.2	2.5	2.8	2.8	2.9	2.1	2.9
2-Mar	Z	2.7	2.5	2.3	2.1	2.2	2.2	3.2	4.4	3.9	3.5	3.0	2.5	2.0	1.8	2.0	2.2	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.4	4.4
3-Mar	1.9	Z	1.9	1.9	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	2.0
4-Mar	2.0	2.0	Z	2.1	2.1	2.0	2.0	2.1	2.4	2.2	2.0	2.0	2.0	1.9	2.0	1.9	1.8	1.8	1.8	1.8	2.0	2.0	2.0	2.2	2.0	2.4
5-Mar	2.2	2.0	1.9	Z	1.9	1.9	1.8	2.0	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.8	1.9	1.9	2.2	2.5	2.4	1.9	1.9	2.0	2.0	2.5
6-Mar	2.0	2.1	2.2	2.1	Z	2.6	2.4	2.2	2.2	2.2	C	C	C	C	C	C	2.0	2.0	2.1	2.1	2.2	2.2	2.5	2.5	--	2.6
7-Mar	2.3	2.3	2.2	2.2	2.2	Z	2.3	2.3	2.2	2.3	2.7	2.3	2.2	2.6	2.4	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.7
8-Mar	Z	2.0	2.1	2.1	2.3	2.5	2.3	2.1	2.0	2.1	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.5
9-Mar	2.0	Z	2.0	2.0	1.9	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.1	2.1	2.0	2.1
10-Mar	2.1	2.1	Z	2.0	2.0	2.0	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.0	2.1	2.2	2.1	2.1	2.2
11-Mar	2.1	2.2	2.2	Z	2.1	2.3	2.2	2.1	2.2	2.2	2.3	2.3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3
12-Mar	2.0	1.9	2.0	2.0	Z	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.1	2.0	2.2
13-Mar	2.1	2.2	2.3	2.3	2.2	Z	2.2	2.1	2.2	2.9	2.8	2.3	2.1	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.9
14-Mar	Z	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	M	M	M	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	2.0
15-Mar	1.9	Z	2.0	2.0	2.1	2.1	2.1	2.0	2.3	2.5	2.3	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	1.9	2.1	2.0	2.0	2.5
16-Mar	2.0	2.0	Z	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1
17-Mar	1.9	1.9	1.9	Z	1.9	2.0	1.9	1.9	2.0	2.1	2.4	M	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.2	2.5	2.4	2.3	2.0	2.5
18-Mar	2.2	2.1	2.5	2.6	Z	2.5	2.3	2.2	2.4	2.3	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.3	2.1	2.1	2.1	2.6
19-Mar	2.1	2.1	2.0	2.0	2.2	Z	2.4	2.3	2.1	2.1	2.2	2.2	2.1	2.0	1.9	1.9	2.1	2.1	2.0	1.9	2.0	2.0	2.0	1.9	2.1	2.4
20-Mar	Z	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.1	2.1	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.1
21-Mar	1.9	Z	1.8	1.9	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	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9
22-Mar	1.9	2.0	Z	2.1	2.2	2.1	2.1	2.0	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.1	2.3	2.0	1.9	1.9	2.0	2.0	1.9	2.0	2.3
23-Mar	1.9	1.9	1.9	Z	2.0	2.0	2.0	2.1	2.2	2.1	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	2.0	2.3	2.2	2.1	2.1	2.1	2.0	2.3
24-Mar	2.1	2.0	2.1	2.1	Z	2.3	2.3	2.3	2.1	1.9	2.0	2.0	2.0	1.8	1.8	1.8	1.8	1.8	1.9	2.0	2.2	1.9	1.8	1.8	2.0	2.3
25-Mar	1.8	1.8	1.8	1.8	1.8	Z	1.8	1.8	1.8	1.9	1.8	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.8	1.8	1.9
26-Mar	Z	1.8	1.8	1.9	1.8	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	2.0	1.8	1.8	2.0	1.9	2.0
27-Mar	2.0	Z	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.0	1.9	1.9	2.0
28-Mar	2.0	1.9	Z	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.0	2.1	2.0	1.9	1.9	2.1
29-Mar	1.9	1.9	1.9	Z	2.0	2.0	2.1	2.1	2.0	2.2	2.1	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	2.0	2.0	2.1	2.0	1.9	2.0	2.2
30-Mar	1.9	2.0	2.2	2.1	Z	2.1	2.0	2.0	2.1	2.1	2.1	2.0	2.4	2.2	2.1	2.0	2.0	1.9	2.0	2.1	1.9	2.0	2.1	2.1	2.1	2.4
31-Mar	1.8	1.8	1.8	1.8	1.8	Z	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9
	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.2	2.1	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	Diurnal Average	
	2.3	2.7	2.5	2.6	2.3	2.6	2.4	3.2	4.4	3.9	3.5	3.0	2.5	2.6	2.4	2.1	2.2	2.3	2.3	2.5	2.5	2.8	2.8	2.9	Diurnal Maximum	

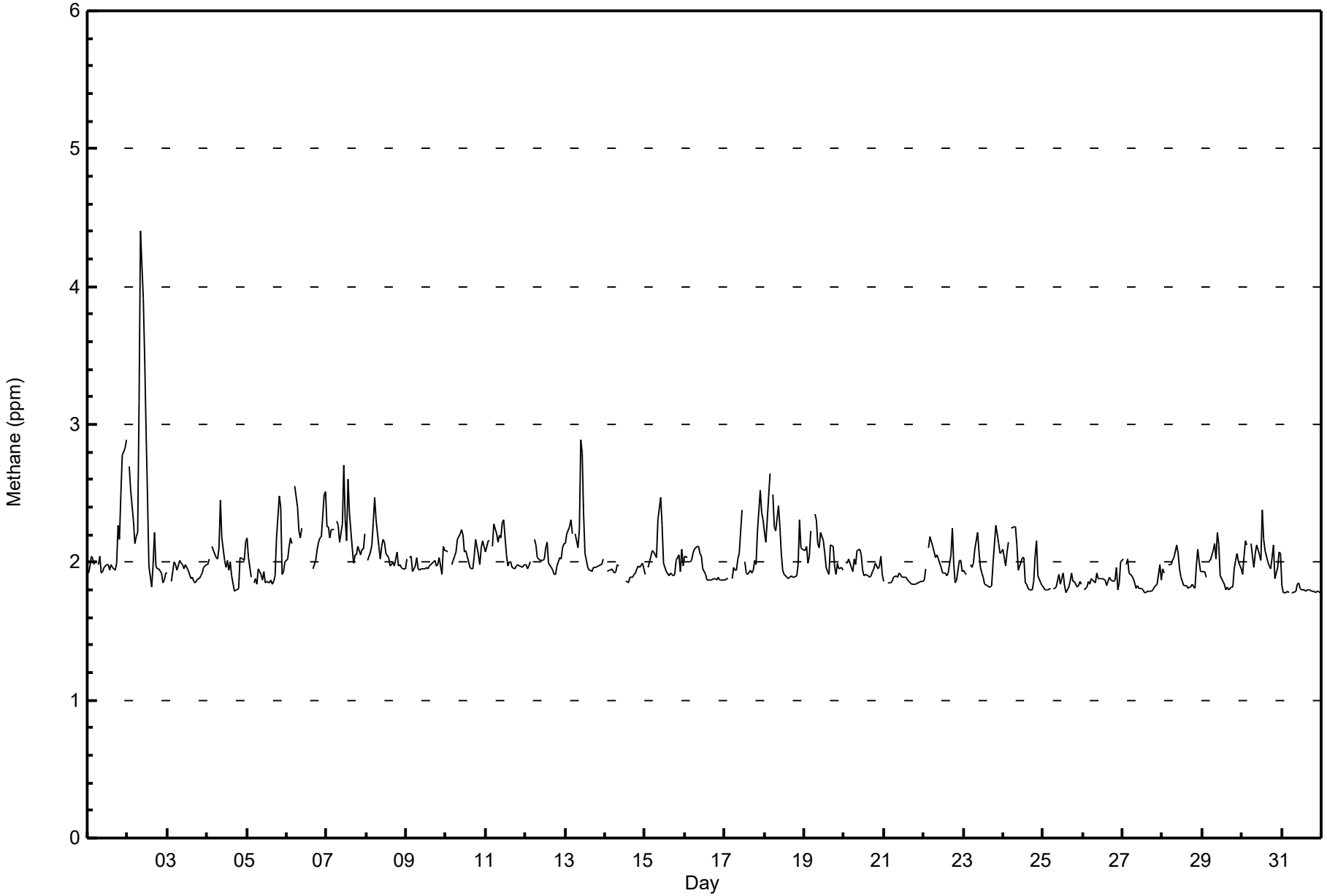
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Barge Landing - March 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	492	69.99	69.99
2.1 - 3.0	207	29.45	99.43
3.1 - 10.0	4	0.57	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 703

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Barge Landing - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	74	115	34	14	4	14	43	46	39	24	14	10	5	6	15	35	492
2.1 - 3.0	33	27	10	9	5	1	3	18	15	7	4	5	9	9	13	39	207
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	4
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	107	142	44	23	9	15	46	64	54	31	18	15	14	15	29	77	703

Total Number of Valid Hours: 703

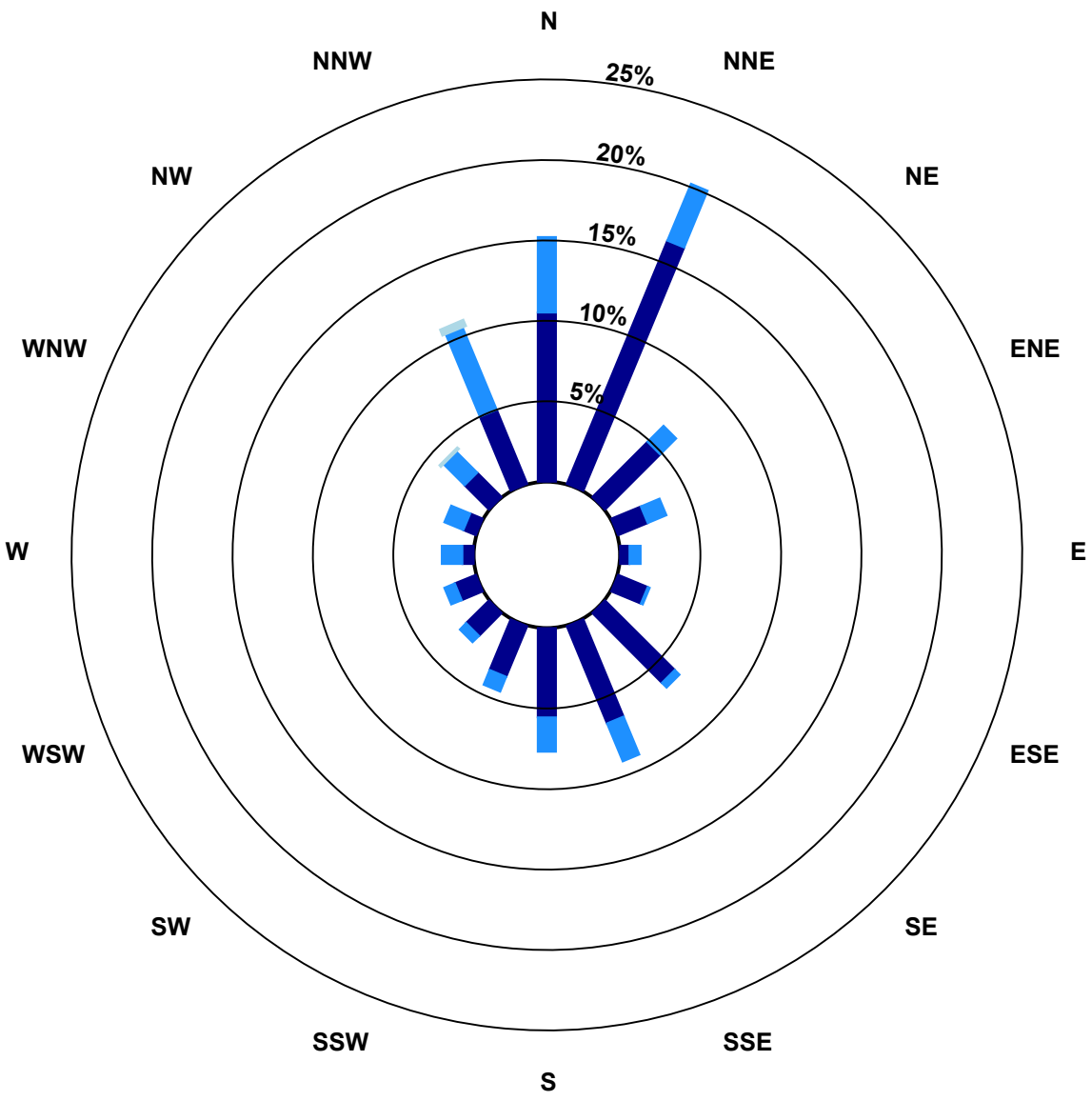
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Methane (CH_4) - ppm

Barge Landing



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

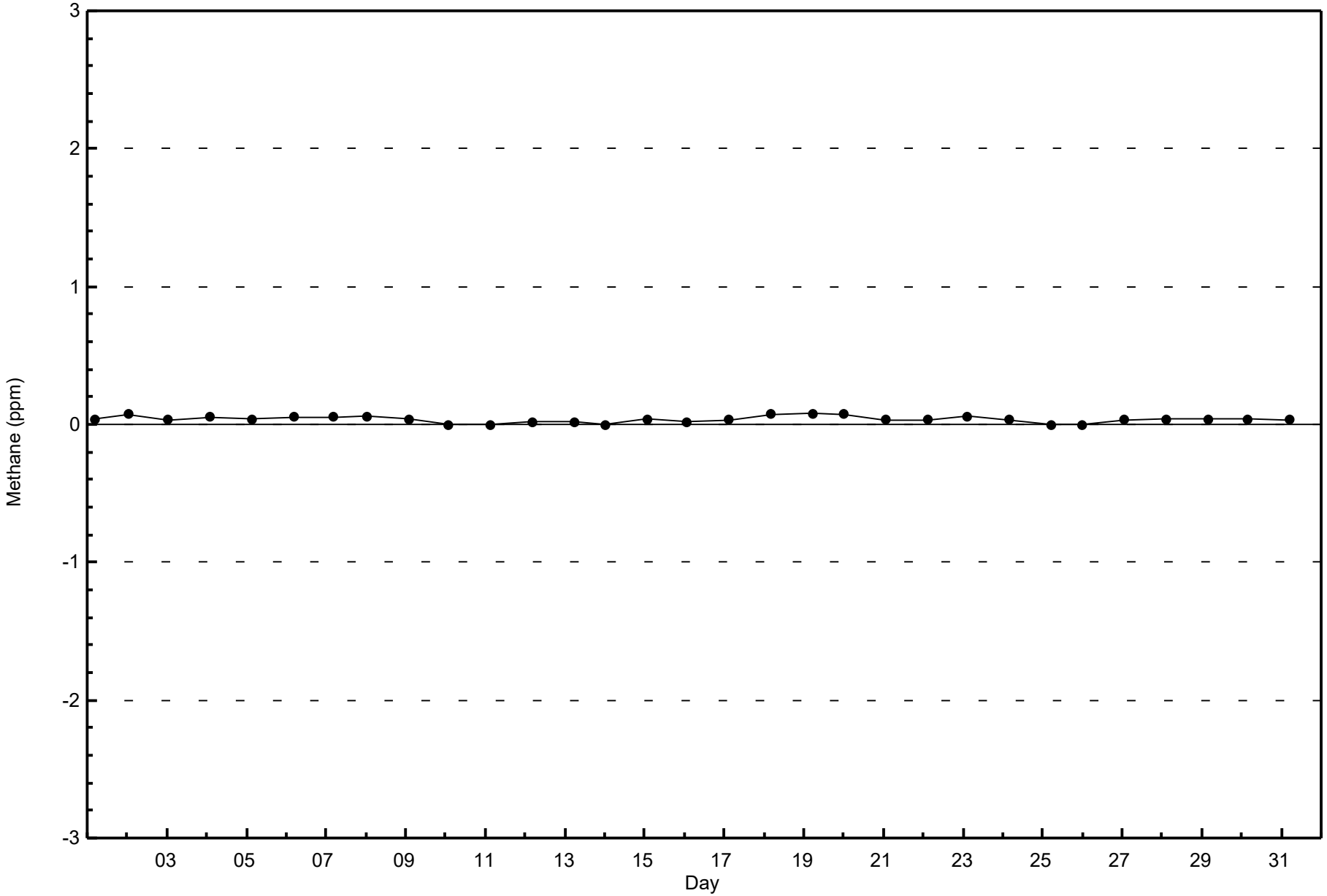
Total Number of Valid Hours: 703

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Barge Landing - March 2025

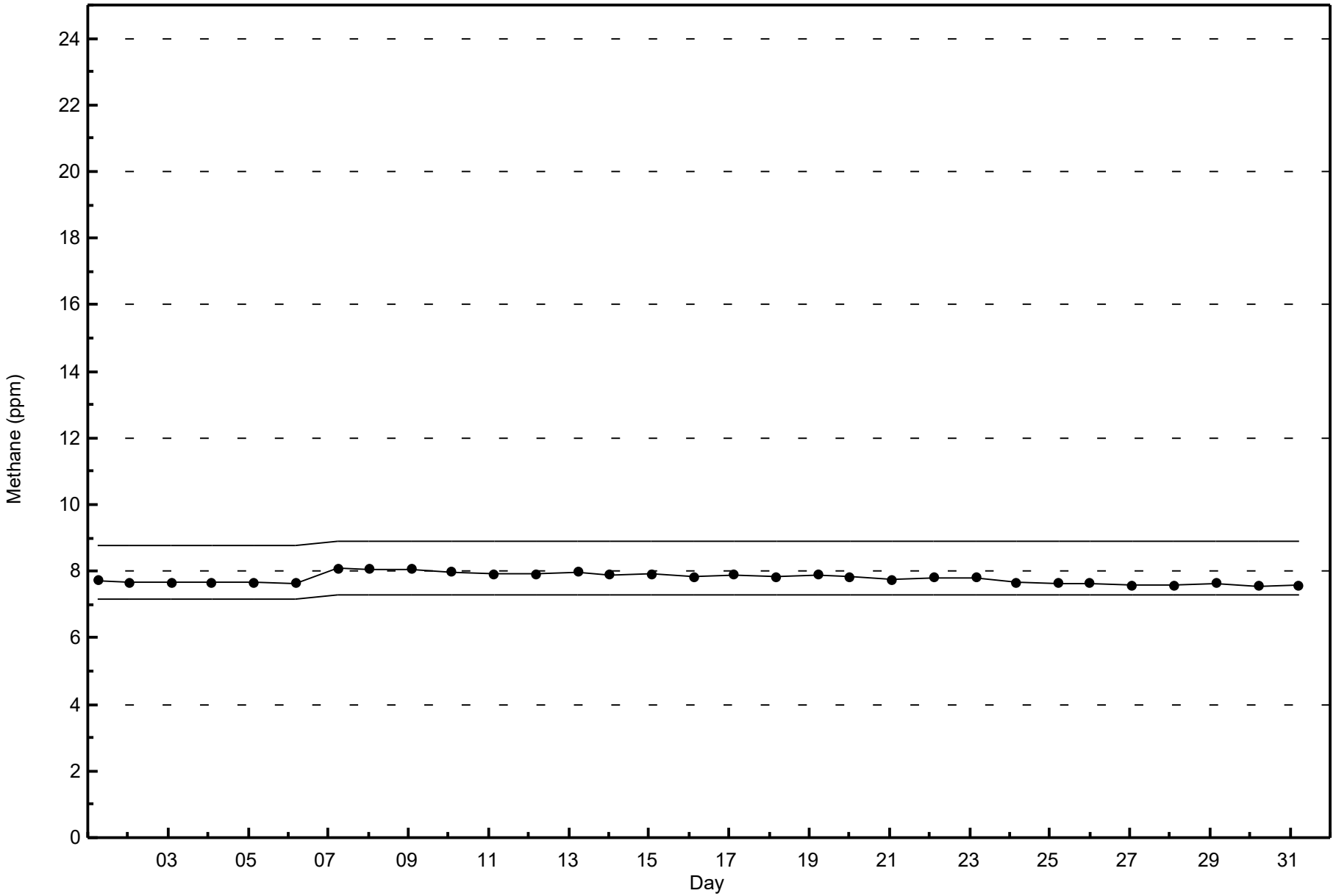


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Barge Landing - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Barge Landing - March 2025

Maximum Value: 105.6 ppb on Mar 19 07:00

Maximum Daily Average: 22.0 ppb on Mar 6

Minimum Value: 0.0 ppb on Mar 4 19:00

Minimum Daily Average: 0.7 ppb on Mar 31

Maximum Diurnal Average: 16.7 ppb at hour 7

Minimum Diurnal Average: 2.1 ppb at hour 2

Monthly Average: 6.75 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.2 Median = 2.0 Q_3 = 6.2 P_{90} = 16.9 P_{99} = 85.4

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	1.6	0.7	1.7	Z	0.5	1.2	1.9	3.3	3.9	4.6	7.0	9.3	8.7	6.1	7.6	7.1	2.8	19.7	29.4	13.1	59.2	69.1	64.6	59.7	16.6	69.1
2-Mar	26.1	24.4	24.4	10.4	Z	0.9	0.9	45.0	91.5	76.3	76.7	41.4	24.4	4.9	0.4	5.7	6.5	1.1	0.1	0.2	0.1	0.1	0.1	0.1	20.1	91.5
3-Mar	0.2	0.2	0.0	0.1	0.1	Z	0.3	1.6	4.3	7.1	5.6	7.6	6.5	5.4	2.1	1.6	0.7	0.7	3.7	11.9	4.6	5.9	4.0	5.7	3.5	11.9
4-Mar	Z	5.3	8.6	11.1	2.2	5.0	22.3	29.3	17.3	8.6	4.4	2.4	3.4	3.5	3.2	1.4	0.0	2.8	0.0	0.0	0.1	0.5	0.2	9.6	6.1	29.3
5-Mar	7.8	Z	0.0	0.0	0.1	0.1	0.4	2.0	2.5	3.0	4.9	3.2	3.0	2.4	2.3	2.3	2.2	1.5	5.1	7.9	11.4	0.5	0.8	0.4	2.8	11.4
6-Mar	0.5	5.7	Z	5.4	54.3	97.5	96.7	86.1	56.7	20.6	8.9	6.0	7.4	5.6	4.7	4.2	2.7	0.9	3.4	8.7	8.9	0.8	8.4	12.3	22.0	97.5
7-Mar	0.2	0.2	0.1	Z	0.2	2.9	8.7	6.3	6.3	12.8	30.9	16.7	11.8	29.8	18.9	3.0	1.6	1.7	0.2	0.2	0.1	0.1	0.1	0.2	6.6	30.9
8-Mar	0.2	0.1	0.1	0.2	Z	7.9	2.6	0.5	1.2	5.5	9.1	7.3	3.1	2.9	2.1	1.5	1.7	1.0	0.3	0.2	0.1	0.0	0.1	0.1	2.1	9.1
9-Mar	0.2	0.3	0.4	0.3	0.3	Z	1.0	1.0	1.5	1.7	2.1	2.7	3.6	4.1	3.6	5.5	4.0	1.3	0.3	0.2	0.3	0.2	1.3	1.1	1.6	5.5
10-Mar	Z	2.8	0.2	0.7	0.7	1.0	2.6	14.9	20.6	22.1	19.0	12.3	11.9	9.9	5.9	3.0	3.0	4.7	6.6	3.4	0.9	2.1	4.5	4.2	6.8	22.1
11-Mar	7.2	Z	6.9	9.2	4.6	3.0	1.5	8.5	11.2	19.0	24.0	29.4	10.1	3.4	4.7	5.2	2.6	1.4	0.3	0.1	0.1	0.1	0.1	0.1	6.6	29.4
12-Mar	0.1	0.0	Z	0.1	0.3	2.7	29.1	2.2	4.1	6.5	6.6	7.3	13.4	15.5	7.7	4.8	2.7	0.5	0.3	11.6	26.6	8.8	1.5	0.3	6.6	29.1
13-Mar	0.6	2.9	11.7	Z	4.4	8.8	9.0	5.7	23.5	90.5	84.7	38.0	14.0	1.7	1.6	3.3	1.6	0.6	0.1	0.1	0.1	0.1	0.1	0.1	13.2	90.5
14-Mar	0.1	0.1	0.1	0.1	Z	0.1	0.2	3.1	4.7	4.6	5.0	2.3	3.3	2.9	1.0	2.0	1.0	0.5	0.2	0.1	0.1	0.0	0.0	0.0	1.4	5.0
15-Mar	0.0	0.0	0.8	2.6	4.3	Z	0.8	1.0	7.6	21.3	23.7	6.6	5.3	3.2	1.6	1.1	0.8	0.3	0.2	1.0	5.1	1.2	0.1	0.1	3.9	23.7
16-Mar	Z	0.1	0.1	0.1	0.1	8.7	46.1	18.4	7.1	8.6	9.3	6.2	2.5	1.1	1.2	0.6	0.8	0.4	0.1	0.1	0.0	0.0	0.0	0.0	4.9	46.1
17-Mar	0.1	Z	0.1	0.1	0.2	0.1	0.1	0.6	3.5	C	C	C	C	C	2.3	1.6	1.6	2.2	2.7	1.2	10.4	13.4	9.9	13.5	3.5	13.5
18-Mar	14.3	8.3	Z	49.6	23.5	26.6	9.0	8.9	13.8	11.8	8.4	4.3	2.1	0.8	0.5	1.1	0.9	0.8	0.6	4.2	2.0	9.9	0.1	0.1	8.8	49.6
19-Mar	0.2	0.3	0.1	Z	41.4	85.4	105.6	85.4	43.9	25.4	21.0	15.4	13.9	8.0	7.1	4.5	9.8	5.4	0.5	0.0	0.0	0.0	0.0	0.0	20.6	105.6
20-Mar	0.1	0.2	0.3	0.2	Z	0.1	1.2	6.3	16.8	19.1	16.3	6.0	3.6	3.9	3.0	1.9	1.4	1.5	0.6	0.2	0.1	0.1	0.1	0.2	3.6	19.1
21-Mar	0.1	0.1	0.0	0.1	0.3	Z	0.7	1.9	1.8	2.9	4.2	3.8	4.0	3.4	2.3	1.2	0.5	0.2	0.1	0.0	0.1	0.2	0.0	0.0	1.2	4.2
22-Mar	Z	0.0	0.0	0.1	0.6	2.2	2.1	4.5	5.4	3.0	3.3	2.9	5.4	6.4	3.4	3.7	5.7	6.1	1.4	0.0	0.0	0.1	0.1	0.1	2.5	6.4
23-Mar	0.0	Z	0.1	0.1	0.1	0.1	1.1	10.7	15.7	8.0	3.8	3.4	1.0	1.3	1.7	0.5	0.4	0.5	3.4	15.7	17.4	12.9	3.4	1.0	4.4	17.4
24-Mar	1.0	0.6	Z	4.4	20.2	45.9	52.1	22.6	24.8	4.2	3.1	2.7	2.2	1.7	0.8	0.5	0.2	0.0	0.0	0.0	0.1	0.0	0.1	0.0	8.1	52.1
25-Mar	0.2	0.0	0.1	Z	2.5	4.9	46.6	12.5	0.9	3.8	1.8	4.9	1.4	0.4	0.0	0.5	2.3	2.0	0.4	0.1	0.0	0.0	0.1	0.0	3.7	46.6
26-Mar	0.0	0.0	0.1	0.2	Z	0.7	7.3	2.8	3.6	3.1	3.6	3.7	4.2	4.6	3.3	3.0	2.8	1.4	0.5	0.1	0.2	0.1	0.2	0.2	2.0	7.3
27-Mar	0.3	0.3	0.3	0.4	0.3	Z	1.5	1.9	2.3	2.0	1.8	1.5	1.4	1.6	0.8	1.3	1.9	0.4	0.1	0.0	0.1	0.1	0.2	0.1	0.9	2.3
28-Mar	Z	0.1	0.5	4.8	17.5	41.2	60.5	12.1	22.1	20.2	12.3	10.0	6.2	3.5	3.6	3.3	2.0	1.3	0.4	0.1	0.2	0.3	2.2	0.2	9.8	60.5
29-Mar	0.2	Z	0.1	0.4	26.7	14.4	3.5	5.3	5.6	33.8	31.3	9.6	6.2	3.3	1.6	1.7	1.6	2.3	0.6	1.2	0.7	0.3	0.2	0.1	6.5	33.8
30-Mar	0.1	1.2	Z	1.9	10.7	9.2	3.3	3.6	11.4	14.1	11.6	13.0	35.8	17.2	11.1	8.3	6.3	3.9	5.0	5.8	0.3	0.1	0.1	0.2	7.6	35.8
31-Mar	0.0	0.0	0.0	Z	0.0	0.2	0.2	0.5	0.8	2.6	4.6	2.3	1.0	1.2	0.8	0.7	0.5	0.4	0.0	0.0	0.0	0.1	0.0	0.0	0.7	4.6
	2.4	2.1	2.2	4.1	8.3	14.3	16.7	13.2	14.1	15.6	15.0	9.4	7.4	5.3	3.6	2.8	2.3	2.2	2.2	2.8	4.8	4.1	3.3	3.5	Diurnal Average	
	26.1	24.4	24.4	49.6	54.3	97.5	105.6	86.1	91.5	90.5	84.7	41.4	35.8	29.8	18.9	8.3	9.8	19.7	29.4	15.7	59.2	69.1	64.6	59.7	Diurnal Maximum	

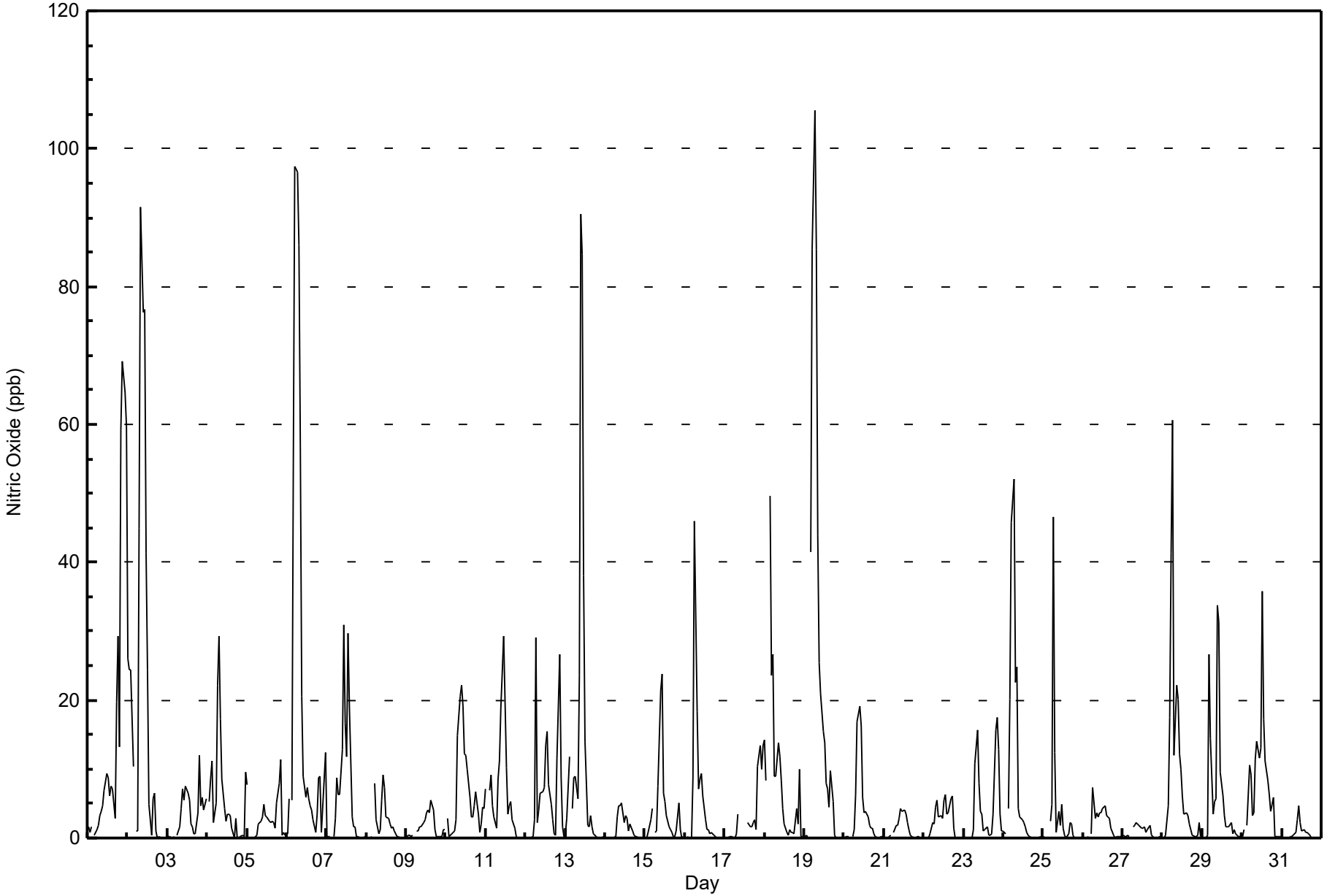
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Barge Landing - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	649	91.67	91.67
21 - 40	31	4.38	96.05
11 - 80	19	2.68	98.73
81 - 159	9	1.27	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

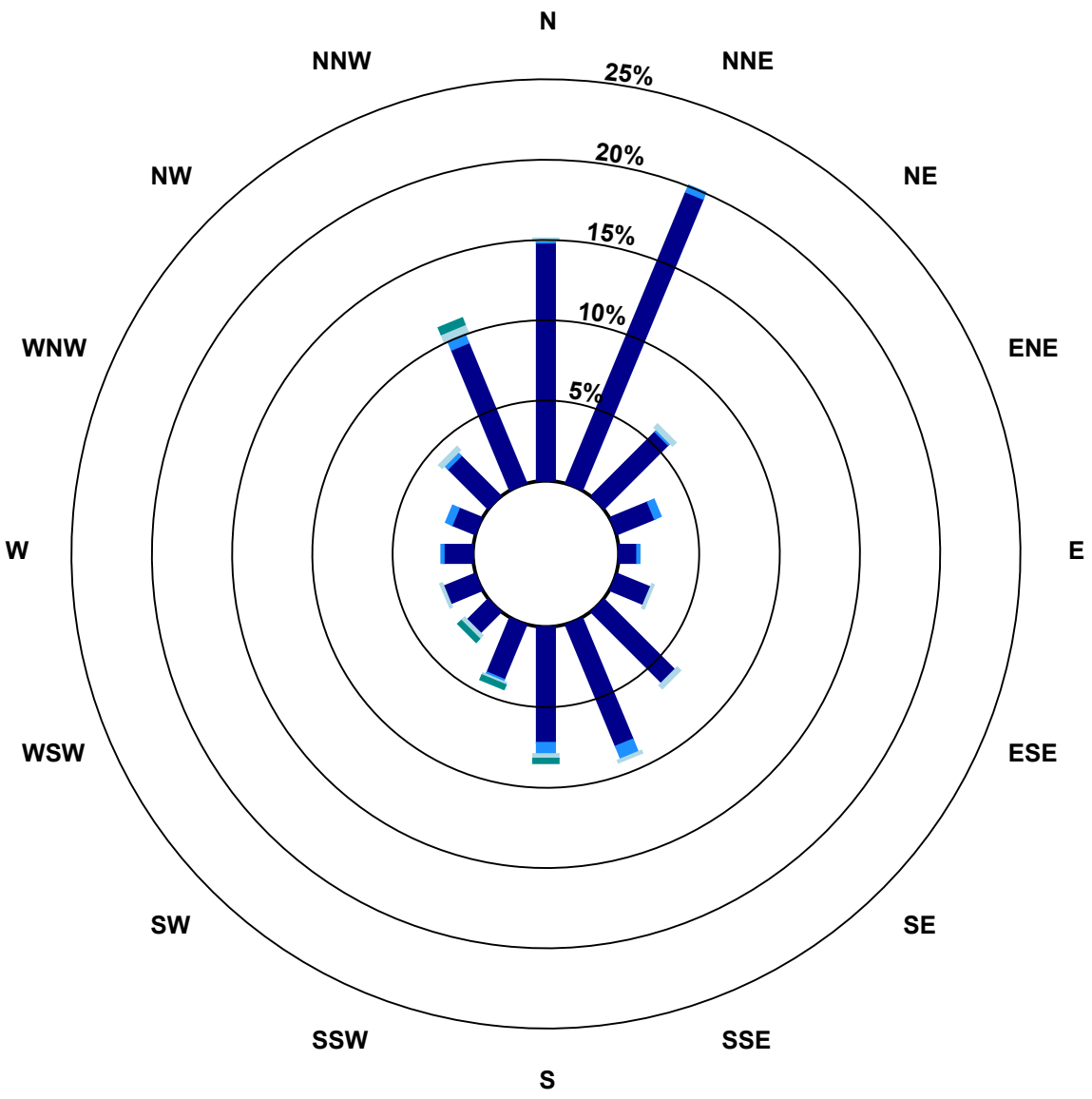
Nitric Oxide (NO) - ppb

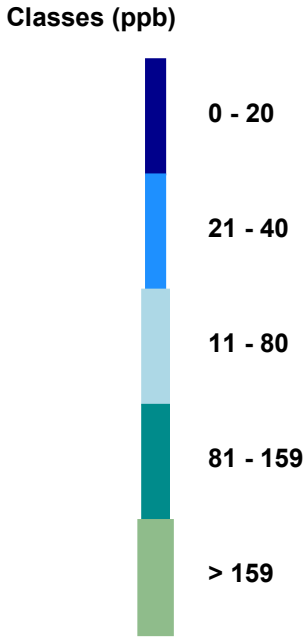
Barge Landing - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	105	139	40	18	8	16	44	58	51	26	13	15	13	11	25	67	649
21 - 40	1	3	1	3	1	0	0	6	5	1	0	0	1	3	2	4	31
11 - 80	1	0	2	0	0	1	2	1	2	1	2	1	0	0	2	4	19
81 - 159	0	0	0	0	0	0	0	0	2	2	2	0	0	0	0	3	9
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	107	142	43	21	9	17	46	65	60	30	17	16	14	14	29	78	708

Total Number of Valid Hours: 708

Total Number of Hours: 744





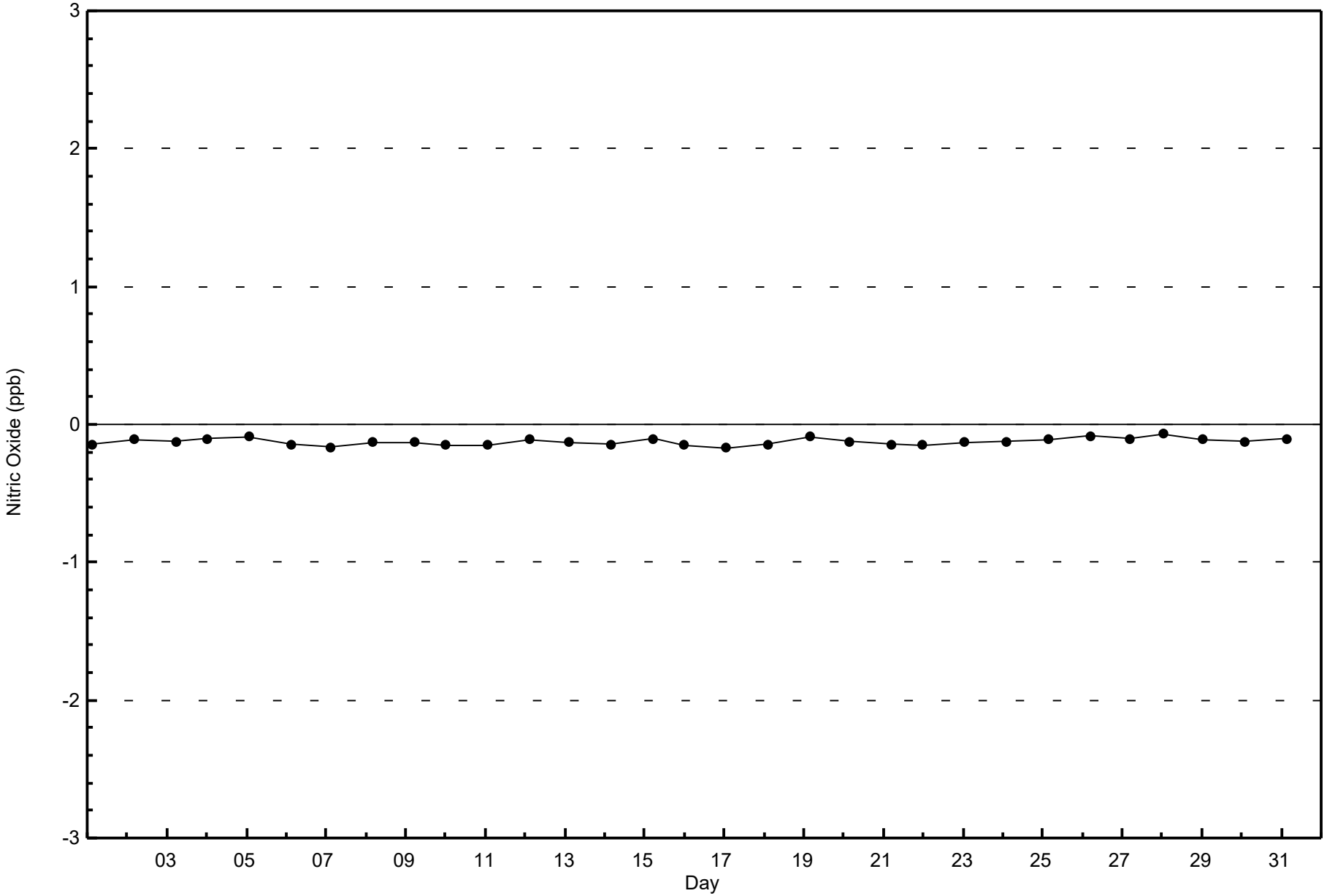
Total Number of Valid Hours: 708

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Barge Landing - March 2025

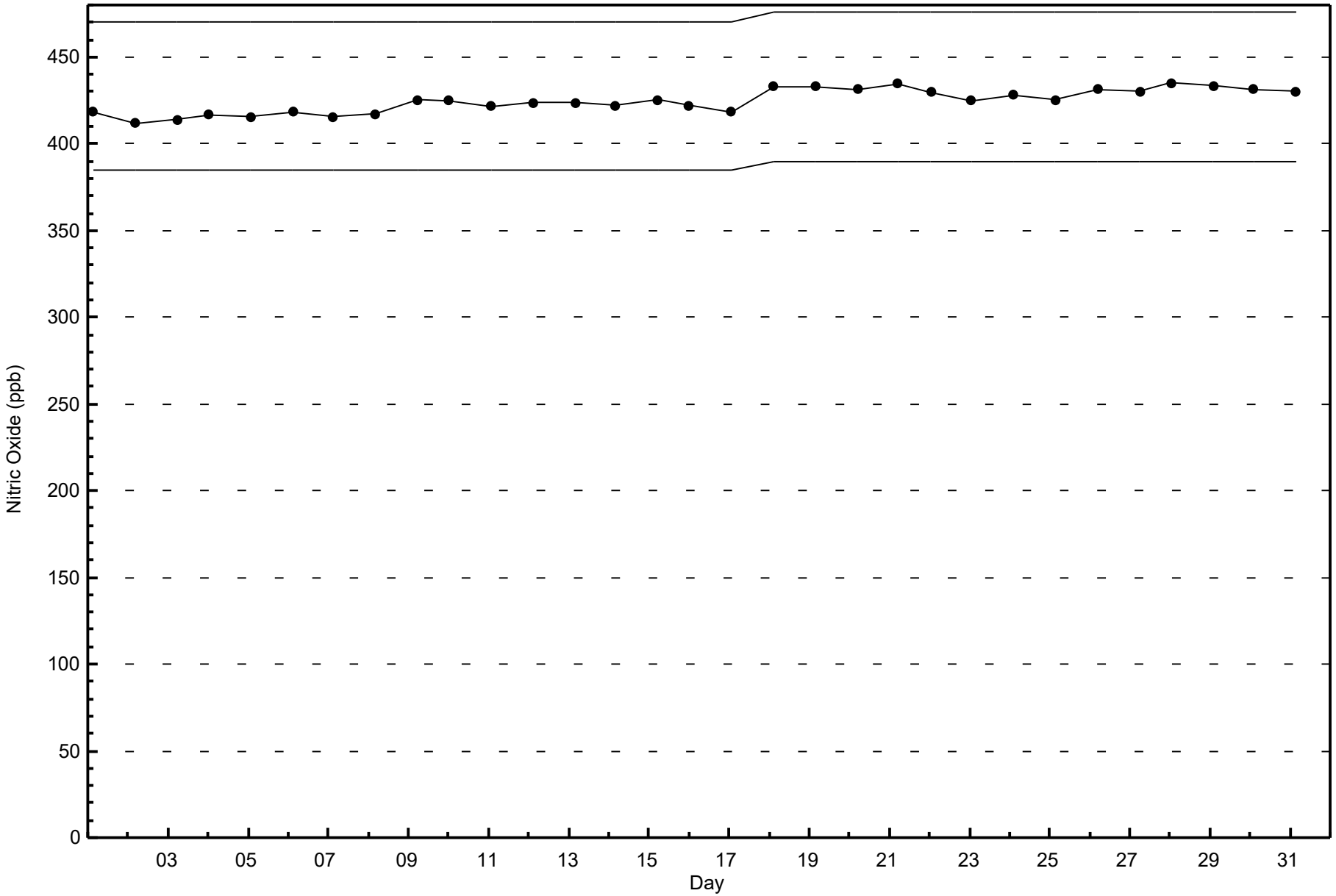


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Barge Landing - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Barge Landing - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 41.5 ppb on Mar 23 21:00 Maximum Daily Average: 23.8 ppb on Mar 6

Minimum Value: 0.2 ppb on Mar 25 15:00 Minimum Daily Average: 3.6 ppb on Mar 31
Maximum Diurnal Average: 22.7 ppb at hour 6 Minimum Diurnal Average: 7.1 ppb at hour 16
Monthly Average: 15.27 ppb Percentiles: P_1 = 1.0 P_{10} = 3.7 Q_1 = 7.2 Median = 12.7 Q_3 = 22.0 P_{90} = 30.4 P_{99} = 39.5

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	17.2	17.2	19.0	Z	11.1	12.3	14.1	17.5	12.3	9.4	10.2	12.0	12.7	11.3	14.7	16.2	14.9	32.4	39.7	33.1	38.7	37.5	37.7	30.0	20.5	39.7
2-Mar	29.5	30.5	31.4	29.6	Z	20.2	19.7	25.0	31.6	32.7	36.7	30.5	28.4	10.4	2.6	8.5	23.6	13.4	9.8	14.0	12.1	6.5	7.5	9.7	20.2	36.7
3-Mar	10.2	12.7	6.0	11.0	17.4	Z	22.4	19.9	18.8	17.1	12.2	13.8	11.1	9.8	6.3	7.2	5.3	10.2	16.8	31.6	28.5	30.0	29.8	28.8	16.4	31.6
4-Mar	Z	26.5	27.8	25.1	22.2	22.6	28.3	31.2	25.9	16.6	11.7	7.6	8.6	10.3	10.1	5.7	0.9	7.1	3.4	3.8	22.4	28.0	25.8	35.0	17.7	35.0
5-Mar	36.1	Z	10.3	9.6	10.1	11.6	7.7	13.9	12.8	9.8	10.5	6.8	6.9	6.6	6.9	7.4	10.4	17.1	28.3	39.6	39.2	23.3	32.0	30.8	16.9	39.6
6-Mar	30.9	31.0	Z	33.5	35.1	36.3	32.7	35.0	29.7	22.4	14.3	10.6	12.0	10.6	10.1	11.3	11.8	11.0	26.5	30.0	30.6	23.8	28.7	29.0	23.8	36.3
7-Mar	19.3	17.9	14.4	Z	22.8	25.4	36.0	31.4	23.5	21.6	28.5	21.2	18.6	31.9	24.4	10.7	8.1	17.2	16.9	22.6	16.8	19.3	19.2	27.0	21.5	36.0
8-Mar	24.9	16.9	19.6	27.6	Z	37.6	37.9	14.3	8.1	18.3	19.9	17.6	13.2	12.0	9.4	8.6	11.7	9.1	12.3	7.0	6.0	5.2	4.1	4.5	15.0	37.9
9-Mar	7.1	7.9	10.3	8.8	6.4	Z	10.5	8.1	5.9	4.3	4.7	4.4	4.6	5.1	4.6	7.8	7.6	7.2	6.2	7.5	9.8	6.1	18.3	21.0	8.0	21.0
10-Mar	Z	21.6	19.1	19.2	18.8	19.8	21.3	21.4	19.2	17.0	14.5	11.1	10.7	8.8	8.2	6.0	8.2	16.5	26.0	25.4	19.6	22.4	24.3	26.1	17.6	26.1
11-Mar	26.8	Z	28.0	28.7	28.6	26.8	23.0	19.9	19.9	19.4	21.8	23.9	11.1	6.6	9.6	11.2	8.8	9.4	10.9	10.5	12.8	11.6	10.5	13.7	17.1	28.7
12-Mar	16.2	11.0	Z	14.3	19.0	30.6	32.9	19.0	14.7	14.6	12.1	12.4	16.7	16.6	10.4	9.0	7.5	4.2	10.4	33.1	36.4	31.4	26.4	25.4	18.4	36.4
13-Mar	25.4	27.5	28.2	Z	27.7	28.0	27.6	18.1	21.3	35.7	35.3	24.8	18.7	5.3	5.3	6.8	8.0	10.1	9.6	12.6	13.9	14.6	12.9	16.9	18.9	35.7
14-Mar	13.5	12.1	11.7	11.4	Z	10.4	9.2	14.7	12.4	8.5	6.6	3.2	4.1	4.3	2.1	4.2	4.2	4.8	9.2	12.5	15.0	15.6	15.5	9.3	9.3	15.6
15-Mar	4.0	1.9	12.7	16.4	14.1	Z	11.0	8.1	15.3	23.5	22.7	10.8	9.2	5.6	3.6	3.4	3.2	3.4	7.2	17.5	35.1	18.9	13.3	17.4	12.1	35.1
16-Mar	Z	19.0	19.4	16.3	16.4	22.1	34.6	23.4	15.6	12.6	12.0	8.5	4.7	2.7	2.6	1.8	3.8	3.9	3.1	1.7	1.5	0.9	0.6	1.1	9.9	34.6
17-Mar	1.9	Z	3.4	4.5	7.4	11.9	6.9	5.6	9.9	C	C	C	C	C	5.7	5.7	6.5	12.6	26.5	24.7	34.2	41.4	36.0	35.1	15.6	41.4
18-Mar	35.2	30.3	Z	36.2	35.5	36.2	33.3	25.8	20.4	14.6	10.5	6.2	3.8	2.1	1.5	3.3	4.9	7.6	12.4	20.5	17.1	35.7	22.3	30.2	19.4	36.2
19-Mar	30.1	25.9	13.5	Z	36.7	40.3	41.1	38.4	28.9	22.2	22.1	18.1	16.2	11.5	11.7	10.3	18.2	21.1	13.6	9.7	9.6	12.8	14.5	13.3	20.9	41.1
20-Mar	16.1	21.9	18.6	22.1	Z	12.9	23.2	20.2	23.0	21.0	17.6	8.5	5.7	6.4	6.0	4.7	5.4	10.7	15.9	24.7	15.2	14.5	19.9	10.5	15.0	24.7
21-Mar	4.1	5.0	5.7	7.2	11.9	Z	10.9	10.7	5.2	5.7	7.7	6.8	7.1	6.7	5.3	3.6	2.5	2.2	2.7	2.6	4.9	5.6	2.5	5.2	5.7	11.9
22-Mar	Z	6.9	12.7	18.5	24.8	23.2	22.1	28.7	23.0	9.5	9.0	9.8	10.3	12.4	8.9	11.1	19.6	37.2	13.3	2.3	2.6	14.9	14.1	10.9	15.0	37.2
23-Mar	7.6	Z	9.9	13.1	15.7	17.9	18.4	20.6	22.0	12.3	7.8	7.8	3.2	4.0	5.3	3.2	2.4	5.5	23.3	40.7	41.5	39.5	32.0	26.2	16.5	41.5
24-Mar	27.8	18.2	Z	27.6	27.8	29.2	25.2	24.0	27.1	13.7	10.0	10.6	10.1	8.8	5.2	2.6	1.6	0.9	3.1	8.5	22.0	6.6	4.9	3.0	13.8	29.2
25-Mar	3.2	0.9	1.9	Z	10.6	7.1	23.3	12.4	1.9	7.0	3.8	7.4	5.0	1.8	0.2	2.7	8.1	10.2	7.8	8.0	6.5	8.1	9.8	7.1	6.7	23.3
26-Mar	5.5	5.8	6.6	13.0	Z	13.9	14.0	9.2	7.3	6.2	6.8	6.3	6.9	8.1	7.6	9.7	10.5	9.9	11.1	7.9	15.6	12.5	12.7	18.5	9.8	18.5
27-Mar	20.1	20.3	19.3	21.6	14.9	Z	16.7	11.2	7.9	5.2	4.2	3.4	2.7	2.7	1.7	2.7	3.2	2.4	3.5	6.2	6.9	10.8	16.7	17.6	9.6	21.6
28-Mar	Z	17.4	20.4	28.0	31.9	31.5	32.9	20.3	20.6	20.4	15.7	14.4	11.1	7.0	7.7	7.3	7.0	8.7	9.7	10.1	21.6	21.8	31.0	18.4	18.0	32.9
29-Mar	16.8	Z	12.9	19.1	29.0	25.7	16.2	13.3	11.2	28.0	26.7	13.9	10.7	6.9	4.3	5.4	6.4	13.2	12.9	24.1	23.8	26.4	21.5	21.1	16.9	29.0
30-Mar	18.0	27.5	Z	33.3	32.3	32.6	21.8	12.7	17.4	17.3	16.3	17.3	35.6	25.0	20.0	17.1	18.0	20.6	32.4	36.9	21.5	19.2	21.7	24.4	23.4	36.9
31-Mar	5.7	1.2	1.9	Z	1.9	4.7	3.1	4.3	3.7	7.0	12.1	6.2	3.0	3.7	2.9	3.4	3.2	3.7	1.3	2.8	3.0	2.4	1.0	1.0	3.6	12.1
	17.4	16.7	14.8	19.8	20.4	22.7	21.9	18.7	16.7	15.8	14.8	11.9	10.8	8.8	7.3	7.1	8.2	11.1	13.7	17.2	18.9	18.3	18.3	18.3	Diurnal Average	
	36.1	31.0	31.4	36.2	36.7	40.3	41.1	38.4	31.6	35.7	36.7	30.5	35.6	31.9	24.4	17.1	23.6	37.2	39.7	40.7	41.5	41.4	37.7	35.1	Diurnal Maximum	

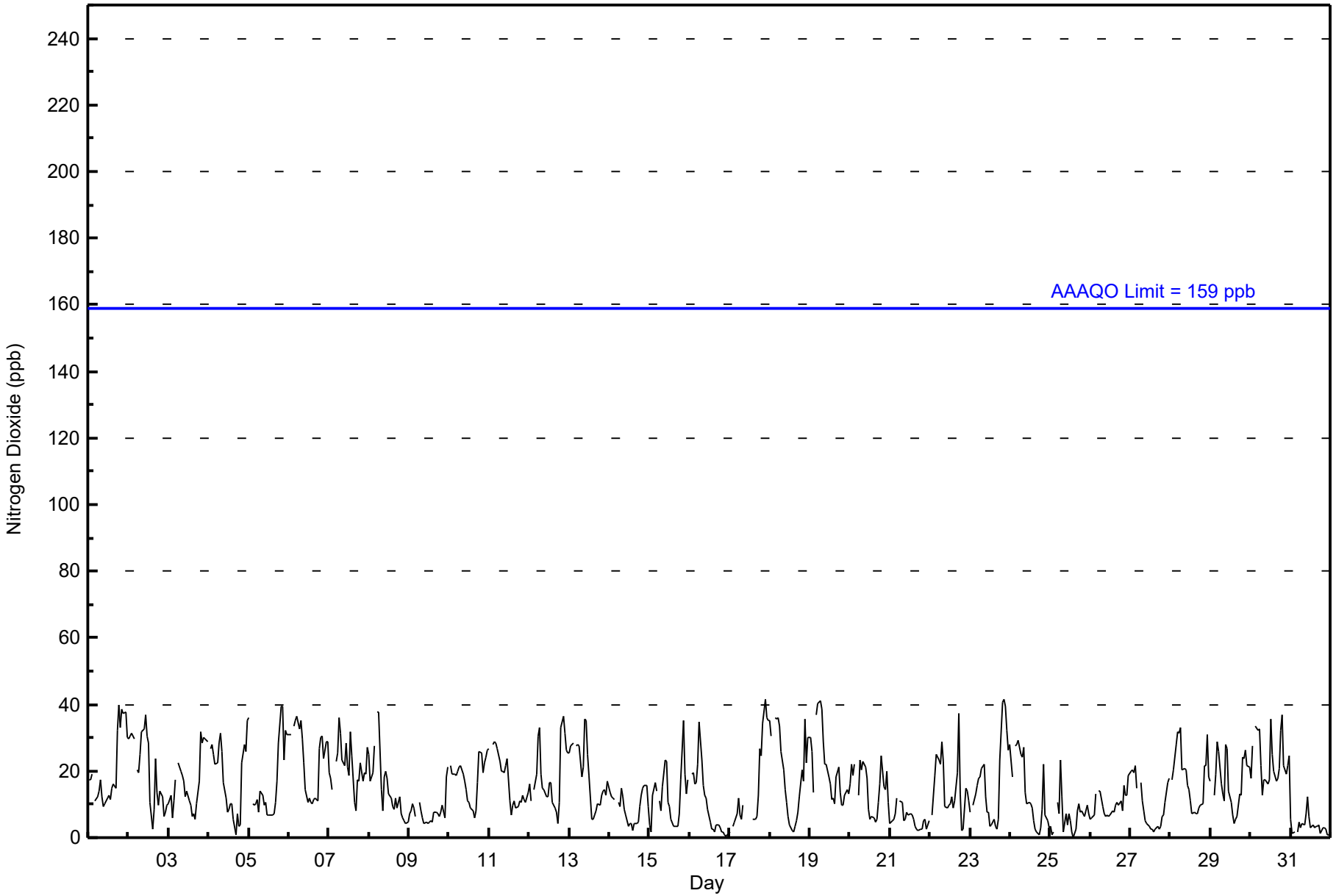
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Barge Landing - March 2025



Nitrogen Dioxide (NO_2) - ppb
Barge Landing - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	507	71.61	71.61
21 - 40	197	27.82	99.44
11 - 80	4	0.56	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Barge Landing - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	75	119	27	14	6	15	41	48	42	25	12	13	11	8	21	30	507
21 - 40	31	23	16	5	3	2	5	17	18	5	4	3	3	6	8	48	197
11 - 80	1	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	4
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	107	142	43	21	9	17	46	65	60	30	17	16	14	14	29	78	708

Total Number of Valid Hours: 708

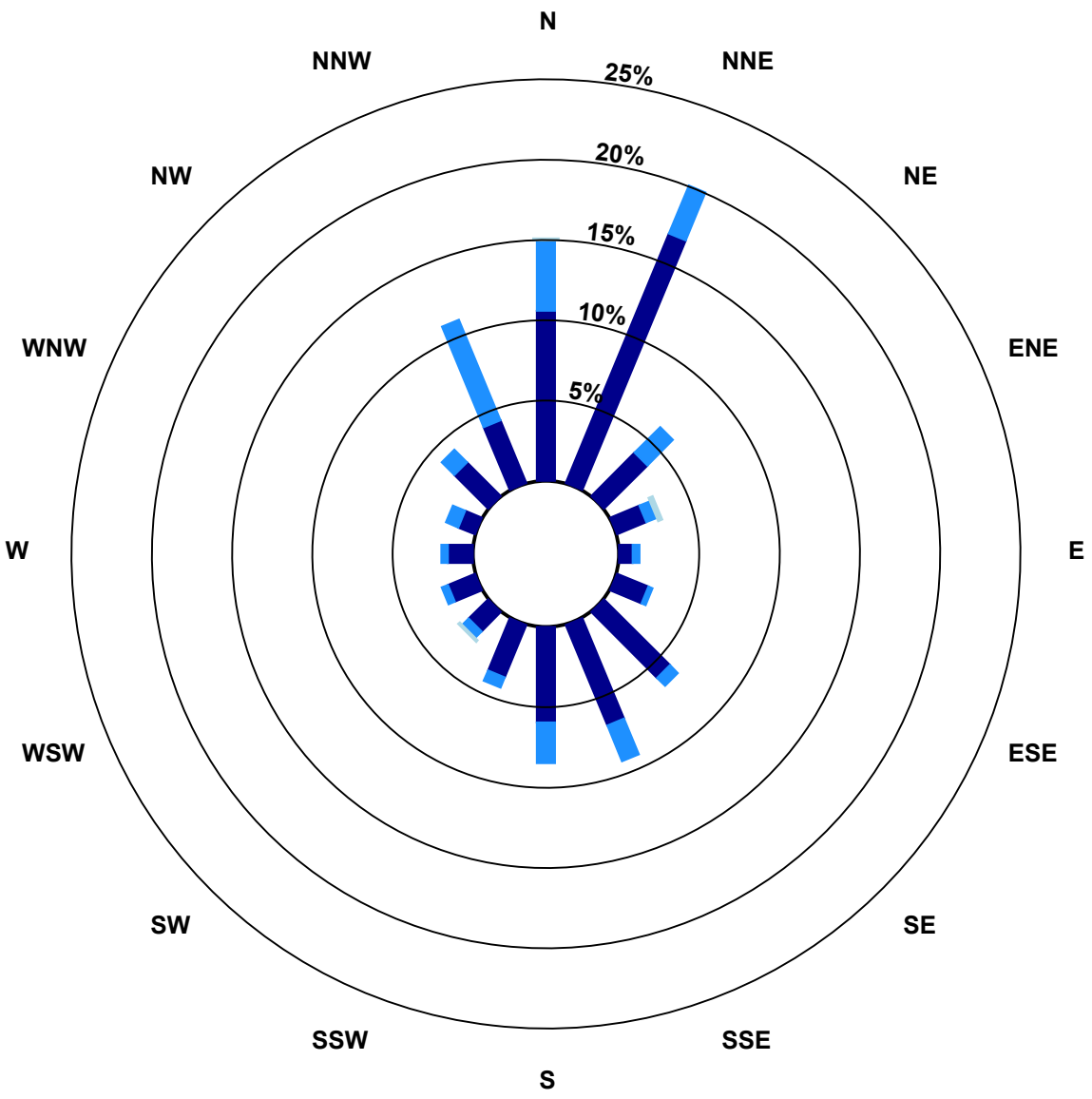
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Dioxide (NO_2) - ppb

Barge Landing



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

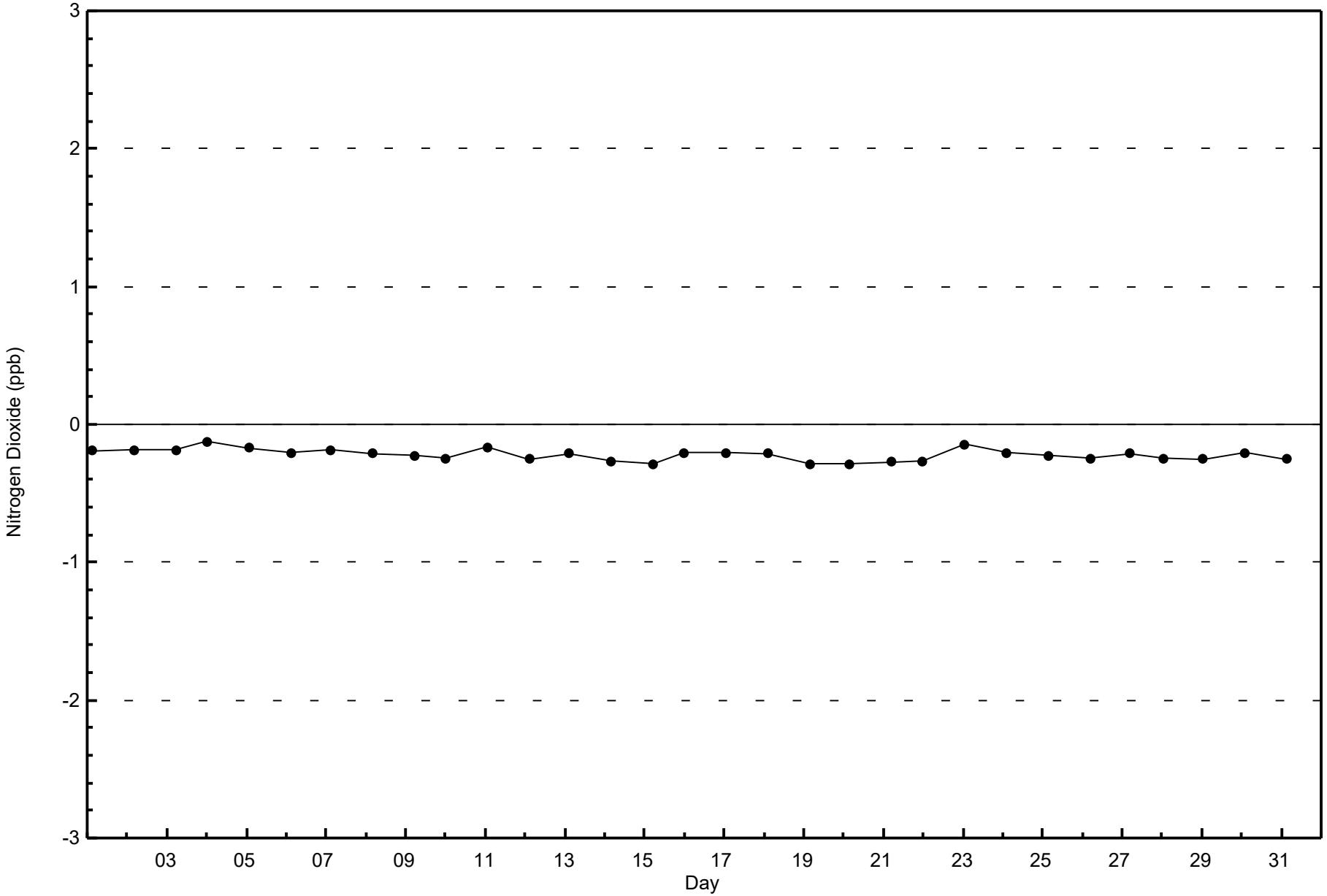
Total Number of Valid Hours: 708

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Barge Landing - March 2025

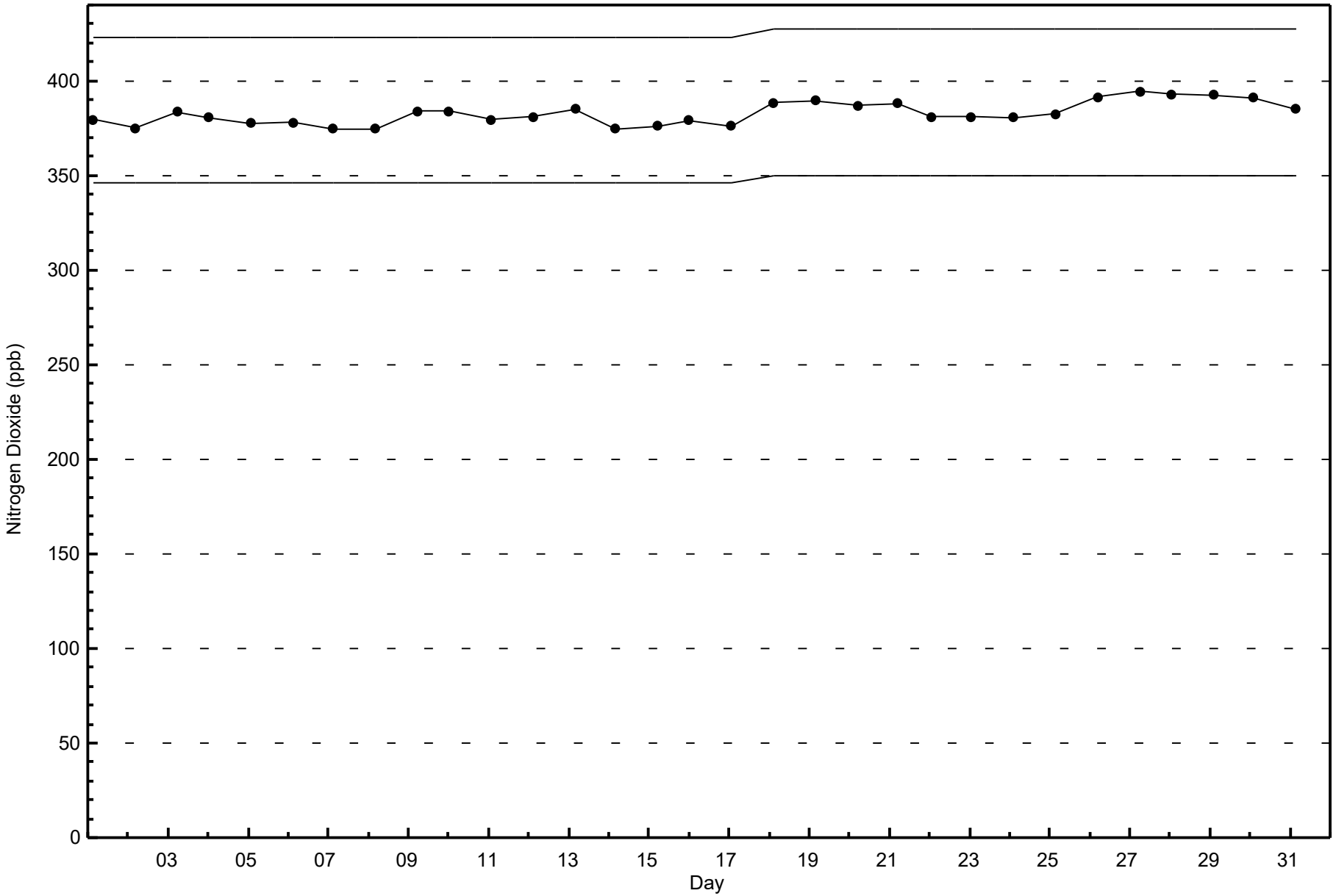


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Barge Landing - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Barge Landing - March 2025

Maximum Value: 146.7 ppb on Mar 19 07:00

Maximum Daily Average: 45.8 ppb on Mar 6

Minimum Value: 0.2 ppb on Mar 25 15:00

Minimum Daily Average: 4.3 ppb on Mar 31

Maximum Diurnal Average: 38.6 ppb at hour 7

Minimum Diurnal Average: 9.8 ppb at hour 16

Monthly Average: 22.03 ppb

Percentiles: P_1 = 1.0 P_{10} = 4.6 Q_1 = 9.3 Median = 15.6 Q_3 = 27.9 P_{90} = 44.6 P_{99} = 121.0

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	18.8	17.9	20.7	Z	11.6	13.5	16.0	20.8	16.2	14.0	17.2	21.3	21.4	17.4	22.3	23.3	17.7	52.1	69.1	46.2	97.9	106.6	102.3	89.7	37.1	106.6
2-Mar	55.6	54.9	55.8	40.0	Z	21.1	20.6	70.0	123.1	109.0	113.4	71.9	52.8	15.3	3.0	14.2	30.1	14.5	9.9	14.2	12.2	6.6	7.6	9.8	40.2	123.1
3-Mar	10.4	12.9	6.0	11.1	17.5	Z	22.7	21.5	23.1	24.2	17.8	21.4	17.6	15.2	8.4	8.8	6.0	10.9	20.5	43.5	33.1	35.9	33.8	34.5	19.9	43.5
4-Mar	Z	31.8	36.4	36.2	24.4	27.6	50.6	60.5	43.2	25.2	16.1	10.0	12.0	13.8	13.3	7.1	0.9	9.9	3.4	3.8	22.5	28.5	26.0	44.6	23.8	60.5
5-Mar	43.9	Z	10.3	9.6	10.2	11.7	8.1	15.9	15.3	12.8	15.4	10.0	9.9	9.0	9.2	9.7	12.6	18.6	33.4	47.5	50.6	23.8	32.8	31.2	19.6	50.6
6-Mar	31.4	36.7	Z	38.9	89.4	133.8	129.4	121.1	86.4	43.0	23.2	16.6	19.4	16.2	14.8	15.5	14.5	11.9	29.9	38.7	39.5	24.6	37.1	41.3	45.8	133.8
7-Mar	19.5	18.1	14.5	Z	23.0	28.3	44.7	37.7	29.8	34.4	59.4	37.9	30.4	61.7	43.3	13.7	9.7	18.9	17.1	22.8	16.9	19.4	19.3	27.2	28.2	61.7
8-Mar	25.1	17.0	19.7	27.8	Z	45.5	40.5	14.8	9.3	23.8	29.0	24.9	16.3	14.9	11.5	10.1	13.4	10.1	12.6	7.2	6.1	5.2	4.2	4.6	17.1	45.5
9-Mar	7.3	8.2	10.7	9.1	6.7	Z	11.5	9.1	7.4	6.0	6.8	7.1	8.2	9.2	8.2	13.3	11.6	8.5	6.5	7.7	10.1	6.3	19.6	22.1	9.6	22.1
10-Mar	Z	24.4	19.3	19.9	19.5	20.8	23.9	36.3	39.8	39.1	33.5	23.4	22.6	18.7	14.1	9.0	11.2	21.2	32.6	28.8	20.5	24.5	28.8	30.3	24.4	39.8
11-Mar	34.0	Z	34.9	37.9	33.2	29.8	24.5	28.4	31.1	38.4	45.8	53.3	21.2	10.0	14.3	16.4	11.4	10.8	11.2	10.6	12.9	11.7	10.6	13.8	23.8	53.3
12-Mar	16.3	11.0	Z	14.4	19.3	33.3	62.0	21.2	18.8	21.1	18.7	19.7	30.1	32.1	18.1	13.8	10.2	4.7	10.7	44.7	63.0	40.2	27.9	25.7	25.1	63.0
13-Mar	26.0	30.4	39.9	Z	32.1	36.8	36.6	23.8	44.8	126.2	120.0	62.8	32.7	7.0	6.9	10.1	9.6	10.7	9.7	12.7	14.0	14.7	13.0	17.0	32.1	126.2
14-Mar	13.6	12.2	11.8	11.5	Z	10.5	9.4	17.8	17.1	13.1	11.6	5.5	7.4	7.2	3.1	6.2	5.2	5.3	9.4	12.6	15.1	15.6	15.5	9.3	10.7	17.8
15-Mar	4.0	1.9	13.5	19.0	18.4	Z	11.8	9.1	22.9	44.8	46.4	17.4	14.5	8.8	5.2	4.5	4.0	3.7	7.4	18.5	40.2	20.1	13.4	17.5	16.0	46.4
16-Mar	Z	19.1	19.5	16.4	16.5	30.8	80.7	41.8	22.7	21.2	21.3	14.7	7.2	3.8	3.8	2.4	4.6	4.3	3.2	1.8	1.5	0.9	0.6	1.1	14.8	80.7
17-Mar	2.0	Z	3.5	4.6	7.6	12.0	7.0	6.2	13.4	C	C	C	C	C	8.0	7.3	8.1	14.8	29.2	25.9	44.6	54.8	45.9	48.6	19.1	54.8
18-Mar	49.5	38.6	Z	85.8	59.0	62.8	42.3	34.7	34.2	26.4	18.9	10.5	5.9	2.9	2.0	4.4	5.8	8.4	13.0	24.7	19.1	45.6	22.4	30.3	28.1	85.8
19-Mar	30.3	26.2	13.6	Z	78.1	125.7	146.7	123.8	72.8	47.6	43.1	33.5	30.1	19.5	18.8	14.8	28.0	26.5	14.1	9.7	9.6	12.8	14.5	13.3	41.4	146.7
20-Mar	16.2	22.1	18.9	22.3	Z	13.0	24.4	26.5	39.8	40.1	33.9	14.5	9.3	10.3	9.0	6.6	6.8	12.2	16.5	24.9	15.3	14.6	20.0	10.7	18.6	40.1
21-Mar	4.2	5.1	5.7	7.3	12.2	Z	11.6	12.6	7.0	8.6	11.9	10.6	11.1	10.1	7.6	4.8	3.0	2.4	2.8	2.6	5.0	5.8	2.5	5.2	6.9	12.6
22-Mar	Z	6.9	12.7	18.6	25.4	25.4	24.2	33.2	28.4	12.5	12.3	12.7	15.7	18.8	12.3	14.8	25.3	43.3	14.7	2.3	2.6	15.0	14.2	11.0	17.5	43.3
23-Mar	7.6	Z	10.0	13.2	15.8	18.0	19.5	31.3	37.7	20.3	11.6	11.2	4.2	5.3	7.0	3.7	2.8	6.0	26.7	56.4	58.9	52.4	35.4	27.2	21.0	58.9
24-Mar	28.8	18.8	Z	32.0	48.0	75.1	77.3	46.6	51.9	17.9	13.1	13.3	12.3	10.5	6.0	3.1	1.8	0.9	3.1	8.5	22.1	6.6	5.0	3.0	22.0	77.3
25-Mar	3.4	0.9	2.0	Z	13.1	12.0	69.9	24.9	2.8	10.8	5.6	12.3	6.4	2.2	0.2	3.2	10.4	12.2	8.2	8.1	6.5	8.1	9.9	7.1	10.4	69.9
26-Mar	5.5	5.8	6.7	13.2	Z	14.6	21.3	12.0	10.9	9.3	10.4	10.0	11.1	12.7	10.9	12.7	13.3	11.3	11.6	8.0	15.8	12.6	12.9	18.7	11.8	21.3
27-Mar	20.4	20.6	19.6	22.0	15.2	Z	18.2	13.1	10.2	7.2	6.0	4.9	4.1	4.3	2.5	4.0	5.1	2.8	3.6	6.2	7.0	10.9	16.9	17.7	10.5	22.0
28-Mar	Z	17.5	20.9	32.8	49.4	72.7	93.4	32.4	42.7	40.6	28.0	24.4	17.3	10.5	11.3	10.6	9.0	10.0	10.1	10.2	21.8	22.1	33.2	18.6	27.8	93.4
29-Mar	17.0	Z	13.0	19.5	55.7	40.1	19.7	18.6	16.8	61.8	58.0	23.5	16.9	10.2	5.9	7.1	8.0	15.5	13.5	25.3	24.5	26.7	21.7	21.2	23.5	61.8
30-Mar	18.1	28.7	Z	35.2	43.0	41.8	25.1	16.3	28.8	31.4	27.9	30.3	71.4	42.2	31.1	25.4	24.3	24.5	37.4	42.7	21.8	19.3	21.8	24.6	31.0	71.4
31-Mar	5.7	1.2	1.9	Z	1.9	4.9	3.3	4.8	4.5	9.6	16.7	8.5	4.0	4.9	3.7	4.1	3.7	4.1	1.3	2.8	3.0	2.5	1.0	1.0	4.3	16.7
	19.8	18.8	17.0	23.9	28.7	37.0	38.6	31.8	30.7	31.3	29.8	21.3	18.1	14.1	10.8	9.8	10.6	13.3	15.9	20.0	23.7	22.4	21.6	21.9	Diurnal Average	
	55.6	54.9	55.8	85.8	89.4	133.8	146.7	123.8	123.1	126.2	120.0	71.9	71.4	61.7	43.3	25.4	30.1	52.1	69.1	56.4	97.9	106.6	102.3	89.7	Diurnal Maximum	

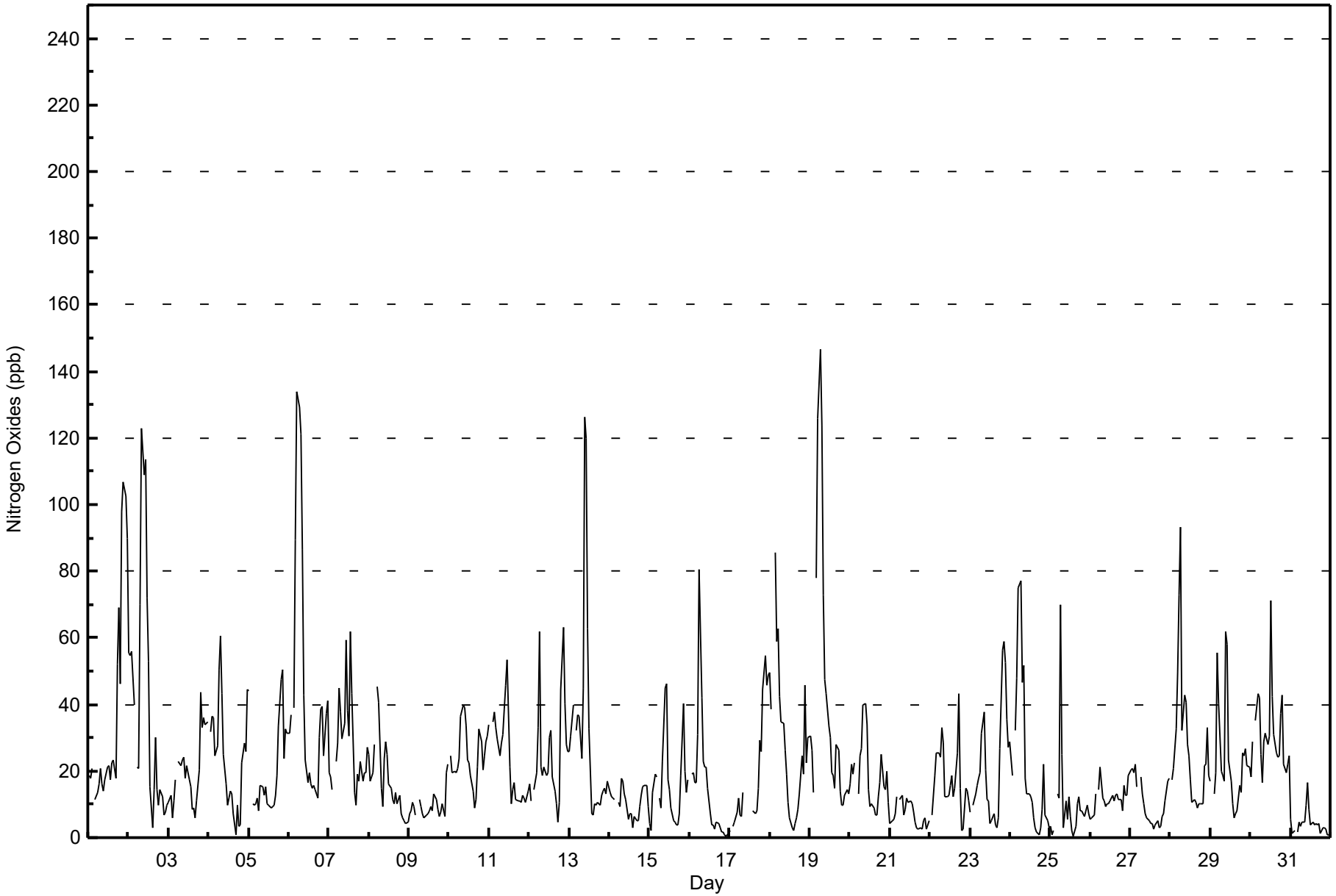
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Barge Landing - March 2025



Nitrogen Oxides (NO_X) - ppb
Barge Landing - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	443	62.57	62.57
21 - 40	175	24.72	87.29
11 - 80	70	9.89	97.18
81 - 159	19	2.68	99.86
> 159	0	0.00	99.86

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Barge Landing - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	72	106	23	11	5	15	40	44	35	18	11	11	3	8	17	24	443
21 - 40	26	27	15	5	2	0	3	13	14	8	2	2	11	3	8	36	175
11 - 80	8	9	3	5	2	1	3	7	8	1	2	2	0	3	3	13	70
81 - 159	1	0	2	0	0	1	0	1	2	3	2	1	0	0	1	5	19
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	107	142	43	21	9	17	46	65	59	30	17	16	14	14	29	78	707

Total Number of Valid Hours: 708

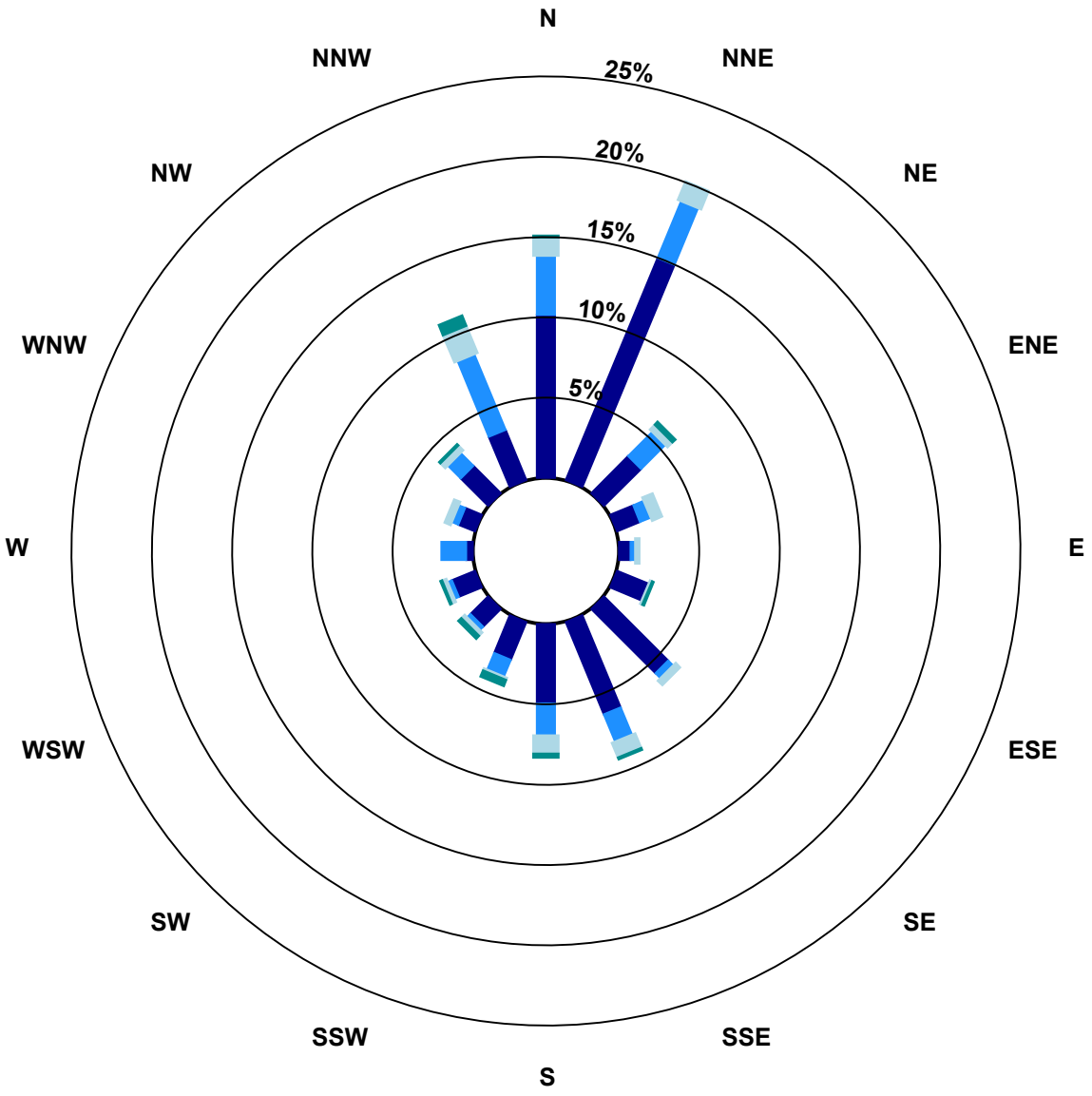
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Oxides (NO_X) - ppb

Barge Landing



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

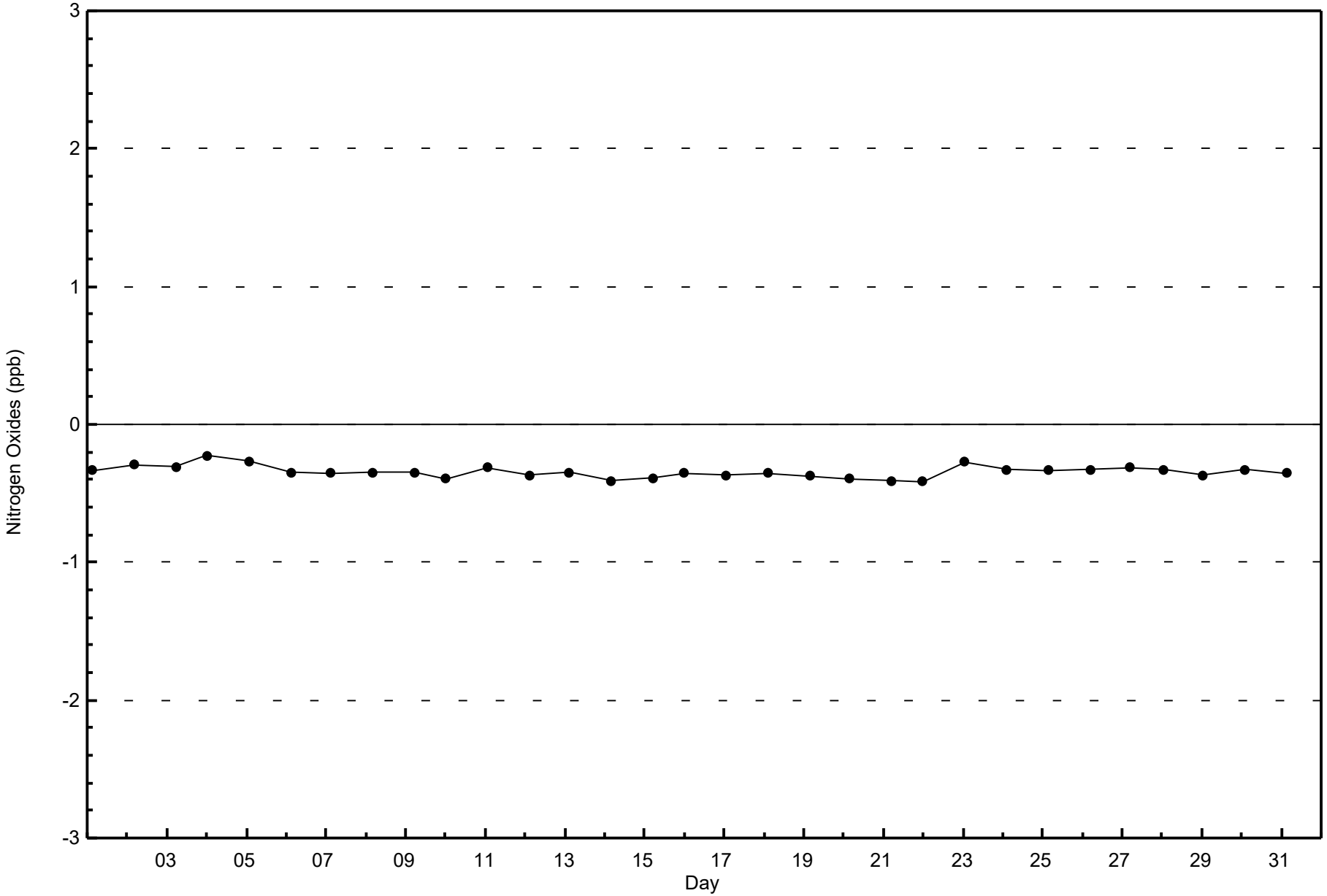
Total Number of Valid Hours: 708

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Barge Landing - March 2025

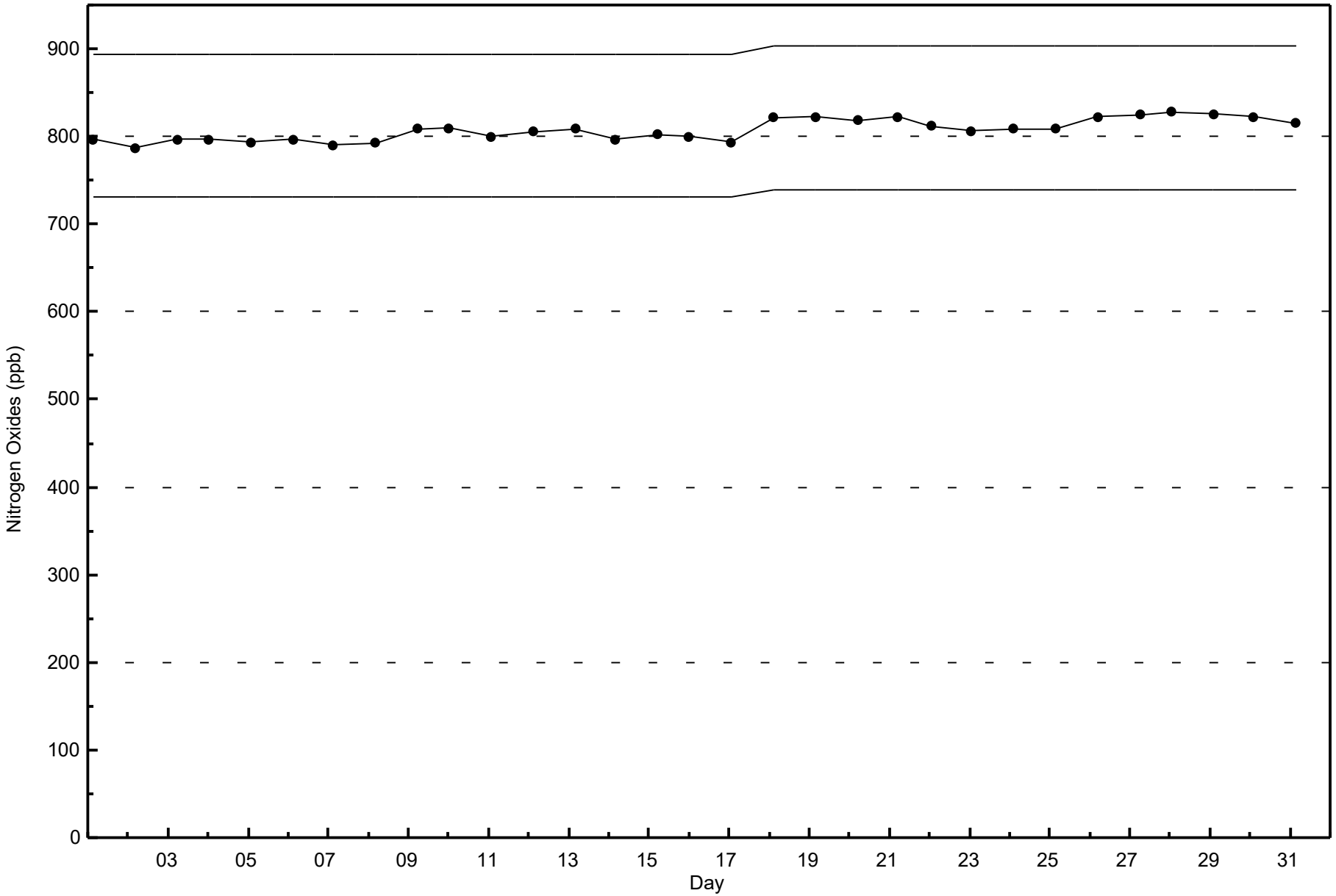


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Barge Landing - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Barge Landing - March 2025

Number of Exceedences (AAAQO): 1-hr: 2 24-hr: 1

Maximum Value: 113.4 $\mu g/m^3$ on Mar 12 21:00

Maximum Daily Average: 32.7 $\mu g/m^3$ on Mar 30

Minimum Value: 0.5 $\mu g/m^3$ on Mar 25 15:00

Minimum Daily Average: 2.4 $\mu g/m^3$ on Mar 25

Maximum Diurnal Average: 14.2 $\mu g/m^3$ at hour 10

Minimum Diurnal Average: 6.9 $\mu g/m^3$ at hour 17

Monthly Average: 10.88 $\mu g/m^3$

Percentiles: P_1 = 1.6 P_{10} = 3.1 Q_1 = 4.3 Median = 6.9 Q_3 = 12.9 P_{90} = 21.8 P_{99} = 51.7

Hours in Service:	744
Hours of Data:	658
Hours of Missing Data:	86
Hours of Calibration:	1
Percent Operational Time:	88.6

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	6.4	7.2	8.2	7.9	6.6	6.9	6.4	6.7	6.5	6.2	6.6	9.1	8.4	8.1	12.0	15.3	7.1	10.1	12.5	10.3	14.2	19.3	17.7	14.6	9.8	19.3
2-Mar	12.4	10.8	9.8	10.0	10.1	9.9	11.6	12.9	16.1	16.8	17.1	11.8	9.7	5.1	2.3	1.9	5.8	3.5	3.3	3.0	2.7	2.9	3.4	4.1	8.2	17.1
3-Mar	4.8	5.0	4.8	4.7	4.9	5.8	6.1	6.3	6.6	6.6	6.1	6.2	5.6	4.0	3.5	4.4	4.8	6.3	5.3	5.1	6.3	9.1	10.7	9.7	5.9	10.7
4-Mar	8.2	8.6	11.4	12.9	11.4	10.9	12.3	9.1	5.8	4.5	3.8	3.6	4.8	5.7	4.9	2.7	1.6	1.4	1.5	1.8	5.8	5.6	4.4	4.7	6.1	12.9
5-Mar	4.1	3.5	2.8	2.8	3.3	3.2	3.2	3.6	4.2	4.5	5.2	4.5	4.3	4.0	4.2	7.6	12.2	11.8	7.6	5.6	5.4	4.2	4.2	4.4	5.0	12.2
6-Mar	4.7	6.5	8.5	9.4	15.0	28.8	21.0	16.6	11.6	8.7	8.2	12.2	21.1	15.6	15.2	15.9	16.5	8.2	10.1	14.5	8.5	7.8	8.4	10.8	12.7	28.8
7-Mar	5.5	3.8	4.3	5.0	4.7	5.9	11.5	13.8	12.5	13.6	C	11.7	11.7	16.8	10.8	3.8	3.1	4.2	3.8	4.5	4.0	5.1	8.8	13.3	7.9	16.8
8-Mar	7.9	4.5	7.3	17.0	15.5	9.6	5.5	2.6	1.8	2.6	3.0	2.8	2.5	2.4	2.9	4.4	4.9	4.4	5.5	4.5	4.9	4.6	4.4	4.9	5.4	17.0
9-Mar	7.9	6.9	7.8	6.5	8.4	6.5	7.2	8.8	5.8	5.2	5.6	6.4	7.3	7.9	8.4	9.8	9.6	9.7	9.8	12.9	14.9	7.8	20.2	18.4	9.2	20.2
10-Mar	18.4	16.6	12.7	10.0	8.7	9.1	9.9	13.8	19.2	25.3	15.1	10.0	11.2	10.5	10.3	6.5	8.5	19.6	43.8	36.9	25.4	13.8	11.1	11.2	15.7	43.8
11-Mar	10.9	11.3	11.0	13.0	12.2	14.1	8.8	5.6	6.5	7.1	7.5	7.4	5.6	4.9	5.2	5.4	5.7	6.1	4.8	4.0	3.8	3.7	3.3	2.8	7.1	14.1
12-Mar	3.0	2.6	2.6	2.5	2.8	4.1	4.9	3.9	3.7	4.3	3.9	4.1	7.0	11.1	11.5	9.6	6.9	3.2	12.9	99.0	113.4	66.4	19.7	15.3	17.4	113.4
13-Mar	13.1	13.4	21.7	15.5	10.8	11.5	10.9	7.3	12.5	42.1	38.2	20.7	15.7	7.4	8.1	7.7	7.6	15.3	16.1	13.6	18.2	15.8	11.5	6.3	15.1	42.1
14-Mar	4.8	4.5	4.3	4.1	3.8	3.9	4.0	4.9	4.8	4.9	4.5	4.2	4.4	4.0	4.2	4.4	4.2	3.7	3.3	3.2	3.1	3.4	3.3	2.8	4.0	4.9
15-Mar	2.4	2.2	2.6	3.1	3.1	3.3	3.1	3.0	4.1	5.5	6.4	4.7	4.4	4.0	3.5	3.4	3.6	3.6	5.2	6.2	13.7	10.6	7.7	7.0	4.9	13.7
16-Mar	7.1	6.1	6.0	5.7	5.8	6.7	13.2	12.0	11.5	9.1	9.0	6.2	5.1	4.0	4.0	3.6	4.7	4.9	5.2	3.3	3.1	2.8	2.8	2.9	6.0	13.2
17-Mar	3.2	3.3	3.4	3.7	5.5	6.8	5.8	5.8	6.8	6.3	8.4	5.6	5.5	4.7	6.7	5.8	8.0	10.4	21.9	16.6	31.8	37.3	31.8	33.9	11.6	37.3
18-Mar	28.6	19.8	52.7	48.2	20.6	22.7	13.2	10.1	9.2	9.3	7.9	6.5	6.2	5.7	5.2	6.2	6.2	10.7	9.2	13.2	10.9	28.5	17.9	25.8	16.4	52.7
19-Mar	26.3	19.3	10.2	10.1	27.2	45.5	44.0	33.8	21.3	15.9	27.8	18.1	21.6	14.8	18.2	14.8	15.8	10.8	6.5	6.2	5.6	6.5	7.6	6.5	18.1	45.5
20-Mar	7.2	8.0	7.6	9.6	9.0	7.3	10.4	11.7	16.9	19.4	17.7	10.6	8.7	8.1	8.1	9.0	6.7	10.4	12.0	22.6	16.5	17.2	23.6	12.6	12.1	23.6
21-Mar	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
22-Mar	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
23-Mar	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
24-Mar	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	5.0	2.5	1.6	2.1	2.0	2.0	2.4	3.4	2.3	2.0	1.9	--	5.0
25-Mar	1.9	1.7	1.6	1.5	1.7	1.7	3.4	2.3	1.8	2.9	1.9	2.5	3.3	2.0	0.5	0.9	2.4	3.6	3.3	3.3	3.3	4.1	3.4	3.3	2.4	4.1
26-Mar	3.6	3.3	3.4	3.9	4.5	4.8	4.7	4.6	5.5	6.1	5.6	4.8	3.9	3.3	2.8	2.9	2.9	3.1	3.0	3.2	4.4	5.8	7.0	6.4	4.3	7.0
27-Mar	8.0	9.1	9.0	9.7	7.7	6.3	7.7	6.2	7.9	5.7	5.0	5.0	4.4	3.5	3.0	3.2	3.1	3.2	3.9	8.0	10.2	11.0	11.9	20.3	7.2	20.3
28-Mar	22.9	24.8	26.6	30.0	42.2	46.5	52.7	37.4	42.7	34.2	20.7	17.2	14.6	6.5	6.4	5.4	4.7	4.3	4.6	5.0	11.8	18.1	29.9	22.2	22.1	52.7
29-Mar	22.7	18.1	14.9	24.6	45.4	31.6	20.3	19.9	17.2	62.0	48.8	21.8	17.1	11.2	6.5	8.0	7.4	15.0	17.1	20.1	15.7	15.9	18.4	27.8	22.0	62.0
30-Mar	26.8	42.4	51.0	50.2	50.4	48.7	30.9	24.4	43.2	39.6	30.7	29.9	77.7	39.5	27.4	25.7	19.8	17.7	21.1	15.9	15.0	12.2	21.1	23.4	32.7	77.7
31-Mar	8.0	4.2	3.8	4.1	4.5	4.6	4.2	5.1	5.9	14.6	28.1	20.3	13.4	12.8	10.3	10.0	8.0	6.4	3.9	4.6	4.2	2.9	2.7	2.7	7.9	28.1
	10.4	9.9	11.5	12.1	12.8	13.6	12.5	10.8	11.5	14.2	13.2	9.9	11.3	8.3	7.4	7.1	6.9	7.6	9.2	12.5	13.6	12.3	11.4	11.4	Diurnal Average	
	28.6	42.4	52.7	50.2	50.4	48.7	52.7	37.4	43.2	62.0	48.8	29.9	77.7	39.5	27.4	25.7	19.8	19.6	43.8	99.0	113.4	66.4	31.8	33.9	Diurnal Maximum	

C - Calibration M - Maintenance UO - Unstable Operation

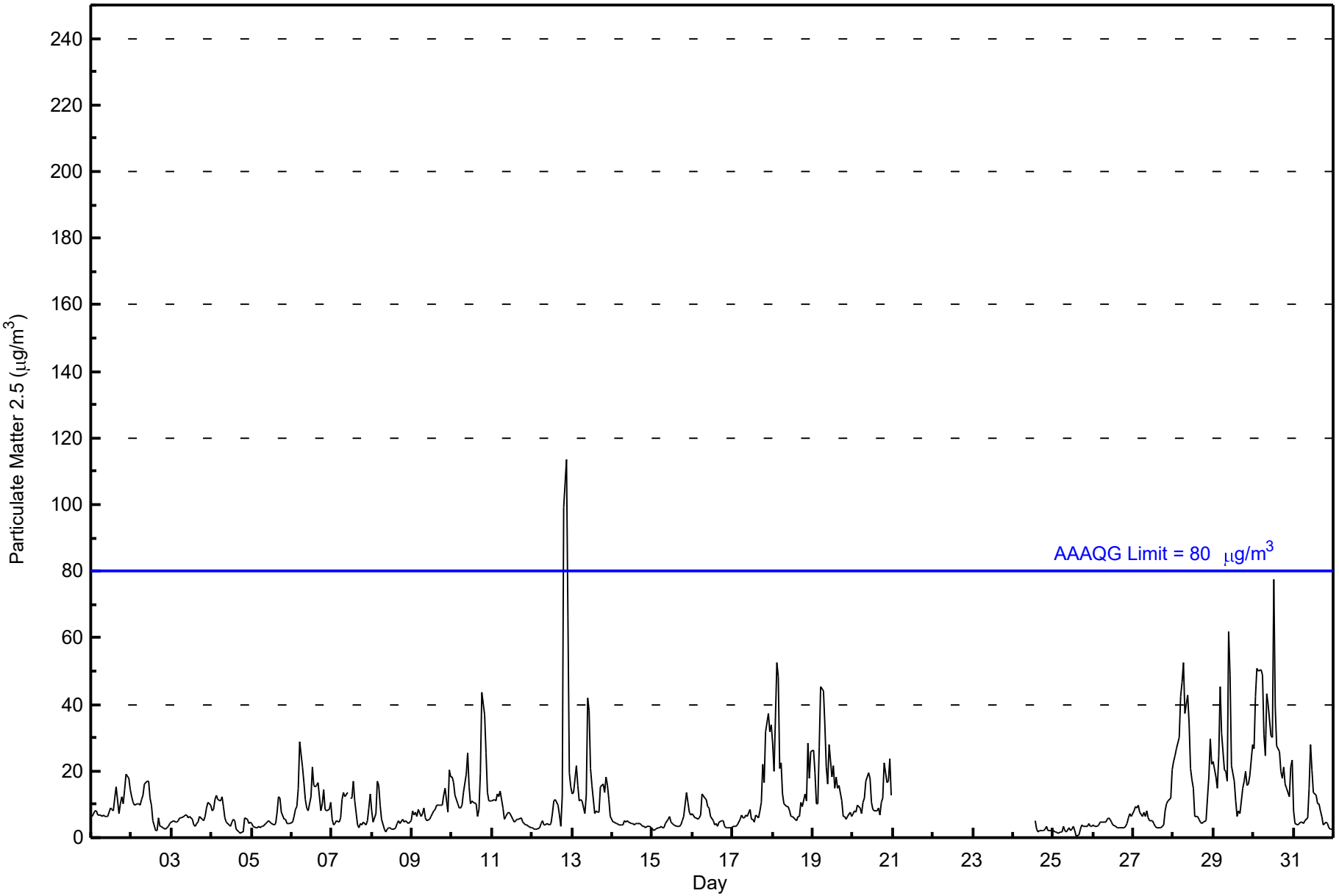
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Barge Landing - March 2025



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

Barge Landing - March 2025

Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	247	37.54	37.54
6 - 15	281	42.71	80.24
16 - 25	77	11.70	91.95
26 - 80	51	7.75	99.70
> 81.0	2	0.30	100.00

Total Number of Valid Hours: 658

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

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

Barge Landing - March 2025

Concentration Ranges ($\mu g/m^3$)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	47	74	11	6	1	9	17	16	9	7	10	7	4	6	14	9	247
6 - 15	45	59	17	8	1	1	17	27	31	16	4	4	6	5	4	36	281
16 - 25	16	9	7	2	2	1	1	6	6	0	0	1	1	1	5	19	77
26 - 80	3	7	5	1	0	0	0	1	1	2	2	2	2	3	4	18	51
> 81.0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Totals	111	149	42	17	4	11	35	50	47	25	16	14	13	15	27	82	658

Total Number of Valid Hours: 658

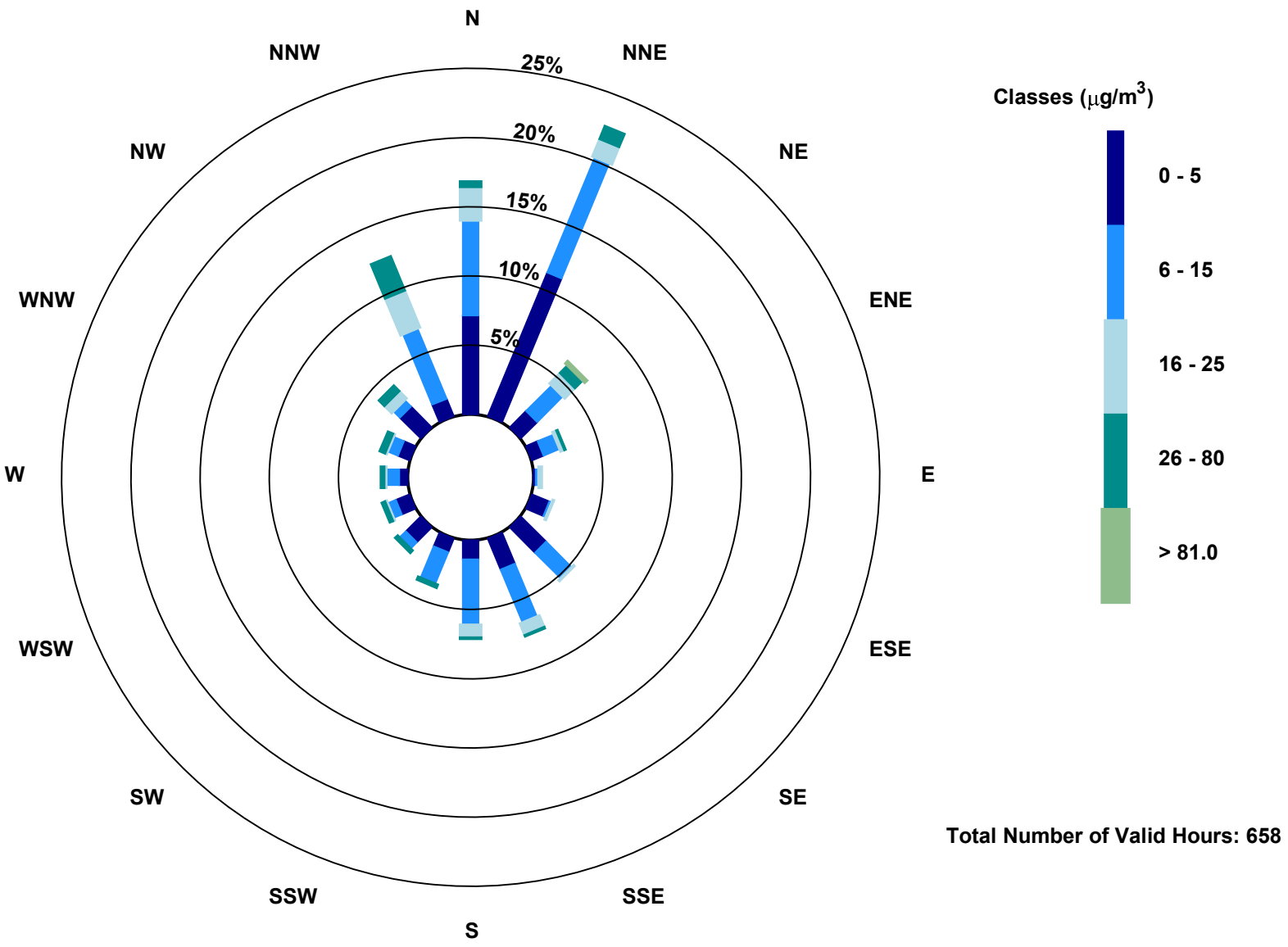
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

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

Barge Landing



Total Number of Valid Hours: 658

Maximum Value: 11.0 C on Mar 25 15:00

Maximum Daily Average: 2.0 C on Mar 23

Minimum Value: -25.7 C on Mar 13 07:00

Minimum Daily Average: -20.8 C on Mar 9

Maximum Diurnal Average: -2.1 C at hour 16

Minimum Diurnal Average: -12.9 C at hour 7

Monthly Average: -7.72 C

Percentiles: P_1 = -22.8 P_{10} = -18.1 Q_1 = -13.7 Median = -7.3 Q_3 = -2.1 P_{90} = 2.1 P_{99} = 8.3

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

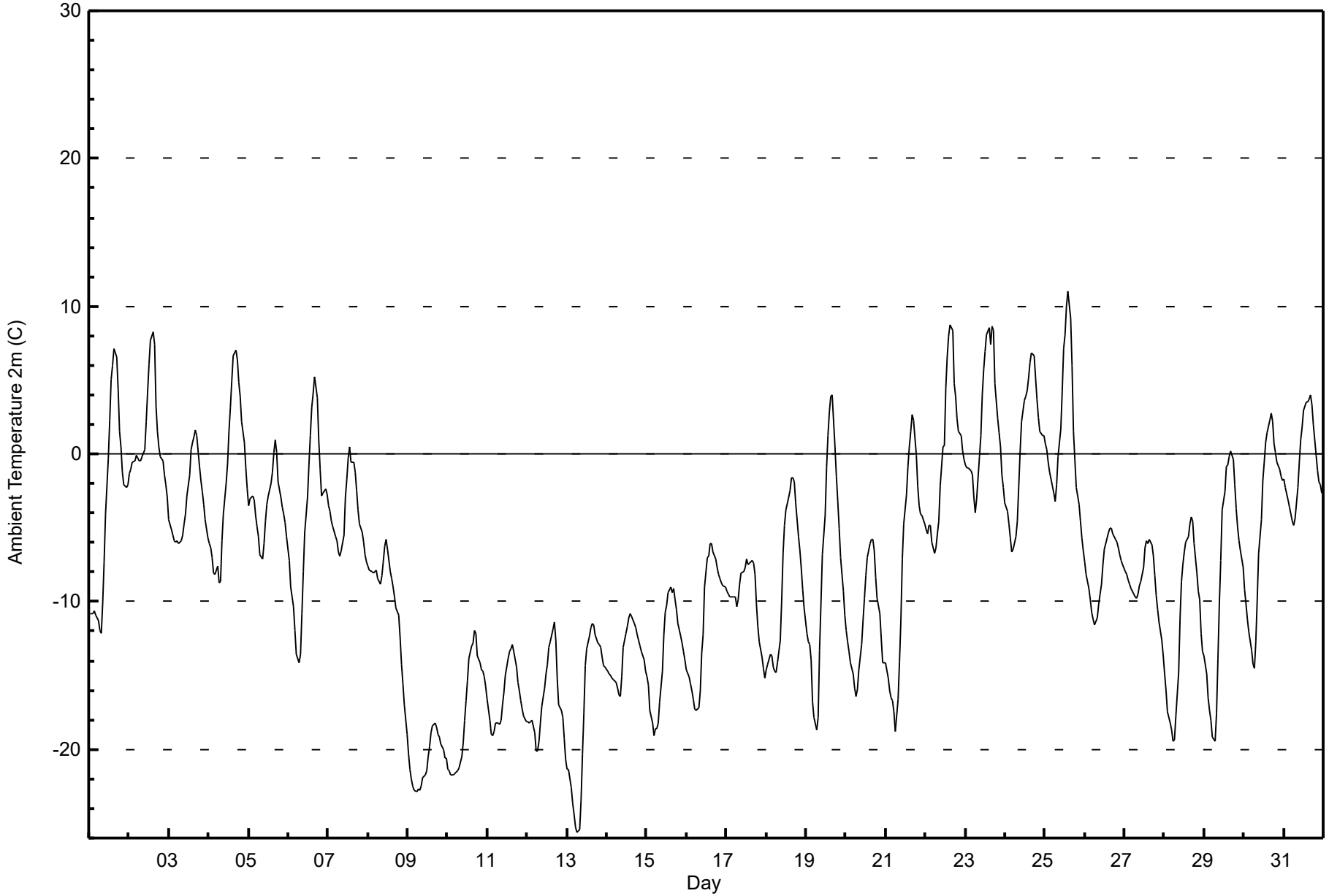
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-10.8	-10.8	-10.8	-10.7	-11.0	-11.3	-11.9	-12.2	-10.1	-7.3	-4.1	-0.3	2.3	5.0	6.0	7.1	6.6	4.4	1.6	0.5	-1.2	-2.0	-2.3	-2.1	-3.6	7.1
2-Mar	-1.3	-1.0	-0.6	-0.5	-0.1	-0.3	-0.5	-0.5	-0.2	0.3	2.2	4.1	6.1	7.7	8.3	7.4	3.2	1.5	0.5	-0.2	-0.5	-1.4	-2.1	-2.9	1.2	8.3
3-Mar	-4.5	-5.2	-5.5	-5.9	-6.0	-5.9	-6.0	-5.8	-5.5	-4.7	-4.0	-2.8	-1.4	0.3	0.8	1.2	1.6	1.2	-0.9	-1.8	-2.6	-3.4	-4.5	-5.7	-3.2	1.6
4-Mar	-6.0	-6.4	-7.0	-8.1	-8.1	-7.5	-8.7	-8.6	-5.9	-4.1	-2.0	-0.6	1.5	3.2	4.9	6.6	7.0	6.3	4.8	3.9	2.2	0.8	-0.9	-2.3	-1.5	7.0
5-Mar	-3.5	-3.0	-2.9	-3.1	-4.2	-4.9	-5.6	-6.9	-7.1	-6.1	-4.5	-3.4	-2.9	-2.0	-1.2	0.1	1.0	0.1	-1.9	-2.9	-3.6	-4.1	-4.6	-5.6	-3.5	1.0
6-Mar	-7.2	-9.0	-9.7	-10.3	-12.0	-13.5	-14.2	-13.6	-10.8	-7.9	-5.3	-2.9	-0.8	1.2	3.1	4.1	5.3	3.8	1.0	-1.0	-2.9	-2.6	-2.4	-2.8	-4.6	5.3
7-Mar	-3.5	-3.9	-4.5	-5.0	-5.6	-5.9	-6.6	-6.9	-6.6	-5.5	-2.9	-1.7	-0.2	0.5	-0.6	-0.6	-1.2	-2.5	-3.8	-4.7	-5.3	-6.0	-6.8	-7.3	-4.0	0.5
8-Mar	-7.6	-7.9	-7.9	-8.0	-8.0	-7.8	-8.5	-8.8	-8.3	-7.3	-6.3	-5.8	-6.5	-8.0	-8.4	-9.0	-9.7	-10.4	-10.9	-12.5	-14.3	-15.6	-17.0	-18.9	-9.7	-5.8
9-Mar	-20.3	-21.3	-22.0	-22.5	-22.8	-22.8	-22.7	-22.7	-22.5	-21.9	-21.7	-21.4	-20.5	-19.8	-18.9	-18.5	-18.2	-18.5	-19.0	-19.1	-19.6	-20.1	-20.6	-20.6	-20.8	-18.2
10-Mar	-21.3	-21.4	-21.7	-21.8	-21.7	-21.6	-21.5	-21.3	-20.5	-19.6	-18.0	-16.7	-15.4	-13.8	-13.0	-12.8	-12.0	-12.1	-13.6	-14.2	-14.6	-14.7	-15.1	-15.8	-17.2	-12.0
11-Mar	-16.6	-18.0	-19.0	-19.1	-18.8	-18.3	-18.2	-18.3	-18.0	-17.0	-16.1	-15.0	-13.9	-13.4	-13.2	-12.9	-13.3	-14.4	-15.4	-16.1	-16.7	-17.3	-17.8	-18.1	-16.4	-12.9
12-Mar	-18.1	-18.2	-18.1	-18.1	-18.8	-20.1	-20.2	-19.4	-18.3	-17.1	-15.9	-14.9	-14.3	-13.1	-12.7	-11.8	-11.4	-12.6	-15.1	-17.0	-17.4	-17.9	-19.3	-20.7	-16.7	-11.4
13-Mar	-21.4	-21.3	-22.6	-23.6	-24.4	-25.2	-25.7	-25.4	-23.4	-20.3	-17.5	-14.4	-13.2	-12.4	-11.8	-11.5	-11.5	-12.2	-12.8	-12.9	-13.1	-13.8	-14.3	-14.4	-17.5	-11.5
14-Mar	-14.7	-14.9	-15.0	-15.2	-15.3	-15.5	-15.9	-16.4	-16.4	-15.1	-13.1	-12.2	-11.7	-11.1	-10.8	-11.0	-11.4	-11.8	-12.2	-12.6	-13.0	-13.3	-13.9	-14.7	-13.6	-10.8
15-Mar	-15.1	-15.7	-17.3	-18.2	-19.1	-18.6	-18.6	-18.2	-16.8	-14.7	-12.3	-10.7	-10.3	-9.4	-9.0	-9.3	-9.1	-9.9	-10.6	-11.5	-12.4	-12.9	-13.4	-13.9	-13.6	-9.0
16-Mar	-14.6	-15.1	-15.5	-16.0	-16.6	-17.3	-17.3	-17.2	-16.0	-13.5	-12.3	-9.0	-7.0	-6.9	-6.1	-6.0	-6.6	-7.1	-7.7	-8.2	-8.5	-8.8	-8.9	-9.0	-11.3	-6.0
17-Mar	-9.3	-9.5	-9.7	-9.6	-9.7	-9.7	-10.3	-9.9	-8.8	-8.1	-7.9	-7.7	-7.1	-7.5	-7.4	-7.2	-7.4	-8.1	-10.1	-11.7	-12.7	-13.8	-14.5	-15.1	-9.7	-7.1
18-Mar	-14.6	-14.2	-13.6	-13.7	-14.4	-14.7	-14.8	-14.2	-12.6	-10.0	-6.8	-4.8	-3.8	-2.9	-2.4	-1.6	-1.6	-1.8	-3.3	-5.5	-6.5	-7.8	-9.2	-10.4	-8.6	-1.6
19-Mar	-12.2	-12.8	-12.9	-13.9	-16.8	-17.8	-18.7	-17.8	-13.3	-10.1	-6.8	-4.2	-1.0	1.2	2.8	3.9	4.0	0.5	-1.5	-3.3	-5.0	-7.0	-9.3	-10.9	-7.6	4.0
20-Mar	-11.9	-12.7	-13.4	-14.1	-14.9	-15.8	-16.4	-15.9	-14.6	-12.9	-11.3	-9.8	-8.3	-7.0	-6.0	-5.8	-5.8	-6.6	-8.4	-9.8	-10.8	-12.5	-14.1	-14.1	-11.4	-5.8
21-Mar	-14.1	-15.1	-16.0	-16.5	-16.7	-17.5	-18.8	-16.6	-14.1	-11.2	-7.1	-4.8	-2.7	-0.9	0.5	1.5	2.7	2.2	-0.1	-2.1	-3.5	-4.0	-4.2	-4.8	-7.7	2.7
22-Mar	-5.1	-5.4	-4.9	-4.9	-6.0	-6.7	-6.4	-5.4	-4.6	-2.1	0.5	0.6	4.5	6.6	8.0	8.7	8.3	4.8	3.9	2.4	1.5	1.2	0.2	-0.4	0.0	8.7
23-Mar	-0.7	-0.9	-1.0	-1.2	-1.4	-2.9	-4.0	-3.1	-0.2	1.2	4.0	5.7	6.9	8.1	8.5	7.4	8.7	8.3	4.8	2.3	1.4	0.5	-1.4	-2.3	2.0	8.7
24-Mar	-3.4	-3.9	-4.7	-5.7	-6.7	-6.4	-5.6	-4.5	-2.1	0.2	2.2	3.6	3.9	4.3	5.1	6.1	6.8	6.6	5.1	3.7	2.5	1.6	1.2	1.2	0.5	6.8
25-Mar	0.7	0.3	-0.6	-1.2	-2.2	-2.7	-3.2	-2.1	-0.2	1.7	4.3	7.2	8.0	10.0	11.0	9.2	6.0	1.5	-0.4	-2.2	-3.4	-4.6	-5.7	-6.5	1.0	11.0
26-Mar	-7.3	-8.1	-9.1	-9.9	-10.7	-11.2	-11.6	-11.1	-10.1	-9.5	-8.8	-7.5	-6.4	-5.7	-5.3	-5.0	-5.0	-5.4	-5.8	-6.0	-6.3	-6.9	-7.2	-7.5	-7.8	-5.0
27-Mar	-8.0	-8.2	-8.6	-8.8	-9.1	-9.5	-9.6	-9.7	-9.5	-8.9	-8.6	-7.7	-6.3	-5.9	-6.0	-5.8	-6.1	-6.9	-8.3	-9.6	-10.5	-11.4	-12.6	-13.7	-8.7	-5.8
28-Mar	-14.9	-16.1	-17.5	-18.2	-18.7	-19.5	-19.4	-17.7	-14.8	-11.1	-8.6	-7.5	-6.6	-6.0	-5.6	-4.7	-4.3	-4.5	-6.0	-8.1	-9.2	-9.9	-12.1	-13.4	-11.4	-4.3
29-Mar	-13.7	-14.9	-16.5	-17.4	-18.0	-19.1	-19.5	-17.6	-13.9	-10.2	-7.2	-3.8	-2.6	-0.8	-0.7	-0.2	0.2	-0.4	-2.1	-3.7	-4.9	-5.8	-6.5	-7.6	-8.6	0.2
30-Mar	-9.2	-10.2	-11.2	-12.0	-13.3	-14.3	-14.5	-12.7	-9.9	-6.8	-4.5	-1.8	-0.5	0.8	1.4	2.2	2.8	2.2	0.7	0.1	-0.5	-1.0	-1.5	-1.8	-4.8	2.8
31-Mar	-1.7	-2.3	-3.1	-3.6	-4.1	-4.6	-4.8	-4.4	-2.3	-0.5	0.9	1.8	2.9	3.5	3.6	3.7	4.0	3.3	2.0	-0.1	-1.1	-1.8	-2.1	-2.6	-0.6	4.0
	-10.1	-10.6	-11.1	-11.5	-12.1	-12.5	-12.9	-12.4	-10.9	-9.0	-7.1	-5.4	-4.1	-3.0	-2.4	-2.1	-2.2	-3.2	-4.7	-5.9	-6.9	-7.6	-8.5	-9.2	Diurnal Average	
	0.7	0.3	-0.6	-0.5	-0.1	-0.3	-0.5	-0.5	-0.2	1.7	4.3	7.2	8.0	10.0	11.0	9.2	8.7	8.3	5.1	3.9	2.5	1.6	1.2	1.2	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Barge Landing - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	38	5.11	5.11
-20 - 0	585	78.63	83.74
0 - 10	120	16.13	99.87
10 - 20	1	0.13	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Maximum Value: 96.1 % on Mar 22 21:00

Maximum Daily Average: 79.7 % on Mar 8

Minimum Value: 27.1 % on Mar 25 15:00

Minimum Daily Average: 46.9 % on Mar 21

Maximum Diurnal Average: 80.4 % at hour 7

Minimum Diurnal Average: 49.5 % at hour 16

Monthly Average: 66.42 %

Percentiles: P_1 = 32.3 P_{10} = 45.1 Q_1 = 54.9 Median = 68.4 Q_3 = 79.0 P_{90} = 84.6 P_{99} = 93.7

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

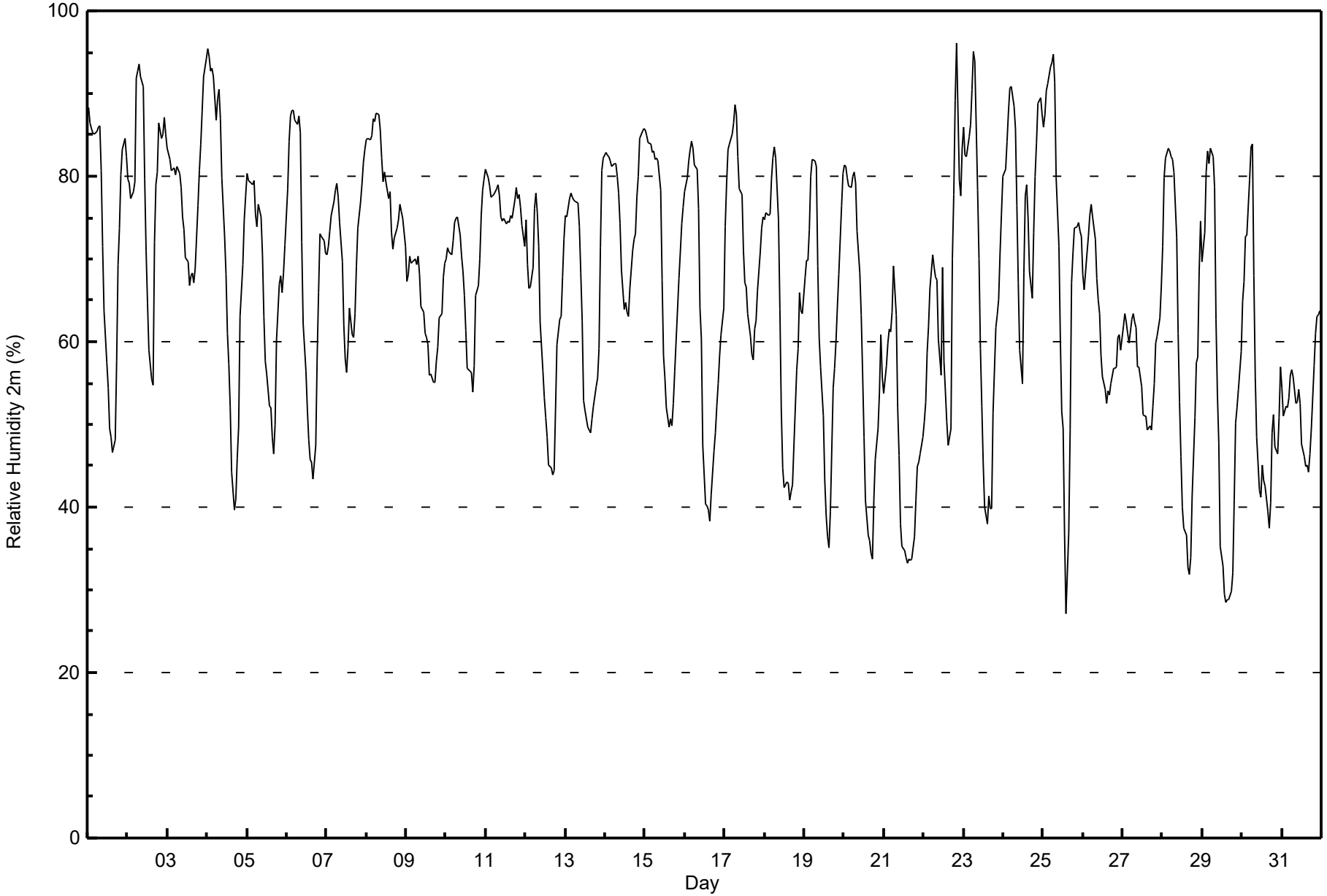
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	88.2	86.4	85.7	85.3	85.1	85.5	85.9	86.1	80.6	71.5	63.8	57.4	54.4	49.5	48.4	46.7	48.1	57.6	69.3	73.7	80.1	83.3	84.5	82.4	72.5	88.2
2-Mar	79.7	79.1	77.3	78.2	79.4	91.9	92.8	93.6	92.1	90.8	79.6	71.1	64.7	58.9	55.4	54.8	72.1	79.0	80.5	86.5	84.6	85.1	87.2	85.1	79.1	93.6
3-Mar	83.4	82.0	80.6	80.9	81.0	80.2	81.3	80.4	78.6	75.1	73.5	70.2	69.7	66.8	68.0	68.3	67.2	68.9	76.5	80.6	84.0	87.9	92.1	94.2	78.0	94.2
4-Mar	95.5	94.3	92.6	93.1	92.0	86.7	89.3	90.4	87.0	79.9	72.7	68.2	61.0	57.3	52.0	44.2	39.7	41.0	45.9	49.7	63.1	69.4	74.7	77.7	71.6	95.5
5-Mar	80.3	79.5	79.2	79.1	79.5	75.4	73.9	76.6	75.2	70.6	63.1	57.6	56.1	52.2	52.0	48.5	46.4	50.1	60.2	66.9	67.9	66.0	68.4	71.7	66.5	80.3
6-Mar	78.5	84.2	87.4	87.9	87.9	86.8	86.3	87.3	85.3	72.1	62.2	56.4	51.8	48.1	45.7	45.4	43.4	47.4	58.2	65.9	73.0	72.8	72.2	70.7	69.0	87.9
7-Mar	70.5	71.5	73.3	75.3	76.9	78.3	79.2	77.5	74.4	69.7	62.0	58.0	56.3	59.4	64.1	60.8	60.6	63.4	69.2	73.7	77.0	79.2	81.6	83.3	70.6	83.3
8-Mar	84.4	84.6	84.4	84.9	86.9	86.6	87.7	87.5	85.6	82.2	79.3	80.4	79.4	77.2	78.2	73.2	71.2	72.6	73.8	74.8	76.6	75.8	74.8	71.5	79.7	87.7
9-Mar	67.2	68.2	70.3	69.5	69.6	69.9	69.3	70.4	68.1	64.3	63.5	61.1	60.4	59.6	55.9	56.0	55.1	55.0	57.6	59.4	62.8	63.4	67.8	69.5	63.9	70.4
10-Mar	70.0	71.3	70.8	70.5	72.2	74.4	74.9	75.1	72.9	70.3	68.5	65.7	61.3	56.7	56.5	56.3	54.0	57.1	65.6	66.7	69.9	75.3	78.2	79.7	68.1	79.7
11-Mar	80.8	79.8	78.8	77.4	77.6	77.7	78.5	78.9	77.6	75.0	74.6	74.9	74.3	74.6	74.4	75.2	74.9	77.2	78.6	77.4	77.9	76.2	74.1	71.6	76.6	80.8
12-Mar	74.8	69.2	66.4	66.5	69.0	76.2	78.0	75.6	71.5	62.4	56.5	53.1	50.8	48.4	45.1	44.7	43.8	44.4	51.9	59.7	62.6	63.0	67.8	72.3	61.4	78.0
13-Mar	75.2	75.1	77.3	77.9	77.5	77.1	77.0	76.7	73.9	68.3	62.5	52.9	51.6	49.7	49.3	49.0	50.7	52.3	54.6	55.6	59.2	71.4	80.7	82.2	65.7	82.2
14-Mar	82.9	82.5	82.3	81.9	81.2	81.5	81.4	79.9	77.9	74.2	68.7	63.9	64.7	63.6	63.1	66.4	71.0	72.4	73.1	77.5	80.0	84.5	85.4	85.8	76.1	85.8
15-Mar	85.6	84.8	84.1	83.9	82.8	83.1	82.0	82.1	81.8	78.2	67.5	58.3	55.6	52.1	49.7	50.7	49.8	52.5	56.5	60.2	67.7	70.8	74.2	76.4	69.6	85.6
16-Mar	78.1	79.8	81.9	83.1	84.2	83.5	81.4	80.9	76.1	64.1	60.3	47.5	40.3	40.2	39.7	38.2	41.5	46.7	49.0	52.2	54.9	58.3	60.9	64.1	62.0	84.2
17-Mar	73.9	79.1	83.2	83.9	85.0	86.5	88.6	87.5	82.4	78.5	77.8	71.1	67.0	66.7	63.4	60.8	58.5	57.8	61.6	62.6	66.1	70.8	73.7	75.1	73.4	88.6
18-Mar	74.8	75.6	75.3	75.4	79.6	82.1	83.6	82.1	74.8	63.9	51.7	44.7	42.4	43.0	42.9	40.9	41.9	42.7	47.4	56.7	59.1	65.9	63.8	63.3	61.4	83.6
19-Mar	67.8	69.8	69.9	73.6	80.1	82.1	81.9	81.2	69.1	60.5	57.0	51.0	43.2	38.9	36.5	35.0	39.5	54.4	56.8	60.0	64.2	68.2	76.4	80.3	62.4	82.1
20-Mar	81.4	81.2	79.8	78.7	78.6	80.0	80.6	79.1	73.4	68.2	63.3	56.1	48.6	40.9	36.6	35.9	34.3	33.8	40.8	45.8	49.5	53.9	60.8	55.8	59.9	81.4
21-Mar	53.8	57.1	59.8	61.5	61.1	63.5	69.1	63.2	52.1	46.2	38.1	35.2	34.7	33.9	33.3	33.8	33.5	33.8	36.4	40.8	44.9	45.4	46.4	48.5	46.9	69.1
22-Mar	50.4	52.8	58.6	61.8	66.4	70.4	69.0	67.8	67.5	60.3	55.9	69.0	57.6	54.0	50.3	47.5	49.5	70.1	77.8	89.1	96.1	79.5	77.6	83.5	65.9	96.1
23-Mar	85.9	82.6	82.3	84.7	86.2	90.5	95.0	93.9	78.3	70.0	59.2	52.3	45.3	40.0	37.9	41.4	39.8	39.9	51.3	61.7	63.1	65.1	70.7	75.4	66.4	95.0
24-Mar	80.1	80.9	84.2	87.7	90.7	90.9	88.5	85.7	76.4	67.1	59.0	54.9	68.4	77.7	78.9	74.9	68.4	65.3	73.2	80.0	84.1	88.8	89.5	87.4	78.4	90.9
25-Mar	86.0	87.4	90.4	91.2	93.2	93.8	94.8	91.4	79.9	71.6	60.3	51.4	49.6	36.7	27.1	36.9	49.3	67.0	70.6	73.8	73.8	74.4	73.4	72.6	70.7	94.8
26-Mar	68.1	66.3	70.7	72.7	75.2	76.6	75.1	72.4	67.5	65.1	63.4	58.3	55.7	54.3	52.6	54.1	53.6	54.9	56.8	56.8	57.0	60.5	60.8	59.0	62.8	76.6
27-Mar	61.9	63.3	62.3	61.0	59.8	62.7	63.4	62.4	61.8	57.0	56.9	54.7	51.2	51.0	50.9	49.3	49.8	49.3	52.3	54.9	59.9	60.6	62.8	66.6	57.7	66.6
28-Mar	71.4	79.8	82.1	83.5	83.0	82.3	82.0	80.5	72.6	61.0	52.8	46.1	40.0	37.4	36.6	32.8	31.9	33.8	41.4	50.8	57.5	58.1	68.4	74.6	60.0	83.5
29-Mar	69.6	73.2	80.4	83.1	81.5	83.3	82.4	78.7	62.7	53.8	47.9	35.3	32.9	29.5	28.6	28.9	28.8	29.9	32.0	40.9	50.2	52.0	54.3	58.7	54.1	83.3
30-Mar	64.9	67.2	72.6	72.8	79.7	83.5	83.9	68.0	55.8	48.6	42.1	41.2	45.1	43.3	42.5	39.5	37.5	40.4	49.0	51.3	47.2	46.4	50.9	56.9	55.4	83.9
31-Mar	54.4	51.0	52.2	52.0	53.3	56.0	56.5	55.8	52.6	52.8	54.2	52.5	47.6	46.0	44.9	45.0	44.3	46.4	49.6	57.1	61.1	63.1	63.3	63.7	53.1	63.7
	74.8	75.5	76.7	77.4	78.6	80.0	80.4	79.0	73.7	67.5	61.9	57.1	54.2	51.9	50.3	49.5	50.0	53.5	58.6	63.3	66.9	68.9	71.5	72.9	Diurnal Average	
	95.5	94.3	92.6	93.1	93.2	93.8	95.0	93.9	92.1	90.8	79.6	80.4	79.4	77.7	78.9	75.2	74.9	79.0	80.5	89.1	96.1	88.8	92.1	94.2	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Barge Landing - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Barometric Pressure (BP) - inHg

Barge Landing - March 2025

Maximum Value: 29.4 inHg on Mar 26 11:00

Maximum Daily Average: 29.3 inHg on Mar 26

Minimum Value: 28.6 inHg on Mar 22 04:00

Minimum Daily Average: 28.6 inHg on Mar 22

Maximum Diurnal Average: 28.9 inHg at hour 8

Minimum Diurnal Average: 28.9 inHg at hour 17

Monthly Average: 28.90 inHg

Percentiles: P_1 = 28.6 P_{10} = 28.7 Q_1 = 28.7 Median = 28.9 Q_3 = 29.0 P_{90} = 29.2 P_{99} = 29.3

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

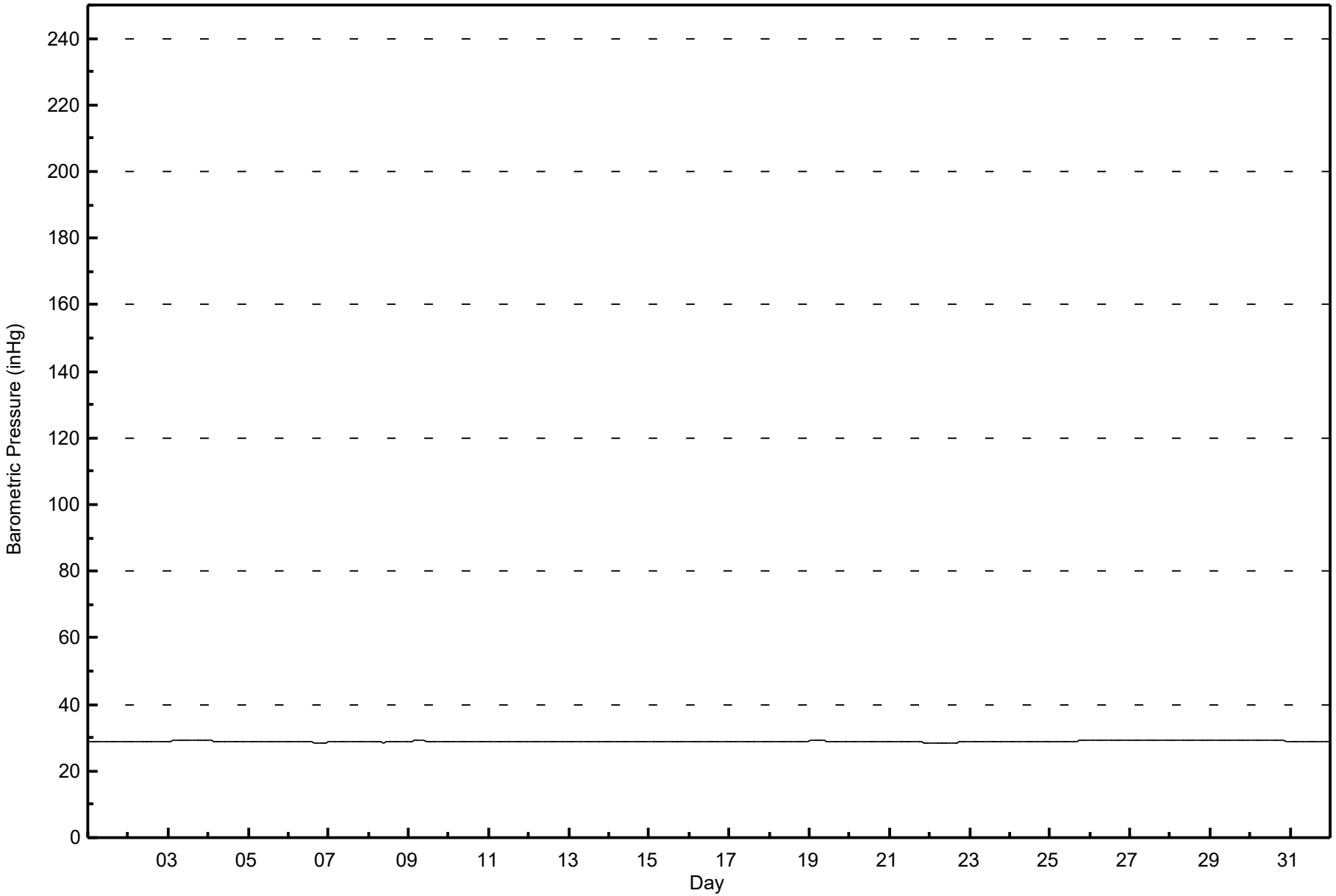
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.8	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.8	28.9
2-Mar	28.7	28.7	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	28.8	28.8	28.9	28.9	28.9	28.9	28.9	28.7	28.9
3-Mar	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	29.0	29.0	29.1	29.1
4-Mar	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	28.8	28.8	28.9	28.9	28.9	28.9	29.0
5-Mar	28.9	28.9	28.9	28.9	28.9	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.9	29.0
6-Mar	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.7	28.7	28.7	28.7	28.7	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.7	28.8
7-Mar	28.6	28.6	28.6	28.6	28.6	28.6	28.7	28.6	28.7	28.7	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	28.7	28.7	28.8
8-Mar	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	28.8	28.8	28.8	28.9	28.9	28.9	28.9	28.9	29.0	28.7	29.0
9-Mar	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	29.0
10-Mar	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	28.8	28.8	28.8	28.8	28.8	28.9	29.0
11-Mar	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8
12-Mar	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	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0
13-Mar	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.7	28.7	28.7	28.8	28.8	28.8	28.8	28.8	28.9
14-Mar	28.8	28.8	28.7	28.7	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9	28.9	28.9	28.9	28.9	28.8	28.9
15-Mar	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
16-Mar	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.8	28.9
17-Mar	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	28.9	28.9	28.9	28.9	28.9	28.9	28.8	28.9
18-Mar	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	29.0
19-Mar	29.0	29.0	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	28.9	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9	29.0	29.1
20-Mar	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.8	28.9	28.9	28.9	28.9	28.9	28.9	28.9
21-Mar	28.9	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.7	28.7	28.7	28.7	28.7	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.7	28.9
22-Mar	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.7	28.7	28.7	28.7	28.6	28.7
23-Mar	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7
24-Mar	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	28.9	28.9	28.9	28.9	28.8	28.9
25-Mar	28.9	28.9	28.9	28.9	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.1	29.1	29.1	29.2	29.2	29.2	29.2	29.0	29.2
26-Mar	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	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	29.3	29.4
27-Mar	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.2	29.2	29.2	29.2	29.3	29.3	29.3	29.3	29.3	29.3	29.3
28-Mar	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.3	29.3	29.3	29.3
29-Mar	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.3
30-Mar	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.1	29.1	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	29.0	29.0	29.1	29.2
31-Mar	29.0	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.8	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.8	29.0
	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	Diurnal Average	
	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.4	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

Barge Landing - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Barge Landing - March 2025

Maximum Speed: 14 km/h on Mar 25 15:00

Maximum Daily Speed Average: 8.2 km/h on Mar 27

Minimum Speed Value: 0 km/h on Mar 28 05:00

Minimum Daily Speed Average: 0.2 km/h on Mar 29

Maximum Diurnal Speed Average: 4.2 km/h at hour 20

Minimum Diurnal Speed Average: 0.2 km/h at hour 10

Monthly Average Velocity: 1.9 km/h 33.8 deg

Percentiles: $P_1 = 1$ $P_{10} = 2$ $Q_1 = 3$ Median = 5 $Q_3 = 7$ $P_{90} = 9$ $P_{99} = 11$

Hours in Service:	744
Hours of Data:	739
Hours of Missing Data:	5
Percent Operational Time:	99.3

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	SE6	SE6	SE7	SE7	SE7	SE7	SE6	SE5	SSE7	S8	S7	S7	S8	SSE6	SW4	SW4	SSW3	ESE3	NNE1	NNW3	ESE2	UO	UO	SE3	SSE4.4	S8
2-Mar	SE3	S2	SE2	SSE3	SE4	E2	WSW2	NNW5	NNW4	NW1	WNW1	SW4	SSE5	SW3	WSW3	NNW7	N7	NNE7	NNE6	NNE7	NNE7	N7	N7	NE7	NNE1.8	NE7
3-Mar	NNE7	NNE6	NNE5	NE4	NNE3	NNE3	NNE2	SE2	SSW3	SW2	WSW5	SSW4	SSW6	SSW6	SSW7	SSE5	SE6	SE5	SE5	SSE3	SSE2	S2	S2	SSE2	SSE1.3	NNE7
4-Mar	SSW3	SSE4	SSE4	SE4	SSE4	S4	SSE5	SSE5	SSE5	S5	S6	SSW8	S7	S5	SSW5	SW8	WSW10	WSW8	WSW5	W4	N6	N5	NNE3	N4	SSW2.9	WSW10
5-Mar	NNE3	N6	N7	N8	N7	N10	N11	NNE7	ENE6	ENE6	ENE6	E5	ENE4	SSE6	SSE7	SSE6	SSE4	SE5	NNE2	N4	NNE3	NE2	NNE2	N2	NE3.0	N11
6-Mar	NNW4	N3	NNW3	NNW3	NNW1	SE3	SE4	SSE2	SSW2	S6	S8	S9	S8	S7	SSE8	SSE7	SSE6	S4	SE4	NNW1	SE1	WNW2	NNW3	N4	S2.2	S9
7-Mar	NNE5	NNE4	ENE3	NE3	N4	N3	N4	NW2	NW2	N3	ENE3	SW3	WSW1	E4	NNE10	NNE8	NNE9	N8	N9	N8	N6	N6	NNW4	N4	NNE4.2	NNE10
8-Mar	NNE5	N4	NNW4	NNW4	N4	N4	NNW5	NNW5	NW4	NW4	NNW5	NNW7	N9	N10	N10	NNE10	NNE8	NNE7	NNE6	NE9	NNE9	NNE9	NNE10	NNE11	N6.1	NNE11
9-Mar	NNE11	NNE9	NNE7	NE8	NE8	NE8	NE8	NE7	NE8	NE8	NE7	NNE8	NNE7	NNE6	NNE7	NNE6	NNE6	NNE6	NE5	NNE5	NE5	NNE4	N2	NNW2	NNE6.5	NNE11
10-Mar	N4	NNW3	NNW3	NNW4	NNW3	NW2	WNW2	WNW2	NW2	WNW3	SW2	SSW6	SSW5	WSW3	S3	WSW6	SW0	ENE4	NNE2	NE4	NE4	NNE4	N4	NNW4	NW1.2	SSW6
11-Mar	NNW4	NNW4	N4	NNW4	NNW3	NNE4	NNE5	NNE5	NNE6	NNE6	NNE6	NNE7	NNE9	N9	N10	N10	N10	N9	N9	NNE10	N8	NNE9	NNE10	N9	N7.0	N10
12-Mar	N8	N8	N8	NNE6	NNE5	NNE2	SW1	WSW3	WNW3	NW3	NNE3	ENE4	ENE4	ENE5	NE6	ENE5	ENE6	ENE5	ENE4	NE3	ENE3	NE2	NNW3	NW2	NNE3.1	N8
13-Mar	NNW3	N1	NNW2	N3	NNW2	NNW3	NNW2	NNW4	NNW3	NW3	NNW5	NNW6	NNE8	NNE8	NNE9	NNE9	NNE9	N10	N10	N10	N10	N11	N8	N7	N5.8	N11
14-Mar	N8	N10	N11	N10	N9	N9	N7	N8	N6	NNE7	NNE9	NNE11	NNE11	NNE10	N11	NNE10	NNE9	NNE8	N7	NNE7	N5	NNW4	NNW4	NNW3	N7.9	N11
15-Mar	NW2	NW2	E1	ESE1	W1	NW2	NW2	UO	WNW1	NW1	NE2	ENE5	ENE5	SE4	SSE6	SSW5	SSW5	S4	E3	ENE5	NE6	NE6	NNW5	NNW4	ENE0.9	NE6
16-Mar	NNW4	NNW4	NNW2	NW1	W1	SSW1	SE3	SE4	SSE5	S5	W4	SSW4	SSE8	SE10	SSE8	SSE8	SSE7	SE7	ESE6	ESE6	SE5	SE8	SE7	SE6	SE3.6	SE10
17-Mar	SE6	SE4	SE4	SE4	SSE4	S1	NNW1	UO	WNW2	NNW4	N6	NNE8	NNE8	NNE9	NNE7	NNE7	NE6	NE5	NE5	NE5	NNE3	NNW1	W1	S2	NE2.7	NNE9
18-Mar	SSE1	ENE1	E2	NE2	NNW3	NNW2	NNW1	SW1	WSW2	SW4	SSW3	S3	SSW9	SSW10	SSW8	S6	S5	SE6	ESE4	ESE3	NNW4	N4	NNW5	NNW6	SSW1.3	SSW10
19-Mar	NNW4	NNW5	NNW5	NNW3	SE2	SE1	SE3	SE2	S2	SSE3	SSE7	S6	S6	S4	SSE3	S2	NNE3	N8	N8	N9	NNE8	N10	N11	N10	NNE1.9	N11
20-Mar	N8	NNE8	NNE6	N7	N7	NNW5	NNW6	N6	N6	N6	N8	NNE8	N8	NNE9	N9	NNE9	NNE8	N8	N6	N5	N6	N4	ENE2	SE6	N6.2	NNE9
21-Mar	ESE5	SE4	SE3	ESE5	SE3	E1	NNW2	NNW2	WSW4	SW5	S8	SSW8	S8	S8	SSW9	S8	SSE8	SSE8	SE7	ESE7	ESE4	SE5	SE4	ESE2	SSE4.0	SSW9
22-Mar	SW2	SW2	SSW4	S5	SSE5	SSE5	SSE6	SSE7	S7	SSE6	SSE6	SSE7	S6	S8	SSE7	S7	W2	NNW3	NW5	W1	NNW1	N6	NE3	ESE3	SSE3.1	S8
23-Mar	ENE2	ENE2	SE1	NNE1	N2	NW2	NNW1	SSW0	S2	WSW4	S3	SSE7	SE7	S7	SSE7	SSW4	E3	ENE4	ENE4	E4	E4	E3	E1	N2	SE1.6	SSE7
24-Mar	N2	E1	N1	NNW2	N1	E1	SSE1	NNW0	SSE3	S8	SSW6	SSW5	S6	SSE6	SSW7	SW8	W7	WNW8	NNW6	NNW4	WNW3	WSW2	WSW2	SW3	SW1.9	WNW8
25-Mar	SW5	SW4	SW3	SSW2	ESE2	SW1	SSE1	W2	W2	SW3	SSW4	SSE5	S6	WNW8	WNW14	NW12	N10	NNE10	NE9	NNE9	NNE10	NNE10	NNE11	NNE11	N2.7	WNW14
26-Mar	NNE12	N8	NNE8	NNE8	NNE7	NNE6	NNE7	NE8	NE8	NE8	NE7	NE7	NE6	NNE7	NNE6	NNE6	NNE7	NE6	NNE6	NNE7	NNE6	ENE6	NE6	NNE7	NNE6.9	NNE12
27-Mar	NNE6	NNE5	NNE7	NNE7	NNE8	NNE7	NE7	NNE8	NNE9	NNE10	NNE10	NNE10	NNE9	NNE11	NNE11	NNE10	NNE10	NNE10	NNE8	NNE8	NNE8	NNE8	NNE3	NNE4	NNE8.2	NNE11
28-Mar	N5	NNW4	N1	UO	WSW0	NNE0	NNE1	NNW4	W3	NNE5	NE6	NNE6	NE7	NNE7	N7	NNE5	N5	NNE5	NNE4	NE4	NNE4	NE4	N1	NNW4	NNE3.6	NE7
29-Mar	NNW6	NNW3	NNW3	NNW3	ESE2	NNW1	W2	W2	NW3	W3	WNW3	ESE0	NNW2	SE5	SE8	SSE7	SSE8	SSE9	SE4	NE4	NNE5	NNW4	N4	NNW4	NE0.2	SSE9
30-Mar	NNW4	NNW3	NNW3	NW2	NNW1	NNW3	W2	NW2	W2	W3	NNE4	NE5	NNE5	NNE6	NNE5	NNE4	NNE5	NNE5	N4	NE5	NE6	N4	NNE2	NNE2	N3.0	NE6
31-Mar	ESE5	SE7	ESE6	ESE7	SE6	ESE6	SE7	SE4	SE5	S6	S7	S9	SSE7	SE8	ESE10	SE10	SE9	SE9	SE9	ESE6	ESE7	ESE6	ESE7	SE8	SE6.7	SE10
	NNE2.8	NNE2.4	NNE2.2	NNE2.2	NE1.7	NNE1.8	NNE1.4	NNE1.4	N0.5	NNW0.2	ENE0.6	ESE1.1	ESE1.4	E1.4	ENE0.9	NE1.0	NE2.0	NE2.9	NE3.5	NNE4.2	NNE4.1	NNE3.8	NNE3.2	NNE2.8	Diurnal Average	
	NNE12	N10	N11	N10	N9	N10	N11	N8	NNE9	NNE10	NNE10	NNE11	NNE11	NNE11	WNW14	NW12	N10	N10	N10	N10	N10	N11	NNE11	NNE11	Diurnal Maximum	

UO - Unstable Operation

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

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 6 km/h on Mar 25 14:00

Minimum Value: 0 km/h on Mar 6 01:00

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

Hours in Service:	744
Hours of Data:	739
Hours of Missing Data:	5
Hours of Calibration:	0
Percent Operational Time:	99.3

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

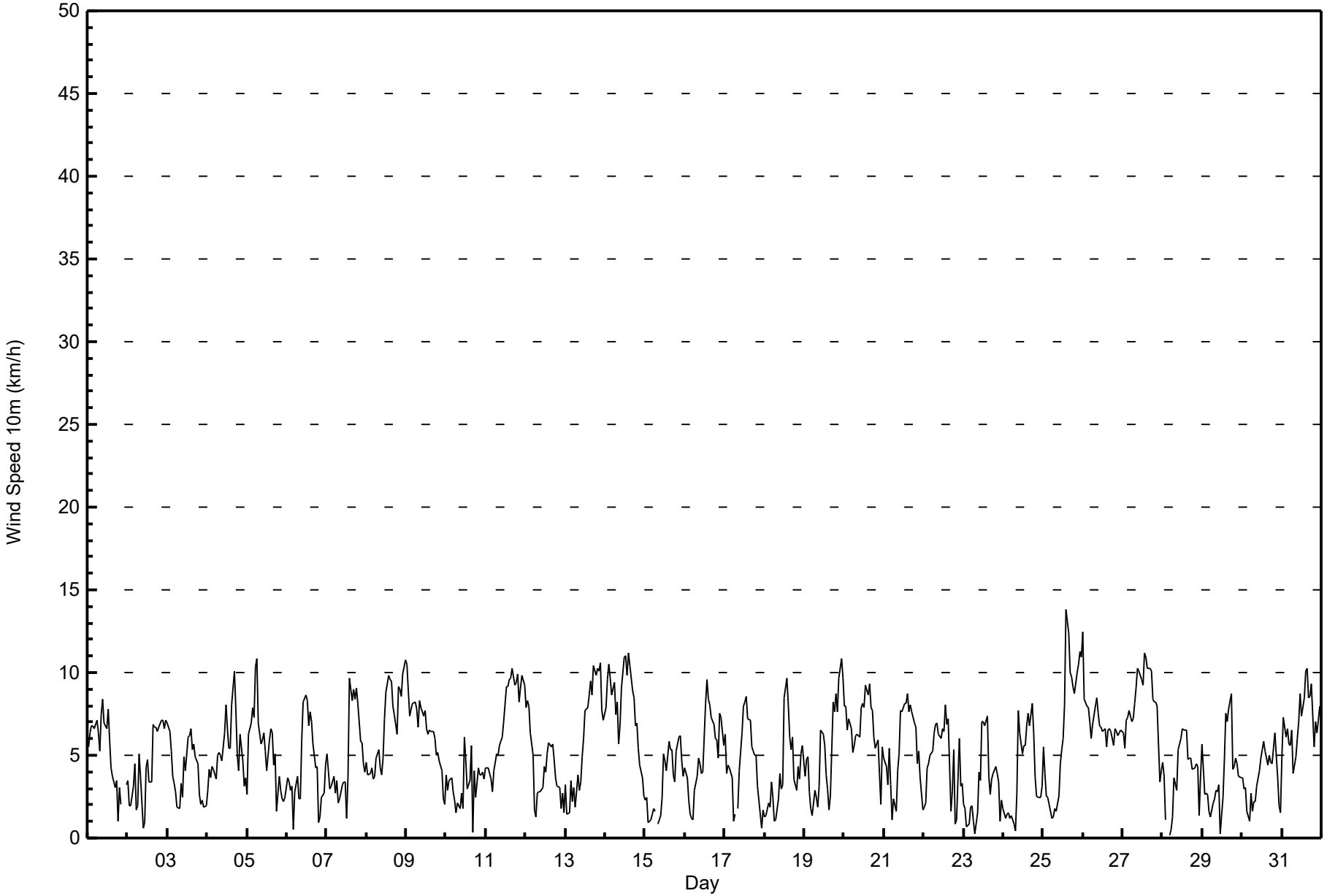
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Barge Landing - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	405	54.80	54.80
6 - 11	331	44.79	99.59
12 - 19	3	0.41	100.00
20 - 28	0	0.00	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 739

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Barge Landing - March 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	33	47	20	20	14	14	33	27	20	18	19	14	16	10	20	80	405
6 - 11	69	107	26	5	0	11	28	30	28	12	2	3	1	2	0	7	331
12 - 19	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	3
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	102	155	46	25	14	25	61	57	48	30	21	17	17	13	21	87	739

Total Number of Valid Hours: 739

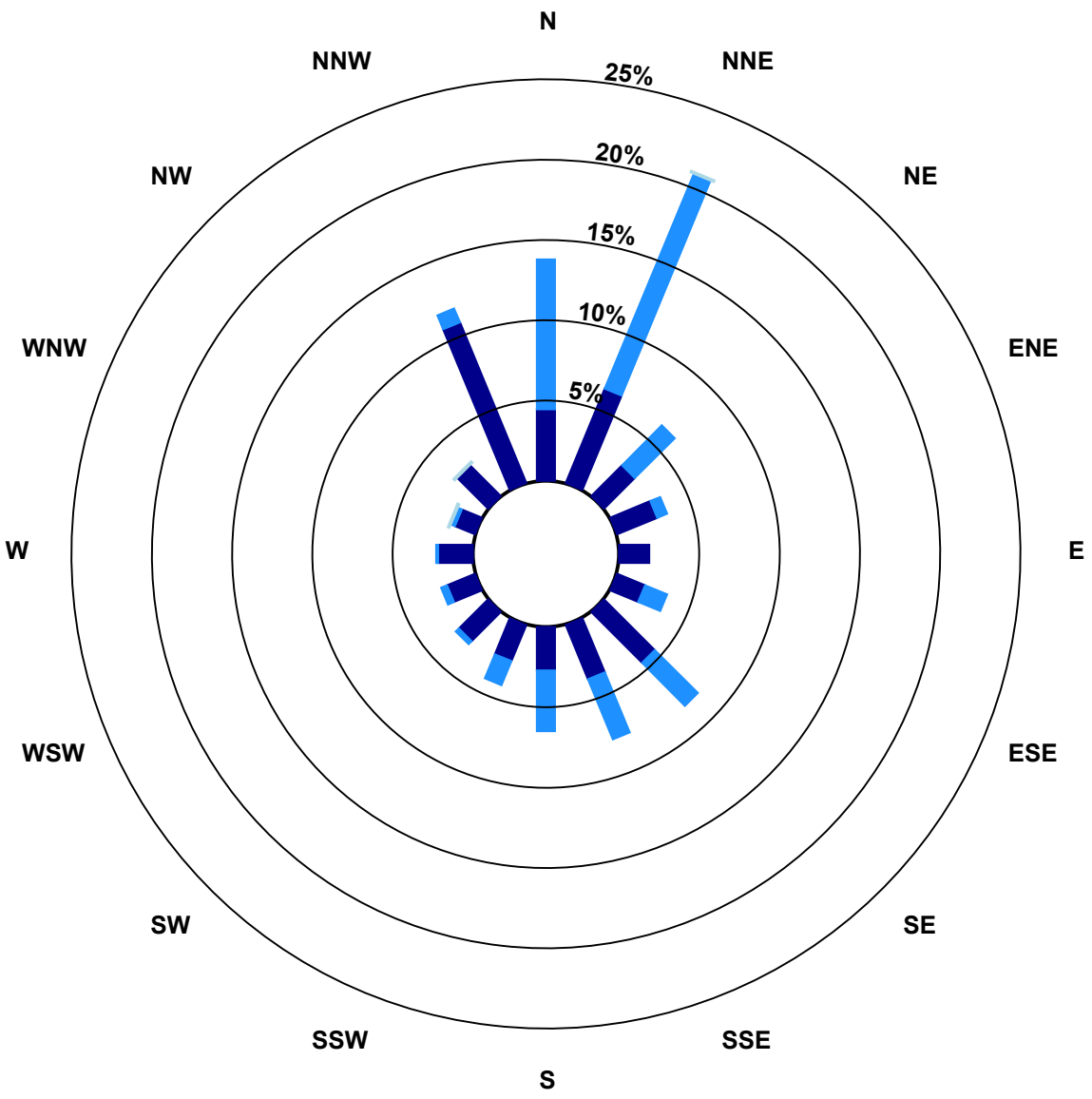
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 10m (WS10) - km/h

Barge Landing



Classes (km/h)

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

Total Number of Valid Hours: 739

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Barge Landing - March 2025

Direction of Maximum Speed: 298 deg on Mar 25 15:00
Direction of Maximum Daily Speed Average: 24.6 deg on Mar 27

Direction of Minimum Speed: 247 deg on Mar 28 05:00

Direction of Minimum Daily Speed Average: 0.2 deg on Mar 29

Monthly Average Direction: 33.8 deg

Hours in Service:	744
Hours of Data:	739
Hours of Missing Data:	5
Percent Operational Time:	99.3

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	124	134	138	137	140	135	140	146	157	174	170	171	175	163	217	231	210	118	22	344	102	UO	UO	128	153.5
2-Mar	134	189	146	159	140	90	252	335	331	323	284	235	155	227	251	331	0	32	29	28	28	11	10	36	15.2
3-Mar	26	24	28	44	27	16	20	133	210	217	241	210	206	199	193	161	142	132	141	152	155	183	180	162	154.9
4-Mar	201	152	163	128	152	177	159	150	157	187	183	197	189	174	202	229	241	242	238	280	353	7	16	3	197.4
5-Mar	14	10	350	3	356	6	6	17	64	63	70	89	68	160	166	162	147	134	22	11	33	41	24	349	39.9
6-Mar	348	352	343	346	348	133	126	164	200	181	175	174	178	185	166	165	164	191	124	332	130	301	345	5	169.5
7-Mar	23	30	60	51	7	4	351	323	326	6	75	231	254	96	13	23	17	7	9	7	8	359	348	357	12.2
8-Mar	22	11	342	348	352	11	327	327	326	315	329	345	357	1	6	25	26	27	29	46	32	22	23	28	9.3
9-Mar	28	31	33	37	47	36	37	46	42	40	41	23	32	32	17	22	24	31	39	30	40	32	8	340	32.8
10-Mar	358	333	333	336	336	324	284	286	326	283	230	199	208	246	183	244	236	66	32	34	49	12	8	337	322.0
11-Mar	342	347	354	348	346	20	31	24	28	18	14	17	18	11	7	6	8	6	9	12	11	14	13	10	10.4
12-Mar	7	7	8	15	14	29	218	244	283	312	15	65	71	70	47	70	69	76	75	54	67	48	348	324	32.5
13-Mar	345	357	333	354	343	348	344	345	334	319	327	332	12	21	20	22	13	9	9	10	9	6	2	359	2.8
14-Mar	352	0	1	359	359	359	359	1	357	21	27	12	13	18	2	14	14	12	9	16	4	341	334	328	5.6
15-Mar	321	307	84	106	266	310	326	UO	297	305	53	77	66	135	159	193	207	182	100	63	55	44	347	333	71.4
16-Mar	335	334	334	305	264	206	138	140	160	182	264	199	160	135	151	152	154	137	109	111	124	133	133	134	145.4
17-Mar	139	145	133	143	149	187	336	UO	293	333	10	22	20	17	23	25	42	37	39	38	18	341	277	174	38.0
18-Mar	161	72	100	52	348	333	337	214	257	232	194	186	205	200	202	186	172	140	116	104	338	352	334	347	198.7
19-Mar	345	338	338	332	140	128	128	130	184	168	164	175	171	190	155	176	28	6	7	9	14	10	6	359	17.8
20-Mar	356	12	16	8	5	346	340	10	352	5	5	12	10	12	11	14	17	6	8	3	360	355	65	128	8.3
21-Mar	121	125	126	115	130	100	341	330	251	224	187	192	188	188	193	171	160	151	130	119	119	130	124	109	159.2
22-Mar	225	219	196	175	161	148	148	163	171	166	167	152	174	171	167	173	262	340	322	262	344	11	48	116	166.3
23-Mar	75	66	136	22	351	325	340	213	172	251	186	153	144	169	158	200	92	65	68	92	91	95	90	352	129.1
24-Mar	2	100	349	347	358	87	162	338	165	171	206	195	174	165	210	227	274	287	338	334	301	251	247	218	230.4
25-Mar	230	229	223	197	113	227	168	266	269	225	195	167	178	303	298	319	6	32	34	25	20	23	23	16	350.5
26-Mar	12	5	12	16	13	29	18	35	47	41	35	45	34	24	25	19	27	37	25	22	33	58	49	28	27.8
27-Mar	28	32	22	27	31	33	37	22	23	25	26	30	28	21	19	27	23	25	22	14	15	16	32	23	24.6
28-Mar	351	339	10	UO	247	30	16	338	276	23	46	31	38	19	9	19	11	25	21	39	16	36	359	337	15.4
29-Mar	339	340	341	348	104	332	276	263	305	270	289	108	342	146	140	166	167	149	136	49	13	337	359	342	49.6
30-Mar	336	345	327	311	335	343	273	316	271	277	18	38	16	19	17	14	21	14	3	36	54	2	20	28	6.8
31-Mar	108	124	118	122	125	121	125	136	145	189	173	169	160	130	123	137	145	140	131	111	111	120	120	133	134.2
	14.3	18.6	20.5	30.8	35.4	28.6	29.7	20.3	9.9	329.1	76.9	109.2	101.7	90.7	66.1	46.7	40.9	45.2	37.1	31.7	30.3	23.0	19.6	19.5	
	Diurnal Average																								

UO - Unstable Operation
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Barge Landing - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 106 deg on Mar 29 12:00

Minimum Value: 6 deg on Mar 1 01:00

Percentiles: P_1 = 10 P_{10} = 16 Q_1 = 19 Median = 24 Q_3 = 37 P_{90} = 57 P_{99} = 88

Hours in Service:	744
Hours of Data:	739
Hours of Missing Data:	5
Hours of Calibration:	0
Percent Operational Time:	99.3

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	6	7	10	12	14	11	13	22	26	27	31	29	27	34	48	42	47	15	50	19	46	UO	UO	41	50
2-Mar	21	58	49	41	35	87	72	17	19	78	68	29	31	49	54	27	31	20	18	21	20	20	21	22	87
3-Mar	20	20	21	25	22	23	30	45	29	54	21	43	34	42	39	33	24	24	18	21	41	32	29	28	54
4-Mar	36	14	24	14	32	54	21	16	23	31	27	26	33	33	28	28	20	18	17	46	22	18	18	15	54
5-Mar	26	16	24	24	24	21	20	20	29	32	26	28	41	49	34	33	65	28	51	15	18	30	23	16	65
6-Mar	10	11	8	17	86	55	8	39	28	31	27	30	35	39	34	30	30	42	13	84	68	35	66	28	86
7-Mar	23	30	39	21	26	23	19	37	52	31	67	61	89	67	18	18	19	17	16	18	25	22	19	21	89
8-Mar	20	23	23	24	24	33	20	18	28	34	33	22	22	19	22	20	19	20	19	19	21	18	18	18	34
9-Mar	19	24	25	20	22	22	20	25	22	22	23	22	29	25	25	24	20	22	26	20	23	32	39	48	48
10-Mar	18	26	17	16	19	20	37	29	47	45	92	45	56	76	66	33	97	21	34	35	42	27	17	28	97
11-Mar	16	16	14	15	22	26	18	18	18	20	21	20	19	19	20	20	19	20	17	17	19	17	17	18	26
12-Mar	19	18	17	17	18	38	74	28	56	49	45	34	41	38	31	25	25	19	18	17	39	92	29	56	92
13-Mar	23	62	72	18	35	13	54	20	37	28	22	27	25	20	19	17	18	18	19	19	18	19	20	19	72
14-Mar	19	18	19	19	19	19	23	20	25	21	19	20	20	21	22	20	18	17	17	17	19	16	15	24	25
15-Mar	14	15	26	34	63	20	20	UO	45	42	55	28	29	54	44	44	42	31	27	20	21	26	21	20	63
16-Mar	17	17	26	67	43	59	23	24	31	53	44	78	39	26	36	32	28	25	14	13	14	15	15	16	78
17-Mar	17	18	17	14	19	38	14	UO	44	30	23	21	20	20	20	21	21	17	14	18	18	41	81	64	81
18-Mar	52	64	72	61	19	26	66	93	38	35	72	72	37	31	37	49	41	25	18	18	10	29	13	14	93
19-Mar	12	11	10	41	45	70	66	30	60	80	37	42	50	60	71	89	80	17	18	17	16	17	18	17	89
20-Mar	20	19	17	17	14	20	19	20	22	25	24	24	22	20	22	20	18	18	15	13	17	26	42	14	42
21-Mar	11	18	16	13	18	69	21	41	24	50	33	37	36	34	34	40	33	32	13	12	19	27	19	14	69
22-Mar	23	24	18	20	17	15	16	25	29	35	38	28	41	35	40	33	80	57	47	83	88	18	51	23	88
23-Mar	44	34	67	60	27	32	33	83	68	29	62	29	29	37	34	57	59	19	19	27	44	40	82	39	83
24-Mar	49	83	56	60	80	65	86	75	34	26	33	41	35	27	32	25	36	31	18	20	32	27	53	23	86
25-Mar	19	42	65	45	67	85	82	69	62	61	48	48	34	44	31	21	36	23	20	20	20	18	18	18	85
26-Mar	18	19	18	17	17	18	19	22	23	24	27	30	34	29	36	24	23	20	20	18	19	19	22	17	36
27-Mar	17	18	18	19	19	19	21	18	19	20	20	21	23	22	22	23	22	20	19	18	18	18	46	22	46
28-Mar	11	13	49	UO	88	45	47	31	43	42	39	33	29	33	29	49	33	27	21	14	17	19	30	8	88
29-Mar	13	19	9	13	54	48	29	34	36	46	57	106	71	62	38	42	32	26	39	20	26	22	34	13	106
30-Mar	16	12	14	38	54	9	34	41	63	52	37	35	26	27	33	55	25	23	16	23	25	40	30	34	63
31-Mar	18	14	13	13	15	12	13	25	39	38	37	36	45	31	23	26	30	22	15	13	11	11	12	14	45
	52	83	72	67	88	87	86	93	68	80	92	106	89	76	71	89	97	57	51	84	88	92	82	64	
	Diurnal Maximum																								

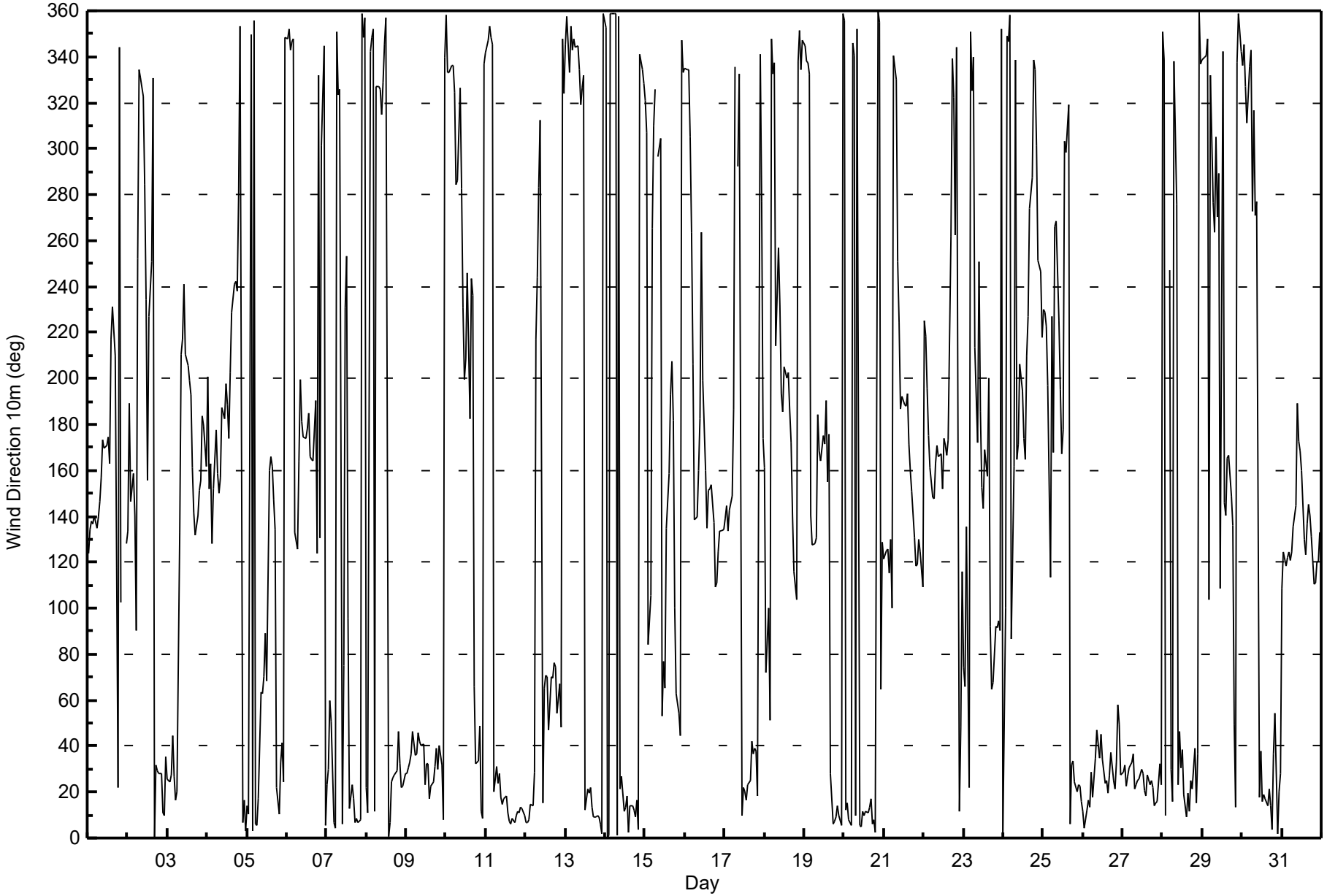
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Barge Landing - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 20m (WS20) - km/h

Barge Landing - March 2025

Maximum Speed: 25 km/h on Mar 25 15:00

Maximum Daily Speed Average: 16.1 km/h on Mar 27

Minimum Speed Value: 0 km/h on Mar 23 04:00

Minimum Daily Speed Average: 1.3 km/h on Mar 18

Maximum Diurnal Speed Average: 8.6 km/h at hour 21

Minimum Diurnal Speed Average: 1.0 km/h at hour 10

Monthly Average Velocity: 3.8 km/h 26.3 deg

Percentiles: P_1 = 1 P_{10} = 4 Q_1 = 6 Median = 9 Q_3 = 12 P_{90} = 16 P_{99} = 21

Hours in Service: 744

Hours of Data: 744

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	SE11	SSE12	SSE13	SSE12	SSE12	SE12	SSE12	SSE10	SSE14	S13	SSE11	S10	S12	SSE10	SSW6	SSW4	SSW6	SE7	ENE3	NNW9	NE3	ESE4	WSW1	SSE6	SSE7.4	SSE14
2-Mar	SSE7	S7	SSE6	SSE7	SSE9	E6	WSW4	NNW10	NNW8	NNW3	NW2	SW5	SSE8	SW4	WSW4	NW12	N12	NNE14	NNE13	NNE13	NNE16	N13	N12	NNE14	NNE3.3	NNE16
3-Mar	NNE14	NNE13	NNE11	NE7	NNE6	NNE5	NNE4	SE3	SSW4	SSW3	SW6	SSW6	SSW8	SSW9	S9	SSE9	SE8	SE7	SSE8	S6	S6	S7	S7	S7	SSE2.3	NNE14
4-Mar	SSW8	S8	S8	SSE7	S8	SSW8	S11	S11	S10	S7	S10	SSW12	S10	S8	SSW8	SW12	WSW15	WSW12	SW10	W9	N11	N9	NNE8	N9	SSW5.6	WSW15
5-Mar	N8	NNE13	N12	N14	N13	N18	N18	NNE14	NE10	NE10	ENE10	E8	ENE6	SSE9	SSE10	SSE9	SE6	SE7	NE3	N7	NNE6	NE5	NNE5	NNW6	NNE5.8	N18
6-Mar	NNW9	NNW8	NNW8	NNW9	NNW6	SSW4	S6	S7	SSW5	S9	S12	S14	S12	S10	SSE12	SSE11	SSE10	S8	SSE8	W3	W3	NW8	NNW8	N9	S2.8	S14
7-Mar	NNE11	NNE9	NE6	NE6	N7	N6	N6	NNW4	NNW4	N4	ENE5	SW4	W1	E5	NNE17	NNE17	NNE17	N14	N16	N14	N10	N9	NNW8	N7	NNE7.8	NNE17
8-Mar	NNE9	N7	NNW7	N7	N6	N6	NW8	NW9	NW6	NW6	NW7	NNW11	N15	N16	N17	NNE19	NNE16	NNE15	NNE13	NE18	NNE18	NNE17	NNE20	NNE23	N11.4	NNE23
9-Mar	NNE22	NNE18	NNE15	NNE16	NE15	NNE16	NNE15	NE12	NE16	NE14	NE13	NNE14	NNE11	NNE10	NNE10	NNE11	NNE12	NNE11	NE10	NNE10	NE10	NE8	NNE5	NNW5	NNE12.3	NNE22
10-Mar	N9	NNW6	NNW6	NNW6	NNW5	NNW4	WNW2	WNW3	NW2	W3	SSW2	S9	SSW5	SW4	S4	WSW7	SSW1	ENE7	NE6	NE9	NE8	NNE7	N7	NNW7	NNW2.1	NE9
11-Mar	NNW8	NNW9	N8	NNW7	NNW6	NNE8	NNE11	NNE10	NNE11	NNE10	NNE10	NNE12	NNE17	N16	N16	N17	N18	N16	N16	N18	N15	NNE17	NNE19	N17	N12.7	NNE19
12-Mar	N13	N14	N14	N12	NNE11	NNE4	SSE2	WSW5	WNW4	NW4	NNE4	ENE6	ENE5	ENE7	NE8	ENE8	ENE9	ENE9	ENE9	NE9	NE9	NE7	N6	N2	NNE6.0	N14
13-Mar	NNW7	N6	NNW6	N9	NNW6	N9	N5	NNW9	NNW5	NNW4	NNW7	NNW9	N13	NNE14	NNE17	NNE19	NNE16	N19	N18	N18	N18	N18	N14	N12	N11.2	NNE19
14-Mar	N13	N16	N19	N17	N14	N16	N13	N15	N10	NNE13	NNE18	N19	NNE20	NNE19	N19	N19	NNE16	N15	N12	NNE14	N10	NNW9	NNW8	NNW6	N14.4	NNE20
15-Mar	NW6	NW6	NNW4	NW1	WNW3	WNW3	NW4	NW3	NW2	NW1	ENE3	ENE7	ENE7	SE5	SSE8	S7	SSW7	S6	ESE6	ENE11	NE13	NE13	N9	NNW7	NE1.9	NE13
16-Mar	NNW8	NNW7	NNW5	NNW4	NW3	WNW2	S4	SSE7	SSE8	S6	W4	S6	SSE12	SE14	SSE13	SSE13	SSE12	SE11	ESE10	ESE10	SE8	SE11	SE10	SE8	SE5.1	SE14
17-Mar	SE9	SSE7	SE8	SSE8	SSE7	S3	WNW2	WSW2	WNW2	NNW6	N10	NNE15	NNE14	NNE15	NNE14	NNE13	NE10	NE11	NE14	NE14	NNE9	N6	NNW4	WSW4	NNE5.0	NNE15
18-Mar	WSW5	N1	ENE5	NE5	NNW7	NNW6	NNW4	W1	W3	SW4	SSW4	S6	SSW12	SSW14	SSW11	S9	S8	SE9	SE7	SE6	NNW8	NNW8	NNW11	NNW12	SW1.3	SSW14
19-Mar	NNW9	NNW11	NNW12	NNW9	NW2	SW5	SW4	SSW5	S3	SSE5	SSE10	S9	SSE8	S5	SSE5	S3	NNE5	N14	N14	N16	NNE15	N17	N19	N16	N4.1	N19
20-Mar	N14	N14	NNE13	N13	N12	N10	NNW12	N11	N9	N10	N13	N13	N13	N15	N14	NNE16	NNE14	N13	N12	N11	N12	N9	E6	SE11	N11.1	NNE16
21-Mar	SE10	SE9	SE7	ESE11	SE8	SE6	SSW2	SW1	WSW5	SW6	S11	S10	S12	S11	S13	SSE12	SSE13	SSE12	SE11	ESE12	ESE9	SE9	SE7	SE4	SSE7.6	SSE13
22-Mar	SW5	SSW5	S8	S9	SSE11	SSE11	SSE12	SSE12	SSE12	SSE10	SSE9	SSE10	S10	SSE12	SSE11	S12	W2	N6	NW10	NW2	NW4	N12	NE7	ESE5	SSE5.0	SSE12
23-Mar	E4	ENE4	ESE2	E0	N5	NNW5	NNW5	NNW1	SSE1	WSW4	S4	SSE10	SSE9	S10	SSE11	SSW6	E3	ENE6	ENE9	ENE9	ENE10	E9	SE5	NNE2	ESE2.6	SSE11
24-Mar	E4	SE5	E5	NE2	ESE4	SE4	SE5	SSW3	S5	S12	SSW9	SSW8	S9	SSE9	SSW10	SW10	W11	WNW14	NNW12	NW8	NW6	WSW6	WSW6	SW7	SSW3.1	WNW14
25-Mar	SW10	SW8	SW6	SW6	SSE2	WSW4	SW6	W4	W1	SSW2	S6	SSE8	S10	WNW14	WNW25	NW22	N19	NNE19	NNE19	NNE18	NNE21	NNE22	NNE24	NNE21	NNW5.6	WNW25
26-Mar	N23	N15	N15	NNE15	NNE14	NNE13	NNE14	NNE15	NE15	NE12	NNE11	NE11	NNE10	NNE10	NNE8	NNE10	NNE12	NNE12	NNE11	NNE13	NNE13	NE12	NE13	NNE14	NNE12.7	N23
27-Mar	NNE13	NNE11	NNE14	NNE15	NNE15	NNE14	NNE14	NNE16	NNE17	NNE20	NNE20	NNE18	NNE17	NNE21	NNE20	NNE19	NNE20	NNE20	NNE17	NNE17	NNE17	NNE16	NNE8	NNE8	NNE16.1	NNE21
28-Mar	NNW11	NNW9	NNW5	NNW4	NNW1	NNW3	N5	NNW5	WNW3	NNE8	NE8	NNE9	NE11	NNE9	N9	NNE7	N7	NNE8	NNE8	NE12	NNE11	NNE10	NNW6	NNW9	N6.7	NE12
29-Mar	NNW13	NNW7	NNW7	NNW8	N3	NNW5	NW5	WNW3	NW4	WNW3	WNW3	NE1	N3	SSE7	SE10	SSE11	SSE13	SSE14	SE8	NE10	NNE10	NNW8	N8	NNW7	N1.6	SSE14
30-Mar	NNW8	NNW7	NW7	NW6	NNW6	NNW7	NW4	NW3	W3	W4	NNE5	NE6	NNE7	NNE8	NNE7	NNE7	NNE7	NNE8	N9	NE12	NE14	N7	NNE5	ENE4	N5.6	NE14
31-Mar	ESE8	SE11	ESE10	SE11	SE9	ESE9	SE9	SE5	SE7	S9	S11	SSE13	SSE11	SE12	SE14	SE15	SSE13	SE13	SE14	ESE11	ESE13	SE12	ESE13	SE13	SE10.7	SE15
	N5.3	N4.7	NNE4.3	NNE4.1	NNE3.3	NNE3.4	N2.3	N2.1	NNE1.2	NNE1.0	ENE1.5	E1.9	E2.3	ENE2.2	NE1.7	NNE2.4	NNE3.8	NE5.4	NE6.7	NNE8.4	NNE8.6	NNE7.4	NNE6.3	NNE5.2	Diurnal Average	
	N23	NNE18	N19	N17	NNE15	N18	N18	NNE16	NNE17	NNE20	NNE20	N19	NNE20	NNE21	WNW25	NW22	NNE20	NNE20	NNE19	NNE18	NNE21	NNE22	NNE24	NNE23	Diurnal Maximum	

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

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 10 km/h on Mar 25 14:00

Minimum Value: 1 km/h on Mar 29 04:00

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

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

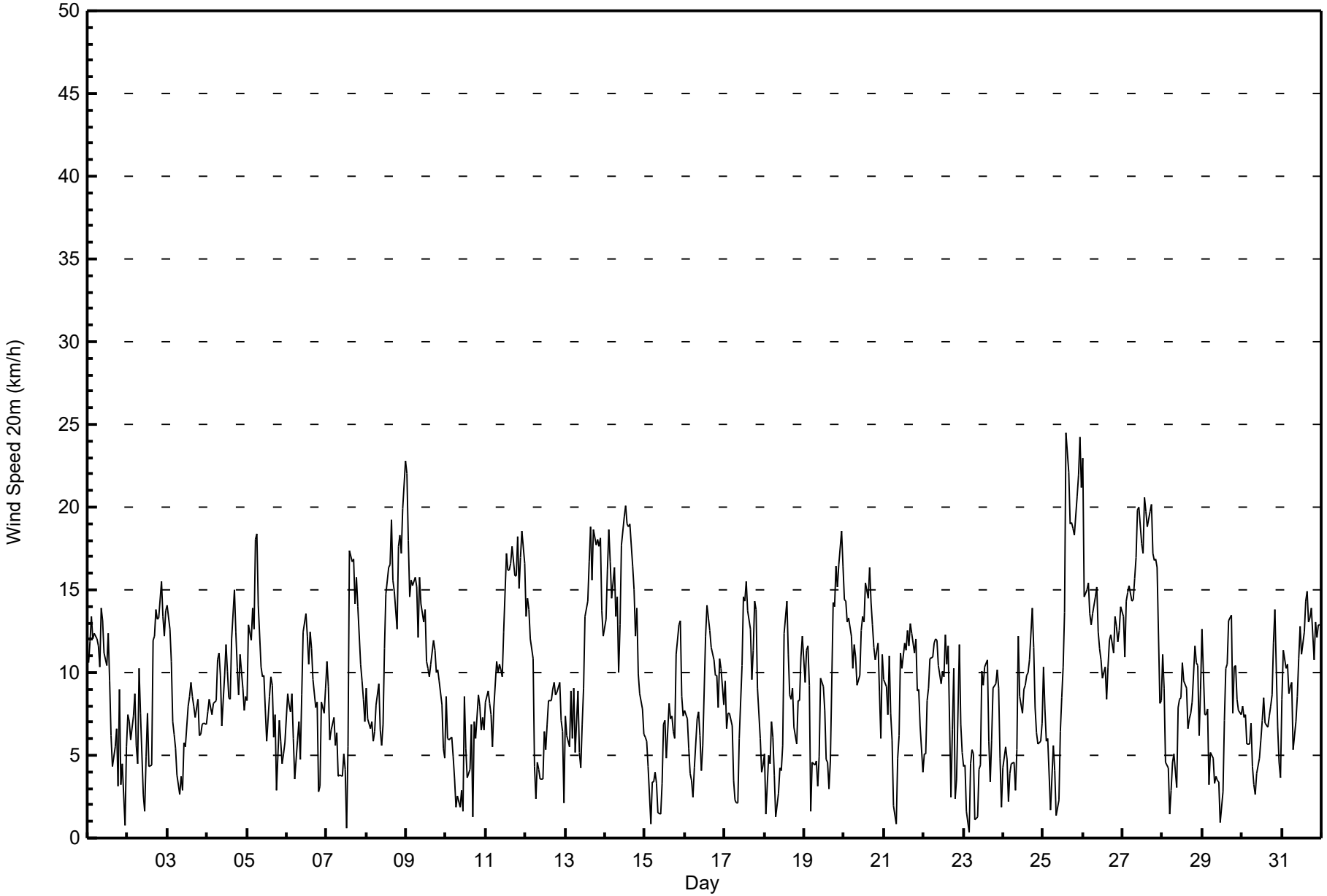
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	1	1	1	1	2	2	1	2	3	3	4	2	2	2	2	2	1	2	2	2	2	2	1	2	4
2-Mar	1	1	2	1	2	3	3	4	2	2	1	1	2	2	2	5	5	4	3	5	4	4	3	4	5
3-Mar	4	3	3	2	2	2	1	1	1	1	1	2	2	3	3	2	2	2	2	1	1	1	1	1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

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 20m (WS20) - km/h

Barge Landing - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	157	21.10	21.10
6 - 11	351	47.18	68.28
12 - 19	219	29.44	97.72
20 - 28	17	2.28	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 20m (WS20) - km/h

Barge Landing - March 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	7	10	6	7	6	4	8	5	8	14	9	10	12	12	16	23	157
6 - 11	37	50	21	16	4	10	31	41	43	14	9	4	2	0	12	57	351
12 - 19	69	76	17	0	0	3	9	22	9	3	1	2	0	2	1	5	219
20 - 28	1	14	0	0	0	0	0	0	0	0	0	0	0	1	1	0	17
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	114	150	44	23	10	17	48	68	60	31	19	16	14	15	30	85	744

Total Number of Valid Hours: 744

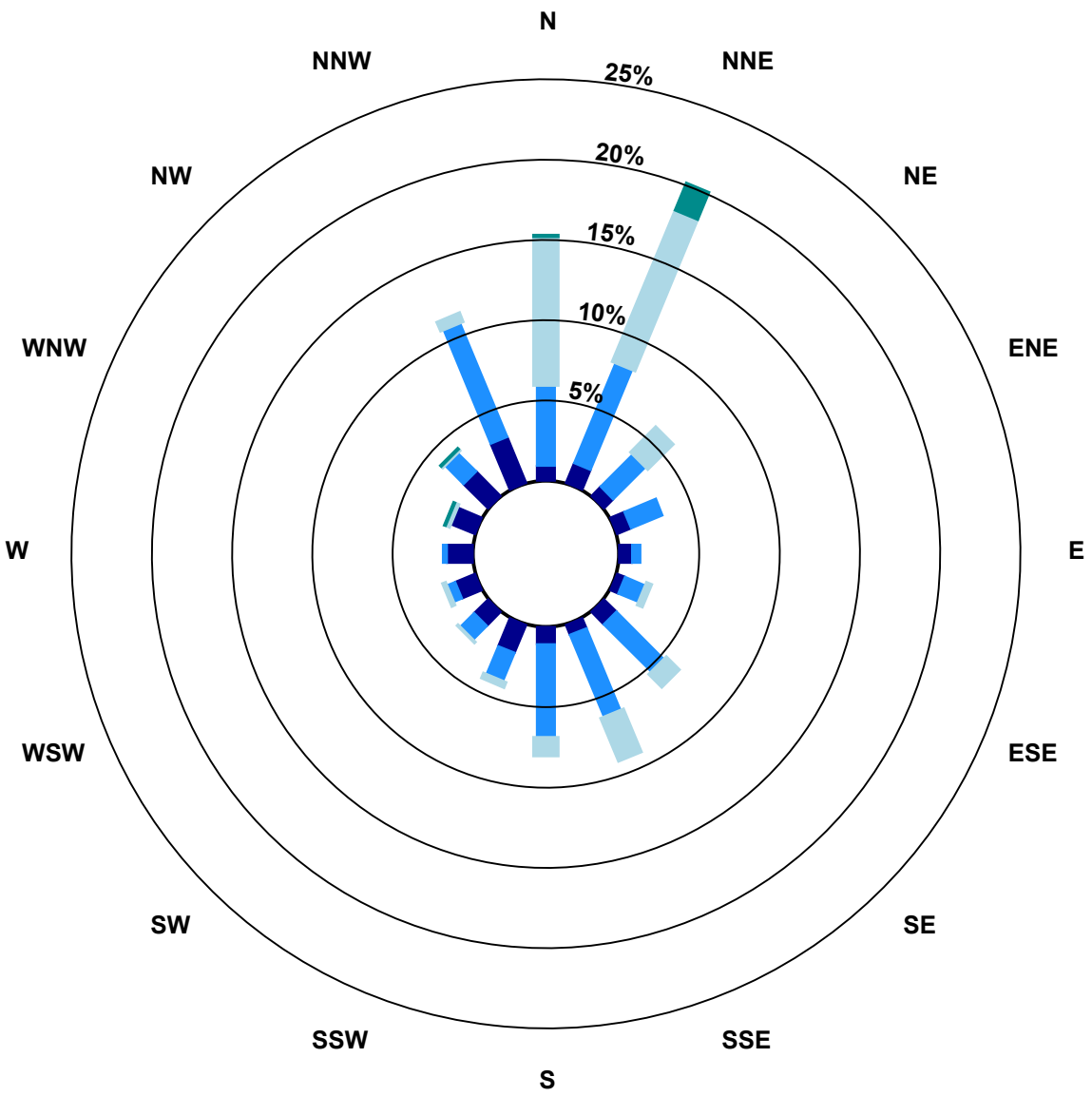
Total Number of Hours: 744

Wood Buffalo Environmental Association

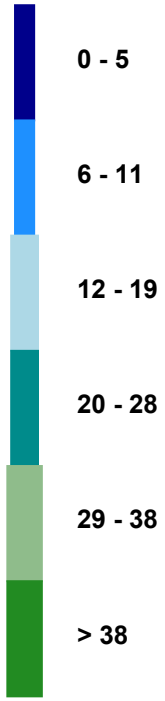
Wind Rose Mar 2025

Wind Speed 20m (WS20) - km/h

Barge Landing



Classes (km/h)



Total Number of Valid Hours: 744

Direction of Maximum Speed: 291 deg on Mar 25 15:00
Direction of Maximum Daily Speed Average: 21.6 deg on Mar 27

Direction of Minimum Speed: 98 deg on Mar 23 04:00

Direction of Minimum Daily Speed Average: 1.3 deg on Mar 18

Monthly Average Direction: 26.3 deg

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	139	147	150	147	149	141	148	158	160	170	165	169	169	164	193	207	198	133	65	340	40	112	250	162	155.3
2-Mar	160	185	168	167	153	100	237	333	336	331	313	235	160	214	251	322	6	28	26	23	24	10	11	30	16.0
3-Mar	22	21	23	38	25	16	16	132	201	213	236	195	195	194	187	163	146	133	150	172	179	183	188	180	149.8
4-Mar	198	187	181	164	187	199	182	172	174	182	179	192	185	173	198	225	241	242	236	275	352	7	13	10	203.9
5-Mar	11	12	349	360	355	6	5	15	53	55	59	80	66	163	166	163	144	137	37	9	32	48	24	344	30.9
6-Mar	341	345	341	341	348	212	191	189	194	175	171	169	174	178	164	163	163	184	148	263	278	307	346	8	188.5
7-Mar	21	27	51	41	8	0	353	331	332	11	72	227	276	90	12	22	13	5	7	6	7	359	347	357	11.8
8-Mar	17	11	341	349	355	10	325	325	325	313	326	340	355	359	4	20	21	22	26	41	28	19	19	23	8.4
9-Mar	24	27	29	31	40	30	32	39	38	34	37	21	28	28	14	20	20	27	34	27	34	34	15	346	28.6
10-Mar	359	342	328	333	334	328	291	287	320	280	211	183	202	234	181	244	212	58	42	42	45	13	9	335	346.4
11-Mar	341	344	349	346	347	17	25	19	26	15	13	14	15	8	4	4	6	5	6	9	7	12	12	8	7.7
12-Mar	5	7	8	11	16	26	163	244	289	314	14	64	70	62	47	65	62	75	70	50	49	51	7	0	32.9
13-Mar	339	353	341	350	339	350	352	345	338	329	332	329	8	19	16	19	12	8	8	8	8	7	3	0	1.7
14-Mar	352	360	1	359	360	358	358	0	358	17	21	9	12	15	1	11	12	11	8	14	4	343	338	334	4.4
15-Mar	317	314	342	316	290	302	312	326	325	326	61	71	61	141	160	189	197	179	102	60	50	45	350	335	34.9
16-Mar	331	333	334	329	309	298	172	156	161	171	270	189	159	137	152	151	154	141	109	107	124	136	137	139	145.3
17-Mar	142	147	138	151	156	180	298	250	286	330	7	19	16	15	20	21	37	34	40	44	30	359	334	237	32.6
18-Mar	240	349	74	53	341	336	331	275	262	223	199	179	198	194	197	182	170	144	124	125	340	345	334	345	216.9
19-Mar	342	336	338	338	312	234	217	196	180	160	167	170	164	180	161	171	24	6	9	10	14	7	4	357	359.9
20-Mar	356	9	14	7	6	354	343	8	350	4	4	7	8	9	7	12	13	5	7	2	1	355	92	132	7.5
21-Mar	133	134	136	118	135	129	213	224	246	217	180	182	181	181	183	167	159	150	133	120	118	132	134	143	153.8
22-Mar	224	200	191	175	166	157	153	162	168	165	168	155	169	167	166	169	275	350	317	313	323	8	43	107	167.0
23-Mar	82	57	108	98	351	332	332	344	157	255	182	158	151	169	157	201	95	60	59	64	60	84	124	30	105.0
24-Mar	83	128	81	52	116	138	132	205	172	170	201	194	173	166	202	224	272	282	334	326	306	258	253	226	213.2
25-Mar	230	234	235	229	152	257	221	267	267	213	190	163	175	297	291	312	4	30	27	21	18	20	19	13	346.0
26-Mar	9	2	10	14	12	25	16	29	39	34	31	40	32	19	22	18	23	33	21	19	28	51	43	25	23.8
27-Mar	26	26	20	24	29	28	33	19	21	22	23	26	24	17	16	23	20	21	19	14	15	15	27	18	21.6
28-Mar	347	337	344	344	328	343	357	344	286	22	41	29	35	19	9	19	11	24	19	42	21	32	346	331	10.5
29-Mar	333	335	336	340	5	346	320	300	312	282	303	53	353	151	143	161	164	152	139	50	25	342	6	339	8.4
30-Mar	331	338	325	321	333	339	315	316	274	280	19	43	16	17	16	15	19	13	8	35	50	3	14	59	4.2
31-Mar	113	125	121	124	128	123	129	141	145	178	169	167	157	132	125	140	148	142	133	116	114	125	122	135	135.0
	6.7	10.1	13.2	18.4	21.3	16.3	8.0	4.3	21.6	28.5	59.6	88.6	84.7	73.2	47.8	32.4	32.5	38.7	34.2	29.3	26.4	21.8	17.0	13.7	
	Diurnal Average																								

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

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 20m (WD20) - deg

Barge Landing - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 92 deg on Mar 29 12:00

Minimum Value: 4 deg on Mar 29 04:00

Percentiles: P_1 = 5 P_{10} = 10 Q_1 = 13 Median = 16 Q_3 = 25 P_{90} = 43 P_{99} = 83

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

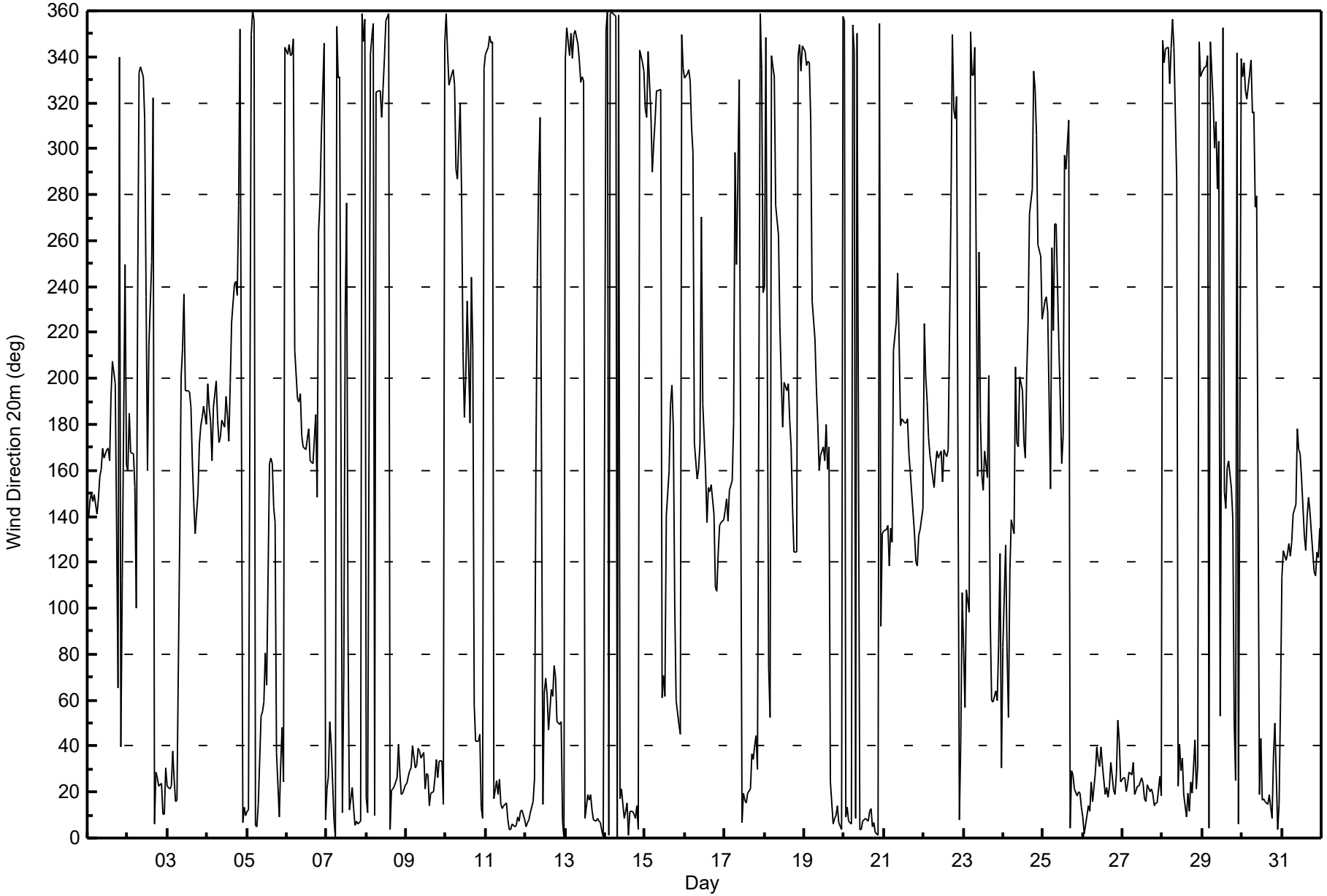
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	4	5	6	7	8	8	8	13	11	12	16	15	14	18	38	48	33	16	47	10	51	26	61	16	61
2-Mar	14	15	15	26	22	50	44	18	10	54	72	35	15	38	65	26	23	14	13	14	13	14	16	19	72
3-Mar	13	13	17	17	13	17	29	42	27	49	18	34	25	33	29	17	16	18	16	12	20	16	10	9	49
4-Mar	13	11	12	17	22	37	10	8	13	21	17	17	22	20	21	23	15	13	9	42	17	15	11	9	42
5-Mar	13	13	19	20	20	17	17	15	25	22	17	21	33	38	22	24	62	21	53	10	13	24	13	13	62
6-Mar	5	6	5	8	18	33	9	13	18	18	16	17	22	26	18	16	16	28	12	63	37	15	35	21	63
7-Mar	15	21	34	14	17	19	16	24	31	40	42	59	89	61	13	12	13	15	15	15	18	17	14	15	89
8-Mar	15	18	20	19	17	26	15	12	18	26	27	17	19	16	18	12	12	13	13	14	14	13	12	12	27
9-Mar	12	14	17	14	15	14	14	18	15	15	15	14	22	17	19	18	14	15	19	15	16	19	18	31	31
10-Mar	14	24	12	10	11	16	33	21	41	42	82	30	56	67	66	25	88	15	22	19	26	21	15	18	88
11-Mar	11	9	9	9	15	20	11	13	12	15	16	13	13	15	16	15	16	17	16	14	15	14	12	14	20
12-Mar	16	15	15	13	13	31	54	22	38	41	45	26	33	28	23	20	18	12	13	10	18	29	25	53	54
13-Mar	19	11	17	20	15	6	52	19	15	29	15	20	19	15	13	12	15	14	15	14	15	16	16	16	52
14-Mar	15	16	17	16	17	16	18	18	21	14	12	16	15	16	17	15	14	13	14	13	16	11	10	18	21
15-Mar	10	11	10	58	26	11	13	13	36	45	51	20	20	58	39	36	33	23	28	12	13	16	18	14	58
16-Mar	11	10	12	42	24	56	17	11	16	42	44	71	28	20	23	18	17	19	11	9	10	10	11	12	71
17-Mar	10	11	13	8	12	23	26	46	36	28	18	14	15	13	12	16	14	11	7	9	12	17	32	50	50
18-Mar	14	86	49	48	13	12	18	70	38	41	57	56	30	22	26	41	31	16	12	9	34	12	8	8	86
19-Mar	7	7	5	8	85	11	24	30	38	43	20	25	36	55	58	84	83	15	15	13	11	14	15	16	85
20-Mar	15	15	12	14	11	16	14	14	19	21	19	19	16	15	17	14	15	15	13	12	14	14	41	8	41
21-Mar	7	12	9	8	8	13	51	78	28	47	21	26	21	21	22	27	19	22	8	9	10	11	10	24	78
22-Mar	15	16	10	10	7	7	9	12	15	19	25	18	27	20	23	19	79	42	30	80	55	14	34	17	80
23-Mar	36	24	77	84	11	14	11	72	75	31	61	19	19	22	20	49	55	13	11	15	18	25	34	75	84
24-Mar	42	36	24	45	74	33	19	32	21	15	25	26	22	16	24	22	27	20	12	16	23	11	14	10	74
25-Mar	10	19	54	18	91	53	21	45	82	68	43	27	23	37	19	16	34	15	14	13	13	13	12	13	91
26-Mar	15	17	14	13	14	13	16	15	16	17	19	21	24	21	22	18	16	14	13	12	14	14	16	12	24
27-Mar	13	14	12	13	14	13	15	12	13	13	12	15	16	15	15	15	14	13	14	14	13	13	28	17	28
28-Mar	7	6	9	13	52	18	13	29	42	36	28	24	21	25	24	39	21	18	15	7	12	12	13	5	52
29-Mar	7	5	6	4	23	10	8	16	26	36	57	92	72	45	27	29	19	16	29	23	16	17	19	8	92
30-Mar	13	6	9	17	12	5	19	31	46	44	32	32	20	19	30	28	19	17	13	16	14	33	22	38	46
31-Mar	11	10	9	9	11	8	10	20	25	24	24	25	29	24	19	20	19	15	11	8	7	7	7	10	29
	42	86	77	84	91	56	54	78	82	68	82	92	89	67	66	84	88	42	53	80	55	33	61	75	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 20m (WD20) - deg

Barge Landing - March 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS11
LOWER CAMP
MARCH 2025

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

April 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - LOWER CAMP (AMS11)
MARCH 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	708	36	36	100	93.6	0	11.3	0
H2S (ppb) Average	708	36	36	100	3.2	0	1	0
THC (ppm) Average	670	39	74	95.3	4	-	2.5	-
CH4(ppm) Average	670	39	74	95.3	3.7	-	2.4	-
NMHC(ppm) Average	670	39	74	95.3	0.347	-	0.084	-
Temperature (C) Average	744	0	0	100	9.8	-	1.7	-
Relative Humidity (%) Average	744	0	0	100	96.3	-	82.1	-
Barometric Pressure (inHg) Average	744	0	0	100	29.5	-	29.5	-
Wind Speed 10 m (km/h) Average	737	0	7	99.06	24	-	16	-
Wind Direction 10 m (deg) Average	737	0	7	99.06	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - LOWER CAMP (AMS11)
MARCH 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	708	1.08	5.3	-	0	0	0	0.1	0.4	1.7	93.6
H2S (ppb) Average	708	0.35	0.4	-	0	0.1	0.1	0.2	0.4	0.8	3.2
THC (ppm) Average	670	2.08	0.2	-	1.9	1.9	1.9	2	2.1	2.3	4
CH4(ppm) Average	670	2.05	0.2	-	1.9	1.9	1.9	2	2.1	2.3	3.7
NMHC(ppm) Average	670	0.026	0.045	-	0	0	0	0	0	0.1	0.347
Temperature 2 m (C) Average	744	-7.56	7.4	-	-25.8	-17.8	-13.1	-7	-2	2	9.8
Relative Humidity (%) Average	744	68.09	14.5	-	26.9	48.1	57.2	70.3	78.9	85.1	96.3
Barometric Pressure (inHg) Average	744	29.09	0.2	-	28.8	28.9	28.9	29.1	29.2	29.4	29.5
Wind Speed 10 m (km/h) Average	737	8.4	5	-	0	2	4	8	12	16	24
Wind Direction 10 m (deg) Average	737	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - LOWER CAMP (AMS11)
MARCH 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
THC/NMHC/CH4	02 Mar 2025 01:00	02 Mar 2025 01:00	1	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	02 Mar 2025 05:00	02 Mar 2025 07:00	3	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	02 Mar 2025 12:00	02 Mar 2025 12:00	1	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	02 Mar 2025 15:00	03 Mar 2025 02:00	12	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	03 Mar 2025 04:00	03 Mar 2025 07:00	4	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	16 Mar 2025 00:00	16 Mar 2025 13:00	14	Unstable Operation - flatline in analyzer output signal
Wind Speed, Wind Direction	01 Mar 2025 19:00	01 Mar 2025 19:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	01 Mar 2025 22:00	01 Mar 2025 22:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	02 Mar 2025 00:00	02 Mar 2025 00:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	03 Mar 2025 20:00	03 Mar 2025 23:00	4	Flat line in sensor output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Lower Camp - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 93.6 ppb on Mar 29 14:00 Maximum Daily Average: 11.3 ppb on Mar 29

Minimum Value: 0.0 ppb on Mar 1 02:00 Minimum Daily Average: 0.0 ppb on Mar 9
Maximum Diurnal Average: 5.5 ppb at hour 14 Minimum Diurnal Average: 0.1 ppb at hour 5
Monthly Average: 1.08 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} = 15.6

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	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	0.3	0.3	0.5	1.0	0.9	0.4	0.3	0.1	0.1	0.1	0.2	1.0
2-Mar	0.2	Z	0.1	0.1	0.1	0.1	0.0	0.1	0.3	0.5	0.7	0.6	1.8	2.3	1.1	1.8	0.7	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.5	2.3
3-Mar	0.0	0.0	Z	0.1	0.0	0.1	0.1	0.1	0.2	0.3	0.6	3.4	2.5	C	C	C	C	C	0.2	0.0	0.0	0.0	0.0	0.0	0.4	3.4
4-Mar	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	0.2	1.5	1.4	1.7	2.1	2.3	0.9	0.5	0.4	0.4	0.2	0.5	2.3
5-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	7.6	27.2	11.9	7.4	4.7	2.8	2.0	1.7	1.1	0.8	0.5	0.4	3.0	27.2
6-Mar	0.3	0.1	0.1	0.1	0.1	Z	0.0	0.0	0.1	0.4	0.3	1.3	2.1	0.6	0.3	1.7	0.6	1.4	1.1	0.5	0.4	0.4	0.3	0.4	0.5	2.1
7-Mar	Z	2.0	0.9	0.6	0.5	0.3	0.6	0.8	0.8	0.9	1.1	3.3	3.2	7.8	7.5	4.0	3.5	1.0	0.5	0.3	0.4	0.3	0.2	0.2	1.8	7.8
8-Mar	0.2	Z	0.1	0.1	0.1	0.2	0.0	0.1	0.2	0.1	1.4	2.4	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.4
9-Mar	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
10-Mar	0.1	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.1	1.3	1.7	1.1	3.3	1.5	1.2	0.6	0.5	0.2	1.2	2.7	1.2	0.8	0.5	0.8	3.3
11-Mar	0.4	0.2	0.5	0.7	Z	0.6	0.4	0.3	0.3	0.4	0.2	0.2	0.2	0.4	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.0	0.1	0.0	0.3	0.7
12-Mar	0.1	0.0	0.0	0.1	0.0	Z	0.1	0.0	0.1	0.2	0.2	0.5	0.4	2.4	13.1	25.5	23.3	3.6	5.8	3.0	0.6	0.2	0.1	0.0	3.4	25.5
13-Mar	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.3	0.2	0.3	0.4	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4
14-Mar	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
15-Mar	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.2	1.3	15.6	20.2	14.9	8.9	4.3	4.0	3.7	4.0	3.4	1.5	1.2	3.7	20.2
16-Mar	0.8	0.3	0.3	Z	0.4	0.3	0.3	0.4	0.5	0.6	1.0	1.4	0.8	0.5	0.3	0.4	0.4	0.4	0.2	0.1	0.2	0.1	0.0	0.1	0.4	1.4
17-Mar	0.1	0.1	0.1	0.1	Z	0.2	0.1	0.5	0.5	0.3	0.3	0.6	0.8	0.9	0.9	0.6	0.6	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.3	0.9
18-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.2	0.5	0.1	0.0	0.5	1.3	0.6	0.3	0.1	0.3	0.4	0.3	0.1	0.1	0.2	0.2	1.3
19-Mar	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.5	1.2	2.5	2.8	2.8	10.9	1.7	4.3	5.1	3.6	1.3	0.6	0.5	0.4	0.1	1.7	10.9
20-Mar	0.1	Z	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.1	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	0.4
21-Mar	0.0	0.0	Z	0.0	0.1	0.0	0.1	0.1	0.0	1.6	0.0	0.2	0.4	0.3	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.2	1.6
22-Mar	0.0	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.3	0.3	0.6	0.5	0.4	0.4	1.5	2.9	1.8	0.5	1.8	0.9	0.8	0.6	2.9
23-Mar	0.6	0.3	0.3	0.2	Z	0.1	0.1	0.2	0.3	0.8	2.0	4.9	2.7	1.6	1.6	0.4	0.3	0.4	0.4	0.3	0.1	0.1	0.1	0.0	0.8	4.9
24-Mar	0.1	0.1	0.0	0.1	0.0	Z	0.1	0.2	0.3	0.4	0.3	0.4	0.3	0.2	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.4
25-Mar	Z	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.4	0.3	0.7	0.6	0.9	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.2	0.9
26-Mar	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4
27-Mar	0.2	0.2	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
28-Mar	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	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
29-Mar	0.0	0.0	0.1	0.0	Z	0.1	0.1	0.1	0.1	0.2	1.1	1.6	66.5	93.6	56.3	13.2	9.7	4.5	3.4	2.7	2.7	3.2	1.1	0.5	11.3	93.6
30-Mar	0.3	0.3	0.3	0.2	0.1	Z	0.1	0.1	0.2	2.9	7.5	8.6	5.9	1.0	1.0	0.6	0.3	0.2	0.4	0.7	0.4	0.4	0.3	0.3	1.4	8.6
31-Mar	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.7	1.0	0.2	0.2	0.3	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.2	1.0
	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.7	1.2	3.4	5.5	4.4	2.6	2.1	1.0	1.0	0.6	0.5	0.4	0.2	0.2	Diurnal Average	
	0.8	2.0	0.9	0.7	0.5	0.6	0.6	0.8	0.8	2.9	7.5	8.6	66.5	93.6	56.3	25.5	23.3	5.1	5.8	3.7	4.0	3.4	1.5	1.2	Diurnal Maximum	

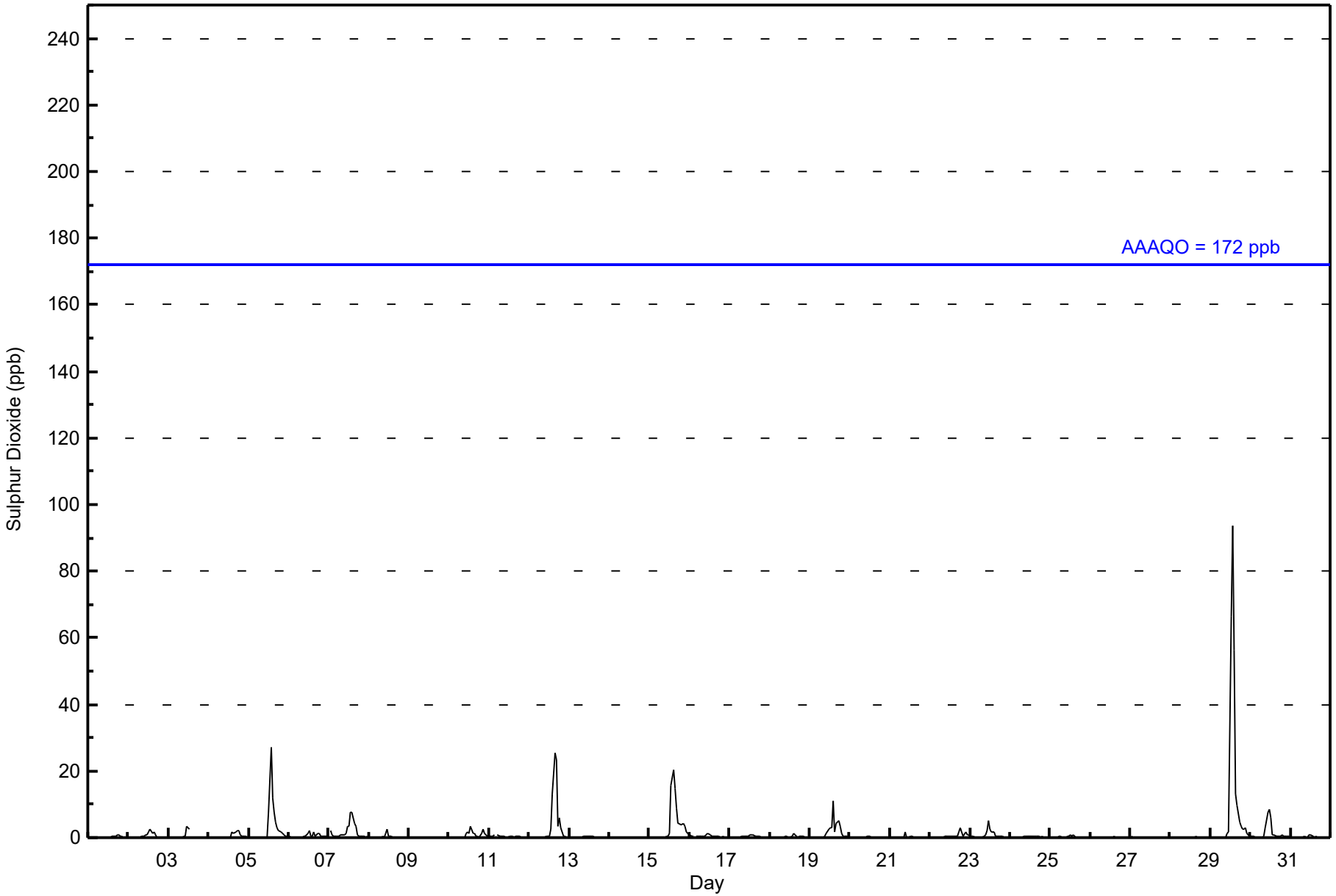
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Lower Camp - March 2025



Sulphur Dioxide (SO_2) - ppb
Lower Camp - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	695	98.16	98.16
11 - 20	7	0.99	99.15
21 - 60	4	0.56	99.72
61 - 110	2	0.28	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Lower Camp - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	89	43	3	3	7	65	115	17	1	1	7	11	27	83	105	111	688
11 - 20	0	0	0	0	1	0	2	0	0	0	0	3	0	0	1	0	7
21 - 60	1	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	4
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	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	90	43	3	3	8	65	117	17	1	1	7	17	27	84	107	111	701

Total Number of Valid Hours: 701

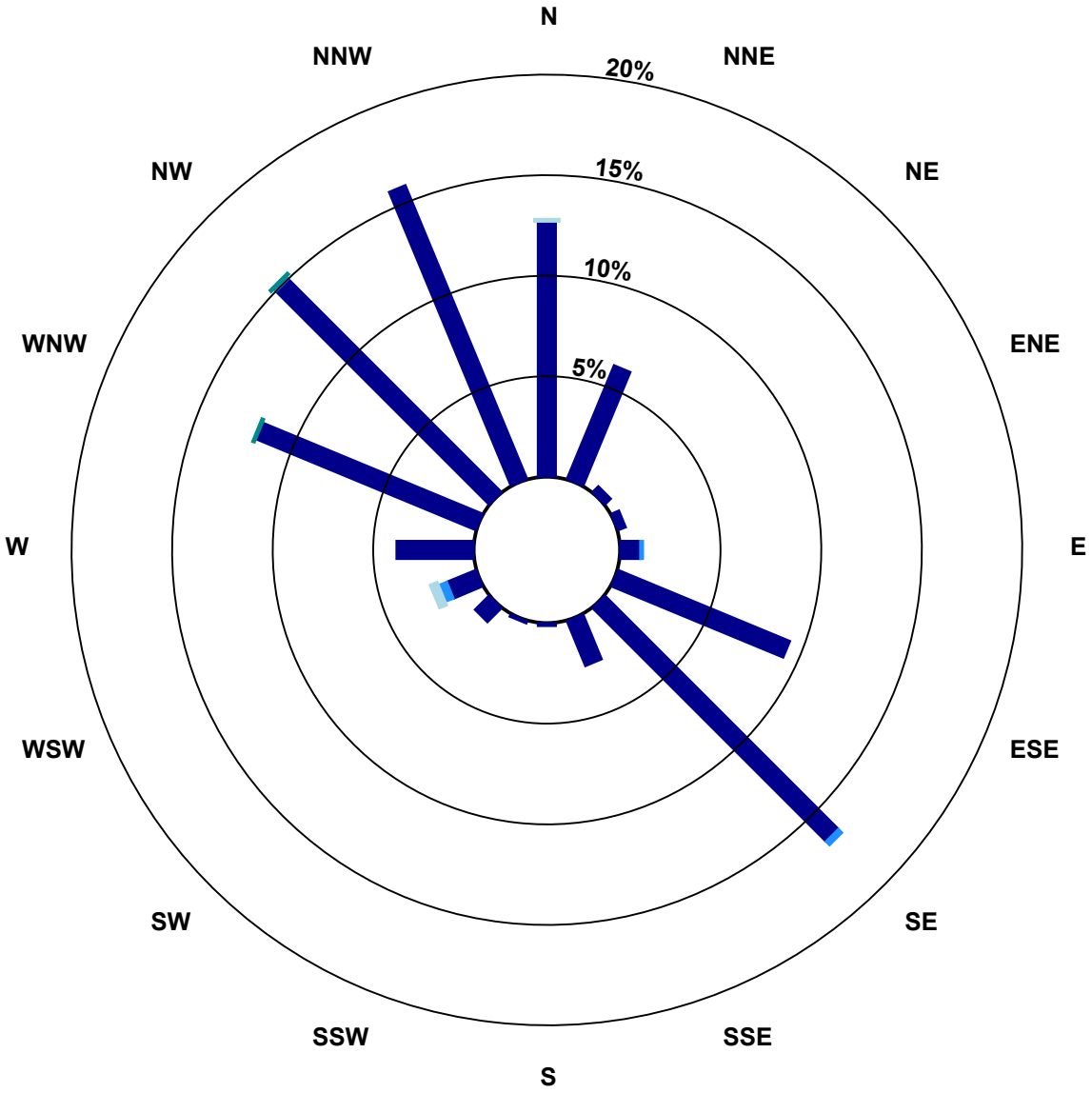
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Sulphur Dioxide (SO_2) - ppb

Lower Camp



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

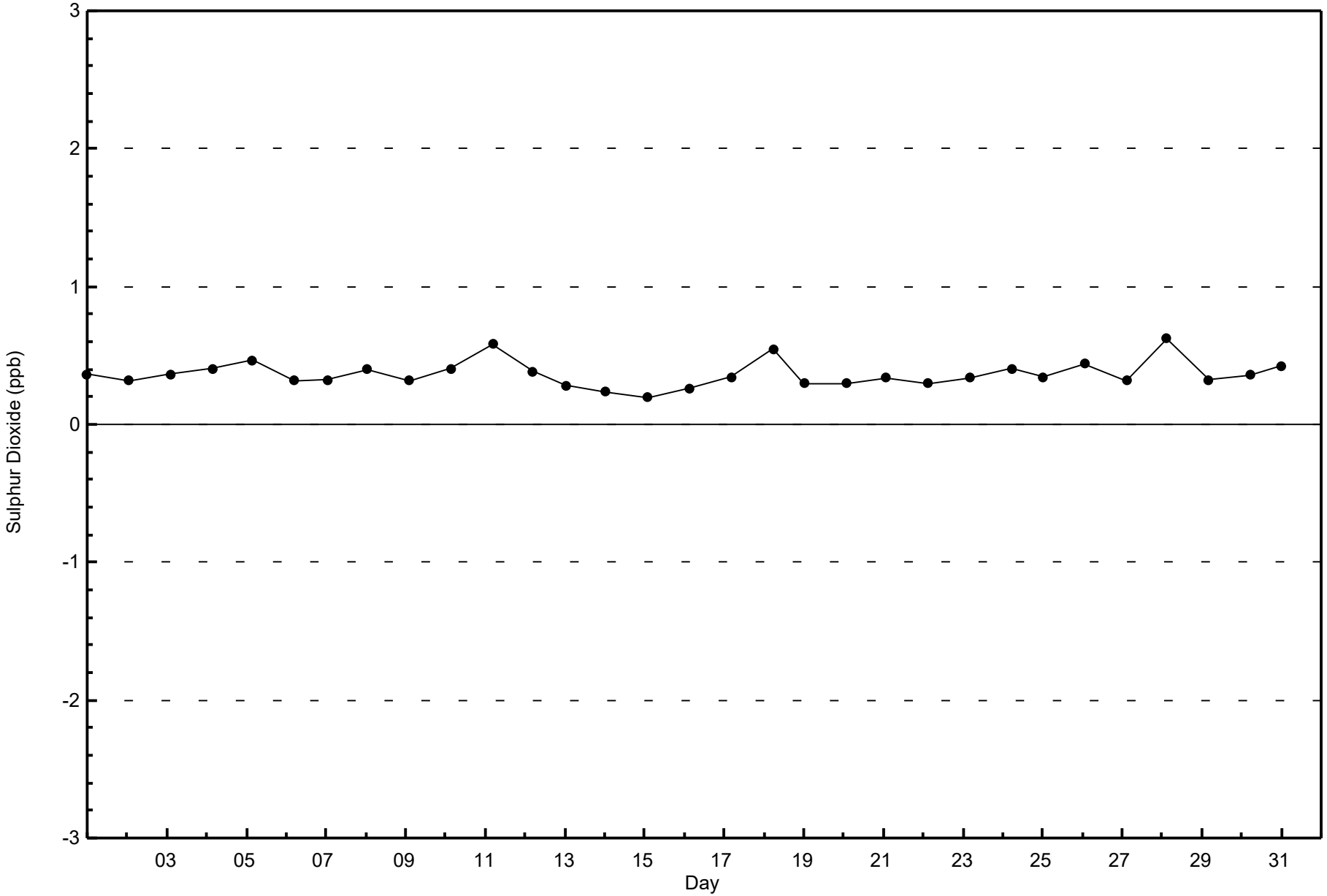
Total Number of Valid Hours: 701

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Lower Camp - March 2025

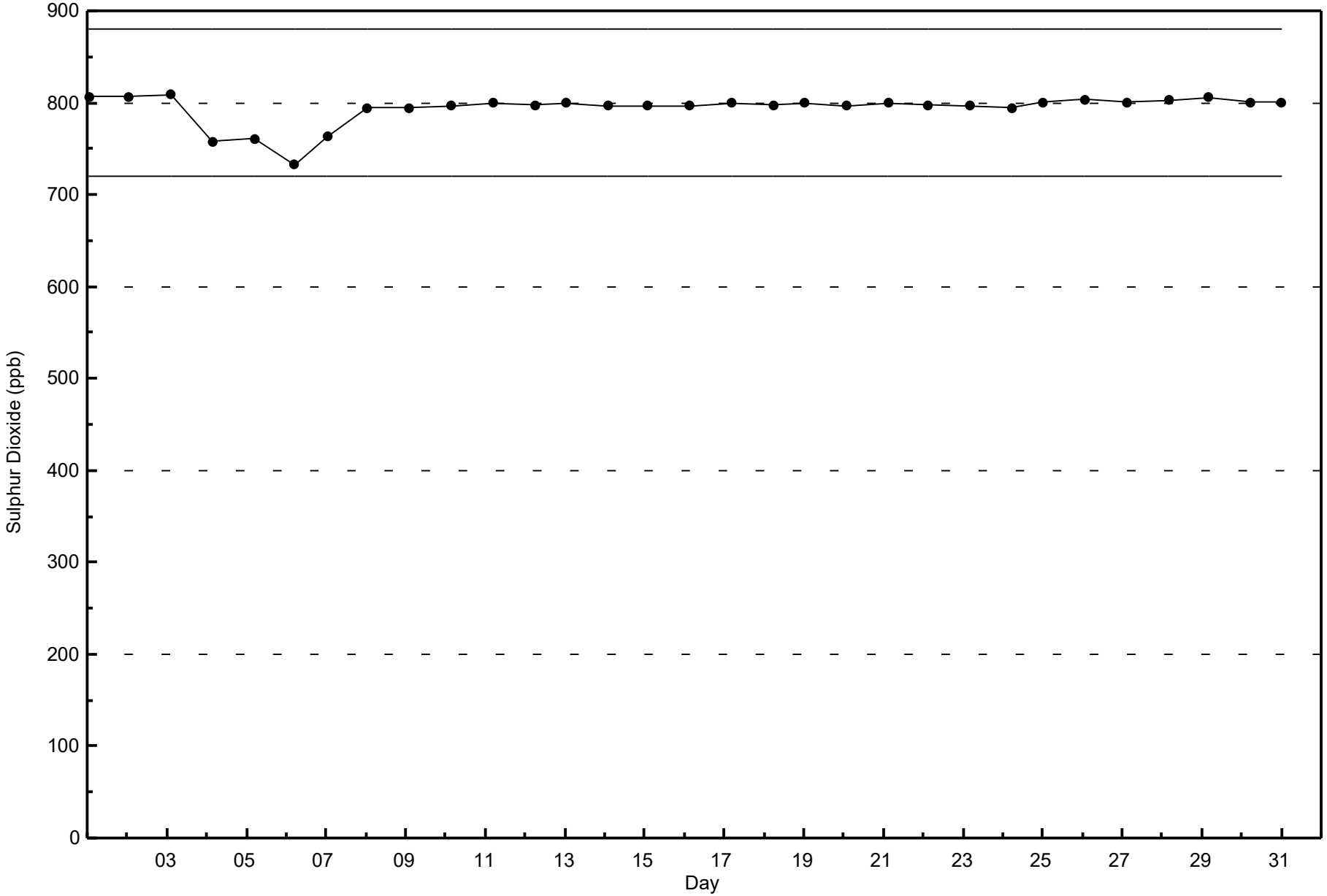


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Lower Camp - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Lower Camp - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.2 ppb on Mar 1 21:00 Maximum Daily Average: 1.0 ppb on Mar 1

Minimum Value: 0.0 ppb on Mar 26 11:00 Minimum Daily Average: 0.0 ppb on Mar 27
Maximum Diurnal Average: 0.6 ppb at hour 11 Minimum Diurnal Average: 0.2 ppb at hour 6
Monthly Average: 0.35 ppb Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.1 Median = 0.2 Q_3 = 0.4 P_{90} = 0.8 P_{99} = 2.1

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.5	Z	0.2	0.1	0.0	0.1	0.1	0.2	0.3	0.3	0.5	0.5	0.8	0.6	1.4	1.0	1.1	1.8	2.4	2.4	3.2	1.4	1.2	2.0	1.0	3.2
2-Mar	1.3	0.7	Z	0.4	0.3	0.4	0.3	0.7	1.0	1.3	1.4	1.0	1.3	0.8	0.2	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	1.4
3-Mar	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.1	0.1	0.3	0.4	0.6	0.4	0.5	0.8	1.0	1.1	1.3	0.7	1.1	0.8	2.2	2.2	1.1	0.7	2.2
4-Mar	0.5	0.4	0.3	0.3	Z	0.3	0.4	0.5	0.5	0.3	0.9	0.5	0.5	0.5	0.5	0.2	0.3	0.2	0.4	0.1	0.6	0.5	0.3	0.4	0.4	0.9
5-Mar	0.3	0.1	0.2	0.1	0.1	Z	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.4	0.4	0.5	0.4	0.4	0.3	0.3	0.4	0.6	2.0	0.6	0.3	2.0
6-Mar	Z	0.9	1.0	0.7	0.5	0.3	0.2	0.2	0.6	0.6	0.3	0.2	0.2	0.1	0.1	0.1	0.4	0.5	1.0	0.8	1.1	1.2	1.4	1.0	0.6	1.4
7-Mar	0.8	Z	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.8	1.2	1.1	1.0	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.4	1.2
8-Mar	0.1	0.2	Z	0.2	0.3	0.3	0.3	0.5	0.4	0.4	1.2	2.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.3	2.2
9-Mar	0.0	0.0	0.0	Z	0.1	0.1	0.0	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	0.2	0.2	0.1	0.2
10-Mar	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.2	0.3	0.3	0.3	0.4	0.3	0.5	0.3	0.3	0.4	0.4	0.3	0.5
11-Mar	0.3	0.3	0.3	0.3	0.2	Z	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.2	0.3
12-Mar	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.6	0.3	0.2	0.3	0.4	0.6	0.4	0.2	0.3	0.3	0.2	0.4	0.2	0.3	0.3	0.6
13-Mar	0.2	Z	0.2	0.2	0.3	0.3	0.3	0.4	0.5	0.6	0.5	0.5	0.5	0.4	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.6
14-Mar	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.2
15-Mar	0.7	0.8	0.5	Z	0.3	0.3	0.3	0.4	0.3	0.2	0.6	0.6	0.8	0.4	0.3	0.2	0.1	0.3	0.3	0.2	0.6	0.4	0.5	0.4	0.4	0.8
16-Mar	0.3	0.3	0.3	0.4	Z	0.2	0.2	0.3	0.4	0.5	1.0	0.8	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.3	0.3	0.3	0.3	1.0
17-Mar	0.6	0.5	0.4	0.4	0.4	Z	0.4	0.5	0.5	0.6	0.2	1.0	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.3	1.0
18-Mar	Z	0.2	0.2	0.4	0.6	0.9	1.0	0.9	0.9	1.7	1.3	0.1	0.1	0.3	0.5	0.3	0.3	0.3	0.5	0.6	0.5	0.7	0.4	0.8	0.6	1.7
19-Mar	0.5	Z	1.0	0.9	0.6	0.4	0.3	0.8	0.6	1.5	1.7	1.0	0.7	0.7	0.7	0.6	0.6	0.7	0.6	0.2	0.2	0.2	0.1	0.1	0.6	1.7
20-Mar	0.1	0.1	Z	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.2
21-Mar	0.2	0.3	0.3	Z	0.1	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.7	1.0	0.7	0.3	0.2	0.3	1.0
22-Mar	0.3	0.3	0.2	0.2	Z	0.1	0.1	0.1	0.1	0.2	0.5	0.5	0.2	0.2	0.3	0.4	0.4	0.3	0.4	0.4	0.8	1.4	0.4	0.4	0.3	1.4
23-Mar	0.3	0.6	0.4	0.5	0.3	Z	0.2	0.4	0.3	0.6	1.3	0.9	0.4	0.3	0.2	0.3	0.7	1.2	1.0	0.8	0.7	0.5	0.9	0.5	0.6	1.3
24-Mar	Z	0.4	0.4	0.5	0.5	0.4	0.4	0.5	0.4	0.2	0.6	C	C	C	C	C	0.5	1.3	0.2	0.1	0.1	0.5	1.2	0.3	0.5	1.3
25-Mar	0.1	Z	0.1	0.1	0.1	0.1	0.6	0.6	0.1	1.0	1.0	0.5	0.3	0.4	1.5	0.9	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.4	1.5
26-Mar	0.1	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2
27-Mar	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	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1
28-Mar	0.1	0.1	0.1	0.2	Z	0.3	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.3
29-Mar	0.1	0.1	0.1	0.2	0.1	Z	0.1	0.1	0.2	0.6	2.2	1.5	0.9	0.7	0.5	0.2	0.3	0.2	0.3	0.3	0.4	0.3	0.2	0.2	0.4	2.2
30-Mar	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	1.7	1.9	2.5	1.1	0.3	0.2	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.2	0.5	2.5
31-Mar	0.1	Z	0.2	0.2	0.1	0.3	0.2	0.2	0.4	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.5	0.3	0.1	0.3	0.1	0.2	0.5
	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.5	0.6	0.6	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	Diurnal Average	
	1.3	0.9	1.0	0.9	0.6	0.9	1.0	0.9	1.0	1.7	2.2	2.5	1.3	1.1	1.5	1.0	1.1	1.8	2.4	2.4	3.2	2.2	2.2	2.0	Diurnal Maximum	

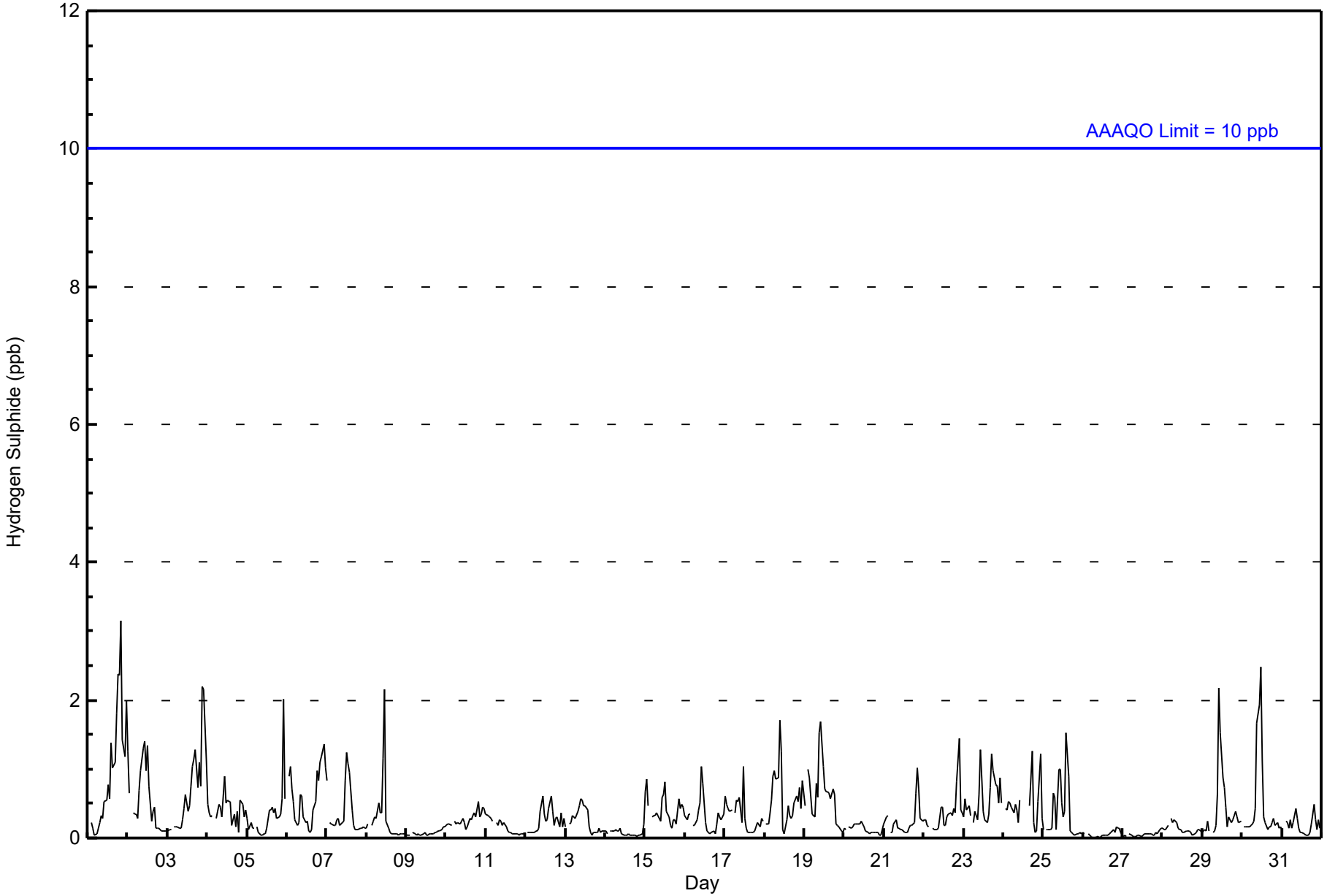
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Lower Camp - March 2025





Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Lower Camp - March 2025

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

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Lower Camp - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	93	43	3	3	8	65	117	17	1	1	7	17	28	83	106	108	700
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	93	43	3	3	8	65	117	17	1	1	7	17	29	83	106	108	701

Total Number of Valid Hours: 701

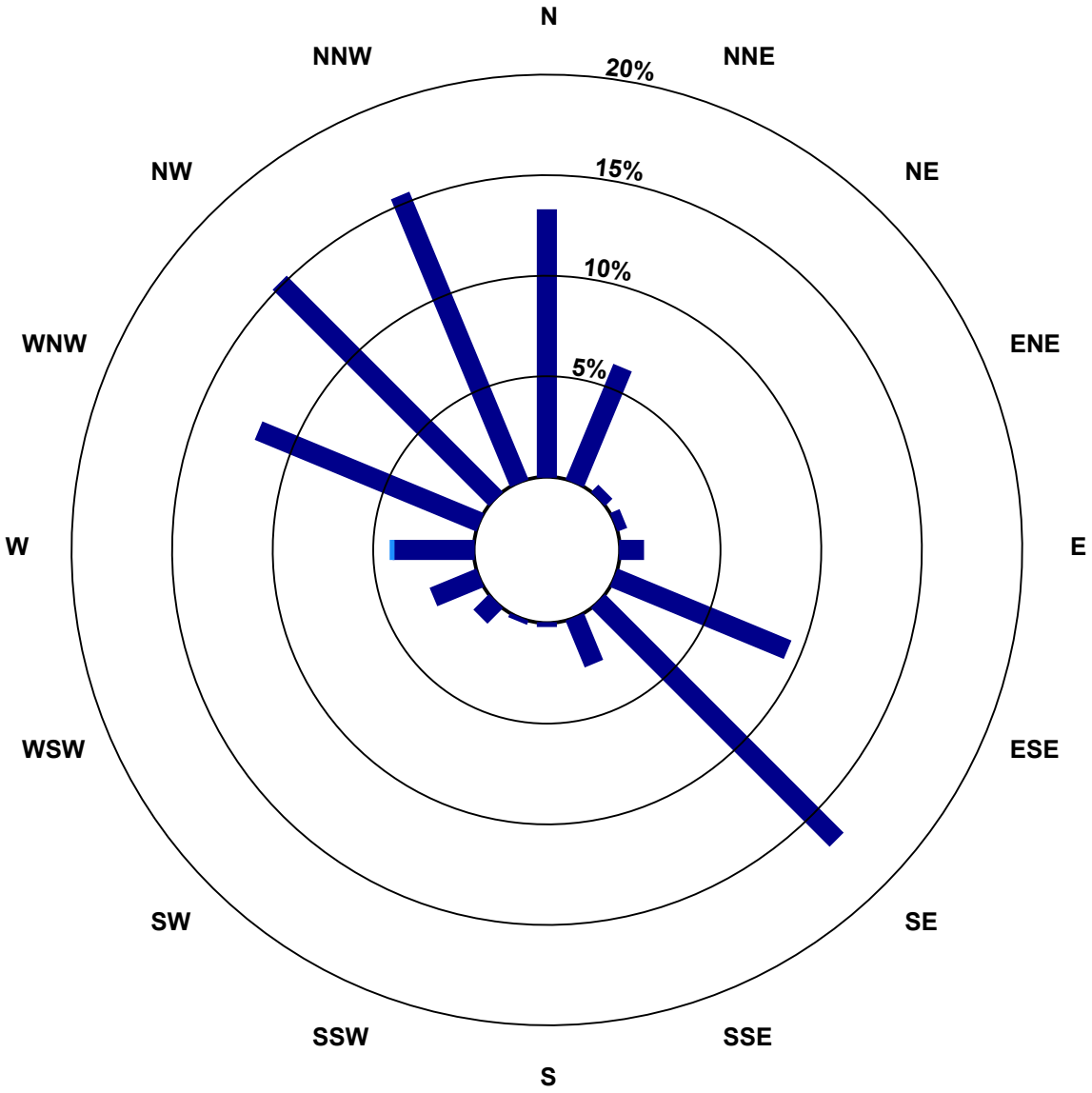
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Hydrogen Sulphide (H_2S) - ppb

Lower Camp



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

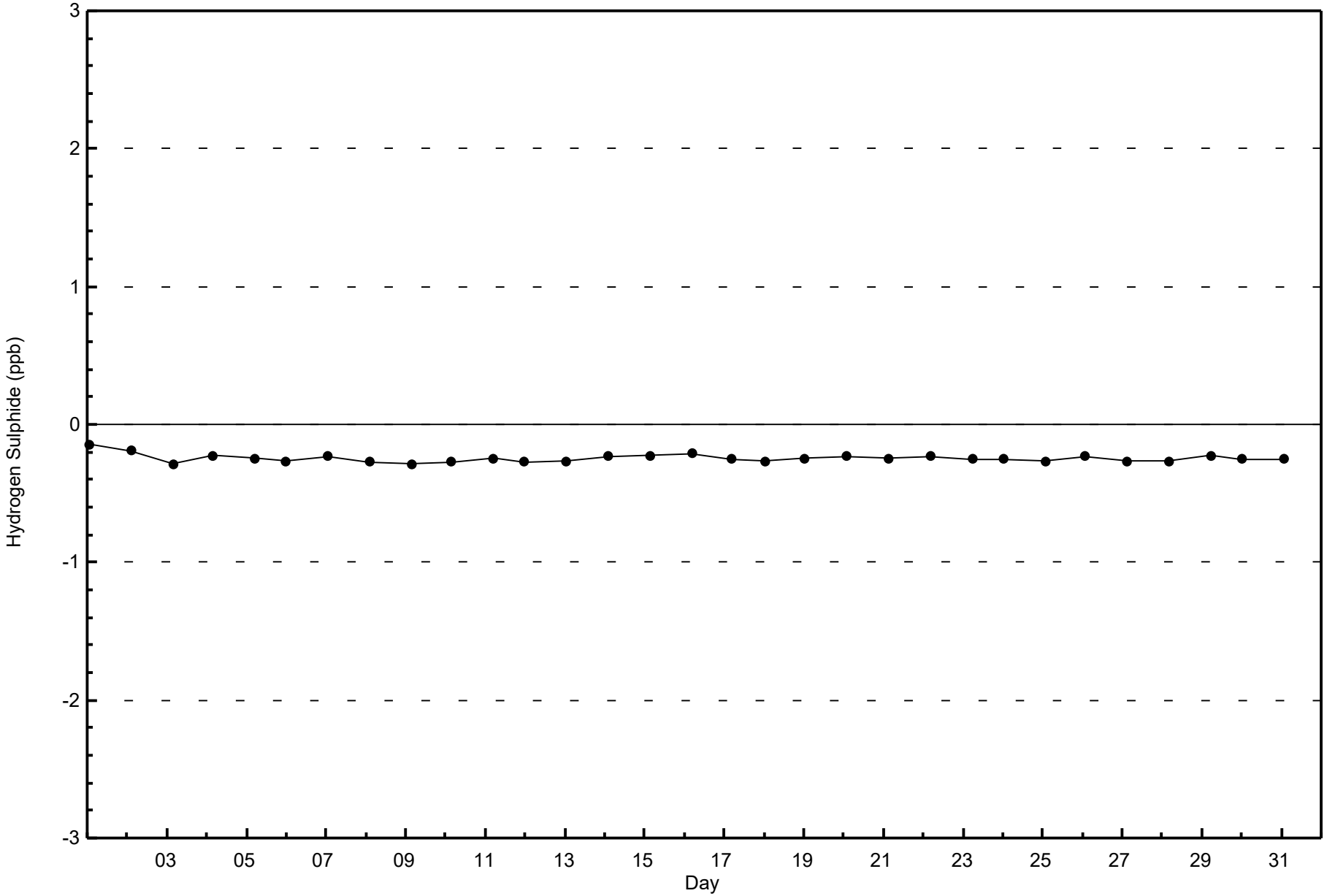
Total Number of Valid Hours: 701

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Lower Camp - March 2025

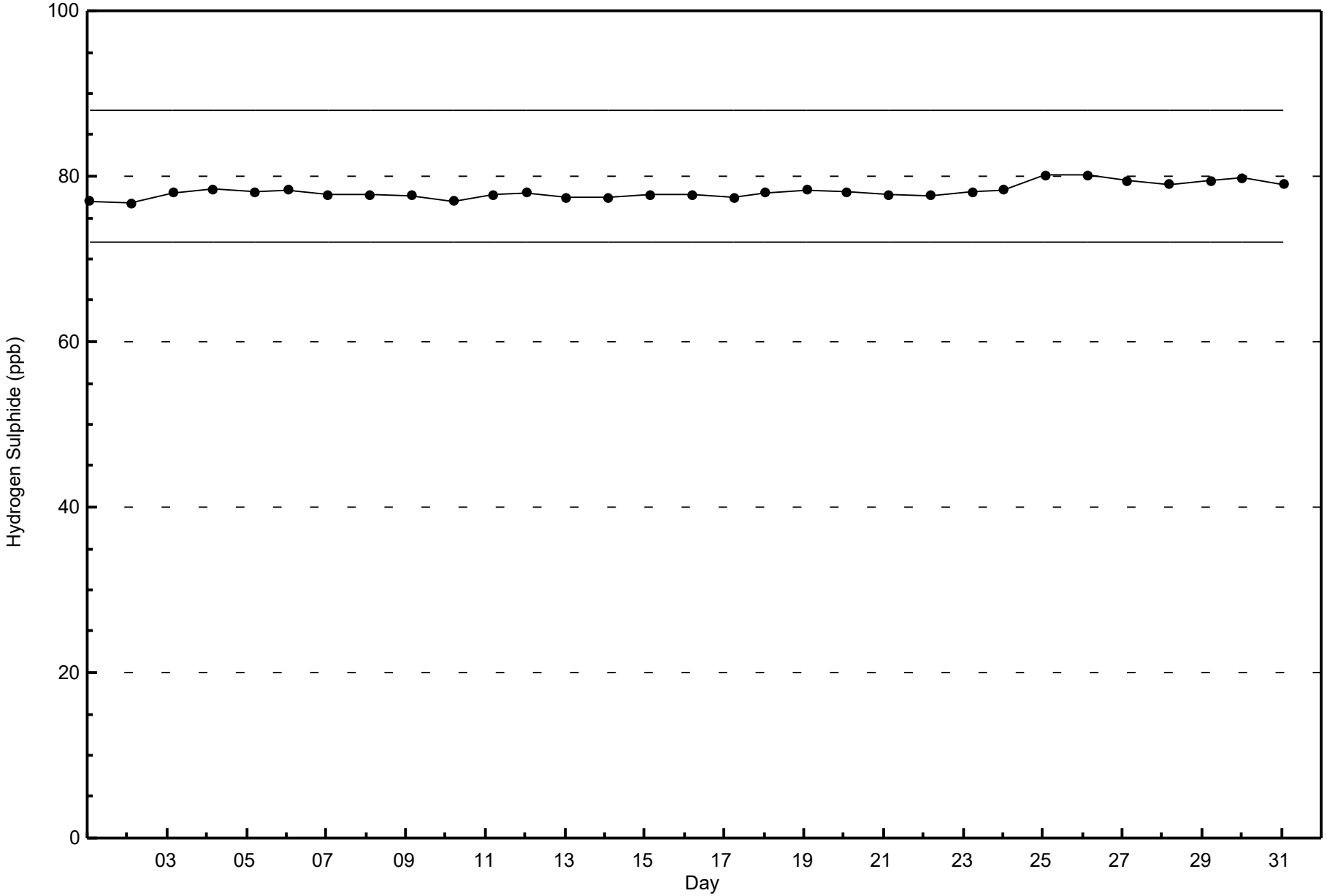


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Lower Camp - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Lower Camp - March 2025

Maximum Value: 4.0 ppm on Mar 2 11:00

Maximum Daily Average: 2.5 ppm on Mar 1

Minimum Value: 1.9 ppm on Mar 27 10:00

Minimum Daily Average: 1.9 ppm on Mar 27

Maximum Diurnal Average: 2.2 ppm at hour 11

Minimum Diurnal Average: 2.0 ppm at hour 6

Monthly Average: 2.08 ppm

Percentiles: P_1 = 1.9 P_{10} = 1.9 Q_1 = 1.9 Median = 2.0 Q_3 = 2.1 P_{90} = 2.3 P_{99} = 2.9

Hours in Service:	744
Hours of Data:	670
Hours of Missing Data:	74
Hours of Calibration:	39
Percent Operational Time:	95.3

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	Z	2.3	2.1	2.0	1.9	1.9	1.9	2.0	2.1	2.2	2.4	2.4	2.5	2.2	2.8	2.8	2.8	3.1	3.5	3.2	3.4	2.7	2.8	2.9	2.5	3.5
2-Mar	UO	Z	2.3	2.3	UO	UO	UO	2.3	2.8	3.5	4.0	UO	2.9	2.5	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	4.0
3-Mar	UO	UO	Z	UO	UO	UO	UO	1.9	1.9	2.1	2.1	2.1	2.0	C	C	C	C	C	3.0	2.5	2.4	2.5	2.5	2.4	--	3.0
4-Mar	2.3	2.3	2.3	Z	2.2	2.2	2.4	2.5	2.4	2.1	2.7	2.3	2.3	2.4	2.4	2.1	2.1	2.0	2.2	2.0	2.1	2.3	2.2	2.1	2.3	2.7
5-Mar	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	2.1	2.2	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.3
6-Mar	2.3	2.3	2.5	2.5	2.2	Z	2.1	2.2	2.3	2.3	2.2	2.1	2.0	2.0	2.1	2.1	2.3	2.5	2.5	2.7	2.9	2.7	2.6	2.6	2.3	2.9
7-Mar	Z	2.2	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.3	2.2	2.8	2.7	2.6	2.5	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.8
8-Mar	2.0	Z	2.1	2.1	2.1	2.1	2.1	2.3	2.6	2.5	2.6	2.6	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.1	2.6
9-Mar	1.9	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0
10-Mar	2.0	2.0	2.0	Z	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.2
11-Mar	2.1	2.1	2.1	2.1	Z	2.1	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1
12-Mar	1.9	1.9	1.9	1.9	1.9	Z	1.9	1.9	1.9	2.0	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.0	2.1	2.0	1.9	2.0	2.0	2.0	2.0	2.2
13-Mar	Z	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.3	2.4	2.3	2.3	2.5	2.2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.5
14-Mar	1.9	Z	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	2.0
15-Mar	2.1	2.1	Z	2.1	2.2	2.2	2.1	2.1	2.0	2.1	2.3	2.3	2.2	2.0	2.0	1.9	2.0	2.1	2.1	2.0	2.2	2.1	2.2	UO	2.1	2.3
16-Mar	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	2.1	2.0	2.2	2.2	2.2	2.0	2.1	--	2.2
17-Mar	2.3	2.2	2.2	2.1	Z	2.0	2.2	2.9	2.3	2.2	2.0	2.3	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.1	2.9
18-Mar	2.0	2.0	2.0	2.0	2.0	Z	2.7	2.7	2.7	2.7	2.3	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.1	2.2	2.2	2.2	2.7
19-Mar	Z	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.8	2.7	2.2	2.1	2.2	2.2	2.2	2.1	2.2	2.1	2.0	1.9	1.9	1.9	1.9	2.2	2.8
20-Mar	1.9	Z	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0
21-Mar	2.1	2.2	Z	2.0	1.9	1.9	2.0	2.0	1.9	2.0	2.0	2.0	1.9	2.0	1.9	2.0	2.1	2.1	2.2	2.2	2.5	2.4	2.0	2.0	2.0	2.5
22-Mar	2.0	2.0	2.0	Z	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.2	2.3	2.2	2.1	2.2	2.1	2.2	2.2	2.1	2.0	2.0	2.3
23-Mar	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.1	2.1	2.1	2.3	2.2	2.3	2.3	2.4	2.2	2.1	2.1	2.0	2.1	2.4
24-Mar	2.0	2.0	2.0	2.1	2.1	Z	2.1	2.1	2.0	1.9	2.0	2.0	2.0	2.1	2.2	2.2	2.2	2.2	2.0	1.9	1.9	2.0	2.0	1.9	2.0	2.2
25-Mar	Z	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	2.3	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.3
26-Mar	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
27-Mar	1.9	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
28-Mar	1.9	1.9	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
29-Mar	1.9	1.9	1.9	1.9	Z	1.9	1.9	2.0	2.3	2.3	2.4	2.2	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	2.0	2.4
30-Mar	1.9	1.9	1.9	1.9	2.0	Z	2.1	2.1	2.2	2.4	2.4	2.3	2.1	2.0	2.0	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.4
31-Mar	Z	2.0	2.0	2.0	1.9	2.0	1.9	2.0	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.3	2.3	2.1	2.0	2.0	2.0	2.0	2.3
	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	Diurnal Average	
	2.3	2.3	2.5	2.5	2.2	2.2	2.7	2.9	2.8	3.5	4.0	2.8	2.9	2.6	2.8	2.8	2.8	3.1	3.5	3.2	3.4	2.7	2.8	2.9	Diurnal Maximum	

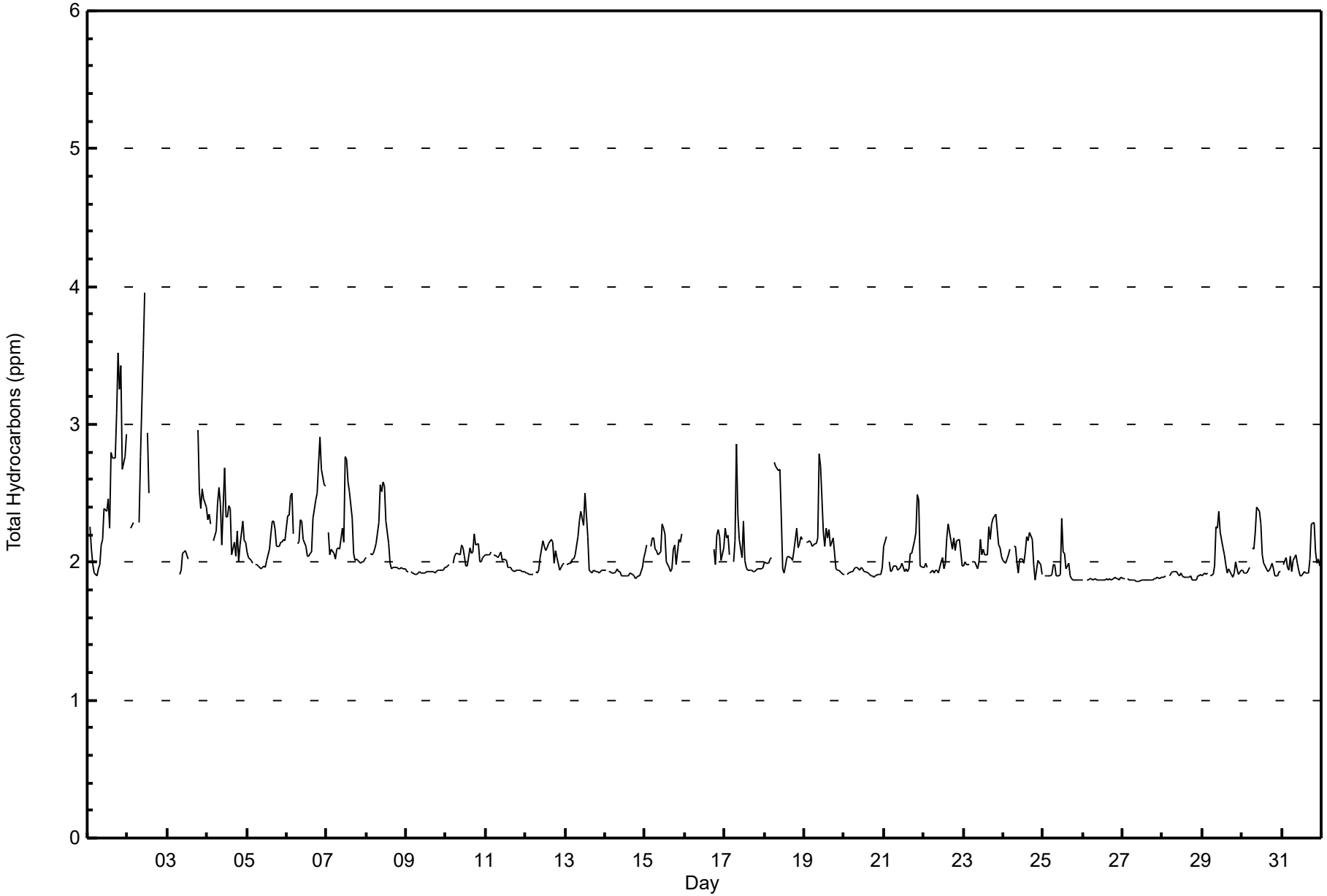
Z - zerospan C - Calibration UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Lower Camp - March 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	402	60.00	60.00
2.1 - 3.0	262	39.10	99.10
3.1 - 10.0	6	0.90	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 670

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Lower Camp - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	67	37	3	1	5	36	39	7	0	0	3	5	13	37	63	86	402
2.1 - 3.0	14	6	0	2	3	25	64	10	1	1	3	10	12	42	42	21	256
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	1	0	5
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	81	43	3	3	8	61	103	17	1	1	7	15	26	81	106	107	663

Total Number of Valid Hours: 663

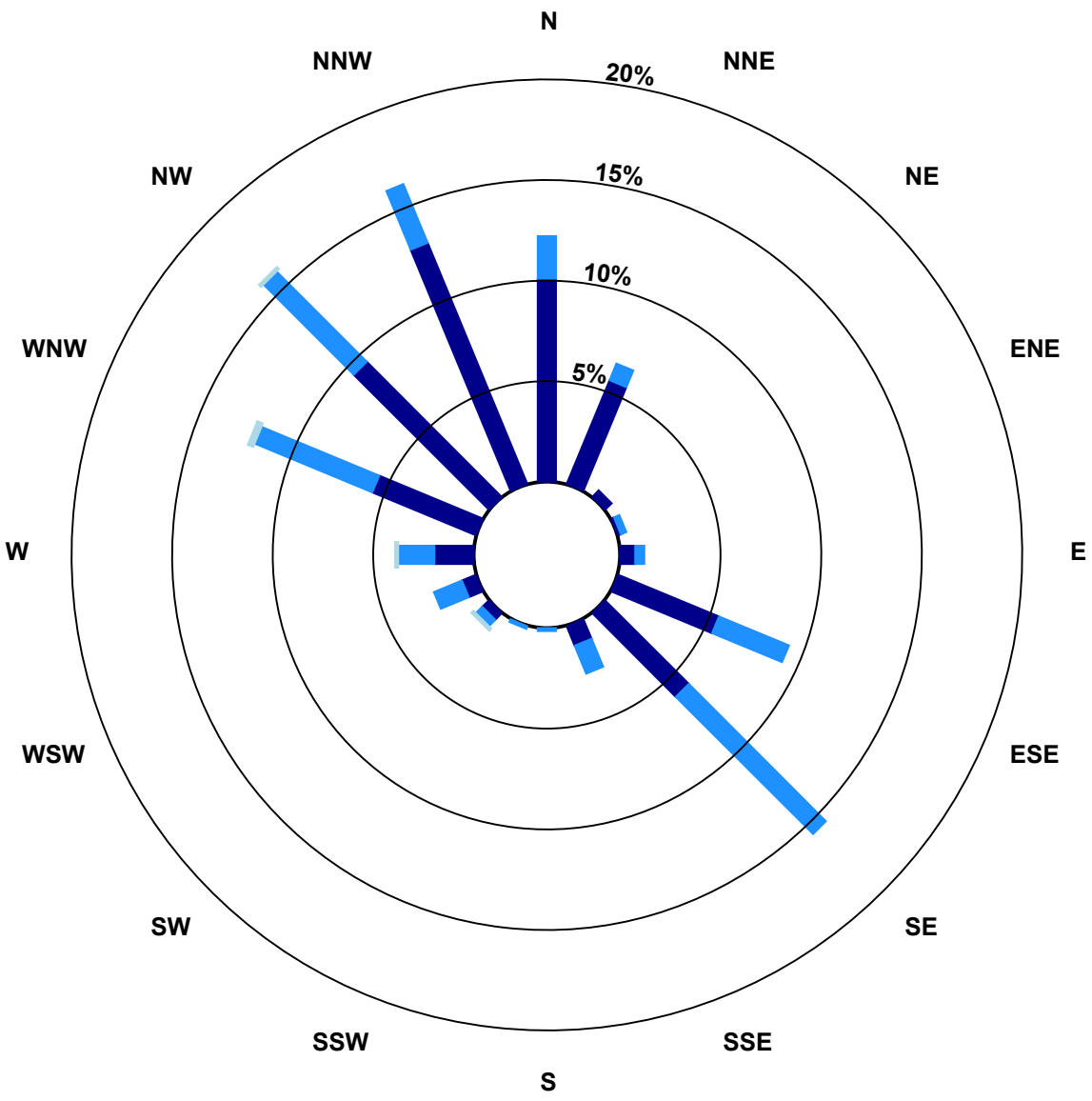
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Total Hydrocarbons (THC) - ppm

Lower Camp



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

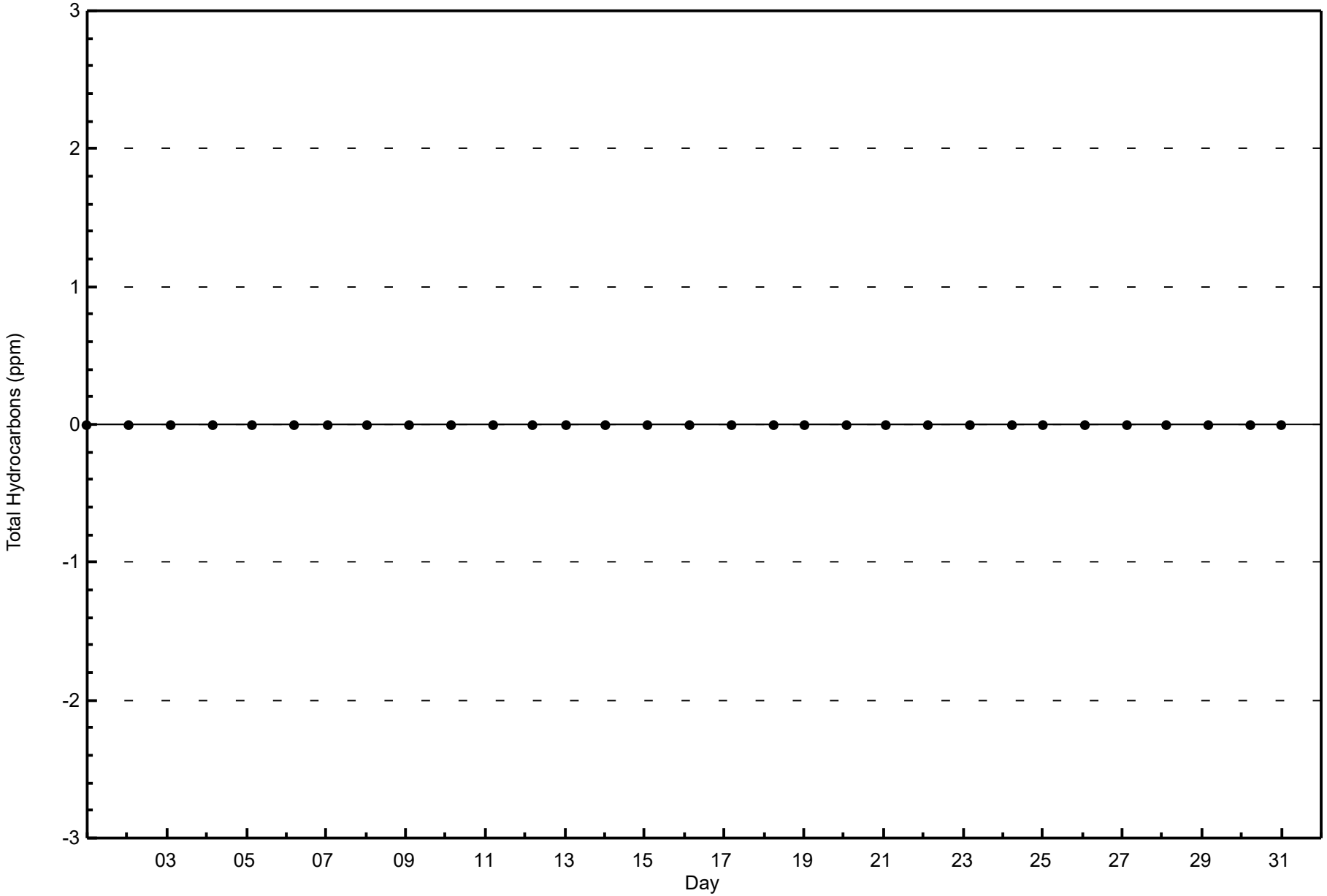
Total Number of Valid Hours: 663

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Lower Camp - March 2025

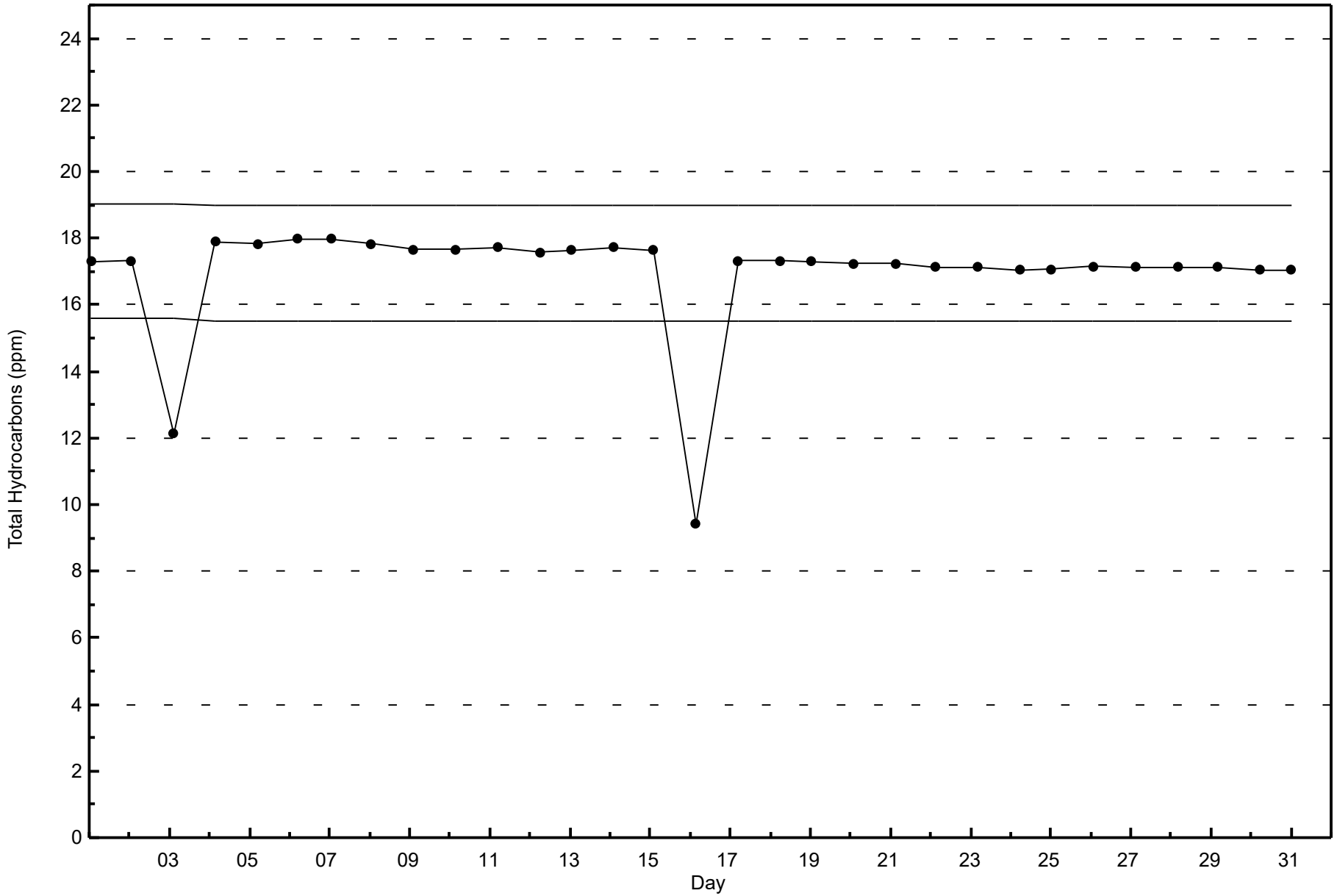


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Lower Camp - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Lower Camp - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.7 ppm on Mar 2 11:00 Maximum Daily Average: 2.4 ppm on Mar 1

Minimum Value: 1.9 ppm on Mar 27 10:00 Minimum Daily Average: 1.9 ppm on Mar 27
Maximum Diurnal Average: 2.2 ppm at hour 11 Minimum Diurnal Average: 2.0 ppm at hour 6
Monthly Average: 2.05 ppm Percentiles: P_1 = 1.9 P_{10} = 1.9 Q_1 = 1.9 Median = 2.0 Q_3 = 2.1 P_{90} = 2.3 P_{99} = 2.8

Hours in Service:	744
Hours of Data:	670
Hours of Missing Data:	74
Hours of Calibration:	39
Percent Operational Time:	95.3

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	Z	2.2	2.0	2.0	1.9	1.9	1.9	2.0	2.1	2.1	2.3	2.3	2.4	2.2	2.7	2.7	2.7	2.9	3.4	3.0	3.3	2.6	2.6	2.8	2.4	3.4
2-Mar	UO	Z	2.2	2.2	UO	UO	UO	2.2	2.7	3.4	3.7	UO	2.7	2.4	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	3.7
3-Mar	UO	UO	Z	UO	UO	UO	UO	1.9	1.9	2.0	2.0	2.0	2.0	C	C	C	C	C	2.8	2.4	2.3	2.4	2.4	2.3	--	2.8
4-Mar	2.2	2.3	2.2	Z	2.1	2.2	2.4	2.5	2.4	2.1	2.6	2.3	2.3	2.3	2.3	2.0	2.1	2.0	2.2	2.0	2.1	2.2	2.1	2.1	2.2	2.6
5-Mar	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	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
6-Mar	2.3	2.3	2.4	2.4	2.2	Z	2.1	2.1	2.3	2.3	2.2	2.1	2.0	2.0	2.1	2.1	2.3	2.4	2.4	2.6	2.8	2.6	2.5	2.5	2.3	2.8
7-Mar	Z	2.2	2.0	2.1	2.1	2.0	2.1	2.1	2.1	2.2	2.1	2.6	2.6	2.4	2.4	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.6
8-Mar	2.0	Z	2.1	2.1	2.1	2.1	2.1	2.2	2.4	2.4	2.4	2.4	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.1	2.4
9-Mar	1.9	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0
10-Mar	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1
11-Mar	2.0	2.0	2.0	2.1	Z	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1
12-Mar	1.9	1.9	1.9	1.9	1.9	Z	1.9	1.9	1.9	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.1
13-Mar	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.3	2.3	2.2	2.3	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.3
14-Mar	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0
15-Mar	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	2.0	1.9	1.9	1.9	2.1	2.1	2.0	2.1	2.1	2.1	UO	2.1	2.2
16-Mar	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	2.1	2.0	2.1	2.1	2.1	2.0	2.1	--	2.1
17-Mar	2.1	2.1	2.2	2.0	Z	2.0	2.2	2.8	2.3	2.2	2.0	2.2	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.1	2.8
18-Mar	2.0	2.0	2.0	2.0	2.0	Z	2.5	2.5	2.6	2.6	2.3	1.9	1.9	2.0	2.0	2.0	2.0	1.9	2.0	2.2	2.1	2.1	2.2	2.2	2.1	2.6
19-Mar	Z	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.6	2.7	2.2	2.1	2.2	2.2	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	2.1	2.7
20-Mar	1.9	Z	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0
21-Mar	2.1	2.1	Z	2.0	1.9	1.9	2.0	2.0	1.9	2.0	2.0	2.0	1.9	2.0	1.9	2.0	2.1	2.1	2.1	2.0	2.1	2.4	2.0	2.0	2.0	2.4
22-Mar	2.0	2.0	2.0	Z	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.2	2.3	2.2	2.1	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.3
23-Mar	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.2	2.0	2.1	2.1	2.2	2.2	2.1	2.1	2.0	2.1	2.2
24-Mar	2.0	2.0	2.0	2.1	2.1	Z	2.1	2.1	2.0	1.9	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.2	2.0	1.9	1.9	2.0	2.0	1.9	2.0	2.2
25-Mar	Z	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	2.3	2.1	2.1	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.3
26-Mar	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
27-Mar	1.9	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
28-Mar	1.9	1.9	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
29-Mar	1.9	1.9	1.9	1.9	Z	1.9	1.9	2.0	2.3	2.2	2.3	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	2.0	2.3
30-Mar	1.9	1.9	1.9	1.9	2.0	Z	2.1	2.1	2.2	2.4	2.4	2.3	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.4
31-Mar	Z	2.0	2.0	1.9	1.9	2.0	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.2
	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.0	Diurnal Average	
	2.3	2.3	2.4	2.4	2.2	2.2	2.5	2.8	2.7	3.4	3.7	2.6	2.7	2.4	2.7	2.7	2.7	2.9	3.4	3.0	3.3	2.6	2.6	2.8	Diurnal Maximum	

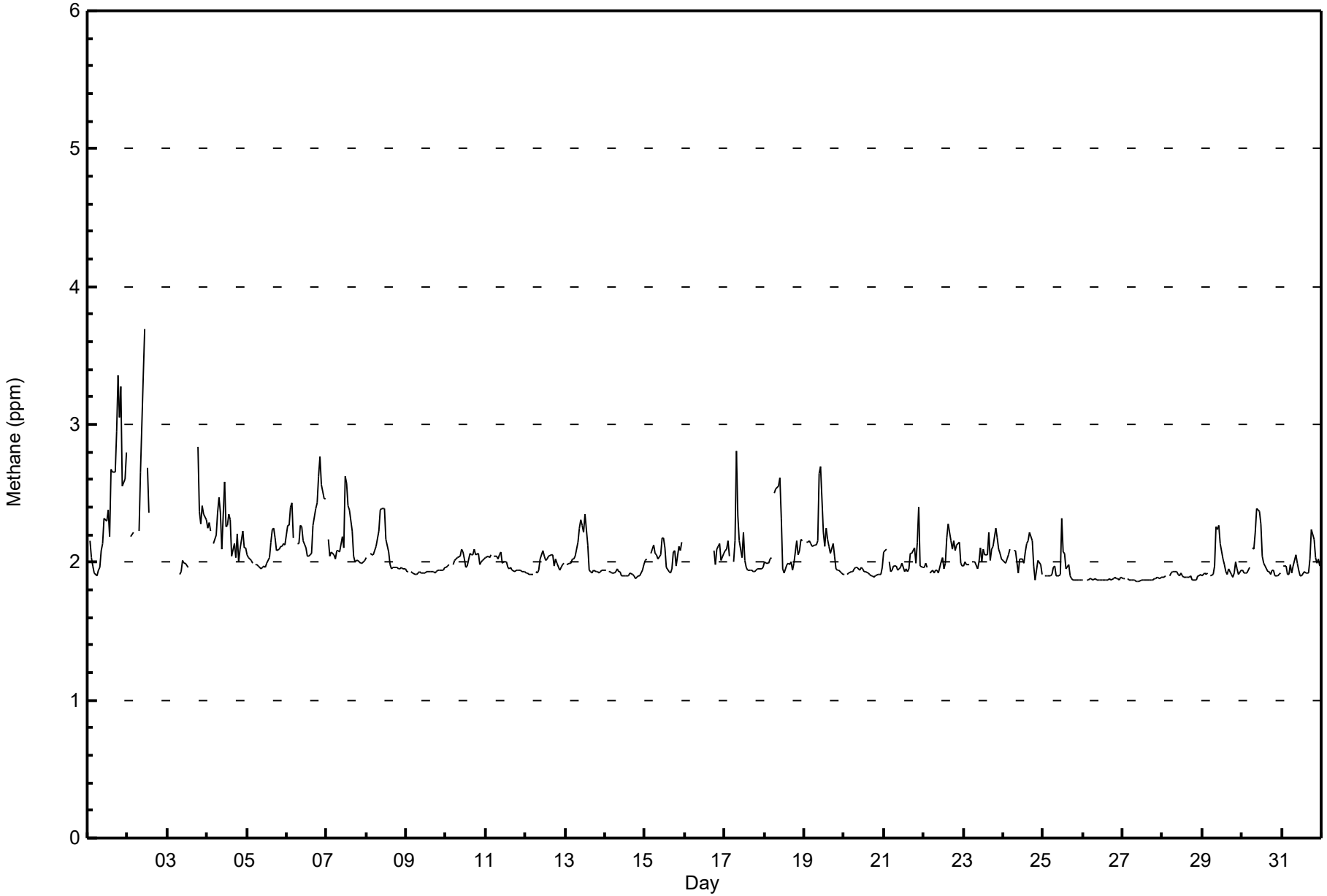
Z - zerospan C - Calibration UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Lower Camp - March 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	439	65.52	65.52
2.1 - 3.0	227	33.88	99.40
3.1 - 10.0	4	0.60	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 670

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Lower Camp - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	70	37	3	1	5	39	46	8	0	0	4	10	15	40	71	90	439
2.1 - 3.0	11	6	0	2	3	22	57	9	1	1	3	5	10	39	35	17	221
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	81	43	3	3	8	61	103	17	1	1	7	15	26	81	106	107	663

Total Number of Valid Hours: 663

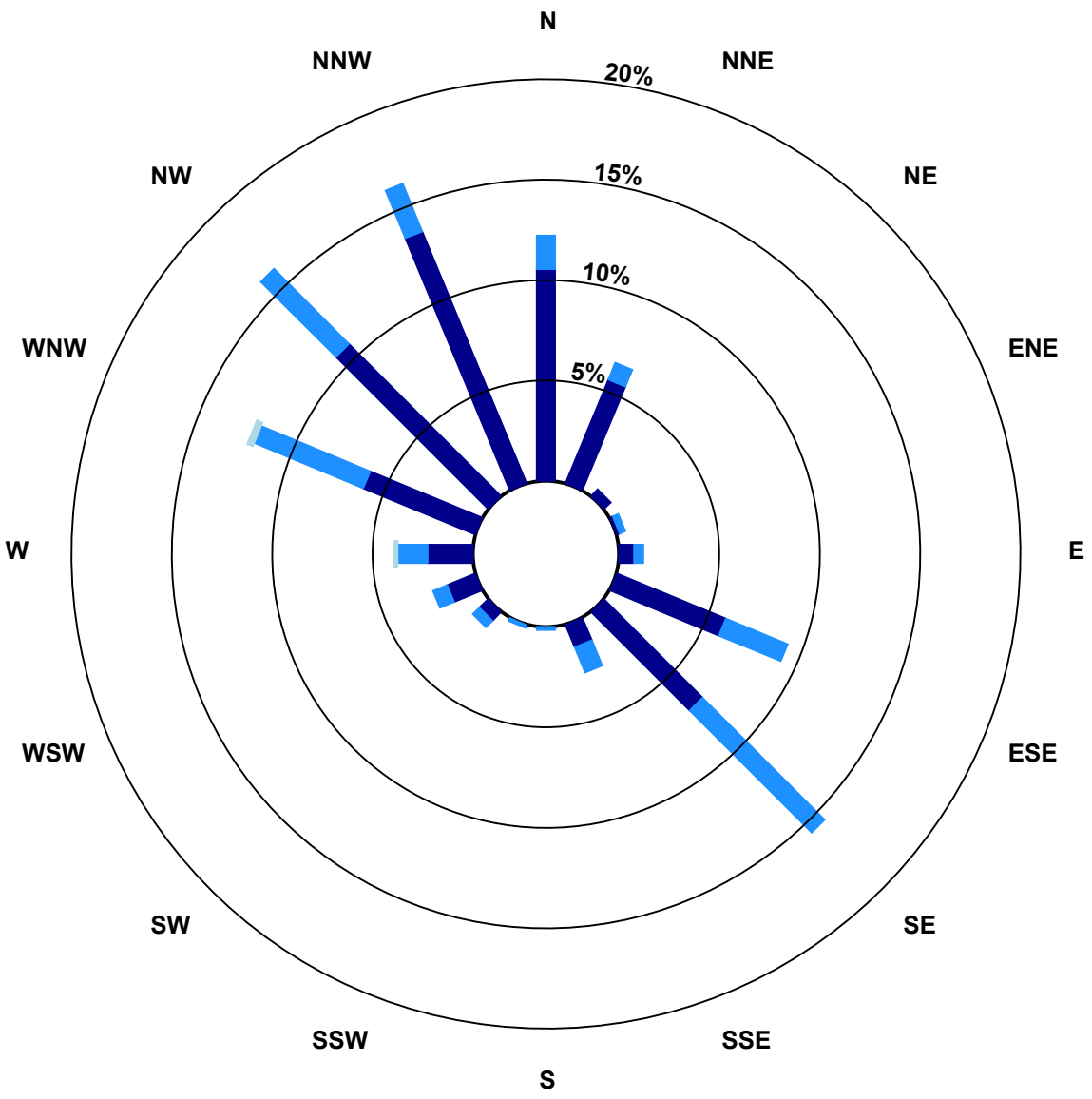
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Methane (CH_4) - ppm

Lower Camp



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

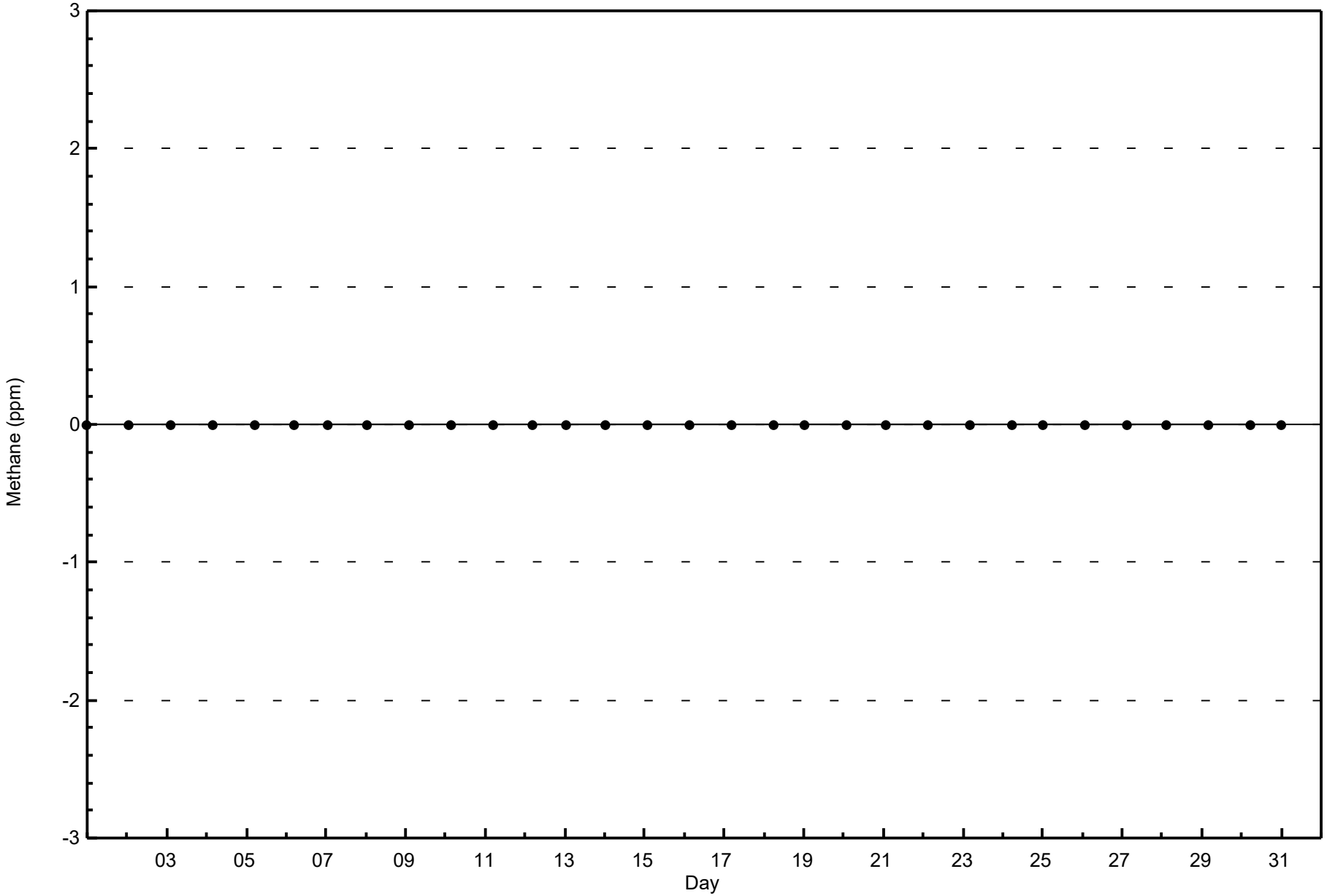
Total Number of Valid Hours: 663

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Lower Camp - March 2025

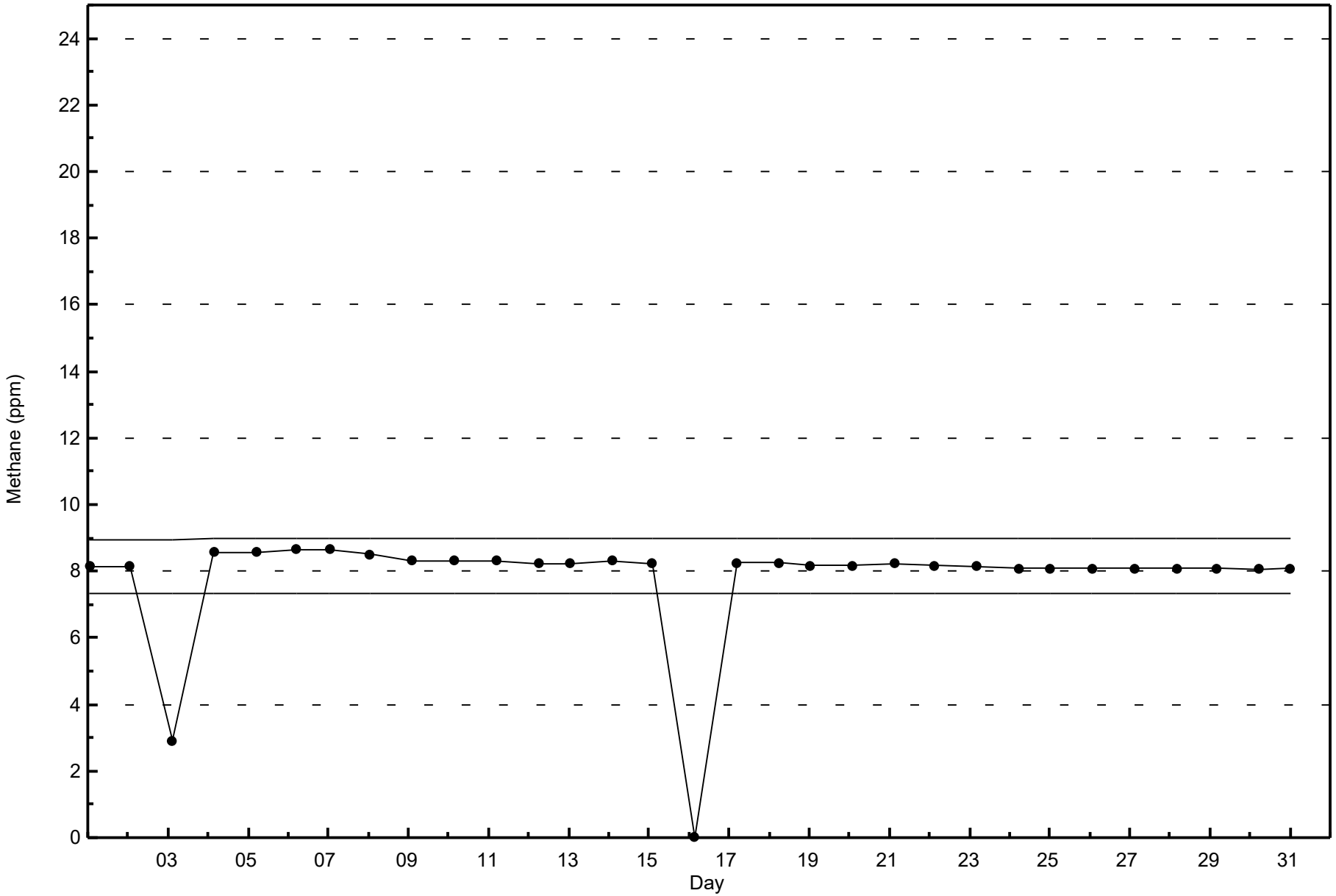


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Lower Camp - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Lower Camp - March 2025

Maximum Value: 0.347 ppm on Mar 21 21:00

Maximum Daily Average: 0.084 ppm on Mar 1

Minimum Value: 0.000 ppm on Mar 8 18:00

Minimum Daily Average: 0.000 ppm on Mar 20

Maximum Diurnal Average: 0.042 ppm at hour 20

Minimum Diurnal Average: 0.008 ppm at hour 5

Monthly Average: 0.026 ppm

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

Hours in Service:	744
Hours of Data:	670
Hours of Missing Data:	74
Hours of Calibration:	39
Percent Operational Time:	95.3

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	Z	0.107	0.055	0.014	0.001	0.002	0.006	0.015	0.044	0.031	0.066	0.067	0.077	0.064	0.124	0.103	0.098	0.134	0.160	0.203	0.153	0.121	0.162	0.135	0.084	0.203
2-Mar	UO	Z	0.066	0.068	UO	UO	UO	0.059	0.107	0.187	0.266	UO	0.257	0.144	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	0.266
3-Mar	UO	UO	Z	UO	UO	UO	UO	0.001	0.008	0.059	0.077	0.095	0.066	C	C	C	C	C	0.119	0.145	0.119	0.119	0.104	0.083	--	0.145
4-Mar	0.064	0.055	0.047	Z	0.021	0.031	0.070	0.075	0.061	0.028	0.099	0.072	0.066	0.065	0.077	0.013	0.009	0.007	0.027	0.003	0.023	0.071	0.050	0.035	0.046	0.099
5-Mar	0.017	0.005	0.001	0.001	Z	0.000	0.001	0.000	0.000	0.000	0.000	0.002	0.024	0.063	0.060	0.066	0.050	0.064	0.031	0.024	0.034	0.028	0.034	0.037	0.024	0.066
6-Mar	0.072	0.069	0.080	0.075	0.029	Z	0.006	0.010	0.040	0.044	0.012	0.013	0.003	0.005	0.005	0.008	0.052	0.062	0.072	0.090	0.147	0.112	0.102	0.094	0.052	0.147
7-Mar	Z	0.051	0.011	0.018	0.010	0.002	0.013	0.020	0.026	0.067	0.043	0.144	0.165	0.167	0.134	0.088	0.020	0.002	0.004	0.002	0.003	0.004	0.003	0.009	0.044	0.167
8-Mar	0.008	Z	0.005	0.004	0.003	0.009	0.022	0.059	0.178	0.124	0.194	0.160	0.136	0.058	0.012	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.042	0.194
9-Mar	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
10-Mar	0.000	0.000	0.001	Z	0.004	0.030	0.041	0.030	0.020	0.038	0.032	0.020	0.006	0.005	0.043	0.019	0.025	0.112	0.069	0.075	0.011	0.008	0.023	0.022	0.028	0.112
11-Mar	0.021	0.017	0.016	0.015	Z	0.004	0.004	0.005	0.004	0.005	0.017	0.017	0.011	0.001	0.000	0.000	0.001	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.006	0.021
12-Mar	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.019	0.074	0.068	0.071	0.081	0.097	0.111	0.092	0.025	0.060	0.040	0.002	0.001	0.001	0.000	0.032	0.111
13-Mar	Z	0.000	0.001	0.002	0.001	0.002	0.012	0.040	0.051	0.056	0.047	0.054	0.155	0.056	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.021	0.155
14-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.007	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	0.021	0.055	0.004	0.055
15-Mar	0.068	0.100	Z	0.056	0.078	0.057	0.036	0.032	0.028	0.020	0.101	0.081	0.099	0.044	0.023	0.006	0.008	0.024	0.038	0.012	0.055	0.053	0.061	UO	0.049	0.101
16-Mar	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	0.013	0.004	0.101	0.128	0.046	0.000	0.036	--	0.128
17-Mar	0.168	0.075	0.032	0.003	Z	0.000	0.002	0.052	0.011	0.011	0.001	0.074	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.019	0.168
18-Mar	0.000	0.001	0.000	0.000	0.000	Z	0.223	0.155	0.111	0.062	0.016	0.002	0.004	0.043	0.052	0.049	0.034	0.065	0.097	0.091	0.057	0.046	0.028	0.012	0.050	0.223
19-Mar	Z	0.001	0.001	0.005	0.007	0.005	0.009	0.013	0.014	0.136	0.001	0.000	0.000	0.000	0.009	0.123	0.052	0.039	0.015	0.000	0.000	0.000	0.000	0.000	0.019	0.136
20-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.043	0.092	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.056	0.224	0.347	0.053	0.000	0.000	0.035	0.347
22-Mar	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	0.021	0.003	0.027	0.027	0.073	0.000	0.007	0.073
23-Mar	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.005	0.059	0.047	0.004	0.000	0.000	0.041	0.149	0.174	0.198	0.108	0.058	0.033	0.036	0.018	0.040	0.198
24-Mar	0.002	0.000	0.000	0.000	0.001	Z	0.030	0.030	0.004	0.000	0.000	0.000	0.000	0.001	0.049	0.000	0.003	0.008	0.006	0.000	0.000	0.003	0.000	0.000	0.006	0.049
25-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.022	0.011	0.000	0.000	0.000	0.000	0.000	0.001	0.003	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.022
26-Mar	0.000	Z	0.000	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	0.000	0.000	0.002
27-Mar	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	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-Mar	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.003	0.017	0.107	0.090	0.074	0.077	0.051	0.007	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.019	0.107
30-Mar	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.010	0.001	0.002	0.006	0.000	0.003	0.000	0.018	0.055	0.052	0.006	0.000	0.000	0.018	0.002	0.008	0.055
31-Mar	Z	0.004	0.063	0.049	0.024	0.066	0.009	0.042	0.002	0.000	0.000	0.000	0.000	0.008	0.001	0.000	0.000	0.003	0.033	0.129	0.042	0.000	0.000	0.000	0.021	0.129
	0.021	0.024	0.015	0.012	0.008	0.009	0.018	0.022	0.024	0.031	0.040	0.035	0.041	0.030	0.027	0.023	0.022	0.027	0.035	0.042	0.040	0.024	0.024	0.019	Diurnal Average	
	0.168	0.107	0.080	0.075	0.078	0.066	0.223	0.155	0.178	0.187	0.266	0.160	0.257	0.167	0.134	0.123	0.149	0.174	0.198	0.224	0.347	0.121	0.162	0.135	Diurnal Maximum	

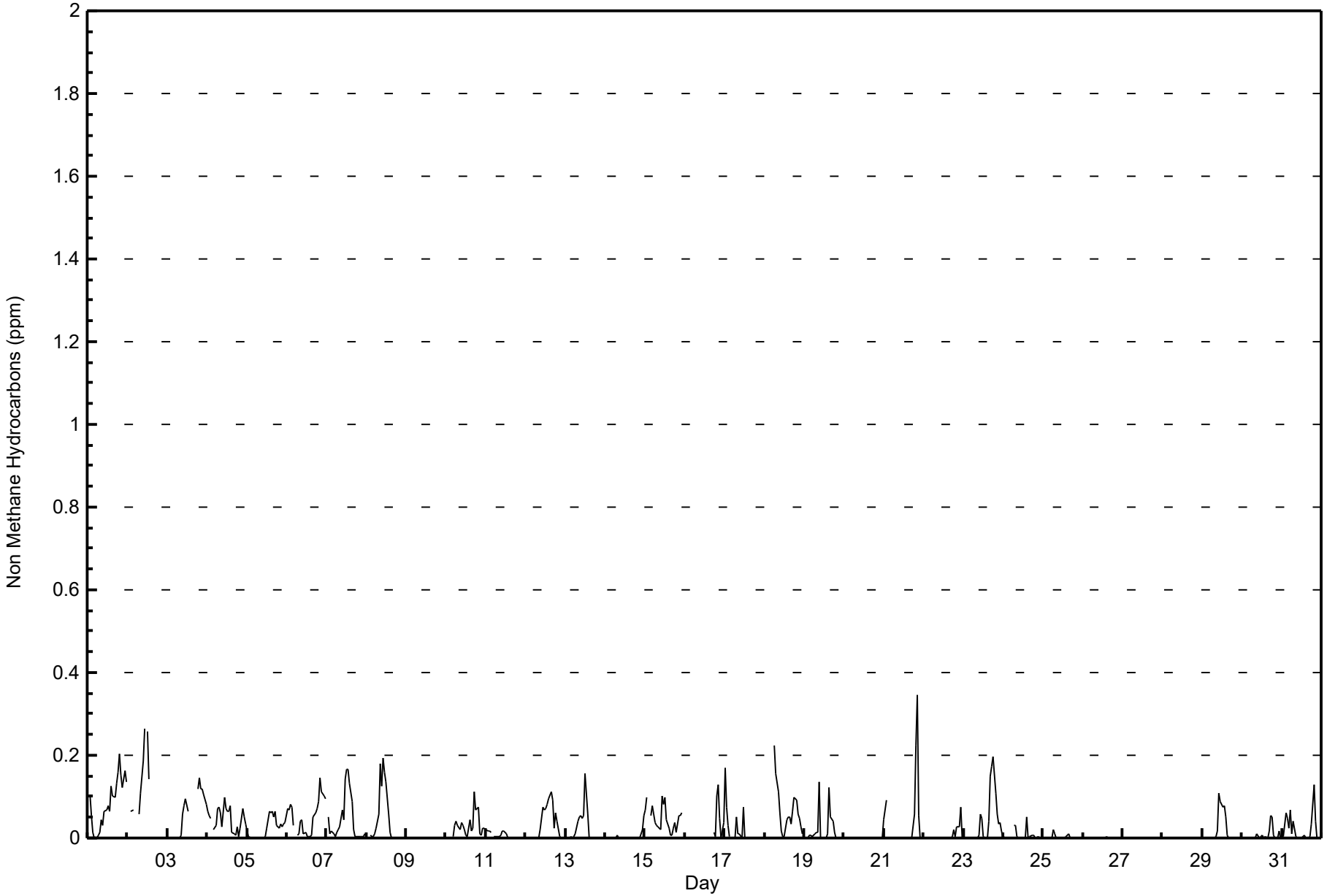
Z - zerospan C - Calibration UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Lower Camp - March 2025



Non Methane Hydrocarbons (NMHC) - ppm
Lower Camp - March 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	389	58.06	58.06
0.006 - 0.05	152	22.69	80.75
0.06 - 0.1	109	16.27	97.02
> 0.1	20	2.99	100.00

Total Number of Valid Hours: 670

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Lower Camp - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.005	71	39	3	1	4	29	46	6	0	0	2	2	14	32	60	80	389
0.006 - 0.05	5	3	0	1	3	17	31	5	0	1	4	3	5	28	27	19	152
0.06 - 0.1	5	0	0	1	1	14	24	4	1	0	1	10	5	17	14	6	103
> 0.1	0	1	0	0	0	1	2	2	0	0	0	0	2	4	5	2	19
Totals	81	43	3	3	8	61	103	17	1	1	7	15	26	81	106	107	663

Total Number of Valid Hours: 663

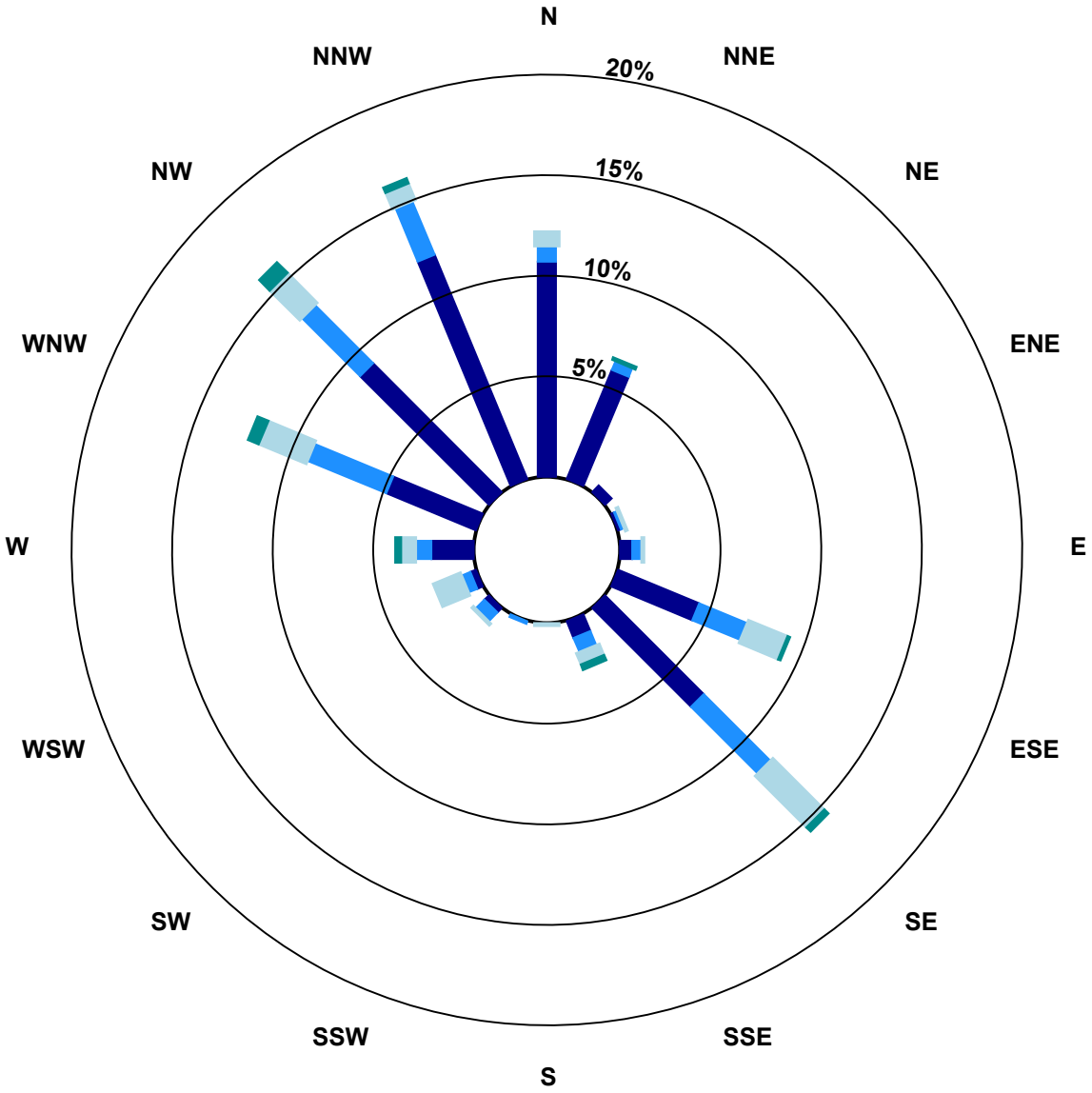
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Non Methane Hydrocarbons (NMHC) - ppm

Lower Camp



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

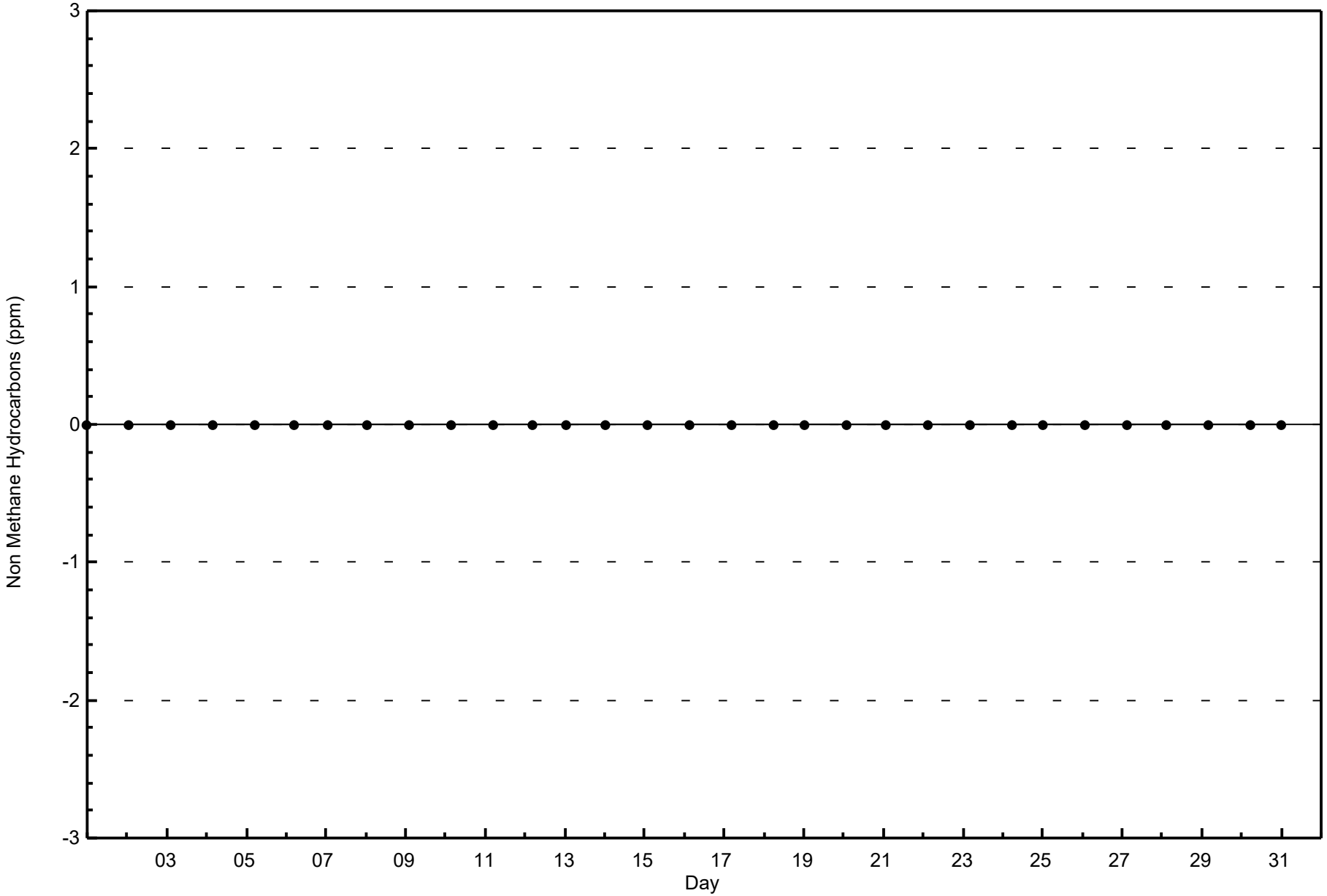
Total Number of Valid Hours: 663

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Lower Camp - March 2025

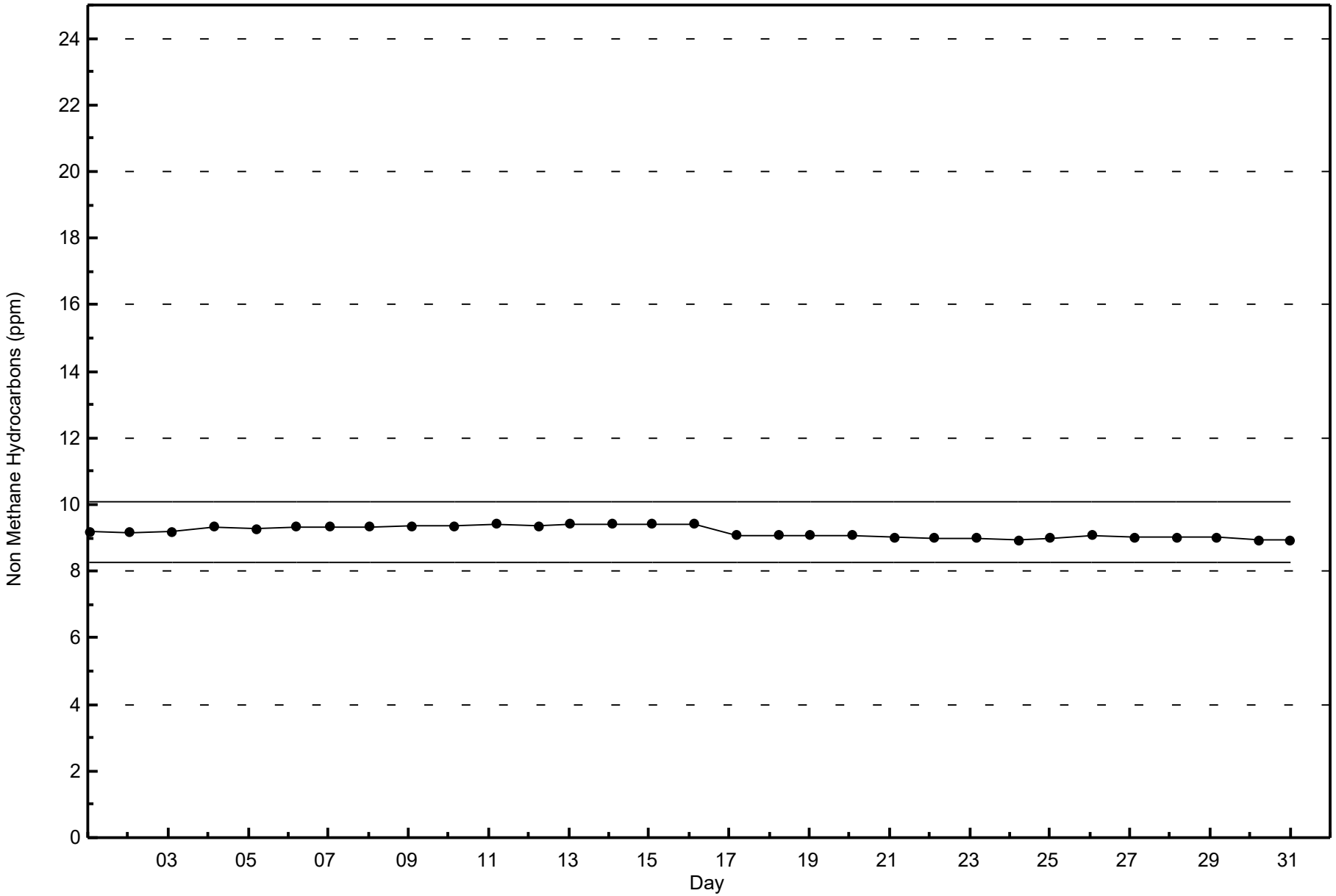


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Lower Camp - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

Lower Camp - March 2025

Maximum Value: 9.8 C on Mar 25 15:00

Maximum Daily Average: 1.7 C on Mar 25

Minimum Value: -25.8 C on Mar 13 06:00

Minimum Daily Average: -20.2 C on Mar 9

Maximum Diurnal Average: -2.1 C at hour 17

Minimum Diurnal Average: -12.7 C at hour 7

Monthly Average: -7.56 C

Percentiles: P_1 = -23.0 P_{10} = -17.8 Q_1 = -13.1 Median = -7.0 Q_3 = -2.0 P_{90} = 2.0 P_{99} = 7.1

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

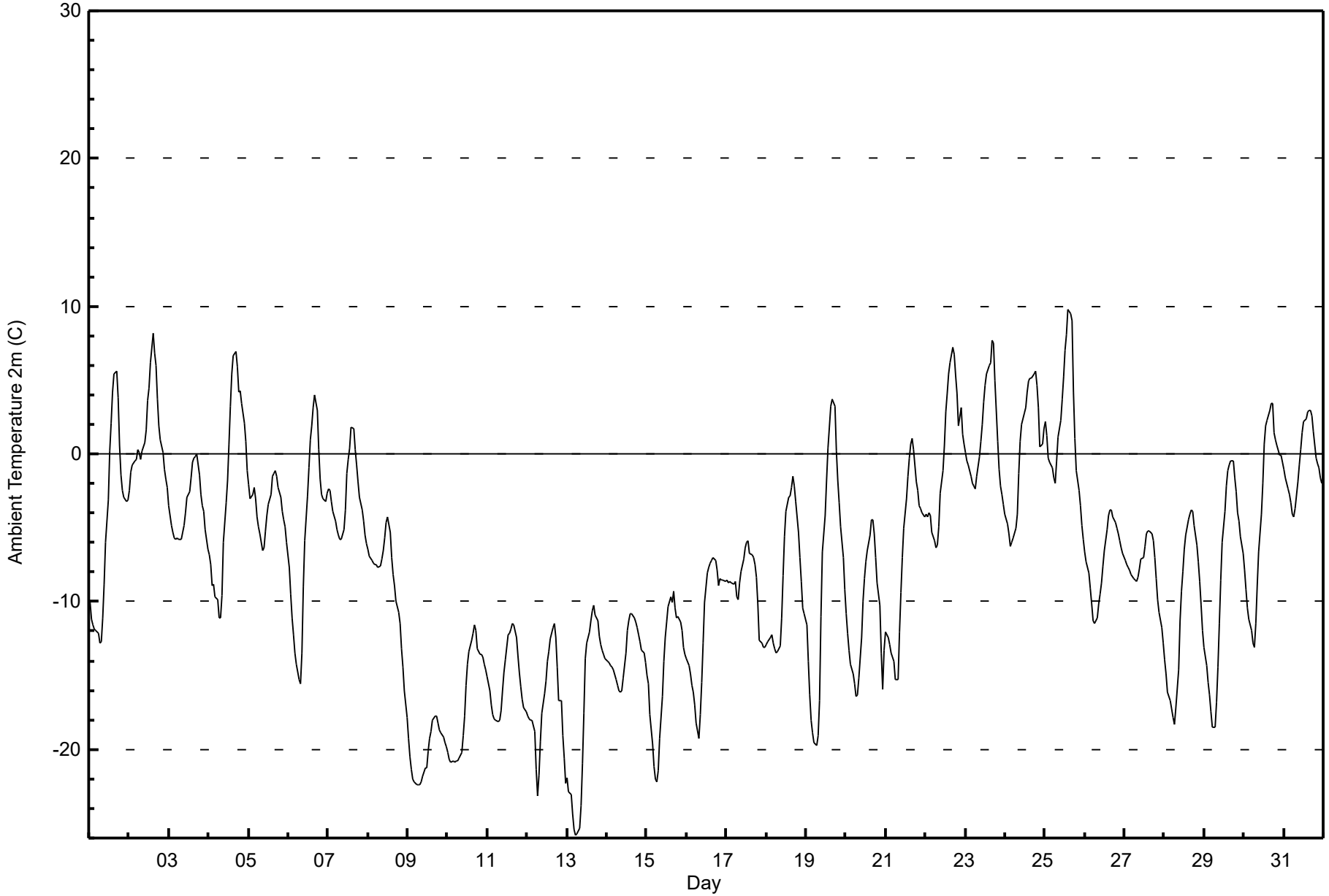
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-10.0	-11.2	-11.6	-11.8	-12.0	-12.2	-12.8	-12.7	-11.1	-8.8	-5.9	-3.1	0.2	2.1	4.2	5.4	5.6	3.8	0.6	-1.4	-2.4	-3.0	-3.2	-3.1	-4.8	5.6
2-Mar	-2.5	-1.2	-0.8	-0.5	-0.4	0.3	0.1	-0.4	0.2	0.7	1.6	3.6	4.5	6.2	8.1	6.8	6.0	3.7	1.9	1.0	0.1	-1.0	-1.7	-2.2	1.4	8.1
3-Mar	-3.5	-4.8	-5.3	-5.7	-5.8	-5.7	-5.8	-5.7	-5.3	-4.8	-4.0	-2.9	-2.6	-1.6	-0.6	-0.2	-0.2	0.0	-1.4	-2.8	-3.5	-3.9	-5.1	-6.5	-3.7	0.0
4-Mar	-6.8	-7.5	-8.9	-8.8	-9.7	-9.9	-11.1	-11.1	-9.6	-6.0	-3.3	-1.8	0.7	3.3	5.5	6.7	6.9	5.9	4.2	4.3	3.4	2.0	0.9	-1.1	-2.2	6.9
5-Mar	-2.1	-3.0	-2.7	-2.2	-3.0	-4.3	-4.9	-5.4	-6.6	-6.3	-5.2	-4.2	-3.5	-2.7	-1.6	-1.3	-1.1	-1.5	-2.3	-2.9	-3.8	-4.4	-4.9	-6.0	-3.6	-1.1
6-Mar	-7.6	-9.5	-11.1	-12.3	-13.5	-14.2	-15.2	-15.5	-13.5	-9.1	-5.9	-2.9	-1.0	1.0	1.9	3.2	4.0	2.9	0.3	-1.7	-2.8	-3.1	-3.2	-2.7	-5.5	4.0
7-Mar	-2.4	-2.5	-3.2	-3.9	-4.5	-5.1	-5.5	-5.8	-5.8	-5.2	-3.8	-1.3	-0.3	0.4	1.9	1.7	0.3	-0.8	-1.9	-2.9	-3.8	-4.6	-5.5	-6.0	-2.9	1.9
8-Mar	-6.4	-6.9	-7.2	-7.4	-7.5	-7.5	-7.7	-7.6	-7.1	-6.6	-5.7	-4.7	-4.3	-5.3	-7.0	-8.1	-8.9	-10.0	-10.8	-11.5	-13.1	-14.5	-16.0	-17.9	-8.7	-4.3
9-Mar	-19.3	-20.5	-21.3	-22.0	-22.2	-22.4	-22.4	-22.4	-22.2	-21.8	-21.2	-21.2	-20.1	-19.3	-18.8	-18.0	-17.8	-17.8	-18.2	-18.7	-18.9	-19.2	-19.6	-19.8	-20.2	-17.8
10-Mar	-20.2	-20.6	-20.8	-20.8	-20.8	-20.8	-20.8	-20.6	-20.2	-19.1	-17.7	-15.7	-14.2	-13.4	-12.6	-12.1	-11.6	-11.9	-13.2	-13.6	-13.5	-13.8	-14.3	-14.6	-16.5	-11.6
11-Mar	-15.1	-16.0	-17.0	-17.6	-17.9	-18.0	-18.2	-18.0	-17.4	-16.1	-14.8	-13.9	-12.3	-12.2	-11.8	-11.5	-11.6	-12.5	-13.7	-14.8	-15.8	-16.6	-17.2	-17.5	-15.3	-11.5
12-Mar	-17.7	-17.9	-18.0	-18.1	-18.8	-21.3	-23.1	-21.7	-19.4	-17.5	-16.2	-15.3	-14.0	-13.3	-12.5	-11.8	-11.5	-12.4	-14.4	-16.7	-16.7	-19.1	-20.6	-22.3	-17.1	-11.5
13-Mar	-22.0	-22.9	-23.0	-24.4	-25.4	-25.8	-25.7	-25.3	-23.8	-21.0	-17.5	-13.9	-12.8	-12.1	-11.3	-10.6	-10.3	-10.9	-11.3	-12.3	-12.9	-13.3	-13.6	-13.9	-17.3	-10.3
14-Mar	-14.0	-14.1	-14.3	-14.4	-14.7	-15.3	-15.7	-16.0	-16.1	-16.1	-15.2	-13.4	-12.0	-11.3	-10.8	-10.8	-11.1	-11.4	-11.8	-12.3	-12.7	-13.3	-13.4	-14.1	-13.5	-10.8
15-Mar	-15.0	-15.6	-17.6	-19.7	-21.2	-22.0	-22.2	-21.4	-19.2	-16.4	-14.1	-12.4	-11.4	-10.4	-9.7	-10.1	-9.3	-10.4	-11.1	-11.0	-11.4	-12.0	-13.1	-13.5	-14.6	-9.3
16-Mar	-13.8	-14.3	-14.9	-15.6	-16.1	-16.9	-18.2	-19.3	-17.6	-15.5	-12.8	-10.1	-8.1	-7.7	-7.4	-7.2	-7.0	-7.2	-7.8	-8.9	-8.5	-8.5	-8.5	-8.6	-11.7	-7.0
17-Mar	-8.5	-8.7	-8.6	-8.8	-8.8	-8.7	-9.6	-9.9	-8.7	-7.9	-7.2	-6.3	-6.0	-5.8	-6.7	-6.9	-7.0	-7.5	-8.4	-10.2	-12.7	-12.8	-13.1	-13.1	-8.8	-5.8
18-Mar	-12.9	-12.7	-12.4	-12.3	-12.8	-13.2	-13.4	-13.4	-13.0	-11.1	-8.2	-5.6	-3.9	-2.9	-2.8	-2.3	-1.5	-2.2	-3.2	-5.3	-7.0	-8.7	-10.4	-10.8	-8.4	-1.5
19-Mar	-11.5	-14.0	-16.3	-18.0	-18.8	-19.5	-19.8	-19.1	-16.7	-11.0	-6.7	-4.2	-1.8	0.4	1.8	3.2	3.7	3.2	0.2	-1.8	-3.3	-4.9	-7.0	-9.2	-8.0	3.7
20-Mar	-10.8	-12.2	-13.2	-14.2	-14.9	-15.6	-16.4	-16.3	-15.2	-12.4	-10.0	-8.4	-7.3	-6.5	-5.5	-4.5	-4.5	-5.4	-7.0	-8.7	-10.3	-13.4	-15.9	-13.3	-10.9	-4.5
21-Mar	-12.0	-12.4	-12.9	-13.5	-13.7	-14.1	-15.3	-15.3	-12.1	-9.4	-7.0	-5.0	-3.1	-1.5	-0.3	0.6	1.1	0.3	-1.9	-2.5	-3.5	-3.7	-4.0	-4.2	-6.9	1.1
22-Mar	-4.1	-4.3	-3.9	-4.1	-5.4	-5.8	-6.4	-6.2	-4.9	-2.7	-1.2	0.6	2.9	4.1	5.4	6.2	7.2	6.7	5.3	4.1	1.9	3.2	1.3	0.6	0.0	7.2
23-Mar	0.1	-0.5	-0.7	-1.5	-2.0	-2.2	-2.4	-1.5	-0.2	0.9	2.0	3.5	4.6	5.4	6.0	6.1	7.7	7.5	4.9	0.9	-1.0	-2.2	-2.8	-3.4	1.2	7.7
24-Mar	-4.0	-4.7	-5.4	-6.2	-6.0	-5.7	-5.0	-4.1	-1.3	0.9	2.0	2.8	3.2	4.2	4.9	5.2	5.1	5.4	5.6	4.7	3.1	0.5	0.7	1.7	0.3	5.6
25-Mar	2.2	1.2	-0.2	-0.6	-1.0	-1.6	-2.0	-0.4	1.1	2.3	3.7	5.2	7.0	8.1	9.8	9.5	9.1	4.2	1.1	-1.1	-2.5	-3.5	-4.8	-5.7	1.7	9.8
26-Mar	-6.6	-7.3	-8.0	-9.1	-10.2	-11.2	-11.4	-11.1	-10.1	-9.4	-8.8	-7.6	-6.5	-5.1	-4.1	-3.8	-3.8	-4.2	-4.7	-5.0	-5.4	-5.9	-6.4	-6.8	-7.2	-3.8
27-Mar	-7.2	-7.5	-7.7	-7.9	-8.2	-8.4	-8.5	-8.6	-8.4	-7.8	-7.2	-7.0	-6.3	-5.4	-5.2	-5.2	-5.4	-5.9	-7.0	-8.5	-9.8	-10.8	-11.8	-12.8	-7.8	-5.2
28-Mar	-13.9	-14.9	-16.1	-16.7	-17.3	-17.8	-18.3	-17.2	-14.6	-11.3	-9.3	-7.9	-6.5	-5.5	-4.5	-4.0	-3.8	-3.9	-4.8	-6.2	-7.3	-8.7	-10.2	-12.0	-10.5	-3.8
29-Mar	-13.1	-14.4	-15.4	-16.3	-17.4	-18.5	-18.5	-16.8	-14.5	-11.5	-8.5	-6.0	-3.9	-2.2	-1.2	-0.7	-0.5	-0.4	-1.6	-2.6	-4.0	-4.6	-5.6	-6.8	-8.5	-0.4
30-Mar	-7.9	-9.2	-10.4	-11.2	-12.0	-12.8	-13.1	-11.5	-8.9	-6.7	-4.1	-2.0	0.6	1.9	2.3	2.9	3.5	3.4	1.4	0.9	0.6	0.0	-0.1	-0.6	-3.9	3.5
31-Mar	-1.1	-1.7	-2.3	-2.8	-3.3	-4.0	-4.3	-3.7	-1.9	-0.8	0.3	1.4	2.2	2.4	2.8	2.9	3.0	2.5	1.5	-0.3	-0.6	-0.9	-1.6	-2.0	-0.5	3.0
	-9.4	-10.1	-10.7	-11.2	-11.8	-12.3	-12.7	-12.4	-11.1	-9.3	-7.5	-5.8	-4.4	-3.4	-2.6	-2.2	-2.1	-2.8	-4.2	-5.4	-6.4	-7.2	-8.1	-8.7	Diurnal Average	
	2.2	1.2	-0.2	-0.5	-0.4	0.3	0.1	-0.4	1.1	2.3	3.7	5.2	7.0	8.1	9.8	9.5	9.1	7.5	5.6	4.7	3.4	3.2	1.3	1.7	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Lower Camp - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	40	5.38	5.38
-20 - 0	581	78.09	83.47
0 - 10	123	16.53	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Lower Camp - March 2025

Maximum Value: 96.3 % on Mar 4 00:00

Maximum Daily Average: 82.1 % on Mar 3

Minimum Value: 26.9 % on Mar 29 15:00

Minimum Daily Average: 53.9 % on Mar 21

Maximum Diurnal Average: 79.0 % at hour 7

Minimum Diurnal Average: 52.3 % at hour 17

Monthly Average: 68.09 %

Percentiles: P_1 = 32.7 P_{10} = 48.1 Q_1 = 57.2 Median = 70.3 Q_3 = 78.9 P_{90} = 85.1 P_{99} = 93.7

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

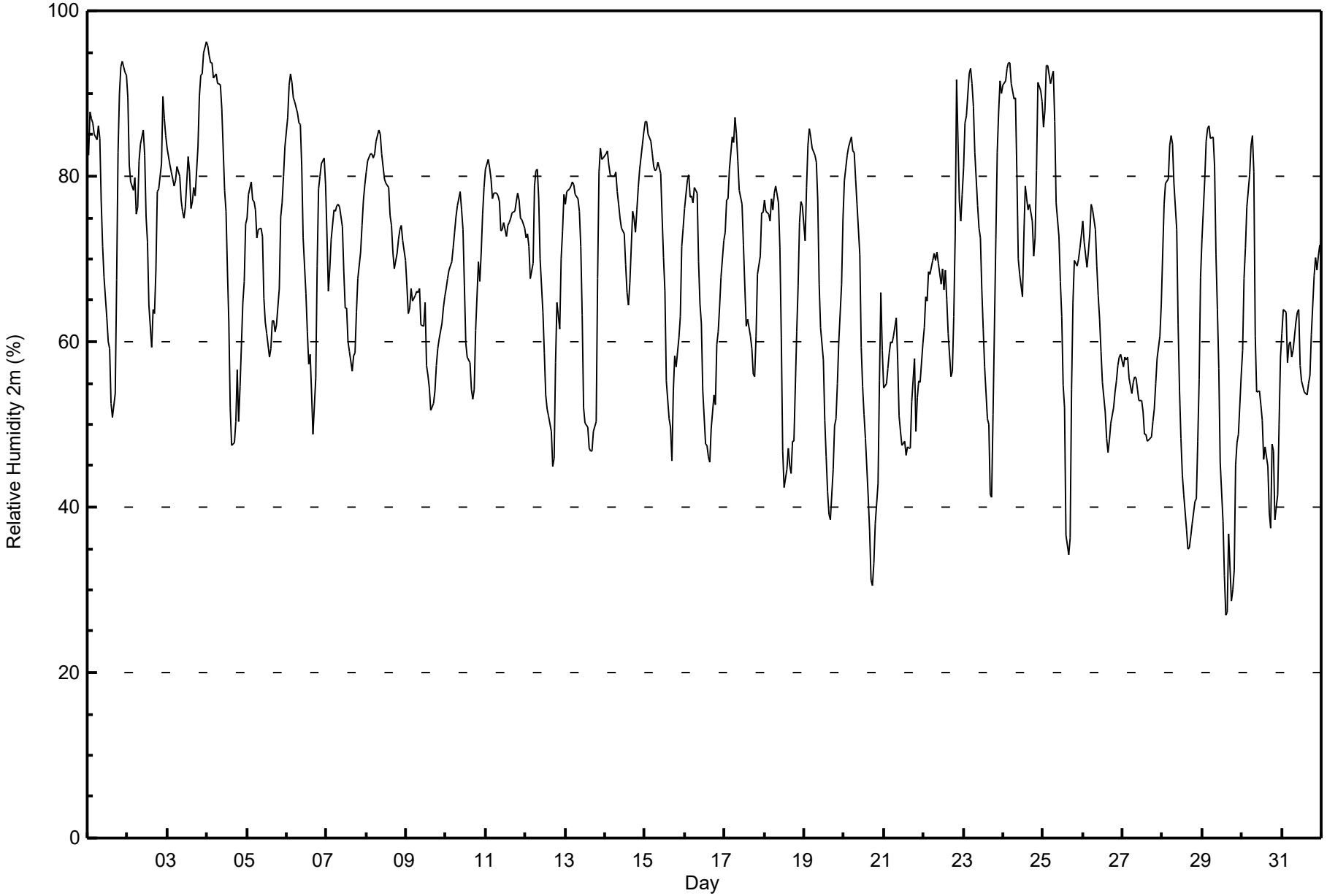
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	82.5	87.9	86.9	86.4	85.1	84.3	86.1	84.5	77.0	71.4	67.8	62.9	60.1	59.2	52.5	50.8	53.6	67.5	82.8	90.0	93.2	93.9	92.5	92.2	77.1	93.9
2-Mar	89.5	81.3	79.3	78.3	79.9	75.5	76.3	81.9	83.9	85.6	82.6	75.1	72.0	64.4	59.4	63.9	63.4	68.6	78.2	78.5	81.4	89.7	87.0	84.9	77.5	89.7
3-Mar	83.5	81.4	80.6	79.7	78.9	79.5	81.1	80.0	77.2	75.7	74.9	76.3	82.3	80.4	76.1	76.9	78.7	77.7	83.5	89.6	92.1	92.4	94.9	96.3	82.1	96.3
4-Mar	95.7	94.6	93.8	93.7	91.8	92.3	91.2	91.2	91.0	88.1	78.3	75.8	68.7	62.3	52.1	47.4	47.8	50.3	56.6	50.4	54.6	64.7	67.4	74.2	73.9	95.7
5-Mar	75.0	77.8	79.4	77.2	77.0	75.9	72.5	73.5	73.7	72.8	65.3	62.4	61.0	58.2	59.1	62.6	62.5	61.2	61.9	66.5	75.1	76.9	80.0	83.6	70.5	83.6
6-Mar	87.1	90.9	92.3	91.4	89.5	88.9	87.6	86.4	86.4	81.2	72.6	65.7	61.2	57.4	58.5	53.9	48.7	55.6	69.2	78.5	79.9	81.6	82.3	78.9	76.1	92.3
7-Mar	72.9	66.1	68.7	72.4	76.0	75.8	76.4	76.6	76.3	74.0	68.4	64.0	64.1	60.0	58.8	56.5	58.3	58.7	63.6	67.7	70.9	74.1	77.1	79.1	69.0	79.1
8-Mar	80.5	81.8	82.6	82.7	82.3	82.8	84.3	85.6	85.0	82.8	81.2	79.6	79.2	78.7	75.3	74.1	70.8	68.8	70.6	72.4	73.6	74.0	72.1	69.8	77.9	85.6
9-Mar	66.8	63.4	64.1	66.5	64.9	65.6	66.0	65.9	66.5	62.0	61.8	64.8	57.2	55.9	54.5	51.6	52.5	54.1	57.2	59.1	60.4	62.1	64.0	65.3	61.4	66.8
10-Mar	66.4	67.6	68.6	69.6	71.3	73.2	75.1	76.4	78.2	76.0	73.6	66.8	59.9	58.2	57.4	54.3	53.1	54.3	61.4	69.7	67.3	70.8	75.5	78.7	67.6	78.7
11-Mar	80.9	82.0	81.0	79.6	77.3	78.0	77.9	77.7	76.9	73.4	73.6	74.5	72.7	74.1	74.4	75.0	75.5	75.8	76.9	77.9	77.1	74.9	74.8	73.6	76.5	82.0
12-Mar	72.6	73.0	71.5	67.7	69.5	78.9	80.6	80.8	77.3	70.0	63.6	58.6	53.6	51.9	51.1	49.1	45.0	45.9	57.4	64.7	61.5	69.9	73.3	77.8	65.2	80.8
13-Mar	76.5	78.1	78.5	78.8	79.4	79.0	77.8	77.4	75.7	71.6	63.1	52.0	50.2	49.7	47.2	46.8	46.7	49.2	50.4	67.7	80.4	83.4	82.0	82.1	67.7	83.4
14-Mar	82.7	83.1	81.3	80.2	80.0	79.9	80.5	78.2	76.6	74.9	73.7	73.0	69.4	66.0	64.5	67.1	75.8	75.0	73.2	76.0	78.7	80.9	84.0	85.4	76.7	85.4
15-Mar	86.6	86.6	85.1	84.3	82.7	81.3	80.7	80.9	81.6	80.4	75.0	70.1	66.2	55.3	50.7	49.6	45.6	54.0	58.3	56.9	60.5	63.1	71.6	73.8	70.0	86.6
16-Mar	76.2	79.5	80.2	77.5	77.7	76.7	78.7	78.1	69.7	64.6	62.2	54.0	47.7	47.4	46.0	45.5	49.4	53.6	52.3	59.7	61.2	64.2	67.8	72.2	64.2	80.2
17-Mar	73.3	77.1	77.2	80.9	84.8	84.1	87.1	85.1	81.8	78.3	76.6	71.8	66.6	61.9	62.7	60.7	59.1	56.1	55.7	60.7	68.2	70.4	75.6	75.7	72.1	87.1
18-Mar	77.2	75.7	75.4	74.6	77.3	75.9	78.0	78.8	76.7	71.4	60.5	46.8	42.4	44.6	47.2	45.1	44.0	47.9	48.0	61.2	66.8	74.4	76.9	76.4	64.3	78.8
19-Mar	72.2	78.7	83.7	85.8	84.8	83.4	82.5	81.6	77.1	67.0	61.7	57.8	50.5	46.0	41.9	39.1	38.5	44.5	49.9	50.7	54.9	60.0	67.0	74.9	63.9	85.8
20-Mar	79.4	81.1	82.5	83.6	84.7	83.1	82.9	79.7	76.5	70.6	59.4	54.5	51.2	48.3	41.1	37.0	31.1	30.5	33.2	37.9	42.8	55.2	66.0	59.0	60.5	84.7
21-Mar	54.4	55.0	56.8	58.7	60.0	59.9	60.7	62.8	57.8	51.0	49.2	47.4	48.0	46.3	47.3	47.2	47.1	52.8	57.9	49.1	53.2	55.2	55.1	59.9	53.9	62.8
22-Mar	61.7	65.3	64.9	68.5	68.1	69.8	70.7	69.8	70.8	69.5	66.9	68.8	66.2	68.6	65.1	61.0	55.8	56.5	63.1	72.7	91.6	76.9	74.6	77.9	68.5	91.6
23-Mar	81.0	86.5	87.2	92.3	93.0	91.2	88.5	82.9	76.4	73.7	72.5	66.2	61.5	56.9	50.7	50.1	41.6	41.2	51.1	72.4	82.9	87.8	91.5	90.1	73.7	93.0
24-Mar	91.1	91.5	93.1	93.7	93.7	91.1	89.3	89.5	80.3	69.9	68.1	65.4	72.9	78.8	77.3	75.9	76.7	74.6	70.4	72.6	80.6	91.4	90.4	89.1	82.0	93.7
25-Mar	85.9	87.9	93.3	93.4	91.1	92.1	92.8	86.6	76.8	72.6	67.3	63.1	54.7	52.0	36.5	34.2	36.2	54.3	64.7	69.9	69.2	70.0	71.3	72.9	70.4	93.4
26-Mar	74.6	72.0	69.0	70.8	73.1	76.6	75.9	73.5	69.1	65.6	62.7	58.7	55.1	51.6	48.4	46.5	48.2	50.2	52.1	54.0	55.3	57.2	58.1	58.4	61.5	76.6
27-Mar	56.9	58.1	57.8	58.1	55.6	53.8	55.1	55.8	55.6	54.3	52.8	53.0	51.5	48.9	48.8	48.0	48.2	48.5	50.3	51.8	55.0	57.9	60.8	64.6	54.2	64.6
28-Mar	70.6	76.5	79.1	79.6	83.7	84.8	84.0	79.1	73.6	62.1	54.0	48.3	43.8	41.6	37.2	34.9	35.0	36.4	38.0	40.7	41.0	48.0	55.4	67.8	58.1	84.8
29-Mar	72.4	79.7	84.2	85.7	86.1	84.6	84.8	81.1	70.6	64.0	56.8	45.5	38.3	31.7	26.9	27.3	36.7	28.7	30.0	32.4	45.1	47.8	48.9	56.0	56.0	86.1
30-Mar	58.9	67.6	71.3	76.3	80.2	83.7	85.0	80.5	60.7	54.0	54.1	52.4	50.5	45.8	47.2	45.0	39.3	37.5	47.6	46.8	38.5	41.5	49.9	58.2	57.2	85.0
31-Mar	61.1	63.8	63.6	57.4	59.6	60.0	58.1	59.1	62.3	63.6	63.8	57.1	55.2	53.9	53.7	53.6	54.8	55.9	60.8	68.0	70.1	68.6	70.4	71.7	61.1	71.7
	75.7	77.1	77.8	78.2	78.7	78.8	79.0	78.1	74.8	70.7	66.6	62.3	59.2	56.6	53.9	52.6	52.3	54.4	58.9	63.4	67.2	70.3	72.8	74.9	Diurnal Average	
	95.7	94.6	93.8	93.7	93.7	92.3	92.8	91.2	91.0	88.1	82.6	79.6	82.3	80.4	77.3	76.9	78.7	77.7	83.5	90.0	93.2	93.9	94.9	96.3	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Lower Camp - March 2025



Summary of Hour Averages

Lower Camp - March 2025

Maximum Value: 29.5 inHg on Mar 26 08:00

Maximum Daily Average: 29.5 inHg on Mar 26

Minimum Value: 28.8 inHg on Mar 22 03:00

Minimum Daily Average: 28.8 inHg on Mar 22

Maximum Diurnal Average: 29.1 inHg at hour 8

Minimum Diurnal Average: 29.1 inHg at hour 17

Monthly Average: 29.09 inHg

Percentiles: P_1 = 28.8 P_{10} = 28.9 Q_1 = 28.9 Median = 29.1 Q_3 = 29.2 P_{90} = 29.4 P_{99} = 29.5

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

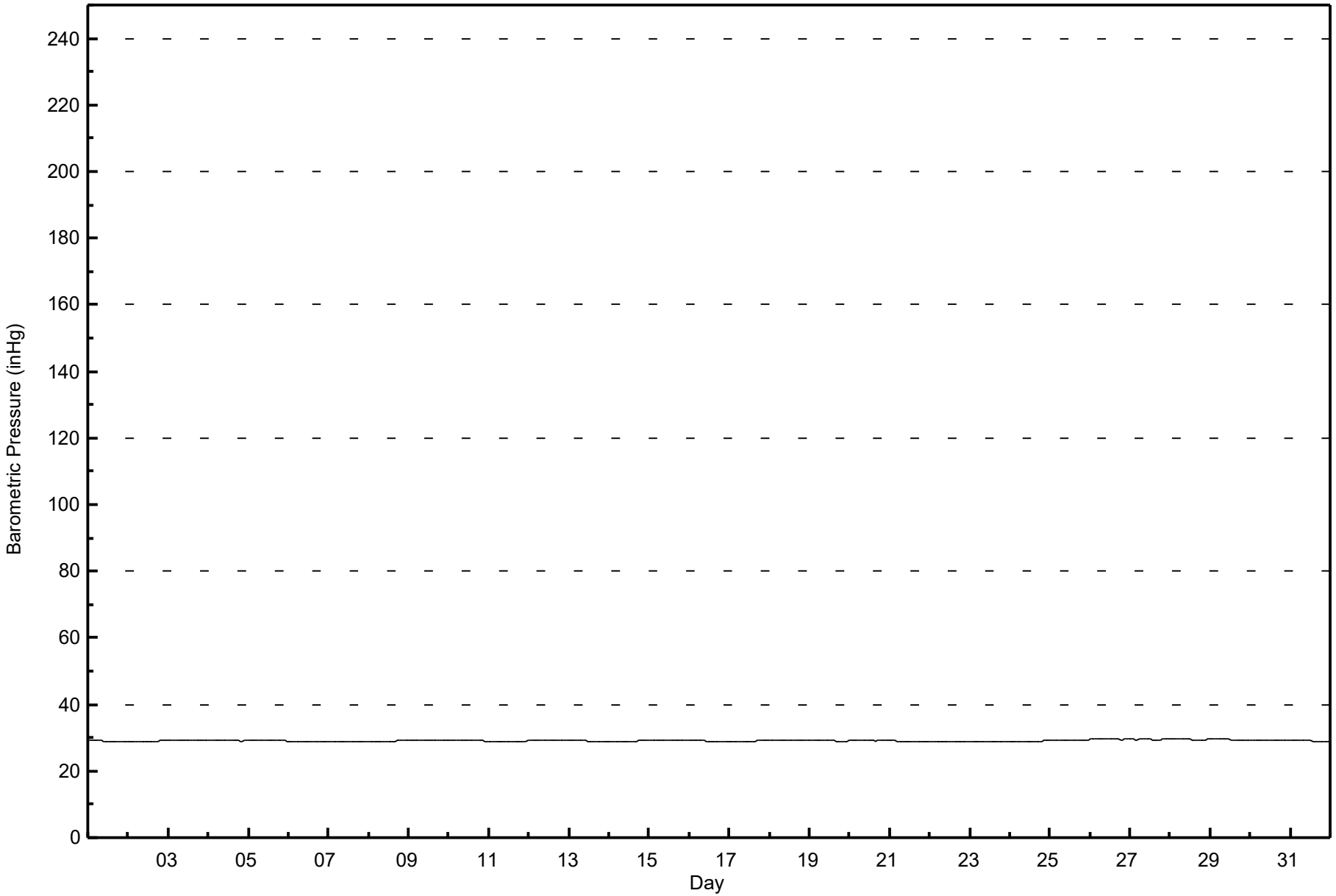
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0	29.1
2-Mar	28.9	28.8	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	29.0	29.0	29.0	29.1	29.1	29.1	29.1	28.9	29.1
3-Mar	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	29.2	29.2	29.2	29.3	29.3
4-Mar	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	29.0	29.0	29.0	29.1	29.1	29.2
5-Mar	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	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.1	29.2
6-Mar	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	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9	29.0
7-Mar	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	28.9	28.9	28.9	28.9	28.9
8-Mar	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9	28.9	29.0	29.0	29.0	29.1	29.1	29.1	29.1	29.1	29.2	28.9	29.2
9-Mar	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2
10-Mar	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	29.0	29.0	29.0	29.0	29.0	29.0	29.1	29.2
11-Mar	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0	29.0	29.0	29.0	29.0	29.0	29.0
12-Mar	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.2	29.2	29.2	29.2	29.2	29.2	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.2
13-Mar	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	28.9	28.9	28.9	28.9	28.9	28.9	29.0	28.9	28.9	29.0	29.1
14-Mar	28.9	28.9	28.9	28.9	28.9	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.1	29.1	29.1	29.1	29.1	29.0	29.1
15-Mar	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1
16-Mar	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0	29.1
17-Mar	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0	29.0	29.0	29.0	29.0	29.0	29.1	29.1	29.1	29.1	29.1	29.1	29.0	29.1
18-Mar	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2
19-Mar	29.2	29.2	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.2	29.2	29.2	29.1	29.1	29.1	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.1	29.3
20-Mar	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	29.1	29.1	29.0	29.1
21-Mar	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	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9	29.0
22-Mar	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9	28.9	28.9	28.8	28.9
23-Mar	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
24-Mar	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
25-Mar	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	29.3	29.3	29.4	29.4	29.4	29.4	29.2	29.4
26-Mar	29.4	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.4	29.4	29.5	29.5	29.5	29.5	29.5	29.5
27-Mar	29.5	29.5	29.5	29.4	29.4	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	29.5	29.5	29.5	29.5	29.5	29.5	29.5
28-Mar	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.5	29.5	29.5
29-Mar	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.5
30-Mar	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.3	29.3	29.3	29.3	29.3	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.3	29.4
31-Mar	29.2	29.2	29.2	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0	29.2
	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	Diurnal Average	
	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.4	29.5	29.5	29.5	29.5	29.5	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Barometric Pressure (BP) - inHg

Lower Camp - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Lower Camp - March 2025

Maximum Speed: 24 km/h on Mar 21 15:00

Maximum Daily Speed Average: 15.4 km/h on Mar 31

Minimum Speed Value: 0 km/h on Mar 6 20:00

Minimum Daily Speed Average: 0.1 km/h on Mar 18

Maximum Diurnal Speed Average: 4.7 km/h at hour 19

Minimum Diurnal Speed Average: 1.7 km/h at hour 6

Monthly Average Velocity: 2.4 km/h 19.2 deg

Percentiles: P_1 = 1 P_{10} = 2 Q_1 = 4 Median = 8 Q_3 = 12 P_{90} = 16 P_{99} = 22

Hours in Service: 744

Hours of Data: 737

Hours of Missing Data: 7

Percent Operational Time: 99.1

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	SE4	SE3	SE6	SE8	SE11	SE8	SE8	SE10	SE12	SE11	SE12	SE10	SE10	SE12	SE8	SE10	SSE2	SW1	UO	NW2	W2	UO	WNW2	UO	SE6.7	SE12
2-Mar	SE2	SE11	SE9	SSE2	SE6	SE11	SE6	WNW2	WNW7	WNW3	WNW5	W8	WNW2	E1	WSW5	WSW4	NW8	NNW12	N14	N14	N11	N9	N9	N14	N2.5	N14
3-Mar	N17	N12	N10	NNW8	NNW6	N6	NNW5	WNW4	NW3	NW2	NW3	WSW4	NW1	SE9	SE11	SE13	SE12	SE8	WSW1	UO	UO	UO	UO	SSE1	NE2.1	N17
4-Mar	SE2	SE5	SE4	SE8	SE9	SE6	SE6	ESE3	SE6	SE12	SE14	SE15	SE12	SE10	SE4	SW8	SW6	SW7	SW7	SW10	W11	NW6	NW7	NW5	SSE3.8	SE15
5-Mar	NW5	WNW6	NW9	NNW11	NNW15	NNW11	NW14	N11	NNE11	NNE11	N9	NNW5	W7	N2	SE11	SE17	SE16	ESE9	SSE1	W3	W2	NW1	WNW2	WNW2	N3.0	SE17
6-Mar	WNW3	NW3	WNW5	NW3	E1	NNW1	ENE1	NNW1	E2	SE10	SE13	SE14	SE14	SE12	SE14	SE13	SE12	SE9	W1	ENE0	WNW3	WNW3	NW2	WNW5	SE3.4	SE14
7-Mar	NW5	NNW7	NW6	NNW9	NW7	NNW6	NW6	NW6	NNW7	N6	WNW5	S4	NNE3	NW3	NW2	N16	N16	N11	NNW10	NNW11	NNW10	NNW9	NNW9	NNW7	NNW7.0	N16
8-Mar	NNW7	NW7	NW6	NNW7	NW7	NW6	WNW8	NW8	NW8	NNW6	W7	NNW9	NNW14	N18	NNW20	N21	NNE19	NNE16	NNE12	NNE15	NNE17	NNE12	NNE16	NNE18	N10.7	N21
9-Mar	N16	N13	NNE10	NNE8	NNE12	NNE14	NNE14	NNE11	NE13	NNE15	NNE14	NNE11	NNW10	N12	NNW9	N8	N12	N12	N12	NNW8	N9	NNW7	NNW6	NW6	N10.4	NNE16
10-Mar	NW6	NNW6	NW5	NW6	NW6	NW5	NW4	NNW3	N3	NNW5	NNE3	ESE3	SE8	ESE5	SE9	SE8	SE6	SE3	ESE1	NW4	NW4	NNW5	NW5	NW5	N1.7	SE9
11-Mar	NW5	NW4	NNW6	NW6	NW7	NW7	NW6	NW7	NW8	NW9	NW10	NW12	NNW13	NNW15	NNW14	NNW14	NNW14	NNW14	NNW15	NNW13	NNW14	N16	N15	NNW12	NNW10.2	N16
12-Mar	NNW10	NNW10	NNW8	NNW7	WNW5	WNW2	NW1	NW3	NNW3	NW4	W4	W6	WSW7	WSW8	WSW10	WSW10	WSW6	NNW4	W4	WNW4	W4	WNW3	WNW5	WNW5	WNW4.5	NNW10
13-Mar	WNW5	WNW4	WNW5	WNW3	NW3	WNW4	WNW5	WNW6	NW4	NW5	NNW7	NW10	NW15	NW10	N15	N17	N15	N16	N12	N12	NNW8	NNW9	NNW11	NNW10	NNW7.8	N17
14-Mar	NNW10	NNW10	NNW10	NNW10	NNW9	NW9	NW10	NNW12	NNW11	NNW13	N16	N15	N18	N17	NNW17	NNW16	NNW14	NNW13	NNW13	N12	NNW7	NW5	WNW5	WNW3	NNW11.0	N18
15-Mar	W4	WNW3	W3	WNW4	WNW3	WNW3	WNW2	NW2	WNW2	WNW2	W5	WSW8	WSW10	WSW7	WSW7	NW1	ESE6	SE10	SE7	SSE7	SE6	SE4	WNW3	WNW4	SW2.0	SE10
16-Mar	WNW3	WNW2	SE4	SE5	SE6	SE11	SE13	SE13	SE11	SE9	SE9	ESE10	SE15	ESE18	ESE19	ESE18	SE14	ESE14	E11	ESE8	ESE12	ESE16	ESE16	SE13	SE10.6	ESE19
17-Mar	ESE13	SSE5	SSE4	SSE3	SSE3	SSE4	NNE0	NNW0	WNW2	W7	NW9	NNW10	N11	N12	NNE15	N14	N12	N9	N8	WNW5	WNW4	NW3	WNW1	NNW0	N3.5	NNE15
18-Mar	NNW1	E0	NNE1	W4	NW3	WNW6	NW4	NNW3	NNW3	N3	N3	W6	W4	SE7	ESE13	ESE10	SE7	ESE10	SE5	WNW2	WNW3	W2	WNW3	WNW5	ESE0.1	ESE13
19-Mar	NW6	WNW4	NW5	W1	NW2	NW1	N0	WNW2	WNW1	ESE3	SE11	ESE13	ESE11	SE8	SE7	SE9	SE8	SSW1	NNW10	NNW10	NNW12	NNW11	NNW14	NNW12	NNE1.3	NNW14
20-Mar	NW10	NNW9	NW8	NW7	WNW6	NW6	NW5	NW5	NNW8	NNW10	WNW10	WNW12	NW14	NW15	WNW15	NW13	NNW12	NNW10	NNW8	NW6	NW5	WNW2	NW2	ESE14	NW7.4	WNW15
21-Mar	ESE21	ESE21	ESE18	ESE22	ESE20	ESE17	E7	NNE4	ESE21	ESE18	SE19	ESE21	ESE23	SE24	SE24	SE24	SE22	SE18	ESE9	SE5	SSE4	SSE4	SSE4	SE7	ESE15.3	SE24
22-Mar	SE9	ESE9	SE6	SE8	SE6	SE7	SE12	SE12	SE14	SE17	SE16	SE12	SE13	ESE16	SE15	SE15	SE11	NNW4	NW8	W4	WNW2	WNW13	NNW11	WNW5	SE6.5	SE17
23-Mar	W2	WNW3	W1	W1	NNW3	NW2	W5	W2	WSW4	SW3	ESE5	ESE10	ESE12	SE12	SE15	ESE14	SE9	SE6	SSE1	NW0	WNW2	WNW3	WNW2	WNW2	SE2.4	SE15
24-Mar	WNW3	WNW3	WNW4	NW3	WNW1	WNW5	WNW2	NNW1	ESE8	SE14	SE13	SE13	SE9	SE7	SE8	SE6	SE3	WNW9	WNW14	WNW11	W6	NNW1	NE4	NNW3	S0.9	SE14
25-Mar	W5	NW4	E0	E1	NNE1	WSW2	NNE1	SSE1	W6	W9	NW3	SE13	SE14	ESE4	WNW15	NW19	NW18	N19	N18	NNE17	N13	N14	N14	N19	N5.6	N19
26-Mar	N14	N12	N12	N12	NNE8	NE6	NNE5	N9	NE13	NNE12	N11	NW8	NW8	NW9	NW9	NNW9	N11	N14	NNW11	N11	N11	N13	NNE14	NNE13	N9.8	NNE14
27-Mar	N8	N9	N10	NNW10	NNW11	N10	N10	NNE14	NNE16	NNE17	N18	N18	N18	N16	N20	N20	N20	N21	N18	N12	NNW9	NNW9	NW7	NW5	N13.3	N21
28-Mar	NW6	N4	N3	NW5	NNW3	NNW4	NW4	NW4	NW5	NW6	NNW7	NNW8	NW9	NNW11	WNW11	WNW11	WNW14	NW13	NNW12	NNW6	NW8	NW7	NW5	NNW4	NW6.8	WNW14
29-Mar	NW3	NNW4	N3	NNW4	N3	N3	N3	NNE4	N6	NNE5	NNW5	WNW6	NW5	WNW6	WSW4	E5	SE13	SSE8	SSE8	SSE6	NW5	NW4	NNW5	NW5	NNW1.4	SE13
30-Mar	NW4	NNE1	N2	N1	NNW2	N1	N2	N3	NNE3	N3	NNE4	N3	SE8	SE7	SE12	SE12	SE9	SE5	W3	NNW4	N5	NNW4	ESE13	SE24	E2.7	SE24
31-Mar	SE24	SE21	SE17	ESE15	ESE16	ESE8	ESE9	ESE9	ESE12	SE15	SE16	ESE17	SE16	ESE19	ESE20	ESE21	ESE19	ESE21	ESE16	ESE8	ESE15	ESE13	ESE10	ESE15	ESE15.4	SE24
	N2.7	N2.4	N2.1	N2.0	NNE1.8	NNE1.7	N1.8	N2.4	NE2.5	NE2.4	NE2.2	ENE1.7	ENE1.7	ENE2.6	ENE2.5	ENE3.2	ENE3.5	NNE4.0	N4.7	NNW4.5	NNW4.3	NNW4.4	N4.2	N3.2	Diurnal Average	
	SE24	ESE21	ESE18	ESE22	ESE20	ESE17	NNE14	NNE14	ESE21	ESE18	ESE19	ESE21	ESE23	SE24	SE24	SE24	SE22	ESE21	N18	NNE17	NNE17	ESE16	NNE16	SE24	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 - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7 km/h on Mar 21 00:00

Minimum Value: 1 km/h on Mar 15 01:00

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

Hours in Service:	744
Hours of Data:	737
Hours of Missing Data:	7
Hours of Calibration:	0
Percent Operational Time:	99.1

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

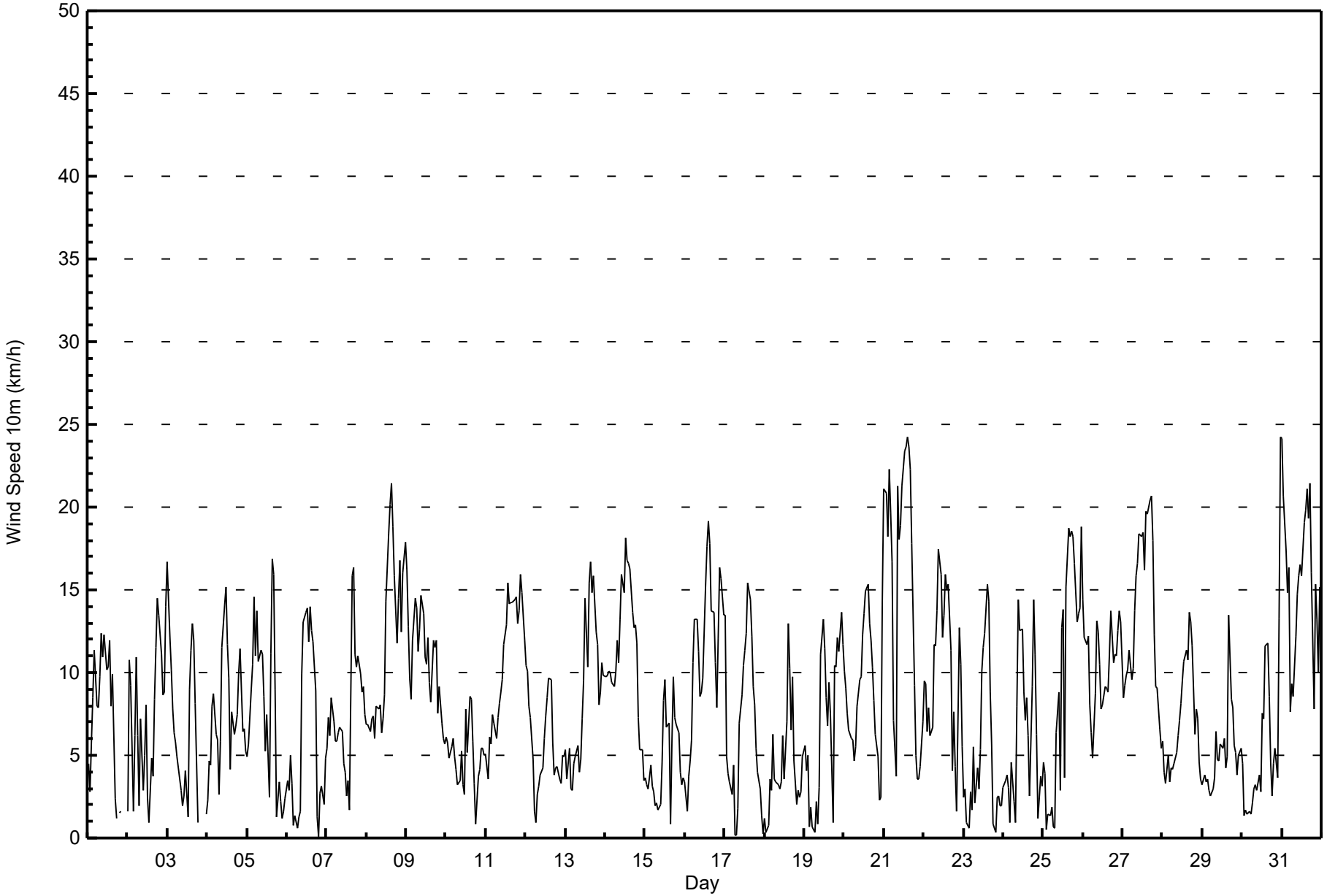
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Lower Camp - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	263	35.69	35.69
6 - 11	264	35.82	71.51
12 - 19	187	25.37	96.88
20 - 28	23	3.12	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 737

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Lower Camp - March 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	19	13	1	3	6	8	14	14	1	1	2	7	21	66	58	29	263
6 - 11	25	7	1	0	2	16	63	4	0	0	5	10	8	15	47	61	264
12 - 19	46	24	1	0	0	32	44	0	0	0	0	0	0	7	8	25	187
20 - 28	5	0	0	0	0	10	7	0	0	0	0	0	0	0	0	1	23
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	95	44	3	3	8	66	128	18	1	1	7	17	29	88	113	116	737

Total Number of Valid Hours: 737

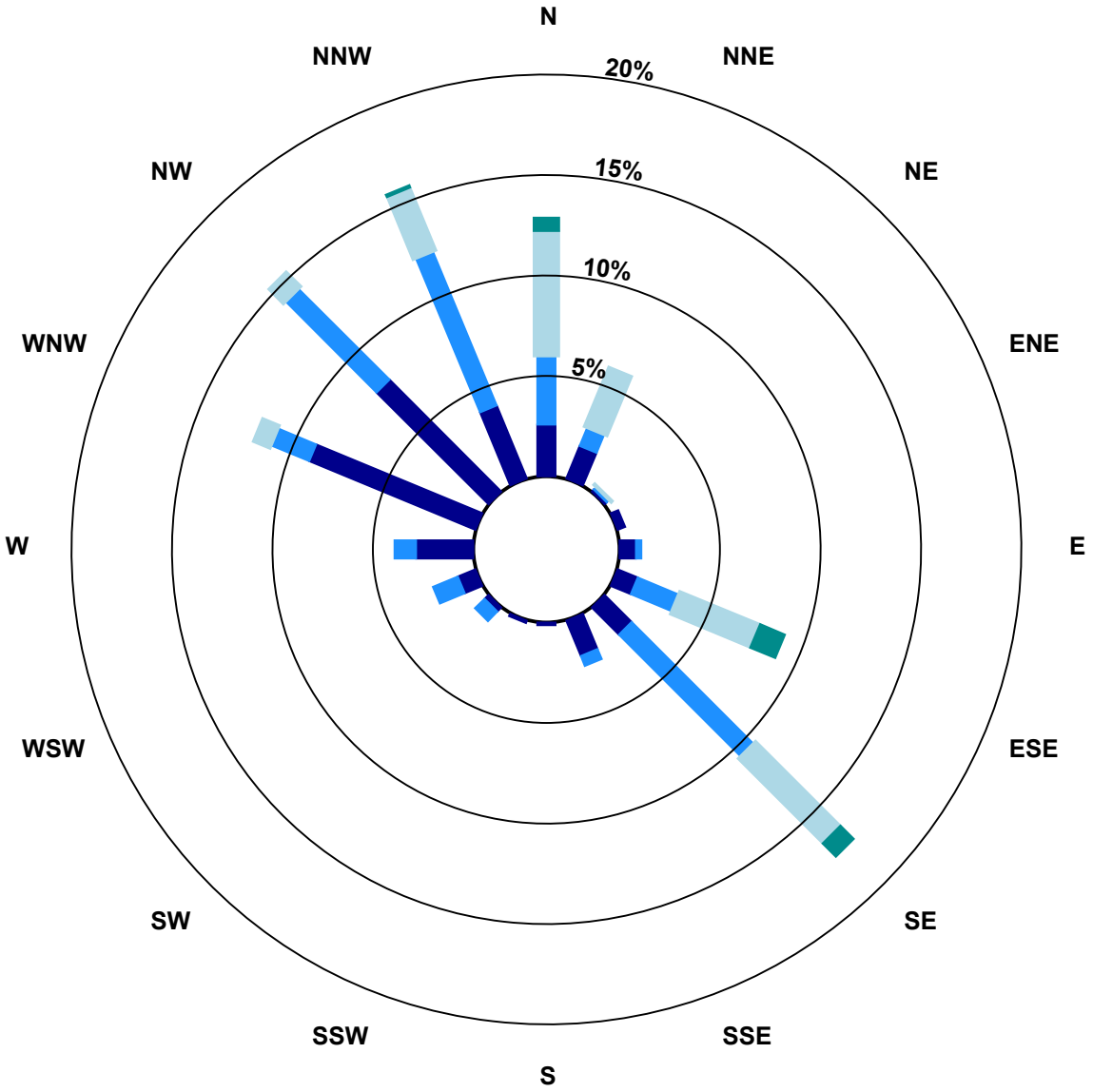
Total Number of Hours: 744

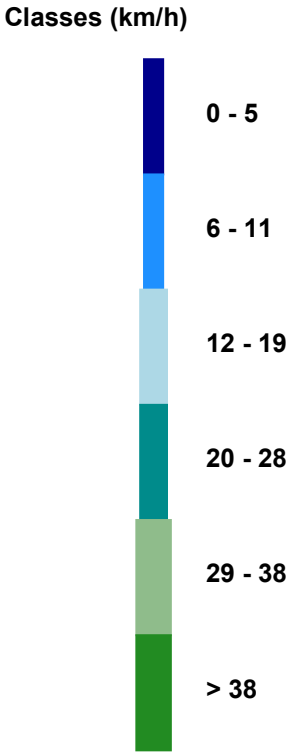
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 10m (WS10) - km/h

Lower Camp





Total Number of Valid Hours: 737

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Lower Camp - March 2025

Direction of Maximum Speed: 126 deg on Mar 21 15:00
Direction of Maximum Daily Speed Average: 120.3 deg on Mar 31

Direction of Minimum Speed: 70 deg on Mar 6 20:00

Direction of Minimum Daily Speed Average: 0.1 deg on Mar 18

Monthly Average Direction: 19.2 deg

Hours in Service:	744
Hours of Data:	737
Hours of Missing Data:	7
Percent Operational Time:	99.1

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	132	129	129	132	135	135	136	132	135	134	132	135	131	131	132	133	161	224	UO	304	281	UO	296	UO	134.4
2-Mar	138	131	134	149	132	137	143	290	300	296	294	271	288	84	244	256	323	343	354	5	9	356	11	7	355.9
3-Mar	8	11	8	347	329	353	344	296	306	311	309	244	325	129	133	131	125	129	255	UO	UO	UO	UO	155	39.6
4-Mar	133	131	133	137	134	132	128	122	128	134	132	125	125	124	136	233	223	228	218	233	281	326	326	304	155.9
5-Mar	309	286	310	330	336	339	326	355	25	21	352	339	261	358	129	130	126	116	155	281	278	324	287	288	353.0
6-Mar	298	317	303	314	79	328	61	334	96	127	125	124	124	124	130	133	141	135	260	70	292	292	323	283	130.0
7-Mar	316	335	325	340	317	328	322	310	346	351	303	177	30	306	323	354	359	350	343	348	338	329	328	339	337.7
8-Mar	337	324	318	330	318	314	297	316	312	333	279	343	345	353	344	355	12	16	15	18	12	19	18	14	352.1
9-Mar	11	11	12	20	26	23	20	19	35	24	16	21	347	351	347	5	4	11	2	341	1	343	330	322	8.6
10-Mar	317	331	322	319	322	324	318	337	355	347	15	112	125	107	125	130	135	124	117	325	325	328	326	314	354.4
11-Mar	319	308	328	319	319	317	320	320	321	315	310	307	331	346	348	347	347	348	346	345	348	0	356	346	337.3
12-Mar	339	340	331	334	303	293	305	319	337	308	266	259	250	252	257	254	255	344	267	292	279	300	292	298	292.9
13-Mar	293	297	287	290	316	299	292	288	305	318	341	311	310	318	2	7	11	8	356	357	327	337	339	334	336.0
14-Mar	329	334	332	330	330	326	324	337	345	348	356	9	358	356	347	343	347	343	347	360	334	315	290	287	342.6
15-Mar	279	301	281	299	303	291	295	305	295	282	266	251	245	247	241	324	123	133	145	155	138	139	303	297	234.7
16-Mar	298	289	143	143	142	135	133	137	136	135	132	123	126	120	112	116	126	115	100	115	122	117	123	124	124.0
17-Mar	121	147	168	160	162	160	33	334	289	279	323	348	353	4	12	9	4	7	357	302	289	318	284	337	358.2
18-Mar	337	79	30	280	309	301	316	328	335	10	4	262	266	132	123	114	126	116	139	286	290	278	296	289	122.7
19-Mar	309	296	312	278	321	307	8	302	294	109	127	122	120	131	136	139	141	204	328	333	337	336	342	337	16.9
20-Mar	326	329	326	314	294	320	311	325	348	345	303	300	304	305	302	306	344	343	328	317	319	296	312	109	320.1
21-Mar	114	115	115	122	120	114	81	13	118	123	124	120	122	125	126	125	125	127	120	137	156	149	164	141	121.5
22-Mar	129	121	134	129	135	133	128	132	125	127	125	127	132	123	130	131	133	340	306	259	285	294	329	296	129.6
23-Mar	264	300	278	267	344	314	266	261	247	218	103	117	122	124	130	121	140	138	160	305	301	300	293	299	138.3
24-Mar	286	294	303	317	300	303	297	341	123	132	130	130	136	144	135	135	128	290	300	294	272	332	37	336	168.9
25-Mar	272	314	91	85	18	249	32	148	270	270	319	127	132	103	299	305	320	4	8	19	0	6	3	7	348.8
26-Mar	11	351	350	7	17	45	29	10	34	25	4	325	323	315	313	337	1	1	347	350	1	9	21	22	1.6
27-Mar	2	353	349	343	345	355	3	19	18	13	360	0	3	357	3	4	7	8	3	352	331	342	319	308	359.1
28-Mar	320	351	0	314	329	331	322	317	323	304	338	336	304	327	295	301	299	312	348	329	324	319	320	340	319.9
29-Mar	310	335	349	337	4	359	358	19	5	21	343	302	307	289	248	93	130	155	152	148	305	319	337	324	344.4
30-Mar	319	13	352	351	339	352	353	359	19	3	20	359	129	129	124	131	130	145	281	343	1	345	114	128	99.8
31-Mar	126	124	124	114	113	105	106	109	123	129	129	121	129	118	121	121	123	120	115	105	123	121	119	119	120.3
	1.4	6.3	358.9	2.4	12.7	12.2	1.9	358.9	36.0	47.0	48.6	77.1	75.8	70.1	78.6	68.7	57.3	32.6	357.4	346.8	341.8	348.2	354.2	6.1	
	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

Lower Camp - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 108 deg on Mar 25 03:00

Minimum Value: 4 deg on Mar 3 16:00

Percentiles: P_1 = 4 P_{10} = 9 Q_1 = 15 Median = 19 Q_3 = 28 P_{90} = 57 P_{99} = 92

Hours in Service:	744
Hours of Data:	737
Hours of Missing Data:	7
Hours of Calibration:	0
Percent Operational Time:	99.1

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	29	68	12	9	8	14	13	10	6	5	5	7	7	4	5	11	81	67	UO	35	33	UO	16	UO	81
2-Mar	76	16	14	86	54	10	30	75	18	15	28	17	59	77	19	32	44	19	20	17	20	24	14	15	86
3-Mar	16	20	16	20	20	22	25	18	13	32	40	23	90	8	4	4	7	9	78	UO	UO	UO	UO	67	90
4-Mar	52	10	18	8	6	10	7	31	23	5	4	4	4	5	61	19	23	16	13	14	25	17	20	16	61
5-Mar	19	12	14	17	20	19	16	23	17	21	17	59	24	65	14	7	7	16	81	22	39	62	32	20	81
6-Mar	22	26	12	17	73	33	77	28	83	35	7	7	8	11	5	12	13	55	69	87	38	38	57	27	87
7-Mar	33	20	18	20	17	17	15	12	18	21	37	62	65	49	89	26	17	26	25	19	19	16	16	19	89
8-Mar	18	20	16	20	15	17	13	13	18	28	23	28	20	19	20	19	15	14	15	15	18	20	17	17	28
9-Mar	20	16	22	21	20	17	21	22	18	18	22	21	22	23	25	29	15	20	12	20	17	19	19	16	29
10-Mar	17	20	17	17	13	16	23	29	29	29	51	91	33	36	23	12	16	44	82	31	32	21	16	15	91
11-Mar	15	27	15	19	17	17	15	17	13	18	16	12	20	18	19	18	20	20	18	19	20	17	18	20	27
12-Mar	20	19	18	18	26	30	74	31	47	41	36	25	24	17	14	13	37	54	17	20	23	26	14	15	74
13-Mar	18	18	9	20	22	11	13	12	21	22	21	17	15	17	21	14	16	11	19	16	18	18	19	17	22
14-Mar	16	18	19	17	16	15	14	18	21	18	17	16	18	23	20	21	19	19	18	16	18	22	16	16	23
15-Mar	15	20	16	23	14	12	27	28	9	21	22	19	16	20	17	72	28	14	18	22	32	80	26	15	80
16-Mar	12	28	61	14	14	7	6	6	5	8	6	20	14	13	12	10	14	14	14	21	12	9	9	9	61
17-Mar	9	32	29	50	61	30	95	93	62	27	22	21	26	21	17	19	20	20	18	16	30	38	52	85	95
18-Mar	75	91	97	41	50	17	26	28	23	33	48	40	65	71	15	19	16	12	26	32	26	39	32	21	97
19-Mar	17	25	13	32	26	59	102	40	34	43	11	7	8	7	7	6	13	75	22	17	18	17	18	19	102
20-Mar	15	17	17	17	15	20	23	18	19	19	17	12	13	12	11	18	21	19	19	22	15	33	45	51	51
21-Mar	8	7	8	8	8	10	56	54	23	11	9	9	8	8	7	7	7	6	20	68	66	74	53	28	74
22-Mar	10	9	16	9	16	13	7	8	6	5	7	9	13	6	8	4	15	83	16	58	62	23	18	21	83
23-Mar	47	41	43	67	43	71	20	85	81	66	29	6	6	7	6	10	15	27	81	88	52	49	24	43	88
24-Mar	28	23	17	31	96	57	40	61	37	5	4	7	14	17	11	16	81	18	9	11	15	85	41	66	96
25-Mar	70	60	108	86	85	58	98	100	28	16	70	4	6	75	12	20	28	21	17	17	19	18	23	15	108
26-Mar	15	22	19	16	18	31	40	21	18	23	28	33	31	33	21	27	17	15	18	18	15	11	10	13	40
27-Mar	20	18	19	20	21	21	16	17	18	15	19	19	19	22	20	20	17	15	16	20	20	22	20	13	22
28-Mar	11	24	42	11	18	14	16	15	25	24	30	26	28	26	19	16	11	17	19	22	21	20	23	28	42
29-Mar	24	24	22	29	32	30	26	17	15	18	38	27	23	35	61	39	8	28	19	37	33	34	20	9	61
30-Mar	13	84	50	57	30	57	50	32	35	35	27	45	22	9	14	12	20	45	38	42	34	28	40	7	84
31-Mar	6	7	9	10	9	21	13	13	9	9	8	13	20	12	11	9	9	8	9	25	12	13	21	10	25
	76	91	108	86	96	71	102	100	83	66	70	91	90	77	89	72	81	83	82	88	66	85	57	85	
	Diurnal Maximum																								

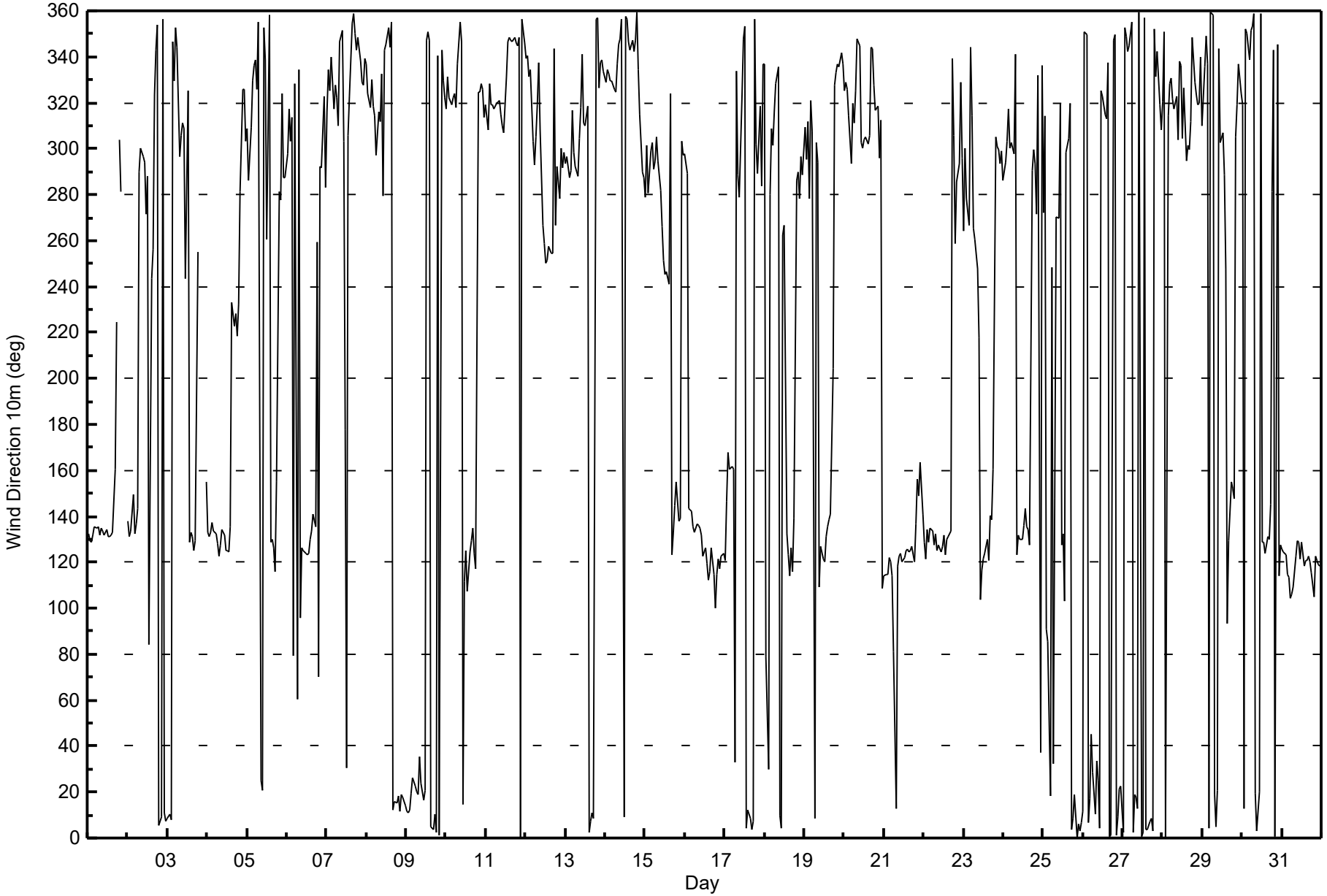
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Lower Camp - March 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS13
FORT MCKAY SOUTH
MARCH 2025

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

April 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT McKAY SOUTH (AMS13)
MARCH 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 30-Min Value	30-Min Exceedances	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2(ppb) Average	708	35	36	99.87	-	-	41.7	0	9	0
TRS(ppb) Average	706	37	38	99.87	16.1	6	11.6	0	1.9	0
THC(ppm) Average	708	35	36	99.87	-	-	3.9	-	2.7	-
NMHC(ppm) Average	708	35	36	99.87	-	-	0.439	-	0.1	-
CH4(ppm) Average	708	35	36	99.87	-	-	3.7	-	2.6	-
O3(ppb) Average	708	35	36	99.87	-	-	43.5	0	31.8	-
NO2(ppb) Average	708	36	36	100	-	-	42.3	0	18.7	-
NO(ppb) Average	708	36	36	100	-	-	86.2	-	17.5	-
NOX(ppb) Average	708	36	36	100	-	-	124.2	-	31.5	-
PM2.5(ug/m3) Average	743	1	1	100	-	-	52.3	0	15.7	0
ET(C) Average	744	0	0	100	-	-	11	-	1.4	-
RH(%) Average	744	0	0	100	-	-	94.1	-	80.4	-
WS(km/h) Average	737	0	7	99.06	-	-	20	-	13	-
WD(deg) Average	737	0	7	99.06	-	-	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT McKAY SOUTH (AMS13)
MARCH 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2(ppb) Average	708	1.86	4.6	-	0	0.2	0.3	0.5	1	4.4	41.7
TRS(ppb) Average	706	0.71	0.7	-	0.4	0.4	0.5	0.6	0.7	1.1	11.6
THC(ppm) Average	708	2.31	0.3	-	2	2.1	2.2	2.2	2.4	2.6	3.9
NMHC(ppm) Average	708	0.025	0.057	-	0	0	0	0	0	0.1	0.439
CH4(ppm) Average	708	2.28	0.2	-	2	2.1	2.2	2.2	2.3	2.5	3.7
O3(ppb) Average	708	21.9	10.3	-	1.3	5.2	14.4	23.9	30.1	34.1	43.5
NO2(ppb) Average	708	11.2	7.3	-	0.4	3.7	5.9	9.2	15.4	22	42.3
NO(ppb) Average	708	4.26	9.3	-	0	0.1	0.1	1	4.1	11.4	86.2
NOX(ppb) Average	708	15.46	14.1	-	0.4	4.5	7.1	11.1	18.6	32	124.2
PM2.5(ug/m3) Average	743	6.32	5	-	0.5	2.3	3.4	4.7	7.5	12.1	52.3
Temperature 2 m (C) Average	744	-8.46	7.8	-	-27.8	-19.2	-14.3	-8	-2.8	1.4	11
Relative Humidity (%) Average	744	67.17	14.8	-	26	45.8	56.2	69.8	78.8	84.5	94.1
Wind Speed 10 m (km/h) Average	737	7.5	5	-	0	2	3	7	11	14	20
Wind Direction 10 m (deg) Average	737	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT McKAY SOUTH (AMS13)
MARCH 2025

OPERATIONAL NOTES

	Parameter	Period Start	Period End	Duration (Hours)	Notes
	ALL GASEOUS ANALYZERS	18 Mar 2025 12:00	18 Mar 2025 12:00	1	Maintenance - sample manifold cleaned
WS/WD		01 Mar 2025 08:00	01 Mar 2025 08:00	1	Unstable Operation - flatline in analyzer output signal
WS/WD		01 Mar 2025 22:00	01 Mar 2025 23:00	2	Unstable Operation - flatline in analyzer output signal
WS/WD		02 Mar 2025 03:00	02 Mar 2025 03:00	1	Unstable Operation - flatline in analyzer output signal
WS/WD		03 Mar 2025 22:00	03 Mar 2025 22:00	1	Unstable Operation - flatline in analyzer output signal
WS/WD		17 Mar 2025 06:00	17 Mar 2025 06:00	1	Unstable Operation - flatline in analyzer output signal
WS/WD		23 Mar 2025 08:00	23 Mar 2025 08:00	1	Unstable Operation - flatline in analyzer output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Fort McKay South - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 41.7 ppb on Mar 19 16:00
Maximum Daily Average: 9.0 ppb on Mar 19

Minimum Value: 0.0 ppb on Mar 29 07:00
Minimum Daily Average: 0.2 ppb on Mar 9
Maximum Diurnal Average: 5.5 ppb at hour 15
Minimum Diurnal Average: 0.3 ppb at hour 7
Monthly Average: 1.86 ppb
Percentiles: P_1 = 0.1 P_{10} = 0.2 Q_1 = 0.3 Median = 0.5 Q_3 = 1.0 P_{90} = 4.4 P_{99} = 27.1

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.3	Z	0.3	0.3	0.2	0.2	0.2	0.2	0.3	1.1	3.3	4.7	5.1	16.8	19.7	12.2	3.3	1.0	0.7	0.4	0.6	0.6	0.5	0.6	3.2	19.7
2-Mar	0.7	1.1	Z	1.3	1.2	0.7	0.6	0.7	1.2	1.5	2.1	1.7	0.9	0.8	0.6	0.5	0.8	0.5	0.4	0.3	0.3	0.3	0.3	0.2	0.8	2.1
3-Mar	0.2	0.2	0.2	Z	0.2	0.2	0.3	0.4	0.4	0.6	C	C	C	C	0.4	3.7	2.0	6.1	2.0	0.6	0.4	0.4	0.3	0.2	1.0	6.1
4-Mar	0.3	0.9	1.4	1.6	Z	1.1	0.7	0.6	0.4	0.6	0.4	0.3	2.6	2.8	1.7	0.7	0.5	0.6	0.6	0.6	1.0	1.1	0.7	0.5	0.9	2.8
5-Mar	0.5	0.5	0.5	0.5	0.4	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.8	12.1	22.6	9.7	10.3	4.5	1.8	1.2	1.0	0.6	0.5	3.0	22.6
6-Mar	Z	0.3	0.2	0.3	0.2	0.2	0.5	0.5	0.5	0.9	4.3	16.8	22.2	14.9	12.6	9.2	5.1	2.3	1.5	1.1	0.9	1.0	0.9	1.7	4.3	22.2
7-Mar	2.3	Z	0.7	0.6	0.4	0.3	0.3	0.7	0.9	1.1	1.2	9.9	5.9	5.7	6.1	3.7	1.2	0.6	0.4	0.5	0.4	0.3	0.4	0.4	1.9	9.9
8-Mar	0.4	0.4	Z	0.5	0.5	0.8	0.8	0.7	0.7	0.7	0.8	1.0	0.8	0.6	0.6	0.5	0.5	0.5	0.4	0.5	0.4	0.3	0.3	0.3	0.6	1.0
9-Mar	0.2	0.2	0.2	Z	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.4
10-Mar	0.2	0.3	0.2	0.3	Z	0.2	0.3	0.4	0.4	0.5	4.0	13.9	27.5	23.0	11.8	18.6	18.9	18.2	6.0	4.5	3.1	2.9	2.0	2.2	6.9	27.5
11-Mar	2.2	2.1	1.6	1.4	1.0	Z	0.6	0.6	0.6	0.8	0.8	0.9	0.8	0.7	0.9	0.9	0.9	0.7	0.6	0.6	0.5	0.4	0.4	0.4	0.9	2.2
12-Mar	Z	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.9	2.2	1.6	0.9	1.2	1.0	0.8	0.6	0.3	0.2	0.4	0.3	0.3	0.3	0.5	2.2
13-Mar	0.2	Z	0.3	0.3	0.6	0.7	0.8	0.8	0.6	1.0	1.8	1.4	0.7	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.6	1.8
14-Mar	0.3	0.3	Z	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4
15-Mar	0.3	0.3	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.4	0.6	1.1	1.1	1.1	1.0	2.1	3.3	1.5	1.5	0.4	0.3	0.3	0.7	3.3
16-Mar	0.3	0.3	0.3	0.2	Z	0.3	0.3	0.4	0.6	2.0	8.1	18.0	7.8	3.9	5.0	4.8	5.5	1.2	0.9	0.7	0.6	0.5	0.5	0.6	2.7	18.0
17-Mar	0.6	0.5	0.5	0.5	0.5	Z	0.3	0.3	0.5	0.5	1.0	2.0	1.8	1.0	0.8	0.8	0.8	0.8	0.5	0.4	0.3	0.3	0.3	0.3	0.7	2.0
18-Mar	Z	0.2	0.1	0.2	0.2	0.4	0.4	0.4	1.1	8.0	1.2	M	0.5	0.6	1.8	1.2	5.6	4.7	2.1	0.8	0.7	0.6	0.4	0.4	1.4	8.0
19-Mar	0.4	Z	0.1	0.1	0.1	0.1	0.0	0.1	0.5	0.5	7.9	11.6	25.8	32.5	30.3	41.7	36.8	11.0	3.6	1.7	0.9	1.0	0.5	0.4	9.0	41.7
20-Mar	0.4	0.4	Z	0.3	0.3	0.3	0.2	0.3	0.4	0.5	0.5	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.3	0.5
21-Mar	0.1	0.1	0.2	Z	0.3	0.2	0.2	0.3	1.0	4.1	5.7	6.1	5.9	4.6	7.5	6.3	8.2	3.8	1.2	0.8	0.6	0.8	0.7	0.7	2.6	8.2
22-Mar	0.6	0.6	0.7	0.7	Z	0.7	0.5	0.6	1.2	2.3	3.8	5.6	13.0	5.6	3.5	9.5	2.4	7.8	3.3	1.1	1.0	1.2	1.2	1.0	2.9	13.0
23-Mar	0.6	0.6	0.6	0.5	0.5	Z	0.2	0.3	0.6	0.6	0.4	0.6	5.5	27.2	35.6	5.5	2.2	2.9	1.8	0.9	0.7	0.6	0.6	0.5	3.9	35.6
24-Mar	Z	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.5	1.1	0.8	0.7	6.0	1.6	0.8	0.7	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.8	6.0
25-Mar	0.3	Z	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.5	4.6	2.5	0.4	0.5	0.5	0.5	0.4	0.3	0.4	0.3	0.3	0.2	0.6	4.6
26-Mar	0.3	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.3
27-Mar	0.3	0.2	0.2	Z	0.1	0.0	0.1	0.1	0.1	0.2	0.3	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.4
28-Mar	0.2	0.3	0.3	0.3	Z	0.1	0.1	0.4	0.7	0.5	0.4	0.4	0.5	0.6	1.0	2.1	2.4	1.4	0.6	0.4	0.3	0.3	0.2	0.2	0.6	2.4
29-Mar	0.2	0.2	0.2	0.1	0.1	Z	0.0	0.0	0.2	0.3	0.4	1.0	2.1	2.6	3.0	4.3	28.1	9.1	4.0	2.2	2.0	0.5	0.4	0.5	2.7	28.1
30-Mar	Z	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.4	0.4	0.5	0.7	5.9	10.2	6.5	3.0	3.3	2.6	2.4	1.1	0.6	0.5	0.5	0.5	1.8	10.2
31-Mar	0.5	Z	0.5	0.5	0.4	0.3	0.4	0.4	0.8	1.9	6.4	1.2	1.4	1.2	2.6	2.4	2.4	1.8	0.5	0.5	0.4	0.4	0.3	0.3	1.2	6.4
	0.5	0.4	0.4	0.5	0.3	0.3	0.3	0.4	0.5	1.1	2.0	3.6	5.0	5.5	5.5	5.1	4.7	3.0	1.4	0.8	0.7	0.6	0.5	0.5	Diurnal Average	
	2.3	2.1	1.6	1.6	1.2	1.1	0.8	0.8	1.2	8.0	8.1	18.0	27.5	32.5	35.6	41.7	36.8	18.2	6.0	4.5	3.1	2.9	2.0	2.2	Diurnal Maximum	

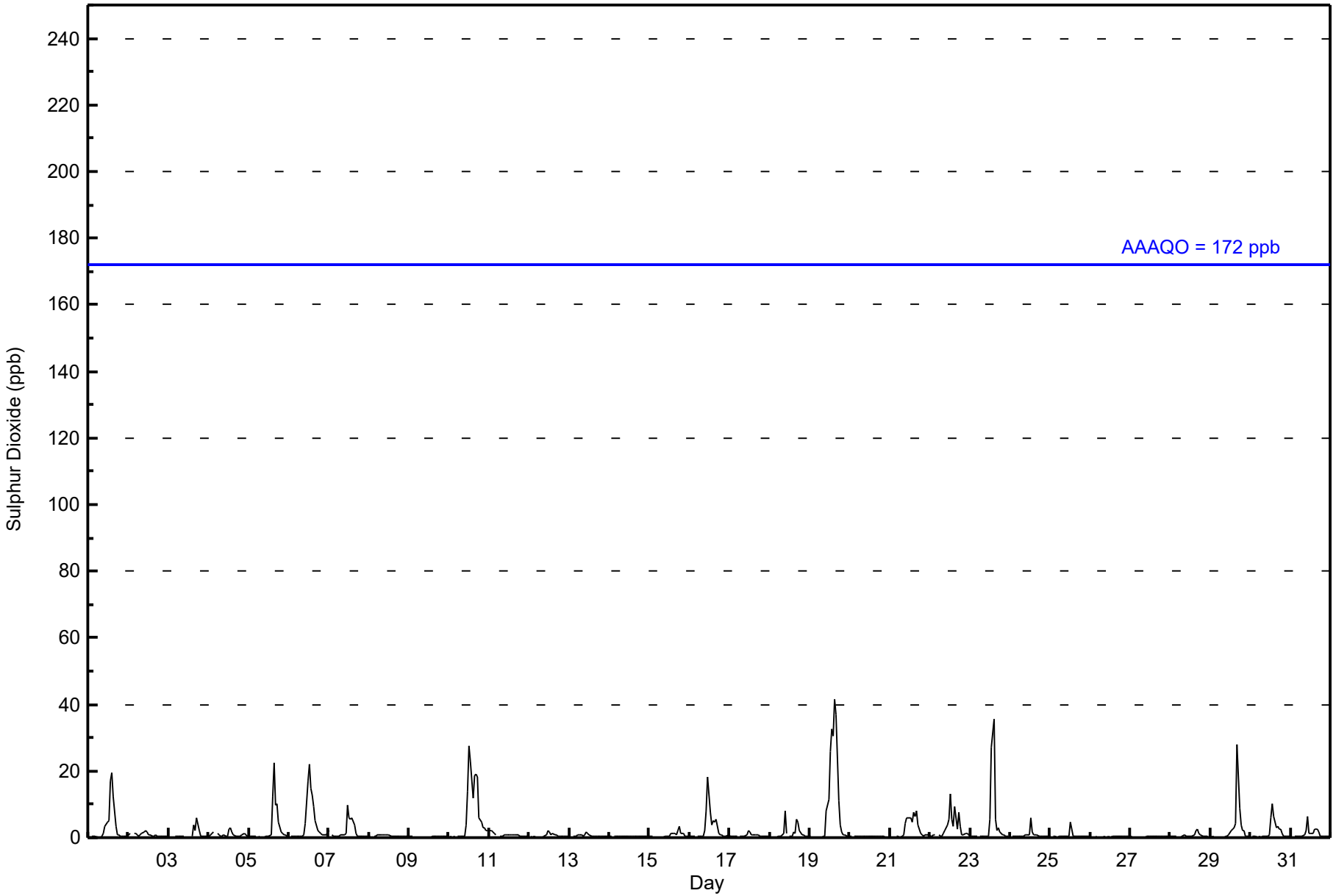
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Fort McKay South - March 2025



Sulphur Dioxide (SO_2) - ppb
Fort McKay South - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	680	96.05	96.05
11 - 20	16	2.26	98.31
21 - 60	12	1.69	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Fort McKay South - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	144	151	21	3	5	7	20	94	46	16	25	31	21	19	31	41	675
11 - 20	1	0	0	0	0	0	2	12	1	0	0	0	0	0	0	0	16
21 - 60	0	0	0	0	0	0	1	10	1	0	0	0	0	0	0	0	12
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	145	151	21	3	5	7	23	116	48	16	25	31	21	19	31	41	703

Total Number of Valid Hours: 703

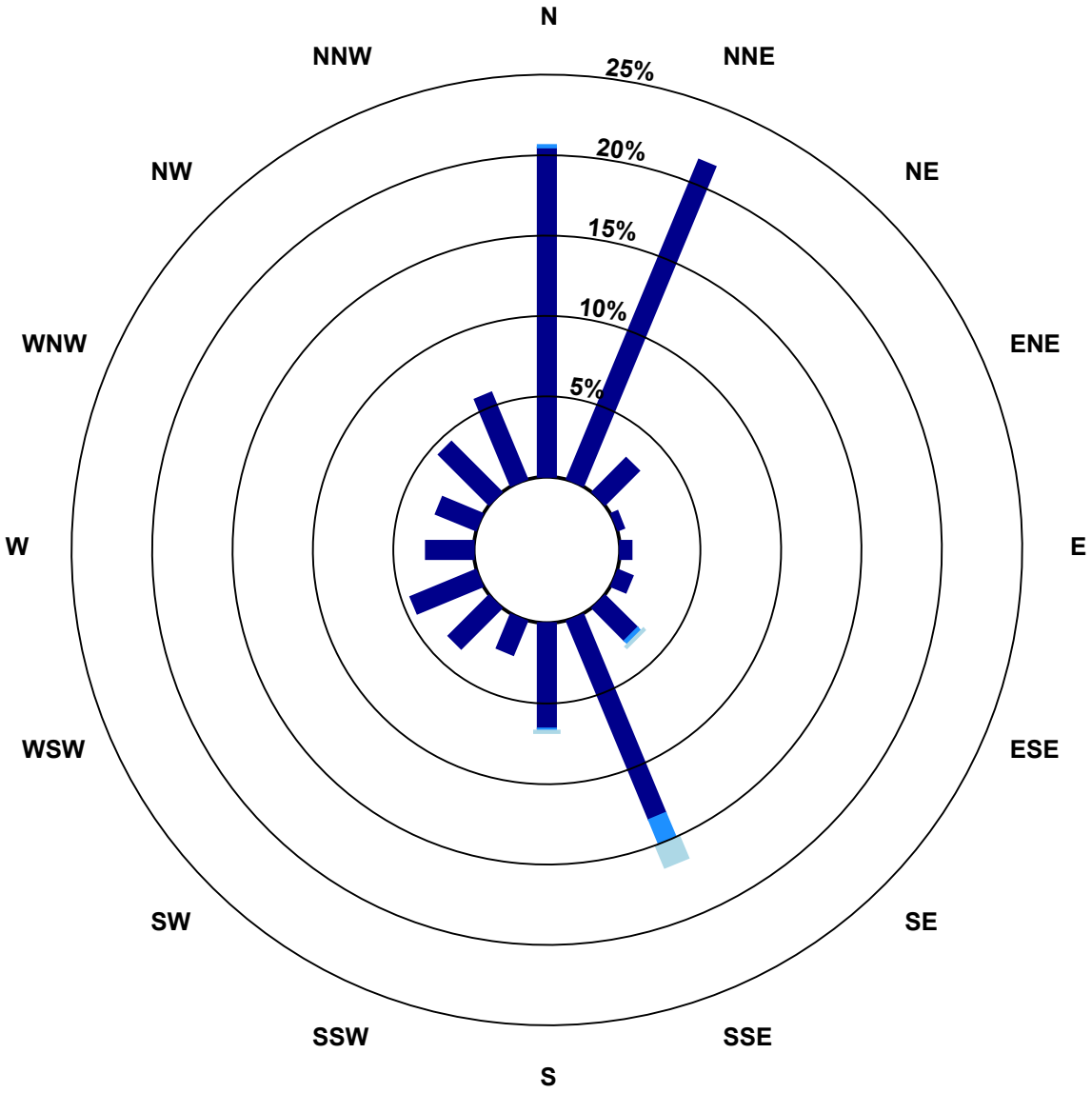
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Sulphur Dioxide (SO_2) - ppb

Fort McKay South



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

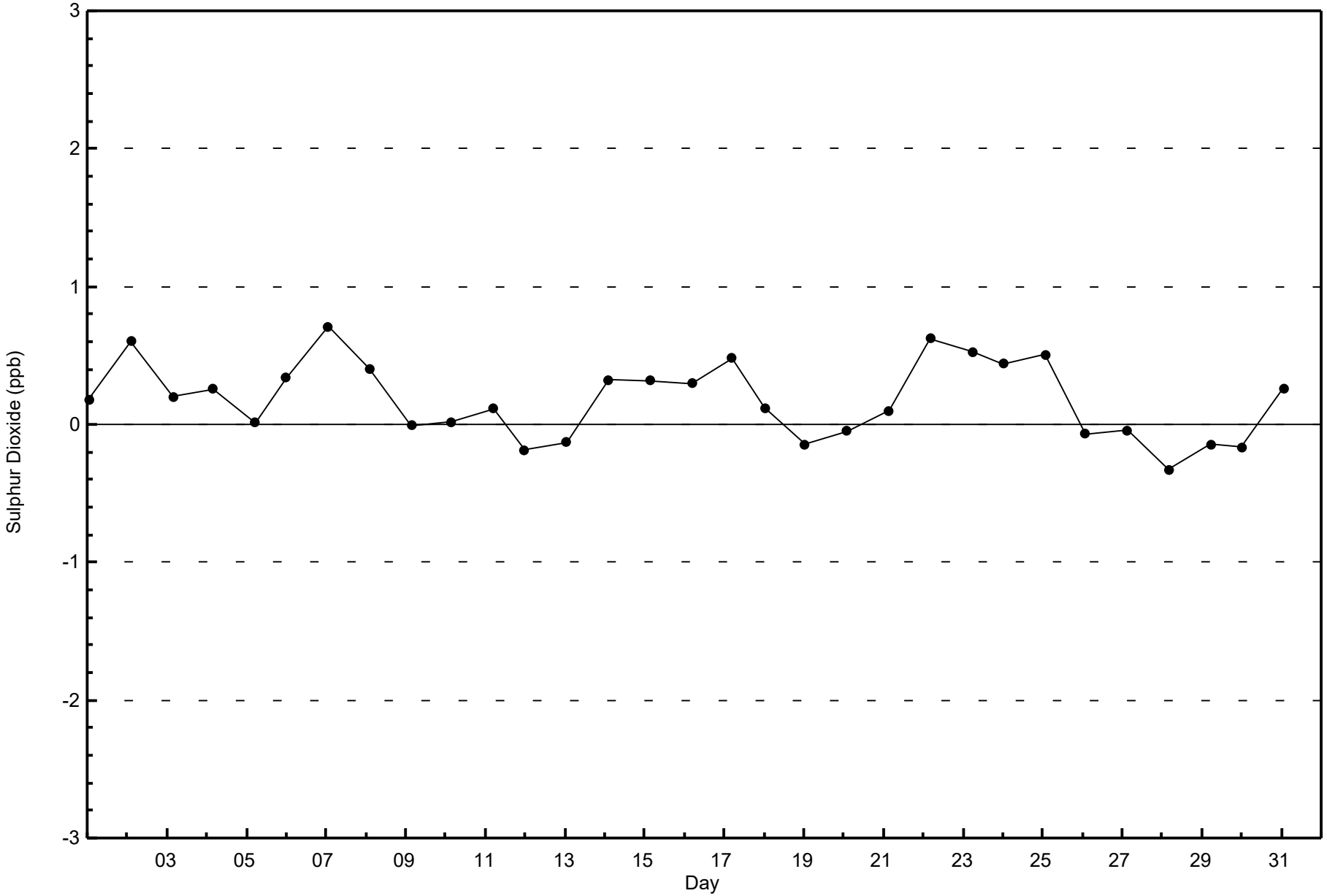
Total Number of Valid Hours: 703

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Fort McKay South - March 2025

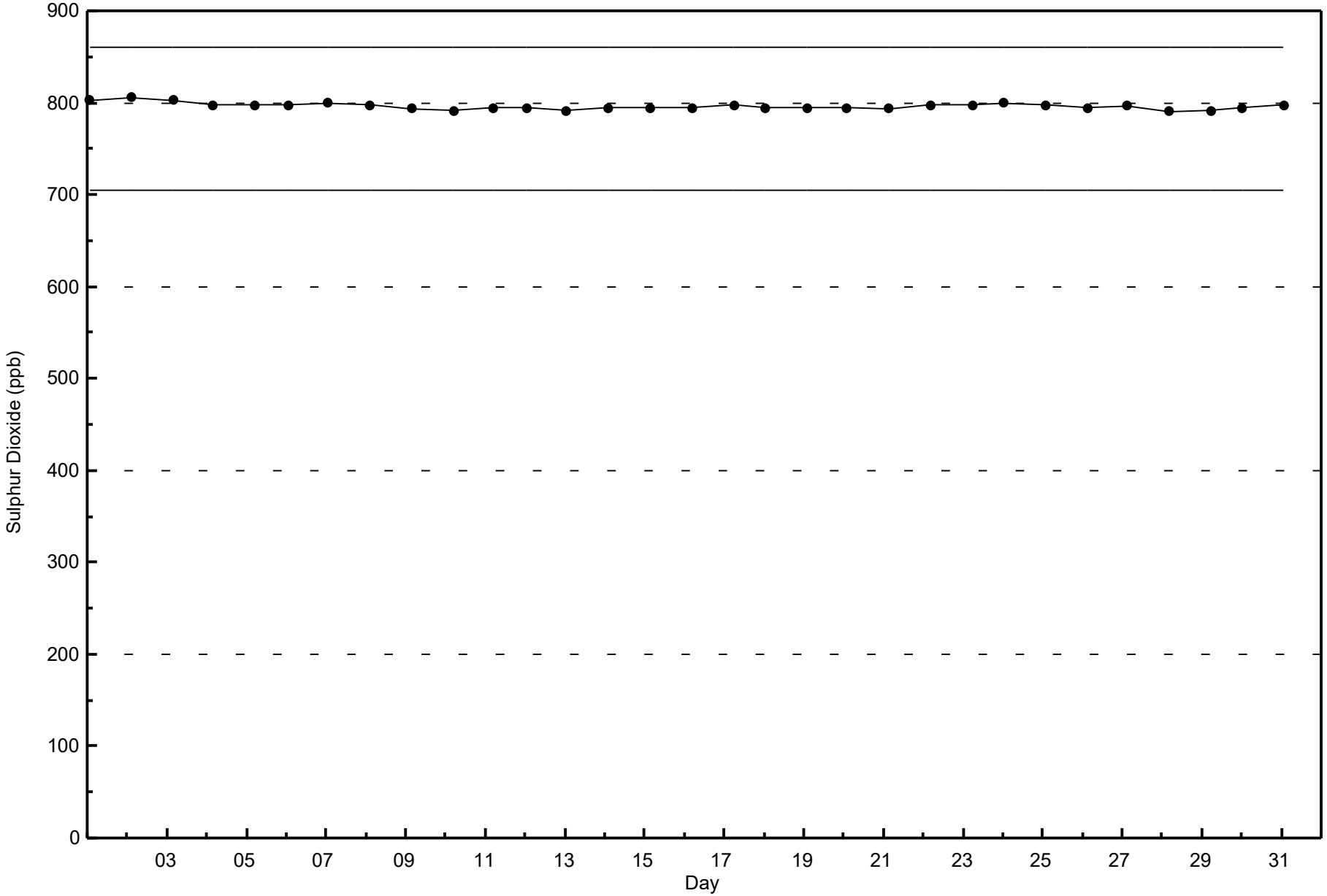


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Fort McKay South - March 2025



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort McKay South - March 2025

Number of Exceedences (AAAQG): 30-Min: 6

Maximum Value: 16.1 ppb on Mar 24 15:30 Maximum Daily Average: 1.9 ppb on Mar 24

Minimum Value: 0.4 ppb on Mar 31 05:00 Minimum Daily Average: 0.4 ppb on Mar 9

Maximum Diurnal Average: 1.2 ppb at hour 11 Minimum Diurnal Average: 0.5 ppb at hour 20

Monthly Average: 0.71 ppb Percentiles: $P_1 = 0.4$ $P_{10} = 0.4$ $Q_1 = 0.5$ Median = 0.5 $Q_3 = 0.7$ $P_{90} = 1.0$ $P_{99} = 3.2$

Periods in Service:	1488
Periods of Valid Data:	1414
Periods of Invalid Data:	74
Periods of Calibration:	72
Percent Operational Time:	99.9

Day	Period Ending At (MST) 00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00	Daily Average	Daily Maximum
1-Mar	0.7	1.0	Z	0.8	0.6	0.5	0.5	0.5	0.5	0.5	1.2	0.8	2.2	2.5	1.8	3.2	2.2	1.1	1.2	0.8	0.7	1.0	0.9	0.9	1.2	4.1
	0.8	0.9	SP	0.6	0.5	0.5	0.5	0.5	0.6	0.7	0.8	1.9	1.3	2.0	4.1	2.2	2.0	1.1	1.0	0.8	0.9	1.0	0.9	1.1		
2-Mar	1.0	1.0	1.2	Z	1.4	1.1	1.0	0.9	1.3	1.2	1.6	1.2	0.7	0.6	0.6	0.4	0.9	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.8	1.6
	1.1	1.1	1.3	SP	1.3	1.0	0.9	1.3	1.2	1.4	1.5	1.1	0.6	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		
3-Mar	0.5	0.5	0.5	0.5	Z	0.6	0.6	0.6	0.6	0.6	2.4	1.7	0.8	0.7	0.7	0.8	0.7	0.8	0.8	0.7	0.6	0.8	1.1	2.2	0.9	2.4
	0.5	0.5	0.5	0.5	SP	0.6	0.6	0.6	0.6	0.6	1.8	1.1	0.8	1.4	0.7	0.6	0.7	1.0	0.7	0.6	0.7	0.9	1.7	2.4		
4-Mar	2.3	3.7	3.4	2.4	1.7	Z	1.3	0.8	0.7	2.0	1.8	C	C	C	C	C	0.6	0.6	0.6	0.5	0.5	0.7	0.6	0.6	1.3	3.7
	2.6	3.5	2.9	2.0	1.4	SP	1.1	0.7	0.6	2.2	C	C	C	C	C	0.7	0.7	0.7	0.6	0.5	0.7	0.6	0.6	0.6		
5-Mar	Z	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.8	0.8	0.8	1.0	0.6	0.7	0.8	1.0	0.9	0.8	0.6	1.0
	SP	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.4	0.5	0.8	0.7	0.9	0.9	0.6	0.6	1.0	0.9	0.8	0.8		
6-Mar	0.8	Z	0.6	0.6	0.5	0.5	0.6	0.7	0.6	1.1	0.6	1.0	0.9	0.7	0.6	0.6	0.5	0.6	0.6	0.6	1.0	3.1	3.1	2.3	1.0	4.8
	0.8	SP	0.6	0.5	0.5	0.6	0.7	0.6	0.6	1.5	0.6	1.0	0.9	0.7	0.6	0.6	0.6	0.6	0.6	0.7	1.7	4.8	2.3	1.5		
7-Mar	0.9	0.7	Z	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.7	1.8	1.5	1.2	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.7	1.9
	0.7	0.5	SP	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.9	1.9	1.5	1.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		
8-Mar	0.5	0.6	0.6	Z	0.6	0.6	0.7	0.6	0.4	0.4	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.5	0.4	0.5	0.5	0.7
	0.5	0.6	0.5	SP	0.6	0.7	0.7	0.5	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		
9-Mar	0.4	0.4	0.4	0.4	Z	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	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	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		
10-Mar	0.5	0.5	0.5	0.5	0.5	Z	0.6	0.6	0.6	0.6	0.6	0.8	0.9	0.8	0.6	0.6	0.7	1.0	0.8	0.8	0.7	0.6	0.7	0.8	0.7	1.0
	0.5	0.5	0.4	0.5	0.5	SP	0.6	0.6	0.7	0.6	0.7	1.0	0.9	0.7	0.6	0.7	0.9	0.9	0.8	0.8	0.6	0.7	0.7	0.7		
11-Mar	Z	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.8	0.7	0.5	0.5	0.5	0.4	0.4	0.5	0.4	0.4	0.5	0.4	0.4	0.5	0.8
	SP	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.6	0.5	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4		
12-Mar	0.4	Z	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.6	0.5	0.6
	0.4	SP	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	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.6		
13-Mar	0.7	0.7	Z	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.4	1.2	0.6	0.5	0.4	0.5	0.4	0.5	0.5	0.5	0.5	0.6	0.8	0.9	0.7	1.4
	0.6	0.6	SP	0.7	0.7	0.7	0.7	0.7	0.6	1.0	1.3	0.8	0.6	0.4	0.5	0.4	0.4	0.6	0.5	0.5	0.6	0.6	0.8	0.8		
14-Mar	0.7	0.5	1.0	Z	0.6	0.6	0.5	0.4	0.5	0.6	0.8	0.5	0.6	0.5	0.5	0.7	0.5	0.8	1.2	0.8	0.6	3.0	0.5	0.4	0.7	3.0
	0.4	0.7	0.6	SP	0.7	0.5	0.4	0.4	0.5	0.8	0.5	0.7	0.8	0.5	0.6	0.5	0.5	0.7	0.7	1.0	0.5	1.2	0.5	0.4		
15-Mar	0.4	0.5	0.4	0.5	Z	0.5	0.4	0.4	0.4	0.4	2.8	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.7	0.6	0.7	0.7	1.5	0.7	2.8
	0.4	0.5	0.5	0.5	SP	0.4	0.4	0.4	0.4	1.1	1.0	0.6	0.6	0.6	0.8	0.6	0.6	0.5	0.7	0.6	0.6	0.8	0.7	1.7		

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort McKay South - March 2025

Day	Period Ending At (MST) 00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00	Daily Average	Daily Maximum
16-Mar	1.0	1.0	0.8	0.7	0.6	Z	0.6	0.6	0.7	0.9	0.6	1.8	0.7	0.6	0.5	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.7	1.8
	0.9	0.8	0.7	0.6	0.5	SP	0.5	0.6	1.0	0.8	1.0	1.6	0.6	0.5	0.7	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5		
17-Mar	Z	0.5	0.5	0.5	0.5	0.6	0.6	0.7	2.5	0.7	0.8	1.2	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	2.5
	SP	0.5	0.4	0.5	0.6	0.6	0.6	1.4	1.2	0.6	1.0	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		
18-Mar	0.5	Z	0.6	0.6	1.0	1.3	1.1	0.8	0.7	1.0	0.6	M	0.6	0.5	0.6	0.7	0.7	0.5	0.5	0.5	0.4	0.6	0.6	0.4	0.7	1.3
	0.5	SP	0.6	0.6	1.2	1.2	1.0	0.7	0.9	0.7	M	0.5	0.6	0.6	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.4		
19-Mar	0.4	0.4	Z	0.5	0.5	0.5	0.5	0.5	0.6	0.7	2.2	2.3	1.3	1.2	1.0	1.1	1.1	1.1	1.0	0.6	0.5	0.5	0.8	1.1	0.9	5.1
	0.4	0.4	SP	0.5	0.5	0.4	0.4	0.5	0.7	0.7	5.1	1.2	1.2	1.1	1.1	1.2	1.0	1.3	0.7	0.5	0.5	0.8	0.8	1.1		
20-Mar	0.8	0.8	1.1	Z	1.1	1.2	1.0	0.9	1.3	1.2	1.2	0.7	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.6	0.6	0.5	0.5	0.7	1.3
	0.7	1.0	1.0	SP	1.3	1.1	1.0	1.0	1.1	1.3	1.0	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.7	0.6	0.5	0.5		
21-Mar	0.5	0.5	0.5	0.5	Z	0.5	0.4	0.4	0.4	0.6	0.7	0.7	0.6	0.7	0.7	0.5	0.8	0.7	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.9
	0.5	0.5	0.5	0.4	SP	0.5	0.4	0.4	0.5	0.7	0.7	0.6	0.6	0.7	0.6	0.6	0.9	0.5	0.5	0.5	0.4	0.4	0.4	0.4		
22-Mar	0.5	0.5	0.5	0.8	1.4	Z	1.2	0.5	0.5	0.5	0.6	0.7	1.2	0.8	0.6	0.8	0.6	0.8	0.8	0.5	0.5	0.6	0.8	0.7	0.7	1.7
	0.5	0.5	0.7	0.8	1.7	SP	0.7	0.5	0.5	0.6	0.6	0.7	1.2	0.6	0.7	0.8	0.6	0.9	0.5	0.6	0.6	0.9	0.7	0.7		
23-Mar	Z	0.7	0.7	0.7	0.7	0.6	0.7	0.6	0.6	0.6	1.4	1.3	0.8	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.7	1.4
	SP	0.7	0.7	0.6	0.6	0.6	0.6	0.7	0.6	0.9	1.4	0.9	0.6	0.6	0.6	0.5	0.5	0.6	0.6	0.5	0.6	0.7	0.7	0.7		
24-Mar	0.7	Z	0.7	0.7	0.6	0.6	0.6	0.6	0.7	0.7	8.7	3.8	0.9	0.7	10.6	16.1	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.9	16.1
	0.7	SP	0.7	0.7	0.6	0.6	0.6	0.6	0.7	2.1	5.0	2.0	1.3	2.1	12.5	4.9	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		
25-Mar	0.5	0.5	Z	0.4	0.4	1.3	0.7	0.5	0.5	0.7	0.4	5.4	0.7	2.3	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.8	5.4
	0.5	0.5	SP	0.4	0.7	0.8	0.6	0.4	0.8	0.8	2.4	2.0	1.0	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4		
26-Mar	0.4	0.4	0.4	Z	0.5	0.4	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	0.5	0.4	0.5	0.4	0.5
	0.5	0.4	0.4	SP	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.5	0.5	0.4	0.4	0.5	0.5	0.4	0.4	0.5		
27-Mar	0.6	0.6	0.7	0.6	Z	0.5	0.5	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.5	0.7
	0.5	0.7	0.7	0.6	SP	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.4		
28-Mar	0.4	0.4	0.4	0.4	0.4	Z	0.5	0.5	0.7	0.8	0.6	0.6	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.8
	0.4	0.4	0.4	0.4	0.4	SP	0.4	0.5	0.8	0.8	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5		
29-Mar	Z	0.5	0.4	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	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.6	0.7
	SP	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.7	0.5	0.7	0.6	0.6	0.6	0.7	0.6	0.6	0.5		
30-Mar	0.5	Z	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.5	0.6	0.7	0.8	0.5	0.5	0.8	0.9	0.6	0.5	0.5	0.6	0.6	0.9
	0.5	SP	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.6	0.6	0.5	0.5	0.7	0.9	0.5	0.5	0.6	0.8	0.8	0.5	0.5	0.6	0.5		
31-Mar	0.5	0.5	Z	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.5	0.4	0.6	0.5	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.5	0.4	0.5	0.5	0.7
	0.5	0.5	SP	0.4	0.4	0.4	0.4	0.4	0.6	0.7	0.5	0.6	0.5	0.5	0.7	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5		
	0.7	0.7	0.7	0.6	0.7	0.6	0.6	0.6	0.7	0.8	1.2	1.0	0.7	0.7	1.0	1.0	0.6	0.6	0.6	0.5	0.6	0.7	0.7	0.7	Diurnal Average	
	2.6	3.7	3.4	2.4	1.7	1.3	1.3	1.4	2.5	2.2	8.7	5.4	2.2	2.5	12.5	16.1	2.2	1.3	1.2	1.0	1.7	4.8	3.1	2.4	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

Fort McKay South - March 2025

Maximum Value: 11.6 ppb on Mar 24 15:00

Maximum Daily Average: 1.9 ppb on Mar 24

Minimum Value: 0.4 ppb on Mar 9 10:00

Minimum Daily Average: 0.4 ppb on Mar 9

Maximum Diurnal Average: 1.1 ppb at hour 11

Minimum Diurnal Average: 0.5 ppb at hour 20

Monthly Average: 0.71 ppb

Percentiles: P_1 = 0.4 P_{10} = 0.4 Q_1 = 0.5 Median = 0.6 Q_3 = 0.7 P_{90} = 1.1 P_{99} = 3.1

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	37
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.8	0.9	Z	0.7	0.5	0.5	0.5	0.5	0.6	0.6	1.0	1.3	1.8	2.3	2.9	2.7	2.1	1.1	1.1	0.8	0.8	1.0	0.9	1.0	1.2	2.9
2-Mar	1.0	1.1	1.2	Z	1.3	1.1	0.9	1.1	1.2	1.3	1.6	1.1	0.6	0.5	0.5	0.4	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.8	1.6
3-Mar	0.5	0.5	0.5	0.5	Z	0.6	0.6	0.6	0.6	0.6	2.1	1.4	0.8	1.1	0.7	0.7	0.7	0.9	0.8	0.7	0.7	0.8	1.4	2.3	0.9	2.3
4-Mar	2.4	3.6	3.2	2.2	1.6	Z	1.2	0.8	0.7	2.1	C	C	C	C	C	C	0.6	0.6	0.6	0.5	0.6	0.6	0.6	0.6	--	3.6
5-Mar	Z	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.5	0.8	0.7	0.8	1.0	0.6	0.6	0.9	0.9	0.9	0.8	0.6	1.0
6-Mar	0.8	Z	0.6	0.5	0.5	0.5	0.7	0.7	0.6	1.3	0.6	1.0	0.9	0.7	0.6	0.6	0.6	0.6	0.6	0.7	1.3	3.9	2.7	1.9	1.0	3.9
7-Mar	0.8	0.6	Z	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.8	1.8	1.5	1.1	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.7	1.8
8-Mar	0.5	0.6	0.5	Z	0.6	0.7	0.7	0.5	0.4	0.4	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	0.5	0.7
9-Mar	0.4	0.4	0.4	0.4	Z	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5
10-Mar	0.5	0.5	0.4	0.5	0.5	Z	0.6	0.6	0.6	0.6	0.7	0.9	0.9	0.7	0.6	0.6	0.8	1.0	0.8	0.8	0.7	0.7	0.7	0.8	0.7	1.0
11-Mar	Z	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.8	0.8	0.7	0.5	0.5	0.5	0.4	0.5	0.5	0.4	0.4	0.5	0.4	0.4	0.5	0.8
12-Mar	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	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.6	0.5	0.6
13-Mar	0.6	0.6	Z	0.7	0.7	0.7	0.7	0.7	0.6	0.9	1.4	1.0	0.6	0.5	0.4	0.5	0.4	0.5	0.5	0.5	0.5	0.6	0.8	0.8	0.7	1.4
14-Mar	0.6	0.6	0.8	Z	0.7	0.5	0.5	0.4	0.5	0.7	0.7	0.6	0.7	0.5	0.6	0.6	0.5	0.8	0.9	0.9	0.6	2.1	0.5	0.4	0.7	2.1
15-Mar	0.4	0.5	0.5	0.5	Z	0.4	0.4	0.4	0.4	0.8	1.9	0.6	0.6	0.6	0.7	0.6	0.6	0.5	0.6	0.7	0.6	0.8	0.7	1.6	0.7	1.9
16-Mar	1.0	0.9	0.8	0.6	0.5	Z	0.5	0.6	0.8	0.8	0.8	1.7	0.7	0.5	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.7	1.7
17-Mar	Z	0.5	0.5	0.5	0.5	0.6	0.6	1.0	1.8	0.7	0.9	0.9	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	1.8
18-Mar	0.5	Z	0.6	0.6	1.1	1.3	1.0	0.7	0.8	0.8	0.5	M	0.6	0.6	0.6	0.7	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.4	0.7	1.3
19-Mar	0.4	0.4	Z	0.5	0.5	0.5	0.5	0.5	0.6	0.7	3.6	1.7	1.2	1.2	1.1	1.2	1.0	1.2	0.9	0.5	0.5	0.7	0.8	1.1	0.9	3.6
20-Mar	0.7	0.9	1.0	Z	1.2	1.2	1.0	1.0	1.2	1.3	1.1	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.6	0.6	0.5	0.5	0.7	1.3
21-Mar	0.5	0.5	0.5	0.5	Z	0.5	0.4	0.4	0.5	0.6	0.7	0.7	0.6	0.7	0.7	0.6	0.8	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.8
22-Mar	0.5	0.5	0.6	0.8	1.5	Z	0.9	0.5	0.5	0.6	0.6	0.7	1.2	0.7	0.6	0.8	0.6	0.8	0.7	0.6	0.5	0.8	0.8	0.7	0.7	1.5
23-Mar	Z	0.7	0.7	0.6	0.7	0.6	0.6	0.6	0.6	0.7	1.4	1.1	0.7	0.6	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.7	1.4
24-Mar	0.7	Z	0.7	0.7	0.6	0.6	0.6	0.6	0.7	1.4	6.9	2.9	1.1	1.4	11.6	10.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.9	11.6
25-Mar	0.5	0.5	Z	0.4	0.5	1.0	0.6	0.5	0.6	0.7	1.4	3.7	0.8	1.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.8	3.7
26-Mar	0.5	0.4	0.4	Z	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.5	0.4	0.4	0.5	0.4	0.5
27-Mar	0.6	0.7	0.7	0.6	Z	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.5	0.7
28-Mar	0.4	0.4	0.4	0.4	0.4	Z	0.4	0.5	0.7	0.8	0.5	0.6	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.8
29-Mar	Z	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.6	0.5	0.7	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.6	0.7
30-Mar	0.5	Z	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.6	0.6	0.5	0.7	0.8	0.6	0.5	0.6	0.8	0.8	0.5	0.5	0.6	0.5	0.6	0.8
31-Mar	0.5	0.5	Z	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.5	0.5	0.6	0.5	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.6
	0.7	0.7	0.7	0.6	0.7	0.6	0.6	0.6	0.7	0.8	1.1	1.0	0.7	0.7	1.0	1.0	0.6	0.6	0.6	0.5	0.6	0.7	0.7	0.7	Diurnal Average	
	2.4	3.6	3.2	2.2	1.6	1.3	1.2	1.1	1.8	2.1	6.9	3.7	1.8	2.3	11.6	10.5	2.1	1.2	1.1	0.9	1.3	3.9	2.7	2.3	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

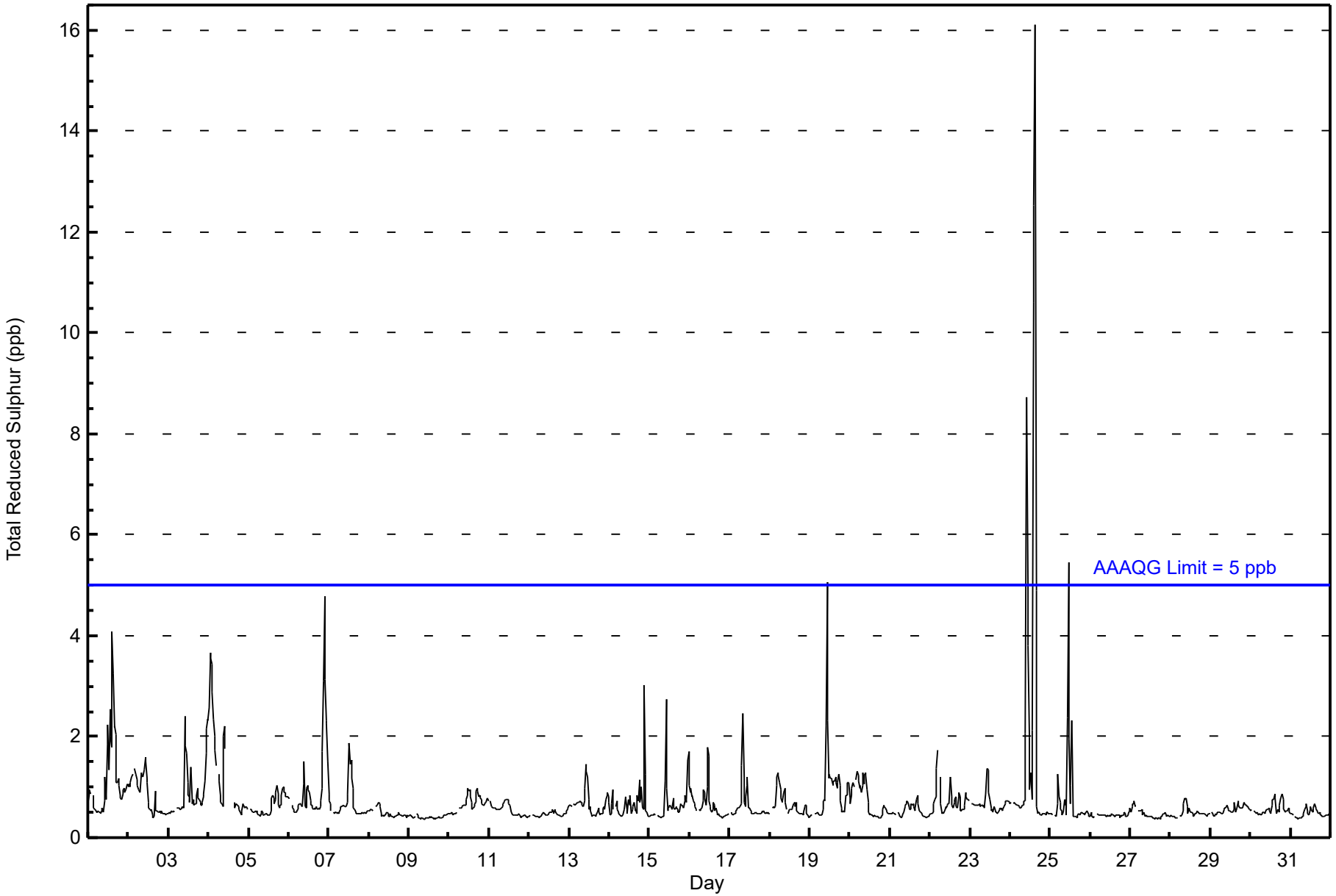
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Fort McKay South - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	694	98.30	98.30
3 - 4	9	1.27	99.58
5 - 7	1	0.14	99.72
8 - 11	1	0.14	99.86
> 11	1	0.14	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Fort McKay South - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	145	151	20	3	5	6	22	110	44	14	24	32	20	18	31	42	687
3 - 4	0	0	0	0	0	0	1	4	0	0	1	1	0	1	0	1	9
5 - 7	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
8 - 11	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
> 11	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Totals	145	151	20	3	5	6	23	114	45	16	25	33	20	19	31	43	699

Total Number of Valid Hours: 699

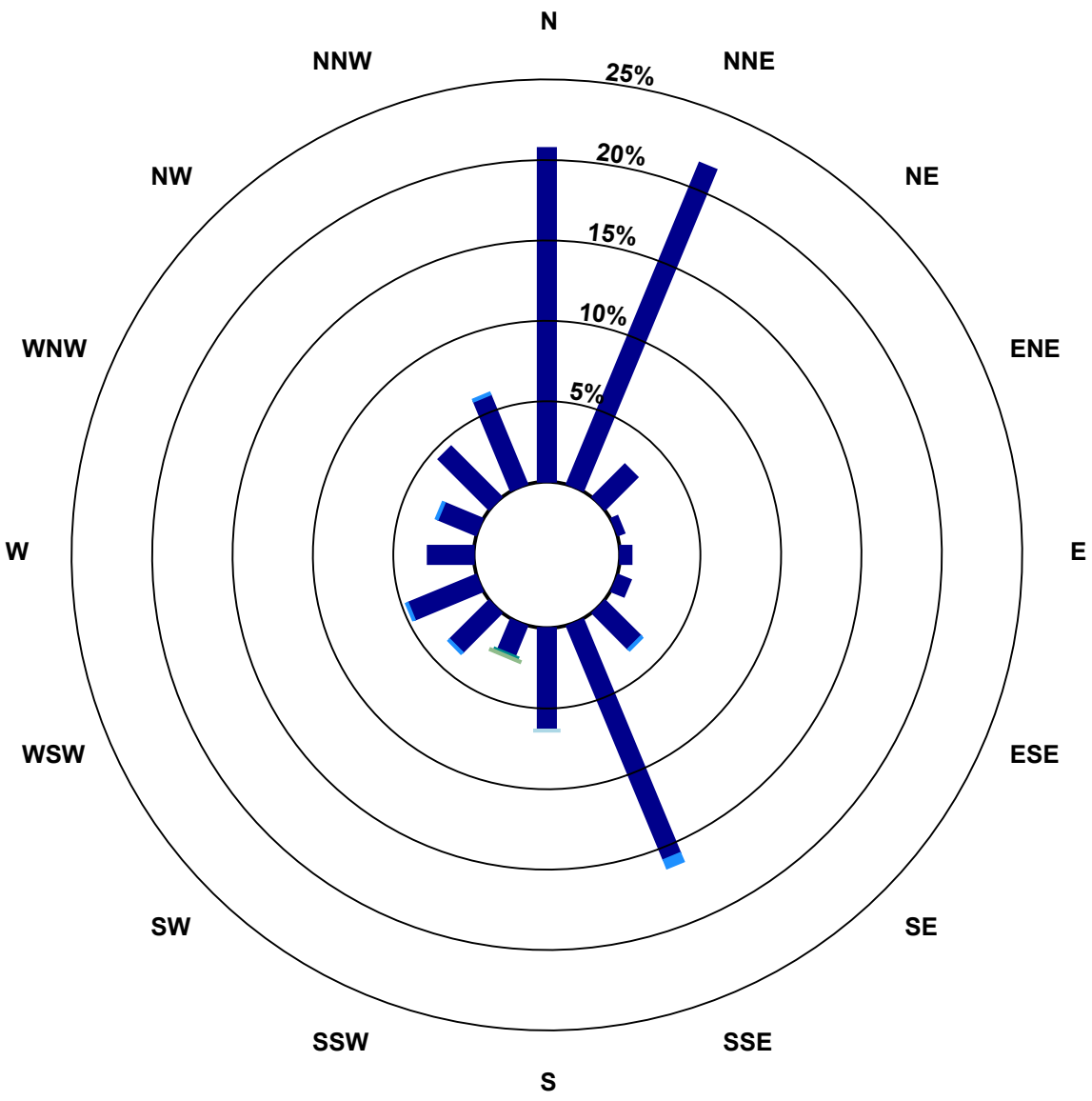
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Total Reduced Sulphur (TRS) - ppb

Fort McKay South



Classes (ppb)

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

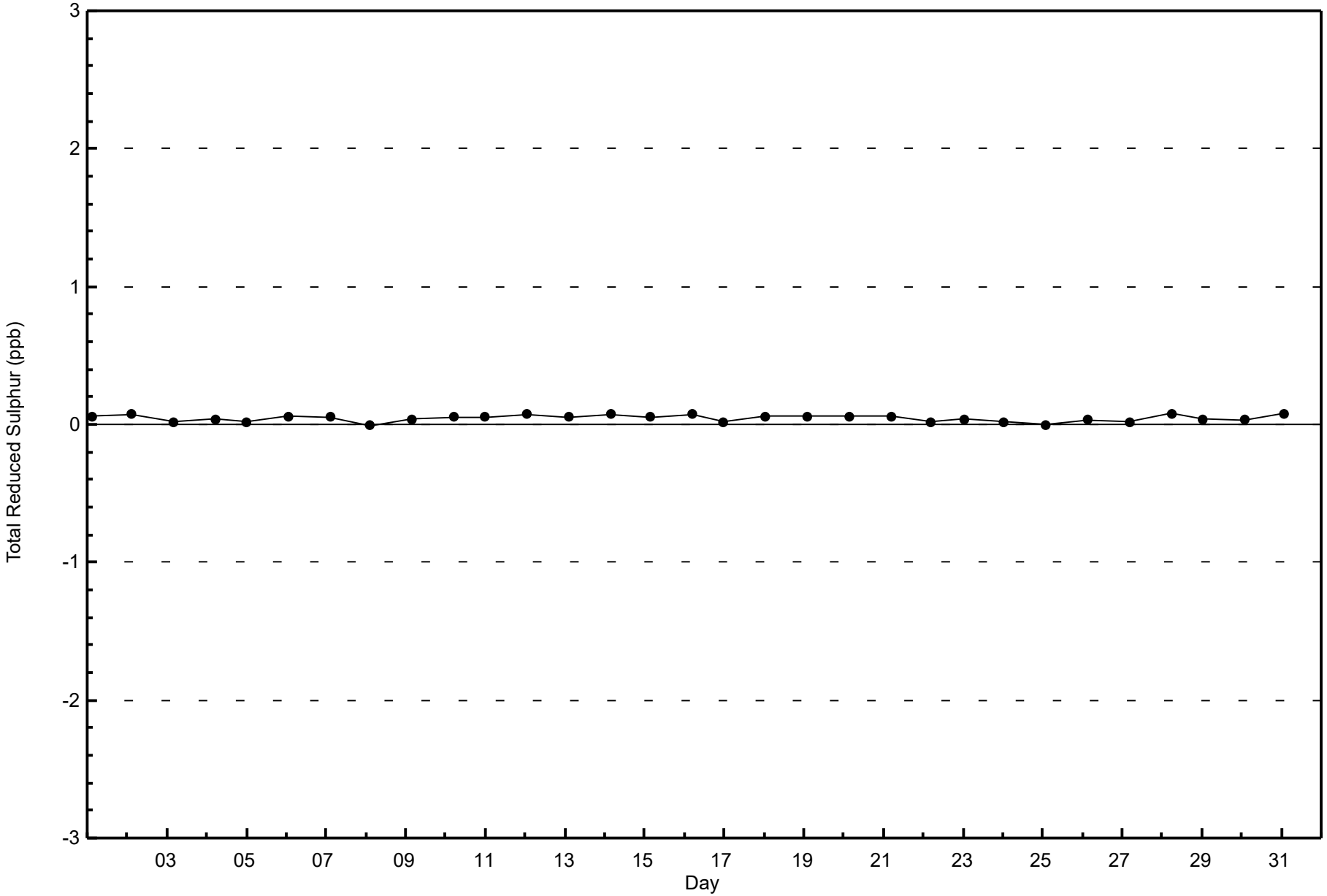
Total Number of Valid Hours: 699

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Fort McKay South - March 2025

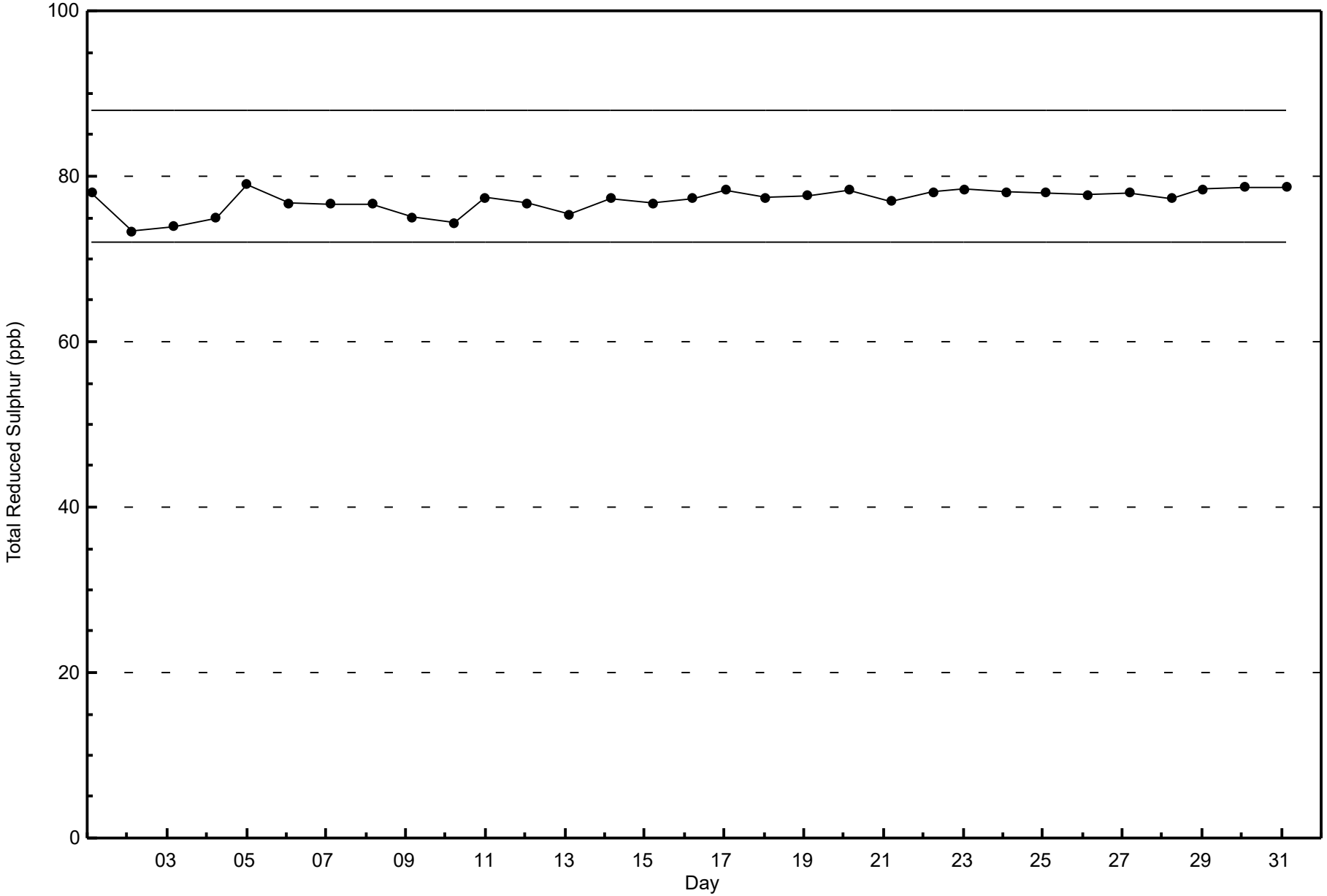


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Fort McKay South - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Fort McKay South - March 2025

Maximum Value: 3.9 ppm on Mar 2 11:00

Maximum Daily Average: 2.7 ppm on Mar 2

Minimum Value: 2.0 ppm on Mar 2 16:00

Minimum Daily Average: 2.1 ppm on Mar 31

Maximum Diurnal Average: 2.4 ppm at hour 4

Minimum Diurnal Average: 2.2 ppm at hour 16

Monthly Average: 2.31 ppm

Percentiles: P_1 = 2.1 P_{10} = 2.1 Q_1 = 2.2 Median = 2.2 Q_3 = 2.4 P_{90} = 2.6 P_{99} = 3.4

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	2.3	Z	2.8	2.5	2.3	2.2	2.1	2.1	2.2	2.2	2.4	2.2	2.2	2.3	2.2	2.2	2.2	3.0	3.2	3.1	3.1	3.2	3.1	3.2	2.5	3.2
2-Mar	3.3	3.3	Z	3.6	3.5	3.0	2.8	2.9	3.2	3.6	3.9	3.0	2.3	2.2	2.1	2.0	2.8	2.2	2.1	2.1	2.2	2.1	2.2	2.2	2.7	3.9
3-Mar	2.2	2.2	2.2	Z	2.2	2.3	2.4	2.2	2.3	2.3	C	C	C	C	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.6	2.6	2.5	2.3	2.6
4-Mar	2.4	2.8	3.2	3.4	Z	3.0	2.8	2.6	2.4	2.5	2.4	2.2	2.5	2.4	2.7	2.3	2.2	2.2	2.3	2.2	2.3	2.3	2.3	2.3	2.5	3.4
5-Mar	2.3	2.3	2.2	2.2	2.2	Z	2.1	2.1	2.3	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.9	2.8	2.5	2.5	2.3	2.9
6-Mar	Z	2.5	2.5	2.4	2.5	2.6	2.7	2.7	2.6	2.7	2.2	2.7	2.5	2.3	2.2	2.2	2.2	2.2	2.3	2.8	3.5	3.6	3.3	2.9	2.6	3.6
7-Mar	2.5	Z	2.3	2.3	2.3	2.4	2.2	2.5	2.4	2.4	2.5	2.5	2.5	2.5	3.0	2.3	2.3	2.2	2.2	2.3	2.3	2.2	2.2	2.3	2.4	3.0
8-Mar	2.4	2.4	Z	2.4	2.4	2.5	2.6	2.5	2.2	2.2	2.2	2.3	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.3	2.6
9-Mar	2.2	2.2	2.2	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.1	2.1	2.2	2.1	2.2
10-Mar	2.2	2.2	2.2	2.2	Z	2.3	2.4	2.4	2.5	2.5	2.5	2.5	2.4	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.3	2.3	2.4	2.3	2.5
11-Mar	2.3	2.3	2.3	2.3	2.3	Z	2.3	2.3	2.4	2.6	2.7	2.7	2.6	2.4	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.7
12-Mar	Z	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	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.3
13-Mar	2.3	Z	2.4	2.7	3.1	3.2	3.2	3.1	2.8	3.0	3.7	3.0	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.6	3.7
14-Mar	2.2	2.2	Z	2.2	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.2
15-Mar	2.1	2.3	2.3	Z	2.2	2.2	2.2	2.2	2.2	2.4	2.5	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.5
16-Mar	2.3	2.3	2.3	2.4	Z	2.8	2.7	2.5	2.4	2.3	2.3	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.8
17-Mar	2.1	2.1	2.1	2.2	2.3	Z	2.3	2.3	2.4	2.2	2.6	2.3	2.4	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.2	2.6
18-Mar	Z	2.3	2.5	2.5	2.7	2.8	2.9	2.8	2.8	2.4	2.3	M	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.4	2.9
19-Mar	2.2	Z	2.3	2.4	2.4	2.4	2.3	2.3	2.4	2.5	2.9	2.5	2.4	2.3	2.2	2.3	2.2	2.5	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.9
20-Mar	2.2	2.2	Z	2.3	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3
21-Mar	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3
22-Mar	2.3	2.3	2.4	2.5	Z	2.9	2.4	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.4	2.3	2.1	2.2	2.4	2.2	2.2	2.3	2.9
23-Mar	2.2	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.4	2.4	2.2	2.4
24-Mar	Z	2.4	2.4	2.3	2.3	2.3	2.4	2.4	2.4	2.3	2.3	2.5	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.5
25-Mar	2.1	Z	2.1	2.1	2.1	2.2	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.2	2.1	2.1	2.1	2.2	2.1	2.2	2.2	2.2	2.3	2.1	2.2	2.3
26-Mar	2.1	2.1	Z	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.3	2.1	2.1	2.2	2.2	2.3
27-Mar	2.2	2.2	2.2	Z	2.1	2.1	2.1	2.2	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.4	2.5	2.4	2.4	2.2	2.5
28-Mar	2.3	2.2	2.3	2.3	Z	2.4	2.5	2.6	2.7	2.5	2.3	2.5	2.4	2.3	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.7
29-Mar	2.3	2.4	2.6	2.7	2.6	Z	2.4	2.4	2.6	2.5	2.4	2.2	2.2	2.1	2.2	2.2	2.1	2.2	2.2	2.2	2.3	2.3	2.4	2.3	2.3	2.7
30-Mar	Z	2.5	2.6	2.6	2.5	2.4	2.5	2.5	2.5	2.5	2.4	2.3	2.2	2.3	2.6	2.3	2.1	2.2	2.4	2.4	2.2	2.2	2.4	2.3	2.4	2.6
31-Mar	2.2	Z	2.2	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	2.1	2.2
	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	Diurnal Average	
	3.3	3.3	3.2	3.6	3.5	3.2	3.2	3.1	3.2	3.6	3.9	3.0	2.6	2.5	3.0	2.3	2.8	3.0	3.2	3.1	3.5	3.6	3.3	3.2	Diurnal Maximum	

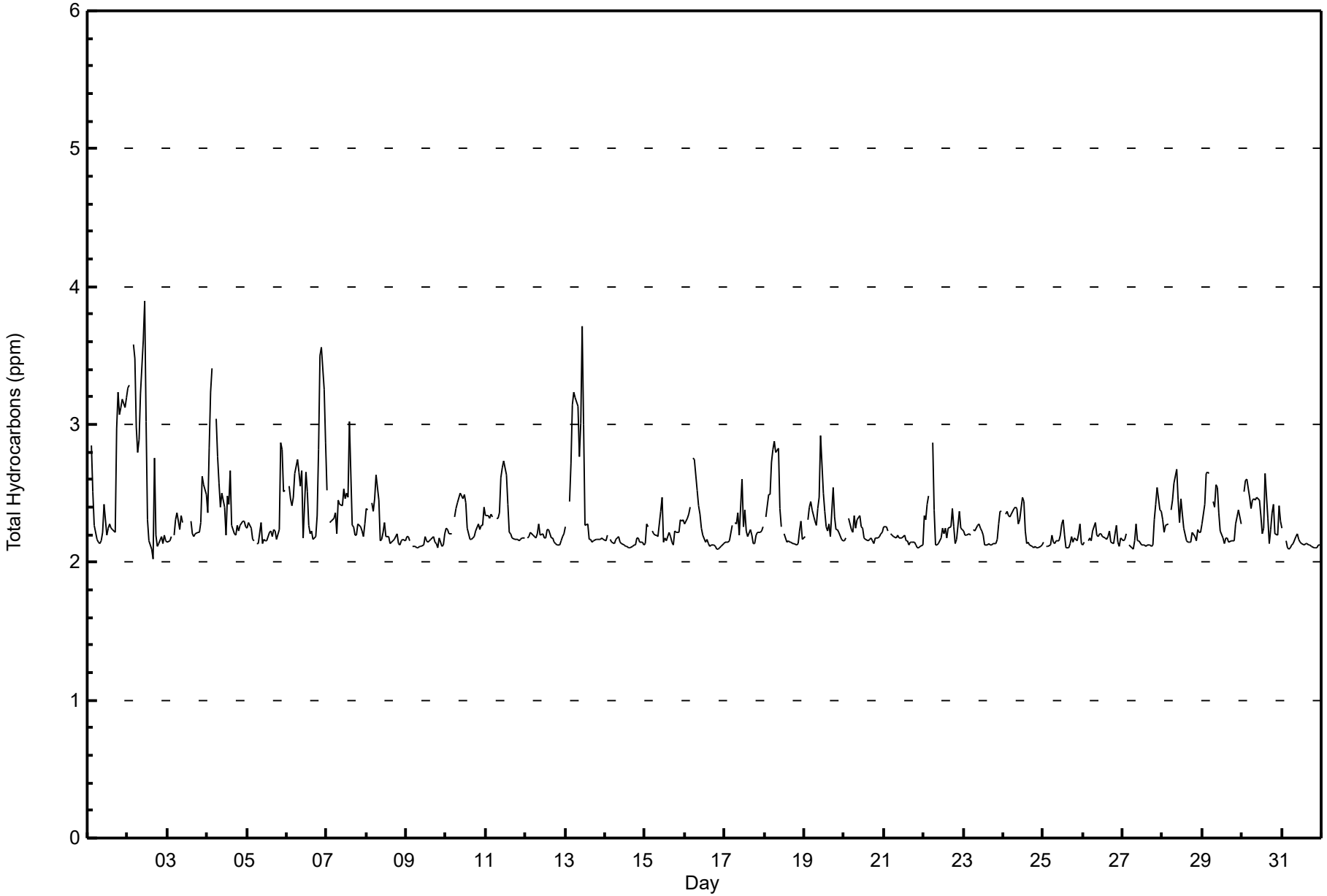
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Fort McKay South - March 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	1	0.14	0.14
2.1 - 3.0	684	96.61	96.75
3.1 - 10.0	23	3.25	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Fort McKay South - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
2.1 - 3.0	143	150	21	3	5	7	23	116	45	14	23	30	16	17	30	38	681
3.1 - 10.0	2	1	0	0	0	0	0	0	3	2	2	1	5	2	0	3	21
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	145	151	21	3	5	7	23	116	48	16	25	31	21	19	31	41	703

Total Number of Valid Hours: 703

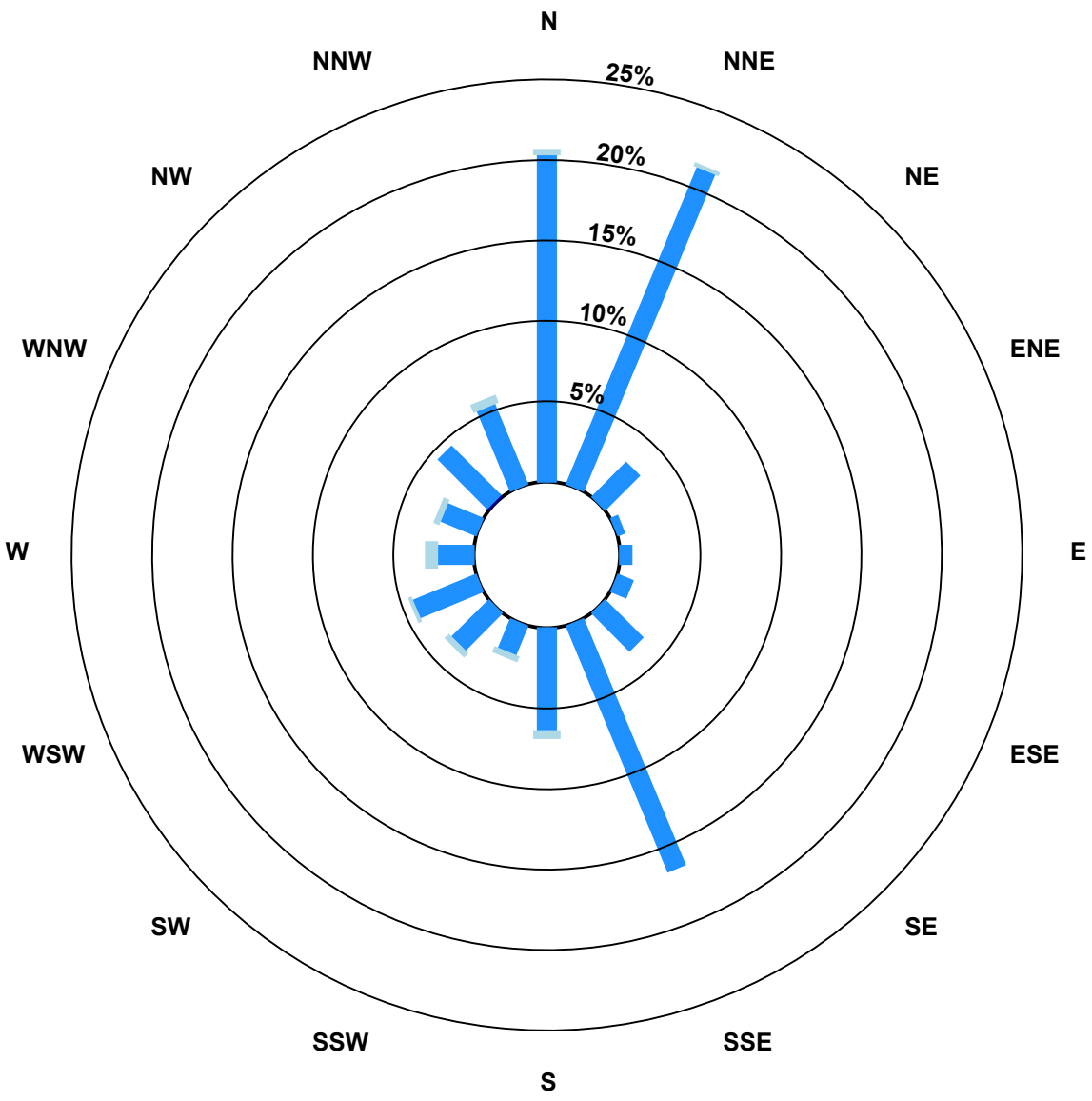
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Total Hydrocarbons (THC) - ppm

Fort McKay South



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

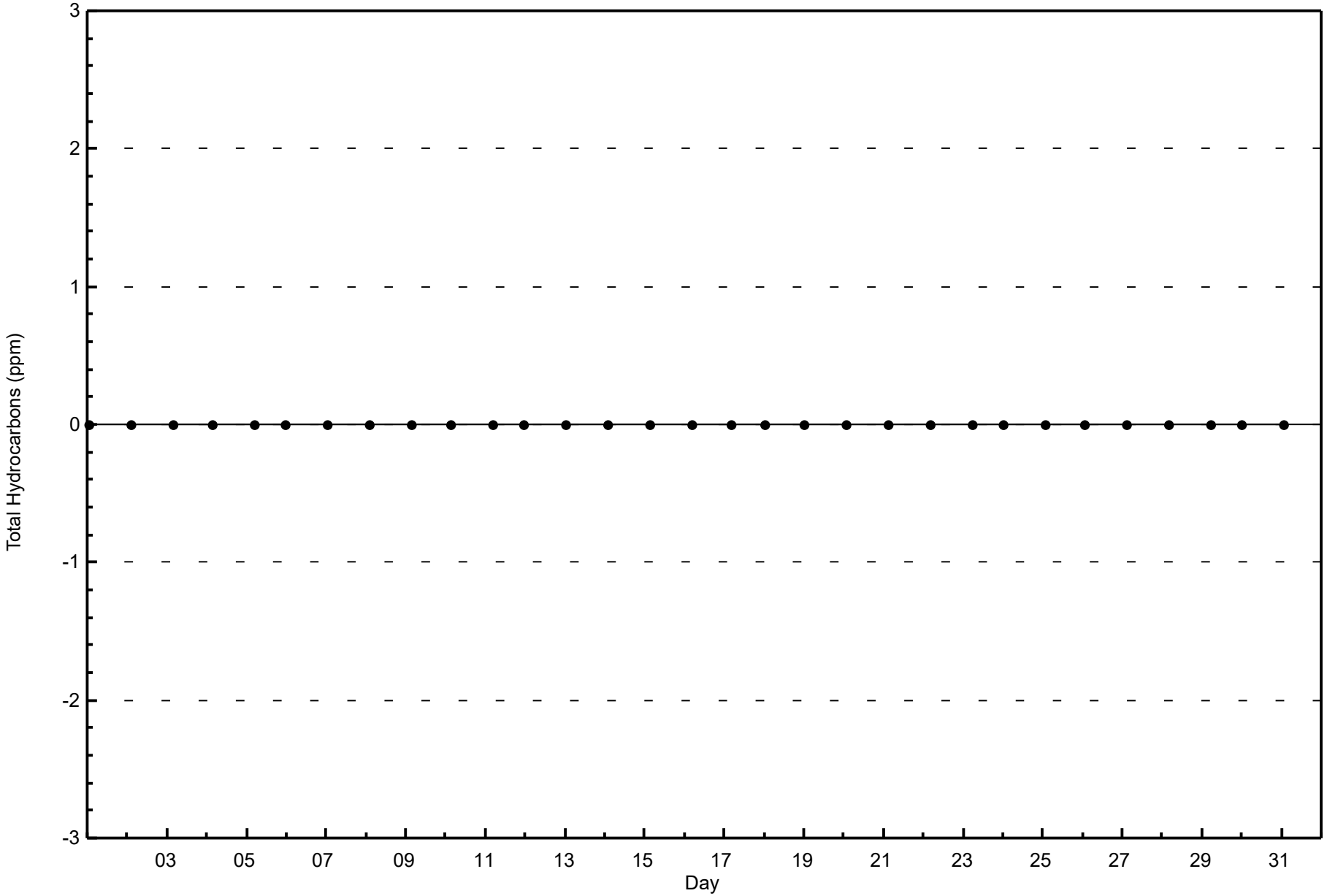
Total Number of Valid Hours: 703

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Fort McKay South - March 2025

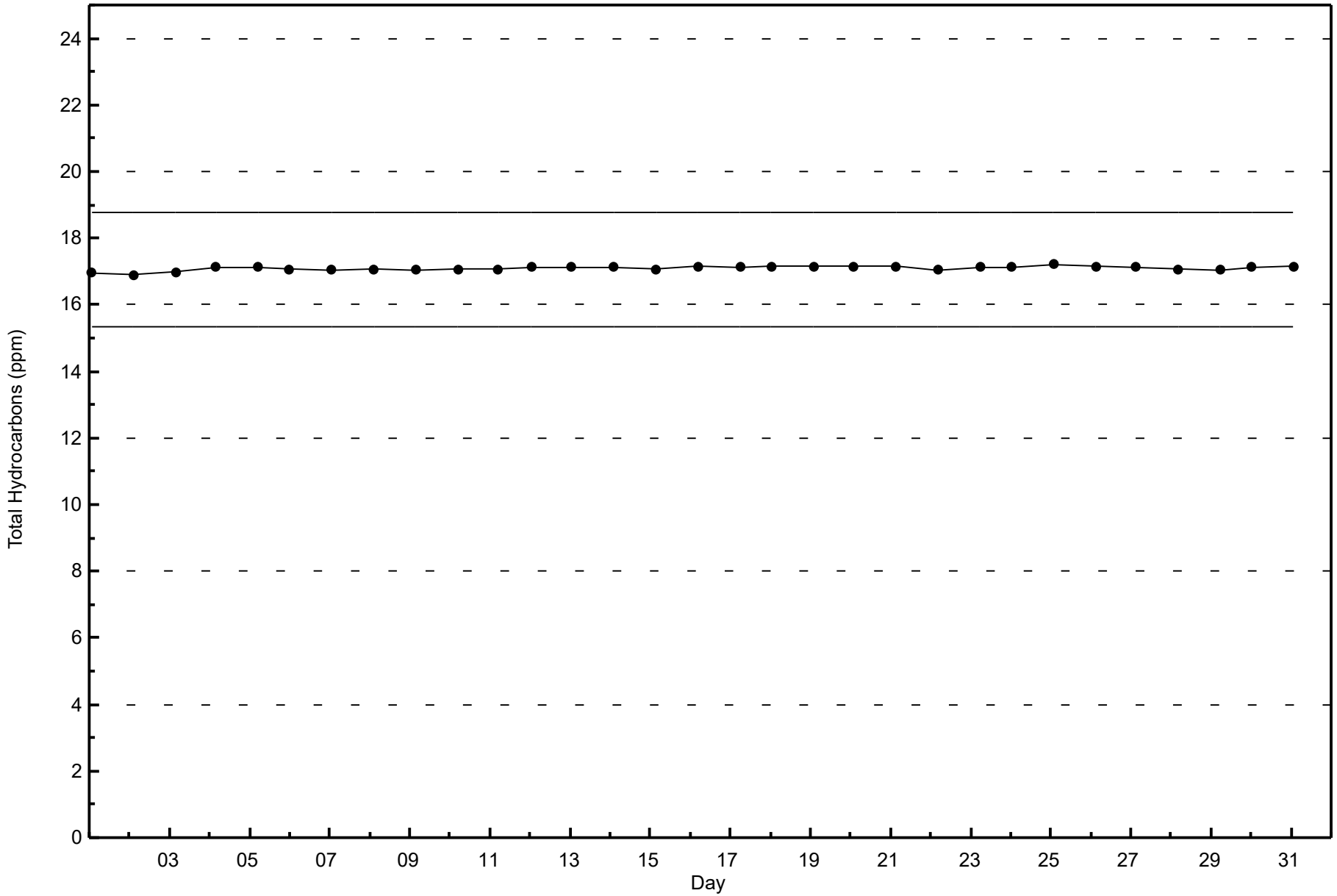


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Fort McKay South - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay South - March 2025

Maximum Value: 0.439 ppm on Mar 13 11:00

Maximum Daily Average: 0.100 ppm on Mar 2

Minimum Value: 0.000 ppm on Mar 1 07:00

Minimum Daily Average: 0.000 ppm on Mar 21

Maximum Diurnal Average: 0.050 ppm at hour 11

Minimum Diurnal Average: 0.008 ppm at hour 16

Monthly Average: 0.025 ppm

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

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.085	Z	0.228	0.124	0.052	0.005	0.000	0.000	0.000	0.021	0.085	0.001	0.000	0.000	0.000	0.000	0.000	0.106	0.170	0.110	0.138	0.216	0.229	0.232	0.078	0.232
2-Mar	0.233	0.219	Z	0.198	0.183	0.112	0.091	0.108	0.143	0.177	0.201	0.147	0.025	0.000	0.000	0.000	0.260	0.030	0.000	0.000	0.000	0.035	0.102	0.025	0.100	0.260
3-Mar	0.000	0.005	0.000	Z	0.000	0.059	0.113	0.031	0.078	0.042	C	C	C	C	0.000	0.003	0.003	0.003	0.000	0.000	0.012	0.112	0.111	0.086	0.035	0.113
4-Mar	0.018	0.125	0.148	0.123	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.107	0.123	0.124	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.034	0.148
5-Mar	0.000	0.000	0.000	0.000	0.002	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.012	0.021	0.000	0.000	0.000	0.045	0.311	0.169	0.098	0.107	0.033	0.311
6-Mar	Z	0.138	0.064	0.000	0.000	0.000	0.000	0.000	0.014	0.032	0.001	0.135	0.116	0.043	0.018	0.000	0.000	0.000	0.000	0.040	0.116	0.134	0.115	0.096	0.046	0.138
7-Mar	0.007	Z	0.000	0.000	0.000	0.033	0.000	0.143	0.073	0.076	0.161	0.135	0.074	0.085	0.375	0.017	0.042	0.008	0.008	0.064	0.042	0.000	0.000	0.000	0.058	0.375
8-Mar	0.000	0.000	Z	0.107	0.000	0.003	0.068	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.004	0.000	0.000	0.000	0.012	0.030	0.000	0.010	0.107
9-Mar	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.024	0.016	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.022	0.000	0.000	0.000	0.003	0.024
10-Mar	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.024	0.068	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.023	0.007	0.068
11-Mar	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.010	0.057	0.190	0.248	0.262	0.215	0.197	0.027	0.016	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.053	0.262
12-Mar	Z	0.000	0.002	0.035	0.000	0.000	0.000	0.000	0.029	0.000	0.000	0.000	0.000	0.018	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.035
13-Mar	0.000	Z	0.000	0.000	0.000	0.031	0.085	0.072	0.000	0.106	0.439	0.226	0.010	0.085	0.004	0.005	0.000	0.000	0.000	0.000	0.002	0.004	0.010	0.000	0.047	0.439
14-Mar	0.000	0.000	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	0.031	0.022	0.000	0.000	0.000	0.002	0.031
15-Mar	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.007	0.132	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.004	0.000	0.000	0.049	0.088	0.013	0.132
16-Mar	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.015
17-Mar	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.027	0.157	0.026	0.000	0.051	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.011	0.157
18-Mar	Z	0.023	0.147	0.148	0.249	0.199	0.134	0.029	0.000	0.001	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	0.042	0.249
19-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.141	0.074	0.059	0.012	0.015	0.061	0.004	0.106	0.018	0.000	0.005	0.022	0.000	0.000	0.022	0.141
20-Mar	0.000	0.000	Z	0.061	0.000	0.013	0.107	0.000	0.000	0.040	0.008	0.026	0.000	0.000	0.000	0.000	0.007	0.000	0.000	0.023	0.000	0.000	0.000	0.000	0.012	0.107
21-Mar	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
22-Mar	0.000	0.000	0.054	0.147	Z	0.133	0.029	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.035	0.020	0.000	0.000	0.105	0.010	0.000	0.023	0.147
23-Mar	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.007	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	0.007
24-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.002	0.000	0.006	0.085	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.085
25-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.049	0.033	0.000	0.000	0.000	0.000	0.000	0.000	0.021	0.048	0.099	0.000	0.011	0.099
26-Mar	0.000	0.000	Z	0.000	0.008	0.000	0.013	0.105	0.000	0.000	0.018	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	0.007	0.105
27-Mar	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.002	0.080	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.152	0.217	0.317	0.185	0.149	0.048	0.317
28-Mar	0.095	0.003	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.011	0.205	0.169	0.063	0.000	0.000	0.000	0.000	0.056	0.022	0.000	0.051	0.011	0.002	0.030	0.205
29-Mar	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.044	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.023	0.101	0.031	0.009	0.101
30-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.021	0.216	0.065	0.000	0.036	0.053	0.041	0.000	0.000	0.075	0.000	0.022	0.216
31-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	0.017	0.021	0.025	0.036	0.019	0.023	0.021	0.016	0.016	0.023	0.050	0.045	0.038	0.025	0.026	0.008	0.010	0.011	0.012	0.017	0.029	0.040	0.040	0.027	Diurnal Average	
	0.233	0.219	0.228	0.198	0.249	0.199	0.134	0.143	0.143	0.190	0.439	0.262	0.215	0.197	0.375	0.065	0.260	0.106	0.170	0.152	0.311	0.317	0.229	0.232	Diurnal Maximum	

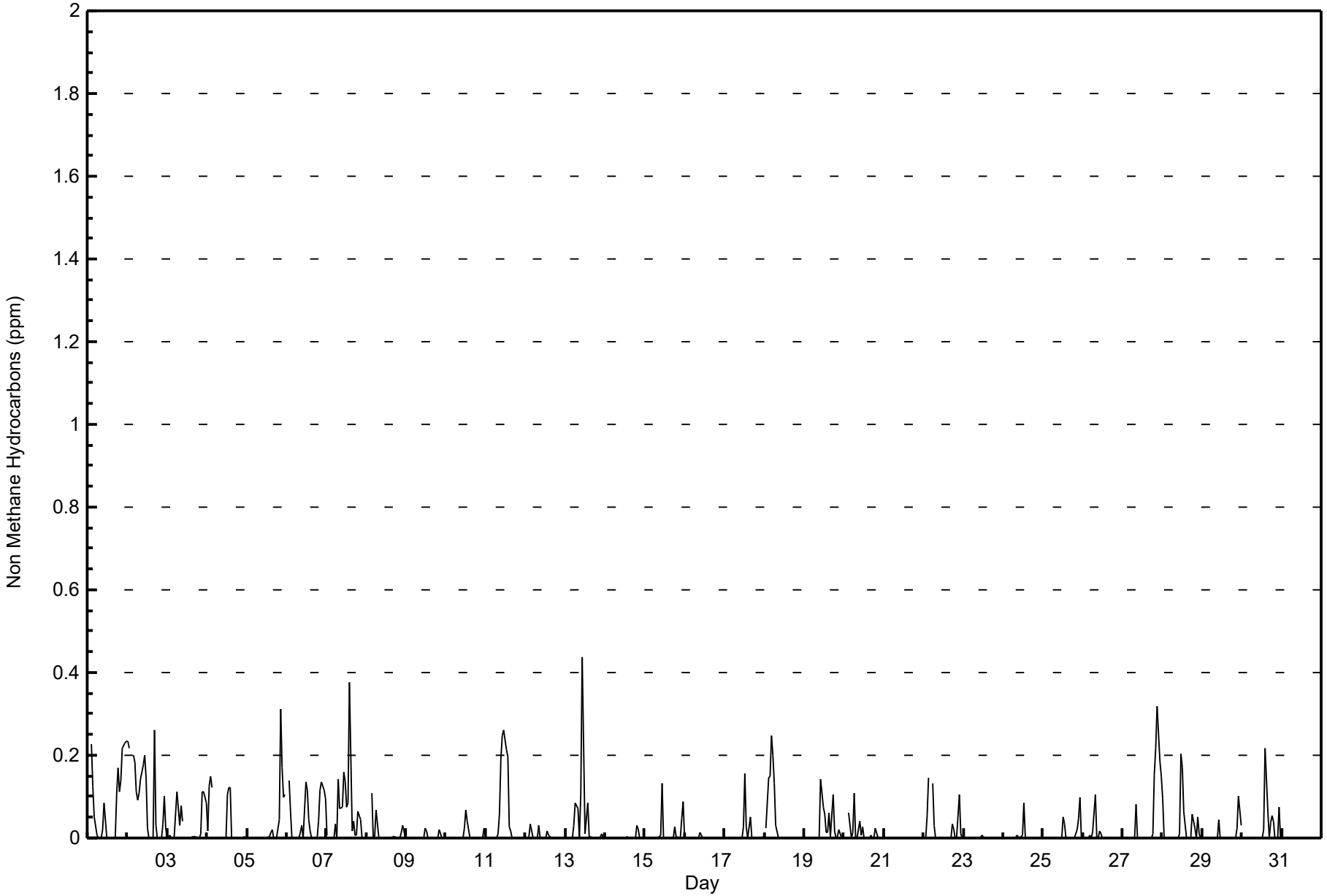
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay South - March 2025



Non Methane Hydrocarbons (NMHC) - ppm
Fort McKay South - March 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	508	71.75	71.75
0.006 - 0.05	92	12.99	84.75
0.06 - 0.1	75	10.59	95.34
> 0.1	33	4.66	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay South - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.005	97	101	18	2	5	6	19	86	33	12	16	27	15	14	28	27	506
0.006 - 0.05	26	27	1	0	0	1	2	21	2	1	2	1	1	3	1	3	92
0.06 - 0.1	12	11	2	0	0	0	2	9	9	1	7	3	4	2	2	10	74
> 0.1	10	12	0	1	0	0	0	0	4	2	0	0	1	0	0	1	31
Totals	145	151	21	3	5	7	23	116	48	16	25	31	21	19	31	41	703

Total Number of Valid Hours: 703

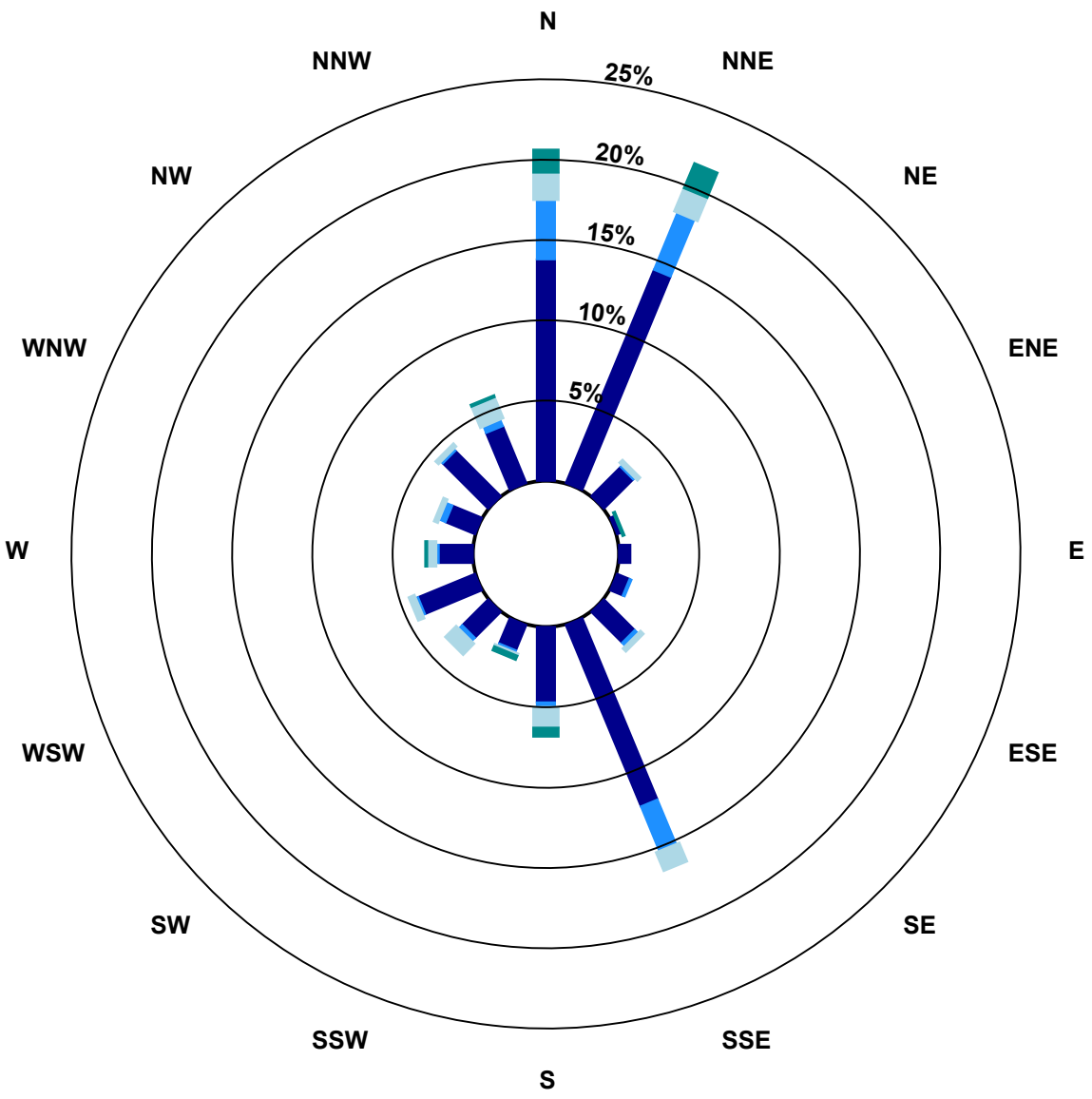
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay South



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

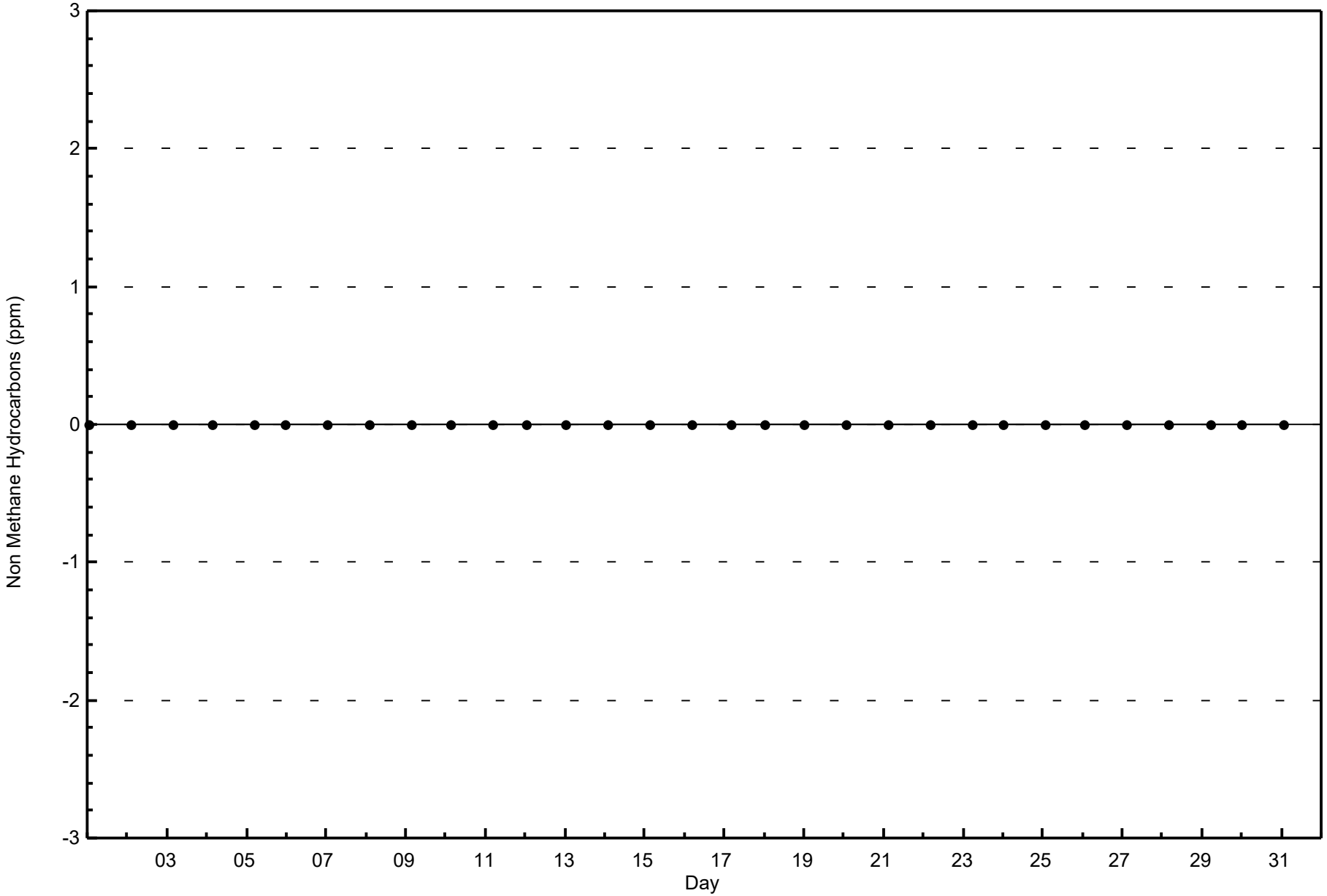
Total Number of Valid Hours: 703

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay South - March 2025

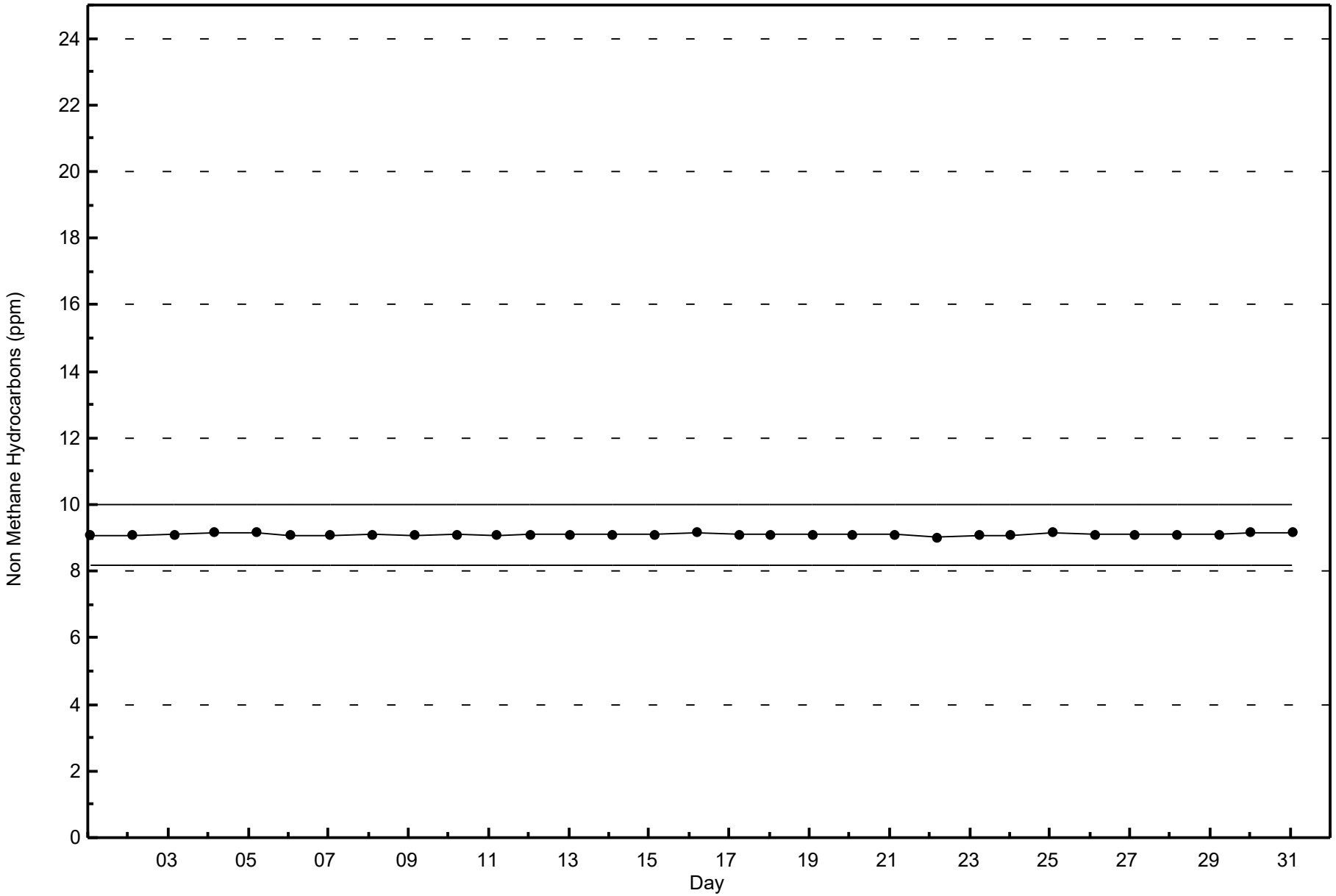


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay South - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Fort McKay South - March 2025

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

Maximum Value: 3.7 ppm on Mar 2 11:00

Maximum Daily Average: 2.6 ppm on Mar 2

Minimum Value: 2.0 ppm on Mar 2 16:00

Minimum Daily Average: 2.1 ppm on Mar 31

Maximum Diurnal Average: 2.4 ppm at hour 6

Minimum Diurnal Average: 2.2 ppm at hour 16

Monthly Average: 2.28 ppm

Percentiles: P_1 = 2.1 P_{10} = 2.1 Q_1 = 2.2 Median = 2.2 Q_3 = 2.3 P_{90} = 2.5 P_{99} = 3.3

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	2.2	Z	2.6	2.4	2.2	2.2	2.1	2.1	2.2	2.2	2.3	2.2	2.2	2.3	2.2	2.2	2.2	2.9	3.1	3.0	3.0	3.0	2.9	3.0	2.5	3.1
2-Mar	3.0	3.1	Z	3.4	3.3	2.9	2.7	2.8	3.1	3.4	3.7	2.9	2.3	2.2	2.1	2.0	2.5	2.2	2.1	2.1	2.2	2.1	2.1	2.1	2.6	3.7
3-Mar	2.2	2.1	2.2	Z	2.2	2.2	2.2	2.2	2.3	2.2	C	C	C	C	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.5	2.5	2.4	2.3	2.5
4-Mar	2.3	2.7	3.1	3.3	Z	3.0	2.8	2.6	2.4	2.5	2.4	2.2	2.4	2.3	2.5	2.3	2.2	2.2	2.3	2.2	2.3	2.3	2.3	2.3	2.5	3.3
5-Mar	2.3	2.3	2.2	2.2	2.2	Z	2.1	2.1	2.3	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.6	2.6	2.4	2.4	2.2	2.6
6-Mar	Z	2.4	2.4	2.4	2.5	2.6	2.7	2.7	2.5	2.6	2.2	2.5	2.4	2.2	2.2	2.2	2.2	2.2	2.3	2.8	3.4	3.4	3.1	2.8	2.6	3.4
7-Mar	2.5	Z	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.3	2.4	2.3	2.4	2.4	2.6	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.6
8-Mar	2.4	2.4	Z	2.3	2.4	2.5	2.6	2.5	2.2	2.2	2.2	2.3	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.6
9-Mar	2.2	2.2	2.2	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2
10-Mar	2.2	2.2	2.2	2.2	Z	2.3	2.4	2.4	2.5	2.5	2.5	2.5	2.4	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.3	2.3	2.4	2.3	2.5
11-Mar	2.3	2.3	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.4	2.4	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	2.5
12-Mar	Z	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	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.3
13-Mar	2.3	Z	2.4	2.7	3.1	3.2	3.1	3.1	2.8	2.9	3.3	2.8	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.5	3.3
14-Mar	2.2	2.2	Z	2.2	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.2
15-Mar	2.1	2.3	2.3	Z	2.2	2.2	2.2	2.2	2.2	2.4	2.3	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.4
16-Mar	2.3	2.3	2.3	2.4	Z	2.8	2.7	2.5	2.4	2.3	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	2.3	2.8
17-Mar	2.1	2.1	2.1	2.2	2.3	Z	2.3	2.3	2.4	2.2	2.6	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.2	2.6
18-Mar	Z	2.3	2.3	2.3	2.5	2.6	2.7	2.8	2.8	2.4	2.3	M	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.3	2.8
19-Mar	2.2	Z	2.3	2.4	2.4	2.4	2.3	2.3	2.4	2.5	2.8	2.4	2.3	2.2	2.2	2.2	2.2	2.4	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.8
20-Mar	2.2	2.2	Z	2.3	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	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3
21-Mar	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3
22-Mar	2.3	2.3	2.4	2.3	Z	2.7	2.3	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.4	2.2	2.1	2.2	2.3	2.2	2.2	2.3	2.7
23-Mar	2.2	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.4	2.4	2.2	2.4
24-Mar	Z	2.4	2.4	2.3	2.3	2.3	2.4	2.4	2.4	2.3	2.3	2.5	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.5
25-Mar	2.1	Z	2.1	2.1	2.1	2.2	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.2	2.1	2.1	2.1	2.2	2.1	2.2	2.1	2.2	2.2	2.1	2.2	2.3
26-Mar	2.1	2.1	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.3	2.1	2.1	2.2	2.2	2.3
27-Mar	2.2	2.2	2.2	Z	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2
28-Mar	2.2	2.2	2.3	2.3	Z	2.4	2.5	2.6	2.7	2.5	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.7
29-Mar	2.3	2.4	2.6	2.7	2.6	Z	2.4	2.4	2.6	2.5	2.3	2.2	2.2	2.1	2.2	2.2	2.1	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.3	2.7
30-Mar	Z	2.5	2.6	2.6	2.5	2.4	2.5	2.5	2.5	2.5	2.4	2.3	2.2	2.2	2.4	2.3	2.1	2.2	2.3	2.4	2.2	2.2	2.3	2.3	2.4	2.6
31-Mar	2.2	Z	2.2	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	2.1	2.2
	2.3	2.3	2.3	2.4	2.3	2.4	2.4	2.3	2.4	2.4	2.4	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	Diurnal Average	
	3.0	3.1	3.1	3.4	3.3	3.2	3.1	3.1	3.1	3.4	3.7	2.9	2.4	2.4	2.6	2.3	2.5	2.9	3.1	3.0	3.4	3.4	3.1	3.0	Diurnal Maximum	

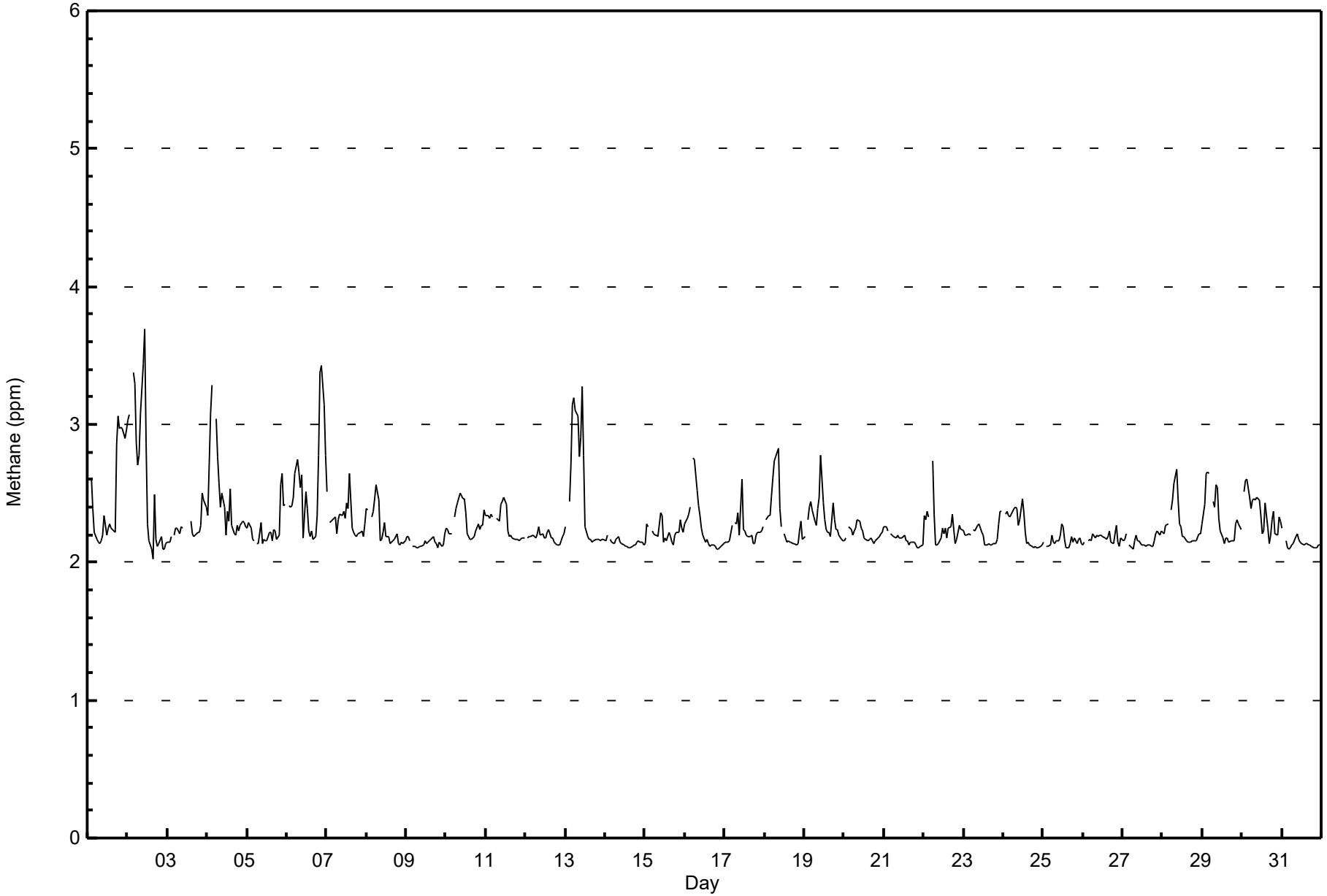
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Fort McKay South - March 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	1	0.14	0.14
2.1 - 3.0	690	97.46	97.60
3.1 - 10.0	17	2.40	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Fort McKay South - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
2.1 - 3.0	143	150	21	3	5	7	23	116	47	14	24	30	17	17	30	38	685
3.1 - 10.0	2	1	0	0	0	0	0	0	1	2	1	1	4	2	0	3	17
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	145	151	21	3	5	7	23	116	48	16	25	31	21	19	31	41	703

Total Number of Valid Hours: 703

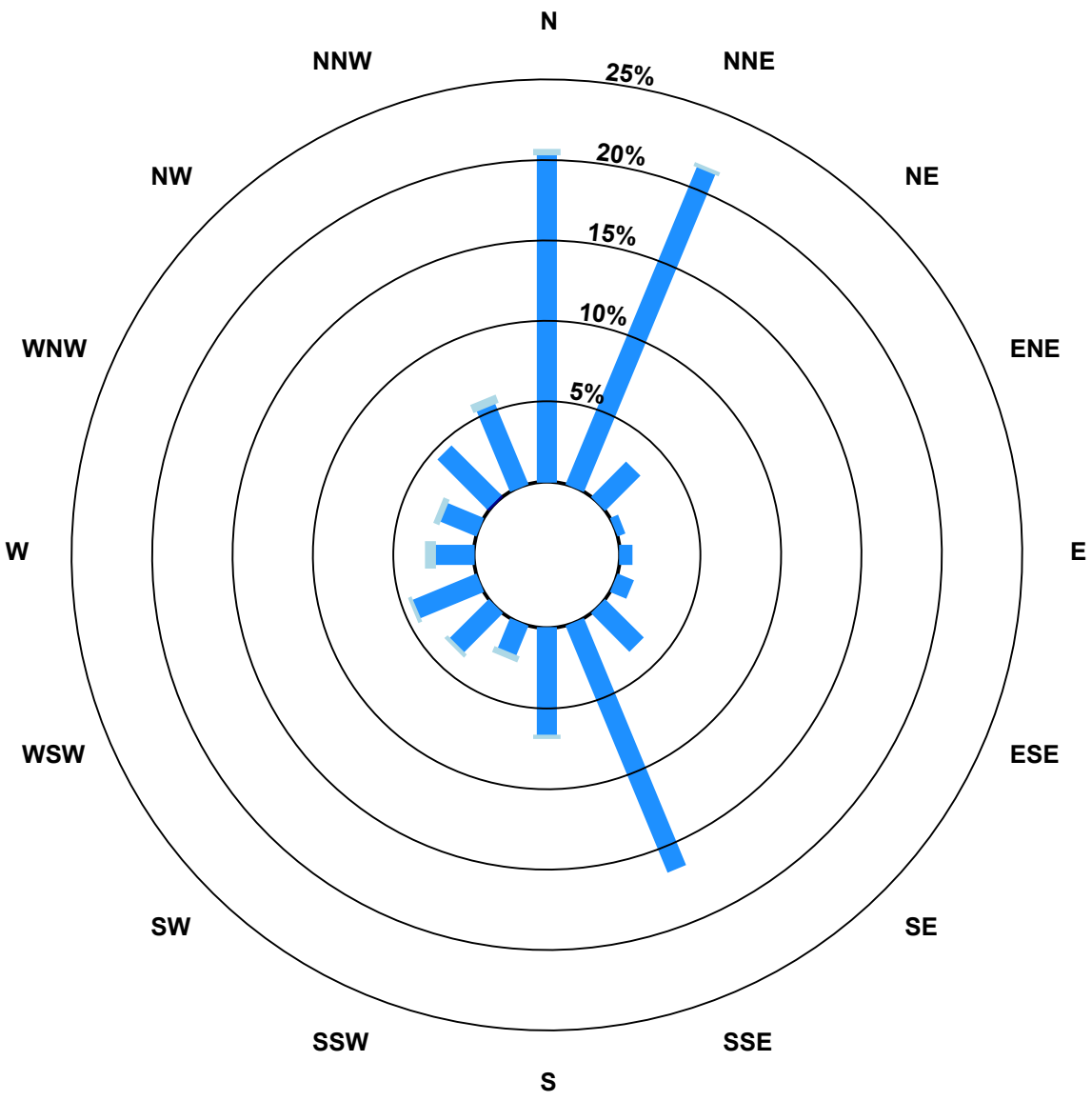
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Methane (CH_4) - ppm

Fort McKay South



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

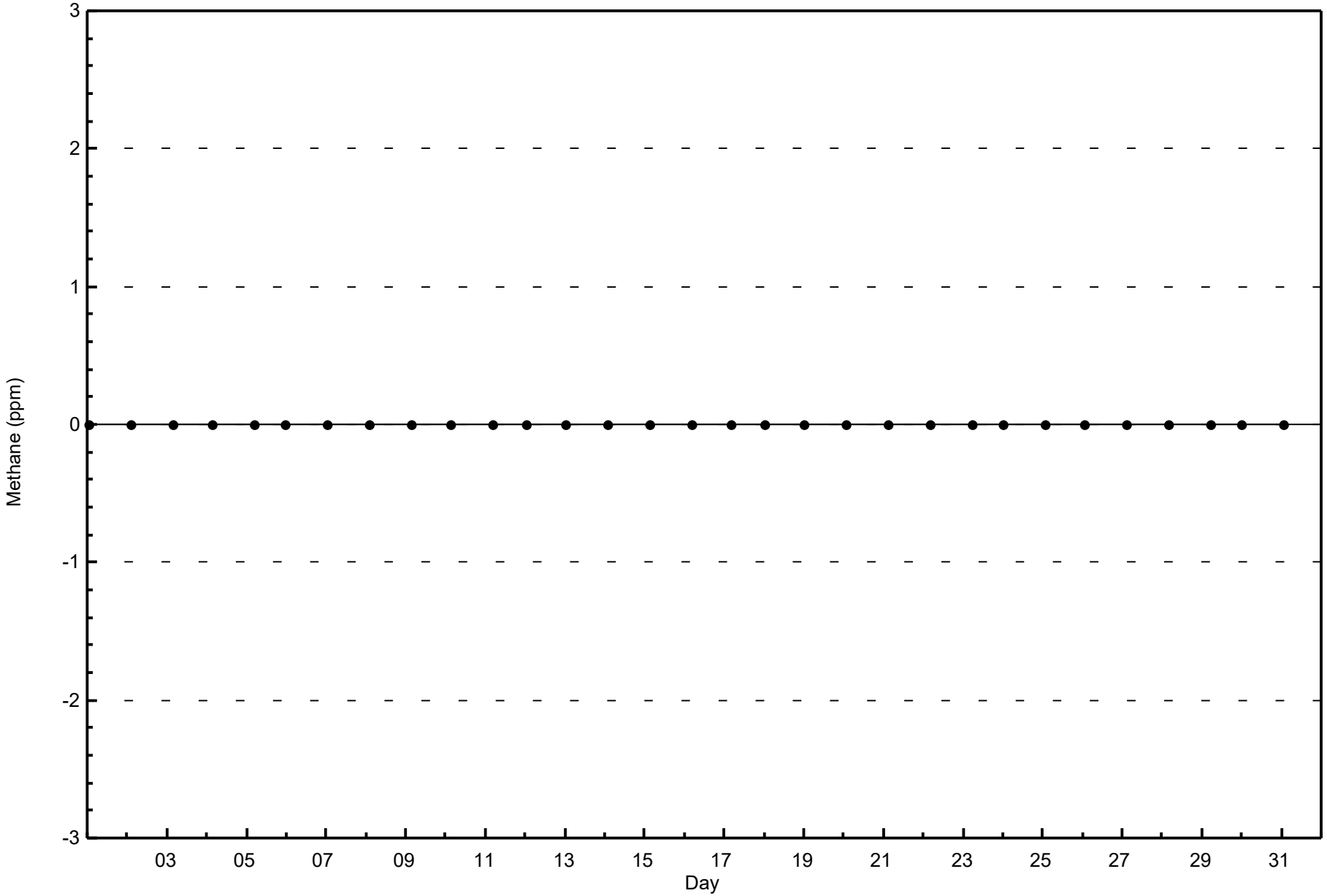
Total Number of Valid Hours: 703

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Fort McKay South - March 2025

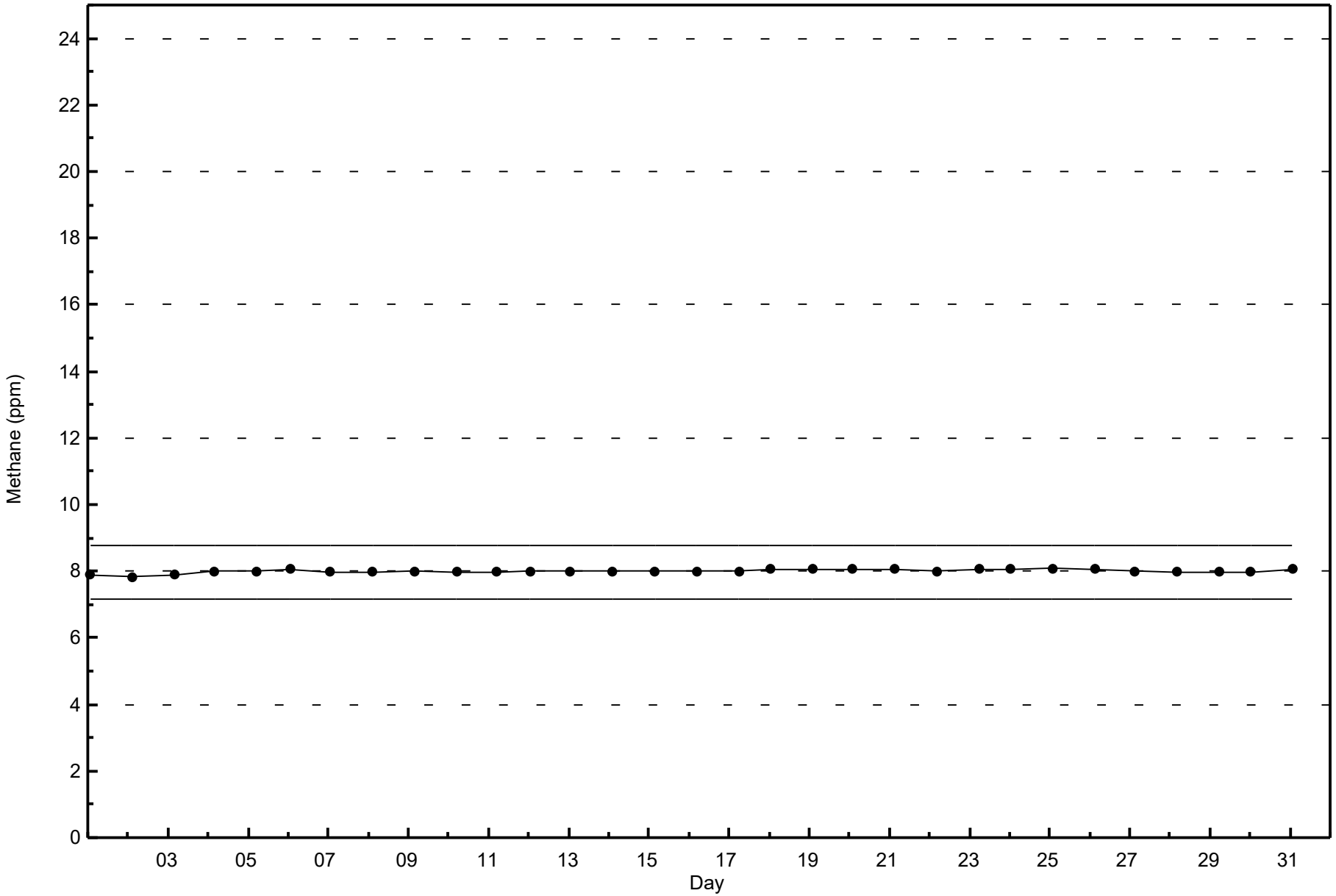


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Fort McKay South - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Fort McKay South - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 43.5 ppb on Mar 25 15:00
Maximum Daily Average: 31.8 ppb on Mar 31

Minimum Value: 1.3 ppb on Mar 13 05:00
Minimum Daily Average: 9.5 ppb on Mar 10
Maximum Diurnal Average: 32.5 ppb at hour 16
Minimum Diurnal Average: 12.0 ppb at hour 6
Monthly Average: 21.90 ppb
Percentiles: P_1 = 1.6 P_{10} = 5.2 Q_1 = 14.4 Median = 23.9 Q_3 = 30.1 P_{90} = 34.1 P_{99} = 38.3

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	8.2	7.1	6.6	Z	15.2	16.7	14.8	13.4	17.0	21.9	22.3	22.6	24.6	24.3	27.0	27.6	15.8	9.3	6.4	4.3	3.2	3.4	2.9	2.6	13.8	27.6
2-Mar	2.2	2.0	2.0	2.1	Z	2.7	3.3	2.5	2.7	3.0	5.6	13.4	25.2	31.8	35.4	38.7	20.0	29.2	32.1	31.9	28.8	31.4	29.9	28.6	17.6	38.7
3-Mar	27.6	25.6	25.8	26.0	23.2	Z	15.7	14.4	15.7	18.5	16.7	19.2	25.8	31.3	34.5	33.5	32.9	23.7	15.5	10.6	8.0	6.3	5.8	4.1	20.0	34.5
4-Mar	Z	2.3	2.4	2.4	2.5	2.5	2.6	3.7	6.6	9.6	19.1	31.1	31.1	31.2	28.8	32.8	38.6	35.8	31.2	32.9	22.8	19.4	14.7	11.2	18.1	38.6
5-Mar	9.7	Z	22.8	29.4	29.3	32.8	33.2	32.4	27.3	C	C	C	C	34.3	33.6	31.9	29.5	26.2	28.5	17.7	3.4	1.8	5.9	3.7	22.8	34.3
6-Mar	2.6	2.0	Z	3.2	3.7	2.9	2.1	4.3	11.2	14.3	27.5	31.9	32.5	32.4	32.5	31.5	32.5	25.0	19.7	14.6	12.6	3.4	4.5	3.6	15.2	32.5
7-Mar	12.4	18.5	23.4	Z	20.9	19.9	19.3	11.6	12.8	17.5	22.4	24.0	20.8	22.7	16.0	28.7	30.1	29.7	28.5	22.1	25.9	23.3	26.0	21.0	21.6	30.1
8-Mar	12.7	11.6	13.9	10.9	Z	2.1	1.9	17.5	33.0	30.7	27.1	25.9	31.2	32.5	36.3	33.6	29.8	27.5	28.8	32.6	32.9	30.0	27.8	25.7	24.2	36.3
9-Mar	23.1	21.5	21.3	20.4	24.2	Z	25.8	26.6	25.8	26.1	24.5	22.6	23.5	23.8	24.9	22.9	22.3	21.3	20.9	21.7	19.3	18.8	15.0	9.9	22.0	26.6
10-Mar	Z	2.3	3.7	2.0	1.5	1.6	1.4	3.0	5.7	8.7	11.7	14.7	17.5	21.0	22.8	22.2	19.9	17.3	9.6	4.9	8.8	9.4	7.6	1.7	9.5	22.8
11-Mar	1.5	Z	1.9	1.7	1.8	1.8	3.7	9.4	14.3	14.5	13.7	13.8	16.7	24.6	24.5	24.3	25.9	26.8	27.1	27.2	25.9	25.3	24.3	23.0	16.2	27.2
12-Mar	23.5	26.2	Z	24.3	21.4	17.0	14.2	13.6	16.9	22.1	25.7	28.7	29.6	28.6	27.4	28.6	28.8	28.3	21.9	20.1	17.6	11.7	7.0	5.4	21.3	29.6
13-Mar	4.5	3.9	2.1	Z	1.3	1.4	1.5	3.7	8.5	8.1	7.4	14.4	24.5	28.8	30.3	31.6	31.7	28.9	29.3	29.6	27.9	28.0	28.6	26.6	17.5	31.7
14-Mar	25.0	22.9	25.4	24.2	Z	27.1	22.5	23.5	23.0	24.6	27.9	29.1	30.3	31.2	30.2	30.2	30.2	30.4	31.2	27.5	27.1	25.9	28.0	28.2	27.2	31.2
15-Mar	27.4	21.4	17.5	17.2	17.8	Z	14.9	15.7	21.8	22.1	26.3	35.1	33.4	34.1	34.1	35.6	36.0	34.8	29.9	21.4	18.6	9.5	21.5	18.7	24.5	36.0
16-Mar	Z	14.5	12.5	9.9	7.5	4.6	3.3	8.3	17.4	24.7	28.2	27.7	32.5	33.0	34.6	35.7	34.0	33.1	34.5	36.3	36.0	35.2	34.1	31.9	24.8	36.3
17-Mar	27.6	Z	25.8	19.8	22.1	17.4	13.2	15.8	17.3	27.9	19.6	28.6	29.9	31.0	32.2	31.5	31.2	32.3	28.4	22.2	18.6	16.1	13.6	11.8	23.2	32.3
18-Mar	10.1	8.5	Z	4.1	1.8	1.4	1.9	7.2	16.3	23.0	27.5	M	32.3	35.0	34.7	36.1	32.2	32.8	29.8	20.0	19.6	12.4	15.4	28.5	19.6	36.1
19-Mar	24.4	18.5	17.1	Z	11.3	10.6	12.3	13.7	12.0	15.2	13.8	21.5	24.5	24.8	25.6	24.8	26.2	15.3	18.3	24.5	25.3	26.5	28.2	28.4	20.1	28.4
20-Mar	28.1	24.8	21.2	17.1	Z	19.2	17.6	19.0	19.8	21.9	25.6	29.2	32.5	33.3	35.4	35.3	35.6	35.7	35.5	29.7	23.6	19.4	17.9	14.4	25.7	35.7
21-Mar	11.8	13.6	16.7	18.4	18.5	Z	19.3	20.3	24.1	29.6	30.5	31.5	32.1	32.8	33.9	34.0	35.4	37.9	33.3	30.9	31.2	24.8	22.2	17.2	26.1	37.9
22-Mar	Z	17.1	17.2	21.3	19.7	17.9	26.5	32.3	32.5	28.3	28.0	28.9	29.2	34.9	36.8	33.7	36.6	24.1	31.9	28.4	21.8	20.1	26.1	22.5	26.8	36.8
23-Mar	15.6	Z	14.7	12.2	8.5	7.1	7.2	9.5	19.1	24.5	32.1	37.6	37.9	37.6	34.6	37.0	38.9	36.9	26.8	18.4	12.5	5.1	2.6	3.4	20.9	38.9
24-Mar	3.9	4.3	Z	5.7	6.3	7.1	8.9	8.3	12.6	25.2	29.0	27.4	29.6	31.4	38.3	34.4	36.7	35.9	38.1	37.7	34.7	25.7	18.0	25.7	22.8	38.3
25-Mar	29.4	25.6	28.5	Z	26.6	15.0	15.4	17.8	18.7	21.3	25.3	28.8	33.1	38.0	43.5	42.7	38.4	30.1	30.4	29.4	30.3	27.1	27.4	31.4	28.4	43.5
26-Mar	31.3	28.4	27.1	24.3	Z	20.0	17.9	21.0	23.0	25.3	26.7	28.0	30.7	30.5	31.7	30.0	26.9	29.7	29.4	26.4	24.9	30.0	27.2	27.2	26.9	31.7
27-Mar	23.0	23.3	21.6	23.9	28.7	Z	29.7	26.4	24.2	30.2	31.2	33.1	33.9	33.9	33.3	33.3	31.9	33.4	34.3	29.6	22.5	18.6	20.5	14.9	27.6	34.3
28-Mar	Z	11.7	7.9	7.8	6.7	4.1	5.2	9.4	11.1	16.2	24.5	26.0	30.8	33.3	35.3	35.6	34.7	34.0	28.4	22.7	19.7	14.3	12.1	10.2	19.2	35.6
29-Mar	9.9	Z	13.4	13.8	10.4	5.9	8.4	13.7	14.8	17.6	22.7	28.7	33.2	37.2	36.0	36.4	31.6	34.0	32.9	25.9	20.8	18.9	14.3	13.4	21.5	37.2
30-Mar	12.1	9.3	Z	9.3	12.1	15.1	11.9	14.2	21.1	22.0	22.4	26.9	32.3	31.0	25.3	35.2	38.5	33.3	18.8	10.8	30.4	31.3	22.8	22.4	22.1	38.5
31-Mar	20.5	23.4	27.6	Z	37.2	37.2	35.0	33.7	31.6	30.3	30.7	35.5	36.9	37.5	37.3	37.3	37.2	37.5	37.4	29.5	25.9	24.6	22.5	24.1	31.8	37.5
	16.5	15.0	16.2	14.1	14.6	12.0	13.2	15.0	18.0	20.8	23.2	26.4	29.3	31.2	31.8	32.5	31.3	29.4	27.4	23.9	22.0	19.3	18.5	17.5	Diurnal Average	
	31.3	28.4	28.5	29.4	37.2	37.2	35.0	33.7	33.0	30.7	32.1	37.6	37.9	38.0	43.5	42.7	38.9	37.9	38.1	37.7	36.0	35.2	34.1	31.9	Diurnal Maximum	

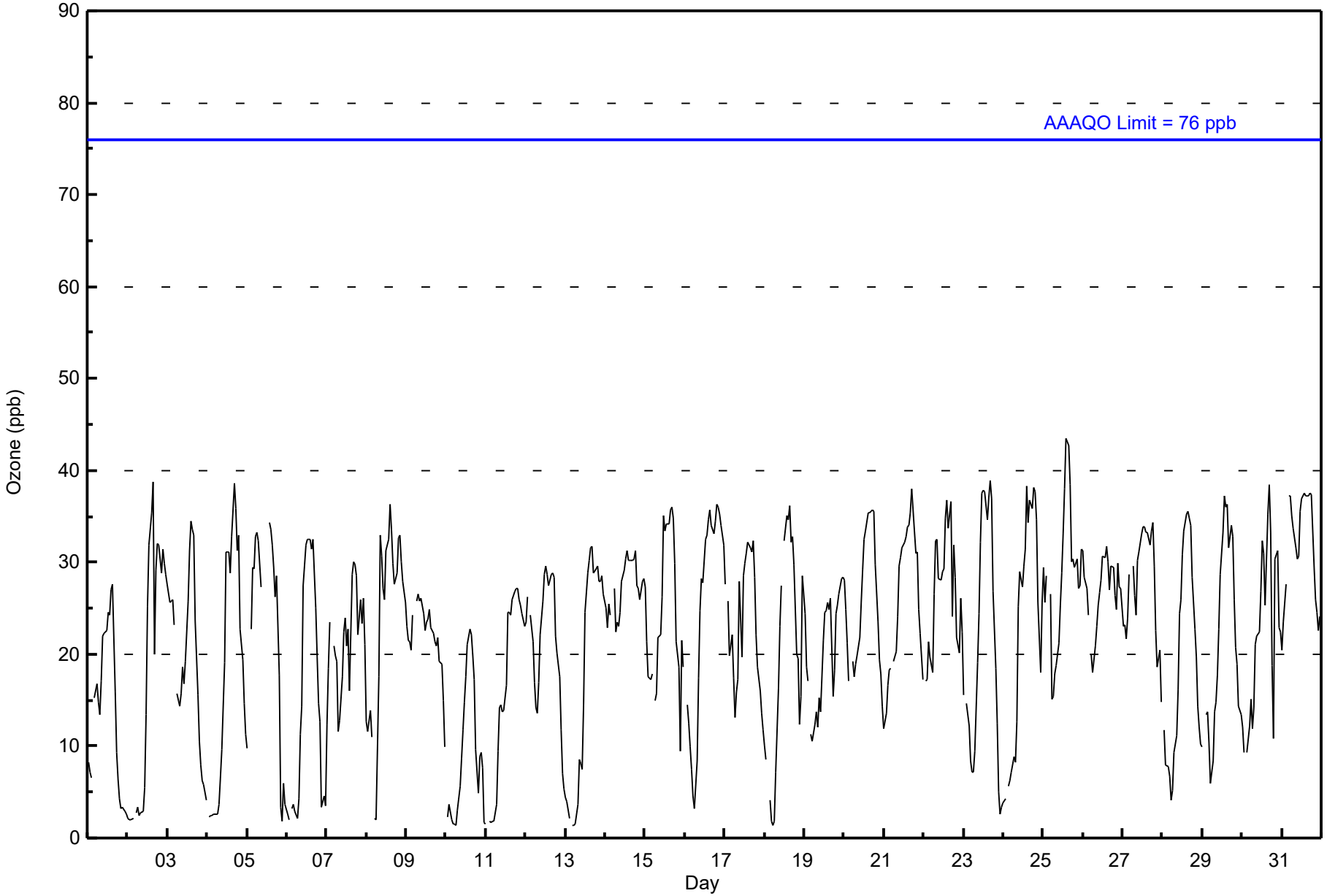
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Fort McKay South - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	282	39.83	39.83
21 - 50	426	60.17	100.00
51 - 82	0	0.00	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Ozone (O_3) - ppb

Fort McKay South - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	51	30	5	1	2	1	8	13	20	12	18	26	17	14	28	29	275
21 - 50	94	118	15	2	3	7	14	102	27	7	7	6	3	4	7	10	426
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	145	148	20	3	5	8	22	115	47	19	25	32	20	18	35	39	701

Total Number of Valid Hours: 701

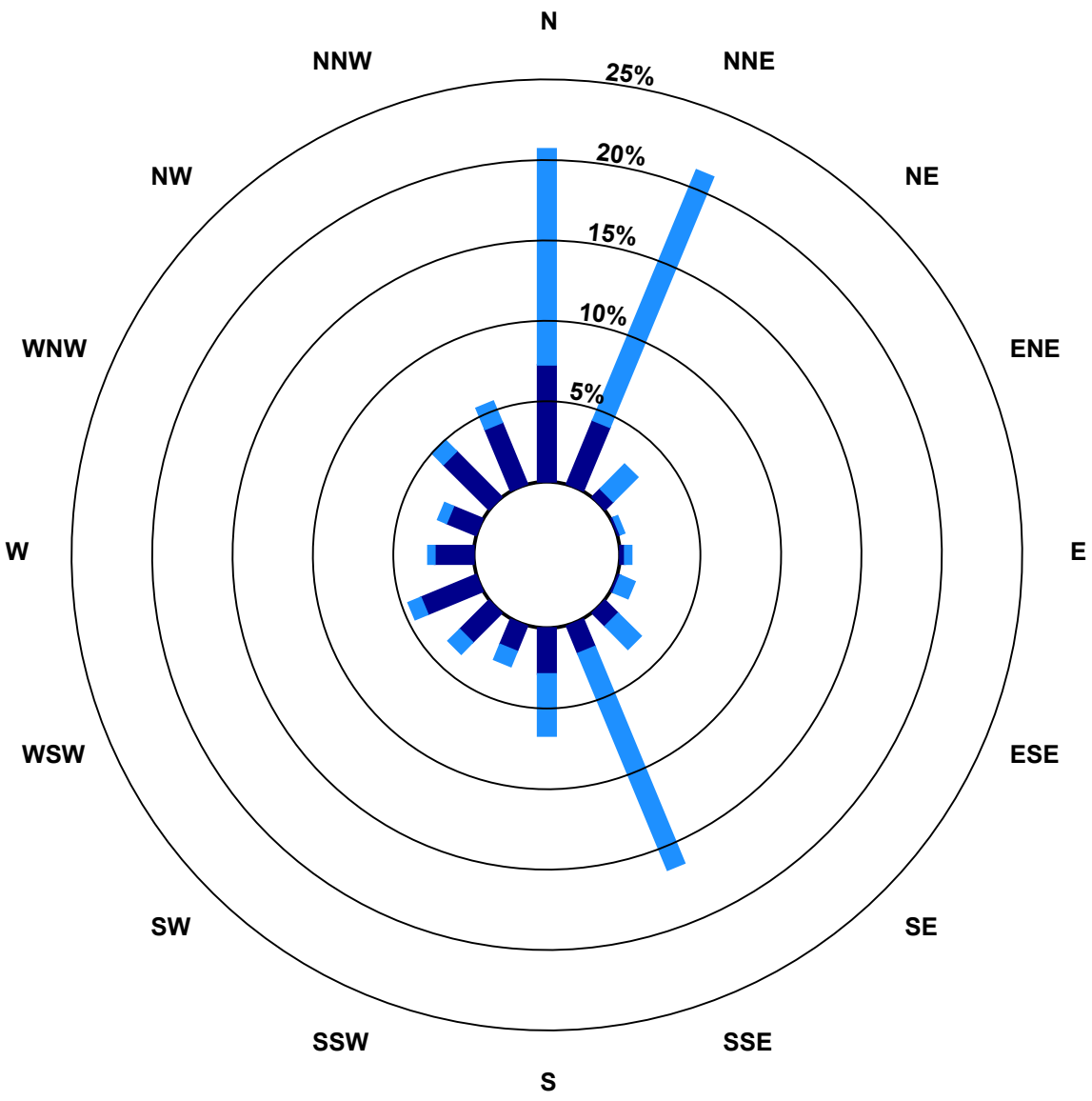
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Ozone (O_3) - ppb

Fort McKay South



Classes (ppb)

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

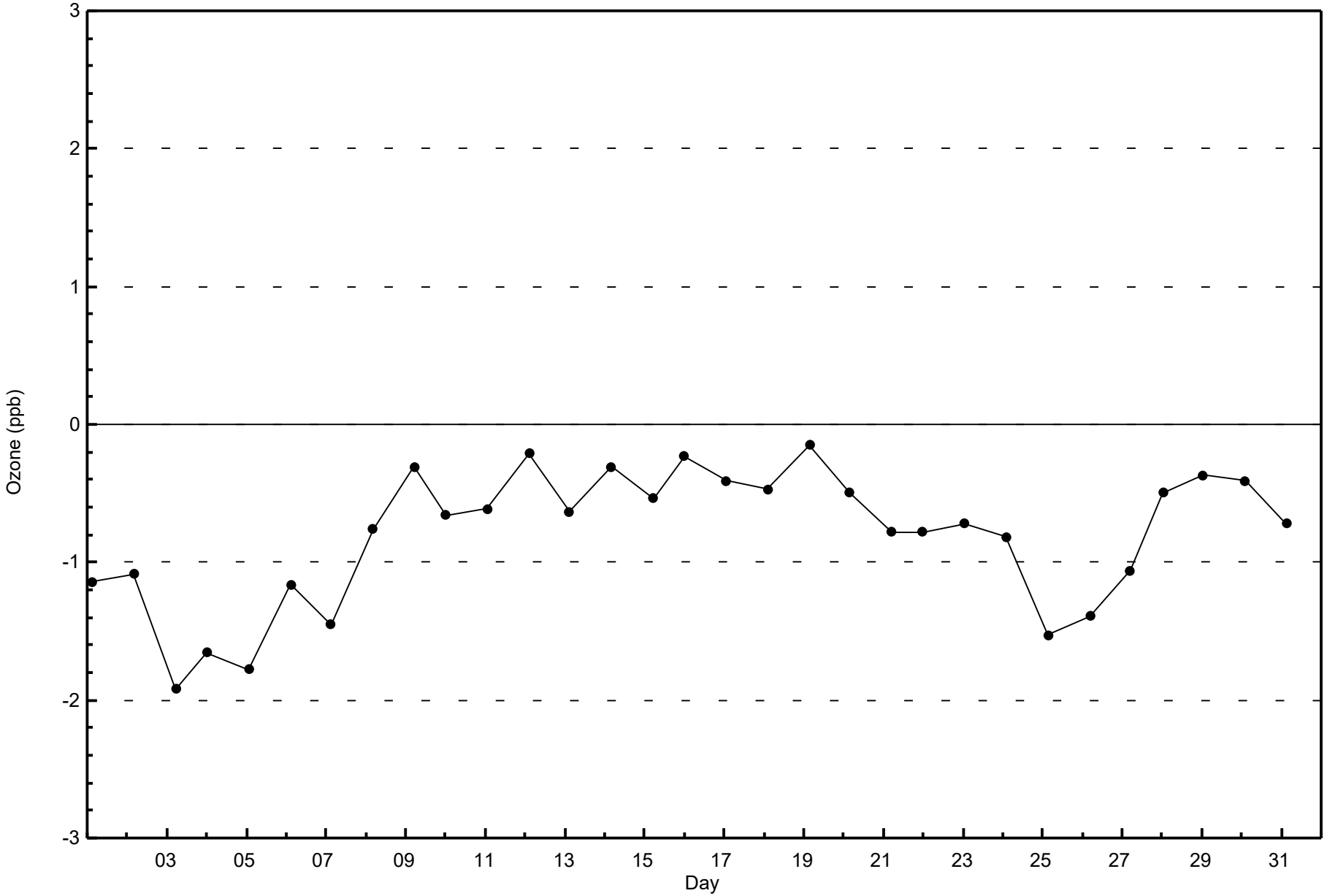
Total Number of Valid Hours: 701

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Fort McKay South - March 2025

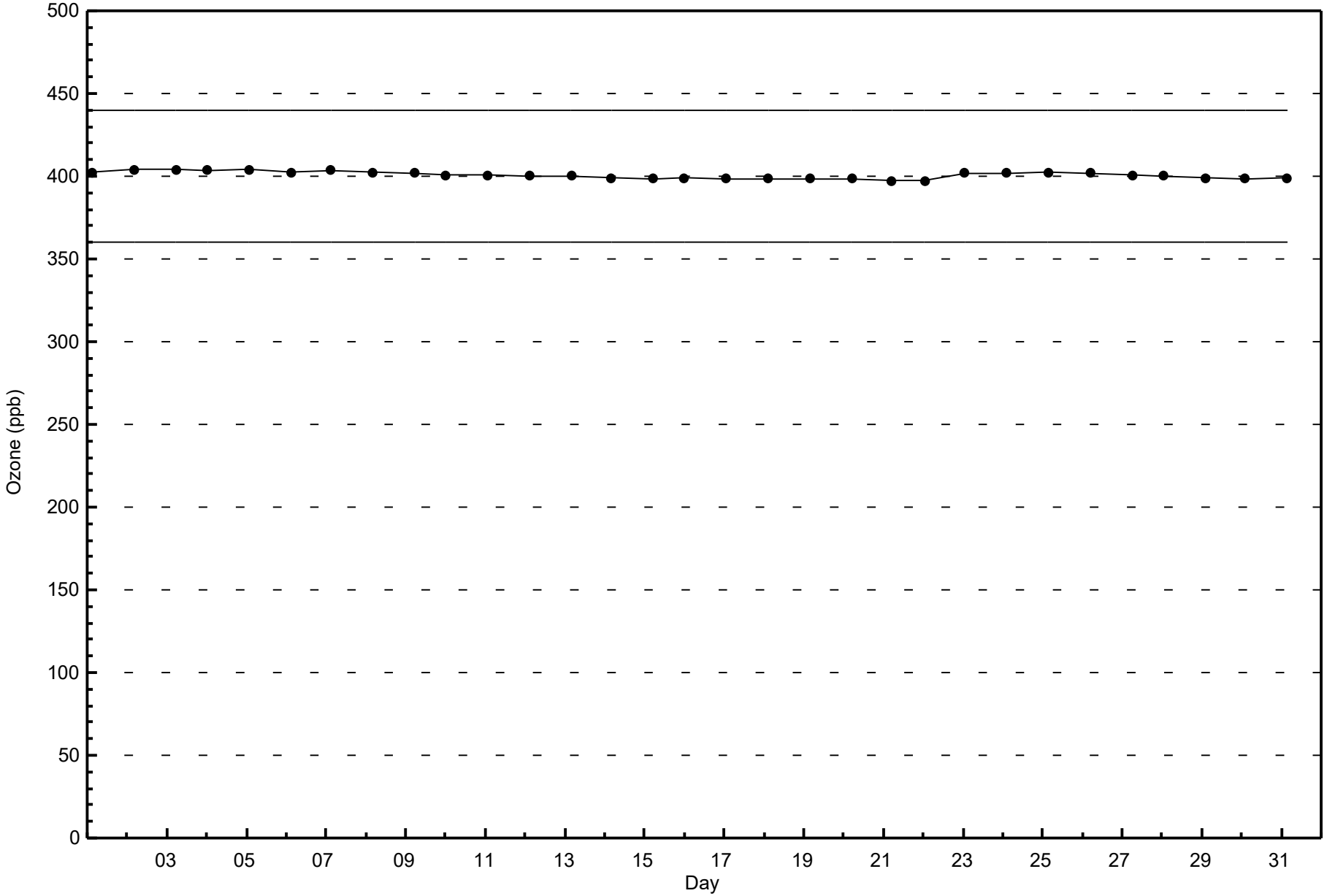


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Fort McKay South - March 2025



Maximum Value: 86.2 ppb on Mar 13 11:00

Maximum Daily Average: 17.5 ppb on Mar 2

Minimum Value: 0.0 ppb on Mar 7 22:00

Minimum Daily Average: 0.7 ppb on Mar 25

Maximum Diurnal Average: 14.3 ppb at hour 11

Minimum Diurnal Average: 0.2 ppb at hour 20

Monthly Average: 4.26 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.1 Median = 1.0 Q_3 = 4.1 P_{90} = 11.4 P_{99} = 46.8

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.3	0.3	0.3	0.2	0.2	Z	0.3	0.5	4.2	6.6	9.5	11.0	9.2	12.5	9.0	6.8	4.3	1.4	0.5	0.4	0.6	0.5	0.6	0.8	3.5	12.5
2-Mar	Z	29.9	47.0	44.4	33.6	8.6	6.3	14.7	35.5	56.4	69.8	28.3	5.9	4.2	1.8	0.1	14.3	0.5	0.2	0.1	0.1	0.1	0.1	0.1	17.5	69.8
3-Mar	0.1	Z	0.1	0.1	0.1	0.1	0.1	1.5	5.1	7.4	12.3	9.0	7.2	4.3	1.8	2.0	1.2	1.5	0.3	0.2	0.1	0.2	0.4	0.7	2.4	12.3
4-Mar	3.5	38.4	Z	75.1	75.2	55.9	36.8	27.3	16.1	28.2	10.6	1.7	3.7	3.6	5.1	2.6	0.6	0.3	0.1	0.1	0.1	0.2	0.1	0.2	16.8	75.2
5-Mar	0.2	0.2	0.1	Z	0.1	0.0	0.0	0.4	3.4	2.1	4.0	3.0	3.2	2.8	3.1	4.7	3.6	2.0	0.3	0.3	6.6	8.4	1.3	1.3	2.2	8.4
6-Mar	1.2	2.1	1.6	0.9	Z	2.0	15.8	20.9	14.2	31.8	7.5	5.5	5.4	5.5	4.6	4.2	1.9	0.9	0.3	0.3	0.3	10.0	3.0	4.3	6.3	31.8
7-Mar	1.0	0.1	0.0	0.1	0.0	Z	0.1	3.9	9.9	13.5	15.7	14.4	14.1	11.3	24.2	4.4	2.3	0.9	0.1	0.0	0.0	0.0	0.0	0.0	5.1	24.2
8-Mar	Z	0.0	0.1	0.1	0.6	9.5	10.0	2.5	0.5	1.3	3.0	5.4	1.9	1.9	1.3	1.4	1.8	1.3	0.3	0.2	0.2	0.2	0.2	0.1	1.9	10.0
9-Mar	0.2	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.8	1.2	1.5	3.0	3.6	3.7	4.3	3.7	2.5	1.1	0.3	0.1	0.1	0.0	0.0	0.1	1.1	4.3
10-Mar	0.8	1.7	Z	2.3	8.6	8.3	12.8	17.9	23.6	23.1	22.2	20.9	15.2	10.0	6.1	6.6	5.8	3.7	1.1	1.3	0.4	0.3	0.4	6.6	8.7	23.6
11-Mar	9.6	7.1	2.7	Z	4.3	3.3	1.4	4.5	9.1	20.3	22.8	26.5	19.1	5.7	3.9	3.6	1.8	0.8	0.2	0.1	0.1	0.1	0.0	0.1	6.4	26.5
12-Mar	0.1	0.1	0.1	0.1	Z	0.0	0.0	1.3	3.9	5.0	4.8	3.7	4.2	7.4	9.4	6.0	3.9	1.4	0.5	0.3	0.2	0.2	0.2	0.2	2.3	9.4
13-Mar	0.1	0.2	1.2	7.3	19.5	Z	28.6	31.8	23.8	45.1	86.2	57.4	10.9	4.4	2.6	1.5	0.7	0.5	0.2	0.2	0.1	0.1	0.1	0.1	14.0	86.2
14-Mar	Z	0.1	0.1	0.1	0.1	0.1	0.3	1.4	3.5	4.7	3.2	2.5	2.4	1.6	1.0	1.4	1.1	0.7	0.3	0.2	0.1	0.3	0.1	0.1	1.1	4.7
15-Mar	0.1	Z	0.1	0.0	0.0	0.0	0.1	0.8	2.0	7.1	13.3	2.3	2.8	2.9	3.4	1.8	1.0	0.6	0.3	0.2	0.2	0.9	0.1	0.2	1.7	13.3
16-Mar	0.1	0.1	Z	0.1	0.1	0.2	1.4	7.4	10.8	9.1	7.3	11.6	6.0	4.2	3.1	2.0	1.7	0.7	0.2	0.1	0.0	0.1	0.1	0.0	2.9	11.6
17-Mar	0.1	0.1	0.1	Z	0.1	0.1	0.2	1.5	8.6	1.8	14.6	6.2	6.3	3.0	2.4	2.1	2.0	1.0	0.4	0.2	0.2	0.2	0.1	0.1	2.2	14.6
18-Mar	0.1	0.2	0.3	0.7	Z	10.5	14.3	13.4	C	C	C	C	C	1.3	1.5	0.7	1.8	0.8	0.2	0.1	0.2	0.2	0.2	0.1	2.6	14.3
19-Mar	0.1	0.1	0.2	0.1	0.1	Z	0.4	2.4	16.8	17.5	39.6	21.5	16.4	14.7	12.4	11.5	6.2	12.8	1.5	0.3	0.2	0.2	0.2	0.2	7.6	39.6
20-Mar	Z	0.1	0.1	0.1	0.1	0.1	0.8	4.9	12.0	14.9	11.7	7.7	4.0	3.9	2.9	2.7	2.0	1.1	0.4	0.2	0.2	0.2	0.1	0.1	3.1	14.9
21-Mar	0.1	Z	0.0	0.0	0.0	0.0	0.0	1.2	4.4	6.1	7.7	7.1	6.4	5.6	4.6	3.6	2.4	0.7	0.2	0.1	0.0	0.0	0.0	0.0	2.2	7.7
22-Mar	0.0	0.0	Z	0.1	0.2	0.1	0.1	0.2	1.0	4.7	5.2	3.9	7.7	3.4	2.2	4.0	1.3	2.3	0.8	0.2	0.2	0.2	0.2	0.2	1.7	7.7
23-Mar	0.2	0.2	0.2	Z	0.2	0.2	0.5	1.9	5.7	5.6	4.7	2.0	2.1	2.6	4.5	1.7	0.9	0.7	0.3	0.2	0.2	0.7	1.4	0.7	1.6	5.7
24-Mar	0.5	0.4	0.4	0.2	Z	0.1	0.3	4.1	7.4	4.8	3.3	2.7	2.5	2.4	1.4	1.9	0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.0	1.4	7.4
25-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.2	0.5	1.4	1.6	4.3	3.0	1.4	1.3	0.0	0.1	0.9	1.3	0.3	0.1	0.1	0.1	0.1	0.1	0.7	4.3
26-Mar	Z	0.0	0.0	0.0	0.0	0.1	0.7	2.7	3.4	2.8	3.0	3.7	3.3	3.4	2.3	2.9	3.0	1.2	0.2	0.1	0.1	0.1	0.1	0.1	1.4	3.7
27-Mar	0.1	Z	0.2	0.1	0.1	0.1	0.2	1.3	4.1	2.1	1.7	1.6	1.7	1.7	1.4	1.4	1.2	0.7	0.3	0.3	0.3	0.3	0.2	0.2	0.9	4.1
28-Mar	0.2	0.2	Z	0.2	0.1	0.3	3.6	15.0	31.1	22.5	11.3	10.7	6.6	4.9	3.0	2.6	2.4	1.6	0.8	0.3	0.3	0.3	0.2	0.2	5.1	31.1
29-Mar	0.2	0.2	0.1	Z	0.1	0.0	1.6	4.2	13.2	17.1	15.7	7.9	4.6	1.9	2.4	2.0	4.5	1.8	0.6	0.2	0.2	0.2	0.2	0.1	3.4	17.1
30-Mar	0.1	0.1	0.1	0.1	Z	0.0	1.1	4.7	5.9	7.8	11.0	7.8	4.2	5.5	11.7	4.0	1.5	1.5	1.6	0.6	0.1	0.1	0.1	0.1	3.0	11.7
31-Mar	0.1	0.0	0.0	0.0	0.0	Z	0.1	0.7	2.4	3.7	2.6	0.9	1.1	1.0	1.6	1.2	0.9	0.5	0.2	0.1	0.1	0.0	0.0	0.0	0.8	3.7
	0.7	3.2	2.1	5.1	5.5	4.0	4.5	6.3	9.5	12.5	14.3	9.8	6.1	4.6	4.5	3.1	2.6	1.5	0.4	0.2	0.4	0.8	0.3	0.6	Diurnal Average	
	9.6	38.4	47.0	75.1	75.2	55.9	36.8	31.8	35.5	56.4	86.2	57.4	19.1	14.7	24.2	11.5	14.3	12.8	1.6	1.3	6.6	10.0	3.0	6.6	Diurnal Maximum	

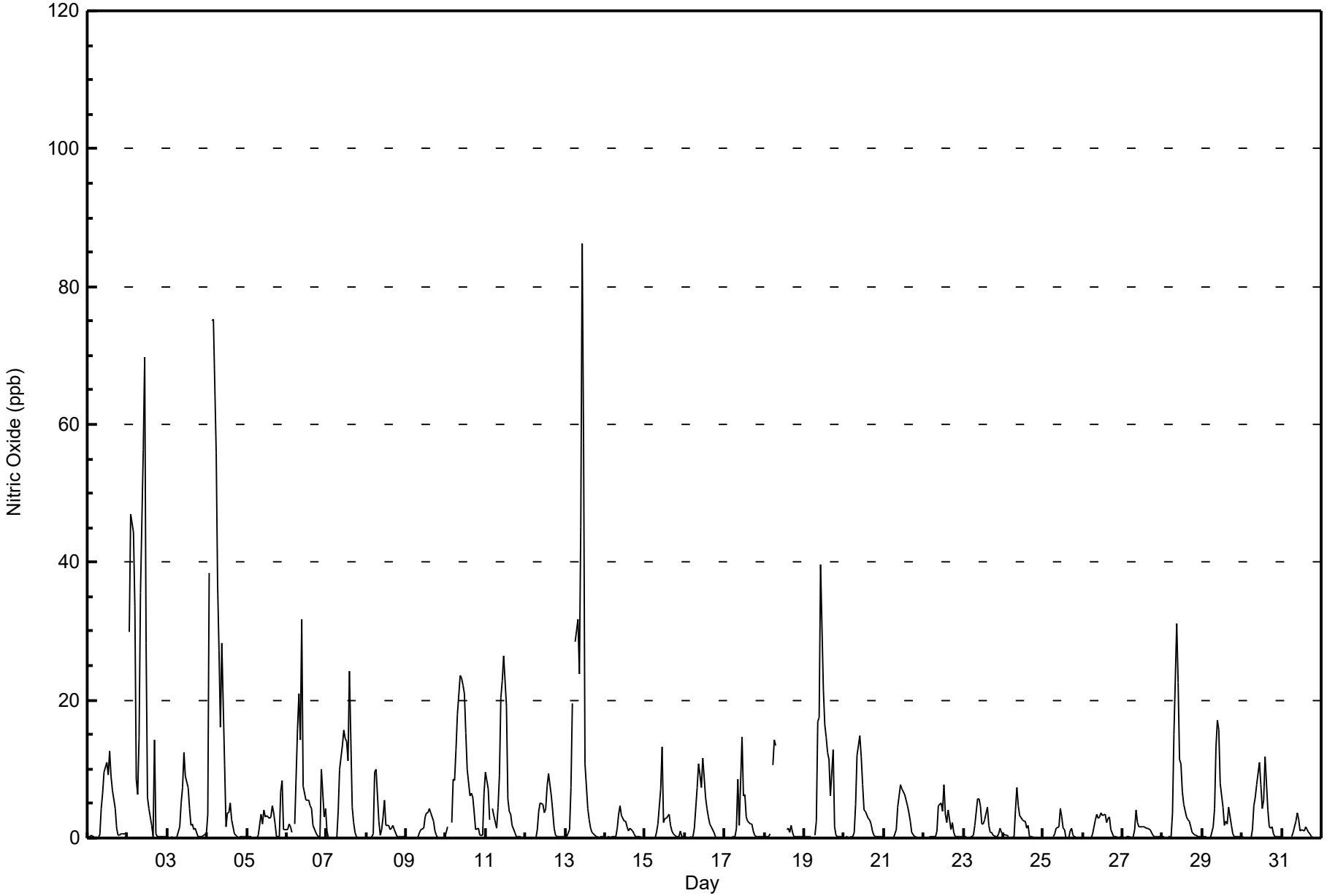
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Fort McKay South - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	674	95.20	95.20
21 - 40	24	3.39	98.59
11 - 80	9	1.27	99.86
81 - 159	1	0.14	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Fort McKay South - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	142	141	20	3	5	7	19	112	45	13	23	30	18	17	32	41	668
21 - 40	2	6	1	0	0	1	2	3	2	2	1	2	1	0	0	1	24
11 - 80	1	2	0	0	0	0	0	0	0	3	1	0	0	0	0	1	8
81 - 159	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	145	150	21	3	5	8	21	115	47	18	25	32	19	17	32	43	701

Total Number of Valid Hours: 701

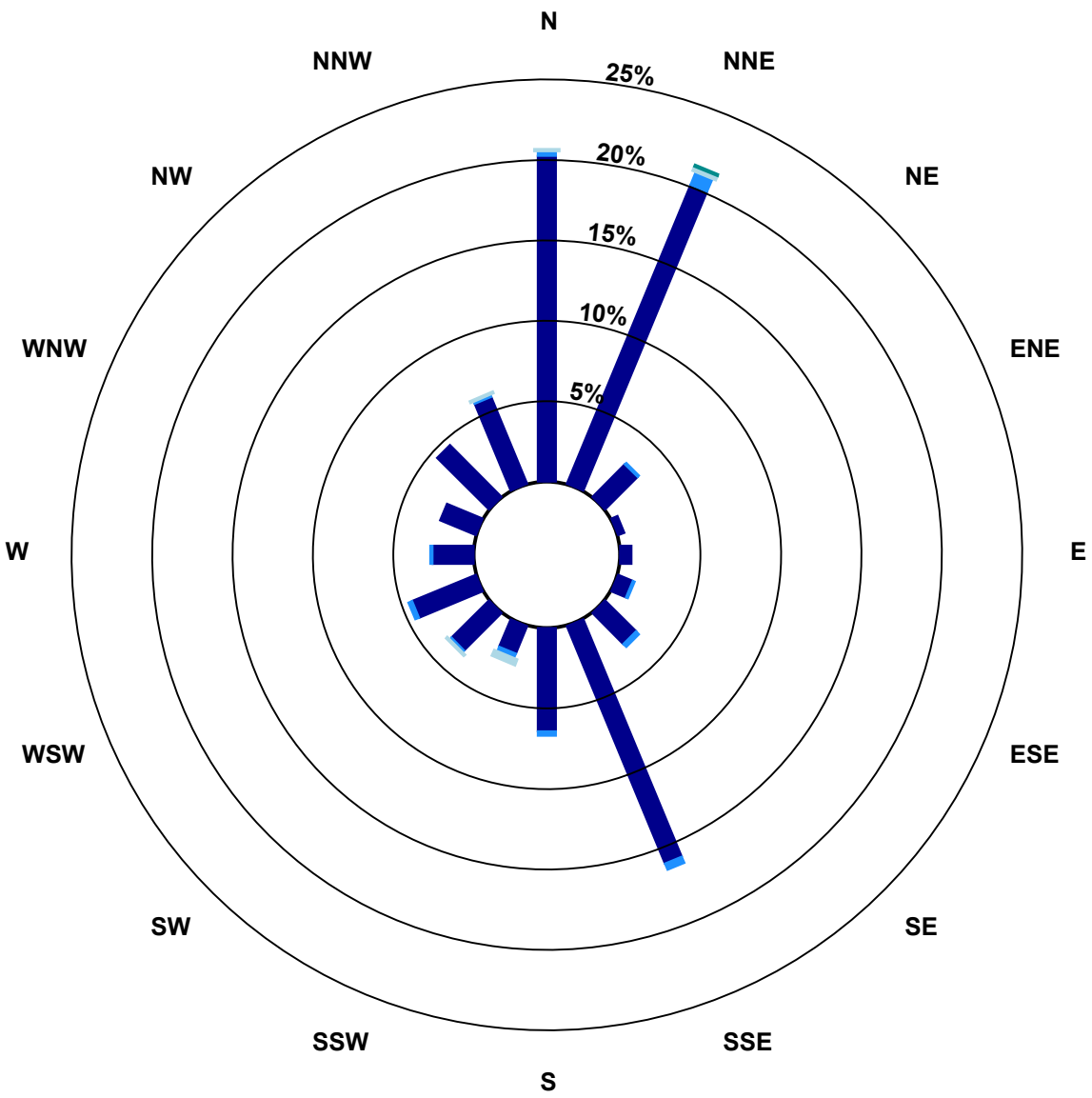
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitric Oxide (NO) - ppb

Fort McKay South



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

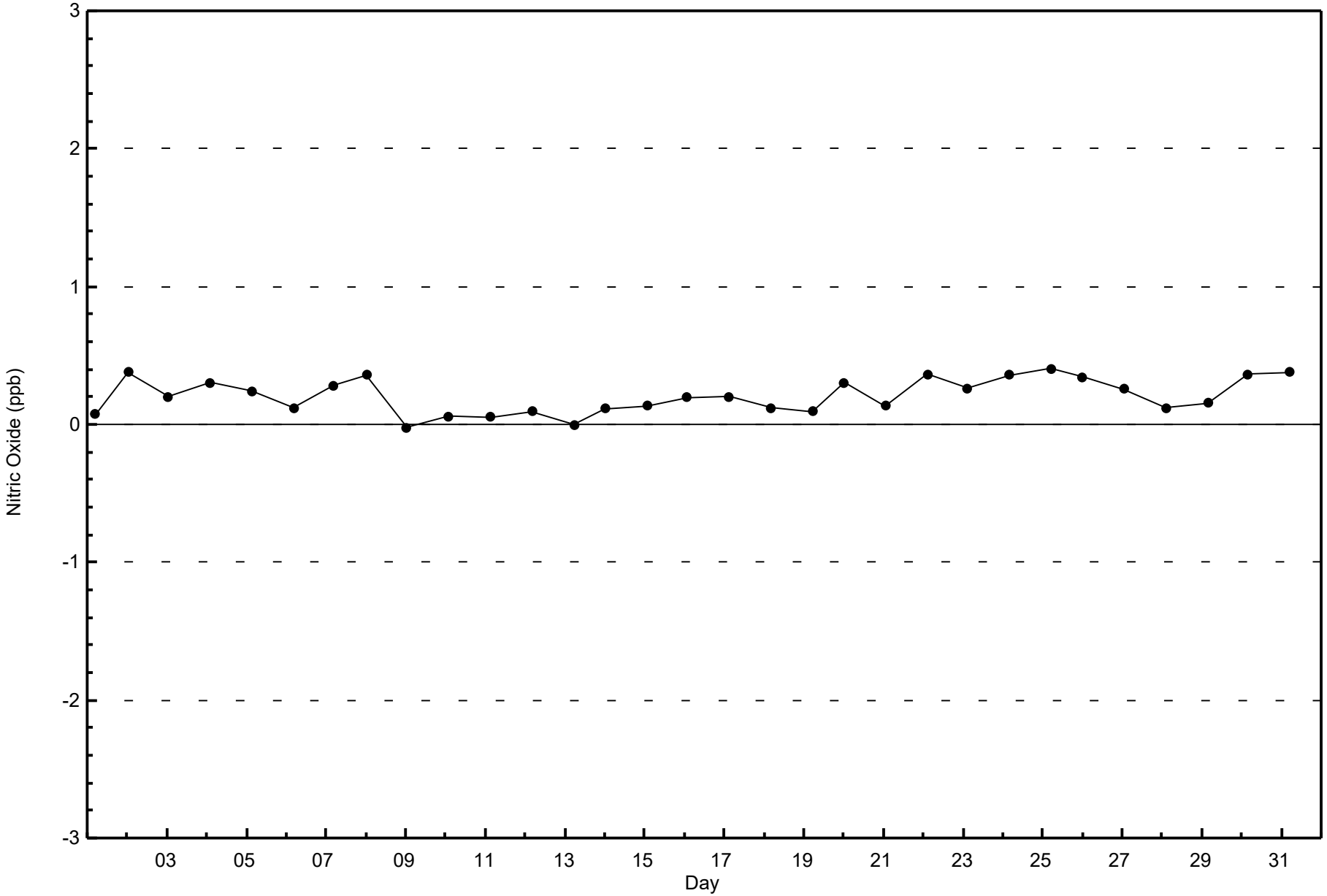
Total Number of Valid Hours: 701

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Fort McKay South - March 2025

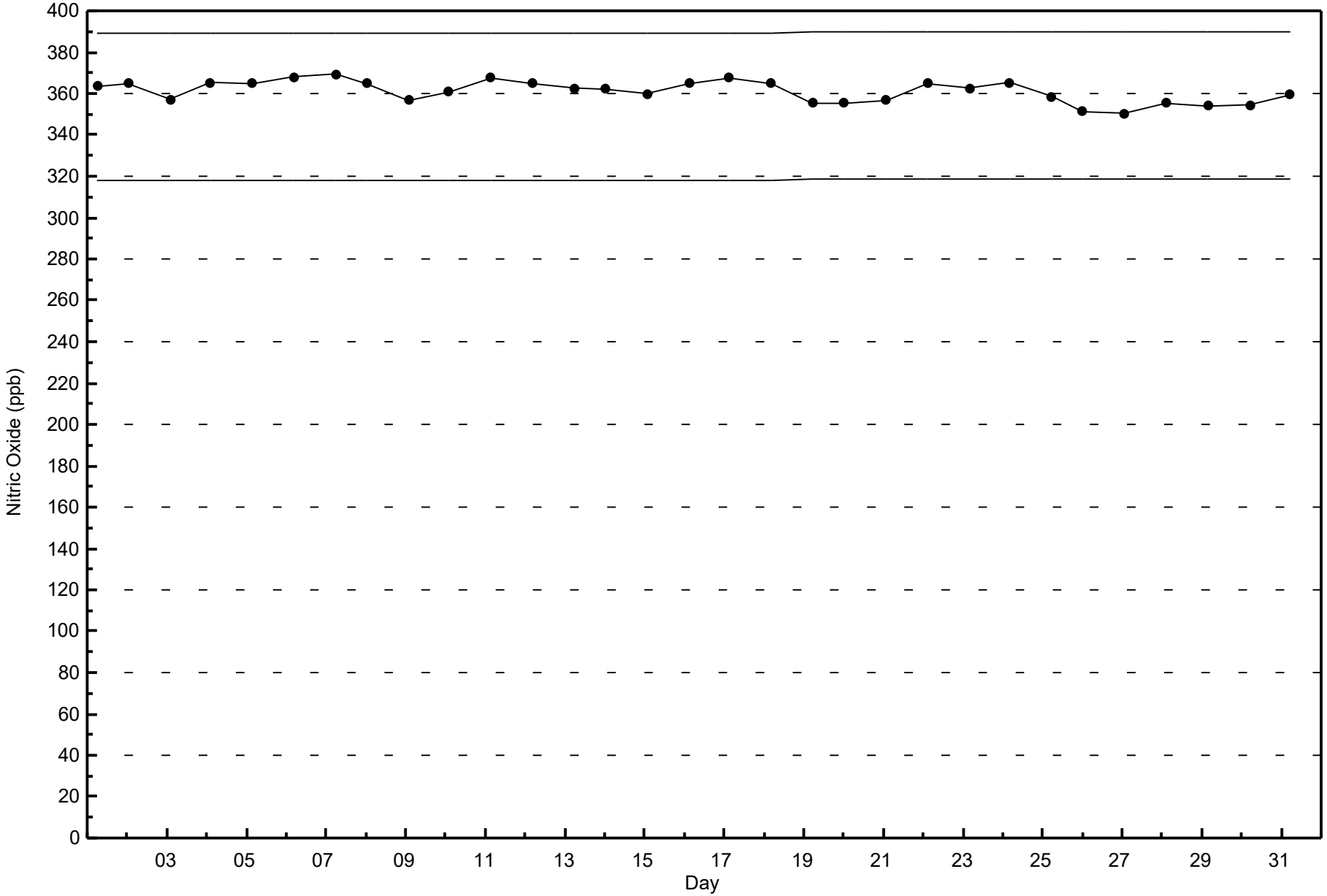


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Fort McKay South - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Fort McKay South - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 42.3 ppb on Mar 8 07:00 Maximum Daily Average: 18.7 ppb on Mar 10

Minimum Value: 0.4 ppb on Mar 25 15:00 Minimum Daily Average: 4.0 ppb on Mar 25
Maximum Diurnal Average: 14.9 ppb at hour 6 Minimum Diurnal Average: 6.9 ppb at hour 16
Monthly Average: 11.20 ppb Percentiles: P_1 = 0.9 P_{10} = 3.7 Q_1 = 5.9 Median = 9.2 Q_3 = 15.4 P_{90} = 22.0 P_{99} = 31.6

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	9.8	10.1	13.9	9.2	7.8	Z	10.3	7.1	9.2	9.7	10.7	10.8	10.4	15.5	14.5	14.2	13.3	7.0	10.2	10.7	9.5	9.0	7.0	7.7	10.3	15.5
2-Mar	Z	9.8	13.8	16.5	15.8	21.5	18.0	15.7	19.8	17.5	29.2	28.1	14.2	10.2	6.8	0.6	24.0	10.3	6.1	7.3	11.3	8.2	9.1	9.3	14.0	29.2
3-Mar	7.8	Z	9.7	9.1	11.2	15.4	18.6	19.8	19.0	16.4	18.5	16.6	12.6	7.3	4.3	5.9	6.6	15.9	18.2	13.9	13.2	13.9	15.9	17.4	13.4	19.8
4-Mar	16.1	22.2	Z	23.0	23.3	22.0	23.4	18.9	12.1	19.6	16.6	4.3	7.8	8.6	12.6	9.3	3.7	6.7	9.7	6.6	16.0	18.3	17.6	13.7	14.4	23.4
5-Mar	13.0	15.0	13.7	Z	7.8	5.2	4.6	6.0	14.9	7.4	8.4	5.7	5.7	5.9	7.5	10.3	12.6	16.1	9.2	11.5	38.1	36.6	30.0	27.8	13.6	38.1
6-Mar	26.5	25.1	24.1	23.9	Z	23.0	25.1	23.7	18.3	21.0	11.4	8.3	8.5	8.9	8.3	9.2	7.3	8.6	10.3	10.1	12.0	21.2	19.4	25.1	16.5	26.5
7-Mar	26.3	18.9	12.6	15.4	15.3	Z	18.0	28.1	27.8	23.2	19.3	18.3	20.4	18.2	30.0	12.3	10.7	10.9	11.2	18.4	14.7	17.8	13.6	18.2	18.2	30.0
8-Mar	Z	29.3	26.0	29.8	35.7	42.1	42.3	23.0	3.9	6.3	10.1	12.9	8.6	8.0	5.1	7.6	10.2	11.6	9.5	5.8	4.7	5.8	5.4	5.8	15.2	42.3
9-Mar	6.5	Z	5.8	6.9	4.4	5.6	5.2	4.7	5.2	3.5	4.3	4.9	4.7	4.6	4.7	5.9	6.0	5.8	6.6	4.7	5.9	5.1	9.0	12.3	5.8	12.3
10-Mar	19.2	22.2	Z	23.8	25.2	24.6	24.8	23.4	21.2	17.8	15.2	14.0	11.6	8.6	7.1	9.4	12.0	14.1	17.7	25.1	21.7	20.7	21.8	29.0	18.7	29.0
11-Mar	29.0	28.9	28.9	Z	31.1	31.6	29.0	22.8	18.7	20.3	22.3	22.9	19.2	9.5	8.2	8.6	7.0	6.0	7.2	7.0	8.3	8.3	9.3	10.3	17.1	31.6
12-Mar	10.4	9.0	7.9	10.6	Z	9.9	9.5	10.2	14.7	11.2	9.0	6.0	6.1	9.0	10.9	9.0	8.7	7.5	6.6	5.0	6.3	12.1	16.8	18.5	9.8	18.5
13-Mar	20.1	19.0	21.5	24.1	25.5	Z	25.3	23.1	18.6	24.1	38.0	30.5	15.9	10.2	7.6	5.8	6.0	6.7	6.1	5.8	7.8	7.2	6.0	8.3	15.8	38.0
14-Mar	Z	12.6	9.8	11.1	7.7	7.7	11.6	9.7	9.6	7.3	4.0	3.0	2.9	2.5	2.1	3.2	3.5	4.7	5.8	8.8	10.0	9.6	6.8	3.5	6.8	12.6
15-Mar	2.5	Z	7.4	6.6	4.8	4.3	5.3	6.0	6.2	11.3	13.1	3.6	5.2	4.6	4.9	3.2	2.7	3.7	8.1	11.9	16.2	30.6	16.4	18.4	8.6	30.6
16-Mar	22.5	22.0	Z	18.4	18.6	22.2	22.7	19.4	15.5	11.6	9.5	12.3	7.5	7.2	5.2	4.3	6.2	6.2	3.8	1.5	0.9	2.3	3.9	5.7	10.8	22.7
17-Mar	5.7	6.3	6.5	Z	7.0	6.3	6.2	6.6	17.2	5.6	16.8	8.1	8.1	7.3	6.4	6.5	6.9	5.7	6.1	10.3	11.6	10.5	10.0	10.1	8.3	17.2
18-Mar	10.5	12.0	18.8	21.0	Z	29.2	29.8	25.6	C	C	C	C	C	2.6	3.3	1.9	6.8	5.6	4.0	3.8	4.3	13.2	16.7	4.8	11.9	29.8
19-Mar	7.0	10.3	9.0	8.9	11.5	Z	8.6	6.4	16.4	17.1	26.8	18.9	15.8	15.4	15.2	17.8	16.1	27.9	22.2	14.3	12.5	10.6	7.8	7.1	14.1	27.9
20-Mar	Z	11.1	14.6	19.5	18.7	15.4	18.4	17.5	17.9	16.6	12.7	9.0	5.4	5.6	5.0	5.4	5.9	6.2	5.6	8.4	10.1	10.2	10.4	12.9	11.4	19.5
21-Mar	15.7	Z	10.4	7.0	5.4	4.3	3.6	4.5	8.7	9.4	10.2	9.1	8.8	8.4	7.8	7.9	7.2	4.0	2.4	1.7	1.1	1.2	1.3	1.8	6.2	15.7
22-Mar	7.9	8.7	Z	7.6	7.9	8.6	6.5	6.1	5.7	10.4	12.2	10.7	11.9	6.5	5.4	10.1	6.5	20.8	10.5	2.7	6.0	12.7	11.3	10.5	9.0	20.8
23-Mar	7.7	5.5	4.9	Z	4.4	3.6	3.6	3.6	9.7	9.0	7.8	4.2	4.4	5.5	8.7	5.4	3.1	4.7	5.1	4.4	9.0	18.8	24.1	22.4	7.8	24.1
24-Mar	17.0	15.2	12.0	9.6	Z	6.8	6.0	7.9	12.8	11.1	6.9	8.8	9.7	8.5	2.6	4.4	1.7	1.1	0.7	0.8	0.9	1.5	1.4	1.8	6.5	17.0
25-Mar	3.3	7.2	1.4	0.6	1.0	Z	3.0	2.5	2.4	3.3	5.6	3.7	3.9	3.5	0.4	0.4	3.1	6.5	5.2	6.1	5.5	9.2	9.1	4.8	4.0	9.2
26-Mar	Z	5.5	5.7	7.7	11.6	9.6	10.9	8.9	6.4	5.2	5.4	5.8	4.9	5.8	5.8	7.6	10.6	7.5	6.6	9.9	12.5	6.8	9.2	10.0	7.8	12.5
27-Mar	13.9	Z	14.9	13.2	7.2	7.4	5.0	8.6	12.0	5.4	4.3	3.3	3.0	2.7	2.2	2.5	2.8	3.0	4.0	8.9	15.9	18.3	13.3	14.4	8.1	18.3
28-Mar	12.3	12.8	Z	16.8	17.1	21.6	19.7	17.8	23.7	20.2	13.0	13.6	10.1	8.1	5.7	5.7	6.6	7.6	10.4	9.9	9.0	12.2	12.6	12.4	13.0	23.7
29-Mar	14.0	13.4	11.1	Z	12.5	17.1	12.1	8.5	14.2	16.8	17.7	11.2	7.6	3.6	5.0	5.1	11.9	8.6	7.6	8.0	16.7	19.1	17.2	15.3	11.9	19.1
30-Mar	16.9	18.5	17.0	16.3	Z	8.2	9.1	9.4	9.6	10.5	13.8	11.2	7.4	9.9	20.4	9.0	5.7	10.8	24.2	32.0	10.3	10.8	17.4	16.1	13.7	32.0
31-Mar	10.9	6.6	3.6	1.3	1.9	Z	5.1	6.2	8.0	8.9	7.5	2.6	3.1	2.9	4.3	4.1	4.2	3.9	2.7	2.6	2.2	2.3	3.7	3.8	4.5	10.9
	13.6	14.5	12.5	13.8	13.1	14.9	14.2	13.0	13.3	12.6	13.3	10.7	8.8	7.6	7.7	6.9	7.7	8.6	8.5	9.0	10.5	12.4	12.0	12.2	Diurnal Average	
	29.0	29.3	28.9	29.8	35.7	42.1	42.3	28.1	27.8	24.1	38.0	30.5	20.4	18.2	30.0	17.8	24.0	27.9	24.2	32.0	38.1	36.6	30.0	29.0	Diurnal Maximum	

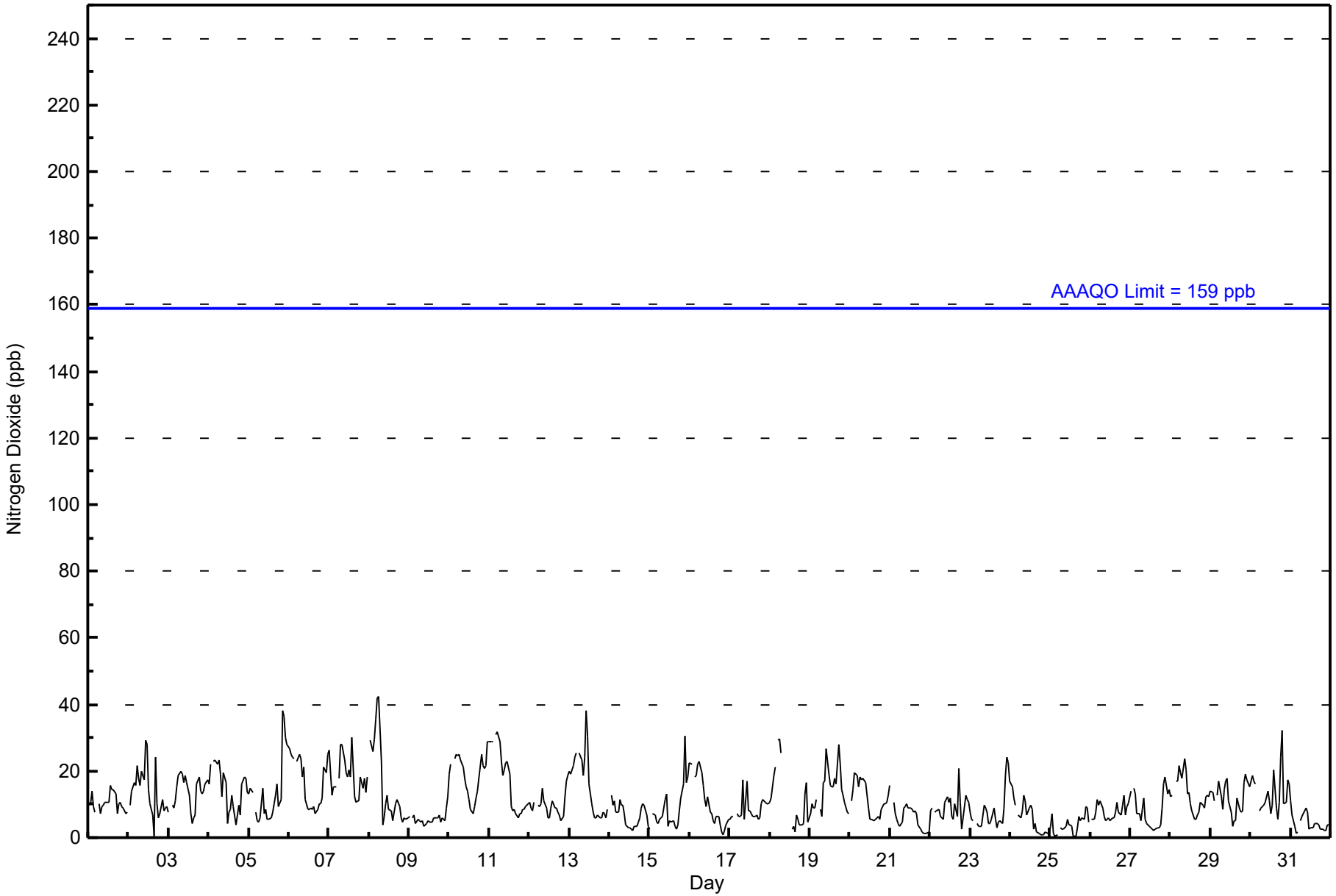
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Fort McKay South - March 2025



Nitrogen Dioxide (NO_2) - ppb
Fort McKay South - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	625	88.28	88.28
21 - 40	81	11.44	99.72
11 - 80	2	0.28	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Fort McKay South - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	119	135	20	3	5	8	20	113	46	14	20	27	16	13	27	32	618
21 - 40	25	15	1	0	0	0	1	2	1	4	5	5	3	4	5	10	81
11 - 80	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	145	150	21	3	5	8	21	115	47	18	25	32	19	17	32	43	701

Total Number of Valid Hours: 701

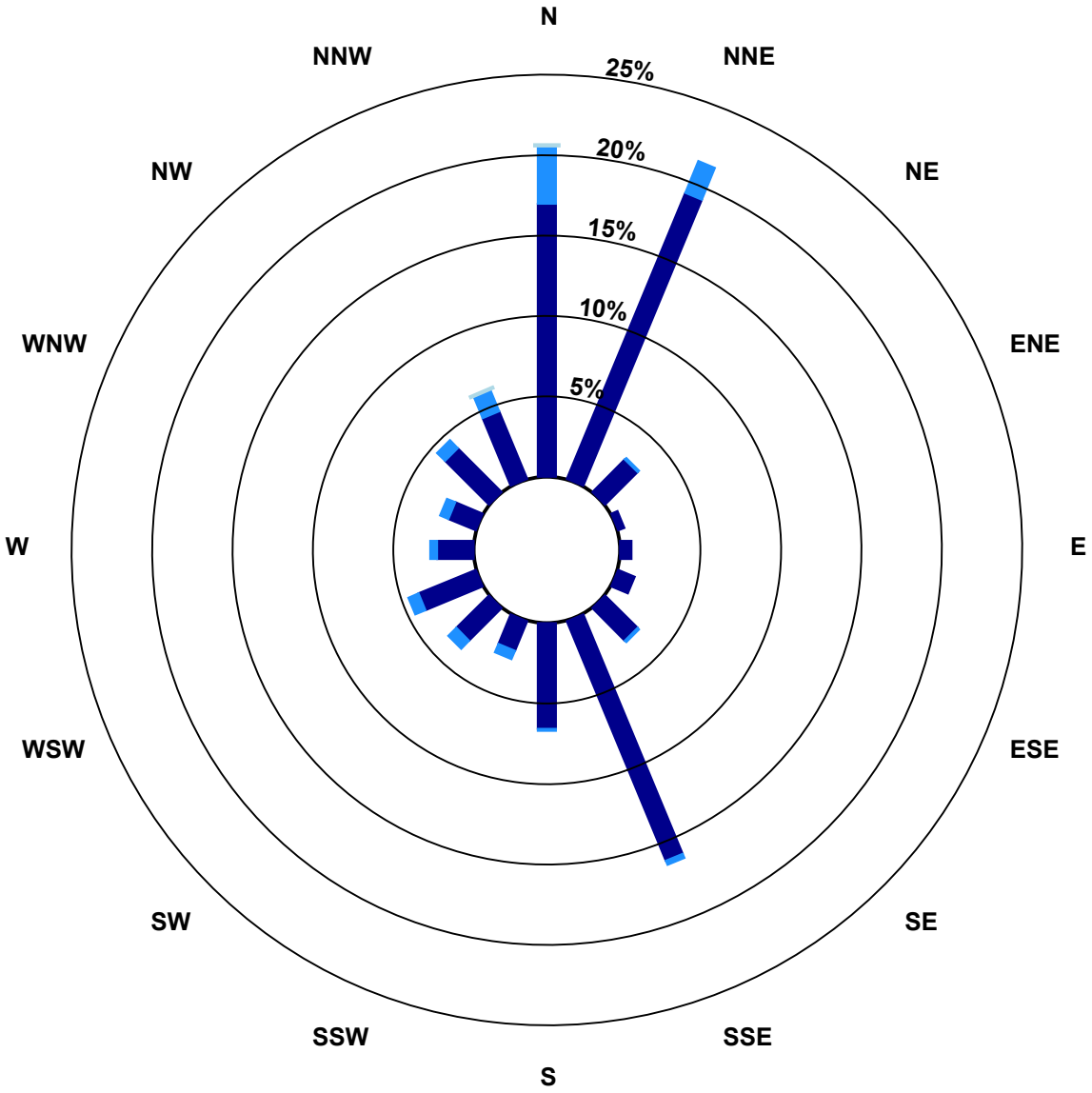
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Dioxide (NO_2) - ppb

Fort McKay South



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

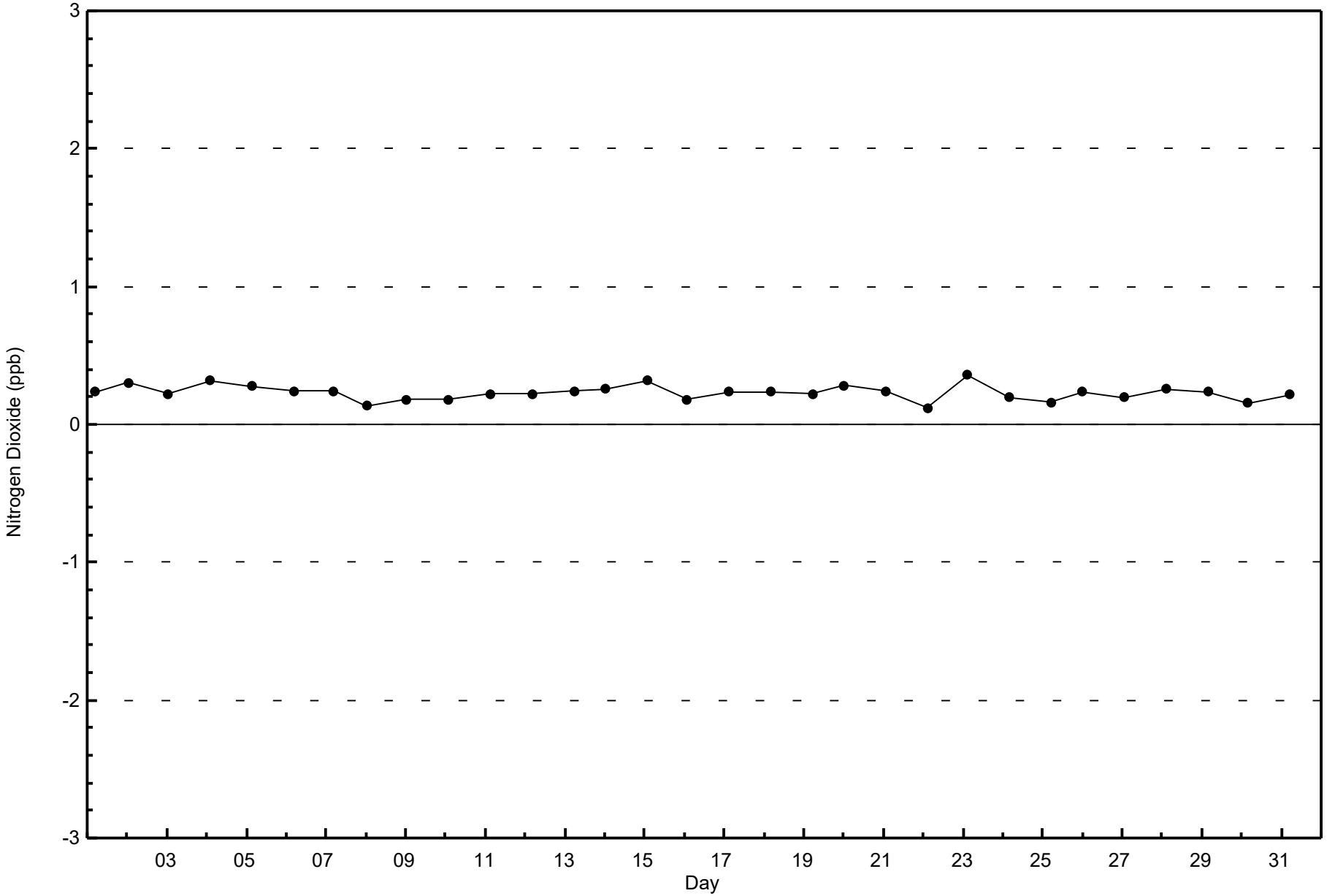
Total Number of Valid Hours: 701

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Fort McKay South - March 2025

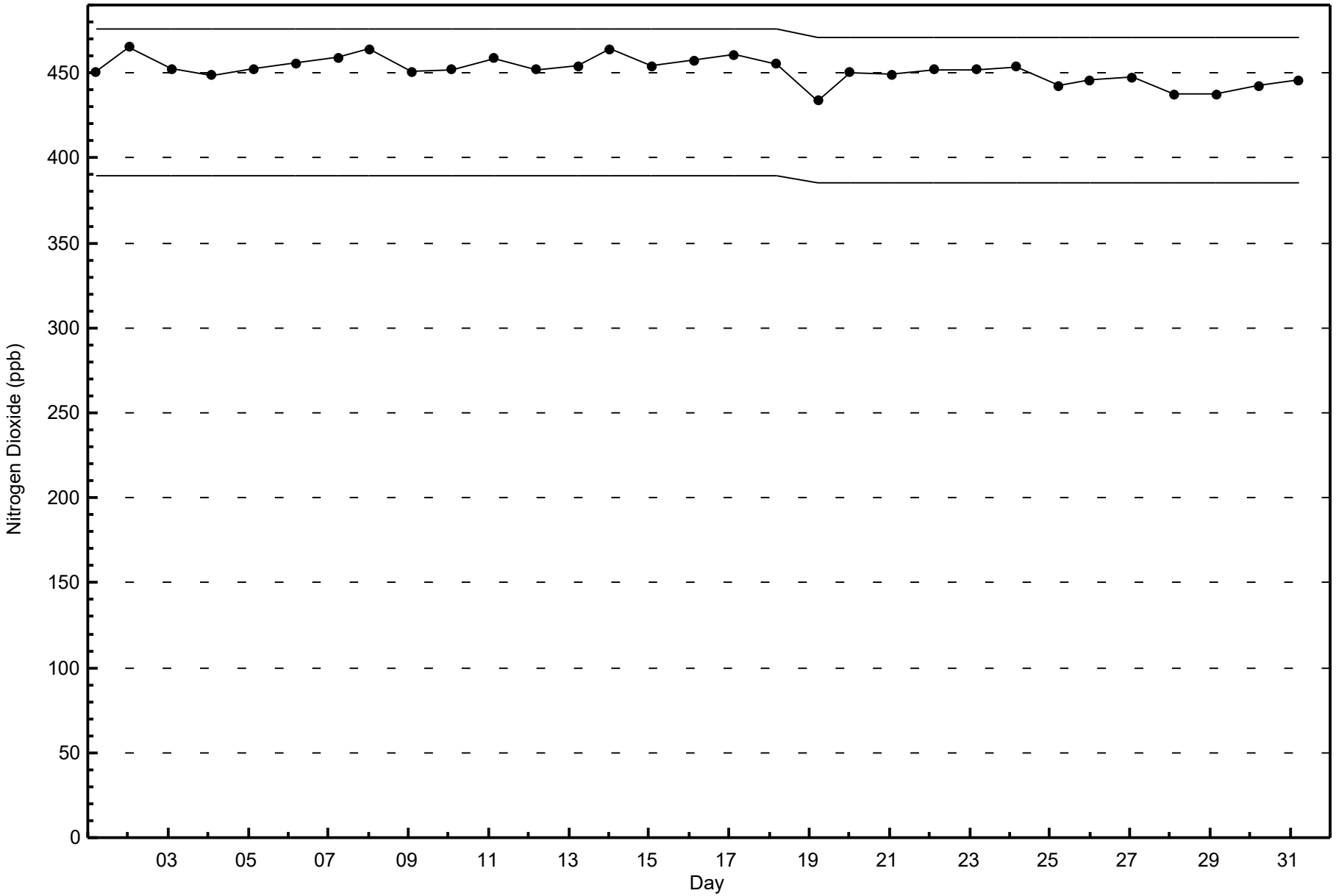


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Fort McKay South - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Fort McKay South - March 2025

Maximum Value: 124.2 ppb on Mar 13 11:00

Maximum Daily Average: 31.5 ppb on Mar 2

Minimum Value: 0.4 ppb on Mar 25 15:00

Minimum Daily Average: 4.7 ppb on Mar 25

Maximum Diurnal Average: 27.7 ppb at hour 11

Minimum Diurnal Average: 8.9 ppb at hour 19

Monthly Average: 15.46 ppb

Percentiles: P_1 = 0.9 P_{10} = 4.5 Q_1 = 7.1 Median = 11.1 Q_3 = 18.6 P_{90} = 32.0 P_{99} = 69.0

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	10.1	10.4	14.2	9.4	8.0	Z	10.6	7.6	13.4	16.3	20.2	21.8	19.6	28.0	23.5	21.0	17.6	8.4	10.7	11.1	10.1	9.5	7.6	8.5	13.8	28.0
2-Mar	Z	39.7	60.8	60.9	49.4	30.1	24.3	30.4	55.3	73.9	99.0	56.4	20.1	14.4	8.6	0.7	38.3	10.8	6.3	7.4	11.4	8.3	9.2	9.4	31.5	99.0
3-Mar	7.9	Z	9.8	9.2	11.3	15.5	18.7	21.3	24.1	23.8	30.8	25.6	19.8	11.6	6.1	7.9	7.8	17.4	18.5	14.1	13.3	14.1	16.3	18.1	15.8	30.8
4-Mar	19.6	60.6	Z	98.1	98.5	77.9	60.2	46.2	28.2	47.8	27.2	6.0	11.5	12.2	17.7	11.9	4.3	7.0	9.8	6.7	16.1	18.5	17.7	13.9	31.2	98.5
5-Mar	13.2	15.2	13.8	Z	7.9	5.2	4.6	6.4	18.3	9.5	12.4	8.7	8.9	8.7	10.6	15.0	16.2	18.1	9.5	11.8	44.7	45.0	31.3	29.1	15.8	45.0
6-Mar	27.7	27.2	25.7	24.8	Z	25.0	40.9	44.6	32.5	52.8	18.9	13.8	13.9	14.4	12.9	13.4	9.2	9.5	10.6	10.4	12.3	31.2	22.4	29.4	22.8	52.8
7-Mar	27.3	19.0	12.6	15.5	15.3	Z	18.1	32.0	37.7	36.7	35.0	32.7	34.5	29.5	54.2	16.7	13.0	11.8	11.3	18.4	14.7	17.8	13.6	18.2	23.3	54.2
8-Mar	Z	29.3	26.1	29.9	36.3	51.6	52.3	25.5	4.4	7.6	13.1	18.3	10.5	9.9	6.4	9.0	12.0	12.9	9.8	6.0	4.9	6.0	5.6	5.9	17.1	52.3
9-Mar	6.7	Z	5.8	6.9	4.4	5.6	5.2	4.8	6.0	4.7	5.8	7.9	8.3	8.3	9.0	9.6	8.5	6.9	6.9	4.8	6.0	5.1	9.0	12.4	6.9	12.4
10-Mar	20.0	23.9	Z	26.1	33.8	32.9	37.6	41.3	44.8	40.9	37.4	34.9	26.8	18.6	13.2	16.0	17.8	17.8	18.8	26.4	22.1	21.0	22.2	35.6	27.4	44.8
11-Mar	38.6	36.0	31.6	Z	35.4	34.9	30.4	27.3	27.8	40.6	45.1	49.4	38.3	15.2	12.1	12.2	8.8	6.8	7.4	7.1	8.4	8.4	9.3	10.4	23.5	49.4
12-Mar	10.5	9.1	8.0	10.7	Z	9.9	9.5	11.5	18.6	16.2	13.8	9.7	10.3	16.4	20.3	15.0	12.6	8.9	7.1	5.3	6.5	12.3	17.0	18.7	12.1	20.3
13-Mar	20.2	19.2	22.7	31.4	45.0	Z	53.9	54.9	42.4	69.2	124.2	87.9	26.8	14.6	10.2	7.3	6.7	7.2	6.3	6.0	7.9	7.3	6.1	8.4	29.8	124.2
14-Mar	Z	12.7	9.9	11.2	7.8	7.8	11.9	11.1	13.1	12.0	7.2	5.5	5.3	4.1	3.1	4.6	4.6	5.4	6.1	9.0	10.1	9.9	6.9	3.6	8.0	13.1
15-Mar	2.6	Z	7.5	6.6	4.8	4.3	5.4	6.8	8.2	18.4	26.4	5.9	8.0	7.5	8.3	5.0	3.7	4.3	8.4	12.1	16.4	31.5	16.5	18.6	10.3	31.5
16-Mar	22.6	22.1	Z	18.5	18.7	22.4	24.1	26.8	26.3	20.7	16.8	23.9	13.5	11.4	8.3	6.3	7.9	6.9	4.0	1.6	0.9	2.4	4.0	5.7	13.7	26.8
17-Mar	5.8	6.4	6.6	Z	7.1	6.4	6.4	8.1	25.8	7.4	31.4	14.3	14.4	10.3	8.8	8.6	8.9	6.7	6.5	10.5	11.8	10.7	10.1	10.2	10.6	31.4
18-Mar	10.6	12.2	19.1	21.7	Z	39.7	44.1	39.0	C	C	C	C	C	3.9	4.8	2.6	8.6	6.4	4.2	3.9	4.5	13.4	16.9	4.9	14.5	44.1
19-Mar	7.1	10.4	9.2	9.0	11.6	Z	9.0	8.8	33.2	34.6	66.4	40.4	32.2	30.1	27.6	29.3	22.3	40.7	23.7	14.6	12.7	10.8	8.0	7.3	21.7	66.4
20-Mar	Z	11.2	14.7	19.6	18.8	15.5	19.2	22.4	29.9	31.5	24.4	16.7	9.4	9.5	7.9	8.1	7.9	7.3	6.0	8.6	10.3	10.4	10.5	13.0	14.5	31.5
21-Mar	15.8	Z	10.4	7.0	5.4	4.3	3.6	5.7	13.1	15.5	17.9	16.2	15.2	14.0	12.4	11.5	9.6	4.7	2.6	1.8	1.1	1.2	1.3	1.8	8.4	17.9
22-Mar	7.9	8.7	Z	7.7	8.1	8.7	6.6	6.3	6.7	15.1	17.4	14.6	19.6	9.9	7.6	14.1	7.8	23.1	11.3	2.9	6.2	12.9	11.5	10.7	10.7	23.1
23-Mar	7.9	5.7	5.1	Z	4.6	3.8	4.1	5.5	15.4	14.6	12.5	6.2	6.5	8.1	13.2	7.1	4.0	5.4	5.4	4.6	9.2	19.5	25.5	23.1	9.4	25.5
24-Mar	17.5	15.6	12.4	9.8	Z	6.9	6.3	12.0	20.2	15.9	10.2	11.5	12.2	10.9	4.0	6.3	2.0	1.2	0.8	0.9	0.9	1.5	1.4	1.8	7.9	20.2
25-Mar	3.3	7.2	1.4	0.6	1.0	Z	3.2	3.0	3.8	4.9	9.9	6.7	5.3	4.8	0.4	0.5	4.0	7.8	5.5	6.2	5.6	9.3	9.2	4.9	4.7	9.9
26-Mar	Z	5.5	5.7	7.7	11.6	9.7	11.6	11.6	9.8	8.0	8.4	9.5	8.2	9.2	8.1	10.5	13.6	8.7	6.8	10.0	12.6	6.9	9.3	10.1	9.3	13.6
27-Mar	14.0	Z	15.1	13.3	7.3	7.5	5.2	9.9	16.1	7.5	6.0	4.9	4.7	4.4	3.6	3.9	4.0	3.7	4.3	9.2	16.2	18.6	13.5	14.6	9.0	18.6
28-Mar	12.5	13.0	Z	17.0	17.2	21.9	23.3	32.8	54.8	42.7	24.3	24.3	16.7	13.0	8.7	8.3	9.0	9.2	11.2	10.2	9.3	12.5	12.8	12.6	18.1	54.8
29-Mar	14.2	13.6	11.2	Z	12.6	17.1	13.7	12.7	27.4	33.9	33.4	19.1	12.2	5.5	7.4	7.1	16.4	10.4	8.2	8.2	16.9	19.3	17.4	15.4	15.4	33.9
30-Mar	17.0	18.6	17.1	16.4	Z	8.2	10.2	14.1	15.5	18.3	24.8	19.0	11.6	15.4	32.1	13.0	7.2	12.3	25.8	32.6	10.4	10.9	17.5	16.2	16.7	32.6
31-Mar	11.0	6.6	3.6	1.3	1.9	Z	5.2	6.9	10.4	12.6	10.1	3.5	4.2	3.9	5.9	5.3	5.1	4.4	2.9	2.7	2.3	2.3	3.7	3.8	5.2	12.6
	14.3	17.7	14.6	18.9	18.6	18.9	18.7	19.3	22.8	25.1	27.7	20.5	14.9	12.2	12.2	9.9	10.3	10.1	8.9	9.2	10.8	13.2	12.4	12.8	Diurnal Average	
	38.6	60.6	60.8	98.1	98.5	77.9	60.2	54.9	55.3	73.9	124.2	87.9	38.3	30.1	54.2	29.3	38.3	40.7	25.8	32.6	44.7	45.0	31.3	35.6	Diurnal Maximum	

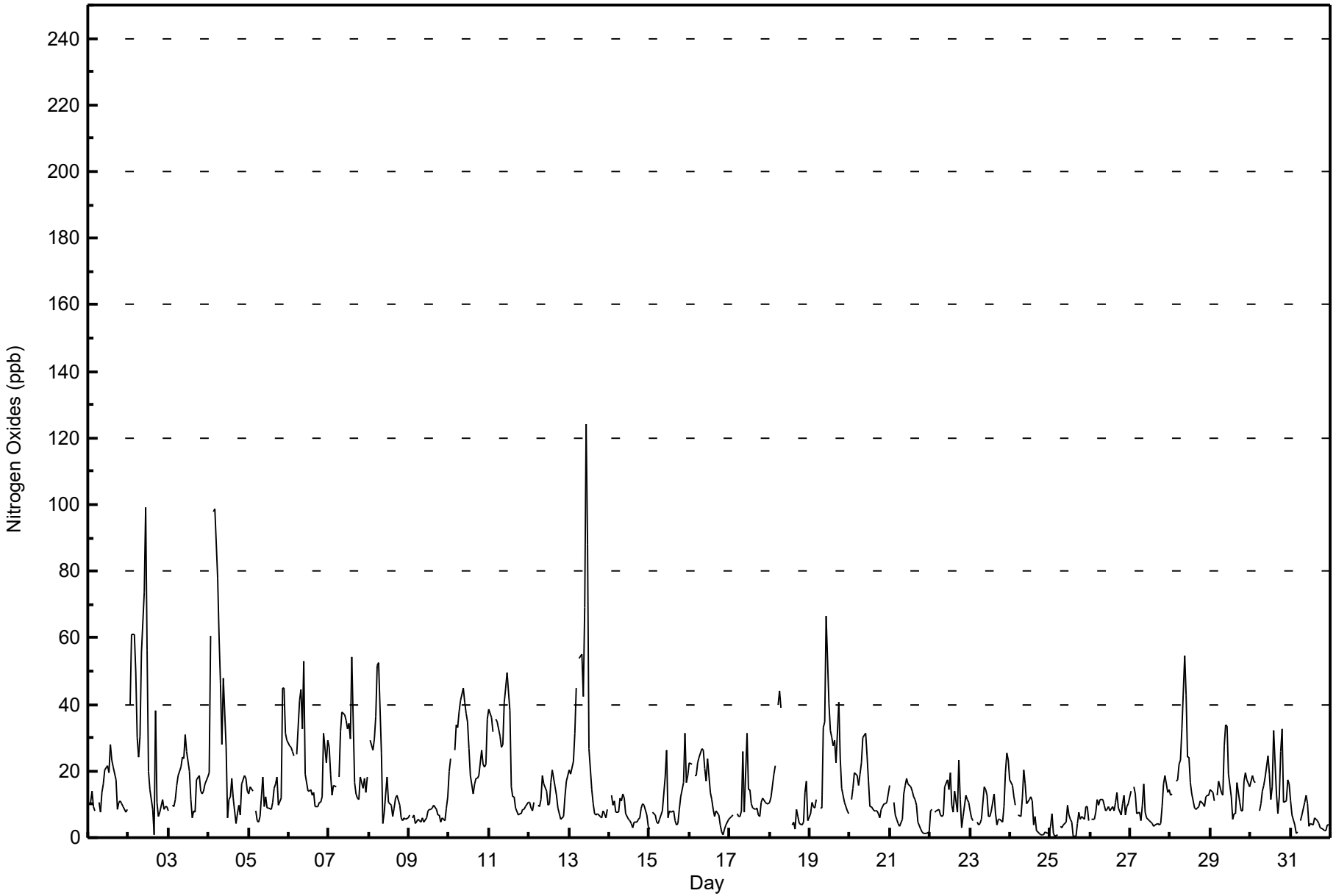
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Fort McKay South - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	560	79.10	79.10
21 - 40	108	15.25	94.35
11 - 80	35	4.94	99.29
81 - 159	5	0.71	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Fort McKay South - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	111	123	16	2	4	7	15	94	42	9	19	26	16	13	26	31	554
21 - 40	27	17	4	1	1	0	5	20	3	5	3	3	1	4	5	9	108
11 - 80	7	8	1	0	0	1	1	1	2	3	2	3	2	0	1	2	34
81 - 159	0	2	0	0	0	0	0	0	0	1	1	0	0	0	0	1	5
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	145	150	21	3	5	8	21	115	47	18	25	32	19	17	32	43	701

Total Number of Valid Hours: 701

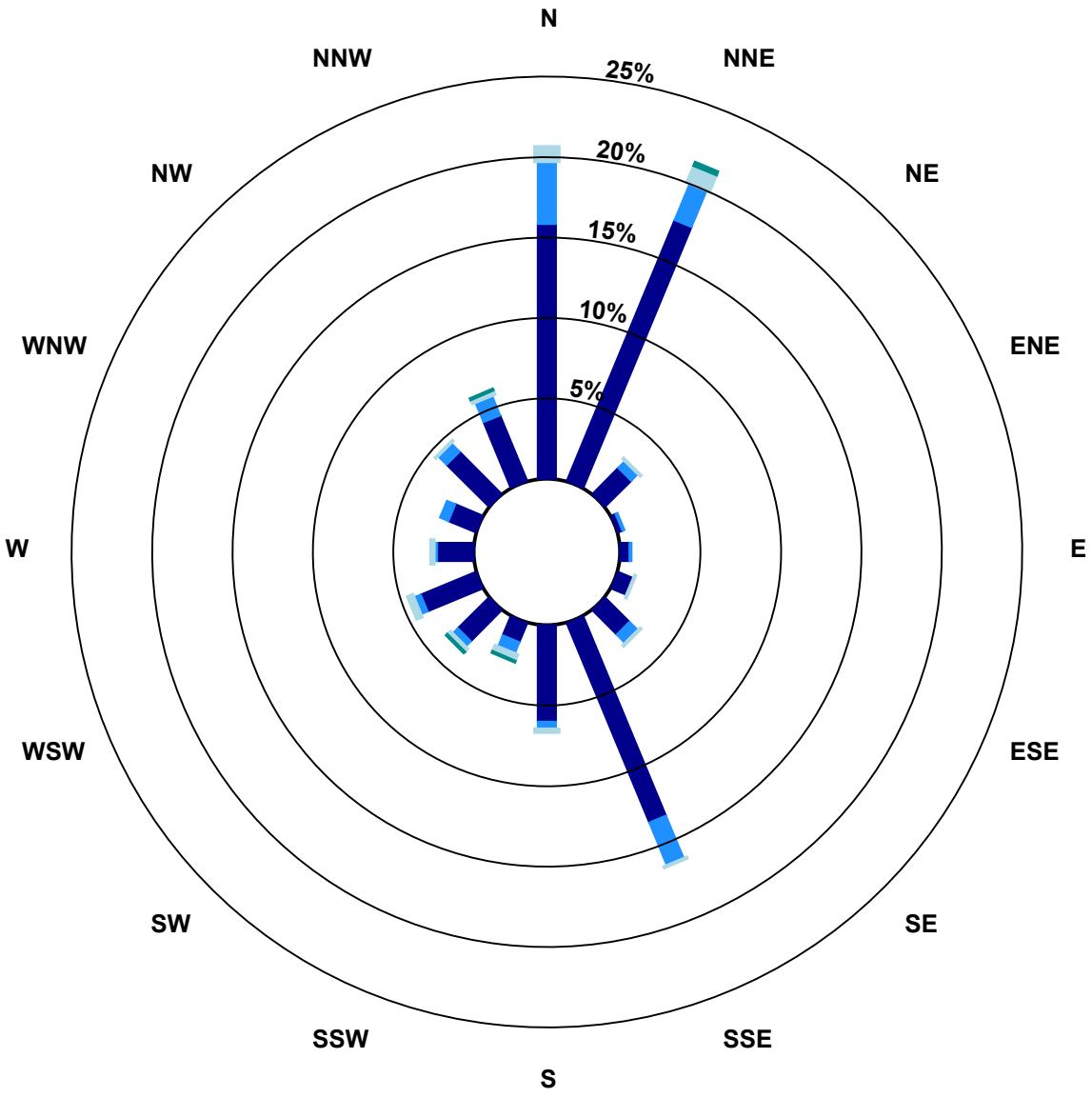
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Oxides (NO_X) - ppb

Fort McKay South



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

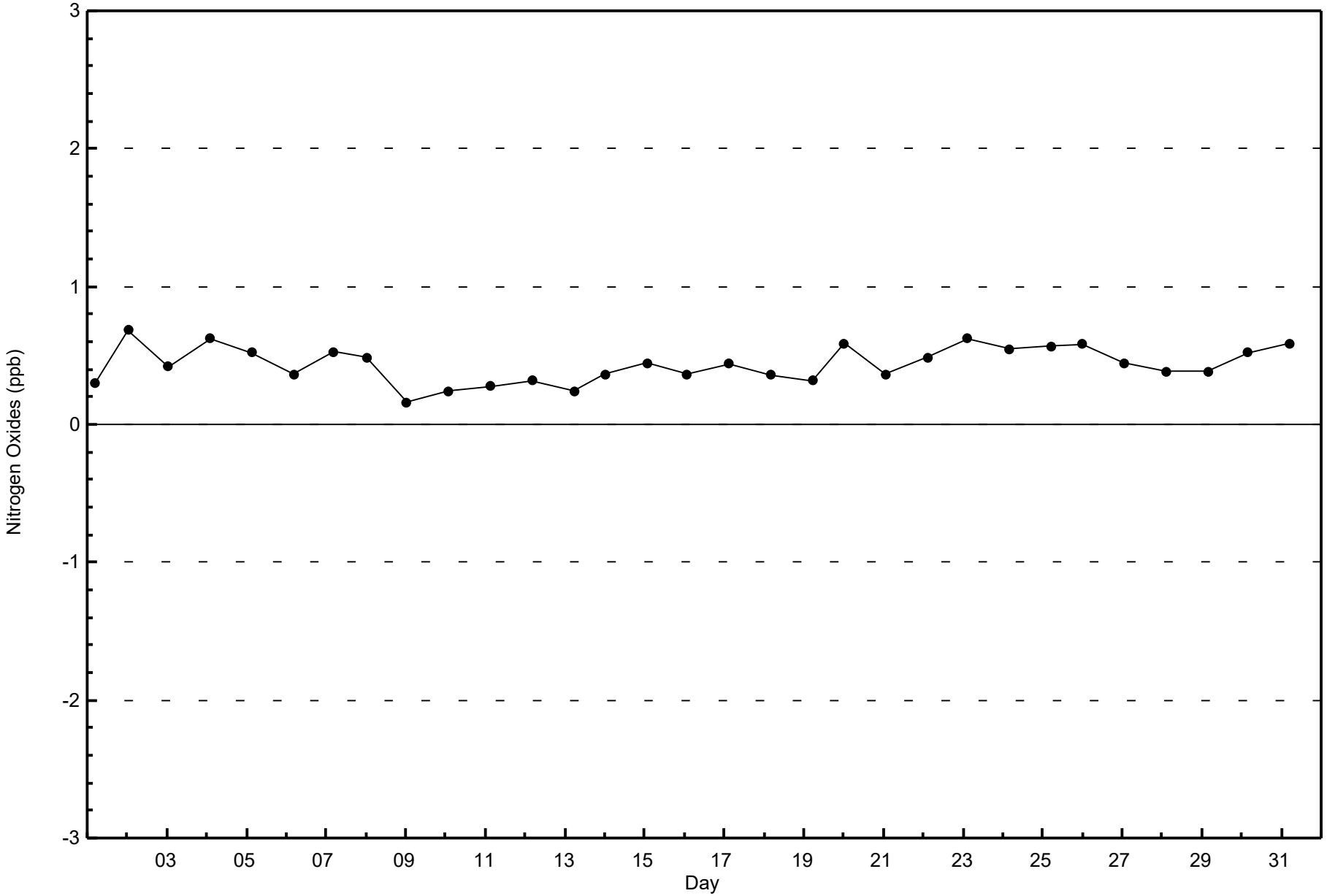
Total Number of Valid Hours: 701

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Fort McKay South - March 2025

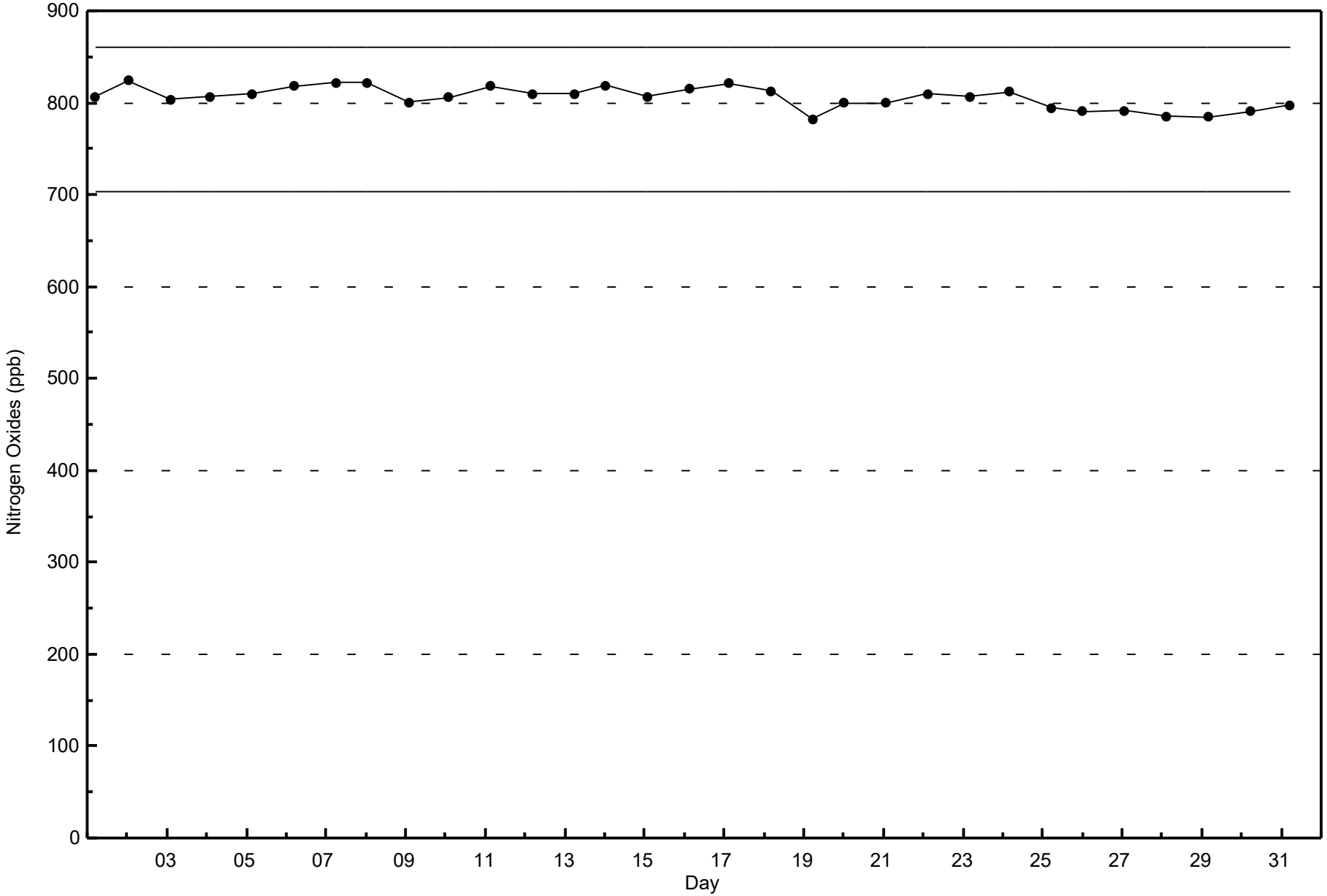


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Fort McKay South - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Fort McKay South - March 2025

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

Maximum Value: 52.3 $\mu g/m^3$ on Mar 28 09:00

Maximum Daily Average: 15.7 $\mu g/m^3$ on Mar 28

Minimum Value: 0.5 $\mu g/m^3$ on Mar 2 16:00

Minimum Daily Average: 2.3 $\mu g/m^3$ on Mar 25

Maximum Diurnal Average: 9.3 $\mu g/m^3$ at hour 11

Minimum Diurnal Average: 4.7 $\mu g/m^3$ at hour 19

Monthly Average: 6.32 $\mu g/m^3$

Percentiles: P_1 = 1.2 P_{10} = 2.3 Q_1 = 3.4 Median = 4.7 Q_3 = 7.5 P_{90} = 12.1 P_{99} = 23.5

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	1
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	3.9	4.0	4.5	3.8	3.4	3.7	3.9	3.4	4.2	4.1	7.3	6.4	7.0	7.6	8.0	5.9	4.3	3.5	4.5	4.0	4.7	6.0	6.5	7.0	5.1	8.0
2-Mar	6.9	6.6	6.7	6.3	5.9	5.9	6.1	5.8	6.3	6.6	7.4	5.6	3.6	2.2	1.4	0.5	3.7	2.4	2.2	1.9	1.9	2.1	2.5	2.8	4.3	7.4
3-Mar	3.5	3.6	3.7	3.4	3.4	3.9	4.2	4.1	4.8	4.9	5.8	4.8	3.4	2.7	2.6	4.0	3.5	3.6	3.6	3.3	3.5	4.0	3.8	3.5	3.8	5.8
4-Mar	3.3	4.0	4.0	3.8	4.2	4.1	4.1	4.5	4.6	4.7	4.1	1.5	3.6	4.1	3.9	1.5	0.8	0.9	0.9	0.8	3.2	3.6	3.2	2.8	3.2	4.7
5-Mar	2.7	2.6	2.2	2.0	2.3	1.8	1.8	1.8	3.4	2.7	3.3	3.0	2.9	2.7	4.0	9.8	6.2	5.1	3.7	3.9	4.5	3.7	3.3	3.0	3.4	9.8
6-Mar	2.8	3.0	3.2	3.6	3.5	3.2	3.4	3.3	3.6	6.3	5.2	5.3	6.5	8.2	8.1	7.8	5.4	4.4	3.9	3.9	4.2	4.1	4.3	5.1	4.7	8.2
7-Mar	5.1	3.6	3.0	3.0	3.1	3.6	4.9	7.0	8.2	8.9	8.2	10.0	7.0	6.7	10.4	4.1	3.1	2.9	3.1	3.7	3.3	3.8	5.1	7.0	5.4	10.4
8-Mar	8.8	9.6	9.7	10.5	12.3	16.5	11.1	3.0	1.5	1.7	2.1	2.3	1.7	1.4	1.3	2.8	3.3	3.8	4.6	2.5	2.8	3.6	4.2	4.6	5.2	16.5
9-Mar	5.6	5.0	4.9	5.4	3.9	3.7	4.0	3.7	3.8	3.6	4.6	5.6	5.5	5.5	6.1	6.8	7.6	5.5	5.0	5.2	6.4	7.5	7.2	10.7	5.5	10.7
10-Mar	12.5	12.5	11.1	11.1	10.5	9.4	11.0	12.9	16.1	14.6	12.4	12.4	10.6	8.7	7.3	9.1	8.1	8.3	11.1	21.1	13.0	10.1	8.4	9.2	11.3	21.1
11-Mar	8.8	7.6	7.2	8.8	9.6	9.3	9.9	6.9	5.4	5.6	5.4	5.6	5.0	4.3	4.3	4.2	4.4	4.0	3.4	3.2	2.8	2.7	2.5	2.6	5.6	9.9
12-Mar	2.3	1.8	1.7	1.9	1.9	1.7	1.5	1.8	2.7	2.5	2.3	1.9	2.0	3.1	3.9	4.0	3.6	2.5	2.4	2.2	3.9	7.0	9.0	9.4	3.2	9.4
13-Mar	8.0	7.1	6.9	6.9	8.1	9.1	9.1	9.0	9.4	13.3	30.9	17.3	8.4	7.4	6.3	6.6	5.9	8.4	8.8	6.4	9.0	7.4	7.2	5.1	9.3	30.9
14-Mar	3.9	3.6	3.0	3.1	2.8	2.7	3.2	3.1	3.4	3.6	3.4	3.2	3.2	3.1	3.3	3.4	3.4	3.2	2.6	2.7	2.4	2.5	1.9	1.6	3.0	3.9
15-Mar	1.6	2.3	2.0	1.9	1.6	1.5	1.5	1.6	2.3	2.8	3.5	2.6	2.8	2.8	2.9	2.8	2.7	2.8	4.0	5.2	4.9	5.9	5.8	5.3	3.0	5.9
16-Mar	5.5	4.9	4.3	3.7	3.5	3.9	3.9	4.4	6.1	5.6	4.6	5.1	4.2	4.8	4.2	3.4	3.9	4.2	3.4	2.2	2.0	2.4	2.8	3.4	4.0	6.1
17-Mar	3.7	3.6	3.7	3.8	4.3	4.1	3.9	3.8	4.7	3.6	4.9	4.2	4.1	3.6	3.8	4.4	4.9	4.6	5.1	8.1	8.0	6.5	5.8	6.0	4.7	8.1
18-Mar	6.3	6.9	8.3	7.7	13.4	13.0	10.2	6.9	6.8	6.5	C	4.5	6.5	4.5	4.7	3.8	6.6	5.2	3.6	3.4	3.6	10.1	11.4	4.7	6.9	13.4
19-Mar	5.4	7.1	4.7	3.5	4.6	5.1	3.8	3.3	8.4	12.4	24.0	16.6	16.7	22.3	18.5	21.1	15.2	10.9	5.8	4.8	4.2	4.5	4.4	4.2	9.6	24.0
20-Mar	4.6	4.9	5.6	5.9	6.2	6.1	6.7	8.8	10.1	10.4	10.0	7.7	6.2	5.9	4.6	4.2	4.1	4.9	5.7	7.6	13.5	13.5	13.8	16.3	7.8	16.3
21-Mar	16.0	11.5	8.5	6.4	4.9	4.3	3.8	4.4	10.8	17.0	19.1	18.3	22.1	23.9	15.1	11.9	5.9	3.1	2.4	2.0	1.8	1.9	1.9	3.7	9.2	23.9
22-Mar	8.9	8.3	6.5	6.4	6.3	6.9	4.8	3.5	4.0	5.3	5.1	8.3	10.8	6.5	5.3	6.5	4.9	7.2	4.5	2.2	2.7	6.0	7.8	7.3	6.1	10.8
23-Mar	6.5	6.8	6.4	6.3	5.6	5.4	5.7	6.4	8.6	6.7	5.1	4.5	6.4	6.4	12.7	7.8	2.9	2.8	2.6	2.5	3.5	4.5	4.7	4.6	5.6	12.7
24-Mar	4.4	4.2	4.0	3.7	3.5	3.5	3.5	3.9	5.6	5.8	3.8	3.7	7.1	4.8	2.1	2.5	2.3	2.9	1.8	1.2	1.2	1.3	1.5	1.9	3.3	7.1
25-Mar	2.1	2.3	1.8	1.5	1.6	2.1	1.6	1.5	1.8	2.2	1.7	1.7	3.6	3.8	0.7	0.7	1.5	3.7	3.5	3.6	3.0	3.4	3.5	3.1	2.3	3.8
26-Mar	3.5	3.8	3.7	3.7	4.3	5.6	5.6	4.8	5.1	5.6	5.6	5.4	4.2	3.5	3.0	3.1	3.2	3.0	2.9	3.4	4.1	4.1	4.9	5.1	4.2	5.6
27-Mar	6.6	6.6	7.2	7.4	5.5	5.7	5.3	6.1	8.7	6.5	6.3	5.5	5.1	4.4	3.6	3.4	3.5	3.5	3.8	6.9	13.7	13.3	11.6	10.8	6.7	13.7
28-Mar	10.8	14.4	18.5	17.7	17.3	22.4	22.3	32.7	52.3	35.2	19.7	18.1	15.4	11.1	6.4	5.7	5.6	5.2	6.1	6.2	6.1	8.2	9.2	10.2	15.7	52.3
29-Mar	16.1	13.0	6.9	5.1	5.4	10.4	8.9	9.1	22.0	26.5	22.3	14.5	9.6	5.9	7.5	7.5	10.2	10.0	8.2	9.9	13.6	12.0	10.5	13.8	11.6	26.5
30-Mar	21.3	20.2	17.2	14.8	10.7	6.9	6.4	7.9	9.9	13.5	23.0	18.7	11.9	14.5	28.5	16.3	9.5	12.5	16.6	17.5	11.3	9.4	12.0	14.0	14.4	28.5
31-Mar	9.3	5.9	4.5	3.7	3.7	4.0	5.0	6.2	12.1	22.2	17.1	9.7	11.5	8.9	12.0	11.3	8.0	7.2	4.4	3.0	2.8	2.9	3.2	3.5	7.6	22.2
	6.8	6.5	6.0	5.7	5.7	6.1	5.8	6.0	8.3	8.7	9.3	7.6	7.0	6.6	6.7	6.0	5.1	4.9	4.7	5.0	5.4	5.7	5.9	6.2	Diurnal Average	
	21.3	20.2	18.5	17.7	17.3	22.4	22.3	32.7	52.3	35.2	30.9	18.7	22.1	23.9	28.5	21.1	15.2	12.5	16.6	21.1	13.7	13.5	13.8	16.3	Diurnal Maximum	

C - Calibration

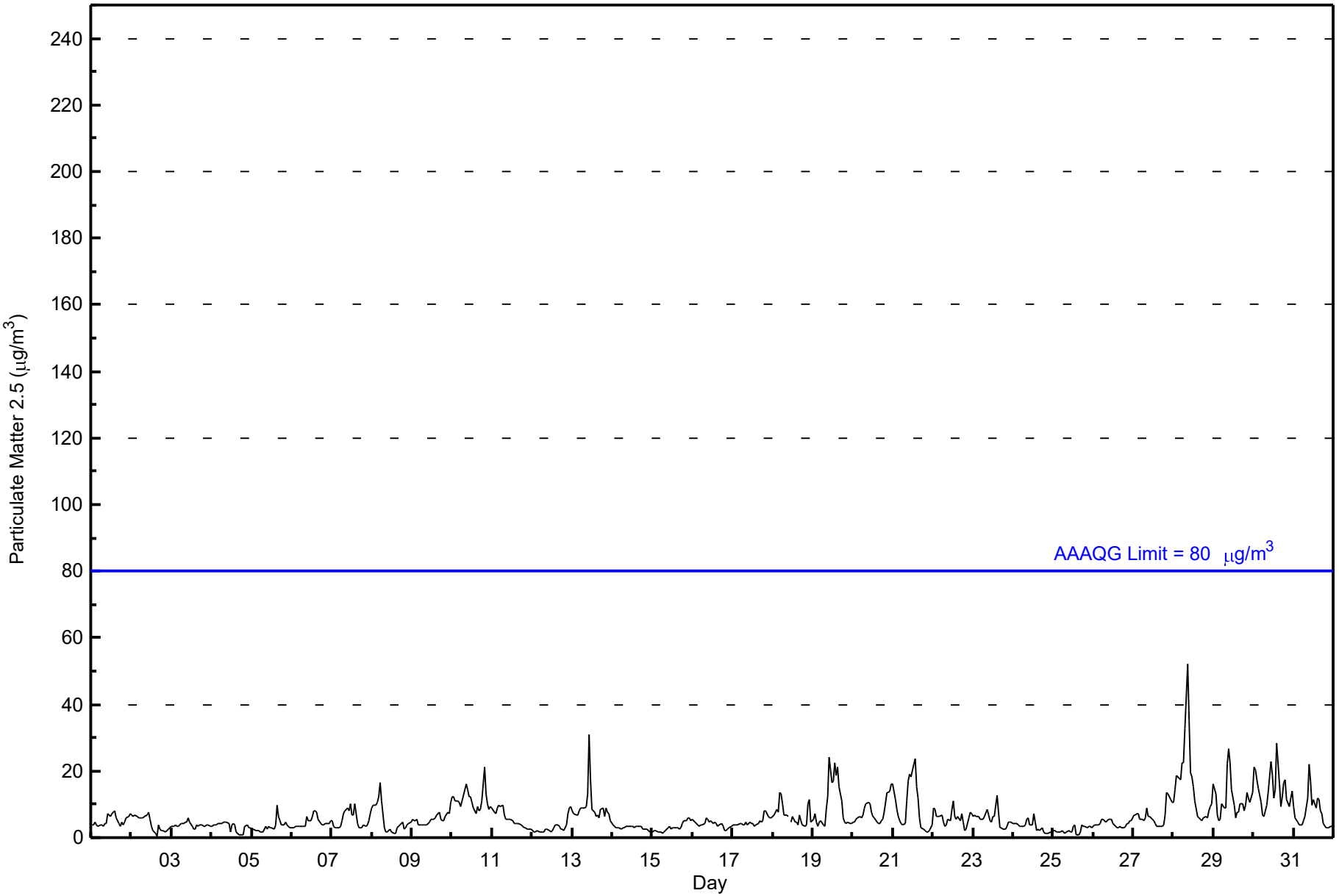
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Fort McKay South - March 2025



Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	430	57.87	57.87
6 - 15	270	36.34	94.21
16 - 25	37	4.98	99.19
26 - 80	6	0.81	100.00
> 81.0	0	0.00	100.00

Total Number of Valid Hours: 743

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

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

Fort McKay South - March 2025

Concentration Ranges ($\mu g/m^3$)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	81	99	14	1	4	6	12	53	32	15	20	22	12	15	19	22	427
6 - 15	66	45	5	2	1	2	9	51	19	4	5	9	8	5	14	21	266
16 - 25	4	6	2	0	0	0	2	12	0	0	1	4	1	1	3	1	37
26 - 80	2	4	0	0	0	0	0	0	0	0	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	153	154	21	3	5	8	23	116	51	19	26	35	21	21	36	44	736

Total Number of Valid Hours: 736

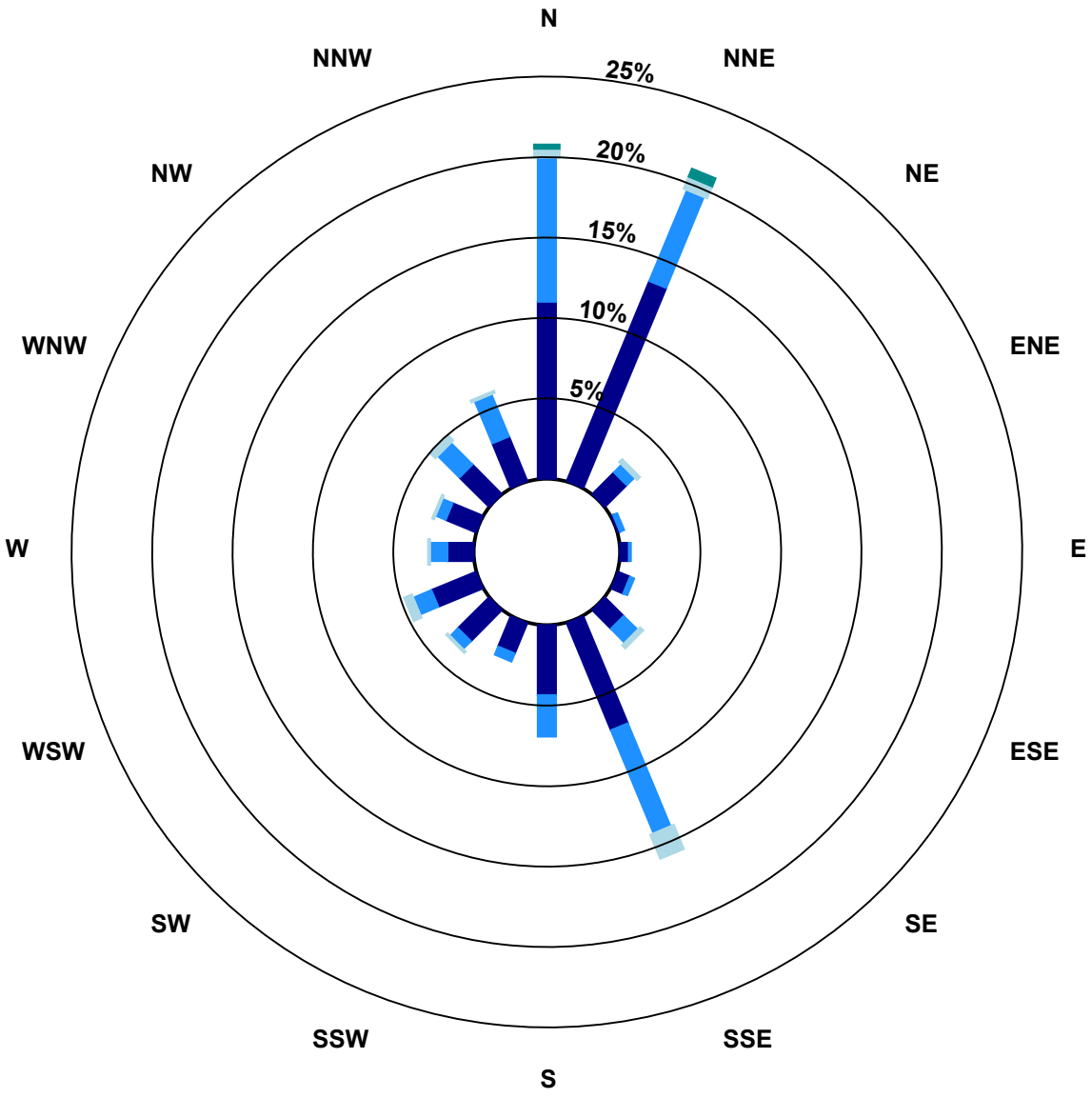
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

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

Fort McKay South



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

0 - 5

6 - 15

16 - 25

26 - 80

> 81.0

Total Number of Valid Hours: 736

Maximum Value: 11.0 C on Mar 25 15:00

Maximum Daily Average: 1.4 C on Mar 25

Minimum Value: -27.8 C on Mar 13 07:00

Minimum Daily Average: -21.0 C on Mar 9

Maximum Diurnal Average: -2.5 C at hour 16

Minimum Diurnal Average: -14.0 C at hour 7

Monthly Average: -8.46 C

Percentiles: P_1 = -23.6 P_{10} = -19.2 Q_1 = -14.3 Median = -8.0 Q_3 = -2.8 P_{90} = 1.4 P_{99} = 7.7

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

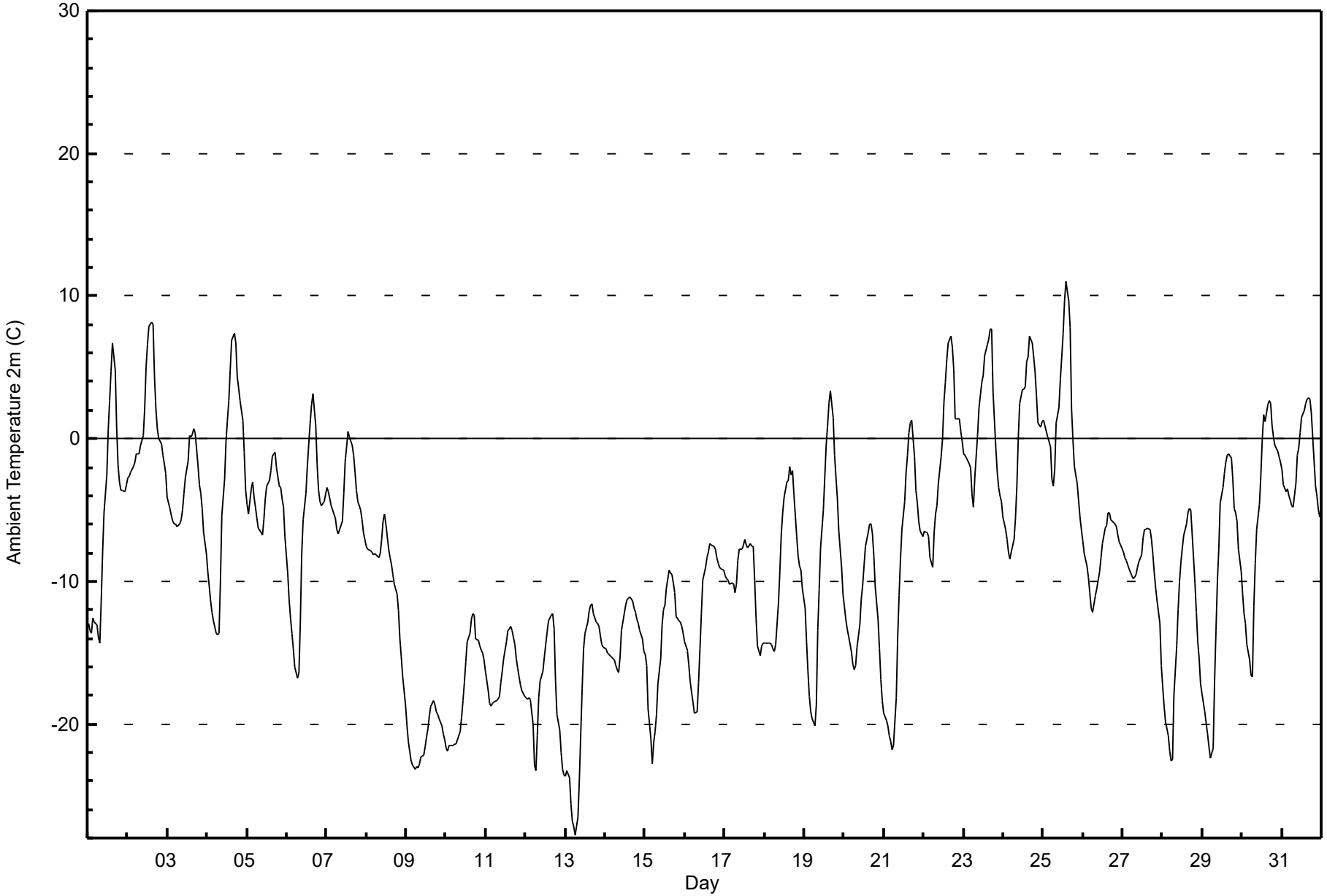
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-12.9	-13.5	-13.6	-12.6	-12.9	-13.0	-13.9	-14.4	-11.4	-7.9	-5.2	-2.5	0.6	2.7	4.7	6.7	4.8	0.8	-1.8	-3.0	-3.7	-3.6	-3.7	-3.2	-5.5	6.7
2-Mar	-2.7	-2.6	-2.3	-1.9	-1.6	-1.1	-1.0	-1.0	-0.4	0.2	2.0	5.0	6.6	7.9	8.2	8.0	4.3	2.1	0.7	0.1	-0.3	-1.2	-1.8	-2.4	1.0	8.2
3-Mar	-4.1	-4.9	-5.3	-5.8	-6.0	-6.0	-6.1	-6.0	-5.7	-5.0	-3.8	-2.8	-1.6	0.2	0.2	0.3	0.7	0.4	-1.9	-3.3	-3.9	-4.9	-6.6	-8.0	-3.7	0.7
4-Mar	-9.3	-10.3	-11.4	-12.2	-12.8	-13.7	-13.8	-13.7	-10.1	-5.4	-2.8	-0.2	1.3	2.7	4.9	6.9	7.4	6.7	4.4	3.6	2.6	1.2	-1.0	-3.7	-3.3	7.4
5-Mar	-4.6	-5.2	-3.5	-3.0	-4.1	-4.8	-5.6	-6.2	-6.6	-6.8	-5.7	-4.2	-3.3	-2.9	-2.2	-1.2	-1.0	-1.0	-2.1	-3.3	-3.4	-4.2	-4.8	-6.9	-4.0	-1.0
6-Mar	-9.4	-11.2	-12.6	-13.6	-14.7	-16.0	-16.8	-16.4	-12.8	-8.1	-5.6	-3.9	-2.0	-0.3	1.1	2.4	3.2	0.9	-1.9	-3.6	-4.4	-4.7	-4.4	-3.9	-6.6	3.2
7-Mar	-3.4	-3.8	-4.2	-4.7	-5.3	-5.6	-6.3	-6.6	-6.4	-5.7	-3.8	-1.6	-0.6	0.5	0.1	-0.4	-1.2	-2.4	-3.6	-4.4	-5.0	-5.7	-6.6	-7.1	-3.9	0.5
8-Mar	-7.5	-7.8	-7.9	-7.9	-8.1	-8.1	-8.2	-8.3	-8.0	-7.0	-5.8	-5.3	-6.0	-7.7	-8.4	-8.8	-9.5	-10.2	-10.9	-12.0	-14.0	-15.3	-16.7	-18.7	-9.5	-5.3
9-Mar	-20.1	-21.2	-22.0	-22.6	-22.9	-23.2	-23.0	-23.1	-22.8	-22.3	-22.2	-21.6	-20.9	-20.4	-19.5	-18.7	-18.4	-18.6	-19.2	-19.3	-19.6	-20.1	-20.7	-21.1	-21.0	-18.4
10-Mar	-21.7	-21.9	-21.6	-21.5	-21.5	-21.4	-21.4	-21.1	-20.5	-19.6	-18.4	-17.1	-15.6	-14.3	-13.7	-12.7	-12.3	-12.4	-14.1	-14.2	-14.6	-14.8	-15.1	-15.5	-17.4	-12.3
11-Mar	-16.3	-17.6	-18.6	-18.8	-18.6	-18.4	-18.4	-18.2	-18.1	-17.1	-16.3	-15.5	-14.3	-13.5	-13.3	-13.2	-13.5	-14.4	-15.5	-16.1	-16.7	-17.3	-17.7	-18.0	-16.5	-13.2
12-Mar	-18.2	-18.3	-18.2	-18.3	-20.1	-22.9	-23.3	-20.9	-18.2	-17.0	-16.3	-15.4	-14.5	-13.5	-12.7	-12.4	-12.3	-13.3	-17.0	-19.3	-20.4	-22.0	-23.2	-23.6	-18.0	-12.3
13-Mar	-23.7	-23.3	-23.8	-25.7	-26.8	-27.2	-27.8	-26.5	-23.8	-20.6	-17.5	-14.7	-13.6	-12.8	-12.1	-11.7	-11.6	-12.3	-12.8	-13.0	-13.1	-13.8	-14.4	-14.6	-18.2	-11.6
14-Mar	-14.8	-15.0	-15.1	-15.2	-15.3	-15.5	-15.9	-16.2	-16.4	-15.3	-13.5	-12.3	-11.7	-11.3	-11.2	-11.1	-11.4	-11.8	-12.1	-12.7	-13.0	-13.5	-14.0	-14.9	-13.7	-11.1
15-Mar	-15.2	-15.9	-18.9	-21.0	-22.8	-21.3	-20.6	-19.4	-17.2	-15.4	-13.0	-12.0	-11.7	-10.5	-9.2	-9.4	-9.6	-10.2	-10.8	-12.4	-12.7	-12.8	-13.2	-13.6	-14.5	-9.2
16-Mar	-14.2	-14.9	-15.8	-17.0	-17.8	-18.4	-19.3	-19.2	-17.1	-14.7	-12.3	-9.9	-9.0	-8.3	-7.9	-7.4	-7.5	-7.5	-7.7	-8.3	-8.7	-9.0	-9.1	-9.2	-12.1	-7.4
17-Mar	-9.6	-9.8	-9.9	-10.2	-10.1	-10.2	-10.8	-10.2	-8.5	-7.8	-7.8	-7.5	-7.0	-7.4	-7.6	-7.4	-7.6	-7.5	-9.9	-12.5	-14.6	-15.3	-14.5	-14.3	-9.9	-7.0
18-Mar	-14.4	-14.4	-14.3	-14.3	-14.5	-14.8	-14.9	-14.4	-11.5	-9.2	-6.7	-5.2	-4.2	-3.0	-2.9	-1.9	-2.5	-2.3	-3.9	-6.9	-8.2	-8.9	-9.2	-10.5	-8.9	-1.9
19-Mar	-11.9	-14.2	-16.3	-18.0	-19.1	-19.6	-20.2	-18.7	-13.4	-10.6	-7.6	-5.0	-2.8	-0.5	0.9	2.5	3.3	1.5	-1.1	-2.7	-4.3	-6.4	-9.1	-10.8	-8.5	3.3
20-Mar	-11.8	-12.6	-13.4	-13.9	-14.9	-15.8	-16.2	-15.9	-14.6	-13.0	-11.3	-10.3	-8.9	-7.5	-6.6	-6.0	-6.0	-6.6	-8.2	-10.4	-12.7	-14.8	-16.9	-18.4	-11.9	-6.0
21-Mar	-19.2	-19.7	-20.1	-20.8	-21.2	-21.8	-21.5	-18.2	-14.0	-11.0	-8.4	-6.4	-4.4	-2.4	-1.2	0.5	1.1	1.3	-1.3	-3.6	-4.5	-5.8	-6.5	-6.8	-9.8	1.3
22-Mar	-6.4	-6.6	-6.6	-6.9	-8.3	-9.0	-6.6	-5.3	-4.7	-3.1	-1.2	0.1	2.5	3.9	5.5	6.7	7.2	6.4	4.9	1.4	1.4	1.4	0.6	-0.2	-1.0	7.2
23-Mar	-1.1	-1.1	-1.4	-1.7	-2.1	-3.9	-4.8	-2.8	0.3	2.2	3.1	4.0	4.5	5.8	6.6	7.0	7.7	7.7	3.3	-0.7	-2.3	-3.4	-4.0	-4.4	0.8	7.7
24-Mar	-5.5	-6.4	-7.1	-8.0	-8.4	-8.0	-7.0	-5.6	-3.3	0.1	2.4	3.5	3.5	3.7	5.4	5.7	7.2	6.7	5.7	4.7	2.9	1.1	0.8	1.2	-0.2	7.2
25-Mar	1.3	0.9	0.5	0.1	-0.5	-2.8	-3.3	-2.1	1.1	2.2	4.1	5.7	7.4	9.7	11.0	9.6	7.7	2.1	-0.1	-1.9	-3.1	-4.3	-5.5	-6.4	1.4	11.0
26-Mar	-7.2	-8.0	-8.9	-9.7	-10.8	-11.9	-12.2	-11.0	-10.5	-9.9	-9.3	-8.3	-7.3	-6.3	-6.1	-5.2	-5.2	-5.7	-5.9	-6.0	-6.2	-6.8	-7.3	-7.4	-8.0	-5.2
27-Mar	-8.0	-8.3	-8.6	-8.8	-9.2	-9.6	-9.8	-9.7	-9.5	-9.1	-8.6	-8.1	-7.0	-6.4	-6.4	-6.3	-6.4	-7.1	-8.2	-9.4	-10.5	-11.4	-13.0	-15.9	-9.0	-6.3
28-Mar	-17.4	-18.7	-19.9	-20.9	-21.9	-22.6	-22.5	-18.0	-14.6	-12.0	-10.0	-8.6	-7.6	-6.8	-6.0	-5.2	-4.9	-5.0	-6.6	-10.1	-12.1	-14.2	-15.4	-17.2	-13.3	-4.9
29-Mar	-17.9	-19.2	-19.9	-20.7	-21.6	-22.4	-21.7	-17.0	-13.4	-10.0	-7.7	-4.5	-3.4	-2.4	-1.7	-1.1	-1.1	-1.4	-2.8	-4.9	-5.2	-5.8	-7.7	-9.3	-10.1	-1.1
30-Mar	-10.9	-12.2	-13.0	-14.4	-15.5	-16.6	-16.7	-11.8	-8.7	-6.4	-4.6	-2.6	-0.1	1.6	1.2	2.4	2.7	2.4	0.9	0.1	-0.4	-0.9	-1.3	-1.6	-5.3	2.7
31-Mar	-2.2	-3.2	-3.7	-3.5	-4.0	-4.3	-4.7	-4.8	-3.2	-1.1	-0.7	0.4	1.5	2.0	2.4	2.7	2.9	2.8	1.8	-1.7	-3.3	-4.0	-5.0	-5.5	-1.6	2.9
	-11.0	-11.6	-12.2	-12.7	-13.3	-13.9	-14.0	-13.0	-11.1	-9.2	-7.6	-6.0	-4.8	-3.8	-3.1	-2.5	-2.6	-3.5	-5.1	-6.6	-7.6	-8.4	-9.2	-10.1	Diurnal Average	
	1.3	0.9	0.5	0.1	-0.5	-1.1	-1.0	-1.0	1.1	2.2	4.1	5.7	7.4	9.7	11.0	9.6	7.7	7.7	5.7	4.7	2.9	1.4	0.8	1.2	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Fort McKay South - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	62	8.33	8.33
-20 - 0	570	76.61	84.95
0 - 10	111	14.92	99.87
10 - 20	1	0.13	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Fort McKay South - March 2025

Maximum Value: 94.1 % on Mar 1 22:00

Maximum Daily Average: 80.4 % on Mar 2

Minimum Value: 26.0 % on Mar 25 15:00

Minimum Daily Average: 53.0 % on Mar 30

Maximum Diurnal Average: 80.0 % at hour 7

Minimum Diurnal Average: 50.5 % at hour 16

Monthly Average: 67.17 %

Percentiles: P_1 = 32.6 P_{10} = 45.8 Q_1 = 56.2 Median = 69.8 Q_3 = 78.8 P_{90} = 84.5 P_{99} = 92.5

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

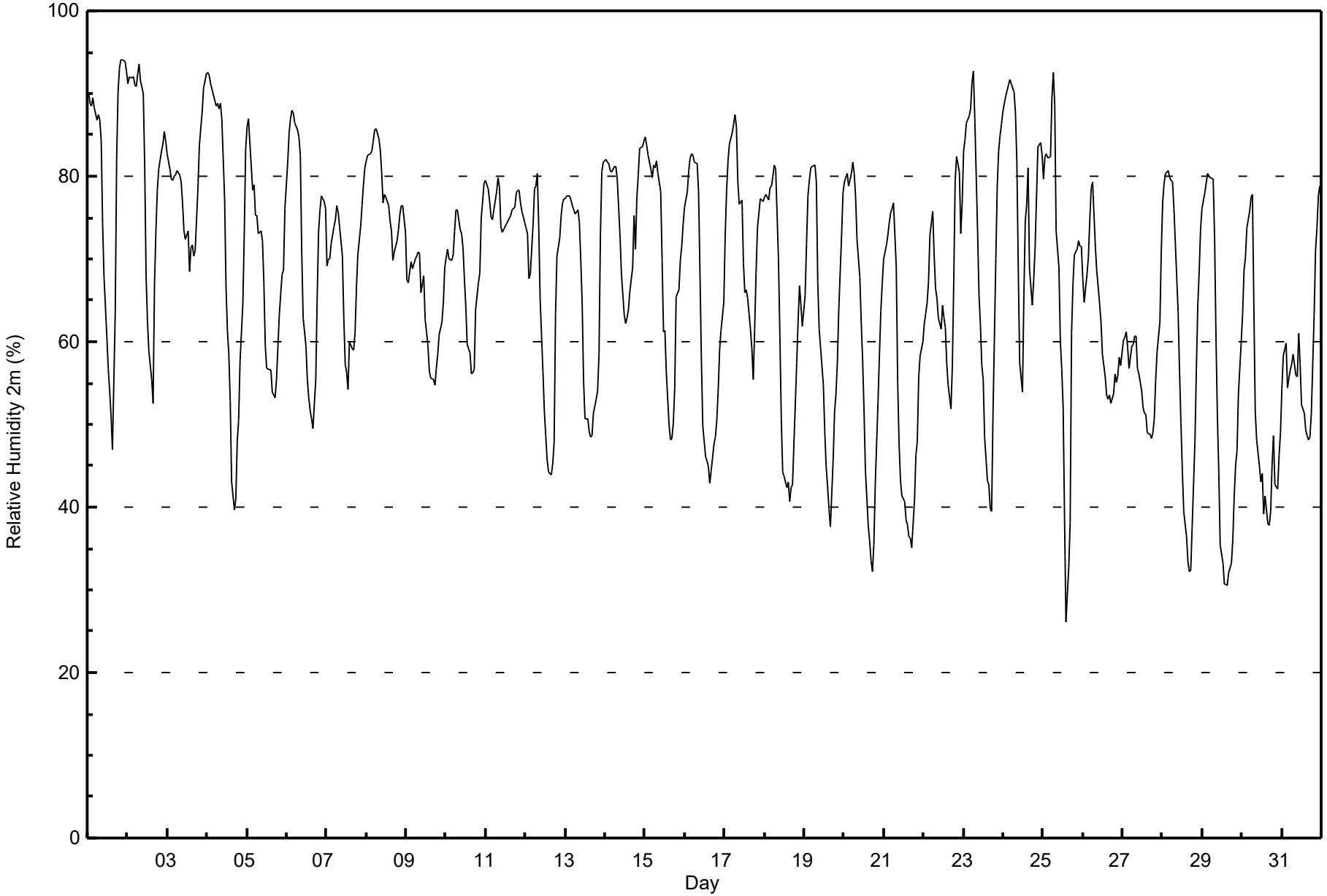
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	90.1	88.8	88.5	89.5	88.3	86.9	87.5	86.9	84.3	74.3	67.8	60.7	56.8	54.1	51.3	47.0	63.5	82.1	90.2	93.1	94.0	94.1	93.9	92.7	79.4	94.1
2-Mar	91.2	92.0	91.9	92.0	91.1	90.8	92.3	93.6	91.5	90.0	81.3	67.9	62.4	58.8	55.4	52.5	67.0	73.4	78.3	80.9	83.0	83.8	85.4	84.2	80.4	93.6
3-Mar	82.7	80.9	79.7	79.4	80.0	80.2	80.7	80.2	79.2	76.7	73.4	72.5	73.4	68.5	71.4	71.7	70.4	71.0	78.7	83.8	85.7	87.7	90.7	92.5	78.8	92.5
4-Mar	92.6	92.3	91.2	90.5	89.8	88.5	88.8	88.1	88.8	87.0	77.3	66.6	61.3	58.4	52.8	43.1	39.7	40.9	48.0	50.4	57.6	64.6	72.9	83.3	71.4	92.6
5-Mar	85.9	86.9	81.2	78.2	78.9	75.3	75.2	73.1	73.4	72.2	67.2	59.5	56.7	56.6	56.6	53.9	53.6	53.2	55.4	63.3	65.8	68.1	68.6	76.0	68.1	86.9
6-Mar	81.7	85.2	87.0	88.0	87.6	86.5	85.6	84.7	82.5	70.9	62.8	59.5	55.5	53.2	51.7	50.6	49.5	55.4	65.3	73.2	75.9	77.7	76.9	76.0	71.8	88.0
7-Mar	69.2	70.0	70.0	71.8	73.8	74.7	76.5	75.7	73.9	70.3	62.8	57.3	56.2	54.3	60.0	59.1	59.0	61.0	66.4	70.5	73.9	76.5	79.0	80.9	68.4	80.9
8-Mar	81.9	82.6	82.7	83.1	84.2	85.5	85.7	84.5	83.3	80.4	76.8	77.8	77.5	76.4	74.5	73.4	69.8	70.8	72.1	73.5	75.5	76.4	76.5	73.2	78.3	85.7
9-Mar	67.5	67.2	68.5	69.7	68.8	70.0	70.3	70.9	70.7	66.0	68.0	62.6	61.3	59.5	56.5	55.6	55.3	54.8	56.8	58.6	60.8	62.4	64.8	68.9	64.0	70.9
10-Mar	70.2	71.2	69.9	69.8	70.5	73.3	75.9	76.0	73.5	73.0	71.3	67.7	64.2	59.7	58.6	56.1	56.2	56.7	63.9	67.1	68.4	74.9	77.0	79.1	68.5	79.1
11-Mar	79.5	78.5	77.0	75.2	74.8	76.0	78.2	79.9	78.6	73.8	73.2	73.6	74.2	74.6	75.0	75.2	75.9	76.2	77.9	78.3	78.3	76.7	75.7	74.3	76.3	79.9
12-Mar	73.8	73.0	67.6	68.1	74.2	78.6	78.9	80.4	74.2	65.2	56.5	51.8	48.6	45.8	44.3	43.9	45.3	47.8	63.4	70.4	72.6	75.3	76.7	77.2	64.7	80.4
13-Mar	77.3	77.6	77.7	77.1	76.4	76.0	75.5	76.0	74.5	69.8	64.6	55.3	50.7	50.6	49.2	48.6	48.7	51.3	53.1	54.1	58.5	72.8	80.5	81.7	65.7	81.7
14-Mar	82.0	81.7	81.5	80.7	80.4	81.1	81.2	79.7	76.2	72.7	68.1	63.2	62.2	62.9	63.9	66.1	68.9	75.3	71.2	77.5	80.2	83.5	83.5	84.3	75.3	84.3
15-Mar	84.7	83.7	82.5	80.9	79.8	81.3	81.1	81.8	80.4	78.2	69.8	61.2	61.3	56.3	49.9	48.2	48.3	50.1	54.3	65.5	66.3	69.8	71.5	74.3	69.2	84.7
16-Mar	76.3	78.1	80.7	82.2	82.7	82.5	81.8	81.5	78.1	68.4	58.0	49.8	46.1	45.6	45.0	42.9	44.4	47.6	48.5	50.6	54.0	59.0	61.4	64.8	62.9	82.7
17-Mar	72.9	78.4	81.8	84.0	85.3	86.2	87.4	85.9	79.3	76.6	77.1	69.4	66.0	66.3	65.2	61.4	59.2	55.4	61.5	68.3	73.7	77.3	77.2	76.9	73.9	87.4
18-Mar	77.4	77.8	77.2	78.6	78.8	79.9	81.4	80.9	69.9	60.7	50.7	44.3	43.7	42.4	43.1	40.6	42.5	42.8	47.7	57.5	62.6	66.8	64.5	61.9	61.4	81.4
19-Mar	65.5	71.8	77.6	79.4	81.1	81.1	81.3	79.3	67.3	61.6	59.4	54.8	49.2	44.9	42.5	39.8	37.7	45.8	51.5	53.7	57.7	63.8	72.9	78.0	62.4	81.3
20-Mar	79.4	79.8	80.4	78.8	80.3	81.7	80.3	77.5	72.4	67.8	62.4	57.8	51.7	44.5	37.8	35.9	33.6	32.1	35.3	42.8	52.8	58.5	63.8	67.2	60.6	81.7
21-Mar	69.9	71.6	72.9	74.3	75.6	76.1	76.9	68.9	55.1	47.6	43.3	41.3	40.6	38.6	37.9	36.4	36.2	35.1	40.8	46.2	47.9	55.8	58.3	59.9	54.5	76.9
22-Mar	62.2	63.4	64.8	67.3	72.9	75.8	70.6	66.4	65.3	62.9	61.6	64.3	62.9	61.8	57.3	54.7	51.8	57.1	67.4	79.5	82.3	80.5	73.1	76.7	66.8	82.3
23-Mar	83.0	84.4	86.5	87.3	88.2	91.3	92.7	87.0	73.2	65.6	62.1	57.1	55.5	48.5	43.1	42.7	39.8	39.5	51.5	70.0	78.8	83.0	84.9	86.3	70.1	92.7
24-Mar	87.9	89.7	90.4	91.1	91.6	91.1	90.1	87.7	81.7	68.8	57.4	53.8	65.6	74.6	76.6	81.0	68.8	64.5	67.5	71.4	77.4	83.6	84.0	82.6	78.3	91.6
25-Mar	79.7	82.4	82.8	82.1	82.4	89.5	92.5	88.7	73.5	69.0	60.1	56.7	52.0	38.6	26.0	32.8	38.2	61.1	67.0	70.5	71.2	72.2	71.5	71.6	67.2	92.5
26-Mar	67.6	64.8	68.1	70.2	74.8	78.4	79.3	71.3	68.5	66.6	64.6	62.3	58.5	55.8	53.5	53.1	53.5	52.6	53.7	56.0	55.0	56.0	58.2	57.2	62.5	79.3
27-Mar	60.2	60.4	61.2	59.3	56.8	59.5	59.7	60.7	60.7	56.7	56.1	54.1	52.0	51.3	51.3	48.9	48.9	48.4	49.0	50.8	55.3	58.8	62.3	71.1	56.4	71.1
28-Mar	76.9	79.1	80.4	80.6	79.9	79.4	79.3	76.2	67.7	63.6	56.4	50.2	44.5	39.5	36.5	33.4	32.2	32.4	37.6	48.0	56.5	64.2	68.4	73.5	59.8	80.6
29-Mar	76.2	77.9	79.1	80.3	80.0	79.8	79.7	72.8	60.5	51.0	44.3	35.5	33.2	30.7	30.7	30.5	32.1	33.2	36.1	41.4	45.0	46.7	53.8	60.0	53.8	80.3
30-Mar	63.3	68.6	70.2	73.8	75.7	77.4	77.8	64.4	51.5	48.2	44.9	43.1	44.0	39.1	41.3	38.0	37.8	39.6	45.1	48.6	42.7	42.3	46.3	49.0	53.0	77.8
31-Mar	54.4	58.3	59.8	54.4	55.6	56.6	57.2	58.5	55.9	55.7	61.1	57.2	52.4	51.3	49.2	48.6	48.2	48.4	51.4	63.3	71.0	73.8	77.7	78.9	58.3	78.9
	76.2	77.4	77.8	78.0	78.7	79.7	80.0	78.0	73.1	68.1	63.2	58.3	56.1	53.7	51.9	50.5	50.8	53.4	58.3	63.8	67.1	70.5	72.6	74.6	Diurnal Average	
	92.6	92.3	91.9	92.0	91.6	91.3	92.7	93.6	91.5	90.0	81.3	77.8	77.5	76.4	76.6	81.0	75.9	82.1	90.2	93.1	94.0	94.1	93.9	92.7	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Fort McKay South - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Fort McKay South - March 2025

Maximum Speed: 20 km/h on Mar 8 15:00

Maximum Daily Speed Average: 13.3 km/h on Mar 27

Minimum Speed Value: 0 km/h on Mar 15 07:00

Minimum Daily Speed Average: 0.3 km/h on Mar 15

Maximum Diurnal Speed Average: 6.2 km/h at hour 22

Minimum Diurnal Speed Average: 1.8 km/h at hour 7

Monthly Average Velocity: 2.9 km/h 23.4 deg

Percentiles: $P_1 = 1$ $P_{10} = 2$ $Q_1 = 3$ Median = 7 $Q_3 = 11$ $P_{90} = 14$ $P_{99} = 18$

Hours in Service:	744
Hours of Data:	737
Hours of Missing Data:	7
Percent Operational Time:	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-Mar	S4	S4	S4	S3	S3	SSE5	S5	UO	SSE7	SSE10	SSE11	SSE9	SSE9	SSE10	SSE8	SSE5	S3	SW2	W2	W2	SW3	UO	UO	S3	SSE4.8	SSE11
2-Mar	S2	S2	UO	SSW2	S4	SW1	NW1	N4	N4	N1	NNW2	WSW3	SSW6	SW1	N3	NW8	N16	NNE13	NNE12	NNE9	NNE9	NNE11	NNE9	NNE12	N3.9	N16
3-Mar	NNE13	NNE11	NNE9	NNE7	NNE5	NNE3	NNE3	SSE1	SSE5	SE5	S4	SW5	SSW8	SSW8	S10	SSE11	SSE9	SSE9	S4	SSW2	SW2	UO	SW2	WSW1	SE1.7	NNE13
4-Mar	WSW3	SW2	WSW2	SW1	SSW1	SSW5	S4	SSW3	SSW2	SE2	SSE5	S10	S11	SSE9	S7	SW7	SW9	SW7	SW6	WSW7	N13	N9	N4	NW3	SSW2.7	N13
5-Mar	WNW1	N3	N9	N13	N14	N16	N14	NNE14	NNE9	NE6	NNE6	NNE4	SSE7	SSE10	SSE10	SSE13	SSE11	SE7	SE2	N4	N6	N3	N5	NNW2	NE3.5	N16
6-Mar	NW1	NW3	WNW3	WSW3	WSW2	SSW2	WSW2	WSW1	SSE2	SSE5	S13	S13	S12	SSE12	SSE14	SSE13	SSE10	SW4	SSW5	WNW1	W1	WNW3	NNW3	NNE5	S3.7	SSE14
7-Mar	NNE7	N6	NNE5	NNE4	N5	NNE6	N8	NNW4	NNE5	NE5	ENE3	SSW6	S3	SSE5	NNE16	NNE15	NNE15	N14	N15	N12	N10	N10	N10	N9	NNE7.0	NNE16
8-Mar	N8	N6	N6	N8	N8	N7	NNW6	NNW8	N6	NNE4	NE4	NNE11	N15	NNE18	N20	NNE17	NNE15	NNE11	NE9	NE12	NNE13	NNE14	NNE16	NNE18	NNE10.6	N20
9-Mar	NNE16	NNE14	NNE11	NNE10	NE9	NE10	NE8	NE9	NNE11	NNE11	NNE11	NNE11	NNE11	NNE12	NNE10	NNE11	NNE11	NNE10	NNE8	NNE7	NNE8	NNE7	N4	NNW3	NNE9.6	NNE16
10-Mar	NNW5	NW4	NW3	NNW4	NNW5	N3	N1	NW1	NNE1	NE3	SE3	SSE7	SSE6	SSE6	SSE7	SSE5	SE3	SE3	N3	NNE7	NNE7	N8	NNE8	N7	NE1.5	NNE8
11-Mar	N8	N9	N8	N8	N8	N7	N7	N9	N11	NNE11	NNE11	NNE14	N14	NNE17	N17	N18	N18	N17	N17	N16	N16	N16	N14	N13	N12.5	N18
12-Mar	N13	N11	N10	N7	NNW2	WSW3	WSW4	WSW3	W2	NNE3	NE6	NE6	NE5	NE6	NNE5	NNE7	NNE8	NNE6	N5	NNW4	NW3	NW3	SW1	NW2	N4.0	N13
13-Mar	W2	NW1	NW2	WNW1	W1	WNW1	W2	NNW3	NNE3	NNE4	NNE9	NNE10	NNE13	N14	N16	N16	N16	N16	N17	N16	N15	N13	N14	N12	N8.7	N17
14-Mar	N13	N15	N16	N15	N13	N13	N13	NNE12	NNE14	NNE14	NNE18	N19	NNE18	N19	N18	NNE17	NNE15	N13	N11	NNE8	N8	NNW6	NNW6	NNW5	N13.3	N19
15-Mar	NW4	NW6	NW6	WNW4	W2	NNW1	NE0	NW0	ESE1	NNE3	NE4	NE7	ESE2	SSE7	S9	S10	S9	SSE7	SSE5	NE4	NNE6	N7	N7	NNW6	NNE0.3	S10
16-Mar	NNW6	NNW5	NW2	W2	WSW2	SSW2	SW2	S4	SSE6	SE7	SSE6	SSE10	SSE14	SSE12	SSE12	SSE12	SSE12	SSE9	ESE4	SE4	SE4	SSE7	SSE8	SE4	SSE5.1	SSE14
17-Mar	ESE2	S3	SSE3	S2	S5	UO	NNW3	SSW0	E1	NNW6	NNE11	NNE14	N14	NNE14	NNE13	NNE12	NNE10	NNE8	N6	N6	NNW2	WSW3	WSW2	SW2	N4.4	NNE14
18-Mar	NW1	S1	NNW3	W3	N4	N2	SW1	SSE0	SE3	S6	SSW6	SSW9	S10	SW7	S9	SSE7	SSE10	SSE7	S4	WSW2	NNW4	NNW6	NNW8	NNW8	SSW1.8	S10
19-Mar	NNW8	NNW5	NW3	SW2	SW2	W1	S1	S0	SE3	SE5	SE9	SSE10	SSE9	SSE9	SSE9	SE6	SSE4	N12	N12	N15	NNE14	N16	N17	N17	NNE2.9	N17
20-Mar	N14	N13	N10	N11	N8	N9	N9	NNE9	NNE10	NNE11	NNE12	N14	N12	NNE13	N15	N15	N13	N12	N9	N7	NNW7	NNW5	WNW2	WSW2	N9.9	N15
21-Mar	SW1	WNW2	W1	NW2	WNW1	W2	WNW1	N1	SSE3	SSE9	SSE9	SSE8	SSE10	SSE12	SSE13	S14	SSE15	SSE11	SSE5	SE5	SE4	E3	WSW1	SW3	SSE4.7	SSE15
22-Mar	S4	SSW1	SW1	S4	S6	S5	SSE6	SSE13	SSE14	SSE11	SE11	SSE11	SSE13	SSE14	SSE12	SSE14	SSE8	N9	NNW8	WNW2	NW3	N10	N6	E1	SSE4.6	SSE14
23-Mar	N0	N2	WSW1	N2	NW1	WNW2	WSW2	UO	SE4	SSE5	SSE10	SSE10	SSE13	SSE13	SSE14	SSE12	SE3	SSE7	SSE3	NNW4	NW4	NW3	WNW2	NNW2	SSE3.1	SSE14
24-Mar	NNW3	NW1	NW2	W1	WNW2	SW1	S1	NNE1	SSE5	S8	S7	SSE7	SSE9	SSE9	SSW8	SSW4	W4	WNW7	NW10	NW9	WNW6	W7	WSW3	WSW8	SW2.4	NW10
25-Mar	WSW7	WSW8	WSW10	WSW7	W4	WNW2	S2	SW1	E3	E3	S8	SSE10	SSE9	WNW3	NW16	NNW18	N16	NNE17	NNE14	NNE14	NNE16	NNE15	NNE15	NNE16	N4.5	NNW18
26-Mar	N19	N13	N12	N11	N7	N5	NNE6	NNE11	NNE13	NNE11	NNE11	NNE10	N10	NNE10	N9	N10	NNE11	NNE10	NNE9	NNE10	NNE9	NNE9	N9	NNE10	NNE10.2	N19
27-Mar	NNE11	NNE11	NNE10	NNE12	NNE13	NNE13	NNE13	NNE13	NNE14	NNE16	NNE16	NNE16	NNE16	NNE18	N20	NNE18	NNE17	NNE16	NNE15	NNE12	N13	NNE9	N6	NNW5	NNE13.3	N20
28-Mar	NNW5	NW4	NW4	W2	WSW3	WSW2	WSW2	N3	NNE4	N7	N8	NNE8	N9	NNE9	N8	NNE6	NNE7	N7	N7	N5	NNW6	NNW3	NW3	NW4	N4.6	NNE9
29-Mar	NNW5	WSW2	W3	WSW2	WSW2	WSW2	W2	NE1	NE4	NNE3	NNE4	SSE2	SSE6	S9	S8	S11	SSE15	SSE15	SSE6	N5	N8	N8	NNW5	NNW5	SSE1.2	SSE15
30-Mar	NW4	NW3	WNW4	WNW3	W1	WSW2	WSW3	NE2	ENE3	NE5	NE5	NNE6	SSE4	SE2	NNE6	SSE7	SSE10	ESE2	N8	N7	N6	NNE7	NNE5	NNE4	NNE1.9	SSE10
31-Mar	N2	ESE2	ESE3	SE6	SSE7	SE7	SSE7	SSE6	SSE6	SE8	SSE14	SSE16	S13	SSE12	SSE13	SSE14	SSE14	SSE13	SSE10	SSE3	SE3	S3	SSE3	S4	SSE7.5	SSE16
	N4.6	N3.9	N3.8	N3.0	N2.3	N2.2	N1.8	NNE2.5	NE2.7	ENE3.1	ENE2.6	E2.5	ESE2.9	E2.9	ENE2.5	ENE2.8	ENE3.2	NE3.9	NNE4.6	N5.5	N6.1	N6.2	N5.2	N4.5	Diurnal Average	
	N19	N15	N16	N15	N14	N16	N14	NNE14	NNE14	NNE16	NNE18	N19	NNE18	N19	N20	NNW18	N18	NNE17	N17	N16	NNE16	N16	N17	NNE18	Diurnal Maximum	

UO - Unstable Operation

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

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7 km/h on Mar 25 15:00

Minimum Value: 1 km/h on Mar 5 00:00

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

Hours in Service:	744
Hours of Data:	737
Hours of Missing Data:	7
Hours of Calibration:	0
Percent Operational Time:	99.1

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

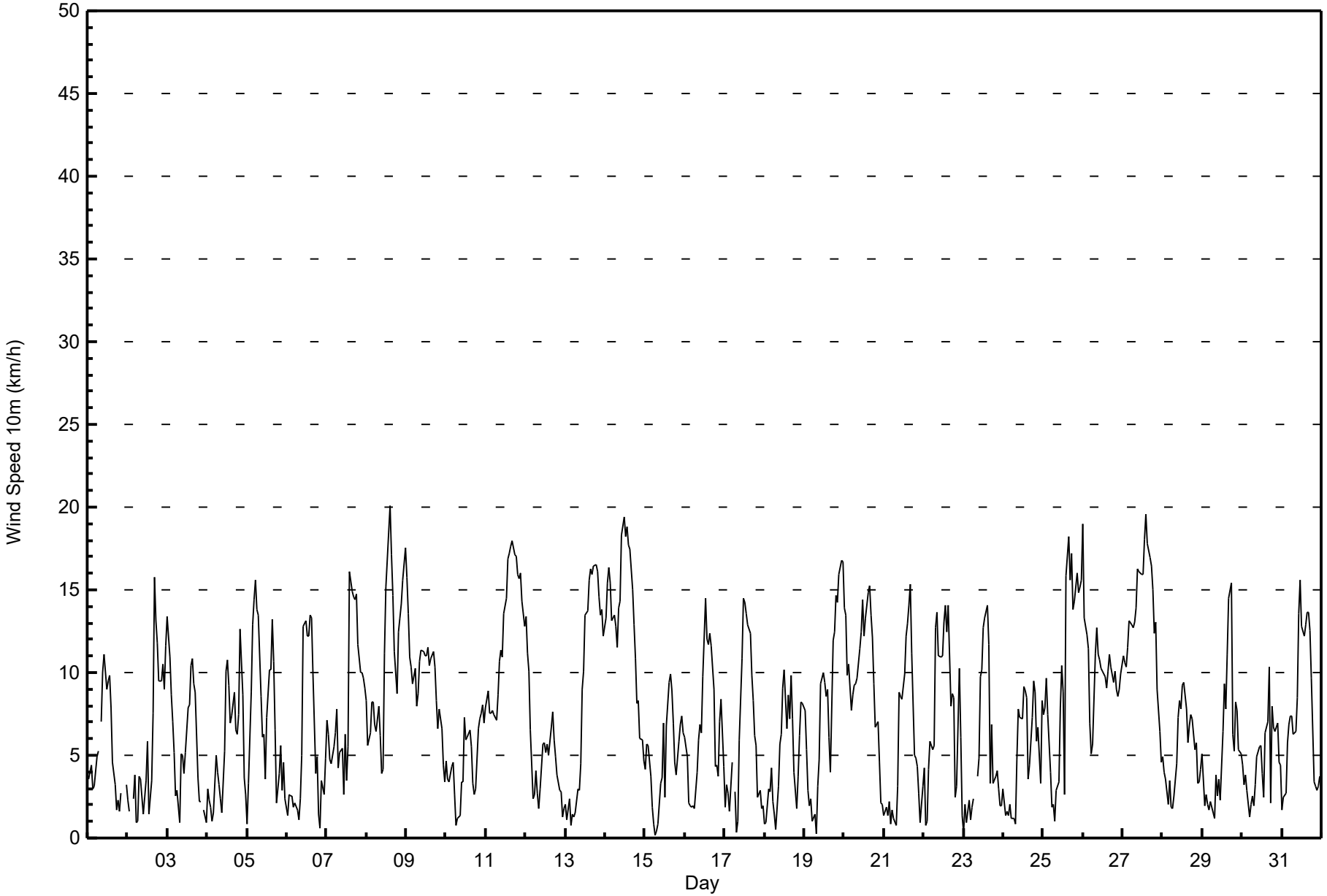
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Fort McKay South - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	303	41.11	41.11
6 - 11	270	36.64	77.75
12 - 19	162	21.98	99.73
20 - 28	2	0.27	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 737

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Fort McKay South - March 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	26	21	11	3	5	8	16	23	29	13	21	29	20	19	30	29	303
6 - 11	62	73	9	0	0	0	7	62	17	7	5	6	1	2	5	14	270
12 - 19	63	60	1	0	0	0	0	31	5	0	0	0	0	0	1	1	162
20 - 28	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	153	154	21	3	5	8	23	116	51	20	26	35	21	21	36	44	737

Total Number of Valid Hours: 737

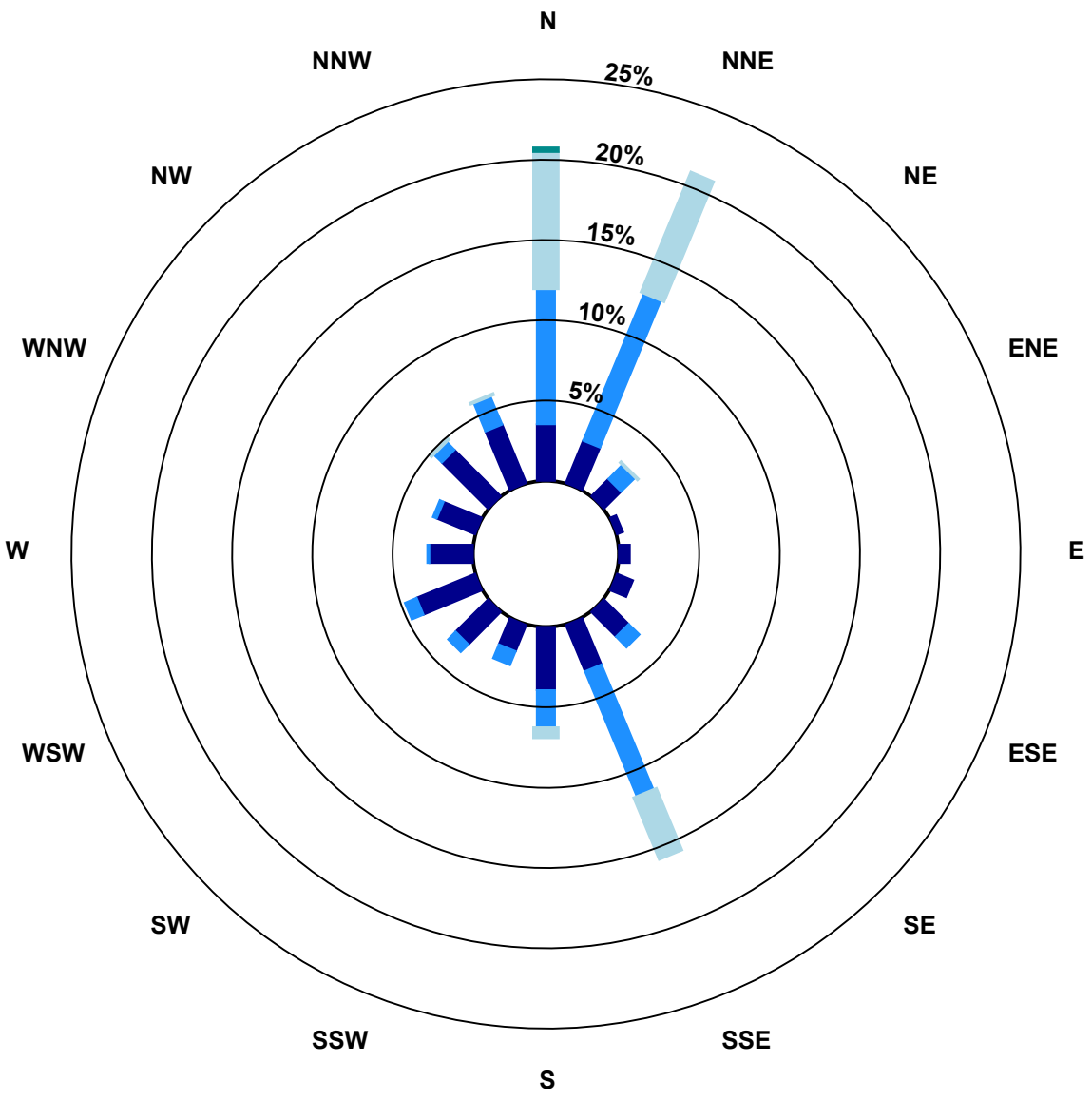
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 10m (WS10) - km/h

Fort McKay South



Classes (km/h)

0 - 5

6 - 11

12 - 19

20 - 28

29 - 38

> 38

Total Number of Valid Hours: 737

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Fort McKay South - March 2025

Direction of Maximum Speed: 6 deg on Mar 8 15:00
Direction of Maximum Daily Speed Average: 18.3 deg on Mar 27

Direction of Minimum Speed: 56 deg on Mar 15 07:00
Direction of Minimum Daily Speed Average: 0.3 deg on Mar 15

Monthly Average Direction: 23.4 deg

Hours in Service:	744
Hours of Data:	737
Hours of Missing Data:	7
Percent Operational Time:	99.1

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	181	181	177	189	177	162	187	UO	162	150	153	147	155	149	150	149	187	231	260	270	236	UO	UO	183	165.6
2-Mar	180	191	UO	200	184	230	315	359	8	5	336	242	209	218	355	324	6	18	21	18	20	21	26	21	8.4
3-Mar	20	18	29	23	27	15	19	151	148	146	182	220	202	199	169	148	150	161	190	206	223	UO	220	243	139.5
4-Mar	240	235	240	229	212	192	179	194	207	124	163	179	171	157	170	221	223	221	230	247	3	0	357	321	206.2
5-Mar	284	359	5	3	8	9	8	15	31	42	25	31	150	164	160	158	150	141	130	356	7	0	7	328	35.9
6-Mar	312	313	298	251	250	205	241	237	163	147	187	179	176	158	157	154	152	218	192	291	272	300	346	15	178.1
7-Mar	15	8	20	32	0	13	4	348	23	38	62	194	175	151	12	15	15	8	6	6	5	4	358	6	11.8
8-Mar	5	4	352	9	5	1	337	343	356	23	35	21	11	12	6	14	17	26	34	35	27	21	19	26	14.3
9-Mar	24	25	28	31	37	34	41	36	32	25	31	26	20	25	18	24	19	27	26	22	26	21	10	330	25.9
10-Mar	334	323	326	347	348	9	355	310	33	42	143	157	158	148	151	162	144	139	9	17	14	11	19	2	37.1
11-Mar	357	351	352	4	11	9	11	11	8	17	19	17	10	12	10	9	9	4	8	10	8	8	6	3	8.3
12-Mar	3	6	3	4	333	255	256	258	274	13	38	54	53	39	22	23	28	31	351	339	320	313	230	313	6.3
13-Mar	275	308	313	289	272	302	263	345	33	21	23	21	14	11	11	11	9	9	7	9	10	10	7	3	7.9
14-Mar	355	4	1	6	6	5	358	12	14	14	12	7	13	11	9	13	14	7	6	14	5	346	343	331	6.7
15-Mar	309	307	307	293	268	346	56	311	102	25	45	41	106	166	187	173	173	159	148	41	12	356	3	342	30.1
16-Mar	339	338	317	276	254	199	215	181	150	144	157	157	155	156	158	154	151	149	114	126	129	156	151	142	153.9
17-Mar	120	171	150	178	182	UO	345	204	92	331	14	13	11	18	15	19	24	16	359	352	341	256	240	227	11.2
18-Mar	320	181	342	281	7	352	235	153	139	190	204	205	174	220	175	166	155	149	172	239	333	339	333	341	199.6
19-Mar	335	328	324	220	236	263	189	173	132	132	142	153	150	152	150	138	150	9	5	10	14	7	5	4	32.6
20-Mar	3	5	6	8	357	352	352	14	13	18	18	6	7	12	9	8	9	4	360	349	338	344	298	255	4.2
21-Mar	217	298	280	314	295	273	303	2	167	148	162	155	154	162	156	171	159	162	158	146	135	84	253	228	162.5
22-Mar	182	194	229	179	176	180	159	156	154	150	145	152	151	152	148	150	163	350	330	297	304	10	5	90	152.2
23-Mar	1	354	258	354	313	299	239	UO	138	162	161	158	148	152	150	151	127	164	164	341	325	325	293	331	157.0
24-Mar	333	306	310	271	287	226	177	14	166	170	171	164	152	153	192	194	263	287	316	325	285	263	256	255	229.1
25-Mar	248	255	256	257	272	287	176	226	80	83	189	161	152	295	307	330	351	22	28	22	17	19	19	12	351.6
26-Mar	10	2	9	11	4	9	23	25	28	20	26	12	5	12	1	9	19	22	14	16	24	20	11	27	14.9
27-Mar	32	30	24	26	26	22	25	19	18	24	19	26	16	13	9	19	15	18	17	13	10	14	8	328	18.3
28-Mar	339	304	309	280	254	258	258	8	29	9	354	18	8	17	8	20	27	11	356	350	346	338	321	325	355.6
29-Mar	331	244	279	252	255	254	260	45	43	23	27	163	154	170	180	170	160	159	154	4	9	357	339	330	161.8
30-Mar	323	314	300	285	260	240	252	35	63	50	39	14	147	142	26	152	161	107	10	3	352	17	29	26	23.5
31-Mar	2	114	105	127	153	143	148	155	149	146	159	159	169	157	148	152	150	153	154	162	130	170	167	184	152.5
	356.1	353.5	351.7	357.4	358.3	2.9	359.1	19.2	54.9	60.2	74.5	87.3	106.6	95.4	65.6	70.2	59.4	34.1	13.3	7.4	6.9	5.3	4.0	357.6	
	Diurnal Average																								

UO - Unstable Operation
All monthly, daily, and diurnal averages have been calculated using vector methods

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 99 deg on Mar 2 06:00

Minimum Value: 7 deg on Mar 22 16:00

Percentiles: P_1 = 9 P_{10} = 13 Q_1 = 15 Median = 18 Q_3 = 32 P_{90} = 56 P_{99} = 89

Hours in Service:	744
Hours of Data:	737
Hours of Missing Data:	7
Hours of Calibration:	0
Percent Operational Time:	99.1

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	14	15	14	19	17	13	12	UO	7	9	11	9	12	9	9	36	28	60	32	30	12	UO	UO	16	60
2-Mar	30	55	UO	43	23	99	77	27	21	77	68	68	29	97	73	21	17	14	18	18	17	16	16	18	99
3-Mar	17	17	21	20	23	28	48	92	9	12	55	36	26	30	16	11	12	10	19	14	47	UO	46	48	92
4-Mar	24	23	29	65	61	15	21	17	33	48	24	12	14	10	20	26	23	20	16	21	26	15	28	13	65
5-Mar	61	31	16	17	17	18	17	16	21	31	33	80	41	20	16	12	19	31	69	23	13	26	13	19	80
6-Mar	27	16	19	16	55	33	20	52	32	49	14	15	16	14	12	9	10	56	13	65	89	41	65	45	89
7-Mar	17	14	24	23	27	12	13	21	16	19	80	47	65	65	15	17	18	16	15	15	20	15	15	14	80
8-Mar	16	18	16	17	15	18	19	15	15	52	36	15	16	15	16	16	16	18	19	17	18	17	15	16	52
9-Mar	16	17	17	17	20	19	20	20	18	22	20	20	24	20	26	20	19	18	17	17	17	17	20	25	26
10-Mar	17	22	22	12	13	22	57	64	52	30	47	19	26	36	24	38	70	55	37	19	14	15	16	13	70
11-Mar	14	13	11	13	12	17	14	13	15	12	15	13	16	16	16	15	16	16	14	15	15	15	16	15	17
12-Mar	15	16	16	17	73	23	9	16	82	45	27	33	43	38	50	33	24	17	14	26	25	29	63	56	82
13-Mar	35	53	43	65	39	39	44	29	19	19	13	14	16	17	15	16	15	15	16	15	15	15	14	16	65
14-Mar	15	16	15	16	15	15	16	15	15	15	17	17	16	18	17	17	15	17	15	14	15	13	15	16	18
15-Mar	17	12	9	19	15	52	71	65	51	22	37	37	67	35	29	22	20	11	18	26	23	15	16	14	71
16-Mar	13	16	29	36	39	18	30	12	14	10	15	14	14	20	14	15	12	12	20	17	21	11	11	16	39
17-Mar	24	28	27	74	16	UO	24	72	78	45	16	15	19	17	18	19	20	17	14	11	35	13	57	60	78
18-Mar	75	84	55	32	17	39	74	93	23	39	43	39	29	55	40	43	11	14	15	33	42	10	11	14	93
19-Mar	11	16	46	40	20	56	81	97	30	26	15	18	15	16	14	29	52	16	15	15	15	14	17	16	97
20-Mar	15	14	14	15	14	12	13	12	15	14	17	19	18	22	16	16	16	15	14	13	10	12	43	32	43
21-Mar	38	38	39	37	31	22	45	78	54	16	17	17	18	19	14	16	11	10	16	22	18	27	80	17	80
22-Mar	12	78	78	9	10	11	13	9	8	9	8	10	9	9	11	7	66	26	21	65	57	16	24	55	78
23-Mar	94	56	68	28	66	38	17	UO	14	33	21	20	9	11	8	14	75	41	48	26	26	21	39	42	94
24-Mar	16	42	36	49	55	62	68	89	12	19	23	18	12	14	28	33	60	30	25	16	22	12	64	15	89
25-Mar	22	22	23	39	78	69	59	88	43	48	38	17	36	99	31	23	30	17	17	17	16	16	17	16	99
26-Mar	16	17	17	16	16	16	29	20	21	24	25	25	25	20	23	18	22	16	17	15	17	17	15	16	29
27-Mar	16	16	16	18	17	16	18	18	17	19	18	20	25	21	19	21	19	18	16	15	15	16	17	15	25
28-Mar	14	24	18	36	12	35	28	56	17	23	23	37	27	30	38	40	31	19	13	10	12	18	30	19	56
29-Mar	11	41	35	37	39	22	45	79	18	52	54	81	39	32	52	19	13	11	46	16	14	14	10	13	81
30-Mar	19	15	15	49	50	42	18	56	25	32	26	29	56	65	47	69	14	73	14	15	18	14	17	25	73
31-Mar	78	51	41	27	13	13	13	14	13	19	13	13	24	21	18	14	13	12	11	24	39	13	18	13	78
	94	84	78	74	78	99	81	97	82	77	80	81	67	99	73	69	75	73	69	65	89	41	80	60	
	Diurnal Maximum																								

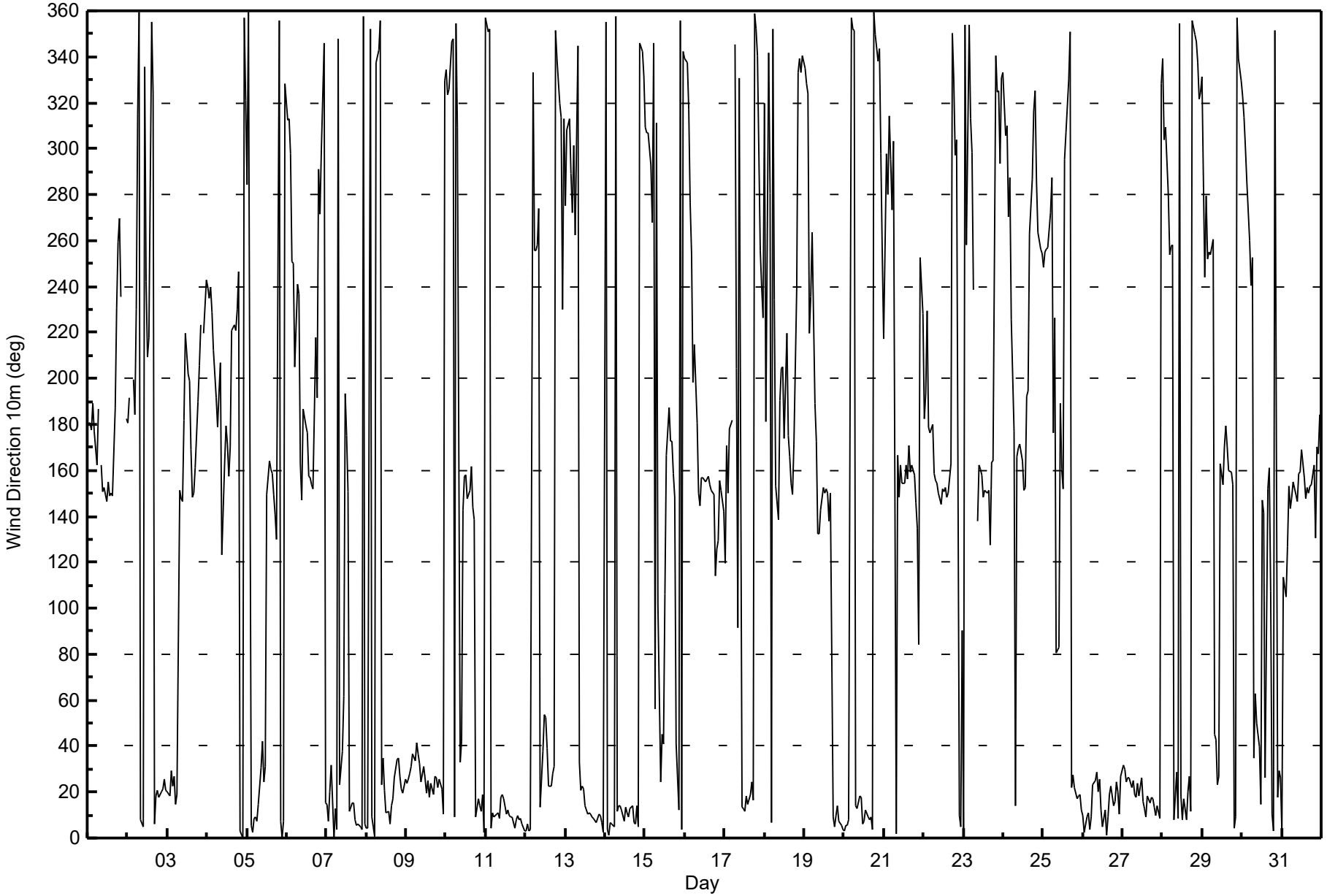
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Fort McKay South - March 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS14
ANZAC
MARCH 2025

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

April 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ANZAC (AMS14)
MARCH 2025

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

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 30-Min Value	30-Min Exceedances	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2(ppb) Average	709	35	35	100	-	-	10.9	0	2.4	0
TRS(ppb) Average	708	36	36	100	1.2	0	1.1	-	0.4	-
THC(ppm) Average	706	35	38	99.6	-	-	2.4	-	2.1	-
NMHC(ppm) Average	706	35	38	99.6	-	-	0.046	-	0.002	-
CH4(ppm) Average	706	35	38	99.6	-	-	2.4	-	2.1	-
NO2(ppb) Average	708	36	36	100	-	-	34.5	0	11.7	-
NO(ppb) Average	708	36	36	100	-	-	25	-	3.9	-
NOX(ppb) Average	708	36	36	100	-	-	55.1	-	13.3	-
O3(ppb) Average	710	34	34	100	-	-	49	0	41	-
PM2.5(ug/m3) Average	743	1	1	100	-	-	14.8	0	5.3	0
AT 2m(C) Average	744	0	0	100	-	-	10.2	-	2.9	-
RH(%) Average	744	0	0	100	-	-	94.3	-	80	-
WS(km/h) Average	744	0	0	100	-	-	28	-	17	-
WD(deg) Average	744	0	0	100	-	-	-	-	-	-
Leaf Wetness (% of range) Average	744	0	0	100	-	-	15	-	2.7	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ANZAC (AMS14)
MARCH 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2(ppb) Average	709	0.68	1.2	-	0	0	0.1	0.3	0.7	1.5	10.9
TRS(ppb) Average	708	0.2	0.1	-	0.1	0.1	0.1	0.2	0.2	0.3	1.1
THC(ppm) Average	706	2.03	0.1	-	2	2	2	2	2	2.1	2.4
NMHC (ppm) Average	706	0	0.002	-	0	0	0	0	0	0	0.046
CH4(ppm) Average	706	2.03	0.1	-	2	2	2	2	2	2.1	2.4
NO2(ppb) Average	708	3.34	4.3	-	0.2	0.3	0.8	1.8	4.2	8.1	34.5
NO(ppb) Average	708	0.9	2.1	-	0	0	0	0.2	0.8	2.7	25
NOX(ppb) Average	708	4.24	5.8	-	0.2	0.3	0.9	2.2	4.9	10.1	55.1
O3(ppb) Average	710	34.25	7.5	-	2.6	24.6	30.4	35.8	39.4	41.9	49
PM2.5(ug/m3) Average	743	2.25	1.5	-	0.2	0.9	1.3	1.9	2.8	3.7	14.8
Temperature 2 m (C) Average	744	-7.5	8	-	-27	-18.8	-13.6	-7.2	-1.2	3	10.2
Relative Humidity (%) Average	744	65.46	15.6	-	26.6	41.6	52.9	67.7	78.6	84.5	94.3
Wind Speed 20 m (km/h) Average	744	9.4	4	-	1	4	6	9	12	15	28
Wind Direction 20 m (deg) Average	744	35.9	-	-	-	-	-	-	-	-	-
Leaf Wetness (% of range) Average	744	0.19	1	-	0	0	0	0	0	0.3	15

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ANZAC (AMS14)
MARCH 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
THC/NMHC/CH4	14 Mar 2025 12:00	14 Mar 2025 14:00	3	Maintenance - replaced support gas cylinder

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Anzac - March 2025

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

Maximum Value: 10.9 ppb on Mar 15 17:00

Maximum Daily Average: 2.4 ppb on Mar 19

Minimum Value: 0.0 ppb on Mar 3 07:00

Minimum Daily Average: 0.0 ppb on Mar 27

Maximum Diurnal Average: 1.1 ppb at hour 17

Minimum Diurnal Average: 0.3 ppb at hour 6

Monthly Average: 0.68 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.3 Q_3 = 0.7 P_{90} = 1.5 P_{99} = 6.1

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.1	0.0	0.1	0.1	0.0	Z	0.1	0.1	0.1	0.4	1.3	1.1	1.3	1.4	1.5	0.3	0.3	0.7	0.8	0.8	0.7	0.5	0.3	0.5	0.5	1.5
2-Mar	Z	0.9	0.6	0.5	0.6	1.4	0.6	0.5	0.7	0.3	1.6	1.1	0.6	3.1	4.6	0.4	0.2	0.2	0.2	0.7	0.2	0.1	0.1	0.0	0.8	4.6
3-Mar	0.0	Z	0.1	0.1	0.1	0.0	0.0	0.0	1.2	4.6	5.0	1.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.6	5.0
4-Mar	0.2	0.7	Z	0.4	0.4	1.0	0.9	1.1	1.7	0.8	0.2	1.5	1.4	0.9	0.6	1.0	0.4	0.7	1.1	1.0	0.9	0.5	0.4	0.8	0.8	1.7
5-Mar	0.5	0.3	0.2	Z	0.3	0.2	0.1	0.1	0.1	0.1	0.2	C	C	C	C	1.7	2.0	1.8	1.6	1.5	1.1	0.8	0.6	0.3	0.7	2.0
6-Mar	0.7	0.5	0.3	0.3	Z	0.2	0.2	0.1	0.5	1.9	3.3	4.2	4.6	2.5	2.5	1.8	0.9	0.4	0.6	0.4	0.1	0.0	0.0	0.0	1.1	4.6
7-Mar	0.0	0.0	0.0	0.0	1.4	Z	5.6	6.8	3.7	3.7	2.6	1.5	1.2	0.7	0.1	0.2	0.5	0.9	9.8	5.2	2.7	2.4	1.8	0.9	2.2	9.8
8-Mar	Z	0.5	0.6	1.9	2.4	0.6	0.5	1.1	0.4	0.2	0.3	0.4	0.6	0.9	2.8	3.9	0.8	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.8	3.9
9-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.2	0.4	0.3	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.3	0.8	0.8	0.2	0.8
10-Mar	0.8	0.5	Z	0.2	0.1	0.1	0.0	0.0	0.0	0.4	0.5	0.5	1.1	0.5	0.6	0.6	1.7	0.9	0.4	0.4	0.2	0.1	0.1	0.1	0.4	1.7
11-Mar	0.2	0.1	0.1	Z	0.1	0.0	0.0	0.0	1.3	0.5	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	1.3
12-Mar	0.0	0.1	0.0	0.2	Z	0.2	0.6	0.6	0.4	0.3	0.1	0.1	0.1	0.0	0.2	1.0	3.0	3.1	2.1	1.7	2.1	1.9	1.9	1.0	0.9	3.1
13-Mar	0.5	0.4	0.3	0.2	0.2	Z	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.2	0.1	0.2	0.5
14-Mar	Z	0.1	0.1	0.1	0.2	0.2	0.4	0.4	0.2	0.3	0.2	0.3	0.5	0.9	0.2	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.9
15-Mar	0.0	Z	0.2	0.2	0.3	0.1	0.1	0.5	1.9	1.7	0.1	0.1	1.9	0.8	0.1	0.1	10.9	10.4	6.3	4.6	3.6	2.2	1.2	1.0	2.1	10.9
16-Mar	1.0	0.7	Z	0.6	0.5	0.4	0.4	0.3	0.9	1.2	0.8	1.3	1.1	0.9	0.5	0.4	0.4	0.4	0.5	0.4	0.2	0.7	0.4	0.4	0.6	1.3
17-Mar	0.6	0.9	0.8	Z	0.8	0.7	0.5	0.5	0.6	1.0	0.5	0.4	0.3	0.4	0.4	3.4	7.2	2.2	0.8	0.9	0.8	1.0	1.0	0.8	1.2	7.2
18-Mar	0.6	0.7	0.5	0.4	Z	0.4	0.8	0.9	0.6	0.2	0.1	0.1	0.1	0.1	0.2	0.5	0.8	0.8	0.7	0.5	0.4	0.3	0.5	0.3	0.5	0.9
19-Mar	0.2	0.3	0.2	1.2	1.4	Z	4.9	6.2	8.0	3.4	4.0	4.8	5.0	4.5	2.9	1.6	1.2	1.1	1.0	1.0	0.8	0.7	1.0	0.6	2.4	8.0
20-Mar	Z	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	3.4	0.3	3.4
21-Mar	3.0	Z	0.0	0.0	0.1	0.0	0.7	0.2	0.6	2.4	0.7	1.2	2.1	0.9	0.6	0.5	0.0	0.0	0.0	0.0	0.6	1.1	0.1	0.2	0.7	3.0
22-Mar	0.4	0.5	Z	0.4	0.4	0.4	0.5	0.6	0.5	0.4	0.4	0.9	3.6	3.5	2.5	0.7	0.5	0.7	0.7	0.4	0.3	0.2	0.3	0.3	0.8	3.6
23-Mar	0.3	0.3	0.3	Z	0.2	0.3	0.3	0.3	0.3	0.4	0.3	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.4	0.9	0.9	0.8	0.7	0.8	0.4	0.9
24-Mar	0.8	2.1	1.9	1.2	Z	0.6	0.5	0.5	0.6	0.8	0.7	0.5	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.6	2.1
25-Mar	0.3	0.2	0.2	0.3	0.2	Z	0.3	0.7	0.5	0.3	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.7	0.2	0.2	0.1	0.1	0.2	0.7
26-Mar	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.1	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.2	0.4	1.1	0.2	1.1
27-Mar	0.3	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	0.1	0.1	0.0	0.0	0.0	0.0	0.3
28-Mar	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	0.3	0.2	0.5	0.7	0.5	0.2	0.1	0.1	0.2	0.1	0.2	0.1	0.7
29-Mar	0.2	0.1	0.2	Z	0.2	0.1	0.0	0.2	0.5	1.4	0.8	1.0	0.8	0.7	0.4	0.4	0.4	0.3	0.3	0.2	0.5	0.4	0.3	0.4	0.4	1.4
30-Mar	0.3	0.3	0.8	0.8	Z	0.6	0.5	0.8	1.2	0.8	0.8	0.2	0.2	0.4	0.9	0.8	0.5	0.4	0.2	0.3	0.2	0.9	0.4	0.1	0.5	1.2
31-Mar	0.2	0.3	0.1	0.0	0.2	Z	0.3	0.3	0.1	0.5	0.5	0.4	0.3	0.1	0.3	0.1	0.3	0.0	0.0	0.0	0.0	0.1	0.3	0.5	0.2	0.5
	0.4	0.4	0.3	0.4	0.4	0.3	0.6	0.7	0.9	0.9	0.8	0.8	1.0	0.8	0.8	0.7	1.1	0.8	0.9	0.7	0.6	0.6	0.5	0.5	Diurnal Average	
	3.0	2.1	1.9	1.9	2.4	1.4	5.6	6.8	8.0	4.6	5.0	4.8	5.0	4.5	4.6	3.9	10.9	10.4	9.8	5.2	3.6	2.4	1.9	3.4	Diurnal Maximum	

Z - zerospan C - Calibration

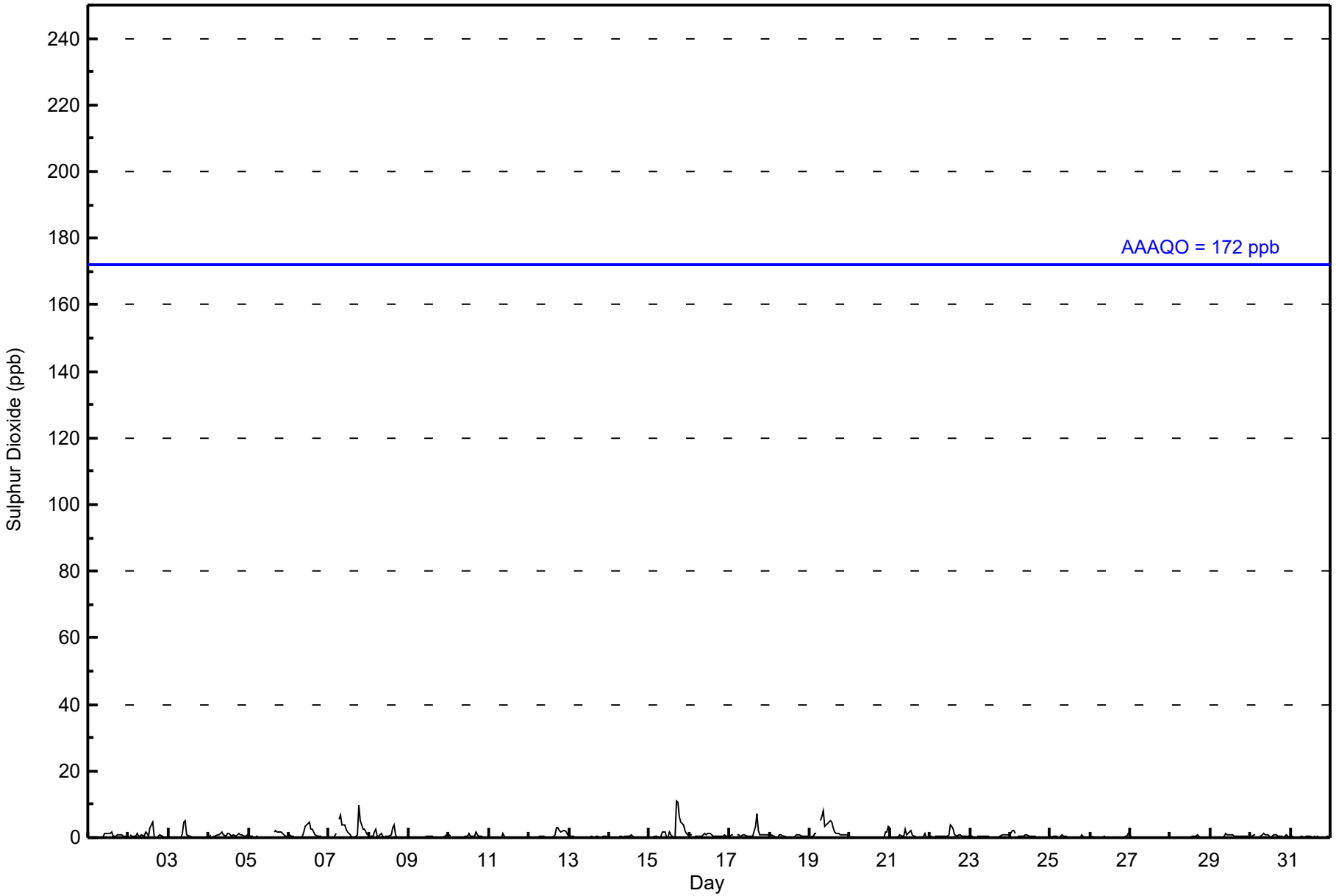
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Anzac - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	708	99.86	99.86
11 - 20	1	0.14	100.00
21 - 60	0	0.00	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Anzac - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	56	16	40	31	40	65	77	64	24	15	12	18	47	94	42	67	708
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	56	16	40	31	40	65	77	64	24	15	12	18	47	94	42	68	709

Total Number of Valid Hours: 709

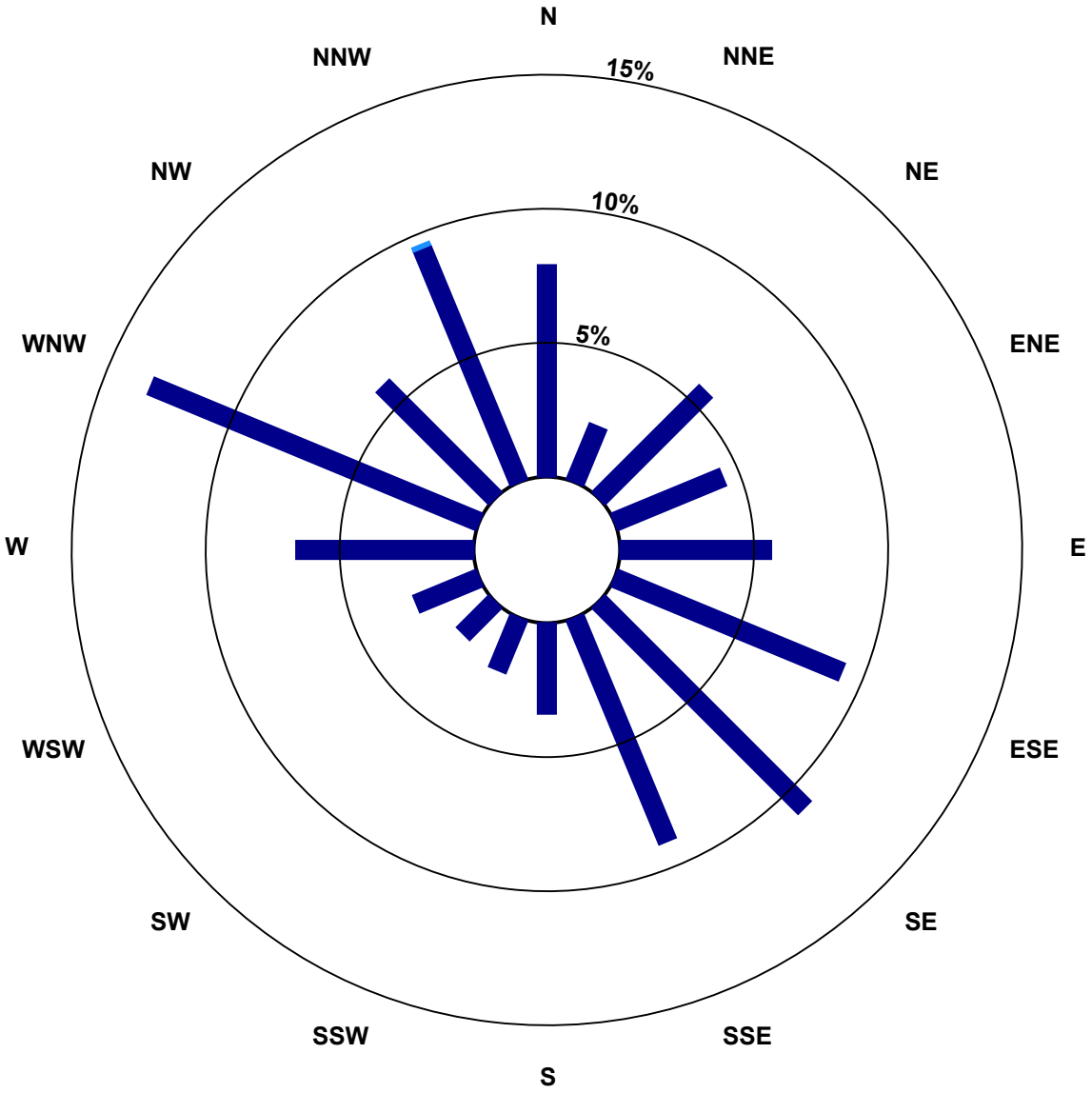
Total Number of Hours: 744

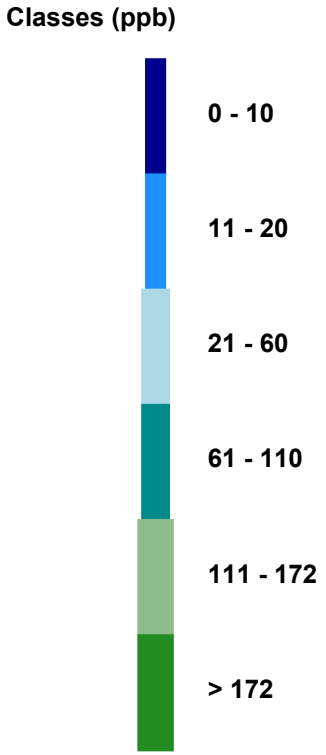
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Sulphur Dioxide (SO_2) - ppb

Anzac





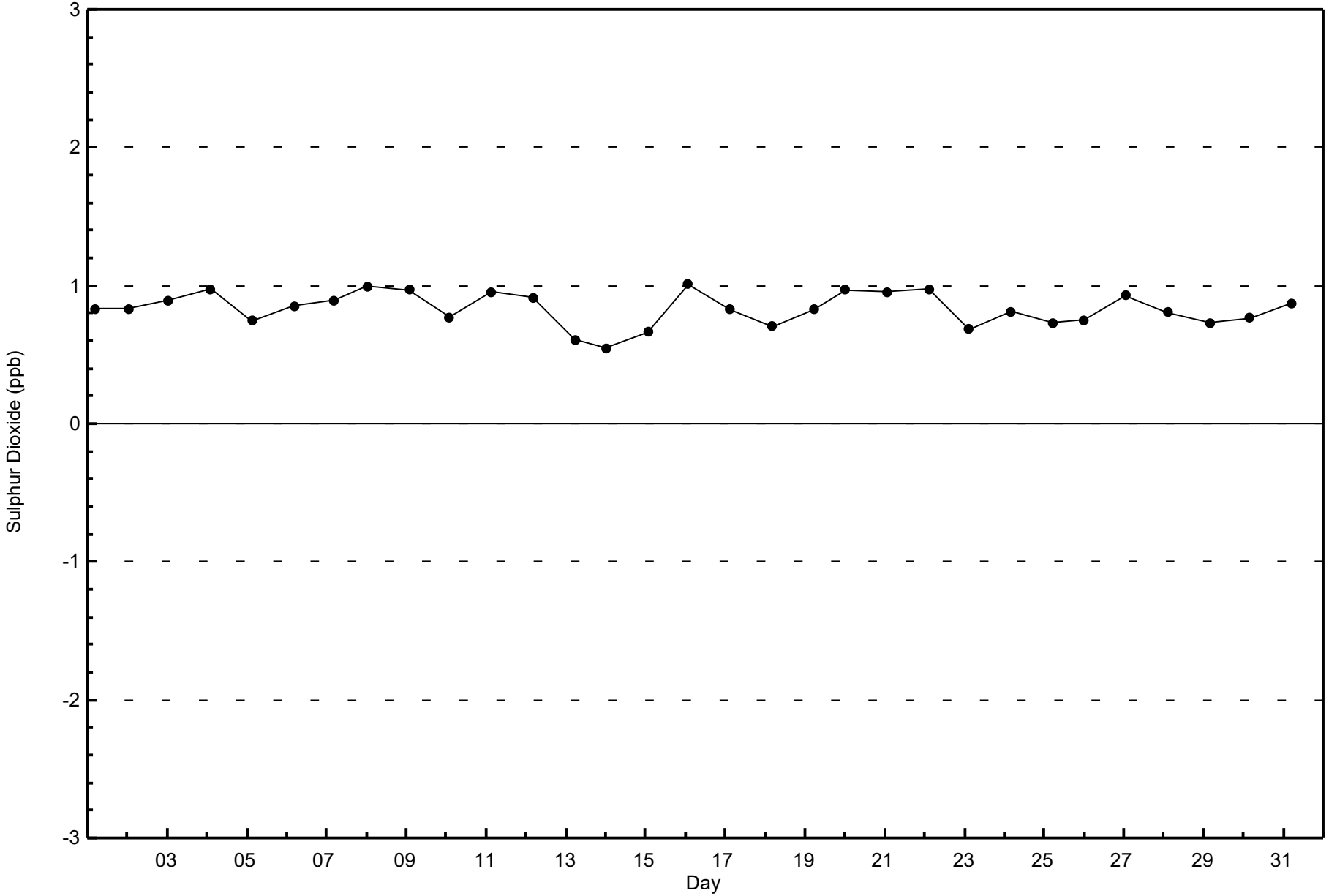
Total Number of Valid Hours: 709

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Anzac - March 2025

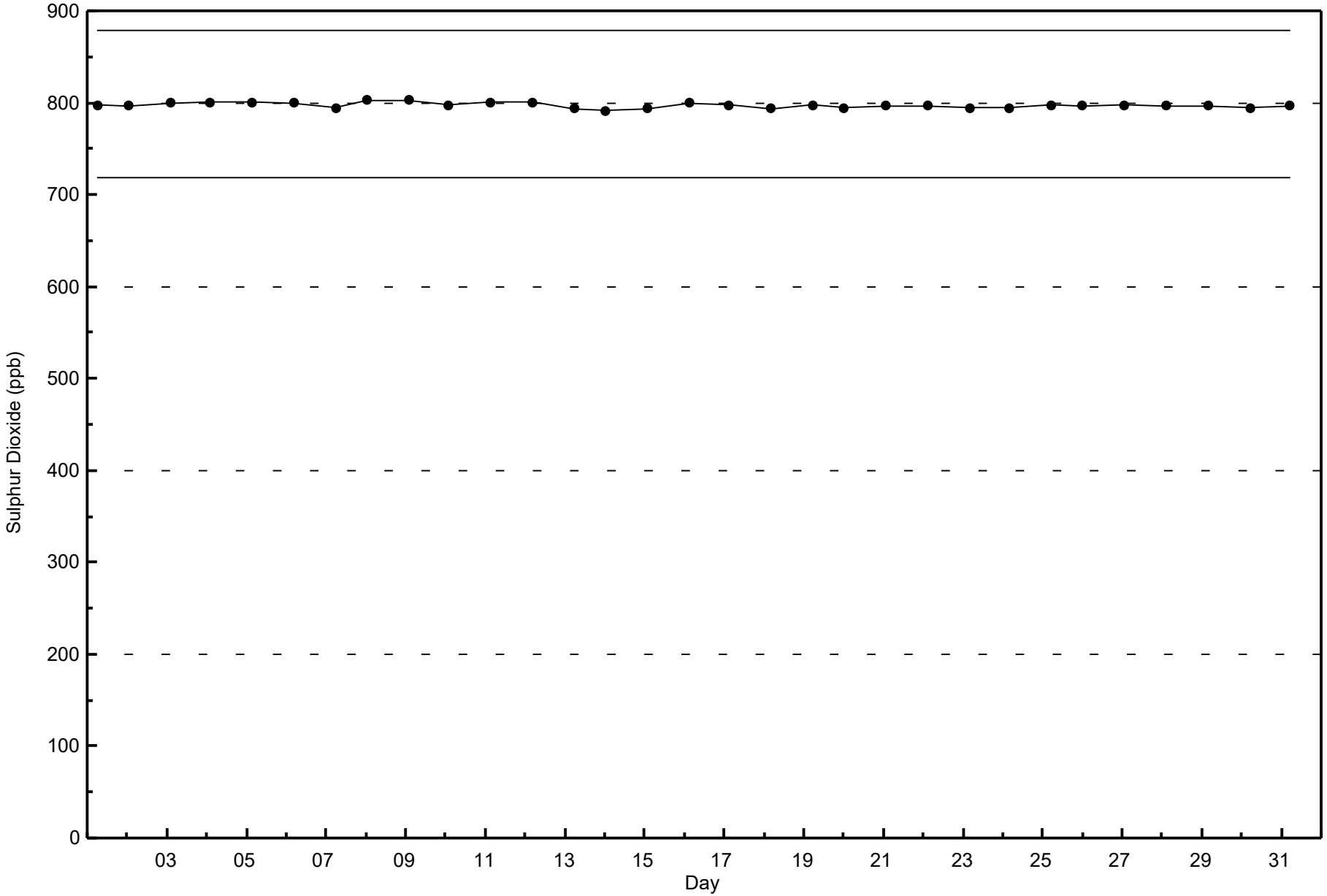


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Anzac - March 2025



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Anzac - March 2025

Number of Exceedences (AAAQG): 30-Min: 0

Maximum Value: 1.2 ppb on Mar 19 04:00 Maximum Daily Average: 0.4 ppb on Mar 19

Minimum Value: 0.1 ppb on Mar 3 00:00 Minimum Daily Average: 0.1 ppb on Mar 11

Maximum Diurnal Average: 0.2 ppb at hour 7 Minimum Diurnal Average: 0.2 ppb at hour 18

Monthly Average: 0.20 ppb Percentiles: P_1 = 0.1 P_{10} = 0.1 Q_1 = 0.1 Median = 0.2 Q_3 = 0.2 P_{90} = 0.3 P_{99} = 0.7

Periods in Service:	1488
Periods of Valid Data:	1416
Periods of Invalid Data:	72
Periods of Calibration:	72
Percent Operational Time:	100.0

Day	Period Ending At (MST) 00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00	Daily Average	Daily Maximum
1-Mar	Z	0.4	0.2	0.3	0.4	0.7	0.8	0.6	0.5	0.3	0.2	0.2	0.6	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.3	0.9
	SP	0.3	0.2	0.4	0.5	0.9	0.7	0.6	0.4	0.2	0.2	0.3	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3		
2-Mar	0.3	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.3	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4
	0.2	SP	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.4	0.4	0.3	0.4	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1		
3-Mar	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.3	0.1	0.3
	0.1	0.1	SP	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3		
4-Mar	0.3	0.3	0.2	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.3
	0.3	0.3	0.2	SP	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.3		
5-Mar	0.3	0.3	0.2	0.2	Z	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	0.3	0.2	0.3	0.5	0.2	0.5
	0.3	0.2	0.2	0.2	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	0.3	0.4	0.4		
6-Mar	0.3	0.2	0.2	0.2	0.2	Z	0.4	0.4	0.2	0.5	0.5	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	0.5
	0.2	0.2	0.1	0.2	0.2	SP	0.5	0.2	0.3	0.4	0.5	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		
7-Mar	Z	0.2	0.2	0.2	0.2	0.3	0.7	0.6	0.6	0.5	0.4	0.4	0.4	0.3	0.2	0.1	0.2	0.2	0.8	0.8	0.6	0.3	0.3	0.2	0.4	0.9
	SP	0.2	0.2	0.2	0.3	0.6	0.7	0.6	0.5	0.7	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.4	0.9	0.6	0.5	0.3	0.3	0.3		
8-Mar	0.3	Z	0.3	0.4	0.5	0.5	0.1	0.4	0.3	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.3	0.6
	0.2	SP	0.2	0.4	0.5	0.2	0.2	0.4	0.2	0.2	0.2	0.2	0.3	0.4	0.6	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1		
9-Mar	0.1	0.1	Z	0.2	0.1	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	0.2	0.1	SP	0.1	0.2	0.1	0.1	0.2	0.1	0.1	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		
10-Mar	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.1	0.2	0.2
	0.2	0.2	0.2	SP	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1		
11-Mar	0.2	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.2	0.1	0.1	C	C	C	C	C	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4
	0.1	0.1	0.2	0.2	SP	0.1	0.1	0.1	0.4	0.2	0.1	C	C	C	C	C	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		
12-Mar	0.2	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	0.2	0.2	0.2	0.2	0.2	SP	0.2	0.2	0.2	0.2	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		
13-Mar	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.3
	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	0.1	0.2	0.1	0.1	0.1	0.1	0.1		
14-Mar	0.1	Z	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	0.2	SP	0.1	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		
15-Mar	0.2	0.2	Z	0.3	0.4	0.2	0.3	0.3	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.4	0.4	0.2	0.2	0.3	0.5
	0.2	0.2	SP	0.2	0.2	0.3	0.3	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.5	0.4	0.3	0.2	0.3		

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Anzac - March 2025

Day	Period Ending At (MST) 00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00	Daily Average	Daily Maximum
16-Mar	0.2	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	0.3
	0.2	0.3	0.2	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	0.1	0.2	0.2	0.2		
17-Mar	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4
	0.2	0.2	0.2	0.2	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
18-Mar	0.2	0.2	0.2	0.1	0.2	Z	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	0.1	0.2	0.2	0.2	0.2	0.3
	0.2	0.2	0.2	0.2	0.2	SP	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.3	0.1		
19-Mar	Z	0.2	0.1	1.1	0.8	0.7	0.7	0.7	0.6	0.3	0.9	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	1.2
	SP	0.2	0.5	1.2	0.8	0.7	0.8	0.7	0.9	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.4		
20-Mar	0.4	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	0.1	0.2	0.2	0.4
	0.3	SP	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2		
21-Mar	0.2	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	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.1	0.2	0.3
	0.2	0.2	SP	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2		
22-Mar	0.1	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.3	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.8
	0.2	0.2	0.3	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.8	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.1	0.1	0.2	0.2	0.2		
23-Mar	0.2	0.1	0.2	0.2	Z	0.3	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.2	0.5
	0.2	0.2	0.2	0.3	SP	0.5	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	0.1	0.1	0.1		
24-Mar	0.1	0.3	0.4	0.3	0.5	Z	0.3	0.6	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.8
	0.1	0.3	0.4	0.3	0.6	SP	0.5	0.8	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	0.2	0.1	0.1		
25-Mar	Z	0.2	0.1	0.1	0.1	0.2	0.3	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.2	0.2	0.2	0.2	0.3
	SP	0.1	0.1	0.1	0.1	0.3	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
26-Mar	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	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
	0.2	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	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		
27-Mar	0.2	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
	0.1	0.1	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		
28-Mar	0.1	0.2	0.2	Z	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3
	0.2	0.2	0.2	SP	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.2		
29-Mar	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.4	0.3	0.3	0.2	0.2	0.5
	0.2	0.1	0.1	0.2	SP	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	0.2	0.5	0.3	0.2	0.2		
30-Mar	0.2	0.2	0.2	0.2	0.1	Z	0.2	0.1	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
	0.2	0.2	0.1	0.2	0.2	SP	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	0.2	0.2	0.2	0.2	0.1		
31-Mar	Z	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
	SP	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2	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	Diurnal Average	
	0.4	0.4	0.5	1.2	0.8	0.9	0.8	0.8	0.9	0.7	0.9	0.8	0.6	0.4	0.6	0.4	0.3	0.4	0.9	0.8	0.6	0.4	0.4	0.5	Diurnal Maximum	

Z - zerospan C - Calibration SP - Span

Alberta Ambient Air Quality Guideline (AAAQG): 30-Min: 5 ppb

Wood Buffalo Environmental Association

Summary of Hour Averages

Total Reduced Sulphur (TRS) - ppb

Anzac - March 2025

Maximum Value: 1.1 ppb on Mar 19 04:00

Maximum Daily Average: 0.4 ppb on Mar 19

Minimum Value: 0.1 ppb on Mar 11 22:00

Minimum Daily Average: 0.1 ppb on Mar 11

Maximum Diurnal Average: 0.2 ppb at hour 7

Minimum Diurnal Average: 0.2 ppb at hour 18

Monthly Average: 0.20 ppb

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

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

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

Z - zerospan C - Calibration

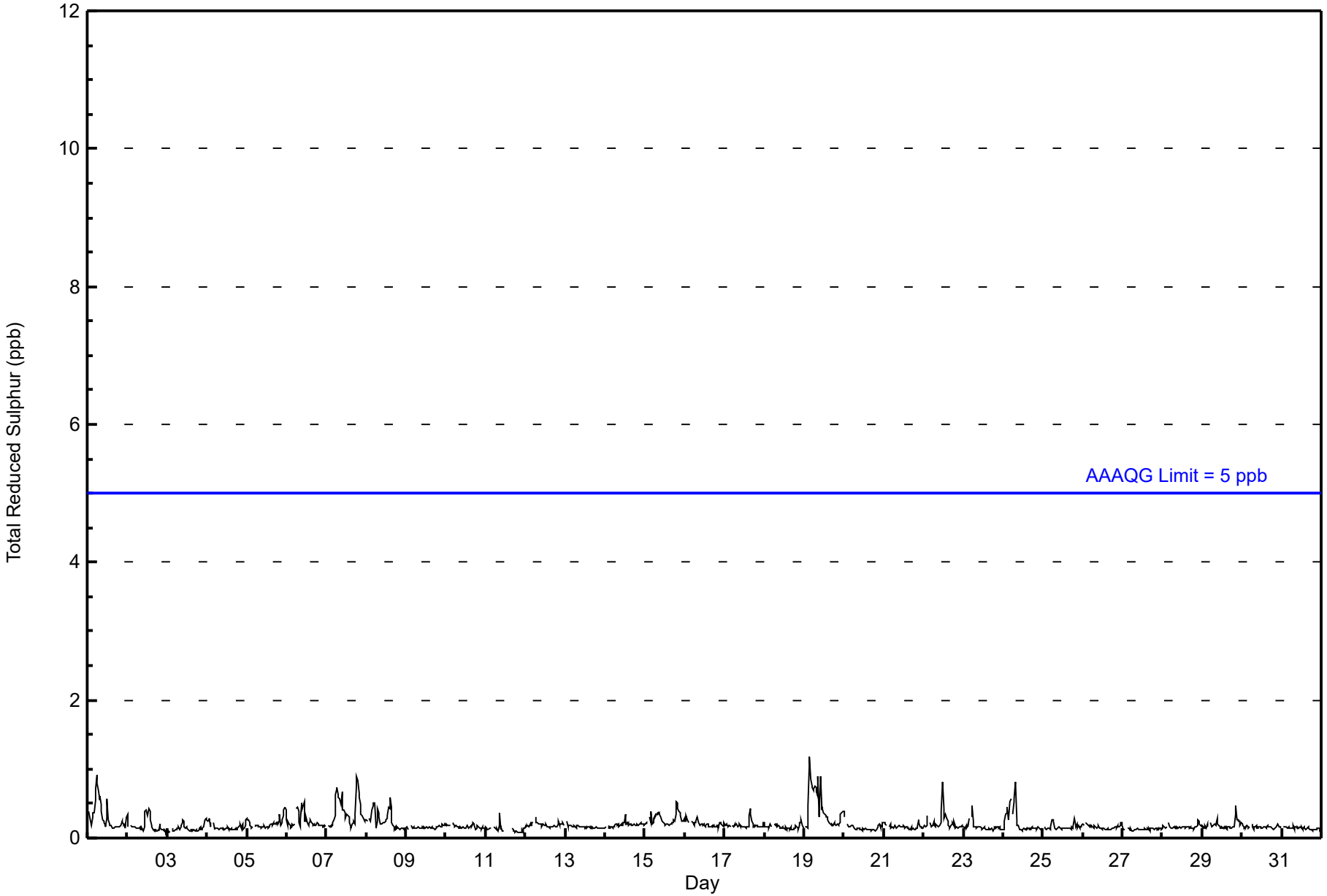
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Anzac - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	708	100.00	100.00
3 - 4	0	0.00	100.00
5 - 7	0	0.00	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Anzac - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	56	15	40	30	36	66	74	63	25	16	12	21	47	91	44	72	708
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	56	15	40	30	36	66	74	63	25	16	12	21	47	91	44	72	708

Total Number of Valid Hours: 708

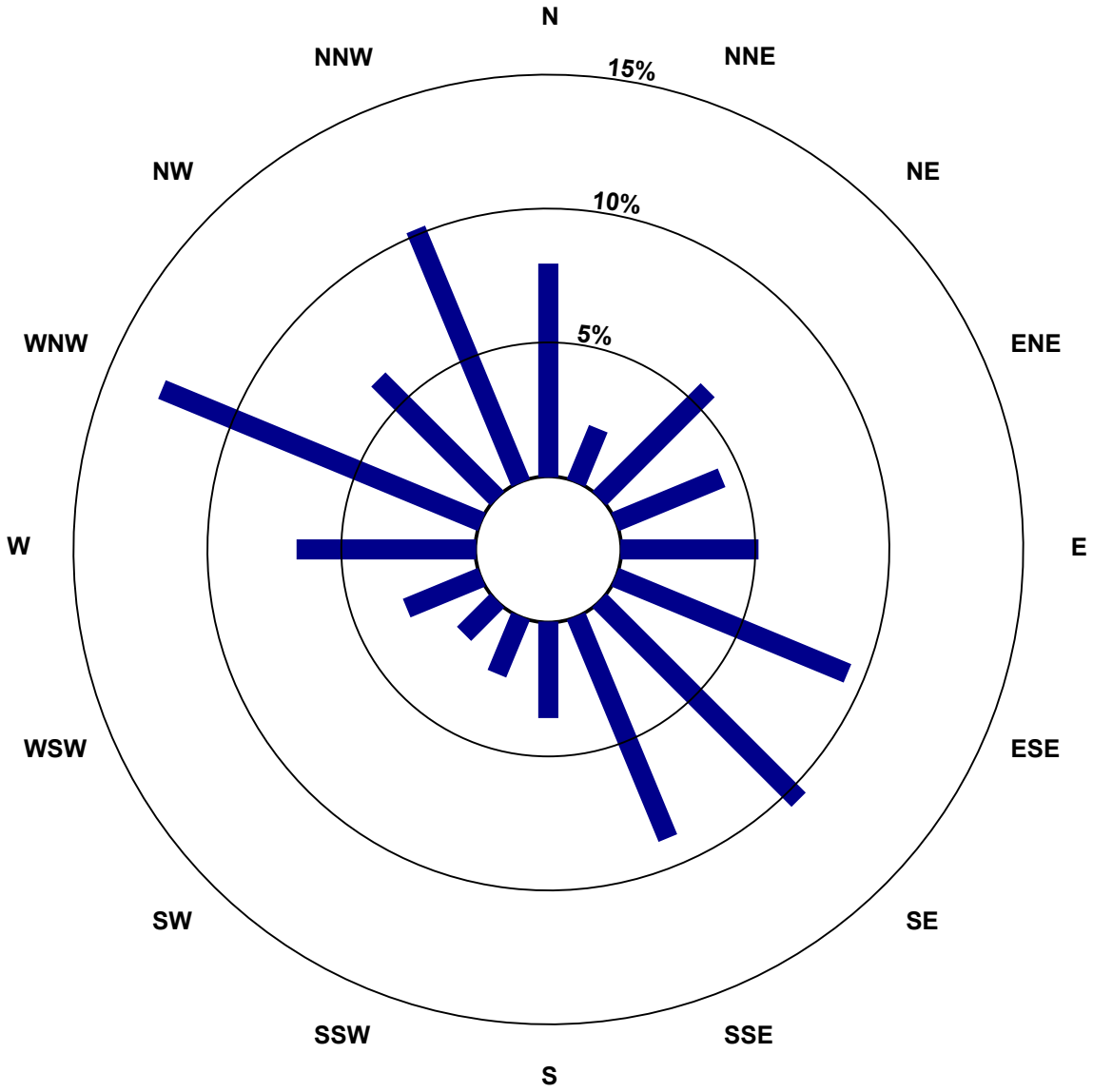
Total Number of Hours: 744

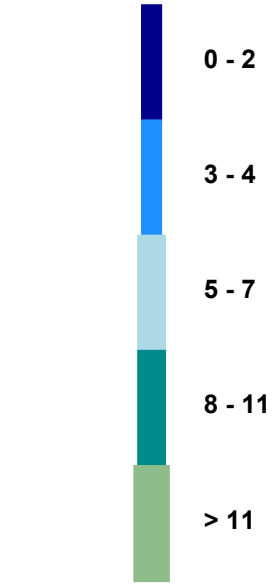
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Total Reduced Sulphur (TRS) - ppb

Anzac





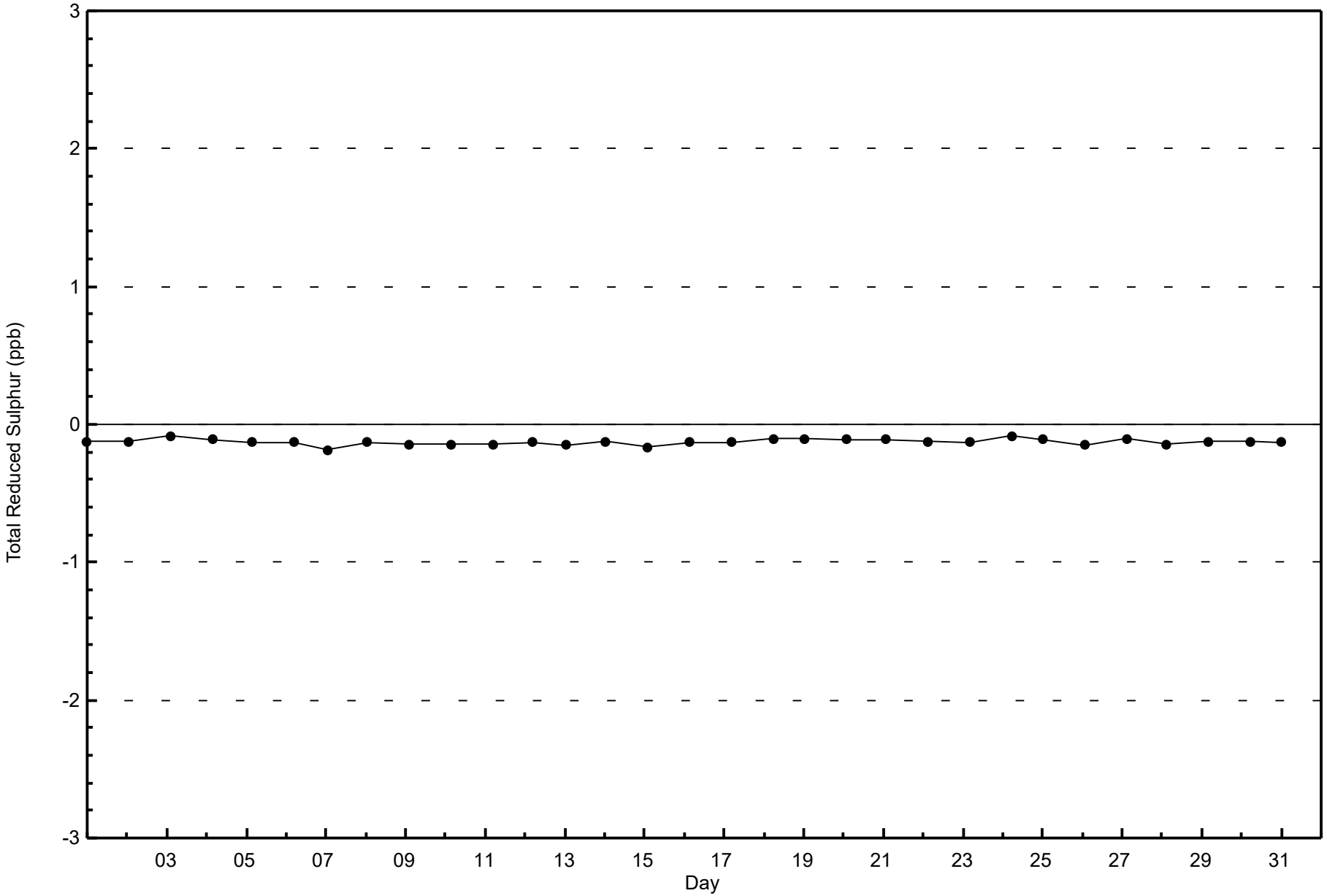
Total Number of Valid Hours: 708

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Anzac - March 2025

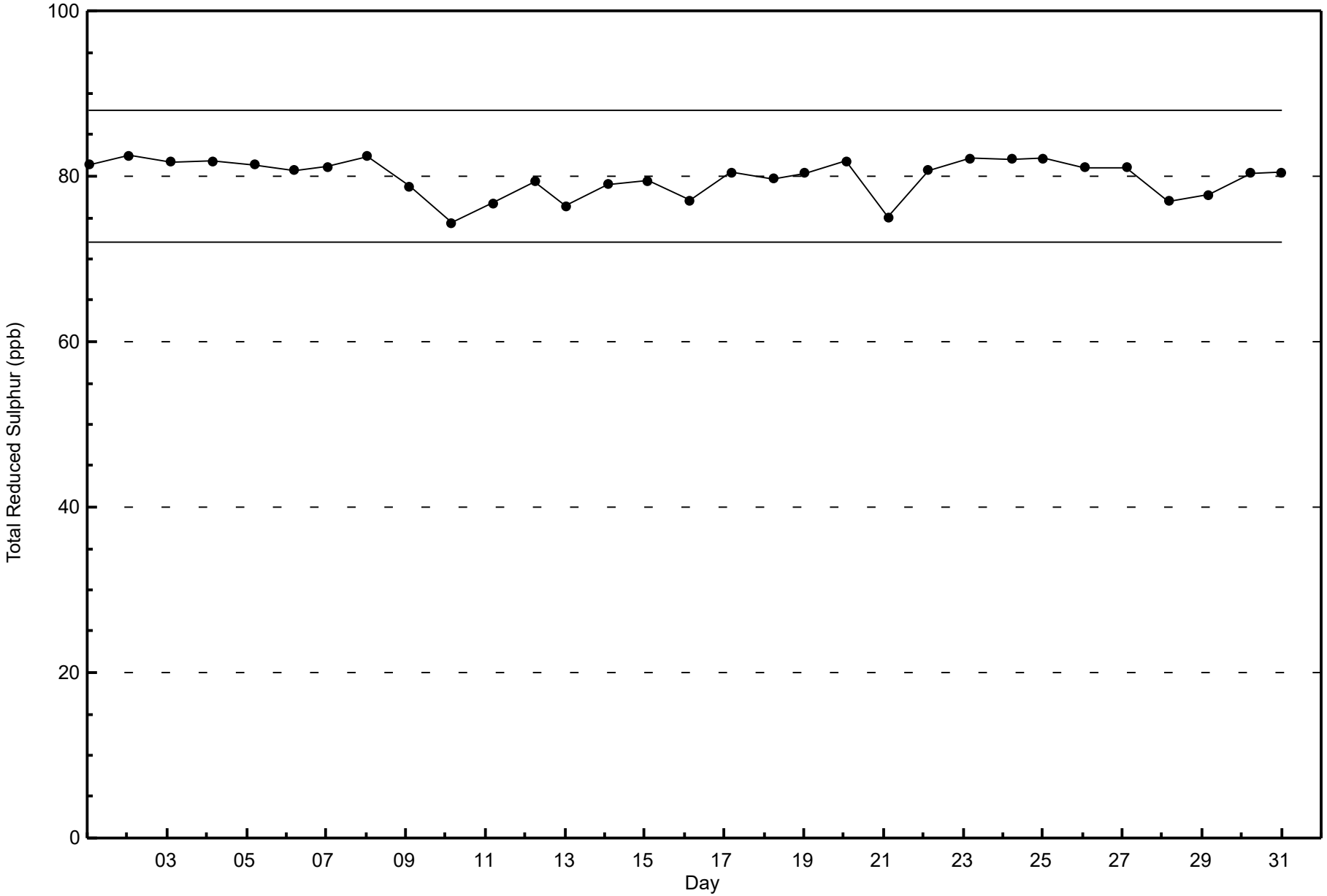


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Anzac - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Anzac - March 2025

Maximum Value: 2.4 ppm on Mar 7 07:00

Maximum Daily Average: 2.1 ppm on Mar 19

Minimum Value: 2.0 ppm on Mar 3 17:00

Minimum Daily Average: 2.0 ppm on Mar 4

Maximum Diurnal Average: 2.1 ppm at hour 7

Minimum Diurnal Average: 2.0 ppm at hour 18

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} = 2.3

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	35
Percent Operational Time:	99.6

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	2.3	2.2	2.1	2.2	2.3	Z	2.4	2.4	2.3	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.4
2-Mar	Z	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
3-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	2.1	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
5-Mar	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	2.0	2.0	2.0	2.1	2.0	2.2	2.2	2.0	2.2
6-Mar	2.1	2.1	2.0	2.0	Z	2.3	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	2.0	2.0	2.0	2.0	2.3
7-Mar	2.0	2.0	2.0	2.0	2.1	Z	2.4	2.3	2.3	2.2	2.1	2.1	2.2	2.1	2.0	2.0	2.0	2.1	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.4
8-Mar	Z	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
9-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
11-Mar	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	2.0	2.1
12-Mar	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
13-Mar	2.0	2.1	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
14-Mar	Z	2.0	2.0	2.0	2.0	2.0	2.1	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	2.1	2.0	2.1
15-Mar	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
16-Mar	2.0	2.1	Z	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
17-Mar	2.0	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	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1
18-Mar	2.1	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	2.1	2.1	2.0	2.1
19-Mar	2.0	2.0	2.1	2.3	2.3	Z	2.3	2.3	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.1	2.3
20-Mar	Z	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.1
21-Mar	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	2.1
22-Mar	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.2
23-Mar	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
24-Mar	2.0	2.1	2.2	2.1	Z	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	2.0	2.0	2.0	2.0	2.1	2.3
25-Mar	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
26-Mar	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1
27-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	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
29-Mar	2.0	2.0	2.0	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
30-Mar	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
31-Mar	2.0	2.0	2.0	2.0	2.0	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
	2.0	2.0	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	Diurnal Average	
	2.3	2.2	2.2	2.3	2.3	2.3	2.4	2.4	2.3	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.3	2.3	2.2	2.1	2.2	2.2	Diurnal Maximum	

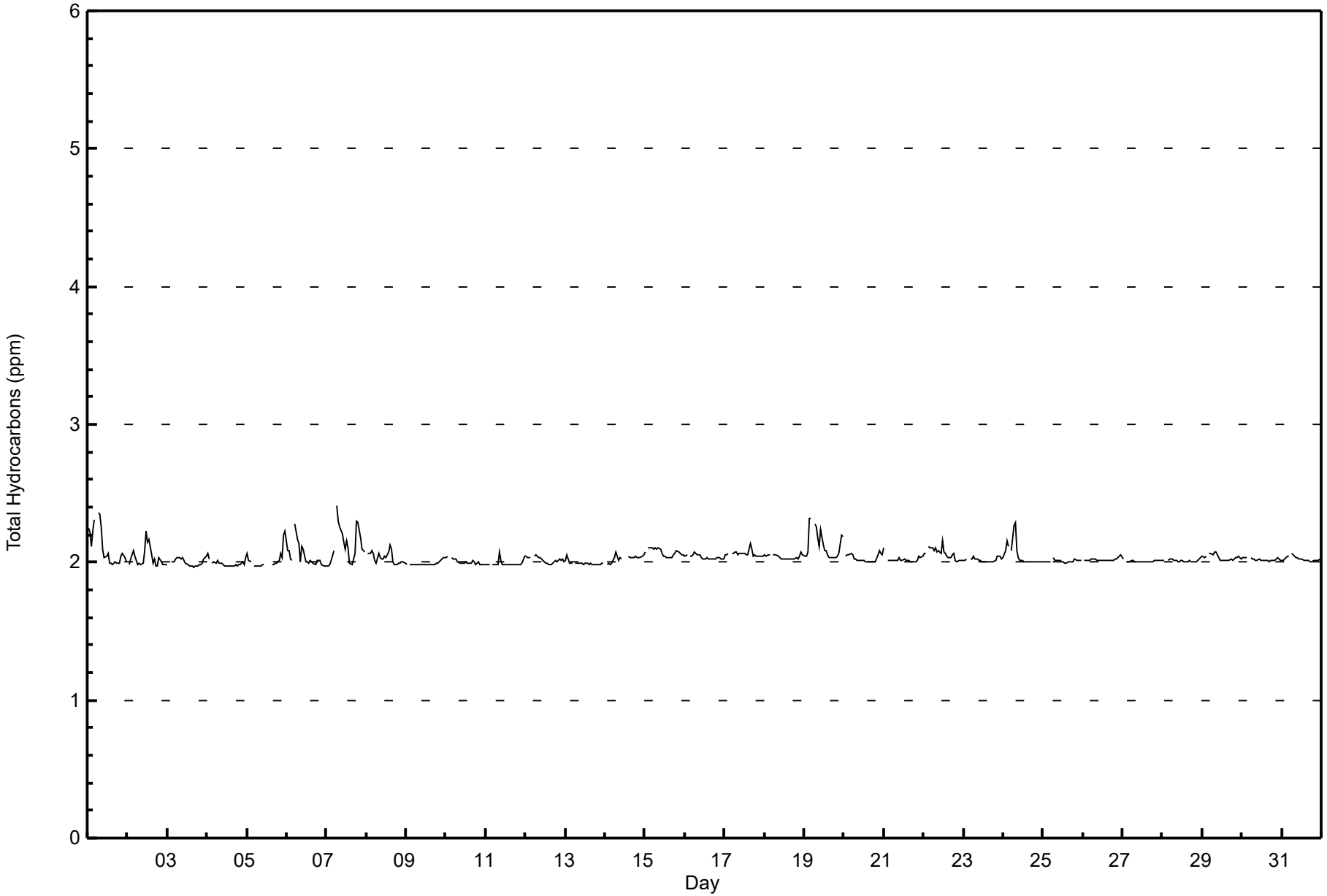
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Anzac - March 2025



Total Hydrocarbons (THC) - ppm
Anzac - March 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	547	77.48	77.48
2.1 - 3.0	159	22.52	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Anzac - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	46	16	38	30	39	54	57	34	11	6	10	12	37	72	29	56	547
2.1 - 3.0	10	0	2	1	1	11	20	30	13	9	2	6	10	22	11	11	159
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	16	40	31	40	65	77	64	24	15	12	18	47	94	40	67	706

Total Number of Valid Hours: 706

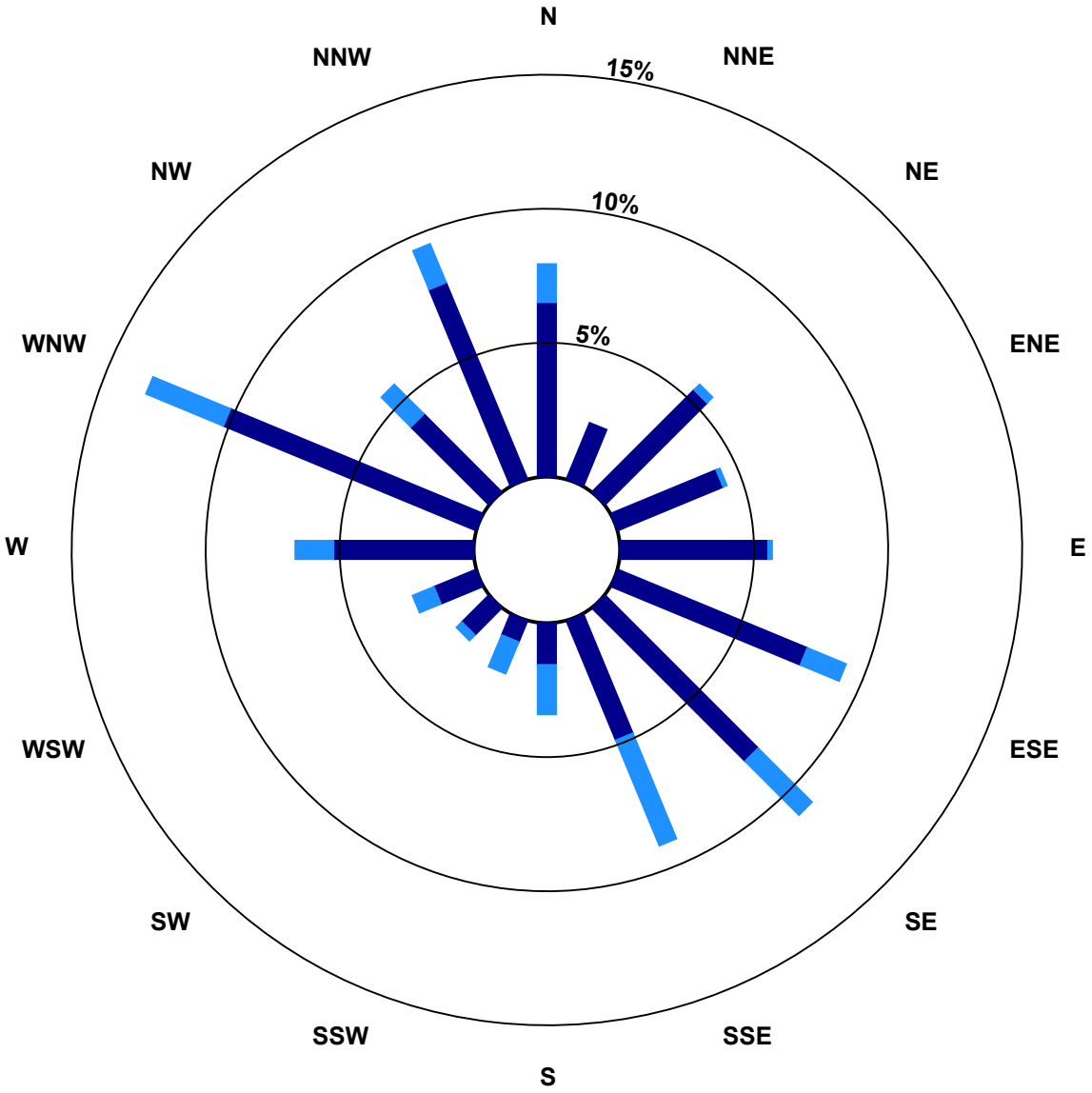
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Total Hydrocarbons (THC) - ppm

Anzac



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

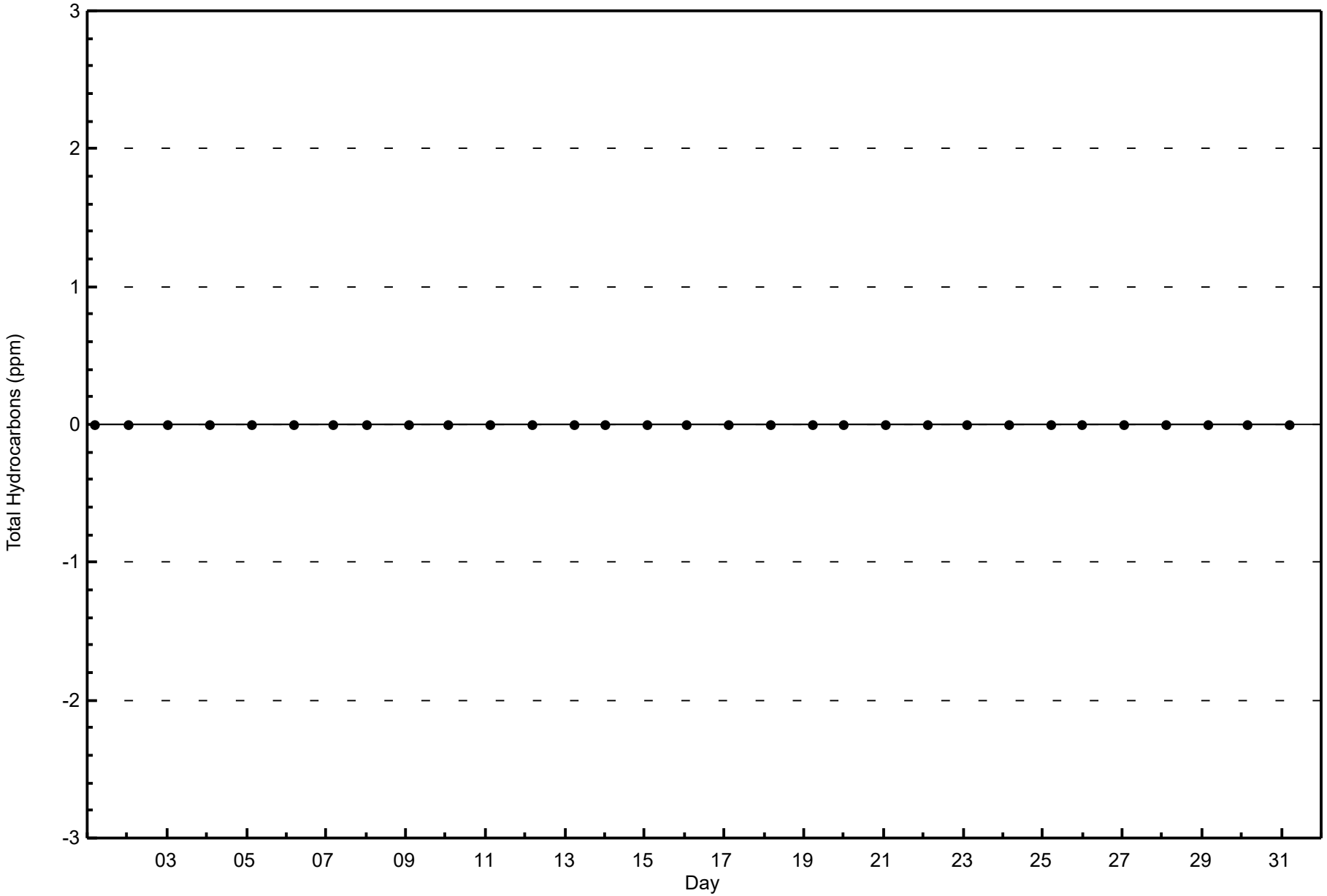
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Anzac - March 2025

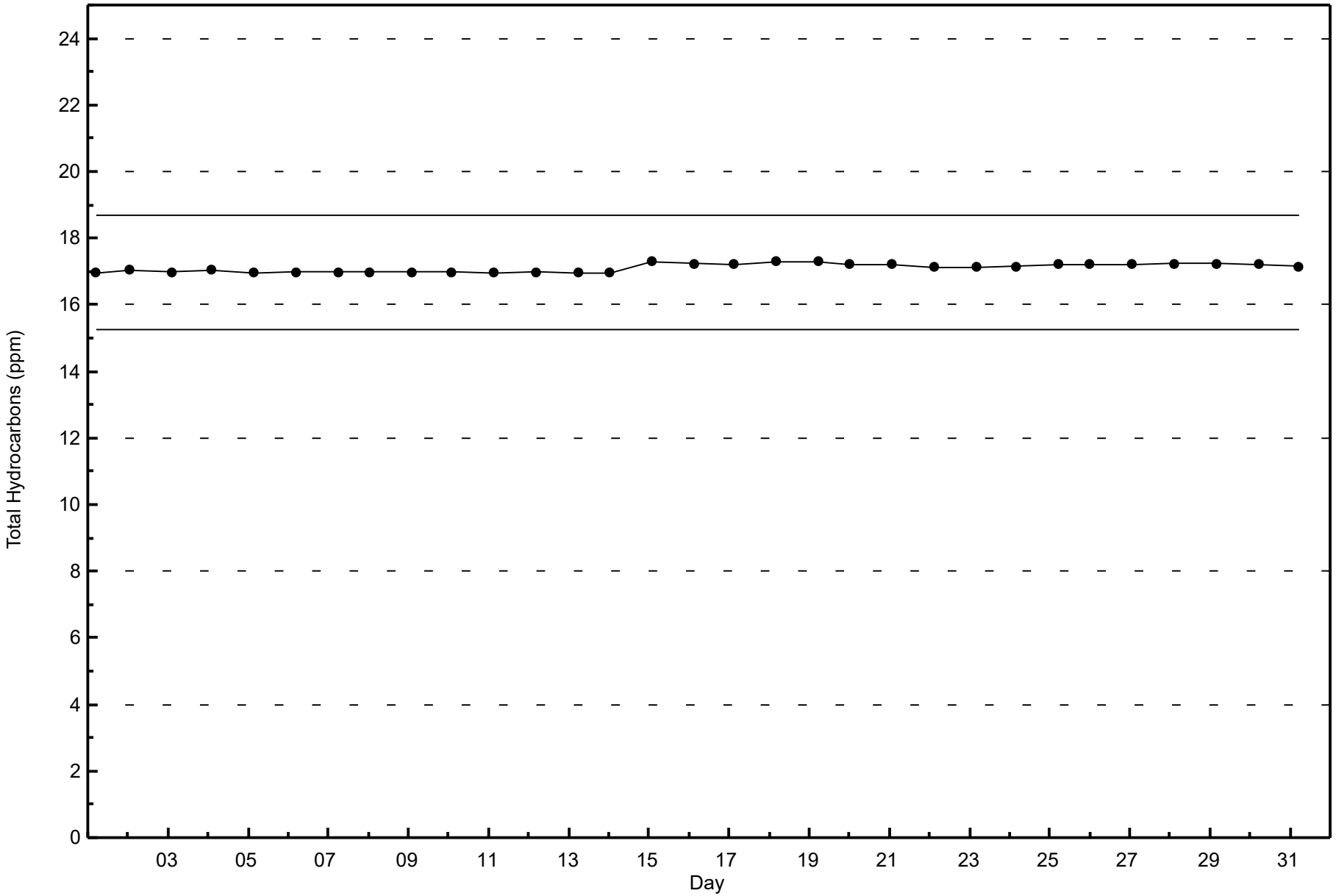


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Anzac - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Anzac - March 2025

Maximum Value: 0.046 ppm on Mar 2 17:00

Maximum Daily Average: 0.002 ppm on Mar 2

Minimum Value: 0.000 ppm on Mar 1 01:00

Minimum Daily Average: 0.000 ppm on Mar 3

Maximum Diurnal Average: 0.002 ppm at hour 17

Minimum Diurnal Average: 0.000 ppm at hour 1

Monthly Average: 0.000 ppm

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

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	35
Percent Operational Time:	99.6

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008
2-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.002	0.046
3-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	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	0.001	0.002	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.003
5-Mar	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
6-Mar	0.000	0.000	0.000	0.000	Z	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
7-Mar	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
8-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12-Mar	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-Mar	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	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
14-Mar	Z	0.000	0.000	0.000	0.000	0.001	0.009	0.000	0.000	0.000	0.000	M	M	M	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009
15-Mar	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	0.001	0.000	0.000	0.000	0.000	0.000	0.001
16-Mar	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	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-Mar	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-Mar	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	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	0.001	0.016
20-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008
23-Mar	0.000	0.000	0.000	Z	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
24-Mar	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-Mar	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
26-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	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-Mar	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
31-Mar	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	0.000	0.000	0.001	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	Diurnal Average	
	0.000	0.000	0.001	0.000	0.002	0.003	0.009	0.000	0.001	0.000	0.016	0.008	0.000	0.000	0.000	0.002	0.046	0.002	0.004	0.001	0.000	0.003	0.000	0.000	Diurnal Maximum	

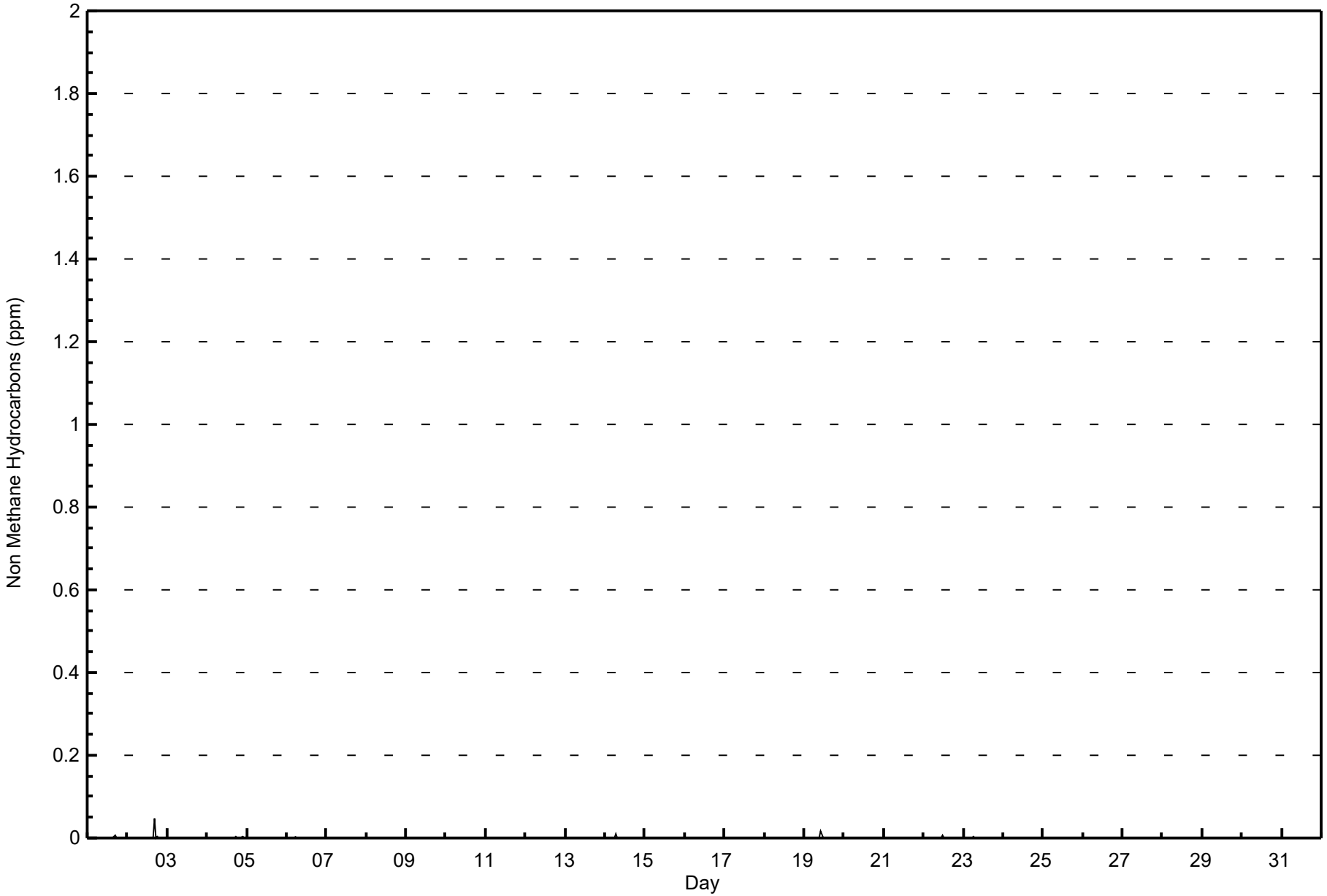
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Anzac - March 2025



Non Methane Hydrocarbons (NMHC) - ppm

Anzac - March 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	701	99.29	99.29
0.006 - 0.05	5	0.71	100.00
0.06 - 0.1	0	0.00	100.00
> 0.1	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Anzac - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.005	56	16	40	31	40	65	75	64	24	15	12	18	47	93	38	67	701
0.006 - 0.05	0	0	0	0	0	0	2	0	0	0	0	0	0	1	2	0	5
0.06 - 0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	56	16	40	31	40	65	77	64	24	15	12	18	47	94	40	67	706

Total Number of Valid Hours: 706

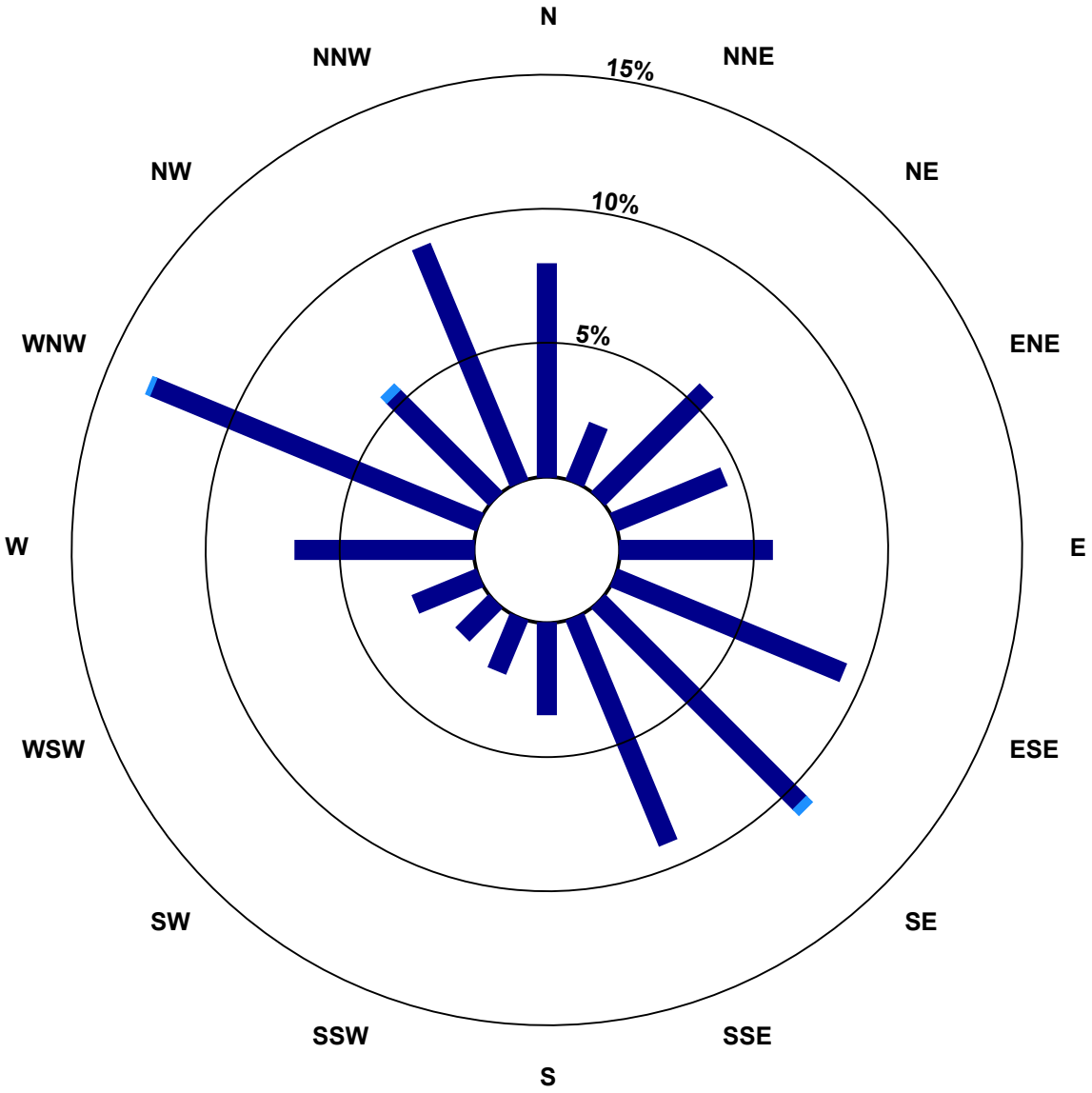
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Non Methane Hydrocarbons (NMHC) - ppm

Anzac



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

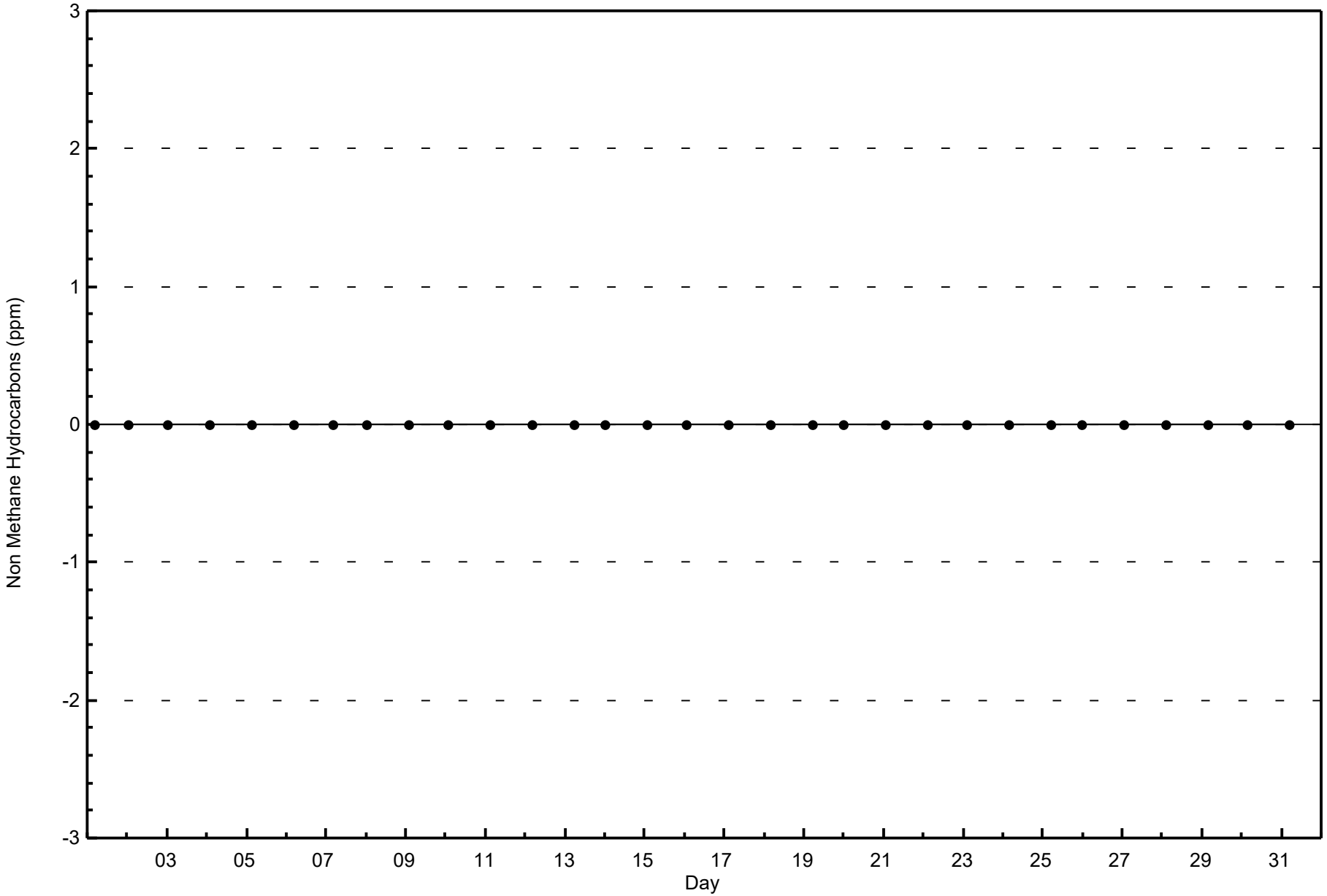
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Anzac - March 2025

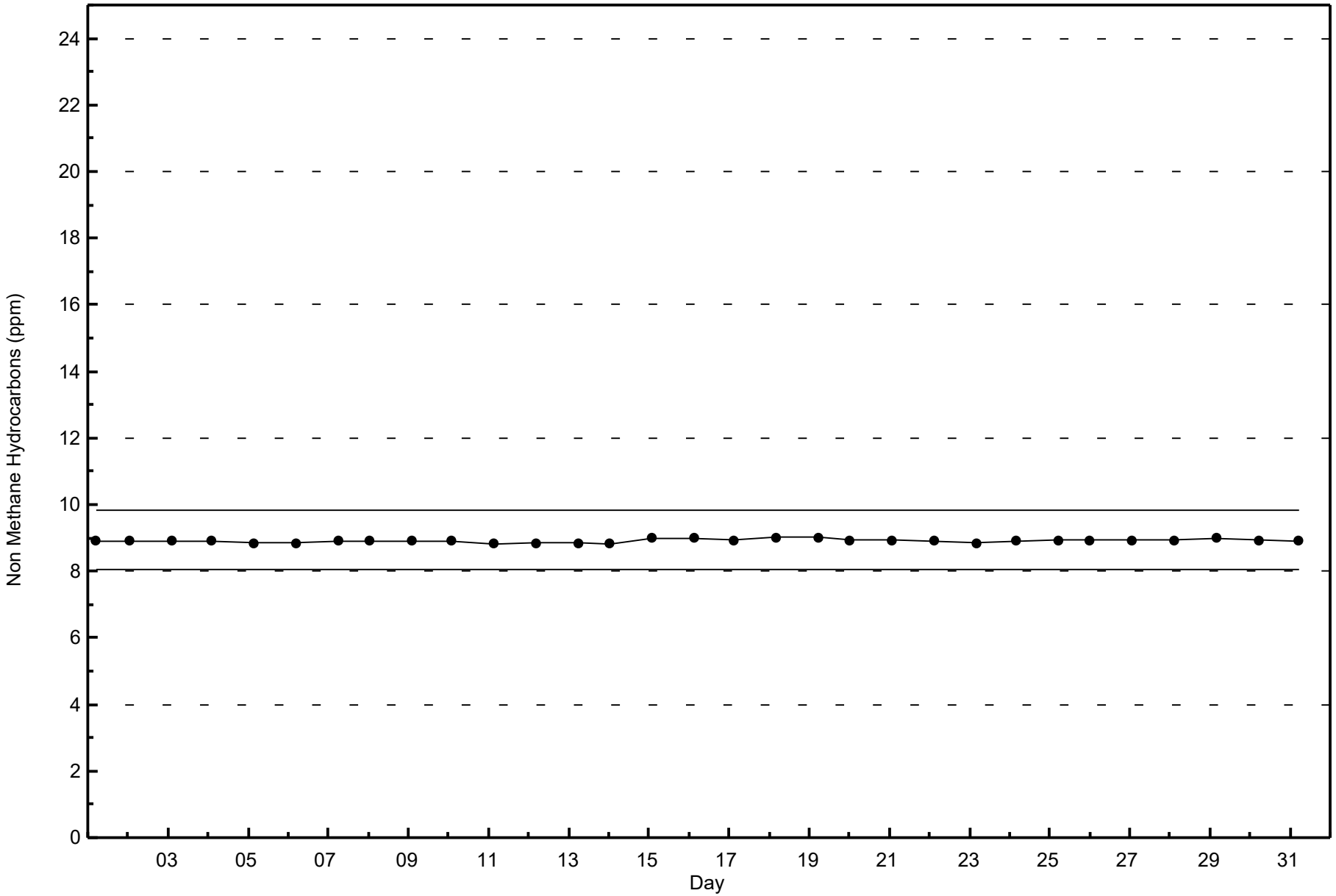


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Anzac - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Anzac - March 2025

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

Maximum Value: 2.4 ppm on Mar 7 07:00

Maximum Daily Average: 2.1 ppm on Mar 19

Minimum Value: 2.0 ppm on Mar 3 17:00

Minimum Daily Average: 2.0 ppm on Mar 4

Maximum Diurnal Average: 2.1 ppm at hour 7

Minimum Diurnal Average: 2.0 ppm at hour 17

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} = 2.3

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	35
Percent Operational Time:	99.6

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	2.3	2.2	2.1	2.2	2.3	Z	2.4	2.4	2.3	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.4
2-Mar	Z	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
3-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	2.1	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
5-Mar	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	2.0	2.0	2.0	2.1	2.0	2.2	2.2	2.0	2.2
6-Mar	2.1	2.1	2.0	2.0	Z	2.3	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	2.0	2.0	2.0	2.0	2.3
7-Mar	2.0	2.0	2.0	2.0	2.1	Z	2.4	2.3	2.3	2.2	2.1	2.1	2.2	2.1	2.0	2.0	2.0	2.1	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.4
8-Mar	Z	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
9-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
11-Mar	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	2.0	2.1
12-Mar	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
13-Mar	2.0	2.1	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
14-Mar	Z	2.0	2.0	2.0	2.0	2.0	2.1	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	2.1	2.0	2.1
15-Mar	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
16-Mar	2.0	2.1	Z	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
17-Mar	2.0	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	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1
18-Mar	2.1	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	2.1	2.1	2.0	2.1
19-Mar	2.0	2.0	2.1	2.3	2.3	Z	2.3	2.3	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.1	2.3
20-Mar	Z	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.1
21-Mar	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	2.1
22-Mar	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.2
23-Mar	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
24-Mar	2.0	2.1	2.2	2.1	Z	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	2.0	2.0	2.0	2.0	2.1	2.3
25-Mar	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
26-Mar	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1
27-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	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
29-Mar	2.0	2.0	2.0	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
30-Mar	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
31-Mar	2.0	2.0	2.0	2.0	2.0	Z	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
	2.0	2.0	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	Diurnal Average	
	2.3	2.2	2.2	2.3	2.3	2.3	2.4	2.4	2.3	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.3	2.3	2.2	2.1	2.2	2.2	Diurnal Maximum	

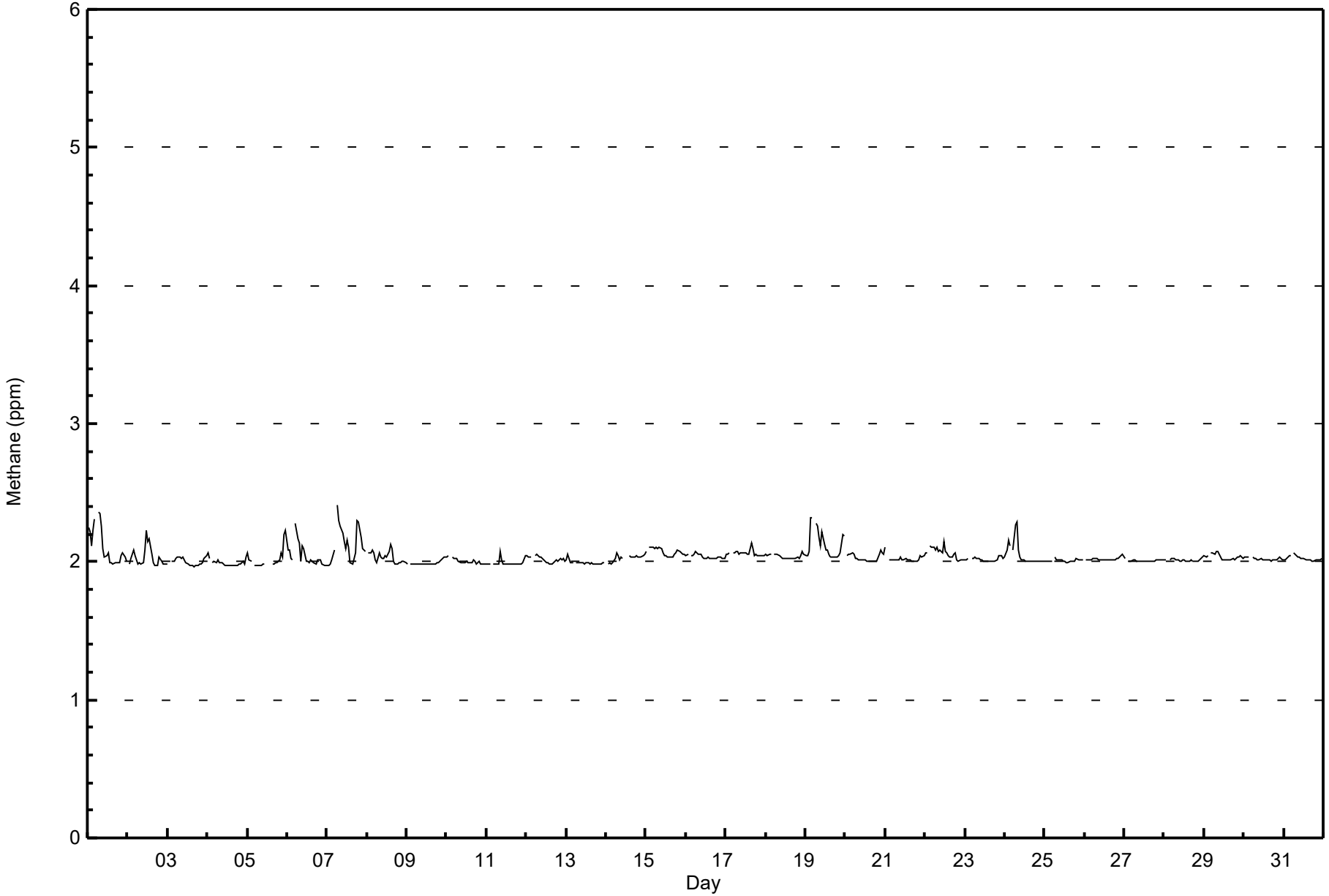
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Anzac - March 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	547	77.48	77.48
2.1 - 3.0	159	22.52	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Anzac - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	46	16	38	30	39	54	57	34	11	6	10	12	37	72	29	56	547
2.1 - 3.0	10	0	2	1	1	11	20	30	13	9	2	6	10	22	11	11	159
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	16	40	31	40	65	77	64	24	15	12	18	47	94	40	67	706

Total Number of Valid Hours: 706

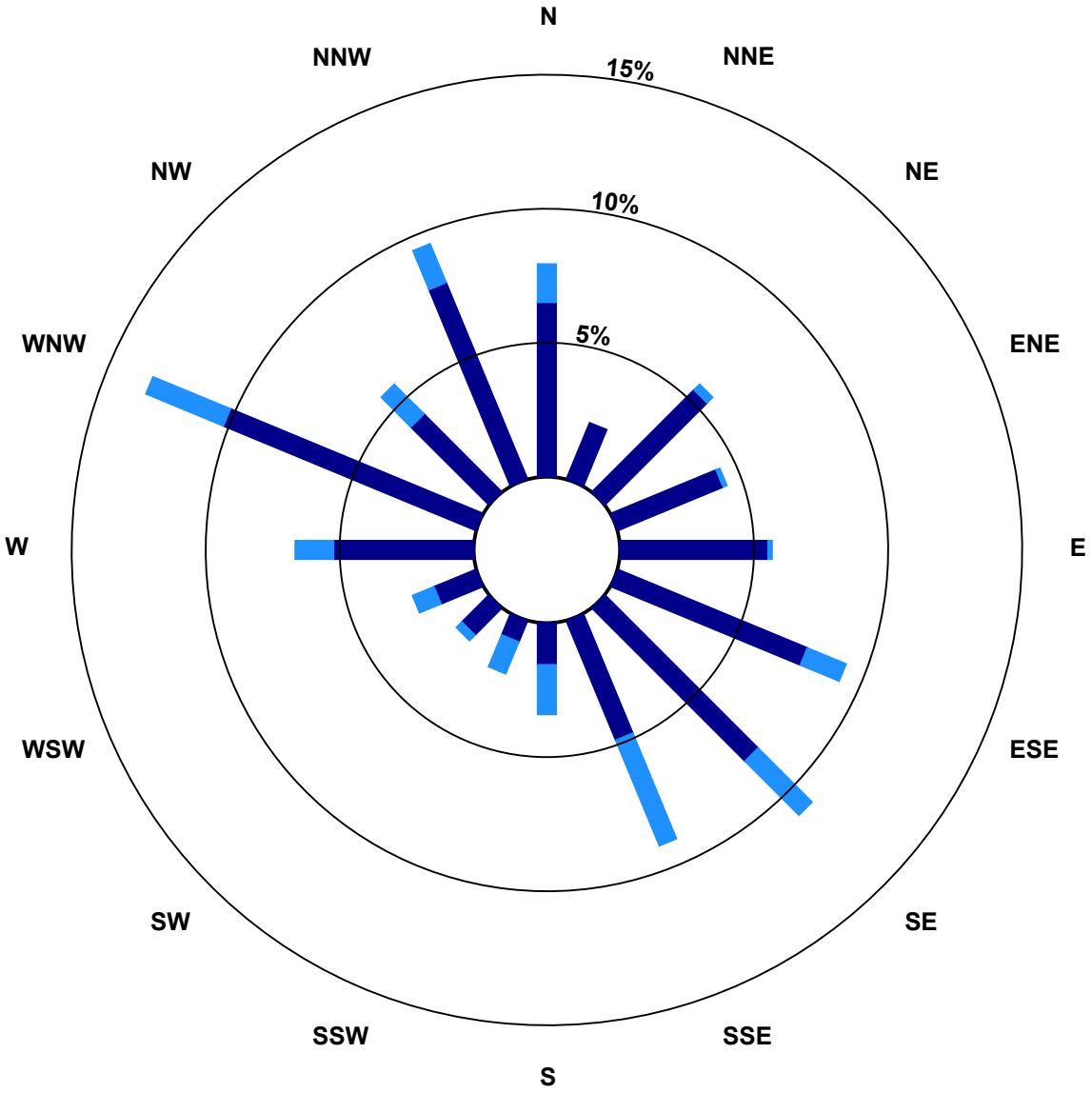
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Methane (CH_4) - ppm

Anzac



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

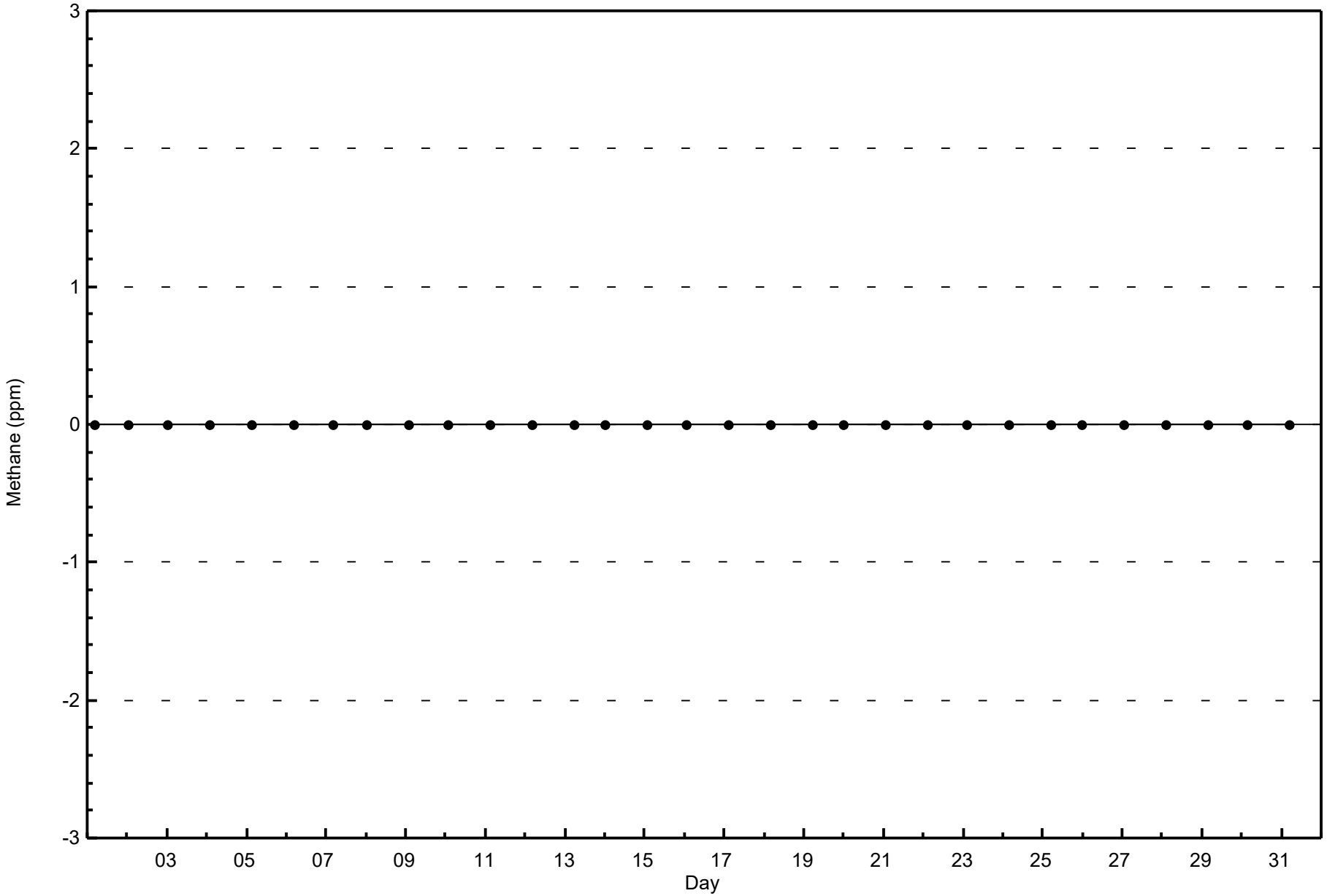
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Anzac - March 2025

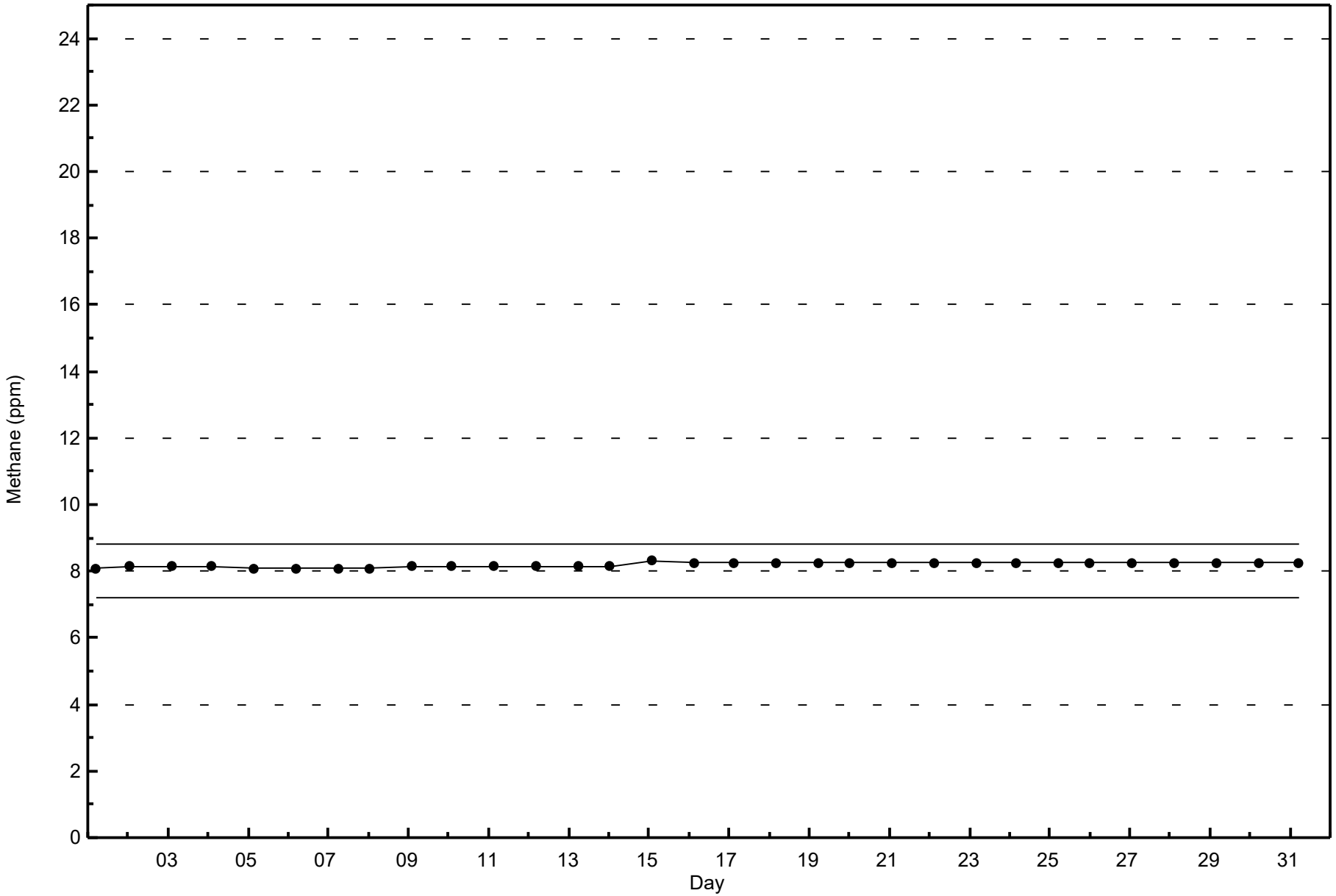


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Anzac - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Anzac - March 2025

Maximum Value: 25.0 ppb on Mar 15 05:00

Maximum Daily Average: 3.9 ppb on Mar 29

Minimum Value: 0.0 ppb on Mar 5 04:00

Minimum Daily Average: 0.0 ppb on Mar 27

Maximum Diurnal Average: 2.1 ppb at hour 5

Minimum Diurnal Average: 0.3 ppb at hour 18

Monthly Average: 0.90 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.2 Q_3 = 0.8 P_{90} = 2.7 P_{99} = 10.4

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.1	0.0	0.0	Z	1.2	2.3	0.5	5.2	1.1	1.6	0.8	0.5	0.8	0.4	0.4	0.2	0.2	0.0	0.0	0.5	0.3	0.5	0.0	4.0	0.9	5.2
2-Mar	13.5	1.7	0.3	0.0	Z	0.2	0.1	0.2	0.2	0.1	1.8	4.1	3.3	4.7	2.7	0.3	0.3	0.1	0.3	0.0	0.0	0.0	0.0	0.0	1.5	13.5
3-Mar	0.0	0.0	0.0	0.1	0.1	Z	0.2	0.2	0.6	0.9	0.9	0.4	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.3	0.1	0.1	0.2	0.9
4-Mar	Z	6.7	1.2	8.7	0.4	0.8	0.1	0.1	0.3	0.4	0.3	0.3	0.2	0.1	0.1	0.2	0.1	0.2	0.0	2.1	0.9	2.5	0.2	0.2	1.1	8.7
5-Mar	0.1	Z	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.3	0.6	0.7	0.9	0.7	0.4	0.2	0.0	0.2	0.2	0.2	0.2	0.7	0.3	0.9
6-Mar	0.0	0.0	Z	3.4	1.0	6.5	5.4	1.9	0.4	1.4	2.0	C	C	C	C	C	3.5	0.1	0.0	0.0	0.0	1.0	0.3	0.3	1.5	6.5
7-Mar	0.4	0.1	0.0	Z	0.2	0.0	0.2	3.1	4.0	5.0	4.2	2.7	4.6	3.5	0.7	0.1	0.5	1.0	2.9	0.9	0.6	0.1	0.1	0.4	1.5	5.0
8-Mar	0.1	0.1	0.0	0.0	Z	0.0	0.5	0.4	0.7	0.8	0.8	1.2	1.3	3.5	4.9	4.4	0.6	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.9	4.9
9-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.4	0.8	0.8	1.0	0.9	0.4	0.0	0.1	0.9	0.1	4.7	0.3	0.3	0.2	0.5	4.7
10-Mar	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.8	0.6	1.0	0.5	0.4	1.2	1.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.2
11-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.4	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	1.0
12-Mar	0.5	0.5	Z	0.6	5.1	1.7	5.1	2.7	2.4	2.9	2.0	1.3	1.1	0.9	0.7	0.8	0.9	1.0	0.1	3.0	0.9	1.1	0.9	0.5	1.6	5.1
13-Mar	0.0	0.0	0.0	Z	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	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.4
14-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.2	0.9	1.4	2.8	3.0	3.4	2.8	1.6	2.7	1.5	0.7	0.3	0.1	0.1	0.0	0.0	0.0	0.2	0.9	3.4
15-Mar	1.1	1.7	2.8	1.3	25.0	Z	0.7	1.4	2.6	2.7	1.4	1.1	1.2	1.1	0.8	0.9	0.9	0.8	2.9	3.6	4.0	0.4	0.0	6.6	2.8	25.0
16-Mar	Z	12.1	8.0	0.1	5.9	0.5	2.1	3.2	0.8	1.3	0.7	0.8	0.9	0.7	0.4	0.2	3.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.8	12.1
17-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.2	3.2	1.6	1.1	0.5	0.5	0.2	0.2	0.5	2.8	1.9	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.6	3.2
18-Mar	0.0	0.2	Z	2.5	1.9	1.9	0.6	1.2	0.6	0.3	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	2.3	10.1	0.8	1.0	10.1
19-Mar	0.4	0.1	0.1	Z	0.6	1.0	8.2	11.7	7.4	4.2	5.2	4.8	5.3	4.5	2.9	1.2	0.6	0.4	0.2	0.0	0.1	0.5	0.6	0.5	2.6	11.7
20-Mar	0.1	0.5	0.8	0.2	Z	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.2
21-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.4	1.5	1.7	0.9	2.2	1.0	0.7	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.2
22-Mar	Z	0.0	0.0	0.3	0.6	1.3	4.4	0.3	0.4	0.6	0.5	0.9	2.5	3.0	2.3	0.6	0.2	0.3	0.1	0.0	0.1	0.2	0.3	0.3	0.8	4.4
23-Mar	0.3	Z	0.2	0.4	1.4	2.2	0.3	0.3	0.2	0.2	0.1	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.1	0.0	0.0	0.0	0.4	2.8
24-Mar	0.0	0.0	Z	0.0	0.2	0.0	0.1	0.7	0.3	0.6	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.0	0.2	0.1	0.1	0.1	0.2	0.7
25-Mar	0.0	0.0	0.2	Z	3.4	10.5	1.1	0.7	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	10.5
26-Mar	0.0	0.0	0.1	0.1	Z	1.0	0.2	0.5	0.7	0.7	0.6	0.7	0.2	0.1	0.1	0.1	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.6
27-Mar	0.0	0.0	0.0	0.0	0.0	Z	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	0.3
28-Mar	Z	0.0	3.3	0.2	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.4	0.8	0.8	0.3	0.0	0.0	0.0	3.7	0.1	1.4	0.5	3.7
29-Mar	1.7	Z	8.3	6.9	6.2	1.7	1.1	2.1	2.1	12.3	1.4	0.4	0.4	0.4	0.5	0.3	0.2	0.2	0.1	0.3	21.3	14.6	7.1	0.6	3.9	21.3
30-Mar	0.1	0.0	Z	0.7	1.8	0.2	0.7	0.3	0.2	0.2	0.3	0.1	0.0	0.2	0.8	0.4	0.2	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.3	1.8
31-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.2	0.2	0.3	0.3	0.4	0.4	0.2	0.2	0.3	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
	0.7	0.9	1.0	1.0	2.1	1.3	1.0	1.3	1.0	1.4	1.0	0.9	1.0	1.0	0.8	0.7	0.6	0.3	0.3	0.5	1.1	0.9	0.7	0.6	Diurnal Average	
	13.5	12.1	8.3	8.7	25.0	10.5	8.2	11.7	7.4	12.3	5.2	4.8	5.3	4.7	4.9	4.4	3.5	2.6	2.9	3.6	21.3	14.6	10.1	6.6	Diurnal Maximum	

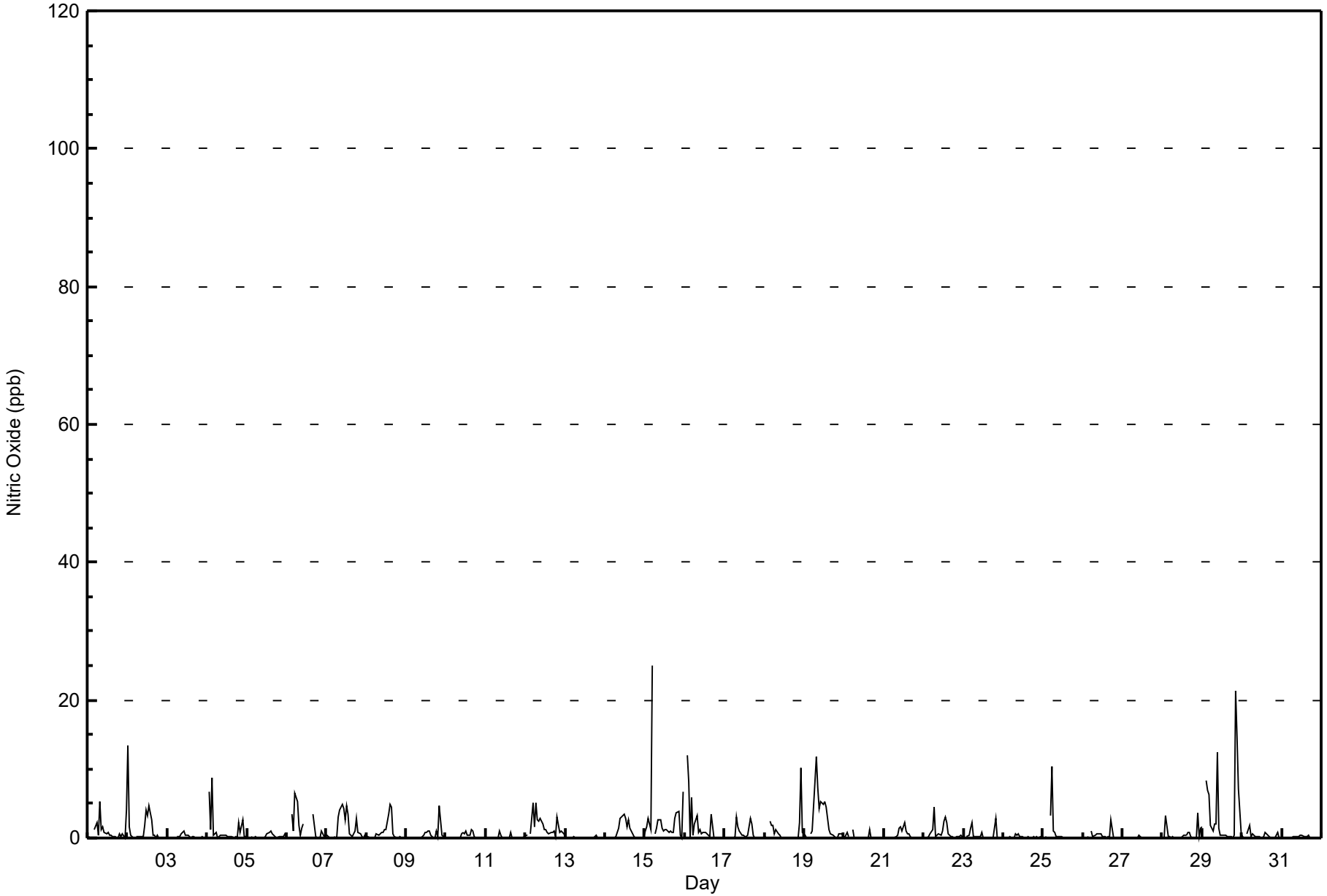
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Anzac - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	706	99.72	99.72
21 - 40	2	0.28	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

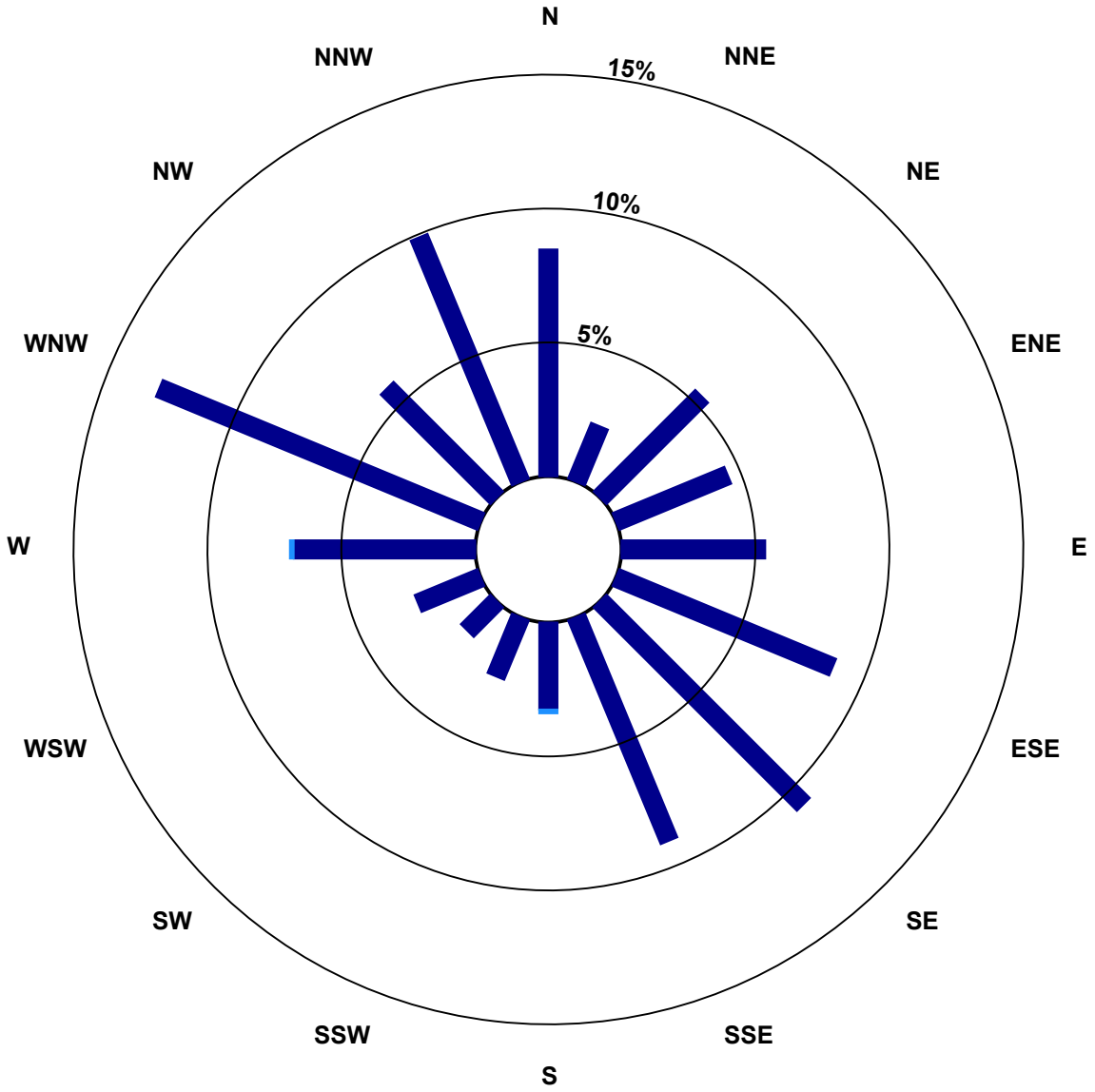
Nitric Oxide (NO) - ppb

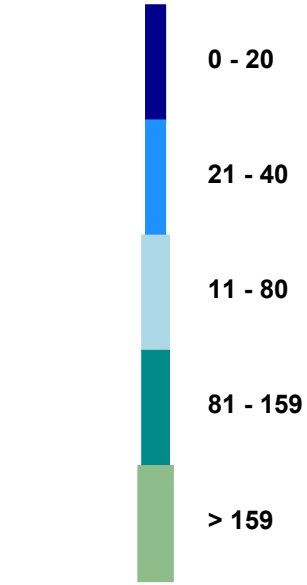
Anzac - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	60	16	38	32	38	62	76	64	23	17	11	18	48	92	41	70	706
21 - 40	0	0	0	0	0	0	0	0	1	0	0	0	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	60	16	38	32	38	62	76	64	24	17	11	18	49	92	41	70	708

Total Number of Valid Hours: 708

Total Number of Hours: 744





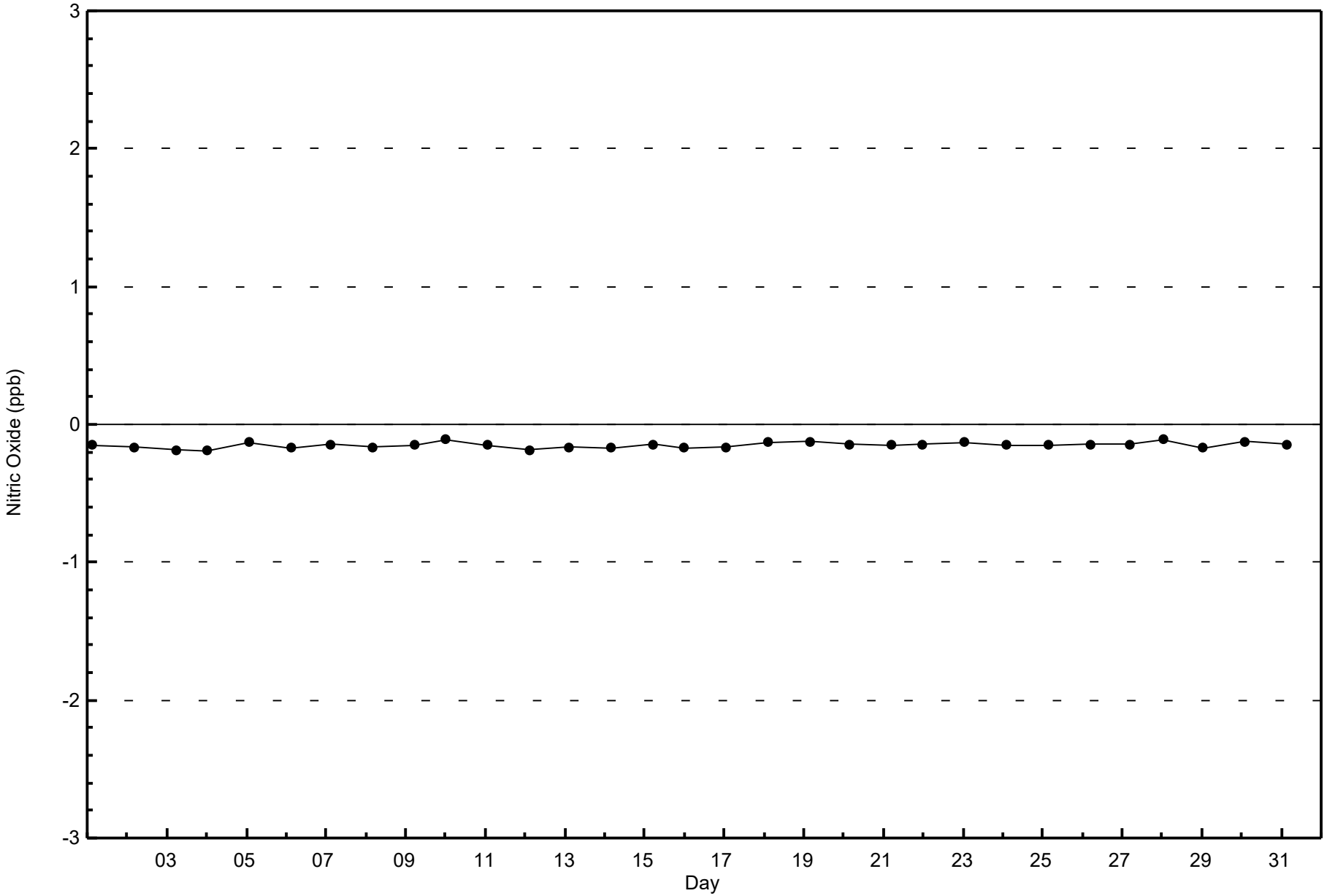
Total Number of Valid Hours: 708

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Anzac - March 2025

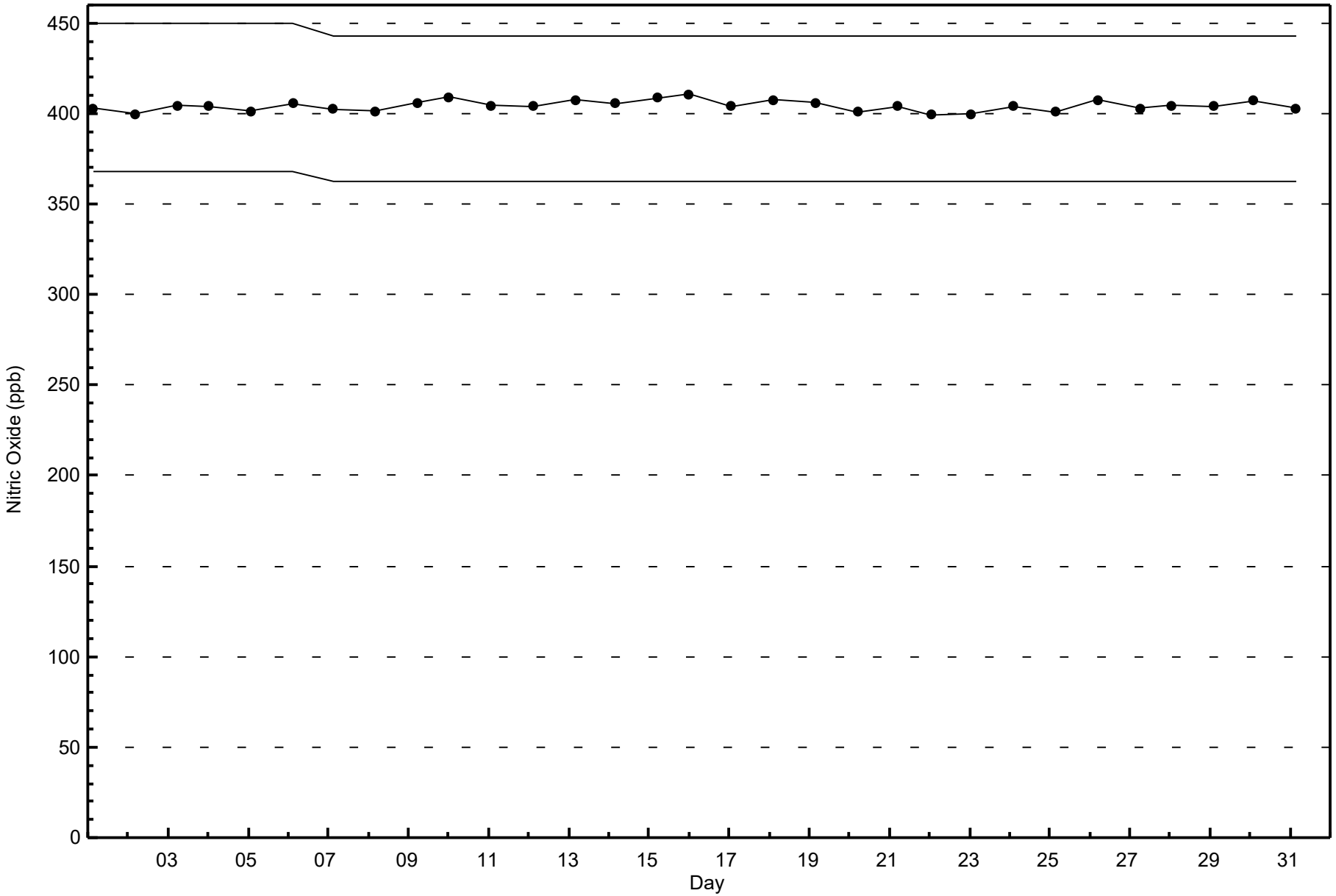


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Anzac - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Anzac - March 2025

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

Maximum Value: 34.5 ppb on Mar 7 19:00

Maximum Daily Average: 11.7 ppb on Mar 7

Minimum Value: 0.2 ppb on Mar 5 07:00

Minimum Daily Average: 0.3 ppb on Mar 27

Maximum Diurnal Average: 6.5 ppb at hour 6

Minimum Diurnal Average: 1.8 ppb at hour 16

Monthly Average: 3.34 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.3$ $Q_1 = 0.8$ Median = 1.8 $Q_3 = 4.2$ $P_{90} = 8.1$ $P_{99} = 22.0$

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	4.1	2.3	2.3	Z	5.6	7.0	5.1	8.8	4.1	4.0	2.2	1.9	2.5	1.7	1.8	1.3	1.2	1.3	1.2	3.3	3.9	4.1	2.8	3.6	3.3	8.8
2-Mar	9.3	3.8	2.3	2.0	Z	3.0	2.1	2.7	1.7	1.1	6.2	11.9	9.2	10.5	6.7	1.8	1.3	1.6	2.4	5.6	2.0	1.0	1.0	1.7	4.0	11.9
3-Mar	1.1	1.2	1.6	1.0	1.6	Z	4.2	3.7	3.4	4.3	4.0	1.7	1.2	0.6	0.5	0.5	0.6	0.4	0.6	1.4	1.5	2.5	2.1	2.4	1.8	4.3
4-Mar	Z	8.6	5.9	9.9	3.4	7.1	2.9	1.9	1.6	1.3	1.1	1.2	0.7	0.7	0.7	1.0	0.8	1.8	1.5	4.2	3.2	5.6	1.5	5.6	3.1	9.9
5-Mar	9.0	Z	4.5	3.2	0.7	1.0	0.2	0.2	0.4	0.4	0.3	0.7	1.5	1.8	2.4	2.3	2.5	3.0	4.4	4.7	4.0	5.0	4.0	5.1	2.7	9.0
6-Mar	2.6	2.2	Z	5.1	3.5	11.3	8.3	5.4	1.6	3.7	3.8	C	C	C	C	C	7.3	2.5	2.6	2.4	2.7	3.3	1.5	1.8	4.0	11.3
7-Mar	2.5	1.5	1.0	Z	6.0	16.5	26.4	20.5	15.1	12.4	9.1	7.0	8.6	6.5	2.1	1.3	4.3	9.1	34.5	29.6	19.6	13.6	12.5	10.0	11.7	34.5
8-Mar	7.7	7.7	7.2	4.8	Z	1.5	3.4	5.9	3.0	2.3	2.6	3.3	2.8	5.9	8.4	8.0	2.6	1.4	0.4	1.1	1.8	1.8	1.8	0.9	3.8	8.4
9-Mar	0.7	0.8	1.0	0.5	0.8	Z	1.4	0.3	0.5	0.5	1.4	1.9	1.6	1.4	1.6	1.0	0.4	0.6	5.5	3.0	6.2	7.7	8.0	8.1	2.4	8.1
10-Mar	Z	7.7	8.5	8.9	7.1	6.0	5.6	1.2	0.4	1.2	1.3	1.1	1.6	1.0	1.0	2.9	3.8	2.0	1.1	1.7	0.7	0.2	0.2	0.2	2.8	8.9
11-Mar	0.9	Z	0.4	0.3	1.9	0.4	0.2	0.3	3.7	1.2	0.4	0.4	0.4	0.4	0.4	0.6	0.3	0.3	0.3	0.3	0.2	0.2	0.7	9.5	1.0	9.5
12-Mar	8.6	7.8	Z	7.8	13.5	10.7	14.8	9.4	6.5	5.7	3.4	2.0	1.7	1.4	1.4	1.8	3.2	6.3	6.8	8.6	8.7	8.2	7.8	4.0	6.5	14.8
13-Mar	2.2	2.5	0.5	Z	0.3	0.5	0.4	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.6	0.3	0.2	0.2	0.2	0.2	0.5	2.5
14-Mar	0.2	0.2	0.2	0.2	Z	5.1	9.9	7.6	5.0	6.0	4.3	4.1	3.1	2.1	3.7	2.9	2.9	2.6	3.5	4.4	4.5	3.2	4.4	5.8	3.7	9.9
15-Mar	8.6	10.7	11.8	11.0	30.1	Z	8.9	7.3	6.9	4.8	2.7	2.1	2.4	2.0	1.7	2.0	3.1	4.7	9.5	18.6	11.6	6.0	3.7	9.3	7.8	30.1
16-Mar	Z	9.4	7.8	2.8	10.0	2.9	3.6	4.4	2.2	2.5	1.5	1.6	1.5	1.4	1.0	0.8	1.3	1.2	1.5	1.5	1.3	3.4	2.0	1.0	2.9	10.0
17-Mar	2.3	Z	2.3	2.7	2.4	2.0	2.9	6.1	3.3	2.9	1.8	1.6	1.2	1.3	1.7	8.4	9.5	3.7	3.0	3.2	3.2	2.8	2.3	2.2	3.2	9.5
18-Mar	3.0	3.2	Z	6.0	6.9	6.7	5.5	6.0	2.6	1.2	0.6	0.5	0.5	0.6	0.6	0.7	0.7	0.7	1.0	2.7	0.9	5.9	8.9	6.7	3.1	8.9
19-Mar	4.0	2.0	4.8	Z	27.8	30.5	29.7	22.1	12.6	7.0	7.8	6.8	7.5	6.9	5.3	3.5	3.0	3.7	5.8	3.2	3.6	5.2	19.1	16.4	10.4	30.5
20-Mar	11.8	4.2	5.0	3.6	Z	7.1	0.6	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.9	0.2	0.2	0.2	0.3	1.2	3.0	5.0	4.6	2.2	11.8
21-Mar	5.2	0.3	0.4	0.4	0.4	Z	1.1	0.9	1.3	2.7	1.9	1.7	3.2	1.7	1.5	1.7	0.7	0.5	0.5	0.3	1.9	1.9	1.6	2.1	1.5	5.2
22-Mar	Z	2.9	3.5	3.8	4.0	4.0	5.7	2.5	2.2	2.2	2.2	3.2	5.2	5.8	4.9	2.4	2.1	2.7	3.1	1.3	1.1	1.2	1.5	1.1	3.0	5.8
23-Mar	1.3	Z	2.4	2.1	5.6	15.1	4.8	1.7	0.9	0.9	0.8	1.2	0.5	0.4	0.4	0.4	0.4	0.5	0.7	1.6	1.7	1.9	1.8	1.1	2.1	15.1
24-Mar	0.7	3.3	Z	3.3	3.0	1.7	4.0	5.2	1.8	1.9	1.2	1.1	0.8	0.9	0.8	1.1	0.8	1.2	1.5	0.8	1.2	0.7	0.8	0.8	1.7	5.2
25-Mar	0.9	0.9	1.3	Z	4.5	10.9	6.1	3.4	1.0	0.8	0.8	0.7	0.5	0.4	0.4	0.4	0.5	0.5	0.5	2.2	1.2	0.6	0.6	0.6	1.7	10.9
26-Mar	1.3	1.4	1.9	0.9	Z	2.1	2.3	2.1	1.9	1.6	1.4	1.1	0.7	0.6	0.5	0.6	0.6	1.3	0.4	2.5	3.4	4.8	4.2	4.9	1.8	4.9
27-Mar	1.8	0.3	0.3	0.3	0.2	Z	0.3	0.3	0.3	0.3	0.5	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	1.8
28-Mar	Z	0.3	6.5	1.3	1.2	0.7	1.0	0.4	0.3	0.2	0.2	0.2	0.5	0.8	0.8	1.7	2.9	1.7	0.8	0.5	0.2	6.3	2.5	7.0	1.7	7.0
29-Mar	11.7	Z	8.1	11.7	15.3	9.5	7.6	6.7	5.7	8.9	2.4	1.0	1.1	1.2	1.2	1.1	1.2	1.4	1.3	2.5	15.4	14.2	10.6	2.5	6.2	15.4
30-Mar	2.2	1.8	Z	4.6	9.2	3.3	2.1	1.8	0.9	0.8	1.0	0.6	0.6	1.0	2.0	1.6	1.2	0.8	0.5	0.5	0.6	2.6	1.4	0.7	1.8	9.2
31-Mar	0.5	0.6	0.8	Z	1.5	1.4	1.4	1.8	1.6	1.6	1.4	1.4	1.3	1.0	1.2	0.9	1.3	0.7	0.6	0.7	0.6	0.6	1.0	1.6	1.1	1.8
	4.0	3.4	3.6	3.9	6.4	6.5	5.6	4.6	3.0	2.7	2.2	2.1	2.1	2.0	1.9	1.8	2.0	1.9	3.1	3.7	3.5	3.8	3.7	3.9	Diurnal Average	
	11.8	10.7	11.8	11.7	30.1	30.5	29.7	22.1	15.1	12.4	9.1	11.9	9.2	10.5	8.4	8.4	9.5	9.1	34.5	29.6	19.6	14.2	19.1	16.4	Diurnal Maximum	

Z - zerospan C - Calibration

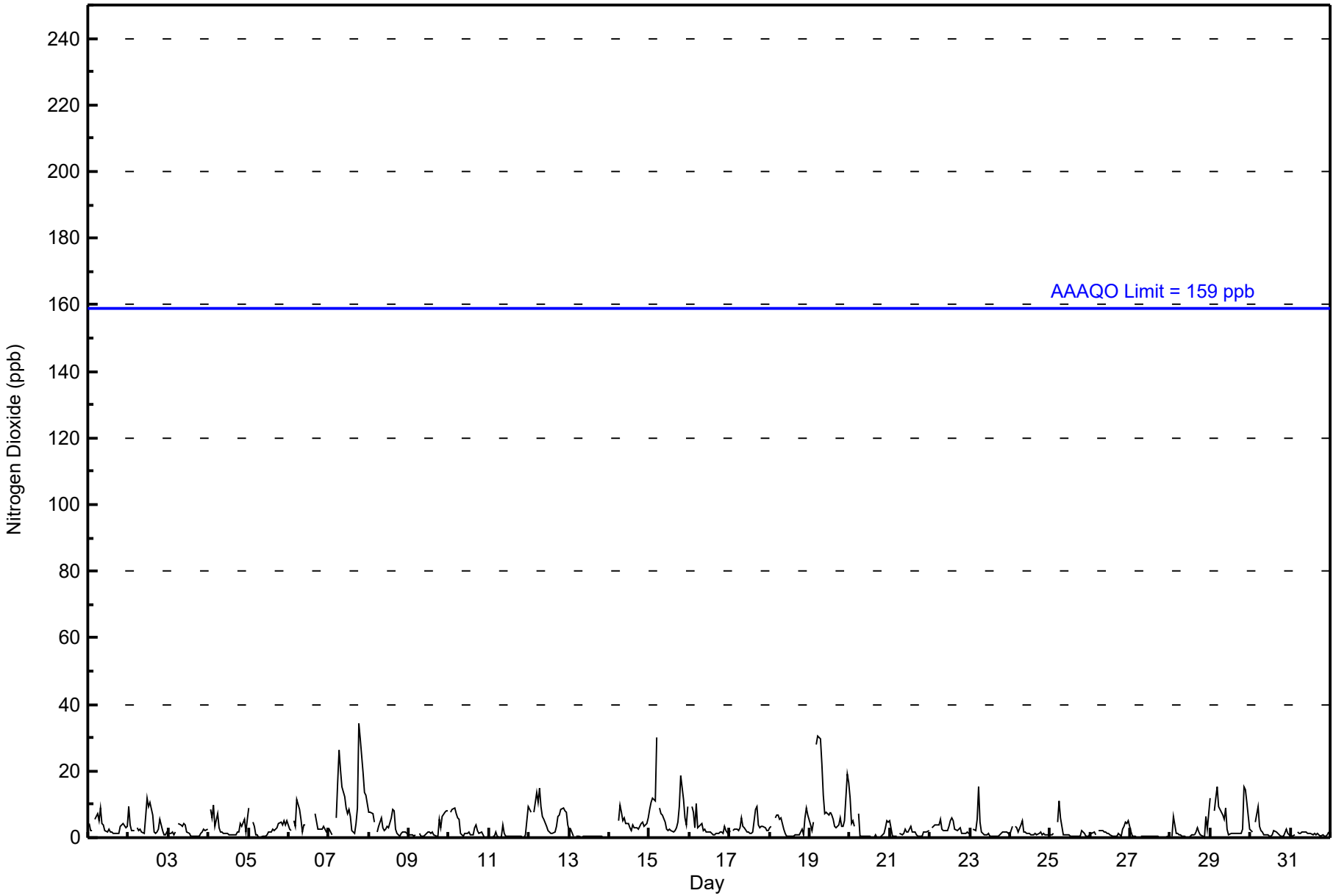
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Anzac - March 2025



Nitrogen Dioxide (NO_2) - ppb
Anzac - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	699	98.73	98.73
21 - 40	9	1.27	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Anzac - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	59	16	38	32	38	62	76	64	24	17	11	18	47	88	39	70	699
21 - 40	1	0	0	0	0	0	0	0	0	0	0	0	2	4	2	0	9
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	60	16	38	32	38	62	76	64	24	17	11	18	49	92	41	70	708

Total Number of Valid Hours: 708

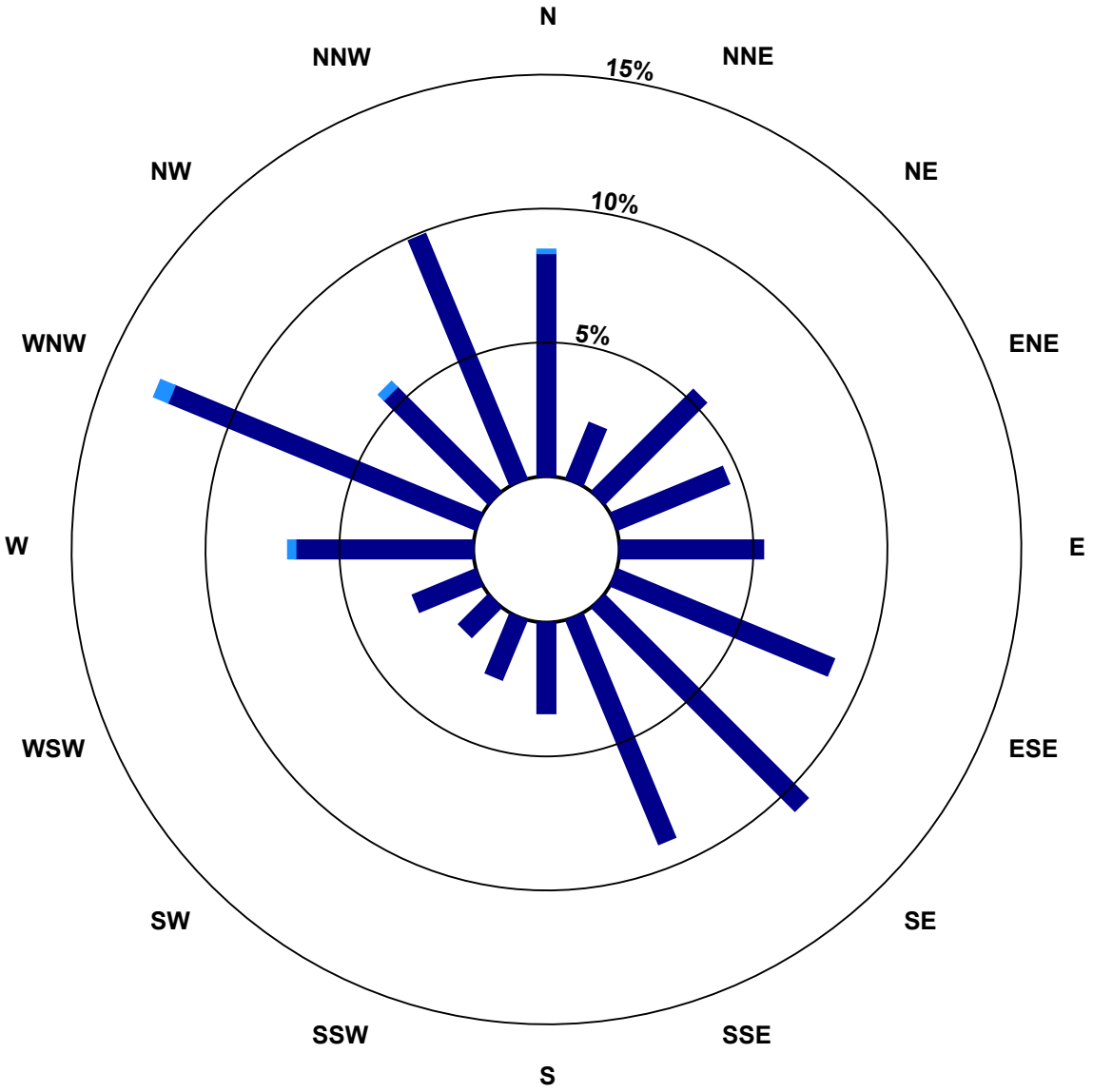
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Dioxide (NO_2) - ppb

Anzac



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

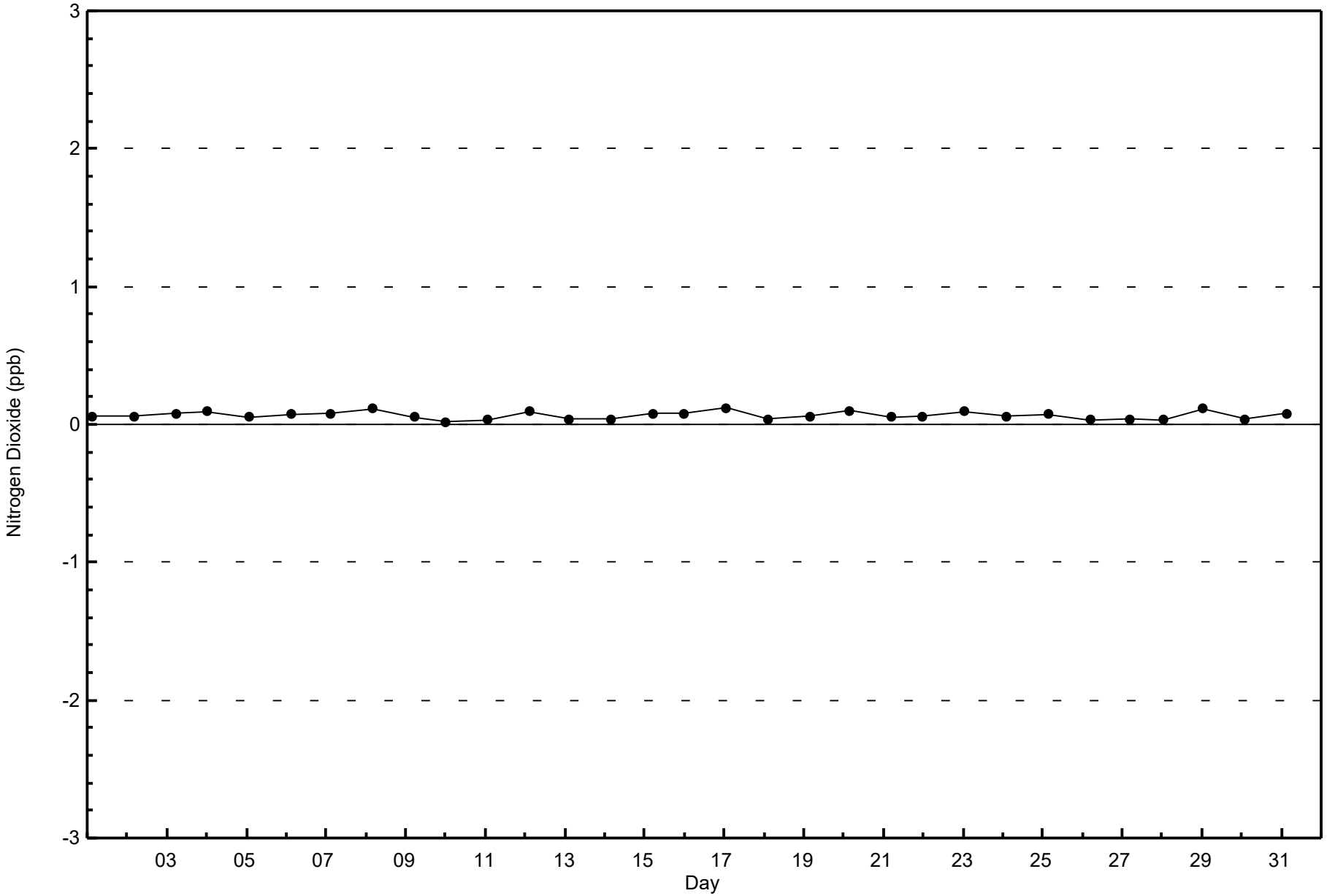
Total Number of Valid Hours: 708

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Anzac - March 2025

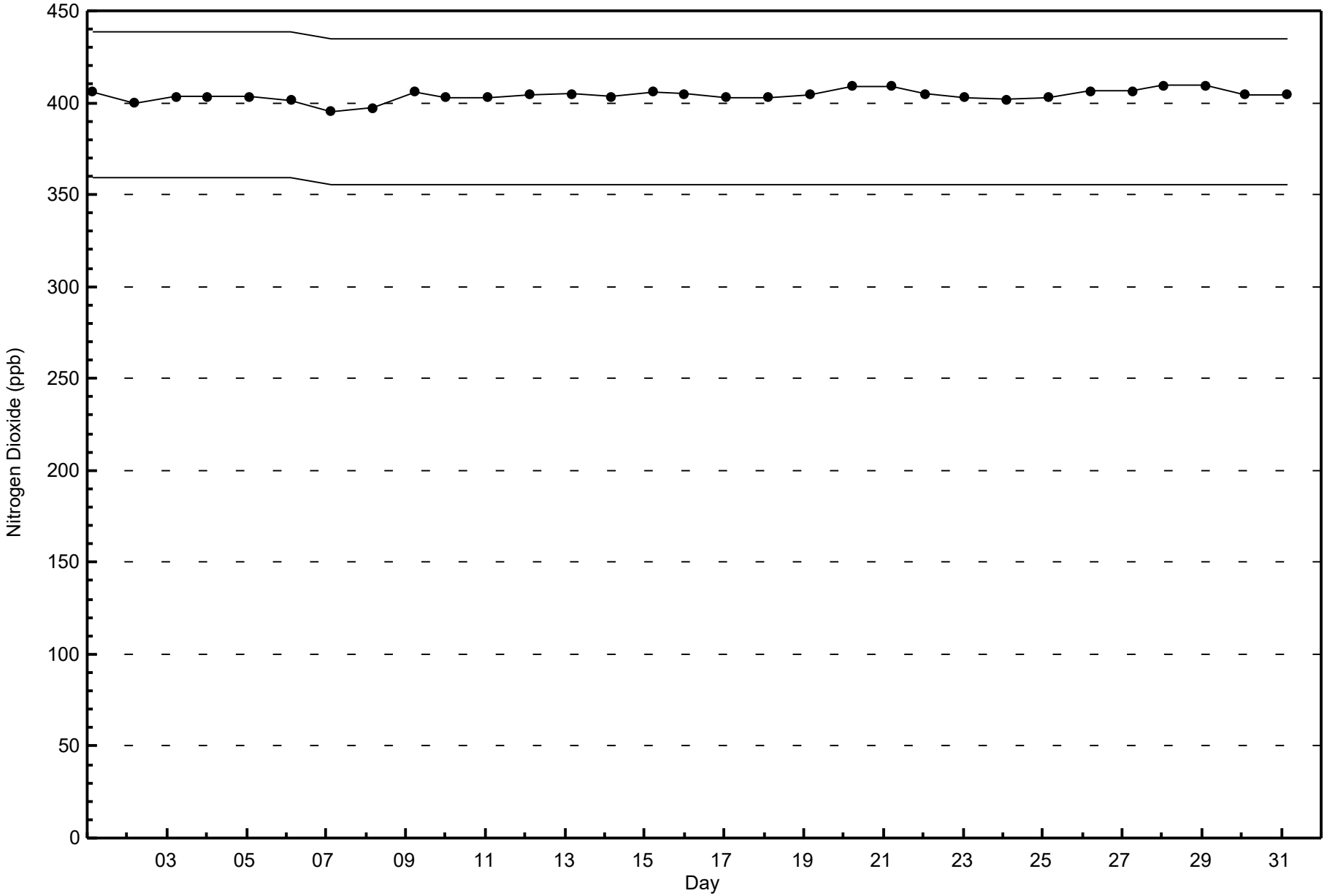


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Anzac - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Anzac - March 2025

Maximum Value: 55.1 ppb on Mar 15 05:00

Maximum Daily Average: 13.3 ppb on Mar 7

Minimum Value: 0.2 ppb on Mar 14 03:00

Minimum Daily Average: 0.4 ppb on Mar 27

Maximum Diurnal Average: 8.5 ppb at hour 5

Minimum Diurnal Average: 2.2 ppb at hour 18

Monthly Average: 4.24 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.3$ $Q_1 = 0.9$ Median = 2.2 $Q_3 = 4.9$ $P_{90} = 10.1$ $P_{99} = 28.8$

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	4.2	2.3	2.3	Z	6.8	9.3	5.6	14.0	5.2	5.6	3.0	2.4	3.3	2.1	2.2	1.5	1.4	1.3	1.2	3.8	4.2	4.6	2.8	7.6	4.2	14.0
2-Mar	22.8	5.5	2.6	2.0	Z	3.2	2.2	2.9	1.9	1.2	8.0	16.0	12.5	15.2	9.4	2.1	1.6	1.7	2.7	5.6	2.0	1.0	1.0	1.7	5.4	22.8
3-Mar	1.1	1.2	1.6	1.1	1.7	Z	4.4	3.9	4.0	5.2	4.9	2.1	1.5	0.7	0.6	0.6	0.7	0.4	0.6	1.5	1.5	2.8	2.2	2.5	2.0	5.2
4-Mar	Z	15.3	7.1	18.6	3.8	7.9	3.0	2.0	1.9	1.7	1.4	1.5	0.9	0.8	0.8	1.2	0.9	2.0	1.5	6.3	4.1	8.1	1.7	5.8	4.3	18.6
5-Mar	9.1	Z	4.7	3.2	0.7	1.2	0.2	0.2	0.4	0.4	0.4	1.0	2.1	2.5	3.3	3.0	2.9	3.2	4.4	4.9	4.2	5.2	4.2	5.8	2.9	9.1
6-Mar	2.6	2.2	Z	8.5	4.5	17.8	13.7	7.3	2.0	5.1	5.8	C	C	C	C	C	10.8	2.6	2.6	2.4	2.7	4.3	1.8	2.1	5.5	17.8
7-Mar	2.9	1.6	1.0	Z	6.2	16.5	26.6	23.6	19.1	17.4	13.3	9.7	13.2	10.0	2.8	1.4	4.8	10.1	37.4	30.5	20.2	13.7	12.6	10.4	13.3	37.4
8-Mar	7.8	7.8	7.2	4.8	Z	1.5	3.9	6.3	3.7	3.1	3.4	4.5	4.1	9.4	13.3	12.4	3.2	1.5	0.4	1.1	1.9	1.8	1.8	0.9	4.6	13.3
9-Mar	0.7	0.8	1.0	0.5	0.8	Z	1.4	0.3	0.5	0.5	1.8	2.7	2.4	2.4	2.5	1.4	0.4	0.7	6.4	3.1	10.9	8.0	8.3	8.3	2.9	10.9
10-Mar	Z	7.8	8.6	8.9	7.1	6.0	5.6	1.2	0.4	1.7	2.1	1.7	2.6	1.5	1.4	4.1	4.8	2.1	1.1	1.7	0.7	0.2	0.2	0.2	3.1	8.9
11-Mar	0.9	Z	0.4	0.3	1.9	0.4	0.2	0.3	4.7	1.6	0.4	0.4	0.4	0.4	0.4	1.5	0.3	0.3	0.3	0.3	0.2	0.2	0.7	9.8	1.1	9.8
12-Mar	9.1	8.3	Z	8.4	18.6	12.4	19.9	12.1	8.9	8.6	5.4	3.3	2.8	2.3	2.1	2.6	4.1	7.3	6.9	11.6	9.6	9.3	8.7	4.5	8.1	19.9
13-Mar	2.2	2.5	0.5	Z	0.3	0.8	0.4	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	1.0	0.3	0.2	0.2	0.2	0.2	0.5	2.5
14-Mar	0.2	0.2	0.2	0.2	Z	5.1	10.1	8.5	6.4	8.8	7.3	7.5	5.9	3.7	6.4	4.4	3.6	2.9	3.6	4.5	4.5	3.2	4.4	6.0	4.7	10.1
15-Mar	9.7	12.4	14.6	12.3	55.1	Z	9.6	8.7	9.5	7.5	4.1	3.2	3.6	3.1	2.5	2.9	4.0	5.5	12.4	22.2	15.6	6.4	3.7	15.9	10.6	55.1
16-Mar	Z	21.5	15.8	2.9	15.9	3.4	5.7	7.6	3.0	3.8	2.2	2.4	2.4	2.1	1.4	1.0	4.7	1.3	1.5	1.5	1.3	3.4	2.0	1.0	4.7	21.5
17-Mar	2.3	Z	2.3	2.7	2.4	2.0	3.1	9.3	4.9	4.0	2.3	2.1	1.4	1.5	2.2	11.2	11.4	4.0	3.0	3.2	3.2	2.8	2.3	2.2	3.7	11.4
18-Mar	3.0	3.4	Z	8.5	8.8	8.6	6.1	7.2	3.2	1.5	0.7	0.6	0.6	0.7	0.7	0.7	0.7	0.7	1.0	2.7	0.9	8.2	19.0	7.5	4.1	19.0
19-Mar	4.4	2.1	4.9	Z	28.4	31.5	37.9	33.8	20.0	11.2	13.0	11.6	12.8	11.4	8.2	4.7	3.6	4.1	6.0	3.2	3.7	5.7	19.7	16.9	13.0	37.9
20-Mar	11.9	4.7	5.8	3.8	Z	8.3	0.6	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	2.1	0.2	0.2	0.2	0.3	1.2	3.0	5.0	4.6	2.4	11.9
21-Mar	5.2	0.3	0.4	0.4	0.4	Z	1.2	1.0	1.7	4.2	3.6	2.6	5.4	2.7	2.2	2.3	0.8	0.5	0.5	0.3	1.9	1.9	1.6	2.1	1.9	5.4
22-Mar	Z	2.9	3.5	4.1	4.6	5.3	10.1	2.8	2.6	2.8	2.7	4.1	7.7	8.8	7.2	3.0	2.3	3.0	3.2	1.3	1.2	1.4	1.8	1.4	3.8	10.1
23-Mar	1.6	Z	2.6	2.5	7.0	17.3	5.1	2.0	1.1	1.1	0.9	2.0	0.5	0.4	0.4	0.4	0.4	0.5	0.7	4.4	1.8	1.9	1.8	1.1	2.5	17.3
24-Mar	0.7	3.3	Z	3.3	3.2	1.7	4.1	5.9	2.1	2.5	1.4	1.3	0.9	1.0	0.9	1.2	0.9	1.3	1.7	0.8	1.4	0.8	0.9	0.9	1.8	5.9
25-Mar	0.9	0.9	1.5	Z	7.9	21.4	7.2	4.1	1.2	1.0	1.0	0.8	0.6	0.5	0.5	0.4	0.5	0.5	0.5	2.2	1.2	0.6	0.6	0.6	2.5	21.4
26-Mar	1.3	1.4	2.0	1.0	Z	3.1	2.5	2.6	2.6	2.3	2.0	1.8	0.9	0.7	0.6	0.7	0.6	3.9	0.4	2.5	3.4	4.8	4.2	4.9	2.2	4.9
27-Mar	1.8	0.3	0.3	0.3	0.2	Z	0.3	0.3	0.3	0.3	0.8	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	0.4	1.8
28-Mar	Z	0.3	9.8	1.5	1.4	0.7	1.1	0.4	0.3	0.2	0.2	0.2	0.7	1.2	1.2	2.5	3.7	2.0	0.8	0.5	0.2	10.0	2.6	8.4	2.2	10.0
29-Mar	13.4	Z	16.4	18.6	21.5	11.2	8.7	8.8	7.8	21.2	3.8	1.4	1.5	1.6	1.7	1.4	1.4	1.6	1.4	2.8	36.7	28.8	17.7	3.1	10.1	36.7
30-Mar	2.3	1.8	Z	5.3	11.0	3.5	2.8	2.1	1.1	1.0	1.3	0.7	0.6	1.2	2.8	2.0	1.4	0.8	0.5	0.5	0.6	3.3	1.4	0.7	2.1	11.0
31-Mar	0.5	0.6	0.8	Z	1.5	1.4	1.5	2.0	1.8	1.9	1.7	1.8	1.7	1.2	1.4	1.2	1.7	0.8	0.6	0.7	0.6	0.6	1.0	1.6	1.2	2.0
	4.7	4.3	4.5	4.9	8.5	7.7	6.6	5.9	4.0	4.1	3.2	3.0	3.1	3.0	2.7	2.5	2.5	2.2	3.4	4.1	4.6	4.7	4.4	4.5	Diurnal Average	
	22.8	21.5	16.4	18.6	55.1	31.5	37.9	33.8	20.0	21.2	13.3	16.0	13.2	15.2	13.3	12.4	11.4	10.1	37.4	30.5	36.7	28.8	19.7	16.9	Diurnal Maximum	

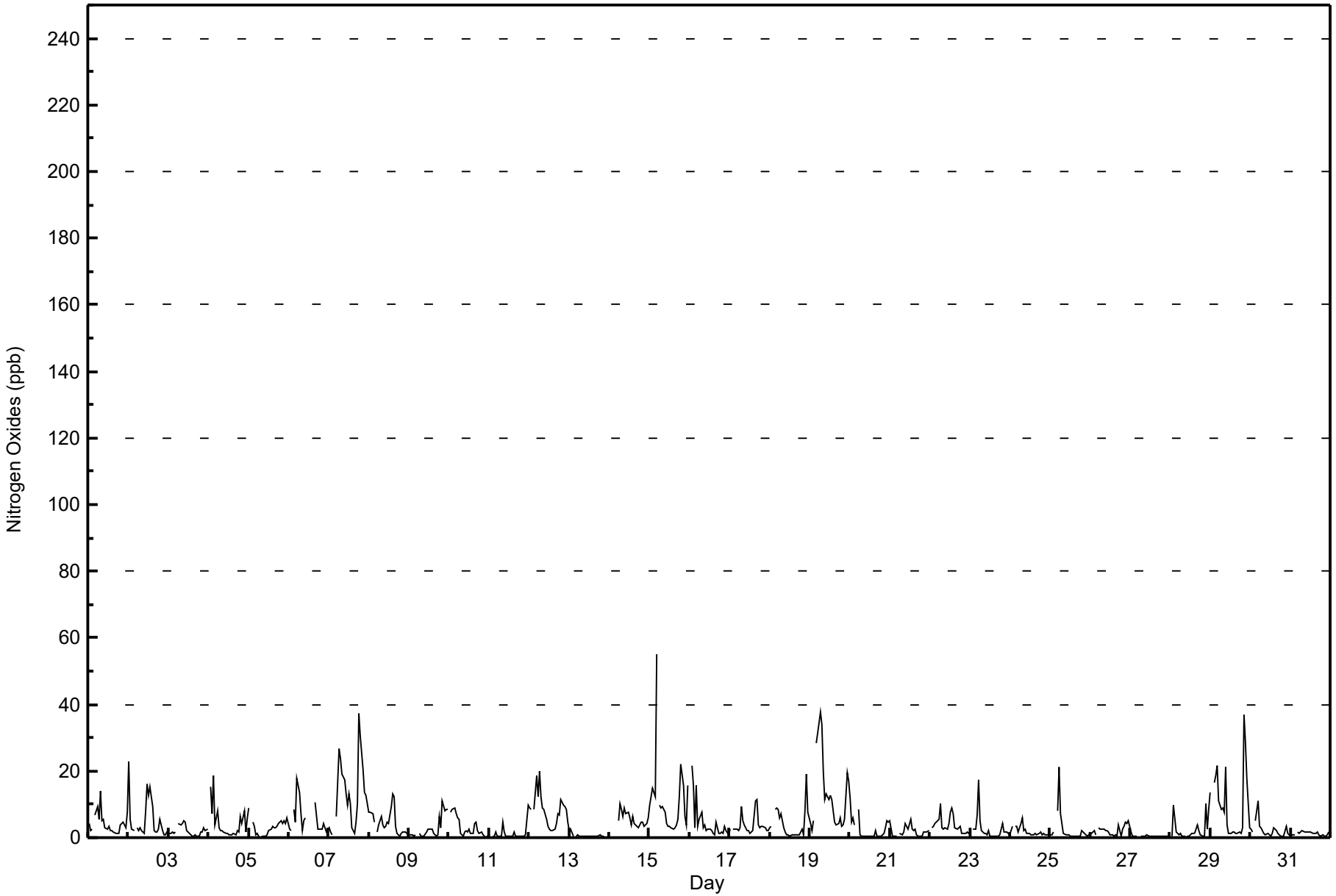
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Anzac - March 2025



Nitrogen Oxides (NO_X) - ppb
Anzac - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	691	97.60	97.60
21 - 40	16	2.26	99.86
11 - 80	1	0.14	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Anzac - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	58	16	38	32	38	62	76	64	22	15	10	18	46	87	39	70	691
21 - 40	2	0	0	0	0	0	0	0	2	2	1	0	2	5	2	0	16
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	60	16	38	32	38	62	76	64	24	17	11	18	49	92	41	70	708

Total Number of Valid Hours: 708

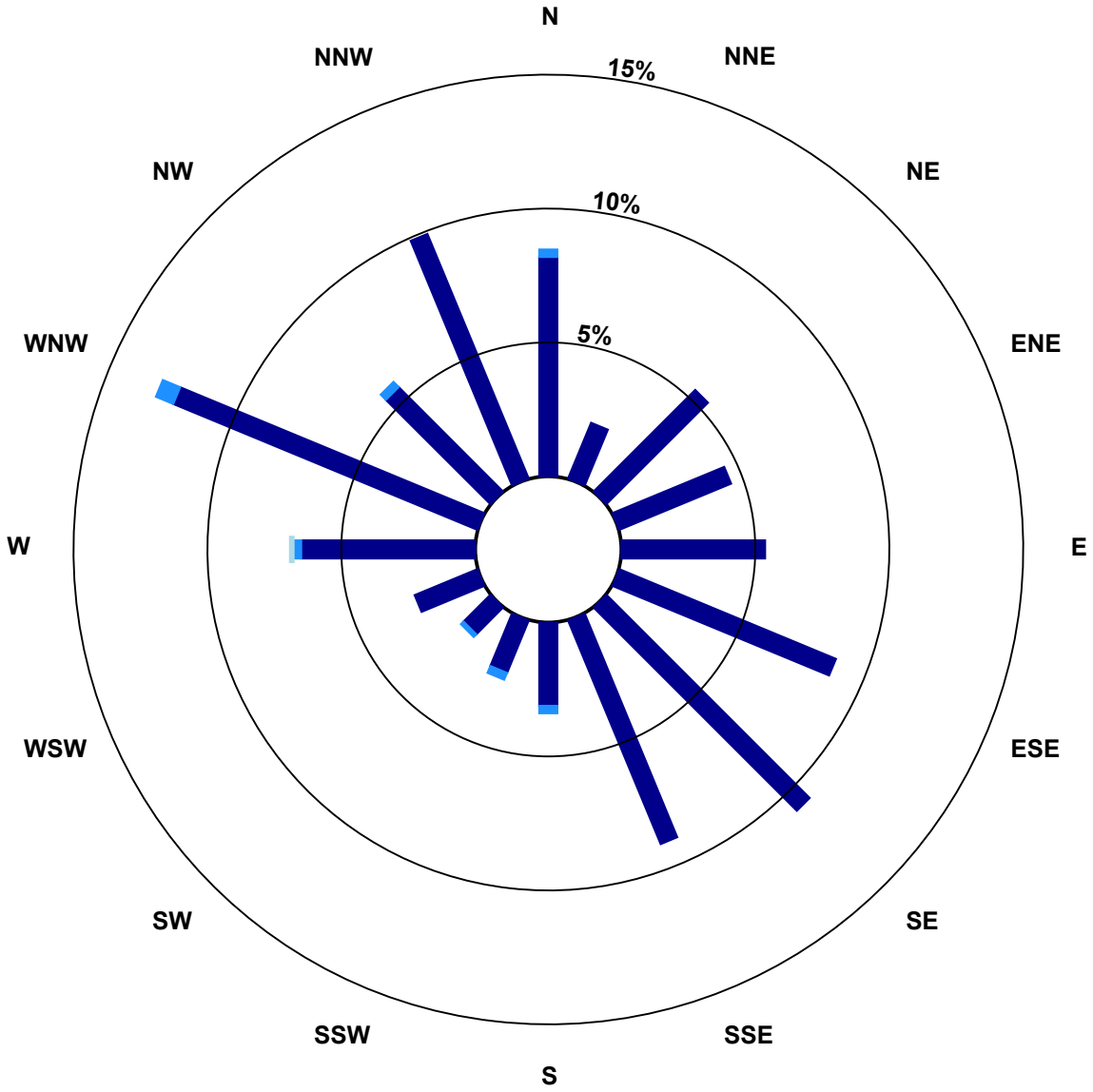
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Oxides (NO_X) - ppb

Anzac



Classes (ppb)

- 0 - 20
- 21 - 40
- 11 - 80
- 81 - 159
- > 159

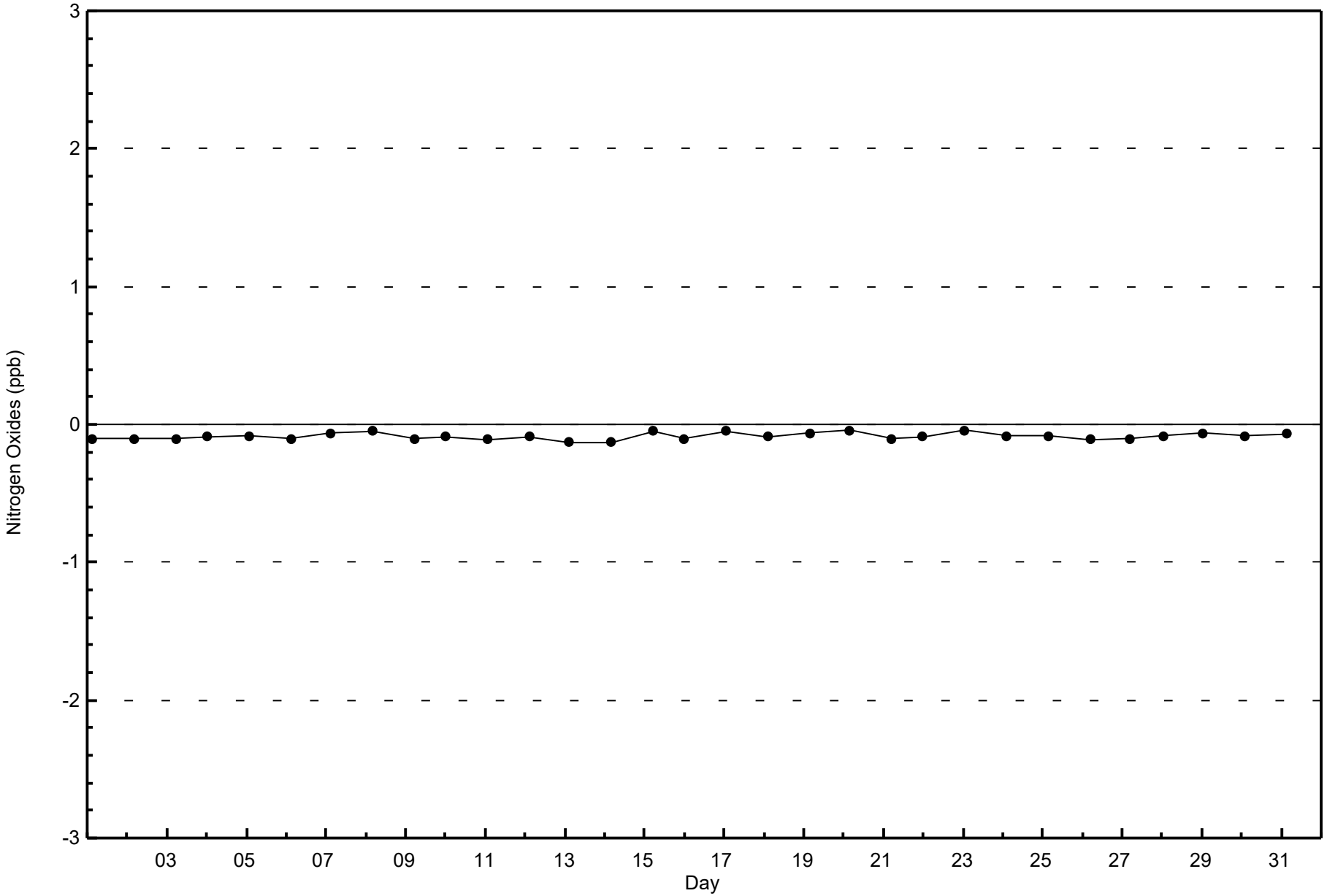
Total Number of Valid Hours: 708

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Anzac - March 2025

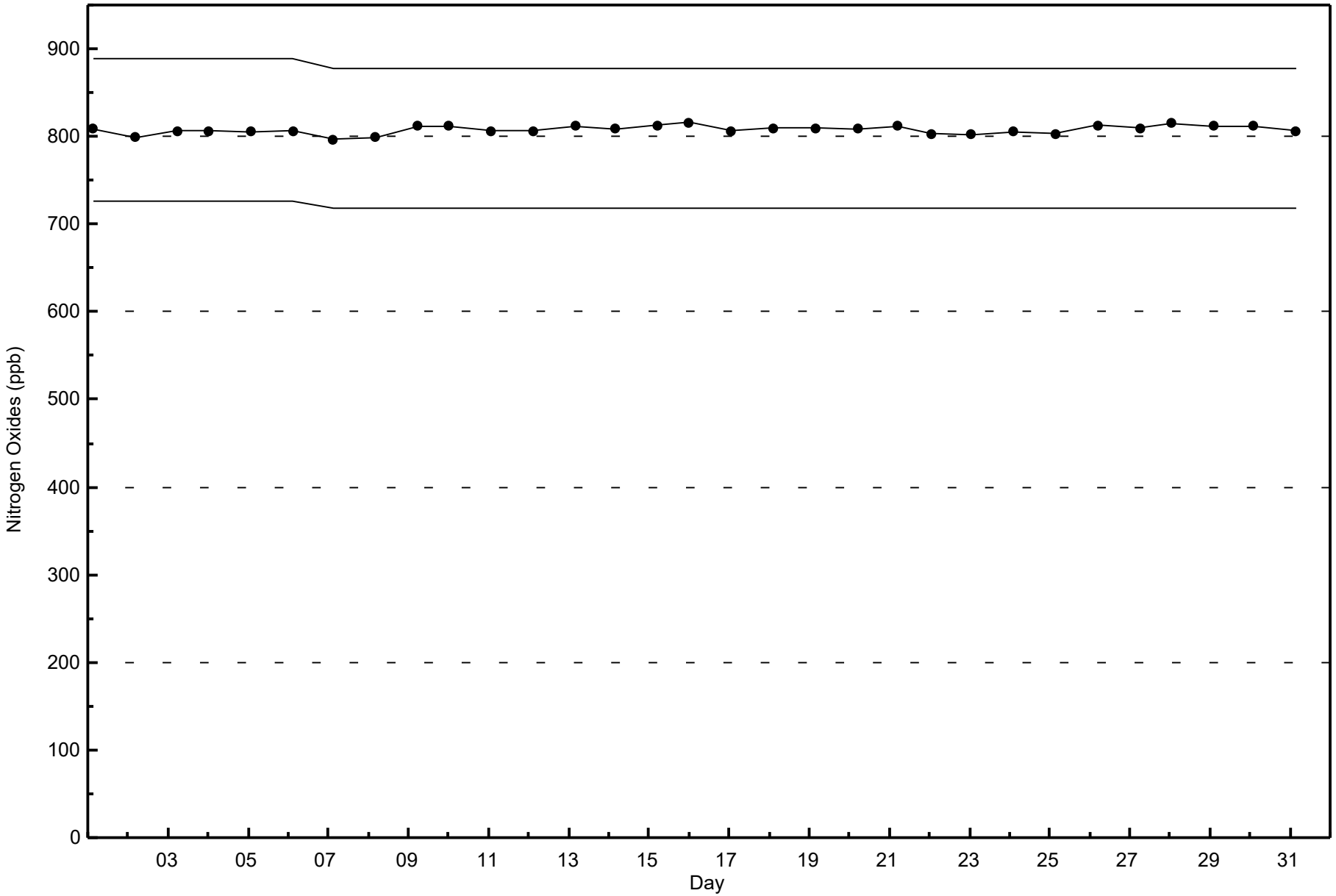


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Anzac - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Anzac - March 2025

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

Maximum Value: 49.0 ppb on Mar 24 14:00

Maximum Daily Average: 41.0 ppb on Mar 23

Minimum Value: 2.6 ppb on Mar 7 19:00

Minimum Daily Average: 24.2 ppb on Mar 7

Maximum Diurnal Average: 39.5 ppb at hour 16

Minimum Diurnal Average: 27.9 ppb at hour 7

Monthly Average: 34.25 ppb

Percentiles: P_1 = 9.7 P_{10} = 24.6 Q_1 = 30.4 Median = 35.8 Q_3 = 39.4 P_{90} = 41.9 P_{99} = 46.6

Hours in Service:	744
Hours of Data:	710
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	22.5	Z	23.8	18.8	16.6	15.2	16.3	14.1	21.8	30.0	38.2	41.8	40.1	45.1	47.2	46.8	46.1	45.2	45.0	39.7	38.8	36.1	32.7	32.6	32.8	47.2
2-Mar	29.1	36.0	Z	38.2	35.0	37.4	41.4	40.2	40.8	41.1	32.4	26.0	30.7	32.1	37.2	41.7	42.7	41.5	40.5	35.1	36.6	38.2	39.1	39.7	37.1	42.7
3-Mar	38.8	36.8	33.9	Z	31.9	28.8	28.7	29.8	31.3	31.6	33.1	36.6	39.0	40.4	41.4	41.6	41.3	40.7	37.1	36.7	37.8	32.7	30.7	32.4	35.4	41.6
4-Mar	31.1	28.3	32.3	28.6	Z	32.3	35.3	35.9	35.3	38.8	41.6	C	C	C	44.6	45.5	43.8	41.1	41.2	37.1	37.7	35.9	39.8	32.7	36.9	45.5
5-Mar	25.7	31.0	30.9	33.3	37.7	Z	38.7	38.6	38.6	38.9	38.3	40.2	40.2	40.9	40.5	40.2	39.6	39.2	37.6	36.9	36.9	32.7	32.1	25.8	36.3	40.9
6-Mar	Z	31.6	33.4	29.5	31.1	28.7	23.8	30.1	36.3	34.3	33.5	33.2	33.1	36.5	37.6	38.9	36.4	40.2	37.9	37.7	33.4	36.5	40.3	39.7	34.5	40.3
7-Mar	38.8	Z	39.3	36.9	30.6	16.6	5.6	10.4	16.3	20.4	25.3	28.8	25.6	29.9	40.5	41.5	34.6	30.6	2.6	6.3	13.4	19.6	19.8	22.9	24.2	41.5
8-Mar	25.0	23.5	Z	30.6	31.6	34.6	31.5	26.5	32.2	33.9	33.7	31.9	35.0	33.1	29.9	31.7	38.0	40.1	41.3	39.5	37.9	37.0	36.0	38.2	33.6	41.3
9-Mar	37.5	34.0	31.2	Z	26.8	24.7	24.0	27.2	29.1	28.8	27.8	26.0	26.4	26.8	27.4	28.9	29.4	28.6	25.2	27.0	22.3	18.3	17.4	16.7	26.6	37.5
10-Mar	16.9	15.5	13.3	12.5	Z	15.6	15.3	24.7	26.4	25.5	25.9	27.6	28.9	31.3	32.2	32.2	30.7	33.2	34.1	33.3	34.4	34.6	33.9	33.1	26.6	34.6
11-Mar	31.8	30.9	30.1	30.1	28.4	Z	29.6	29.5	26.5	29.3	31.2	32.3	33.1	33.6	33.2	33.7	34.7	35.6	34.9	34.6	34.6	34.8	34.7	20.3	31.6	35.6
12-Mar	Z	22.3	22.6	23.0	21.9	20.9	19.8	23.4	26.0	28.1	32.2	34.2	35.5	36.5	38.4	38.8	36.8	33.1	28.9	26.8	24.2	24.0	25.2	28.9	28.3	38.8
13-Mar	32.8	Z	34.0	34.1	33.3	32.6	32.7	33.3	33.9	35.2	36.7	37.9	38.2	38.6	39.7	40.5	38.9	38.8	38.5	38.8	38.6	37.6	36.8	36.3	36.4	40.5
14-Mar	36.3	36.3	Z	36.4	35.8	30.0	23.8	26.4	29.4	28.3	29.3	29.5	30.9	32.5	30.1	30.8	31.5	32.0	29.3	28.3	28.0	29.5	29.4	27.9	30.5	36.4
15-Mar	25.2	23.5	21.7	Z	23.0	23.4	25.7	28.0	28.1	31.6	35.0	37.0	37.5	38.9	39.6	38.9	38.5	36.8	31.3	19.3	26.3	27.7	29.9	26.0	30.1	39.6
16-Mar	29.5	27.0	25.8	31.9	Z	31.1	30.7	31.1	34.7	36.4	38.5	38.3	38.0	38.3	39.5	39.9	39.8	39.4	38.5	38.1	38.4	36.6	37.5	37.9	35.5	39.9
17-Mar	34.9	34.2	34.1	33.2	33.4	Z	32.0	30.6	32.3	34.2	35.2	36.2	38.0	38.6	37.6	30.7	29.2	32.8	31.9	30.0	30.0	29.0	28.7	28.5	32.8	38.6
18-Mar	Z	26.7	25.5	21.2	20.8	20.5	20.9	23.7	29.4	33.0	34.5	35.0	35.5	35.5	35.3	35.7	36.4	38.7	39.0	38.6	40.5	33.9	30.9	32.7	31.5	40.5
19-Mar	35.9	Z	34.1	9.6	6.4	3.5	3.5	12.1	24.4	31.6	33.2	35.0	36.0	37.5	38.7	39.9	39.4	40.1	36.2	36.5	35.4	32.4	15.9	16.3	27.5	40.1
20-Mar	20.8	33.0	Z	30.1	28.6	28.2	35.3	36.1	36.7	36.9	37.2	38.7	40.1	41.4	42.9	42.7	44.0	44.0	42.6	42.3	41.4	39.2	36.9	37.2	37.2	44.0
21-Mar	36.3	41.0	40.2	Z	39.3	39.0	38.6	38.7	38.6	37.9	39.2	39.8	39.2	41.2	42.3	41.8	41.8	42.3	42.1	40.6	39.0	40.4	41.2	40.3	40.0	42.3
22-Mar	39.9	38.2	36.5	34.9	Z	34.3	32.6	36.5	37.3	38.0	39.6	40.1	38.0	39.0	39.1	41.9	42.6	41.7	40.1	44.1	43.6	42.4	41.3	40.9	39.2	44.1
23-Mar	40.7	39.8	38.0	36.5	30.2	Z	31.3	36.6	38.7	40.3	41.9	43.2	44.3	44.7	44.5	44.6	44.5	44.3	44.1	43.3	43.0	42.2	42.0	43.3	41.0	44.7
24-Mar	Z	40.4	37.8	38.4	38.2	38.8	35.8	32.9	37.4	38.9	44.5	46.0	48.1	49.0	48.0	44.6	43.4	41.7	39.9	39.9	38.7	34.9	32.5	33.1	40.1	49.0
25-Mar	32.4	Z	34.3	35.2	35.1	30.8	31.4	37.9	38.7	38.4	38.8	40.1	41.6	43.2	44.4	45.1	44.9	45.5	46.2	39.8	36.0	35.6	36.0	35.8	38.6	46.2
26-Mar	35.2	35.8	Z	35.9	32.9	30.1	28.1	27.9	30.0	30.9	32.7	33.5	34.9	35.8	35.9	35.5	35.6	35.4	36.1	32.1	30.5	27.9	28.5	27.9	32.6	36.1
27-Mar	34.6	38.5	38.1	Z	35.7	34.2	35.4	36.3	36.3	36.8	37.3	39.1	40.6	40.0	42.1	41.8	41.2	40.6	38.6	39.4	39.7	39.3	36.4	38.3	38.3	42.1
28-Mar	39.3	38.0	28.0	33.9	Z	33.7	32.6	35.1	37.5	38.5	39.5	40.3	40.1	39.1	38.7	38.9	38.9	39.9	40.5	40.3	40.8	28.0	30.4	25.7	36.4	40.8
29-Mar	19.3	20.1	17.1	12.9	8.9	Z	12.7	23.1	26.2	29.9	35.8	39.1	39.3	39.6	40.4	41.8	42.3	42.7	43.6	38.5	27.2	23.5	22.2	35.7	29.7	43.6
30-Mar	Z	33.7	32.9	29.0	28.2	31.8	33.6	34.4	40.4	41.2	41.8	44.0	45.2	45.4	45.1	46.4	46.8	46.9	46.6	45.8	45.0	43.3	43.8	43.9	40.7	46.9
31-Mar	43.7	Z	40.5	38.8	36.5	36.3	37.1	37.5	37.8	39.8	40.3	40.0	40.7	42.0	42.0	41.4	40.7	41.9	42.1	41.9	42.1	40.6	38.2	36.4	39.9	43.7
	32.1	31.8	31.1	29.8	29.2	28.2	27.9	30.0	32.5	34.1	35.6	36.4	37.1	38.2	39.2	39.5	39.2	39.2	37.2	35.8	35.2	33.7	32.9	32.5	Diurnal Average	
	43.7	41.0	40.5	38.8	39.3	39.0	41.4	40.2	40.8	41.2	44.5	46.0	48.1	49.0	48.0	46.8	46.8	46.9	46.6	45.8	45.0	43.3	43.8	43.9	Diurnal Maximum	

Z - zerospan C - Calibration

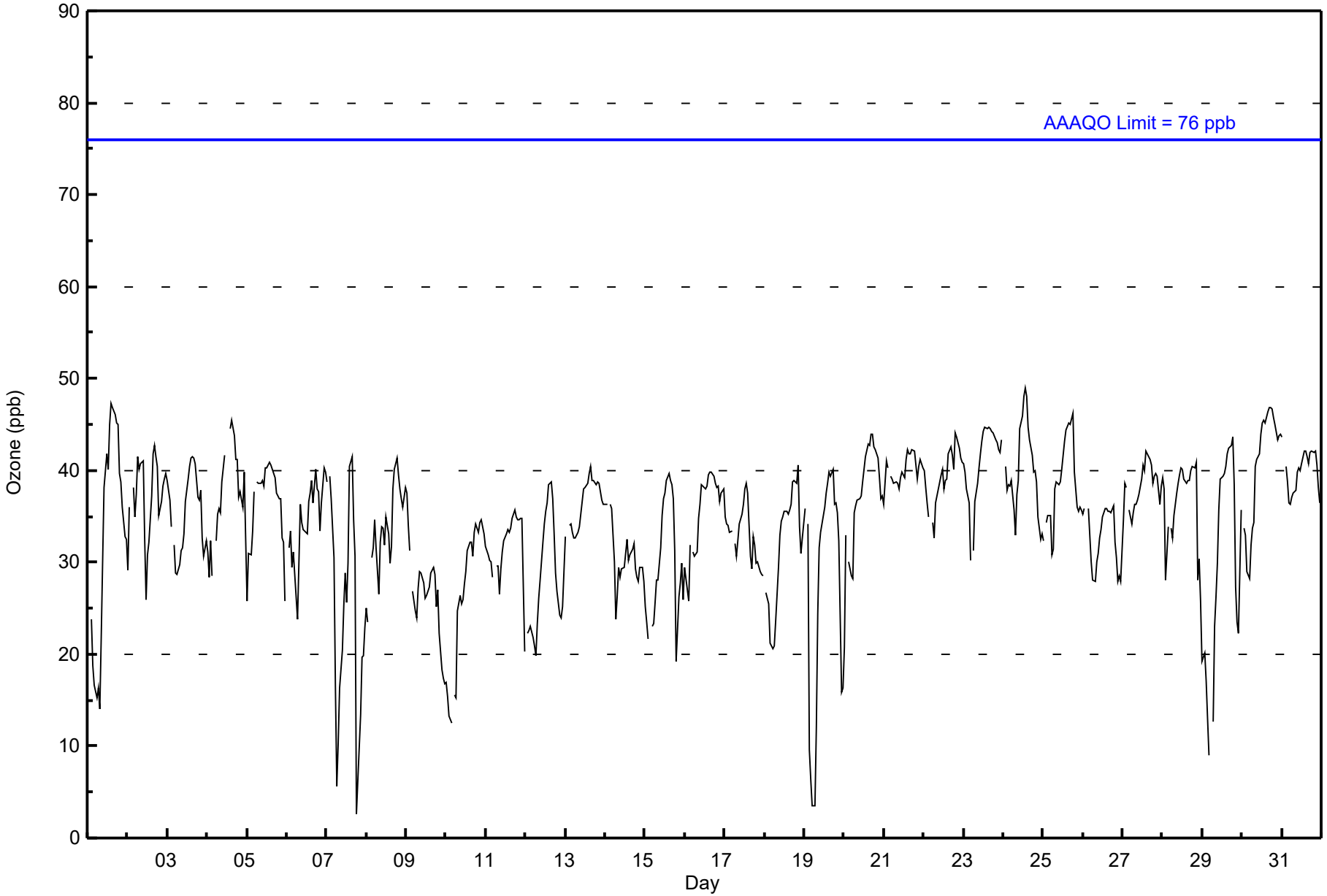
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Anzac - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	40	5.63	5.63
21 - 50	670	94.37	100.00
51 - 82	0	0.00	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 710

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Ozone (O_3) - ppb

Anzac - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	3	0	0	1	1	0	0	2	3	1	0	3	5	8	4	9	40
21 - 50	56	15	40	30	39	63	77	60	21	15	11	18	44	82	38	61	670
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	59	15	40	31	40	63	77	62	24	16	11	21	49	90	42	70	710

Total Number of Valid Hours: 710

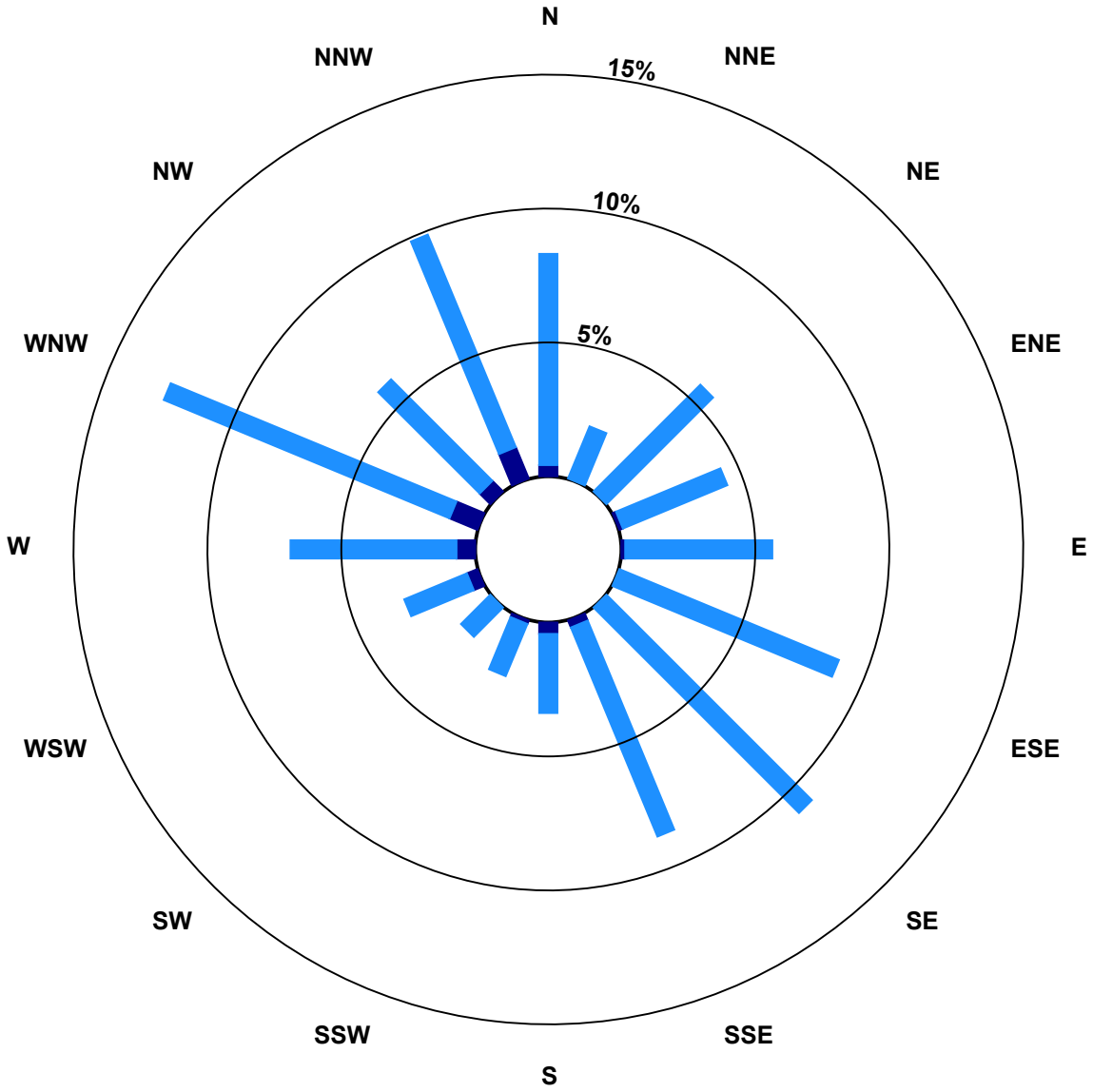
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Ozone (O_3) - ppb

Anzac



Classes (ppb)

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

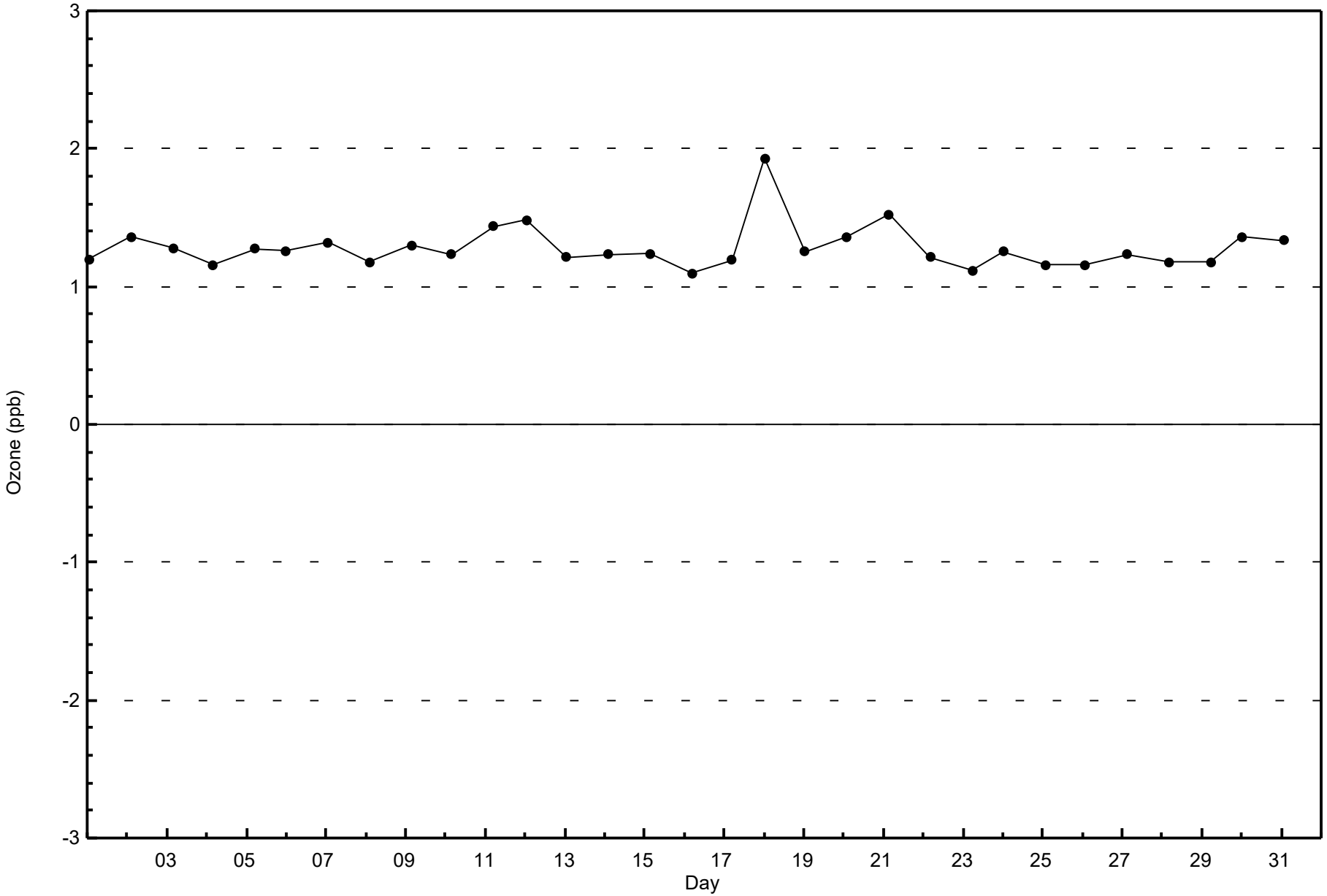
Total Number of Valid Hours: 710

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Anzac - March 2025

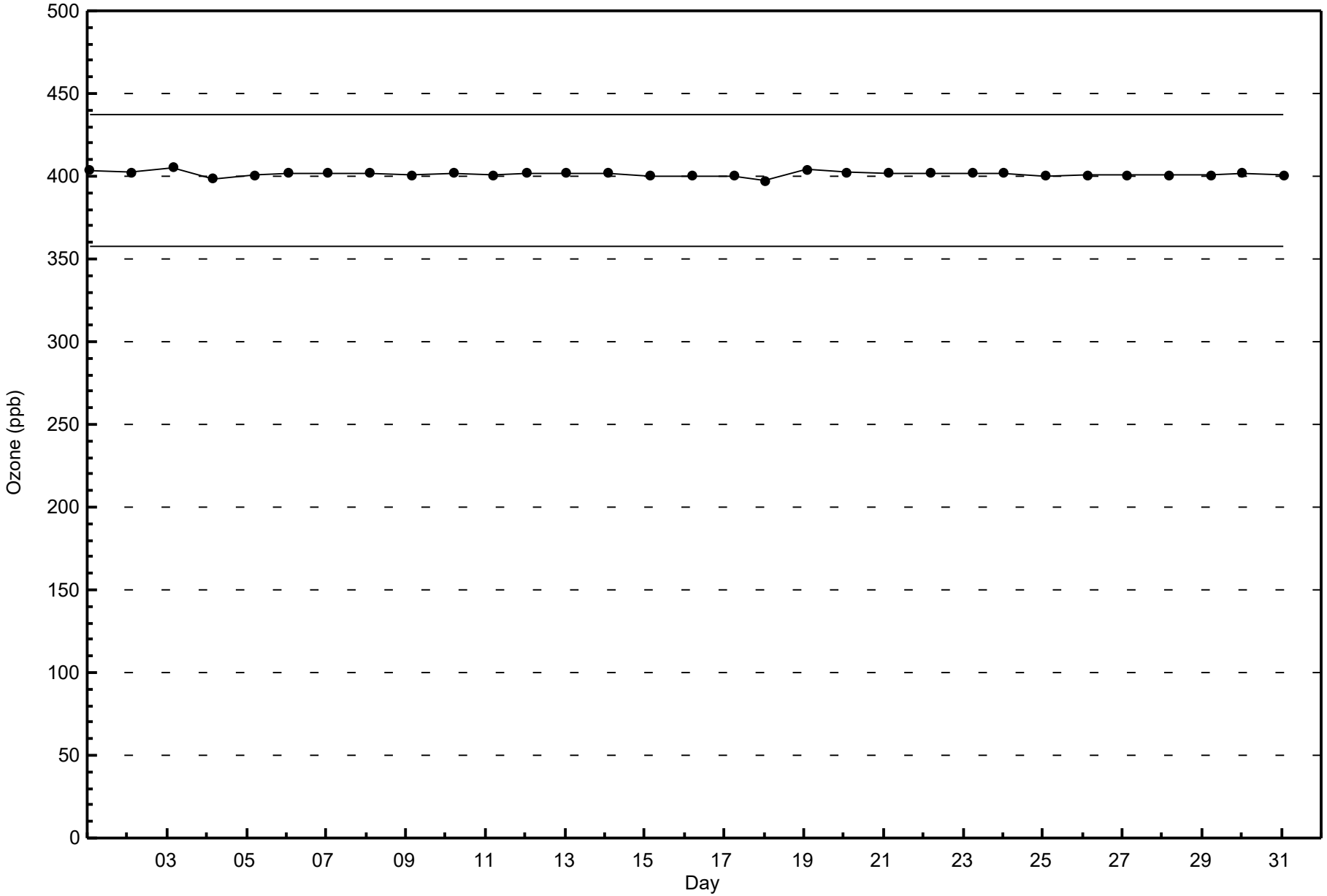


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Anzac - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Anzac - March 2025

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

Maximum Value: 14.8 $\mu g/m^3$ on Mar 16 02:00

Maximum Daily Average: 5.3 $\mu g/m^3$ on Mar 19

Minimum Value: 0.2 $\mu g/m^3$ on Mar 25 19:00

Minimum Daily Average: 0.8 $\mu g/m^3$ on Mar 25

Maximum Diurnal Average: 2.6 $\mu g/m^3$ at hour 7

Minimum Diurnal Average: 1.8 $\mu g/m^3$ at hour 18

Monthly Average: 2.25 $\mu g/m^3$

Percentiles: P_1 = 0.5 P_{10} = 0.9 Q_1 = 1.3 Median = 1.9 Q_3 = 2.8 P_{90} = 3.7 P_{99} = 8.5

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	1
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	3.2	3.1	2.7	2.8	3.0	3.7	3.6	3.4	3.1	2.1	1.4	1.4	1.8	1.7	2.3	2.9	2.0	2.2	2.5	2.1	1.8	2.1	2.4	2.1	2.5	3.7
2-Mar	1.7	1.7	1.6	1.4	1.4	1.6	2.2	1.8	1.7	3.5	4.9	4.3	3.4	2.9	3.4	2.1	0.9	0.7	0.6	1.3	1.7	1.1	1.0	0.9	2.0	4.9
3-Mar	0.9	1.4	2.2	2.5	2.8	3.3	3.3	3.1	3.4	4.9	4.8	3.3	2.2	1.3	0.7	0.5	0.5	0.5	0.6	0.8	0.8	0.7	0.7	0.9	1.9	4.9
4-Mar	1.4	1.5	0.6	0.6	0.6	0.7	1.0	0.9	0.8	0.7	0.6	0.8	0.7	0.7	0.7	0.7	0.7	1.0	2.8	3.7	8.0	10.2	1.5	1.8	1.8	10.2
5-Mar	2.5	2.0	1.6	1.3	0.9	0.9	0.8	0.7	0.7	0.7	1.0	0.8	1.1	1.4	1.8	1.9	2.1	2.2	2.4	2.7	2.0	2.2	2.1	3.4	1.6	3.4
6-Mar	2.3	1.5	1.3	1.2	1.6	2.1	2.0	3.2	1.6	2.7	2.7	1.9	3.2	3.2	2.9	2.9	2.4	1.9	2.7	2.6	2.4	1.8	0.8	0.8	2.2	3.2
7-Mar	0.8	0.8	0.9	1.0	2.2	4.3	6.6	6.5	5.7	5.9	4.4	3.3	3.5	3.2	1.6	0.8	2.1	2.7	8.1	8.2	6.2	4.8	4.3	3.7	3.8	8.2
8-Mar	3.3	3.3	3.3	2.5	2.0	1.7	1.7	2.5	1.9	1.6	1.9	2.2	2.3	3.0	3.7	3.8	2.1	1.1	0.5	0.5	0.5	0.9	0.7	0.5	2.0	3.8
9-Mar	0.5	0.7	0.9	0.9	1.1	1.3	1.5	1.4	1.4	1.4	1.6	1.7	1.6	1.5	1.4	1.3	1.2	1.3	2.0	2.1	2.4	3.7	4.5	4.5	1.8	4.5
10-Mar	4.2	4.2	4.2	4.4	3.9	3.7	3.5	1.7	1.1	1.4	2.0	1.9	2.4	3.0	2.7	2.2	2.7	2.9	2.5	2.0	1.3	0.9	0.7	0.7	2.5	4.4
11-Mar	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	1.4	1.3	1.0	1.0	0.9	1.0	1.0	1.1	1.1	1.1	1.0	1.0	1.0	0.9	0.9	2.5	1.0	2.5
12-Mar	2.1	1.7	1.5	1.4	1.9	1.5	1.4	1.5	1.7	1.7	1.2	1.1	2.6	1.1	1.1	1.2	1.4	1.5	2.1	1.8	3.7	3.1	2.5	1.6	1.8	3.7
13-Mar	1.1	1.3	1.6	1.2	1.1	1.1	1.2	1.2	1.5	1.2	1.1	1.0	1.1	1.1	1.2	1.4	1.3	1.2	1.1	1.2	1.3	1.3	1.1	1.2	1.2	1.6
14-Mar	1.2	1.3	1.3	1.3	1.4	1.8	2.5	2.3	2.1	2.4	2.5	2.7	2.6	C	2.6	2.7	2.7	2.6	2.9	2.9	2.8	2.7	2.7	3.2	2.3	3.2
15-Mar	3.1	2.8	2.6	2.5	2.7	2.3	3.8	3.2	3.2	3.0	2.6	2.6	2.7	2.2	1.9	2.3	2.6	2.9	2.9	4.9	3.9	3.1	3.0	4.7	3.0	4.9
16-Mar	6.9	14.8	3.6	2.6	2.7	2.6	2.9	3.1	3.5	2.9	1.9	2.0	1.9	1.8	1.7	1.6	1.7	2.0	2.1	2.1	2.0	1.8	1.7	2.0	3.0	14.8
17-Mar	3.4	3.7	3.5	3.4	3.2	3.2	3.2	3.2	3.4	3.9	3.9	3.8	3.6	3.4	3.5	4.7	4.9	3.6	3.3	3.0	3.0	3.0	2.8	2.7	3.5	4.9
18-Mar	2.7	2.6	2.7	2.7	2.9	2.8	3.0	3.4	3.0	2.5	2.1	2.0	2.1	2.1	2.2	2.2	2.4	2.4	2.5	2.4	2.2	2.1	2.8	2.7	2.5	3.4
19-Mar	3.0	2.8	3.6	10.9	10.6	12.2	11.9	10.8	8.7	5.2	5.9	4.3	3.8	3.7	2.9	2.5	2.5	2.5	2.9	2.5	3.0	2.8	4.6	4.6	5.3	12.2
20-Mar	4.0	2.1	2.2	2.4	3.1	2.9	1.6	1.5	1.5	1.5	1.4	1.3	1.2	1.1	1.1	1.2	1.1	1.0	0.9	1.0	1.2	1.3	1.4	1.2	1.6	4.0
21-Mar	1.2	1.0	1.0	1.1	1.1	1.1	1.4	1.4	1.5	1.5	1.4	1.5	1.7	1.9	1.8	1.4	1.3	1.4	1.4	1.4	1.5	1.7	2.1	2.6	1.5	2.6
22-Mar	2.7	2.7	2.8	2.8	2.7	2.8	3.3	3.0	3.2	3.2	3.1	3.7	3.6	3.2	2.8	2.8	2.7	2.9	2.9	1.8	1.7	1.4	1.6	1.7	2.7	3.7
23-Mar	1.4	1.5	1.6	1.8	2.0	2.2	1.5	1.2	1.0	1.2	1.2	1.3	0.9	0.8	1.0	0.9	0.9	0.9	1.1	1.5	1.3	1.4	1.4	1.4	1.3	2.2
24-Mar	1.6	1.8	2.1	2.0	2.1	1.9	2.5	2.8	1.9	1.5	1.0	1.1	1.0	1.3	1.5	1.4	1.4	1.6	1.1	0.7	0.7	0.8	0.8	0.8	1.5	2.8
25-Mar	0.7	0.7	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.6	0.7	0.7	0.5	0.4	0.5	0.4	0.3	0.3	0.2	1.4	2.1	2.3	1.8	2.0	0.8	2.3
26-Mar	2.0	1.9	1.8	1.6	1.9	2.1	2.2	2.3	2.1	2.2	2.0	2.0	1.8	1.8	1.8	1.9	1.9	1.8	1.8	2.7	3.2	3.9	3.6	3.9	2.3	3.9
27-Mar	2.5	1.6	1.6	1.5	1.4	1.5	1.5	1.4	1.5	1.5	1.5	1.4	1.3	1.4	1.5	1.5	1.6	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.5	2.5
28-Mar	1.5	1.4	2.6	1.4	2.1	2.0	1.5	1.3	1.3	1.4	1.4	1.4	1.7	2.0	2.0	1.9	2.2	1.9	1.6	1.5	1.4	2.5	7.1	6.3	2.1	7.1
29-Mar	5.5	5.8	4.9	3.3	3.7	3.8	4.0	5.4	5.9	5.0	3.8	2.3	2.4	2.5	2.6	2.4	2.5	2.6	2.5	2.4	3.9	2.8	2.8	2.6	3.6	5.9
30-Mar	2.6	2.5	1.9	2.2	2.9	2.3	1.5	1.9	1.9	1.9	2.0	2.1	2.7	2.8	2.9	2.8	2.7	2.8	2.7	2.6	2.3	2.6	2.4	1.9	2.4	2.9
31-Mar	1.9	2.0	2.6	3.7	3.9	3.7	3.4	3.7	3.8	4.4	4.5	4.1	3.8	3.0	2.5	2.1	1.6	1.8	1.7	1.3	1.3	1.3	1.8	2.3	2.8	4.5
	2.3	2.5	2.1	2.3	2.4	2.5	2.6	2.6	2.5	2.4	2.3	2.1	2.1	2.0	2.0	1.9	1.9	1.8	2.1	2.2	2.3	2.4	2.2	2.3	Diurnal Average	
	6.9	14.8	4.9	10.9	10.6	12.2	11.9	10.8	8.7	5.9	5.9	4.3	3.8	3.7	3.7	4.7	4.9	3.6	8.1	8.2	8.0	10.2	7.1	6.3	Diurnal Maximum	

C - Calibration

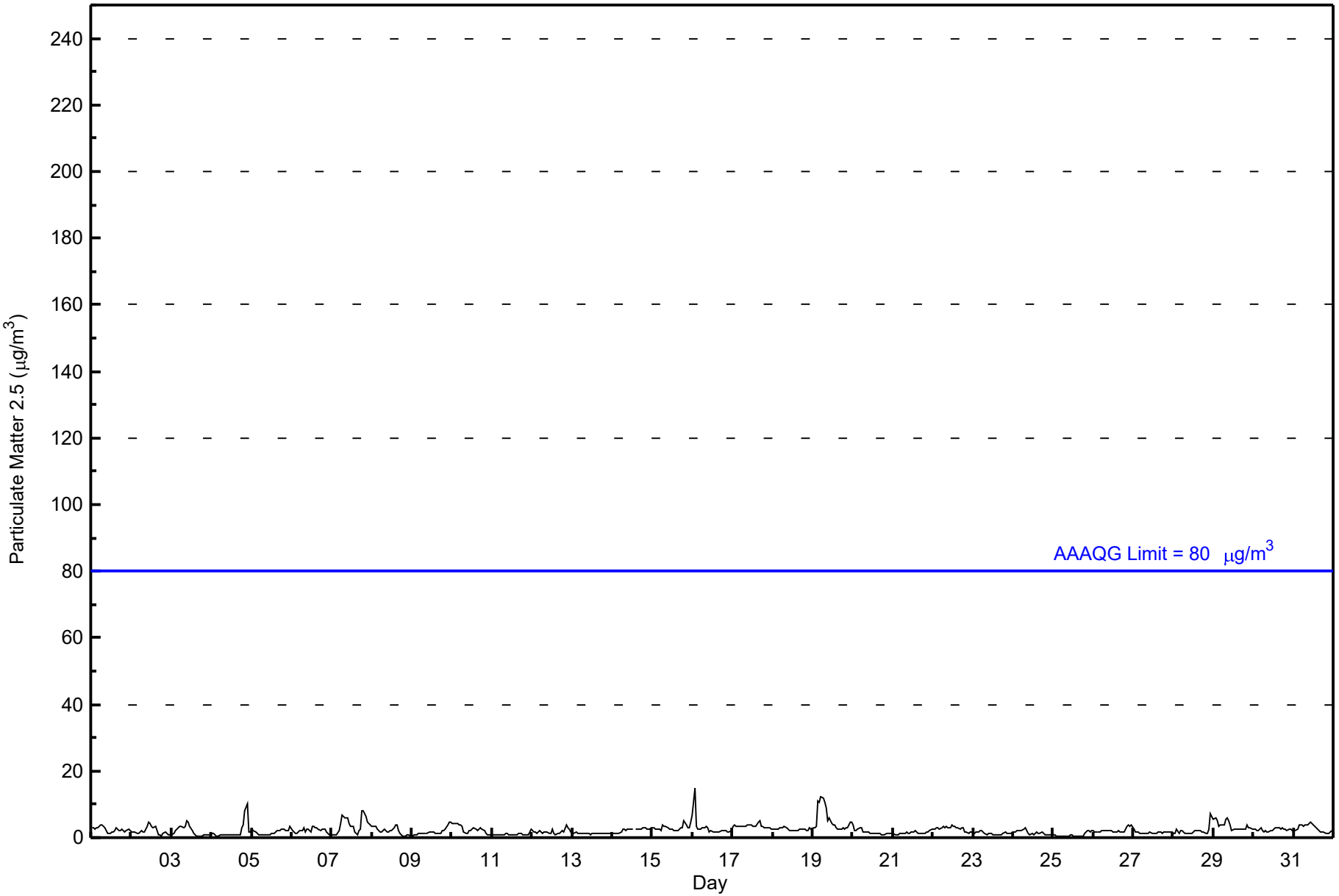
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Anzac - March 2025





Wood Buffalo Environmental Association

Cumulative Frequency Distribution

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

Anzac - March 2025

Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	720	96.90	96.90
6 - 15	23	3.10	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: 743

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

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

Anzac - March 2025

Concentration Ranges ($\mu g/m^3$)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	60	16	41	32	39	67	79	67	25	17	10	18	46	91	40	72	720
6 - 15	1	0	0	0	1	0	1	0	0	0	2	4	5	5	4	0	23
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	61	16	41	32	40	67	80	67	25	17	12	22	51	96	44	72	743

Total Number of Valid Hours: 743

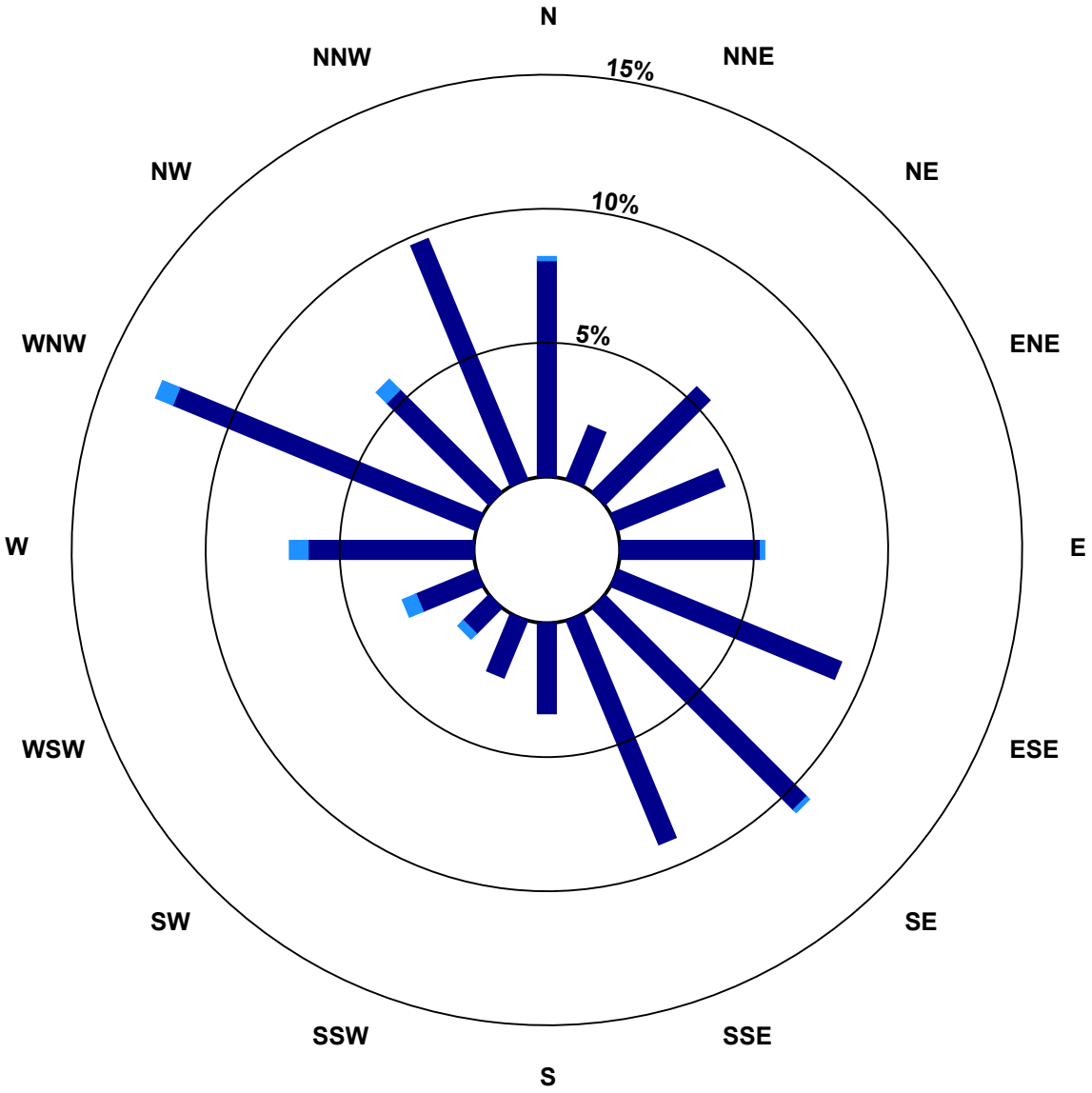
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

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

Anzac



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

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

Total Number of Valid Hours: 743

Maximum Value: 10.2 C on Mar 1 15:00

Maximum Daily Average: 2.9 C on Mar 2

Minimum Value: -27.0 C on Mar 16 05:00

Minimum Daily Average: -20.9 C on Mar 9

Maximum Diurnal Average: -2.6 C at hour 16

Minimum Diurnal Average: -12.5 C at hour 6

Monthly Average: -7.50 C

Percentiles: P_1 = -23.3 P_{10} = -18.8 Q_1 = -13.6 Median = -7.2 Q_3 = -1.2 P_{90} = 3.0 P_{99} = 7.8

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

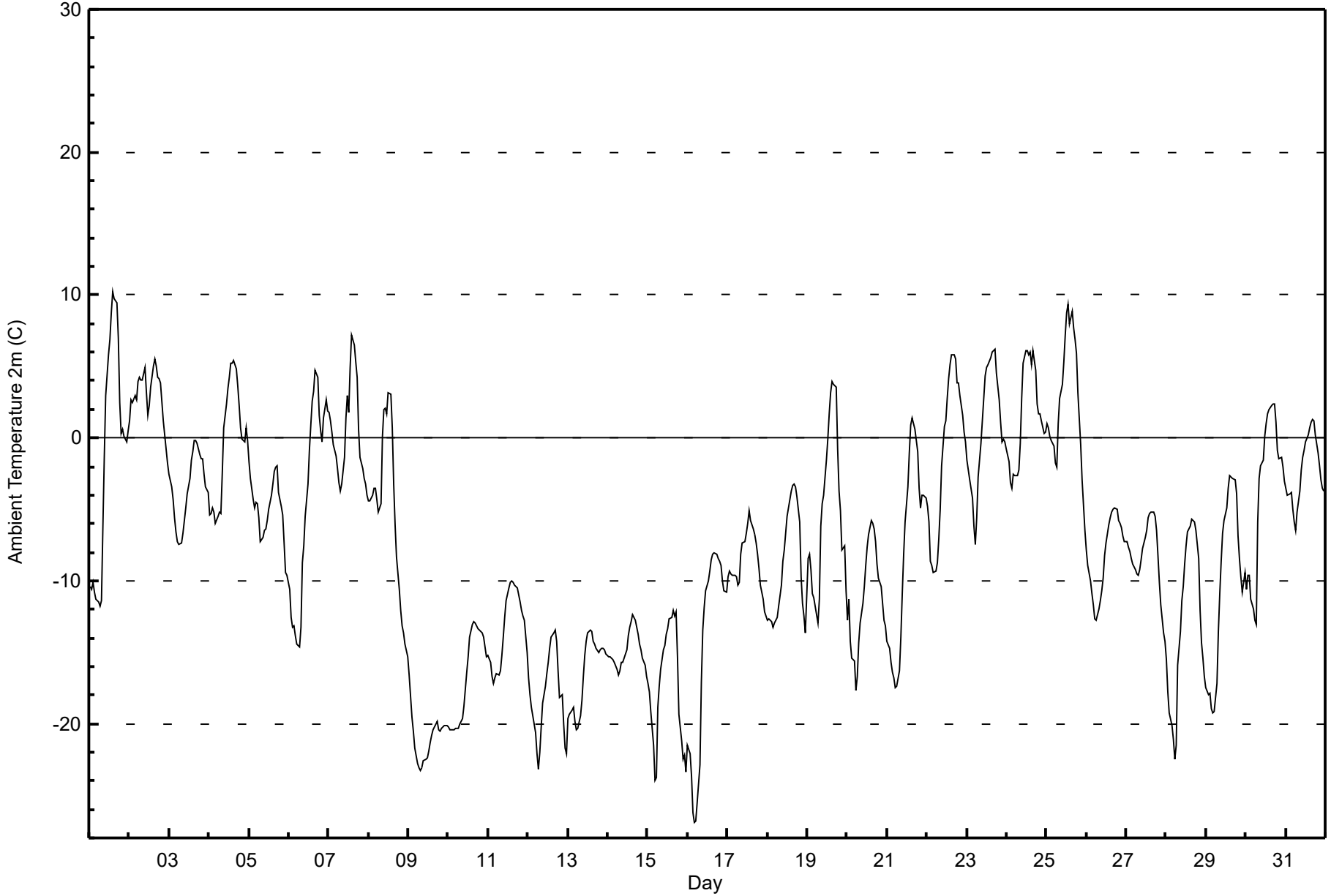
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-10.4	-10.6	-10.1	-10.8	-11.3	-11.5	-11.8	-11.3	-6.3	-1.4	2.9	5.8	6.9	8.8	10.2	9.8	9.4	7.0	2.5	0.3	0.6	0.2	-0.3	0.5	-1.3	10.2
2-Mar	1.2	2.7	2.5	2.9	2.7	4.0	4.2	4.1	4.1	4.9	3.2	1.6	2.2	3.5	5.1	5.5	5.0	4.3	4.1	3.8	1.2	0.2	-0.8	-1.8	2.9	5.5
3-Mar	-2.6	-3.4	-4.3	-5.6	-6.5	-7.2	-7.5	-7.4	-6.7	-5.8	-4.9	-3.9	-2.9	-1.6	-1.0	-0.2	-0.2	-0.4	-1.1	-1.5	-1.5	-2.6	-3.4	-3.8	-3.6	-0.2
4-Mar	-5.4	-5.3	-4.9	-5.2	-6.0	-5.5	-5.2	-5.3	-2.4	0.7	2.4	3.5	4.2	5.2	5.2	5.4	4.9	3.7	2.3	0.7	-0.1	-0.3	0.7	-0.2	-0.3	5.4
5-Mar	-1.6	-2.8	-4.3	-4.9	-4.6	-4.6	-5.6	-7.3	-7.0	-6.5	-6.4	-5.8	-4.9	-4.0	-3.2	-2.3	-2.1	-2.0	-3.8	-4.8	-5.4	-7.4	-9.4	-9.6	-5.0	-1.6
6-Mar	-10.6	-12.6	-13.3	-13.2	-13.9	-14.4	-14.7	-13.2	-8.7	-7.6	-5.5	-3.2	-0.9	0.9	2.5	3.2	4.7	4.3	1.5	0.5	-0.3	1.4	2.6	1.9	-4.5	4.7
7-Mar	1.8	1.2	0.4	-0.4	-1.3	-2.1	-3.1	-3.8	-3.2	-1.3	1.4	2.9	1.8	5.0	7.2	6.5	5.3	4.2	0.6	-1.3	-2.2	-2.9	-3.2	-4.0	0.4	7.2
8-Mar	-4.4	-4.4	-4.1	-3.5	-3.5	-4.3	-5.1	-4.6	0.1	2.0	2.1	1.7	3.2	3.0	0.7	-3.2	-6.1	-8.4	-10.6	-12.0	-13.1	-13.6	-14.4	-15.3	-4.9	3.2
9-Mar	-16.6	-18.1	-19.6	-20.5	-21.7	-22.8	-23.1	-23.3	-23.1	-22.6	-22.5	-22.4	-21.9	-21.3	-20.8	-20.4	-20.0	-19.8	-20.4	-20.6	-20.3	-20.2	-20.1	-20.1	-20.9	-16.6
10-Mar	-20.3	-20.4	-20.5	-20.4	-20.4	-20.4	-20.4	-20.1	-19.6	-18.7	-17.6	-16.4	-15.3	-14.0	-13.1	-12.9	-13.0	-13.2	-13.3	-13.5	-13.6	-13.9	-14.7	-15.3	-16.7	-12.9
11-Mar	-15.2	-15.7	-16.7	-17.1	-16.8	-16.5	-16.6	-16.3	-15.3	-13.9	-12.6	-11.4	-10.5	-10.1	-10.0	-10.1	-10.3	-10.5	-11.0	-11.5	-12.1	-12.4	-12.8	-15.0	-13.4	-10.0
12-Mar	-16.8	-18.0	-18.8	-19.5	-20.6	-22.1	-23.2	-22.0	-20.2	-18.5	-17.4	-16.5	-15.7	-14.7	-13.9	-13.6	-13.5	-14.2	-16.3	-18.2	-17.9	-20.1	-21.7	-22.1	-18.2	-13.5
13-Mar	-19.6	-19.4	-19.0	-18.9	-19.9	-20.5	-20.4	-19.5	-18.3	-16.7	-15.2	-14.2	-13.6	-13.5	-13.6	-14.2	-14.4	-14.7	-15.0	-14.9	-14.7	-14.7	-14.9	-15.1	-16.5	-13.5
14-Mar	-15.3	-15.3	-15.4	-15.5	-15.7	-16.2	-16.6	-16.3	-15.7	-15.8	-15.4	-14.8	-13.8	-13.2	-12.8	-12.3	-12.8	-13.2	-13.8	-14.4	-14.9	-15.4	-16.0	-16.6	-14.9	-12.3
15-Mar	-17.2	-17.8	-19.2	-21.5	-24.0	-23.8	-18.8	-17.4	-16.2	-14.9	-14.5	-13.7	-13.4	-12.7	-12.5	-12.1	-12.5	-12.2	-15.4	-19.4	-21.3	-22.5	-22.2	-23.3	-17.4	-12.1
16-Mar	-21.6	-22.1	-23.7	-26.2	-27.0	-26.8	-25.6	-22.9	-17.1	-13.5	-11.9	-10.7	-10.0	-9.4	-8.5	-8.1	-8.1	-8.2	-8.5	-8.7	-8.9	-10.0	-10.7	-10.8	-15.0	-8.1
17-Mar	-9.8	-9.3	-9.5	-9.6	-9.6	-9.7	-10.3	-10.1	-8.1	-7.3	-7.2	-6.6	-6.0	-5.1	-5.8	-6.4	-6.8	-7.3	-8.1	-9.1	-10.3	-11.3	-12.2	-12.4	-8.7	-5.1
18-Mar	-12.8	-12.6	-12.8	-13.2	-12.9	-12.8	-12.5	-11.7	-10.3	-8.6	-7.8	-6.7	-5.4	-4.3	-3.7	-3.3	-3.2	-3.4	-4.1	-5.9	-9.8	-11.6	-12.4	-13.6	-9.0	-3.2
19-Mar	-8.5	-8.2	-9.3	-10.9	-11.2	-11.8	-13.0	-11.2	-6.2	-4.6	-4.0	-1.5	-0.1	1.7	3.1	3.9	3.8	3.5	-0.8	-3.8	-5.1	-7.8	-7.6	-10.7	-5.0	3.9
20-Mar	-12.8	-11.3	-14.2	-15.4	-15.7	-17.7	-16.7	-14.3	-12.9	-11.6	-10.4	-8.9	-7.6	-6.8	-5.7	-6.0	-6.4	-7.3	-8.8	-9.8	-10.4	-11.6	-12.8	-13.2	-11.2	-5.7
21-Mar	-14.3	-14.7	-15.7	-16.4	-16.8	-17.5	-17.4	-16.3	-14.0	-10.9	-8.2	-5.8	-3.4	-1.1	0.9	1.4	1.0	0.7	-1.0	-3.5	-4.9	-4.1	-4.0	-4.2	-7.9	1.4
22-Mar	-4.8	-5.9	-8.6	-9.0	-9.5	-9.3	-8.8	-7.1	-5.0	-1.9	0.8	1.2	2.7	4.1	5.2	5.8	5.8	5.5	3.8	3.8	3.0	1.6	0.4	-0.3	-1.1	5.8
23-Mar	-1.5	-2.2	-3.0	-4.3	-6.2	-7.4	-5.6	-2.8	-0.3	1.2	2.7	4.3	4.9	5.1	5.7	6.0	6.1	6.2	4.6	2.7	1.1	-0.3	-0.1	-0.3	0.7	6.2
24-Mar	-0.8	-1.6	-3.1	-3.6	-2.6	-2.6	-2.7	-2.2	-0.4	2.8	5.2	6.1	6.1	5.8	6.0	5.2	6.2	4.7	2.4	1.7	1.7	1.2	0.4	0.4	1.5	6.2
25-Mar	1.0	0.7	0.1	-0.2	-0.5	-1.8	-2.0	1.0	2.8	3.8	5.3	7.2	8.8	9.4	7.9	8.9	7.7	6.9	6.0	3.2	-0.5	-2.9	-4.7	-6.5	2.6	9.4
26-Mar	-7.9	-9.0	-10.0	-10.9	-11.7	-12.7	-12.7	-12.0	-11.4	-10.7	-9.8	-8.2	-7.3	-6.1	-5.6	-5.2	-5.0	-4.9	-5.0	-5.8	-6.0	-6.3	-6.8	-7.3	-8.3	-4.9
27-Mar	-7.2	-7.6	-8.0	-8.4	-8.8	-9.2	-9.5	-9.6	-9.2	-8.5	-7.8	-7.0	-6.5	-5.6	-5.3	-5.2	-5.2	-5.5	-6.5	-8.3	-10.1	-11.7	-13.6	-14.3	-8.3	-5.2
28-Mar	-15.5	-17.8	-19.2	-20.2	-21.1	-22.5	-21.5	-16.0	-13.5	-11.4	-10.4	-8.8	-7.5	-6.5	-6.2	-5.7	-5.8	-5.9	-6.4	-8.4	-12.1	-14.3	-15.4	-16.7	-12.9	-5.7
29-Mar	-17.4	-18.0	-17.9	-19.0	-19.2	-19.1	-17.2	-13.5	-10.9	-8.6	-6.7	-5.8	-4.9	-3.5	-2.6	-2.7	-2.8	-2.9	-3.9	-6.9	-8.4	-9.7	-10.8	-9.5	-10.1	-2.6
30-Mar	-10.6	-9.6	-9.6	-11.3	-12.0	-12.8	-13.0	-5.9	-2.9	-2.0	-1.6	0.1	1.0	1.7	2.0	2.3	2.4	2.4	1.1	-0.9	-1.5	-1.3	-2.1	-3.0	-3.6	2.4
31-Mar	-3.6	-4.0	-4.0	-3.8	-5.0	-5.9	-6.5	-5.2	-3.7	-2.3	-1.4	-0.9	-0.3	0.2	0.7	1.1	1.3	1.2	0.2	-1.0	-2.0	-2.9	-3.5	-3.7	-2.3	1.3
	-9.7	-10.1	-10.8	-11.5	-12.0	-12.5	-12.4	-11.1	-9.1	-7.4	-6.2	-5.1	-4.2	-3.2	-2.6	-2.6	-2.7	-3.2	-4.7	-6.0	-7.1	-8.0	-8.6	-9.2	Diurnal Average	
	1.8	2.7	2.5	2.9	2.7	4.0	4.2	4.1	4.1	4.9	5.3	7.2	8.8	9.4	10.2	9.8	9.4	7.0	6.0	3.8	3.0	1.6	2.6	1.9	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Anzac - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	57	7.66	7.66
-20 - 0	532	71.51	79.17
0 - 10	154	20.70	99.87
10 - 20	1	0.13	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Anzac - March 2025

Maximum Value: 94.3 % on Mar 23 05:00

Maximum Daily Average: 80.0 % on Mar 14

Minimum Value: 26.6 % on Mar 20 17:00

Minimum Daily Average: 47.2 % on Mar 21

Maximum Diurnal Average: 79.7 % at hour 7

Minimum Diurnal Average: 49.6 % at hour 15

Monthly Average: 65.46 %

Percentiles: P_1 = 33.3 P_{10} = 41.6 Q_1 = 52.9 Median = 67.7 Q_3 = 78.6 P_{90} = 84.5 P_{99} = 90.9

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

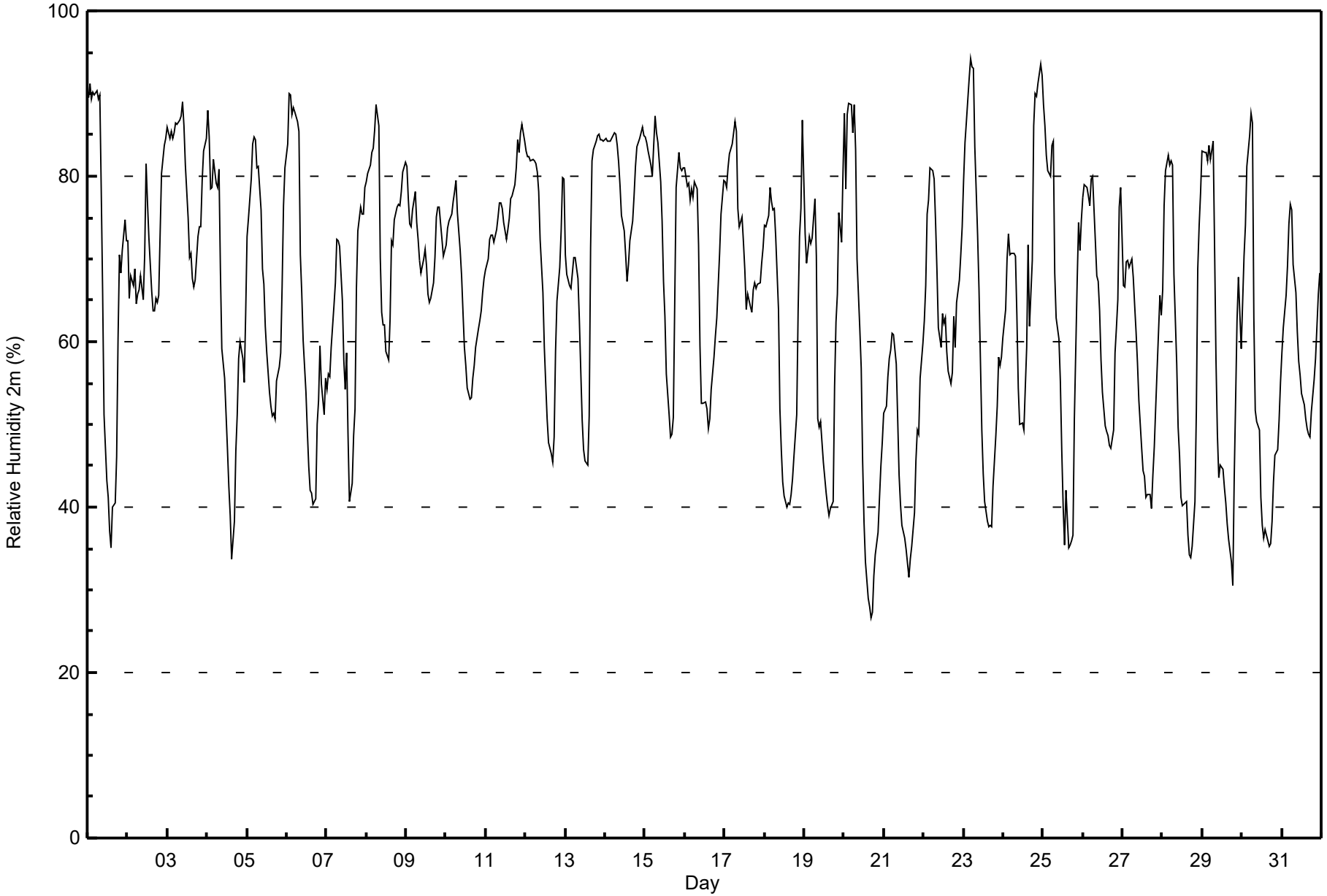
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	89.5	91.2	89.4	90.2	89.8	90.4	89.4	89.9	78.4	66.1	51.2	43.2	41.3	37.1	35.2	40.1	40.6	46.1	60.3	70.6	68.3	71.1	74.7	72.1	67.3	91.2
2-Mar	72.2	65.2	68.0	66.8	68.8	64.6	65.7	66.2	68.0	65.0	70.5	81.6	76.8	72.5	66.1	63.7	63.8	65.3	64.7	65.5	80.4	82.1	83.7	84.6	70.5	84.6
3-Mar	85.9	84.6	85.4	84.6	85.2	86.5	86.3	86.8	87.3	88.9	86.0	81.3	74.9	70.1	70.7	67.6	66.7	67.5	72.8	74.0	73.9	79.5	83.1	84.6	79.8	88.9
4-Mar	87.9	84.8	78.5	78.7	82.0	79.2	78.7	80.9	68.6	59.1	55.6	51.4	47.2	42.6	38.9	33.8	38.3	46.8	51.3	58.0	60.1	57.9	55.1	63.2	61.6	87.9
5-Mar	72.7	74.9	79.7	83.9	84.8	84.4	81.0	81.1	76.0	68.8	66.9	61.9	58.8	53.9	52.2	51.0	51.3	50.8	55.2	57.0	58.7	66.6	76.5	81.0	67.9	84.8
6-Mar	83.9	90.1	89.8	87.4	88.3	87.8	86.6	85.5	70.5	66.0	60.2	53.9	49.1	44.8	42.1	41.7	40.4	41.1	50.0	52.9	59.4	54.8	51.1	55.6	63.9	90.1
7-Mar	54.3	56.1	55.8	59.4	64.4	67.1	72.4	72.2	71.6	64.9	57.8	54.2	58.6	48.8	40.6	42.9	48.6	51.9	66.4	73.4	76.3	75.4	75.3	78.6	62.0	78.6
8-Mar	79.3	80.3	81.4	82.9	83.4	85.6	88.6	86.1	70.2	63.5	62.1	62.1	58.9	57.8	62.7	72.1	71.7	74.8	76.2	76.6	76.4	78.2	80.5	81.7	74.7	88.6
9-Mar	81.2	77.2	74.2	73.9	75.9	78.2	74.5	72.4	69.8	68.4	70.0	71.2	69.1	65.8	64.8	65.2	67.0	70.1	75.1	76.3	76.2	72.3	70.3	71.1	72.1	81.2
10-Mar	71.7	73.7	74.5	75.4	76.9	78.2	79.4	75.6	71.1	68.0	63.5	59.4	57.1	54.3	53.0	53.2	55.6	57.1	59.3	61.5	62.5	63.7	65.9	67.7	65.8	79.4
11-Mar	68.6	69.9	72.3	72.9	72.9	72.1	73.6	75.0	76.7	76.8	76.0	74.4	72.3	73.6	74.8	77.3	77.6	79.0	81.1	84.5	82.8	85.2	86.2	84.3	76.7	86.2
12-Mar	83.1	82.4	82.3	81.9	82.0	81.9	81.5	80.5	78.1	72.3	66.0	59.3	55.0	50.6	47.8	46.5	45.4	48.5	58.9	65.0	68.9	73.4	79.8	79.7	68.8	83.1
13-Mar	70.4	68.1	66.7	66.4	68.3	70.2	70.1	67.6	62.6	56.4	50.5	46.9	45.6	45.1	51.0	71.4	81.8	83.2	84.2	84.9	85.1	84.4	84.4	84.2	68.7	85.1
14-Mar	84.5	84.3	84.2	84.2	84.6	85.2	85.1	83.7	81.7	78.8	75.3	73.4	70.4	67.4	69.3	72.2	74.6	77.7	81.3	83.5	84.1	84.6	85.9	84.9	80.0	85.9
15-Mar	84.7	84.1	83.0	81.4	80.1	83.7	87.2	85.3	84.1	79.4	74.6	67.3	63.0	56.1	51.3	48.5	48.8	50.8	64.8	78.6	82.9	81.0	80.6	81.0	73.4	87.2
16-Mar	81.1	78.9	79.2	77.1	78.4	77.5	79.3	78.5	71.6	59.4	52.6	52.5	52.7	51.8	49.5	50.7	54.2	58.1	60.7	62.9	66.7	70.6	75.5	79.6	66.6	81.1
17-Mar	79.3	78.6	81.0	82.7	83.8	85.3	86.7	85.5	76.0	73.9	75.1	72.1	68.6	63.8	65.8	64.2	63.6	66.3	67.2	66.4	67.0	67.1	69.4	71.3	73.4	86.7
18-Mar	74.1	73.9	75.3	78.6	77.0	75.9	76.0	72.8	63.8	51.8	47.0	43.1	41.4	40.0	40.5	40.4	41.6	43.4	46.0	51.2	63.7	72.7	76.1	86.7	60.5	86.7
19-Mar	73.1	69.4	71.1	72.6	71.9	72.5	77.3	70.4	50.7	49.6	50.4	45.4	43.6	41.7	40.2	39.0	39.9	40.6	54.6	62.4	65.7	75.5	72.0	80.6	59.6	80.6
20-Mar	87.7	78.6	87.4	88.8	88.7	85.2	88.7	83.2	70.0	61.6	56.8	45.6	38.1	33.4	28.9	28.0	26.6	27.3	31.8	34.2	36.9	40.9	45.0	47.8	55.9	88.8
21-Mar	51.3	52.2	55.7	58.0	59.0	61.0	60.9	57.3	50.7	44.0	40.3	37.9	36.3	34.9	33.2	31.5	33.7	35.3	39.3	45.7	49.3	48.8	55.6	59.9	47.2	61.0
22-Mar	62.6	66.8	75.4	77.2	81.0	80.8	79.7	74.5	68.6	61.7	59.3	63.4	62.2	62.9	58.8	56.4	54.9	56.3	63.1	59.4	64.8	67.5	70.6	73.8	66.7	81.0
23-Mar	79.6	84.1	86.5	91.9	94.3	93.3	93.0	83.5	72.9	66.2	57.9	49.4	44.1	40.7	38.3	37.6	37.9	37.7	42.5	48.7	52.3	58.2	57.1	58.1	62.7	94.3
24-Mar	60.6	63.9	70.0	73.0	70.4	70.7	70.7	70.3	63.2	54.4	50.0	50.2	49.3	54.3	59.3	71.7	61.8	69.8	86.0	90.0	89.7	91.2	93.5	92.1	69.8	93.5
25-Mar	88.6	86.0	82.6	80.7	80.0	83.7	84.2	68.2	62.9	60.4	55.3	47.0	40.2	35.4	42.0	35.1	35.4	36.0	36.6	50.7	67.2	74.5	71.0	74.8	61.6	88.6
26-Mar	77.4	79.1	78.7	77.7	76.5	79.7	80.1	72.0	68.0	67.2	63.7	57.8	53.9	49.8	49.1	48.6	47.4	47.2	49.3	58.7	61.7	65.1	76.2	78.6	65.1	80.1
27-Mar	66.8	66.7	69.6	69.8	69.0	70.1	67.8	64.5	61.2	57.5	52.9	47.1	44.4	43.8	41.2	41.6	41.5	39.8	44.0	47.3	52.1	56.5	65.6	63.3	56.0	70.1
28-Mar	66.2	76.4	80.7	82.5	81.3	81.9	81.4	68.1	57.3	49.6	46.3	41.3	40.2	40.3	40.7	36.6	34.2	33.9	35.2	40.6	51.8	68.8	74.1	77.9	57.8	82.5
29-Mar	83.0	82.8	82.9	81.9	83.7	82.0	84.2	71.3	57.7	48.7	43.5	45.1	44.6	42.3	40.6	38.0	36.1	33.3	30.4	43.5	52.9	62.5	67.8	59.2	58.3	84.2
30-Mar	64.7	70.4	74.0	81.2	84.8	87.7	86.4	62.8	51.8	50.3	49.3	41.2	37.8	36.3	37.3	36.0	35.2	35.7	38.3	43.1	46.3	46.9	50.5	55.1	54.3	87.7
31-Mar	58.6	61.7	65.6	69.2	74.2	76.6	75.9	69.4	66.0	61.1	57.7	55.9	53.7	52.3	50.7	49.5	48.9	48.4	51.6	55.5	57.9	61.9	65.8	68.3	60.7	76.6
	75.0	75.4	76.8	77.8	78.8	79.3	79.7	75.5	68.6	63.2	59.5	56.0	53.2	50.5	49.6	50.1	50.5	52.2	57.4	62.0	65.9	69.0	71.6	73.6	Diurnal Average	
	89.5	91.2	89.8	91.9	94.3	93.3	93.0	89.9	87.3	88.9	86.0	81.6	76.8	73.6	74.8	77.3	81.8	83.2	86.0	90.0	89.7	91.2	93.5	92.1	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Anzac - March 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	49	6.59	6.59
40 - 60	215	28.90	35.48
60 - 80	321	43.15	78.63
80 - 100	159	21.37	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Leaf Wetness (LW) - %

Anzac - March 2025

Maximum Value: 15.0 % on Mar 24 16:00

Maximum Daily Average: 2.7 % on Mar 24

Minimum Value: 0.0 % on Mar 1 01:00

Minimum Daily Average: 0.0 % on Mar 3

Maximum Diurnal Average: 0.6 % at hour 16

Minimum Diurnal Average: 0.0 % at hour 14

Monthly Average: 0.19 %

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.0 P_{90} = 0.3 P_{99} = 6.1

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

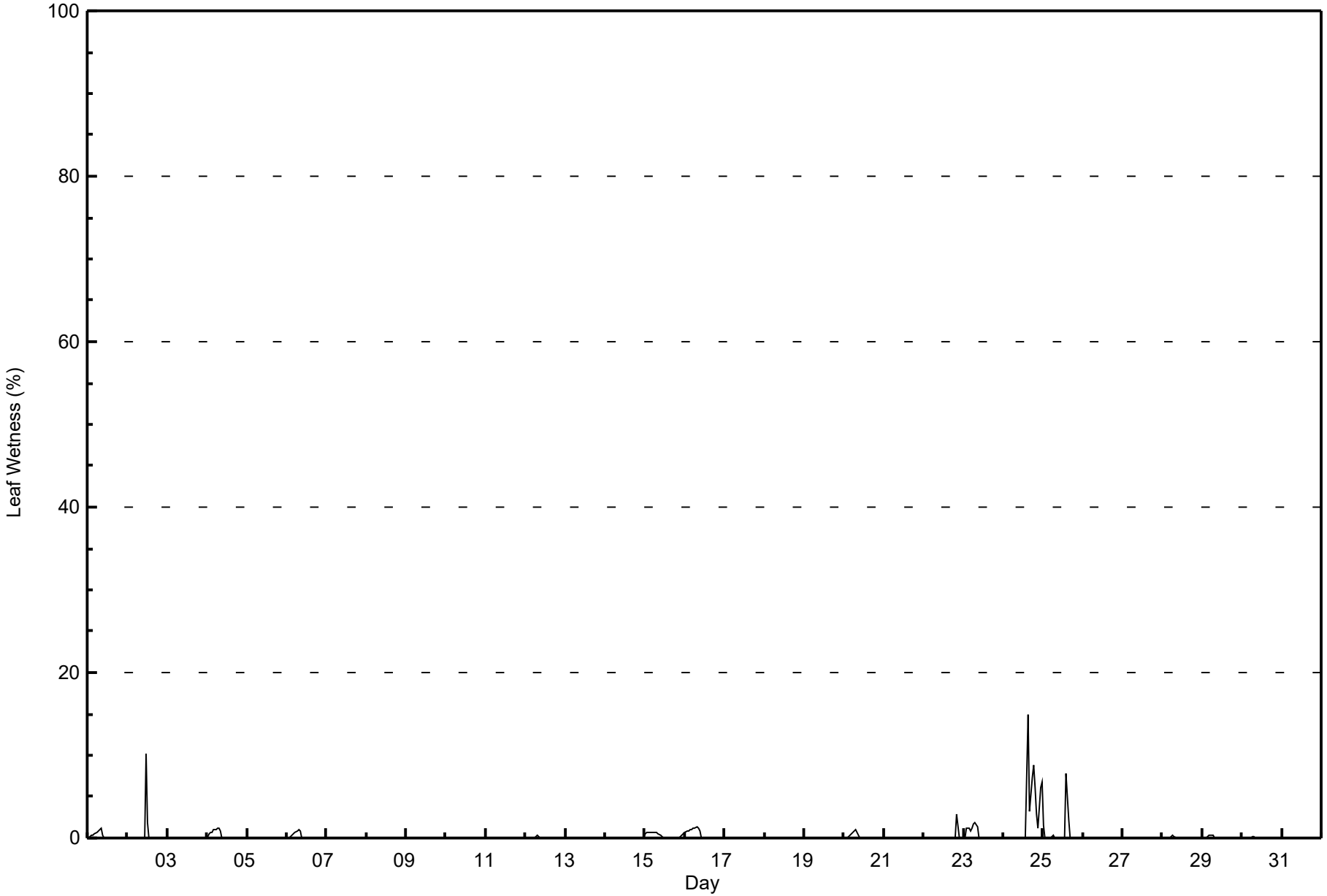
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.0	0.1	0.3	0.4	0.5	0.7	0.9	1.1	1.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.1
2-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.1	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	10.1
3-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.1	0.5	0.6	0.7	0.9	1.1	1.2	1.2	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.2
5-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.1	0.3	0.5	0.7	0.8	1.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0
7-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
13-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.2
15-Mar	0.5	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.6	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.6	0.3	0.7
16-Mar	0.7	0.8	0.9	1.0	1.1	1.1	1.2	1.3	1.2	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.3
17-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.2	0.5	0.7	0.8	1.0	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	0.2	1.0
21-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	0.1	2.9
23-Mar	0.0	0.0	1.2	1.2	0.8	1.3	1.7	1.9	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	0.4	1.9
24-Mar	0.0	0.0	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	15.0	3.2	7.4	8.8	6.2	3.0	1.1	6.1	6.7	2.7	15.0
25-Mar	1.5	0.0	0.0	0.0	0.0	0.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	7.9
26-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
29-Mar	0.0	0.0	0.0	0.2	0.3	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
30-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
31-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.2	0.2	0.2	0.3	0.3	0.2	0.0	0.0	0.3	0.1	0.0	0.5	0.6	0.1	0.2	0.3	0.2	0.2	0.0	0.2	0.2	Diurnal Average	
	1.5	0.8	1.2	1.2	1.1	1.3	1.7	1.9	1.4	0.8	0.2	10.1	1.8	0.0	7.9	15.0	3.2	7.4	8.8	6.2	3.0	1.1	6.1	6.7	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Leaf Wetness (LW) - %

Anzac - March 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 0.3	674	90.59	90.59
0.4 - 0.5	9	1.21	91.80
0.6 - 0.7	16	2.15	93.95
0.8 - 1.4	28	3.76	97.72
1.5 - 10	15	2.02	99.73
> 10	2	0.27	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 20m (WS20) - km/h

Anzac - March 2025

Maximum Speed: 28 km/h on Mar 8 16:00

Maximum Daily Speed Average: 16.4 km/h on Mar 21

Minimum Speed Value: 1 km/h on Mar 30 09:00

Minimum Daily Speed Average: 1.0 km/h on Mar 19

Maximum Diurnal Speed Average: 3.8 km/h at hour 16

Minimum Diurnal Speed Average: 0.2 km/h at hour 8

Monthly Average Velocity: 1.0 km/h 8.0 deg

Percentiles: $P_1 = 2$ $P_{10} = 4$ $Q_1 = 6$ Median = 9 $Q_3 = 12$ $P_{90} = 15$ $P_{99} = 20$

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	SSE9	S9	S9	SSE6	S6	S6	SSE6	S7	S9	S7	SSE6	E3	ESE6	SSE4	WSW3	W8	NW5	NE7	E7	SE7	SSE8	S8	SSW7	SW6	SSE4.6	SSE9
2-Mar	SSW8	SSW7	SSE10	S10	WSW7	W10	W9	WNW8	W12	WNW17	NW18	WNW13	WNW13	WNW13	WNW13	WNW13	WNW10	W7	WNW10	NNW15	N14	NNW12	NNW13	NNW16	WNW8.4	NW18
3-Mar	NNW15	N15	N19	NNW17	NNW13	NW14	NW11	NW11	WNW12	WNW11	WNW12	NW12	NW14	WNW13	WNW12	WNW10	NW10	N4	SSE4	S8	S6	SSE4	SSE4	SSW5	NW7.7	N19
4-Mar	WSW6	W8	W7	W6	W8	W8	W10	SW8	SW7	W7	WNW9	WNW12	WNW11	W10	WSW12	W11	W11	W10	SW7	SW8	WSW8	WSW7	WNW13	NW13	W8.3	NW13
5-Mar	NNW11	NW12	WNW10	NNW15	NNW16	NNW15	N19	NNW15	NNW12	NNW15	NNW15	NNW13	NW11	NW10	NNW8	NNE7	NE4	ESE6	SE8	SE7	SSE7	SSE6	SSE5	SW5	NNW6.7	N19
6-Mar	ESE3	ESE6	ESE6	SE4	SE5	SE5	SE5	SE7	SE8	SSE7	ESE7	ESE8	ESE9	ESE8	SE4	NE4	W5	SSW3	S8	S7	SW5	WNW10	WNW12	WNW10	SSE3.0	WNW12
7-Mar	WNW8	NW8	NNW8	WNW5	W6	N9	N7	NW5	W3	WSW3	SSW7	N5	NE6	SSW5	WNW13	NW11	N1	NNW9	WNW10	WNW9	NW5	WNW9	NNW6	WNW6	NW5.2	WNW13
8-Mar	WSW3	SE3	SE5	SE11	SE12	ESE10	SE7	SSE3	WNW12	WNW17	WNW18	WNW16	NW23	NNW20	NNW23	NNW28	NNW25	NNW20	NNW20	NNW12	NNW8	NNW9	N11	NNW10	NNW8.5	NNW28
9-Mar	NNW13	N13	N14	N14	N13	N10	N10	N10	NNW8	N8	N10	N9	N9	N8	NNW9	N8	N5	NNE4	WNW4	WNW4	WNW2	NNW6	NNW4	NNW4	N8.0	N14
10-Mar	NNW4	NNW4	NNW3	N3	ENE2	ENE4	E5	SE7	SSE10	SSE11	SSE10	SE8	ESE9	SE8	ENE7	E4	SE8	ESE8	SE6	ESE6	ESE6	E8	E7	ESE8	ESE4.9	SSE11
11-Mar	ESE9	ESE8	ESE9	ESE9	SE7	ESE8	ESE9	SE8	SE9	SE11	ESE11	E12	E14	E12	ENE13	ENE13	ENE12	ENE11	ENE10	NE10	ENE10	NE8	NNE7	NW10	E8.1	E14
12-Mar	WNW10	WNW10	NW12	WNW10	WNW10	WNW7	W10	WNW8	WNW7	NW5	NW4	N6	N6	N7	N8	N8	N7	NNW4	WNW3	N5	ENE3	E5	E6	E7	NW4.8	NW12
13-Mar	SE8	ESE8	ESE9	E8	E8	ESE9	ESE8	E10	ESE11	ESE14	ESE17	E15	E15	E15	E15	E13	ENE12	NE13	NE11	NE11	NE10	NE13	NNE12	NNE11	E10.1	ESE17
14-Mar	N10	NNE11	NNE10	N10	NNW11	NNW12	NW11	NNW11	NNW12	NW13	NW14	NW15	NW15	NNW16	NNW16	NW17	NW19	NW18	NW16	NNW14	NNW12	NW11	NW11	NW8	NNW12.4	NW19
15-Mar	WNW7	W6	WNW6	WNW6	W6	WNW5	WNW4	WNW4	W1	NNW5	NNW8	NNW10	NNW11	NNW11	N11	NNW12	NNW9	W6	WSW4	SSW6	SSW6	SSW6	S8	SSW6	WNW4.4	NNW12
16-Mar	SW7	SW6	SSW5	SE3	SE4	SSE7	S8	SSE9	SSE10	SSE12	SE13	SE15	SE15	SE15	SE15	SSE13	SE12	SSE13	SSE12	SSE11	SE11	ESE10	E8	ESE10	SSE9.3	SE15
17-Mar	SE10	SSE9	SSE8	SSE6	SSE6	SSE5	SSE4	SSW5	WSW6	WNW9	NW13	WNW12	NW12	NW12	NNW16	N15	N12	N12	N11	N9	N8	N10	NNE7	NNW2	NNW3.9	NNW16
18-Mar	WSW3	W4	WSW3	SW4	WSW5	W7	W9	W8	W8	W10	WNW12	WNW10	WNW11	WNW10	WNW6	NW5	N4	E5	SE6	ESE9	ESE8	SSE6	SSW7	W8	W3.8	WNW12
19-Mar	W10	WNW10	WNW12	WNW9	W12	WNW6	WNW4	NW3	E2	SE4	SE8	ESE8	ESE9	SE10	ESE8	ENE5	NE6	NE3	ENE1	ENE8	SE6	N7	NNW10	NNW7	NNW1.0	W12
20-Mar	NNW10	N8	N7	N7	NE7	ENE8	ENE9	E11	E12	ESE10	ESE10	ESE12	E9	ENE9	ENE11	E10	E8	E7	E9	ESE10	SE10	SE11	SE14	SE15	E7.4	SE15
21-Mar	SE14	SE17	SE17	SE16	SE18	SE19	SE21	SE19	SE17	SE20	SE18	SE18	SE18	SE18	SE17	ESE18	ESE16	ESE15	ESE13	ESE12	SE12	SE15	SSE15	SSE14	SE16.4	SE21
22-Mar	SSE11	SSE7	SE7	SSE9	SSE7	SSE9	S9	S10	SSE8	SSE6	SSE5	SE8	ESE12	ESE13	ESE11	E11	SE7	SSE5	S6	WNW19	WNW14	WNW14	WNW13	WNW14	SSE4.0	WNW19
23-Mar	WNW12	WNW8	WNW8	WSW6	WSW5	SW6	W9	WNW8	WNW9	WNW9	W8	WNW8	NNW7	NNE10	NNE9	NE6	E8	ESE8	ESE9	ESE11	SE8	SSE10	SSE14	SSE14	WSW1.2	SSE14
24-Mar	SSE12	SE13	SE10	ESE9	SSE9	SSE8	SE8	SSE8	SSE5	W6	WNW11	W8	SW14	SW13	WSW15	W11	WNW9	WNW11	W10	WNW16	WNW17	WNW15	WNW11	WNW11	WSW5.0	WNW17
25-Mar	WNW10	W12	WNW12	W11	W10	W9	W8	WNW10	WNW10	WNW12	WNW12	W9	WNW12	W15	WNW16	NW18	NW18	NW20	NW19	N18	N15	N13	NNW19	N17	NW11.7	NW20
26-Mar	N16	N14	NNW11	NW12	NNW11	NNW10	NNW9	NNW11	N9	N8	NNW7	NNW6	ENE6	ENE5	N4	N5	NE5	ENE6	NE6	NNE6	NNE4	NNE4	NNE5	N6	N6.9	N16
27-Mar	NE8	NE9	NE8	NE8	NNE8	NE10	NE13	ENE15	ENE13	NE13	NE13	NE14	NE13	NE13	NE13	NE14	NE14	NE12	NE10	NE11	NE11	NE10	ENE6	E8	NE10.9	ENE15
28-Mar	E8	E7	ENE6	E7	SSE2	NE4	NE5	ENE5	NE4	ENE6	ENE10	E7	ESE7	SE4	ESE5	ESE7	ENE6	E6	ENE5	NE7	ENE6	SE3	WSW3	W5	E4.4	ENE10
29-Mar	W4	W3	WSW3	WSW3	WNW4	NW4	WNW5	WNW4	NW1	N2	NNE7	N7	NNW3	W3	WNW6	NNW6	N8	N8	NE5	E4	S6	S7	SSW6	S8	NW1.6	N8
30-Mar	SSW8	SW7	WSW7	W6	W7	W4	SE3	SE2	NE1	SSE5	ESE9	S8	S8	SE8	ESE11	ESE11	ESE13	ESE10	E9	E10	ESE11	SE11	ESE10	ESE9	SE4.9	ESE13
31-Mar	ESE6	ESE6	SSE7	S10	S8	SSE10	SSE10	SSE8	SSE8	SSE12	SSE13	SE18	SE18	SE17	SE17	SE16	SE16	SSE17	SSE13	SE12	SSE14	SSE15	SSE14	SSE15	SSE12.2	SE18
	WNW1.2	NNW1.0	NW0.9	NW0.6	WNW1.1	NW0.6	NW0.3	S0.2	SW0.7	W0.9	NNW1.2	NNE1.6	NE1.5	NE1.3	N2.7	N3.8	NNE3.4	NE2.5	ENE1.6	NE2.0	E1.5	NE0.7	N0.8	NW1.0	Diurnal Average	
	N16	SE17	N19	NNW17	SE18	SE19	SE21	SE19	SE17	SE20	NW18	SE18	NW23	NNW20	NNW23	NNW28	NNW25	NNW20	NNW20	WNW19	WNW17	WNW15	NNW19	NNW17	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 - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8 km/h on Mar 24 18:00

Minimum Value: 0 km/h on Mar 30 08:00

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

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

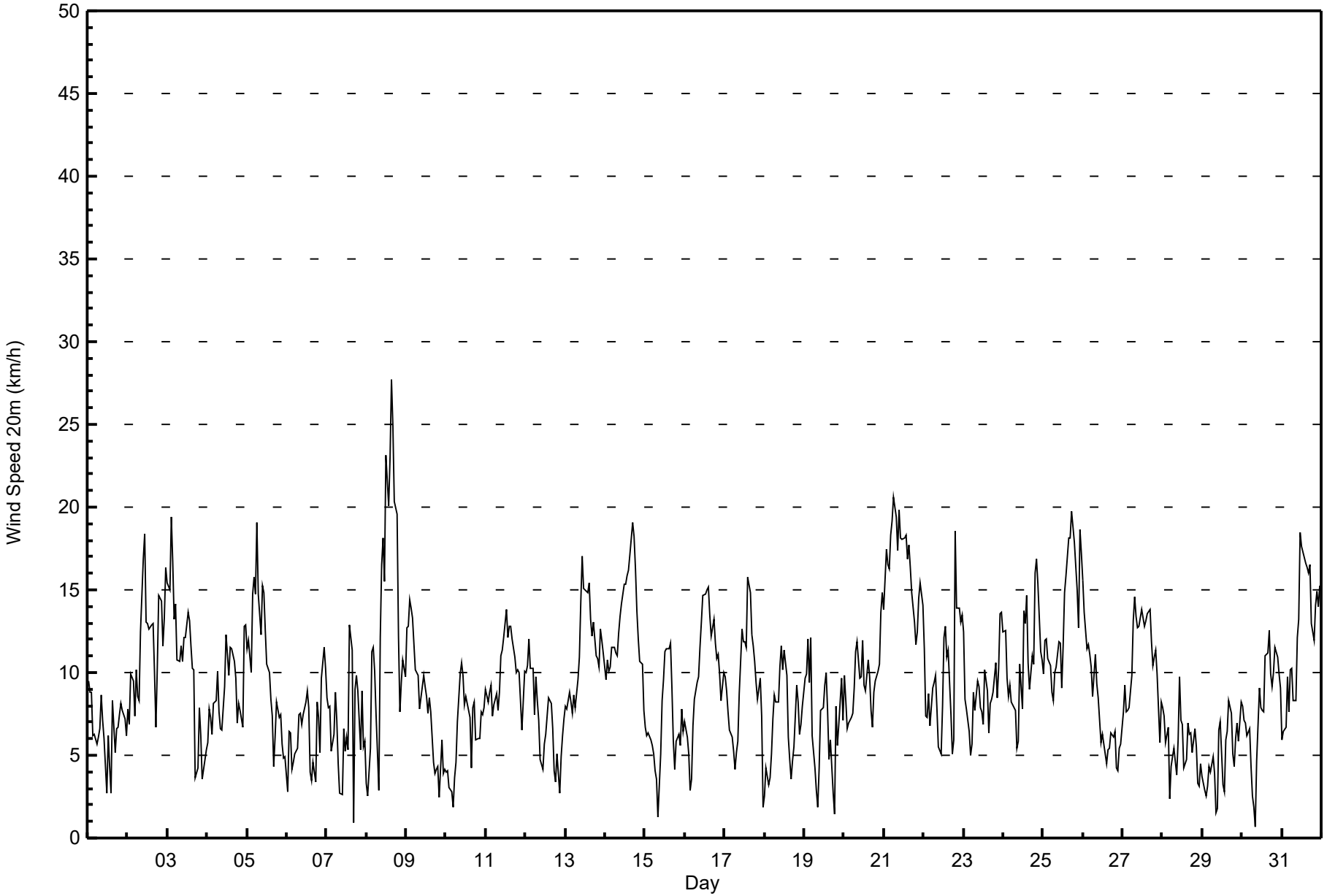
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	2	1	2	1	1	1	1	1	2	1	1	2	1	2	2	3	2	1	1	2	1	1	1	1	3
2-Mar	1	1	2	1	1	2	2	2	4	4	4	3	3	3	4	3	2	1	3	3	3	3	3	4	4
3-Mar	4	3	4	4	3	3	3	2	2	3	3	4	3	3	3	3	2	2	2	1	1	1	1	0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

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 20m (WS20) - km/h

Anzac - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	125	16.80	16.80
6 - 11	413	55.51	72.31
12 - 19	196	26.34	98.66
20 - 28	10	1.34	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 20m (WS20) - km/h

Anzac - March 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	10	4	9	8	7	2	14	13	0	6	2	11	9	12	9	9	125
6 - 11	35	11	20	18	24	54	32	37	25	11	8	9	39	48	12	30	413
12 - 19	16	1	12	6	9	11	32	17	0	0	2	2	3	36	21	28	196
20 - 28	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	6	10
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	61	16	41	32	40	67	80	67	25	17	12	22	51	96	44	73	744

Total Number of Valid Hours: 744

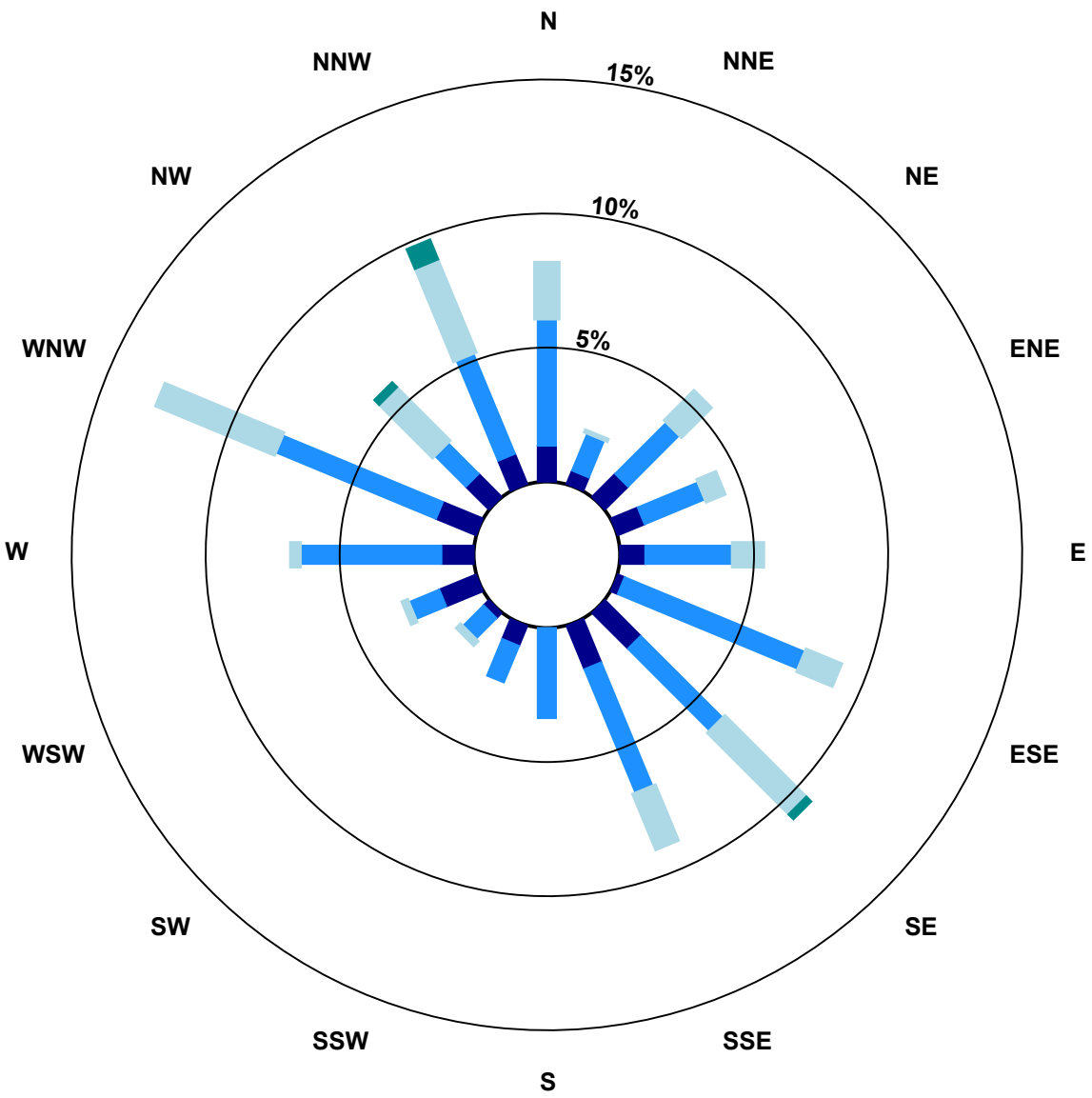
Total Number of Hours: 744

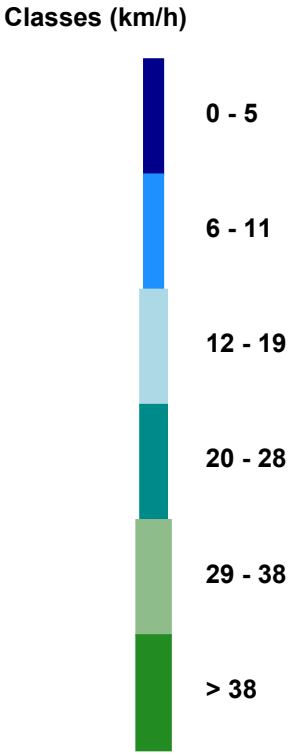
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 20m (WS20) - km/h

Anzac





Total Number of Valid Hours: 744

Direction of Maximum Speed: 338 deg on Mar 8 16:00
Direction of Maximum Daily Speed Average: 137.5 deg on Mar 21

Direction of Minimum Speed: 35 deg on Mar 30 09:00

Direction of Minimum Daily Speed Average: 1.0 deg on Mar 19

Monthly Average Direction: 8.0 deg

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	168	170	172	168	170	174	168	171	174	178	164	82	106	148	237	279	313	46	97	130	160	183	208	220	168.7
2-Mar	205	209	165	173	240	276	280	282	281	293	318	301	290	290	302	295	288	277	303	334	354	343	339	344	298.0
3-Mar	347	352	355	339	334	315	312	307	294	302	298	309	312	301	299	294	319	3	154	177	177	158	158	198	315.4
4-Mar	254	268	272	275	266	264	260	229	225	271	284	292	287	273	258	274	269	259	236	234	243	254	297	319	268.4
5-Mar	330	319	301	335	343	341	355	341	331	345	340	335	318	324	341	14	39	119	124	136	151	153	168	214	340.3
6-Mar	107	108	113	146	132	136	135	132	124	149	122	118	121	119	131	44	275	196	170	188	233	286	297	285	148.2
7-Mar	295	324	332	289	263	356	356	323	273	250	202	8	48	202	288	322	3	336	297	291	307	291	330	292	309.0
8-Mar	248	146	145	131	139	111	128	147	283	288	293	299	318	340	345	338	334	343	347	347	343	344	353	346	332.3
9-Mar	343	351	349	352	358	355	357	356	346	350	353	351	354	350	345	0	8	17	293	295	303	334	333	337	348.8
10-Mar	337	343	344	8	73	74	90	141	152	158	150	131	116	139	63	100	137	116	125	117	109	101	91	110	116.3
11-Mar	118	111	114	114	131	119	111	126	139	132	102	90	97	87	70	68	61	69	72	56	62	40	14	324	88.4
12-Mar	297	298	308	295	301	291	279	284	296	307	306	8	8	360	8	8	354	346	298	354	75	85	86	100	325.6
13-Mar	133	111	109	97	93	103	117	100	108	107	104	98	90	82	85	95	69	54	56	47	44	41	33	20	82.3
14-Mar	11	19	15	357	343	337	322	336	343	308	308	317	319	334	335	323	322	322	326	335	336	321	322	307	331.2
15-Mar	299	279	296	285	278	283	291	283	262	347	344	336	333	335	350	329	331	275	247	202	202	203	184	213	299.8
16-Mar	223	215	201	138	144	167	174	168	160	152	146	131	139	136	141	151	140	164	153	148	146	121	101	104	148.3
17-Mar	138	150	152	153	151	151	156	195	250	289	305	302	317	323	343	358	0	350	356	356	353	3	20	343	339.0
18-Mar	246	268	252	216	244	279	278	276	275	270	285	292	293	291	301	323	349	97	135	117	104	161	195	280	270.1
19-Mar	281	285	284	293	277	293	282	306	81	130	146	117	116	126	117	59	42	37	65	75	129	359	336	346	343.6
20-Mar	346	353	11	8	38	72	74	83	95	106	105	103	98	66	76	86	99	87	94	113	134	139	131	136	89.9
21-Mar	136	143	144	142	140	144	143	143	137	138	142	138	136	141	142	123	122	122	123	115	126	143	149	154	137.5
22-Mar	155	147	144	153	153	163	170	171	166	161	159	128	119	120	114	98	125	157	189	286	293	294	289	285	168.5
23-Mar	288	299	283	258	247	229	278	291	290	286	280	301	347	12	15	51	89	105	122	123	137	162	154	154	258.4
24-Mar	148	128	132	111	151	150	144	156	167	269	297	278	216	216	245	264	283	299	268	286	292	295	289	284	243.1
25-Mar	290	281	283	279	275	270	274	287	283	290	283	278	287	274	285	310	317	323	326	357	357	355	348	349	307.5
26-Mar	351	352	327	326	343	342	333	347	358	352	341	339	57	57	11	350	48	71	56	18	23	20	18	3	358.4
27-Mar	39	48	54	37	33	39	51	60	60	53	48	47	56	40	42	44	45	49	42	42	47	47	74	91	49.1
28-Mar	91	92	76	81	153	47	38	68	42	76	63	87	122	128	116	102	78	97	78	35	65	132	237	281	82.1
29-Mar	265	278	245	242	288	311	288	290	304	351	17	3	342	273	295	345	3	6	46	98	169	181	192	181	309.9
30-Mar	195	220	248	265	278	280	143	127	35	149	113	171	176	131	115	103	111	107	86	86	112	126	119	118	131.2
31-Mar	105	115	160	174	173	159	152	157	157	150	150	145	143	139	141	136	139	167	160	144	152	158	160	159	150.1
	299.9	331.8	312.8	316.7	282.7	317.7	309.9	190.3	235.9	270.8	331.8	12.4	37.4	34.2	7.8	9.2	20.1	35.8	57.7	45.7	82.3	48.6	1.2	306.2	
	Diurnal Average																								

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

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

Maximum Value: 98 deg on Mar 30 09:00

Minimum Value: 3 deg on Mar 16 07:00

Percentiles: P_1 = 6 P_{10} = 10 Q_1 = 13 Median = 16 Q_3 = 21 P_{90} = 36 P_{99} = 75

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

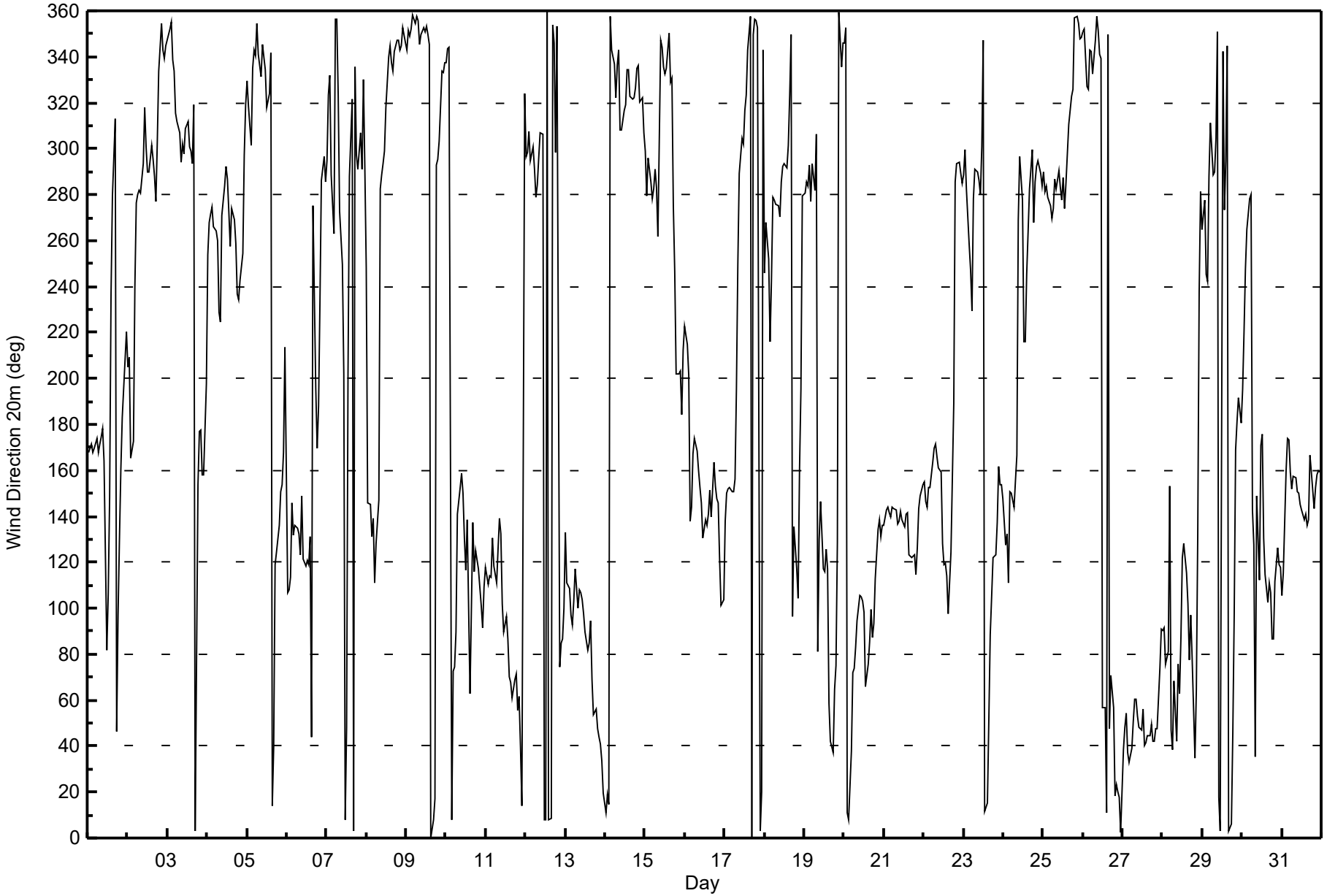
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	7	5	6	17	7	12	10	10	8	12	10	69	24	47	72	21	40	14	13	11	8	5	12	7	72
2-Mar	6	13	9	7	26	14	14	12	15	16	15	19	15	17	19	16	14	15	21	17	15	15	18	16	26
3-Mar	15	16	15	15	15	13	16	15	16	17	17	20	17	18	19	19	15	44	24	7	12	28	26	20	44
4-Mar	12	9	10	9	10	9	9	24	15	19	19	15	17	24	18	19	19	14	13	10	9	13	15	12	24
5-Mar	12	13	13	15	15	16	15	14	14	16	17	23	26	27	23	26	45	26	13	21	15	11	12	14	45
6-Mar	62	6	8	20	10	9	12	14	13	20	16	17	19	26	61	49	34	39	7	18	20	16	14	13	62
7-Mar	13	18	12	32	27	11	18	42	40	33	30	66	46	29	18	36	91	30	21	13	21	19	23	14	91
8-Mar	38	60	14	13	14	33	15	61	18	16	16	18	16	20	14	14	15	17	13	14	14	13	12	17	61
9-Mar	13	13	13	14	15	16	15	15	28	20	16	15	17	22	20	25	43	52	48	24	52	18	34	30	52
10-Mar	14	26	28	40	66	20	20	17	15	15	21	27	23	29	35	53	20	14	18	17	15	14	15	20	66
11-Mar	14	16	10	13	14	16	18	18	15	19	15	19	21	17	14	14	14	14	13	17	15	15	21	16	21
12-Mar	13	14	13	13	15	15	10	14	25	41	56	54	35	38	34	23	24	18	18	10	75	16	11	15	75
13-Mar	17	11	11	11	11	16	13	16	15	15	15	18	16	16	18	16	15	14	14	13	13	13	13	14	18
14-Mar	14	14	14	17	11	13	14	17	18	15	15	15	19	18	15	14	13	13	12	13	12	14	13	16	19
15-Mar	13	11	15	11	7	10	15	16	79	19	21	19	19	20	18	19	20	36	26	9	4	16	13	12	79
16-Mar	10	11	9	37	29	5	3	7	7	17	18	16	19	17	17	19	16	13	11	13	12	13	13	11	37
17-Mar	8	13	13	12	13	12	15	28	21	19	16	18	20	29	19	16	16	14	14	15	13	12	10	61	61
18-Mar	57	17	52	20	31	12	14	16	20	20	20	19	18	23	44	41	51	22	16	9	14	37	12	14	57
19-Mar	11	12	16	17	10	16	17	56	78	45	21	27	20	21	28	53	31	41	79	17	17	34	23	22	79
20-Mar	12	11	15	16	13	12	10	13	18	22	21	23	29	28	21	23	19	14	10	16	13	13	13	13	29
21-Mar	13	11	12	12	12	11	12	12	14	13	14	15	16	15	18	15	16	14	14	12	13	12	11	11	18
22-Mar	9	13	11	9	8	10	7	6	7	17	16	23	16	16	18	16	22	42	28	18	15	14	13	14	42
23-Mar	13	13	14	10	11	18	12	13	15	18	23	35	47	20	28	49	24	22	14	11	15	7	8	9	49
24-Mar	11	11	12	23	10	11	14	12	20	47	16	24	21	20	23	21	18	27	16	14	15	14	14	15	47
25-Mar	16	14	13	13	13	9	11	14	20	18	18	23	18	18	27	17	23	13	14	15	17	15	14	12	27
26-Mar	15	13	17	11	14	14	19	15	19	22	23	49	40	50	60	36	40	18	19	13	33	16	14	13	60
27-Mar	19	12	13	14	12	12	12	14	15	18	17	17	18	24	23	20	19	16	13	11	11	11	30	15	30
28-Mar	10	11	13	14	54	11	8	21	43	37	24	41	41	70	60	35	38	21	24	10	11	33	24	6	70
29-Mar	8	20	35	22	11	33	12	22	60	94	29	23	79	76	39	41	24	21	24	20	13	9	10	5	94
30-Mar	11	12	7	14	9	12	37	24	98	44	23	46	38	37	22	23	20	18	13	14	15	13	18	14	98
31-Mar	18	15	11	7	9	7	10	11	14	17	20	16	19	19	16	17	17	13	15	12	10	9	9	8	20
	62	60	52	40	66	33	37	61	98	94	56	69	79	76	72	53	91	52	79	24	75	37	34	61	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 20m (WD20) - deg

Anzac - March 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS17
WAPASU
MARCH 2025

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

April 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - WAPASU (AMS17)
MARCH 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	708	36	36	100	17.9	0	3.6	0
H2S (ppb) Average	706	38	38	100	1.5	0	0.4	0
THC (ppm) Average	709	35	35	100	2.9	-	2.4	-
O3 (ppb) Average	700	35	44	98.79	50.1	0	46.5	-
NO2 (ppb) Average	707	37	37	100	38.1	0	9.7	-
NO (ppb) Average	707	37	37	100	40	-	4.1	-
NOX (ppb) Average	707	37	37	100	76.3	-	13.6	-
PM2.5 (ug/m3) Average	742	2	2	100	41.3	0	11.1	0
Temperature 2 m (C) Average	744	0	0	100	8.3	-	1.3	-
Relative Humidity (%) Average	744	0	0	100	98.9	-	86.1	-
Wind Speed 10 m (km/h) Average	743	0	1	99.87	21	-	16	-
Wind Direction 10 m (deg) Average	743	0	1	99.87	-	-	-	-
Precipitation (mm) Total	742	0	2	99.73	0.7	-	2.6	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - WAPASU (AMS17)
MARCH 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	708	0.67	1.8	-	0	0	0	0.1	0.5	1.9	17.9
H2S (ppb) Average	706	0.09	0.2	-	0	0	0	0	0.1	0.3	1.5
THC (ppm) Average	709	2.27	0.1	-	2.2	2.2	2.2	2.3	2.3	2.4	2.9
O3 (ppb) Average	700	36.8	8.2	-	6.3	25.1	31.8	38.9	43.3	45.9	50.1
NO2 (ppb) Average	707	4.09	4.9	-	0.2	0.4	0.9	2.3	5.6	9.8	38.1
NO (ppb) Average	707	0.97	2.9	-	0	0	0	0.1	0.8	2.3	40
NOX (ppb) Average	707	5.05	7.2	-	0.2	0.4	1	2.6	6.4	11.9	76.3
PM2.5 (ug/m3) Average	742	2.74	2.9	-	0.6	1.1	1.5	2.2	2.9	4.2	41.3
Temperature 2 m (C) Average	744	-8.79	8	-	-27.6	-20.1	-15.1	-8.3	-2.3	1.6	8.3
Relative Humidity (%) Average	744	66.47	17.7	-	23.7	42.4	52.8	68	81.5	87	98.9
Wind Speed 10 m (km/h) Average	743	7.5	4	-	0	3	5	7	10	13	21
Wind Direction 10 m (deg) Average	743	-	-	-	-	-	-	-	-	-	-
Precipitation (mm) Total	742	-	-	9.64	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - WAPASU (AMS17)
MARCH 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
O3	13 Mar 2025 03:00	13 Mar 2025 11:00	9	Unstable Operation - sample pump failing
Precipitation Collector	03 Mar 2025 11:00	03 Mar 2025 12:00	2	Maintenance - emptied bucket
Wind Speed, Wind Direction	07 Mar 2025 07:00	07 Mar 2025 07:00	1	Flat line in sensor output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Wapasu - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 17.9 ppb on Mar 4 11:00 Maximum Daily Average: 3.6 ppb on Mar 1

Minimum Value: 0.0 ppb on Mar 1 01:00 Minimum Daily Average: 0.0 ppb on Mar 12
Maximum Diurnal Average: 1.4 ppb at hour 12 Minimum Diurnal Average: 0.2 ppb at hour 3
Monthly Average: 0.67 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.5 P_{90} = 1.9 P_{99} = 7.4

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.0	0.0	0.8	0.8	0.0	Z	0.0	0.0	0.0	0.0	2.2	6.5	3.0	15.2	17.7	12.1	13.9	6.3	1.9	1.6	0.5	0.3	0.4	0.6	3.6	17.7
2-Mar	Z	0.5	0.3	0.3	0.2	1.5	2.4	1.5	0.9	0.4	0.6	0.5	0.2	0.3	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.4
3-Mar	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.6	1.5	1.5	1.6	3.5	3.3	1.3	0.6	3.5
4-Mar	0.4	1.4	Z	2.4	4.2	3.0	2.3	2.9	7.5	11.7	17.9	C	C	C	C	C	1.9	0.7	0.9	0.3	0.4	0.4	0.0	0.0	3.2	17.9
5-Mar	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	0.5	1.0	0.4	0.1	0.0	1.5	4.6	4.3	2.2	3.2	0.8	4.6
6-Mar	3.1	2.1	1.6	0.8	Z	0.2	0.1	0.0	0.1	0.1	0.2	0.0	0.0	0.2	1.9	3.8	5.1	4.2	3.1	1.2	0.5	0.5	1.9	5.4	1.6	5.4
7-Mar	5.1	2.6	1.1	0.7	0.8	Z	0.4	0.4	0.3	0.5	1.0	12.6	5.1	5.0	3.3	3.7	2.4	0.7	0.1	0.4	0.2	0.1	0.1	0.0	2.0	12.6
8-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
9-Mar	0.1	Z	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
10-Mar	0.5	1.0	Z	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.5	2.2	4.0	2.6	3.1	1.1	0.8	0.6	0.4	0.4	0.4	0.1	0.1	0.8	4.0
11-Mar	0.1	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2
12-Mar	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-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
14-Mar	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
15-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16-Mar	0.0	0.1	Z	0.5	0.5	0.3	0.6	0.6	3.7	3.1	2.6	1.2	1.0	1.3	1.1	0.5	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.8	3.7
17-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	1.3	1.8	0.8	1.5	0.9	0.6	0.8	0.8	0.9	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.5	1.8
18-Mar	0.0	0.0	0.1	0.0	Z	0.0	0.0	0.0	0.8	2.4	3.0	0.3	0.2	0.3	3.5	6.0	4.0	3.6	5.9	2.0	0.8	0.3	0.2	0.1	1.4	6.0
19-Mar	0.1	0.0	0.1	0.1	0.0	Z	0.1	0.1	0.3	0.5	0.4	5.4	2.6	0.5	0.8	2.4	2.8	2.5	1.4	0.8	0.2	0.1	0.0	0.0	0.9	5.4
20-Mar	Z	0.0	0.1	0.0	0.0	0.0	0.0	0.4	0.2	0.1	0.0	0.0	0.2	0.1	0.0	0.1	0.0	0.2	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.4
21-Mar	0.0	Z	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2
22-Mar	0.2	0.3	Z	0.5	0.6	0.6	0.8	0.7	0.6	0.7	3.9	0.9	0.4	0.2	0.7	0.4	0.4	0.8	0.9	0.3	0.1	0.0	0.4	0.3	0.6	3.9
23-Mar	0.2	0.2	0.2	Z	0.1	0.1	0.1	0.3	0.8	0.4	0.1	0.0	0.2	0.2	0.2	0.1	0.6	1.5	0.5	0.0	0.0	0.0	0.0	0.0	0.2	1.5
24-Mar	0.0	0.0	0.1	0.2	Z	0.3	0.3	0.2	0.2	0.4	0.9	2.3	5.8	1.3	0.0	0.0	1.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.6	5.8
25-Mar	0.0	0.0	0.0	0.3	0.0	Z	0.0	0.0	0.2	0.1	0.3	6.7	4.7	4.1	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	6.7
26-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28-Mar	0.0	0.0	Z	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	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.2
29-Mar	0.1	0.1	0.0	Z	0.0	0.1	0.1	0.0	0.4	0.4	1.3	1.9	1.9	1.2	0.9	0.8	0.9	0.9	0.7	0.4	0.2	0.2	0.8	0.2	0.6	1.9
30-Mar	0.3	0.3	0.3	0.0	Z	0.7	5.0	3.0	4.0	5.0	2.5	2.1	1.6	0.8	0.8	0.8	0.4	0.7	0.5	1.3	0.7	0.1	0.6	0.4	1.4	5.0
31-Mar	0.3	0.3	0.2	0.2	0.1	Z	0.1	0.2	0.2	0.4	0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.4
	0.4	0.3	0.2	0.3	0.3	0.3	0.4	0.3	0.7	0.9	1.3	1.4	1.0	1.2	1.2	1.2	1.2	0.8	0.6	0.4	0.3	0.3	0.3	0.4	Diurnal Average	
	5.1	2.6	1.6	2.4	4.2	3.0	5.0	3.0	7.5	11.7	17.9	12.6	5.8	15.2	17.7	12.1	13.9	6.3	5.9	2.0	4.6	4.3	3.3	5.4	Diurnal Maximum	

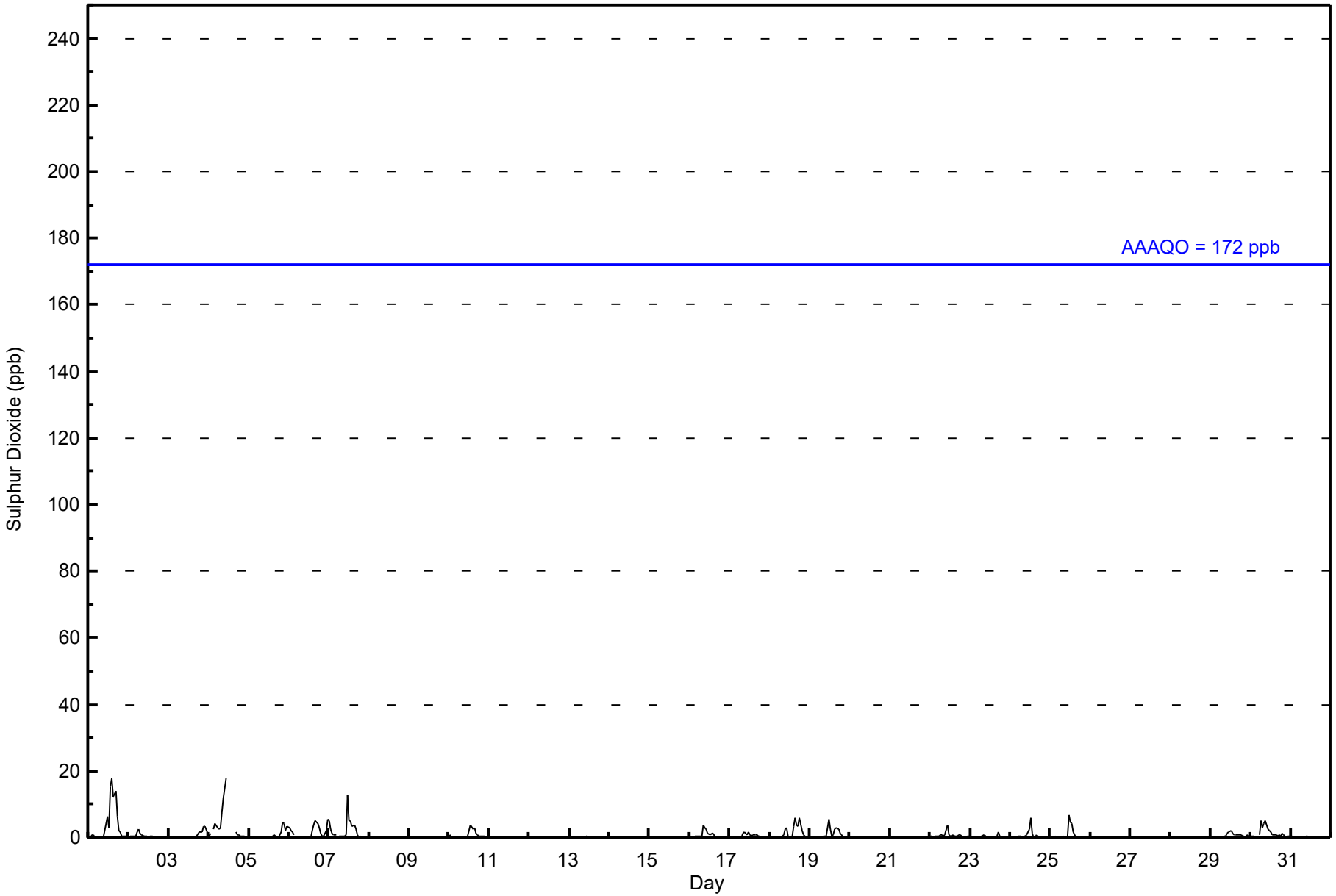
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Wapasu - March 2025



Sulphur Dioxide (SO_2) - ppb
Wapasu - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	701	99.01	99.01
11 - 20	7	0.99	100.00
21 - 60	0	0.00	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Wapasu - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	126	52	52	19	21	29	104	79	45	29	25	18	14	23	16	48	700
11 - 20	0	0	0	0	0	0	0	0	1	1	2	3	0	0	0	0	7
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	126	52	52	19	21	29	104	79	46	30	27	21	14	23	16	48	707

Total Number of Valid Hours: 707

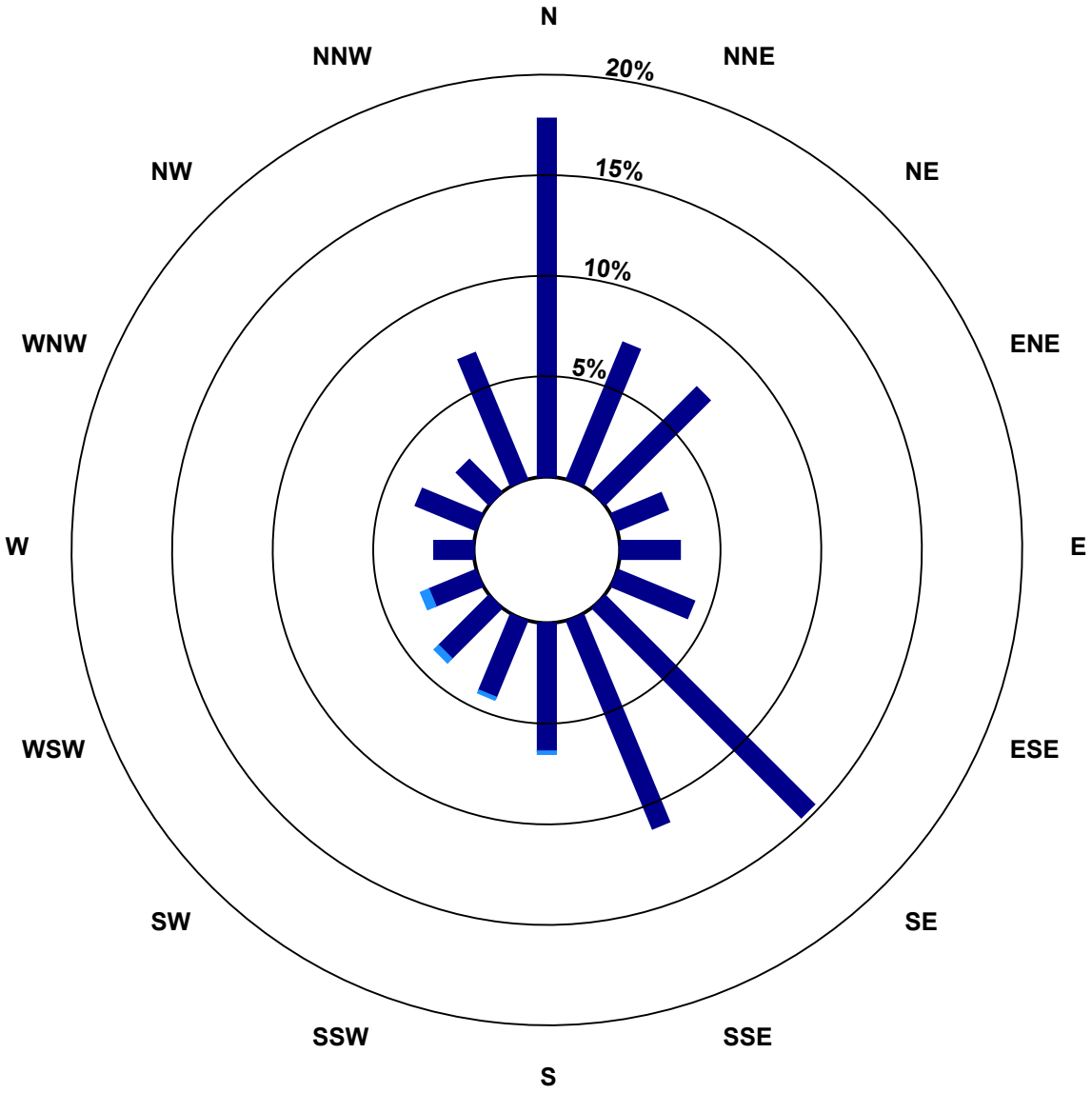
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Sulphur Dioxide (SO_2) - ppb

Wapasu



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

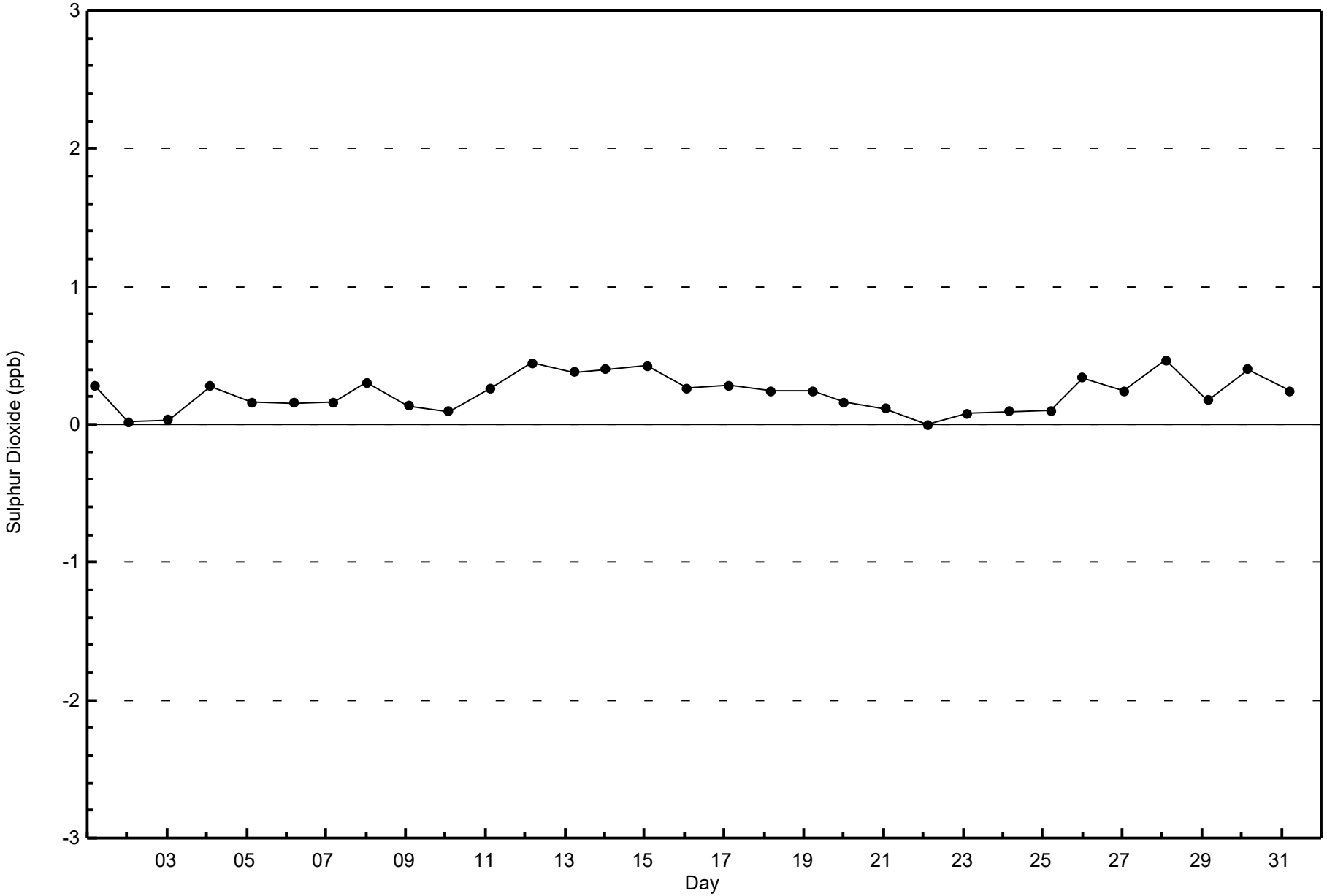
Total Number of Valid Hours: 707

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Wapasu - March 2025

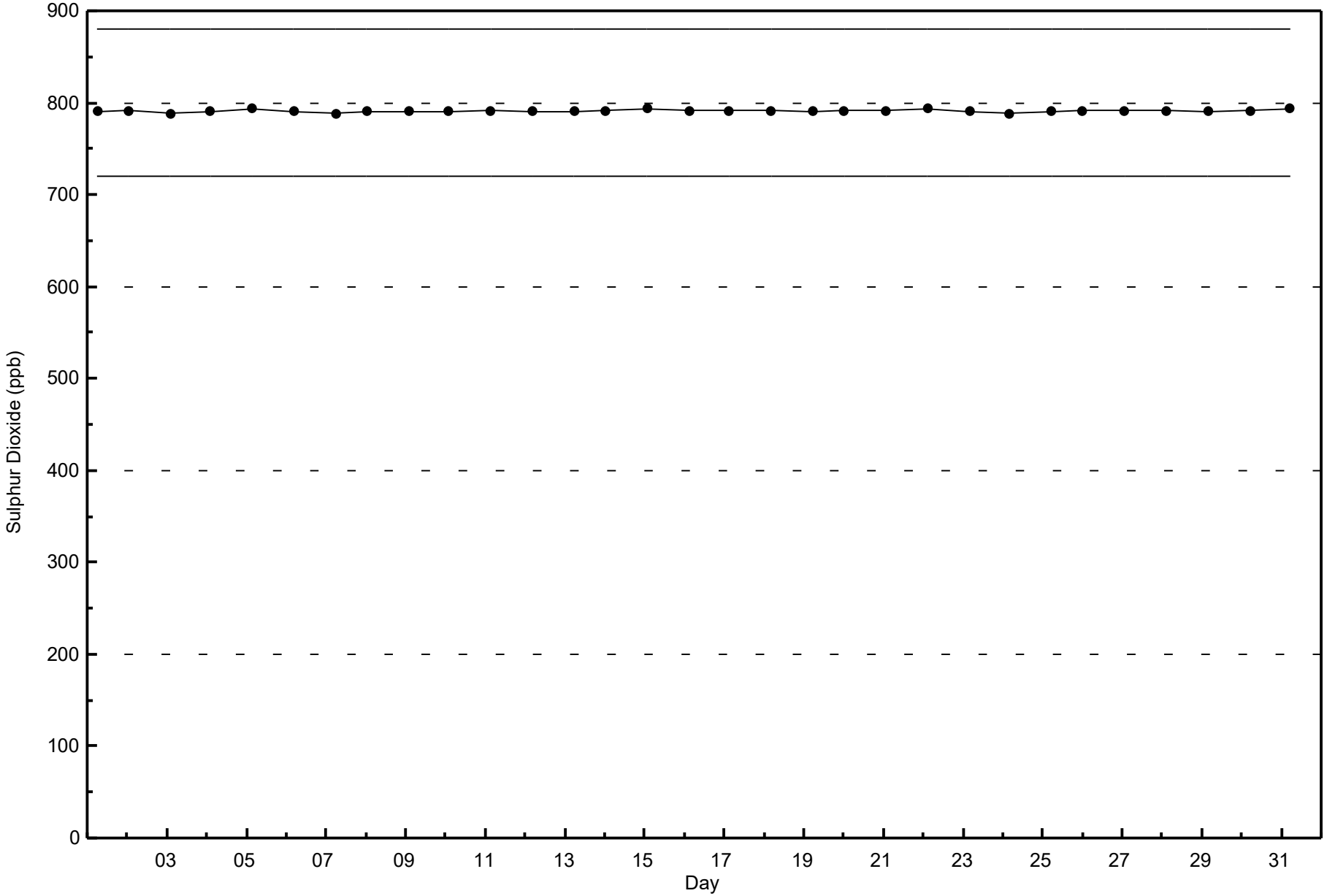


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Wapasu - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Wapasu - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.5 ppb on Mar 2 09:00 Maximum Daily Average: 0.4 ppb on Mar 25

Minimum Value: 0.0 ppb on Mar 1 03:00 Minimum Daily Average: 0.0 ppb on Mar 27
Maximum Diurnal Average: 0.2 ppb at hour 9 Minimum Diurnal Average: 0.0 ppb at hour 17
Monthly Average: 0.09 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.1 P_{90} = 0.3 P_{99} = 0.8

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	38
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	Z	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
2-Mar	0.0	Z	0.2	0.0	0.0	0.0	0.0	0.8	1.5	0.6	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.2	1.5
3-Mar	0.1	0.1	Z	0.2	0.2	0.0	0.1	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	0.1	0.0	0.1	0.1	0.1	0.2
4-Mar	0.0	0.1	0.1	Z	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.1	0.1	0.0	0.0	0.3	0.0	0.0	0.1	0.0	0.3	0.2	0.0	0.1	0.2	0.3
5-Mar	0.1	0.0	0.0	0.1	Z	0.2	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.2
6-Mar	0.1	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	0.3	0.9	0.1	0.9
7-Mar	Z	0.4	0.2	0.3	0.1	0.1	0.1	0.0	0.1	0.4	0.5	0.4	0.5	0.6	0.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
8-Mar	0.0	Z	0.2	0.0	0.0	0.0	0.0	0.0	0.3	0.5	0.3	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
9-Mar	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.2
10-Mar	0.0	0.1	0.0	Z	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.3	0.1	0.1	0.0	0.0	0.1	0.3
11-Mar	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.0	0.0	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	0.3
12-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.2
13-Mar	Z	0.3	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
14-Mar	0.0	Z	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	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
15-Mar	0.1	0.3	Z	0.4	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
16-Mar	0.0	0.0	0.0	Z	0.2	0.0	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	0.2
17-Mar	0.0	0.1	0.0	0.0	Z	0.1	0.0	0.0	0.1	0.2	0.6	0.3	0.2	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.6
18-Mar	0.2	0.2	0.2	0.2	0.2	Z	0.4	0.2	0.7	0.5	0.3	0.1	0.1	0.1	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.7
19-Mar	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	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
20-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	C	C	C	C	C	C	C	0.1	0.0	0.0	0.0	0.0	0.0	0.0	--	0.2
21-Mar	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	0.0	0.0	0.0	0.0	0.1
22-Mar	0.0	0.1	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	0.6	0.2	0.2	0.4	0.4	0.7	0.6	0.2	0.7
23-Mar	0.5	0.4	0.4	0.4	Z	0.3	0.2	0.4	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	0.1	0.5
24-Mar	0.0	0.0	0.0	0.0	0.1	Z	0.2	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.9	0.7	0.1	0.0	0.2	0.1	0.9
25-Mar	Z	0.8	1.4	0.9	0.7	0.5	0.5	0.5	0.7	0.3	0.3	0.4	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.4	1.4
26-Mar	0.1	Z	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
27-Mar	0.0	0.0	Z	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
28-Mar	0.0	0.1	0.3	Z	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
29-Mar	0.0	0.0	0.1	0.1	Z	0.4	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.1	0.4
30-Mar	0.0	0.0	0.0	0.0	0.1	Z	0.5	0.5	0.8	0.5	0.4	0.3	0.2	0.3	0.2	0.2	0.1	0.1	0.5	0.3	0.2	0.2	0.1	0.1	0.2	0.8
31-Mar	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	0.0	0.0	0.1	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	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	Diurnal Average	
	0.5	0.8	1.4	0.9	0.7	0.5	0.5	0.8	1.5	0.6	0.6	0.4	0.5	0.6	0.7	0.3	0.2	0.6	0.5	0.9	0.7	0.4	0.7	0.9	Diurnal Maximum	

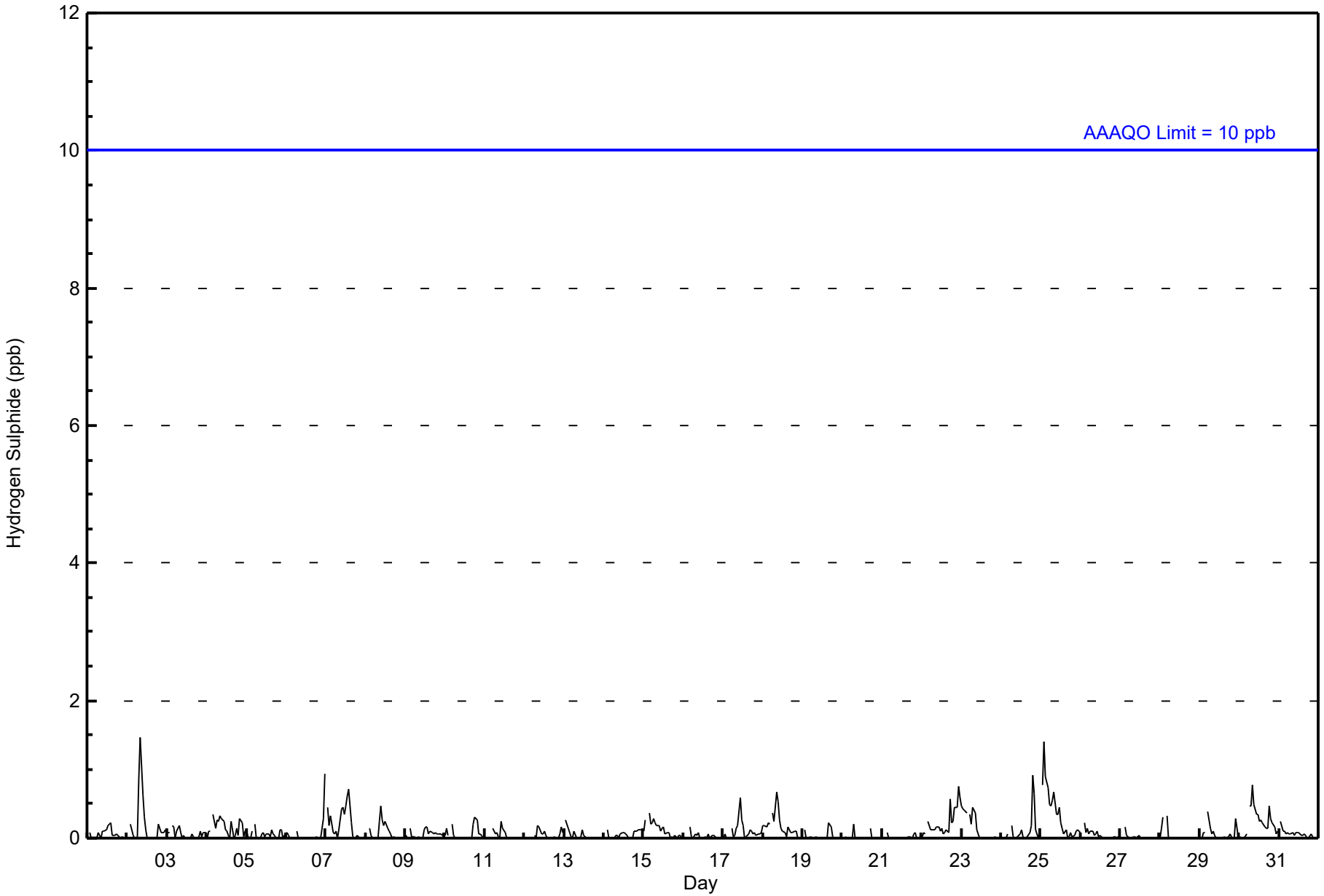
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Wapasu - March 2025



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

Total Number of Valid Hours: 706

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Wapasu - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	122	53	47	20	21	31	102	78	47	32	31	19	14	23	16	49	705
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	122	53	47	20	21	31	102	78	47	32	31	19	14	23	16	49	705

Total Number of Valid Hours: 705

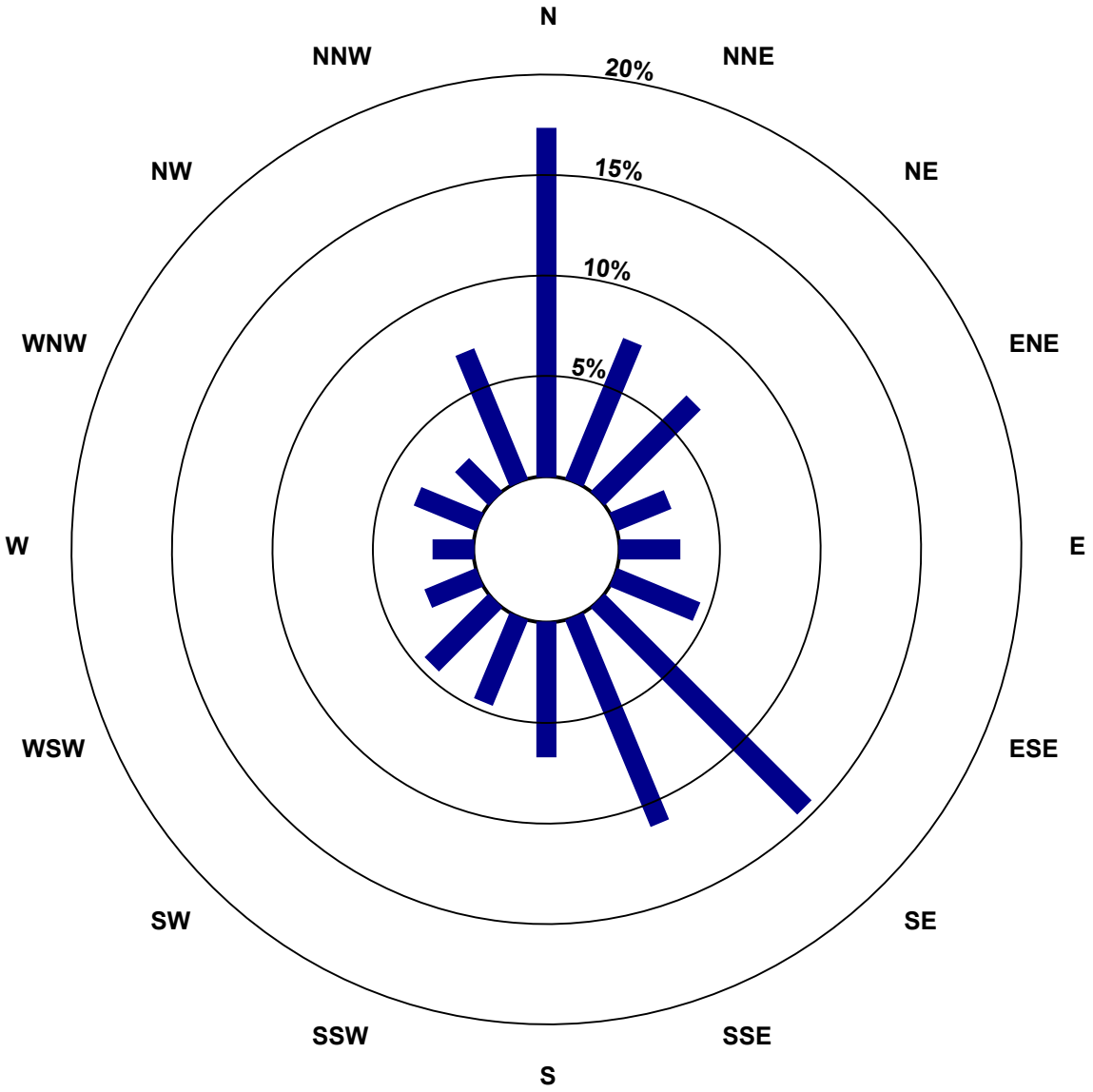
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Hydrogen Sulphide (H_2S) - ppb

Wapasu



Classes (ppb)

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

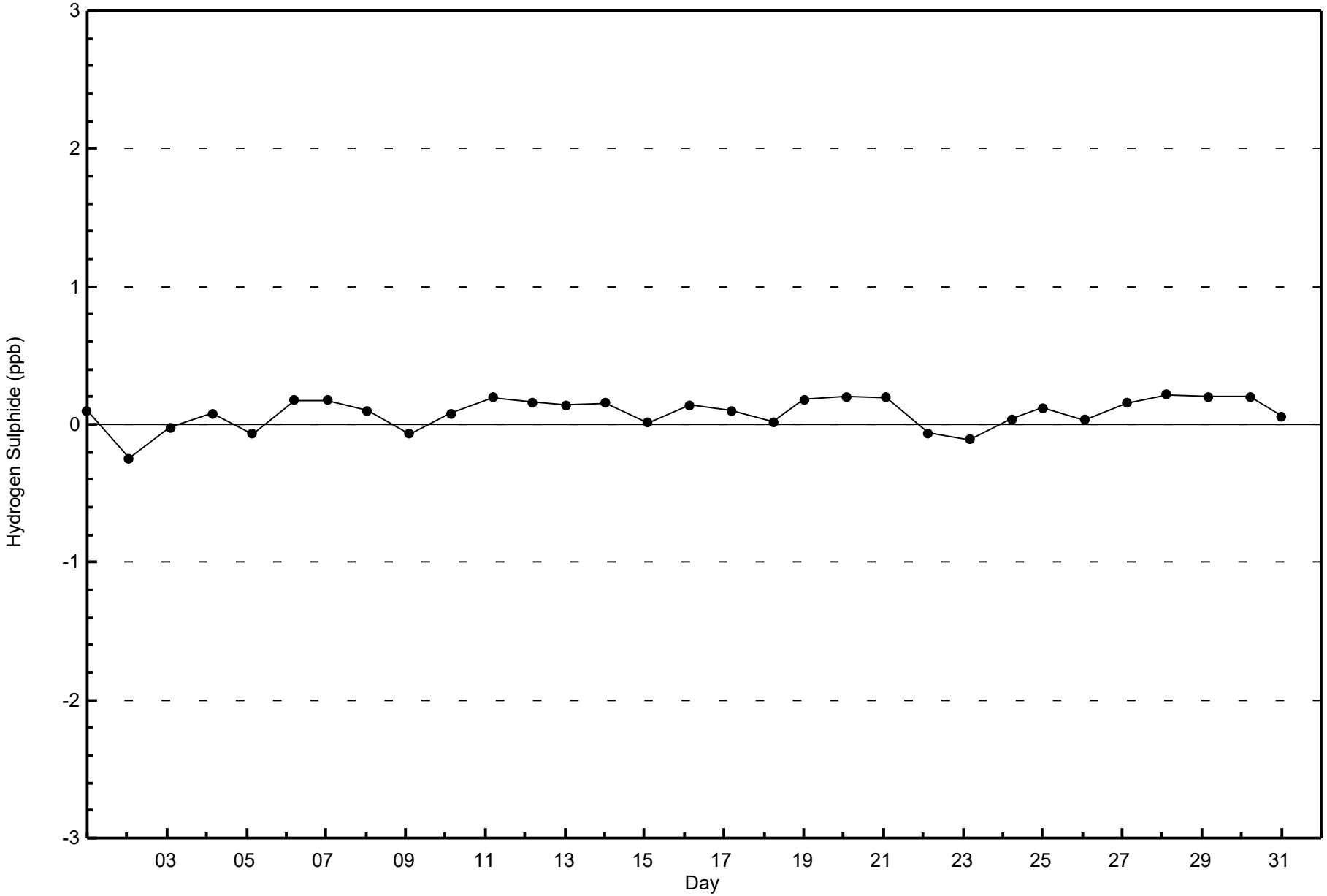
Total Number of Valid Hours: 705

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Wapasu - March 2025

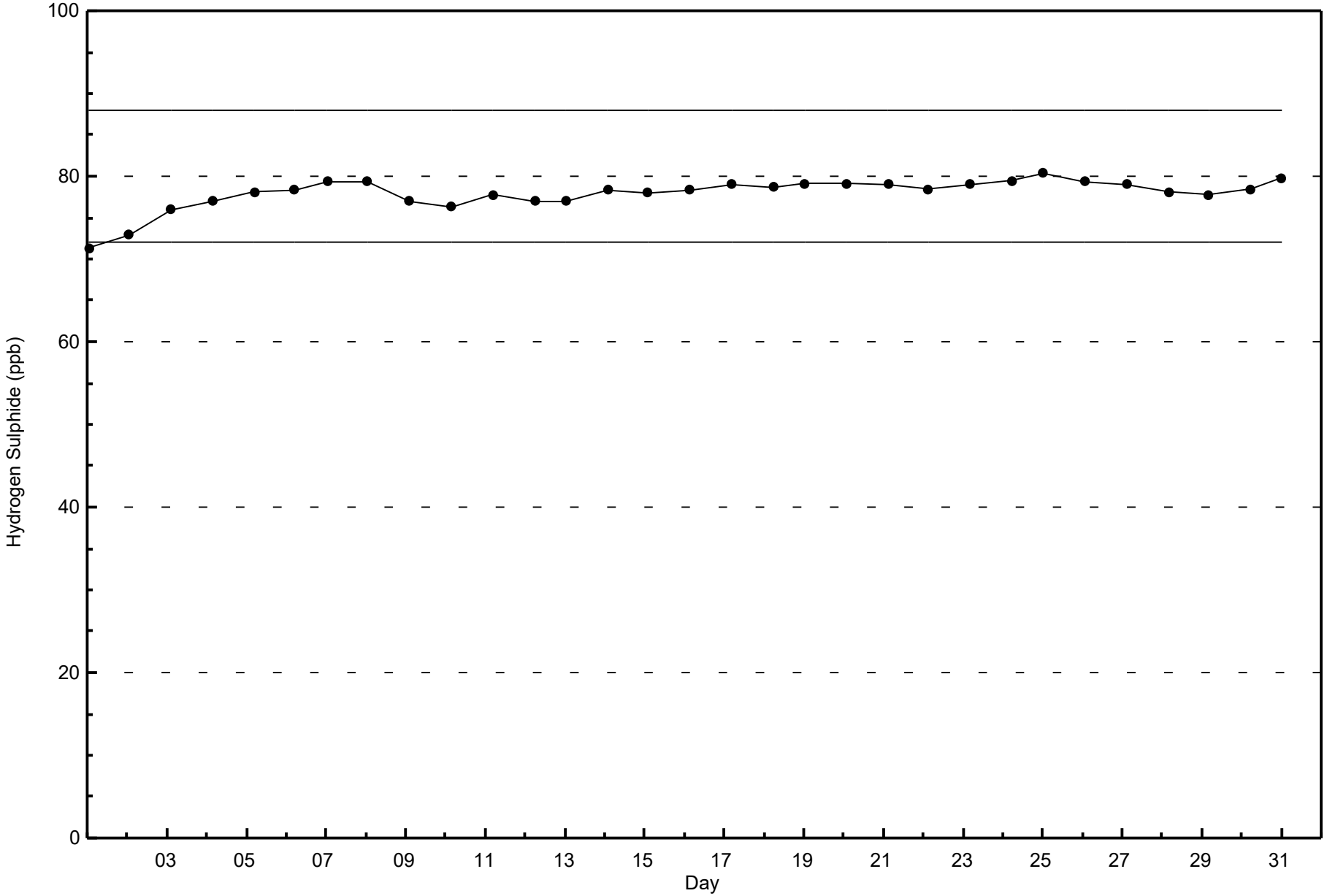


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Wapasu - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Wapasu - March 2025

Maximum Value: 2.9 ppm on Mar 2 09:00

Maximum Daily Average: 2.4 ppm on Mar 30

Minimum Value: 2.2 ppm on Mar 21 18:00

Minimum Daily Average: 2.2 ppm on Mar 27

Maximum Diurnal Average: 2.3 ppm at hour 9

Minimum Diurnal Average: 2.2 ppm at hour 17

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} = 2.4 P_{99} = 2.6

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	2.2	2.2	2.3	2.2	2.3	Z	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.2	2.3	2.3
2-Mar	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.8	2.9	2.6	2.4	2.4	2.3	2.2	2.3	2.4	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.3	2.3	2.9
3-Mar	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	2.3
4-Mar	2.2	2.3	Z	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	C	C	C	C	2.3	2.4	2.4	2.4	2.3	2.5	2.4	2.3	2.3	2.4	2.5
5-Mar	2.4	2.3	2.3	Z	2.2	2.3	2.3	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.4
6-Mar	2.2	2.3	2.2	2.3	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.3	2.2	2.3	2.3	2.2	2.3	2.3	2.2	2.3	2.4	2.7	2.3	2.7
7-Mar	2.6	2.3	2.3	2.4	2.3	Z	2.3	2.3	2.3	2.5	2.5	2.4	2.5	2.6	2.6	2.3	2.3	2.2	2.2	2.3	2.3	2.3	2.2	2.2	2.4	2.6
8-Mar	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.4	2.3	2.2	2.3	2.2	2.3	2.3	2.3	2.3	2.2	2.2	2.3	2.3	2.2	2.3	2.3	2.4
9-Mar	2.3	Z	2.2	2.2	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.3	2.3	2.3
10-Mar	2.2	2.3	Z	2.2	2.2	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.4
11-Mar	2.3	2.2	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.5	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.5
12-Mar	2.2	2.3	2.2	2.3	Z	2.2	2.3	2.3	2.4	2.4	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	2.3	2.4
13-Mar	2.3	2.3	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3
14-Mar	Z	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.2	2.3	2.2	2.3
15-Mar	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	2.3	2.3	2.3
16-Mar	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.3	2.3	2.3
17-Mar	2.3	2.2	2.3	Z	2.2	2.2	2.3	2.3	2.3	2.3	2.6	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.6
18-Mar	2.3	2.3	2.3	2.3	Z	2.4	2.4	2.6	2.8	2.5	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.8
19-Mar	2.2	2.2	2.2	2.2	2.2	Z	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3
20-Mar	Z	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	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3
21-Mar	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
22-Mar	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.3	2.4
23-Mar	2.4	2.4	2.5	Z	2.4	2.3	2.4	2.6	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.3	2.6
24-Mar	2.2	2.2	2.2	2.2	Z	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	2.5	2.6	2.5	2.5	2.4	2.7	2.3	2.7
25-Mar	2.7	2.5	2.5	2.4	2.4	Z	2.4	2.4	2.4	2.4	2.3	2.4	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.7
26-Mar	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3
27-Mar	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
28-Mar	2.2	2.2	Z	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3
29-Mar	2.3	2.2	2.2	Z	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.3
30-Mar	2.2	2.2	2.2	2.2	Z	2.3	2.5	2.6	2.6	2.5	2.6	2.7	2.5	2.6	2.5	2.3	2.3	2.2	2.4	2.4	2.3	2.3	2.2	2.2	2.4	2.7
31-Mar	2.2	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3
	2.3	2.3	2.3	2.3	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	2.3	2.3	2.3	2.3	2.3	2.3	Diurnal Average	
	2.7	2.5	2.5	2.4	2.4	2.4	2.5	2.8	2.9	2.6	2.6	2.7	2.5	2.6	2.6	2.4	2.4	2.4	2.5	2.6	2.5	2.5	2.4	2.7	Diurnal Maximum	

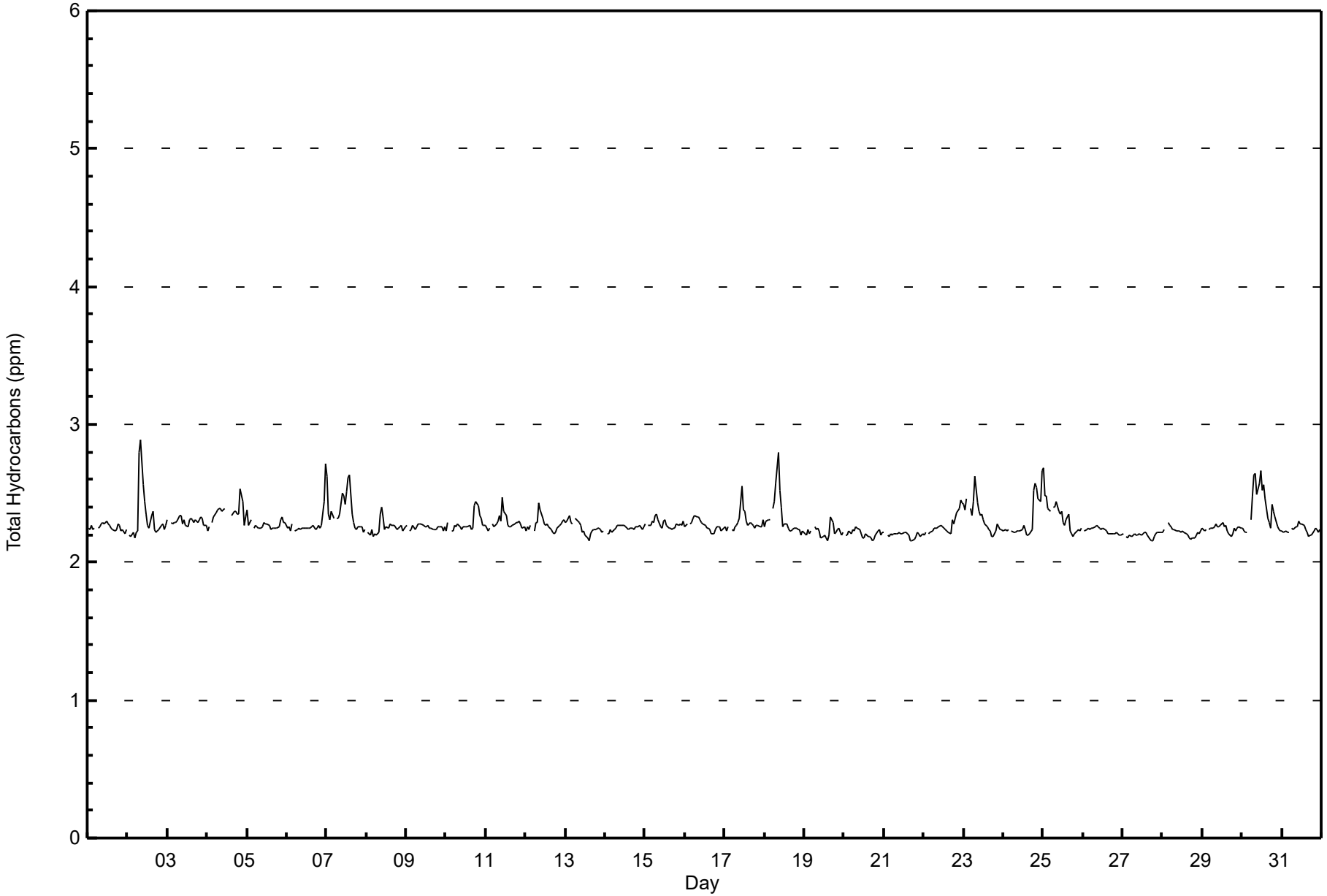
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Wapasu - March 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	0	0.00	0.00
2.1 - 3.0	709	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: 709

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Wapasu - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.1 - 3.0	126	52	52	19	21	29	104	79	46	30	28	21	14	23	16	48	708
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	126	52	52	19	21	29	104	79	46	30	28	21	14	23	16	48	708

Total Number of Valid Hours: 708

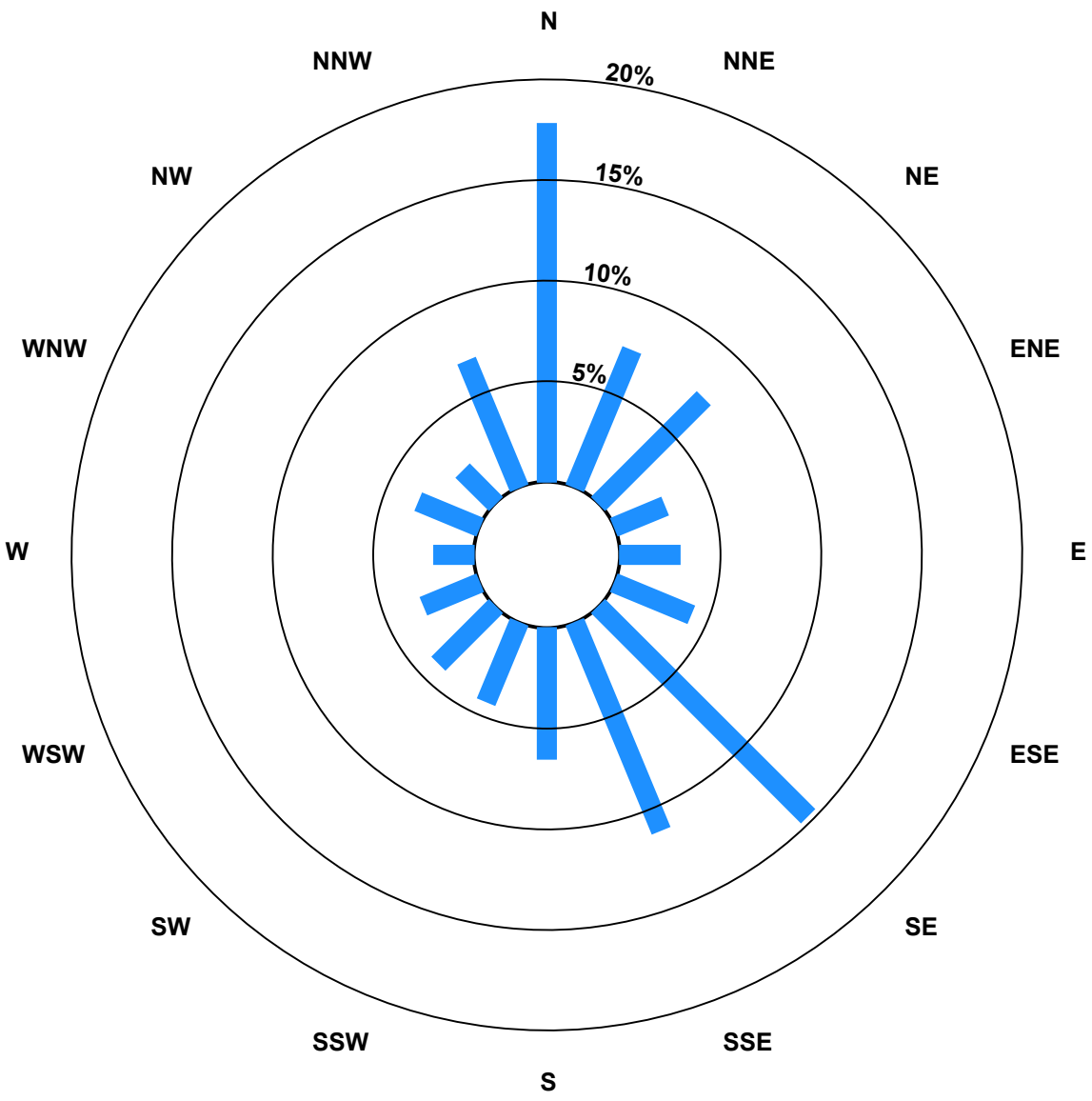
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Total Hydrocarbons (THC) - ppm

Wapasu



Classes (ppm)

- 0 - 2.0
- 2.1 - 3.0
- 3.1 - 10.0
- > 10.0

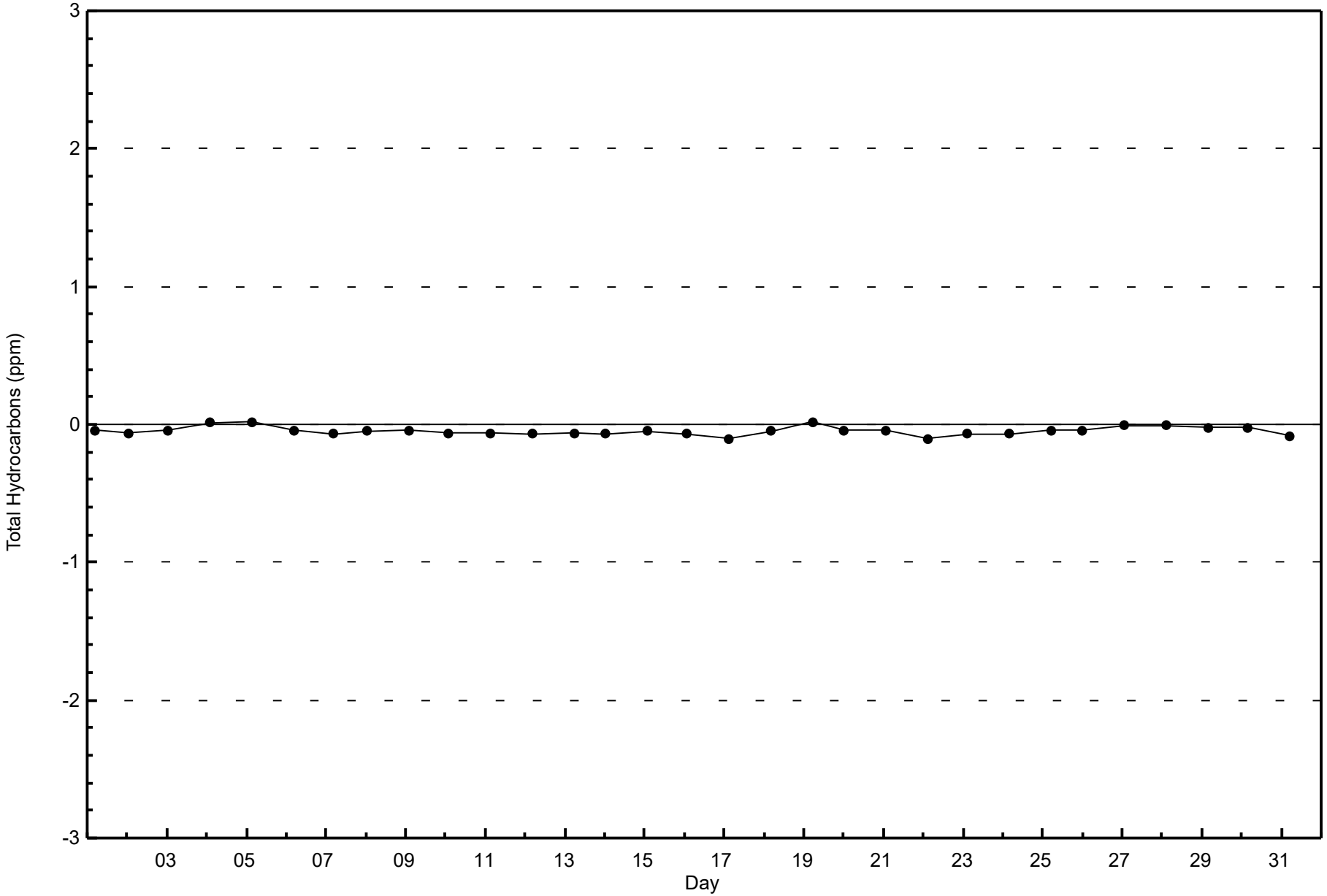
Total Number of Valid Hours: 708

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Wapasu - March 2025

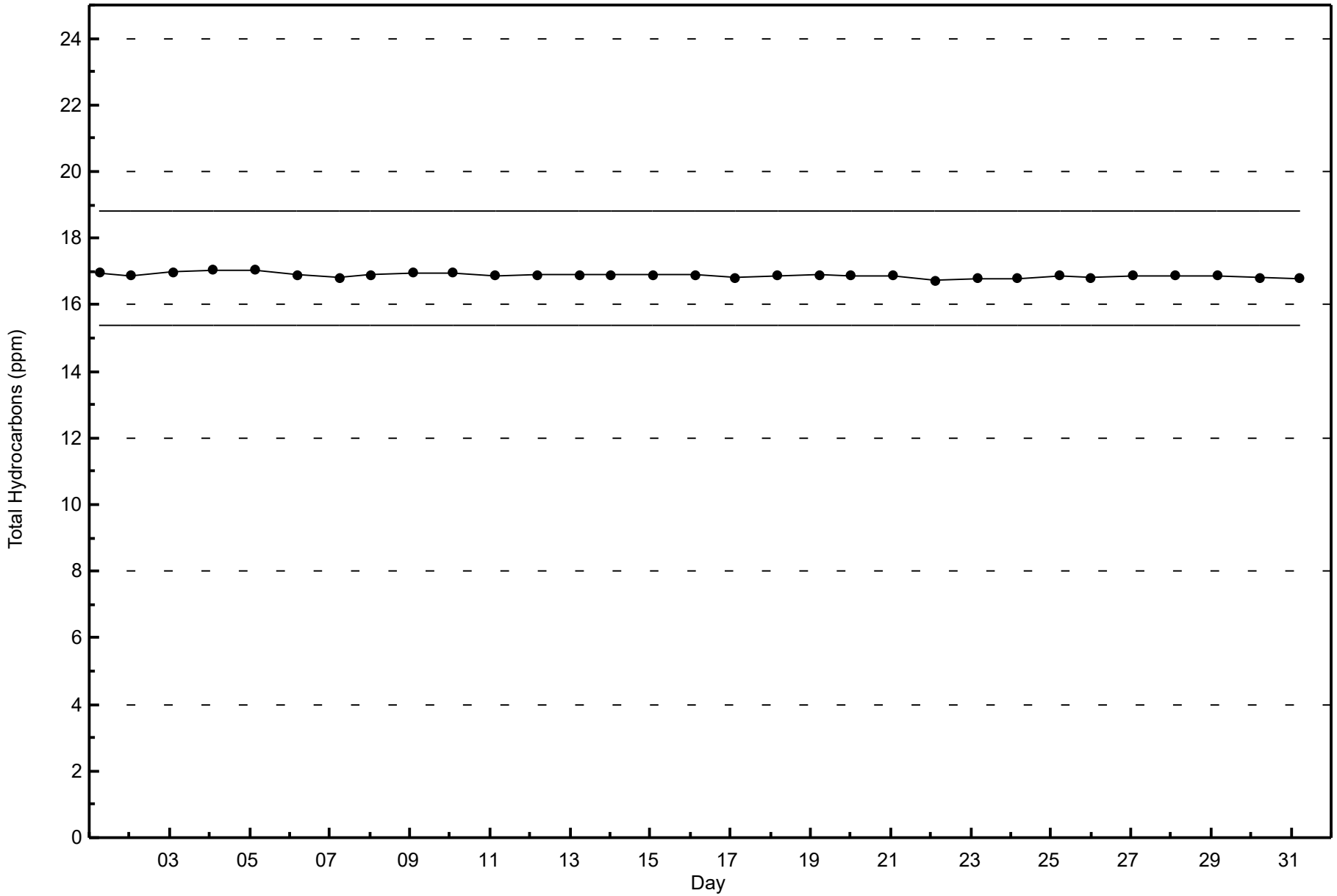


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Wapasu - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Wapasu - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 50.1 ppb on Mar 22 15:00 Maximum Daily Average: 46.5 ppb on Mar 31

Minimum Value: 6.3 ppb on Mar 10 19:00 Minimum Daily Average: 24.5 ppb on Mar 10
Maximum Diurnal Average: 41.4 ppb at hour 15 Minimum Diurnal Average: 32.1 ppb at hour 8
Monthly Average: 36.80 ppb Percentiles: P_1 = 13.3 P_{10} = 25.1 Q_1 = 31.8 Median = 38.9 Q_3 = 43.3 P_{90} = 45.9 P_{99} = 48.8

Hours in Service:	744
Hours of Data:	700
Hours of Missing Data:	44
Hours of Calibration:	35
Percent Operational Time:	98.8

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	35.5	Z	34.8	34.2	36.2	37.2	36.5	35.9	37.0	38.9	40.5	40.5	46.7	41.9	41.1	44.2	40.4	33.3	21.2	23.1	39.6	41.8	44.9	47.9	38.0	47.9
2-Mar	48.8	48.0	Z	46.6	45.1	40.1	36.7	7.7	9.1	22.1	30.1	35.7	40.8	45.1	44.0	39.0	42.4	44.0	45.3	44.4	40.2	39.2	39.6	37.6	37.9	48.8
3-Mar	36.7	37.2	37.0	Z	33.1	33.3	32.9	35.6	32.9	37.1	35.1	36.4	41.0	40.3	40.8	41.7	42.3	38.3	37.6	35.3	31.8	29.4	29.3	31.8	35.9	42.3
4-Mar	33.0	32.1	32.2	30.1	Z	28.1	28.9	27.6	30.3	34.8	36.0	38.8	38.1	39.7	42.5	42.1	39.6	39.0	39.9	44.2	29.1	31.8	38.6	32.9	35.2	44.2
5-Mar	30.0	37.9	39.5	40.1	41.6	Z	47.4	47.3	45.1	44.3	40.2	41.9	44.3	44.7	46.1	44.6	44.4	44.0	42.1	40.5	34.5	30.8	36.9	38.3	41.2	47.4
6-Mar	Z	39.4	39.0	37.5	41.4	43.4	44.0	44.1	44.2	43.9	43.2	43.4	43.8	45.0	44.5	41.0	38.0	38.1	34.7	38.1	40.5	37.8	18.8	9.1	38.8	45.0
7-Mar	15.5	Z	29.1	17.2	25.9	28.8	24.4	27.3	23.0	22.1	30.1	32.5	25.9	18.4	18.2	33.8	37.8	41.5	42.3	42.5	43.5	41.5	39.3	38.0	30.4	43.5
8-Mar	37.0	37.7	Z	40.9	42.0	42.3	42.4	35.0	28.5	25.4	29.9	34.0	34.5	39.3	39.6	39.5	38.3	37.1	38.9	41.3	39.2	35.6	32.4	29.7	36.6	42.4
9-Mar	27.1	27.4	28.4	Z	28.7	28.6	30.2	29.4	31.0	29.0	27.9	26.7	27.5	27.5	27.8	26.5	24.8	27.7	29.1	27.5	27.7	27.4	27.0	27.6	27.9	31.0
10-Mar	25.5	26.1	27.7	26.9	Z	23.8	25.9	27.5	28.5	28.9	29.6	29.8	29.9	30.1	31.1	31.7	30.2	13.3	6.3	7.1	16.5	20.9	22.3	24.4	24.5	31.7
11-Mar	29.2	29.7	29.3	28.9	24.2	Z	15.8	17.8	17.4	32.3	17.1	19.6	24.1	29.7	34.6	34.9	31.8	29.3	33.0	34.8	32.9	33.3	33.7	33.4	28.1	34.9
12-Mar	Z	33.6	33.4	33.7	35.0	33.0	28.8	28.1	20.7	23.2	30.4	32.4	30.9	31.5	34.6	35.3	34.0	31.5	31.6	28.1	28.4	26.0	25.0	26.6	30.2	35.3
13-Mar	25.2	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	42.3	42.7	41.7	39.7	39.5	39.7	40.8	40.8	40.0	--	42.7
14-Mar	39.8	40.0	Z	40.0	39.5	38.9	37.9	33.9	32.9	35.7	33.6	32.2	34.7	36.8	38.0	35.4	35.0	36.8	35.1	36.7	35.4	35.1	35.9	33.7	36.2	40.0
15-Mar	29.2	21.6	20.3	Z	18.8	17.5	16.2	18.2	32.1	42.3	42.5	39.5	38.9	43.0	44.3	43.8	43.3	41.7	36.3	31.8	36.7	36.5	37.7	39.5	33.5	44.3
16-Mar	40.0	39.1	37.6	35.8	Z	32.3	30.1	30.8	35.1	40.4	42.7	44.1	44.4	44.4	45.1	45.9	46.3	45.3	45.2	45.0	44.8	44.5	44.5	43.7	41.2	46.3
17-Mar	42.6	41.1	40.6	40.2	40.4	Z	40.0	38.9	37.3	36.3	27.9	35.5	36.5	41.6	42.1	41.3	40.8	41.7	42.2	42.1	39.9	37.2	28.8	24.3	38.2	42.6
18-Mar	Z	21.0	21.8	22.3	23.7	19.9	18.9	20.0	25.7	33.4	36.6	41.3	41.7	41.7	41.3	40.0	40.4	39.9	36.4	32.8	32.6	34.7	30.6	29.5	31.6	41.7
19-Mar	30.9	Z	26.2	26.5	29.4	33.3	36.4	37.6	37.5	37.4	40.3	40.4	41.5	44.0	44.3	41.7	32.9	33.1	38.5	39.5	40.0	40.2	41.6	41.5	37.2	44.3
20-Mar	40.1	39.0	Z	39.1	38.7	35.7	35.9	36.3	40.1	41.2	44.3	44.9	46.2	46.0	46.0	46.4	47.0	46.1	46.1	44.6	45.3	45.0	44.4	43.9	42.7	47.0
21-Mar	43.8	44.1	44.3	Z	44.2	44.2	44.3	44.4	45.5	46.5	48.1	48.2	47.2	46.2	46.7	46.7	46.5	46.3	45.3	45.3	45.5	45.8	46.4	46.5	45.7	48.2
22-Mar	46.2	45.9	45.6	45.4	Z	45.2	44.2	44.4	44.9	44.9	45.0	46.7	49.4	50.0	50.1	49.9	49.2	41.1	41.0	36.2	28.0	23.2	24.9	32.8	42.3	50.1
23-Mar	27.9	23.4	21.0	17.5	20.2	Z	20.1	24.5	33.9	42.8	45.0	45.2	47.1	48.5	48.9	49.1	48.4	46.9	45.1	40.8	43.0	44.3	45.2	46.1	38.0	49.1
24-Mar	Z	47.1	47.6	47.9	48.7	48.5	47.8	46.7	47.0	46.5	45.7	46.1	44.1	44.3	46.3	44.9	44.3	42.4	29.9	21.8	23.9	25.1	14.5	12.3	39.7	48.7
25-Mar	17.2	Z	26.9	27.6	28.5	19.2	12.8	17.8	25.5	31.4	35.9	37.9	43.5	43.8	44.7	37.3	41.2	41.5	40.7	41.0	40.3	38.9	40.7	41.0	33.7	44.7
26-Mar	38.9	38.2	Z	33.6	30.8	32.3	32.9	34.1	35.8	35.8	39.7	39.4	39.0	39.5	40.9	40.4	42.3	43.5	43.4	41.6	41.2	40.8	41.4	40.8	38.5	43.5
27-Mar	40.2	40.4	40.2	Z	40.0	39.4	38.5	38.9	38.8	39.7	40.2	41.4	42.3	42.1	41.6	41.5	41.4	41.6	42.1	35.1	38.4	39.4	38.3	37.1	39.9	42.3
28-Mar	38.3	37.3	32.4	31.1	Z	35.6	29.7	31.2	39.9	40.4	38.7	40.1	42.8	45.1	45.0	44.7	43.3	42.0	41.0	41.1	39.6	39.3	39.7	39.4	39.0	45.1
29-Mar	40.9	40.4	33.3	23.6	19.3	Z	23.5	31.5	38.3	39.8	43.0	42.9	43.2	45.6	45.6	45.8	45.5	44.6	40.0	37.4	40.3	36.4	38.3	43.3	38.4	45.8
30-Mar	Z	43.9	43.8	35.9	24.9	30.6	24.1	24.6	27.4	33.7	33.8	33.4	37.9	35.6	37.8	41.2	41.0	40.8	25.1	31.0	32.6	45.4	47.5	47.7	35.6	47.7
31-Mar	47.7	Z	47.3	47.0	47.0	46.3	44.9	44.5	43.4	43.9	44.1	45.7	46.6	47.1	47.9	47.9	48.3	48.8	48.2	46.8	45.4	45.8	47.5	46.5	46.5	48.8
	34.9	36.5	34.4	34.0	33.9	34.3	32.4	32.1	33.6	36.5	37.2	38.6	39.8	40.6	41.4	41.3	40.8	39.4	37.5	36.7	36.7	36.6	36.0	35.7	Diurnal Average	
	48.8	48.0	47.6	47.9	48.7	48.5	47.8	47.3	47.0	46.5	48.1	48.2	49.4	50.0	50.1	49.9	49.2	48.8	48.2	46.8	45.5	45.8	47.5	47.9	Diurnal Maximum	

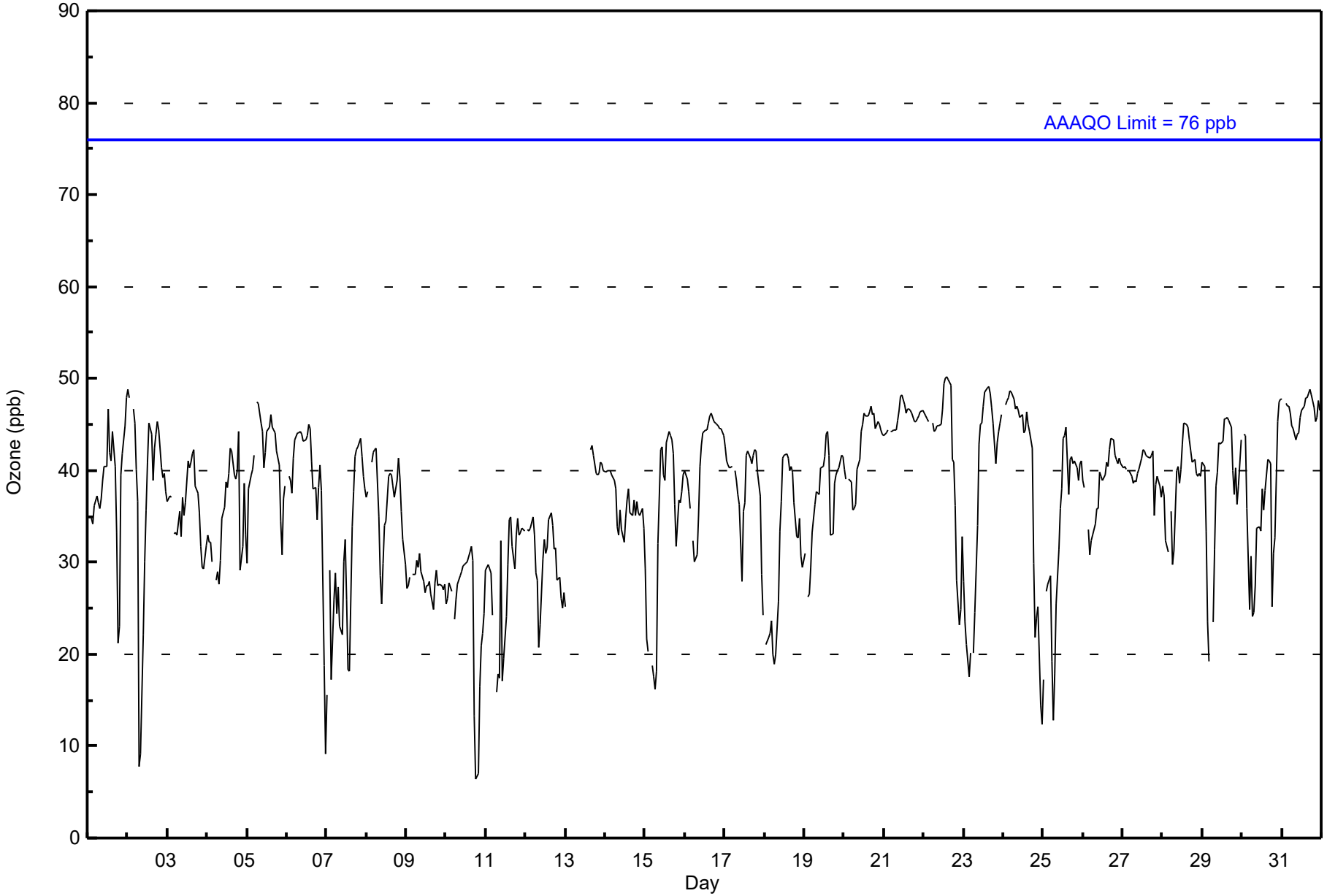
Z - zerospan C - Calibration UO - Unstable Operation
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Wapasu - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	35	5.00	5.00
21 - 50	665	95.00	100.00
51 - 82	0	0.00	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 700

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Ozone (O_3) - ppb

Wapasu - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	7	3	0	2	1	1	5	3	1	4	1	2	0	0	0	5	35
21 - 50	118	51	49	16	18	26	91	79	44	28	29	19	14	23	15	44	664
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	125	54	49	18	19	27	96	82	45	32	30	21	14	23	15	49	699

Total Number of Valid Hours: 699

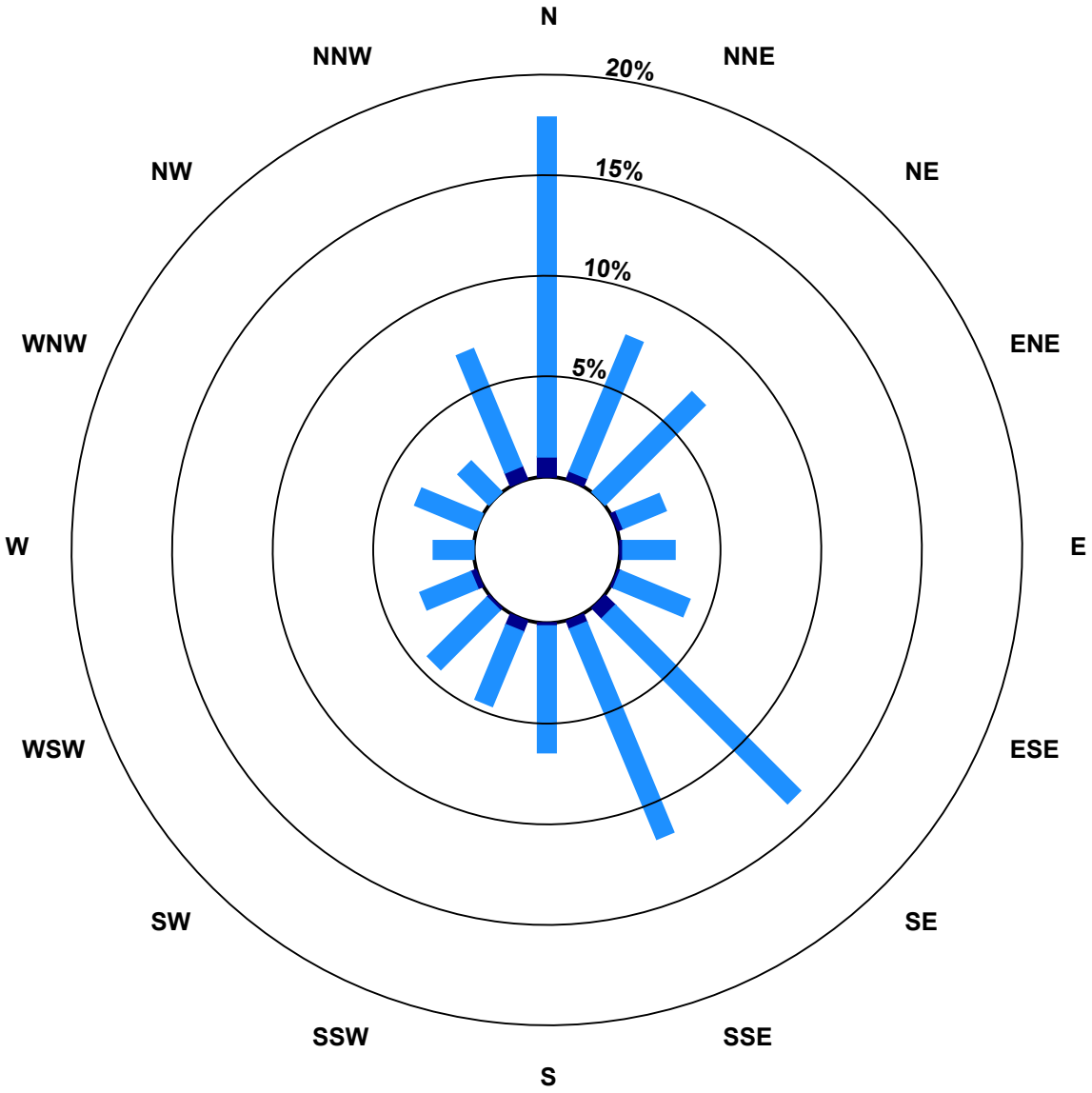
Total Number of Hours: 744

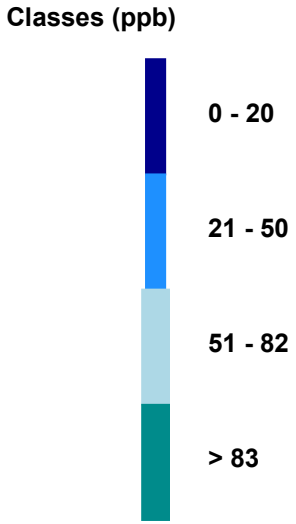
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Ozone (O_3) - ppb

Wapasu





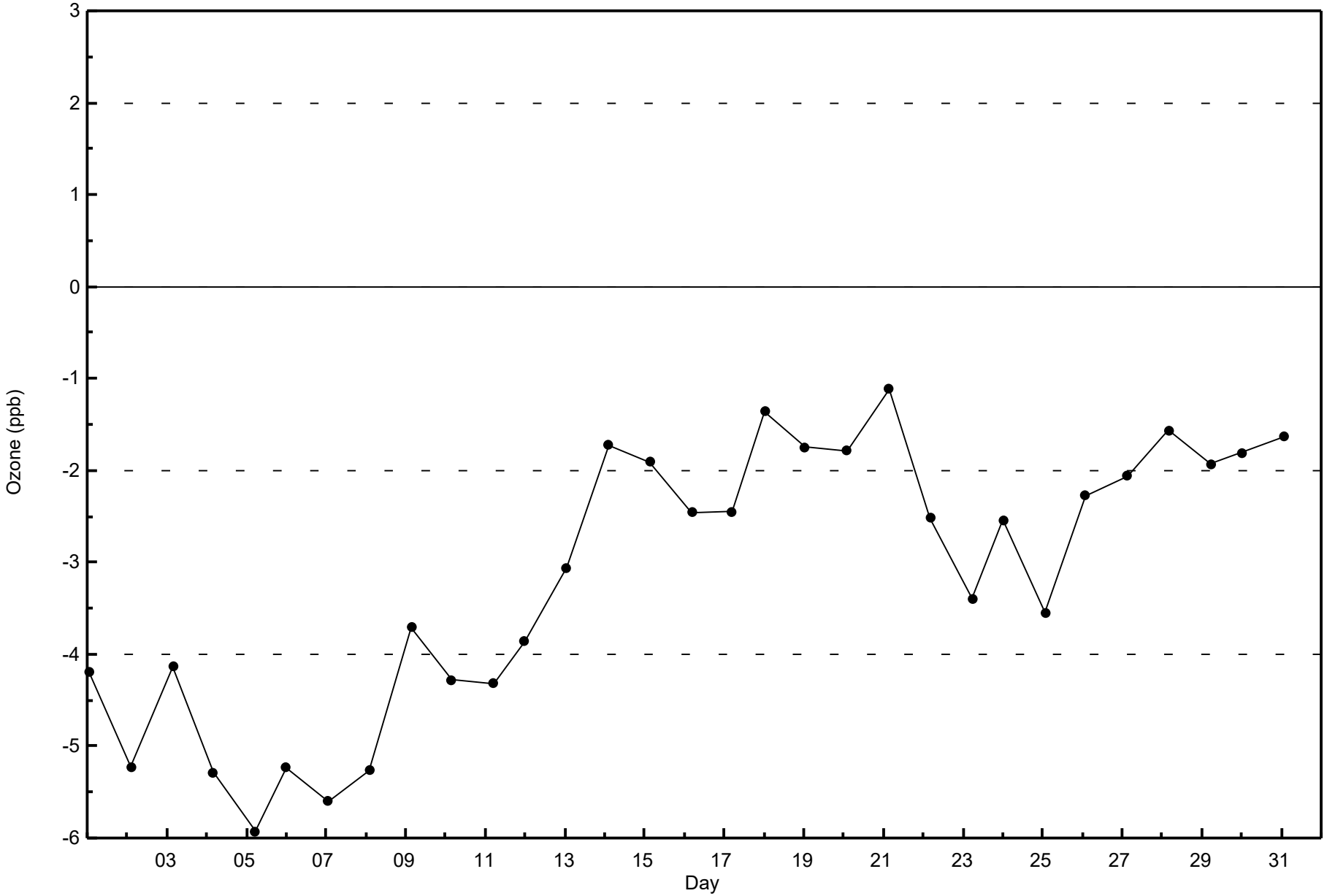
Total Number of Valid Hours: 699

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Wapasu - March 2025

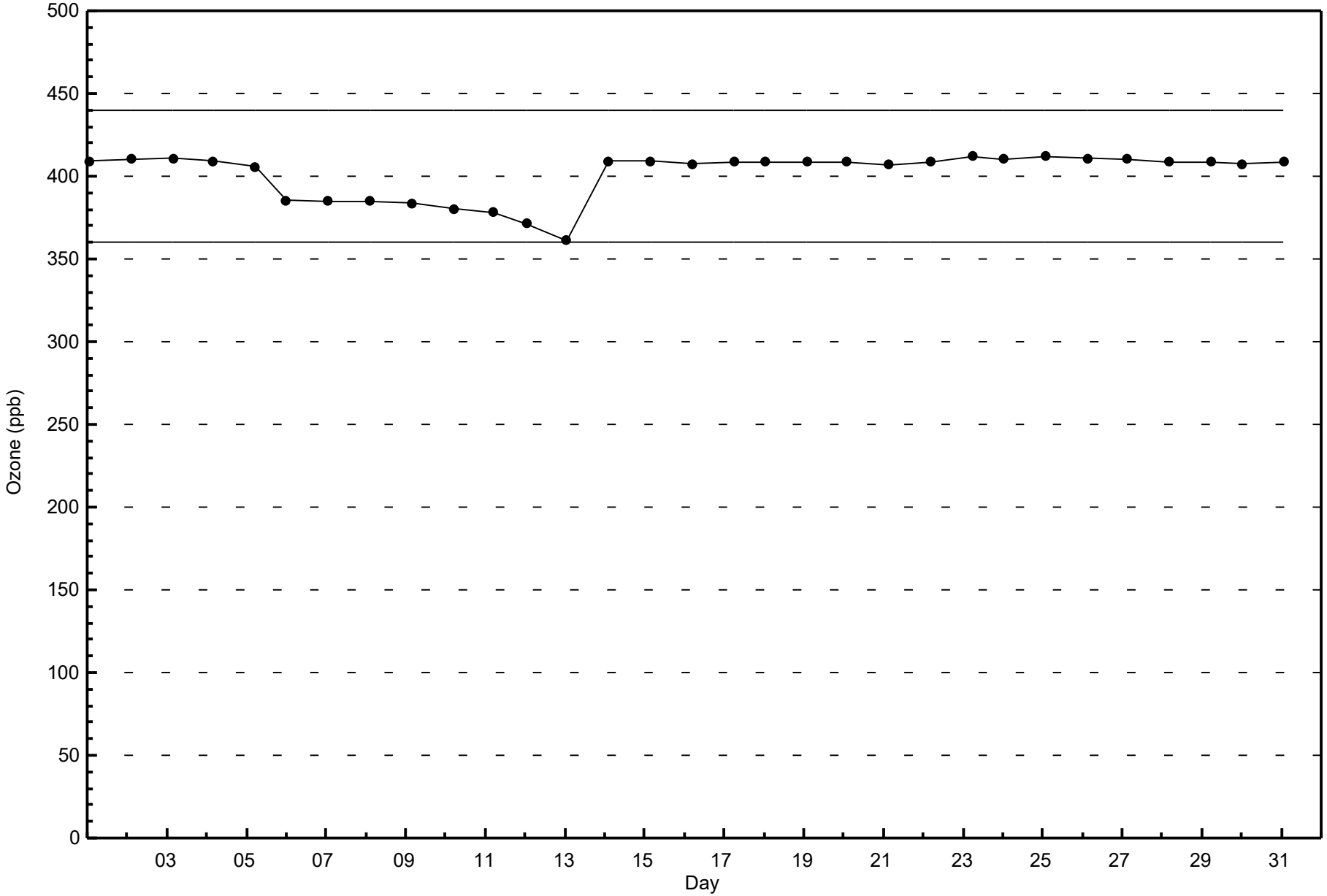


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Wapasu - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Wapasu - March 2025

Maximum Value: 40.0 ppb on Mar 2 08:00

Maximum Daily Average: 4.1 ppb on Mar 2

Minimum Value: 0.0 ppb on Mar 1 01:00

Minimum Daily Average: 0.0 ppb on Mar 27

Maximum Diurnal Average: 3.2 ppb at hour 9

Minimum Diurnal Average: 0.0 ppb at hour 22

Monthly Average: 0.97 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.8 P_{90} = 2.3 P_{99} = 12.8

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.3	0.4	1.1	2.7	1.5	4.3	5.3	3.0	2.2	0.7	0.1	0.1	0.0	0.0	0.0	0.0	0.9	5.3
2-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	40.0	38.2	3.8	3.3	3.4	1.9	0.7	0.9	1.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	40.0
3-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.9	0.7	1.7	1.9	0.3	1.2	1.3	0.6	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.9
4-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.9	3.5	4.2	3.3	3.1	2.6	1.3	0.9	0.8	0.3	0.0	0.0	0.7	0.1	0.1	0.1	1.1	4.2
5-Mar	0.1	Z	0.2	0.2	0.1	1.1	0.0	0.1	0.6	0.9	3.8	2.8	1.1	0.8	0.4	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	3.8
6-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.2	0.3	0.3	0.9	1.8	1.8	0.6	0.0	0.0	0.0	0.0	4.6	14.5	1.1	14.5
7-Mar	10.0	0.2	0.5	Z	0.1	0.0	0.0	0.2	3.3	12.8	7.2	6.2	12.8	17.5	18.2	3.0	1.1	0.2	0.1	0.0	0.0	0.0	0.2	0.0	4.1	18.2
8-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	1.5	2.6	5.0	2.7	2.3	4.3	1.0	1.1	0.5	0.5	0.4	0.2	0.1	0.1	0.1	0.2	0.4	1.0	5.0
9-Mar	0.4	0.3	0.2	0.1	0.3	Z	0.3	0.3	0.3	0.2	0.2	1.2	1.1	2.1	1.4	1.2	1.0	0.2	0.1	0.2	0.0	0.0	0.0	0.1	0.5	2.1
10-Mar	Z	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.6	0.3	0.4	1.0	1.8	1.1	1.2	0.9	6.9	4.0	0.8	0.1	0.1	0.1	0.0	0.9	6.9
11-Mar	0.0	Z	0.0	0.1	0.1	0.1	1.3	3.1	7.4	2.2	18.2	13.2	6.6	2.1	0.1	0.1	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	2.4	18.2
12-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.3	5.7	5.0	1.7	0.8	2.2	2.8	0.8	0.5	0.9	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.9	5.7
13-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.4	0.4	0.3	1.2	4.7	1.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	4.7
14-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.4	0.9	0.1	1.3	2.1	0.8	0.5	0.2	0.5	0.7	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.3	2.1
15-Mar	0.1	0.1	0.0	0.0	0.0	Z	0.3	1.8	1.6	0.5	1.0	4.9	5.3	1.1	0.5	0.5	0.5	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.8	5.3
16-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.1	1.3	2.3	0.9	0.5	0.4	0.4	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.3
17-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.8	0.9	6.7	4.8	4.9	1.2	0.8	0.7	0.6	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.9	6.7
18-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.2	2.6	8.3	5.5	4.2	1.3	1.2	1.1	1.0	1.2	0.7	0.4	0.2	0.0	0.0	0.0	0.3	0.0	1.2	8.3
19-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.2	0.8	1.5	C	C	C	C	C	C	6.3	2.4	0.1	0.0	0.0	0.0	0.0	0.0	--	6.3
20-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	1.2	0.5	0.1	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.2
21-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
22-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.3	0.9	0.5	0.3	0.2	0.3	0.2	0.3	1.0	0.1	0.0	0.1	0.0	0.0	0.0	0.2	1.0
23-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.3	1.3	1.7	1.1	0.8	0.9	0.7	0.6	0.4	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.7
24-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5	1.0	1.3	0.7	0.2	0.2	0.4	0.1	0.4	0.2	0.1	0.1	0.1	0.9	0.3	1.3
25-Mar	0.2	0.1	0.0	Z	0.0	0.0	0.5	1.9	4.0	2.4	2.0	3.4	1.0	1.1	1.2	1.7	0.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.9	4.0
26-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.7	1.8	0.3	0.7	1.1	1.1	1.0	0.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.8
27-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.3	1.4	0.4	0.5	1.8	1.2	1.1	0.6	0.6	0.6	0.5	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.4	1.8
29-Mar	0.0	Z	0.0	1.1	2.2	9.4	1.8	1.1	2.8	2.7	1.7	2.1	2.3	1.2	1.3	1.2	0.9	0.6	0.3	0.0	0.0	0.2	0.1	0.0	1.4	9.4
30-Mar	0.0	0.0	Z	0.0	0.4	0.1	1.6	6.7	10.5	8.0	7.7	8.9	6.1	8.1	6.1	3.2	2.7	1.5	2.2	0.1	0.1	0.0	0.0	0.0	3.2	10.5
31-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
	0.4	0.0	0.1	0.1	0.1	0.4	0.2	2.2	3.2	2.0	2.5	2.5	2.1	1.8	1.6	0.9	0.8	0.6	0.3	0.1	0.0	0.0	0.2	0.5	Diurnal Average	
	10.0	0.3	0.5	1.1	2.2	9.4	1.8	40.0	38.2	12.8	18.2	13.2	12.8	17.5	18.2	3.2	6.3	6.9	4.0	0.8	0.7	0.2	4.6	14.5	Diurnal Maximum	

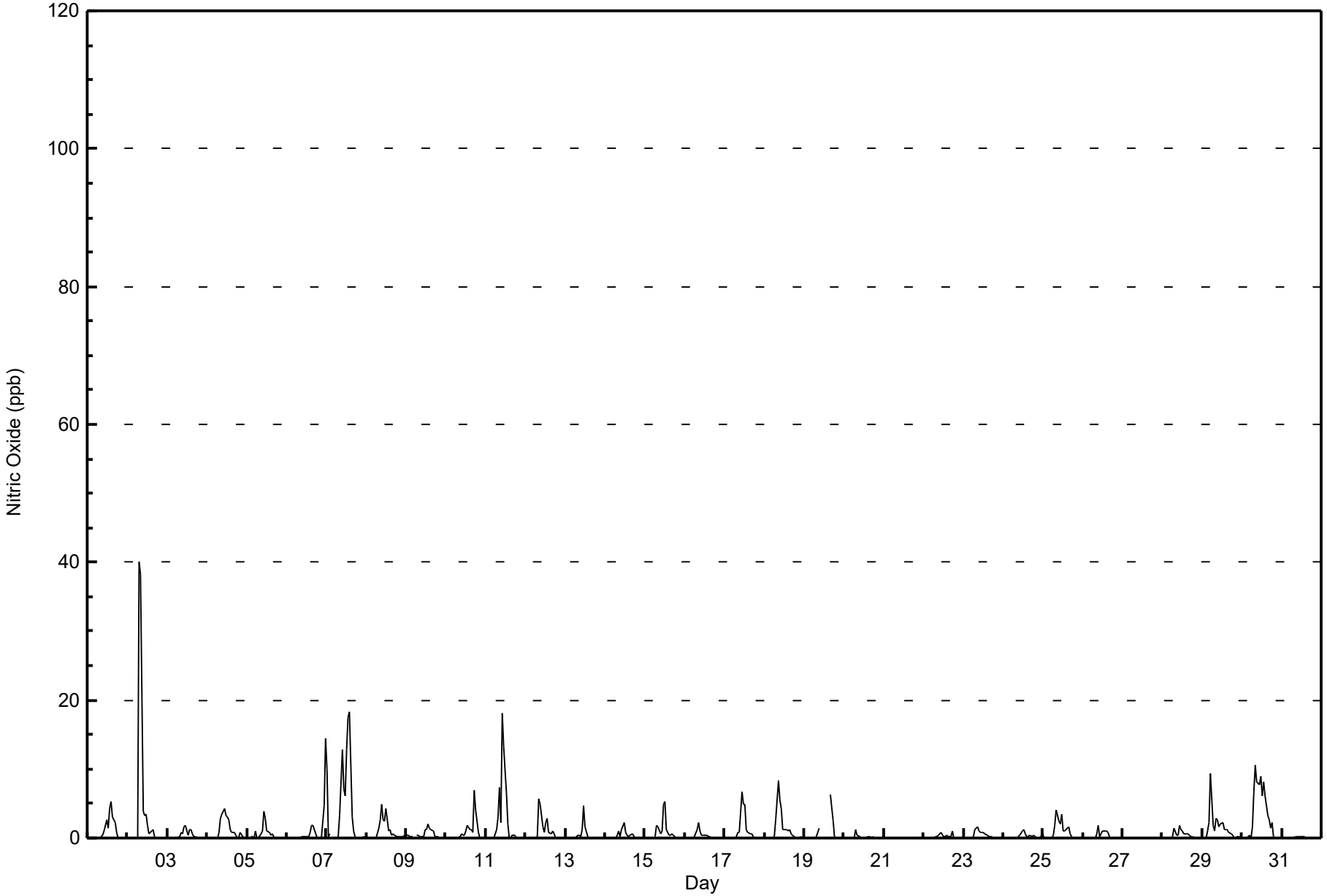
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Wapasu - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	705	99.72	99.72
21 - 40	2	0.28	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Wapasu - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	124	54	52	20	18	30	102	80	46	30	30	19	12	23	16	48	704
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	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	124	54	52	20	18	30	102	80	46	30	30	19	12	23	16	50	706

Total Number of Valid Hours: 706

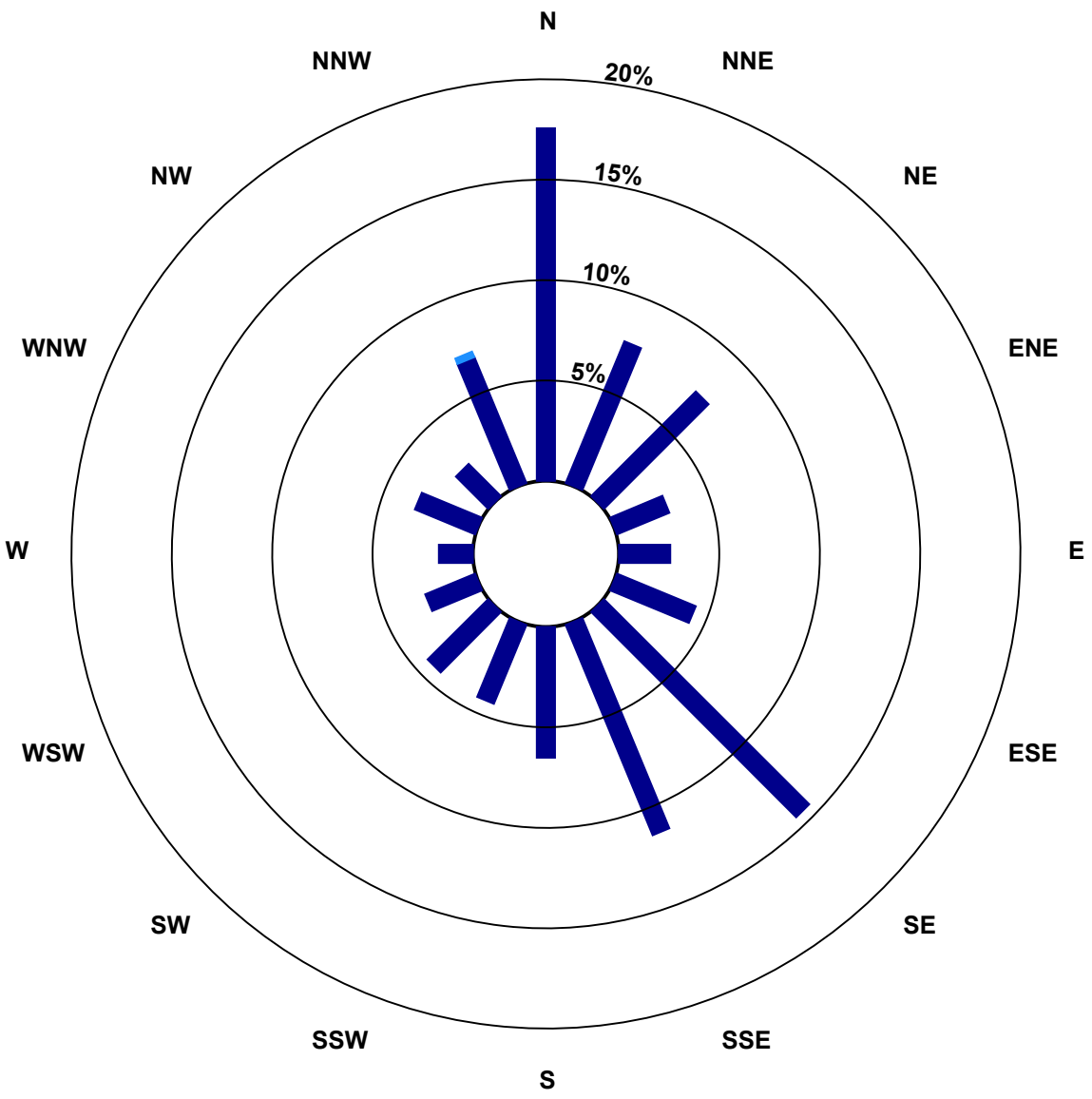
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitric Oxide (NO) - ppb

Wapasu



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

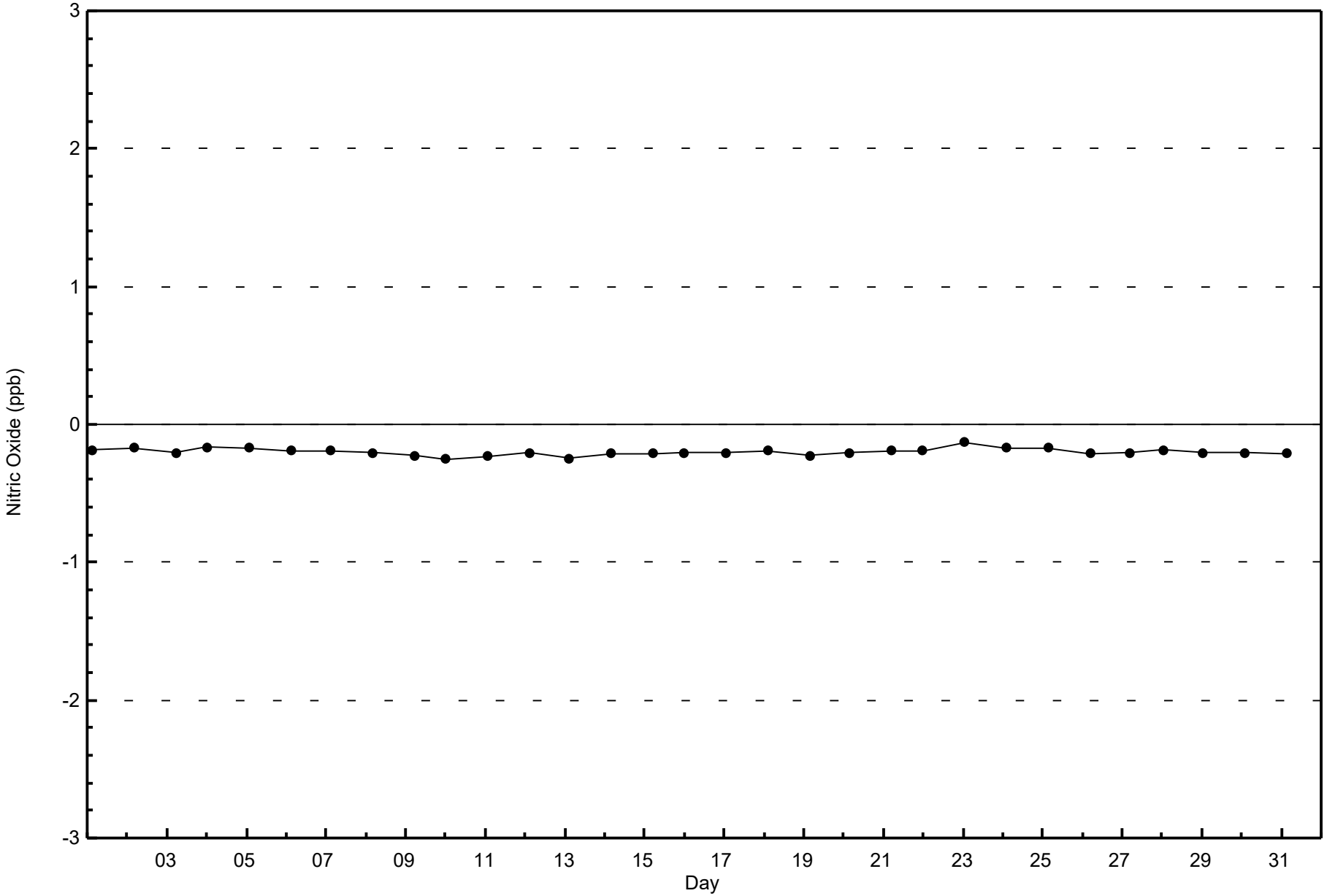
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Wapasu - March 2025

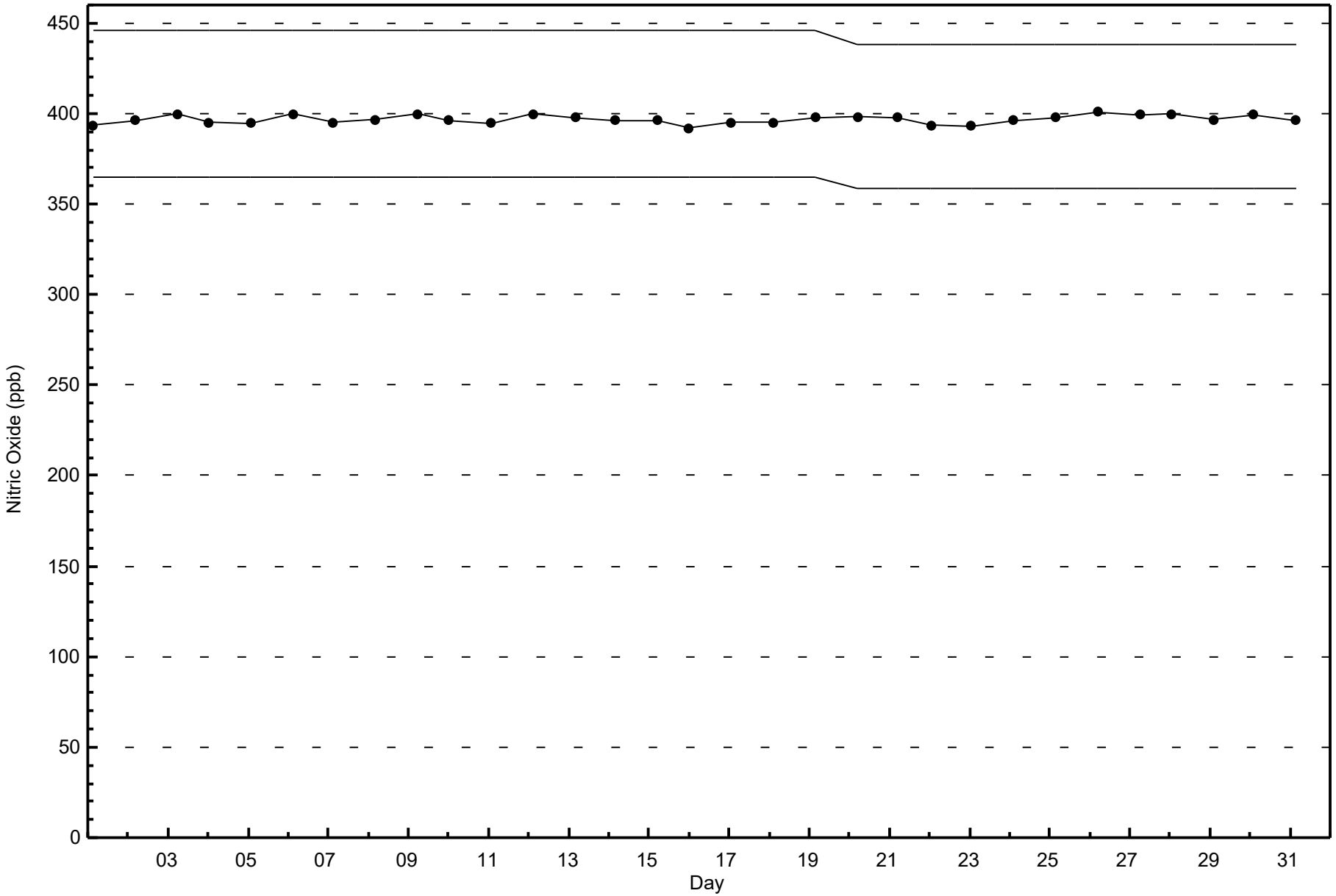


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Wapasu - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Wapasu - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 38.1 ppb on Mar 2 09:00 Maximum Daily Average: 9.7 ppb on Mar 30

Minimum Value: 0.2 ppb on Mar 11 23:00 Minimum Daily Average: 0.4 ppb on Mar 21
Maximum Diurnal Average: 6.0 ppb at hour 9 Minimum Diurnal Average: 3.0 ppb at hour 2
Monthly Average: 4.09 ppb Percentiles: P_1 = 0.2 P_{10} = 0.4 Q_1 = 0.9 Median = 2.3 Q_3 = 5.6 P_{90} = 9.8 P_{99} = 25.1

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.7	0.8	2.0	Z	0.9	1.0	0.8	1.2	1.7	1.5	2.6	5.2	3.5	9.1	11.6	9.3	12.2	12.5	9.9	10.5	3.0	1.5	0.9	1.1	4.5	12.5
2-Mar	1.3	1.2	1.3	0.9	Z	3.1	4.1	35.5	38.1	23.0	13.5	10.3	6.8	2.5	5.1	9.0	2.3	0.5	0.6	2.3	4.0	3.5	1.3	2.2	7.5	38.1
3-Mar	2.4	2.3	2.2	2.8	6.0	Z	6.1	4.9	8.1	4.2	6.0	5.4	1.1	2.8	3.7	3.1	3.1	6.4	4.1	5.2	6.7	8.5	8.1	6.1	4.8	8.5
4-Mar	Z	6.4	6.5	9.8	11.5	11.2	9.9	11.2	11.1	8.1	8.3	7.8	9.1	7.8	5.4	5.9	8.5	8.9	7.3	3.4	15.4	11.4	6.7	11.3	8.8	15.4
5-Mar	14.2	Z	5.7	4.9	3.0	7.0	1.1	1.7	2.9	3.6	7.1	4.6	2.2	1.7	1.4	2.6	2.3	2.2	2.0	3.1	6.5	7.4	4.3	4.0	4.2	14.2
6-Mar	3.9	2.9	Z	2.6	2.1	1.2	0.6	0.7	0.5	0.7	0.9	0.9	0.9	1.1	2.3	5.3	7.9	7.2	6.8	3.8	1.8	2.6	22.8	33.7	4.9	33.7
7-Mar	26.7	12.1	12.0	Z	11.7	6.7	5.8	3.9	10.0	16.0	10.2	8.5	17.0	25.6	26.3	8.7	5.2	2.1	1.1	1.2	1.0	1.2	2.9	2.4	9.5	26.7
8-Mar	1.1	1.5	1.0	0.7	Z	0.8	0.7	5.2	8.0	15.4	8.9	5.6	8.2	4.3	4.2	2.6	3.3	4.8	3.2	0.9	1.6	2.5	2.3	3.4	3.9	15.4
9-Mar	4.0	2.2	1.5	3.1	3.8	Z	1.8	1.3	0.7	0.4	0.5	1.5	1.5	1.9	1.5	1.8	2.8	0.8	0.6	1.0	0.3	0.5	0.6	0.8	1.5	4.0
10-Mar	Z	2.9	0.8	0.7	1.3	1.6	1.0	0.9	0.8	1.1	0.7	0.8	1.4	2.4	1.9	2.5	2.9	20.3	27.2	25.1	13.2	8.5	6.5	4.1	5.6	27.2
11-Mar	1.8	Z	1.6	1.7	5.4	4.1	11.6	9.3	9.8	3.1	15.5	12.6	8.8	3.7	0.5	0.6	3.2	4.7	1.7	1.0	2.7	0.7	0.2	0.2	4.5	15.5
12-Mar	0.2	0.6	Z	0.8	0.2	0.2	0.3	2.8	14.4	11.7	3.7	1.8	4.1	4.3	1.4	1.1	2.5	4.3	2.0	1.4	1.5	3.0	5.8	2.5	3.1	14.4
13-Mar	2.7	5.2	6.0	Z	2.9	2.3	4.8	3.8	1.2	0.8	3.0	5.8	2.3	0.5	0.3	0.3	0.3	0.2	0.2	0.2	0.4	0.3	0.2	0.3	1.9	6.0
14-Mar	0.2	0.2	0.2	0.2	Z	0.3	0.6	3.5	4.1	0.7	2.7	3.8	1.4	0.9	0.7	1.3	2.3	1.5	4.3	4.1	5.6	7.0	6.4	5.2	2.5	7.0
15-Mar	5.6	8.7	8.1	8.5	7.0	Z	10.9	9.3	5.4	1.8	2.1	6.6	7.1	2.2	1.2	1.3	2.2	3.1	6.4	7.2	2.8	2.3	2.1	1.5	4.9	10.9
16-Mar	Z	1.8	1.9	2.5	3.2	4.5	7.2	7.8	5.9	2.2	1.3	0.9	0.9	1.0	0.9	0.7	0.7	1.0	0.5	0.6	0.6	0.6	0.5	0.7	2.1	7.8
17-Mar	1.4	Z	2.5	2.3	1.5	0.9	1.1	1.7	3.6	3.8	13.2	7.3	6.7	2.2	2.4	2.3	2.3	2.0	1.7	1.0	2.2	0.7	1.3	3.3	2.9	13.2
18-Mar	6.5	9.4	Z	7.8	9.1	8.2	8.2	9.3	13.6	8.4	6.0	2.2	2.1	2.3	2.7	4.1	3.8	4.6	7.2	6.5	4.4	2.6	8.0	3.7	6.1	13.6
19-Mar	2.0	1.7	1.8	Z	2.0	2.6	2.5	1.7	2.9	4.4	C	C	C	C	C	C	14.0	13.1	5.4	3.7	2.7	1.9	0.6	0.3	--	14.0
20-Mar	0.3	0.3	0.3	0.4	Z	0.5	0.4	4.3	1.4	0.5	0.3	0.2	0.2	0.3	0.5	0.5	0.3	1.3	0.3	0.5	0.7	0.8	0.6	0.9	0.7	4.3
21-Mar	0.4	0.3	0.2	0.2	0.2	Z	0.4	0.4	0.3	0.3	0.4	0.3	0.4	0.4	0.5	0.5	0.6	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.6
22-Mar	Z	0.8	0.9	0.9	0.9	1.1	2.1	2.1	1.9	2.0	2.6	1.8	1.5	1.4	1.6	1.5	2.1	10.6	8.5	10.6	10.1	8.7	15.1	6.7	4.2	15.1
23-Mar	6.2	Z	9.8	8.2	5.6	3.5	5.4	9.2	5.5	3.5	2.5	2.4	2.1	1.7	1.5	1.4	1.5	2.2	2.0	2.2	2.7	2.1	1.5	1.2	3.6	9.8
24-Mar	0.9	0.8	Z	0.8	0.7	0.6	0.7	1.0	0.9	1.4	2.3	3.1	5.3	4.4	1.7	1.7	3.1	2.4	13.8	20.5	12.0	9.2	5.5	22.5	5.0	22.5
25-Mar	15.9	8.1	8.8	Z	5.2	4.6	5.2	6.1	6.9	4.4	4.0	6.2	3.6	2.8	4.2	10.3	2.8	1.2	1.3	1.3	2.0	2.6	1.9	1.8	4.8	15.9
26-Mar	2.8	2.8	2.3	2.0	Z	0.9	0.4	0.4	1.4	2.9	0.7	1.2	1.6	2.0	2.2	2.6	0.9	0.3	0.3	0.3	0.3	0.2	0.2	0.3	1.3	2.9
27-Mar	0.7	0.4	0.3	0.4	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	5.3	1.5	0.3	0.5	0.3	0.6	5.3
28-Mar	Z	2.0	4.1	3.1	2.4	1.2	2.2	5.1	1.4	1.1	2.8	2.0	2.0	1.3	1.5	1.6	1.7	1.5	1.5	0.3	0.7	0.6	1.3	1.4	1.9	5.1
29-Mar	1.5	Z	8.8	13.9	17.4	25.1	8.3	3.4	6.3	4.8	3.0	3.6	3.9	2.6	2.9	3.0	3.2	3.8	7.6	7.1	3.3	9.6	7.7	1.9	6.6	25.1
30-Mar	3.8	1.4	Z	5.0	14.0	8.1	15.3	16.1	16.9	12.7	12.0	12.7	9.1	12.2	11.0	7.6	8.2	8.2	22.6	13.1	9.7	2.1	1.0	1.0	9.7	22.6
31-Mar	0.9	0.8	0.7	Z	0.7	0.6	1.3	1.0	1.2	1.0	1.2	1.3	1.1	1.0	0.9	0.8	0.8	0.9	0.8	0.8	0.7	0.6	0.6	0.5	0.9	1.3
	4.2	3.0	3.5	3.4	4.6	3.9	3.9	5.3	6.0	4.7	4.6	4.2	3.9	3.6	3.4	3.1	3.5	4.3	4.9	4.7	3.9	3.3	3.8	4.1	Diurnal Average	
	26.7	12.1	12.0	13.9	17.4	25.1	15.3	35.5	38.1	23.0	15.5	12.7	17.0	25.6	26.3	10.3	14.0	20.3	27.2	25.1	15.4	11.4	22.8	33.7	Diurnal Maximum	

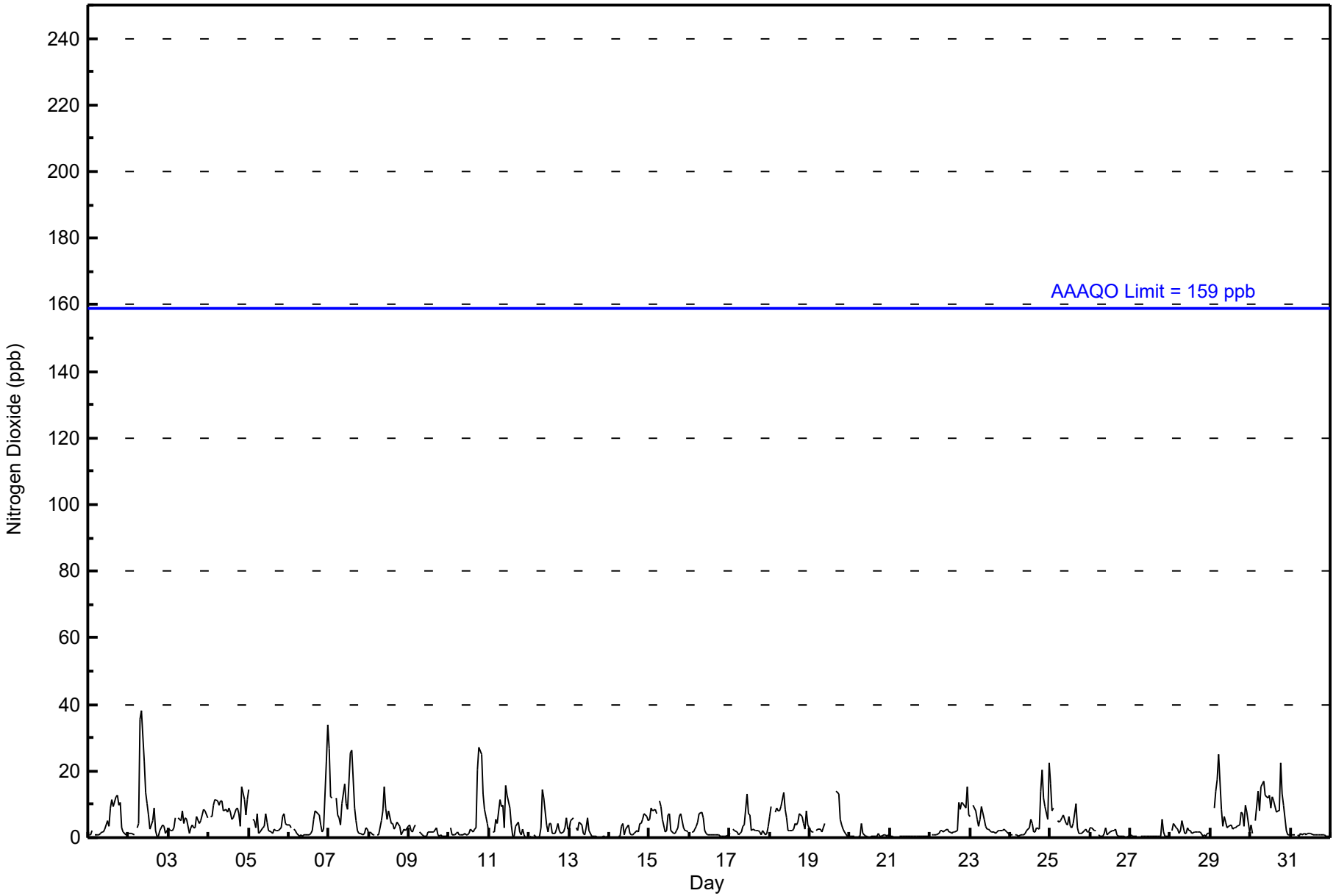
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Wapasu - March 2025



Nitrogen Dioxide (NO_2) - ppb
Wapasu - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	693	98.02	98.02
21 - 40	14	1.98	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Wapasu - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	122	52	52	19	18	30	101	80	45	30	29	19	12	23	16	44	692
21 - 40	2	2	0	1	0	0	1	0	1	0	1	0	0	0	0	6	14
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	124	54	52	20	18	30	102	80	46	30	30	19	12	23	16	50	706

Total Number of Valid Hours: 706

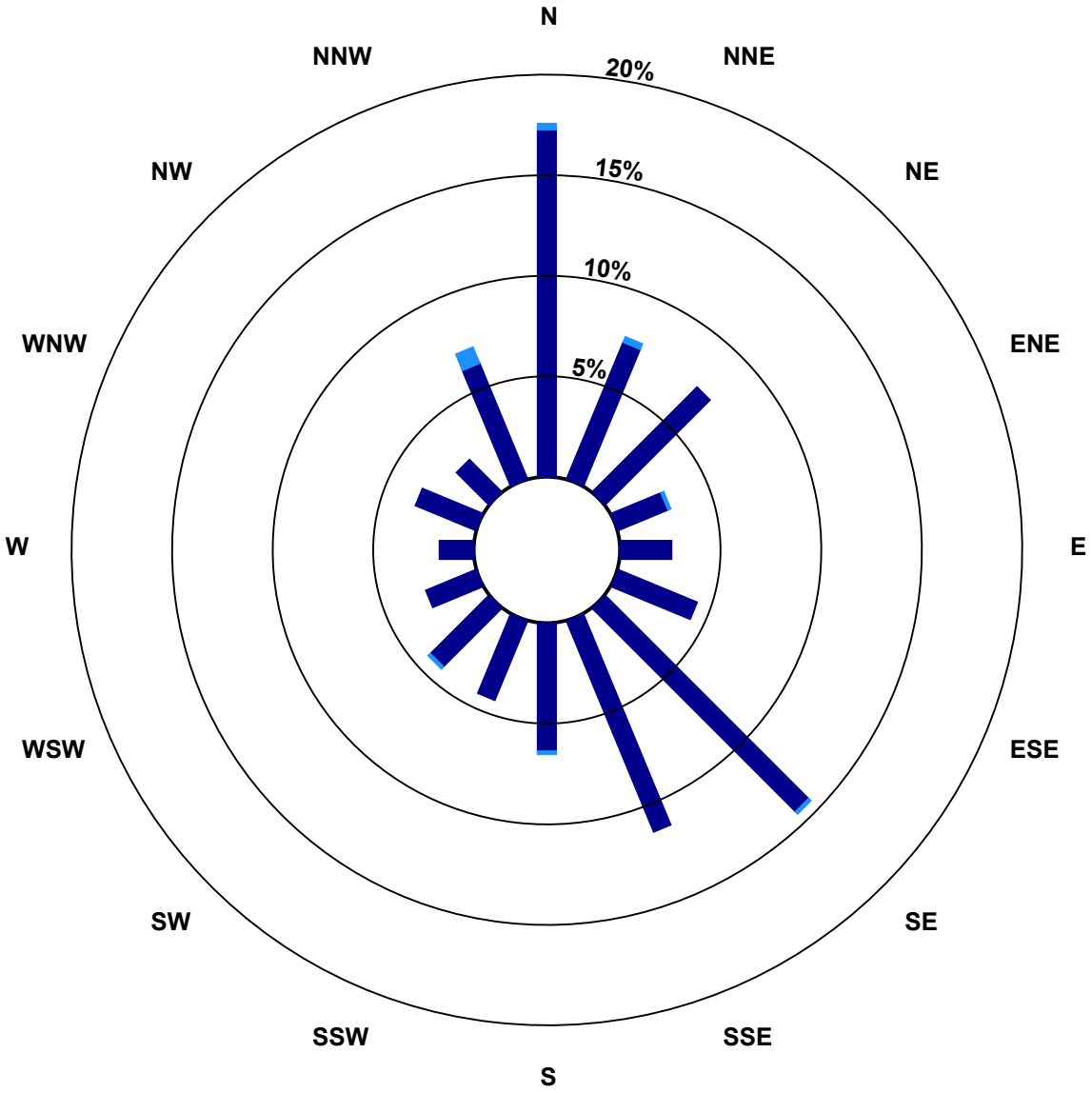
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Dioxide (NO_2) - ppb

Wapasu



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

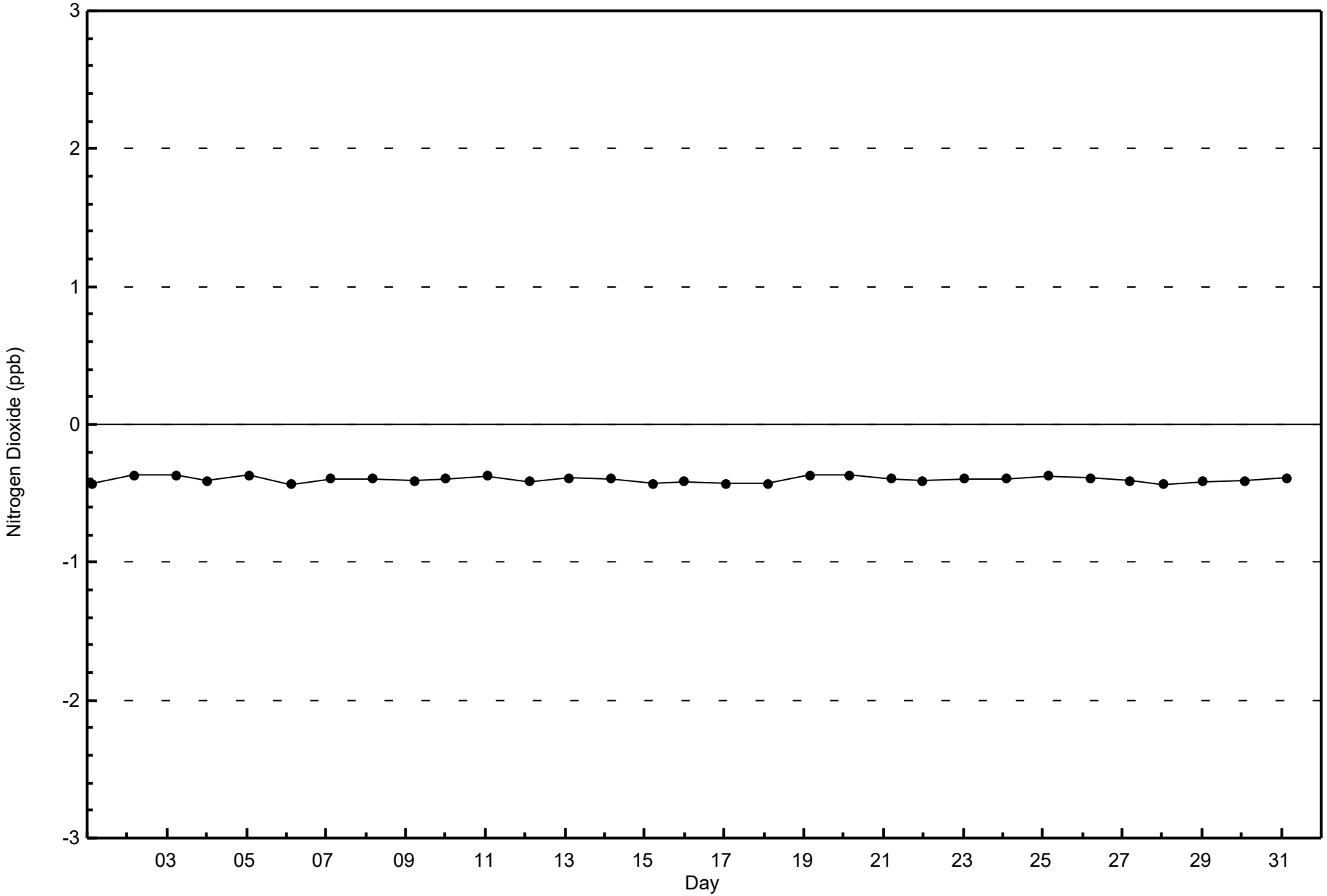
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Wapasu - March 2025

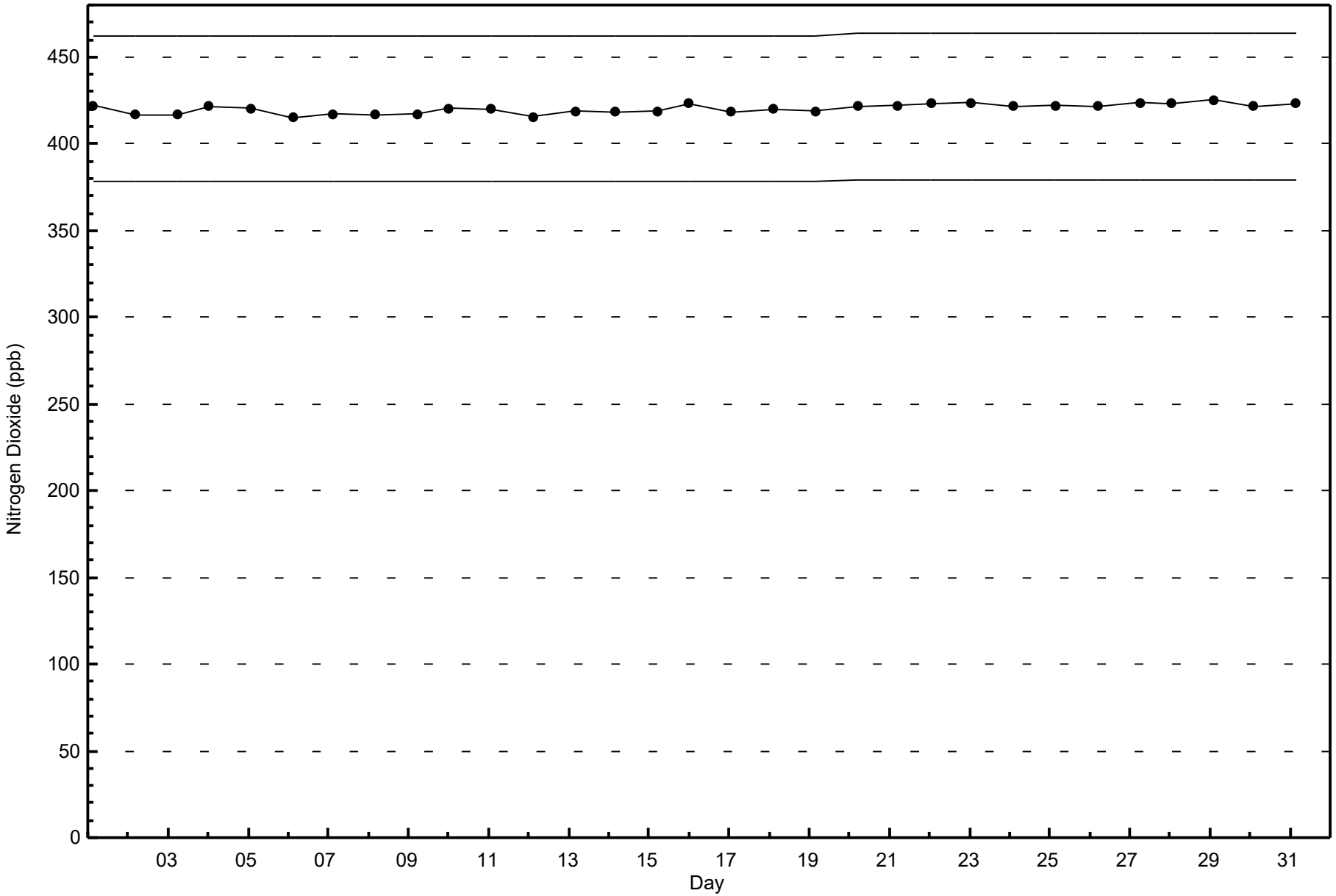


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Wapasu - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Wapasu - March 2025

Maximum Value: 76.3 ppb on Mar 2 09:00

Maximum Daily Average: 13.6 ppb on Mar 7

Minimum Value: 0.2 ppb on Mar 12 01:00

Minimum Daily Average: 0.4 ppb on Mar 21

Maximum Diurnal Average: 9.2 ppb at hour 9

Minimum Diurnal Average: 3.0 ppb at hour 2

Monthly Average: 5.05 ppb

Percentiles: P_1 = 0.2 P_{10} = 0.4 Q_1 = 1.0 Median = 2.6 Q_3 = 6.4 P_{90} = 11.9 P_{99} = 33.6

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.7	0.8	2.0	Z	0.9	1.0	0.8	1.2	2.0	1.9	3.7	7.9	5.0	13.4	16.9	12.3	14.4	13.2	10.0	10.6	3.0	1.5	0.9	1.1	5.4	16.9
2-Mar	1.3	1.2	1.3	0.9	Z	3.1	4.1	75.5	76.3	26.8	16.8	13.7	8.7	3.2	6.0	10.3	2.5	0.5	0.6	2.3	4.0	3.5	1.3	2.2	11.6	76.3
3-Mar	2.4	2.3	2.2	2.8	6.0	Z	6.1	5.0	9.0	4.9	7.7	7.3	1.4	4.0	5.0	3.7	3.3	6.7	4.1	5.2	6.7	8.5	8.1	6.1	5.2	9.0
4-Mar	Z	6.4	6.5	9.8	11.5	11.2	9.9	12.0	14.0	11.6	12.5	11.1	12.2	10.4	6.7	6.8	9.3	9.2	7.3	3.4	16.1	11.5	6.8	11.4	9.9	16.1
5-Mar	14.3	Z	5.9	5.1	3.1	8.1	1.1	1.8	3.5	4.5	10.9	7.4	3.3	2.5	1.8	3.1	2.6	2.2	2.0	3.1	6.5	7.4	4.3	4.0	4.7	14.3
6-Mar	3.9	2.9	Z	2.6	2.1	1.2	0.6	0.7	0.5	0.8	1.2	1.1	1.2	1.4	3.2	7.1	9.7	7.8	6.8	3.8	1.8	2.6	27.4	48.2	6.0	48.2
7-Mar	36.7	12.3	12.5	Z	11.8	6.7	5.8	4.1	13.3	28.8	17.4	14.7	29.8	43.1	44.5	11.7	6.3	2.3	1.2	1.2	1.0	1.2	3.1	2.4	13.6	44.5
8-Mar	1.1	1.5	1.0	0.7	Z	0.8	0.7	6.7	10.6	20.4	11.6	7.9	12.5	5.3	5.3	3.1	3.8	5.2	3.4	1.0	1.7	2.6	2.5	3.8	4.9	20.4
9-Mar	4.4	2.5	1.7	3.2	4.1	Z	2.1	1.6	1.0	0.6	0.7	2.7	2.6	4.0	2.9	3.0	3.8	1.0	0.7	1.2	0.3	0.5	0.6	0.9	2.0	4.4
10-Mar	Z	2.9	0.8	0.7	1.4	1.7	1.0	1.0	1.0	1.7	1.0	1.2	2.4	4.2	3.0	3.7	3.8	27.2	31.2	25.9	13.3	8.6	6.6	4.1	6.4	31.2
11-Mar	1.8	Z	1.6	1.8	5.5	4.2	12.9	12.4	17.2	5.3	33.7	25.8	15.4	5.8	0.6	0.7	3.6	5.1	1.7	1.0	2.7	0.7	0.2	0.2	7.0	33.7
12-Mar	0.2	0.6	Z	0.8	0.2	0.2	0.3	3.1	20.1	16.7	5.4	2.6	6.3	7.1	2.2	1.6	3.4	5.0	2.0	1.4	1.5	3.0	5.8	2.5	4.0	20.1
13-Mar	2.7	5.2	6.0	Z	2.9	2.3	4.9	4.2	1.6	1.1	4.2	10.5	3.8	0.6	0.3	0.3	0.3	0.2	0.2	0.2	0.4	0.3	0.2	0.3	2.3	10.5
14-Mar	0.2	0.2	0.2	0.2	Z	0.3	0.6	3.9	5.0	0.8	4.0	5.9	2.2	1.4	0.9	1.8	3.0	1.6	4.4	4.1	5.6	7.1	6.4	5.2	2.8	7.1
15-Mar	5.7	8.8	8.1	8.5	7.0	Z	11.2	11.1	7.0	2.3	3.1	11.5	12.4	3.3	1.7	1.8	2.7	3.5	6.5	7.2	2.8	2.3	2.1	1.5	5.7	12.4
16-Mar	Z	1.8	1.9	2.5	3.2	4.5	7.3	9.1	8.2	3.1	1.8	1.3	1.3	1.3	1.1	0.9	0.8	1.1	0.5	0.6	0.6	0.6	0.5	0.7	2.4	9.1
17-Mar	1.4	Z	2.5	2.3	1.5	0.9	1.1	1.8	4.4	4.7	19.9	12.1	11.6	3.4	3.2	3.0	2.9	2.3	1.8	1.0	2.2	0.7	1.3	3.3	3.9	19.9
18-Mar	6.5	9.4	Z	7.8	9.1	8.2	8.4	11.9	21.9	13.9	10.2	3.5	3.3	3.4	3.7	5.3	4.5	5.0	7.4	6.5	4.4	2.6	8.3	3.7	7.3	21.9
19-Mar	2.0	1.7	1.8	Z	2.0	2.6	2.5	1.9	3.7	5.9	C	C	C	C	C	C	20.3	15.5	5.5	3.7	2.7	1.9	0.6	0.3	--	20.3
20-Mar	0.3	0.3	0.3	0.4	Z	0.5	0.4	5.5	1.9	0.6	0.3	0.2	0.2	0.3	0.7	0.6	0.3	1.4	0.3	0.5	0.7	0.8	0.6	0.9	0.8	5.5
21-Mar	0.4	0.3	0.2	0.2	0.2	Z	0.4	0.4	0.3	0.4	0.5	0.4	0.5	0.5	0.6	0.6	0.6	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.6
22-Mar	Z	0.8	0.9	0.9	0.9	1.1	2.1	2.3	2.1	2.3	3.5	2.3	1.8	1.6	1.9	1.7	2.4	11.6	8.6	10.6	10.2	8.7	15.1	6.7	4.4	15.1
23-Mar	6.2	Z	9.8	8.2	5.6	3.5	5.7	10.5	7.2	4.6	3.3	3.3	2.8	2.3	1.9	1.7	1.7	2.4	2.0	2.2	2.7	2.1	1.5	1.2	4.0	10.5
24-Mar	0.9	0.8	Z	0.8	0.7	0.6	0.7	1.0	0.9	1.7	2.8	4.1	6.6	5.1	1.9	1.9	3.5	2.5	14.2	20.7	12.1	9.3	5.6	23.4	5.3	23.4
25-Mar	16.1	8.2	8.8	Z	5.2	4.6	5.7	8.0	10.9	6.8	6.0	9.6	4.6	3.9	5.4	12.0	3.5	1.4	1.3	1.3	2.0	2.6	1.9	1.8	5.7	16.1
26-Mar	2.8	2.8	2.3	2.0	Z	0.9	0.4	0.4	2.1	4.7	1.0	1.9	2.7	3.1	3.2	3.3	1.1	0.3	0.3	0.3	0.3	0.2	0.2	0.3	1.6	4.7
27-Mar	0.7	0.4	0.3	0.4	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	5.3	1.5	0.3	0.5	0.3	0.6	5.3
28-Mar	Z	2.0	4.1	3.1	2.4	1.2	2.5	6.5	1.8	1.6	4.6	3.2	3.1	1.9	2.1	2.2	2.2	1.7	1.6	0.3	0.7	0.6	1.3	1.4	2.3	6.5
29-Mar	1.5	Z	8.8	15.0	19.6	34.5	10.1	4.5	9.1	7.5	4.7	5.7	6.2	3.8	4.2	4.2	4.1	4.4	7.9	7.1	3.3	9.8	7.8	1.9	8.1	34.5
30-Mar	3.8	1.4	Z	5.0	14.4	8.2	16.9	22.8	27.4	20.7	19.7	21.6	15.2	20.3	17.1	10.8	10.9	9.7	24.8	13.2	9.8	2.1	1.0	1.0	12.9	27.4
31-Mar	0.9	0.8	0.7	Z	0.7	0.6	1.3	1.1	1.4	1.2	1.4	1.5	1.2	1.1	1.0	0.9	0.9	0.9	0.8	0.8	0.7	0.6	0.6	0.5	0.9	1.5
	4.6	3.0	3.6	3.4	4.7	4.3	4.1	7.5	9.2	6.7	7.1	6.7	6.0	5.4	5.0	4.0	4.3	4.9	5.2	4.7	3.9	3.4	4.0	4.6	Diurnal Average	
	36.7	12.3	12.5	15.0	19.6	34.5	16.9	75.5	76.3	28.8	33.7	25.8	29.8	43.1	44.5	12.3	20.3	27.2	31.2	25.9	16.1	11.5	27.4	48.2	Diurnal Maximum	

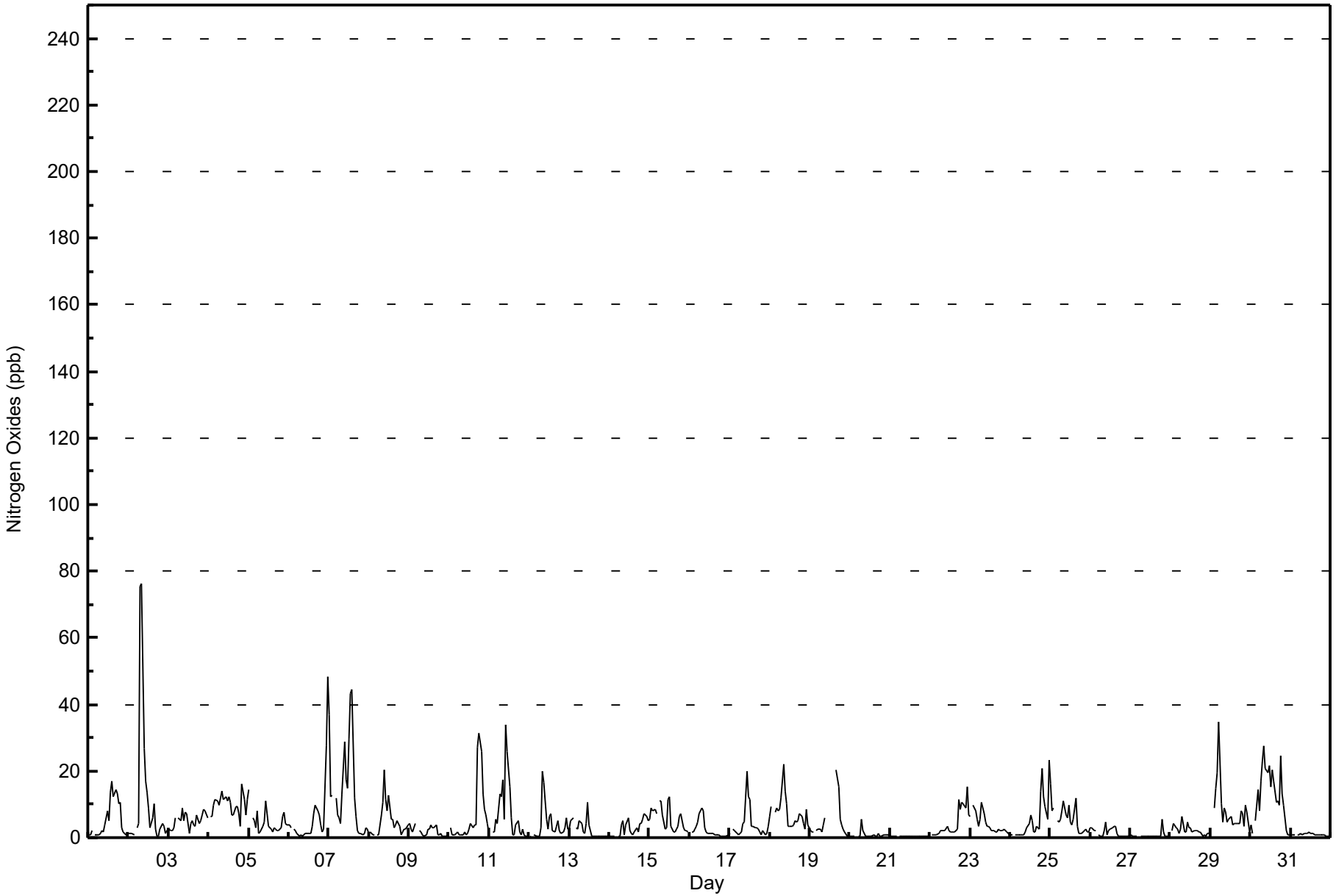
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Wapasu - March 2025



Nitrogen Oxides (NO_X) - ppb
Wapasu - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	683	96.61	96.61
21 - 40	19	2.69	99.29
11 - 80	5	0.71	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744

Nitrogen Oxides (NO_X) - ppb
Wapasu - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	119	52	52	19	18	30	101	80	44	29	27	19	12	22	15	43	682
21 - 40	4	2	0	1	0	0	1	0	1	1	3	0	0	1	1	4	19
11 - 80	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3	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	124	54	52	20	18	30	102	80	46	30	30	19	12	23	16	50	706

Total Number of Valid Hours: 706

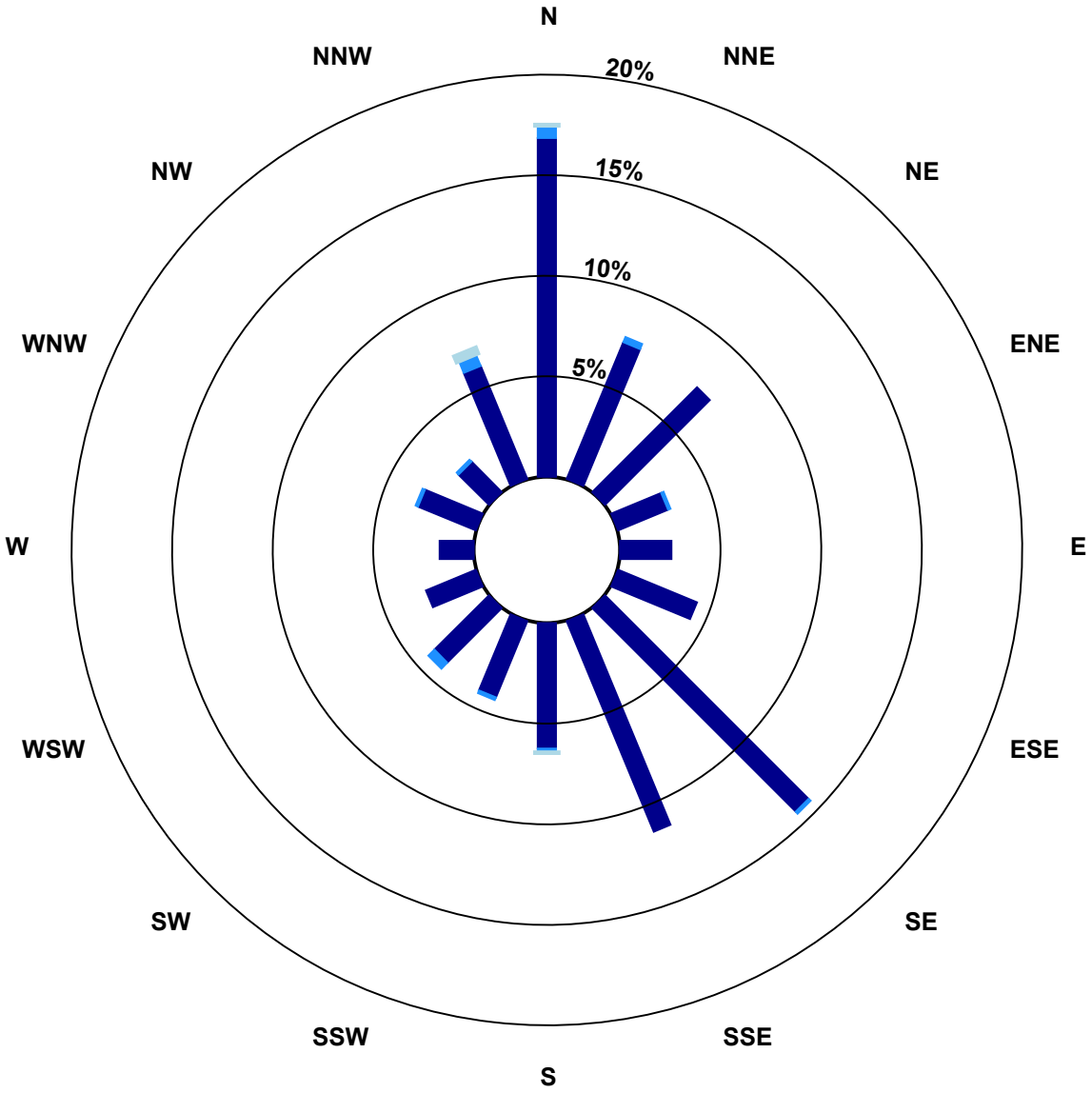
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Oxides (NO_X) - ppb

Wapasu



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

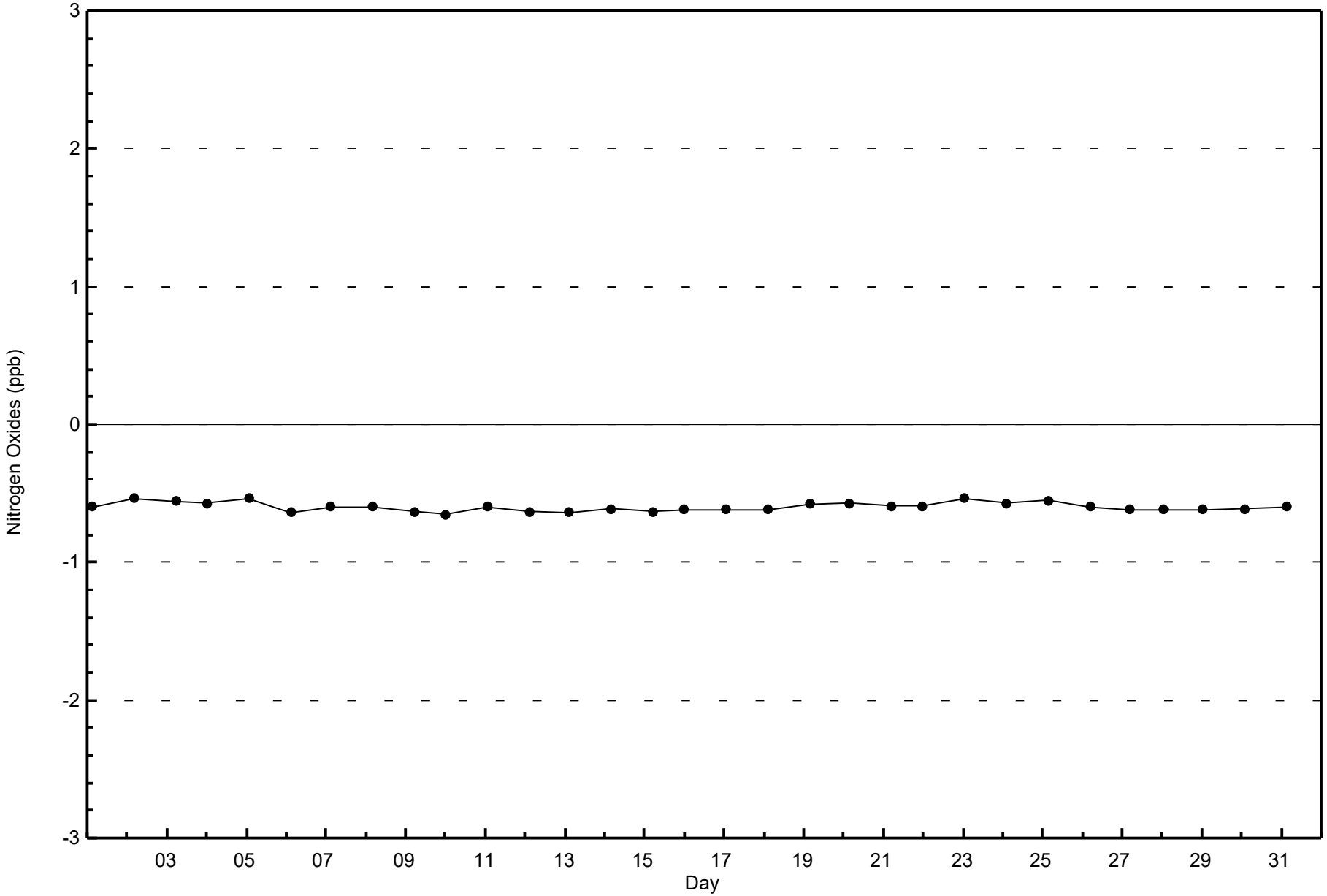
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Wapasu - March 2025

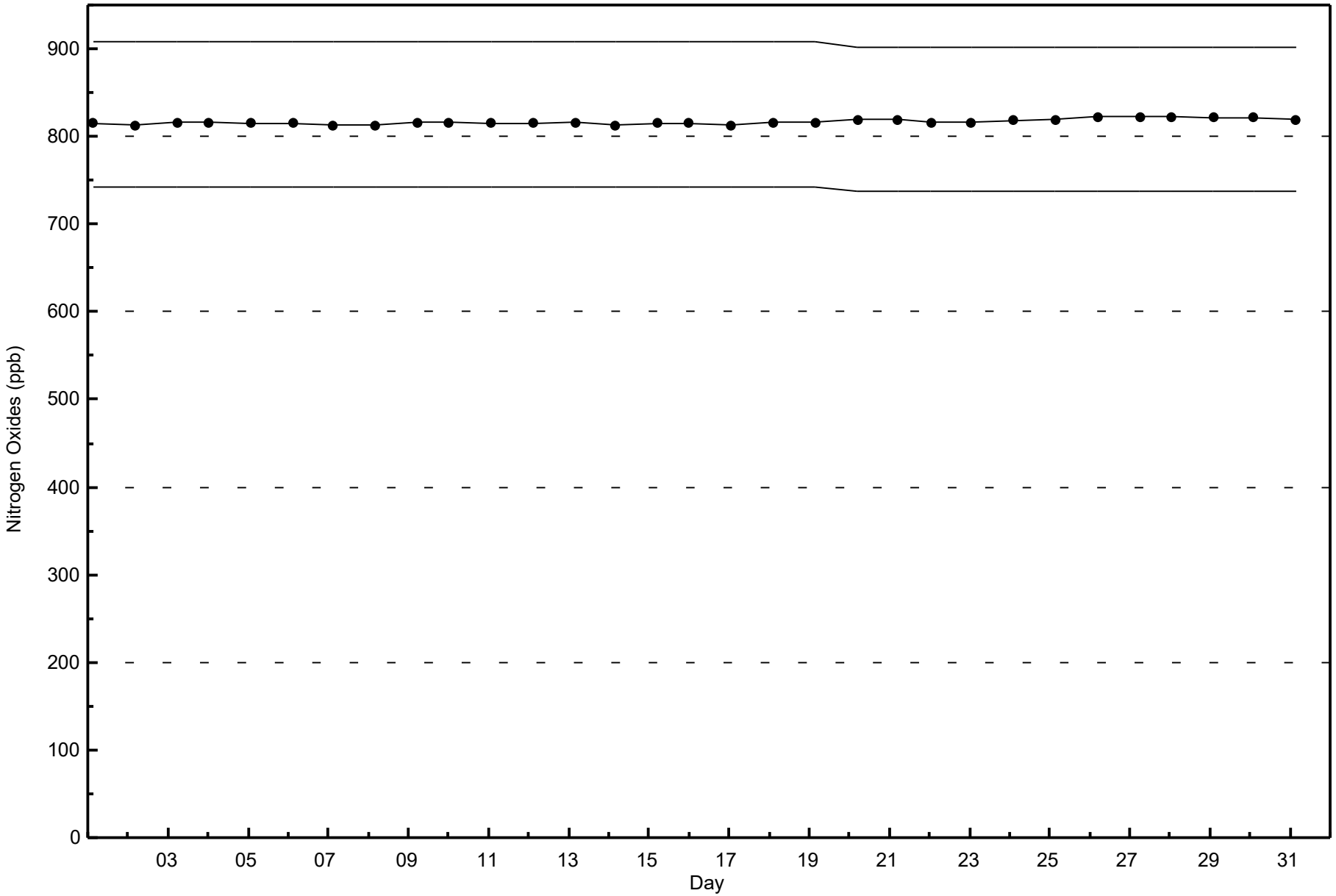


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Wapasu - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Wapasu - March 2025

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

Maximum Value: 41.3 $\mu g/m^3$ on Mar 30 09:00

Maximum Daily Average: 11.1 $\mu g/m^3$ on Mar 30

Minimum Value: 0.6 $\mu g/m^3$ on Mar 12 01:00

Minimum Daily Average: 1.2 $\mu g/m^3$ on Mar 12

Maximum Diurnal Average: 4.8 $\mu g/m^3$ at hour 9

Minimum Diurnal Average: 2.0 $\mu g/m^3$ at hour 22

Monthly Average: 2.74 $\mu g/m^3$

Percentiles: P_1 = 0.6 P_{10} = 1.1 Q_1 = 1.5 Median = 2.2 Q_3 = 2.9 P_{90} = 4.2 P_{99} = 16.7

Hours in Service:	744
Hours of Data:	742
Hours of Missing Data:	2
Hours of Calibration:	2
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	2.6	2.6	3.5	3.3	2.8	2.2	2.0	2.5	2.0	1.8	1.6	1.7	1.6	2.7	1.6	1.7	1.7	2.0	1.7	1.6	1.7	1.9	2.4	2.4	2.2	3.5
2-Mar	2.0	2.4	2.8	2.7	2.2	2.8	3.8	5.1	5.2	3.8	3.5	3.1	2.3	1.8	1.5	2.0	2.2	1.7	1.4	1.2	2.0	2.5	2.8	3.1	2.7	5.2
3-Mar	3.2	3.1	3.0	3.0	2.9	2.8	2.8	2.8	2.8	2.7	2.8	2.9	2.3	2.2	2.2	2.0	1.5	2.2	2.8	3.0	3.1	3.6	3.7	2.9	2.8	3.7
4-Mar	1.7	1.6	1.8	3.9	6.4	5.1	4.7	4.9	5.5	4.5	7.1	3.1	3.1	3.6	2.5	3.1	1.6	1.3	1.0	1.1	2.5	2.5	1.5	1.6	3.2	7.1
5-Mar	1.9	1.3	1.2	1.5	1.3	1.9	1.3	1.2	1.3	1.8	2.4	1.9	1.5	1.7	0.8	1.1	1.1	1.3	1.2	2.0	3.3	3.6	2.6	2.4	1.7	3.6
6-Mar	2.5	2.2	1.9	1.9	1.4	1.1	0.9	0.8	0.8	0.8	1.3	1.5	2.8	5.3	3.1	2.9	2.8	2.3	2.3	1.9	1.7	1.9	3.5	5.1	2.2	5.3
7-Mar	5.5	3.2	2.4	3.3	2.8	2.8	2.8	2.4	3.9	24.4	9.5	6.0	6.2	7.0	6.4	3.9	2.9	2.0	1.4	1.5	1.3	1.3	1.2	1.3	4.4	24.4
8-Mar	1.2	1.7	1.5	1.5	1.4	1.3	1.2	1.6	2.4	2.8	2.3	1.6	1.3	1.0	1.0	1.0	1.0	0.8	0.7	0.6	0.6	1.0	1.4	1.5	1.3	2.8
9-Mar	1.5	1.9	1.6	1.9	1.8	2.1	1.6	1.7	1.4	1.6	1.6	1.7	1.3	1.4	1.4	1.4	1.4	0.7	0.7	0.7	0.7	0.7	0.6	0.8	1.3	2.1
10-Mar	1.3	1.2	0.8	0.9	1.1	0.8	0.8	0.8	0.8	2.2	2.2	1.8	2.3	2.5	2.6	2.5	2.6	6.3	6.4	4.6	3.1	2.7	2.3	1.3	2.2	6.4
11-Mar	1.0	0.8	0.9	0.9	1.0	0.9	1.6	1.7	2.5	1.7	5.0	3.8	2.7	1.6	1.3	1.5	1.6	1.7	1.4	1.3	1.2	0.8	0.6	0.6	1.6	5.0
12-Mar	0.6	0.6	0.6	0.7	0.7	0.7	0.6	1.0	2.8	3.0	1.7	1.6	1.8	1.8	1.0	0.9	1.3	1.5	0.9	0.8	0.7	0.9	1.3	1.0	1.2	3.0
13-Mar	0.8	1.0	1.2	0.9	0.8	0.7	1.1	1.0	1.0	1.1	1.3	2.2	1.8	1.3	1.2	1.1	1.1	1.2	1.1	1.2	1.3	1.5	1.5	1.4	1.2	2.2
14-Mar	1.4	1.4	1.4	1.5	1.5	1.6	1.8	2.2	2.6	2.3	2.6	2.9	2.6	2.4	2.0	2.6	2.8	2.8	3.0	2.4	2.1	1.8	1.6	1.5	2.1	3.0
15-Mar	1.6	2.3	1.8	1.7	1.7	2.1	2.2	2.1	2.4	2.2	2.0	2.6	2.9	2.5	2.1	2.0	2.1	2.3	2.4	2.3	2.0	2.2	2.6	2.3	2.2	2.9
16-Mar	2.2	2.1	2.2	2.4	2.5	2.5	2.7	2.5	3.2	2.5	2.0	1.9	1.9	1.9	1.8	1.7	1.4	1.5	1.4	1.4	1.6	1.6	1.5	1.5	2.0	3.2
17-Mar	1.9	2.2	2.4	2.6	2.6	2.5	2.6	2.6	2.9	3.2	4.1	3.5	3.3	2.7	2.5	2.9	2.7	2.2	1.9	1.3	1.3	1.2	1.0	1.0	2.4	4.1
18-Mar	1.2	1.2	1.6	2.6	3.8	3.8	4.2	5.7	10.7	6.2	4.6	2.9	2.9	3.0	3.8	4.2	4.0	3.9	4.3	3.9	3.0	2.6	2.5	2.4	3.7	10.7
19-Mar	2.4	2.2	2.0	2.4	2.3	2.3	2.5	2.4	2.8	4.4	3.5	2.8	2.9	2.6	2.5	3.2	4.6	4.3	3.0	2.7	2.5	2.6	2.0	1.5	2.8	4.6
20-Mar	1.5	1.6	1.7	1.8	1.7	1.6	1.6	3.0	2.5	1.5	1.1	0.9	0.9	1.3	C	C	1.0	1.0	0.9	0.8	1.1	0.8	0.9	0.9	1.4	3.0
21-Mar	1.3	1.1	1.3	1.4	1.4	1.3	1.3	1.3	1.1	1.0	1.2	1.3	1.6	2.3	2.6	2.5	2.2	1.5	1.7	1.6	1.6	1.4	1.5	1.8	1.6	2.6
22-Mar	1.9	2.3	2.5	2.5	2.7	2.8	3.0	3.1	3.4	4.2	5.7	4.2	3.2	2.6	2.1	2.4	2.4	3.3	3.3	3.1	3.0	3.6	6.1	6.3	3.3	6.3
23-Mar	6.3	6.3	6.6	6.8	6.7	5.8	6.3	8.8	5.7	4.4	3.4	3.1	2.4	1.7	1.7	1.7	2.3	2.7	2.2	1.9	2.5	2.5	2.5	2.5	4.0	8.8
24-Mar	2.5	2.5	2.6	2.5	2.4	2.3	2.1	2.0	2.0	2.1	1.9	1.7	4.0	1.6	1.0	1.2	2.2	2.0	2.7	4.1	4.0	3.0	2.6	3.3	2.4	4.1
25-Mar	3.2	2.9	3.4	2.5	2.4	2.0	2.0	2.5	2.9	2.5	1.6	3.7	2.9	2.9	1.9	1.3	2.5	2.6	2.6	2.2	2.4	2.5	2.4	2.0	2.5	3.7
26-Mar	2.1	2.3	2.5	2.4	2.9	2.5	2.3	2.4	2.5	3.1	2.2	2.6	2.7	2.8	2.6	2.5	1.7	1.5	1.4	1.6	1.6	1.5	1.4	1.6	2.2	3.1
27-Mar	1.7	1.7	1.7	1.7	1.9	1.9	1.9	1.8	1.9	1.9	1.8	1.8	1.7	1.7	1.7	1.7	1.8	1.8	1.8	4.2	2.4	1.6	1.7	1.7	1.9	4.2
28-Mar	1.8	3.1	3.7	4.0	3.0	2.7	2.5	2.9	5.4	2.5	3.8	3.7	5.1	3.5	3.8	3.3	3.7	3.9	3.8	1.8	1.8	1.8	1.7	2.1	3.1	5.4
29-Mar	2.6	2.6	2.6	2.6	2.9	4.6	3.9	3.6	19.6	11.6	6.8	6.2	5.7	4.0	3.9	4.2	4.2	4.6	5.9	5.7	3.0	3.0	3.3	2.8	5.0	19.6
30-Mar	3.0	3.2	3.2	2.9	3.5	11.3	21.5	26.0	41.3	24.1	18.9	18.9	13.7	13.2	13.0	8.1	7.0	6.1	7.6	7.0	4.8	2.7	2.8	2.8	11.1	41.3
31-Mar	2.7	2.7	2.7	2.6	2.6	3.0	3.8	3.9	3.9	4.2	7.4	6.3	3.7	3.8	4.0	3.2	2.6	2.5	2.6	2.5	2.0	1.7	1.6	1.8	3.2	7.4
	2.2	2.2	2.2	2.4	2.4	2.6	3.0	3.4	4.8	4.4	3.8	3.3	3.1	2.9	2.7	2.5	2.4	2.4	2.4	2.3	2.1	2.0	2.1	2.1	Diurnal Average	
	6.3	6.3	6.6	6.8	6.7	11.3	21.5	26.0	41.3	24.4	18.9	18.9	13.7	13.2	13.0	8.1	7.0	6.3	7.6	7.0	4.8	3.6	6.1	6.3	Diurnal Maximum	

C - Calibration

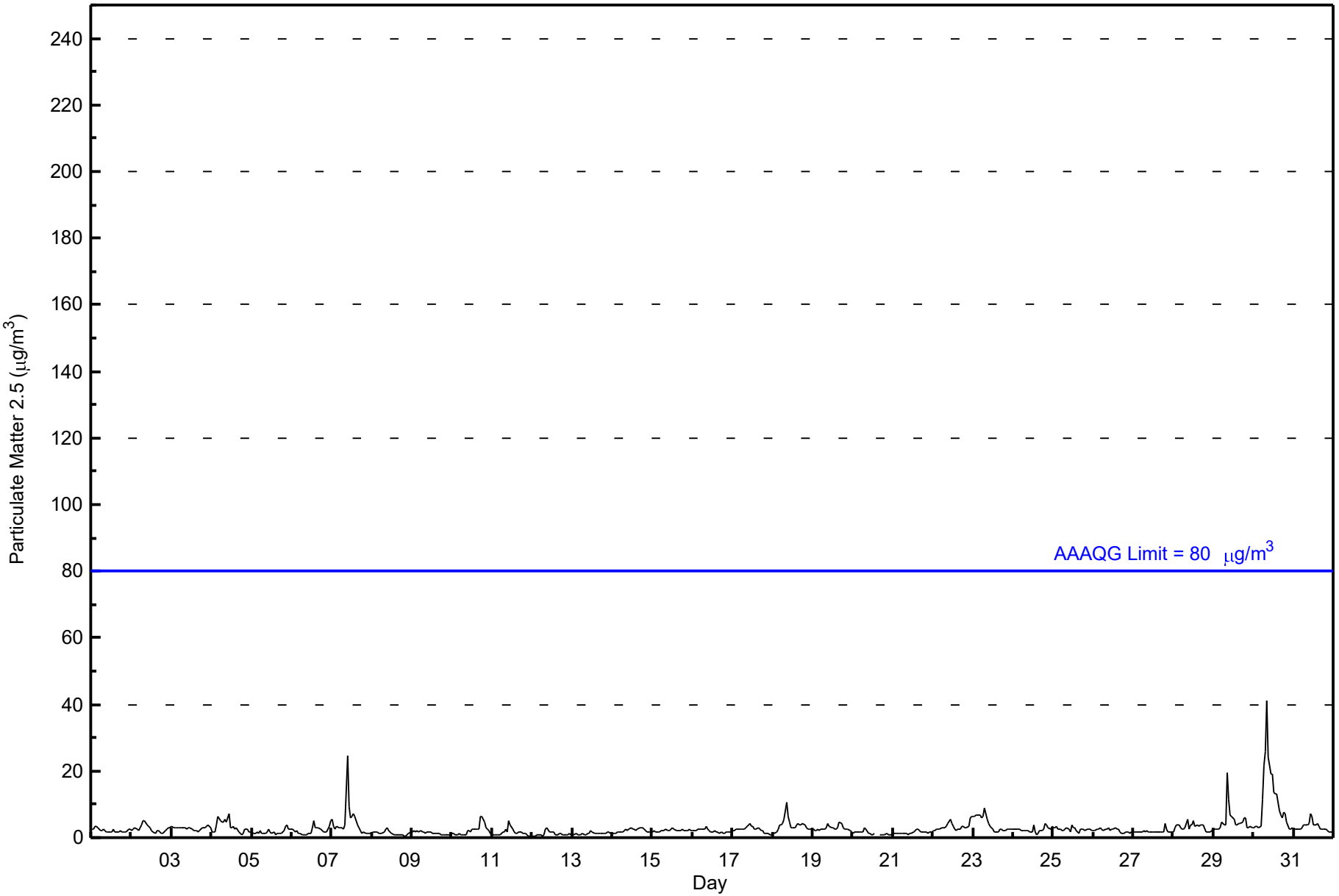
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Wapasu - March 2025



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

Wapasu - March 2025

Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	692	93.26	93.26
6 - 15	42	5.66	98.92
16 - 25	6	0.81	99.73
26 - 80	2	0.27	100.00
> 81.0	0	0.00	100.00

Total Number of Valid Hours: 742

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

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

Wapasu - March 2025

Concentration Ranges ($\mu g/m^3$)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	121	55	51	20	22	31	108	83	43	28	26	18	11	17	13	44	691
6 - 15	5	2	2	1	0	0	2	1	4	5	3	3	2	4	3	5	42
16 - 25	0	0	0	0	0	0	0	1	0	0	1	0	1	2	0	1	6
26 - 80	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2
> 81.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	126	57	53	21	22	31	110	85	48	33	31	21	14	23	16	50	741

Total Number of Valid Hours: 741

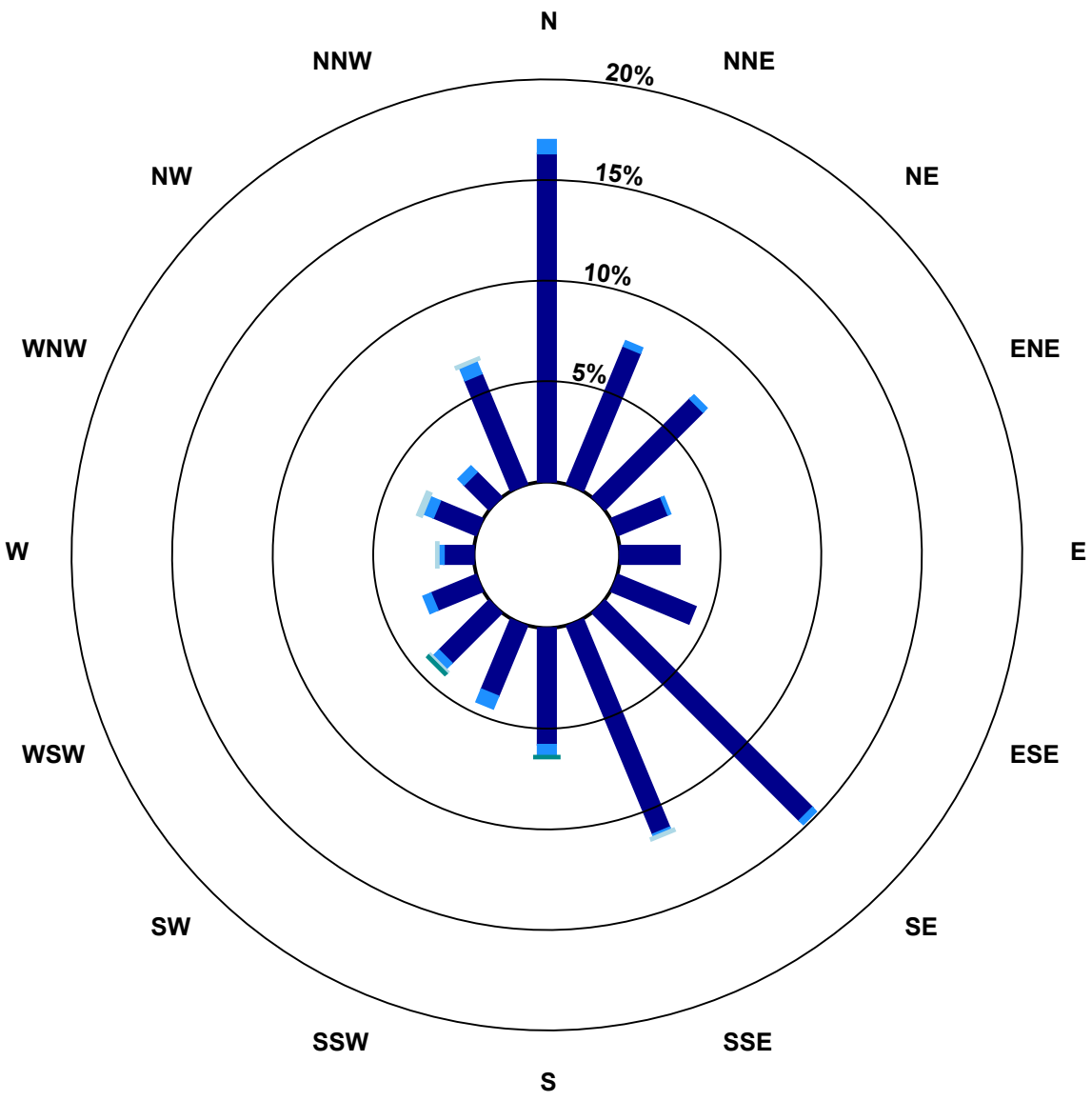
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

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

Wapasu



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

0 - 5

6 - 15

16 - 25

26 - 80

> 81.0

Total Number of Valid Hours: 741

Maximum Value: 8.3 C on Mar 25 15:00

Maximum Daily Average: 1.3 C on Mar 23

Minimum Value: -27.6 C on Mar 13 06:00

Minimum Daily Average: -23.0 C on Mar 9

Maximum Diurnal Average: -3.8 C at hour 16

Minimum Diurnal Average: -13.2 C at hour 6

Monthly Average: -8.79 C

Percentiles: P_1 = -25.6 P_{10} = -20.1 Q_1 = -15.1 Median = -8.3 Q_3 = -2.3 P_{90} = 1.6 P_{99} = 6.7

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

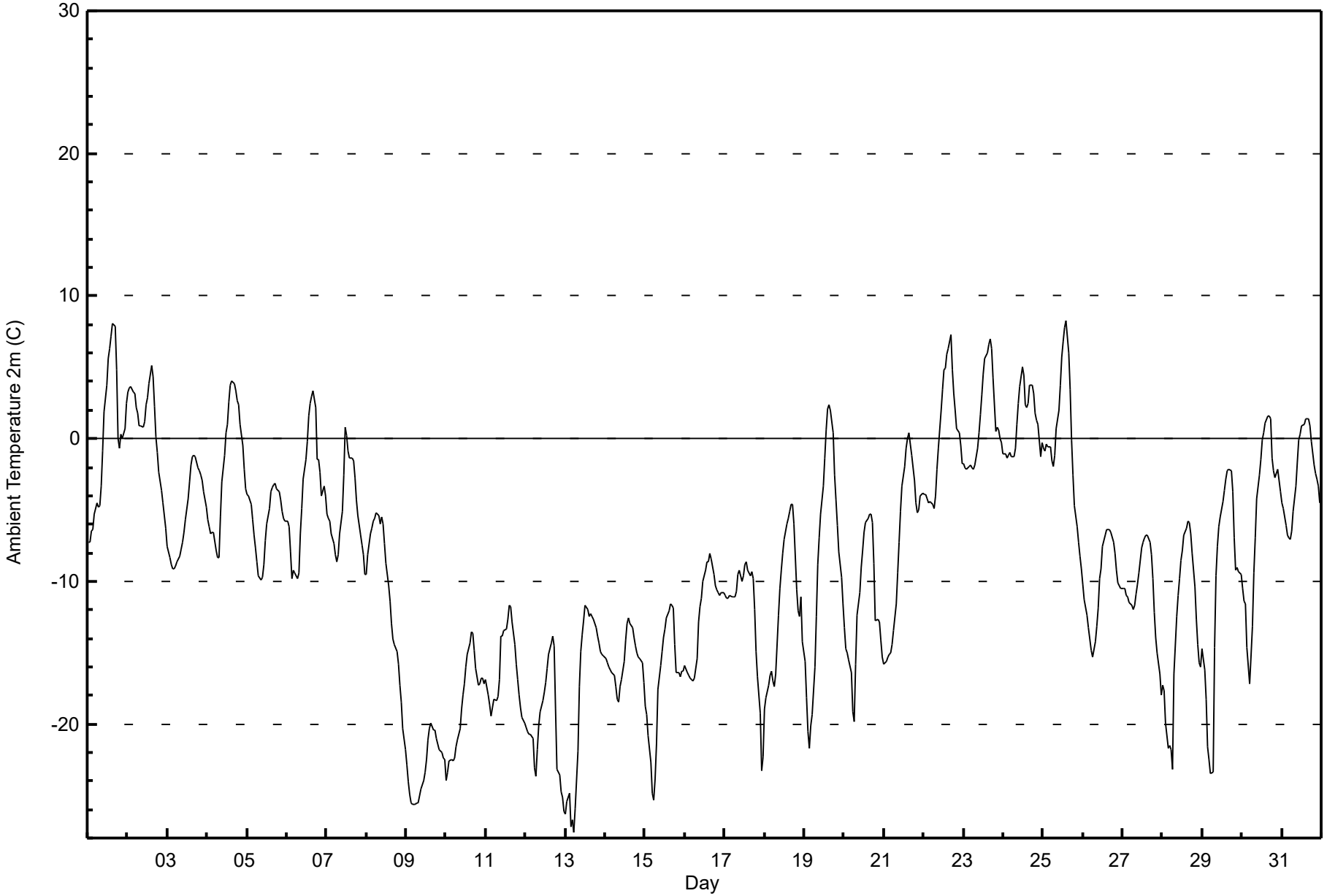
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-7.3	-7.3	-6.5	-6.4	-5.3	-4.5	-4.8	-4.7	-3.3	-0.8	1.9	3.7	5.6	6.3	7.2	8.1	7.8	4.8	0.0	-0.7	0.3	0.0	0.7	2.4	-0.1	8.1
2-Mar	3.3	3.5	3.7	3.2	3.2	2.2	1.8	0.9	0.9	0.8	1.2	2.3	2.9	3.9	5.1	4.3	2.3	0.2	-1.0	-2.3	-3.6	-4.5	-5.4	-6.2	0.9	5.1
3-Mar	-7.5	-8.3	-8.8	-9.1	-9.2	-9.0	-8.6	-8.3	-7.7	-7.3	-6.6	-5.7	-4.2	-3.0	-1.9	-1.3	-1.1	-1.3	-2.1	-2.3	-2.5	-2.9	-3.8	-4.8	-5.3	-1.1
4-Mar	-5.6	-6.2	-6.7	-6.6	-6.6	-7.8	-8.3	-8.3	-5.5	-3.1	-1.2	0.4	1.0	2.6	3.7	4.0	3.9	3.3	2.7	2.4	1.0	-0.5	-2.1	-3.5	-2.0	4.0
5-Mar	-3.9	-4.0	-4.6	-5.7	-6.8	-7.6	-8.6	-9.7	-9.9	-9.8	-8.8	-7.2	-6.0	-4.9	-3.7	-3.4	-3.2	-3.1	-3.5	-3.8	-4.3	-5.1	-5.6	-5.8	-5.8	-3.1
6-Mar	-5.8	-6.2	-8.0	-9.8	-9.2	-9.4	-9.8	-9.4	-6.7	-4.9	-2.8	-1.4	-0.2	1.6	2.5	2.9	3.3	2.2	-1.4	-1.4	-2.3	-4.0	-3.4	-4.0	-3.7	3.3
7-Mar	-5.3	-5.6	-5.8	-6.7	-7.3	-8.1	-8.6	-8.2	-6.6	-5.1	-2.5	0.8	0.3	-0.8	-1.3	-1.4	-1.6	-2.7	-4.3	-5.4	-6.8	-7.5	-8.1	-9.5	-4.9	0.8
8-Mar	-9.6	-8.1	-6.6	-6.2	-5.8	-5.5	-5.2	-5.4	-6.0	-5.5	-6.0	-7.4	-8.7	-10.3	-11.4	-13.0	-14.0	-14.4	-14.9	-15.8	-17.3	-18.5	-20.4	-21.8	-10.7	-5.2
9-Mar	-22.9	-24.1	-25.0	-25.5	-25.7	-25.6	-25.5	-25.5	-25.0	-24.6	-24.0	-23.4	-22.5	-21.1	-20.3	-19.9	-20.4	-20.4	-21.0	-21.4	-21.8	-22.0	-22.4	-22.5	-23.0	-19.9
10-Mar	-23.9	-23.4	-22.6	-22.5	-22.6	-22.4	-21.7	-21.1	-20.3	-19.0	-18.0	-17.2	-16.0	-15.1	-14.3	-13.5	-13.7	-14.9	-16.1	-17.3	-17.2	-16.8	-16.8	-17.2	-18.5	-13.5
11-Mar	-16.9	-18.0	-18.7	-19.4	-18.8	-18.3	-18.3	-18.1	-16.9	-13.8	-13.8	-13.5	-13.3	-12.7	-11.6	-11.7	-12.9	-14.4	-15.8	-16.9	-18.0	-18.9	-19.5	-20.0	-16.3	-11.6
12-Mar	-20.2	-20.5	-20.7	-20.8	-21.0	-23.0	-23.7	-21.8	-20.2	-19.1	-18.4	-17.8	-17.1	-16.1	-15.1	-14.4	-13.9	-14.6	-19.0	-23.2	-23.5	-24.7	-25.2	-26.1	-20.0	-13.9
13-Mar	-26.3	-25.4	-24.9	-27.2	-26.7	-27.6	-25.9	-21.9	-17.4	-14.9	-13.8	-12.8	-11.7	-12.0	-12.5	-12.3	-12.5	-12.6	-13.2	-13.8	-14.3	-14.9	-15.1	-15.2	-17.7	-11.7
14-Mar	-15.5	-15.7	-16.0	-16.2	-16.4	-16.6	-17.4	-18.3	-18.4	-17.4	-16.9	-15.7	-14.1	-12.9	-12.5	-13.0	-13.2	-13.9	-14.6	-15.0	-15.3	-15.4	-15.7	-17.1	-15.6	-12.5
15-Mar	-18.7	-19.3	-20.8	-22.7	-24.9	-25.4	-23.9	-21.4	-17.6	-15.9	-14.9	-13.9	-13.3	-12.6	-12.1	-11.6	-11.7	-11.9	-14.5	-16.4	-16.4	-16.7	-16.3	-16.3	-17.0	-11.6
16-Mar	-15.9	-16.4	-16.6	-16.7	-16.9	-17.0	-16.8	-15.5	-12.8	-11.8	-11.2	-10.0	-9.3	-8.6	-8.7	-8.1	-8.5	-9.6	-10.3	-10.6	-10.8	-11.0	-10.8	-10.8	-12.3	-8.1
17-Mar	-11.0	-11.2	-11.2	-11.0	-11.1	-11.1	-11.1	-10.7	-9.5	-9.3	-10.0	-9.6	-8.8	-8.7	-9.3	-9.6	-9.3	-9.8	-12.0	-15.0	-16.7	-19.3	-23.3	-22.3	-12.1	-8.7
18-Mar	-18.9	-18.1	-17.3	-16.6	-16.3	-17.0	-17.4	-16.5	-12.4	-10.5	-9.2	-8.1	-7.0	-6.0	-5.6	-5.1	-4.6	-4.6	-5.9	-10.6	-12.1	-12.5	-11.1	-14.2	-11.6	-4.6
19-Mar	-15.6	-18.2	-20.5	-21.7	-20.2	-19.4	-16.0	-12.5	-8.9	-6.9	-5.2	-3.3	-1.3	0.6	2.1	2.4	2.0	0.4	-2.5	-4.3	-6.1	-8.0	-9.7	-11.6	-8.5	2.4
20-Mar	-13.3	-14.7	-15.1	-15.5	-16.4	-19.2	-19.9	-15.8	-12.3	-10.8	-9.0	-7.8	-6.6	-5.9	-5.6	-5.3	-5.3	-5.9	-8.7	-12.8	-12.6	-12.9	-14.2	-15.3	-11.7	-5.3
21-Mar	-15.8	-15.6	-15.3	-15.1	-15.1	-14.5	-13.5	-11.6	-9.4	-7.3	-5.1	-3.4	-2.0	-0.7	0.0	0.4	-0.3	-1.2	-3.0	-4.5	-5.2	-5.0	-4.0	-3.8	-7.1	0.4
22-Mar	-3.9	-3.9	-4.2	-4.5	-4.4	-4.6	-4.9	-4.0	-2.1	-0.7	2.0	3.5	4.8	4.9	6.0	6.4	7.3	4.9	3.2	2.0	0.7	0.4	-0.5	-1.7	0.3	7.3
23-Mar	-1.7	-2.0	-2.2	-2.0	-1.9	-2.0	-2.1	-1.9	-0.7	0.4	1.7	3.0	4.5	5.6	6.1	6.6	7.0	6.4	4.2	0.5	0.8	0.6	0.1	-0.2	1.3	7.0
24-Mar	-1.1	-1.1	-1.4	-1.2	-0.9	-1.2	-1.3	-0.6	1.0	2.5	3.6	5.1	4.5	2.4	2.2	2.4	3.7	3.7	3.2	1.8	1.3	1.0	-1.2	-0.3	1.2	5.1
25-Mar	-0.7	-0.9	-0.4	-0.6	-0.6	-1.5	-1.9	-1.2	0.7	2.0	3.7	5.7	6.8	7.8	8.3	6.1	3.4	-0.1	-2.6	-4.7	-6.2	-7.3	-8.3	-9.1	-0.1	8.3
26-Mar	-10.2	-11.3	-12.3	-13.3	-14.1	-14.8	-15.4	-14.2	-13.2	-11.8	-9.8	-9.1	-7.5	-6.7	-6.4	-6.4	-6.4	-6.6	-7.2	-8.0	-9.3	-10.1	-10.3	-10.5	-10.2	-6.4
27-Mar	-10.5	-10.5	-11.0	-11.1	-11.5	-11.7	-12.0	-11.7	-10.9	-10.2	-9.4	-7.7	-7.2	-6.9	-6.8	-6.8	-7.3	-8.1	-9.8	-12.1	-13.9	-15.0	-16.5	-18.0	-10.7	-6.8
28-Mar	-17.3	-17.7	-19.9	-21.7	-21.6	-21.8	-23.2	-16.5	-12.5	-11.0	-9.8	-8.6	-7.9	-6.7	-6.2	-5.8	-5.9	-6.7	-8.0	-10.4	-12.7	-14.4	-15.7	-16.0	-13.3	-5.8
29-Mar	-14.7	-16.2	-18.2	-21.6	-22.5	-23.5	-23.3	-14.6	-9.7	-7.5	-6.2	-5.4	-4.4	-3.6	-2.8	-2.3	-2.2	-2.2	-3.8	-6.9	-9.2	-9.0	-9.3	-9.5	-10.4	-2.2
30-Mar	-10.5	-11.4	-11.6	-14.6	-17.2	-15.2	-13.1	-9.4	-7.0	-4.2	-2.5	-1.5	-0.1	0.4	1.1	1.6	1.6	1.4	-1.4	-2.3	-2.7	-2.2	-2.9	-3.8	-5.3	1.6
31-Mar	-4.6	-4.9	-6.1	-6.7	-7.0	-7.1	-6.5	-5.1	-3.3	-1.7	-0.1	0.3	0.9	1.0	1.4	1.4	1.4	0.9	-0.2	-1.8	-2.4	-2.8	-3.3	-4.5	-2.5	1.4
	-11.3	-11.7	-12.1	-12.8	-12.9	-13.2	-13.1	-11.7	-9.8	-8.4	-7.1	-6.0	-5.1	-4.5	-4.0	-3.8	-4.0	-4.9	-6.6	-8.2	-9.0	-9.7	-10.3	-10.9	Diurnal Average	
	3.3	3.5	3.7	3.2	3.2	2.2	1.8	0.9	1.0	2.5	3.7	5.7	6.8	7.8	8.3	8.1	7.8	6.4	4.2	2.4	1.3	1.0	0.7	2.4	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Wapasu - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	75	10.08	10.08
-20 - 0	553	74.33	84.41
0 - 10	116	15.59	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Wapasu - March 2025

Maximum Value: 98.9 % on Mar 24 21:00

Maximum Daily Average: 86.1 % on Mar 8

Minimum Value: 23.7 % on Mar 20 17:00

Minimum Daily Average: 41.2 % on Mar 21

Maximum Diurnal Average: 79.5 % at hour 7

Minimum Diurnal Average: 50.9 % at hour 16

Monthly Average: 66.47 %

Percentiles: P_1 = 25.5 P_{10} = 42.4 Q_1 = 52.8 Median = 68.0 Q_3 = 81.5 P_{90} = 87.0 P_{99} = 97.5

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

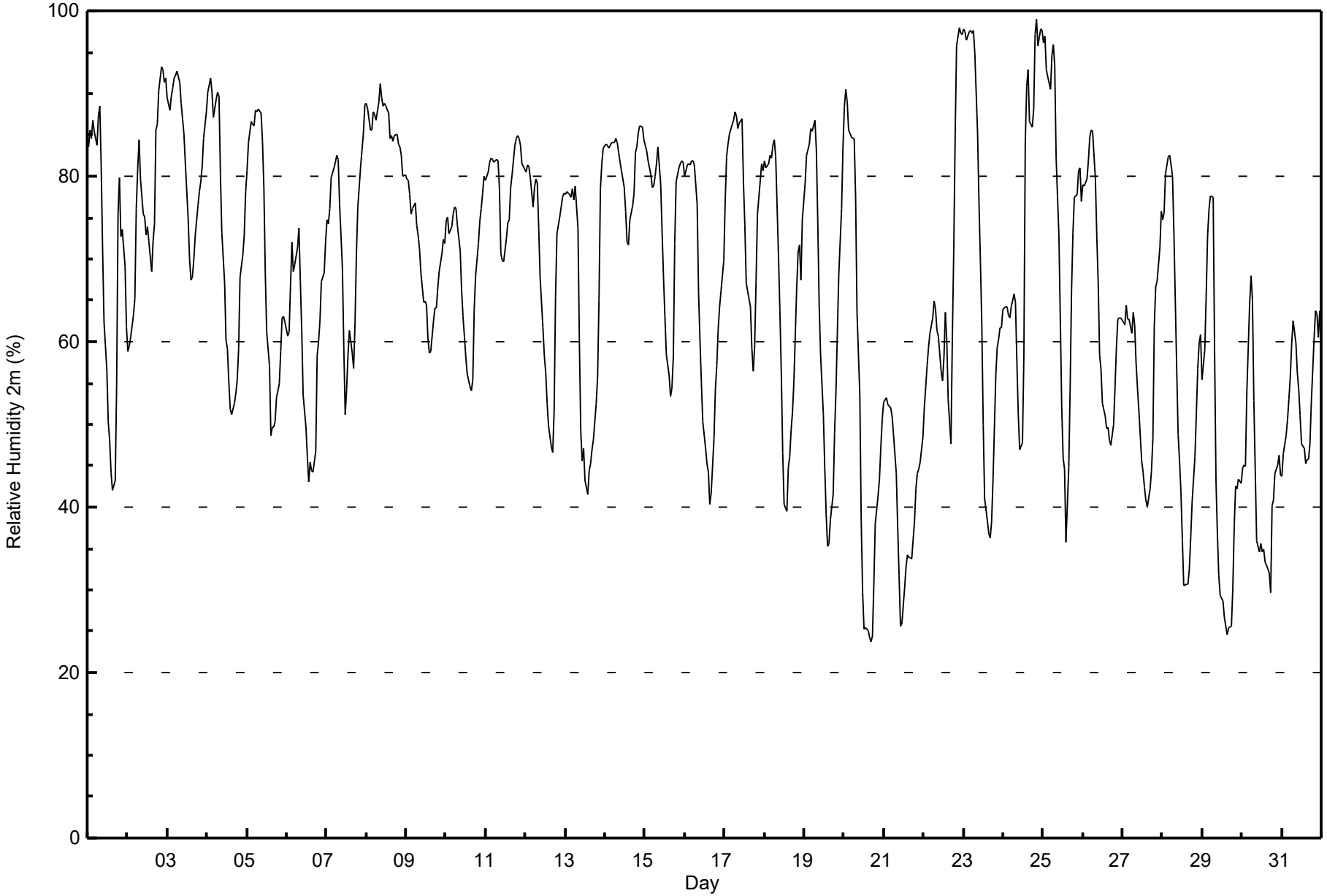
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	83.6	85.5	84.6	86.7	85.4	83.8	87.3	88.6	81.1	71.1	62.5	56.7	50.4	48.2	44.2	42.1	43.2	54.8	75.5	79.8	72.8	73.6	69.2	61.8	69.7	88.6
2-Mar	58.9	59.5	60.5	63.3	65.2	76.1	80.8	84.4	79.6	75.3	75.0	73.0	74.0	72.1	68.5	72.3	74.2	85.5	86.2	90.4	93.2	92.9	91.4	91.9	76.8	93.2
3-Mar	89.4	87.9	89.6	90.7	91.9	92.2	92.7	91.4	88.9	86.9	85.1	81.6	74.9	70.1	67.5	67.7	69.8	72.7	76.5	78.2	79.3	81.1	84.6	87.8	82.4	92.7
4-Mar	90.2	91.1	91.9	90.1	87.1	89.3	90.2	89.7	80.3	73.2	67.1	60.2	59.1	55.2	51.9	51.1	52.5	53.8	55.5	59.1	67.7	70.5	72.9	78.2	72.0	91.9
5-Mar	80.7	84.0	86.6	86.2	86.2	88.0	87.8	88.1	87.6	84.3	78.7	68.4	61.1	57.1	48.7	49.6	49.7	50.3	53.2	54.9	58.9	62.9	63.0	62.3	69.9	88.1
6-Mar	60.7	61.3	66.8	72.1	68.4	69.4	71.4	73.6	67.3	61.4	53.6	49.6	46.2	43.0	45.3	44.5	44.3	46.8	58.3	60.1	62.5	67.2	68.3	72.0	59.8	73.6
7-Mar	74.7	74.2	76.0	79.9	81.1	81.6	82.5	82.1	76.5	69.0	59.3	51.3	54.3	58.5	61.4	58.6	56.8	62.3	70.6	76.2	81.3	83.3	85.3	88.6	71.9	88.6
8-Mar	88.9	88.2	85.6	85.5	87.9	87.4	86.7	88.9	91.2	89.6	88.5	88.9	88.5	87.6	84.5	84.9	84.3	84.8	85.1	83.9	83.5	82.5	80.0	80.1	86.1	91.2
9-Mar	79.7	79.5	77.7	75.4	76.1	76.8	74.1	72.9	71.2	68.3	64.8	64.8	64.3	60.4	58.7	58.9	62.6	64.1	64.1	66.5	68.4	70.7	72.3	71.9	69.4	79.7
10-Mar	74.5	75.0	73.1	73.8	75.4	76.3	76.1	74.2	71.0	66.2	63.1	60.7	58.2	56.2	54.6	54.1	55.4	63.9	68.0	71.8	74.5	76.1	78.0	79.9	68.8	79.9
11-Mar	79.4	80.5	81.7	82.2	82.0	81.7	82.1	81.8	78.4	70.7	69.8	69.7	72.5	74.4	74.8	78.6	80.2	83.7	84.5	84.9	84.5	83.7	81.5	80.9	79.4	84.9
12-Mar	80.5	81.3	81.2	79.8	76.3	78.7	79.6	79.2	73.7	67.8	61.6	58.3	56.2	52.5	49.8	47.4	46.6	51.7	65.4	73.0	75.1	76.3	77.5	77.9	68.6	81.3
13-Mar	77.7	78.1	77.8	77.4	78.5	77.1	78.8	73.7	60.0	49.2	45.5	47.2	43.3	41.5	44.4	45.2	46.9	48.2	52.5	55.7	65.1	78.4	81.5	83.4	62.8	83.4
14-Mar	83.8	83.8	83.4	83.7	84.0	84.2	84.6	84.0	82.8	81.7	80.7	78.6	75.8	72.0	71.7	74.7	76.4	78.0	82.9	83.5	85.2	86.1	85.9	84.3	81.3	86.1
15-Mar	83.7	83.0	81.8	80.2	78.6	78.8	80.0	81.5	83.6	79.0	73.3	67.9	63.0	58.6	55.9	53.4	54.4	58.1	71.8	79.3	81.0	81.6	81.8	81.7	73.8	83.7
16-Mar	80.1	81.3	81.5	81.4	81.8	81.8	81.4	76.6	66.0	60.1	55.0	50.4	47.1	45.3	44.3	40.4	41.7	48.3	54.3	57.2	61.6	64.3	66.1	69.8	63.2	81.8
17-Mar	77.1	82.4	83.9	85.2	86.3	86.8	87.7	87.2	85.7	86.5	87.0	79.3	74.1	67.1	66.1	64.3	59.2	56.5	59.4	67.2	75.5	79.5	81.6	80.7	76.9	87.7
18-Mar	81.9	81.1	81.5	82.5	82.3	83.7	84.3	82.4	70.3	63.7	56.3	46.7	40.3	39.4	44.8	46.1	49.3	51.6	55.2	66.6	70.8	71.7	67.4	74.7	65.6	84.3
19-Mar	79.1	82.6	83.3	83.8	85.8	85.5	86.8	83.2	74.6	64.6	58.5	51.1	44.7	39.1	35.2	35.6	38.4	41.6	49.0	54.1	61.2	68.2	76.1	83.6	64.4	86.8
20-Mar	88.6	90.6	88.9	85.6	84.7	84.6	84.6	77.4	63.5	53.5	38.3	29.7	25.3	25.5	25.1	24.2	23.7	24.4	30.6	38.0	41.4	43.4	47.2	50.7	52.9	90.6
21-Mar	52.8	53.2	52.4	52.2	52.0	51.0	48.7	44.0	37.6	31.7	25.5	26.0	30.4	33.0	34.2	33.9	33.8	33.7	38.3	42.1	44.1	44.7	45.4	48.5	41.2	53.2
22-Mar	52.0	54.6	57.1	59.3	61.1	62.9	64.9	63.8	61.4	60.6	56.4	55.3	58.1	63.5	60.1	53.0	47.6	60.7	71.1	85.1	95.7	97.9	97.2	97.1	66.5	97.9
23-Mar	97.9	97.5	96.4	97.4	97.6	97.3	97.6	95.0	85.1	76.7	69.6	62.0	50.0	41.0	38.4	36.7	36.2	38.2	43.4	56.2	59.3	60.3	61.7	61.8	68.9	97.9
24-Mar	63.8	64.2	64.3	63.2	62.9	64.2	65.8	64.8	57.6	51.1	47.0	47.9	58.3	84.2	90.9	92.9	86.6	85.9	88.1	97.1	98.9	95.8	97.8	97.7	74.6	98.9
25-Mar	96.1	97.0	92.9	92.0	90.5	94.6	95.9	93.4	82.2	72.8	62.3	52.1	46.0	44.6	35.7	44.8	54.3	66.2	73.3	77.5	77.9	80.6	81.1	77.0	74.2	97.0
26-Mar	79.0	78.8	79.6	81.9	84.8	85.6	85.5	79.7	72.7	67.1	58.5	56.6	52.6	51.0	49.5	49.7	48.2	47.4	50.0	54.6	59.4	62.8	62.9	62.9	65.0	85.6
27-Mar	62.4	62.1	64.3	62.7	62.7	61.0	63.5	62.0	57.4	54.4	51.7	45.6	44.2	42.4	40.8	40.1	42.2	44.4	48.4	61.9	66.6	67.3	71.4	75.8	56.5	75.8
28-Mar	74.8	75.6	80.3	82.4	82.6	81.4	80.0	73.0	56.6	48.8	45.5	41.8	36.2	30.6	30.7	30.6	32.6	36.4	40.7	46.1	51.3	56.7	59.8	60.9	55.6	82.6
29-Mar	55.5	58.9	65.5	72.8	75.9	77.6	77.5	58.9	43.2	36.9	31.7	29.3	28.6	26.5	25.6	24.6	25.4	25.7	30.2	37.7	42.6	42.2	43.4	42.8	45.0	77.6
30-Mar	44.8	45.1	44.9	53.9	64.6	67.9	65.1	52.8	44.4	35.9	34.5	35.6	34.5	34.9	33.4	32.5	32.1	29.7	40.1	40.8	44.1	45.2	46.3	44.0	43.6	67.9
31-Mar	43.8	46.4	48.7	50.5	53.0	55.8	59.9	62.6	59.8	56.3	54.2	51.0	47.7	47.1	45.3	45.8	45.7	47.7	52.7	60.5	63.8	63.4	60.4	63.7	53.6	63.8
	74.7	75.6	76.3	77.2	77.8	78.8	79.5	77.1	70.7	65.0	60.0	56.0	53.5	52.3	51.0	50.9	51.4	54.7	60.5	65.8	69.3	71.3	72.2	73.4	Diurnal Average	
	97.9	97.5	96.4	97.4	97.6	97.3	97.6	95.0	91.2	89.6	88.5	88.9	88.5	87.6	90.9	92.9	86.6	85.9	88.1	97.1	98.9	97.9	97.8	97.7	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Wapasu - March 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	57	7.66	7.66
40 - 60	209	28.09	35.75
60 - 80	261	35.08	70.83
80 - 100	217	29.17	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Precipitation (PC) - mm

Wapasu - March 2025

Maximum Value: 0.7 mm on Mar 22 23:00

Maximum Daily Total: 2.6 mm on Mar 14

Minimum Value: 0.0 mm on Mar 1 01:00

Minimum Daily Total: 0.0 mm on Mar 1

Maximum Diurnal Total: 1.3 mm at hour 23

Minimum Diurnal Total: 0.0 mm at hour 10

Monthly Total: 9.64 mm

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.0 P_{90} = 0.0 P_{99} = 0.4

Hours in Service:	744
Hours of Data:	742
Hours of Missing Data:	2
Hours of Calibration:	0
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	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	0.3	0.0	0.0	0.0	0.0	0.4	0.3
3-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	M	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.3	0.1	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	0.7	0.3
9-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	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	0.5	0.2	0.0	0.0	0.0	0.0	0.0	1.2	0.5
12-Mar	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
13-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.4	1.4	0.5
14-Mar	0.5	0.4	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	2.6	0.5
15-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.2
18-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.3	0.7	0.1	1.6	0.7
23-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.3
25-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.7	0.5	0.3	0.2	0.4	0.4	0.3	0.3	0.0	0.0	0.2	0.1	0.1	0.3	0.3	0.6	0.3	0.5	0.2	0.5	0.7	0.9	1.3	0.5	Diurnal Average	
	0.5	0.4	0.3	0.2	0.3	0.1	0.2	0.3	0.0	0.0	0.2	0.1	0.1	0.3	0.3	0.4	0.2	0.5	0.2	0.3	0.4	0.5	0.7	0.4	Diurnal Maximum	

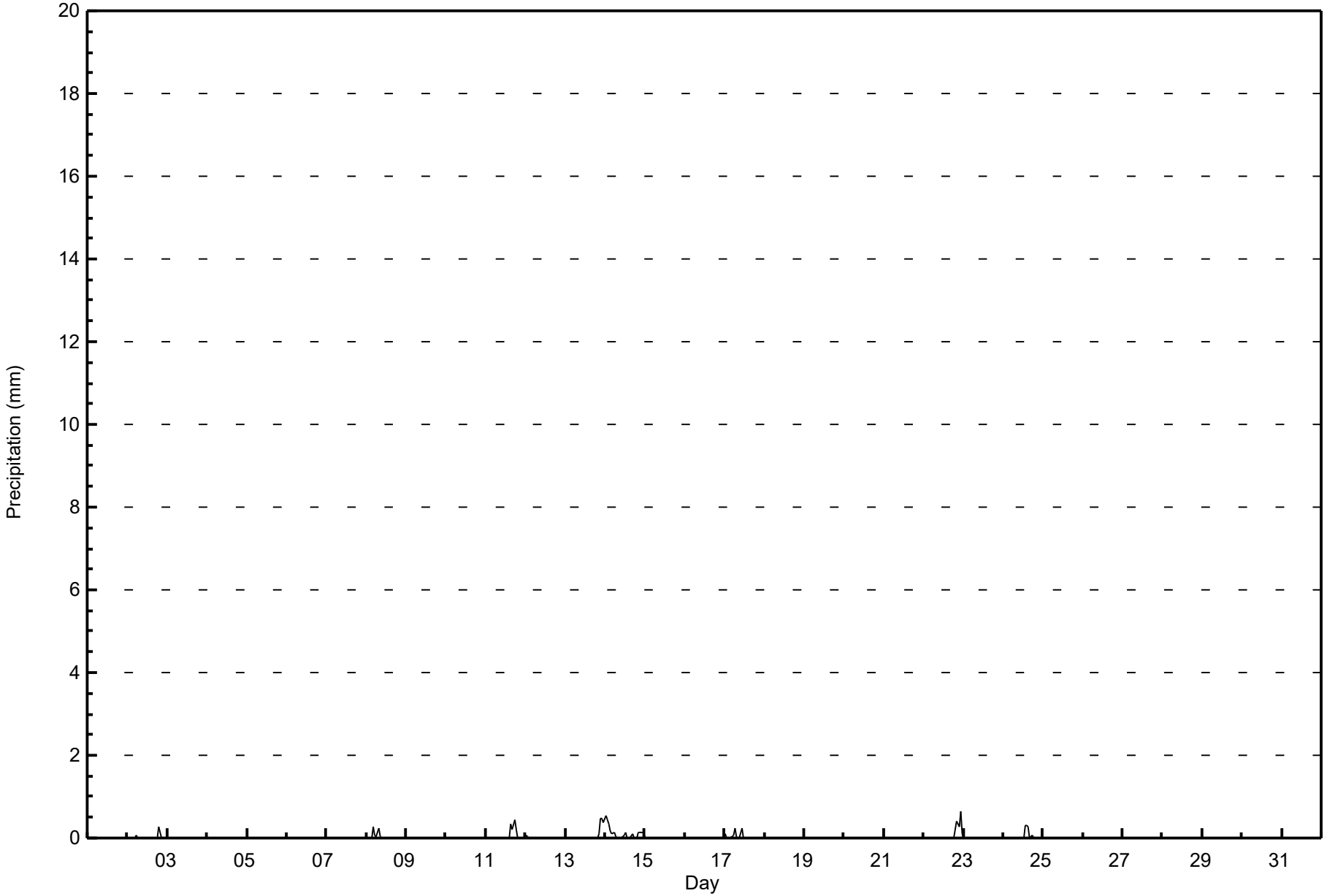
M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Precipitation (PC) - mm

Wapasu - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Wapasu - March 2025

Maximum Speed: 21 km/h on Mar 21 09:00

Maximum Daily Speed Average: 15.5 km/h on Mar 21

Minimum Speed Value: 0 km/h on Mar 23 00:00

Minimum Daily Speed Average: 0.4 km/h on Mar 23

Maximum Diurnal Speed Average: 3.8 km/h at hour 21

Minimum Diurnal Speed Average: 0.7 km/h at hour 10

Monthly Average Velocity: 1.2 km/h 71.6 deg

Percentiles: P_1 = 1 P_{10} = 3 Q_1 = 5 Median = 7 Q_3 = 10 P_{90} = 13 P_{99} = 18

Hours in Service: 744

Hours of Data: 743

Hours of Missing Data: 1

Percent Operational Time: 99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	SSE9	SSE8	SSE8	SSE8	SSE7	SSE7	SSE7	SSE6	SSE9	S8	S9	SSW7	SSW7	WSW9	SW9	WSW9	WSW5	S2	SE4	SE6	SE6	SSE7	SSE7	SSE8	S6.1	SW9
2-Mar	S8	SSE7	S7	SSE7	S5	SSE5	ESE2	NNW3	NNW8	N10	N7	N9	N7	WNW5	WNW8	NNW7	NNE9	NNE10	N11	N13	N10	N11	NNE11	N13	N4.2	N13
3-Mar	N13	N13	N11	N10	N9	N9	N8	N12	NNW12	NNW12	NNW9	NW5	W5	W6	W6	W6	SW6	SSW3	S4	S4	SSE4	SSE5	SSE5	SSE6	NNW4.0	N13
4-Mar	SSE6	SSE6	SSE6	S6	S7	S6	SSE7	SSE7	S7	S8	SSW10	SSW12	SW12	SW15	SW14	SW13	SW8	SSW7	SW7	W3	N10	N9	N8	N6	SSW4.9	SW15
5-Mar	N8	N12	N13	NNW18	NNW20	NNW14	N14	N11	N10	N8	NNW7	NNW8	N6	WNW2	SW5	SW6	SE4	SE5	ESE2	S4	SSE3	SE4	SE7	SE7	N4.7	NNW20
6-Mar	SE6	SE5	SE4	SE6	SE7	SE8	SE9	SE10	SSE10	S9	S9	S10	SSW11	SSW12	SW12	SW9	SSW7	S5	SSE4	SSE4	S5	S3	NNW5	NNW5	S5.5	SW12
7-Mar	NNE4	NNE3	N4	NNE4	NE5	NNE1	UO	ESE3	WNW3	WNW4	SW5	SW8	NW8	S4	N10	N9	N9	NNE8	NE8	NE8	NE7	NE1	N4	NE4	NNE3.2	N10
8-Mar	ENE5	SE6	SE8	SE8	SE8	SE11	SE7	WSW2	NW4	WNW5	NW8	NNW10	NNW12	NNW15	N16	N16	N13	N11	N10	N11	N12	N12	N12	N10	N5.6	N16
9-Mar	N9	NNE7	N8	N10	N9	N11	N10	N10	N8	NNE9	N9	N8	N8	N8	N10	N9	N10	NE7	NNE6	NNE5	NE6	ENE6	ENE5	ESE4	NNE7.5	N11
10-Mar	E4	SE6	SE5	WSW2	ENE2	SE1	S3	SSE6	SSE6	SSW6	SSW8	SSW8	SSW4	WSW4	SW4	W1	WSW2	N5	NNE4	ENE4	E4	ESE3	E3	SE3	SSE1.9	SSW8
11-Mar	SE4	ESE2	ESE3	ENE3	ENE2	NE3	N1	N3	NNW3	ESE4	N8	N9	N11	N12	NNE11	NNE9	N9	N9	N10	NNE8	N8	NNE8	NNE9	NNE8	NNE5.7	N12
12-Mar	NNE7	NNE5	NNE6	NNE5	NNE5	NE2	SE2	SSW1	WNW3	NNW4	NNW5	N6	N6	NNW6	NNW7	NNW6	NNW5	NE5	ENE3	ESE4	E4	SE5	SE4	ESE4	NNE2.8	NNE7
13-Mar	SE4	ESE5	E4	E4	ESE6	ESE4	SE6	SE6	SE6	SE8	SE4	NW3	NE4	E9	ENE10	ENE9	ENE9	NE9	NNE8	NNE8	NE6	NE8	NE9	NNE6	ENE5.0	ENE10
14-Mar	NNE7	NNE7	NNE9	NNE10	NNE8	NNE7	N9	N10	N9	N8	N11	N13	N14	N14	N13	N15	N14	N12	N10	N7	N6	N7	N4	NNW2	N9.2	N15
15-Mar	NNW3	NNW2	N0	ESE1	SE3	SE4	SE3	ESE2	NNE1	N6	N7	N6	NW7	NNW5	NW6	NW5	NW4	N5	NE3	E4	E4	ESE4	ESE5	SE4	NNE1.7	N7
16-Mar	SE5	SE3	SE3	SE4	SE4	SSE5	SE4	SSE6	S5	S8	S8	S8	SSW8	S8	SSE8	SSE9	SSE11	SSE8	SE8	SE10	SE12	SE13	SSE13	SSE11	SSE7.1	SSE13
17-Mar	SSE10	SSE10	SSE8	SSE8	SSE8	S6	S6	S5	SW6	WNW7	NNW10	NNW10	N11	N13	N12	N12	N11	NNE9	NNE6	ENE4	ENE5	ENE5	SSE5	SSE6	NNE1.5	N13
18-Mar	SSE4	S2	SE3	SE4	S1	SSE4	SSE4	SE4	SSW4	W6	WSW8	WSW9	W10	WSW6	SW10	SW8	SW7	WSW6	SW5	ESE2	SE4	SE5	W1	SSE4	SW3.4	W10
19-Mar	E2	ENE2	E2	ENE4	ESE5	ESE4	SE7	SE5	SSE5	SSW7	SSW9	SW9	SSW7	WSW8	WSW7	W8	NNW7	NNE6	NNE8	NE11	NE9	NNE7	NE9	NE7	E1.0	NE11
20-Mar	NNE6	NNE6	NE8	NE6	E3	SSE1	ENE5	ESE3	NE5	NNE6	NE8	NE9	NE8	NE7	N8	N10	NNE9	E8	E6	E5	SE10	SE14	SE15	SE14	ENE5.4	SE15
21-Mar	SE13	SE15	SE15	SE17	SE18	SSE19	SE19	SE18	SSE21	SSE19	SSE17	SSE18	SSE16	S13	SSE14	S12	SSE14	SSE12	SE13	SE15	SE15	SE15	SSE16	SSE16	SSE15.5	SSE21
22-Mar	S11	SSE11	SSE9	SSE9	SSE9	S9	S9	S10	S9	S10	SSW9	SSW8	SSW9	SSW8	SSW10	S8	ESE2	N10	N3	NNE4	E3	NW3	NNW7	NE0	S5.0	S11
23-Mar	NW2	W2	SE1	SSW2	WSW3	SW2	SSW2	WSW4	W3	NW4	WNW5	WNW6	WNW5	NNW6	NW5	N5	WNW2	WNW1	E4	ESE6	ESE8	SE10	SE10	SE10	S0.4	SE10
24-Mar	SE10	SE10	SE9	SE9	SE10	SE11	SSE9	SSE10	SSE9	SSW10	SSW10	SW13	SW13	S9	S9	S8	SW9	W8	WNW8	NNW6	WNW3	NW3	WSW3	SW6	S5.2	SW13
25-Mar	SSW5	SSW7	SSW6	SSW5	SW5	SSW2	ENE2	SE1	W4	WSW7	SW9	SW13	WSW12	WSW12	WNW14	NNW14	N17	N16	N15	N14	N17	N13	N14	N16	NW5.0	N17
26-Mar	N13	N14	N14	N12	N8	NNE6	NNE5	NNE7	N9	N9	N8	N8	NNW7	N9	N8	N8	NNE7	NNE7	NE6	NE6	NE6	NE6	NE6	NE7	N7.7	N14
27-Mar	NE6	NE6	NE7	NE8	NE10	NE10	NE8	NE9	NE12	NE12	NE11	NNE12	NNE12	NNE12	NNE12	NE12	NNE12	NE11	NE8	N6	NNE6	NE7	ENE6	E5	NE8.9	NE12
28-Mar	E7	ESE6	E4	SE4	SE6	SE4	ESE3	ESE1	N3	NNW5	N9	NNW10	NNW12	NNW11	NNW14	NNW13	NNW12	NNW13	N8	NE6	NE6	ENE6	E6	ESE6	NNE4.2	NNW14
29-Mar	SE6	SE5	SE4	SSE4	SE4	SE4	SE4	SSE3	W3	NW5	WNW6	WNW6	WNW7	NW6	WNW6	WSW5	WNW4	NNW4	N4	NE5	E6	ESE8	ESE7	SE6	SE0.4	ESE8
30-Mar	SE5	SSE6	SSE6	SSE5	SSE6	SSE8	SSE7	S5	SW6	SW5	WNW4	NNW4	WNW3	NNW8	NNW4	NNW7	N8	N8	NNW5	ENE3	ESE3	SE9	SE15	SE16	SE1.8	SE16
31-Mar	SE16	SE15	SE13	SE11	SE11	SE9	SE9	SE10	SSE9	S10	S10	S11	SSE12	SSE13	SSE12	SE13	SSE13	SSE13	SSE10	SE10	SE12	SE15	SE14	SE14	SE11.4	SE16
	ESE3.0	ESE2.7	ESE2.7	ESE2.7	ESE2.9	ESE3.1	ESE3.1	SE2.3	SSE0.9	WSW0.7	W1.7	WNW2.5	WNW2.8	WNW2.3	NW3.0	NNW2.7	N2.9	NNE3.5	NE3.3	NE3.6	ENE3.8	E3.6	E3.7	ESE3.5	Diurnal Average	
	SE16	SE15	SE15	NNW18	NNW20	SSE19	SE19	SE18	SSE21	SSE19	SSE17	SSE18	SSE16	NNW15	N16	N16	N17	N16	N15	SE15	N17	SE15	SSE16	N16	Diurnal Maximum	

UO - Unstable Operation

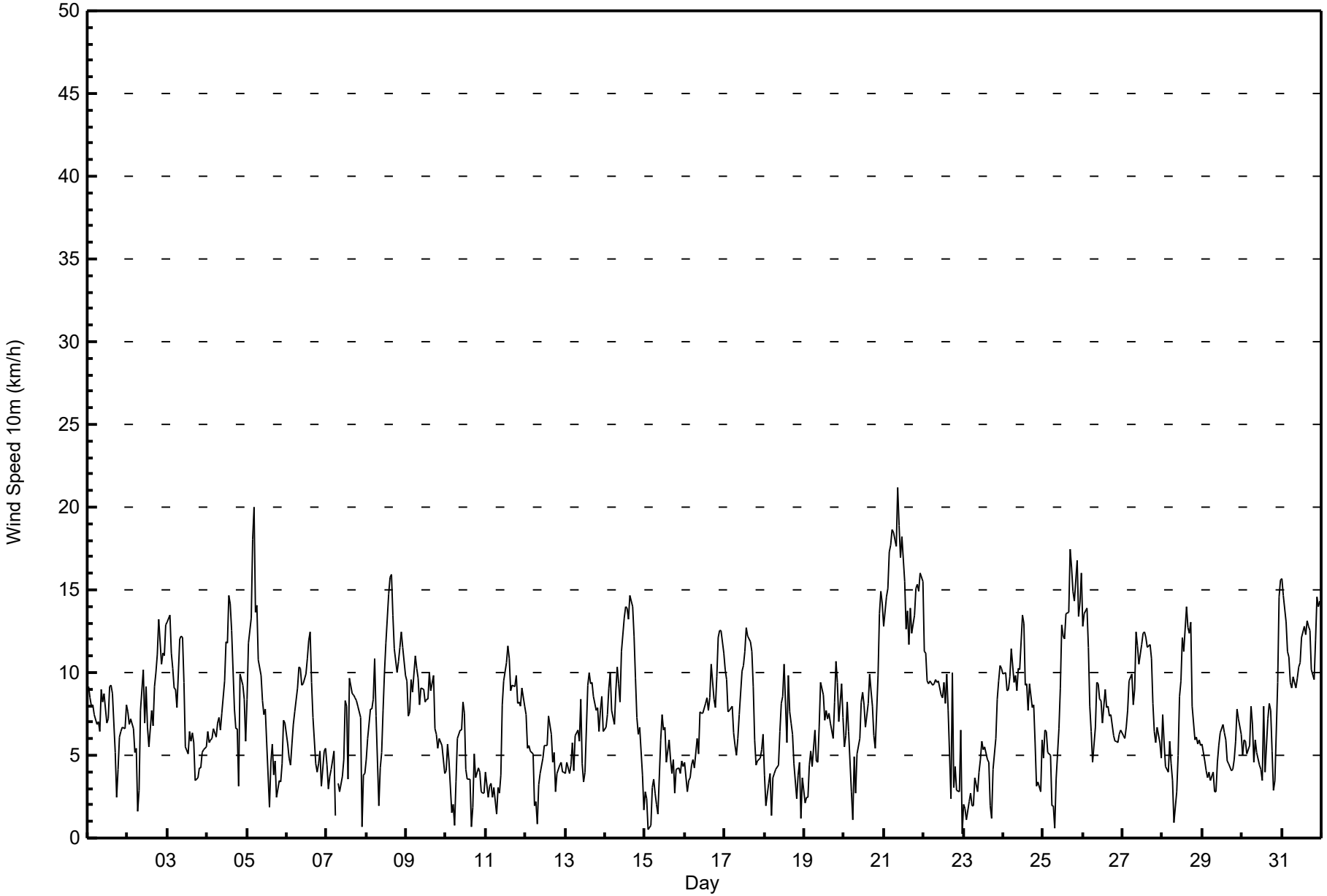
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Wapasu - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	238	32.03	32.03
6 - 11	389	52.36	84.39
12 - 19	114	15.34	99.73
20 - 28	2	0.27	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 743

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Wapasu - March 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	11	13	11	15	16	24	40	19	15	9	7	9	8	14	11	16	238
6 - 11	81	39	39	6	6	7	44	49	31	22	16	10	6	8	5	20	389
12 - 19	36	5	3	0	0	0	26	16	2	2	8	2	0	1	0	13	114
20 - 28	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	2
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	128	57	53	21	22	31	110	85	48	33	31	21	14	23	16	50	743

Total Number of Valid Hours: 743

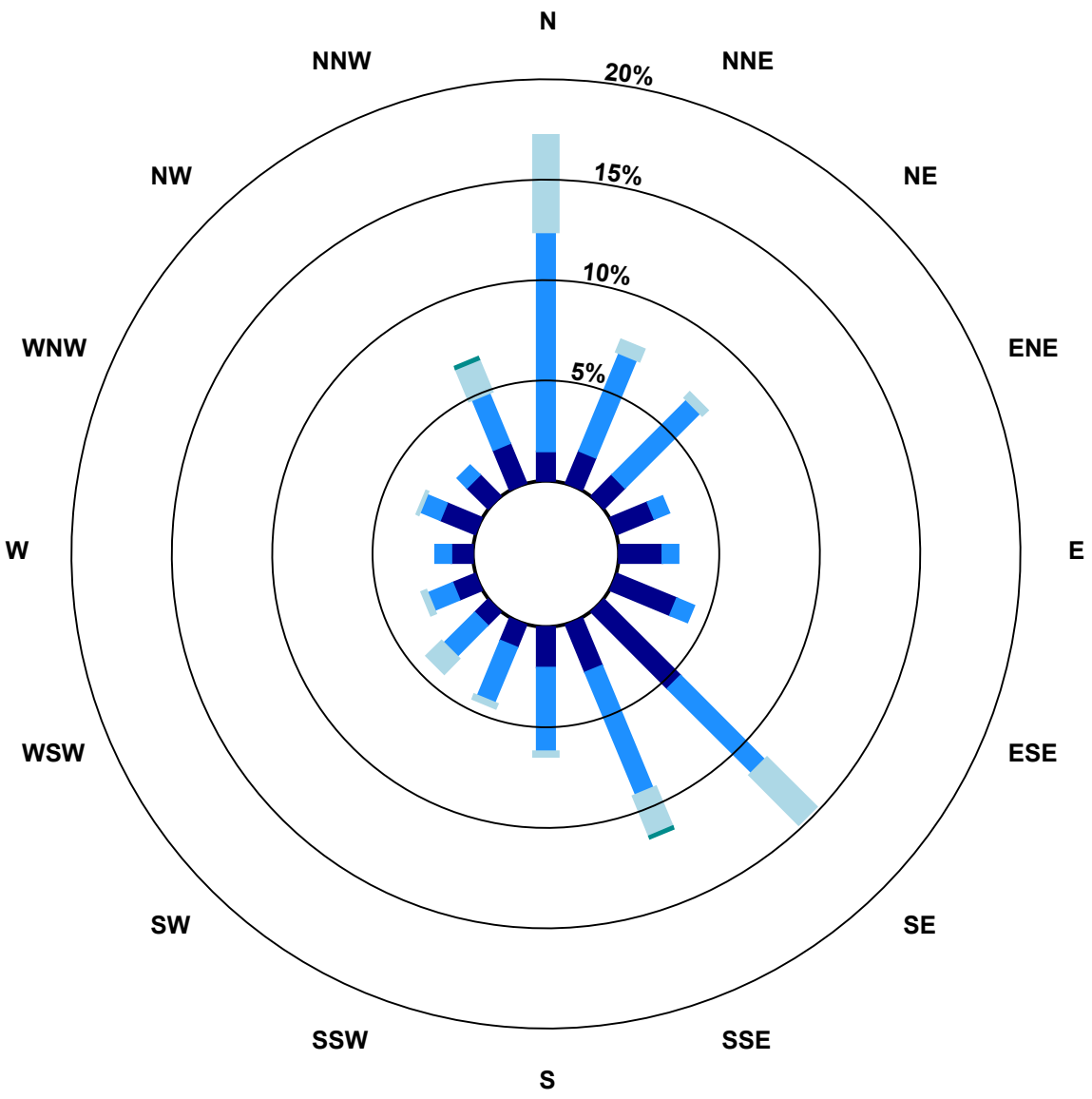
Total Number of Hours: 744

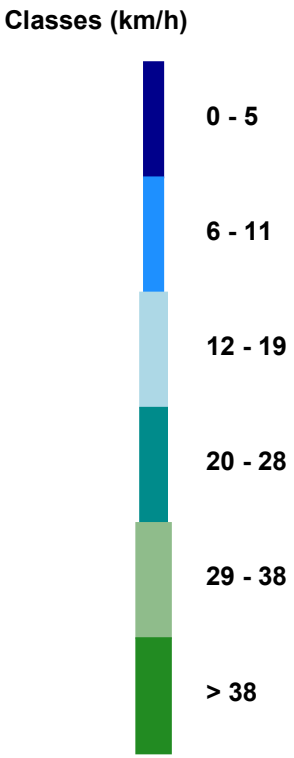
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 10m (WS10) - km/h

Wapasu





Total Number of Valid Hours: 743

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

Maximum Value: 6 km/h on Mar 21 09:00

Minimum Value: 0 km/h on Mar 15 08:00

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

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

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

UO - Unstable Operation

Direction of Maximum Speed: 152 deg on Mar 21 09:00
Direction of Maximum Daily Speed Average: 151.3 deg on Mar 21

Direction of Minimum Speed: 42 deg on Mar 23 00:00

Direction of Minimum Daily Speed Average: 0.4 deg on Mar 23

Monthly Average Direction: 71.6 deg

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	156	156	158	156	153	156	154	161	166	184	187	208	211	241	236	238	237	188	138	146	144	149	158	164	176.7
2-Mar	169	165	173	163	186	150	123	346	347	350	355	351	349	282	290	339	15	27	9	358	357	3	12	2	358.8
3-Mar	5	3	354	358	360	355	350	353	339	344	343	310	273	267	274	272	234	200	170	176	157	163	161	164	335.4
4-Mar	160	167	166	178	178	170	165	168	178	189	207	213	220	224	228	227	216	205	225	266	355	360	353	353	208.8
5-Mar	350	349	349	347	347	345	355	3	356	0	333	339	11	291	228	230	141	143	123	182	167	143	127	144	353.0
6-Mar	140	145	146	124	126	136	143	145	154	169	186	191	202	207	226	223	212	190	161	160	173	188	344	340	175.9
7-Mar	17	15	10	22	55	14	UO	112	297	290	219	227	314	183	353	5	11	33	34	36	48	48	352	45	11.3
8-Mar	65	129	141	141	124	129	140	250	309	297	310	340	335	346	350	351	358	353	8	10	9	3	8	7	5.5
9-Mar	10	17	5	1	11	5	8	6	10	15	3	359	354	352	351	359	351	39	33	30	49	58	63	102	11.6
10-Mar	92	128	136	238	71	129	183	168	166	200	205	200	210	247	227	270	256	10	27	61	88	106	90	131	161.5
11-Mar	124	103	104	78	65	52	355	360	347	110	354	359	5	352	19	32	9	360	7	16	8	18	28	32	18.4
12-Mar	24	15	17	19	26	48	142	204	283	335	334	358	358	347	343	328	345	45	74	109	101	133	138	105	18.7
13-Mar	131	114	93	100	102	108	134	130	129	131	128	312	47	81	71	61	64	47	30	29	55	42	38	24	74.7
14-Mar	17	24	30	32	22	14	356	356	3	4	355	356	356	1	356	350	354	0	356	4	3	1	11	347	3.1
15-Mar	344	345	8	118	133	140	126	116	21	4	356	359	317	342	313	307	318	10	50	96	98	104	107	127	20.3
16-Mar	125	135	141	141	143	151	128	153	180	186	173	185	196	178	155	167	162	161	135	132	137	145	149	156	156.0
17-Mar	156	160	166	168	168	169	169	186	227	302	336	348	356	1	356	357	2	19	21	65	73	63	150	147	32.7
18-Mar	149	187	141	138	172	152	147	146	206	259	256	255	274	243	235	222	222	238	218	121	136	145	261	155	214.0
19-Mar	101	72	88	76	103	116	142	142	166	203	201	222	205	238	252	268	340	32	31	41	37	32	38	34	79.8
20-Mar	28	29	47	51	83	157	77	119	56	30	43	54	56	52	4	10	30	82	84	96	124	136	133	137	72.9
21-Mar	142	143	142	144	144	147	145	144	152	154	159	156	164	184	158	169	159	160	144	140	141	145	151	157	151.3
22-Mar	170	164	164	164	165	171	172	169	180	190	202	194	199	200	205	178	120	359	360	15	87	317	346	42	178.6
23-Mar	314	262	141	196	239	224	212	245	279	304	301	289	293	336	311	7	298	301	85	105	120	128	128	129	172.1
24-Mar	136	133	133	133	136	143	151	149	161	195	204	234	232	191	173	189	236	278	297	327	302	314	257	224	186.4
25-Mar	211	213	208	196	226	208	77	134	259	242	236	233	248	253	300	336	357	3	3	7	4	7	3	356	320.9
26-Mar	356	356	352	355	3	24	20	19	6	8	356	356	346	360	4	8	19	31	39	34	38	48	47	54	10.6
27-Mar	54	45	49	49	52	52	43	46	49	46	41	31	20	25	24	38	29	37	39	9	25	44	58	79	39.4
28-Mar	101	106	99	125	144	136	107	107	349	341	357	346	329	346	337	344	343	348	6	38	53	67	91	108	16.0
29-Mar	128	133	133	157	146	130	133	168	266	325	301	284	288	312	298	246	296	339	2	55	92	107	117	128	129.7
30-Mar	132	153	151	149	148	149	151	191	215	233	289	327	286	347	336	336	350	2	336	68	106	125	135	132	134.6
31-Mar	134	136	133	135	135	133	141	146	150	174	189	189	156	148	150	146	151	152	147	132	137	139	137	136	145.8
	104.3	110.0	107.4	104.9	110.9	121.0	123.6	127.3	151.8	248.6	278.1	284.3	293.5	300.2	309.5	328.7	355.3	22.2	35.4	54.5	71.5	84.7	87.6	105.1	
	Diurnal Average																								

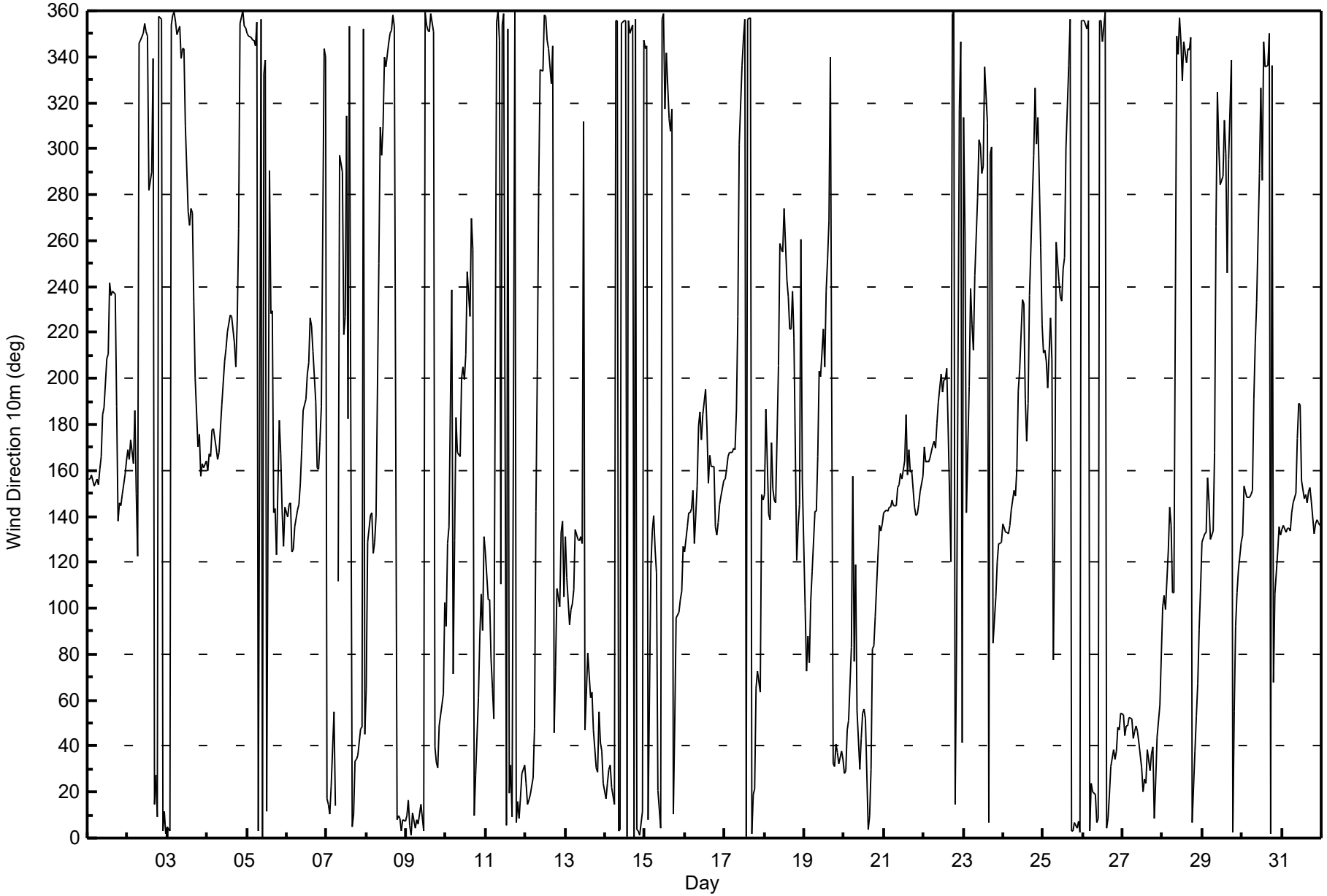
UO - Unstable Operation
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Wapasu - March 2025



Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 105 deg on Mar 10 16:00

Minimum Value: 0 deg on Mar 1 02:00

Percentiles: P_1 = 5 P_{10} = 15 Q_1 = 20 Median = 26 Q_3 = 32 P_{90} = 50 P_{99} = 82

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	10	0	0	1	1	5	4	14	20	28	28	26	26	20	19	23	31	28	13	8	5	10	15	20	31
2-Mar	23	19	22	24	29	22	80	52	23	18	21	20	28	64	28	39	31	28	28	26	24	28	29	26	80
3-Mar	28	27	24	23	26	22	20	20	17	18	21	40	46	46	40	32	22	34	18	17	9	11	9	10	46
4-Mar	11	12	13	16	17	11	10	13	23	29	22	23	19	18	18	18	24	21	34	60	25	25	22	21	60
5-Mar	19	21	22	20	20	20	24	27	24	27	30	37	42	97	61	31	33	20	40	23	16	13	19	17	97
6-Mar	16	16	29	13	16	15	14	18	22	28	32	29	30	29	24	28	29	30	30	20	32	50	26	24	50
7-Mar	39	37	33	37	16	68	UO	29	42	61	50	31	52	70	27	25	31	27	27	27	30	103	37	22	103
8-Mar	21	24	19	20	21	18	40	68	22	26	24	23	18	20	20	23	25	21	28	30	31	27	29	28	68
9-Mar	31	31	29	26	29	28	30	29	30	33	26	31	30	32	30	28	21	30	28	26	22	24	24	24	33
10-Mar	25	19	21	55	39	63	45	24	28	35	32	38	79	68	69	105	81	29	18	14	18	24	25	15	105
11-Mar	15	41	22	19	30	15	65	31	40	53	19	22	25	22	27	28	29	23	26	29	27	28	28	28	65
12-Mar	31	32	30	29	27	52	37	74	41	48	36	36	41	44	38	45	44	27	33	15	20	15	13	24	74
13-Mar	26	31	14	14	9	30	14	17	23	26	53	84	71	32	27	26	26	26	30	27	28	25	25	28	84
14-Mar	29	29	28	28	31	30	22	22	25	25	23	22	24	26	27	21	24	26	24	28	26	26	29	20	31
15-Mar	24	15	52	48	12	19	40	21	69	27	28	34	40	58	45	54	68	32	50	13	18	18	16	18	69
16-Mar	20	23	21	25	18	27	47	19	34	29	33	40	35	38	38	34	29	24	19	19	18	20	19	21	47
17-Mar	20	21	26	25	23	27	23	28	29	35	21	21	26	26	25	24	28	31	26	20	7	17	6	7	35
18-Mar	20	62	18	22	75	9	10	25	31	33	32	36	34	60	27	31	38	39	23	36	9	15	76	35	76
19-Mar	54	52	56	17	9	25	11	22	29	28	30	33	39	43	39	34	41	27	28	25	26	25	26	27	56
20-Mar	28	25	22	20	61	60	19	41	38	52	38	37	44	47	51	30	34	28	16	12	17	18	18	17	61
21-Mar	16	17	18	19	18	18	19	19	21	23	23	24	29	30	24	31	23	25	18	17	18	17	19	19	31
22-Mar	27	22	27	23	24	26	24	26	28	29	31	31	29	33	28	35	82	30	51	32	37	72	24	87	87
23-Mar	29	37	83	51	31	44	62	28	40	48	55	45	56	56	65	59	88	80	22	15	15	16	17	16	88
24-Mar	17	15	14	14	16	16	26	18	27	29	28	20	22	33	26	30	24	29	32	23	29	23	30	15	33
25-Mar	23	24	23	31	32	46	61	88	62	42	25	18	26	31	33	27	25	29	28	30	28	29	28	25	88
26-Mar	24	24	19	24	28	28	29	30	25	36	40	29	46	30	30	29	33	29	28	24	24	21	25	21	46
27-Mar	22	24	23	22	24	21	24	26	25	29	32	36	36	32	34	34	31	30	26	30	24	23	17	16	36
28-Mar	14	14	16	21	7	9	15	78	67	46	33	34	31	29	21	25	24	20	29	22	15	15	12	24	78
29-Mar	13	13	12	24	9	17	7	35	55	42	49	55	45	69	58	62	64	51	30	16	20	16	18	17	69
30-Mar	15	9	8	7	5	5	8	24	24	32	60	73	77	37	72	60	35	28	21	38	34	17	20	19	77
31-Mar	20	19	17	20	18	18	19	19	22	29	34	34	29	28	27	28	26	23	19	17	17	18	19	19	34
	54	62	83	55	75	68	80	88	69	61	60	84	79	97	72	105	88	80	51	60	37	103	76	87	
	Diurnal Maximum																								

UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS18
STONY MOUNTAIN
MARCH 2025

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

April 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - STONY MOUNTAIN (AMS18)
MARCH 2025

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

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 30-Min Value	30-Min Exceedances	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2(ppb) Average	707	37	37	100	-	-	4.1	0	0.8	0
TRS(ppb) Average	706	38	38	100	0.8	0	0.7	-	0.5	-
THC(ppm) Average	647	39	97	92.2	-	-	2.2	-	2	-
NMHC(ppm) Average	647	39	97	92.2	-	-	0.102	-	0.019	-
CH4(ppm) Average	647	39	97	92.2	-	-	2.1	-	2	-
O3 (ppb) Average	709	35	35	100	-	-	48.1	0	43.3	-
NO2 (ppb) Average	706	38	38	100	-	-	5.2	0	1.8	-
NO (ppb) Average	706	38	38	100	-	-	1.9	-	1.1	-
NOX (ppb) Average	706	38	38	100	-	-	5.3	-	2.3	-
PM2.5 (ug/m3) Average	743	1	1	100	-	-	6.3	0	4.1	0
CO(ppm) Average	709	35	35	100	-	-	0.2	0	0.2	0
CO2(ppm) Average	707	37	37	100	-	-	458.1	-	449.7	-
Temperature 2 m (C) Average	744	0	0	100	-	-	10.7	-	4.1	-
Relative Humidity (%) Average	744	0	0	100	-	-	90.5	-	83.2	-
Wind Speed 10 m (km/h) Average	744	0	0	100	-	-	19	-	11	-
Wind Speed 20 m (km/h) Average	744	0	0	100	-	-	26	-	16	-
Wind Direction 10 m (deg) Average	744	0	0	100	-	-	-	-	0	-
Wind Direction 20 m (deg) Average	744	0	0	100	-	-	-	-	0	-
Precipitation (mm) Total	744	0	0	100	-	-	7.1	-	13.1	-
Leaf Wetness (% of range) Average	744	0	0	100	-	-	15	-	4.1	-
Global Solar Radiation (W/m2) Average	744	0	0	100	-	-	756.5	-	236.3	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - STONY MOUNTAIN (AMS18)
MARCH 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	707	0.34	0.5	-	0	0	0.1	0.2	0.4	0.9	4.1
TRS (ppb) Average	706	0.46	0.1	-	0.3	0.4	0.4	0.5	0.5	0.5	0.7
THC (ppm) Average	647	2	0	-	1.9	2	2	2	2	2	2.2
NMHC(ppm) Average	647	0.003	0.01	-	0	0	0	0	0	0	0.102
CH4(ppm) Average	647	2	0	-	1.9	2	2	2	2	2	2.1
O3 (ppb) Average	709	38.76	4.4	-	26	32.7	36.4	39.3	41.6	44.1	48.1
NO2 (ppb) Average	706	0.84	0.8	-	0	0	0.3	0.7	1.2	1.8	5.2
NO (ppb) Average	706	0.26	0.4	-	0	0	0	0	0.4	0.9	1.9
NOX (ppb) Average	706	1.1	0.9	-	0	0	0.4	1	1.6	2.3	5.3
PM2.5 (ug/m3) Average	743	1.89	1.1	-	0.2	0.7	1.1	1.6	2.5	3.5	6.3
CO(ppm) Average	709	0.18	0	-	0.1	0.2	0.2	0.2	0.2	0.2	0.2
CO2(ppm) Average	707	446.14	3	-	437.9	442.5	444.6	446.1	448	449.5	458.1
Temperature 2 m (C) Average	744	-5.27	7.6	-	-22.2	-16	-11.3	-4.8	0.5	4.8	10.7
Relative Humidity (%) Average	744	63.65	15.7	-	25.3	40.6	51.6	65.3	77.4	82.6	90.5
Wind Speed 10 m (km/h) Average	744	7.4	3	-	0	4	6	7	9	11	19
Wind Speed 20 m (km/h) Average	744	10.8	4	-	1	6	8	11	13	15	26
Wind Direction 10 m (deg) Average	744	-	-	-	-	-	-	-	-	-	-
Wind Direction 20 m (deg) Average	744	-	-	-	-	-	-	-	-	-	-
Precipitation (mm) Total	744	-	-	46.72	-	-	-	-	-	-	-
Surface Wetness (% of range) Average	744	1.93	1	-	0.5	1.1	1.5	1.7	2.1	2.8	15
Global Solar Radiation (W/m2) Average	744	124.77	185.8	-	0	0	0.1	4.4	207.6	445	756.5

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - STONY MOUNTAIN (AMS18)
MARCH 2025

MONTHLY SUMMARY

Parameter	Period Start	Period End	Duration (Hours)	Notes
THC/NMHC/CH4	10 Mar 2025 04:00	12 Mar 2025 11:00	56	Unstable Operations - excessive baseline drift
THC/NMHC/CH4	18 Mar 2025 12:00	18 Mar 2025 13:00	2	Maintenance - analyzer replaced

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Stony Mountain - March 2025

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

Maximum Value: 4.1 ppb on Mar 14 22:00 Maximum Daily Average: 0.8 ppb on Mar 14

Minimum Value: 0.0 ppb on Mar 3 21:00 Minimum Daily Average: 0.0 ppb on Mar 6

Maximum Diurnal Average: 0.5 ppb at hour 10 Minimum Diurnal Average: 0.2 ppb at hour 2

Monthly Average: 0.34 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.2 Q_3 = 0.4 P_{90} = 0.9 P_{99} = 2.1

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.2	0.2	0.3	0.3	0.2	Z	0.2	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.4	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.5
2-Mar	Z	0.4	0.3	0.3	0.4	0.5	0.6	0.7	0.5	0.3	0.4	0.3	0.3	0.3	0.3	0.5	0.6	0.2	0.2	0.1	0.1	0.1	0.4	0.1	0.3	0.7
3-Mar	0.3	Z	2.0	1.2	1.7	0.9	0.8	0.5	0.7	1.3	1.6	1.4	1.2	1.0	1.1	0.8	0.4	0.6	0.4	0.2	0.0	0.0	0.0	0.0	0.8	2.0
4-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.7	0.4	0.6	2.1	2.1	1.2	1.0	0.7	0.8	1.1	1.0	0.5	2.1
5-Mar	0.8	0.7	0.7	Z	3.3	2.2	2.0	1.9	1.1	0.9	0.7	0.6	0.6	1.4	1.0	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	3.3
6-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
7-Mar	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	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1
8-Mar	Z	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.2	0.1	0.1	0.1	0.1	0.2	0.4	1.1	1.8	1.2	0.6	0.5	0.3	1.8
9-Mar	0.9	Z	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.9
10-Mar	0.1	0.1	Z	0.1	0.1	0.0	0.1	0.4	1.4	3.3	0.3	0.4	0.6	0.3	0.1	0.6	0.9	1.2	1.7	1.2	0.6	0.4	0.2	0.2	0.6	3.3
11-Mar	0.2	0.1	0.1	Z	0.0	0.1	0.0	0.0	0.0	0.1	0.3	0.5	0.7	0.8	0.8	0.5	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.8
12-Mar	0.0	0.1	0.1	0.2	Z	0.3	0.2	0.4	0.3	0.2	0.2	C	C	C	C	C	C	0.8	0.8	0.4	0.2	0.1	0.1	0.2	--	0.8
13-Mar	0.2	0.2	0.1	0.2	0.1	Z	0.1	0.0	0.1	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	0.1	0.2
14-Mar	Z	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.5	0.4	0.4	0.7	0.9	1.0	1.2	0.8	0.6	0.8	3.0	4.1	3.1	1.4	0.8	4.1
15-Mar	0.9	Z	1.0	0.6	0.4	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.4	0.9	1.1	1.1	1.1	1.2	0.9	1.1	0.6	1.2
16-Mar	1.1	0.7	Z	0.8	0.7	0.7	0.6	0.6	1.1	0.8	1.2	0.5	0.6	0.7	0.5	0.2	0.1	0.1	0.1	0.1	0.4	0.6	0.5	0.3	0.6	1.2
17-Mar	0.3	0.3	0.5	Z	0.3	0.1	0.3	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.2	0.3	0.8	1.4	1.6	0.3	1.6
18-Mar	0.9	0.6	0.4	0.4	Z	0.7	0.4	0.4	1.6	2.5	1.2	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.5	2.5
19-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
20-Mar	Z	0.1	0.4	0.3	0.1	0.0	0.0	0.0	0.1	0.3	0.4	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.4
21-Mar	1.2	Z	0.5	0.0	0.0	0.4	0.6	0.7	0.4	0.6	0.9	1.2	1.8	1.0	0.4	0.4	0.3	0.4	0.6	0.7	0.6	0.7	0.3	0.3	0.6	1.8
22-Mar	0.4	0.5	Z	0.4	0.3	0.3	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	0.0	0.1	0.1	0.0	0.2	0.5
23-Mar	0.0	0.0	0.2	Z	0.1	0.0	0.1	0.0	0.1	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
24-Mar	0.1	0.2	0.1	0.1	Z	0.2	0.5	0.3	0.2	0.3	0.4	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.0	0.2	0.1	0.2	0.5
25-Mar	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	0.2	0.2	0.1	0.0	0.2	0.3	0.2	0.1	0.2	0.5	0.5	0.2	0.5
26-Mar	Z	0.4	0.3	0.3	0.2	0.4	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.2	0.2	0.4
27-Mar	0.1	Z	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.3
28-Mar	0.1	0.2	Z	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.8	1.3	1.1	1.0	0.8	0.6	0.7	0.6	0.4	0.3	0.1	0.2	0.4	1.3
29-Mar	0.1	0.2	0.2	Z	0.2	0.2	0.3	1.1	1.0	1.0	0.9	1.0	0.7	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.1
30-Mar	0.0	0.0	0.0	0.0	Z	0.4	0.6	0.8	0.7	1.0	0.6	0.5	1.3	1.9	0.8	1.0	1.3	0.2	0.1	0.0	0.1	0.2	0.1	0.1	0.5	1.9
31-Mar	0.1	0.2	0.3	0.0	0.0	Z	0.1	0.1	0.3	0.4	0.3	0.1	0.1	0.1	0.2	0.2	0.2	0.4	0.9	0.4	0.6	0.6	0.5	0.6	0.3	0.9
	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.4	0.5	0.4	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	Diurnal Average	
	1.2	0.7	2.0	1.2	3.3	2.2	2.0	1.9	1.6	3.3	1.6	1.4	1.8	1.9	1.1	1.0	2.1	2.1	1.7	1.2	3.0	4.1	3.1	1.6	Diurnal Maximum	

Z - zerospan C - Calibration

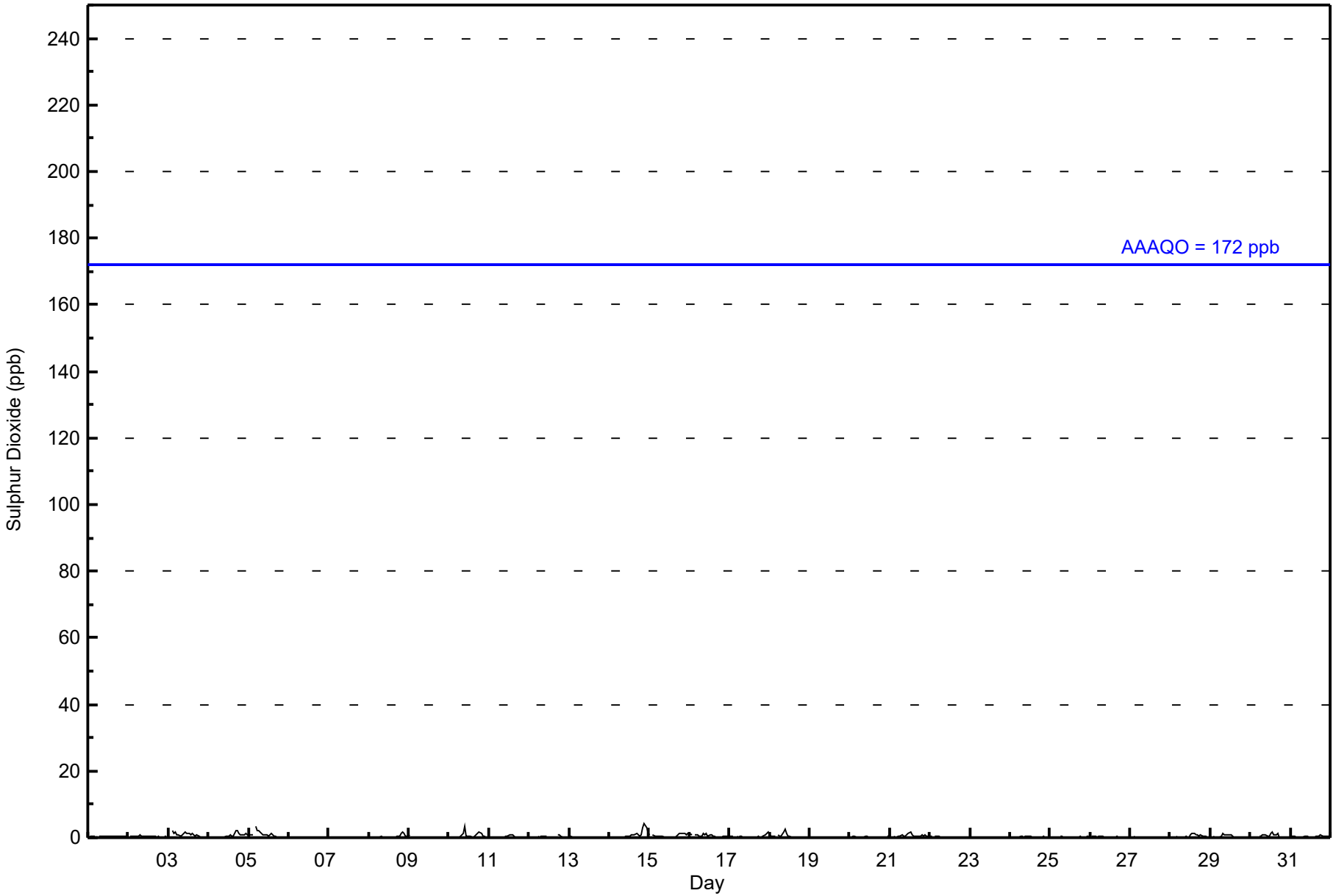
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Stony Mountain - March 2025



Sulphur Dioxide (SO_2) - ppb
Stony Mountain - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	707	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: 707

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Stony Mountain - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	25	28	76	84	16	7	27	35	28	41	64	55	99	45	40	37	707
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	25	28	76	84	16	7	27	35	28	41	64	55	99	45	40	37	707

Total Number of Valid Hours: 707

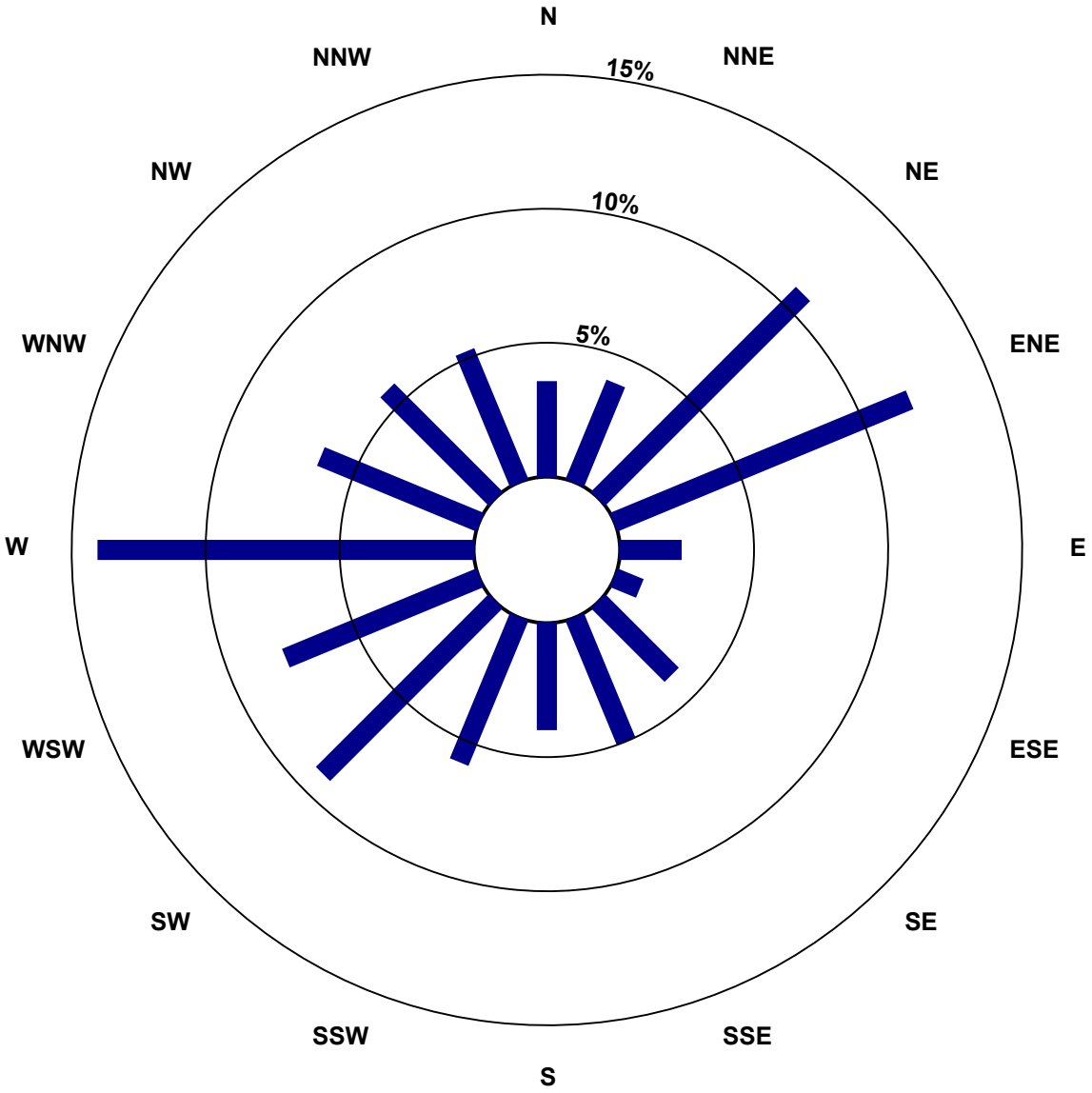
Total Number of Hours: 744

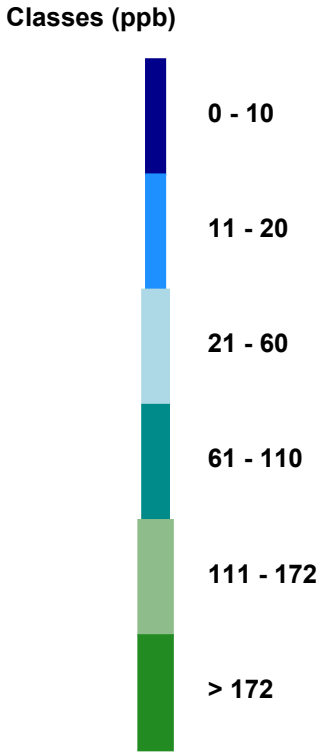
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Sulphur Dioxide (SO_2) - ppb

Stony Mountain





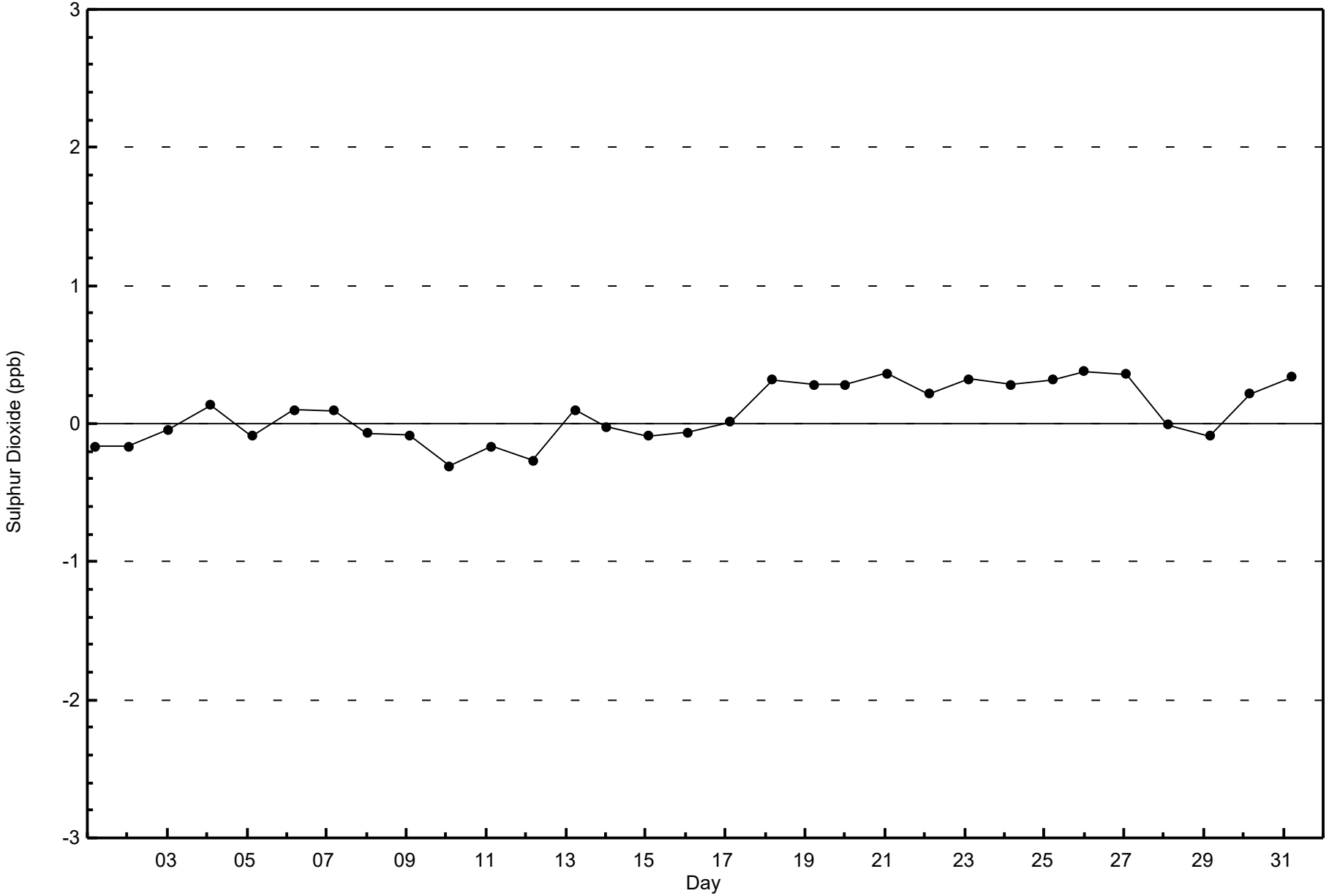
Total Number of Valid Hours: 707

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Stony Mountain - March 2025

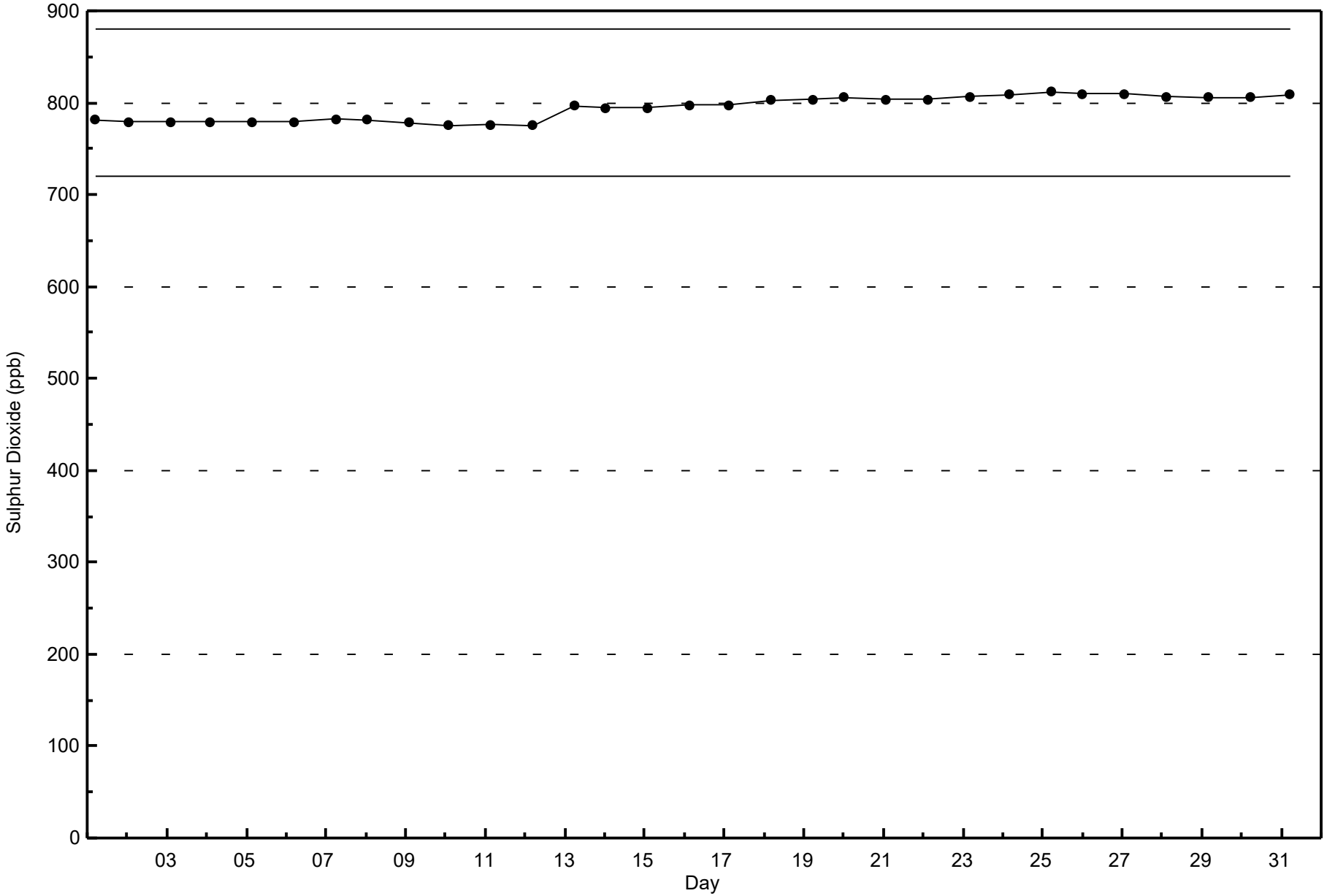


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Stony Mountain - March 2025



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Stony Mountain - March 2025

Number of Exceedences (AAAQG): 30-Min: 0

Maximum Value: 0.8 ppb on Mar 27 12:00

Maximum Daily Average: 0.5 ppb on Mar 23

Minimum Value: 0.3 ppb on Mar 10 02:00

Minimum Daily Average: 0.4 ppb on Mar 10

Maximum Diurnal Average: 0.5 ppb at hour 2

Minimum Diurnal Average: 0.5 ppb at hour 11

Monthly Average: 0.46 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

Periods in Service:	1488
Periods of Valid Data:	1414
Periods of Invalid Data:	74
Periods of Calibration:	74
Percent Operational Time:	100.0

Day	Period Ending At (MST) 00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00	Daily Average	Daily Maximum
1-Mar	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	0.6
	SP	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		
2-Mar	0.5	Z	0.5	0.5	0.6	0.6	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6
	0.6	SP	0.5	0.6	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4		
3-Mar	0.5	0.6	Z	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.4	0.4	0.5	0.6
	0.4	0.6	SP	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.4	0.5	0.5	0.4	0.4	0.5		
4-Mar	0.5	0.4	0.5	Z	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.5	0.4	0.4	0.5
	0.4	0.5	0.5	SP	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.4		
5-Mar	0.4	0.5	0.4	0.4	Z	0.6	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	0.6
	0.5	0.4	0.4	0.5	SP	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		
6-Mar	0.4	0.4	0.4	0.4	0.4	Z	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
	0.4	0.4	0.4	0.4	0.5	SP	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	0.4	0.4	0.4	0.4		
7-Mar	Z	0.5	0.4	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.4	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.6
	SP	0.4	0.5	0.4	0.4	0.6	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	0.4	0.5		
8-Mar	0.5	Z	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	0.4	0.4	0.5	0.5	0.5	0.7	0.5	0.5	0.5	0.5	0.7
	0.5	SP	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	0.7	0.6	0.5	0.5	0.5		
9-Mar	0.5	0.4	Z	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	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	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	0.3		
10-Mar	0.4	0.3	0.4	Z	0.4	0.3	0.4	0.3	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
	0.4	0.3	0.4	SP	0.3	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	0.4	0.4	0.4	0.4		
11-Mar	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	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
	0.5	0.4	0.4	0.5	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		
12-Mar	0.4	0.4	0.4	0.4	0.4	Z	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	0.5	0.4	0.5	0.4	0.4	0.5	0.8
	0.4	0.5	0.4	0.4	0.5	SP	0.4	0.4	0.4	0.4	0.4	0.5	0.8	0.5	0.5	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.5	0.4		
13-Mar	Z	0.4	0.5	0.5	0.4	0.4	0.5	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	0.4	0.5
	SP	0.5	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4		
14-Mar	0.4	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	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.6	0.6	0.5	0.6
	0.5	SP	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	0.5	0.5	0.4	0.5	0.5	0.5	0.6	0.6	0.5		
15-Mar	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	0.4	0.5	0.5	0.4	0.4	0.5
	0.5	0.5	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	0.5	0.4	0.5	0.4	0.4	0.4		

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Stony Mountain - March 2025

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

Z - zerospan C - Calibration SP - Span

Alberta Ambient Air Quality Guideline (AAAQG): 30-Min: 5 ppb

Wood Buffalo Environmental Association

Summary of Hour Averages

Total Reduced Sulphur (TRS) - ppb

Stony Mountain - March 2025

Maximum Value: 0.7 ppb on Mar 27 13:00

Maximum Daily Average: 0.5 ppb on Mar 23

Minimum Value: 0.3 ppb on Mar 10 02:00

Minimum Daily Average: 0.4 ppb on Mar 10

Maximum Diurnal Average: 0.5 ppb at hour 2

Minimum Diurnal Average: 0.5 ppb at hour 11

Monthly Average: 0.46 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 in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	38
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	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
2-Mar	0.5	Z	0.5	0.6	0.6	0.6	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.6
3-Mar	0.5	0.6	Z	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.6
4-Mar	0.4	0.5	0.5	Z	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	0.5	0.4	0.4	0.4	0.5	0.4	0.4	0.5
5-Mar	0.5	0.5	0.4	0.5	Z	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	0.5
6-Mar	0.4	0.4	0.4	0.4	0.5	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
7-Mar	Z	0.4	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
8-Mar	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	0.5	0.5	0.4	0.4	0.4	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.6
9-Mar	0.5	0.5	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	0.5
10-Mar	0.4	0.3	0.4	Z	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
11-Mar	0.5	0.4	0.4	0.5	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
12-Mar	0.4	0.4	0.4	0.4	0.5	Z	0.5	0.4	0.4	0.4	0.4	0.4	0.6	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.4	0.5	0.4	0.4	0.5	0.6
13-Mar	Z	0.4	0.5	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
14-Mar	0.5	Z	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.6
15-Mar	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	0.4	0.4	0.4	0.4	0.5
16-Mar	0.5	0.4	0.5	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
17-Mar	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	0.6	0.6	0.4	0.6
18-Mar	0.5	0.5	0.5	0.5	0.5	Z	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6
19-Mar	Z	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.5	0.5
20-Mar	0.5	Z	0.5	0.5	0.5	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	0.5	0.4	0.4	0.4	0.4	0.5
21-Mar	0.4	0.5	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
22-Mar	0.5	0.5	0.6	Z	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	0.6	0.5	0.5	0.5	0.5	0.6
23-Mar	0.6	0.6	0.6	0.6	Z	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	0.6	0.5	0.5	0.5	0.6
24-Mar	0.5	0.6	0.6	0.6	0.6	Z	0.6	0.6	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6
25-Mar	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	C	C	C	C	C	C	C	0.4	0.4	0.4	0.4	0.4	0.5	0.5	--	0.5
26-Mar	0.6	Z	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	0.5	0.5	0.5	0.5	0.5	0.5	0.6
27-Mar	0.5	0.5	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	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
28-Mar	0.5	0.5	0.5	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.5
29-Mar	0.4	0.5	0.4	0.5	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
30-Mar	0.4	0.4	0.4	0.4	0.5	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	0.5	0.5	0.5	0.5	0.5	0.5
31-Mar	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	0.4	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5
	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	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	
	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	Diurnal Maximum	

Z - zerospan C - Calibration

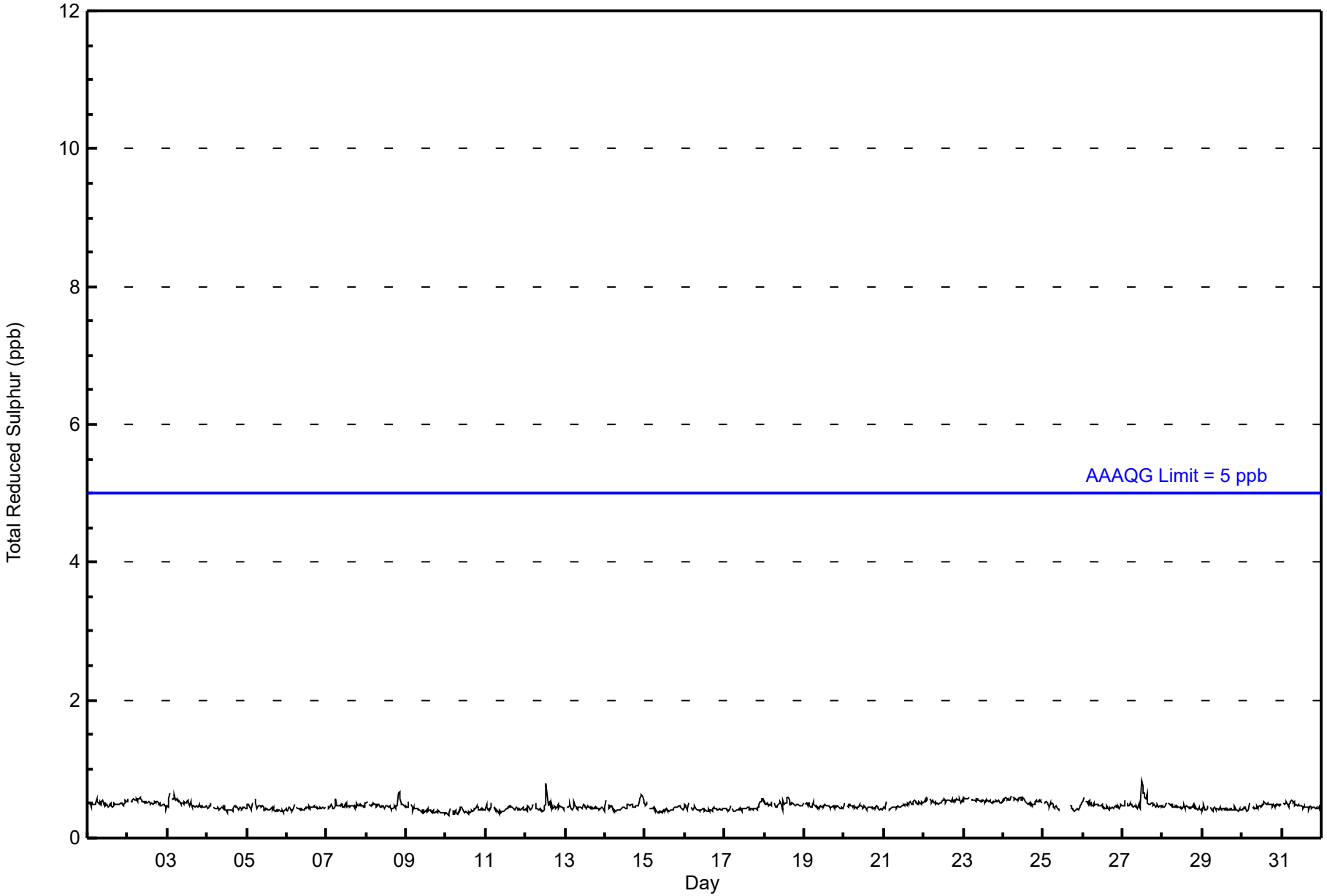
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Stony Mountain - March 2025



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

Total Number of Valid Hours: 706

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Stony Mountain - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	23	33	76	85	17	7	28	36	29	38	64	53	96	44	39	38	706
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	23	33	76	85	17	7	28	36	29	38	64	53	96	44	39	38	706

Total Number of Valid Hours: 706

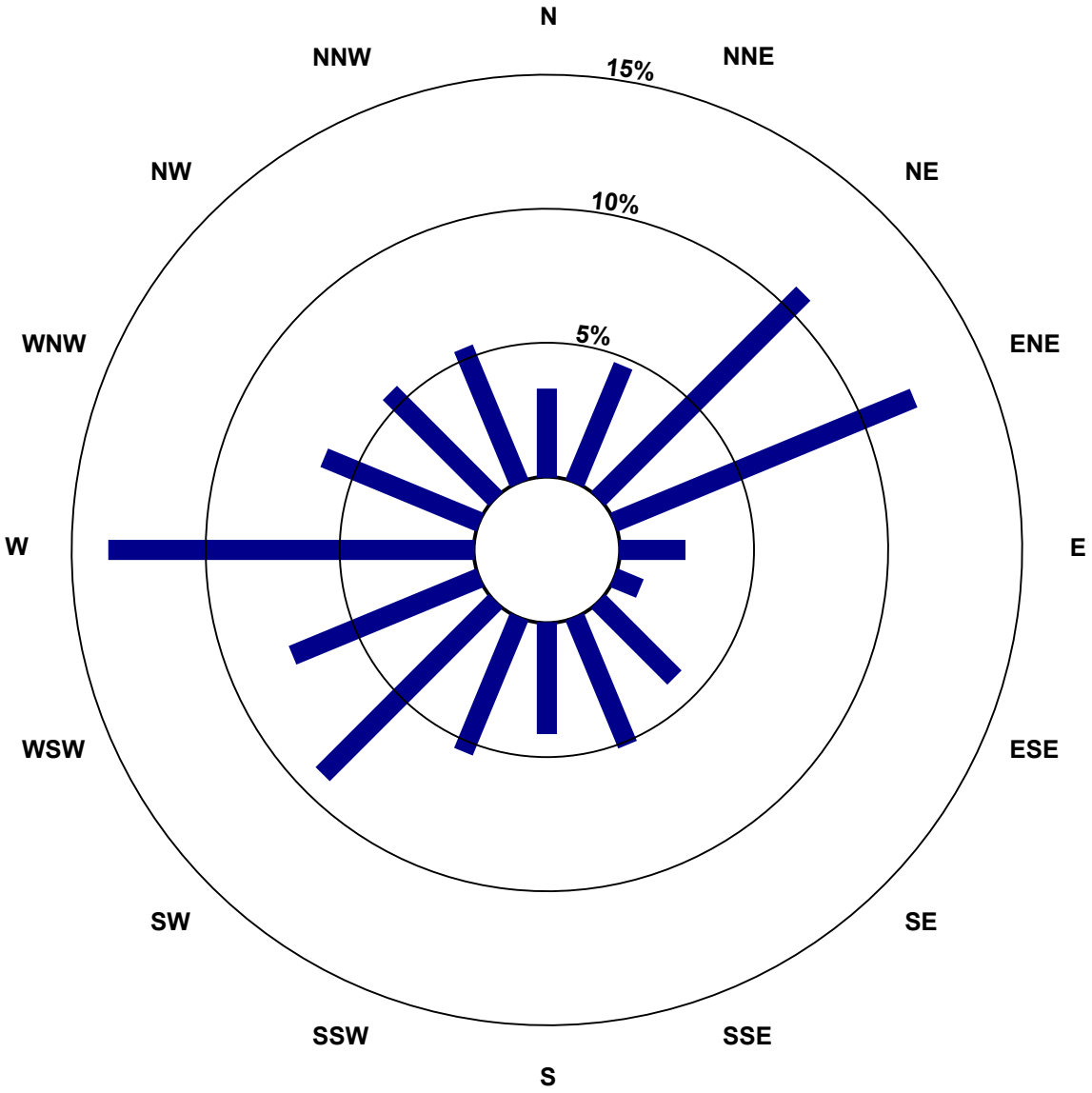
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Total Reduced Sulphur (TRS) - ppb

Stony Mountain



Classes (ppb)

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

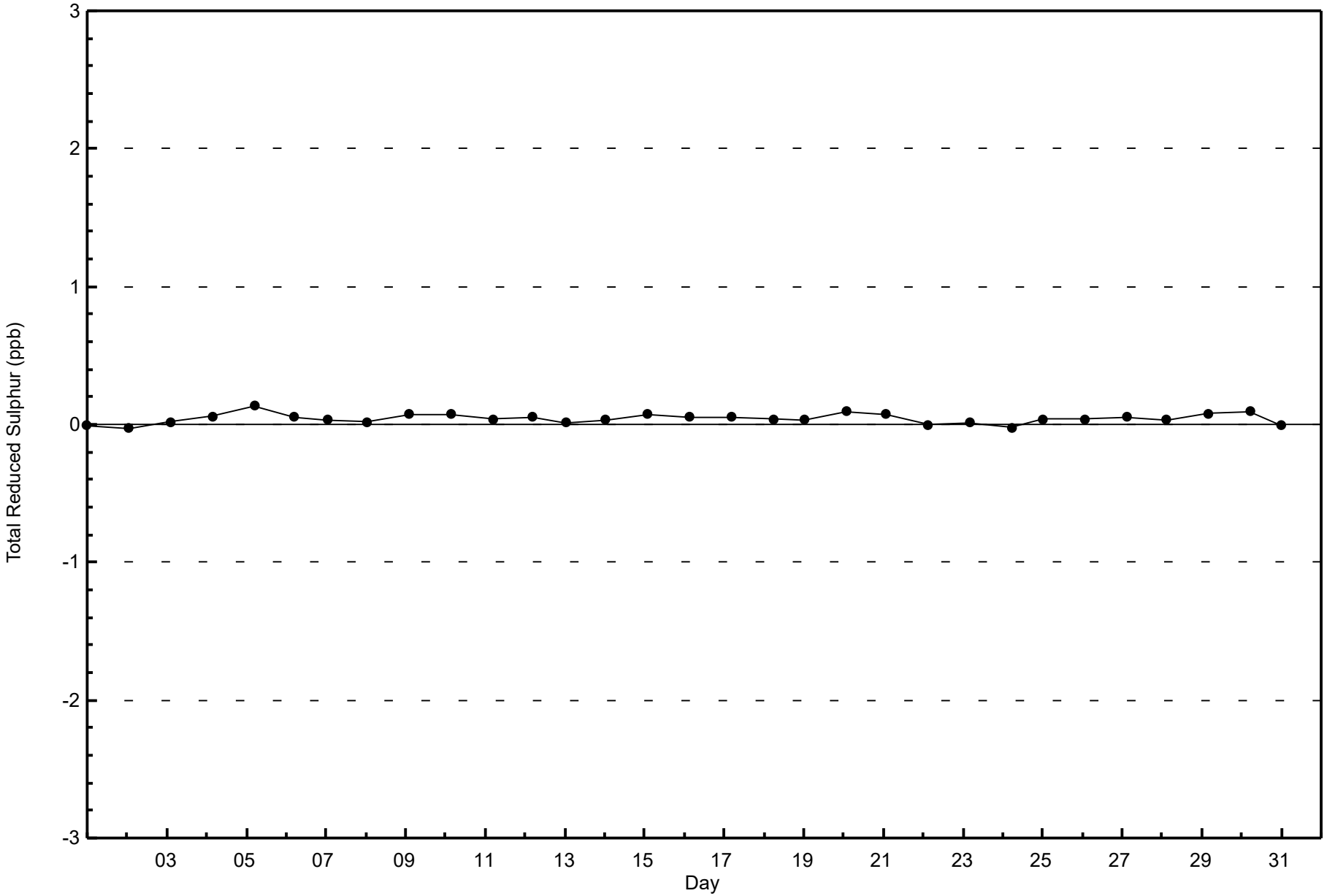
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Stony Mountain - March 2025

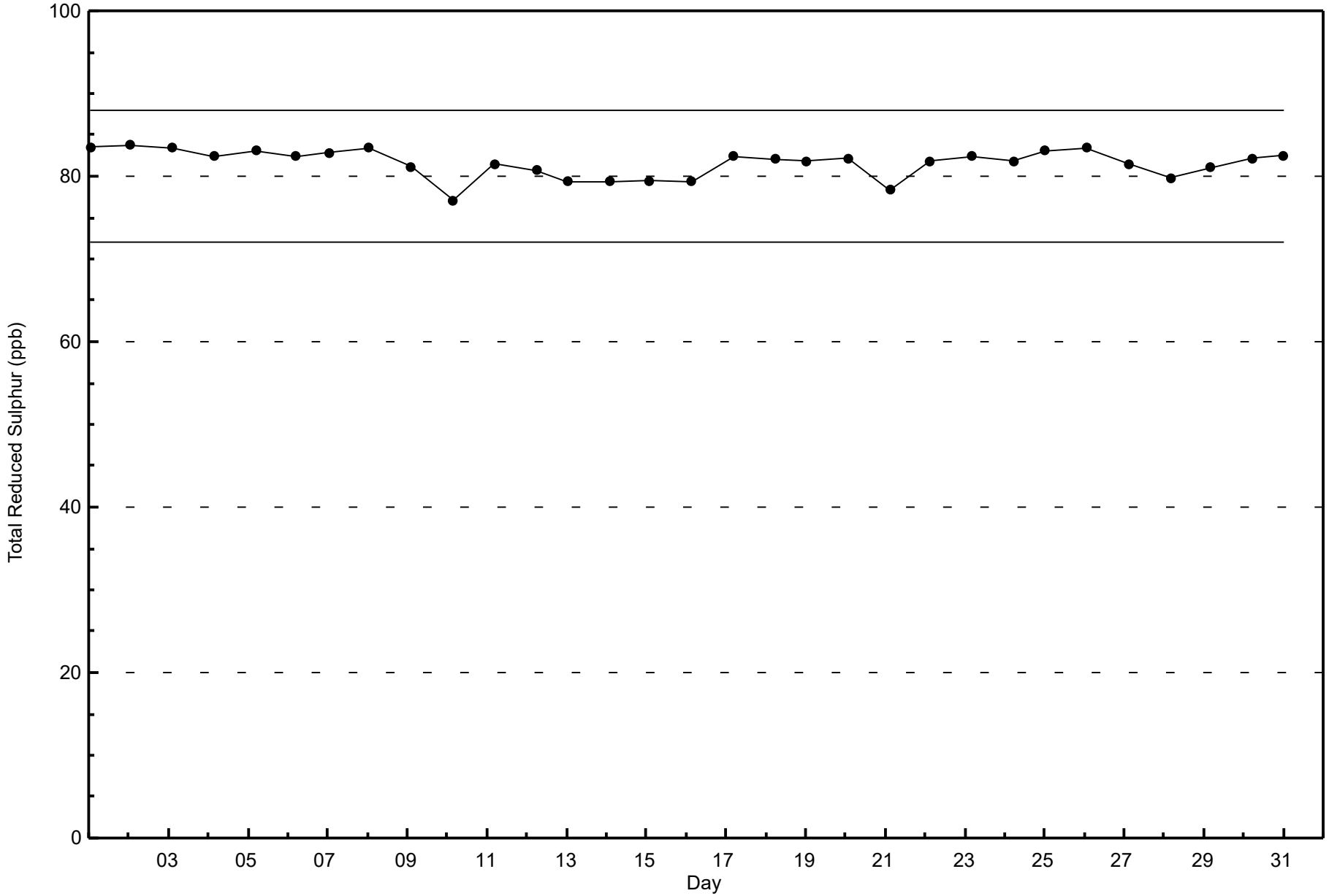


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Stony Mountain - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Stony Mountain - March 2025

Maximum Value: 2.2 ppm on Mar 2 08:00

Maximum Daily Average: 2.0 ppm on Mar 2

Minimum Value: 1.9 ppm on Mar 18 11:00

Minimum Daily Average: 1.9 ppm on Mar 8

Maximum Diurnal Average: 2.0 ppm at hour 5

Minimum Diurnal Average: 2.0 ppm at hour 19

Monthly Average: 2.00 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 in Service:	744
Hours of Data:	647
Hours of Missing Data:	97
Hours of Calibration:	39
Percent Operational Time:	92.2

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	2.0	2.0	2.0	2.0	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
2-Mar	Z	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
3-Mar	2.0	Z	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
4-Mar	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
5-Mar	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
6-Mar	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
7-Mar	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	1.9	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0
8-Mar	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	2.0
9-Mar	2.0	Z	2.0	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	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0
10-Mar	1.9	1.9	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	1.9
11-Mar	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
12-Mar	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	C	C	2.1	2.1	2.1	2.1	2.1	2.1	2.1	--	2.1
13-Mar	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
14-Mar	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
16-Mar	2.1	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.1
17-Mar	1.9	2.0	1.9	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	2.0	1.9	1.9	1.9	Z	1.9	2.0	1.9	1.9	1.9	1.9	M	M	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	--	2.0
19-Mar	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
20-Mar	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
23-Mar	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
24-Mar	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
25-Mar	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
26-Mar	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	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
29-Mar	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
30-Mar	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
31-Mar	2.0	2.0	2.0	2.0	2.0	Z	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	Diurnal Average	
	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	Diurnal Maximum	

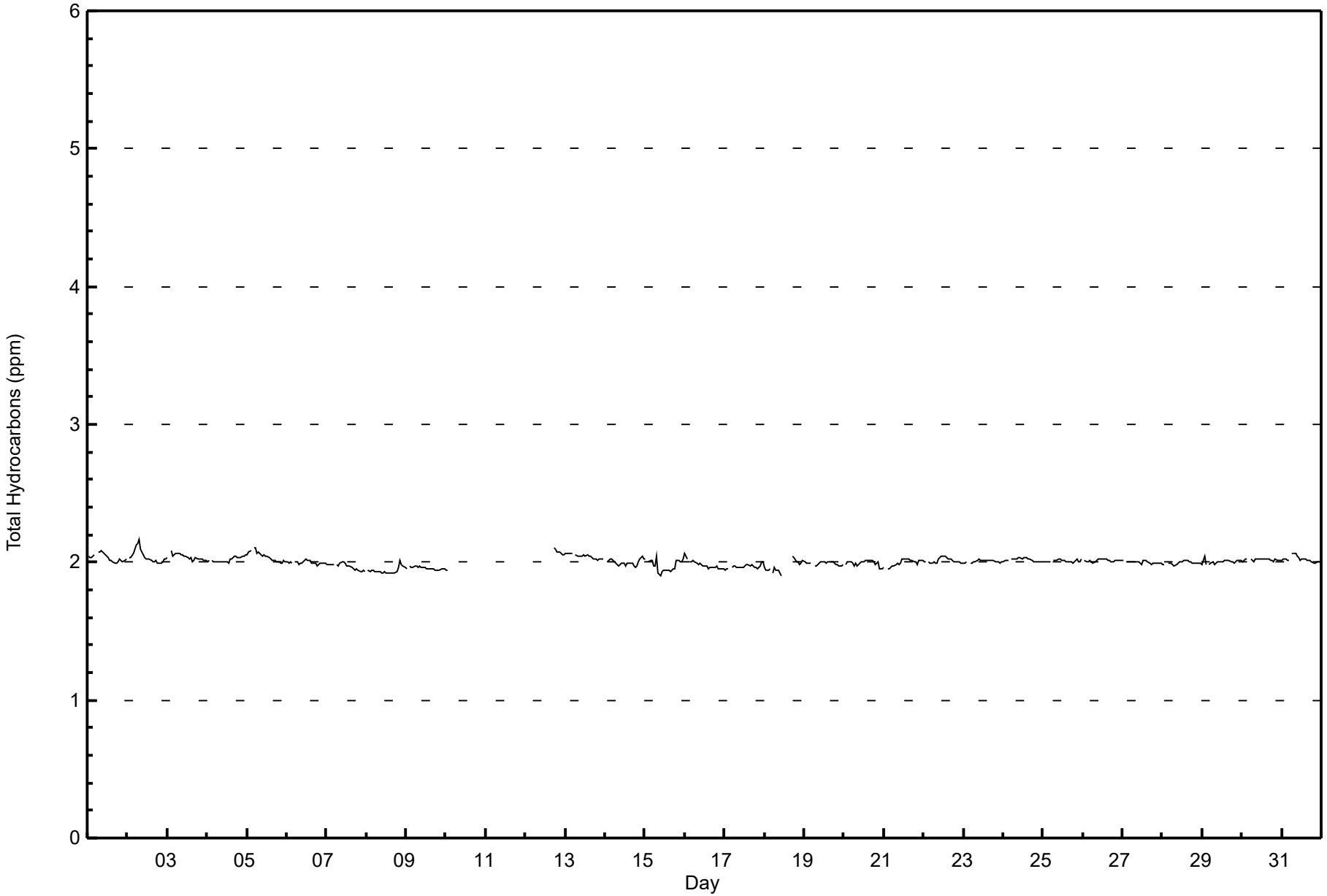
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Stony Mountain - March 2025



Total Hydrocarbons (THC) - ppm
Stony Mountain - March 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	599	92.58	92.58
2.1 - 3.0	48	7.42	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 647

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Stony Mountain - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	19	18	64	56	12	4	21	29	27	40	50	53	95	43	38	30	599
2.1 - 3.0	4	0	2	12	1	0	2	2	0	0	10	2	2	2	2	7	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	23	18	66	68	13	4	23	31	27	40	60	55	97	45	40	37	647

Total Number of Valid Hours: 647

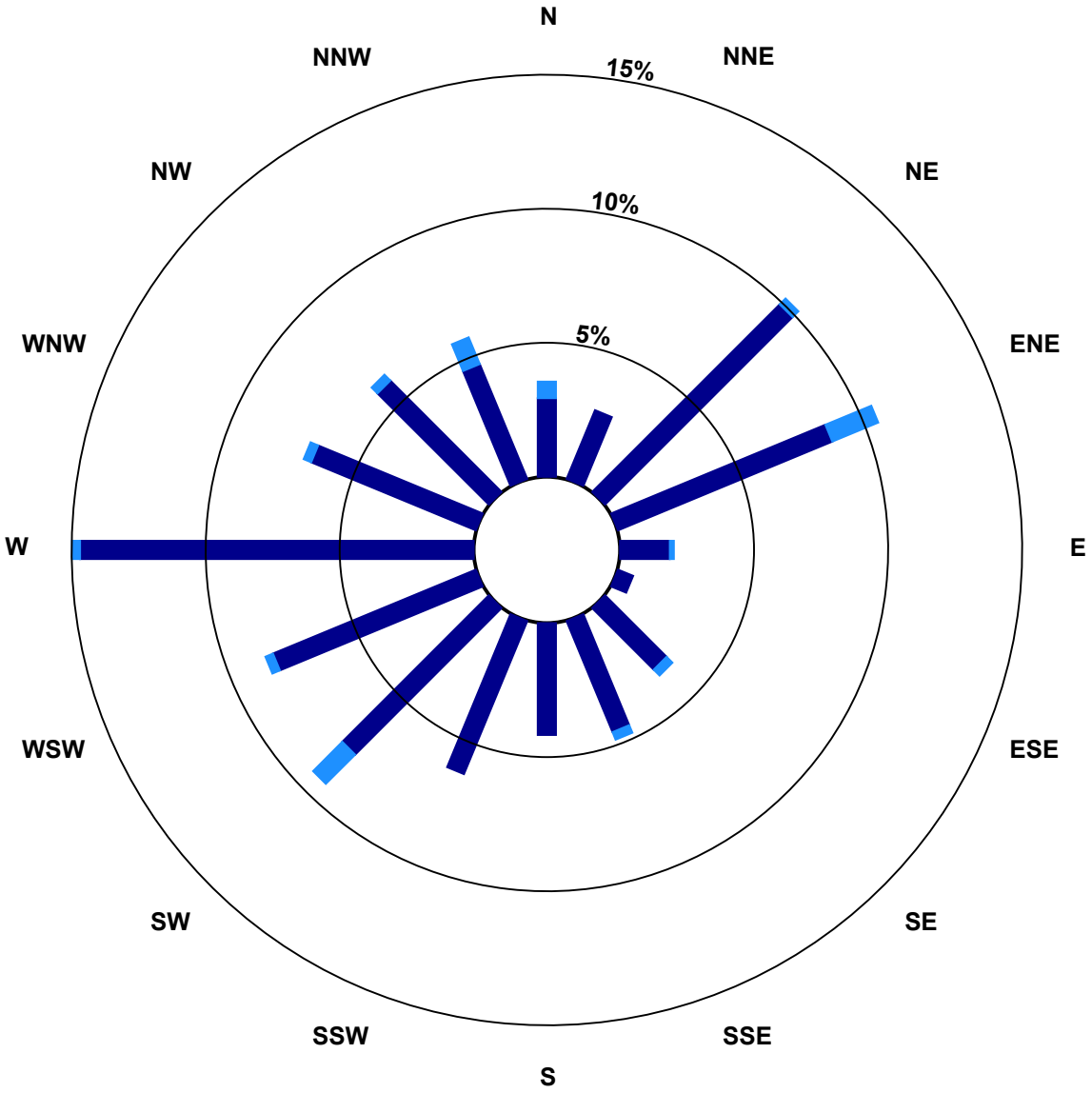
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Total Hydrocarbons (THC) - ppm

Stony Mountain



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

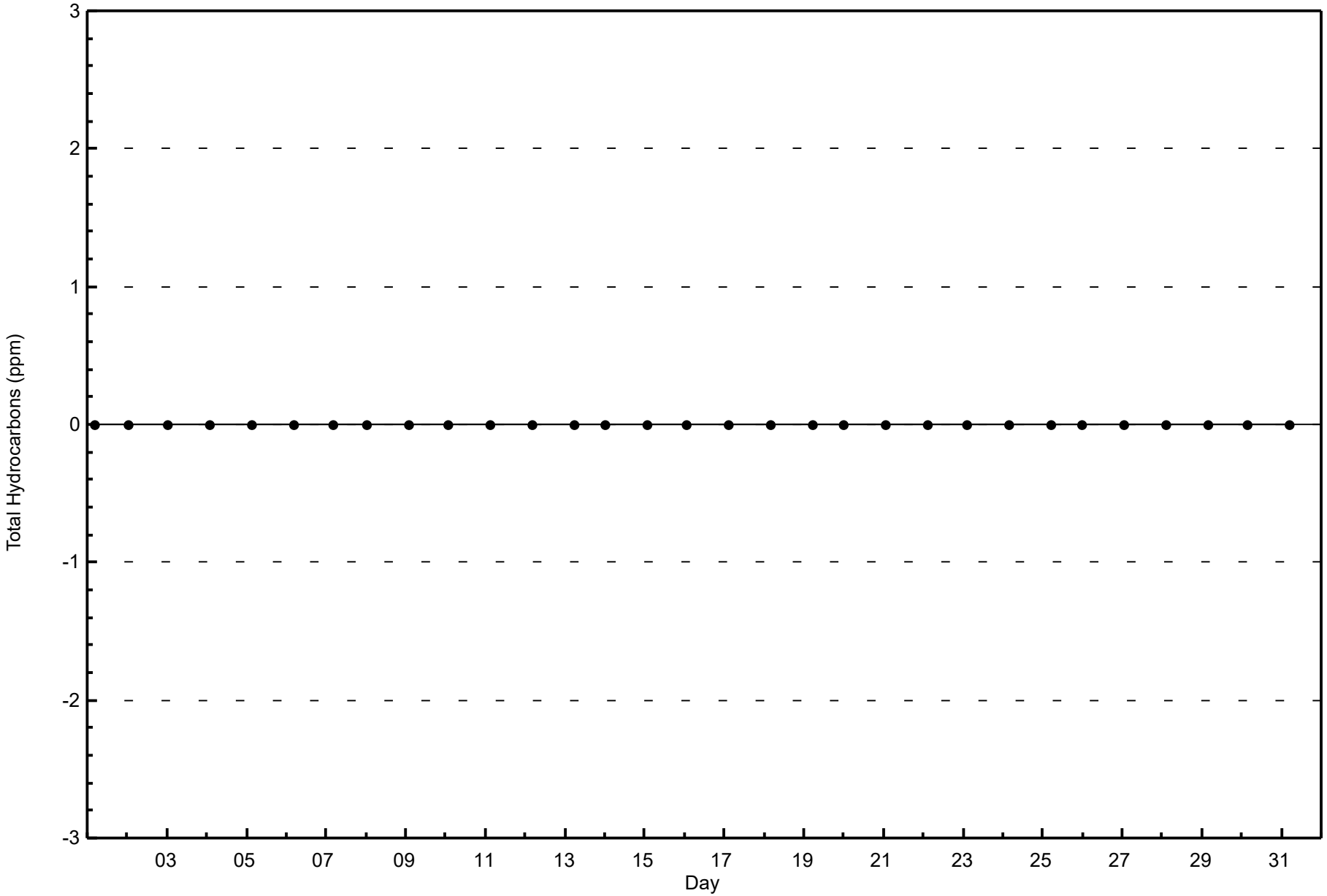
Total Number of Valid Hours: 647

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Stony Mountain - March 2025

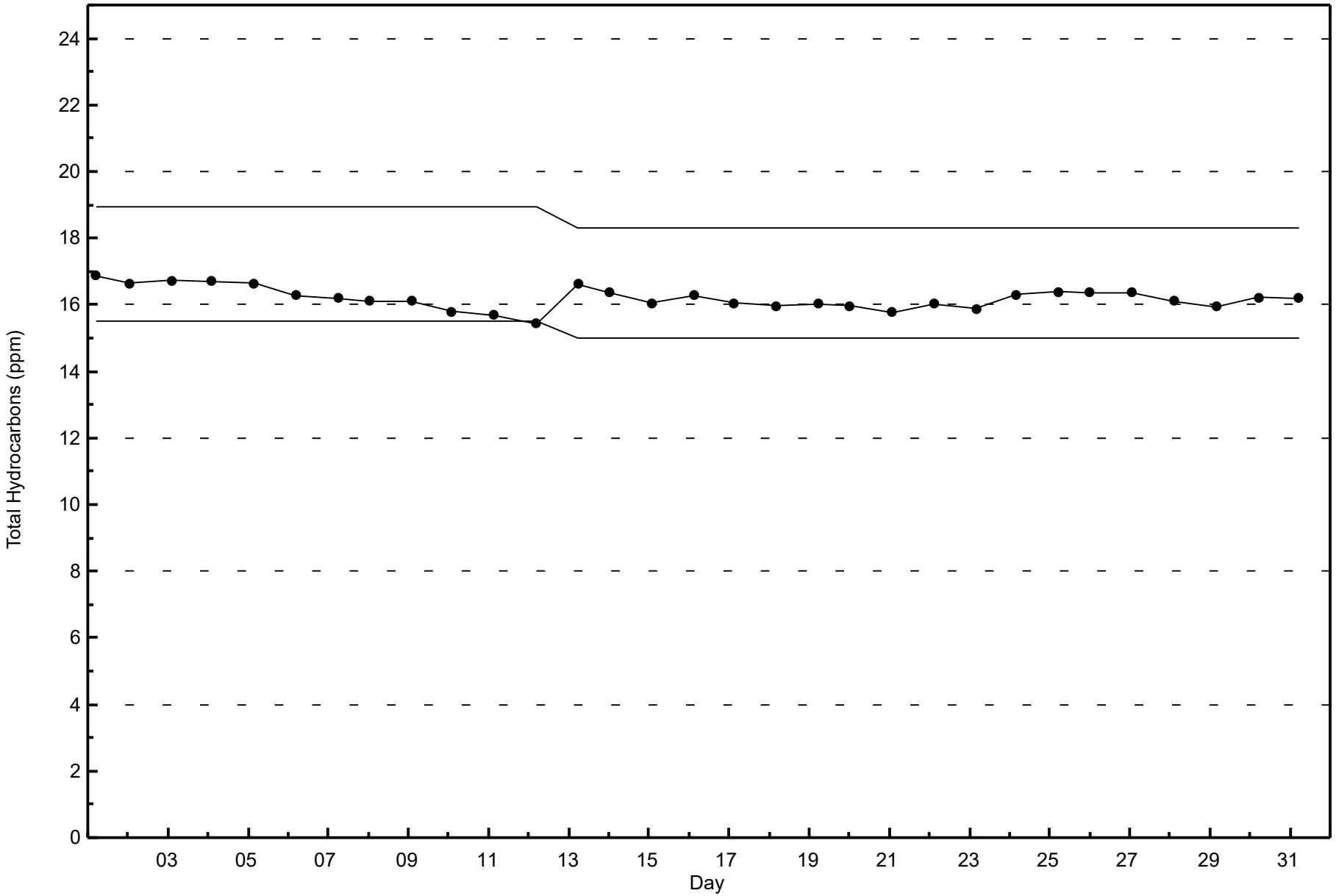


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Stony Mountain - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Stony Mountain - March 2025

Maximum Value: 0.102 ppm on Mar 15 08:00

Maximum Daily Average: 0.019 ppm on Mar 15

Minimum Value: 0.000 ppm on Mar 1 01:00

Minimum Daily Average: 0.000 ppm on Mar 21

Maximum Diurnal Average: 0.007 ppm at hour 8

Minimum Diurnal Average: 0.000 ppm at hour 12

Monthly Average: 0.003 ppm

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

Hours in Service:	744
Hours of Data:	647
Hours of Missing Data:	97
Hours of Calibration:	39
Percent Operational Time:	92.2

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.000	0.000	0.000	0.000	0.000	Z	0.001	0.004	0.009	0.008	0.004	0.001	0.000	0.001	0.000	0.000	0.005	0.000	0.000	0.011	0.000	0.001	0.001	0.002	0.002	0.011
2-Mar	Z	0.002	0.004	0.016	0.030	0.040	0.047	0.056	0.031	0.012	0.007	0.003	0.007	0.008	0.003	0.004	0.007	0.012	0.001	0.000	0.001	0.008	0.006	0.001	0.013	0.056
3-Mar	0.012	Z	0.024	0.001	0.005	0.004	0.004	0.004	0.001	0.002	0.000	0.001	0.000	0.000	0.002	0.001	0.002	0.014	0.005	0.000	0.000	0.000	0.000	0.001	0.004	0.024
4-Mar	0.000	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	0.000	0.003	0.000	0.000	0.000	0.000	0.002	0.004	0.005	0.001	0.005
5-Mar	0.008	0.019	0.027	Z	0.026	0.022	0.007	0.019	0.005	0.006	0.000	0.000	0.001	0.000	0.001	0.001	0.001	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.027
6-Mar	0.000	0.000	0.000	0.000	Z	0.002	0.000	0.000	0.007	0.002	0.000	0.001	0.001	0.000	0.000	0.001	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.007
7-Mar	0.000	0.000	0.000	0.001	0.001	Z	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.000	0.000	0.001	0.001	0.001	0.000	0.000	0.001	0.000	0.000	0.000	0.001
8-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.020	0.009	0.002	0.001	0.002	0.020
9-Mar	0.000	Z	0.000	0.001	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
10-Mar	0.000	0.003	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	0.003
11-Mar	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
12-Mar	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	C	C	0.001	0.000	0.000	0.000	0.000	0.000	0.000	--	0.001
13-Mar	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
14-Mar	Z	0.000	0.000	0.001	0.001	0.007	0.000	0.000	0.003	0.000	0.002	0.001	0.001	0.004	0.011	0.009	0.010	0.002	0.001	0.019	0.054	0.061	0.068	0.058	0.013	0.068
15-Mar	0.062	Z	0.062	0.070	0.060	0.025	0.037	0.102	0.003	0.000	0.002	0.001	0.000	0.001	0.001	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.001	0.007	0.019	0.102
16-Mar	0.013	0.001	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.000	0.002	0.001	0.001	0.001	0.000	0.000	0.001	0.013
17-Mar	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.003	0.003	0.008	0.008	0.021	0.009	0.002	0.007	0.001	0.005	0.028	0.022	0.005	0.028
18-Mar	0.006	0.002	0.007	0.010	Z	0.003	0.045	0.020	0.021	0.009	0.002	M	M	C	C	C	C	0.000	0.000	0.003	0.000	0.000	0.000	0.000	--	0.045
19-Mar	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20-Mar	Z	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
21-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
24-Mar	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-Mar	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	0.002	0.000	0.011	0.000	0.000	0.000	0.001	0.011
26-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	0.000	Z	0.000	0.000	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	0.004	0.007	0.000	0.001	0.000	0.001	0.007
29-Mar	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	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.003
30-Mar	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
31-Mar	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
	0.004	0.001	0.005	0.004	0.005	0.005	0.005	0.007	0.003	0.001	0.001	0.000	0.000	0.001	0.001	0.001	0.002	0.002	0.001	0.002	0.003	0.003	0.004	0.003	Diurnal Average	
	0.062	0.019	0.062	0.070	0.060	0.040	0.047	0.102	0.031	0.012	0.007	0.003	0.007	0.008	0.011	0.009	0.021	0.014	0.005	0.019	0.054	0.061	0.068	0.058	Diurnal Maximum	

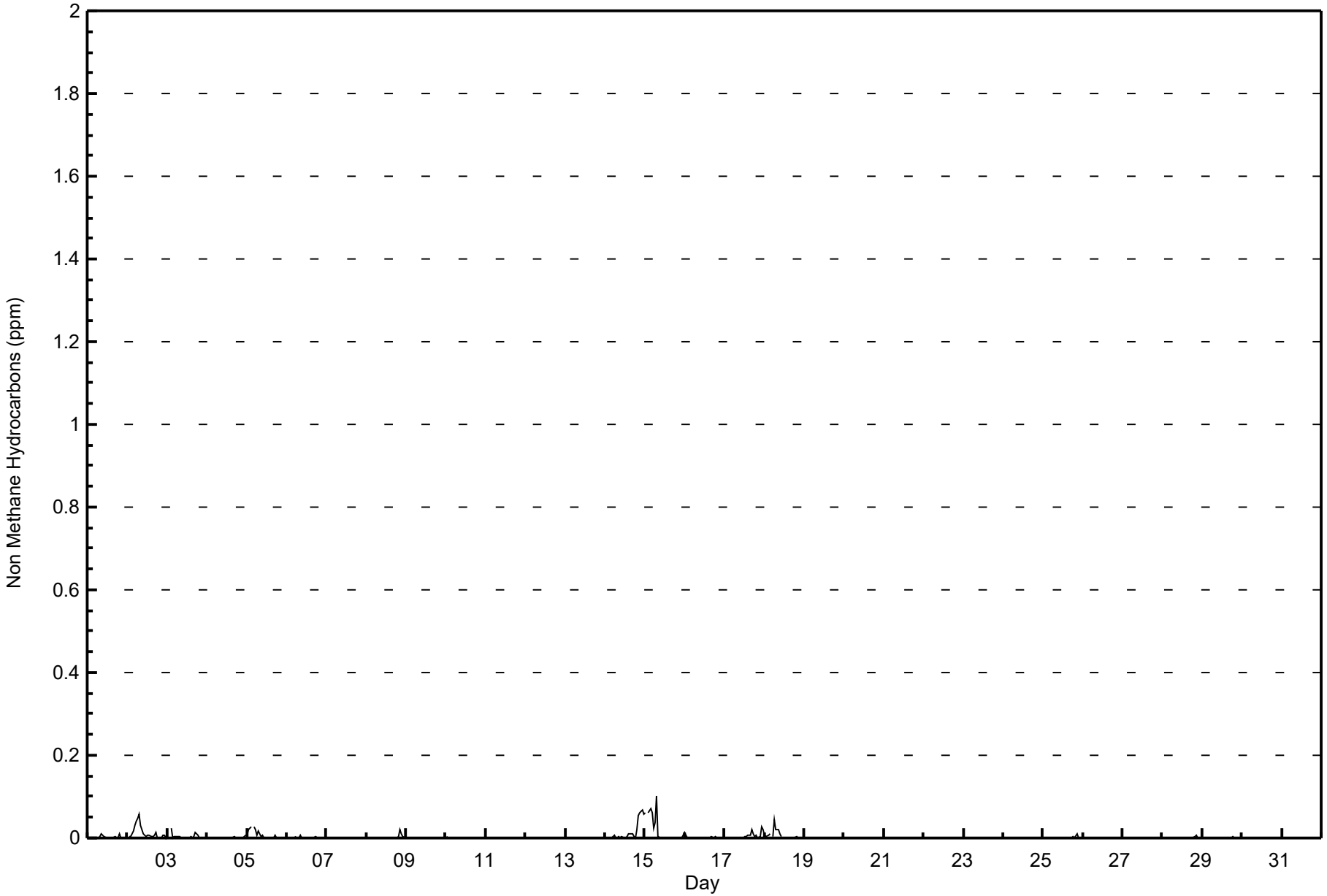
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Stony Mountain - March 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Stony Mountain - March 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	582	89.95	89.95
0.006 - 0.05	56	8.66	98.61
0.06 - 0.1	9	1.39	100.00
> 0.1	0	0.00	100.00

Total Number of Valid Hours: 647

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Stony Mountain - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.005	20	16	65	64	13	4	23	30	26	40	53	54	95	37	16	26	582
0.006 - 0.05	3	2	1	4	0	0	0	1	1	0	6	1	2	6	18	11	56
0.06 - 0.1	0	0	0	0	0	0	0	0	0	0	1	0	0	2	6	0	9
> 0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	23	18	66	68	13	4	23	31	27	40	60	55	97	45	40	37	647

Total Number of Valid Hours: 647

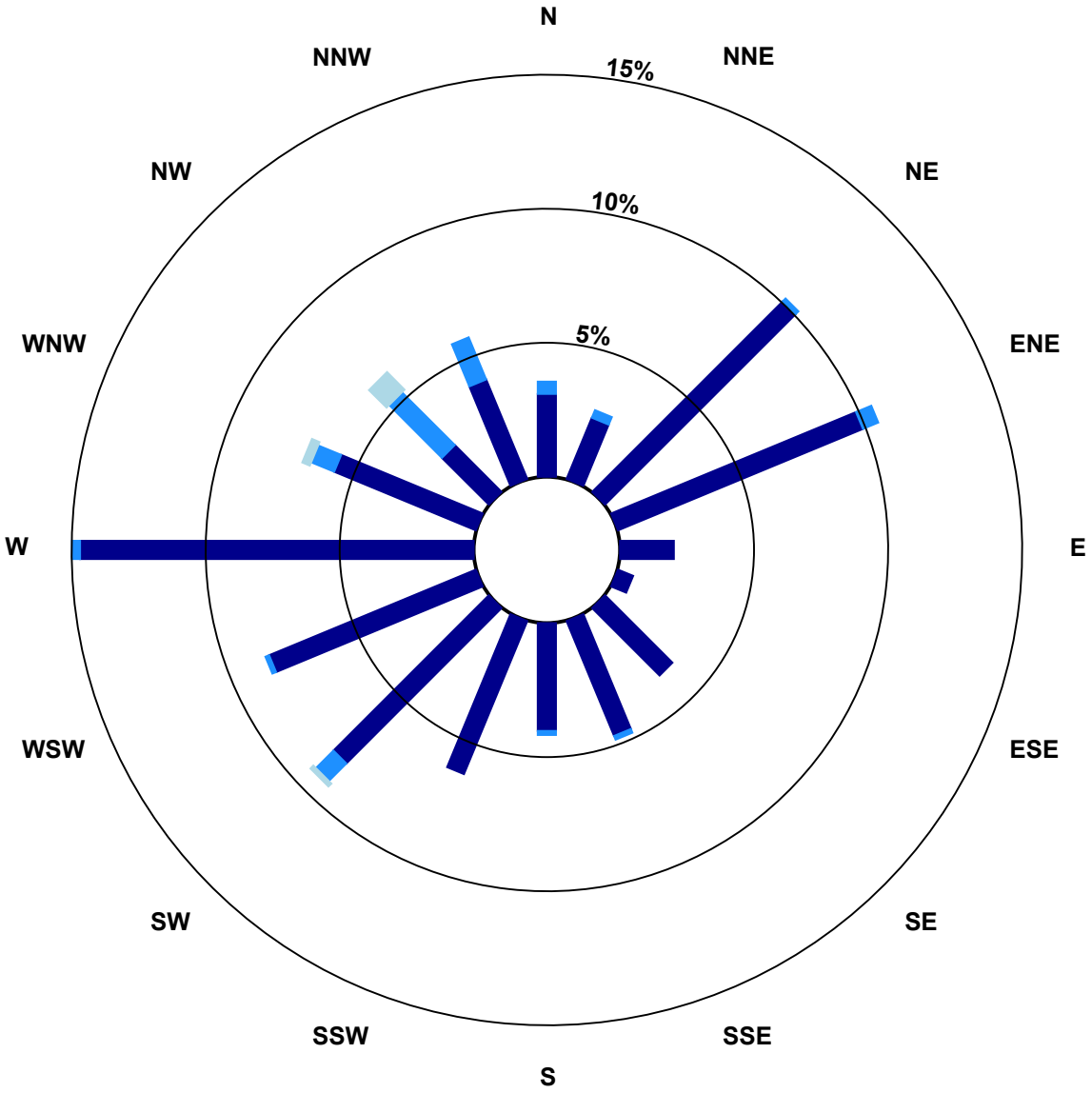
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Non Methane Hydrocarbons (NMHC) - ppm

Stony Mountain



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

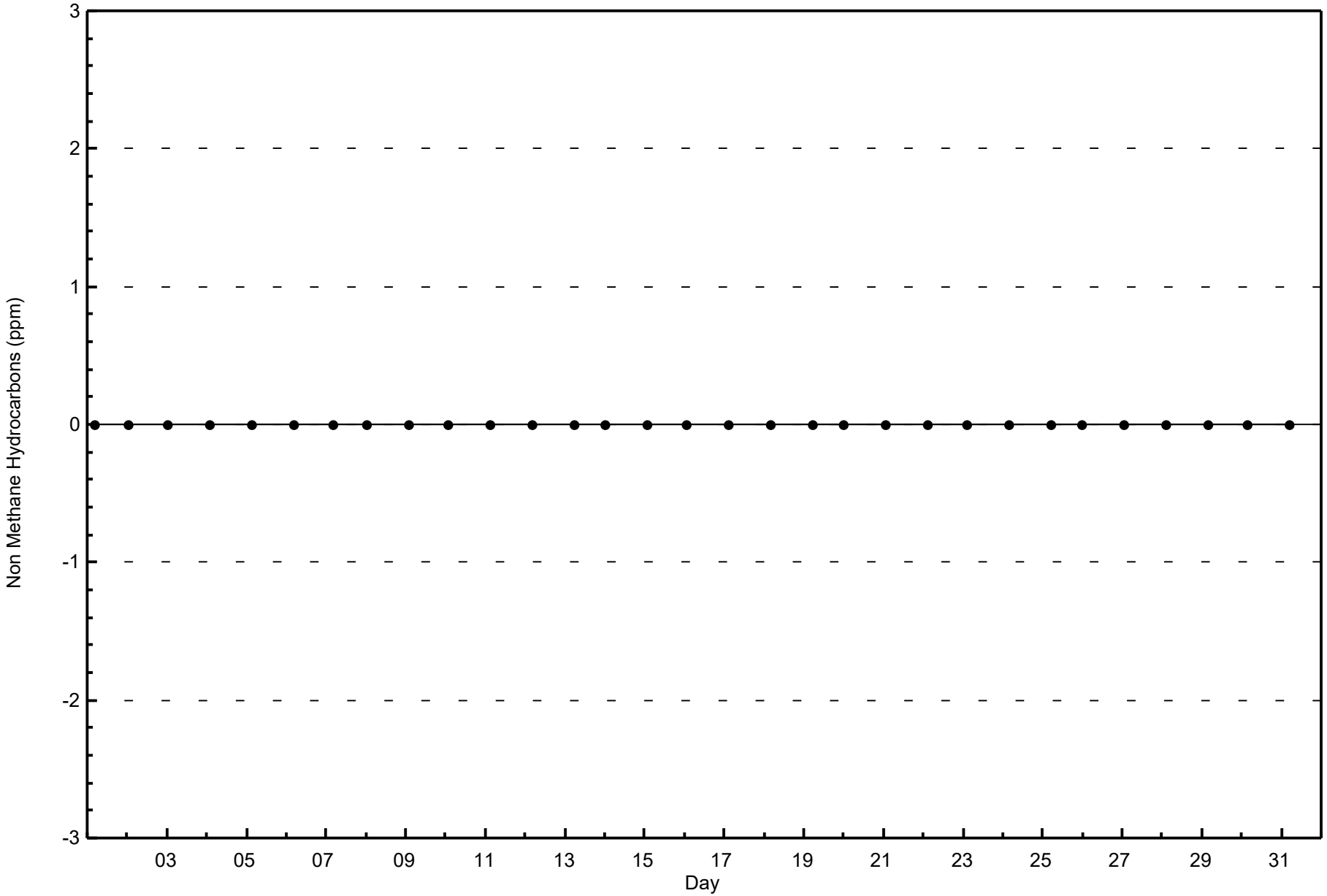
Total Number of Valid Hours: 647

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Stony Mountain - March 2025

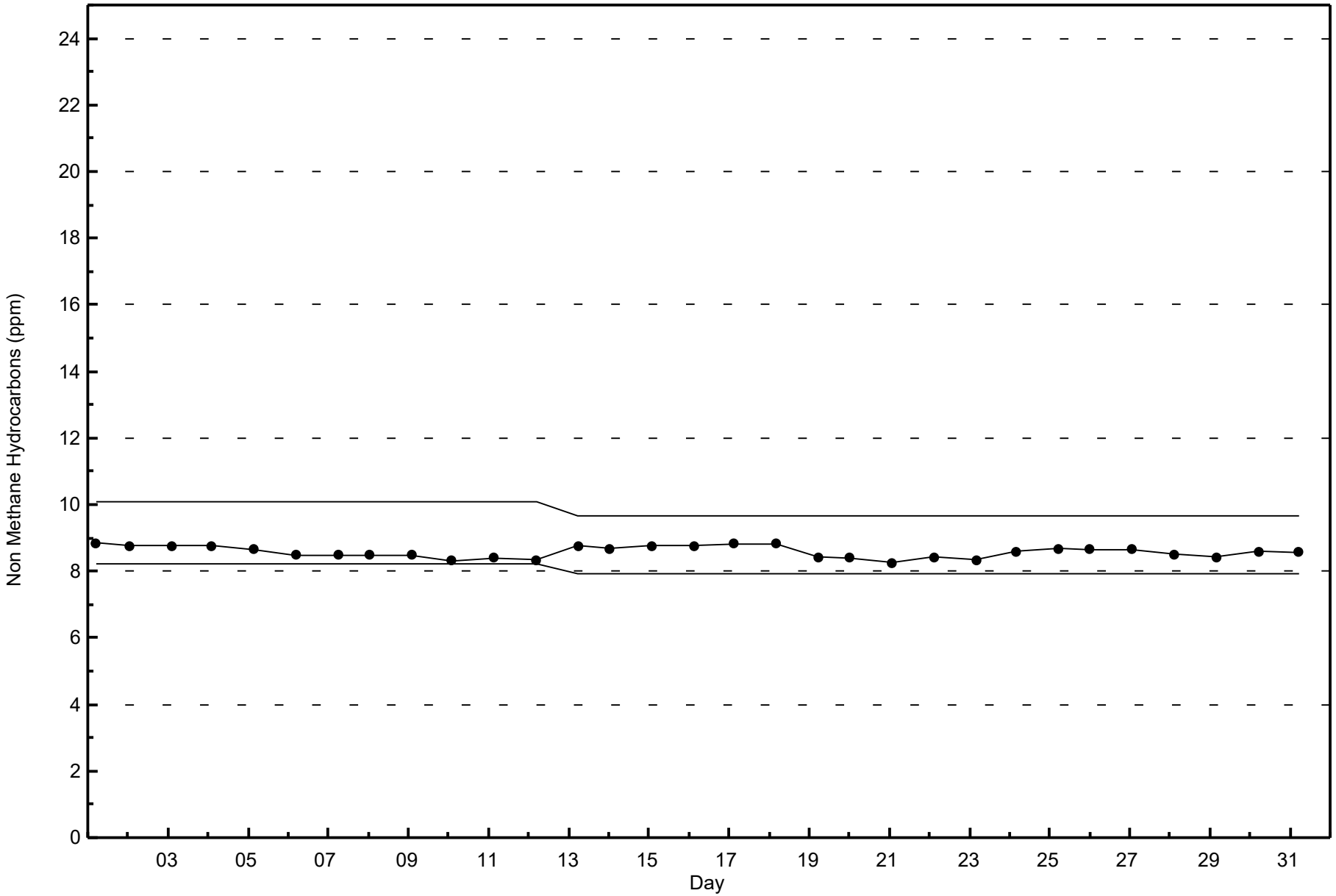


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Stony Mountain - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Stony Mountain - March 2025

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

Maximum Value: 2.1 ppm on Mar 2 08:00

Maximum Daily Average: 2.0 ppm on Mar 13

Minimum Value: 1.9 ppm on Mar 18 11:00

Minimum Daily Average: 1.9 ppm on Mar 8

Maximum Diurnal Average: 2.0 ppm at hour 12

Minimum Diurnal Average: 2.0 ppm at hour 22

Monthly Average: 2.00 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 in Service:	744
Hours of Data:	647
Hours of Missing Data:	97
Hours of Calibration:	39
Percent Operational Time:	92.2

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	2.0	2.0	2.0	2.0	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
2-Mar	Z	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
3-Mar	2.0	Z	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
4-Mar	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
5-Mar	2.0	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
6-Mar	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
7-Mar	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	1.9	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0
8-Mar	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	2.0
9-Mar	2.0	Z	2.0	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	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0
10-Mar	1.9	1.9	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	1.9
11-Mar	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
12-Mar	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	C	C	2.1	2.1	2.1	2.1	2.1	2.1	2.1	--	2.1
13-Mar	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
14-Mar	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	2.0	Z	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
16-Mar	2.1	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.1
17-Mar	1.9	2.0	1.9	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	2.0	1.9	1.9	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	M	M	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	--	2.0
19-Mar	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
20-Mar	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
23-Mar	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
24-Mar	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
25-Mar	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
26-Mar	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	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
29-Mar	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
30-Mar	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
31-Mar	2.0	2.0	2.0	2.0	2.0	Z	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	Diurnal Average	
	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	Diurnal Maximum	

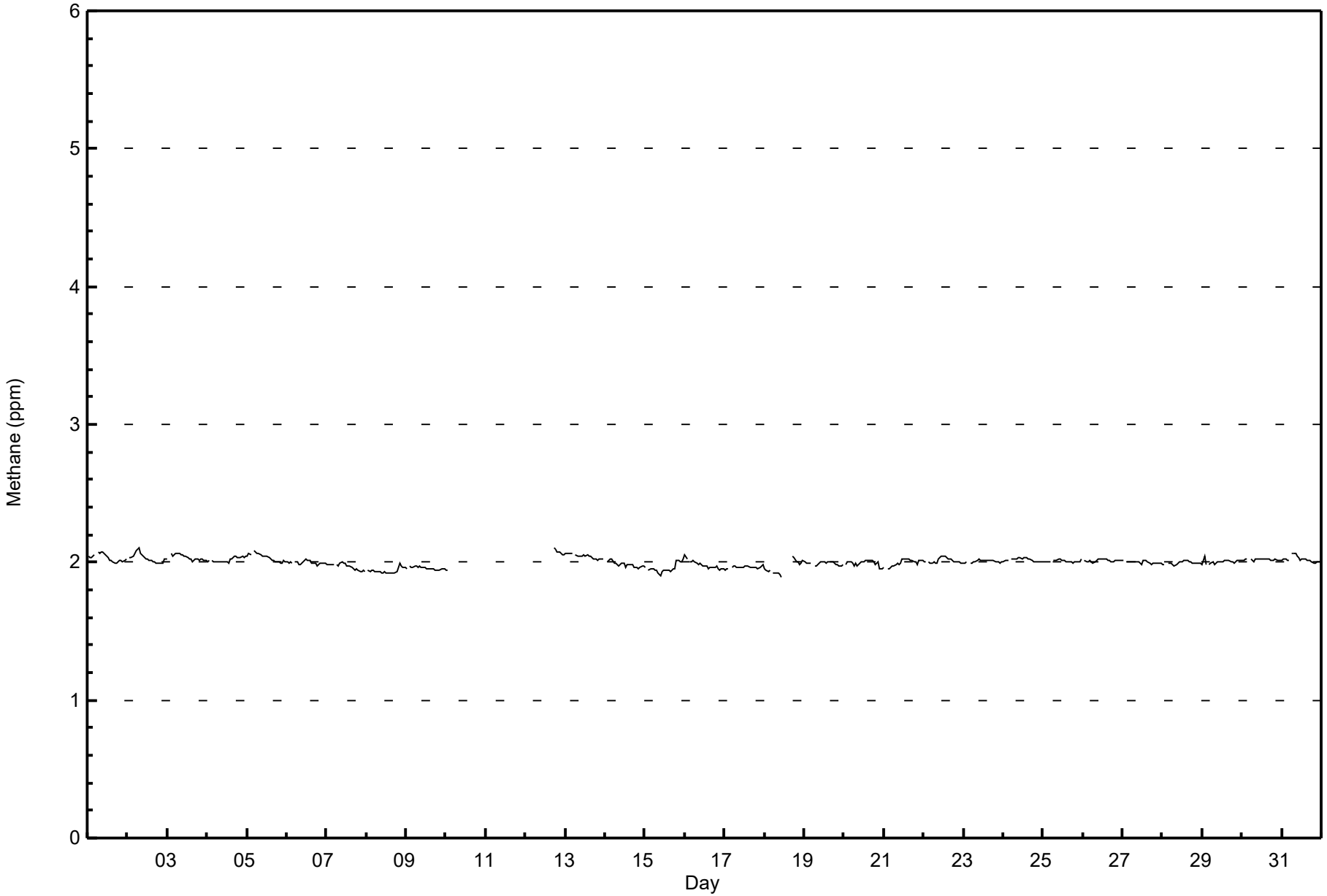
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Stony Mountain - March 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	604	93.35	93.35
2.1 - 3.0	43	6.65	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 647

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Stony Mountain - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	19	18	64	56	12	4	21	29	27	40	51	54	96	44	38	31	604
2.1 - 3.0	4	0	2	12	1	0	2	2	0	0	9	1	1	1	2	6	43
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	23	18	66	68	13	4	23	31	27	40	60	55	97	45	40	37	647

Total Number of Valid Hours: 647

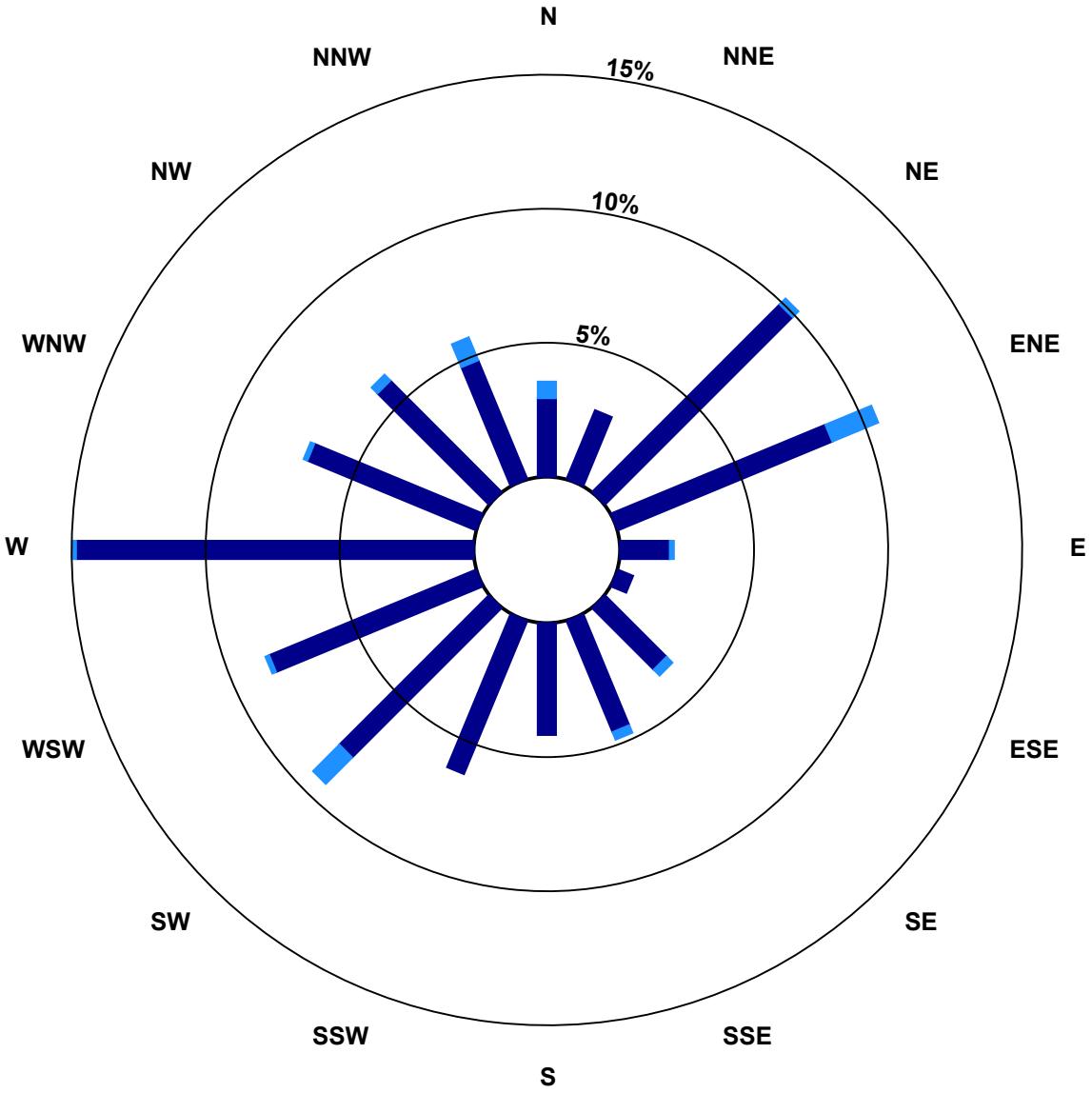
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Methane (CH_4) - ppm

Stony Mountain



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

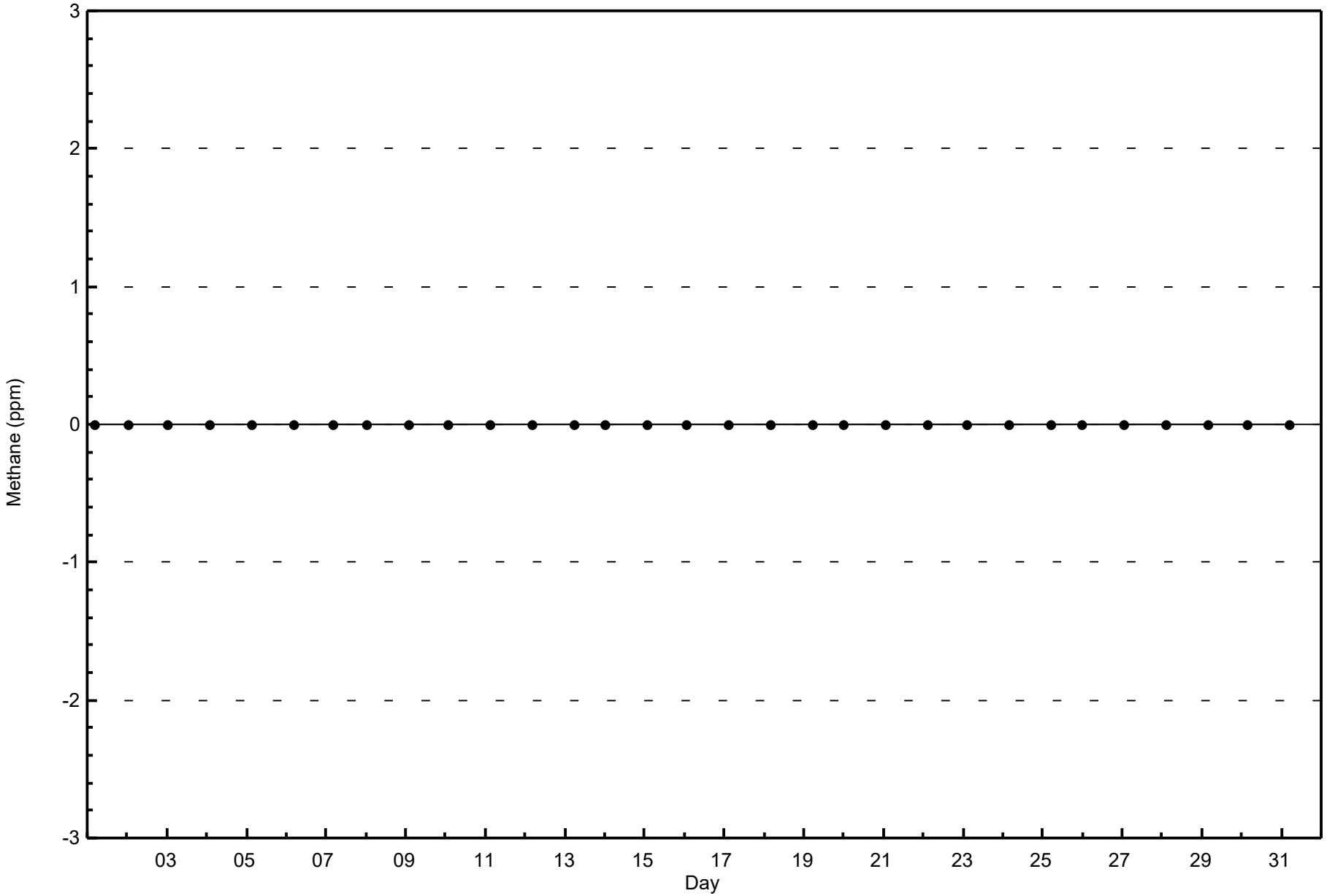
Total Number of Valid Hours: 647

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Stony Mountain - March 2025

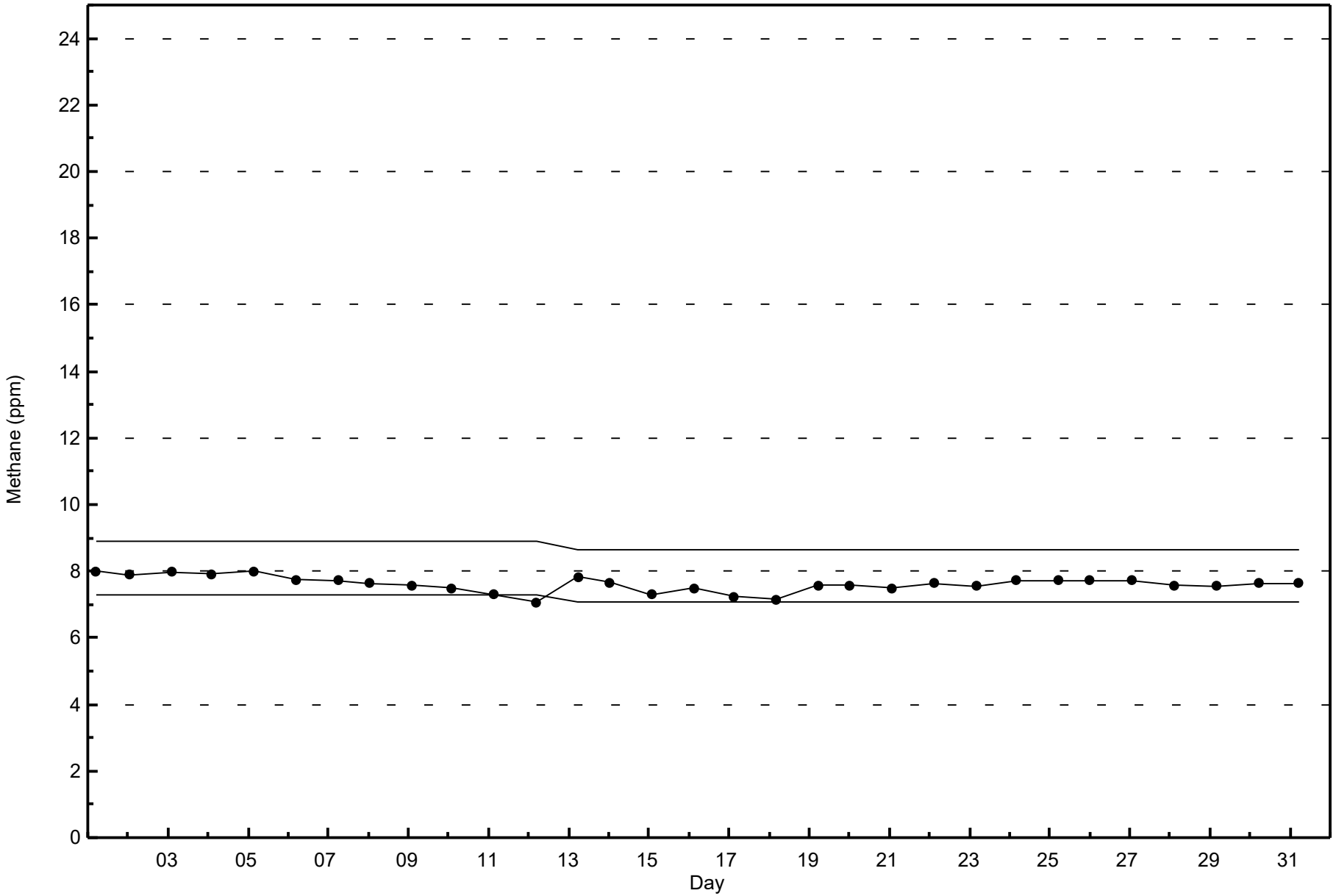


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Stony Mountain - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Stony Mountain - March 2025

Maximum Value: 1.9 ppb on Mar 22 07:00

Maximum Daily Average: 1.1 ppb on Mar 5

Minimum Value: 0.0 ppb on Mar 1 01:00

Minimum Daily Average: 0.0 ppb on Mar 27

Maximum Diurnal Average: 0.4 ppb at hour 11

Minimum Diurnal Average: 0.1 ppb at hour 22

Monthly Average: 0.26 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.4 P_{90} = 0.9 P_{99} = 1.4

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	38
Percent Operational Time:	100.0

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

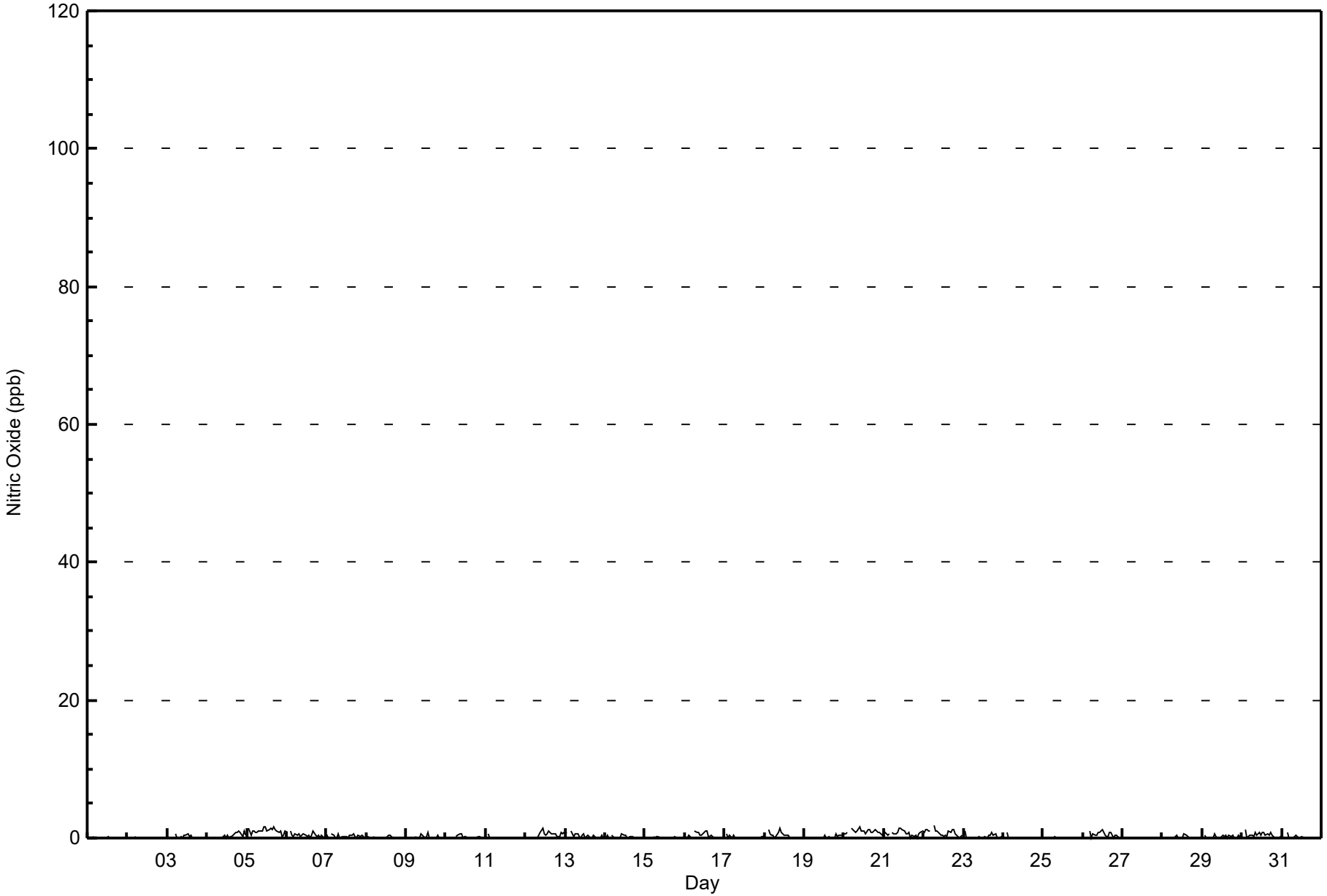
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Stony Mountain - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	706	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Stony Mountain - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	22	31	78	85	17	5	28	36	29	40	62	54	97	44	39	39	706
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	22	31	78	85	17	5	28	36	29	40	62	54	97	44	39	39	706

Total Number of Valid Hours: 706

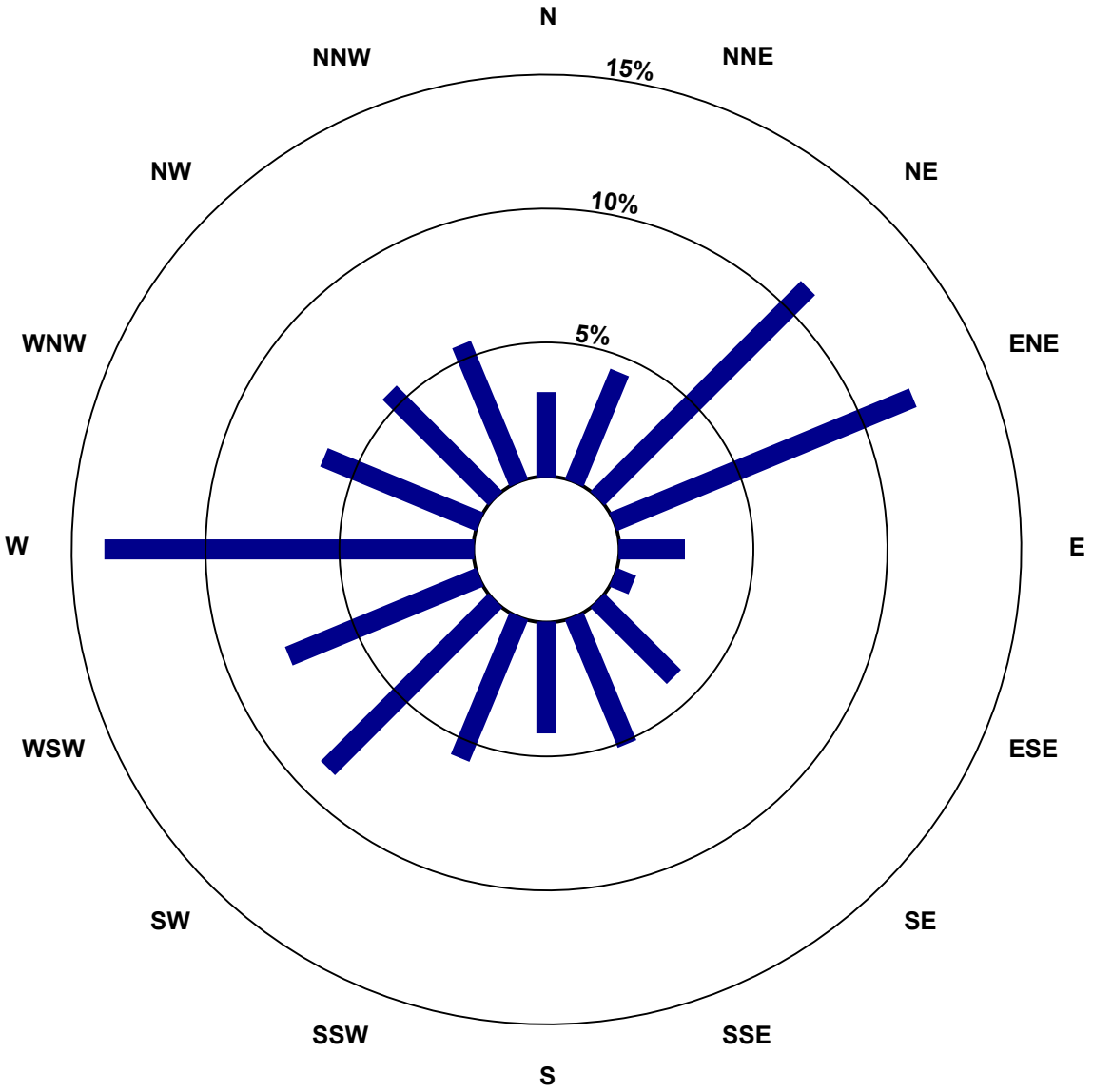
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitric Oxide (NO) - ppb

Stony Mountain



Classes (ppb)

- 0 - 20
- 21 - 40
- 11 - 80
- 81 - 159
- > 159

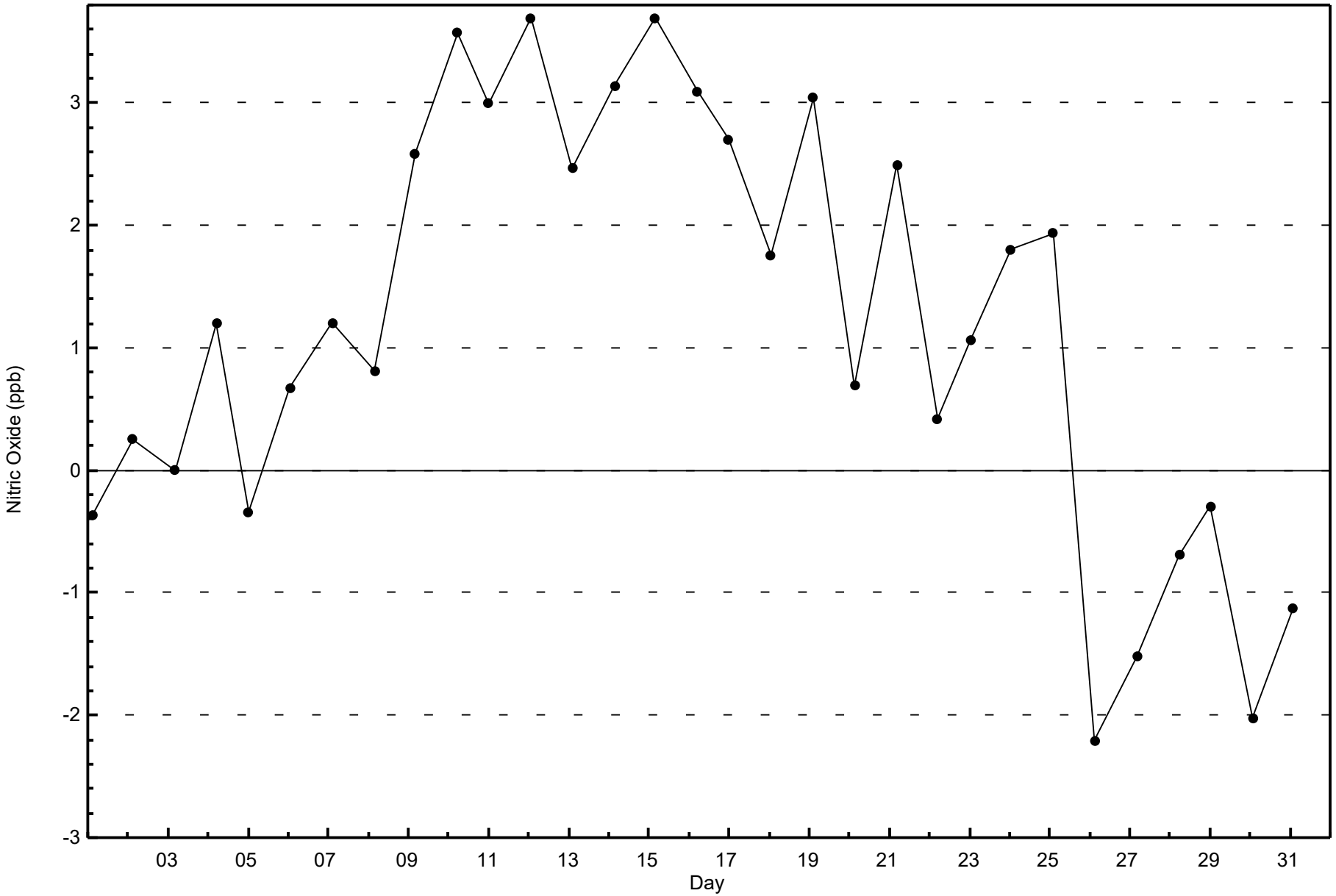
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Stony Mountain - March 2025

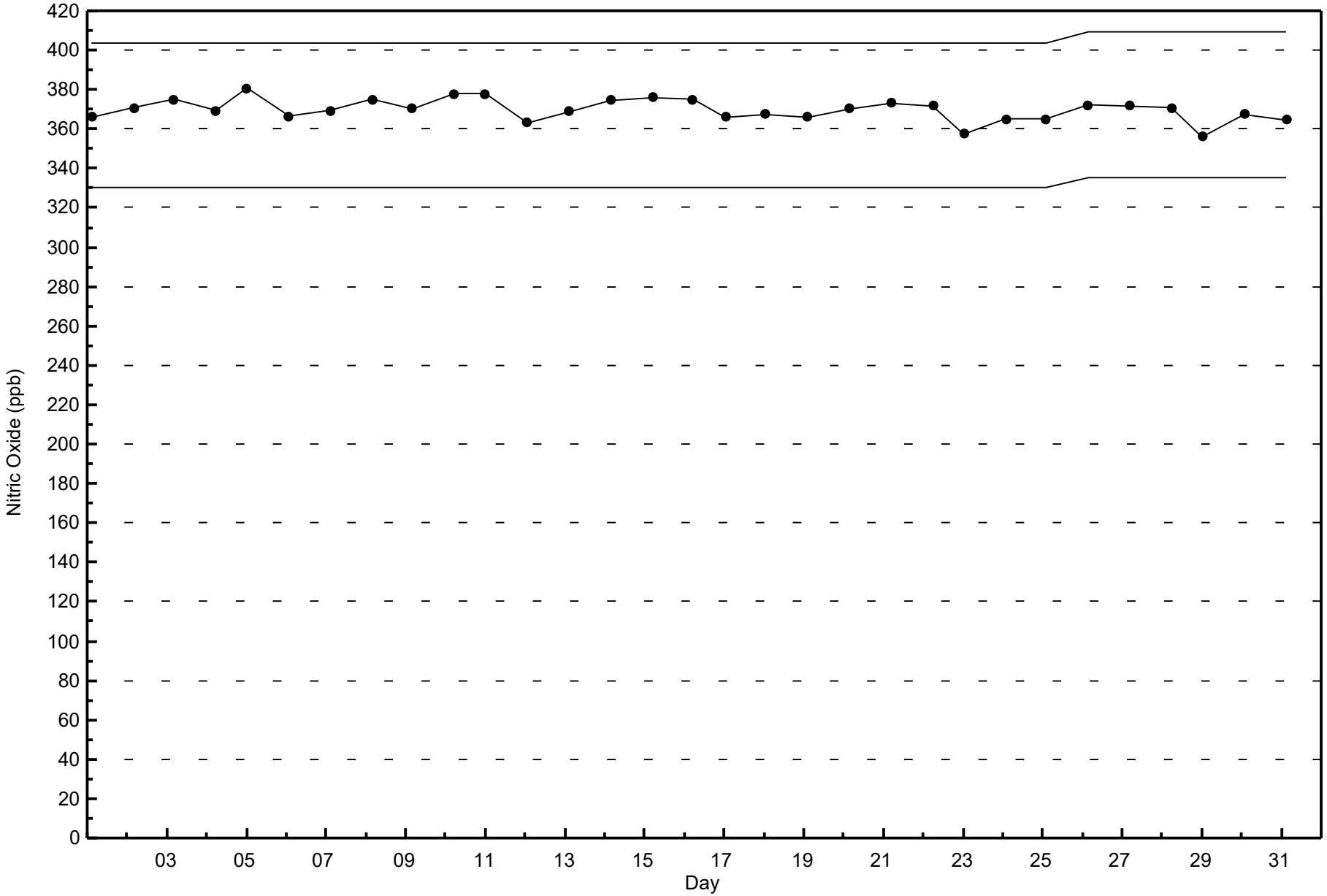


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Stony Mountain - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Stony Mountain - March 2025

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

Maximum Value: 5.2 ppb on Mar 18 00:00

Maximum Daily Average: 1.8 ppb on Mar 17

Minimum Value: 0.0 ppb on Mar 1 16:00

Minimum Daily Average: 0.0 ppb on Mar 19

Maximum Diurnal Average: 1.3 ppb at hour 8

Minimum Diurnal Average: 0.6 ppb at hour 18

Monthly Average: 0.84 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.3 Median = 0.7 Q_3 = 1.2 P_{90} = 1.8 P_{99} = 3.4

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	38
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	1.2	0.2	Z	1.3	0.5	0.8	0.9	1.2	1.6	1.5	0.4	0.9	0.7	0.4	0.1	0.0	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.5	1.6
2-Mar	0.0	0.0	0.1	Z	2.0	1.1	1.3	2.0	0.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.3	2.0
3-Mar	0.5	1.5	1.8	1.0	Z	1.8	1.2	1.3	1.2	1.5	1.5	0.9	0.8	0.7	0.6	0.6	0.4	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.8	1.8
4-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.5	0.0	0.0	0.0	1.0	0.5	0.4	0.6	0.6	0.4	1.5	1.4	0.6	0.6	0.9	1.7	1.9	1.5	0.6	1.9
5-Mar	Z	1.8	1.4	1.7	3.5	2.8	2.7	2.9	2.4	1.7	1.1	0.9	0.7	1.1	1.1	0.9	0.3	0.3	0.2	0.2	0.2	0.4	0.1	0.2	1.2	3.5
6-Mar	0.4	Z	0.8	0.8	1.0	0.7	1.0	1.0	0.9	1.0	1.4	1.0	1.0	0.8	0.8	0.8	0.7	0.7	0.6	0.6	0.4	0.5	0.5	0.8	0.8	1.4
7-Mar	0.5	0.3	Z	1.3	0.8	0.9	0.6	1.0	1.0	0.9	1.1	0.8	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.6	0.6	0.6	0.3	0.6	0.7	1.3
8-Mar	0.2	0.6	0.0	Z	0.8	0.8	0.6	0.5	1.0	0.7	0.4	0.6	0.4	0.6	0.5	0.6	0.4	0.5	0.3	2.2	4.5	2.8	2.3	1.6	1.0	4.5
9-Mar	1.5	1.0	0.9	0.8	Z	1.5	0.9	0.6	0.9	0.8	0.8	0.3	0.5	0.6	0.5	0.5	0.0	0.0	0.0	0.5	0.1	0.0	0.7	0.4	0.6	1.5
10-Mar	0.3	0.4	0.2	0.4	0.5	Z	1.2	1.9	2.5	2.4	0.5	0.6	1.1	0.7	0.0	0.7	1.3	2.0	3.0	3.4	2.6	1.9	1.0	1.8	1.3	3.4
11-Mar	Z	2.3	2.0	1.6	0.6	0.9	1.6	0.8	0.9	1.4	0.7	1.1	1.3	1.6	1.6	0.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.3
12-Mar	0.0	Z	0.4	0.0	0.7	1.2	1.7	2.1	1.9	1.4	1.4	1.4	1.0	1.3	0.9	1.1	1.2	1.3	1.7	1.1	0.9	0.5	0.7	0.6	1.1	2.1
13-Mar	1.0	0.7	Z	1.5	0.9	0.8	1.1	0.8	1.1	0.6	1.3	1.1	0.7	0.6	0.3	0.4	0.3	0.5	0.3	0.3	0.1	0.3	0.2	0.8	0.7	1.5
14-Mar	0.4	0.3	0.0	Z	0.5	0.6	0.9	0.7	0.4	0.8	1.6	1.7	1.2	1.9	2.5	2.4	2.4	1.7	1.3	1.8	3.2	4.3	4.2	2.9	1.6	4.3
15-Mar	2.4	2.7	2.2	1.9	Z	2.3	1.5	1.8	1.1	0.6	0.8	0.7	0.6	0.2	0.0	0.3	0.2	0.3	1.6	2.2	2.0	2.1	1.9	2.2	1.4	2.7
16-Mar	2.3	1.3	1.2	1.0	0.9	Z	3.0	1.9	1.9	1.6	1.5	0.7	0.7	1.0	1.1	1.0	0.9	1.0	1.2	1.3	1.8	1.5	1.1	0.8	1.3	3.0
17-Mar	Z	1.3	1.5	1.5	1.7	1.4	1.1	1.4	1.5	1.8	1.5	0.8	1.4	1.2	1.4	0.9	1.0	1.0	1.3	1.2	2.1	3.1	5.1	5.2	1.8	5.2
18-Mar	3.4	Z	1.9	1.5	1.4	1.6	1.2	1.4	1.8	1.7	1.0	0.4	0.5	0.5	0.5	0.5	0.5	0.3	0.7	0.0	0.0	0.0	0.0	0.2	0.9	3.4
19-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.2	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.3
20-Mar	0.1	0.0	0.9	Z	0.6	0.0	0.0	0.3	0.4	0.7	0.8	0.0	0.1	0.2	0.3	0.1	0.2	0.5	0.2	0.3	0.3	0.6	0.8	1.0	0.4	1.0
21-Mar	1.9	0.9	0.5	0.5	Z	1.1	1.9	2.5	2.7	2.2	2.3	2.0	1.8	1.5	1.3	1.2	1.2	1.3	1.7	2.0	1.6	1.3	1.2	1.1	1.6	2.7
22-Mar	1.1	1.3	1.7	1.3	1.1	Z	1.2	1.6	1.5	1.5	1.2	1.1	1.2	1.1	1.0	0.9	0.9	0.6	0.6	0.9	0.8	0.5	0.9	0.9	1.1	1.7
23-Mar	Z	1.0	0.8	0.8	0.5	0.3	0.4	1.1	0.8	1.0	0.4	0.2	0.2	0.4	0.4	0.4	0.5	0.4	0.3	0.2	0.3	0.2	0.3	0.3	0.5	1.1
24-Mar	0.5	Z	1.5	1.0	0.6	0.5	0.4	0.7	0.3	0.9	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.5
25-Mar	0.0	0.0	Z	0.7	0.2	0.5	0.6	1.7	1.0	1.3	C	C	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.3	--	1.7
26-Mar	0.1	1.0	0.7	Z	0.9	1.4	1.4	1.1	1.1	0.9	0.5	0.5	0.7	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.2	0.6	0.7	0.2	0.6	1.4
27-Mar	0.5	0.2	0.9	0.3	Z	0.8	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4	0.1	0.2	0.0	0.3	0.2	0.4	0.2	0.2	0.9
28-Mar	0.0	0.1	0.6	0.2	0.3	Z	0.3	1.6	1.4	1.2	0.5	0.5	1.0	1.9	1.5	1.1	1.0	0.9	1.2	0.8	0.6	0.2	0.0	0.7	0.8	1.9
29-Mar	Z	0.7	0.2	0.2	0.1	0.4	0.3	3.1	1.7	1.3	1.1	0.9	0.7	0.3	0.2	0.3	0.2	0.3	0.2	0.4	0.4	0.4	0.4	0.5	0.6	3.1
30-Mar	0.2	Z	0.4	0.6	0.6	0.8	1.1	0.9	0.9	1.1	0.6	0.6	0.5	0.8	0.7	1.0	1.3	0.7	0.7	0.6	0.2	0.7	0.6	0.8	0.7	1.3
31-Mar	0.5	0.9	Z	1.4	1.1	0.8	1.3	1.0	1.7	1.8	1.3	0.9	1.0	0.6	0.9	0.7	0.8	0.8	1.3	1.1	1.3	1.9	1.0	1.1	1.1	1.9
	0.7	0.8	0.9	0.9	0.8	1.0	1.0	1.3	1.2	1.1	0.9	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.7	0.7	0.8	0.9	0.9	0.9	Diurnal Average	
	3.4	2.7	2.2	1.9	3.5	2.8	3.0	3.1	2.7	2.4	2.3	2.0	1.8	1.9	2.5	2.4	2.4	2.0	3.0	3.4	4.5	4.3	5.1	5.2	Diurnal Maximum	

Z - zerospan C - Calibration

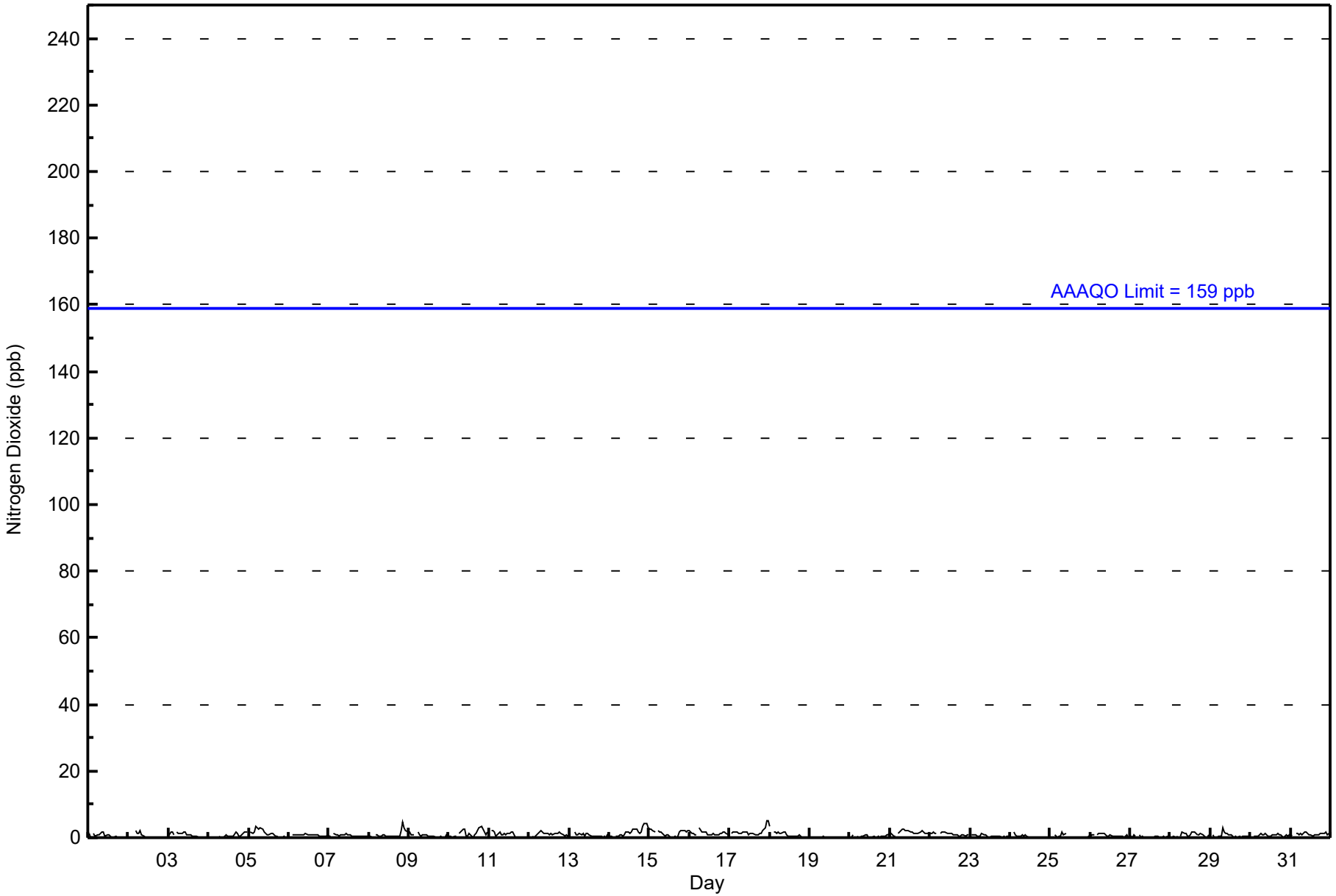
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Stony Mountain - March 2025



Nitrogen Dioxide (NO_2) - ppb
Stony Mountain - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	706	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Stony Mountain - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	22	31	78	85	17	5	28	36	29	40	62	54	97	44	39	39	706
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	22	31	78	85	17	5	28	36	29	40	62	54	97	44	39	39	706

Total Number of Valid Hours: 706

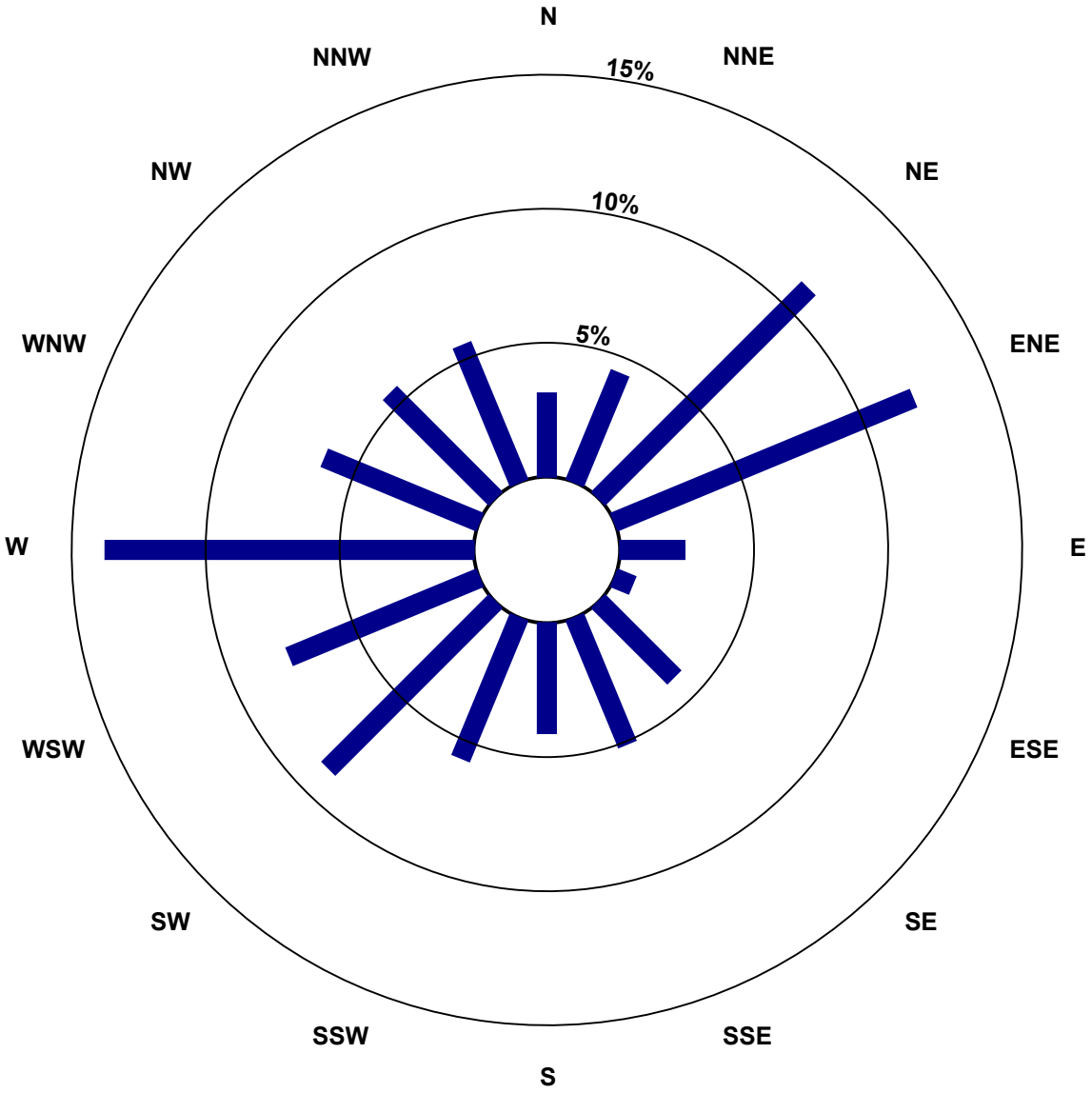
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Dioxide (NO_2) - ppb

Stony Mountain



Classes (ppb)

- 0 - 20
- 21 - 40
- 11 - 80
- 81 - 159
- > 159

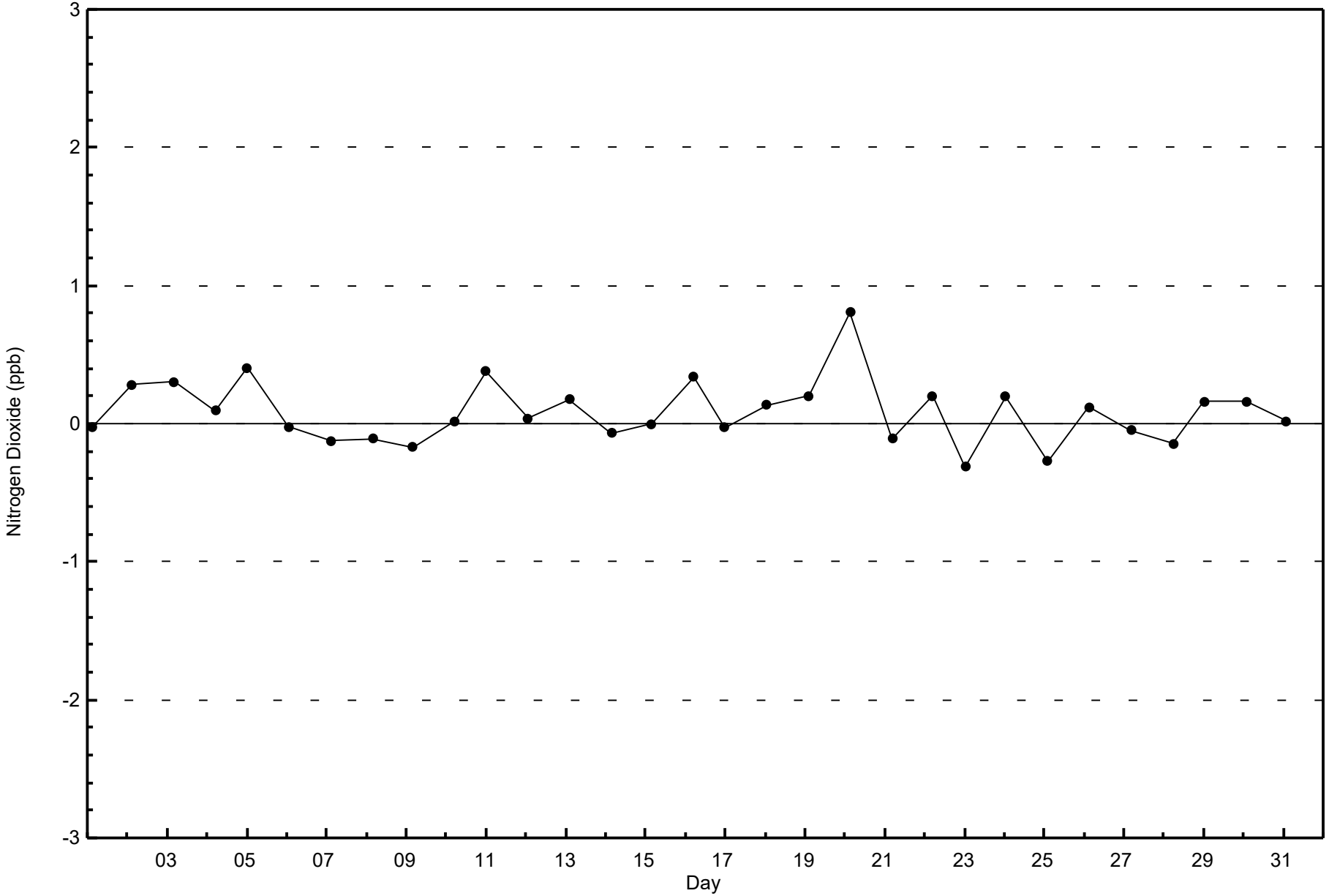
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Stony Mountain - March 2025

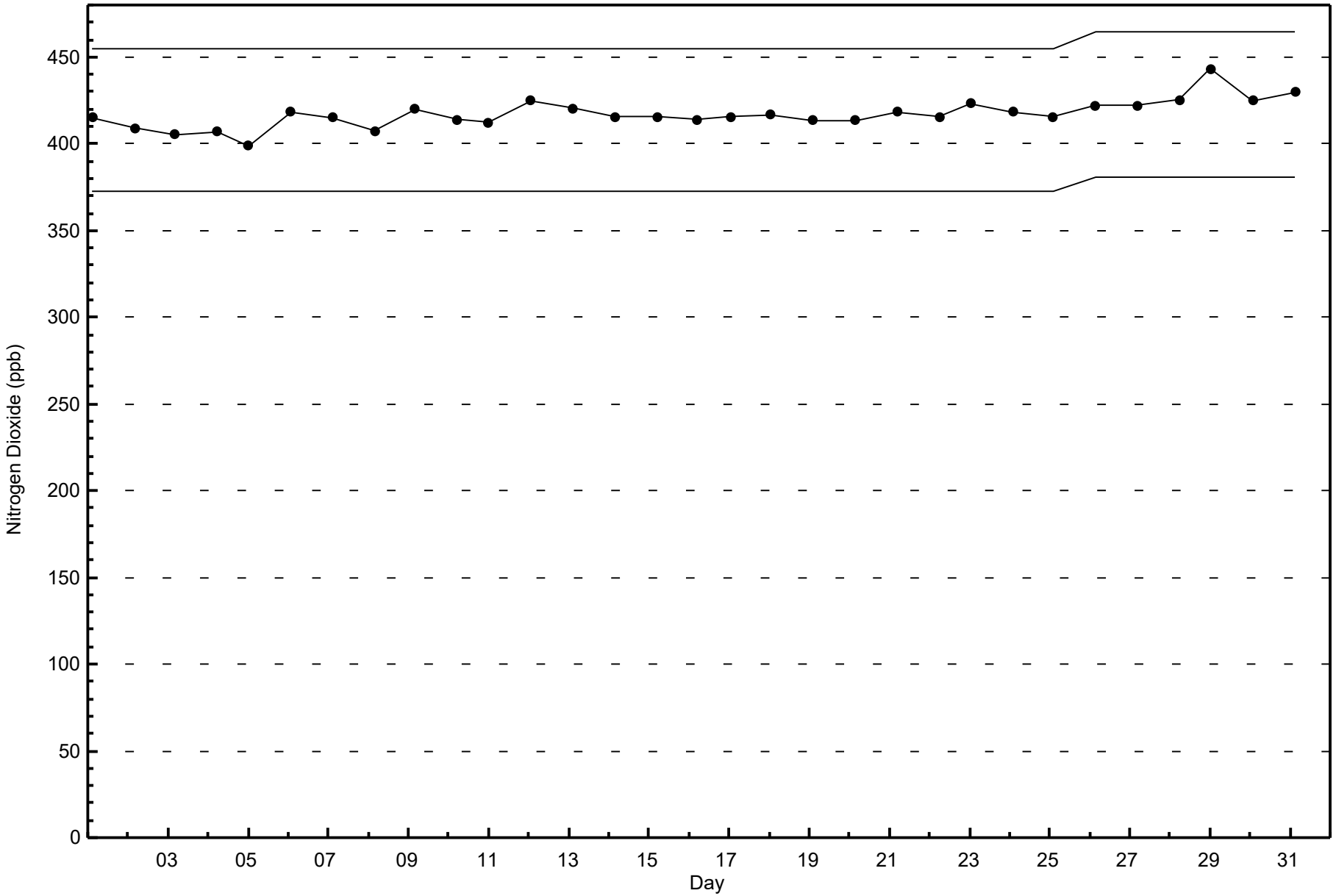


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Stony Mountain - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Stony Mountain - March 2025

Maximum Value: 5.3 ppb on Mar 18 00:00

Maximum Daily Average: 2.3 ppb on Mar 5

Minimum Value: 0.0 ppb on Mar 1 16:00

Minimum Daily Average: 0.2 ppb on Mar 19

Maximum Diurnal Average: 1.5 ppb at hour 8

Minimum Diurnal Average: 0.9 ppb at hour 19

Monthly Average: 1.10 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.4 Median = 1.0 Q_3 = 1.6 P_{90} = 2.3 P_{99} = 4.0

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	38
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	1.2	0.2	Z	1.5	0.5	0.8	0.9	1.2	1.6	1.5	0.4	0.9	0.8	0.4	0.1	0.0	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.6	1.6
2-Mar	0.0	0.0	0.1	Z	2.3	1.1	1.3	2.0	0.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.4	2.3
3-Mar	0.5	1.5	1.8	1.0	Z	2.3	1.2	1.3	1.5	1.5	1.9	1.2	1.5	0.9	0.9	0.7	0.4	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.9	2.3
4-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.5	0.0	0.0	0.0	1.3	0.5	0.8	0.6	0.8	0.7	2.2	2.3	1.4	1.5	1.8	1.9	2.8	2.0	0.9	2.8
5-Mar	Z	3.3	1.9	2.7	4.5	3.7	3.5	4.0	3.4	2.7	2.7	2.5	1.7	2.4	2.5	2.2	1.9	1.5	1.3	1.0	1.2	0.5	0.5	1.2	2.3	4.5
6-Mar	1.3	Z	1.8	1.3	1.1	1.3	1.5	1.5	1.2	1.3	2.1	1.3	1.2	1.1	0.8	1.3	1.8	1.1	0.9	1.0	0.4	0.9	0.6	1.0	1.2	2.1
7-Mar	1.0	0.3	Z	2.0	1.1	0.9	0.6	1.5	1.1	1.0	1.2	0.9	0.9	0.7	1.1	1.1	1.3	0.7	0.5	1.0	0.8	1.0	0.5	0.6	1.0	2.0
8-Mar	0.2	0.7	0.0	Z	1.1	0.8	0.6	0.5	1.0	0.7	0.4	0.6	0.4	1.0	0.9	0.8	0.4	0.5	0.3	2.2	4.5	2.8	2.3	1.6	1.1	4.5
9-Mar	1.5	1.0	0.9	0.8	Z	1.8	0.9	0.6	0.9	1.3	1.1	0.3	0.7	1.5	0.5	0.5	0.0	0.0	0.0	0.8	0.1	0.0	0.7	0.4	0.7	1.8
10-Mar	0.3	0.4	0.2	0.4	0.5	Z	1.4	2.4	3.2	3.0	0.5	0.7	1.2	0.7	0.0	0.8	1.3	2.0	3.1	3.6	2.7	1.9	1.0	1.8	1.4	3.6
11-Mar	Z	2.9	2.0	1.6	0.6	0.9	1.6	0.8	0.9	1.4	0.7	1.1	1.3	1.6	1.6	0.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	2.9
12-Mar	0.0	Z	0.4	0.0	0.7	1.2	1.7	2.1	2.3	2.2	2.7	2.0	1.4	1.9	1.9	1.8	1.9	2.0	2.3	1.4	1.1	1.3	1.3	1.4	1.5	2.7
13-Mar	1.6	1.6	Z	2.6	1.4	1.1	1.6	1.5	1.3	0.6	1.8	1.7	0.7	1.0	0.6	0.4	0.3	1.0	0.3	0.3	0.1	0.4	0.6	0.8	1.0	2.6
14-Mar	0.4	0.6	0.0	Z	0.8	0.6	1.0	0.7	0.4	0.9	2.2	2.2	1.5	1.9	2.6	2.6	2.5	1.7	1.3	1.8	3.2	4.3	4.2	2.9	1.7	4.3
15-Mar	2.4	2.7	2.2	1.9	Z	2.5	1.5	2.0	1.3	0.6	0.8	0.7	0.6	0.2	0.0	0.3	0.2	0.3	1.7	2.2	2.0	2.1	1.9	2.2	1.4	2.7
16-Mar	2.5	1.3	1.6	1.2	0.9	Z	4.0	2.8	2.7	2.0	2.0	1.3	1.7	2.0	1.4	1.2	1.3	1.0	1.2	1.3	1.8	1.5	1.1	0.8	1.7	4.0
17-Mar	Z	1.9	1.5	1.8	1.7	1.8	1.1	1.4	1.5	1.8	1.5	0.8	1.4	1.2	1.4	0.9	1.0	1.0	1.3	1.2	2.1	3.1	5.3	5.3	1.8	5.3
18-Mar	3.9	Z	3.1	2.2	1.8	2.0	1.2	1.5	2.6	3.1	1.8	1.1	0.8	1.0	0.8	0.6	0.5	0.3	0.7	0.0	0.0	0.0	0.0	0.2	1.3	3.9
19-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.2	0.0	0.3	0.1	0.0	0.0	0.4	0.0	0.0	0.2	0.3	0.0	0.0	0.6	0.2	0.4	0.5	0.5	0.2	0.6
20-Mar	0.7	0.6	1.8	Z	2.0	1.1	1.0	1.2	1.4	2.4	1.9	1.0	1.1	0.8	1.5	1.3	0.9	1.4	1.2	1.4	1.0	1.4	1.4	1.5	1.3	2.4
21-Mar	2.9	1.4	1.0	1.2	Z	1.9	2.6	3.2	3.6	3.7	3.7	3.3	2.9	2.1	1.9	1.9	1.2	1.7	1.9	2.3	1.6	1.9	2.1	2.0	2.3	3.7
22-Mar	1.9	2.5	2.8	2.3	2.2	Z	3.1	2.7	2.5	2.3	1.5	1.5	1.4	1.5	1.1	1.9	1.7	1.9	1.7	1.5	1.1	0.5	1.1	1.3	1.8	3.1
23-Mar	Z	1.9	0.8	0.8	0.5	0.3	0.4	1.1	0.8	1.1	0.4	0.2	0.2	0.7	0.4	0.9	0.9	1.3	0.6	0.9	0.4	0.2	0.3	0.5	0.7	1.9
24-Mar	0.6	Z	2.3	1.0	0.6	0.5	0.4	0.7	0.3	0.9	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.3
25-Mar	0.0	0.0	Z	0.7	0.2	0.5	0.6	1.8	1.0	1.3	C	C	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.3	--	1.8
26-Mar	0.1	1.0	0.7	Z	2.0	1.4	1.9	1.5	1.5	1.6	1.3	1.5	2.0	0.8	0.8	0.7	1.2	1.1	0.4	0.8	0.6	0.7	0.7	0.2	1.1	2.0
27-Mar	0.5	0.2	0.9	0.3	Z	0.8	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4	0.1	0.2	0.0	0.3	0.2	0.4	0.3	0.2	0.9
28-Mar	0.0	0.1	0.7	0.2	0.3	Z	0.3	1.6	1.8	1.2	0.5	0.5	1.0	2.5	1.9	1.4	1.0	0.9	1.2	0.8	0.6	0.2	0.0	0.7	0.8	2.5
29-Mar	Z	1.0	0.2	0.2	0.1	0.4	0.3	3.6	1.9	1.3	1.1	0.9	1.1	0.5	0.7	0.4	0.6	0.5	0.7	0.4	0.4	0.4	0.7	0.5	0.8	3.6
30-Mar	0.5	Z	1.6	0.6	1.0	1.1	1.4	1.1	1.7	1.6	1.3	1.0	1.4	1.5	1.2	1.5	1.8	1.4	1.1	0.8	0.2	0.7	0.6	0.9	1.1	1.8
31-Mar	0.5	0.9	Z	2.3	1.1	0.8	1.3	1.0	2.1	1.9	1.3	1.0	1.2	0.6	0.9	0.7	0.9	0.8	1.3	1.1	1.3	1.9	1.0	1.1	1.2	2.3
	0.9	1.1	1.2	1.2	1.1	1.2	1.3	1.5	1.5	1.5	1.3	1.0	1.0	1.0	0.9	0.9	1.0	0.9	0.9	1.0	1.0	1.0	1.0	1.0	Diurnal Average	
	3.9	3.3	3.1	2.7	4.5	3.7	4.0	4.0	3.6	3.7	3.7	3.3	2.9	2.5	2.6	2.6	2.5	2.3	3.1	3.6	4.5	4.3	5.3	5.3	Diurnal Maximum	

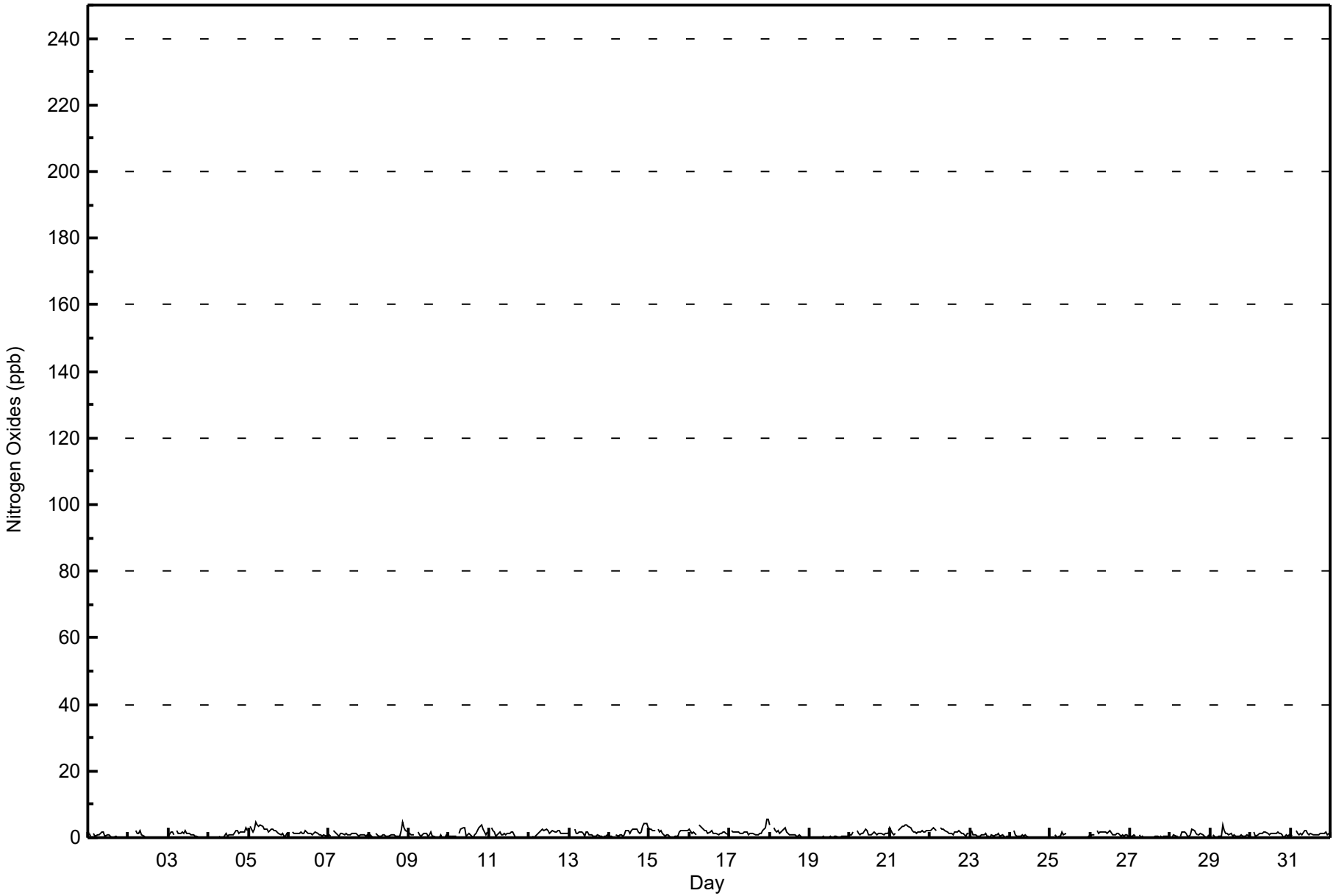
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Stony Mountain - March 2025



Nitrogen Oxides (NO_X) - ppb
Stony Mountain - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	706	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Stony Mountain - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	22	31	78	85	17	5	28	36	29	40	62	54	97	44	39	39	706
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	22	31	78	85	17	5	28	36	29	40	62	54	97	44	39	39	706

Total Number of Valid Hours: 706

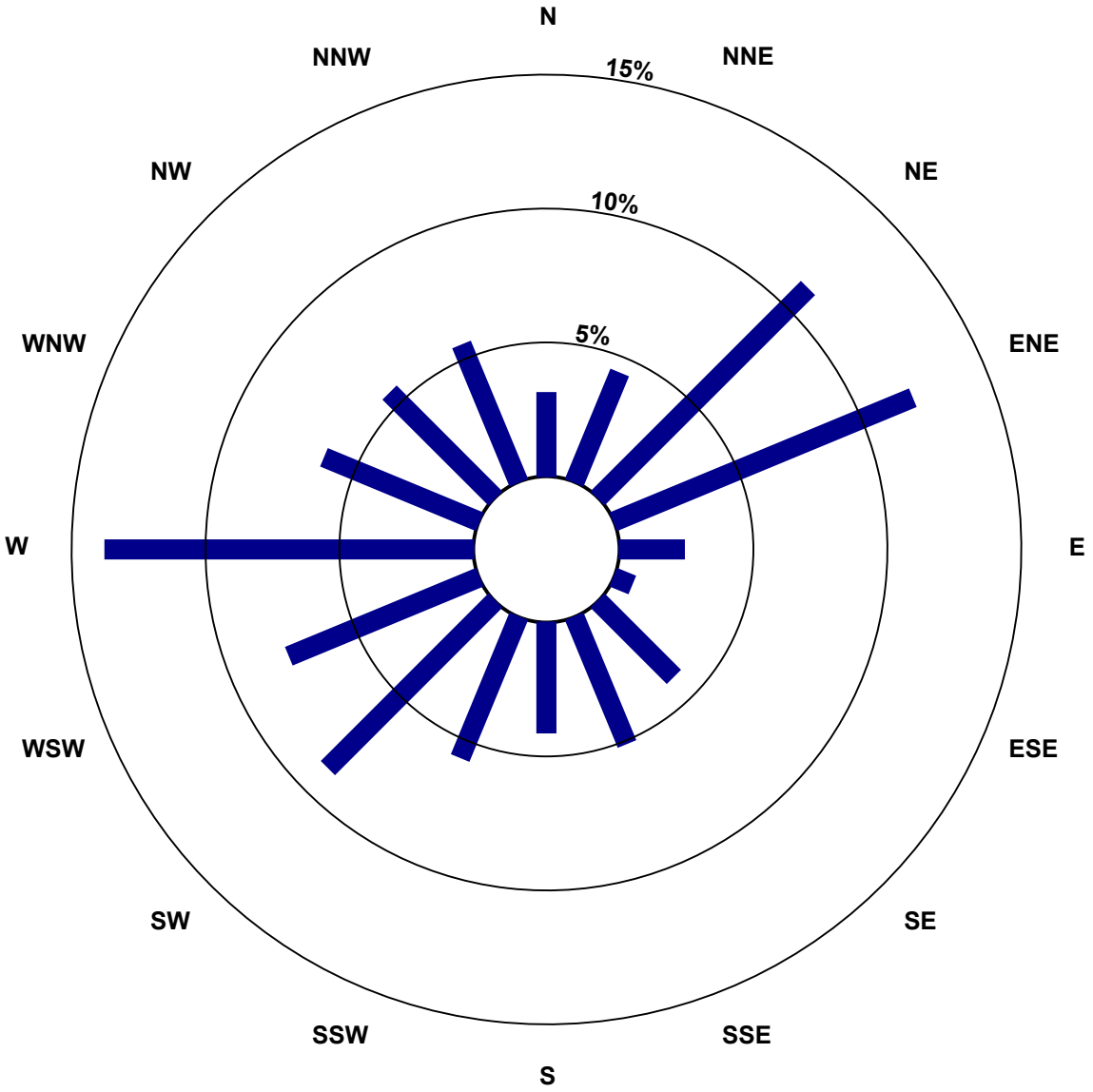
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Oxides (NO_X) - ppb

Stony Mountain



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

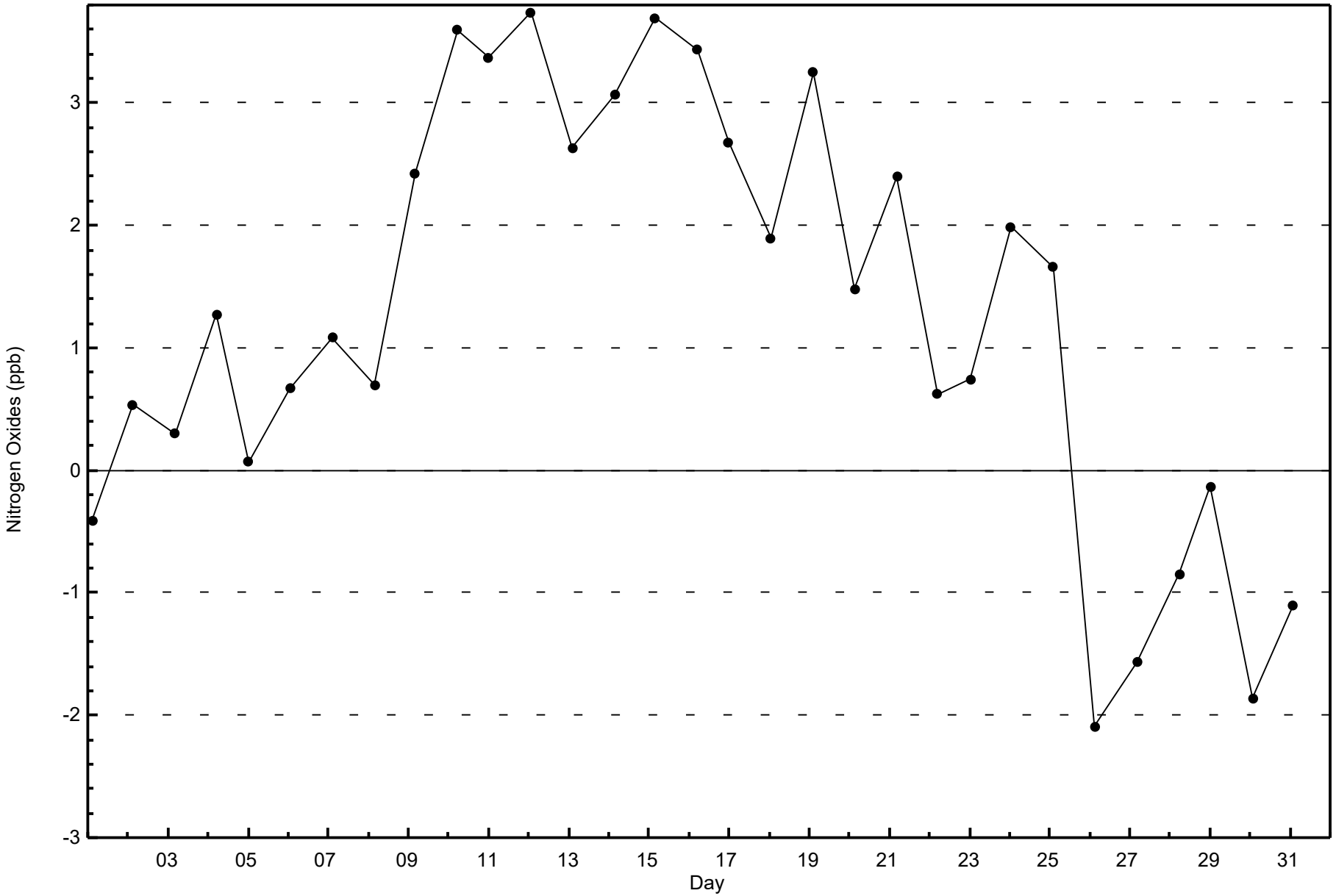
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Stony Mountain - March 2025

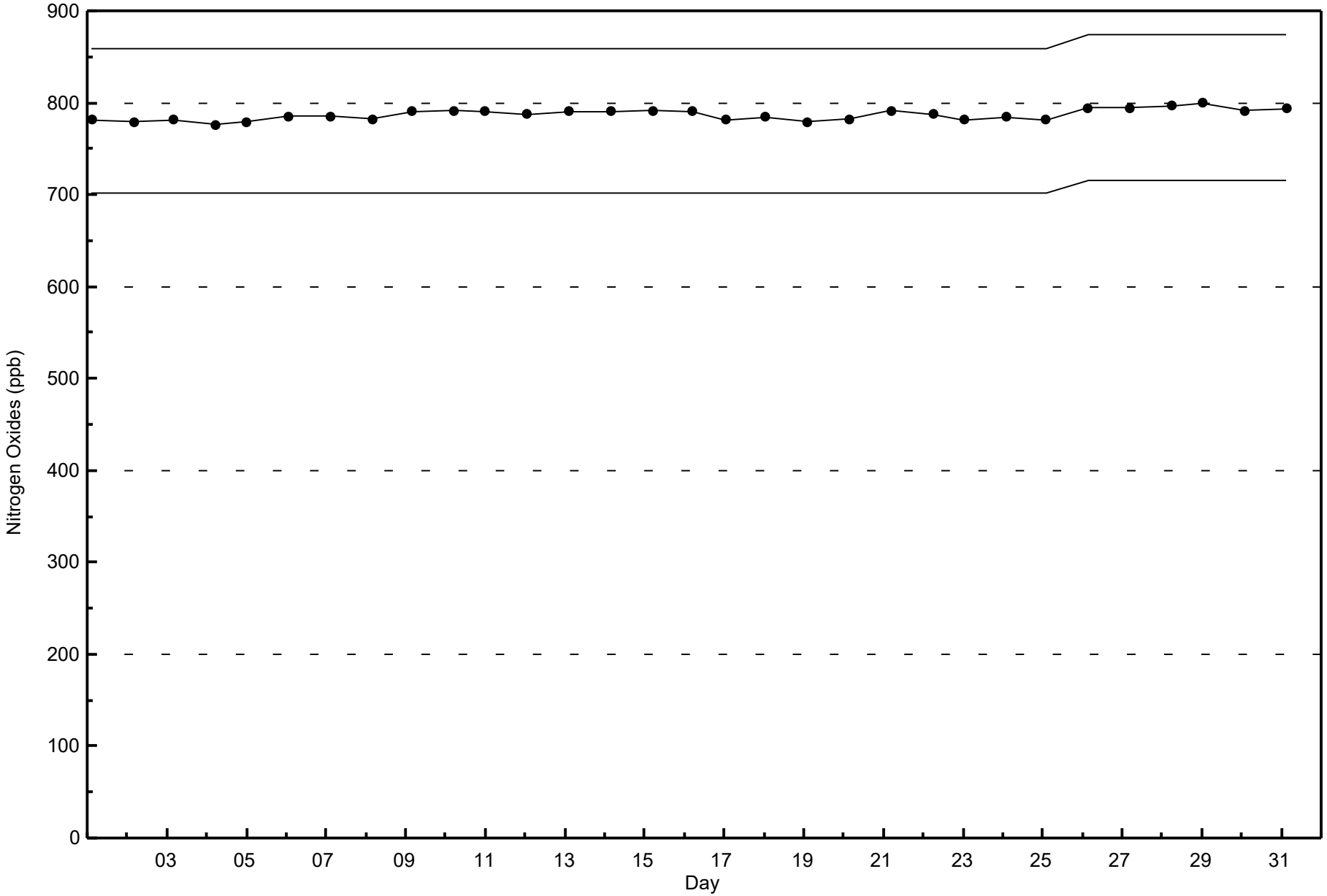


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Stony Mountain - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Stony Mountain - March 2025

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

Maximum Value: 48.1 ppb on Mar 8 15:00

Maximum Daily Average: 43.3 ppb on Mar 25

Minimum Value: 26.0 ppb on Mar 11 01:00

Minimum Daily Average: 30.3 ppb on Mar 11

Maximum Diurnal Average: 41.0 ppb at hour 17

Minimum Diurnal Average: 36.3 ppb at hour 8

Monthly Average: 38.76 ppb

Percentiles: P_1 = 26.9 P_{10} = 32.7 Q_1 = 36.4 Median = 39.3 Q_3 = 41.6 P_{90} = 44.1 P_{99} = 47.7

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	34.7	Z	35.9	35.8	37.6	36.3	35.5	36.9	35.9	37.0	41.4	45.9	45.9	46.4	47.0	46.8	47.1	47.0	46.7	46.7	45.9	45.9	45.3	44.4	42.1	47.1
2-Mar	42.7	42.4	Z	40.1	38.7	36.3	35.3	33.5	38.2	39.3	40.4	41.1	40.6	39.9	39.7	40.9	41.2	41.2	41.1	40.8	40.8	39.6	39.7	39.7	39.7	42.7
3-Mar	38.8	33.7	32.5	Z	34.0	34.9	35.2	35.0	35.0	34.9	36.4	38.7	39.8	40.5	40.3	40.2	40.8	40.4	40.5	41.0	40.5	41.2	41.7	41.7	38.2	41.7
4-Mar	41.8	41.7	41.5	40.5	Z	39.9	39.3	38.0	37.1	37.5	37.6	39.1	40.6	40.6	41.9	42.0	39.5	40.2	40.7	40.6	40.7	39.3	38.4	38.3	39.9	42.0
5-Mar	37.6	36.0	36.1	35.5	31.1	Z	31.5	31.7	35.2	37.7	39.2	40.8	42.2	43.6	44.7	44.6	43.9	43.3	42.8	42.1	42.4	42.3	42.4	42.0	39.5	44.7
6-Mar	Z	41.8	40.9	40.6	40.4	40.0	39.5	39.7	39.8	39.1	38.5	C	C	C	C	43.7	43.5	42.6	41.9	41.6	40.8	41.1	41.2	41.0	40.9	43.7
7-Mar	40.8	Z	39.9	39.6	39.2	38.8	39.3	38.9	38.7	39.3	40.3	41.9	43.0	43.4	44.2	44.3	44.0	43.2	43.3	43.0	43.1	42.6	42.5	42.5	41.5	44.3
8-Mar	42.1	42.0	Z	38.4	37.6	38.8	39.3	40.9	40.7	41.4	43.3	44.9	46.5	47.8	48.1	47.7	47.8	41.9	40.5	37.4	32.7	35.4	36.9	37.9	41.3	48.1
9-Mar	38.1	39.4	39.7	Z	38.6	38.4	39.0	36.4	34.1	34.5	32.7	31.9	31.4	31.2	30.3	29.9	30.1	31.5	31.5	30.6	30.5	29.2	27.8	27.6	33.2	39.7
10-Mar	27.8	26.8	26.7	26.2	Z	26.9	27.0	26.8	26.7	28.6	31.5	33.1	34.9	37.4	37.3	34.9	34.2	33.1	31.9	29.9	29.6	29.8	29.1	26.7	30.3	37.4
11-Mar	26.0	28.1	27.9	29.3	29.6	Z	28.4	28.8	28.2	27.5	28.0	28.9	28.9	29.3	29.6	30.5	30.9	31.5	32.7	33.4	34.0	34.3	35.1	35.3	30.3	35.3
12-Mar	Z	34.4	35.2	35.9	34.0	32.4	30.0	29.5	31.6	32.6	32.8	34.4	34.3	34.3	34.6	34.3	34.0	33.9	35.0	38.2	40.0	41.2	40.8	40.0	34.9	41.2
13-Mar	38.6	Z	37.7	37.3	37.6	37.7	37.7	38.3	39.0	40.3	40.3	40.6	40.6	39.8	40.0	41.3	41.7	40.9	39.8	39.5	39.6	39.3	38.1	36.9	39.2	41.7
14-Mar	36.9	36.9	Z	36.7	36.4	35.8	35.5	35.9	36.1	36.4	34.7	35.3	37.1	36.2	36.4	36.7	36.3	37.1	36.7	35.3	32.3	30.6	29.7	30.0	35.3	37.1
15-Mar	30.4	29.8	29.6	Z	31.6	33.0	34.1	34.9	37.3	38.0	38.6	39.7	39.8	40.3	40.4	40.2	39.5	38.7	36.8	35.3	36.2	36.8	36.7	36.4	36.3	40.4
16-Mar	36.8	37.5	37.5	36.5	Z	35.7	33.4	34.1	34.6	34.6	37.1	38.6	38.5	37.9	38.4	38.3	37.4	36.7	36.2	35.8	35.7	36.0	36.5	36.5	36.5	38.6
17-Mar	36.4	36.5	35.8	35.1	34.5	Z	33.3	33.0	33.5	34.2	34.4	35.6	35.5	35.8	36.4	36.7	36.4	36.5	36.3	35.9	34.1	32.1	29.4	29.0	34.6	36.7
18-Mar	Z	32.1	34.0	33.9	33.3	33.5	32.6	31.9	31.5	34.3	36.9	38.7	39.2	39.8	41.0	41.8	40.6	40.7	40.9	40.4	40.2	40.5	40.4	40.2	37.3	41.8
19-Mar	40.9	Z	41.7	42.5	41.7	40.0	39.9	38.5	37.6	40.4	40.9	41.1	41.3	42.2	42.1	42.4	43.7	43.8	43.8	44.0	43.6	43.8	44.8	44.1	41.9	44.8
20-Mar	45.0	40.8	Z	36.1	37.3	38.1	37.7	37.3	37.4	37.3	37.2	38.3	38.6	39.1	39.1	39.7	40.5	41.9	42.0	43.2	43.5	42.8	41.8	41.5	39.8	45.0
21-Mar	40.4	41.5	41.8	Z	41.7	40.7	39.4	38.4	37.6	38.7	39.4	40.5	42.2	44.4	47.6	47.5	47.8	47.8	46.9	44.2	42.5	42.2	41.8	41.9	42.5	47.8
22-Mar	41.5	41.1	40.3	40.3	Z	39.4	39.2	38.8	38.3	37.9	38.4	39.8	42.0	43.4	44.2	46.5	46.9	46.8	45.8	45.0	44.9	44.5	44.2	43.4	42.3	46.9
23-Mar	43.1	42.8	42.8	42.2	41.8	Z	42.8	39.6	40.0	40.5	43.2	43.9	43.5	44.1	44.1	44.5	44.6	44.5	44.3	44.4	43.8	43.8	44.0	43.2	43.1	44.6
24-Mar	Z	42.7	42.0	42.4	43.0	43.6	43.8	42.6	41.6	42.7	45.3	46.5	46.1	45.8	43.0	41.1	41.6	41.9	44.0	42.7	40.4	40.2	39.7	39.9	42.7	46.5
25-Mar	40.2	Z	41.4	41.8	42.6	41.8	40.4	39.5	39.7	40.2	42.6	44.6	45.4	46.0	47.0	47.1	47.2	45.6	45.5	45.4	44.7	44.7	43.6	38.1	43.3	47.2
26-Mar	35.4	34.1	Z	35.5	36.2	38.2	37.2	36.0	35.6	36.5	38.1	39.5	39.6	40.5	41.8	41.5	40.4	39.2	38.5	38.4	39.7	39.5	38.5	38.6	38.2	41.8
27-Mar	39.0	38.5	38.1	Z	37.4	36.2	35.0	38.0	36.8	34.9	34.8	36.6	37.4	37.1	37.9	38.3	40.7	41.8	40.9	41.1	40.8	40.1	40.9	41.2	38.4	41.8
28-Mar	40.7	40.3	39.8	39.3	Z	38.9	38.5	37.4	38.4	38.3	38.3	38.1	37.2	37.0	37.4	37.8	40.0	39.1	38.3	37.6	37.9	37.2	36.7	36.6	38.3	40.7
29-Mar	36.6	36.8	36.5	36.7	37.7	Z	38.4	35.7	37.4	37.1	37.9	38.6	39.1	40.0	40.5	40.6	40.8	40.4	40.1	40.1	39.4	39.2	39.4	40.4	38.7	40.8
30-Mar	Z	40.3	38.3	38.5	38.5	40.0	41.2	41.6	41.6	44.0	44.7	45.6	46.6	46.8	47.0	47.7	47.7	46.3	45.2	43.2	42.4	41.4	40.9	41.4	43.1	47.7
31-Mar	41.7	Z	39.9	39.8	39.9	38.7	36.8	36.2	36.0	37.9	38.4	38.8	38.5	38.9	39.7	40.3	41.1	41.0	40.2	39.0	37.7	36.7	36.9	35.7	38.7	41.7
	38.2	37.5	37.4	37.6	37.4	37.5	36.7	36.3	36.5	37.2	38.2	39.4	39.9	40.3	40.7	41.0	41.0	40.7	40.3	39.9	39.4	39.1	38.9	38.5	Diurnal Average	
	45.0	42.8	42.8	42.5	43.0	43.6	43.8	42.6	41.6	44.0	45.3	46.5	46.6	47.8	48.1	47.7	47.8	47.8	46.9	46.7	45.9	45.9	45.3	44.4	Diurnal Maximum	

Z - zerospan C - Calibration

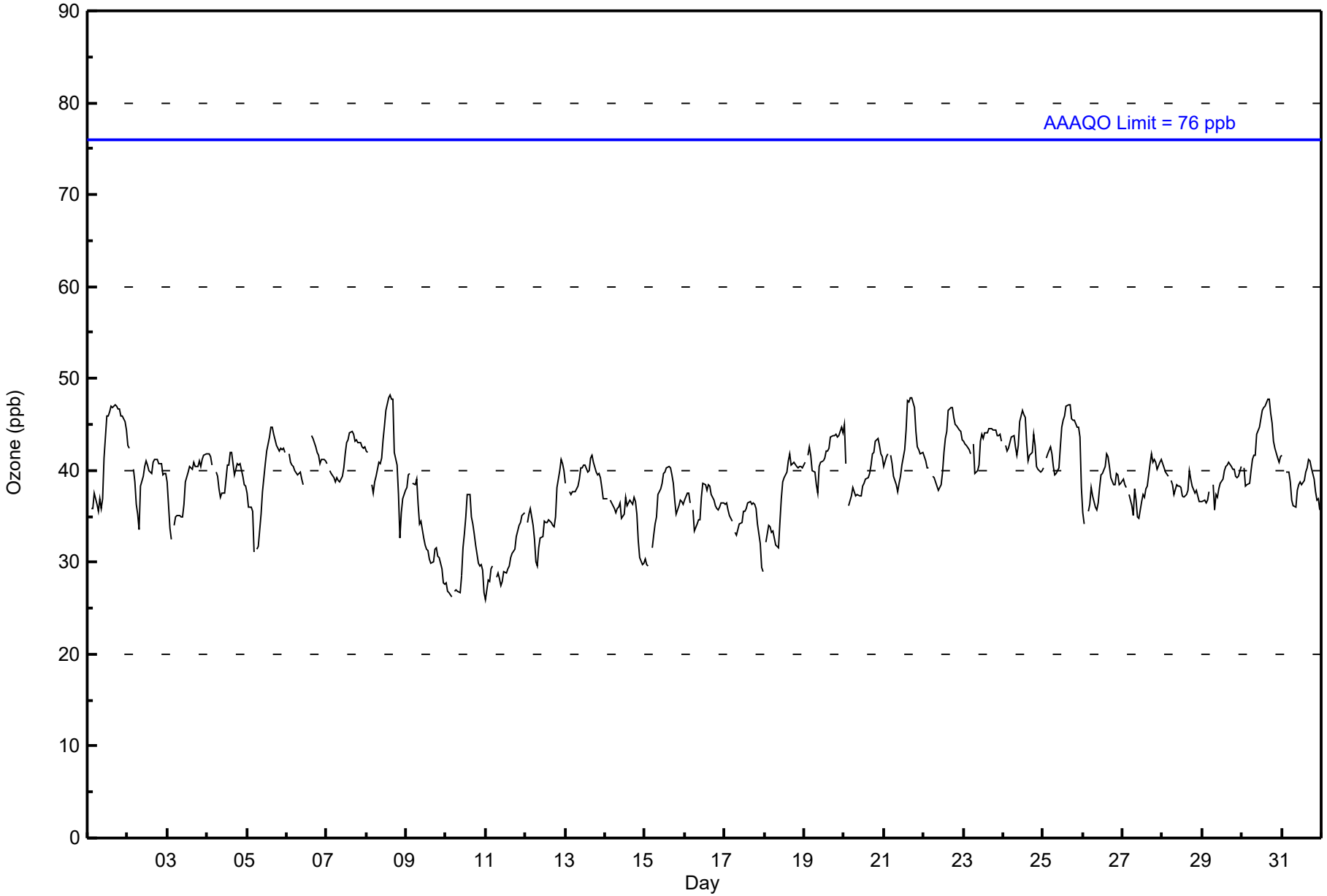
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Stony Mountain - March 2025



Ozone (O_3) - ppb
Stony Mountain - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
21 - 50	709	100.00	100.00
51 - 82	0	0.00	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Ozone (O_3) - ppb

Stony Mountain - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 - 50	24	30	77	85	17	7	28	35	29	40	63	55	97	45	40	37	709
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	24	30	77	85	17	7	28	35	29	40	63	55	97	45	40	37	709

Total Number of Valid Hours: 709

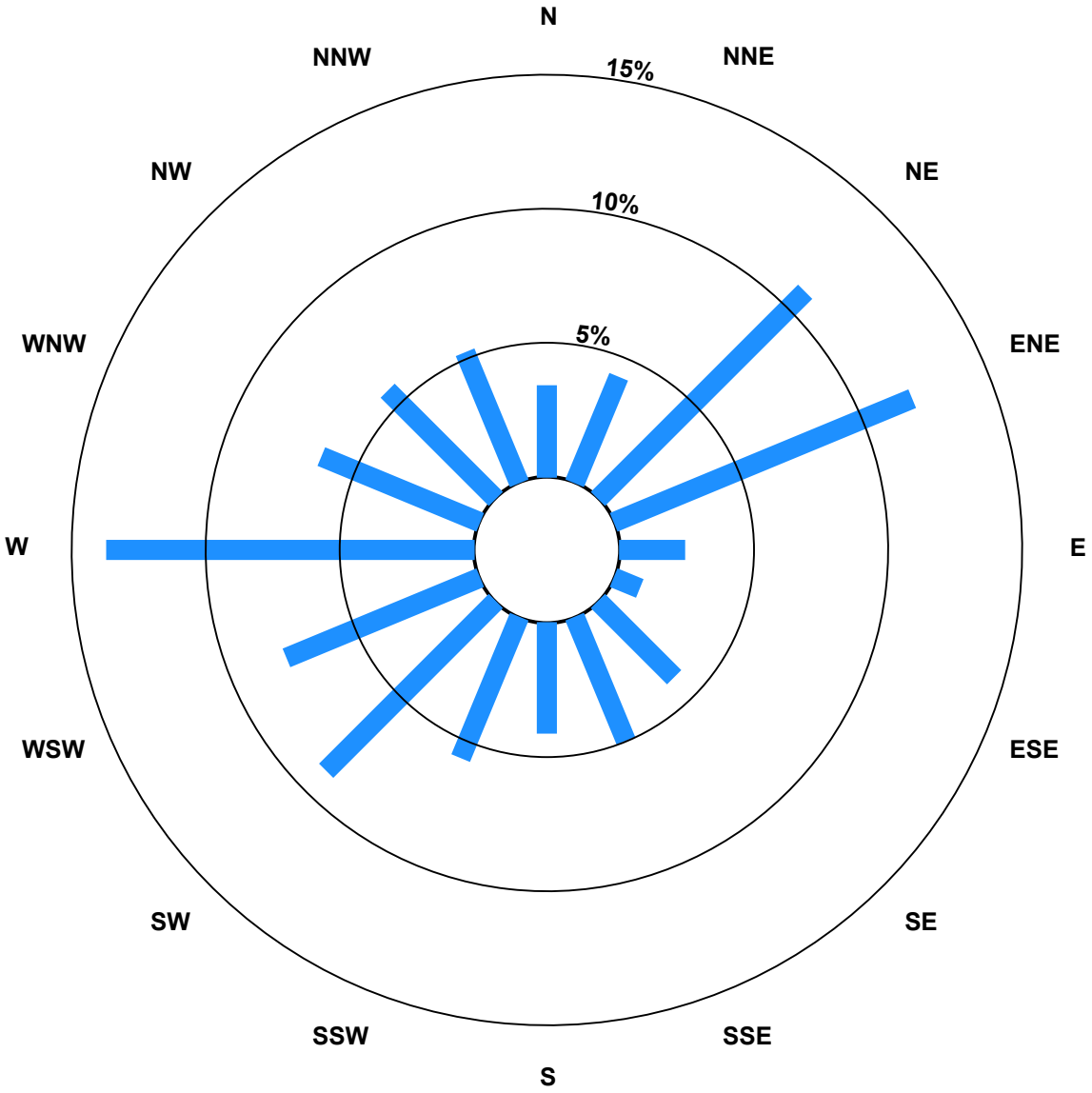
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Ozone (O_3) - ppb

Stony Mountain



Classes (ppb)

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

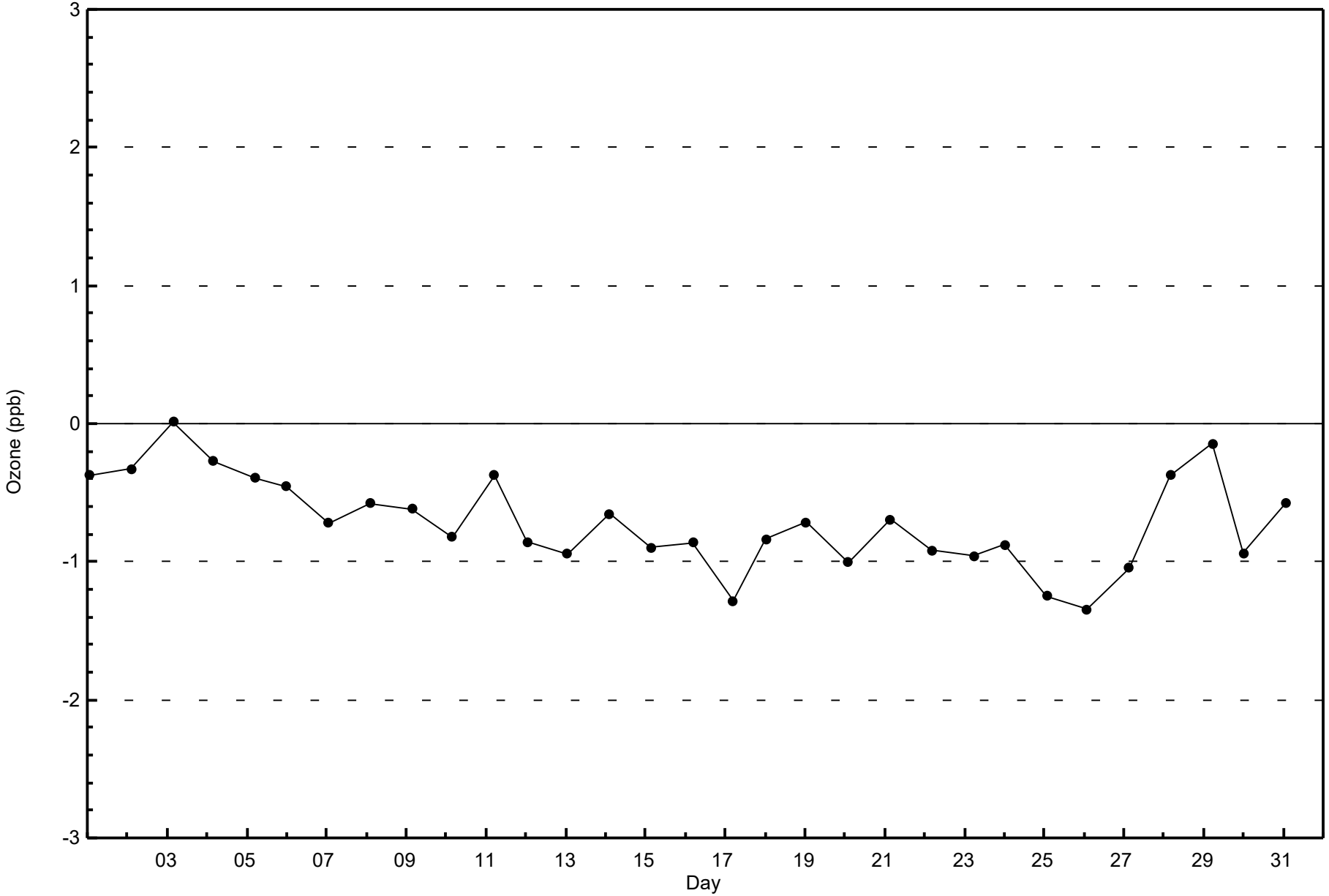
Total Number of Valid Hours: 709

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Stony Mountain - March 2025

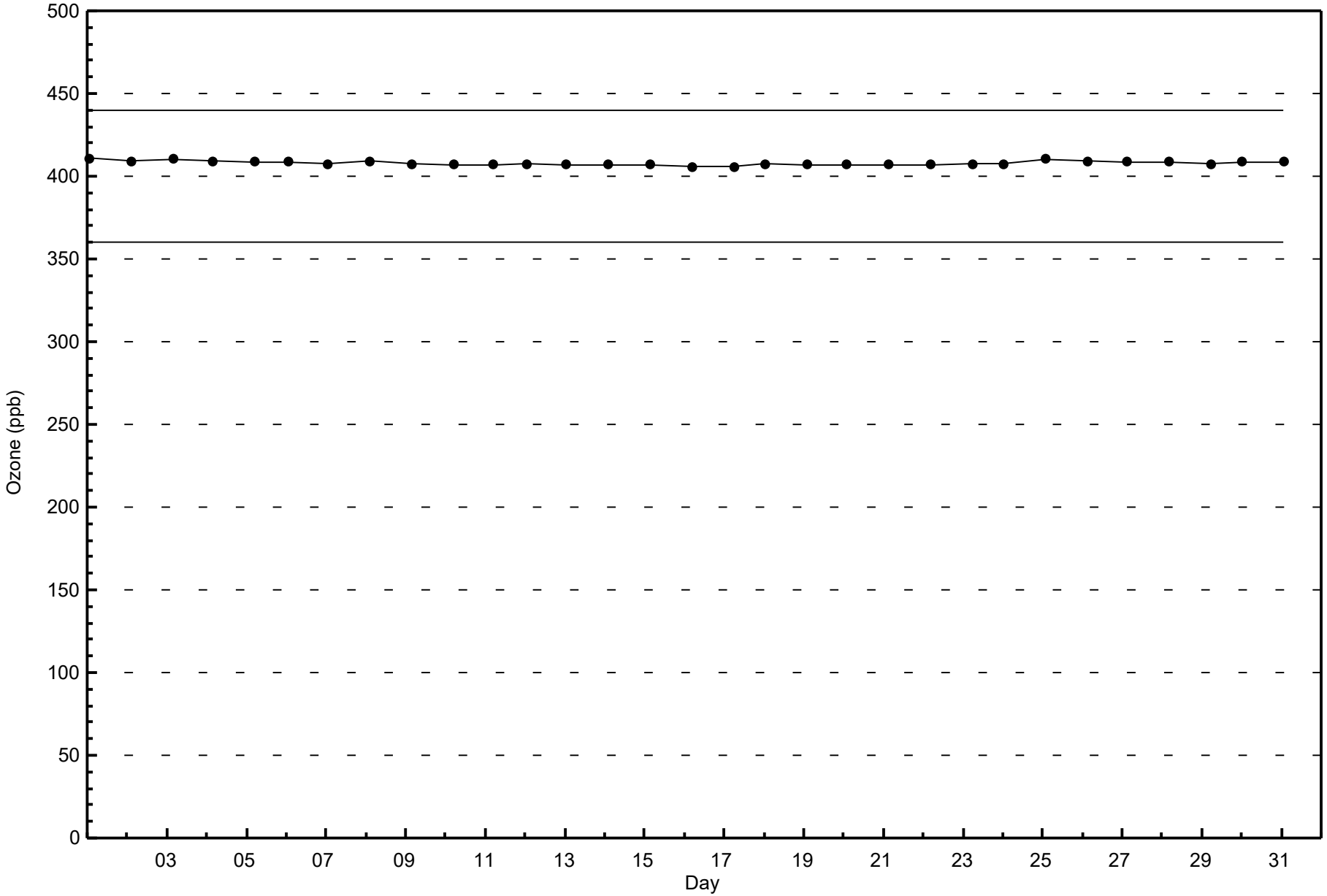


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Stony Mountain - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Stony Mountain - March 2025

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

Maximum Value: 6.3 $\mu g/m^3$ on Mar 21 09:00

Maximum Daily Average: 4.1 $\mu g/m^3$ on Mar 17

Minimum Value: 0.2 $\mu g/m^3$ on Mar 25 22:00

Minimum Daily Average: 0.5 $\mu g/m^3$ on Mar 25

Maximum Diurnal Average: 2.2 $\mu g/m^3$ at hour 9

Minimum Diurnal Average: 1.7 $\mu g/m^3$ at hour 19

Monthly Average: 1.89 $\mu g/m^3$

Percentiles: P_1 = 0.3 P_{10} = 0.7 Q_1 = 1.1 Median = 1.6 Q_3 = 2.5 P_{90} = 3.5 P_{99} = 5.6

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	1
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	1.4	1.5	1.5	1.5	1.3	1.5	2.2	2.5	2.8	2.9	3.6	3.8	1.7	1.3	1.1	1.1	1.0	0.9	0.8	0.9	0.9	1.0	1.2	1.5	1.7	3.8
2-Mar	1.9	1.9	2.4	2.8	3.6	3.9	4.2	4.7	3.4	1.9	1.6	1.5	1.6	2.0	3.0	3.4	3.6	1.8	1.5	1.1	0.8	1.4	1.2	0.7	2.3	4.7
3-Mar	0.4	1.5	2.1	1.9	2.9	2.7	3.0	2.9	2.9	3.1	3.0	2.7	2.5	2.0	1.6	1.5	1.1	0.8	0.6	0.6	0.5	0.4	0.3	0.4	1.7	3.1
4-Mar	0.5	0.5	0.5	0.7	1.4	0.8	0.8	1.0	1.1	1.4	2.2	1.5	1.2	1.9	0.9	0.8	1.8	1.6	1.4	1.4	1.7	2.9	4.0	4.8	1.5	4.8
5-Mar	4.9	4.1	2.5	1.9	2.5	2.4	2.7	3.1	2.5	2.3	2.3	2.3	1.7	1.5	1.6	1.4	0.7	0.5	0.4	0.5	0.5	0.5	0.5	0.7	1.8	4.9
6-Mar	0.9	0.8	1.0	1.3	1.6	1.6	1.5	1.4	1.4	2.1	2.7	2.4	2.4	2.0	1.5	1.6	1.7	1.6	1.3	1.2	1.1	1.1	1.0	1.0	1.5	2.7
7-Mar	1.0	1.1	1.0	1.1	1.2	1.1	1.2	1.3	1.5	1.3	1.3	1.1	0.9	0.8	0.7	0.6	0.5	0.6	0.4	0.4	0.4	0.5	0.7	0.7	0.9	1.5
8-Mar	0.6	0.7	0.7	0.7	0.8	0.8	0.9	0.9	0.9	0.7	0.5	0.4	0.4	0.3	0.4	0.4	0.4	0.6	0.7	1.2	2.6	2.0	1.4	0.9	0.8	2.6
9-Mar	0.7	0.5	0.4	0.5	0.5	0.6	0.7	0.9	1.1	1.0	1.0	0.9	1.0	1.0	1.1	1.2	1.2	1.2	1.3	1.4	1.4	1.6	1.8	1.6	1.0	1.8
10-Mar	1.6	1.6	1.7	1.8	1.6	1.7	1.6	1.7	3.2	2.5	1.3	0.9	0.8	0.9	1.0	1.3	1.3	1.5	2.0	2.7	3.5	3.3	3.0	2.7	1.9	3.5
11-Mar	2.3	2.1	2.2	2.1	2.2	1.6	1.2	1.0	1.1	1.4	2.0	2.8	3.2	3.1	3.2	3.2	3.3	2.6	2.6	2.2	1.5	1.3	1.1	1.2	2.1	3.3
12-Mar	1.4	1.3	1.2	0.9	1.0	1.1	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.4	1.5	1.7	1.8	1.9	2.1	1.7	1.4	1.2	1.0	1.0	1.4	2.1
13-Mar	1.0	1.0	1.2	1.1	1.1	1.1	1.2	1.2	1.2	1.1	1.0	0.9	0.9	1.0	1.3	1.4	1.6	1.8	1.6	1.4	1.4	1.4	1.5	1.5	1.2	1.8
14-Mar	1.3	1.3	1.3	1.3	1.3	1.3	1.5	1.2	1.3	1.4	1.6	1.6	1.5	1.8	2.3	2.0	2.2	1.8	1.9	2.0	3.1	3.8	3.7	3.1	1.9	3.8
15-Mar	2.9	3.0	3.0	2.8	2.6	2.3	2.0	1.7	1.6	1.6	1.5	1.3	1.4	1.5	1.4	1.4	1.5	1.6	1.7	2.2	2.2	2.5	2.2	2.2	2.0	3.0
16-Mar	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.8	1.8	1.8	1.9	2.0	2.1	3.3	4.8	5.0	4.5	4.5	3.6	3.3	3.0	2.8	2.7	5.0
17-Mar	2.9	2.9	3.0	3.0	3.1	3.2	3.3	3.2	3.4	3.8	4.4	5.7	5.8	6.0	5.6	5.4	5.1	5.1	4.6	4.0	3.6	3.8	4.2	4.1	4.1	6.0
18-Mar	3.7	3.3	3.0	2.9	2.9	2.9	2.8	3.1	3.4	3.3	3.2	2.8	2.8	2.8	2.6	2.6	3.3	3.5	3.7	3.9	3.9	3.0	2.5	2.1	3.1	3.9
19-Mar	1.6	1.2	1.1	1.0	0.9	1.0	1.1	1.1	1.1	1.2	1.3	1.0	1.0	0.9	0.9	1.0	1.2	1.2	1.2	1.0	1.1	1.7	2.3	2.3	1.2	2.3
20-Mar	2.3	2.0	2.5	2.9	2.9	2.7	2.4	2.3	2.4	2.3	2.3	2.1	2.1	1.8	1.8	1.6	1.6	1.4	1.3	1.1	1.0	0.9	1.1	1.6	1.9	2.9
21-Mar	1.7	1.6	1.4	1.4	1.5	2.1	3.5	5.9	6.3	4.7	3.0	3.2	3.5	3.1	3.5	3.6	3.6	3.6	3.4	3.0	2.8	2.7	2.7	2.8	3.1	6.3
22-Mar	2.9	3.0	3.1	3.1	3.0	3.0	3.2	3.4	3.9	4.3	4.8	4.8	4.0	3.3	2.4	1.4	1.4	0.9	0.7	0.7	0.7	0.7	0.7	0.7	2.5	4.8
23-Mar	0.8	0.8	0.9	0.9	0.9	0.9	0.8	0.9	0.8	0.8	0.8	0.9	0.7	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.7	0.9
24-Mar	0.5	0.5	0.8	1.2	1.3	1.4	1.5	1.2	1.1	1.5	1.8	1.5	1.5	2.2	1.3	1.2	0.9	0.7	0.5	0.5	0.4	0.6	0.8	0.6	1.1	2.2
25-Mar	0.5	0.5	0.5	0.5	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.7	0.6	0.7	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	1.5	0.5	1.5
26-Mar	2.2	2.3	2.1	2.2	2.4	2.2	1.9	2.0	1.9	1.9	1.7	1.7	1.7	1.7	1.7	1.6	1.5	1.5	1.5	1.6	1.5	1.4	1.5	1.5	1.8	2.4
27-Mar	1.7	1.8	1.7	1.7	1.8	1.7	1.7	1.6	1.6	1.6	1.7	1.6	1.6	1.7	1.7	C	1.4	1.7	1.7	1.7	1.5	1.5	1.6	1.6	1.6	1.8
28-Mar	1.5	1.5	1.6	1.6	1.5	1.5	1.5	1.7	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.8	1.8	1.7	1.9	1.8	1.7	2.0	2.3	1.9	1.7	2.3
29-Mar	2.0	2.1	1.7	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.6	1.6	1.6	1.7	1.5	1.5	1.5	1.5	1.5	1.4	1.5	1.6	1.6	1.7	1.7	2.1
30-Mar	1.8	1.7	1.8	2.4	3.6	5.4	6.2	6.1	5.5	5.7	3.9	3.4	3.9	4.1	3.7	4.8	3.9	1.6	1.7	2.6	3.2	3.3	3.1	3.3	3.6	6.2
31-Mar	3.3	3.3	3.6	3.9	3.9	3.7	4.0	4.2	3.9	3.5	3.4	3.5	3.7	3.9	3.2	3.1	3.2	3.1	2.7	2.6	2.7	2.8	2.7	2.5	3.3	4.2
	1.7	1.7	1.7	1.8	1.9	2.0	2.1	2.2	2.2	2.2	2.1	2.0	2.0	2.0	1.8	1.9	1.9	1.7	1.7	1.7	1.7	1.8	1.8	1.8	Diurnal Average	
	4.9	4.1	3.6	3.9	3.9	5.4	6.2	6.1	6.3	5.7	4.8	5.7	5.8	6.0	5.6	5.4	5.1	5.1	4.6	4.5	3.9	3.8	4.2	4.8	Diurnal Maximum	

C - Calibration

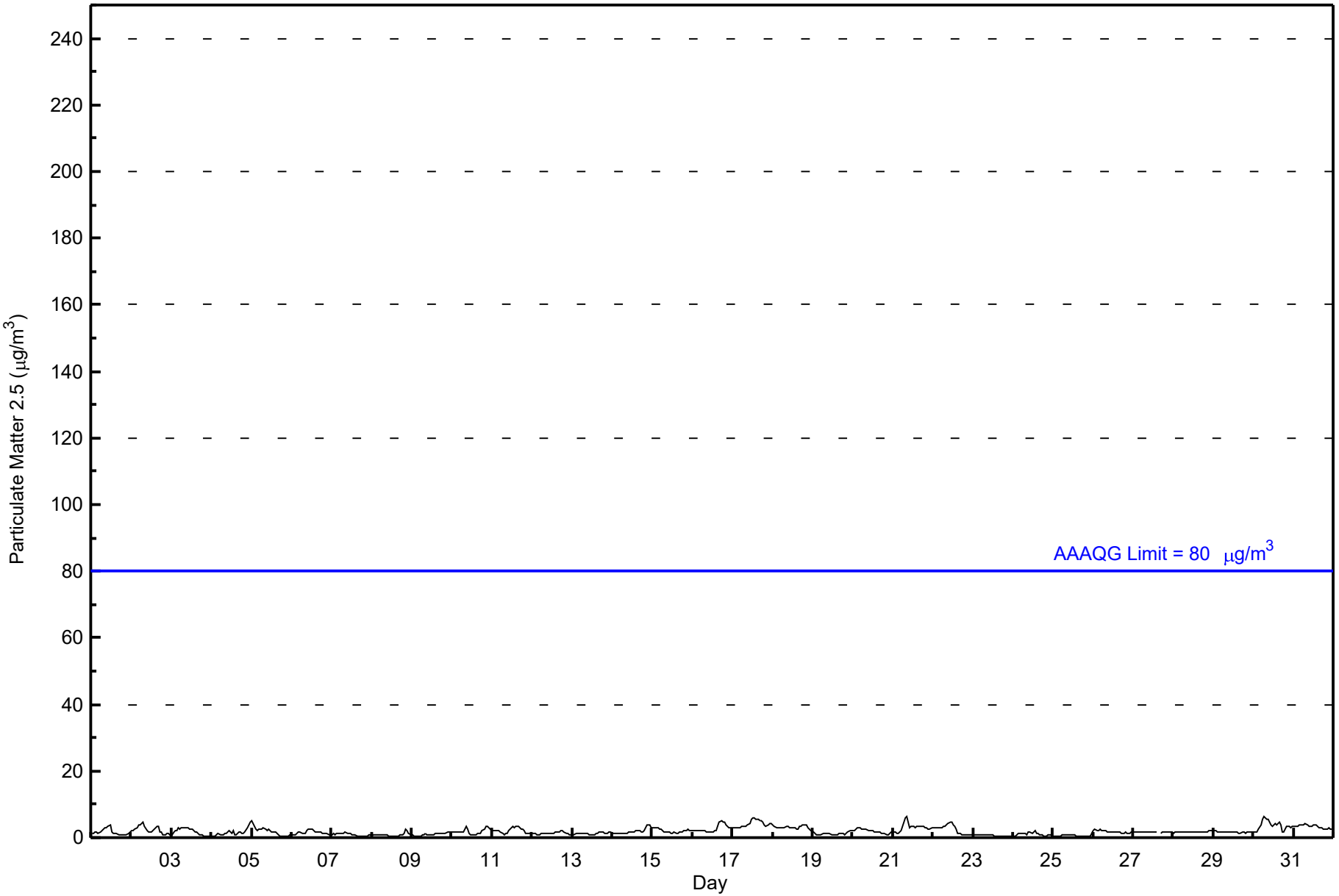
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Stony Mountain - March 2025



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

Stony Mountain - March 2025

Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	733	98.65	98.65
6 - 15	10	1.35	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: 743

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

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

Stony Mountain - March 2025

Concentration Ranges ($\mu g/m^3$)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	25	33	79	89	17	7	26	38	30	42	63	58	102	46	39	39	733
6 - 15	0	0	0	0	0	0	2	0	0	1	3	0	2	1	1	0	10
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	25	33	79	89	17	7	28	38	30	43	66	58	104	47	40	39	743

Total Number of Valid Hours: 743

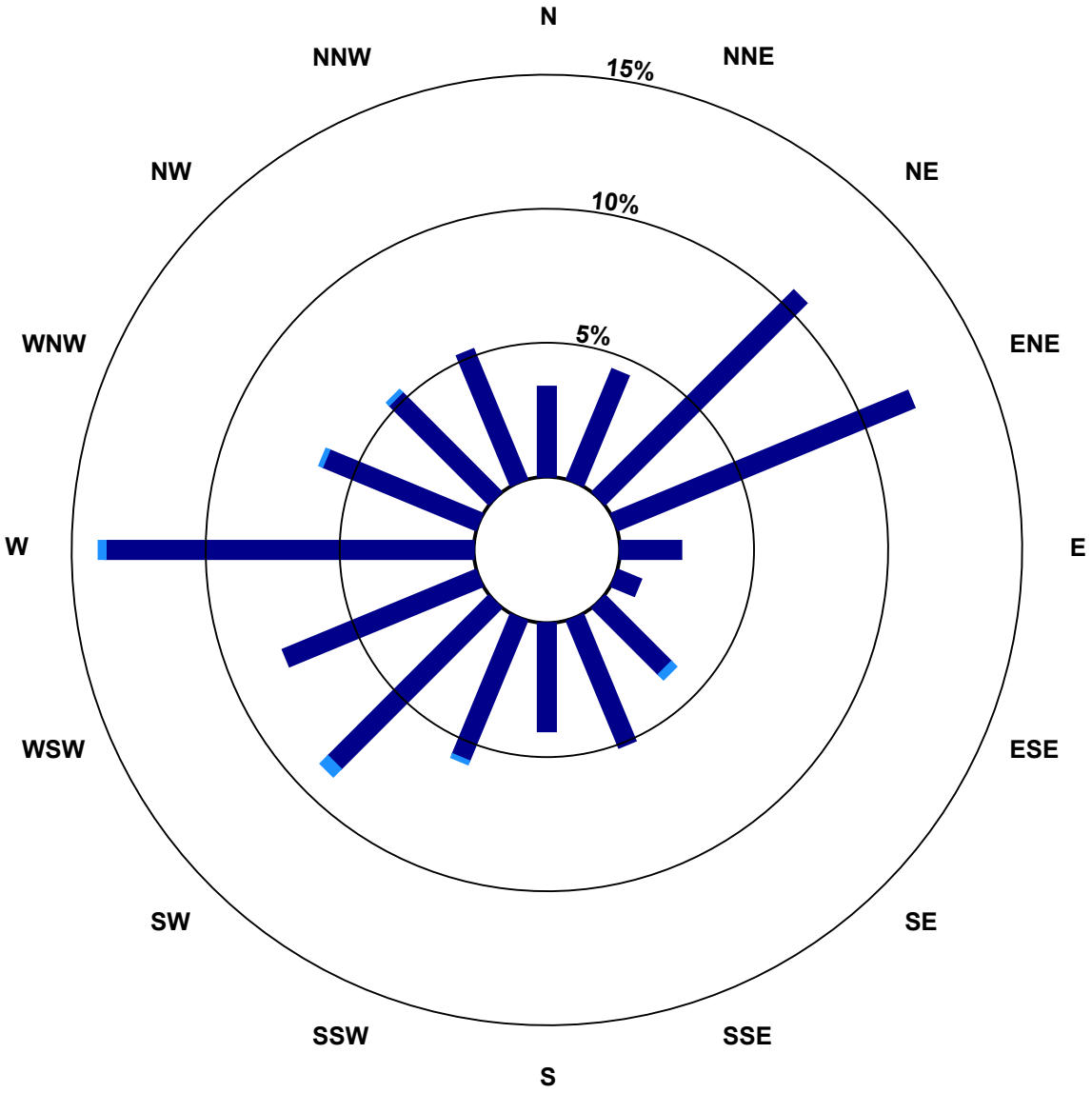
Total Number of Hours: 744

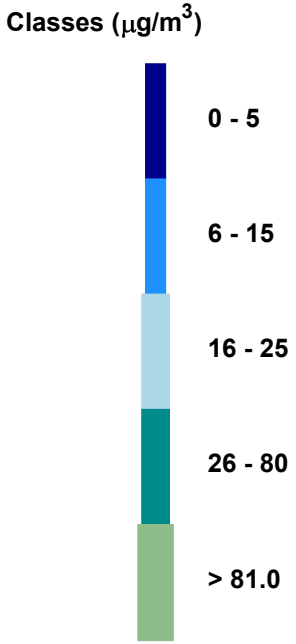
Wood Buffalo Environmental Association

Wind Rose Mar 2025

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

Stony Mountain





Total Number of Valid Hours: 743

Wood Buffalo Environmental Association

Summary of Hour Averages

Carbon Monoxide (CO) - ppm

Stony Mountain - March 2025

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

Maximum Value: 0.2 ppm on Mar 2 08:00

Maximum Daily Average: 0.2 ppm on Mar 24

Minimum Value: 0.1 ppm on Mar 29 11:00

Minimum Daily Average: 0.2 ppm on Mar 6

Maximum Diurnal Average: 0.2 ppm at hour 6

Minimum Diurnal Average: 0.2 ppm at hour 16

Monthly Average: 0.18 ppm

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

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	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
2-Mar	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
3-Mar	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	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
4-Mar	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
5-Mar	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
6-Mar	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
7-Mar	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
8-Mar	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
9-Mar	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
10-Mar	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-Mar	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
12-Mar	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
13-Mar	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-Mar	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
15-Mar	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-Mar	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
17-Mar	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
18-Mar	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
19-Mar	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
20-Mar	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-Mar	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
22-Mar	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
23-Mar	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
24-Mar	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
25-Mar	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
26-Mar	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
27-Mar	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
28-Mar	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-Mar	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
30-Mar	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	0.2	0.2	0.2
31-Mar	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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	
	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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 Maximum	

Z - zerospan C - Calibration

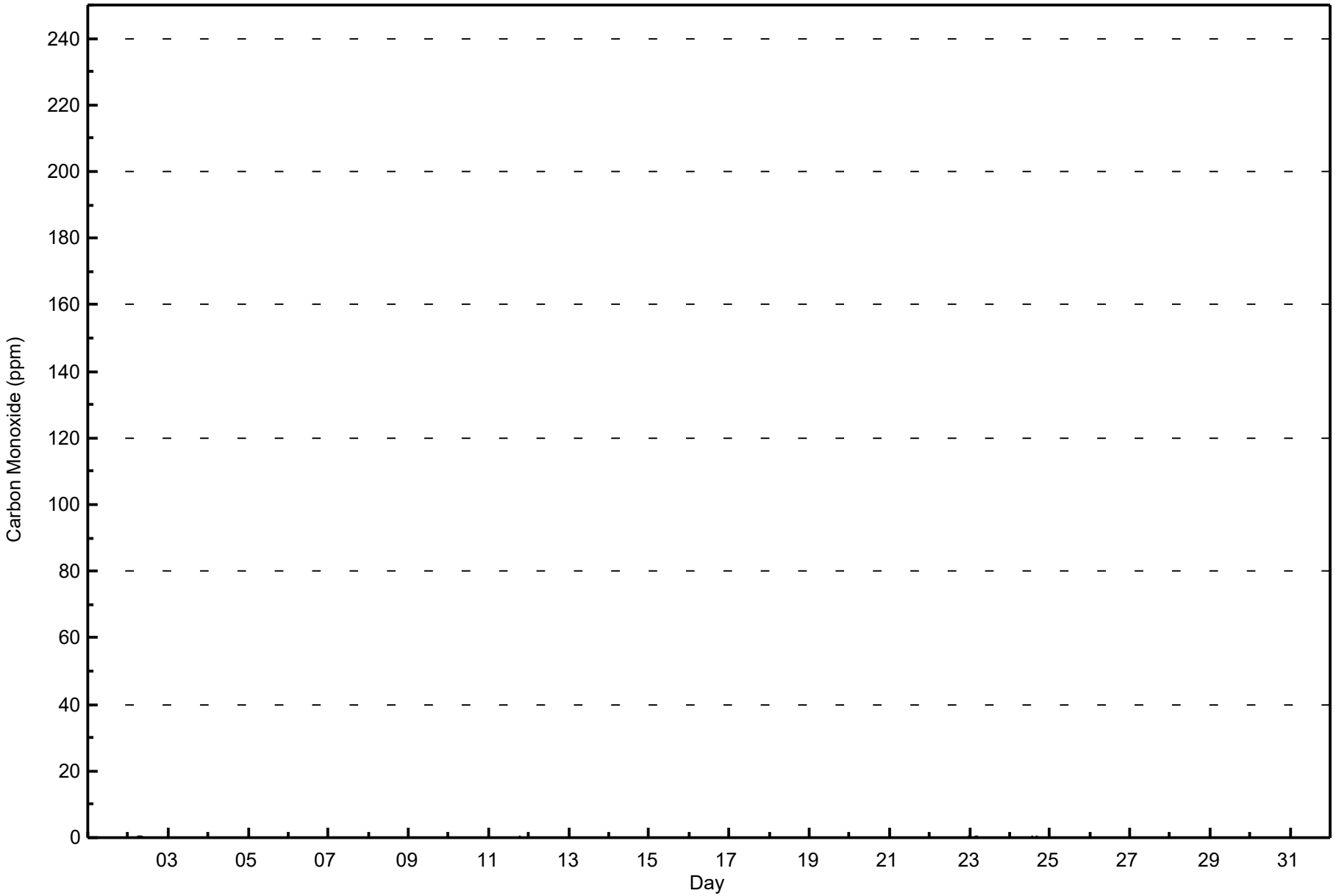
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm

Wood Buffalo Environmental Association

Hourly Averages

Carbon Monoxide (CO) - ppm

Stony Mountain - March 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.3	709	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: 709

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Carbon Monoxide (CO) - ppm

Stony Mountain - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.3	21	32	77	85	17	7	27	37	27	41	62	56	100	46	39	35	709
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	21	32	77	85	17	7	27	37	27	41	62	56	100	46	39	35	709

Total Number of Valid Hours: 709

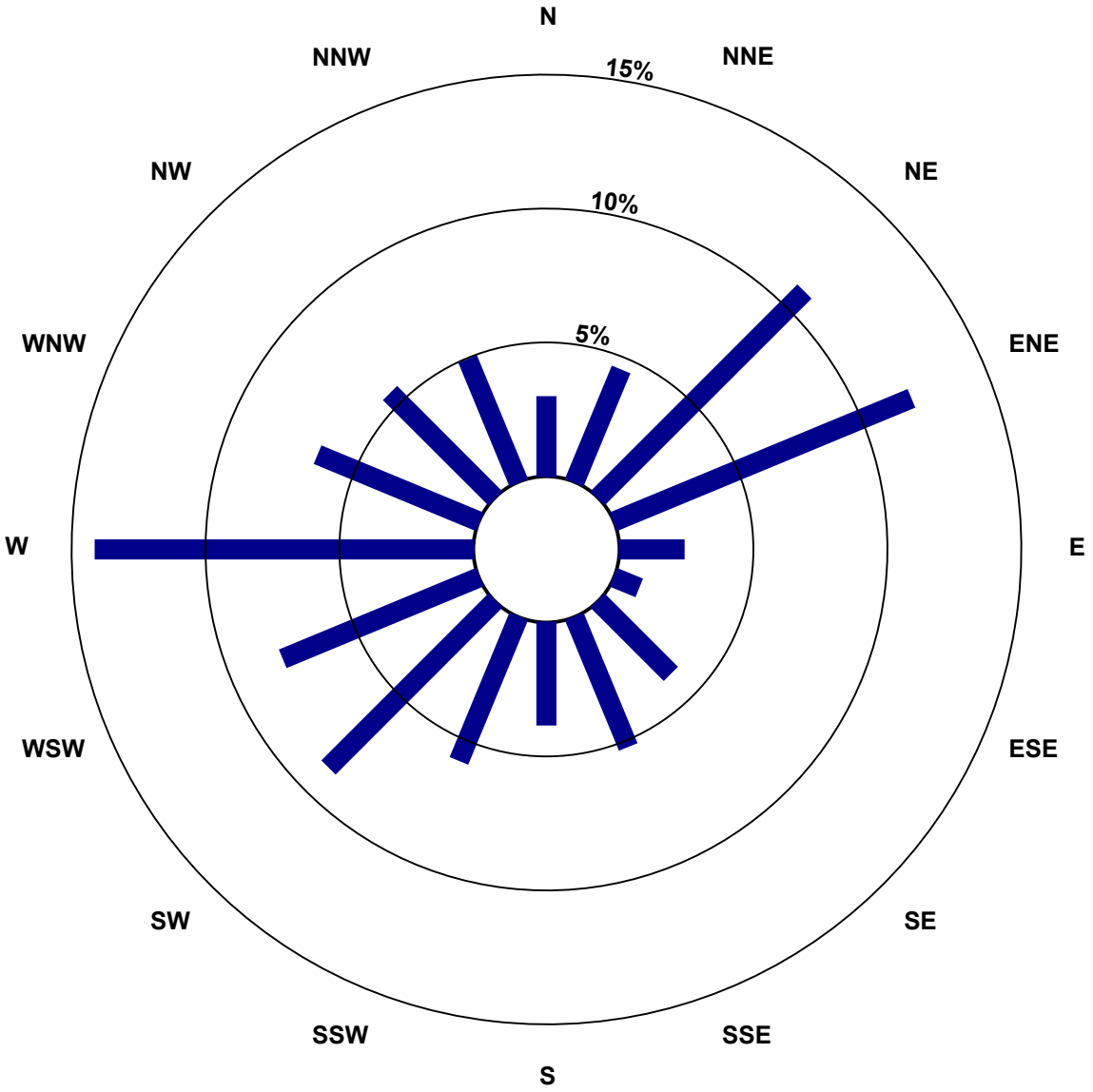
Total Number of Hours: 744

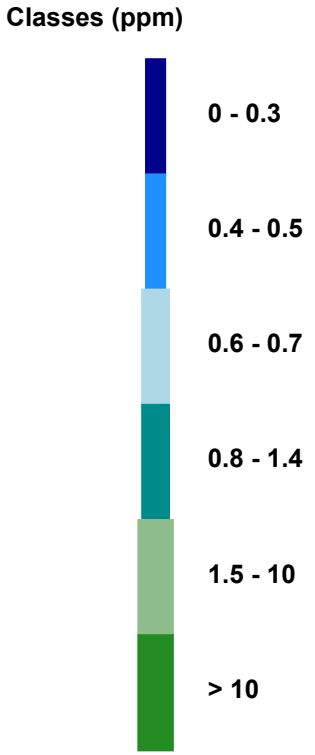
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Carbon Monoxide (CO) - ppm

Stony Mountain





Total Number of Valid Hours: 709

Wood Buffalo Environmental Association

Summary of Hour Averages

Carbon Dioxide (CO_2) - ppm

Stony Mountain - March 2025

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

Maximum Value: 458.1 ppm on Mar 2 08:00

Maximum Daily Average: 449.7 ppm on Mar 18

Minimum Value: 437.9 ppm on Mar 28 00:00

Minimum Daily Average: 440.2 ppm on Mar 28

Maximum Diurnal Average: 447.1 ppm at hour 8

Minimum Diurnal Average: 445.4 ppm at hour 23

Monthly Average: 446.14 ppm

Percentiles: P_1 = 438.8 P_{10} = 442.5 Q_1 = 444.6 Median = 446.1 Q_3 = 448.0 P_{90} = 449.5 P_{99} = 453.7

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	446.8	446.7	447.0	447.6	Z	448.5	448.8	448.7	449.8	449.7	447.5	444.9	444.7	444.3	444.1	444.9	444.4	444.3	443.9	444.1	444.7	444.7	445.7	447.0	446.2	449.8
2-Mar	449.3	449.2	451.6	451.6	452.8	Z	456.2	458.1	452.6	448.8	447.1	446.9	446.9	447.5	447.1	446.1	445.8	444.5	444.3	444.7	444.1	444.6	444.5	443.6	448.2	458.1
3-Mar	Z	447.5	448.5	446.5	446.5	445.8	445.4	445.1	445.6	445.7	444.9	447.7	453.8	449.4	447.9	446.7	444.8	444.9	444.3	443.2	444.0	443.8	443.1	442.9	446.0	453.8
4-Mar	442.9	Z	443.3	443.6	443.8	443.4	443.9	444.6	445.4	445.0	445.8	444.9	444.3	445.2	444.4	444.6	446.8	446.4	445.9	446.0	446.0	447.1	447.8	447.5	445.1	447.8
5-Mar	447.7	448.5	Z	449.0	451.4	450.4	449.0	448.5	447.0	446.3	445.5	444.6	444.4	444.9	444.3	443.9	443.7	443.7	443.9	444.2	443.9	443.6	443.7	444.5	445.9	451.4
6-Mar	445.4	445.9	446.2	Z	446.1	446.1	446.6	447.0	446.8	447.8	448.6	448.2	452.7	453.5	452.1	451.3	450.6	449.5	448.7	447.2	447.8	446.8	446.1	445.9	448.1	453.5
7-Mar	445.9	445.9	446.0	446.1	Z	446.6	446.4	446.9	447.1	446.9	446.2	445.9	445.6	445.3	445.0	445.0	444.9	445.2	444.8	445.2	445.1	445.4	444.7	444.3	445.7	447.1
8-Mar	444.7	444.7	446.1	448.4	448.6	Z	447.5	446.1	446.3	445.5	444.7	444.5	444.3	444.5	444.4	444.4	444.3	445.7	446.1	447.7	450.2	449.1	447.2	446.6	446.2	450.2
9-Mar	Z	445.1	444.8	445.1	445.5	446.2	445.6	445.6	446.3	445.7	445.0	444.4	444.2	444.1	444.4	444.0	444.0	444.1	444.2	444.3	444.6	444.9	444.7	444.7	444.8	446.3
10-Mar	445.1	Z	445.5	445.3	445.6	445.6	445.6	446.2	447.5	449.5	444.6	445.1	446.0	445.2	444.5	446.0	447.3	449.6	452.0	452.1	450.3	449.2	448.8	449.5	447.2	452.1
11-Mar	450.0	449.3	Z	448.3	448.0	448.1	448.6	448.6	449.0	449.7	450.7	451.3	451.8	453.1	453.7	451.6	449.8	448.2	447.8	447.6	447.2	446.7	445.9	445.4	449.1	453.7
12-Mar	445.6	445.5	445.2	Z	445.9	446.9	447.8	448.5	447.3	446.6	446.6	450.3	452.2	454.7	453.0	453.1	451.7	451.3	450.3	447.6	446.7	446.1	445.7	445.5	448.4	454.7
13-Mar	446.0	445.9	446.2	446.3	Z	446.2	446.1	446.1	446.4	445.9	447.1	446.2	445.4	445.1	445.3	445.5	445.6	446.0	446.1	445.9	445.8	445.9	446.2	445.9	446.0	447.1
14-Mar	445.9	446.0	445.9	445.8	445.7	Z	447.6	446.7	446.5	446.1	447.4	447.1	446.1	447.3	447.5	447.6	447.9	447.4	447.4	448.0	449.4	449.6	449.3	448.1	447.2	449.6
15-Mar	Z	448.2	448.3	447.7	447.1	446.8	446.5	447.0	445.7	445.5	445.0	444.6	444.7	444.4	444.6	444.8	445.0	445.2	446.2	446.9	446.7	446.5	446.5	446.9	446.1	448.3
16-Mar	447.1	Z	446.6	446.9	447.1	447.1	447.7	448.4	449.5	449.6	449.3	447.5	447.6	448.2	448.0	448.4	448.4	448.8	449.0	449.2	450.9	450.6	449.3	449.2	448.4	450.9
17-Mar	448.7	448.1	Z	449.2	448.7	447.4	449.1	449.4	448.0	447.9	448.0	448.3	448.5	448.3	448.0	448.1	448.3	448.7	448.5	448.3	449.0	450.2	450.4	450.9	448.7	450.9
18-Mar	449.9	449.2	448.4	Z	449.2	448.7	449.9	450.5	450.5	449.3	447.5	448.5	450.9	454.1	454.7	453.7	452.4	451.0	450.0	449.1	448.1	446.7	445.3	445.6	449.7	454.7
19-Mar	444.9	444.2	443.6	443.2	Z	444.8	444.3	444.8	445.6	444.5	444.3	444.3	444.5	444.3	444.6	444.8	444.8	444.9	445.0	444.9	445.0	445.2	445.0	445.7	444.7	445.7
20-Mar	445.3	446.7	449.2	449.5	448.8	Z	447.7	448.2	448.6	449.5	449.9	447.3	447.4	447.4	447.3	446.8	447.2	446.8	446.1	445.5	444.6	445.7	445.2	445.6	447.2	449.9
21-Mar	Z	446.6	445.5	444.9	445.3	446.9	448.0	448.8	449.3	449.4	449.7	449.7	450.2	448.6	447.5	447.7	447.8	448.0	448.9	450.3	449.1	449.6	449.2	448.7	448.3	450.3
22-Mar	449.1	Z	449.8	449.2	449.3	449.1	449.1	449.1	449.2	449.3	449.0	448.8	448.5	448.5	448.0	447.3	447.1	446.7	446.9	446.8	446.8	447.0	446.5	446.6	448.2	449.8
23-Mar	446.5	446.1	Z	446.5	446.7	446.2	446.9	449.2	448.2	448.2	446.9	446.7	447.0	446.9	447.1	447.1	447.2	447.2	447.3	447.4	447.9	447.8	447.0	447.4	447.2	449.2
24-Mar	447.3	447.3	447.5	Z	448.5	448.0	449.3	449.7	449.9	449.4	447.5	446.7	446.9	446.8	447.3	446.8	446.2	445.8	445.1	445.2	445.4	445.3	445.2	445.2	447.1	449.9
25-Mar	445.3	445.1	444.8	444.5	Z	445.1	445.6	446.1	446.1	445.8	445.8	448.5	449.8	451.7	452.9	451.9	448.2	447.2	447.1	446.9	446.3	445.7	445.5	447.4	447.1	452.9
26-Mar	447.4	447.6	445.9	444.9	444.0	Z	445.1	444.6	444.2	444.2	444.0	443.9	444.1	444.1	443.8	444.1	444.0	443.7	443.9	443.9	444.2	444.4	444.4	444.8	444.6	447.6
27-Mar	Z	445.1	445.3	444.7	444.8	444.1	444.3	444.2	444.6	445.2	445.8	C	C	C	C	C	C	439.1	438.9	438.7	438.3	438.2	437.9	437.9	--	445.8
28-Mar	438.0	Z	438.8	439.0	439.0	439.0	439.1	439.1	439.5	439.9	438.8	439.1	441.7	443.6	442.5	441.9	441.1	441.1	441.8	441.6	440.4	440.1	439.3	439.4	440.2	443.6
29-Mar	439.2	438.7	Z	440.2	440.1	439.6	440.4	447.8	443.6	443.2	442.5	442.0	441.0	439.6	439.5	439.5	439.4	439.4	439.5	439.0	439.4	439.8	439.3	439.1	440.5	447.8
30-Mar	438.9	439.3	440.3	Z	442.3	442.3	442.5	442.7	442.9	442.0	440.6	439.9	440.2	440.9	440.9	442.0	442.1	440.1	441.1	441.5	441.9	442.4	442.4	442.4	441.4	442.9
31-Mar	442.3	443.1	443.8	442.7	Z	443.4	444.4	444.2	444.2	443.5	443.6	442.1	442.2	442.8	442.6	442.5	442.5	442.9	443.8	444.1	444.9	445.6	445.1	446.1	443.6	446.1
	445.6	446.0	445.9	446.0	446.4	445.9	446.6	447.1	446.9	446.6	446.1	446.0	446.6	446.8	446.6	446.4	446.1	445.7	445.8	445.7	445.8	445.8	445.4	445.5	Diurnal Average	
	450.0	449.3	451.6	451.6	452.8	450.4	456.2	458.1	452.6	449.7	450.7	451.3	453.8	454.7	454.7	453.7	452.4	451.3	452.0	452.1	450.9	450.6	450.4	450.9	Diurnal Maximum	

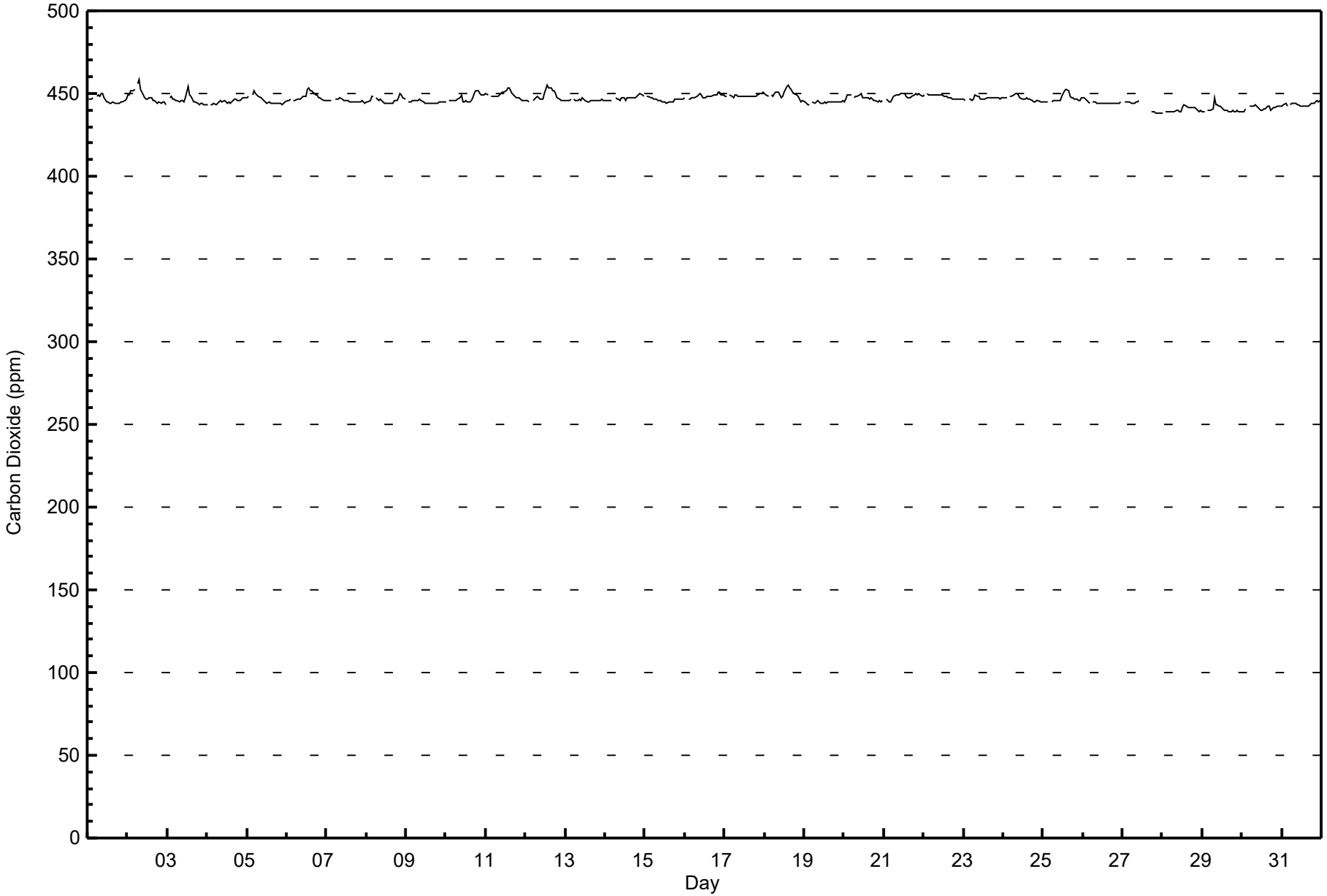
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Carbon Dioxide (CO_2) - ppm

Stony Mountain - March 2025



Carbon Dioxide (CO_2) - ppm
Stony Mountain - March 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
400 - 420	0	0.00	0.00
420 - 440	45	6.36	6.36
440 - 460	662	93.64	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: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

Carbon Dioxide (CO_2) - ppm

Stony Mountain - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
400 - 420	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
420 - 440	2	3	7	10	0	1	0	0	2	4	4	8	3	0	1	0	45
440 - 460	23	27	66	73	17	6	27	37	26	36	59	47	97	47	36	38	662
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	25	30	73	83	17	7	27	37	28	40	63	55	100	47	37	38	707

Total Number of Valid Hours: 707

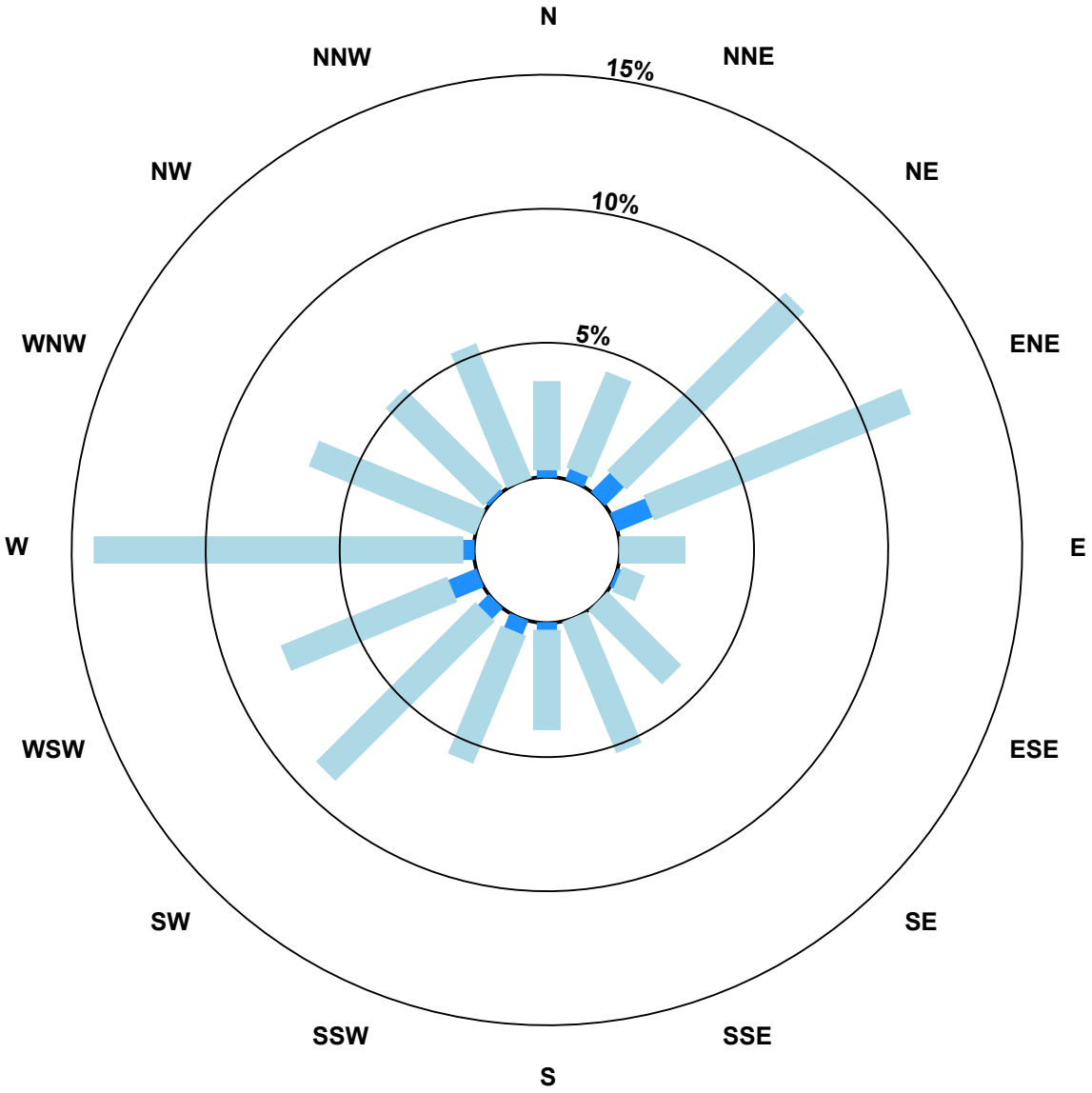
Total Number of Hours: 744

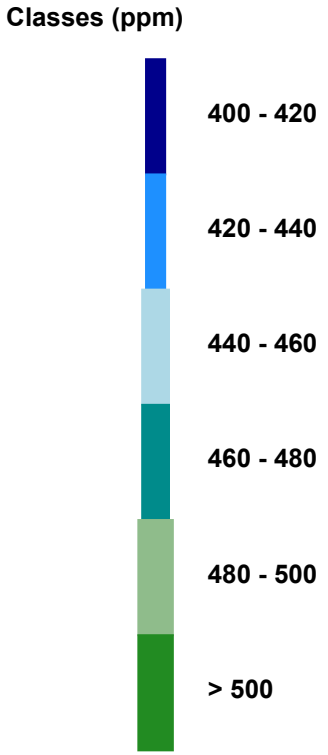
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Carbon Dioxide (CO_2) - ppm

Stony Mountain





Total Number of Valid Hours: 707

Maximum Value: 10.7 C on Mar 1 15:00

Maximum Daily Average: 4.1 C on Mar 25

Minimum Value: -22.2 C on Mar 10 03:00

Minimum Daily Average: -17.1 C on Mar 9

Maximum Diurnal Average: -1.0 C at hour 15

Minimum Diurnal Average: -9.1 C at hour 7

Monthly Average: -5.27 C

Percentiles: P_1 = -21.4 P_{10} = -16.0 Q_1 = -11.3 Median = -4.8 Q_3 = 0.5 P_{90} = 4.8 P_{99} = 9.5

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

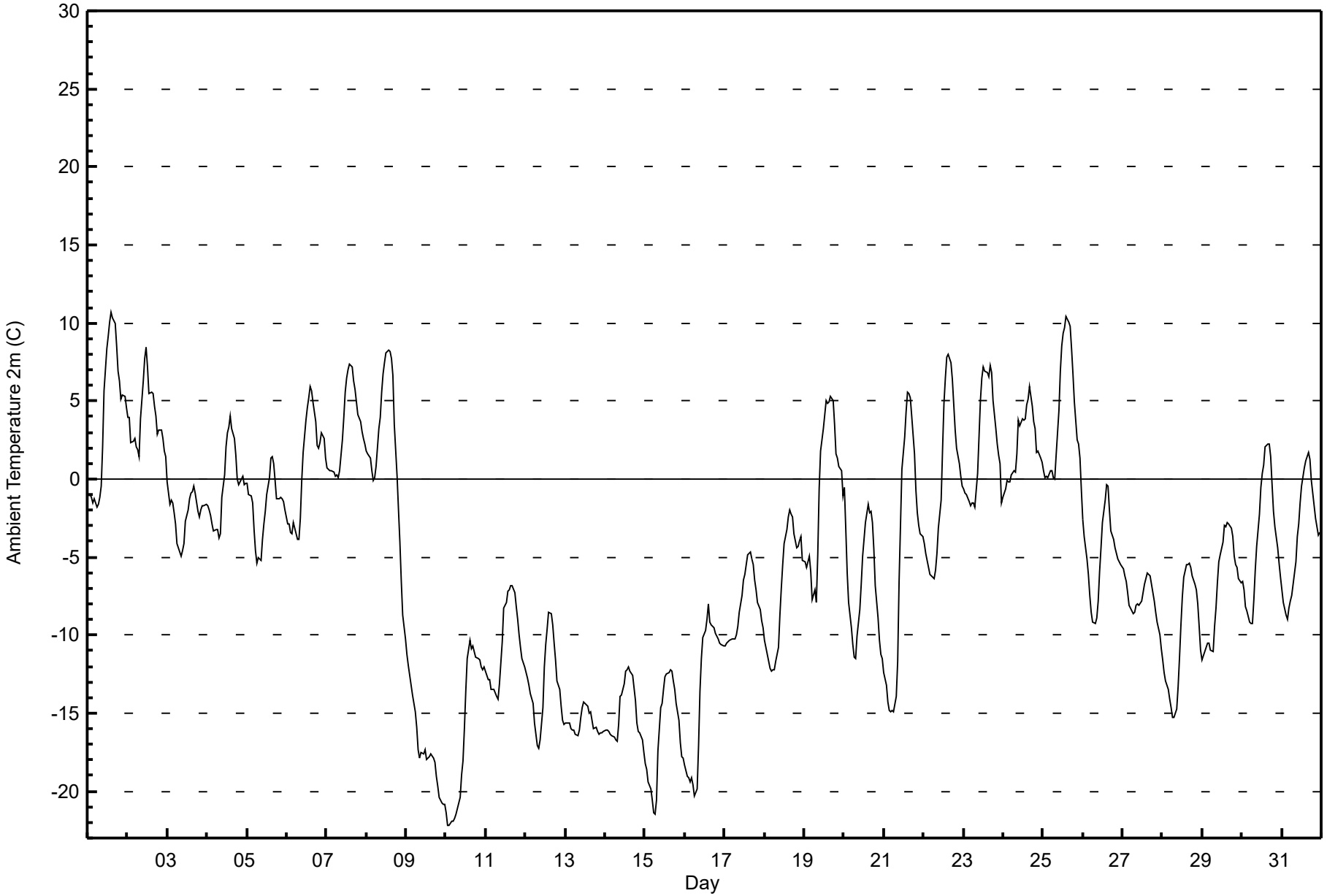
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-1.1	-1.0	-1.2	-1.5	-1.3	-1.8	-1.6	-1.1	-0.4	2.0	5.7	8.3	9.1	10.1	10.7	10.4	9.9	8.5	6.9	6.3	5.1	5.4	5.3	4.5	4.1	10.7
2-Mar	4.0	3.9	2.3	2.5	2.6	2.0	1.9	1.4	3.8	6.3	7.7	8.4	7.2	5.5	5.6	5.5	4.7	4.1	2.9	3.1	3.2	2.6	1.8	1.4	3.9	8.4
3-Mar	-0.2	-1.6	-1.4	-1.5	-2.2	-2.9	-4.1	-4.7	-4.9	-4.6	-4.1	-2.7	-2.0	-1.3	-0.9	-0.9	-0.4	-0.9	-2.1	-2.4	-2.0	-1.7	-1.7	-1.6	-2.2	-0.2
4-Mar	-1.7	-1.9	-2.3	-2.9	-3.3	-3.2	-3.2	-3.8	-3.5	-1.2	0.3	2.0	3.0	3.4	4.0	3.2	2.6	1.5	0.0	-0.3	-0.2	0.1	-0.4	-0.3	-0.3	4.0
5-Mar	-0.3	-1.0	-1.1	-1.5	-3.2	-4.5	-5.4	-5.0	-5.2	-3.9	-2.9	-2.0	-1.0	0.1	1.3	1.5	1.0	-0.1	-1.3	-1.2	-1.1	-1.2	-1.5	-2.0	-1.7	1.5
6-Mar	-2.8	-2.9	-3.4	-3.5	-2.8	-3.2	-3.8	-3.9	-2.5	-0.1	1.7	3.8	4.6	5.2	5.9	5.7	5.0	3.7	2.1	2.0	2.3	3.0	2.6	1.3	0.8	5.9
7-Mar	0.7	0.6	0.5	0.6	0.4	0.1	0.3	0.1	0.5	2.5	3.9	5.5	6.5	7.0	7.3	7.2	6.3	5.7	4.9	4.1	3.7	3.1	2.6	2.2	3.2	7.3
8-Mar	1.8	1.6	1.3	0.5	-0.1	0.1	0.8	3.2	4.0	5.6	6.7	7.5	8.1	8.3	8.2	7.7	6.7	3.5	0.2	-1.9	-4.0	-6.6	-8.7	-10.3	1.8	8.3
9-Mar	-11.2	-11.9	-12.6	-13.2	-13.9	-14.9	-15.9	-17.3	-17.9	-17.5	-17.6	-17.3	-18.0	-17.9	-17.8	-17.6	-17.9	-18.2	-19.1	-19.7	-20.4	-20.8	-20.8	-20.8	-17.1	-11.2
10-Mar	-21.4	-22.2	-22.2	-21.9	-21.9	-21.7	-21.4	-21.1	-20.4	-19.0	-18.1	-16.0	-13.6	-11.5	-10.3	-10.8	-10.7	-11.0	-11.4	-11.5	-11.6	-12.0	-12.2	-12.0	-16.1	-10.3
11-Mar	-12.3	-12.8	-12.9	-13.5	-13.5	-13.4	-13.9	-14.1	-13.1	-11.8	-10.5	-8.3	-7.9	-7.2	-7.1	-6.8	-6.8	-7.3	-8.2	-9.0	-10.0	-10.7	-11.5	-12.0	-10.6	-6.8
12-Mar	-12.4	-12.8	-13.2	-13.8	-14.4	-15.7	-16.4	-17.1	-17.2	-16.7	-14.6	-12.1	-10.6	-9.6	-8.5	-8.6	-9.4	-10.5	-11.6	-12.9	-13.5	-14.5	-15.4	-15.7	-13.2	-8.5
13-Mar	-15.7	-15.6	-15.7	-16.0	-16.1	-16.1	-16.4	-16.4	-16.1	-15.3	-14.6	-14.3	-14.3	-14.6	-15.0	-14.9	-15.5	-16.0	-15.9	-16.2	-16.3	-16.3	-16.3	-16.2	-15.6	-14.3
14-Mar	-16.1	-16.1	-16.2	-16.3	-16.5	-16.5	-16.7	-16.8	-15.7	-14.0	-13.8	-13.1	-12.3	-12.3	-12.1	-12.3	-12.5	-13.4	-14.2	-15.7	-16.2	-16.2	-16.7	-17.5	-15.0	-12.1
15-Mar	-18.2	-18.6	-19.4	-19.9	-20.6	-21.4	-21.5	-20.5	-17.4	-14.6	-14.3	-13.4	-12.7	-12.5	-12.4	-12.2	-12.3	-12.9	-13.5	-14.4	-15.5	-16.9	-17.8	-17.9	-16.3	-12.2
16-Mar	-18.3	-19.1	-19.2	-19.4	-19.2	-19.6	-20.3	-19.8	-17.1	-13.5	-11.5	-10.1	-9.7	-9.0	-8.0	-9.1	-9.4	-9.5	-9.9	-10.1	-10.2	-10.5	-10.6	-10.7	-13.5	-8.0
17-Mar	-10.7	-10.5	-10.4	-10.3	-10.3	-10.2	-10.3	-10.0	-9.4	-8.5	-7.4	-6.5	-6.1	-5.5	-4.8	-4.7	-5.1	-5.5	-6.5	-7.1	-7.9	-8.4	-9.1	-9.5	-8.1	-4.7
18-Mar	-10.3	-10.8	-11.7	-12.2	-12.3	-12.2	-12.2	-11.7	-10.7	-8.7	-7.0	-5.5	-4.2	-3.2	-2.4	-2.0	-2.3	-2.4	-3.5	-4.4	-4.3	-4.0	-3.7	-5.2	-7.0	-2.0
19-Mar	-5.3	-5.7	-5.3	-4.9	-5.9	-7.7	-7.1	-7.9	-4.9	-0.7	1.8	3.3	4.2	5.0	4.9	4.9	5.3	5.0	3.5	1.6	1.3	0.8	0.5	-1.1	-0.6	5.3
20-Mar	-0.6	-3.2	-6.1	-7.9	-9.5	-10.6	-11.5	-11.5	-10.0	-8.3	-6.8	-5.0	-3.9	-2.8	-1.6	-2.2	-2.1	-2.8	-4.5	-6.8	-8.9	-10.3	-11.3	-11.5	-6.7	-0.6
21-Mar	-12.4	-13.2	-14.3	-14.8	-15.0	-14.9	-14.9	-13.9	-11.7	-6.6	-3.0	0.6	2.7	4.4	5.6	5.5	5.2	4.0	1.6	-0.7	-2.1	-3.0	-3.5	-3.6	-4.9	5.6
22-Mar	-4.1	-4.8	-5.2	-5.7	-6.1	-6.3	-6.4	-5.8	-4.7	-3.2	-1.3	1.9	4.8	6.4	7.8	8.0	7.5	6.4	4.7	3.1	1.9	1.0	0.2	-0.5	0.0	8.0
23-Mar	-0.6	-0.9	-1.0	-1.4	-1.7	-1.6	-1.5	-1.8	0.4	2.7	5.0	6.4	7.2	6.9	6.9	6.5	7.3	6.8	5.0	3.3	2.3	1.6	1.0	-1.5	2.4	7.3
24-Mar	-1.2	-0.6	-0.1	-0.2	-0.1	0.2	0.5	0.4	1.6	3.8	3.4	3.9	3.7	3.9	4.7	5.1	6.0	4.6	3.7	3.3	1.7	1.8	1.4	1.1	2.2	6.0
25-Mar	0.5	0.1	0.1	0.1	0.6	0.6	0.1	0.0	1.6	4.4	6.9	8.5	9.3	9.7	10.4	10.1	9.8	8.4	6.7	4.9	2.5	2.3	1.3	-0.7	4.1	10.4
26-Mar	-2.6	-3.7	-5.1	-6.1	-7.4	-8.6	-9.1	-9.3	-8.9	-7.8	-6.0	-4.4	-2.8	-1.4	-0.4	-0.5	-1.9	-3.4	-3.9	-4.4	-4.8	-5.1	-5.3	-5.5	-4.9	-0.4
27-Mar	-5.8	-6.2	-6.6	-7.3	-8.1	-8.4	-8.7	-8.5	-8.1	-8.0	-8.1	-7.8	-7.2	-6.7	-6.4	-6.0	-6.2	-6.7	-7.3	-7.9	-8.5	-9.1	-9.9	-10.9	-7.7	-5.8
28-Mar	-11.6	-12.4	-12.9	-13.4	-14.1	-14.7	-15.3	-15.3	-14.7	-13.3	-11.4	-9.4	-7.6	-6.3	-5.5	-5.4	-5.4	-5.7	-6.2	-6.8	-7.1	-8.0	-9.5	-11.0	-10.1	-5.4
29-Mar	-11.6	-11.0	-10.8	-10.5	-10.5	-10.9	-11.1	-9.4	-8.3	-6.6	-5.3	-4.9	-4.1	-2.9	-3.0	-2.8	-2.9	-3.1	-3.7	-4.9	-5.5	-5.7	-6.4	-6.6	-6.8	-2.8
30-Mar	-6.6	-7.1	-8.2	-8.5	-9.1	-9.3	-9.2	-7.7	-5.9	-4.3	-2.2	-0.6	0.3	0.9	2.1	2.2	2.2	1.4	-0.4	-2.1	-3.1	-4.4	-5.4	-6.3	-3.8	2.2
31-Mar	-7.1	-7.9	-8.7	-9.0	-8.2	-7.8	-7.4	-6.7	-5.3	-3.7	-2.9	-1.5	-0.5	0.7	1.1	1.4	1.7	1.3	-0.1	-1.7	-2.5	-3.0	-3.6	-3.4	-3.5	1.7
	-6.9	-7.4	-7.8	-8.2	-8.5	-8.9	-9.1	-8.9	-7.8	-6.0	-4.5	-3.1	-2.2	-1.5	-1.0	-1.0	-1.3	-2.1	-3.3	-4.2	-4.9	-5.4	-6.0	-6.6	Diurnal Average	
	4.0	3.9	2.3	2.5	2.6	2.0	1.9	3.2	4.0	6.3	7.7	8.5	9.3	10.1	10.7	10.4	9.9	8.5	6.9	6.3	5.1	5.4	5.3	4.5	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Stony Mountain - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	18	2.42	2.42
-20 - 0	517	69.49	71.91
0 - 10	204	27.42	99.33
10 - 20	5	0.67	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Stony Mountain - March 2025

Maximum Value: 90.5 % on Mar 17 22:00

Maximum Daily Average: 83.2 % on Mar 11

Minimum Value: 25.3 % on Mar 25 16:00

Minimum Daily Average: 47.9 % on Mar 21

Maximum Diurnal Average: 75.9 % at hour 7

Minimum Diurnal Average: 49.9 % at hour 15

Monthly Average: 63.65 %

Percentiles: P_1 = 29.5 P_{10} = 40.6 Q_1 = 51.6 Median = 65.3 Q_3 = 77.4 P_{90} = 82.6 P_{99} = 88.7

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

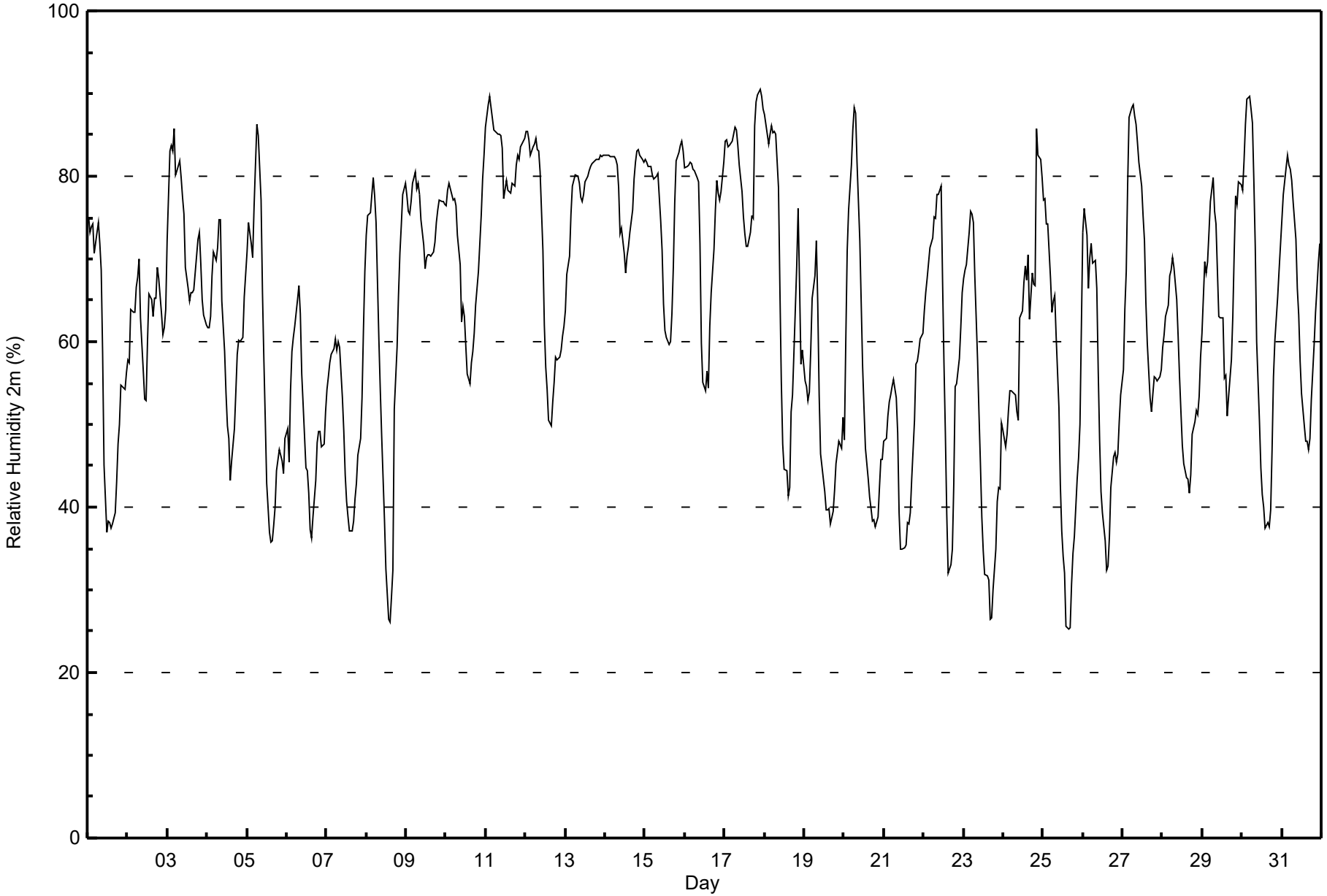
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	75.2	73.3	73.9	74.2	70.7	73.2	74.4	71.8	68.6	58.7	45.1	37.0	38.3	38.1	37.5	37.9	39.3	43.1	47.7	50.0	54.7	54.5	54.2	56.3	56.1	75.2
2-Mar	57.9	57.5	63.9	63.5	63.5	66.6	67.8	70.0	62.9	56.5	53.0	52.9	60.1	65.8	65.1	63.1	65.3	65.2	69.0	67.6	63.4	60.8	61.7	63.8	62.8	70.0
3-Mar	72.1	83.0	83.8	83.0	85.7	80.2	80.7	81.9	79.9	77.4	75.5	69.0	66.4	64.9	65.9	65.9	66.4	68.3	72.4	73.3	69.5	65.1	63.3	62.1	73.2	85.7
4-Mar	61.8	61.6	63.1	68.0	70.8	69.8	71.4	74.8	74.7	65.0	58.8	53.7	49.8	48.3	43.2	45.5	49.5	53.8	58.5	60.1	59.9	60.5	65.5	68.2	60.7	74.8
5-Mar	70.9	74.4	71.8	70.1	76.2	81.4	86.3	84.9	77.1	65.9	57.8	50.6	42.9	36.9	35.7	35.9	37.7	39.9	44.4	46.9	46.2	45.6	44.1	48.3	57.2	86.3
6-Mar	49.5	45.5	54.1	58.9	60.5	61.9	65.0	66.8	63.5	56.1	52.4	44.7	44.4	41.7	37.3	36.3	38.9	43.2	47.8	49.2	49.1	47.2	47.5	51.5	50.5	66.8
7-Mar	54.2	55.8	57.5	58.5	59.2	60.3	58.9	59.9	59.3	53.2	49.1	43.9	40.7	38.7	37.1	37.1	38.3	41.0	42.9	46.3	48.2	53.1	61.3	68.5	51.0	68.5
8-Mar	73.0	75.3	75.6	77.8	79.8	77.7	74.4	60.4	54.2	48.6	43.5	38.6	32.5	26.5	26.1	29.1	32.4	51.8	59.4	65.6	70.8	74.2	77.8	79.1	58.5	79.8
9-Mar	77.6	75.7	75.4	77.0	79.1	80.5	78.4	79.1	77.9	74.7	71.7	68.8	70.1	70.5	70.5	70.3	70.9	72.1	74.3	75.9	77.1	76.9	76.9	76.6	74.9	80.5
10-Mar	76.4	78.3	79.1	77.8	77.1	77.2	76.4	73.0	69.4	62.4	64.3	63.1	59.5	56.1	54.9	57.4	58.8	61.0	64.5	68.5	71.9	75.2	79.6	82.5	69.4	82.5
11-Mar	86.0	88.7	89.7	88.3	86.9	85.6	85.3	85.1	85.1	84.9	83.4	77.3	79.5	78.2	78.1	78.0	79.2	78.8	81.4	82.6	82.0	83.5	84.0	84.6	83.2	89.7
12-Mar	85.4	85.5	84.5	82.6	83.6	83.9	84.5	83.2	83.1	80.5	70.9	62.1	56.9	54.3	50.5	49.8	52.6	55.1	58.2	57.8	58.1	58.9	60.7	61.8	68.5	85.5
13-Mar	63.8	68.2	70.4	75.4	78.9	79.6	80.1	80.0	79.1	77.4	77.0	77.7	79.3	80.1	80.7	81.2	81.5	81.7	82.1	82.0	82.1	82.5	82.4	82.5	78.6	82.5
14-Mar	82.5	82.5	82.5	82.4	82.4	82.5	82.0	81.4	78.6	73.1	73.7	70.7	68.3	70.3	71.6	73.2	75.9	79.6	81.6	83.0	83.2	82.6	82.0	81.8	78.6	83.2
15-Mar	82.0	81.7	81.1	81.2	80.2	79.6	79.9	80.0	80.3	74.5	70.9	64.6	61.4	60.5	59.7	60.0	63.3	69.0	76.8	81.9	82.9	83.8	84.2	83.0	75.1	84.2
16-Mar	81.1	81.1	81.3	81.7	81.5	80.9	80.8	79.9	79.2	71.9	59.8	55.1	54.1	56.4	54.5	61.9	66.0	71.2	76.0	79.5	78.0	77.2	78.2	81.8	72.9	81.8
17-Mar	84.2	84.4	83.6	83.7	84.3	85.0	85.9	85.6	83.7	81.3	78.2	75.1	73.0	71.6	71.5	73.2	75.3	75.0	86.0	89.1	89.8	90.5	89.7	88.2	82.0	90.5
18-Mar	87.4	86.2	83.8	85.0	86.0	85.2	85.5	85.1	78.6	66.4	55.3	47.6	44.5	44.5	41.3	42.4	51.6	53.5	58.7	69.2	76.2	67.1	57.3	59.0	66.6	87.4
19-Mar	55.3	54.6	52.9	53.9	59.0	65.3	68.0	72.2	64.6	53.5	46.5	43.4	41.9	39.6	39.7	39.9	38.0	39.4	42.0	45.2	46.5	48.0	47.2	50.8	50.3	72.2
20-Mar	48.2	60.1	71.1	75.9	81.3	85.5	88.2	87.6	81.6	72.3	64.5	57.0	51.8	47.1	43.3	41.2	39.9	38.4	38.4	37.6	38.8	42.3	45.8	45.8	57.7	88.2
21-Mar	47.9	48.3	51.0	52.7	53.6	54.6	55.5	53.2	48.9	39.3	34.9	35.0	35.1	35.4	38.1	38.0	39.4	43.3	50.6	57.2	57.7	58.8	60.3	61.0	47.9	61.0
22-Mar	63.6	65.9	67.7	69.5	71.4	72.6	75.1	74.9	77.9	77.7	78.8	67.5	57.5	49.1	39.1	32.0	33.1	34.9	42.7	54.6	54.9	57.9	61.6	66.0	60.2	78.8
23-Mar	67.6	68.7	69.4	73.2	75.7	75.5	74.5	67.9	57.5	51.1	45.2	38.8	34.7	31.9	31.7	31.2	26.4	26.6	30.1	34.9	40.6	42.3	42.2	50.1	49.5	75.7
24-Mar	49.4	47.3	48.9	51.7	54.1	54.1	53.7	53.6	51.6	50.6	62.8	63.7	67.2	69.1	67.4	70.4	62.8	68.3	66.9	66.9	85.7	82.5	82.0	79.9	62.9	85.7
25-Mar	77.2	77.2	74.3	74.3	67.6	63.5	64.9	65.6	60.7	52.0	42.7	37.1	34.1	32.1	25.6	25.3	25.4	30.7	34.4	36.5	43.3	46.0	50.0	61.6	50.1	77.2
26-Mar	73.3	76.2	72.8	66.5	70.2	71.9	69.5	69.8	66.5	56.6	48.2	41.8	39.3	35.9	32.3	33.0	36.5	42.4	46.1	46.7	45.4	46.5	50.3	53.6	53.8	76.2
27-Mar	56.5	63.9	68.5	79.0	87.1	88.3	88.7	87.3	86.3	84.1	81.7	78.8	75.2	72.3	64.8	59.9	53.2	51.5	53.7	55.7	55.6	55.3	55.8	56.6	69.2	88.7
28-Mar	59.3	60.9	63.0	64.4	68.0	68.7	70.1	68.9	65.1	60.7	55.8	51.6	47.5	45.3	43.6	43.4	41.7	43.9	48.8	50.4	51.6	51.2	53.4	58.2	55.7	70.1
29-Mar	61.0	69.7	68.4	69.7	73.2	76.9	79.8	75.8	74.2	68.7	63.1	62.9	62.9	55.6	55.9	51.1	53.4	57.7	63.0	70.8	77.6	76.7	79.2	79.0	67.8	79.8
30-Mar	78.2	81.8	86.4	89.3	89.6	88.1	86.5	79.4	71.5	59.9	50.4	44.7	41.5	39.9	37.5	38.1	37.7	39.6	47.0	55.8	60.2	65.5	68.6	71.7	62.9	89.6
31-Mar	74.8	77.8	81.1	82.6	81.4	80.8	79.6	76.9	72.4	66.5	63.3	57.6	53.8	49.9	48.0	47.9	46.9	48.4	53.1	59.7	63.5	66.5	69.5	71.9	65.6	82.6
	68.8	70.7	71.9	73.3	74.8	75.4	75.9	74.7	71.4	65.2	60.6	55.9	53.7	51.8	49.9	50.0	50.9	53.8	58.0	61.3	63.4	63.8	65.0	67.3	Diurnal Average	
	87.4	88.7	89.7	89.3	89.6	88.3	88.7	87.6	86.3	84.9	83.4	78.8	79.5	80.1	80.7	81.2	81.5	81.7	86.0	89.1	89.8	90.5	89.7	88.2	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Stony Mountain - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Precipitation (PC) - mm

Stony Mountain - March 2025

Maximum Value: 7.1 mm on Mar 18 10:00

Maximum Daily Total: 13.1 mm on Mar 13

Minimum Value: 0.0 mm on Mar 1 01:00

Minimum Daily Total: 0.0 mm on Mar 1

Maximum Diurnal Total: 9.2 mm at hour 10

Minimum Diurnal Total: 0.1 mm at hour 3

Monthly Total: 46.72 mm

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} = 1.2

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

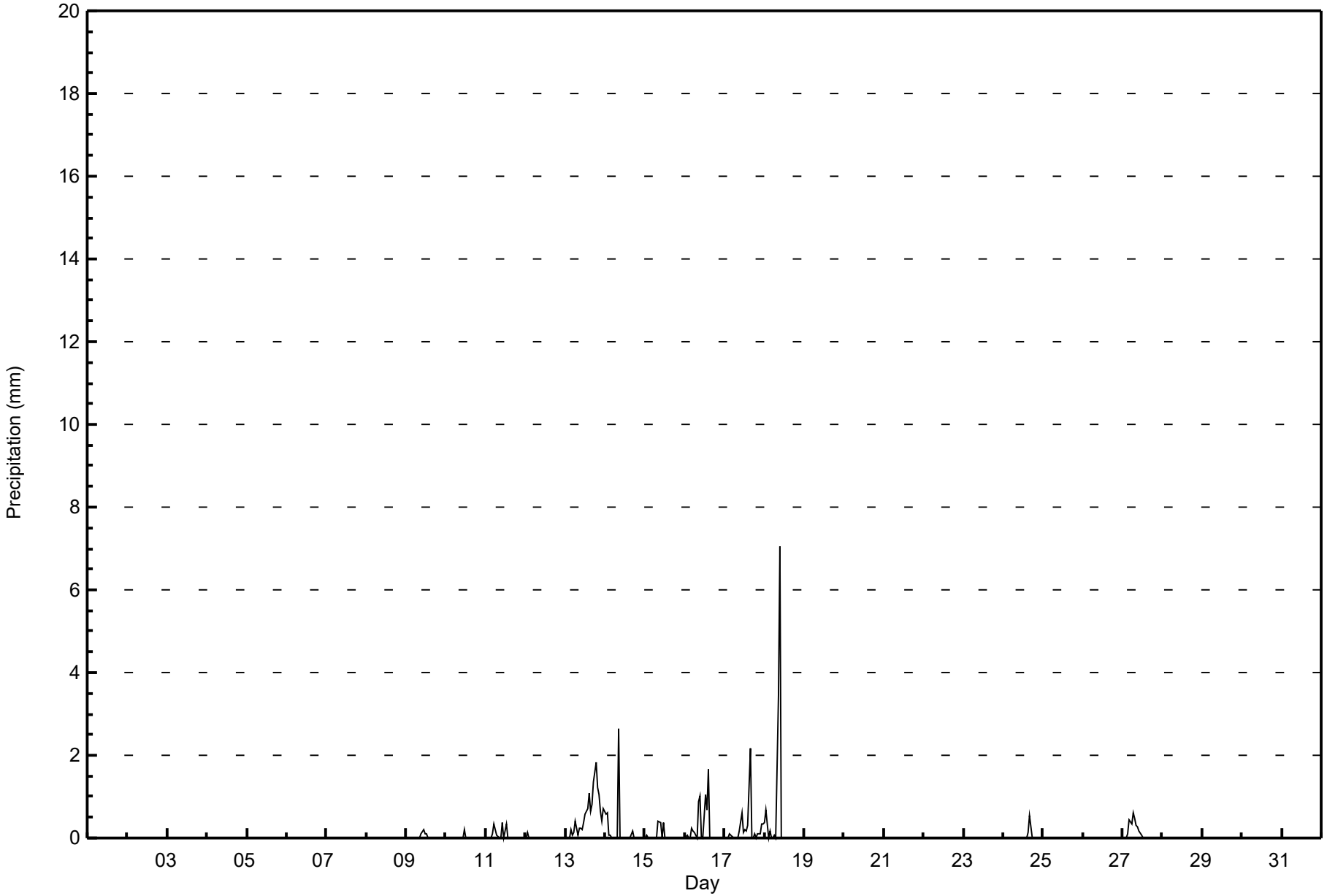
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2
10-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2
11-Mar	0.0	0.0	0.0	0.0	0.1	0.3	0.1	0.1	0.0	0.0	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	1.3	0.4
12-Mar	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
13-Mar	0.0	0.0	0.0	0.2	0.1	0.1	0.4	0.1	0.2	0.3	0.2	0.4	0.6	0.7	1.1	0.7	0.8	1.4	1.8	1.2	1.1	0.6	0.4	0.7	13.1	1.8
14-Mar	0.6	0.6	0.1	0.1	0.0	0.0	0.0	0.0	2.7	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	4.2	2.7
15-Mar	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.4
16-Mar	0.0	0.1	0.0	0.0	0.2	0.2	0.1	0.0	0.9	1.0	0.0	0.0	1.1	0.7	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	1.7
17-Mar	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.6	0.2	0.2	0.2	0.3	2.2	0.0	0.0	0.1	0.0	0.1	0.1	0.3	0.3	4.9	2.2
18-Mar	0.4	0.7	0.0	0.2	0.0	0.0	0.1	0.0	3.5	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.8	7.1
19-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.5
25-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.1	0.5	0.4	0.6	0.5	0.3	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.6
28-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.9	1.6	0.1	0.7	0.9	1.0	1.3	0.6	8.0	9.2	1.6	1.3	2.3	1.6	3.1	2.9	1.5	1.4	1.9	1.2	1.1	0.8	0.8	1.1	Diurnal Average	
	0.6	0.7	0.1	0.2	0.5	0.4	0.6	0.5	3.5	7.1	0.6	0.4	1.1	0.7	1.7	2.2	0.8	1.4	1.8	1.2	1.1	0.6	0.4	0.7	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Precipitation (PC) - mm

Stony Mountain - March 2025



Concentration Ranges (mm)	Number of Hours	%	Cumulative %
0 - 0.3	708	95.16	95.16
0.4 - 0.5	11	1.48	96.64
0.6 - 0.7	11	1.48	98.12
0.8 - 1.4	8	1.08	99.19
1.5 - 10	6	0.81	100.00
> 10	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Maximum Value: 15.0 % on Mar 24 17:00

Maximum Daily Average: 4.1 % on Mar 11

Minimum Value: 0.5 % on Mar 26 16:00

Minimum Daily Average: 1.3 % on Mar 21

Maximum Diurnal Average: 2.3 % at hour 7

Minimum Diurnal Average: 1.4 % at hour 15

Monthly Average: 1.93 %

Percentiles: P_1 = 0.6 P_{10} = 1.1 Q_1 = 1.5 Median = 1.7 Q_3 = 2.1 P_{90} = 2.8 P_{99} = 4.7

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

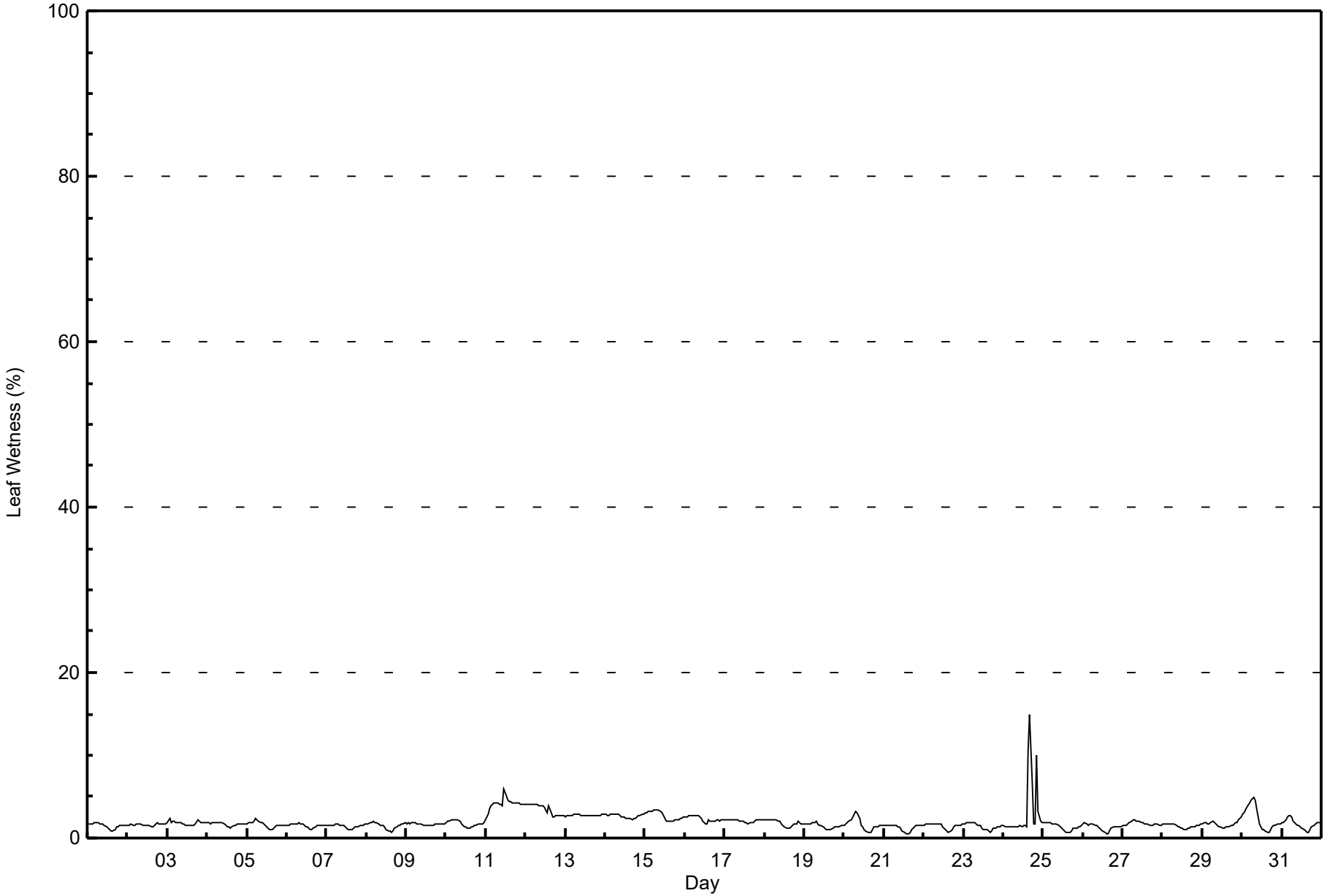
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.6	1.5	1.3	1.2	1.0	0.9	0.9	1.1	1.3	1.4	1.5	1.5	1.5	1.5	1.6	1.5	1.8
2-Mar	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.6	1.6	1.5	1.4	1.5	1.5	1.4	1.4	1.6	1.7	1.8	1.8	1.7	1.7	1.7	1.7	1.6	1.8
3-Mar	1.8	2.4	1.9	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.7	1.6	1.6	1.6	1.6	1.6	1.5	1.8	2.1	2.1	1.9	1.8	1.8	1.8	1.8	2.4
4-Mar	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.8	1.7	1.6	1.4	1.3	1.2	1.4	1.5	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.9
5-Mar	1.8	1.8	1.8	1.8	2.1	2.3	2.3	2.0	1.9	1.8	1.7	1.5	1.3	1.1	1.0	1.0	1.2	1.4	1.5	1.5	1.5	1.5	1.5	1.6	1.6	2.3
6-Mar	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.8	1.7	1.6	1.6	1.4	1.3	1.1	1.0	1.0	1.1	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.8
7-Mar	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.4	1.2	1.1	1.1	1.1	1.3	1.3	1.4	1.4	1.4	1.5	1.6	1.6	1.5	1.6
8-Mar	1.7	1.8	1.8	1.9	2.0	1.9	1.9	1.7	1.6	1.5	1.5	1.3	1.1	0.9	0.8	0.7	0.9	1.2	1.4	1.5	1.6	1.7	1.8	1.8	1.5	2.0
9-Mar	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.6	1.6	1.5	1.6	1.6	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.7	1.7	1.7	1.7	1.8
10-Mar	1.8	2.0	2.1	2.2	2.2	2.3	2.3	2.2	2.0	1.7	1.6	1.4	1.3	1.1	1.1	1.3	1.3	1.5	1.6	1.6	1.7	1.7	1.8	1.8	1.7	2.3
11-Mar	2.3	2.9	3.6	3.9	4.0	4.2	4.2	4.2	4.1	4.0	3.9	5.9	5.0	4.6	4.5	4.4	4.3	4.2	4.2	4.2	4.2	4.1	4.1	4.1	4.1	5.9
12-Mar	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.0	4.0	3.9	3.8	3.7	3.3	3.1	4.0	3.1	2.6	2.6	2.7	2.7	2.7	2.7	2.6	2.6	3.4	4.1
13-Mar	2.6	2.6	2.7	2.7	2.8	2.8	2.8	2.8	2.8	2.8	2.7	2.7	2.7	2.7	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
14-Mar	2.8	2.8	2.8	2.8	2.8	2.8	2.9	2.9	2.8	2.7	2.6	2.5	2.4	2.3	2.3	2.3	2.3	2.3	2.4	2.5	2.7	2.7	2.8	2.9	2.6	2.9
15-Mar	3.0	3.1	3.2	3.2	3.3	3.3	3.4	3.4	3.3	3.3	3.1	2.7	2.3	2.1	2.0	2.0	2.0	2.1	2.1	2.2	2.3	2.3	2.4	2.5	2.7	3.4
16-Mar	2.6	2.6	2.7	2.7	2.7	2.7	2.8	2.7	2.7	2.6	2.5	2.0	1.7	1.8	2.2	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.8
17-Mar	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.0	2.0	1.9	1.8	1.8	1.8	1.9	1.9	2.1	2.2	2.2	2.3	2.3	2.3	2.1	2.3
18-Mar	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.0	1.7	1.5	1.4	1.2	1.2	1.2	1.4	1.5	1.7	1.8	2.0	1.8	1.7	1.7	1.8	2.2
19-Mar	1.7	1.7	1.7	1.7	1.7	1.8	1.9	2.0	1.7	1.6	1.5	1.3	1.2	0.9	1.0	1.0	1.0	1.1	1.3	1.4	1.4	1.4	1.4	1.5	1.5	2.0
20-Mar	1.5	1.6	1.9	2.0	2.3	2.6	2.9	3.2	3.1	2.3	1.5	1.3	1.1	0.8	0.7	0.8	0.8	1.1	1.3	1.4	1.4	1.5	1.5	1.5	1.7	3.2
21-Mar	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.5	1.4	1.3	1.2	0.9	0.7	0.5	0.6	0.6	0.6	1.1	1.4	1.5	1.6	1.6	1.6	1.5	1.3	1.6
22-Mar	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.4	1.2	1.0	0.9	0.7	0.9	1.1	1.3	1.5	1.5	1.5	1.6	1.7	1.4	1.7
23-Mar	1.7	1.8	1.8	1.9	1.9	1.9	1.9	1.8	1.6	1.5	1.5	1.2	1.0	1.0	1.0	0.9	0.7	0.8	1.1	1.2	1.3	1.3	1.3	1.4	1.4	1.9
24-Mar	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.6	1.4	1.5	1.5	1.4	10.6	15.0	6.5	1.7	1.6	10.0	3.2	2.0	1.9	3.1	15.0
25-Mar	1.9	1.9	1.9	1.9	1.8	1.7	1.7	1.7	1.6	1.5	1.4	1.2	1.0	0.8	0.7	0.6	0.6	0.9	1.1	1.2	1.2	1.3	1.4	1.5	1.4	1.9
26-Mar	1.7	1.8	1.7	1.6	1.6	1.7	1.6	1.6	1.5	1.4	1.3	1.1	0.8	0.6	0.5	0.5	0.9	1.2	1.3	1.4	1.4	1.4	1.4	1.4	1.3	1.8
27-Mar	1.5	1.5	1.6	1.7	1.9	2.1	2.1	2.1	2.1	2.0	2.0	1.9	1.8	1.8	1.7	1.7	1.6	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.8	2.1
28-Mar	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.0	1.0	1.1	1.2	1.3	1.4	1.4	1.5	1.5	1.6	1.6	1.4	1.7
29-Mar	1.7	1.8	1.8	1.7	1.7	1.8	2.0	1.9	1.6	1.5	1.3	1.3	1.2	1.2	1.4	1.4	1.4	1.5	1.6	1.8	1.9	1.9	2.2	2.6	1.7	2.6
30-Mar	2.9	3.0	3.3	3.8	4.2	4.6	4.8	5.0	4.6	3.5	1.7	1.3	1.1	1.0	0.9	0.8	0.8	1.0	1.4	1.5	1.5	1.6	1.7	1.7	2.4	5.0
31-Mar	1.8	1.9	2.2	2.6	2.7	2.7	2.5	2.0	1.7	1.6	1.5	1.4	1.2	1.0	0.8	0.7	0.7	1.1	1.4	1.6	1.7	1.8	1.8	1.8	1.7	2.7
	2.0	2.1	2.1	2.2	2.2	2.3	2.3	2.3	2.2	2.0	1.9	1.8	1.6	1.5	1.4	1.7	1.9	1.8	1.7	1.8	2.1	1.9	1.9	1.9	Diurnal Average	
	4.1	4.1	4.1	4.1	4.2	4.6	4.8	5.0	4.6	4.0	3.9	5.9	5.0	4.6	4.5	10.6	15.0	6.5	4.2	4.2	10.0	4.1	4.1	4.1	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Leaf Wetness (LW) - %

Stony Mountain - March 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 0.3	0	0.00	0.00
0.4 - 0.5	3	0.40	0.40
0.6 - 0.7	14	1.88	2.28
0.8 - 1.4	168	22.58	24.87
1.5 - 10	528	70.97	95.83
> 10	3	0.40	96.24

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Global Radiation (GR) - W/m2

Stony Mountain - March 2025

Maximum Value: 756.5 W/m2 on Mar 30 13:00

Maximum Daily Average: 236.3 W/m2 on Mar 30

Minimum Value: 0.0 W/m2 on Mar 5 03:00

Minimum Daily Average: 20.0 W/m2 on Mar 13

Maximum Diurnal Average: 446.1 W/m2 at hour 13

Minimum Diurnal Average: 0.1 W/m2 at hour 5

Monthly Average: 124.77 W/m2

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 4.4 Q_3 = 207.6 P_{90} = 445.0 P_{99} = 671.5

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

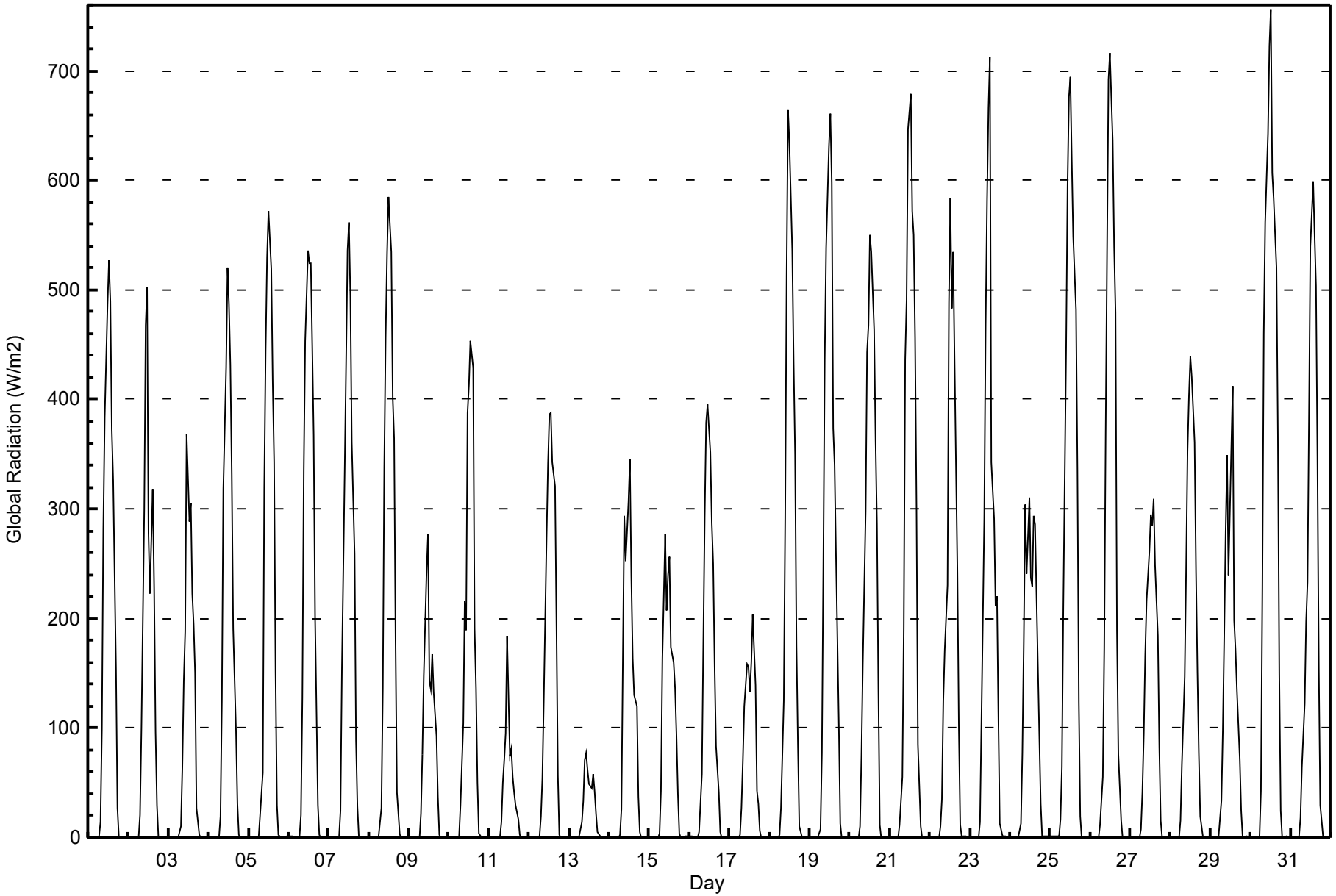
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.5	0.3	0.4	0.4	0.5	0.5	0.7	13.8	99.2	282.0	384.3	487.3	527.2	489.5	372.7	325.9	153.1	26.8	1.3	0.4	0.4	0.3	0.1	0.1	132.0	527.2
2-Mar	0.0	0.2	0.1	0.1	0.0	0.1	0.3	21.2	99.8	298.3	467.3	503.0	278.0	223.3	317.8	227.5	96.3	29.4	1.3	0.1	0.1	0.0	0.0	0.1	106.8	503.0
3-Mar	0.0	0.2	0.1	0.0	0.0	0.0	0.2	9.7	64.4	142.5	188.0	368.5	288.5	305.8	222.6	194.9	151.0	27.1	2.1	0.4	0.2	0.2	0.0	0.1	81.9	368.5
4-Mar	0.2	0.3	0.3	0.3	0.4	0.3	0.9	19.5	126.3	318.2	429.3	519.8	487.5	431.5	330.6	190.6	97.3	30.9	2.0	0.5	0.6	0.4	0.3	0.2	124.5	519.8
5-Mar	0.0	0.0	0.0	0.0	0.0	0.1	0.4	18.9	59.7	319.9	445.8	529.2	571.9	519.7	416.6	343.0	151.3	29.6	2.4	0.2	0.3	0.3	0.6	0.7	142.1	571.9
6-Mar	0.8	0.7	0.7	0.6	0.3	0.1	0.9	20.5	128.0	334.8	453.1	536.3	523.8	524.6	447.7	367.2	200.3	29.8	2.4	0.1	0.1	0.0	0.0	0.1	148.9	536.3
7-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.8	24.9	152.9	337.8	435.6	535.5	561.8	495.2	360.2	259.0	89.4	28.9	1.7	0.0	0.0	0.0	0.0	0.0	136.8	561.8
8-Mar	0.0	0.0	0.0	0.2	0.5	0.3	1.2	27.4	136.3	339.1	457.1	533.9	584.5	534.5	402.3	364.2	180.0	40.9	3.2	0.8	0.2	0.0	0.0	0.0	150.3	584.5
9-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.6	21.9	76.1	148.5	242.9	276.5	143.1	134.8	166.8	132.3	92.7	36.8	2.1	0.0	0.0	0.0	0.0	0.0	61.5	276.5
10-Mar	0.0	0.1	0.0	0.0	0.0	0.0	1.0	29.3	103.7	216.2	188.9	387.5	414.0	453.1	429.0	190.0	136.0	49.6	3.7	0.0	0.0	0.0	0.0	0.0	108.4	453.1
11-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.7	14.2	50.8	71.5	95.5	184.1	74.4	80.8	55.2	40.9	30.0	16.4	2.0	0.0	0.0	0.0	0.0	0.0	29.8	184.1
12-Mar	0.0	0.0	0.0	0.0	0.0	0.0	1.1	19.0	54.0	125.5	274.3	341.4	386.0	388.3	343.0	321.0	192.2	57.1	2.7	0.0	0.0	0.0	0.0	0.0	104.4	388.3
13-Mar	0.0	0.0	0.0	0.0	0.0	0.0	1.0	14.1	34.1	70.5	77.8	62.0	48.6	44.5	57.7	41.9	21.6	5.6	0.9	0.0	0.0	0.0	0.0	0.0	20.0	77.8
14-Mar	0.0	0.0	0.0	0.0	0.0	0.0	2.3	26.0	161.4	293.6	252.4	306.5	345.6	237.8	163.1	129.7	119.8	37.3	4.8	0.0	0.0	0.0	0.1	0.1	86.7	345.6
15-Mar	0.1	0.1	0.1	0.1	0.1	0.2	3.7	43.1	163.5	277.0	207.0	239.8	256.9	173.3	160.4	136.4	93.1	39.8	4.1	0.0	0.2	0.7	0.8	0.8	75.1	277.0
16-Mar	0.8	0.6	0.6	0.3	0.3	0.5	5.1	58.5	177.6	294.2	379.0	395.2	351.1	287.1	249.3	157.1	84.3	40.8	5.2	0.0	0.0	0.0	0.0	0.0	103.7	395.2
17-Mar	0.0	0.0	0.0	0.0	0.0	0.0	2.0	26.6	69.6	119.7	158.6	156.1	132.4	160.0	204.1	139.1	42.0	30.9	6.3	0.0	0.0	0.0	0.0	0.0	52.0	204.1
18-Mar	0.0	0.0	0.0	0.0	0.0	0.0	2.8	27.0	125.1	291.5	514.1	664.9	633.8	536.1	433.3	350.2	175.2	84.5	9.7	0.4	0.5	0.4	0.1	0.0	160.4	664.9
19-Mar	0.2	0.1	0.0	0.1	0.1	0.2	8.2	76.8	247.0	435.3	538.9	631.3	660.7	597.2	373.1	340.2	256.5	101.7	12.4	0.3	0.2	0.1	0.1	0.3	178.4	660.7
20-Mar	0.0	0.0	0.0	0.0	0.0	0.0	10.1	75.0	159.1	297.2	443.3	467.4	550.3	534.5	463.3	363.3	285.7	135.8	11.9	0.0	0.0	0.0	0.0	0.0	158.2	550.3
21-Mar	0.0	0.0	0.0	0.0	0.0	0.1	11.2	56.0	192.0	436.8	491.1	646.7	678.8	572.2	549.5	456.6	302.7	85.6	10.0	0.4	0.4	0.1	0.0	0.0	187.1	678.8
22-Mar	0.0	0.1	0.0	0.1	0.0	0.1	10.3	35.0	124.3	171.5	231.2	488.2	583.5	482.6	534.6	433.3	241.8	100.8	11.8	0.7	0.7	0.7	0.1	0.1	143.8	583.5
23-Mar	0.1	0.1	0.1	0.1	0.2	0.3	13.8	105.8	291.4	468.1	582.2	666.0	712.5	343.0	291.4	210.7	219.9	111.9	13.4	1.0	0.9	0.8	0.3	0.1	168.1	712.5
24-Mar	0.2	0.1	0.1	0.2	0.0	0.2	12.7	77.2	179.7	304.6	240.8	310.6	237.4	229.8	293.3	285.7	220.4	92.6	30.7	1.0	0.9	1.0	1.0	0.9	105.1	310.6
25-Mar	0.9	0.9	0.9	0.9	0.9	1.0	17.1	64.1	209.4	446.9	595.7	675.7	693.7	618.2	548.4	481.8	335.6	124.2	19.8	0.4	0.2	0.0	0.0	0.0	201.5	693.7
26-Mar	0.0	0.0	0.0	0.0	0.0	0.2	11.9	55.2	172.8	368.2	535.8	691.1	716.4	636.5	539.8	478.6	189.0	75.5	15.4	0.2	0.0	0.0	0.0	0.0	186.9	716.4
27-Mar	0.0	0.0	0.0	0.0	0.0	0.2	7.6	41.0	93.7	165.7	216.1	261.4	295.1	285.2	309.6	248.9	184.1	82.2	16.0	0.3	0.0	0.0	0.0	0.0	92.0	309.6
28-Mar	0.0	0.0	0.0	0.0	0.0	0.5	15.3	66.5	146.6	244.3	352.8	403.7	439.5	419.9	360.6	243.9	151.8	77.3	18.7	0.4	0.0	0.0	0.0	0.1	122.6	439.5
29-Mar	0.5	0.6	0.2	0.2	0.2	0.8	32.9	98.3	185.2	279.6	348.8	239.7	355.0	412.0	198.8	170.7	134.6	72.6	24.8	1.2	0.6	0.5	0.7	0.6	106.6	412.0
30-Mar	0.4	0.3	0.6	0.5	0.6	1.4	42.9	228.2	459.4	561.1	642.3	722.1	756.5	606.3	583.0	520.3	366.8	149.0	24.6	1.5	0.5	0.7	0.5	0.6	236.3	756.5
31-Mar	0.5	0.5	0.4	0.6	0.2	0.7	17.8	64.0	122.2	196.4	233.2	379.6	539.9	598.5	549.7	504.2	348.3	154.5	29.7	1.1	0.4	0.3	0.0	0.2	156.0	598.5
	0.2	0.2	0.2	0.2	0.1	0.3	7.7	47.7	144.0	279.2	358.2	439.1	446.1	398.6	346.0	279.0	172.3	64.7	9.6	0.4	0.2	0.2	0.2	0.2	Diurnal Average	
	0.9	0.9	0.9	0.9	0.9	1.4	42.9	228.2	459.4	561.1	642.3	722.1	756.5	636.5	583.0	520.3	366.8	154.5	30.7	1.5	0.9	1.0	1.0	0.9	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Global Radiation (GR) - W/m2

Stony Mountain - March 2025



Concentration Ranges (W/m2)	Number of Hours	%	Cumulative %
0 - 20	406	54.57	54.57
21 - 100	82	11.02	65.59
101 - 300	120	16.13	81.72
301 - 600	118	15.86	97.58
601 - 900	18	2.42	100.00
> 900	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Stony Mountain - March 2025

Maximum Speed: 19 km/h on Mar 8 14:00

Maximum Daily Speed Average: 10.8 km/h on Mar 27

Minimum Speed Value: 0 km/h on Mar 29 10:00

Minimum Daily Speed Average: 2.0 km/h on Mar 17

Maximum Diurnal Speed Average: 2.5 km/h at hour 15

Minimum Diurnal Speed Average: 0.8 km/h at hour 19

Monthly Average Velocity: 1.2 km/h 278.0 deg

Percentiles: $P_1 = 2$ $P_{10} = 4$ $Q_1 = 6$ Median = 7 $Q_3 = 9$ $P_{90} = 11$ $P_{99} = 15$

Hours in Service: 744

Hours of Data: 744

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	SSW9	SSW11	SSW11	SSW8	SW7	SSW7	SSW10	SSW10	SSW10	SSW8	SW8	WSW7	W10	WSW9	W9	WSW9	W7	WSW5	WSW4	WSW5	SW6	SW7	WSW8	SW8	SW7.6	SSW11
2-Mar	SW8	SW7	SSW9	SSW10	SSW12	SSW7	SW8	SSW9	W11	WNW11	WNW12	WNW11	NW9	NW10	NW10	NW9	NW6	WNW4	WSW4	WSW6	WNW8	NW7	NW7	NW8	W6.1	WNW12
3-Mar	NW7	NW5	NW7	NNW7	N6	NNW7	NNW7	NNW7	N7	NNW6	N6	NNW6	NNW6	NNW7	NNW6	NW5	NW5	NW4	WSW2	SW2	WSW4	WSW6	W8	W8	NW4.8	W8
4-Mar	WSW8	WSW7	WSW8	WSW9	WSW9	WSW10	WSW11	SW10	SW10	SW10	SSW11	SW10	SW11	WSW9	SW10	SW9	SSW8	SSW9	SSW8	SSW9	SW10	SW11	SW10	SW10	SW9.3	SW11
5-Mar	W8	WNW6	NW6	NW6	NNW5	NW6	NNW6	NNW6	NNW7	NNW8	N7	NNW7	NW8	NW7	NW8	NW8	WNW6	WNW6	W5	W6	WSW6	SW8	SW8	SW10	WNW5.2	SW10
6-Mar	SW8	SW8	SW9	WSW9	W11	W12	W9	W7	WNW6	WNW6	W7	WSW7	W9	W10	W10	W11	WNW11	W8	WSW6	SW7	WSW7	WSW9	W11	W11	W8.3	W12
7-Mar	W10	W10	W10	WSW11	W10	W10	WSW11	W12	W13	W11	W11	W11	W11	W12	WNW11	WNW9	W7	W6	W8	W7	W7	W7	W8	W8	W9.6	W13
8-Mar	W5	WSW4	SSW4	SSW5	SSW8	SSW12	SW11	WSW13	WSW15	W16	W15	W16	W16	WNW19	WNW18	WNW15	WNW14	NW11	NW8	N6	NNE7	NE9	NE9	NE9	W7.2	WNW19
9-Mar	NE9	NE8	NE8	NE8	NE9	NE9	NE10	NE12	NE11	NE10	NE11	NE10	NE11	NE9	NE8	NE8	NE8	NE8	NE8	NNE8	NE8	NNE8	NE6	NE6	NE8.8	NE12
10-Mar	NE4	NNE3	NNE5	ENE3	ENE3	E3	SE4	SE5	SE4	SE5	SSE4	SSE5	SSE3	SE4	S5	NE4	ENE5	ESE4	ESE4	ESE3	ENE2	E3	E3	ENE3	ESE2.6	SSE5
11-Mar	ENE3	ENE4	NE4	NE5	NE5	NE5	NE6	NE5	NE5	ENE5	ENE6	ENE6	ENE6	ENE7	NE6	NE6	ENE5	NNE6	NE6	NNE8	NNE7	NNE7	NNE7	NNE7	NE5.5	NNE8
12-Mar	NNE7	N7	N7	NNE8	NNE7	NNE7	NNE6	NNE7	NE6	NNE4	NE5	NE5	NE6	NNE5	NE6	NE6	E9	E8	ENE7	NE8	NE7	ENE7	ENE7	NE6	NE6.1	E9
13-Mar	NE7	ENE7	ENE6	ENE8	ENE8	ENE8	ENE8	ENE9	ENE9	ENE9	ENE10	ENE11	ENE12	NE13	NE13	NE14	NE15	NE14	NE11	NE9	NNE9	N8	NNE9	N8	NE9.2	NE15
14-Mar	N8	N9	N8	N5	NNW4	NW5	NNW5	N5	NNW5	NNW6	NW8	NNW7	NNW8	NNW8	NNW7	NW9	NW8	NNW7	NNW5	NW4	NW5	NW5	NW5	NW4	NNW6.0	NW9
15-Mar	NW4	WNW5	WNW5	WNW5	NW4	NW3	WNW3	NW3	NNE3	NE4	NE4	NE4	N3	NNW5	WNW6	NNW5	N5	NNE5	NE5	ENE5	ENE4	E4	SSE3	S4	N2.2	WNW6
16-Mar	SE3	SSE3	SSE4	SSE4	SSE4	SSE4	SE4	SSE4	SSE5	SE5	SE9	SE9	SE9	SE8	SSE9	S8	SE7	SE7	SE6	SE6	SSE8	SSE8	SSE8	SSE6	SSE6.1	SE9
17-Mar	S7	S8	S8	S6	S6	S6	S6	S5	S7	SSW8	SW7	WSW7	W7	WNW6	NW5	NW5	NW5	NW5	NNW3	N3	NNE5	NE3	NE3	NE4	SW2.0	S8
18-Mar	NE3	NE4	N4	NE1	SE4	SSW4	WNW3	W4	NW5	NW5	WSW9	W10	W10	SW10	SW10	SW11	SW9	SW9	SW7	SW6	SW7	WSW9	W11	W9	WSW5.0	W11
19-Mar	W8	WSW7	WSW7	WSW7	WSW6	SW6	W6	SW6	SSW7	SW7	WSW7	WSW9	WSW10	WSW10	WSW12	WSW10	W10	W7	W5	WSW4	WSW6	WSW7	WSW6	WSW6	WSW7.1	WSW12
20-Mar	WNW5	N6	NE9	NE10	NE12	NE10	NE8	NE7	ENE7	NE9	ENE9	ENE9	ENE10	NE11	ENE8	NE10	ENE8	ENE9	NE8	NE10	NE8	ENE6	E6	ESE8	NE7.8	NE12
21-Mar	ESE7	SE9	SE8	SE7	SE7	SE7	ESE7	ESE5	ESE4	ESE4	ESE6	ESE6	ESE8	ESE9	SSE9	SSE9	SE9	SE8	SSE6	SSE7	S10	SSE10	SSE8	SSE8	SE7.1	S10
22-Mar	SSE6	S7	S6	S8	S8	SSW10	SSW10	SSW11	SSW11	SSW9	SSW7	SSW8	SW7	WSW7	WSW10	W10	W10	WNW11	WNW10	W11	W9	W9	W9	W7	SW6.6	SSW11
23-Mar	W8	W8	W8	W7	WSW8	W8	W7	WSW7	W9	W7	W6	W8	W9	W8	W6	W1	WSW6	WSW5	SSW5	SSW5	SSW7	SSW7	SW3	SE2	WSW5.8	W9
24-Mar	SSE3	SSW5	SSW6	SSW8	SSW7	SSW8	SSW8	SSW9	SSW8	SSW11	SSW12	SSW9	SSW10	SSW11	SW10	SW8	W5	NNW6	WNW8	NW8	WNW8	W10	W11	W11	SW6.3	SSW12
25-Mar	W11	W11	W11	W11	W11	W11	W12	W10	W9	W8	WSW9	WSW9	WSW10	WSW10	W13	WNW14	WNW13	NW8	NW6	NW5	NNW2	NNW4	N5	NNE8	W8.1	WNW14
26-Mar	NNE7	NE7	NNE9	NNE10	NNE9	NNE10	NNE10	NE9	NE8	NE9	ENE8	NE9	ENE9	ENE7	ENE8	ENE9	NE11	NE10	ENE8	NE8	NE10	NE9	ENE8	ENE8	NE8.4	NE11
27-Mar	ENE9	ENE8	ENE9	ENE8	ENE9	NE10	NE10	NE13	NE11	NE13	NE13	NE13	NE12	NE12	NE13	NE12	NNE13	NE13	NE11	NE10	NE10	ENE10	ENE9	ENE10	NE10.8	NE13
28-Mar	ENE8	NE10	NE8	NE6	N5	N6	N6	NNE7	NNE7	NE6	NE7	ENE7	E7	E6	E4	ENE4	ENE3	E3	E3	ENE3	NE3	NE4	NE4	NE2	NE5.0	NE10
29-Mar	ESE1	S3	S4	SSW6	SSW6	SSW4	S3	S3	S5	ENE0	N3	NNE3	NNW2	WSW4	NW4	W5	WSW5	W5	SW4	SW4	SW5	SW5	SW6	SW5	SW2.7	SSW6
30-Mar	WSW6	SW6	SSW7	SW8	SSW7	SW7	SW6	SSW6	SSW6	SSW7	SSW7	SSW7	SSW8	SSW9	SSW8	SSW7	S7	S7	SW7	SW7	SW8	SSW7	SSW8	SSW9	SSW7.0	SSW9
31-Mar	SSW8	SSW7	S5	S6	S4	SE3	ESE3	SE4	SE5	SE7	SE8	SSE8	SE10	SE10	SE9	ESE10	SE8	ESE8	ESE7	SE6	SSE6	SSE7	SSE8	SSE7	SE6.3	SE10
	W1.4	W1.0	W1.1	WSW1.2	SW1.3	WSW1.2	WSW1.2	WSW1.1	W1.1	W1.0	W1.1	W1.1	WNW1.6	W2.0	W2.5	WNW2.3	NW2.1	NNW1.7	NNW0.8	NW0.8	WNW1.0	WSW1.0	W1.4	W1.2	Diurnal Average	
	W11	SSW11	SSW11	WSW11	NE12	W12	W12	WSW13	WSW15	W16	W15	W16	W16	WNW19	WNW18	WNW15	NE15	NE14	NE11	W11	S10	SW11	W11	W11	Diurnal Maximum	

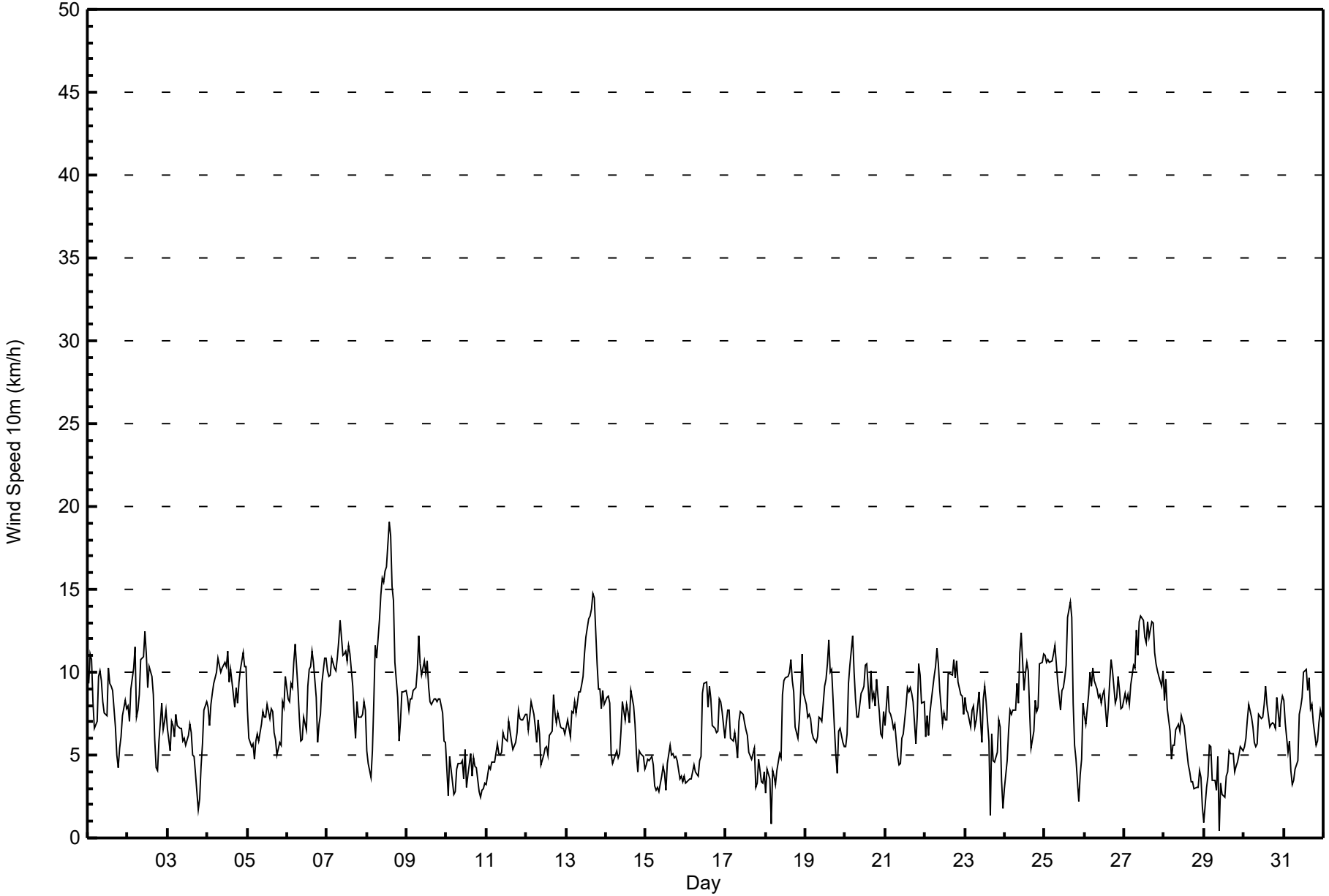
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Stony Mountain - March 2025



Wind Speed 10m (WS10) - km/h
Stony Mountain - March 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	179	24.06	24.06
6 - 11	524	70.43	94.49
12 - 19	41	5.51	100.00
20 - 28	0	0.00	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Stony Mountain - March 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	8	8	24	15	7	8	13	12	10	7	7	11	8	7	22	12	179
6 - 11	15	26	69	45	5	10	22	18	16	62	47	50	76	17	25	21	524
12 - 19	0	1	16	1	0	0	0	0	0	3	0	3	10	7	0	0	41
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	23	35	109	61	12	18	35	30	26	72	54	64	94	31	47	33	744

Total Number of Valid Hours: 744

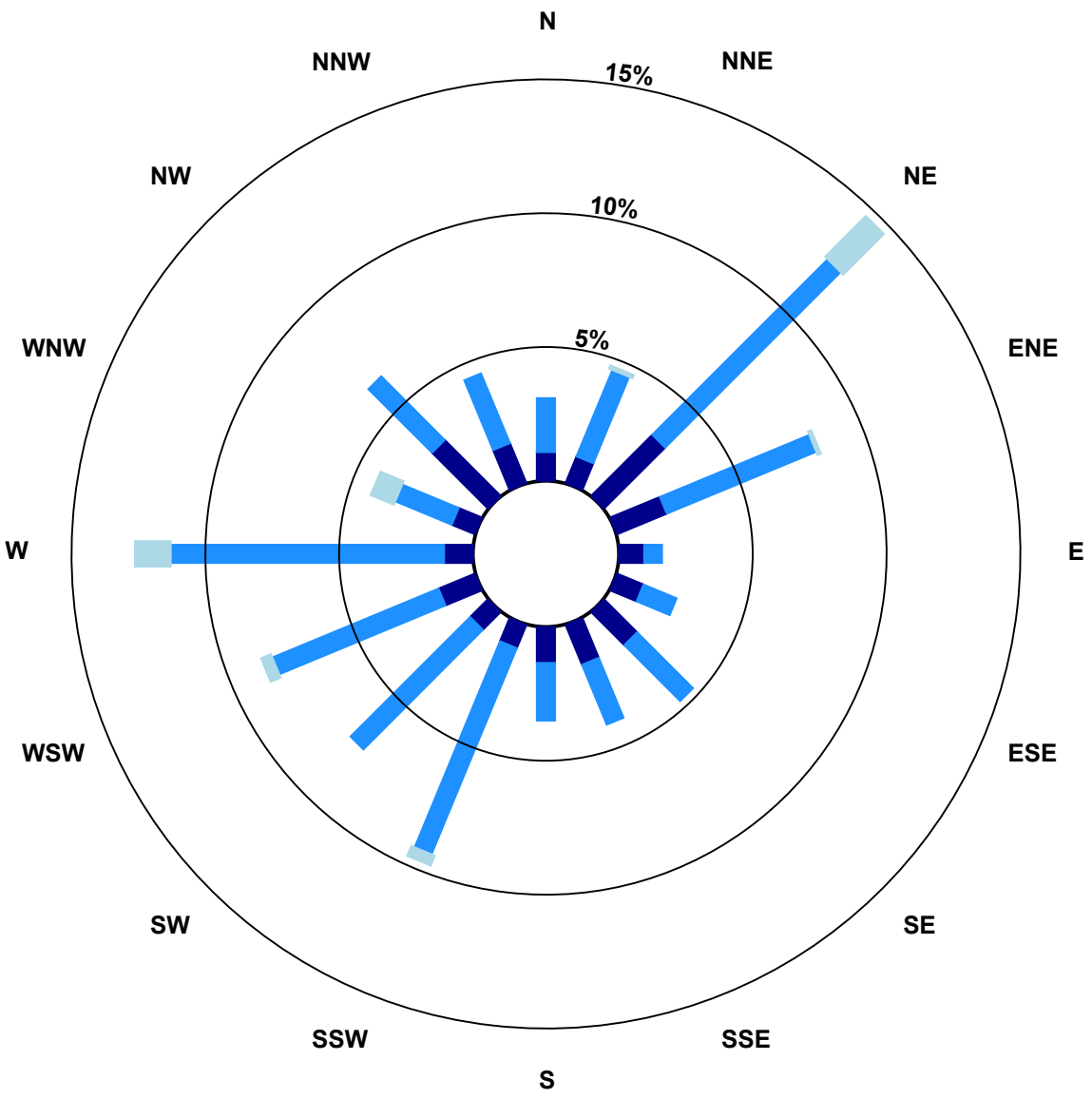
Total Number of Hours: 744

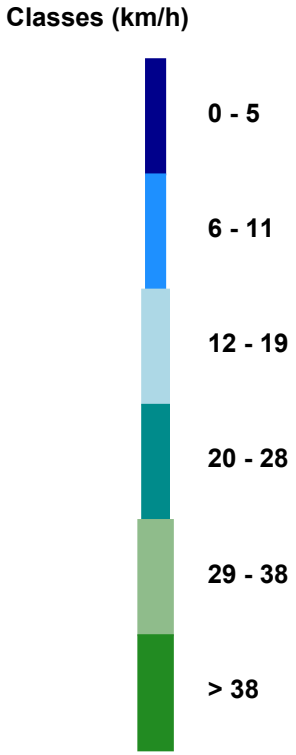
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 10m (WS10) - km/h

Stony Mountain





Total Number of Valid Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Stony Mountain - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8 km/h on Mar 8 14:00

Minimum Value: 0 km/h on Mar 15 08:00

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

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

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

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Stony Mountain - March 2025

Direction of Maximum Speed: 283 deg on Mar 8 14:00
Direction of Maximum Daily Speed Average: 50.1 deg on Mar 27

Direction of Minimum Speed: 71 deg on Mar 29 10:00
Direction of Minimum Daily Speed Average: 2.0 deg on Mar 17

Monthly Average Direction: 278.0 deg

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	204	212	210	212	218	206	205	207	205	209	225	239	262	250	262	252	265	249	238	247	233	236	240	229	228.3
2-Mar	225	222	209	205	207	210	214	211	263	282	291	303	323	309	317	315	314	297	250	253	290	307	309	307	269.5
3-Mar	316	323	315	338	349	347	342	347	356	345	358	347	332	331	341	324	317	315	244	221	250	258	264	266	322.0
4-Mar	258	257	242	239	239	247	242	233	224	226	209	221	231	237	225	224	206	204	204	209	222	228	222	231	227.9
5-Mar	268	299	309	319	329	326	334	333	337	347	349	334	310	314	313	311	299	294	260	265	246	228	225	216	299.5
6-Mar	226	233	232	248	263	272	276	272	295	282	272	255	273	268	262	275	291	280	258	230	237	251	259	267	261.9
7-Mar	272	267	259	254	264	265	253	267	269	269	273	270	267	274	282	282	275	278	281	278	268	278	268	269	269.6
8-Mar	272	240	206	202	200	211	221	245	258	271	275	268	279	283	282	284	295	321	321	358	24	52	44	44	277.2
9-Mar	50	52	45	45	52	49	44	43	42	52	41	43	38	41	36	42	37	49	41	30	36	33	46	44	42.9
10-Mar	41	20	25	63	61	98	125	126	134	142	157	156	148	142	188	39	64	104	121	104	74	95	81	64	103.2
11-Mar	66	62	37	40	51	45	34	44	54	58	66	66	64	66	53	55	66	31	43	33	26	27	18	19	45.5
12-Mar	17	5	11	14	17	32	26	17	39	23	44	46	43	31	42	56	88	86	59	49	47	67	62	48	40.7
13-Mar	54	68	60	58	69	65	67	64	70	73	69	63	57	49	55	53	40	42	49	39	22	8	12	9	50.6
14-Mar	9	5	8	357	334	324	346	350	341	338	314	330	338	331	328	322	324	327	335	320	313	310	314	311	334.9
15-Mar	305	302	298	303	304	309	303	308	33	48	46	40	9	332	302	334	359	20	37	61	72	99	148	172	351.8
16-Mar	146	155	160	149	156	152	142	148	163	129	145	133	142	133	162	169	136	128	128	144	151	159	163	165	148.1
17-Mar	169	172	186	179	171	174	172	171	191	199	214	255	271	284	307	317	306	319	339	358	23	49	53	47	215.6
18-Mar	49	40	0	42	145	204	299	281	309	307	257	273	272	226	218	229	219	223	216	220	235	246	275	269	249.0
19-Mar	270	255	258	249	240	233	259	221	212	229	257	250	237	239	257	255	273	270	272	254	258	252	250	238	249.9
20-Mar	287	11	38	37	37	41	45	52	63	56	61	63	61	53	60	44	68	61	50	45	54	72	87	109	52.4
21-Mar	120	133	140	139	138	131	123	120	117	122	121	119	112	117	164	159	144	144	147	159	171	166	167	166	141.7
22-Mar	166	174	175	185	188	196	197	199	198	203	210	199	215	247	255	265	267	296	284	280	276	278	274	271	231.9
23-Mar	271	269	272	261	255	265	260	249	280	272	271	274	271	273	261	266	248	248	195	198	206	212	232	130	255.8
24-Mar	157	199	208	202	202	203	203	204	213	209	208	196	198	209	223	226	270	335	289	317	287	280	279	278	231.1
25-Mar	273	280	275	264	261	266	273	274	264	259	242	239	254	258	274	285	288	313	308	319	335	340	349	15	277.2
26-Mar	19	35	30	21	22	24	31	42	42	39	60	53	62	77	74	60	38	49	61	48	50	54	63	62	45.7
27-Mar	59	59	62	64	61	52	48	54	52	47	42	48	52	44	53	44	33	42	43	43	46	57	65	58	50.1
28-Mar	58	52	56	36	8	11	3	28	32	35	43	57	84	81	84	73	57	79	91	60	42	48	46	52	49.2
29-Mar	112	186	189	202	201	197	184	182	176	71	351	32	340	249	308	274	258	268	230	229	228	227	234	235	229.3
30-Mar	242	222	210	215	211	220	217	209	198	208	195	208	213	210	211	204	190	191	216	226	216	195	201	202	209.3
31-Mar	199	194	180	185	183	138	122	136	125	127	139	155	144	135	133	118	127	123	113	144	160	154	148	155	146.0
	274.1	260.1	259.4	245.6	235.1	250.5	258.3	249.9	259.9	277.1	272.6	276.0	285.1	280.0	277.8	298.6	314.4	344.4	335.5	323.1	281.5	258.5	266.6	267.4	
	Diurnal Average																								

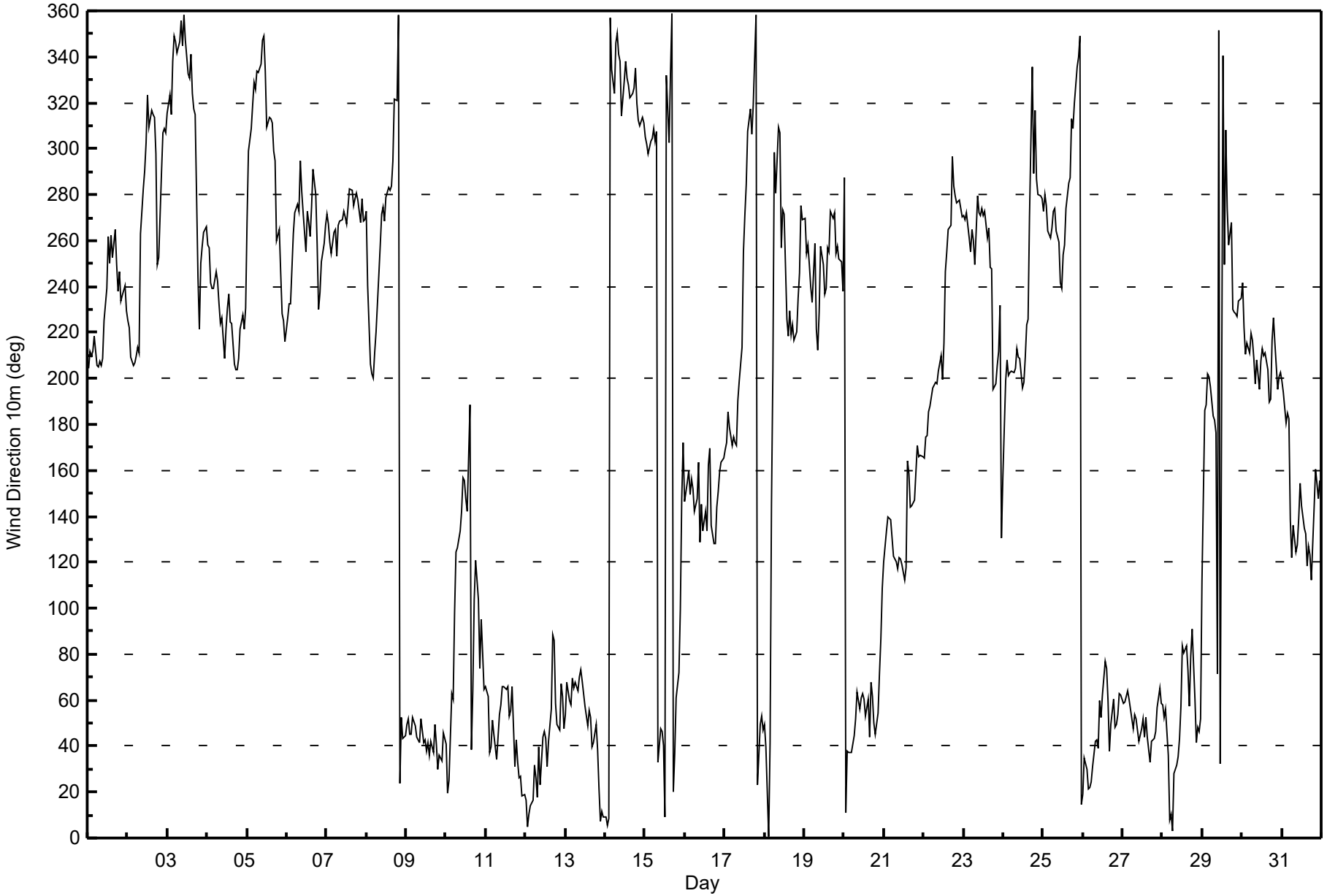
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Stony Mountain - March 2025



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

Maximum Value: 99 deg on Mar 29 10:00

Minimum Value: 11 deg on Mar 15 00:00

Percentiles: P_1 = 15 P_{10} = 19 Q_1 = 21 Median = 26 Q_3 = 32 P_{90} = 41 P_{99} = 72

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	20	21	19	20	21	17	21	19	20	24	30	40	33	36	37	33	32	28	21	27	32	23	28	27	40
2-Mar	27	24	18	19	19	21	20	19	34	30	28	30	29	24	27	27	24	24	21	25	30	20	20	22	34
3-Mar	20	20	24	32	33	32	30	31	31	35	36	48	36	32	39	39	45	24	25	37	23	23	27	27	48
4-Mar	27	29	29	29	26	30	29	27	26	29	28	33	34	41	36	33	29	25	20	21	25	25	25	26	41
5-Mar	35	23	20	23	22	23	29	30	30	33	38	41	37	36	36	32	31	26	22	21	25	24	22	24	41
6-Mar	25	24	25	33	30	29	23	21	26	36	35	47	40	38	37	32	29	24	25	20	26	30	30	27	47
7-Mar	24	26	30	32	31	26	28	27	29	32	31	31	34	33	30	34	27	26	23	23	27	23	23	24	34
8-Mar	30	27	23	19	20	20	24	30	29	32	28	32	32	28	29	30	27	27	28	32	31	16	19	19	32
9-Mar	19	22	20	18	19	19	18	18	20	20	21	25	24	23	23	22	25	19	21	20	22	24	24	25	25
10-Mar	27	54	20	59	40	25	28	31	38	44	68	47	86	72	61	76	37	30	26	23	19	47	49	28	86
11-Mar	33	33	30	28	20	19	20	24	19	20	23	30	24	24	25	29	25	29	27	26	29	25	25	23	33
12-Mar	22	22	24	21	22	20	22	21	27	42	46	38	51	58	44	41	26	22	20	17	17	19	18	22	58
13-Mar	18	18	22	21	20	18	19	19	20	21	19	19	18	19	18	17	19	19	22	21	22	21	21	21	22
14-Mar	20	20	22	24	20	19	28	29	31	35	30	35	35	33	33	27	29	29	32	19	15	15	15	11	35
15-Mar	16	15	14	14	13	21	32	13	34	36	40	60	84	53	39	42	42	29	26	18	16	20	17	18	84
16-Mar	16	18	18	18	24	25	21	23	31	36	38	41	40	38	39	41	30	29	26	26	26	27	27	31	41
17-Mar	26	25	21	23	22	21	21	23	24	25	34	38	35	32	31	32	28	29	27	42	21	28	25	17	42
18-Mar	26	25	29	73	19	43	22	24	26	43	41	35	38	40	38	34	33	32	23	41	31	29	26	25	73
19-Mar	25	23	25	25	23	27	22	27	22	33	41	38	38	41	36	35	29	31	22	19	22	26	26	32	41
20-Mar	21	37	18	18	17	17	16	17	21	21	22	24	27	25	30	25	24	25	22	16	19	16	19	19	37
21-Mar	21	21	17	17	19	19	20	22	30	45	35	43	36	31	43	37	33	29	26	24	21	28	26	28	45
22-Mar	29	24	24	22	20	20	21	21	21	29	35	40	40	48	35	36	34	27	25	24	24	24	26	26	48
23-Mar	23	24	24	27	26	27	28	37	27	34	44	39	39	38	44	98	41	43	20	17	18	19	57	43	98
24-Mar	18	21	19	18	19	20	20	23	26	28	26	35	31	33	32	37	63	39	30	28	31	24	24	23	63
25-Mar	24	24	25	25	28	29	26	26	28	33	33	41	40	43	35	30	30	28	23	27	19	19	23	20	43
26-Mar	20	18	23	22	22	21	23	22	21	30	27	26	34	45	34	26	22	21	21	18	16	16	19	19	45
27-Mar	18	22	19	19	18	18	18	17	20	19	20	19	21	21	22	21	21	20	19	20	19	19	20	17	22
28-Mar	19	18	20	20	25	20	19	25	22	27	22	28	37	46	59	72	58	66	35	26	17	28	14	20	72
29-Mar	70	15	17	16	19	17	18	27	31	99	58	71	74	72	66	45	43	39	31	21	21	23	22	23	99
30-Mar	24	26	19	20	19	19	19	23	38	44	51	48	41	37	47	49	44	38	25	28	25	23	24	25	51
31-Mar	22	21	19	19	26	23	23	30	28	28	36	42	38	42	44	34	35	29	24	31	24	23	18	22	44
	70	54	30	73	40	43	32	37	38	99	68	71	86	72	66	98	63	66	35	42	32	47	57	43	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 20m (WS20) - km/h

Stony Mountain - March 2025

Maximum Speed: 26 km/h on Mar 8 14:00

Maximum Daily Speed Average: 14.4 km/h on Mar 27

Minimum Speed Value: 1 km/h on Mar 29 10:00

Minimum Daily Speed Average: 3.1 km/h on Mar 17

Maximum Diurnal Speed Average: 3.7 km/h at hour 15

Minimum Diurnal Speed Average: 1.6 km/h at hour 19

Monthly Average Velocity: 2.1 km/h 281.9 deg

Percentiles: $P_1 = 4$ $P_{10} = 6$ $Q_1 = 8$ Median = 11 $Q_3 = 13$ $P_{90} = 15$ $P_{99} = 21$

Hours in Service: 744

Hours of Data: 744

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	SW14	SW16	SW15	SW12	WSW11	SW11	SW15	SW14	SW13	SW10	SW9	WSW10	W13	WSW12	W12	WSW12	W9	WSW7	WSW8	WSW9	WSW10	WSW11	WSW13	WSW12	WSW11.1	SW16
2-Mar	WSW12	WSW11	SW13	SW15	SW16	SW11	SW12	SW13	W16	WNW16	WNW18	NW16	NNW16	NW16	NW16	NW14	NW9	NW7	W7	W9	WNW13	NW11	NW13	NW13	WNW10.0	WNW18
3-Mar	NW12	NNW10	NW13	NNW13	N11	N14	NNW13	N12	N10	NNW9	N9	N7	NNW9	NNW11	NNW10	NNW8	NNW7	NW6	WNW4	W4	W7	W8	W11	W12	NNW8.3	N14
4-Mar	W12	W11	WSW13	WSW14	WSW14	WSW15	WSW16	WSW15	WSW14	SW14	SW13	SW13	WSW15	WSW12	SW13	SW13	SSW10	SSW12	SW12	SW13	SW15	WSW16	SW15	WSW15	WSW13.1	WSW16
5-Mar	W11	WNW10	NW9	NNW10	NNW10	NNW11	NNW13	NNW12	NNW13	N13	N11	NNW11	NW12	NW11	NW12	NW12	NW10	NW10	W8	W9	WSW9	WSW12	SW12	SW14	NW8.7	SW14
6-Mar	WSW13	WSW13	WSW14	WSW14	W15	W16	W13	W10	WNW8	WNW8	W9	W8	W12	W14	W14	WNW16	WNW15	WNW12	W9	WSW11	WSW12	W14	W16	W16	W12.2	W16
7-Mar	W14	W14	W14	W16	W15	W15	W15	W16	W18	W15	W15	W15	W15	W16	WNW15	WNW13	WNW10	WNW9	WNW12	WNW11	W10	W11	W12	W11	W13.5	W18
8-Mar	W7	WSW7	SW6	SW8	SSW13	SW16	SW16	WSW19	W20	W21	W21	W22	WNW23	WNW26	WNW26	WNW22	WNW21	NNW19	NNW16	N10	NNE10	ENE12	NE11	NE11	WNW10.8	WNW26
9-Mar	ENE11	ENE10	NE11	NE11	ENE12	NE12	NE13	NE15	NE13	ENE13	NE13	NE12	NE13	NE11	NE10	NE10	NE10	NE11	NE11	NE10	NE10	NE10	NE7	NE7	NE11.0	NE15
10-Mar	NE6	NE5	NNE7	ENE4	ENE4	ESE4	SE5	SE6	SE6	SSE6	SSE5	SSE7	S4	SSE4	SSW6	NE5	ENE6	ESE6	SE6	ESE4	E4	E4	E4	ENE5	ESE3.5	NNE7
11-Mar	ENE4	ENE6	NE5	NE6	ENE6	NE6	NE7	NE6	ENE7	ENE7	ENE9	ENE8	ENE8	ENE9	ENE9	ENE8	ENE7	NNE7	NE8	NE10	NNE10	NNE9	NNE9	NNE10	NE7.1	NE10
12-Mar	NNE10	N10	N10	NNE11	NNE10	NE8	NNE7	NNE9	NE8	NNE5	NE6	NE7	NE7	NNE6	NE8	ENE8	E12	E11	ENE10	NE10	NE9	ENE10	ENE10	ENE8	NE7.9	E12
13-Mar	ENE9	ENE10	ENE9	ENE11	ENE11	ENE12	ENE12	ENE13	E13	E14	ENE14	ENE16	ENE17	NE17	ENE19	ENE19	NE18	NE19	NE15	NE11	NNE12	NNE12	NNE13	NNE12	ENE12.9	ENE19
14-Mar	NNE12	N13	NNE12	N8	NNW9	NNW10	N10	N10	NNW8	NNW10	NW13	NNW12	NNW14	NNW12	NNW12	NNW15	NNW14	NNW12	NNW10	NNW8	NW9	NW9	NW9	NW8	NNW10.4	NNW15
15-Mar	NW8	WNW8	WNW8	WNW9	NW8	NW6	NW5	NW5	NNE3	NE4	NE4	NE5	N4	NNW7	NW8	NNW7	N7	NNE6	NE7	ENE7	E6	ESE7	SSE8	S8	N3.1	WNW9
16-Mar	SSE8	SSE9	SSE9	SSE9	SSE9	SSE10	SSE8	SSE7	S7	SE7	SSE12	SE12	SSE12	SE11	S13	S11	SSE10	SE9	SE9	SSE10	SSE13	S13	S12	S10	SSE9.8	SSE13
17-Mar	S11	S12	SSW11	S9	S9	S10	S9	S8	SSW9	SSW10	SW9	W9	W9	WNW8	NW8	NW7	NW8	NNW9	NNW6	N6	NNE6	ENE5	ENE5	NE5	SW3.1	S12
18-Mar	ENE4	NE5	N5	NE2	SSE7	SSW6	WNW5	WNW6	NW7	NW7	W11	W13	W13	SW13	SW13	SW14	SW12	SW12	SW9	SW9	WSW11	WSW14	WNW16	W13	WSW6.9	WNW16
19-Mar	W12	W11	W11	WSW11	WSW11	WSW10	W10	WSW9	SW10	WSW9	W9	WSW11	WSW13	WSW14	W16	W14	W14	W9	W8	W7	W10	W11	W10	WSW9	W10.5	W16
20-Mar	WNW9	N9	NE12	NE13	NE15	NE13	NE11	ENE10	ENE10	ENE12	ENE12	ENE12	ENE14	ENE14	ENE11	NE12	ENE12	ENE12	ENE11	NE12	ENE10	E10	E10	ESE12	ENE10.2	NE15
21-Mar	SE11	SE15	SSE13	SSE13	SSE13	SE11	SE10	SE7	SE6	SE6	SE8	SE8	ESE11	SE12	S12	SSE12	SSE12	SSE12	SSE10	S14	S17	S17	S14	S13	SSE10.9	S17
22-Mar	S10	S12	S10	SSW11	SSW12	SSW14	SSW14	SSW16	SSW14	SSW12	SW9	SSW9	SW9	WSW9	W13	W13	W14	WNW16	WNW14	WNW15	WNW14	WNW13	WNW13	W11	WSW9.4	WNW16
23-Mar	W12	W11	W11	W10	W11	W11	W11	W11	WNW12	W9	W8	W11	WNW12	W11	W8	W2	WSW8	WSW6	SSW7	SSW9	SSW11	SW11	SW7	SSE4	W8.3	W12
24-Mar	SSE7	SSW8	SW10	SSW12	SSW12	SSW12	SSW12	SSW13	SW11	SW15	SW16	SSW12	SSW13	SW14	SW13	SW10	WNW8	NNW11	WNW12	NW14	WNW12	WNW16	WNW16	WNW16	WSW9.0	SW16
25-Mar	W16	WNW16	WNW16	W15	W16	W16	W17	W15	W13	W11	WSW12	WSW12	W13	W13	W18	WNW20	WNW20	NW13	NW10	NNW9	N7	N9	N10	NNE11	WNW11.7	WNW20
26-Mar	NNE10	NE8	NNE11	NNE13	NNE11	NNE13	NE12	NE12	NE10	NE11	ENE11	ENE12	ENE11	E9	E11	ENE13	NE14	NE13	ENE12	NE11	NE13	ENE12	ENE12	ENE12	NE10.9	NE14
27-Mar	ENE12	ENE12	ENE12	ENE12	ENE13	ENE14	NE14	ENE17	ENE15	NE17	NE17	NE17	ENE16	NE15	ENE18	NE15	NE16	NE16	NE14	NE13	NE13	ENE13	ENE13	ENE14	ENE14.4	ENE18
28-Mar	ENE12	ENE13	ENE11	NE8	N7	NNE8	N8	NNE8	NE8	NE8	NE9	ENE9	E9	E8	E6	ENE4	ENE4	E5	E5	ENE5	ENE5	ENE6	ENE6	ENE5	ENE6.6	ENE13
29-Mar	ESE4	S7	SSW7	SSW9	SSW9	SSW6	S6	S4	S6	SE1	NNW4	NE3	NW3	WSW5	NW6	W7	W7	W7	WSW5	WSW7	WSW8	WSW8	WSW9	WSW9	SW4.3	WSW9
30-Mar	WSW9	SW9	SW11	SW12	SW11	SW11	SW9	SW7	SSW7	SW9	SSW9	SW9	SW10	SW11	SW10	SSW9	SSW9	SSW9	SW10	SW10	SW12	SSW10	SSW12	SSW12	SW9.6	SSW12
31-Mar	SSW12	SSW10	SSW9	SSW10	S8	SSE6	SE5	SSE6	SE6	SE10	SSE11	SSE12	SSE14	SE14	SE12	SE13	SE11	SE11	SE10	SSE9	S9	SSE12	SSE14	SSE13	SSE9.5	SE14
	W2.2	W2.1	W2.3	WSW2.4	WSW2.5	WSW2.4	W2.4	W2.2	W2.0	WNW1.7	W1.8	WNW1.7	WNW2.5	WNW3.0	WNW3.7	NW3.6	NW3.2	NNW2.7	NW1.6	NW1.7	WNW2.0	W2.0	W2.3	W2.0	Diurnal Average	
	W16	WNW16	WNW16	W16	SW16	SW16	W17	WSW19	W20	W21	W21	W22	WNW23	WNW26	WNW26	WNW22	WNW21	NNW19	NNW16	WNW15	S17	S17	WNW16	WNW16	Diurnal Maximum	

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

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

Maximum Value: 9 km/h on Mar 8 15:00

Minimum Value: 1 km/h on Mar 3 19:00

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

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

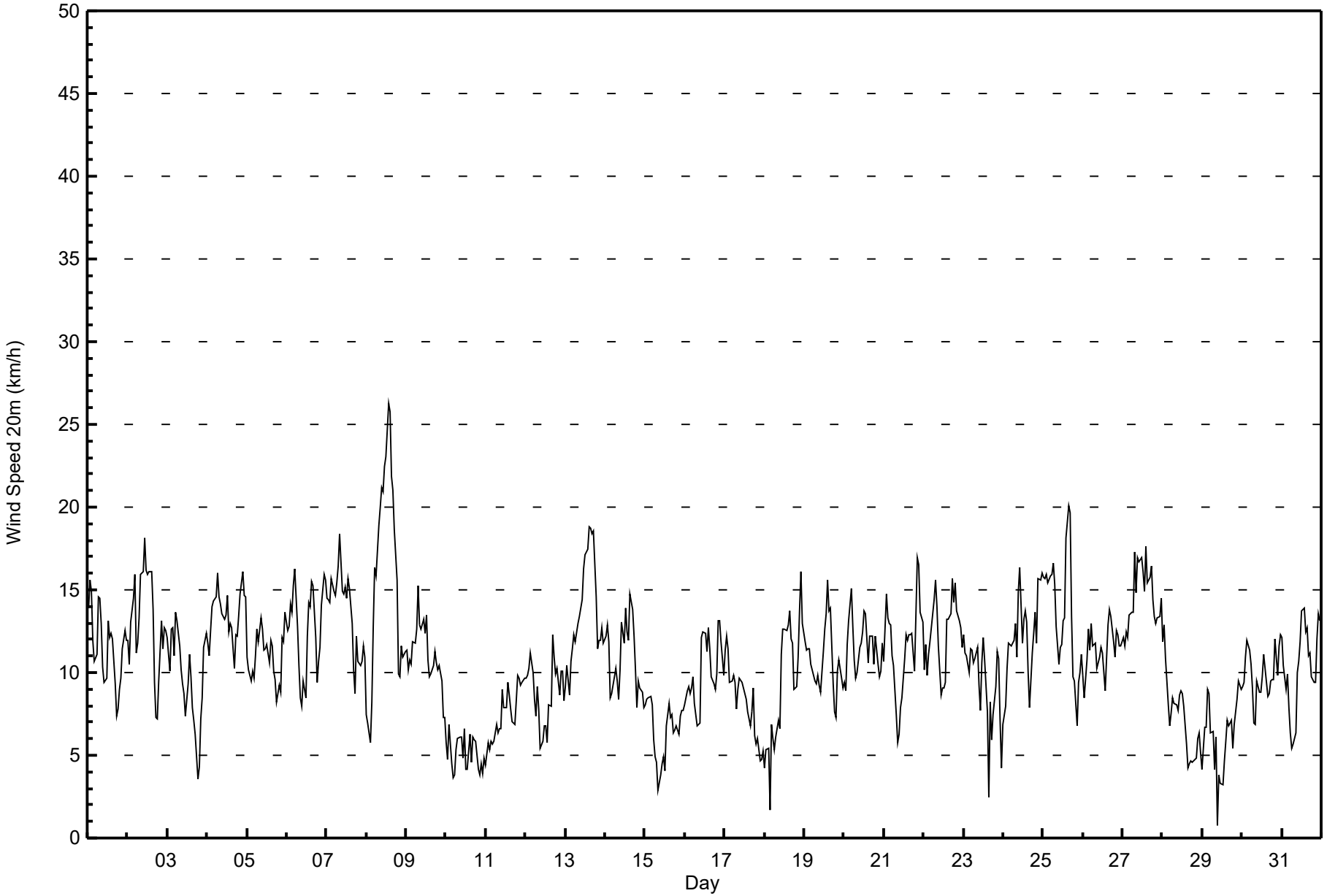
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	3	3	3	3	2	2	3	3	3	3	3	3	4	4	4	4	3	2	2	2	2	3	3	3	4
2-Mar	3	2	3	3	3	2	2	3	5	5	5	5	6	5	5	4	3	2	2	2	4	3	4	4	6
3-Mar	3	3	3	4	4	4	5	4	3	3	3	3	3	3	4	3	3	2	1	2	2	2	3	3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

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 20m (WS20) - km/h

Stony Mountain - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	52	6.99	6.99
6 - 11	376	50.54	57.53
12 - 19	305	40.99	98.52
20 - 28	11	1.48	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 20m (WS20) - km/h

Stony Mountain - March 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	2	3	9	12	5	3	3	3	2	0	0	2	2	2	3	1	52
6 - 11	19	22	40	36	9	3	20	20	17	25	30	28	48	13	23	23	376
12 - 19	4	8	31	41	3	1	5	15	11	18	36	28	50	25	14	15	305
20 - 28	0	0	0	0	0	0	0	0	0	0	0	0	4	7	0	0	11
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	25	33	80	89	17	7	28	38	30	43	66	58	104	47	40	39	744

Total Number of Valid Hours: 744

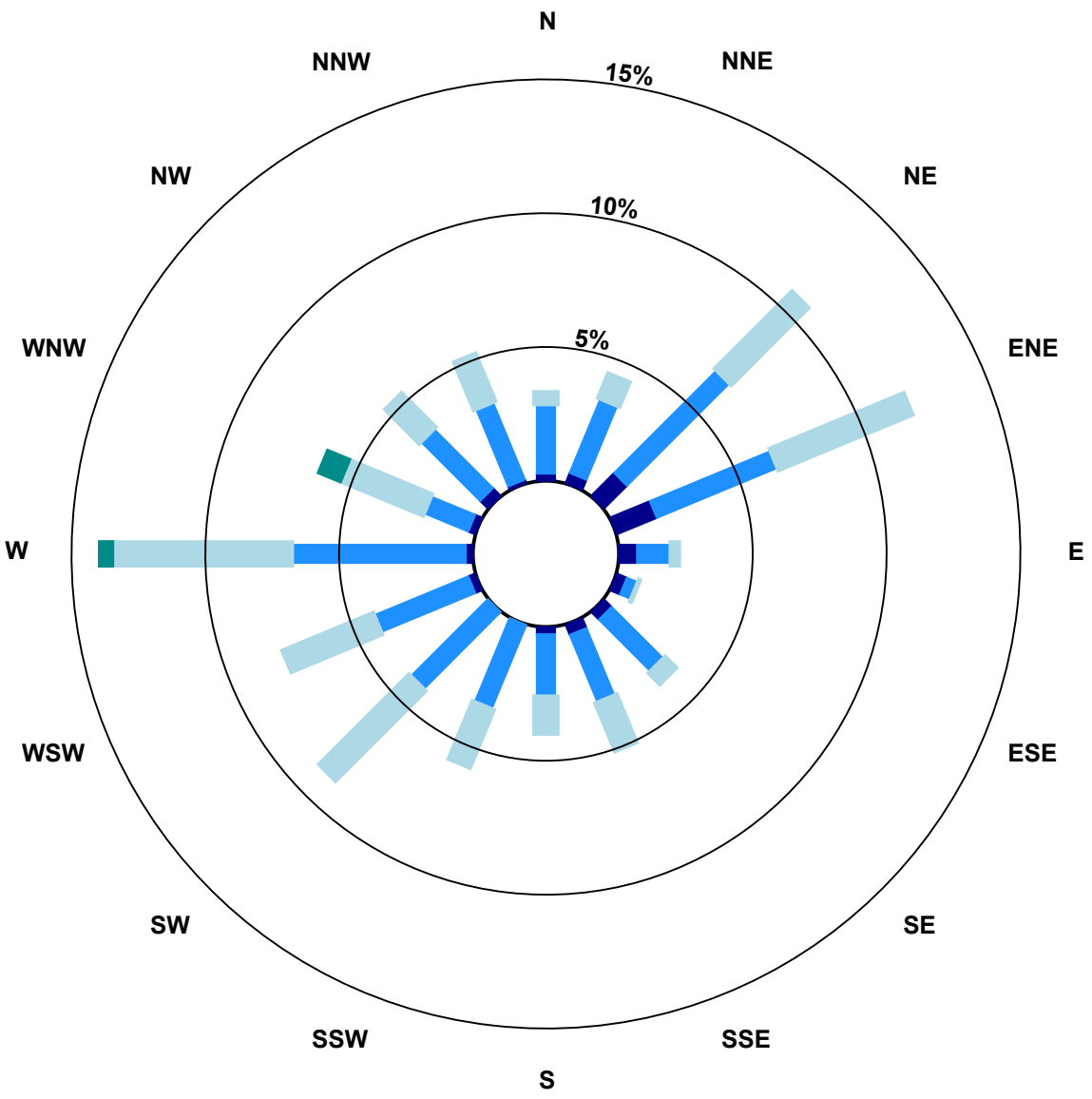
Total Number of Hours: 744

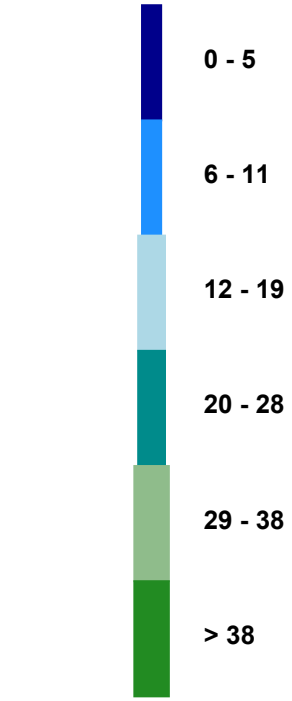
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 20m (WS20) - km/h

Stony Mountain





Total Number of Valid Hours: 744

Direction of Maximum Speed: 290 deg on Mar 8 14:00
Direction of Maximum Daily Speed Average: 57.3 deg on Mar 27

Direction of Minimum Speed: 128 deg on Mar 29 10:00

Direction of Minimum Daily Speed Average: 3.1 deg on Mar 17

Monthly Average Direction: 281.9 deg

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	215	221	222	225	237	222	218	220	218	222	236	247	265	257	268	258	272	253	248	254	243	246	250	240	238.3
2-Mar	239	242	221	218	219	227	229	226	267	285	300	309	331	317	325	324	322	308	268	265	297	315	318	315	281.3
3-Mar	325	332	325	344	352	349	347	350	356	347	354	350	337	338	341	333	330	326	286	267	261	263	269	271	328.4
4-Mar	263	263	250	250	250	253	252	243	237	234	216	226	242	242	231	233	210	211	214	219	233	237	231	240	237.0
5-Mar	273	302	315	330	338	335	341	338	344	351	352	340	323	323	321	318	309	304	270	275	255	239	234	226	310.0
6-Mar	240	247	246	258	268	275	280	276	294	285	280	266	279	274	272	283	298	288	269	244	251	259	264	271	269.1
7-Mar	279	273	264	261	267	271	260	272	270	275	278	277	273	279	289	288	284	285	289	286	276	281	273	272	275.1
8-Mar	277	251	224	214	211	220	234	253	264	274	279	276	284	290	289	289	302	330	329	359	25	59	50	50	284.4
9-Mar	57	58	49	49	58	54	50	49	48	58	47	45	42	46	39	46	42	55	47	36	42	39	52	48	48.3
10-Mar	50	36	33	66	73	103	136	136	146	150	165	166	170	167	196	37	70	112	133	117	79	101	96	74	111.0
11-Mar	76	70	41	47	60	54	39	48	61	64	74	76	73	74	58	65	73	32	50	36	29	30	22	23	52.0
12-Mar	19	7	11	15	18	36	27	19	44	27	51	51	43	32	44	62	98	95	66	54	55	76	69	58	45.8
13-Mar	62	77	67	66	77	73	74	72	80	81	76	70	65	56	63	60	45	49	56	44	27	12	17	14	58.1
14-Mar	13	11	12	1	344	333	351	354	346	344	321	335	343	337	334	331	334	336	342	331	322	317	320	319	340.9
15-Mar	310	303	299	303	309	319	309	313	32	49	54	49	0	332	314	338	358	19	44	68	80	104	150	173	348.8
16-Mar	154	166	168	162	162	161	156	167	176	141	154	146	151	141	169	177	147	142	142	154	163	172	174	176	159.4
17-Mar	179	182	194	190	185	186	182	183	198	206	221	265	280	292	313	321	316	329	345	360	28	58	57	53	225.2
18-Mar	59	48	6	34	151	209	299	286	316	310	264	280	275	232	225	236	227	234	227	227	246	255	282	279	256.8
19-Mar	277	264	263	257	252	248	263	243	229	239	262	258	245	248	262	265	277	278	279	266	265	262	260	250	259.1
20-Mar	286	11	42	41	42	47	51	58	71	64	70	71	70	62	67	49	77	69	57	51	62	79	95	118	60.1
21-Mar	130	142	148	149	148	140	132	132	128	130	136	126	123	130	174	167	158	158	161	171	181	177	179	179	153.2
22-Mar	176	182	186	196	199	208	210	212	208	210	224	209	223	252	261	269	275	303	292	287	282	285	284	280	241.3
23-Mar	280	276	278	267	263	269	268	260	284	275	278	279	283	278	261	280	258	257	201	205	213	220	230	157	260.0
24-Mar	162	207	219	213	211	210	212	213	222	217	216	201	204	216	233	235	283	339	298	326	297	288	285	284	240.6
25-Mar	279	287	282	270	264	271	276	279	271	269	251	248	259	266	280	290	295	323	318	330	356	353	356	19	287.1
26-Mar	22	39	30	26	26	25	35	45	48	46	66	60	69	84	80	65	45	56	68	54	55	60	71	69	51.8
27-Mar	66	67	69	72	68	60	54	62	57	53	48	55	60	50	59	49	38	46	48	48	53	66	72	67	57.3
28-Mar	65	60	63	43	10	15	6	31	34	39	50	64	94	89	93	77	63	93	101	72	57	63	59	77	57.1
29-Mar	122	188	197	210	208	203	187	187	182	128	342	36	323	254	312	281	271	272	240	239	239	239	242	247	232.9
30-Mar	250	235	222	226	224	230	231	226	207	222	204	214	221	218	215	209	198	196	223	236	226	205	208	211	219.2
31-Mar	207	204	195	195	190	155	140	147	142	145	151	163	155	142	142	129	137	135	127	158	172	165	160	168	159.0
	271.6	262.9	262.2	253.8	244.6	257.3	267.0	266.8	270.7	282.5	280.3	288.0	293.6	288.2	288.1	304.3	318.5	342.0	322.7	307.8	282.5	265.1	267.9	264.3	
	Diurnal Average																								

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

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

Maximum Value: 101 deg on Mar 29 10:00

Minimum Value: 7 deg on Mar 16 01:00

Percentiles: P_1 = 11 P_{10} = 15 Q_1 = 17 Median = 20 Q_3 = 25 P_{90} = 33 P_{99} = 70

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

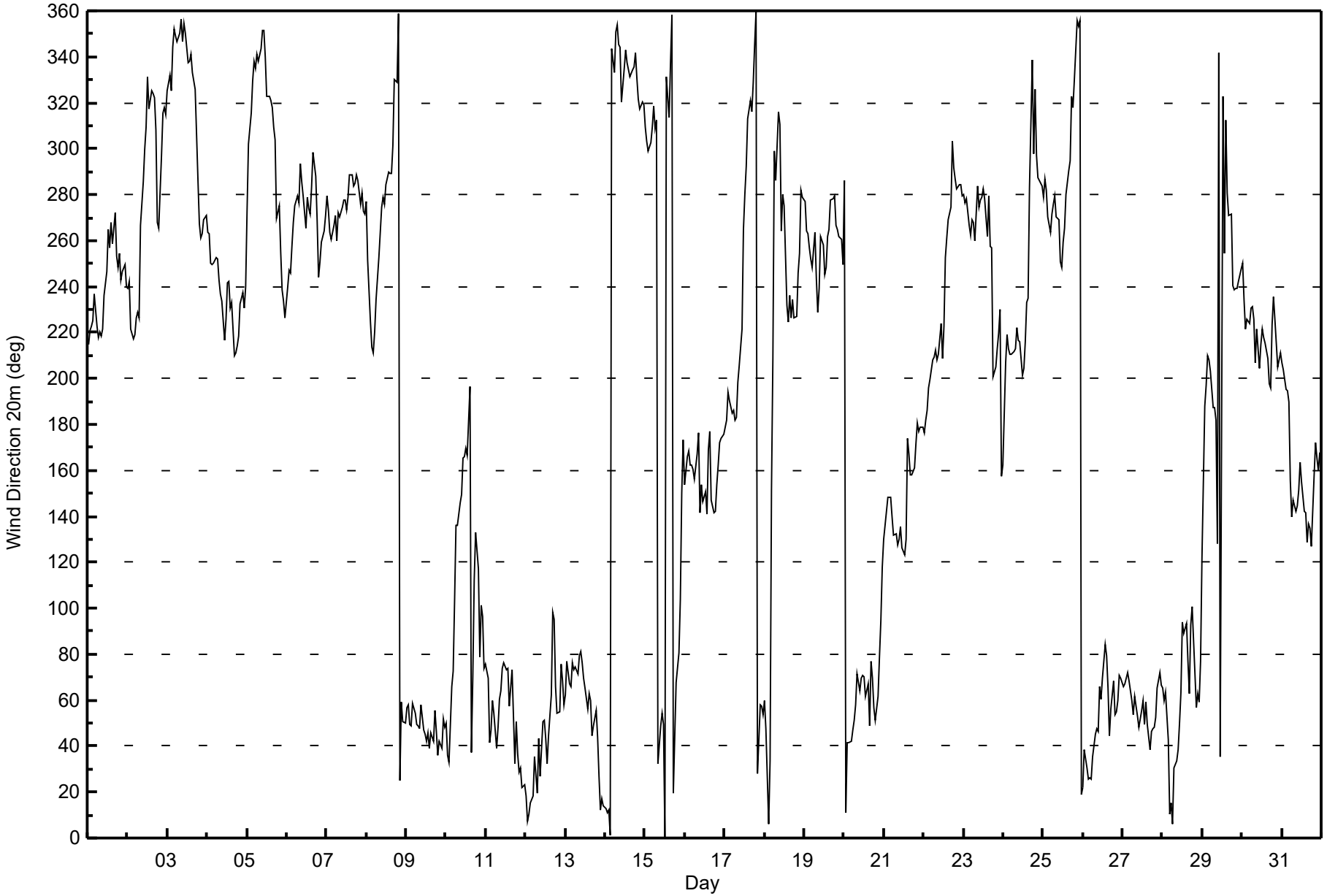
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	15	16	14	15	14	13	14	14	16	19	24	29	26	30	29	27	24	20	16	19	25	17	19	19	30
2-Mar	20	20	14	14	14	15	14	15	26	23	21	23	20	20	20	21	19	18	16	17	23	17	17	18	26
3-Mar	16	16	16	22	22	21	20	22	22	25	25	38	27	23	29	28	34	16	24	13	16	19	19	20	38
4-Mar	19	19	19	20	19	21	21	20	19	22	27	26	26	32	30	26	23	20	15	15	19	19	18	19	32
5-Mar	29	18	16	16	18	18	19	19	20	24	28	29	29	29	27	26	23	19	16	15	18	17	15	17	29
6-Mar	18	18	18	22	23	23	17	15	20	27	27	37	33	30	27	26	24	19	19	15	20	21	22	20	37
7-Mar	20	20	21	21	22	19	21	21	22	24	23	24	26	25	25	27	21	21	18	19	22	20	18	18	27
8-Mar	22	21	20	14	14	16	19	23	22	24	23	23	23	22	23	24	22	19	19	22	29	14	17	17	29
9-Mar	16	20	18	16	16	18	17	17	18	18	17	23	22	22	23	22	23	16	19	18	20	21	21	22	23
10-Mar	24	29	17	57	33	23	25	25	32	35	46	37	78	73	50	77	38	26	22	22	17	40	45	23	78
11-Mar	24	28	29	22	18	18	18	22	17	19	19	22	21	20	23	24	25	30	26	22	29	26	24	21	30
12-Mar	18	18	20	20	19	18	20	20	25	34	40	31	43	60	42	38	22	19	17	15	16	16	15	20	60
13-Mar	16	16	20	19	18	17	16	17	17	18	17	17	16	17	16	16	17	18	19	20	19	17	18	18	20
14-Mar	17	17	17	20	18	15	20	20	21	24	21	26	24	25	22	20	20	20	20	16	14	14	14	12	26
15-Mar	15	13	12	12	12	17	17	11	32	34	36	51	73	40	27	33	32	25	22	16	15	15	12	13	73
16-Mar	7	8	9	9	13	13	11	15	21	25	27	31	32	29	29	35	21	21	19	18	16	17	18	20	35
17-Mar	17	18	16	15	15	14	14	15	21	21	28	29	28	25	28	25	19	21	19	36	18	22	24	15	36
18-Mar	23	27	27	70	14	38	17	21	23	33	33	29	30	33	30	27	25	24	19	34	23	21	20	18	70
19-Mar	20	17	17	19	17	18	17	18	19	29	29	29	32	33	30	27	23	26	19	15	16	19	17	23	33
20-Mar	15	40	17	18	16	16	15	15	18	19	20	22	23	23	28	25	21	20	21	15	19	14	16	13	40
21-Mar	15	13	11	10	11	13	15	15	22	32	27	33	26	24	35	31	23	21	15	14	14	17	16	18	35
22-Mar	19	16	16	16	15	16	17	18	17	23	28	32	36	38	28	29	29	22	19	19	17	17	19	19	38
23-Mar	19	18	19	20	18	19	19	26	22	26	33	32	33	32	34	78	33	41	14	11	13	13	18	38	78
24-Mar	12	17	14	14	14	14	15	18	21	25	21	31	26	26	24	29	50	32	25	22	26	20	19	18	50
25-Mar	19	19	19	18	21	21	20	19	22	25	26	33	29	35	25	25	24	23	17	23	15	15	19	19	35
26-Mar	18	18	21	19	22	19	20	20	22	28	26	23	30	37	27	21	21	18	18	17	14	15	17	16	37
27-Mar	17	20	17	16	15	17	17	16	19	18	18	17	18	20	20	19	20	19	17	18	17	16	18	15	20
28-Mar	17	16	17	21	19	18	14	24	18	23	22	26	34	36	54	79	54	67	29	21	15	26	12	14	79
29-Mar	46	9	12	11	13	11	12	22	24	101	55	59	70	66	41	38	33	31	27	15	14	16	14	14	101
30-Mar	16	19	15	15	14	14	14	20	29	34	43	41	38	32	38	43	39	31	20	20	20	19	17	18	43
31-Mar	17	16	13	12	16	13	17	22	24	23	26	32	26	32	31	30	25	21	20	23	17	14	11	14	32
	46	40	29	70	33	38	25	26	32	101	55	59	78	73	54	79	54	67	29	36	29	40	45	38	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 20m (WD20) - deg

Stony Mountain - March 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS19
FIREBAG
MARCH 2025

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

April 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FIREBAG (AMS19)
MARCH 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	707	37	37	100	16.2	0	4.6	0
H2S (ppb) Average	708	36	36	100	3.4	0	0.5	0
THC (ppm) Average	660	34	84	93.28	2.8	-	2.3	-
NO2 (ppb) Average	709	35	35	100	38.4	0	15.8	-
NO (ppb) Average	709	35	35	100	46.3	-	7.4	-
NOX (ppb) Average	709	35	35	100	83.3	-	23.3	-
Temperature 2 m (C) Average	744	0	0	100	7.4	-	0.5	-
Relative Humidity (%) Average	744	0	0	100	96.8	-	85.1	-
Wind Speed 10 m (km/h) Average	734	0	10	98.66	27	-	19	-
Wind Direction 10 m (deg) Average	734	0	10	98.66	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FIREBAG (AMS19)
MARCH 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	707	0.78	1.7	-	0	0	0	0.2	0.6	2.2	16.2
H2S (ppb) Average	708	0.15	0.2	-	0	0	0	0.1	0.2	0.4	3.4
THC (ppm) Average	660	2.21	0.1	-	2.1	2.1	2.2	2.2	2.2	2.3	2.8
NO2 (ppb) Average	709	4.49	5.5	-	0.1	0.2	0.8	2.7	6.3	10.7	38.4
NO (ppb) Average	709	1.18	2.9	-	0	0	0	0.4	1.3	2.9	46.3
NOX (ppb) Average	709	5.68	7.7	-	0.1	0.2	0.9	3.5	7.6	12.7	83.3
Temperature 2 m (C) Average	744	-9.2	7.6	-	-26.6	-19	-15.5	-9	-3.2	1.1	7.4
Relative Humidity (%) Average	744	66.17	16.1	-	23.8	44.9	54.8	67.9	78.8	85.8	96.8
Wind Speed 10 m (km/h) Average	734	10.9	5	-	1	5	7	11	14	17	27
Wind Direction 10 m (deg) Average	734	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FIREBAG (AMS19)
MARCH 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
THC	09 Mar 2025 19:00	10 Mar 2025 09:00	15	Unstable Operation - flatline in analyzer output signal
THC	10 Mar 2025 10:00	10 Mar 2025 11:00	2	Maintenance - analyzer rebooted
THC	14 Mar 2025 03:00	15 Mar 2025 11:00	33	Unstable Operation - AMD non-compliance
Wind Speed, Wind Direction	25 Mar 2025 00:00	25 Mar 2025 08:00	9	Flat line in sensor output signal
Wind Speed, Wind Direction	28 Mar 2025 08:00	28 Mar 2025 08:00	1	Flat line in sensor output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Firebag - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 16.2 ppb on Mar 4 10:00 Maximum Daily Average: 4.6 ppb on Mar 4

Minimum Value: 0.0 ppb on Mar 8 14:00 Minimum Daily Average: 0.0 ppb on Mar 26
Maximum Diurnal Average: 1.8 ppb at hour 12 Minimum Diurnal Average: 0.2 ppb at hour 4
Monthly Average: 0.78 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.2 Q_3 = 0.6 P_{90} = 2.2 P_{99} = 10.1

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	Z	0.1	0.6	1.1	0.3	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.3	0.4	1.0	1.9	11.5	11.5	3.7	2.5	0.5	0.4	0.5	0.5	1.7	11.5
2-Mar	0.4	Z	0.3	0.2	0.2	1.7	2.9	2.8	2.1	0.8	1.0	0.5	0.3	0.3	1.5	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.7	2.9
3-Mar	0.2	0.2	Z	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.5	1.1	0.7	0.2	1.2	2.3	3.8	4.5	3.8	1.9	1.0	4.5
4-Mar	0.4	1.2	1.8	Z	6.6	4.8	3.2	3.4	11.1	16.2	13.4	8.0	10.6	10.3	4.8	6.4	1.1	0.4	0.3	0.4	0.5	0.6	0.3	0.1	4.6	16.2
5-Mar	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	0.3	0.8	0.4	0.2	0.2	0.5	0.4	0.3	0.9	4.1	0.4	4.1
6-Mar	3.5	2.7	2.4	1.5	0.7	Z	0.2	0.2	0.2	0.2	0.4	0.6	0.3	0.4	0.3	0.6	2.5	3.4	1.9	0.8	0.5	0.8	1.3	5.3	1.3	5.3
7-Mar	Z	2.7	2.1	1.2	1.4	2.6	2.4	0.8	0.8	0.6	1.3	14.7	6.2	4.0	4.3	5.8	3.2	1.5	0.3	0.2	0.3	0.2	0.2	0.1	2.5	14.7
8-Mar	0.2	Z	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.5	0.8	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8
9-Mar	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	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.0	0.2
10-Mar	0.7	0.8	0.1	Z	0.2	0.2	0.1	0.2	0.1	0.1	0.2	1.5	2.0	2.0	1.8	1.4	1.3	1.3	1.1	0.8	0.7	0.3	0.2	0.3	0.8	2.0
11-Mar	0.2	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	1.0	0.2	0.1	0.2	0.2	0.3	0.4	0.5	0.4	0.1	0.1	0.0	0.0	0.2	1.0
12-Mar	0.0	0.0	0.1	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1
13-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	2.3	1.7	0.9	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.3	2.3
14-Mar	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	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.2
15-Mar	0.1	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C	C	C	C	C	C	0.1	0.1	0.2	0.1	0.0	0.2	0.0	0.0	--	0.2
16-Mar	0.1	0.1	0.3	Z	0.6	0.9	1.0	1.1	1.6	3.0	3.3	0.9	1.1	1.4	1.2	0.8	0.4	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.8	3.3
17-Mar	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.2	0.7	2.3	1.3	1.1	1.4	0.8	0.8	0.9	1.1	1.1	0.4	0.2	0.0	0.0	0.0	0.0	0.5	2.3
18-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.1	1.0	0.4	2.5	0.4	0.3	0.4	2.8	4.2	2.3	3.1	3.3	1.0	0.1	0.0	0.0	0.0	1.0	4.2
19-Mar	Z	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.2	0.4	3.1	8.0	0.8	0.2	0.3	1.8	3.2	2.1	1.5	0.8	0.1	0.0	0.0	0.0	1.0	8.0
20-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.3	3.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.3	0.8	0.4	0.0	0.1	0.1	0.3	3.4
21-Mar	0.0	0.1	Z	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
22-Mar	0.1	0.1	0.1	Z	0.1	0.2	0.3	0.4	0.6	0.4	0.4	0.4	0.2	0.2	0.3	0.4	0.3	0.3	0.9	0.3	0.1	0.1	0.9	0.8	0.4	0.9
23-Mar	0.7	0.4	0.2	0.2	Z	0.3	0.3	0.8	1.1	0.6	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.4	1.3	0.1	0.0	0.0	0.0	0.0	0.3	1.3
24-Mar	0.0	0.0	0.0	0.1	0.2	Z	0.3	0.3	0.3	0.4	0.4	1.4	4.2	1.2	0.2	0.2	0.6	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.5	4.2
25-Mar	Z	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.7	0.5	3.0	4.5	5.8	2.1	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	5.8
26-Mar	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
27-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1
28-Mar	0.2	1.0	0.3	Z	0.7	0.1	0.1	0.1	0.8	4.9	0.4	3.7	2.9	2.1	1.4	0.7	0.4	0.2	0.1	0.1	0.1	0.1	0.2	1.3	1.0	4.9
29-Mar	0.2	0.1	0.1	0.0	Z	0.1	0.0	0.0	1.9	2.2	1.6	1.8	1.4	1.0	1.0	1.0	1.1	1.1	1.2	0.7	0.4	0.5	1.7	0.3	0.8	2.2
30-Mar	0.4	0.4	0.3	0.2	0.2	Z	5.3	6.5	6.6	6.1	3.8	4.2	3.1	2.2	3.1	4.7	3.7	2.6	0.3	0.2	0.3	0.5	0.8	0.6	2.4	6.6
31-Mar	Z	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.4
	0.3	0.4	0.4	0.2	0.5	0.5	0.6	0.7	1.0	1.3	1.3	1.8	1.4	1.1	0.9	1.1	1.1	1.0	0.6	0.4	0.3	0.3	0.4	0.5	Diurnal Average	
	3.5	2.7	2.4	1.5	6.6	4.8	5.3	6.5	11.1	16.2	13.4	14.7	10.6	10.3	4.8	6.4	11.5	11.5	3.7	2.5	3.8	4.5	3.8	5.3	Diurnal Maximum	

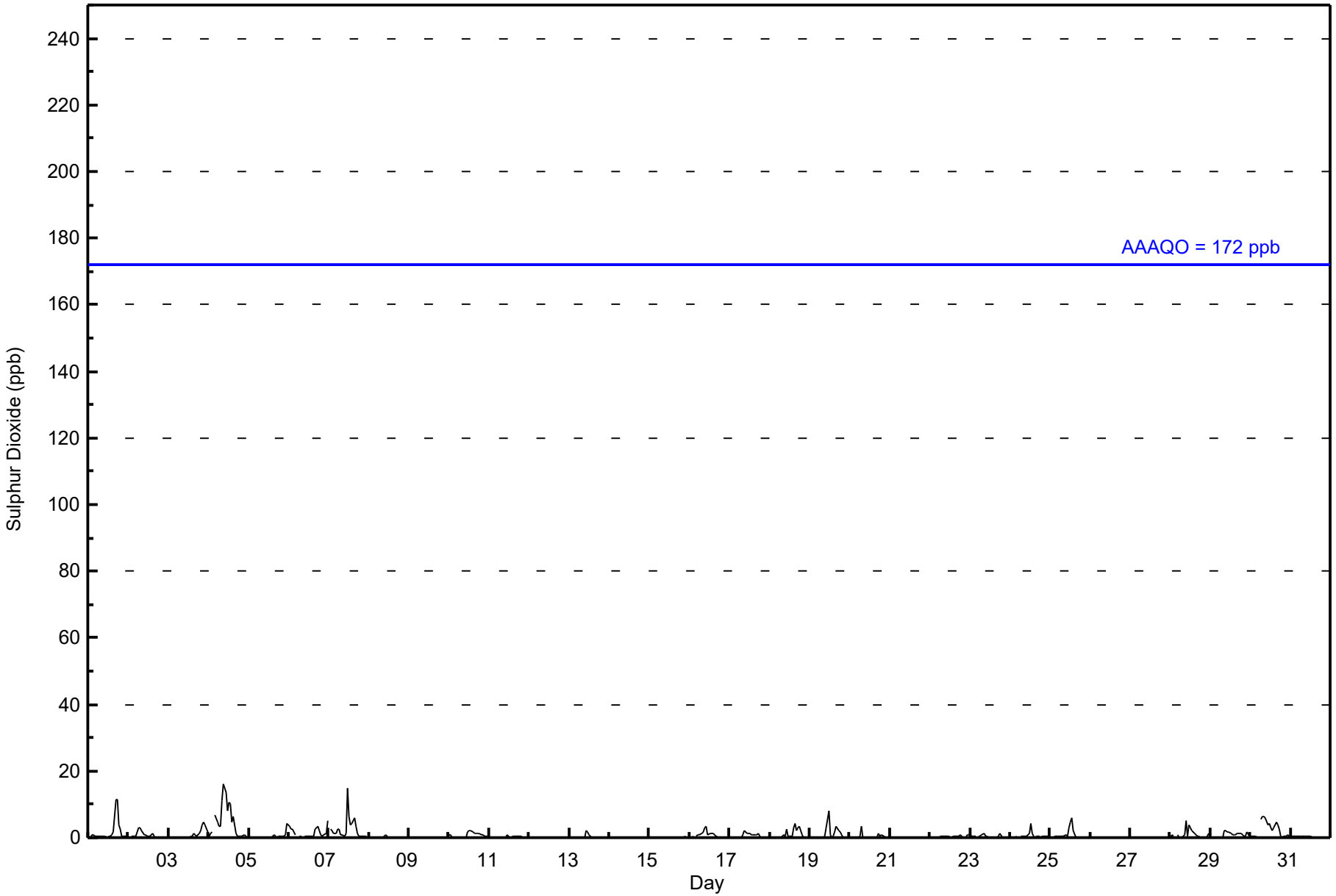
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Firebag - March 2025



Sulphur Dioxide (SO_2) - ppb
Firebag - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	700	99.01	99.01
11 - 20	7	0.99	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: 707

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Firebag - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	81	79	56	29	31	32	59	71	52	35	35	32	22	18	24	35	691
11 - 20	0	0	0	0	0	0	0	0	0	0	4	2	1	0	0	0	7
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	81	79	56	29	31	32	59	71	52	35	39	34	23	18	24	35	698

Total Number of Valid Hours: 698

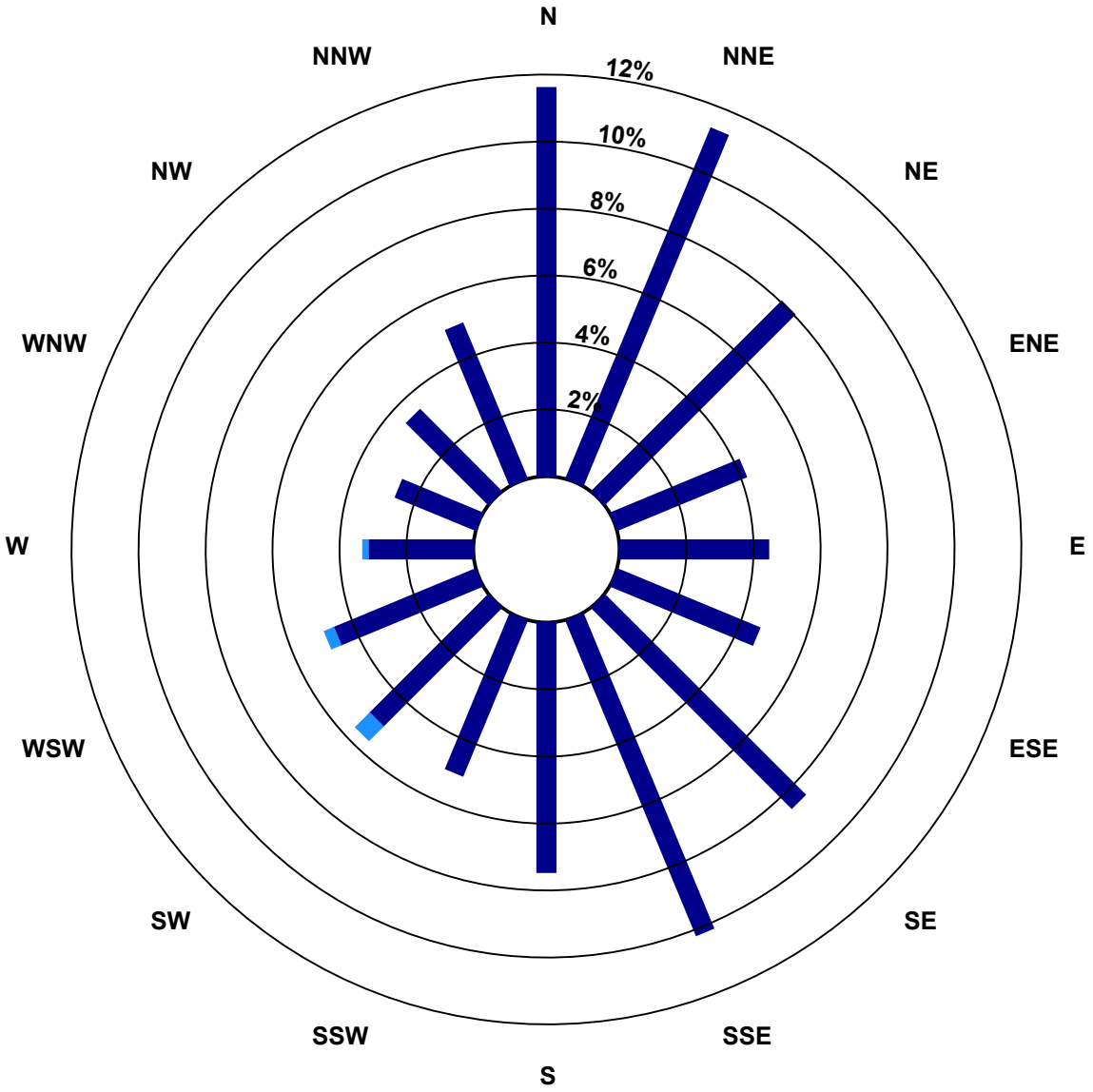
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Sulphur Dioxide (SO_2) - ppb

Firebag



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

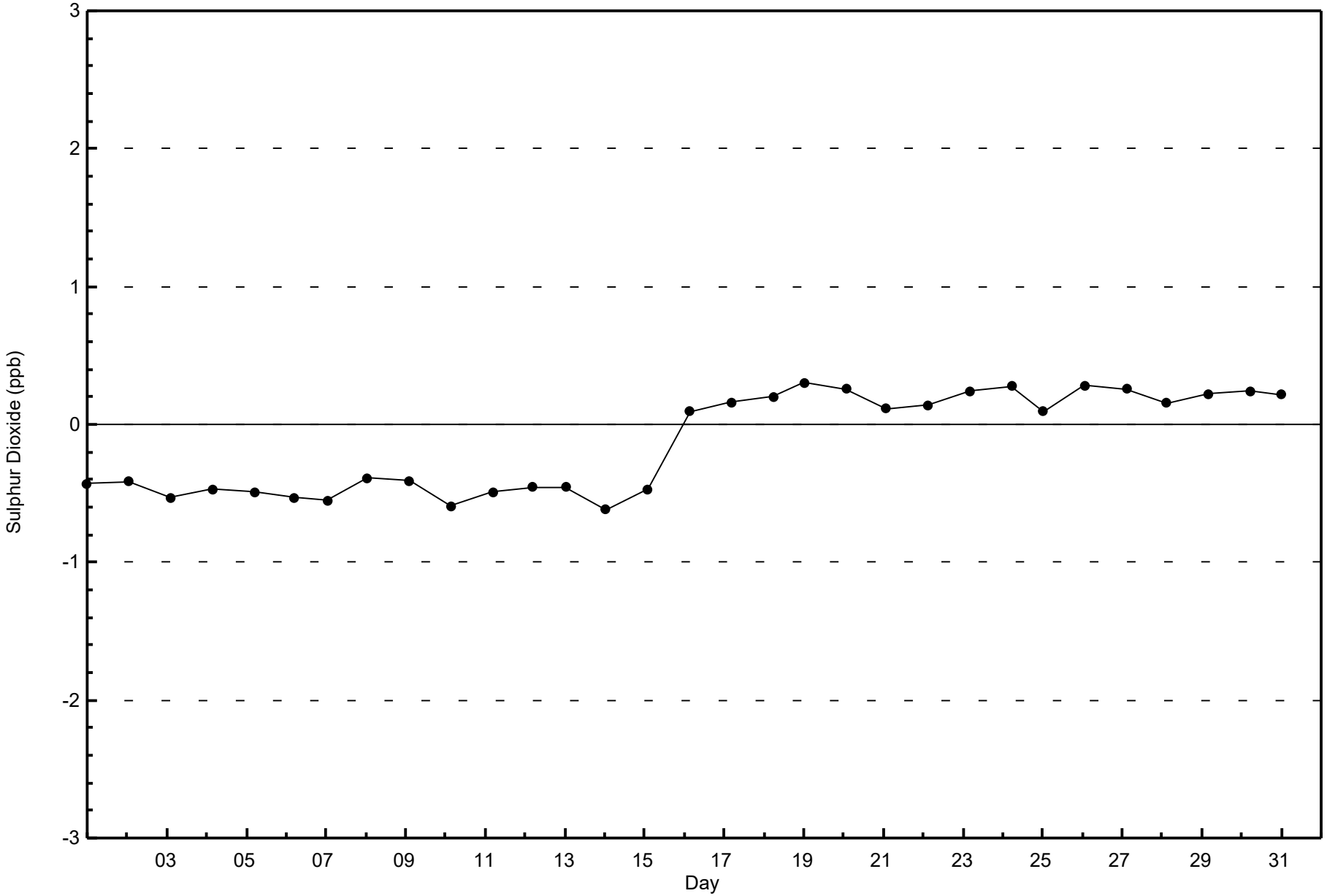
Total Number of Valid Hours: 698

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Firebag - March 2025

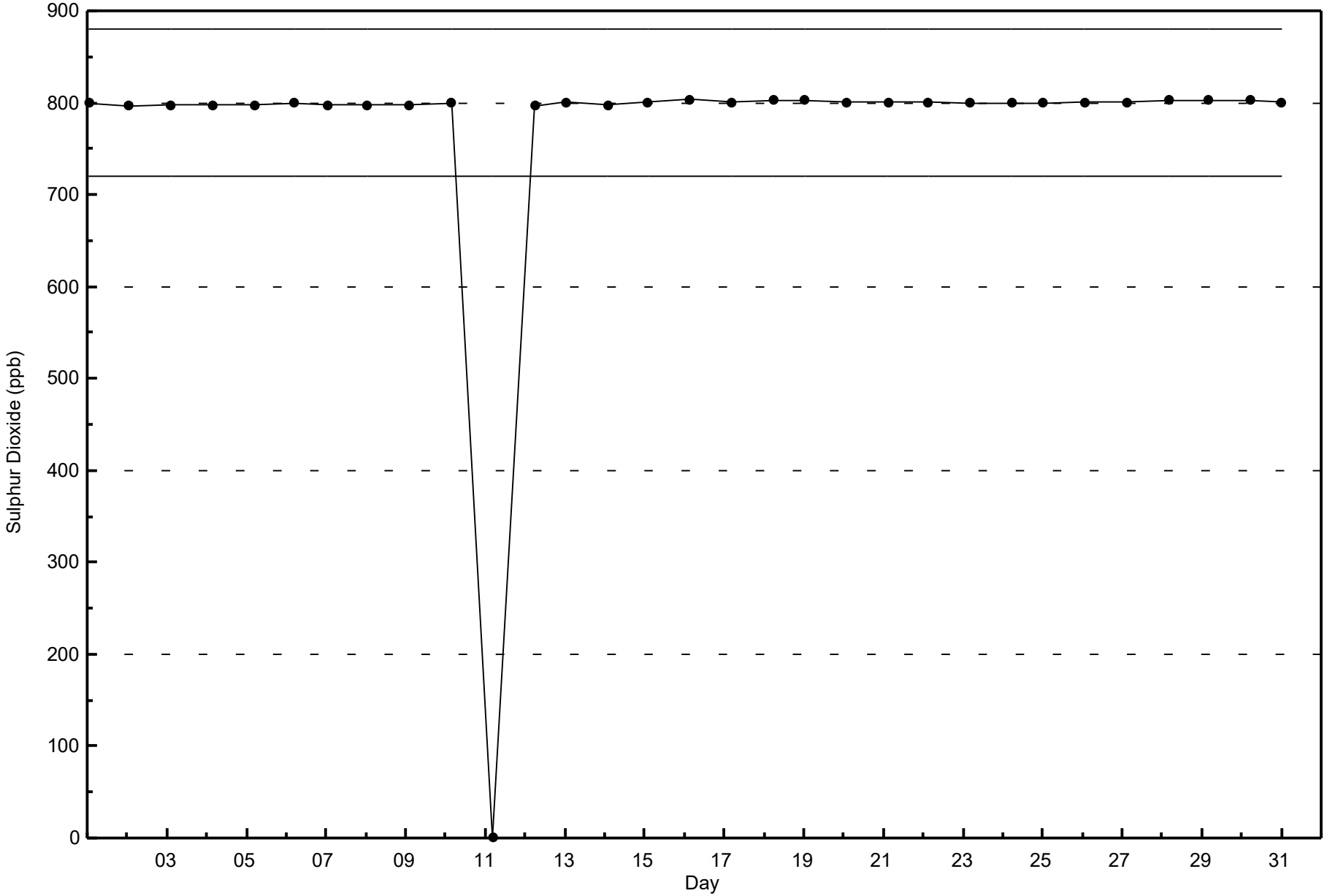


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Firebag - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Firebag - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.4 ppb on Mar 28 03:00 Maximum Daily Average: 0.5 ppb on Mar 28

Minimum Value: 0.0 ppb on Mar 5 00:00 Minimum Daily Average: 0.0 ppb on Mar 27
Maximum Diurnal Average: 0.3 ppb at hour 3 Minimum Diurnal Average: 0.1 ppb at hour 17
Monthly Average: 0.15 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} = 0.9

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.1	Z	0.2	0.1	0.5	0.7	0.7	0.4	0.3	0.4	0.2	0.0	0.1	0.0	0.0	0.0	0.1	0.2	0.4	0.4	0.2	0.3	0.2	0.2	0.3	0.7
2-Mar	0.1	0.2	Z	0.1	0.1	0.1	0.3	0.2	0.7	0.7	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.2	0.7
3-Mar	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.3	0.3	0.2	0.1	0.3
4-Mar	0.1	0.1	0.3	0.6	Z	0.3	0.3	0.3	0.4	0.4	0.3	0.2	C	C	C	C	C	0.1	0.0	0.0	0.2	0.2	0.0	0.0	0.2	0.6
5-Mar	0.0	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	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2
6-Mar	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.2	0.1	0.1	0.2	0.6	0.1	0.6
7-Mar	0.6	Z	0.2	0.1	0.1	0.2	0.2	0.4	0.4	0.5	0.3	0.3	0.4	0.5	0.5	0.4	0.1	0.1	0.1	0.1	0.1	0.9	1.1	0.5	0.3	1.1
8-Mar	0.3	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.0	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	0.0	0.1	0.3
9-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
10-Mar	0.7	0.2	0.1	0.0	Z	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.2	0.3	0.1	0.7
11-Mar	0.6	0.1	0.1	0.0	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	0.1	0.6
12-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.3	0.9	0.9	0.2	0.3	0.1	0.9
13-Mar	0.3	Z	0.2	0.1	0.4	0.4	0.1	0.1	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	0.1	0.4
14-Mar	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
15-Mar	0.0	0.0	0.1	Z	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	0.4	0.2	0.1	0.1	0.1	0.4
16-Mar	0.1	0.1	0.1	0.2	Z	0.2	0.3	0.7	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	0.2	0.7
17-Mar	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.5	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.5
18-Mar	Z	0.1	0.1	0.1	0.2	0.2	0.3	0.5	0.5	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.5
19-Mar	0.1	Z	0.1	0.1	0.6	0.9	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.9
20-Mar	0.0	0.0	Z	0.0	0.1	0.4	0.5	0.7	0.5	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.3	0.5	0.0	0.0	0.0	0.0	0.2	0.7
21-Mar	0.1	0.1	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
22-Mar	0.0	0.0	0.0	0.1	Z	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.3	0.2	0.3	0.3	0.1	0.3
23-Mar	0.3	0.3	0.3	0.3	0.3	Z	0.5	0.6	0.5	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.7	0.8	0.1	0.1	0.1	0.1	0.3	0.8
24-Mar	Z	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.7	0.7	0.4	0.3	0.3	0.2	0.7
25-Mar	0.2	Z	1.2	0.8	0.9	0.8	0.9	0.6	0.6	0.6	0.4	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.4	1.2
26-Mar	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
27-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28-Mar	0.7	2.2	3.4	2.2	Z	0.1	0.1	0.1	0.1	0.2	0.1	0.3	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	3.4
29-Mar	0.1	0.1	0.1	0.1	0.1	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	0.1	0.1	0.5	1.1	0.4	0.1	0.2	1.1
30-Mar	Z	0.1	0.1	0.1	0.1	0.2	0.5	0.7	0.7	0.6	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.5	0.1	0.0	0.1	0.1	0.0	0.0	0.3	0.7
31-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1
	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	Diurnal Average	
	0.7	2.2	3.4	2.2	0.9	0.9	0.9	0.7	0.7	0.7	0.5	0.4	0.4	0.5	0.5	0.4	0.2	0.5	0.7	0.8	0.9	1.1	1.1	0.6	Diurnal Maximum	

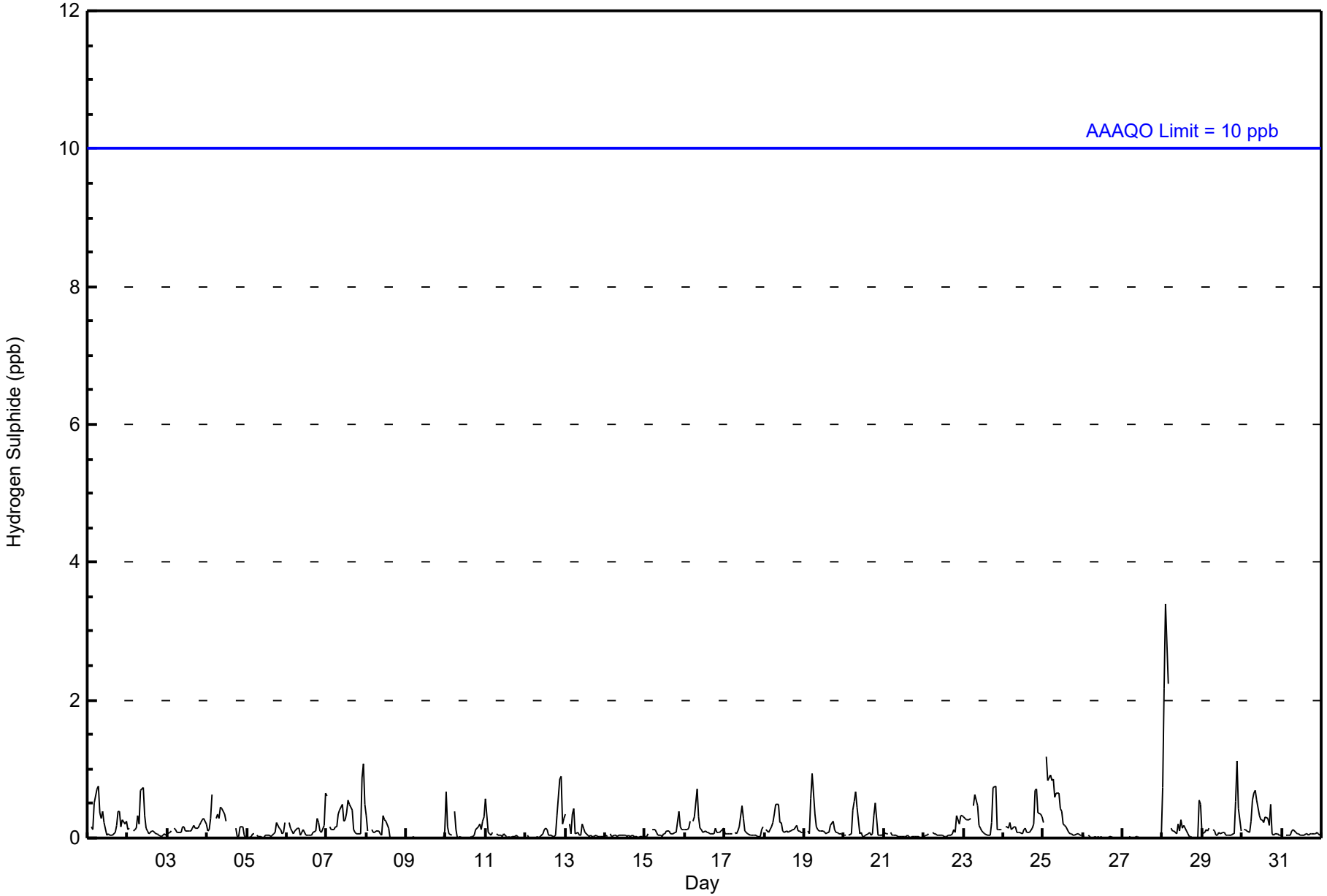
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Firebag - March 2025



Hydrogen Sulphide (H_2S) - ppb
Firebag - March 2025

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

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Firebag - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	83	79	58	27	30	32	59	70	53	34	38	31	24	18	23	39	698
3 - 4	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	83	79	58	27	30	33	59	70	53	34	38	31	24	18	23	39	699

Total Number of Valid Hours: 699

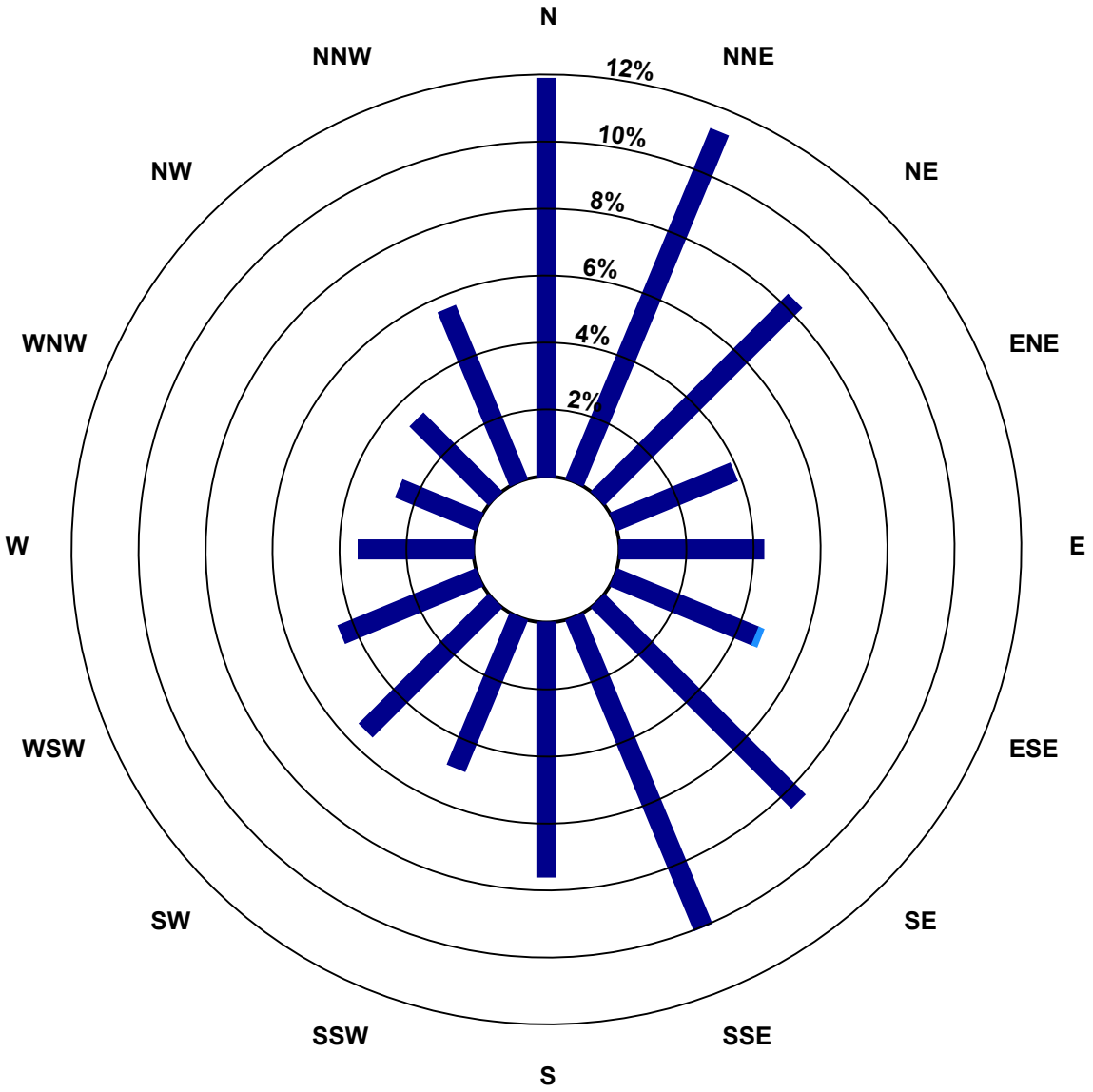
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Hydrogen Sulphide (H_2S) - ppb

Firebag



Classes (ppb)

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

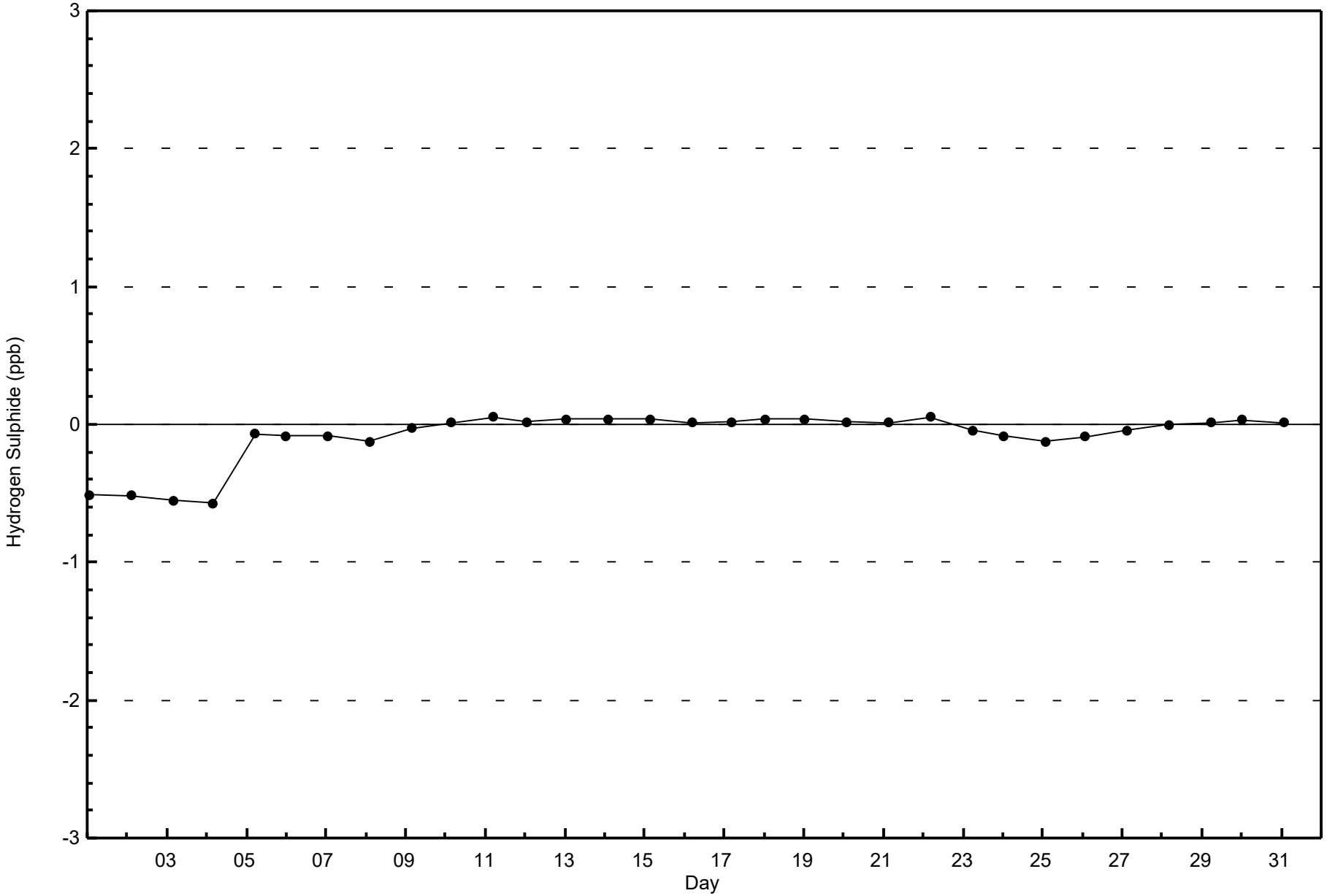
Total Number of Valid Hours: 699

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Firebag - March 2025

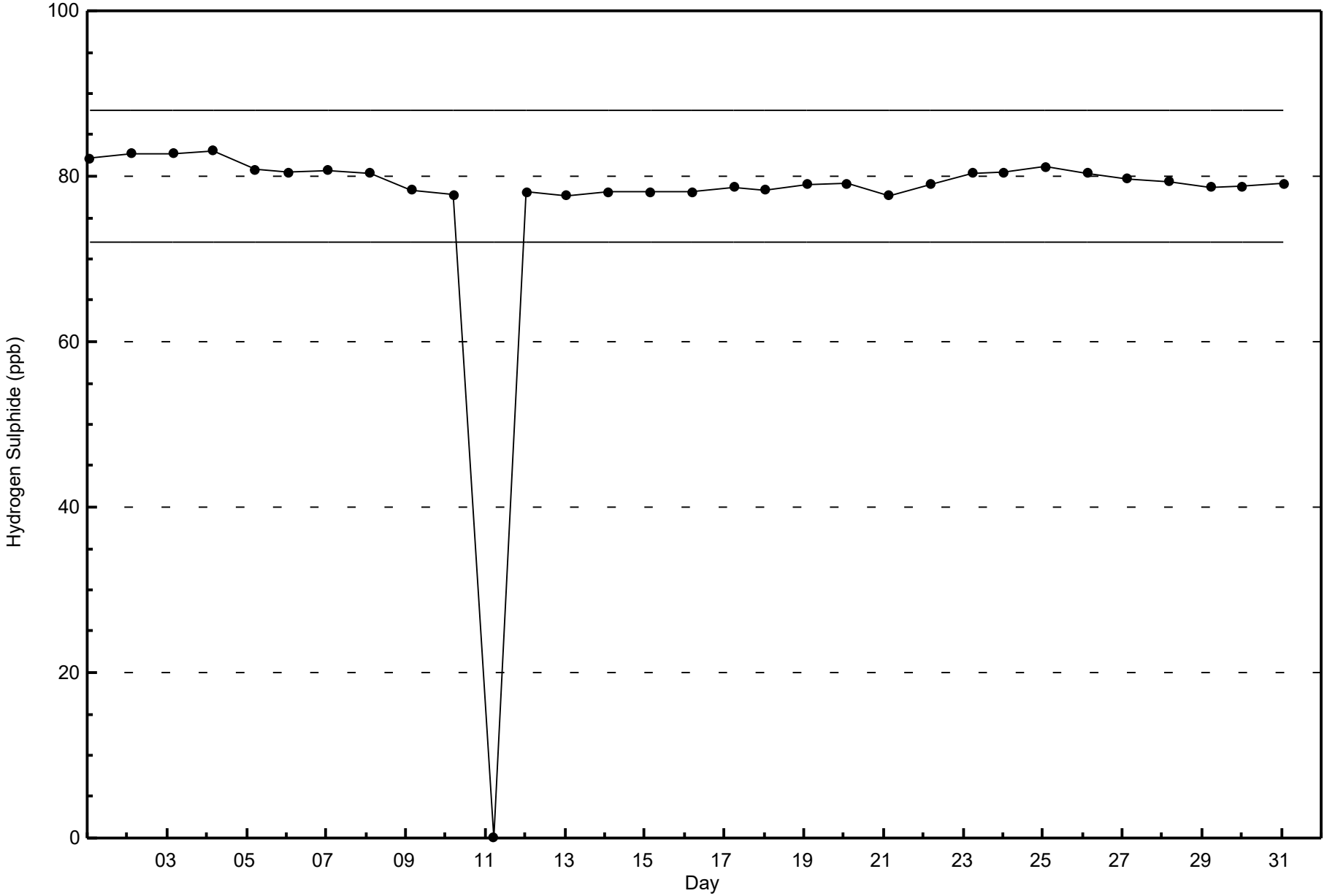


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Firebag - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Firebag - March 2025

Maximum Value: 2.8 ppm on Mar 18 08:00

Maximum Daily Average: 2.3 ppm on Mar 18

Minimum Value: 2.1 ppm on Mar 23 15:00

Minimum Daily Average: 2.1 ppm on Mar 27

Maximum Diurnal Average: 2.3 ppm at hour 8

Minimum Diurnal Average: 2.2 ppm at hour 17

Monthly Average: 2.21 ppm

Percentiles: P_1 = 2.1 P_{10} = 2.1 Q_1 = 2.2 Median = 2.2 Q_3 = 2.2 P_{90} = 2.3 P_{99} = 2.5

Hours in Service:	744
Hours of Data:	660
Hours of Missing Data:	84
Hours of Calibration:	34
Percent Operational Time:	93.3

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	Z	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.4	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.7	2.3	2.3	2.2	2.2	2.3	2.7
2-Mar	2.2	Z	2.2	2.2	2.2	2.2	2.3	2.3	2.4	2.4	2.3	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	2.4
3-Mar	2.2	2.3	Z	2.3	2.2	2.3	2.2	2.2	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	2.2	2.2	2.2	2.3	2.3
4-Mar	2.2	2.2	2.2	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	2.3	2.3	2.2	2.2	2.2	2.3
5-Mar	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	2.3	2.3	2.3	2.2	2.2	2.3	2.2	2.3
6-Mar	2.3	2.3	2.3	2.3	2.2	Z	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.5	2.2	2.5
7-Mar	Z	2.2	2.2	2.2	2.2	2.3	2.3	2.4	2.5	2.5	2.3	2.2	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.4	2.3	2.3	2.5
8-Mar	2.3	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3
9-Mar	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	UO	UO	UO	UO	UO	UO	--	2.2
10-Mar	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	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
11-Mar	2.2	2.3	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3
12-Mar	2.2	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.4	2.3	2.3	2.2	2.4
13-Mar	Z	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3
14-Mar	2.2	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	2.2
15-Mar	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	C	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	--	2.2
16-Mar	2.2	2.2	2.2	Z	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.1	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3
17-Mar	2.1	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.3
18-Mar	2.3	2.3	2.2	2.3	2.4	Z	2.4	2.8	2.5	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	2.2	2.3	2.3	2.8
19-Mar	Z	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3
20-Mar	2.2	Z	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.3	2.1	2.2	2.2	2.2	2.2	2.3
21-Mar	2.2	2.2	Z	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.3
22-Mar	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
23-Mar	2.2	2.2	2.3	2.3	Z	2.2	2.4	2.5	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.5
24-Mar	2.1	2.2	2.2	2.2	2.3	Z	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.4	2.4	2.4	2.3	2.4	2.2	2.4
25-Mar	Z	2.3	2.4	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.2	2.2	2.2	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.2	2.2	2.4
26-Mar	2.1	Z	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.1	2.1	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2
27-Mar	2.2	2.2	Z	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.2
28-Mar	2.2	2.3	2.4	Z	2.2	2.3	2.2	2.2	2.1	2.1	2.2	2.6	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	2.6
29-Mar	2.2	2.3	2.4	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	2.3	2.2	2.3	2.2	2.4
30-Mar	2.2	2.3	2.2	2.2	2.2	Z	2.4	2.5	2.5	2.4	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.3	2.5
31-Mar	Z	2.2	2.2	2.1	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3
	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	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	Diurnal Average	
	2.3	2.3	2.4	2.3	2.4	2.3	2.4	2.8	2.5	2.5	2.3	2.6	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.7	2.4	2.4	2.4	2.5	Diurnal Maximum	

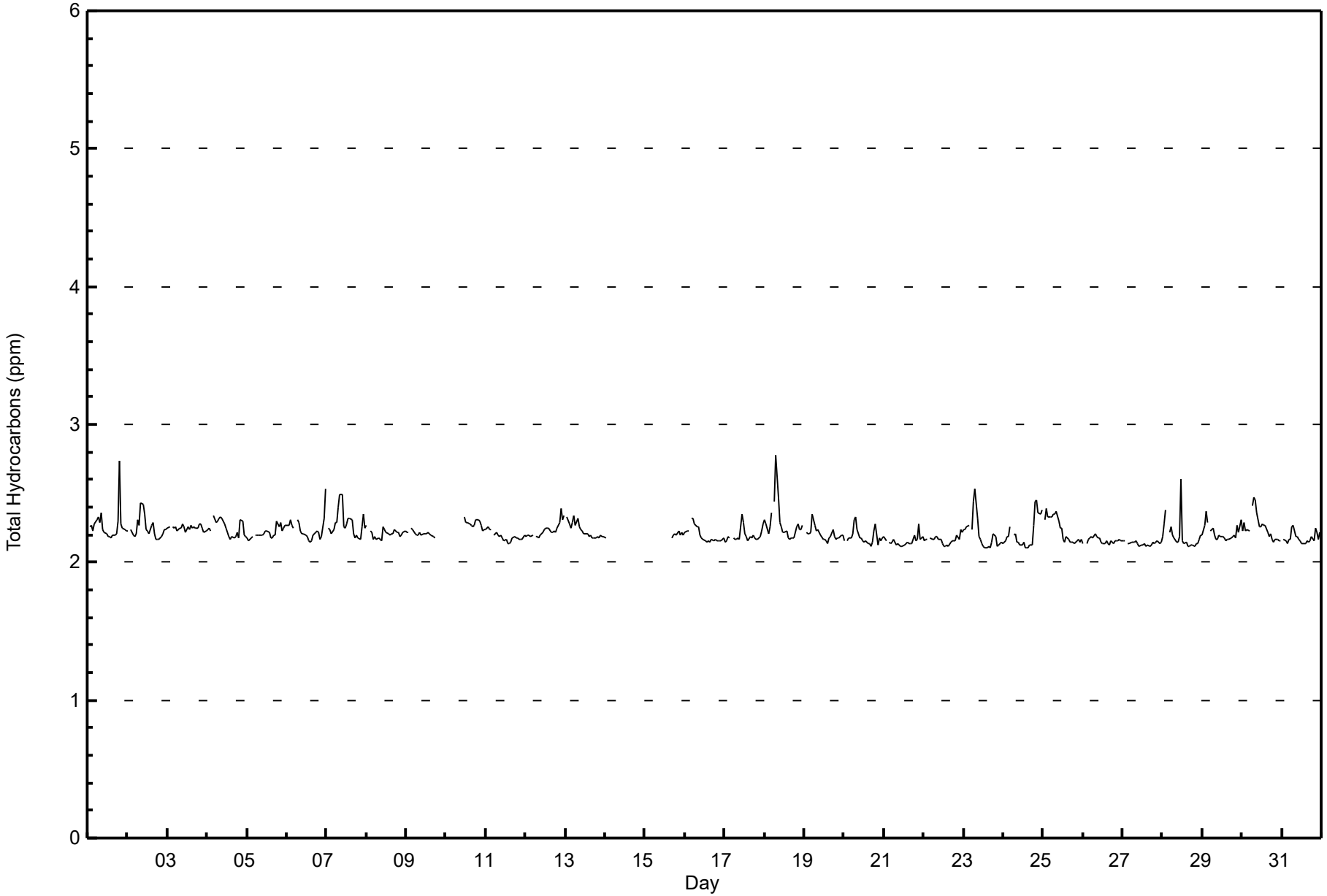
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Firebag - March 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	0	0.00	0.00
2.1 - 3.0	660	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: 660

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Firebag - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.1 - 3.0	71	63	53	27	30	31	58	69	48	33	39	34	23	18	24	30	651
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	71	63	53	27	30	31	58	69	48	33	39	34	23	18	24	30	651

Total Number of Valid Hours: 651

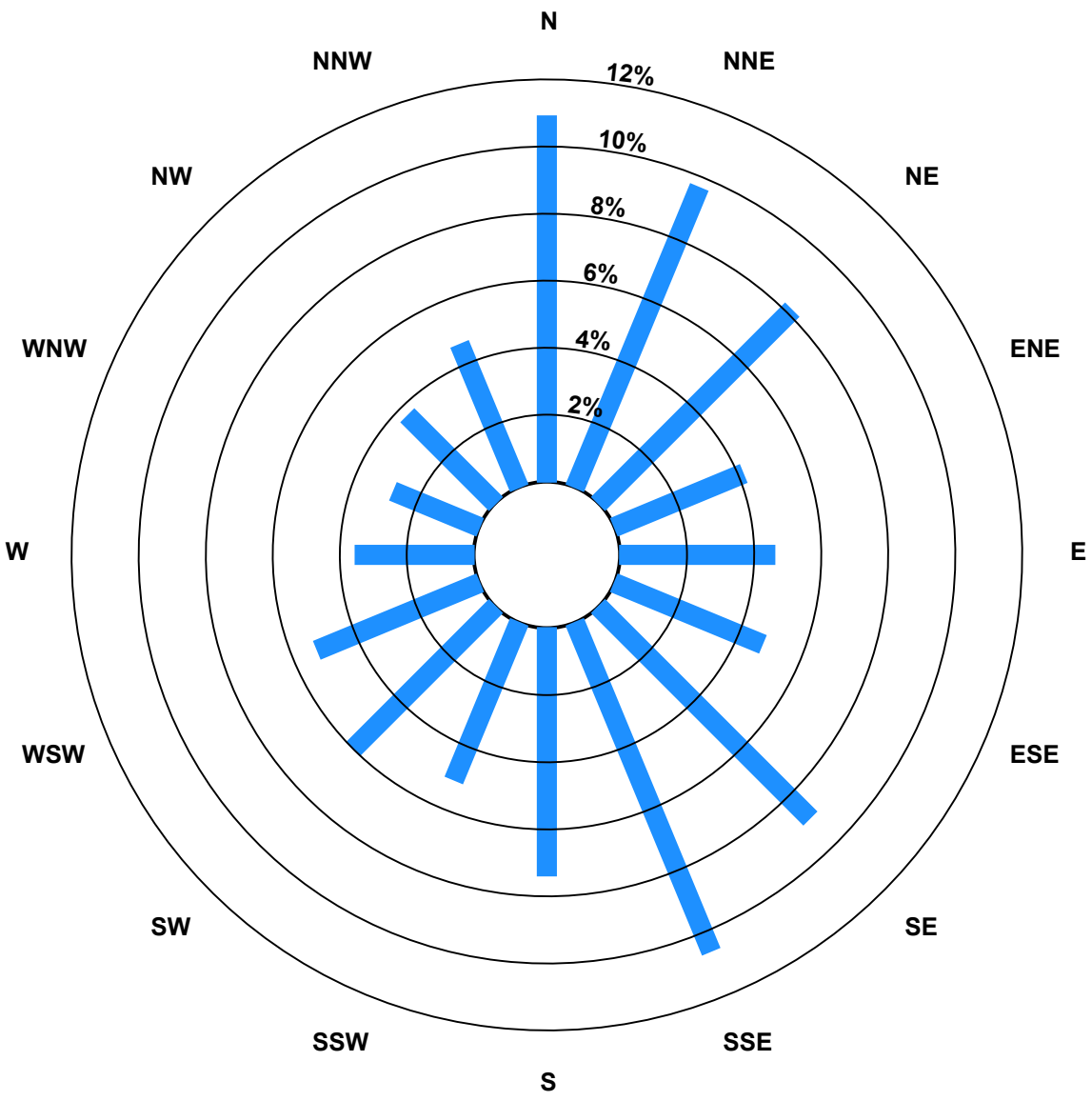
Total Number of Hours: 744

Wood Buffalo Environmental Association

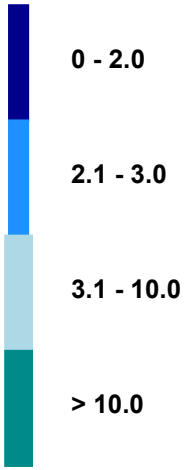
Wind Rose Mar 2025

Total Hydrocarbons (THC) - ppm

Firebag



Classes (ppm)



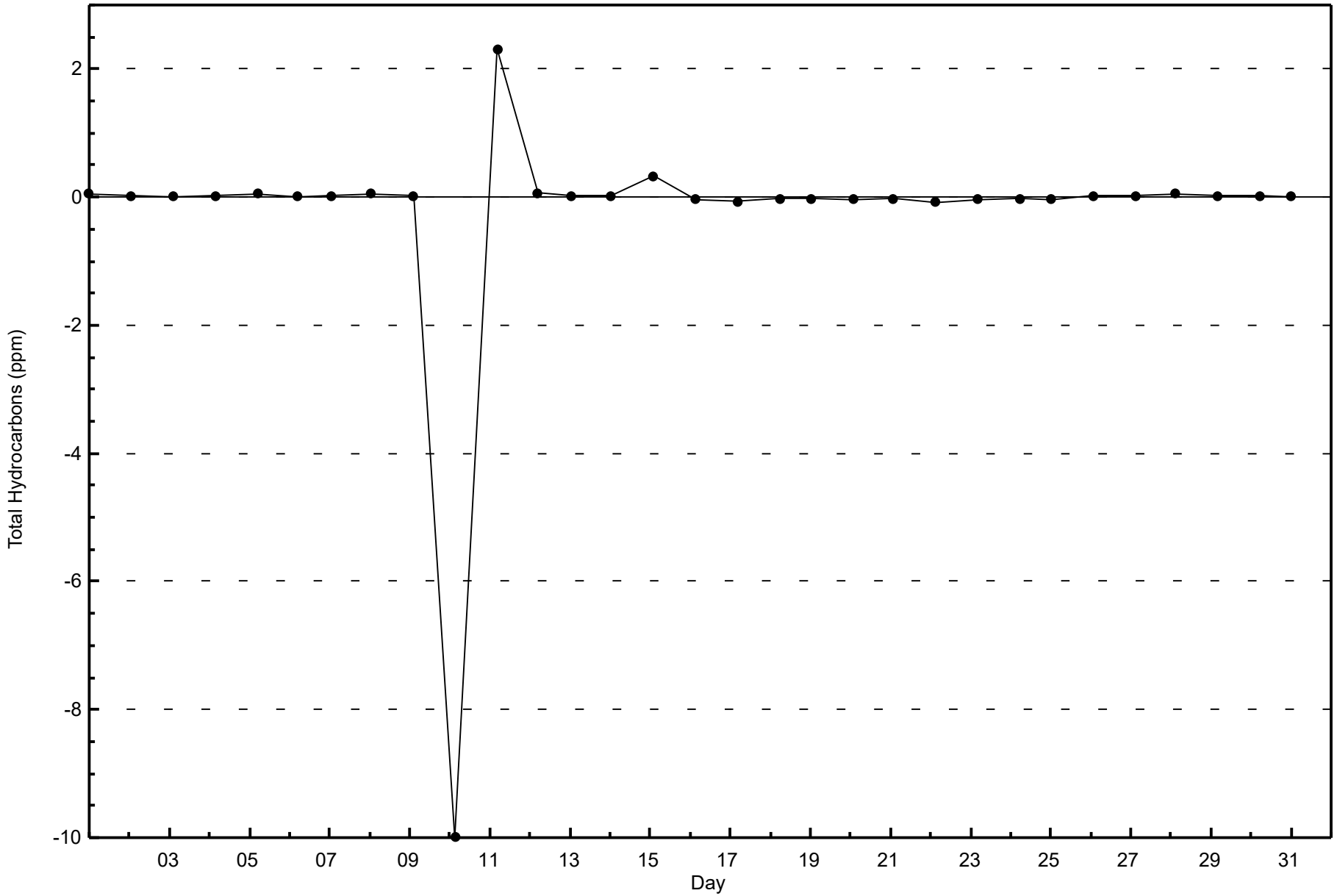
Total Number of Valid Hours: 651

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Firebag - March 2025

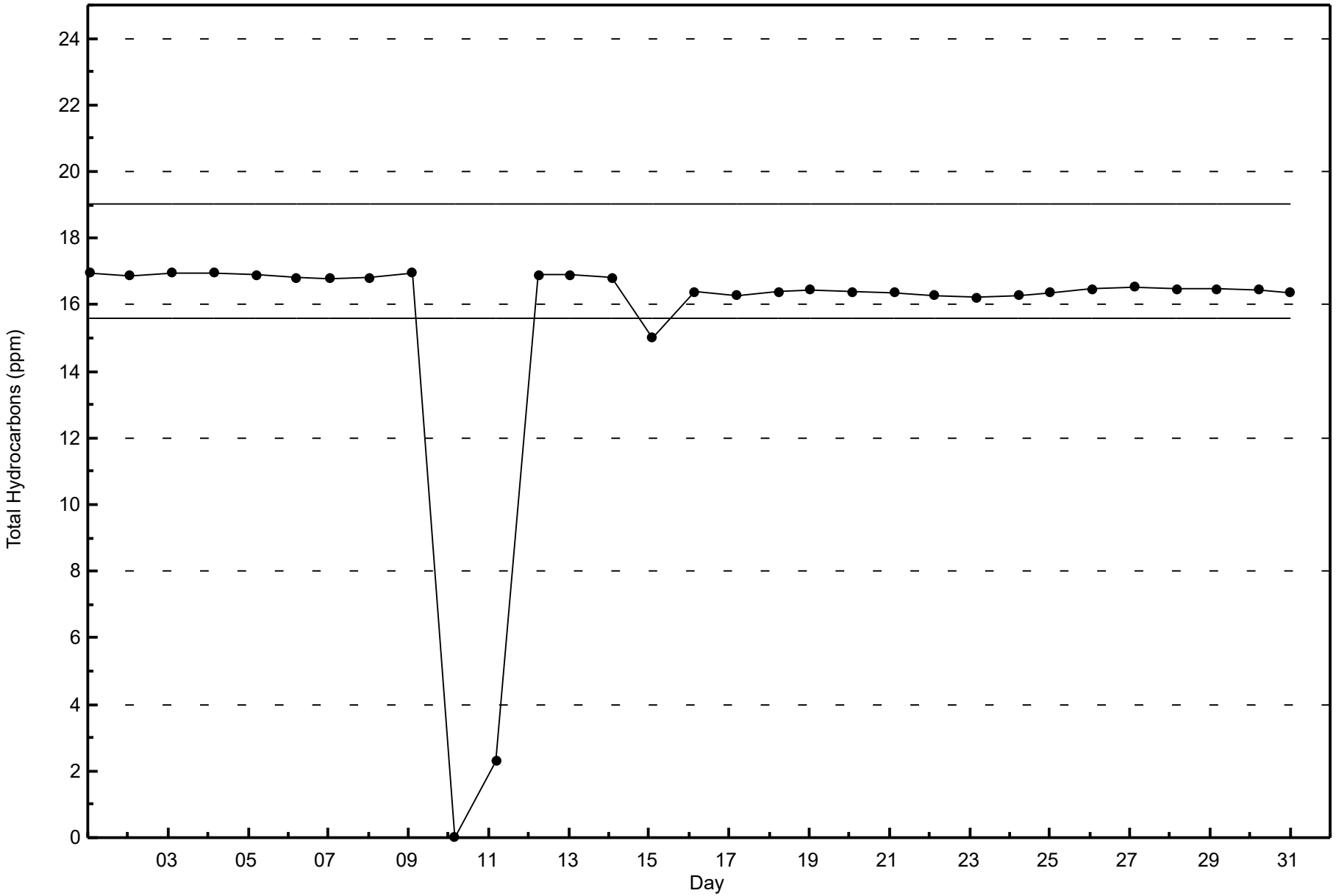


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Firebag - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Firebag - March 2025

Maximum Value: 46.3 ppb on Mar 1 07:00

Maximum Daily Average: 7.4 ppb on Mar 1

Minimum Value: 0.0 ppb on Mar 2 19:00

Minimum Daily Average: 0.0 ppb on Mar 27

Maximum Diurnal Average: 3.2 ppb at hour 7

Minimum Diurnal Average: 0.3 ppb at hour 21

Monthly Average: 1.18 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.4 Q_3 = 1.3 P_{90} = 2.9 P_{99} = 10.4

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	1.9	10.3	1.7	0.6	Z	42.9	46.3	12.7	8.9	2.9	1.6	0.4	0.4	0.5	0.7	0.7	1.6	2.1	12.4	3.4	2.5	6.5	4.6	5.1	7.4	46.3
2-Mar	2.0	2.5	2.3	1.6	2.4	Z	11.9	0.2	4.6	2.6	1.8	1.0	0.8	0.8	1.0	0.9	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	11.9
3-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.0	1.0	0.5	1.2	0.5	1.4	1.0	0.4	0.1	0.0	0.0	0.0	0.0	0.2	0.4	0.4	1.4
4-Mar	0.4	Z	0.1	1.5	0.0	0.0	0.0	0.9	2.8	3.7	2.8	2.6	3.0	2.6	1.0	1.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.0	3.7
5-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.8	1.6	1.0	0.5	0.3	0.2	0.6	5.4	1.4	0.4	0.4	0.5	3.6	0.8	5.4
6-Mar	0.9	4.4	0.7	Z	1.0	1.4	1.9	4.5	0.8	3.2	6.4	1.6	1.0	1.9	0.8	1.0	1.6	1.6	5.2	5.3	0.9	0.1	0.0	0.1	2.0	6.4
7-Mar	0.4	0.0	0.0	0.0	Z	0.0	0.3	2.9	5.2	15.1	3.8	5.5	5.3	7.6	8.7	6.0	0.5	0.1	0.0	0.0	0.0	0.1	0.1	0.0	2.7	15.1
8-Mar	0.1	0.4	0.2	0.2	0.7	Z	0.6	1.5	0.6	0.3	3.2	3.1	2.5	1.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	3.2
9-Mar	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	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.3
10-Mar	1.1	Z	2.3	2.3	10.4	2.9	2.6	1.2	2.1	0.8	1.2	0.8	0.8	1.4	1.3	0.9	0.9	0.8	0.3	0.0	0.4	0.8	2.8	4.5	1.9	10.4
11-Mar	5.6	0.5	Z	1.1	1.5	1.3	1.4	1.3	1.4	1.9	0.6	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	5.6
12-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.2	1.0	2.3	3.7	3.7	3.4	1.6	0.9	0.5	0.1	0.1	0.4	2.9	3.8	0.2	0.2	1.1	3.8
13-Mar	3.1	2.1	0.2	0.1	Z	1.5	2.4	1.5	1.4	2.1	2.0	3.0	2.6	0.6	0.2	0.2	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	1.0	3.1
14-Mar	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-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.4	0.8	0.3	0.0	0.0	0.0	1.2	2.0	1.0	0.3	0.2	0.3	0.1	0.0	0.2	0.3	0.6	0.6	0.4	2.0
16-Mar	0.9	Z	0.7	1.0	1.5	1.3	2.6	8.7	7.0	1.9	1.8	1.1	1.6	1.0	0.7	0.5	0.2	0.2	0.6	0.8	0.5	1.0	0.8	0.2	1.6	8.7
17-Mar	0.1	0.1	Z	0.3	0.5	1.1	0.2	0.5	0.4	0.9	6.2	4.0	1.2	0.7	0.2	0.3	0.3	0.2	0.0	0.0	0.0	0.1	1.1	1.7	0.9	6.2
18-Mar	0.9	0.0	0.1	Z	0.4	0.1	0.4	4.4	6.0	2.7	2.9	1.7	2.0	1.4	1.1	1.4	0.9	0.5	0.2	0.6	0.2	0.4	0.2	0.0	1.2	6.0
19-Mar	0.0	0.1	0.0	0.0	Z	1.2	14.4	2.5	1.7	1.0	1.6	2.4	0.8	0.6	0.7	1.5	2.7	2.8	0.2	0.0	0.0	0.0	0.0	0.0	1.5	14.4
20-Mar	0.0	0.0	0.0	0.0	0.1	Z	0.9	2.0	1.9	0.2	0.2	0.2	0.2	0.5	1.4	1.0	0.3	0.4	0.3	0.3	0.9	0.7	0.8	0.6	0.6	2.0
21-Mar	Z	2.0	2.1	2.7	0.9	0.8	1.1	2.1	1.3	0.9	0.3	1.0	0.8	1.1	1.3	0.5	0.3	0.3	0.5	0.3	0.2	0.2	0.2	0.5	0.9	2.7
22-Mar	0.6	Z	1.4	2.1	3.5	2.7	0.4	1.1	0.8	0.8	0.7	0.6	0.5	0.5	0.4	0.6	0.7	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.8	3.5
23-Mar	0.0	0.1	Z	0.0	0.0	0.0	0.3	1.3	1.5	0.8	0.8	0.6	0.5	0.4	0.4	0.4	0.3	0.9	1.2	0.6	0.5	0.3	0.3	0.4	0.5	1.5
24-Mar	0.3	0.6	0.3	Z	1.3	0.7	0.9	0.9	0.5	0.5	0.7	0.5	1.2	1.0	0.3	0.3	0.6	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.5	1.3
25-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.2	2.3	5.3	3.5	1.9	2.2	1.4	1.6	1.2	0.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	5.3
26-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	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	0.5
27-Mar	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
28-Mar	0.2	Z	0.5	0.9	1.8	0.7	2.0	3.3	1.0	3.2	1.5	3.1	2.0	3.4	2.1	1.9	0.7	0.1	0.0	0.0	0.0	0.0	0.1	0.9	1.3	3.4
29-Mar	1.0	0.2	Z	0.5	2.1	0.2	1.7	3.3	1.3	1.6	1.7	1.5	2.1	2.2	0.9	0.9	0.8	0.5	0.2	0.0	0.1	0.1	0.6	0.5	1.0	3.3
30-Mar	0.4	0.8	0.8	Z	0.3	2.9	5.2	7.9	8.5	8.3	3.8	4.2	4.4	3.4	4.8	3.2	1.7	1.0	0.1	0.0	0.2	0.3	0.2	0.3	2.7	8.5
31-Mar	0.2	0.2	0.3	0.4	Z	0.2	0.8	1.6	1.2	0.7	0.5	0.6	0.5	0.2	0.3	0.5	0.2	0.4	0.7	0.2	0.2	0.2	0.2	0.2	0.5	1.6
	0.8	0.9	0.5	0.6	1.1	2.4	3.2	2.2	2.2	2.0	1.7	1.6	1.5	1.4	1.2	0.9	0.5	0.4	0.9	0.4	0.3	0.5	0.4	0.6	Diurnal Average	
	5.6	10.3	2.3	2.7	10.4	42.9	46.3	12.7	8.9	15.1	6.4	5.5	5.3	7.6	8.7	6.0	2.7	2.8	12.4	5.3	2.9	6.5	4.6	5.1	Diurnal Maximum	

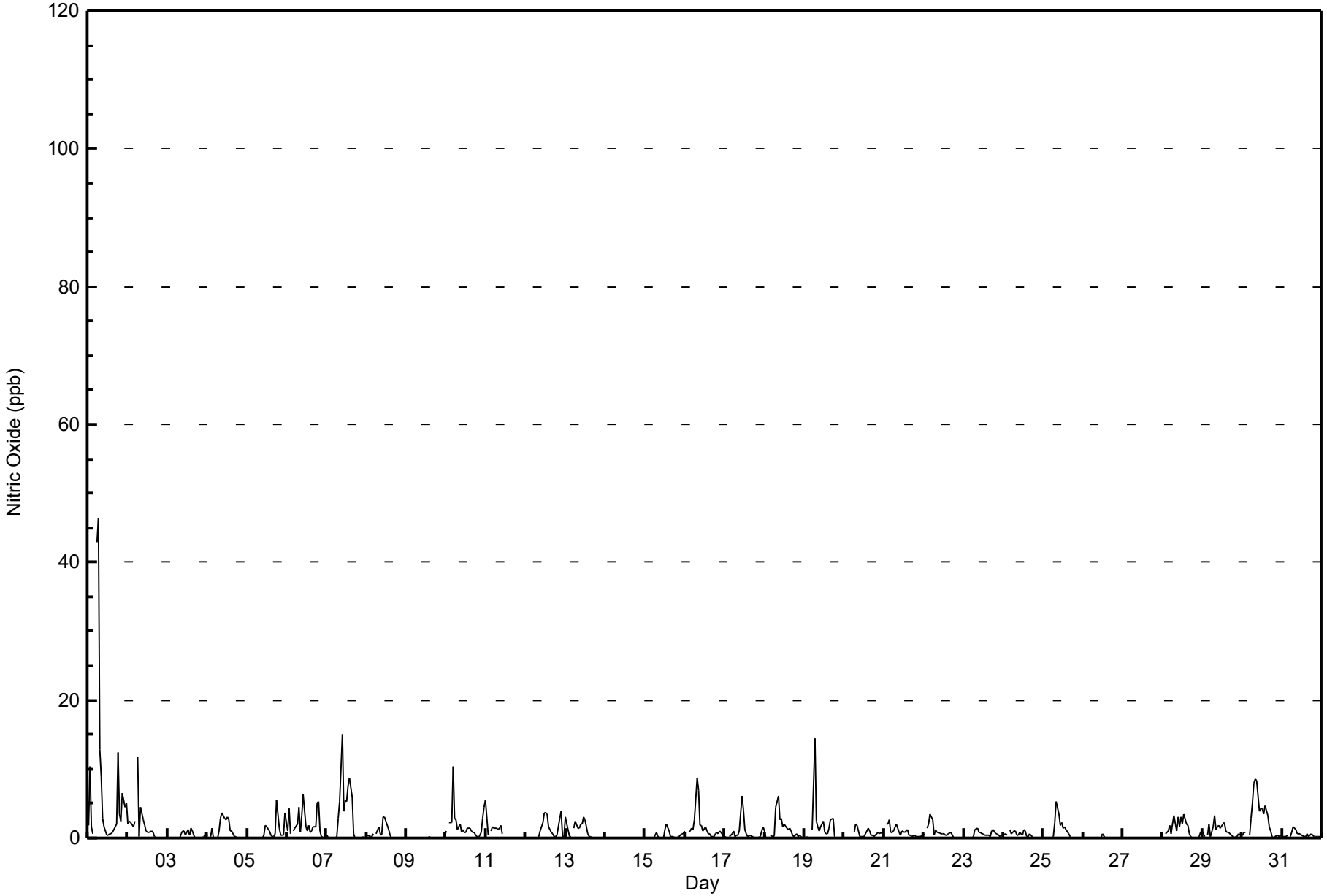
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Firebag - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	707	99.72	99.72
21 - 40	0	0.00	99.72
11 - 80	2	0.28	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Firebag - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	84	78	53	29	27	31	59	72	54	33	38	33	25	18	24	40	698
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	2	0	0	0	0	0	0	2
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	84	78	53	29	27	31	59	72	54	35	38	33	25	18	24	40	700

Total Number of Valid Hours: 700

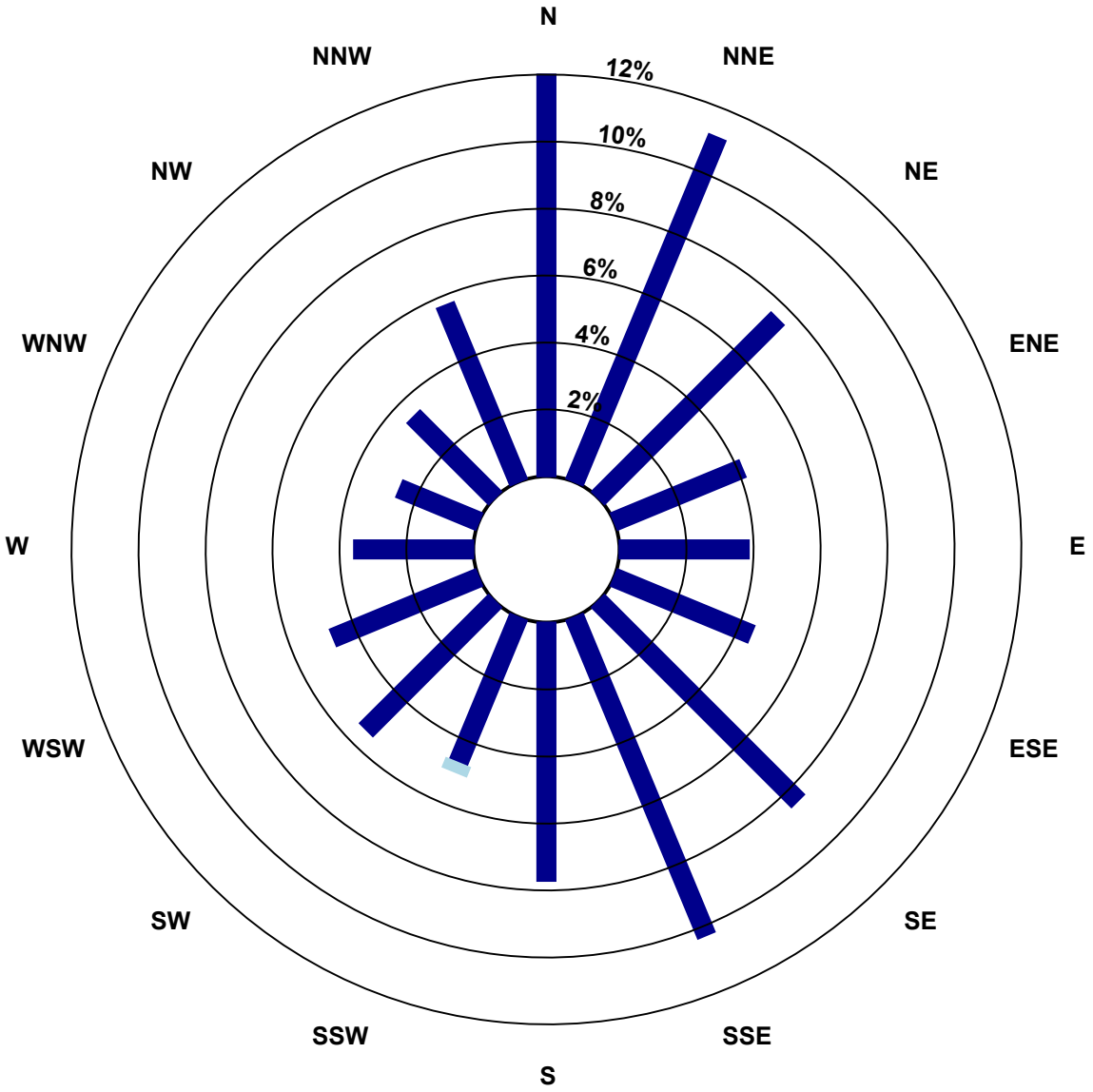
Total Number of Hours: 744

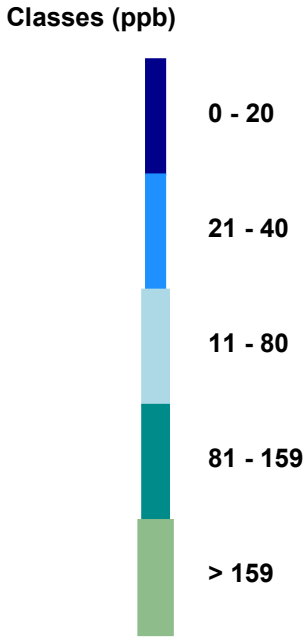
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitric Oxide (NO) - ppb

Firebag





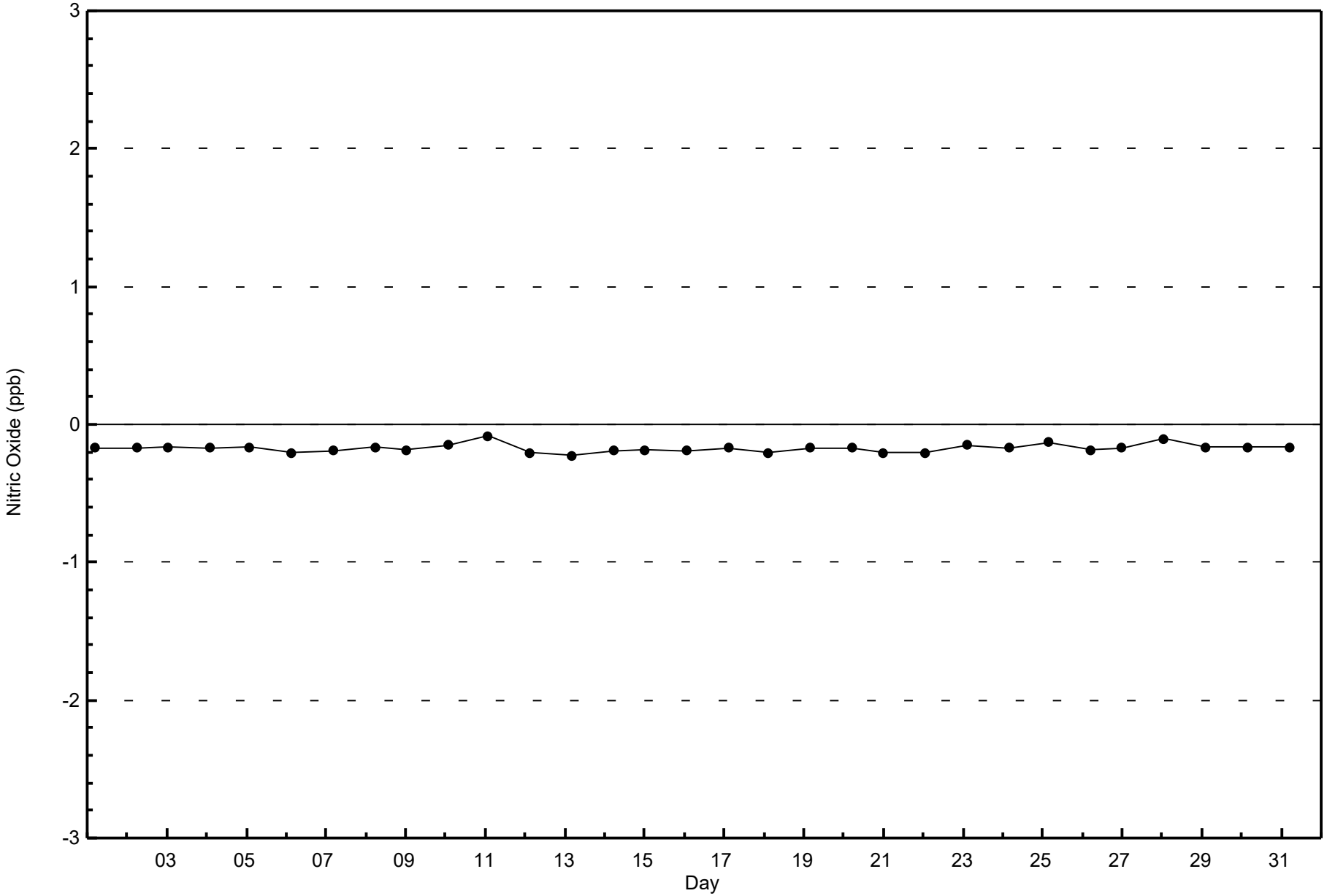
Total Number of Valid Hours: 700

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Firebag - March 2025

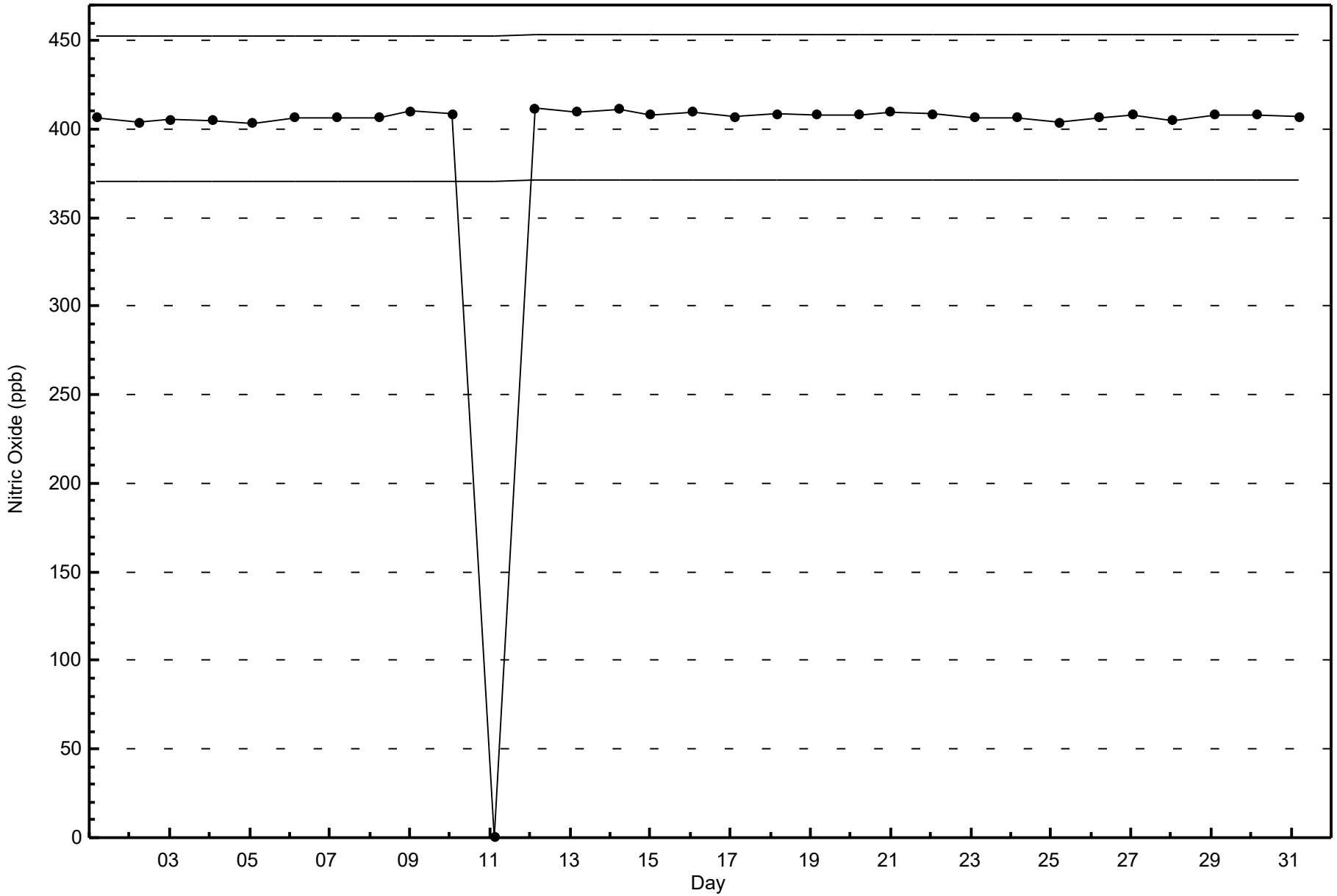


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Firebag - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Firebag - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 38.4 ppb on Mar 1 19:00 Maximum Daily Average: 15.8 ppb on Mar 1

Minimum Value: 0.1 ppb on Mar 8 23:00 Minimum Daily Average: 0.2 ppb on Mar 14
Maximum Diurnal Average: 8.4 ppb at hour 7 Minimum Diurnal Average: 2.1 ppb at hour 17
Monthly Average: 4.49 ppb Percentiles: P_1 = 0.1 P_{10} = 0.2 Q_1 = 0.8 Median = 2.7 Q_3 = 6.3 P_{90} = 10.7 P_{99} = 25.8

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	7.0	17.5	10.3	7.0	Z	37.6	37.0	22.7	13.8	5.8	3.0	1.1	1.2	1.5	2.0	2.6	9.8	23.0	38.4	28.5	16.3	31.2	21.4	25.8	15.8	38.4
2-Mar	11.3	18.0	15.0	9.5	9.1	Z	28.4	8.5	24.1	16.1	7.2	3.2	2.7	2.7	3.7	5.7	1.5	0.4	0.4	0.3	0.3	0.4	0.4	0.4	7.4	28.4
3-Mar	Z	0.5	0.4	0.4	0.4	0.5	1.2	1.0	4.3	4.6	3.4	1.4	2.5	1.3	3.2	4.5	3.5	2.4	3.1	4.1	5.0	6.9	7.8	8.1	3.1	8.1
4-Mar	6.5	Z	5.0	9.1	13.3	8.8	9.0	11.3	9.1	7.8	5.0	5.2	6.6	6.0	3.4	4.5	2.8	3.5	5.1	3.0	7.8	5.8	2.5	0.9	6.2	13.3
5-Mar	0.4	0.6	Z	0.4	0.3	0.2	0.2	0.2	0.3	0.3	0.8	2.9	2.7	1.9	1.1	1.2	1.7	7.0	22.0	13.4	9.8	4.9	4.6	14.4	4.0	22.0
6-Mar	9.5	15.2	7.8	Z	5.7	9.2	10.3	10.1	2.0	5.4	7.6	2.5	1.5	2.9	1.1	1.7	4.1	7.9	27.0	19.7	9.1	2.3	8.4	25.7	8.6	27.0
7-Mar	23.1	6.1	4.1	2.3	Z	3.7	6.2	15.6	15.7	16.9	5.5	6.7	9.7	15.3	15.9	12.3	2.5	1.4	0.7	0.6	0.9	4.1	8.8	4.0	7.9	23.1
8-Mar	2.3	4.3	2.6	2.4	3.7	Z	2.9	6.6	3.4	1.2	8.8	8.3	6.2	4.6	1.5	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	2.6	8.8
9-Mar	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	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	3.3	0.3	3.3
10-Mar	6.8	Z	6.8	6.9	16.3	7.1	6.6	3.8	3.2	1.2	1.3	1.0	1.0	1.5	1.6	1.6	2.2	4.1	10.8	14.1	8.9	7.0	11.2	11.1	5.9	16.3
11-Mar	13.4	3.5	Z	4.5	6.3	5.4	7.1	4.8	3.3	2.8	1.1	C	C	C	C	0.6	0.8	0.7	1.2	1.4	0.4	0.1	0.1	0.1	3.0	13.4
12-Mar	0.1	0.1	0.1	Z	0.2	0.3	0.2	0.2	0.7	2.6	3.9	5.4	5.1	4.1	2.1	1.3	1.3	0.6	0.9	6.4	10.1	21.2	4.5	3.7	3.3	21.2
13-Mar	14.1	10.1	2.6	1.3	Z	7.2	8.0	5.3	2.6	2.4	3.1	3.6	3.4	1.1	0.4	0.5	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	2.9	14.1
14-Mar	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
15-Mar	Z	0.9	8.3	10.8	9.8	10.2	11.1	5.8	1.3	0.3	0.3	0.3	1.7	2.8	1.8	0.8	0.9	1.9	2.9	2.1	3.9	3.5	5.0	5.9	4.0	11.1
16-Mar	5.4	Z	5.9	9.5	13.8	10.5	11.8	14.3	10.1	2.8	2.2	1.6	2.1	1.5	1.2	1.1	0.9	1.1	4.3	3.8	2.9	3.6	2.8	1.0	5.0	14.3
17-Mar	0.9	0.9	Z	1.7	2.1	4.2	2.7	1.5	1.6	2.8	9.6	5.5	2.0	1.4	0.7	1.0	1.0	1.2	0.8	0.5	0.3	2.7	16.4	18.2	3.5	18.2
18-Mar	18.0	5.9	5.5	Z	10.0	9.1	10.8	15.4	10.1	4.6	4.0	2.3	2.6	2.3	2.5	3.5	3.6	4.0	6.5	13.6	7.4	7.3	6.4	2.8	6.9	18.0
19-Mar	3.8	5.3	3.4	1.8	Z	11.5	20.4	9.1	4.5	2.3	2.7	3.4	1.3	1.2	1.6	3.3	7.3	11.9	6.2	3.8	2.6	1.8	1.2	0.6	4.8	20.4
20-Mar	0.4	0.3	0.4	0.3	0.4	Z	9.8	7.9	3.8	0.5	0.6	0.4	0.4	0.9	2.1	1.9	1.0	1.8	3.8	7.0	3.3	3.6	3.0	2.7	2.4	9.8
21-Mar	Z	6.1	5.4	6.3	2.7	2.6	3.2	3.4	2.0	1.2	0.6	1.2	1.2	1.6	1.9	0.9	0.9	0.9	2.0	1.8	1.8	1.6	0.9	2.2	2.3	6.3
22-Mar	2.9	Z	6.7	9.6	12.6	9.8	6.1	6.4	2.5	1.7	1.6	1.5	1.5	1.3	1.2	1.5	3.4	3.4	3.6	3.8	6.9	3.8	5.3	3.3	4.4	12.6
23-Mar	2.7	2.7	Z	2.8	2.9	4.8	6.4	9.0	6.2	2.8	2.1	1.7	1.5	1.3	1.3	1.3	1.5	6.5	9.8	6.5	6.4	5.5	5.6	5.3	4.2	9.8
24-Mar	5.6	7.7	5.1	Z	9.3	6.3	6.4	5.5	2.1	1.5	1.4	1.5	3.8	3.0	1.3	1.0	1.8	2.0	6.4	14.2	17.7	8.1	8.8	10.7	5.7	17.7
25-Mar	15.4	4.6	7.0	5.1	Z	4.5	5.0	8.4	7.5	5.3	3.3	3.6	3.3	3.4	3.4	4.0	1.2	0.4	0.4	0.3	0.3	0.3	0.3	0.3	3.8	15.4
26-Mar	0.4	0.3	0.2	0.3	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.4
27-Mar	Z	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.6	0.2	0.6
28-Mar	4.3	Z	8.7	11.0	10.9	14.0	8.7	7.7	2.1	4.3	2.3	4.0	2.6	4.3	3.1	3.1	1.7	0.9	0.8	0.3	0.2	0.5	2.7	4.6	4.5	14.0
29-Mar	6.5	7.5	Z	8.3	17.8	8.7	11.4	8.3	2.7	2.8	2.9	2.4	3.1	3.4	1.9	2.0	2.6	2.6	3.7	3.9	2.6	5.3	7.2	7.9	5.5	17.8
30-Mar	6.9	8.6	12.9	Z	9.5	23.2	21.2	15.0	12.3	10.8	5.7	6.4	6.1	5.2	7.3	6.2	4.4	5.2	1.9	1.4	3.7	2.8	1.9	2.2	7.9	23.2
31-Mar	1.9	1.5	1.9	2.9	Z	3.0	8.8	8.1	3.7	1.9	1.4	1.7	1.4	1.0	1.1	1.6	1.2	1.8	4.4	2.2	2.8	2.9	1.7	2.3	2.7	8.8
	6.5	5.0	4.9	4.4	6.3	7.8	8.4	7.0	5.0	3.7	3.0	2.7	2.6	2.6	2.3	2.3	2.1	3.2	5.4	5.1	4.3	4.5	4.5	5.4	Diurnal Average	
	23.1	18.0	15.0	11.0	17.8	37.6	37.0	22.7	24.1	16.9	9.6	8.3	9.7	15.3	15.9	12.3	9.8	23.0	38.4	28.5	17.7	31.2	21.4	25.8	Diurnal Maximum	

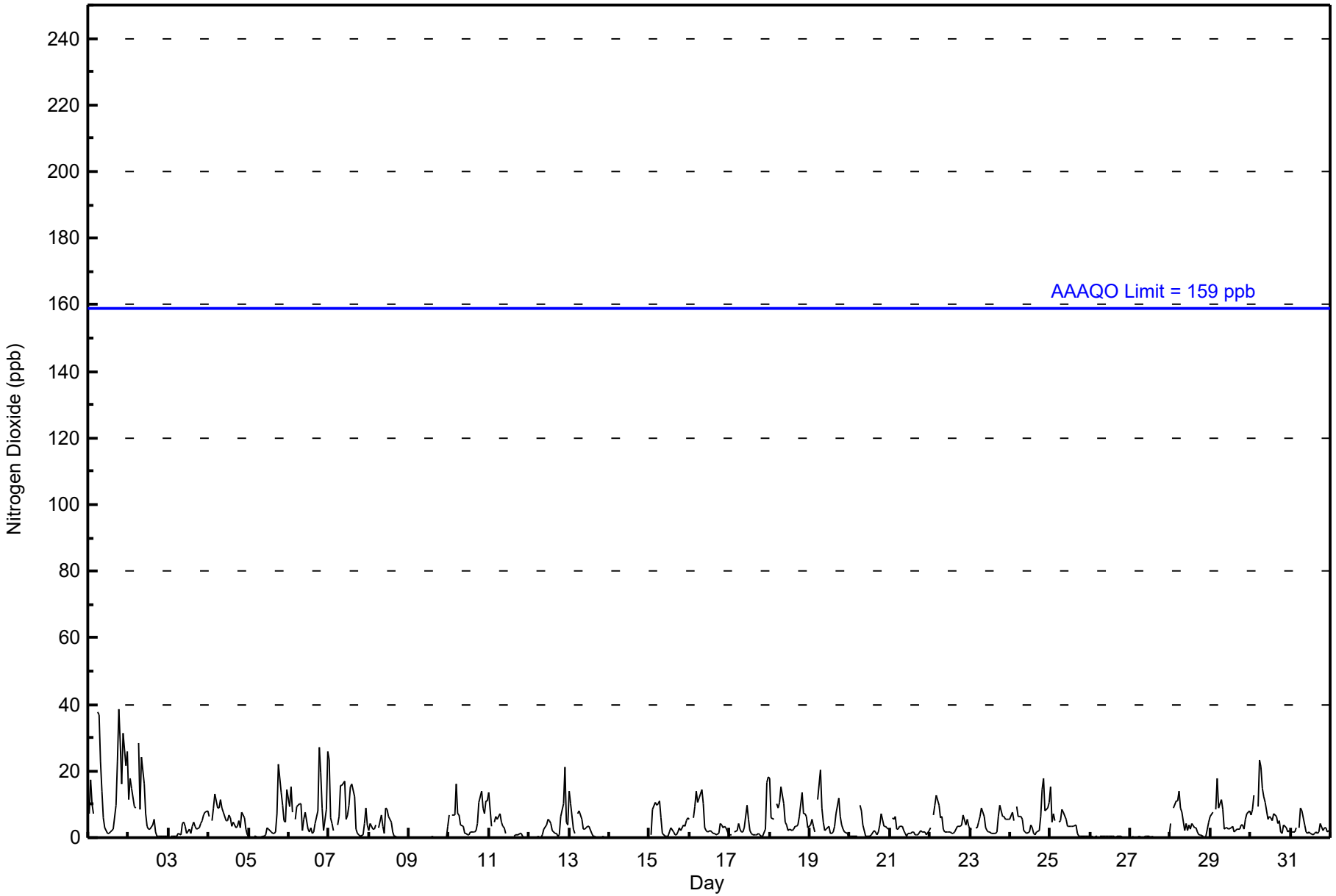
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Firebag - March 2025



Nitrogen Dioxide (NO_2) - ppb
Firebag - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	691	97.46	97.46
21 - 40	18	2.54	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Firebag - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	84	78	53	29	27	31	58	68	50	30	37	33	25	18	24	37	682
21 - 40	0	0	0	0	0	0	1	4	4	5	1	0	0	0	0	3	18
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	84	78	53	29	27	31	59	72	54	35	38	33	25	18	24	40	700

Total Number of Valid Hours: 700

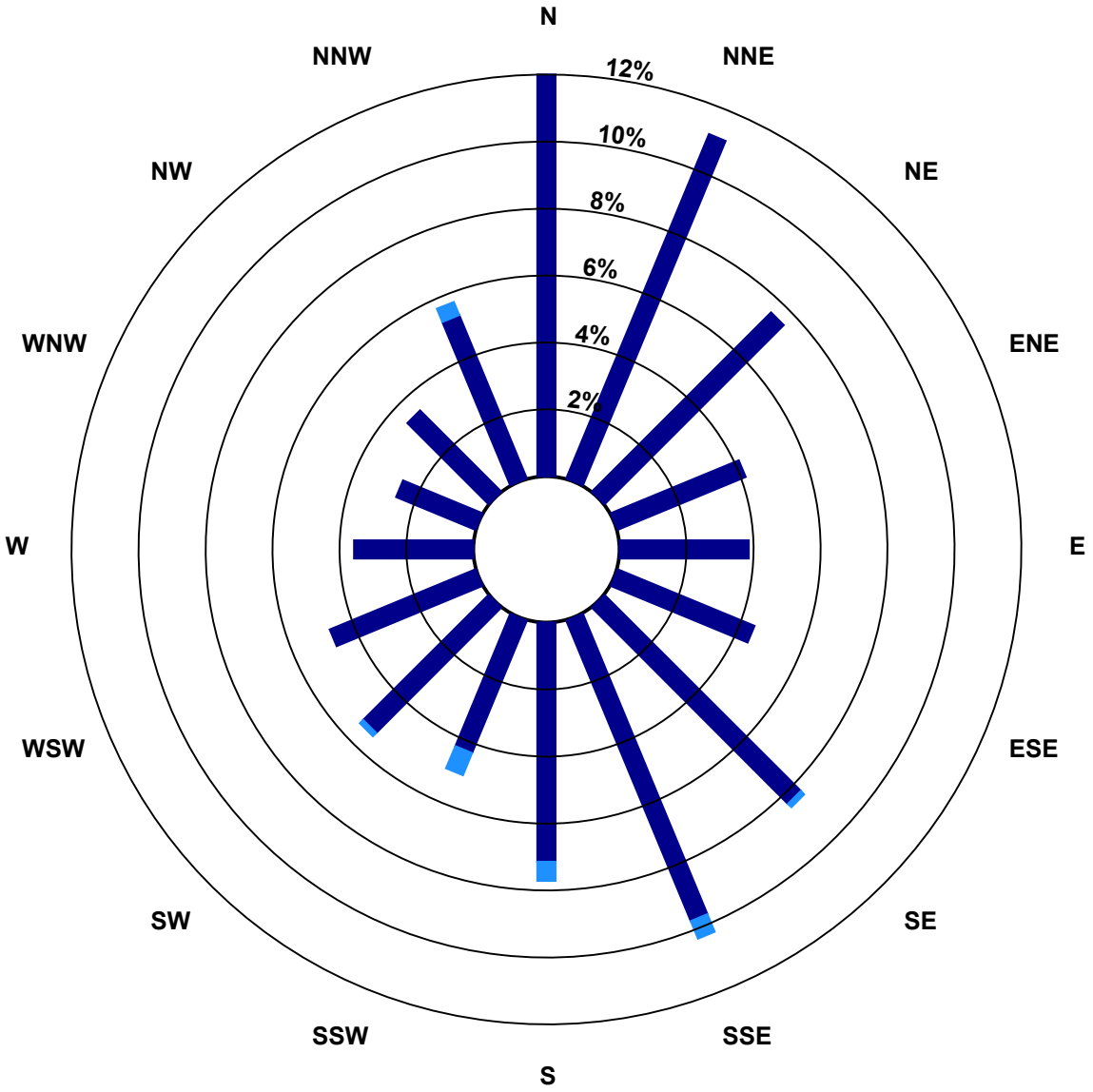
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Dioxide (NO_2) - ppb

Firebag



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

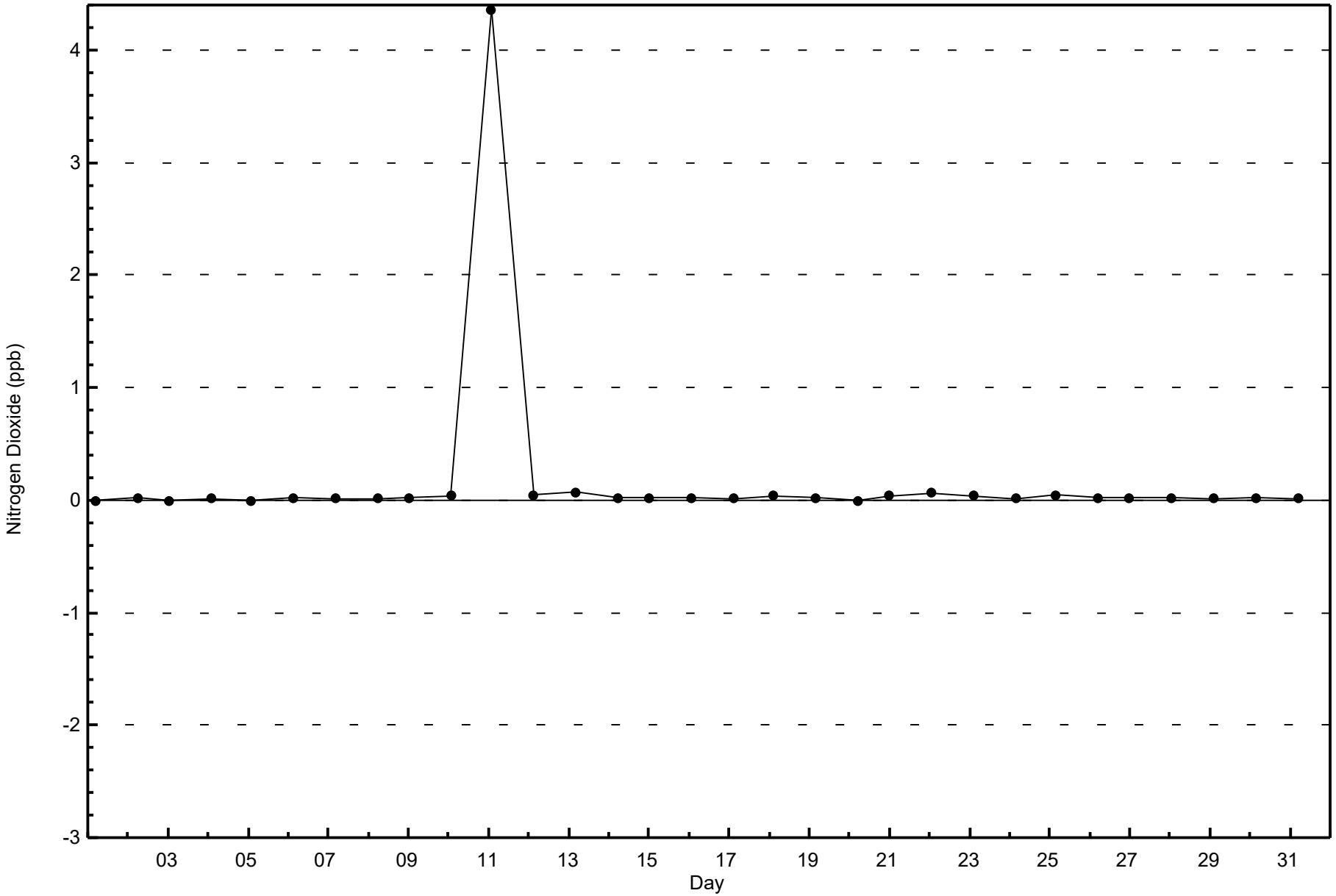
Total Number of Valid Hours: 700

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Firebag - March 2025

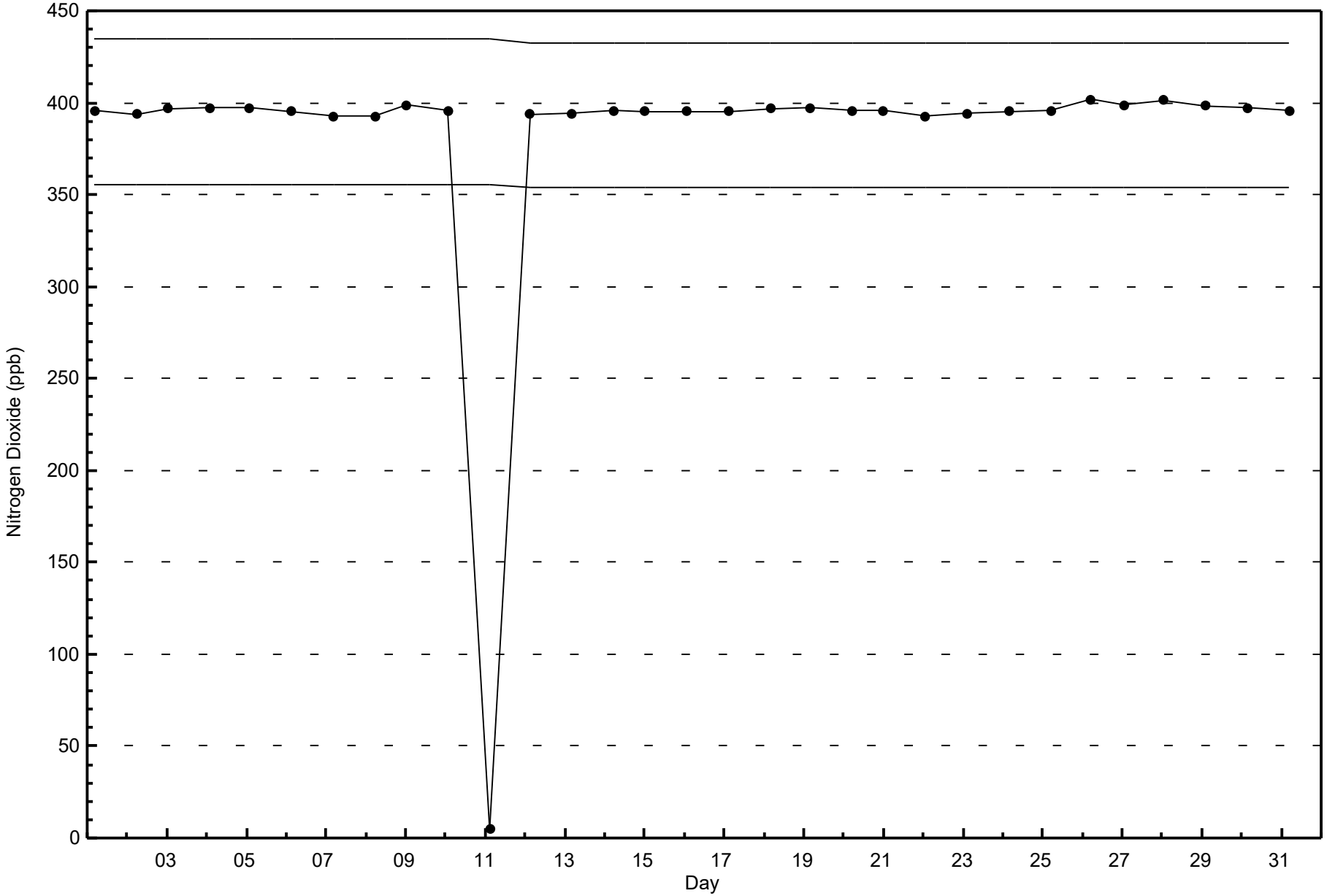


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Firebag - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Firebag - March 2025

Maximum Value: 83.3 ppb on Mar 1 07:00

Maximum Daily Average: 23.3 ppb on Mar 1

Minimum Value: 0.1 ppb on Mar 9 19:00

Minimum Daily Average: 0.2 ppb on Mar 14

Maximum Diurnal Average: 11.6 ppb at hour 7

Minimum Diurnal Average: 2.6 ppb at hour 17

Monthly Average: 5.68 ppb

Percentiles: P_1 = 0.1 P_{10} = 0.2 Q_1 = 0.9 Median = 3.5 Q_3 = 7.6 P_{90} = 12.7 P_{99} = 32.2

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	8.9	27.8	12.0	7.6	Z	80.5	83.3	35.4	22.7	8.7	4.6	1.5	1.6	2.0	2.7	3.3	11.4	25.1	50.8	31.9	18.8	37.7	26.0	30.9	23.3	83.3
2-Mar	13.3	20.5	17.3	11.1	11.5	Z	40.3	8.7	28.7	18.7	9.0	4.2	3.5	3.5	4.7	6.6	1.7	0.4	0.4	0.3	0.3	0.4	0.4	0.4	9.0	40.3
3-Mar	Z	0.5	0.4	0.4	0.4	0.5	1.2	1.0	4.9	5.6	4.4	1.9	3.7	1.8	4.6	5.5	3.9	2.5	3.1	4.1	5.0	6.9	8.0	8.5	3.4	8.5
4-Mar	6.9	Z	5.1	10.6	13.3	8.8	9.0	12.2	11.9	11.5	7.8	7.8	9.6	8.6	4.4	5.5	3.1	3.6	5.1	3.0	7.8	5.8	2.5	0.9	7.2	13.3
5-Mar	0.4	0.6	Z	0.4	0.3	0.2	0.2	0.2	0.3	0.3	1.2	4.7	4.3	2.9	1.6	1.5	1.9	7.6	27.4	14.8	10.2	5.3	5.1	18.0	4.8	27.4
6-Mar	10.4	19.6	8.5	Z	6.7	10.6	12.2	14.6	2.8	8.6	14.0	4.1	2.5	4.8	1.9	2.7	5.7	9.5	32.2	25.0	10.0	2.4	8.4	25.8	10.6	32.2
7-Mar	23.5	6.1	4.1	2.3	Z	3.7	6.5	18.5	20.9	32.0	9.3	12.2	15.0	22.9	24.6	18.3	3.0	1.5	0.7	0.6	0.9	4.2	8.9	4.0	10.6	32.0
8-Mar	2.4	4.7	2.8	2.6	4.4	Z	3.5	8.1	4.0	1.5	12.0	11.4	8.7	5.8	1.9	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	3.3	12.0
9-Mar	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	0.6	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	3.5	0.3	3.5
10-Mar	7.9	Z	9.1	9.2	26.7	10.0	9.2	5.0	5.3	2.0	2.5	1.8	1.8	2.9	2.9	2.5	3.1	4.9	11.1	14.1	9.3	7.8	14.0	15.6	7.8	26.7
11-Mar	19.0	4.0	Z	5.6	7.8	6.7	8.5	6.1	4.7	4.7	1.7	C	C	C	C	0.6	0.8	0.7	1.2	1.4	0.4	0.1	0.1	0.1	3.9	19.0
12-Mar	0.1	0.1	0.1	Z	0.2	0.3	0.2	0.2	0.9	3.6	6.2	9.1	8.8	7.5	3.7	2.2	1.8	0.7	1.0	6.8	13.0	25.0	4.7	3.9	4.4	25.0
13-Mar	17.2	12.2	2.8	1.4	Z	8.7	10.4	6.8	4.0	4.5	5.1	6.6	6.0	1.7	0.6	0.7	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	3.9	17.2
14-Mar	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
15-Mar	Z	0.9	8.3	10.8	9.8	10.2	11.5	6.6	1.6	0.3	0.3	0.3	2.9	4.8	2.8	1.1	1.1	2.2	3.0	2.1	4.1	3.8	5.6	6.5	4.4	11.5
16-Mar	6.3	Z	6.6	10.5	15.3	11.8	14.4	23.0	17.1	4.7	4.0	2.7	3.7	2.5	1.9	1.6	1.1	1.3	4.9	4.6	3.4	4.6	3.6	1.2	6.6	23.0
17-Mar	1.0	1.0	Z	2.0	2.6	5.3	2.9	2.0	2.0	3.7	15.8	9.5	3.2	2.1	0.9	1.3	1.3	1.4	0.8	0.5	0.3	2.8	17.5	19.9	4.3	19.9
18-Mar	18.9	5.9	5.6	Z	10.4	9.2	11.2	19.8	16.1	7.3	6.9	4.0	4.6	3.7	3.6	4.9	4.5	4.5	6.7	14.2	7.6	7.7	6.6	2.8	8.1	19.8
19-Mar	3.8	5.4	3.4	1.8	Z	12.7	34.8	11.6	6.2	3.3	4.3	5.8	2.1	1.8	2.3	4.8	10.0	14.7	6.4	3.8	2.6	1.8	1.2	0.6	6.3	34.8
20-Mar	0.4	0.3	0.4	0.3	0.5	Z	10.7	9.9	5.7	0.7	0.8	0.6	0.6	1.4	3.5	2.9	1.3	2.2	4.1	7.3	4.2	4.3	3.8	3.3	3.0	10.7
21-Mar	Z	8.1	7.5	9.0	3.6	3.4	4.3	5.5	3.3	2.1	0.9	2.2	2.0	2.7	3.2	1.4	1.2	1.2	2.5	2.1	2.0	1.8	1.1	2.7	3.2	9.0
22-Mar	3.5	Z	8.1	11.7	16.1	12.5	6.5	7.5	3.3	2.5	2.3	2.1	2.0	1.8	1.6	2.1	4.1	3.7	3.7	3.8	6.9	3.8	5.3	3.3	5.1	16.1
23-Mar	2.7	2.8	Z	2.8	2.9	4.8	6.7	10.3	7.7	3.6	2.9	2.3	2.0	1.7	1.7	1.7	1.8	7.4	11.0	7.1	6.9	5.8	5.9	5.7	4.7	11.0
24-Mar	5.9	8.3	5.4	Z	10.6	7.0	7.3	6.4	2.6	2.0	2.1	2.0	5.0	4.0	1.6	1.3	2.4	2.1	6.5	14.2	17.8	8.1	8.8	10.7	6.2	17.8
25-Mar	15.4	4.6	7.0	5.1	Z	4.5	5.2	10.7	12.8	8.8	5.2	5.8	4.7	5.0	4.6	4.7	1.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	4.7	15.4
26-Mar	0.4	0.3	0.2	0.3	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.9	0.3	0.5	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.9
27-Mar	Z	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.4	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.6	0.2	0.6
28-Mar	4.5	Z	9.2	11.9	12.7	14.7	10.7	11.0	3.1	7.5	3.8	7.1	4.6	7.7	5.2	5.0	2.4	1.0	0.8	0.3	0.2	0.5	2.8	5.5	5.7	14.7
29-Mar	7.5	7.7	Z	8.8	19.9	8.9	13.1	11.6	4.0	4.4	4.6	3.9	5.2	5.6	2.8	2.9	3.4	3.1	3.9	3.9	2.7	5.4	7.8	8.4	6.5	19.9
30-Mar	7.3	9.4	13.7	Z	9.8	26.1	26.4	22.9	20.8	19.1	9.5	10.6	10.5	8.6	12.1	9.4	6.1	6.2	2.0	1.4	3.9	3.1	2.1	2.5	10.6	26.4
31-Mar	2.1	1.7	2.2	3.3	Z	3.2	9.6	9.7	4.9	2.6	1.9	2.3	1.9	1.2	1.4	2.1	1.4	2.2	5.1	2.4	3.0	3.1	1.9	2.5	3.1	9.7
	7.3	5.9	5.4	5.0	7.5	10.2	11.6	9.2	7.2	5.6	4.6	4.3	4.1	4.0	3.5	3.2	2.6	3.6	6.3	5.5	4.6	5.0	5.0	6.1	Diurnal Average	
	23.5	27.8	17.3	11.9	26.7	80.5	83.3	35.4	28.7	32.0	15.8	12.2	15.0	22.9	24.6	18.3	11.4	25.1	50.8	31.9	18.8	37.7	26.0	30.9	Diurnal Maximum	

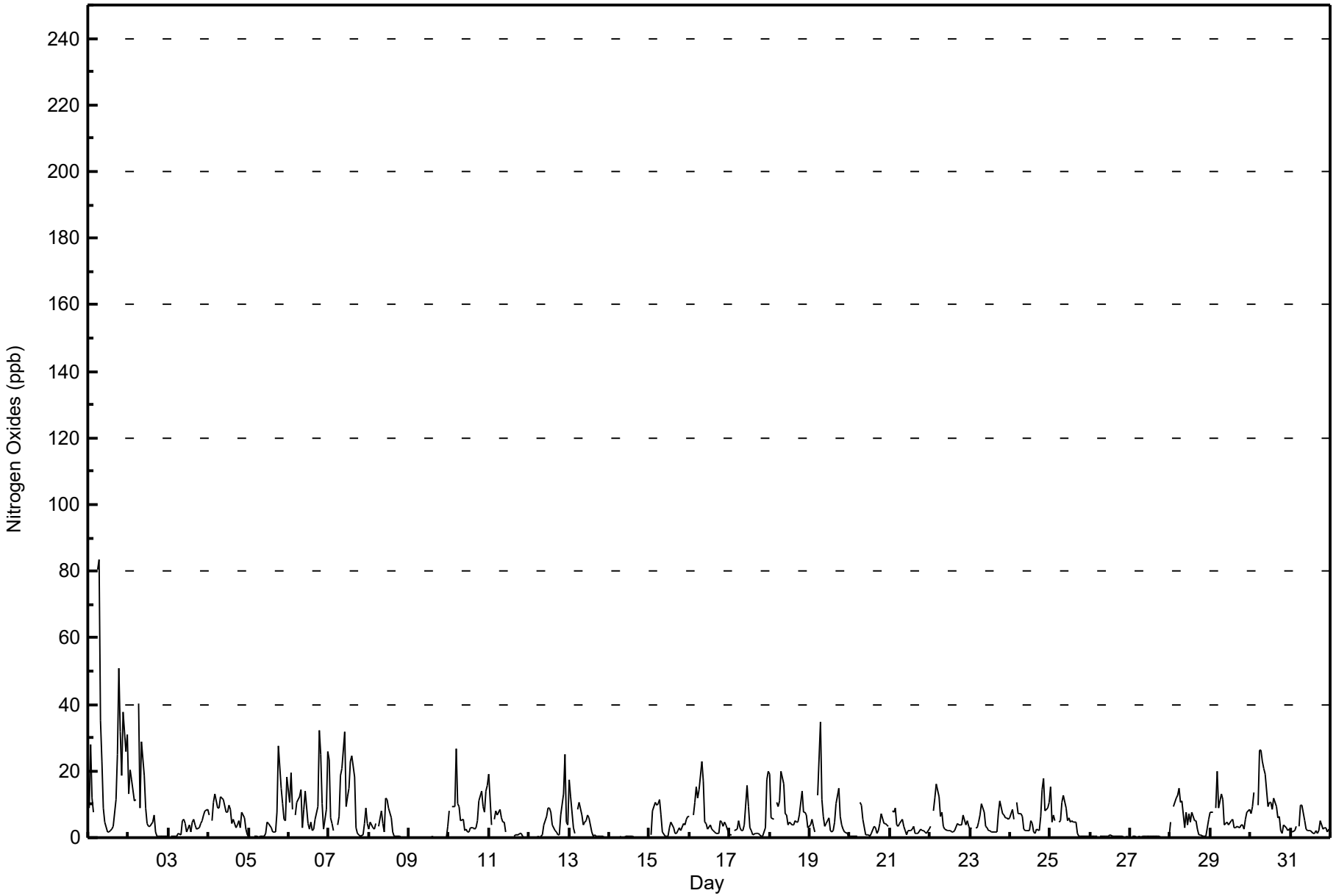
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Firebag - March 2025



Nitrogen Oxides (NO_X) - ppb
Firebag - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	679	95.77	95.77
21 - 40	27	3.81	99.58
11 - 80	2	0.28	99.86
81 - 159	1	0.14	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Firebag - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	84	78	53	29	27	31	58	65	47	29	36	31	24	18	24	36	670
21 - 40	0	0	0	0	0	0	1	6	7	4	2	2	1	0	0	4	27
11 - 80	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2
81 - 159	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	84	78	53	29	27	31	59	72	54	35	38	33	25	18	24	40	700

Total Number of Valid Hours: 700

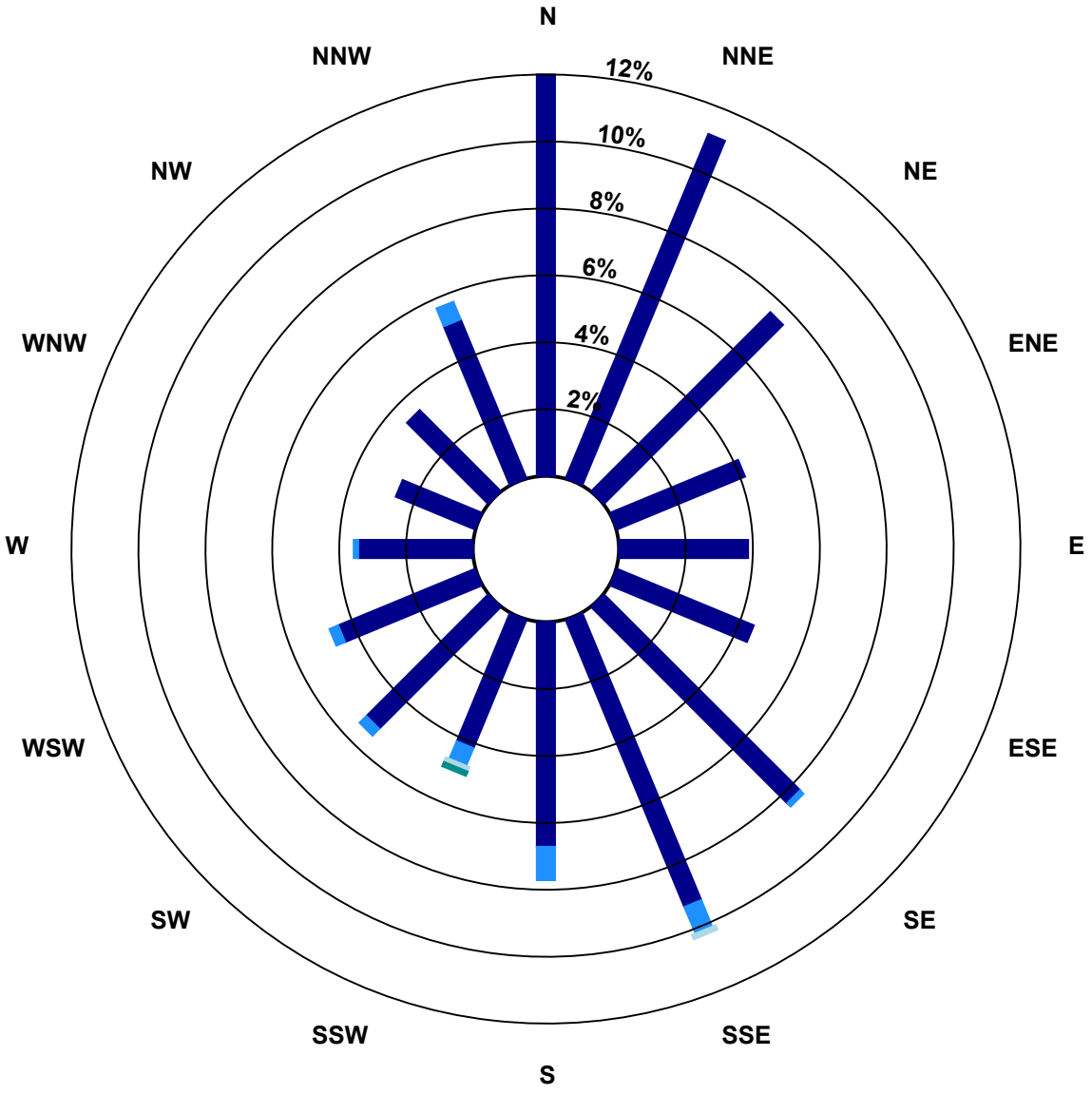
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Oxides (NO_X) - ppb

Firebag



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

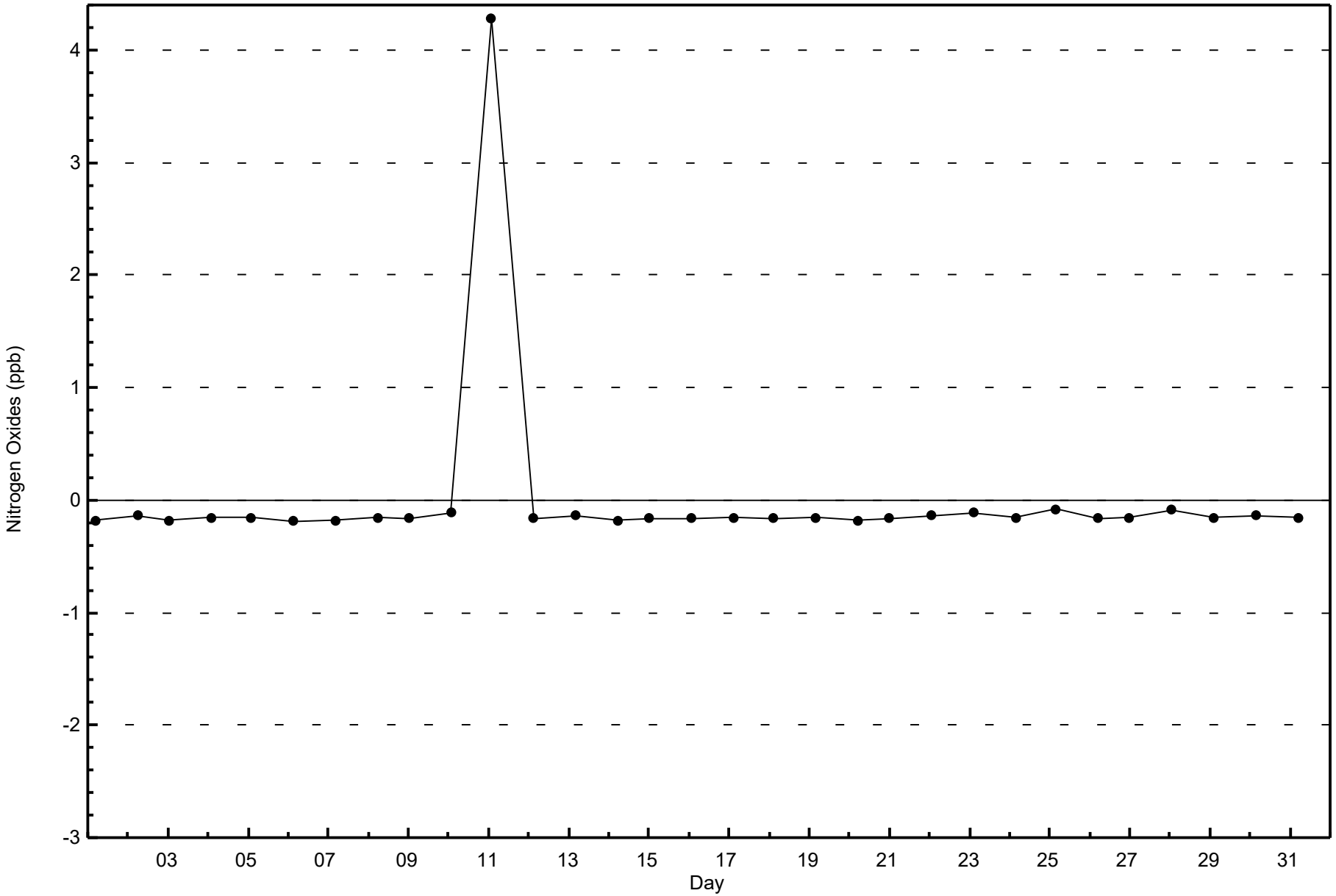
Total Number of Valid Hours: 700

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Firebag - March 2025

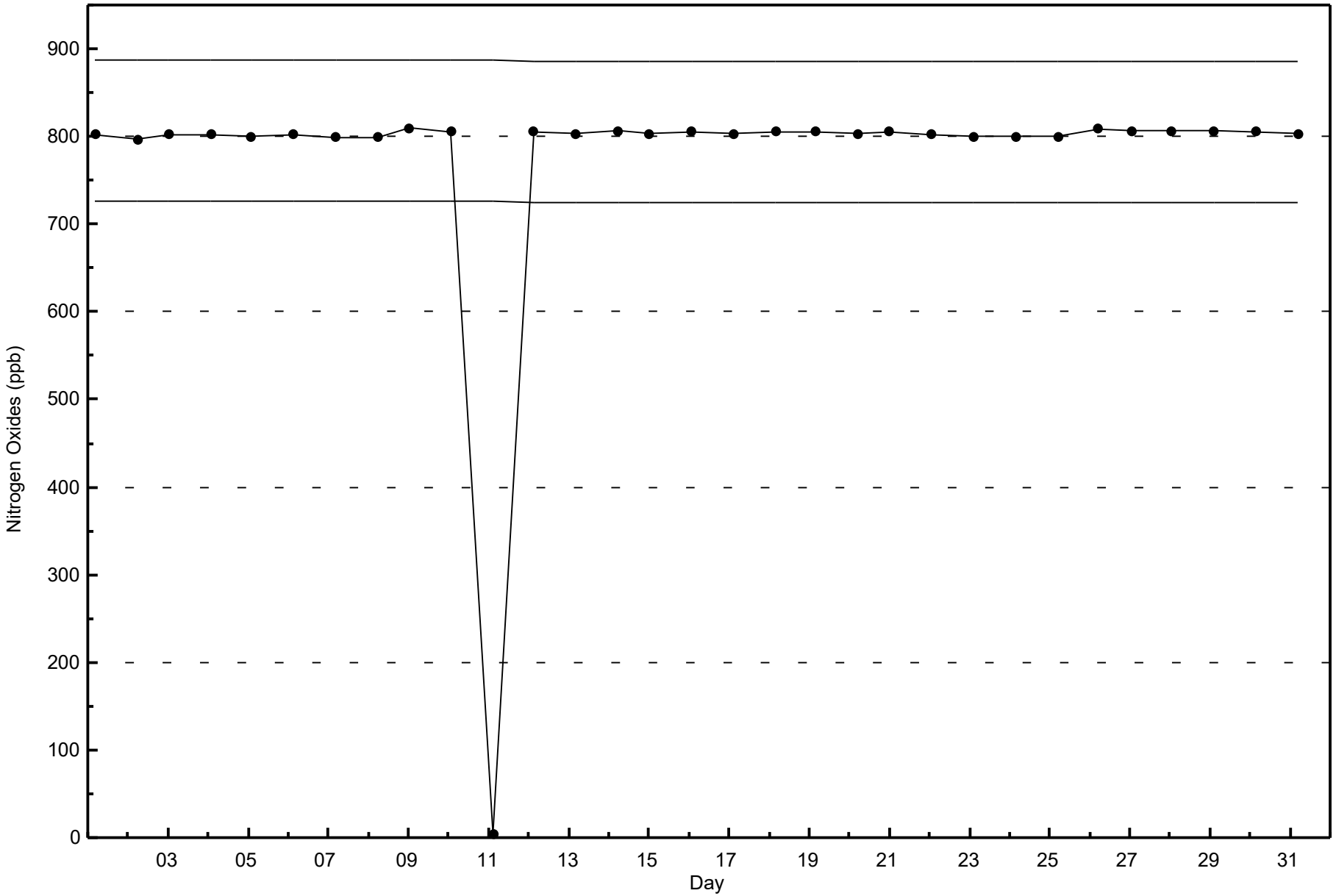


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Firebag - March 2025



Maximum Value: 7.4 C on Mar 25 15:00

Maximum Daily Average: 0.5 C on Mar 23

Minimum Value: -26.6 C on Mar 9 05:00

Minimum Daily Average: -23.7 C on Mar 9

Maximum Diurnal Average: -4.8 C at hour 16

Minimum Diurnal Average: -13.0 C at hour 7

Monthly Average: -9.20 C

Percentiles: P_1 = -25.3 P_{10} = -19.0 Q_1 = -15.5 Median = -9.0 Q_3 = -3.2 P_{90} = 1.1 P_{99} = 5.3

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

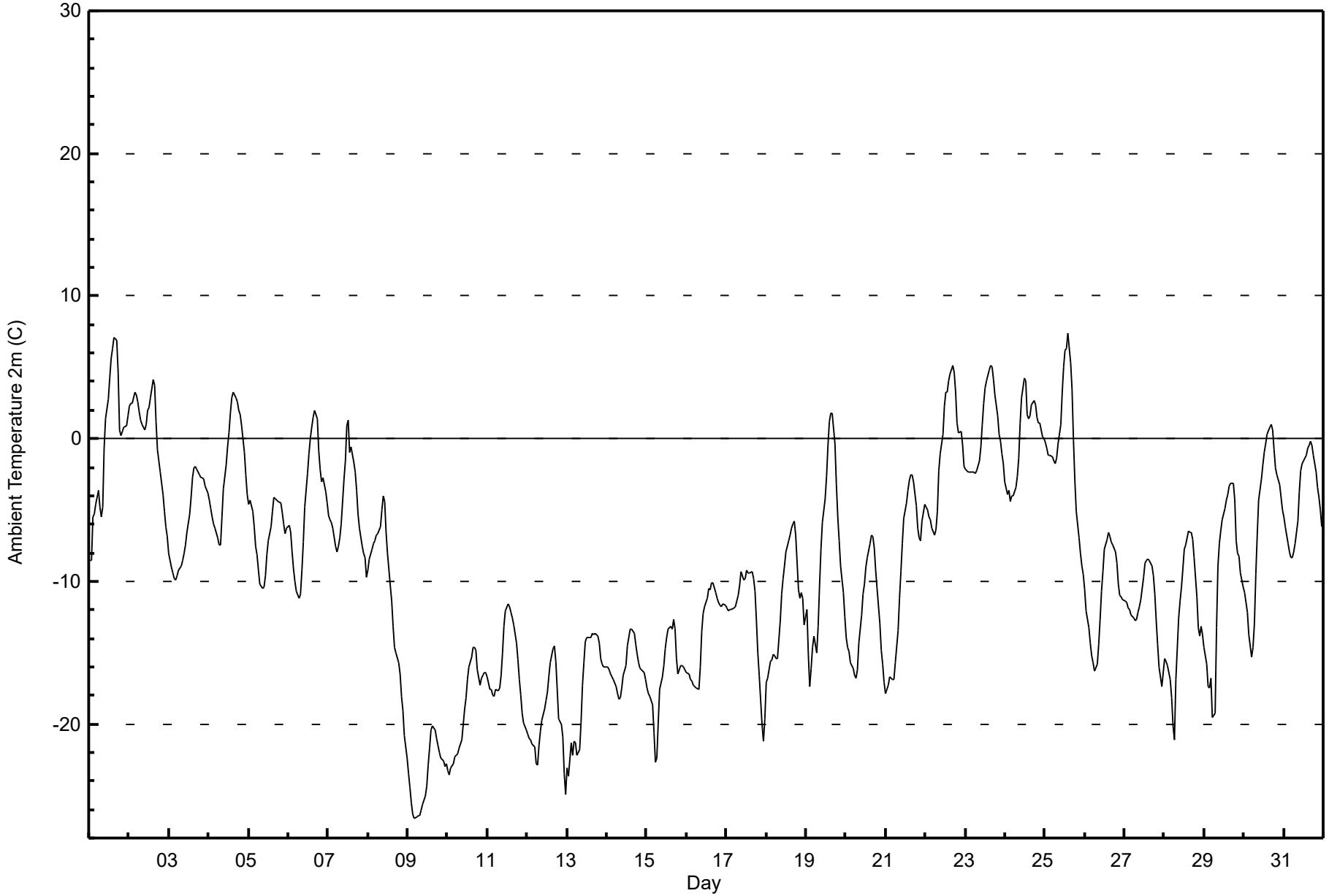
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-8.6	-8.5	-5.5	-5.2	-4.6	-3.6	-4.8	-5.5	-4.8	-0.7	1.4	2.8	4.2	5.6	6.3	7.1	6.9	4.6	0.6	0.2	0.5	0.8	0.9	1.6	-0.3	7.1
2-Mar	2.3	2.4	2.5	3.3	3.1	2.6	1.9	1.3	1.0	0.6	1.0	2.0	2.2	2.8	4.2	3.8	1.2	-0.8	-1.6	-2.3	-3.9	-5.1	-6.1	-6.8	0.5	4.2
3-Mar	-8.0	-9.0	-9.5	-9.8	-9.9	-9.6	-9.2	-9.0	-8.6	-8.1	-7.5	-6.6	-5.3	-4.1	-2.7	-2.1	-2.0	-2.2	-2.6	-2.7	-2.8	-2.8	-3.3	-3.9	-5.9	-2.0
4-Mar	-4.3	-4.9	-5.4	-6.0	-6.3	-7.0	-7.5	-7.4	-5.5	-3.6	-1.8	-0.6	0.4	1.8	2.8	3.2	2.8	2.6	2.0	1.7	0.9	-0.9	-2.5	-3.9	-2.0	3.2
5-Mar	-4.6	-4.3	-5.1	-6.2	-7.5	-8.2	-9.2	-10.2	-10.5	-10.4	-9.6	-8.1	-7.1	-6.2	-5.1	-4.1	-4.2	-4.3	-4.4	-4.5	-5.2	-6.0	-6.7	-6.2	-6.6	-4.1
6-Mar	-6.1	-6.5	-8.0	-9.1	-10.0	-10.7	-11.2	-10.9	-9.2	-7.2	-4.8	-2.4	-1.1	0.0	0.8	1.5	2.0	1.4	-0.9	-2.1	-3.1	-2.8	-3.7	-4.5	-4.5	2.0
7-Mar	-5.4	-5.7	-5.9	-6.3	-7.6	-8.0	-7.5	-6.9	-6.0	-2.9	-1.6	1.0	1.3	-0.9	-0.6	-1.6	-2.4	-3.6	-5.2	-6.2	-7.5	-8.1	-8.3	-9.7	-4.8	1.3
8-Mar	-9.3	-8.5	-7.8	-7.4	-7.1	-6.8	-6.7	-6.2	-5.0	-4.0	-4.4	-6.5	-8.1	-10.3	-11.4	-13.2	-14.6	-15.0	-15.7	-16.5	-18.0	-19.0	-20.8	-22.4	-11.0	-4.0
9-Mar	-23.5	-24.4	-25.5	-26.3	-26.6	-26.5	-26.4	-26.4	-26.1	-25.7	-25.0	-24.3	-22.9	-21.7	-20.5	-20.2	-20.4	-21.0	-21.5	-22.0	-22.4	-22.6	-23.0	-22.8	-23.7	-20.2
10-Mar	-23.3	-23.6	-23.1	-22.8	-22.3	-22.2	-22.1	-21.7	-21.1	-20.0	-19.0	-18.1	-16.8	-16.0	-15.3	-14.6	-14.6	-14.8	-16.2	-17.3	-16.8	-16.6	-16.4	-16.4	-18.8	-14.6
11-Mar	-16.7	-17.6	-17.5	-18.0	-18.1	-17.6	-17.7	-17.5	-16.6	-15.1	-13.1	-12.1	-11.5	-11.8	-12.2	-12.5	-13.0	-14.3	-15.5	-16.9	-17.9	-19.2	-20.0	-20.4	-16.0	-11.5
12-Mar	-20.7	-21.0	-21.1	-21.4	-21.6	-22.8	-22.9	-21.5	-20.5	-19.8	-19.0	-18.4	-17.8	-16.7	-15.7	-14.7	-14.5	-15.6	-17.5	-19.7	-20.0	-21.0	-23.5	-25.0	-19.7	-14.5
13-Mar	-23.1	-23.7	-21.3	-22.2	-21.2	-21.3	-22.2	-21.8	-19.9	-17.3	-15.7	-14.2	-14.0	-14.0	-13.9	-13.7	-13.7	-13.6	-13.8	-14.3	-15.4	-15.8	-16.0	-16.0	-17.4	-13.6
14-Mar	-16.0	-16.2	-16.5	-16.7	-16.9	-17.3	-17.8	-18.3	-18.2	-17.5	-16.6	-15.9	-14.6	-14.0	-13.3	-13.3	-13.7	-14.5	-15.2	-15.7	-16.1	-16.2	-16.4	-16.9	-16.0	-13.3
15-Mar	-17.5	-17.9	-18.0	-18.7	-20.6	-22.7	-22.4	-20.0	-17.6	-16.7	-15.9	-14.8	-13.9	-13.4	-13.2	-13.4	-12.7	-13.3	-15.4	-16.5	-15.9	-15.9	-16.0	-16.2	-16.6	-12.7
16-Mar	-16.4	-16.5	-16.9	-16.9	-17.3	-17.4	-17.4	-17.6	-16.0	-13.5	-12.3	-11.8	-11.2	-10.5	-10.6	-10.1	-10.1	-10.8	-11.2	-11.4	-11.6	-11.7	-11.6	-11.6	-13.4	-10.1
17-Mar	-11.9	-12.1	-12.0	-11.9	-11.9	-11.8	-11.4	-11.0	-10.3	-9.3	-10.0	-9.8	-9.2	-9.4	-9.4	-9.3	-9.8	-10.7	-12.8	-15.1	-16.6	-20.0	-21.2	-19.7	-12.4	-9.2
18-Mar	-17.1	-16.8	-15.6	-15.5	-15.2	-15.2	-15.5	-15.4	-12.8	-10.8	-9.8	-8.9	-7.9	-7.2	-6.8	-6.3	-6.0	-5.8	-6.8	-10.6	-11.2	-10.8	-11.2	-13.0	-11.3	-5.8
19-Mar	-12.0	-15.1	-17.4	-16.1	-14.6	-13.9	-15.1	-13.1	-10.3	-7.8	-5.9	-4.2	-2.7	-0.5	1.2	1.8	1.8	-0.4	-3.2	-5.5	-7.2	-9.0	-10.8	-12.5	-8.0	1.8
20-Mar	-14.0	-14.6	-14.9	-15.7	-16.1	-16.6	-16.8	-16.2	-14.3	-12.3	-10.9	-10.2	-9.0	-8.3	-7.4	-6.7	-6.9	-7.7	-9.2	-10.5	-12.9	-14.8	-15.8	-17.1	-12.5	-6.7
21-Mar	-17.9	-17.3	-16.7	-16.8	-16.9	-16.9	-15.7	-13.5	-11.2	-9.3	-7.3	-5.6	-4.5	-3.7	-3.0	-2.6	-2.6	-3.0	-4.7	-6.2	-6.9	-7.2	-5.8	-4.6	-9.2	-2.6
22-Mar	-4.8	-5.0	-5.5	-5.7	-6.2	-6.7	-6.3	-5.1	-2.2	-1.0	0.3	2.3	3.2	3.3	4.0	4.6	5.2	4.6	3.3	1.1	0.4	0.5	-0.5	-2.0	-0.8	5.2
23-Mar	-2.1	-2.2	-2.3	-2.3	-2.3	-2.4	-2.4	-2.2	-1.5	-0.6	1.0	2.4	3.6	4.1	4.8	5.1	5.0	4.2	3.1	1.6	0.3	-0.2	-1.0	-1.7	0.5	5.1
24-Mar	-3.0	-3.9	-3.6	-4.4	-4.1	-4.1	-3.4	-2.6	-1.4	1.1	2.8	4.3	4.0	1.7	1.4	1.6	2.4	2.7	2.4	1.5	1.1	1.1	0.1	0.0	-0.1	4.3
25-Mar	-0.3	-0.7	-1.2	-1.2	-1.3	-1.6	-1.8	-1.4	-0.3	1.0	3.2	5.1	6.3	6.3	7.4	5.3	3.5	-0.1	-2.9	-5.1	-6.9	-8.0	-8.9	-9.5	-0.6	7.4
26-Mar	-10.6	-12.0	-13.3	-14.3	-15.2	-15.7	-16.3	-15.9	-14.4	-12.7	-10.7	-9.3	-7.8	-7.1	-6.6	-6.9	-7.3	-7.5	-8.0	-8.8	-10.2	-10.9	-11.1	-11.3	-11.0	-6.6
27-Mar	-11.4	-11.5	-11.8	-12.0	-12.4	-12.6	-12.8	-12.7	-12.2	-11.8	-11.2	-9.7	-8.7	-8.5	-8.4	-8.6	-9.0	-9.7	-10.8	-12.8	-14.4	-16.0	-17.4	-16.4	-11.8	-8.4
28-Mar	-15.4	-15.7	-15.9	-16.9	-18.2	-20.2	-21.1	-16.9	-12.6	-11.4	-10.4	-9.1	-7.7	-7.4	-6.5	-6.5	-6.6	-7.1	-8.4	-11.1	-13.3	-13.8	-13.2	-13.7	-12.5	-6.5
29-Mar	-14.7	-15.8	-17.4	-17.5	-16.8	-19.6	-19.3	-13.2	-8.9	-7.4	-6.4	-5.7	-4.9	-4.4	-3.9	-3.4	-3.1	-3.1	-4.3	-7.2	-8.1	-8.3	-9.5	-10.4	-9.7	-3.1
30-Mar	-10.8	-11.5	-12.1	-13.7	-15.3	-14.6	-13.0	-9.5	-6.8	-4.3	-2.8	-1.9	-1.0	-0.4	0.3	0.9	1.0	0.6	-0.8	-2.1	-2.6	-3.2	-4.2	-5.0	-5.5	1.0
31-Mar	-5.5	-6.2	-7.3	-8.0	-8.3	-8.4	-8.0	-7.3	-5.8	-3.7	-2.2	-1.8	-1.5	-1.2	-0.7	-0.4	-0.2	-0.4	-1.2	-2.4	-3.5	-4.2	-5.0	-6.2	-4.1	-0.2
	-11.4	-11.8	-12.0	-12.3	-12.6	-12.9	-13.0	-12.1	-10.6	-9.1	-7.9	-6.8	-5.9	-5.5	-5.0	-4.8	-5.0	-5.8	-7.0	-8.4	-9.3	-9.9	-10.6	-11.1	Diurnal Average	
	2.3	2.4	2.5	3.3	3.1	2.6	1.9	1.3	1.0	1.1	3.2	5.1	6.3	6.3	7.4	7.1	6.9	4.6	3.3	1.7	1.1	1.1	0.9	1.6	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Firebag - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	64	8.60	8.60
-20 - 0	580	77.96	86.56
0 - 10	100	13.44	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Firebag - March 2025

Maximum Value: 96.8 % on Mar 24 21:00

Maximum Daily Average: 85.1 % on Mar 8

Minimum Value: 23.8 % on Mar 29 16:00

Minimum Daily Average: 43.5 % on Mar 29

Maximum Diurnal Average: 77.1 % at hour 7

Minimum Diurnal Average: 51.9 % at hour 16

Monthly Average: 66.17 %

Percentiles: P_1 = 28.5 P_{10} = 44.9 Q_1 = 54.8 Median = 67.9 Q_3 = 78.8 P_{90} = 85.8 P_{99} = 92.7

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

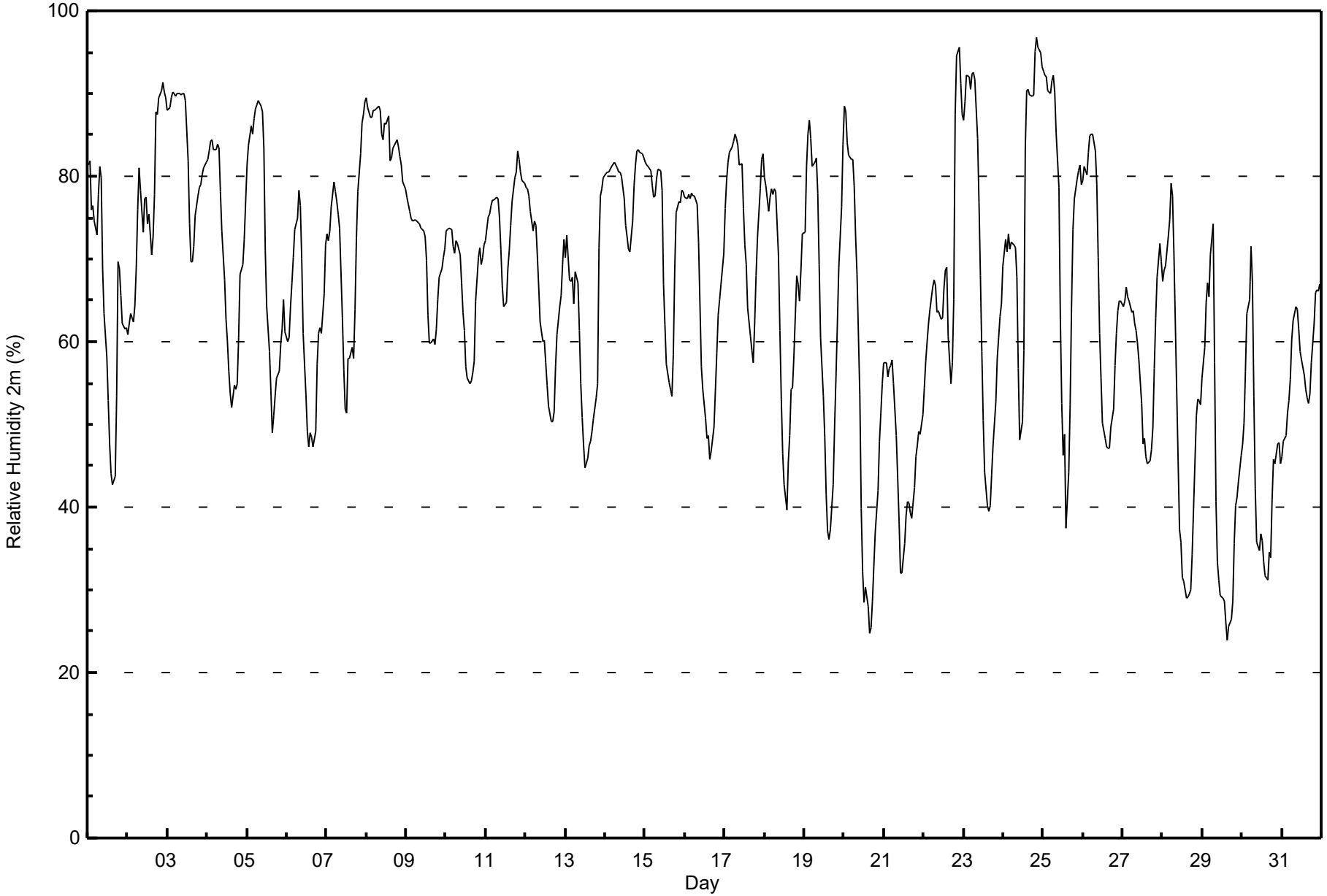
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	81.3	81.8	75.9	76.4	74.7	72.9	77.7	81.1	79.9	68.9	63.4	58.1	52.9	47.7	44.0	42.7	43.8	53.3	69.7	68.8	65.6	62.2	61.6	61.7	65.3	81.8
2-Mar	60.8	62.2	63.3	62.4	64.4	68.9	75.9	81.0	78.3	73.1	77.3	77.5	74.3	75.4	70.5	72.7	77.7	87.8	87.5	89.5	90.3	91.4	90.2	89.5	76.8	91.4
3-Mar	87.9	88.3	89.6	90.2	90.0	89.7	90.1	90.0	89.9	90.0	90.0	89.2	81.8	74.3	69.7	69.7	71.6	75.2	77.6	78.7	79.0	80.2	81.0	81.7	83.1	90.2
4-Mar	82.0	83.0	84.2	84.4	83.2	83.2	84.0	83.4	78.1	73.3	67.5	62.8	60.0	56.4	53.7	52.0	54.8	54.3	54.9	60.5	68.1	69.3	72.4	76.9	70.1	84.4
5-Mar	81.3	83.7	86.0	85.0	86.9	88.1	88.6	89.2	88.5	87.7	83.4	71.1	64.2	58.9	54.0	49.0	51.0	53.4	55.7	56.4	59.6	61.6	65.0	61.2	71.2	89.2
6-Mar	60.1	60.5	64.2	67.2	70.2	73.6	74.9	78.3	76.4	69.9	60.9	53.5	49.1	47.3	48.9	48.5	47.3	49.2	57.3	61.0	61.7	61.1	65.8	71.7	61.6	78.3
7-Mar	73.0	72.1	73.4	76.2	79.3	78.1	77.0	75.5	73.8	62.9	56.7	51.9	51.4	58.0	58.0	59.4	58.0	63.9	72.6	78.2	82.7	86.4	87.4	89.0	70.6	89.0
8-Mar	89.6	88.3	87.1	87.1	87.9	88.0	88.1	88.5	87.9	85.0	84.4	86.4	86.2	87.4	81.8	82.2	83.4	83.8	84.4	83.6	82.4	81.4	79.4	78.4	85.1	89.6
9-Mar	77.5	76.7	75.7	74.9	74.6	74.7	74.7	74.5	74.2	73.7	73.4	72.7	69.8	63.2	59.8	59.8	60.4	59.7	61.5	65.0	67.7	68.7	70.1	71.1	69.7	77.5
10-Mar	73.3	73.6	73.7	73.5	71.5	70.7	72.1	71.9	70.5	67.1	63.5	61.3	57.0	55.6	55.0	55.2	56.3	57.7	64.9	70.1	71.4	69.2	70.2	71.6	66.5	73.7
11-Mar	72.2	75.0	75.5	76.5	77.0	77.2	77.4	77.3	75.1	71.2	66.7	64.2	64.8	68.8	71.0	74.1	77.0	79.8	80.5	83.0	82.0	80.5	79.5	79.1	75.2	83.0
12-Mar	78.6	78.5	77.7	75.8	73.5	74.6	74.1	70.5	66.6	62.3	59.9	60.2	57.5	54.7	52.2	50.4	50.3	51.5	57.0	60.8	64.2	65.6	69.3	72.4	64.9	78.6
13-Mar	70.1	72.9	67.4	67.3	67.8	64.7	68.5	67.1	61.4	55.0	50.9	47.4	44.8	45.9	47.4	47.9	49.2	50.6	53.3	54.9	71.4	77.6	78.5	79.8	60.9	79.8
14-Mar	80.3	80.6	80.4	80.8	81.3	81.7	81.3	81.1	80.6	80.4	80.0	77.2	74.1	72.8	71.2	70.8	74.7	78.9	81.3	83.0	83.2	82.9	82.8	82.2	79.3	83.2
15-Mar	81.7	81.3	81.2	80.6	78.9	77.5	77.7	79.6	80.8	80.7	78.3	67.0	62.0	57.3	55.1	54.2	53.4	58.5	68.7	75.6	76.9	76.8	78.4	78.2	72.5	81.7
16-Mar	77.4	77.4	77.8	77.3	78.0	77.6	77.6	76.6	72.0	64.3	56.9	54.2	50.7	48.3	48.6	45.8	46.7	49.6	54.1	58.6	63.2	65.0	67.0	70.6	64.0	78.0
17-Mar	76.0	79.5	81.8	83.0	83.6	84.3	85.0	84.5	83.7	81.4	81.6	76.0	71.7	69.3	64.0	60.6	59.0	57.5	62.1	67.9	72.5	78.4	82.0	82.7	75.3	85.0
18-Mar	79.8	78.9	75.8	77.5	78.4	77.9	78.5	78.1	70.3	61.3	53.0	46.5	42.6	39.7	45.4	48.6	54.3	54.4	58.3	68.0	67.0	64.9	68.7	73.0	64.2	79.8
19-Mar	73.1	81.2	85.1	86.7	84.6	81.3	81.6	82.1	77.9	69.3	60.4	53.5	48.5	41.6	37.1	36.1	37.3	42.7	49.7	55.7	62.3	69.1	76.3	84.0	64.9	86.7
20-Mar	88.5	87.7	84.0	82.5	82.1	82.1	78.7	72.6	68.1	53.6	39.8	32.2	28.5	30.4	27.9	24.7	25.5	28.7	32.9	37.0	42.1	48.0	51.4	55.0	53.5	88.5
21-Mar	57.4	57.4	55.8	56.9	57.1	57.7	54.8	48.7	43.5	38.3	32.0	32.1	35.5	38.9	40.7	40.6	39.3	38.6	42.4	46.1	47.5	49.1	48.9	51.2	46.3	57.7
22-Mar	54.3	57.6	60.0	62.1	63.9	66.6	67.4	66.8	63.6	63.7	62.7	62.8	66.4	68.6	69.0	60.7	54.9	57.5	65.2	87.5	94.6	95.5	91.3	87.4	68.8	95.5
23-Mar	86.7	88.9	92.2	92.1	90.5	92.3	92.5	91.7	84.6	76.9	67.9	58.9	50.5	44.2	40.1	39.5	40.3	43.9	47.5	52.8	58.0	60.5	63.0	64.5	67.5	92.5
24-Mar	69.1	72.3	70.8	73.0	71.2	72.1	71.7	71.4	67.7	56.8	48.1	50.3	59.0	83.4	90.3	90.5	89.8	89.7	89.9	95.1	96.8	95.6	95.0	93.2	77.6	96.8
25-Mar	92.8	92.2	92.0	90.4	90.1	91.6	92.2	90.2	85.2	78.7	62.9	52.6	46.2	48.8	37.4	44.3	52.4	64.5	73.5	77.2	79.7	80.7	81.3	78.9	74.0	92.8
26-Mar	79.5	81.3	80.2	82.9	85.0	85.1	85.0	83.0	79.0	70.1	61.0	55.5	50.1	48.3	47.3	47.1	47.2	49.7	51.9	57.1	61.1	63.8	64.9	64.9	65.9	85.1
27-Mar	64.2	64.9	66.6	65.3	65.0	63.6	63.7	62.2	61.3	59.8	57.8	52.5	47.7	48.3	46.0	45.2	45.5	46.9	49.7	56.7	62.9	67.8	71.9	69.6	58.6	71.9
28-Mar	67.4	68.7	69.1	72.7	74.8	79.2	77.7	70.6	53.8	45.5	37.3	35.7	31.6	31.1	29.0	29.1	29.5	30.0	34.3	45.5	51.1	53.0	52.9	52.4	50.9	79.2
29-Mar	55.6	59.4	64.8	67.1	65.3	70.5	74.2	57.5	40.6	33.4	31.2	29.3	29.0	28.6	26.1	23.8	25.6	26.5	28.6	35.5	40.2	41.2	43.1	46.3	43.5	74.2
30-Mar	47.6	50.2	56.5	63.4	65.1	71.4	67.1	53.4	42.2	35.8	34.8	36.7	36.0	33.4	31.7	31.3	34.6	33.8	40.8	45.7	45.3	47.7	47.9	45.2	45.7	71.4
31-Mar	46.1	47.9	48.6	51.4	52.9	55.4	60.1	62.5	64.2	64.0	61.6	58.7	57.8	55.9	54.3	53.2	52.6	53.8	57.4	62.2	66.0	66.2	66.1	66.9	57.7	66.9
	73.1	74.3	74.7	75.6	75.8	76.5	77.1	75.5	71.6	66.3	61.5	57.7	54.9	54.3	52.5	51.9	53.0	55.7	60.2	65.1	68.3	69.7	71.1	71.9	Diurnal Average	
	92.8	92.2	92.2	92.1	90.5	92.3	92.5	91.7	89.9	90.0	90.0	89.2	86.2	87.4	90.3	90.5	89.8	89.7	89.9	95.1	96.8	95.6	95.0	93.2	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Firebag - March 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	52	6.99	6.99
40 - 60	200	26.88	33.87
60 - 80	325	43.68	77.55
80 - 100	167	22.45	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Firebag - March 2025

Maximum Speed: 27 km/h on Mar 21 10:00

Maximum Daily Speed Average: 19.3 km/h on Mar 21

Minimum Speed Value: 1 km/h on Mar 10 18:00

Minimum Daily Speed Average: 0.3 km/h on Mar 23

Maximum Diurnal Speed Average: 5.4 km/h at hour 20

Minimum Diurnal Speed Average: 1.2 km/h at hour 9

Monthly Average Velocity: 1.6 km/h 68.5 deg

Percentiles: P_1 = 2 P_{10} = 5 Q_1 = 7 Median = 11 Q_3 = 14 P_{90} = 17 P_{99} = 23

Hours in Service:	744
Hours of Data:	734
Hours of Missing Data:	10
Percent Operational Time:	98.7

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	SSW11	SSW10	SW13	SSW10	SSW10	SSW7	SSW9	S8	S10	SW14	SW14	SW13	WSW11	WSW12	W12	W12	W8	SW3	SSE3	SSE7	S9	S10	S11	S10	SSW8.7	SW14
2-Mar	SSW11	S10	SSW10	SSW11	SW8	SW7	SSE6	NW8	NNW12	N14	N11	N16	N12	NW10	WNW13	NNW11	NNE18	NNE17	NNE17	N17	N17	N17	N17	N20	N7.4	N20
3-Mar	N20	N20	N17	N17	N14	N12	N13	N16	NNW15	NNW15	N15	NNW11	NW11	NW10	WNW9	WNW11	W9	WSW7	SW7	WSW8	WSW8	SW9	SW9	SW10	NNW8.5	N20
4-Mar	SW12	SW11	SW11	SW12	SW11	SW13	SW10	SW10	SW11	SW12	SW14	SW18	WSW17	WSW20	WSW18	WSW17	SW12	SW11	SW12	W8	NNW12	N15	N14	N12	WSW9.8	WSW20
5-Mar	N11	N17	N17	N25	N24	N18	NNE15	N15	N13	NNW11	NNW10	NW11	NNW9	NW6	WSW4	W5	WSW5	S5	S7	SSE5	SSE5	SE9	SE11	SSE10	N6.1	N25
6-Mar	SSE9	S9	SE9	SE10	SE12	SE10	SE13	SSE14	SSE15	S14	S14	SSW13	SSW15	SSW15	SW18	SW16	SW12	SW9	SSW8	S9	SSW10	WSW8	NW7	NNW5	S8.7	SW18
7-Mar	NNW7	N4	N5	N7	NE7	NE4	E3	SSE4	SSE3	W2	WSW9	WSW11	NW12	WSW4	NNW11	NNE10	NNE13	NNE12	NNE13	NE9	NE11	ENE4	S2	NE5	NNE4.1	NNE13
8-Mar	ESE8	SE10	SE14	SE11	ESE10	SE13	ESE15	SSE8	SW6	WSW11	NW11	NNW13	NW15	NNW16	N22	N24	N19	N15	N16	NNE17	NNE18	N18	N18	N17	N6.8	N24
9-Mar	N15	N15	N12	N13	N14	N16	N14	N12	NNE11	NNE13	NNE10	NNE11	NNE8	NNE9	NNE8	NNE10	NNE12	NE11	NE10	NE8	NE8	ENE8	ENE7	E7	NNE10.2	N16
10-Mar	ESE7	SE9	SSE7	SSE6	S6	SSE7	S8	SSW10	S11	S9	SSW11	SW9	W2	SSE5	S5	ESE2	S1	WNW1	NNE6	NNE6	E5	S4	SSE5	S7	S4.5	SSW11
11-Mar	SSE7	ESE6	ESE7	ESE8	ESE8	SE9	SE8	SE8	SE8	SSE10	SE6	E6	NE10	NE16	NE16	NE15	NE15	NNE15	NNE16	NNE15	NNE16	NNE15	NNE15	NNE12	ENE7.8	NE16
12-Mar	NNE12	NNE11	NNE11	NNE11	NNE9	NNE6	NNE4	NW4	NNW7	NNW7	N7	N7	N8	N6	N6	NNE2	NE4	NNE8	ENE6	E6	E7	SE5	SE5	E4	NNE5.2	NNE12
13-Mar	SE4	E4	ENE7	E7	E9	ESE11	SE12	SE8	SE9	SE11	ESE7	ESE10	ESE12	ENE13	ENE15	ENE16	ENE16	ENE14	ENE14	ENE15	ENE12	NE16	NE16	NE13	E9.9	NE16
14-Mar	NE12	NNE12	NNE15	NNE15	NNE15	NNE14	N16	NNE16	NNE17	NNE14	NNE16	N18	N19	NNE21	NNE20	NNE19	NNE17	N18	N15	N14	N12	NNE11	NNE9	N7	NNE14.9	NNE21
15-Mar	N7	NNW7	NNW6	NNW6	NNW4	N3	NNW3	NNW3	N4	NNE6	N6	N7	N8	NNW10	NNW11	NNW7	NNW5	NNE7	NNE6	ENE6	ESE6	ESE6	ESE7	SE9	N4.1	NNW11
16-Mar	SE10	SE9	ESE4	SE6	SE4	SE6	SSE6	SSE5	SSE7	S9	SSE10	SSE11	SSE10	S10	S13	S13	S16	S14	SE11	SE14	SE16	SSE17	SSE18	S16	SSE10.2	SSE18
17-Mar	S14	S13	S10	S12	S11	S10	SSW9	SW9	WSW9	WNW10	NNW13	NNW13	N15	N16	N16	NNE17	N16	N15	NNE11	NNE10	NNE8	NE4	E1	SSW4	NNW2.5	NNE17
18-Mar	SSW4	WNW7	WSW6	WSW5	WSW7	W6	W7	WSW7	W7	WNW10	WNW11	W11	WNW12	WNW9	W10	WSW10	WSW9	W10	SW7	SSE6	SSE6	SSE7	S4	NNW4	W5.9	WNW12
19-Mar	W5	NW3	NNE6	NE8	E7	ESE7	SSE8	SSE7	S7	SSW8	SSW13	WSW13	WSW10	W11	W11	WNW10	WNW9	NNE10	NNE12	NE14	NE14	NE11	NE13	NE12	N1.3	NE14
20-Mar	NE11	NE11	ENE11	ENE13	ENE13	E10	E13	E12	E11	E11	E11	ENE12	ENE11	ENE8	ESE6	E6	E11	ESE11	ESE11	ESE10	ESE14	SE14	SE15	SE12	E10.2	SE15
21-Mar	SE12	SSE14	SSE18	SSE17	SSE19	SSE17	SSE18	SSE23	SSE26	SSE27	S25	SSE22	SSE24	SSE20	SSE21	S22	SSE20	SSE20	SSE17	SE16	SE17	SSE15	S18	S20	SSE19.3	SSE27
22-Mar	S19	S16	S15	S14	S12	S13	SSW14	SSW14	SSW15	SSW16	SSW13	SW13	SW14	SSW13	SSW10	SSW12	SSE4	NE5	NNE7	N8	NNE4	NNW6	N9	N8	SSW7.2	S19
23-Mar	NNE2	WSW4	WSW5	WSW5	WSW6	W5	W4	WNW7	NW6	NNW4	NW5	WNW6	NW8	NNW10	NNW4	NE3	E4	ESE6	ESE6	ESE9	SE12	SE12	SE12	SE12	S0.3	SE12
24-Mar	SE9	SE9	SE12	SE11	SSE13	SE14	SSE14	SSE13	SSE14	SSW14	SW15	W16	W17	SW14	SSW14	SSW15	SW12	WNW9	NW11	NNW12	NW10	NW8	NW7	UO	SSW6.0	W17
25-Mar	UO	UO	UO	UO	UO	UO	UO	UO	WSW6	W8	W13	WSW16	W17	W16	NW22	NNW21	N21	NNE22	NNE20	N24	N23	N21	N21	N22	----	N24
26-Mar	N19	N16	N15	N15	N15	NNE12	NNE9	N10	N11	NNE13	NNE11	NNE8	N4	NNE8	N9	NNE9	NE10	NE10	ENE10	NE11	NE9	NE8	NE9	NE10	NNE10.4	N19
27-Mar	NE10	NE10	NE12	ENE13	ENE15	ENE15	NE15	NE15	NE18	ENE18	ENE17	NE16	NE16	NE17	NE16	NNE18	NE17	NE16	NE13	NNE12	NNE12	NE10	NE10	E9	NE13.8	ENE18
28-Mar	E13	ESE10	ESE9	SE6	SE8	SSE4	SE3	UO	NE2	S2	E6	SSW6	SW4	E4	E3	E5	ENE9	NE11	NE11	NE10	NE9	ENE8	E8	ESE12	E5.3	E13
29-Mar	SE8	SSE5	SSE5	S7	S6	SSE4	SSW3	WSW4	NW4	NNW6	NNW7	NNW9	NW7	NNW8	NW7	WNW7	WNW8	WNW5	NNE4	ENE8	E9	E10	ESE9	SE8	NE0.5	E10
30-Mar	SE7	SSE8	S6	SSW5	WSW3	SSW5	SSW6	WSW6	SW6	S3	E3	NW3	NNW2	NE4	SSE3	NE3	ESE8	E6	S9	SSE6	ESE8	SE15	SE19	SE18	SSE4.7	SE19
31-Mar	SE18	SE18	SE16	SE13	SE14	SE10	SSE10	SSE13	SSE12	SSE13	S18	S18	S18	S18	S18	S17	SSE17	SSE16	SE14	SE14	SE16	SSE16	SE16	SE15	SSE14.7	S18
	ESE3.2	ESE2.5	ESE2.6	E2.5	ESE2.7	ESE2.7	SE3.1	SSE2.2	S1.2	SSW1.2	WSW1.5	W2.8	WNW3.1	NW2.1	NW2.5	NNW2.5	NNE2.9	NE4.0	NE4.7	NE5.4	ENE5.1	ENE4.2	E4.0	E3.9	Diurnal Average	
	N20	N20	SSE18	N25	N24	N18	SSE18	SSE23	SSE26	SSE27	S25	SSE22	SSE24	NNE21	NW22	N24	N21	NNE22	NNE20	N24	N23	N21	N21	N22	Diurnal Maximum	

UO - Unstable Operation

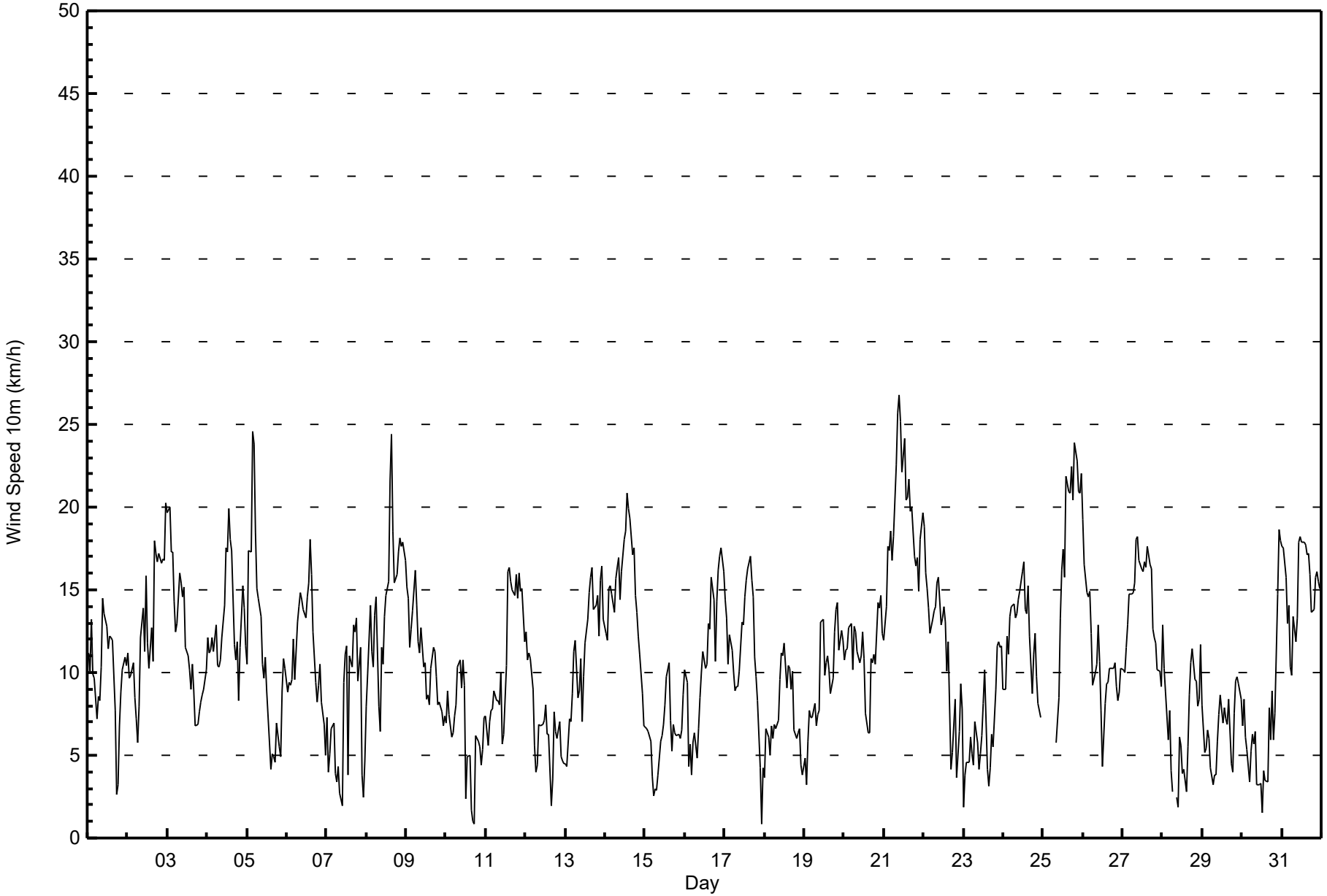
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Firebag - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	97	13.22	13.22
6 - 11	332	45.23	58.45
12 - 19	273	37.19	95.64
20 - 28	32	4.36	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 734

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Firebag - March 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	5	5	9	1	10	2	5	14	8	5	2	9	6	2	5	9	97
6 - 11	19	32	27	12	19	26	31	25	23	18	19	18	12	14	16	21	332
12 - 19	51	40	22	16	2	5	30	25	22	14	19	7	7	2	2	9	273
20 - 28	13	4	0	0	0	0	0	9	3	0	0	1	0	0	1	1	32
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	88	81	58	29	31	33	66	73	56	37	40	35	25	18	24	40	734

Total Number of Valid Hours: 734

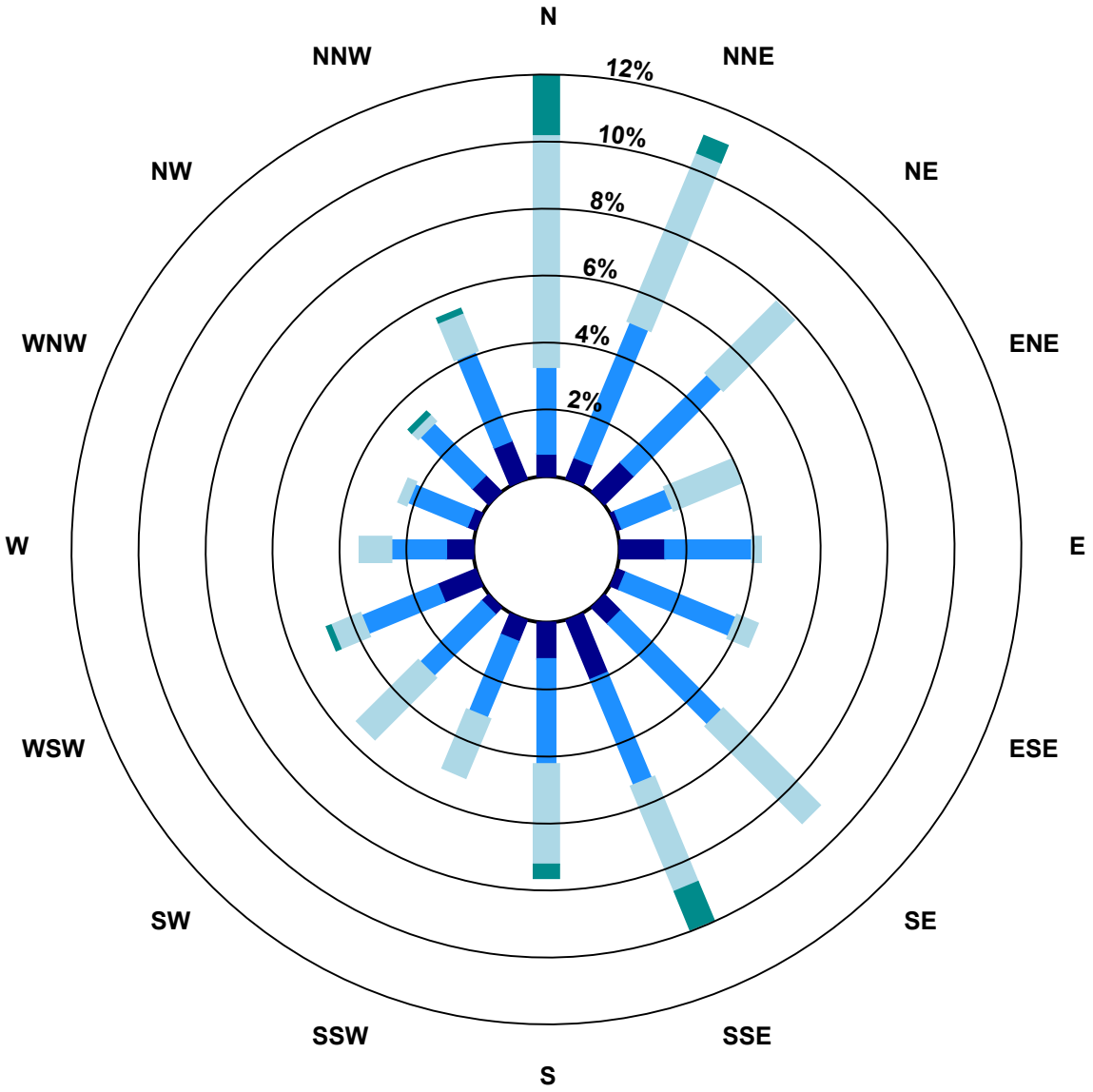
Total Number of Hours: 744

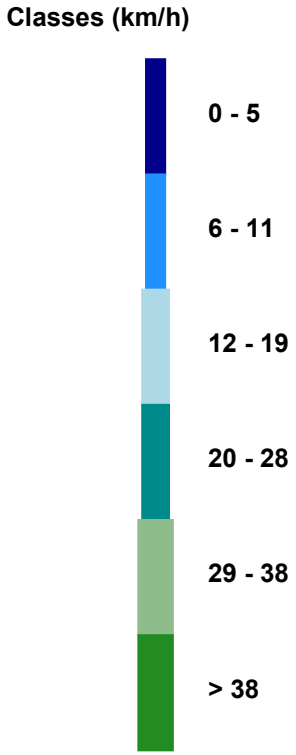
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 10m (WS10) - km/h

Firebag





Total Number of Valid Hours: 734

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7 km/h on Mar 25 16:00

Minimum Value: 0 km/h on Mar 17 22:00

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

Hours in Service:	744
Hours of Data:	734
Hours of Missing Data:	10
Hours of Calibration:	0
Percent Operational Time:	98.7

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

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Firebag - March 2025

Direction of Maximum Speed: 163 deg on Mar 21 10:00
Direction of Maximum Daily Speed Average: 159.4 deg on Mar 21

Direction of Minimum Speed: 291 deg on Mar 10 18:00

Direction of Minimum Daily Speed Average: 0.3 deg on Mar 23

Monthly Average Direction: 68.5 deg

Hours in Service:	744
Hours of Data:	734
Hours of Missing Data:	10
Percent Operational Time:	98.7

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	193	200	218	208	205	202	195	174	186	217	219	232	240	241	261	259	259	229	152	148	173	182	189	187	210.7
2-Mar	198	189	198	198	226	229	161	323	340	360	6	357	351	311	301	340	20	19	13	359	359	1	9	4	348.8
3-Mar	1	3	359	360	0	353	352	356	343	343	350	337	322	305	297	292	276	255	233	238	238	233	226	221	328.6
4-Mar	215	221	225	230	229	232	234	228	232	234	231	236	238	250	246	249	236	227	236	276	336	2	352	4	246.9
5-Mar	2	1	358	355	356	358	12	1	1	337	334	322	332	321	238	280	237	188	169	150	148	125	136	166	355.0
6-Mar	166	185	126	129	127	135	146	155	160	171	181	195	198	209	228	227	233	219	196	185	203	244	319	344	186.5
7-Mar	348	358	9	8	43	34	85	147	148	274	251	246	311	244	348	16	21	29	29	43	50	75	187	42	12.1
8-Mar	106	130	143	146	120	128	122	162	232	249	312	331	322	340	353	359	358	359	3	14	13	5	2	7	10.4
9-Mar	8	11	8	4	10	8	7	11	14	29	19	17	15	31	29	27	33	54	43	37	51	57	57	94	23.8
10-Mar	108	130	151	161	171	167	186	192	187	190	203	225	259	151	180	114	170	291	23	32	96	179	166	169	169.5
11-Mar	166	117	117	118	121	124	134	134	140	149	126	100	48	45	51	50	35	27	30	26	29	23	27	26	62.5
12-Mar	30	25	27	24	25	22	17	325	345	340	351	353	354	356	353	24	39	30	74	95	95	133	128	100	25.7
13-Mar	137	96	78	79	92	119	130	133	125	142	115	102	103	77	64	65	58	59	68	64	65	51	51	42	80.9
14-Mar	38	27	28	31	22	17	11	15	20	19	12	7	7	15	23	18	14	8	7	4	11	12	12	8	16.1
15-Mar	1	336	336	336	334	351	330	339	5	13	4	358	349	332	339	343	340	13	32	65	104	111	117	136	5.9
16-Mar	129	135	108	132	140	140	164	160	163	170	168	167	160	172	174	172	176	178	141	131	144	153	163	171	157.8
17-Mar	175	180	185	180	188	188	207	225	249	299	336	348	353	4	10	20	10	7	14	30	28	49	87	209	347.8
18-Mar	204	302	251	247	245	266	259	246	272	301	285	279	282	299	265	252	243	272	236	163	163	167	174	343	259.8
19-Mar	273	313	16	50	95	123	153	162	176	203	204	241	237	266	276	283	300	26	31	39	42	36	40	42	8.2
20-Mar	51	50	64	67	72	84	101	101	85	80	83	75	74	73	107	98	79	105	107	106	123	134	133	132	92.0
21-Mar	146	156	154	159	160	156	152	156	164	163	170	163	162	156	157	169	165	161	149	145	143	154	170	176	159.4
22-Mar	179	181	181	181	183	187	195	197	206	213	210	235	227	205	192	213	159	48	15	7	19	341	1	1	200.4
23-Mar	26	250	255	245	251	269	278	283	309	328	312	294	324	345	333	56	79	120	103	111	130	136	138	134	177.2
24-Mar	137	140	141	142	147	144	147	156	166	204	225	263	263	219	193	208	229	284	305	339	320	321	309	UO	204.5
25-Mar	UO	UO	UO	UO	UO	UO	UO	UO	258	270	261	251	276	271	309	339	9	15	14	9	8	6	8	5	--
26-Mar	2	1	4	3	7	13	19	5	2	19	25	19	5	24	2	17	41	48	59	44	40	46	49	43	20.1
27-Mar	56	49	51	58	57	62	52	56	55	62	57	53	34	44	36	31	35	39	36	25	26	34	49	80	47.1
28-Mar	101	110	108	124	138	160	145	UO	46	173	82	206	217	80	93	81	59	55	50	37	47	66	92	122	90.6
29-Mar	131	152	159	169	170	163	200	245	317	344	338	332	323	342	312	300	288	292	14	61	86	101	119	141	46.1
30-Mar	138	166	189	210	238	192	202	237	223	179	90	326	340	54	165	51	122	100	182	168	122	125	135	132	152.0
31-Mar	136	137	135	134	137	139	152	154	160	168	182	174	172	169	173	169	166	165	142	143	146	149	140	145	154.5
	105.8	106.0	104.9	99.0	105.0	119.5	133.8	151.9	169.0	212.5	251.6	280.3	299.2	318.2	316.6	343.8	21.9	36.9	46.5	50.9	63.9	71.9	80.4	90.0	
	Diurnal Average																								

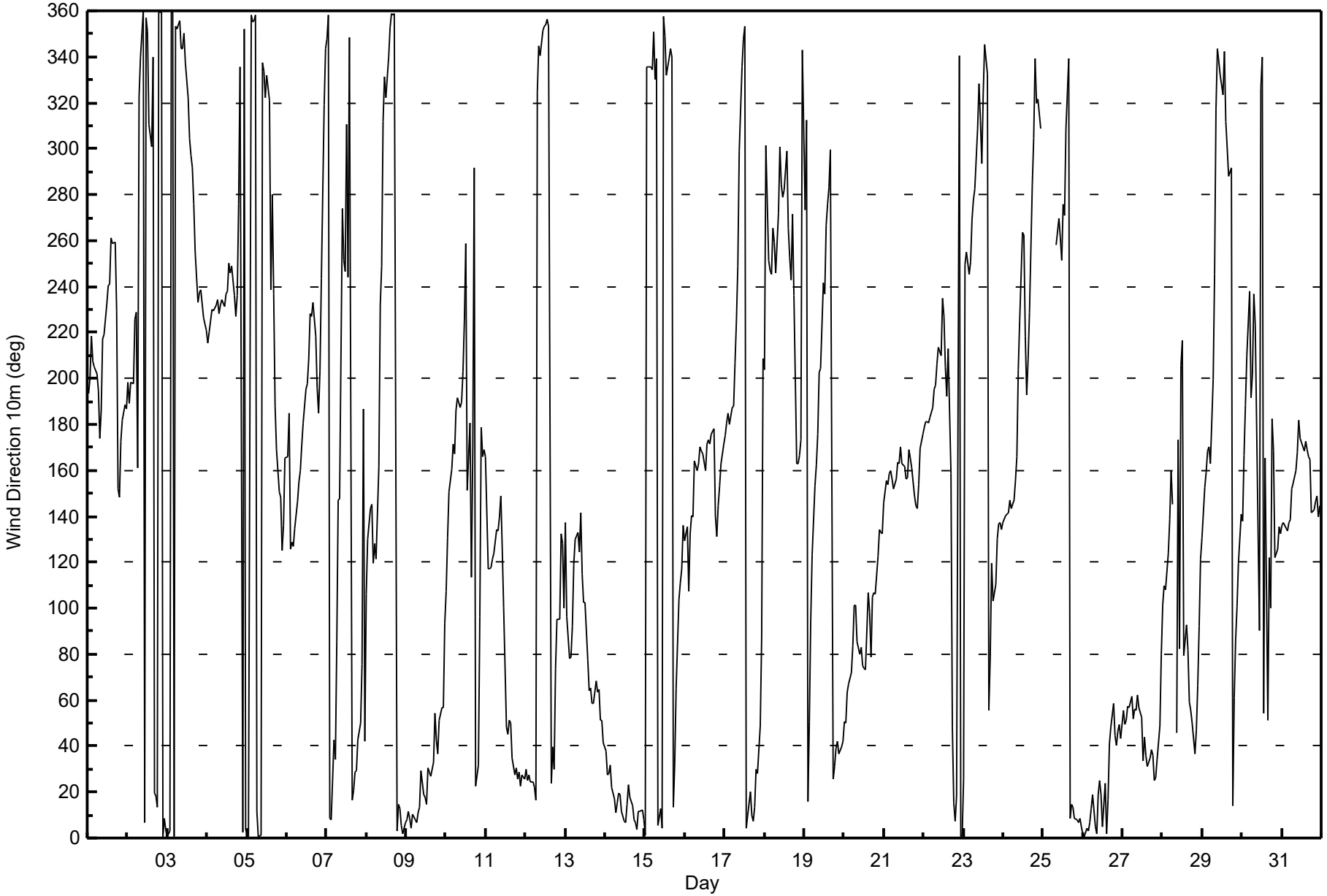
UO - Unstable Operation
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Firebag - March 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Firebag - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 94 deg on Mar 10 13:00

Minimum Value: 3 deg on Mar 27 23:00

Percentiles: P_1 = 6 P_{10} = 9 Q_1 = 11 Median = 13 Q_3 = 19 P_{90} = 30 P_{99} = 77

Hours in Service:	744
Hours of Data:	734
Hours of Missing Data:	10
Hours of Calibration:	0
Percent Operational Time:	98.7

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	5	12	8	9	12	11	11	18	21	8	9	12	16	18	14	15	17	24	30	8	8	6	7	7	30
2-Mar	9	9	12	11	22	27	24	30	14	13	12	13	19	22	19	29	12	12	13	14	14	13	13	14	30
3-Mar	15	13	13	13	13	12	11	13	12	12	13	15	18	20	22	17	18	12	8	7	7	7	7	8	22
4-Mar	7	8	7	6	6	7	9	7	11	13	13	12	12	11	13	13	17	10	13	27	38	13	12	13	38
5-Mar	13	14	15	14	15	15	14	14	16	17	22	21	26	29	66	47	28	20	9	16	19	13	15	13	66
6-Mar	10	16	14	11	10	12	9	9	10	8	12	13	17	15	17	16	14	11	6	8	13	11	32	21	32
7-Mar	32	10	12	15	12	13	25	23	45	72	26	26	40	58	35	14	12	11	10	12	10	62	45	42	72
8-Mar	23	13	10	11	13	12	13	27	22	15	20	15	14	15	16	15	13	12	15	13	12	15	15	12	27
9-Mar	12	13	14	13	13	14	14	14	16	16	19	21	25	22	33	21	14	13	13	16	13	12	15	15	33
10-Mar	20	13	12	14	11	12	11	9	10	12	20	30	94	23	37	77	83	83	17	11	13	31	22	12	94
11-Mar	13	21	14	13	11	13	16	16	16	12	26	26	19	12	9	10	16	11	11	11	10	10	11	12	26
12-Mar	11	12	12	11	10	32	30	23	15	24	23	21	23	37	37	86	41	12	21	16	22	20	13	17	86
13-Mar	22	32	9	11	10	13	9	17	13	17	16	18	13	18	12	12	8	10	10	11	11	8	10	10	32
14-Mar	11	10	9	10	12	10	12	10	12	12	13	14	14	14	15	14	14	13	11	11	11	11	11	8	15
15-Mar	8	7	6	6	11	19	20	23	20	15	17	21	25	26	21	16	42	17	9	14	13	12	13	10	42
16-Mar	11	11	27	18	27	20	23	19	15	9	14	17	19	19	13	18	12	11	15	12	10	11	9	9	27
17-Mar	8	8	8	8	8	9	10	14	19	23	14	14	15	16	16	14	13	12	7	8	4	12	56	13	56
18-Mar	30	18	15	11	20	19	12	13	29	20	24	30	25	31	23	21	29	18	23	14	9	11	19	68	68
19-Mar	22	28	19	11	16	16	12	17	13	14	12	17	30	25	29	27	37	18	10	9	9	8	9	9	37
20-Mar	6	6	10	8	9	16	8	8	11	15	18	16	21	35	31	27	16	11	8	12	10	11	12	14	35
21-Mar	12	9	10	10	11	9	10	10	10	12	10	12	10	13	13	10	11	10	10	10	10	10	9	8	13
22-Mar	9	8	7	7	7	7	5	5	10	9	13	17	16	14	27	21	31	50	26	12	62	18	29	27	62
23-Mar	47	19	17	10	13	16	22	18	22	63	47	60	34	25	67	72	51	14	21	19	11	10	10	11	72
24-Mar	12	11	10	10	9	10	11	10	10	16	18	16	16	18	13	11	12	27	17	11	14	13	9	UO	27
25-Mar	UO	UO	UO	UO	UO	UO	UO	UO	38	25	16	16	23	19	22	19	17	13	14	14	15	14	14	15	38
26-Mar	13	13	12	12	13	11	12	14	15	20	24	28	78	28	20	18	19	18	11	9	9	8	10	10	78
27-Mar	8	8	9	8	9	9	8	11	12	14	13	18	19	21	17	16	16	15	11	8	8	9	3	16	21
28-Mar	14	9	11	13	13	13	10	UO	73	75	36	35	40	63	93	58	27	12	9	6	10	15	16	10	93
29-Mar	12	15	6	4	6	6	17	30	34	23	28	27	52	37	51	46	36	47	40	10	14	9	11	12	52
30-Mar	12	16	10	10	19	15	11	14	18	43	43	69	91	71	54	71	29	64	16	41	23	11	11	11	91
31-Mar	11	11	11	11	10	13	10	9	10	11	17	14	17	17	14	17	16	17	12	10	10	9	10	10	17
	47	32	27	18	27	32	30	30	73	75	47	69	94	71	93	86	83	83	40	41	62	62	56	68	
	Diurnal Maximum																								

UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS20
MACKAY RIVER
MARCH 2025

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

April 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MACKAY RIVER (AMS20)
MARCH 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	709	35	35	100	29.6	0	7.5	0
H2S (ppb) Average	708	35	36	99.87	5.9	0	1.2	0
THC (ppm) Average	705	35	39	99.46	3.4	-	2.6	-
NO2 (ppb) Average	707	36	37	99.87	33.8	0	15.1	-
NO (ppb) Average	707	36	37	99.87	17	-	5.7	-
NOX (ppb) Average	707	36	37	99.87	46.2	-	20.7	-
Temperature 2 m (C) Average	744	0	0	100	10	-	2.8	-
Relative Humidity (%) Average	744	0	0	100	96.9	-	78.4	-
Wind Speed 10 m (km/h) Average	737	0	7	99.06	18	-	11	-
Wind Direction 10 m (deg) Average	737	0	7	99.06	-	-	-	-
Precipitation (mm) Total	743	0	1	99.87	0.7	-	3.8	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MACKAY RIVER (AMS20)
MARCH 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	709	1.73	3.6	-	0	0	0.1	0.2	1.3	5.4	29.6
H2S (ppb) Average	708	0.32	0.6	-	0	0	0.1	0.1	0.3	0.8	5.9
THC (ppm) Average	705	2.37	0.1	-	2.2	2.3	2.3	2.3	2.4	2.5	3.4
NO2 (ppb) Average	707	4.41	5.8	-	0.1	0.4	0.6	1.6	6.4	12.2	33.8
NO (ppb) Average	707	0.72	2	-	0	0	0	0	0.4	1.8	17
NOX (ppb) Average	707	5.13	7.1	-	0.1	0.4	0.7	2.1	7	13.3	46.2
Temperature 2 m (C) Average	744	-7.82	8.4	-	-27.6	-19.3	-14.2	-7.7	-1.2	3.4	10
Relative Humidity (%) Average	744	65.09	16.6	-	18.8	39.5	53.3	68.1	79.2	84	96.9
Wind Speed 10 m (km/h) Average	737	6	3	-	0	2	4	6	8	10	18
Wind Direction 10 m (deg) Average	737	-	-	-	-	-	-	-	-	-	-
Precipitation (mm) Total	743	-	-	9.95	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION -MACKAY RIVER (AMS20)
MARCH 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
H2S, NO2	10 Mar 2025 08:00	10 Mar 2025 08:00	1	Maintenance - sample manifold cleaned
THC	06 Mar 2025 09:00	06 Mar 2025 09:00	1	Unstable Operation - flatline in analyzer output signal
THC	21 Mar 2025 08:00	21 Mar 2025 10:00	3	Maintenance - recalibration to adjust span and zero
Precipitation Collector	21 Mar 2025 08:00	21 Mar 2025 08:00	1	Maintenance - emptied bucket
Wind Speed, Wind Direction	01 Mar 2025 03:00	01 Mar 2025 03:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	01 Mar 2025 18:00	01 Mar 2025 18:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	15 Mar 2025 02:00	15 Mar 2025 02:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	17 Mar 2025 21:00	17 Mar 2025 22:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction	29 Mar 2025 07:00	29 Mar 2025 08:00	2	Flat line in sensor output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Mackay River - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 29.6 ppb on Mar 27 09:00 Maximum Daily Average: 7.5 ppb on Mar 26

Minimum Value: 0.0 ppb on Mar 1 07:00 Minimum Daily Average: 0.0 ppb on Mar 4
Maximum Diurnal Average: 2.9 ppb at hour 9 Minimum Diurnal Average: 0.5 ppb at hour 3
Monthly Average: 1.73 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.2 Q_3 = 1.3 P_{90} = 5.4 P_{99} = 17.4

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	Z	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
2-Mar	0.1	Z	0.2	0.1	0.2	0.2	0.2	0.1	0.1	1.7	1.1	4.9	2.8	0.7	0.8	1.4	0.1	0.3	2.5	3.5	1.5	0.4	1.1	0.9	1.1	4.9
3-Mar	0.5	0.1	Z	0.1	0.1	0.2	0.5	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.5	0.5	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.2	0.5
4-Mar	0.1	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	0.7	0.0	0.0	0.0	0.7
5-Mar	0.1	0.0	0.0	0.0	Z	0.1	0.0	0.1	0.0	0.7	2.3	3.1	0.5	0.8	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.4	3.1
6-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.1	0.1	0.0	0.1	0.3	0.0	0.1	0.0	0.1	0.2	0.1	0.1	0.3
7-Mar	Z	0.2	0.1	0.1	0.8	6.7	11.0	7.9	12.8	4.6	5.3	1.2	0.0	0.0	0.0	1.8	2.8	3.8	6.5	9.7	13.2	10.8	8.7	9.9	5.1	13.2
8-Mar	11.0	Z	6.9	4.3	2.6	2.2	1.9	1.0	1.0	1.4	2.0	1.5	0.1	4.7	1.6	0.1	0.0	0.1	0.2	0.5	1.0	1.5	0.7	0.1	2.0	11.0
9-Mar	3.5	1.0	Z	4.4	19.4	12.1	13.7	12.4	11.6	13.8	15.4	9.3	2.6	1.6	0.7	0.9	0.9	0.6	18.0	7.6	1.0	0.3	0.5	0.7	6.6	19.4
10-Mar	1.2	0.7	0.5	Z	0.3	0.2	0.2	C	C	C	C	0.7	0.6	0.5	0.7	0.4	0.3	0.4	0.5	0.3	0.2	0.2	0.3	0.1	0.4	1.2
11-Mar	0.1	0.7	0.7	1.2	Z	3.3	3.1	2.3	1.6	1.3	1.6	2.5	2.9	5.9	11.7	5.9	10.3	6.9	2.6	2.0	1.6	0.8	0.2	0.1	3.0	11.7
12-Mar	0.0	0.0	0.1	0.0	0.0	Z	0.0	0.0	5.4	16.3	2.7	0.8	0.5	0.1	0.1	0.3	1.0	4.5	9.1	13.0	11.3	8.6	4.5	2.4	3.5	16.3
13-Mar	Z	0.9	0.4	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	3.6	9.1	14.0	3.8	0.6	0.9	0.4	0.1	0.0	0.0	0.1	1.5	14.0
14-Mar	0.2	Z	0.5	0.6	0.1	0.2	1.9	2.3	1.1	1.1	1.7	1.7	1.2	1.5	1.4	1.3	1.6	0.7	0.1	0.1	0.1	0.1	0.1	0.1	0.9	2.3
15-Mar	0.2	0.1	Z	0.1	0.0	0.1	0.2	0.7	1.0	1.4	1.2	1.1	1.7	0.8	2.0	0.6	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.5	2.0
16-Mar	0.1	0.1	0.0	Z	0.0	0.0	0.0	0.3	2.0	3.0	2.0	1.7	1.1	0.6	1.0	0.9	0.9	0.8	0.5	0.5	0.5	0.5	0.6	0.4	0.8	3.0
17-Mar	0.3	0.2	0.2	0.2	Z	0.2	0.1	0.0	0.1	0.1	0.4	0.1	1.0	0.5	0.3	0.9	3.1	4.4	10.3	4.2	2.0	1.0	0.6	0.4	1.3	10.3
18-Mar	0.5	0.4	0.5	0.5	0.7	Z	0.6	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
19-Mar	Z	0.2	0.2	0.1	0.1	0.1	0.1	3.9	8.2	5.6	3.3	1.7	0.2	0.0	0.0	0.0	1.6	0.0	0.1	3.0	2.4	0.7	7.9	2.5	1.8	8.2
20-Mar	0.5	Z	0.9	3.6	3.8	3.5	2.5	5.7	4.6	2.1	0.7	0.1	0.1	0.2	0.3	4.3	6.5	6.4	4.9	0.6	0.1	0.1	0.4	0.4	2.3	6.5
21-Mar	0.2	0.4	Z	0.4	0.3	0.3	0.3	0.3	0.5	0.7	1.0	1.1	1.1	1.2	0.6	0.6	0.4	0.3	0.1	0.1	0.0	0.0	0.1	0.1	0.4	1.2
22-Mar	0.2	0.2	0.2	Z	0.1	0.1	0.1	0.2	0.0	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
23-Mar	0.0	0.0	0.1	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.8	0.8	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.3	0.8	0.7	0.2	1.7
24-Mar	0.7	0.9	1.0	0.9	0.9	Z	0.5	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.6	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.3	1.0
25-Mar	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	0.1	0.4	5.0	10.3	14.7	2.1	0.1	0.1	0.0	0.1	0.1	1.4	14.7
26-Mar	0.1	Z	0.1	0.2	0.2	0.2	0.2	0.9	1.3	4.8	11.6	11.2	19.0	22.3	17.5	16.5	7.8	4.2	16.3	13.7	10.8	3.4	4.3	6.8	7.5	22.3
27-Mar	9.9	10.7	Z	5.4	1.6	8.5	19.8	26.4	29.6	12.0	10.7	8.5	6.1	5.1	5.7	4.5	3.4	3.6	1.6	0.0	0.0	0.0	0.0	0.0	7.5	29.6
28-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.4	0.7	0.8	1.6	0.5	1.2	2.4	1.0	0.1	0.1	0.2	2.1	3.5	3.0	2.9	1.8	0.8	1.0	3.5
29-Mar	0.4	0.3	0.3	0.2	Z	0.2	0.2	0.3	2.8	7.7	7.1	8.6	6.4	4.4	5.8	3.1	1.9	1.6	1.5	1.0	0.9	0.8	0.8	0.6	2.5	8.6
30-Mar	0.5	0.5	0.4	0.3	0.2	Z	0.1	0.1	0.2	0.2	0.3	0.4	0.4	0.2	0.0	0.2	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.3	0.5
31-Mar	Z	0.1	0.2	0.1	0.0	0.0	0.1	0.2	0.4	0.3	0.1	0.1	0.1	0.3	0.3	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.4	0.2	0.4
	1.2	0.7	0.5	0.9	1.2	1.5	1.9	2.2	2.9	2.7	2.4	2.0	1.7	1.9	2.0	2.0	1.9	1.8	2.6	2.1	1.6	1.1	1.1	0.9	Diurnal Average	
	11.0	10.7	6.9	5.4	19.4	12.1	19.8	26.4	29.6	16.3	15.4	11.2	19.0	22.3	17.5	16.5	10.3	14.7	18.0	13.7	13.2	10.8	8.7	9.9	Diurnal Maximum	

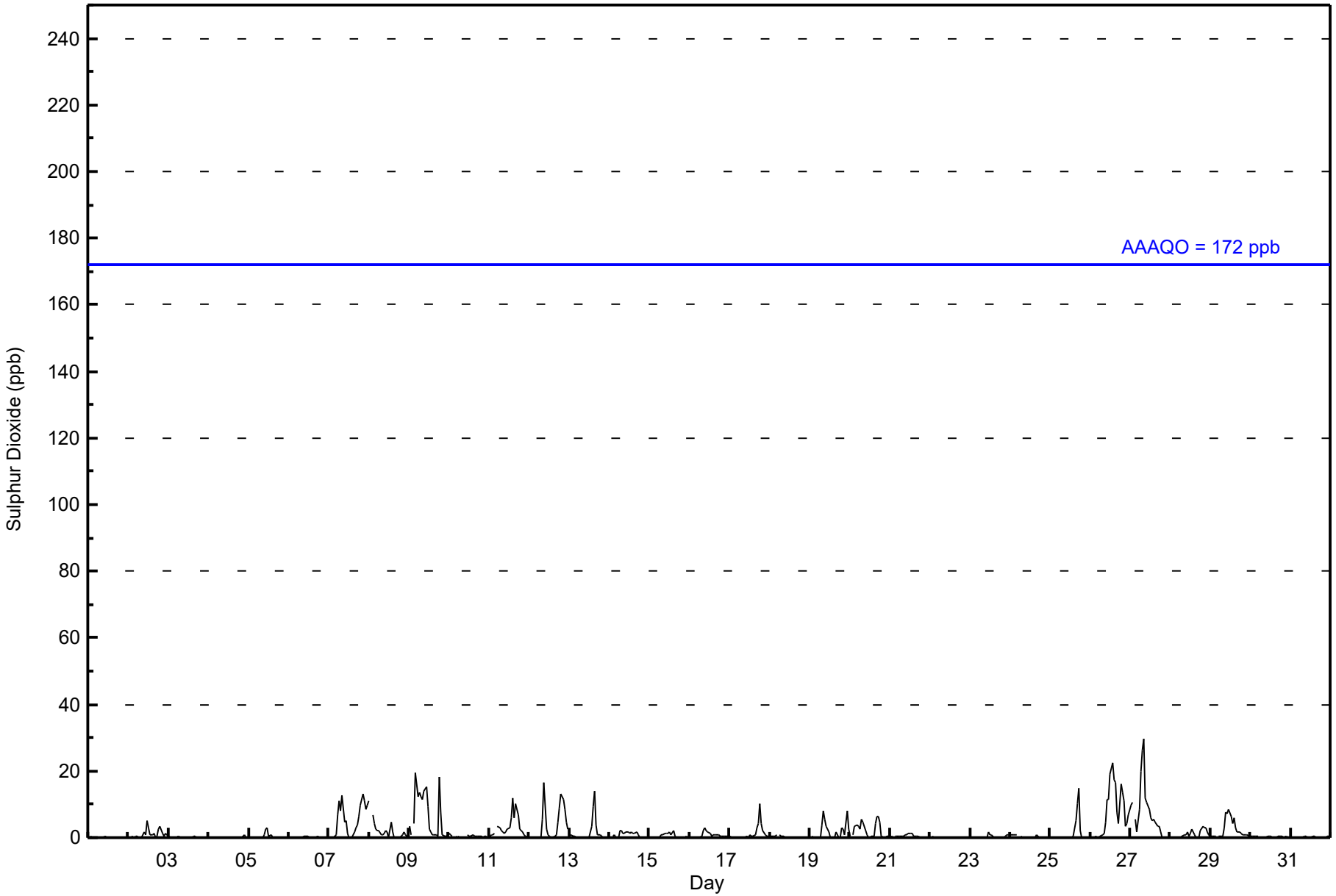
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Mackay River - March 2025



Sulphur Dioxide (SO_2) - ppb
Mackay River - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	675	95.20	95.20
11 - 20	31	4.37	99.58
21 - 60	3	0.42	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Mackay River - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	26	82	77	36	14	59	71	46	34	20	23	43	58	25	20	34	668
11 - 20	0	4	17	6	0	0	2	0	1	0	0	0	0	0	1	0	31
21 - 60	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	26	87	96	42	14	59	73	46	35	20	23	43	58	25	21	34	702

Total Number of Valid Hours: 702

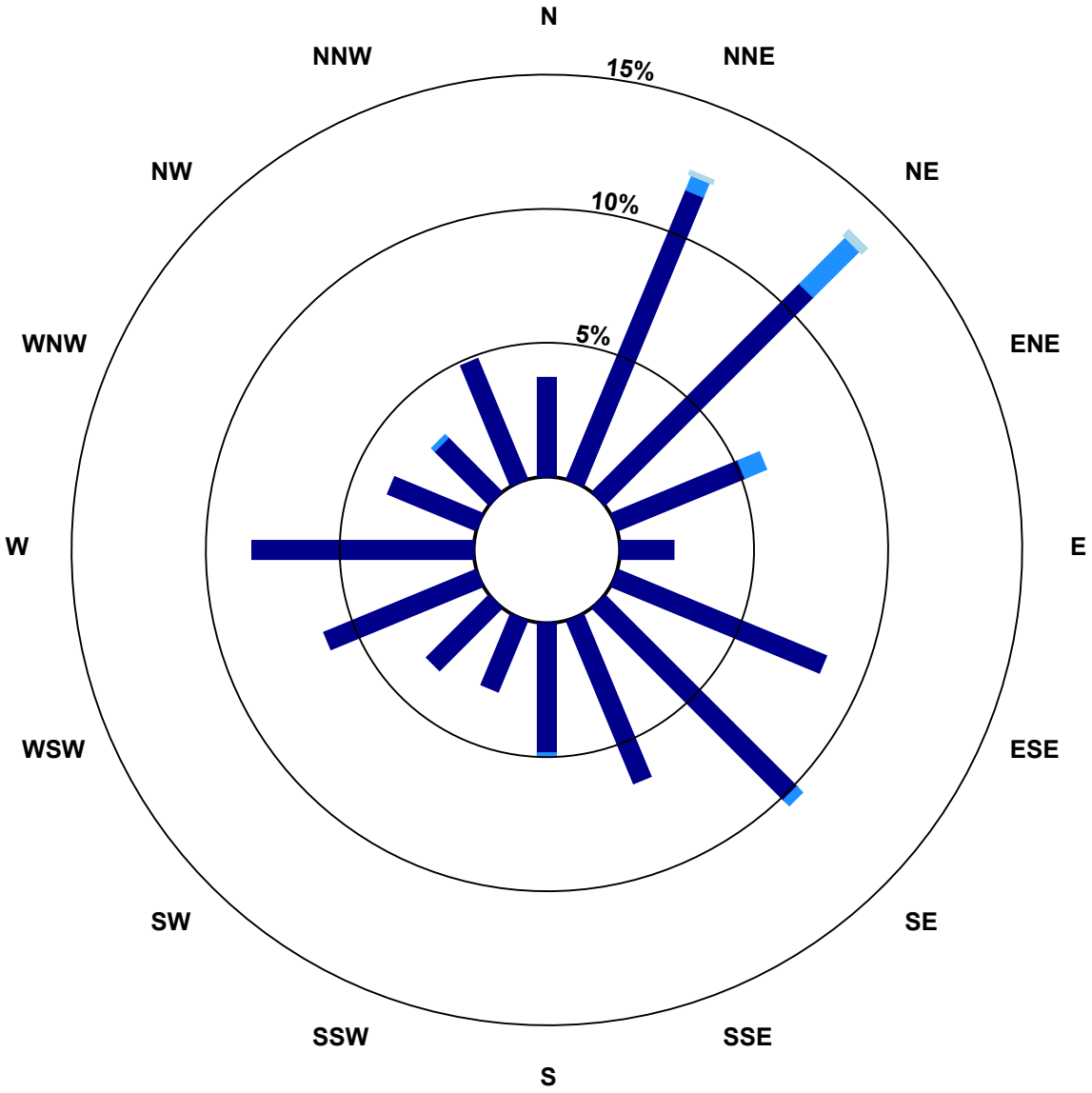
Total Number of Hours: 744

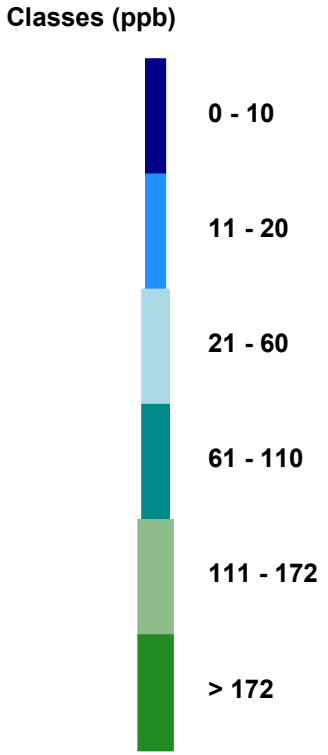
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Sulphur Dioxide (SO_2) - ppb

Mackay River





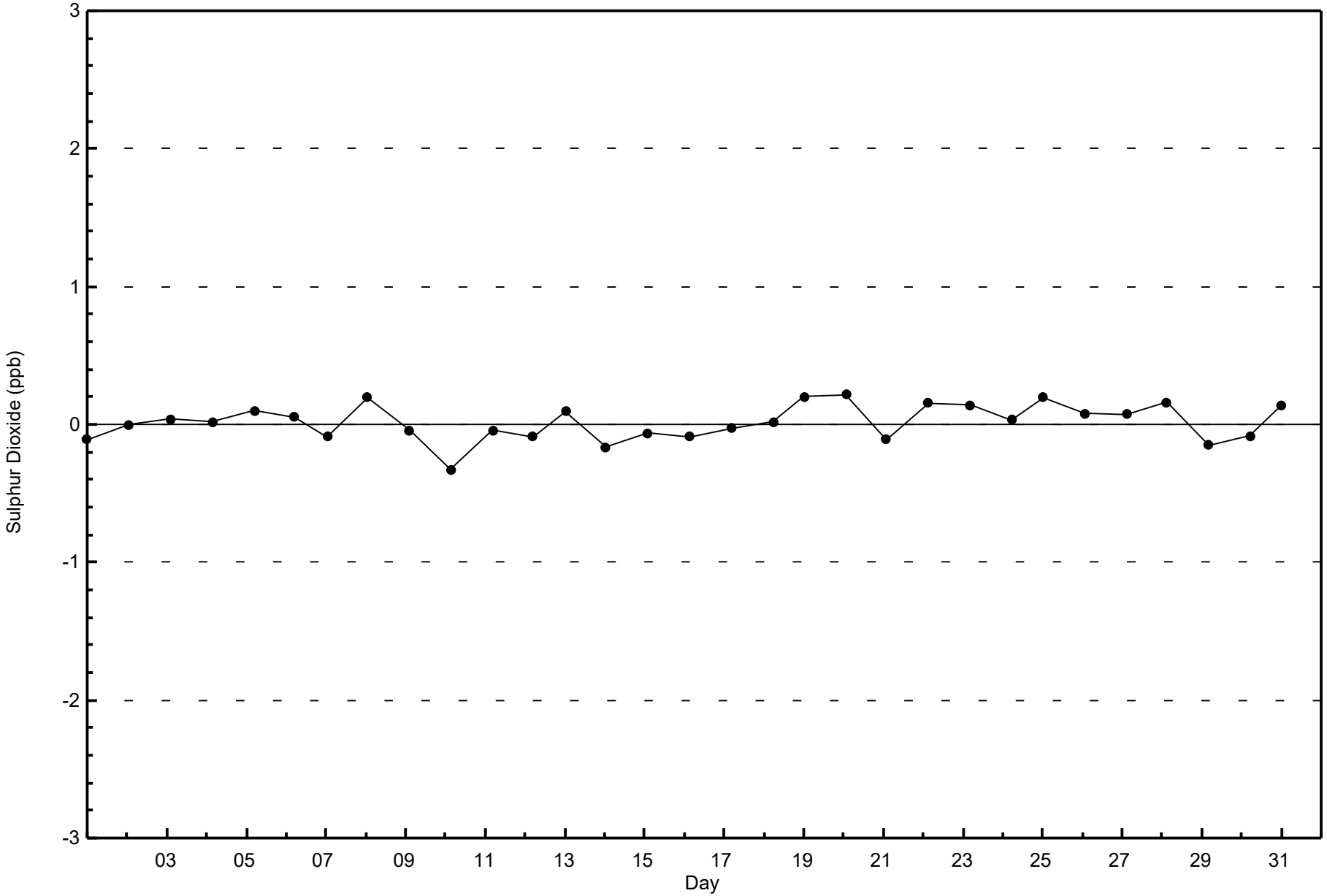
Total Number of Valid Hours: 702

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Mackay River - March 2025

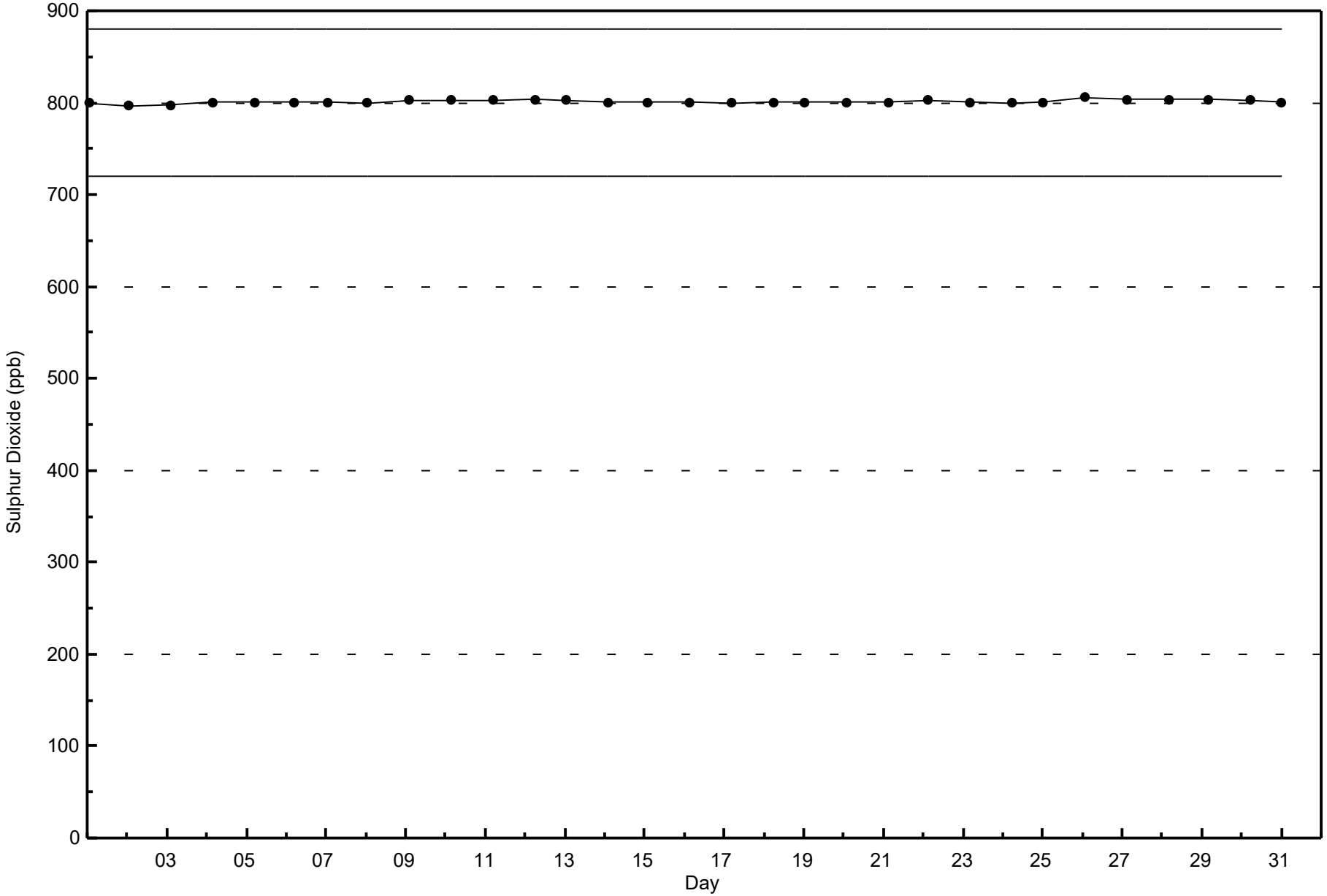


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Mackay River - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Mackay River - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 5.9 ppb on Mar 27 01:00 Maximum Daily Average: 1.2 ppb on Mar 20

Minimum Value: 0.0 ppb on Mar 6 19:00 Minimum Daily Average: 0.0 ppb on Mar 21
Maximum Diurnal Average: 0.5 ppb at hour 24 Minimum Diurnal Average: 0.1 ppb at hour 13
Monthly Average: 0.32 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.1 Q_3 = 0.3 P_{90} = 0.8 P_{99} = 2.8

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	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	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
2-Mar	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.7	0.2	0.8	0.3	0.1	0.2	0.8	0.1	0.3	0.4	0.2	0.3	0.5	0.7	0.5	0.3	0.8
3-Mar	0.3	0.1	0.1	Z	0.5	0.8	0.7	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8
4-Mar	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.1	0.1	0.4
5-Mar	0.1	0.2	1.8	0.1	0.5	Z	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.2	0.1	0.2	1.8
6-Mar	Z	0.1	0.0	0.0	0.2	0.4	0.3	0.2	C	C	C	C	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
7-Mar	0.0	Z	0.3	0.2	0.3	2.6	2.2	1.5	1.5	1.2	1.6	0.3	0.1	0.0	0.0	0.3	1.7	0.5	0.2	0.2	0.2	0.2	0.2	0.3	0.7	2.6
8-Mar	0.3	0.5	Z	2.6	4.2	3.8	1.3	0.7	0.5	0.6	0.5	0.2	0.1	0.5	0.2	0.0	0.0	0.0	1.4	2.2	2.0	1.3	1.1	0.9	1.1	4.2
9-Mar	0.9	0.9	0.4	Z	0.3	0.1	0.1	0.1	0.1	0.1	0.3	0.2	1.1	1.1	0.7	0.2	0.1	0.3	1.0	1.5	0.8	0.2	0.3	0.3	0.5	1.5
10-Mar	0.4	0.2	0.2	0.2	Z	0.2	0.2	M	1.2	1.0	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	0.2	1.2
11-Mar	0.0	0.4	1.0	1.2	0.6	Z	0.5	0.6	0.8	0.8	0.4	0.5	0.5	0.7	0.3	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.4	1.2
12-Mar	Z	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.4	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.4
13-Mar	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	0.4	0.3	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4
14-Mar	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.2	0.4	0.2	0.1	0.1	0.4
15-Mar	0.1	0.2	0.3	Z	0.4	0.5	0.4	0.3	0.2	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.5
16-Mar	0.1	0.1	0.0	0.1	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
17-Mar	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	0.6	0.5	0.8	1.0	1.0	0.9	0.8	0.7	0.4	0.3	1.0
18-Mar	Z	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2
19-Mar	0.2	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.7	0.5	0.3	1.6	0.6	0.3	1.6
20-Mar	0.2	0.1	Z	0.8	1.5	1.5	1.4	4.8	4.5	1.6	0.7	0.1	0.1	0.1	0.1	0.5	0.9	1.2	1.6	1.3	0.5	0.7	1.5	2.5	1.2	4.8
21-Mar	0.3	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	0.3
22-Mar	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
23-Mar	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
24-Mar	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
25-Mar	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	0.2	0.3	0.3	2.7	1.4	1.8	1.5	1.8	0.5	2.7
26-Mar	0.5	0.1	Z	0.1	0.1	0.8	2.3	1.7	0.5	0.3	0.1	0.2	0.2	0.4	1.0	0.5	0.2	0.1	1.1	1.0	2.3	0.4	2.0	5.5	0.9	5.5
27-Mar	5.9	3.7	2.8	Z	1.6	1.7	0.8	0.4	0.3	0.5	0.5	0.9	0.3	0.4	0.6	0.5	0.3	0.4	0.6	0.1	0.0	0.1	0.6	0.8	1.0	5.9
28-Mar	0.6	0.4	0.4	0.3	Z	0.3	0.3	1.4	1.0	0.4	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.3	0.4	0.7	0.7	1.1	0.4	1.4
29-Mar	1.8	1.5	0.8	0.4	0.4	Z	0.5	0.4	0.8	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	0.4	1.8
30-Mar	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
31-Mar	0.0	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1
	0.5	0.4	0.4	0.3	0.5	0.5	0.4	0.5	0.4	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.4	0.5	Diurnal Average	
	5.9	3.7	2.8	2.6	4.2	3.8	2.3	4.8	4.5	1.6	1.6	0.9	1.1	1.1	1.0	0.8	1.7	1.2	1.6	2.7	2.3	1.8	2.0	5.5	Diurnal Maximum	

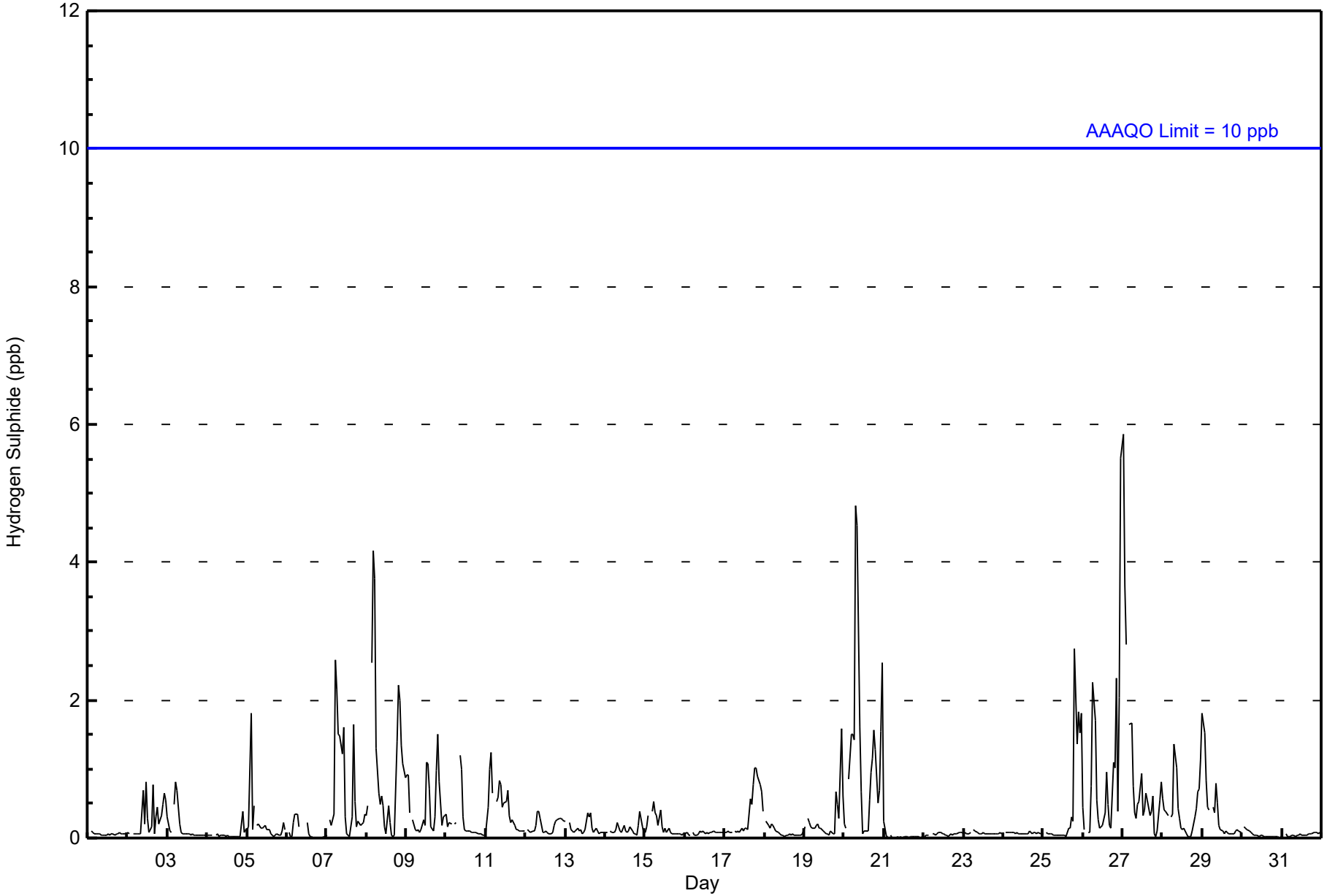
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Mackay River - March 2025



Hydrogen Sulphide (H_2S) - ppb
Mackay River - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	696	98.31	98.31
3 - 4	8	1.13	99.44
5 - 7	4	0.56	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Mackay River - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	25	84	89	40	14	57	73	50	34	20	24	43	56	25	22	33	689
3 - 4	0	3	3	1	0	1	0	0	0	0	0	0	0	0	0	0	8
5 - 7	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
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	87	96	41	14	58	73	50	34	20	24	43	56	25	22	33	701

Total Number of Valid Hours: 701

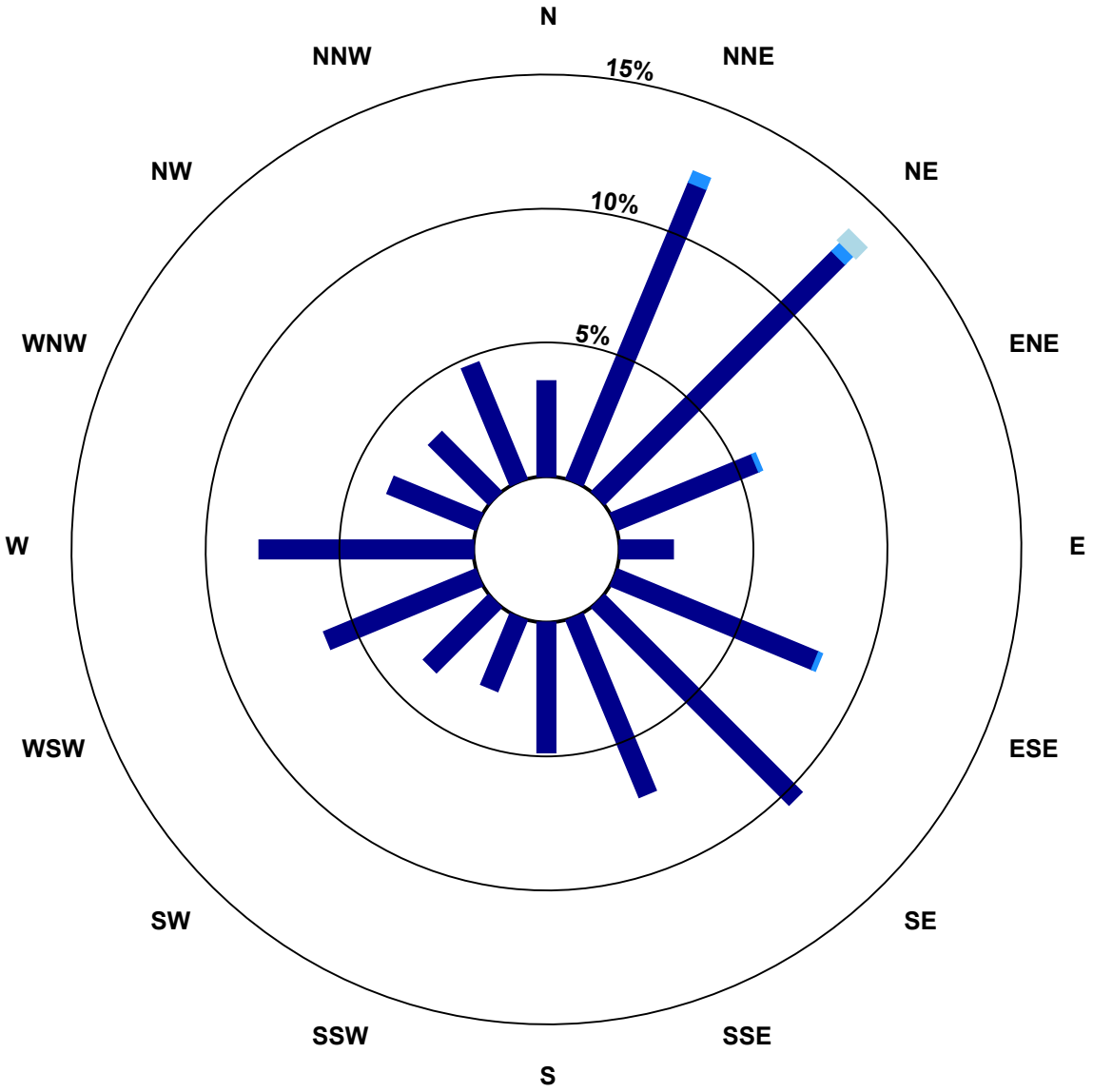
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Hydrogen Sulphide (H_2S) - ppb

Mackay River



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

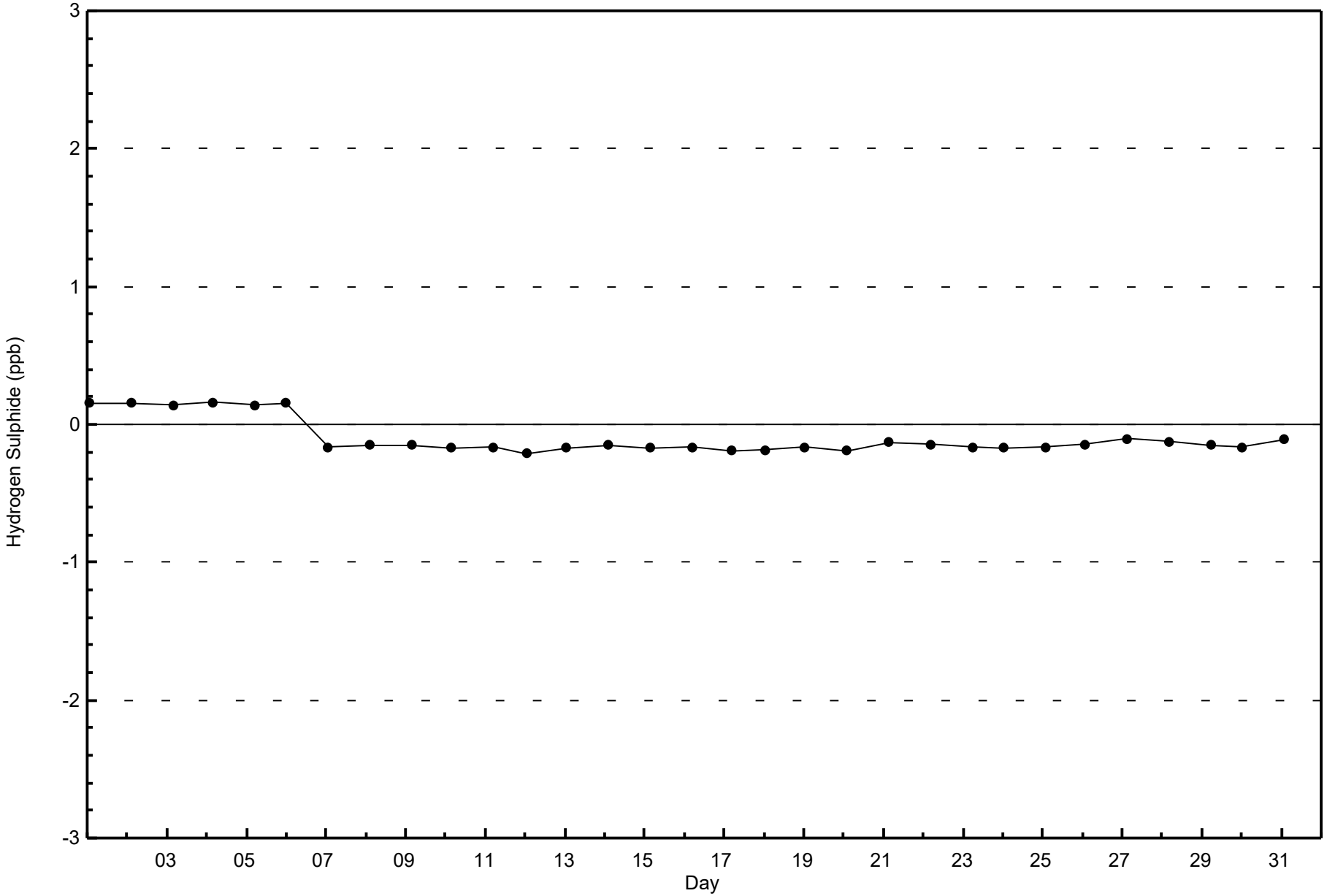
Total Number of Valid Hours: 701

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Mackay River - March 2025

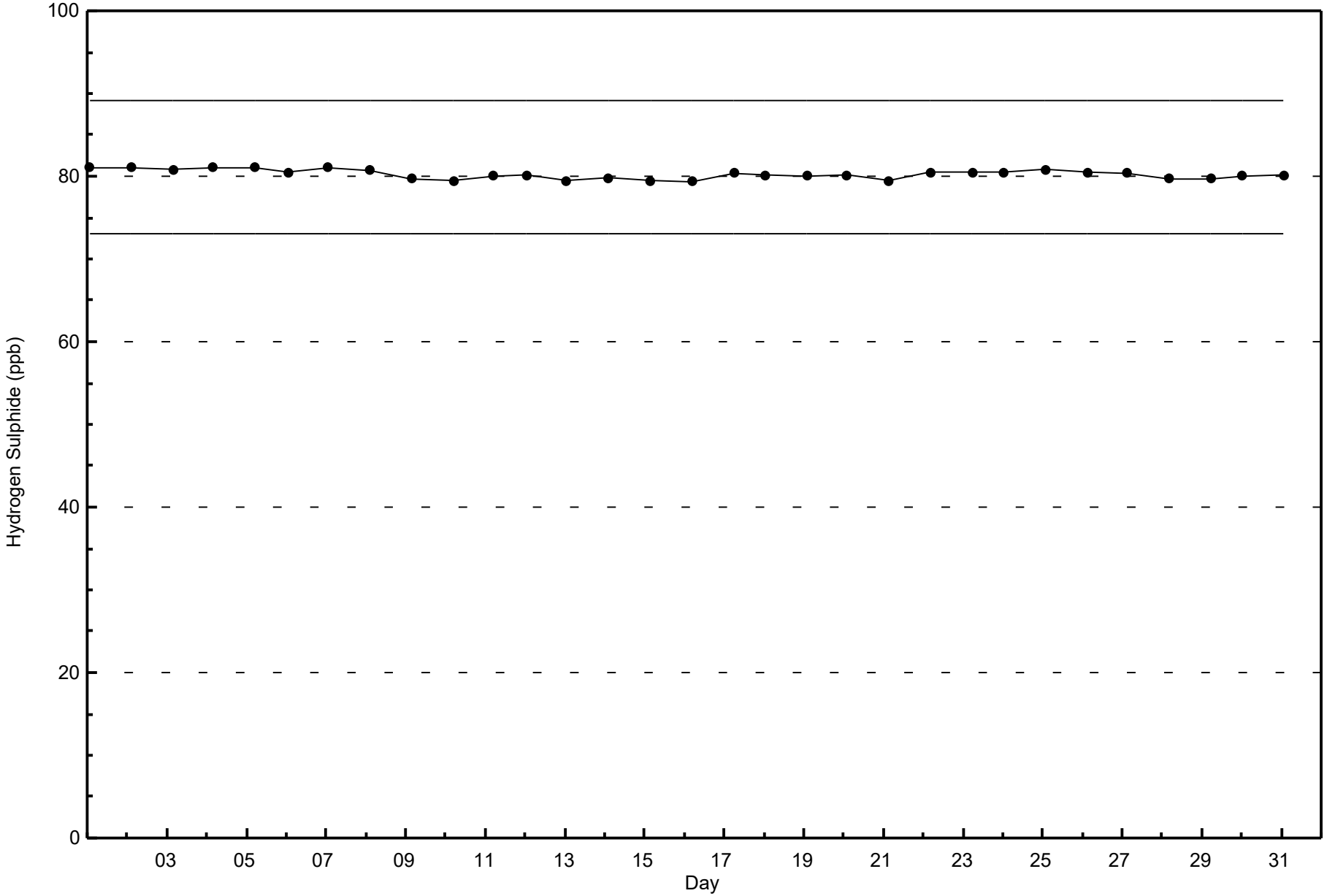


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Mackay River - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Mackay River - March 2025

Maximum Value: 3.4 ppm on Mar 7 06:00

Maximum Daily Average: 2.6 ppm on Mar 11

Minimum Value: 2.2 ppm on Mar 31 19:00

Minimum Daily Average: 2.3 ppm on Mar 24

Maximum Diurnal Average: 2.5 ppm at hour 6

Minimum Diurnal Average: 2.3 ppm at hour 15

Monthly Average: 2.37 ppm

Percentiles: P_1 = 2.2 P_{10} = 2.3 Q_1 = 2.3 Median = 2.3 Q_3 = 2.4 P_{90} = 2.5 P_{99} = 2.9

Hours in Service:	744
Hours of Data:	705
Hours of Missing Data:	39
Hours of Calibration:	35
Percent Operational Time:	99.5

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

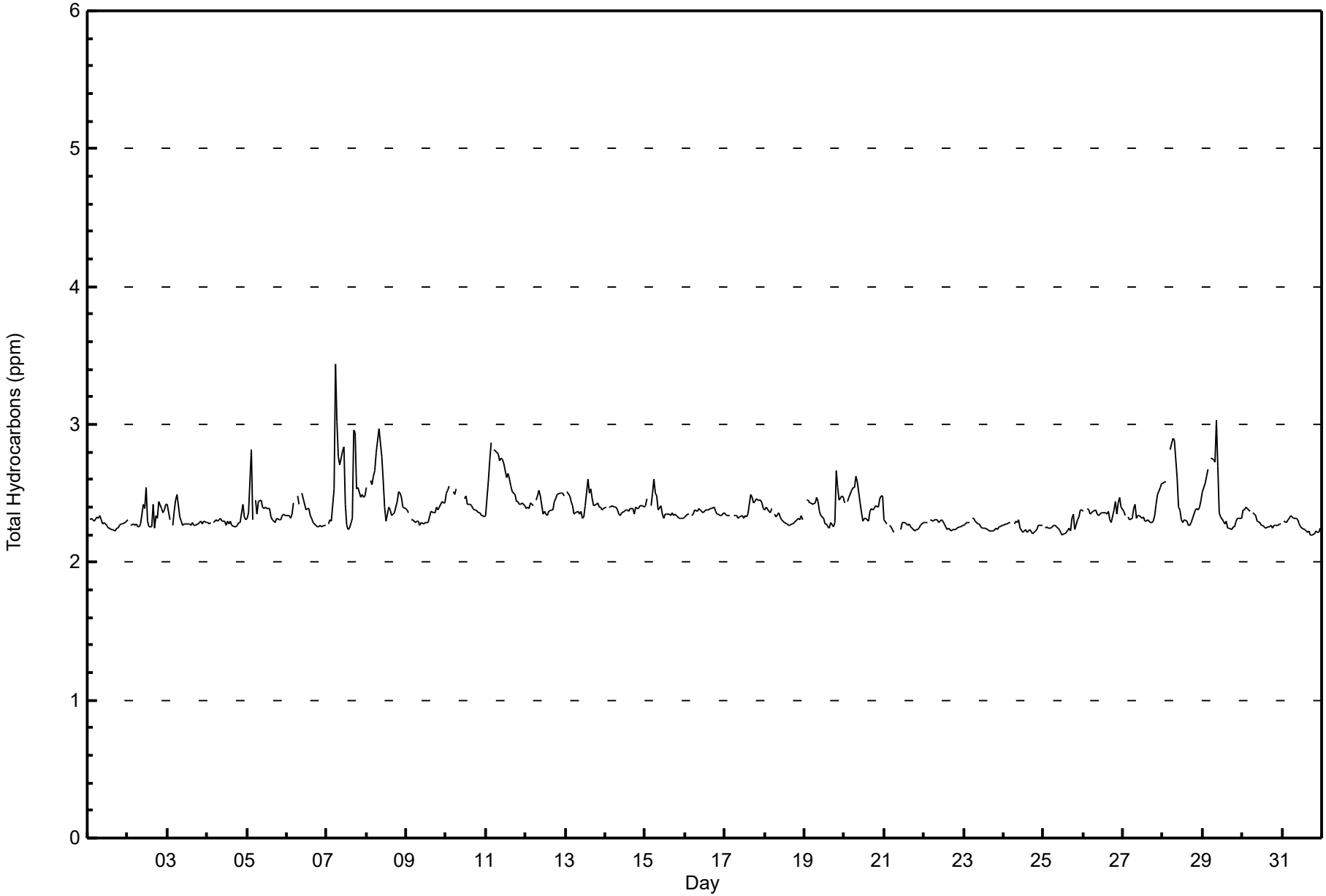
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Mackay River - March 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm

Mackay River - March 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	0	0.00	0.00
2.1 - 3.0	704	99.86	99.86
3.1 - 10.0	1	0.14	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 705

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Mackay River - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.1 - 3.0	26	86	96	42	14	56	73	46	35	20	23	43	57	25	21	34	697
3.1 - 10.0	0	1	0	0	0	0	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	26	87	96	42	14	56	73	46	35	20	23	43	57	25	21	34	698

Total Number of Valid Hours: 698

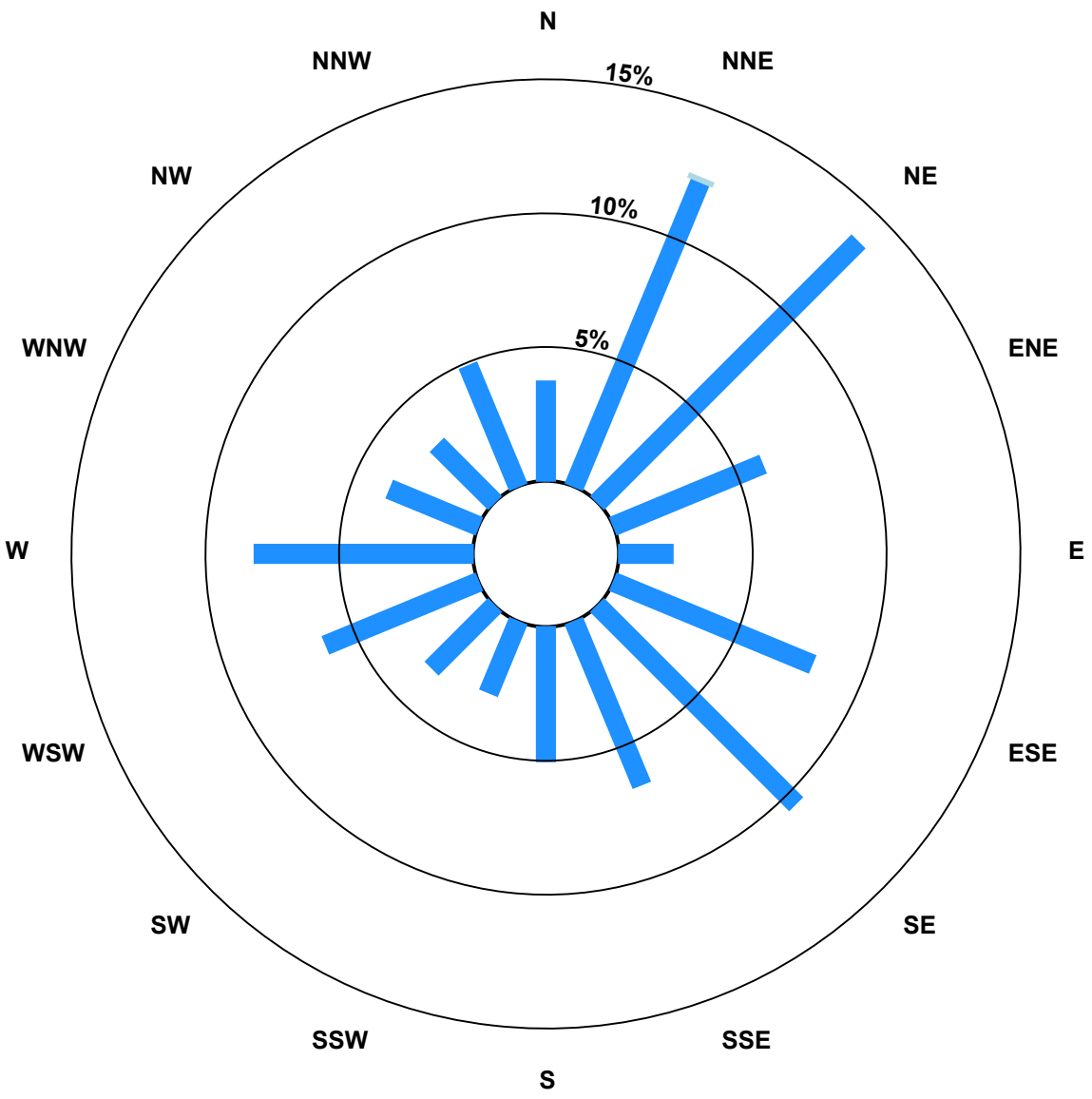
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Total Hydrocarbons (THC) - ppm

Mackay River



Classes (ppm)

- 0 - 2.0
- 2.1 - 3.0
- 3.1 - 10.0
- > 10.0

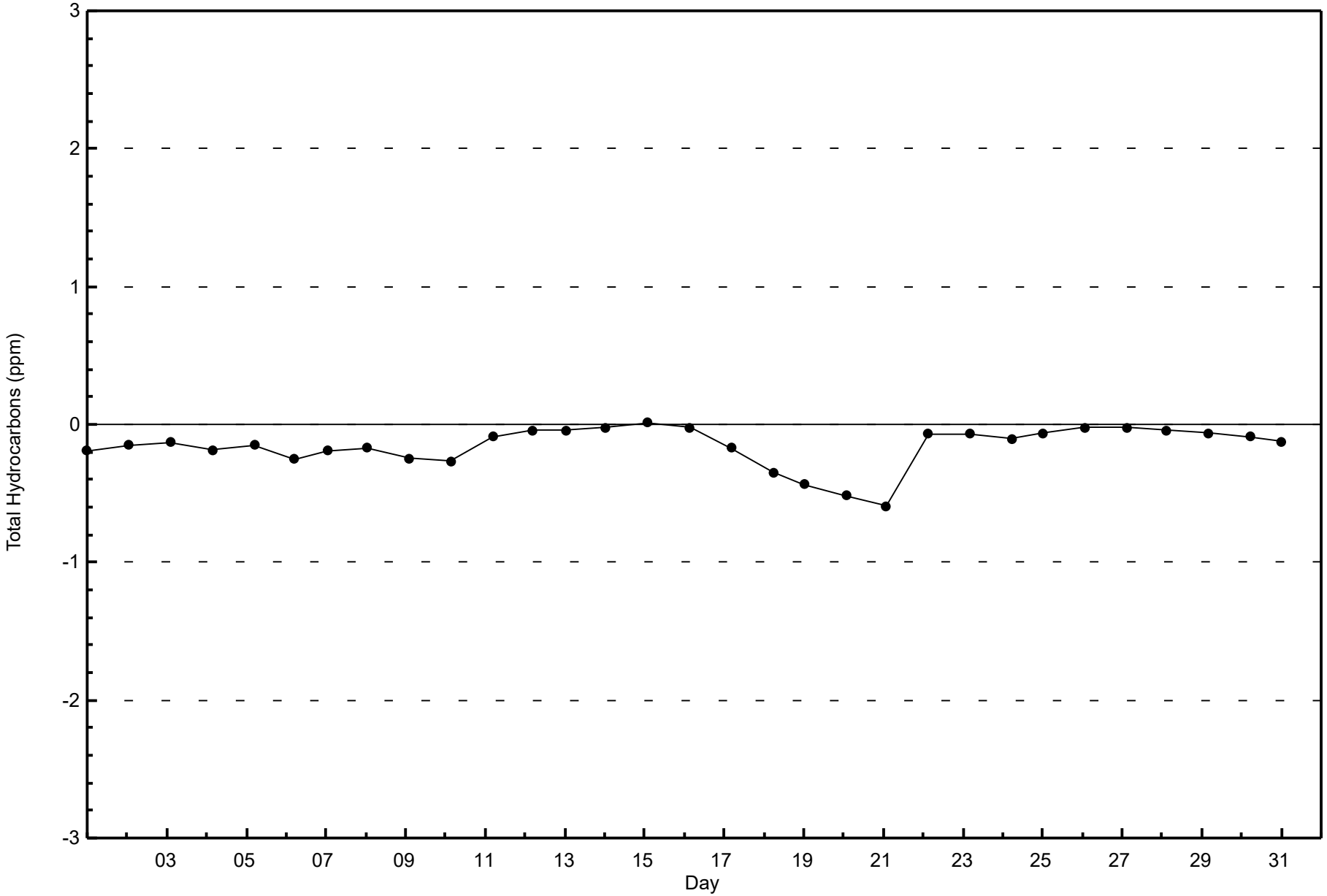
Total Number of Valid Hours: 698

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Mackay River - March 2025

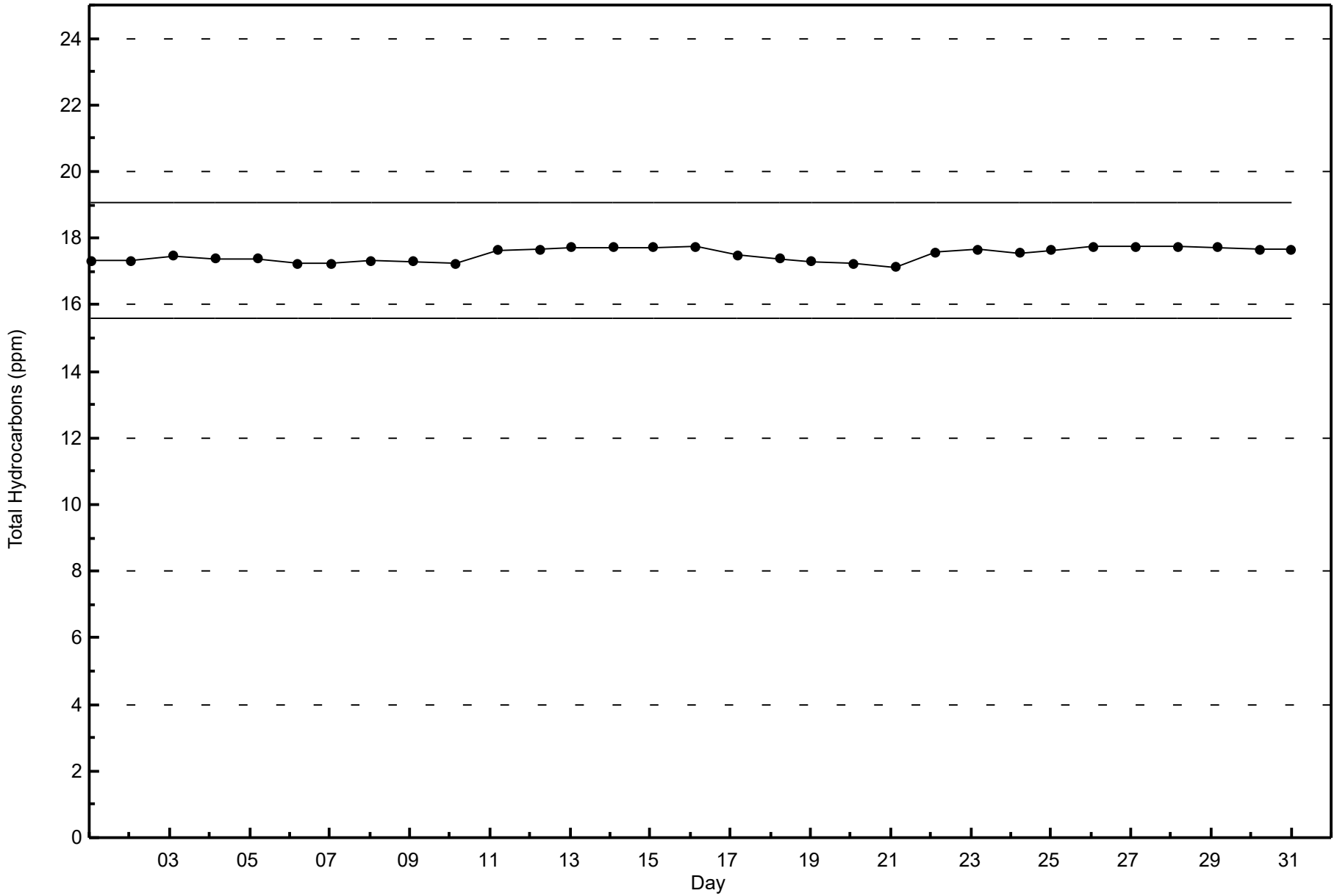


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Mackay River - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Mackay River - March 2025

Maximum Value: 17.0 ppb on Mar 28 08:00

Maximum Daily Average: 5.7 ppb on Mar 11

Minimum Value: 0.0 ppb on Mar 2 18:00

Minimum Daily Average: 0.0 ppb on Mar 24

Maximum Diurnal Average: 2.4 ppb at hour 9

Minimum Diurnal Average: 0.0 ppb at hour 21

Monthly Average: 0.72 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.4 P_{90} = 1.8 P_{99} = 10.9

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2
2-Mar	0.1	0.1	0.1	0.1	0.0	Z	0.0	0.0	0.0	0.2	0.8	1.4	0.4	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.4
3-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1
4-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
5-Mar	0.1	0.1	Z	0.0	0.0	0.0	0.0	C	C	C	C	C	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
6-Mar	0.0	0.0	0.0	Z	0.2	0.1	0.0	0.6	1.4	3.5	2.4	0.7	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	3.5
7-Mar	0.0	0.0	0.0	0.0	Z	12.4	0.3	1.4	3.7	4.7	6.0	2.0	0.2	0.0	0.0	0.2	4.6	6.0	0.2	0.1	0.1	0.1	0.1	0.1	1.8	12.4
8-Mar	0.1	0.1	0.1	0.1	0.1	Z	0.9	10.1	10.7	9.2	3.8	1.6	0.1	0.7	0.3	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	1.7	10.7
9-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0	1.2	1.4	0.9	1.4	2.0	2.6	3.5	2.8	1.5	0.4	0.0	0.0	0.0	0.0	0.0	0.8	3.5
10-Mar	0.0	Z	0.1	0.3	0.1	0.1	0.3	M	4.9	3.7	2.4	1.5	1.3	1.2	0.9	0.7	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.8	4.9
11-Mar	0.0	0.0	Z	9.8	12.0	6.1	8.0	10.9	12.2	12.4	13.3	12.1	8.7	8.3	7.3	4.5	3.0	1.3	0.1	0.0	0.0	0.0	0.0	0.0	5.7	13.3
12-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.7	2.9	3.1	0.9	1.1	1.0	1.1	0.9	0.7	0.9	0.8	0.2	0.0	0.0	0.0	0.0	0.0	0.6	3.1
13-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.5	0.8	1.2	0.6	1.0	2.5	6.4	5.0	4.4	0.9	0.2	0.1	0.0	0.0	0.0	0.0	0.0	1.0	6.4
14-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.4	0.6	0.9	1.3	1.7	1.5	1.3	1.3	1.0	0.8	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.5	1.7
15-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	0.6	0.4	0.4	0.4	0.2	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6
16-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.6	0.8	0.6	0.6	0.4	0.3	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8
17-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.6	0.2	0.4	1.7	1.8	0.8	0.3	0.0	0.0	0.0	0.0	0.0	0.3	1.8
18-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
19-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.1	1.4	3.0	2.0	1.6	1.0	0.3	0.1	0.1	0.0	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.4	3.0
20-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.7	5.1	7.3	4.2	2.3	0.8	1.6	1.3	1.2	2.2	1.5	0.9	0.3	0.0	0.0	0.0	0.0	0.0	1.3	7.3
21-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.5	0.6	0.6	0.6	0.6	0.6	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6
22-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
23-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.3
24-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
25-Mar	0.0	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	0.1	0.5	0.7	0.8	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.8
26-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.3	0.7	0.9	1.1	1.6	1.6	3.2	3.5	3.7	2.5	0.8	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.9	3.7
27-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.3	1.5	2.2	2.0	2.7	2.2	2.8	2.2	2.0	1.7	1.2	0.8	0.2	0.0	0.0	0.0	0.0	0.0	1.0	2.8
28-Mar	0.0	Z	0.0	0.1	0.1	0.6	7.4	17.0	8.9	3.3	3.1	1.5	1.6	2.0	1.1	0.7	0.9	0.6	0.3	0.1	0.0	0.0	0.0	0.0	2.1	17.0
29-Mar	0.0	0.0	Z	0.1	0.1	0.2	3.6	8.3	9.8	6.5	3.3	2.3	1.4	1.0	1.2	0.6	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	1.7	9.8
30-Mar	0.0	0.0	0.0	Z	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
31-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
	0.0	0.0	0.0	0.4	0.5	0.8	0.7	2.0	2.4	2.1	1.7	1.2	1.0	1.1	1.0	0.8	0.7	0.5	0.1	0.0	0.0	0.0	0.0	0.0	Diurnal Average	
	0.1	0.1	0.1	9.8	12.0	12.4	8.0	17.0	12.2	12.4	13.3	12.1	8.7	8.3	7.3	4.5	4.6	6.0	0.4	0.1	0.1	0.1	0.1	0.1	Diurnal Maximum	

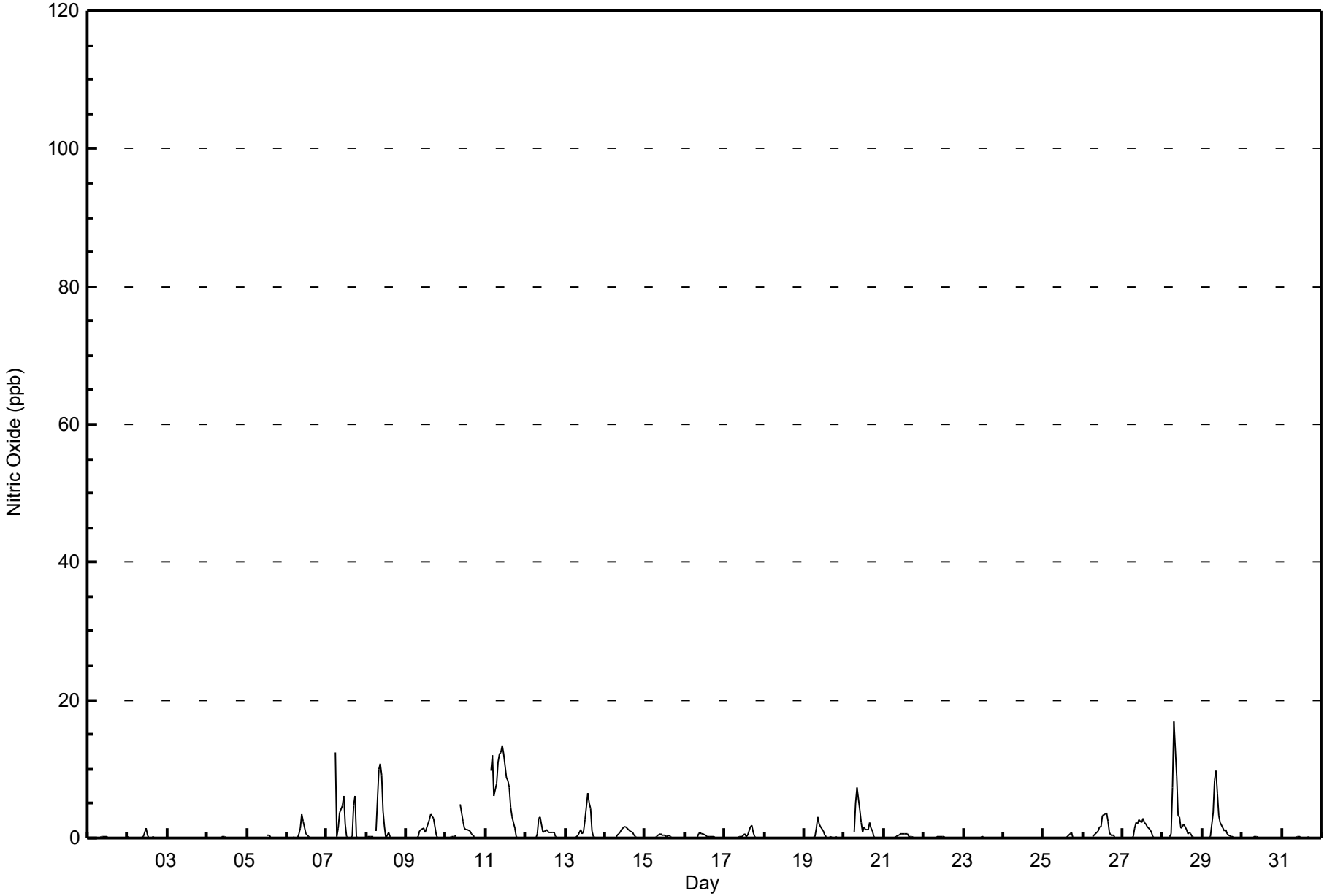
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Mackay River - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	707	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Mackay River - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	24	88	93	42	13	60	73	48	37	20	23	43	58	25	19	34	700
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	24	88	93	42	13	60	73	48	37	20	23	43	58	25	19	34	700

Total Number of Valid Hours: 700

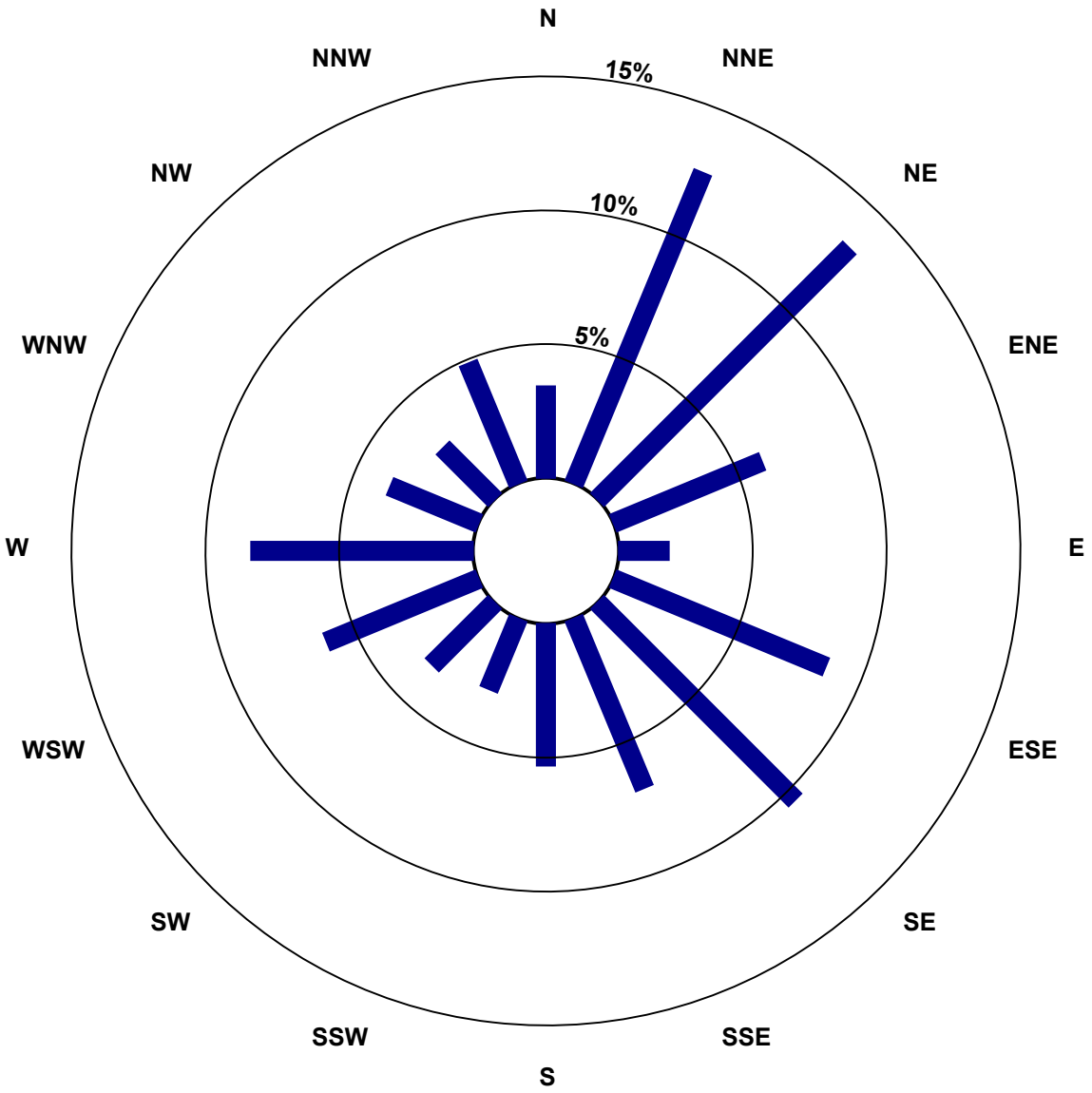
Total Number of Hours: 744

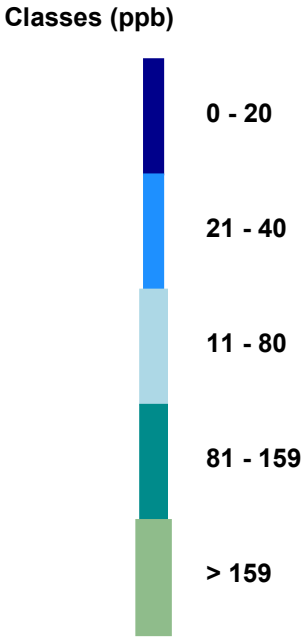
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitric Oxide (NO) - ppb

Mackay River





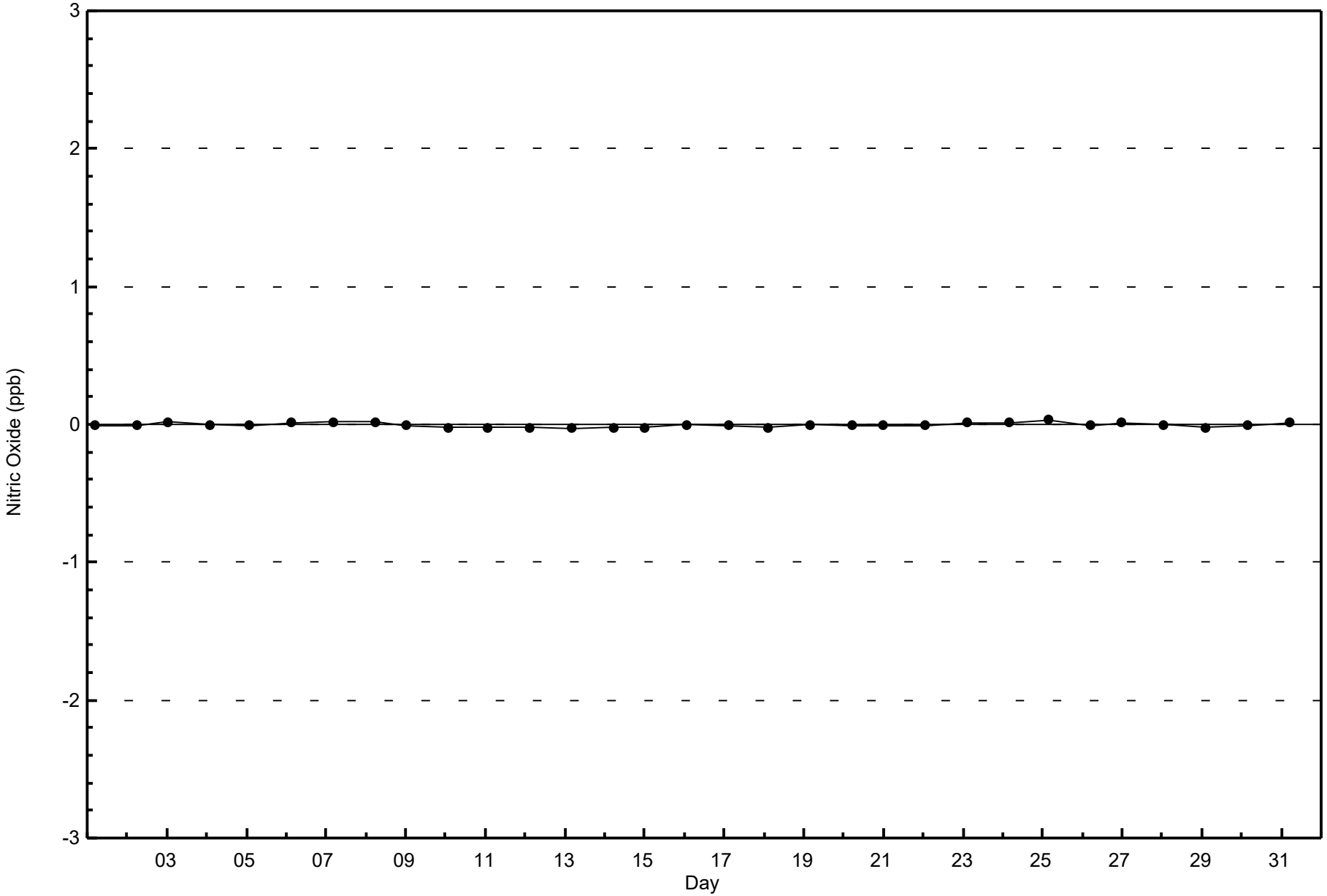
Total Number of Valid Hours: 700

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Mackay River - March 2025

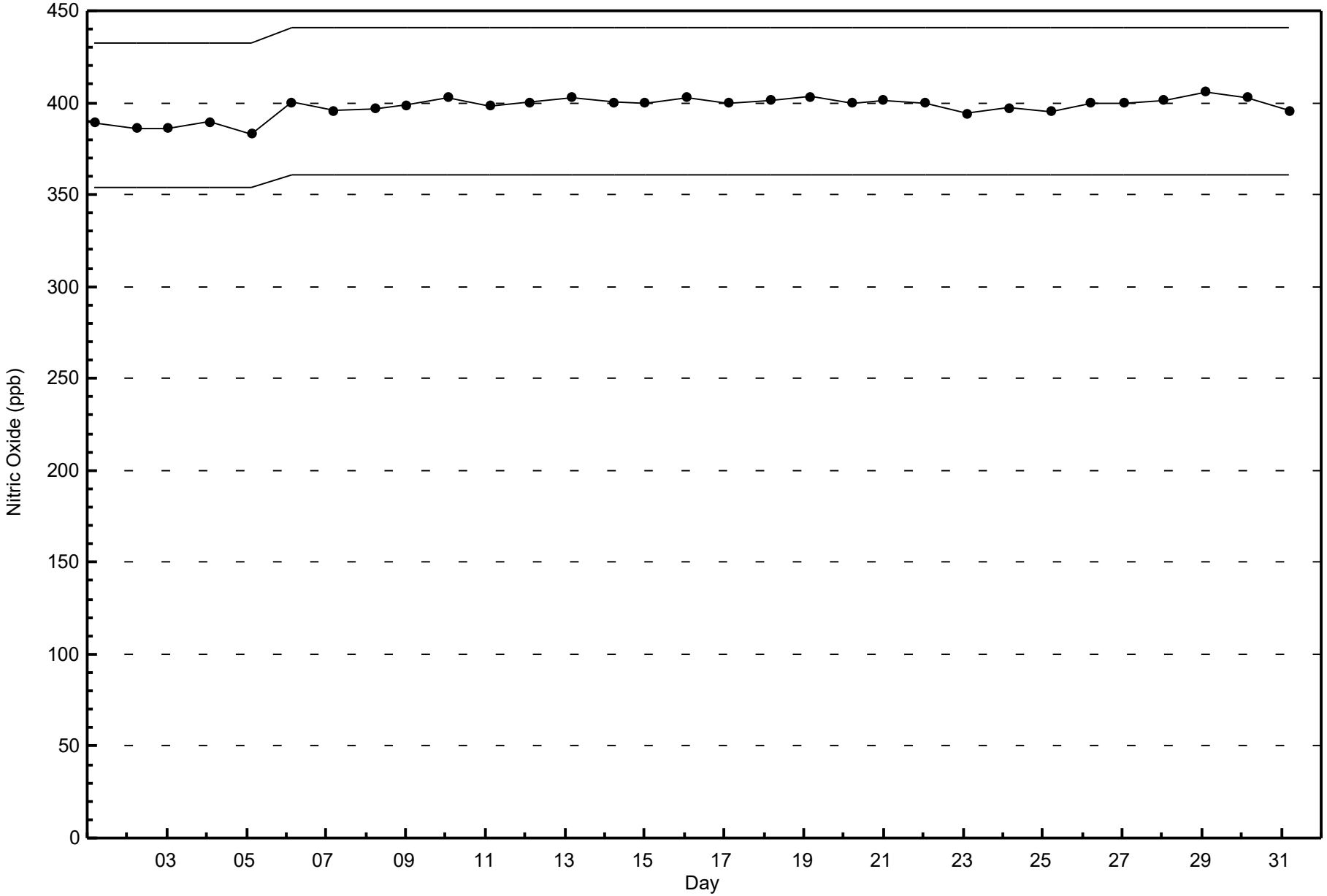


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Mackay River - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Mackay River - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 33.8 ppb on Mar 7 06:00 Maximum Daily Average: 15.1 ppb on Mar 11

Minimum Value: 0.1 ppb on Mar 5 16:00 Minimum Daily Average: 0.5 ppb on Mar 23
Maximum Diurnal Average: 7.9 ppb at hour 7 Minimum Diurnal Average: 2.0 ppb at hour 13
Monthly Average: 4.41 ppb Percentiles: P_1 = 0.3 P_{10} = 0.4 Q_1 = 0.6 Median = 1.6 Q_3 = 6.4 P_{90} = 12.2 P_{99} = 26.0

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	1.3	1.1	1.0	0.9	Z	0.9	0.7	0.7	0.6	0.8	0.9	1.1	1.2	0.8	0.7	0.7	0.7	0.6	0.7	0.6	0.5	0.5	0.5	0.6	0.8	1.3
2-Mar	0.6	0.6	0.5	0.6	0.7	Z	0.9	0.8	0.9	2.7	4.7	5.5	1.8	0.9	0.8	1.5	0.6	0.8	1.6	7.5	7.4	3.8	2.8	4.4	2.3	7.5
3-Mar	Z	1.1	0.6	0.5	4.5	7.4	8.0	2.1	0.5	0.5	0.6	0.5	0.5	0.7	0.3	0.5	0.5	0.4	0.5	0.6	0.5	0.4	0.5	0.4	1.4	8.0
4-Mar	0.4	Z	0.4	0.4	0.3	0.3	0.3	0.4	0.7	0.6	0.5	0.7	0.6	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.5	1.2	0.6	0.5	0.5	1.2
5-Mar	0.5	0.5	Z	0.6	0.8	1.0	3.9	C	C	C	C	C	1.2	1.3	0.3	0.1	0.1	0.3	0.5	0.5	0.5	0.6	0.9	0.4	0.8	3.9
6-Mar	0.3	0.3	0.2	Z	7.3	11.1	10.3	5.5	2.6	5.9	4.3	1.6	1.2	0.8	0.6	0.5	0.3	0.5	0.4	0.4	0.5	0.5	0.4	0.4	2.4	11.1
7-Mar	0.4	0.5	0.5	0.5	Z	33.8	25.9	18.4	15.0	12.2	10.6	5.3	1.4	0.6	0.4	1.3	16.7	25.3	13.1	14.7	13.6	12.8	10.5	12.9	10.7	33.8
8-Mar	15.7	20.9	18.3	15.0	16.6	Z	30.5	31.3	21.0	14.0	8.8	3.4	1.3	2.5	1.1	0.5	0.4	1.9	8.5	10.1	10.5	6.5	5.0	5.7	10.8	31.3
9-Mar	Z	4.2	4.1	2.2	4.6	6.6	5.8	3.8	4.8	4.9	3.9	2.6	2.0	2.2	3.5	6.0	7.0	8.2	13.3	10.4	10.1	11.7	10.1	11.3	6.2	13.3
10-Mar	12.6	Z	19.7	21.8	21.2	21.5	22.3	M	10.6	5.3	2.8	1.8	1.4	1.3	1.5	1.5	1.6	2.0	2.3	2.3	2.3	2.6	2.7	2.3	7.4	22.3
11-Mar	2.4	13.0	Z	27.7	28.3	28.1	28.7	25.9	20.5	19.0	17.8	15.0	12.2	14.2	15.3	11.1	11.0	10.5	8.2	7.1	7.3	8.2	7.9	7.8	15.1	28.7
12-Mar	6.3	5.7	6.7	Z	6.4	5.9	5.8	5.2	8.8	7.1	2.2	1.7	1.6	1.8	1.7	1.7	3.0	6.5	9.2	13.3	15.9	15.5	13.0	10.8	6.8	15.9
13-Mar	8.6	8.2	6.5	4.5	Z	2.9	4.0	6.1	4.1	3.1	1.7	2.2	6.5	12.8	12.6	17.4	10.1	7.3	7.5	6.7	5.1	7.2	7.7	7.9	7.0	17.4
14-Mar	8.4	7.3	5.8	5.8	6.9	Z	5.1	4.4	2.0	1.9	2.6	2.6	2.9	2.8	2.7	3.3	3.5	3.0	6.3	4.4	4.4	5.8	3.7	3.2	4.3	8.4
15-Mar	Z	3.1	3.2	2.9	2.7	2.2	2.1	2.2	2.1	1.7	1.1	0.9	1.1	0.7	1.1	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	1.4	3.2
16-Mar	0.4	Z	0.4	0.4	0.3	0.3	0.3	0.5	1.9	2.0	1.3	1.4	1.1	0.9	0.9	1.0	1.3	1.8	1.6	1.5	1.4	1.3	1.3	1.2	1.1	2.0
17-Mar	1.1	1.2	Z	1.0	0.9	0.9	0.8	0.8	0.9	0.9	1.1	1.1	1.5	1.1	2.0	7.7	7.8	6.2	8.1	7.9	7.0	6.1	5.1	3.9	3.3	8.1
18-Mar	3.4	3.2	2.5	Z	2.6	2.1	1.5	1.0	0.6	0.4	0.4	0.4	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.3	1.0	3.4
19-Mar	0.3	2.4	3.5	3.6	Z	3.8	4.3	6.5	6.4	4.1	3.0	1.9	1.0	0.8	0.6	0.6	1.2	0.6	0.6	20.2	14.1	11.3	11.5	10.7	4.9	20.2
20-Mar	6.9	8.9	9.4	12.1	15.2	Z	19.0	18.2	13.0	6.4	3.4	1.5	2.4	2.1	2.2	5.3	6.4	6.7	7.7	8.7	10.0	11.9	11.5	9.7	8.6	19.0
21-Mar	Z	1.1	0.8	0.8	0.9	1.1	1.2	1.2	1.2	1.1	1.1	1.2	1.3	1.5	1.4	1.1	1.1	1.2	1.1	0.8	0.6	0.6	0.7	0.7	1.0	1.5
22-Mar	0.8	Z	1.4	1.2	1.2	1.3	1.2	1.2	1.2	1.4	1.3	1.1	1.0	0.7	0.6	0.6	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.9	1.4
23-Mar	0.5	0.5	Z	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.8	0.6	0.6	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	1.0	0.8	0.5	1.0
24-Mar	0.9	1.0	1.3	Z	1.2	1.0	0.9	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.5	0.8	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.7	1.3
25-Mar	0.3	0.3	0.3	0.3	Z	0.3	0.4	0.4	0.5	0.4	0.5	0.4	0.3	0.3	0.4	2.0	3.6	5.8	1.6	2.1	2.5	5.8	7.9	7.9	1.9	7.9
26-Mar	6.5	7.3	7.1	6.6	6.2	Z	6.5	4.9	3.4	2.8	3.3	2.9	4.6	6.5	7.4	6.8	4.1	5.3	12.0	10.0	8.5	11.4	12.2	10.8	6.8	12.2
27-Mar	Z	6.5	11.2	9.3	6.6	8.1	10.0	9.5	7.6	4.8	4.5	3.5	4.1	3.6	3.5	3.6	3.4	4.0	4.1	5.7	8.9	14.9	15.5	15.7	7.3	15.7
28-Mar	19.0	Z	16.0	20.0	24.7	26.0	24.6	22.9	12.7	5.2	4.4	2.3	2.6	3.3	2.3	2.1	2.6	3.4	5.7	7.5	7.3	8.2	8.5	7.8	10.4	26.0
29-Mar	11.1	15.1	Z	18.1	19.8	21.4	19.0	13.3	12.3	8.5	5.4	3.8	2.7	2.2	2.7	2.0	1.6	1.6	2.2	1.7	2.2	2.4	2.0	1.6	7.5	21.4
30-Mar	3.2	3.9	3.6	Z	1.6	1.0	0.7	0.6	0.8	0.8	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.9	1.1	0.9	1.2	0.9	1.2	3.9
31-Mar	1.0	1.0	1.0	1.0	Z	0.9	1.1	1.1	1.2	1.3	1.4	1.4	1.2	1.0	0.9	0.9	1.1	1.1	1.2	1.3	1.2	1.0	0.9	0.9	1.1	1.4
	4.3	4.6	4.8	6.1	7.3	7.3	7.9	6.6	5.3	4.0	3.2	2.3	2.0	2.3	2.3	2.7	3.0	3.5	3.9	4.8	4.7	5.0	4.8	4.6	Diurnal Average	
	19.0	20.9	19.7	27.7	28.3	33.8	30.5	31.3	21.0	19.0	17.8	15.0	12.2	14.2	15.3	17.4	16.7	25.3	13.3	20.2	15.9	15.5	15.5	15.7	Diurnal Maximum	

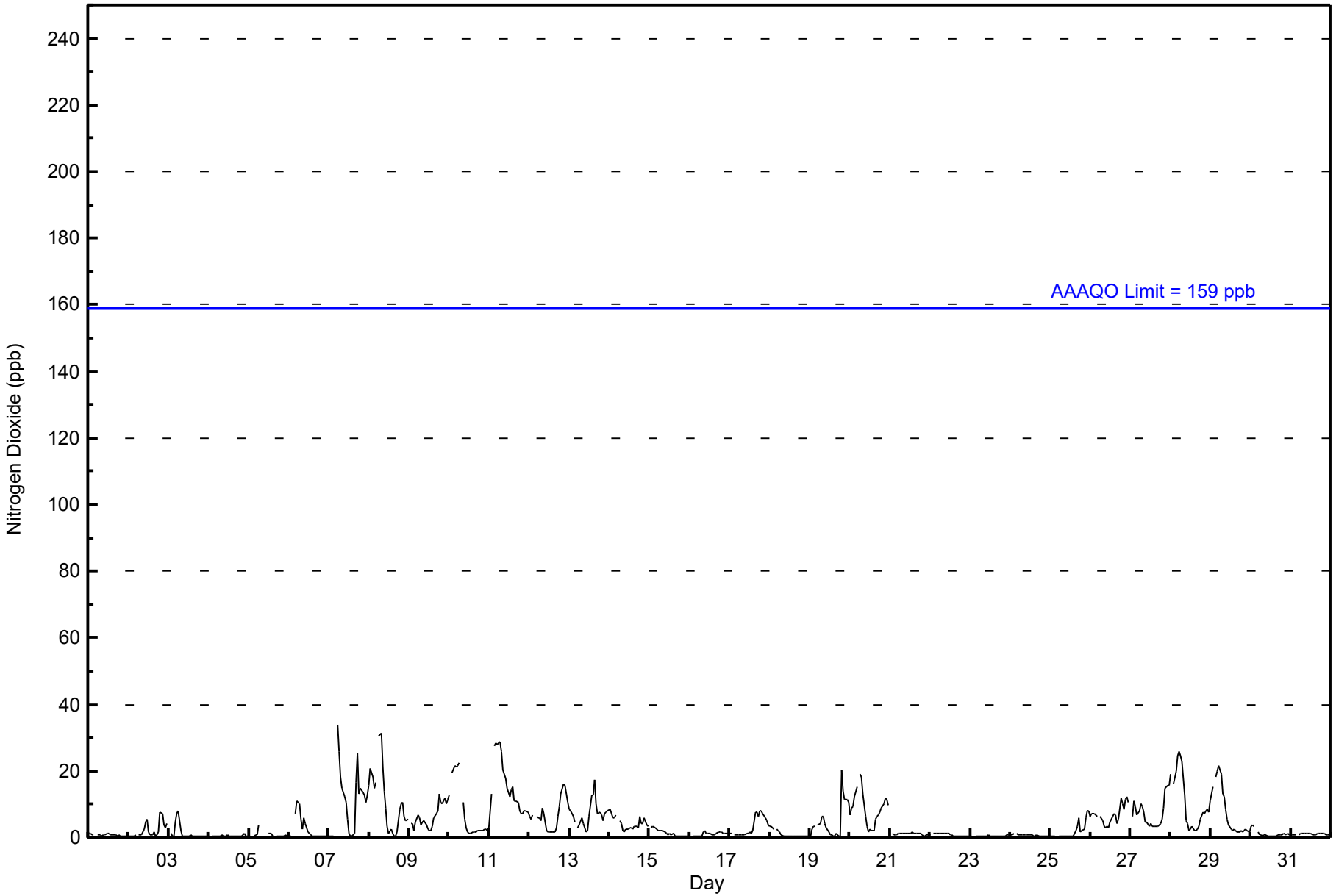
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Mackay River - March 2025



Nitrogen Dioxide (NO_2) - ppb
Mackay River - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	685	96.89	96.89
21 - 40	22	3.11	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Mackay River - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	24	82	83	40	13	60	73	48	36	20	23	43	58	25	19	31	678
21 - 40	0	6	10	2	0	0	0	0	1	0	0	0	0	0	0	3	22
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	24	88	93	42	13	60	73	48	37	20	23	43	58	25	19	34	700

Total Number of Valid Hours: 700

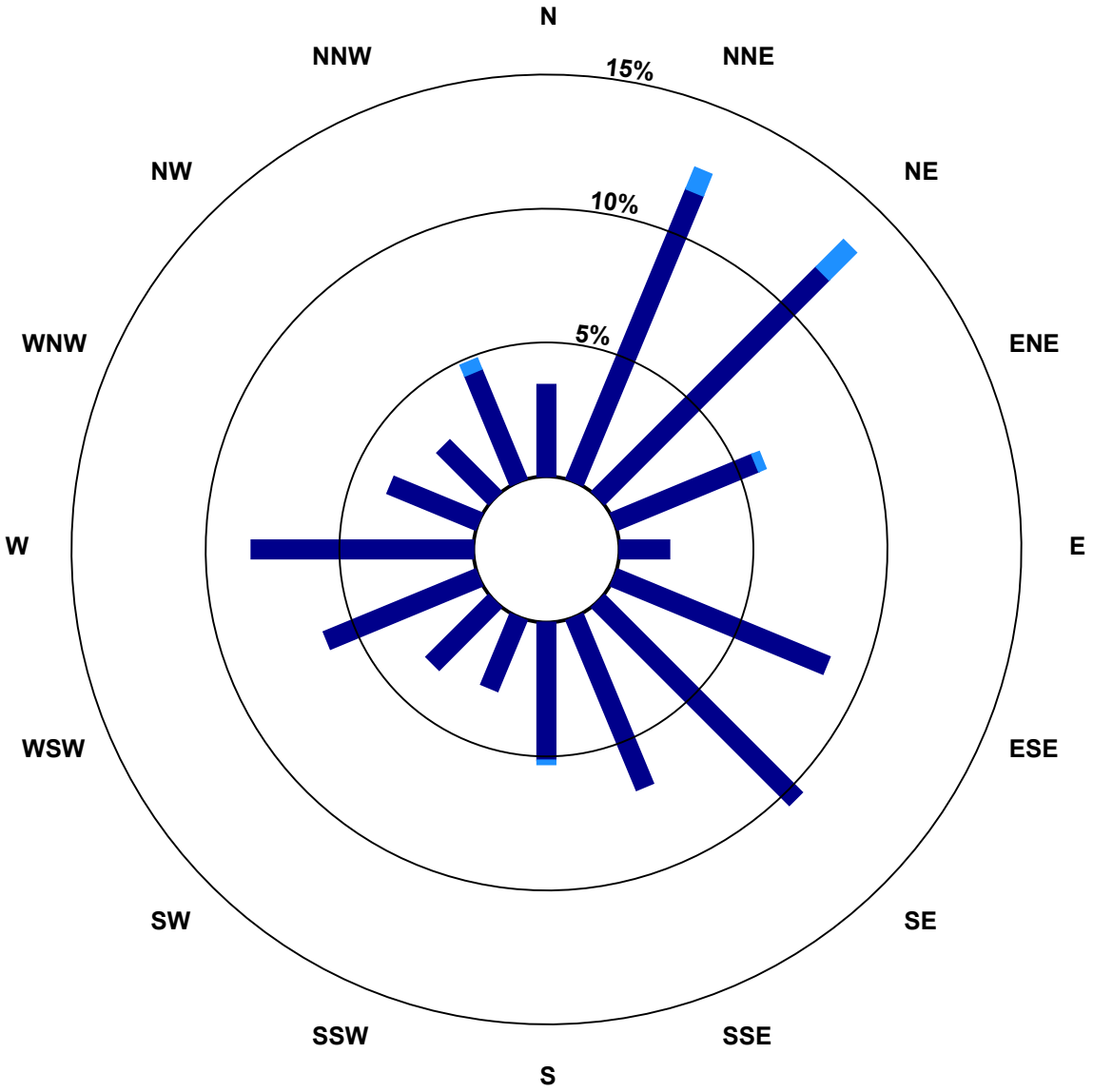
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Dioxide (NO_2) - ppb

Mackay River



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

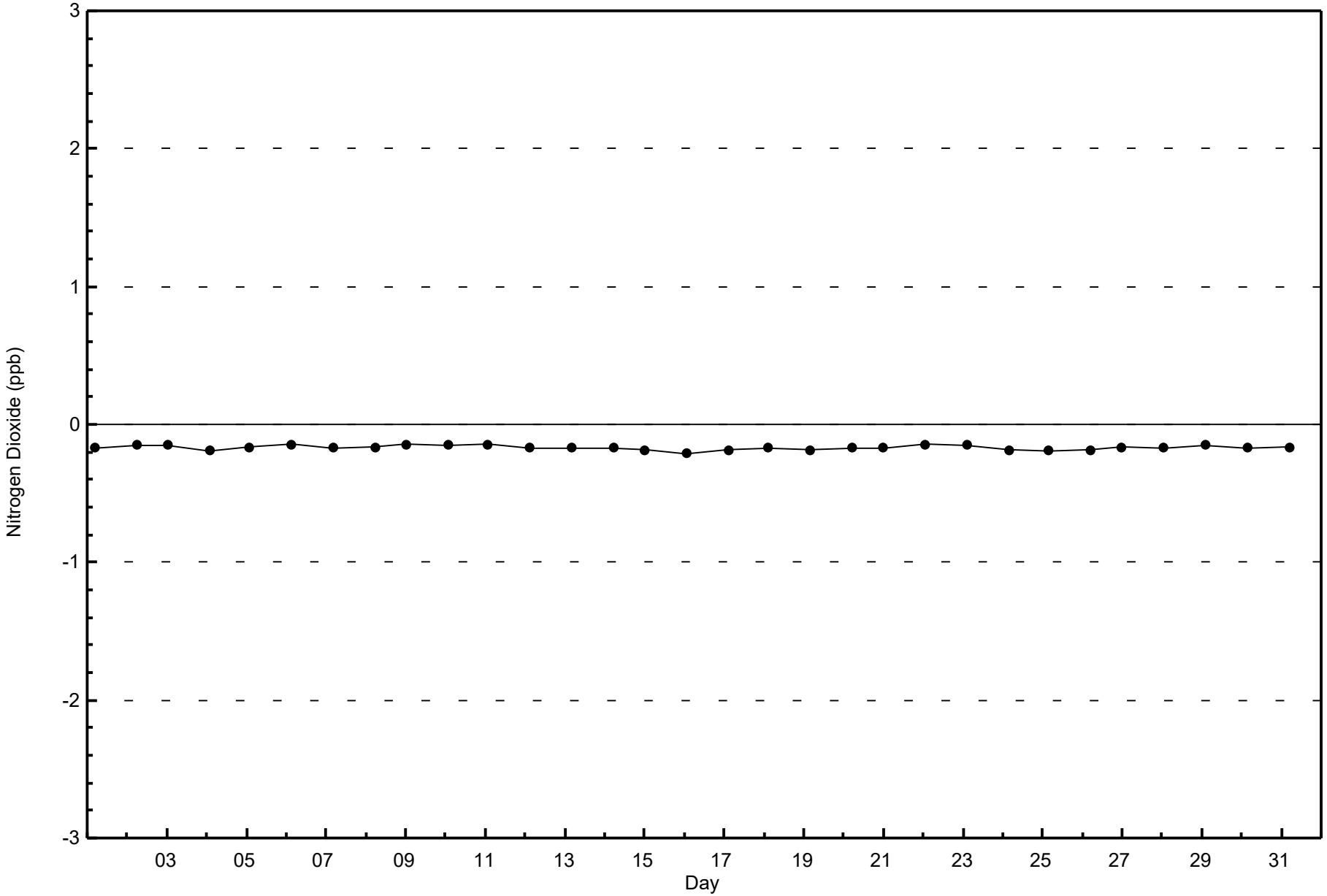
Total Number of Valid Hours: 700

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Mackay River - March 2025

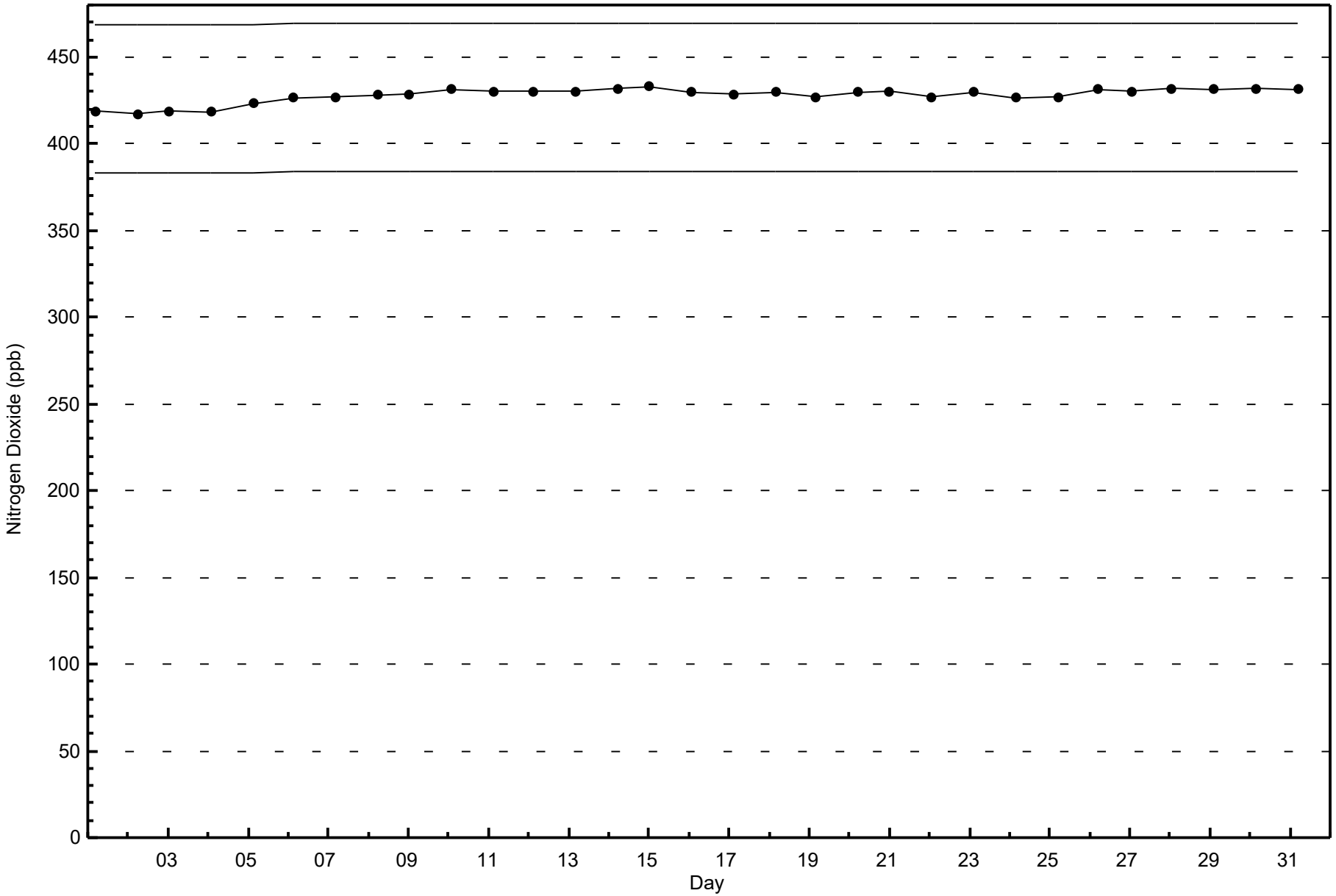


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Mackay River - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Mackay River - March 2025

Maximum Value: 46.2 ppb on Mar 7 06:00

Maximum Daily Average: 20.7 ppb on Mar 11

Minimum Value: 0.1 ppb on Mar 5 17:00

Minimum Daily Average: 0.5 ppb on Mar 23

Maximum Diurnal Average: 8.7 ppb at hour 7

Minimum Diurnal Average: 3.0 ppb at hour 13

Monthly Average: 5.13 ppb

Percentiles: P_1 = 0.3 P_{10} = 0.4 Q_1 = 0.7 Median = 2.1 Q_3 = 7.0 P_{90} = 13.3 P_{99} = 34.1

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	36
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	1.3	1.1	1.0	0.9	Z	0.9	0.7	0.7	0.7	1.0	1.1	1.3	1.3	0.9	0.8	0.7	0.7	0.6	0.7	0.6	0.6	0.6	0.6	0.7	0.9	1.3
2-Mar	0.7	0.7	0.6	0.7	0.7	Z	0.9	0.8	0.9	2.9	5.5	6.9	2.2	1.0	0.9	1.6	0.6	0.8	1.6	7.5	7.4	3.8	2.8	4.4	2.4	7.5
3-Mar	Z	1.1	0.6	0.5	4.5	7.4	8.0	2.1	0.5	0.5	0.6	0.5	0.5	0.7	0.3	0.5	0.5	0.4	0.5	0.6	0.6	0.5	0.5	0.4	1.4	8.0
4-Mar	0.4	Z	0.4	0.4	0.3	0.3	0.3	0.4	0.8	0.7	0.6	0.8	0.7	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.5	1.2	0.6	0.6	0.5	1.2
5-Mar	0.6	0.6	Z	0.6	0.8	1.0	3.9	C	C	C	C	C	1.6	1.6	0.3	0.1	0.1	0.3	0.5	0.5	0.5	0.6	0.9	0.4	0.8	3.9
6-Mar	0.3	0.3	0.2	Z	7.5	11.2	10.3	6.1	4.0	9.4	6.7	2.3	1.5	1.0	0.7	0.5	0.3	0.5	0.4	0.4	0.5	0.5	0.4	0.4	2.8	11.2
7-Mar	0.4	0.5	0.5	0.5	Z	46.2	26.2	19.8	18.7	16.9	16.6	7.3	1.6	0.6	0.4	1.5	21.3	31.3	13.3	14.8	13.7	12.9	10.6	13.0	12.5	46.2
8-Mar	15.8	21.0	18.4	15.1	16.7	Z	31.4	41.4	31.7	23.2	12.6	5.0	1.4	3.2	1.4	0.5	0.4	2.0	8.6	10.1	10.5	6.5	5.0	5.7	12.5	41.4
9-Mar	Z	4.2	4.1	2.2	4.6	6.6	5.8	4.0	5.8	6.1	5.3	3.5	3.4	4.2	6.1	9.5	9.8	9.7	13.7	10.4	10.1	11.7	10.1	11.3	7.0	13.7
10-Mar	12.6	Z	19.8	22.1	21.3	21.6	22.6	M	15.5	9.0	5.2	3.3	2.7	2.5	2.4	2.2	2.1	2.2	2.3	2.3	2.3	2.6	2.7	2.3	8.3	22.6
11-Mar	2.4	13.0	Z	37.5	40.3	34.2	36.7	36.8	32.7	31.4	31.1	27.1	20.9	22.5	22.6	15.6	14.0	11.8	8.3	7.1	7.3	8.2	7.9	7.8	20.7	40.3
12-Mar	6.3	5.7	6.7	Z	6.4	5.9	5.9	5.9	11.7	10.2	3.1	2.8	2.6	2.9	2.6	2.4	3.9	7.3	9.4	13.3	15.9	15.5	13.0	10.8	7.4	15.9
13-Mar	8.6	8.2	6.5	4.5	Z	2.9	4.1	6.6	4.9	4.3	2.3	3.2	9.0	19.2	17.6	21.8	11.0	7.5	7.6	6.7	5.1	7.2	7.7	7.9	8.0	21.8
14-Mar	8.4	7.3	5.8	5.8	6.9	Z	5.1	4.8	2.6	2.8	3.9	4.3	4.4	4.1	4.0	4.3	4.3	3.3	6.4	4.4	4.4	5.8	3.7	3.2	4.8	8.4
15-Mar	Z	3.1	3.2	2.9	2.7	2.2	2.1	2.4	2.6	2.3	1.5	1.3	1.5	0.9	1.4	0.7	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	1.5	3.2
16-Mar	0.4	Z	0.4	0.4	0.3	0.3	0.3	0.6	2.5	2.8	1.9	2.0	1.5	1.2	1.2	1.2	1.5	1.9	1.6	1.5	1.4	1.3	1.3	1.2	1.3	2.8
17-Mar	1.1	1.2	Z	1.0	0.9	0.9	0.8	0.8	1.0	1.0	1.3	1.4	2.1	1.3	2.4	9.4	9.6	7.0	8.4	7.9	7.0	6.1	5.1	3.9	3.5	9.6
18-Mar	3.4	3.2	2.5	Z	2.6	2.1	1.5	1.1	0.7	0.5	0.4	0.4	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.3	1.0	3.4
19-Mar	0.3	2.4	3.5	3.6	Z	3.8	4.4	7.9	9.4	6.1	4.6	2.9	1.3	0.9	0.7	0.6	1.4	0.6	0.6	20.3	14.1	11.3	11.5	10.7	5.4	20.3
20-Mar	6.9	8.9	9.4	12.1	15.2	Z	19.7	23.3	20.3	10.6	5.7	2.3	4.0	3.4	3.4	7.5	7.9	7.6	8.0	8.7	10.0	11.9	11.5	9.7	9.9	23.3
21-Mar	Z	1.1	0.8	0.8	0.9	1.1	1.2	1.4	1.5	1.6	1.7	1.8	1.9	2.1	2.0	1.4	1.3	1.3	1.1	0.8	0.6	0.6	0.7	0.7	1.2	2.1
22-Mar	0.8	Z	1.4	1.2	1.2	1.3	1.2	1.2	1.3	1.5	1.5	1.3	1.2	0.8	0.6	0.6	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.9	1.5
23-Mar	0.5	0.5	Z	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.4	1.1	0.7	0.7	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	1.0	0.8	0.5	1.1
24-Mar	0.9	1.0	1.3	Z	1.2	1.0	0.9	0.8	0.7	0.8	0.7	0.7	0.7	0.7	0.6	0.5	0.8	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.7	1.3
25-Mar	0.3	0.3	0.3	0.3	Z	0.3	0.4	0.4	0.5	0.5	0.5	0.4	0.3	0.3	0.5	2.5	4.3	6.6	1.7	2.1	2.5	5.8	7.9	7.9	2.0	7.9
26-Mar	6.5	7.3	7.1	6.6	6.2	Z	6.8	5.6	4.3	3.9	4.9	4.5	7.8	10.0	11.1	9.3	4.9	5.7	12.3	10.0	8.5	11.4	12.2	10.8	7.7	12.3
27-Mar	Z	6.5	11.2	9.3	6.6	8.1	10.3	11.0	9.8	6.8	7.2	5.7	6.9	5.8	5.5	5.3	4.6	4.8	4.3	5.7	8.9	14.9	15.5	15.7	8.3	15.7
28-Mar	19.0	Z	16.0	20.1	24.8	26.6	32.0	39.9	21.6	8.5	7.5	3.8	4.2	5.3	3.4	2.8	3.5	4.0	6.0	7.6	7.3	8.2	8.5	7.8	12.5	39.9
29-Mar	11.1	15.1	Z	18.2	19.9	21.6	22.6	21.6	22.1	15.0	8.7	6.1	4.1	3.2	3.9	2.6	2.0	1.8	2.3	1.7	2.2	2.4	2.0	1.6	9.2	22.6
30-Mar	3.2	3.9	3.6	Z	1.6	1.0	0.7	0.7	1.0	0.9	0.7	0.7	0.7	0.6	0.6	0.6	0.8	0.7	0.7	0.9	1.1	0.9	1.2	0.9	1.2	3.9
31-Mar	1.0	1.0	1.0	1.0	Z	0.9	1.1	1.1	1.3	1.4	1.5	1.5	1.3	1.1	0.9	0.9	1.2	1.2	1.2	1.3	1.2	1.0	0.9	0.9	1.1	1.5
	4.4	4.6	4.9	6.5	7.8	8.1	8.7	8.6	7.7	6.1	4.8	3.5	3.0	3.3	3.2	3.5	3.7	4.0	4.0	4.8	4.7	5.0	4.8	4.6	Diurnal Average	
	19.0	21.0	19.8	37.5	40.3	46.2	36.7	41.4	32.7	31.4	31.1	27.1	20.9	22.5	22.6	21.8	21.3	31.3	13.7	20.3	15.9	15.5	15.5	15.7	Diurnal Maximum	

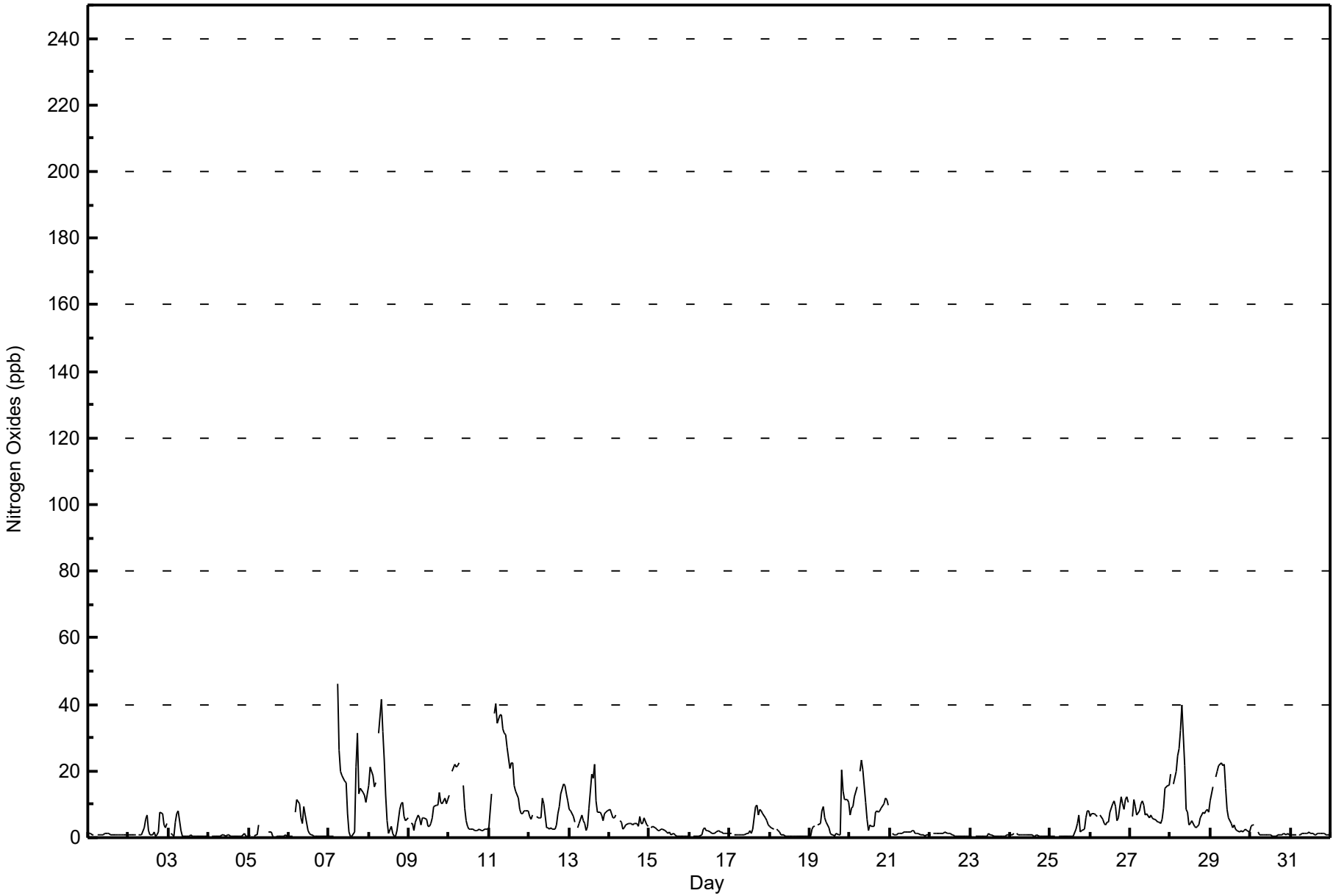
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Mackay River - March 2025



Nitrogen Oxides (NO_X) - ppb
Mackay River - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	671	94.91	94.91
21 - 40	34	4.81	99.72
11 - 80	2	0.28	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Mackay River - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	24	79	75	40	13	60	73	48	36	20	23	43	58	25	19	30	666
21 - 40	0	8	18	2	0	0	0	0	1	0	0	0	0	0	0	3	32
11 - 80	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	24	88	93	42	13	60	73	48	37	20	23	43	58	25	19	34	700

Total Number of Valid Hours: 700

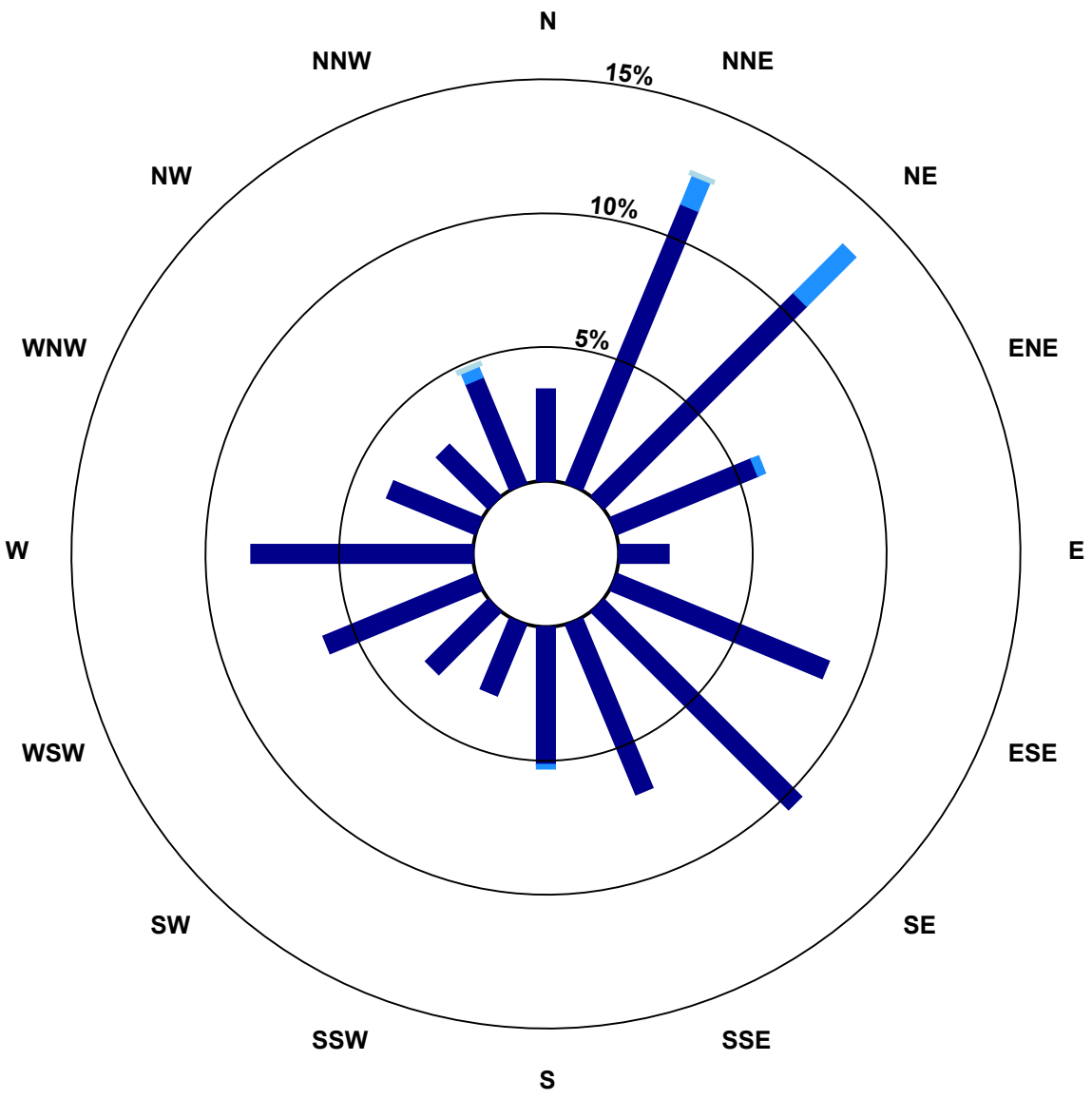
Total Number of Hours: 744

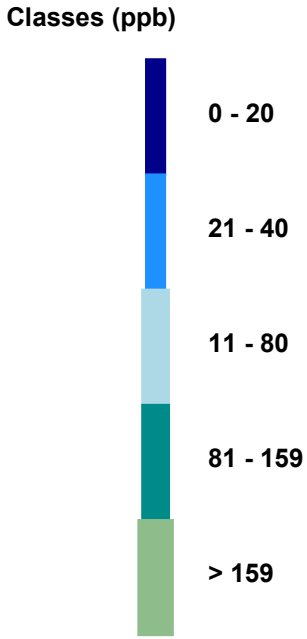
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Oxides (NO_X) - ppb

Mackay River





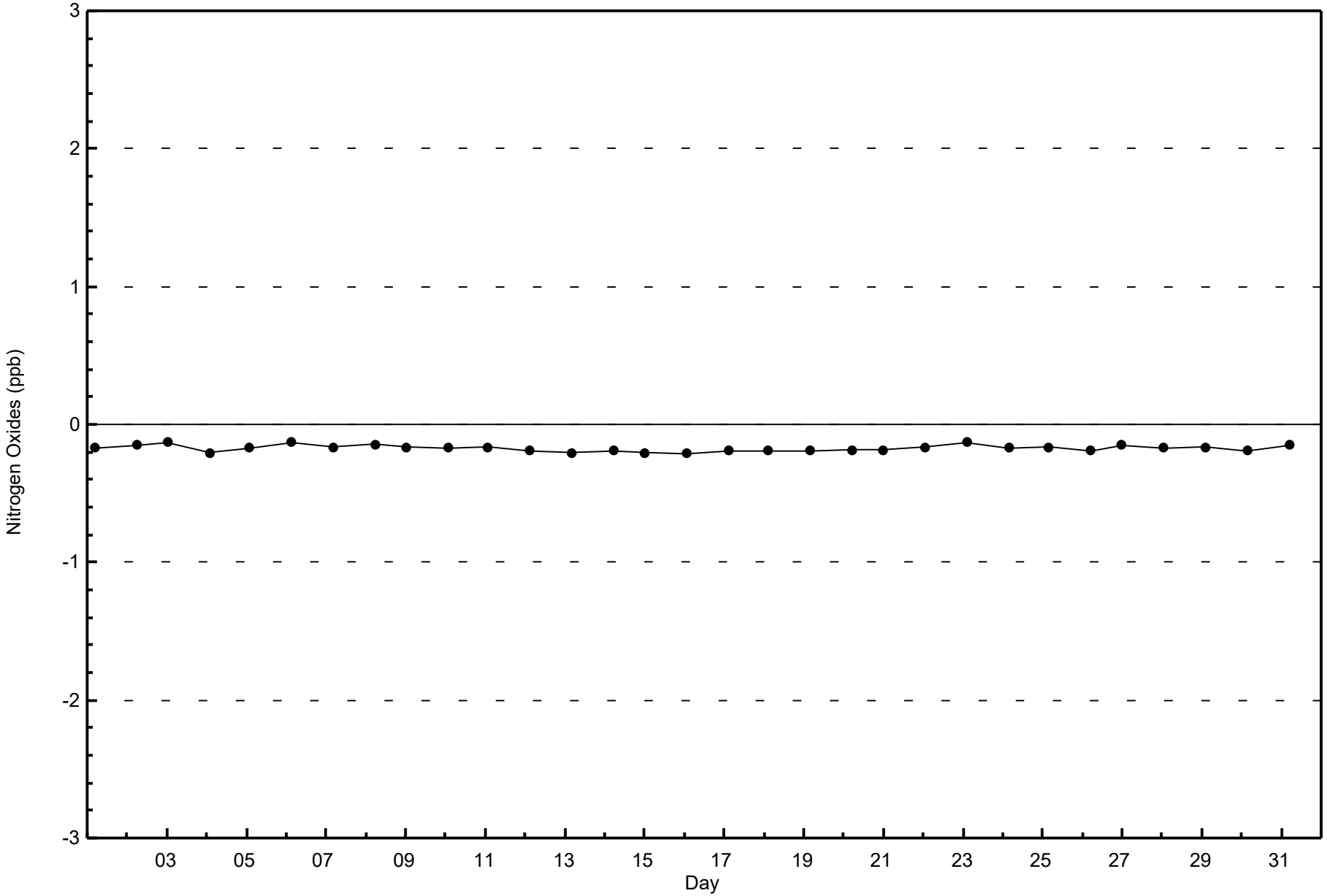
Total Number of Valid Hours: 700

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Mackay River - March 2025

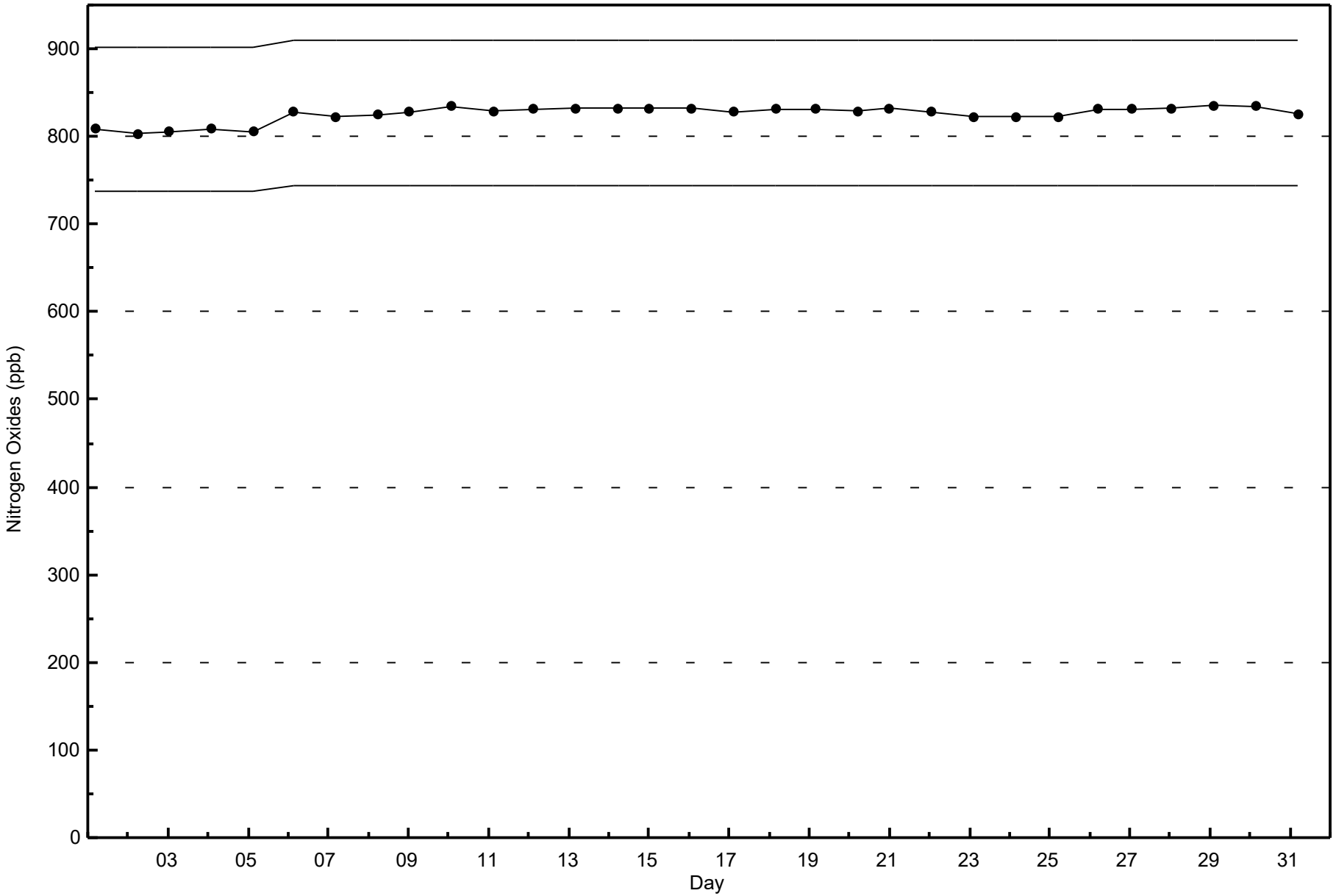


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Mackay River - March 2025



Maximum Value: 10.0 C on Mar 1 15:00

Maximum Daily Average: 2.8 C on Mar 2

Minimum Value: -27.6 C on Mar 16 07:00

Minimum Daily Average: -21.4 C on Mar 9

Maximum Diurnal Average: -1.7 C at hour 16

Minimum Diurnal Average: -13.6 C at hour 7

Monthly Average: -7.82 C

Percentiles: P_1 = -24.4 P_{10} = -19.3 Q_1 = -14.2 Median = -7.7 Q_3 = -1.2 P_{90} = 3.4 P_{99} = 9.1

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

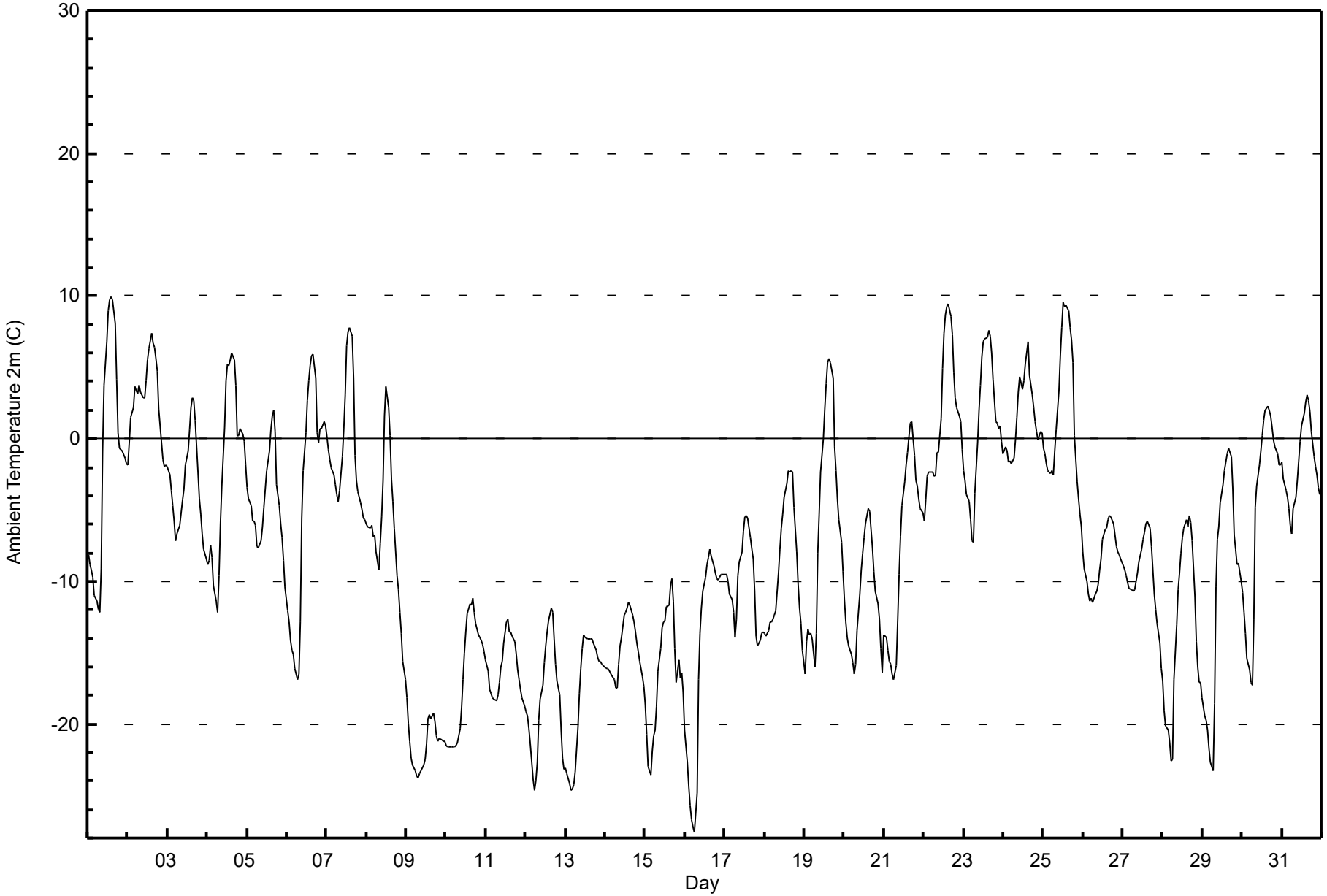
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-8.1	-8.8	-9.2	-9.7	-11.0	-11.4	-12.0	-12.2	-9.1	-0.8	3.7	6.8	8.9	9.7	10.0	9.7	8.1	4.1	0.4	-0.6	-0.8	-0.8	-1.4	-1.8	-1.5	10.0
2-Mar	-1.8	-0.3	1.5	2.2	3.7	3.3	3.2	3.8	3.3	2.8	2.9	4.0	5.5	6.3	7.4	6.7	6.4	5.6	4.7	2.0	-0.3	-1.4	-1.9	-1.9	2.8	7.4
3-Mar	-2.0	-2.5	-3.7	-4.7	-5.8	-7.2	-6.7	-6.1	-5.2	-4.4	-3.5	-1.9	-0.8	0.6	2.2	2.9	2.7	1.3	-2.4	-4.2	-5.3	-6.7	-7.8	-8.5	-3.3	2.9
4-Mar	-8.8	-8.5	-7.5	-8.4	-10.3	-11.4	-12.2	-9.6	-6.0	-3.3	0.8	4.0	5.2	5.1	5.5	6.0	5.5	3.7	0.2	0.2	0.7	0.3	-0.2	-1.8	-2.1	6.0
5-Mar	-3.4	-4.3	-4.7	-5.8	-5.8	-6.1	-7.6	-7.6	-7.1	-6.2	-4.8	-3.6	-2.2	-0.8	0.6	1.6	2.0	0.5	-3.2	-4.7	-6.0	-7.0	-8.6	-10.4	-4.4	2.0
6-Mar	-12.0	-12.9	-14.2	-14.9	-15.1	-16.1	-16.9	-16.5	-12.9	-5.5	-2.2	0.4	2.7	4.0	5.1	5.8	5.9	4.3	0.4	-0.3	0.7	0.7	1.2	0.9	-4.5	5.9
7-Mar	0.1	-0.8	-1.5	-2.0	-2.6	-3.2	-3.9	-4.4	-3.7	-1.2	0.7	3.1	6.5	7.5	7.7	7.2	4.3	-1.1	-3.0	-3.7	-4.5	-5.0	-5.5	-5.7	-0.6	7.7
8-Mar	-6.0	-6.2	-6.3	-6.1	-6.9	-6.8	-8.0	-9.2	-7.3	-5.4	-3.0	1.6	3.6	2.2	0.2	-2.8	-4.4	-6.3	-9.6	-10.6	-12.2	-13.7	-15.6	-16.9	-6.5	3.6
9-Mar	-18.2	-20.0	-21.2	-22.4	-22.9	-23.3	-23.7	-23.8	-23.5	-23.3	-22.9	-22.5	-21.4	-19.7	-19.3	-19.6	-19.3	-19.9	-20.9	-21.2	-21.1	-21.1	-21.2	-21.3	-21.4	-18.2
10-Mar	-21.5	-21.6	-21.6	-21.6	-21.6	-21.7	-21.5	-21.3	-20.4	-18.8	-16.9	-15.1	-13.5	-12.2	-11.6	-11.7	-11.2	-12.2	-12.9	-13.7	-13.9	-14.2	-14.5	-14.9	-16.7	-11.2
11-Mar	-15.5	-16.3	-17.5	-17.9	-18.2	-18.3	-18.4	-18.0	-17.1	-16.0	-15.6	-14.4	-12.9	-12.7	-13.5	-13.6	-13.9	-14.2	-15.1	-16.2	-16.9	-17.6	-18.2	-18.7	-16.1	-12.7
12-Mar	-19.1	-19.5	-20.3	-21.4	-23.8	-24.7	-24.0	-22.7	-19.7	-18.3	-17.2	-15.8	-14.6	-13.6	-12.7	-11.9	-12.2	-14.1	-15.8	-17.0	-18.0	-20.4	-22.4	-23.2	-18.4	-11.9
13-Mar	-23.1	-23.4	-24.1	-24.6	-24.5	-24.3	-23.4	-20.3	-17.8	-16.1	-14.8	-13.8	-13.9	-14.1	-14.0	-14.1	-14.1	-14.4	-14.8	-15.3	-15.6	-15.7	-15.8	-15.9	-17.8	-13.8
14-Mar	-16.1	-16.1	-16.2	-16.4	-16.6	-16.9	-17.5	-17.5	-15.8	-14.5	-14.0	-12.4	-12.2	-11.9	-11.5	-11.7	-12.4	-12.9	-13.6	-14.3	-14.9	-15.7	-16.7	-17.4	-14.8	-11.5
15-Mar	-18.7	-20.7	-23.0	-23.6	-21.9	-20.8	-20.5	-18.8	-16.3	-14.7	-13.2	-12.8	-12.8	-11.8	-11.6	-10.3	-9.8	-11.4	-14.7	-17.1	-15.6	-16.8	-16.4	-17.7	-16.3	-9.8
16-Mar	-20.4	-22.7	-24.3	-25.7	-26.7	-27.3	-27.6	-24.8	-16.9	-13.7	-11.9	-10.7	-9.7	-8.8	-8.4	-7.7	-8.2	-9.0	-9.5	-9.8	-9.9	-9.7	-9.5	-9.5	-15.1	-7.7
17-Mar	-9.5	-9.5	-10.1	-10.9	-11.3	-12.2	-14.0	-12.7	-9.6	-8.7	-7.9	-6.5	-5.5	-5.4	-5.6	-7.0	-7.7	-8.4	-10.7	-13.9	-14.6	-14.1	-13.7	-13.6	-10.1	-5.4
18-Mar	-13.6	-13.8	-13.4	-12.8	-12.8	-12.6	-12.4	-12.1	-9.5	-7.7	-6.2	-5.3	-4.1	-3.1	-2.2	-2.3	-2.2	-2.3	-4.8	-8.0	-10.2	-11.8	-12.9	-14.9	-8.8	-2.2
19-Mar	-16.5	-14.2	-13.4	-13.7	-13.6	-14.0	-16.0	-13.6	-8.0	-5.3	-2.4	0.0	2.1	3.9	5.4	5.6	5.3	4.3	-0.6	-2.2	-4.2	-5.7	-7.3	-9.3	-5.6	5.6
20-Mar	-11.3	-12.9	-13.9	-14.5	-15.1	-15.7	-16.5	-15.8	-13.4	-10.9	-9.2	-8.0	-7.0	-6.0	-4.9	-5.1	-6.4	-7.6	-9.3	-10.7	-11.6	-12.7	-14.7	-16.4	-11.2	-4.9
21-Mar	-13.8	-14.0	-14.8	-15.6	-15.8	-16.5	-16.9	-15.9	-12.8	-9.5	-6.8	-4.7	-3.0	-1.9	-0.9	0.1	1.1	1.2	-1.2	-2.9	-3.4	-4.3	-4.9	-5.2	-7.6	1.2
22-Mar	-5.7	-4.3	-2.6	-2.3	-2.4	-2.3	-2.6	-2.5	-0.9	-0.9	1.4	5.0	7.4	8.7	9.3	9.5	8.5	7.3	4.7	2.8	2.2	1.6	1.2	-0.8	1.7	9.5
23-Mar	-2.2	-2.9	-3.9	-4.4	-5.7	-7.2	-7.2	-3.8	-0.2	2.0	3.7	5.7	6.8	7.0	7.1	7.6	7.2	6.0	4.2	1.2	1.1	0.7	0.9	-0.1	1.0	7.6
24-Mar	-1.1	-0.6	-0.9	-1.6	-1.6	-1.8	-1.4	-0.1	1.5	3.3	4.4	3.4	4.0	5.2	6.0	6.8	4.5	3.0	2.2	1.2	0.5	-0.1	0.5	0.5	1.6	6.8
25-Mar	-0.7	-1.1	-1.7	-2.2	-2.4	-2.2	-2.5	-0.9	0.6	3.4	5.8	7.8	9.5	9.3	9.4	9.0	7.8	6.9	5.3	0.2	-3.0	-4.2	-5.3	-6.1	1.8	9.5
26-Mar	-7.9	-9.1	-10.0	-10.9	-11.4	-11.2	-11.5	-10.9	-10.7	-10.2	-9.3	-8.5	-7.1	-6.3	-6.3	-5.7	-5.4	-5.5	-6.0	-6.8	-7.5	-8.0	-8.1	-8.4	-8.4	-5.4
27-Mar	-8.9	-9.2	-9.6	-10.1	-10.5	-10.6	-10.7	-10.6	-10.0	-9.5	-8.7	-7.7	-7.1	-6.5	-6.0	-5.8	-6.3	-7.6	-9.3	-10.9	-12.0	-13.0	-14.3	-16.1	-9.6	-5.8
28-Mar	-17.0	-19.1	-20.2	-20.4	-21.3	-22.6	-22.5	-16.9	-13.0	-10.6	-9.4	-8.0	-6.9	-6.3	-5.7	-6.2	-5.4	-5.9	-7.2	-11.1	-14.2	-16.0	-17.1	-17.1	-13.3	-5.4
29-Mar	-18.2	-19.4	-19.8	-20.4	-21.7	-22.7	-23.3	-18.5	-10.4	-7.1	-6.1	-4.5	-3.3	-2.3	-1.6	-1.0	-0.6	-1.3	-3.5	-6.8	-7.7	-8.9	-8.8	-10.0	-10.3	-0.6
30-Mar	-10.8	-12.2	-13.7	-15.4	-16.2	-17.1	-17.3	-12.7	-4.8	-3.3	-1.9	-0.9	0.2	1.3	2.0	2.3	2.0	1.6	0.8	-0.1	-0.5	-1.1	-1.9	-1.9	-5.1	2.3
31-Mar	-1.7	-2.8	-3.6	-4.1	-4.9	-6.1	-6.7	-4.9	-4.1	-3.0	-1.6	-0.2	0.9	1.8	2.6	3.0	2.7	1.9	0.5	-1.2	-1.9	-2.6	-3.4	-3.9	-1.8	3.0
	-10.8	-11.3	-11.8	-12.3	-12.8	-13.3	-13.6	-12.3	-9.7	-7.7	-6.0	-4.4	-3.0	-2.3	-1.8	-1.7	-2.1	-3.3	-5.3	-7.0	-7.8	-8.5	-9.2	-9.9	Diurnal Average	
	0.1	-0.3	1.5	2.2	3.7	3.3	3.2	3.8	3.3	3.4	5.8	7.8	9.5	9.7	10.0	9.7	8.5	7.3	5.3	2.8	2.2	1.6	1.2	0.9	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Mackay River - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	66	8.87	8.87
-20 - 0	529	71.10	79.97
0 - 10	149	20.03	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Mackay River - March 2025

Maximum Value: 96.9 % on Mar 24 22:00

Maximum Daily Average: 78.4 % on Mar 11

Minimum Value: 18.8 % on Mar 29 17:00

Minimum Daily Average: 45.4 % on Mar 21

Maximum Diurnal Average: 78.9 % at hour 7

Minimum Diurnal Average: 45.3 % at hour 16

Monthly Average: 65.09 %

Percentiles: P_1 = 28.5 P_{10} = 39.5 Q_1 = 53.3 Median = 68.1 Q_3 = 79.2 P_{90} = 84.0 P_{99} = 93.3

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

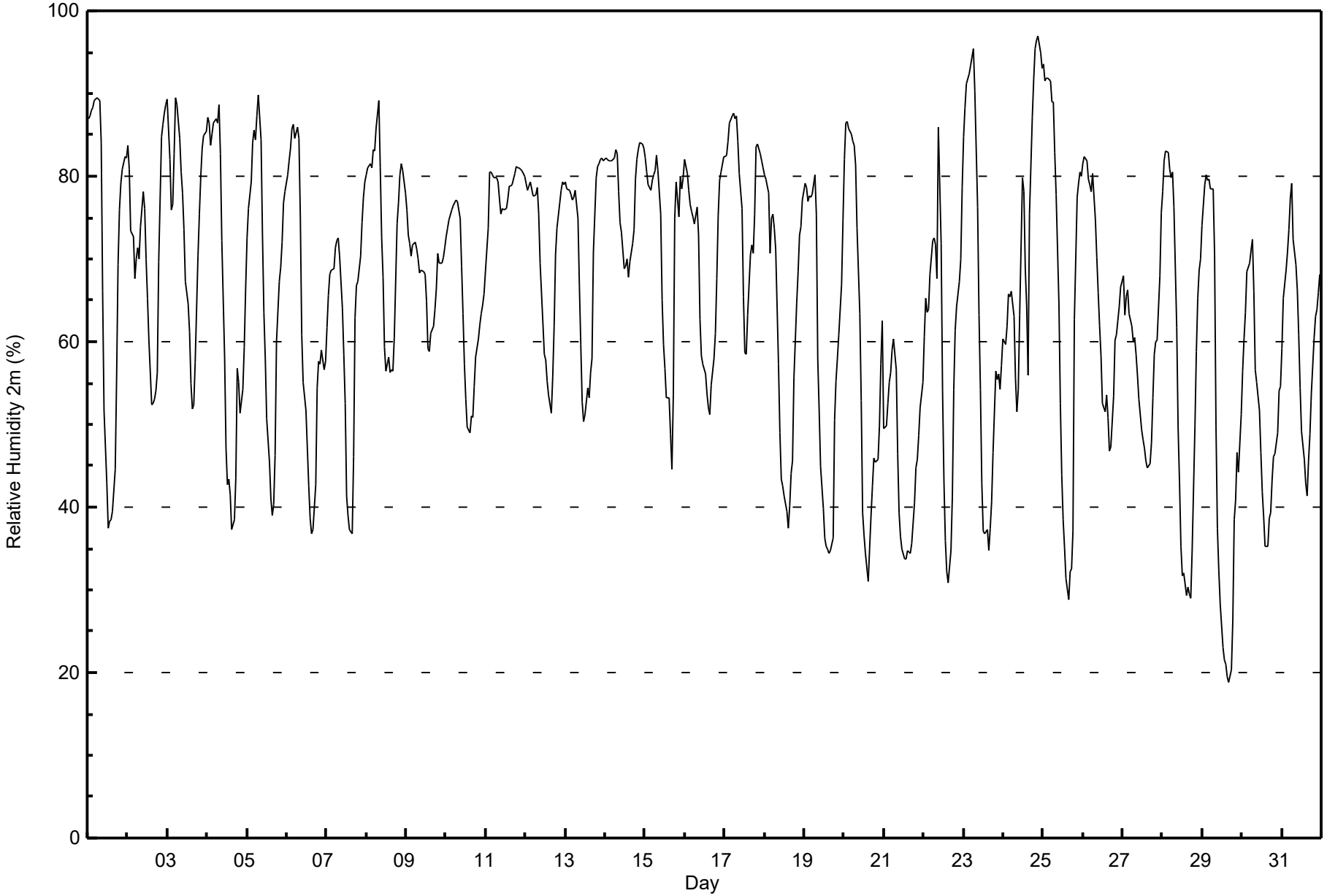
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	86.9	87.3	87.9	88.3	89.1	89.6	89.3	89.1	84.1	66.1	51.7	42.9	37.5	38.4	38.5	39.5	44.5	56.0	69.4	75.9	79.1	80.8	82.4	82.1	69.8	89.6
2-Mar	83.7	80.8	73.5	72.6	67.7	69.9	71.4	69.9	73.9	78.2	76.1	69.9	65.3	60.1	52.4	52.6	53.1	54.0	56.3	69.6	84.7	86.3	87.6	88.7	70.8	88.7
3-Mar	89.3	82.0	75.9	76.6	82.8	89.4	88.7	84.6	80.6	78.0	73.6	67.3	64.6	61.3	54.9	51.9	52.4	57.4	70.3	75.4	80.1	83.4	84.8	85.5	74.6	89.4
4-Mar	87.2	86.5	83.8	85.1	86.5	86.9	86.5	88.6	82.6	72.2	58.1	47.0	42.6	43.5	41.5	37.3	38.4	43.6	56.9	55.1	51.3	54.2	59.3	66.4	64.2	88.6
5-Mar	72.5	76.1	79.4	84.1	85.7	84.4	87.3	89.9	84.4	72.9	63.6	57.9	50.7	45.3	40.9	39.0	40.3	46.3	59.9	67.3	69.0	72.1	76.7	78.2	67.7	89.9
6-Mar	80.2	81.9	83.4	85.7	86.3	84.6	85.9	84.6	75.1	60.8	55.1	51.7	47.1	42.5	38.7	36.7	37.4	42.8	54.4	57.6	57.3	59.0	56.5	57.6	62.6	86.3
7-Mar	61.7	65.5	68.1	68.7	68.8	71.4	72.2	72.6	70.3	64.1	58.5	52.6	41.3	39.0	37.4	36.9	46.1	62.9	66.7	67.3	70.4	74.3	77.5	79.3	62.2	79.3
8-Mar	80.2	81.1	81.5	81.0	83.3	83.1	85.8	89.1	81.0	72.6	67.8	59.3	56.5	58.1	56.2	56.6	56.4	60.5	74.2	76.8	80.1	81.6	80.7	78.0	73.4	89.1
9-Mar	75.9	72.9	71.8	70.4	71.7	72.1	71.2	70.0	68.3	68.7	68.4	68.1	65.0	59.2	58.8	61.0	61.9	63.9	66.4	70.7	69.4	69.5	70.2	71.3	68.2	75.9
10-Mar	72.8	73.7	74.8	75.9	76.5	76.8	77.0	77.0	74.8	69.2	63.4	57.3	53.1	49.6	49.0	51.0	50.8	54.6	58.1	60.4	62.0	63.4	64.4	65.7	64.6	77.0
11-Mar	68.4	73.8	80.5	80.4	80.1	79.8	79.8	79.3	77.4	75.5	76.1	76.0	76.1	77.4	78.9	78.8	79.0	80.4	81.2	81.1	81.1	80.8	80.6	80.0	78.4	81.2
12-Mar	79.2	78.4	78.8	79.3	77.6	77.6	77.8	78.7	75.5	69.5	62.2	58.5	57.7	55.2	53.6	51.4	55.7	61.9	70.5	73.7	76.9	78.2	79.3	79.0	70.3	79.3
13-Mar	79.3	78.5	78.4	77.9	77.2	77.5	78.3	74.8	66.7	59.6	52.7	50.4	51.2	54.4	53.3	56.4	58.0	70.9	79.8	81.3	81.6	82.0	82.2	81.9	70.2	82.2
14-Mar	82.2	82.1	81.9	81.8	81.8	82.3	83.2	82.8	78.2	74.4	73.2	68.8	69.1	70.0	67.7	69.7	71.8	73.6	79.7	82.1	83.3	84.0	84.0	83.4	78.0	84.0
15-Mar	82.2	80.4	78.9	78.3	79.5	80.1	80.8	82.5	80.6	75.4	65.0	59.7	56.7	53.2	53.3	48.9	44.5	53.6	74.9	79.4	75.1	79.9	78.5	79.8	70.9	82.5
16-Mar	82.1	80.4	78.3	76.6	75.8	75.1	74.2	76.4	72.9	62.8	58.4	57.3	56.1	53.8	52.1	51.2	54.7	58.0	61.0	67.6	75.3	79.6	80.4	82.4	68.4	82.4
17-Mar	82.4	82.5	84.3	86.5	87.3	87.6	87.0	87.3	84.3	80.3	76.2	65.4	58.7	58.5	63.2	70.5	71.7	70.7	75.5	83.6	83.9	82.7	81.9	81.1	78.0	87.6
18-Mar	80.2	79.7	77.9	70.7	75.0	75.4	73.7	71.2	57.3	48.9	43.4	42.5	41.3	39.6	37.5	40.1	44.1	45.7	55.6	64.7	68.4	72.8	73.8	77.2	60.7	80.2
19-Mar	79.1	78.6	77.0	77.6	77.5	77.8	80.1	75.4	57.9	51.7	45.0	39.9	36.2	35.2	34.8	34.4	34.7	36.3	50.5	55.2	57.9	60.8	67.0	74.8	58.1	80.1
20-Mar	82.0	86.4	86.6	85.7	85.1	84.2	83.7	81.4	73.8	63.4	52.8	39.3	36.6	34.4	31.0	35.0	39.0	42.6	45.9	45.4	45.8	49.8	57.3	62.5	59.6	86.6
21-Mar	49.6	49.8	52.5	55.1	56.3	58.9	60.3	56.6	46.5	39.4	36.5	34.9	33.7	33.7	34.7	34.6	34.4	35.6	40.5	44.8	45.7	48.7	52.1	55.1	45.4	60.3
22-Mar	60.7	65.3	63.5	63.9	68.2	72.2	72.5	71.6	67.6	85.9	71.9	54.2	43.1	35.9	32.2	30.8	34.8	41.3	54.2	61.4	64.2	67.2	70.1	78.6	59.6	85.9
23-Mar	84.7	88.3	91.1	92.4	93.4	94.5	95.5	90.4	76.3	63.2	54.3	42.9	37.1	36.8	37.3	34.7	37.5	40.6	46.6	56.4	55.5	56.0	54.3	57.1	63.2	95.5
24-Mar	60.4	59.6	61.8	65.8	65.4	66.2	63.0	55.6	51.5	54.2	63.2	79.8	78.1	68.8	64.3	55.9	75.4	87.2	91.7	95.5	96.4	96.9	94.9	93.1	72.7	96.9
25-Mar	93.6	91.5	91.8	91.8	91.5	89.0	88.9	82.9	77.7	64.6	52.6	43.9	38.4	35.1	31.4	28.9	32.3	32.6	37.0	62.6	77.4	79.2	80.4	80.0	65.6	93.6
26-Mar	81.4	82.3	81.9	79.6	79.0	78.2	80.4	74.7	70.1	66.0	61.9	58.3	52.6	51.6	53.5	50.8	46.7	47.3	53.4	60.1	60.8	62.6	64.3	66.6	65.2	82.3
27-Mar	68.0	63.3	65.4	66.3	63.4	61.9	60.1	60.5	58.4	55.9	53.1	49.4	48.2	47.1	45.6	44.7	45.3	47.9	53.2	58.4	59.9	60.2	67.9	75.6	57.5	75.6
28-Mar	78.2	81.9	83.0	82.9	80.9	79.9	80.5	76.3	61.7	49.5	42.8	35.2	31.6	32.0	29.4	30.4	29.4	29.0	34.8	49.8	58.8	65.3	68.7	70.0	56.8	83.0
29-Mar	74.1	79.0	80.2	79.4	79.7	78.4	78.5	70.5	49.7	37.4	32.4	28.2	23.1	21.5	21.0	19.4	18.8	20.3	26.2	38.5	40.9	46.6	44.2	51.1	47.5	80.2
30-Mar	56.5	60.3	63.6	68.5	69.4	71.1	72.4	66.0	56.6	55.1	51.6	46.6	41.9	38.7	35.2	35.3	38.6	39.3	43.2	46.0	46.4	49.0	54.1	54.6	52.5	72.4
31-Mar	59.2	65.2	68.6	70.8	73.5	77.4	79.2	72.5	69.3	66.3	60.8	54.3	49.2	45.8	42.8	41.4	45.6	48.8	53.8	60.4	63.0	63.9	66.0	68.1	61.1	79.2
	75.9	76.6	77.0	77.4	77.9	78.5	78.9	76.9	70.5	64.6	58.8	53.5	49.7	47.6	45.8	45.3	47.5	51.8	59.4	65.3	67.8	70.0	71.7	73.7	Diurnal Average	
	93.6	91.5	91.8	92.4	93.4	94.5	95.5	90.4	84.4	85.9	76.2	79.8	78.1	77.4	78.9	78.8	79.0	87.2	91.7	95.5	96.4	96.9	94.9	93.1	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Mackay River - March 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	2	0.27	0.27
20 - 40	75	10.08	10.35
40 - 60	200	26.88	37.23
60 - 80	305	40.99	78.23
80 - 100	162	21.77	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Precipitation (PC) - mm

Mackay River - March 2025

Maximum Value: 0.7 mm on Mar 13 23:00

Maximum Daily Total: 3.8 mm on Mar 13

Minimum Value: 0.0 mm on Mar 1 01:00

Minimum Daily Total: 0.0 mm on Mar 1

Maximum Diurnal Total: 0.9 mm at hour 22

Minimum Diurnal Total: 0.0 mm at hour 7

Monthly Total: 9.95 mm

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.0 P_{90} = 0.0 P_{99} = 0.4

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	0
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.3
10-Mar	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2
11-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.5	0.3	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.3	0.0	0.1	2.5	0.5
12-Mar	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
13-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.6	0.6	0.6	0.7	0.5	3.8	0.7
14-Mar	0.5	0.3	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	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.0	1.7	0.5
15-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22-Mar	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	0.0	0.3	0.3
23-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3
25-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.6	0.3	0.2	0.4	0.2	0.1	0.0	0.1	0.1	0.7	0.6	0.6	0.6	0.4	0.3	0.1	0.1	0.6	0.7	0.8	0.6	0.9	0.7	0.6	Diurnal Average	
	0.5	0.3	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.3	0.3	0.3	0.5	0.3	0.3	0.1	0.1	0.3	0.6	0.6	0.6	0.6	0.7	0.5	Diurnal Maximum	

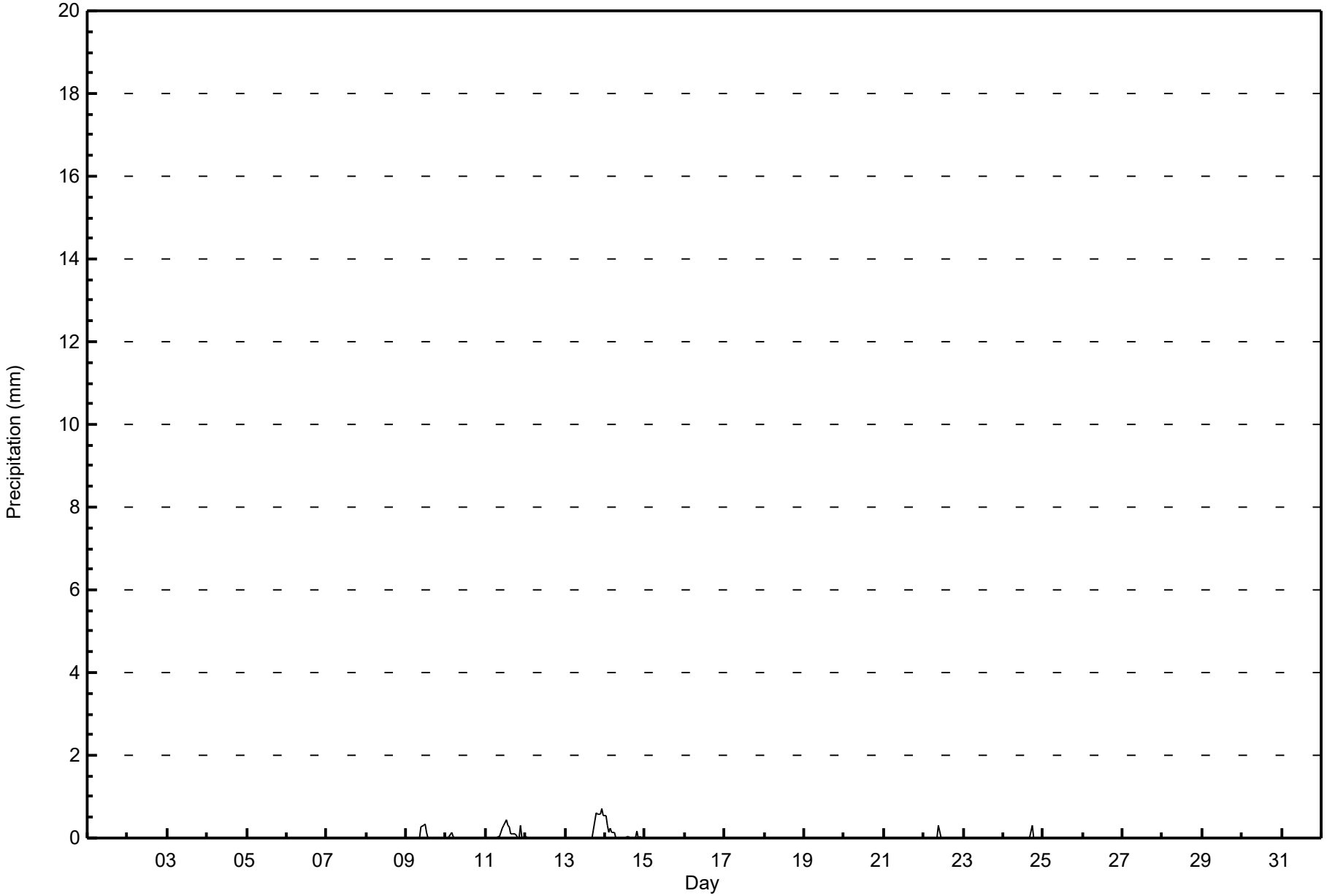
M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Precipitation (PC) - mm

Mackay River - March 2025



Concentration Ranges (mm)	Number of Hours	%	Cumulative %
0 - 0.3	735	98.92	98.92
0.4 - 0.5	3	0.40	99.33
0.6 - 0.7	5	0.67	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: 743

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Mackay River - March 2025

Maximum Speed: 18 km/h on Mar 8 15:00

Maximum Daily Speed Average: 11.4 km/h on Mar 27

Minimum Speed Value: 0 km/h on Mar 6 04:00

Minimum Daily Speed Average: 1.1 km/h on Mar 19

Maximum Diurnal Speed Average: 2.9 km/h at hour 21

Minimum Diurnal Speed Average: 0.7 km/h at hour 12

Monthly Average Velocity: 1.5 km/h 42.5 deg

Percentiles: $P_1 = 1$ $P_{10} = 2$ $Q_1 = 4$ Median = 6 $Q_3 = 8$ $P_{90} = 10$ $P_{99} = 14$

Hours in Service: 744

Hours of Data: 737

Hours of Missing Data: 7

Percent Operational Time: 99.1

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	SSE6	SSE4	UO	SE2	SSE4	SSE4	SSE4	SSE4	S5	SW5	WSW4	WSW5	SW7	WSW6	W7	W7	W3	UO	SSE2	SE3	SSE5	SSE4	SSE3	SE3	SSW2.7	W7
2-Mar	SSE4	SSE5	S5	WSW4	WSW5	WSW4	WSW5	W7	WNW7	NNW7	NNW5	NW7	WNW8	WNW10	WNW9	NW7	W4	NW9	WNW8	N8	NE6	ENE3	N1	N4	NW3.7	WNW10
3-Mar	NNW8	N10	N12	NNW9	NNW5	N2	W2	W2	W4	WNW6	WNW7	W6	WNW6	W6	W7	WNW7	WNW7	W3	SSE2	SE2	SSE3	S3	SSW3	SSW4	WNW3.1	N12
4-Mar	SW4	SW5	SW5	SW4	S3	S5	S5	S7	S7	SSW7	SW8	SW8	SW9	SSW8	SSW10	SW8	W6	WSW4	SSW4	SW5	WSW5	NW6	NNW5	NNW4	SW4.7	SSW10
5-Mar	NNW5	NW5	NW7	NNW6	NW6	NNW7	NNE5	NE4	NNE4	NNE5	NW5	W3	W5	WNW5	W6	WSW7	WSW7	SW4	SSW3	SSE2	ENE1	ESE1	SE3	SE3	NW2.2	NNW7
6-Mar	SE1	SSE2	SE1	SSE0	SSE1	SSE2	S2	SE2	W1	WSW3	W5	W6	WSW7	W7	WSW8	W7	W8	WNW5	SW2	WSW4	W4	W4	W4	W3	WSW3.0	WSW8
7-Mar	WSW2	N2	SSE1	SSE2	N3	NNE5	NE3	NNE3	S2	SSW4	NW5	WSW6	WSW8	W10	W9	WNW9	NNE8	NE11	NE9	NNE8	NE8	NNE8	NNE6	NNE6	N2.7	NE11
8-Mar	NNE3	NNE4	NE3	ENE4	NE3	NNE2	NNW4	NNW3	NNW5	NNW6	W5	WNW11	WNW17	NW16	NNW18	NNW17	NNW14	NNW9	NE6	ENE5	NE6	NE8	NE11	NE9	NNW5.8	NNW18
9-Mar	NE10	NE10	NE10	NE9	NE9	ENE8	ENE8	ENE7	ENE7	NE7	NE7	NNE8	NNE8	N9	NNE9	NNE8	NNE7	NE7	NE6	NE3	NE5	NNE5	NNE5	NNE4	NE7.0	NE10
10-Mar	NNE4	NE4	NNE4	NE3	NNE2	NE3	ENE3	ESE4	SE6	SSE5	ESE4	SSE4	S5	ESE4	SSW1	SSE6	S2	SE7	ESE7	ESE6	E5	ENE5	ENE6	ENE4	ESE2.9	SE7
11-Mar	NE4	NE5	NE6	NE7	NE6	NE6	NE6	NNE5	NNE7	NNE8	NE9	NE9	NE9	NE9	NE11	NE11	NE11	NE11	NNE10	NNE11	NNE9	NNE10	NNE10	NNE10	NNE8.3	NNE11
12-Mar	NNE10	NNE10	NNE7	N4	NNW1	W1	S1	SW1	SE1	NE3	NNE4	E1	NNW5	NW6	NNW7	N7	NNE7	E5	ESE4	SE3	SE3	ENE1	E2	ENE1	NNE2.6	NNE10
13-Mar	NE2	ENE2	E2	ENE2	E1	NE2	N1	ENE4	ENE7	ENE8	E10	ENE10	NE10	NE11	NE11	NE10	NNE11	NNE9	NNE12	NNE11	NNE11	NNE11	NNE10	NNE10	NE6.9	NNE12
14-Mar	NNE10	NNE11	NNE11	NNE9	NNE10	N9	N7	N8	N10	N12	N11	NNE11	N11	N10	N11	N9	NNE9	NNE8	NE6	NNE6	NNE5	NNW2	N2	NNW3	NNE8.1	N12
15-Mar	NW2	UO	SSE2	SE2	ESE2	ESE2	WNW1	WSW2	WSW1	N3	NNW3	N3	NE1	S2	ESE1	ENE2	WSW3	SW4	S4	S5	S5	S5	S6	S1	S1.2	S6
16-Mar	SE2	SE3	SE3	SE3	SE4	SSE4	SSE3	SE5	SE8	SE9	SE9	SE8	SE8	SE9	SE10	SE9	ESE9	ESE8	ESE6	ESE4	SE4	SE4	SE5	SE5	SE5.8	SE10
17-Mar	SSE5	SSE3	SE2	SE2	SE2	SSE3	SSE2	S3	WSW4	WNW6	NW8	NNW8	NNW7	NNW9	N7	NNE10	NE8	NE7	NE4	E1	UO	UO	SE1	SSE2	N1.7	NNE10
18-Mar	SW1	S3	SSW4	SW4	WSW4	SW5	SW4	SW5	WSW4	W6	W7	WSW8	SW8	SSW5	SSW7	SSW8	WSW6	SSW4	SE2	ESE3	SSE4	SE3	SE1	S2	SW3.6	WSW8
19-Mar	NNW1	N4	NNW2	N1	S1	SE2	SE3	SSE5	ESE4	SE7	SSE6	SSE6	S8	SSW6	W8	W9	NW8	NNW6	SSE1	NNE9	NNE11	NE11	NE9	NNE11	NE1.1	NNE11
20-Mar	NNE10	NNE11	NNE7	NNE8	NNE9	NE7	NE8	NE7	NE7	NE8	ENE9	ENE11	ENE9	E8	E9	ENE9	ENE6	ENE5	NE5	ENE6	NE6	ENE4	E3	E3	NE6.8	ENE11
21-Mar	ESE9	ESE8	ESE8	ESE7	ESE7	ESE7	ESE6	ESE7	ESE8	ESE7	ESE7	ESE8	ESE9	ESE10	ESE12	ESE11	ESE11	ESE8	E4	ESE6	ESE11	ESE10	SE8	SE6	ESE7.9	ESE12
22-Mar	SE5	SSE6	S8	S9	S7	SSW6	S5	S6	S6	S6	SSE7	SSW5	SW3	W9	W9	W8	W10	WNW11	W11	W8	WNW8	WNW6	WNW7	WSW3	SW4.7	W11
23-Mar	WSW4	W4	WSW3	W3	WSW3	WSW2	W3	W3	W3	WSW3	WNW4	NW5	NNW2	NW3	SE7	SSE7	SE9	SE8	SE6	ESE6	ESE7	ESE8	SE8	SE7	SSE1.9	SE9
24-Mar	ESE7	SE7	SE7	SE5	SSE6	SSE6	SSE5	SSW5	WSW6	W6	SW9	SSW10	SSW10	SW10	WSW8	W8	W7	W7	W6	W5	WSW6	WSW5	WSW5	WSW6	SW4.4	SSW10
25-Mar	WSW5	WSW5	WSW5	SW5	WSW5	WSW6	WSW5	WSW6	W6	W6	W6	W7	W8	W12	WNW14	NW16	NW16	NW15	NW11	NNE10	NE10	NNE10	NNE8	NE8	WNW5.3	NW16
26-Mar	NE8	NNE7	NE5	NE3	NE5	NE5	NE4	NE7	NE7	NE8	NE8	NNE8	ENE6	NE6	NNE8	NE7	ENE7	ENE7	ENE5	NE7	NE7	NE5	NNE7	NE8	NE6.2	NE8
27-Mar	NE9	NE11	NE10	NNE12	NNE13	NNE13	NE12	NE13	NNE12	NE15	NE13	NNE12	NNE14	NNE13	NNE14	NNE12	NNE13	NNE12	NNE12	NNE10	NNE11	NE9	NE6	NE5	NNE11.4	NE15
28-Mar	NE4	NE3	NE4	NE4	NE2	ENE1	NE3	NE6	NE6	NE6	ENE7	NE6	ENE5	ESE8	ESE8	SE8	ESE6	ENE5	NE5	ESE1	SE2	ESE1	NE3	NE3	ENE3.6	ESE8
29-Mar	NNE1	NNE2	NNE2	SSE1	S2	S2	UO	UO	NNE1	WNW2	NNW6	NW6	NNW7	NW5	NNW6	NNW5	WSW2	W5	W3	SE3	SE5	SE5	SE3	WNW1	NNW1.2	NNW7
30-Mar	ESE1	S1	SSE2	SE2	SE3	SE3	SE3	SE3	SSE2	S7	S7	SE8	SE8	SE7	ESE8	ESE10	ESE11	ESE8	ESE6	E5	ENE4	ENE3	ENE2	SSE3	SE4.3	ESE11
31-Mar	S4	SE4	SSE4	SE5	SE4	SE5	SE5	SE6	SE6	SSE7	SSE9	SE8	ESE10	ESE10	ESE12	ESE12	ESE11	ESE11	E8	ESE7	SE8	SE7	SE7	SE7	SE7.0	ESE12
	NE1.9	NE2.2	NE1.7	ENE1.4	ENE1.2	ENE1.2	ENE1.0	E1.1	ENE1.0	NE1.1	NNE0.9	N0.7	NW0.9	NW1.6	NNW1.9	N1.9	NNE2.3	NNE2.6	NE2.2	ENE2.8	ENE2.9	ENE2.7	ENE2.2	NE2.1	Diurnal Average	
	NNE10	NNE11	N12	NNE12	NNE13	NNE13	NE12	NE13	NNE12	NE15	NE13	NNE12	WNW17	NW16	NNW18	NNW17	NW16	NW15	NNE12	NNE11	NNE11	NNE11	NE11	NNE11	Diurnal Maximum	

UO - Unstable Operation

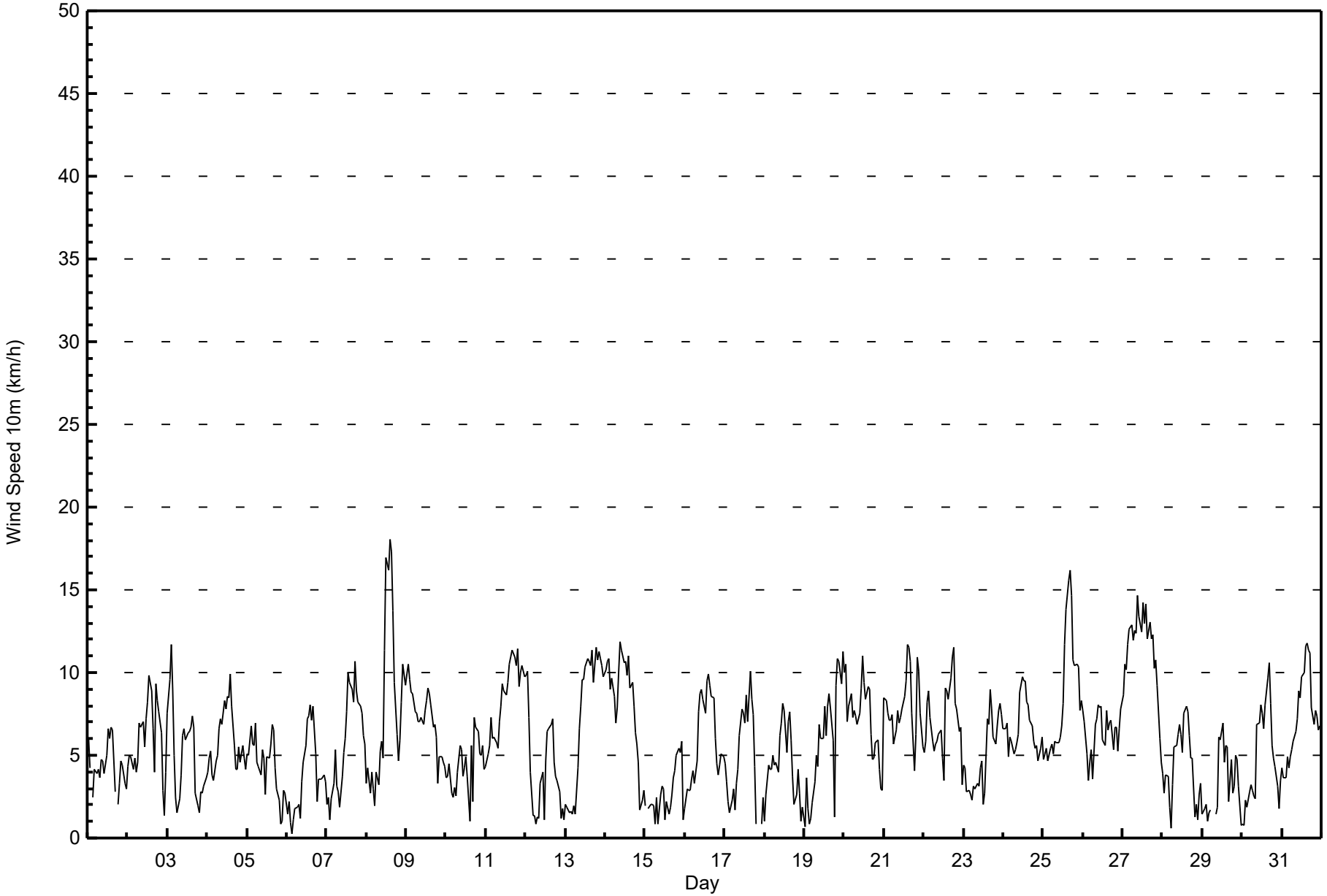
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Mackay River - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	340	46.13	46.13
6 - 11	365	49.53	95.66
12 - 19	32	4.34	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: 737

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Mackay River - March 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	12	22	30	24	10	15	47	41	26	11	17	31	24	6	7	17	340
6 - 11	13	57	67	18	4	44	30	11	12	9	8	15	34	17	11	15	365
12 - 19	2	13	4	0	0	3	0	0	0	0	0	0	1	2	4	3	32
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	27	92	101	42	14	62	77	52	38	20	25	46	59	25	22	35	737

Total Number of Valid Hours: 737

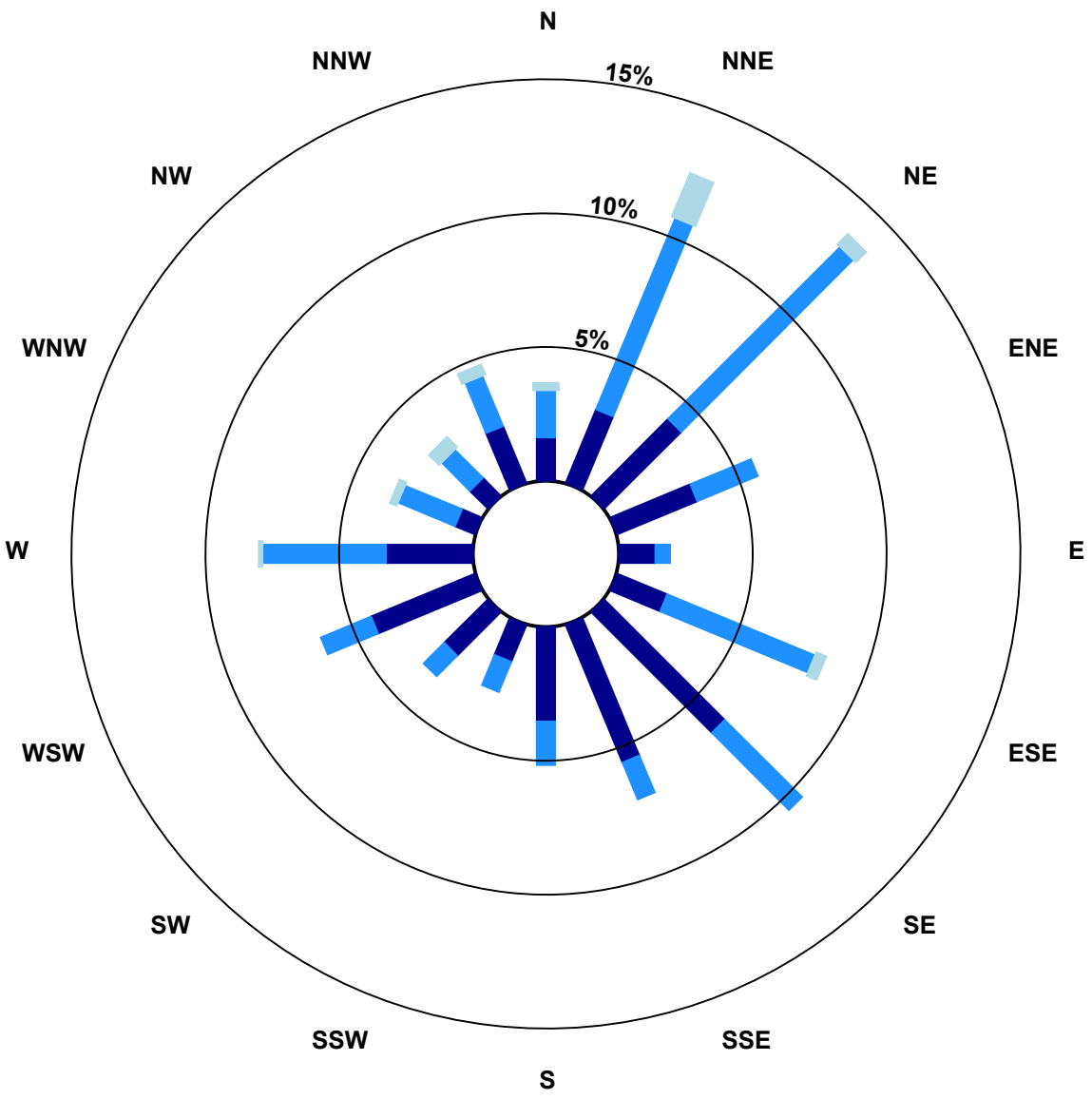
Total Number of Hours: 744

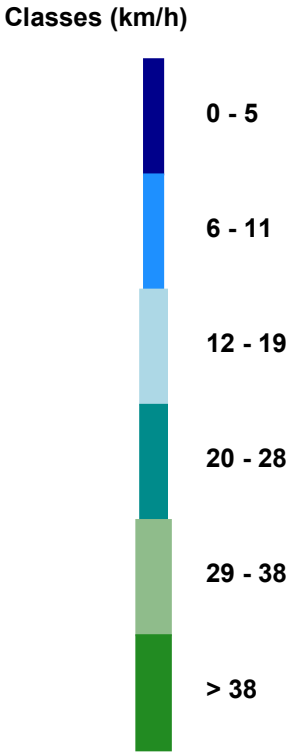
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 10m (WS10) - km/h

Mackay River





Total Number of Valid Hours: 737

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Mackay River - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 6 km/h on Mar 8 13:00

Minimum Value: 0 km/h on Mar 6 00:00

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

Hours in Service:	744
Hours of Data:	737
Hours of Missing Data:	7
Hours of Calibration:	0
Percent Operational Time:	99.1

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

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Mackay River - March 2025

Direction of Maximum Speed: 327 deg on Mar 8 15:00
Direction of Maximum Daily Speed Average: 31.5 deg on Mar 27

Direction of Minimum Speed: 155 deg on Mar 6 04:00
Direction of Minimum Daily Speed Average: 1.1 deg on Mar 19

Monthly Average Direction: 42.5 deg

Hours in Service:	744
Hours of Data:	737
Hours of Missing Data:	7
Percent Operational Time:	99.1

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	149	151	UO	133	157	156	156	157	175	221	245	242	231	254	275	280	278	UO	147	144	154	147	147	136	192.4
2-Mar	156	166	187	239	257	249	250	275	286	334	346	320	302	299	298	322	280	322	303	11	34	66	8	7	304.8
3-Mar	347	9	3	348	346	360	260	261	267	290	289	274	286	271	269	292	291	273	167	144	150	181	193	212	302.9
4-Mar	220	218	218	214	178	190	171	190	184	193	220	228	220	209	200	230	260	257	208	216	249	308	332	336	219.1
5-Mar	333	318	326	330	325	336	14	37	33	32	326	264	268	282	270	249	249	228	198	148	76	113	146	140	308.9
6-Mar	126	150	145	155	168	148	175	141	265	245	261	259	255	269	253	261	269	290	215	253	267	267	267	271	253.7
7-Mar	253	7	164	168	11	24	40	28	180	198	313	257	239	278	281	302	26	44	38	33	37	32	19	33	356.3
8-Mar	27	27	53	71	43	19	332	333	336	336	272	285	294	314	327	331	334	343	52	64	39	37	44	46	345.8
9-Mar	43	41	47	53	44	57	58	64	69	55	45	31	16	11	16	25	26	41	40	38	39	30	28	32	39.7
10-Mar	29	37	21	34	16	54	65	117	144	161	123	157	189	115	209	149	172	124	121	112	99	75	76	59	106.3
11-Mar	56	37	43	34	41	35	38	27	31	29	41	43	40	35	38	35	38	37	30	23	23	23	25	16	33.1
12-Mar	16	14	16	7	335	259	189	227	126	41	27	95	328	325	331	349	31	84	122	124	124	71	93	70	19.4
13-Mar	50	67	89	69	92	47	10	64	60	59	91	63	54	41	39	43	33	29	25	23	20	21	19	21	40.4
14-Mar	23	19	19	23	17	1	2	4	5	5	357	13	2	4	5	9	26	31	37	27	24	344	352	338	11.8
15-Mar	316	UO	154	139	109	103	290	251	256	1	335	1	56	189	114	60	258	219	188	190	183	180	188	172	189.2
16-Mar	135	146	144	142	146	149	154	140	131	127	132	140	141	142	127	134	116	104	109	120	133	138	139	142	132.3
17-Mar	152	158	136	131	146	151	155	188	251	288	320	333	336	331	5	23	36	39	40	81	UO	UO	138	168	4.4
18-Mar	226	187	197	231	242	234	231	217	246	277	263	239	228	201	206	202	241	201	129	115	157	140	142	175	218.9
19-Mar	341	358	342	10	173	136	140	153	110	143	154	164	187	212	279	265	312	337	162	30	32	43	38	31	46.1
20-Mar	28	25	32	31	29	35	36	40	41	54	75	66	72	83	81	68	71	69	50	57	53	60	85	101	53.6
21-Mar	117	117	114	113	115	116	109	113	111	107	116	115	117	113	107	116	114	105	80	107	119	123	133	145	114.8
22-Mar	145	166	183	187	187	192	191	190	184	171	156	197	231	271	274	265	281	283	277	276	285	282	283	254	234.7
23-Mar	247	262	253	262	255	251	262	270	259	249	286	323	344	320	133	147	126	128	124	116	122	121	127	124	156.8
24-Mar	123	124	128	144	152	149	167	197	244	264	220	200	193	216	246	271	260	271	267	262	255	248	254	258	217.8
25-Mar	249	249	241	236	237	239	244	244	262	262	263	271	271	274	298	310	309	312	323	33	36	32	31	35	300.4
26-Mar	39	32	42	45	45	41	36	42	50	38	34	29	64	38	24	46	65	65	62	39	44	35	33	34	42.1
27-Mar	42	40	38	29	31	31	37	40	33	36	39	25	16	21	19	31	33	30	31	31	31	35	39	35	31.5
28-Mar	40	54	39	38	37	76	43	41	34	50	71	51	59	114	115	133	112	78	49	103	131	123	43	42	70.9
29-Mar	26	12	32	151	176	169	UO	UO	13	295	327	325	347	313	336	338	249	272	278	144	132	129	134	295	329.4
30-Mar	110	172	148	127	143	144	141	144	150	172	169	135	124	128	114	118	106	108	103	97	78	64	61	163	124.4
31-Mar	173	138	148	134	124	132	126	137	126	148	151	144	116	110	112	115	104	107	99	106	124	135	128	134	124.4
	52.9	48.3	54.0	57.5	61.4	74.1	77.7	91.3	71.0	42.7	27.4	356.2	320.6	319.1	343.2	355.5	16.4	32.0	48.1	58.3	62.9	59.8	57.0	52.1	
	Diurnal Average																								

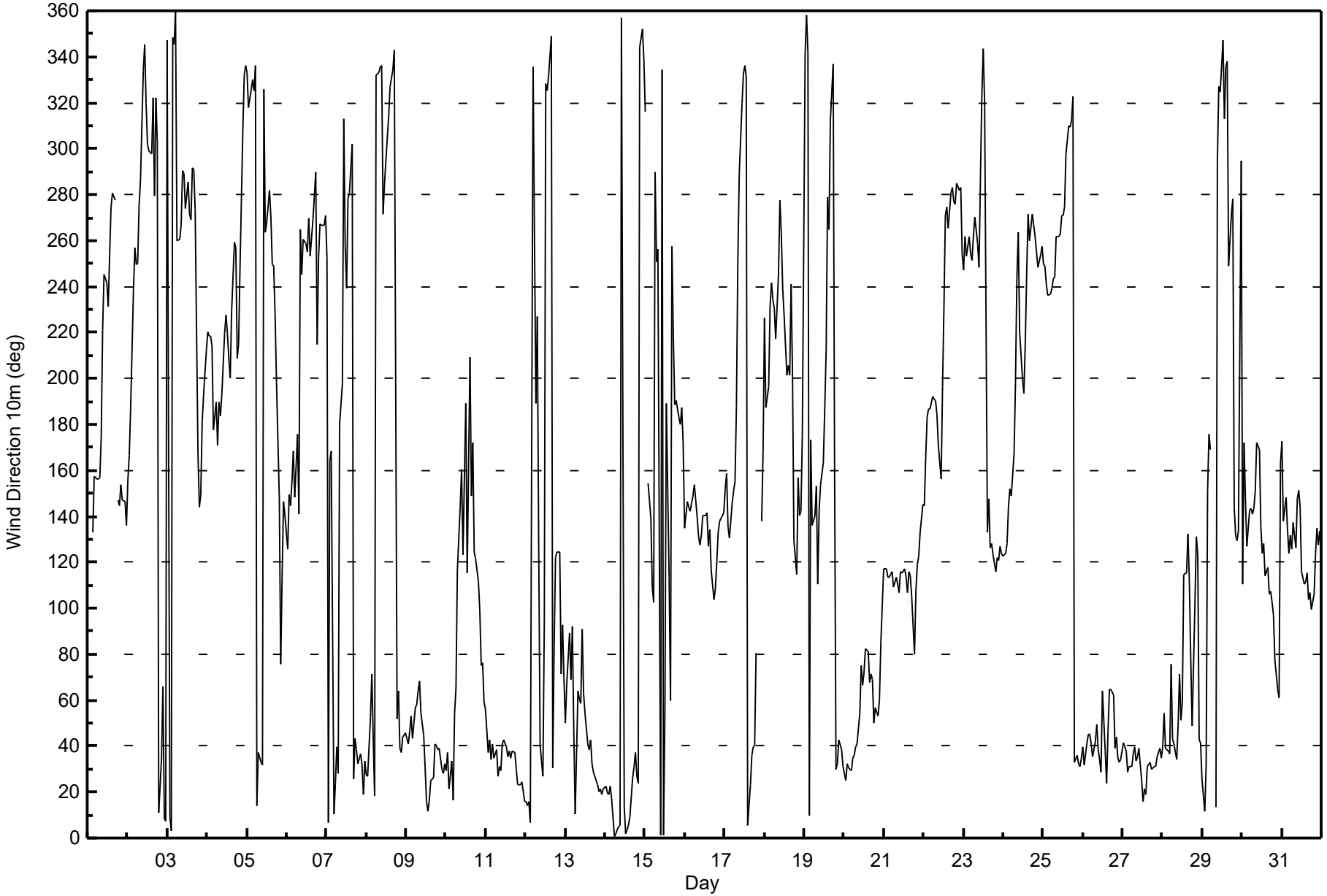
UO - Unstable Operation
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Mackay River - March 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Mackay River - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 104 deg on Mar 10 15:00

Minimum Value: 6 deg on Mar 1 21:00

Percentiles: P_1 = 10 P_{10} = 17 Q_1 = 23 Median = 29 Q_3 = 41 P_{90} = 54 P_{99} = 90

Hours in Service:	744
Hours of Data:	737
Hours of Missing Data:	7
Hours of Calibration:	0
Percent Operational Time:	99.1

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	10	13	UO	22	22	17	19	25	32	34	51	54	43	49	44	39	32	UO	16	10	6	9	15	15	54
2-Mar	14	17	28	40	41	36	36	35	28	31	25	25	31	29	35	24	37	16	23	37	29	38	29	28	41
3-Mar	22	25	24	24	21	33	30	44	49	32	36	42	41	46	49	37	35	40	64	46	11	16	23	17	64
4-Mar	15	16	18	18	19	20	17	16	16	23	30	40	39	31	32	47	44	41	21	19	41	32	18	15	47
5-Mar	18	15	16	20	17	25	33	34	39	29	59	89	61	57	55	47	48	39	19	41	74	53	8	12	89
6-Mar	55	14	65	97	37	36	44	42	32	41	49	52	49	46	51	51	45	35	26	23	27	30	36	31	97
7-Mar	30	32	92	41	40	27	41	47	84	54	39	46	44	43	44	28	33	21	22	26	25	26	21	25	92
8-Mar	33	27	31	30	49	66	29	32	24	29	55	36	29	23	21	21	22	35	27	32	23	22	23	26	66
9-Mar	25	23	25	27	23	29	27	32	32	30	30	29	33	31	29	34	37	27	25	50	26	30	37	24	50
10-Mar	50	28	23	35	30	29	31	32	32	33	61	58	71	72	104	48	86	22	20	17	26	31	33	28	104
11-Mar	24	19	22	21	22	20	22	23	21	24	21	25	25	24	23	24	26	23	26	24	26	26	26	25	26
12-Mar	27	25	25	26	55	47	73	75	63	56	45	95	65	39	35	35	33	31	16	16	19	36	40	54	95
13-Mar	34	41	44	45	44	46	35	28	25	24	31	31	28	26	25	23	24	24	22	24	24	25	26	25	46
14-Mar	22	24	25	23	23	24	23	25	25	27	28	30	31	29	26	28	25	26	23	21	23	23	20	15	31
15-Mar	25	UO	9	24	35	44	81	30	88	77	74	74	90	88	88	93	80	50	11	12	14	15	15	91	93
16-Mar	43	12	11	10	11	8	15	15	18	23	30	32	44	34	28	33	27	23	21	16	20	21	21	22	44
17-Mar	25	30	18	43	55	10	34	30	45	33	30	29	42	29	35	22	27	24	18	54	UO	UO	60	38	60
18-Mar	83	63	17	38	36	30	29	27	52	47	49	47	52	74	64	38	51	52	50	21	17	66	77	44	83
19-Mar	86	15	43	87	40	28	29	13	20	24	39	43	44	61	47	46	36	21	69	24	26	28	25	22	87
20-Mar	22	24	30	21	22	22	21	26	27	36	37	31	33	39	38	35	32	27	21	25	21	24	36	42	42
21-Mar	17	18	18	16	18	18	31	19	17	24	32	36	31	27	22	19	21	29	37	25	17	16	19	26	37
22-Mar	20	24	20	19	19	22	22	20	25	24	26	68	76	44	45	52	39	34	36	36	32	30	31	35	76
23-Mar	40	41	27	33	32	26	32	45	53	68	64	57	98	83	33	38	24	20	15	17	15	15	16	14	98
24-Mar	15	15	16	21	19	17	22	22	43	50	41	25	28	36	44	45	47	38	46	40	39	40	37	38	50
25-Mar	40	42	34	30	30	34	34	41	50	42	48	48	48	44	27	26	23	20	20	28	25	25	25	24	50
26-Mar	26	23	30	38	35	25	21	32	33	33	31	35	52	58	35	32	33	31	32	23	26	26	24	23	58
27-Mar	23	22	23	24	24	24	24	24	24	27	27	32	28	31	26	30	28	27	24	22	23	26	20	15	32
28-Mar	26	27	15	14	51	54	24	21	34	41	44	52	74	54	41	41	56	49	28	34	10	57	18	18	74
29-Mar	34	52	20	57	46	30	UO	UO	75	88	38	45	44	69	78	49	88	50	33	19	15	15	58	83	88
30-Mar	63	88	22	33	9	14	16	19	44	34	47	45	48	58	41	35	25	24	28	35	33	32	54	30	88
31-Mar	29	21	23	20	22	24	17	19	24	27	32	42	39	30	28	26	25	22	27	24	17	17	15	18	42
	86	88	92	97	55	66	81	75	88	88	74	95	98	88	104	93	88	52	69	54	74	66	77	91	
	Diurnal Maximum																								

UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS21
CONKLIN
MARCH 2025

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

April 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - CONKLIN (AMS21)
MARCH 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	693	35	51	97.85	-	-	3	0	0.9	0
TRS(ppb) Average	691	35	53	97.58	0.5	0	0.5	0	0.3	0
THC(ppm) Average	693	35	51	97.85	-	-	2.3	-	2.1	-
NMHC(ppm) Average	693	35	51	97.85	-	-	0.2	-	0.02	-
CH4(ppm) Average	693	35	51	97.85	-	-	2.2	-	2.1	-
O3 (ppb) Average	691	35	53	97.58	-	-	52.6	0	43.1	-
NO2 (ppb) Average	690	36	54	97.58	-	-	14.9	0	3.7	-
NO (ppb) Average	690	36	54	97.58	-	-	7.5	-	0.8	-
NOX (ppb) Average	690	36	54	97.58	-	-	18.4	-	4.2	-
PM2.5 (ug/m3) Average	727	1	17	97.85	-	-	27.4	0	7.3	0
Temperature 2 m (C) Average	744	0	0	100	-	-	10.7	-	3.5	-
Relative Humidity (%) Average	744	0	0	100	-	-	93	-	83.3	-
Wind Speed 10 m (km/h) Average	741	0	3	99.6	-	-	16	-	10	-
Wind Direction 10 m (deg) Average	741	0	3	99.6	-	-	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - CONKLIN (AMS21)
MARCH 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	693	0.33	0.4	-	0	0	0.1	0.2	0.4	0.9	3
TRS (ppb) Average	691	0.22	0	-	0.1	0.2	0.2	0.2	0.2	0.3	0.5
THC (ppm) Average	693	2.06	0	-	2	2	2	2.1	2.1	2.1	2.3
NMHC(ppm) Average	693	0.001	0.011	-	0	0	0	0	0	0	0.2
CH4(ppm) Average	693	2.06	0	-	2	2	2	2.1	2.1	2.1	2.2
O3 (ppb) Average	691	36.98	7.6	-	12.6	26.5	32.1	38.3	42.2	45.4	52.6
NO2 (ppb) Average	690	1.71	1.8	-	0.1	0.3	0.7	1.2	2.1	3.2	14.9
NO (ppb) Average	690	0.28	0.7	-	0	0	0	0.1	0.3	0.6	7.5
NOX (ppb) Average	690	1.98	2.1	-	0.1	0.3	0.8	1.4	2.4	3.7	18.4
PM2.5 (ug/m3) Average	727	3.09	2.9	-	0.3	1	1.5	2.2	3.8	5.6	27.4
Temperature 2 m (C) Average	744	-5.89	8	-	-31.5	-15.5	-11.4	-5.8	0	4.5	10.7
Relative Humidity (%) Average	744	66.73	16.2	-	26.4	41.3	54.3	70	80.8	85.1	93
Wind Speed 10 m (km/h) Average	741	6.4	3	-	0	2	4	6	8	11	16
Wind Direction 10 m (deg) Average	741	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - CONKLIN (AMS 21)
MARCH 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
AIR QUALITY ANALYZERS	30 Mar 2025 09:00	30 Mar 2025 17:00	9	Station power failure
AIR QUALITY ANALYZERS	31 Mar 2025 09:00	31 Mar 2025 15:00	7	Station power failure
NO2, O3, TRS	17 Mar 2025 12:00	17 Mar 2025 13:00	2	Maintenance - sample manifold cleaned
Wind Speed, Wind Direction	16 Mar 2025 03:00	16 Mar 2025 03:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	29 Mar 2025 00:00	29 Mar 2025 00:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	29 Mar 2025 06:00	29 Mar 2025 06:00	1	Flat line in sensor output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Conklin - March 2025

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

Maximum Value: 3.0 ppb on Mar 21 11:00

Maximum Daily Average: 0.9 ppb on Mar 10

Minimum Value: 0.0 ppb on Mar 1 19:00

Minimum Daily Average: 0.1 ppb on Mar 26

Maximum Diurnal Average: 0.7 ppb at hour 11

Minimum Diurnal Average: 0.2 ppb at hour 4

Monthly Average: 0.33 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.2 Q_3 = 0.4 P_{90} = 0.9 P_{99} = 2.0

Hours in Service:	744
Hours of Data:	693
Hours of Missing Data:	51
Hours of Calibration:	35
Percent Operational Time:	97.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.2	Z	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3
2-Mar	0.0	0.0	Z	0.0	0.1	0.4	0.6	0.6	0.6	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.4	0.1	0.0	0.0	0.0	0.1	0.2	0.1	0.2	0.6
3-Mar	0.3	0.7	0.5	Z	1.0	1.2	0.9	0.6	1.3	2.6	2.1	1.2	1.2	1.1	1.0	1.1	0.3	0.3	0.1	0.1	0.1	0.2	0.1	0.1	0.8	2.6
4-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.3	0.5	0.6	0.6	1.8	2.0	1.2	0.7	0.7	0.4	0.4	0.4	0.4	2.0
5-Mar	0.5	0.6	0.5	0.8	2.0	Z	1.3	1.4	1.0	1.1	0.9	0.7	0.6	0.8	1.3	1.0	0.5	0.1	0.3	0.2	0.2	0.2	0.1	0.2	0.7	2.0
6-Mar	Z	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.4
7-Mar	0.2	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
8-Mar	0.2	0.7	Z	0.2	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	1.2	1.6	1.0	0.6	0.8	0.3	1.6
9-Mar	0.8	0.4	0.3	Z	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.8
10-Mar	0.1	0.2	0.2	0.2	Z	0.2	0.1	0.6	1.1	2.0	2.7	2.4	1.6	0.9	0.6	1.3	1.6	1.7	1.3	0.6	0.6	0.4	0.4	0.4	0.9	2.7
11-Mar	0.4	0.3	0.4	0.2	0.3	Z	0.2	0.3	0.3	0.3	0.4	0.6	0.8	0.6	0.6	0.4	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.3	0.8
12-Mar	Z	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.6	0.8	0.7	0.4	0.2	0.3	0.2	0.3	0.3	0.8
13-Mar	0.4	Z	0.3	0.2	0.3	0.2	0.2	0.1	0.2	0.3	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.2	0.4
14-Mar	0.0	0.0	Z	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.4	0.3	0.4	0.6	0.8	0.5	0.7	1.0	0.6	0.7	1.3	1.3	1.4	0.5	1.4
15-Mar	0.7	0.5	0.4	Z	0.3	0.2	0.2	0.3	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.5	0.7	1.1	1.2	1.1	0.7	0.4	0.3	0.3	0.5	1.2
16-Mar	0.3	0.3	0.3	0.2	Z	0.3	0.2	0.2	0.3	0.8	1.7	1.4	1.5	1.1	0.9	0.6	0.6	0.9	0.8	0.6	0.6	0.6	0.5	0.5	0.7	1.7
17-Mar	0.4	0.2	0.2	0.2	0.1	Z	0.2	0.3	0.5	0.7	C	C	C	C	0.1	0.0	0.1	0.2	0.1	0.2	0.6	0.9	1.1	0.8	0.4	1.1
18-Mar	Z	0.5	0.4	0.4	0.4	0.5	0.4	0.4	1.0	1.8	1.7	0.6	0.4	0.4	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	1.8
19-Mar	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.3
20-Mar	0.1	0.1	Z	0.2	0.1	0.1	0.0	0.0	0.2	0.4	0.6	0.1	0.3	0.3	0.3	0.2	0.3	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.6
21-Mar	0.2	0.1	0.1	Z	0.0	0.0	0.0	0.1	0.4	1.5	3.0	1.9	1.6	1.6	1.1	0.5	0.6	0.4	1.1	1.1	0.3	0.5	0.6	0.4	0.8	3.0
22-Mar	0.4	0.3	0.1	0.1	Z	0.1	0.2	0.1	0.1	0.1	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.4
23-Mar	0.2	0.1	0.0	0.1	0.1	Z	0.0	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
24-Mar	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.6	0.7	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.7
25-Mar	0.2	Z	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.2
26-Mar	0.1	0.1	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2
27-Mar	0.1	0.3	0.2	Z	0.1	0.1	0.0	0.1	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	0.1	0.1	0.1	0.3
28-Mar	0.1	0.0	0.1	0.1	Z	0.0	0.0	0.0	0.1	0.1	0.0	0.2	0.5	0.9	0.9	0.9	0.6	0.5	0.6	0.3	0.2	0.1	0.1	0.1	0.3	0.9
29-Mar	0.1	0.1	0.1	0.2	0.2	Z	0.2	0.1	0.2	1.5	2.2	1.2	0.9	0.3	0.2	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.3	2.2
30-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	PF	PF	PF	PF	PF	PF	PF	PF	PF	0.4	0.2	0.2	0.2	0.2	0.2	0.2	--	0.4
31-Mar	0.4	Z	0.1	0.1	0.1	0.1	0.3	0.7	PF	PF	PF	PF	PF	PF	PF	0.9	1.0	1.0	0.5	0.2	0.2	1.8	1.2	0.4	--	1.8
	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.6	0.7	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.2	Diurnal Average	
	0.8	0.7	0.5	0.8	2.0	1.2	1.3	1.4	1.3	2.6	3.0	2.4	1.6	1.6	1.3	1.3	1.8	2.0	1.3	1.2	1.6	1.8	1.3	1.4	Diurnal Maximum	

Z - zerospan C - Calibration PF - Power Failure

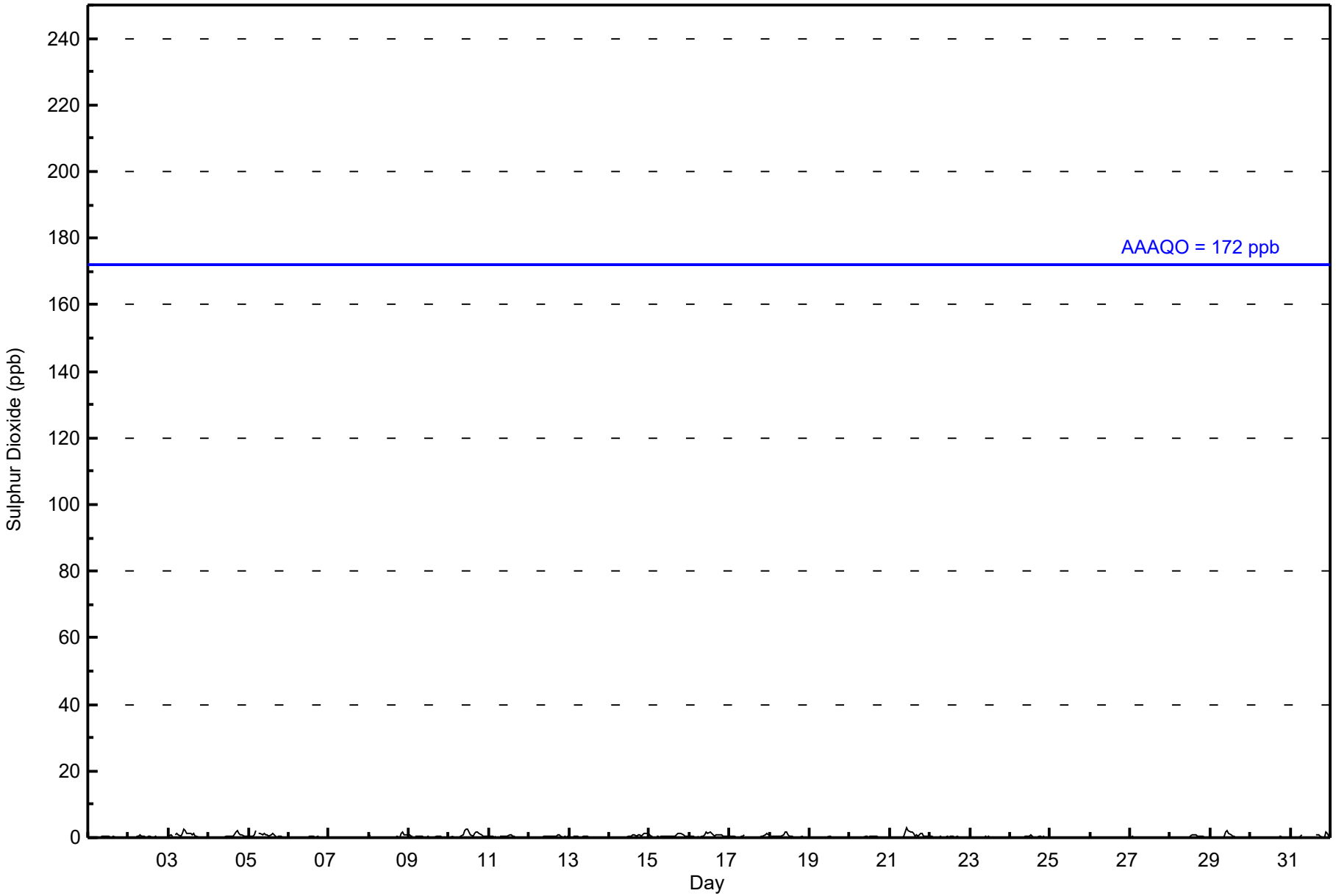
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Conklin - March 2025



Sulphur Dioxide (SO_2) - ppb
Conklin - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	693	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: 693

Total Number of Hours: 744

Sulphur Dioxide (SO_2) - ppb
Conklin - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	40	52	71	28	21	22	43	65	44	52	53	21	37	56	37	49	691
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	40	52	71	28	21	22	43	65	44	52	53	21	37	56	37	49	691

Total Number of Valid Hours: 691

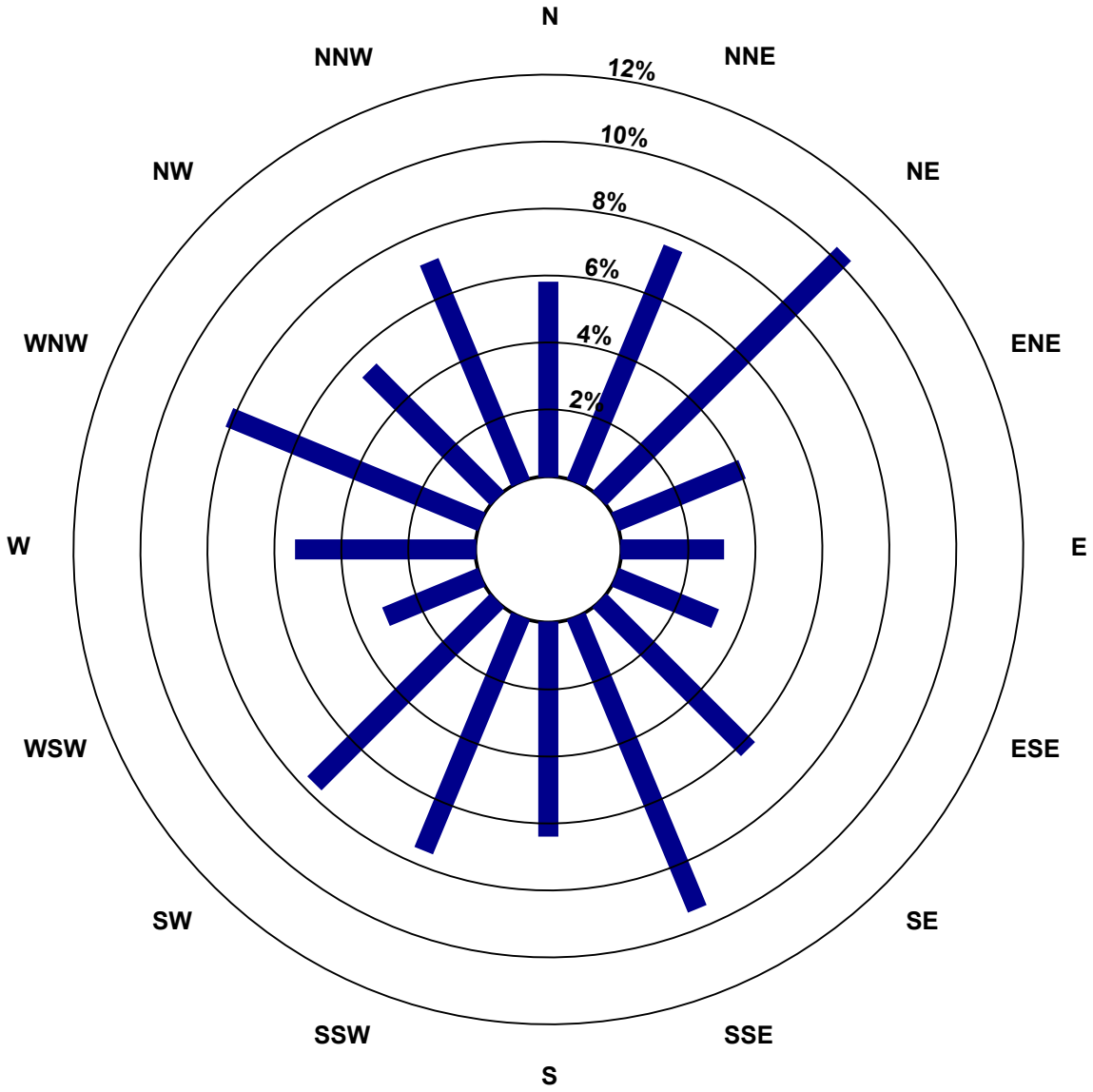
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Sulphur Dioxide (SO_2) - ppb

Conklin



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

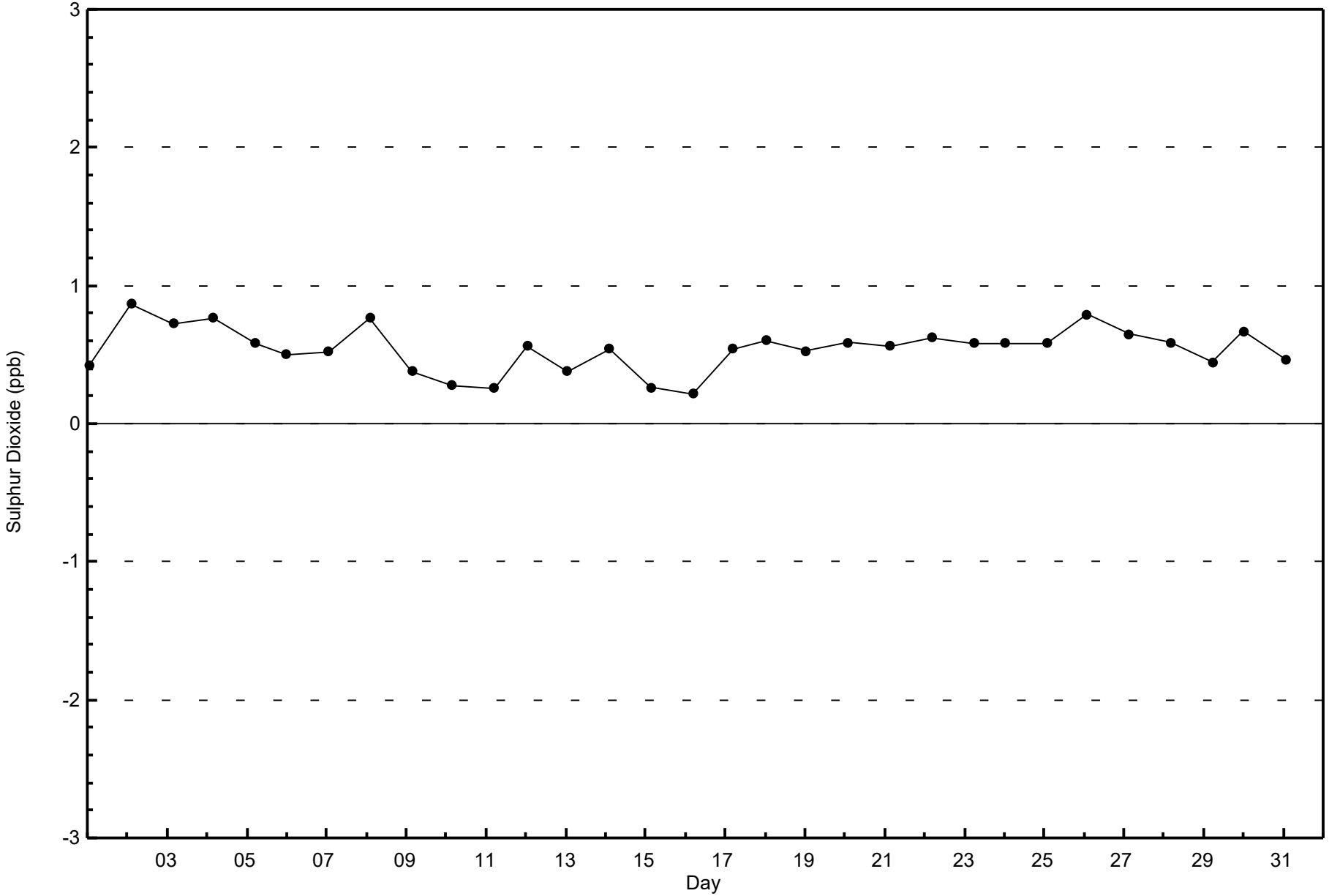
Total Number of Valid Hours: 691

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Conklin - March 2025

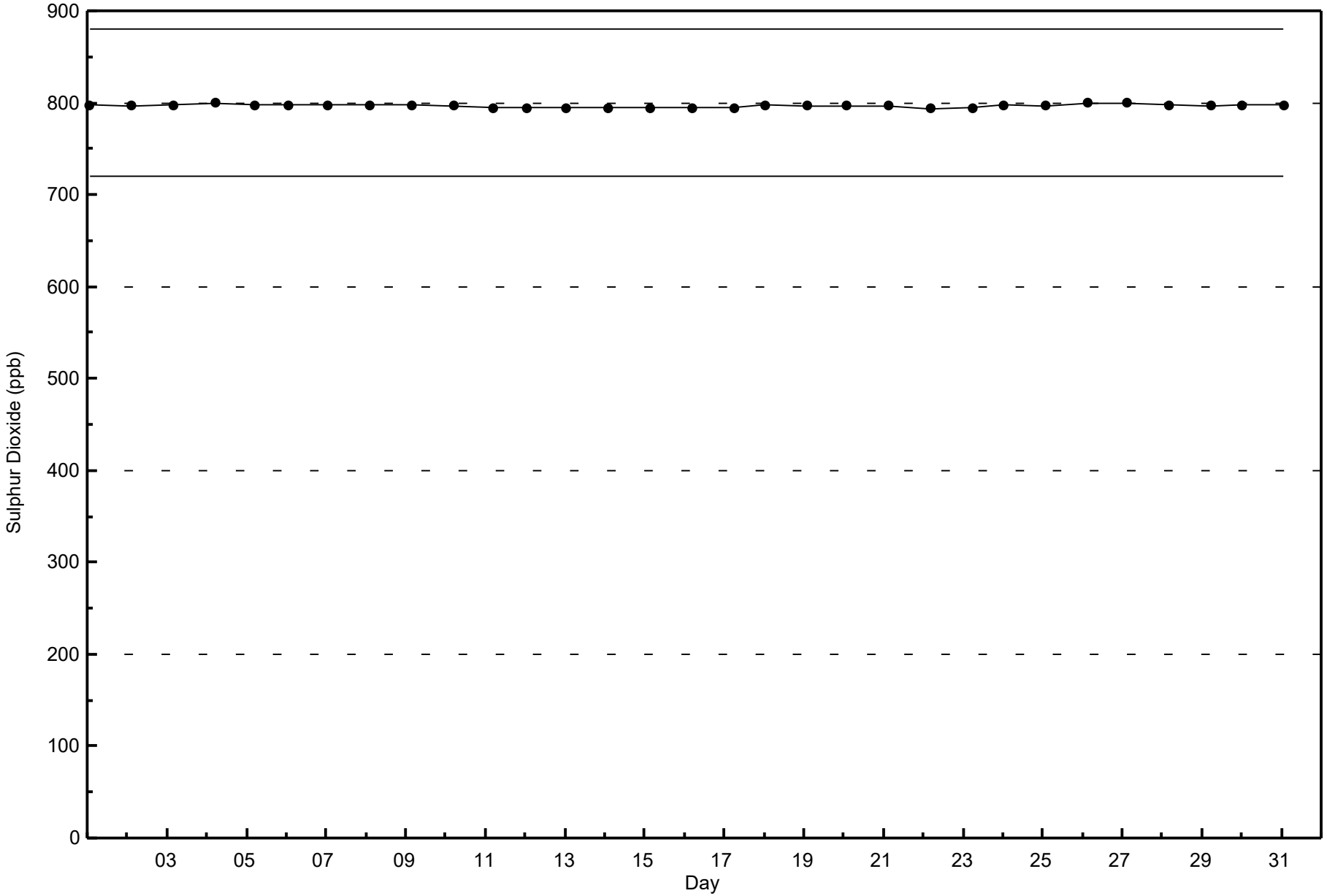


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Conklin - March 2025



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Conklin - March 2025

Number of Exceedences (AAAQG): 30-Min: 0

Maximum Value: 0.5 ppb on Mar 16 09:00 Maximum Daily Average: 0.3 ppb on Mar 14

Minimum Value: 0.1 ppb on Mar 1 01:00 Minimum Daily Average: 0.2 ppb on Mar 25

Maximum Diurnal Average: 0.2 ppb at hour 11 Minimum Diurnal Average: 0.2 ppb at hour 17

Monthly Average: 0.22 ppb Percentiles: P_1 = 0.2 P_{10} = 0.2 Q_1 = 0.2 Median = 0.2 Q_3 = 0.2 P_{90} = 0.3 P_{99} = 0.4

Periods in Service:	1488
Periods of Valid Data:	1382
Periods of Invalid Data:	106
Periods of Calibration:	72
Percent Operational Time:	97.7

Day	Period Ending At (MST) 00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00	Daily Average	Daily Maximum
1-Mar	0.1	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	0.2	0.2	0.2	0.2
	0.1	0.1	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		
2-Mar	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	0.2	0.2	0.2	SP	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		
3-Mar	0.2	0.3	0.3	0.3	Z	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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	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		
4-Mar	0.2	0.2	0.1	0.2	0.2	Z	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.3
	0.2	0.2	0.2	0.2	0.2	SP	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2		
5-Mar	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4
	SP	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2		
6-Mar	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	0.1	0.2	0.2	0.2	0.2	0.2
	0.2	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	C	C	C	C	C	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
7-Mar	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	0.2	0.2	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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-Mar	0.2	0.3	0.3	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.5
	0.3	0.3	0.3	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	0.5	0.3	0.2	0.2	0.2		
9-Mar	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	0.2	0.2	0.1	0.2	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
10-Mar	0.2	0.2	0.2	0.2	0.2	Z	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	0.2	0.2	0.2	0.2	0.2	SP	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
11-Mar	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	0.3
	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		
12-Mar	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	0.2	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2		
13-Mar	0.2	0.2	Z	0.3	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	0.3
	0.2	0.2	SP	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
14-Mar	0.3	0.2	0.2	Z	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4
	0.2	0.2	0.3	SP	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4		
15-Mar	0.4	0.3	0.3	0.3	Z	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.4
	0.4	0.3	0.3	0.3	SP	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2		

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Conklin - March 2025

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

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

Alberta Ambient Air Quality Guideline (AAAQG): 30-Min: 5 ppb

Wood Buffalo Environmental Association

Summary of Hour Averages

Total Reduced Sulphur (TRS) - ppb

Conklin - March 2025

Maximum Value: 0.5 ppb on Mar 16 09:00

Maximum Daily Average: 0.3 ppb on Mar 14

Minimum Value: 0.1 ppb on Mar 1 01:00

Minimum Daily Average: 0.2 ppb on Mar 25

Maximum Diurnal Average: 0.2 ppb at hour 11

Minimum Diurnal Average: 0.2 ppb at hour 17

Monthly Average: 0.22 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.2$ $Q_1 = 0.2$ Median = 0.2 $Q_3 = 0.2$ $P_{90} = 0.3$ $P_{99} = 0.4$

Hours in Service:	744
Hours of Data:	691
Hours of Missing Data:	53
Hours of Calibration:	35
Percent Operational Time:	97.6

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	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	0.2	0.2	0.2
2-Mar	0.2	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	0.2	0.3
3-Mar	0.2	0.3	0.3	0.3	Z	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
4-Mar	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.3
5-Mar	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3
6-Mar	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
7-Mar	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
8-Mar	0.2	0.3	0.3	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.3	0.3	0.2	0.2	0.2	0.4
9-Mar	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
10-Mar	0.2	0.2	0.2	0.2	0.2	Z	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
11-Mar	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
12-Mar	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
13-Mar	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
14-Mar	0.2	0.2	0.2	Z	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.4
15-Mar	0.4	0.3	0.3	0.3	Z	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.4
16-Mar	0.2	0.2	0.2	0.2	0.2	Z	0.3	0.3	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.5
17-Mar	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	M	M	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.2	0.4
18-Mar	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
19-Mar	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
20-Mar	0.2	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	0.2	0.2	0.2	0.3
21-Mar	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3
22-Mar	0.4	0.3	0.3	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4
23-Mar	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
24-Mar	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
25-Mar	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3
26-Mar	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	0.2	0.2	0.2	0.2	0.3
27-Mar	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
28-Mar	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
29-Mar	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
30-Mar	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	PF	PF	PF	PF	PF	PF	PF	PF	PF	0.2	0.2	0.2	0.2	0.2	0.2	0.2	--	0.2
31-Mar	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	PF	PF	PF	PF	PF	PF	PF	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	--	0.2
	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Diurnal Average	
	0.4	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.4	0.4	Diurnal Maximum	

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

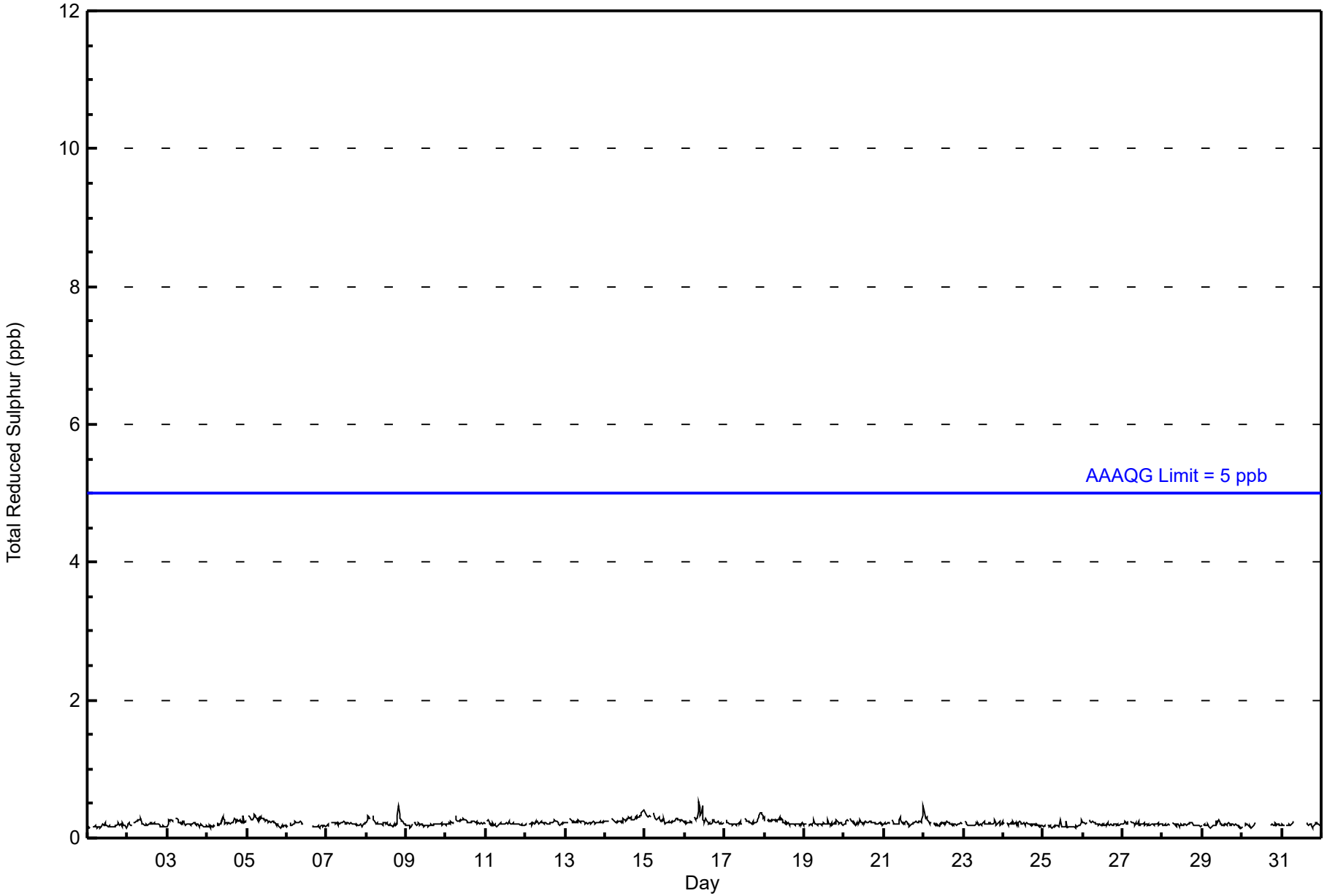
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Conklin - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	691	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: 691

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Conklin - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	37	53	71	31	20	21	43	63	48	47	54	20	37	54	37	52	688
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	37	53	71	31	20	21	43	63	48	47	54	20	37	54	37	52	688

Total Number of Valid Hours: 688

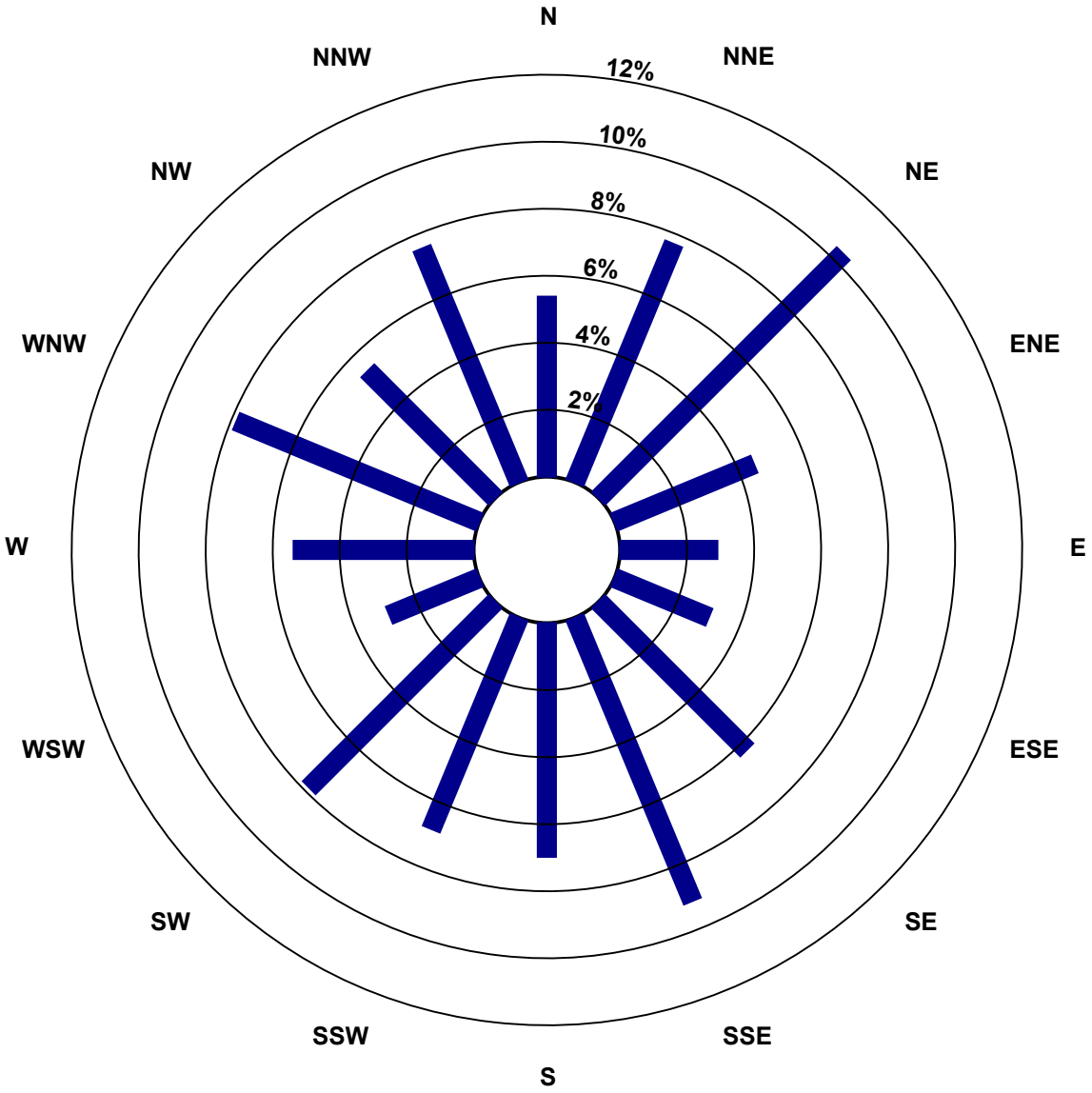
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Total Reduced Sulphur (TRS) - ppb

Conklin



Classes (ppb)

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

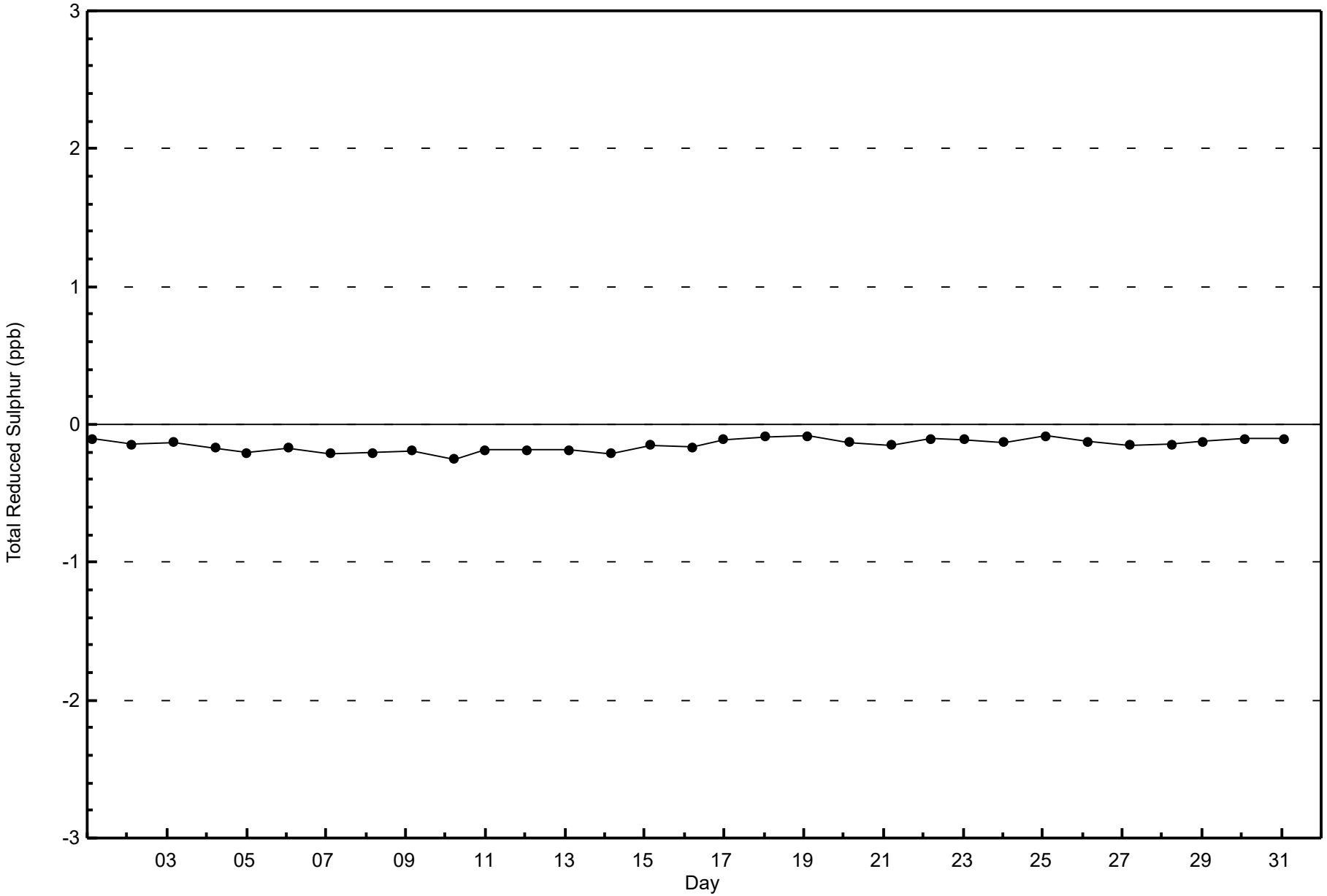
Total Number of Valid Hours: 688

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Conklin - March 2025

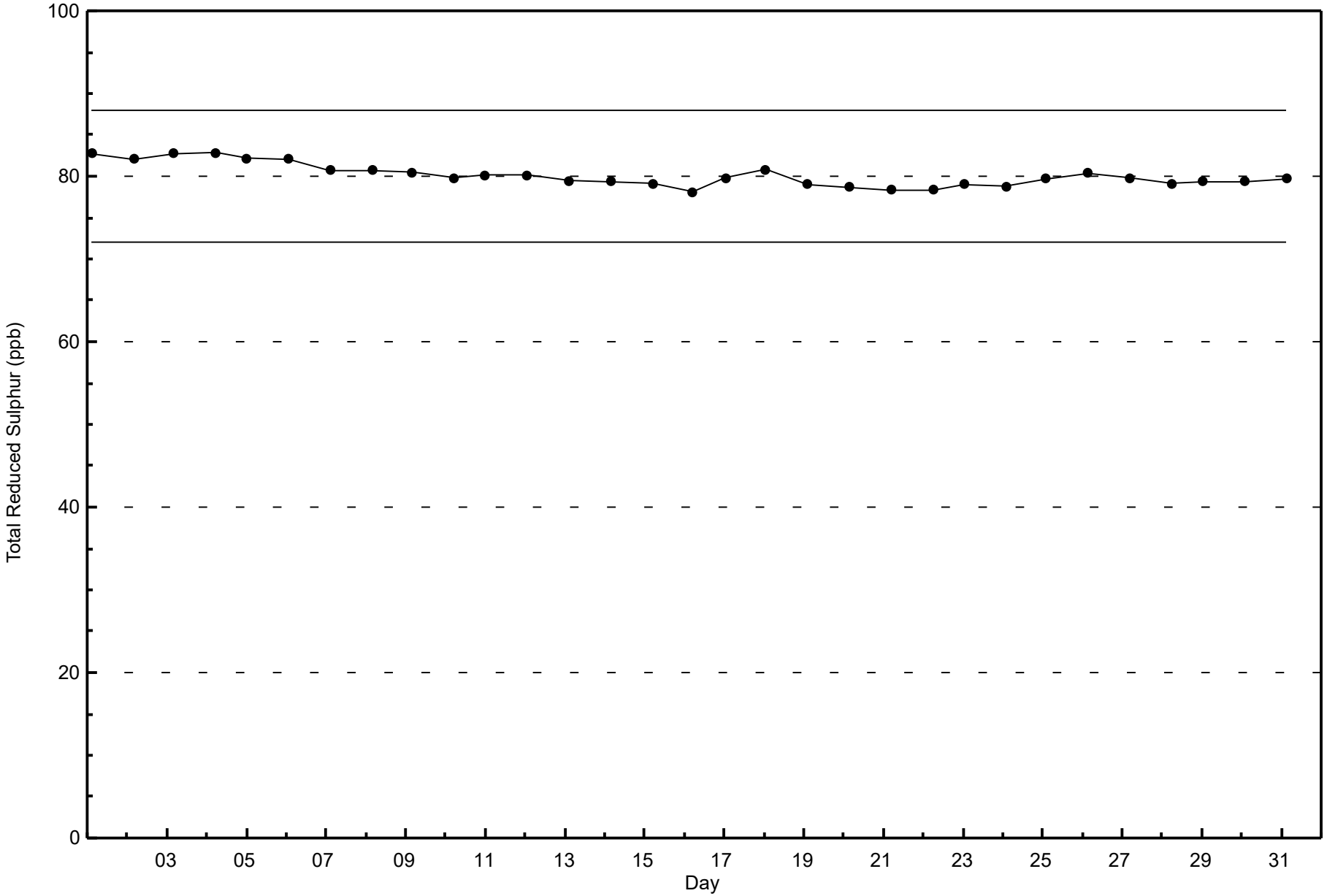


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Conklin - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Conklin - March 2025

Maximum Value: 2.3 ppm on Mar 25 23:00

Maximum Daily Average: 2.1 ppm on Mar 16

Minimum Value: 2.0 ppm on Mar 8 12:00

Minimum Daily Average: 2.0 ppm on Mar 27

Maximum Diurnal Average: 2.1 ppm at hour 7

Minimum Diurnal Average: 2.0 ppm at hour 14

Monthly Average: 2.06 ppm

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

Hours in Service:	744
Hours of Data:	693
Hours of Missing Data:	51
Hours of Calibration:	35
Percent Operational Time:	97.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	2.2	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.2
2-Mar	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1
3-Mar	2.0	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
4-Mar	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
5-Mar	2.1	2.1	2.1	2.1	2.1	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	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1
6-Mar	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.1
7-Mar	2.0	Z	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
8-Mar	2.1	2.1	Z	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2
9-Mar	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
10-Mar	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	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
11-Mar	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1
12-Mar	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	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1
13-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	2.0	2.0	Z	2.0	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
15-Mar	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	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2
16-Mar	2.2	2.2	2.1	2.1	Z	2.2	2.2	2.2	2.2	2.2	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
17-Mar	2.1	2.1	2.1	2.1	2.1	Z	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	2.1	2.1	2.1
18-Mar	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
19-Mar	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	2.1	2.1	2.1	2.1	2.1	2.1
20-Mar	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	2.1	2.1
21-Mar	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	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
22-Mar	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2
23-Mar	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1
24-Mar	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1
25-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.3	2.1	2.1	2.3
26-Mar	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
27-Mar	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-Mar	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	2.0	2.1	2.0	2.1
29-Mar	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1
30-Mar	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	PF	PF	PF	PF	PF	PF	PF	PF	PF	2.0	2.0	2.1	2.1	2.1	2.1	2.1	--	2.1
31-Mar	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	PF	PF	PF	PF	PF	PF	PF	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	--	2.1
	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	Diurnal Average
	2.2	2.2	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	2.1	2.1	2.1	2.2	2.3	2.2		Diurnal Maximum

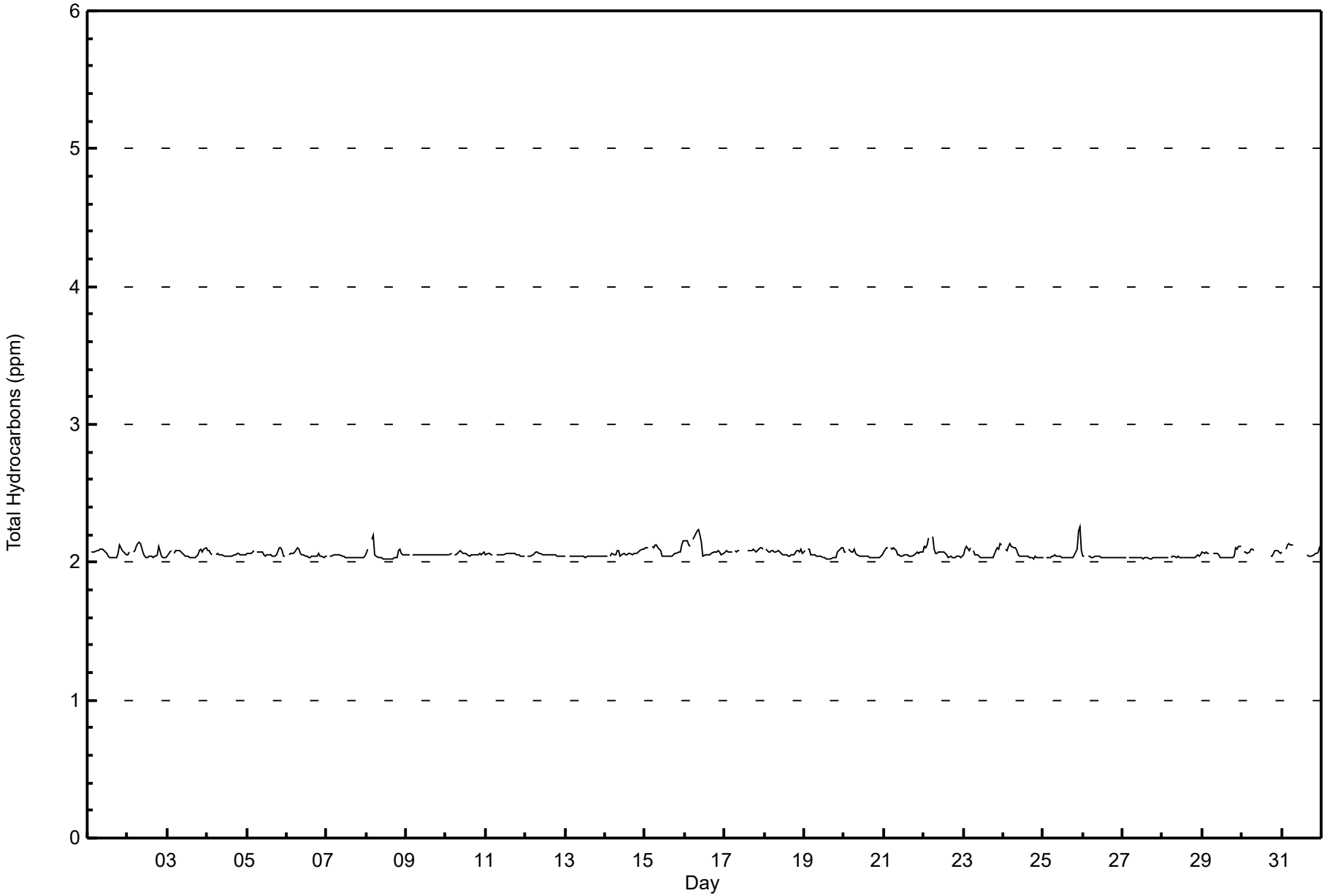
Z - zerospan C - Calibration PF - Power Failure

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Conklin - March 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	303	43.72	43.72
2.1 - 3.0	390	56.28	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 693

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Conklin - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	15	23	48	17	9	11	4	4	3	6	27	14	34	50	24	14	303
2.1 - 3.0	25	29	23	11	12	11	39	61	41	46	26	7	3	6	13	35	388
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	40	52	71	28	21	22	43	65	44	52	53	21	37	56	37	49	691

Total Number of Valid Hours: 691

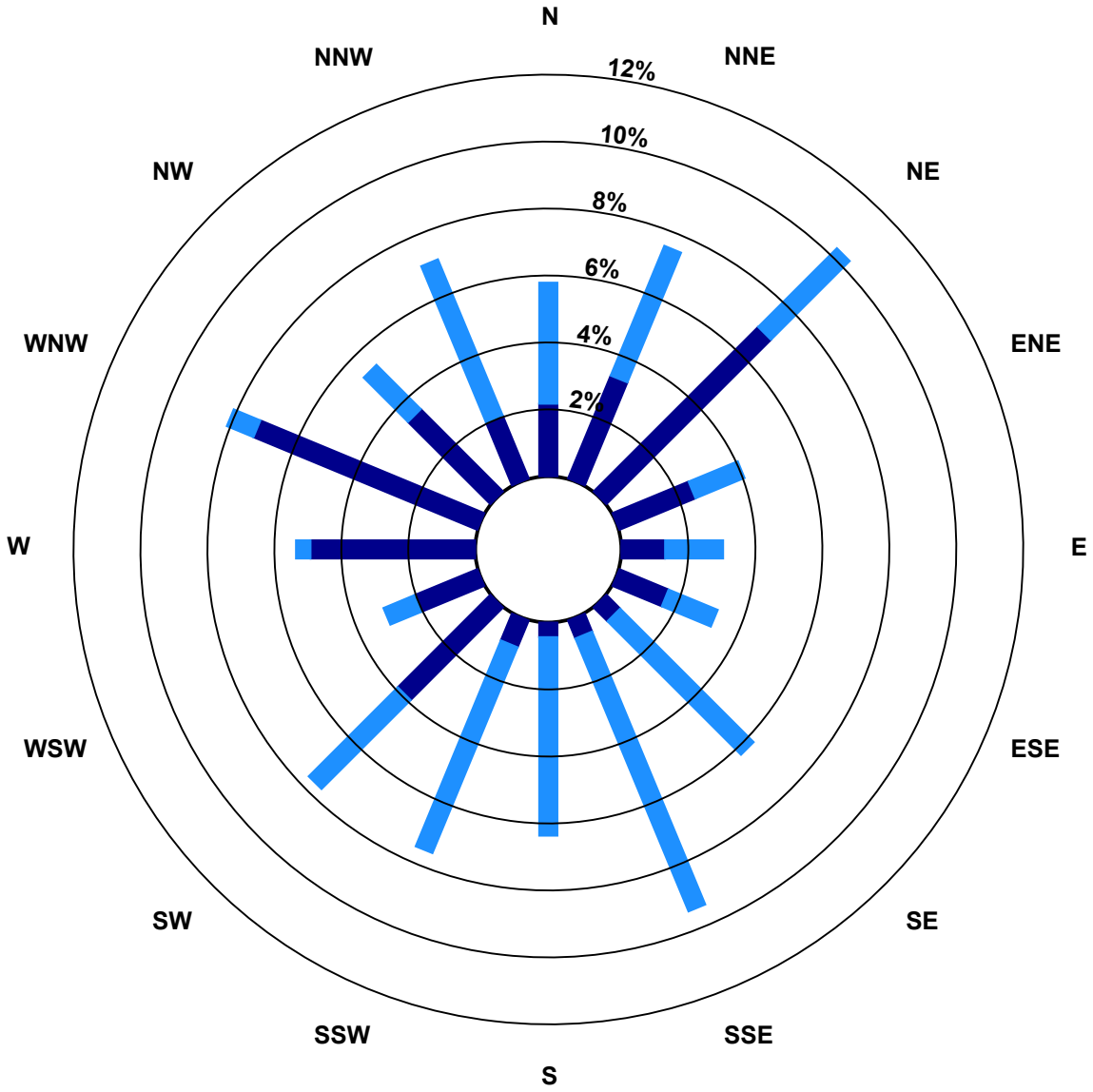
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Total Hydrocarbons (THC) - ppm

Conklin



Classes (ppm)

- 0 - 2.0
- 2.1 - 3.0
- 3.1 - 10.0
- > 10.0

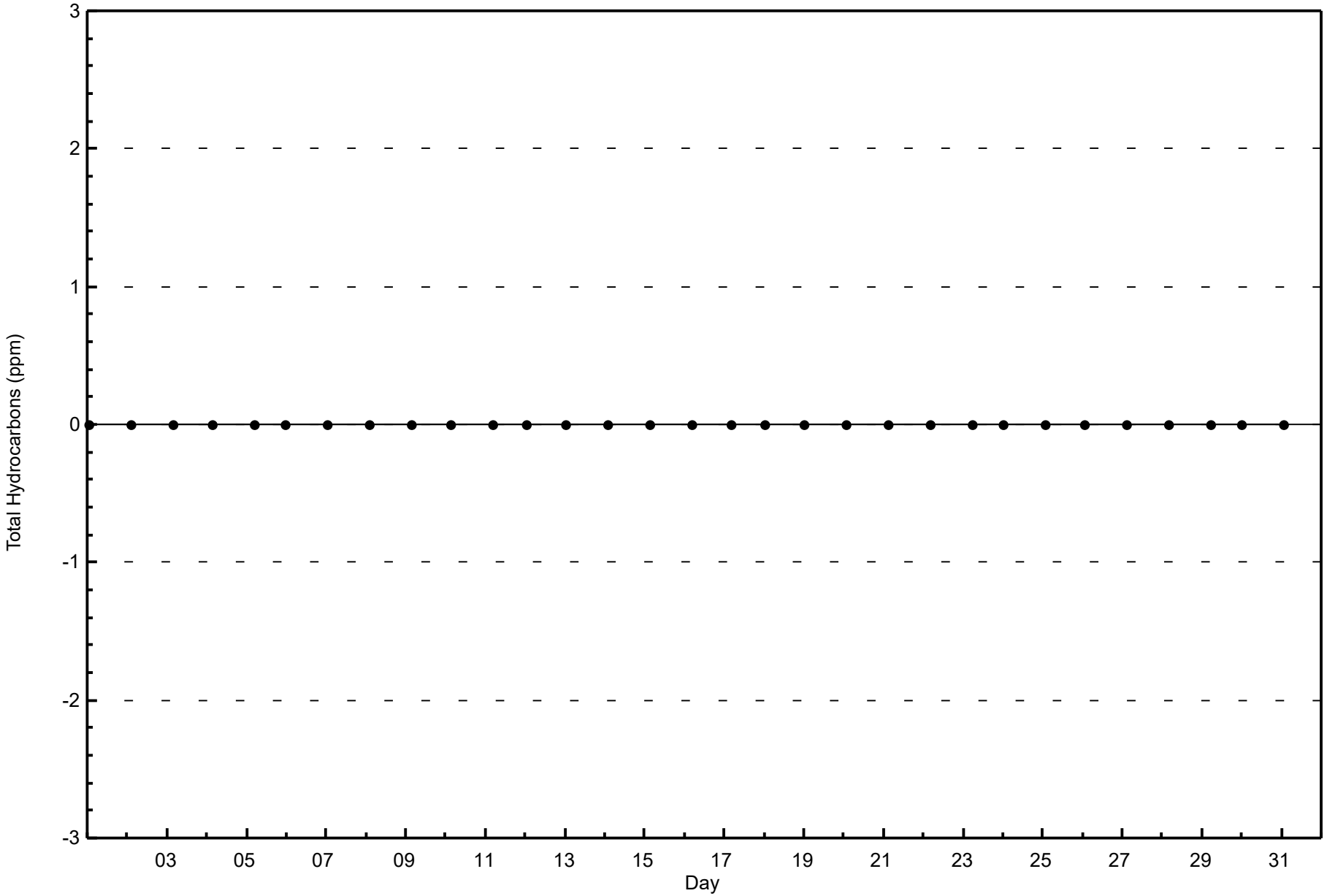
Total Number of Valid Hours: 691

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Conklin - March 2025

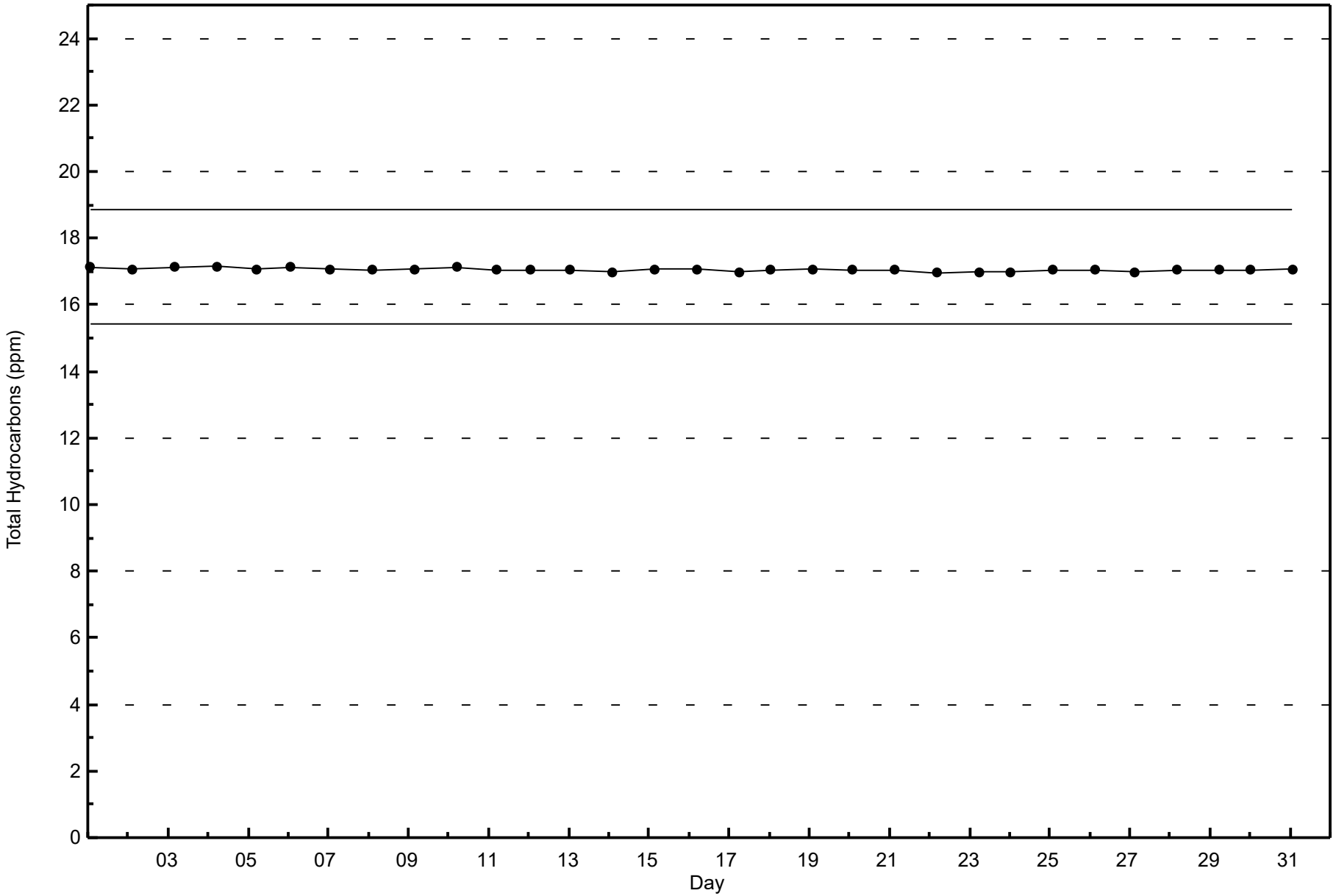


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Conklin - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Conklin - March 2025

Maximum Value: 0.200 ppm on Mar 25 23:00

Maximum Daily Average: 0.020 ppm on Mar 25

Minimum Value: 0.000 ppm on Mar 1 01:00

Minimum Daily Average: 0.000 ppm on Mar 2

Maximum Diurnal Average: 0.008 ppm at hour 23

Minimum Diurnal Average: 0.000 ppm at hour 5

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 in Service:	744
Hours of Data:	693
Hours of Missing Data:	51
Hours of Calibration:	35
Percent Operational Time:	97.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.000	0.000	0.000	0.000	0.000	0.001	0.020
2-Mar	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	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
4-Mar	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
5-Mar	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
6-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.010	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010
9-Mar	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10-Mar	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
11-Mar	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
12-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	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	0.000	0.000	0.000	0.000	0.001
16-Mar	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.012	0.003	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.035
17-Mar	0.000	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	0.001	0.000	0.000	0.001
18-Mar	Z	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	0.000	0.000	0.020	0.010	0.000	0.030	0.000	0.004	0.030
19-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.020	0.003	0.001	0.020
20-Mar	0.006	0.000	Z	0.021	0.000	0.005	0.034	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	0.000	0.003	0.034
21-Mar	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.004
22-Mar	0.000	0.000	0.000	0.005	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005
23-Mar	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	0.001	0.002	0.004	0.000	0.004
24-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.021	0.045	0.174	0.200	0.032	0.020	0.200
26-Mar	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.001
27-Mar	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-Mar	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	0.003	0.000	0.003
29-Mar	0.012	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	0.024	0.000	0.000	0.000	0.002	0.024
30-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	PF	PF	PF	PF	PF	PF	PF	PF	PF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	--	0.000
31-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.001	0.000	PF	PF	PF	PF	PF	PF	PF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	--	0.001
	0.001	0.001	0.000	0.001	0.000	0.000	0.001	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.003	0.006	0.008	0.001	Diurnal Average	
	0.012	0.021	0.000	0.021	0.000	0.005	0.034	0.004	0.012	0.003	0.035	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.020	0.021	0.045	0.174	0.200	0.032	Diurnal Maximum	

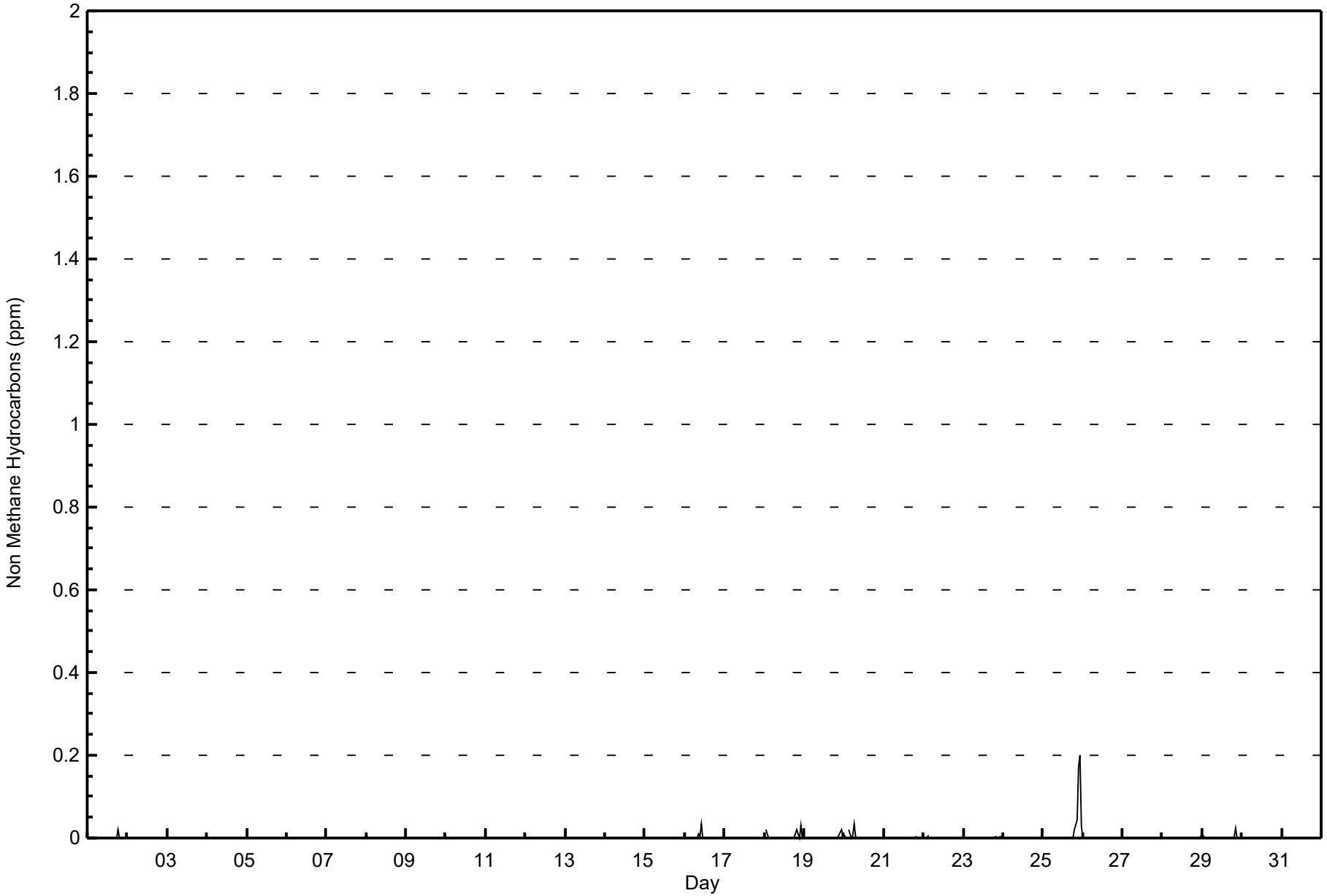
Z - zerospan C - Calibration PF - Power Failure

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Conklin - March 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Conklin - March 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	673	97.11	97.11
0.006 - 0.05	18	2.60	99.71
0.06 - 0.1	0	0.00	99.71
> 0.1	2	0.29	100.00

Total Number of Valid Hours: 693

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Conklin - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.005	37	51	71	28	20	22	39	65	43	49	53	21	37	54	36	45	671
0.006 - 0.05	3	1	0	0	1	0	4	0	1	3	0	0	0	2	0	3	18
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	1	1	2
Totals	40	52	71	28	21	22	43	65	44	52	53	21	37	56	37	49	691

Total Number of Valid Hours: 691

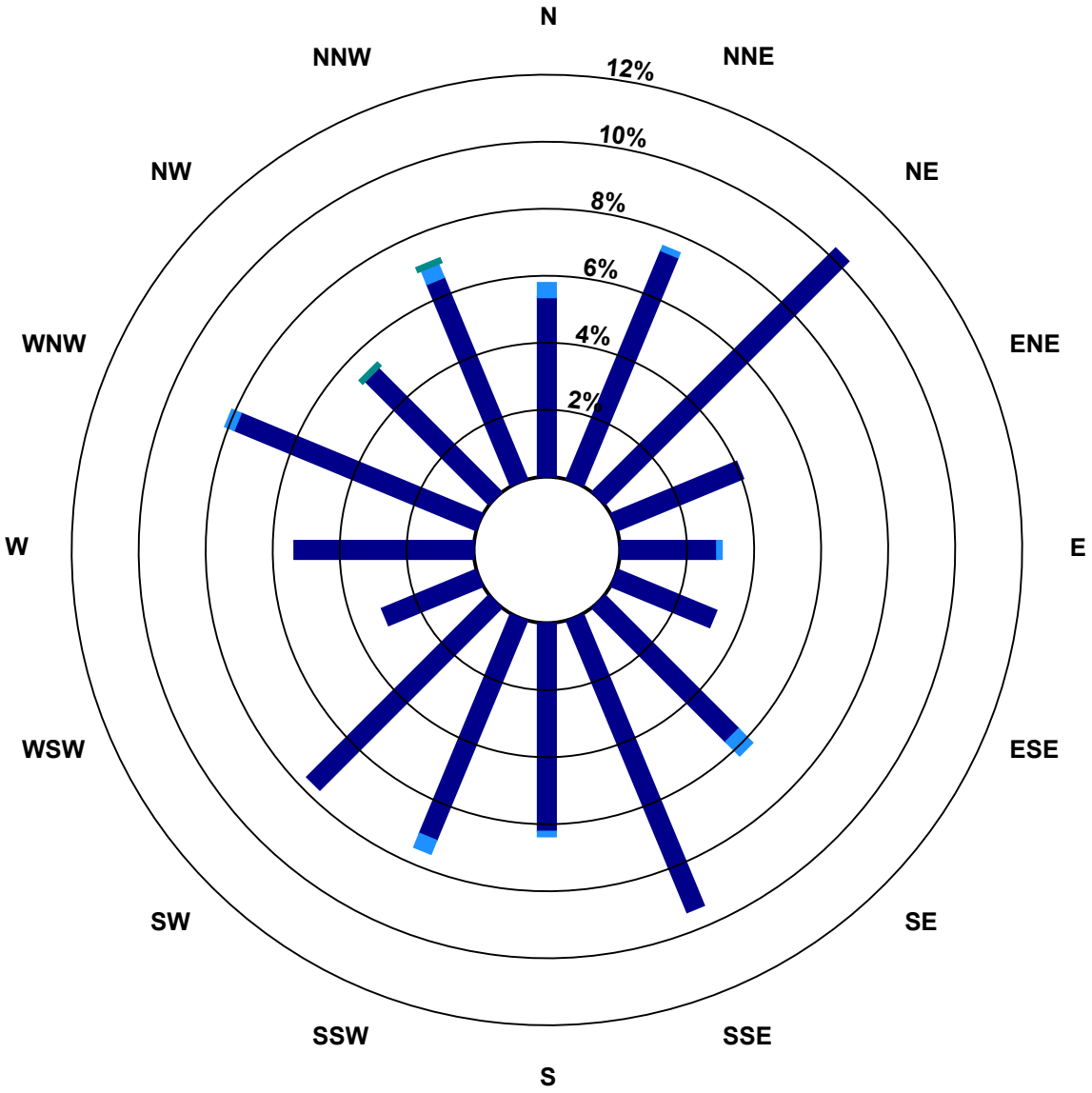
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Non Methane Hydrocarbons (NMHC) - ppm

Conklin



Classes (ppm)

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

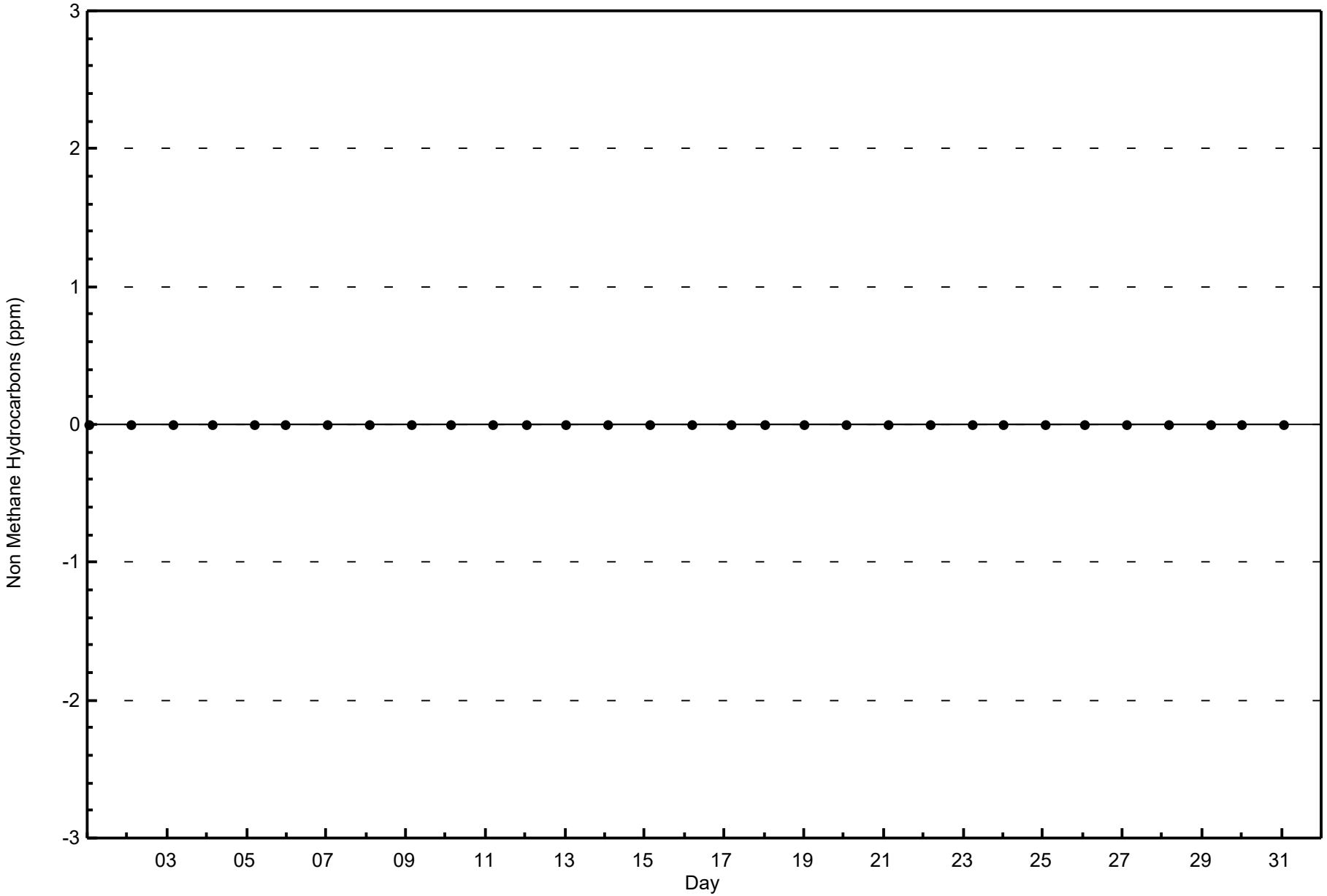
Total Number of Valid Hours: 691

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Conklin - March 2025

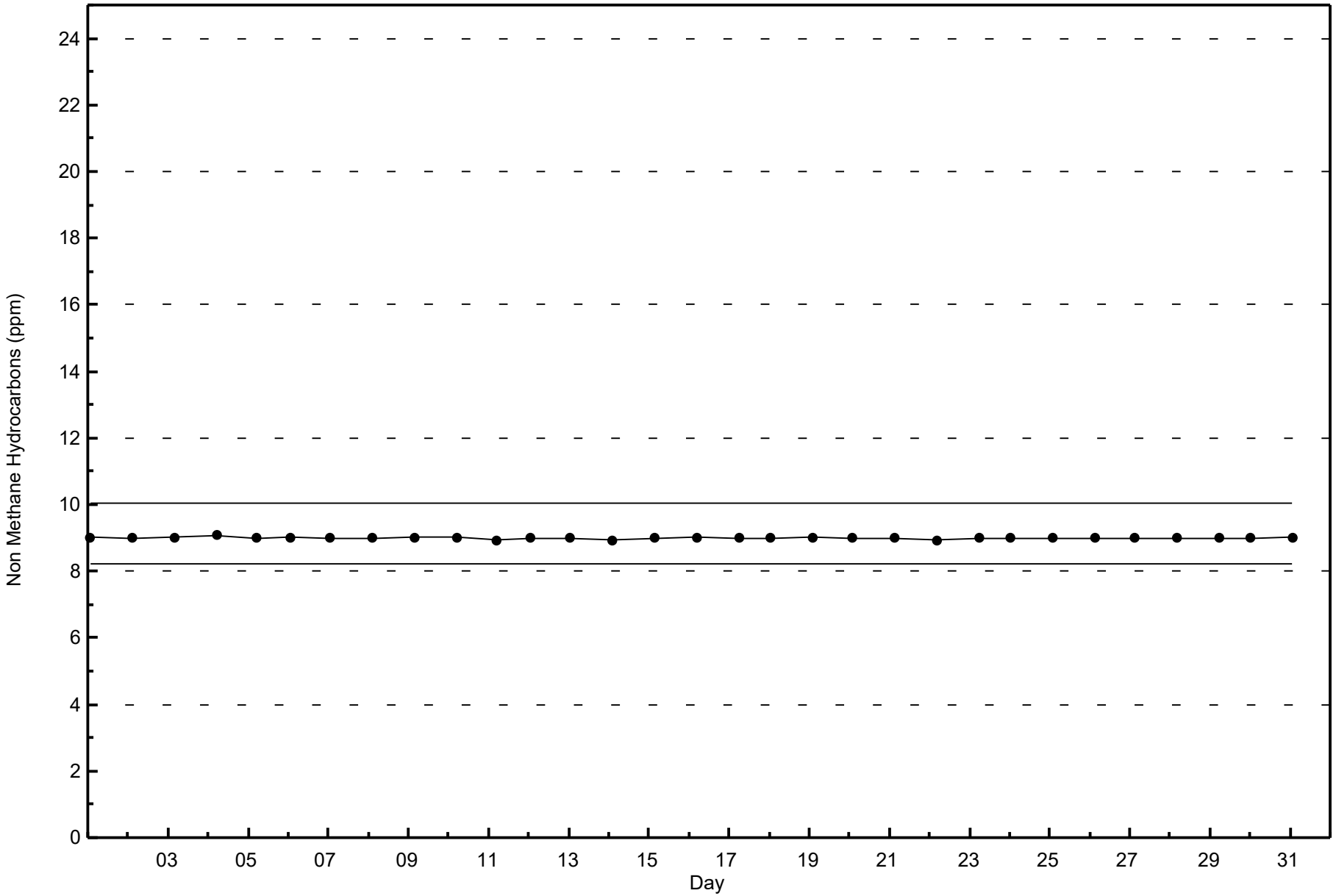


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Conklin - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Conklin - March 2025

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

Maximum Value: 2.2 ppm on Mar 16 08:00

Maximum Daily Average: 2.1 ppm on Mar 16

Minimum Value: 2.0 ppm on Mar 8 12:00

Minimum Daily Average: 2.0 ppm on Mar 27

Maximum Diurnal Average: 2.1 ppm at hour 6

Minimum Diurnal Average: 2.0 ppm at hour 14

Monthly Average: 2.06 ppm

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

Hours in Service:	744
Hours of Data:	693
Hours of Missing Data:	51
Hours of Calibration:	35
Percent Operational Time:	97.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	2.2	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.1	2.2
2-Mar	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1
3-Mar	2.0	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
4-Mar	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
5-Mar	2.1	2.1	2.1	2.1	2.1	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	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1
6-Mar	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.1
7-Mar	2.0	Z	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
8-Mar	2.1	2.1	Z	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2
9-Mar	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
10-Mar	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	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
11-Mar	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1
12-Mar	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	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1
13-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	2.0	2.0	Z	2.0	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
15-Mar	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	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2
16-Mar	2.2	2.2	2.1	2.1	Z	2.2	2.2	2.2	2.2	2.2	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
17-Mar	2.1	2.1	2.1	2.1	2.1	Z	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	2.1	2.1	2.1
18-Mar	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
19-Mar	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	2.1	2.1	2.1	2.1	2.1	2.1
20-Mar	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	2.0	2.1
21-Mar	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	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
22-Mar	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2
23-Mar	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1
24-Mar	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1
25-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1
26-Mar	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
27-Mar	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-Mar	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	2.0	2.1	2.0	2.1
29-Mar	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1
30-Mar	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	PF	PF	PF	PF	PF	PF	PF	PF	PF	2.0	2.0	2.1	2.1	2.1	2.1	2.1	--	2.1
31-Mar	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	PF	PF	PF	PF	PF	PF	PF	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	--	2.1
	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	Diurnal Average
	2.2	2.2	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	2.1	2.1	2.1	2.1	2.1	2.2	Diurnal Maximum	

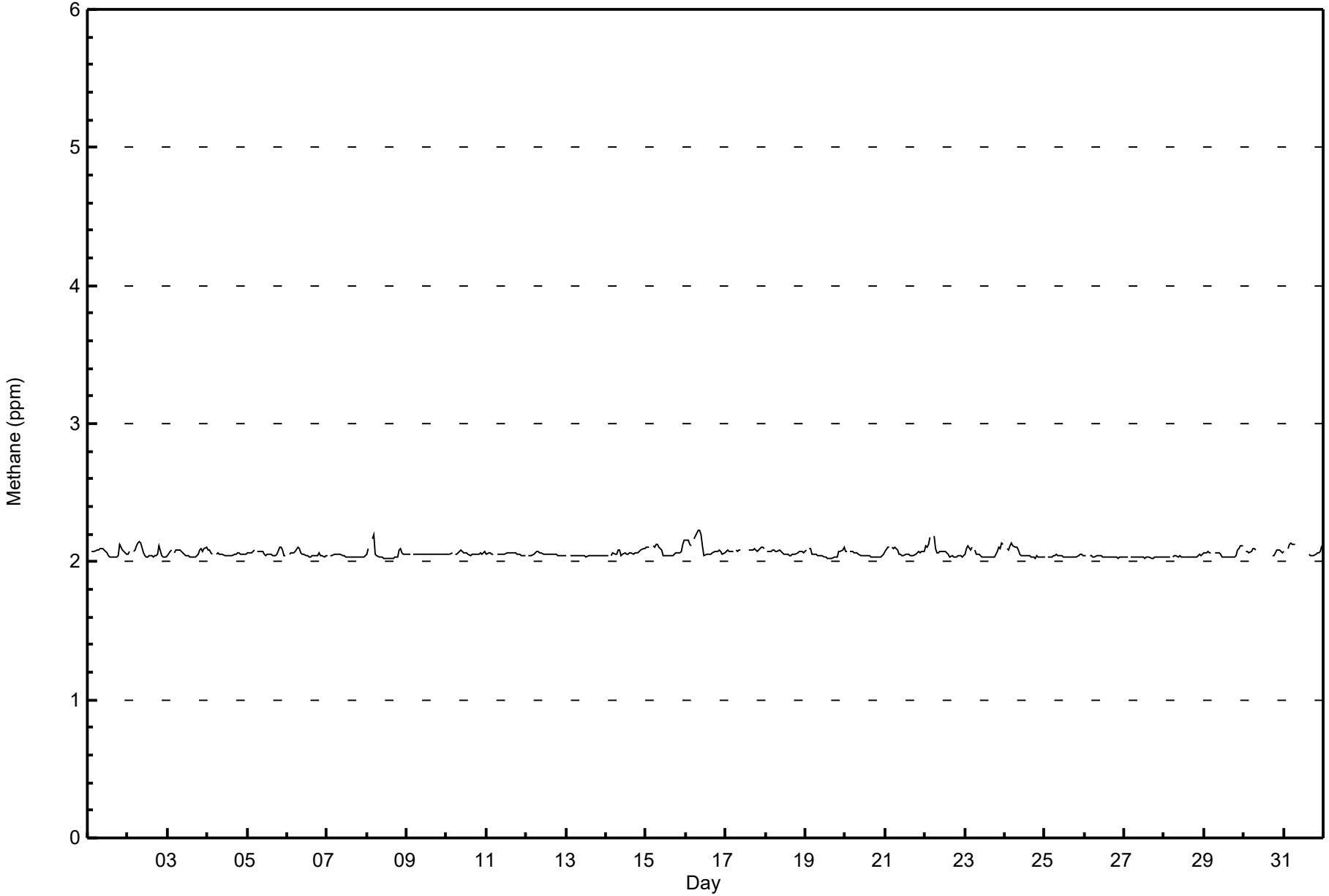
Z - zerospan C - Calibration PF - Power Failure

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Conklin - March 2025



Methane (CH_4) - ppm
Conklin - March 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	307	44.30	44.30
2.1 - 3.0	386	55.70	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 693

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Conklin - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	16	23	48	17	9	11	4	4	3	7	27	14	34	51	24	15	307
2.1 - 3.0	24	29	23	11	12	11	39	61	41	45	26	7	3	5	13	34	384
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	40	52	71	28	21	22	43	65	44	52	53	21	37	56	37	49	691

Total Number of Valid Hours: 691

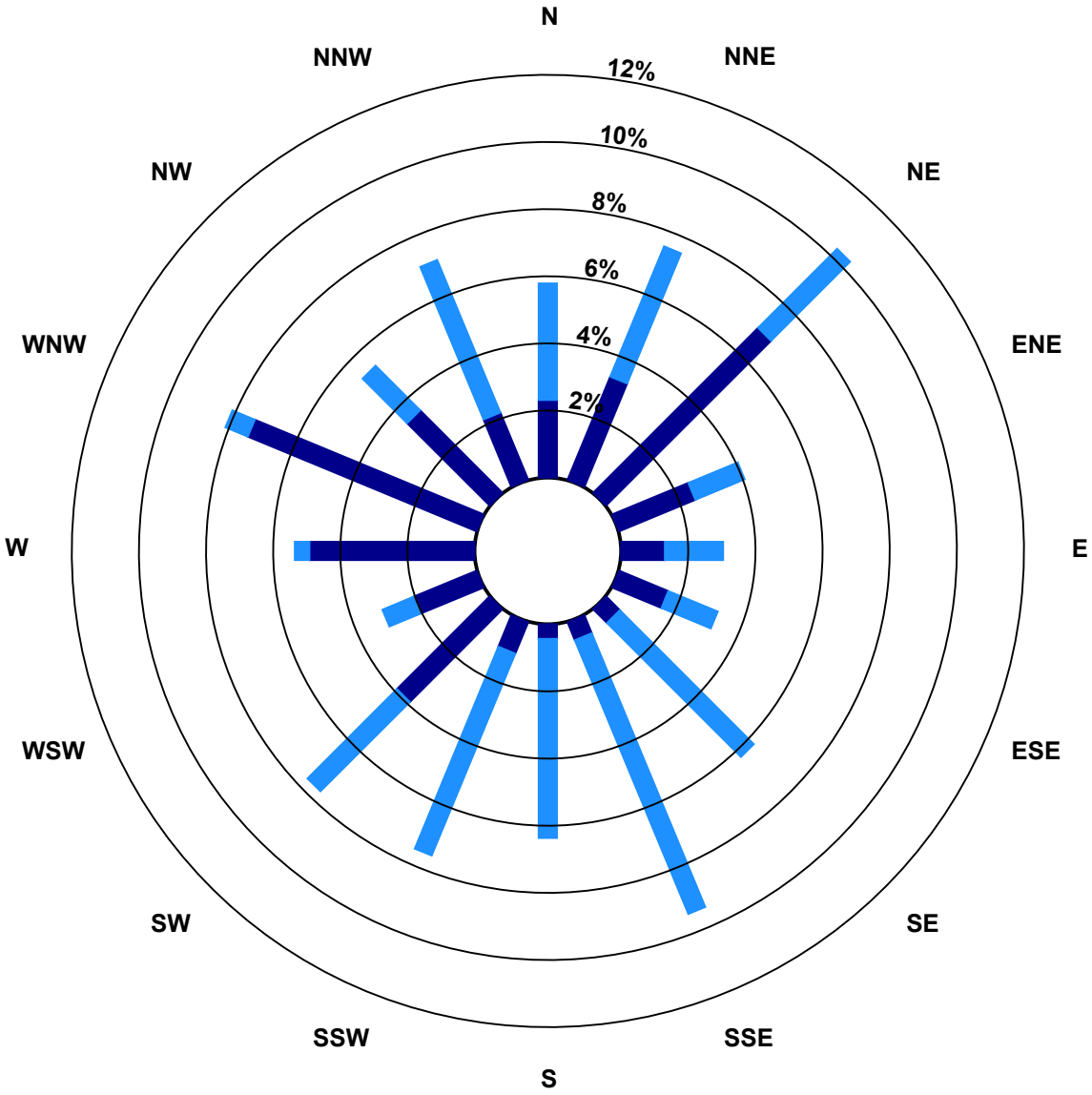
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Methane (CH_4) - ppm

Conklin



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

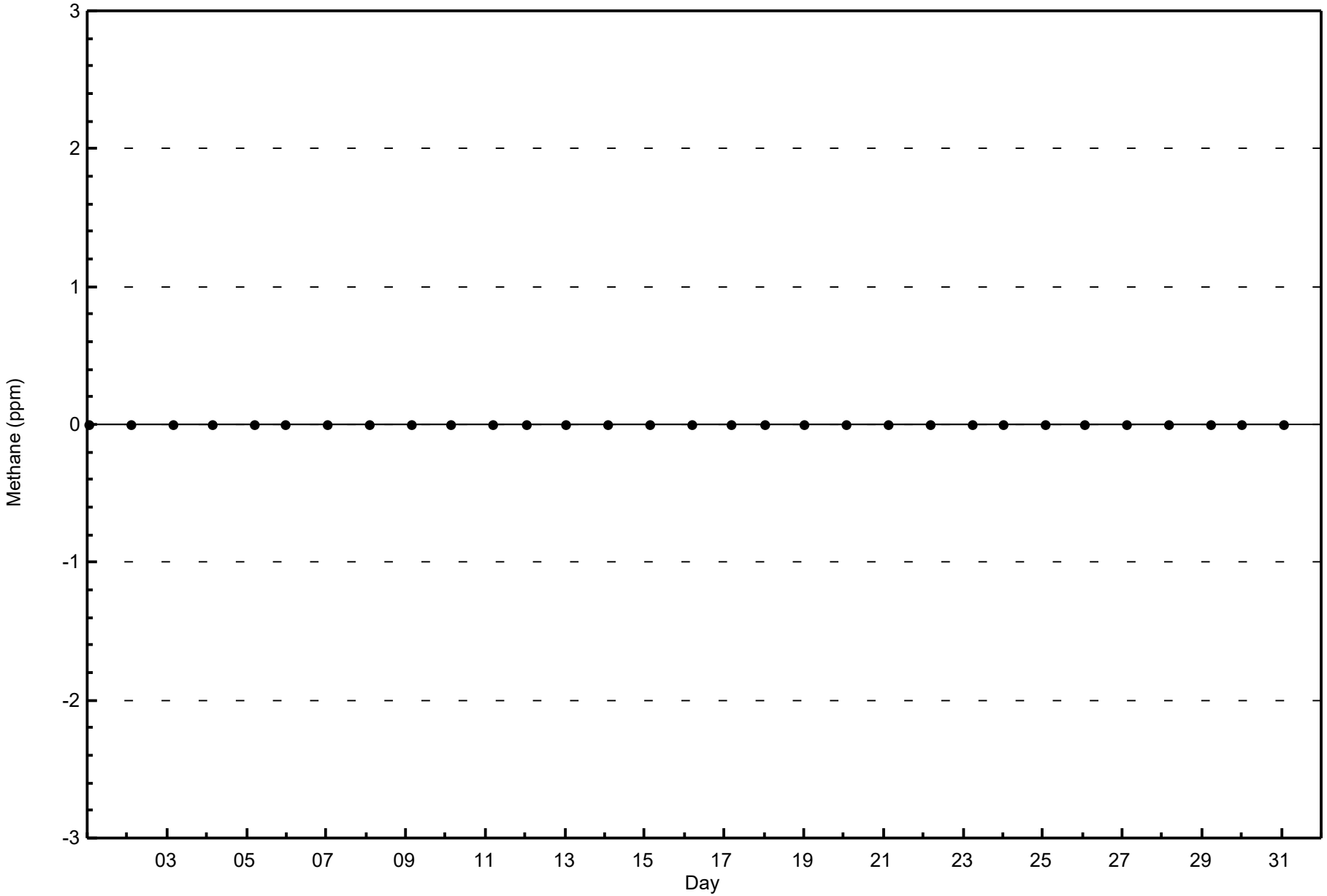
Total Number of Valid Hours: 691

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Conklin - March 2025

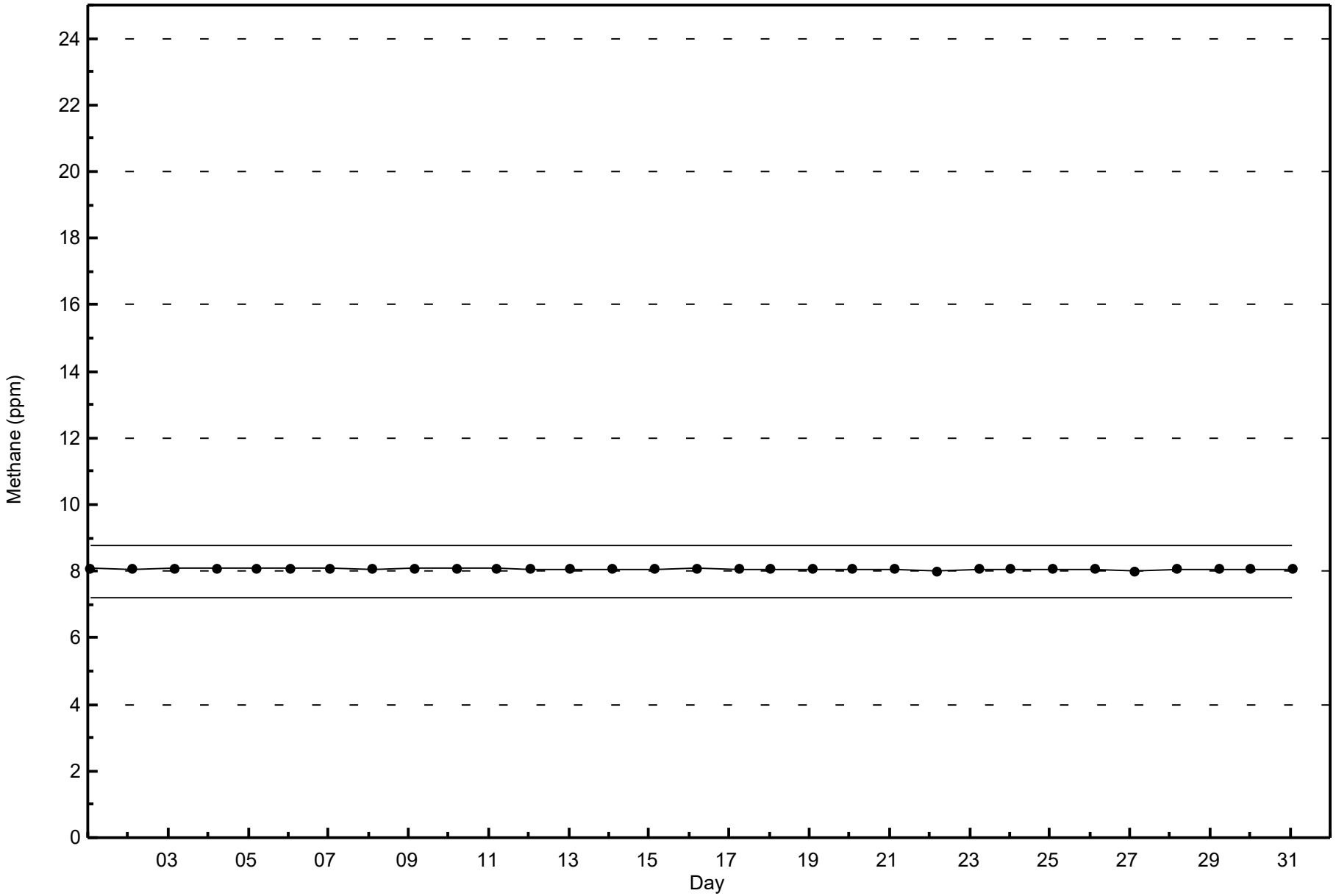


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Conklin - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Conklin - March 2025

Maximum Value: 7.8 ppb on Mar 19 15:00

Maximum Daily Average: 0.8 ppb on Mar 16

Minimum Value: 0.0 ppb on Mar 2 21:00

Minimum Daily Average: 0.0 ppb on Mar 27

Maximum Diurnal Average: 0.9 ppb at hour 11

Minimum Diurnal Average: 0.0 ppb at hour 24

Monthly Average: 0.29 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.3 P_{90} = 0.6 P_{99} = 4.1

Hours in Service:	744
Hours of Data:	690
Hours of Missing Data:	54
Hours of Calibration:	36
Percent Operational Time:	97.6

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.0	0.1	0.0	0.0	0.1	Z	0.4	0.1	0.4	0.6	3.1	0.9	0.2	0.1	0.3	0.2	0.1	0.0	0.5	0.7	0.5	3.0	0.2	0.0	0.5	3.1
2-Mar	Z	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.3	1.3	0.3	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.1	1.3
3-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.4	0.3	0.3	0.2	0.1	0.1	2.1	0.0	0.1	0.3	0.0	0.1	0.0	0.1	0.2	2.1
4-Mar	0.0	0.0	Z	0.3	0.2	0.6	0.1	0.4	0.2	0.3	0.4	0.2	0.1	0.3	0.1	0.1	0.2	0.1	0.2	0.1	0.0	0.0	5.5	0.0	0.4	5.5
5-Mar	0.2	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.3	0.6	0.4	0.3	0.3	0.3	0.4	0.3	0.1	0.1	0.2	0.2	0.2	0.0	0.0	0.1	0.2	0.6
6-Mar	0.0	0.1	0.1	0.2	Z	0.5	0.1	0.4	0.4	0.6	0.5	0.4	0.3	0.2	0.2	0.2	0.1	0.1	1.6	0.5	0.0	0.0	0.0	0.1	0.3	1.6
7-Mar	0.1	0.0	0.3	0.1	0.1	Z	0.2	0.1	0.2	1.1	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	0.1	1.1
8-Mar	Z	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.2	0.1	4.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	4.0
9-Mar	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
10-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.3	0.6	1.0	0.8	1.1	0.8	0.6	0.4	0.5	0.5	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.3	1.1
11-Mar	0.0	0.0	0.1	Z	0.0	0.0	0.0	0.0	0.2	0.4	0.4	0.8	0.6	0.5	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8
12-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.2	0.3	0.6	0.8	0.7	0.5	0.5	0.5	0.4	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8
13-Mar	0.0	0.0	0.0	0.0	0.1	Z	0.0	0.0	0.2	0.2	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
14-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	2.4	0.4	0.5	0.8	0.6	0.6	0.6	0.5	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.4
15-Mar	0.0	Z	0.0	0.0	0.1	0.0	0.5	1.6	4.7	3.0	0.9	3.1	0.8	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.7	4.7
16-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.2	1.3	4.3	4.8	3.0	1.0	0.9	0.7	0.5	0.4	0.1	0.1	0.0	0.1	0.1	0.2	0.0	0.0	0.8	4.8
17-Mar	0.0	0.0	0.1	Z	0.3	0.1	0.4	0.3	0.6	4.1	0.5	M	M	0.4	1.3	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	4.1
18-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.3	2.0	1.1	1.2	C	C	C	C	C	0.0	0.0	1.4	0.0	0.0	0.1	0.0	0.0	0.0	0.3	2.0
19-Mar	0.0	0.0	0.0	0.1	0.0	Z	3.5	1.2	0.3	0.3	0.3	0.2	0.2	0.5	7.8	0.2	0.4	0.4	0.2	0.5	0.9	0.1	0.0	0.1	0.7	7.8
20-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.5	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	0.1	0.5
21-Mar	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.4	0.4	0.9	1.1	1.1	1.2	0.9	0.5	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.2
22-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.2	0.3	0.3	0.2	0.2	0.1	0.1	1.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	1.1
23-Mar	3.7	0.2	0.0	Z	0.0	0.0	0.1	0.2	0.9	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.3	3.7
24-Mar	0.3	0.3	0.1	0.1	Z	0.3	0.2	0.3	0.9	0.3	0.2	0.2	1.3	0.1	0.2	0.2	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.2	1.3
25-Mar	0.1	0.1	0.0	0.0	0.2	Z	0.1	0.2	0.3	0.4	7.5	0.2	0.1	0.1	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	7.5
26-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.3	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
27-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.6	0.7	0.5	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.7
29-Mar	0.0	0.0	0.1	Z	0.0	0.0	0.1	0.7	0.7	0.9	1.2	0.6	0.5	0.3	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.2
30-Mar	0.0	0.1	0.6	0.3	Z	0.5	0.1	1.2	PF	PF	PF	PF	PF	PF	PF	PF	PF	0.4	0.0	0.0	0.0	0.0	0.0	0.0	--	1.2
31-Mar	0.0	0.0	0.0	0.0	0.3	Z	0.2	0.4	PF	PF	PF	PF	PF	PF	PF	3.7	2.3	0.6	0.0	0.0	0.0	0.1	0.0	0.0	--	3.7
	0.2	0.0	0.1	0.1	0.1	0.1	0.2	0.4	0.7	0.9	0.9	0.6	0.4	0.3	0.8	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.2	0.0	Diurnal Average	
	3.7	0.3	0.6	0.3	0.3	0.6	3.5	2.0	4.7	4.8	7.5	4.0	1.3	0.9	7.8	3.7	2.3	1.4	1.6	0.7	0.9	3.0	5.5	0.1	Diurnal Maximum	

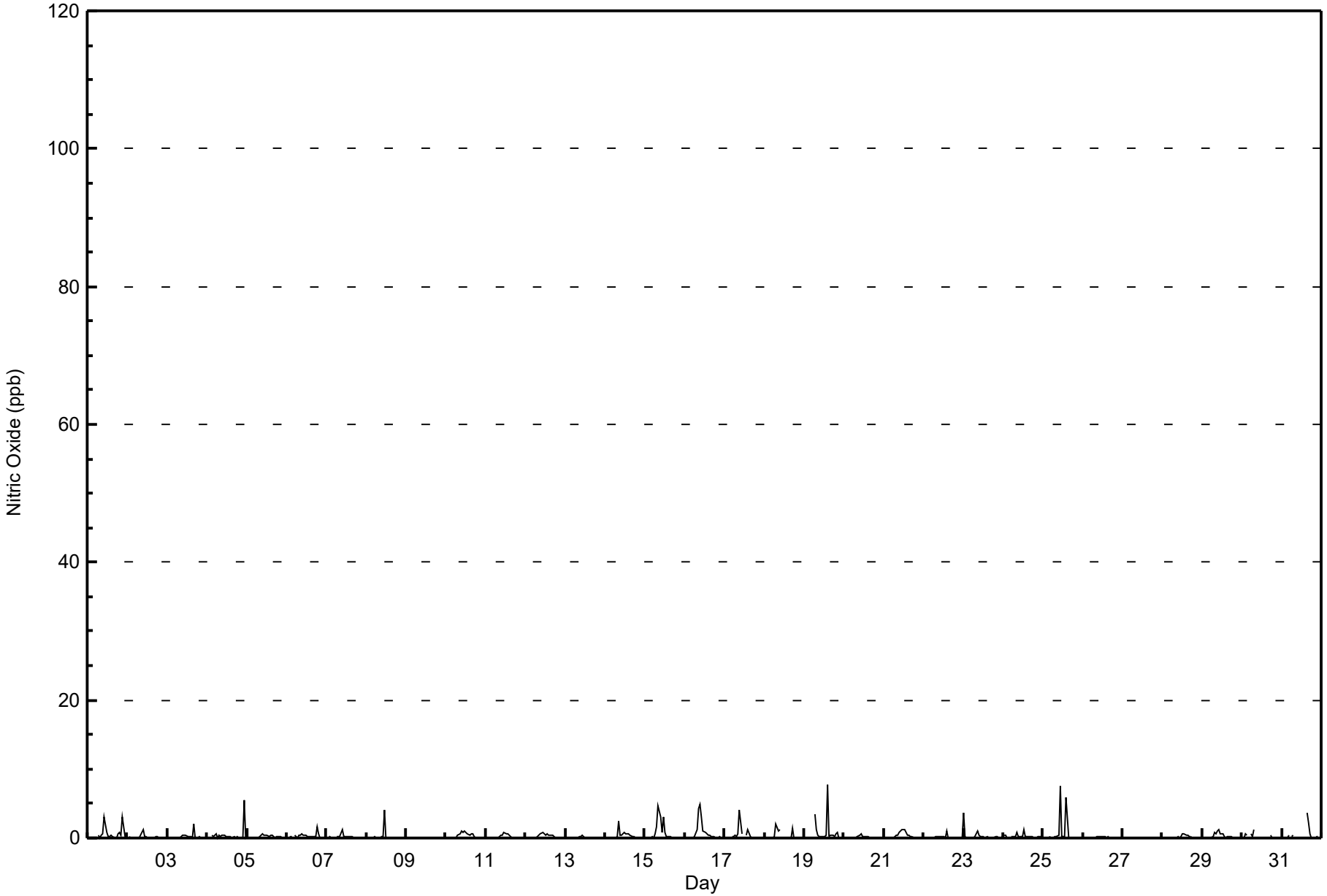
Z - zerospan C - Calibration M - Maintenance PF - Power Failure

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Conklin - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	690	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 690

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Conklin - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	40	51	70	31	21	22	43	62	45	51	53	20	37	56	34	52	688
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	40	51	70	31	21	22	43	62	45	51	53	20	37	56	34	52	688

Total Number of Valid Hours: 688

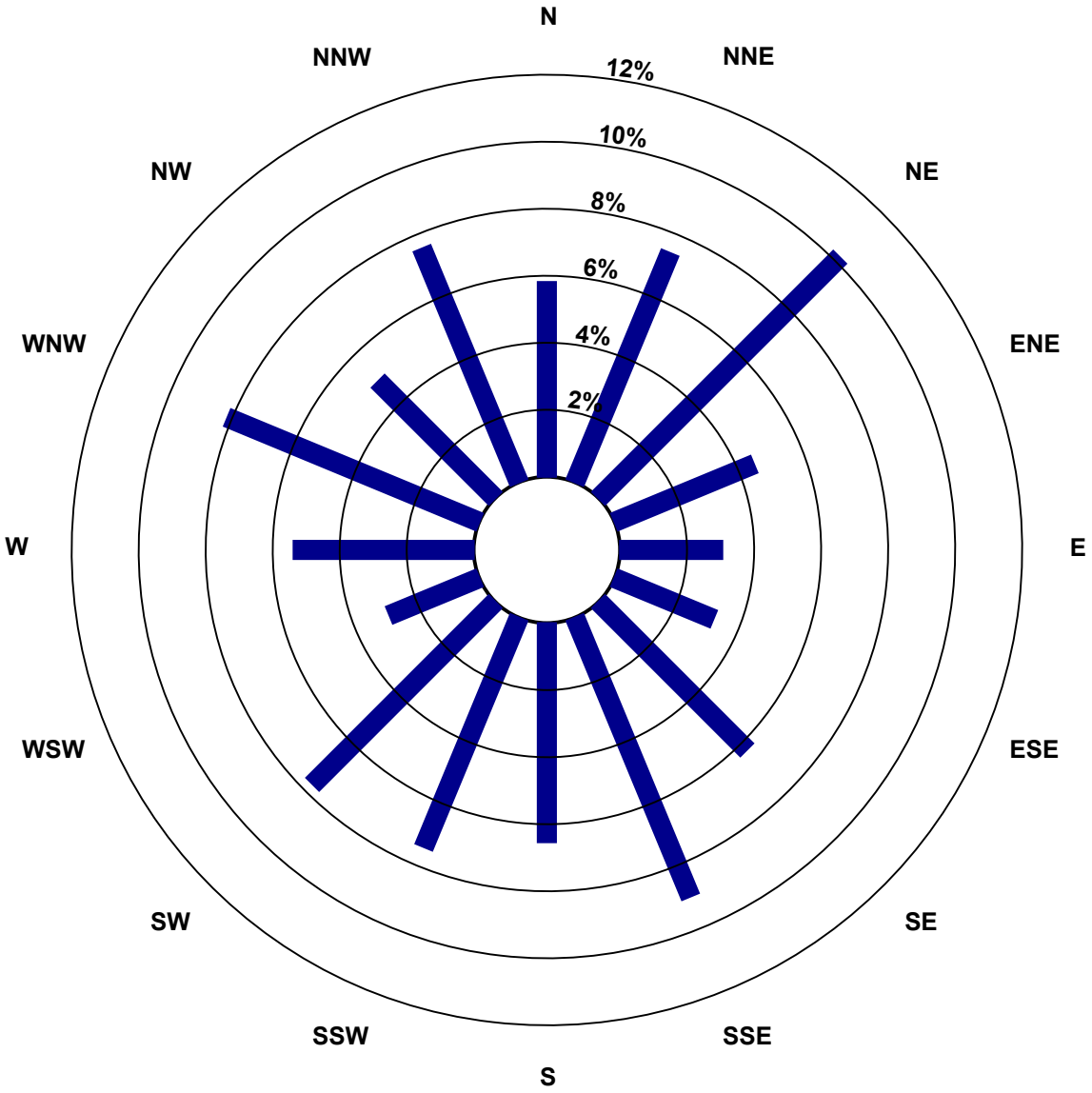
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitric Oxide (NO) - ppb

Conklin



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

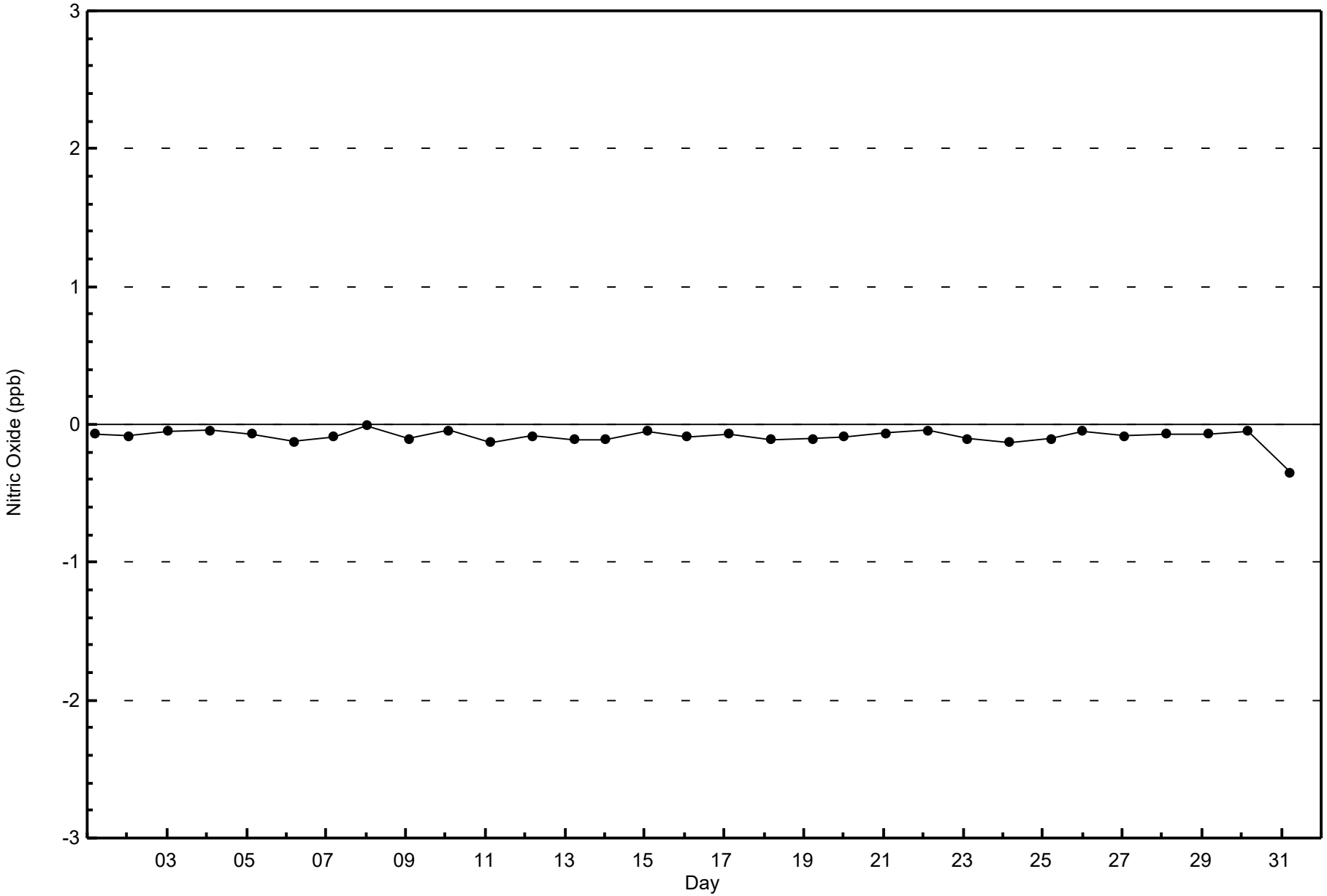
Total Number of Valid Hours: 688

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Conklin - March 2025

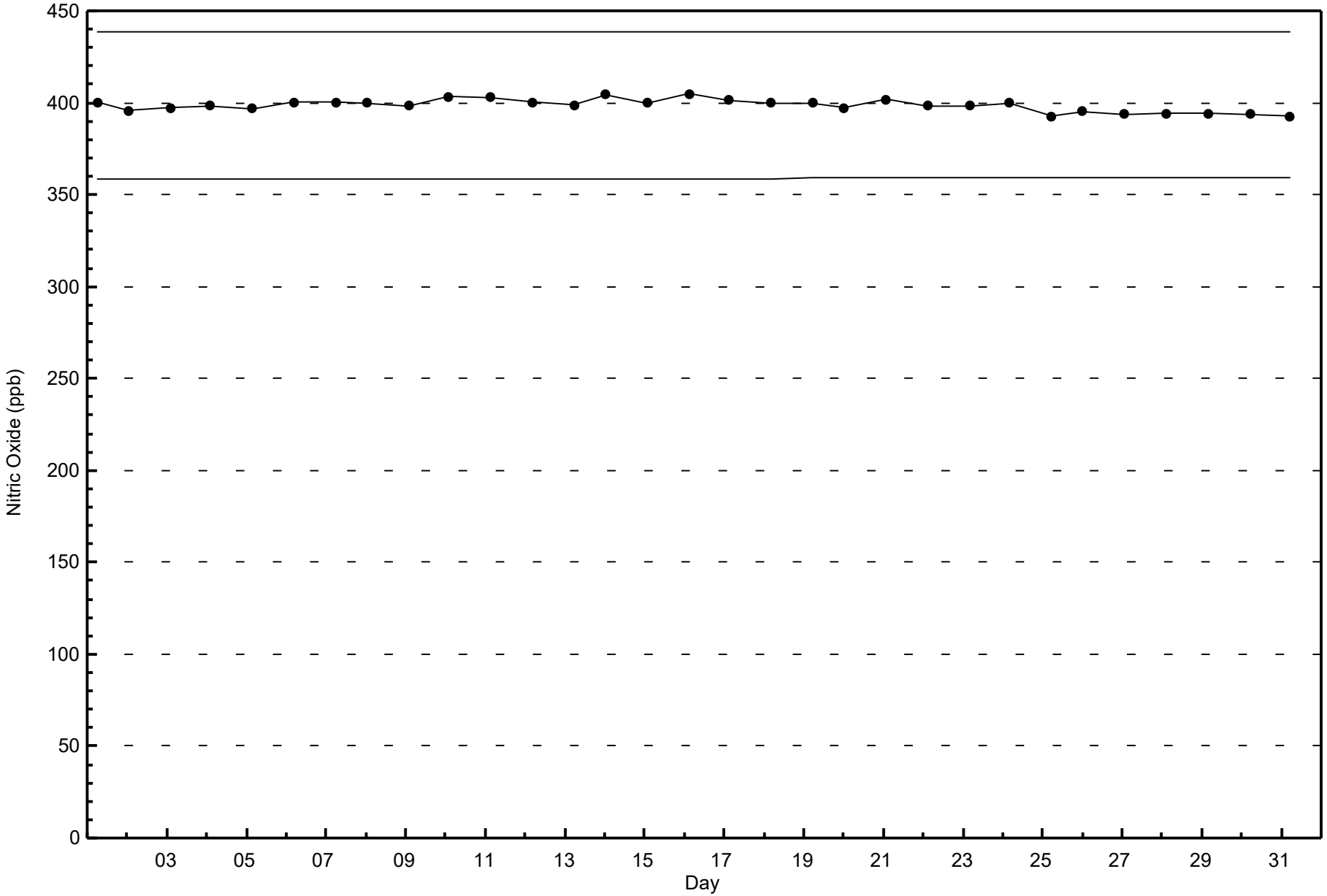


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Conklin - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Conklin - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 14.9 ppb on Mar 19 07:00 Maximum Daily Average: 3.7 ppb on Mar 1

Minimum Value: 0.0 ppb on Mar 19 15:00 Minimum Daily Average: 0.3 ppb on Mar 27
Maximum Diurnal Average: 2.6 ppb at hour 20 Minimum Diurnal Average: 0.9 ppb at hour 14
Monthly Average: 1.70 ppb Percentiles: P_1 = 0.2 P_{10} = 0.3 Q_1 = 0.7 Median = 1.2 Q_3 = 2.1 P_{90} = 3.2 P_{99} = 10.2

Hours in Service:	744
Hours of Data:	690
Hours of Missing Data:	54
Hours of Calibration:	36
Percent Operational Time:	97.6

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	2.6	2.3	1.3	1.4	1.3	Z	1.9	1.7	2.0	1.9	2.4	2.4	1.2	0.8	1.4	1.1	1.4	2.3	11.6	10.9	6.8	10.2	11.4	3.9	3.7	11.6
2-Mar	Z	6.8	3.4	2.3	2.4	3.2	3.6	3.9	3.4	2.6	1.4	1.1	0.9	0.8	0.7	0.8	1.2	3.4	6.9	6.5	1.1	0.9	1.1	0.8	2.6	6.9
3-Mar	0.9	Z	2.3	1.8	2.4	2.7	2.5	2.3	2.1	2.7	2.0	1.3	1.2	0.9	0.8	0.7	1.6	1.0	4.5	7.9	3.4	1.4	1.2	1.0	2.1	7.9
4-Mar	0.5	0.4	Z	1.0	0.9	2.2	1.5	1.2	0.7	0.9	1.0	0.8	0.6	0.8	0.8	0.8	1.7	1.9	2.8	2.4	1.1	1.1	3.8	2.1	1.3	3.8
5-Mar	2.6	2.4	2.1	Z	3.2	2.6	3.3	2.6	2.4	2.0	1.3	0.9	1.0	1.0	1.2	1.3	0.9	1.3	5.1	4.9	3.4	1.8	0.6	0.7	2.1	5.1
6-Mar	0.6	0.7	0.9	1.0	Z	5.9	1.2	1.8	1.5	1.4	1.3	1.1	1.0	1.0	0.9	0.9	1.1	1.9	7.3	5.0	0.9	0.8	0.8	1.2	1.7	7.3
7-Mar	1.1	0.9	1.5	1.0	1.0	Z	1.8	1.3	1.3	1.3	0.9	0.8	0.8	0.7	0.8	0.9	1.3	1.7	1.3	1.5	1.2	1.2	1.0	0.9	1.1	1.8
8-Mar	Z	3.0	2.6	2.8	2.2	2.7	0.7	1.3	0.8	0.8	0.8	0.2	0.6	0.5	0.6	0.6	0.7	0.4	0.5	4.2	4.9	2.6	1.9	1.8	1.6	4.9
9-Mar	1.1	Z	0.6	0.5	0.6	0.8	0.9	0.7	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.4	1.1
10-Mar	0.2	0.3	Z	0.4	0.3	0.7	0.8	2.9	2.4	2.1	2.4	1.7	1.2	1.1	1.0	1.7	2.4	3.0	3.4	2.8	1.9	1.7	2.0	2.5	1.7	3.4
11-Mar	1.8	2.6	2.4	Z	1.1	1.4	0.5	0.6	1.1	1.1	1.2	1.5	1.6	1.6	1.8	1.3	0.9	0.9	0.6	0.5	0.4	0.3	0.3	0.3	1.1	2.6
12-Mar	0.3	0.3	0.3	0.3	Z	2.3	2.4	2.6	1.7	1.6	1.3	1.1	0.9	1.0	0.9	1.2	1.3	1.5	1.5	0.7	0.3	0.3	0.4	0.4	1.1	2.6
13-Mar	0.9	1.0	1.0	1.0	1.0	Z	0.9	0.9	1.3	1.1	1.4	0.7	0.4	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.6	0.6	1.4
14-Mar	Z	0.3	0.2	0.3	1.1	0.3	1.0	2.3	3.5	1.0	1.1	1.5	1.4	1.5	2.0	2.2	1.7	1.9	2.5	2.3	2.4	3.6	4.1	4.2	1.8	4.2
15-Mar	3.9	Z	4.1	4.0	4.8	5.9	7.1	4.4	5.3	3.9	1.5	2.7	0.7	0.7	0.8	0.7	0.5	1.0	1.9	2.5	2.1	2.3	3.5	2.8	2.9	7.1
16-Mar	2.7	2.5	Z	2.8	3.2	3.0	3.6	3.2	5.2	4.9	3.4	1.6	1.5	1.2	1.2	1.3	1.4	1.7	2.1	2.0	2.4	2.6	1.9	1.8	2.5	5.2
17-Mar	1.7	1.6	1.5	Z	1.9	1.9	2.8	2.0	2.4	2.3	1.9	M	M	1.9	2.2	1.8	1.6	2.1	1.3	1.9	3.2	4.6	5.3	3.5	2.4	5.3
18-Mar	2.6	1.9	1.6	1.6	Z	2.1	3.5	10.4	3.4	2.5	C	C	C	C	C	0.6	0.9	2.1	1.7	1.7	2.3	2.0	1.1	1.6	2.4	10.4
19-Mar	1.2	1.1	1.1	0.9	0.8	Z	14.9	6.6	0.9	0.8	0.8	0.8	0.6	1.1	0.0	0.8	1.5	3.2	4.9	7.2	14.3	8.5	6.9	3.2	3.6	14.9
20-Mar	Z	2.4	1.5	1.4	0.9	0.6	0.5	0.5	0.8	1.4	1.4	0.7	0.8	0.7	0.6	0.6	0.6	0.6	0.3	0.2	0.2	0.7	0.9	1.2	0.8	2.4
21-Mar	1.4	Z	1.3	2.1	1.9	1.8	1.4	3.3	1.8	2.2	2.2	2.3	2.5	2.1	1.6	1.8	1.5	1.4	1.7	1.9	1.2	1.3	1.5	1.7	1.8	3.3
22-Mar	2.3	2.0	Z	1.6	1.6	1.7	1.7	2.1	2.2	1.7	1.6	1.3	1.2	0.9	1.5	0.7	0.9	0.9	1.4	1.2	1.5	1.0	1.5	1.2	1.5	2.3
23-Mar	9.4	6.9	2.3	Z	0.9	0.9	0.9	1.0	2.1	1.1	0.6	0.6	0.6	0.5	0.6	0.4	0.4	0.6	2.4	4.8	2.8	1.5	1.7	1.8	1.9	9.4
24-Mar	3.2	9.9	10.7	7.7	Z	2.2	1.6	1.5	2.7	1.0	0.9	0.9	1.8	0.8	0.7	0.8	1.5	0.8	1.5	1.4	1.0	1.2	1.0	0.6	2.4	10.7
25-Mar	0.9	0.7	0.5	0.7	1.0	Z	1.1	1.0	1.2	1.1	1.8	0.5	0.5	0.6	1.7	0.4	0.4	0.4	0.6	0.5	1.0	0.8	0.8	1.1	0.8	1.8
26-Mar	Z	1.1	1.2	1.1	1.4	1.4	1.2	1.1	0.8	0.6	0.6	0.5	0.6	0.5	0.5	0.6	0.3	0.2	0.2	0.1	0.1	0.1	0.3	0.4	0.6	1.4
27-Mar	0.4	Z	0.8	0.7	0.7	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	0.2	0.2	0.2	0.3	0.5	0.3	0.8
28-Mar	0.3	0.2	Z	0.3	0.2	0.3	0.3	0.4	0.4	0.6	0.3	0.5	1.3	1.4	1.3	1.3	1.2	1.5	1.4	0.8	0.8	0.6	0.5	0.4	0.7	1.5
29-Mar	0.7	1.2	1.9	Z	1.0	1.0	1.4	2.7	1.9	2.3	2.3	1.4	1.3	0.8	0.6	0.8	1.0	1.7	0.8	2.5	5.3	5.3	2.2	1.5	1.8	5.3
30-Mar	1.1	0.9	2.1	1.5	Z	1.5	0.9	2.6	PF	PF	PF	PF	PF	PF	PF	PF	PF	1.7	1.0	1.2	1.6	1.0	1.3	1.2	--	2.6
31-Mar	1.4	0.8	1.1	1.0	1.4	Z	2.4	2.9	PF	PF	PF	PF	PF	PF	PF	3.5	3.0	1.9	1.5	1.3	2.6	3.1	1.9	1.7	--	3.5
	1.8	2.1	1.9	1.6	1.5	2.0	2.2	2.3	1.9	1.6	1.4	1.1	1.0	0.9	1.0	1.0	1.1	1.4	2.4	2.6	2.3	2.0	2.0	1.5	Diurnal Average	
	9.4	9.9	10.7	7.7	4.8	5.9	14.9	10.4	5.3	4.9	3.4	2.7	2.5	2.1	2.2	3.5	3.0	3.4	11.6	10.9	14.3	10.2	11.4	4.2	Diurnal Maximum	

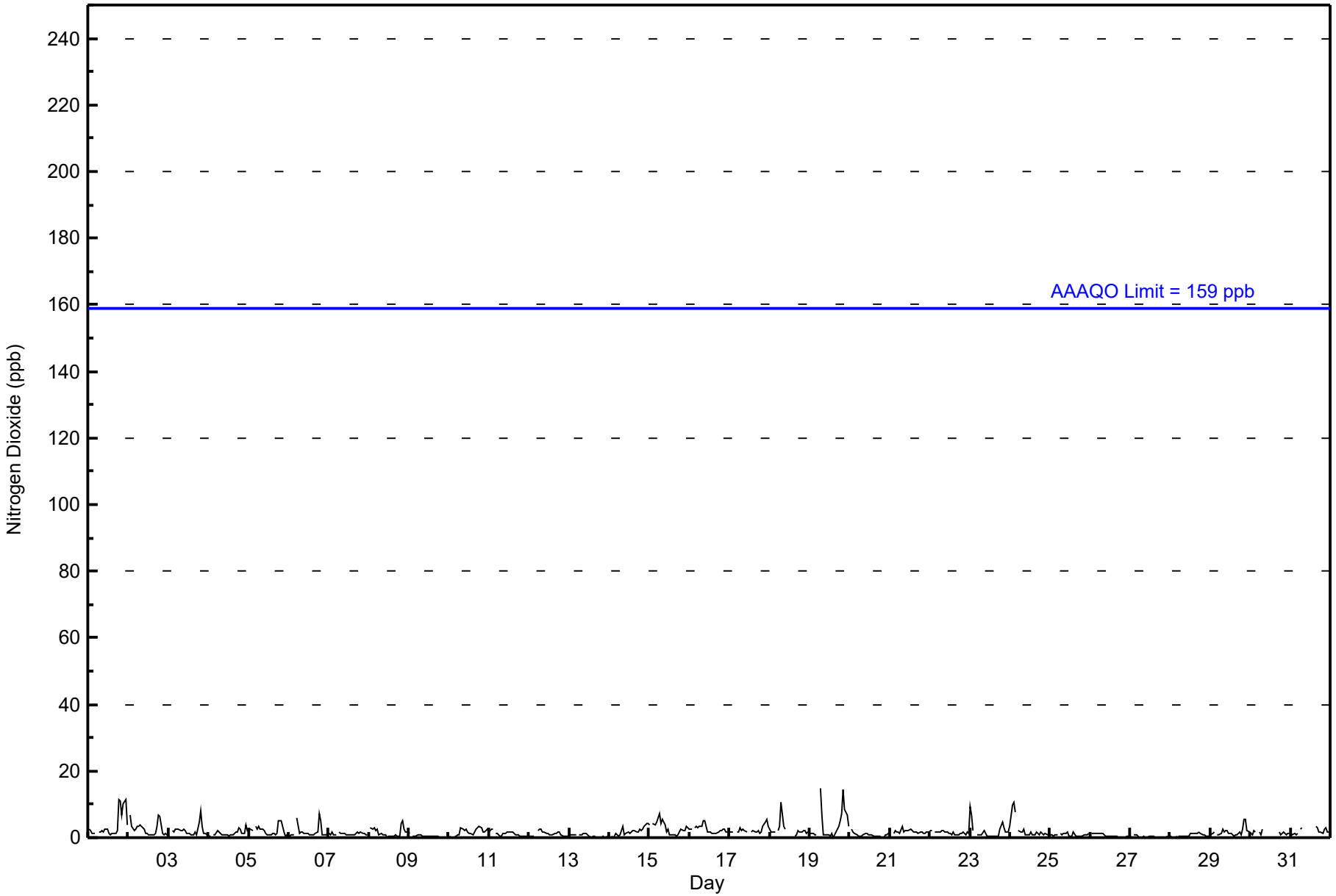
Z - zerospan C - Calibration M - Maintenance PF - Power Failure
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Conklin - March 2025



Nitrogen Dioxide (NO_2) - ppb
Conklin - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	690	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 690

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Conklin - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	40	51	70	31	21	22	43	62	45	51	53	20	37	56	34	52	688
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	40	51	70	31	21	22	43	62	45	51	53	20	37	56	34	52	688

Total Number of Valid Hours: 688

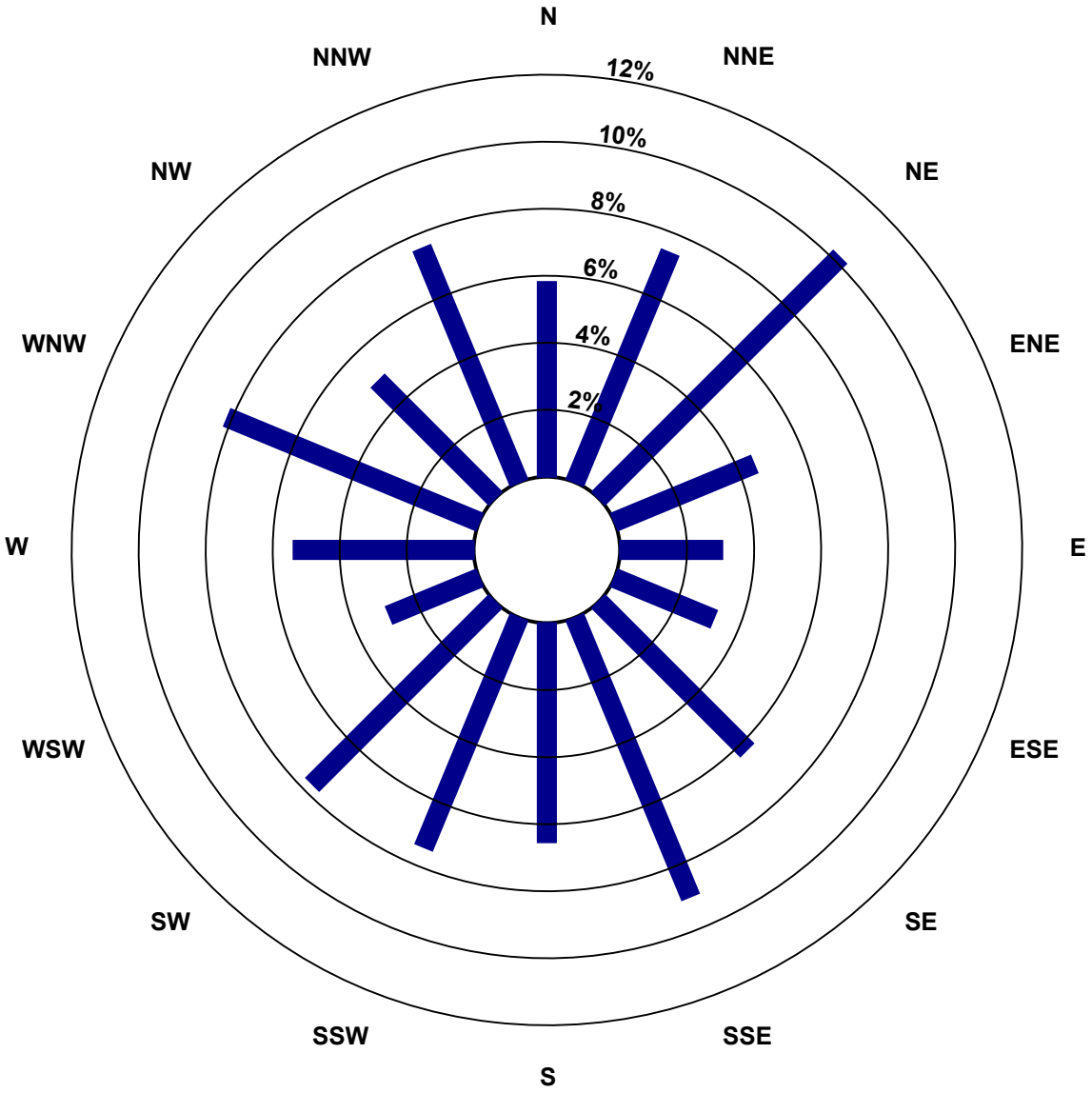
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Dioxide (NO_2) - ppb

Conklin



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

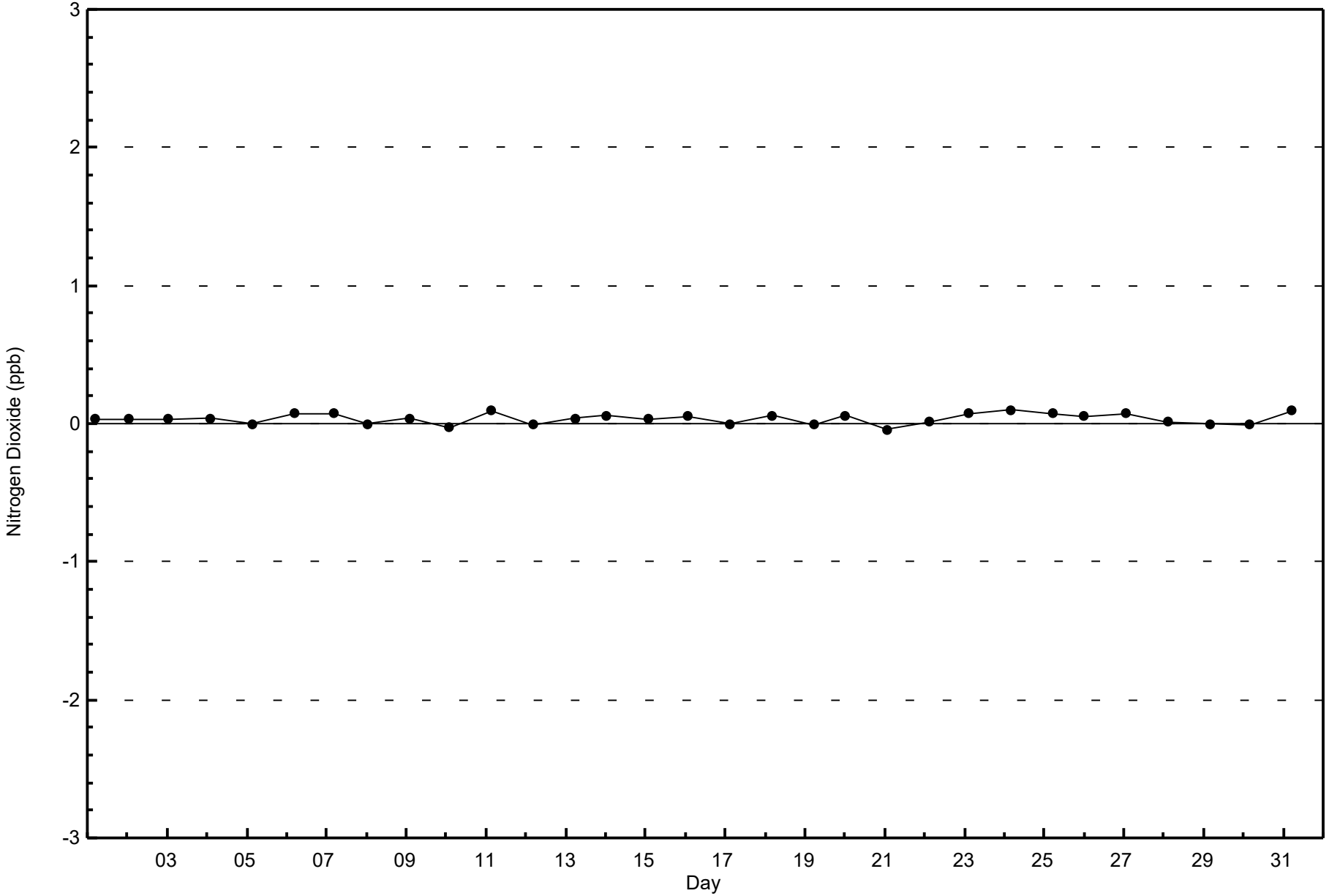
Total Number of Valid Hours: 688

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Conklin - March 2025

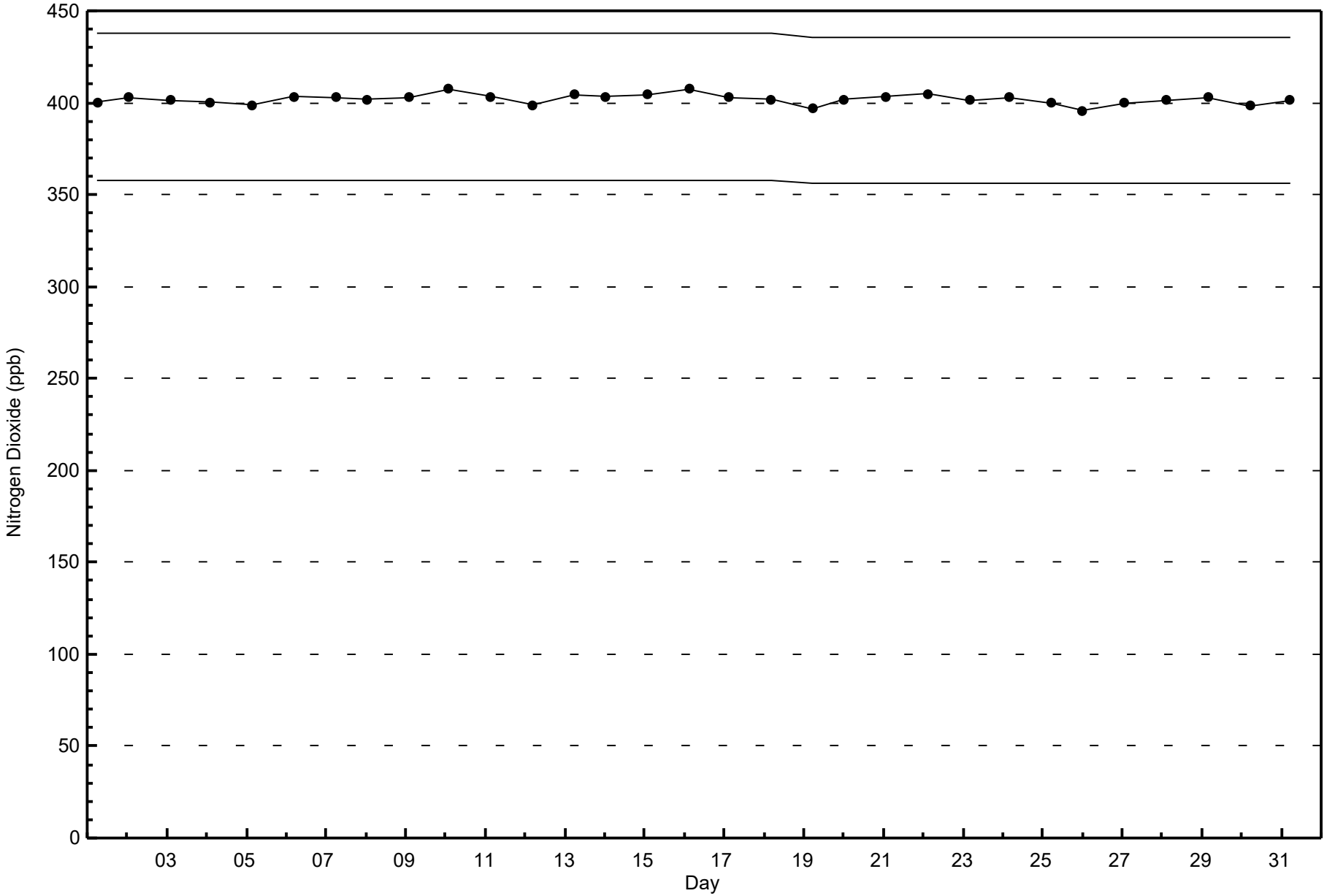


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Conklin - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Conklin - March 2025

Maximum Value: 18.4 ppb on Mar 19 07:00

Maximum Daily Average: 4.3 ppb on Mar 19

Minimum Value: 0.1 ppb on Mar 26 21:00

Minimum Daily Average: 0.3 ppb on Mar 27

Maximum Diurnal Average: 2.7 ppb at hour 20

Minimum Diurnal Average: 1.2 ppb at hour 14

Monthly Average: 1.99 ppb

Percentiles: P_1 = 0.2 P_{10} = 0.3 Q_1 = 0.8 Median = 1.4 Q_3 = 2.4 P_{90} = 3.7 P_{99} = 11.6

Hours in Service:	744
Hours of Data:	690
Hours of Missing Data:	54
Hours of Calibration:	36
Percent Operational Time:	97.6

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	2.6	2.4	1.3	1.4	1.4	Z	2.3	1.8	2.4	2.5	5.5	3.3	1.4	0.9	1.7	1.3	1.5	2.3	12.1	11.6	7.3	13.2	11.6	3.9	4.2	13.2
2-Mar	Z	7.0	3.5	2.3	2.4	3.2	3.6	4.0	3.7	3.9	1.7	1.3	1.0	0.9	0.8	0.8	1.3	3.5	7.1	6.5	1.1	0.9	1.1	0.8	2.7	7.1
3-Mar	0.9	Z	2.3	1.8	2.4	2.7	2.5	2.3	2.2	3.1	2.4	1.6	1.5	1.1	0.9	0.8	3.7	1.0	4.6	8.2	3.4	1.5	1.2	1.1	2.3	8.2
4-Mar	0.5	0.4	Z	1.3	1.1	2.8	1.6	1.6	0.9	1.2	1.4	1.0	0.7	1.1	0.9	0.9	1.9	2.0	3.0	2.5	1.1	1.1	9.3	2.1	1.8	9.3
5-Mar	2.8	2.4	2.1	Z	3.2	2.6	3.4	2.7	2.7	2.6	1.7	1.2	1.3	1.3	1.6	1.6	1.0	1.4	5.3	5.1	3.6	1.8	0.6	0.8	2.3	5.3
6-Mar	0.6	0.8	1.0	1.2	Z	6.4	1.3	2.2	1.9	2.0	1.8	1.5	1.3	1.2	1.1	1.1	1.2	2.0	8.9	5.5	0.9	0.8	0.8	1.3	2.0	8.9
7-Mar	1.2	0.9	1.8	1.1	1.1	Z	2.0	1.4	1.5	2.4	1.2	1.0	1.0	0.9	0.9	1.0	1.4	1.7	1.3	1.5	1.2	1.2	1.0	0.9	1.3	2.4
8-Mar	Z	3.0	2.6	2.8	2.2	2.9	0.7	1.3	0.9	1.0	0.9	4.2	0.7	0.6	0.7	0.7	0.8	0.4	0.5	4.2	4.9	2.6	1.9	1.8	1.8	4.9
9-Mar	1.1	Z	0.6	0.5	0.6	0.8	0.9	0.7	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.4	1.1
10-Mar	0.2	0.3	Z	0.4	0.3	0.7	0.8	3.2	3.0	3.1	3.2	2.8	2.0	1.7	1.4	2.2	2.9	3.3	3.5	2.8	1.9	1.7	2.0	2.5	2.0	3.5
11-Mar	1.8	2.6	2.5	Z	1.1	1.4	0.5	0.6	1.3	1.5	1.6	2.3	2.2	2.1	2.2	1.5	1.0	1.0	0.6	0.5	0.4	0.3	0.3	0.3	1.3	2.6
12-Mar	0.3	0.3	0.3	0.3	Z	2.3	2.4	2.8	2.0	2.2	2.1	1.8	1.4	1.5	1.4	1.6	1.6	1.7	1.5	0.7	0.3	0.3	0.4	0.4	1.3	2.8
13-Mar	0.9	1.0	1.0	1.0	1.1	Z	0.9	0.9	1.5	1.3	1.7	0.9	0.5	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.6	0.7	1.7
14-Mar	Z	0.3	0.2	0.3	1.1	0.3	1.0	2.5	5.9	1.4	1.6	2.3	2.0	2.1	2.6	2.7	2.0	2.0	2.5	2.3	2.4	3.6	4.1	4.2	2.1	5.9
15-Mar	3.9	Z	4.1	4.0	4.9	5.9	7.6	6.0	10.0	6.9	2.4	5.8	1.5	1.0	1.0	0.8	0.6	1.1	1.9	2.5	2.1	2.3	3.5	2.8	3.6	10.0
16-Mar	2.7	2.5	Z	2.8	3.2	3.0	3.8	4.5	9.5	9.7	6.4	2.6	2.4	1.9	1.7	1.7	1.5	1.8	2.1	2.1	2.5	2.8	1.9	1.8	3.3	9.7
17-Mar	1.7	1.6	1.6	Z	2.2	2.0	3.2	2.3	3.0	6.4	2.4	M	M	2.3	3.5	2.1	1.7	2.2	1.3	1.9	3.2	4.6	5.3	3.5	2.8	6.4
18-Mar	2.6	1.9	1.6	1.6	Z	2.1	3.8	12.4	4.5	3.7	C	C	C	C	C	0.6	0.9	3.5	1.7	1.7	2.4	2.0	1.1	1.6	2.8	12.4
19-Mar	1.2	1.1	1.1	1.0	0.8	Z	18.4	7.8	1.2	1.1	1.1	1.0	0.8	1.6	7.8	1.0	1.9	3.6	5.1	7.7	15.2	8.6	6.9	3.3	4.3	18.4
20-Mar	Z	2.4	1.5	1.4	0.9	0.6	0.5	0.5	0.9	1.9	1.9	0.9	1.0	0.9	0.7	0.7	0.7	0.6	0.3	0.2	0.2	0.7	0.9	1.2	0.9	2.4
21-Mar	1.4	Z	1.3	2.1	1.9	1.9	1.5	3.7	2.2	3.1	3.3	3.4	3.7	3.0	2.1	2.2	1.6	1.5	1.7	1.9	1.2	1.3	1.5	1.7	2.1	3.7
22-Mar	2.3	2.0	Z	1.6	1.6	1.7	1.7	2.3	2.5	2.0	1.8	1.5	1.3	1.0	2.6	0.8	1.0	0.9	1.4	1.3	1.6	1.1	1.6	1.2	1.6	2.6
23-Mar	13.1	7.1	2.3	Z	0.9	0.9	1.0	1.2	3.0	1.4	0.8	0.8	0.7	0.6	0.7	0.5	0.5	0.7	2.5	5.0	2.9	1.5	1.8	1.9	2.3	13.1
24-Mar	3.5	10.2	10.8	7.8	Z	2.5	1.8	1.8	3.6	1.3	1.1	1.1	3.1	0.9	0.9	1.0	1.7	0.9	1.6	1.4	1.1	1.3	1.1	0.7	2.7	10.8
25-Mar	1.0	0.8	0.5	0.7	1.2	Z	1.2	1.2	1.5	1.5	9.3	0.7	0.6	0.7	7.5	0.4	0.4	0.4	0.6	0.5	1.0	0.8	0.8	1.1	1.5	9.3
26-Mar	Z	1.1	1.2	1.1	1.4	1.4	1.2	1.2	0.9	0.8	0.8	0.7	0.9	0.6	0.6	0.8	0.3	0.2	0.2	0.1	0.1	0.1	0.3	0.4	0.7	1.4
27-Mar	0.4	Z	0.8	0.7	0.7	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	0.2	0.2	0.2	0.3	0.5	0.3	0.8
28-Mar	0.3	0.2	Z	0.3	0.2	0.3	0.3	0.4	0.5	0.7	0.4	0.7	1.9	2.1	1.8	1.7	1.4	1.6	1.4	0.8	0.8	0.6	0.5	0.4	0.8	2.1
29-Mar	0.7	1.2	2.0	Z	1.0	1.0	1.5	3.4	2.6	3.2	3.5	2.0	1.8	1.1	0.7	0.9	1.1	1.9	0.8	2.5	5.3	5.3	2.2	1.5	2.1	5.3
30-Mar	1.1	1.0	2.7	1.8	Z	2.0	1.0	3.8	PF	PF	PF	PF	PF	PF	PF	PF	PF	2.1	1.0	1.2	1.6	1.0	1.3	1.2	--	3.8
31-Mar	1.4	0.8	1.1	1.0	1.7	Z	2.6	3.3	PF	PF	PF	PF	PF	PF	PF	7.2	5.3	2.5	1.5	1.3	2.6	3.2	1.9	1.7	--	7.2
	1.9	2.1	2.0	1.6	1.6	2.1	2.4	2.7	2.6	2.5	2.2	1.7	1.4	1.2	1.7	1.3	1.4	1.6	2.5	2.7	2.4	2.2	2.2	1.5	Diurnal Average	
	13.1	10.2	10.8	7.8	4.9	6.4	18.4	12.4	10.0	9.7	9.3	5.8	3.7	3.0	7.8	7.2	5.3	3.6	12.1	11.6	15.2	13.2	11.6	4.2	Diurnal Maximum	

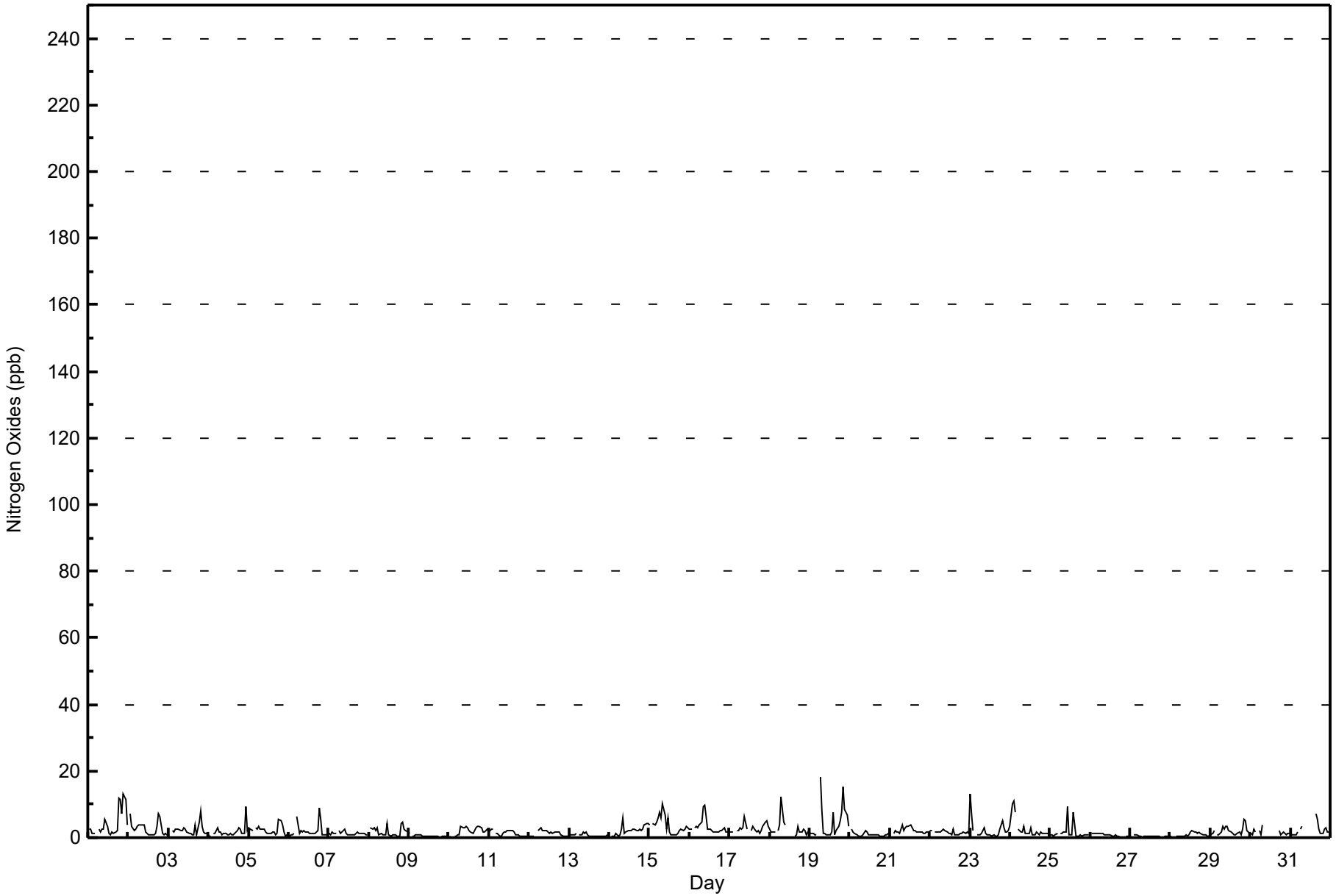
Z - zerospan C - Calibration M - Maintenance PF - Power Failure

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Conklin - March 2025



Nitrogen Oxides (NO_X) - ppb
Conklin - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	690	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 690

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Conklin - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	40	51	70	31	21	22	43	62	45	51	53	20	37	56	34	52	688
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	40	51	70	31	21	22	43	62	45	51	53	20	37	56	34	52	688

Total Number of Valid Hours: 688

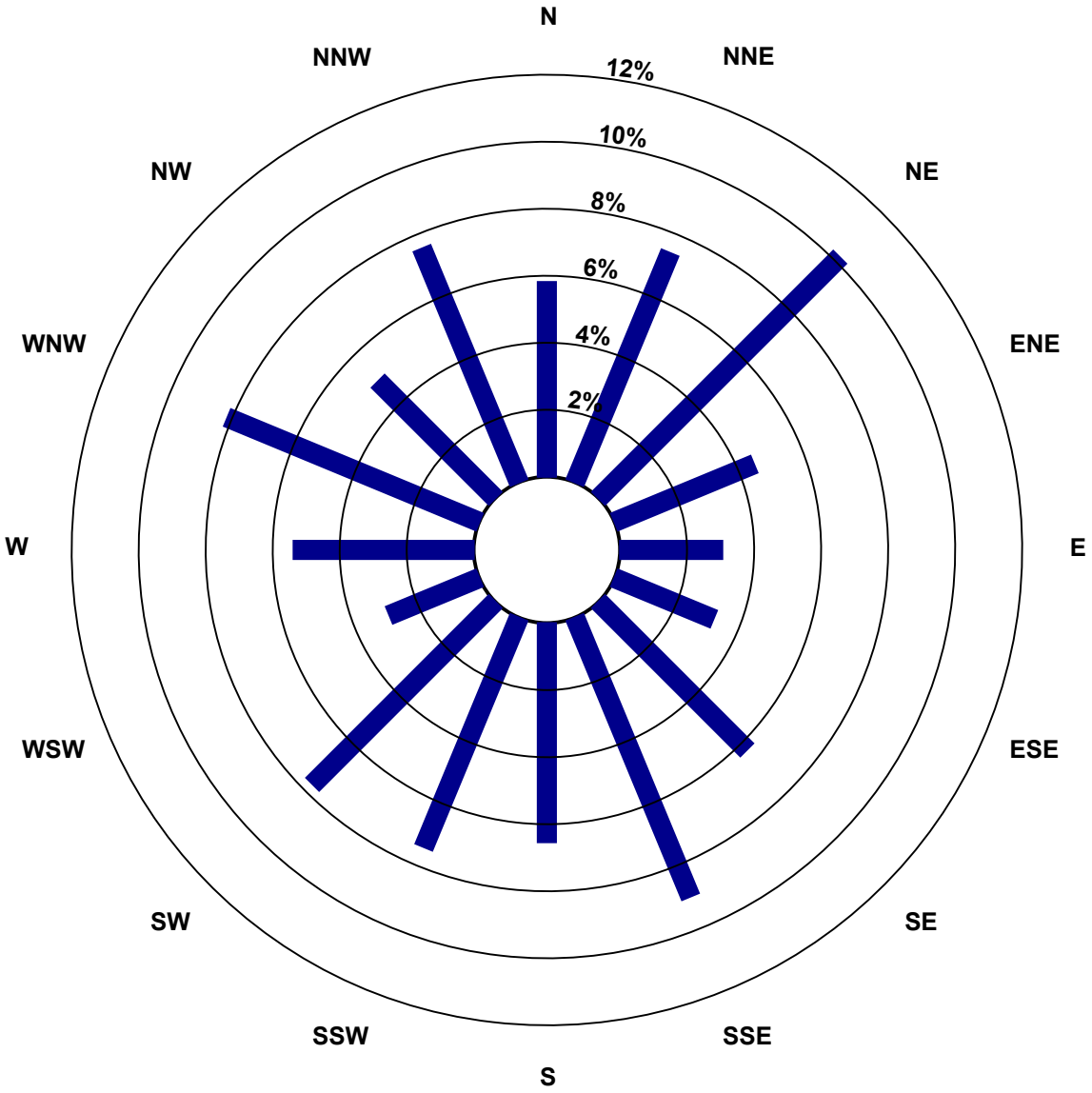
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Oxides (NO_X) - ppb

Conklin



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

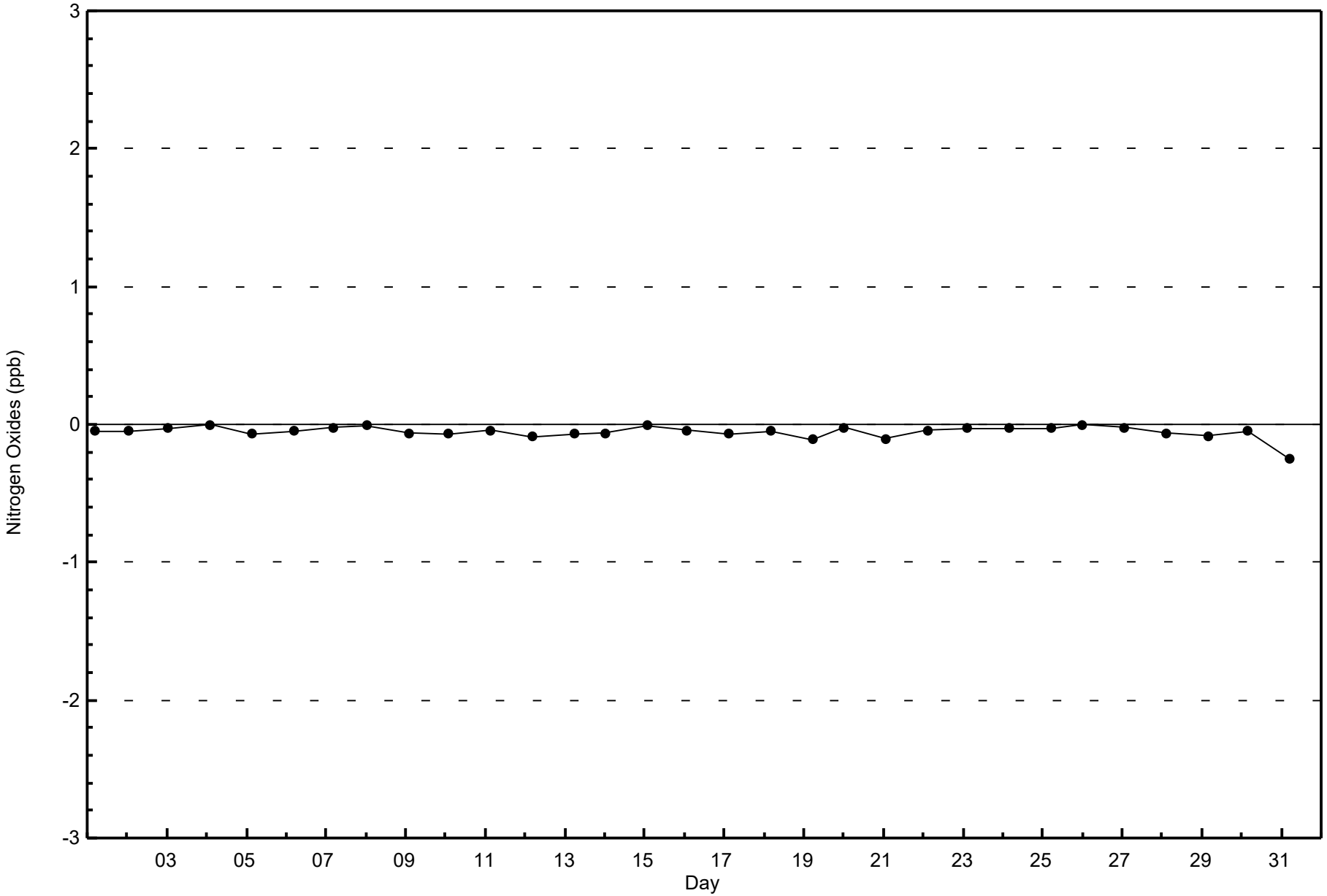
Total Number of Valid Hours: 688

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Conklin - March 2025

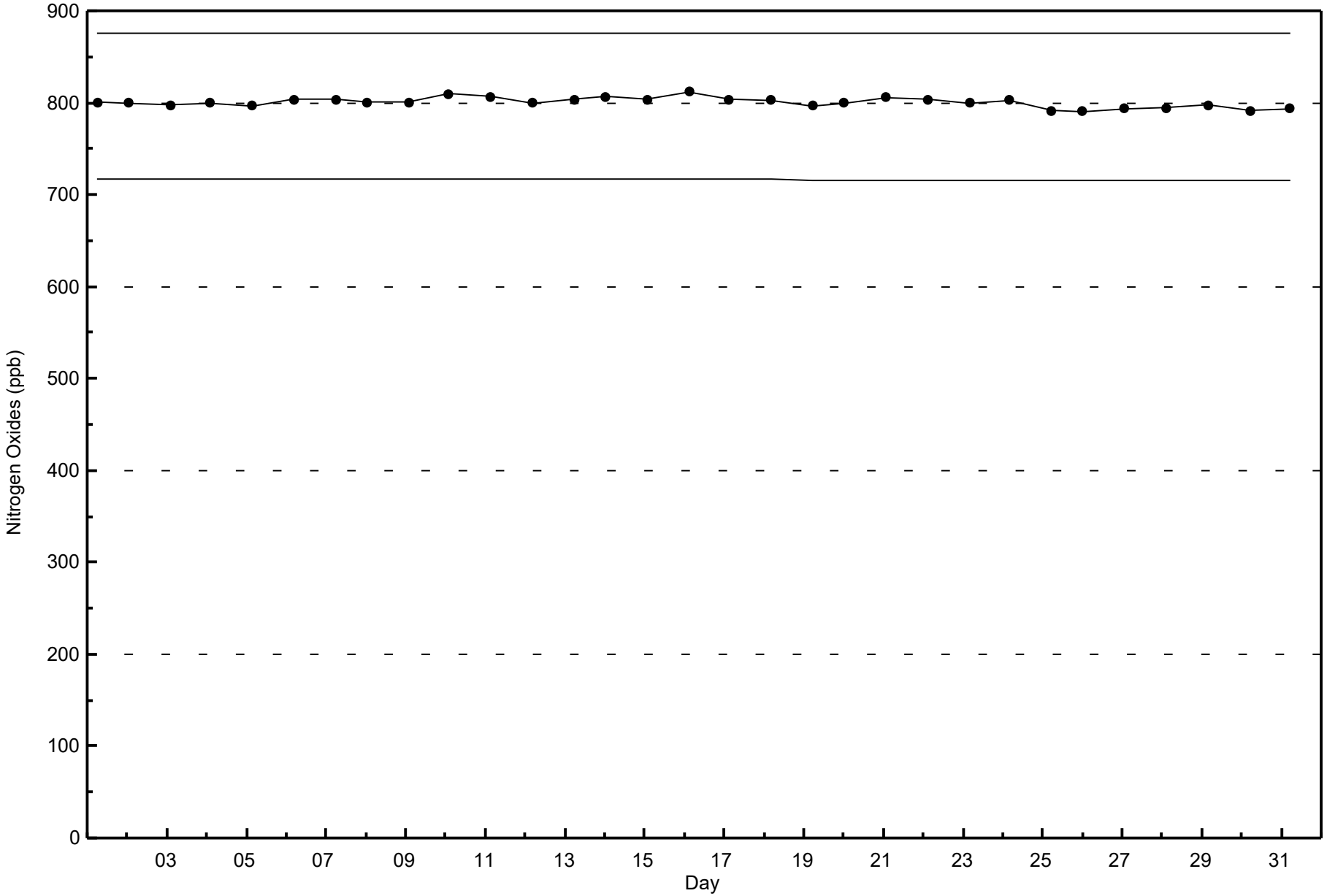


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Conklin - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Conklin - March 2025

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

Maximum Value: 52.6 ppb on Mar 21 18:00

Maximum Daily Average: 43.1 ppb on Mar 7

Minimum Value: 12.6 ppb on Mar 24 02:00

Minimum Daily Average: 30.3 ppb on Mar 10

Maximum Diurnal Average: 43.2 ppb at hour 16

Minimum Diurnal Average: 31.7 ppb at hour 7

Monthly Average: 36.98 ppb

Percentiles: P_1 = 17.2 P_{10} = 26.5 Q_1 = 32.1 Median = 38.3 Q_3 = 42.2 P_{90} = 45.4 P_{99} = 50.9

Hours in Service:	744
Hours of Data:	691
Hours of Missing Data:	53
Hours of Calibration:	35
Percent Operational Time:	97.6

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	12.9	18.1	26.8	Z	33.1	30.9	31.9	24.3	30.8	36.9	38.0	43.2	50.2	50.9	51.2	51.3	50.5	48.2	26.3	19.6	28.7	26.0	25.5	35.0	34.4	51.3
2-Mar	39.3	33.5	38.3	41.1	Z	37.7	35.3	34.1	35.5	42.7	44.1	45.4	45.6	43.9	43.8	46.6	45.3	40.7	27.3	21.6	29.6	40.5	39.4	40.5	38.8	46.6
3-Mar	39.8	34.7	32.4	36.2	37.1	Z	36.4	37.7	37.4	37.0	39.7	C	C	C	C	44.0	43.1	42.3	30.8	22.0	24.9	28.9	26.5	24.2	34.5	44.0
4-Mar	Z	29.1	32.7	35.4	34.6	32.6	32.0	33.9	35.2	36.2	38.7	41.5	43.1	43.7	44.3	44.8	42.5	42.3	41.0	41.5	42.6	42.1	38.1	40.0	38.6	44.8
5-Mar	38.0	Z	36.0	35.6	33.5	32.9	33.9	33.9	37.8	40.3	42.6	44.6	44.8	46.2	47.1	47.1	46.5	44.4	32.5	26.8	26.9	31.4	42.4	41.2	38.5	47.1
6-Mar	40.7	38.7	Z	37.4	37.2	30.8	30.1	28.8	33.8	35.7	40.0	43.5	44.8	45.4	46.0	47.2	47.1	45.0	34.9	31.1	42.0	41.9	43.1	43.5	39.5	47.2
7-Mar	43.0	42.9	41.0	Z	37.7	37.5	38.7	38.0	41.0	41.3	42.6	44.1	45.8	46.2	46.8	46.7	45.7	43.2	44.7	44.8	45.3	44.5	44.8	44.9	43.1	46.8
8-Mar	37.7	29.6	25.1	20.9	Z	33.5	40.3	40.4	43.8	44.4	46.1	47.3	49.2	51.0	50.9	50.7	50.4	44.6	42.9	37.7	34.8	38.6	39.5	39.7	40.8	51.0
9-Mar	41.1	41.9	41.5	41.7	40.6	Z	39.9	37.0	36.4	36.4	34.3	35.1	32.5	31.0	30.4	29.7	30.0	31.3	31.3	30.8	30.5	29.0	28.2	28.1	34.3	41.9
10-Mar	Z	25.1	25.9	26.9	27.5	27.5	28.1	26.7	27.0	28.2	29.4	31.2	33.0	35.7	37.4	35.2	34.9	34.1	32.4	31.9	32.2	31.6	29.4	26.8	30.3	37.4
11-Mar	30.6	Z	27.8	32.0	30.0	28.2	30.0	30.2	29.1	29.0	29.9	30.4	30.8	31.4	31.8	32.5	33.2	33.4	34.3	35.3	35.9	36.5	36.7	36.7	32.0	36.7
12-Mar	35.8	36.2	Z	37.2	34.4	31.0	29.8	29.7	32.6	32.9	33.8	34.7	36.0	35.8	35.8	35.3	35.5	36.1	36.9	40.6	44.1	43.9	42.7	41.7	36.2	44.1
13-Mar	40.4	39.6	39.2	Z	38.9	39.1	40.0	40.3	40.6	42.4	42.6	43.1	43.0	42.2	42.7	44.1	44.4	43.4	42.2	41.7	41.6	41.3	40.0	38.8	41.4	44.4
14-Mar	38.7	38.3	38.5	38.7	Z	38.2	37.2	36.5	35.6	38.1	38.0	36.3	38.2	38.2	38.2	38.5	39.1	39.5	38.0	36.2	33.7	30.2	27.4	26.8	36.4	39.5
15-Mar	27.3	24.6	22.2	21.2	19.9	Z	15.4	17.6	21.4	33.3	37.2	39.1	40.9	41.7	42.1	42.1	41.8	40.2	38.0	36.7	34.4	31.2	27.1	24.8	31.3	42.1
16-Mar	Z	21.4	20.0	18.9	18.9	16.5	16.4	17.2	22.9	25.7	33.8	39.6	40.3	40.2	40.6	40.3	39.1	38.3	37.3	36.6	35.8	36.9	37.3	36.4	30.9	40.6
17-Mar	35.0	Z	37.3	37.4	36.5	37.0	36.0	35.2	35.3	34.9	35.5	M	M	36.6	37.2	38.4	38.2	38.0	38.5	37.3	34.6	31.1	29.0	31.5	35.7	38.5
18-Mar	31.4	33.2	Z	34.4	33.7	33.3	30.1	22.0	30.3	35.2	36.8	39.7	40.6	41.4	42.5	43.4	43.0	42.6	41.4	36.5	38.2	36.6	35.9	38.2	36.5	43.4
19-Mar	33.4	30.3	30.1	Z	38.2	38.9	24.6	32.1	39.8	40.5	43.2	44.0	44.5	44.8	44.3	45.4	45.9	44.3	40.4	31.8	18.9	22.9	21.5	25.9	35.9	45.9
20-Mar	22.7	28.9	35.8	36.1	Z	39.2	35.9	37.7	39.7	39.0	39.2	40.6	40.8	41.3	41.6	42.1	43.7	44.8	44.9	45.7	45.4	44.7	41.3	40.3	39.6	45.7
21-Mar	39.3	31.8	30.0	27.0	24.7	Z	27.9	33.9	40.2	41.1	42.0	42.6	43.4	45.6	48.8	51.6	52.1	52.6	50.2	45.7	45.1	45.0	43.1	42.3	41.1	52.6
22-Mar	Z	37.9	30.2	28.4	28.5	29.6	37.4	40.8	40.3	40.6	40.7	42.1	44.9	46.9	47.0	49.7	50.1	49.8	48.2	48.0	47.1	47.2	46.2	44.1	42.0	50.1
23-Mar	28.7	Z	26.8	28.2	26.0	30.0	30.1	37.1	37.6	43.0	46.2	47.3	46.9	47.0	47.4	46.9	47.1	46.8	42.0	27.4	26.4	26.7	21.0	19.5	35.9	47.4
24-Mar	18.6	12.6	Z	13.9	21.0	24.3	23.7	23.7	30.0	43.8	49.4	50.7	49.7	50.2	47.2	44.5	43.9	41.0	41.0	35.4	40.5	40.4	40.1	39.1	35.9	50.7
25-Mar	41.2	41.6	42.4	Z	43.6	40.0	40.2	38.7	40.4	42.1	43.6	47.0	47.8	48.6	48.0	48.8	48.7	47.9	46.3	41.1	35.1	27.5	26.5	35.8	41.9	48.8
26-Mar	36.6	36.8	36.2	37.3	Z	38.8	38.9	37.0	36.5	37.6	38.3	39.2	40.3	42.1	43.2	42.8	41.4	40.3	39.6	41.2	41.8	40.8	40.3	40.3	39.5	43.2
27-Mar	40.4	39.7	39.7	39.9	38.9	Z	36.4	39.4	39.1	36.9	36.9	38.3	39.5	39.3	39.9	40.9	42.8	44.4	43.2	43.6	43.1	42.4	43.5	43.1	40.5	44.4
28-Mar	Z	42.4	41.9	41.6	40.9	40.6	40.7	41.1	40.8	40.5	40.3	39.7	39.0	39.0	39.4	40.2	40.7	40.5	40.4	38.9	33.9	33.4	31.6	26.0	38.9	42.4
29-Mar	22.1	Z	21.2	23.6	22.5	16.9	18.1	22.0	31.9	35.7	38.4	41.3	41.5	42.7	43.0	43.2	43.5	42.3	42.1	37.2	25.0	20.1	18.4	17.9	30.9	43.5
30-Mar	18.2	25.3	Z	28.8	28.4	22.2	21.8	32.7	PF	PF	PF	PF	PF	PF	PF	PF	PF	49.3	47.5	43.7	41.1	38.5	35.6	41.1	--	49.3
31-Mar	41.2	35.7	28.1	Z	24.2	28.1	26.3	29.2	PF	PF	PF	PF	PF	PF	PF	41.5	42.8	43.7	41.8	38.9	33.8	34.3	35.1	28.1	--	43.7
	33.6	32.7	32.6	32.0	31.9	32.1	31.7	32.5	35.3	37.6	39.4	41.2	42.1	42.4	42.8	43.2	43.1	42.4	39.3	36.4	35.9	35.7	34.8	34.9	Diurnal Average	
	43.0	42.9	42.4	41.7	43.6	40.6	40.7	41.1	43.8	44.4	49.4	50.7	50.2	51.0	51.2	51.6	52.1	52.6	50.2	48.0	47.1	47.2	46.2	44.9	Diurnal Maximum	

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

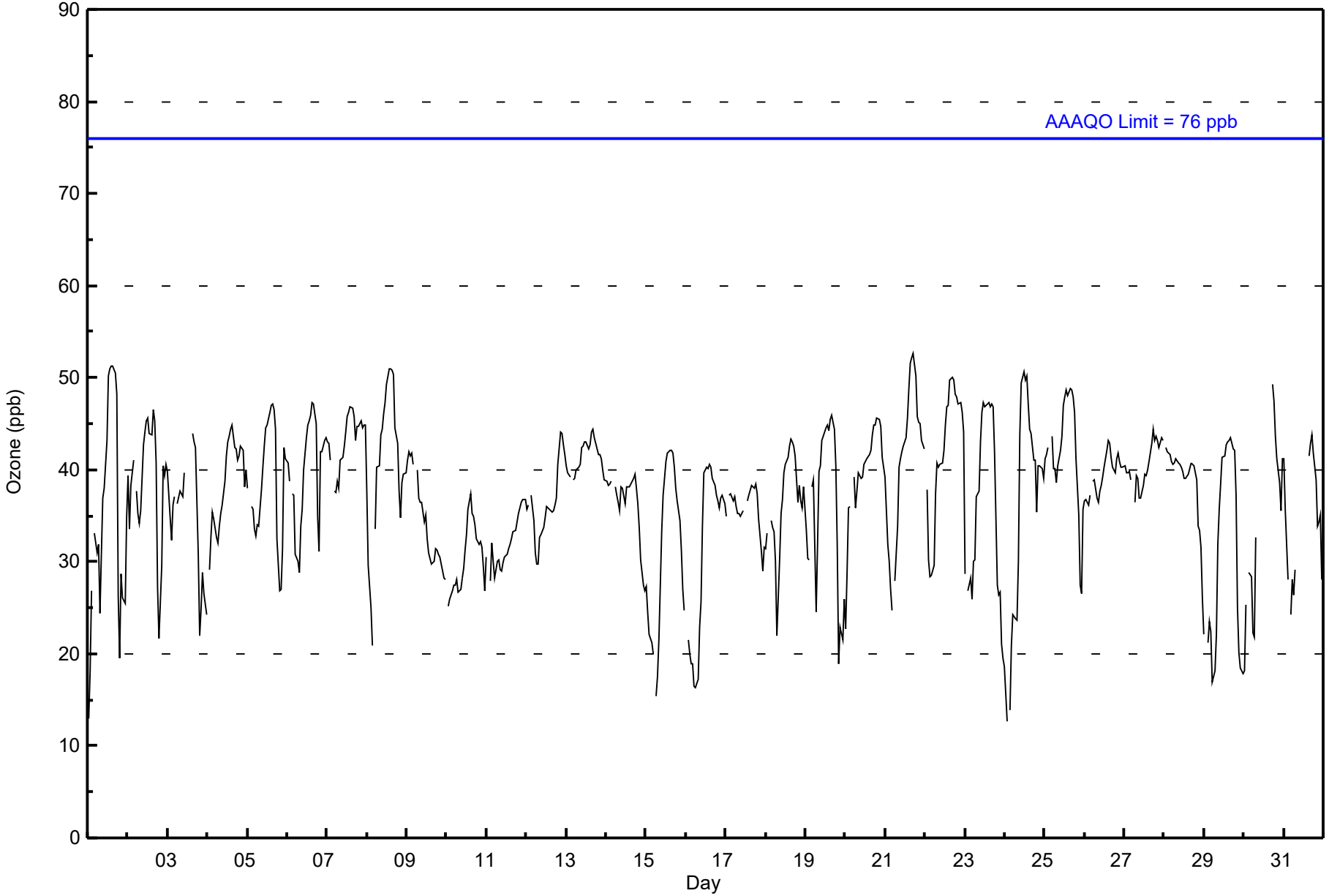
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Conklin - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	23	3.33	3.33
21 - 50	658	95.22	98.55
51 - 82	10	1.45	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 691

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Ozone (O_3) - ppb

Conklin - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	0	0	0	0	0	0	2	10	5	4	0	0	0	0	0	0	21
21 - 50	41	50	70	31	21	22	39	50	42	44	54	21	35	54	36	47	657
51 - 82	0	0	0	0	0	0	0	2	1	0	1	0	3	3	0	0	10
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	41	50	70	31	21	22	41	62	48	48	55	21	38	57	36	47	688

Total Number of Valid Hours: 688

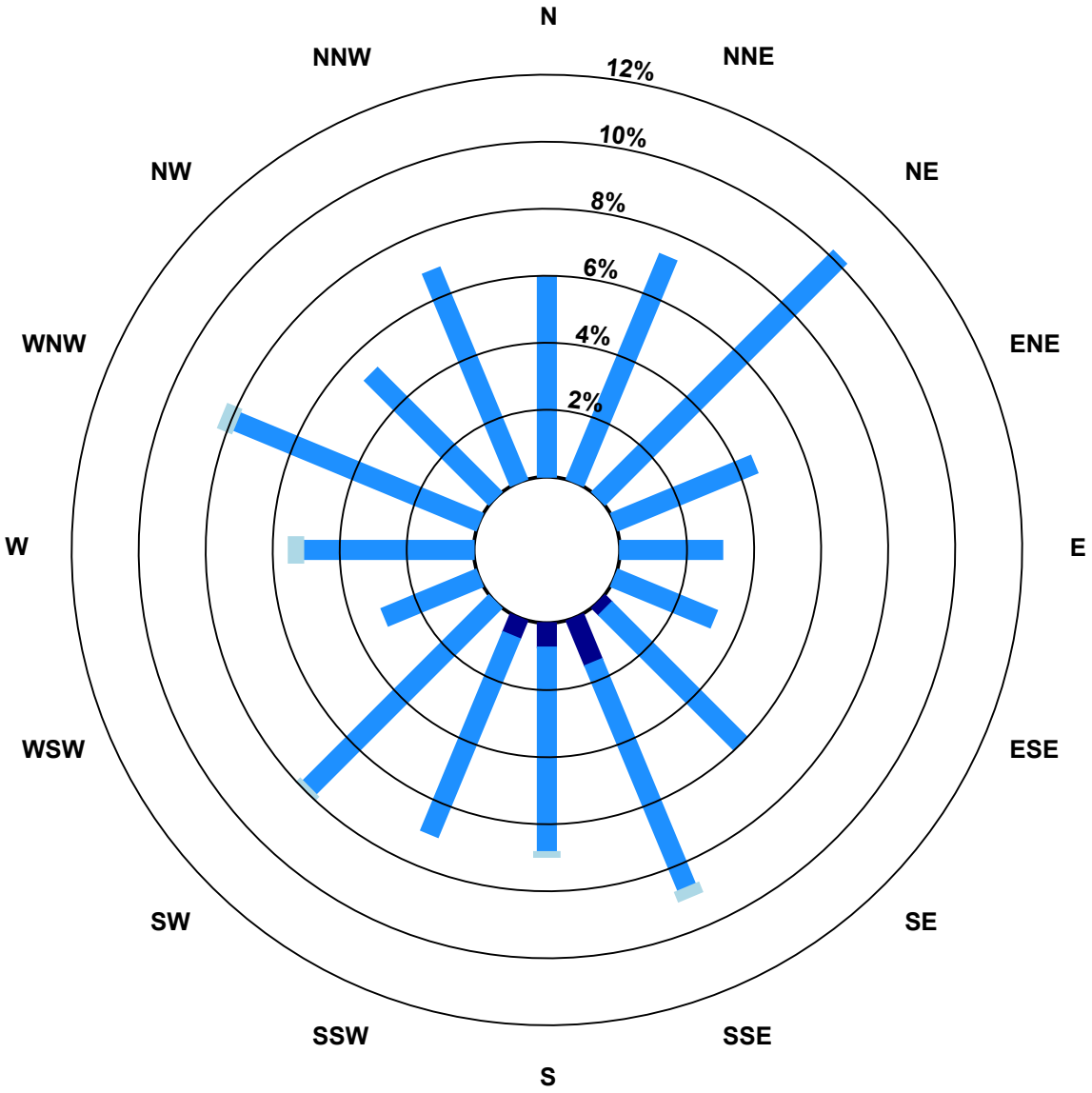
Total Number of Hours: 744

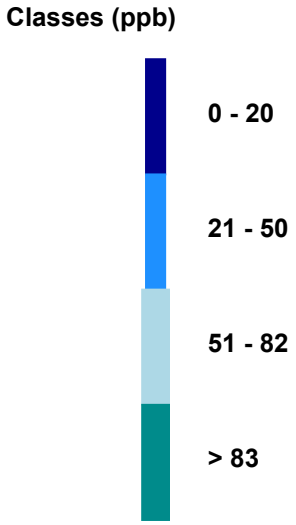
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Ozone (O_3) - ppb

Conklin





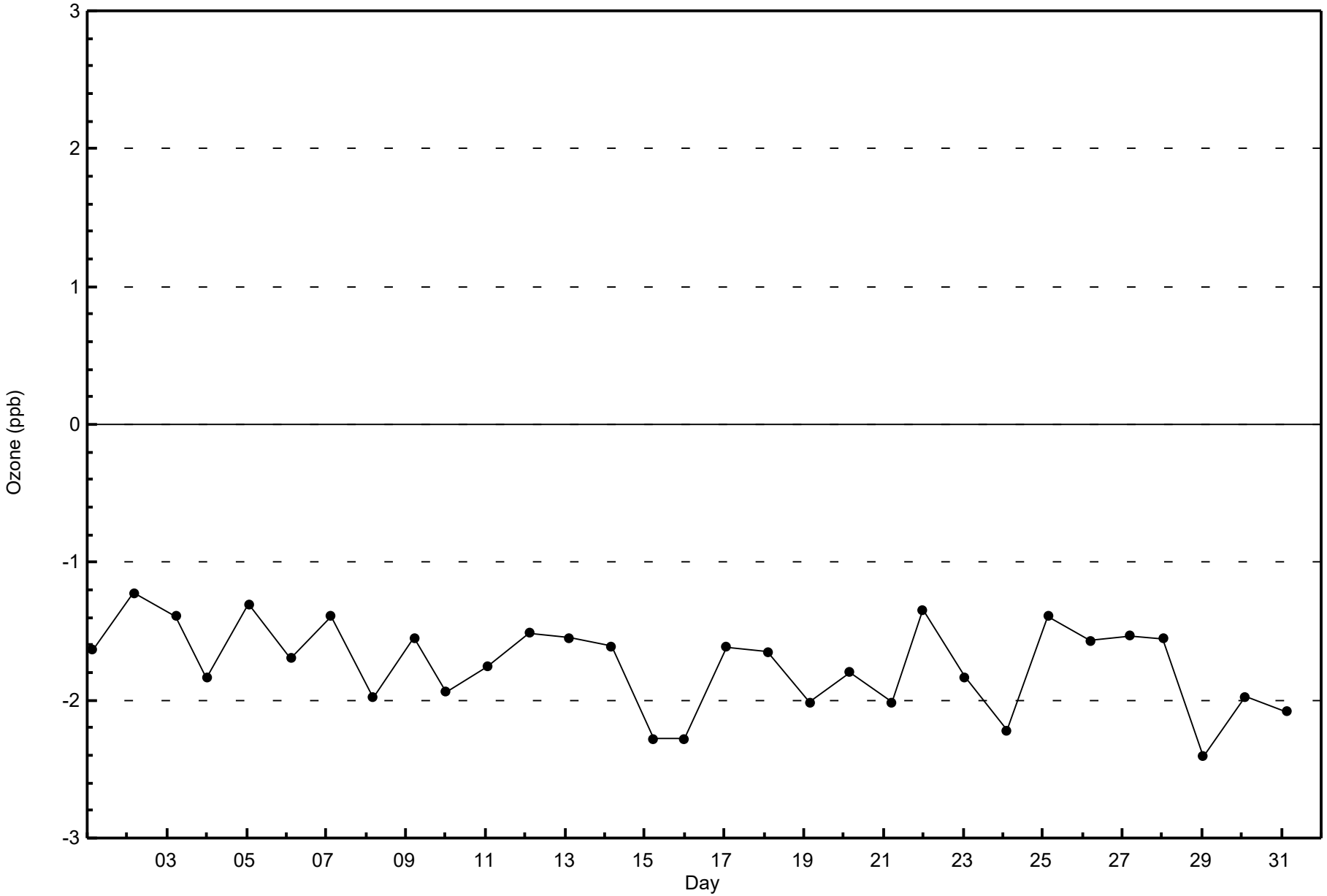
Total Number of Valid Hours: 688

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Conklin - March 2025

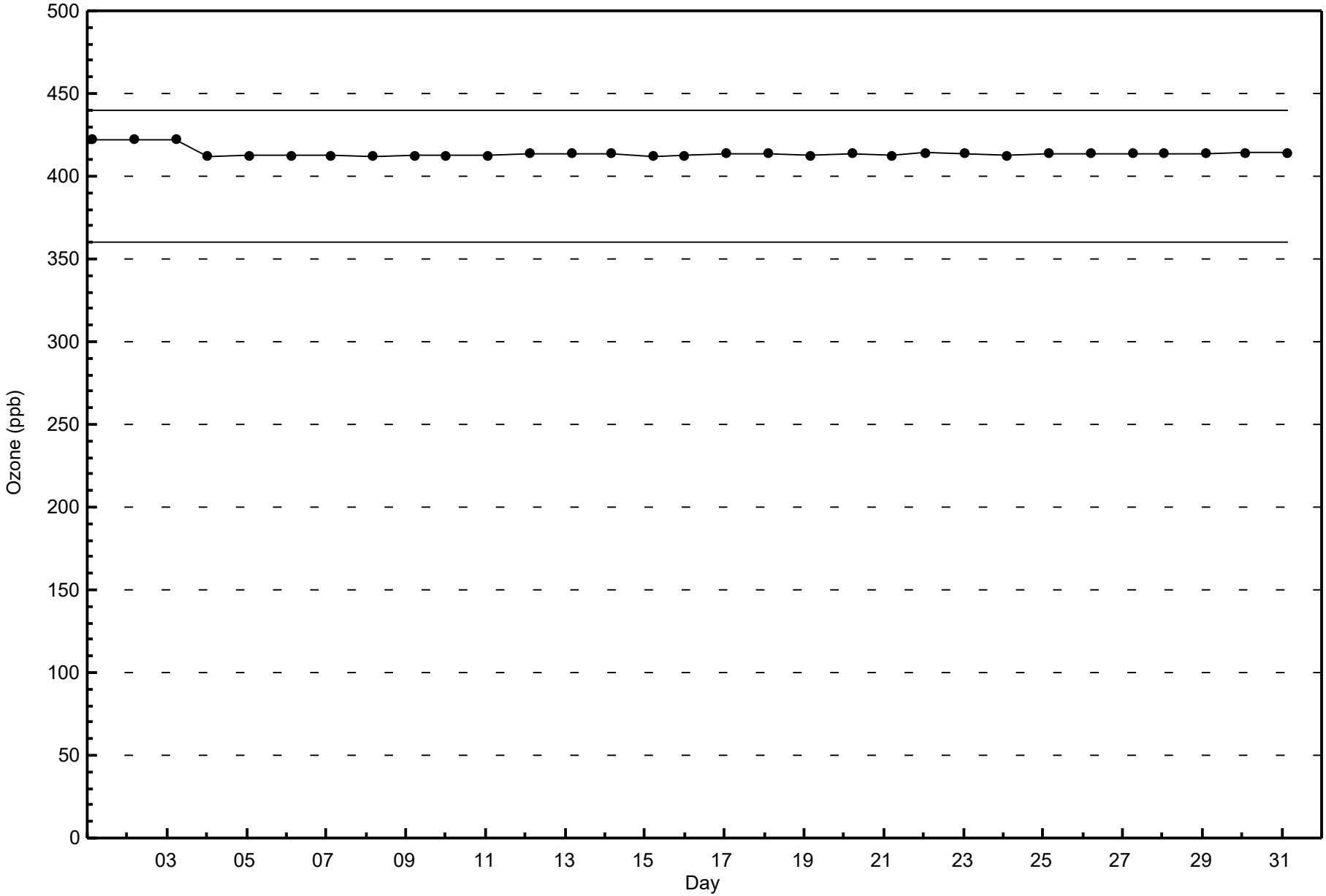


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Conklin - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Conklin - March 2025

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

Maximum Value: 27.4 $\mu g/m^3$ on Mar 15 01:00

Maximum Daily Average: 7.3 $\mu g/m^3$ on Mar 15

Minimum Value: 0.3 $\mu g/m^3$ on Mar 25 19:00

Minimum Daily Average: 1.2 $\mu g/m^3$ on Mar 9

Maximum Diurnal Average: 4.3 $\mu g/m^3$ at hour 6

Minimum Diurnal Average: 2.0 $\mu g/m^3$ at hour 14

Monthly Average: 3.09 $\mu g/m^3$

Percentiles: P_1 = 0.5 P_{10} = 1.0 Q_1 = 1.5 Median = 2.2 Q_3 = 3.8 P_{90} = 5.6 P_{99} = 16.6

Hours in Service:	744
Hours of Data:	727
Hours of Missing Data:	17
Hours of Calibration:	1
Percent Operational Time:	97.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	1.5	1.9	2.1	2.2	2.8	2.4	6.3	3.2	8.1	6.6	2.9	3.6	2.2	1.4	1.1	1.1	1.1	1.2	7.9	19.7	9.6	5.0	2.3	1.2	4.1	19.7
2-Mar	1.6	1.9	2.1	2.6	3.1	4.3	5.5	6.8	5.1	2.1	1.6	1.5	1.8	2.4	3.4	3.6	3.9	3.0	3.3	3.3	2.2	1.0	1.1	0.7	2.8	6.8
3-Mar	1.2	3.2	3.1	4.8	2.6	3.0	3.2	3.0	4.7	3.6	3.3	2.5	2.7	2.4	1.5	1.4	1.4	1.2	3.8	4.2	3.9	2.5	1.3	0.6	2.7	4.8
4-Mar	0.5	0.6	1.9	1.0	2.8	3.6	4.2	1.9	1.4	1.6	2.3	1.8	1.4	1.8	2.6	1.2	2.2	3.0	5.2	10.6	1.9	1.6	2.3	2.3	2.5	10.6
5-Mar	3.3	5.0	4.3	4.4	5.5	2.2	2.5	3.0	2.4	2.7	2.6	1.9	1.8	1.5	1.7	1.7	2.3	1.0	8.2	18.2	8.5	3.5	1.4	3.5	3.9	18.2
6-Mar	1.4	1.9	1.6	2.6	3.0	5.5	5.2	5.2	2.4	2.6	2.4	2.2	C	2.2	2.1	1.6	1.8	2.0	4.7	8.2	3.0	1.9	1.5	1.0	2.9	8.2
7-Mar	1.0	1.3	10.0	3.9	2.1	11.7	12.2	5.1	2.4	1.4	1.2	1.1	1.0	0.8	0.9	0.8	0.9	0.9	1.0	0.6	0.5	1.0	0.7	3.8	2.8	12.2
8-Mar	3.7	4.1	3.0	5.9	3.0	1.7	1.1	1.0	0.8	0.9	0.6	0.8	0.5	0.6	0.6	0.5	0.7	1.0	0.7	1.6	2.6	1.9	1.3	0.9	1.6	5.9
9-Mar	0.7	0.5	0.4	0.4	0.8	0.6	0.7	0.9	1.2	1.2	1.0	0.8	0.9	1.2	1.2	1.2	1.7	1.9	2.1	1.8	1.8	1.7	2.0	2.0	1.2	2.1
10-Mar	1.7	1.5	1.9	2.8	1.8	2.0	1.6	2.5	3.8	4.1	3.7	3.4	2.4	1.4	1.2	1.5	1.5	1.6	2.2	3.3	5.7	3.1	5.1	3.8	2.7	5.7
11-Mar	4.4	2.0	3.6	3.6	3.7	1.8	1.3	2.3	1.3	1.7	2.4	3.0	3.3	3.3	3.3	3.8	3.5	3.5	2.7	2.0	1.5	1.6	1.9	1.4	2.6	4.4
12-Mar	1.4	1.7	1.1	1.0	1.2	1.2	1.4	1.4	1.7	1.6	1.5	1.4	1.3	1.3	1.4	1.7	2.5	2.9	2.2	1.9	1.3	3.2	4.6	4.1	1.9	4.6
13-Mar	3.8	1.7	1.9	1.1	1.1	1.2	3.6	3.8	1.8	2.3	2.2	1.0	1.1	1.1	1.8	2.6	3.0	2.5	2.7	1.9	1.6	1.7	1.8	1.5	2.0	3.8
14-Mar	1.3	1.2	1.5	1.7	2.9	1.5	1.5	1.4	1.3	1.3	1.4	1.6	1.5	1.6	1.9	2.8	2.8	4.5	2.0	1.9	2.1	3.4	6.3	6.5	2.3	6.5
15-Mar	27.4	26.6	8.6	18.6	24.4	6.8	9.0	7.8	2.6	2.1	2.7	3.3	1.8	1.9	2.5	2.0	1.8	1.7	2.0	5.2	4.3	2.8	4.5	3.6	7.3	27.4
16-Mar	2.5	3.7	9.3	12.4	4.1	4.5	4.5	1.3	2.1	2.5	2.3	1.9	1.9	2.2	2.9	5.0	4.8	4.9	4.6	4.6	4.2	3.7	3.1	2.9	4.0	12.4
17-Mar	2.9	3.2	3.7	6.8	4.5	7.0	7.6	4.4	9.6	8.6	4.7	5.4	6.0	5.7	5.8	5.6	5.1	5.0	4.7	4.1	6.8	4.7	4.6	3.8	5.4	9.6
18-Mar	4.1	5.7	3.3	3.0	5.2	8.1	3.0	4.1	3.4	3.3	3.3	2.9	2.8	2.9	2.8	2.8	3.4	4.1	3.7	4.0	10.2	8.0	3.5	2.9	4.2	10.2
19-Mar	2.7	2.5	2.3	1.9	6.2	3.0	10.1	1.9	1.2	1.1	1.4	1.3	1.5	1.0	1.1	1.2	1.3	1.4	1.7	3.2	4.3	5.0	4.2	7.6	2.9	10.1
20-Mar	5.0	10.0	8.5	5.8	5.0	8.1	5.3	9.6	2.4	2.3	2.5	2.3	2.1	2.0	2.0	1.7	1.8	1.7	1.2	1.1	1.0	1.9	3.8	2.2	3.7	10.0
21-Mar	3.9	2.7	5.1	13.9	6.1	4.6	7.1	6.2	3.7	4.5	3.9	5.7	5.2	4.5	3.6	4.8	3.9	4.2	3.9	3.6	3.2	3.0	3.0	2.9	4.7	13.9
22-Mar	2.9	3.3	5.9	5.4	4.4	3.0	3.4	5.5	5.5	4.6	4.9	5.2	4.4	3.8	2.7	1.4	1.4	1.1	0.8	0.8	0.7	0.7	0.7	1.0	3.1	5.9
23-Mar	5.6	2.5	0.9	0.8	1.2	0.9	1.5	2.7	4.4	1.0	0.8	0.8	1.6	0.7	0.7	0.9	1.2	0.7	1.8	6.3	6.3	3.1	4.4	2.4	2.2	6.3
24-Mar	3.6	3.0	3.8	0.8	0.7	1.1	1.1	1.9	3.1	1.9	1.6	1.7	2.0	2.6	1.9	1.2	2.0	4.4	1.4	3.8	0.8	0.6	0.8	0.7	1.9	4.4
25-Mar	0.6	0.5	0.4	0.5	2.9	2.7	1.6	4.4	3.5	0.8	1.1	0.6	0.8	0.8	0.5	0.5	0.4	0.4	0.3	0.5	2.8	0.8	0.4	4.9	1.4	4.9
26-Mar	2.3	2.0	2.0	2.1	2.2	1.7	1.8	1.9	1.9	2.0	1.8	2.4	2.0	2.0	1.8	1.8	1.5	1.5	1.5	1.5	1.4	1.5	1.7	1.6	1.8	2.4
27-Mar	1.6	1.8	1.9	1.8	1.8	1.7	1.7	1.6	1.7	1.6	1.7	1.6	1.7	1.6	1.6	1.5	1.4	1.6	1.8	1.7	1.6	2.0	1.9	1.6	1.7	2.0
28-Mar	1.6	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.5	1.7	1.7	1.8	1.7	1.8	1.9	2.1	2.0	2.0	2.2	3.8	8.3	2.3	1.8	2.1	8.3
29-Mar	2.4	8.4	11.3	1.9	4.2	5.1	4.2	4.4	3.1	2.7	2.1	1.9	2.0	1.8	1.8	1.5	1.5	1.6	1.9	2.8	5.1	5.1	2.7	4.2	3.5	11.3
30-Mar	3.4	2.1	11.5	2.6	15.9	16.8	9.2	20.7	PF	PF	PF	PF	PF	PF	PF	PF	PF	3.0	2.1	4.1	7.0	3.3	5.7	6.1	--	20.7
31-Mar	11.7	3.8	4.8	4.3	3.2	13.6	5.2	5.3	PF	PF	PF	PF	PF	PF	PF	3.3	3.1	2.8	2.7	2.6	2.9	3.0	2.9	2.7	--	13.6
	3.6	3.6	4.0	3.9	4.2	4.3	4.1	4.1	3.0	2.6	2.3	2.3	2.1	2.0	2.0	2.1	2.2	2.3	2.8	4.2	3.6	2.9	2.7	2.8	Diurnal Average	
	27.4	26.6	11.5	18.6	24.4	16.8	12.2	20.7	9.6	8.6	4.9	5.7	6.0	5.7	5.8	5.6	5.1	5.0	8.2	19.7	10.2	8.3	6.3	7.6	Diurnal Maximum	

C - Calibration PF - Power Failure

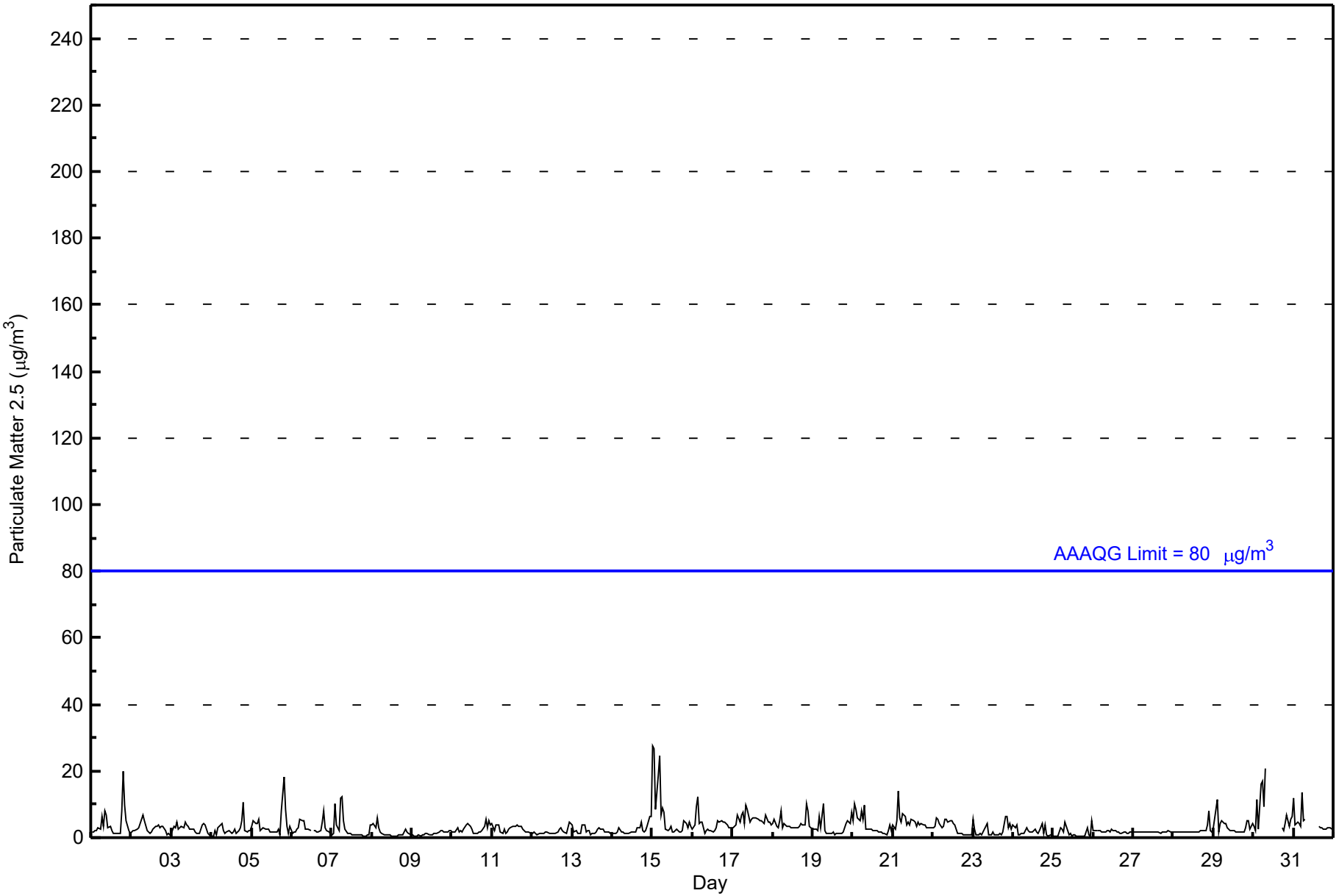
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Conklin - March 2025



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

Conklin - March 2025

Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	650	89.41	89.41
6 - 15	68	9.35	98.76
16 - 25	7	0.96	99.72
26 - 80	2	0.28	100.00
> 81.0	0	0.00	100.00

Total Number of Valid Hours: 727

Total Number of Hours: 744

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

Conklin - March 2025

Concentration Ranges ($\mu g/m^3$)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	41	52	73	30	20	21	44	62	30	28	51	22	38	54	36	46	648
6 - 15	3	1	1	1	1	1	1	5	17	22	4	0	1	3	0	6	67
16 - 25	0	0	0	0	0	0	0	1	3	3	0	0	0	0	0	0	7
26 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2
> 81.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	44	53	74	31	21	22	45	68	50	53	55	22	39	57	37	53	724

Total Number of Valid Hours: 724

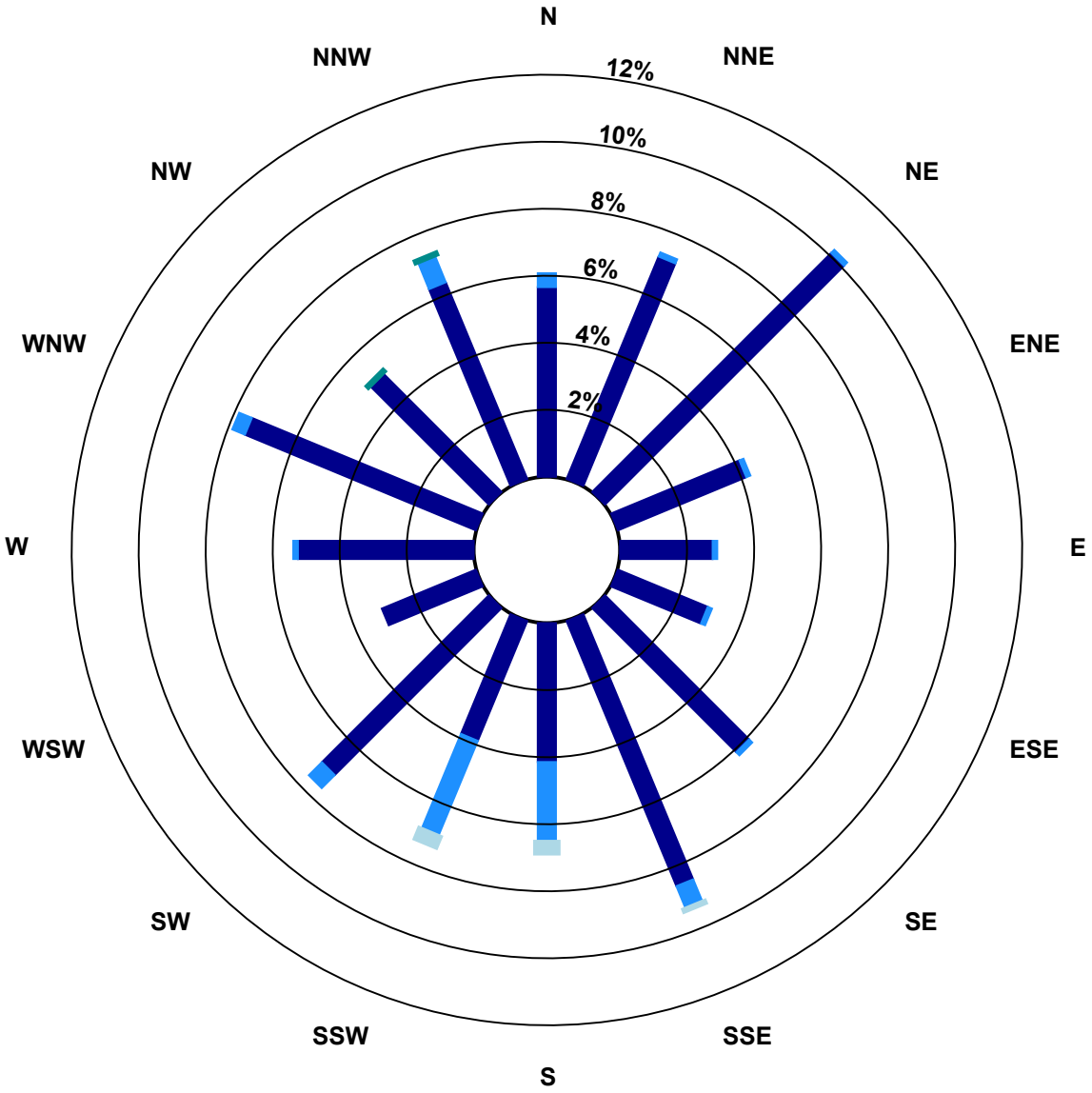
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

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

Conklin



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

0 - 5

6 - 15

16 - 25

26 - 80

> 81.0

Total Number of Valid Hours: 724

Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

Conklin - March 2025

Maximum Value: 10.7 C on Mar 1 15:00

Maximum Daily Average: 3.5 C on Mar 25

Minimum Value: -31.5 C on Mar 16 07:00

Minimum Daily Average: -18.7 C on Mar 15

Maximum Diurnal Average: -0.4 C at hour 16

Minimum Diurnal Average: -10.8 C at hour 7

Monthly Average: -5.89 C

Percentiles: P_1 = -28.7 P_{10} = -15.5 Q_1 = -11.4 Median = -5.8 Q_3 = 0.0 P_{90} = 4.5 P_{99} = 9.7

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

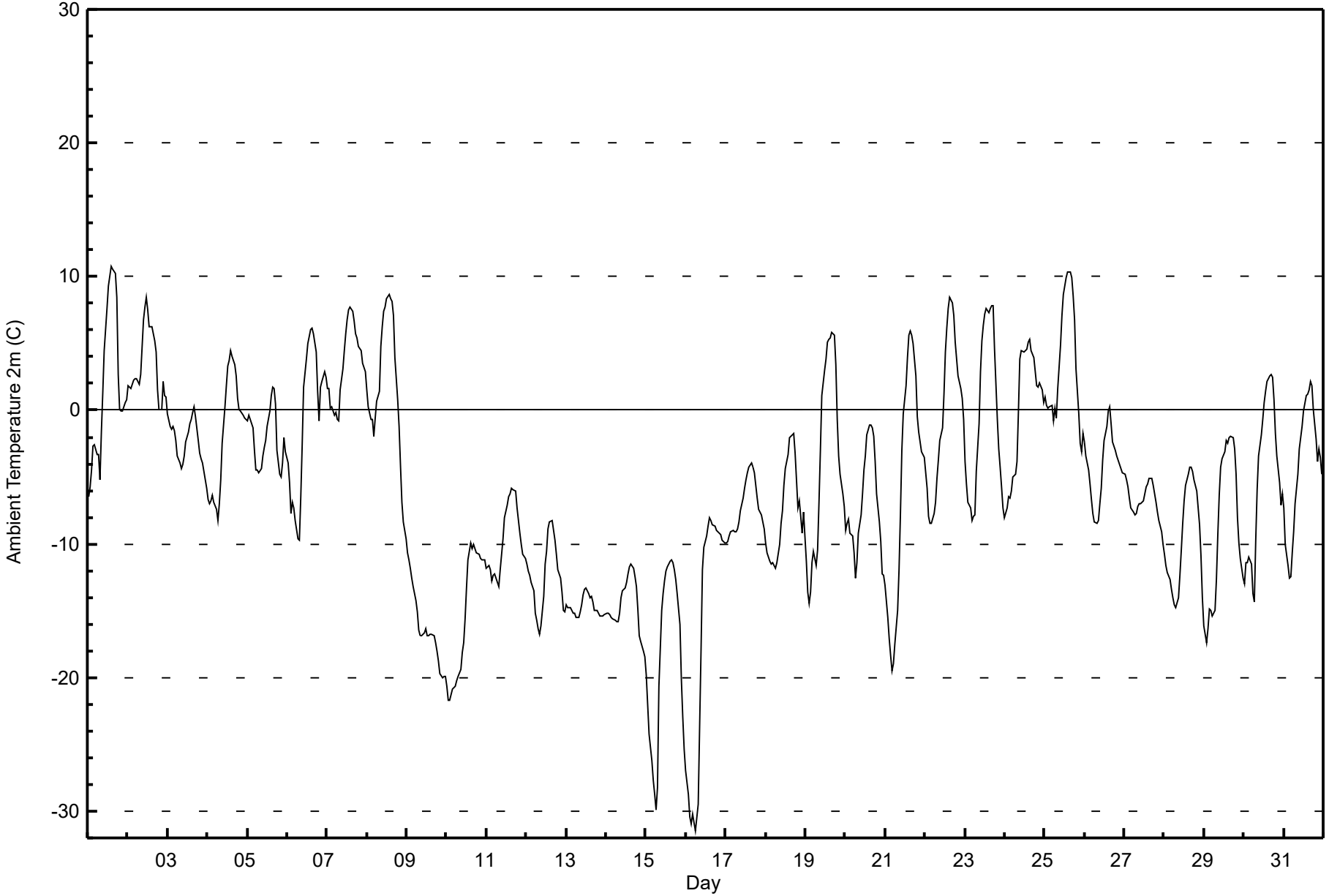
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-6.4	-5.8	-4.5	-2.7	-2.6	-3.3	-3.3	-5.2	-1.7	1.4	4.4	7.6	9.3	10.0	10.7	10.5	10.2	8.5	2.7	0.1	-0.1	-0.1	0.6	0.8	1.7	10.7
2-Mar	1.9	1.7	1.7	2.3	2.4	2.4	2.1	1.9	2.7	6.8	7.8	8.4	7.5	6.2	6.2	5.7	5.2	4.3	1.5	0.0	0.1	2.1	1.1	1.0	3.5	8.4
3-Mar	-0.2	-1.2	-1.5	-1.2	-1.5	-2.3	-3.4	-4.0	-4.3	-4.0	-3.5	-2.3	-1.6	-1.0	-0.7	-0.2	0.3	-0.4	-2.3	-3.2	-3.6	-4.0	-4.6	-5.8	-2.4	0.3
4-Mar	-6.7	-7.0	-6.8	-6.4	-6.9	-7.4	-8.2	-7.0	-5.2	-2.5	0.2	1.8	3.3	3.8	4.4	4.0	3.4	2.5	0.9	0.1	0.0	-0.4	-0.5	-0.7	-1.7	4.4
5-Mar	-0.8	-0.4	-1.0	-1.3	-3.0	-4.4	-4.4	-4.6	-4.3	-3.4	-2.7	-2.2	-1.2	-0.1	1.1	1.7	1.6	0.5	-3.0	-4.8	-5.0	-4.0	-2.1	-3.1	-2.1	1.7
6-Mar	-3.9	-5.4	-7.7	-6.9	-7.4	-8.3	-9.6	-9.8	-6.4	-2.5	1.7	3.9	5.0	5.5	6.1	6.2	5.7	4.3	1.4	-0.8	1.7	2.2	2.9	2.4	-0.8	6.2
7-Mar	1.6	1.6	0.1	0.3	-0.3	-0.2	-0.6	-0.8	1.5	3.1	4.4	5.7	6.8	7.5	7.7	7.4	6.7	5.7	5.4	4.8	4.4	3.5	3.2	2.9	3.4	7.7
8-Mar	1.5	0.2	-0.7	-0.7	-1.9	-0.5	0.7	1.4	4.8	6.3	7.4	7.8	8.3	8.7	8.4	8.1	7.1	3.9	0.8	-1.2	-4.2	-6.8	-8.4	-9.7	1.7	8.7
9-Mar	-10.6	-11.2	-11.8	-12.5	-13.2	-14.3	-15.0	-16.4	-16.9	-16.9	-16.7	-16.3	-16.9	-16.9	-16.8	-16.8	-16.9	-17.4	-18.1	-18.8	-19.7	-20.0	-19.9	-19.9	-16.2	-10.6
10-Mar	-20.7	-21.7	-21.7	-20.9	-20.8	-20.7	-20.3	-20.0	-19.4	-18.2	-17.4	-15.6	-13.3	-11.2	-10.0	-10.4	-10.1	-10.3	-10.7	-10.8	-11.1	-11.2	-11.2	-11.2	-15.4	-10.0
11-Mar	-11.9	-11.6	-11.9	-12.7	-12.4	-12.2	-12.9	-13.1	-11.9	-10.8	-9.6	-8.1	-7.1	-6.5	-6.2	-5.9	-6.0	-6.1	-7.3	-8.3	-9.2	-10.0	-10.7	-11.1	-9.7	-5.9
12-Mar	-11.5	-12.0	-12.3	-12.8	-13.5	-15.2	-15.7	-16.4	-16.7	-16.1	-13.9	-11.5	-10.6	-8.8	-8.4	-8.2	-8.9	-9.7	-10.8	-12.0	-12.6	-13.6	-15.0	-15.1	-12.6	-8.2
13-Mar	-14.6	-14.8	-14.7	-15.0	-15.1	-15.2	-15.5	-15.5	-15.1	-14.6	-13.8	-13.4	-13.3	-13.7	-14.0	-13.9	-14.4	-14.9	-15.0	-15.2	-15.4	-15.4	-15.4	-15.3	-14.7	-13.3
14-Mar	-15.2	-15.2	-15.3	-15.5	-15.6	-15.7	-15.8	-15.8	-15.1	-14.0	-13.5	-13.3	-12.9	-12.2	-11.7	-11.5	-11.8	-12.4	-13.1	-14.9	-16.8	-17.3	-18.1	-18.5	-14.6	-11.5
15-Mar	-19.8	-22.0	-24.2	-26.2	-27.7	-28.8	-29.8	-28.2	-20.6	-15.0	-13.7	-12.8	-12.0	-11.7	-11.3	-11.2	-11.4	-11.9	-12.6	-13.7	-16.0	-20.2	-23.0	-25.4	-18.7	-11.2
16-Mar	-27.0	-28.7	-30.5	-31.0	-30.2	-30.9	-31.5	-29.4	-23.7	-18.1	-11.9	-10.3	-9.4	-8.7	-8.0	-8.3	-8.5	-8.7	-9.0	-9.1	-9.2	-9.3	-9.7	-9.9	-17.1	-8.0
17-Mar	-10.0	-9.9	-9.4	-9.1	-9.0	-9.1	-9.1	-8.9	-8.3	-7.5	-6.6	-5.8	-5.2	-4.7	-4.2	-3.9	-4.3	-4.7	-5.7	-6.6	-7.4	-7.8	-8.4	-8.9	-7.3	-3.9
18-Mar	-9.9	-10.7	-11.3	-11.5	-11.4	-11.6	-11.8	-11.4	-10.0	-8.5	-7.5	-5.6	-4.4	-3.3	-2.1	-1.9	-1.8	-1.8	-3.2	-7.4	-6.8	-7.9	-9.2	-7.6	-7.4	-1.8
19-Mar	-11.3	-13.6	-14.4	-13.6	-11.4	-10.6	-11.7	-10.5	-6.9	-3.0	1.1	3.0	3.8	5.1	5.3	5.4	5.8	5.7	3.4	-0.7	-3.4	-4.8	-6.2	-7.2	-3.8	5.8
20-Mar	-9.0	-8.5	-8.1	-9.2	-9.4	-10.7	-12.6	-11.4	-9.2	-7.9	-6.3	-4.4	-3.4	-1.8	-1.1	-1.1	-1.3	-1.9	-3.8	-6.3	-8.3	-9.9	-12.3	-12.4	-7.1	-1.1
21-Mar	-13.1	-15.5	-17.1	-18.4	-19.4	-18.9	-17.5	-14.9	-11.9	-7.7	-3.0	-0.3	1.8	4.0	5.6	5.9	5.6	5.0	2.6	-0.5	-1.6	-2.3	-3.1	-3.5	-5.8	5.9
22-Mar	-4.6	-5.8	-7.9	-8.5	-8.5	-7.7	-6.9	-5.1	-3.7	-2.3	-1.3	1.2	4.4	6.2	7.6	8.5	8.1	7.1	5.1	3.9	2.6	1.7	0.9	-0.7	-0.2	8.5
23-Mar	-3.8	-5.6	-6.8	-7.3	-8.3	-7.9	-7.8	-4.6	-1.0	2.9	5.2	6.4	7.2	7.6	7.3	7.6	7.8	7.9	4.5	-0.7	-2.9	-4.2	-5.8	-7.3	-0.4	7.9
24-Mar	-8.1	-7.3	-6.4	-6.6	-6.0	-5.0	-4.7	-3.8	-0.1	3.9	4.4	4.4	4.4	4.5	5.1	5.3	4.5	4.0	2.9	1.8	1.7	2.1	1.5	0.6	0.1	5.3
25-Mar	1.0	0.4	0.1	0.3	0.4	-0.8	0.2	-0.6	1.6	4.9	7.1	8.6	9.3	10.0	10.3	10.3	9.9	8.6	6.8	3.1	-0.2	-2.5	-3.1	-1.7	3.5	10.3
26-Mar	-2.4	-3.4	-4.5	-5.5	-6.7	-7.7	-8.3	-8.5	-8.2	-7.0	-5.9	-3.7	-2.3	-1.3	-0.1	0.3	-1.0	-2.4	-3.0	-3.4	-3.8	-4.1	-4.3	-4.6	-4.2	0.3
27-Mar	-4.8	-5.3	-5.8	-6.6	-7.3	-7.6	-7.9	-7.7	-7.2	-7.0	-7.0	-6.7	-6.3	-5.7	-5.6	-5.1	-5.1	-5.7	-6.2	-6.9	-7.6	-8.3	-9.1	-10.0	-6.8	-4.8
28-Mar	-10.8	-11.6	-12.2	-12.6	-13.4	-14.1	-14.6	-14.7	-14.0	-12.4	-10.5	-8.5	-6.8	-5.6	-4.8	-4.3	-4.3	-4.6	-5.2	-6.0	-7.3	-8.6	-10.9	-14.1	-9.7	-4.3
29-Mar	-16.1	-17.4	-16.4	-14.9	-14.9	-15.4	-15.0	-12.6	-9.3	-6.4	-4.2	-3.6	-3.2	-2.2	-2.5	-2.0	-2.0	-2.1	-2.9	-4.8	-8.1	-9.9	-11.1	-12.6	-8.7	-2.0
30-Mar	-13.0	-11.4	-11.4	-11.0	-11.5	-13.7	-14.3	-9.8	-5.9	-3.4	-1.8	-0.7	0.5	1.4	2.2	2.6	2.7	2.5	0.8	-1.7	-3.4	-5.4	-7.1	-6.2	-5.0	2.7
31-Mar	-7.3	-10.1	-11.6	-12.6	-12.5	-10.7	-9.1	-7.0	-4.8	-2.9	-2.1	-1.2	0.0	1.1	1.2	1.5	2.1	1.9	0.0	-2.2	-3.8	-2.9	-3.5	-4.8	-4.2	2.1
	-8.6	-9.3	-9.9	-10.0	-10.3	-10.6	-10.8	-10.1	-8.1	-5.9	-4.2	-2.8	-1.9	-1.1	-0.6	-0.4	-0.7	-1.4	-3.0	-4.7	-5.7	-6.4	-7.2	-7.7	Diurnal Average	
	1.9	1.7	1.7	2.3	2.4	2.4	2.1	1.9	4.8	6.8	7.8	8.6	9.3	10.0	10.7	10.5	10.2	8.6	6.8	4.8	4.4	3.5	3.2	2.9	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Conklin - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	27	3.63	3.63
-20 - 0	532	71.51	75.13
0 - 10	180	24.19	99.33
10 - 20	5	0.67	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Conklin - March 2025

Maximum Value: 93.0 % on Mar 24 21:00

Maximum Daily Average: 83.3 % on Mar 14

Minimum Value: 26.4 % on Mar 23 18:00

Minimum Daily Average: 51.8 % on Mar 26

Maximum Diurnal Average: 79.8 % at hour 6

Minimum Diurnal Average: 49.8 % at hour 16

Monthly Average: 66.73 %

Percentiles: P_1 = 30.2 P_{10} = 41.3 Q_1 = 54.3 Median = 70.0 Q_3 = 80.8 P_{90} = 85.1 P_{99} = 89.7

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

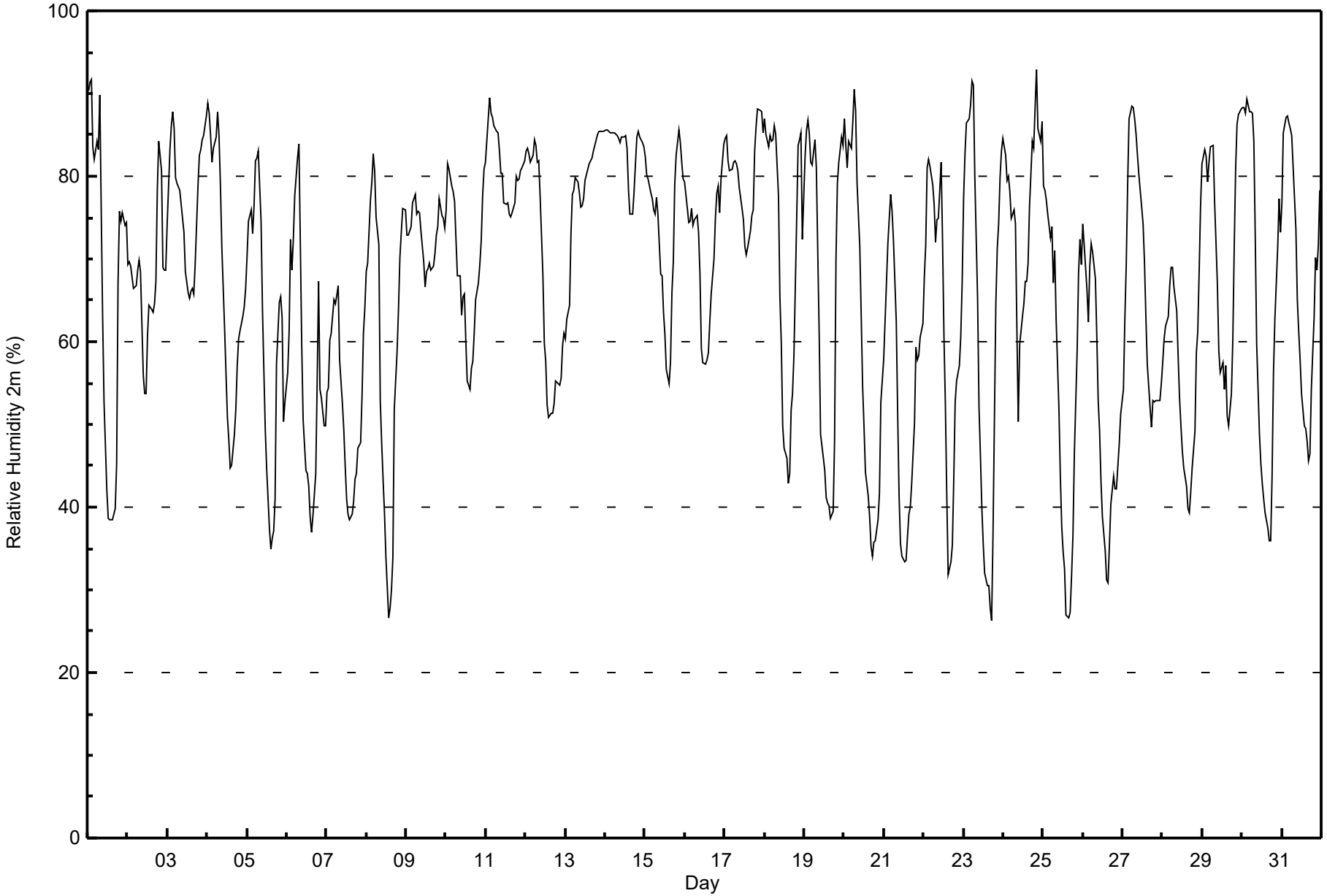
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	90.3	91.4	91.8	83.6	82.0	84.2	83.3	89.8	75.9	63.1	52.8	42.0	38.6	38.5	38.4	38.5	39.8	45.2	67.1	75.8	74.6	75.5	74.0	74.3	67.1	91.8
2-Mar	69.4	69.7	69.2	66.5	66.5	66.7	68.6	69.8	68.5	55.9	53.8	53.7	60.7	64.5	64.0	63.5	64.5	67.3	78.3	84.2	80.7	69.0	68.7	68.6	67.2	84.2
3-Mar	74.1	83.2	86.2	87.9	85.7	79.8	79.1	78.3	76.6	74.9	73.2	68.5	65.9	65.2	66.1	66.5	65.8	69.4	78.8	82.6	83.3	84.4	85.0	87.3	77.0	87.9
4-Mar	88.8	87.7	85.0	81.7	83.4	84.7	87.8	84.9	79.1	71.5	61.5	56.1	50.9	48.1	44.8	45.2	48.9	51.9	57.2	60.3	61.4	63.0	64.2	66.4	67.3	88.8
5-Mar	70.3	74.6	75.9	73.1	76.4	81.9	82.2	83.1	74.6	63.9	56.4	49.3	44.6	37.2	34.9	36.3	37.2	41.0	57.2	64.7	65.5	62.9	50.3	52.6	60.2	83.1
6-Mar	56.2	61.2	72.4	68.7	72.4	77.6	82.3	83.8	71.9	59.4	50.6	44.4	44.1	42.5	38.9	37.0	39.0	44.1	55.2	67.3	54.3	53.1	49.9	49.9	57.3	83.8
7-Mar	54.0	54.4	60.1	61.0	65.0	64.6	65.7	66.8	57.7	52.6	49.2	44.9	41.0	39.2	38.4	39.1	40.6	43.4	44.1	47.1	47.8	53.3	61.0	64.0	52.3	66.8
8-Mar	68.4	69.4	77.2	79.4	82.7	80.6	75.1	71.7	53.0	47.7	43.4	39.3	34.1	26.6	27.9	29.9	33.9	51.9	58.8	64.0	70.1	73.3	76.0	76.0	58.8	82.7
9-Mar	72.8	72.8	73.4	74.0	76.7	77.9	75.5	75.7	75.6	73.3	69.7	66.7	68.5	68.9	69.5	68.7	69.1	70.8	72.8	73.9	77.2	75.2	74.9	73.8	72.8	77.9
10-Mar	75.9	81.6	80.8	78.8	78.1	77.0	72.4	67.9	67.9	63.3	65.4	65.7	60.1	55.3	54.3	56.8	57.7	61.1	65.1	67.1	69.3	72.2	77.6	80.8	68.8	81.6
11-Mar	81.8	87.0	89.5	87.7	87.0	86.1	85.5	85.2	83.0	80.4	80.4	76.8	76.7	76.8	75.5	75.1	75.6	76.8	80.0	79.4	79.6	80.7	81.1	81.9	81.2	89.5
12-Mar	83.1	83.4	82.7	81.6	82.6	84.3	83.7	81.8	81.8	77.6	68.0	59.9	57.6	52.4	50.8	51.4	51.3	52.5	55.3	55.2	54.8	55.5	59.6	61.0	67.0	84.3
13-Mar	60.3	62.8	64.4	73.0	77.8	78.3	79.9	79.4	77.9	76.3	76.4	77.3	79.6	80.8	81.6	81.9	82.1	83.1	84.3	85.2	85.3	85.4	85.4	85.5	78.5	85.5
14-Mar	85.6	85.6	85.5	85.3	85.2	85.2	85.1	84.9	84.7	84.1	84.7	84.7	84.9	83.4	78.4	75.5	75.3	78.2	81.6	84.7	85.4	84.7	84.0	83.5	83.3	85.6
15-Mar	82.4	80.1	79.7	78.0	77.3	76.0	75.5	77.4	75.3	68.1	67.9	63.5	60.9	56.7	54.8	57.6	66.0	69.6	79.0	82.5	85.5	84.0	81.8	79.7	73.3	85.5
16-Mar	79.3	76.1	74.4	74.6	76.0	74.0	74.7	75.3	73.2	68.1	59.2	57.5	57.3	57.9	58.7	62.4	65.7	70.0	74.9	77.9	78.9	75.6	79.6	84.0	71.1	84.0
17-Mar	84.6	84.9	81.9	80.7	80.9	81.7	81.9	81.6	80.6	78.7	76.0	74.7	71.5	70.5	71.3	73.4	75.2	75.9	83.0	86.0	88.1	87.9	87.8	85.2	80.2	88.1
18-Mar	86.9	85.0	83.6	85.0	84.2	84.5	86.1	85.1	77.7	65.5	59.8	49.8	47.1	45.9	42.9	44.0	51.8	53.8	58.3	75.1	83.7	84.3	85.2	72.4	69.9	86.9
19-Mar	82.5	85.7	86.9	85.1	81.8	81.4	84.3	80.9	70.9	61.3	48.9	46.0	44.5	41.1	40.6	40.1	38.7	39.5	48.1	70.0	79.2	81.7	84.8	83.8	66.1	86.9
20-Mar	86.9	83.7	81.1	84.2	83.5	86.6	90.6	87.9	79.3	71.4	63.1	54.5	49.7	44.2	41.3	38.8	35.3	34.1	35.8	35.9	38.5	41.7	52.7	55.3	60.7	90.6
21-Mar	57.8	67.0	71.9	74.9	77.9	75.7	72.3	62.3	51.1	41.4	35.5	34.0	33.4	33.6	36.5	39.2	40.0	42.9	50.1	59.3	57.8	58.3	60.5	62.2	54.0	77.9
22-Mar	67.8	71.7	81.0	82.0	81.2	79.0	76.7	72.1	74.8	75.0	81.7	72.3	60.7	52.5	41.5	31.9	33.4	35.4	43.4	52.6	55.3	57.2	60.7	67.3	62.8	82.0
23-Mar	77.3	82.8	86.4	87.0	88.7	91.5	91.0	80.0	65.1	52.0	46.2	40.0	35.5	32.0	30.5	30.6	27.8	26.4	36.9	64.5	71.2	74.3	79.8	83.0	61.7	91.5
24-Mar	84.5	82.6	79.5	80.1	78.1	74.9	75.9	74.2	61.6	50.3	59.6	63.1	64.6	67.3	67.3	69.5	76.2	84.3	83.4	88.4	93.0	85.8	84.2	86.6	75.6	93.0
25-Mar	78.9	78.3	77.1	75.5	72.5	73.9	67.1	71.0	62.7	51.9	43.7	37.5	34.6	32.6	27.0	26.5	27.3	31.7	36.6	46.4	59.0	68.3	72.4	69.2	55.1	78.9
26-Mar	74.2	71.7	66.2	62.4	69.2	71.8	70.8	67.7	60.6	52.8	49.1	43.0	38.8	34.7	31.1	30.8	35.4	40.4	43.7	42.1	42.2	44.8	47.7	51.2	51.8	74.2
27-Mar	54.2	62.7	69.3	79.0	87.0	88.4	88.4	87.0	85.0	82.5	80.1	76.3	74.2	69.6	63.0	57.3	52.0	49.7	52.9	52.7	52.9	52.9	52.9	55.0	67.7	88.4
28-Mar	57.4	60.3	61.9	63.1	66.9	69.0	69.1	66.7	63.8	58.3	53.2	49.8	46.8	44.7	42.6	39.8	39.3	41.8	44.7	49.1	58.6	61.1	68.4	76.5	56.4	76.5
29-Mar	81.6	83.3	82.4	79.4	81.6	83.6	83.7	76.9	72.1	67.0	59.0	56.3	57.4	54.2	57.2	51.1	49.8	53.8	60.2	71.4	80.9	86.2	87.4	88.1	71.0	88.1
30-Mar	88.3	88.3	87.6	89.3	87.7	87.8	87.6	84.3	72.7	59.8	48.9	45.3	42.9	41.0	39.3	37.5	35.9	36.0	43.7	56.3	62.7	71.3	77.3	73.2	64.4	89.3
31-Mar	76.8	85.3	87.1	87.3	86.5	85.8	84.9	81.1	73.6	65.1	61.2	57.8	53.8	49.8	49.5	47.9	45.6	46.5	54.2	63.0	70.2	68.7	71.7	78.4	68.0	87.3
	75.2	77.2	78.4	78.4	79.4	79.8	79.6	77.9	71.9	64.9	60.6	56.5	54.2	51.9	50.3	49.8	50.9	53.8	60.2	66.6	69.3	70.1	71.8	72.8	Diurnal Average	
	90.3	91.4	91.8	89.3	88.7	91.5	91.0	89.8	85.0	84.1	84.7	84.7	84.9	83.4	81.6	81.9	82.1	84.3	84.3	88.4	93.0	87.9	87.8	88.1	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Conklin - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Conklin - March 2025

Maximum Speed: 16 km/h on Mar 8 14:00

Maximum Daily Speed Average: 9.7 km/h on Mar 27

Minimum Speed Value: 0 km/h on Mar 15 04:00

Minimum Daily Speed Average: 0.4 km/h on Mar 15

Maximum Diurnal Speed Average: 2.4 km/h at hour 16

Minimum Diurnal Speed Average: 0.1 km/h at hour 22

Monthly Average Velocity: 0.6 km/h 318.6 deg

Percentiles: $P_1 = 1$ $P_{10} = 2$ $Q_1 = 4$ Median = 6 $Q_3 = 8$ $P_{90} = 11$ $P_{99} = 14$

Hours in Service: 744

Hours of Data: 741

Hours of Missing Data: 3

Percent Operational Time: 99.6

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	SSE5	SE3	SE4	S5	S4	SSE5	SSW7	SE3	S6	SW10	SW6	SW7	WNW7	W9	W8	W8	WNW5	W5	S2	SSW5	S5	S6	S6	SE5	SSW3.7	SW10
2-Mar	SE4	S5	S6	SSW8	SSW4	SSW7	SSW10	SSW12	WSW10	WNW9	WNW10	NW10	NW13	NW11	NW12	NNW13	NW6	WNW2	SW2	SW4	WNW3	NW4	NW3	NW5	W4.2	NW13
3-Mar	NW7	NW6	NW5	NNW9	N10	N12	NNW12	N11	NNW9	NNW8	NNW8	NNW7	NNW7	NNW10	NNW10	NW7	NW6	WNW2	S1	SSW2	S4	SSE2	SSE3	SE4	NNW5.4	NNW12
4-Mar	SE4	SSE4	S6	SSW7	SSW8	SSW6	S5	SSW8	SW10	SW10	SW12	SW13	WSW12	WSW12	SW11	SW11	SW8	SW9	SSW6	SSW7	SW10	SW11	SW11	WSW8	SW8.0	SW13
5-Mar	WSW4	NW5	NW4	NNW5	NNW8	NNW7	NNW11	NW6	NNW10	N13	NNW10	NNW12	NW8	NW8	NW7	NW8	NW7	NW4	SSW1	SSE3	SSE3	SW5	SW9	SSW7	NW5.0	N13
6-Mar	SW9	SSW6	SE4	S6	S5	S5	S4	SSE4	SE5	S4	WSW3	WNW5	WNW8	W9	W9	W10	WNW9	WNW6	SW5	SSW6	SW8	SW8	WSW9	W9	WSW4.6	W10
7-Mar	WNW7	W7	SSW6	SSW5	S3	SSW4	SSW6	SW5	W9	W8	W8	W10	W11	W10	WNW10	WNW8	WNW5	W3	W7	WNW6	W6	WNW5	WNW5	NW5	W5.6	W11
8-Mar	NNE2	NE1	N1	S3	SSE4	SW9	SW12	SW10	W15	W14	WNW12	WNW15	WNW13	WNW16	WNW15	WNW15	WNW12	NNW16	NNW12	N9	NE8	NE8	NE7	NE7	WNW6.1	WNW16
9-Mar	NE8	NE6	NNE7	NE8	NE9	NNE10	NNE9	NNE10	NE9	NNE10	NE9	NE10	NNE9	NE8	NNE8	NNE8	NNE8	NNE8	NNE7	NNE7	NNE6	NNE6	NE6	NNE6	NNE7.9	NNE10
10-Mar	NNE3	NNW3	N4	NNE2	NE2	E3	ESE5	SE5	SSE4	SE5	ESE2	SE3	ESE5	SE3	NNW1	NE8	E6	SE6	ESE4	E4	ENE3	E3	ENE2	NNE3	E2.6	NE8
11-Mar	N4	NE3	N5	N5	NNE3	NE5	N6	N4	NE5	ENE6	NE6	ENE6	ENE6	ENE6	ENE6	E5	NE5	NE5	NNE6	N9	NNE8	NNE8	N8	N7	NNE5.1	N9
12-Mar	N7	N8	NNE7	NNE9	N7	N6	N8	N8	NNE7	ENE3	E3	E3	NNE5	NE1	ENE5	ESE9	E9	E6	NE6	NE6	NE5	ENE6	NE4	NNE4	NE4.8	E9
13-Mar	NE6	ENE6	NE5	NE6	ENE6	NE7	NE7	NE7	ENE7	ENE10	ENE9	ENE10	NE9	NE12	NE11	NE10	NNE12	NE11	NE8	NNE7	N7	N8	N8	N8	NE7.7	NE12
14-Mar	N8	N9	N8	N7	NNW6	NNW7	NNW8	NNW9	NNW8	NNW9	NNW9	NNW11	NNW11	NNW10	NNW10	NNW11	NNW12	NNW10	NNW8	NW4	NW3	NNW3	NNW4	NNW4	NNW7.9	NNW12
15-Mar	NNW3	NW1	S1	S0	S2	SSW1	S2	SSW3	SSE2	SSE2	S3	SSE4	W3	WNW5	NW6	NW6	N6	NNE6	NE4	ENE2	NNE1	WSW1	SSE3	SSE3	WNW0.4	N6
16-Mar	SSE3	SSE1	UO	SSE1	SSE2	SSE1	SSE2	SE3	SE4	SE5	SE7	SE12	SE11	SSE10	SSE9	SSE11	SE8	SE9	SE7	SSE6	SSE7	SSE7	SE5	SE3	SSE5.7	SE12
17-Mar	ESE3	SE5	SSE6	S6	S6	S9	S8	S8	SSW8	SSW8	SW9	WSW7	W7	WNW5	WNW5	WNW4	NW4	NNW9	NNW5	N5	NE4	NE2	NE2	NNE3	SW2.1	NNW9
18-Mar	ENE2	N4	NNW4	N1	S4	SW2	NNW3	SSW1	WNW3	W4	NW5	W8	WNW7	WSW9	SW11	SW10	SW10	SW8	SW4	E1	SSW5	SW6	N2	W5	WSW3.6	SW11
19-Mar	SSE3	SSE4	SSE4	SSE5	SSE5	S6	S5	SSW6	SW7	WSW6	SW6	SW8	WSW12	W10	WSW13	W11	W9	W5	WNW3	SSW2	SSW4	SE2	SE2	S4	SW4.5	WSW13
20-Mar	WNW1	N6	NNW6	NNW7	N7	NNW4	NNW4	NNE5	ENE7	ENE8	E9	E10	E10	E10	E8	NE9	NE9	ENE9	NE8	NNE7	NE5	ENE4	SSE1	SE3	NE5.0	E10
21-Mar	SE3	SSE3	SSE2	S1	SSE1	SSE1	S2	ESE1	ESE4	E3	E8	E9	ESE10	ESE11	SE11	S11	SSE11	SSE10	SSE7	SSE5	SSE7	SSE9	SSE6	SSE6	SE5.4	SSE11
22-Mar	SE6	SE4	SSE3	SE2	SE4	SE6	SSE6	S7	SSW7	SSW8	SW5	SSW7	SSW7	SW10	WSW9	WNW9	WNW8	WNW7	WNW6	W8	W8	WNW7	W7	WSW5	SW4.0	SW10
23-Mar	SW4	SSW5	S4	SSE4	SSE4	SSE4	S5	SSW6	SSW5	WNW5	NW5	WNW7	WNW8	WNW7	W5	WSW5	W5	WSW4	SW3	S3	SSW4	SE2	SSE4	SSE3	SW2.6	WNW8
24-Mar	S3	SSE2	SE3	SSE4	SE6	SE6	SSE2	ESE1	SSE2	SW8	SW14	SW12	SSW12	SW11	SW11	WSW9	NW6	NNW7	WNW3	NNW8	WNW6	WNW8	WNW6	WNW5	SW3.9	SW14
25-Mar	WNW7	WNW7	WNW7	WNW6	SW5	SW4	WSW3	WSW3	SW6	W7	WSW8	W8	W9	W10	WNW12	NW12	WNW10	NW9	NW4	NNW4	WNW1	NW2	NNW4	N6	WNW5.5	WNW12
26-Mar	NNE6	NNE8	NNE9	N12	N7	NNE8	NNE8	NNE9	NNE10	NE8	NE8	E6	ESE9	ESE10	E7	ENE8	NNE11	NE10	NE7	NE7	NE8	NE8	ENE7	NE7	NE7.3	N12
27-Mar	NE8	NE7	ENE8	ENE8	NE7	NE8	NE8	NE10	NE10	NE11	NE12	NE13	NE11	NE12	NE13	NE13	NNE13	NE12	NNE9	NE10	NE9	ENE8	ENE8	ENE8	NE9.7	NE13
28-Mar	NE8	NE7	NE6	NNE6	N6	N6	N7	NNE8	N6	NNE5	NNE7	ENE6	ESE6	ESE6	ESE7	SE4	ENE3	ESE4	ESE3	NNE3	NE1	N3	WNW1	UO	NE3.6	NE8
29-Mar	SSW1	S1	S2	SSE2	S1	UO	SSE1	N1	SE1	ESE1	SW3	SW0	W4	S3	NW4	WNW5	W7	W5	WSW4	SW3	S2	SSE1	S4	SSW5	SW1.7	W7
30-Mar	S5	SSW6	SSW6	SSW7	SSW6	SSW5	SSW5	S5	SW6	WSW5	SSW8	SW7	S10	SSW11	SSW9	SSW10	SSW9	SW8	SW7	SW4	S5	S3	SW3	SSW6	SSW6.2	SSW11
31-Mar	SSW3	NNW2	SSE2	SSE3	SSE4	SE2	SSE1	SE2	ESE5	SE9	SE12	SSE11	SSE12	SE13	SE14	SE12	SE10	ESE10	ESE9	ESE4	E2	SSE6	SE4	SE6	SE6.2	SE14
	NNE0.7	NNE0.9	NE0.9	NE0.5	E0.7	ESE0.2	W0.3	WNW0.2	W0.5	WNW0.9	W0.9	W1.1	WNW1.4	W1.9	WNW2.2	WNW2.4	NNW2.3	N1.8	N1.1	NNE1.2	N0.1	WSW0.1	W0.2	N0.4	Diurnal Average	
	SW9	N9	NNE9	N12	N10	N12	NNW12	SSW12	W15	W14	SW14	WNW15	NW13	WNW16	WNW15	WNW15	NNE13	NNW16	NNW12	NE10	SW10	SW11	SW11	W9	Diurnal Maximum	

UO - Unstable Operation

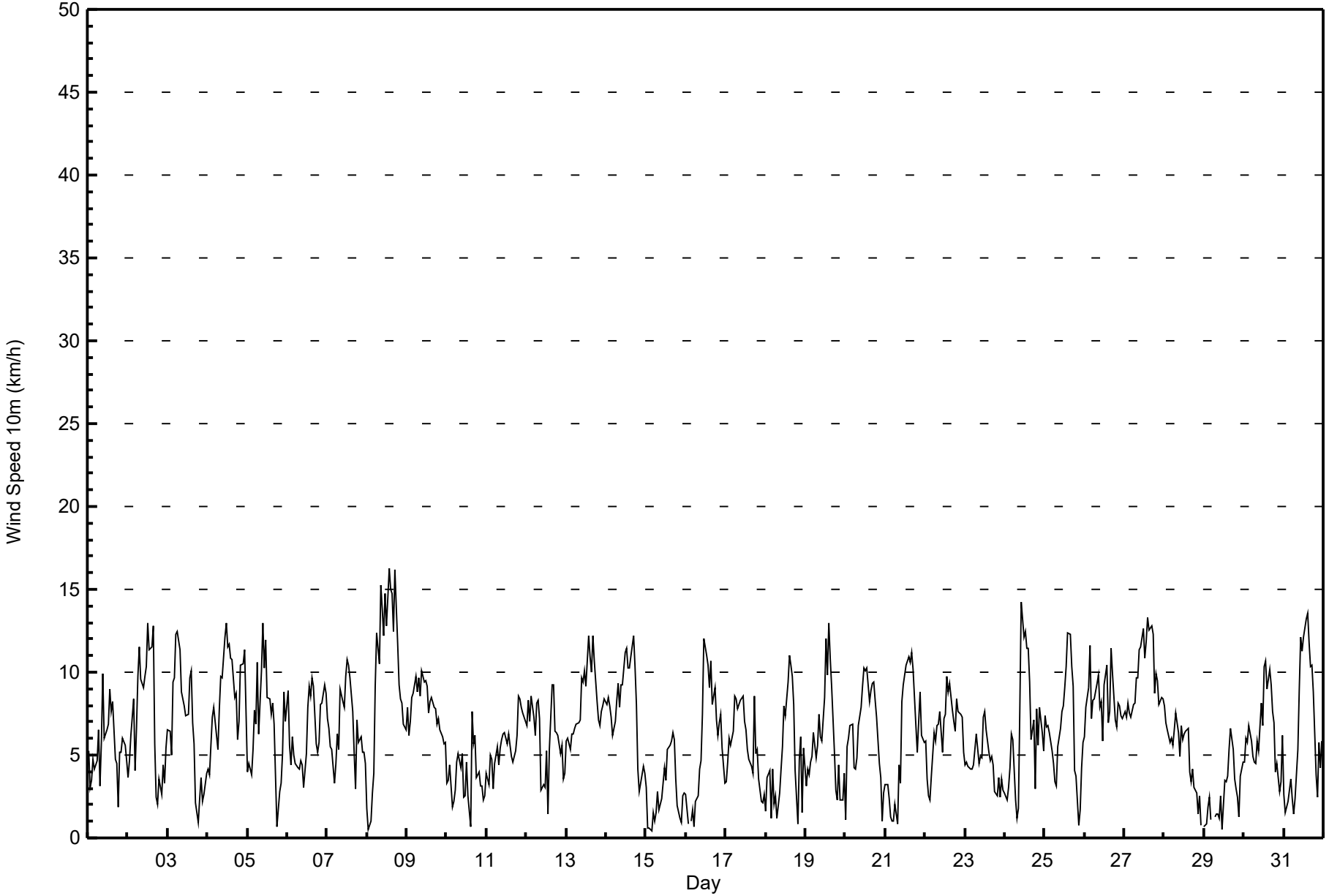
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Conklin - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	301	40.62	40.62
6 - 11	392	52.90	93.52
12 - 19	48	6.48	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: 741

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Conklin - March 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	12	12	17	8	9	13	32	50	36	23	16	10	10	21	17	15	301
6 - 11	29	39	50	23	12	10	12	19	15	33	36	9	27	29	17	32	392
12 - 19	3	2	7	0	0	0	5	1	0	2	5	4	2	8	3	6	48
20 - 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	44	53	74	31	21	23	49	70	51	58	57	23	39	58	37	53	741

Total Number of Valid Hours: 741

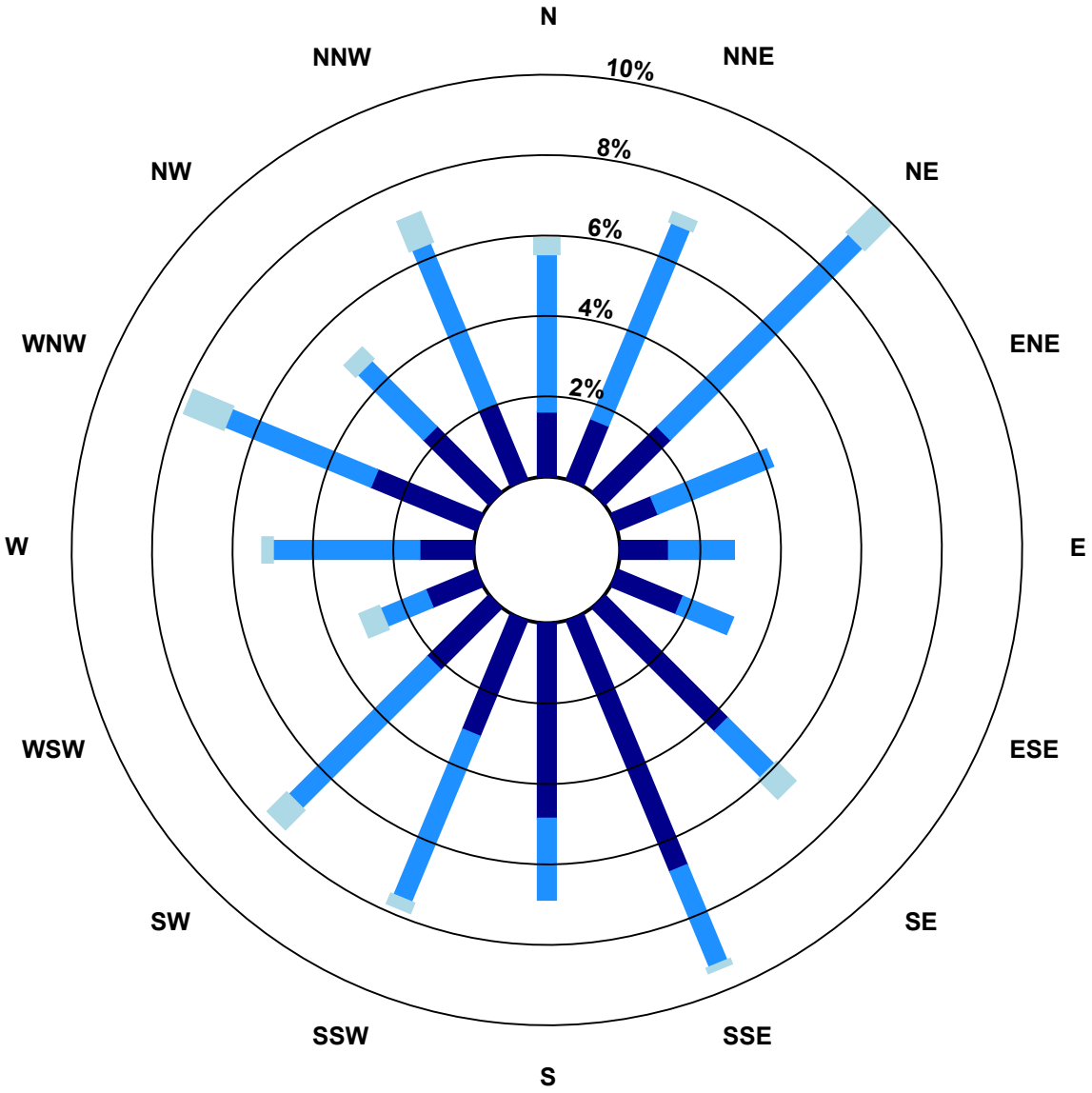
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 10m (WS10) - km/h

Conklin



Classes (km/h)

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

Total Number of Valid Hours: 741

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Conklin - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7 km/h on Mar 8 14:00

Minimum Value: 0 km/h on Mar 16 01:00

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

Hours in Service:	744
Hours of Data:	741
Hours of Missing Data:	3
Hours of Calibration:	0
Percent Operational Time:	99.6

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

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Conklin - March 2025

Direction of Maximum Speed: 288 deg on Mar 8 14:00
Direction of Maximum Daily Speed Average: 44.7 deg on Mar 27

Direction of Minimum Speed: 184 deg on Mar 15 04:00
Direction of Minimum Daily Speed Average: 0.4 deg on Mar 15

Monthly Average Direction: 318.6 deg

Hours in Service:	744
Hours of Data:	741
Hours of Missing Data:	3
Percent Operational Time:	99.6

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	148	138	138	170	177	168	193	142	177	216	236	218	288	264	280	273	293	260	191	194	188	190	173	128	209.9
2-Mar	141	185	187	198	192	211	211	211	239	288	298	308	314	315	321	337	320	288	219	218	300	310	306	311	274.3
3-Mar	323	322	321	348	352	355	344	353	347	341	333	344	332	336	336	321	304	303	187	193	190	153	158	141	337.4
4-Mar	128	149	182	201	201	195	188	212	229	230	216	229	237	250	220	232	222	219	207	208	233	231	234	240	220.1
5-Mar	255	305	316	328	335	333	336	324	342	350	348	338	326	317	319	309	318	304	196	163	167	218	230	208	317.8
6-Mar	231	199	135	190	184	189	188	163	135	178	253	292	286	273	281	280	296	283	232	209	226	229	252	279	240.9
7-Mar	291	260	199	204	174	205	195	223	277	277	280	276	277	278	286	294	295	278	276	285	268	285	289	315	269.0
8-Mar	18	42	357	169	163	215	229	231	262	275	282	282	285	288	293	288	303	337	339	359	34	40	44	40	295.1
9-Mar	34	39	27	35	37	31	28	29	40	33	39	43	27	35	19	19	20	27	30	22	19	14	46	28	30.3
10-Mar	22	348	1	23	41	83	116	144	154	131	113	140	110	135	342	53	87	132	116	95	72	98	76	30	91.9
11-Mar	1	39	8	354	26	35	360	358	51	62	51	75	70	77	57	84	51	38	28	11	14	13	11	10	32.6
12-Mar	6	2	14	19	3	353	355	358	24	64	91	79	20	50	66	120	97	85	40	46	51	67	41	31	37.1
13-Mar	54	66	50	53	63	55	53	54	70	75	70	57	53	35	52	48	32	35	42	29	3	359	3	6	44.1
14-Mar	5	3	3	354	335	329	342	345	343	347	333	330	342	337	337	328	343	334	336	324	322	328	327	328	340.3
15-Mar	345	324	180	184	173	193	186	192	161	159	176	166	261	295	305	315	4	14	48	57	13	245	166	153	299.1
16-Mar	153	155	UO	161	147	149	151	131	136	137	139	136	135	154	164	168	140	139	133	150	155	160	146	130	146.4
17-Mar	120	135	167	187	175	178	188	189	200	205	220	238	273	298	302	294	306	343	327	10	38	52	55	31	220.2
18-Mar	77	360	329	2	170	228	339	213	282	277	310	277	289	238	234	234	224	234	226	100	213	217	351	267	251.2
19-Mar	166	155	148	158	155	190	187	205	231	239	226	235	239	265	251	261	276	281	292	210	192	138	133	179	225.7
20-Mar	303	352	344	347	356	348	340	21	65	78	93	93	90	92	80	50	50	60	34	33	52	71	158	141	52.6
21-Mar	134	150	156	173	158	152	176	105	116	93	98	99	102	102	129	173	162	161	150	149	152	154	155	151	137.4
22-Mar	137	134	149	131	135	129	159	190	211	209	228	200	213	220	245	286	292	294	284	281	276	284	274	245	233.6
23-Mar	216	192	170	166	152	148	169	194	197	302	305	298	301	290	264	239	277	247	219	188	199	140	164	162	224.9
24-Mar	177	161	146	157	146	146	147	105	156	230	228	215	211	214	233	238	316	333	293	338	290	285	291	301	234.4
25-Mar	288	296	303	296	227	232	245	248	229	277	247	261	276	274	283	304	296	322	312	330	292	326	347	5	286.0
26-Mar	14	32	16	10	10	14	29	26	30	53	37	79	108	118	81	71	22	38	42	37	39	46	60	44	41.9
27-Mar	45	49	58	57	50	42	40	50	49	37	38	41	50	38	39	47	33	35	33	38	45	59	64	59	44.7
28-Mar	50	35	45	25	3	349	358	12	352	29	31	78	118	118	115	128	73	121	109	32	37	354	292	UO	46.7
29-Mar	196	178	188	163	175	UO	162	351	132	120	234	216	269	189	312	293	261	267	246	218	183	153	176	193	228.1
30-Mar	191	202	197	197	194	194	194	190	224	238	192	216	176	193	192	194	197	215	225	236	191	191	214	205	200.7
31-Mar	194	337	164	166	148	145	160	145	116	130	142	158	148	134	129	143	132	117	112	102	99	152	142	146	136.9
	31.1	25.3	43.4	39.3	98.4	113.5	278.3	292.6	278.1	301.4	280.4	267.0	282.7	272.4	290.4	290.7	328.7	348.9	3.6	12.4	350.2	248.6	276.9	354.0	
	Diurnal Average																								

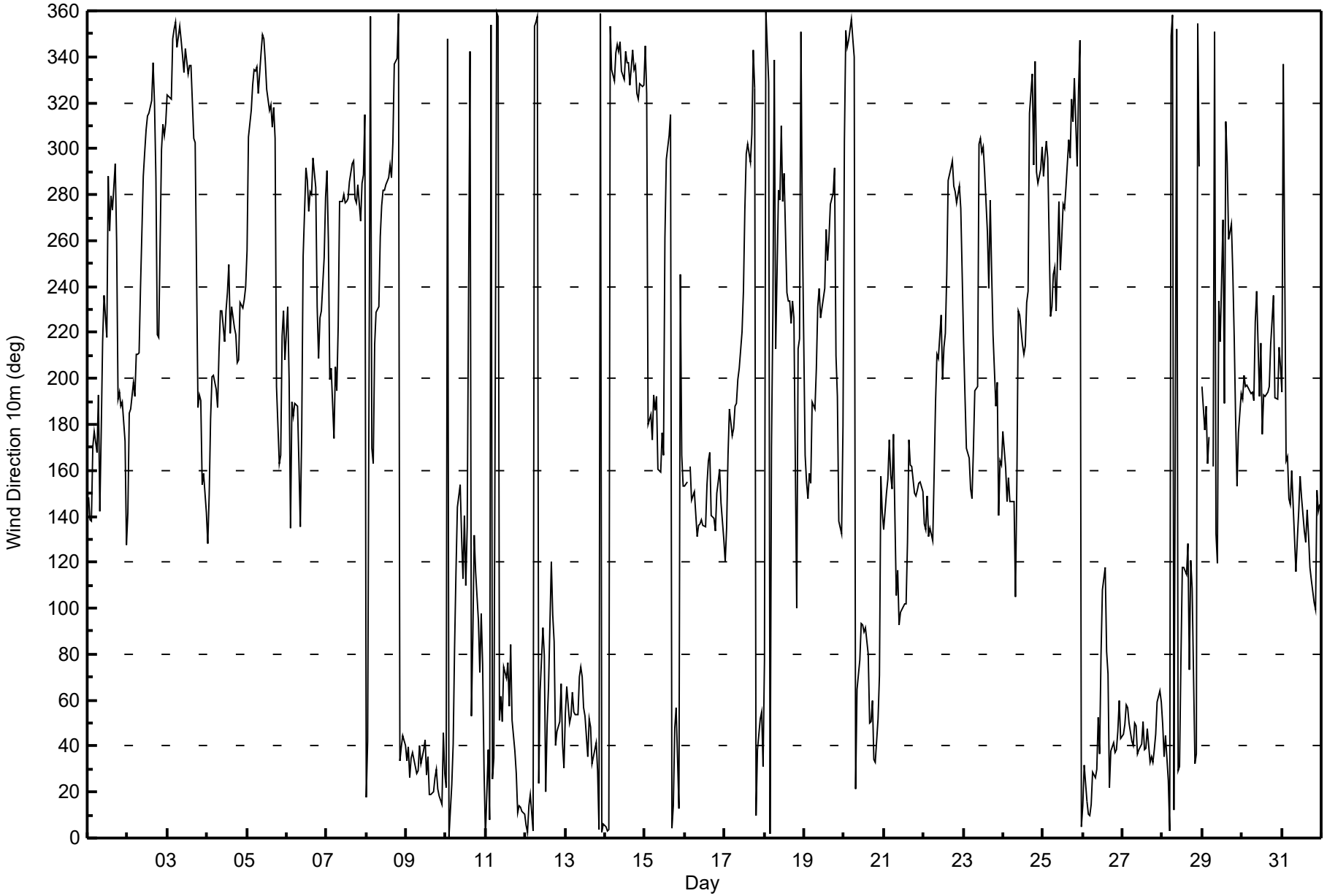
UO - Unstable Operation
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Conklin - March 2025



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

Maximum Value: 103 deg on Mar 10 15:00

Minimum Value: 7 deg on Mar 22 01:00

Percentiles: P_1 = 11 P_{10} = 16 Q_1 = 21 Median = 28 Q_3 = 36 P_{90} = 50 P_{99} = 87

Hours in Service:	744
Hours of Data:	741
Hours of Missing Data:	3
Hours of Calibration:	0
Percent Operational Time:	99.6

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	13	53	31	38	37	22	19	24	21	21	27	30	38	33	38	32	33	24	23	13	17	13	14	19	53
2-Mar	40	20	23	20	65	30	22	18	32	34	32	31	23	21	22	20	30	35	42	45	51	22	23	19	65
3-Mar	17	17	16	17	17	19	16	18	25	24	24	40	36	23	23	32	34	30	30	20	15	31	22	12	40
4-Mar	15	18	17	19	19	23	18	22	21	21	21	22	28	29	29	28	26	22	18	19	18	19	18	39	39
5-Mar	45	31	21	18	15	17	19	17	19	21	28	28	34	33	43	34	27	31	81	17	21	45	18	19	81
6-Mar	19	27	26	20	21	14	13	35	21	24	69	43	37	35	37	33	33	30	23	12	16	16	28	31	69
7-Mar	32	41	19	24	40	37	23	35	36	34	36	36	32	34	34	31	31	26	27	27	24	29	30	43	43
8-Mar	75	94	89	34	21	22	19	19	27	32	36	32	37	31	31	31	29	18	17	21	25	25	27	25	94
9-Mar	27	27	22	22	23	19	23	22	29	23	30	31	29	32	32	33	29	25	28	23	28	38	28	28	38
10-Mar	40	36	16	83	60	37	28	28	40	47	83	69	53	80	103	41	39	20	28	29	37	44	59	63	103
11-Mar	25	44	36	26	53	25	20	30	33	31	37	42	38	35	38	34	44	39	32	22	28	24	27	22	53
12-Mar	21	20	23	22	20	15	17	20	27	81	81	76	60	98	59	39	30	36	25	29	29	32	37	44	98
13-Mar	34	34	33	35	33	30	27	31	35	31	31	31	34	21	30	27	21	24	31	23	18	17	19	20	35
14-Mar	20	21	22	20	17	16	19	15	18	23	24	22	20	23	21	20	18	19	16	13	16	14	12	13	24
15-Mar	28	84	84	82	66	62	18	17	29	49	57	40	58	34	37	31	24	23	29	46	34	71	25	19	84
16-Mar	13	46	UO	50	14	49	16	17	15	17	27	23	23	33	36	27	19	16	12	14	12	16	13	15	50
17-Mar	15	13	15	16	12	11	12	13	16	18	24	31	33	32	36	38	30	16	16	32	29	36	34	28	38
18-Mar	36	37	17	76	20	61	34	47	47	42	31	36	38	30	27	24	26	26	37	92	26	31	83	28	92
19-Mar	46	26	22	18	19	29	32	28	22	22	30	38	30	37	31	28	33	33	23	32	14	38	30	26	46
20-Mar	63	29	12	14	15	21	11	29	36	35	29	31	34	34	48	39	34	32	21	23	37	32	40	23	63
21-Mar	22	21	31	79	60	59	29	95	25	59	27	28	24	24	31	30	22	19	12	19	17	17	16	14	95
22-Mar	7	27	29	27	13	10	19	23	33	24	28	25	36	28	37	35	32	29	25	25	21	27	22	39	39
23-Mar	28	14	22	16	18	14	15	21	27	37	40	34	35	41	44	50	44	43	21	18	55	31	29	21	55
24-Mar	47	28	19	26	15	13	78	79	59	27	22	23	21	25	24	27	63	56	39	23	34	26	31	26	79
25-Mar	32	28	27	27	46	59	70	76	35	37	39	44	39	33	33	30	31	27	25	29	72	46	17	23	76
26-Mar	23	21	23	21	23	25	23	23	24	42	35	60	43	31	56	46	28	25	29	29	23	30	34	28	60
27-Mar	25	33	30	33	30	25	28	28	30	27	28	27	30	26	27	27	23	24	23	25	26	29	32	29	33
28-Mar	27	26	27	21	22	19	19	21	24	45	34	50	45	39	37	56	60	47	43	36	65	59	39	UO	65
29-Mar	70	71	25	26	67	UO	67	68	79	89	58	102	51	70	56	37	32	37	43	30	26	30	19	8	102
30-Mar	13	13	9	11	11	9	13	16	29	45	41	47	32	38	40	34	29	26	19	31	31	38	25	19	47
31-Mar	72	61	62	28	18	36	45	38	22	17	19	28	26	25	27	26	23	19	17	34	39	18	16	7	72
	75	94	89	83	67	62	78	95	79	89	83	102	60	98	103	56	63	56	81	92	72	71	83	63	
	Diurnal Maximum																								

UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS22
JANVIER
MARCH 2025

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

April 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JANVIER (AMS22)
MARCH 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 30-Min Value	30-Min Exceedances	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2(ppb) Average	708	35	36	99.87	-	-	3.1	0	0.6	0
TRS(ppb) Average	703	38	41	99.6	0.6	0	0.5	-	0.2	-
THC(ppm) Average	707	35	37	99.73	-	-	2.2	-	2	-
NMHC(ppm) Average	707	35	37	99.73	-	-	0.009	-	0	-
CH4(ppm) Average	707	35	37	99.73	-	-	2.2	-	2	-
O3 (ppb) Average	707	35	37	99.73	-	-	53.8	0	46.2	-
NO2 (ppb) Average	681	41	63	97.04	-	-	15.1	0	2.8	-
NO (ppb) Average	681	41	63	97.04	-	-	6.2	-	0.6	-
NOX (ppb) Average	681	41	63	97.04	-	-	15.3	-	3.1	-
PM2.5 (ug/m3) Average	742	2	2	100	-	-	25.7	0	3.9	0
Temperature 2 m (C) Average	744	0	0	100	-	-	11	-	4.4	-
Relative Humidity (%) Average	744	0	0	100	-	-	99.2	-	86.2	-
Wind Speed 10 m (km/h) Average	744	0	0	100	-	-	19	-	11	-
Wind Speed 20 m (km/h) Average	742	0	2	99.73	-	-	26	-	13	-
Wind Direction 10 m (deg) Average	744	0	0	100	-	-	-	-	-	-
Wind Direction 20 m (deg) Average	742	0	2	99.73	-	-	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JANVIER (AMS22)
MARCH 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	708	0.22	0.4	-	0	0	0	0.1	0.3	0.6	3.1
TRS (ppb) Average	703	0.17	0	-	0.1	0.1	0.1	0.2	0.2	0.2	0.5
THC (ppm) Average	707	2.01	0	-	2	2	2	2	2	2	2.2
NMHC(ppm) Average	707	0	0	-	0	0	0	0	0	0	0.009
CH4(ppm) Average	707	2.01	0	-	2	2	2	2	2	2	2.2
O3 (ppb) Average	707	40.97	5.6	-	22	33.1	37.9	41.3	44.6	48.2	53.8
NO2 (ppb) Average	681	1.21	1.4	-	0	0.1	0.4	0.9	1.6	2.4	15.1
NO (ppb) Average	681	0.26	0.4	-	0	0	0	0.1	0.4	0.6	6.2
NOX (ppb) Average	681	1.46	1.6	-	0	0.3	0.5	1.1	1.9	2.9	15.3
PM2.5 (ug/m3) Average	742	2.05	1.5	-	0.3	0.9	1.2	1.7	2.6	3.4	25.7
Temperature 2 m (C) Average	744	-5.8	8	-	-29.3	-16.6	-11.9	-5.2	-0.3	4.8	11
Relative Humidity (%) Average	744	66.04	15.9	-	26.5	41.4	54	68.7	78.9	84.5	99.2
Wind Speed 10 m (km/h) Average	744	6.3	3	-	0	2	4	6	8	10	19
Wind Speed 20 m (km/h) Average	742	8.3	4	-	0	4	6	8	11	12	26
Wind Direction 10 m (deg) Average	744	-	-	-	-	-	-	-	-	-	-
Wind Direction 20 m (deg) Average	742	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JANVIER (AMS22)
MARCH 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
SO2	13 Mar 2025 13:00	13 Mar 2025 13:00	1	Maintenance - WBEA internal audit
TRS	13 Mar 2025 11:00	13 Mar 2025 13:00	3	Maintenance - WBEA internal audit
THC/NMHC/CH4	13 Mar 2025 14:00	13 Mar 2025 15:00	2	Maintenance - WBEA internal audit
O3	13 Mar 2025 14:00	13 Mar 2025 15:00	2	Maintenance - WBEA internal audit
NO2	13 Mar 2025 11:00	13 Mar 2025 13:00	3	Maintenance - WBEA internal audit
NO2	24 Mar 2025 17:00	25 Mar 2025 11:00	19	Maintenance - stabilization post maintenance
Wind Speed, Wind Direction 20m	15 Mar 2025 23:00	15 Mar 2025 23:00	1	Flat line in sensor output signal - Sensor frozen
Wind Speed, Wind Direction 20m	16 Mar 2025 06:00	16 Mar 2025 06:00	1	Flat line in sensor output signal - Sensor frozen

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Janvier - March 2025

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

Maximum Value: 3.1 ppb on Mar 8 18:00 Maximum Daily Average: 0.6 ppb on Mar 17

Minimum Value: 0.0 ppb on Mar 7 04:00 Minimum Daily Average: 0.0 ppb on Mar 21

Maximum Diurnal Average: 0.4 ppb at hour 18 Minimum Diurnal Average: 0.1 ppb at hour 2

Monthly Average: 0.22 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.3 P_{90} = 0.6 P_{99} = 1.8

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	Z	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	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	0.1	0.2	0.4
2-Mar	0.0	Z	0.3	0.2	0.2	0.1	0.2	0.3	0.3	0.4	0.3	0.5	0.5	0.7	0.2	0.4	1.0	1.1	0.6	0.2	0.2	0.1	0.3	0.2	0.4	1.1
3-Mar	0.1	0.1	Z	0.6	0.7	0.9	1.2	0.3	0.2	0.2	0.5	0.3	0.8	1.0	1.1	0.3	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.4	1.2
4-Mar	0.0	0.1	0.4	Z	0.6	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.2	0.2	0.9	1.4	1.0	0.7	0.5	0.6	0.3	1.4
5-Mar	0.4	0.4	0.6	0.5	Z	0.2	0.5	0.8	0.5	0.4	0.4	0.4	0.4	0.4	0.6	0.6	0.8	0.8	0.4	0.4	0.4	0.4	0.4	0.3	0.5	0.8
6-Mar	0.2	0.3	0.3	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.4	0.3	0.3	0.4	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.4
7-Mar	Z	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.8	2.7	0.3	2.7
8-Mar	2.8	Z	0.6	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	3.1	1.2	0.4	0.3	0.2	0.1	0.0	0.4	3.1
9-Mar	0.0	0.0	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.3	0.3	0.1	0.3
10-Mar	0.2	0.1	0.1	Z	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.5	0.8	0.6	0.6	0.7	0.7	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.3	0.8
11-Mar	0.1	0.0	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	0.2	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.3
12-Mar	0.1	0.2	0.3	0.4	0.4	Z	0.5	0.6	0.7	0.5	0.4	0.5	0.7	1.0	0.9	0.9	0.6	0.3	0.2	0.3	0.2	0.2	0.1	0.1	0.4	1.0
13-Mar	Z	0.1	0.2	0.2	0.1	0.1	0.0	0.0	0.1	0.1	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	0.2
14-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.3	0.0	0.0	0.3	0.3	0.3	0.3	0.4	0.3	0.2	0.2	0.2	0.1	0.4
15-Mar	0.2	0.1	Z	0.1	0.1	0.0	0.1	0.0	0.1	0.2	0.5	0.5	0.6	0.7	1.6	1.4	1.7	1.7	0.6	0.1	0.1	0.0	0.0	0.0	0.4	1.7
16-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.3	0.3	0.3	0.1	0.1	0.3	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.3
17-Mar	0.2	0.1	0.1	0.1	Z	0.4	0.4	0.6	0.8	0.6	0.2	0.1	0.2	0.2	0.4	0.3	0.4	0.5	1.8	2.2	2.6	1.3	0.8	0.6	0.6	2.6
18-Mar	0.6	0.6	0.5	0.5	0.4	Z	0.5	0.5	0.7	0.7	0.4	0.3	0.4	0.4	0.3	0.3	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.4	0.7
19-Mar	Z	0.3	0.2	0.6	0.3	0.1	0.1	0.3	0.2	0.3	1.1	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	0.2	1.1
20-Mar	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	0.0	0.0	0.0	0.0	0.0	0.1
21-Mar	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
22-Mar	0.1	0.0	0.0	Z	0.4	0.6	0.6	0.8	0.4	0.0	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	0.0	0.2	0.8
23-Mar	0.1	0.0	0.1	0.2	Z	0.3	0.2	0.3	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.3
24-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.3	0.1	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
25-Mar	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	0.3	0.0	0.0	0.0	0.3
26-Mar	Z	0.1	0.3	0.2	0.3	0.2	0.1	0.1	0.1	0.0	0.1	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
27-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28-Mar	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	0.3	0.2	0.1	0.0	0.0	0.3
29-Mar	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.4	0.7	0.7	0.7	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.1	0.0	0.0	0.0	0.2	0.7
30-Mar	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.1	0.2	0.5	0.4	0.3	0.4	0.3	0.2	0.3	1.1	1.2	0.9	0.7	0.4	0.1	0.1	0.2	0.3	1.2
31-Mar	0.2	0.3	0.8	1.0	0.8	Z	0.4	0.4	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0
	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.2	Diurnal Average	
	2.8	0.6	0.8	1.0	0.8	0.9	1.2	0.8	0.8	0.7	1.1	0.7	0.8	1.0	1.6	1.4	1.7	3.1	1.8	2.2	2.6	2.0	1.8	2.7	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

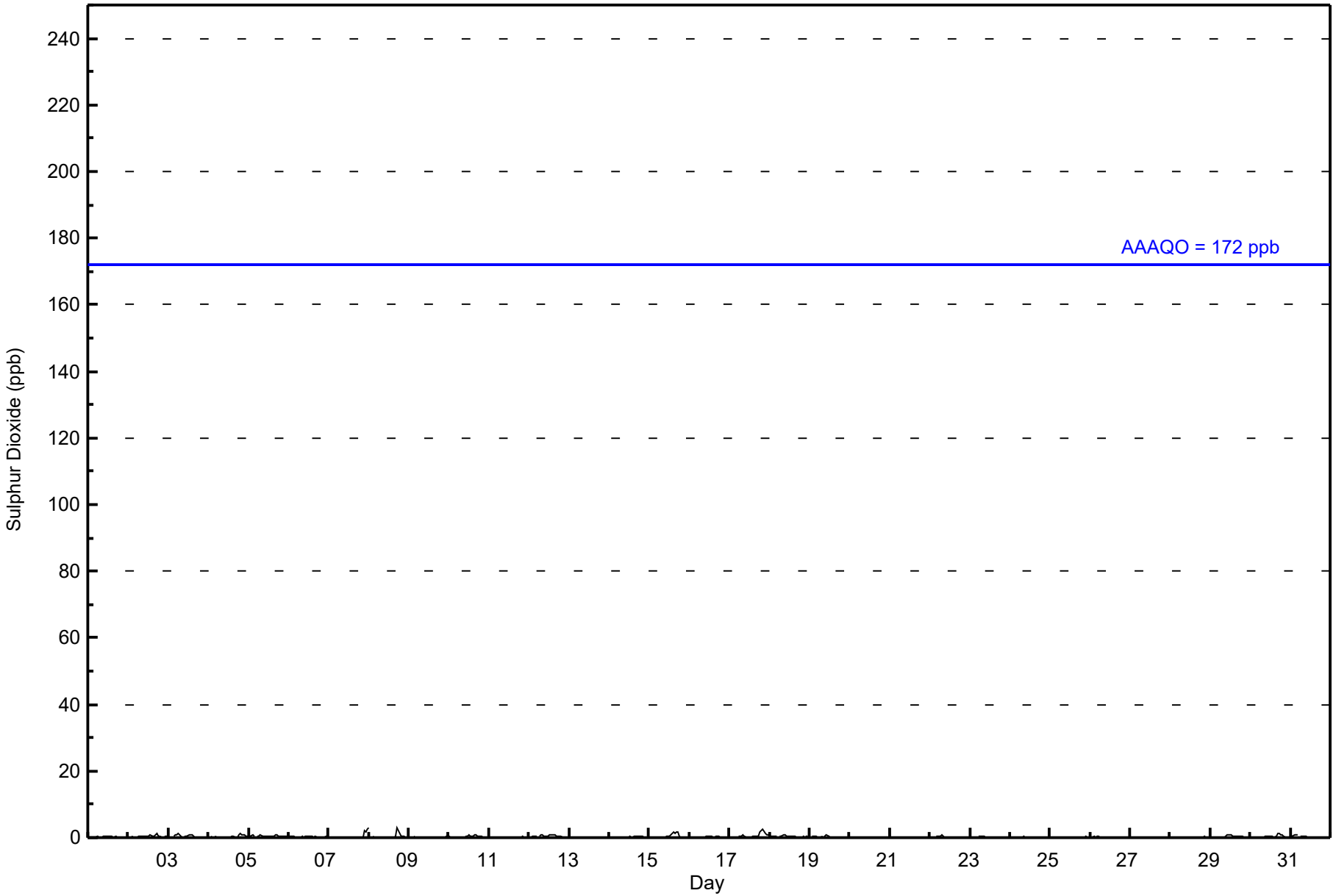
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Janvier - March 2025



Sulphur Dioxide (SO_2) - ppb

Janvier - March 2025

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

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Janvier - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	72	156	58	19	15	4	17	27	38	84	101	27	33	27	11	17	706
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	72	156	58	19	15	4	17	27	38	84	101	27	33	27	11	17	706

Total Number of Valid Hours: 706

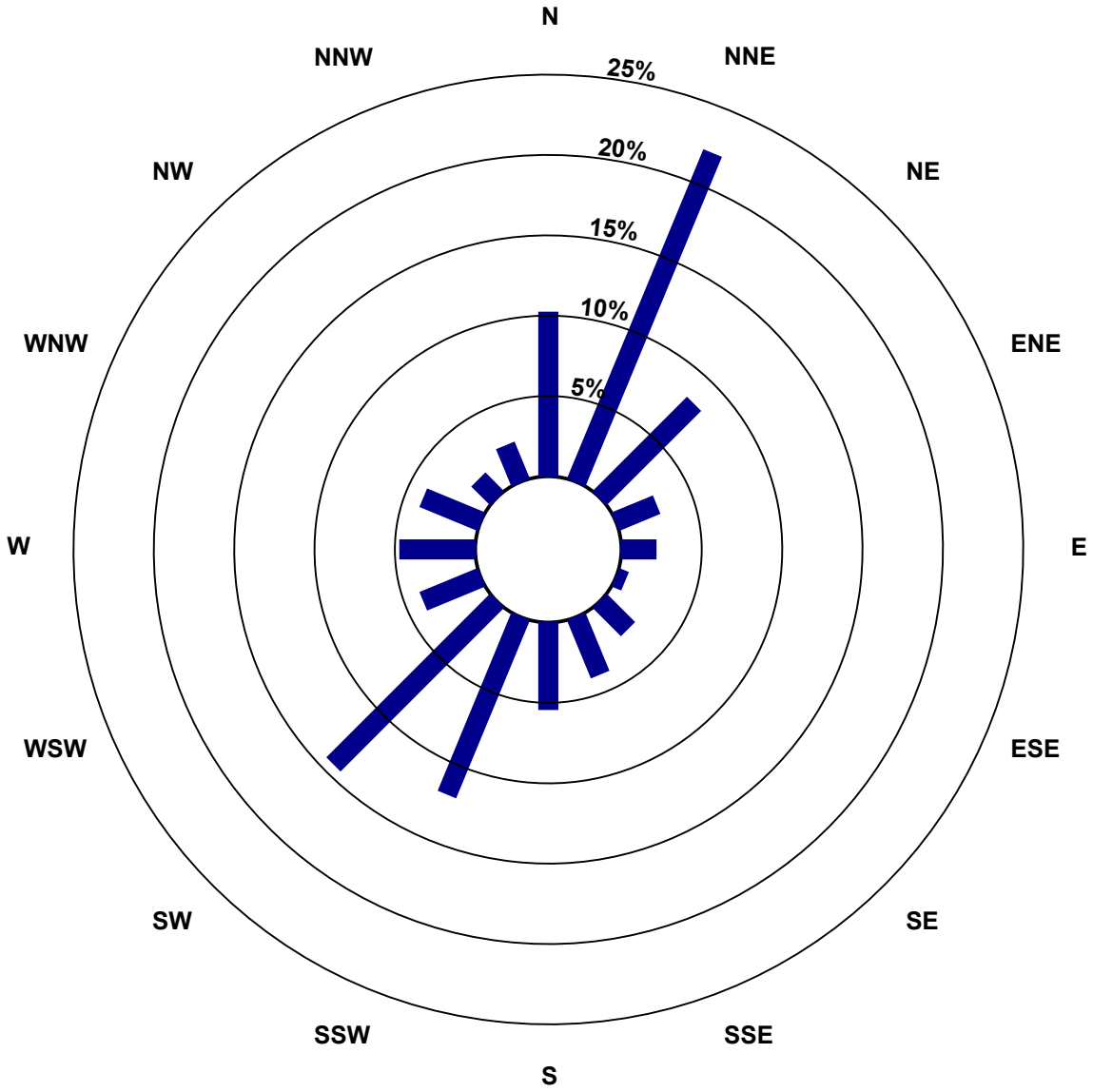
Total Number of Hours: 744

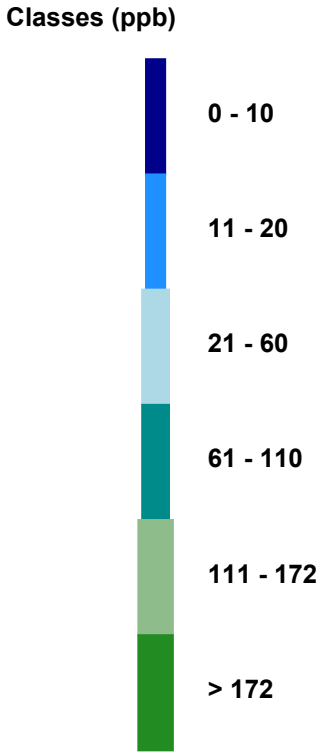
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Sulphur Dioxide (SO_2) - ppb

Janvier





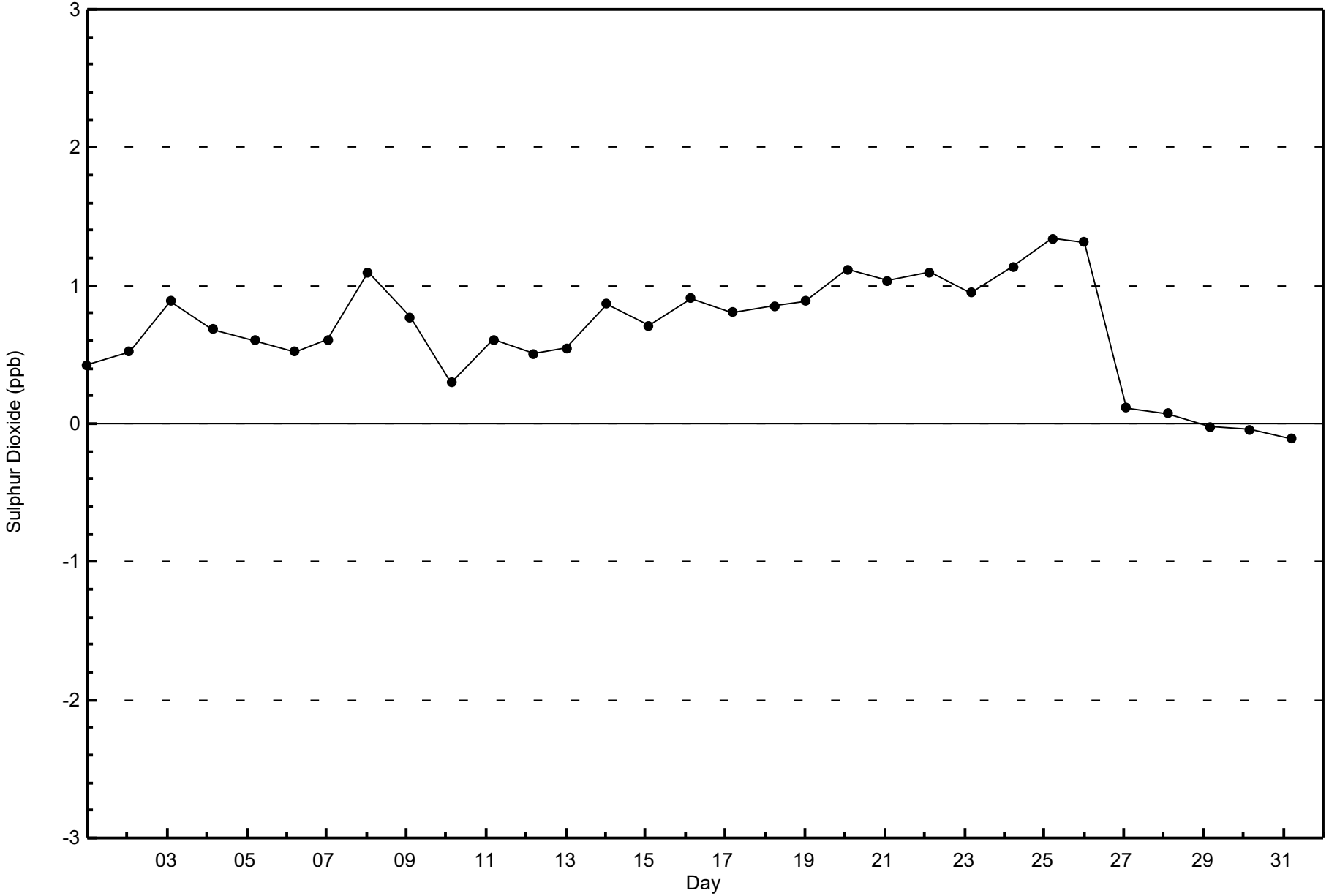
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Janvier - March 2025

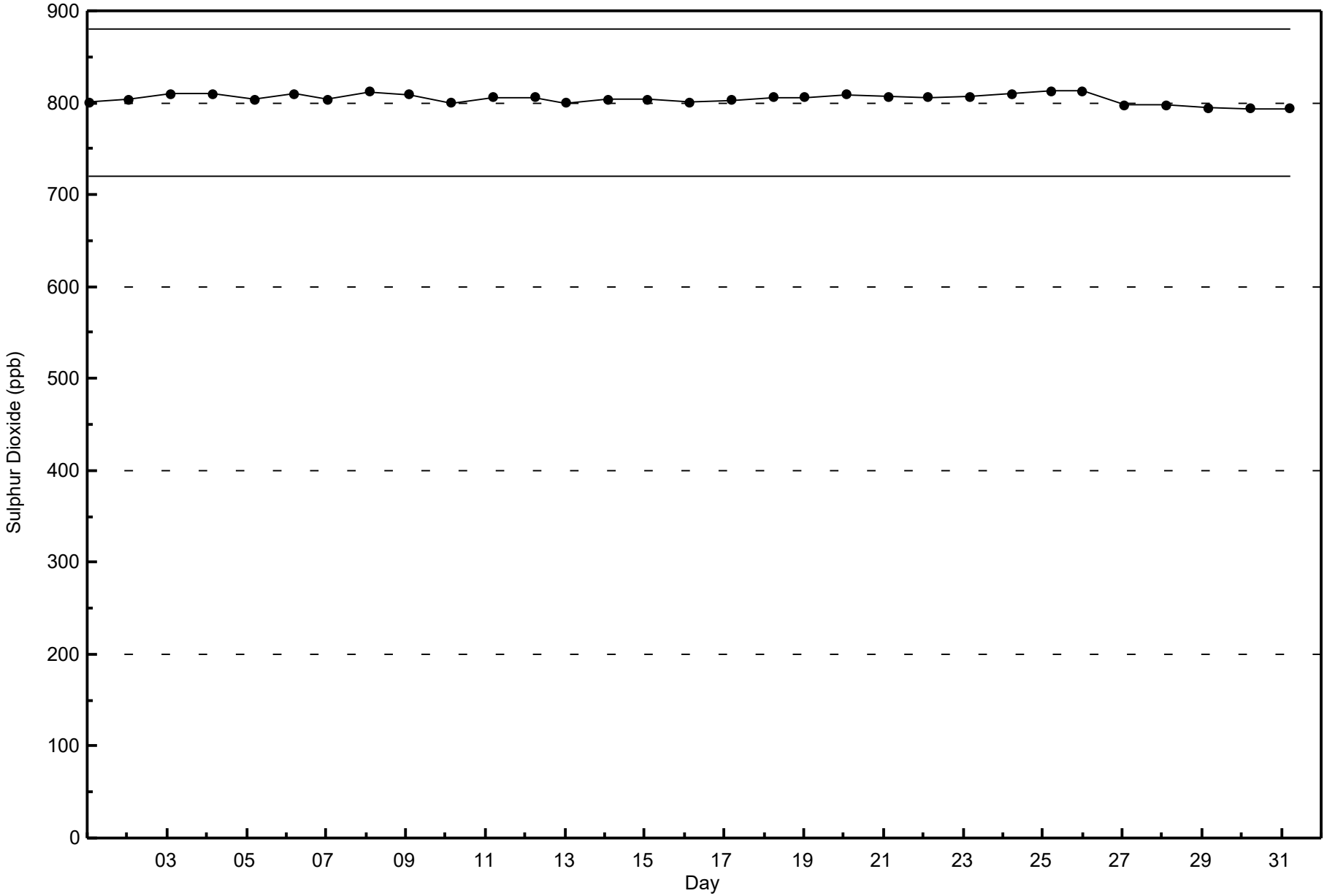


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Janvier - March 2025



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Janvier - March 2025

Number of Exceedences (AAAQG): 30-Min: 0

Maximum Value: 0.6 ppb on Mar 8 00:00

Maximum Daily Average: 0.2 ppb on Mar 8

Minimum Value: 0.1 ppb on Mar 12 00:00

Minimum Daily Average: 0.1 ppb on Mar 30

Maximum Diurnal Average: 0.2 ppb at hour 6

Minimum Diurnal Average: 0.2 ppb at hour 20

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} = 0.2 P_{99} = 0.3

Periods in Service:	1488
Periods of Valid Data:	1407
Periods of Invalid Data:	81
Periods of Calibration:	75
Percent Operational Time:	99.6

Period Ending At (MST)

Day	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00	Daily Average	Daily Maximum
1-Mar	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
	0.2	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
2-Mar	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	0.3
	0.2	0.2	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
3-Mar	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	0.1	0.2	0.2	0.1	0.2	0.2	0.3
	0.2	0.2	0.2	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
4-Mar	0.2	0.2	0.2	0.1	Z	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	0.1	0.2	0.2	0.2	SP	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2		
5-Mar	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	0.1	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	SP	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1		
6-Mar	Z	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.2
	SP	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1		
7-Mar	0.2	Z	0.2	0.2	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	0.2	0.1	0.2	0.2	0.3	0.3	0.4	0.2	0.6
	0.2	SP	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.6		
8-Mar	0.6	0.5	Z	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.5	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.6
	0.5	0.5	SP	0.2	0.2	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1		
9-Mar	0.1	0.1	0.1	Z	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.2	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
	0.1	0.1	0.2	SP	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2		
10-Mar	0.1	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	0.2	0.2	0.2	0.3
	0.2	0.2	0.2	0.2	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
11-Mar	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	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2
	0.2	0.2	0.2	0.2	0.2	SP	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1		
12-Mar	Z	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.2
	SP	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	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1		
13-Mar	0.1	Z	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	M	M	M	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
	0.1	SP	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	M	M	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1		
14-Mar	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	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2
	0.1	0.1	SP	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.2	0.1		
15-Mar	0.1	0.2	0.1	Z	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	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2
	0.1	0.1	0.1	SP	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	0.1	0.2	0.1	0.2	0.2	0.2	0.1		

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Janvier - March 2025

Day	Period Ending At (MST) 00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00	Daily Average	Daily Maximum
16-Mar	0.2	0.1	0.1	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	0.2	0.1	0.1	0.2	0.3
	0.2	0.2	0.1	0.1	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2		
17-Mar	0.1	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	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.3
	0.1	0.1	0.1	0.1	0.1	SP	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2		
18-Mar	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	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.3
	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.1		
19-Mar	0.1	Z	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	0.1	SP	0.1	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		
20-Mar	0.2	0.2	Z	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	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	SP	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2		
21-Mar	0.2	0.2	0.2	Z	0.3	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	0.1	0.2	0.1	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		
22-Mar	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	0.3
	0.2	0.1	0.2	0.3	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
23-Mar	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	0.2	0.2	0.2	0.2	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
24-Mar	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.3
	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	M	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2		
25-Mar	Z	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.1	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
	SP	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2		
26-Mar	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	0.2	SP	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.2		
27-Mar	0.2	0.2	Z	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	C	C	C	C	C	C	0.2	0.1	0.1	0.1	0.1	0.2	0.1	--	0.2
	0.2	0.2	SP	0.2	0.2	0.1	0.1	0.1	0.1	0.1	C	C	C	C	C	C	C	0.2	0.1	0.1	0.1	0.1	0.1	0.1		
28-Mar	0.1	0.2	0.1	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	0.2	0.2	0.2	0.3
	0.1	0.1	0.2	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
29-Mar	0.2	0.2	0.1	0.2	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	0.2	0.2	0.1	0.2	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
30-Mar	0.2	0.2	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	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2
	0.1	0.1	0.1	0.1	0.1	SP	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		
31-Mar	Z	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	0.1	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
	SP	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	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	0.2	0.2	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	
	0.6	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.5	0.2	0.3	0.3	0.3	0.3	0.6	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 - March 2025

Maximum Value: 0.5 ppb on Mar 8 01:00

Maximum Daily Average: 0.2 ppb on Mar 8

Minimum Value: 0.1 ppb on Mar 12 00:00

Minimum Daily Average: 0.1 ppb on Mar 30

Maximum Diurnal Average: 0.2 ppb at hour 6

Minimum Diurnal Average: 0.2 ppb at hour 20

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} = 0.2 P_{99} = 0.3

Hours in Service:	744
Hours of Data:	703
Hours of Missing Data:	41
Hours of Calibration:	38
Percent Operational Time:	99.6

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	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
2-Mar	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
3-Mar	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-Mar	0.2	0.2	0.2	0.1	Z	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
5-Mar	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2
6-Mar	Z	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.2
7-Mar	0.2	Z	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.5	0.2	0.5
8-Mar	0.5	0.5	Z	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	0.2	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.5
9-Mar	0.1	0.1	0.1	Z	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.2
10-Mar	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
11-Mar	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
12-Mar	Z	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	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.2
13-Mar	0.1	Z	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	M	M	M	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
14-Mar	0.1	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	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2
15-Mar	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	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
16-Mar	0.2	0.2	0.1	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
17-Mar	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	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.3
18-Mar	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.2
19-Mar	0.1	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	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
20-Mar	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	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
21-Mar	0.2	0.2	0.1	Z	0.2	0.2	0.1	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
22-Mar	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
23-Mar	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
24-Mar	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.3
25-Mar	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
26-Mar	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
27-Mar	0.2	0.2	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.1	C	C	C	C	C	C	C	0.2	0.1	0.1	0.1	0.1	0.1	0.1	--	0.2
28-Mar	0.1	0.1	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	0.2	0.2	0.2	0.3
29-Mar	0.2	0.2	0.1	0.2	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3
30-Mar	0.2	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	0.1	0.1	0.2
31-Mar	Z	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Diurnal Average	
	0.5	0.5	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.2	0.3	0.3	0.3	0.3	0.5	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

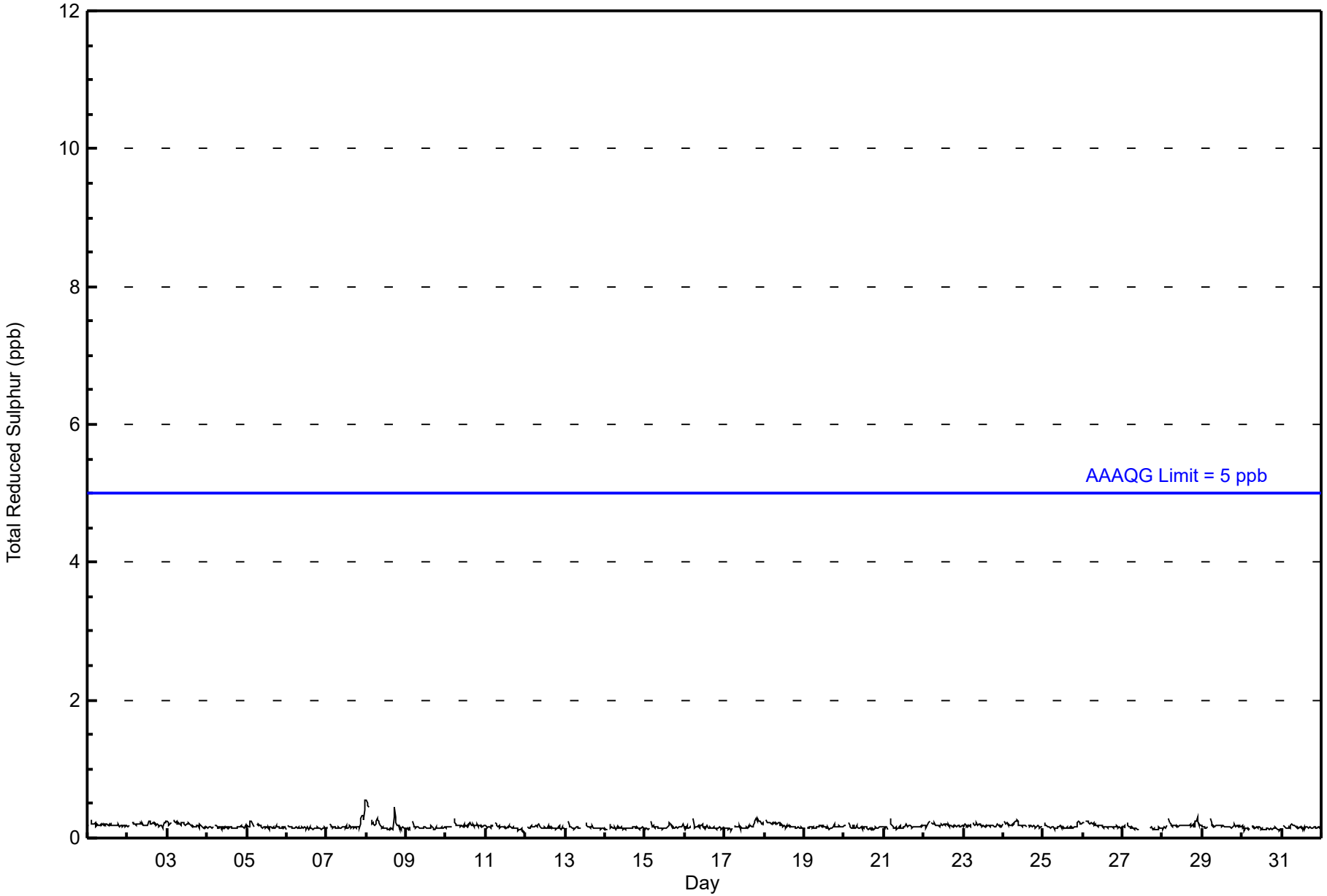
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Janvier - March 2025



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

Total Number of Valid Hours: 703

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Janvier - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	75	155	52	18	15	4	16	28	40	84	98	27	34	27	11	17	701
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	75	155	52	18	15	4	16	28	40	84	98	27	34	27	11	17	701

Total Number of Valid Hours: 701

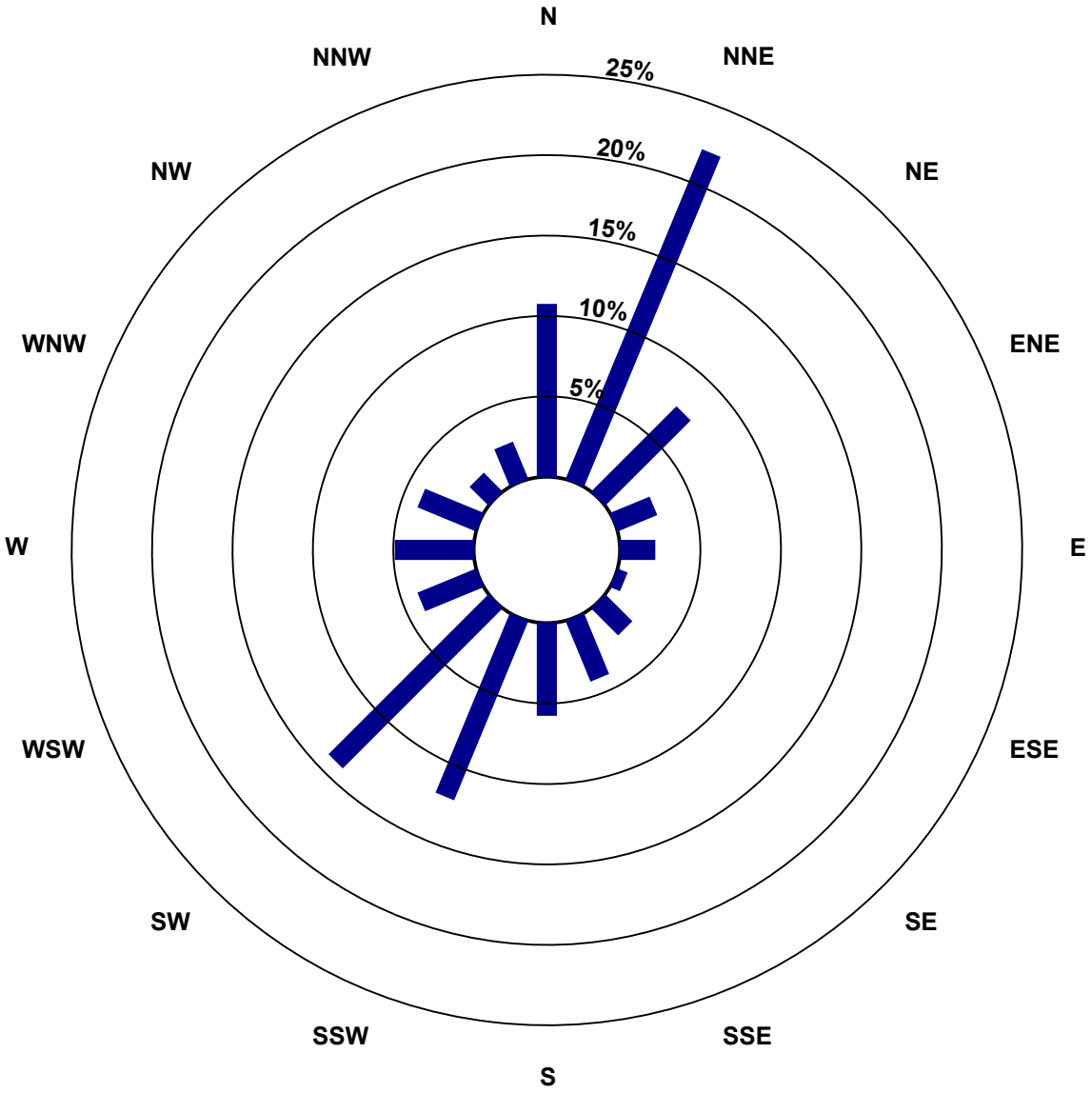
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Total Reduced Sulphur (TRS) - ppb

Janvier



Classes (ppb)

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

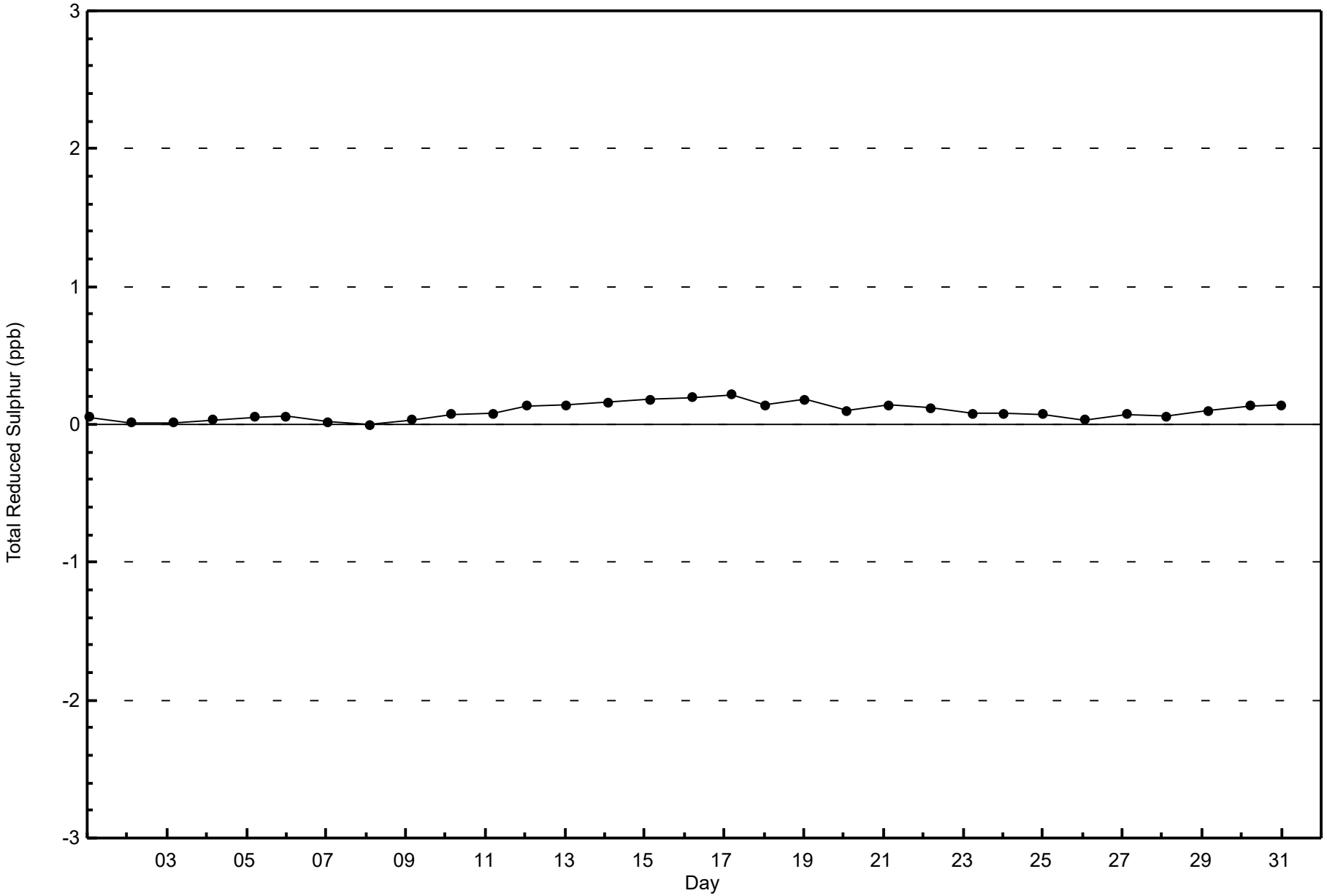
Total Number of Valid Hours: 701

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Janvier - March 2025

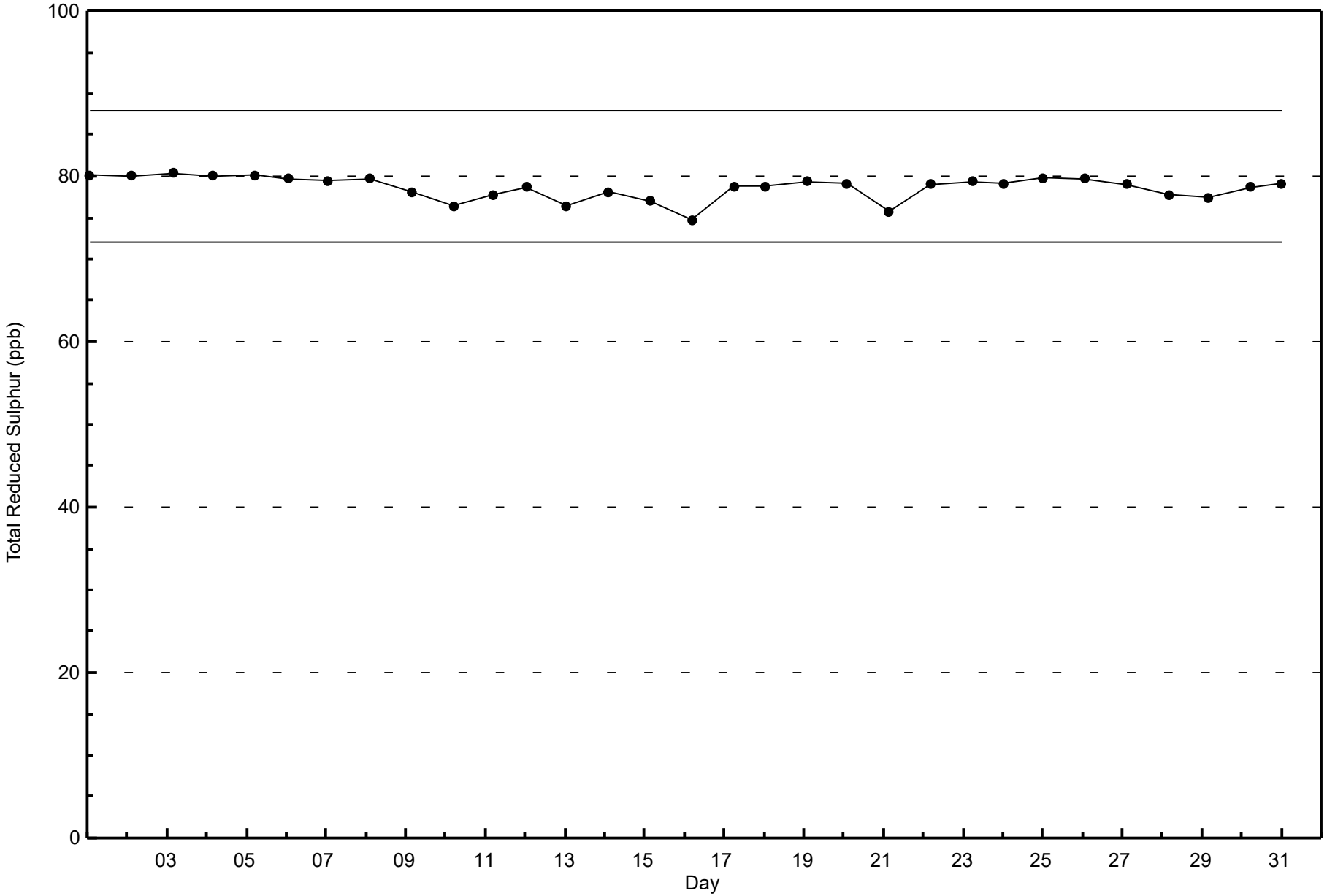


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Janvier - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Janvier - March 2025

Maximum Value: 2.2 ppm on Mar 8 01:00

Maximum Daily Average: 2.0 ppm on Mar 16

Minimum Value: 2.0 ppm on Mar 3 18:00

Minimum Daily Average: 2.0 ppm on Mar 3

Maximum Diurnal Average: 2.0 ppm at hour 7

Minimum Diurnal Average: 2.0 ppm at hour 17

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 in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	35
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
2-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	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-Mar	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-Mar	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-Mar	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-Mar	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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
8-Mar	2.2	Z	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	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
9-Mar	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-Mar	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-Mar	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-Mar	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-Mar	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	M	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
14-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	2.0	2.0	Z	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1
16-Mar	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
17-Mar	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	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1
18-Mar	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-Mar	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	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-Mar	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-Mar	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-Mar	2.0	2.0	2.1	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
25-Mar	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
26-Mar	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
27-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	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
29-Mar	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	2.0	2.1
30-Mar	2.1	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
31-Mar	2.0	2.0	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	2.1
	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	Diurnal Maximum	

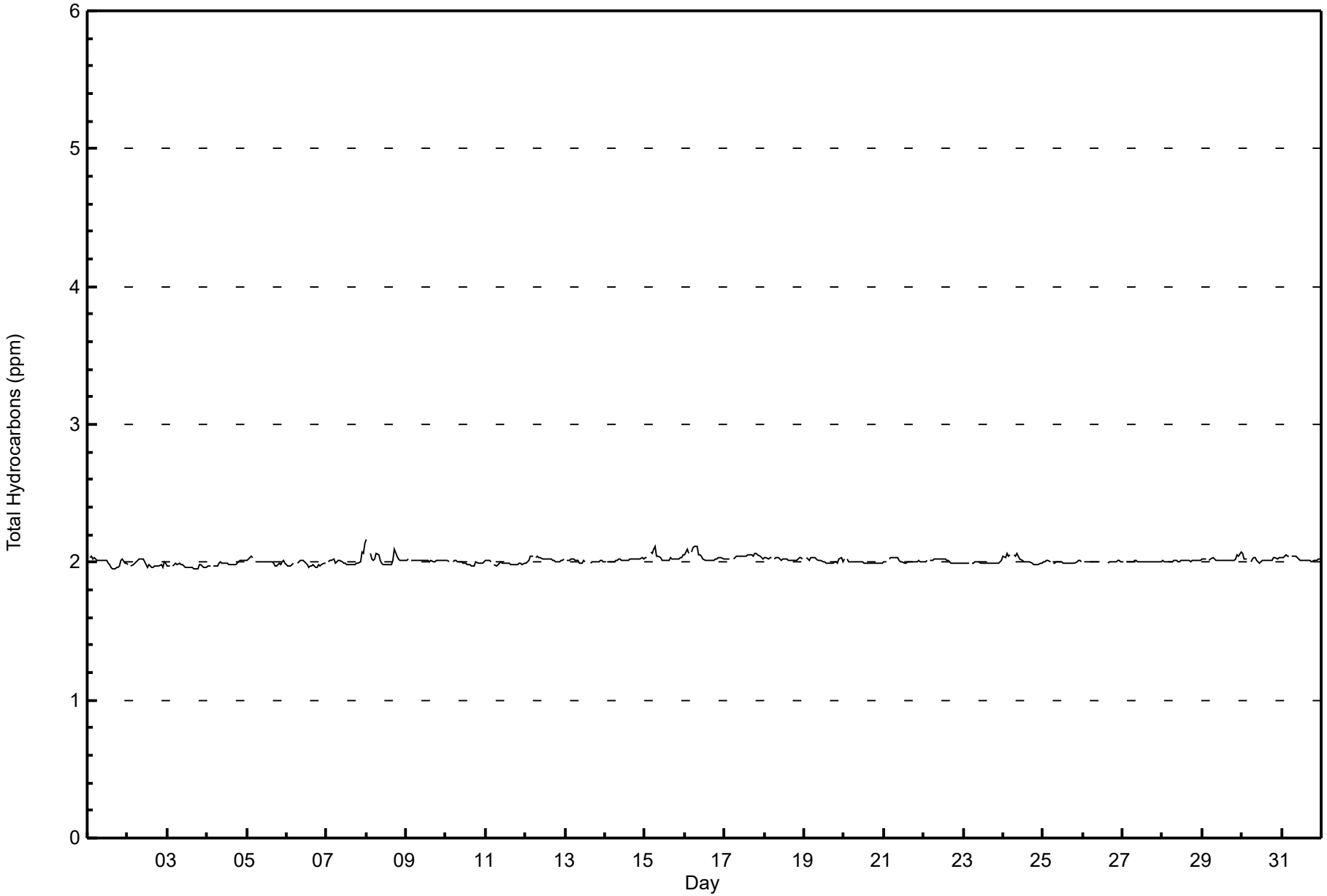
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Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Janvier - March 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	671	94.91	94.91
2.1 - 3.0	36	5.09	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Janvier - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	69	147	56	20	15	4	17	25	34	75	95	26	33	27	11	16	670
2.1 - 3.0	3	9	0	0	0	0	0	2	4	9	6	1	0	0	0	1	35
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	72	156	56	20	15	4	17	27	38	84	101	27	33	27	11	17	705

Total Number of Valid Hours: 705

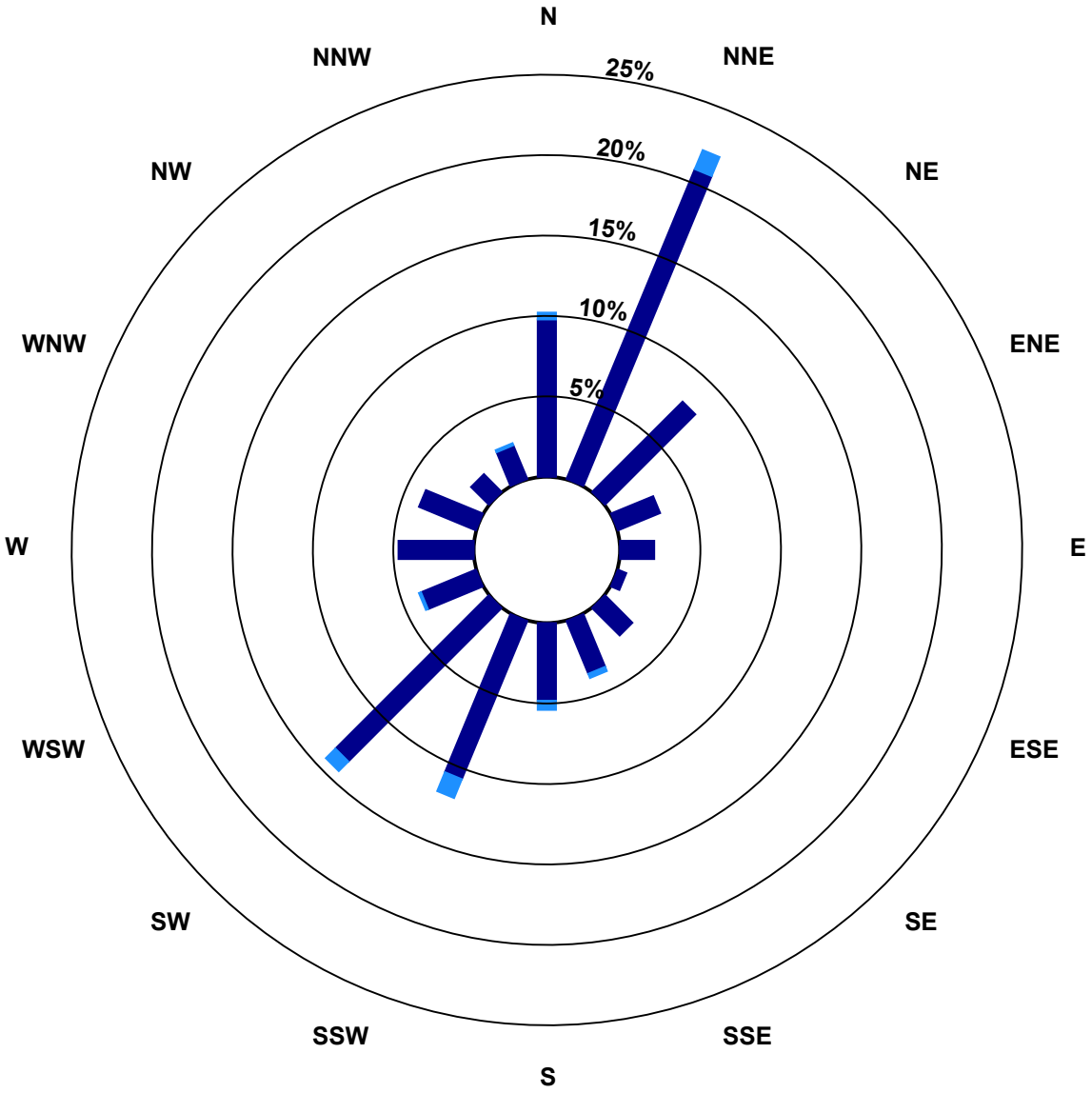
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Total Hydrocarbons (THC) - ppm

Janvier



Classes (ppm)

- 0 - 2.0
- 2.1 - 3.0
- 3.1 - 10.0
- > 10.0

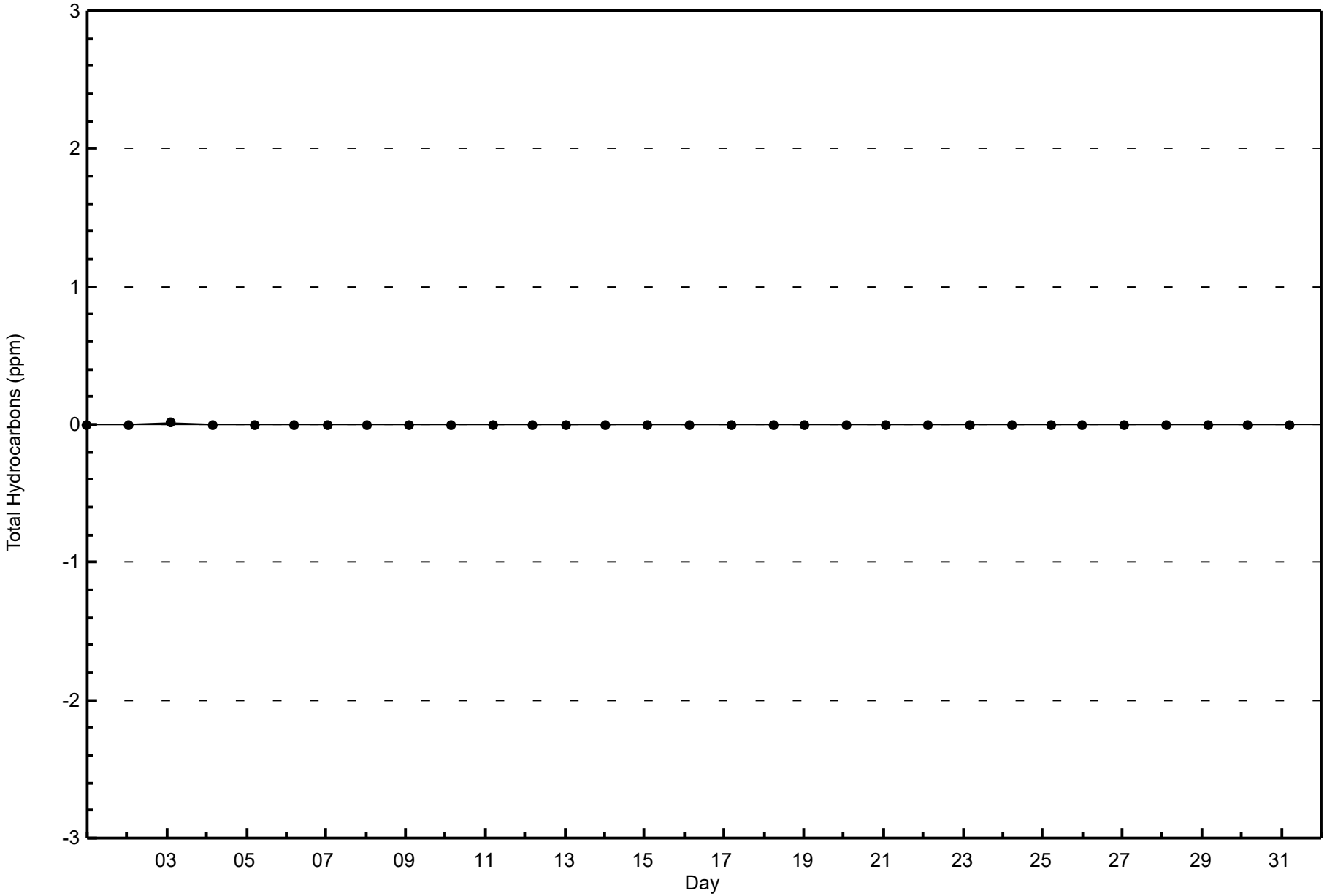
Total Number of Valid Hours: 705

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Janvier - March 2025

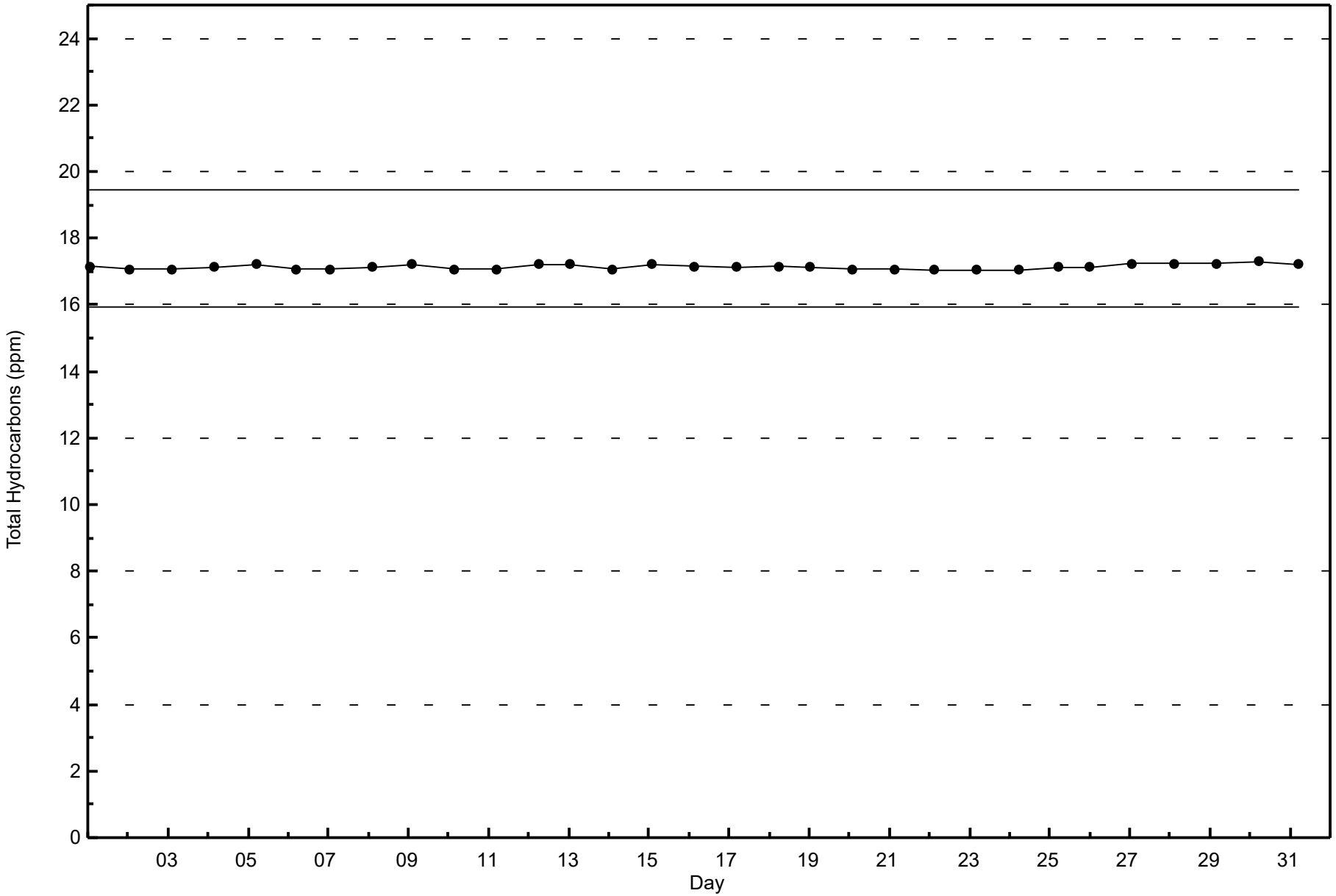


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Janvier - March 2025



Maximum Value: 0.009 ppm on Mar 21 22:00

Maximum Daily Average: 0.000 ppm on Mar 21

Minimum Value: 0.000 ppm on Mar 1 02:00

Minimum Daily Average: 0.000 ppm on Mar 1

Maximum Diurnal Average: 0.000 ppm at hour 22

Minimum Diurnal Average: 0.000 ppm at hour 1

Monthly Average: 0.000 ppm

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

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	35
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	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	0.003
4-Mar	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-Mar	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001
6-Mar	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-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	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	0.002	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.003
11-Mar	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-Mar	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-Mar	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	M	M	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005
14-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.000	0.003	0.000	0.003
16-Mar	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-Mar	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-Mar	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-Mar	Z	0.000	0.000	0.000	0.000	0.000	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	0.002	0.000	0.000	0.000	0.000	0.000	0.002
20-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.000	0.000	0.000	0.009
22-Mar	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-Mar	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-Mar	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-Mar	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.002
26-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	C	C	C	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.002
30-Mar	0.000	0.000	0.000	0.000	Z	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
31-Mar	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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Diurnal Average	
	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.001	0.003	0.003	0.002	0.009	0.002	0.003	Diurnal Maximum	

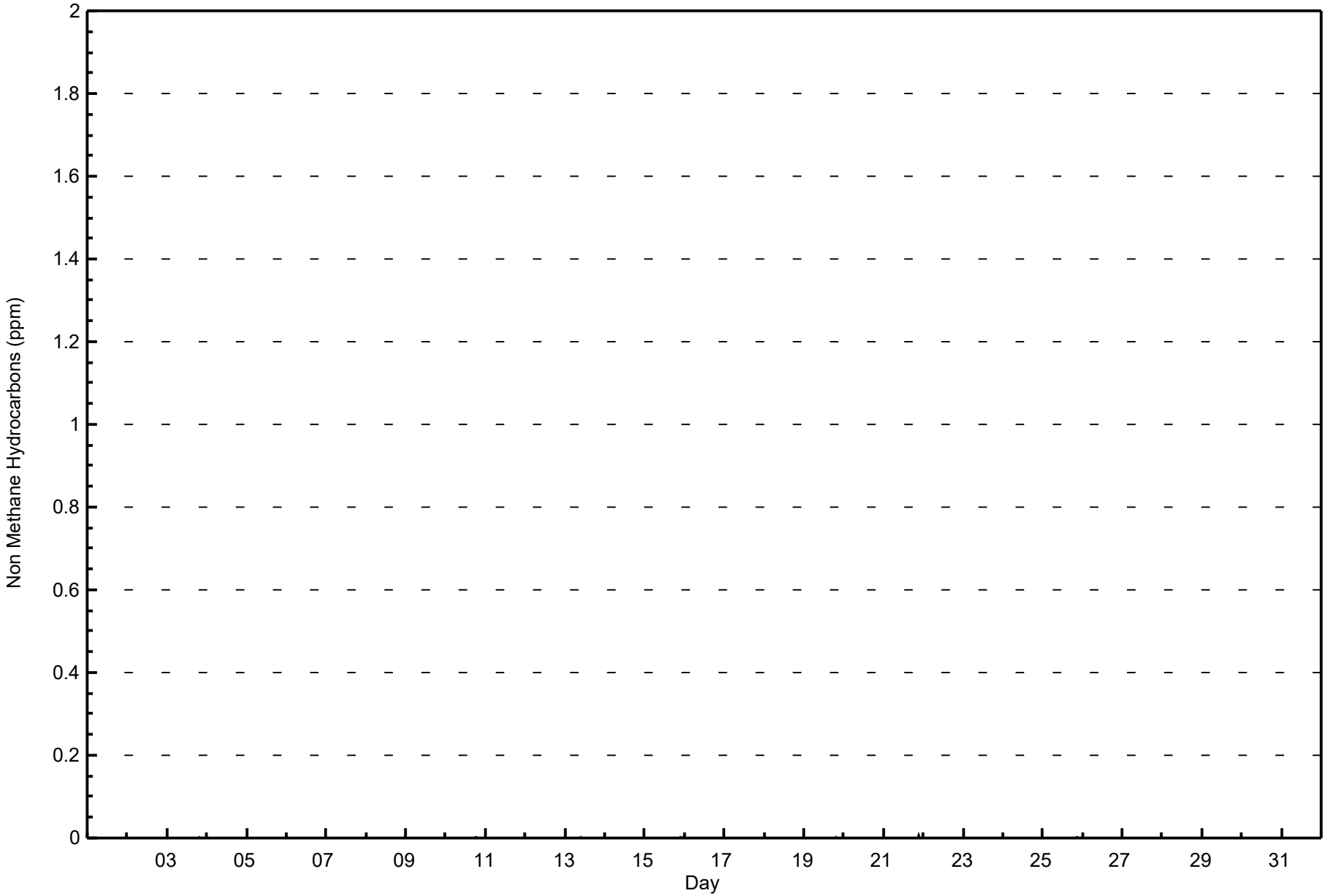
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Janvier - March 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Janvier - March 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	706	99.86	99.86
0.006 - 0.05	1	0.14	100.00
0.06 - 0.1	0	0.00	100.00
> 0.1	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Janvier - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.005	72	156	56	20	15	4	17	26	38	84	101	27	33	27	11	17	704
0.006 - 0.05	0	0	0	0	0	0	0	1	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	72	156	56	20	15	4	17	27	38	84	101	27	33	27	11	17	705

Total Number of Valid Hours: 705

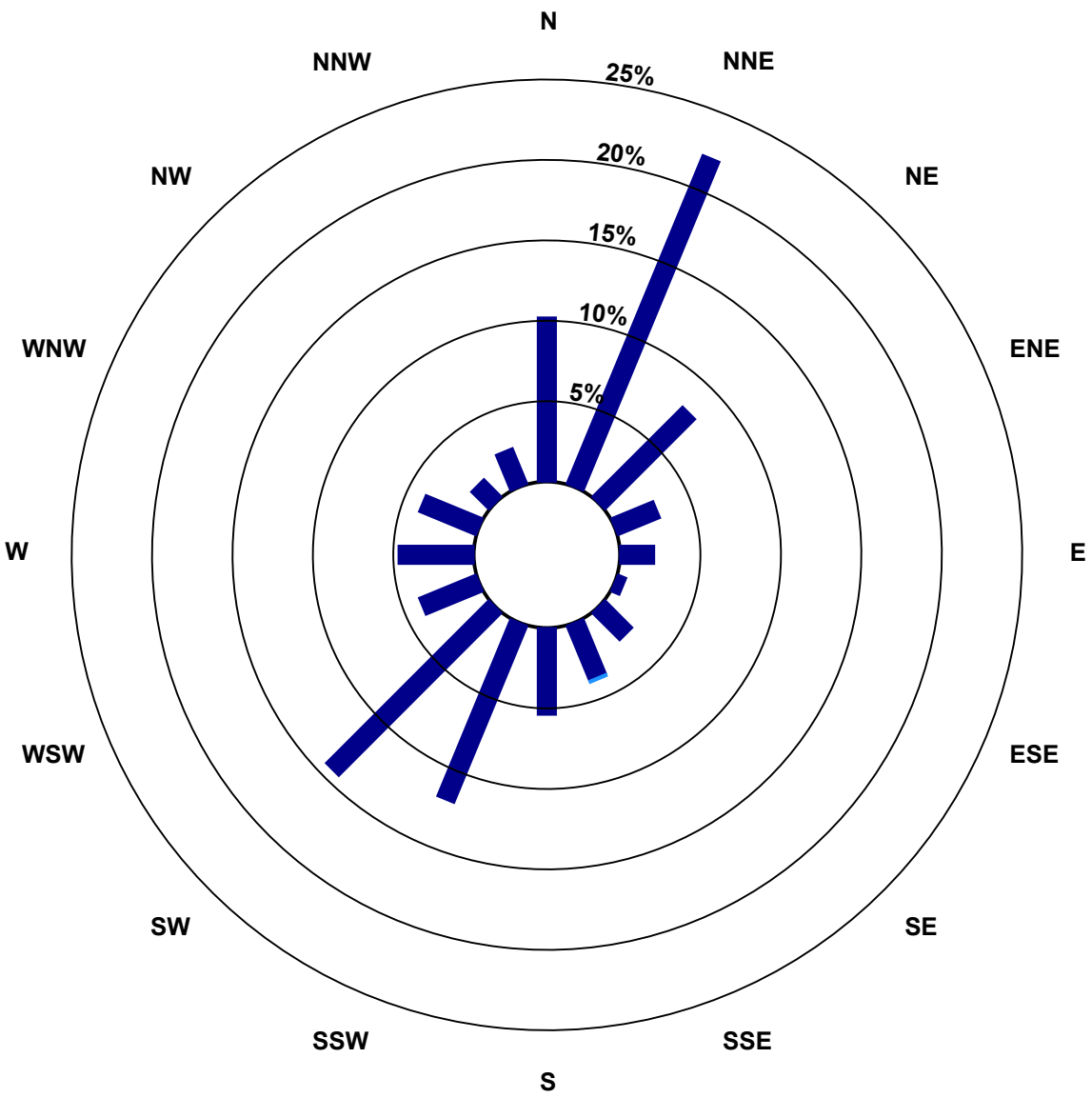
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Non Methane Hydrocarbons (NMHC) - ppm

Janvier



Classes (ppm)

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

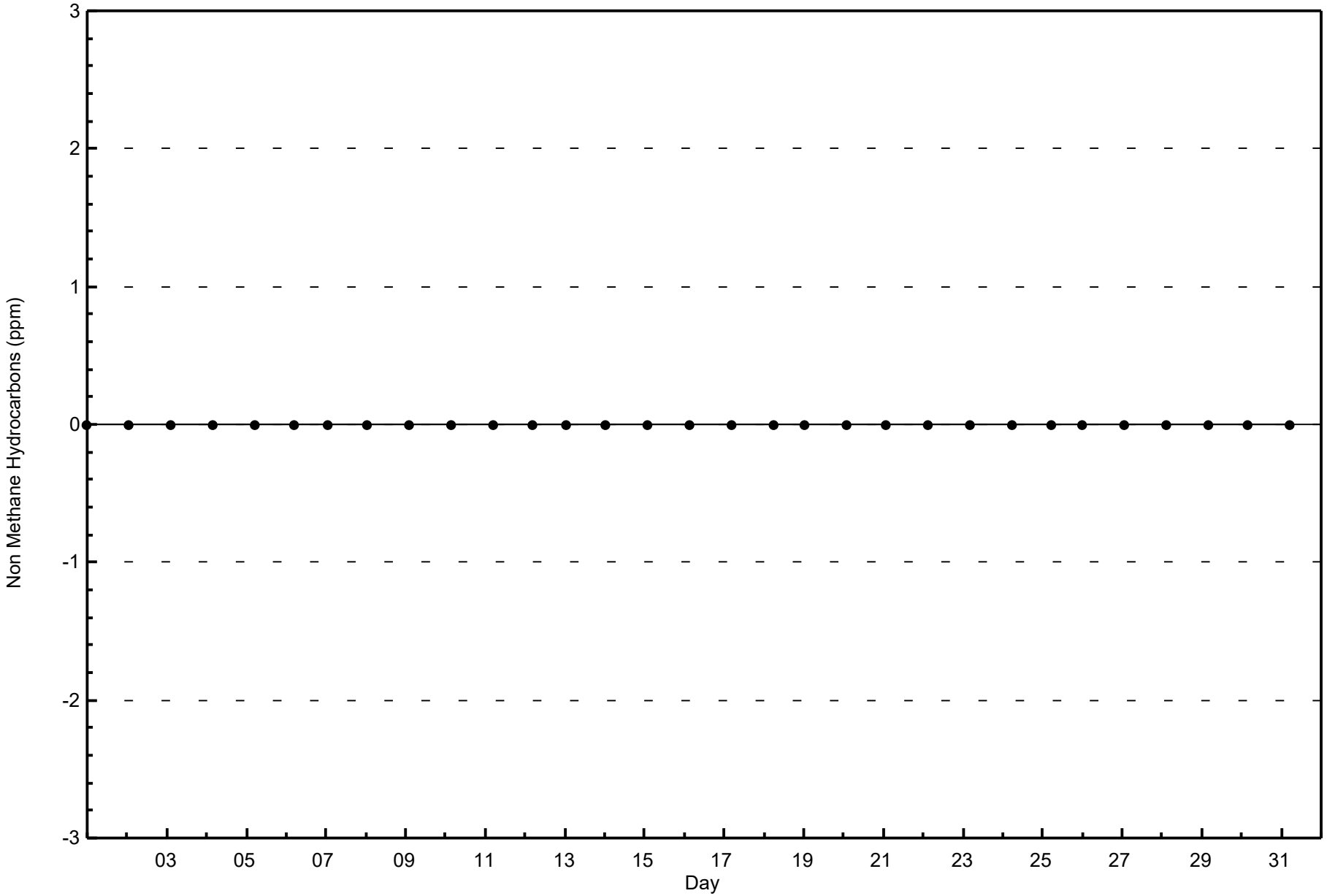
Total Number of Valid Hours: 705

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Janvier - March 2025

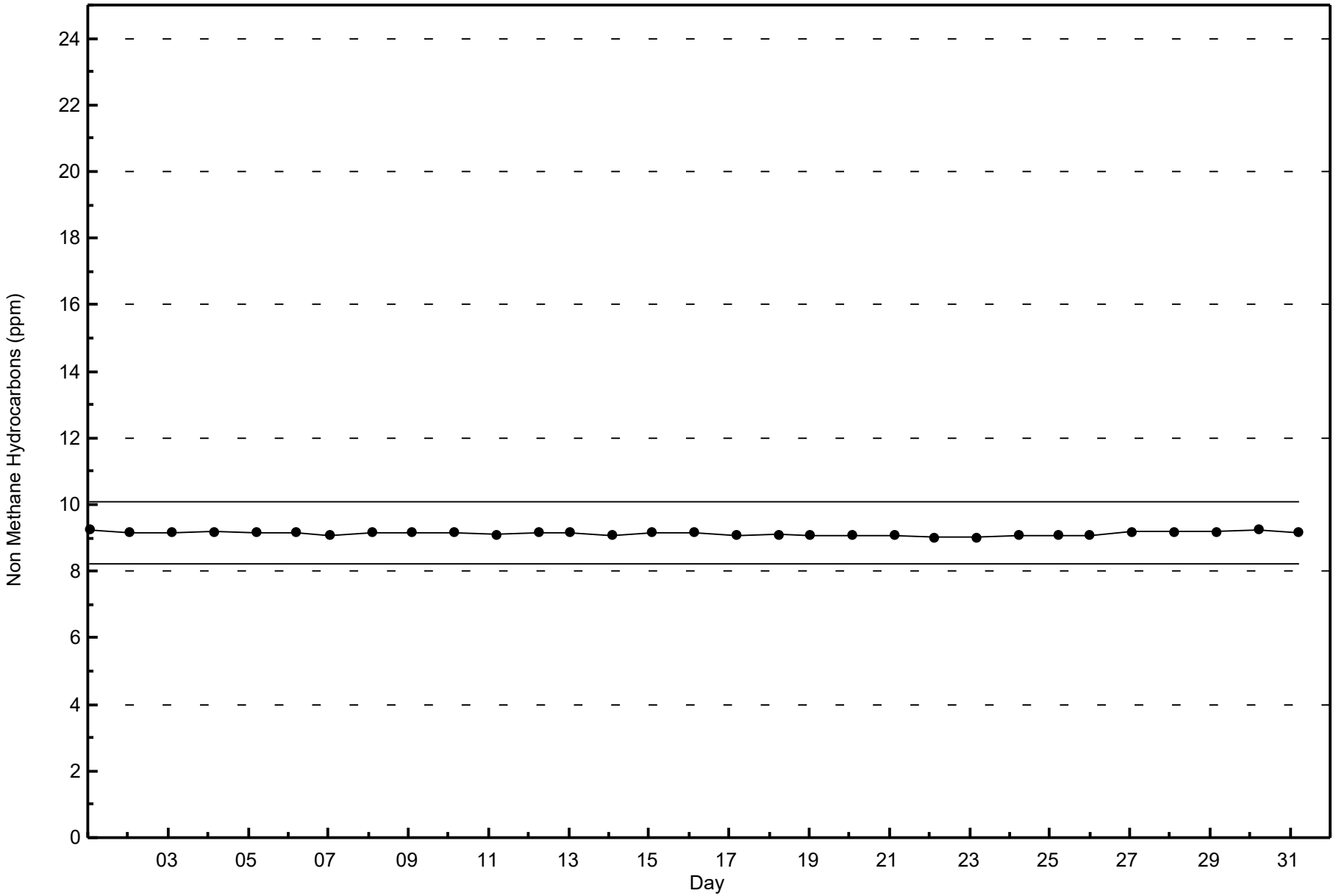


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Janvier - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Janvier - March 2025

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

Maximum Value: 2.2 ppm on Mar 8 01:00

Maximum Daily Average: 2.0 ppm on Mar 16

Minimum Value: 2.0 ppm on Mar 3 18:00

Minimum Daily Average: 2.0 ppm on Mar 3

Maximum Diurnal Average: 2.0 ppm at hour 7

Minimum Diurnal Average: 2.0 ppm at hour 17

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 in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	35
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
2-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	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-Mar	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-Mar	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-Mar	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-Mar	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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
8-Mar	2.2	Z	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	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
9-Mar	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-Mar	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-Mar	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-Mar	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-Mar	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	M	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
14-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	2.0	2.0	Z	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1
16-Mar	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
17-Mar	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	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1
18-Mar	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-Mar	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	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-Mar	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-Mar	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-Mar	2.0	2.0	2.1	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
25-Mar	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
26-Mar	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
27-Mar	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Mar	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
29-Mar	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	2.0	2.1
30-Mar	2.1	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
31-Mar	2.0	2.0	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	2.1
	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	Diurnal Maximum	

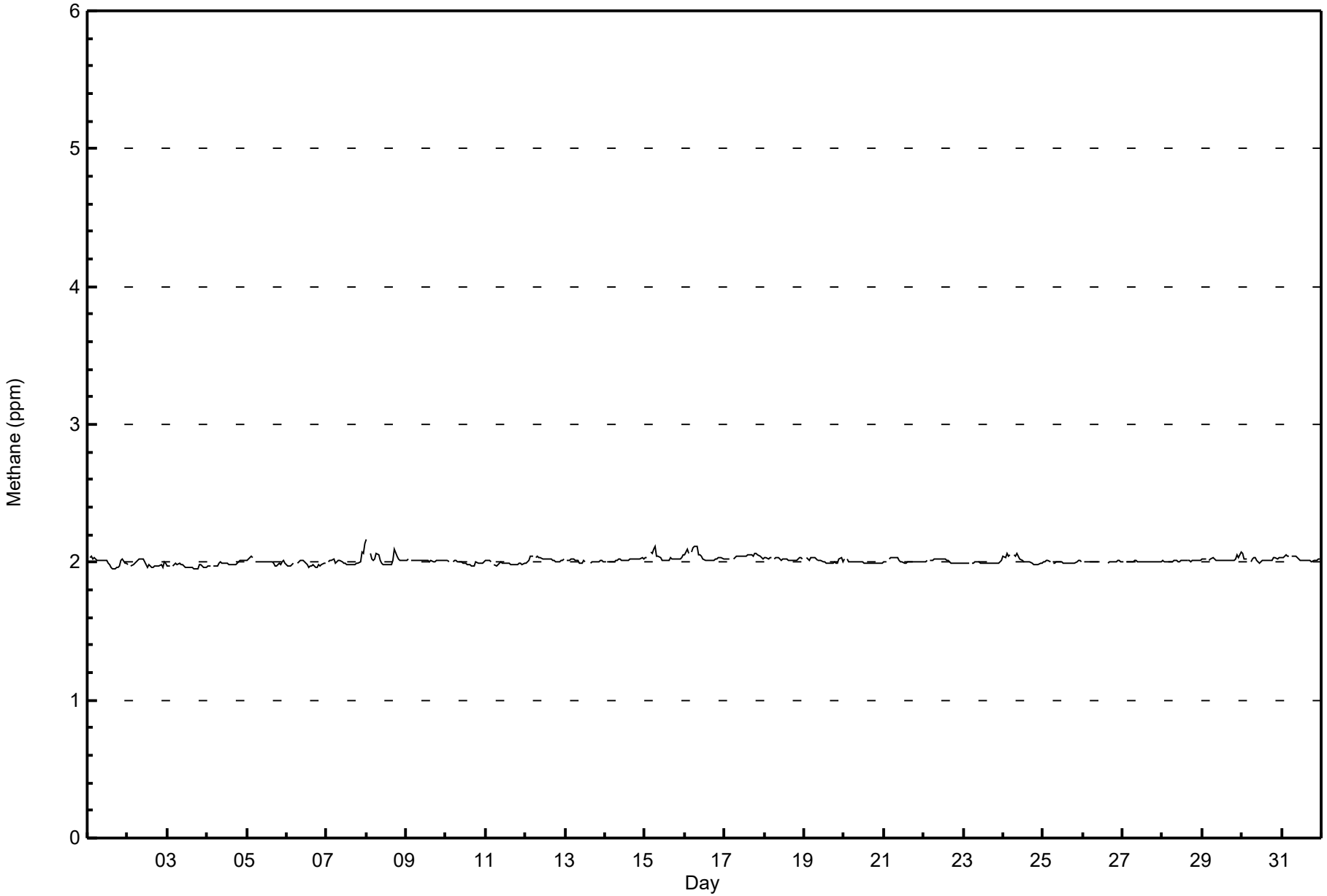
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Janvier - March 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	671	94.91	94.91
2.1 - 3.0	36	5.09	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Janvier - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	69	147	56	20	15	4	17	25	34	75	95	26	33	27	11	16	670
2.1 - 3.0	3	9	0	0	0	0	0	2	4	9	6	1	0	0	0	1	35
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	72	156	56	20	15	4	17	27	38	84	101	27	33	27	11	17	705

Total Number of Valid Hours: 705

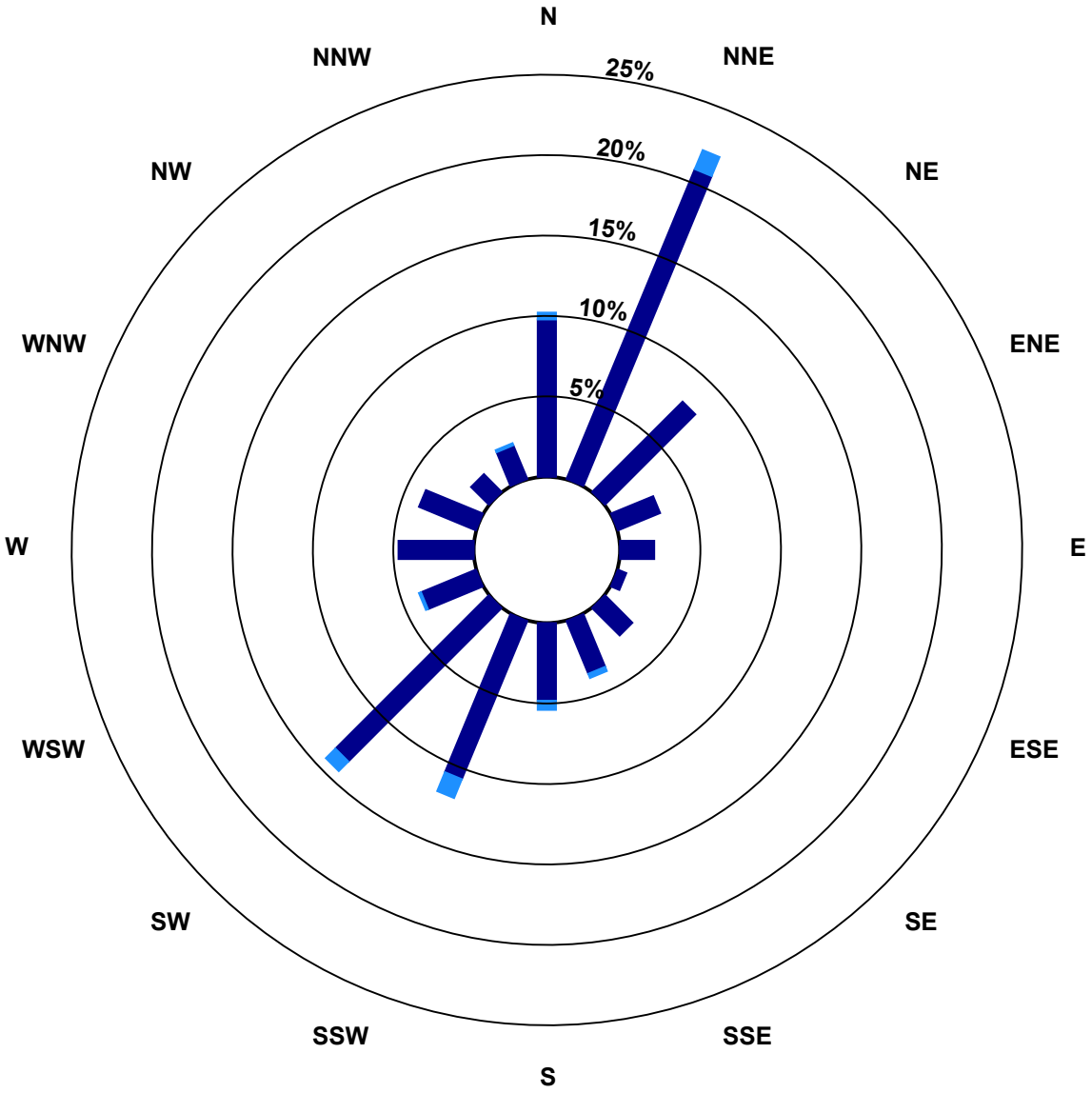
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Methane (CH_4) - ppm

Janvier



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

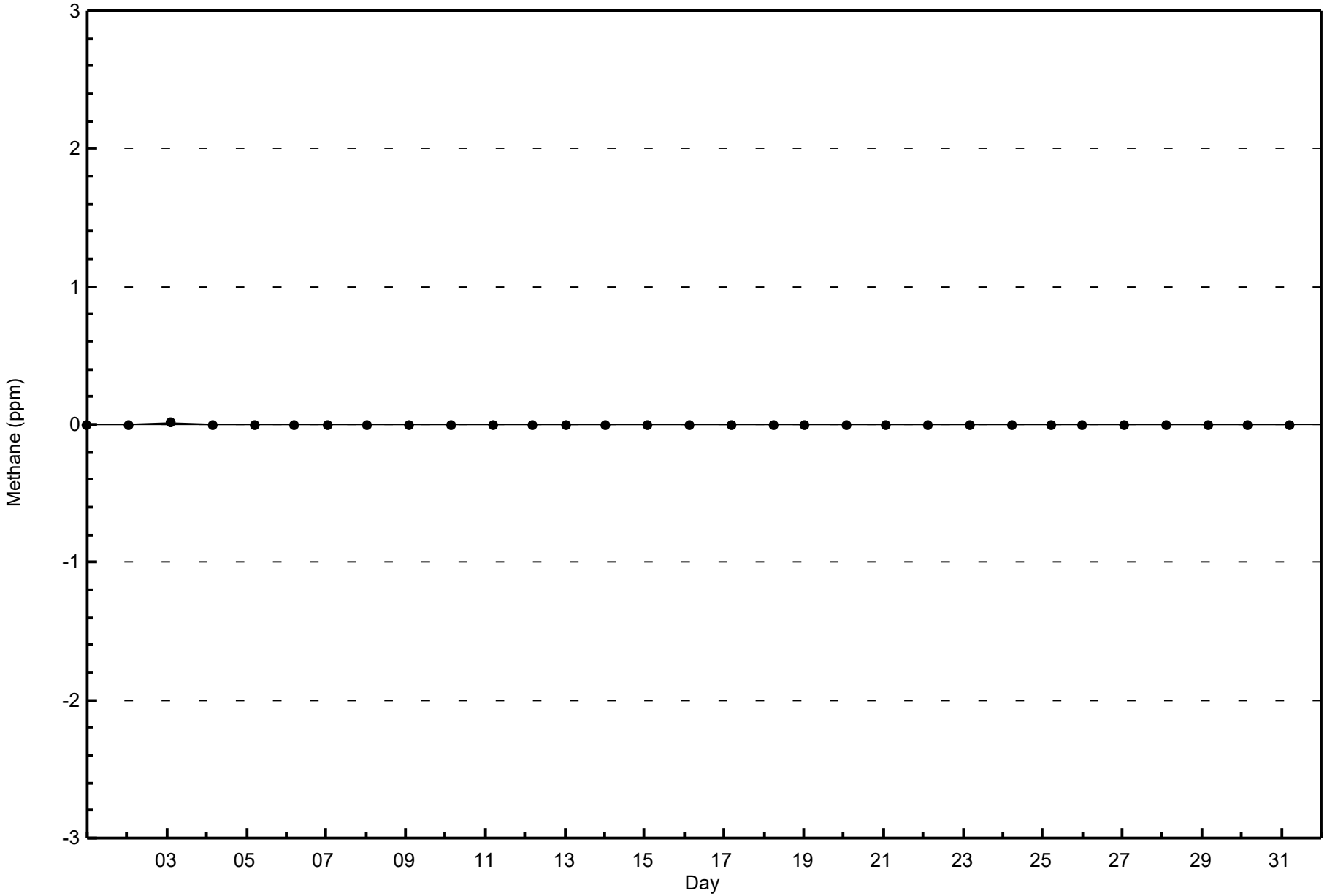
Total Number of Valid Hours: 705

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Janvier - March 2025

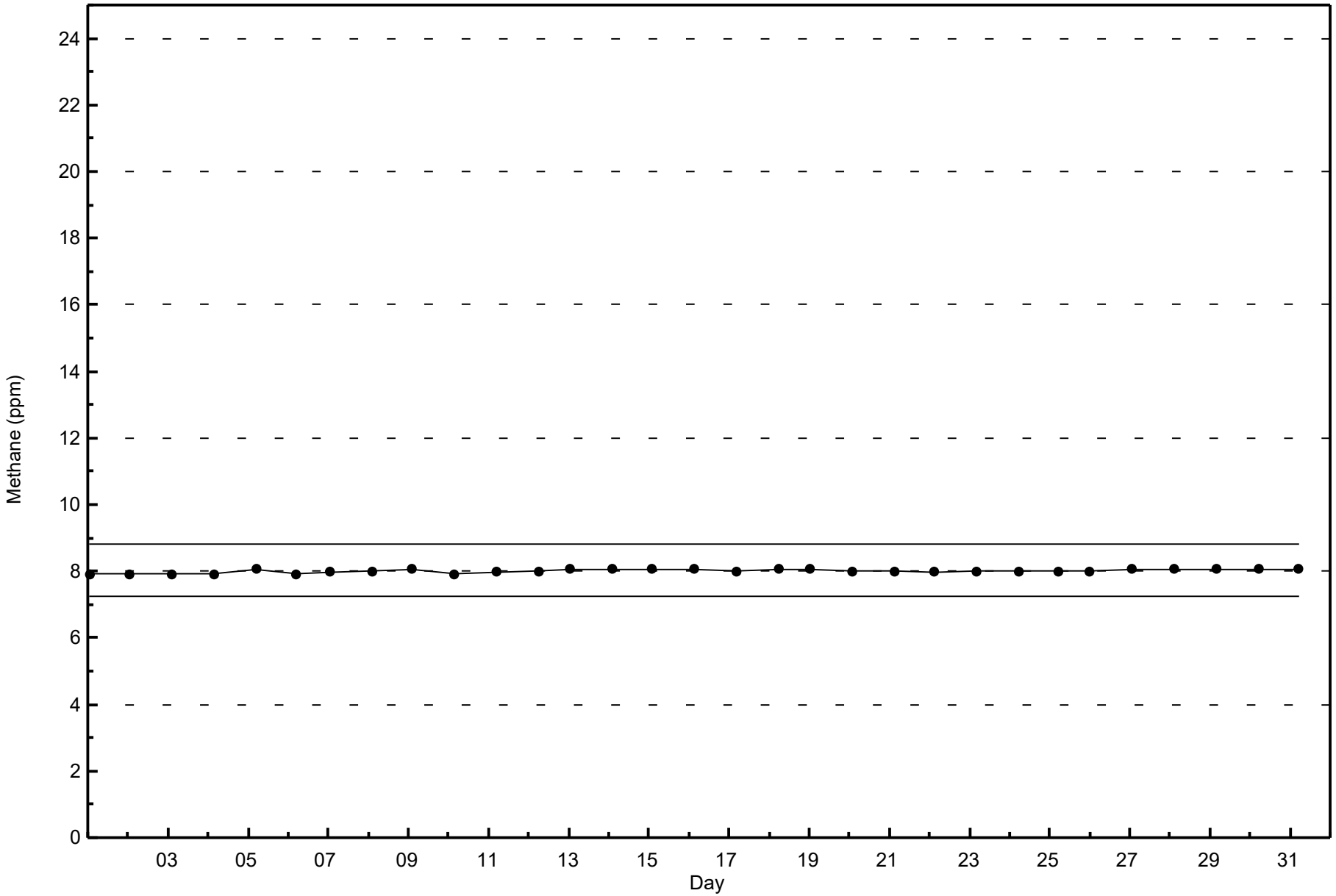


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Janvier - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Janvier - March 2025

Maximum Value: 6.2 ppb on Mar 29 20:00

Maximum Daily Average: 0.6 ppb on Mar 15

Minimum Value: 0.0 ppb on Mar 1 02:00

Minimum Daily Average: 0.0 ppb on Mar 13

Maximum Diurnal Average: 0.4 ppb at hour 9

Minimum Diurnal Average: 0.1 ppb at hour 7

Monthly Average: 0.26 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.4 P_{90} = 0.6 P_{99} = 1.4

Hours in Service:	744
Hours of Data:	681
Hours of Missing Data:	63
Hours of Calibration:	41
Percent Operational Time:	97.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.5	0.0	0.2	0.3	Z	0.2	0.0	0.0	0.0	0.0	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.6	0.5	0.2	0.0	1.0	0.1	0.2	1.0
2-Mar	0.0	0.2	0.0	0.0	0.0	Z	0.0	0.1	0.0	1.2	0.3	0.0	0.1	0.7	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.0	0.0	0.1	0.2	1.2
3-Mar	Z	0.3	0.0	0.0	0.2	0.0	0.3	0.5	0.4	0.4	0.7	0.1	0.3	0.4	0.4	0.2	0.3	0.0	3.8	0.2	0.7	0.0	0.2	0.4	0.4	3.8
4-Mar	0.3	Z	0.3	0.5	0.2	0.3	0.1	0.0	0.2	0.4	0.2	0.0	0.0	0.4	0.3	0.2	0.1	0.1	0.0	0.1	0.2	0.0	0.1	0.2	0.2	0.5
5-Mar	0.3	0.0	Z	0.0	0.3	0.2	0.0	0.2	0.0	0.4	0.4	0.3	0.5	0.7	0.8	0.7	0.4	0.2	0.7	0.6	1.0	1.2	0.5	0.6	0.4	1.2
6-Mar	0.4	0.4	0.2	Z	0.6	0.8	0.3	0.4	0.9	0.7	0.8	0.7	0.9	0.5	0.5	0.5	0.1	0.4	0.6	1.3	0.4	0.4	0.6	0.3	0.5	1.3
7-Mar	0.5	0.0	0.1	0.2	Z	0.1	0.1	0.3	0.0	0.5	0.3	0.3	0.4	0.8	0.1	0.2	0.0	0.0	0.0	0.3	0.0	0.0	0.1	0.2	0.2	0.8
8-Mar	0.2	0.5	0.2	0.0	0.0	Z	0.2	0.2	0.1	0.2	0.2	0.1	0.3	0.2	0.5	0.0	0.6	1.2	0.2	0.1	0.2	0.5	0.4	0.4	0.3	1.2
9-Mar	Z	0.7	0.3	0.2	0.4	0.4	0.1	0.2	0.4	0.2	0.5	0.2	0.3	0.4	0.1	0.2	0.5	0.2	0.0	0.2	0.1	0.0	0.3	0.0	0.3	0.7
10-Mar	0.0	Z	0.2	0.2	0.4	0.3	0.2	0.4	0.1	0.2	0.4	0.7	1.1	0.9	0.8	0.5	0.6	0.7	0.5	0.6	0.4	0.7	0.4	0.4	0.5	1.1
11-Mar	0.6	0.5	Z	0.9	0.3	0.3	0.4	0.2	0.3	0.4	0.5	0.2	0.1	0.1	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.9
12-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	1.4	0.5	0.0	0.5	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.4
13-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	M	M	M	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
14-Mar	0.0	0.0	0.1	0.1	0.0	Z	0.0	0.0	0.6	1.0	1.0	0.9	1.0	0.6	0.5	0.8	1.0	0.5	0.2	0.2	0.4	0.5	0.3	0.2	0.4	1.0
15-Mar	Z	0.2	0.6	0.3	0.3	0.9	0.6	0.5	1.3	1.4	1.5	0.8	0.6	0.6	0.8	1.0	0.4	0.5	0.8	0.2	0.4	0.1	0.3	0.5	0.6	1.5
16-Mar	0.3	Z	0.1	0.4	0.0	0.8	0.1	3.1	1.2	0.9	0.7	0.1	1.0	0.7	0.0	0.3	0.1	0.0	0.5	0.0	0.0	0.0	0.1	0.0	0.5	3.1
17-Mar	0.4	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.2	0.2	0.2	0.2	0.0	0.2	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.2	0.1	0.4
18-Mar	0.0	0.3	0.0	Z	0.1	0.3	0.0	0.2	0.5	0.6	0.4	0.3	0.0	0.4	0.2	0.4	0.2	0.0	0.3	0.0	0.4	1.4	0.1	0.5	0.3	1.4
19-Mar	0.1	0.3	0.4	0.2	Z	0.6	0.2	0.9	0.8	0.6	0.7	0.4	0.2	0.1	0.0	0.0	0.0	0.0	1.5	0.0	0.5	0.0	0.0	0.0	0.3	1.5
20-Mar	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	0.2	0.0	0.1	0.6	0.0	0.6
21-Mar	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.3	1.2	0.0	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.1	1.2
22-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.5	0.4	0.1	0.5	0.2	0.3	0.2	0.4	0.3	0.0	0.0	0.3	0.4	0.2	0.4	0.2	0.6
23-Mar	0.2	0.2	Z	0.3	0.2	0.2	0.3	0.9	0.9	0.3	0.4	0.3	0.2	0.2	0.2	0.7	0.1	0.3	0.5	0.6	0.4	0.9	0.6	0.2	0.4	0.9
24-Mar	0.0	0.2	0.0	Z	0.4	0.8	0.1	0.7	0.0	0.3	0.0	C	C	C	C	C	M	M	M	M	M	M	M	M	--	0.8
25-Mar	M	M	M	M	M	M	M	M	M	M	M	C	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.0
26-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.8	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.8
27-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1
28-Mar	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	0.2	0.1	0.2	0.1	0.0	0.2
29-Mar	0.5	Z	0.1	0.0	0.0	0.0	0.1	0.2	0.3	1.0	0.6	0.6	0.4	0.2	0.1	0.1	0.1	0.0	0.1	6.2	0.4	0.1	0.1	0.6	0.5	6.2
30-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.2	0.9	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.5	0.1	0.1	0.0	0.0	0.1	0.9
31-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.2	0.4	0.3	0.1	0.2	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.4
	0.2	0.2	0.1	0.2	0.1	0.3	0.1	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.4	0.4	0.2	0.2	0.2	0.2	Diurnal Average	
	0.6	0.7	0.6	0.9	0.6	0.9	0.6	3.1	1.4	1.4	1.5	0.9	1.1	0.9	0.8	1.0	1.0	1.2	3.8	6.2	1.0	1.4	1.0	0.6	Diurnal Maximum	

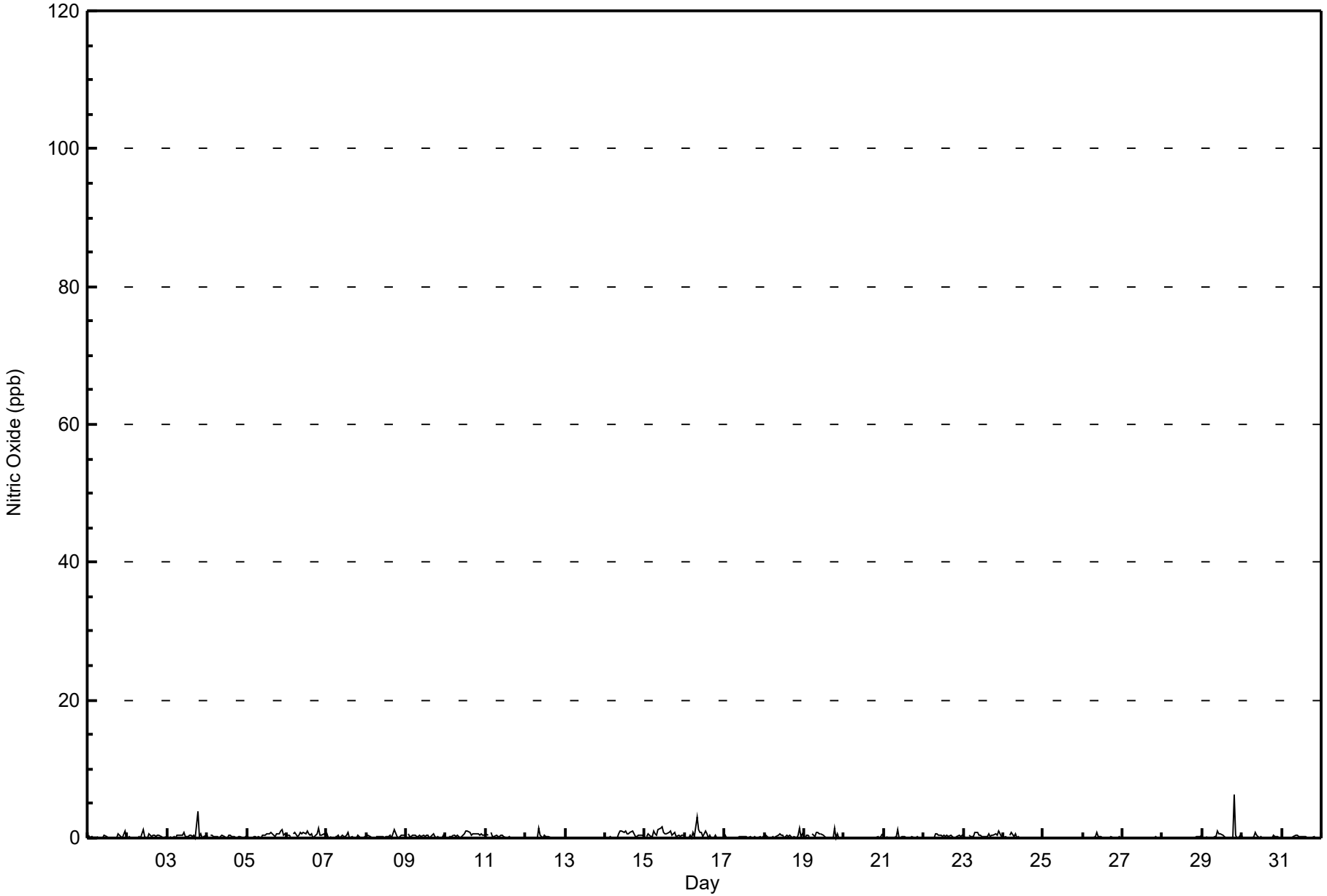
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Janvier - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	681	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 681

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Janvier - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	73	158	57	18	15	4	17	25	41	79	89	22	29	24	11	17	679
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	73	158	57	18	15	4	17	25	41	79	89	22	29	24	11	17	679

Total Number of Valid Hours: 679

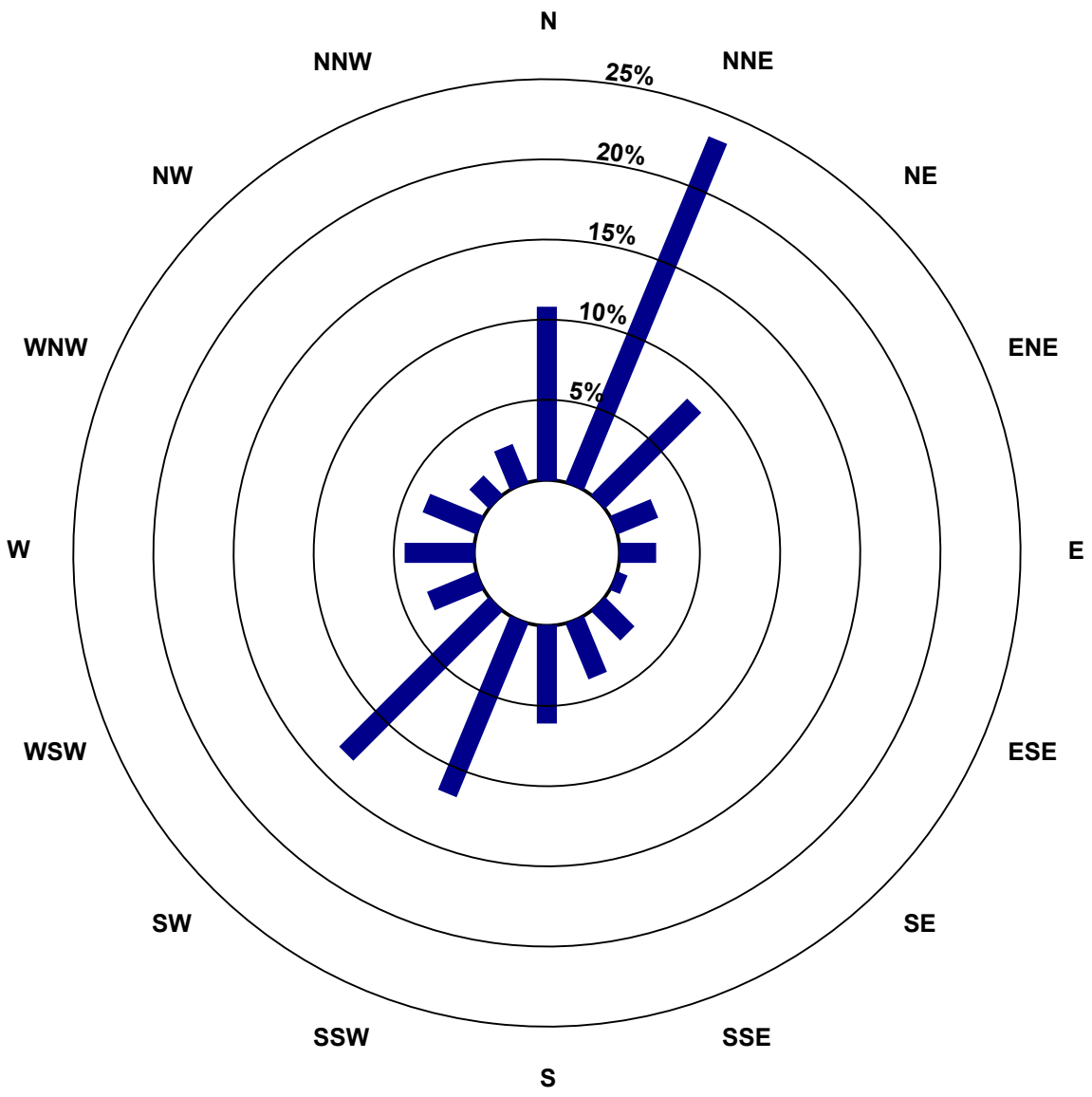
Total Number of Hours: 744

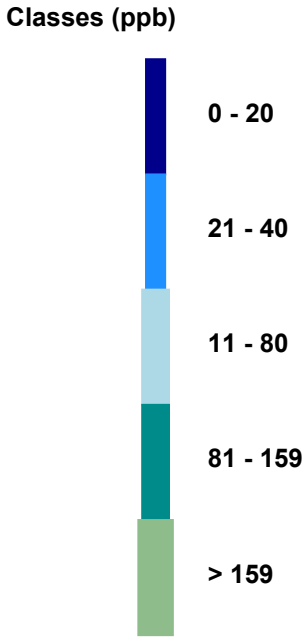
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Wind Rose Mar 2025

Nitric Oxide (NO) - ppb

Janvier





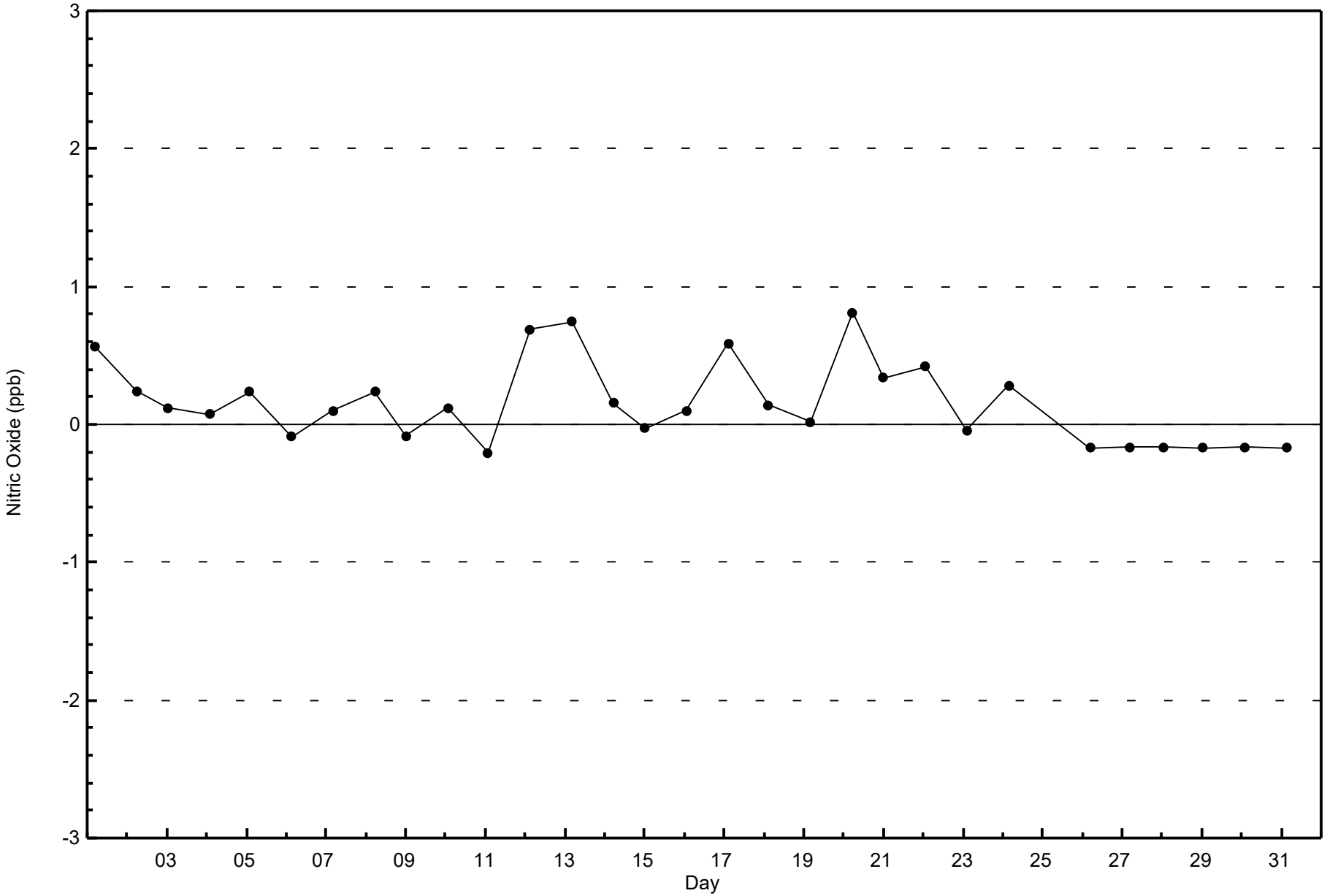
Total Number of Valid Hours: 679

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Janvier - March 2025

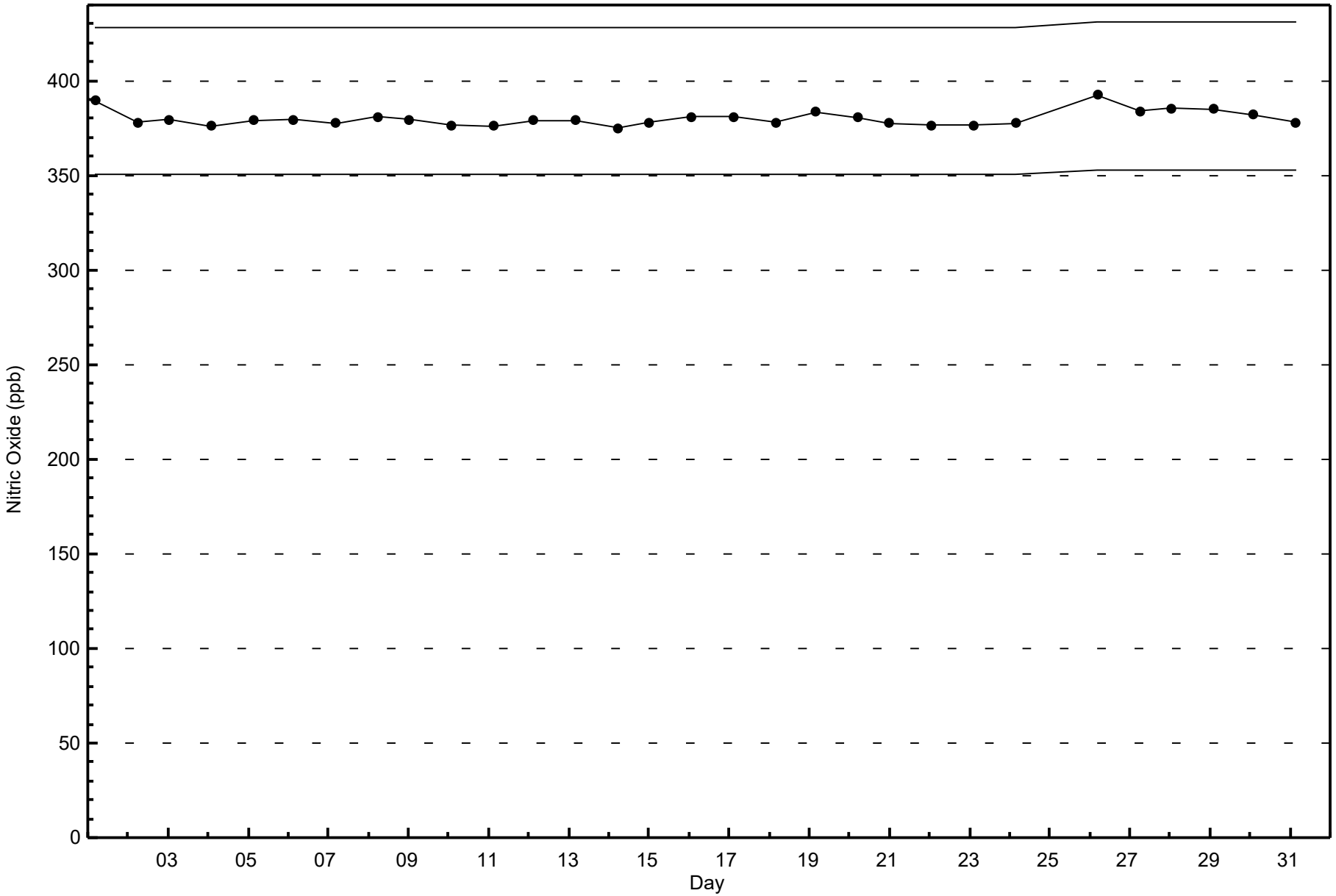


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Janvier - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Janvier - March 2025

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

Maximum Value: 15.1 ppb on Mar 8 01:00

Maximum Daily Average: 2.8 ppb on Mar 8

Minimum Value: 0.0 ppb on Mar 7 15:00

Minimum Daily Average: 0.2 ppb on Mar 11

Maximum Diurnal Average: 1.7 ppb at hour 1

Minimum Diurnal Average: 0.6 ppb at hour 15

Monthly Average: 1.21 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.4 Median = 0.9 Q_3 = 1.6 P_{90} = 2.4 P_{99} = 5.4

Hours in Service:	744
Hours of Data:	681
Hours of Missing Data:	63
Hours of Calibration:	41
Percent Operational Time:	97.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	1.4	1.9	1.3	1.2	Z	1.3	1.6	1.3	1.2	1.1	1.4	1.4	0.9	1.0	0.6	0.3	0.2	1.3	1.7	2.3	0.8	0.7	3.9	2.5	1.4	3.9
2-Mar	1.7	2.7	2.5	1.5	1.8	Z	1.6	1.7	1.3	2.9	0.8	0.7	0.5	1.7	1.0	1.4	1.9	2.0	1.5	1.1	1.5	0.5	2.8	1.6	1.6	2.9
3-Mar	Z	1.3	1.5	1.5	1.8	1.6	1.6	1.0	1.4	1.3	1.2	0.6	0.8	0.9	1.0	0.6	0.5	0.2	7.0	1.3	1.8	0.6	0.6	0.4	1.3	7.0
4-Mar	0.1	Z	0.8	1.4	1.0	0.4	0.4	0.6	0.4	0.4	0.3	0.2	0.3	0.4	0.6	0.6	0.5	1.2	1.5	2.0	1.5	1.0	1.3	2.0	0.8	2.0
5-Mar	1.9	1.6	Z	3.3	1.5	1.2	1.4	1.8	0.9	0.9	0.7	0.9	0.9	1.1	1.3	1.2	1.5	1.6	2.4	1.8	2.3	2.7	1.1	0.8	1.5	3.3
6-Mar	0.1	0.5	0.2	Z	0.9	1.6	1.3	1.7	1.8	1.1	1.1	0.8	0.8	0.8	0.5	0.4	0.6	0.5	0.7	1.9	1.3	0.8	1.0	0.7	0.9	1.9
7-Mar	1.0	0.6	0.7	0.7	Z	1.2	1.0	1.1	0.9	0.8	0.5	0.4	0.4	0.4	0.0	0.2	0.0	0.2	0.0	1.4	0.9	4.9	4.8	12.5	1.5	12.5
8-Mar	15.1	12.3	4.4	1.0	0.4	Z	3.7	3.9	1.4	0.3	0.1	0.0	0.1	0.1	0.0	0.1	1.7	9.8	3.7	2.1	1.9	1.1	0.5	0.7	2.8	15.1
9-Mar	Z	0.8	0.7	0.9	1.0	0.7	0.5	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	0.1	0.2	0.3	0.3	1.0
10-Mar	0.6	Z	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.0	0.8	0.9	1.0	1.1	0.8	0.9	0.3	0.1	0.0	0.0	0.0	0.4	1.1
11-Mar	0.0	0.0	Z	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.4	0.3	0.4	0.4	0.1	0.4	0.2	0.5	0.3	0.1	0.4	0.0	0.0	0.2	0.5
12-Mar	0.2	0.0	0.9	Z	3.9	3.7	4.2	4.3	4.7	2.9	1.5	1.4	1.2	1.3	1.2	1.3	1.3	0.3	0.0	0.5	0.8	1.0	0.8	0.9	1.7	4.7
13-Mar	0.0	0.2	0.0	0.0	Z	0.8	0.6	0.1	0.3	0.1	M	M	M	0.6	0.2	0.2	0.0	0.2	0.5	0.5	0.0	0.3	0.1	0.1	0.2	0.8
14-Mar	0.1	0.2	0.0	0.0	0.1	Z	0.4	0.8	2.4	1.9	1.4	1.3	1.6	0.7	0.8	1.7	2.3	3.6	3.5	3.2	2.7	2.8	4.3	3.2	1.7	4.3
15-Mar	Z	3.1	3.2	2.4	2.8	4.4	2.3	2.0	2.3	1.8	1.7	0.8	1.0	0.9	1.4	2.6	2.0	2.7	4.0	2.3	2.4	2.2	2.5	2.4	2.3	4.4
16-Mar	2.4	Z	2.1	2.3	1.9	2.8	1.8	4.6	2.3	1.4	1.3	0.8	0.8	0.7	0.3	0.4	1.1	1.0	1.6	1.1	0.6	0.9	1.0	0.7	1.5	4.6
17-Mar	2.5	0.6	Z	1.3	2.1	1.5	1.9	3.0	2.6	2.2	1.5	1.2	1.2	1.1	1.2	1.4	1.2	2.0	4.6	5.2	5.0	2.5	1.5	1.6	2.1	5.2
18-Mar	1.8	1.5	1.2	Z	1.5	1.1	1.5	2.0	1.5	1.0	0.6	0.6	0.7	0.6	0.6	0.5	0.5	0.6	0.6	1.3	1.1	3.7	1.2	0.9	1.2	3.7
19-Mar	0.8	1.1	0.8	1.1	Z	1.9	1.5	2.4	1.1	1.2	1.4	1.0	0.8	0.7	0.6	0.1	0.6	0.9	3.2	1.7	2.4	1.3	0.9	2.4	1.3	3.2
20-Mar	1.8	1.3	0.9	0.0	1.1	Z	0.8	0.4	0.0	0.0	0.2	0.0	0.2	0.2	0.0	0.0	0.3	0.0	0.5	0.6	0.5	0.5	0.9	3.4	0.6	3.4
21-Mar	Z	2.8	2.7	2.3	2.3	3.3	1.0	0.6	2.7	0.2	0.3	0.3	0.4	0.3	0.4	0.8	0.6	0.5	0.5	0.5	0.6	1.0	0.6	0.7	1.1	3.3
22-Mar	1.0	Z	1.5	1.7	2.3	2.2	2.8	3.2	2.0	1.7	1.5	1.7	1.5	1.4	1.0	0.8	0.5	0.5	0.5	0.8	0.4	0.7	0.9	0.5	1.4	3.2
23-Mar	0.6	0.9	Z	1.0	1.2	0.9	1.5	1.6	1.9	0.9	0.7	0.4	0.4	0.4	0.3	1.1	0.5	1.2	0.6	0.5	2.0	5.4	2.4	2.2	1.2	5.4
24-Mar	0.9	0.8	2.2	Z	1.9	3.3	1.9	2.9	2.3	1.9	1.1	C	C	C	C	C	M	M	M	M	M	M	M	M	--	3.3
25-Mar	M	M	M	M	M	M	M	M	M	M	M	C	C	C	C	C	C	0.4	0.5	1.2	0.8	1.7	0.5	0.8	--	1.7
26-Mar	2.0	1.4	2.1	1.9	Z	2.2	1.5	1.2	1.9	0.7	0.6	0.5	0.4	0.3	0.3	0.2	0.2	0.4	0.4	0.4	0.6	0.4	0.5	0.3	0.9	2.2
27-Mar	0.3	0.4	0.3	0.3	0.3	Z	0.4	0.5	0.3	0.4	0.3	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.4	0.4	0.5	0.3	0.3	0.2	0.3	0.5
28-Mar	Z	0.3	0.3	0.3	0.2	0.4	0.5	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.5	0.4	1.7	2.0	1.5	2.9	0.6	2.9
29-Mar	5.4	Z	2.6	2.0	1.8	1.9	1.4	1.1	0.8	1.5	1.3	1.2	1.1	0.7	0.6	0.6	0.7	0.8	1.0	7.8	1.7	1.4	1.7	3.6	1.9	7.8
30-Mar	0.9	1.0	Z	0.9	0.7	0.7	0.7	0.9	1.4	1.2	0.7	0.7	0.7	0.6	0.5	0.5	0.8	0.8	1.3	1.4	1.6	1.0	0.8	0.8	0.9	1.6
31-Mar	0.9	1.0	2.0	Z	2.5	2.5	2.4	2.4	2.3	2.0	1.3	1.2	1.0	0.9	0.9	0.7	0.6	0.6	0.7	0.8	0.7	0.7	0.8	0.6	1.3	2.5
	1.7	1.5	1.4	1.2	1.4	1.7	1.4	1.6	1.4	1.1	0.8	0.7	0.7	0.7	0.6	0.7	0.8	1.2	1.5	1.5	1.3	1.4	1.3	1.7	Diurnal Average	
	15.1	12.3	4.4	3.3	3.9	4.4	4.2	4.6	4.7	2.9	1.7	1.7	1.6	1.7	1.4	2.6	2.3	9.8	7.0	7.8	5.0	5.4	4.8	12.5	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

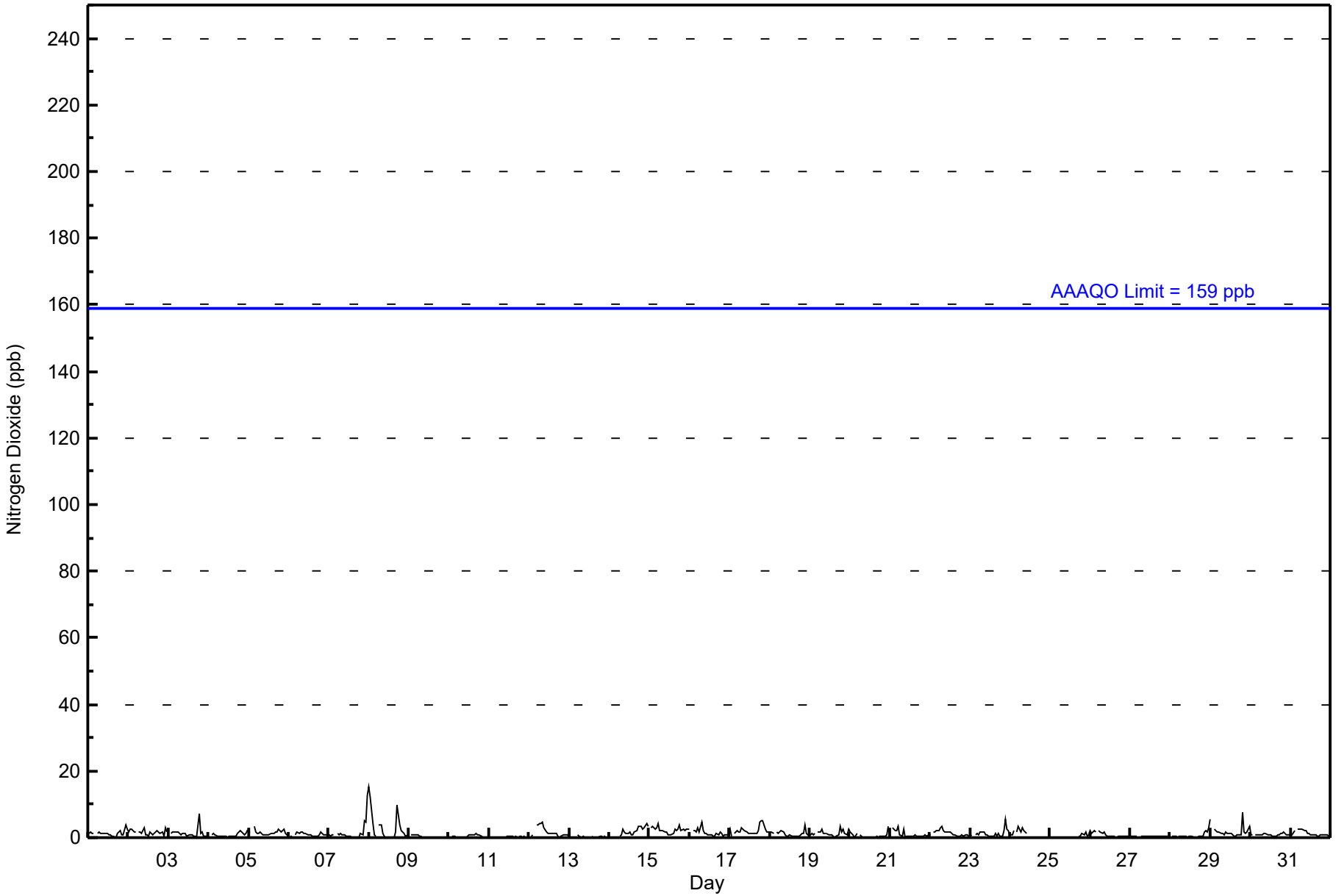
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Janvier - March 2025



Nitrogen Dioxide (NO_2) - ppb

Janvier - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	681	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 681

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Janvier - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	73	158	57	18	15	4	17	25	41	79	89	22	29	24	11	17	679
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	73	158	57	18	15	4	17	25	41	79	89	22	29	24	11	17	679

Total Number of Valid Hours: 679

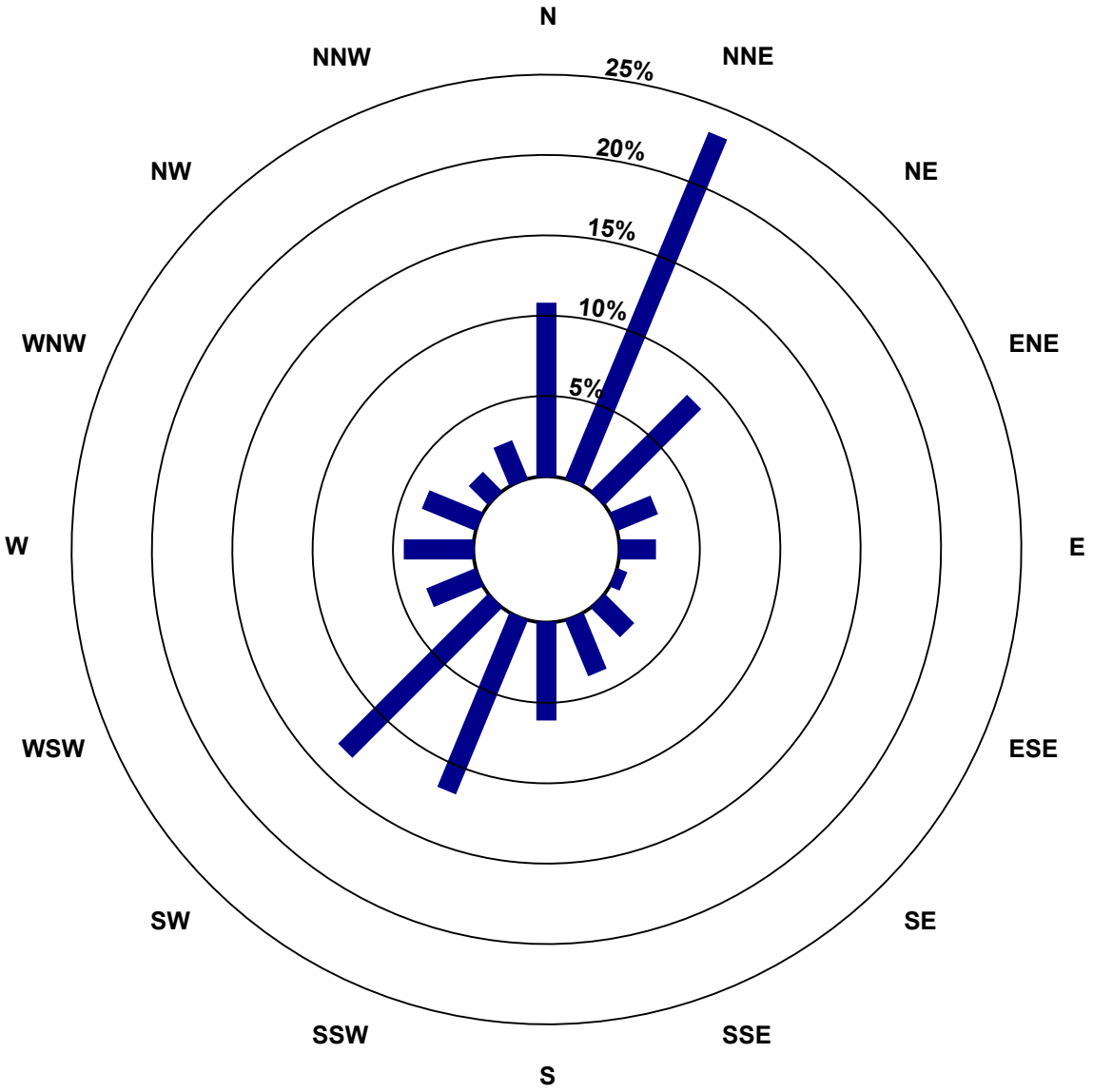
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Dioxide (NO_2) - ppb

Janvier



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

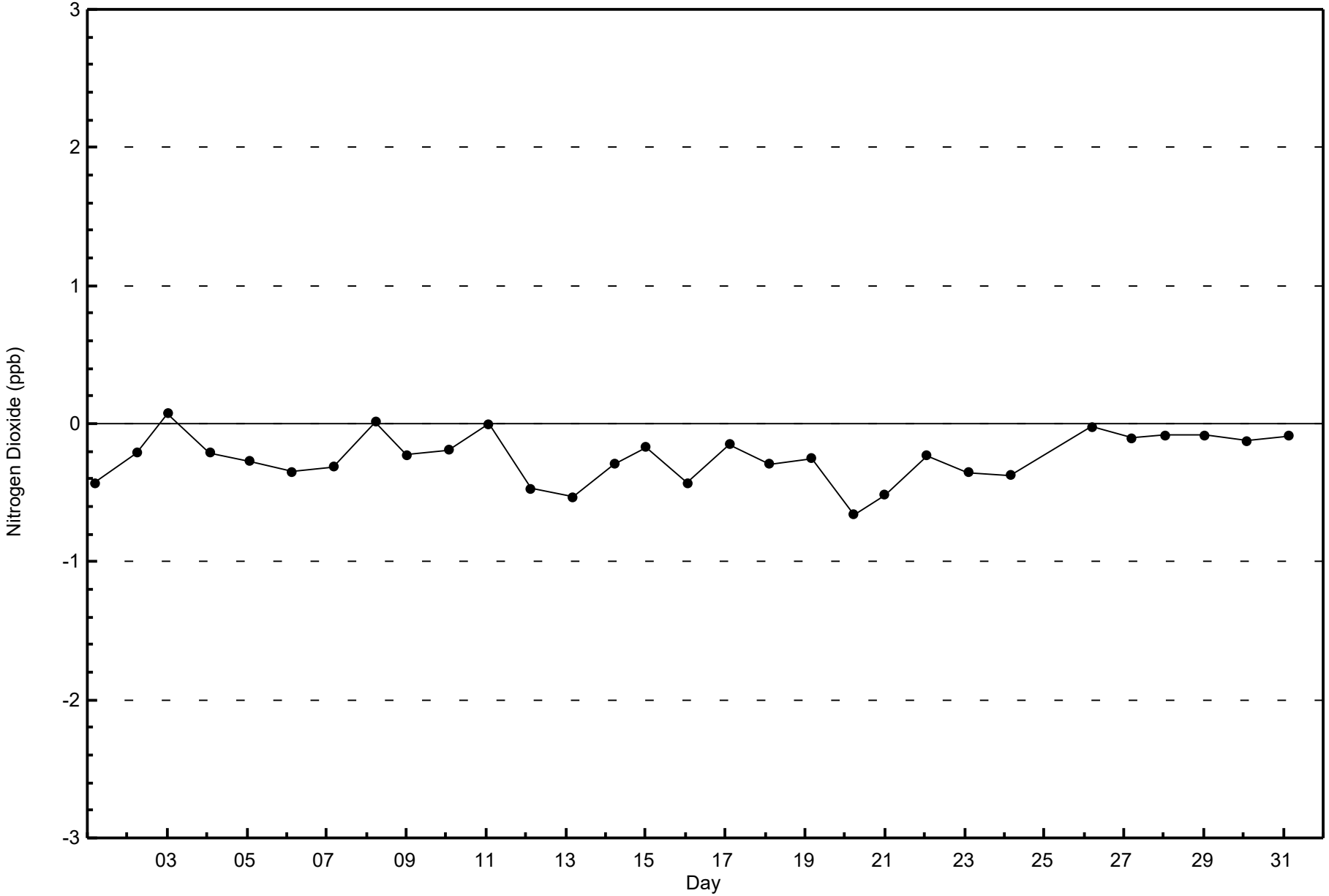
Total Number of Valid Hours: 679

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Janvier - March 2025

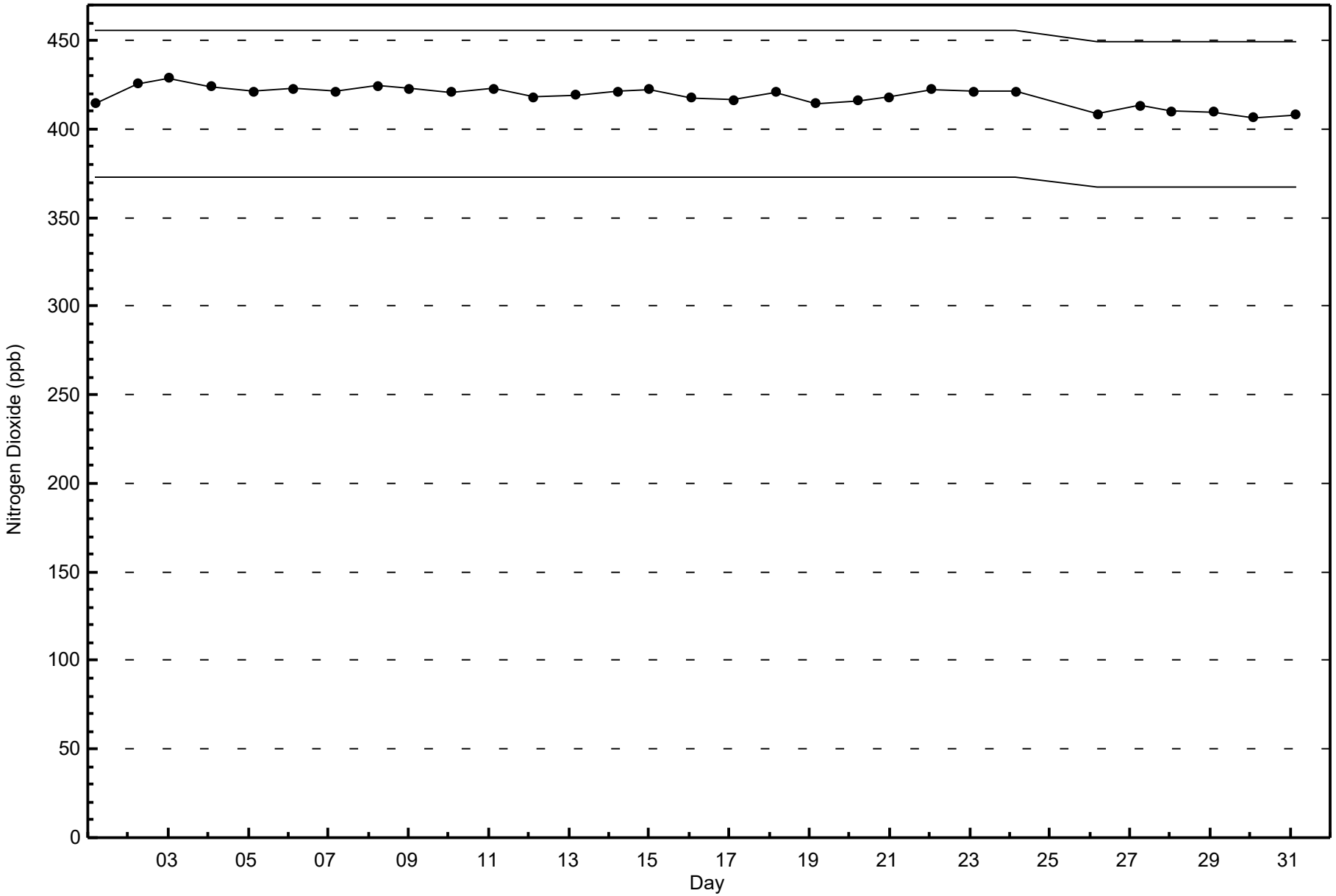


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Janvier - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Janvier - March 2025

Maximum Value: 15.3 ppb on Mar 8 01:00

Maximum Daily Average: 3.1 ppb on Mar 8

Minimum Value: 0.0 ppb on Mar 7 17:00

Minimum Daily Average: 0.2 ppb on Mar 13

Maximum Diurnal Average: 1.9 ppb at hour 8

Minimum Diurnal Average: 0.8 ppb at hour 15

Monthly Average: 1.46 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.3 Q_1 = 0.5 Median = 1.1 Q_3 = 1.9 P_{90} = 2.9 P_{99} = 6.6

Hours in Service:	744
Hours of Data:	681
Hours of Missing Data:	63
Hours of Calibration:	41
Percent Operational Time:	97.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	1.9	1.9	1.5	1.5	Z	1.5	1.6	1.3	1.2	1.1	1.8	1.6	0.9	1.0	0.6	0.3	0.2	1.4	2.3	2.8	1.0	0.7	4.9	2.6	1.6	4.9
2-Mar	1.7	2.9	2.5	1.5	1.8	Z	1.6	1.8	1.3	4.1	1.1	0.7	0.6	2.4	1.3	1.7	2.2	2.3	1.8	1.4	1.7	0.5	2.8	1.7	1.8	4.1
3-Mar	Z	1.6	1.5	1.5	2.0	1.6	1.9	1.5	1.8	1.7	1.9	0.7	1.1	1.3	1.4	0.8	0.8	0.2	10.8	1.5	2.5	0.6	0.8	0.8	1.8	10.8
4-Mar	0.4	Z	1.1	1.9	1.2	0.7	0.5	0.6	0.6	0.8	0.5	0.2	0.3	0.8	0.9	0.8	0.6	1.3	1.5	2.1	1.7	1.0	1.4	2.2	1.0	2.2
5-Mar	2.2	1.6	Z	3.3	1.8	1.4	1.4	2.0	0.9	1.3	1.1	1.2	1.4	1.8	2.1	1.9	1.9	1.8	3.1	2.4	3.3	3.9	1.6	1.4	1.9	3.9
6-Mar	0.5	0.9	0.4	Z	1.5	2.4	1.6	2.1	2.7	1.8	1.9	1.5	1.7	1.3	1.0	0.9	0.7	0.9	1.3	3.2	1.7	1.2	1.6	1.0	1.5	3.2
7-Mar	1.5	0.6	0.8	0.9	Z	1.3	1.1	1.4	0.9	1.3	0.8	0.7	0.8	1.2	0.1	0.4	0.0	0.2	0.0	1.7	0.9	4.9	4.9	12.7	1.7	12.7
8-Mar	15.3	12.8	4.6	1.0	0.4	Z	3.9	4.1	1.5	0.5	0.3	0.1	0.4	0.3	0.5	0.1	2.3	11.0	3.9	2.2	2.1	1.6	0.9	1.1	3.1	15.3
9-Mar	Z	1.5	1.0	1.1	1.4	1.1	0.6	0.5	0.5	0.3	0.6	0.2	0.3	0.4	0.1	0.2	0.5	0.2	0.0	0.2	0.1	0.1	0.5	0.3	0.5	1.5
10-Mar	0.6	Z	0.6	0.5	0.4	0.3	0.2	0.4	0.1	0.2	0.4	1.3	2.1	1.7	1.7	1.5	1.7	1.5	1.4	0.9	0.5	0.7	0.4	0.4	0.8	2.1
11-Mar	0.6	0.5	Z	0.9	0.3	0.4	0.4	0.2	0.3	0.5	0.5	0.6	0.4	0.5	0.6	0.1	0.4	0.3	0.5	0.3	0.1	0.4	0.0	0.0	0.4	0.9
12-Mar	0.2	0.0	0.9	Z	3.9	3.7	4.2	4.3	6.1	3.4	1.5	1.9	1.5	1.5	1.4	1.3	1.3	0.3	0.0	0.5	0.8	1.0	0.8	0.9	1.8	6.1
13-Mar	0.0	0.2	0.0	0.0	Z	0.8	0.6	0.1	0.3	0.1	M	M	M	0.6	0.2	0.2	0.0	0.2	0.5	0.5	0.0	0.3	0.1	0.2	0.2	0.8
14-Mar	0.1	0.2	0.1	0.1	0.1	Z	0.4	0.8	3.0	2.9	2.4	2.2	2.6	1.3	1.3	2.5	3.3	4.1	3.7	3.4	3.1	3.3	4.6	3.4	2.1	4.6
15-Mar	Z	3.3	3.8	2.7	3.1	5.3	2.9	2.5	3.6	3.2	3.2	1.6	1.6	1.5	2.2	3.6	2.4	3.2	4.8	2.5	2.8	2.3	2.8	2.9	2.9	5.3
16-Mar	2.7	Z	2.2	2.7	1.9	3.6	1.9	7.7	3.5	2.3	2.0	0.9	1.8	1.4	0.3	0.7	1.2	1.0	2.1	1.1	0.6	0.9	1.1	0.7	1.9	7.7
17-Mar	2.9	0.6	Z	1.3	2.1	1.5	1.9	3.0	2.7	2.5	1.7	1.4	1.4	1.3	1.2	1.6	1.2	2.0	4.7	5.2	5.1	2.7	1.5	1.8	2.2	5.2
18-Mar	1.8	1.8	1.2	Z	1.6	1.4	1.5	2.2	2.0	1.6	1.0	0.9	0.7	1.0	0.8	0.9	0.7	0.6	0.9	1.3	1.5	5.1	1.3	1.4	1.4	5.1
19-Mar	0.9	1.4	1.2	1.3	Z	2.5	1.7	3.3	1.9	1.8	2.1	1.4	1.0	0.8	0.6	0.1	0.6	0.9	4.7	1.7	2.9	1.3	0.9	2.4	1.6	4.7
20-Mar	1.8	1.3	0.9	0.0	1.1	Z	0.8	0.4	0.0	0.0	0.2	0.0	0.2	0.2	0.0	0.0	0.3	0.0	0.5	0.6	0.7	0.5	1.0	4.0	0.6	4.0
21-Mar	Z	2.9	2.7	2.3	2.3	3.3	1.0	0.9	3.9	0.2	0.4	0.5	0.6	0.3	0.4	0.8	0.6	0.7	0.5	0.5	0.7	1.0	0.6	0.7	1.2	3.9
22-Mar	1.0	Z	1.5	1.7	2.3	2.2	2.8	3.8	2.6	2.2	1.9	1.8	2.0	1.6	1.3	1.0	0.9	0.8	0.5	0.8	0.7	1.1	1.1	0.9	1.6	3.8
23-Mar	0.8	1.1	Z	1.3	1.4	1.1	1.8	2.5	2.8	1.2	1.1	0.7	0.6	0.6	0.5	1.8	0.6	1.5	1.1	1.1	2.4	6.3	3.0	2.4	1.6	6.3
24-Mar	0.9	1.0	2.2	Z	2.3	4.1	2.0	3.6	2.3	2.2	1.1	C	C	C	C	C	M	M	M	M	M	M	M	M	--	4.1
25-Mar	M	M	M	M	M	M	M	M	M	M	M	C	C	C	C	C	C	0.4	0.5	1.2	0.8	1.7	0.5	0.8	--	1.7
26-Mar	2.0	1.4	2.1	1.9	Z	2.2	1.5	1.3	2.7	0.9	0.8	0.7	0.5	0.3	0.3	0.2	0.2	0.5	0.4	0.4	0.6	0.4	0.6	0.3	1.0	2.7
27-Mar	0.3	0.4	0.3	0.3	0.3	Z	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.5	0.6	0.3	0.3	0.2	0.4	0.6
28-Mar	Z	0.3	0.3	0.3	0.2	0.4	0.5	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.5	0.4	1.9	2.1	1.7	3.0	0.6	3.0
29-Mar	5.9	Z	2.7	2.0	1.8	1.9	1.5	1.3	1.1	2.5	1.9	1.8	1.5	0.9	0.7	0.7	0.8	0.8	1.1	14.0	2.1	1.5	1.8	4.2	2.4	14.0
30-Mar	0.9	1.0	Z	0.9	0.7	0.7	0.8	1.1	2.3	1.5	0.8	0.8	0.8	0.7	0.5	0.5	0.9	0.9	1.4	1.9	1.7	1.1	0.8	0.8	1.0	2.3
31-Mar	0.9	1.0	2.0	Z	2.5	2.5	2.5	2.6	2.7	2.3	1.4	1.4	1.1	1.1	1.1	0.7	0.6	0.6	0.7	0.9	0.7	0.7	0.8	0.6	1.4	2.7
	1.9	1.7	1.5	1.3	1.5	1.9	1.5	1.9	1.9	1.5	1.2	1.0	1.0	1.0	0.8	0.9	1.0	1.3	1.9	1.9	1.5	1.6	1.5	1.9	Diurnal Average	
	15.3	12.8	4.6	3.3	3.9	5.3	4.2	7.7	6.1	4.1	3.2	2.2	2.6	2.4	2.2	3.6	3.3	11.0	10.8	14.0	5.1	6.3	4.9	12.7	Diurnal Maximum	

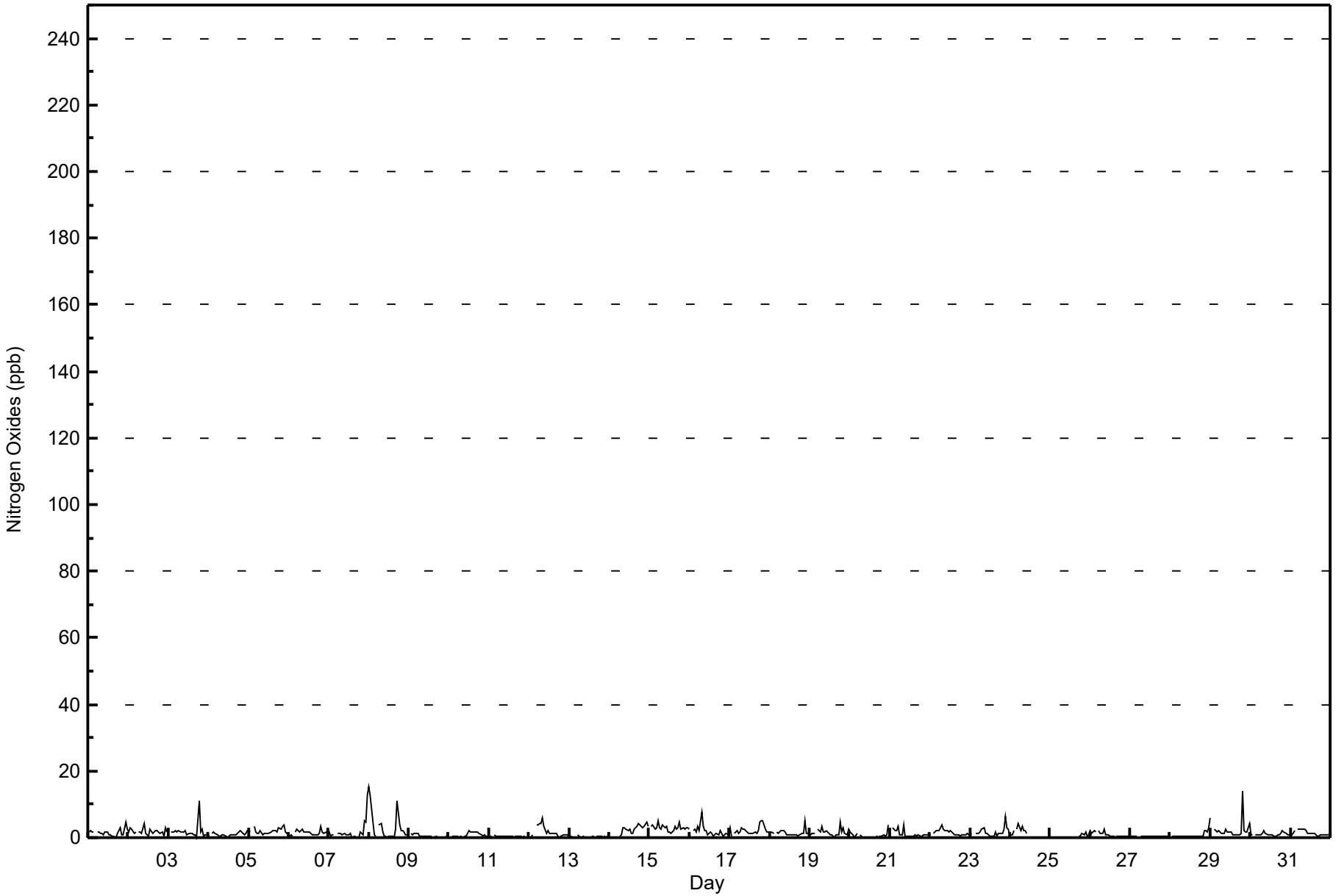
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Janvier - March 2025



Nitrogen Oxides (NO_X) - ppb

Janvier - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	681	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 681

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Janvier - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	73	158	57	18	15	4	17	25	41	79	89	22	29	24	11	17	679
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	73	158	57	18	15	4	17	25	41	79	89	22	29	24	11	17	679

Total Number of Valid Hours: 679

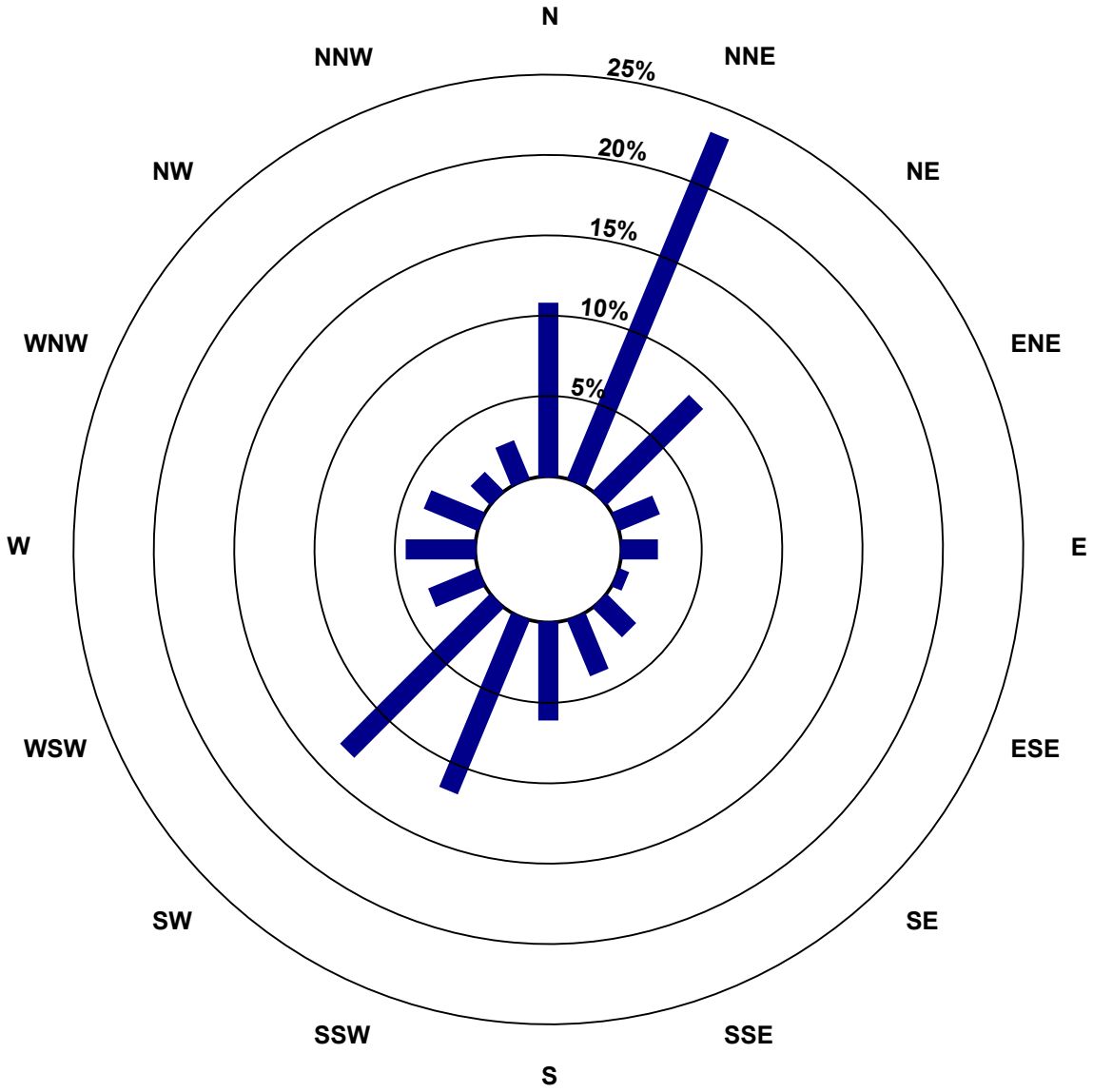
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Oxides (NO_X) - ppb

Janvier



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

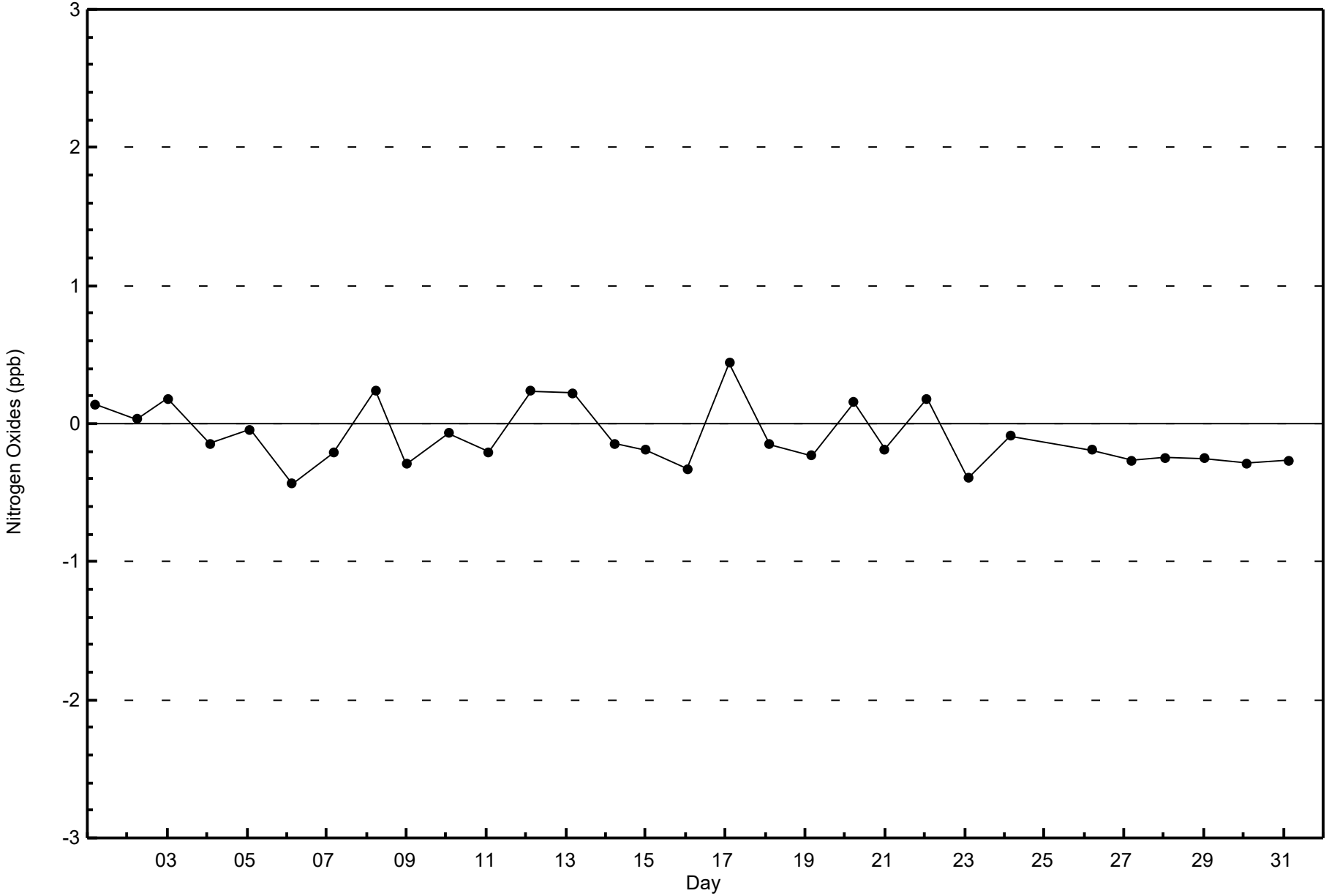
Total Number of Valid Hours: 679

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Janvier - March 2025

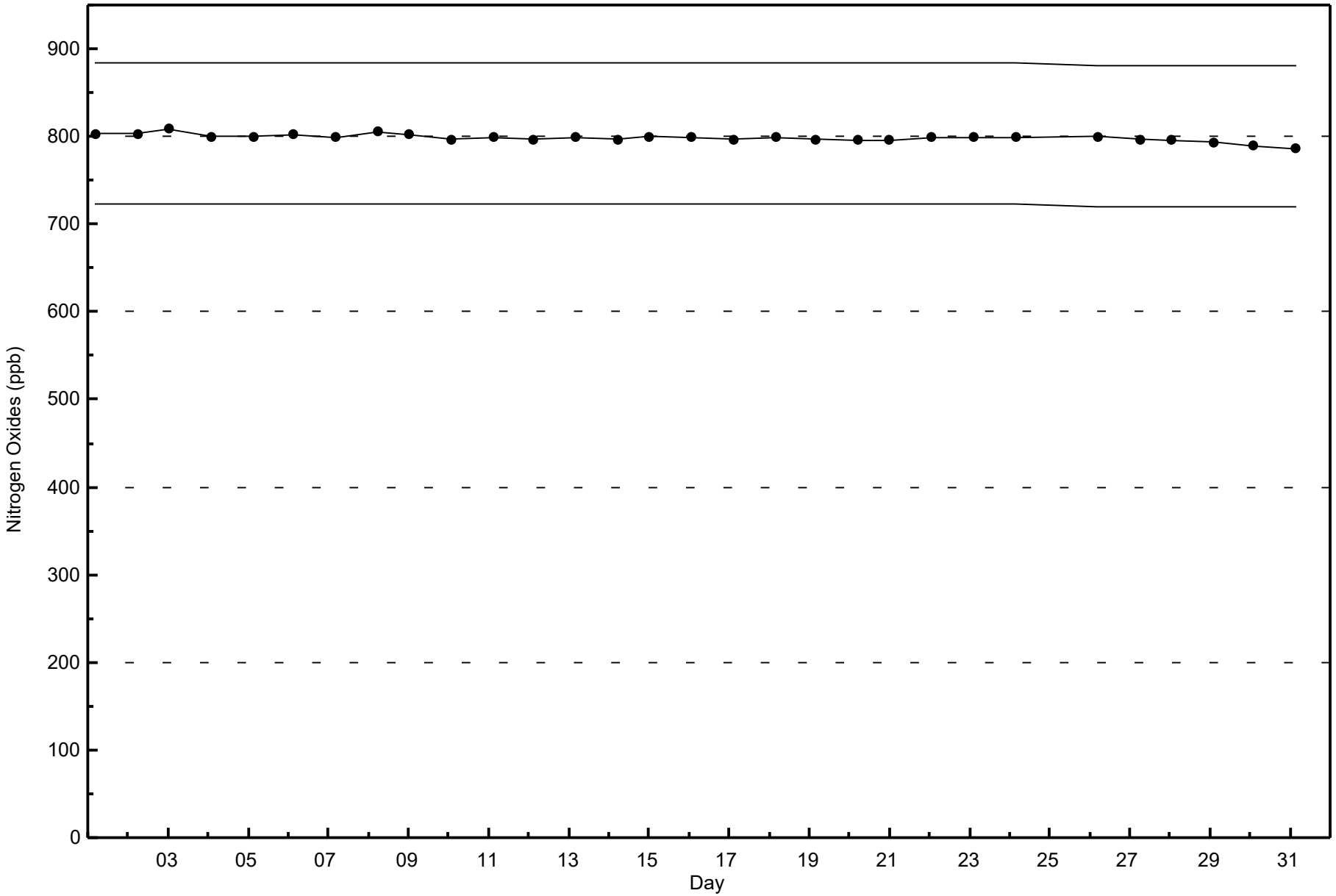


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Janvier - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Janvier - March 2025

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

Maximum Value: 53.8 ppb on Mar 24 13:00

Maximum Daily Average: 46.2 ppb on Mar 22

Minimum Value: 22.0 ppb on Mar 8 01:00

Minimum Daily Average: 33.9 ppb on Mar 9

Maximum Diurnal Average: 45.7 ppb at hour 16

Minimum Diurnal Average: 36.6 ppb at hour 7

Monthly Average: 40.97 ppb

Percentiles: P_1 = 27.0 P_{10} = 33.1 Q_1 = 37.9 Median = 41.3 Q_3 = 44.6 P_{90} = 48.2 P_{99} = 52.9

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	35
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	27.8	28.5	Z	26.7	28.4	33.9	34.7	34.1	35.3	37.4	39.4	42.2	47.4	51.5	53.0	53.4	53.2	50.6	49.4	46.4	43.3	44.4	43.3	44.1	41.2	53.4
2-Mar	44.8	43.3	43.1	Z	43.1	43.3	42.6	41.9	42.3	41.1	46.1	48.0	47.0	46.1	48.5	48.6	47.1	45.8	45.1	44.8	44.6	44.4	39.2	40.3	44.4	48.6
3-Mar	41.2	43.9	43.6	41.1	Z	38.6	39.0	39.7	39.2	40.5	43.2	44.6	44.8	45.1	45.3	46.6	46.6	46.6	35.0	36.9	37.7	43.3	42.8	43.1	42.1	46.6
4-Mar	44.2	44.2	41.8	40.2	40.0	Z	39.7	38.9	39.0	40.1	41.9	44.0	45.2	45.8	46.0	46.9	47.4	45.8	43.3	42.7	42.3	43.2	43.0	41.5	42.9	47.4
5-Mar	Z	40.1	37.3	37.6	39.9	41.2	41.6	42.2	44.1	44.9	45.3	45.6	45.8	46.1	46.3	47.3	47.3	46.8	43.4	41.1	41.9	38.0	39.9	42.2	42.9	47.3
6-Mar	43.5	Z	43.4	42.3	41.6	39.9	37.5	37.2	35.7	38.6	41.9	43.1	45.0	47.5	49.2	50.1	49.8	48.6	45.4	43.4	45.2	45.2	44.2	44.3	43.6	50.1
7-Mar	43.7	43.4	Z	42.6	40.8	42.0	41.3	41.1	41.6	42.8	43.7	45.3	47.3	48.4	49.6	50.0	49.6	48.9	48.6	45.8	44.4	35.5	34.9	23.8	43.3	50.0
8-Mar	22.0	22.6	33.2	Z	35.5	31.9	30.0	33.1	39.4	45.4	47.9	48.8	50.2	51.3	51.9	51.5	45.3	33.5	40.1	42.4	43.1	44.1	43.9	42.8	40.4	51.9
9-Mar	42.6	42.1	42.1	42.0	Z	38.2	35.8	34.0	32.0	30.8	31.4	31.9	30.6	30.9	32.4	33.6	33.7	33.4	32.2	31.3	30.0	30.2	30.4	28.7	33.9	42.6
10-Mar	28.3	28.6	29.0	29.8	30.6	Z	30.3	30.5	31.3	32.0	33.5	34.6	35.7	37.1	37.8	37.9	38.1	38.9	39.2	39.6	39.0	38.0	37.7	36.8	34.5	39.6
11-Mar	Z	35.8	35.7	35.3	34.3	33.5	33.2	32.7	32.7	33.1	35.1	36.2	37.0	37.3	37.6	38.4	38.3	38.7	38.8	39.5	39.4	39.0	38.3	38.7	36.5	39.5
12-Mar	39.4	Z	37.3	30.9	29.9	30.5	30.4	30.7	31.4	34.3	36.3	37.0	38.3	39.1	40.3	40.1	41.8	44.7	45.2	45.1	43.6	42.5	39.1	37.5	37.6	45.2
13-Mar	39.2	39.2	Z	38.9	39.1	39.1	39.0	38.3	38.1	41.1	43.3	44.3	44.5	M	M	45.8	44.9	43.6	43.9	43.8	42.5	41.8	41.0	40.7	41.5	45.8
14-Mar	40.1	40.2	40.9	Z	40.5	40.1	39.8	39.5	37.3	37.8	38.9	39.3	39.3	40.3	41.0	39.8	37.7	35.3	35.4	35.2	34.7	33.1	30.8	31.3	37.8	41.0
15-Mar	31.9	30.2	29.3	29.6	Z	26.8	28.0	30.7	33.2	36.4	39.6	41.0	41.6	41.8	40.9	39.5	42.1	42.0	40.1	41.1	39.5	38.5	37.9	36.9	36.5	42.1
16-Mar	35.2	31.9	30.7	30.1	29.5	Z	27.6	27.0	29.5	30.2	34.8	39.4	43.0	43.9	44.0	43.4	42.2	41.7	40.9	41.0	40.7	40.2	39.3	39.7	36.8	44.0
17-Mar	Z	39.1	38.5	37.6	37.3	37.2	36.8	35.8	35.5	36.0	38.2	39.3	39.7	40.7	40.6	40.6	40.3	40.1	37.1	35.6	35.6	38.2	39.8	39.9	38.2	40.7
18-Mar	39.1	Z	38.3	38.3	37.3	36.7	35.7	34.4	34.8	39.5	42.0	C	C	C	C	43.4	44.0	44.7	43.8	42.7	41.9	38.7	40.5	40.4	39.8	44.7
19-Mar	39.9	39.1	Z	40.3	39.1	38.0	38.4	39.2	40.9	41.8	43.1	44.1	45.4	46.8	46.9	47.4	47.8	47.8	44.1	44.4	43.7	42.9	42.6	39.9	42.8	47.8
20-Mar	36.8	39.4	41.1	Z	42.2	41.5	41.0	41.6	41.2	41.2	41.3	41.7	43.1	44.9	46.5	46.8	47.3	48.4	47.9	47.2	46.7	46.8	46.1	42.9	43.6	48.4
21-Mar	43.0	40.5	38.4	36.8	Z	33.8	37.8	38.3	37.8	41.9	42.8	43.6	44.6	45.8	49.3	50.9	49.8	49.1	48.8	48.6	47.4	46.3	45.5	44.6	43.7	50.9
22-Mar	44.4	44.4	43.5	42.9	42.2	Z	40.6	40.6	42.5	43.2	43.7	43.6	44.3	45.7	48.8	50.2	51.8	52.2	51.5	50.6	50.1	49.5	48.4	47.7	46.2	52.2
23-Mar	Z	46.1	44.8	44.4	42.3	42.8	41.8	40.7	41.0	43.4	46.3	48.1	49.7	49.5	49.4	48.8	48.7	48.6	48.7	48.6	44.6	39.4	40.4	38.8	45.1	49.7
24-Mar	40.7	Z	37.2	37.0	32.9	29.9	30.2	34.8	38.4	42.0	46.3	50.4	53.8	53.5	52.9	51.5	49.1	48.3	49.4	45.7	42.3	36.0	30.8	26.0	41.7	53.8
25-Mar	26.8	Z	27.7	30.4	33.4	35.4	36.1	36.6	37.0	37.3	39.1	42.7	46.6	48.5	50.5	51.0	50.8	51.4	49.9	47.9	48.0	45.3	41.6	40.1	41.5	51.4
26-Mar	38.8	39.2	Z	39.8	39.6	39.1	38.5	38.0	36.6	37.5	37.4	38.4	39.9	40.6	42.6	43.0	42.9	42.7	43.6	42.0	40.9	40.1	41.5	41.6	40.2	43.6
27-Mar	42.4	41.9	42.1	Z	41.0	40.3	37.8	37.4	38.2	39.8	40.7	40.8	40.9	41.6	43.2	45.0	46.4	46.6	46.0	44.8	44.1	45.1	45.2	44.7	42.4	46.6
28-Mar	43.2	43.0	43.0	42.7	Z	41.9	41.1	40.9	41.2	41.8	41.9	41.2	40.8	41.3	42.1	42.1	42.5	42.8	42.2	41.9	38.6	37.6	39.3	36.9	41.3	43.2
29-Mar	29.6	31.4	33.4	31.3	29.7	Z	30.1	35.2	35.1	41.3	42.2	42.7	43.1	44.2	44.4	44.5	44.7	44.6	44.1	34.0	40.3	38.3	37.1	34.1	38.1	44.7
30-Mar	Z	39.0	39.2	38.1	37.9	37.4	36.8	37.9	40.2	43.9	47.8	49.5	50.7	52.0	52.1	51.8	52.9	53.5	52.4	49.4	48.4	46.7	46.2	45.2	45.6	53.5
31-Mar	44.8	Z	42.9	42.8	42.6	41.6	40.2	41.7	41.8	42.8	45.0	45.1	44.8	44.6	45.3	46.6	47.5	47.4	45.7	43.9	43.0	42.6	41.7	40.6	43.7	47.5
	38.2	38.3	38.4	37.3	37.3	37.5	36.6	36.9	37.6	39.4	41.3	42.6	43.7	44.6	45.5	45.7	45.5	44.9	43.9	42.8	42.2	41.1	40.4	39.2	Diurnal Average	
	44.8	46.1	44.8	44.4	43.1	43.3	42.6	42.2	44.1	45.4	47.9	50.4	53.8	53.5	53.0	53.4	53.2	53.5	52.4	50.6	50.1	49.5	48.4	47.7	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

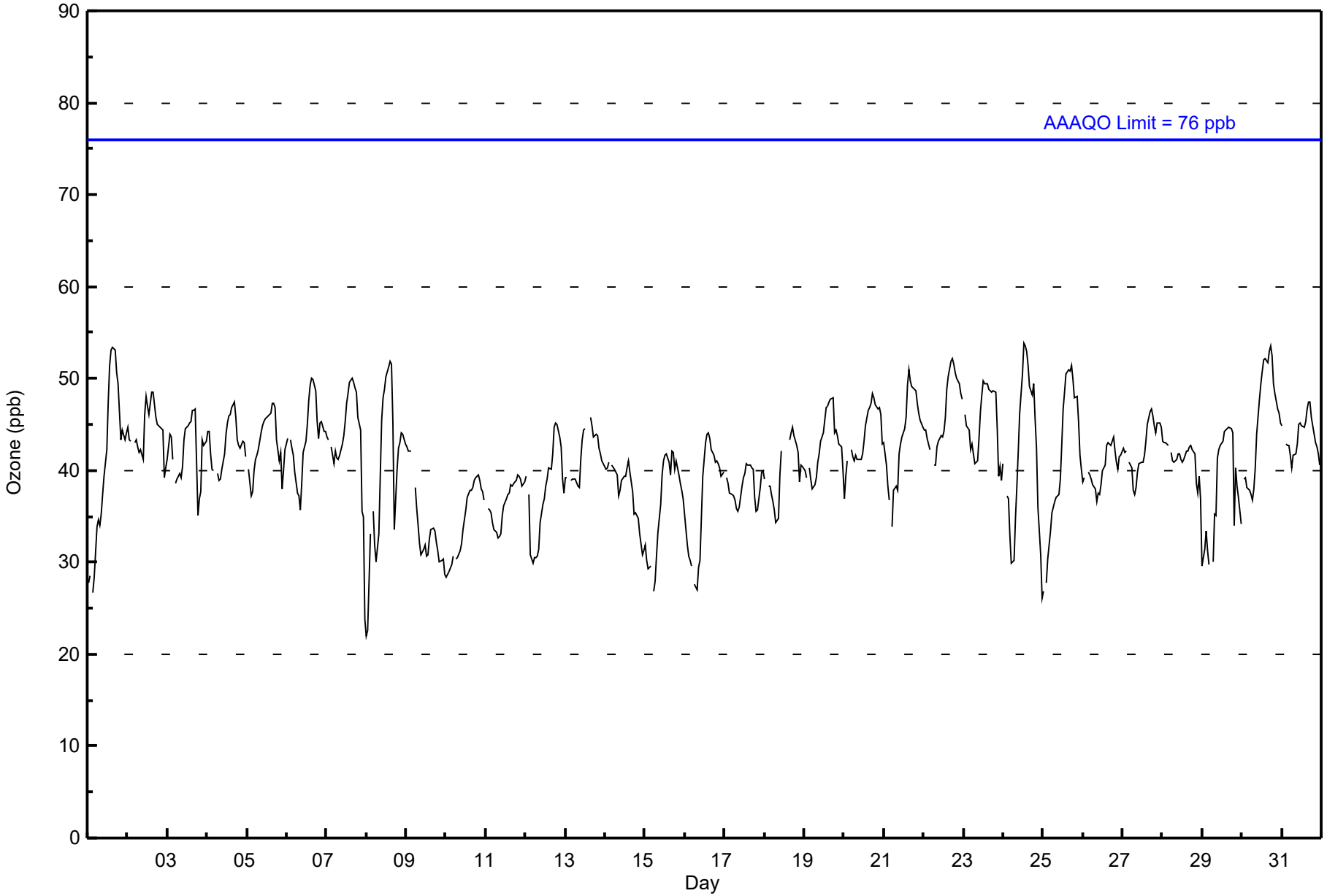
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Janvier - March 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Ozone (O_3) - ppb

Janvier - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
21 - 50	679	96.04	96.04
51 - 82	28	3.96	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Ozone (O_3) - ppb

Janvier - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 - 50	77	156	57	19	16	3	17	27	39	81	88	27	25	19	10	17	678
51 - 82	0	0	0	0	0	0	0	1	0	3	9	0	6	8	1	0	28
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	77	156	57	19	16	3	17	28	39	84	97	27	31	27	11	17	706

Total Number of Valid Hours: 706

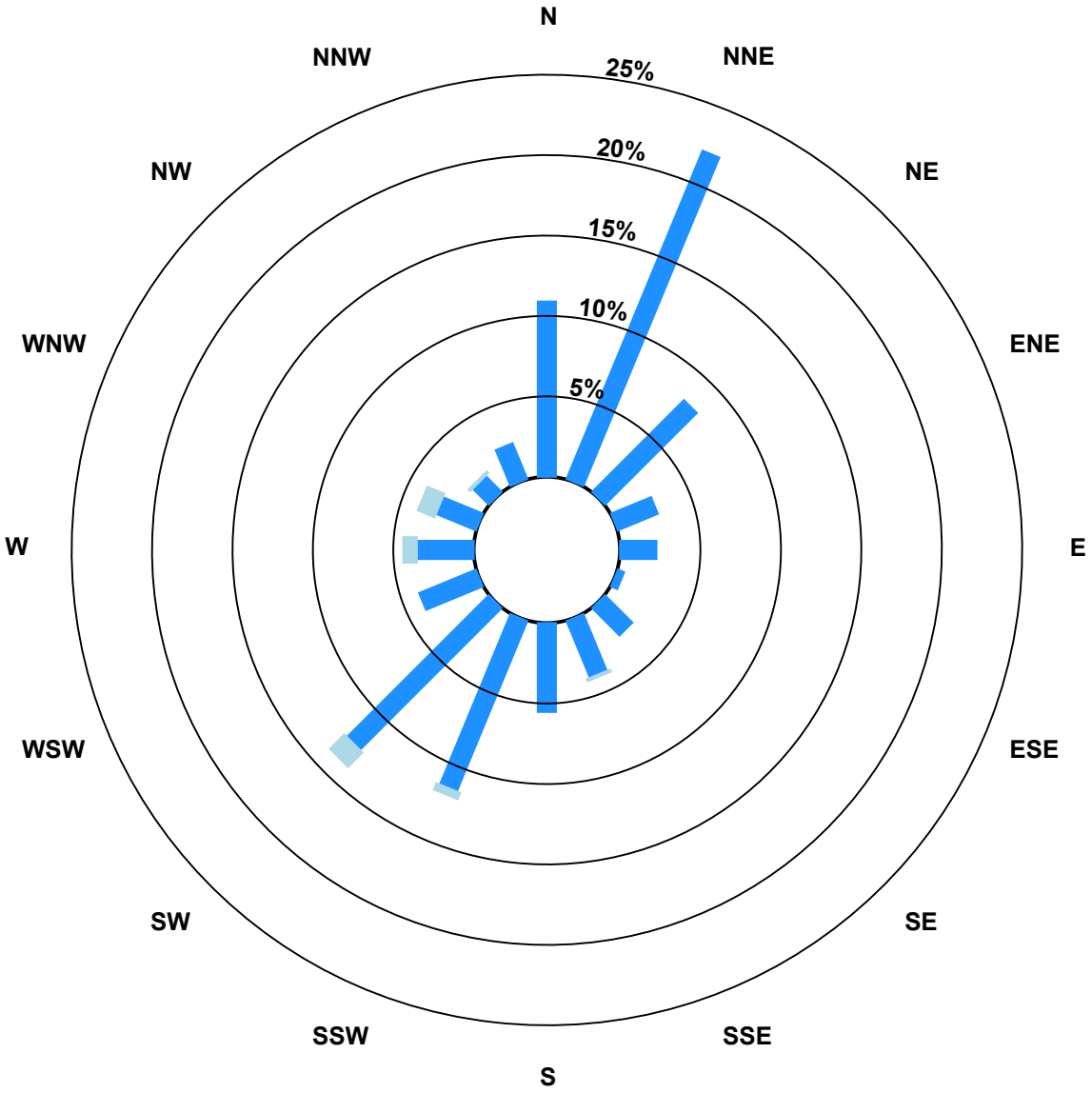
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Ozone (O_3) - ppb

Janvier



Classes (ppb)

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

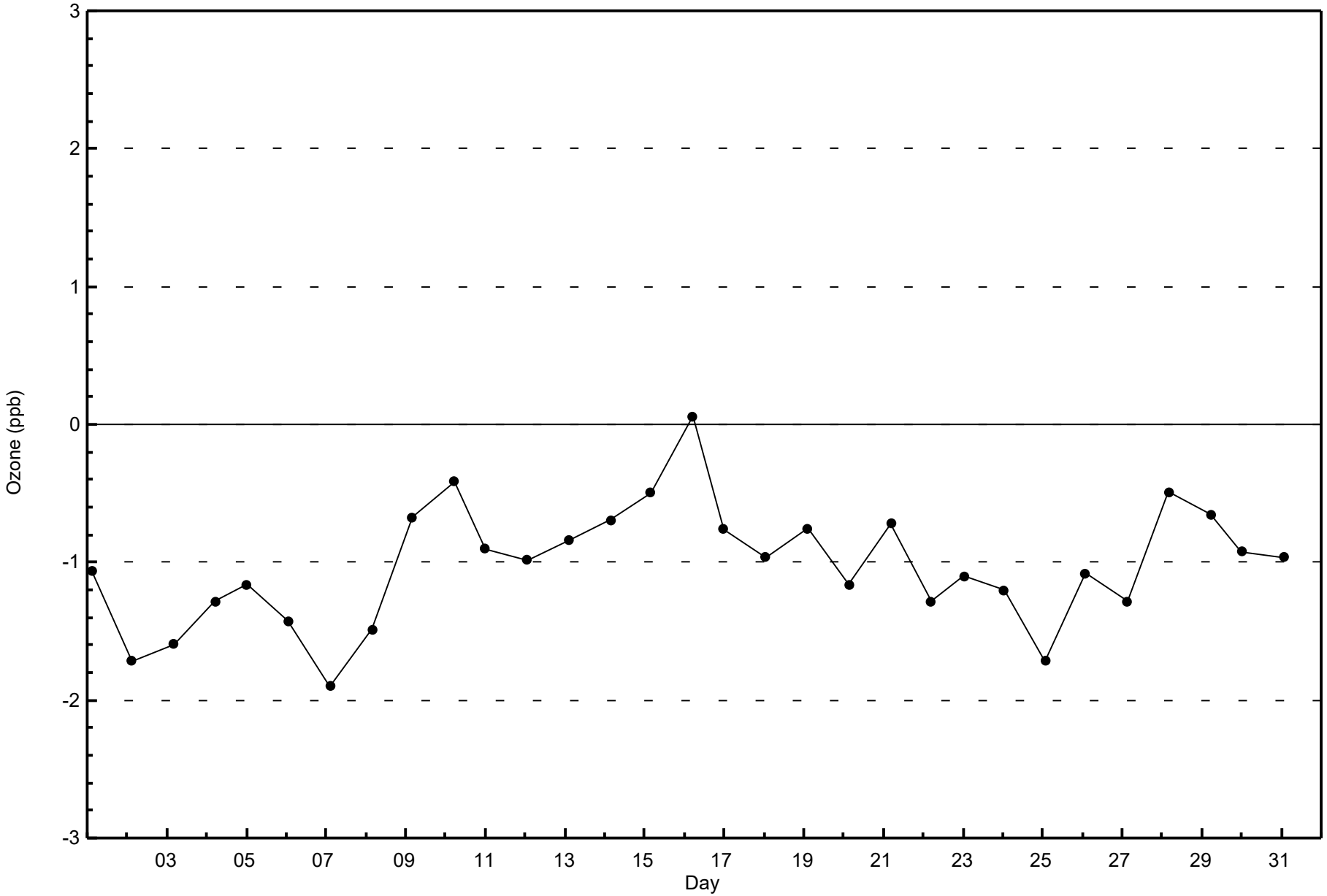
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Janvier - March 2025

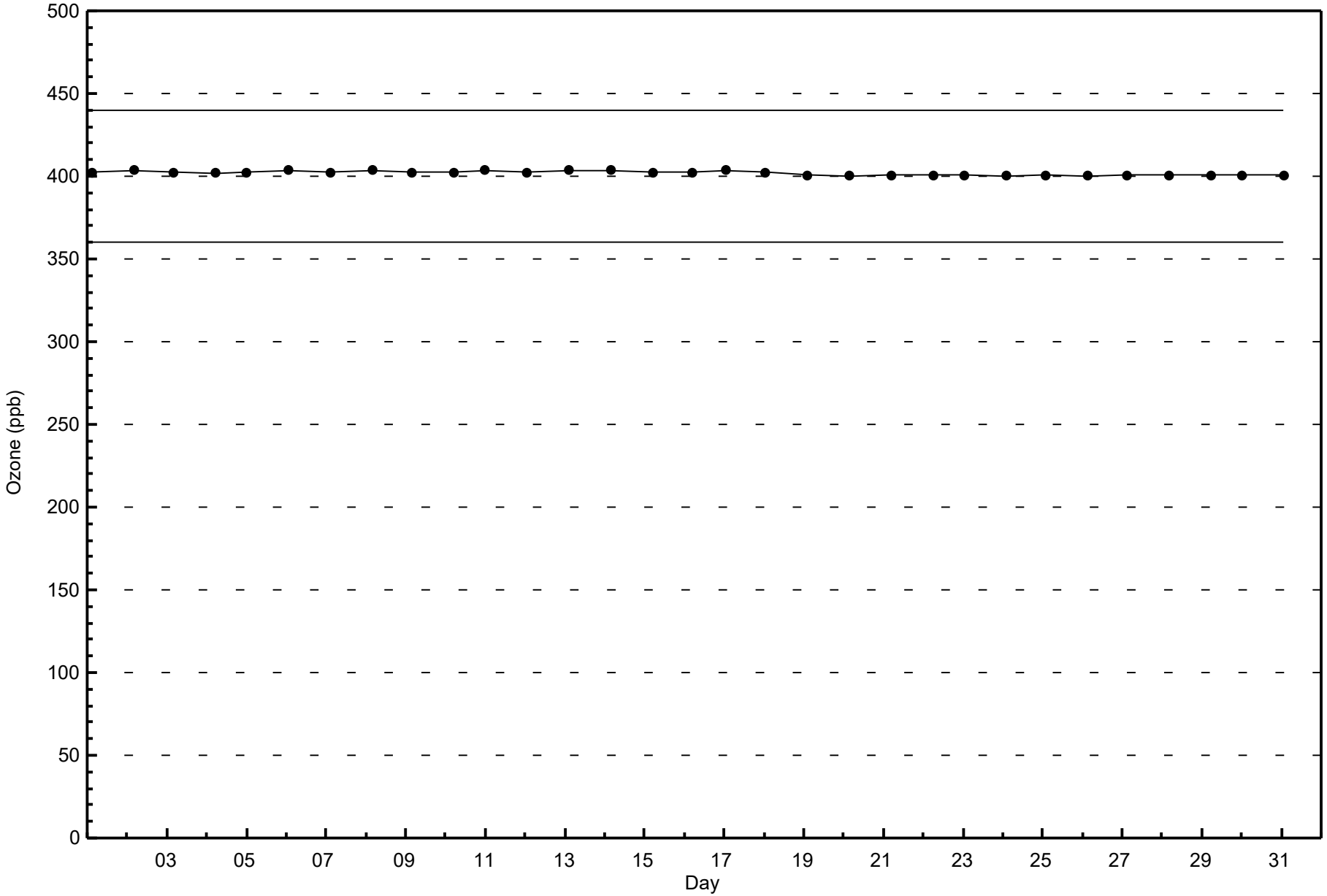


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Janvier - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Janvier - March 2025

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

Maximum Value: 25.7 $\mu g/m^3$ on Mar 6 08:00

Maximum Daily Average: 3.9 $\mu g/m^3$ on Mar 17

Minimum Value: 0.3 $\mu g/m^3$ on Mar 25 18:00

Minimum Daily Average: 0.7 $\mu g/m^3$ on Mar 25

Maximum Diurnal Average: 2.8 $\mu g/m^3$ at hour 8

Minimum Diurnal Average: 1.8 $\mu g/m^3$ at hour 17

Monthly Average: 2.05 $\mu g/m^3$

Percentiles: P_1 = 0.4 P_{10} = 0.9 Q_1 = 1.2 Median = 1.7 Q_3 = 2.6 P_{90} = 3.4 P_{99} = 5.3

Hours in Service:	744
Hours of Data:	742
Hours of Missing Data:	2
Hours of Calibration:	2
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	2.7	2.7	2.7	2.7	2.4	1.8	1.7	1.9	1.8	1.8	2.0	2.2	2.6	2.9	1.3	1.0	0.8	1.0	1.0	0.9	0.9	1.0	1.0	1.0	1.7	2.9
2-Mar	1.0	1.1	1.3	1.6	2.0	2.2	2.6	2.7	2.8	2.5	1.8	1.6	2.2	3.0	2.5	2.2	3.1	3.5	2.9	1.7	11.7	5.4	2.8	1.7	2.8	11.7
3-Mar	1.6	1.0	0.7	1.8	2.8	2.8	2.7	2.7	2.6	2.3	1.6	1.6	2.1	2.6	2.6	2.2	1.4	0.7	1.6	0.9	0.8	0.9	0.7	0.5	1.7	2.8
4-Mar	0.4	0.5	0.6	1.1	1.0	0.6	1.0	1.3	1.0	1.0	1.1	1.0	1.3	1.5	1.4	1.7	0.9	2.7	1.9	2.2	1.7	1.6	2.5	2.2	1.3	2.7
5-Mar	2.0	1.8	1.9	1.7	1.3	1.4	2.2	2.4	1.4	0.8	1.1	1.0	1.5	1.6	1.9	1.6	1.9	2.0	4.0	4.2	2.0	2.2	1.6	1.4	1.9	4.2
6-Mar	1.5	1.0	0.9	0.9	1.2	1.4	10.5	25.7	5.2	2.6	2.0	2.0	2.0	2.0	1.8	1.3	1.5	1.1	2.7	2.4	3.1	2.4	2.2	2.2	3.3	25.7
7-Mar	1.1	0.9	0.9	1.0	1.0	1.1	1.1	1.6	1.4	1.4	1.5	1.5	1.1	1.3	0.7	0.8	0.7	0.6	0.7	1.4	1.0	3.0	2.8	5.1	1.4	5.1
8-Mar	5.2	4.8	3.4	2.8	2.5	2.6	3.0	2.6	1.6	0.8	0.7	0.6	0.6	0.7	0.5	0.8	1.4	3.2	2.0	1.3	1.0	0.7	0.5	0.4	1.8	5.2
9-Mar	0.4	0.5	0.5	0.5	0.7	0.8	1.0	1.0	1.1	1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.6	1.5	1.5	1.9	1.8	1.8	1.2	1.9
10-Mar	2.5	2.0	1.8	1.6	1.4	1.3	1.3	1.1	0.9	1.0	0.9	1.1	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	1.1	0.8	1.0	1.2	2.5
11-Mar	1.1	0.8	0.9	1.0	0.9	1.0	1.0	1.2	1.1	1.2	1.7	2.4	2.6	2.6	2.5	2.5	2.4	1.5	1.5	1.2	1.1	1.1	1.1	1.1	1.5	2.6
12-Mar	1.1	0.9	1.0	1.5	1.4	1.4	1.3	1.3	1.3	1.1	1.5	1.4	1.7	2.4	2.0	2.2	2.1	1.7	2.7	2.5	2.6	2.0	3.9	3.3	1.8	3.9
13-Mar	2.7	2.1	1.6	1.5	2.0	1.7	1.2	1.2	1.1	1.7	1.1	1.1	1.2	1.2	1.3	1.5	1.8	2.0	1.6	1.7	1.7	1.7	1.5	1.4	1.6	2.7
14-Mar	1.2	1.3	1.3	1.3	1.3	1.3	1.4	1.3	1.5	1.6	1.6	1.6	1.8	1.7	1.6	1.8	2.0	2.1	2.2	2.4	2.4	2.7	5.0	5.1	2.0	5.1
15-Mar	5.0	4.5	4.1	3.6	3.2	4.0	4.2	4.6	2.0	1.7	1.7	1.7	1.8	1.8	2.1	2.5	2.4	2.1	1.9	1.9	1.8	1.7	1.7	1.9	2.7	5.0
16-Mar	1.7	1.5	1.4	1.4	1.3	1.3	1.2	1.5	1.7	1.8	2.4	2.0	1.7	1.6	1.8	1.9	2.0	2.4	3.0	3.4	4.2	4.7	4.5	4.1	2.3	4.7
17-Mar	3.8	3.6	3.5	3.3	3.2	3.2	3.2	3.3	3.3	3.5	3.9	4.3	4.6	5.1	5.4	5.0	4.5	3.8	4.9	4.3	4.0	3.5	3.2	3.0	3.9	5.4
18-Mar	3.0	2.9	3.1	4.3	2.9	2.8	2.8	3.1	3.2	2.9	2.7	2.7	2.7	2.7	2.8	2.8	2.7	2.7	2.9	2.9	3.0	3.3	3.4	3.3	3.0	4.3
19-Mar	3.1	2.9	2.6	2.0	1.7	1.6	1.6	1.6	1.4	1.3	1.3	1.5	1.5	1.2	0.8	0.9	1.1	1.0	1.5	1.3	1.3	1.3	1.5	2.7	1.6	3.1
20-Mar	1.9	2.4	2.7	2.8	2.6	2.5	2.3	2.0	1.8	1.7	1.6	1.7	1.5	1.5	1.3	1.1	1.3	1.2	1.3	1.8	2.1	1.5	1.5	2.4	1.9	2.8
21-Mar	1.9	2.3	3.1	3.9	2.7	3.1	2.4	1.6	2.2	1.9	1.9	1.3	1.8	1.6	2.5	3.1	2.8	2.6	2.6	2.6	2.7	2.7	2.8	2.6	2.5	3.9
22-Mar	2.6	2.7	2.8	2.8	3.0	3.0	3.1	3.4	3.7	3.8	3.8	3.7	3.8	3.6	2.9	2.5	1.1	1.0	1.1	1.6	0.8	0.7	0.7	0.7	2.5	3.8
23-Mar	0.9	0.9	1.0	1.1	1.1	1.0	0.9	1.0	1.0	1.2	1.2	0.9	0.8	0.9	1.0	1.0	0.9	0.9	0.9	0.9	1.3	1.6	1.4	1.5	1.0	1.6
24-Mar	1.2	1.3	1.5	1.1	1.0	1.1	1.0	1.2	1.9	1.8	1.5	1.1	C	C	2.0	1.9	1.3	0.8	0.8	0.4	0.6	0.8	0.7	0.8	1.2	2.0
25-Mar	0.9	0.8	0.7	0.6	0.5	0.5	0.6	0.7	0.7	0.7	0.7	0.6	0.3	0.3	0.4	0.3	0.4	0.3	0.3	0.6	1.0	1.5	2.0	2.3	0.7	2.3
26-Mar	1.8	2.0	2.2	2.1	1.9	1.9	1.9	1.9	2.1	1.9	2.0	1.9	1.7	1.7	1.5	1.5	1.5	2.4	2.4	1.9	1.8	1.9	1.8	1.6	1.9	2.4
27-Mar	1.9	2.1	1.9	1.7	1.8	1.7	1.8	1.8	1.7	1.6	1.6	1.6	1.6	1.6	1.5	1.7	1.7	1.6	1.7	1.7	1.7	1.6	1.6	1.5	1.7	2.1
28-Mar	1.5	1.5	1.6	1.7	1.6	1.6	1.7	1.6	1.6	1.5	1.5	1.7	1.7	1.8	2.1	1.8	1.7	1.7	3.7	2.7	8.8	12.5	5.3	4.5	2.8	12.5
29-Mar	4.6	4.5	2.9	4.6	5.0	4.7	4.2	3.4	2.5	2.1	1.9	1.9	2.0	1.7	2.1	1.8	1.8	1.8	1.8	3.7	2.6	2.4	2.6	2.8	2.9	5.0
30-Mar	1.8	1.7	1.7	1.7	1.8	1.8	2.3	2.9	4.2	5.2	4.0	3.3	2.9	2.3	2.3	2.9	3.4	3.4	3.7	3.7	3.2	2.4	3.1	3.0	2.9	5.2
31-Mar	3.0	3.2	3.1	3.4	3.6	4.0	4.4	4.2	4.1	3.7	3.4	3.4	2.7	2.7	2.9	2.0	1.8	1.7	1.5	1.7	2.0	2.2	2.3	2.0	2.9	4.4
	2.1	2.0	1.9	2.0	2.0	2.0	2.3	2.8	2.1	1.9	1.8	1.8	1.9	1.9	1.9	1.8	1.8	1.8	2.0	2.0	2.4	2.4	2.2	2.2	Diurnal Average	
	5.2	4.8	4.1	4.6	5.0	4.7	10.5	25.7	5.2	5.2	4.0	4.3	4.6	5.1	5.4	5.0	4.5	3.8	4.9	4.3	11.7	12.5	5.3	5.1	Diurnal Maximum	

C - Calibration

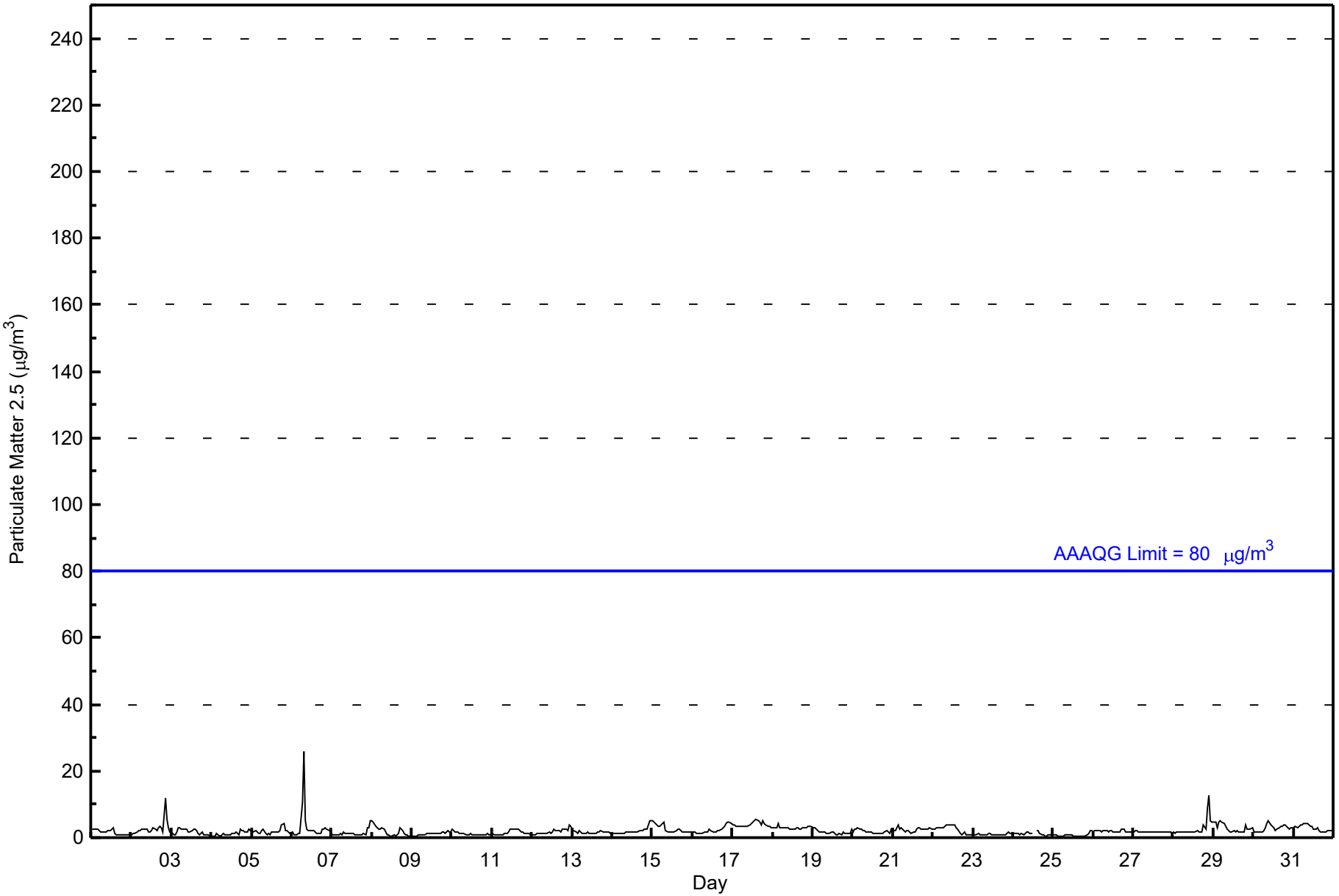
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Janvier - March 2025



Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	737	99.33	99.33
6 - 15	4	0.54	99.87
16 - 25	0	0.00	99.87
26 - 80	1	0.13	100.00
> 81.0	0	0.00	100.00

Total Number of Valid Hours: 742

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

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

Janvier - March 2025

Concentration Ranges ($\mu g/m^3$)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	80	162	59	21	16	4	17	29	42	87	102	28	34	26	11	17	735
6 - 15	0	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	4
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	1	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	80	164	59	21	16	4	17	29	42	88	103	28	34	27	11	17	740

Total Number of Valid Hours: 740

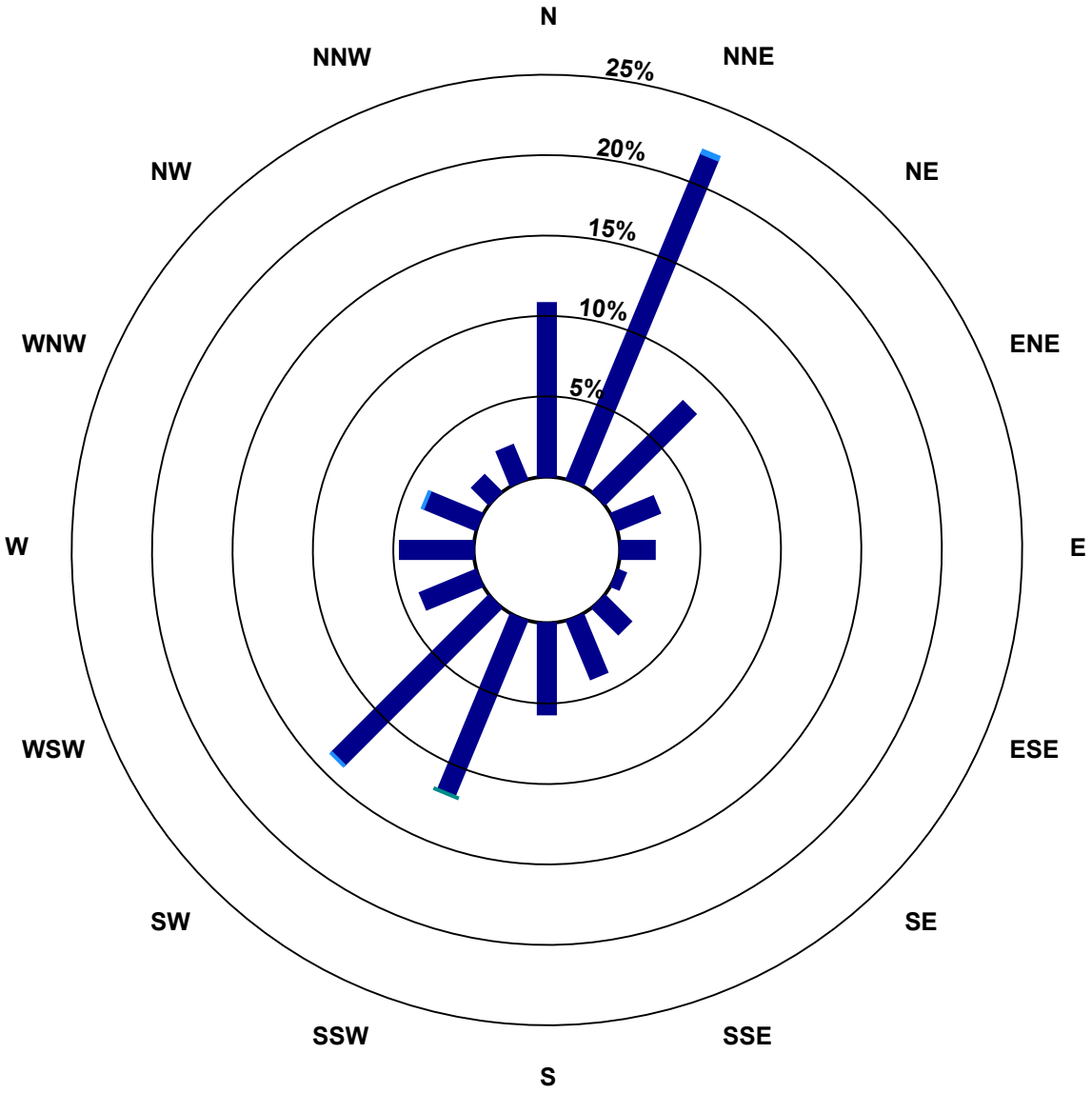
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

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

Janvier



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

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

Total Number of Valid Hours: 740

Maximum Value: 11.0 C on Mar 25 16:00

Maximum Daily Average: 4.4 C on Mar 2

Minimum Value: -29.3 C on Mar 16 07:00

Minimum Daily Average: -18.1 C on Mar 9

Maximum Diurnal Average: -0.6 C at hour 16

Minimum Diurnal Average: -10.5 C at hour 7

Monthly Average: -5.80 C

Percentiles: P_1 = -24.6 P_{10} = -16.6 Q_1 = -11.9 Median = -5.2 Q_3 = -0.3 P_{90} = 4.8 P_{99} = 9.7

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

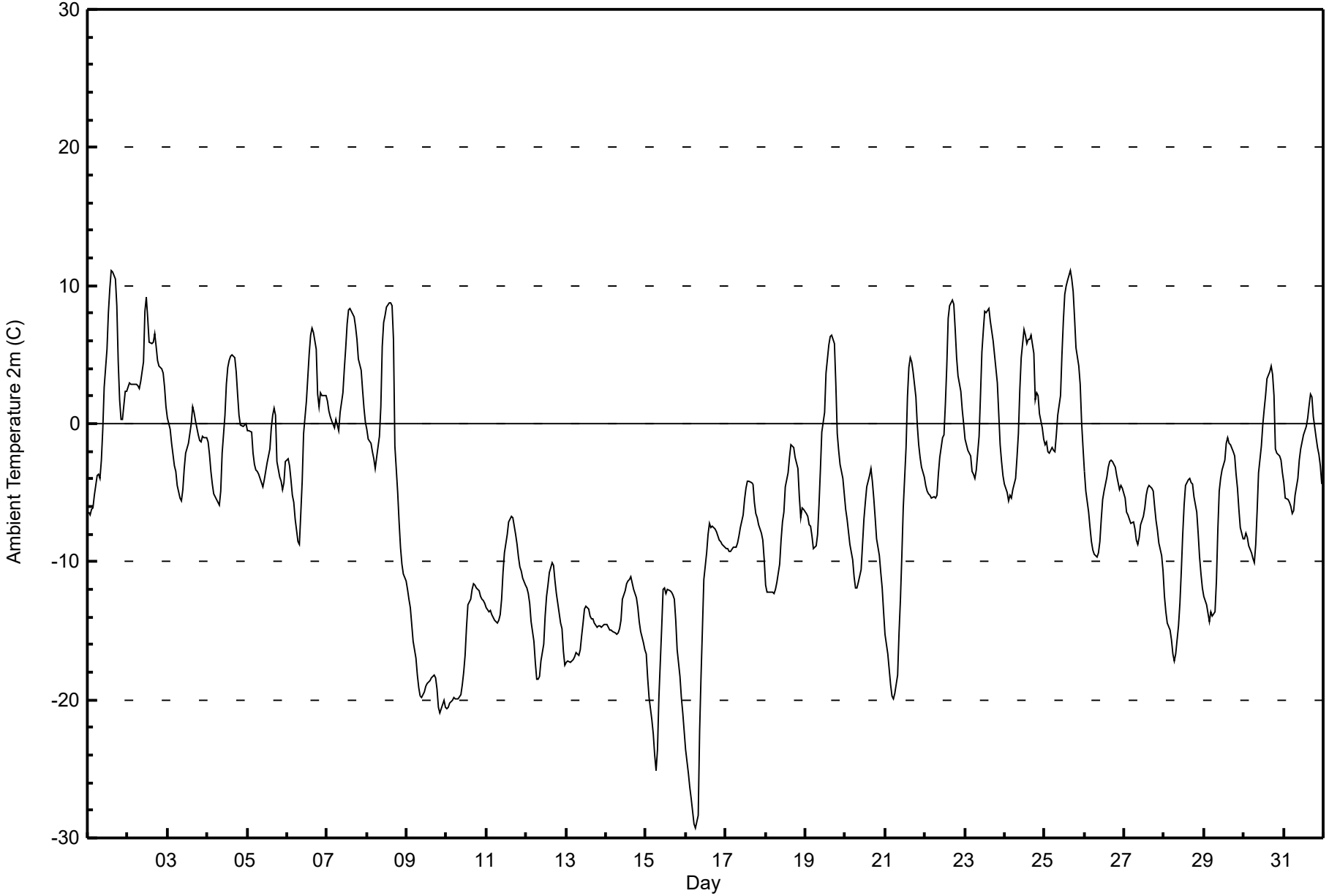
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-6.4	-6.6	-6.2	-6.1	-5.2	-3.7	-3.7	-4.0	-2.6	-0.5	2.6	5.4	8.0	9.8	11.0	11.0	10.5	8.5	4.5	1.8	0.3	0.3	2.3	2.3	1.4	11.0
2-Mar	2.7	3.0	2.8	2.8	2.9	2.9	2.7	2.5	3.1	4.5	8.1	9.2	7.6	5.9	5.8	5.9	6.5	5.6	4.6	4.2	3.9	3.6	2.6	1.2	4.4	9.2
3-Mar	0.4	-0.4	-1.4	-2.2	-3.0	-3.4	-4.5	-5.4	-5.6	-4.8	-3.3	-2.1	-1.4	-0.8	0.0	1.2	0.8	0.2	-0.8	-1.2	-1.4	-0.9	-1.0	-1.0	-1.8	1.2
4-Mar	-1.4	-2.3	-3.5	-4.4	-5.0	-5.5	-5.7	-5.9	-4.9	-2.1	0.6	2.8	4.1	4.6	4.9	5.0	4.8	3.8	2.1	0.6	-0.1	-0.2	-0.1	0.0	-0.3	5.0
5-Mar	-0.5	-0.5	-0.6	-2.2	-3.0	-3.4	-3.5	-3.7	-4.3	-4.6	-4.1	-3.5	-2.8	-1.9	-0.3	0.6	1.1	0.6	-2.7	-3.8	-4.2	-4.8	-4.2	-2.7	-2.4	1.1
6-Mar	-2.5	-3.1	-4.1	-5.1	-5.7	-6.9	-8.5	-8.7	-6.5	-4.2	-0.7	1.6	3.4	5.1	6.4	6.9	6.6	5.4	2.1	1.2	2.2	2.0	2.1	2.0	-0.4	6.9
7-Mar	1.7	0.9	0.5	0.2	-0.3	0.3	-0.1	-0.5	0.8	2.2	4.0	5.5	7.2	8.2	8.3	8.0	7.7	7.0	6.1	4.7	3.9	2.4	1.1	0.1	3.3	8.3
8-Mar	-0.4	-1.1	-1.5	-2.0	-2.5	-3.3	-2.4	-0.9	1.2	5.6	7.3	7.9	8.5	8.7	8.7	8.6	6.1	-1.6	-5.0	-7.2	-9.0	-10.2	-10.9	-11.4	-0.3	8.7
9-Mar	-12.0	-12.7	-13.3	-14.5	-15.7	-17.0	-18.2	-19.1	-19.7	-19.9	-19.4	-19.0	-18.8	-18.7	-18.6	-18.4	-18.2	-18.4	-19.2	-20.5	-21.0	-20.3	-20.0	-20.5	-18.1	-12.0
10-Mar	-20.7	-20.6	-20.2	-20.0	-19.9	-19.9	-19.9	-20.0	-19.6	-18.9	-18.0	-16.8	-14.7	-13.1	-12.7	-12.0	-11.6	-11.7	-11.9	-12.1	-12.5	-12.7	-12.8	-13.1	-16.1	-11.6
11-Mar	-13.4	-13.6	-13.5	-13.8	-14.1	-14.2	-14.4	-14.3	-13.9	-12.7	-10.8	-9.3	-8.0	-7.2	-6.9	-6.7	-6.8	-8.0	-8.7	-9.7	-10.3	-10.7	-11.2	-11.6	-11.0	-6.7
12-Mar	-11.9	-12.3	-13.0	-14.3	-15.8	-17.3	-18.5	-18.5	-18.3	-17.2	-15.9	-14.0	-12.6	-11.7	-10.7	-10.1	-10.3	-11.4	-12.3	-13.1	-14.4	-14.9	-16.5	-17.5	-14.3	-10.1
13-Mar	-17.3	-17.2	-17.3	-17.2	-17.0	-16.8	-16.6	-16.7	-16.3	-15.3	-14.4	-13.4	-13.2	-13.4	-13.9	-14.1	-14.1	-14.5	-14.8	-14.7	-14.6	-14.7	-14.7	-14.5	-15.3	-13.2
14-Mar	-14.6	-14.8	-14.9	-15.0	-15.1	-15.2	-15.3	-15.1	-14.9	-14.2	-12.7	-12.1	-11.6	-11.4	-11.3	-11.1	-12.0	-12.3	-12.6	-13.3	-14.3	-15.0	-15.9	-16.3	-13.8	-11.1
15-Mar	-16.7	-18.4	-19.8	-21.4	-22.5	-24.0	-25.1	-23.6	-19.9	-14.8	-12.0	-11.9	-12.3	-12.0	-12.1	-12.2	-12.4	-12.8	-14.3	-16.3	-18.3	-19.8	-21.0	-22.2	-17.3	-11.9
16-Mar	-23.6	-25.3	-26.3	-27.2	-28.1	-28.9	-29.3	-28.4	-22.3	-18.3	-14.9	-11.3	-9.3	-8.1	-7.2	-7.5	-7.4	-7.6	-7.9	-8.2	-8.4	-8.5	-8.7	-8.9	-15.9	-7.2
17-Mar	-9.0	-9.1	-9.2	-9.3	-9.0	-8.9	-8.9	-8.7	-8.2	-7.5	-6.6	-5.5	-4.7	-4.2	-4.1	-4.2	-4.3	-5.7	-6.5	-6.9	-7.3	-7.9	-8.5	-9.9	-7.3	-4.1
18-Mar	-11.7	-12.2	-12.2	-12.2	-12.2	-12.4	-12.0	-11.5	-10.2	-8.5	-7.1	-6.4	-4.6	-3.6	-2.5	-1.6	-1.6	-1.8	-2.4	-3.3	-5.3	-6.8	-6.1	-6.2	-7.3	-1.6
19-Mar	-6.5	-6.7	-7.3	-7.4	-8.1	-9.1	-8.8	-8.0	-5.9	-3.3	-0.6	0.9	3.6	4.7	5.7	6.3	6.4	5.8	2.9	-0.7	-2.0	-3.0	-4.0	-5.0	-2.1	6.4
20-Mar	-6.2	-7.0	-7.8	-8.8	-9.9	-11.1	-11.9	-11.9	-11.5	-10.6	-8.8	-6.9	-5.7	-4.6	-3.7	-3.3	-4.2	-5.4	-6.8	-8.3	-9.5	-10.7	-11.9	-13.6	-8.3	-3.3
21-Mar	-15.2	-16.6	-17.8	-18.9	-19.7	-19.9	-19.6	-18.2	-15.1	-12.7	-9.6	-6.1	-1.8	1.9	4.1	4.8	4.5	3.8	1.9	-0.1	-1.6	-2.4	-3.2	-3.9	-7.6	4.8
22-Mar	-4.4	-4.9	-5.0	-5.2	-5.4	-5.3	-5.4	-5.2	-3.6	-2.4	-1.0	-0.8	1.4	4.2	7.7	8.6	8.9	8.7	6.8	4.8	3.4	2.3	1.0	0.0	0.4	8.9
23-Mar	-1.1	-1.5	-1.9	-2.4	-3.4	-3.7	-3.9	-3.4	-1.0	2.1	5.2	6.7	8.1	8.0	8.3	7.4	6.7	6.0	5.0	3.0	0.7	-1.6	-2.7	-3.8	1.5	8.3
24-Mar	-4.4	-5.0	-5.6	-5.2	-5.4	-4.7	-4.0	-2.5	-0.7	2.4	4.8	6.9	6.4	5.8	6.1	6.1	6.4	5.1	1.8	2.3	2.1	0.7	-0.3	-1.1	0.7	6.9
25-Mar	-1.5	-1.3	-2.1	-2.1	-1.7	-1.9	-2.0	-0.8	0.6	2.0	5.0	7.5	9.4	10.0	10.4	11.0	10.4	9.5	7.7	5.5	4.1	2.9	0.1	-1.8	3.4	11.0
26-Mar	-3.5	-4.9	-6.4	-7.6	-8.5	-9.1	-9.4	-9.7	-9.4	-8.5	-6.9	-5.5	-4.9	-3.8	-3.2	-2.7	-2.7	-2.8	-3.1	-3.7	-4.3	-4.8	-4.5	-4.7	-5.6	-2.7
27-Mar	-5.4	-6.4	-6.6	-7.0	-7.2	-7.1	-7.7	-8.5	-8.8	-8.3	-7.3	-6.7	-6.1	-5.2	-4.6	-4.5	-4.7	-4.8	-6.0	-7.0	-7.7	-8.6	-9.6	-10.7	-6.9	-4.5
28-Mar	-12.5	-13.7	-14.5	-14.9	-15.7	-16.7	-17.2	-16.6	-14.6	-13.0	-10.7	-8.0	-5.9	-4.5	-4.1	-4.0	-4.3	-4.4	-5.3	-6.4	-7.9	-9.7	-10.9	-11.9	-10.3	-4.0
29-Mar	-12.5	-13.1	-13.7	-14.3	-13.7	-13.9	-13.6	-11.4	-7.8	-4.9	-4.0	-3.3	-2.7	-1.4	-1.0	-1.5	-1.5	-2.1	-2.4	-3.7	-4.7	-6.2	-7.5	-8.3	-7.0	-1.0
30-Mar	-8.4	-7.9	-8.3	-8.8	-9.4	-9.8	-10.1	-8.8	-6.3	-3.6	-1.6	-0.1	1.1	2.1	3.2	3.8	4.2	3.6	2.0	-1.8	-2.1	-2.3	-2.6	-3.5	-3.1	4.2
31-Mar	-4.3	-5.4	-5.4	-5.7	-6.0	-6.5	-6.3	-5.2	-4.0	-2.6	-1.8	-1.3	-0.8	-0.2	0.4	1.3	2.1	2.0	0.5	-1.1	-1.7	-2.2	-3.1	-4.4	-2.6	2.1
	-7.8	-8.4	-8.9	-9.4	-9.8	-10.2	-10.5	-10.1	-8.7	-6.9	-5.0	-3.5	-2.4	-1.5	-0.8	-0.6	-0.7	-1.6	-3.1	-4.4	-5.2	-6.0	-6.5	-7.2	Diurnal Average	
	2.7	3.0	2.8	2.8	2.9	2.9	2.7	2.5	3.1	5.6	8.1	9.2	9.4	10.0	11.0	11.0	10.5	9.5	7.7	5.5	4.1	3.6	2.6	2.3	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Janvier - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	25	3.36	3.36
-20 - 0	541	72.72	76.08
0 - 10	172	23.12	99.19
10 - 20	6	0.81	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Janvier - March 2025

Maximum Value: 99.2 % on Mar 25 01:00

Maximum Daily Average: 86.2 % on Mar 14

Minimum Value: 26.5 % on Mar 25 18:00

Minimum Daily Average: 52.0 % on Mar 21

Maximum Diurnal Average: 79.0 % at hour 6

Minimum Diurnal Average: 50.2 % at hour 16

Monthly Average: 66.04 %

Percentiles: P_1 = 31.3 P_{10} = 41.4 Q_1 = 54.0 Median = 68.7 Q_3 = 78.9 P_{90} = 84.5 P_{99} = 94.7

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

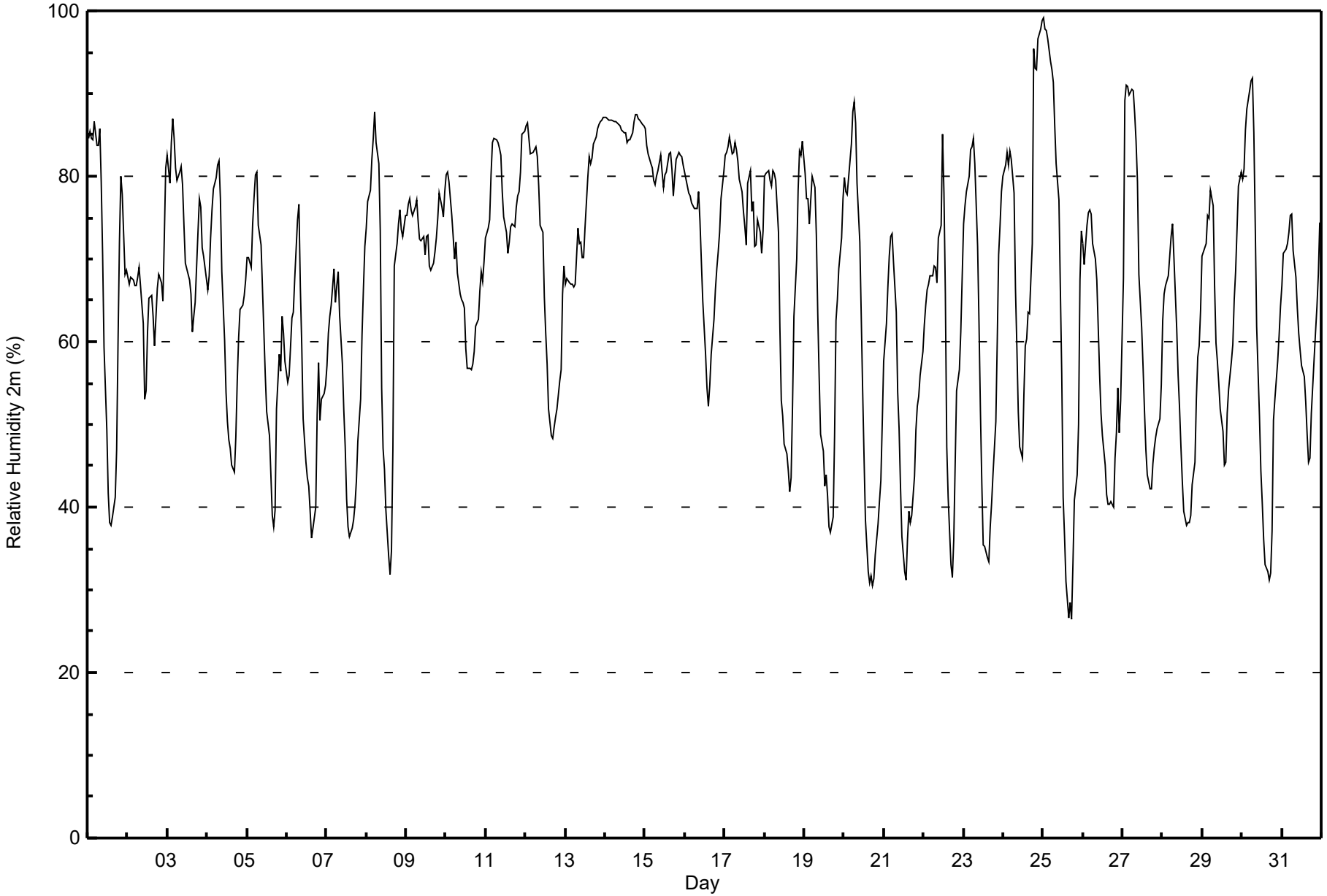
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	84.5	85.5	84.6	84.3	86.6	83.8	83.7	85.7	79.3	70.5	59.4	49.3	41.6	38.1	37.8	38.8	41.1	47.0	60.0	72.1	79.9	77.8	68.2	68.7	67.0	86.6
2-Mar	67.8	67.0	67.7	67.5	66.8	66.8	67.8	68.9	66.7	62.2	53.1	54.0	61.0	65.2	65.6	63.1	59.4	62.8	66.4	68.2	67.1	64.9	72.8	81.0	65.6	81.0
3-Mar	82.5	79.2	84.1	86.9	84.5	80.9	79.5	80.5	81.3	78.9	74.0	69.5	68.2	67.5	65.7	61.1	63.1	64.7	73.2	77.3	76.3	71.4	70.4	67.7	74.5	86.9
4-Mar	66.2	67.9	72.5	75.9	78.4	79.8	81.4	81.9	77.2	68.5	60.2	53.9	50.3	48.2	47.1	45.1	44.3	48.5	55.3	60.5	63.9	64.4	65.6	67.4	63.5	81.9
5-Mar	70.1	70.2	69.0	74.2	77.5	80.2	80.4	74.1	71.6	66.5	61.2	56.0	51.6	48.6	44.0	39.0	37.5	39.7	51.9	58.5	56.5	63.1	61.1	57.6	60.8	80.4
6-Mar	55.0	55.9	59.3	62.8	63.5	67.6	74.8	76.6	66.6	59.7	50.8	45.4	43.6	42.6	39.5	36.2	37.4	40.0	51.2	57.5	50.6	53.1	53.8	54.8	54.1	76.6
7-Mar	57.2	60.9	63.0	64.5	68.8	64.7	66.8	68.4	63.3	57.4	51.8	47.2	41.0	37.6	36.5	37.5	38.5	40.4	43.3	48.0	53.1	60.9	66.4	71.6	54.5	71.6
8-Mar	73.7	77.0	78.3	82.0	84.6	87.7	84.1	81.5	73.3	54.4	47.2	44.6	39.6	34.1	31.8	34.8	47.0	69.2	71.9	74.2	75.9	73.5	72.7	75.2	65.3	87.7
9-Mar	75.3	76.6	77.3	75.9	75.3	76.2	77.1	74.5	72.4	72.2	72.7	70.5	72.7	72.8	69.1	68.7	69.5	70.8	72.6	74.8	78.0	76.3	75.1	78.2	73.9	78.2
10-Mar	80.1	80.5	79.2	75.3	72.6	70.0	72.0	68.3	65.8	65.1	64.7	64.1	59.2	56.8	56.9	56.6	57.3	58.8	61.9	62.7	66.1	68.6	67.2	69.7	66.7	80.5
11-Mar	72.6	73.7	74.7	80.1	84.0	84.6	84.5	84.0	83.3	82.6	78.2	75.1	73.2	70.7	72.1	73.9	74.2	73.9	76.3	77.6	78.2	80.5	85.0	85.4	78.3	85.4
12-Mar	86.1	86.4	84.6	82.8	82.9	83.1	83.6	82.4	78.9	74.1	73.3	65.5	61.1	57.2	51.9	48.7	48.4	49.7	50.8	51.9	55.3	56.7	65.7	69.2	67.9	86.4
13-Mar	66.9	67.6	67.1	67.0	67.0	66.7	67.0	73.8	71.9	72.1	70.2	70.1	73.8	79.8	82.3	81.5	82.3	83.9	84.7	85.8	86.3	86.6	86.7	87.1	76.2	87.1
14-Mar	87.1	86.9	86.8	86.8	86.7	86.7	86.5	86.4	86.2	86.0	85.6	85.2	85.2	84.0	84.5	84.5	85.2	86.7	87.5	87.4	87.0	86.8	86.2	86.0	86.2	87.5
15-Mar	85.8	83.8	82.7	81.6	80.9	79.5	79.0	80.1	80.7	82.6	80.6	78.7	80.2	80.5	82.7	82.8	80.8	77.6	80.1	82.0	82.9	82.6	82.3	81.4	81.3	85.8
16-Mar	80.5	78.9	78.0	77.6	76.7	76.4	76.1	76.2	78.1	74.5	69.7	64.8	58.4	54.4	52.2	54.7	58.5	62.7	66.2	68.8	70.8	73.2	77.2	80.6	70.2	80.6
17-Mar	82.6	82.9	83.6	84.7	82.8	82.8	84.1	83.2	81.8	79.7	78.1	75.8	73.8	71.7	79.2	80.8	75.7	77.0	71.5	71.7	74.7	73.1	70.7	73.3	78.1	84.7
18-Mar	80.0	80.3	80.7	79.4	78.8	80.7	80.3	79.5	73.2	61.7	52.8	51.1	47.7	46.5	44.4	41.9	43.5	52.3	63.0	70.1	78.2	83.0	82.6	84.2	67.3	84.2
19-Mar	80.4	77.2	77.2	74.2	77.0	79.9	78.6	72.9	63.5	55.8	48.8	46.7	42.5	44.0	41.4	37.6	36.9	38.8	48.6	62.5	65.0	68.8	72.6	77.4	61.2	80.4
20-Mar	79.9	78.2	77.8	79.9	83.9	87.8	89.0	86.4	79.2	72.1	63.2	54.3	46.0	38.5	32.2	30.8	31.6	30.6	31.4	34.3	38.0	40.7	43.2	50.1	57.5	89.0
21-Mar	57.6	62.3	66.6	70.4	72.6	73.1	69.7	63.5	53.9	49.4	42.5	36.4	32.3	31.2	36.2	39.6	38.2	39.0	43.7	49.4	52.1	53.4	55.9	58.8	52.0	73.1
22-Mar	62.1	64.4	66.2	67.0	67.9	68.0	69.2	69.0	67.1	72.6	74.1	85.0	78.0	65.8	47.2	41.3	33.1	31.5	36.1	45.3	54.0	56.5	61.3	67.7	60.4	85.0
23-Mar	74.2	76.4	78.1	80.0	83.2	83.6	84.5	81.5	71.6	62.2	51.8	42.9	35.4	35.3	33.9	33.3	37.6	40.5	44.0	50.3	60.0	70.5	74.0	78.2	61.0	84.5
24-Mar	80.0	81.3	82.9	81.3	83.0	82.0	77.9	66.5	59.2	51.6	47.3	45.9	53.5	59.5	60.3	63.5	63.4	71.8	95.4	93.0	92.9	96.6	97.8	98.9	74.4	98.9
25-Mar	99.2	97.8	97.6	96.7	93.9	92.9	91.4	86.0	81.5	77.1	66.4	56.2	41.3	36.4	31.0	26.6	28.4	26.5	33.2	40.9	43.9	50.1	67.5	73.4	64.0	99.2
26-Mar	71.9	69.3	74.1	75.5	75.9	75.4	71.9	70.0	67.5	61.8	56.2	51.4	48.7	45.1	41.5	40.3	40.3	40.6	40.0	45.9	49.1	54.5	49.0	53.0	57.0	75.9
27-Mar	67.6	89.1	91.0	90.8	89.8	90.4	90.4	87.7	84.3	79.3	68.2	61.7	57.0	51.7	46.9	43.9	42.2	42.2	45.2	47.2	48.5	49.4	50.6	54.8	65.4	91.0
28-Mar	62.6	65.8	66.8	68.0	70.4	72.7	74.3	70.2	61.6	55.9	52.1	47.3	43.0	39.5	37.8	38.1	38.1	38.9	42.7	45.5	53.1	58.2	59.5	63.7	55.2	74.3
29-Mar	70.4	71.4	71.9	75.3	74.9	78.3	76.4	66.7	59.9	57.6	55.0	51.8	49.1	45.2	45.5	51.3	54.2	57.6	59.7	65.1	68.5	73.6	78.7	80.5	64.1	80.5
30-Mar	79.7	80.8	85.6	88.1	90.3	91.5	91.9	85.2	74.0	61.9	51.1	44.4	40.5	36.1	33.0	32.1	31.2	32.0	37.1	50.5	53.0	57.7	60.8	64.2	60.5	91.9
31-Mar	66.9	70.6	71.1	71.9	73.2	75.2	75.4	71.1	67.9	64.0	61.0	59.0	57.2	55.7	52.7	48.9	45.3	46.0	51.4	57.9	61.2	64.2	68.2	74.4	62.9	75.4
	74.4	75.7	76.8	77.7	78.5	79.0	79.0	76.9	72.3	67.4	62.0	58.2	55.0	52.9	51.1	50.2	50.5	53.0	57.9	62.5	65.2	67.4	69.3	72.1	Diurnal Average	
	99.2	97.8	97.6	96.7	93.9	92.9	91.9	87.7	86.2	86.0	85.6	85.2	85.2	84.0	84.5	84.5	85.2	86.7	95.4	93.0	92.9	96.6	97.8	98.9	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Janvier - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Janvier - March 2025

Maximum Speed: 19 km/h on Mar 8 15:00

Maximum Daily Speed Average: 10.7 km/h on Mar 27

Minimum Speed Value: 0 km/h on Mar 28 22:00

Minimum Daily Speed Average: 0.3 km/h on Mar 29

Maximum Diurnal Speed Average: 3.1 km/h at hour 17

Minimum Diurnal Speed Average: 0.2 km/h at hour 1

Monthly Average Velocity: 0.8 km/h 339.4 deg

Percentiles: $P_1 = 1$ $P_{10} = 2$ $Q_1 = 4$ Median = 6 $Q_3 = 8$ $P_{90} = 10$ $P_{99} = 15$

Hours in Service: 744

Hours of Data: 744

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	SSW2	S3	S3	S3	SSW6	SSW8	SSW7	SSW8	SSW9	SSW10	SW8	SW8	SW10	SW10	W8	W9	W6	W1	SE3	SSE3	S5	SSW7	SSW8	SSW7	SSW5.4	SW10
2-Mar	SSW8	SSW9	SSW8	SSW8	SSW8	SSW10	SSW10	SSW10	SW9	SW8	WNW8	WNW8	NW8	N7	NNW5	N5	WNW5	W5	SW4	SW5	W5	W6	N6	N7	WSW3.9	SSW10
3-Mar	N6	N7	N8	N9	N10	N7	N9	NNE10	N8	N5	NW5	NNW5	NW5	N7	NNW4	NW5	NNE5	N2	S2	SSE2	S4	SSW6	SW6	SW5	N3.7	NNE10
4-Mar	SW5	SW7	SSW6	SSW7	SSW7	SSW9	SSW9	SSW9	SSW9	SW10	SW10	SW11	SW10	SW11	SW11	SW9	SW9	SW6	SSW9	SSW7	SSW7	SSW7	SSW7	SW5	SSW8.0	SW11
5-Mar	SSW6	NW1	N6	N4	N5	N9	N7	N8	N9	N9	N9	N10	NNE10	NNE8	NE6	NE4	NE3	NW2	E3	S2	E1	S2	SSW5	SSW7	NNE3.5	NNE10
6-Mar	SSW7	SSW7	SSW7	S6	SSW8	SSW5	SW3	SSW4	SSW4	SW4	SSW1	E3	E3	S5	W10	WNW9	WNW9	WNW7	SW4	SSW6	SW8	SW7	SW6	SW5	SW4.5	W10
7-Mar	SSW6	S6	S6	S4	S5	SSW8	SSW4	S4	SSW4	S3	W4	SW7	WSW7	WNW7	WNW8	W9	W8	WSW7	W6	W4	NNW4	N7	NNE5	N3	WSW3.5	W9
8-Mar	NNE4	N2	N3	N2	WSW1	S2	SSW6	SSW9	SW9	W15	W17	W17	W16	W17	W19	WNW16	NNW11	NNE14	NNE13	NNE11	NNE12	NNE9	NNE6	NNE6	WNW5.5	W19
9-Mar	NNE7	NNE8	NNE10	NNE11	NNE11	NNE11	NNE11	NNE11	NNE10	N9	NNE9	NNE10	NNE10	N9	NNE9	N8	N8	NNE7	NNE7	N4	N3	NNE3	N4	N2	NNE7.9	NNE11
10-Mar	NNE1	N2	NNE3	NE3	E3	ESE4	SE4	SE3	SE3	SE5	SSE5	SSW5	SW2	ENE4	NNE6	N3	ENE6	E6	ENE4	NE5	NNE4	NNE3	NNE6	N4	ENE2.2	NNE6
11-Mar	NNE5	NNE5	N3	NNE6	N6	NNE6	NNE7	N5	NNE6	N6	NNE8	NE8	NNE7	NNE8	NNE6	NE6	NE7	NNE9	NNE8	NNE11	NNE9	NNE7	N7	N7	NNE6.7	NNE11
12-Mar	NNE7	N8	NNE8	N6	N6	N6	NNE5	N6	NNE7	NNE4	NNE7	NNE7	NNE9	NNE10	NNE10	NNE9	NNE9	NE7	NE6	NE6	NNE4	NE4	N2	N2	NNE6.3	NNE10
13-Mar	N3	N4	N5	N5	N6	NNE6	NNE7	NNE6	NNE6	NE8	NE11	NE11	NE12	NE10	NNE13	NE14	NNE14	NNE15	NNE14	NNE11	NNE9	NNE8	NNE8	N7	NNE8.6	NNE15
14-Mar	N8	N8	N7	N7	N6	N5	N5	N7	N6	N7	N7	N8	N9	NNE11	N10	N9	N8	NNW4	N4	N5	N3	NNW3	NNW2	NNE3	N6.3	NNE11
15-Mar	NNE2	SW2	S2	SSW2	S2	SSW3	SSW4	SSW5	S4	S2	NE2	NNE3	NNE4	NNE5	NNE8	NNE8	NNE7	NNE5	ENE3	SE2	SSE2	SSE3	S2	S2	ENE0.9	NNE8
16-Mar	SSE1	SSE2	S2	SSE2	SSE1	SSE1	S2	SSW4	SW3	NNW2	NNW4	NNE1	SE7	SSE7	S9	S10	S8	S6	S5	SSE4	SSE4	S4	SSE4	S5	S3.4	S10
17-Mar	SSE3	SE3	SSE3	S4	S4	SSE4	S5	SSW5	SW5	SW7	SW8	SW7	WSW6	WNW6	NNE6	NNE5	N6	NNE8	NNE6	N5	N5	NNE5	NNE5	N4	WNW0.6	NNE8
18-Mar	NNE3	N2	NW0	ESE2	SSW2	SW3	SW3	SSW4	SW3	WNW4	W8	W9	W8	WSW9	WSW7	SW7	W6	W7	NW3	E4	ESE4	SSW3	SW4	WSW5	WSW3.2	WSW9
19-Mar	WSW4	SSW5	SSW7	S5	S6	SSE4	SSW5	S5	SSW5	SSW4	SSE1	S4	SW3	SW8	W9	W11	W9	W6	SW1	SE1	SSE2	SE2	SSW2	N2	SW3.3	W11
20-Mar	N5	NNE6	NNE8	NNE10	NNE8	NNE6	NNE6	NNE9	N8	N8	N9	NNE10	NNE10	NNE10	NNE10	N10	NNE10	NNE9	NNE10	NE8	NE6	NE4	ENE3	NE3	NNE7.6	NNE10
21-Mar	NNE3	N1	N2	NNE2	N1	N1	N3	N3	NNE4	N4	NNE5	NNE5	NNE5	N4	ESE7	SSE10	SE11	ESE9	ESE9	SE9	SE6	SSE6	SSE5	SSE5	E2.5	SE11
22-Mar	SSE5	SSE5	SSE5	SSE4	S6	S7	S6	S7	SSW9	SSW9	SW8	SSW9	SSW9	SSW8	SSW8	SW9	W10	W10	W7	W9	W8	WSW7	WSW6	WSW7	SW5.8	W10
23-Mar	SSW5	SSW6	SW6	SW6	SSW6	SSW8	SSW6	SSW5	SSW6	SSW5	SE3	NW1	W8	N6	NNE5	NE2	ENE5	ENE6	E5	E6	ENE4	NNE1	ESE2	SSE1	S1.5	W8
24-Mar	SSE2	SSE2	S1	S1	SE2	SE3	S3	SSW4	SSW6	SW6	SW6	SW10	SW13	SW11	SW12	SW10	SW6	WSW11	WSW10	W11	W6	SSW5	SW4	S5	SW5.5	SW13
25-Mar	S6	SSW5	SSW6	SSW7	SSW8	SSW9	SSW8	SSW8	SW7	SW9	WSW8	SW9	WSW10	W9	W12	W13	WNW14	WNW10	NNW5	NNW3	NNE2	N7	NNE11	N8	WSW4.7	WNW14
26-Mar	N9	N9	N8	N10	N9	N8	N8	NNE8	NNE9	NNE8	N8	N7	N7	N7	NNE8	N10	NNE9	NE8	NE9	NNE7	NNE7	NNE6	NE7	NNE6	NNE7.8	N10
27-Mar	NE7	NE6	NE7	NE7	NE7	NE7	NNE10	NNE12	NNE12	NNE13	NNE13	NNE14	NNE13	NNE13	NNE15	NNE14	NNE16	NNE15	NE12	NE10	NE11	NE10	NE10	NNE7	NNE10.7	NNE16
28-Mar	N4	N5	N6	NNE5	N5	NNE4	NNE4	NNE7	NNE5	NNE7	NNE7	NNE7	NE7	E6	NE6	N6	N6	N5	NNE8	NNE7	N3	NE0	NE2	NNE2	NNE4.9	NNE8
29-Mar	NNE1	NNE2	SE1	SW1	S1	SSE1	S2	SSW2	SSE0	E1	N1	ESE3	SSW5	SW4	W3	NNE8	NNE6	NNE5	NE4	ENE1	S2	SSW2	ENE0	S2	ENE0.3	NNE8
30-Mar	SSW5	SSW6	SSW7	SSW8	SSW8	SSW8	SSW7	SSW7	SW6	SW6	SSW8	SSW7	SW7	SSW7	SW5	SSW5	SSW5	SSW7	S6	S2	SSW5	SSW8	SSW9	SSW8	SSW6.5	SSW9
31-Mar	SSW8	S3	SSE4	SSE5	S5	S3	WSW1	S3	SE3	SSE7	SSE11	SSE10	SSE10	SE10	S11	S10	SSE8	SE9	SE9	SE7	SE7	S7	S5	SSE2	SSE6.3	SSE11
	NNW0.2	NNW0.4	NNE0.4	NE0.5	SE0.4	S0.6	SSW0.3	SSW0.5	WSW0.6	WNW1.2	NW1.7	NW1.4	NW1.6	NNW1.5	NW2.5	NW2.7	NNW3.1	N2.5	NE2.2	NE1.7	NE1.0	NE0.2	N0.5	NNW0.4	Diurnal Average	
	N9	N9	NNE10	NNE11	NNE11	NNE11	NNE11	NNE12	NNE12	W15	W17	W17	W16	W17	W19	WNW16	NNE16	NNE15	NNE14	NNE11	NNE12	NE10	NNE11	N8	Diurnal Maximum	

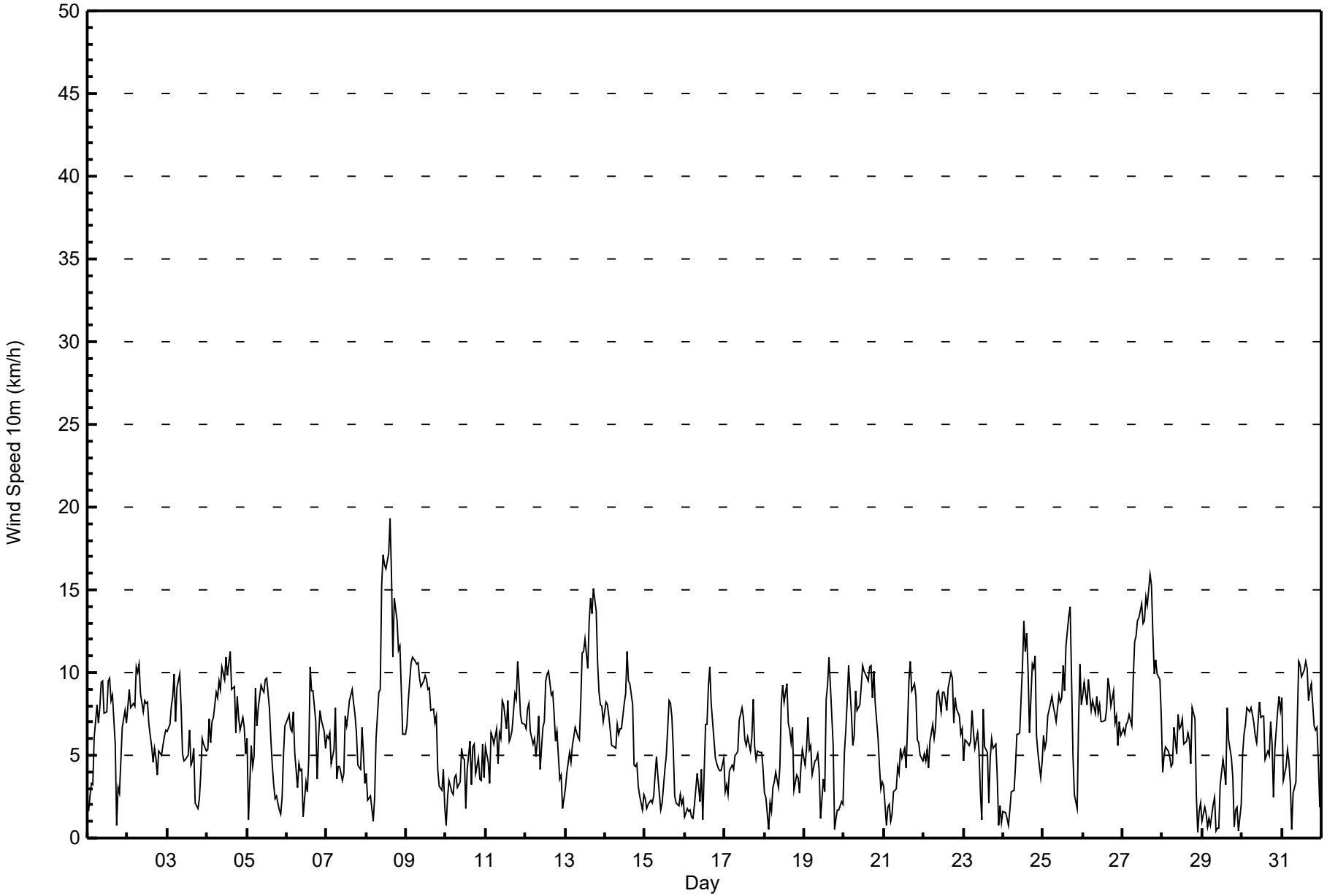
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Janvier - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	305	40.99	40.99
6 - 11	406	54.57	95.56
12 - 19	33	4.44	100.00
20 - 28	0	0.00	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Janvier - March 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	48	43	11	8	8	5	14	34	43	37	23	4	6	2	8	11	305
6 - 11	70	99	28	2	3	3	9	8	17	75	43	12	26	9	1	1	406
12 - 19	0	18	3	0	0	0	0	0	0	0	2	0	8	2	0	0	33
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	118	160	42	10	11	8	23	42	60	112	68	16	40	13	9	12	744

Total Number of Valid Hours: 744

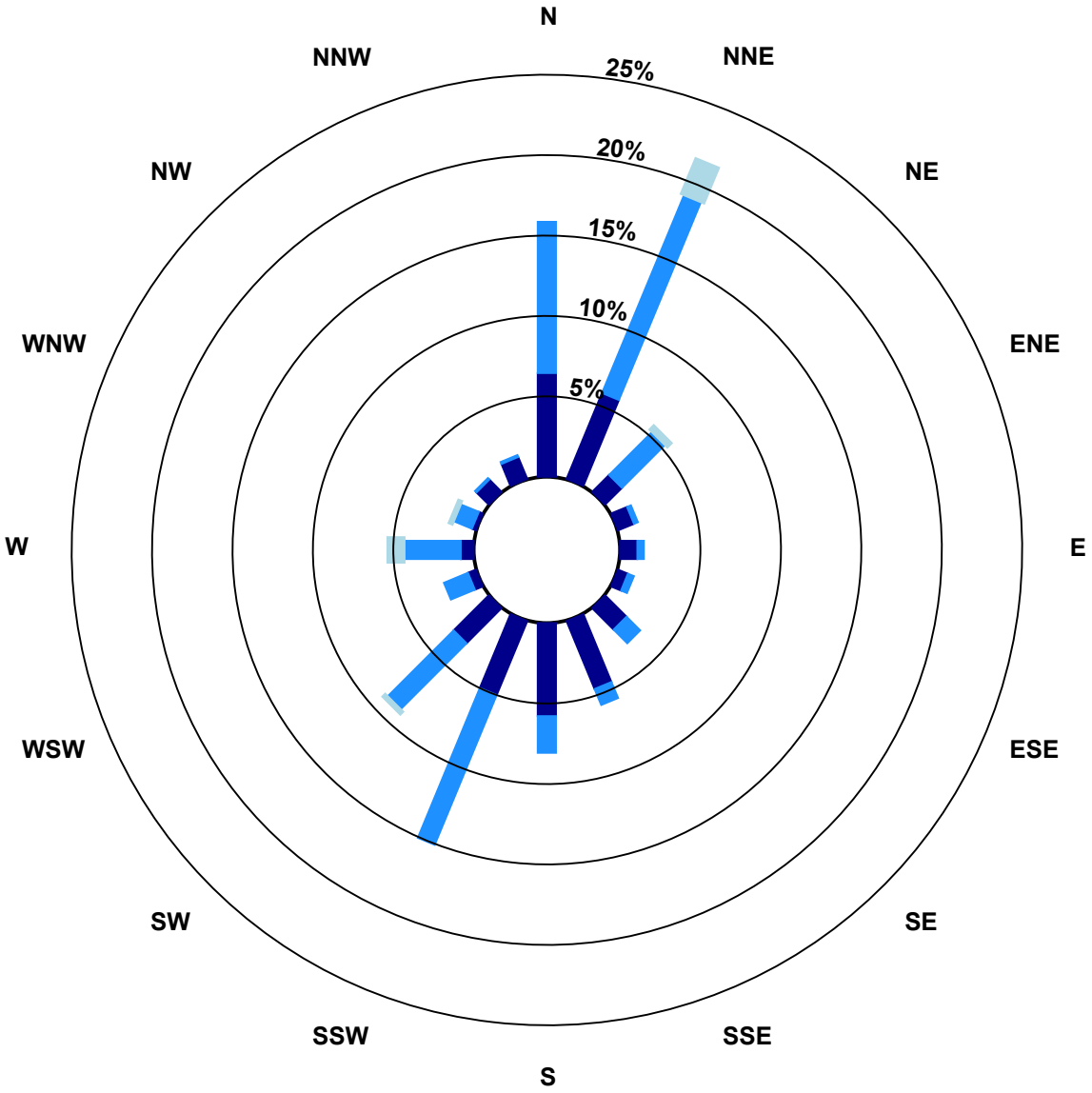
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 10m (WS10) - km/h

Janvier



Classes (km/h)

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

Total Number of Valid Hours: 744

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

Maximum Value: 7 km/h on Mar 8 11:00

Minimum Value: 0 km/h on Mar 16 03:00

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

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

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

Direction of Maximum Speed: 271 deg on Mar 8 15:00
Direction of Maximum Daily Speed Average: 33.5 deg on Mar 27

Direction of Minimum Speed: 43 deg on Mar 28 22:00

Direction of Minimum Daily Speed Average: 0.3 deg on Mar 29

Monthly Average Direction: 339.4 deg

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	196	186	174	182	200	199	201	195	199	201	215	227	221	218	259	261	278	259	124	164	190	194	195	193	209.4
2-Mar	198	199	201	205	201	197	197	202	218	221	282	303	314	354	348	7	293	264	232	232	280	276	6	7	243.4
3-Mar	6	4	10	7	11	5	9	13	10	4	326	343	321	7	338	305	22	355	184	154	190	211	216	219	354.8
4-Mar	227	230	206	209	205	201	193	195	207	222	224	222	223	224	223	224	231	216	201	202	192	193	210	214	213.1
5-Mar	199	313	5	5	2	5	356	1	9	3	9	10	29	30	40	38	41	310	96	175	85	170	194	199	14.0
6-Mar	204	205	199	190	194	201	229	195	195	225	198	88	92	190	259	288	287	285	236	203	215	220	227	219	221.9
7-Mar	193	182	189	188	178	197	199	189	203	180	262	236	243	286	283	268	272	254	265	272	341	11	19	2	242.4
8-Mar	12	354	360	7	247	179	195	204	220	264	273	268	269	281	271	286	332	19	14	18	26	18	13	14	302.8
9-Mar	12	16	18	12	23	19	16	16	19	11	14	16	15	10	12	6	7	18	18	8	2	15	8	3	14.3
10-Mar	13	7	15	52	91	104	142	131	139	136	152	192	217	77	18	356	60	99	65	52	27	31	33	8	72.5
11-Mar	15	23	359	21	11	17	19	6	12	10	32	39	21	33	23	43	38	13	33	21	19	23	10	10	21.5
12-Mar	12	10	13	3	7	8	20	8	15	23	33	28	29	32	26	19	22	37	36	37	28	34	350	353	21.1
13-Mar	0	3	4	11	9	18	22	18	18	35	43	54	54	39	30	35	33	27	28	23	12	14	13	11	27.4
14-Mar	9	9	8	6	4	4	5	10	6	3	359	356	6	12	3	10	5	345	0	3	356	338	333	12	4.1
15-Mar	13	215	182	192	175	197	193	196	191	175	45	29	24	29	23	29	16	24	59	131	155	159	181	179	66.0
16-Mar	168	156	177	160	156	165	183	194	214	348	344	22	141	160	181	183	176	173	169	165	164	169	168	179	172.5
17-Mar	149	144	148	185	179	159	185	195	218	226	230	226	238	295	26	18	8	13	14	5	11	14	16	10	290.5
18-Mar	12	9	314	108	201	231	225	213	233	284	270	267	262	240	253	222	264	271	310	95	121	192	235	244	249.7
19-Mar	241	212	196	184	180	160	199	191	198	196	157	172	231	225	270	274	276	281	233	142	149	139	207	5	221.9
20-Mar	11	19	17	21	21	16	14	20	11	7	6	21	13	25	21	11	21	21	31	36	45	54	67	45	21.3
21-Mar	15	358	8	16	349	4	8	356	26	360	22	14	30	1	121	158	128	117	121	128	146	162	154	159	99.4
22-Mar	153	157	165	159	173	178	175	181	196	200	216	205	193	198	206	226	271	275	262	265	262	250	244	238	215.2
23-Mar	209	212	221	225	202	200	207	201	211	207	129	316	262	1	25	44	65	75	80	83	58	22	108	153	186.9
24-Mar	164	152	179	171	145	141	172	194	196	220	218	221	222	216	219	220	233	245	246	277	262	207	230	176	221.9
25-Mar	184	208	200	195	197	203	205	209	224	232	242	224	256	267	265	281	285	292	342	329	30	11	13	11	252.5
26-Mar	6	9	11	11	10	10	11	17	19	13	9	353	0	6	19	6	12	34	37	21	23	18	34	25	14.6
27-Mar	55	38	47	52	50	35	24	23	25	29	32	26	33	31	24	25	30	32	37	39	46	45	38	31	33.5
28-Mar	357	3	6	12	9	12	13	12	20	16	13	22	36	83	36	4	5	1	19	29	351	43	41	22	17.7
29-Mar	22	31	124	216	185	165	180	198	168	100	5	114	201	215	277	17	24	19	42	58	169	196	60	181	77.2
30-Mar	192	199	196	195	195	196	195	199	216	230	207	202	220	197	219	212	205	201	191	174	203	198	201	199	202.0
31-Mar	194	172	158	160	170	174	243	171	141	153	168	167	153	143	173	186	150	145	131	130	142	170	183	157	160.3
	341.0	347.7	29.6	46.2	134.5	171.7	203.7	206.6	256.1	284.6	315.8	309.8	304.0	330.7	320.8	320.1	346.2	358.2	34.8	35.5	35.1	49.0	3.7	334.2	
	Diurnal Average																								

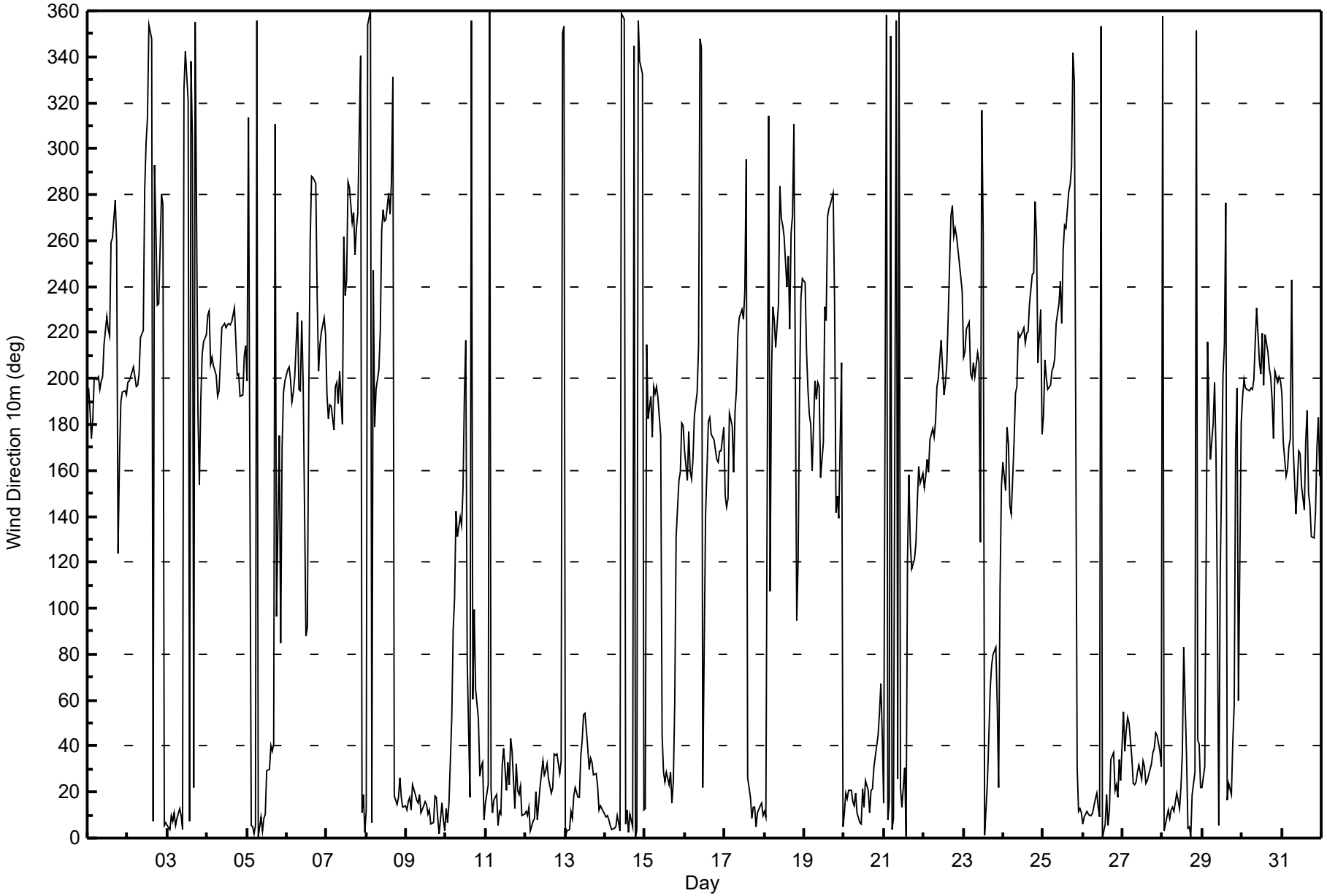
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Janvier - March 2025



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

Maximum Value: 106 deg on Mar 23 12:00

Minimum Value: 7 deg on Mar 1 22:00

Percentiles: P_1 = 10 P_{10} = 15 Q_1 = 19 Median = 24 Q_3 = 35 P_{90} = 53 P_{99} = 96

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	40	21	18	19	12	11	11	8	13	17	27	26	28	31	30	28	25	74	52	19	10	7	12	10	74
2-Mar	11	14	15	21	22	14	14	17	21	25	30	41	50	43	53	46	51	19	18	23	22	19	36	26	53
3-Mar	28	32	23	25	22	33	31	21	24	55	55	55	54	42	55	51	38	81	34	18	19	17	18	27	81
4-Mar	24	20	21	16	14	13	12	13	21	22	22	24	30	29	30	28	24	22	13	14	13	16	20	25	30
5-Mar	15	84	32	38	33	32	40	41	33	38	32	33	21	16	24	48	53	50	67	48	47	28	11	13	84
6-Mar	15	15	13	10	9	11	24	15	21	29	101	56	62	67	25	30	27	22	37	14	17	20	20	19	101
7-Mar	18	16	11	15	21	14	43	17	21	34	88	32	47	33	43	24	19	22	23	22	50	25	20	30	88
8-Mar	30	39	37	53	67	63	16	15	22	24	22	24	23	25	23	24	49	18	20	19	17	19	19	19	67
9-Mar	20	17	20	22	18	19	19	20	20	25	22	23	25	23	26	26	24	21	22	25	26	46	31	52	52
10-Mar	81	39	37	52	37	29	31	51	52	42	48	50	88	50	38	61	33	26	29	35	36	24	17	34	88
11-Mar	22	27	37	18	19	18	17	24	19	20	21	24	39	17	46	24	20	22	21	19	22	20	20	22	46
12-Mar	19	23	21	26	24	21	16	26	21	51	22	28	21	16	18	24	19	24	21	13	22	17	24	27	51
13-Mar	21	19	21	17	19	16	14	16	18	21	18	23	21	19	16	16	16	14	15	16	21	21	19	22	23
14-Mar	22	22	23	24	28	30	36	27	28	33	40	37	41	25	37	28	35	59	35	35	43	50	48	31	59
15-Mar	31	36	39	26	30	30	12	8	12	62	97	65	48	34	19	16	22	24	30	25	26	23	36	28	97
16-Mar	34	43	37	42	60	54	13	13	31	49	33	93	47	45	43	24	26	30	23	22	23	21	18	17	93
17-Mar	21	21	20	18	17	23	15	15	26	26	28	30	38	46	20	29	42	21	24	33	28	19	23	21	46
18-Mar	25	28	80	78	55	22	23	21	45	43	31	28	33	35	42	42	24	31	40	25	47	37	19	20	80
19-Mar	21	18	9	23	15	32	26	25	30	42	100	57	96	39	28	26	24	21	81	78	51	59	42	80	100
20-Mar	24	10	15	14	11	14	13	16	25	30	31	24	27	24	32	28	21	15	14	15	24	29	31	25	32
21-Mar	16	80	43	42	43	67	29	41	33	42	30	39	22	54	55	34	25	20	16	20	29	24	22	20	80
22-Mar	20	19	19	21	18	17	18	15	16	23	28	25	23	25	37	32	23	25	20	19	19	19	17	19	37
23-Mar	24	24	16	17	13	12	15	15	21	33	65	106	34	54	58	72	36	24	24	17	26	96	84	82	106
24-Mar	49	50	77	88	52	11	20	13	16	29	30	33	28	26	26	26	34	32	33	21	26	13	33	30	88
25-Mar	29	13	11	9	11	14	14	17	19	22	24	32	28	29	30	24	28	34	52	75	86	24	20	22	86
26-Mar	25	26	24	25	25	24	22	22	21	28	33	44	44	42	28	25	22	18	15	19	18	17	18	21	44
27-Mar	22	17	18	20	21	16	15	14	15	15	20	17	24	19	18	20	18	17	16	15	19	17	16	17	24
28-Mar	22	21	21	24	21	23	15	25	41	24	39	35	34	52	52	43	27	31	20	20	20	93	49	38	93
29-Mar	81	26	30	81	32	60	26	41	96	103	100	57	59	70	81	22	36	25	35	71	56	54	82	29	103
30-Mar	11	11	10	10	9	11	10	17	27	35	41	48	49	48	61	64	50	30	15	40	13	12	14	14	64
31-Mar	13	34	24	23	25	31	88	55	67	30	28	31	32	32	36	34	33	33	23	19	22	23	26	53	88
	81	84	80	88	67	67	88	55	96	103	101	106	96	70	81	72	53	81	81	78	86	96	84	82	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 20m (WS20) - km/h

Janvier - March 2025

Maximum Speed: 26 km/h on Mar 8 15:00

Maximum Daily Speed Average: 12.9 km/h on Mar 27

Minimum Speed Value: 0 km/h on Mar 24 00:00

Minimum Daily Speed Average: 0.4 km/h on Mar 29

Maximum Diurnal Speed Average: 4.3 km/h at hour 17

Minimum Diurnal Speed Average: 0.4 km/h at hour 22

Monthly Average Velocity: 1.4 km/h 326.0 deg

Percentiles: $P_1 = 1$ $P_{10} = 4$ $Q_1 = 6$ Median = 8 $Q_3 = 11$ $P_{90} = 12$ $P_{99} = 20$

Hours in Service:	744
Hours of Data:	742
Hours of Missing Data:	2
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	S3	SW5	SSW6	SSW7	SSW9	SSW11	SSW10	SSW10	SSW12	SW11	SW9	SW10	SW12	SW12	W11	W11	WNW8	WNW3	ESE1	S4	SSW7	SW9	SSW10	SSW10	SW7.5	SW12
2-Mar	SSW10	SSW11	SW11	SW11	SW11	SSW13	SSW12	SSW13	SW12	SW10	WNW12	NW13	NW13	N9	NNW8	N6	NW8	W7	WSW6	WSW8	WNW9	WNW9	N9	N9	W5.7	SSW13
3-Mar	N9	N10	N10	N11	N12	N9	N12	NNE13	N10	N6	NNW7	NNW6	NW7	N8	NNW6	NW7	NNE6	NNW4	WSW2	SSW4	SSW6	SW8	SW8	SW7	NNW5.1	NNE13
4-Mar	WSW8	WSW10	SW8	SW10	SW10	SSW11	SSW11	SSW12	SW11	SW13	SW12	SW14	SW12	SW13	SW14	SW11	WSW12	SW9	SW11	SW10	SSW9	SSW10	SW9	SW7	SW10.5	SW14
5-Mar	SW8	NW4	N8	N7	N8	N12	N10	N11	N12	N12	N11	N12	NNE11	NE9	NE6	NE5	NE3	NW4	E3	SSE3	E1	SSW4	SW7	SW9	N4.5	N12
6-Mar	SW10	SW10	SW9	SSW9	SSW10	SW7	SW6	SSW6	SSW5	SW5	SSW2	E4	ESE3	SSW6	W13	WNW13	WNW12	WNW11	W6	SW9	SW11	SW11	WSW10	SW8	WSW6.4	W13
7-Mar	SSW8	SSW8	SSW8	SSW6	SSW8	SSW10	SW5	SW6	SW5	S4	W5	WSW9	WSW8	WNW10	WNW11	W12	WNW11	W10	W9	WNW7	NNW7	NNE9	NNE7	N5	WSW5.0	W12
8-Mar	NNE5	NNE3	NNE3	NNE2	SW1	SSW3	SSW9	SW12	SW13	W20	W23	W22	W22	WNW24	W26	WNW23	NNW17	NNE18	NNE17	NNE14	NNE14	NNE11	NNE8	NNE8	NW7.9	W26
9-Mar	NNE9	NNE11	NNE12	NNE13	NNE13	NNE13	NNE13	NNE13	NNE12	NNE11	NNE11	NNE12	NNE11	NNE11	NNE11	N9	NNE10	NNE8	NNE9	N6	N5	NNE4	NNE5	NNE3	NNE9.7	NNE13
10-Mar	NE2	NNE4	NNE5	ENE4	E3	ESE4	SE5	SE4	SE4	SE6	SSE6	SSW5	SSW2	ENE4	NNE7	N4	ENE7	E7	ENE5	ENE6	NE4	NE4	NE7	NNE5	E2.9	ENE7
11-Mar	NNE7	NNE6	N4	NNE8	NNE8	NNE7	NNE8	N6	NNE8	N7	NE9	NE9	NNE7	NE9	NNE7	NE7	NE8	NNE11	NE10	NNE13	NNE12	NNE9	NNE9	NNE9	NNE8.1	NNE13
12-Mar	NNE9	NNE11	NNE10	N9	N8	N9	NNE7	NNE8	NNE9	NNE5	NE7	NNE8	NE11	NE11	NNE11	NNE10	NNE10	NE9	NE8	NE8	NE6	NE6	NNE5	NNE5	NNE8.0	NNE11
13-Mar	N5	N6	N7	NNE6	NNE7	NNE7	NNE8	NNE8	NNE7	NE10	NE13	ENE14	ENE14	NE12	NE16	NE17	NE16	NE18	NE17	NNE13	NNE12	NNE11	NNE10	NNE10	NE10.6	NE18
14-Mar	NNE11	NNE11	N10	N9	N8	N8	N8	N9	N8	N8	N9	N11	N10	NNE14	N12	N12	N10	NNW7	N6	N7	N6	NNW5	NNW5	N5	N8.5	NNE14
15-Mar	N5	WNW3	SSW4	SW5	SW3	SW3	SSW6	SSW7	SSW4	SSW2	ENE3	NE3	NE5	NE6	NNE9	NE9	NNE9	NNE7	NE4	ENE2	SW2	SSW5	UO	SSW4	NNE0.7	NNE9
16-Mar	SSW3	S2	S2	S2	S1	UO	SSW3	SSW6	SSW4	NNW2	N5	NNE1	SSE8	SSE8	S11	S12	S9	S7	S6	SSE6	SSE6	SSE5	S6	S6	S4.5	S12
17-Mar	SSE4	SSE5	SSE4	S6	S6	SSE6	S7	SSW7	SW7	SW9	WSW10	SW9	WSW7	NW8	NNE7	NNE6	NNE8	NNE11	NNE8	N7	N7	NNE7	NNE7	NNE7	WNW0.9	NNE11
18-Mar	NNE5	NNE4	NNW2	E2	S3	WSW5	WSW5	SW5	WSW4	WNW6	W11	W12	W10	WSW12	W9	SW8	W7	W9	NW4	E5	SE6	SSW5	WSW7	W8	W4.3	W12
19-Mar	W7	WSW7	SW9	SSW7	SSW8	S6	SSW7	SSW6	SSW6	SSW4	S2	S4	SW4	SW10	W13	WNW15	WNW12	WNW8	NW4	NNW1	W1	S2	SW4	NNE4	WSW4.7	WNW15
20-Mar	NNE8	NNE9	NNE11	NNE13	NNE10	NNE8	NNE8	NNE11	NNE9	N9	N11	NNE11	NNE12	NNE11	NNE11	NNE12	NNE12	NNE10	NE12	NE10	ENE8	ENE6	E4	E5	NNE9.2	NNE13
21-Mar	ENE4	E3	E3	NE4	ENE2	NNE3	NNE4	N4	NNE5	N5	NNE6	NNE6	NNE6	N5	SE8	SSE11	SE13	SE11	SE12	SE11	SSE8	S8	SSE7	S7	ESE3.4	SE13
22-Mar	SSE7	SSE7	S8	SSE6	S8	S9	S8	S8	SSW10	SSW10	SW9	SSW11	SSW10	SSW10	SW10	SW12	WNW13	WNW13	W10	W12	W11	W10	WSW10	WSW10	SW7.5	WNW13
23-Mar	SW8	SW9	SW9	WSW9	SW8	SW10	SW9	SW6	SW7	SW6	SSE3	NNW2	W10	N7	NNE6	NNE2	ENE6	E9	E8	E8	E7	E3	SE6	S0	SSW1.9	SW10
24-Mar	SE2	S1	S2	S1	S4	SSE5	SSW5	SSW6	SSW7	SW8	SW8	SW13	SW16	SW14	SW15	SW12	WSW8	WSW14	WSW14	WNW16	W9	SW7	W6	SSW6	SW7.3	SW16
25-Mar	SSW8	SW8	SW8	SW9	SW10	SW11	SW10	SW10	SW9	WSW11	WSW10	SW10	W13	W12	W15	WNW18	WNW20	NW15	NNW9	NNW6	NNW6	N10	NNE14	N10	W6.9	WNW20
26-Mar	N11	N12	NNE10	NNE12	N11	NNE10	NNE10	NNE9	NNE10	NNE9	N9	N9	N9	N8	NNE9	N12	NNE11	NE9	NE11	NNE9	NNE10	NNE8	NE9	NE8	NNE9.5	NNE12
27-Mar	ENE8	NE7	ENE8	ENE9	ENE9	NE8	NNE12	NNE14	NNE15	NE16	NE16	NE17	NE16	NE15	NNE17	NNE17	NE19	NE18	NE15	NE12	ENE13	ENE12	NE11	NE9	NE12.9	NE19
28-Mar	NNE6	N7	NNE8	NNE7	NNE7	NNE6	NNE6	NNE8	NNE6	NNE9	NNE8	NNE8	NE8	E7	NE7	N7	N7	N6	NNE10	NE9	NNE5	NNE3	NNE4	NNE5	NNE6.4	NNE10
29-Mar	NNE3	NNE4	NNE2	NNE1	SW2	SSW2	SSW4	SSW3	WSW1	W2	NNE1	SE4	SSW5	SW5	WNW5	NNE9	NNE7	NNE6	NE4	ENE2	SSW3	WSW3	WNW2	SW4	NW0.4	NNE9
30-Mar	SW7	SW8	SSW9	SSW10	SSW10	SSW10	SSW9	SW8	SW7	WSW7	SW10	SSW9	SW9	SSW8	SW5	SW6	SW5	SSW8	SSW8	SSW6	SW8	SSW10	SSW12	SSW10	SW8.2	SSW12
31-Mar	SSW11	S5	SSE6	S6	S6	S5	SE1	S3	SE4	SSE8	S13	S12	SSE12	SSE12	S13	SSW12	SSE10	SSE11	SE11	SE9	SSE9	S9	S7	S5	SSE7.9	S13
	NW0.7	NW1.1	NNW0.6	NNW0.4	SW0.5	SW0.9	WSW1.0	WSW1.1	W1.5	WNW2.1	NW2.5	NW2.2	NW2.4	NW2.3	NW3.6	NW4.0	NNW4.3	N3.6	NNE2.8	NNE2.0	NNE1.3	NW0.4	NNW0.9	NW0.9	Diurnal Average	
	N11	N12	NNE12	NNE13	NNE13	SSW13	NNE13	NNE14	NNE15	W20	WNW23	W22	W22	WNW24	W26	WNW23	WNW20	NE18	NE17	WNW16	NNE14	ENE12	NNE14	N10	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 - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8 km/h on Mar 8 11:00

Minimum Value: 0 km/h on Mar 29 05:00

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

Hours in Service:	744
Hours of Data:	742
Hours of Missing Data:	2
Hours of Calibration:	0
Percent Operational Time:	99.7

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

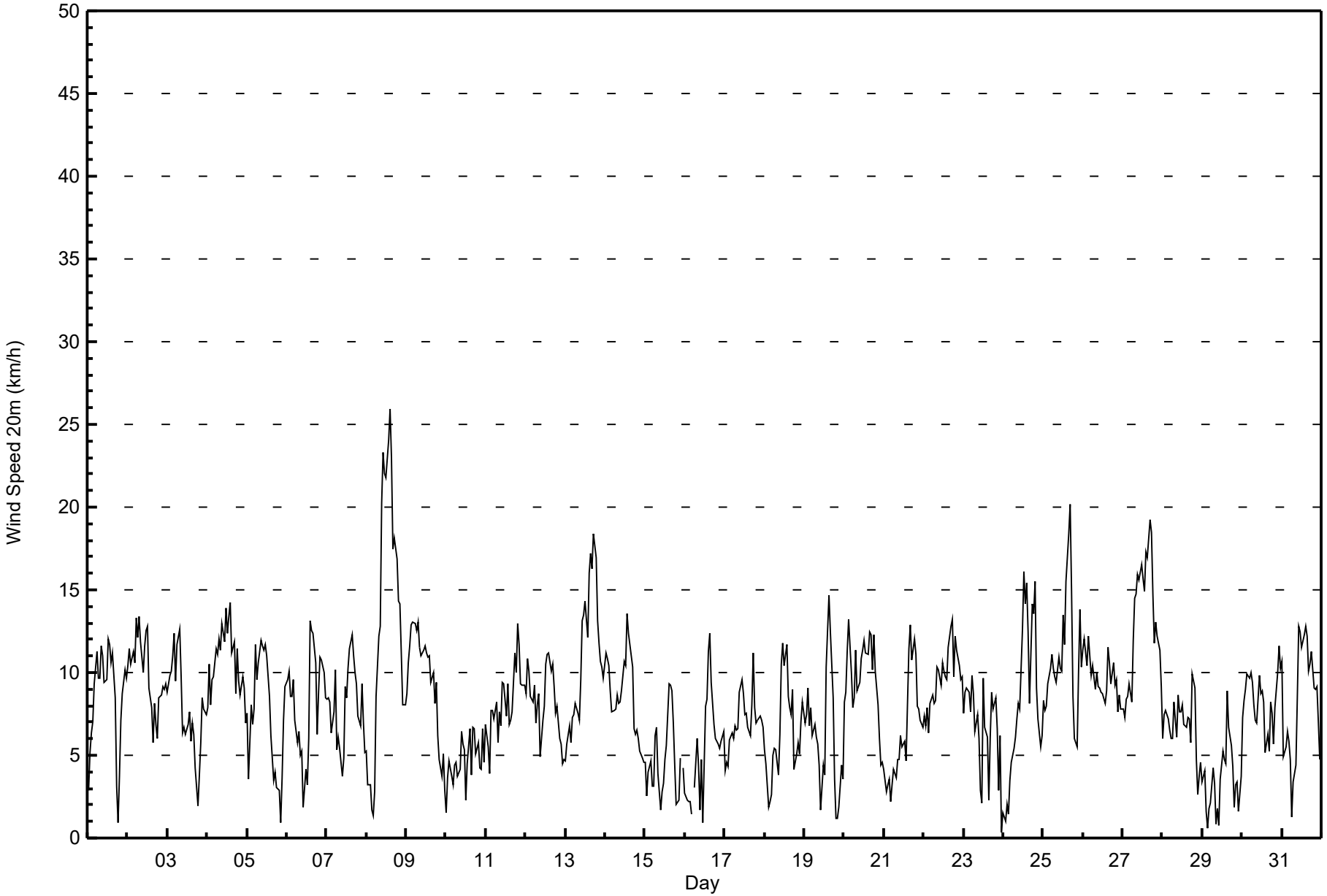
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 20m (WS20) - km/h

Janvier - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	171	23.05	23.05
6 - 11	446	60.11	83.15
12 - 19	117	15.77	98.92
20 - 28	8	1.08	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 742

Total Number of Hours: 744

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	11	30	10	8	11	3	7	8	19	23	17	6	3	4	4	7	171
6 - 11	59	105	32	9	5	1	8	19	19	58	71	18	19	10	4	9	446
12 - 19	10	29	17	4	0	0	2	2	4	7	17	4	8	9	3	1	117
20 - 28	0	0	0	0	0	0	0	0	0	0	0	0	4	4	0	0	8
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	80	164	59	21	16	4	17	29	42	88	105	28	34	27	11	17	742

Total Number of Valid Hours: 742

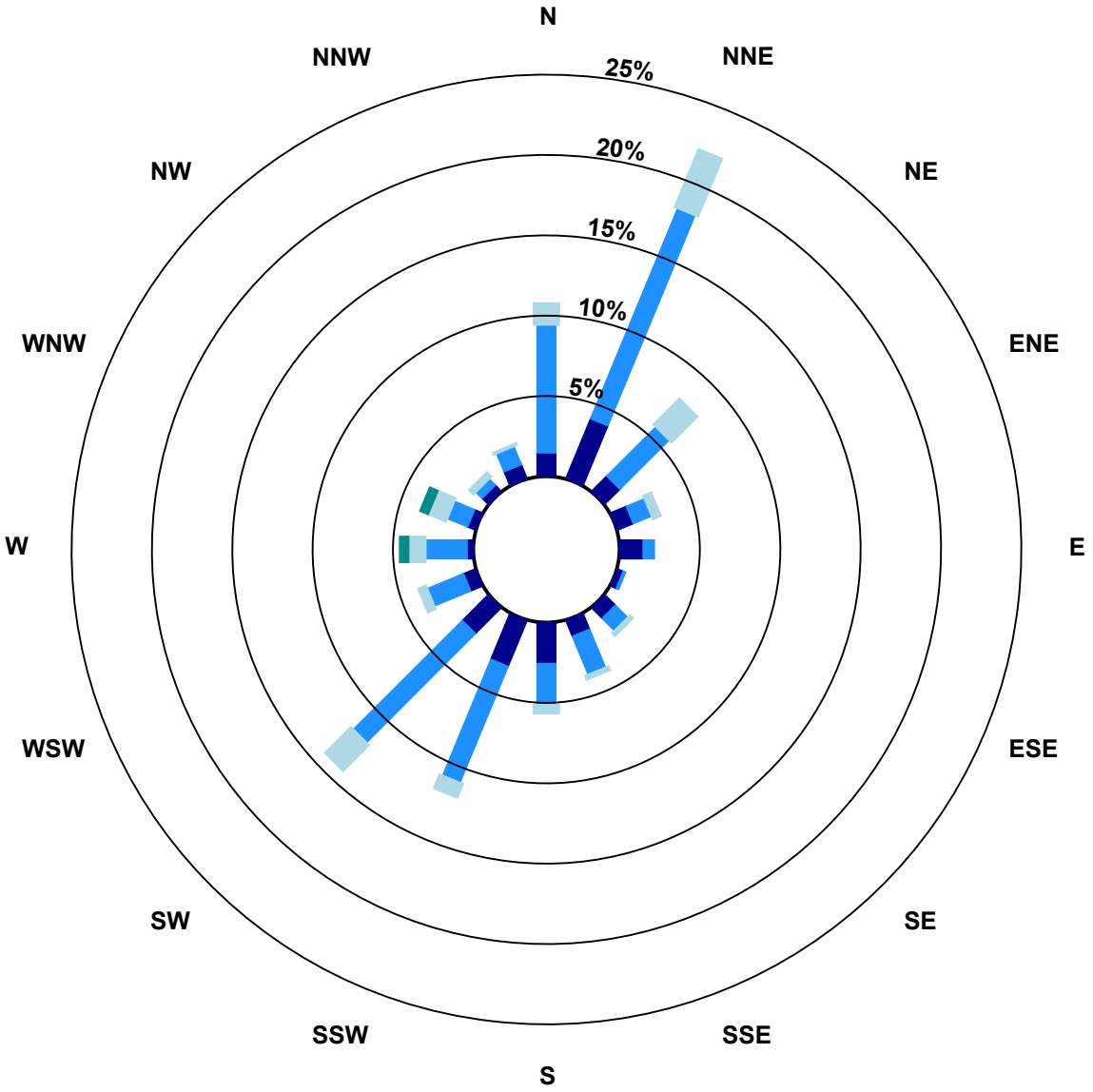
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 20m (WS20) - km/h

Janvier



Classes (km/h)

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

Total Number of Valid Hours: 742

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 20m (WD20) - deg

Janvier - March 2025

Direction of Maximum Speed: 279 deg on Mar 8 15:00
Direction of Maximum Daily Speed Average: 43.6 deg on Mar 27

Direction of Minimum Speed: 180 deg on Mar 24 00:00
Direction of Minimum Daily Speed Average: 0.4 deg on Mar 29

Monthly Average Direction: 326.0 deg

Hours in Service:	744
Hours of Data:	742
Hours of Missing Data:	2
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	183	215	197	203	212	210	213	213	212	215	226	235	230	232	268	268	288	300	103	190	208	215	212	203	223.5
2-Mar	208	213	215	216	215	207	210	213	228	230	294	318	324	350	348	6	310	275	249	243	298	296	3	3	261.5
3-Mar	2	360	8	9	11	1	4	16	9	6	338	339	323	2	342	313	24	346	253	192	207	223	228	233	348.7
4-Mar	238	241	225	223	219	212	202	205	220	231	233	230	235	234	233	235	240	229	214	219	209	209	226	234	225.1
5-Mar	221	319	358	359	358	359	352	355	4	360	6	10	33	36	43	43	47	318	90	166	99	199	215	216	3.1
6-Mar	222	222	218	205	210	216	228	213	208	229	202	98	113	202	269	302	301	298	261	222	227	233	238	234	237.0
7-Mar	211	196	208	211	192	209	223	214	224	187	267	248	258	300	294	274	282	262	273	288	338	18	22	7	257.8
8-Mar	20	12	14	30	227	213	209	219	232	270	281	276	277	290	279	297	335	23	18	23	31	23	17	19	308.1
9-Mar	16	23	23	15	28	23	21	20	21	13	17	21	18	13	17	6	12	21	23	11	8	20	13	18	18.3
10-Mar	38	14	26	58	97	112	143	137	141	143	155	197	208	76	29	6	70	101	78	66	38	47	43	17	80.1
11-Mar	20	28	8	27	19	24	28	11	15	11	40	46	23	44	27	54	51	17	40	28	28	30	17	18	28.0
12-Mar	18	14	13	3	11	6	20	14	17	25	38	32	36	37	30	21	28	47	46	48	41	47	19	12	25.7
13-Mar	10	10	9	19	18	27	32	25	22	47	55	63	65	50	38	45	43	35	36	31	19	18	18	17	35.2
14-Mar	14	12	11	9	1	1	357	5	4	360	353	353	4	12	3	6	360	340	353	1	353	344	338	353	1.4
15-Mar	4	289	211	218	230	232	205	210	204	198	57	41	36	39	29	34	21	31	53	65	216	200	UO	195	33.4
16-Mar	206	169	184	178	172	UO	199	212	210	342	358	13	149	164	187	188	181	177	173	167	164	168	174	184	179.5
17-Mar	165	152	153	191	185	165	191	204	228	235	238	235	246	306	22	15	15	16	21	3	6	19	22	18	301.2
18-Mar	26	14	347	93	191	241	240	233	248	301	278	276	273	250	261	235	271	279	317	97	129	209	250	264	263.2
19-Mar	265	238	215	201	192	181	211	206	213	211	182	179	229	235	279	285	287	291	307	333	277	170	235	14	242.3
20-Mar	19	24	26	29	31	26	25	28	13	7	5	21	15	28	20	12	25	30	42	49	64	76	96	93	28.6
21-Mar	58	84	92	38	58	24	19	359	19	0	21	12	28	1	126	164	135	124	130	136	151	169	161	171	109.5
22-Mar	167	165	173	168	180	183	184	186	205	211	227	213	203	206	216	235	284	287	272	274	273	260	253	252	225.8
23-Mar	232	225	234	239	223	217	224	223	228	221	148	327	271	3	28	27	78	84	89	92	83	91	126	180	202.9
24-Mar	138	191	187	175	188	165	192	206	212	228	229	228	230	225	229	229	241	257	257	288	274	229	275	209	234.3
25-Mar	200	232	226	216	215	216	220	224	233	239	248	234	262	275	274	295	296	309	344	335	337	8	18	11	269.6
26-Mar	6	6	12	13	10	13	13	20	21	17	10	355	2	9	19	7	15	42	48	31	33	26	47	36	18.1
27-Mar	69	49	60	64	62	45	33	32	33	38	42	36	44	39	31	33	39	41	48	52	57	58	50	44	43.6
28-Mar	18	11	13	18	13	17	17	16	18	18	18	27	47	87	36	0	7	0	28	40	20	14	25	28	22.4
29-Mar	14	15	24	31	224	196	205	205	250	272	29	127	209	227	287	20	29	25	49	71	209	237	294	222	315.9
30-Mar	214	215	212	210	209	211	211	216	228	237	220	209	230	209	233	225	219	210	203	211	225	211	211	208	215.3
31-Mar	204	183	167	169	176	178	131	171	145	160	173	174	158	149	179	192	155	148	137	138	147	171	184	182	166.1
	318.0	322.2	329.7	339.6	225.6	228.9	245.9	252.3	276.1	289.0	314.8	309.2	304.5	324.0	320.4	321.1	347.1	356.2	29.1	30.0	15.3	320.0	336.8	313.3	
	Diurnal Average																								

UO - Unstable Operation
All monthly, daily, and diurnal averages have been calculated using vector methods

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 101 deg on Mar 29 11:00

Minimum Value: 6 deg on Mar 1 21:00

Percentiles: P_1 = 9 P_{10} = 13 Q_1 = 16 Median = 21 Q_3 = 28 P_{90} = 43 P_{99} = 89

Hours in Service:	744
Hours of Data:	742
Hours of Missing Data:	2
Hours of Calibration:	0
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	41	15	7	7	11	9	10	9	11	17	22	20	22	27	26	26	20	50	70	17	6	7	10	9	70
2-Mar	10	14	13	18	19	13	13	14	18	21	26	29	34	38	41	45	34	16	16	17	17	13	27	20	45
3-Mar	25	25	21	22	21	28	26	19	24	40	38	43	40	38	45	39	21	35	43	21	16	14	16	21	45
4-Mar	17	15	18	14	14	11	10	12	20	17	20	19	24	25	25	23	20	18	13	14	13	14	17	24	25
5-Mar	17	54	28	23	21	28	33	31	29	31	27	27	18	17	27	43	48	32	73	40	84	40	12	13	84
6-Mar	14	14	13	10	9	9	11	14	17	23	77	47	62	58	23	23	20	16	27	11	14	14	14	14	77
7-Mar	17	12	12	16	14	13	33	17	19	36	94	28	42	26	33	21	16	18	21	16	43	20	16	20	94
8-Mar	21	24	29	72	61	86	12	14	18	21	19	20	20	21	19	20	35	16	18	18	14	17	18	16	86
9-Mar	19	15	17	20	16	18	18	18	19	21	20	19	21	22	22	25	20	21	20	20	21	44	26	24	44
10-Mar	67	28	29	41	34	24	28	51	43	37	40	49	88	47	32	48	27	22	25	32	36	23	14	28	88
11-Mar	18	26	36	14	15	17	15	21	17	18	23	20	39	16	39	23	21	19	21	16	17	17	18	18	39
12-Mar	18	18	22	25	19	17	13	19	20	42	20	25	17	16	15	23	17	23	20	11	13	12	11	11	42
13-Mar	16	15	17	15	16	13	12	13	17	19	15	20	18	18	15	14	14	12	12	13	18	19	18	17	20
14-Mar	18	19	19	20	22	24	29	23	23	30	34	31	33	23	27	26	27	42	26	25	22	26	20	20	42
15-Mar	17	29	19	11	25	28	8	9	15	55	78	63	43	26	16	14	18	19	14	23	57	11	UO	48	78
16-Mar	31	43	71	36	78	UO	12	9	13	63	29	91	43	40	35	21	25	29	20	21	21	21	15	15	91
17-Mar	18	18	17	15	14	20	13	14	23	22	22	24	34	39	22	26	29	20	17	21	25	15	17	15	39
18-Mar	11	16	36	69	46	18	16	18	37	31	27	23	28	29	38	37	23	26	37	25	26	30	16	16	69
19-Mar	16	16	13	20	11	21	17	17	28	34	97	51	86	37	24	23	21	17	24	79	54	74	21	63	97
20-Mar	14	10	13	12	10	11	11	13	24	28	28	24	24	23	27	23	20	14	12	13	21	24	21	21	28
21-Mar	18	24	44	24	28	21	22	26	28	37	27	39	22	49	57	30	23	18	15	17	23	22	18	16	57
22-Mar	17	17	15	17	15	15	15	14	15	22	27	22	21	21	31	28	20	21	17	17	16	17	13	16	31
23-Mar	19	17	13	13	12	12	14	15	20	31	64	97	29	46	53	77	35	18	16	15	15	55	34	93	97
24-Mar	71	83	57	89	32	12	11	11	18	21	26	30	24	22	22	21	31	29	30	17	21	13	26	26	89
25-Mar	23	13	10	11	12	13	13	15	17	19	21	30	24	25	26	21	22	24	32	31	37	20	18	21	37
26-Mar	23	25	21	22	24	20	21	22	19	22	31	35	32	34	29	23	20	19	13	14	14	17	15	19	35
27-Mar	21	17	16	19	17	14	12	12	14	13	18	15	21	17	17	18	13	14	13	13	16	17	14	14	21
28-Mar	18	14	18	18	19	19	16	20	34	20	31	29	29	43	49	36	24	28	18	14	12	18	11	8	49
29-Mar	19	11	13	63	25	18	9	33	81	93	101	59	67	72	72	24	30	20	31	43	21	29	51	12	101
30-Mar	10	11	9	10	9	10	10	16	23	28	37	43	45	43	65	60	61	28	13	18	13	11	12	12	65
31-Mar	13	32	20	21	23	24	82	44	44	26	26	27	28	28	32	29	29	29	22	17	19	20	18	20	82
	71	83	71	89	78	86	82	51	81	93	101	97	88	72	72	77	61	50	73	79	84	74	51	93	
	Diurnal Maximum																								

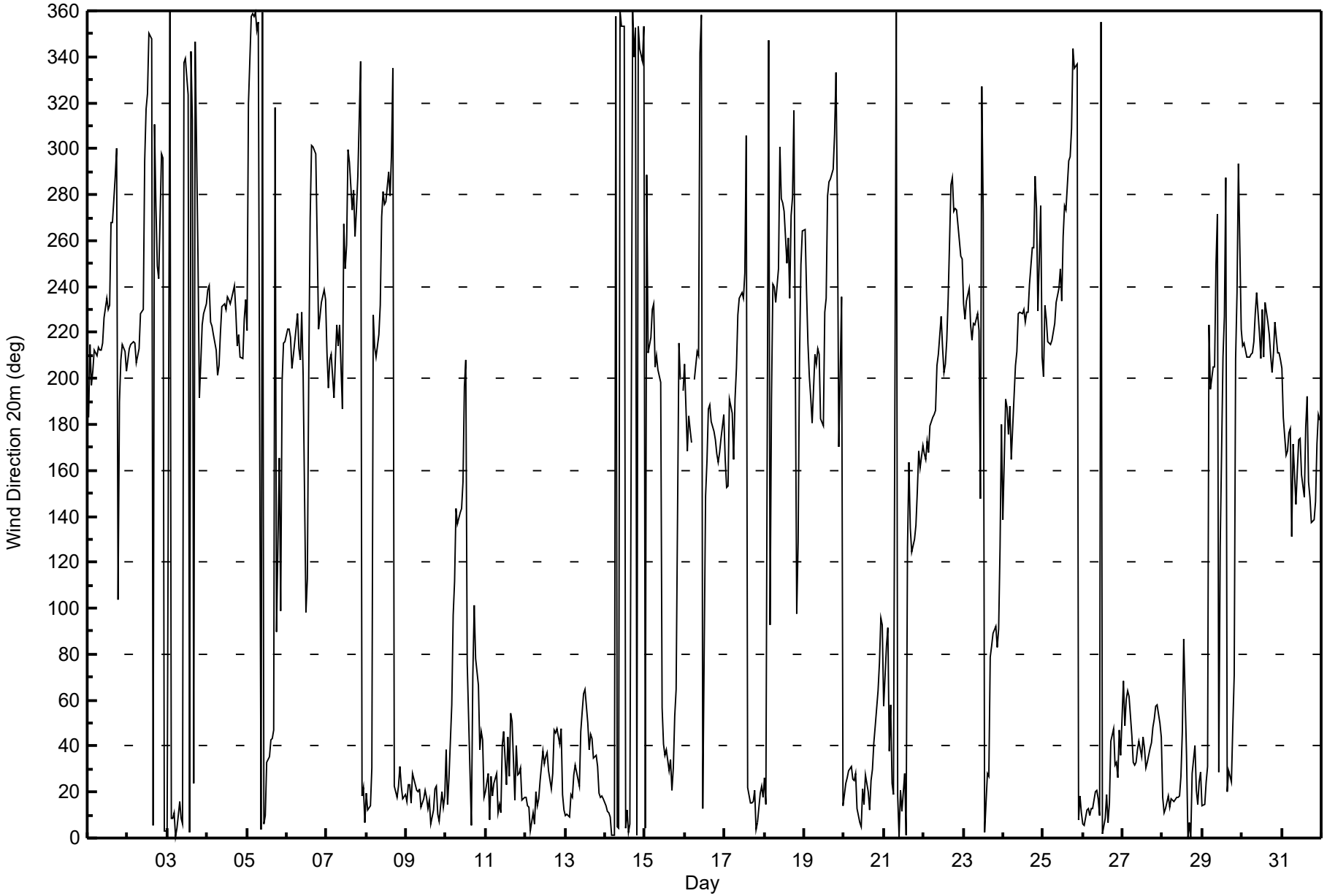
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 20m (WD20) - deg

Janvier - March 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS23
FORT HILLS
MARCH 2025

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

April 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT HILLS (AMS23)
MARCH 2025

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

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 30-Min Value	30-Min Exceedances	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2(ppb) Average	708	35	36	99.87	-	-	19.9	0	4.7	0
TRS(ppb) Average	708	35	36	99.87	21.1	8	12.8	0	1.6	0
THC(ppm) Average	708	35	36	99.87	-	-	6.8	-	3.8	-
NMHC(ppm) Average	708	35	36	99.87	-	-	1.984	-	0.678	-
CH4(ppm) Average	708	35	36	99.87	-	-	5.2	-	3.1	-
NO2 (ppb) Average	708	35	36	99.87	-	-	56.8	0	31.8	-
NO (ppb) Average	708	35	36	99.87	-	-	204.3	-	57	-
NOX (ppb) Average	708	35	36	99.87	-	-	261.1	-	87.1	-
PM2.5 (ug/m3) Average	742	2	2	100	-	-	172.8	20	65.8	3
Temperature 2 m (C) Average	744	0	0	100	-	-	9.4	-	1.1	-
Relative Humidity (%) Average	744	0	0	100	-	-	92.5	-	81.1	-
Wind Speed 10 m (km/h) Average	742	0	2	99.73	-	-	29	-	20	-
Wind Direction 10 m (deg) Average	742	0	2	99.73	-	-	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT HILLS (AMS23)
MARCH 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	708	0.99	2.2	-	0	0	0.1	0.2	0.7	2.7	19.9
TRS (ppb) Average	708	0.74	0.8	-	0.3	0.4	0.4	0.5	0.7	1.2	12.8
THC (ppm) Average	708	2.54	0.7	-	2	2.1	2.1	2.3	2.7	3.4	6.8
NMHC(ppm) Average	708	0.182	0.271	-	0	0	0	0.1	0.3	0.5	1.984
CH4(ppm) Average	708	2.36	0.4	-	2	2	2.1	2.2	2.4	2.9	5.2
NO2 (ppb) Average	708	20.16	12.5	-	0.5	5	9.5	18.4	30.5	38.5	56.8
NO (ppb) Average	708	16.19	27.2	-	0	0.5	1.4	4.8	18.2	46.6	204.3
NOX (ppb) Average	708	36.36	36.6	-	0.6	6.8	11.8	24.7	47.1	80.8	261.1
PM2.5 (ug/m3) Average	742	14.5	22.3	-	0.9	2.8	3.9	6.8	14.1	33.2	172.8
Temperature 2 m (C) Average	744	-8.3	7.2	-	-25.4	-18.2	-13.9	-8.2	-2.6	1	9.4
Relative Humidity (%) Average	744	67.41	13.3	-	29.6	49.9	57.6	69	78	83.7	92.5
Wind Speed 10 m (km/h) Average	742	11	6	-	1	4	7	10	14	20	29
Wind Direction 10 m (deg) Average	742	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT HILLS (AMS23)
MARCH 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL GASEOUS ANALYZERS	17 Mar 2025 08:00	17 Mar 2025 08:00	1	Maintenance - sample manifold cleaned
Wind Speed, Wind Direction	03 Mar 2025 21:00	03 Mar 2025 21:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	18 Mar 2025 09:00	18 Mar 2025 09:00	1	Flat line in sensor output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Fort Hills - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 19.9 ppb on Mar 19 13:00 Maximum Daily Average: 4.7 ppb on Mar 6

Minimum Value: 0.0 ppb on Mar 2 21:00 Minimum Daily Average: 0.0 ppb on Mar 27
Maximum Diurnal Average: 2.3 ppb at hour 13 Minimum Diurnal Average: 0.2 ppb at hour 6
Monthly Average: 0.99 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.2 Q_3 = 0.7 P_{90} = 2.7 P_{99} = 9.7

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.4	0.2	0.2	0.3	0.3	Z	0.7	0.3	1.1	3.8	5.1	3.6	1.9	4.8	3.2	9.3	17.7	16.1	7.5	5.6	4.6	3.4	3.0	3.3	4.2	17.7
2-Mar	Z	3.9	2.2	1.5	1.3	1.4	1.3	1.3	1.8	1.2	1.1	0.9	0.8	1.1	1.1	0.4	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.9	3.9
3-Mar	0.0	Z	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.3	1.3	1.5	0.7	0.2	0.2	0.2	0.3	0.4	0.4	2.9	2.9	1.6	1.0	0.6	0.7	2.9
4-Mar	0.4	0.3	Z	0.2	0.2	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.3	0.6	0.9	0.4	0.4	0.4	0.3	0.9
5-Mar	0.3	0.1	0.2	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	1.1	0.8	0.6	0.7	0.5	0.6	0.1	0.1	0.1	0.2	0.0	0.0	0.3	1.1
6-Mar	0.1	0.0	0.1	0.0	Z	0.0	0.0	0.0	0.0	0.3	9.7	10.8	13.6	7.4	7.1	8.7	8.4	8.0	8.9	7.2	5.3	4.7	6.2	1.9	4.7	13.6
7-Mar	0.7	0.4	0.1	0.1	0.1	Z	0.4	0.4	0.4	0.4	0.4	0.5	2.1	5.1	1.2	0.7	0.4	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.6	5.1
8-Mar	Z	0.2	0.1	0.3	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	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.3
9-Mar	0.1	Z	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
10-Mar	0.1	0.2	Z	0.1	0.1	0.1	0.2	0.1	0.1	0.2	1.0	1.4	2.7	2.8	4.0	5.7	6.7	7.0	7.6	9.0	6.5	4.1	3.5	3.1	2.9	9.0
11-Mar	2.4	1.4	0.7	Z	0.4	0.4	0.2	0.2	0.2	0.3	0.3	0.5	0.5	0.6	0.4	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.4
12-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.2	1.2	2.4	4.5	2.8	0.5	0.6	0.1	0.1	0.0	0.1	0.2	0.1	0.5	0.6	4.5
13-Mar	0.5	0.3	0.6	0.5	0.7	Z	0.6	0.7	0.9	0.6	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.4	0.9
14-Mar	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
15-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.5	0.2	0.4	0.5	0.6	0.7	0.7	0.6	0.4	0.4	0.3	0.1	0.1	0.2	0.2	0.3	0.7
16-Mar	0.3	0.3	Z	0.5	0.2	0.4	0.7	0.3	0.2	0.3	0.6	2.5	6.8	3.1	1.6	1.0	0.7	0.6	0.9	0.3	0.1	0.2	0.1	0.1	0.9	6.8
17-Mar	0.2	0.1	0.1	Z	0.1	0.2	0.2	M	C	C	C	C	0.2	0.2	0.4	0.4	0.4	0.3	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.4
18-Mar	0.1	0.3	0.8	0.1	Z	0.2	0.1	0.1	0.3	0.5	0.7	1.3	0.7	0.4	0.2	0.3	0.3	0.6	0.8	1.0	0.4	0.1	0.0	0.1	0.4	1.3
19-Mar	0.3	0.5	0.3	0.1	0.2	Z	0.1	0.2	0.2	0.2	1.5	9.7	19.9	9.6	10.7	7.9	6.1	5.5	2.7	0.6	0.8	0.2	0.1	0.1	3.4	19.9
20-Mar	Z	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.2	0.1	0.2	0.5	0.1	0.5
21-Mar	0.3	Z	0.1	0.1	0.0	0.1	0.0	0.0	0.5	0.7	0.3	2.4	2.3	3.1	3.7	2.9	2.4	2.3	1.4	0.3	0.7	0.1	0.0	0.1	1.0	3.7
22-Mar	0.2	0.4	Z	3.2	3.3	0.6	0.3	0.7	5.4	7.3	5.7	3.9	6.2	8.4	13.7	7.3	5.3	2.7	1.6	2.0	1.4	1.2	1.1	0.9	3.6	13.7
23-Mar	0.5	0.3	0.3	Z	0.2	0.2	0.2	0.2	0.7	0.9	0.7	1.0	1.0	0.5	2.4	2.2	2.6	2.6	2.1	1.3	0.3	0.2	0.3	0.5	0.9	2.6
24-Mar	0.6	0.7	0.8	1.0	Z	0.5	0.7	0.4	0.4	1.2	0.8	0.8	0.6	0.4	1.7	0.7	1.7	0.6	0.4	0.3	0.2	0.2	0.4	0.4	0.7	1.7
25-Mar	0.4	0.2	0.1	0.1	0.1	Z	0.2	0.2	0.3	0.2	0.4	0.5	0.4	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.5
26-Mar	Z	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	0.0	0.0	0.0	0.0	0.0	0.1	0.1
27-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28-Mar	0.1	0.1	Z	0.1	0.5	0.0	0.1	0.2	0.4	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.4	0.1	0.5
29-Mar	0.2	0.3	0.4	Z	0.6	0.2	0.2	0.3	0.2	0.3	0.4	2.3	1.7	0.9	1.0	1.1	1.7	2.6	0.9	0.3	0.2	0.1	0.3	0.4	0.7	2.6
30-Mar	0.4	0.2	0.3	0.4	Z	0.4	0.6	0.8	0.5	0.4	0.5	1.7	0.9	0.6	0.4	1.3	2.4	1.2	0.7	0.4	0.2	0.1	0.0	0.1	0.6	2.4
31-Mar	0.2	0.3	0.2	0.2	0.1	Z	0.2	0.2	2.1	4.1	4.6	9.4	1.8	0.3	0.2	0.2	0.2	0.2	0.4	0.2	0.2	0.1	0.1	0.1	1.1	9.4
	0.3	0.4	0.3	0.4	0.4	0.2	0.2	0.2	0.6	0.8	1.2	1.9	2.3	1.8	1.9	1.7	2.0	1.7	1.2	1.1	0.8	0.6	0.6	0.5	Diurnal Average	
	2.4	3.9	2.2	3.2	3.3	1.4	1.3	1.3	5.4	7.3	9.7	10.8	19.9	9.6	13.7	9.3	17.7	16.1	8.9	9.0	6.5	4.7	6.2	3.3	Diurnal Maximum	

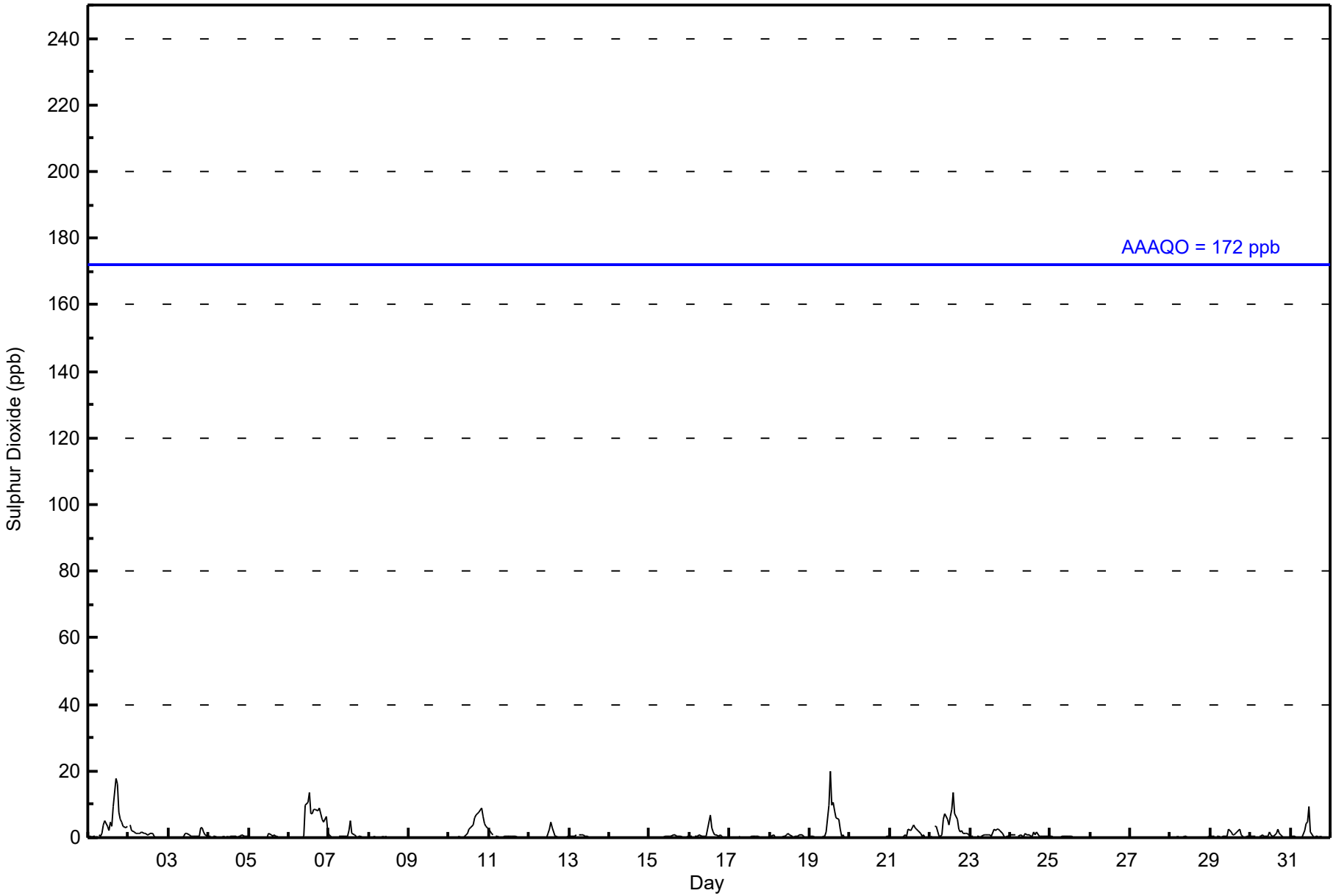
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Fort Hills - March 2025



Sulphur Dioxide (SO_2) - ppb
Fort Hills - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	701	99.01	99.01
11 - 20	7	0.99	100.00
21 - 60	0	0.00	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Fort Hills - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	194	132	23	15	10	64	66	40	23	21	6	6	13	5	23	58	699
11 - 20	1	0	0	0	0	2	3	1	0	0	0	0	0	0	0	0	7
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	195	132	23	15	10	66	69	41	23	21	6	6	13	5	23	58	706

Total Number of Valid Hours: 706

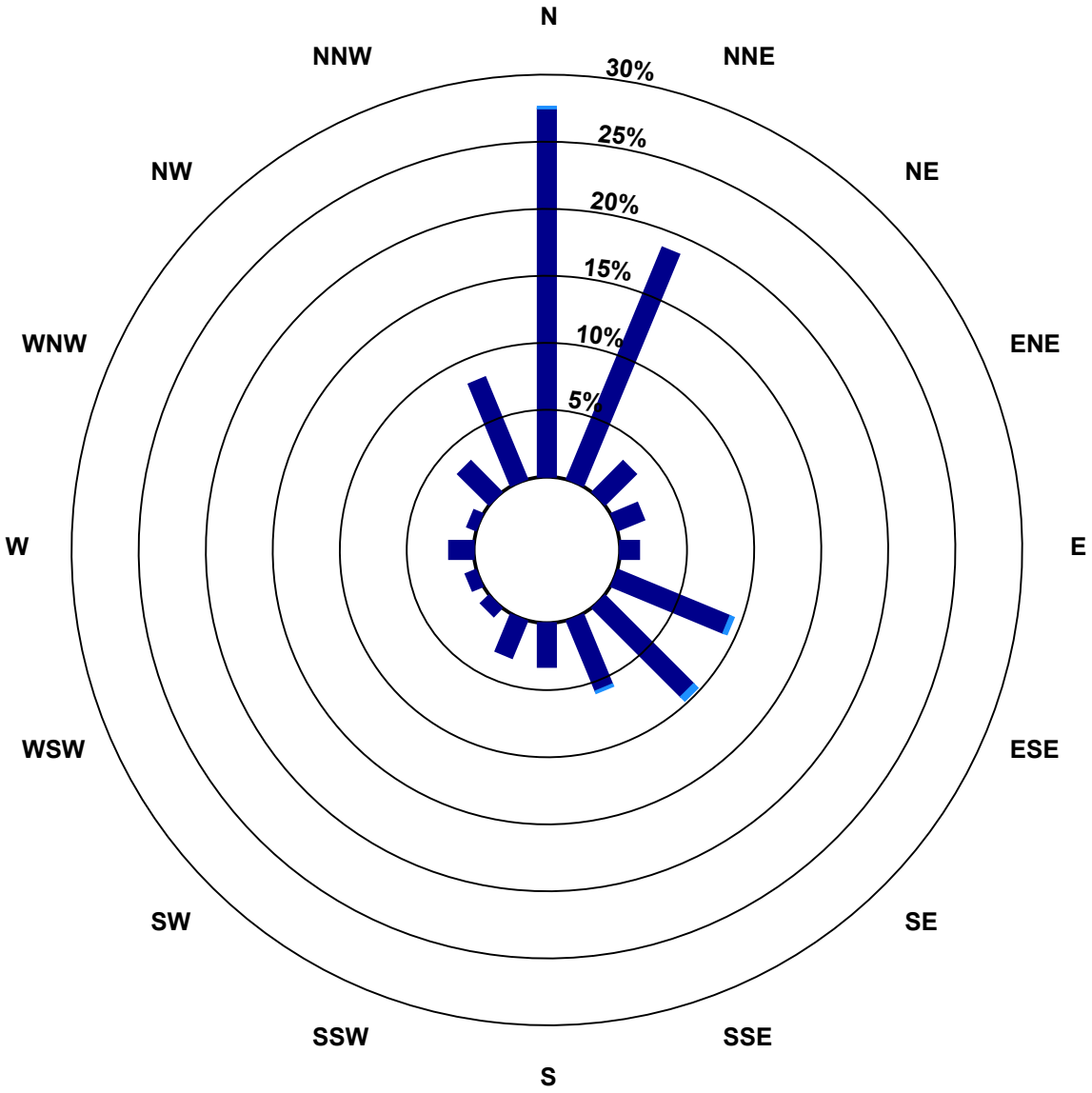
Total Number of Hours: 744

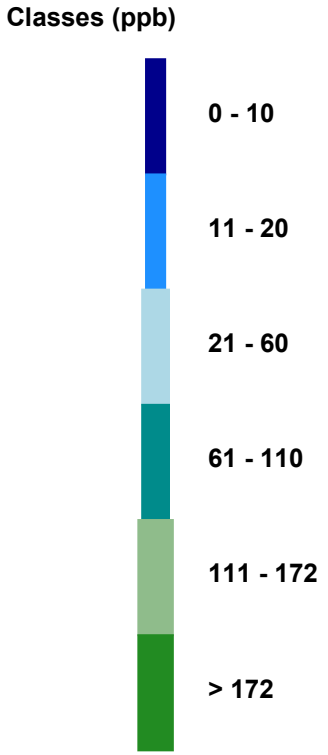
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Sulphur Dioxide (SO_2) - ppb

Fort Hills





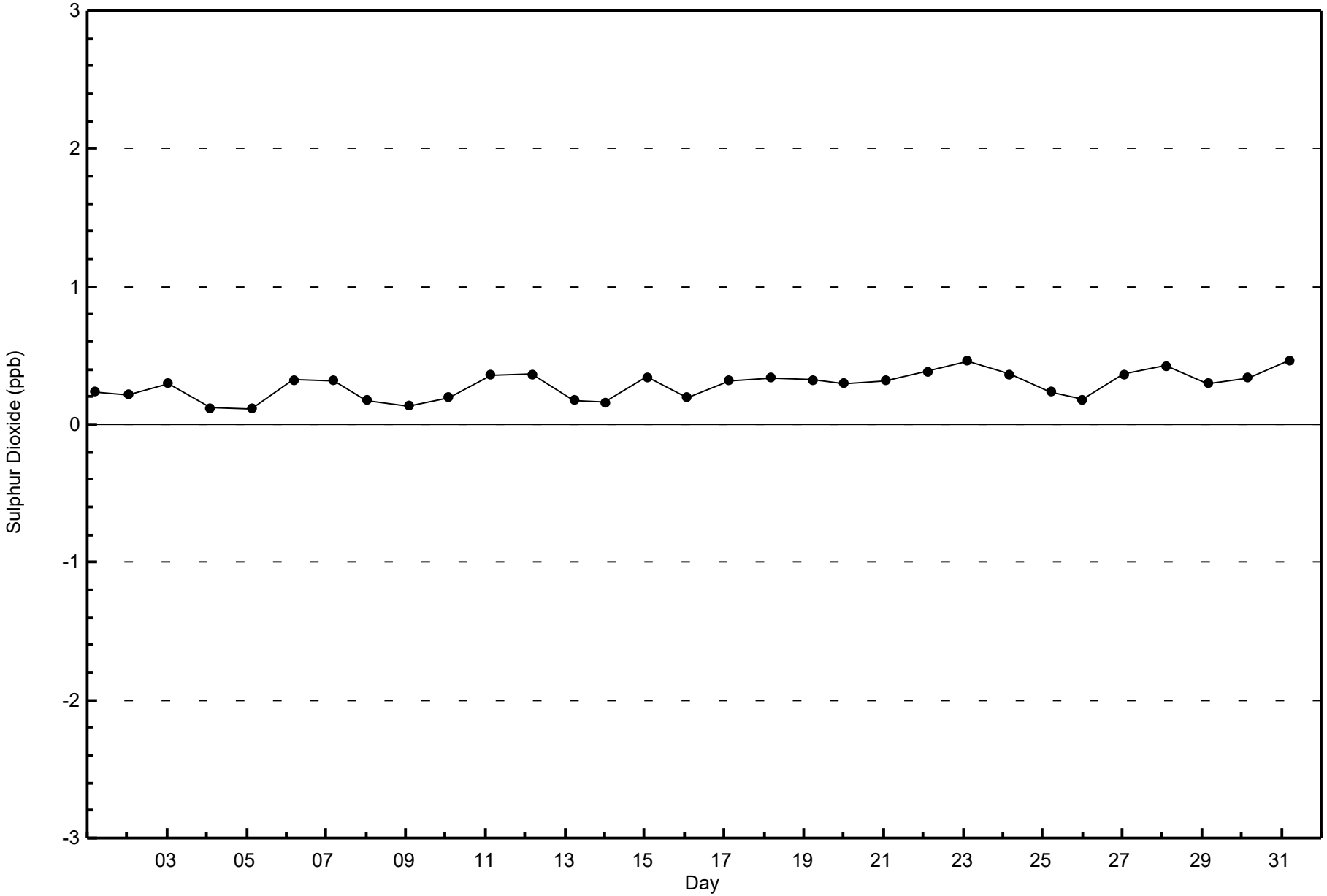
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Fort Hills - March 2025

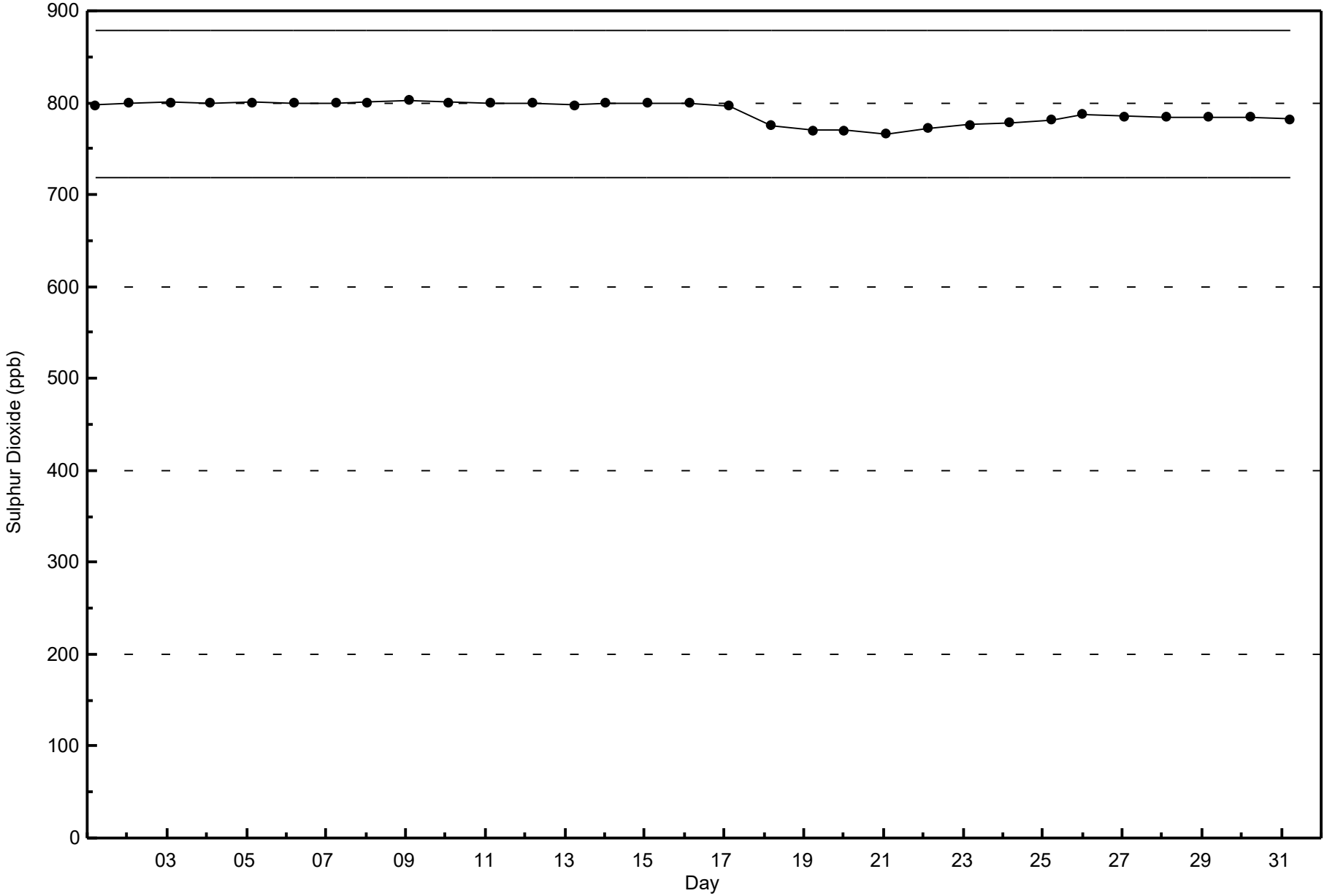


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Fort Hills - March 2025



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort Hills - March 2025

Number of Exceedences (AAAQG): 30-Min: 8

Maximum Value: 21.1 ppb on Mar 16 11:00 Maximum Daily Average: 1.6 ppb on Mar 16

Minimum Value: 0.3 ppb on Mar 5 06:30 Minimum Daily Average: 0.4 ppb on Mar 9

Maximum Diurnal Average: 1.5 ppb at hour 11 Minimum Diurnal Average: 0.6 ppb at hour 23

Monthly Average: 0.74 ppb Percentiles: $P_1 = 0.3$ $P_{10} = 0.4$ $Q_1 = 0.4$ Median = 0.5 $Q_3 = 0.7$ $P_{90} = 1.2$ $P_{99} = 3.6$

Periods in Service:	1488
Periods of Valid Data:	1415
Periods of Invalid Data:	73
Periods of Calibration:	70
Percent Operational Time:	99.8

Day	Period Ending At (MST) 00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00	Daily Average	Daily Maximum
1-Mar	Z	1.5	0.7	1.1	0.5	0.7	0.6	0.5	0.6	0.8	0.7	0.8	0.9	1.8	1.2	1.1	1.5	1.8	1.9	1.7	1.8	1.6	1.4	1.4	1.2	2.0
	SP	1.0	1.1	0.5	0.5	0.7	0.7	0.5	0.8	0.7	0.9	0.8	1.1	1.5	1.1	1.3	1.6	2.0	1.8	1.8	1.8	1.5	1.5	1.6		
2-Mar	2.4	Z	1.8	2.2	2.2	1.8	2.1	1.8	2.2	1.6	1.4	1.0	1.4	1.3	1.3	0.8	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	1.2	3.0
	3.0	SP	1.8	2.2	2.0	2.1	1.9	1.9	1.6	1.5	1.2	1.0	1.3	1.6	1.0	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4		
3-Mar	0.4	0.4	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.7	0.8	0.7	0.8	0.7	0.7	0.8	0.8	0.7	0.8	0.8	0.7	0.7	1.3	0.7	1.5
	0.4	0.6	SP	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.8	0.6	0.9	0.6	0.8	0.7	0.7	0.8	0.7	0.8	0.7	0.8	1.5		
4-Mar	1.7	1.8	1.1	Z	0.7	0.5	0.9	0.6	0.6	1.0	0.4	0.4	0.4	0.3	0.4	0.6	0.6	0.5	0.5	0.5	0.6	0.5	0.4	0.5	0.7	1.9
	1.9	1.3	1.0	SP	0.6	0.5	1.0	0.5	0.8	0.6	0.4	0.4	0.4	0.4	0.7	0.5	0.7	0.5	0.5	0.6	0.5	0.4	0.5	0.5		
5-Mar	0.6	0.4	0.4	0.4	Z	0.3	0.3	0.3	0.6	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	0.5	0.5	0.6
	0.5	0.4	0.4	0.3	SP	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.5	0.5	0.6	0.6	0.5	0.5	0.6	0.5	0.4		
6-Mar	0.5	0.7	0.7	0.5	0.5	Z	0.5	0.5	0.6	0.7	1.2	0.7	0.7	1.1	1.0	1.0	0.9	1.0	1.2	1.4	1.0	1.0	1.1	0.7	0.8	1.5
	0.7	0.7	0.5	0.5	0.5	SP	0.5	0.5	0.6	0.9	1.0	0.7	0.8	1.2	1.0	0.8	1.0	1.0	1.5	1.4	0.9	1.4	0.9	0.7		
7-Mar	Z	0.6	0.5	0.5	0.5	0.6	0.6	0.7	0.6	0.6	0.6	0.6	0.7	0.7	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.5	0.8
	SP	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.6	0.6	0.6	0.7	0.8	0.7	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.5		
8-Mar	0.5	Z	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	0.3	0.4	0.4	0.4	0.5
	0.5	SP	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.3	0.4	0.4		
9-Mar	0.4	0.4	Z	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	0.4	SP	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4		
10-Mar	0.4	0.5	0.4	Z	0.5	0.5	0.4	0.5	0.4	0.4	0.5	0.6	0.6	0.7	0.8	0.7	0.6	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.5	0.8
	0.4	0.4	0.4	SP	0.5	0.4	0.5	0.4	0.4	0.4	0.5	0.7	0.6	0.8	0.7	0.6	0.6	0.7	0.6	0.6	0.6	0.6	0.6	0.5		
11-Mar	0.5	0.4	0.4	0.4	Z	0.4	0.4	C	C	C	C	0.7	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.7
	0.4	0.4	0.4	0.4	SP	0.4	0.4	C	C	C	C	0.6	0.5	0.5	0.5	0.4	0.4	0.3	0.4	0.3	0.4	0.3	0.4	0.4		
12-Mar	0.4	0.4	0.4	0.5	0.5	Z	0.5	0.4	0.4	0.5	0.7	0.5	0.6	0.6	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.6	0.5	0.7
	0.4	0.4	0.4	0.5	0.5	SP	0.5	0.4	0.5	0.7	0.7	0.5	0.6	0.6	0.7	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.7		
13-Mar	Z	0.6	0.7	0.7	0.9	0.6	0.7	0.6	0.9	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	0.6	0.9
	SP	0.5	0.6	0.6	0.6	0.6	0.7	0.9	0.9	0.8	0.9	0.6	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4		
14-Mar	0.4	Z	0.4	0.4	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	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.5
	0.4	SP	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	0.5	0.4	0.4	0.4	0.4		
15-Mar	0.4	0.4	Z	0.5	0.4	0.4	0.4	0.4	0.5	0.7	0.5	0.7	0.7	4.4	1.3	1.0	0.7	1.5	0.8	0.6	0.5	0.6	0.5	0.5	0.9	5.3
	0.4	0.4	SP	0.4	0.4	0.4	0.5	0.4	0.5	0.7	0.6	0.8	5.3	2.8	1.4	1.2	0.9	0.7	0.7	0.5	0.5	0.6	0.5	0.5		

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort Hills - March 2025

Day	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00	Daily Average	Daily Maximum
	Period Ending At (MST)																									
16-Mar	0.6	0.6	0.6	Z	0.5	0.6	0.7	0.6	0.5	0.8	4.5	6.2	3.6	1.6	0.8	1.0	1.2	0.5	0.5	0.5	0.5	1.5	0.5	0.4	1.6	21.1
	0.6	0.6	0.6	SP	0.6	0.7	0.7	0.5	0.6	1.0	21.1	4.0	3.2	0.8	0.8	1.3	1.2	0.5	0.6	0.5	0.8	2.0	0.4	0.4		
17-Mar	0.4	0.4	0.4	0.4	Z	0.4	0.4	M	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	1.0
	0.4	0.4	0.4	0.4	SP	0.5	0.4	M	1.0	0.6	0.5	0.4	0.5	0.5	0.5	0.4	0.5	0.4	0.5	0.6	0.5	0.5	0.5	0.5		
18-Mar	0.6	0.5	1.2	0.6	0.5	Z	0.6	0.4	0.6	3.4	11.4	5.5	1.2	0.7	1.3	0.9	1.0	0.6	1.1	1.8	0.6	0.5	0.5	0.5	1.5	11.4
	0.8	0.8	0.6	0.5	0.6	SP	0.5	0.5	0.7	8.9	6.8	2.9	0.8	0.7	0.9	1.2	0.8	0.8	2.0	0.7	0.6	0.4	0.4	0.5		
19-Mar	Z	0.6	0.6	0.5	0.5	0.4	0.5	0.5	0.6	0.6	0.6	1.7	2.0	3.4	3.5	1.3	1.0	0.8	0.6	0.5	0.5	0.4	0.4	0.4	1.0	5.0
	SP	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.9	0.8	4.7	1.8	5.0	2.5	1.2	1.0	0.6	0.5	0.4	0.5	0.4	0.4	0.4		
20-Mar	0.4	Z	0.5	0.4	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	0.5	0.5	0.5	0.6	0.8	0.5	0.8
	0.4	SP	0.4	0.5	0.4	0.5	DF	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	0.6	0.7	0.8		
21-Mar	0.8	0.5	Z	0.4	0.5	0.4	0.4	0.4	0.4	0.5	0.4	0.7	0.6	0.6	0.6	0.7	0.5	0.6	0.6	1.0	2.8	1.6	0.4	0.4	0.7	4.0
	0.6	0.4	SP	0.4	0.5	0.4	0.4	0.4	0.6	0.5	0.5	0.8	0.6	0.6	0.7	0.7	0.5	0.6	0.6	4.0	2.7	0.5	0.5	0.4		
22-Mar	0.4	0.6	0.5	Z	1.5	0.8	0.5	0.5	1.0	0.7	0.7	0.8	0.7	1.5	2.1	1.6	1.1	0.7	0.7	0.8	1.0	1.0	0.8	0.8	0.9	3.4
	0.5	0.5	0.9	SP	1.7	0.5	0.5	0.7	0.7	0.7	0.8	0.9	1.0	3.4	1.8	1.1	0.9	0.7	0.7	1.0	1.1	0.9	0.8	0.7		
23-Mar	0.6	0.6	0.6	0.6	Z	0.6	0.7	0.6	0.8	1.9	1.9	1.4	1.3	1.5	1.4	1.0	0.8	0.9	1.0	0.8	0.9	0.8	0.6	0.8	0.9	1.9
	0.5	0.6	0.6	0.5	SP	0.7	0.6	0.7	1.5	1.6	1.1	1.3	1.5	1.8	1.5	0.6	1.0	0.8	0.8	0.9	0.7	0.8	0.7	0.8		
24-Mar	0.9	1.0	1.0	1.1	1.3	Z	0.9	0.9	0.7	0.8	5.4	1.4	2.7	1.3	1.4	0.8	1.8	0.6	0.5	0.5	0.5	0.5	0.9	0.7	1.2	5.4
	1.0	1.1	1.1	1.3	1.2	SP	1.1	0.8	0.7	1.9	3.2	1.1	2.4	1.3	1.4	0.8	1.2	0.6	0.5	0.5	0.5	0.7	0.7	0.8		
25-Mar	Z	0.6	0.6	0.5	0.6	1.0	1.0	1.1	0.6	0.7	1.1	2.2	1.5	0.7	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.7	2.2
	SP	0.6	0.6	0.5	0.8	1.0	1.1	0.7	0.7	0.7	1.3	2.0	1.2	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4		
26-Mar	0.3	Z	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	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.5
	0.4	SP	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.4	0.5	0.5	0.5	0.5	0.5		
27-Mar	0.5	0.5	Z	0.5	0.5	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.6	0.5	0.5	0.6
	0.5	0.5	SP	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.6	0.6	0.6		
28-Mar	0.5	0.5	0.6	Z	0.7	0.6	0.6	0.6	0.8	0.8	0.6	0.5	0.5	0.5	0.4	0.5	0.4	0.5	0.4	0.4	0.5	0.5	0.5	0.7	0.6	0.8
	0.6	0.6	0.5	SP	0.8	0.5	0.7	0.7	0.7	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.7	0.7		
29-Mar	0.6	0.5	0.6	0.8	Z	0.6	0.6	0.6	0.6	0.5	0.7	1.1	1.0	0.8	0.8	0.5	0.6	0.5	0.6	0.5	0.5	0.4	0.5	0.6	0.6	1.3
	0.6	0.6	0.7	0.8	SP	0.7	0.6	0.6	0.5	0.7	0.9	1.3	0.8	0.8	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.7		
30-Mar	0.6	0.6	0.6	0.7	0.8	Z	1.0	1.2	1.1	0.9	0.8	0.9	0.9	0.7	0.5	0.6	0.6	0.7	0.7	0.6	0.5	0.5	0.6	0.6	0.7	1.2
	0.6	0.6	0.7	0.7	0.8	SP	1.2	1.1	1.0	0.8	0.7	0.8	0.9	0.6	0.6	0.6	0.7	0.6	0.7	0.5	0.5	0.6	0.6	0.6		
31-Mar	Z	0.5	0.5	0.5	0.6	0.7	0.5	0.7	0.5	0.9	0.8	0.9	0.7	0.5	0.5	0.4	0.5	0.4	0.5	0.7	1.2	0.7	0.8	0.5	0.6	1.2
	SP	0.5	0.6	0.5	0.6	0.6	0.8	0.5	0.7	0.8	0.7	0.8	0.7	0.4	0.5	0.5	0.5	0.5	0.7	1.0	0.8	0.7	0.7	0.6		
	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.7	0.9	1.5	1.1	1.0	1.0	0.8	0.7	0.7	0.6	0.6	0.7	0.7	0.6	0.6	0.6	Diurnal Average	
	3.0	1.8	1.8	2.2	2.2	2.1	2.1	1.9	2.2	8.9	21.1	6.2	5.3	5.0	3.5	1.6	1.8	2.0	2.0	4.0	2.8	2.0	1.5	1.6	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance DF - DAS Failure SP - Span

Alberta Ambient Air Quality Guideline (AAAQG): 30-Min: 5 ppb

Wood Buffalo Environmental Association

Summary of Hour Averages

Total Reduced Sulphur (TRS) - ppb

Fort Hills - March 2025

Maximum Value: 12.8 ppb on Mar 16 11:00

Maximum Daily Average: 1.6 ppb on Mar 16

Minimum Value: 0.3 ppb on Mar 5 07:00

Minimum Daily Average: 0.4 ppb on Mar 9

Maximum Diurnal Average: 1.5 ppb at hour 11

Minimum Diurnal Average: 0.6 ppb at hour 23

Monthly Average: 0.74 ppb

Percentiles: P_1 = 0.4 P_{10} = 0.4 Q_1 = 0.4 Median = 0.5 Q_3 = 0.7 P_{90} = 1.2 P_{99} = 3.6

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	Z	1.2	0.9	0.8	0.5	0.7	0.7	0.5	0.7	0.8	0.8	0.8	1.0	1.7	1.2	1.2	1.6	1.9	1.8	1.8	1.8	1.6	1.5	1.5	1.2	1.9
2-Mar	2.7	Z	1.8	2.2	2.1	2.0	2.0	1.9	1.9	1.6	1.3	1.0	1.3	1.4	1.2	0.7	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	1.2	2.7
3-Mar	0.4	0.5	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.8	0.6	0.8	0.7	0.8	0.7	0.8	0.8	0.8	0.8	0.7	0.8	1.4	0.7	1.4
4-Mar	1.8	1.5	1.0	Z	0.6	0.5	0.9	0.6	0.7	0.8	0.4	0.4	0.4	0.4	0.6	0.5	0.6	0.5	0.5	0.5	0.6	0.4	0.5	0.5	0.7	1.8
5-Mar	0.5	0.4	0.4	0.4	Z	0.3	0.3	0.4	0.5	0.4	0.4	0.4	0.5	0.6	0.6	0.6	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.6
6-Mar	0.6	0.7	0.6	0.5	0.5	Z	0.5	0.5	0.6	0.8	1.1	0.7	0.8	1.2	1.0	0.9	0.9	1.0	1.3	1.4	1.0	1.2	1.0	0.7	0.8	1.4
7-Mar	Z	0.6	0.5	0.5	0.5	0.6	0.6	0.7	0.6	0.6	0.6	0.7	0.7	0.7	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.5	0.7
8-Mar	0.5	Z	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	0.3	0.4	0.4	0.4	0.5
9-Mar	0.4	0.4	Z	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
10-Mar	0.4	0.4	0.4	Z	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.6	0.6	0.7	0.8	0.7	0.6	0.7	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.8
11-Mar	0.4	0.4	0.4	0.4	Z	0.4	0.4	C	C	C	C	0.6	0.5	0.5	0.5	0.4	0.4	0.3	0.4	0.3	0.4	0.3	0.4	0.4	0.4	0.6
12-Mar	0.4	0.4	0.4	0.5	0.5	Z	0.5	0.4	0.4	0.6	0.7	0.5	0.6	0.6	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.7	0.5	0.7
13-Mar	Z	0.6	0.7	0.7	0.8	0.6	0.7	0.8	0.9	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	0.6	0.9
14-Mar	0.4	Z	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	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.5
15-Mar	0.4	0.4	Z	0.5	0.4	0.4	0.4	0.4	0.5	0.7	0.6	0.7	3.0	3.6	1.3	1.1	0.8	1.1	0.8	0.6	0.5	0.6	0.5	0.5	0.9	3.6
16-Mar	0.6	0.6	0.6	Z	0.5	0.6	0.7	0.6	0.5	0.9	12.8	5.1	3.4	1.2	0.8	1.2	1.2	0.5	0.5	0.5	0.7	1.7	0.5	0.4	1.6	12.8
17-Mar	0.4	0.4	0.4	0.4	Z	0.4	0.4	M	0.8	0.6	0.5	0.4	0.5	0.5	0.5	0.4	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.8
18-Mar	0.7	0.7	0.9	0.5	0.5	Z	0.6	0.4	0.6	6.1	9.1	4.2	1.0	0.7	1.1	1.0	0.9	0.7	1.5	1.3	0.6	0.5	0.4	0.5	1.5	9.1
19-Mar	Z	0.6	0.5	0.5	0.5	0.4	0.5	0.5	0.6	0.7	0.7	3.2	1.9	4.2	3.0	1.3	1.0	0.7	0.6	0.5	0.5	0.4	0.4	0.4	1.0	4.2
20-Mar	0.4	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	0.5	0.5	0.5	0.5	0.7	0.8	0.5	0.8
21-Mar	0.7	0.4	Z	0.4	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.7	0.6	0.6	0.7	0.7	0.5	0.6	0.6	2.5	2.7	1.0	0.4	0.4	0.7	2.7
22-Mar	0.5	0.5	0.7	Z	1.6	0.7	0.5	0.6	0.8	0.7	0.8	0.8	0.8	2.5	2.0	1.4	1.0	0.7	0.7	0.9	1.0	0.9	0.8	0.8	0.9	2.5
23-Mar	0.6	0.6	0.6	0.6	Z	0.6	0.6	0.7	1.2	1.7	1.5	1.3	1.4	1.6	1.4	0.8	0.9	0.8	0.9	0.9	0.8	0.8	0.7	0.8	0.9	1.7
24-Mar	1.0	1.0	1.0	1.2	1.3	Z	1.0	0.8	0.7	1.3	4.3	1.3	2.5	1.3	1.4	0.8	1.5	0.6	0.5	0.5	0.5	0.6	0.8	0.7	1.2	4.3
25-Mar	Z	0.6	0.6	0.5	0.7	1.0	1.0	0.9	0.7	0.7	1.2	2.1	1.4	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.7	2.1
26-Mar	0.4	Z	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	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.5
27-Mar	0.5	0.5	Z	0.5	0.5	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.6	0.5	0.5	0.6
28-Mar	0.5	0.6	0.6	Z	0.7	0.5	0.7	0.7	0.8	0.8	0.6	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.7	0.6	0.8
29-Mar	0.6	0.6	0.6	0.8	Z	0.7	0.6	0.6	0.6	0.6	0.8	1.2	0.9	0.8	0.7	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.7	0.6	1.2
30-Mar	0.6	0.6	0.6	0.7	0.8	Z	1.1	1.2	1.0	0.9	0.7	0.8	0.9	0.6	0.5	0.6	0.6	0.6	0.7	0.6	0.5	0.6	0.6	0.6	0.7	1.2
31-Mar	Z	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.9	0.8	0.8	0.7	0.4	0.5	0.4	0.5	0.5	0.6	0.9	1.0	0.7	0.7	0.6	0.6	1.0
	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.7	0.9	1.5	1.1	1.0	1.0	0.8	0.7	0.7	0.6	0.6	0.7	0.7	0.6	0.6	0.6	Diurnal Average	
	2.7	1.5	1.8	2.2	2.1	2.0	2.0	1.9	1.9	6.1	12.8	5.1	3.4	4.2	3.0	1.4	1.6	1.9	1.8	2.5	2.7	1.7	1.5	1.5	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

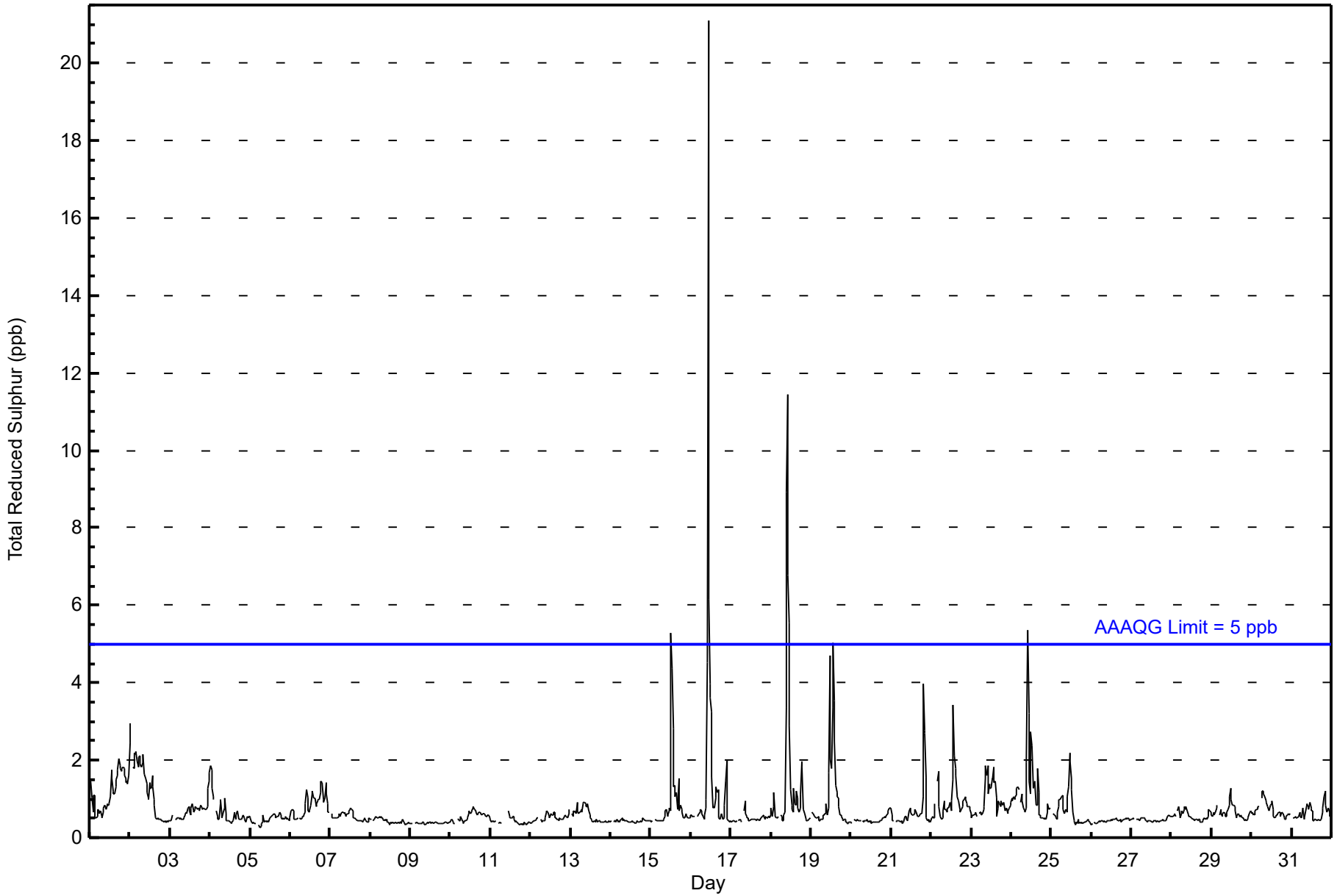
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Fort Hills - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	692	97.74	97.74
3 - 4	12	1.69	99.44
5 - 7	2	0.28	99.72
8 - 11	1	0.14	99.86
> 11	1	0.14	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Fort Hills - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	192	134	21	14	10	61	63	40	21	21	7	7	13	5	26	55	690
3 - 4	0	0	1	0	0	4	6	0	1	0	0	0	0	0	0	0	12
5 - 7	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
8 - 11	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
> 11	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Totals	192	134	22	15	10	68	69	40	22	21	7	7	13	5	26	55	706

Total Number of Valid Hours: 706

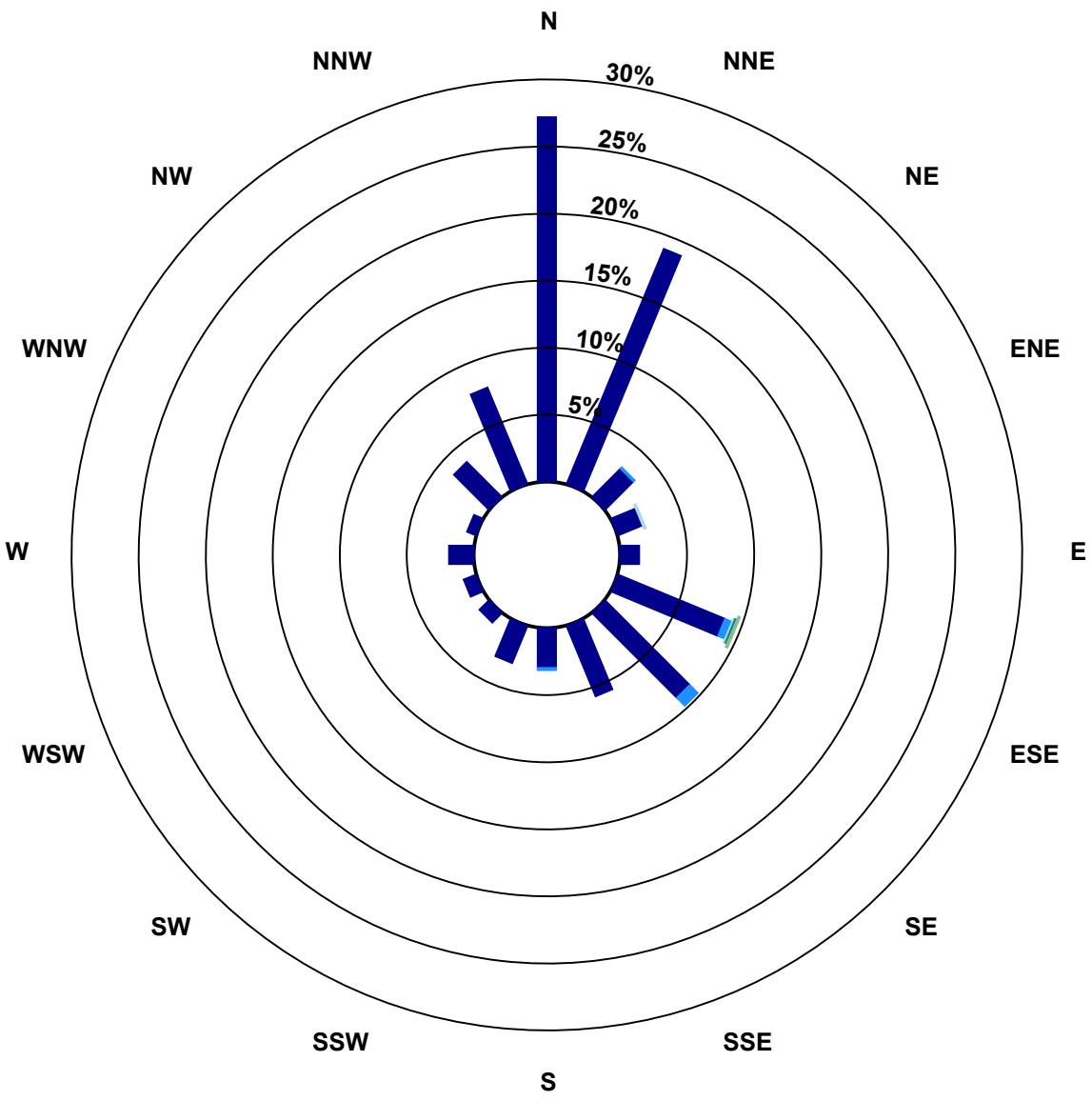
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Total Reduced Sulphur (TRS) - ppb

Fort Hills



Classes (ppb)

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

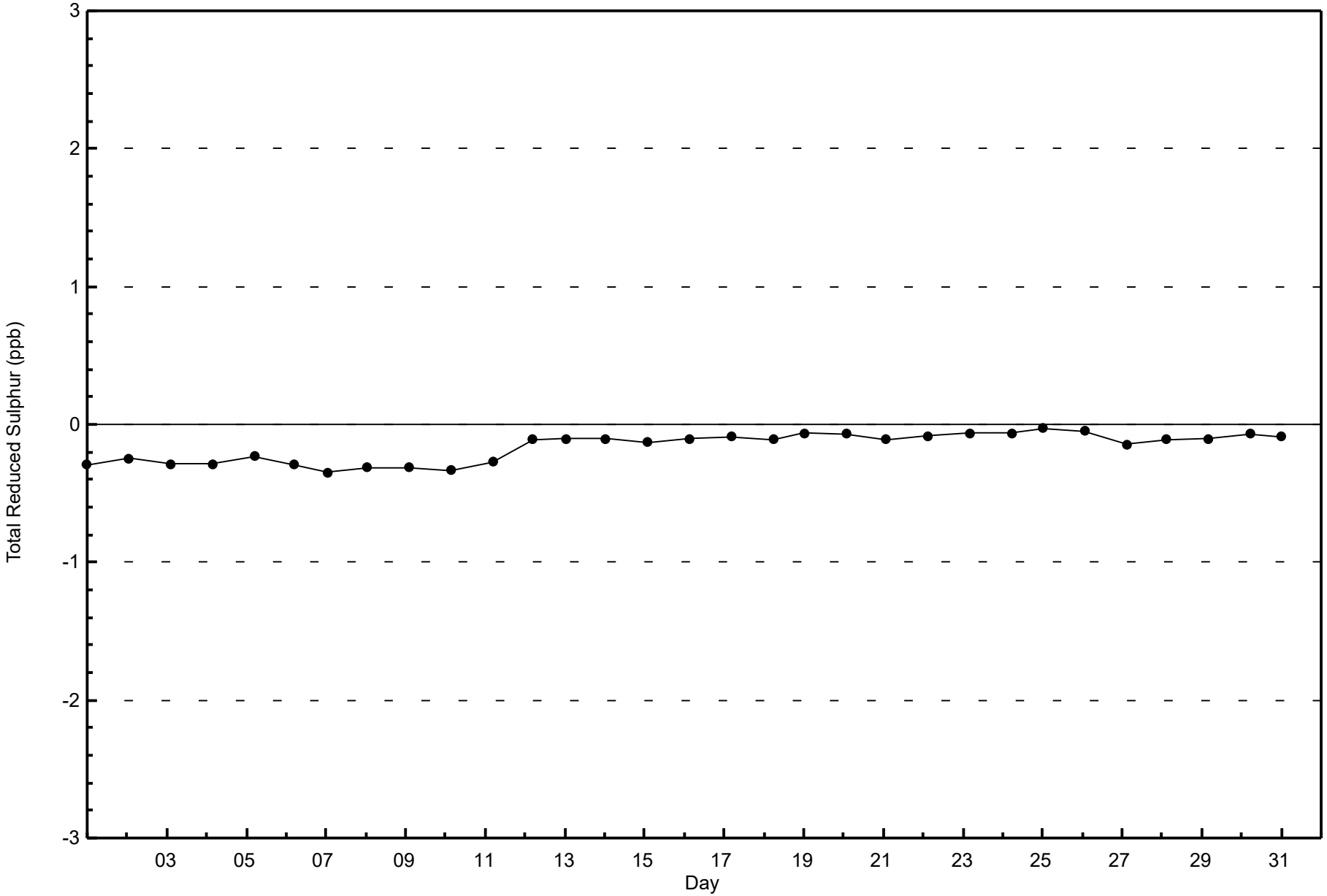
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Fort Hills - March 2025

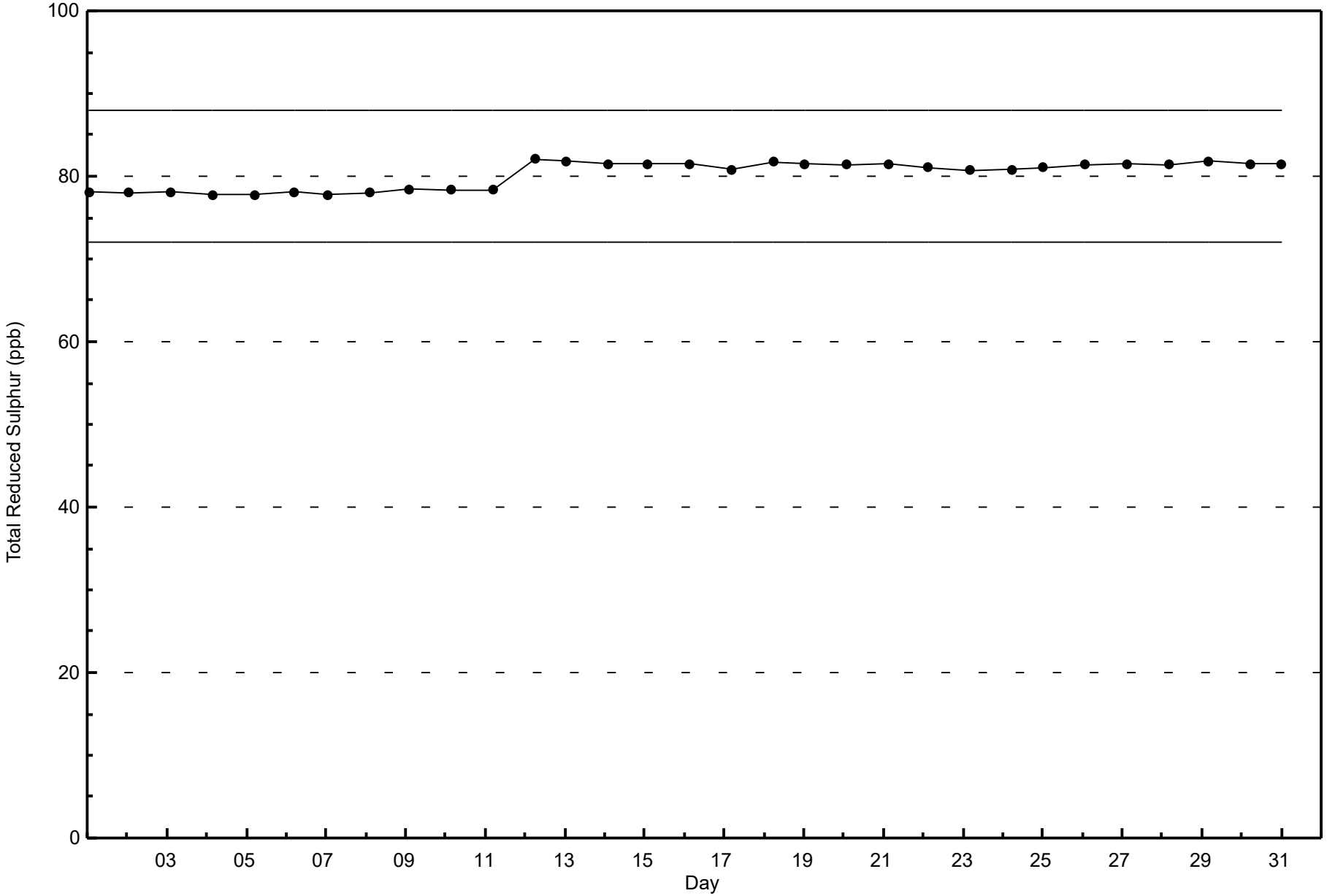


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Fort Hills - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Fort Hills - March 2025

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

Maximum Value: 6.8 ppm on Mar 2 02:00

Maximum Daily Average: 3.8 ppm on Mar 2

Minimum Value: 2.0 ppm on Mar 14 23:00

Minimum Daily Average: 2.1 ppm on Mar 14

Maximum Diurnal Average: 2.8 ppm at hour 2

Minimum Diurnal Average: 2.3 ppm at hour 16

Monthly Average: 2.54 ppm

Percentiles: P_1 = 2.0 P_{10} = 2.1 Q_1 = 2.1 Median = 2.3 Q_3 = 2.7 P_{90} = 3.4 P_{99} = 5.1

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	3.0	2.6	2.5	2.3	2.1	Z	2.4	2.1	2.7	2.6	2.5	2.7	2.7	2.8	3.5	2.9	3.8	4.3	6.0	5.0	5.1	4.9	4.2	3.8	3.3	6.0
2-Mar	Z	6.8	4.2	4.4	3.9	4.7	5.1	5.1	6.0	4.7	4.2	3.5	3.8	5.7	4.7	2.8	2.3	2.3	2.2	2.1	2.1	2.2	2.1	2.2	3.8	6.8
3-Mar	2.2	Z	2.2	2.5	2.2	2.4	2.2	2.1	2.2	2.6	2.8	2.7	2.3	2.4	2.5	2.4	2.8	2.8	2.8	2.4	2.2	2.2	2.4	2.6	2.4	2.8
4-Mar	2.7	2.6	Z	2.1	2.1	2.0	2.1	2.1	2.2	2.6	2.0	2.0	2.0	2.0	2.5	2.7	2.8	2.5	2.3	2.5	2.5	2.4	2.8	3.0	2.4	3.0
5-Mar	2.8	2.2	2.1	Z	2.1	2.1	2.0	2.1	2.2	2.4	2.2	2.0	2.1	2.7	2.5	2.3	2.4	2.5	2.5	2.3	2.3	2.9	2.4	2.2	2.3	2.9
6-Mar	2.7	2.2	2.2	2.2	Z	2.3	2.3	2.5	2.6	2.6	2.5	2.1	2.2	2.4	2.7	2.8	3.6	3.6	3.7	4.0	3.1	4.5	2.7	2.2	2.8	4.5
7-Mar	2.1	2.2	2.5	2.3	2.5	Z	2.3	2.1	3.1	2.6	2.6	2.6	2.7	2.6	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.2	2.2	2.3	2.3	3.1
8-Mar	Z	2.6	2.5	2.9	2.3	3.1	2.5	2.4	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.2	2.0	2.0	2.0	2.1	2.3	3.1
9-Mar	2.1	Z	2.3	2.3	2.3	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.3	2.5	2.4	2.4	2.2	2.5
10-Mar	2.6	2.2	Z	2.2	2.3	2.2	2.4	2.2	2.1	2.2	2.3	2.4	2.3	2.3	2.2	2.2	2.2	2.7	2.8	2.8	2.7	2.3	2.3	2.3	2.4	2.8
11-Mar	2.3	2.3	2.3	Z	2.2	2.1	2.1	2.0	2.3	2.4	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.4
12-Mar	2.1	2.1	2.2	2.3	Z	2.2	2.3	2.0	2.0	2.2	2.3	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.2	2.5	2.5	3.1	2.2	3.1
13-Mar	3.2	2.4	3.4	3.1	3.6	Z	2.6	2.7	4.0	2.8	2.8	2.6	2.1	2.0	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.5	4.0
14-Mar	Z	2.2	2.2	2.1	2.1	2.2	2.2	2.3	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.3
15-Mar	2.1	Z	2.2	2.0	2.1	2.0	2.1	2.0	2.1	2.9	2.6	2.8	2.4	3.0	2.9	2.5	2.1	2.4	2.3	2.2	2.2	2.1	2.7	2.7	2.4	3.0
16-Mar	3.0	2.8	Z	3.4	2.3	3.4	3.7	2.6	2.4	2.4	2.8	3.4	2.6	2.3	2.3	2.3	2.5	2.0	2.1	2.1	2.3	2.7	2.2	2.0	2.6	3.7
17-Mar	2.1	2.1	2.1	Z	2.0	2.0	2.1	M	C	C	C	C	2.1	2.0	2.1	2.1	2.1	2.1	2.2	2.4	2.5	2.4	2.4	2.5	2.2	2.5
18-Mar	2.6	2.9	4.2	2.4	Z	2.4	2.3	2.1	2.5	3.2	3.8	3.9	3.0	2.2	2.3	2.4	2.5	2.5	2.4	2.7	2.8	2.8	2.9	2.8	2.8	4.2
19-Mar	3.5	4.0	3.3	2.9	2.7	Z	2.3	2.5	3.4	3.1	2.7	2.7	2.6	3.2	3.5	3.0	2.5	2.2	2.4	2.1	2.1	2.2	2.2	2.3	2.8	4.0
20-Mar	Z	2.4	2.2	2.5	2.2	2.2	2.2	2.5	2.4	2.3	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.4	2.2	2.4	2.8	3.0	4.1	2.4	4.1
21-Mar	3.5	Z	2.1	2.0	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	3.5	4.5	3.0	2.1	2.0	2.4	4.5
22-Mar	2.1	2.3	Z	2.3	2.5	2.2	2.1	2.2	2.1	2.2	2.2	2.3	2.2	2.6	3.0	3.3	3.2	2.4	2.6	3.0	2.6	2.5	2.8	2.4	2.5	3.3
23-Mar	2.5	2.7	2.2	Z	2.3	2.8	2.9	2.9	3.6	4.5	4.8	4.6	3.7	3.2	3.3	2.4	2.6	2.5	3.2	3.1	2.6	2.5	2.9	4.0	3.1	4.8
24-Mar	4.2	4.2	4.4	5.1	Z	3.5	3.8	3.2	2.8	2.5	2.4	2.4	2.5	2.3	2.4	2.4	2.5	2.1	2.1	2.1	2.0	2.5	3.6	3.6	3.0	5.1
25-Mar	4.2	3.8	3.6	3.0	2.6	Z	2.6	2.5	2.6	2.4	2.9	3.5	2.9	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.6	4.2
26-Mar	Z	2.2	2.1	2.1	2.3	2.3	2.3	2.3	2.2	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.5	2.2	2.1	2.5
27-Mar	2.4	Z	2.4	2.2	2.1	2.4	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	2.3	2.2	2.2	2.3	2.5	2.2	2.5
28-Mar	2.8	2.9	Z	2.8	3.4	2.4	2.3	2.5	3.2	3.0	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.5	2.3	2.7	3.6	2.5	3.6
29-Mar	2.6	3.5	3.9	Z	3.1	2.6	2.4	2.7	2.6	3.0	3.3	3.7	4.0	3.6	2.8	2.1	2.1	2.1	2.4	2.4	2.4	2.3	3.1	3.7	2.9	4.0
30-Mar	3.6	3.2	3.4	3.2	Z	3.2	3.9	4.0	3.8	3.4	3.0	3.1	3.1	2.5	2.2	2.3	2.4	2.2	2.7	2.5	2.6	2.9	2.8	2.6	3.0	4.0
31-Mar	3.1	2.2	2.2	2.3	2.4	Z	2.6	2.4	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	3.2	3.2	3.0	2.9	2.9	2.4	3.2
	2.8	2.8	2.7	2.7	2.5	2.5	2.5	2.5	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.3	2.4	2.3	2.5	2.5	2.5	2.6	2.6	2.7	Diurnal Average	
	4.2	6.8	4.4	5.1	3.9	4.7	5.1	5.1	6.0	4.7	4.8	4.6	4.0	5.7	4.7	3.3	3.8	4.3	6.0	5.0	5.1	4.9	4.2	4.1	Diurnal Maximum	

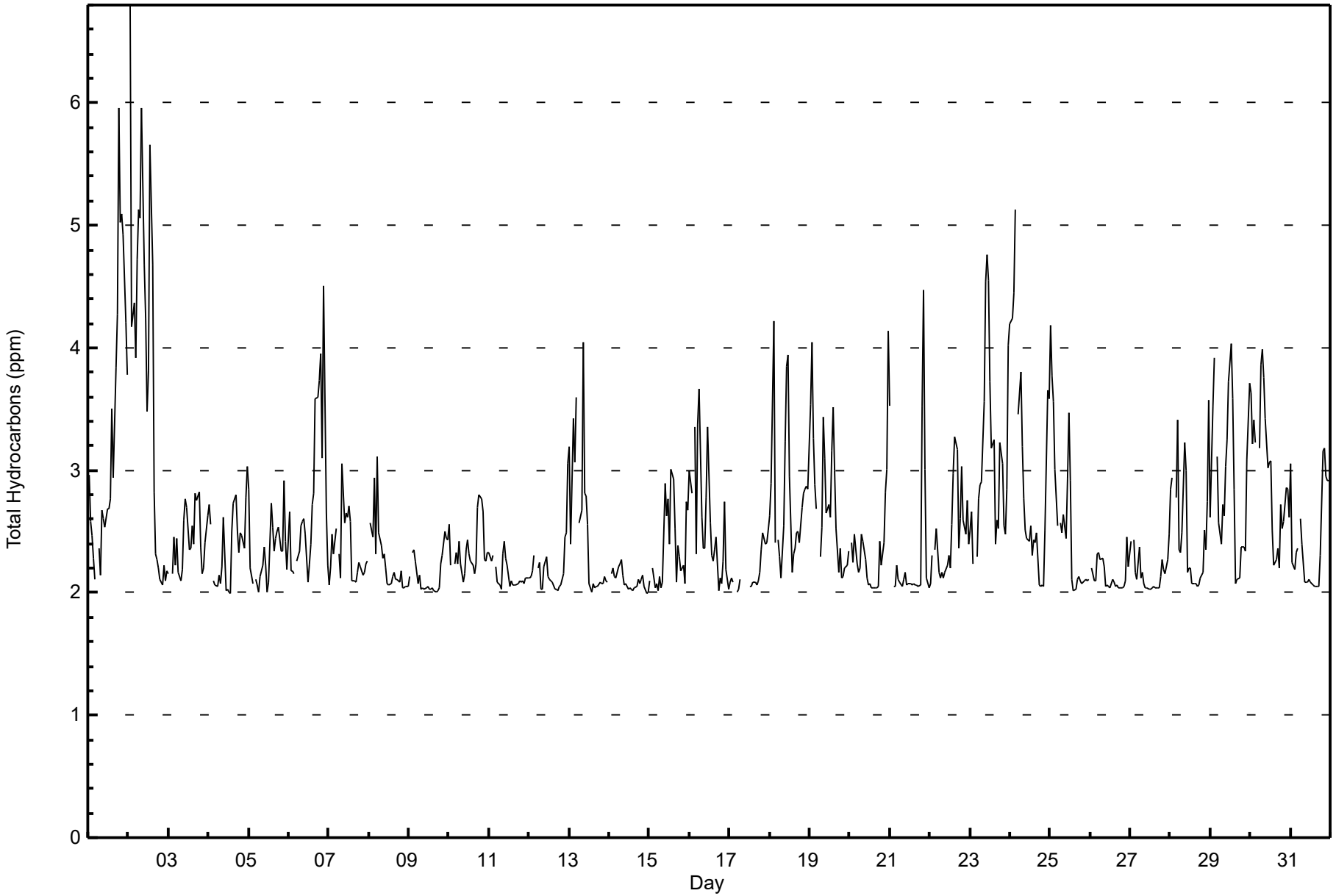
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Fort Hills - March 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	71	10.03	10.03
2.1 - 3.0	530	74.86	84.89
3.1 - 10.0	107	15.11	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Fort Hills - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	14	24	5	3	2	2	1	4	4	0	0	0	2	2	5	3	71
2.1 - 3.0	161	107	14	9	7	42	54	35	16	18	4	5	6	2	17	31	528
3.1 - 10.0	20	1	4	3	1	22	14	2	3	3	2	1	5	1	1	24	107
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	195	132	23	15	10	66	69	41	23	21	6	6	13	5	23	58	706

Total Number of Valid Hours: 706

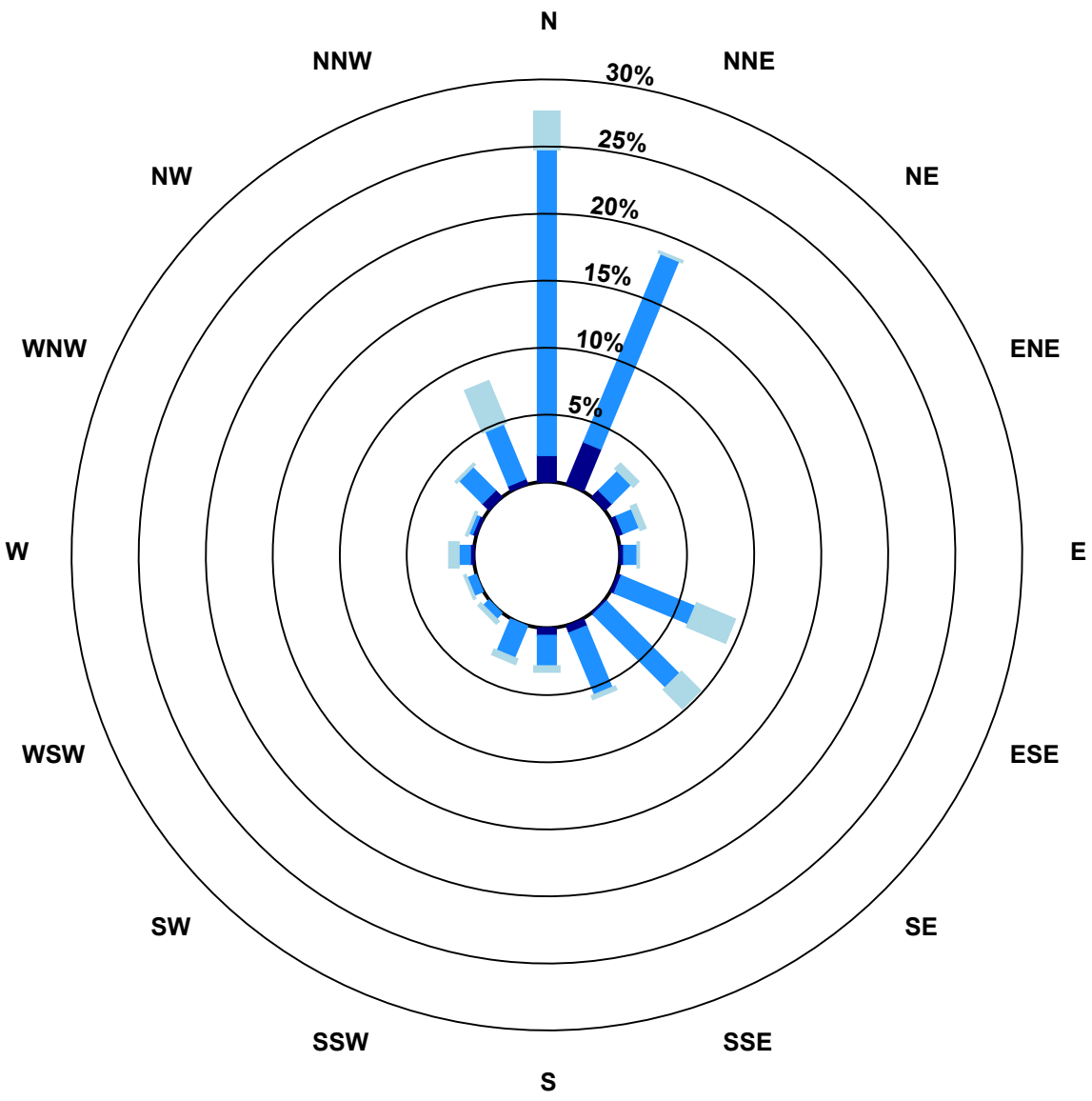
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Total Hydrocarbons (THC) - ppm

Fort Hills



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

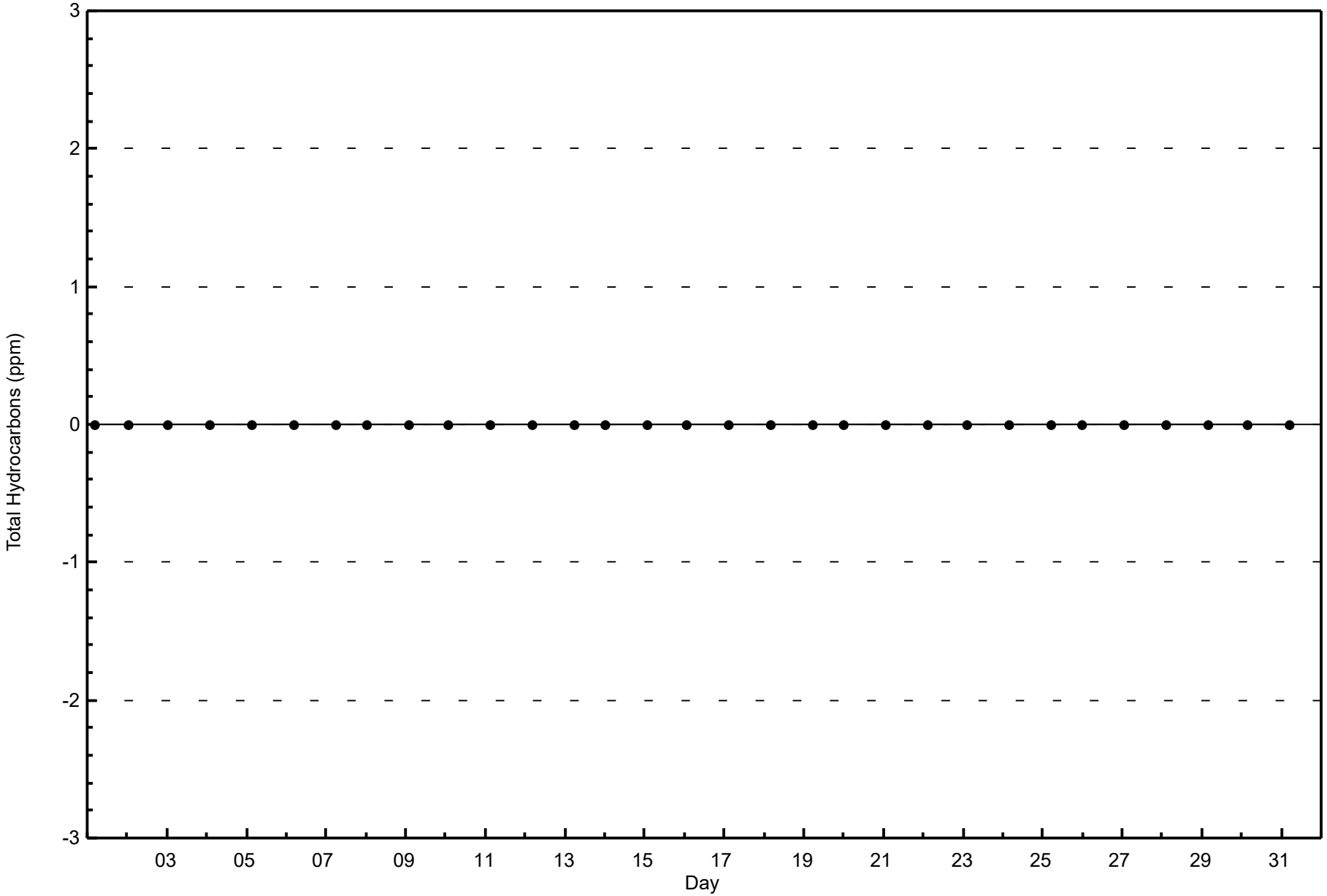
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Fort Hills - March 2025

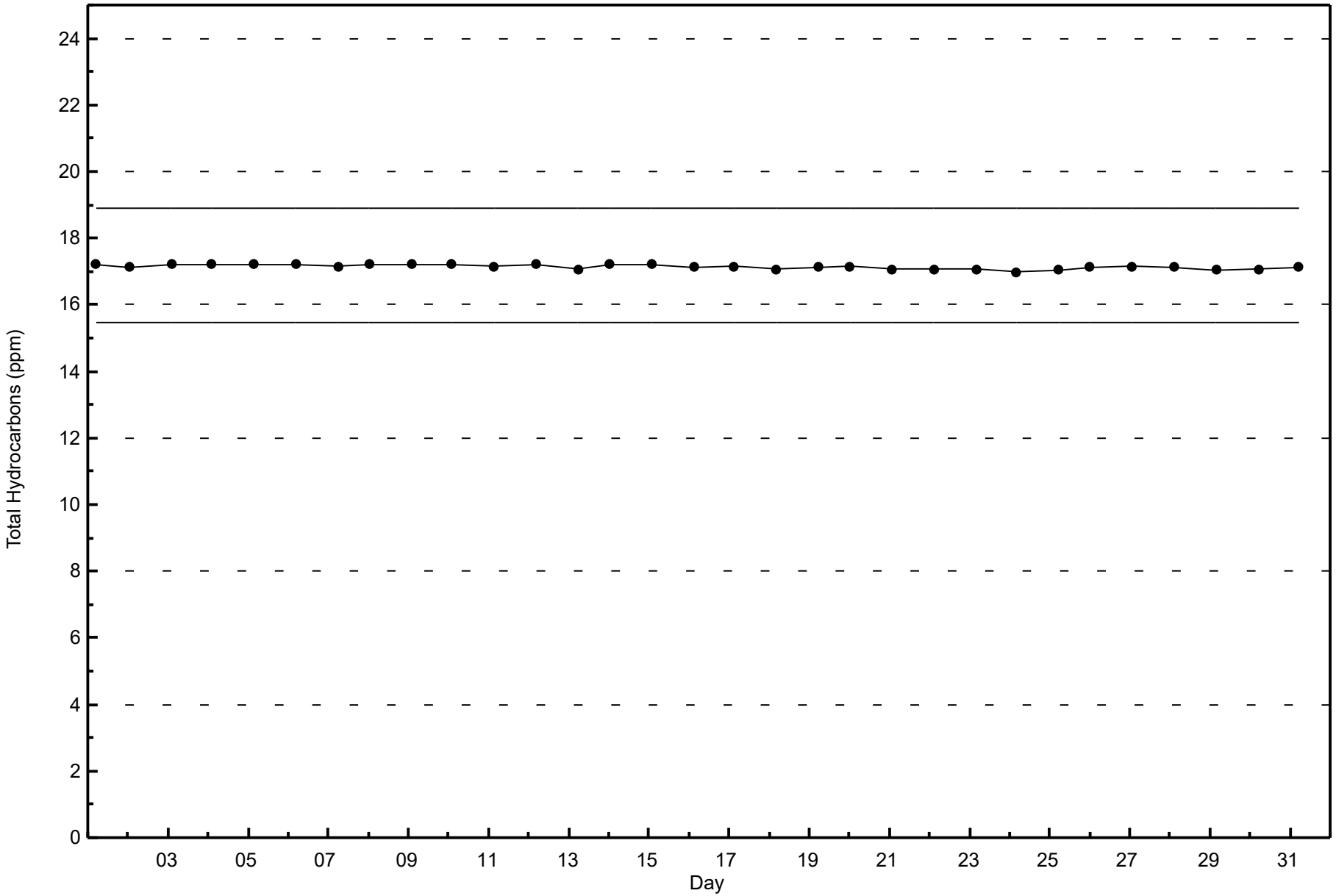


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Fort Hills - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Fort Hills - March 2025

Maximum Value: 1.984 ppm on Mar 2 14:00

Maximum Daily Average: 0.678 ppm on Mar 2

Minimum Value: 0.000 ppm on Mar 1 05:00

Minimum Daily Average: 0.000 ppm on Mar 14

Maximum Diurnal Average: 0.269 ppm at hour 12

Minimum Diurnal Average: 0.095 ppm at hour 8

Monthly Average: 0.182 ppm

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.3 P_{90} = 0.5 P_{99} = 1.3

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.291	0.223	0.233	0.082	0.000	Z	0.000	0.000	0.011	0.192	0.221	0.255	0.246	0.357	0.961	0.473	1.282	1.389	1.208	1.082	1.058	1.030	0.853	0.697	0.528	1.389
2-Mar	Z	1.617	0.854	0.855	0.688	0.953	1.060	1.056	1.206	0.928	0.725	0.496	0.687	1.984	1.474	0.423	0.209	0.180	0.093	0.000	0.000	0.000	0.000	0.094	0.678	1.984
3-Mar	0.000	Z	0.031	0.308	0.000	0.095	0.037	0.000	0.009	0.233	0.308	0.255	0.118	0.143	0.362	0.192	0.461	0.321	0.379	0.111	0.039	0.108	0.281	0.394	0.182	0.461
4-Mar	0.377	0.293	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.079	0.000	0.000	0.000	0.000	0.126	0.221	0.247	0.222	0.128	0.259	0.169	0.102	0.294	0.280	0.122	0.377
5-Mar	0.256	0.050	0.000	Z	0.000	0.000	0.000	0.000	0.028	0.228	0.174	0.000	0.021	0.402	0.306	0.212	0.314	0.335	0.371	0.208	0.215	0.644	0.118	0.011	0.169	0.644
6-Mar	0.174	0.011	0.003	0.009	Z	0.162	0.231	0.192	0.242	0.265	0.131	0.000	0.111	0.211	0.303	0.366	1.096	0.920	0.596	0.712	0.420	0.678	0.256	0.024	0.309	1.096
7-Mar	0.000	0.084	0.268	0.141	0.315	Z	0.089	0.000	0.118	0.133	0.434	0.332	0.401	0.269	0.000	0.000	0.005	0.051	0.102	0.073	0.000	0.000	0.030	0.000	0.124	0.434
8-Mar	Z	0.041	0.296	0.170	0.009	0.211	0.038	0.019	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.019	0.098	0.009	0.000	0.000	0.000	0.040	0.296
9-Mar	0.052	Z	0.218	0.224	0.168	0.014	0.072	0.000	0.010	0.007	0.003	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.156	0.211	0.394	0.306	0.237	0.090	0.394
10-Mar	0.342	0.070	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.031	0.199	0.148	0.000	0.000	0.000	0.000	0.059	0.454	0.494	0.435	0.382	0.092	0.000	0.002	0.118	0.494
11-Mar	0.007	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007
12-Mar	0.000	0.000	0.000	0.000	Z	0.055	0.003	0.000	0.000	0.000	0.050	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.030	0.060	0.007	0.229	0.019	0.229
13-Mar	0.281	0.012	0.251	0.167	0.293	Z	0.035	0.108	0.384	0.147	0.217	0.163	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.089	0.384
14-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.000	Z	0.036	0.000	0.000	0.000	0.011	0.000	0.000	0.236	0.288	0.391	0.219	0.520	0.588	0.288	0.009	0.228	0.148	0.073	0.148	0.007	0.111	0.104	0.148	0.588
16-Mar	0.209	0.146	Z	0.261	0.000	0.189	0.273	0.048	0.000	0.000	0.241	0.678	0.320	0.193	0.095	0.196	0.331	0.000	0.000	0.000	0.024	0.507	0.098	0.000	0.166	0.678
17-Mar	0.000	0.000	0.000	Z	0.000	0.000	0.000	M	C	C	C	C	0.000	0.000	0.016	0.012	0.000	0.000	0.068	0.128	0.233	0.205	0.196	0.233	0.061	0.233
18-Mar	0.174	0.307	0.550	0.079	Z	0.012	0.023	0.000	0.056	0.369	0.793	0.961	0.447	0.009	0.055	0.133	0.249	0.295	0.177	0.231	0.232	0.223	0.242	0.195	0.253	0.961
19-Mar	0.311	0.414	0.276	0.206	0.097	Z	0.000	0.103	0.375	0.316	0.258	0.437	0.333	0.658	0.738	0.496	0.225	0.033	0.129	0.011	0.000	0.000	0.000	0.000	0.235	0.738
20-Mar	Z	0.008	0.003	0.028	0.000	0.000	0.000	0.041	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.052	0.000	0.059	0.128	0.154	0.377	0.037	0.377
21-Mar	0.279	Z	0.000	0.000	0.089	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.786	0.600	0.440	0.000	0.000	0.095	0.786
22-Mar	0.005	0.008	Z	0.229	0.357	0.065	0.000	0.000	0.000	0.030	0.069	0.113	0.052	0.257	0.566	0.607	0.634	0.187	0.280	0.382	0.295	0.146	0.490	0.208	0.217	0.634
23-Mar	0.310	0.407	0.013	Z	0.017	0.154	0.215	0.203	0.518	0.931	1.606	1.498	0.941	0.743	0.666	0.190	0.325	0.323	0.697	0.633	0.349	0.268	0.250	0.486	0.510	1.606
24-Mar	0.523	0.567	0.588	0.673	Z	0.293	0.430	0.318	0.202	0.156	0.099	0.080	0.200	0.069	0.206	0.038	0.200	0.000	0.000	0.000	0.000	0.113	0.468	0.586	0.253	0.673
25-Mar	0.488	0.325	0.233	0.114	0.177	Z	0.221	0.143	0.183	0.209	0.435	0.797	0.591	0.052	0.000	0.000	0.029	0.068	0.018	0.000	0.000	0.017	0.000	0.000	0.178	0.797
26-Mar	Z	0.000	0.000	0.000	0.000	0.106	0.081	0.000	0.118	0.000	0.000	0.000	0.000	0.051	0.024	0.008	0.010	0.009	0.000	0.007	0.009	0.050	0.342	0.087	0.039	0.342
27-Mar	0.296	Z	0.297	0.045	0.013	0.219	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.055	0.140	0.038	0.000	0.000	0.040	0.050	0.297
28-Mar	0.169	0.157	Z	0.293	0.269	0.031	0.000	0.056	0.295	0.355	0.008	0.065	0.123	0.006	0.006	0.000	0.000	0.011	0.022	0.000	0.270	0.206	0.165	0.328	0.123	0.355
29-Mar	0.086	0.253	0.341	Z	0.200	0.060	0.019	0.000	0.095	0.518	0.591	0.877	1.441	1.087	0.513	0.003	0.026	0.029	0.226	0.158	0.218	0.158	0.307	0.383	0.330	1.441
30-Mar	0.371	0.293	0.310	0.303	Z	0.274	0.389	0.453	0.527	0.719	0.560	0.527	0.583	0.345	0.141	0.156	0.217	0.037	0.367	0.312	0.346	0.278	0.264	0.244	0.349	0.719
31-Mar	0.351	0.038	0.000	0.041	0.074	Z	0.133	0.100	0.000	0.000	0.000	0.004	0.000	0.006	0.000	0.000	0.000	0.000	0.087	0.392	0.322	0.332	0.349	0.441	0.116	0.441
	0.206	0.205	0.185	0.163	0.106	0.116	0.108	0.095	0.146	0.203	0.247	0.269	0.221	0.237	0.230	0.129	0.191	0.164	0.184	0.206	0.183	0.199	0.180	0.183	Diurnal Average	
	0.523	1.617	0.854	0.855	0.688	0.953	1.060	1.056	1.206	0.931	1.606	1.498	1.441	1.984	1.474	0.607	1.282	1.389	1.208	1.082	1.058	1.030	0.853	0.697	Diurnal Maximum	

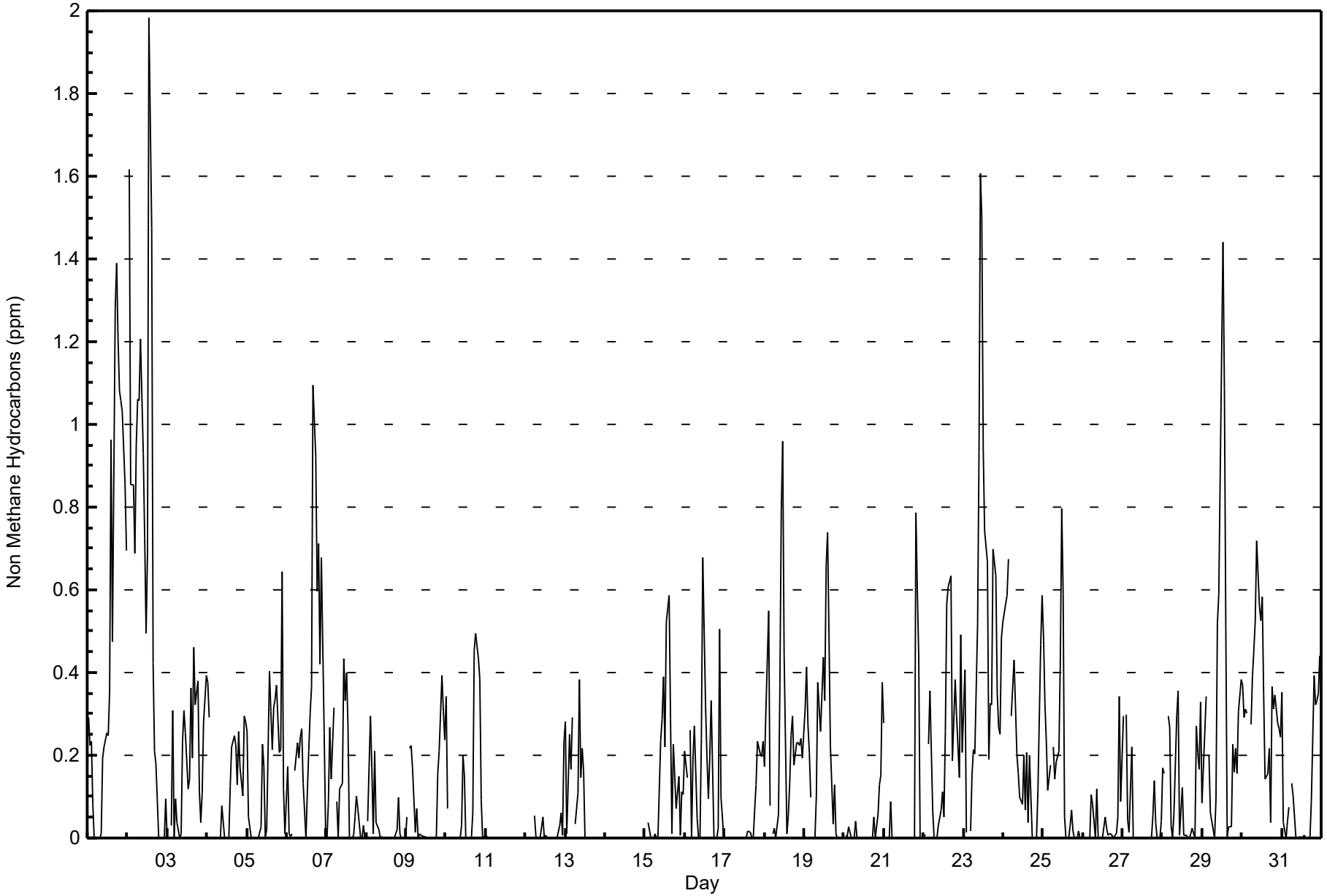
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Fort Hills - March 2025



Non Methane Hydrocarbons (NMHC) - ppm

Fort Hills - March 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	260	36.72	36.72
0.006 - 0.05	86	12.15	48.87
0.06 - 0.1	78	11.02	59.89
> 0.1	284	40.11	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Fort Hills - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.005	105	48	5	4	2	11	12	23	8	10	1	0	3	3	14	11	260
0.006 - 0.05	20	26	5	0	2	7	4	2	2	1	0	0	3	0	4	9	85
0.06 - 0.1	12	21	2	1	1	5	7	9	4	2	1	2	0	0	1	9	77
> 0.1	58	37	11	10	5	43	46	7	9	8	4	4	7	2	4	29	284
Totals	195	132	23	15	10	66	69	41	23	21	6	6	13	5	23	58	706

Total Number of Valid Hours: 706

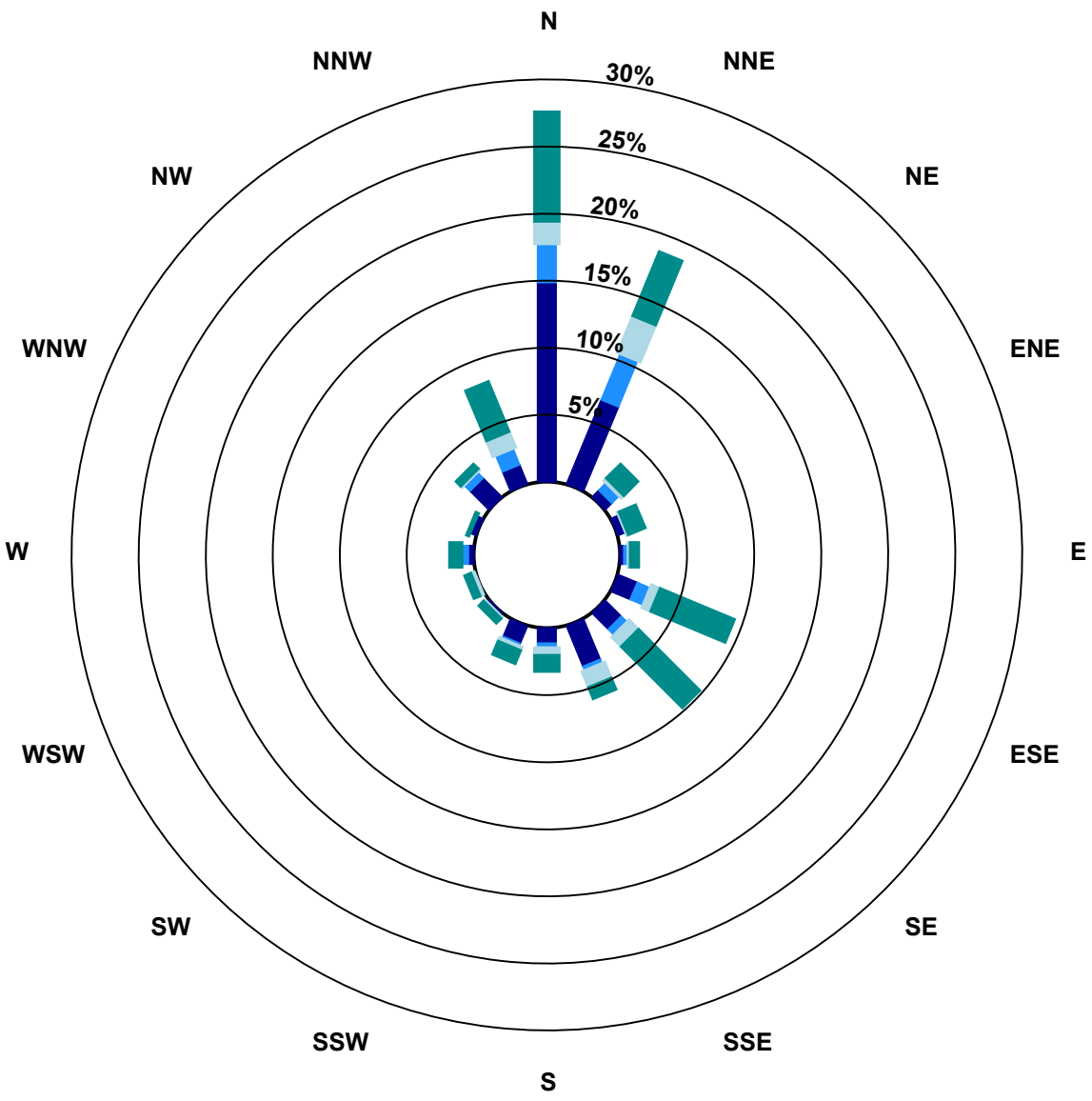
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Non Methane Hydrocarbons (NMHC) - ppm

Fort Hills



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

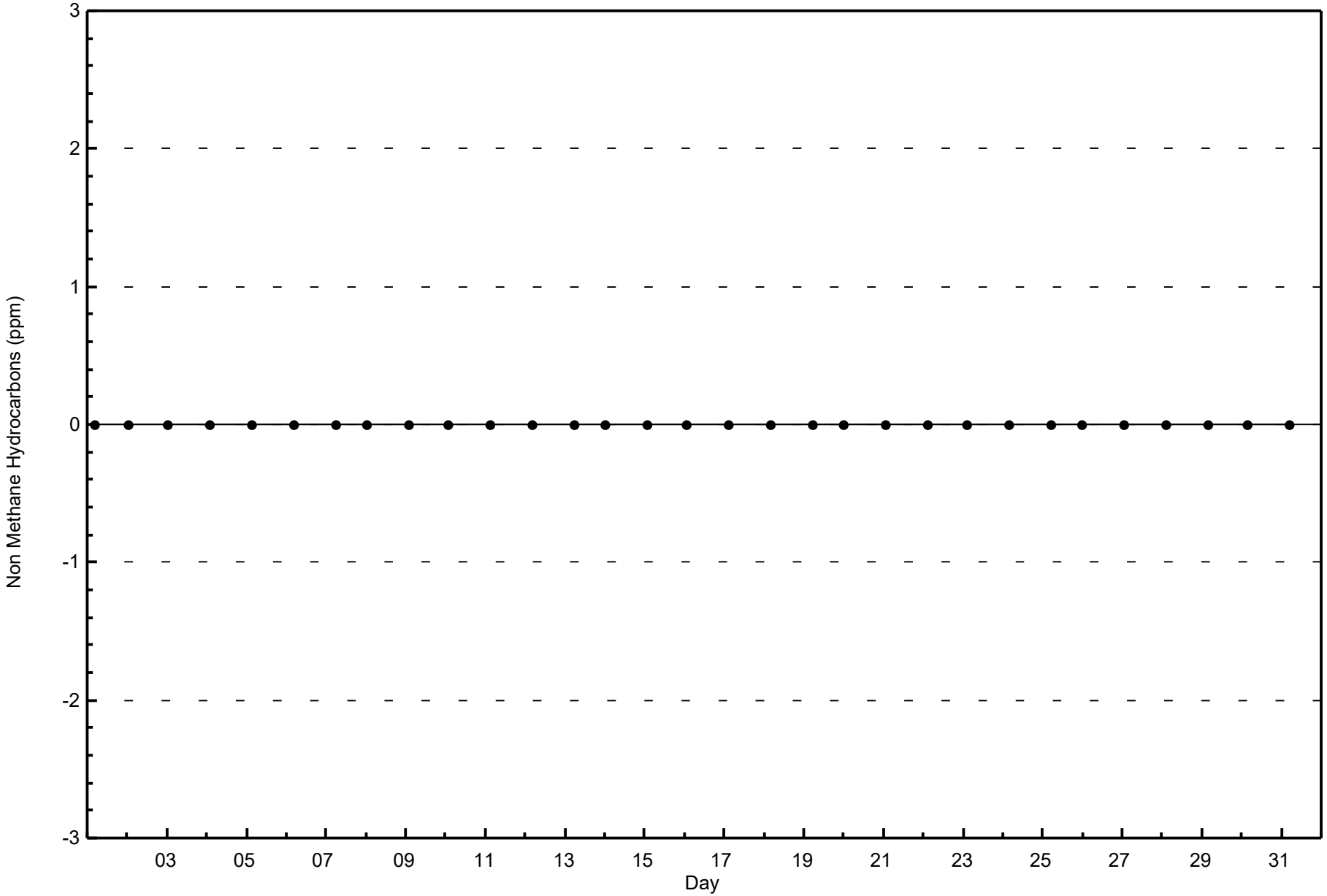
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Fort Hills - March 2025

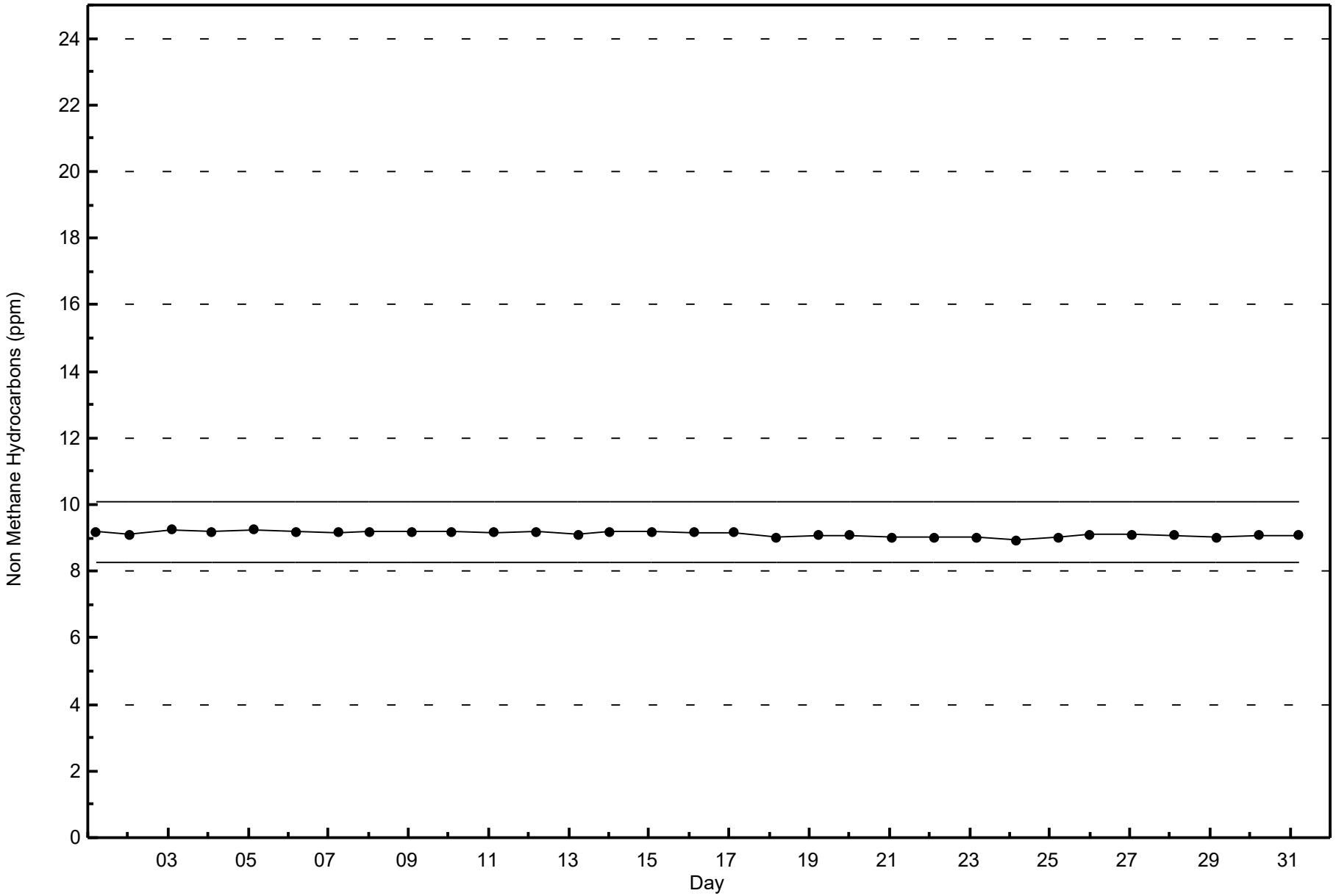


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Fort Hills - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Fort Hills - March 2025

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

Maximum Value: 5.2 ppm on Mar 2 02:00

Maximum Daily Average: 3.1 ppm on Mar 2

Minimum Value: 2.0 ppm on Mar 14 23:00

Minimum Daily Average: 2.1 ppm on Mar 9

Maximum Diurnal Average: 2.6 ppm at hour 2

Minimum Diurnal Average: 2.2 ppm at hour 18

Monthly Average: 2.36 ppm

Percentiles: P_1 = 2.0 P_{10} = 2.0 Q_1 = 2.1 Median = 2.2 Q_3 = 2.4 P_{90} = 2.9 P_{99} = 3.9

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	2.7	2.4	2.2	2.2	2.1	Z	2.4	2.1	2.7	2.4	2.3	2.4	2.4	2.4	2.5	2.5	2.6	2.9	4.8	3.9	4.0	3.9	3.4	3.1	2.8	4.8
2-Mar	Z	5.2	3.3	3.5	3.2	3.8	4.1	4.0	4.8	3.8	3.5	3.0	3.1	3.7	3.2	2.4	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	3.1	5.2
3-Mar	2.2	Z	2.1	2.2	2.2	2.3	2.1	2.1	2.2	2.4	2.5	2.4	2.2	2.2	2.2	2.2	2.4	2.4	2.5	2.3	2.1	2.1	2.1	2.2	2.2	2.5
4-Mar	2.3	2.3	Z	2.1	2.1	2.0	2.1	2.1	2.2	2.5	2.0	2.0	2.0	2.0	2.4	2.5	2.6	2.3	2.2	2.2	2.3	2.3	2.5	2.8	2.3	2.8
5-Mar	2.6	2.1	2.1	Z	2.1	2.1	2.0	2.1	2.2	2.1	2.1	2.0	2.1	2.3	2.2	2.1	2.1	2.2	2.2	2.1	2.1	2.3	2.3	2.2	2.2	2.6
6-Mar	2.5	2.2	2.2	2.1	Z	2.1	2.1	2.4	2.3	2.3	2.3	2.1	2.1	2.2	2.4	2.5	2.5	2.7	3.1	3.2	2.7	3.8	2.4	2.2	2.5	3.8
7-Mar	2.1	2.1	2.2	2.2	2.2	Z	2.2	2.1	2.9	2.4	2.2	2.3	2.3	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.2	2.9
8-Mar	Z	2.5	2.2	2.8	2.3	2.9	2.4	2.4	2.3	2.3	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	2.2	2.9
9-Mar	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.1	2.2
10-Mar	2.2	2.1	Z	2.2	2.3	2.2	2.4	2.2	2.1	2.1	2.1	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.3	2.3	2.2	2.4
11-Mar	2.3	2.3	2.3	Z	2.2	2.1	2.1	2.0	2.3	2.4	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.4
12-Mar	2.1	2.1	2.2	2.3	Z	2.1	2.2	2.0	2.0	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.4	2.5	2.8	2.2	2.8
13-Mar	2.9	2.4	3.2	2.9	3.3	Z	2.5	2.6	3.7	2.7	2.6	2.4	2.1	2.0	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.4	3.7
14-Mar	Z	2.2	2.2	2.1	2.1	2.2	2.2	2.3	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.3
15-Mar	2.1	Z	2.2	2.0	2.1	2.0	2.1	2.0	2.1	2.7	2.3	2.4	2.2	2.5	2.3	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.6	2.6	2.2	2.7
16-Mar	2.8	2.7	Z	3.1	2.3	3.2	3.4	2.6	2.4	2.4	2.5	2.7	2.2	2.1	2.2	2.1	2.1	2.0	2.1	2.1	2.2	2.2	2.1	2.0	2.4	3.4
17-Mar	2.1	2.1	2.1	Z	2.0	2.0	2.1	M	C	C	C	C	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.2	2.3	2.1	2.3
18-Mar	2.5	2.6	3.7	2.3	Z	2.4	2.3	2.1	2.5	2.9	3.1	3.0	2.5	2.2	2.3	2.2	2.2	2.2	2.2	2.5	2.6	2.6	2.6	2.7	2.5	3.7
19-Mar	3.2	3.6	3.0	2.7	2.6	Z	2.3	2.4	3.1	2.8	2.4	2.3	2.3	2.5	2.8	2.5	2.3	2.1	2.2	2.1	2.1	2.2	2.2	2.3	2.5	3.6
20-Mar	Z	2.4	2.2	2.4	2.2	2.2	2.2	2.4	2.4	2.3	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.4	2.2	2.4	2.7	2.9	3.8	2.3	3.8
21-Mar	3.2	Z	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	2.7	3.9	2.6	2.1	2.0	2.3	3.9
22-Mar	2.1	2.3	Z	2.1	2.2	2.1	2.1	2.2	2.1	2.1	2.2	2.2	2.2	2.3	2.4	2.7	2.5	2.2	2.3	2.6	2.3	2.3	2.3	2.2	2.3	2.7
23-Mar	2.2	2.3	2.2	Z	2.3	2.6	2.7	2.7	3.0	3.6	3.2	3.1	2.8	2.4	2.6	2.2	2.3	2.2	2.5	2.4	2.2	2.2	2.6	3.5	2.6	3.6
24-Mar	3.7	3.7	3.9	4.5	Z	3.2	3.4	2.9	2.6	2.4	2.3	2.3	2.3	2.2	2.2	2.4	2.3	2.1	2.1	2.1	2.0	2.4	3.2	3.0	2.7	4.5
25-Mar	3.7	3.4	3.3	2.9	2.4	Z	2.4	2.3	2.5	2.2	2.5	2.7	2.3	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.4	3.7
26-Mar	Z	2.2	2.1	2.1	2.3	2.2	2.2	2.3	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	2.1	2.1	2.1	2.3
27-Mar	2.1	Z	2.1	2.1	2.1	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	2.1	2.1	2.1	2.2	2.3	2.4	2.1	2.4
28-Mar	2.7	2.8	Z	2.5	3.1	2.3	2.3	2.4	2.9	2.6	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.6	3.2	2.4	3.2
29-Mar	2.5	3.3	3.6	Z	2.9	2.5	2.4	2.7	2.5	2.5	2.7	2.8	2.6	2.5	2.3	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.8	3.3	2.6	3.6
30-Mar	3.3	2.9	3.1	2.9	Z	2.9	3.5	3.5	3.2	2.7	2.5	2.5	2.5	2.2	2.1	2.1	2.2	2.2	2.4	2.2	2.2	2.6	2.6	2.4	2.6	3.5
31-Mar	2.7	2.2	2.2	2.3	2.3	Z	2.5	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.8	2.9	2.6	2.6	2.5	2.3	2.9
	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.4	2.5	2.4	2.4	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.4	2.4	2.5	Diurnal Average	
	3.7	5.2	3.9	4.5	3.3	3.8	4.1	4.0	4.8	3.8	3.5	3.1	3.1	3.7	3.2	2.7	2.6	2.9	4.8	3.9	4.0	3.9	3.4	3.8	Diurnal Maximum	

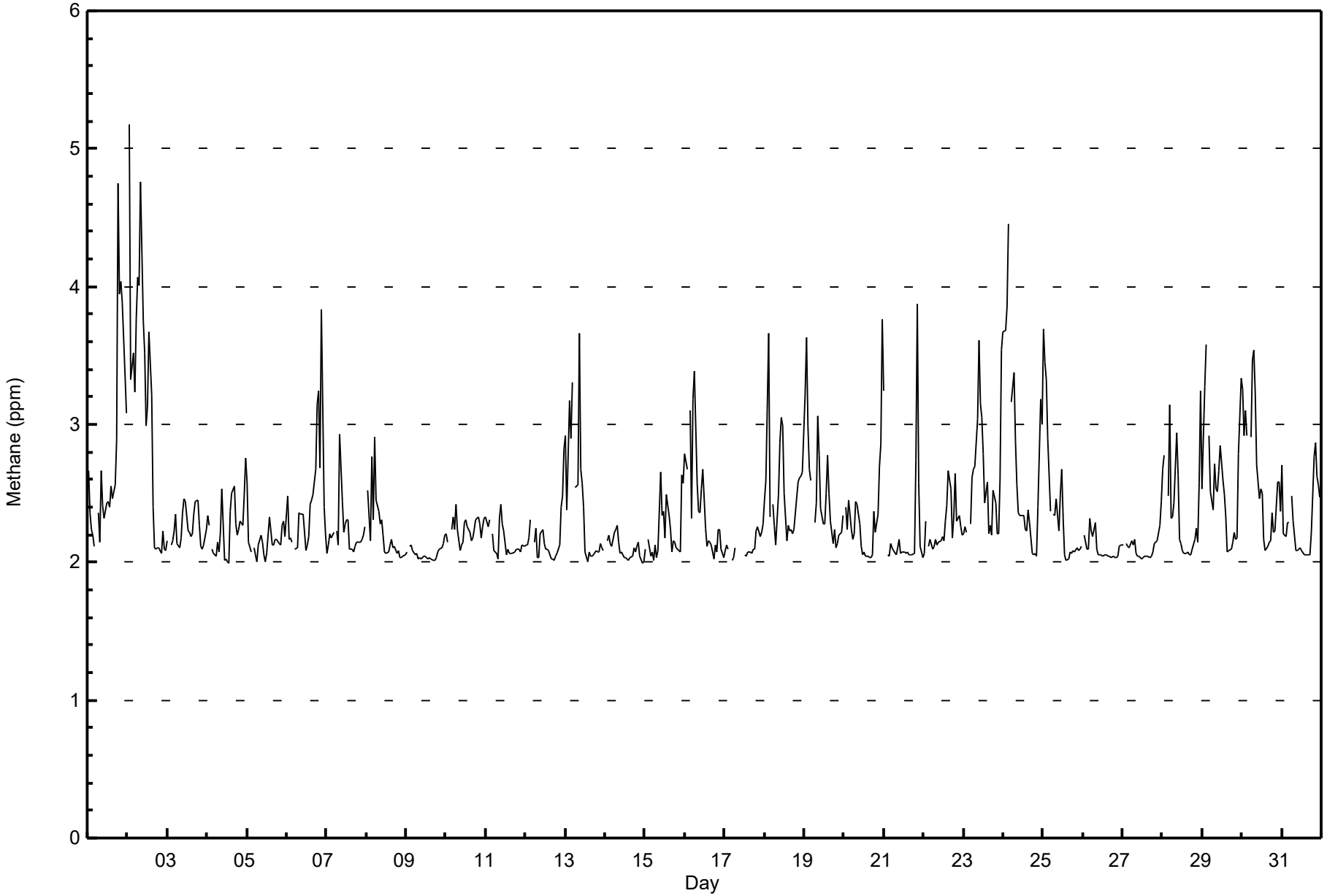
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Fort Hills - March 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	75	10.59	10.59
2.1 - 3.0	573	80.93	91.53
3.1 - 10.0	60	8.47	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Fort Hills - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	14	28	5	3	2	2	1	4	4	0	0	0	2	2	5	3	75
2.1 - 3.0	166	104	18	12	7	54	63	36	17	18	5	5	8	2	17	39	571
3.1 - 10.0	15	0	0	0	1	10	5	1	2	3	1	1	3	1	1	16	60
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	195	132	23	15	10	66	69	41	23	21	6	6	13	5	23	58	706

Total Number of Valid Hours: 706

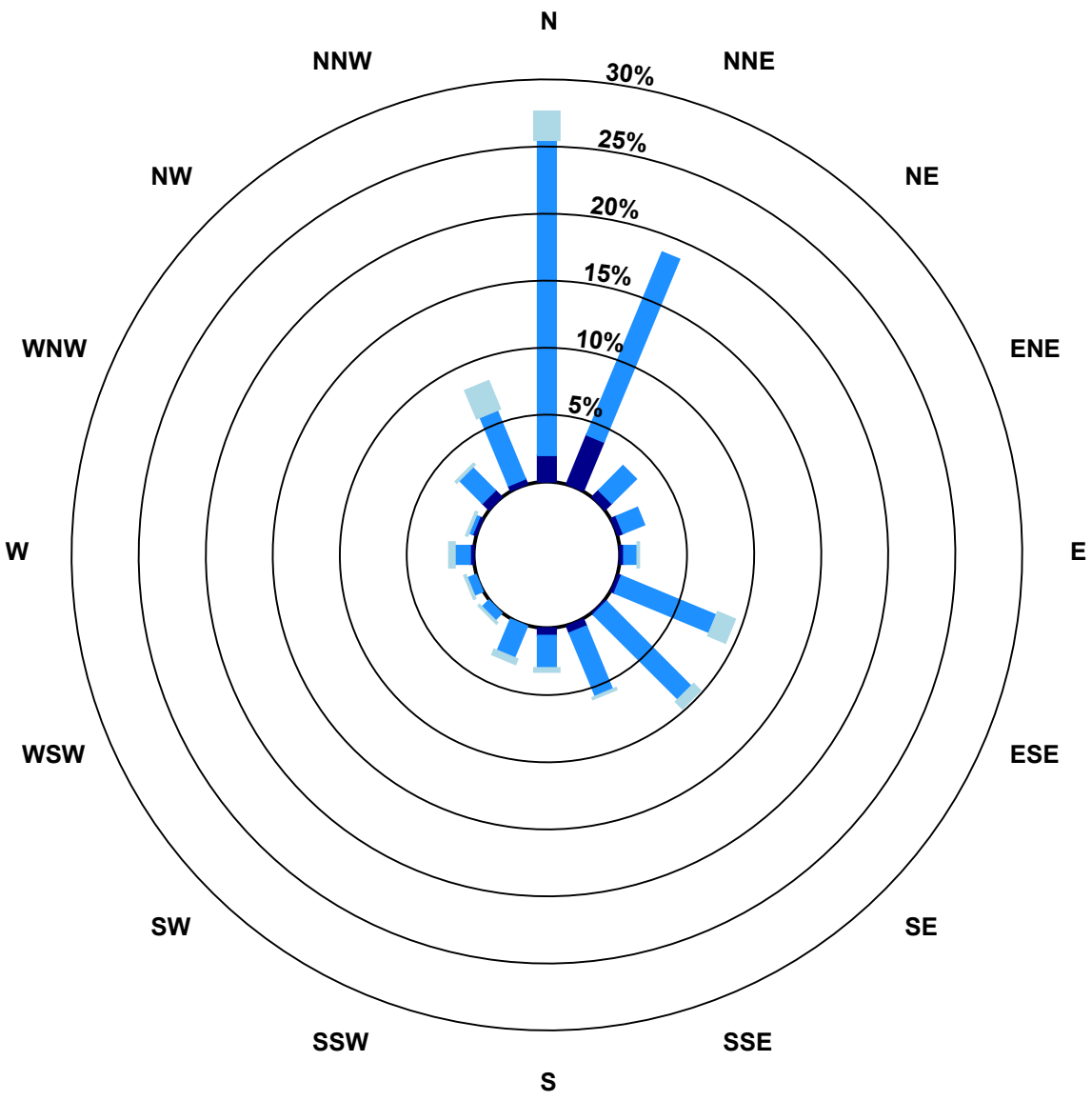
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Methane (CH_4) - ppm

Fort Hills



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

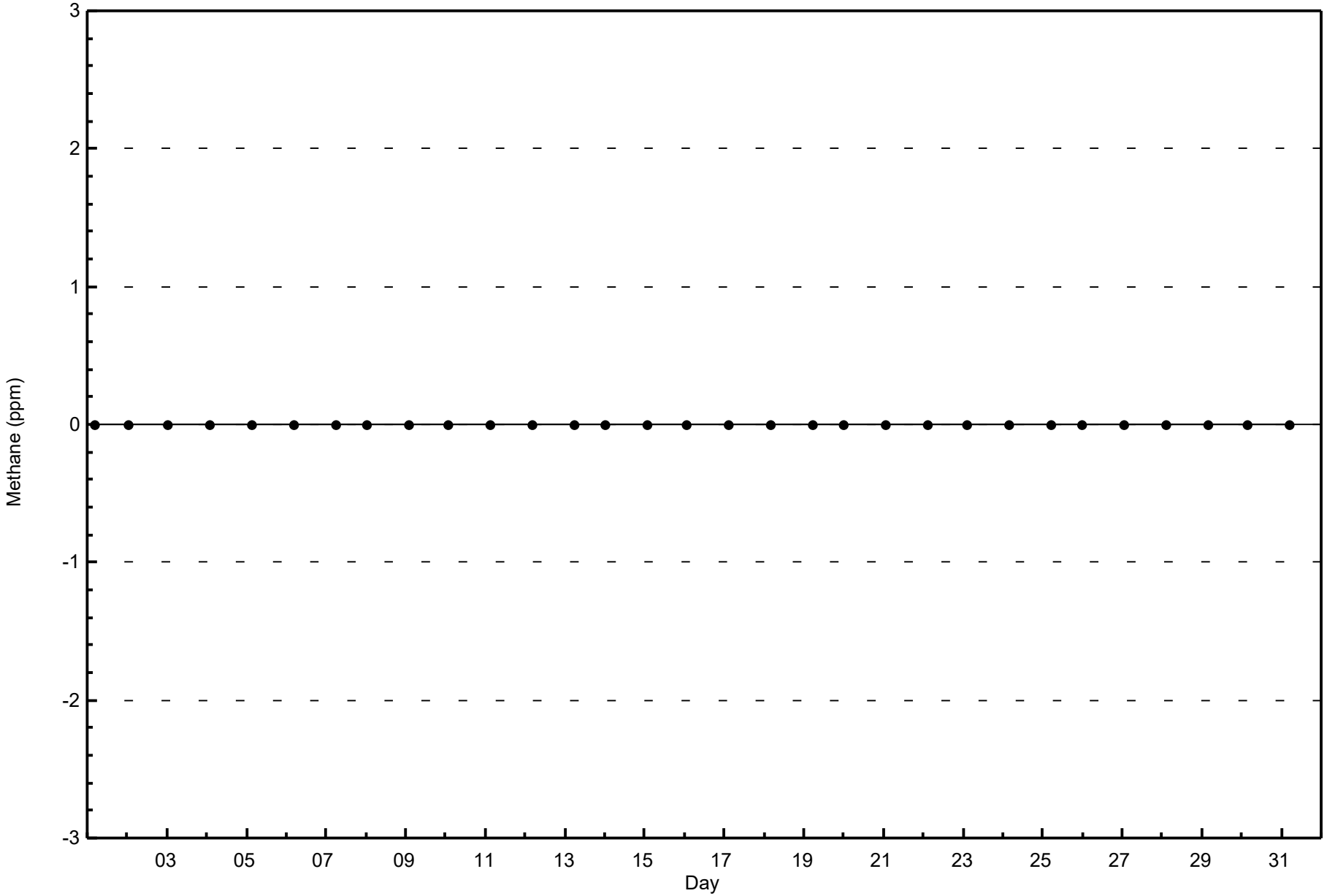
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Fort Hills - March 2025

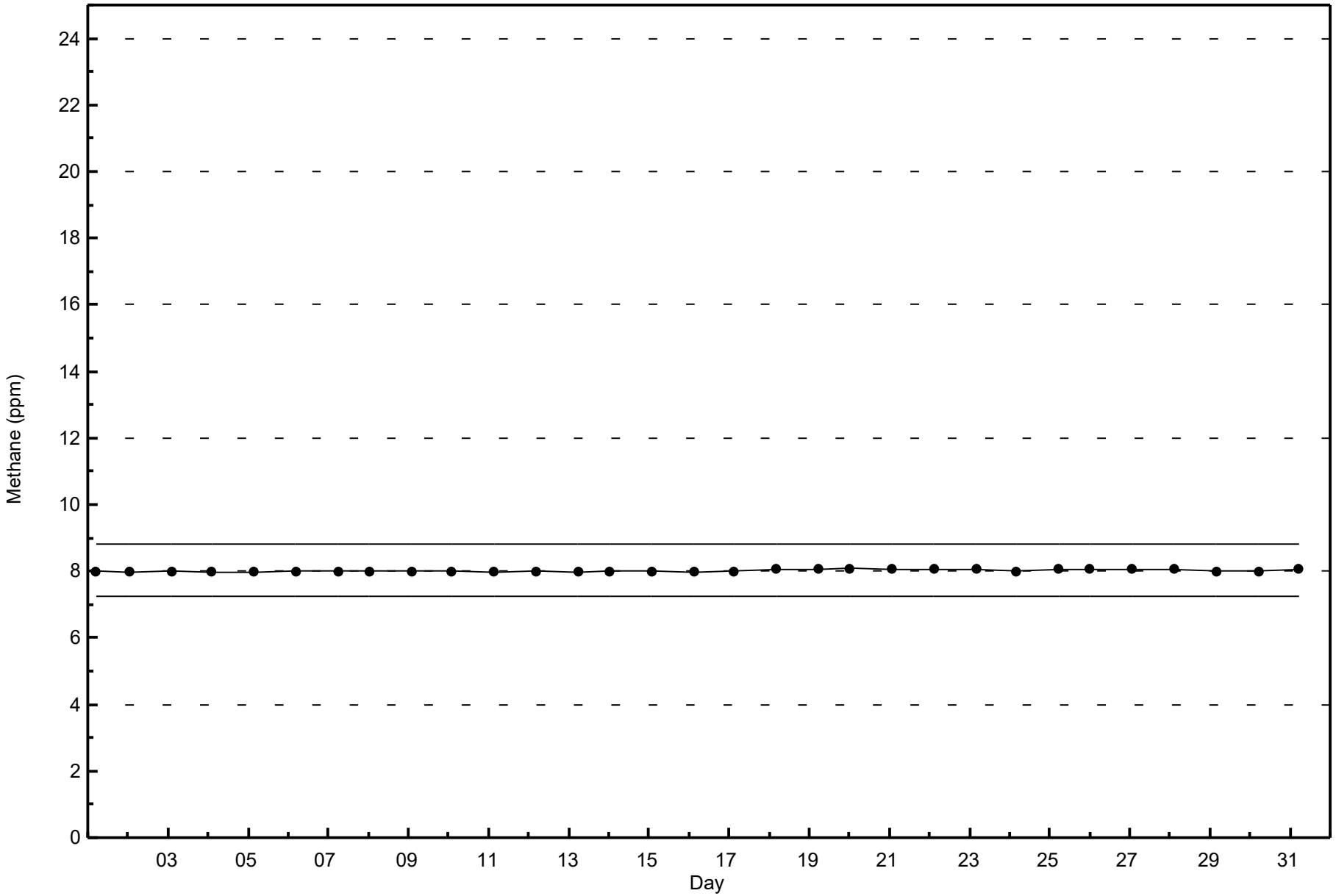


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Fort Hills - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Fort Hills - March 2025

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

Maximum Value: 204.3 ppb on Mar 2 01:00

Maximum Daily Average: 57.0 ppb on Mar 2

Minimum Value: 0.0 ppb on Mar 1 06:00

Minimum Daily Average: 2.3 ppb on Mar 26

Maximum Diurnal Average: 27.8 ppb at hour 9

Minimum Diurnal Average: 6.8 ppb at hour 16

Monthly Average: 16.19 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.5 Q_1 = 1.4 Median = 4.8 Q_3 = 18.2 P_{90} = 46.6 P_{99} = 140.0

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	31.1	6.4	0.5	Z	0.1	0.0	0.0	0.5	7.4	11.8	11.3	16.5	18.9	15.8	22.1	19.8	36.3	76.3	158.7	160.4	190.0	150.1	96.9	76.3	48.1	190.0
2-Mar	204.3	132.3	51.0	59.3	Z	93.2	119.7	108.4	140.6	76.5	55.8	29.6	41.6	101.9	69.3	20.1	1.9	0.9	0.5	0.5	0.6	0.5	0.8	0.9	57.0	204.3
3-Mar	0.8	1.0	1.4	0.8	2.1	Z	0.1	0.5	6.7	14.8	15.7	15.5	13.2	12.5	14.1	11.9	18.5	23.9	13.5	0.7	1.9	1.6	1.2	4.4	7.7	23.9
4-Mar	Z	9.6	10.0	7.1	0.9	0.2	0.3	2.3	4.9	12.4	1.5	1.2	0.3	0.4	6.7	7.5	7.7	4.2	2.4	2.8	7.7	1.5	23.9	30.6	6.3	30.6
5-Mar	28.4	Z	0.3	0.4	1.2	0.3	0.1	6.9	15.3	6.1	10.6	3.3	6.9	15.5	10.9	6.3	3.8	5.8	4.7	3.5	7.1	21.6	9.5	2.8	7.4	28.4
6-Mar	20.5	15.4	Z	0.7	4.7	4.5	6.5	5.5	10.4	18.6	13.9	4.7	6.3	5.7	10.3	15.6	32.1	37.9	46.5	59.3	18.7	86.4	19.1	3.7	19.4	86.4
7-Mar	3.8	3.4	1.2	Z	5.2	23.6	14.3	22.6	31.0	28.0	27.5	22.3	28.3	18.8	3.9	3.9	2.5	1.6	0.5	0.4	0.6	0.3	0.7	3.1	10.7	31.0
8-Mar	7.1	11.4	2.7	26.1	Z	18.8	2.8	12.1	14.7	15.2	13.6	5.2	4.1	4.3	4.1	4.0	2.5	2.0	0.9	1.2	0.8	0.8	0.8	1.6	6.8	26.1
9-Mar	1.6	1.9	3.0	3.6	2.1	Z	1.3	1.8	2.5	2.4	2.9	3.9	4.1	3.8	4.3	2.5	1.8	1.3	1.1	0.8	1.3	1.4	1.1	4.3	2.4	4.3
10-Mar	Z	16.0	1.8	11.7	14.9	9.1	26.3	12.3	8.7	11.0	10.0	17.8	15.6	15.3	11.7	6.2	5.5	11.9	12.1	12.3	20.7	18.8	20.2	12.7	13.2	26.3
11-Mar	6.9	Z	9.7	21.2	13.6	5.5	8.0	10.7	20.8	22.1	16.7	11.9	6.7	6.3	4.5	3.7	2.4	1.8	1.1	0.9	0.7	0.6	1.1	1.2	7.7	22.1
12-Mar	0.6	0.9	Z	10.5	15.1	9.8	8.5	C	C	C	C	8.6	6.9	7.6	5.6	3.0	3.0	0.6	0.3	0.5	4.1	14.3	5.7	56.9	8.6	56.9
13-Mar	67.8	23.5	67.1	Z	97.7	51.8	72.0	82.5	122.3	75.6	54.2	29.7	8.0	3.1	3.7	2.6	1.7	1.0	1.3	0.8	1.1	0.7	0.9	1.1	33.5	122.3
14-Mar	0.4	0.2	0.8	1.3	Z	1.5	3.9	7.2	11.1	6.5	5.0	3.2	3.9	2.7	1.7	2.2	1.7	2.2	0.8	1.1	0.8	0.4	0.4	0.7	2.6	11.1
15-Mar	0.1	0.8	0.5	0.5	0.3	Z	0.7	1.6	12.8	68.9	29.0	45.9	24.8	32.5	18.7	10.5	1.8	3.4	7.2	1.9	2.8	3.4	3.6	13.7	12.4	68.9
16-Mar	Z	25.1	26.6	50.1	13.8	49.3	80.7	29.8	19.2	16.0	33.1	43.9	23.2	7.9	9.5	8.4	4.1	0.2	0.1	0.1	0.1	0.4	0.0	0.0	19.2	80.7
17-Mar	0.0	Z	0.0	0.0	0.2	0.0	0.1	M	32.4	25.1	9.1	6.1	3.3	3.2	3.8	2.4	2.1	2.3	2.6	4.5	2.4	9.2	6.8	18.1	6.1	32.4
18-Mar	14.0	38.7	Z	7.7	14.5	17.1	13.4	3.5	33.2	49.4	62.6	53.4	25.0	8.1	8.4	5.9	4.8	2.7	1.3	8.9	8.4	4.2	4.1	14.3	17.5	62.6
19-Mar	29.9	67.1	34.1	Z	19.6	8.5	5.6	16.2	31.0	21.3	12.3	15.5	17.0	31.5	55.7	27.8	17.3	6.1	3.5	1.3	1.0	0.3	0.4	0.8	18.4	67.1
20-Mar	0.8	2.4	2.5	5.8	Z	1.8	2.4	14.1	14.9	13.7	7.6	3.4	4.4	3.1	2.7	1.9	1.6	1.1	1.9	3.8	8.0	18.5	25.0	73.7	9.3	73.7
21-Mar	46.9	0.5	0.0	0.0	0.0	Z	0.7	0.7	1.6	2.9	1.7	3.7	3.2	2.8	3.1	1.6	0.9	0.5	0.0	11.7	87.0	9.4	0.0	0.0	7.8	87.0
22-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.5	2.0	4.3	3.5	3.1	5.0	12.8	18.6	23.5	39.1	1.4	1.0	35.3	13.5	4.4	2.0	1.2	7.4	39.1
23-Mar	0.8	Z	6.3	13.3	3.3	8.9	16.4	27.1	84.3	101.6	61.0	64.3	42.5	19.8	18.1	3.3	12.2	25.5	30.8	26.3	3.0	0.5	19.4	63.8	28.4	101.6
24-Mar	95.0	117.3	Z	147.6	180.8	78.5	103.4	59.2	17.6	4.4	7.1	5.9	8.6	1.4	1.8	2.4	4.4	0.3	0.3	0.0	0.0	8.3	35.6	35.7	39.8	180.8
25-Mar	32.6	17.5	7.5	Z	2.6	2.1	10.3	21.9	18.4	9.5	33.5	41.0	20.2	2.3	0.1	0.7	3.2	2.2	1.1	0.7	1.3	1.0	0.5	0.3	10.0	41.0
26-Mar	0.4	0.3	0.6	0.9	Z	1.6	5.4	8.1	7.0	3.0	3.6	3.5	3.4	3.6	2.8	1.8	1.3	1.0	0.7	0.5	1.1	1.4	0.8	0.7	2.3	8.1
27-Mar	0.4	0.4	0.5	1.1	0.8	Z	1.3	2.7	2.4	1.4	1.5	1.1	1.5	1.8	2.5	1.6	1.1	1.2	2.4	1.0	0.8	3.6	8.8	14.9	2.4	14.9
28-Mar	Z	34.5	36.0	25.1	78.2	13.2	20.6	38.9	64.5	47.3	14.3	6.7	4.7	3.6	2.8	3.0	2.3	1.1	0.6	1.8	2.6	1.6	16.5	57.1	20.7	78.2
29-Mar	21.2	Z	55.0	89.2	72.4	25.7	17.7	34.9	21.7	28.3	54.8	72.1	33.8	25.4	13.8	1.8	1.5	1.8	2.0	1.2	1.0	1.3	24.8	46.6	28.2	89.2
30-Mar	38.2	30.4	Z	61.1	66.2	45.1	76.8	110.1	72.5	50.7	34.9	46.6	36.7	11.7	3.9	4.4	4.7	3.3	7.5	4.0	1.8	3.7	2.7	9.6	31.6	110.1
31-Mar	14.4	0.1	0.1	Z	0.8	4.9	14.5	8.7	1.5	2.4	2.6	4.6	2.2	0.6	0.6	0.3	0.2	0.1	1.7	29.1	27.6	17.3	14.0	14.0	7.1	29.1
	25.7	21.4	12.3	21.8	23.5	18.3	20.5	22.5	27.8	25.0	20.4	19.2	13.7	12.4	11.0	6.8	7.2	7.3	10.0	12.2	13.5	12.5	11.2	18.2	Diurnal Average	
	204.3	132.3	67.1	147.6	180.8	93.2	119.7	110.1	140.6	101.6	62.6	72.1	42.5	101.9	69.3	27.8	39.1	76.3	158.7	160.4	190.0	150.1	96.9	76.3	Diurnal Maximum	

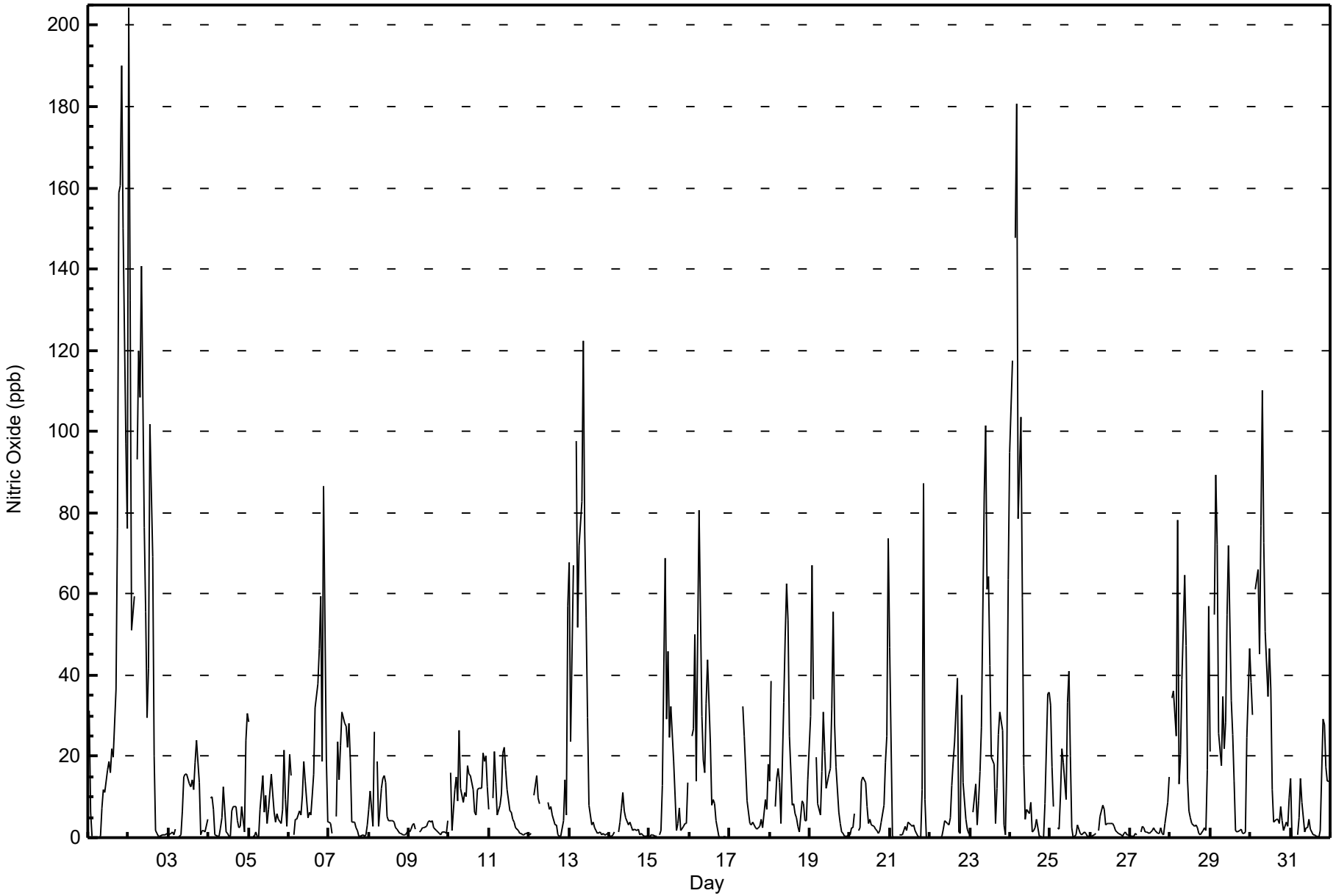
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Fort Hills - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	552	77.97	77.97
21 - 40	77	10.88	88.84
11 - 80	52	7.34	96.19
81 - 159	22	3.11	99.29
> 159	4	0.56	99.86

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Fort Hills - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	153	130	17	10	8	41	53	36	21	17	5	6	5	2	21	26	551
21 - 40	23	5	5	4	0	11	7	2	1	2	1	0	3	0	4	8	76
11 - 80	8	0	1	1	1	10	6	0	2	1	0	1	2	1	1	17	52
81 - 159	7	0	0	0	0	4	3	0	0	1	0	0	1	0	1	5	22
> 159	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	3	4
Totals	191	135	23	15	9	66	70	38	24	21	6	7	11	3	27	59	705

Total Number of Valid Hours: 706

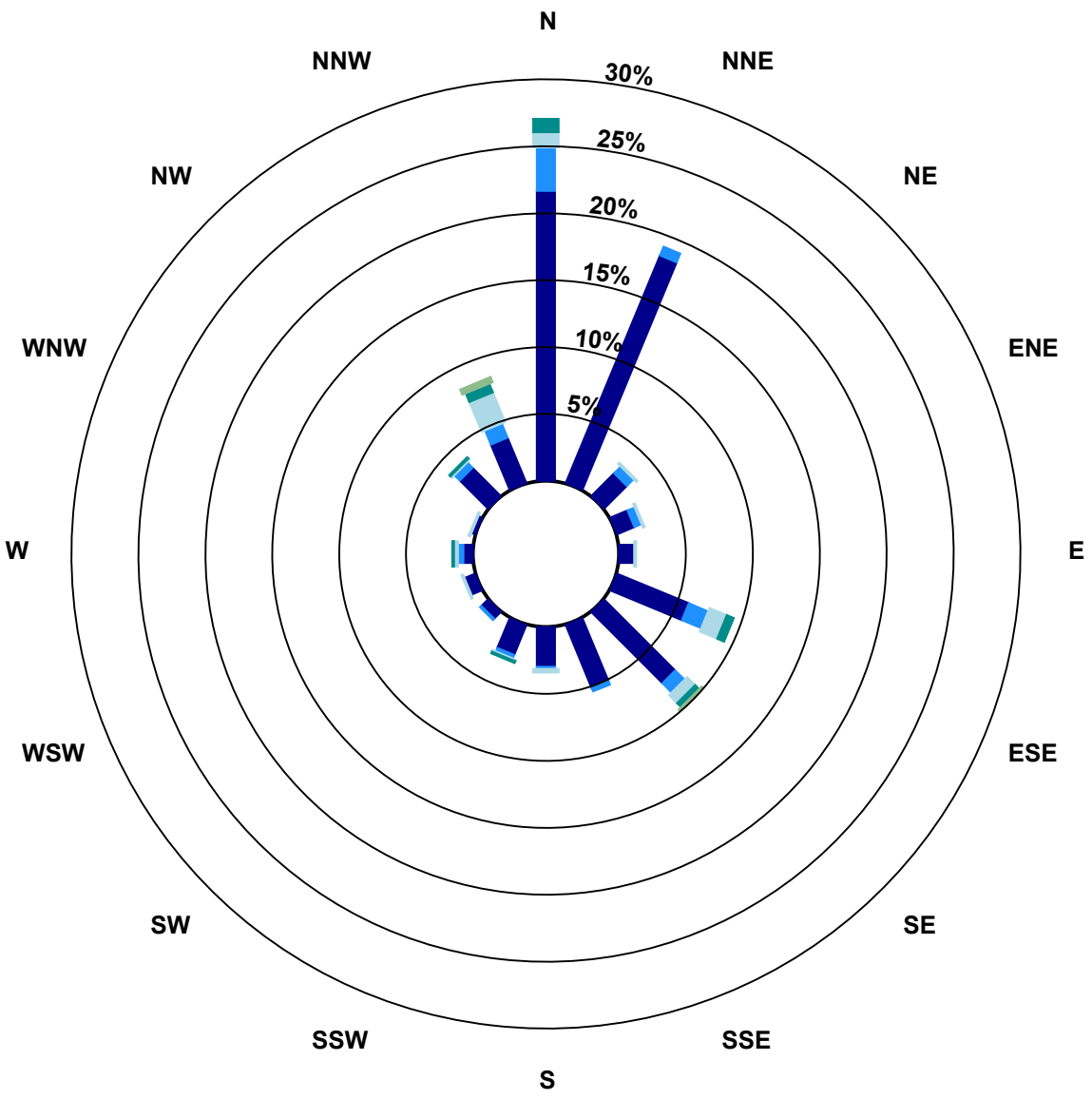
Total Number of Hours: 744

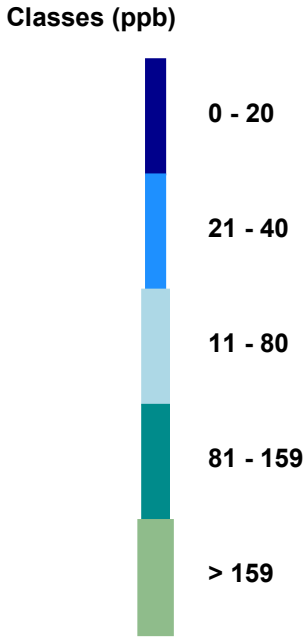
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitric Oxide (NO) - ppb

Fort Hills





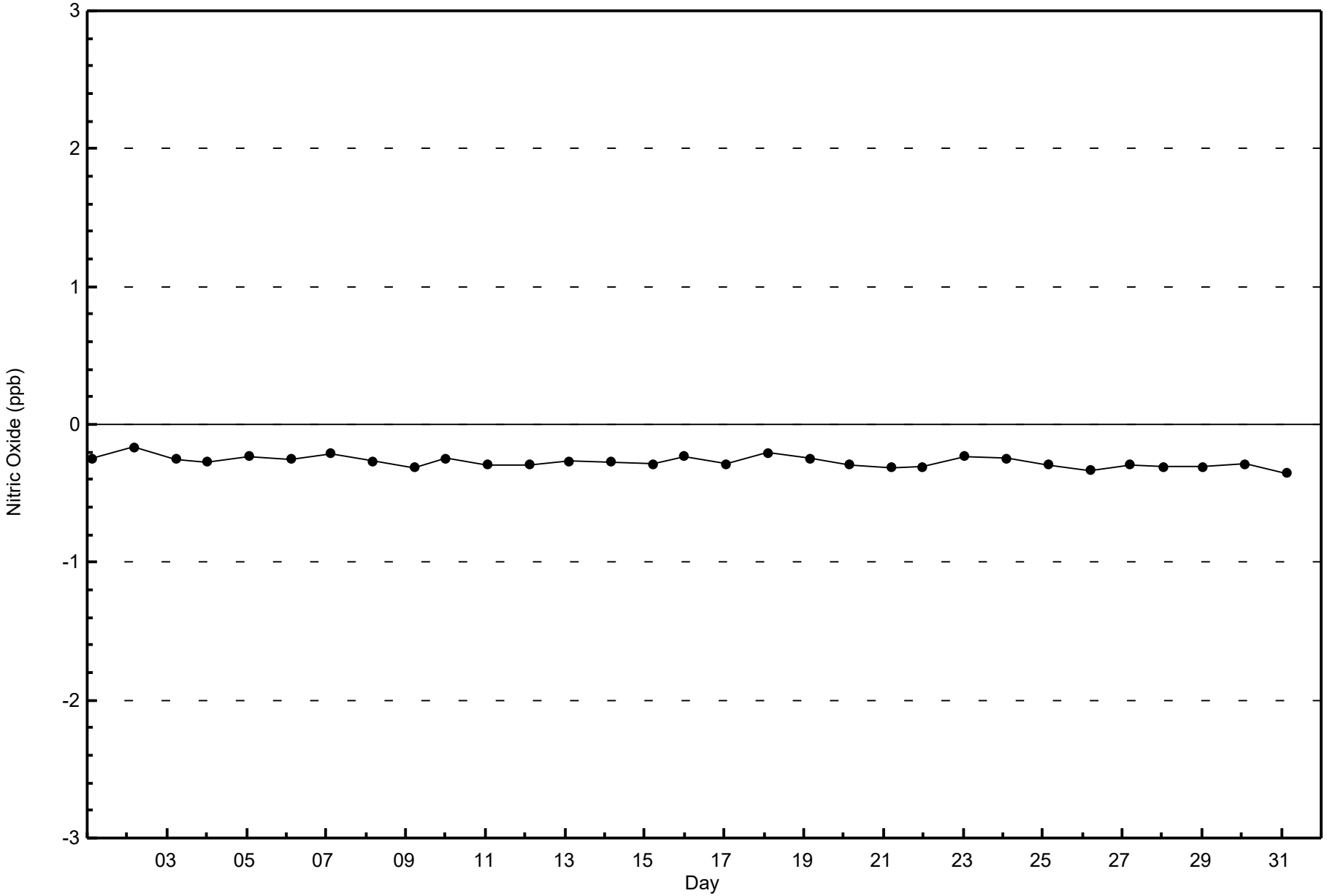
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Fort Hills - March 2025

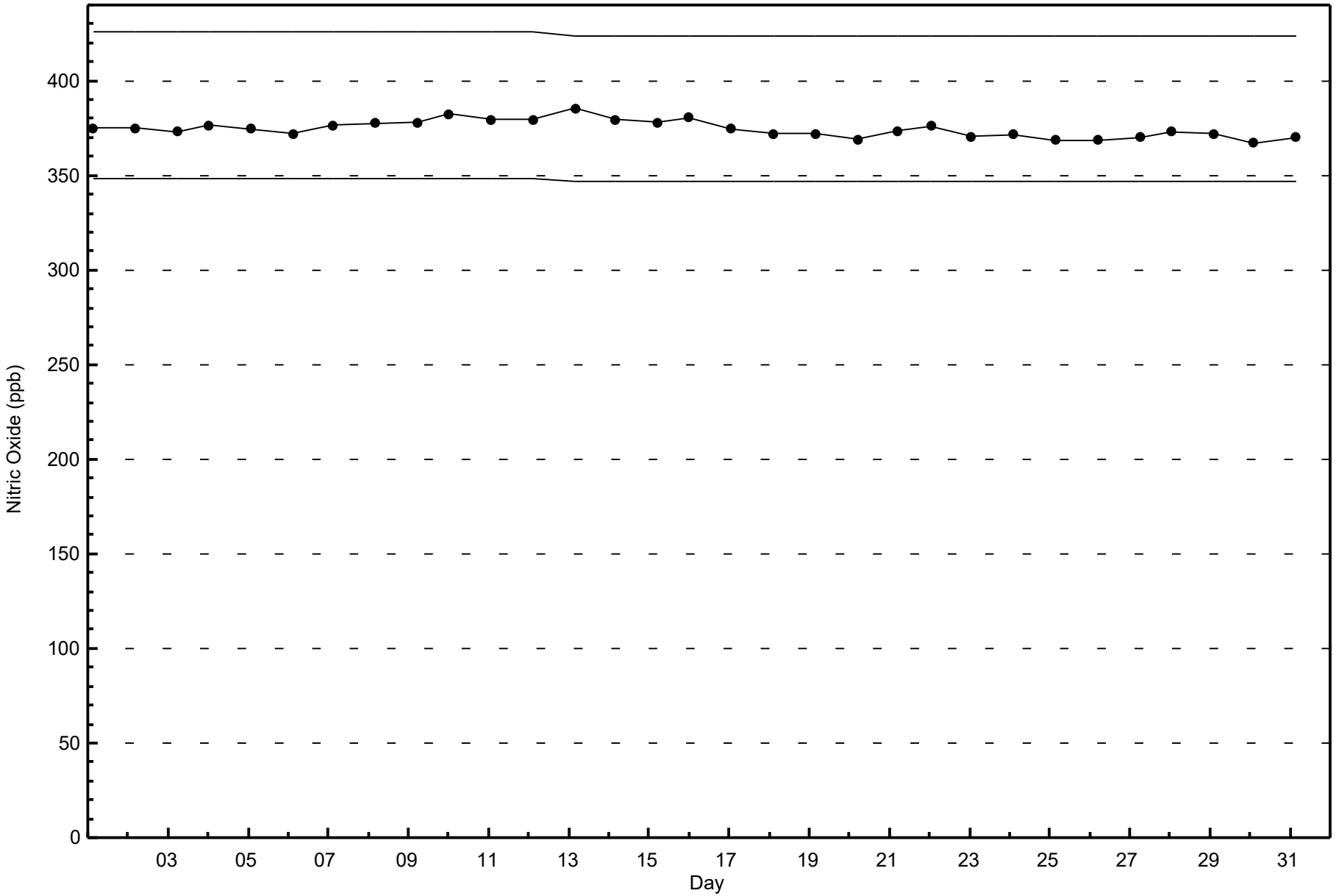


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Fort Hills - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Fort Hills - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 56.8 ppb on Mar 2 01:00 Maximum Daily Average: 31.8 ppb on Mar 23

Minimum Value: 0.5 ppb on Mar 25 15:00 Minimum Daily Average: 8.4 ppb on Mar 9
Maximum Diurnal Average: 27.9 ppb at hour 1 Minimum Diurnal Average: 10.7 ppb at hour 16
Monthly Average: 20.16 ppb Percentiles: P_1 = 1.5 P_{10} = 5.0 Q_1 = 9.5 Median = 18.4 Q_3 = 30.5 P_{90} = 38.5 P_{99} = 46.4

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	32.1	26.9	18.1	Z	10.8	11.6	13.3	7.8	14.4	12.7	10.6	13.3	14.4	15.6	22.4	23.5	39.9	49.3	54.0	52.7	55.5	51.8	45.7	42.5	27.8	55.5
2-Mar	56.8	48.3	38.8	40.5	Z	40.0	39.6	38.6	43.2	33.9	30.6	26.4	30.6	46.5	44.1	23.6	11.4	9.7	11.8	16.7	15.5	21.6	15.6	10.3	30.2	56.8
3-Mar	15.8	16.4	16.3	14.1	26.5	Z	16.2	12.2	18.2	21.9	19.8	17.1	12.3	13.8	17.4	17.5	28.6	35.1	36.5	20.3	20.5	23.7	18.3	25.6	20.2	36.5
4-Mar	Z	31.1	23.9	16.6	11.6	6.0	10.9	8.0	11.3	14.0	2.9	2.8	1.2	1.4	12.2	18.4	23.2	28.9	32.9	25.9	33.7	27.0	39.8	39.6	18.4	39.8
5-Mar	38.7	Z	15.0	12.9	19.3	10.3	3.8	25.6	28.5	13.6	14.4	5.6	9.9	19.4	16.1	12.6	13.6	24.6	36.0	37.1	37.8	41.1	36.5	30.6	21.9	41.1
6-Mar	39.9	38.4	Z	19.0	26.2	22.5	21.0	22.2	17.6	18.4	15.3	7.0	8.2	8.3	12.5	18.7	33.6	38.9	41.7	41.8	37.2	42.4	35.4	28.4	25.9	42.4
7-Mar	30.9	31.0	20.5	Z	28.1	40.1	38.5	37.3	34.5	26.7	24.5	22.1	27.3	24.2	11.3	9.1	9.3	11.1	10.2	10.9	20.1	15.4	23.2	31.2	23.4	40.1
8-Mar	37.1	38.2	31.0	41.8	Z	39.8	29.6	33.5	29.2	24.1	16.9	9.4	7.8	9.8	10.8	11.7	10.1	11.3	9.0	10.3	8.1	9.1	8.8	11.0	19.5	41.8
9-Mar	9.0	11.2	12.4	15.3	9.7	Z	8.8	7.8	5.6	3.8	3.9	4.0	3.8	3.3	4.3	3.3	3.5	4.5	5.7	8.5	12.6	15.3	16.1	21.0	8.4	21.0
10-Mar	Z	19.5	8.4	20.8	22.9	22.1	23.7	12.7	9.9	11.1	8.6	11.7	10.4	9.9	9.7	9.0	11.8	23.8	29.3	29.4	30.5	28.6	28.2	27.3	18.2	30.5
11-Mar	25.1	Z	27.5	30.4	27.0	25.8	28.8	24.9	22.7	18.7	16.4	11.1	7.2	6.9	7.2	7.2	6.6	10.2	14.1	14.0	14.6	12.4	17.6	20.4	17.3	30.4
12-Mar	19.0	20.6	Z	34.9	36.5	34.1	28.0	C	C	C	C	12.4	9.3	8.9	6.4	5.0	6.7	4.3	11.1	14.4	20.1	28.7	29.5	37.1	19.3	37.1
13-Mar	37.7	35.5	37.7	Z	39.0	35.6	37.6	36.5	40.0	32.1	29.4	23.1	10.4	6.3	8.4	7.3	7.6	9.1	13.9	14.5	13.5	14.2	15.2	17.1	22.7	40.0
14-Mar	12.3	11.6	15.8	16.3	Z	17.1	23.8	20.3	15.7	7.6	5.4	3.5	4.0	3.1	2.3	4.0	4.4	11.8	8.2	20.1	20.0	9.8	5.2	7.8	10.9	23.8
15-Mar	3.0	5.1	4.2	9.0	8.4	Z	9.4	8.6	18.0	35.2	20.8	26.1	17.1	22.3	18.6	14.9	5.3	16.6	30.0	21.3	26.3	29.6	34.4	38.5	18.4	38.5
16-Mar	Z	39.2	39.8	41.2	33.2	40.1	41.4	29.7	20.5	15.4	19.4	24.4	17.6	10.6	11.3	11.5	9.6	2.5	11.4	18.7	18.4	22.1	14.3	5.1	21.6	41.4
17-Mar	2.9	Z	3.8	3.5	5.1	4.1	6.2	M	22.2	23.9	10.8	6.7	5.0	5.0	6.3	4.4	5.0	9.0	18.6	27.3	23.5	35.4	35.9	36.7	13.7	36.7
18-Mar	35.0	29.4	Z	33.0	35.8	36.7	29.8	12.8	24.4	27.3	29.4	28.5	18.5	11.1	13.0	11.8	14.9	15.1	18.0	30.8	35.5	32.2	33.7	36.9	25.8	36.9
19-Mar	39.8	40.8	37.9	Z	34.1	31.7	28.6	24.1	23.8	19.5	12.4	15.0	15.9	23.3	32.9	27.0	23.9	22.2	27.5	19.0	18.9	12.9	13.0	18.2	24.5	40.8
20-Mar	20.5	26.5	24.3	31.6	Z	23.9	23.4	25.6	19.7	15.4	8.9	4.8	6.1	4.8	4.6	4.0	4.9	6.5	21.9	30.5	38.0	41.3	40.5	45.1	20.6	45.1
21-Mar	37.8	7.5	2.2	2.8	13.6	Z	12.2	5.3	4.2	5.2	2.8	5.5	5.1	5.0	5.8	4.2	3.6	3.8	3.7	31.8	43.3	22.3	1.5	1.1	10.0	43.3
22-Mar	Z	8.7	5.2	6.0	7.0	4.8	6.0	7.6	9.6	10.3	8.7	6.8	8.6	15.6	20.7	27.4	40.6	15.5	20.5	39.4	33.7	33.8	30.1	24.8	17.0	40.6
23-Mar	18.0	Z	35.6	31.7	26.8	32.3	31.7	29.3	38.2	41.8	39.2	39.9	31.4	23.4	27.2	11.0	24.5	33.0	42.1	42.8	29.3	24.8	36.7	41.3	31.8	42.8
24-Mar	42.1	41.0	Z	37.1	40.8	33.1	34.5	31.5	25.0	12.6	13.9	13.9	14.7	8.5	8.1	8.5	12.8	3.3	4.4	2.9	1.7	14.2	34.7	35.3	20.6	42.1
25-Mar	32.0	33.1	28.5	Z	15.4	22.5	24.7	20.5	18.2	15.7	24.1	22.1	18.9	2.9	0.5	1.7	8.0	6.9	10.4	14.0	17.5	14.3	11.3	11.5	16.3	33.1
26-Mar	9.5	10.3	10.4	14.8	Z	18.5	19.5	15.6	9.4	4.5	5.0	4.6	5.1	6.9	7.8	7.3	6.5	5.6	6.2	5.3	10.5	11.8	14.2	13.8	9.7	19.5
27-Mar	12.2	13.3	13.8	19.3	18.5	Z	18.6	17.0	9.0	4.0	3.1	2.0	2.3	2.8	3.7	2.8	2.4	3.6	9.5	14.4	16.4	26.1	31.5	35.7	12.3	35.7
28-Mar	Z	37.1	36.5	35.1	37.1	23.4	27.8	26.9	30.9	27.2	15.4	9.7	7.8	6.8	6.0	7.0	7.2	5.5	7.6	18.6	25.9	23.8	34.8	40.6	21.7	40.6
29-Mar	37.1	Z	39.8	39.3	38.6	31.8	28.1	31.6	21.7	23.1	32.1	37.1	32.5	28.3	19.4	4.8	5.4	9.7	18.5	22.3	23.7	26.4	38.8	42.0	27.5	42.0
30-Mar	42.1	41.0	Z	38.9	38.3	37.8	38.5	39.0	34.7	32.6	29.2	33.7	29.9	15.2	8.0	10.3	13.5	18.4	34.3	26.2	19.6	37.0	37.8	40.0	30.3	42.1
31-Mar	38.8	17.2	20.3	Z	28.3	34.8	34.4	17.4	5.5	5.9	5.5	8.5	4.9	1.9	2.2	1.5	1.4	1.4	13.0	41.9	41.5	39.7	37.5	35.4	19.1	41.9
	27.9	26.1	21.8	24.2	24.6	26.2	23.8	21.7	20.9	18.6	16.0	14.8	12.8	12.0	12.3	10.7	12.9	14.6	19.7	23.3	24.6	25.4	26.3	27.5	Diurnal Average	
	56.8	48.3	39.8	41.8	40.8	40.1	41.4	39.0	43.2	41.8	39.2	39.9	32.5	46.5	44.1	27.4	40.6	49.3	54.0	52.7	55.5	51.8	45.7	45.1	Diurnal Maximum	

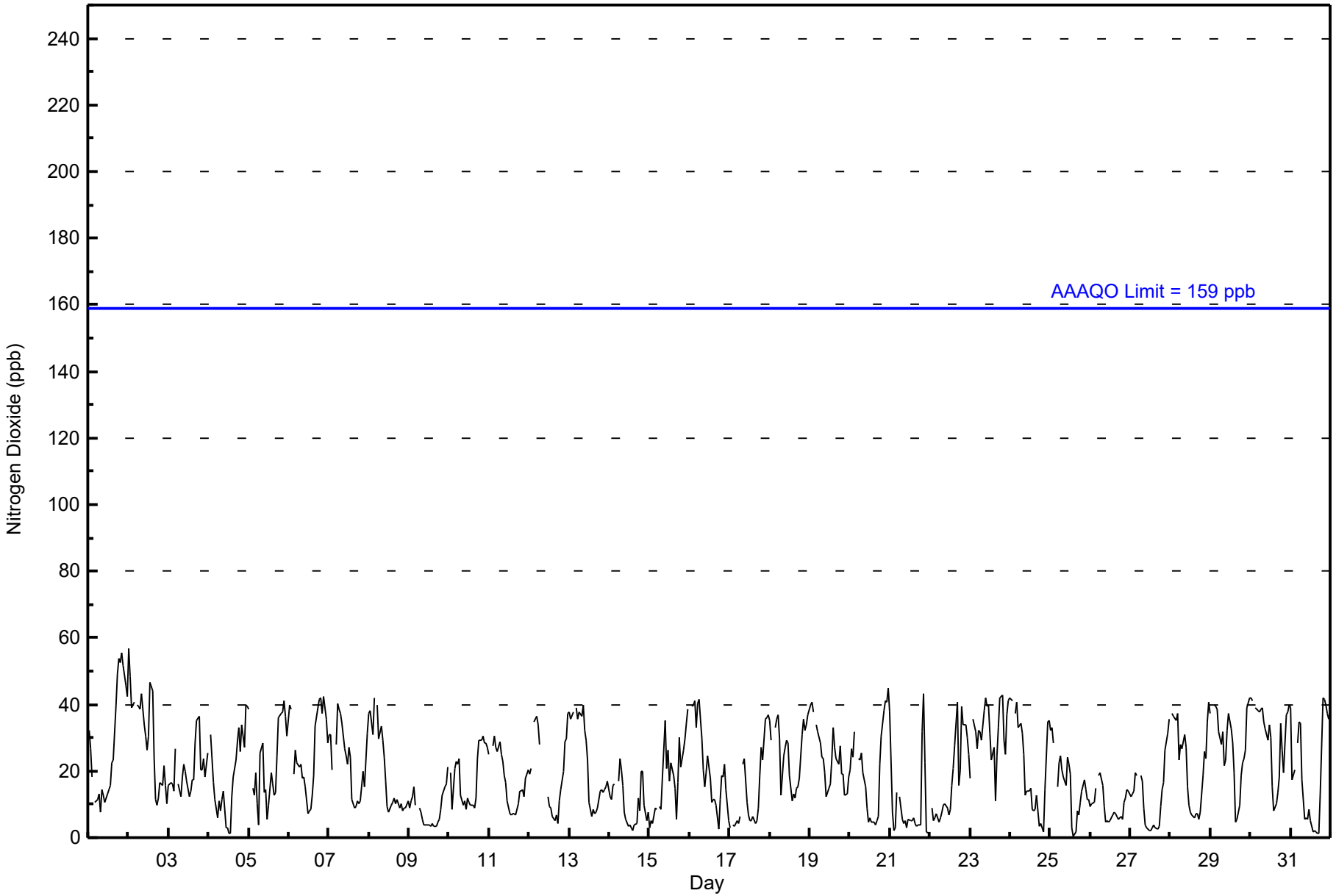
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Fort Hills - March 2025



Nitrogen Dioxide (NO_2) - ppb
Fort Hills - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	393	55.51	55.51
21 - 40	276	38.98	94.49
11 - 80	39	5.51	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Fort Hills - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	84	103	14	8	8	37	41	34	16	14	2	3	3	2	14	10	393
21 - 40	95	31	7	7	0	27	21	4	8	5	4	4	7	1	12	41	274
11 - 80	13	1	2	0	1	2	8	0	0	2	0	0	1	0	1	8	39
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	192	135	23	15	9	66	70	38	24	21	6	7	11	3	27	59	706

Total Number of Valid Hours: 706

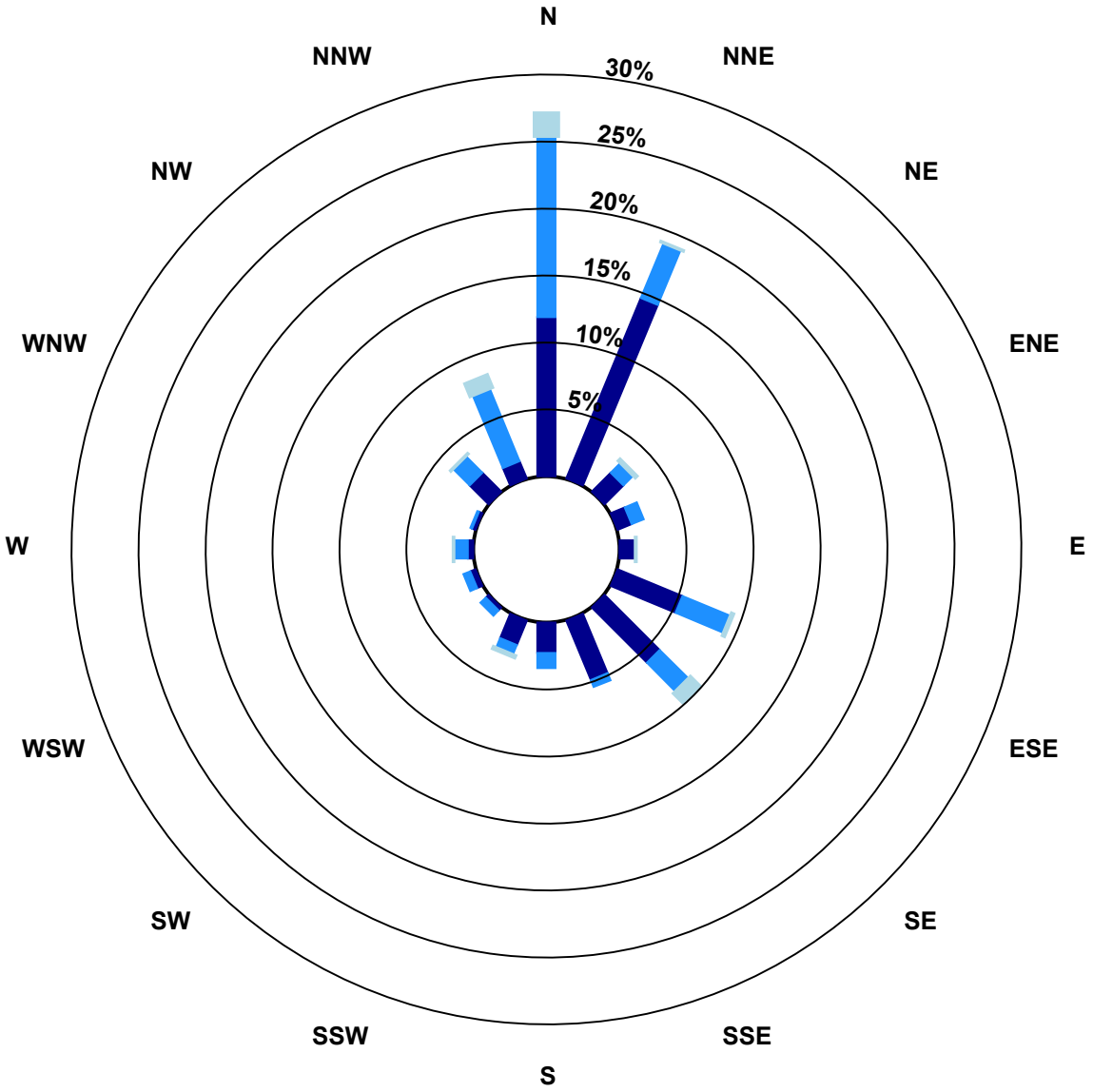
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Dioxide (NO_2) - ppb

Fort Hills



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

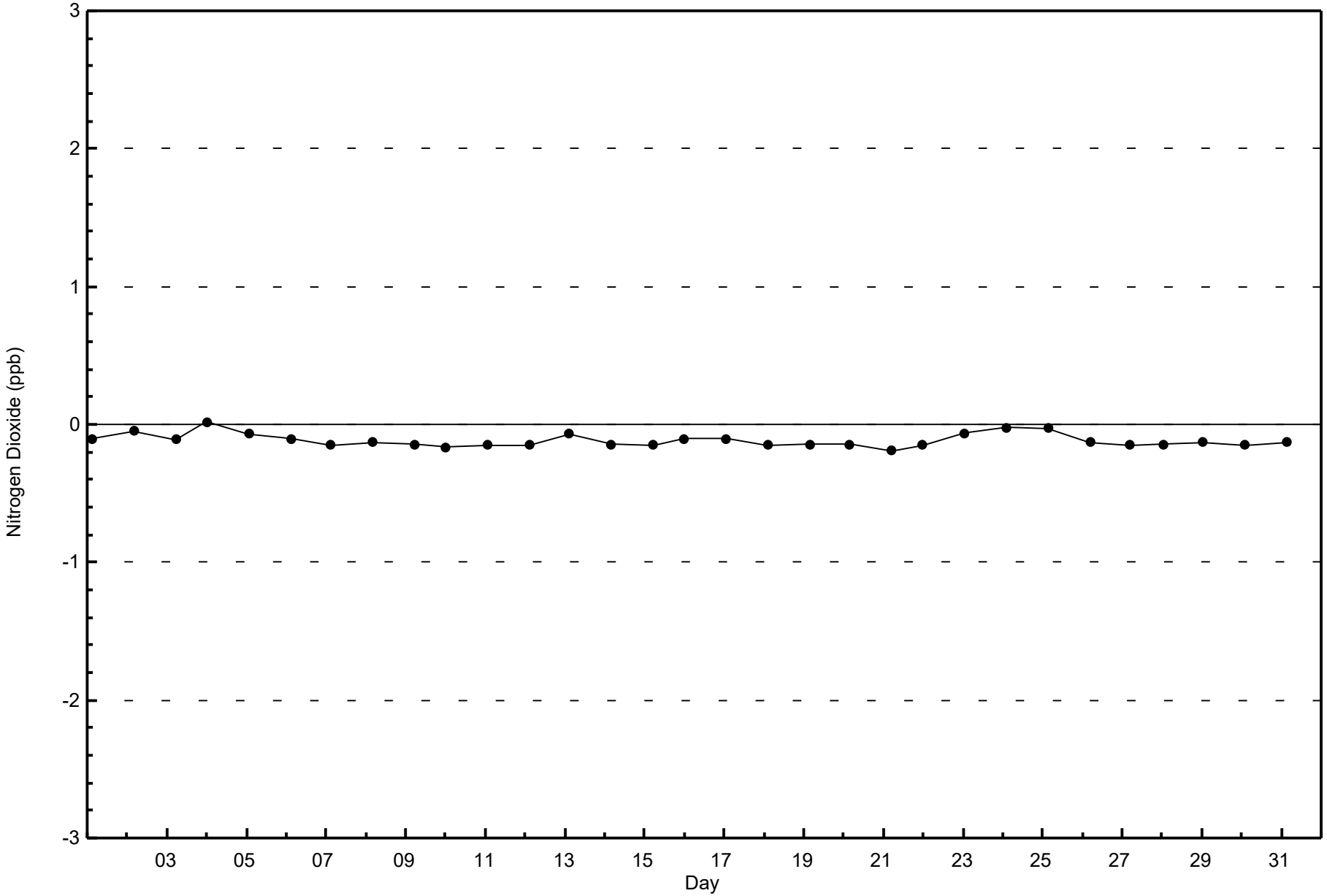
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Fort Hills - March 2025

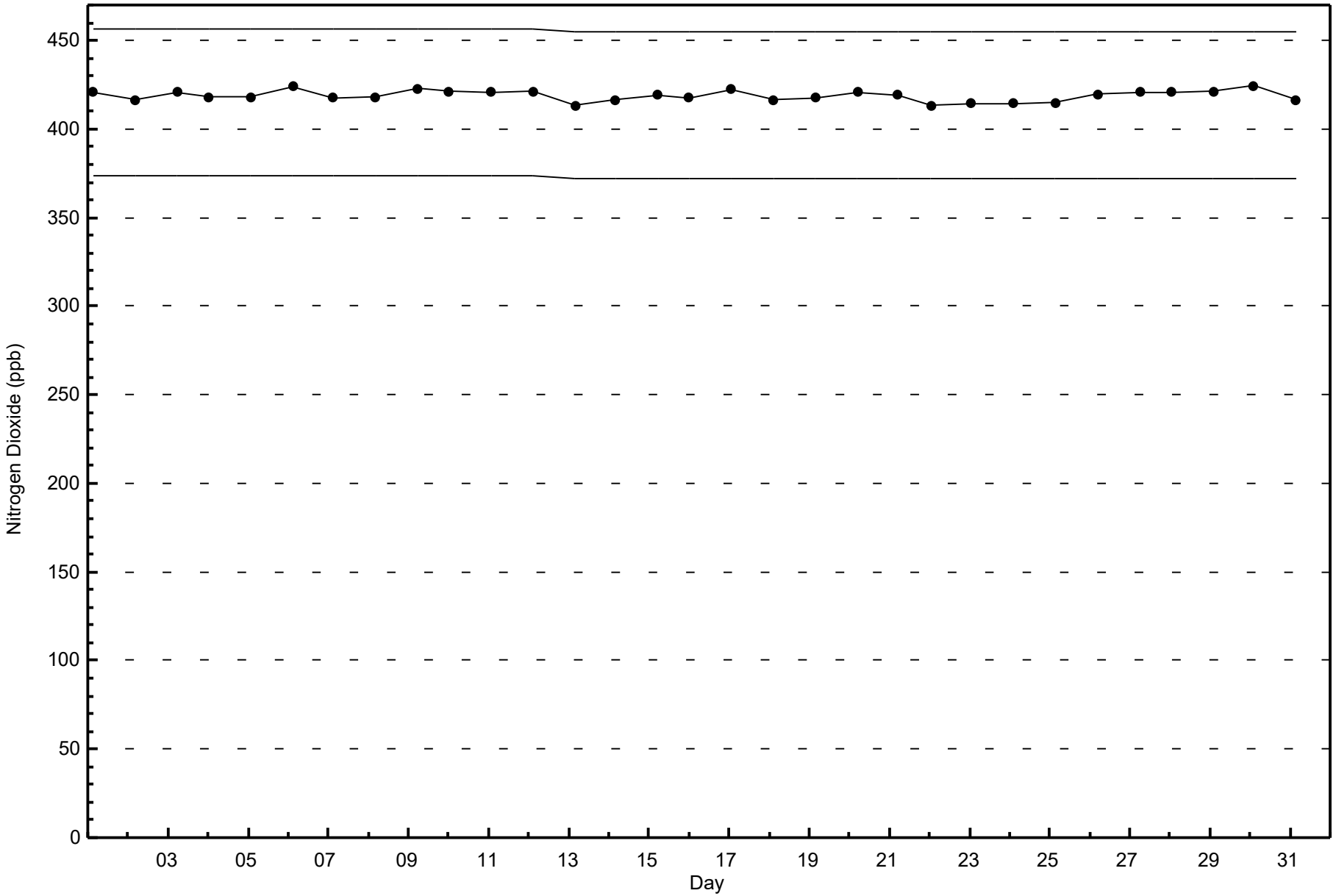


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Fort Hills - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Fort Hills - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 261.1 ppb on Mar 2 01:00
Maximum Daily Average: 87.1 ppb on Mar 2

Minimum Value: 0.6 ppb on Mar 25 15:00
Minimum Daily Average: 10.8 ppb on Mar 9
Maximum Diurnal Average: 53.6 ppb at hour 1
Minimum Diurnal Average: 17.5 ppb at hour 16
Monthly Average: 36.36 ppb
Percentiles: P_1 = 1.8 P_{10} = 6.8 Q_1 = 11.8 Median = 24.7 Q_3 = 47.1 P_{90} = 80.8 P_{99} = 183.6

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	63.2	33.3	18.6	Z	10.9	11.6	13.3	8.3	21.8	24.5	21.9	29.8	33.3	31.4	44.5	43.3	76.2	125.6	212.7	213.1	245.5	201.9	142.6	118.8	75.9	245.5
2-Mar	261.1	180.6	89.8	99.8	Z	133.2	159.3	147.0	183.8	110.4	86.4	56.0	72.2	148.4	113.4	43.7	13.3	10.6	12.3	17.2	16.1	22.1	16.4	11.2	87.1	261.1
3-Mar	16.6	17.4	17.7	14.9	28.6	Z	16.3	12.7	24.9	36.7	35.5	32.6	25.5	26.3	31.5	29.4	47.1	59.0	50.0	21.0	22.4	25.3	19.5	30.0	27.9	59.0
4-Mar	Z	40.7	33.9	23.7	12.5	6.2	11.2	10.3	16.2	26.4	4.4	4.0	1.5	1.8	18.9	25.9	30.9	33.1	35.3	28.7	41.4	28.5	63.7	70.2	24.8	70.2
5-Mar	67.1	Z	15.3	13.3	20.5	10.6	3.9	32.5	43.8	19.7	25.0	8.9	16.8	34.9	27.0	18.9	17.4	30.4	40.7	40.6	44.9	62.7	46.0	33.4	29.3	67.1
6-Mar	60.4	53.8	Z	19.7	30.9	27.0	27.5	27.7	28.0	37.0	29.2	11.7	14.5	14.0	22.8	34.3	65.7	76.8	88.2	101.1	55.9	128.8	54.5	32.1	45.3	128.8
7-Mar	34.7	34.4	21.7	Z	33.3	63.7	52.8	59.9	65.5	54.7	52.0	44.4	55.6	43.0	15.2	13.0	11.8	12.7	10.7	11.3	20.7	15.7	23.9	34.3	34.1	65.5
8-Mar	44.2	49.6	33.7	67.9	Z	58.6	32.4	45.6	43.9	39.3	30.5	14.6	11.9	14.1	14.9	15.7	12.6	13.3	9.9	11.5	8.9	9.9	9.6	12.6	26.3	67.9
9-Mar	10.6	13.1	15.4	18.9	11.8	Z	10.1	9.6	8.1	6.2	6.8	7.9	7.9	7.1	8.6	5.8	5.3	5.8	6.8	9.3	13.9	16.7	17.2	25.3	10.8	25.3
10-Mar	Z	35.5	10.2	32.5	37.8	31.2	50.0	25.0	18.6	22.1	18.6	29.5	26.0	25.2	21.4	15.2	17.3	35.7	41.4	41.7	51.2	47.4	48.4	40.0	31.4	51.2
11-Mar	32.0	Z	37.2	51.6	40.6	31.3	36.8	35.6	43.5	40.8	33.1	23.0	13.9	13.2	11.7	10.9	9.0	12.0	15.2	14.9	15.3	13.0	18.7	21.6	25.0	51.6
12-Mar	19.6	21.5	Z	45.4	51.6	43.9	36.5	C	C	C	C	21.0	16.2	16.5	12.0	8.0	9.7	4.9	11.4	14.9	24.2	43.0	35.2	94.0	27.9	94.0
13-Mar	105.5	59.0	104.8	Z	136.7	87.4	109.6	119.0	162.3	107.7	83.6	52.8	18.4	9.4	12.1	9.9	9.3	10.1	15.2	15.3	14.6	14.9	16.1	18.2	56.2	162.3
14-Mar	12.7	11.8	16.6	17.6	Z	18.6	27.7	27.5	26.8	14.1	10.4	6.7	7.9	5.8	4.0	6.2	6.1	14.0	9.0	21.2	20.8	10.2	5.6	8.5	13.5	27.7
15-Mar	3.1	5.9	4.7	9.5	8.7	Z	10.1	10.2	30.8	104.1	49.8	72.0	41.9	54.8	37.3	25.4	7.1	20.0	37.2	23.2	29.1	33.0	38.0	52.2	30.8	104.1
16-Mar	Z	64.3	66.4	91.3	47.0	89.4	122.1	59.5	39.7	31.4	52.5	68.3	40.8	18.5	20.8	19.9	13.7	2.7	11.5	18.8	18.5	22.5	14.3	5.1	40.8	122.1
17-Mar	2.9	Z	3.8	3.5	5.3	4.1	6.3	M	54.6	49.0	19.9	12.8	8.3	8.2	10.1	6.8	7.1	11.3	21.2	31.8	25.9	44.6	42.7	54.8	19.8	54.8
18-Mar	49.0	68.1	Z	40.7	50.3	53.8	43.2	16.3	57.6	76.7	92.0	81.9	43.5	19.2	21.4	17.7	19.7	17.8	19.4	39.7	43.9	36.4	37.8	51.2	43.4	92.0
19-Mar	69.7	107.9	72.0	Z	53.7	40.2	34.2	40.3	54.8	40.8	24.7	30.5	32.9	54.8	88.6	54.8	41.2	28.3	31.0	20.3	19.9	13.2	13.4	19.0	42.9	107.9
20-Mar	21.3	28.9	26.8	37.4	Z	25.7	25.8	39.7	34.6	29.1	16.5	8.2	10.5	7.9	7.3	5.9	6.5	7.6	23.8	34.3	46.0	59.8	65.5	118.8	29.9	118.8
21-Mar	84.7	8.0	2.2	2.8	13.6	Z	12.9	6.0	5.8	8.1	4.5	9.2	8.3	7.8	8.9	5.8	4.5	4.3	3.7	43.5	130.3	31.7	1.5	1.1	17.8	130.3
22-Mar	Z	8.7	5.2	6.0	7.0	4.8	6.1	8.1	11.6	14.6	12.2	9.9	13.6	28.4	39.3	50.9	79.7	16.9	21.5	74.7	47.2	38.2	32.1	26.0	24.5	79.7
23-Mar	18.8	Z	41.9	45.0	30.1	41.2	48.1	56.4	122.5	143.4	100.2	104.2	73.9	43.2	45.3	14.3	36.7	58.5	72.9	69.1	32.3	25.3	56.1	105.1	60.2	143.4
24-Mar	137.1	158.3	Z	184.7	221.6	111.6	137.9	90.7	42.6	17.0	21.0	19.8	23.3	9.9	9.9	10.9	17.2	3.6	4.7	2.9	1.7	22.5	70.3	71.0	60.4	221.6
25-Mar	64.6	50.6	36.0	Z	18.0	24.6	35.0	42.4	36.6	25.2	57.6	63.1	39.1	5.2	0.6	2.4	11.2	9.1	11.5	14.7	18.8	15.3	11.8	11.8	26.3	64.6
26-Mar	9.9	10.6	11.0	15.7	Z	20.1	24.9	23.7	16.4	7.5	8.6	8.1	8.5	10.5	10.6	9.1	7.8	6.6	6.9	5.8	11.6	13.2	15.0	14.5	12.0	24.9
27-Mar	12.6	13.7	14.3	20.4	19.3	Z	19.9	19.7	11.4	5.4	4.6	3.1	3.8	4.6	6.2	4.4	3.5	4.8	11.9	15.4	17.2	29.7	40.3	50.6	14.6	50.6
28-Mar	Z	71.6	72.5	60.2	115.3	36.6	48.4	65.8	95.4	74.5	29.7	16.4	12.5	10.4	8.8	10.0	9.5	6.6	8.2	20.4	28.5	25.4	51.3	97.7	42.4	115.3
29-Mar	58.3	Z	94.8	128.5	111.0	57.5	45.8	66.5	43.4	51.4	86.9	109.2	66.3	53.7	33.2	6.6	6.9	11.5	20.5	23.5	24.7	27.7	63.6	88.6	55.7	128.5
30-Mar	80.3	71.4	Z	100.0	104.5	82.9	115.4	149.1	107.2	83.3	64.1	80.3	66.6	26.9	11.9	14.7	18.2	21.7	41.8	30.2	21.4	40.7	40.5	49.6	61.8	149.1
31-Mar	53.2	17.3	20.4	Z	29.1	39.7	48.9	26.1	7.0	8.3	8.1	13.1	7.1	2.5	2.8	1.8	1.6	1.5	14.7	71.0	69.1	57.0	51.5	49.4	26.1	71.0
	53.6	47.5	34.1	46.0	48.1	44.4	44.3	44.2	48.6	43.6	36.3	34.0	26.5	24.4	23.2	17.5	20.1	21.8	29.7	35.5	38.1	38.0	37.5	45.7	Diurnal Average	
	261.1	180.6	104.8	184.7	221.6	133.2	159.3	149.1	183.8	143.4	100.2	109.2	73.9	148.4	113.4	54.8	79.7	125.6	212.7	213.1	245.5	201.9	142.6	118.8	Diurnal Maximum	

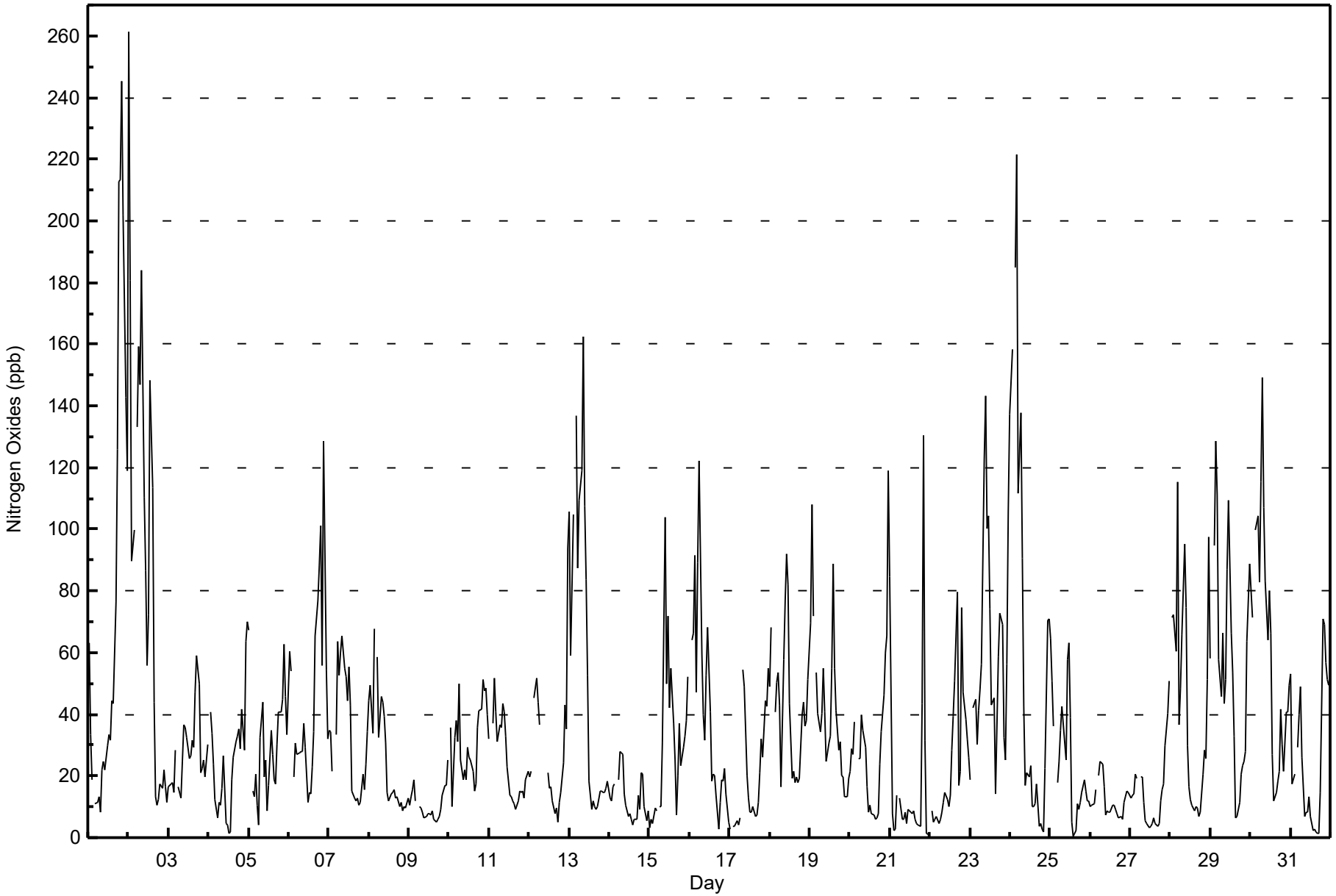
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Fort Hills - March 2025



Nitrogen Oxides (NO_X) - ppb
Fort Hills - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	315	44.49	44.49
21 - 40	167	23.59	68.08
11 - 80	155	21.89	89.97
81 - 159	61	8.62	98.59
> 159	10	1.41	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Fort Hills - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	66	101	10	7	8	18	24	28	14	11	2	2	2	2	13	7	315
21 - 40	57	19	6	3	0	19	22	8	6	5	2	3	2	0	6	8	166
11 - 80	54	15	7	5	0	18	16	2	2	3	2	1	4	0	6	19	154
81 - 159	13	0	0	0	1	11	6	0	2	2	0	1	2	1	1	21	61
> 159	2	0	0	0	0	0	2	0	0	0	0	0	1	0	1	4	10
Totals	192	135	23	15	9	66	70	38	24	21	6	7	11	3	27	59	706

Total Number of Valid Hours: 706

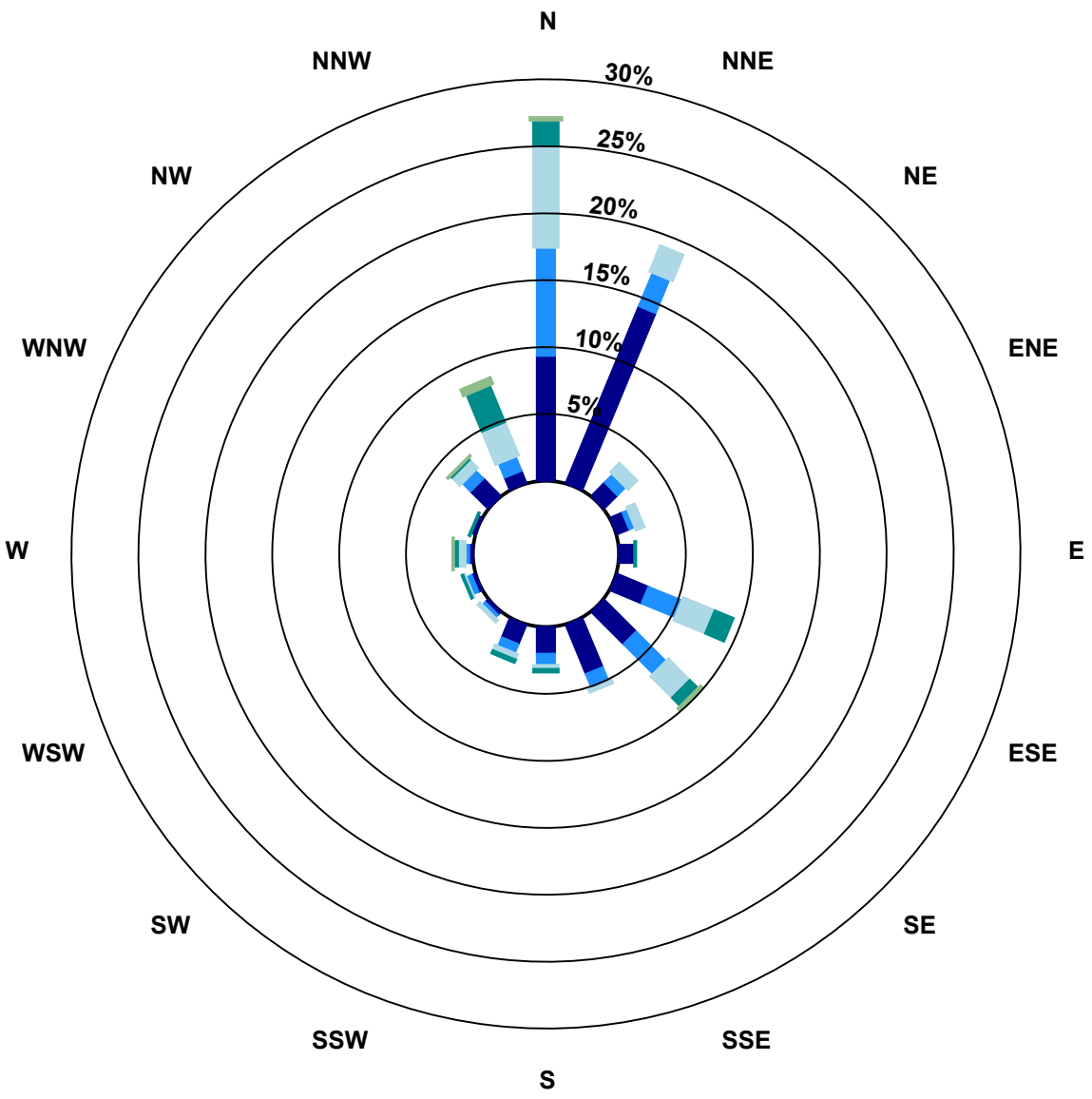
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Oxides (NO_X) - ppb

Fort Hills



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

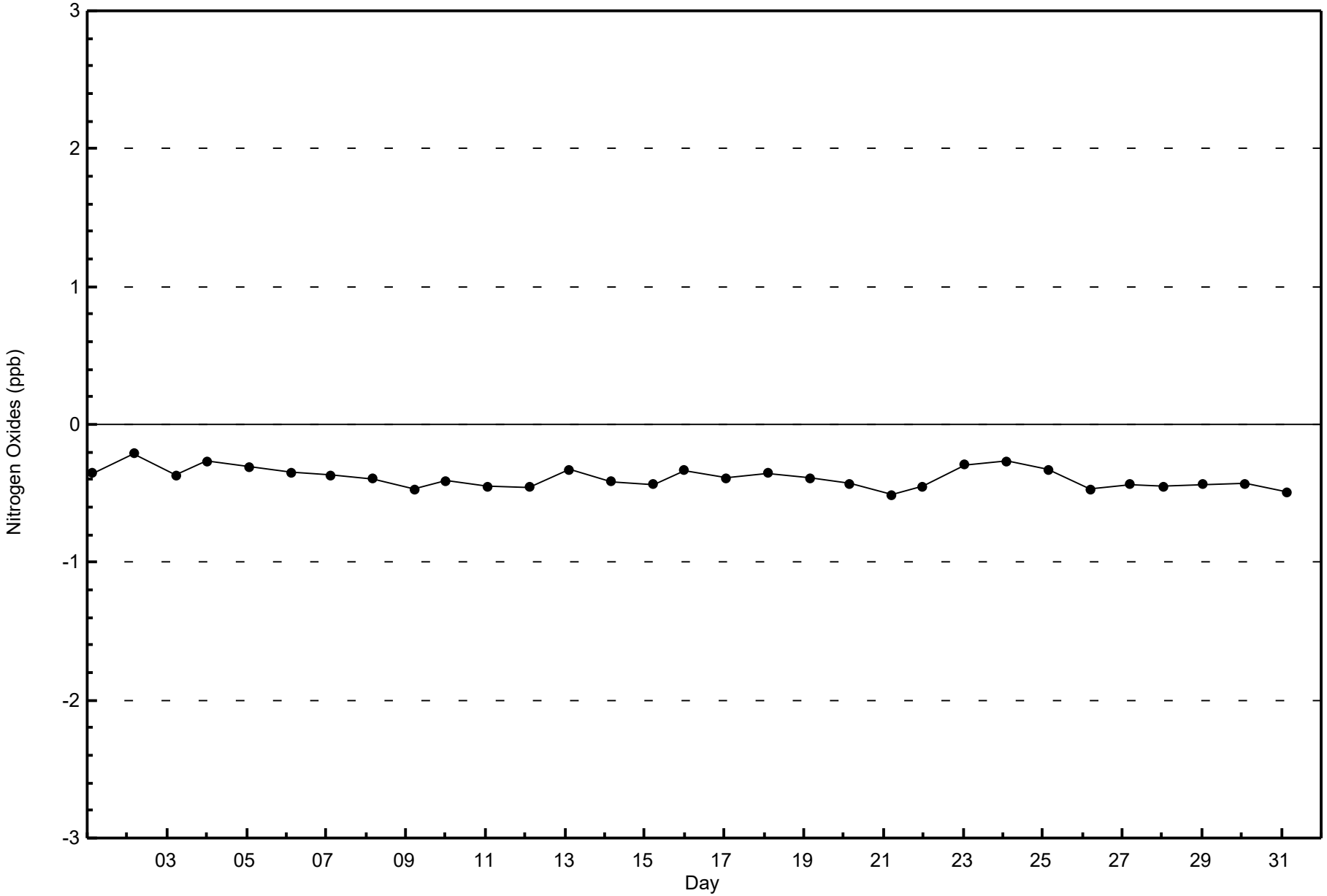
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Fort Hills - March 2025

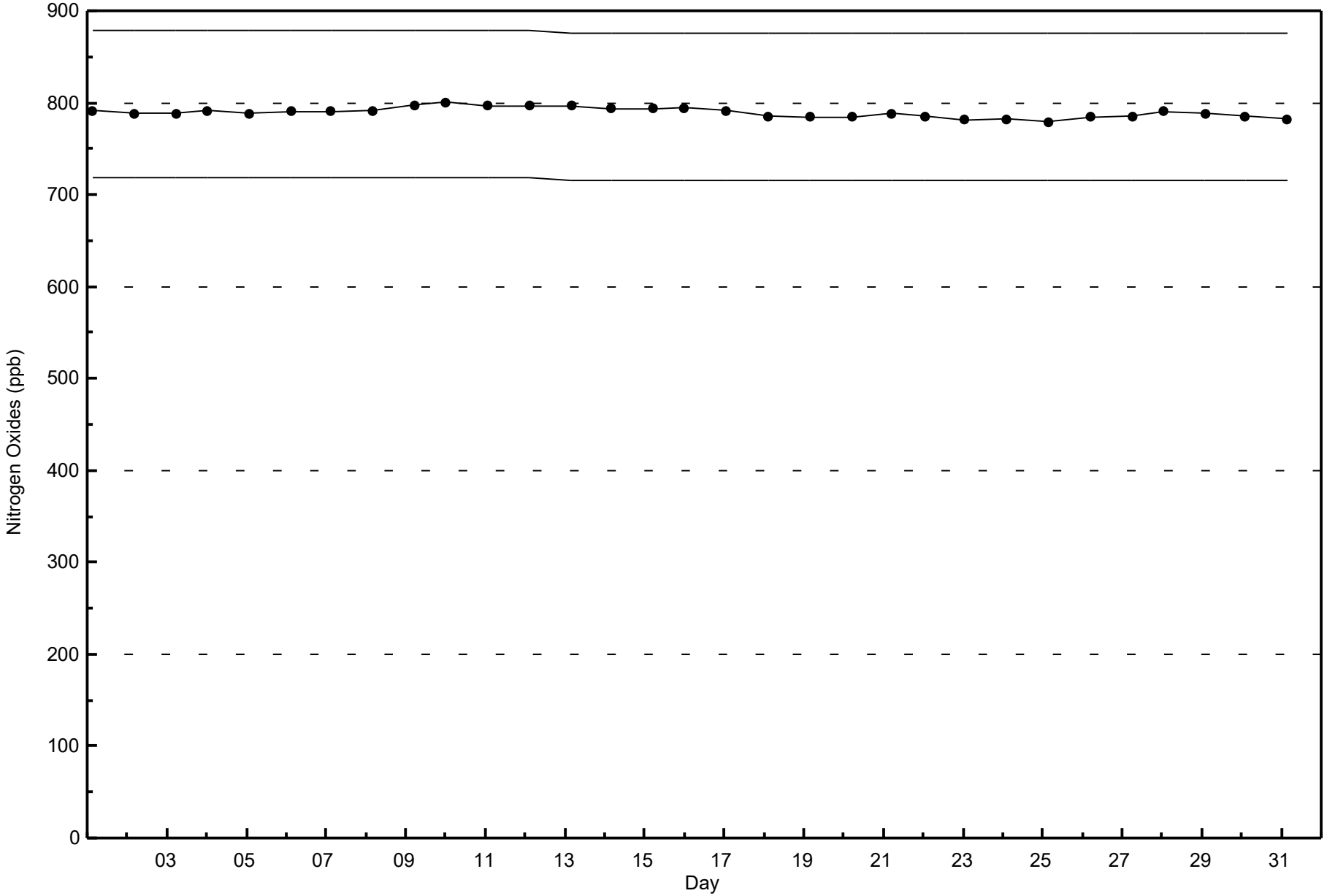


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Fort Hills - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Fort Hills - March 2025

Number of Exceedences (AAAQO): 1-hr: 20 24-hr: 3

Maximum Value: 172.8 $\mu g/m^3$ on Mar 30 08:00

Maximum Daily Average: 65.8 $\mu g/m^3$ on Mar 30

Minimum Value: 0.9 $\mu g/m^3$ on Mar 25 16:00

Minimum Daily Average: 2.7 $\mu g/m^3$ on Mar 25

Maximum Diurnal Average: 23.5 $\mu g/m^3$ at hour 5

Minimum Diurnal Average: 6.3 $\mu g/m^3$ at hour 17

Monthly Average: 14.50 $\mu g/m^3$

Percentiles: P_1 = 1.5 P_{10} = 2.8 Q_1 = 3.9 Median = 6.8 Q_3 = 14.1 P_{90} = 33.2 P_{99} = 118.8

Hours in Service:	744
Hours of Data:	742
Hours of Missing Data:	2
Hours of Calibration:	2
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	6.6	5.8	5.1	4.4	4.1	4.1	4.2	3.8	4.4	5.0	5.5	5.9	5.7	5.3	5.5	5.6	10.4	15.2	12.1	13.5	13.0	10.5	7.7	7.2	7.1	15.2
2-Mar	12.4	11.2	7.7	7.4	7.0	7.6	8.1	8.5	9.5	7.8	6.7	5.3	6.1	9.7	8.7	4.2	2.1	1.9	1.8	1.9	1.9	2.0	2.4	3.0	6.0	12.4
3-Mar	3.3	3.3	3.3	3.4	3.4	4.2	3.6	3.7	4.0	4.8	5.1	4.7	4.1	3.9	3.6	3.3	3.4	3.5	3.4	3.7	3.7	3.9	5.2	6.8	4.0	6.8
4-Mar	6.1	4.8	2.9	2.0	3.8	6.3	8.8	9.6	9.5	5.2	3.6	2.2	2.3	2.3	2.5	2.2	2.1	1.8	2.1	3.3	3.7	2.4	2.6	2.8	4.0	9.6
5-Mar	2.9	2.0	1.9	2.2	3.5	2.7	2.6	7.7	9.8	6.8	5.7	2.8	3.2	3.8	3.5	3.4	3.0	3.2	4.2	3.1	3.2	5.5	5.7	5.8	4.1	9.8
6-Mar	9.6	19.7	10.6	5.1	6.8	4.0	3.7	4.7	4.0	5.5	5.1	7.3	6.1	4.6	5.9	8.3	10.6	11.3	9.3	9.1	7.8	9.9	8.0	6.5	7.6	19.7
7-Mar	6.9	7.7	6.3	7.3	8.8	14.5	20.8	23.0	18.1	24.0	31.2	16.8	19.3	17.2	5.2	4.8	4.5	5.8	6.2	9.0	8.3	5.4	5.0	8.9	11.9	31.2
8-Mar	21.2	14.7	18.8	13.8	7.3	3.4	2.3	2.2	2.4	2.2	1.9	1.3	1.4	1.7	2.7	2.4	2.0	1.7	2.5	3.3	3.4	3.5	4.4	5.7	5.3	21.2
9-Mar	4.8	3.9	3.8	4.5	4.0	4.3	4.2	3.3	3.1	4.2	4.4	4.8	5.7	6.8	8.5	7.2	4.8	6.4	7.1	9.1	12.4	16.8	14.0	19.3	7.0	19.3
10-Mar	18.4	18.4	5.6	19.4	14.2	15.0	16.8	9.5	3.8	6.6	5.2	7.5	7.8	7.8	8.4	6.6	7.9	19.9	27.7	24.2	22.9	12.9	11.3	9.3	12.8	27.7
11-Mar	8.3	9.7	10.7	13.4	11.1	9.3	6.0	5.5	5.0	5.2	4.9	4.9	5.9	5.5	5.4	5.1	5.8	4.6	3.7	3.4	3.2	3.1	2.9	2.9	6.1	13.4
12-Mar	2.8	2.9	3.5	4.8	4.8	5.1	4.9	2.1	1.3	4.1	4.4	3.6	3.5	3.7	3.8	3.9	5.3	3.7	7.5	20.6	26.6	33.1	14.6	28.6	8.3	33.1
13-Mar	33.2	12.8	22.3	23.8	40.5	17.7	28.7	20.6	32.7	28.2	24.8	20.5	14.3	11.3	12.1	16.4	13.1	14.2	20.6	15.8	16.2	14.5	16.9	8.2	20.0	40.5
14-Mar	4.4	3.1	3.3	3.2	3.1	3.4	3.8	3.8	4.0	3.9	3.7	3.5	4.0	4.8	3.7	4.6	3.9	3.7	2.8	2.9	3.2	2.0	1.4	1.6	3.4	4.8
15-Mar	1.5	1.6	1.6	1.9	1.8	1.6	1.6	1.8	2.5	6.4	5.0	5.8	3.9	5.2	4.7	4.1	2.8	4.1	8.5	6.2	7.5	7.5	7.6	7.7	4.3	8.5
16-Mar	8.0	7.5	8.9	14.1	4.7	11.5	13.7	9.4	6.8	6.9	9.5	14.5	10.1	5.6	6.0	6.4	5.4	3.0	4.7	7.0	8.6	10.2	9.4	3.9	8.2	14.5
17-Mar	3.7	4.1	3.2	2.9	3.2	3.3	3.3	C	C	4.6	3.8	3.9	3.8	5.3	7.5	7.3	5.0	6.9	17.2	23.2	21.3	34.9	34.5	36.6	10.9	36.6
18-Mar	24.0	21.5	53.7	9.9	10.4	9.9	11.5	5.7	15.7	16.3	26.3	32.9	19.9	7.5	6.9	5.6	5.7	5.9	5.8	19.4	22.7	23.8	22.3	26.3	17.1	53.7
19-Mar	33.5	58.3	54.6	33.8	65.8	25.0	17.4	9.7	13.3	13.4	9.1	16.1	16.2	20.9	24.9	15.6	12.0	7.6	9.4	7.8	9.4	7.1	6.2	6.4	20.6	65.8
20-Mar	6.6	8.6	10.3	12.7	11.5	10.4	14.1	19.3	17.1	20.9	22.1	13.4	17.1	12.1	10.9	11.6	12.7	18.4	24.7	41.2	57.9	67.6	62.4	114.7	25.8	114.7
21-Mar	86.7	6.7	2.5	2.6	12.8	6.3	5.2	3.5	7.1	9.5	6.1	9.0	10.3	9.4	12.5	8.4	5.4	4.3	3.4	6.3	17.4	9.8	1.9	1.8	10.4	86.7
22-Mar	4.2	8.7	7.4	8.1	10.1	5.6	5.9	7.0	9.1	9.4	7.2	5.4	8.3	14.4	16.6	10.1	11.6	5.3	5.2	7.7	6.4	6.1	5.9	5.3	8.0	16.6
23-Mar	4.1	4.3	4.1	4.6	4.4	4.6	4.8	5.4	7.8	10.7	10.7	11.5	9.2	5.5	7.3	4.8	4.7	4.6	4.6	4.2	3.5	3.3	3.5	4.3	5.7	11.5
24-Mar	4.6	4.7	4.9	5.4	6.1	4.6	4.9	4.5	4.5	4.5	4.1	3.7	3.5	2.6	4.8	2.4	3.5	2.3	2.0	1.8	1.2	1.8	3.4	3.7	3.7	6.1
25-Mar	3.0	2.5	2.1	1.8	2.2	2.2	2.6	2.8	3.3	3.3	4.2	5.4	3.0	1.4	1.4	0.9	3.3	3.0	3.0	2.8	2.7	2.8	2.6	3.5	2.7	5.4
26-Mar	5.1	6.0	4.2	6.4	10.4	8.2	10.9	15.2	12.2	7.4	9.0	8.2	5.1	3.6	3.3	3.1	3.3	2.8	3.6	3.9	8.0	12.1	13.6	22.1	7.8	22.1
27-Mar	19.1	20.0	16.7	33.2	34.4	20.8	37.2	21.6	28.4	16.3	12.3	10.5	9.6	6.8	6.9	5.8	4.1	4.1	8.4	26.1	39.4	53.0	51.8	48.2	22.3	53.0
28-Mar	71.7	59.7	66.0	86.7	130.8	75.6	65.0	76.9	106.2	110.9	40.1	36.4	28.6	20.7	15.1	14.7	12.1	8.8	17.4	43.2	64.6	38.8	68.8	121.6	57.5	130.8
29-Mar	70.8	53.0	79.8	170.3	162.1	65.7	54.8	57.7	44.6	56.6	104.0	91.4	55.6	37.7	21.7	7.7	5.8	7.0	24.1	49.3	49.2	37.2	52.1	79.6	59.9	170.3
30-Mar	65.0	57.7	69.8	140.4	122.1	91.1	106.5	172.8	111.2	88.0	95.9	125.2	77.1	39.1	12.4	11.0	14.6	14.6	30.3	29.5	22.9	24.9	22.1	33.8	65.8	172.8
31-Mar	30.8	7.0	7.0	12.0	12.4	18.9	20.7	18.3	6.8	8.2	9.1	16.0	14.1	7.3	6.7	5.4	5.0	3.8	3.9	12.0	9.5	8.6	12.5	9.7	11.1	30.8
	18.8	14.6	16.2	21.3	23.5	15.1	16.1	18.0	16.9	16.4	15.8	16.1	12.4	9.5	8.0	6.5	6.3	6.6	9.3	13.4	15.5	15.3	15.6	20.8	Diurnal Average	
	86.7	59.7	79.8	170.3	162.1	91.1	106.5	172.8	111.2	110.9	104.0	125.2	77.1	39.1	24.9	16.4	14.6	19.9	30.3	49.3	64.6	67.6	68.8	121.6	Diurnal Maximum	

C - Calibration

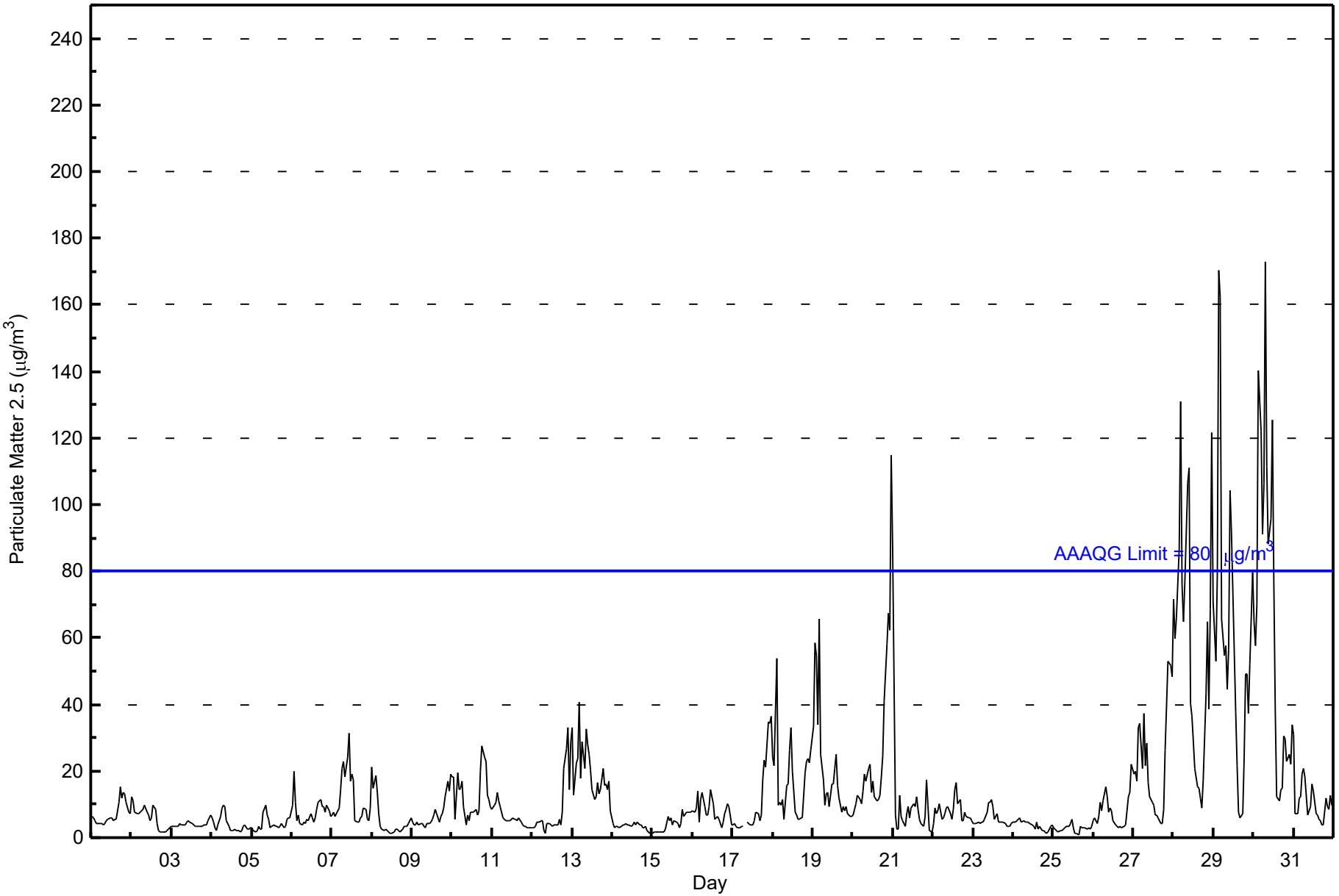
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Fort Hills - March 2025





Wood Buffalo Environmental Association

Cumulative Frequency Distribution

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

Fort Hills - March 2025

Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	309	41.64	41.64
6 - 15	264	35.58	77.22
16 - 25	77	10.38	87.60
26 - 80	72	9.70	97.30
> 81.0	20	2.70	100.00

Total Number of Valid Hours: 742

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

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

Fort Hills - March 2025

Concentration Ranges ($\mu g/m^3$)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	87	51	9	6	5	26	24	26	15	11	7	4	6	2	17	12	308
6 - 15	61	51	7	6	5	32	39	14	9	9	0	1	4	1	5	20	264
16 - 25	29	20	4	2	0	5	7	1	0	0	0	1	1	0	2	4	76
26 - 80	24	16	2	1	0	4	1	0	0	1	0	1	1	1	3	17	72
> 81.0	4	0	1	0	0	1	1	0	1	0	0	0	1	1	0	10	20
Totals	205	138	23	15	10	68	72	41	25	21	7	7	13	5	27	63	740

Total Number of Valid Hours: 740

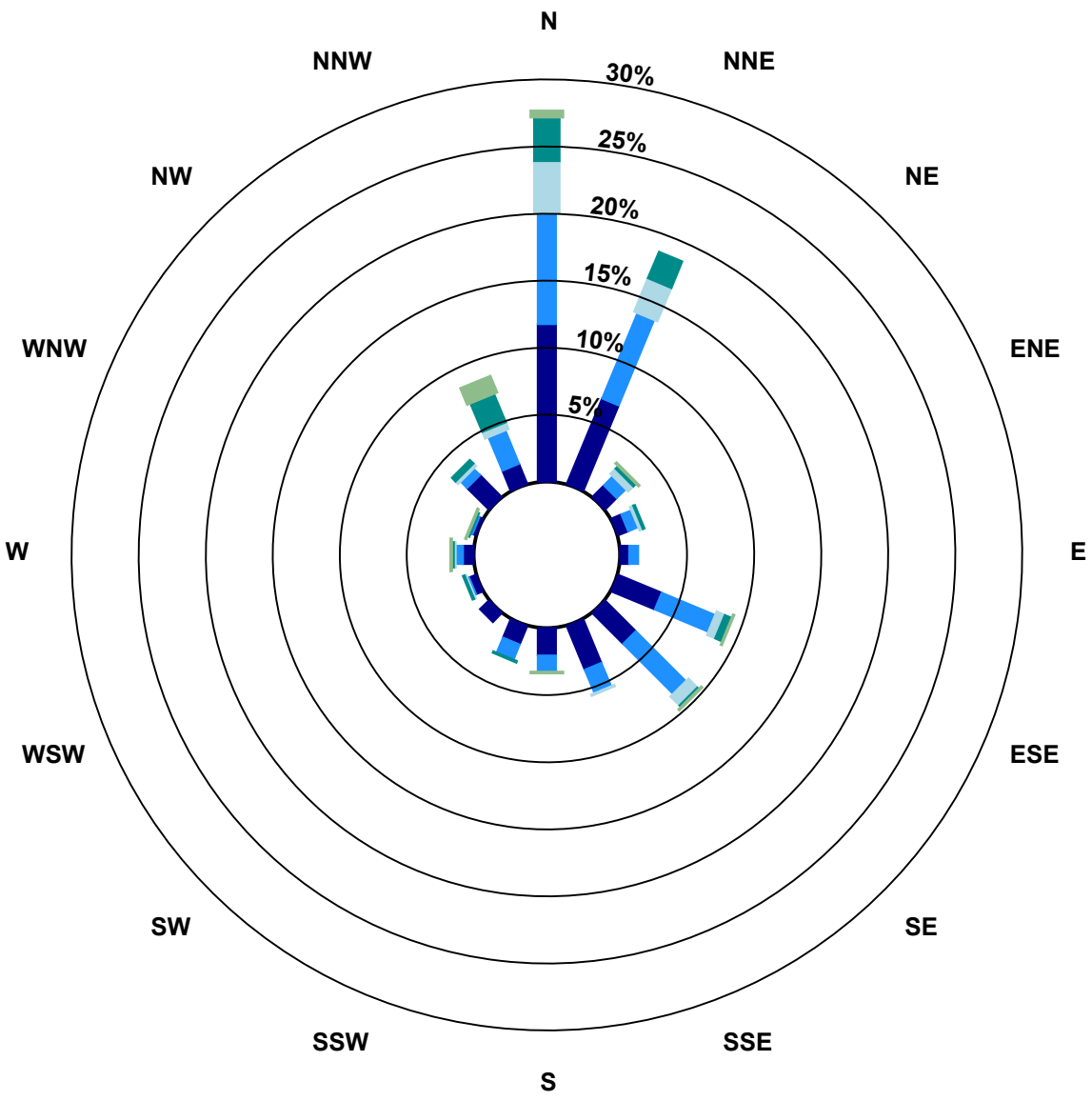
Total Number of Hours: 744

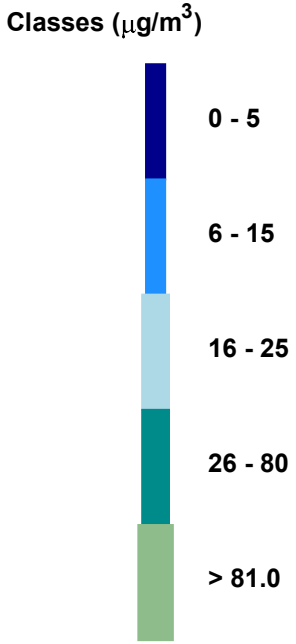
Wood Buffalo Environmental Association

Wind Rose Mar 2025

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

Fort Hills





Total Number of Valid Hours: 740

Summary of Hour Averages

Fort Hills - March 2025

Maximum Value: 9.4 C on Mar 25 14:00

Maximum Daily Average: 1.1 C on Mar 23

Minimum Value: -25.4 C on Mar 13 07:00

Minimum Daily Average: -21.3 C on Mar 9

Maximum Diurnal Average: -3.6 C at hour 16

Minimum Diurnal Average: -12.6 C at hour 7

Monthly Average: -8.30 C

Percentiles: P_1 = -23.2 P_{10} = -18.2 Q_1 = -13.9 Median = -8.2 Q_3 = -2.6 P_{90} = 1.0 P_{99} = 5.5

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

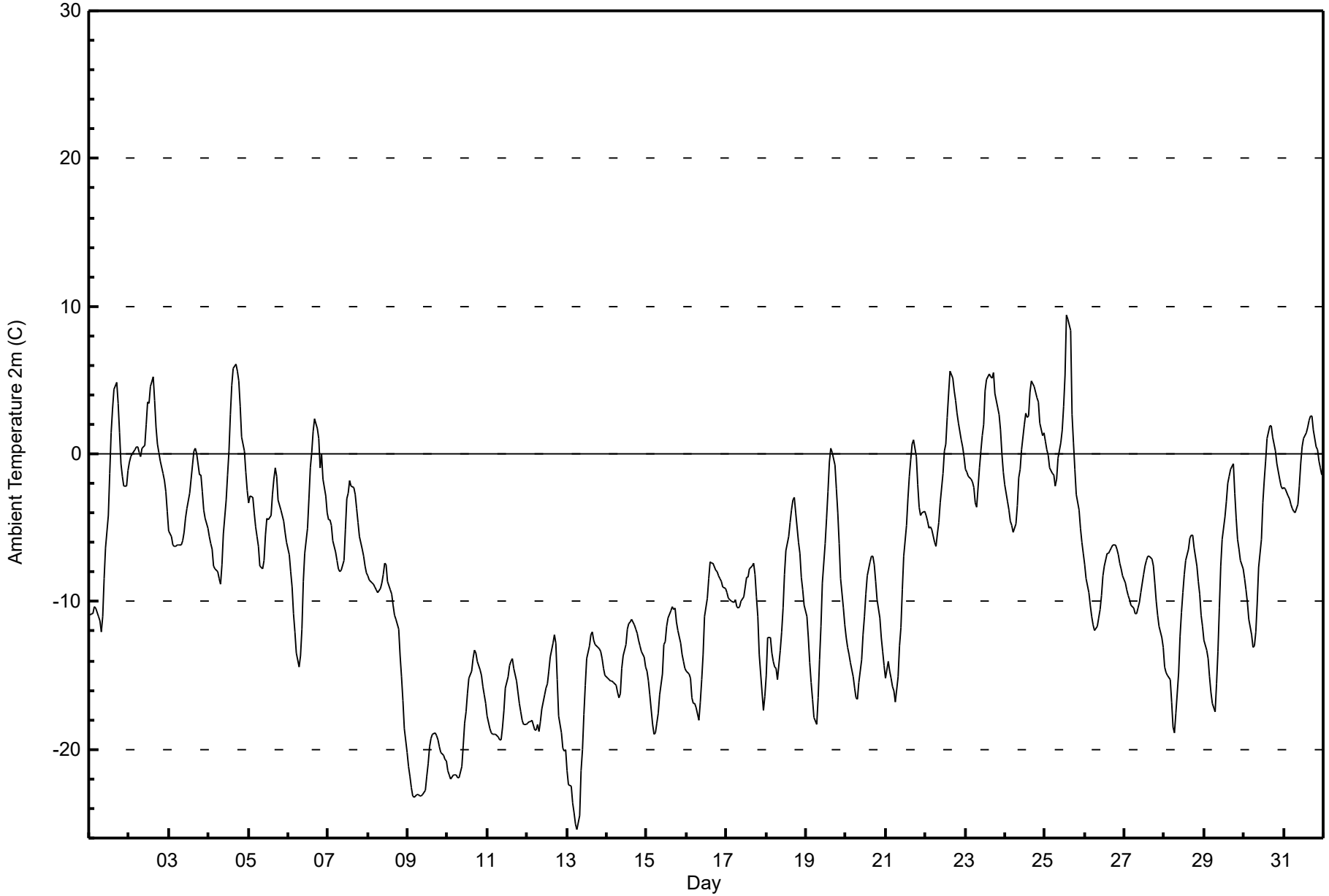
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-10.9	-10.8	-10.8	-10.3	-10.5	-11.0	-11.3	-12.1	-11.0	-8.5	-6.4	-4.2	-1.3	1.4	3.1	4.4	4.9	3.5	1.4	-0.7	-1.5	-2.2	-2.2	-1.1	-4.5	4.9
2-Mar	-0.6	-0.2	0.0	0.3	0.5	0.5	0.1	-0.2	0.4	0.6	2.0	3.6	3.4	4.5	5.3	3.6	1.8	0.6	0.1	-0.4	-1.3	-1.8	-2.6	-3.9	0.7	5.3
3-Mar	-5.2	-5.6	-6.1	-6.2	-6.2	-6.2	-6.2	-6.2	-5.9	-5.3	-4.4	-3.7	-2.7	-1.7	-0.7	0.2	0.3	0.0	-1.5	-1.5	-2.6	-3.8	-4.4	-5.0	-3.8	0.3
4-Mar	-5.6	-6.1	-6.5	-7.6	-7.7	-8.0	-8.4	-8.8	-7.5	-5.4	-3.1	-1.4	0.2	2.7	4.6	5.8	6.1	5.6	4.9	3.2	1.1	0.2	-1.2	-2.4	-1.9	6.1
5-Mar	-3.3	-2.8	-3.0	-4.0	-4.9	-5.6	-6.3	-7.6	-7.8	-7.2	-5.5	-4.4	-4.5	-4.2	-2.7	-1.7	-1.0	-1.5	-3.2	-3.8	-4.2	-4.5	-5.3	-5.9	-4.4	-1.0
6-Mar	-6.9	-8.0	-9.0	-10.8	-12.1	-13.5	-14.5	-13.6	-11.9	-8.7	-6.8	-5.0	-3.0	-1.0	0.1	1.5	2.4	1.8	1.0	-0.9	0.0	-1.7	-2.8	-4.0	-5.3	2.4
7-Mar	-4.4	-4.5	-4.8	-5.8	-6.7	-7.3	-7.8	-8.0	-7.9	-7.2	-5.1	-3.1	-2.6	-1.8	-2.2	-2.2	-2.8	-3.7	-4.6	-5.6	-6.5	-7.0	-7.6	-8.1	-5.3	-1.8
8-Mar	-8.3	-8.5	-8.7	-8.8	-9.0	-9.2	-9.4	-9.1	-8.7	-8.2	-7.4	-7.5	-8.6	-9.2	-9.5	-10.3	-10.9	-11.1	-11.9	-13.7	-15.1	-16.7	-18.6	-20.2	-10.8	-7.4
9-Mar	-21.1	-21.9	-22.6	-23.2	-23.2	-23.1	-23.0	-23.2	-23.1	-23.1	-22.7	-21.8	-21.0	-19.8	-19.2	-19.0	-18.9	-19.1	-19.4	-19.9	-20.2	-20.4	-20.7	-20.8	-21.3	-18.9
10-Mar	-21.5	-21.8	-22.0	-21.7	-21.7	-21.7	-21.9	-21.9	-21.2	-19.7	-18.3	-17.4	-16.2	-15.1	-14.7	-13.9	-13.3	-13.4	-14.1	-14.6	-15.0	-15.8	-16.3	-16.9	-17.9	-13.3
11-Mar	-17.7	-18.6	-18.9	-18.9	-19.0	-19.0	-19.2	-19.4	-19.4	-18.5	-17.3	-15.8	-15.0	-14.3	-14.0	-13.8	-14.5	-15.3	-16.1	-16.9	-17.5	-18.0	-18.3	-18.4	-17.2	-13.8
12-Mar	-18.2	-18.1	-18.2	-18.0	-18.7	-18.7	-18.3	-18.8	-18.1	-17.2	-16.3	-15.8	-15.6	-14.7	-13.7	-12.8	-12.2	-12.8	-15.3	-17.7	-18.9	-19.9	-20.2	-20.1	-17.0	-12.2
13-Mar	-21.4	-22.4	-22.5	-23.7	-24.3	-25.0	-25.4	-24.5	-21.4	-20.0	-17.6	-15.7	-13.8	-13.0	-12.3	-12.1	-12.6	-12.9	-13.1	-13.2	-13.4	-13.8	-14.5	-15.0	-17.6	-12.1
14-Mar	-15.2	-15.3	-15.4	-15.3	-15.4	-15.6	-16.1	-16.5	-16.2	-14.5	-13.7	-12.9	-11.9	-11.4	-11.4	-11.2	-11.5	-11.8	-12.2	-12.6	-13.0	-13.4	-13.7	-14.4	-13.8	-11.2
15-Mar	-14.7	-15.3	-16.3	-18.3	-19.0	-18.8	-18.2	-17.6	-16.3	-14.9	-12.9	-12.7	-11.7	-11.1	-10.7	-10.3	-10.5	-10.4	-11.4	-12.0	-12.8	-13.5	-14.1	-14.5	-14.1	-10.3
16-Mar	-14.7	-14.9	-15.2	-16.5	-16.9	-16.9	-17.2	-18.1	-16.8	-15.3	-13.5	-11.0	-9.7	-8.4	-7.3	-7.4	-7.4	-7.9	-8.0	-8.2	-8.4	-8.6	-9.0	-9.1	-11.9	-7.3
17-Mar	-9.4	-9.7	-9.9	-10.0	-10.1	-9.8	-10.3	-10.4	-10.4	-10.0	-9.6	-9.0	-8.4	-8.3	-7.8	-7.6	-7.4	-8.2	-9.7	-11.0	-13.6	-16.2	-17.3	-16.4	-10.4	-7.4
18-Mar	-15.0	-12.4	-12.5	-13.5	-14.0	-14.4	-14.6	-15.3	-13.3	-12.1	-10.5	-8.2	-6.5	-5.6	-4.6	-3.8	-3.2	-2.9	-4.0	-6.0	-6.8	-8.3	-9.2	-10.2	-9.4	-2.9
19-Mar	-11.0	-12.4	-14.1	-15.5	-16.6	-17.8	-18.3	-16.5	-14.0	-11.7	-8.8	-6.1	-4.3	-2.5	-0.6	0.4	0.1	-0.7	-2.4	-4.0	-6.1	-8.4	-10.4	-11.6	-8.9	0.4
20-Mar	-12.4	-13.1	-13.5	-14.2	-15.0	-15.8	-16.5	-16.6	-15.4	-13.9	-12.2	-11.0	-9.5	-8.3	-7.3	-6.9	-6.9	-7.5	-8.7	-9.9	-11.1	-12.4	-13.4	-14.3	-11.9	-6.9
21-Mar	-15.2	-14.0	-14.7	-15.2	-15.8	-16.0	-16.8	-15.1	-13.0	-11.7	-9.2	-7.0	-4.9	-3.0	-1.6	-0.3	0.7	1.0	-0.2	-2.1	-3.6	-4.2	-4.0	-3.9	-7.9	1.0
22-Mar	-4.2	-4.6	-5.0	-4.9	-5.1	-6.0	-6.3	-5.4	-4.6	-3.3	-1.3	0.2	0.7	2.5	4.1	5.6	5.1	4.3	3.6	2.7	2.1	1.0	0.5	-0.2	-0.8	5.6
23-Mar	-1.1	-1.2	-1.5	-1.7	-1.9	-2.3	-3.3	-3.6	-0.9	0.2	1.3	2.0	4.3	5.0	5.4	5.2	5.1	5.5	4.1	3.2	2.6	1.7	0.0	-1.2	1.1	5.5
24-Mar	-2.1	-3.2	-3.7	-4.6	-4.8	-5.3	-4.8	-3.5	-1.6	-1.0	0.3	2.0	2.7	2.5	2.6	4.2	4.9	4.6	4.2	3.8	3.5	2.1	1.3	1.5	0.2	4.9
25-Mar	0.8	0.3	-0.1	-0.9	-1.4	-1.5	-2.2	-1.7	-0.2	0.8	1.6	3.3	5.3	9.4	9.2	8.4	2.6	0.8	-1.0	-2.7	-3.7	-5.0	-6.0	-6.7	0.4	9.4
26-Mar	-7.5	-8.4	-9.4	-10.2	-11.0	-11.6	-12.0	-11.6	-11.1	-10.5	-9.6	-8.2	-7.6	-6.8	-6.7	-6.6	-6.4	-6.2	-6.2	-6.5	-6.9	-7.4	-7.8	-8.3	-8.5	-6.2
27-Mar	-8.8	-9.2	-9.5	-9.9	-10.2	-10.5	-10.8	-10.8	-10.5	-10.1	-9.3	-8.1	-7.6	-7.2	-6.9	-6.9	-7.1	-7.5	-8.7	-10.0	-10.9	-11.7	-12.5	-13.1	-9.5	-6.9
28-Mar	-14.4	-14.8	-15.0	-15.3	-16.8	-18.5	-18.9	-17.5	-14.8	-12.3	-10.7	-9.3	-8.1	-7.2	-6.5	-5.7	-5.5	-5.5	-6.3	-7.6	-8.7	-9.5	-10.9	-11.6	-11.3	-5.5
29-Mar	-12.6	-13.2	-13.8	-15.1	-16.1	-16.9	-17.4	-15.6	-13.4	-10.4	-7.5	-5.8	-4.3	-3.2	-2.0	-1.6	-1.1	-0.7	-2.7	-4.4	-5.7	-6.4	-7.2	-7.8	-8.5	-0.7
30-Mar	-8.5	-9.2	-10.1	-11.2	-12.2	-13.1	-13.0	-12.1	-10.1	-7.7	-5.8	-3.3	-1.8	-0.5	1.1	1.9	1.9	1.2	0.6	0.2	-0.7	-1.7	-2.2	-2.4	-4.9	1.9
31-Mar	-2.3	-2.3	-2.8	-3.1	-3.4	-3.7	-3.9	-4.0	-3.4	-2.2	-0.7	0.5	1.0	1.4	1.8	2.3	2.6	2.6	1.6	0.5	0.3	-0.4	-0.9	-1.5	-0.8	2.6
	-10.1	-10.4	-10.8	-11.4	-11.9	-12.3	-12.6	-12.4	-11.3	-10.0	-8.4	-7.0	-5.9	-4.8	-4.0	-3.6	-3.7	-4.1	-5.1	-6.2	-7.0	-8.0	-8.8	-9.3	Diurnal Average	
	0.8	0.3	0.0	0.3	0.5	0.5	0.1	-0.2	0.4	0.8	2.0	3.6	5.3	9.4	9.2	8.4	6.1	5.6	4.9	3.8	3.5	2.1	1.3	1.5	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Fort Hills - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	38	5.11	5.11
-20 - 0	596	80.11	85.22
0 - 10	110	14.78	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Fort Hills - March 2025

Maximum Value: 92.5 % on Mar 23 08:00

Maximum Daily Average: 81.1 % on Mar 24

Minimum Value: 29.6 % on Mar 29 18:00

Minimum Daily Average: 49.2 % on Mar 30

Maximum Diurnal Average: 78.2 % at hour 7

Minimum Diurnal Average: 54.0 % at hour 16

Monthly Average: 67.41 %

Percentiles: P_1 = 34.4 P_{10} = 49.9 Q_1 = 57.6 Median = 69.0 Q_3 = 78.0 P_{90} = 83.7 P_{99} = 90.1

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

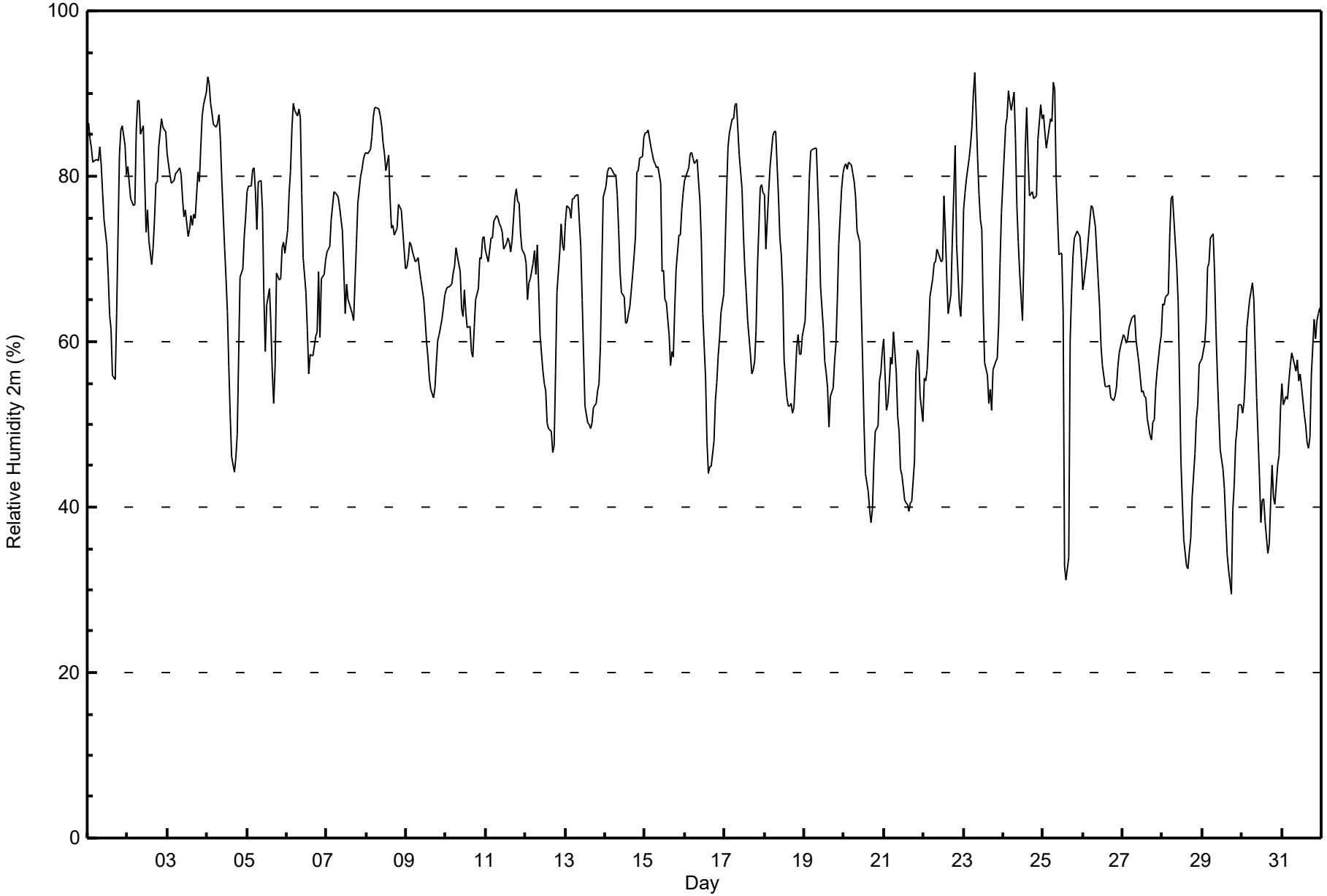
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	86.4	84.5	83.4	81.7	81.8	82.1	81.9	83.6	81.3	77.9	74.7	71.7	67.9	63.2	61.5	56.0	55.5	63.3	73.1	82.5	85.7	86.2	83.7	80.2	76.2	86.4
2-Mar	81.2	79.2	77.4	76.5	76.7	85.7	89.1	89.2	85.1	86.1	79.7	73.2	76.0	72.2	69.3	71.4	74.8	79.2	79.4	83.6	87.0	85.9	85.6	85.4	80.4	89.2
3-Mar	82.7	80.2	79.2	79.3	79.5	80.3	80.4	81.0	80.2	77.3	75.0	76.0	72.7	73.5	75.2	74.0	75.4	75.0	80.5	79.4	83.5	87.3	88.7	90.2	79.4	90.2
4-Mar	92.0	91.2	88.7	87.7	86.4	85.9	86.4	87.4	84.4	79.6	71.3	67.7	63.5	56.9	51.0	46.2	44.2	46.0	48.7	58.1	67.8	68.8	72.7	75.1	71.2	92.0
5-Mar	78.2	78.8	78.7	80.9	81.0	78.1	73.5	79.3	79.5	75.9	65.6	58.8	64.4	66.4	62.1	56.2	52.6	56.9	68.3	67.4	67.7	71.3	72.0	70.7	70.2	81.0
6-Mar	73.5	78.0	80.7	85.7	88.8	88.0	87.3	88.2	87.1	78.0	70.1	65.9	61.4	56.1	58.4	58.3	58.3	60.6	61.3	68.5	60.6	67.7	68.1	69.8	71.7	88.8
7-Mar	70.8	71.2	71.5	74.7	78.1	78.0	77.8	77.5	76.3	73.4	68.6	63.3	66.9	65.0	64.5	63.4	62.6	67.3	71.8	76.8	80.0	80.9	82.0	82.7	72.7	82.7
8-Mar	82.8	82.7	83.2	84.7	87.1	88.3	88.4	88.2	87.2	86.1	84.2	82.6	80.7	82.5	77.3	73.7	74.1	72.8	73.7	76.6	76.3	75.9	73.5	68.7	80.5	88.4
9-Mar	69.0	70.1	72.0	71.7	70.8	69.6	69.7	70.1	68.6	67.5	65.1	62.8	60.0	58.1	55.6	54.2	53.3	54.5	57.5	60.2	60.9	62.7	64.1	65.6	63.9	72.0
10-Mar	66.3	66.6	66.6	66.9	68.3	69.1	71.3	70.4	68.4	64.0	63.0	66.2	63.6	61.7	61.8	58.8	58.2	61.6	65.0	66.5	70.2	70.0	72.5	72.7	66.2	72.7
11-Mar	71.0	69.6	71.0	72.6	72.5	74.5	75.2	75.0	74.3	73.8	73.3	71.2	71.9	72.5	72.0	70.9	72.1	77.5	78.4	76.9	76.8	73.3	71.1	70.5	73.2	78.4
12-Mar	69.5	65.0	67.1	67.6	69.5	71.1	68.1	71.7	66.2	60.7	56.4	55.0	54.1	50.1	49.5	49.2	46.7	47.5	56.3	65.9	70.9	74.2	71.6	71.0	62.3	74.2
13-Mar	74.4	76.4	76.1	75.0	77.3	77.4	77.6	77.8	74.3	71.5	65.1	58.4	52.2	50.1	50.1	49.5	50.2	52.0	52.5	54.0	55.0	59.5	68.9	77.5	64.7	77.8
14-Mar	78.8	80.5	81.1	81.0	80.8	80.2	80.2	77.8	73.6	68.5	66.0	65.4	62.3	62.4	63.5	64.2	68.1	70.4	72.8	80.6	80.7	82.3	82.3	84.7	74.5	84.7
15-Mar	85.2	85.3	85.6	83.6	82.8	81.8	81.5	81.1	81.2	79.1	68.5	68.7	65.1	64.8	60.9	57.2	58.9	58.1	64.1	68.8	72.9	72.8	75.9	78.0	73.4	85.6
16-Mar	79.5	80.5	81.0	82.7	82.9	82.1	81.5	82.1	79.2	77.0	72.0	63.3	55.6	48.0	44.0	44.8	44.9	48.0	52.8	55.0	58.4	60.4	63.5	65.7	66.0	82.9
17-Mar	71.9	78.2	83.5	85.3	87.0	86.9	88.7	88.8	85.7	82.6	78.5	72.9	68.8	65.9	62.6	58.5	56.2	56.7	57.6	61.4	69.0	78.6	79.0	78.0	74.2	88.8
18-Mar	77.8	71.1	78.1	81.1	83.0	84.9	85.4	85.4	77.5	72.6	70.6	66.5	57.8	53.3	52.3	52.2	52.5	51.3	52.1	59.3	60.9	58.5	58.5	60.7	66.8	85.4
19-Mar	62.5	67.9	73.6	79.8	83.1	83.2	83.3	83.5	78.7	73.9	66.6	61.5	57.6	56.3	54.4	49.7	53.5	54.5	57.6	59.9	65.3	71.8	78.4	80.3	68.2	83.5
20-Mar	81.1	81.6	80.8	81.6	81.4	80.3	79.3	77.5	73.4	72.0	64.4	57.6	49.9	44.0	41.8	39.7	38.2	39.8	45.3	49.1	49.9	55.3	56.3	58.8	61.6	81.6
21-Mar	60.3	51.6	52.5	55.0	58.1	57.3	61.1	56.3	51.0	49.1	44.6	44.0	40.9	40.6	40.3	39.6	40.5	40.6	45.6	56.4	59.1	58.4	53.4	50.4	50.3	61.1
22-Mar	55.6	55.2	56.5	60.3	65.4	67.6	69.5	69.6	71.1	70.6	69.7	69.8	77.6	73.1	67.9	63.3	65.8	72.5	78.0	83.7	71.9	64.4	63.0	67.1	67.9	83.7
23-Mar	75.9	78.0	79.7	82.1	83.9	86.1	90.0	92.5	82.1	77.8	74.7	73.5	64.1	57.4	55.9	52.5	54.2	51.7	56.5	57.7	58.0	62.0	69.5	75.7	70.5	92.5
24-Mar	79.2	86.2	87.1	90.3	88.9	88.0	90.2	84.6	76.4	72.1	68.3	62.6	70.3	83.4	88.3	82.4	77.6	78.2	77.2	77.4	77.6	84.4	88.6	87.0	81.1	90.3
25-Mar	87.4	85.3	83.4	84.6	86.9	86.6	91.4	90.5	79.8	70.5	70.7	70.7	63.6	32.9	31.1	34.0	60.1	65.9	70.4	72.5	73.4	73.1	72.6	70.2	71.2	91.4
26-Mar	66.2	67.4	70.6	72.5	74.6	76.5	76.3	73.9	70.7	67.4	64.3	59.6	57.1	54.6	54.6	54.6	54.8	53.3	52.9	53.3	54.5	56.9	58.6	59.5	62.7	76.5
27-Mar	60.9	60.5	59.8	60.3	61.7	62.8	63.1	63.2	60.2	58.8	57.5	54.0	54.0	53.4	53.2	50.6	48.7	48.1	50.4	50.6	54.4	56.4	59.7	60.8	56.8	63.2
28-Mar	64.6	64.4	65.3	65.8	72.7	77.3	77.6	74.8	69.2	64.9	55.5	45.5	40.7	36.0	32.8	32.5	34.6	36.2	41.2	46.4	50.7	52.4	57.4	57.6	54.8	77.6
29-Mar	58.0	59.9	62.5	69.0	69.4	72.6	73.0	68.2	61.4	55.9	51.4	47.0	44.6	42.2	38.1	34.3	32.3	29.6	39.6	42.7	47.8	49.6	52.4	52.4	52.3	73.0
30-Mar	51.4	52.7	56.3	61.7	65.0	66.1	67.1	65.1	59.0	53.2	43.8	38.2	40.9	41.0	38.4	34.5	35.7	40.7	45.1	41.2	40.3	45.1	46.3	51.9	49.2	67.1
31-Mar	54.9	52.4	53.4	53.0	55.3	57.1	58.7	58.0	56.5	57.7	55.3	56.1	54.6	51.2	49.9	47.8	47.2	48.5	56.0	62.8	60.3	62.6	63.3	64.0	55.7	64.0
	72.5	72.6	73.8	75.3	76.8	77.6	78.2	77.8	74.2	70.8	66.3	62.9	60.7	57.7	56.1	54.0	54.9	56.7	60.7	64.4	66.0	68.0	69.5	70.4	Diurnal Average	
	92.0	91.2	88.7	90.3	88.9	88.3	91.4	92.5	87.2	86.1	84.2	82.6	80.7	83.4	88.3	82.4	77.6	79.2	80.5	83.7	87.0	87.3	88.7	90.2	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Fort Hills - March 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	21	2.82	2.82
40 - 60	205	27.55	30.38
60 - 80	367	49.33	79.70
80 - 100	151	20.30	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Fort Hills - March 2025

Maximum Speed: 29 km/h on Mar 9 00:00

Maximum Daily Speed Average: 19.5 km/h on Mar 11

Minimum Speed Value: 1 km/h on Mar 19 07:00

Minimum Daily Speed Average: 2.2 km/h on Mar 24

Maximum Diurnal Speed Average: 10.8 km/h at hour 21

Minimum Diurnal Speed Average: 3.2 km/h at hour 10

Monthly Average Velocity: 5.9 km/h 24.6 deg

Percentiles: P_1 = 1 P_{10} = 4 Q_1 = 7 Median = 10 Q_3 = 14 P_{90} = 20 P_{99} = 26

Hours in Service: 744

Hours of Data: 742

Hours of Missing Data: 2

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-Mar	SE10	SE12	SE12	SE13	SE12	SE12	SE12	SSE10	SE13	SSE13	SE14	SE14	SE14	SE15	SE11	ESE12	ESE9	N3	N4	NNW4	NNW3	W2	SSW1	SE6	SE8.2	SE15
2-Mar	SE9	SE8	ESE7	SE8	ESE5	ESE2	NNW3	NNW5	NW5	W4	WSW3	SSE4	ESE7	ESE9	SE3	NNE18	NNE19	NNE19	NNE14	N13	NNE20	N15	NNE16	NNE18	NNE6.0	NNE20
3-Mar	NNE16	N15	NNE10	NNE7	NNE6	SW1	W2	NW1	SSW6	SSW7	SSW5	SE9	ESE13	SE13	ESE13	ESE13	ESE11	ESE9	SE6	S5	UO	SSE5	SE6	SE7	ESE4.0	NNE16
4-Mar	SE7	SE7	SE8	SE9	SSE9	SE9	SE10	SE9	SE11	SSE11	S11	S12	S13	S14	SSW14	SSW12	SW14	SW12	WSW6	N12	N12	N13	N8	N5	SSE4.7	SSW14
5-Mar	N7	N16	N20	N22	N21	N25	N20	N12	NNE11	NE10	ENE7	ESE6	ESE10	ESE14	ESE10	E8	E5	NNE6	N9	N6	N8	N5	NNW7	NNW8	NNE8.7	N25
6-Mar	N10	N8	NNW6	NW4	NW3	SE2	S4	S7	SSE7	SSE9	SSE16	SSE17	SE16	SSE12	SE13	SE12	ESE9	ESE6	E6	SSW1	W8	N9	N17	N19	ESE3.0	N19
7-Mar	N8	NNE7	NNE10	NNE10	NNE9	NNE8	NNE7	N7	N6	N8	SE4	ENE4	NE7	NNE10	NNE17	NNE20	NNE19	NNE18	NNE17	NNE17	N15	N12	N12	N12	NNE10.5	NNE20
8-Mar	N14	N11	N9	N11	N13	N14	N13	N15	N14	N12	N12	N18	N20	N23	N26	N25	N22	NNE17	NNE20	NNE23	NNE26	NNE25	N27	NNE29	N18.1	NNE29
9-Mar	NNE29	NNE21	NNE17	NNE18	NNE23	NNE21	NNE19	NNE15	NNE17	NNE18	NNE14	NNE11	NE10	NNE12	NNE11	NNE13	NNE13	NNE13	NNE14	NNE12	NNE11	NNE10	NNE7	NNE9	NNE14.9	NNE29
10-Mar	N9	NNW9	NNW8	NNW8	NW6	NNW6	NW6	NW5	NNW5	NNW2	SE2	ESE6	NE3	ESE4	SE10	SE7	E5	NE6	NNE12	NNE12	NNE11	N13	N14	N14	N5.0	N14
11-Mar	N15	N14	N16	N16	N18	N18	NNE13	N15	N17	N18	N18	N21	NNE24	N24	N24	N24	N26	N24	N23	N24	N20	N24	N16	N18	N19.5	N26
12-Mar	N16	N14	N13	N10	NNE8	NNE7	N8	W5	WNW5	N4	E3	ESE5	SE7	ESE7	ESE8	E7	ENE7	E5	ENE4	ENE3	N3	NNW5	NNW6	N7	NNE4.2	N16
13-Mar	NNW6	NW2	N8	NNW4	NNW6	NW5	NNW7	N7	N9	NNW9	N13	N14	NNE17	N19	N18	N20	N21	N22	N20	N21	N22	N20	N21	N21	N13.6	N22
14-Mar	N22	N22	N21	N22	N19	N19	N15	N16	N17	N21	N23	N22	N22	N23	N23	N20	N20	N17	N13	N11	N10	NNW10	NNW8	NW5	N17.3	N23
15-Mar	NW6	NW7	NNW7	NW5	NW4	W3	NW3	NNW5	NNW3	NNW3	SSW1	SE6	ESE9	ESE12	ESE12	ESE11	ESE10	ENE6	NE8	NNE12	NNE12	N13	N12	N10	NNE3.5	N13
16-Mar	N10	NNW9	NNW8	NNW8	NNW5	NNW5	N2	W2	S3	ESE6	ESE8	ENE5	NE6	E6	ESE7	SE10	ESE9	SSE12	SE11	ESE11	ESE9	SE14	SSE13	SSE10	ESE3.8	SE14
17-Mar	SSE8	SSE3	SSE6	SW2	NW3	ESE2	ESE4	SE4	N7	N11	NNE14	NNE17	NNE17	NNE16	NNE16	NNE15	NE12	NNE11	NE10	NNE7	NNE2	NNE1	SSW5	WSW3	NNE5.5	NNE17
18-Mar	NNW3	NNE6	N8	N11	NNW7	NNW6	NNW4	WNW3	UO	ESE8	ESE11	ESE12	ESE16	ESE15	ESE13	ESE11	ESE7	E6	ESE6	N9	N16	N14	N14	N15	NE4.7	ESE16
19-Mar	N10	NNW6	NNW3	WNW4	NNW4	WSW2	W1	S3	SSE4	SE10	SE11	SE13	SE14	SE13	ESE9	NE9	N17	N19	N21	NNE22	NNE21	N21	N23	N19	NNE6.7	N23
20-Mar	N16	N16	N18	N16	N15	N17	N18	N17	N17	N15	NNE14	NNE13	N11	N16	N15	NNE18	NNE18	N16	N14	N14	N12	N13	N9	NNW5	N14.5	NNE18
21-Mar	S5	S9	S7	SSE8	SSE7	S6	SW5	SSW7	SSW9	SSW12	S10	SSW10	SSW10	SSW11	SSW11	SSW11	S10	SSW9	SSE4	SE8	SE11	SE12	SSE9	SSE9	S8.1	SSW12
22-Mar	SSE8	S7	S9	S7	S8	SSE11	SSE11	SSE14	SSE18	SSE17	SE14	SE13	SE13	ESE11	SE13	ENE6	NNE9	SE5	NW5	N9	N12	NNE9	NNE6	NE8	SE5.7	SSE18
23-Mar	NNE9	N7	N7	NW5	NNW5	N5	NW3	NNE2	SE4	ESE7	ESE9	ESE10	ESE8	ESE10	ESE10	WSW4	ENE5	ENE6	NE8	NE8	ENE7	N3	NNW5	NNW4	ENE3.6	ESE10
24-Mar	N5	N3	N5	NNW4	NNW5	N2	ESE2	S4	S6	S12	S12	S10	SE11	SSE12	SE8	S7	WSW9	NW11	NNW9	NW8	WNW5	WSW5	W6	SW8	SSW2.2	S12
25-Mar	S6	SW10	SSW10	SSE4	ESE6	ESE3	NW1	SSW2	W2	SE3	ESE9	SE12	ESE7	W19	NW24	NW21	NNE29	NNE26	NNE25	NNE26	NNE27	NNE23	N24	N25	N7.6	NNE29
26-Mar	N22	N19	N18	N18	N13	NNE10	N10	N13	NNE16	NNE13	NNE11	NE9	ENE8	NE7	NE7	NE9	NNE10	NE11	NE12	NE12	NE12	NNE12	NNE12	NNE13	NNE11.8	N22
27-Mar	NNE14	NNE16	NNE13	NNE14	NNE15	NNE14	NNE14	N15	NNE19	NNE19	NNE21	NNE22	NNE22	NNE22	NNE22	NNE22	NNE21	NNE21	NNE19	NNE19	NNE19	NNE18	N14	N11	NNE17.5	NNE22
28-Mar	NNW9	N12	N12	N7	NNW6	NW7	NW7	NNW7	NNW9	N12	N12	NNE7	NNE7	NNE9	NNE9	NNE6	N9	NNE12	NNE13	NNE16	NNE14	N11	NNW10	NNW11	N9.3	NNE16
29-Mar	NNW13	NNW12	N9	N6	NNW6	NNW8	NNW6	NNW5	NW4	W3	SE3	ESE7	ESE9	ESE11	ESE11	SE15	SE11	E5	NNE13	NNE18	N15	N12	NNW10	N11	NNE4.8	NNE18
30-Mar	N12	N12	N10	NNW6	NNW7	NNW7	NNW6	NNW4	WNW3	W2	N5	NE4	ENE5	NE8	ENE7	ENE5	NNE6	N9	NNE9	NNE13	NNE15	N13	N13	N10	N7.1	NNE15
31-Mar	NE4	ESE10	ESE10	ESE10	ESE8	ESE6	SE7	SSE6	SSE10	SE10	ESE9	SE12	SSE14	SSE16	SSE15	SSE15	SSE16	SSE14	SE10	SE11	SE13	SE12	SE14	SE12	SE10.5	SSE16
	N7.6	N6.6	N6.4	N5.7	N5.7	N5.1	N4.4	N3.3	NNE3.2	NE3.2	ENE3.9	ENE5.0	ENE6.1	ENE5.5	ENE5.5	NE6.0	NE7.5	NNE7.8	NNE9.1	NNE10.3	NNE10.8	N9.2	N8.6	N8.4	Diurnal Average	
	NNE29	N22	N21	N22	NNE23	N25	N20	N17	NNE19	N21	N23	NNE22	NNE24	N24	N26	N25	NNE29	NNE26	NNE25	NNE26	NNE27	NNE25	N27	NNE29	Diurnal Maximum	

UO - Unstable Operation

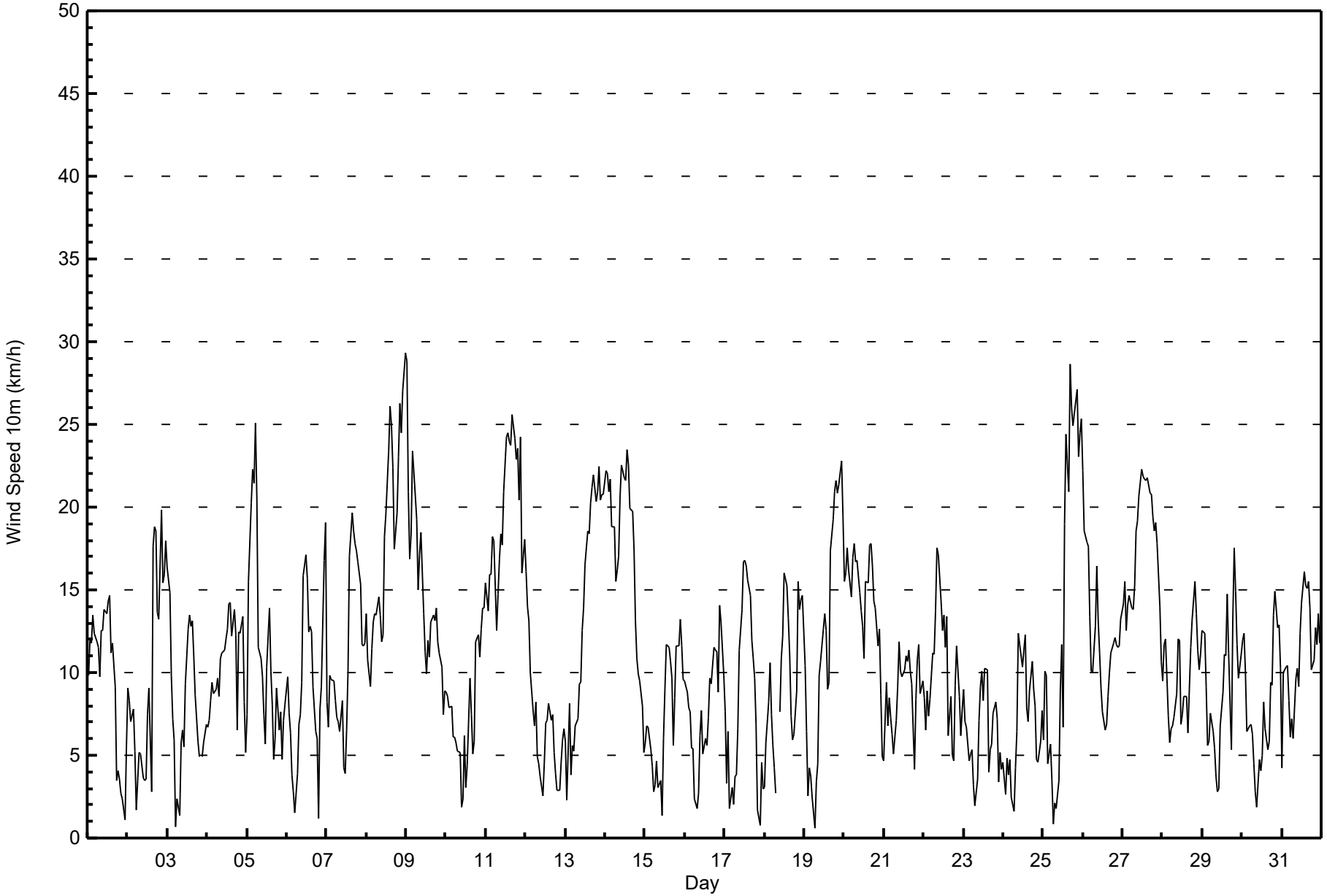
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Fort Hills - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	132	17.79	17.79
6 - 11	293	39.49	57.28
12 - 19	239	32.21	89.49
20 - 28	75	10.11	99.60
29 - 38	3	0.40	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 742

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Fort Hills - March 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	14	3	3	7	5	8	8	7	6	6	3	5	10	5	17	25	132
6 - 11	48	39	16	8	5	49	35	17	14	12	2	2	2	0	8	36	293
12 - 19	96	68	4	0	0	11	30	17	5	3	2	0	1	0	0	2	239
20 - 28	48	25	0	0	0	0	0	0	0	0	0	0	0	0	2	0	75
29 - 38	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	206	138	23	15	10	68	73	41	25	21	7	7	13	5	27	63	742

Total Number of Valid Hours: 742

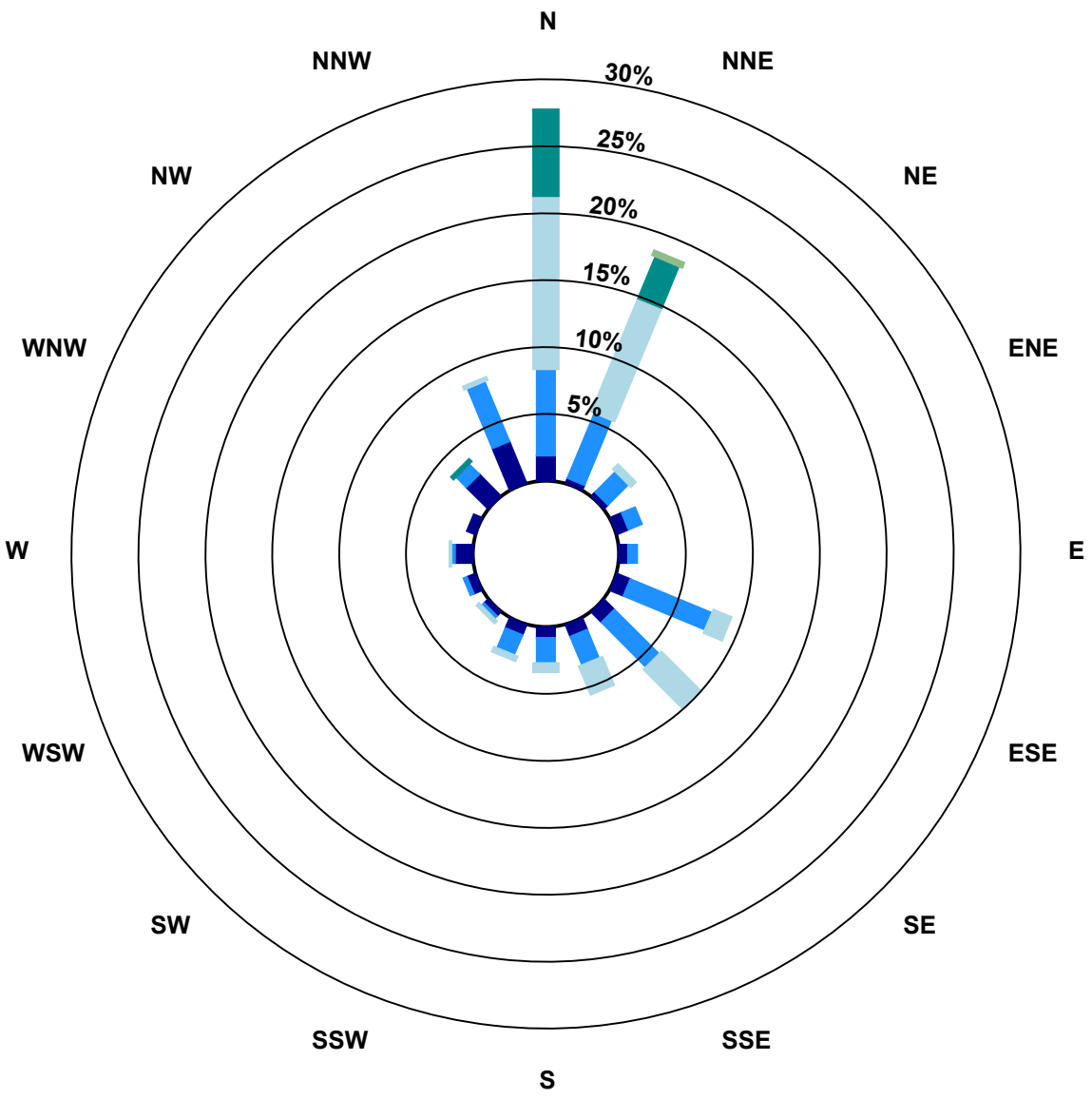
Total Number of Hours: 744

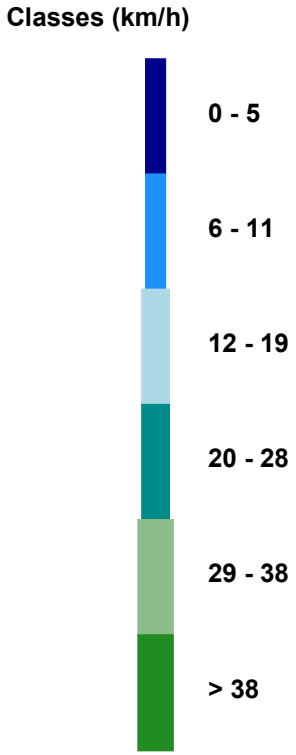
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 10m (WS10) - km/h

Fort Hills





Total Number of Valid Hours: 742

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

Maximum Value: 8 km/h on Mar 25 14:00

Minimum Value: 1 km/h on Mar 3 22:00

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

Hours in Service:	744
Hours of Data:	742
Hours of Missing Data:	2
Hours of Calibration:	0
Percent Operational Time:	99.7

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

UO - Unstable Operation

Direction of Maximum Speed: 15 deg on Mar 9 00:00
Direction of Maximum Daily Speed Average: 2.3 deg on Mar 11

Direction of Minimum Speed: 276 deg on Mar 19 07:00

Direction of Minimum Daily Speed Average: 2.2 deg on Mar 24

Monthly Average Direction: 24.6 deg

Hours in Service:	744
Hours of Data:	742
Hours of Missing Data:	2
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	137	141	139	144	145	138	146	155	141	147	135	129	128	127	126	119	115	1	2	340	342	265	207	137	134.5
2-Mar	134	134	116	131	116	113	331	338	324	274	249	157	114	114	132	16	20	20	16	6	12	8	19	21	32.4
3-Mar	12	6	18	25	17	215	267	317	212	199	192	126	123	124	122	123	114	119	135	171	UO	159	133	129	107.9
4-Mar	139	139	133	139	149	135	136	138	129	148	172	181	185	189	199	207	217	225	248	354	7	358	1	352	168.3
5-Mar	1	1	2	6	9	5	356	11	24	38	57	123	114	119	109	87	91	25	358	0	3	349	343	337	20.1
6-Mar	358	360	332	322	317	146	186	169	162	148	157	149	145	156	126	126	120	123	90	206	262	1	4	4	116.9
7-Mar	5	22	20	18	13	15	12	350	349	354	133	71	50	18	13	16	20	18	19	17	8	0	357	4	14.2
8-Mar	6	7	3	357	358	354	350	355	356	358	358	5	4	6	9	3	10	13	20	24	14	15	10	15	7.3
9-Mar	17	21	27	24	22	18	24	32	23	20	18	26	36	29	23	33	33	28	14	15	13	13	16	16	22.4
10-Mar	7	341	330	340	322	329	319	317	333	337	132	120	46	114	141	126	99	35	15	15	14	1	0	355	7.9
11-Mar	357	359	358	357	359	1	12	9	0	3	3	5	13	2	6	359	2	360	359	1	1	1	5	4	2.3
12-Mar	2	4	2	1	14	23	1	279	302	359	86	120	129	121	120	94	69	92	78	76	3	331	336	353	25.9
13-Mar	330	306	349	341	332	326	348	352	350	345	355	359	12	8	4	9	1	6	2	3	8	5	7	9	0.8
14-Mar	1	1	358	358	359	1	354	351	354	4	7	6	9	8	2	4	4	5	0	7	349	345	338	326	0.3
15-Mar	325	321	328	306	311	280	311	334	342	341	193	124	111	113	112	113	123	72	41	29	19	9	358	352	32.1
16-Mar	351	345	345	339	341	348	349	279	175	121	115	75	35	82	108	125	123	153	135	120	114	138	148	153	107.2
17-Mar	156	165	149	236	318	122	118	127	0	360	14	19	21	20	19	25	35	33	39	29	25	20	200	248	28.4
18-Mar	345	17	2	360	342	346	339	299	UO	118	118	116	116	120	117	117	107	92	122	360	2	353	356	355	51.8
19-Mar	352	347	328	299	328	242	276	182	151	132	131	127	131	126	116	37	9	10	9	16	12	3	2	2	26.5
20-Mar	359	4	4	5	8	359	5	6	2	0	14	15	8	8	8	12	13	11	3	7	2	3	351	345	5.5
21-Mar	171	184	181	155	162	171	221	193	200	205	181	198	208	206	205	199	191	199	164	136	134	144	160	163	181.6
22-Mar	154	185	182	177	170	164	157	164	166	150	146	140	136	123	131	72	16	141	312	6	10	14	15	43	137.2
23-Mar	21	8	4	325	339	359	315	20	132	120	113	114	108	111	116	241	61	60	50	50	58	8	341	346	58.3
24-Mar	360	350	352	347	339	5	105	175	183	176	171	172	139	148	144	184	243	314	327	306	290	241	263	227	210.0
25-Mar	183	214	210	159	104	105	320	213	269	144	120	124	109	274	305	307	17	21	12	12	14	13	7	3	3.6
26-Mar	2	0	11	7	355	15	9	8	23	29	26	41	59	54	36	34	30	45	35	37	38	33	20	19	21.6
27-Mar	16	14	19	17	18	18	15	9	20	19	23	14	19	28	23	29	31	31	28	19	18	16	11	3	20.0
28-Mar	336	349	2	8	334	323	326	345	348	2	2	15	31	18	17	25	8	15	14	20	18	9	344	347	2.4
29-Mar	348	347	356	349	336	343	339	329	316	260	133	119	115	118	113	129	128	99	26	17	11	355	346	350	24.7
30-Mar	356	356	350	338	340	340	347	336	286	260	11	53	76	39	61	61	13	7	19	25	16	360	358	354	6.7
31-Mar	48	115	118	120	122	115	133	153	152	131	120	142	149	163	158	158	156	153	138	128	127	128	132	135	138.0
	8.1	6.9	9.8	10.1	7.9	10.3	5.2	4.2	15.6	44.4	69.4	78.2	78.2	72.1	60.8	46.1	35.9	27.5	20.6	18.6	15.0	10.1	6.0	7.1	
	Diurnal Average																								

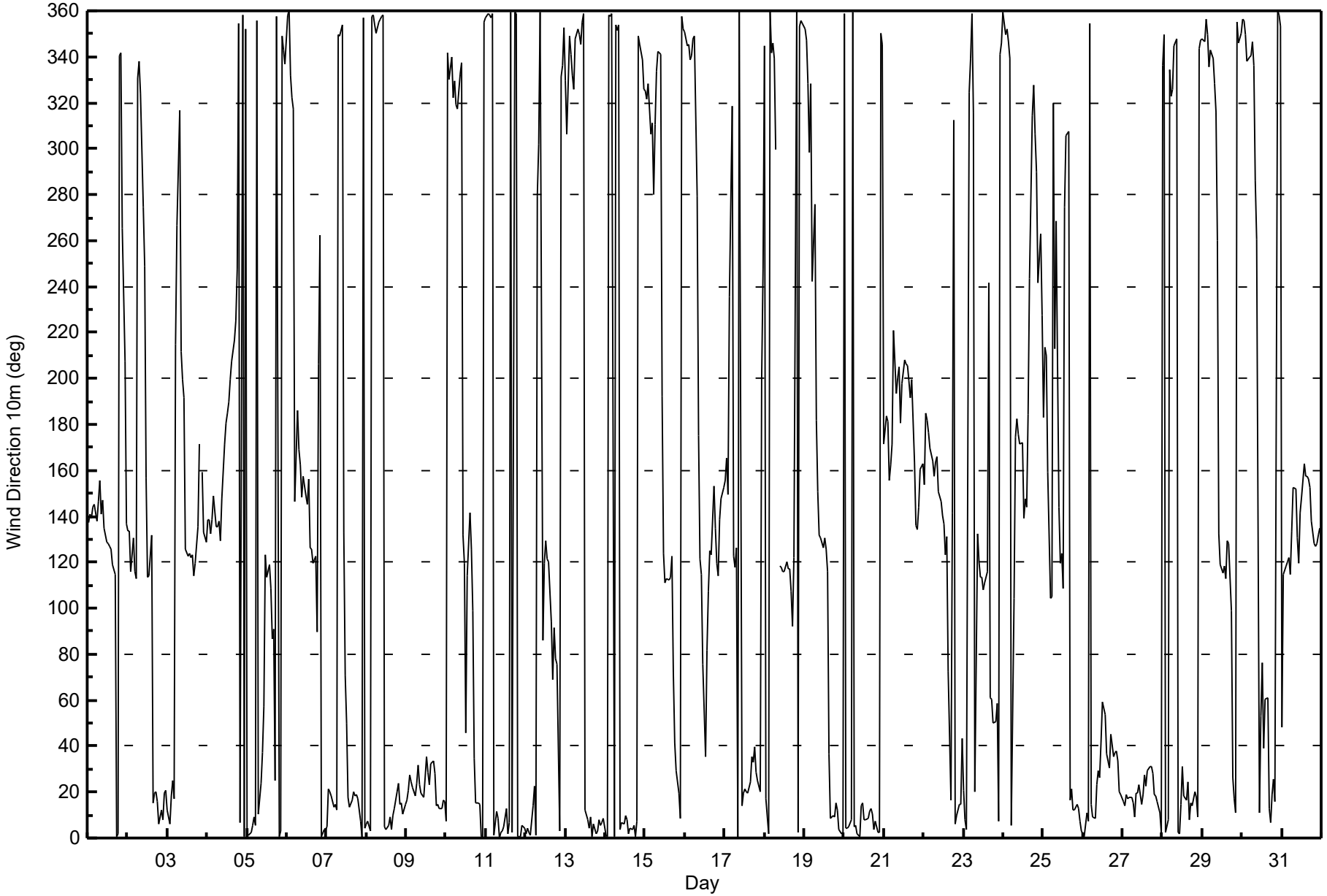
UO - Unstable Operation
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Fort Hills - March 2025



Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 94 deg on Mar 25 07:00

Minimum Value: 4 deg on Mar 22 03:00

Percentiles: P_1 = 6 P_{10} = 9 Q_1 = 11 Median = 14 Q_3 = 20 P_{90} = 36 P_{99} = 79

Hours in Service:	744
Hours of Data:	742
Hours of Missing Data:	2
Hours of Calibration:	0
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	5	5	5	10	7	6	6	13	7	6	8	8	7	8	8	7	10	51	18	14	34	36	75	8	75
2-Mar	8	7	13	19	39	79	42	21	22	25	30	44	18	12	76	12	10	10	14	12	10	12	9	10	79
3-Mar	8	13	17	14	14	91	39	63	14	12	19	11	8	7	7	9	12	8	12	19	UO	21	12	10	91
4-Mar	7	10	11	10	23	12	6	9	8	19	10	11	9	8	10	15	9	8	16	40	11	12	11	27	40
5-Mar	30	14	13	12	11	14	15	15	10	15	21	29	18	14	23	28	37	22	11	9	7	21	15	12	37
6-Mar	11	9	13	17	31	13	19	10	11	10	12	10	12	13	9	11	12	43	18	83	19	28	12	10	83
7-Mar	16	13	15	12	12	12	18	12	19	14	48	46	46	54	12	11	10	9	10	9	12	14	13	12	54
8-Mar	11	15	14	12	11	12	13	13	13	13	12	12	12	13	12	15	11	13	9	10	10	10	12	10	15
9-Mar	9	10	10	10	9	10	10	12	12	11	14	16	17	17	18	12	13	14	9	10	10	8	14	11	18
10-Mar	11	17	19	14	14	15	11	10	15	76	56	21	60	61	15	21	23	21	8	7	13	11	11	14	76
11-Mar	13	13	14	16	16	15	12	13	14	15	15	14	11	18	17	19	19	19	20	20	18	20	17	17	20
12-Mar	20	20	19	18	18	13	35	13	27	31	64	29	19	20	21	30	20	31	23	27	21	16	9	15	64
13-Mar	27	61	14	26	25	24	12	21	13	15	16	16	15	13	15	14	18	16	20	20	16	19	15	13	61
14-Mar	19	20	21	20	17	17	17	17	20	16	18	16	17	18	21	21	20	17	19	17	17	16	10	21	21
15-Mar	11	7	7	18	15	56	9	10	19	25	76	25	19	14	16	15	9	23	10	11	14	10	14	16	76
16-Mar	14	13	18	14	14	19	47	57	77	19	12	34	23	28	24	14	14	9	15	9	14	8	6	7	77
17-Mar	7	62	9	53	22	24	8	10	52	11	11	11	14	11	13	14	12	10	11	9	83	77	48	36	83
18-Mar	79	10	11	16	18	13	23	39	UO	11	9	10	12	10	11	10	19	19	19	47	12	13	14	14	79
19-Mar	13	16	28	25	31	62	85	34	17	11	11	13	10	12	24	23	11	11	12	10	11	14	14	14	85
20-Mar	14	12	12	11	11	13	11	11	15	15	16	16	20	16	17	13	11	12	17	14	17	17	16	18	20
21-Mar	70	11	12	13	8	16	14	16	20	14	16	21	15	13	16	15	16	10	18	7	5	6	6	8	70
22-Mar	6	9	4	6	5	6	8	10	7	10	8	9	8	10	8	57	45	50	49	12	15	29	20	10	57
23-Mar	12	10	11	17	16	12	36	48	27	10	11	11	23	16	17	64	44	21	7	6	35	58	16	19	64
24-Mar	16	32	13	13	18	48	80	30	12	10	11	14	22	13	14	42	62	28	11	17	32	29	27	21	80
25-Mar	27	6	12	22	33	68	94	85	57	43	12	11	28	26	16	30	12	10	13	12	11	11	13	14	94
26-Mar	16	14	12	14	16	20	19	18	14	16	22	25	31	40	33	19	17	13	14	14	10	10	13	11	40
27-Mar	10	8	10	10	9	9	12	13	11	13	14	14	16	15	15	12	12	12	10	10	8	8	10	12	16
28-Mar	11	12	13	20	29	14	16	14	17	16	18	63	39	36	31	44	24	14	11	8	8	14	13	12	63
29-Mar	16	15	23	19	13	14	15	13	31	56	63	24	20	20	24	13	17	34	13	8	11	17	11	12	63
30-Mar	14	12	14	17	14	22	11	19	45	67	37	52	41	22	24	41	33	13	9	10	13	16	14	13	67
31-Mar	59	13	10	10	10	13	10	15	12	17	16	19	14	13	16	11	9	8	18	6	8	9	9	7	59
	79	62	28	53	39	91	94	85	77	76	76	63	60	61	76	64	62	51	49	83	83	77	75	36	
	Diurnal Maximum																								

UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS25
WASKŌW OHCI PIMÂTISIWIN
MARCH 2025

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

April 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - WASKŌW OHCI PIMÂTISIWIN (AMS25)
MARCH 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2(ppb) Average	709	34	35	99.87	26.3	0	5.5	0
H2S(ppb) Average	706	37	38	99.87	3.8	0	1.1	0
Temperature 2 m (C) Average	744	0	0	100	10.6	0	1.3	0
Relative Humidity (%) Average	744	0	0	100	95.4	-	79.9	-
Wind Speed 10 m (km/h) Average	719	0	25	96.64	18	0	10	0
Wind Direction 10 m (deg) Average	719	0	25	96.64	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - WASKŌW OHCI PIMÂTISIWIN (AMS25)
MARCH 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	709	1.45	3.6	-	0	0	0.1	0.2	0.7	3.9	26.3
H2S (ppb) Average	706	0.34	0.4	-	0	0.1	0.1	0.2	0.4	0.7	3.8
Temperature 2 m (C) Average	744	-8.12	7.5	-	-26.2	-18.4	-13.9	-7.7	-2.5	1.7	10.6
Relative Humidity (%) Average	744	66.6	14.7	-	26.8	45.6	56	68.4	78.1	85	95.4
Wind Speed 10 m (km/h) Average	719	5.3	3	-	0	2	3	5	7	10	18
Wind Direction 10 m (deg) Average	719	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - WASKŌW OHCI PIMÂTISIWIN (AMS25)

MARCH 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL GASEOUS ANALYZERS	25 Mar 2025 07:00	25 Mar 2025 07:00	1	Maintenance - sample manifold cleaned
Wind Speed, Wind Direction	01 Mar 2025 21:00	01 Mar 2025 21:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	03 Mar 2025 21:00	03 Mar 2025 22:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction	04 Mar 2025 00:00	04 Mar 2025 00:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	06 Mar 2025 07:00	06 Mar 2025 09:00	3	Flat line in sensor output signal
Wind Speed, Wind Direction	10 Mar 2025 07:00	10 Mar 2025 07:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	15 Mar 2025 06:00	15 Mar 2025 06:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	16 Mar 2025 04:00	16 Mar 2025 04:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	16 Mar 2025 07:00	16 Mar 2025 07:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	17 Mar 2025 06:00	17 Mar 2025 08:00	3	Flat line in sensor output signal
Wind Speed, Wind Direction	17 Mar 2025 23:00	17 Mar 2025 23:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	18 Mar 2025 01:00	18 Mar 2025 01:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	18 Mar 2025 20:00	18 Mar 2025 20:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	19 Mar 2025 06:00	19 Mar 2025 06:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	22 Mar 2025 00:00	22 Mar 2025 00:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	23 Mar 2025 01:00	23 Mar 2025 01:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	23 Mar 2025 23:00	23 Mar 2025 23:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	24 Mar 2025 04:00	24 Mar 2025 04:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	24 Mar 2025 08:00	24 Mar 2025 08:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	28 Mar 2025 07:00	28 Mar 2025 07:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	29 Mar 2025 05:00	29 Mar 2025 05:00	1	Flat line in sensor output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Waskow ohci Pimatisiwin - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 26.3 ppb on Mar 1 15:00 Maximum Daily Average: 5.5 ppb on Mar 19

Minimum Value: 0.0 ppb on Mar 5 03:00 Minimum Daily Average: 0.0 ppb on Mar 26
Maximum Diurnal Average: 4.8 ppb at hour 15 Minimum Diurnal Average: 0.1 ppb at hour 4
Monthly Average: 1.45 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.2 Q_3 = 0.7 P_{90} = 3.9 P_{99} = 20.1

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	34
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.2	0.1	0.2	0.1	0.1	Z	0.1	0.2	0.1	0.4	1.3	4.4	6.1	16.0	26.3	15.7	9.0	4.7	2.1	0.8	0.6	0.5	0.4	0.5	3.9	26.3
2-Mar	Z	0.6	0.6	0.5	0.4	0.3	0.3	0.5	1.0	1.3	1.7	1.5	1.1	0.7	0.3	0.3	0.3	0.2	0.1	0.2	0.1	0.2	0.0	0.1	0.5	1.7
3-Mar	0.1	Z	0.1	0.1	0.1	0.2	0.1	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.2	2.2	2.2	1.9	2.4	1.1	0.5	0.3	0.2	0.2	0.6	2.4
4-Mar	0.4	0.5	Z	0.5	0.4	0.4	0.3	0.2	0.3	0.3	0.2	0.4	2.3	3.9	3.4	1.0	0.1	0.2	0.0	0.0	0.5	0.5	0.3	0.1	0.7	3.9
5-Mar	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	0.2	4.6	19.5	12.4	9.6	6.3	2.5	0.6	0.4	0.3	0.2	2.5	19.5
6-Mar	0.1	0.0	0.0	0.0	Z	0.0	0.0	0.2	0.2	0.3	0.6	8.9	22.5	16.2	15.9	9.9	6.3	4.6	1.6	1.0	0.9	0.7	0.9	4.3	4.1	22.5
7-Mar	3.3	1.2	0.6	0.4	0.4	Z	0.5	0.7	0.8	0.8	1.0	3.6	11.0	8.1	5.4	2.7	0.7	0.4	0.3	0.4	0.3	0.2	0.2	0.2	1.9	11.0
8-Mar	Z	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.2
9-Mar	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
10-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	14.0	12.5	12.8	14.4	9.7	13.4	9.5	6.0	4.6	2.9	2.9	2.2	2.5	4.8	14.4
11-Mar	2.3	2.0	1.5	Z	0.8	0.6	0.6	0.5	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.3	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.6	2.3
12-Mar	0.1	0.0	0.1	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.3	2.7	1.2	1.4	1.1	0.9	0.5	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.4	2.7
13-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.2	0.2	0.2	0.8	0.4	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.8
14-Mar	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.2
15-Mar	0.1	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.0	0.8	0.8	0.7	0.6	1.1	0.9	1.5	1.0	0.2	0.1	0.0	0.0	0.4	1.5
16-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.8	7.8	16.5	6.4	4.6	4.1	3.5	3.9	1.3	0.5	0.4	0.3	0.2	0.1	0.2	2.2	16.5
17-Mar	0.2	0.2	0.1	Z	0.1	0.0	0.1	0.1	0.4	0.3	0.8	1.5	1.3	0.7	0.5	0.5	0.5	0.5	0.3	0.2	0.2	0.1	0.1	0.1	0.4	1.5
18-Mar	0.1	0.1	0.1	0.1	Z	0.2	0.2	0.3	0.2	1.9	2.9	0.3	0.1	0.3	0.6	1.6	2.6	4.9	3.6	2.2	1.4	0.3	0.0	0.0	1.0	4.9
19-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	2.6	7.4	18.3	23.8	21.0	22.1	22.9	5.1	2.6	1.0	0.5	0.3	0.0	0.0	5.5	23.8
20-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2
21-Mar	0.2	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.4	3.0	8.6	9.1	8.0	8.1	8.9	7.0	6.4	2.6	0.6	0.5	0.4	0.3	0.2	0.3	2.9	9.1
22-Mar	0.3	0.3	Z	0.5	0.3	0.3	0.3	0.3	0.7	1.8	2.0	3.4	16.0	16.3	5.3	8.0	6.6	5.9	1.9	0.4	0.3	0.9	0.7	0.5	3.2	16.3
23-Mar	0.4	0.3	0.4	Z	0.2	0.2	0.1	0.1	0.2	0.5	0.4	0.3	1.4	12.2	24.9	9.6	2.2	2.5	1.8	1.5	0.7	0.4	0.3	0.2	2.6	24.9
24-Mar	0.2	0.1	0.0	0.1	Z	0.2	0.2	0.2	0.2	0.4	0.9	0.6	1.2	3.3	0.8	0.6	0.2	0.1	0.6	0.2	0.0	0.0	0.0	0.0	0.4	3.3
25-Mar	0.0	0.0	0.0	0.0	0.0	Z	M	C	C	C	0.0	0.0	2.2	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	3.1
26-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1
28-Mar	0.2	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.4	0.7	2.7	2.4	1.0	0.2	0.2	0.1	0.1	0.1	0.1	0.5	2.7
29-Mar	0.1	0.1	0.0	Z	0.1	0.1	0.0	0.0	0.1	0.1	0.3	0.6	1.6	2.1	1.8	4.6	16.1	20.2	5.5	3.9	1.0	0.3	0.3	0.2	2.6	20.2
30-Mar	0.2	0.1	0.1	0.2	Z	0.2	0.2	0.1	0.1	0.2	0.3	0.6	1.2	4.5	5.5	5.8	3.7	3.1	1.8	0.8	0.4	0.3	0.3	0.2	1.3	5.8
31-Mar	0.3	0.4	0.4	0.4	0.3	Z	0.3	0.3	0.9	1.4	4.7	0.8	1.7	1.5	2.1	1.8	2.2	1.4	0.2	0.1	0.1	0.0	0.0	0.0	0.9	4.7
	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.5	1.4	2.5	3.8	4.6	4.8	4.2	3.8	2.6	1.3	0.8	0.4	0.3	0.2	0.3	Diurnal Average	
	3.3	2.0	1.5	0.5	0.8	0.6	0.6	0.7	1.0	3.0	8.6	16.5	22.5	23.8	26.3	22.1	22.9	20.2	6.3	4.6	2.9	2.9	2.2	4.3	Diurnal Maximum	

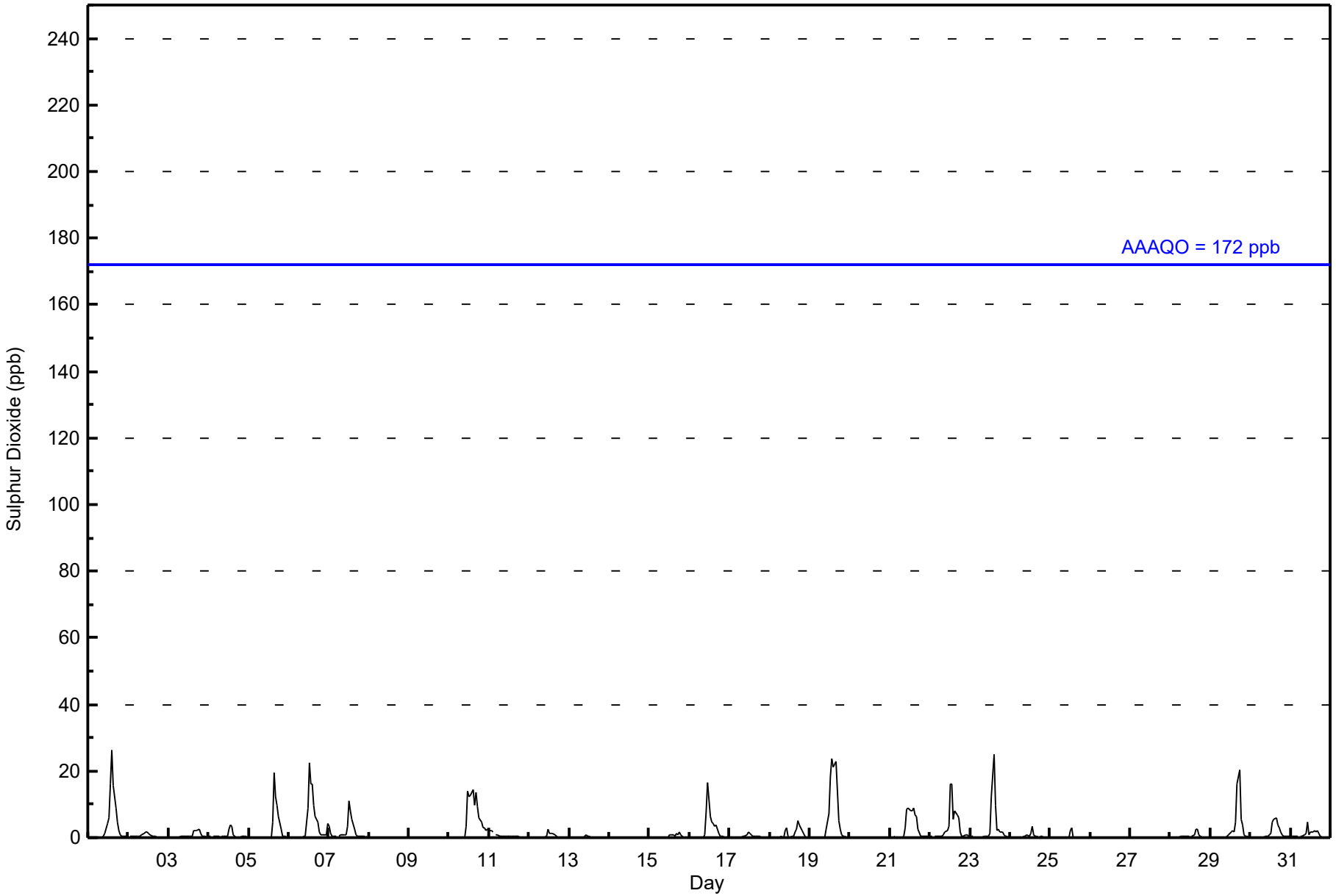
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Waskow ohci Pimatisiwin - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	683	96.33	96.33
11 - 20	19	2.68	99.01
21 - 60	7	0.99	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Waskow ohci Pimatisiwin - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	135	108	56	19	10	13	50	88	22	5	13	10	19	32	33	46	659
11 - 20	0	0	0	0	0	1	9	9	0	0	0	0	0	0	0	0	19
21 - 60	0	0	1	0	0	0	4	1	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	135	108	57	19	10	14	63	98	23	5	13	10	19	32	33	46	685

Total Number of Valid Hours: 685

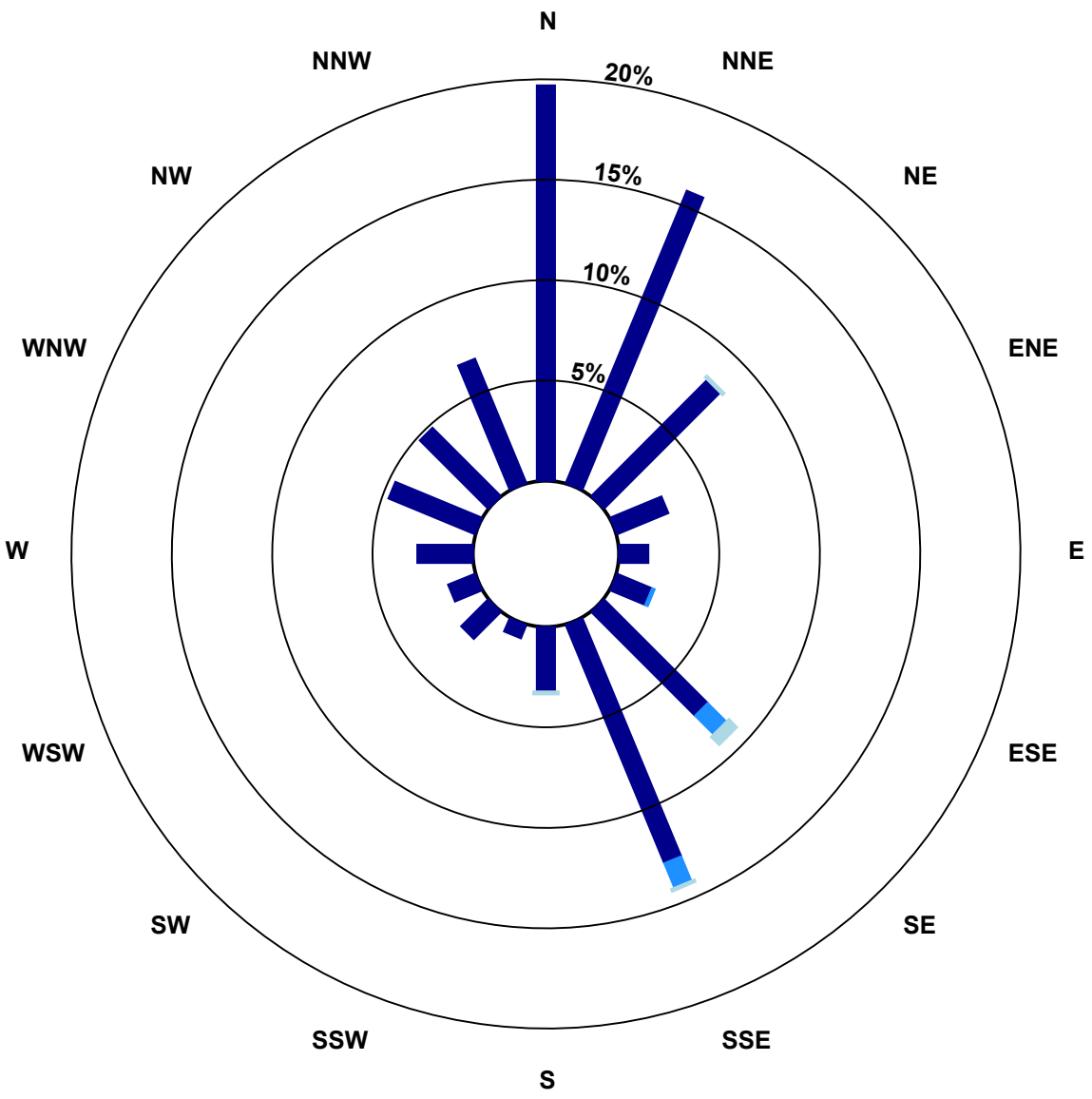
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Sulphur Dioxide (SO_2) - ppb

Waskow ohci Pimatisiwin



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

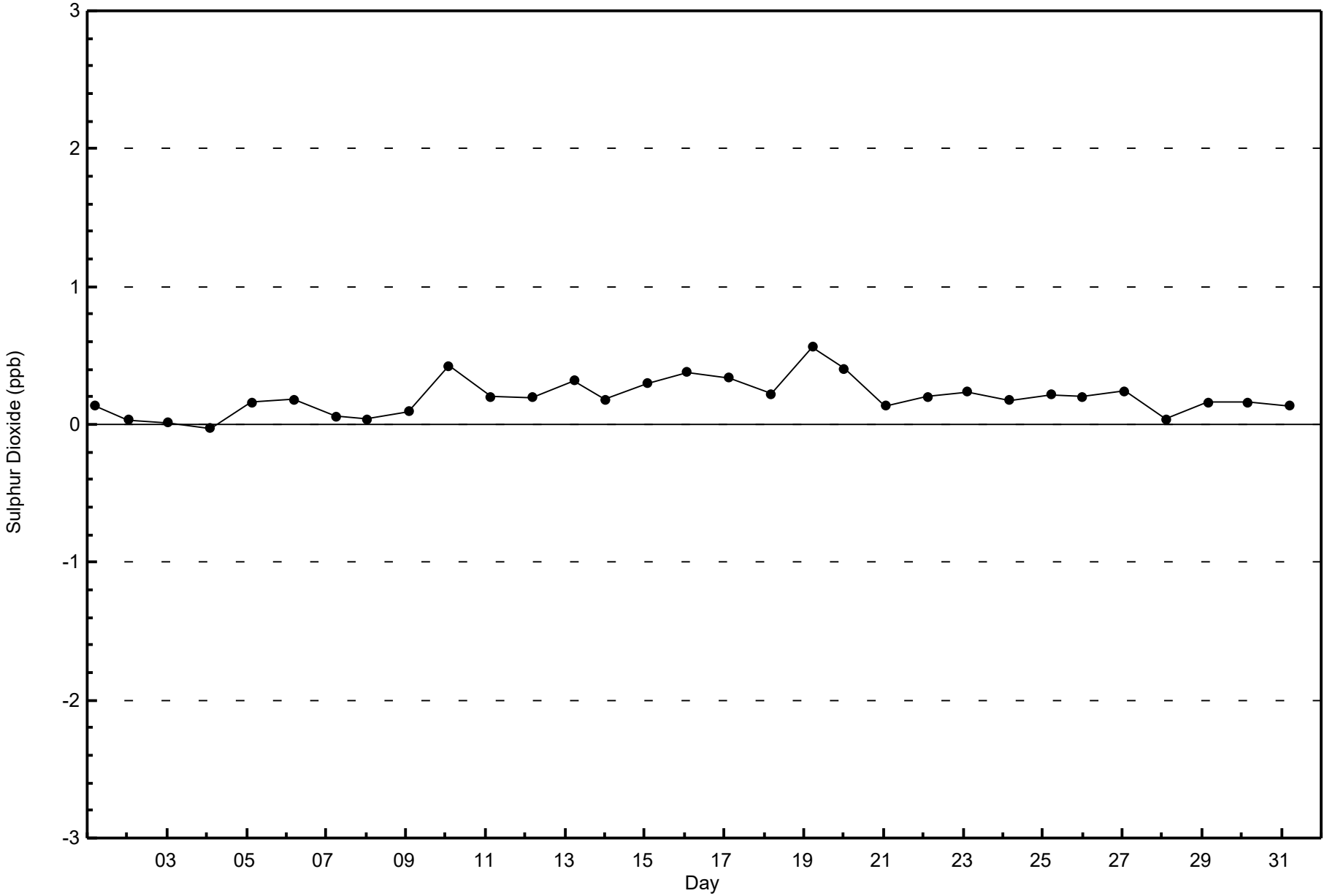
Total Number of Valid Hours: 685

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Waskow ohci Pimatisiwin - March 2025

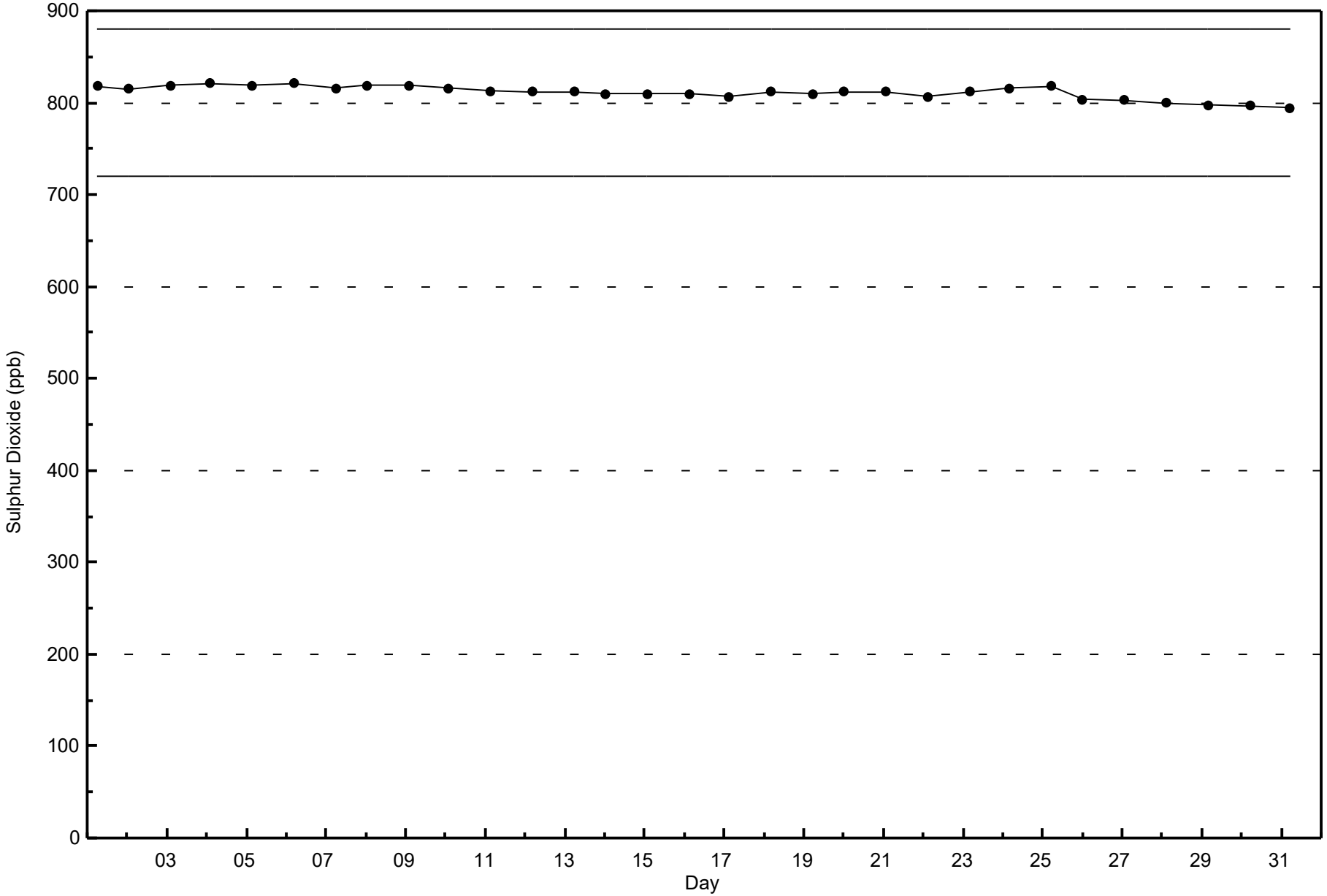


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Waskow ohci Pimatisiwin - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Waskow ohci Pimatisiwin - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.8 ppb on Mar 25 12:00 Maximum Daily Average: 1.1 ppb on Mar 4

Minimum Value: 0.0 ppb on Mar 31 22:00 Minimum Daily Average: 0.1 ppb on Mar 27
Maximum Diurnal Average: 0.7 ppb at hour 12 Minimum Diurnal Average: 0.2 ppb at hour 7
Monthly Average: 0.34 ppb Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.1 Median = 0.2 Q_3 = 0.4 P_{90} = 0.7 P_{99} = 2.4

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	37
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	Z	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	1.3	2.6	2.0	1.3	2.7	1.9	1.6	1.8	1.5	1.2	1.1	1.0	0.9	1.0	2.7
2-Mar	0.7	Z	0.9	0.8	0.8	0.7	0.7	0.9	1.4	1.9	1.9	1.2	0.7	0.3	0.1	0.2	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.6	1.9
3-Mar	0.2	0.2	Z	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	1.4	0.5	0.4	0.4	0.4	0.3	0.3	0.4	0.3	0.2	0.3	0.6	1.3	0.4	1.4
4-Mar	2.4	2.5	2.8	Z	1.9	1.5	1.1	1.3	2.3	1.5	1.1	1.5	1.6	0.8	0.8	0.5	0.1	0.1	0.1	0.1	0.3	0.3	0.2	0.2	1.1	2.8
5-Mar	0.2	0.2	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.4	0.4	0.4	0.6	0.5	0.4	0.6	0.6	0.4	0.4	0.3	0.6
6-Mar	0.3	0.2	0.2	0.2	0.2	Z	0.3	0.5	0.5	1.5	0.4	0.4	0.5	0.4	0.3	0.2	0.2	0.5	0.3	0.3	0.4	1.1	0.8	0.7	0.5	1.5
7-Mar	Z	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.7	0.5	0.6	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.7
8-Mar	0.2	Z	0.2	0.2	0.2	0.3	0.3	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3
9-Mar	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	0.2	0.2	0.1	0.2
10-Mar	0.2	0.2	0.1	Z	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.5	0.6	0.5	0.2	0.2	0.3	0.3	0.3	0.5	0.3	0.3	0.4	0.3	0.3	0.6
11-Mar	0.3	0.2	0.2	0.2	Z	0.2	0.1	0.2	0.2	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	0.0	0.1	0.2	0.4
12-Mar	0.1	0.0	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.1	0.3
13-Mar	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	1.1	0.5	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.7	0.6	0.3	0.3	0.3	1.1
14-Mar	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.7	0.5	0.5	0.2	0.3	0.3	0.3	0.2	1.6	3.0	1.3	0.6	0.1	0.1	0.5	3.0
15-Mar	0.1	0.2	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.2	1.3	0.5	0.4	0.3	0.2	0.3	0.2	0.3	0.2	0.2	0.4	0.4	0.9	1.6	0.4	1.6
16-Mar	0.6	0.5	0.3	Z	0.2	0.2	0.2	0.3	0.5	0.7	0.7	1.1	0.3	0.2	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.3	1.1
17-Mar	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.2	1.0	0.4	0.5	0.5	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	1.0
18-Mar	0.2	0.2	0.6	0.9	1.2	Z	0.4	0.5	0.4	0.5	0.4	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.2	0.2	0.4	0.4	0.2	0.1	0.4	1.2
19-Mar	Z	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.5	1.6	2.3	0.9	0.7	0.7	0.6	0.6	1.3	1.0	0.3	0.2	0.4	0.5	0.5	0.6	2.3
20-Mar	0.2	Z	1.0	1.2	1.1	0.5	0.4	0.5	0.9	0.7	0.7	0.2	0.1	0.2	0.0	0.0	0.1	0.1	0.1	0.3	0.4	0.2	0.2	0.2	0.4	1.2
21-Mar	0.2	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.6	0.5	0.2	0.6	0.4	0.2	0.3	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.6
22-Mar	0.1	0.1	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.7	0.5	0.2	0.4	0.4	0.6	0.2	0.1	0.2	0.5	0.4	0.3	0.3	0.7
23-Mar	0.3	0.3	0.2	0.2	Z	0.3	0.2	0.3	0.3	0.3	1.0	1.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.4	0.3	0.3	1.4
24-Mar	0.3	0.4	0.4	0.4	0.4	Z	C	C	C	C	C	C	1.5	0.6	0.7	3.0	0.4	0.1	0.2	0.1	0.1	0.1	0.1	0.1	--	3.0
25-Mar	Z	0.1	0.0	0.0	0.2	0.1	M	0.2	0.1	0.2	0.2	3.8	0.6	0.6	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	3.8
26-Mar	0.2	Z	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2
27-Mar	0.1	0.1	Z	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	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2
28-Mar	0.2	0.2	0.1	Z	0.2	0.2	0.2	0.2	0.4	0.5	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	0.2	0.5
29-Mar	0.2	0.1	0.1	0.1	Z	0.2	0.2	0.1	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.3
30-Mar	0.2	0.2	0.2	0.2	0.1	Z	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.4
31-Mar	Z	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.2	0.3	0.4	0.1	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.4
	0.3	0.3	0.3	0.3	0.4	0.3	0.2	0.3	0.4	0.4	0.5	0.7	0.5	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	Diurnal Average	
	2.4	2.5	2.8	1.2	1.9	1.5	1.1	1.3	2.3	1.9	1.9	3.8	2.6	2.0	1.3	3.0	1.9	1.6	1.8	3.0	1.3	1.1	1.0	1.6	Diurnal Maximum	

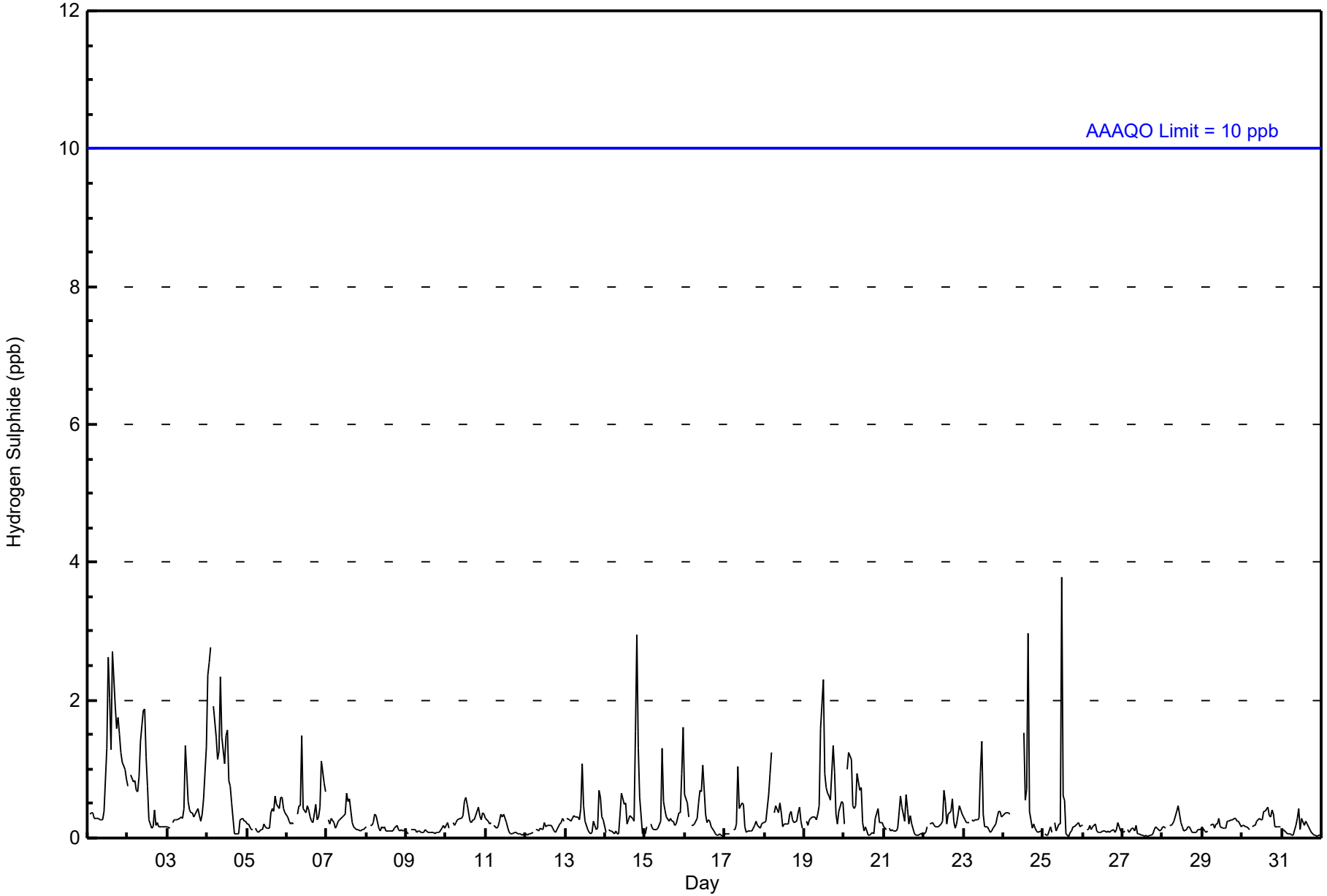
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Waskow ohci Pimatisiwin - March 2025



Hydrogen Sulphide (H_2S) - ppb

Waskow ohci Pimatisiwin - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	699	99.01	99.01
3 - 4	7	0.99	100.00
5 - 7	0	0.00	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Waskow ohci Pimatisiwin - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	134	108	58	19	10	17	59	92	21	5	13	11	17	32	35	46	677
3 - 4	1	0	0	0	0	0	2	4	0	0	0	0	0	0	0	0	7
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	135	108	58	19	10	17	61	96	21	5	13	11	17	32	35	46	684

Total Number of Valid Hours: 684

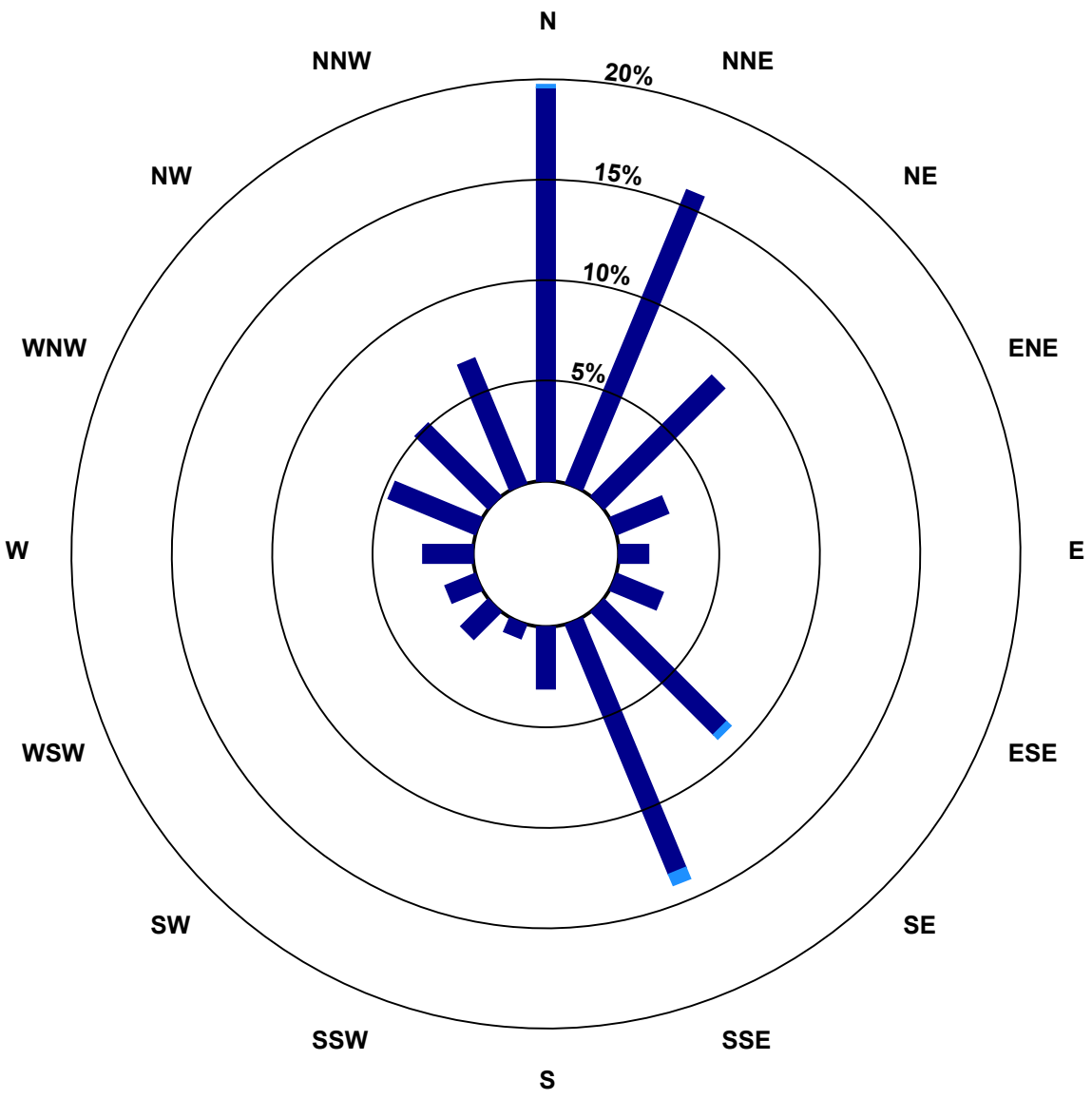
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Hydrogen Sulphide (H_2S) - ppb

Waskow ohci Pimatisiwin



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

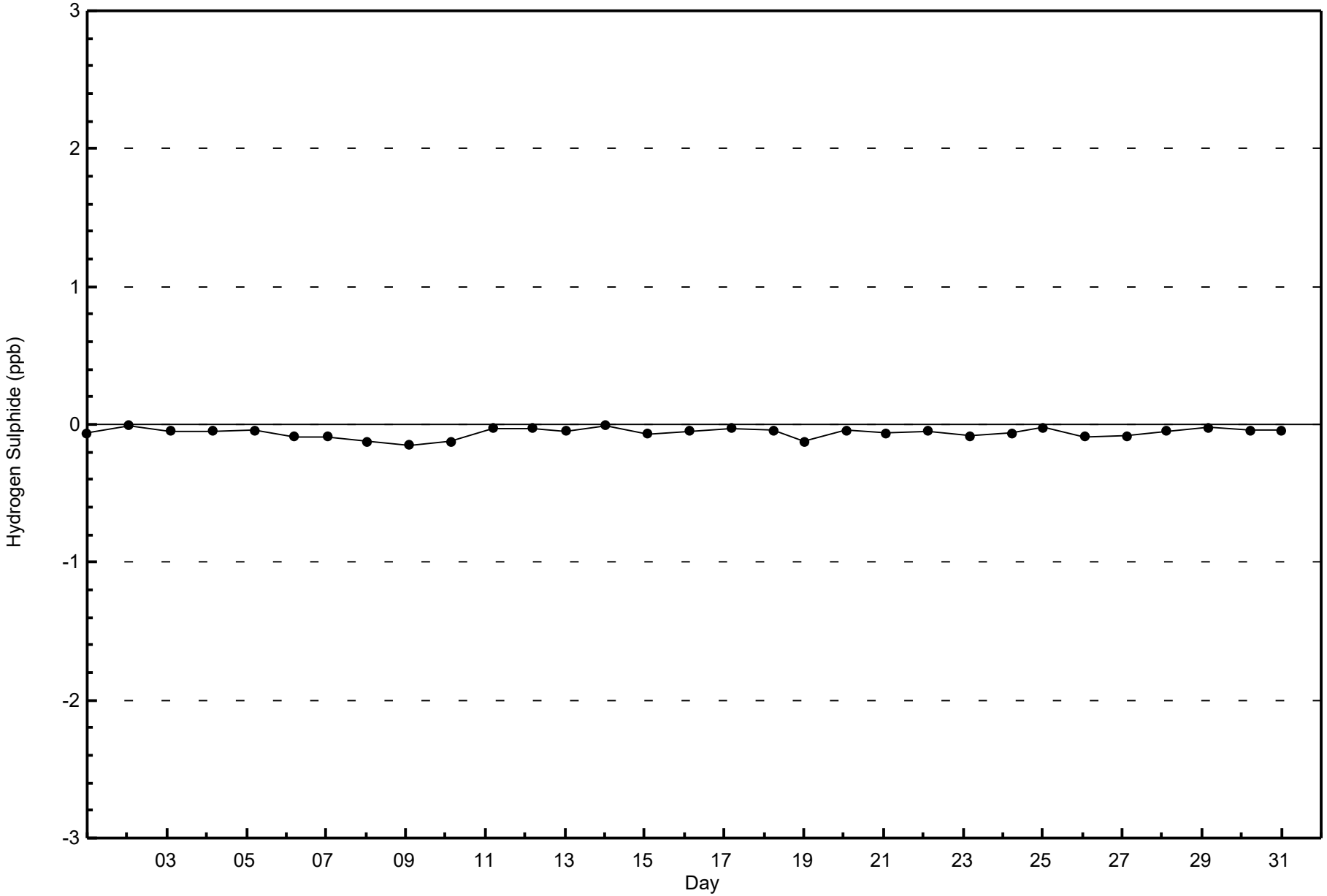
Total Number of Valid Hours: 684

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Waskow ohci Pimatisiwin - March 2025

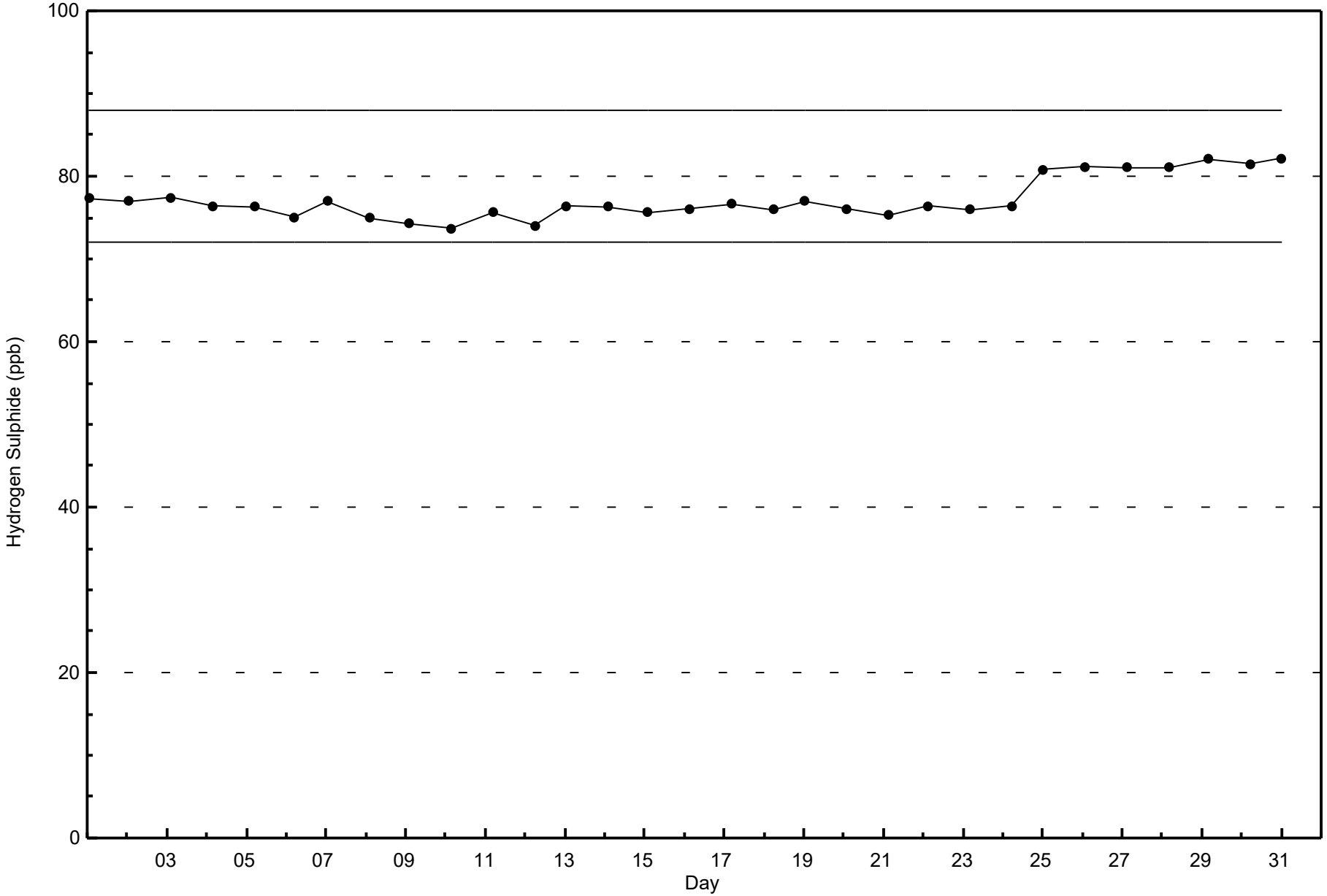


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Waskow ohci Pimatisiwin - March 2025





Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

Waskow ohci Pimatisiwin - March 2025

Maximum Value: 10.6 C on Mar 25 15:00

Maximum Daily Average: 1.3 C on Mar 23

Minimum Value: -26.2 C on Mar 13 07:00

Minimum Daily Average: -20.8 C on Mar 9

Maximum Diurnal Average: -2.5 C at hour 16

Minimum Diurnal Average: -13.3 C at hour 7

Monthly Average: -8.12 C

Percentiles: P_1 = -22.8 P_{10} = -18.4 Q_1 = -13.9 Median = -7.7 Q_3 = -2.5 P_{90} = 1.7 P_{99} = 7.1

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

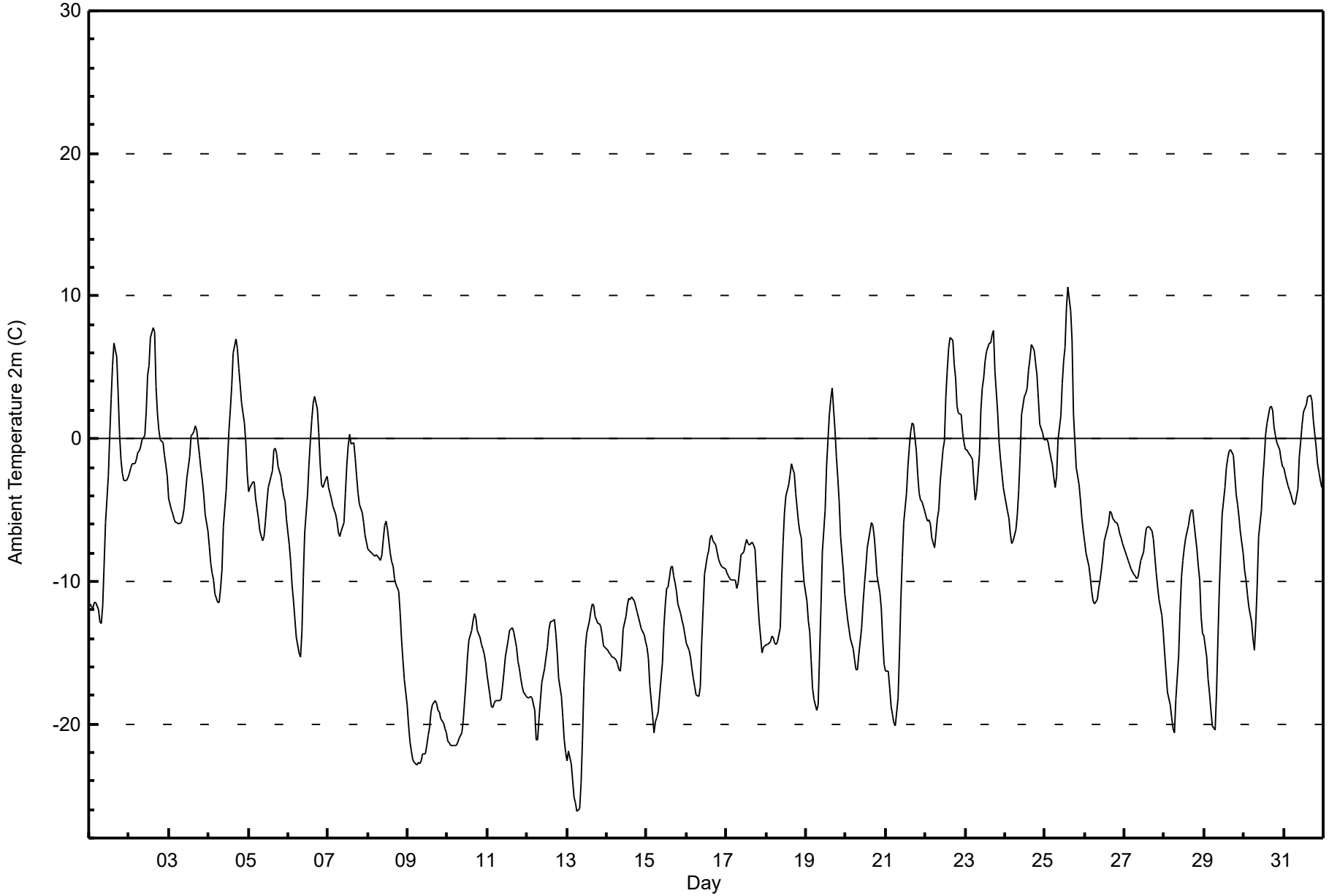
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-11.6	-11.7	-11.8	-11.5	-11.5	-12.0	-12.8	-12.9	-11.7	-8.9	-5.9	-2.6	0.2	2.7	5.1	6.7	5.7	3.2	0.3	-1.5	-2.5	-2.9	-2.9	-2.7	-4.7	6.7
2-Mar	-2.4	-2.1	-1.7	-1.8	-1.5	-1.0	-0.8	-0.6	-0.1	0.2	1.9	4.5	5.2	7.1	7.8	7.5	3.7	1.8	0.6	-0.1	-0.3	-1.2	-1.8	-2.6	0.9	7.8
3-Mar	-4.2	-5.0	-5.3	-5.7	-5.9	-5.9	-6.0	-5.8	-5.4	-4.9	-3.8	-2.7	-1.2	0.2	0.3	0.5	0.9	0.6	-1.2	-2.1	-3.0	-3.9	-5.3	-6.4	-3.4	0.9
4-Mar	-7.6	-8.8	-9.4	-9.9	-10.9	-11.5	-11.5	-10.5	-9.2	-6.2	-3.6	-1.5	0.6	2.1	3.7	6.1	7.0	6.3	4.9	3.8	2.4	1.1	-0.3	-2.5	-2.7	7.0
5-Mar	-3.7	-3.5	-3.0	-3.0	-4.2	-4.9	-5.6	-6.5	-7.2	-6.8	-5.8	-4.5	-3.5	-2.7	-2.2	-0.8	-0.6	-1.0	-2.0	-2.7	-3.4	-4.0	-4.5	-5.7	-3.8	-0.6
6-Mar	-7.5	-8.7	-10.3	-11.4	-12.7	-14.0	-15.0	-15.4	-13.5	-9.7	-6.6	-3.9	-1.9	-0.1	1.3	2.5	2.9	2.0	0.4	-1.7	-3.2	-3.4	-2.9	-2.6	-5.6	2.9
7-Mar	-3.4	-3.8	-4.2	-4.7	-5.3	-5.8	-6.6	-6.8	-6.5	-5.9	-3.8	-1.8	-0.5	0.3	-0.3	-0.3	-1.4	-2.6	-3.8	-4.6	-5.2	-5.9	-6.8	-7.3	-4.0	0.3
8-Mar	-7.7	-7.9	-8.0	-8.1	-8.3	-8.2	-8.3	-8.5	-8.2	-7.1	-6.1	-5.8	-6.4	-8.1	-8.6	-8.9	-9.8	-10.2	-10.7	-12.1	-14.0	-15.5	-16.9	-18.7	-9.7	-5.8
9-Mar	-20.1	-21.2	-21.9	-22.5	-22.7	-22.8	-22.7	-22.8	-22.6	-22.1	-22.1	-21.5	-20.8	-20.2	-19.1	-18.7	-18.4	-18.6	-19.1	-19.1	-19.6	-19.9	-20.4	-20.6	-20.8	-18.4
10-Mar	-21.2	-21.4	-21.5	-21.5	-21.5	-21.5	-21.3	-21.1	-20.6	-19.7	-18.4	-17.0	-15.3	-14.2	-13.5	-12.7	-12.2	-12.5	-13.5	-13.9	-14.4	-14.7	-15.1	-15.7	-17.3	-12.2
11-Mar	-16.6	-17.9	-18.7	-18.8	-18.6	-18.4	-18.4	-18.4	-18.2	-17.4	-16.4	-15.3	-14.2	-13.5	-13.4	-13.3	-13.6	-14.6	-15.6	-16.1	-16.8	-17.4	-17.8	-18.1	-16.6	-13.3
12-Mar	-18.2	-18.2	-18.1	-18.1	-19.1	-21.1	-21.1	-19.7	-18.3	-17.1	-16.1	-15.3	-14.7	-13.5	-12.9	-12.7	-12.7	-13.6	-15.0	-16.8	-18.1	-19.6	-21.1	-22.0	-17.2	-12.7
13-Mar	-22.6	-22.0	-22.8	-23.9	-25.2	-25.5	-26.2	-25.9	-24.2	-21.1	-17.3	-14.7	-13.6	-12.7	-12.1	-11.6	-11.7	-12.4	-12.9	-13.0	-13.1	-13.8	-14.5	-14.7	-17.8	-11.6
14-Mar	-14.8	-15.1	-15.1	-15.3	-15.3	-15.5	-15.8	-16.2	-16.3	-15.1	-13.3	-12.5	-11.7	-11.2	-11.3	-11.1	-11.4	-11.8	-12.2	-12.6	-13.0	-13.3	-13.7	-14.3	-13.7	-11.1
15-Mar	-14.6	-15.4	-17.3	-19.5	-20.7	-19.8	-19.6	-19.2	-18.0	-15.7	-13.3	-11.7	-10.5	-10.4	-9.0	-8.9	-9.6	-10.1	-10.7	-11.6	-12.3	-12.7	-13.2	-13.8	-14.1	-8.9
16-Mar	-14.3	-14.8	-15.3	-16.1	-16.8	-17.3	-18.0	-18.1	-17.4	-14.3	-11.9	-9.5	-8.2	-7.8	-7.0	-6.7	-7.2	-7.4	-7.9	-8.4	-8.7	-9.0	-9.0	-9.1	-11.7	-6.7
17-Mar	-9.4	-9.6	-9.8	-9.9	-10.0	-9.9	-10.5	-10.2	-9.2	-8.1	-7.9	-7.4	-7.0	-7.4	-7.5	-7.2	-7.5	-7.7	-9.5	-11.4	-12.8	-15.0	-14.6	-14.5	-9.8	-7.0
18-Mar	-14.4	-14.4	-14.2	-13.9	-14.0	-14.3	-14.4	-14.3	-13.2	-9.8	-7.3	-5.2	-4.1	-3.3	-2.5	-1.8	-2.1	-2.4	-3.8	-5.9	-6.5	-7.0	-8.8	-10.1	-8.7	-1.8
19-Mar	-11.4	-12.7	-13.6	-15.5	-17.5	-18.3	-19.1	-18.6	-15.2	-11.8	-7.9	-5.0	-2.0	-0.1	1.7	2.8	3.6	0.6	-1.3	-2.8	-4.4	-6.9	-9.3	-10.9	-8.2	3.6
20-Mar	-11.8	-12.7	-13.3	-14.0	-14.8	-15.5	-16.3	-16.2	-15.1	-13.3	-11.6	-10.2	-9.0	-7.7	-6.4	-5.8	-6.0	-6.9	-8.2	-9.7	-10.8	-11.9	-14.0	-15.8	-11.5	-5.8
21-Mar	-16.3	-16.3	-17.5	-18.8	-19.3	-20.0	-20.2	-18.2	-15.0	-11.2	-8.3	-5.9	-3.8	-1.9	-0.6	0.6	1.1	1.0	-0.9	-2.6	-3.8	-4.3	-4.5	-5.1	-8.8	1.1
22-Mar	-5.5	-5.8	-5.7	-6.0	-6.9	-7.6	-6.6	-5.6	-5.0	-3.1	-0.8	-0.2	2.9	4.7	6.3	7.1	6.9	5.2	4.3	2.3	1.8	1.7	0.4	-0.3	-0.6	7.1
23-Mar	-0.7	-0.8	-1.0	-1.2	-1.4	-3.1	-4.3	-3.7	-1.0	2.0	3.6	4.3	5.5	6.1	6.7	6.7	7.3	7.6	4.7	1.8	-0.2	-1.5	-2.5	-3.4	1.3	7.6
24-Mar	-4.0	-5.1	-5.6	-6.6	-7.3	-7.1	-6.4	-5.3	-3.7	-1.1	1.7	3.0	3.1	3.6	4.8	5.6	6.6	6.2	5.3	4.4	2.8	1.0	0.4	0.0	-0.2	6.6
25-Mar	-0.1	0.0	-0.3	-0.9	-1.8	-2.7	-3.4	-2.7	0.0	1.6	3.9	5.4	6.4	9.1	10.6	8.9	6.9	1.7	-0.2	-2.0	-3.2	-4.3	-5.6	-6.5	0.9	10.6
26-Mar	-7.2	-8.0	-8.9	-9.8	-10.7	-11.3	-11.6	-11.3	-10.5	-10.0	-9.1	-8.3	-7.1	-6.4	-6.0	-5.1	-5.2	-5.6	-5.8	-5.9	-6.2	-6.7	-6.9	-7.3	-8.0	-5.1
27-Mar	-7.9	-8.2	-8.5	-8.8	-9.1	-9.5	-9.7	-9.9	-9.8	-9.1	-8.6	-7.9	-6.9	-6.3	-6.2	-6.2	-6.5	-7.1	-8.2	-9.5	-10.4	-11.3	-12.4	-13.5	-8.8	-6.2
28-Mar	-15.0	-16.4	-17.8	-18.7	-19.6	-20.3	-20.7	-18.3	-15.2	-12.0	-9.8	-8.6	-7.7	-7.0	-6.1	-5.3	-5.0	-5.0	-6.0	-7.7	-8.9	-9.9	-12.5	-13.7	-12.0	-5.0
29-Mar	-13.9	-15.3	-16.9	-17.9	-19.1	-20.1	-20.4	-17.8	-14.0	-10.5	-7.7	-5.3	-3.4	-2.1	-1.3	-0.9	-0.7	-1.2	-2.5	-3.9	-4.6	-5.5	-6.6	-8.1	-9.2	-0.7
30-Mar	-9.2	-10.0	-10.9	-11.7	-12.9	-14.0	-14.9	-12.8	-10.2	-6.9	-5.0	-2.8	-1.4	0.3	1.1	2.1	2.3	2.0	0.8	0.2	-0.3	-0.7	-1.4	-1.9	-4.9	2.3
31-Mar	-2.1	-2.5	-3.3	-3.6	-3.9	-4.3	-4.6	-4.6	-3.5	-1.3	-0.2	1.0	1.9	2.4	3.0	3.0	3.1	2.7	1.3	-0.6	-1.7	-2.3	-2.9	-3.4	-1.1	3.1
	-10.3	-10.8	-11.4	-11.9	-12.5	-13.0	-13.3	-12.8	-11.5	-9.6	-7.7	-6.1	-4.8	-3.8	-3.0	-2.5	-2.7	-3.5	-4.8	-6.0	-6.9	-7.8	-8.6	-9.4	Diurnal Average	
	-0.1	0.0	-0.3	-0.9	-1.4	-1.0	-0.8	-0.6	0.0	2.0	3.9	5.4	6.4	9.1	10.6	8.9	7.3	7.6	5.3	4.4	2.8	1.7	0.4	0.0	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Waskow ohci Pimatisiwin - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	45	6.05	6.05
-20 - 0	595	79.97	86.02
0 - 10	103	13.84	99.87
10 - 20	1	0.13	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Waskow ohci Pimatisiwin - March 2025

Maximum Value: 95.4 % on Mar 25 07:00

Maximum Daily Average: 79.9 % on Mar 2

Minimum Value: 26.8 % on Mar 25 15:00

Minimum Daily Average: 51.8 % on Mar 30

Maximum Diurnal Average: 80.0 % at hour 7

Minimum Diurnal Average: 50.6 % at hour 16

Monthly Average: 66.60 %

Percentiles: P_1 = 33.3 P_{10} = 45.6 Q_1 = 56.0 Median = 68.4 Q_3 = 78.1 P_{90} = 85.0 P_{99} = 93.4

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

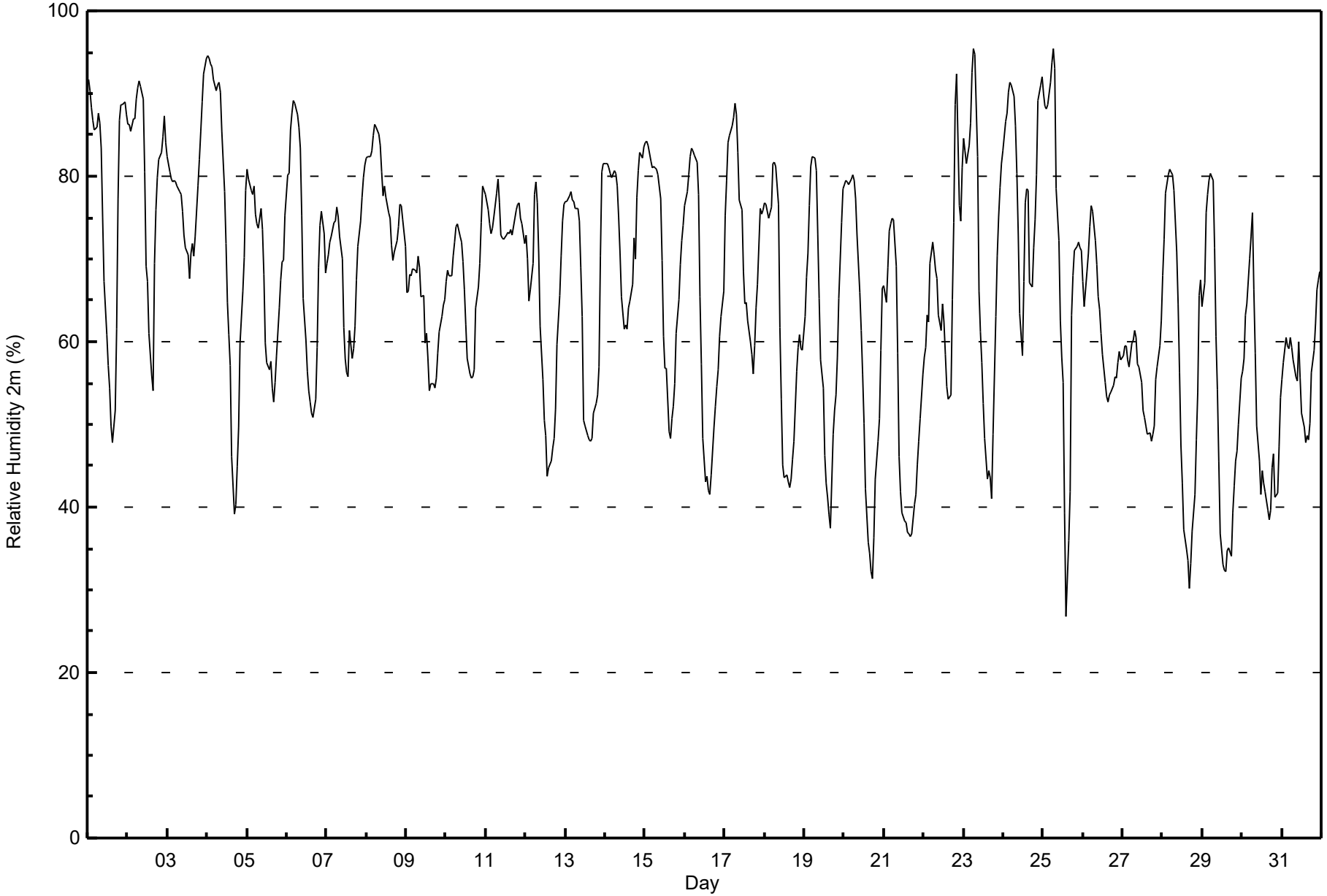
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	91.7	90.3	88.3	86.8	85.6	85.9	87.6	86.5	83.4	75.0	67.2	60.8	57.1	54.4	49.8	47.7	51.7	61.5	77.3	86.7	88.6	88.7	89.0	87.4	76.2	91.7
2-Mar	86.3	86.2	85.5	87.0	87.0	89.3	90.7	91.5	90.8	89.3	80.4	69.1	67.3	61.0	55.9	54.0	69.4	75.9	79.8	82.0	82.9	84.7	87.3	84.0	79.9	91.5
3-Mar	82.4	80.6	79.6	79.3	79.5	79.3	78.8	78.1	77.8	75.7	72.8	71.4	70.5	67.7	70.6	71.8	70.4	72.7	78.8	82.1	85.4	89.0	92.4	94.2	78.4	94.2
4-Mar	94.5	94.3	93.5	93.2	91.6	90.3	91.0	91.3	90.2	85.4	78.2	71.9	64.8	60.8	57.2	46.1	39.1	40.3	44.9	49.7	59.9	66.0	70.1	78.2	72.6	94.5
5-Mar	80.9	79.7	78.3	77.8	78.9	75.5	74.2	73.7	76.0	73.5	68.2	59.8	57.5	56.6	57.6	54.4	52.7	55.1	58.3	64.0	67.4	69.6	69.9	75.3	68.1	80.9
6-Mar	80.1	80.3	85.7	87.7	89.2	88.8	87.5	85.9	83.3	75.3	65.2	60.1	56.4	54.1	52.7	51.4	50.8	53.1	59.4	68.9	74.1	75.8	73.0	68.3	71.1	89.2
7-Mar	69.4	70.6	72.0	72.7	74.5	74.6	76.3	75.1	72.7	70.1	61.8	57.9	56.2	55.7	61.4	57.9	59.1	61.8	67.4	71.6	74.6	77.4	79.8	81.4	68.8	81.4
8-Mar	82.1	82.4	82.4	83.1	84.9	86.2	85.9	85.0	83.7	80.5	77.6	78.8	77.5	75.7	74.9	71.8	69.8	70.9	72.2	73.9	76.6	76.4	74.8	71.6	78.3	86.2
9-Mar	66.0	66.1	68.1	68.0	68.9	68.7	68.3	70.3	69.0	65.5	65.7	59.8	61.0	58.0	54.1	55.0	54.9	54.5	55.7	58.6	61.2	63.1	64.5	65.1	62.9	70.3
10-Mar	67.2	68.6	67.9	67.9	70.3	72.0	73.9	74.3	72.7	72.1	69.6	66.2	62.0	58.0	56.0	55.6	55.7	56.6	64.1	66.7	69.5	74.3	78.9	78.3	67.4	78.9
11-Mar	77.8	76.0	74.2	73.0	73.7	75.0	77.9	79.7	76.8	72.9	72.5	72.4	72.9	73.2	73.1	73.5	72.9	74.9	76.0	76.6	76.8	74.9	74.3	71.8	74.7	79.7
12-Mar	72.9	70.0	65.0	66.3	69.6	77.8	79.4	76.8	70.7	61.9	55.5	50.5	48.7	43.8	44.8	45.7	47.2	48.3	51.8	59.6	65.6	70.4	74.5	76.7	62.2	79.4
13-Mar	76.9	77.0	77.6	78.1	77.2	77.0	76.0	76.1	74.6	69.1	63.1	50.6	49.9	48.6	48.1	48.0	48.4	51.4	52.5	53.6	57.0	70.3	80.5	81.6	65.1	81.6
14-Mar	81.4	81.5	81.0	80.3	79.8	80.7	80.3	78.8	75.0	70.7	65.4	61.5	62.1	61.6	64.1	65.0	66.9	72.6	70.0	77.5	80.7	83.0	82.3	83.6	74.4	83.6
15-Mar	84.0	84.2	83.8	81.9	81.1	81.2	81.0	80.8	80.2	77.2	69.8	60.7	56.8	56.7	49.1	48.3	50.6	52.2	55.0	61.1	65.1	69.3	72.2	74.1	69.0	84.2
16-Mar	76.4	78.2	80.1	82.4	83.4	83.1	82.6	81.7	77.9	65.4	57.2	48.3	43.0	43.7	42.1	41.6	43.9	49.7	52.3	54.6	56.6	60.7	63.0	66.1	63.1	83.4
17-Mar	75.2	79.5	84.1	85.0	86.1	87.2	88.9	87.4	82.8	77.0	76.0	68.5	64.5	64.7	62.5	59.9	58.4	56.1	59.5	64.1	67.0	76.2	75.5	76.0	73.4	88.9
18-Mar	76.7	76.6	75.0	75.7	76.3	81.5	81.7	81.3	76.7	61.7	53.0	45.2	43.6	43.9	43.0	42.3	43.3	45.7	48.0	56.4	59.4	60.9	59.1	59.0	61.1	81.7
19-Mar	63.0	67.7	70.6	76.4	81.2	82.4	82.2	80.6	73.0	65.2	57.8	54.4	46.3	42.9	41.3	39.2	37.4	48.8	51.7	53.6	58.1	65.3	74.4	78.5	62.2	82.4
20-Mar	78.9	79.6	79.3	78.9	79.7	80.1	79.5	77.3	72.8	66.0	61.4	56.1	50.2	42.3	35.8	34.4	32.3	31.3	36.3	43.3	48.0	50.6	59.0	66.4	59.2	80.1
21-Mar	66.8	64.8	68.9	73.4	74.2	75.0	74.7	69.2	58.7	46.1	41.9	39.3	38.3	38.2	37.0	36.8	36.5	36.8	40.4	41.5	45.0	48.0	50.6	56.1	52.4	75.0
22-Mar	58.2	59.3	63.2	62.4	69.4	72.1	70.5	68.7	67.6	63.2	61.4	64.7	62.4	58.5	54.6	53.0	53.6	65.2	74.5	88.6	92.4	76.4	74.5	81.0	67.3	92.4
23-Mar	84.5	83.1	81.5	83.7	86.4	92.6	95.4	94.8	82.4	66.2	61.3	57.4	52.5	48.2	43.3	44.3	43.6	40.9	48.9	63.0	70.4	75.2	78.6	81.6	69.2	95.4
24-Mar	83.1	86.5	87.6	90.1	91.4	91.0	89.6	86.1	80.4	72.8	63.3	58.2	67.4	76.7	78.5	78.4	67.1	66.6	71.3	74.8	80.2	89.2	91.0	92.1	79.7	92.1
25-Mar	90.0	88.5	88.1	88.7	91.4	93.8	95.4	93.1	78.5	72.3	62.5	58.1	55.1	39.3	26.8	36.0	41.9	63.2	68.0	71.1	71.5	72.1	71.4	71.0	70.3	95.4
26-Mar	67.3	64.3	68.4	70.7	73.9	76.4	75.8	72.2	69.3	65.5	63.8	61.1	58.5	55.1	53.3	52.7	53.6	53.9	54.7	55.8	55.6	57.5	58.9	57.8	62.3	76.4
27-Mar	58.3	59.5	59.5	57.9	56.9	59.8	60.2	61.4	60.6	57.3	57.0	55.1	51.7	50.9	49.8	48.8	48.9	47.9	48.8	49.9	55.4	57.0	59.6	62.6	55.6	62.6
28-Mar	68.0	72.3	78.0	80.2	80.8	80.5	80.2	78.3	70.9	64.5	56.3	47.4	42.9	37.2	35.0	33.5	30.2	33.3	37.1	41.5	48.2	53.9	65.6	67.5	57.6	80.8
29-Mar	64.2	67.1	75.6	77.7	79.5	80.3	79.5	71.4	60.7	54.2	45.6	36.7	33.1	32.4	32.2	34.7	35.1	34.1	39.3	42.5	45.6	46.8	50.0	55.6	53.1	80.3
30-Mar	56.4	57.9	63.3	64.6	70.0	72.7	75.5	66.2	58.6	49.8	45.5	41.5	44.5	42.9	41.9	39.7	38.6	39.6	44.7	46.5	41.2	41.7	47.2	53.2	51.8	75.5
31-Mar	55.5	57.4	60.6	59.4	59.2	60.4	59.3	57.8	55.8	55.3	60.0	55.6	51.3	49.6	47.8	48.6	48.2	50.1	56.3	59.0	62.3	66.3	67.5	68.5	57.1	68.5
	74.7	75.2	76.3	77.1	78.4	79.7	80.0	78.4	74.3	68.3	63.1	58.0	55.7	53.3	51.4	50.6	50.7	53.7	57.9	62.5	65.9	68.7	71.3	73.1	Diurnal Average	
	94.5	94.3	93.5	93.2	91.6	93.8	95.4	94.8	90.8	89.3	80.4	78.8	77.5	76.7	78.5	78.4	72.9	75.9	79.8	88.6	92.4	89.2	92.4	94.2	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Waskow ohci Pimatisiwin - March 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	35	4.70	4.70
40 - 60	222	29.84	34.54
60 - 80	338	45.43	79.97
80 - 100	149	20.03	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Waskow ohci Pimatisiwin - March 2025

Maximum Speed: 18 km/h on Mar 25 16:00

Maximum Daily Speed Average: 9.7 km/h on Mar 14

Minimum Speed Value: 0 km/h on Mar 21 02:00

Minimum Daily Speed Average: 0.6 km/h on Mar 29

Maximum Diurnal Speed Average: 4.5 km/h at hour 21

Minimum Diurnal Speed Average: 1.8 km/h at hour 9

Monthly Average Velocity: 2.3 km/h 24.1 deg

Percentiles: $P_1 = 0$ $P_{10} = 2$ $Q_1 = 3$ Median = 5 $Q_3 = 7$ $P_{90} = 10$ $P_{99} = 13$

Hours in Service: 744

Hours of Data: 719

Hours of Missing Data: 25

Percent Operational Time: 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-Mar	SSE2	SSE3	SSE5	SSE6	SSE6	SSE5	SSE5	SSE5	SSE7	SSE7	SSE7	SSE7	SE5	SSE7	S5	SSE3	S3	SE1	W2	WNW3	UO	WSW1	WNW2	SSE2	SSE3.8	SSE7
2-Mar	SSW2	S2	S2	S1	SSE3	S1	W1	NNW4	N3	NE0	S0	SSE1	SE4	E3	NW2	NNW8	NNE9	NE7	NE6	NNE6	NNE5	NNE7	N6	NNE7	NNE2.2	NNE9
3-Mar	NE7	NE6	NE5	NE4	NNE3	N2	NNE3	NNE0	SSE3	SE4	SE4	SE4	SSE5	S6	SSE7	SSE6	SSE5	SSE3	S4	SSE2	UO	UO	SW1	UO	ESE2.0	NE7
4-Mar	S1	SSE2	SSE2	S3	SSE2	SSE3	S4	S4	SSE3	SSE4	SSE5	SSE4	SSE6	SSE5	SSE5	SW5	SW8	SW5	SW4	W4	N11	N6	NNW4	NNW3	S1.7	N11
5-Mar	WNW1	N5	N8	N10	N10	N11	N11	NNE8	NE5	ENE4	ENE4	ENE4	ESE4	SE7	SSE7	SE6	SSE5	SSE3	NNE1	N4	NNE2	NNE1	N2	NW3	NNE2.9	N11
6-Mar	NNW3	NW4	WNW3	W2	WSW1	SW0	UO	UO	UO	SE4	SE7	SE7	SE7	SE7	SE7	SSE7	SSE6	S5	S4	WNW2	SW1	WNW3	N2	N5	SSE2.0	SE7
7-Mar	NNE2	NNE4	NE3	NE3	N4	N6	N5	NNW3	N3	NNE3	ENE2	SE4	SE3	E3	NNE10	NNE10	N10	N11	N11	N9	N8	N7	N7	N6	N4.9	N11
8-Mar	N6	N4	NNW5	N6	N6	N5	NW6	NNW6	N5	N4	N4	N9	N11	N13	N14	NNE11	N10	NNE7	NE5	NE8	NE7	NNE9	NNE10	NNE9	N7.0	N14
9-Mar	NE10	NNE10	NNE9	NNE8	NE7	NNE8	NNE7	NE5	NE7	NE7	NE8	NNE8	NNE6	NNE6	NE5	NNE7	NNE7	NE6	NE5	NNE5	NNE5	NE3	NNE4	N5	NNE6.4	NNE10
10-Mar	NNW3	NNW4	NW4	NNW4	N3	NNE2	UO	SW1	N2	NNE2	SE3	SE5	SE4	ESE4	SSE5	SE5	SE3	NE2	NNE3	NE4	NE4	N5	N5	NNW6	NE1.4	NNW6
11-Mar	NNW7	NNW6	NNW5	N6	N5	N6	N5	N7	N8	N8	N8	N9	N10	NNE10	N12	N12	N13	N12	N12	N11	N11	N11	N10	N10	N8.8	N13
12-Mar	N10	N9	N8	N6	NNW3	W1	WSW2	W2	WNW3	NNW2	ENE3	ENE3	ENE3	ENE4	NE5	NE4	NE4	ENE3	NNE3	NNW3	NW2	NW2	NW2	WNW1	N2.6	N10
13-Mar	W2	NNW1	WNW2	NNW3	WNW1	NW3	N1	NNW3	NNE2	NNE2	NNE7	N8	N9	NNE9	N10	NNE9	N11	N11	N11	N10	N11	N10	N10	N9	N6.3	N11
14-Mar	N11	N12	N14	N13	N12	N10	N9	N9	N9	NNE9	NNE11	NNE13	N13	NNE12	N13	NNE11	NNE10	N10	N8	N6	NNW6	NNW6	NNW6	NW4	N9.7	N14
15-Mar	WNW4	WNW4	WNW4	W2	W2	UO	NW1	NW1	E1	NE1	NE3	E4	ESE4	SE5	SSE6	SSE6	SSE5	SSE4	ESE2	NE3	NNE4	NNE5	N6	NNW6	ENE0.7	SSE6
16-Mar	NW5	NW4	NW2	UO	NW1	WSW1	UO	SSE3	SSE6	SE4	SSE4	SSE6	SSE10	SSE9	SSE7	SSE7	SSE7	SE5	E4	ESE3	ESE2	SE3	SE4	SE4	SSE3.2	SSE10
17-Mar	SE3	SSE3	SE2	SSE3	SSE3	UO	UO	UO	NNW2	NNW4	NNE8	NE7	NNE9	NNE8	NNE8	NNE7	NE5	NE5	NNE4	NNE3	NNW3	W3	UO	SW1	NNE3.0	NNE9
18-Mar	UO	NE1	NNW1	WNW2	NNW3	NNW3	W0	SE2	ENE2	ESE3	SE5	SSE6	SSE8	S8	SSE7	SE5	SSE6	SE4	S2	UO	NNW5	NNW5	NW7	NNW6	SSE1.0	S8
19-Mar	NW5	NW5	NW4	WNW1	WSW1	UO	S1	SSW1	SE3	SE5	SE5	SE6	SE6	SE5	SE5	SE4	NE1	N9	N9	N10	N8	N12	N13	N13	NNE2.4	N13
20-Mar	N11	N8	N7	N7	N6	N8	N8	N8	N8	N8	N9	NNE9	N9	N11	N10	NNE10	N9	N10	N7	NNW6	NNW6	N5	NNW3	NW2	N7.5	N11
21-Mar	NW1	ESE0	WNW2	NW2	WNW3	WNW2	WNW2	NNE1	S2	SSE6	S8	SSE9	S8	SSE9	SSE9	SSE9	SSE9	SSE7	SSE3	SSE2	SE3	ESE2	NE1	UO	SSE3.2	SSE9
22-Mar	SW1	SW1	SW1	SSE2	SSE4	SSE5	SSE6	SSE8	SSE8	SE6	SE6	SSE7	SSE7	SSE8	SSE7	SSE9	S2	NNW4	NW8	WSW2	NNW3	N8	NE2	ESE2	SSE2.7	SSE9
23-Mar	UO	NE1	SSW1	NNE1	NNW2	WNW2	W2	SE0	ESE1	SE4	SE5	SSE6	SE6	SE7	SSE7	ENE2	ENE3	E2	ESE0	NNW2	NNW3	WNW1	UO	NW3	SE1.2	SSE7
24-Mar	NW4	WNW2	NW3	UO	WNW2	W1	W1	UO	SE1	SSE5	SSE4	SE4	SE5	SSE5	S5	SSE3	W7	WNW8	NNW6	NW8	WNW3	WSW2	SSW1	SSW1	WSW1.1	WNW8
25-Mar	SSW2	WSW2	WSW3	SW3	ENE1	W2	SW1	N0	NE1	ESE3	SE4	SE6	SSE5	NW5	WNW15	NW18	NNW13	NNE11	NE9	NE9	NNE9	NNE9	NNE11	N10	N3.3	NW18
26-Mar	N12	N10	N8	N7	N6	NNE5	N5	NNE7	NE7	NNE9	NE6	NE6	ENE6	NE5	NE4	NE5	NE7	NE6	NNE7	NNE6	NNE7	NNE6	NNE6	NE7	NNE6.4	N12
27-Mar	NNE7	NNE7	NNE7	NNE8	NE9	NE8	NE8	N9	N10	NNE9	NNE8	NNE9	NNE10	NNE10	NNE10	NNE11	NNE12	NNE11	NNE10	NNE8	NNE8	N7	NNE5	NNW6	NNE8.4	NNE12
28-Mar	NW6	W2	W2	W2	W2	W2	UO	NNW3	N3	N5	NE4	NNE5	NNE6	NE4	NNE6	NE4	ENE3	NNE5	N6	N4	N5	N4	WNW3	NW4	N3.0	NNE6
29-Mar	NW4	SW0	WNW2	W2	UO	WSW2	W3	WNW3	NNE2	ENE3	NE2	E3	ESE4	SE7	SE6	SE6	SE8	SSE8	SE3	N3	NNE6	NNW7	NW4	NW5	E0.6	SSE8
30-Mar	NW4	NW3	WNW3	WNW3	WNW2	WNW2	WSW1	NNW2	N2	NE3	NE4	NNE5	N6	NNE4	NNE3	ENE2	NNE5	NNE5	NNE5	NNE5	NNE6	N5	NNE3	NNE3	N2.9	NNE6
31-Mar	N1	ESE3	E2	E2	E2	ESE3	SE4	SSE4	SSE6	SE5	SE7	SSE9	SSE8	SSE8	SSE8	SSE9	SSE9	SSE7	SE5	SE1	SE2	E2	ESE3	SE3	SSE4.3	SSE9
	N3.4	N2.8	N2.6	N2.4	N2.1	N2.1	N1.8	N1.8	NE1.8	ENE2.2	ENE2.7	E2.7	E2.6	E2.6	ENE2.0	ENE2.3	NE2.3	NNE2.9	NNE3.4	N3.9	N4.5	N4.4	N4.0	N3.7	Diurnal Average	
	N12	N12	N14	N13	N12	N11	N11	N9	N10	NNE9	NNE11	NNE13	N13	N13	WNW15	NW18	NNW13	N12	N12	N11	N11	N12	N13	N13	Diurnal Maximum	

UO - Unstable Operation

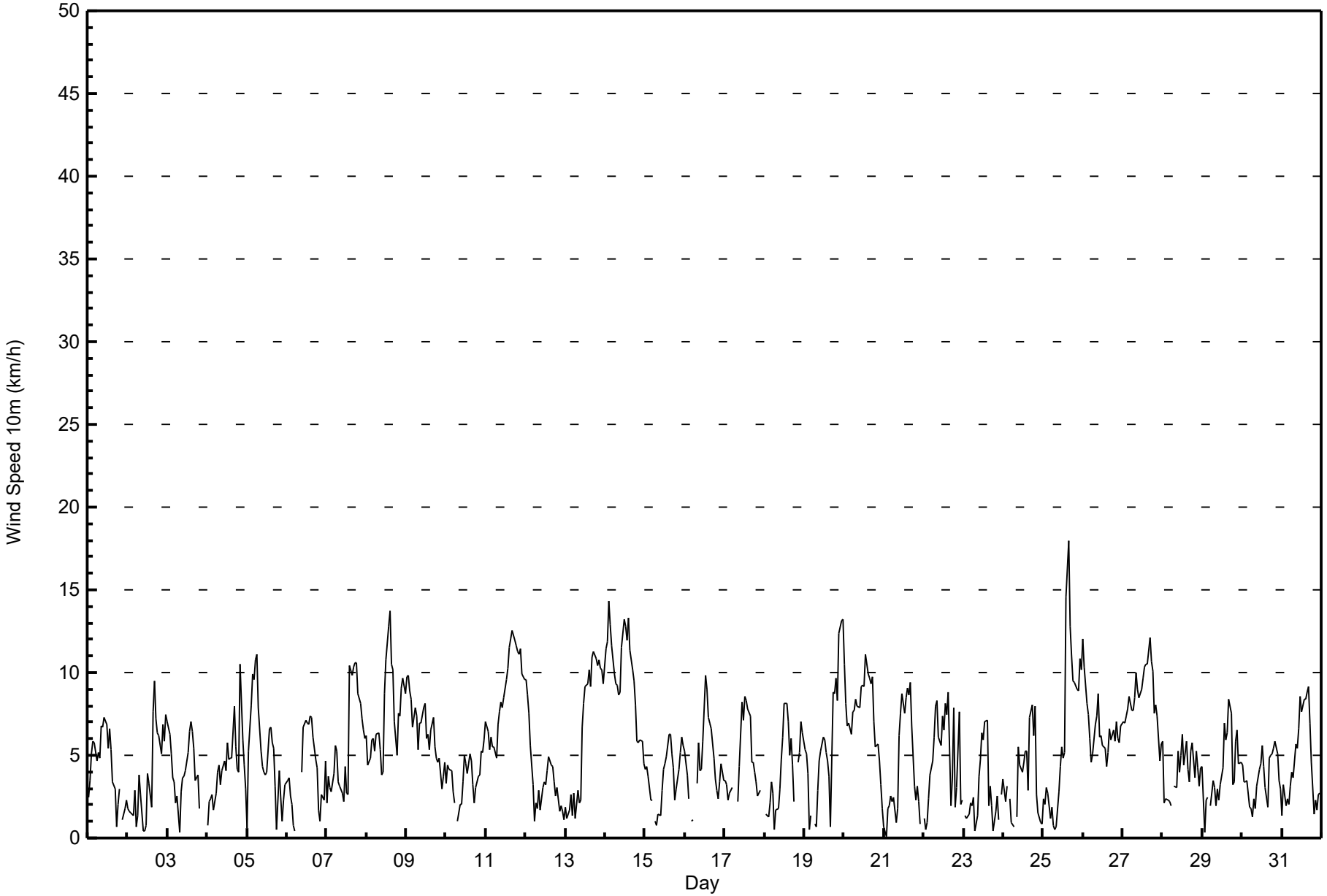
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Waskow ohci Pimatisiwin - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	414	57.58	57.58
6 - 11	282	39.22	96.80
12 - 19	23	3.20	100.00
20 - 28	0	0.00	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 719

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Waskow ohci Pimatisiwin - March 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	35	40	35	18	10	17	45	48	19	6	14	11	21	33	30	32	414
6 - 11	90	68	24	1	0	0	18	53	4	0	1	0	1	1	5	16	282
12 - 19	17	3	0	0	0	0	0	0	0	0	0	0	0	1	1	1	23
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	142	111	59	19	10	17	63	101	23	6	15	11	22	35	36	49	719

Total Number of Valid Hours: 719

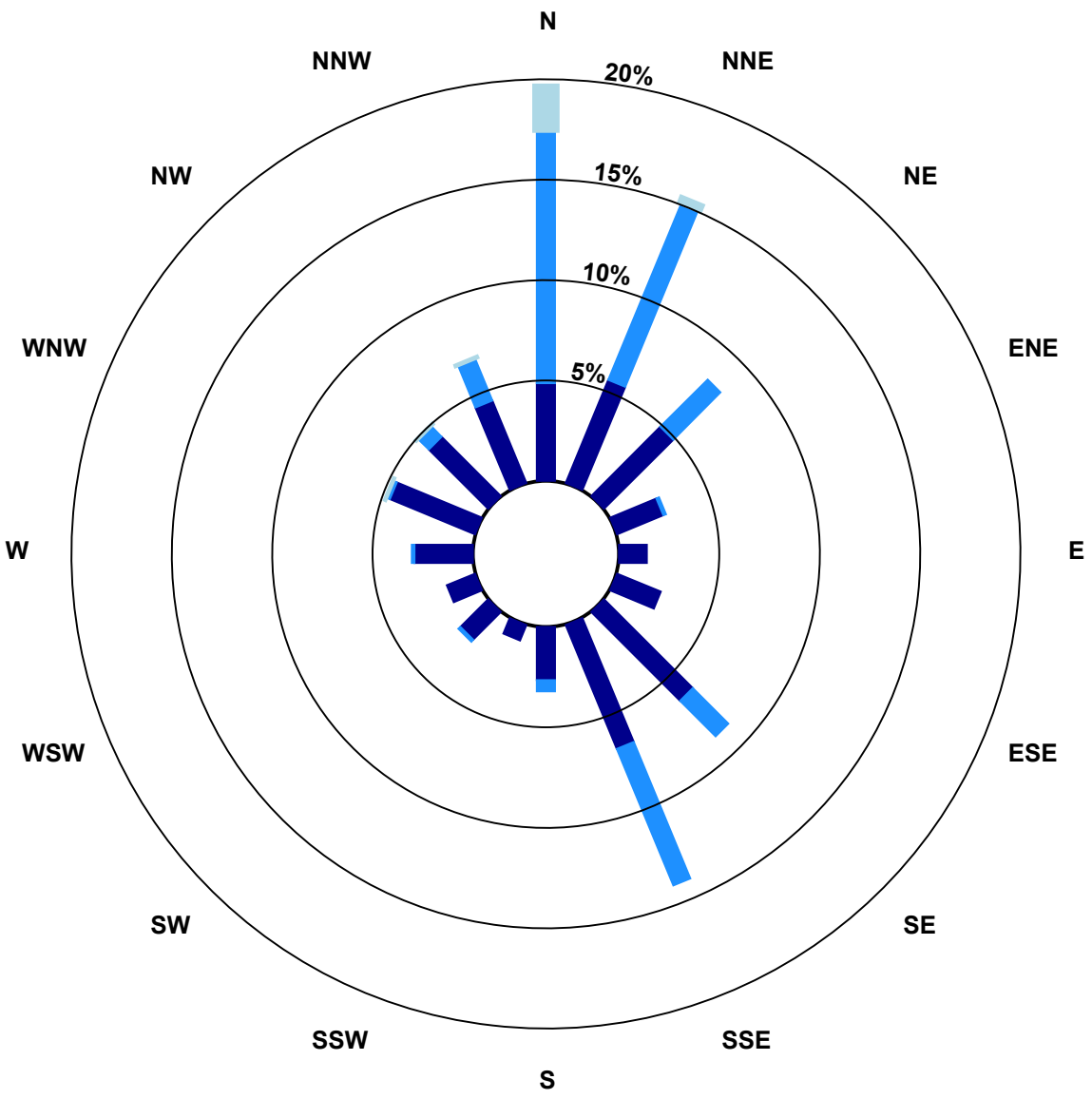
Total Number of Hours: 744

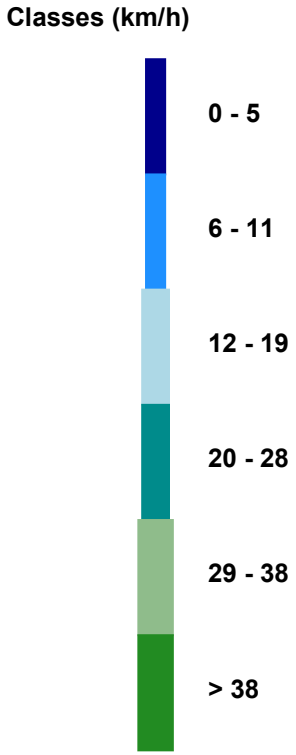
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 10m (WS10) - km/h

Waskow ohci Pimatisiwin





Total Number of Valid Hours: 719

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Waskow ohci Pimatisiwin - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 6 km/h on Mar 25 17:00

Minimum Value: 0 km/h on Mar 4 02:00

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

Hours in Service:	744
Hours of Data:	719
Hours of Missing Data:	25
Hours of Calibration:	0
Percent Operational Time:	96.6

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

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Waskow ohci Pimatisiwin - March 2025

Direction of Maximum Speed: 322 deg on Mar 25 16:00
Direction of Maximum Daily Speed Average: 2.2 deg on Mar 14

Direction of Minimum Speed: 115 deg on Mar 21 02:00

Direction of Minimum Daily Speed Average: 0.6 deg on Mar 29

Monthly Average Direction: 24.1 deg

Hours in Service:	744
Hours of Data:	719
Hours of Missing Data:	25
Percent Operational Time:	96.6

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	160	166	162	159	158	154	164	166	161	151	151	150	142	149	173	162	170	144	278	296	UO	242	297	159	161.4
2-Mar	196	180	181	170	161	187	281	345	353	55	190	168	143	94	307	327	16	41	44	20	28	17	8	31	23.6
3-Mar	34	35	37	37	27	0	13	12	154	142	136	139	166	173	155	147	155	152	171	159	UO	UO	227	UO	122.2
4-Mar	180	166	152	170	160	161	169	172	153	154	162	168	151	158	151	222	228	227	225	281	359	4	344	331	187.3
5-Mar	298	359	357	5	9	9	5	17	53	62	64	67	121	144	147	141	160	151	29	350	19	25	7	311	33.7
6-Mar	327	317	283	265	241	225	UO	UO	UO	146	142	144	142	141	144	148	160	179	173	289	232	292	356	2	158.7
7-Mar	31	25	38	46	359	356	352	329	10	22	71	145	142	79	18	19	11	360	359	358	358	1	352	352	9.8
8-Mar	349	350	339	356	353	355	324	338	353	2	3	358	3	6	4	19	5	18	34	48	44	33	30	30	8.5
9-Mar	37	32	30	31	48	33	29	48	42	43	35	18	26	23	51	26	19	39	41	23	24	40	18	352	31.6
10-Mar	336	327	321	334	2	21	UO	224	1	27	134	142	139	123	153	142	139	53	16	40	47	9	8	345	38.6
11-Mar	347	339	347	356	3	355	6	356	357	0	2	8	3	18	6	5	6	5	7	6	2	6	1	356	2.0
12-Mar	1	1	359	360	337	265	244	271	299	344	68	76	57	57	53	48	56	59	29	330	308	305	305	282	10.5
13-Mar	273	329	293	336	299	326	351	348	14	32	25	6	7	16	9	18	5	2	6	8	7	7	2	2	4.6
14-Mar	353	360	354	356	356	358	358	360	9	16	19	12	7	16	360	19	20	3	3	5	348	335	329	320	2.2
15-Mar	296	296	300	274	280	UO	315	319	84	35	49	80	109	133	147	151	155	149	123	48	31	20	358	330	63.7
16-Mar	325	324	305	UO	304	245	UO	166	153	141	151	155	160	163	167	158	156	143	96	106	113	136	136	138	152.0
17-Mar	143	153	140	151	147	UO	UO	UO	348	342	14	34	20	23	26	31	48	43	30	12	337	265	UO	224	30.4
18-Mar	UO	45	328	295	346	330	262	140	70	109	129	155	158	174	163	143	156	146	175	UO	333	340	325	331	150.4
19-Mar	318	313	318	292	242	UO	179	193	143	143	141	141	141	145	138	144	38	3	6	10	10	1	359	356	17.1
20-Mar	358	8	2	354	350	356	352	1	1	8	4	13	356	356	9	15	4	354	357	335	338	349	348	312	358.9
21-Mar	313	115	299	304	297	288	302	12	190	163	171	162	171	159	157	159	162	161	151	148	145	108	40	UO	165.4
22-Mar	223	221	223	148	162	158	151	152	155	146	139	153	153	155	167	163	169	347	313	250	331	7	45	120	154.3
23-Mar	UO	56	194	14	340	300	266	129	110	137	131	147	139	145	148	74	59	100	109	329	334	299	UO	325	126.9
24-Mar	320	300	319	UO	295	278	266	UO	127	155	154	146	144	158	175	157	276	289	341	314	285	258	201	196	249.4
25-Mar	192	251	242	233	69	262	224	355	56	108	137	136	152	312	294	322	346	32	34	34	25	18	17	11	0.5
26-Mar	3	357	10	4	359	13	2	19	42	26	39	38	58	48	42	49	34	43	19	26	20	32	28	35	24.0
27-Mar	33	24	29	30	34	38	37	10	9	33	33	32	27	30	32	29	21	23	18	19	16	7	12	336	24.0
28-Mar	319	276	276	262	267	273	UO	341	359	6	42	25	33	35	20	43	61	17	354	356	352	353	298	305	357.0
29-Mar	318	223	283	274	UO	248	278	297	20	68	41	91	102	139	130	137	146	154	133	10	15	348	322	308	87.8
30-Mar	309	308	296	291	293	288	249	335	356	51	43	30	351	13	30	75	27	17	17	29	17	4	17	13	3.6
31-Mar	355	104	88	97	90	118	132	148	156	146	143	154	162	168	168	163	163	157	140	143	129	89	117	141	147.4
	350.3	356.3	349.7	358.4	2.4	0.5	357.3	6.8	41.5	68.5	77.5	85.1	88.8	89.6	75.5	61.1	42.2	30.0	16.9	8.3	9.3	5.3	1.6	355.0	
	Diurnal Average																								

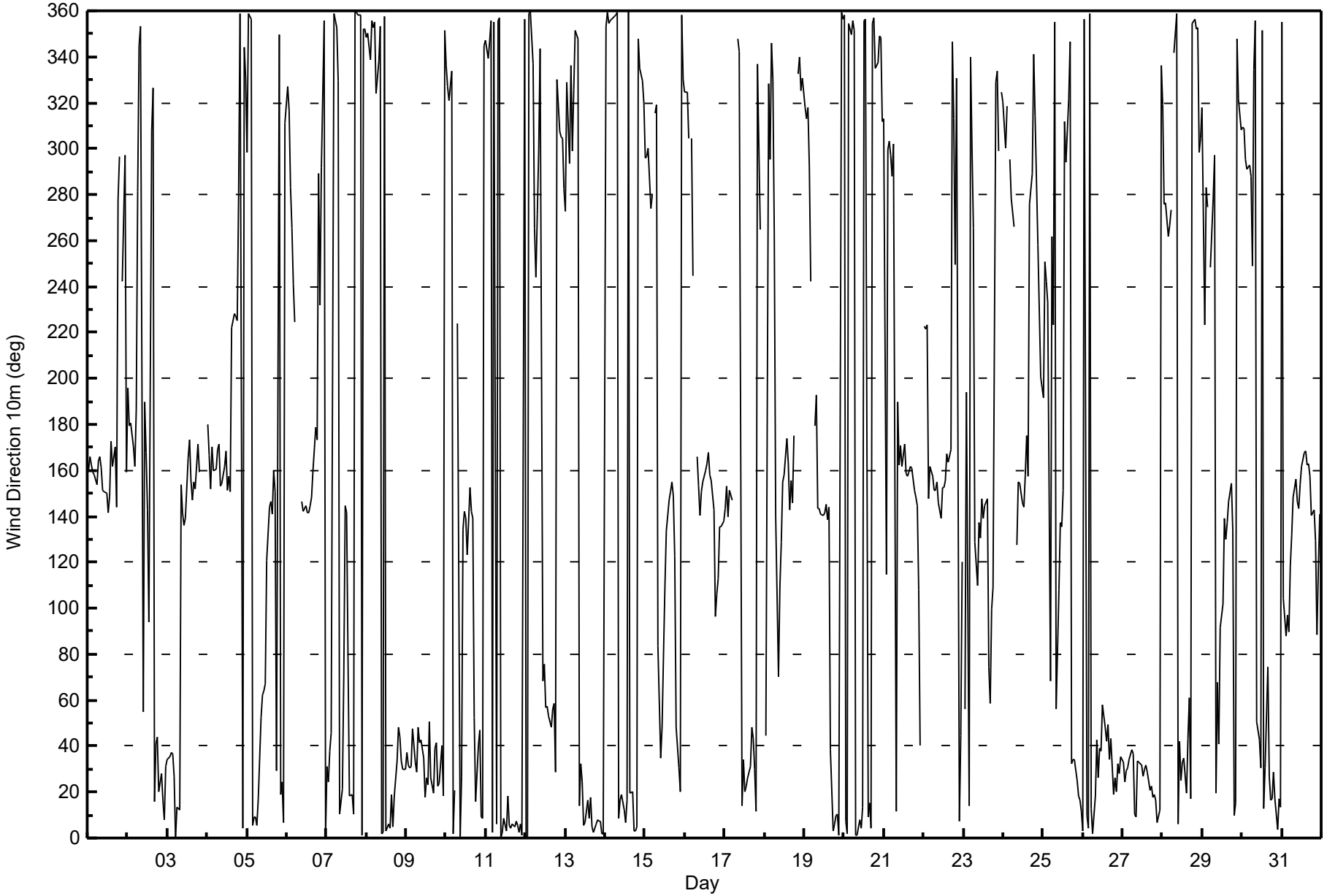
UO - Unstable Operation
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Waskow ohci Pimatisiwin - March 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Waskow ohci Pimatisiwin - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 100 deg on Mar 25 02:00

Minimum Value: 9 deg on Mar 29 01:00

Percentiles: P_1 = 13 P_{10} = 19 Q_1 = 22 Median = 26 Q_3 = 36 P_{90} = 62 P_{99} = 91

Hours in Service:	744
Hours of Data:	719
Hours of Missing Data:	25
Hours of Calibration:	0
Percent Operational Time:	96.6

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	29	24	18	17	18	15	16	21	20	21	22	22	23	22	29	35	26	69	12	15	UO	54	50	20	69
2-Mar	61	45	79	61	46	87	75	35	24	76	85	92	27	36	88	24	26	24	25	28	29	27	23	29	92
3-Mar	26	27	25	32	28	52	30	93	42	26	25	32	32	36	30	22	21	24	21	23	UO	UO	52	UO	93
4-Mar	89	21	22	17	78	38	20	13	22	19	20	27	23	25	19	60	41	35	31	41	20	21	21	23	89
5-Mar	93	25	20	22	24	24	23	23	25	28	31	43	46	23	23	27	28	40	67	28	28	35	30	16	93
6-Mar	10	23	16	28	52	74	UO	UO	UO	22	25	25	25	25	25	24	29	36	13	67	90	39	64	32	90
7-Mar	34	24	31	25	33	20	19	32	27	43	81	38	61	65	22	23	22	18	20	20	27	21	20	22	81
8-Mar	20	29	19	22	21	31	20	17	22	36	34	24	23	24	23	25	23	27	30	23	24	28	26	29	36
9-Mar	24	25	26	27	27	25	25	26	26	29	26	30	35	36	35	32	27	27	25	28	23	32	25	20	36
10-Mar	37	24	19	16	31	36	UO	66	40	59	46	30	36	66	37	35	41	47	25	31	27	23	22	17	66
11-Mar	16	16	19	17	20	23	22	19	21	22	22	23	24	24	23	22	22	22	22	21	22	23	20	18	24
12-Mar	20	20	19	21	30	71	31	37	48	71	45	35	57	42	32	35	24	20	21	11	66	39	53	66	71
13-Mar	60	77	54	34	43	39	75	18	20	34	19	26	25	24	23	24	22	21	22	22	22	22	20	21	77
14-Mar	18	20	19	19	20	23	22	21	25	26	23	25	28	25	24	24	23	25	21	20	18	15	14	18	28
15-Mar	14	14	16	27	16	UO	28	52	18	30	53	34	42	27	32	33	32	22	31	16	21	24	21	20	53
16-Mar	17	21	28	UO	65	65	UO	18	22	28	31	44	24	26	31	33	25	27	17	20	30	21	26	28	65
17-Mar	18	24	21	19	21	UO	UO	UO	27	42	24	30	28	28	24	30	28	25	24	21	47	14	UO	76	76
18-Mar	UO	73	75	55	30	36	89	58	61	46	35	51	37	35	29	67	30	21	30	UO	21	16	13	16	89
19-Mar	12	15	20	78	45	UO	86	73	29	22	26	27	25	37	26	39	82	22	21	23	20	20	21	20	86
20-Mar	22	22	19	19	16	16	17	19	23	26	23	30	26	24	27	26	26	19	20	18	16	22	34	35	35
21-Mar	88	95	30	51	25	33	21	54	97	32	29	25	31	28	26	28	24	22	33	48	30	31	47	UO	97
22-Mar	72	77	52	19	20	18	18	21	22	28	25	23	27	22	24	21	87	65	45	76	74	20	75	22	87
23-Mar	UO	60	51	44	37	36	22	86	53	35	25	26	23	22	28	77	51	35	71	29	27	78	UO	41	86
24-Mar	20	38	23	UO	50	63	82	UO	49	25	32	24	25	24	49	70	42	27	27	16	67	56	83	77	83
25-Mar	59	100	66	62	80	62	84	87	95	41	31	25	45	94	30	19	40	24	27	25	24	24	23	23	100
26-Mar	23	21	26	23	24	27	26	29	27	29	39	35	37	40	44	32	30	26	23	24	24	24	27	23	44
27-Mar	24	23	23	22	23	24	23	22	24	30	28	31	30	31	27	28	26	24	21	22	22	23	28	22	31
28-Mar	14	49	35	31	26	37	UO	43	45	35	52	57	41	52	38	46	54	32	18	15	16	17	25	11	57
29-Mar	9	82	17	23	UO	36	10	35	58	44	81	56	37	25	32	26	24	23	50	13	20	18	20	14	82
30-Mar	20	17	16	24	41	33	47	54	51	45	36	39	34	41	74	78	28	22	19	22	25	23	41	34	78
31-Mar	74	22	37	24	28	25	24	28	27	29	25	25	36	30	29	26	23	23	23	55	29	29	30	27	74
	93	100	79	78	80	87	89	93	97	76	85	92	61	94	88	78	87	69	71	76	90	78	83	77	
	Diurnal Maximum																								

UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS27
JACKFISH 2/3
MARCH 2025

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

April 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JACKFISH 2/3 (AMS27)
MARCH 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	708	35	36	99.87	9.6	0	1.4	0
H2S (ppb) Average	706	37	38	99.87	0.7	0	0.2	0
NO2 (ppb) Average	706	37	38	99.87	12.6	0	3	-
NO (ppb) Average	706	37	38	99.87	5.7	-	1.1	-
NOX (ppb) Average	706	37	38	99.87	15.3	-	3.7	-
Temperature 2 m (C) Average	744	0	0	100	9.9	-	3.5	-
Relative Humidity (%) Average	744	0	0	100	89.8	-	87.4	-
Wind Speed 10 m (km/h) Average	744	0	0	100	18	-	11	-
Wind Direction 10 m (deg) Average	744	0	0	100	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JACKFISH 2/3 (AMS27)
MARCH 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	708	0.58	0.9	-	0	0	0.1	0.3	0.6	1.4	9.6
H2S (ppb) Average	706	0.1	0.1	-	0	0	0	0.1	0.1	0.2	0.7
NO2 (ppb) Average	706	1.64	1.3	-	0	0.5	0.8	1.3	2.1	3.1	12.6
NO (ppb) Average	706	0.28	0.6	-	0	0	0	0.1	0.3	0.7	5.7
NOX (ppb) Average	706	1.92	1.7	-	0	0.5	0.8	1.5	2.4	3.8	15.3
Temperature 2 m (C) Average	744	-5.66	7.3	-	-22.8	-15.7	-11.1	-5.3	-0.3	3.7	9.9
Relative Humidity (%) Average	744	66.65	16.2	-	24.8	42.2	54.2	70.1	80.8	85.1	89.8
Wind Speed 10 m (km/h) Average	744	7.2	3	-	0	4	5	7	9	11	18
Wind Direction 10 m (deg) Average	744	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JACKFISH 2/3 (AMS27)
MARCH 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL GASEOUS ANALYZERS	26 Mar 2025 15:00	26 Mar 2025 15:00	1	Maintenance - sample manifold cleaned & QA check

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Jackfish 2/3 - March 2025

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

Maximum Value: 9.6 ppb on Mar 8 17:00

Maximum Daily Average: 1.4 ppb on Mar 8

Minimum Value: 0.0 ppb on Mar 6 07:00

Minimum Daily Average: 0.1 ppb on Mar 10

Maximum Diurnal Average: 1.1 ppb at hour 18

Minimum Diurnal Average: 0.3 ppb at hour 1

Monthly Average: 0.58 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.3 Q_3 = 0.6 P_{90} = 1.4 P_{99} = 4.6

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.3	0.2	0.1	0.3	0.2	Z	0.0	0.1	0.2	0.3	0.8	1.2	0.7	0.5	0.6	0.4	0.6	0.6	0.4	0.4	0.4	0.4	0.8	0.6	0.4	1.2
2-Mar	Z	0.6	0.3	0.4	0.6	0.8	1.2	1.3	1.2	0.6	0.8	5.0	2.4	0.5	0.4	0.4	0.4	0.5	1.2	0.3	0.3	2.8	1.1	4.2	1.2	5.0
3-Mar	1.0	Z	1.0	1.0	1.4	1.3	1.7	0.7	1.1	2.3	2.1	1.7	1.0	1.2	1.1	1.1	1.1	0.6	0.5	0.6	0.5	0.5	0.4	0.4	1.1	2.3
4-Mar	0.4	0.5	Z	0.6	0.8	1.0	1.3	0.8	0.4	0.4	0.6	0.3	0.5	0.6	0.6	1.1	1.5	1.4	1.0	0.8	0.5	0.2	0.2	0.3	0.7	1.5
5-Mar	0.6	1.9	2.0	Z	1.7	1.6	0.9	1.1	0.8	0.7	0.9	0.7	0.3	0.3	1.6	0.7	0.6	2.2	1.5	0.1	0.1	0.1	0.1	0.1	0.9	2.2
6-Mar	0.2	0.5	0.0	0.2	Z	0.3	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.2	0.6	3.6	6.5	0.2	0.1	0.2	0.2	0.4	0.0	0.6	6.5
7-Mar	0.0	0.1	0.4	0.5	0.3	Z	0.2	0.5	0.2	0.0	0.0	0.0	0.0	0.0	1.2	4.0	0.2	0.0	0.7	0.1	0.0	0.0	0.0	0.0	0.4	4.0
8-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.4	2.0	9.6	7.7	0.2	1.4	3.3	3.2	1.8	2.2	1.4	9.6
9-Mar	1.0	Z	0.3	0.4	0.4	0.5	0.3	0.3	0.3	0.2	0.2	0.8	2.2	1.2	0.7	1.8	1.4	1.2	0.5	0.4	0.6	0.7	0.6	0.0	0.7	2.2
10-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.3	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.2	0.1	0.0	0.1	0.3
11-Mar	0.1	0.1	0.3	Z	0.1	0.0	0.1	0.3	0.1	0.4	0.3	0.5	0.8	0.5	0.4	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.2	0.8
12-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	1.1	1.6	2.7	4.0	3.6	1.7	2.4	2.0	1.1	0.6	0.4	0.5	0.3	0.3	0.3	0.4	1.0	4.0
13-Mar	0.5	1.1	0.6	0.6	1.0	Z	1.1	0.4	1.0	1.3	0.8	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.1	0.5	1.3
14-Mar	Z	0.1	0.0	0.0	0.4	0.4	0.1	0.7	1.0	0.9	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.3	0.5	0.6	0.6	1.8	1.6	1.0	0.5	1.8
15-Mar	0.5	Z	0.5	0.7	0.2	0.2	0.2	0.3	1.2	0.4	0.2	0.4	0.5	2.0	2.4	0.1	0.3	0.4	0.5	0.8	0.8	0.6	0.5	0.4	0.6	2.4
16-Mar	0.6	0.8	Z	0.6	0.4	0.4	0.4	0.7	0.7	0.9	0.6	0.5	0.4	0.5	0.4	0.3	0.1	0.1	0.2	0.4	0.4	0.3	0.2	0.2	0.5	0.9
17-Mar	0.3	0.3	0.5	Z	0.6	0.4	0.3	0.4	0.6	0.1	0.1	0.3	0.2	0.7	2.2	1.2	0.2	0.1	0.3	0.3	0.6	0.7	1.2	0.8	0.5	2.2
18-Mar	0.5	0.4	0.4	0.6	Z	0.7	0.9	1.2	0.9	3.6	1.6	1.4	0.6	0.4	0.2	0.1	0.2	0.3	0.2	0.3	0.3	0.5	0.4	0.3	0.7	3.6
19-Mar	0.3	0.3	0.3	0.3	0.6	Z	0.2	0.4	0.9	1.3	0.6	0.8	0.6	0.4	0.3	0.2	0.2	0.1	0.2	0.2	0.3	0.4	0.6	0.7	0.4	1.3
20-Mar	Z	0.3	0.8	0.7	2.2	2.5	0.7	0.2	0.5	1.1	1.6	0.8	0.2	0.4	0.3	0.4	0.2	0.2	0.2	0.1	0.0	0.4	0.5	0.0	0.6	2.5
21-Mar	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.5	0.5	0.4	0.5	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.4	0.4	0.4	0.2	0.5
22-Mar	0.4	0.5	Z	0.4	0.4	0.3	0.2	0.2	0.0	0.1	0.1	0.1	0.2	0.2	0.4	0.5	0.4	0.5	7.8	0.4	0.3	0.2	0.2	0.2	0.6	7.8
23-Mar	0.2	0.2	0.3	Z	0.2	0.4	0.4	0.6	0.4	0.2	0.2	0.3	0.3	0.2	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6
24-Mar	0.1	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	0.2	0.2	0.2	0.5	2.1	1.2	1.5	0.2	0.1	0.1	0.3	2.1
25-Mar	0.1	0.1	0.1	0.1	0.2	Z	0.1	0.1	0.2	0.2	0.1	0.4	0.4	0.2	1.4	1.6	6.5	5.1	0.2	0.2	1.5	0.7	1.1	0.4	0.9	6.5
26-Mar	Z	0.1	0.1	0.1	0.1	0.1	0.4	1.8	1.7	2.7	0.9	0.2	0.3	0.3	M	0.7	0.3	1.8	0.1	0.0	0.0	0.0	0.2	0.1	0.5	2.7
27-Mar	0.9	Z	1.4	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.6	0.3	0.1	0.1	0.1	0.1	0.2	0.2	1.4
28-Mar	0.1	0.1	Z	0.0	0.2	0.8	1.9	1.7	2.4	4.6	3.1	1.1	0.6	0.3	1.5	1.5	1.4	1.1	0.4	0.1	0.1	0.0	0.0	0.1	1.0	4.6
29-Mar	0.0	0.0	0.1	Z	0.1	0.2	0.1	0.4	0.6	1.2	0.7	0.2	0.4	0.2	1.6	3.6	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.4	3.6
30-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.1	1.9	1.9	0.9	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.2	1.9
31-Mar	0.1	0.7	0.7	0.3	0.1	Z	0.1	0.3	0.4	0.5	0.4	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.7
	0.3	0.3	0.4	0.3	0.5	0.5	0.4	0.5	0.6	0.8	0.7	0.7	0.6	0.5	0.8	0.9	1.0	1.1	0.7	0.3	0.4	0.5	0.4	0.4	Diurnal Average	
	1.0	1.9	2.0	1.0	2.2	2.5	1.9	1.8	2.4	4.6	3.1	5.0	3.6	2.0	2.4	4.0	9.6	7.7	7.8	1.4	3.3	3.2	1.8	4.2	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

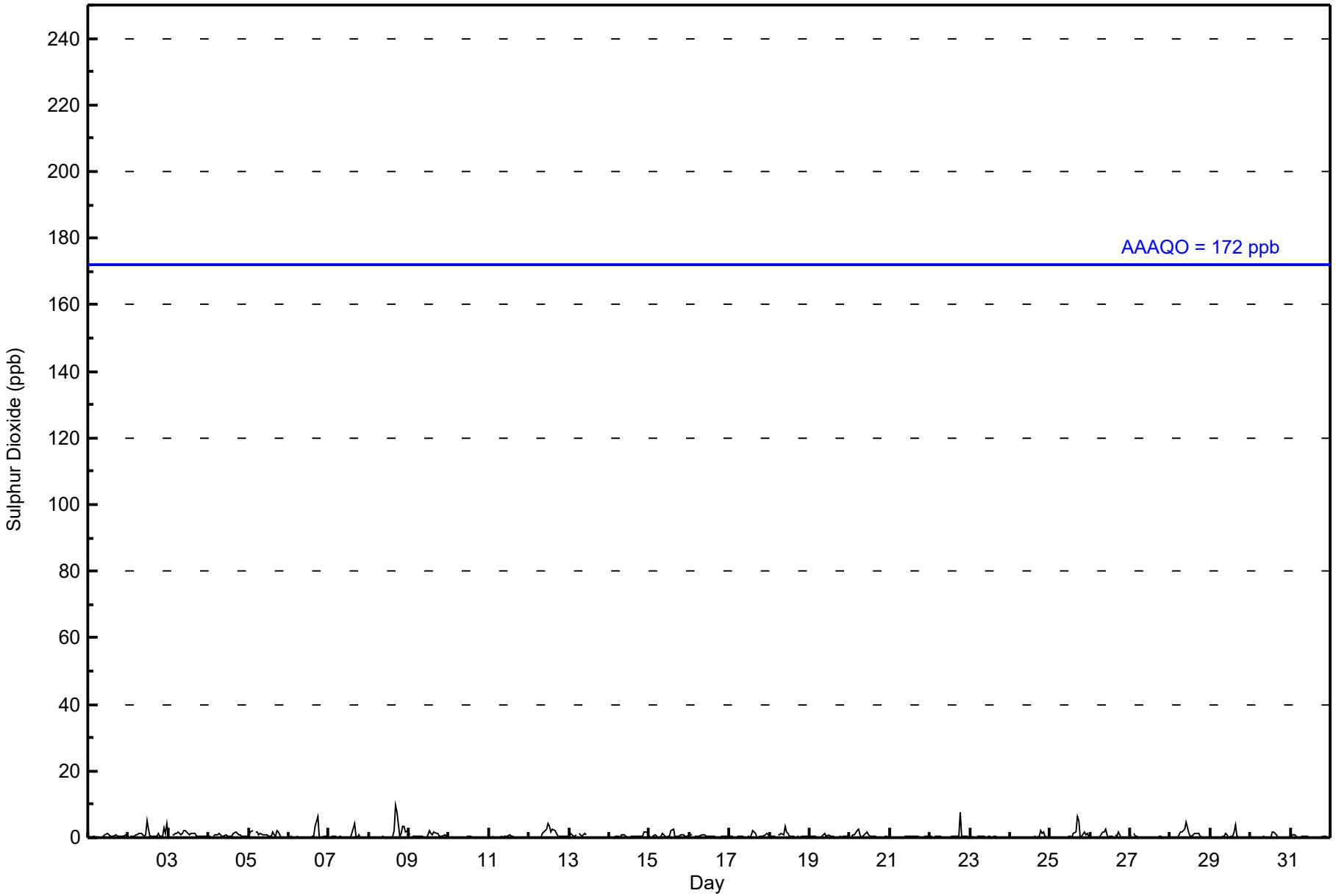
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Jackfish 2/3 - March 2025



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

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Jackfish 2/3 - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	20	37	89	63	7	7	16	36	52	46	85	115	59	21	21	34	708
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	20	37	89	63	7	7	16	36	52	46	85	115	59	21	21	34	708

Total Number of Valid Hours: 708

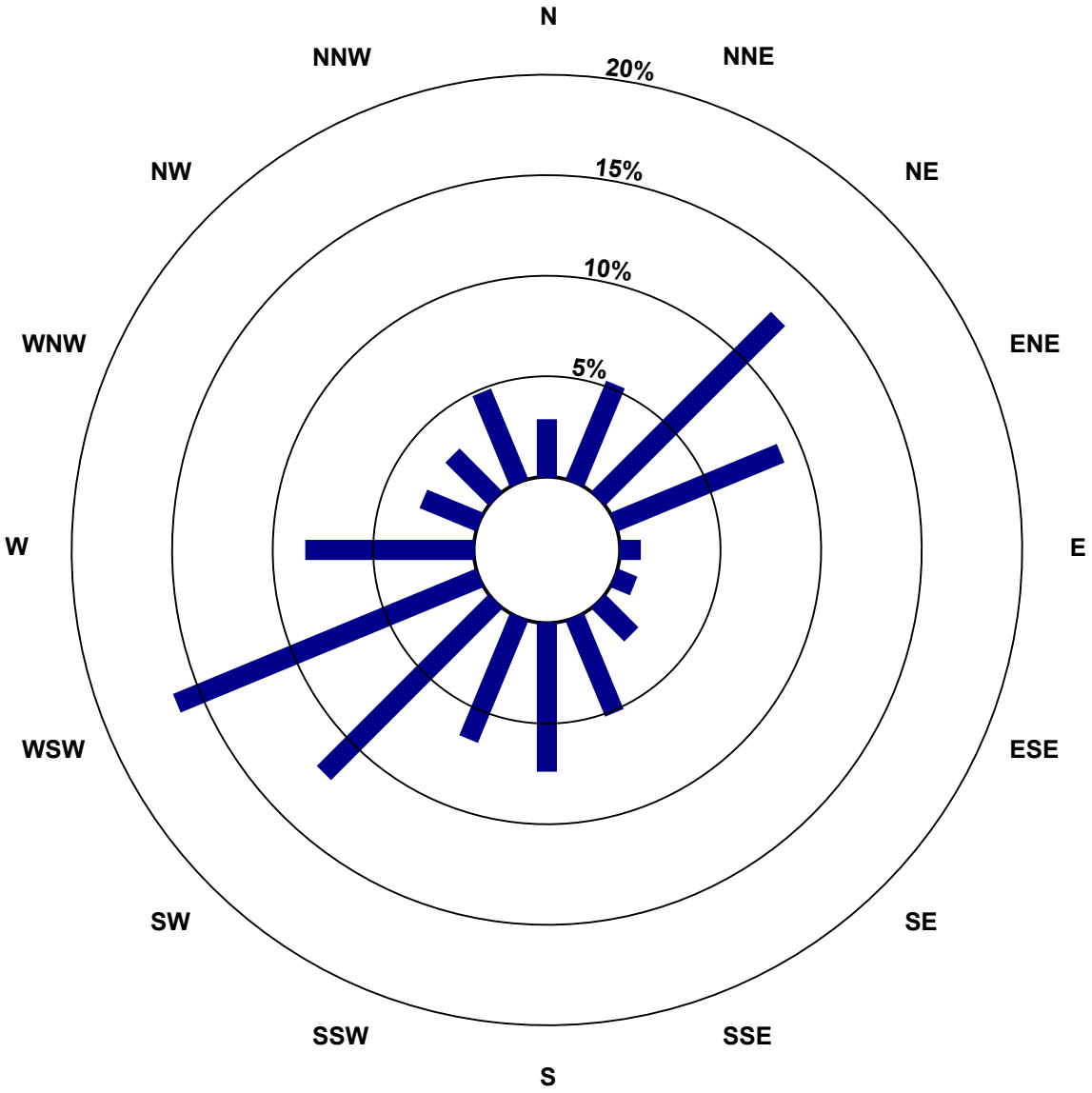
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Sulphur Dioxide (SO_2) - ppb

Jackfish 2/3



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

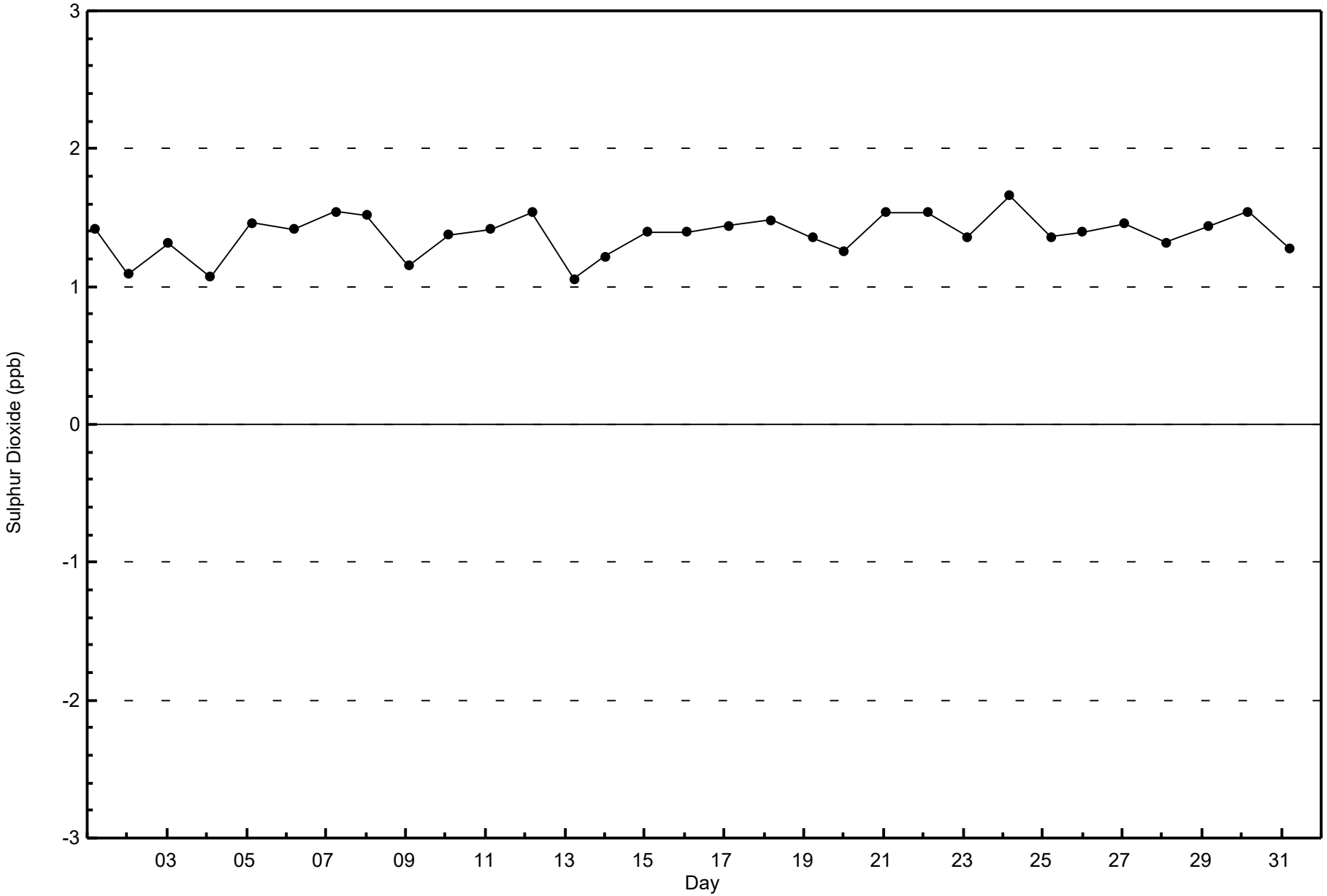
Total Number of Valid Hours: 708

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Jackfish 2/3 - March 2025

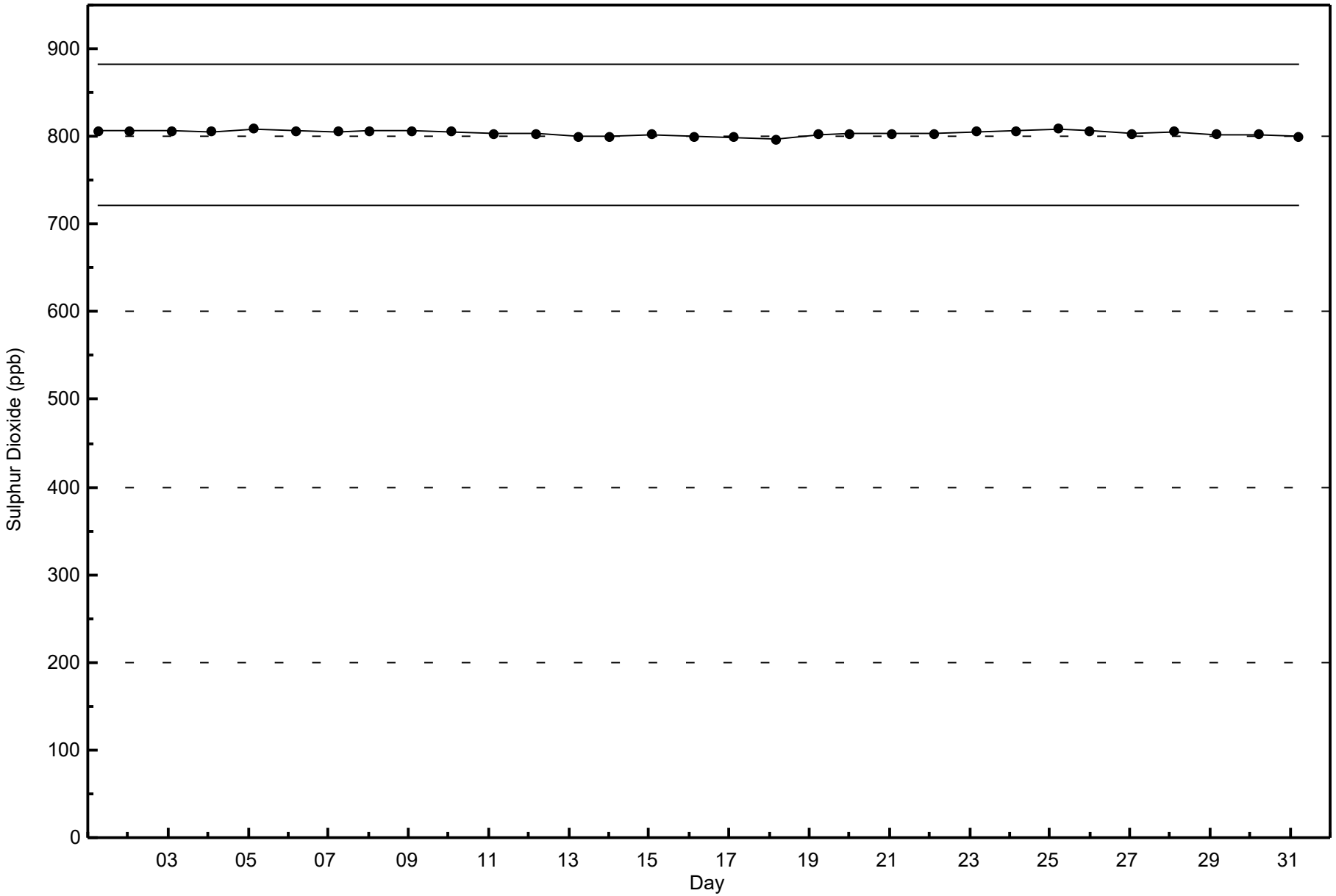


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Jackfish 2/3 - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H2S) - ppb

Jackfish 2/3 - March 2025

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

Maximum Value: 0.7 ppb on Mar 20 23:00

Maximum Daily Average: 0.2 ppb on Mar 5

Minimum Value: 0.0 ppb on Mar 20 00:00

Minimum Daily Average: 0.0 ppb on Mar 21

Maximum Diurnal Average: 0.2 ppb at hour 2

Minimum Diurnal Average: 0.1 ppb at hour 14

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} = 0.5

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	37
Percent Operational Time:	99.9

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

Z - zerospan C - Calibration M - Maintenance

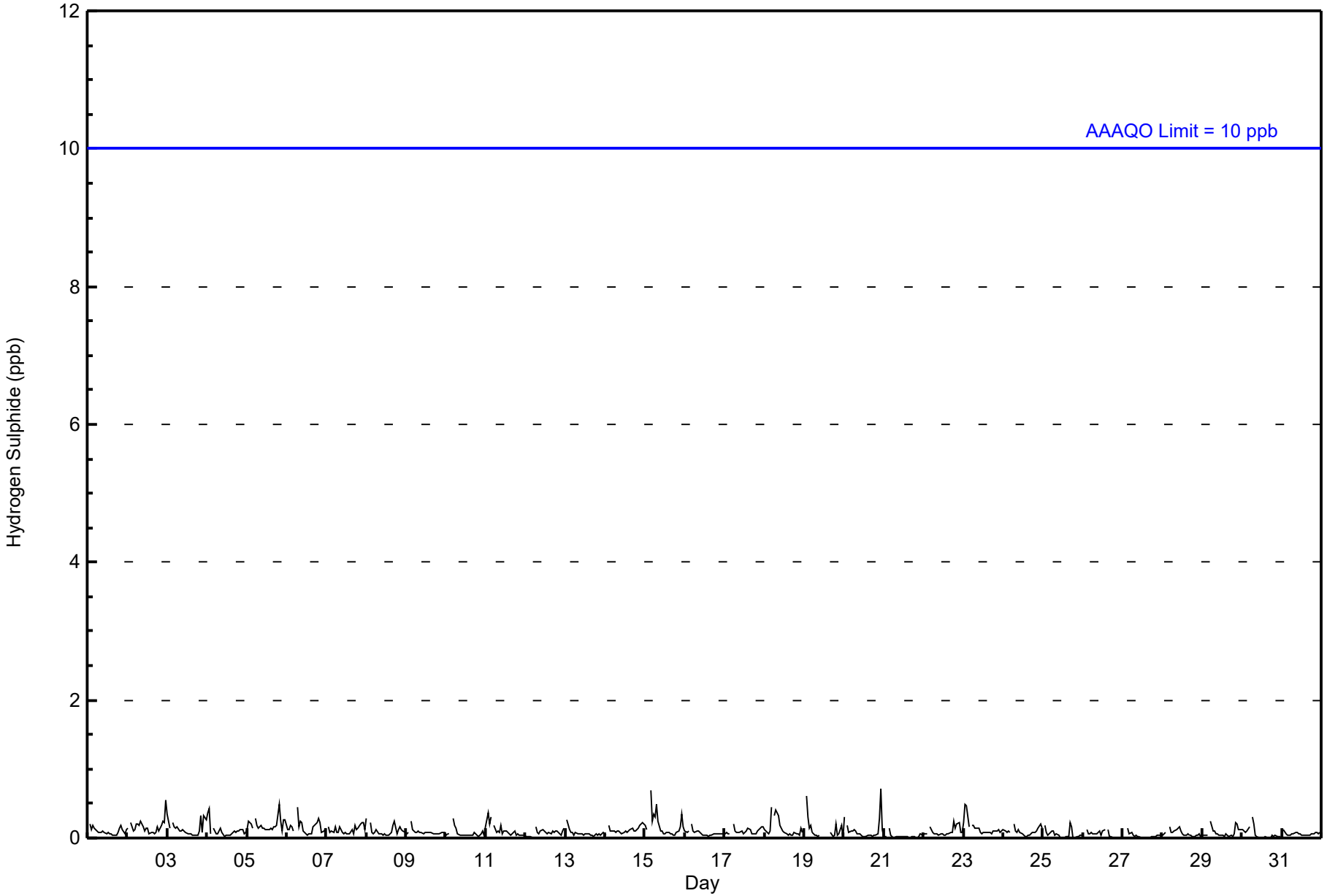
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H2S) - ppb

Jackfish 2/3 - March 2025



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

Total Number of Valid Hours: 706

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H2S) - ppb

Jackfish 2/3 - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	20	36	89	67	9	7	16	36	51	46	88	107	59	21	20	34	706
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	20	36	89	67	9	7	16	36	51	46	88	107	59	21	20	34	706

Total Number of Valid Hours: 706

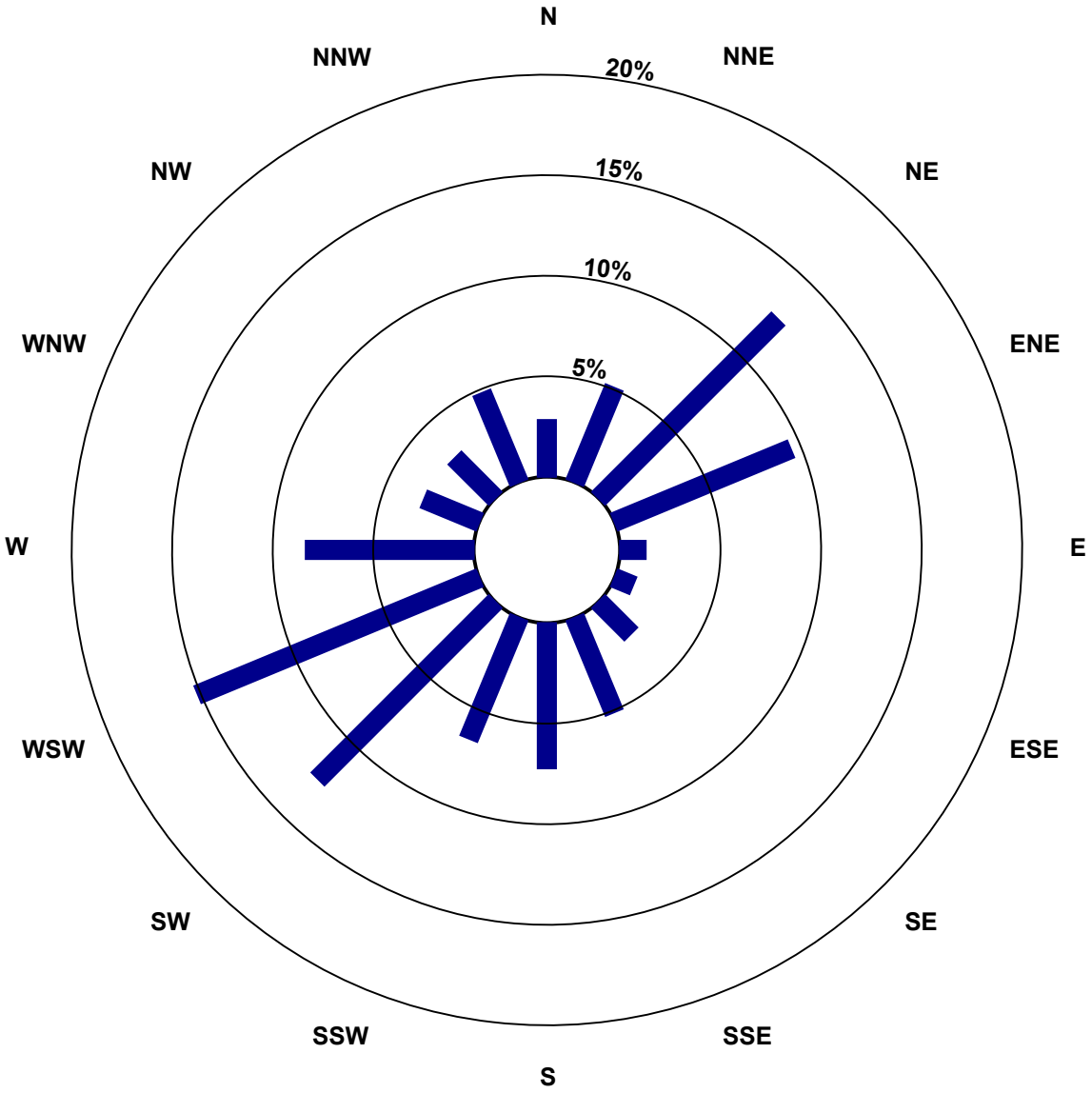
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Hydrogen Sulphide (H2S) - ppb

Jackfish 2/3



Classes (ppb)

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

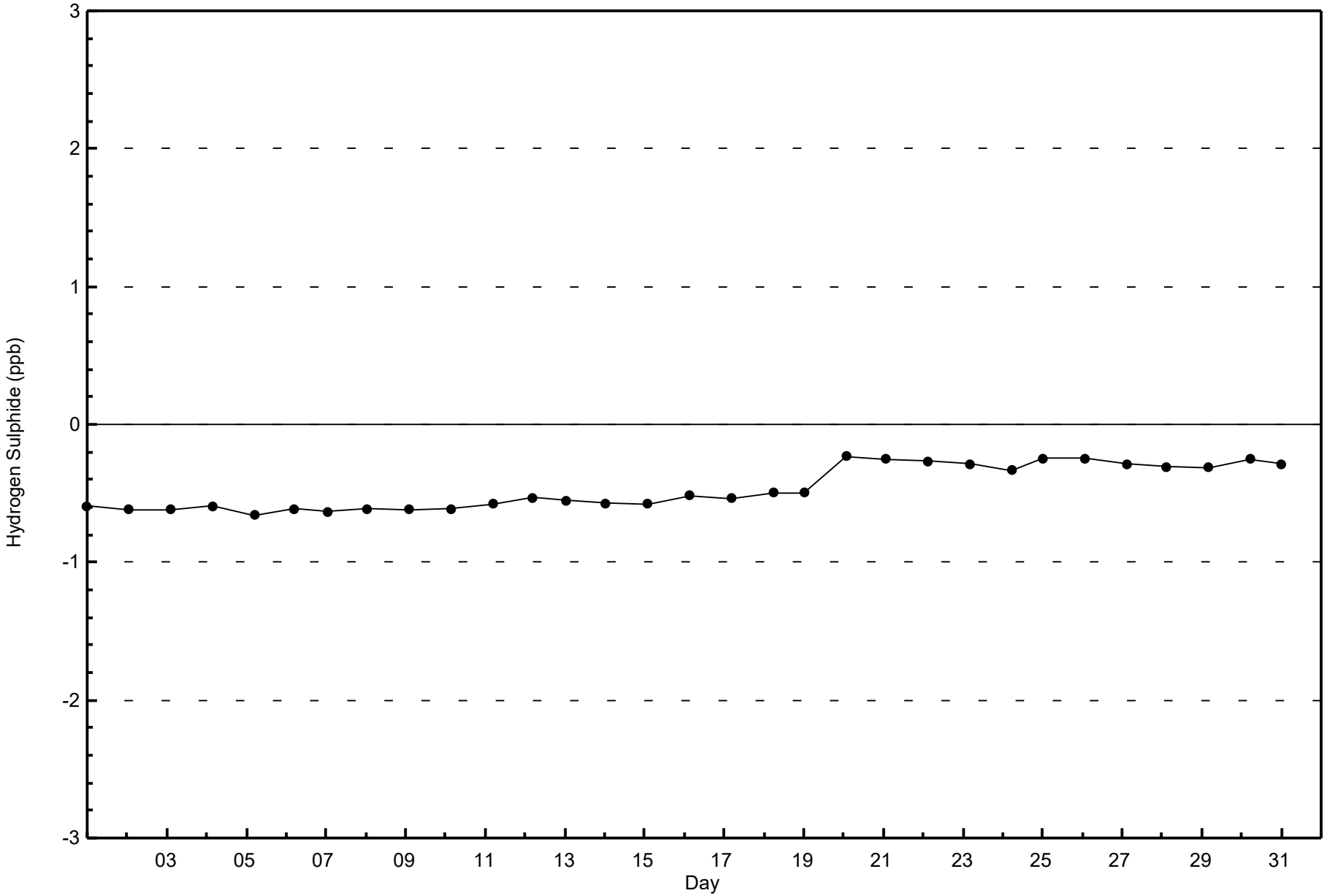
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H2S) - ppb

Jackfish 2/3 - March 2025

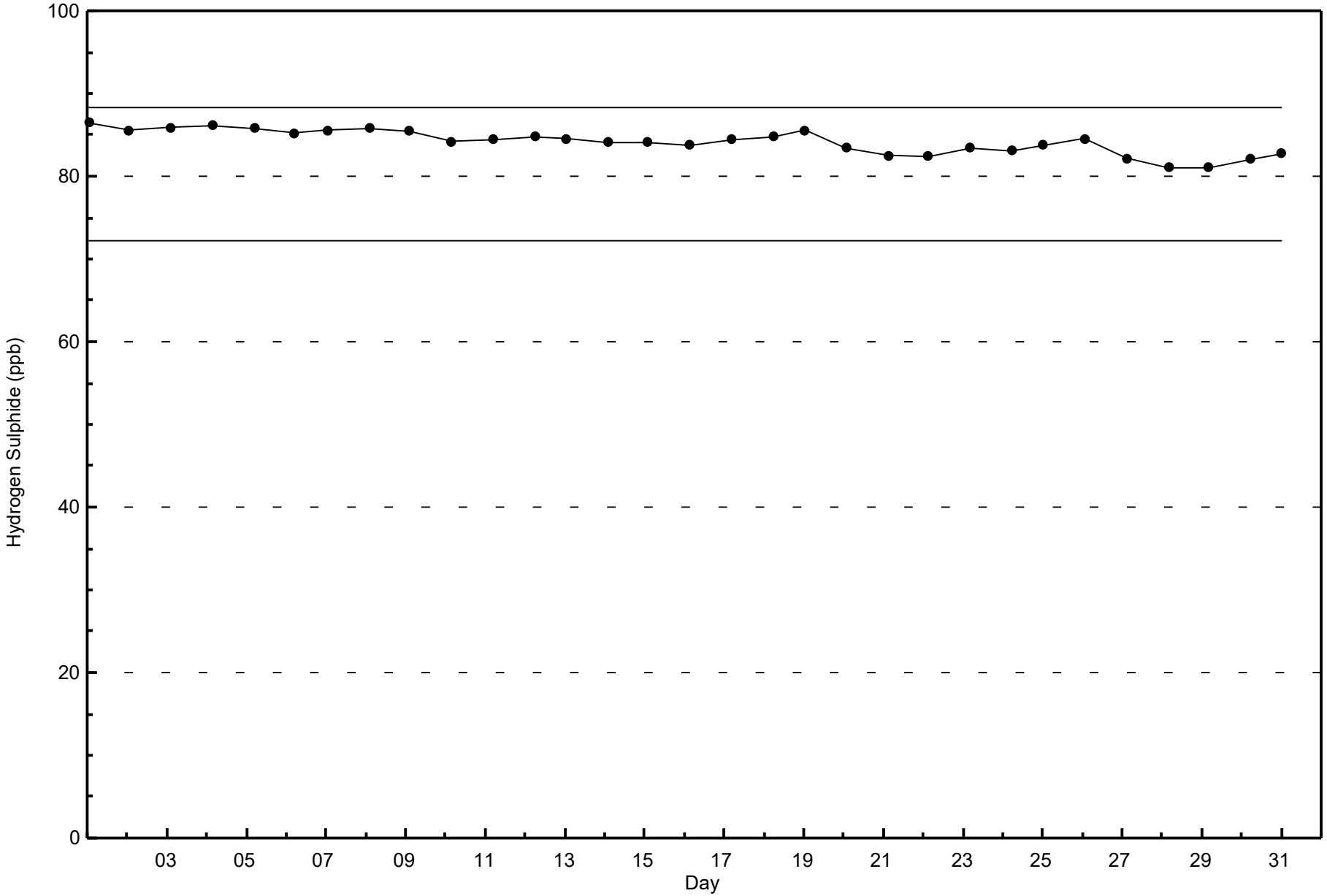


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H2S) - ppb

Jackfish 2/3 - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Jackfish 2/3 - March 2025

Maximum Value: 5.7 ppb on Mar 12 12:00

Maximum Daily Average: 1.1 ppb on Mar 12

Minimum Value: 0.0 ppb on Mar 1 15:00

Minimum Daily Average: 0.0 ppb on Mar 27

Maximum Diurnal Average: 0.7 ppb at hour 10

Minimum Diurnal Average: 0.1 ppb at hour 22

Monthly Average: 0.28 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} = 2.8

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	37
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.1	0.2	0.2	Z	0.9	0.5	0.3	0.2	1.0	0.5	0.5	0.5	0.2	0.1	0.0	0.1	0.0	0.1	3.0	0.0	1.9	0.0	0.2	0.6	0.5	3.0
2-Mar	0.0	0.5	1.3	0.5	Z	0.2	0.2	0.0	0.6	0.4	0.3	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.4	0.6	0.3	0.0	0.0	0.0	0.3	1.3
3-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.2	0.3	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.4	0.1	0.6	0.7	0.0	0.9	0.2	0.9
4-Mar	Z	0.9	0.2	0.1	0.0	0.5	0.2	0.2	0.5	0.5	0.3	0.3	0.2	0.3	0.3	0.1	0.3	0.1	0.0	0.3	0.3	0.1	0.1	0.3	0.3	0.9
5-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.5	0.4	0.2	0.3	0.4	0.2	0.1	0.1	0.3	3.1	2.1	0.4	0.2	0.5	0.4	3.1
6-Mar	0.5	0.9	Z	0.0	0.9	0.3	0.3	0.2	0.9	1.5	0.3	0.6	0.1	0.8	0.2	0.3	0.4	0.3	2.7	0.5	1.6	0.3	0.1	0.3	0.6	2.7
7-Mar	0.0	0.3	0.7	Z	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.2	0.1	0.1	0.2	0.4	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.2	0.7
8-Mar	0.0	0.1	0.1	0.0	Z	0.4	0.3	0.4	0.2	0.5	0.3	0.2	0.0	0.2	0.0	0.2	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6
9-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.2	0.8	1.1	0.6	0.6	1.2	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.2
10-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.3	0.4	0.4	0.2	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.4
11-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.3	0.3	0.5	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
12-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.7	2.2	4.7	5.7	4.1	2.0	2.5	1.5	0.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	1.1	5.7
13-Mar	0.0	0.0	0.0	Z	0.0	0.1	2.2	0.0	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	0.1	2.2
14-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.3	0.4	0.2	0.5	0.5	0.4	0.3	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
15-Mar	0.0	0.0	1.5	1.9	0.0	Z	2.4	0.8	1.8	0.3	0.5	0.3	0.7	0.3	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.7	0.6	2.7
16-Mar	Z	0.0	1.8	0.4	1.1	0.1	0.9	0.7	1.4	2.1	1.3	0.6	1.0	0.4	0.3	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.6	2.1
17-Mar	0.1	Z	0.1	0.2	0.1	0.2	0.2	0.4	0.5	0.4	0.5	0.3	0.2	0.2	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5
18-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.3	0.8	0.7	C	C	C	C	C	C	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	--	0.8
19-Mar	0.0	0.2	0.4	Z	0.0	0.4	0.4	0.5	0.8	0.7	0.4	0.6	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.2	0.0	0.9	0.0	0.3	0.9
20-Mar	0.2	0.0	0.0	0.0	Z	0.0	0.0	0.2	0.4	0.6	0.9	0.5	0.2	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.9
21-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.2	0.4	0.6	0.5	0.4	0.5	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6
22-Mar	Z	0.0	0.2	0.6	0.0	0.1	0.3	0.2	0.3	0.4	0.5	0.4	0.3	0.3	0.2	0.1	0.0	0.0	0.1	1.1	0.0	0.0	0.0	0.0	0.2	1.1
23-Mar	0.0	Z	0.1	0.2	0.0	0.8	0.2	0.7	0.6	0.2	0.2	0.1	0.1	0.3	0.1	0.0	0.0	0.0	0.7	0.5	2.4	0.5	0.7	0.1	0.4	2.4
24-Mar	3.1	0.3	Z	0.1	1.3	0.5	0.4	0.1	0.3	0.3	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	0.1	0.3	3.1
25-Mar	0.0	0.0	0.0	Z	0.1	0.1	0.0	0.1	0.2	0.5	0.2	0.2	0.2	0.1	0.3	0.3	0.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.7
26-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.4	0.8	2.0	1.0	0.3	0.3	0.3	M	0.5	0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.0
27-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.5	1.4	3.1	2.9	1.0	0.4	0.2	0.4	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.3	0.0	0.5	3.1
29-Mar	0.3	Z	0.5	0.0	0.2	0.4	0.9	0.3	0.4	0.6	0.3	0.2	0.2	0.1	0.1	0.3	0.0	0.0	0.0	0.3	0.7	0.1	2.4	0.4	0.4	2.4
30-Mar	0.0	0.1	Z	0.1	0.3	0.4	1.3	0.2	0.1	0.0	0.2	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	1.3
31-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.2	0.3	0.5	0.3	0.1	0.2	0.2	0.1	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
	0.2	0.1	0.3	0.2	0.2	0.2	0.4	0.2	0.5	0.7	0.6	0.5	0.4	0.3	0.3	0.3	0.2	0.1	0.2	0.2	0.3	0.1	0.2	0.2	Diurnal Average	
	3.1	0.9	1.8	1.9	1.3	0.8	2.4	0.8	1.8	3.1	4.7	5.7	4.1	2.0	2.5	1.5	0.7	0.5	3.0	3.1	2.4	0.7	2.4	2.7	Diurnal Maximum	

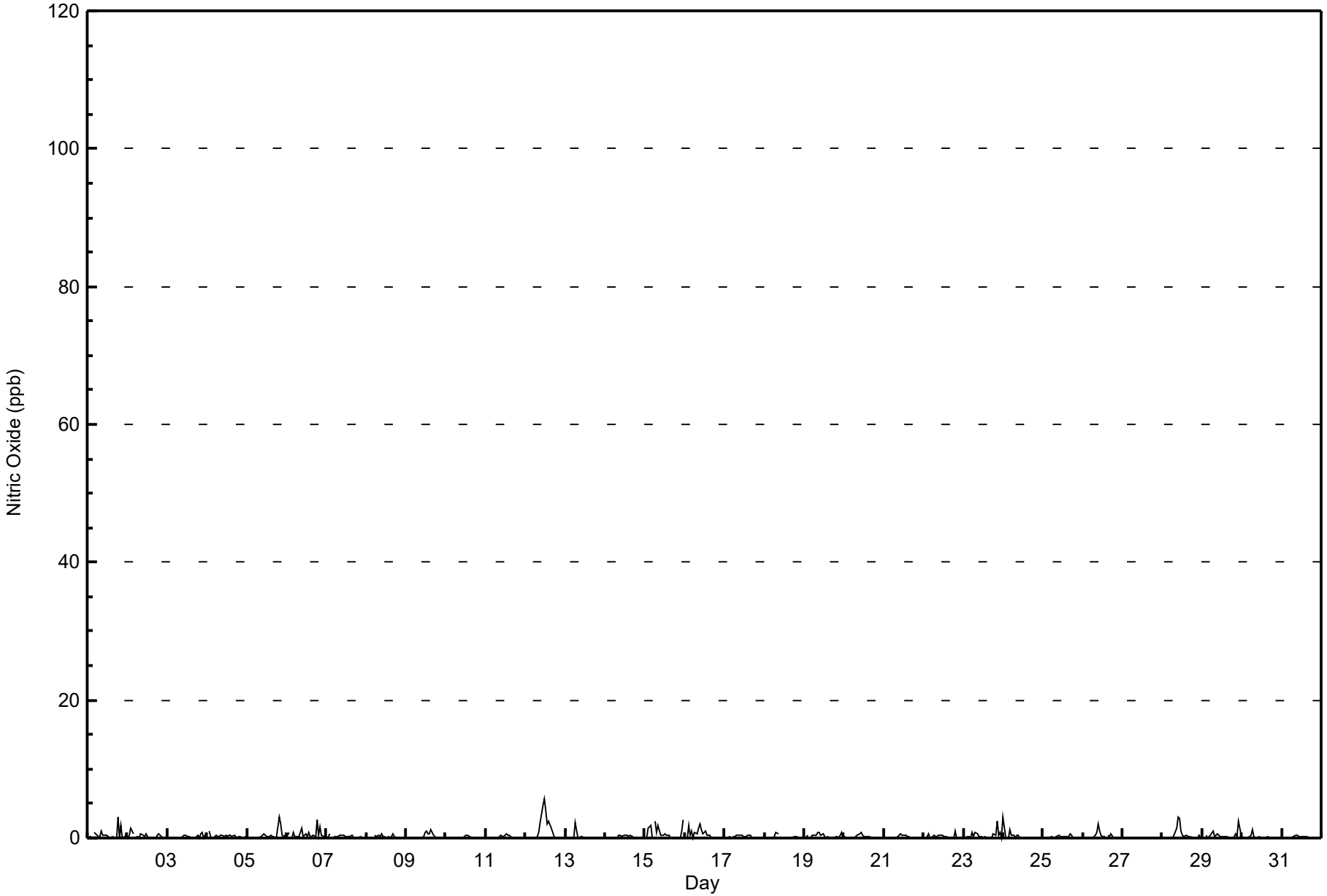
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Jackfish 2/3 - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	706	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Jackfish 2/3 - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	17	36	90	67	9	6	16	36	53	45	85	112	56	21	21	36	706
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	17	36	90	67	9	6	16	36	53	45	85	112	56	21	21	36	706

Total Number of Valid Hours: 706

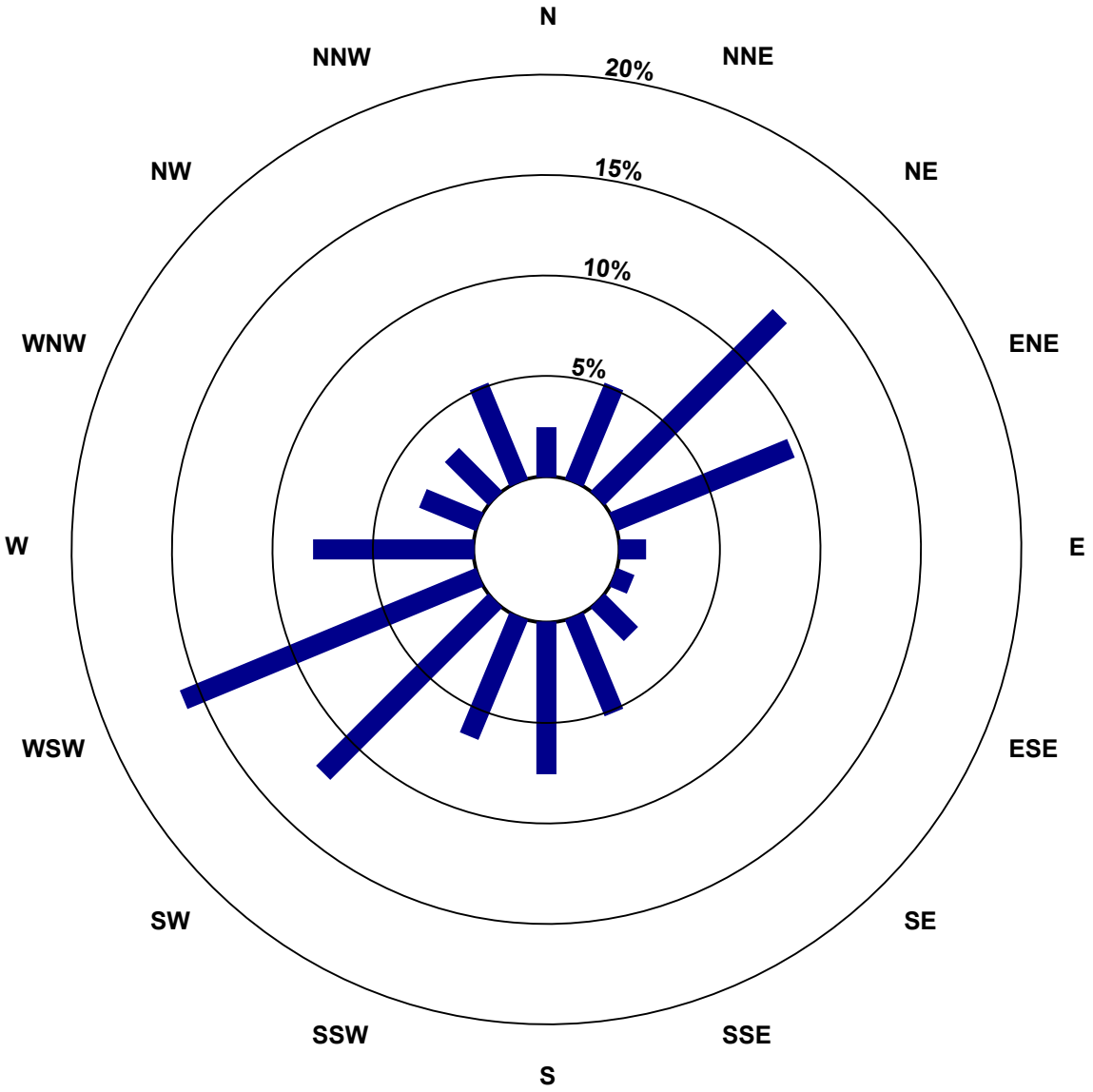
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitric Oxide (NO) - ppb

Jackfish 2/3



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

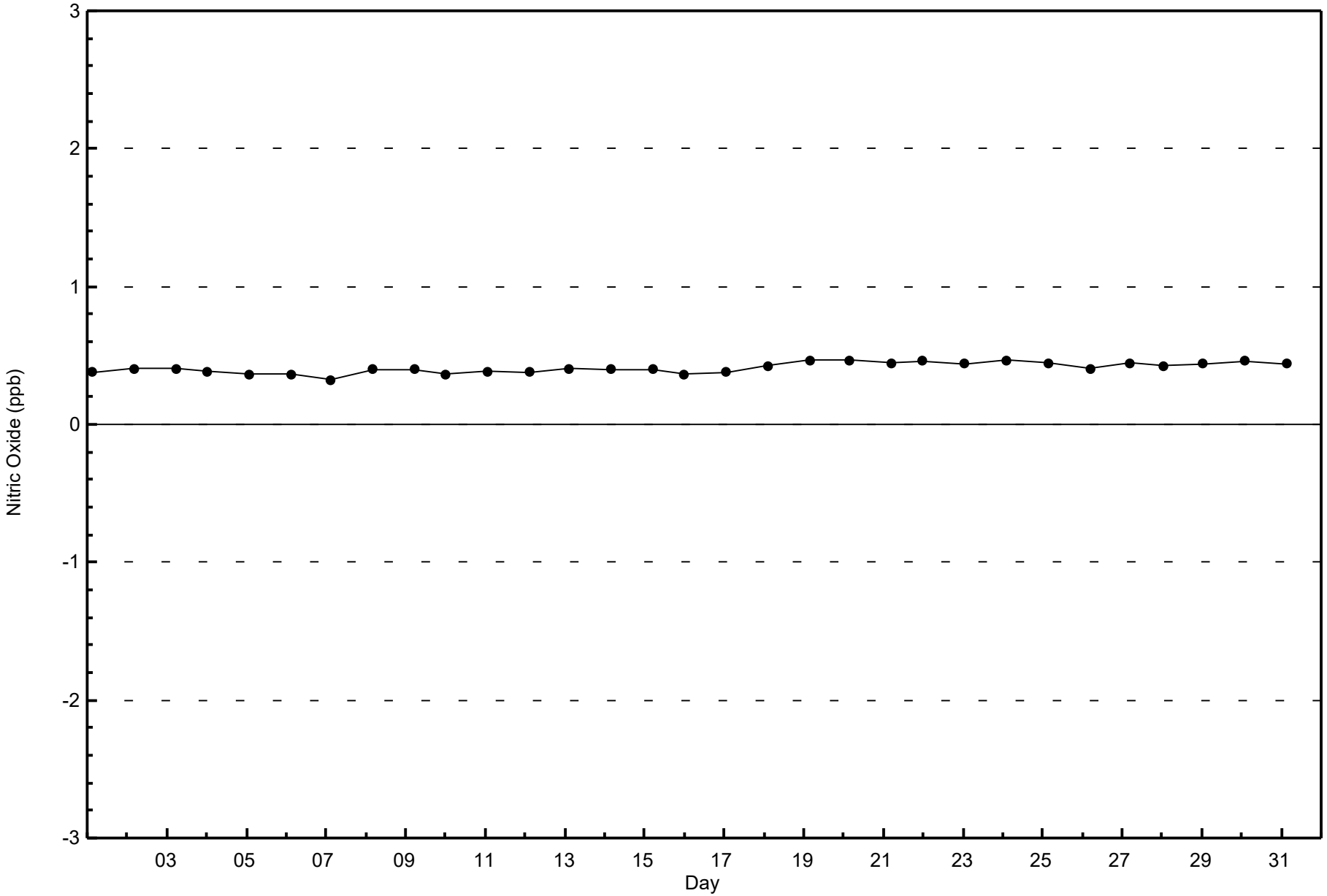
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Jackfish 2/3 - March 2025

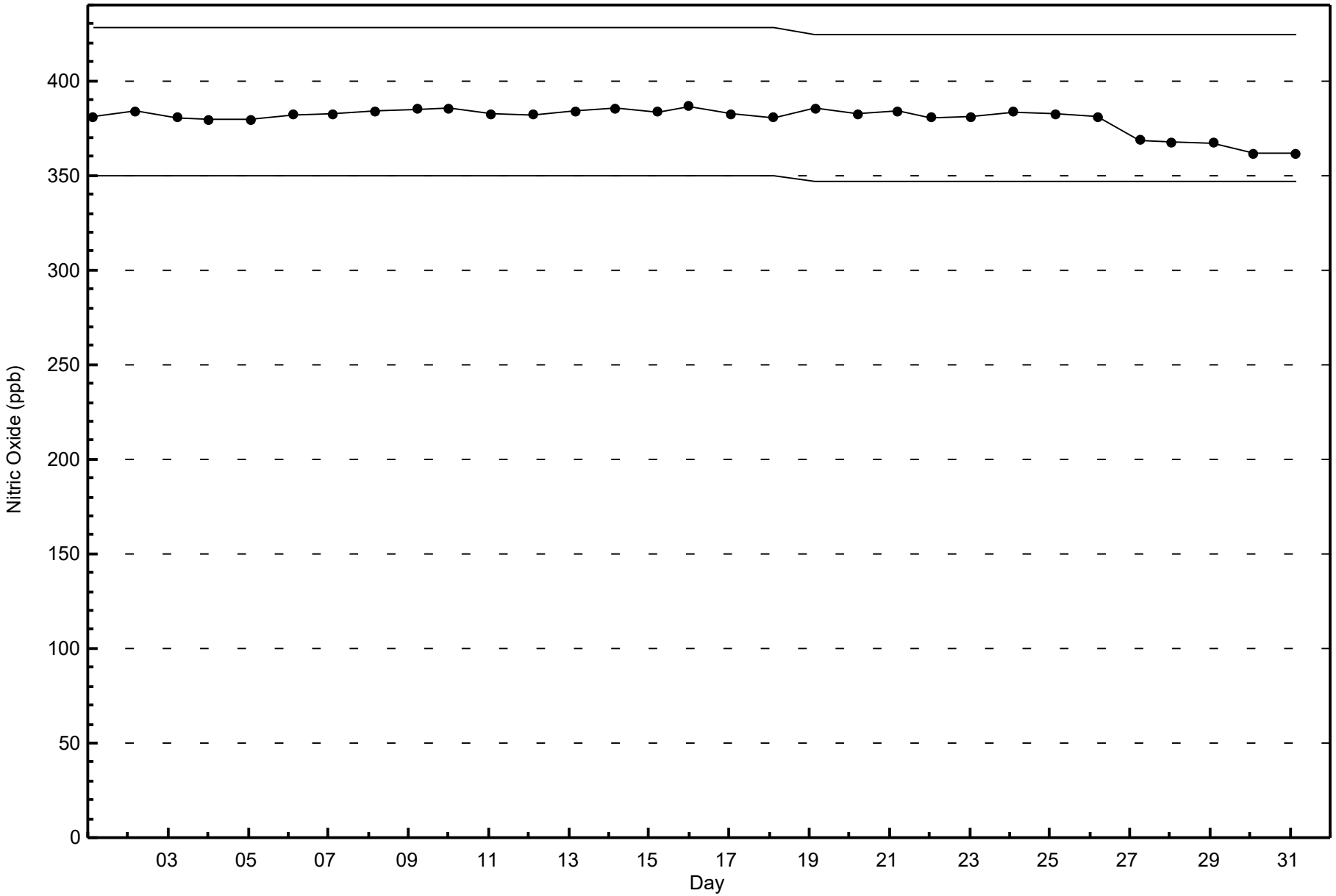


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Jackfish 2/3 - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Jackfish 2/3 - March 2025

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

Maximum Value: 12.6 ppb on Mar 16 00:00

Maximum Daily Average: 3.0 ppb on Mar 15

Minimum Value: 0.0 ppb on Mar 21 02:00

Minimum Daily Average: 0.5 ppb on Mar 27

Maximum Diurnal Average: 2.4 ppb at hour 7

Minimum Diurnal Average: 1.0 ppb at hour 14

Monthly Average: 1.64 ppb

Percentiles: $P_1 = 0.1$ $P_{10} = 0.5$ $Q_1 = 0.8$ Median = 1.3 $Q_3 = 2.1$ $P_{90} = 3.1$ $P_{99} = 6.1$

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	37
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	2.6	2.8	2.4	Z	1.9	1.6	2.0	1.8	2.3	2.0	1.9	1.9	1.2	0.8	0.6	0.9	0.9	1.2	3.8	1.0	3.9	1.7	2.5	2.6	1.9	3.9
2-Mar	1.3	2.3	2.9	1.9	Z	3.4	4.4	4.6	4.7	2.4	1.6	2.2	1.5	1.0	0.9	0.8	0.8	1.1	2.3	1.7	1.8	2.0	1.1	2.7	2.1	4.7
3-Mar	0.8	1.9	2.2	1.9	2.1	Z	2.8	1.8	1.9	2.5	2.2	1.5	0.9	0.9	0.9	0.7	0.8	0.6	3.4	3.2	2.0	3.2	1.0	1.6	1.8	3.4
4-Mar	Z	2.1	1.5	1.4	1.4	2.0	2.3	1.5	1.3	1.2	0.8	0.8	0.6	0.9	1.0	0.9	1.7	1.3	0.8	1.8	1.4	1.6	1.5	1.6	1.4	2.3
5-Mar	2.3	Z	3.2	2.0	2.7	2.6	2.4	2.4	2.4	1.7	1.6	1.0	0.8	0.8	1.2	1.0	1.2	2.1	2.3	4.1	3.5	1.9	1.6	2.0	2.0	4.1
6-Mar	2.2	2.8	Z	1.4	2.3	2.1	1.7	1.5	2.9	2.4	1.0	1.5	0.8	1.5	0.9	1.0	2.3	3.5	3.5	1.5	3.2	1.9	1.2	1.1	1.9	3.5
7-Mar	0.6	1.0	1.9	Z	1.2	1.3	1.4	2.0	1.6	1.1	1.0	0.6	0.6	0.6	1.1	2.1	0.9	1.4	1.0	0.6	1.1	0.7	1.5	0.5	1.1	2.1
8-Mar	0.5	1.4	1.2	0.9	Z	1.3	1.5	1.4	1.1	1.0	0.9	0.7	0.4	0.7	0.6	1.3	4.1	3.1	0.3	3.0	9.3	7.8	5.0	4.7	2.3	9.3
9-Mar	1.4	2.1	1.4	2.0	1.4	Z	1.6	1.9	1.3	0.8	0.9	2.1	4.1	2.6	2.0	3.8	3.1	2.9	1.7	1.7	2.0	2.2	2.2	0.7	2.0	4.1
10-Mar	Z	0.8	1.1	1.2	1.4	0.9	1.5	1.6	0.4	0.2	0.3	0.5	0.7	0.7	0.3	0.4	0.5	0.8	1.5	1.9	2.9	3.5	3.6	2.9	1.3	3.6
11-Mar	3.8	Z	5.1	4.0	2.8	1.7	1.5	1.7	1.4	1.2	1.0	1.2	1.6	1.4	1.7	1.9	0.9	1.0	1.5	1.5	1.4	0.5	0.5	0.7	1.7	5.1
12-Mar	0.5	0.1	Z	0.3	0.3	1.4	2.2	2.2	4.0	4.7	5.3	6.0	4.9	2.5	3.7	3.1	2.6	1.8	1.6	1.9	0.8	0.6	0.4	0.5	2.2	6.0
13-Mar	0.7	1.7	0.8	Z	1.8	2.8	2.7	1.1	1.7	2.1	1.2	0.6	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.6	1.5	0.4	0.2	0.1	1.0	2.8
14-Mar	0.1	0.1	0.1	0.1	Z	0.8	0.6	1.6	1.4	1.1	0.7	1.2	1.2	1.3	1.4	2.0	2.2	1.5	1.8	2.0	2.5	3.8	3.5	3.1	1.5	3.8
15-Mar	2.5	2.5	5.4	5.0	2.9	Z	8.8	3.8	3.7	0.7	0.8	0.8	1.1	1.1	1.3	0.4	0.4	0.7	1.1	2.2	2.9	2.6	6.7	12.6	3.0	12.6
16-Mar	Z	1.9	3.2	2.5	2.9	1.1	3.1	3.3	2.9	3.0	1.7	1.0	1.3	0.8	1.0	1.4	1.1	1.4	1.3	2.0	2.6	2.2	1.2	1.4	1.9	3.3
17-Mar	1.9	Z	2.0	2.5	2.8	2.5	2.2	3.0	3.3	1.9	1.9	1.8	1.8	2.0	2.8	2.2	1.8	1.8	1.4	1.6	3.1	4.9	4.7	3.8	2.5	4.9
18-Mar	2.5	1.7	Z	1.4	2.3	3.2	3.2	4.8	3.1	C	C	C	C	C	C	0.5	0.5	0.5	1.3	1.5	1.4	1.3	1.9	1.0	--	4.8
19-Mar	0.7	3.2	1.5	Z	1.2	1.7	1.6	1.6	1.8	1.7	0.9	1.0	0.7	0.4	0.5	0.4	0.6	0.7	0.4	2.3	1.7	1.0	1.9	1.4	1.3	3.2
20-Mar	2.2	1.0	1.9	2.0	Z	7.8	4.4	2.3	2.4	1.9	2.0	1.2	0.5	0.6	0.7	0.7	0.6	0.5	0.5	0.7	0.5	0.7	0.8	0.8	1.6	7.8
21-Mar	0.4	0.0	0.2	0.2	0.4	Z	1.0	0.8	1.1	1.2	1.3	1.1	1.1	1.3	1.4	1.1	1.2	1.0	0.9	1.2	0.8	1.0	1.4	1.5	0.9	1.5
22-Mar	Z	2.3	2.7	2.9	2.1	2.2	2.2	1.6	1.9	1.9	2.2	2.2	1.4	1.2	1.2	0.8	0.9	0.9	3.2	3.1	0.8	0.6	1.1	0.7	1.7	3.2
23-Mar	0.6	Z	1.2	1.1	0.9	3.2	1.9	2.4	1.7	0.9	0.6	0.6	0.4	0.6	0.4	0.4	0.5	0.5	6.1	5.4	3.2	1.5	1.4	3.4	1.7	6.1
24-Mar	2.9	1.0	Z	1.0	1.7	1.7	1.9	1.2	1.4	1.3	0.8	0.8	0.8	0.8	0.9	0.8	0.8	1.0	1.7	1.0	1.6	0.8	0.8	0.6	1.2	2.9
25-Mar	0.4	0.4	0.2	Z	0.7	0.9	0.7	0.7	0.8	0.9	0.5	0.7	0.6	0.6	0.8	0.9	2.8	2.4	0.3	0.6	1.6	0.6	0.5	0.9	0.8	2.8
26-Mar	0.9	0.9	0.7	0.8	Z	1.4	2.0	4.4	4.0	4.4	2.1	0.8	0.8	0.7	M	1.4	0.9	3.8	0.3	0.2	0.2	0.2	0.5	0.3	1.4	4.4
27-Mar	1.3	0.6	2.0	1.1	0.7	Z	0.5	0.5	0.3	0.3	0.2	0.2	0.3	0.2	0.5	0.4	0.3	1.2	0.5	0.2	0.1	0.2	0.2	0.2	0.5	2.0
28-Mar	Z	0.4	0.3	0.2	1.4	2.5	4.5	4.7	6.0	7.5	5.5	2.1	1.0	0.5	0.9	1.1	1.6	1.2	0.6	0.4	0.7	1.2	2.8	1.6	2.1	7.5
29-Mar	1.5	Z	1.4	0.7	1.8	2.9	2.9	1.6	1.3	1.6	1.1	0.6	0.7	0.6	1.1	1.8	0.8	0.5	0.6	1.1	2.0	1.4	1.9	1.7	1.4	2.9
30-Mar	0.9	1.0	Z	1.2	1.2	2.3	2.6	0.9	0.7	0.5	0.6	0.3	0.3	0.7	0.8	1.1	0.6	0.3	0.3	0.4	0.5	0.5	0.5	0.6	0.8	2.6
31-Mar	0.7	2.8	3.4	Z	1.5	2.3	2.5	2.8	2.8	2.7	1.7	1.2	1.3	1.0	0.9	1.0	0.8	0.8	0.9	1.3	1.1	1.1	0.9	1.0	1.6	3.4
	1.4	1.5	1.9	1.6	1.7	2.2	2.4	2.2	2.2	1.9	1.5	1.3	1.1	1.0	1.1	1.2	1.2	1.4	1.5	1.7	2.0	1.7	1.8	1.9	Diurnal Average	
	3.8	3.2	5.4	5.0	2.9	7.8	8.8	4.8	6.0	7.5	5.5	6.0	4.9	2.6	3.7	3.8	4.1	3.8	6.1	5.4	9.3	7.8	6.7	12.6	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

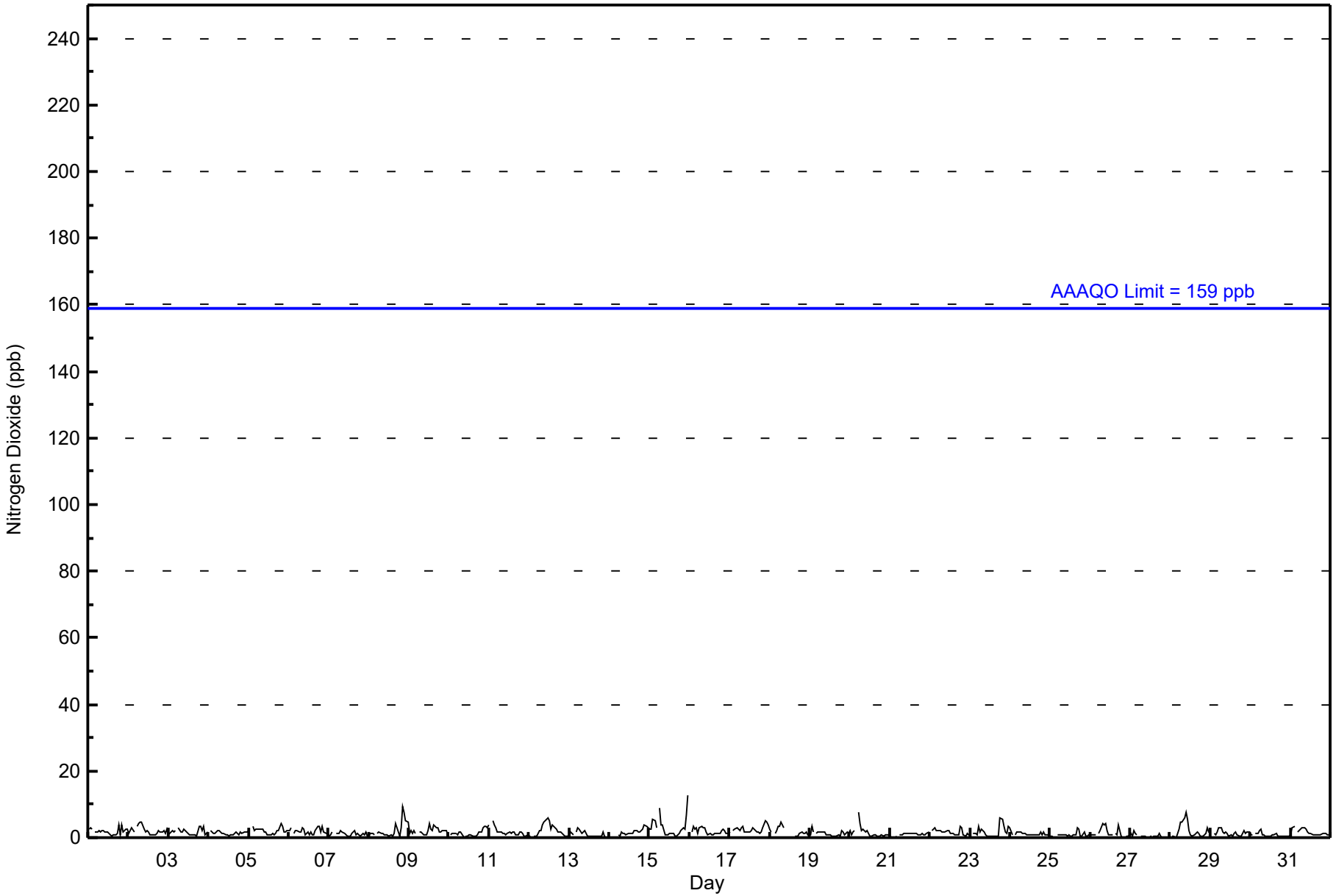
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Jackfish 2/3 - March 2025



Nitrogen Dioxide (NO_2) - ppb
Jackfish 2/3 - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	706	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Jackfish 2/3 - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	17	36	90	67	9	6	16	36	53	45	85	112	56	21	21	36	706
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	17	36	90	67	9	6	16	36	53	45	85	112	56	21	21	36	706

Total Number of Valid Hours: 706

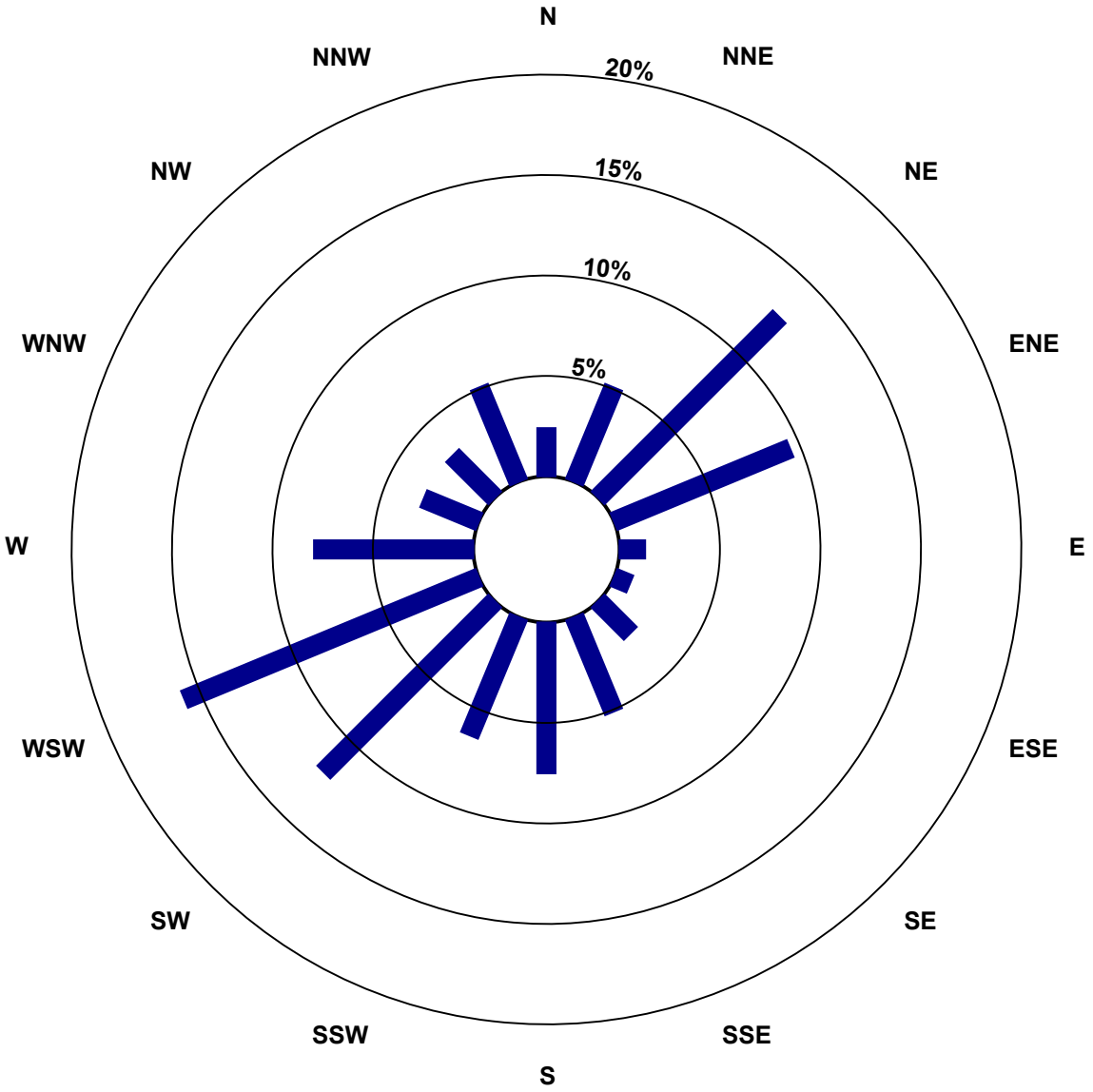
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Dioxide (NO_2) - ppb

Jackfish 2/3



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

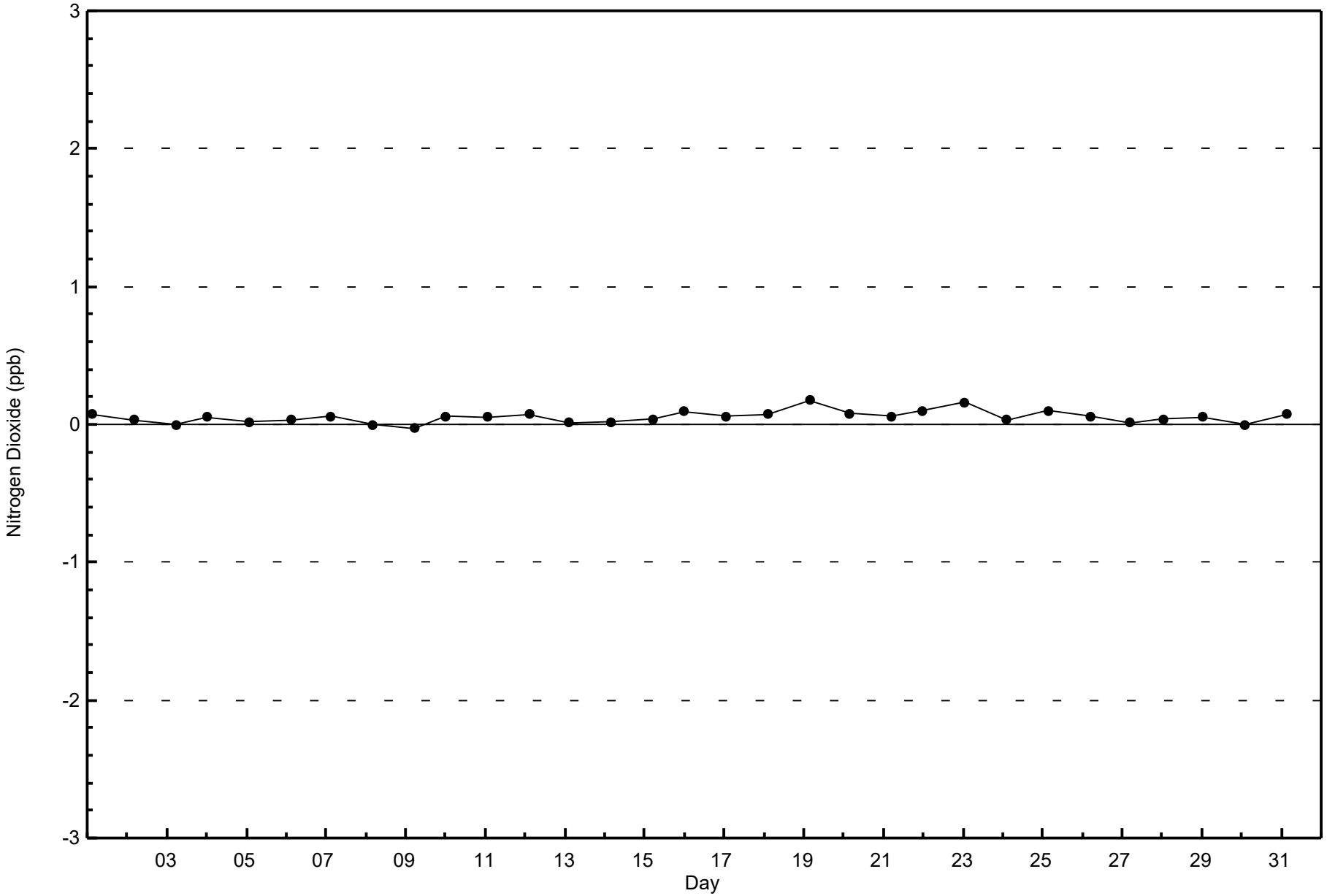
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Jackfish 2/3 - March 2025



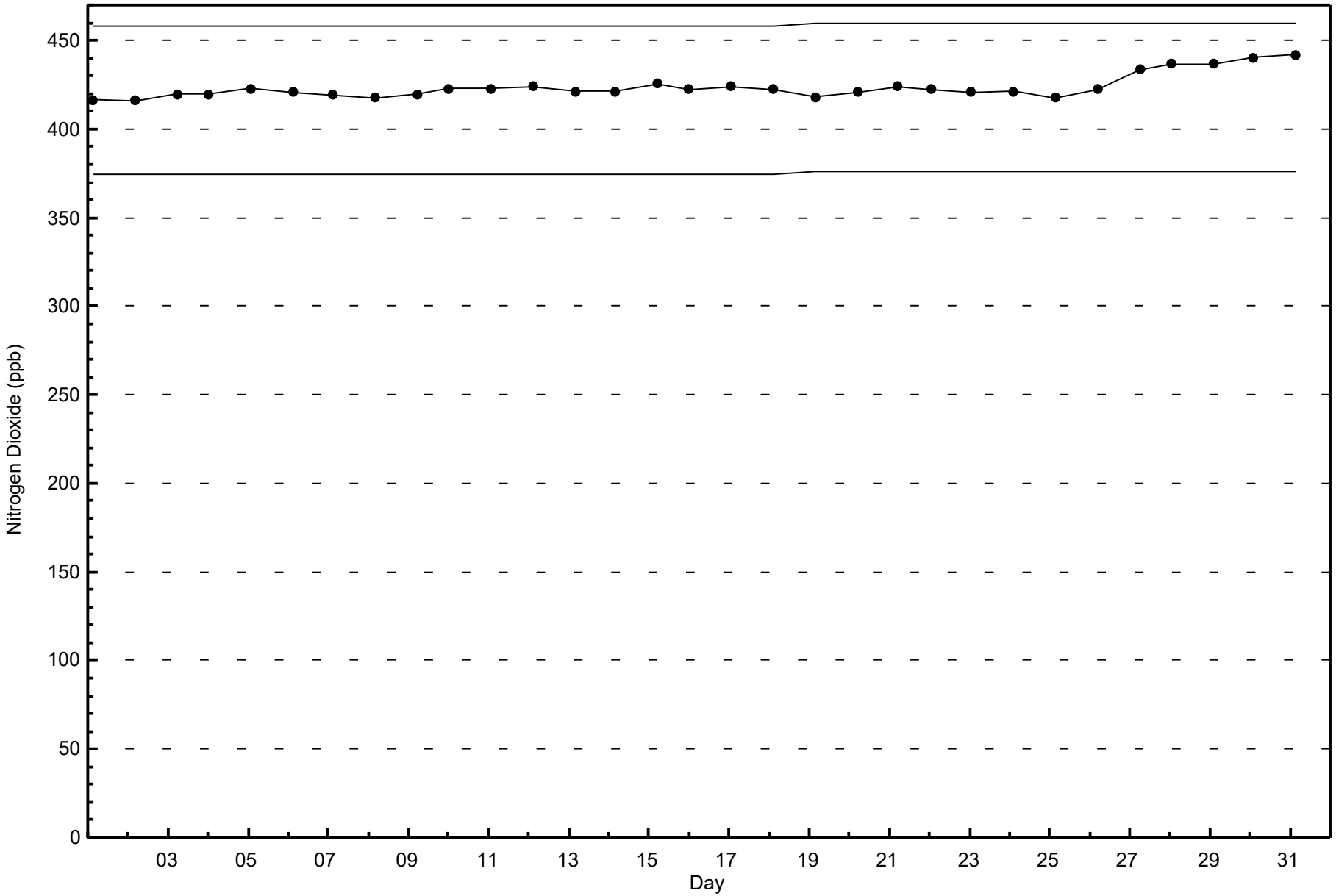
27 - 31

Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Jackfish 2/3 - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Jackfish 2/3 - March 2025

Maximum Value: 15.3 ppb on Mar 16 00:00

Maximum Daily Average: 3.7 ppb on Mar 15

Minimum Value: 0.0 ppb on Mar 21 02:00

Minimum Daily Average: 0.5 ppb on Mar 27

Maximum Diurnal Average: 2.8 ppb at hour 7

Minimum Diurnal Average: 1.3 ppb at hour 14

Monthly Average: 1.92 ppb

Percentiles: P_1 = 0.1 P_{10} = 0.5 Q_1 = 0.8 Median = 1.5 Q_3 = 2.4 P_{90} = 3.8 P_{99} = 8.4

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	37
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	2.7	3.0	2.6	Z	2.8	2.1	2.3	2.0	3.3	2.5	2.4	2.4	1.4	0.9	0.6	1.0	0.9	1.3	6.8	1.0	5.8	1.7	2.7	3.2	2.4	6.8
2-Mar	1.3	2.8	4.2	2.4	Z	3.6	4.6	4.6	5.3	2.8	1.9	2.8	1.6	1.0	0.9	0.8	0.8	1.1	2.7	2.3	2.1	2.0	1.1	2.7	2.4	5.3
3-Mar	0.8	1.9	2.2	1.9	2.1	Z	2.8	1.8	1.9	2.7	2.5	1.8	1.1	1.0	0.9	0.7	0.8	0.6	3.8	3.3	2.6	3.9	1.0	2.5	1.9	3.9
4-Mar	Z	3.0	1.7	1.5	1.4	2.5	2.5	1.7	1.8	1.7	1.1	1.1	0.8	1.2	1.3	1.0	2.0	1.4	0.8	2.1	1.7	1.7	1.6	1.9	1.6	3.0
5-Mar	2.3	Z	3.2	2.0	2.7	2.6	2.4	2.4	2.6	2.1	2.1	1.4	1.0	1.1	1.6	1.2	1.3	2.2	2.6	7.2	5.6	2.3	1.8	2.5	2.4	7.2
6-Mar	2.7	3.7	Z	1.4	3.2	2.4	2.0	1.7	3.8	3.9	1.3	2.1	0.9	2.3	1.1	1.3	2.7	3.8	6.2	2.0	4.8	2.2	1.3	1.4	2.5	6.2
7-Mar	0.6	1.3	2.6	Z	1.4	1.5	1.6	2.2	1.9	1.5	1.3	0.8	0.7	0.7	1.3	2.5	0.9	1.4	1.0	0.6	1.2	0.7	1.6	0.5	1.3	2.6
8-Mar	0.5	1.5	1.3	0.9	Z	1.7	1.8	1.8	1.3	1.5	1.2	0.9	0.4	0.9	0.6	1.5	4.7	3.3	0.3	3.0	9.3	7.8	5.0	4.7	2.4	9.3
9-Mar	1.4	2.1	1.4	2.0	1.4	Z	1.6	1.9	1.3	0.9	1.1	2.9	5.2	3.2	2.6	5.0	3.6	3.1	1.7	1.7	2.0	2.2	2.2	0.7	2.2	5.2
10-Mar	Z	0.8	1.1	1.2	1.4	0.9	1.5	1.7	0.5	0.2	0.4	0.8	1.1	1.1	0.5	0.5	0.5	0.9	1.5	1.9	3.0	3.5	3.6	2.9	1.4	3.6
11-Mar	3.8	Z	5.1	4.0	2.8	1.7	1.5	1.8	1.6	1.5	1.3	1.5	2.1	1.8	2.0	2.1	1.0	1.0	1.5	1.5	1.4	0.5	0.5	0.7	1.9	5.1
12-Mar	0.5	0.1	Z	0.3	0.3	1.4	2.2	2.3	4.7	6.9	10.0	11.7	9.0	4.5	6.2	4.6	3.3	2.0	1.6	1.9	0.8	0.6	0.4	0.5	3.3	11.7
13-Mar	0.7	1.7	0.8	Z	1.8	2.9	4.9	1.1	1.8	2.4	1.4	0.6	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.6	1.5	0.4	0.2	0.1	1.1	4.9
14-Mar	0.1	0.1	0.1	0.1	Z	0.8	0.6	1.7	1.7	1.5	0.9	1.7	1.7	1.7	1.7	2.3	2.4	1.6	1.8	2.0	2.5	3.8	3.5	3.1	1.6	3.8
15-Mar	2.5	2.5	6.9	6.9	2.9	Z	11.2	4.6	5.5	1.0	1.3	1.1	1.8	1.4	1.7	0.4	0.4	0.7	1.1	2.2	2.9	2.6	7.7	15.3	3.7	15.3
16-Mar	Z	1.9	5.0	2.9	4.0	1.2	4.0	4.0	4.3	5.1	3.0	1.6	2.3	1.2	1.3	1.7	1.2	1.5	1.3	2.0	2.6	2.2	1.2	1.5	2.5	5.1
17-Mar	2.0	Z	2.1	2.7	2.9	2.7	2.4	3.4	3.8	2.3	2.4	2.1	2.0	2.2	3.3	2.6	1.8	1.8	1.4	1.6	3.1	4.9	4.7	3.8	2.7	4.9
18-Mar	2.5	1.7	Z	1.4	2.3	3.2	3.5	5.6	3.8	C	C	C	C	C	C	0.6	0.5	0.5	1.4	1.6	1.5	1.3	2.0	1.1	--	5.6
19-Mar	0.7	3.4	1.9	Z	1.2	2.1	2.0	2.1	2.6	2.4	1.3	1.6	0.9	0.5	0.6	0.5	0.6	0.7	0.4	2.5	1.9	1.0	2.8	1.4	1.5	3.4
20-Mar	2.4	1.0	1.9	2.0	Z	7.8	4.4	2.5	2.8	2.5	2.9	1.7	0.7	0.7	0.8	0.9	0.7	0.5	0.5	0.7	0.5	0.7	0.8	0.8	1.7	7.8
21-Mar	0.4	0.0	0.2	0.2	0.4	Z	1.0	0.9	1.3	1.6	1.9	1.6	1.5	1.8	1.7	1.2	1.3	1.0	0.9	1.2	0.8	1.0	1.4	1.5	1.1	1.9
22-Mar	Z	2.3	2.9	3.5	2.1	2.3	2.5	1.8	2.2	2.3	2.7	2.6	1.7	1.5	1.4	0.9	0.9	0.9	3.3	4.2	0.8	0.6	1.1	0.7	2.0	4.2
23-Mar	0.6	Z	1.3	1.3	0.9	4.0	2.1	3.1	2.3	1.1	0.8	0.7	0.5	0.9	0.5	0.4	0.5	0.5	6.8	5.9	5.6	2.0	2.1	3.5	2.1	6.8
24-Mar	6.0	1.3	Z	1.1	3.0	2.2	2.3	1.3	1.7	1.6	0.8	0.9	0.8	0.8	1.0	0.9	0.8	1.0	1.7	1.0	1.6	0.8	0.8	0.7	1.5	6.0
25-Mar	0.4	0.4	0.2	Z	0.8	1.0	0.7	0.8	1.0	1.4	0.7	0.9	0.8	0.7	1.1	1.2	3.5	2.7	0.3	0.6	1.6	0.6	0.5	0.9	1.0	3.5
26-Mar	0.9	0.9	0.7	0.8	Z	1.4	2.0	4.8	4.8	6.4	3.1	1.1	1.1	1.0	M	1.9	1.1	4.3	0.3	0.2	0.2	0.2	0.5	0.3	1.7	6.4
27-Mar	1.3	0.6	2.0	1.1	0.7	Z	0.5	0.5	0.3	0.3	0.2	0.2	0.3	0.2	0.5	0.4	0.3	1.2	0.5	0.2	0.1	0.2	0.2	0.2	0.5	2.0
28-Mar	Z	0.4	0.3	0.2	1.4	2.5	4.6	5.2	7.4	10.6	8.4	3.1	1.4	0.7	1.3	1.4	1.9	1.3	0.6	0.4	0.7	1.2	3.1	1.6	2.6	10.6
29-Mar	1.8	Z	1.9	0.7	2.0	3.3	3.8	1.9	1.7	2.2	1.4	0.8	0.9	0.7	1.2	2.1	0.8	0.5	0.6	1.4	2.7	1.5	4.3	2.1	1.8	4.3
30-Mar	0.9	1.1	Z	1.3	1.5	2.7	3.9	1.1	0.8	0.5	0.8	0.3	0.3	0.8	0.9	1.2	0.6	0.3	0.3	0.4	0.5	0.5	0.5	0.6	1.0	3.9
31-Mar	0.7	2.8	3.4	Z	1.5	2.3	2.6	3.0	3.1	3.2	2.0	1.3	1.5	1.2	1.0	1.3	0.9	0.8	0.9	1.3	1.1	1.1	0.9	1.0	1.7	3.4
	1.6	1.6	2.2	1.8	1.9	2.4	2.8	2.4	2.7	2.6	2.1	1.8	1.5	1.3	1.4	1.4	1.4	1.4	1.8	1.9	2.3	1.8	2.0	2.1	Diurnal Average	
	6.0	3.7	6.9	6.9	4.0	7.8	11.2	5.6	7.4	10.6	10.0	11.7	9.0	4.5	6.2	5.0	4.7	4.3	6.8	7.2	9.3	7.8	7.7	15.3	Diurnal Maximum	

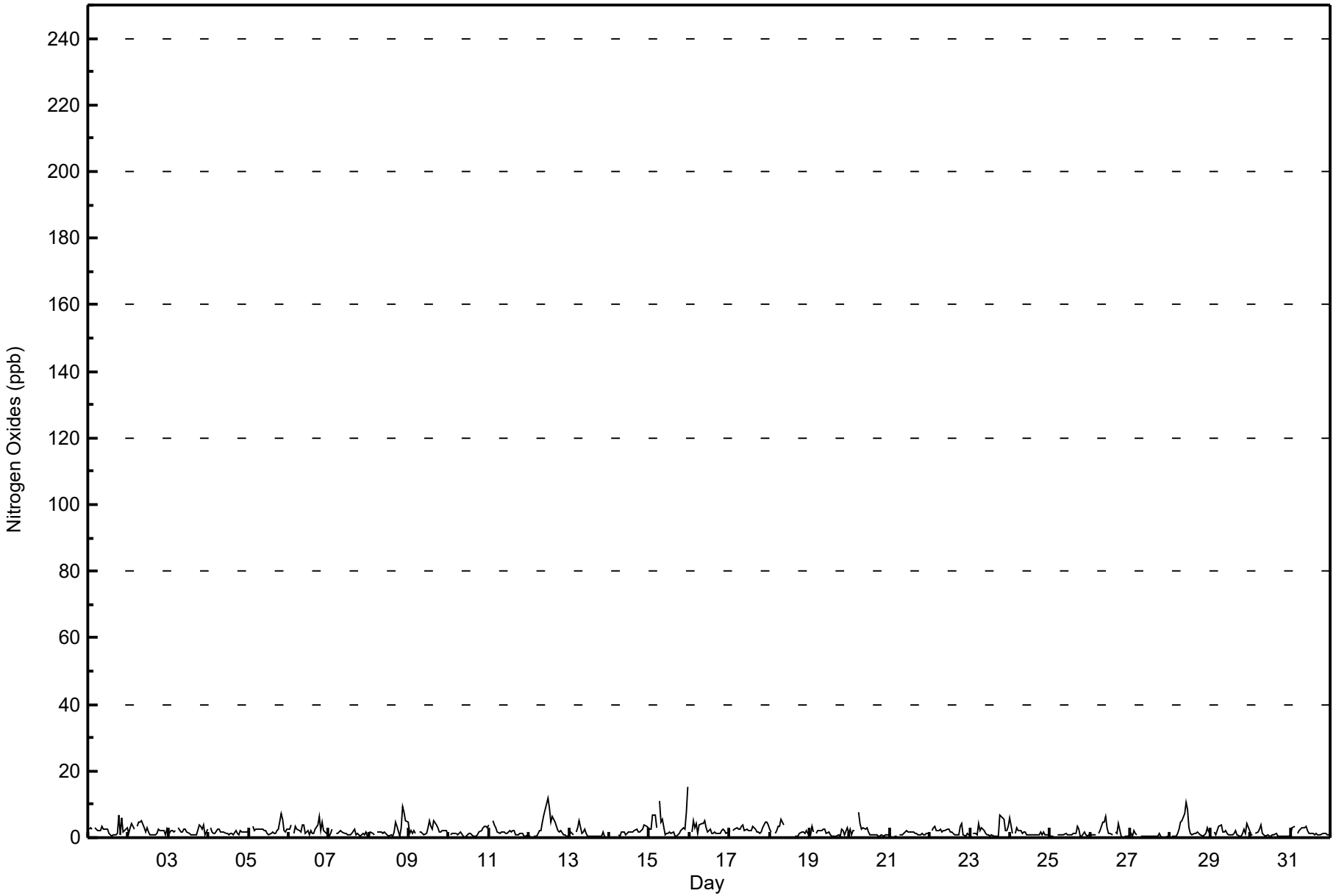
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Jackfish 2/3 - March 2025



Nitrogen Oxides (NO_X) - ppb
Jackfish 2/3 - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	706	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Jackfish 2/3 - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	17	36	90	67	9	6	16	36	53	45	85	112	56	21	21	36	706
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	17	36	90	67	9	6	16	36	53	45	85	112	56	21	21	36	706

Total Number of Valid Hours: 706

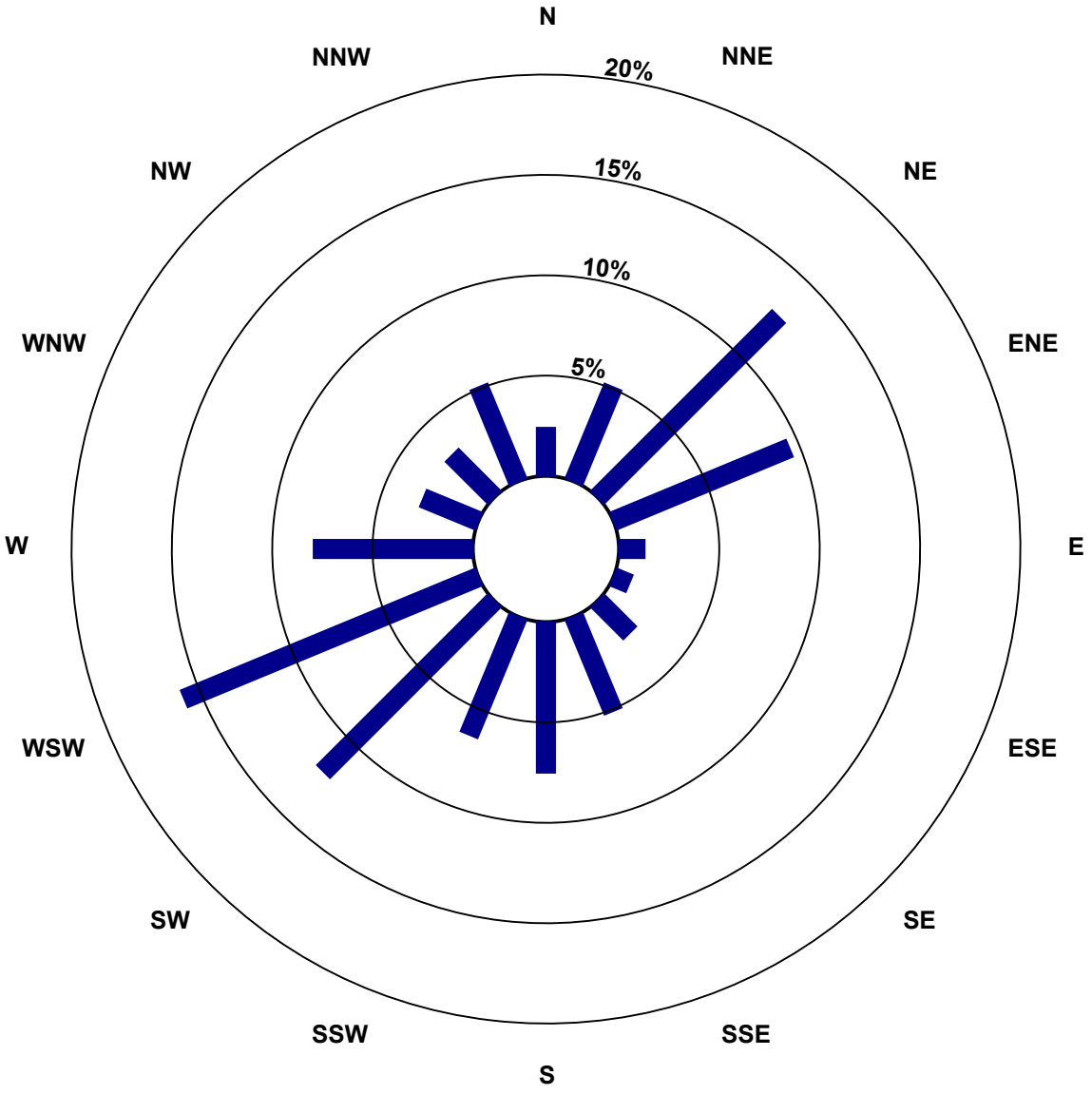
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Oxides (NO_X) - ppb

Jackfish 2/3



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

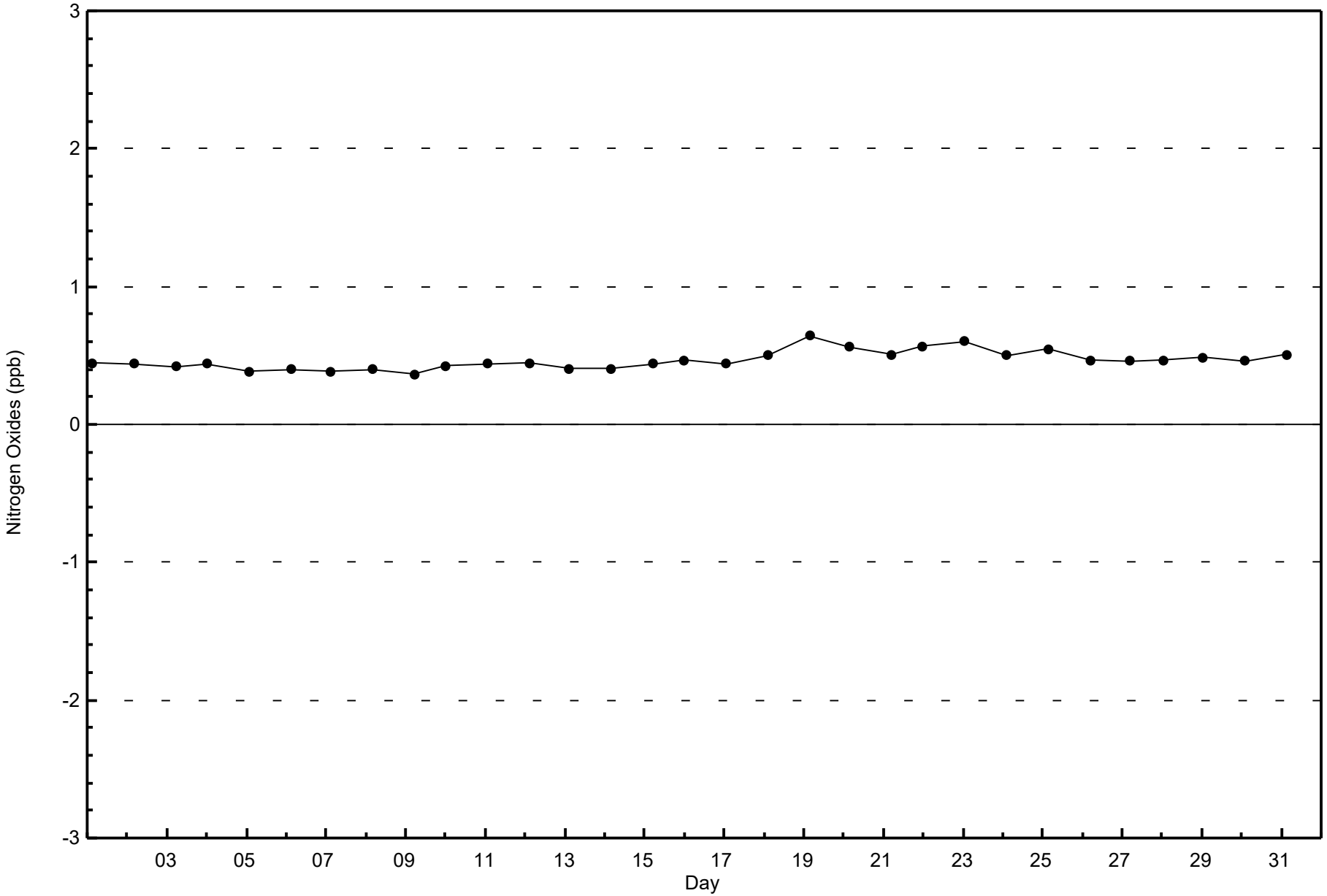
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Jackfish 2/3 - March 2025

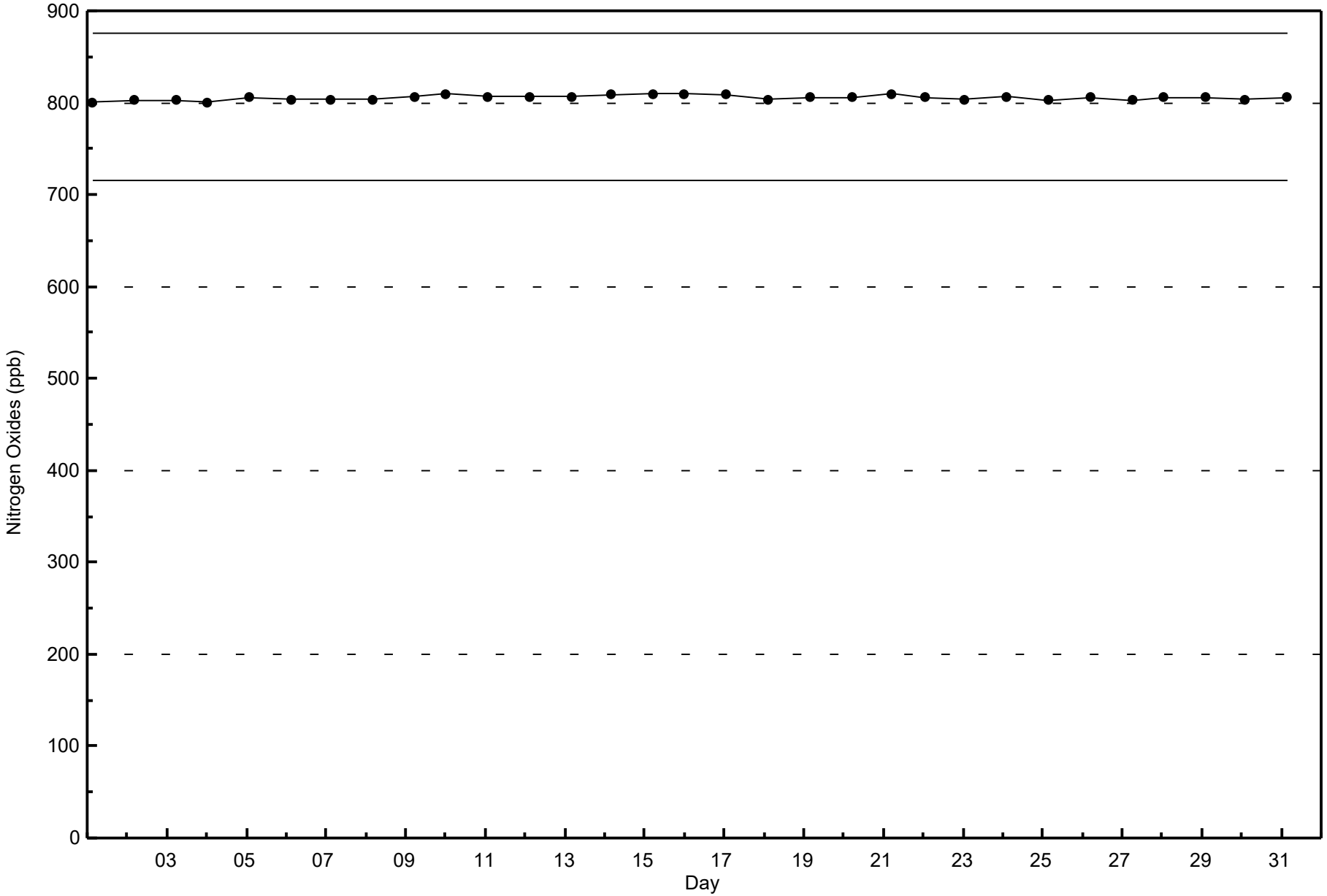


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Jackfish 2/3 - March 2025



Maximum Value: 9.9 C on Mar 25 16:00

Maximum Daily Average: 3.5 C on Mar 2

Minimum Value: -22.8 C on Mar 10 03:00

Minimum Daily Average: -16.5 C on Mar 9

Maximum Diurnal Average: -1.2 C at hour 16

Minimum Diurnal Average: -9.5 C at hour 7

Monthly Average: -5.66 C

Percentiles: P_1 = -21.6 P_{10} = -15.7 Q_1 = -11.1 Median = -5.3 Q_3 = -0.3 P_{90} = 3.7 P_{99} = 8.8

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

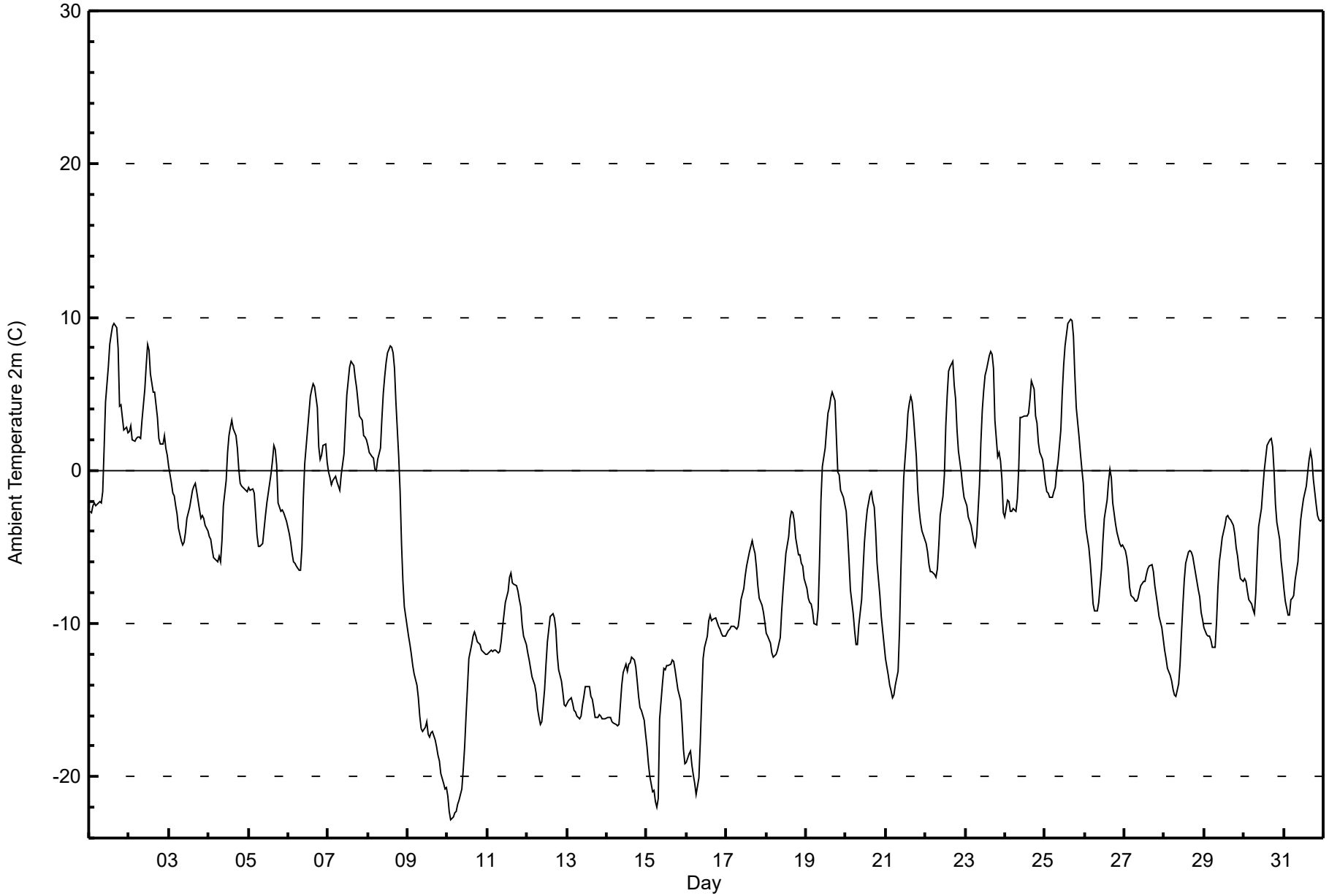
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-2.7	-2.8	-2.3	-2.1	-2.3	-2.1	-2.1	-2.2	-1.4	1.5	4.5	6.8	8.2	8.9	9.4	9.6	9.3	7.9	4.2	4.3	3.4	2.6	2.8	2.5	2.7	9.6
2-Mar	2.5	2.9	2.0	1.9	2.1	2.2	2.2	2.1	3.3	5.3	6.9	8.2	7.9	6.3	5.1	5.1	4.3	3.5	2.1	1.7	1.7	2.3	1.4	1.0	3.5	8.2
3-Mar	0.3	-0.8	-1.5	-1.7	-2.3	-2.8	-3.8	-4.6	-4.9	-4.7	-4.1	-3.2	-2.4	-1.8	-1.3	-1.0	-0.9	-1.4	-2.5	-3.1	-2.9	-3.2	-3.6	-3.9	-2.6	0.3
4-Mar	-4.3	-4.5	-5.2	-5.7	-5.8	-6.0	-5.6	-5.9	-4.6	-2.3	-0.6	1.2	2.3	2.8	3.3	2.7	2.3	1.5	0.1	-0.9	-1.0	-1.2	-1.3	-1.4	-1.7	3.3
5-Mar	-1.2	-1.3	-1.3	-1.5	-2.9	-4.2	-5.0	-4.9	-4.8	-3.9	-2.9	-2.2	-1.5	-0.2	0.6	1.7	1.3	0.3	-2.1	-2.7	-2.6	-2.8	-3.0	-3.3	-2.1	1.7
6-Mar	-4.1	-4.7	-5.4	-5.9	-6.1	-6.2	-6.5	-6.5	-5.1	-1.9	0.4	2.6	3.7	4.8	5.2	5.7	5.5	4.1	1.5	0.7	1.0	1.6	1.7	0.5	-0.6	5.7
7-Mar	-0.1	-0.5	-0.9	-0.7	-0.4	-0.7	-1.0	-1.3	-0.3	1.1	3.0	4.9	5.9	6.8	7.1	6.9	6.0	5.3	4.5	3.6	3.3	2.2	2.2	2.0	2.4	7.1
8-Mar	1.6	1.2	0.9	0.8	0.0	-0.1	0.7	1.5	3.3	5.0	6.1	7.1	7.7	8.1	8.1	7.7	6.7	4.5	0.9	-1.4	-4.8	-7.2	-8.9	-10.2	1.6	8.1
9-Mar	-10.8	-11.4	-12.0	-12.7	-13.3	-14.1	-14.8	-16.0	-16.9	-17.0	-16.7	-16.4	-17.2	-17.4	-17.1	-17.1	-17.6	-18.0	-18.6	-19.0	-19.8	-20.5	-20.8	-20.7	-16.5	-10.8
10-Mar	-21.2	-22.3	-22.8	-22.6	-22.4	-22.3	-21.8	-21.5	-20.8	-19.5	-18.0	-16.0	-14.2	-12.3	-11.4	-10.8	-10.6	-10.8	-11.2	-11.4	-11.7	-11.8	-11.9	-12.0	-16.3	-10.6
11-Mar	-12.0	-11.8	-11.7	-11.8	-11.7	-11.8	-11.9	-11.8	-11.2	-10.3	-9.4	-8.7	-7.9	-7.0	-6.7	-7.4	-7.4	-7.6	-7.9	-8.5	-8.9	-10.1	-10.8	-11.4	-9.8	-6.7
12-Mar	-11.9	-12.4	-12.9	-13.5	-14.1	-14.6	-15.6	-16.1	-16.6	-16.4	-14.3	-12.7	-11.2	-10.4	-9.5	-9.4	-9.7	-10.4	-12.0	-13.0	-13.7	-14.5	-15.3	-15.4	-13.1	-9.4
13-Mar	-15.2	-15.1	-14.8	-15.2	-15.6	-15.8	-16.0	-16.3	-16.0	-15.3	-14.7	-14.1	-14.2	-14.1	-14.8	-14.9	-15.4	-16.1	-16.1	-15.9	-16.0	-16.2	-16.2	-16.3	-15.4	-14.1
14-Mar	-16.1	-16.1	-16.2	-16.4	-16.5	-16.6	-16.7	-16.6	-15.3	-14.0	-13.2	-12.7	-13.1	-12.6	-12.5	-12.2	-12.4	-12.8	-13.8	-14.7	-15.5	-15.7	-16.3	-17.2	-14.8	-12.2
15-Mar	-18.0	-19.1	-19.9	-21.0	-20.8	-21.6	-22.0	-21.4	-16.3	-14.0	-13.0	-13.1	-12.7	-12.8	-12.7	-12.4	-12.4	-13.0	-13.7	-14.3	-15.0	-16.5	-18.2	-19.2	-16.4	-12.4
16-Mar	-19.1	-18.5	-18.3	-19.2	-19.9	-20.4	-21.2	-20.0	-17.7	-14.8	-12.3	-11.6	-10.9	-9.9	-9.4	-9.9	-9.7	-9.7	-9.9	-10.1	-10.3	-10.6	-10.8	-10.8	-14.0	-9.4
17-Mar	-10.6	-10.5	-10.3	-10.2	-10.2	-10.3	-10.3	-10.1	-9.5	-8.4	-7.7	-6.9	-6.2	-5.8	-5.3	-4.6	-5.0	-5.4	-6.3	-7.5	-8.3	-8.8	-9.2	-9.9	-8.2	-4.6
18-Mar	-10.7	-10.8	-11.3	-11.9	-12.2	-12.1	-12.0	-11.7	-10.9	-9.2	-7.8	-6.6	-5.4	-4.3	-3.2	-2.7	-2.7	-3.3	-4.4	-5.5	-5.5	-6.1	-6.2	-7.0	-7.7	-2.7
19-Mar	-7.7	-8.3	-8.6	-8.7	-9.2	-10.0	-10.1	-9.1	-5.9	-1.9	0.3	1.5	2.7	3.7	4.1	4.7	5.1	4.5	2.2	-0.1	-0.3	-1.3	-1.8	-2.2	-2.4	5.1
20-Mar	-2.7	-4.1	-5.9	-7.8	-9.3	-10.5	-11.3	-11.4	-10.1	-8.4	-6.5	-4.7	-3.5	-2.5	-1.6	-1.4	-2.0	-2.4	-4.0	-6.0	-8.2	-9.5	-10.5	-11.4	-6.5	-1.4
21-Mar	-12.3	-13.4	-14.0	-14.4	-14.9	-14.7	-14.0	-13.1	-10.4	-6.4	-3.1	-0.5	2.1	3.7	4.3	4.8	4.5	3.5	0.9	-1.3	-2.6	-3.4	-4.0	-4.5	-5.1	4.8
22-Mar	-4.8	-5.4	-6.1	-6.6	-6.6	-6.8	-6.9	-6.4	-4.9	-2.9	-1.7	-0.3	2.9	5.0	6.5	6.8	7.1	5.6	4.7	2.6	1.2	-0.1	-1.0	-1.8	-0.8	7.1
23-Mar	-2.1	-2.3	-3.0	-3.6	-4.1	-4.7	-4.9	-4.3	-0.9	1.9	3.9	5.2	6.2	6.6	7.5	7.7	7.6	6.7	3.3	0.9	1.2	0.6	-0.5	-2.8	1.1	7.7
24-Mar	-3.0	-1.9	-2.1	-2.7	-2.7	-2.5	-2.7	-1.9	0.2	3.5	3.5	3.6	3.6	3.6	3.7	4.6	5.8	5.3	3.5	3.1	1.8	1.2	0.7	-0.1	1.2	5.8
25-Mar	-0.8	-1.4	-1.5	-1.7	-1.8	-1.4	-1.1	-0.1	0.5	2.7	5.1	6.8	8.1	8.9	9.6	9.9	9.7	8.8	6.2	4.1	2.2	1.1	0.1	-0.8	3.0	9.9
26-Mar	-2.8	-3.8	-5.1	-6.0	-7.4	-8.7	-9.1	-9.1	-8.7	-7.5	-6.4	-4.6	-3.2	-1.9	-0.8	0.0	-0.4	-2.1	-3.5	-4.1	-4.4	-4.8	-5.0	-4.9	-4.8	0.0
27-Mar	-5.3	-5.7	-6.5	-7.6	-8.2	-8.4	-8.5	-8.6	-8.3	-7.9	-7.5	-7.3	-7.2	-6.8	-6.4	-6.3	-6.1	-6.6	-7.5	-8.2	-8.8	-9.6	-10.3	-11.0	-7.7	-5.3
28-Mar	-11.7	-12.3	-12.9	-13.4	-13.7	-14.3	-14.7	-14.7	-13.9	-12.6	-10.7	-8.8	-7.2	-6.1	-5.3	-5.2	-5.3	-5.6	-6.2	-7.3	-7.8	-8.3	-9.2	-9.7	-9.9	-5.2
29-Mar	-10.3	-10.7	-10.8	-10.8	-11.1	-11.5	-11.5	-9.9	-7.6	-6.0	-5.3	-4.4	-3.6	-3.0	-2.9	-3.1	-3.2	-3.6	-4.1	-5.1	-5.6	-6.5	-7.1	-7.2	-6.9	-2.9
30-Mar	-7.0	-7.2	-7.9	-8.5	-8.7	-9.1	-9.4	-8.0	-5.6	-3.7	-2.5	-1.2	0.0	0.8	1.7	2.0	2.1	1.5	0.0	-2.2	-3.4	-4.5	-5.8	-6.7	-3.9	2.1
31-Mar	-7.7	-8.5	-9.5	-9.5	-8.5	-8.3	-8.2	-7.2	-6.0	-4.5	-3.2	-2.5	-1.8	-1.1	-0.1	0.7	1.2	0.7	-0.6	-2.2	-2.9	-3.2	-3.3	-3.2	-4.1	1.2
	-7.5	-7.9	-8.3	-8.7	-9.0	-9.4	-9.5	-9.3	-8.0	-6.2	-4.8	-3.6	-2.7	-1.9	-1.4	-1.2	-1.4	-2.1	-3.6	-4.6	-5.3	-6.0	-6.5	-7.1	Diurnal Average	
	2.5	2.9	2.0	1.9	2.1	2.2	2.2	2.1	3.3	5.3	6.9	8.2	8.2	8.9	9.6	9.9	9.7	8.8	6.2	4.3	3.4	2.6	2.8	2.5	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Jackfish 2/3 - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	20	2.69	2.69
-20 - 0	547	73.52	76.21
0 - 10	177	23.79	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Maximum Value: 89.8 % on Mar 17 22:00

Maximum Daily Average: 87.4 % on Mar 11

Minimum Value: 24.8 % on Mar 23 17:00

Minimum Daily Average: 48.6 % on Mar 21

Maximum Diurnal Average: 78.3 % at hour 7

Minimum Diurnal Average: 52.9 % at hour 16

Monthly Average: 66.65 %

Percentiles: P_1 = 27.0 P_{10} = 42.2 Q_1 = 54.2 Median = 70.1 Q_3 = 80.8 P_{90} = 85.1 P_{99} = 89.1

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

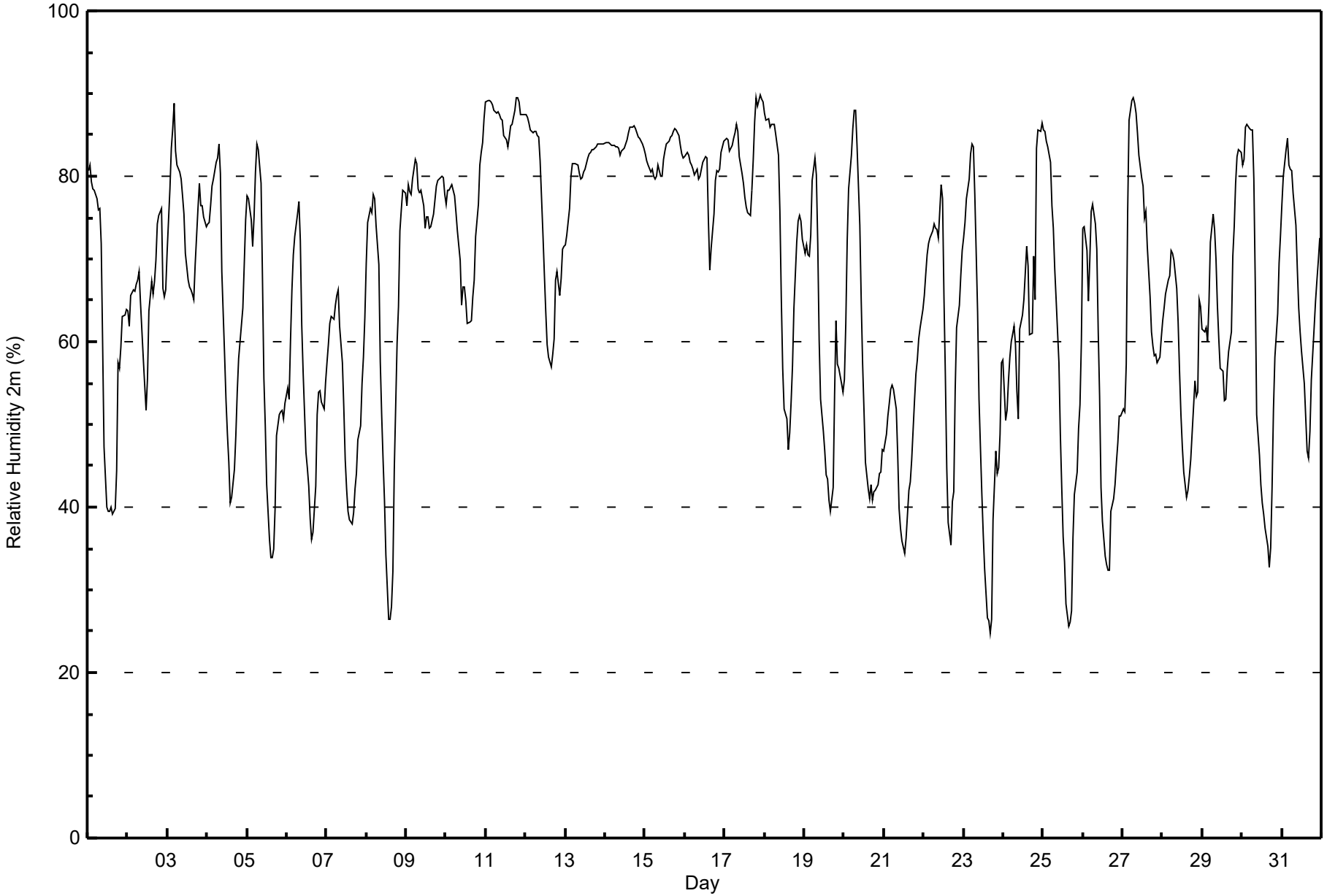
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	80.7	81.4	79.3	78.5	78.3	77.3	75.9	76.0	71.8	59.8	47.3	39.9	39.5	39.5	39.9	39.1	39.8	44.5	57.5	56.8	59.3	63.1	63.3	63.9	60.5	81.4
2-Mar	63.8	61.9	65.5	66.2	66.2	66.9	67.4	68.5	64.8	58.0	54.7	51.8	55.6	63.7	67.3	65.8	67.3	69.8	74.2	75.2	76.1	66.5	65.4	66.4	65.4	76.1
3-Mar	70.8	78.6	83.5	85.8	88.8	83.1	81.3	80.4	79.6	77.6	75.5	70.6	67.4	66.5	66.2	65.7	65.1	69.3	76.2	79.1	76.4	76.4	75.2	73.8	75.5	88.8
4-Mar	74.2	74.4	76.5	78.8	79.6	81.7	82.2	83.9	80.4	68.4	58.4	52.9	48.8	45.4	40.4	41.2	44.6	48.6	53.9	57.9	60.1	64.0	69.3	74.7	64.2	83.9
5-Mar	77.6	77.3	74.7	71.5	75.1	80.5	83.9	83.2	79.2	67.7	55.6	49.9	42.7	36.1	34.0	33.8	34.9	39.8	48.6	51.1	51.5	51.8	50.7	52.6	58.5	83.9
6-Mar	54.5	53.1	60.1	66.3	70.4	72.7	75.4	76.9	72.2	62.1	56.3	46.5	44.7	42.6	38.7	36.1	36.9	42.5	51.1	54.0	54.0	52.7	51.9	55.1	55.3	76.9
7-Mar	57.5	59.6	62.1	63.1	62.7	64.4	65.5	66.3	61.8	57.4	52.1	45.8	42.3	39.6	38.5	37.9	39.3	42.2	44.1	48.1	49.8	55.0	58.1	62.9	53.2	66.3
8-Mar	69.5	74.4	76.2	75.6	77.8	77.3	74.0	69.3	57.6	51.2	45.8	40.9	34.2	26.4	26.4	28.0	32.1	44.6	59.9	64.3	73.4	76.0	78.3	78.0	58.8	78.3
9-Mar	76.4	79.0	78.1	77.8	79.7	82.0	81.5	78.4	78.0	78.4	76.4	73.7	75.1	75.1	73.8	74.0	75.5	77.1	78.8	79.5	79.7	80.0	79.9	77.7	77.7	82.0
10-Mar	76.5	78.3	78.3	78.9	78.4	77.7	75.6	73.4	69.8	64.4	66.5	66.6	64.8	62.2	62.4	62.5	65.5	67.5	72.7	76.7	81.4	82.8	84.1	86.9	73.1	86.9
11-Mar	88.9	89.1	89.1	89.0	88.6	87.9	87.7	87.7	87.5	87.0	86.9	85.0	84.5	83.6	84.8	86.1	86.4	88.0	89.4	89.5	88.9	87.4	87.4	87.5	87.4	89.5
12-Mar	87.5	87.1	86.4	85.6	85.2	85.4	85.4	85.0	84.8	81.8	73.1	68.4	63.8	59.7	58.1	56.9	58.5	60.4	67.5	68.4	65.5	67.7	71.3	71.6	73.5	87.5
13-Mar	71.7	72.9	76.1	80.0	81.5	81.5	81.5	81.4	80.3	79.7	79.9	80.5	80.9	82.2	82.7	82.9	83.2	83.2	83.6	83.9	84.0	83.9	83.9	84.0	81.1	84.0
14-Mar	84.1	84.1	84.1	83.9	83.8	83.7	83.6	83.5	83.3	82.5	83.0	83.3	83.9	84.5	85.3	85.9	86.0	86.1	85.7	85.2	84.8	84.6	84.0	83.3	84.3	86.1
15-Mar	82.7	81.9	81.3	80.5	80.8	79.9	79.7	80.0	81.3	80.0	79.9	82.0	83.1	83.8	84.3	84.7	85.0	85.5	85.7	85.5	84.9	83.8	82.7	82.1	82.6	85.7
16-Mar	82.3	82.8	82.6	81.7	81.4	80.8	80.2	80.9	79.7	80.1	80.8	81.8	82.3	82.2	74.8	68.6	71.3	75.5	79.5	80.7	80.5	80.9	82.9	84.2	79.9	84.2
17-Mar	84.4	84.5	84.3	83.0	83.8	84.5	85.3	86.2	85.4	82.3	80.3	79.2	77.5	76.3	75.6	75.3	78.4	82.0	86.6	89.5	88.5	89.8	89.3	89.1	83.4	89.8
18-Mar	87.7	86.8	87.0	86.0	86.3	86.2	86.2	85.1	82.6	75.7	65.2	56.8	51.9	50.7	46.9	49.0	52.7	57.1	64.0	72.1	74.5	75.2	74.6	72.3	71.4	87.7
19-Mar	70.7	71.7	70.4	70.4	72.9	79.6	82.2	80.2	71.9	60.2	53.0	49.2	46.8	43.8	43.4	40.9	39.6	42.3	53.5	62.6	57.2	56.8	54.9	53.9	59.5	82.2
20-Mar	55.4	62.1	72.2	78.5	82.5	85.7	88.0	87.9	83.7	74.1	65.0	57.4	51.5	45.5	42.2	41.0	42.8	40.8	41.8	42.0	42.7	44.0	44.2	47.0	59.1	88.0
21-Mar	46.8	48.8	51.1	52.5	54.2	54.7	54.2	51.9	46.4	39.8	37.4	36.0	34.3	36.2	39.2	42.0	43.0	45.8	52.8	56.1	57.9	60.4	61.6	63.9	48.6	63.9
22-Mar	65.6	68.1	70.5	71.9	72.5	73.4	74.3	73.7	73.6	72.6	79.0	77.2	65.4	56.0	44.7	38.1	35.4	40.6	41.9	54.0	61.7	64.4	67.9	71.0	63.1	79.0
23-Mar	72.6	74.4	77.2	79.7	82.7	83.9	83.6	77.8	63.5	53.0	47.2	41.7	36.9	32.5	26.6	26.2	24.8	26.5	38.5	46.8	44.1	44.8	48.8	57.5	53.8	83.9
24-Mar	57.8	50.5	51.6	55.2	58.1	60.0	61.8	59.7	54.1	50.7	61.6	63.2	65.0	68.3	71.6	69.1	60.9	61.0	70.3	65.0	83.4	85.6	85.5	86.5	64.9	86.5
25-Mar	85.6	85.3	84.3	83.5	81.7	76.5	73.7	68.8	65.1	57.4	48.8	42.4	36.5	33.5	28.3	25.6	26.1	27.5	36.3	41.6	44.2	49.5	52.3	60.0	54.8	85.6
26-Mar	73.8	73.9	71.0	65.0	69.9	75.7	76.6	74.2	71.1	61.3	53.4	42.3	38.4	34.0	33.0	32.4	32.4	39.5	41.0	42.7	45.5	47.8	51.0	51.1	54.0	76.6
27-Mar	51.9	51.6	57.3	75.7	86.8	89.1	89.5	88.9	87.6	85.3	82.5	79.8	78.8	74.9	75.8	71.5	65.4	61.2	59.5	58.4	58.5	57.5	58.2	60.6	71.1	89.5
28-Mar	62.6	64.1	65.8	67.5	67.9	71.1	70.6	69.9	66.4	62.3	56.4	51.2	47.4	44.3	41.1	42.0	43.6	45.8	49.0	55.2	53.4	53.9	65.1	64.2	57.5	71.1
29-Mar	61.5	61.3	61.8	59.9	64.7	72.0	75.5	73.6	70.0	64.4	60.4	56.7	56.4	52.9	53.1	56.7	58.8	61.1	70.3	74.0	79.2	82.4	83.2	82.9	66.4	83.2
30-Mar	81.3	82.1	86.0	86.2	85.8	85.6	85.6	79.6	67.2	51.1	46.3	42.7	40.5	39.2	37.4	35.2	32.8	35.1	42.3	51.9	58.1	63.4	69.5	72.9	60.7	86.2
31-Mar	76.6	80.0	83.3	84.5	81.4	80.9	80.7	78.0	74.1	68.9	64.1	61.2	58.8	55.0	50.9	46.8	45.9	49.2	55.3	61.7	65.0	67.5	69.9	72.5	67.2	84.5
	72.0	72.9	74.4	75.6	77.1	78.1	78.3	77.1	73.4	67.6	63.6	59.9	57.4	55.4	53.8	52.9	53.3	56.1	61.7	64.8	66.6	67.7	69.2	70.7	Diurnal Average	
	88.9	89.1	89.1	89.0	88.8	89.1	89.5	88.9	87.6	87.0	86.9	85.0	84.5	84.5	85.3	86.1	86.4	88.0	89.4	89.5	88.9	89.8	89.3	89.1	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Jackfish 2/3 - March 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	57	7.66	7.66
40 - 60	190	25.54	33.20
60 - 80	294	39.52	72.72
80 - 100	203	27.28	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Jackfish 2/3 - March 2025

Maximum Speed: 18 km/h on Mar 8 14:00

Maximum Daily Speed Average: 10.9 km/h on Mar 27

Minimum Speed Value: 0 km/h on Mar 15 01:00

Minimum Daily Speed Average: 0.9 km/h on Mar 15

Maximum Diurnal Speed Average: 3.0 km/h at hour 15

Minimum Diurnal Speed Average: 0.5 km/h at hour 19

Monthly Average Velocity: 1.5 km/h 250.1 deg

Percentiles: $P_1 = 2$ $P_{10} = 4$ $Q_1 = 5$ Median = 7 $Q_3 = 9$ $P_{90} = 11$ $P_{99} = 14$

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	S8	SSW8	SSW9	SW8	SW8	SSW8	SSW9	SSW9	SW8	SW10	WSW11	WSW10	W10	WSW11	WSW12	WSW10	WSW10	WSW7	SW5	SSW7	SW7	SW8	WSW8	SW8	SW8.2	WSW12
2-Mar	SW8	SW8	SSW8	SSW8	SW8	SW8	SW8	SW10	WSW9	W10	W11	WNW10	NW8	NW8	NW7	NNW7	NW5	WNW3	SW5	WSW8	W6	WNW7	WNW5	WNW7	W5.7	W11
3-Mar	NW7	NNW6	NW5	NNW6	N7	N8	N7	N7	N7	N6	N6	NNW6	N6	N7	N6	NNW6	NW5	NNW3	SSW1	SSW2	SW6	WSW7	WSW8	WSW9	NNW4.2	WSW9
4-Mar	WSW9	WSW8	SW9	WSW9	WSW9	SW10	WSW10	SW10	SW11	WSW12	WSW13	WSW11	WSW13	WSW13	WSW12	WSW11	WSW9	WSW9	SW6	SW7	SW8	SW9	SW11	WSW11	WSW10.0	WSW13
5-Mar	WSW11	W7	NW5	NNW5	NNW5	NNW5	NNW7	NNW7	NNW7	NNW7	N9	N7	NNW7	NW7	NW8	NW6	NW6	WNW5	W4	WSW6	WSW6	SW7	SW7	SW8	WNW4.8	WSW11
6-Mar	SW8	SW8	SW9	SW10	WSW10	WSW10	WSW9	WSW8	WSW7	WSW8	W8	W8	W10	W10	W10	W10	WNW10	WNW7	W5	SW7	WSW7	WSW9	WSW9	WSW10	WSW8.3	W10
7-Mar	WSW11	WSW11	SW11	WSW12	WSW11	WSW10	WSW11	WSW12	WSW14	WSW14	WSW12	W10	W12	W12	W11	WNW9	W7	W5	W6	W6	WSW7	W5	W6	WSW8	WSW9.5	WSW14
8-Mar	W6	WSW4	SW5	SSW6	SSW7	SSW9	SW10	WSW14	WSW14	W14	W15	W14	W17	W18	W16	WNW14	WNW13	NW10	NNW7	N6	NE9	NE10	NE9	NE8	W6.5	W18
9-Mar	NE8	ENE7	ENE7	NE8	NE8	NE8	NE10	NE10	NE11	NE10	NE10	NE10	NE11	NE9	NE8	NNE8	NNE8	NE8	NNE6	NNE6	NE7	NE8	NE7	NE7	NE8.1	NE11
10-Mar	NE6	ENE3	NE3	NE2	E3	E3	SE3	SSE4	S4	S4	SSW4	SW4	SSW5	SW4	SW6	SSW5	SW4	SSW2	SSW4	S4	S4	SE2	SE3	ESE4	SSE2.1	SW6
11-Mar	ESE4	ESE4	ENE4	E4	ENE4	ENE4	ENE5	ENE5	ENE4	E5	ENE5	ENE6	ENE6	NE8	NE7	NE7	ENE7	NE4	NE6	NE6	NE7	NNE6	NNE6	NE7	ENE5.2	NE8
12-Mar	NNE7	NNE6	N6	NNE7	NE7	NNE6	NNE5	NNE5	NE6	NE5	NE4	NE6	NNE6	ENE5	ENE6	NE6	NE7	ENE6	ENE5	NE7	NE8	ENE6	NE6	NE7	NE5.7	NE8
13-Mar	NE7	ENE7	ENE6	ENE8	ENE8	ENE8	ENE9	ENE10	ENE11	ENE10	ENE11	ENE10	ENE12	ENE12	ENE12	NE14	NE15	NE13	ENE11	NE7	NE7	NNE6	NNE7	NNE7	ENE9.2	NE15
14-Mar	NNE7	NNE7	NNE6	N5	N4	NNW5	NNW5	N6	NNW6	N6	NNW6	NW7	NNW7	NNW6	NNW6	NNW5	NNW7	NNW5	NNW5	NNW3	NW3	NW4	NW4	NNW2	NNW5.0	NNE7
15-Mar	WSW0	SW2	WSW3	WSW3	WSW3	WSW3	WSW3	WSW2	N2	NE4	ENE4	NNW3	NNE3	WNW5	NNW4	NNW4	NNW5	NNE4	NE4	NE4	ENE4	ESE3	SE3	S3	N0.9	WNW5
16-Mar	SSE4	SSE5	S5	SSE4	SSE4	S4	S5	S5	S5	S4	SSE6	SE7	SSE8	S7	S7	S8	SSE5	SE4	SE4	SSE4	S5	S6	S7	SSW5	SSE5.1	SSE8
17-Mar	S6	SSW7	SSW6	SSW6	S5	S6	S6	S5	SSW6	SW6	SW7	WSW10	W8	W6	NW4	WNW4	NNW3	NNW3	NNW5	NNE3	NE6	NNE4	NNE4	NE4	SW2.1	WSW10
18-Mar	NE3	NNE3	NNE3	N3	E3	S4	SW5	WSW4	W4	W5	W7	W9	WSW11	WSW11	WSW12	WSW12	WSW12	WSW9	SW6	SW7	SW8	WSW9	WSW9	W8	WSW5.7	WSW12
19-Mar	WSW8	WSW8	WSW8	SW9	SW8	SW8	SW8	SW9	SW9	WSW8	WSW8	WSW11	WSW12	WSW13	W12	WSW12	W12	W7	WSW4	SW6	SW7	WSW8	WSW8	SW7	WSW8.7	WSW13
20-Mar	WSW6	NNW2	NE8	NE9	NE10	NE7	NE6	NE8	NE8	ENE9	ENE10	ENE10	NE10	ENE9	NE8	ENE7	ENE9	ENE10	ENE7	NE8	ENE7	E6	E8	ESE5	ENE7.0	NE10
21-Mar	SE6	SSE7	SSE8	SSE7	SSE6	SSE6	SSE6	S8	S9	S7	SSE6	SSE7	SE6	SE8	SSE8	S8	SSE7	SSE7	SSE5	S6	S9	S9	S7	S7	SSE6.9	S9
22-Mar	SSW7	SSW8	S8	SSW7	SSW8	SSW9	SSW9	SSW10	SW9	SSW9	SW10	SW8	SW9	WSW9	WSW10	W9	W9	W8	WNW7	W7	W6	W6	W6	W6	SW6.9	WSW10
23-Mar	WSW7	WSW8	WSW7	SW7	SW8	SW7	SW8	SW8	WSW8	W6	WSW6	WSW9	W10	WSW10	W8	WSW9	WSW9	SW8	SSW4	SSW4	SSW6	SSW6	SSW6	SE3	WSW6.6	W10
24-Mar	S4	S7	S6	S6	S6	S6	S5	S5	SSW6	SW11	SW13	SW11	SSW11	SW10	WSW11	WSW10	WSW11	W5	NW6	WNW6	NW7	W7	W7	WSW8	SW6.2	SW13
25-Mar	WSW10	W8	WSW8	WSW10	WSW10	WSW10	WSW10	WSW8	WSW12	WSW12	WSW9	WSW11	WSW12	W11	W12	W14	WNW11	WNW9	WNW2	NW3	NNE3	NNE3	NNE3	NNE5	W7.4	W14
26-Mar	NE8	NE10	NE9	NE10	NNE8	NNE7	NE8	NE8	NNE6	NE8	ENE9	ENE9	ENE7	ENE8	ENE8	NE9	NE10	NE11	ENE11	NE10	NE10	NE9	ENE7	ENE8	NE8.4	ENE11
27-Mar	ENE8	ENE8	ENE10	ENE9	ENE8	ENE9	NE10	NE11	ENE12	ENE13	ENE14	ENE13	NE14	ENE14	NE12	NE12	NE12	NE11	NE12	NE11	NE11	NE11	ENE10	ENE9	ENE10.9	NE14
28-Mar	ENE8	ENE7	NE7	NE6	NNE5	NNE6	NE8	NE7	NNE6	NE7	NE6	ENE7	ENE6	SE5	ESE5	ESE5	ENE5	E4	SE3	SSW0	E2	S2	S2	SSE4	ENE4.1	ENE8
29-Mar	S4	S5	S5	S5	S4	S4	S5	S5	SSW4	SSW2	W3	SW4	W5	SW7	WNW5	WNW6	W5	WSW5	WSW6	SW6	SW5	WSW6	SW6	SW6	SW4.0	SW7
30-Mar	SW6	SW6	SW6	SW6	SW6	SW5	SW6	SSW5	SW6	SW8	SW8	SSW8	SW9	SW9	SW8	SW8	SW8	SW7	SW6	SW5	SW7	SSW6	SSW5	SSW6	SW6.6	SW9
31-Mar	S4	S5	S4	S4	SSE5	SSE5	SSE5	SSE5	SSE5	SSE6	SSE7	S7	SSE8	SSE8	SSE9	SE8	SE7	SE6	SSE5	SSE5	SSE5	SSE5	SSE6	S6	SSE5.7	SSE9
	SW1.6	SW1.6	SSW1.4	SW1.3	SSW1.5	SSW1.6	SW1.8	SW1.7	WSW1.8	WSW2.1	WSW1.9	W2.3	W2.6	W2.9	W3.0	WNW2.9	WNW2.5	NW1.4	NNW0.5	WSW0.6	WSW0.6	WSW1.2	SW1.3	SW1.4	Diurnal Average	
	WSW11	WSW11	SW11	WSW12	WSW11	WSW10	WSW11	WSW14	WSW14	W14	W15	W14	W17	W18	W16	NE14	NE15	NE13	NE12	NE11	NE11	NE11	WSW11	WSW11	Diurnal Maximum	

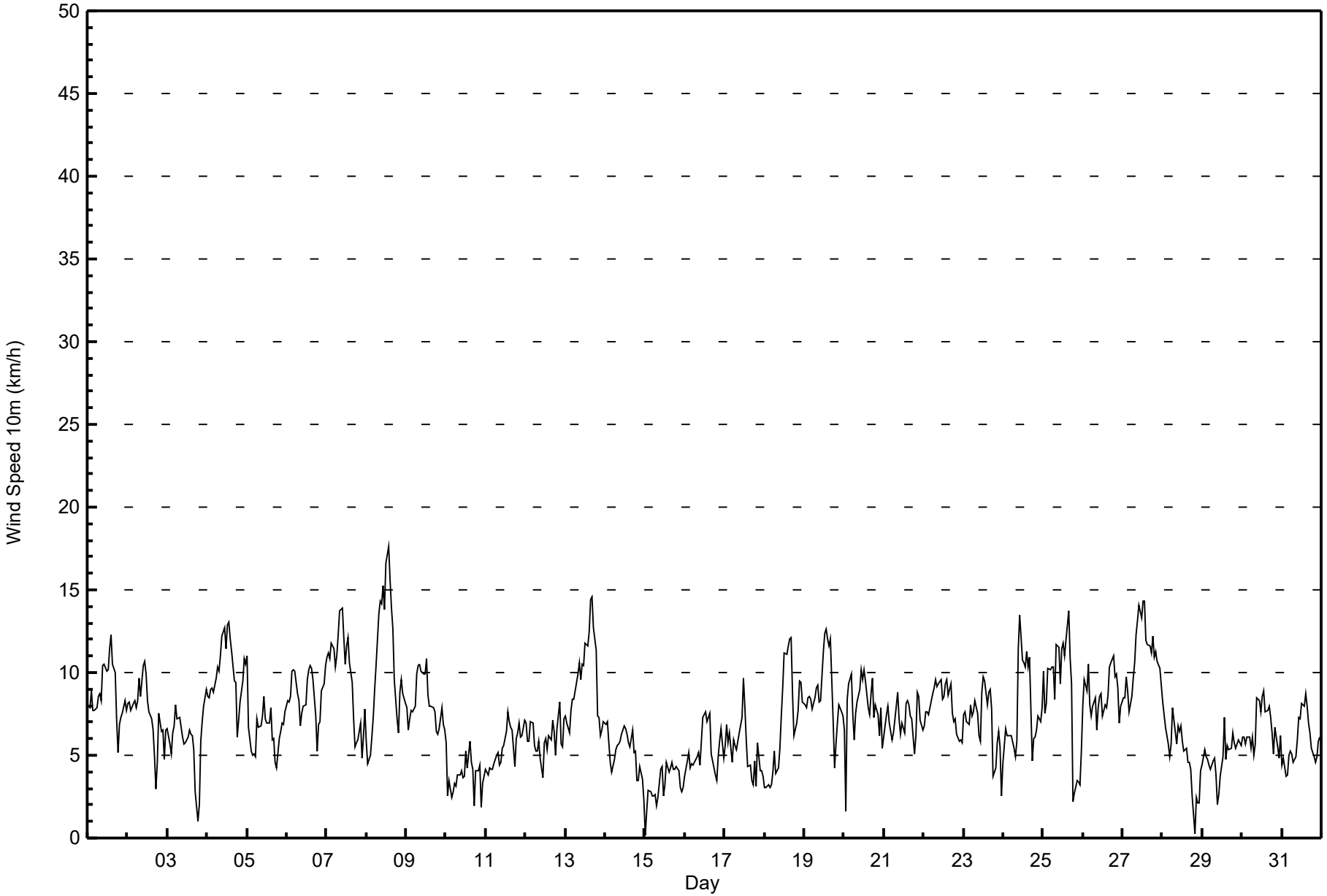
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Jackfish 2/3 - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	197	26.48	26.48
6 - 11	494	66.40	92.88
12 - 19	53	7.12	100.00
20 - 28	0	0.00	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Jackfish 2/3 - March 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	4	15	9	13	7	7	9	19	30	17	11	11	9	8	9	19	197
6 - 11	16	23	76	50	2	0	7	19	26	31	78	87	39	11	12	17	494
12 - 19	0	0	8	8	0	0	0	0	0	0	1	22	12	2	0	0	53
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	20	38	93	71	9	7	16	38	56	48	90	120	60	21	21	36	744

Total Number of Valid Hours: 744

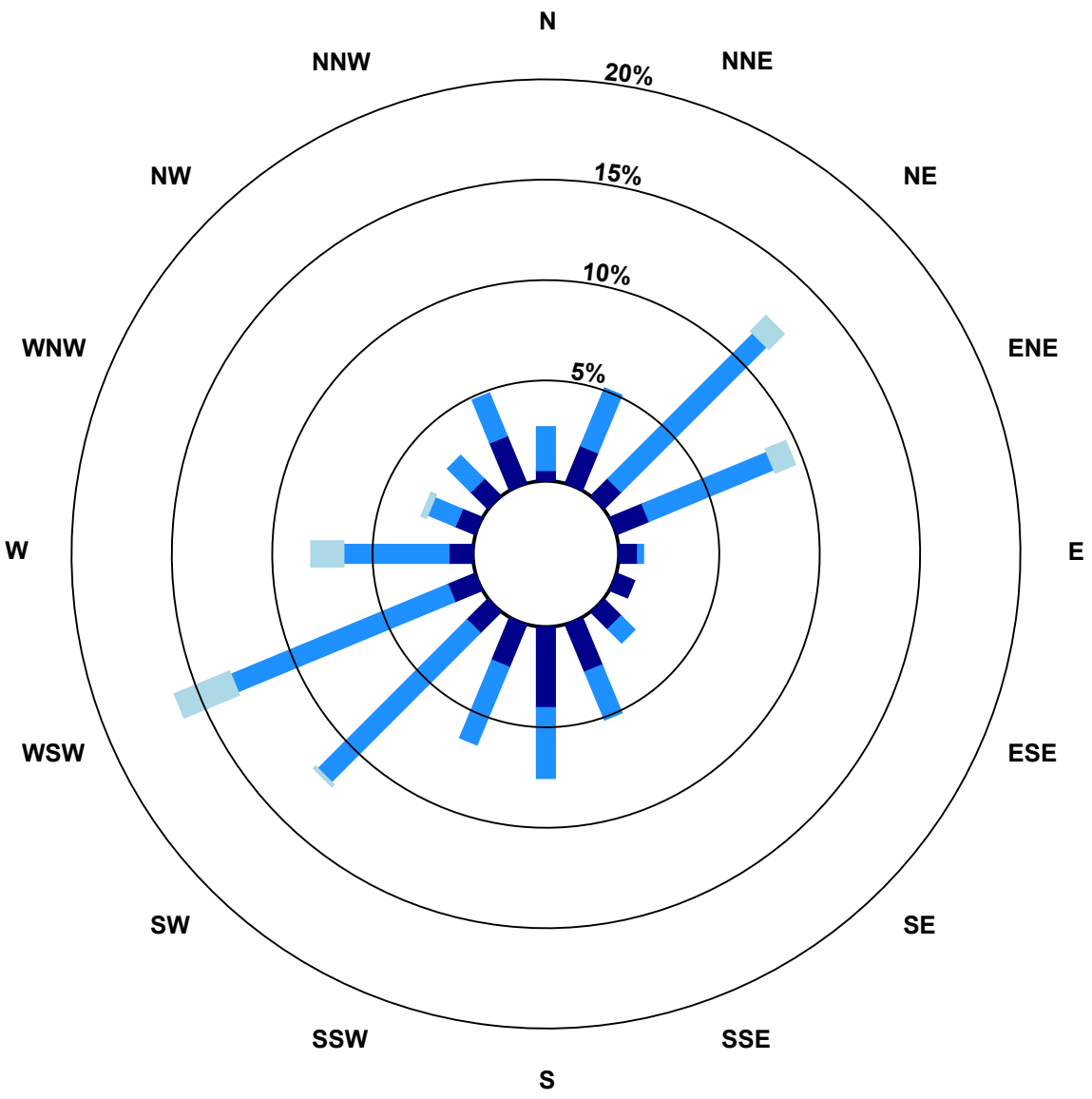
Total Number of Hours: 744

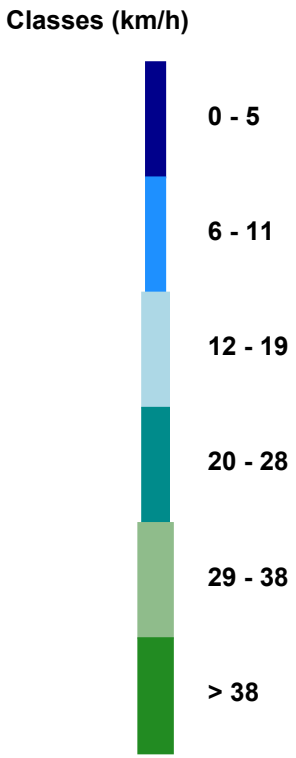
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 10m (WS10) - km/h

Jackfish 2/3





Total Number of Valid Hours: 744

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

Maximum Value: 7 km/h on Mar 8 14:00

Minimum Value: 0 km/h on Mar 28 23:00

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

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

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

Direction of Maximum Speed: 273 deg on Mar 8 14:00

Direction of Maximum Daily Speed Average: 58.5 deg on Mar 27

Direction of Minimum Speed: 253 deg on Mar 15 01:00

Direction of Minimum Daily Speed Average: 0.9 deg on Mar 15

Monthly Average Direction: 250.1 deg

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	189	198	210	222	217	197	197	199	214	233	244	249	259	250	249	251	241	240	226	212	228	236	239	222	228.2
2-Mar	221	224	207	209	217	217	224	232	250	265	276	294	321	320	314	327	324	301	235	239	260	303	302	298	261.6
3-Mar	319	330	320	346	356	0	353	354	2	349	6	345	354	351	354	348	312	338	198	209	227	238	247	244	329.4
4-Mar	248	243	236	239	237	234	239	230	236	242	245	246	249	257	239	239	241	239	217	216	231	233	236	238	239.1
5-Mar	250	280	313	332	342	343	340	347	338	328	350	350	330	313	305	322	314	298	262	245	238	232	227	223	302.3
6-Mar	234	231	232	235	238	245	250	245	252	256	265	263	264	266	279	274	292	287	267	229	239	241	251	250	253.6
7-Mar	253	242	233	239	246	246	240	242	253	253	257	275	265	270	278	283	279	270	275	261	256	266	263	255	256.6
8-Mar	259	238	214	204	206	212	228	242	254	264	271	275	268	273	279	286	291	315	344	8	42	51	52	35	274.0
9-Mar	42	57	60	55	51	48	52	49	55	52	48	44	40	40	39	30	33	37	32	32	37	43	50	48	45.2
10-Mar	52	60	39	54	96	80	143	163	170	169	193	225	194	223	232	211	216	203	192	181	182	125	130	116	168.5
11-Mar	107	108	66	79	66	74	66	69	67	87	69	70	58	55	38	37	57	56	47	50	48	16	31	38	57.3
12-Mar	28	16	11	18	36	24	21	14	45	43	40	36	30	67	59	45	54	61	62	50	56	62	52	52	41.2
13-Mar	56	63	68	62	76	72	72	67	77	73	68	71	69	59	60	56	50	53	57	50	36	24	24	28	59.3
14-Mar	28	26	23	10	355	340	347	357	347	354	341	325	327	343	336	343	336	341	343	342	322	319	325	336	347.3
15-Mar	253	231	246	237	242	239	237	250	7	42	76	336	14	294	327	340	348	32	47	47	59	107	142	175	0.0
16-Mar	162	167	172	168	168	174	175	175	177	175	149	142	159	171	178	190	156	143	137	154	173	183	186	192	168.5
17-Mar	191	195	194	197	186	187	183	177	196	219	224	246	260	281	306	291	346	343	347	20	51	30	31	34	229.5
18-Mar	39	27	20	2	96	191	215	244	273	265	261	265	250	237	239	245	242	237	225	217	236	241	255	260	246.0
19-Mar	255	246	243	235	233	234	228	232	233	242	240	245	247	250	260	258	259	262	249	235	231	248	241	235	244.2
20-Mar	251	346	35	35	41	44	56	53	53	65	60	60	55	70	55	58	61	58	58	52	60	87	99	118	57.8
21-Mar	140	153	159	155	165	160	157	173	175	175	154	147	146	142	157	182	160	159	163	176	182	191	184	189	164.9
22-Mar	197	197	189	194	202	202	204	208	215	209	216	220	221	240	256	268	263	265	285	277	271	268	261	261	230.6
23-Mar	254	247	245	233	236	235	226	234	251	260	246	255	259	251	259	247	250	235	211	202	211	206	202	130	239.4
24-Mar	179	183	189	185	181	180	185	181	206	233	232	225	213	222	243	243	241	278	313	299	310	274	273	257	230.5
25-Mar	252	264	256	256	244	243	250	258	250	254	253	248	252	261	273	279	290	297	302	305	14	18	14	31	265.2
26-Mar	39	36	34	35	24	27	39	48	26	48	68	62	72	66	67	45	42	44	57	50	49	54	67	76	48.7
27-Mar	76	69	76	77	62	60	54	55	59	60	60	58	54	60	54	50	50	47	52	54	55	56	59	63	58.5
28-Mar	63	58	53	41	32	32	38	45	32	43	54	61	61	137	122	107	69	93	134	200	95	171	179	156	66.3
29-Mar	173	175	182	190	188	185	182	182	202	207	269	227	262	225	285	284	281	248	237	227	227	239	232	228	223.3
30-Mar	222	219	223	227	227	225	224	204	222	230	222	210	230	231	235	219	224	231	232	229	223	207	196	213	222.6
31-Mar	191	175	172	170	157	151	154	158	152	147	163	173	165	150	148	139	141	128	148	167	159	160	165	176	157.5
	227.6	214.3	210.1	216.9	210.6	210.9	214.2	217.2	239.3	250.5	254.8	264.5	267.1	261.2	275.6	283.6	294.1	312.1	334.3	248.4	239.3	245.9	233.9	230.1	
	Diurnal Average																								

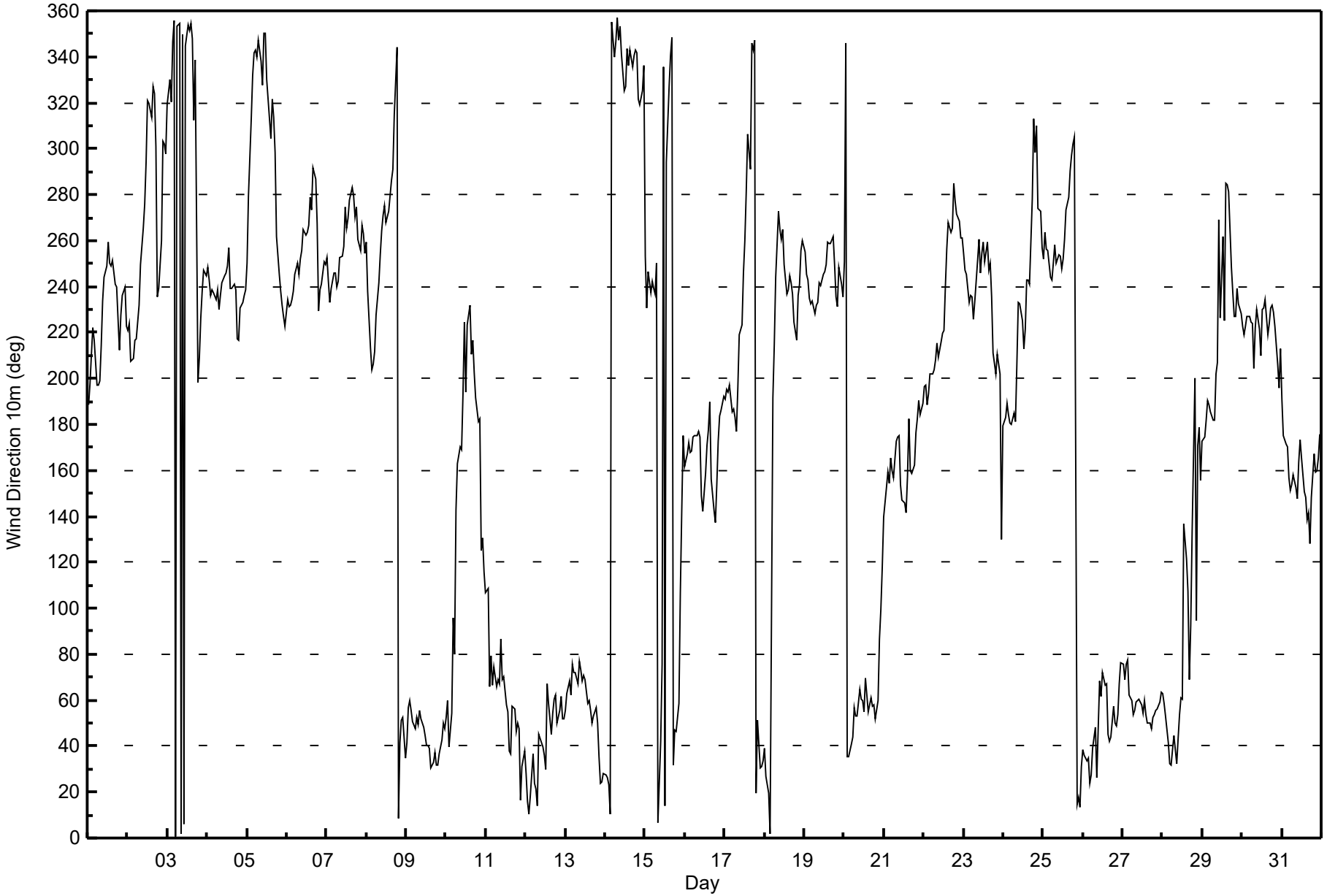
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Jackfish 2/3 - March 2025



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

Maximum Value: 124 deg on Mar 15 01:00

Minimum Value: 9 deg on Mar 24 04:00

Percentiles: P_1 = 11 P_{10} = 16 Q_1 = 21 Median = 29 Q_3 = 41 P_{90} = 50 P_{99} = 83

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	12	15	16	16	15	14	16	15	18	16	19	23	28	28	26	27	20	16	20	19	17	14	14	16	28
2-Mar	17	17	14	14	17	14	16	16	26	27	34	42	44	47	54	54	52	57	28	16	26	38	42	32	57
3-Mar	42	38	37	42	43	44	45	49	46	47	48	52	53	50	51	51	53	53	74	33	17	15	13	13	74
4-Mar	12	13	13	15	16	17	17	18	17	18	21	26	23	27	26	24	21	20	22	21	20	18	18	17	27
5-Mar	18	35	39	36	44	43	44	52	44	45	48	50	52	52	43	56	46	50	26	13	15	18	18	19	56
6-Mar	17	16	15	15	14	14	15	15	17	25	35	34	35	38	39	36	36	33	24	18	16	16	20	18	39
7-Mar	15	15	15	15	16	16	16	17	18	20	30	37	33	34	38	34	33	31	27	29	22	22	23	16	38
8-Mar	22	21	19	18	17	20	21	19	23	31	33	36	31	34	36	37	34	47	44	48	32	23	26	29	48
9-Mar	31	27	28	27	26	28	26	28	29	27	31	35	30	37	34	35	34	32	34	33	40	29	28	30	40
10-Mar	26	45	28	47	51	27	40	44	48	54	68	63	47	58	48	49	41	87	27	35	32	54	46	44	87
11-Mar	30	40	36	32	27	27	24	28	30	38	33	29	28	27	33	30	28	49	30	30	35	39	35	32	49
12-Mar	35	37	42	42	34	39	44	45	43	45	83	49	53	60	53	44	30	27	22	23	21	20	17	20	83
13-Mar	19	22	28	25	27	29	27	25	26	29	27	29	29	28	28	26	24	28	27	29	34	43	36	34	43
14-Mar	36	38	37	42	41	45	50	49	44	48	52	54	54	52	53	58	52	46	45	51	48	48	51	88	88
15-Mar	124	54	13	31	46	33	22	41	62	48	62	89	74	56	68	54	44	35	29	25	25	32	29	16	124
16-Mar	25	25	23	24	23	20	19	28	33	44	55	42	44	51	47	33	48	49	42	48	40	30	32	35	55
17-Mar	36	26	29	25	32	27	31	33	28	26	26	24	28	36	50	59	49	50	44	50	25	33	27	28	59
18-Mar	30	29	37	41	26	37	20	37	41	35	37	37	28	27	25	22	22	22	21	18	18	14	16	19	41
19-Mar	14	12	12	16	15	13	15	15	15	20	25	25	24	26	33	32	28	33	17	20	20	12	13	13	33
20-Mar	11	68	20	21	21	22	22	18	25	30	28	32	33	36	37	35	31	26	25	24	21	24	23	32	68
21-Mar	45	45	40	44	45	47	43	34	33	40	43	46	52	48	42	51	44	41	43	40	24	27	30	33	52
22-Mar	26	22	21	18	18	16	15	16	18	19	22	24	31	34	31	38	30	31	29	28	26	24	19	17	38
23-Mar	12	13	13	16	16	16	18	15	24	36	48	35	37	31	41	46	29	27	19	20	22	19	19	52	52
24-Mar	9	11	9	9	10	13	13	25	24	25	23	27	30	28	24	28	22	64	57	45	47	31	30	18	64
25-Mar	14	24	21	15	14	15	14	28	18	22	31	26	29	36	36	37	39	45	88	71	37	35	42	35	88
26-Mar	29	28	31	34	39	35	32	27	44	39	39	39	53	39	38	41	33	30	25	24	23	24	25	28	53
27-Mar	28	28	27	26	27	25	24	26	27	29	28	31	28	28	29	31	29	28	27	28	28	28	27	29	31
28-Mar	28	27	28	29	29	27	24	28	36	35	36	45	59	59	55	56	48	43	56	100	55	33	10	31	100
29-Mar	19	18	15	19	18	10	11	20	36	84	87	64	54	50	54	39	41	24	21	17	18	14	15	16	87
30-Mar	19	21	20	19	19	18	17	20	33	34	38	38	42	44	47	43	37	30	22	24	22	22	26	19	47
31-Mar	26	25	43	33	35	36	36	34	41	42	39	42	43	48	48	43	43	42	44	45	43	48	38	29	48
	124	68	43	47	51	47	50	52	62	84	87	89	74	60	68	59	53	87	88	100	55	54	51	88	
	Diurnal Maximum																								

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS29
SURMONT 2
MARCH 2025

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

April 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - SURMONT2 (AMS29)
MARCH 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	708	36	36	100	8.4	0	1.7	0
H2S (ppb) Average	705	38	39	99.87	0.7	0	0.1	0
THC(ppm) Average	708	36	36	100	2.8	-	2.4	-
NO2 (ppb) Average	684	40	60	97.31	33.1	0	6.1	-
NO (ppb) Average	684	40	60	97.31	3.8	-	0.6	-
NOX (ppb) Average	684	40	60	97.31	33.4	-	6.3	-
PM2.5 (ug/m3) Average	743	1	1	100	46.9	0	11.8	0
Temperature 2 m (C) Average	744	0	0	100	9.8	-	3.5	-
Relative Humidity (%) Average	744	0	0	100	95.2	-	78.9	-
Wind Speed 10 m (km/h) Average	744	0	0	100	17	-	9	-
Wind Direction 10 m (deg) Average	744	0	0	100	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - SURMONT 2 (AMS29)
MARCH 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	708	0.39	0.6	-	0	0	0.1	0.2	0.5	0.8	8.4
H2S (ppb) Average	705	0.05	0.1	-	0	0	0	0	0.1	0.1	0.7
THC (ppm) Average	708	2.34	0	-	2.2	2.3	2.3	2.3	2.4	2.4	2.8
NO2 (ppb) Average	684	2.09	2.7	-	0.1	0.5	0.7	1.3	2.5	4.5	33.1
NO (ppb) Average	684	0.17	0.4	-	0	0	0	0	0.1	0.5	3.8
NOX (ppb) Average	684	2.27	2.8	-	0.1	0.5	0.7	1.4	2.9	4.9	33.4
PM2.5 (ug/m3) Average	743	3.36	4.5	-	0.4	1.1	1.5	2.3	3.4	5.7	46.9
Temperature 2 m (C) Average	744	-6.91	8.1	-	-28.1	-17.9	-13.2	-6.4	-0.7	4.2	9.8
Relative Humidity (%) Average	744	66.99	15.4	-	27.7	43.6	55.8	70.2	79.3	84.7	95.2
Wind Speed 10 m (km/h) Average	744	5.4	3	-	0	2	3	5	7	9	17
Wind Direction 10 m (deg) Average	744	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - SURMONT 2 (AMS29)
MARCH 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
H2S, NO2	17 Mar 2025 14:00	17 Mar 2025 14:00	1	Maintenance - sample manifold cleaned
NO2	24 Mar 2025 16:00	25 Mar 2025 10:00	19	Maintenance - stabilization post maintenance

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Surmont 2 - March 2025

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

Maximum Value: 8.4 ppb on Mar 7 21:00 Maximum Daily Average: 1.7 ppb on Mar 7

Minimum Value: 0.0 ppb on Mar 1 08:00 Minimum Daily Average: 0.0 ppb on Mar 27

Maximum Diurnal Average: 0.6 ppb at hour 11 Minimum Diurnal Average: 0.3 ppb at hour 8

Monthly Average: 0.39 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.2 Q_3 = 0.5 P_{90} = 0.8 P_{99} = 3.0

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	Z	0.3	0.3	0.2	0.2	0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
2-Mar	0.0	Z	0.0	0.0	0.2	0.3	0.2	0.1	0.1	0.3	0.4	0.6	0.2	0.2	1.2	1.5	0.1	0.1	0.2	0.4	0.8	0.4	0.2	0.2	0.3	1.5
3-Mar	0.1	0.1	Z	0.6	1.3	0.9	1.1	0.4	0.3	0.7	1.3	2.0	2.9	1.0	0.4	0.3	0.3	0.5	0.1	0.0	0.2	0.2	0.0	0.2	0.6	2.9
4-Mar	0.4	0.5	0.5	Z	1.2	1.1	0.7	0.5	0.5	0.2	0.1	0.1	0.0	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.3	1.2
5-Mar	0.4	0.3	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.4	0.4	0.6	0.7	0.9	0.7	0.5	0.7	0.4	0.2	0.1	0.1	0.3	0.9
6-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.3	1.2	3.4	1.3	0.8	0.6	0.3	0.2	0.3	0.2	0.5	0.6	0.6	0.4	0.5	0.5	3.4
7-Mar	Z	1.2	0.7	0.6	0.3	0.7	1.0	1.1	3.7	0.9	0.4	0.3	0.4	1.7	0.5	0.4	0.4	0.4	0.5	2.2	8.4	6.5	3.6	2.9	1.7	8.4
8-Mar	2.2	Z	1.6	1.4	0.6	0.8	0.5	0.2	0.3	0.0	0.3	0.5	0.2	0.3	0.5	1.9	4.2	1.6	0.8	0.2	0.3	0.5	0.5	0.5	0.9	4.2
9-Mar	0.3	0.1	Z	0.0	0.0	0.1	0.3	0.4	0.1	0.3	0.3	0.2	0.6	0.3	0.3	0.2	0.0	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.2	0.6
10-Mar	0.1	0.3	0.3	Z	0.4	0.1	0.4	0.4	0.1	0.0	0.0	0.0	0.3	0.6	0.3	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6
11-Mar	0.1	0.0	0.0	0.0	Z	0.2	0.1	0.2	0.0	0.1	0.2	0.2	0.2	0.1	0.3	0.3	0.3	0.4	0.4	0.1	0.1	0.3	0.2	0.3	0.2	0.4
12-Mar	0.5	1.0	0.8	0.7	0.9	Z	1.0	0.5	0.6	0.5	1.2	0.9	0.8	1.7	1.4	1.3	1.0	0.8	0.5	0.4	0.4	0.2	0.2	0.1	0.8	1.7
13-Mar	Z	0.3	0.1	0.4	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	0.1	0.1	0.0	0.0	0.2	0.4
14-Mar	0.0	Z	0.1	0.0	0.1	0.2	0.2	0.2	0.6	0.7	0.5	0.2	0.3	0.5	0.8	0.4	0.3	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.3	0.8
15-Mar	0.1	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.2	0.3	2.7	2.6	1.6	1.8	3.0	1.0	0.8	1.6	1.3	0.5	0.3	0.1	0.0	0.3	0.8	3.0
16-Mar	0.2	0.1	0.0	Z	0.1	0.1	0.1	0.1	0.3	1.3	1.7	1.2	0.5	0.5	0.6	0.7	0.7	0.8	0.8	0.7	0.6	0.5	0.5	0.3	0.5	1.7
17-Mar	0.4	0.6	0.8	0.6	Z	0.4	0.4	0.2	0.4	0.3	C	C	C	C	C	0.0	0.9	2.1	4.6	1.5	0.6	0.8	0.8	0.7	0.9	4.6
18-Mar	0.3	0.1	0.1	0.0	0.0	Z	0.8	0.9	1.2	0.4	0.1	0.3	0.0	0.2	0.1	0.0	0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2	1.2
19-Mar	Z	0.8	0.4	0.6	0.2	0.1	0.0	0.0	0.4	1.5	1.6	0.7	0.5	0.4	0.3	0.2	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.9	0.4	1.6
20-Mar	0.7	Z	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.7
21-Mar	0.5	0.5	Z	0.1	0.1	0.0	0.2	0.1	0.0	0.1	0.3	0.2	0.2	0.0	0.3	0.3	0.2	0.2	0.3	0.5	0.5	0.1	0.4	0.2	0.2	0.5
22-Mar	0.2	0.2	0.2	Z	0.2	0.1	0.1	0.2	0.4	0.6	0.4	0.4	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.5	0.2	0.6
23-Mar	0.8	0.4	0.0	0.5	Z	0.3	0.3	0.4	0.5	0.3	0.2	0.2	0.3	0.1	0.2	0.2	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.8
24-Mar	0.4	0.1	0.1	0.3	0.2	Z	0.1	0.1	0.1	0.5	0.6	0.7	1.7	1.1	0.7	0.4	0.5	0.3	0.2	0.3	0.3	0.2	0.3	0.0	0.4	1.7
25-Mar	Z	0.3	0.3	0.5	0.7	0.3	0.2	0.3	0.1	0.2	0.1	0.1	0.1	0.3	0.1	0.1	0.0	0.0	0.1	0.3	0.7	0.5	0.2	0.2	0.3	0.7
26-Mar	0.2	Z	0.2	0.2	0.5	0.3	0.1	0.3	0.3	0.5	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	0.1	0.7
27-Mar	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-Mar	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.3	0.3	0.4	0.4	0.3	0.3	0.2	0.2	0.1	0.4
29-Mar	0.3	0.2	0.2	0.1	Z	0.0	0.1	0.2	0.2	0.6	1.9	1.2	1.1	0.9	0.6	0.7	0.9	0.9	1.0	0.6	0.3	0.3	0.3	0.3	0.6	1.9
30-Mar	0.2	0.2	0.3	0.2	0.1	Z	0.3	0.3	0.4	0.8	0.8	0.6	0.8	0.4	0.2	0.4	0.4	0.5	0.7	0.3	0.1	0.7	0.5	0.6	0.4	0.8
31-Mar	Z	0.4	1.1	0.0	0.0	0.2	0.4	0.3	0.6	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.2	1.1
	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.5	0.4	0.3	0.3	Diurnal Average	
	2.2	1.2	1.6	1.4	1.3	1.1	1.1	1.1	3.7	1.5	2.7	3.4	2.9	1.8	3.0	1.9	4.2	2.1	4.6	2.2	8.4	6.5	3.6	2.9	Diurnal Maximum	

Z - zerospan C - Calibration

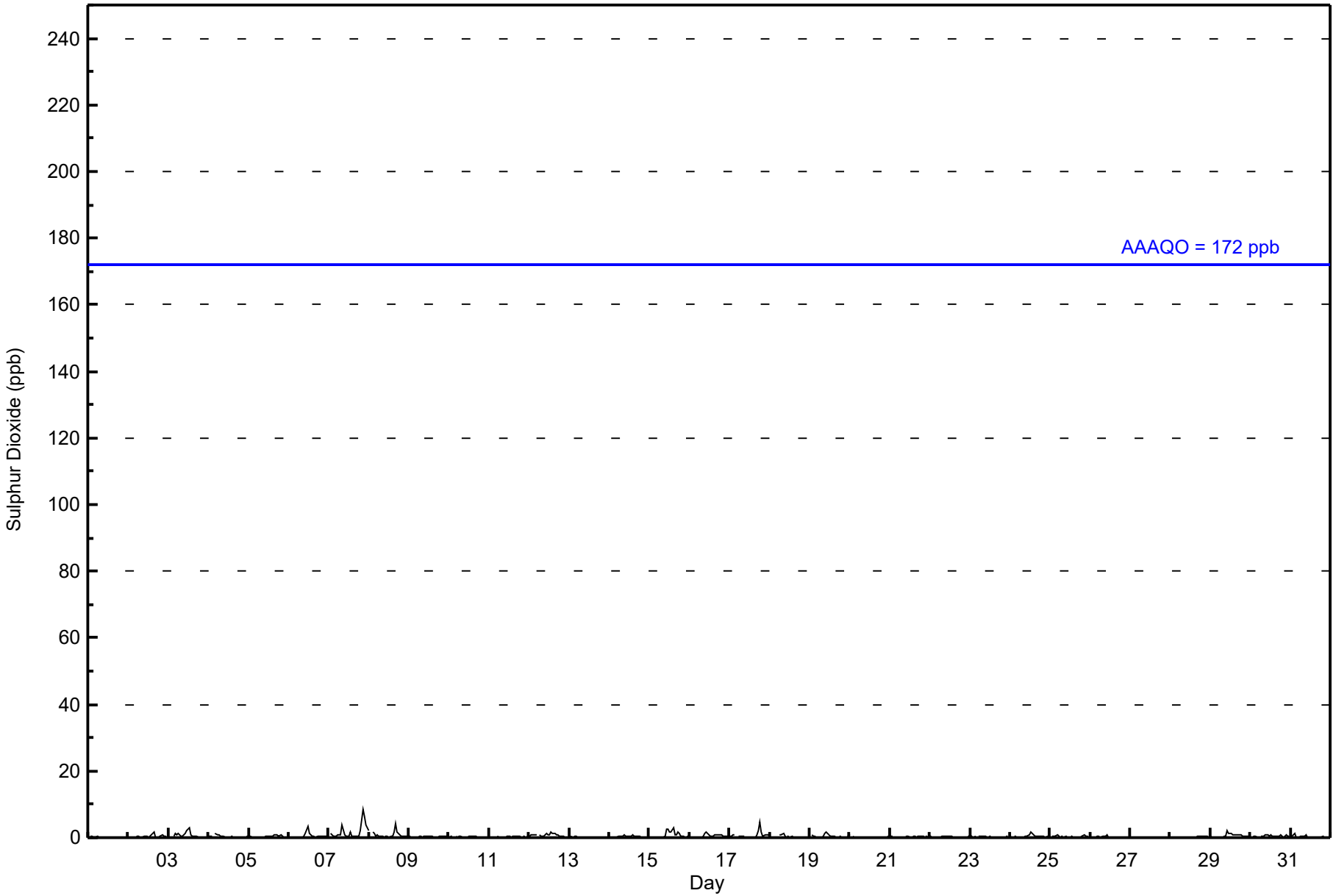
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Surmont 2 - March 2025



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

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Surmont 2 - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	50	33	31	45	26	47	80	27	8	16	39	87	89	23	37	70	708
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	50	33	31	45	26	47	80	27	8	16	39	87	89	23	37	70	708

Total Number of Valid Hours: 708

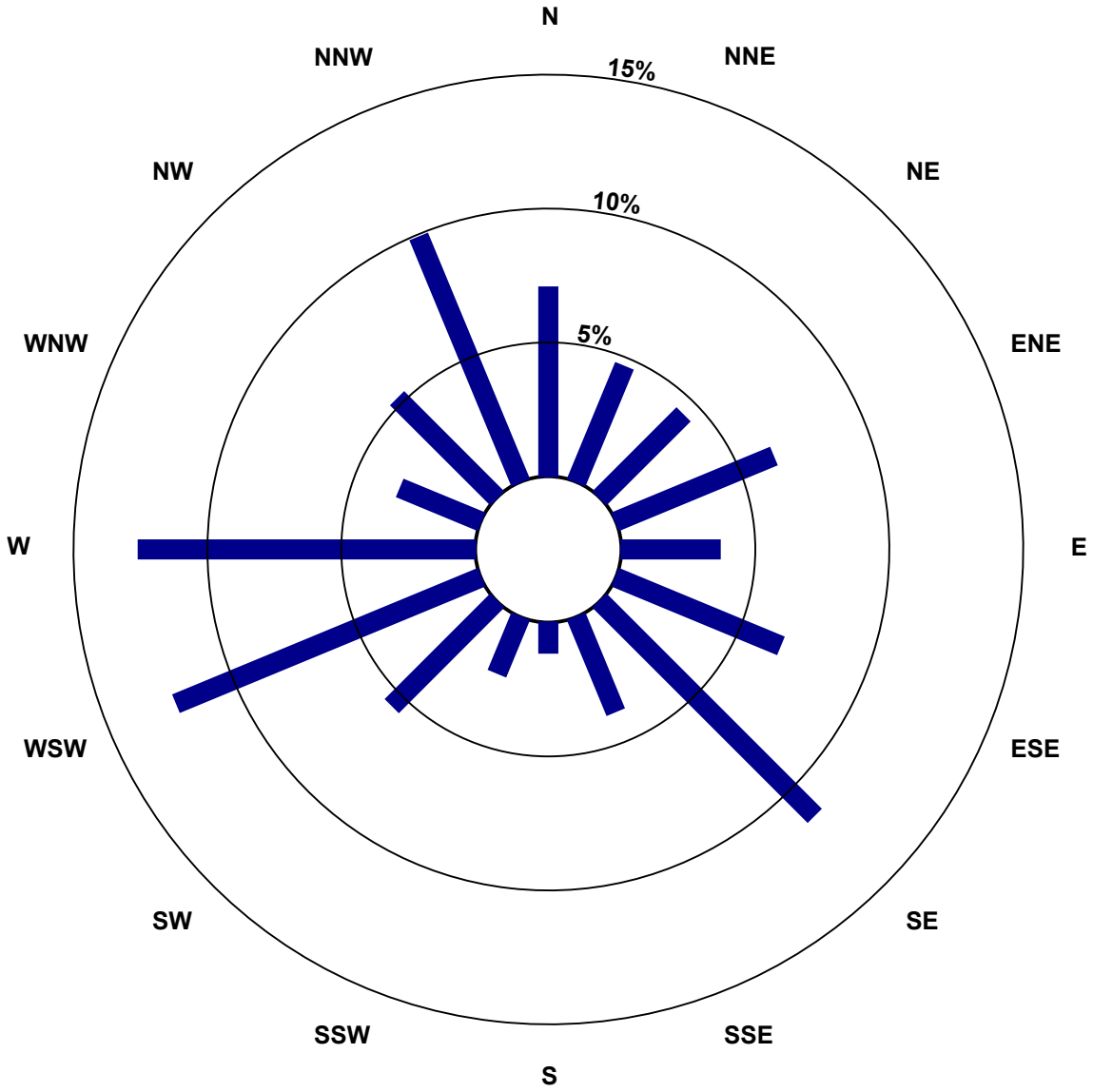
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Sulphur Dioxide (SO_2) - ppb

Surmont 2



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

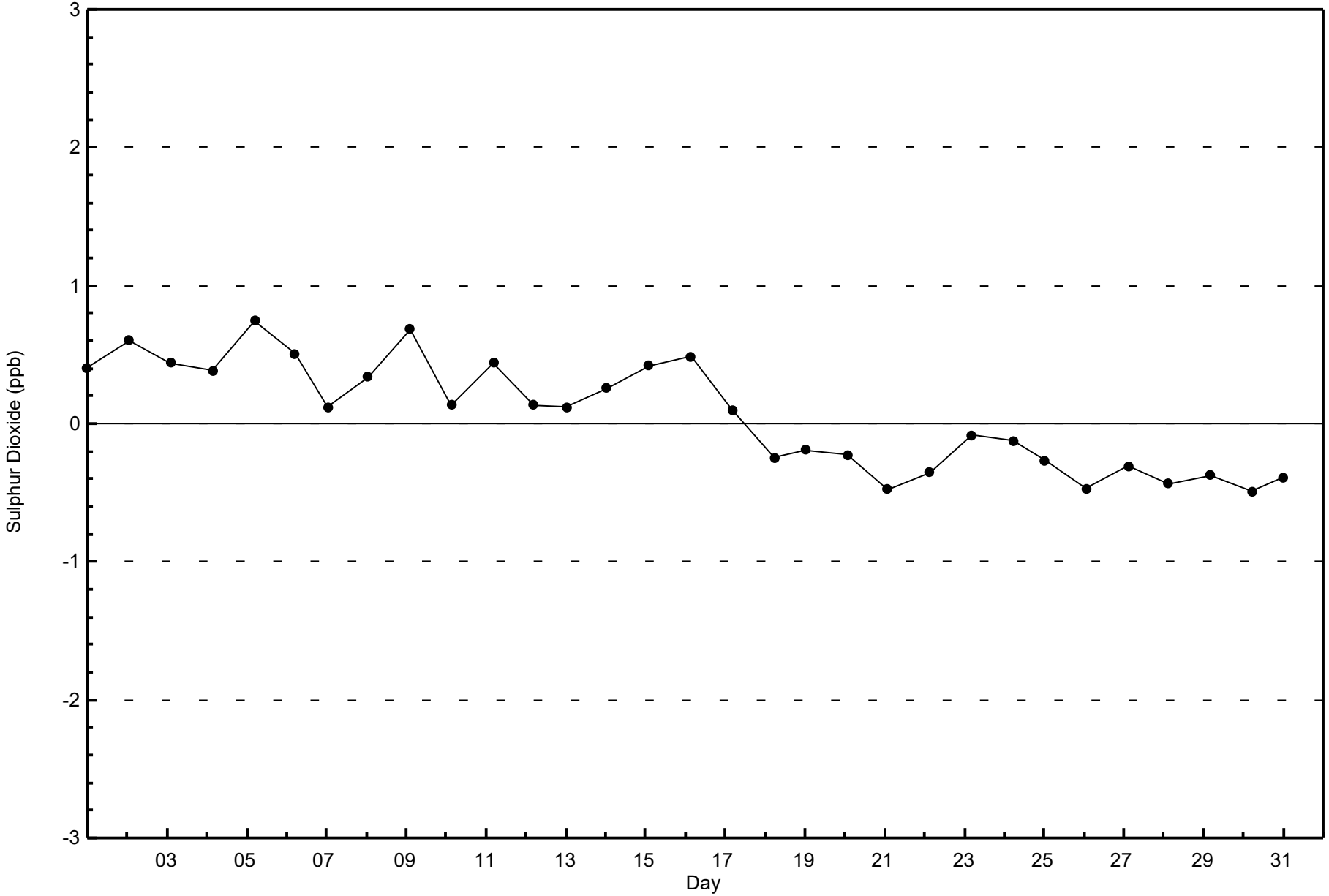
Total Number of Valid Hours: 708

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Surmont 2 - March 2025

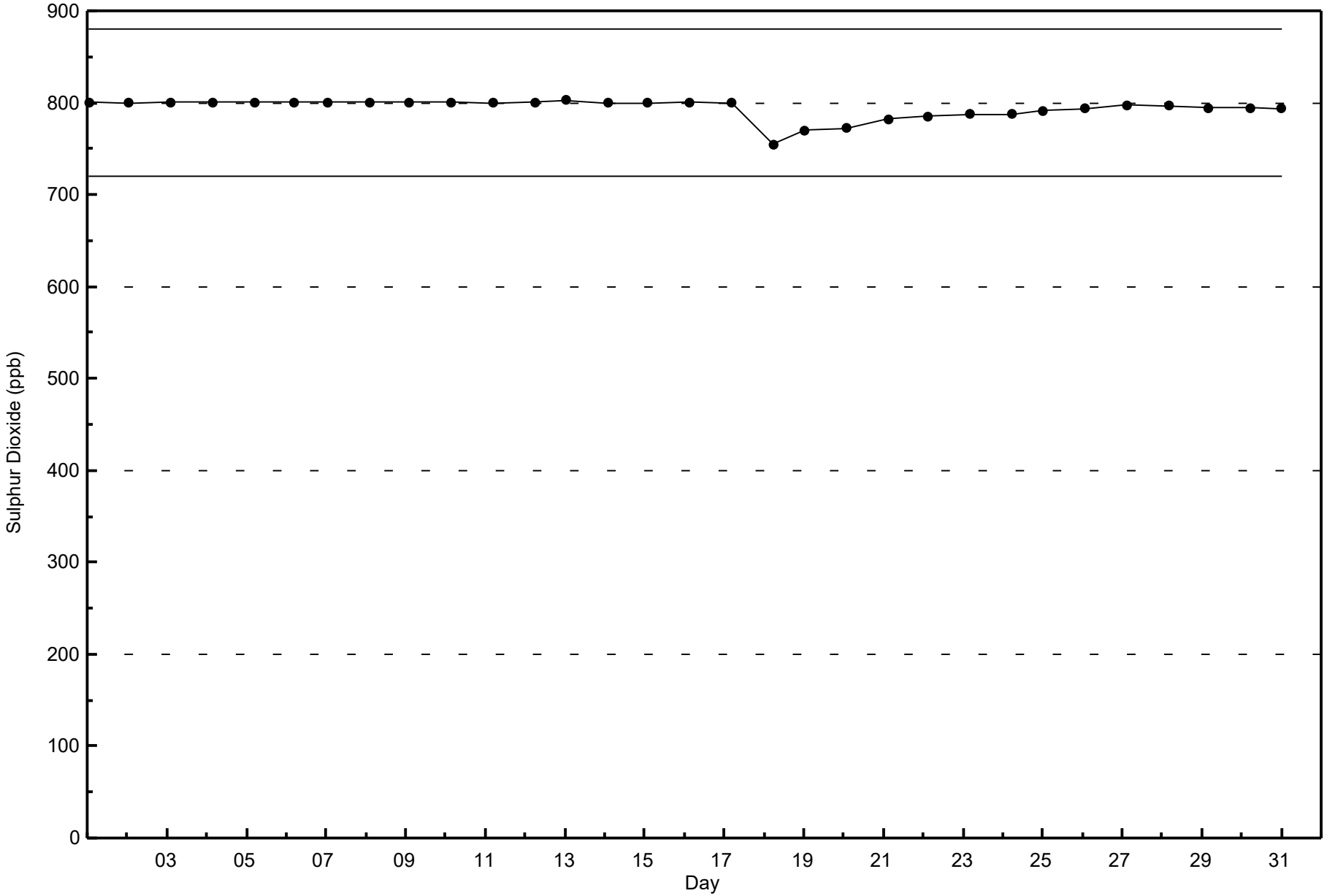


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Surmont 2 - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Surmont 2 - March 2025

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

Maximum Value: 0.7 ppb on Mar 7 21:00

Maximum Daily Average: 0.1 ppb on Mar 7

Minimum Value: 0.0 ppb on Mar 13 12:00

Minimum Daily Average: 0.0 ppb on Mar 27

Maximum Diurnal Average: 0.1 ppb at hour 2

Minimum Diurnal Average: 0.0 ppb at hour 19

Monthly Average: 0.05 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

Hours in Service:	744
Hours of Data:	705
Hours of Missing Data:	39
Hours of Calibration:	38
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
2-Mar	0.1	0.1	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
3-Mar	0.0	0.0	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1
4-Mar	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1
5-Mar	0.1	0.2	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
6-Mar	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
7-Mar	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	0.2	0.0	0.0	0.0	0.0	0.0	0.3	0.7	0.7	0.4	0.3	0.1	0.7
8-Mar	0.3	0.2	Z	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.3	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.3
9-Mar	0.1	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
10-Mar	0.0	0.1	0.1	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
11-Mar	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
12-Mar	Z	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	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
13-Mar	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
14-Mar	0.0	0.0	Z	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
15-Mar	0.0	0.0	0.0	Z	0.1	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1
16-Mar	0.1	0.1	0.1	0.1	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	0.0	0.0	0.0	0.0	0.0	0.1	0.1
17-Mar	0.1	0.1	0.1	0.0	0.1	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.1	M	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
18-Mar	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1
19-Mar	0.1	Z	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.2
20-Mar	0.2	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	0.0	0.0	0.0	0.0	0.0	0.2
21-Mar	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1
22-Mar	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	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
23-Mar	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
24-Mar	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
25-Mar	0.1	Z	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	0.1	0.1	0.0	0.0	0.1
26-Mar	0.1	0.1	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	C	C	C	C	C	C	C	0.1	0.0	0.0	0.0	0.0	0.0	0.0	--	0.1
27-Mar	0.0	0.0	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
28-Mar	0.0	0.0	0.0	0.0	Z	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	0.0	0.0	0.1
29-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.2
30-Mar	Z	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.2
31-Mar	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	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	0.0	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	Diurnal Average	
	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.1	0.3	0.3	0.2	0.1	0.3	0.7	0.7	0.4	0.3	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

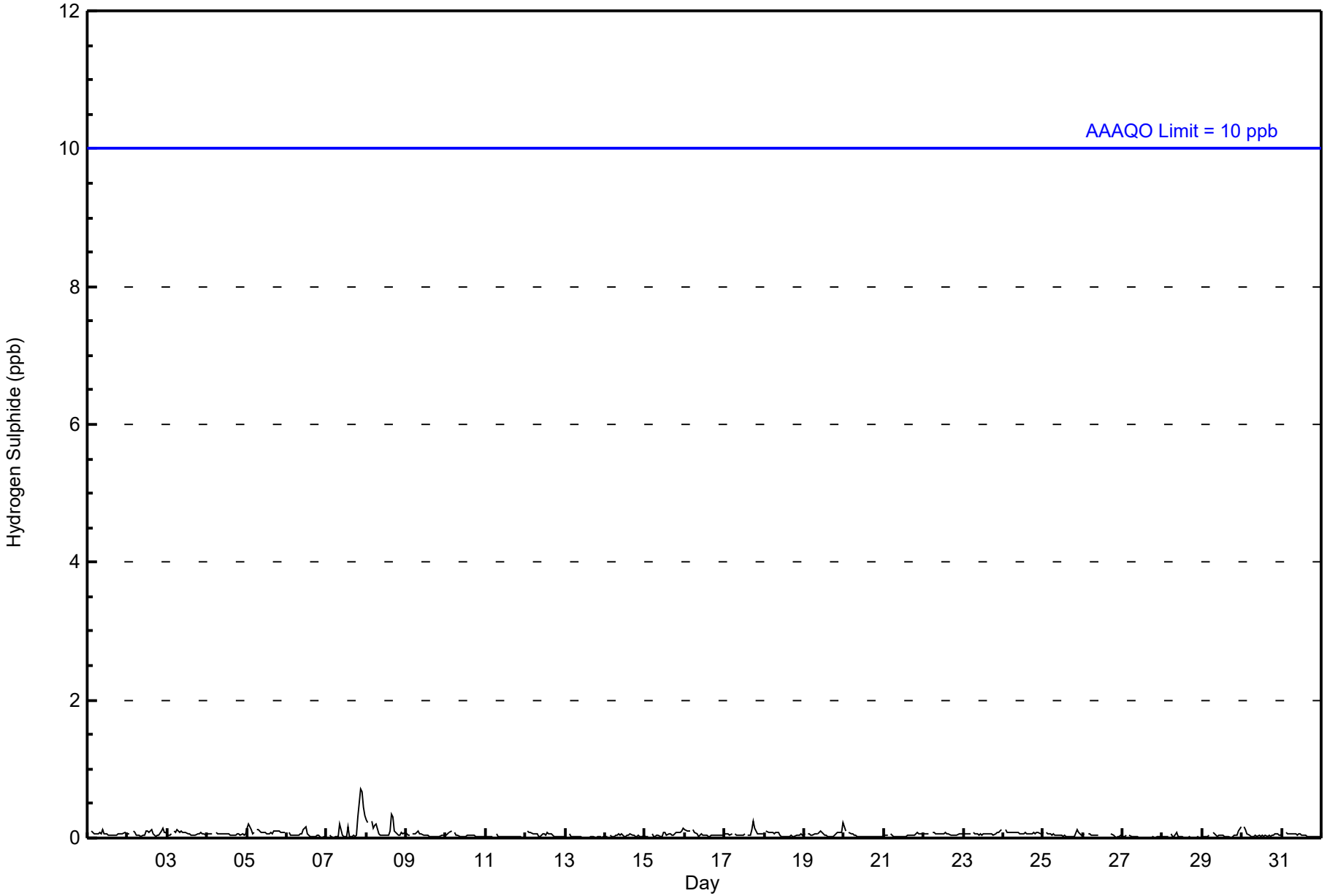
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Surmont 2 - March 2025



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

Total Number of Valid Hours: 705

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Surmont 2 - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	51	29	29	44	27	45	80	27	8	14	40	88	89	25	38	71	705
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	51	29	29	44	27	45	80	27	8	14	40	88	89	25	38	71	705

Total Number of Valid Hours: 705

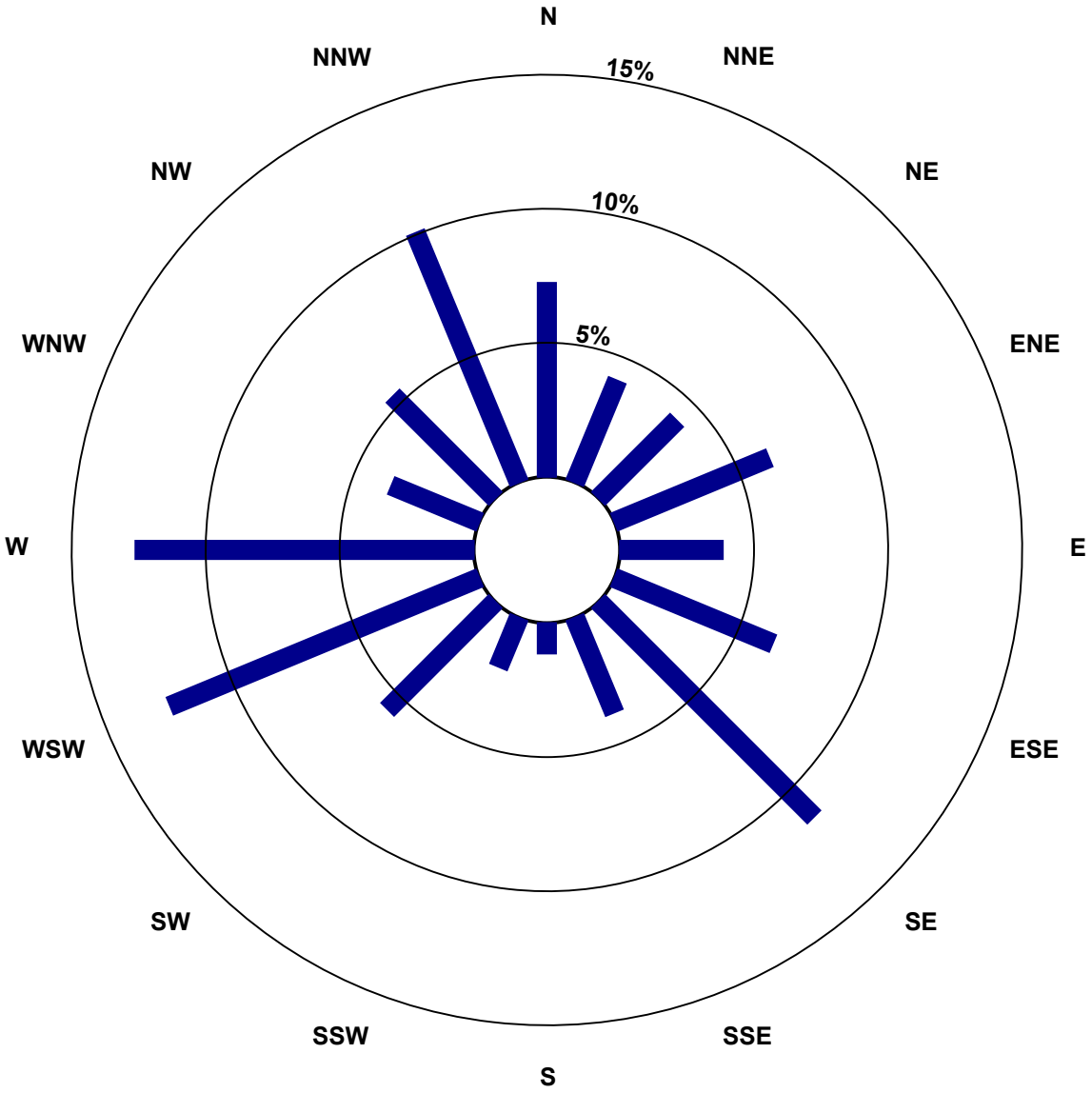
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Hydrogen Sulphide (H_2S) - ppb

Surmont 2



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

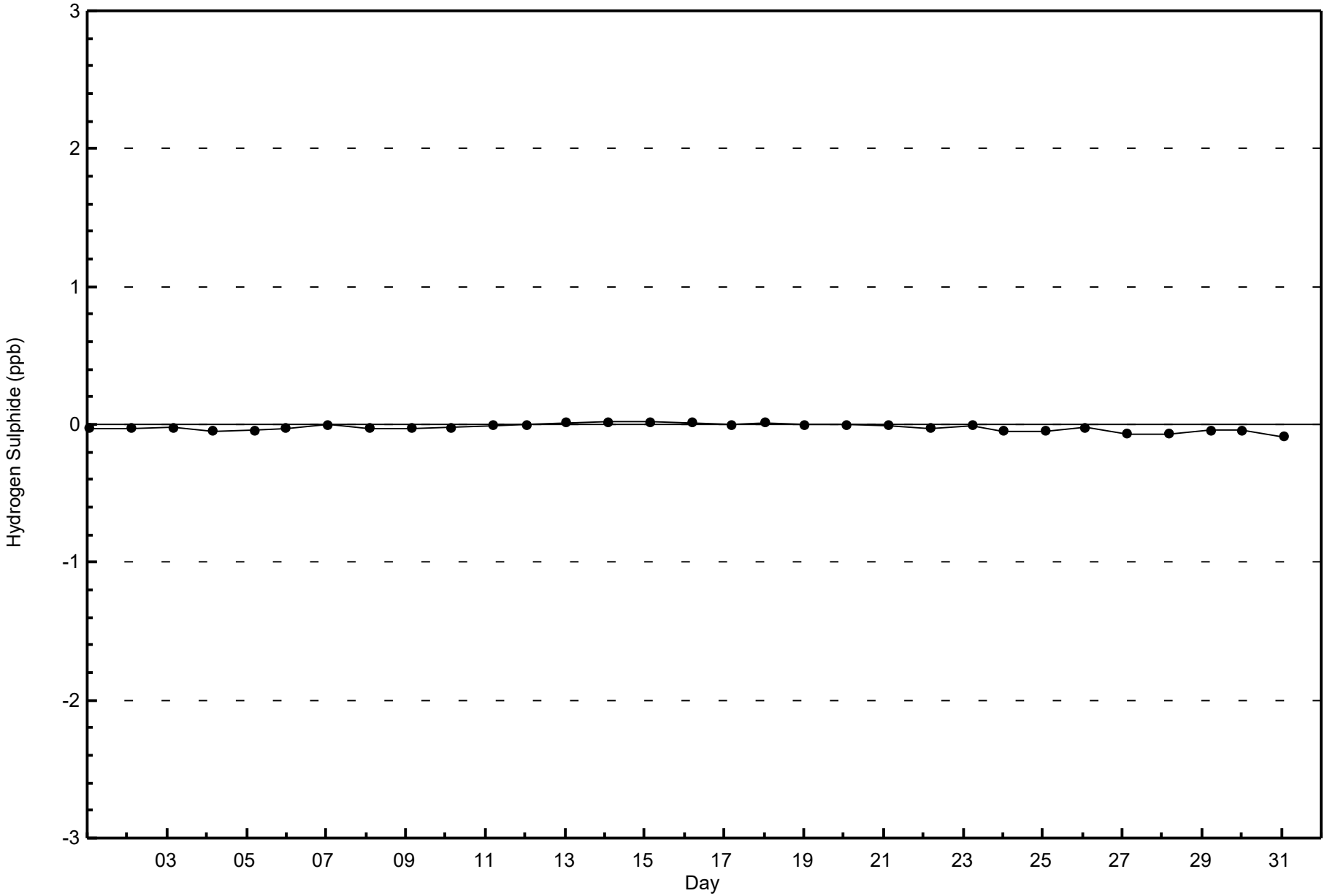
Total Number of Valid Hours: 705

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Surmont 2 - March 2025

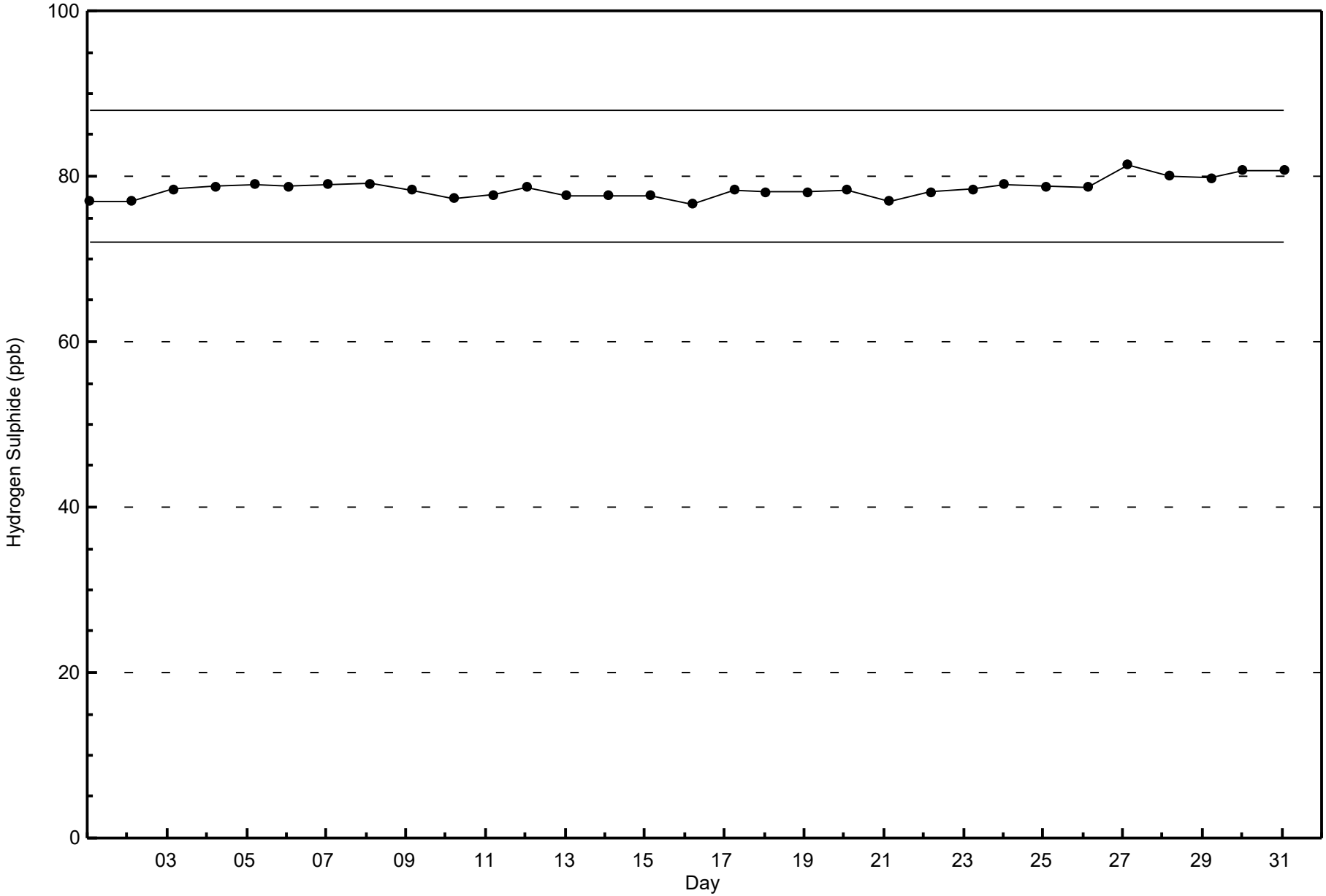


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Surmont 2 - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Surmont 2 - March 2025

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

Maximum Value: 2.8 ppm on Mar 7 22:00

Maximum Daily Average: 2.4 ppm on Mar 15

Minimum Value: 2.2 ppm on Mar 31 22:00

Minimum Daily Average: 2.3 ppm on Mar 21

Maximum Diurnal Average: 2.4 ppm at hour 1

Minimum Diurnal Average: 2.3 ppm at hour 18

Monthly Average: 2.34 ppm

Percentiles: P_1 = 2.3 P_{10} = 2.3 Q_1 = 2.3 Median = 2.3 Q_3 = 2.4 P_{90} = 2.4 P_{99} = 2.5

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	Z	2.3	2.3	2.3	2.4	2.4	2.4	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	2.4	2.4	2.4	2.4	2.3	2.4
2-Mar	2.4	Z	2.3	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.3	2.4	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.3	2.3	2.3	2.4
3-Mar	2.3	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	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4
4-Mar	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	2.3
5-Mar	2.4	2.4	2.4	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	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
6-Mar	2.3	2.3	2.3	2.4	2.3	Z	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	2.3	2.3	2.3	2.3	2.4
7-Mar	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.5	2.3	2.3	2.3	2.3	2.5	2.3	2.3	2.3	2.3	2.3	2.5	2.8	2.8	2.6	2.5	2.4	2.8
8-Mar	2.5	Z	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.5	2.5	2.4	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.5
9-Mar	2.3	2.3	Z	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4
10-Mar	2.3	2.3	2.4	Z	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4
11-Mar	2.3	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
12-Mar	2.4	2.4	2.4	2.4	2.4	Z	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.4	2.4	2.3	2.4	2.4
13-Mar	Z	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	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.4
14-Mar	2.3	Z	2.4	2.4	2.3	2.3	2.3	2.3	2.4	2.3	2.4	2.4	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.4	2.4	2.4	2.4
15-Mar	2.4	2.4	Z	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	2.4	2.4	2.4	2.4	2.4	2.5	2.5	2.4	2.5
16-Mar	2.5	2.5	2.4	Z	2.5	2.4	2.5	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.4	2.5
17-Mar	2.4	2.4	2.4	2.4	Z	2.4	2.4	2.4	2.4	2.4	C	C	C	C	C	2.3	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.4	2.4
18-Mar	2.3	2.3	2.3	2.4	2.4	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	2.4	2.3	2.3	2.4
19-Mar	Z	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.5	2.3	2.5
20-Mar	2.4	Z	2.4	2.3	2.3	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4
21-Mar	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
22-Mar	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	2.3
23-Mar	2.3	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
24-Mar	2.3	2.3	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.3
25-Mar	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.3	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4
26-Mar	2.3	Z	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	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4
27-Mar	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
28-Mar	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.4	2.5	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.5
29-Mar	2.3	2.4	2.4	2.4	Z	2.4	2.4	2.4	2.4	2.3	2.4	2.4	2.3	2.3	2.4	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.5	2.4	2.5
30-Mar	2.4	2.4	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	2.4
31-Mar	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	2.2	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	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	Diurnal Average	
	2.5	2.5	2.4	2.4	2.5	2.4	2.5	2.4	2.5	2.4	2.4	2.4	2.4	2.5	2.4	2.5	2.5	2.4	2.4	2.5	2.8	2.8	2.6	2.5	Diurnal Maximum	

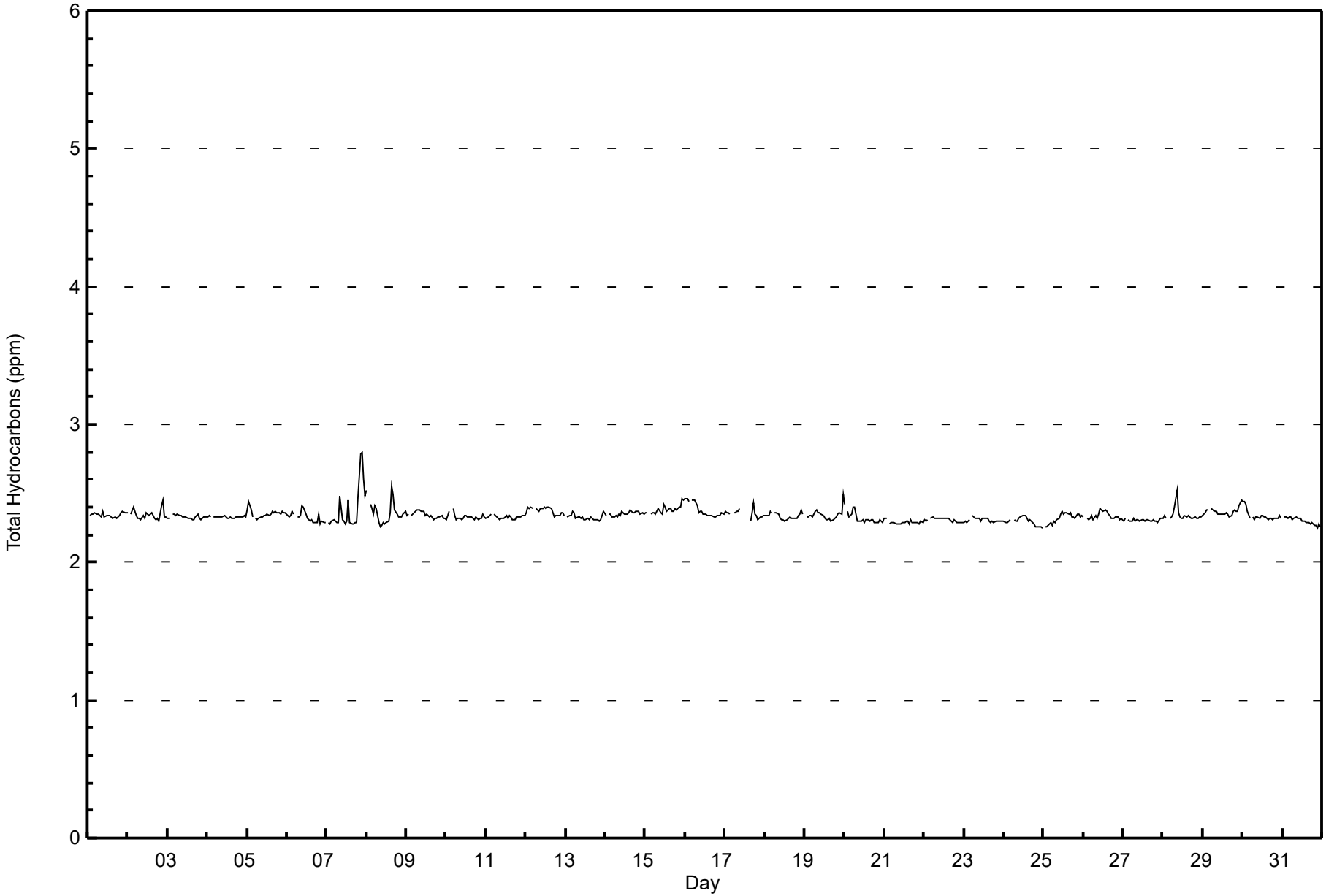
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Surmont 2 - March 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	0	0.00	0.00
2.1 - 3.0	708	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: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Surmont 2 - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.1 - 3.0	50	33	31	45	26	47	80	27	8	16	39	87	89	23	37	70	708
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	50	33	31	45	26	47	80	27	8	16	39	87	89	23	37	70	708

Total Number of Valid Hours: 708

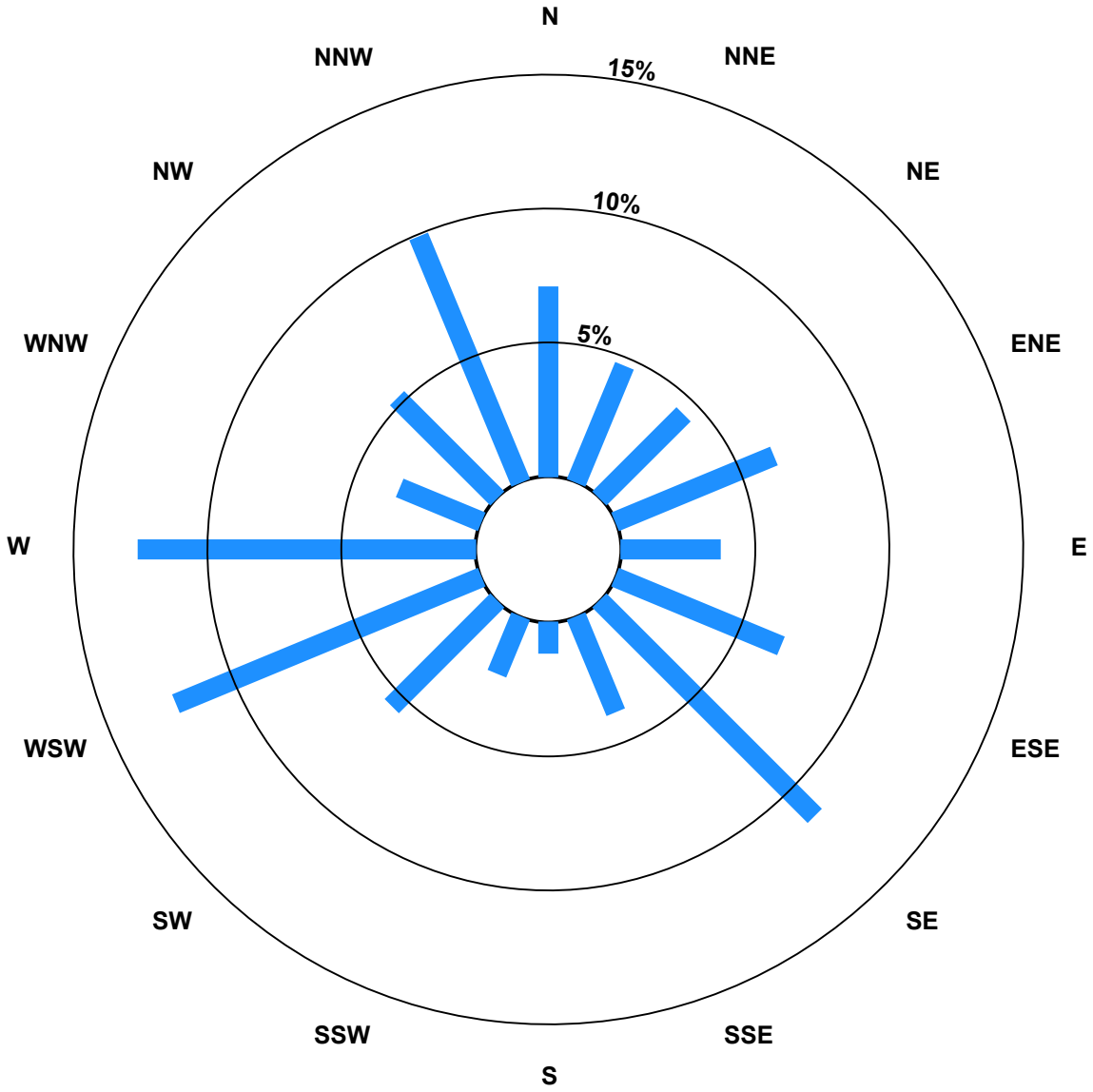
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Total Hydrocarbons (THC) - ppm

Surmont 2



Classes (ppm)

- 0 - 2.0
- 2.1 - 3.0
- 3.1 - 10.0
- > 10.0

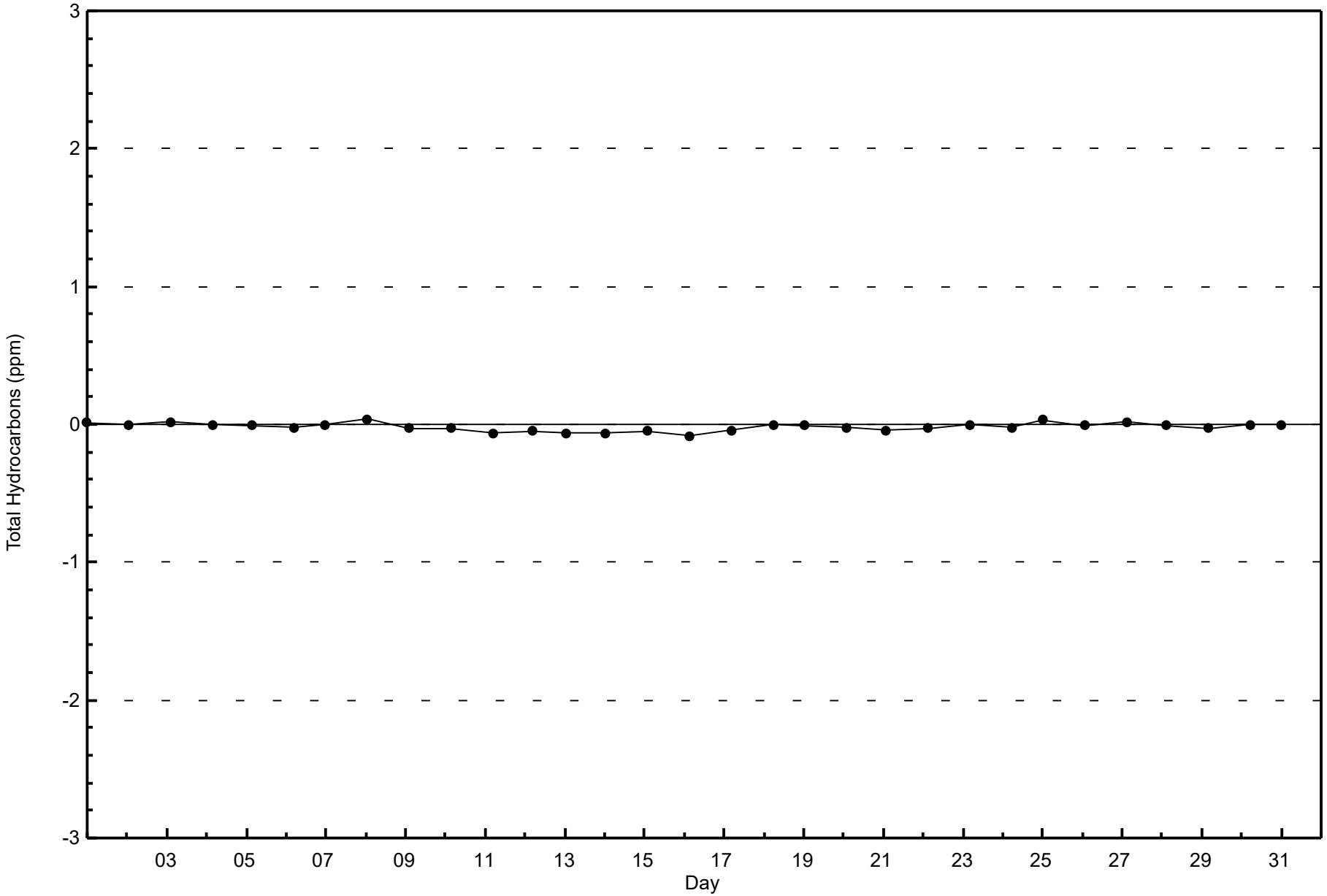
Total Number of Valid Hours: 708

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Surmont 2 - March 2025

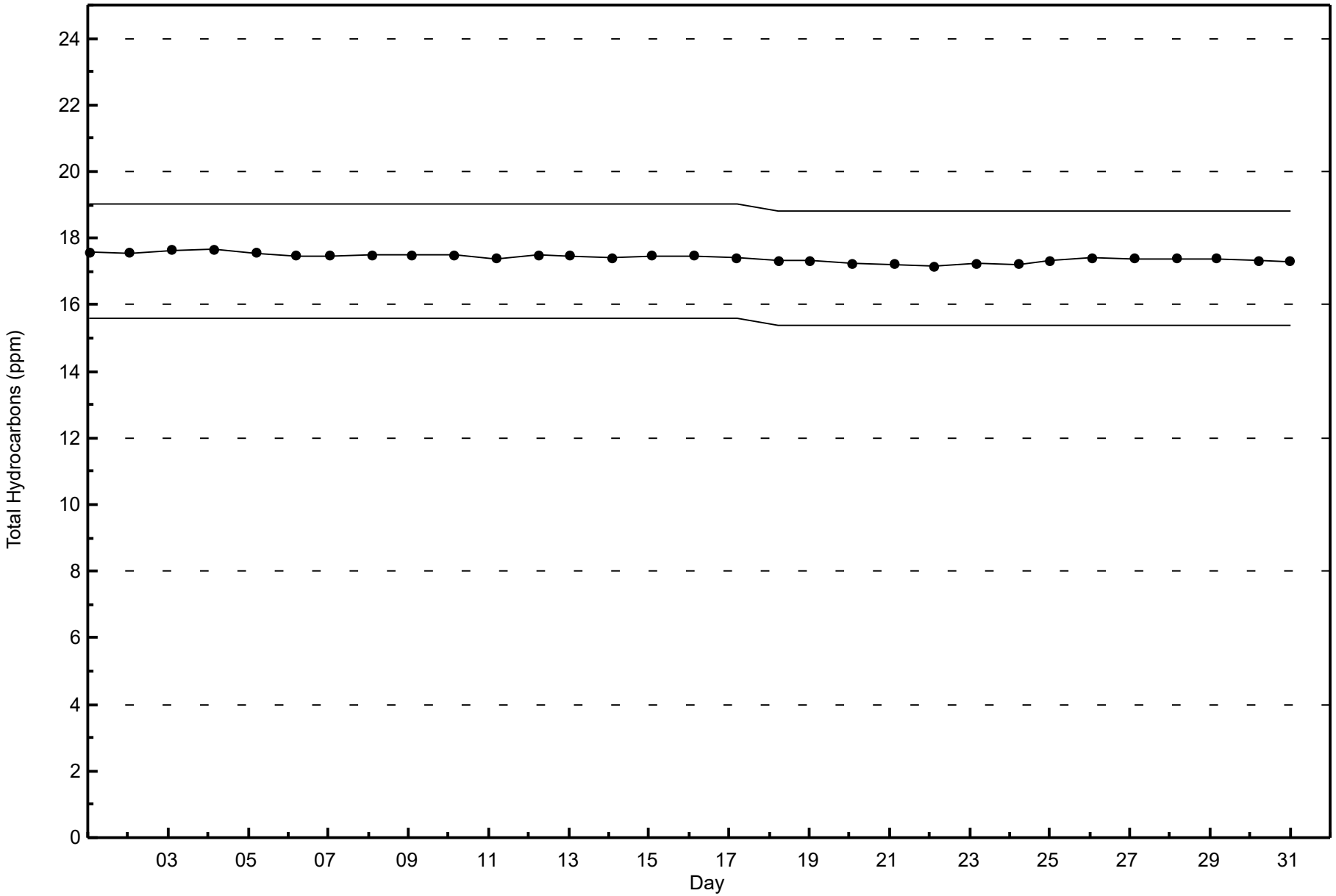


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Surmont 2 - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Surmont 2 - March 2025

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

Maximum Value: 3.8 ppb on Mar 8 16:00 Maximum Daily Average: 0.6 ppb on Mar 12

Minimum Value: 0.0 ppb on Mar 1 01:00 Minimum Daily Average: 0.0 ppb on Mar 11

Maximum Diurnal Average: 0.5 ppb at hour 9 Minimum Diurnal Average: 0.0 ppb at hour 5

Monthly Average: 0.17 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.1 P_{90} = 0.5 P_{99} = 1.7

Hours in Service:	744
Hours of Data:	684
Hours of Missing Data:	60
Hours of Calibration:	40
Percent Operational Time:	97.3

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.5	1.2	1.6	0.5	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	0.2	1.6
2-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.2	0.2	0.1	0.7	0.5	0.5	0.9	0.6	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.9
3-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.3	0.6	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6
4-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.0	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
5-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.4	0.4	0.5	0.6	0.6	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6
6-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.4	1.7	1.2	1.1	0.8	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.7
7-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	1.2	0.2	0.2	0.2	0.2	1.8	0.1	0.1	0.1	0.0	0.0	0.0	0.3	0.3	0.1	0.1	0.2	1.8
8-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.8	3.8	2.6	0.4	0.0	0.0	0.1	0.0	0.0	0.0	0.4	3.8
9-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.4	0.7	0.4	0.4	0.9	0.5	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.9
10-Mar	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.4	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
11-Mar	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	0.0	0.0	0.0	0.0	0.1
12-Mar	0.0	0.0	0.1	Z	0.0	0.0	0.0	0.6	1.2	1.0	1.6	1.6	1.7	2.2	1.7	1.5	0.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.2
13-Mar	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
14-Mar	0.0	0.1	0.0	0.0	0.0	Z	0.0	0.4	1.2	1.5	2.2	1.0	0.9	1.1	1.2	1.2	0.8	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.5	2.2
15-Mar	Z	0.0	0.1	0.1	0.0	0.0	0.1	1.1	1.5	0.6	0.6	1.3	1.1	0.7	0.9	0.7	0.5	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.4	1.5
16-Mar	0.1	Z	0.0	0.0	0.0	0.0	0.1	0.7	0.4	0.6	0.9	0.6	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.9
17-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.3	0.4	M	0.3	0.3	0.6	0.6	0.2	0.0	0.0	0.1	0.0	0.0	0.2	0.6
18-Mar	0.7	0.0	0.0	Z	0.0	0.0	0.0	0.3	0.5	0.2	0.2	0.1	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.1	0.7
19-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.3	1.0	1.1	1.1	0.4	0.3	0.3	0.2	0.2	0.1	0.0	0.2	0.0	0.0	0.1	0.0	0.0	0.2	1.1
20-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.1	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	0.0	0.0	0.0	0.0	0.3
21-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
22-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.5	0.3	0.3	0.3	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.5
23-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.4	0.2	0.1	0.1	0.0	0.1	0.0	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
24-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.4	C	C	C	C	C	M	M	M	M	M	M	M	M	M	--	0.4
25-Mar	M	M	M	M	M	M	M	M	M	M	C	C	C	C	C	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.1
26-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.5	0.8	1.3	1.6	0.5	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.6
27-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
28-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.3	1.9	0.7	0.4	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.9
29-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.2	0.6	0.8	0.5	1.0	0.7	0.6	0.5	0.4	0.4	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.3	1.0
30-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.2	0.3	0.2	0.2	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
31-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5	0.5	0.5	0.4	0.3	0.4	0.3	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	Diurnal Average	
	0.7	0.1	0.1	0.1	0.0	0.0	0.3	1.9	1.7	1.6	2.2	1.6	1.7	2.2	1.7	3.8	2.6	0.6	0.2	0.1	0.3	0.5	0.1	0.1	Diurnal Maximum	

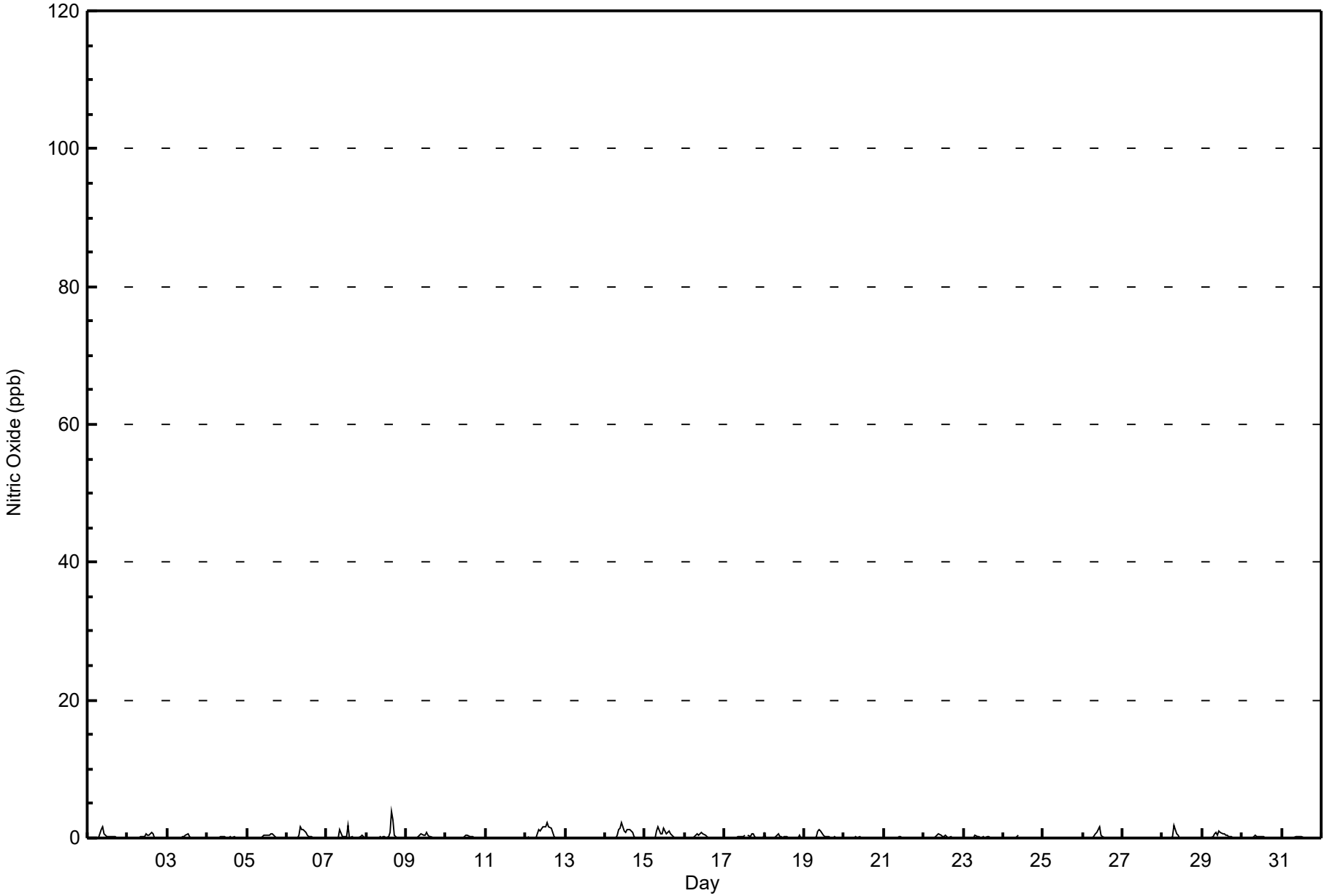
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Surmont 2 - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	684	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Surmont 2 - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	53	34	31	44	27	44	80	28	8	16	38	82	71	24	35	69	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	53	34	31	44	27	44	80	28	8	16	38	82	71	24	35	69	684

Total Number of Valid Hours: 684

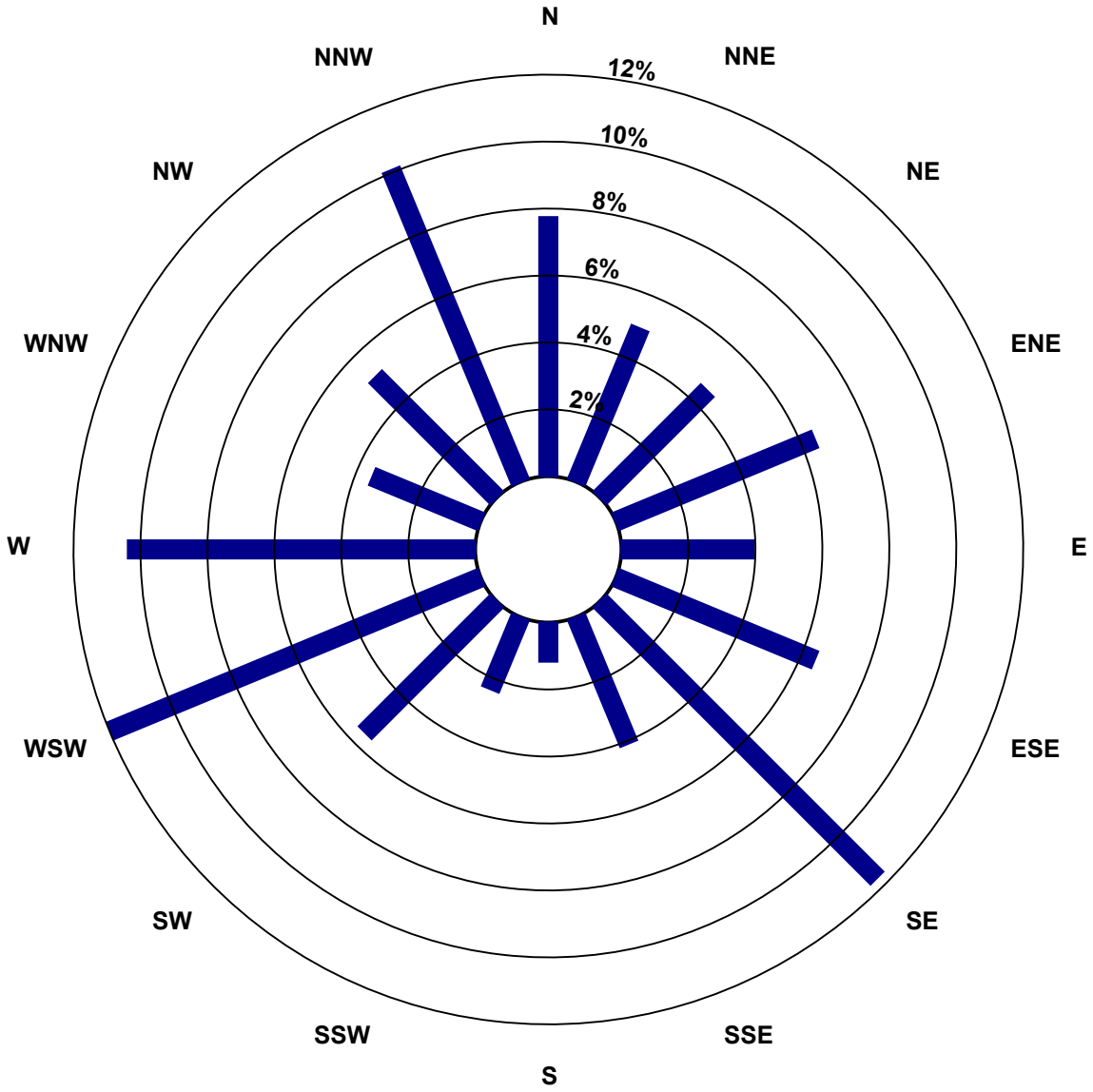
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitric Oxide (NO) - ppb

Surmont 2



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

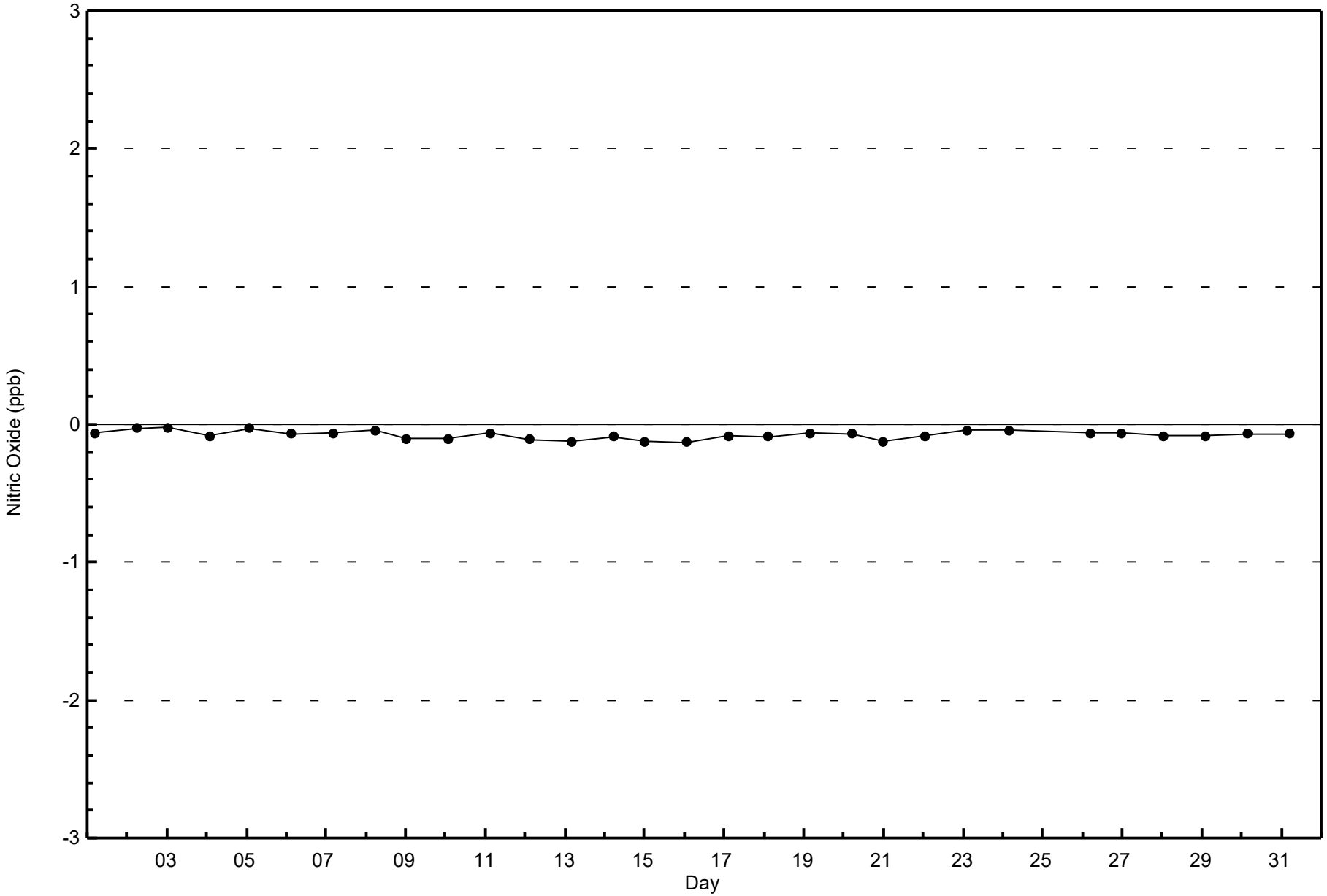
Total Number of Valid Hours: 684

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Surmont 2 - March 2025



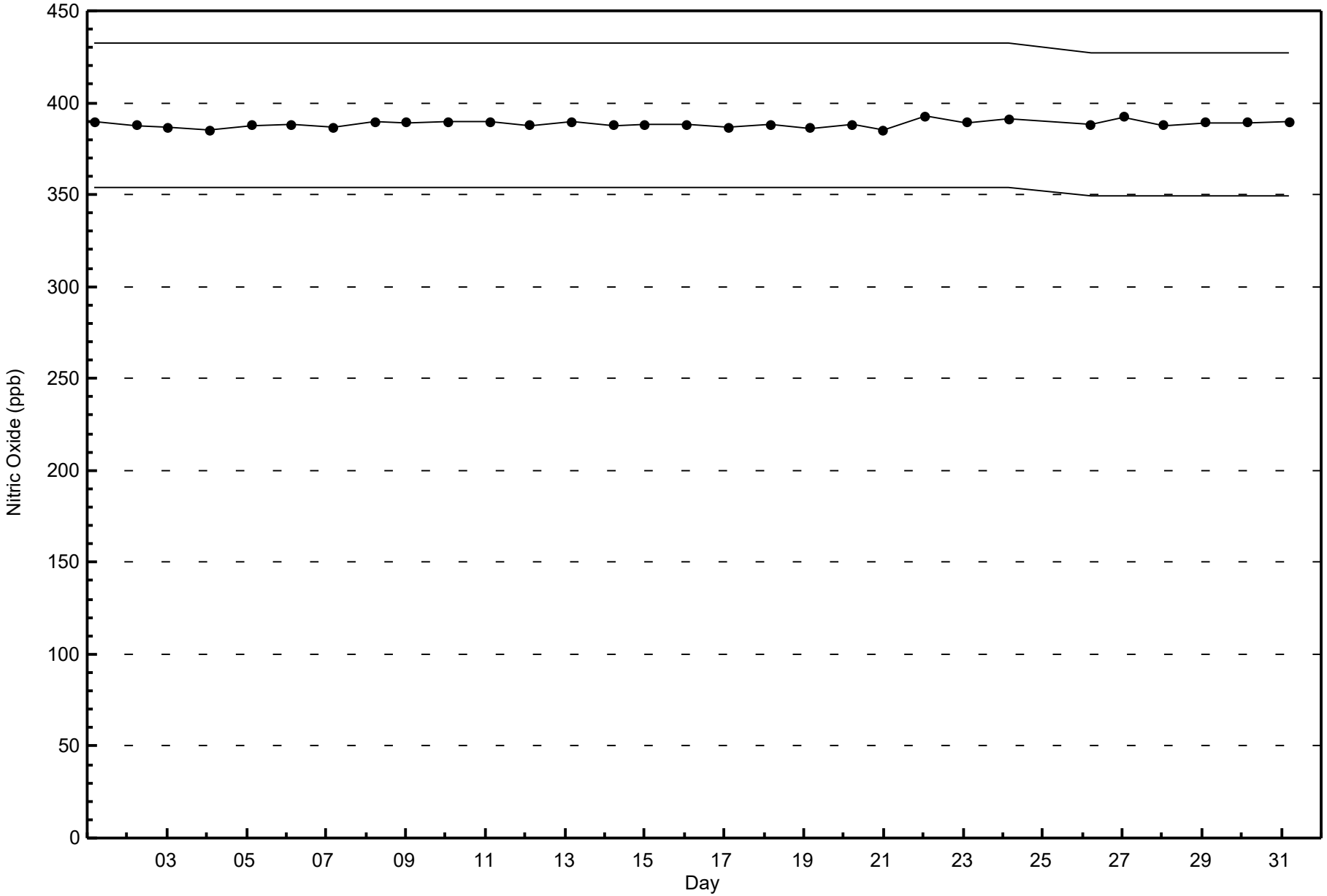
29 - 31

Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Surmont 2 - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Surmont 2 - March 2025

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

Maximum Value: 33.1 ppb on Mar 7 21:00

Maximum Daily Average: 6.1 ppb on Mar 7

Minimum Value: 0.1 ppb on Mar 21 06:00

Minimum Daily Average: 0.4 ppb on Mar 21

Maximum Diurnal Average: 3.5 ppb at hour 22

Minimum Diurnal Average: 1.1 ppb at hour 15

Monthly Average: 2.09 ppb

Percentiles: P_1 = 0.2 P_{10} = 0.5 Q_1 = 0.7 Median = 1.3 Q_3 = 2.5 P_{90} = 4.5 P_{99} = 11.0

Hours in Service:	744
Hours of Data:	684
Hours of Missing Data:	60
Hours of Calibration:	40
Percent Operational Time:	97.3

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.6	0.6	0.7	1.7	Z	1.8	3.9	8.0	4.5	4.2	1.6	0.8	0.8	0.9	0.8	0.9	1.1	1.6	5.9	5.0	4.7	4.8	3.7	2.7	2.7	8.0
2-Mar	2.4	1.7	2.3	3.8	2.2	Z	2.9	2.7	2.6	1.3	0.7	2.2	2.3	1.8	3.0	2.7	0.9	1.6	1.9	1.0	5.6	7.3	2.1	2.3	2.5	7.3
3-Mar	Z	1.8	1.3	1.9	2.8	2.1	2.4	2.1	1.8	1.1	1.6	1.9	2.5	1.1	0.4	0.5	0.6	1.0	1.0	0.9	0.9	1.1	1.1	1.6	1.5	2.8
4-Mar	1.6	Z	1.0	1.3	1.4	2.5	1.8	1.4	1.4	0.7	0.6	0.4	0.4	0.5	0.8	0.8	1.3	0.9	1.7	2.1	1.6	1.0	2.2	1.2	1.2	2.5
5-Mar	3.7	6.6	Z	1.8	1.8	1.4	2.1	0.9	0.6	0.9	1.1	1.1	1.1	1.3	1.8	2.3	2.7	3.2	3.2	2.8	2.3	1.7	1.6	1.7	2.1	6.6
6-Mar	1.4	1.5	1.2	Z	2.2	1.9	2.0	3.5	4.6	3.0	3.0	1.8	1.0	0.8	0.8	0.7	0.7	1.7	5.8	6.7	1.0	1.3	0.9	0.7	2.1	6.7
7-Mar	1.0	0.6	0.6	0.9	Z	1.1	1.9	1.3	7.5	1.5	0.8	0.7	0.8	4.6	0.5	1.0	0.9	0.6	1.8	13.9	33.1	32.3	19.0	14.2	6.1	33.1
8-Mar	10.8	8.0	6.8	5.6	3.6	Z	5.0	1.7	1.7	0.6	0.6	0.6	0.5	0.7	2.0	9.1	9.6	4.2	2.9	2.4	1.8	3.3	3.5	3.5	3.8	10.8
9-Mar	Z	1.0	0.7	1.6	1.3	2.2	2.7	3.1	2.5	2.5	1.5	1.3	2.1	0.9	0.6	0.5	0.5	0.5	0.5	0.5	0.8	1.1	1.7	3.8	1.5	3.8
10-Mar	4.5	Z	6.7	7.0	6.3	2.9	1.2	0.4	0.2	0.2	0.3	0.6	0.9	1.0	0.7	0.8	0.9	0.8	0.6	0.6	0.5	0.6	0.4	0.3	1.7	7.0
11-Mar	0.4	0.4	Z	0.5	0.9	0.4	0.5	0.6	0.8	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.5	0.6	0.5	0.9
12-Mar	3.8	7.6	5.6	Z	4.4	4.3	4.3	3.9	3.2	2.0	2.8	2.6	2.2	2.8	2.7	3.0	2.8	2.5	2.4	2.1	1.7	2.1	2.8	2.5	3.2	7.6
13-Mar	1.0	0.6	1.5	1.3	Z	2.2	0.3	0.6	0.3	0.4	0.2	0.3	0.3	0.4	0.3	0.5	0.7	0.9	0.9	0.4	0.4	0.5	0.7	0.6	0.7	2.2
14-Mar	0.4	0.8	0.7	0.5	1.1	Z	4.4	4.8	4.6	3.8	3.5	1.5	1.3	1.6	2.0	3.2	3.3	2.7	2.5	3.0	3.9	3.7	3.2	3.7	2.6	4.8
15-Mar	Z	4.1	4.7	5.9	5.2	5.0	4.2	4.2	3.4	1.4	1.4	3.1	2.6	1.8	2.7	2.3	2.2	2.3	3.1	8.0	8.0	8.8	10.9	10.6	4.6	10.9
16-Mar	10.8	Z	10.3	12.7	8.1	8.2	7.0	3.0	1.1	1.4	1.7	1.3	0.9	0.6	0.5	0.5	0.8	1.3	1.3	1.3	1.4	1.4	1.4	1.7	3.4	12.7
17-Mar	1.7	1.7	Z	1.6	1.5	1.4	1.3	1.4	1.4	1.3	1.4	1.5	2.0	M	1.5	1.8	4.3	8.5	7.8	4.5	2.9	3.6	3.5	2.9	2.7	8.5
18-Mar	6.8	6.7	5.7	Z	4.8	4.5	2.5	2.7	2.5	0.8	0.6	0.6	0.8	0.8	0.7	0.7	0.8	0.8	1.8	1.4	1.9	5.0	3.2	1.9	2.5	6.8
19-Mar	1.7	1.4	1.1	2.5	Z	1.0	2.6	1.7	2.4	2.6	2.2	1.1	0.9	1.0	0.7	0.9	0.7	0.8	3.3	7.4	7.5	8.9	6.7	11.5	3.1	11.5
20-Mar	6.8	4.6	4.0	1.8	1.8	Z	3.1	2.3	0.5	0.6	0.4	0.4	0.3	0.4	0.4	0.4	0.3	0.4	0.6	0.3	0.3	0.2	0.2	0.3	1.3	6.8
21-Mar	Z	0.4	0.3	0.2	0.2	0.1	0.2	0.2	0.3	0.5	0.6	0.4	0.4	0.4	0.5	0.6	0.5	0.6	0.6	0.6	0.6	0.5	0.7	0.9	0.4	0.9
22-Mar	0.9	Z	1.0	1.1	1.0	1.0	1.2	1.5	1.9	2.2	1.7	1.4	1.3	1.4	1.2	0.9	1.1	0.8	1.2	0.9	1.0	0.9	0.6	1.0	1.2	2.2
23-Mar	0.9	1.9	Z	3.7	2.3	2.4	2.7	2.5	1.1	0.6	0.5	0.5	0.6	0.6	0.8	0.8	0.6	0.5	0.5	0.8	3.9	2.2	0.9	0.6	1.4	3.9
24-Mar	0.6	0.5	0.4	Z	0.5	0.4	0.5	0.6	0.8	1.9	C	C	C	C	C	M	M	M	M	M	M	M	M	M	--	1.9
25-Mar	M	M	M	M	M	M	M	M	M	M	C	C	C	C	C	0.5	0.4	0.5	0.6	0.4	2.3	2.1	0.9	1.0	--	2.3
26-Mar	0.8	1.5	1.5	2.1	1.7	Z	1.9	3.2	2.7	2.8	2.8	1.4	1.0	0.8	0.9	0.8	0.6	0.6	0.5	1.1	0.7	0.9	0.5	0.8	1.4	3.2
27-Mar	Z	0.9	1.6	0.5	0.5	0.4	0.9	1.0	0.7	0.5	0.6	0.5	0.5	0.5	0.5	0.6	0.5	0.6	0.6	0.5	0.5	1.0	0.8	2.2	0.7	2.2
28-Mar	0.7	Z	0.6	1.2	2.2	3.5	3.2	3.6	1.6	1.0	0.5	0.5	0.6	0.6	0.7	0.7	0.7	0.4	0.4	0.6	1.4	1.5	1.2	1.7	1.3	3.6
29-Mar	3.9	5.3	Z	5.9	3.9	3.0	3.3	2.7	2.1	1.1	2.7	2.5	1.8	1.7	1.2	1.3	1.4	1.2	1.6	3.4	3.5	4.4	6.2	6.4	3.1	6.4
30-Mar	4.0	3.3	2.8	Z	1.7	1.2	1.2	0.8	1.3	0.9	0.9	0.7	1.0	0.8	0.6	0.6	0.7	0.7	0.7	1.1	1.2	1.9	1.9	1.6	1.4	4.0
31-Mar	2.4	1.5	2.3	0.9	Z	1.0	1.2	1.3	1.7	1.8	1.6	1.5	1.1	0.9	0.8	0.9	0.9	0.7	0.7	0.7	0.5	0.6	0.7	0.9	1.2	2.4
	2.9	2.6	2.6	2.7	2.5	2.2	2.4	2.3	2.1	1.5	1.3	1.2	1.1	1.1	1.1	1.4	1.4	1.4	1.9	2.5	3.2	3.5	2.8	2.8	Diurnal Average	
	10.8	8.0	10.3	12.7	8.1	8.2	7.0	8.0	7.5	4.2	3.5	3.1	2.6	4.6	3.0	9.1	9.6	8.5	7.8	13.9	33.1	32.3	19.0	14.2	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

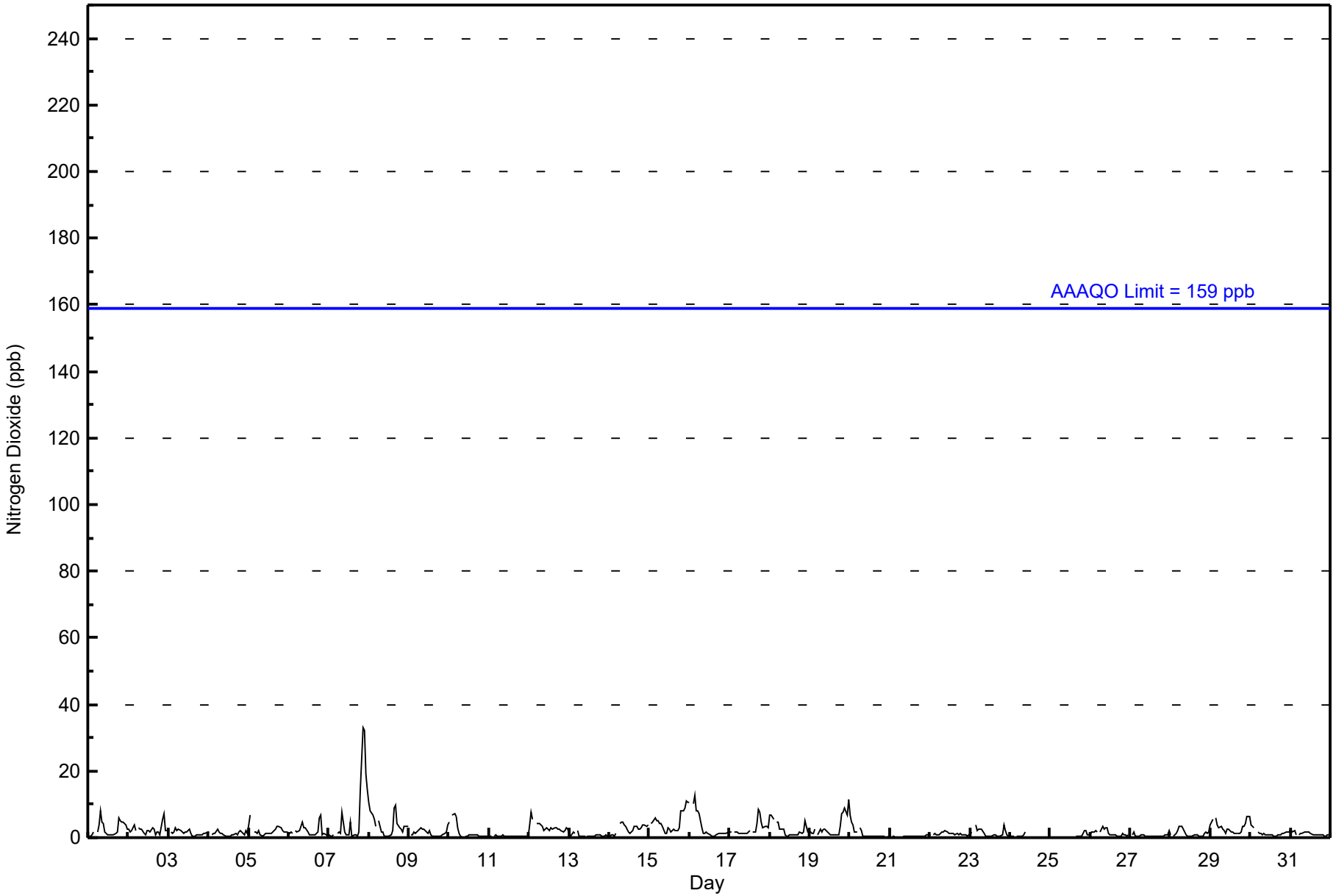
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Surmont 2 - March 2025



Nitrogen Dioxide (NO_2) - ppb
Surmont 2 - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	682	99.71	99.71
21 - 40	2	0.29	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Surmont 2 - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	53	34	31	44	27	44	80	28	8	16	38	82	71	24	34	68	682
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	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	53	34	31	44	27	44	80	28	8	16	38	82	71	24	35	69	684

Total Number of Valid Hours: 684

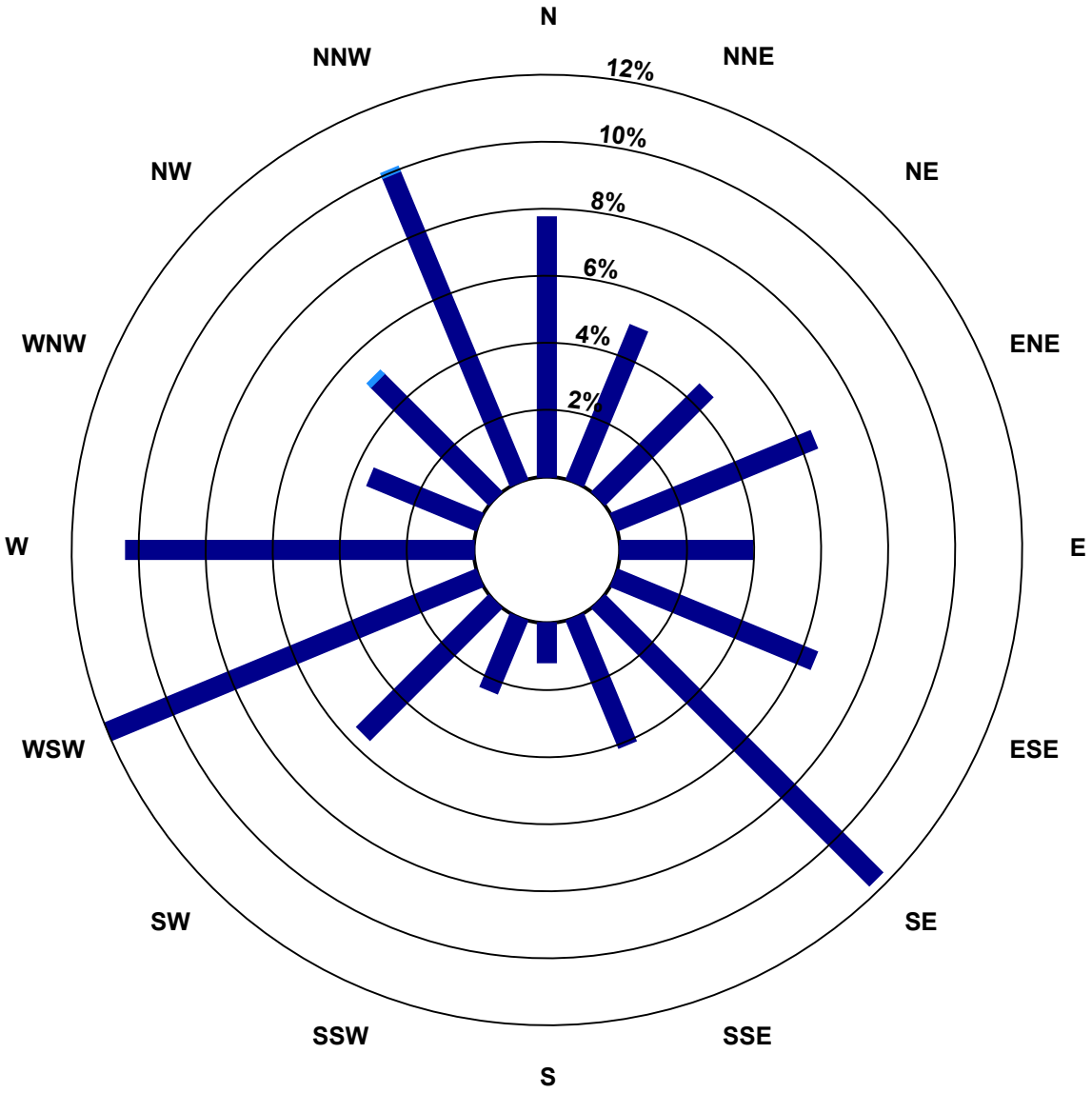
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Dioxide (NO_2) - ppb

Surmont 2



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

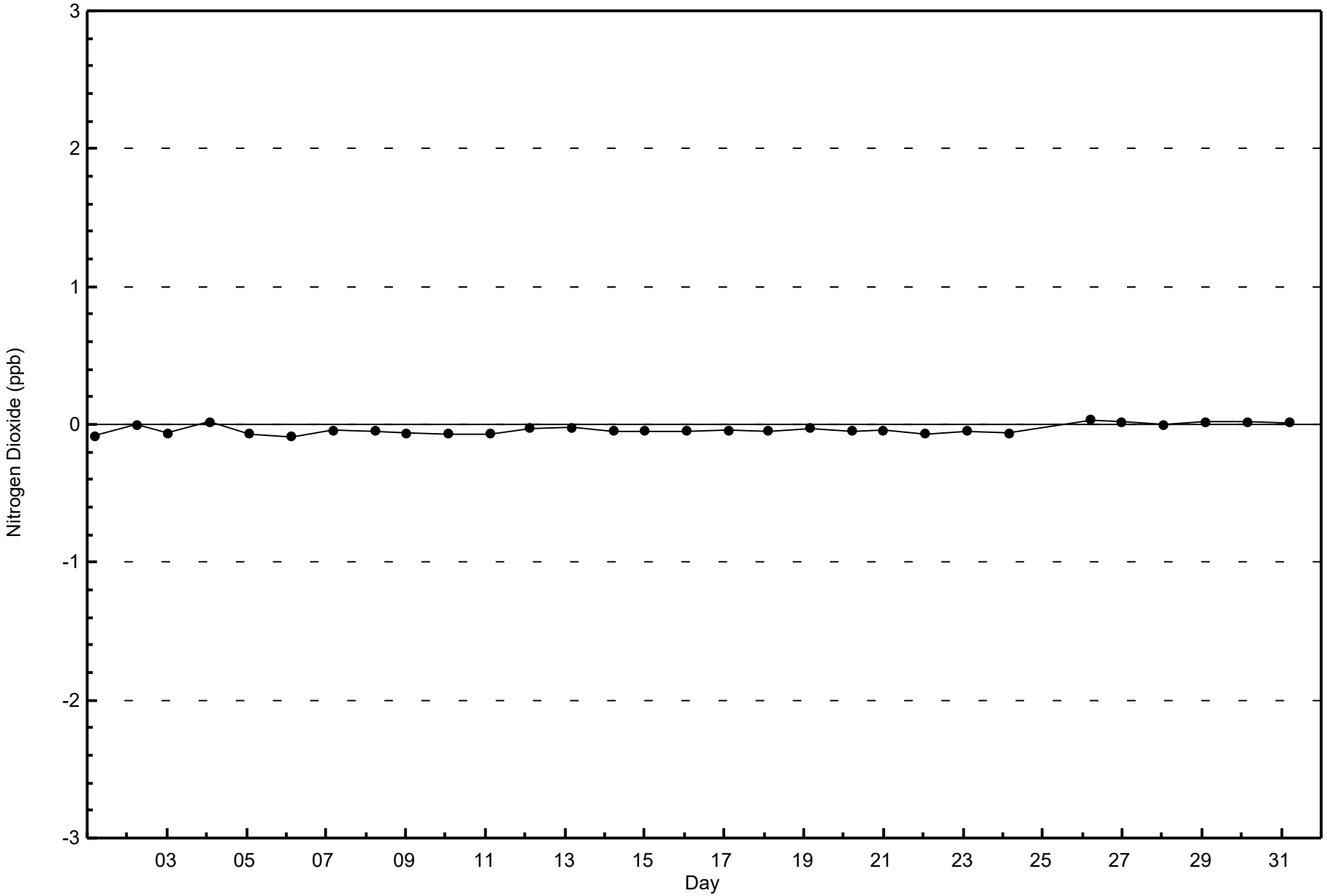
Total Number of Valid Hours: 684

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Surmont 2 - March 2025

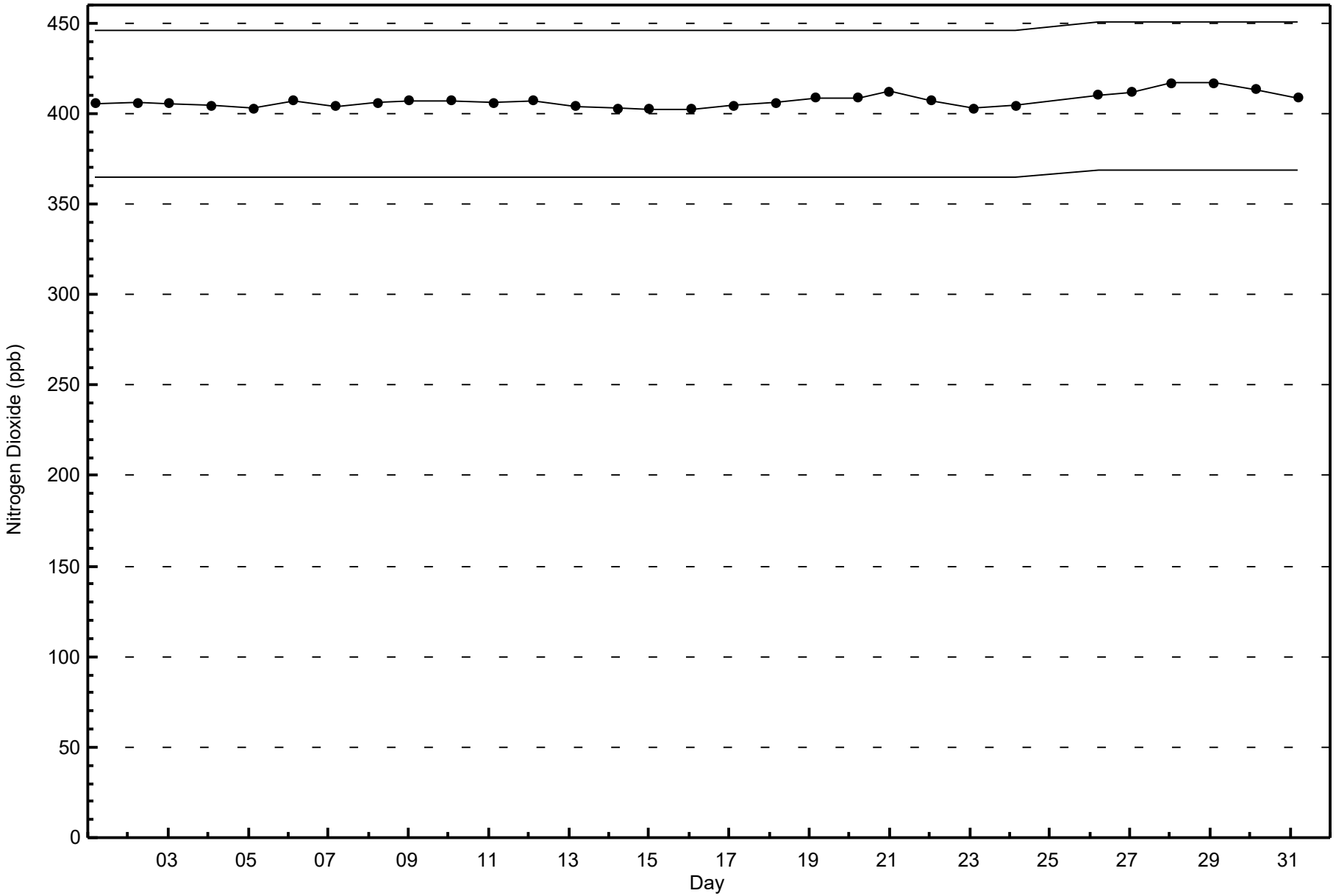


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Surmont 2 - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Surmont 2 - March 2025

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

Maximum Value: 33.4 ppb on Mar 7 21:00

Maximum Daily Average: 6.3 ppb on Mar 7

Minimum Value: 0.1 ppb on Mar 21 06:00

Minimum Daily Average: 0.5 ppb on Mar 11

Maximum Diurnal Average: 3.5 ppb at hour 22

Minimum Diurnal Average: 1.4 ppb at hour 15

Monthly Average: 2.27 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.5$ $Q_1 = 0.7$ Median = 1.4 $Q_3 = 2.9$ $P_{90} = 4.9$ $P_{99} = 12.3$

Hours in Service:	744
Hours of Data:	684
Hours of Missing Data:	60
Hours of Calibration:	40
Percent Operational Time:	97.3

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.6	0.6	0.7	1.7	Z	1.8	3.9	8.5	5.7	5.8	2.1	0.9	0.9	1.0	0.9	1.1	1.2	1.7	5.9	5.0	4.7	4.8	3.7	2.7	2.9	8.5
2-Mar	2.4	1.7	2.3	3.8	2.2	Z	2.9	2.8	2.8	1.5	0.8	2.9	2.8	2.3	3.9	3.3	1.0	1.6	1.9	1.0	5.6	7.4	2.1	2.3	2.7	7.4
3-Mar	Z	1.8	1.3	1.9	2.8	2.1	2.4	2.1	1.9	1.3	1.9	2.2	3.1	1.3	0.5	0.6	0.7	1.0	1.0	0.9	0.9	1.1	1.1	1.6	1.5	3.1
4-Mar	1.6	Z	1.0	1.3	1.4	2.5	1.8	1.4	1.6	0.8	0.7	0.5	0.4	0.6	1.0	0.9	1.5	0.9	1.7	2.1	1.6	1.0	2.2	1.2	1.3	2.5
5-Mar	3.7	6.6	Z	1.8	1.8	1.4	2.1	0.9	0.6	1.0	1.5	1.5	1.5	1.8	2.4	2.9	3.2	3.4	3.2	2.8	2.3	1.7	1.6	1.7	2.2	6.6
6-Mar	1.4	1.5	1.2	Z	2.2	1.9	2.0	3.9	6.3	4.2	4.1	2.6	1.3	1.0	0.9	0.8	0.8	1.8	5.8	6.7	1.0	1.3	0.9	0.7	2.4	6.7
7-Mar	1.0	0.6	0.6	0.9	Z	1.1	1.9	1.4	8.7	1.7	1.0	0.9	1.0	6.4	0.6	1.1	1.0	0.6	1.8	13.9	33.4	32.6	19.1	14.3	6.3	33.4
8-Mar	10.8	8.0	6.8	5.6	3.6	Z	5.0	1.8	2.0	0.7	0.7	0.7	0.6	0.8	2.8	12.9	12.2	4.6	2.9	2.4	1.9	3.3	3.5	3.5	4.2	12.9
9-Mar	Z	1.0	0.7	1.6	1.3	2.2	2.8	3.3	2.9	3.2	1.9	1.7	3.0	1.4	0.9	0.7	0.5	0.5	0.5	0.5	0.8	1.1	1.7	3.9	1.7	3.9
10-Mar	4.5	Z	6.8	7.0	6.3	2.9	1.2	0.4	0.2	0.2	0.3	0.7	1.2	1.4	0.8	1.0	1.0	0.8	0.6	0.6	0.5	0.6	0.4	0.3	1.7	7.0
11-Mar	0.4	0.4	Z	0.5	0.9	0.4	0.5	0.6	0.8	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.5	0.6	0.5	0.9
12-Mar	3.8	7.6	5.7	Z	4.4	4.3	4.3	4.5	4.4	3.0	4.4	4.2	3.9	5.0	4.4	4.5	3.5	2.7	2.4	2.1	1.7	2.1	2.8	2.5	3.9	7.6
13-Mar	1.0	0.6	1.5	1.3	Z	2.2	0.3	0.6	0.3	0.4	0.2	0.3	0.3	0.4	0.3	0.5	0.7	0.9	0.9	0.4	0.4	0.5	0.8	0.6	0.7	2.2
14-Mar	0.4	0.9	0.7	0.5	1.1	Z	4.4	5.2	5.8	5.3	5.7	2.5	2.2	2.7	3.2	4.4	4.1	3.0	2.6	3.0	3.9	3.7	3.2	3.7	3.1	5.8
15-Mar	Z	4.1	4.8	6.0	5.2	5.0	4.3	5.3	4.9	2.0	2.0	4.4	3.7	2.5	3.6	3.0	2.7	2.6	3.2	8.0	8.0	8.8	10.9	10.6	5.0	10.9
16-Mar	10.9	Z	10.3	12.7	8.1	8.2	7.1	3.7	1.5	2.0	2.6	1.9	1.2	0.8	0.6	0.6	0.9	1.3	1.3	1.3	1.4	1.4	1.4	1.7	3.6	12.7
17-Mar	1.7	1.7	Z	1.6	1.5	1.4	1.3	1.5	1.6	1.5	1.6	1.8	2.4	M	1.8	2.1	4.9	9.1	8.0	4.5	2.9	3.7	3.5	2.9	2.9	9.1
18-Mar	7.5	6.7	5.7	Z	4.8	4.5	2.5	3.0	3.0	1.0	0.8	0.7	1.0	0.9	0.8	0.7	0.9	0.8	1.8	1.4	1.9	5.5	3.2	1.9	2.7	7.5
19-Mar	1.7	1.4	1.1	2.5	Z	1.0	2.6	2.0	3.4	3.7	3.3	1.5	1.2	1.3	0.9	1.1	0.8	0.8	3.5	7.4	7.5	9.0	6.7	11.5	3.3	11.5
20-Mar	6.8	4.6	4.0	1.8	1.8	Z	3.2	2.6	0.6	0.7	0.4	0.4	0.3	0.4	0.4	0.4	0.3	0.4	0.6	0.3	0.3	0.2	0.2	0.3	1.4	6.8
21-Mar	Z	0.4	0.3	0.2	0.2	0.1	0.2	0.2	0.3	0.6	0.9	0.5	0.5	0.4	0.5	0.7	0.5	0.6	0.6	0.6	0.6	0.5	0.7	0.9	0.5	0.9
22-Mar	0.9	Z	1.0	1.1	1.0	1.0	1.2	1.6	2.3	2.7	2.0	1.7	1.6	1.8	1.4	1.0	1.2	0.8	1.2	0.9	1.1	0.9	0.6	1.0	1.3	2.7
23-Mar	0.9	1.9	Z	3.7	2.3	2.4	2.8	2.9	1.3	0.7	0.6	0.5	0.7	0.6	1.0	0.9	0.7	0.5	0.5	0.8	3.9	2.2	0.9	0.6	1.5	3.9
24-Mar	0.6	0.5	0.4	Z	0.5	0.4	0.5	0.6	0.9	2.3	C	C	C	C	C	M	M	M	M	M	M	M	M	M	--	2.3
25-Mar	M	M	M	M	M	M	M	M	M	M	C	C	C	C	C	0.6	0.4	0.5	0.6	0.4	2.3	2.1	0.9	1.0	--	2.3
26-Mar	0.8	1.5	1.5	2.1	1.7	Z	1.9	3.7	3.5	4.1	4.4	1.9	1.2	0.9	0.9	0.9	0.6	0.6	0.5	1.1	0.7	0.9	0.5	0.8	1.6	4.4
27-Mar	Z	0.9	1.6	0.5	0.5	0.4	0.9	1.1	0.8	0.5	0.7	0.5	0.5	0.5	0.5	0.6	0.5	0.6	0.6	0.5	0.5	1.0	0.8	2.2	0.8	2.2
28-Mar	0.7	Z	0.6	1.2	2.2	3.5	3.5	5.5	2.3	1.4	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.4	0.4	0.6	1.4	1.5	1.2	1.7	1.4	5.5
29-Mar	3.9	5.3	Z	5.9	3.9	3.0	3.5	3.3	2.9	1.6	3.7	3.2	2.4	2.2	1.6	1.7	1.6	1.3	1.6	3.5	3.5	4.4	6.2	6.4	3.3	6.4
30-Mar	4.0	3.3	2.8	Z	1.7	1.2	1.2	1.0	1.6	1.1	1.1	0.8	1.2	0.9	0.6	0.6	0.7	0.7	0.7	1.1	1.2	1.9	1.9	1.6	1.4	4.0
31-Mar	2.4	1.5	2.3	0.9	Z	1.0	1.2	1.4	2.0	2.1	1.8	1.7	1.2	1.0	0.9	0.9	0.9	0.7	0.7	0.7	0.5	0.6	0.7	0.9	1.2	2.4
	3.0	2.6	2.6	2.7	2.5	2.2	2.4	2.6	2.6	1.9	1.8	1.5	1.5	1.5	1.4	1.7	1.7	1.5	1.9	2.5	3.2	3.5	2.8	2.9	Diurnal Average	
	10.9	8.0	10.3	12.7	8.1	8.2	7.1	8.5	8.7	5.8	5.7	4.4	3.9	6.4	4.4	12.9	12.2	9.1	8.0	13.9	33.4	32.6	19.1	14.3	Diurnal Maximum	

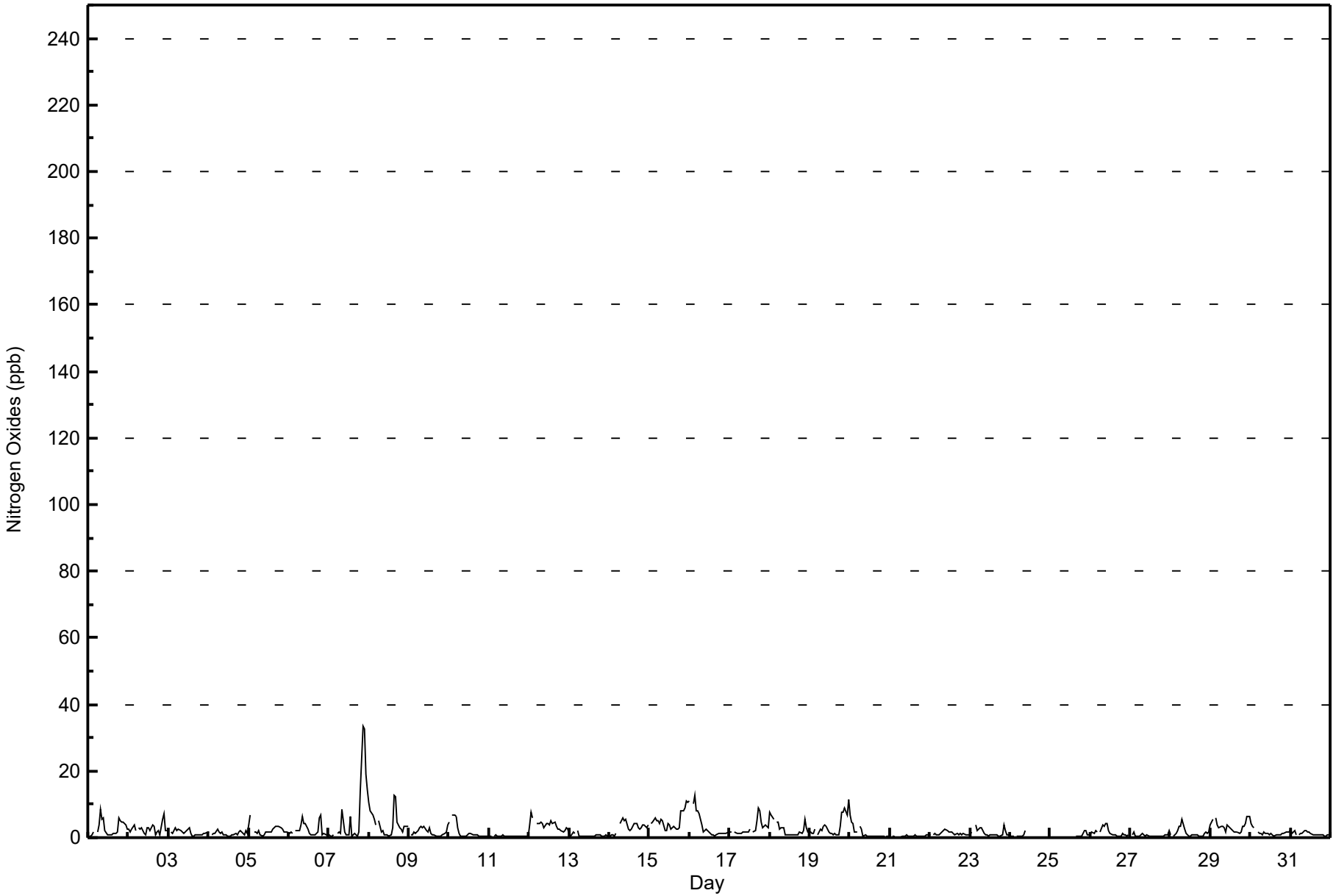
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Surmont 2 - March 2025



Nitrogen Oxides (NO_X) - ppb

Surmont 2 - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	682	99.71	99.71
21 - 40	2	0.29	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 684

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Surmont 2 - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	53	34	31	44	27	44	80	28	8	16	38	82	71	24	34	68	682
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	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	53	34	31	44	27	44	80	28	8	16	38	82	71	24	35	69	684

Total Number of Valid Hours: 684

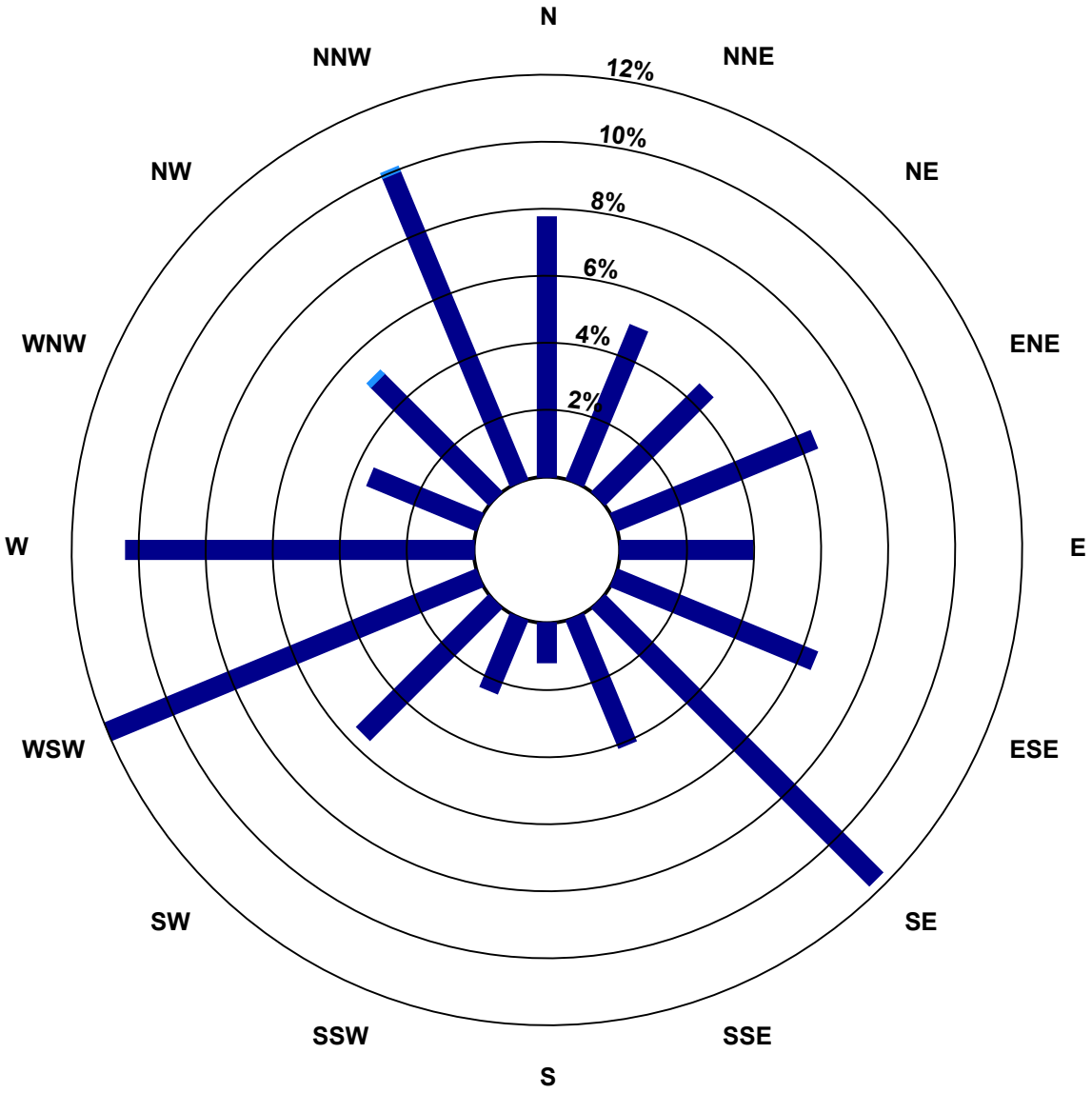
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Oxides (NO_X) - ppb

Surmont 2



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

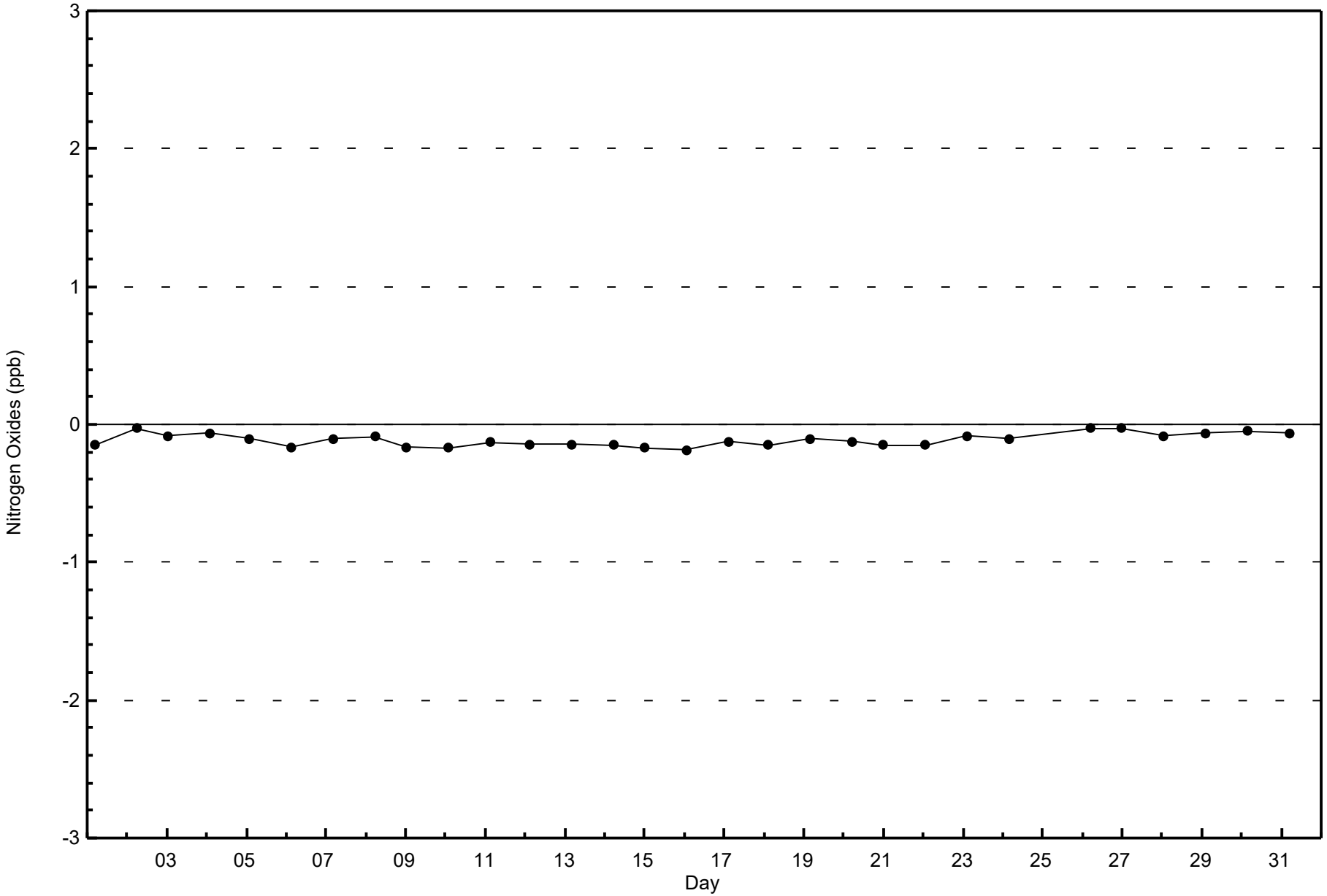
Total Number of Valid Hours: 684

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Surmont 2 - March 2025

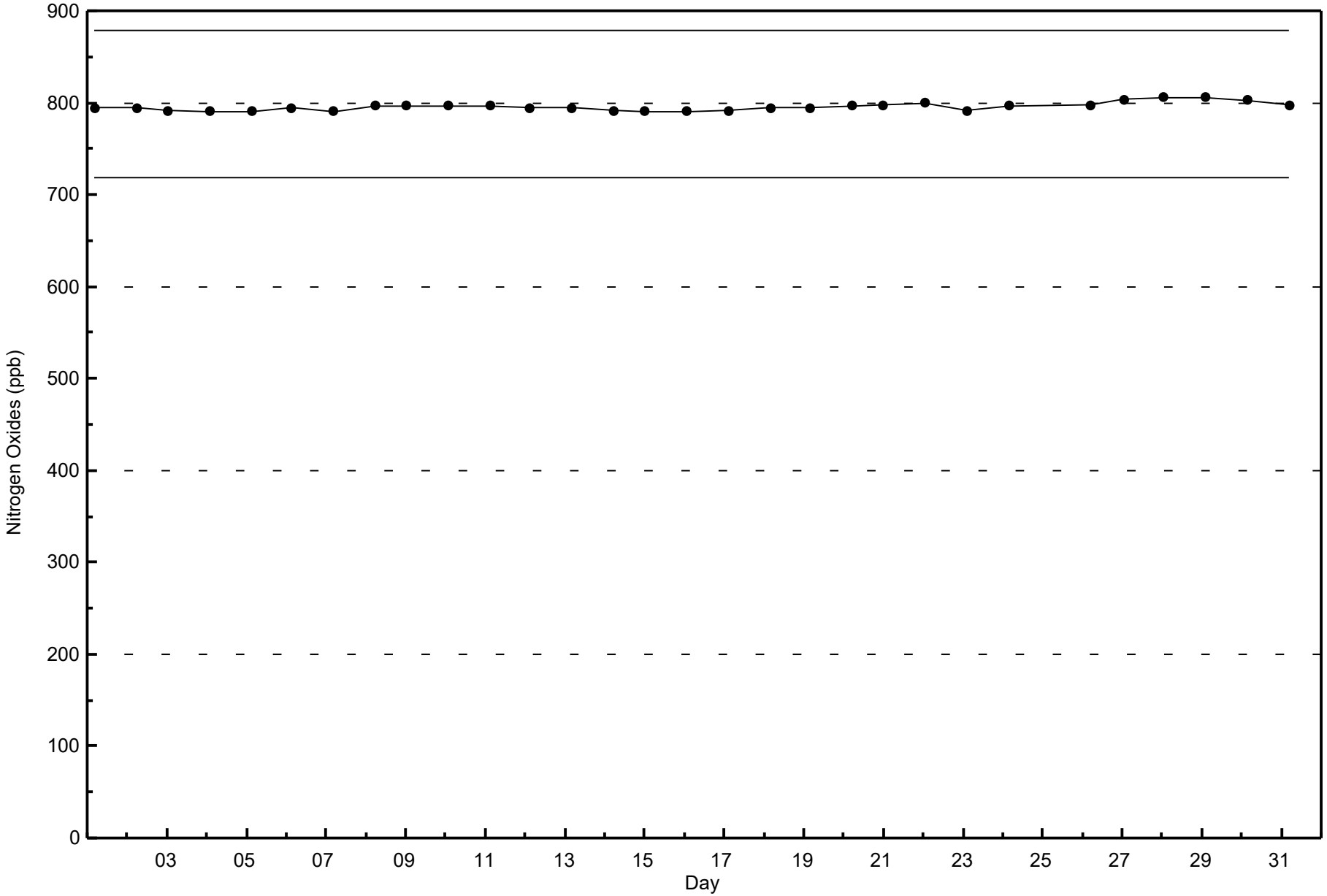


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Surmont 2 - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Surmont 2 - March 2025

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

Maximum Value: 46.9 $\mu g/m^3$ on Mar 28 21:00

Maximum Daily Average: 11.8 $\mu g/m^3$ on Mar 29

Minimum Value: 0.4 $\mu g/m^3$ on Mar 24 20:00

Minimum Daily Average: 1.3 $\mu g/m^3$ on Mar 11

Maximum Diurnal Average: 5.4 $\mu g/m^3$ at hour 21

Minimum Diurnal Average: 2.3 $\mu g/m^3$ at hour 18

Monthly Average: 3.36 $\mu g/m^3$

Percentiles: P_1 = 0.5 P_{10} = 1.1 Q_1 = 1.5 Median = 2.3 Q_3 = 3.4 P_{90} = 5.7 P_{99} = 28.7

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	1
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	2.6	2.6	2.7	2.4	1.8	1.5	2.0	3.7	2.3	1.8	2.4	1.5	1.6	2.0	1.1	0.9	1.0	1.0	1.1	1.1	1.2	1.1	1.1	1.1	1.7	3.7
2-Mar	1.2	1.2	1.0	1.0	1.1	1.2	1.3	1.5	1.5	1.4	1.9	3.5	2.2	1.5	2.1	2.8	2.1	1.1	0.7	0.7	1.4	2.4	1.7	1.9	1.6	3.5
3-Mar	0.9	1.0	1.5	2.6	2.9	2.8	2.9	2.7	2.8	3.5	3.4	3.5	3.5	2.8	1.7	1.6	1.2	0.8	0.9	0.7	0.7	1.0	1.7	3.3	2.1	3.5
4-Mar	2.0	0.8	0.5	1.6	1.3	3.3	3.7	8.5	4.0	2.4	3.5	2.1	1.5	2.2	1.1	1.9	3.0	2.4	6.3	6.0	10.9	2.2	2.8	2.3	3.2	10.9
5-Mar	1.9	3.0	2.8	1.8	1.5	1.6	2.4	2.3	1.7	2.3	4.7	2.8	3.9	2.5	2.3	2.3	3.0	3.6	2.9	1.8	1.5	2.4	2.9	3.5	2.6	4.7
6-Mar	5.8	7.7	6.3	4.8	7.2	7.4	5.9	6.2	5.9	13.9	14.9	2.9	1.9	1.7	3.9	4.6	5.5	6.2	4.9	22.7	5.0	2.7	1.6	3.4	6.4	22.7
7-Mar	3.5	1.9	2.8	3.6	1.5	3.7	4.7	5.3	4.8	6.0	4.0	2.4	3.6	4.3	6.3	5.7	4.3	3.6	8.8	7.6	8.3	8.0	5.6	4.7	4.8	8.8
8-Mar	4.7	4.0	3.7	3.4	3.0	3.4	3.4	3.2	2.6	2.7	4.8	5.0	5.8	5.6	5.2	5.6	4.9	4.0	3.9	3.3	3.3	2.2	3.9	2.0	3.9	5.8
9-Mar	1.9	2.3	1.6	6.1	4.8	9.0	6.3	9.1	7.2	5.4	2.9	1.7	1.9	1.7	1.5	1.5	1.6	1.6	1.6	2.4	2.0	1.8	1.9	2.2	3.3	9.1
10-Mar	2.5	3.1	3.6	3.6	3.8	2.2	1.3	1.2	1.3	1.2	1.5	2.6	2.5	2.5	1.8	1.4	1.2	1.1	0.9	1.0	1.1	1.0	0.9	0.8	1.8	3.8
11-Mar	0.8	1.6	2.1	1.0	1.9	2.2	1.7	1.1	1.1	1.1	1.3	1.5	1.4	1.2	1.3	1.2	1.3	1.1	1.0	1.0	1.1	1.2	1.0	1.0	1.3	2.2
12-Mar	1.3	1.8	1.6	1.4	1.2	1.3	1.3	1.2	1.0	1.0	1.0	1.3	1.3	1.7	1.9	1.7	1.7	1.8	4.5	2.9	2.0	6.4	8.5	5.7	2.3	8.5
13-Mar	2.1	1.2	3.9	2.8	5.8	3.3	1.3	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.6	1.4	1.3	1.3	1.4	1.3	1.3	1.8	5.8
14-Mar	1.2	1.4	1.3	1.3	1.4	1.3	1.8	2.0	1.9	1.9	2.1	1.9	1.9	2.0	2.2	2.4	2.6	2.6	2.6	2.8	2.9	2.9	2.8	2.8	2.1	2.9
15-Mar	2.7	2.5	2.2	2.0	1.7	1.7	1.5	1.6	1.9	1.8	2.2	2.5	2.6	2.4	2.3	2.0	1.9	2.1	2.3	2.5	2.5	2.5	2.9	2.7	2.2	2.9
16-Mar	2.5	2.4	2.1	1.9	1.7	1.8	1.8	1.5	1.6	2.1	2.1	1.9	1.8	1.6	1.6	1.6	1.8	2.0	2.0	2.1	2.9	3.7	4.6	4.3	2.2	4.6
17-Mar	4.0	3.7	3.4	3.2	3.1	3.1	3.0	3.0	3.4	5.5	5.0	4.8	4.4	4.7	4.0	3.6	4.1	4.6	4.4	3.6	3.2	3.1	3.1	3.0	3.8	5.5
18-Mar	2.9	2.9	3.9	3.7	3.9	6.0	3.3	3.0	3.0	2.5	2.2	3.1	3.1	3.1	2.8	2.8	3.0	2.6	2.8	2.7	2.7	2.8	2.9	2.9	3.1	6.0
19-Mar	2.9	2.7	2.3	10.0	2.1	1.9	2.1	2.2	2.2	6.3	3.4	2.2	1.6	1.3	1.5	1.4	1.1	1.2	1.4	1.7	2.0	2.7	3.5	4.3	2.7	10.0
20-Mar	3.6	3.6	3.5	2.9	3.2	3.8	2.9	4.0	2.1	2.2	2.1	1.8	1.8	1.7	1.6	1.3	1.4	1.8	2.4	1.0	1.1	1.1	1.1	1.1	2.2	4.0
21-Mar	1.1	1.1	1.1	1.0	1.0	1.0	1.1	1.1	1.0	1.1	1.2	1.5	1.5	1.6	1.9	2.1	1.9	2.1	2.5	2.5	2.6	2.6	2.5	2.6	1.7	2.6
22-Mar	2.5	2.6	2.6	2.6	2.6	2.5	2.5	2.5	2.7	3.1	2.9	2.9	2.9	3.1	2.9	2.3	3.5	2.0	1.8	1.6	1.5	1.8	2.4	2.1	2.5	3.5
23-Mar	1.6	1.9	1.8	11.6	40.5	29.9	12.8	8.4	1.6	2.2	2.3	3.3	2.3	1.8	1.8	1.4	1.4	1.0	1.0	2.8	8.6	2.4	1.3	1.3	6.0	40.5
24-Mar	1.4	1.4	1.4	1.4	1.3	1.2	1.2	1.2	1.1	10.7	C	2.4	1.5	1.3	2.2	2.5	2.2	1.0	0.6	0.4	0.8	0.8	0.9	0.9	1.7	10.7
25-Mar	0.9	0.7	0.5	0.5	0.5	0.7	10.0	1.6	0.6	0.5	0.5	0.4	0.7	1.5	1.4	2.5	2.5	2.7	2.5	1.8	2.7	2.4	2.4	2.1	1.8	10.0
26-Mar	2.5	2.6	2.3	1.9	3.1	3.5	3.9	6.1	5.4	5.1	5.7	3.8	2.4	2.9	2.8	3.4	3.3	1.9	2.3	2.5	2.3	1.7	1.6	1.6	3.1	6.1
27-Mar	1.6	1.7	2.7	1.7	2.0	1.7	1.8	1.7	1.5	1.7	1.5	1.6	1.4	1.4	1.6	1.7	1.6	1.8	1.9	1.9	2.3	3.6	5.6	13.2	2.5	13.2
28-Mar	4.7	14.4	5.1	7.4	8.9	12.4	12.0	21.0	13.7	5.3	2.4	3.0	2.1	2.8	2.5	2.2	3.0	1.9	1.6	16.3	46.9	30.9	35.8	16.4	11.4	46.9
29-Mar	14.6	13.2	9.9	9.4	6.0	5.0	11.6	35.7	42.3	4.3	4.1	3.9	3.1	3.3	3.1	3.1	3.3	3.6	6.8	26.9	37.2	17.0	7.4	8.6	11.8	42.3
30-Mar	5.4	4.7	3.2	2.6	2.7	7.4	9.9	3.9	4.4	3.6	3.0	2.7	2.8	2.9	3.1	3.3	3.3	3.5	3.8	3.6	3.4	3.0	2.8	4.0	3.9	9.9
31-Mar	4.1	4.2	4.0	3.0	3.1	3.1	3.2	3.3	3.5	3.8	4.0	3.8	3.1	2.5	2.2	2.2	2.1	1.5	1.3	1.2	1.1	1.4	1.7	1.9	2.7	4.2
	3.0	3.2	2.8	3.4	4.1	4.2	4.0	4.9	4.2	3.5	3.1	2.6	2.4	2.4	2.4	2.4	2.4	2.3	2.7	4.2	5.4	3.9	3.9	3.5	Diurnal Average	
	14.6	14.4	9.9	11.6	40.5	29.9	12.8	35.7	42.3	13.9	14.9	5.0	5.8	5.6	6.3	5.7	5.5	6.2	8.8	26.9	46.9	30.9	35.8	16.4	Diurnal Maximum	

C - Calibration

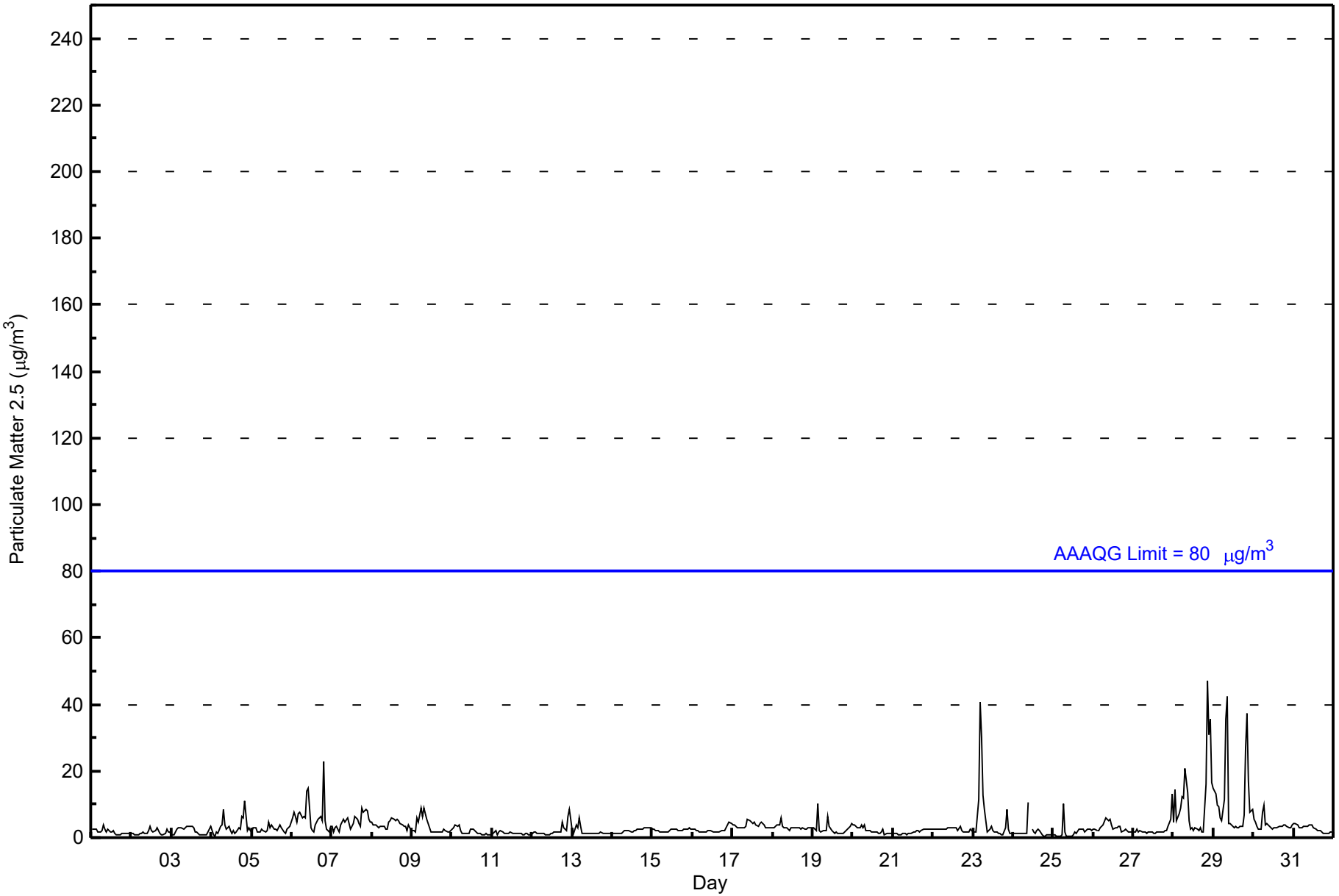
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Surmont 2 - March 2025



Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	664	89.37	89.37
6 - 15	65	8.75	98.12
16 - 25	5	0.67	98.79
26 - 80	9	1.21	100.00
> 81.0	0	0.00	100.00

Total Number of Valid Hours: 743

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

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

Surmont 2 - March 2025

Concentration Ranges ($\mu g/m^3$)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	48	32	31	44	24	44	83	26	8	17	29	68	84	22	33	71	664
6 - 15	7	3	0	1	2	2	0	2	0	0	12	16	9	3	5	3	65
16 - 25	0	0	0	0	1	0	0	0	0	0	1	3	0	0	0	0	5
26 - 80	0	0	1	0	0	1	0	0	0	0	1	5	1	0	0	0	9
> 81.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	55	35	32	45	27	47	83	28	8	17	43	92	94	25	38	74	743

Total Number of Valid Hours: 743

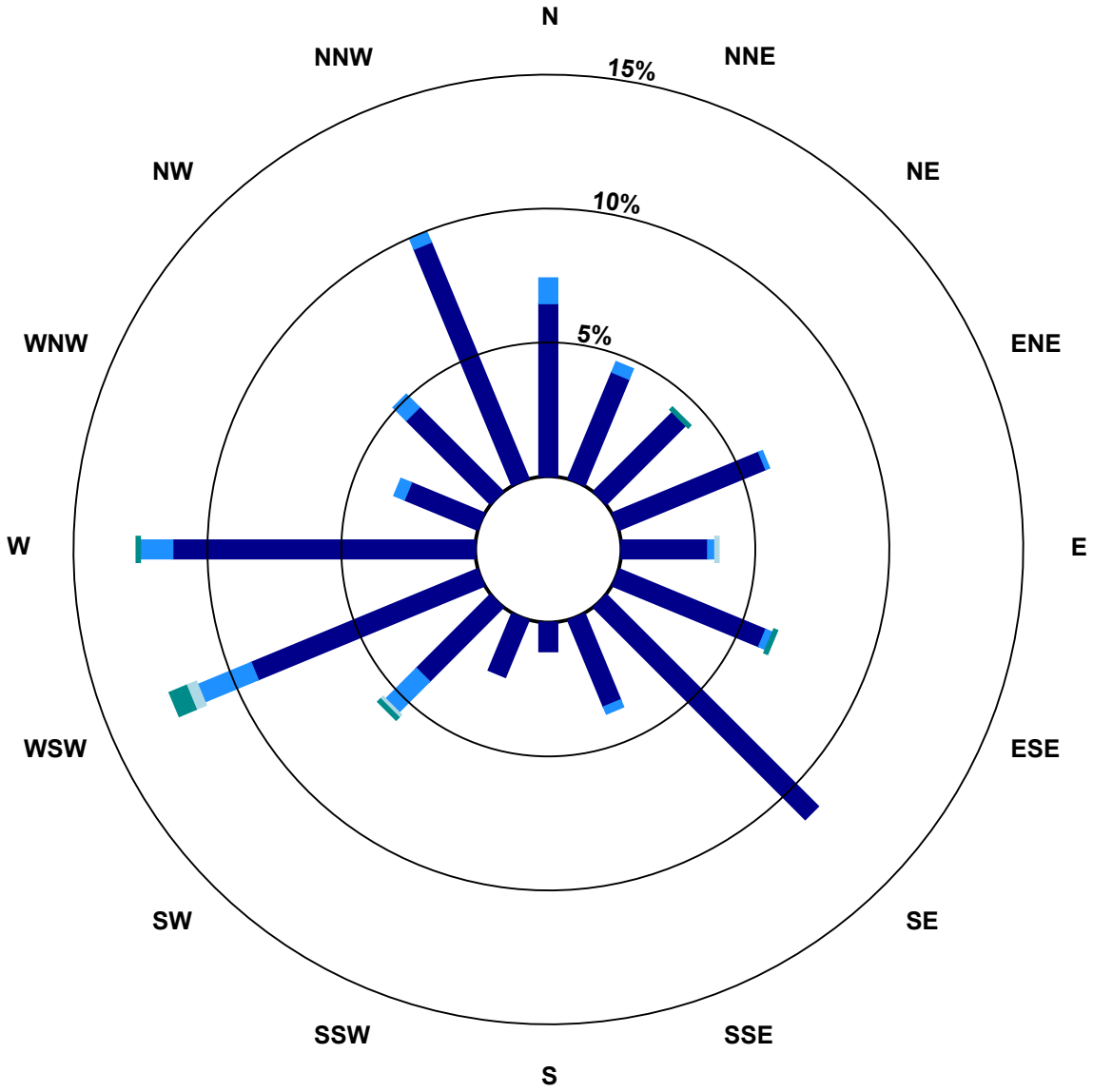
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

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

Surmont 2



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

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

Total Number of Valid Hours: 743

Maximum Value: 9.8 C on Mar 25 16:00

Maximum Daily Average: 3.5 C on Mar 2

Minimum Value: -28.1 C on Mar 16 07:00

Minimum Daily Average: -19.8 C on Mar 9

Maximum Diurnal Average: -1.7 C at hour 16

Minimum Diurnal Average: -11.5 C at hour 7

Monthly Average: -6.91 C

Percentiles: P_1 = -25.6 P_{10} = -17.9 Q_1 = -13.2 Median = -6.4 Q_3 = -0.7 P_{90} = 4.2 P_{99} = 8.4

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

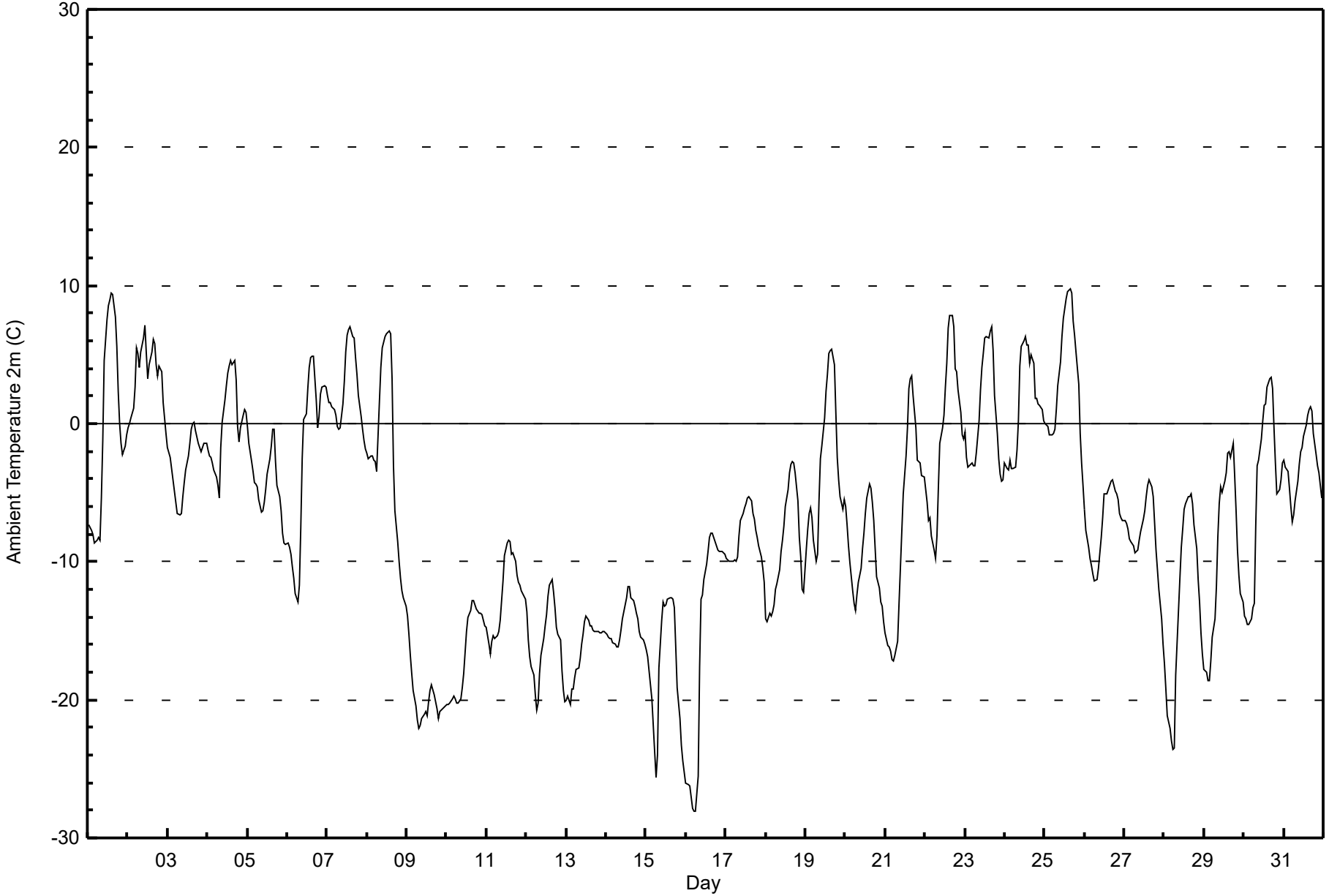
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-7.4	-7.5	-7.7	-8.0	-8.6	-8.4	-8.3	-8.4	-5.3	-1.2	4.5	7.5	8.5	9.0	9.4	9.4	7.7	5.6	2.4	0.0	-1.4	-2.3	-1.6	-0.8	-0.5	9.4
2-Mar	-0.3	0.0	0.4	1.1	2.7	5.5	5.1	4.0	5.2	6.2	7.1	5.0	3.3	4.3	5.2	6.1	5.7	4.3	3.5	4.2	3.7	1.5	0.4	-0.7	3.5	7.1
3-Mar	-1.7	-2.4	-3.2	-4.1	-4.9	-5.7	-6.5	-6.6	-6.5	-5.3	-4.3	-3.3	-2.4	-1.4	-0.5	0.0	0.1	-0.5	-1.4	-1.8	-2.1	-1.7	-1.4	-1.4	-2.9	0.1
4-Mar	-2.0	-2.3	-2.4	-2.9	-3.3	-3.9	-4.4	-5.4	-1.7	0.1	1.8	2.7	3.7	4.2	4.6	4.3	4.6	3.1	-0.2	-1.3	-0.3	0.6	1.0	0.8	0.1	4.6
5-Mar	-0.2	-1.4	-2.7	-3.4	-4.2	-4.4	-4.6	-5.5	-6.4	-6.3	-5.7	-4.8	-3.7	-2.6	-1.7	-0.4	-0.4	-2.8	-4.4	-5.3	-6.3	-7.9	-8.6	-8.8	-4.3	-0.2
6-Mar	-8.7	-8.9	-9.5	-10.4	-11.2	-12.3	-12.9	-11.6	-7.5	-2.5	0.3	0.7	2.5	4.1	4.8	4.9	4.9	1.7	-0.3	0.5	2.1	2.6	2.8	2.7	-2.6	4.9
7-Mar	2.1	1.5	1.5	1.2	1.1	0.6	-0.2	-0.4	-0.3	1.4	3.0	5.2	6.4	6.8	7.0	6.3	6.2	4.8	3.5	2.0	0.5	-0.4	-1.2	-1.8	2.4	7.0
8-Mar	-2.2	-2.5	-2.4	-2.4	-2.6	-2.7	-3.5	1.6	4.1	5.4	5.9	6.3	6.5	6.7	6.5	3.3	-3.1	-6.3	-8.6	-10.0	-11.2	-12.1	-12.6	-13.2	-2.0	6.7
9-Mar	-13.9	-15.2	-16.8	-18.1	-19.4	-20.4	-21.5	-22.1	-21.9	-21.4	-21.0	-20.8	-21.2	-20.1	-19.3	-18.9	-19.6	-20.2	-20.6	-21.3	-20.9	-20.7	-20.6	-20.4	-19.8	-13.9
10-Mar	-20.4	-20.3	-20.2	-20.0	-19.8	-19.9	-20.3	-20.3	-19.9	-19.1	-18.1	-16.6	-15.1	-14.0	-13.5	-12.8	-12.8	-13.2	-13.4	-13.7	-13.8	-13.9	-14.3	-14.6	-16.7	-12.8
11-Mar	-14.7	-15.9	-16.6	-15.8	-15.4	-15.5	-15.3	-15.1	-14.2	-12.9	-11.4	-9.5	-8.6	-8.4	-8.5	-9.4	-9.3	-10.0	-11.0	-11.5	-11.7	-12.1	-12.3	-12.7	-12.4	-8.4
12-Mar	-13.6	-15.7	-16.8	-17.6	-18.2	-19.6	-20.7	-20.2	-18.1	-16.8	-15.6	-14.6	-13.8	-12.6	-11.7	-11.3	-12.2	-13.3	-14.8	-15.3	-15.7	-17.9	-19.3	-20.1	-16.1	-11.3
13-Mar	-20.1	-19.7	-20.3	-19.2	-19.2	-18.4	-17.8	-17.7	-17.0	-15.9	-15.2	-14.4	-14.0	-14.3	-14.7	-14.7	-14.9	-15.1	-15.0	-15.1	-15.1	-15.1	-15.1	-15.1	-16.4	-14.0
14-Mar	-15.2	-15.5	-15.5	-15.6	-15.9	-16.0	-16.2	-16.2	-15.7	-14.9	-14.1	-13.1	-12.6	-11.8	-11.8	-12.6	-12.8	-13.2	-13.7	-14.2	-15.0	-15.4	-15.7	-15.9	-14.5	-11.8
15-Mar	-16.4	-16.9	-17.9	-20.0	-21.9	-23.8	-25.6	-24.0	-17.7	-14.2	-12.9	-13.3	-13.1	-12.7	-12.6	-12.6	-12.7	-13.3	-16.2	-19.1	-21.4	-23.3	-24.4	-25.3	-18.0	-12.6
16-Mar	-26.1	-26.2	-26.3	-27.1	-27.8	-28.0	-28.1	-25.5	-17.6	-12.7	-12.4	-11.3	-10.2	-9.3	-8.3	-7.9	-7.9	-8.5	-8.9	-9.2	-9.3	-9.3	-9.2	-9.5	-15.7	-7.9
17-Mar	-9.8	-9.9	-10.0	-10.0	-9.9	-9.8	-10.0	-9.6	-8.2	-7.0	-6.5	-6.1	-5.8	-5.4	-5.3	-5.6	-6.5	-6.9	-7.7	-8.3	-8.8	-9.7	-10.5	-11.5	-8.3	-5.3
18-Mar	-14.1	-14.3	-13.8	-13.9	-13.6	-13.2	-12.0	-11.6	-10.5	-9.2	-8.4	-7.5	-6.0	-4.7	-3.6	-2.9	-2.8	-2.9	-3.5	-5.6	-8.2	-9.7	-12.0	-12.2	-9.0	-2.8
19-Mar	-9.1	-7.7	-6.5	-6.1	-6.8	-8.4	-10.0	-9.4	-5.6	-2.5	-1.6	0.4	2.4	3.5	5.1	5.3	5.4	4.2	0.8	-2.5	-4.1	-5.2	-6.2	-5.4	-2.9	5.4
20-Mar	-6.0	-7.3	-8.8	-10.1	-12.1	-13.0	-13.5	-12.4	-11.5	-10.5	-9.0	-8.0	-6.5	-5.3	-4.4	-4.7	-5.7	-7.0	-9.1	-11.1	-11.9	-12.9	-13.2	-14.4	-9.5	-4.4
21-Mar	-15.1	-16.1	-16.1	-16.5	-17.1	-17.2	-16.8	-15.7	-13.0	-10.4	-7.7	-5.0	-2.3	-0.3	2.6	3.3	3.4	2.0	-0.3	-2.6	-2.7	-2.8	-3.7	-3.9	-7.3	3.4
22-Mar	-4.8	-5.7	-7.1	-6.8	-8.1	-9.1	-9.8	-8.2	-4.7	-1.4	-0.3	0.6	2.6	4.4	6.9	7.8	7.8	7.0	4.0	3.8	2.4	0.8	-0.8	-1.1	-0.8	7.8
23-Mar	-0.6	-2.4	-3.1	-2.9	-2.8	-3.0	-3.0	-2.1	0.2	2.5	4.1	5.1	6.2	6.3	6.2	6.7	7.0	5.3	2.1	-0.7	-2.5	-3.7	-4.2	-4.0	0.7	7.0
24-Mar	-2.9	-3.3	-3.4	-2.7	-3.3	-3.2	-3.1	-1.9	0.2	4.1	5.5	6.0	6.3	5.7	5.7	4.4	5.0	4.4	1.9	1.9	1.4	1.3	1.0	0.2	1.3	6.3
25-Mar	0.0	-0.1	-0.2	-0.8	-0.9	-0.7	-0.4	1.1	2.8	4.5	6.3	7.7	8.3	9.0	9.6	9.8	9.5	7.4	6.4	5.2	2.8	-0.8	-2.9	-4.5	3.3	9.8
26-Mar	-6.2	-7.8	-8.9	-9.8	-10.3	-10.9	-11.4	-11.3	-10.5	-9.4	-8.2	-6.8	-5.1	-5.1	-4.8	-4.4	-4.1	-4.1	-4.9	-5.1	-5.5	-6.5	-6.9	-7.0	-7.3	-4.1
27-Mar	-7.0	-7.2	-7.7	-8.3	-8.5	-8.8	-9.3	-9.3	-9.1	-8.4	-7.9	-6.9	-6.3	-5.3	-4.5	-4.1	-4.5	-5.3	-7.2	-9.1	-10.5	-12.0	-14.1	-15.9	-8.2	-4.1
28-Mar	-17.4	-19.3	-21.2	-22.1	-23.0	-23.6	-23.5	-18.2	-13.5	-11.2	-9.0	-7.6	-6.2	-5.8	-5.3	-5.3	-5.1	-5.8	-7.3	-9.1	-11.3	-12.9	-15.2	-16.7	-13.1	-5.1
29-Mar	-17.8	-18.0	-18.6	-18.6	-17.2	-15.4	-14.2	-11.8	-8.2	-5.8	-4.6	-5.0	-4.2	-3.5	-2.2	-2.0	-2.4	-1.4	-3.8	-6.3	-9.1	-10.9	-12.3	-12.9	-9.4	-1.4
30-Mar	-13.9	-14.1	-14.5	-14.6	-14.1	-13.3	-13.0	-7.4	-3.1	-2.6	-1.1	0.2	1.3	1.5	2.7	3.2	3.4	2.6	-0.3	-2.9	-5.1	-4.8	-4.1	-2.8	-4.9	3.4
31-Mar	-2.6	-3.2	-3.5	-4.7	-6.0	-7.1	-6.6	-5.5	-4.2	-2.9	-2.1	-1.7	-0.9	-0.1	0.6	1.1	1.2	1.0	-0.7	-2.3	-3.1	-3.6	-4.4	-5.4	-2.8	1.2
	-9.3	-9.9	-10.3	-10.6	-11.0	-11.3	-11.5	-10.5	-8.4	-6.5	-5.1	-4.2	-3.2	-2.5	-1.8	-1.7	-2.1	-3.1	-4.8	-6.0	-6.9	-7.8	-8.4	-8.9	Diurnal Average	
	2.1	1.5	1.5	1.2	2.7	5.5	5.1	4.0	5.2	6.2	7.1	7.7	8.5	9.0	9.6	9.8	9.5	7.4	6.4	5.2	3.7	2.6	2.8	2.7	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Surmont 2 - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	47	6.32	6.32
-20 - 0	537	72.18	78.49
0 - 10	160	21.51	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Surmont 2 - March 2025

Maximum Value: 95.2 % on Mar 25 01:00

Maximum Daily Average: 78.9 % on Mar 14

Minimum Value: 27.7 % on Mar 25 17:00

Minimum Daily Average: 49.5 % on Mar 21

Maximum Diurnal Average: 79.3 % at hour 7

Minimum Diurnal Average: 50.5 % at hour 15

Monthly Average: 66.99 %

Percentiles: P_1 = 33.1 P_{10} = 43.6 Q_1 = 55.8 Median = 70.2 Q_3 = 79.3 P_{90} = 84.7 P_{99} = 92.2

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

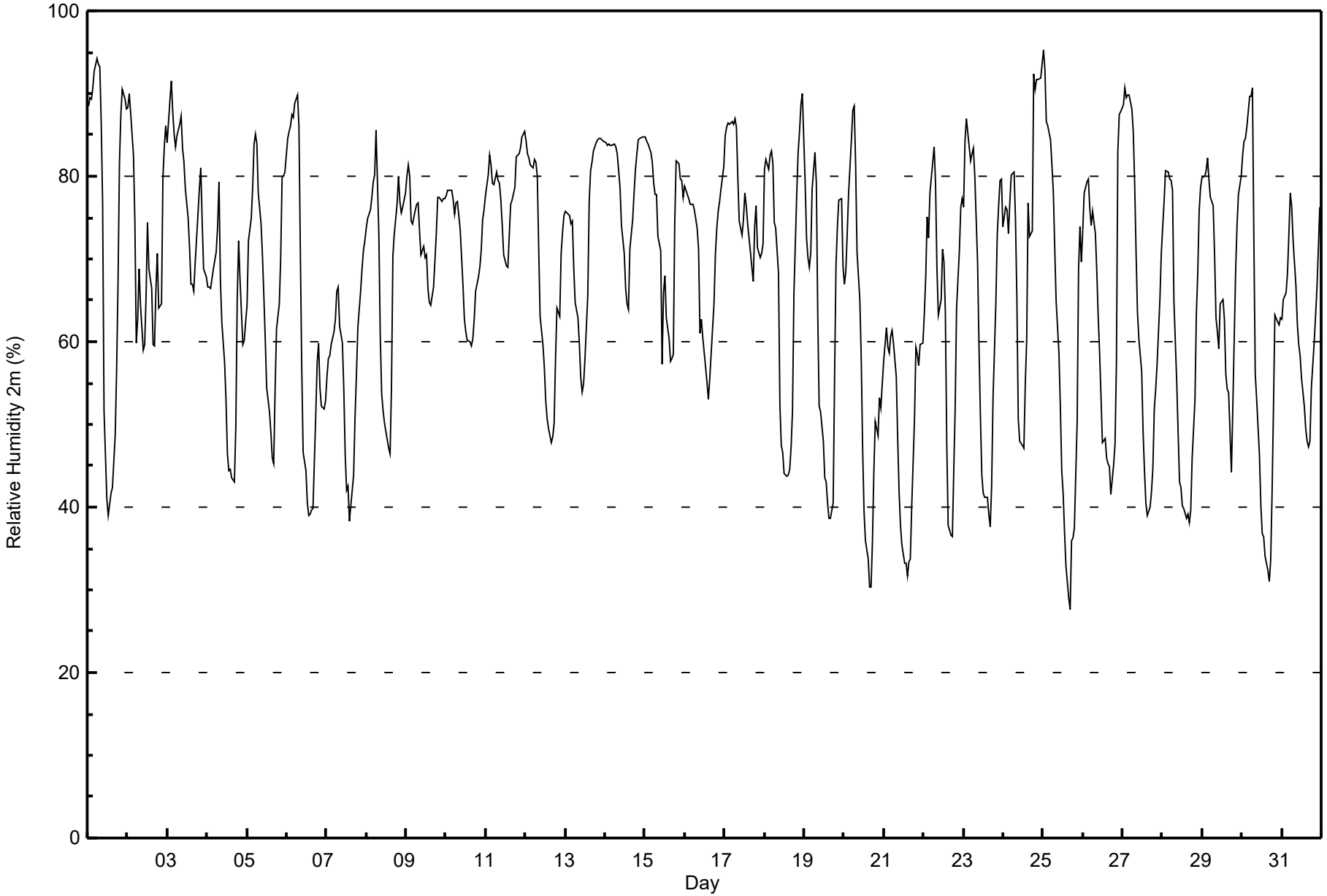
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	88.6	89.5	89.4	90.7	92.8	94.2	93.6	93.2	86.4	76.8	51.7	41.1	38.9	40.4	41.7	42.4	48.8	56.8	67.3	81.6	87.4	90.4	89.3	88.1	73.4	94.2
2-Mar	88.3	90.0	87.6	82.6	74.6	59.9	62.7	68.8	64.4	59.0	59.6	65.6	74.3	68.9	66.5	59.7	59.5	66.2	70.7	64.0	64.6	79.9	83.6	86.0	71.1	90.0
3-Mar	84.1	89.1	91.6	87.7	85.2	83.6	84.9	86.3	87.3	83.3	81.7	78.6	74.9	71.3	67.0	67.0	66.2	69.5	75.5	78.5	81.1	74.6	68.8	67.8	78.6	91.6
4-Mar	66.7	66.6	66.4	67.7	68.9	70.9	73.8	79.4	67.5	62.3	57.4	52.8	46.4	44.4	44.6	43.6	43.1	49.9	65.3	72.3	67.4	59.7	60.2	62.3	60.8	79.4
5-Mar	64.4	72.2	75.0	78.6	83.9	85.0	84.0	77.9	74.2	70.3	65.3	60.2	54.4	51.5	48.9	45.9	45.3	54.1	61.5	64.6	70.1	80.0	80.0	80.5	67.8	85.0
6-Mar	84.5	85.4	86.2	87.5	87.1	88.9	89.8	86.1	70.9	56.9	46.6	44.4	40.6	39.1	39.1	39.7	39.9	51.2	57.5	59.8	54.5	52.2	51.9	52.8	62.2	89.8
7-Mar	55.8	58.0	58.4	59.7	61.2	62.7	66.2	66.7	61.9	59.8	54.3	46.3	42.1	42.5	38.4	42.1	43.9	50.8	55.9	61.7	66.0	68.7	71.0	72.2	56.9	72.2
8-Mar	73.7	74.9	75.9	77.4	79.3	80.2	85.7	72.9	60.7	53.7	51.7	50.2	49.1	47.2	46.4	54.6	70.4	73.0	76.6	80.1	76.9	75.5	76.3	78.0	68.4	85.7
9-Mar	80.1	81.4	80.0	74.6	74.3	76.0	76.6	76.8	73.4	70.6	71.4	70.2	70.5	66.5	64.8	64.4	66.7	69.8	73.3	77.4	77.4	77.0	77.3	77.3	73.7	81.4
10-Mar	77.7	78.3	78.3	78.3	77.0	75.4	76.8	76.9	73.5	70.2	66.8	62.7	61.2	60.2	60.0	59.5	60.4	62.7	66.1	67.7	68.9	71.1	74.7	75.9	70.0	78.3
11-Mar	77.6	80.1	82.5	81.4	79.1	78.9	80.6	79.6	79.1	77.2	74.1	70.5	69.2	69.0	72.8	76.6	77.1	78.7	82.4	82.6	82.6	83.4	84.8	85.5	78.6	85.5
12-Mar	84.3	82.8	82.3	81.3	81.0	82.1	81.8	80.0	71.3	63.0	59.7	57.0	52.8	50.7	49.5	47.8	48.5	50.2	58.0	64.1	63.0	70.6	73.3	75.3	67.1	84.3
13-Mar	75.8	75.6	75.3	74.3	74.6	68.7	64.7	62.9	59.7	55.7	53.9	55.0	58.0	65.6	76.9	80.7	81.8	83.1	84.1	84.5	84.6	84.6	84.4	84.3	72.9	84.6
14-Mar	84.1	83.7	83.9	83.8	83.8	83.9	83.6	82.8	80.7	78.7	74.1	70.6	66.4	64.6	63.9	71.2	74.7	77.9	80.9	82.7	84.4	84.6	84.7	84.7	78.9	84.7
15-Mar	84.8	84.3	83.9	82.8	81.7	79.1	77.8	77.8	72.7	71.0	57.3	66.0	68.0	62.9	60.3	57.7	58.0	58.4	74.3	81.9	81.5	79.7	79.4	77.5	73.3	84.8
16-Mar	78.7	77.8	77.2	76.5	76.7	76.7	76.0	73.7	71.2	61.0	62.8	60.6	57.0	55.1	53.0	55.5	58.7	64.5	70.6	73.7	75.7	76.9	78.6	81.2	69.6	81.2
17-Mar	84.8	85.9	86.5	86.3	86.7	86.3	86.9	86.0	79.8	74.5	72.8	74.8	78.0	76.4	74.2	70.9	69.0	67.2	73.9	76.4	71.3	70.1	70.6	71.8	77.5	86.9
18-Mar	80.8	82.0	80.8	82.6	83.1	81.6	74.5	73.7	68.3	52.3	47.5	46.6	44.1	43.6	43.9	44.6	47.3	51.7	65.7	77.8	82.9	85.5	88.7	90.1	67.5	90.1
19-Mar	79.4	72.6	70.2	69.0	70.8	78.5	82.8	79.1	63.2	52.3	51.5	48.0	43.5	43.1	40.4	38.6	38.7	40.6	55.5	69.1	73.9	77.1	77.3	69.2	61.9	82.8
20-Mar	66.9	68.4	73.1	77.9	84.4	87.9	88.5	81.6	70.9	65.0	58.1	47.1	39.5	35.9	33.8	30.4	30.4	35.8	44.3	50.3	48.6	53.2	52.0	54.9	57.5	88.5
21-Mar	57.7	61.7	59.4	58.7	60.6	61.3	59.9	55.8	48.4	41.8	37.8	35.5	33.2	33.3	31.7	33.4	33.7	40.1	50.7	59.3	58.5	57.2	59.7	59.8	49.5	61.7
22-Mar	63.5	67.8	75.1	72.5	78.0	81.7	83.5	79.2	68.9	63.2	65.1	71.3	69.7	63.6	47.8	37.7	36.6	36.5	44.4	52.1	64.1	71.1	76.3	77.3	64.5	83.5
23-Mar	76.2	84.2	86.9	83.5	81.8	82.8	83.4	80.0	69.5	59.3	51.0	43.8	41.7	41.2	41.2	39.1	37.6	42.6	53.1	64.7	72.8	76.4	79.5	79.6	64.7	86.9
24-Mar	73.9	76.2	75.9	73.0	76.9	80.1	80.5	74.9	65.2	50.8	47.9	47.4	47.1	54.9	60.2	76.8	72.8	73.5	92.4	90.5	91.7	91.7	91.8	93.6	73.3	93.6
25-Mar	95.2	92.8	86.6	86.2	84.4	81.4	78.1	71.4	64.8	58.6	52.3	44.5	41.8	37.0	32.9	28.9	27.7	35.9	36.3	37.4	50.4	68.9	73.9	69.7	59.9	95.2
26-Mar	73.6	77.9	79.4	79.7	76.0	74.0	75.8	73.0	68.5	63.0	58.7	53.4	47.9	48.3	45.9	45.2	44.8	41.5	45.2	47.7	57.5	82.9	87.5	87.8	64.0	87.8
27-Mar	88.7	90.7	89.6	89.8	89.8	88.2	85.4	79.1	70.8	63.6	60.3	56.4	49.2	44.4	40.5	39.1	39.9	41.9	44.8	51.8	54.2	57.3	65.1	70.6	64.6	90.7
28-Mar	73.9	76.9	80.6	80.5	79.6	79.5	78.4	64.9	55.1	49.1	43.1	42.3	40.2	39.9	38.6	39.1	38.1	39.7	46.0	52.9	63.4	68.4	75.8	78.6	59.4	80.6
29-Mar	79.8	79.9	80.7	82.2	79.5	77.4	76.4	70.5	62.9	61.1	59.1	64.6	65.1	62.7	56.0	54.2	53.9	44.2	52.0	60.4	68.5	74.1	77.9	80.0	67.6	82.2
30-Mar	82.6	84.2	84.6	85.9	89.7	89.6	90.7	72.8	56.0	53.1	46.3	40.1	36.7	36.4	34.1	32.3	31.1	33.5	41.7	52.0	63.2	62.4	62.1	62.9	59.3	90.7
31-Mar	62.7	65.1	65.9	68.4	73.1	78.0	76.4	72.2	66.8	62.2	59.7	58.3	55.6	52.2	49.5	48.0	47.2	47.9	54.3	59.8	63.0	66.4	71.2	76.3	62.5	78.0
	77.1	78.6	79.0	78.7	79.2	79.2	79.3	76.0	68.8	62.6	58.0	55.7	53.5	52.0	50.5	50.5	51.4	54.5	61.9	67.1	70.0	73.3	75.1	75.9	Diurnal Average	
	95.2	92.8	91.6	90.7	92.8	94.2	93.6	93.2	87.3	83.3	81.7	78.6	78.0	76.4	76.9	80.7	81.8	83.1	92.4	90.5	91.7	91.7	91.8	93.6	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Surmont 2 - March 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	46	6.18	6.18
40 - 60	191	25.67	31.85
60 - 80	338	45.43	77.28
80 - 100	169	22.72	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Surmont 2 - March 2025

Maximum Speed: 17 km/h on Mar 8 11:00

Maximum Daily Speed Average: 7.5 km/h on Mar 25

Minimum Speed Value: 0 km/h on Mar 18 05:00

Minimum Daily Speed Average: 0.3 km/h on Mar 29

Maximum Diurnal Speed Average: 1.9 km/h at hour 2

Minimum Diurnal Speed Average: 0.5 km/h at hour 12

Monthly Average Velocity: 1.0 km/h 323.7 deg

Percentiles: $P_1 = 0$ $P_{10} = 2$ $Q_1 = 3$ Median = 5 $Q_3 = 7$ $P_{90} = 9$ $P_{99} = 13$

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	SW2	SW2	SW2	SW2	SSW1	SW2	SW2	SW1	SSW1	SSE1	W3	WSW7	W8	W9	W8	W9	WSW6	WSW4	WSW4	SW3	WSW2	WSW1	SW2	WSW2	WSW3.3	W9
2-Mar	SSW1	SSW1	SW1	SW2	WSW4	WSW10	W8	WNW4	W8	WNW7	NW11	NNW11	NNW9	NNW10	NNW8	NW7	WNW7	WSW4	WSW5	WNW6	NW7	NNW8	NNW7	NNW8	NW5.2	NNW11
3-Mar	NNW7	NNW8	N8	N9	NNW9	NNW9	NNW9	NNW8	NNW7	NW7	NNW8	NNW6	NNW7	N7	NNW7	NNW6	NNW4	ENE3	SSE1	SSE2	ESE1	W4	W4	W5	NNW5.1	NNW9
4-Mar	W6	W7	W8	W8	WSW8	W6	W5	NW3	W7	WSW11	W10	WSW11	WSW12	WSW9	WSW9	WSW9	W9	WSW7	WSW3	W3	WSW4	WSW7	W9	WNW7	W7.3	WSW12
5-Mar	NNW7	NNW7	NW7	NNW7	NNW10	NNW8	NNW8	N9	NNW10	NNW10	NNW10	N9	N7	N6	NE6	ENE4	NNE4	NNE1	SSE3	SE4	S3	SW2	WSW2	NE0	NNW4.7	NNW10
6-Mar	SSE1	SW1	SW1	WSW2	SW1	WSW1	WSW0	SW1	E1	ENE2	E4	ESE9	ESE7	ESE7	NW2	WNW10	WNW9	NW2	WSW4	WSW4	WSW6	WSW8	W8	W6	WSW1.5	WNW10
7-Mar	W4	W6	W6	W6	W5	W7	W5	NW4	NE2	WNW6	W6	WSW6	W8	NNW2	W10	W8	W7	W4	WNW3	NW4	NW4	NNW4	NNW4	N4	W4.5	W10
8-Mar	NNE3	E2	ESE5	SE6	SE7	SE5	S2	WSW9	W13	W15	WNW17	WNW16	WNW12	NW9	NW12	N11	N13	NNW13	NNW11	N8	N8	N5	N5	N6	NW5.2	WNW17
9-Mar	N6	N9	N8	N8	N7	N7	N8	N7	NNE6	NNE6	NNE7	NNE7	N7	N6	NE7	NNE7	NNE6	NNE5	NNE3	WNW1	NW2	NNW2	NNW2	NW2	N5.3	N9
10-Mar	NW2	NNW2	N2	NNE2	ESE2	ESE4	ESE5	SE5	SE7	SE7	SSE6	SE7	ESE8	ESE9	ESE9	ESE7	ESE8	ESE6	ESE3	SE3	SE2	ESE3	ESE1	NE0	ESE4.0	ESE9
11-Mar	SE2	WNW0	SW1	ENE1	NE2	NNE3	ENE2	E4	ESE4	ESE7	ESE9	E7	ENE8	ENE7	ENE7	ENE7	ENE6	ENE6	NE7	ENE7	ENE5	NE4	NNE4	NNE5	ENE4.3	ESE9
12-Mar	N6	NNW6	NNW6	NNW5	NNW5	NNW4	NW4	NW4	NNW5	N5	NNE5	NE6	N6	N7	NE7	NE7	NE6	NNE4	NW0	SSE0	W2	WSW2	WSW2	WSW2	N3.5	NE7
13-Mar	WSW2	W2	SE1	SE1	NNE1	E2	E4	E5	E6	E8	ESE9	E9	ENE9	E8	E8	ENE8	NE7	NE8	NE7	NE6	NNE6	NNE6	N6	N6	ENE4.4	ESE9
14-Mar	N6	N6	N5	NNW5	NW6	NNW6	NW6	NNW6	NNW7	N8	NNW9	NNW9	NNW11	N10	NNW10	NNW9	NNW8	NW8	NNW7	NNW7	NNW6	NW5	NW5	NW4	NNW6.9	NNW11
15-Mar	NW4	NW4	WNW2	W2	WSW2	WSW3	SW1	SSE1	E1	SSW1	N4	N7	NNE6	N7	N6	N7	NNW6	NNW4	WSW4	WSW3	WSW3	SW2	SW3	WSW3	NW2.0	N7
16-Mar	SW2	SW3	WSW4	SW3	SW3	WSW3	SW3	SSW1	SSE3	SE7	SE10	SE10	SE10	SE10	SSE7	SE8	SSE7	SE7	SE4	SE6	SE5	SE6	SE7	ESE6	SSE4.6	SE10
17-Mar	SE6	ESE5	SE4	SE4	SE3	SE3	SE3	SE3	WSW4	W6	W7	WNW6	N4	NNW5	N5	N7	N8	NNW6	NNW6	NNW5	NNW4	NNW4	NNW4	NW3	NNW1.7	N8
18-Mar	W3	WSW3	SW2	SW1	SSW0	W2	W5	W5	W6	WNW8	W9	WSW8	W9	WSW8	WSW7	W7	WSW6	WSW5	SW3	SW2	WSW2	WSW2	WSW2	W4	W4.4	W9
19-Mar	WSW6	WSW6	WSW6	W6	NW3	W1	NW0	ESE0	ESE2	ESE4	SE6	SE8	SE10	SSE5	W10	W11	W9	W7	WNW2	WSW3	WSW2	WSW2	WNW2	NW4	WSW2.4	W11
20-Mar	NW5	NW3	NNE2	NNE2	S0	ENE0	NE2	ENE4	E6	ENE7	E9	ESE10	ENE7	E7	NE7	ENE8	E6	E4	ESE3	SSE2	SE3	SE4	SE5	ESE4	E3.6	ESE10
21-Mar	SE3	ESE3	SE4	SE5	ESE5	SE5	SE8	SE7	SE8	SE10	SE10	SE10	SE10	SE8	SE10	ESE12	ESE10	ESE8	SE4	SE3	SSE4	SE6	SE6	SE5	SE6.8	ESE12
22-Mar	SE3	ESE3	SE3	SE3	SE3	S2	SSW2	SSE2	SSE3	SE4	SSE7	SSE7	SE8	SSE10	SSW5	W8	W10	W8	WSW5	W9	W7	W6	WNW4	W6	SSW2.5	SSE10
23-Mar	W8	W3	W3	WSW7	WSW7	WSW7	WSW7	W4	W6	NW7	NW5	WNW7	N7	NE2	NE6	ENE7	E5	ESE5	ESE2	WSW4	SW3	SW2	SW2	SW3	W2.3	W8
24-Mar	SSW3	SSW2	S2	SE4	S1	SSE2	SSE2	SE2	SSE2	W7	WSW6	WSW9	SW7	SW6	WSW9	WSW7	WSW7	W7	W7	W11	W9	WNW7	W7	WSW6	WSW4.6	W11
25-Mar	W3	W5	W7	W7	W6	W7	W9	W8	W7	W9	W8	W9	WSW11	W11	W13	W15	WNW13	NW9	NW8	NW8	NNW7	N9	N9	N10	WNW7.5	W15
26-Mar	NNW10	NNW10	NNW9	NNW7	NNW8	N7	N7	N7	N6	NNE7	NNE6	NNE7	NE5	NNE6	ENE5	NE6	NNE5	ENE6	ENE5	ENE5	NE5	ENE4	E3	NNE2	NNE5.2	NNW10
27-Mar	NE3	NE3	NNE4	NE5	NNE3	NNE4	NE6	ENE5	ENE7	ENE8	ENE9	ENE8	ENE9	ENE9	ENE9	NE9	NE9	ENE8	ENE7	ENE4	E5	NE2	WSW1	W3	NE5.4	NE9
28-Mar	WSW3	WSW3	WSW2	SW2	WSW0	SW1	ESE0	E1	NNW2	NNE4	ENE8	NE6	ENE5	NNE6	ENE7	ENE6	ENE6	ESE6	ESE2	WSW2	SW2	WSW3	WSW2	WSW2	ENE1.3	ENE8
29-Mar	WSW2	WSW2	SW2	WSW1	SW0	SSW0	SW0	ESE1	NE2	NNE1	ENE5	ENE4	E3	W1	ENE1	NNW3	N2	WNW3	N3	W3	WSW3	SW3	SW3	SW3	WNW0.3	ENE5
30-Mar	SW1	SSW1	SE2	W1	NW1	W1	SSE1	E2	E0	WSW7	SSW5	S6	SSE5	SE5	ESE8	ESE8	SE7	SE7	S3	WSW3	SSE1	SSW2	E2	SSW2	SSE2.4	ESE8
31-Mar	WSW4	SSW2	SE5	SE6	SE5	SSE4	SE4	SE5	SE6	SE8	SE8	SSE9	SE11	SE13	SE9	SSE10	SE9	SE7	ESE7	SE5	SE4	SE5	SE5	ESE3	SE6.0	SE13
	WNW1.8	WNW1.9	WNW1.3	WNW1.1	NW1.2	WNW1.3	WNW1.0	N0.9	NNW0.7	NW1.1	N0.5	NNE0.5	NE1.0	NE1.5	N1.1	N1.8	NNW1.6	N1.1	NNW0.6	WNW1.2	WNW1.1	WNW1.2	WNW1.3	WNW1.7	Diurnal Average	
	NNW10	NNW10	NNW9	N9	NNW10	WSW10	NNW9	N9	W13	W15	WNW17	WNW16	WNW12	SE13	W13	W15	WNW13	NNW13	NNW11	W11	W9	N9	N9	N10	Diurnal Maximum	

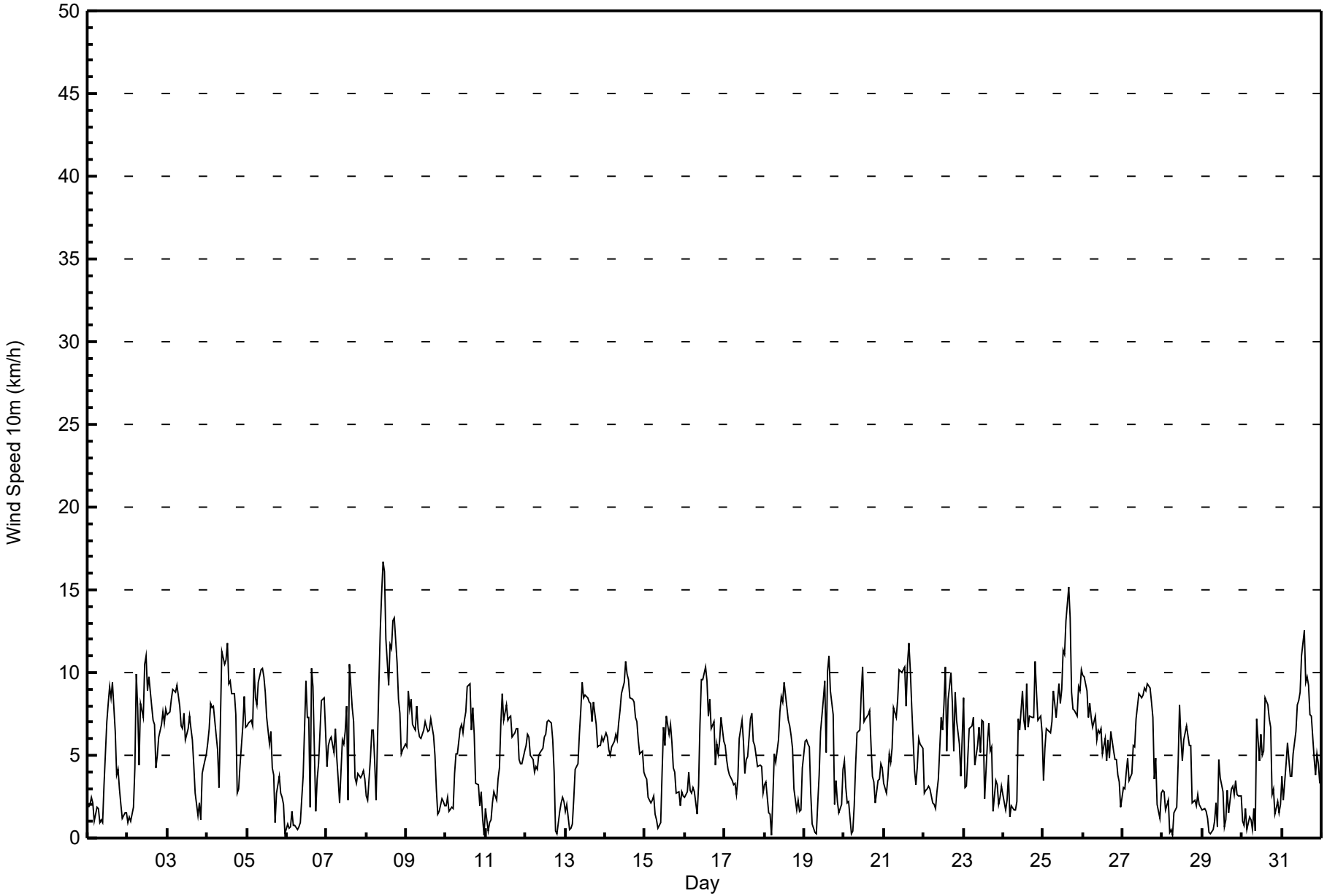
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Surmont 2 - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	372	50.00	50.00
6 - 11	358	48.12	98.12
12 - 19	14	1.88	100.00
20 - 28	0	0.00	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Surmont 2 - March 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	11	21	14	18	17	26	41	20	7	17	41	57	28	9	25	20	372
6 - 11	44	14	18	27	10	20	41	8	1	0	2	35	62	12	12	52	358
12 - 19	0	0	0	0	0	1	1	0	0	0	0	1	4	4	1	2	14
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	55	35	32	45	27	47	83	28	8	17	43	93	94	25	38	74	744

Total Number of Valid Hours: 744

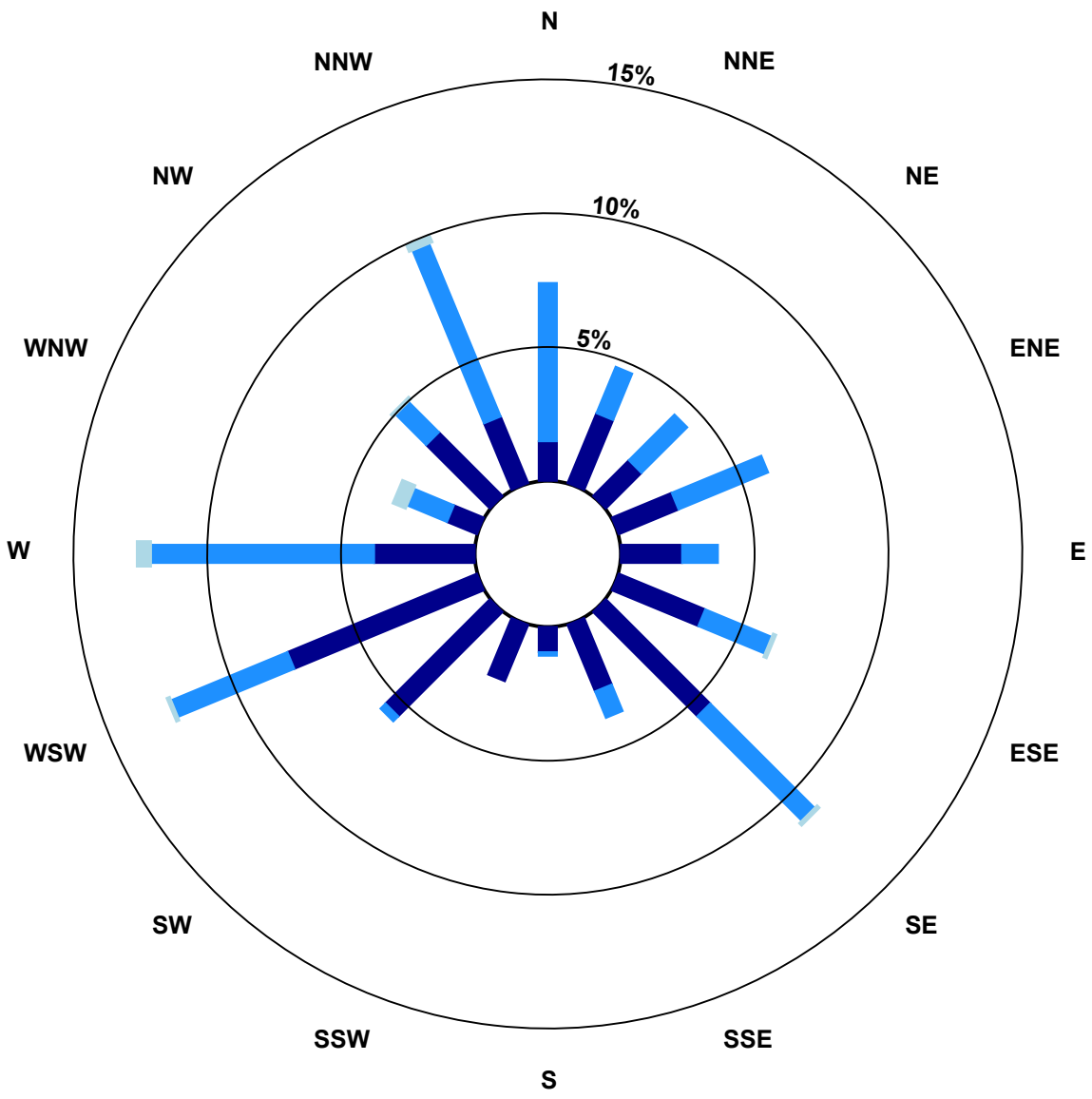
Total Number of Hours: 744

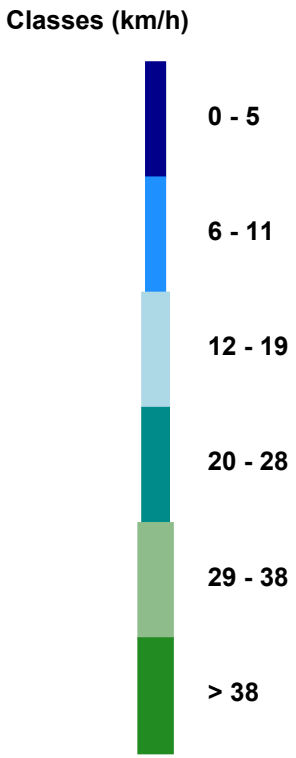
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 10m (WS10) - km/h

Surmont 2





Total Number of Valid Hours: 744

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

Maximum Value: 6 km/h on Mar 8 11:00

Minimum Value: 0 km/h on Mar 30 03:00

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

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

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

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Surmont 2 - March 2025

Direction of Maximum Speed: 285 deg on Mar 8 11:00
Direction of Maximum Daily Speed Average: 288.8 deg on Mar 25

Direction of Minimum Speed: 211 deg on Mar 18 05:00
Direction of Minimum Daily Speed Average: 0.3 deg on Mar 29

Monthly Average Direction: 323.7 deg

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	222	236	231	231	207	231	226	217	194	149	270	251	271	263	267	263	257	249	242	231	237	238	216	244	250.6
2-Mar	207	197	216	229	256	255	259	288	268	295	320	337	335	333	339	309	296	255	252	295	326	339	335	337	304.4
3-Mar	330	340	358	357	345	335	342	348	341	322	342	347	340	350	331	338	348	70	162	156	118	264	272	268	338.0
4-Mar	269	265	260	259	255	262	275	316	275	257	260	249	252	251	250	254	263	258	248	263	256	255	262	289	260.3
5-Mar	327	331	315	331	336	337	341	356	347	342	331	351	354	3	38	65	17	19	155	131	171	232	244	45	345.4
6-Mar	156	225	235	245	229	244	246	234	81	67	97	115	118	114	310	285	289	304	239	253	256	254	264	266	247.2
7-Mar	281	262	264	263	260	269	275	310	45	286	260	247	269	343	268	267	264	262	302	321	318	328	343	352	280.0
8-Mar	30	96	116	129	141	124	183	258	267	273	285	282	299	310	312	354	349	341	332	351	359	355	4	359	315.3
9-Mar	359	351	353	356	9	9	6	9	20	26	16	27	357	10	37	30	30	18	33	292	314	335	330	315	8.7
10-Mar	322	334	355	17	102	122	123	134	134	138	147	127	115	116	110	119	118	111	115	126	126	123	116	49	119.4
11-Mar	129	300	216	74	37	30	66	100	105	117	116	91	74	64	70	70	70	59	53	60	60	42	33	26	71.6
12-Mar	8	338	337	332	340	337	318	313	345	358	29	34	2	7	35	45	52	28	320	158	259	247	246	239	358.6
13-Mar	239	271	125	143	21	97	100	85	96	91	104	82	78	84	86	66	53	47	43	35	22	15	2	353	64.7
14-Mar	357	351	360	345	324	333	322	332	343	350	339	345	335	358	343	336	327	326	332	336	328	313	310	325	337.2
15-Mar	308	304	286	261	249	252	230	167	82	194	349	356	15	7	1	3	348	343	254	239	239	232	235	237	321.2
16-Mar	232	233	237	231	234	237	232	198	155	126	129	134	135	132	163	139	155	129	134	131	125	137	141	122	147.6
17-Mar	125	121	124	146	131	135	128	127	249	260	268	301	8	342	355	356	356	346	346	344	335	344	345	325	345.8
18-Mar	265	247	225	236	211	259	267	261	270	289	266	258	266	257	254	262	251	252	218	226	240	253	253	260	259.0
19-Mar	256	257	253	264	313	278	325	102	105	123	133	129	133	152	265	268	267	272	287	238	252	245	289	312	241.9
20-Mar	322	322	29	20	180	58	54	68	86	64	100	106	69	79	54	64	89	92	111	158	144	134	124	116	82.9
21-Mar	128	119	138	137	123	125	124	137	143	134	134	142	136	133	130	118	116	118	131	144	154	143	133	135	131.6
22-Mar	131	112	135	144	144	176	192	162	148	144	147	149	142	147	201	268	267	268	256	272	273	280	289	279	212.6
23-Mar	269	264	276	255	252	253	253	280	280	304	305	300	4	52	44	71	88	105	120	251	235	223	222	234	279.0
24-Mar	210	205	181	146	171	164	151	130	148	281	258	244	225	229	246	255	253	264	268	272	277	285	273	257	250.8
25-Mar	276	276	279	274	274	266	259	273	273	269	275	276	254	269	263	278	289	320	320	316	341	356	354	353	288.8
26-Mar	347	342	343	337	339	351	351	5	356	18	25	24	51	30	57	44	28	72	69	64	56	58	82	25	16.8
27-Mar	39	54	32	35	23	30	55	64	67	66	58	67	65	61	68	38	39	57	59	78	86	54	246	262	55.4
28-Mar	254	248	242	234	256	230	109	92	328	32	78	49	72	23	70	60	71	108	113	258	236	237	242	241	64.7
29-Mar	237	238	231	240	216	212	216	103	55	21	65	71	94	265	58	348	351	301	8	281	239	234	223	232	299.3
30-Mar	218	196	145	264	305	276	164	101	80	244	198	172	156	141	117	121	140	139	184	240	155	197	92	206	159.8
31-Mar	252	213	139	135	136	148	140	137	131	128	141	156	129	126	139	147	144	139	121	131	143	125	126	119	137.9
	302.9	303.7	301.6	293.3	305.3	293.4	300.2	348.8	339.3	319.1	357.9	31.3	41.3	44.1	2.9	352.7	339.0	8.8	344.5	293.0	296.5	297.4	297.7	303.1	
	Diurnal Average																								

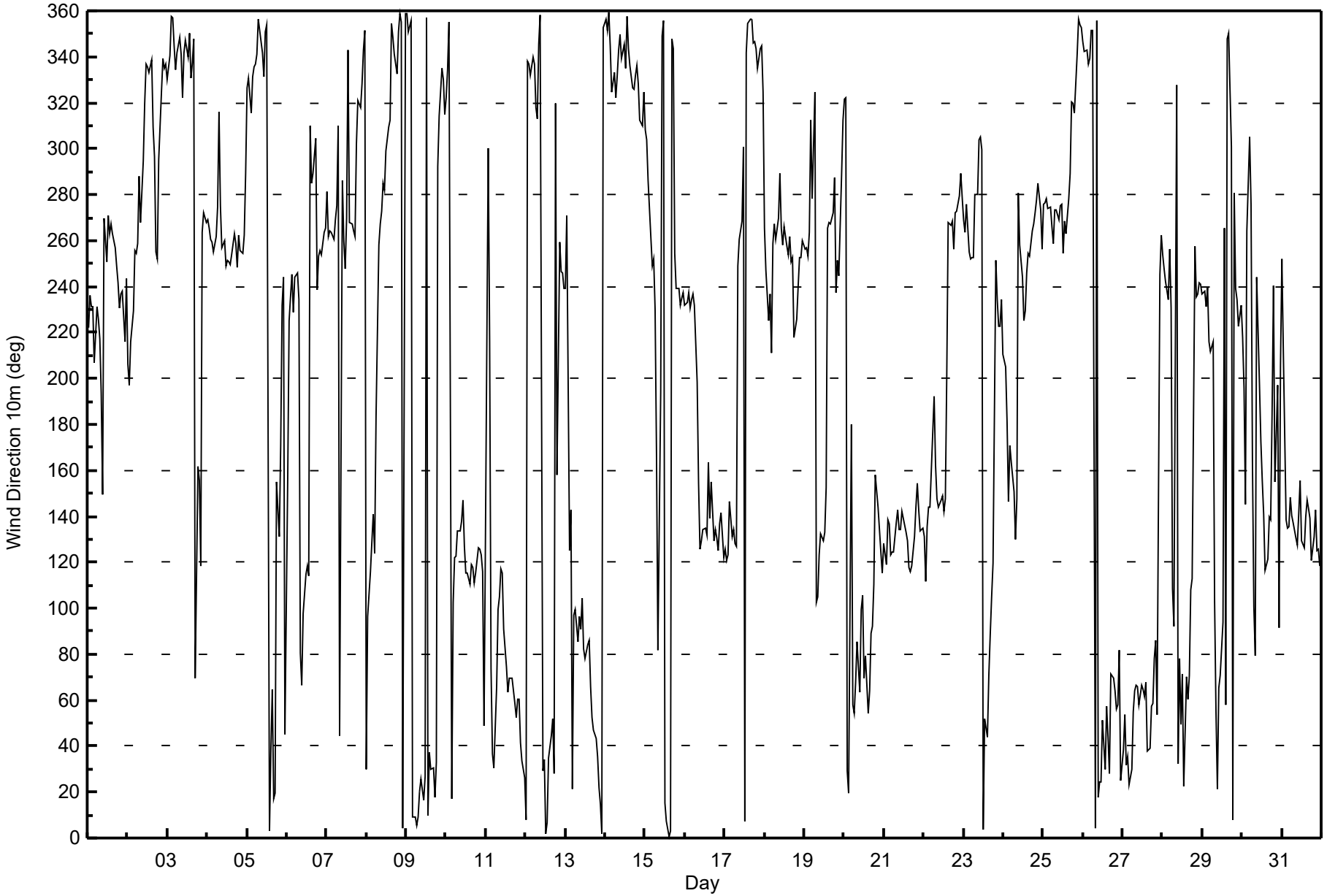
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Surmont 2 - March 2025



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

Maximum Value: 108 deg on Mar 6 00:00

Minimum Value: 11 deg on Mar 24 07:00

Percentiles: P_1 = 15 P_{10} = 22 Q_1 = 30 Median = 39 Q_3 = 47 P_{90} = 63 P_{99} = 94

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	32	49	28	17	34	16	26	38	43	72	76	35	34	28	30	25	20	15	12	23	22	38	24	37	76
2-Mar	61	21	49	39	63	19	25	44	25	34	42	43	40	42	42	46	36	22	17	46	43	38	43	42	63
3-Mar	42	39	37	45	40	38	40	37	42	46	41	38	46	37	52	44	43	27	28	28	38	42	21	26	52
4-Mar	27	25	22	22	17	19	22	58	50	25	27	26	25	32	34	26	29	27	17	24	26	21	23	37	58
5-Mar	38	40	40	47	39	39	48	42	37	38	42	42	44	54	41	48	43	78	40	32	26	30	42	108	108
6-Mar	65	78	38	32	82	74	77	64	32	16	40	17	32	47	94	37	36	68	13	18	20	19	22	22	94
7-Mar	45	21	20	22	31	36	33	56	53	37	36	41	41	80	28	26	24	48	48	40	41	39	42	35	80
8-Mar	49	23	18	30	42	46	61	28	28	28	32	31	35	45	48	36	38	41	41	44	35	38	36	39	61
9-Mar	34	39	35	35	42	43	35	40	45	42	43	41	43	49	40	40	41	41	46	47	63	47	67	61	67
10-Mar	52	51	64	43	53	25	22	30	31	39	49	38	31	22	22	31	19	17	28	34	49	17	49	95	95
11-Mar	59	92	72	62	46	31	41	35	31	26	20	39	33	41	33	33	32	31	30	31	36	34	41	38	92
12-Mar	44	33	36	44	50	36	37	47	49	61	52	50	55	47	44	49	40	44	81	91	16	34	35	31	91
13-Mar	47	34	91	75	62	36	31	28	25	30	21	30	29	31	27	29	34	29	31	38	33	41	40	38	91
14-Mar	41	39	40	43	45	40	41	47	39	37	40	42	40	41	42	41	42	42	42	43	37	44	37	48	48
15-Mar	36	41	35	24	21	17	42	56	88	87	73	41	47	39	47	38	35	48	16	32	18	26	30	32	88
16-Mar	19	21	18	22	14	13	14	60	58	34	31	36	44	38	52	43	51	33	34	38	35	44	47	38	60
17-Mar	33	28	37	50	53	56	31	28	79	30	30	45	57	56	57	38	41	36	38	32	40	41	37	44	79
18-Mar	27	28	66	56	85	60	24	23	26	39	34	36	41	39	37	34	41	29	44	50	60	59	61	22	85
19-Mar	18	19	17	26	33	90	71	85	65	49	48	31	36	82	35	32	32	31	57	24	27	74	64	37	90
20-Mar	48	54	58	58	89	89	56	34	32	35	31	28	47	49	45	36	31	22	22	43	40	38	30	33	89
21-Mar	50	57	59	46	43	41	32	42	44	34	37	40	37	38	33	24	19	22	40	44	52	49	43	47	59
22-Mar	69	43	29	58	34	37	28	27	44	28	22	41	37	32	71	36	27	25	17	25	24	25	46	42	71
23-Mar	25	39	54	21	19	20	22	38	41	39	61	51	53	91	46	41	45	31	74	23	26	50	46	31	91
24-Mar	59	92	59	47	75	42	11	49	61	33	49	34	61	52	35	29	27	28	27	25	26	28	25	19	92
25-Mar	43	26	25	26	23	24	24	32	32	26	33	34	26	33	29	31	38	41	43	40	42	38	36	41	43
26-Mar	38	39	39	40	37	39	39	30	41	46	54	51	63	57	55	43	50	32	32	30	41	39	30	56	63
27-Mar	38	39	36	34	37	39	31	39	29	33	37	38	39	45	43	38	41	34	32	30	27	72	72	19	72
28-Mar	22	21	34	42	73	80	77	42	83	64	38	55	80	55	47	41	43	26	29	22	26	17	16	16	83
29-Mar	38	14	14	49	58	83	73	30	52	108	62	61	68	103	102	86	88	75	57	36	32	28	30	35	108
30-Mar	77	43	27	101	95	85	73	25	97	51	73	63	76	69	33	34	38	36	52	19	39	55	73	89	101
31-Mar	84	71	44	35	41	49	39	32	35	35	46	49	37	34	45	43	43	42	21	40	49	33	37	40	84
	84	92	91	101	95	90	77	85	97	108	76	63	80	103	102	86	88	78	81	91	63	74	73	108	
	Diurnal Maximum																								

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS30
ELLS RIVER
MARCH 2025

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

April 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ELLS RIVER (AMS30)
MARCH 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	706	34	38	99.46	-	-	22.3	0	3.3	0
TRS (ppb) Average	708	36	36	100	17.3	16	15.9	0	4.6	0
THC (ppm) Average	705	34	39	99.33	-	-	7.2	-	3.2	-
NMHC (ppm) Average	705	34	39	99.33	-	-	2.691	-	0.551	-
CH4 (ppm) Average	705	34	39	99.33	-	-	5.2	-	2.8	-
NO2 (ppb) Average	707	37	37	100	-	-	40.3	0	19.7	-
NO (ppb) Average	707	37	37	100	-	-	161.3	-	29.6	-
NOX (ppb) Average	707	37	37	100	-	-	199.6	-	45.9	-
PM2.5 (ug/m3) Average	743	1	1	100	-	-	49.9	0	18.1	0
Temperature 2 m (C) Average	744	0	0	100	-	-	10.4	-	1.3	-
Relative Humidity (%) Average	744	0	0	100	-	-	92.8	-	77.9	-
Wind Speed 10 m (km/h) Average	723	0	21	97.18	-	-	25	-	19	-
Wind Direction 10 m (deg) Average	723	0	21	97.18	-	-	-	-	-	-
Global Solar Radiation (W/m2) Average	744	0	0	100	-	-	613.2	-	193.2	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ELLS RIVER (AMS30)
MARCH 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	706	0.96	2.3	-	0	0	0.1	0.2	0.6	2.7	22.3
TRS (ppb) Average	708	0.77	1.3	-	0.4	0.4	0.4	0.5	0.7	1.1	15.9
THC (ppm) Average	705	2.37	0.6	-	1.9	2	2.1	2.1	2.5	2.9	7.2
NMHC(ppm) Average	705	0.115	0.257	-	0	0	0	0	0.1	0.3	2.691
CH4(ppm) Average	705	2.25	0.4	-	1.8	2	2.1	2.1	2.3	2.6	5.2
NO2 (ppb) Average	707	11.68	9.2	-	0.3	1.8	4.6	9.1	17	25.2	40.3
NO (ppb) Average	707	5	13	-	0	0	0.1	1.1	4.1	12.3	161.3
NOX (ppb) Average	707	16.68	18.8	-	0.4	2.1	5.5	10.9	21.6	35.7	199.6
PM2.5 (ug/m3) Average	743	6.11	5.5	-	0.3	1.8	2.8	4.5	7.2	12.4	49.9
Temperature 2 m (C) Average	744	-8.3	7.7	-	-27.6	-18.9	-14.1	-8	-2.4	1.5	10.4
Relative Humidity (%) Average	744	63.81	13.9	-	27.6	44	53.7	65.3	74.6	80.5	92.8
Wind Speed 10 m (km/h) Average	723	10	6	-	0	3	5	9	14	19	25
Wind Direction 10 m (deg) Average	723	35.9	-	-	-	-	-	-	-	-	-
Global Solar Radiation (W/m2) Average	744	121.4	170.4	-	0	0	0	4	222.1	408.6	613.2

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ELLS RIVER (AMS30)
MARCH 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
THC/NMHC/CH4	06 Mar 2025 06:00	06 Mar 2025 10:00	5	Unstable Operation - excessive baseline drift
SO2	11 Mar 2025 10:00	11 Mar 2025 10:00	1	DAS Failure - data not recorded
SO2	11 Mar 2025 11:00	11 Mar 2025 13:00	3	Maintenance - tightened valve connection
Wind Speed, Wind Direction	01 Mar 2025 21:00	01 Mar 2025 22:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction	03 Mar 2025 22:00	03 Mar 2025 22:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	15 Mar 2025 07:00	15 Mar 2025 11:00	5	Flat line in sensor output signal
Wind Speed, Wind Direction	17 Mar 2025 07:00	17 Mar 2025 09:00	3	Flat line in sensor output signal
Wind Speed, Wind Direction	23 Mar 2025 02:00	23 Mar 2025 09:00	8	Flat line in sensor output signal
Wind Speed, Wind Direction	24 Mar 2025 06:00	24 Mar 2025 06:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	29 Mar 2025 05:00	29 Mar 2025 05:00	1	Flat line in sensor output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Ells River - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 22.3 ppb on Mar 31 11:00 Maximum Daily Average: 3.3 ppb on Mar 6

Minimum Value: 0.0 ppb on Mar 2 22:00 Minimum Daily Average: 0.0 ppb on Mar 9
Maximum Diurnal Average: 2.7 ppb at hour 18 Minimum Diurnal Average: 0.2 ppb at hour 7
Monthly Average: 0.96 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.2 Q_3 = 0.6 P_{90} = 2.7 P_{99} = 11.6

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	34
Percent Operational Time:	99.5

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.3	0.2	0.3	0.2	0.2	Z	0.6	0.8	0.5	0.5	0.6	0.5	0.6	0.6	2.1	7.5	4.8	5.2	3.2	0.9	0.7	0.5	0.5	0.6	1.4	7.5
2-Mar	Z	0.7	0.7	0.9	0.8	0.4	0.2	1.0	1.4	1.5	1.5	0.8	0.3	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.5	1.5
3-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.2	0.7	0.9	1.3	1.8	0.7	0.4	0.2	0.1	0.3	1.8
4-Mar	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	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.3
5-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.1	0.1	2.0	14.0	11.8	3.1	0.2	0.0	0.0	0.0	0.0	1.4	14.0
6-Mar	0.1	0.3	0.5	0.8	Z	1.2	1.2	1.4	1.4	6.0	18.8	1.2	1.3	1.1	3.6	4.9	5.0	9.4	5.5	2.5	1.2	1.3	3.9	4.2	3.3	18.8
7-Mar	1.7	0.8	0.6	0.3	0.3	Z	0.3	0.3	0.4	0.5	0.7	5.8	4.7	2.8	2.8	1.2	0.7	0.5	0.4	0.4	0.4	0.2	0.2	0.3	1.1	5.8
8-Mar	Z	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	1.0	1.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.1
9-Mar	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
10-Mar	0.0	0.0	Z	0.1	0.0	0.0	0.1	0.1	0.2	0.2	C	C	C	0.4	0.6	2.1	5.0	5.3	4.2	4.9	5.1	4.3	2.9	2.5	1.9	5.3
11-Mar	2.6	2.2	1.4	Z	0.8	0.7	0.5	0.4	0.3	DF	M	M	M	0.6	0.5	0.3	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.6	2.6
12-Mar	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.3	0.6	0.9	0.8	0.6	1.0	1.3	0.9	0.6	0.6	0.2	0.1	0.0	0.1	0.0	0.0	0.4	1.3
13-Mar	0.0	0.1	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.4
14-Mar	Z	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
15-Mar	0.2	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.9	1.1	0.8	0.5	0.5	0.4	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.3	1.1
16-Mar	0.1	0.1	Z	0.1	0.1	0.2	0.1	0.1	0.1	0.2	1.8	9.4	5.2	4.0	3.4	3.3	5.3	2.5	1.0	0.5	0.3	0.3	0.2	0.3	1.7	9.4
17-Mar	0.5	0.3	0.2	Z	0.4	0.4	0.2	0.2	0.3	1.0	1.0	0.9	0.5	0.4	0.4	0.5	0.5	0.5	0.2	0.2	0.1	0.1	0.0	0.1	0.4	1.0
18-Mar	0.1	0.0	0.2	0.3	Z	0.1	0.0	0.0	0.2	0.5	0.3	0.2	0.1	0.1	0.1	0.3	0.3	1.6	4.0	2.1	0.8	0.3	0.2	0.1	0.5	4.0
19-Mar	0.1	0.1	0.0	0.0	0.0	Z	0.1	0.0	0.1	0.5	5.6	5.0	4.1	5.7	5.7	6.2	6.9	7.5	3.9	0.8	0.8	0.4	0.2	0.1	2.3	7.5
20-Mar	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2
21-Mar	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.8	8.4	6.3	6.0	5.2	4.3	3.6	4.3	5.8	7.3	3.8	1.0	0.3	0.2	0.2	0.2	2.5	8.4
22-Mar	0.3	1.4	Z	1.5	1.0	0.3	0.3	0.3	0.3	0.4	0.5	1.7	2.6	11.6	14.0	11.0	10.5	6.0	0.8	0.1	0.2	0.6	0.5	0.2	2.9	14.0
23-Mar	0.2	0.3	0.2	Z	0.2	0.1	0.1	0.2	0.5	0.5	0.3	0.3	0.3	1.5	7.6	6.6	1.5	1.6	1.4	0.8	0.3	0.3	0.3	0.4	1.1	7.6
24-Mar	0.4	0.5	0.4	0.4	Z	0.5	0.5	0.6	0.5	0.4	0.6	0.5	0.3	0.4	0.3	0.3	0.3	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.3	0.6
25-Mar	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2
26-Mar	Z	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	0.7	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.7
27-Mar	0.1	Z	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
28-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.7	0.6	0.5	0.3	0.1	0.1	0.1	0.2	0.1	0.2	0.7
29-Mar	0.3	0.3	0.1	Z	0.1	0.1	0.1	0.2	0.3	0.3	0.2	1.9	1.2	1.3	1.5	2.1	5.8	18.0	10.4	3.0	0.4	0.2	0.1	0.1	2.1	18.0
30-Mar	0.1	0.1	0.0	0.0	Z	0.0	0.1	0.1	0.3	0.3	0.4	0.6	0.6	0.8	2.7	4.9	3.4	2.6	1.4	0.8	0.5	0.3	0.2	0.2	0.9	4.9
31-Mar	0.2	0.2	0.3	0.2	0.3	Z	0.3	0.3	2.8	10.5	22.3	17.3	3.9	1.6	2.1	2.3	2.0	1.3	1.1	0.4	0.2	0.1	0.0	0.0	3.0	22.3
	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.4	1.1	2.2	2.0	1.2	1.3	1.8	2.0	2.4	2.7	1.5	0.7	0.4	0.3	0.3	0.3	Diurnal Average	
	2.6	2.2	1.4	1.5	1.0	1.2	1.2	1.4	2.8	10.5	22.3	17.3	5.2	11.6	14.0	11.0	14.0	18.0	10.4	4.9	5.1	4.3	3.9	4.2	Diurnal Maximum	

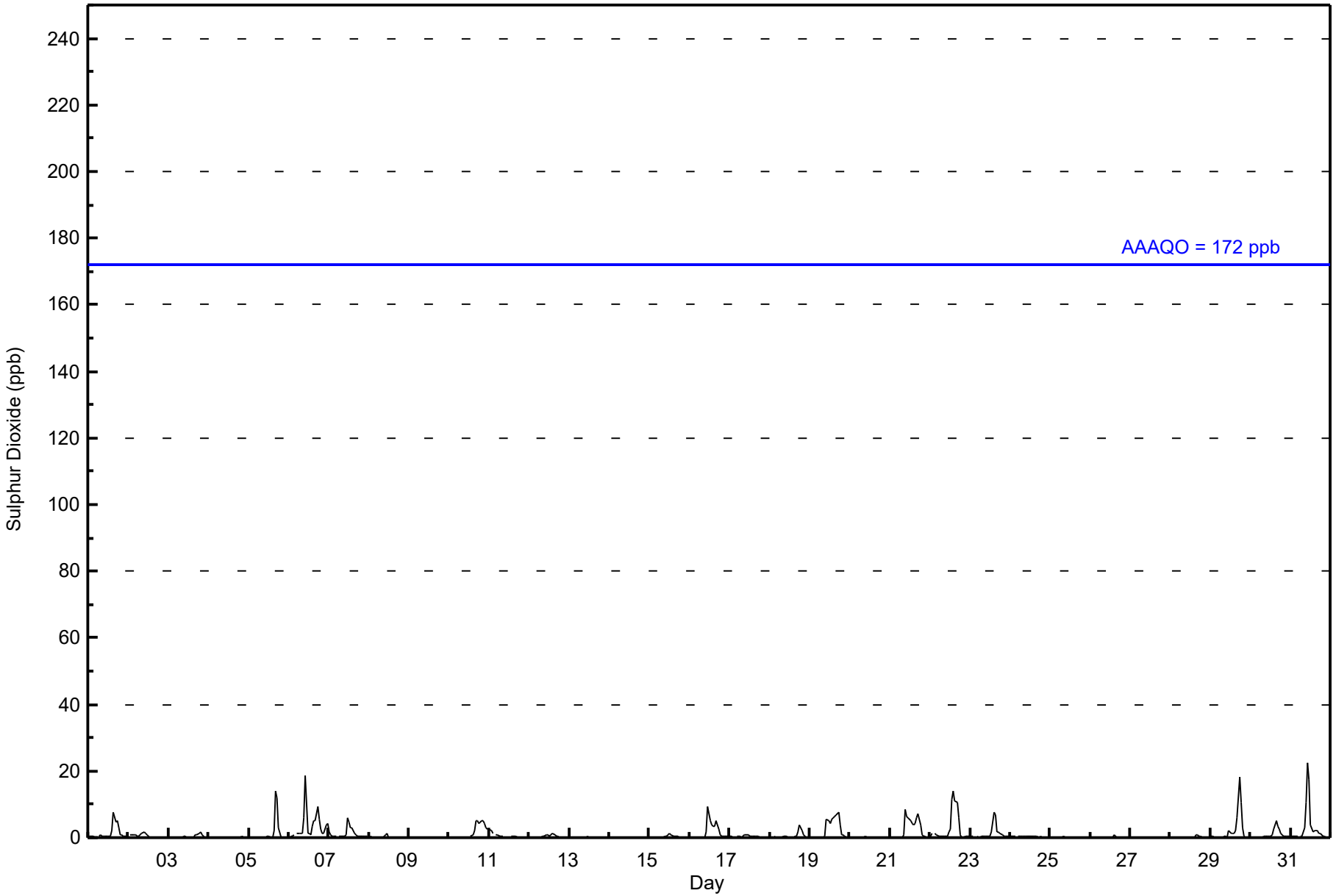
Z - zerospan C - Calibration M - Maintenance DF - DAS Failure
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Ells River - March 2025



Sulphur Dioxide (SO_2) - ppb
Ells River - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	697	98.73	98.73
11 - 20	8	1.13	99.86
21 - 60	1	0.14	100.00
61 - 110	0	0.00	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 706

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Ells River - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	149	151	29	9	10	17	58	56	35	12	20	14	24	30	24	39	677
11 - 20	0	0	0	0	0	1	3	4	0	0	0	0	0	0	0	0	8
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	149	151	29	9	10	18	61	61	35	12	20	14	24	30	24	39	686

Total Number of Valid Hours: 686

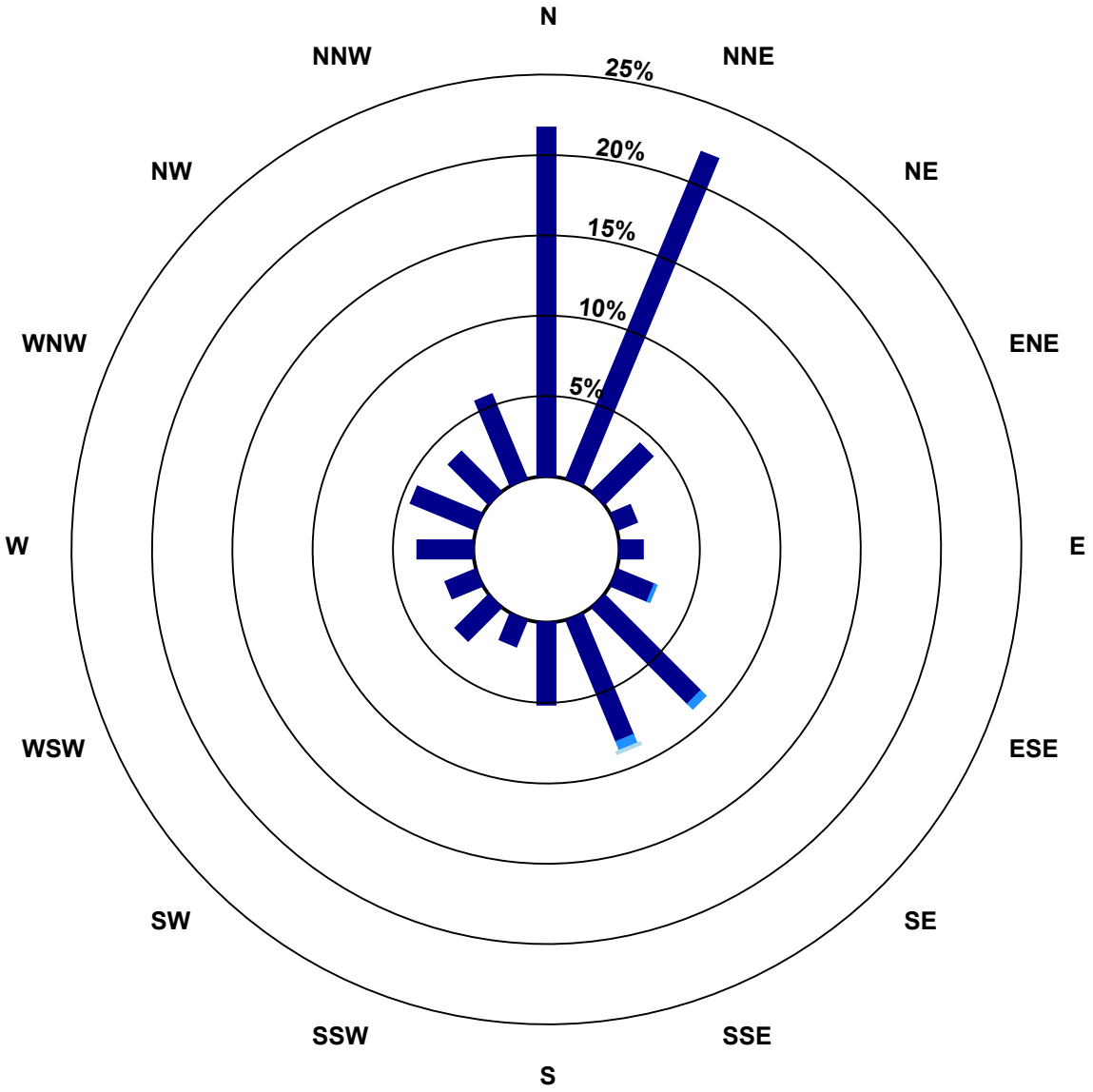
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Sulphur Dioxide (SO_2) - ppb

Ells River



Classes (ppb)

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

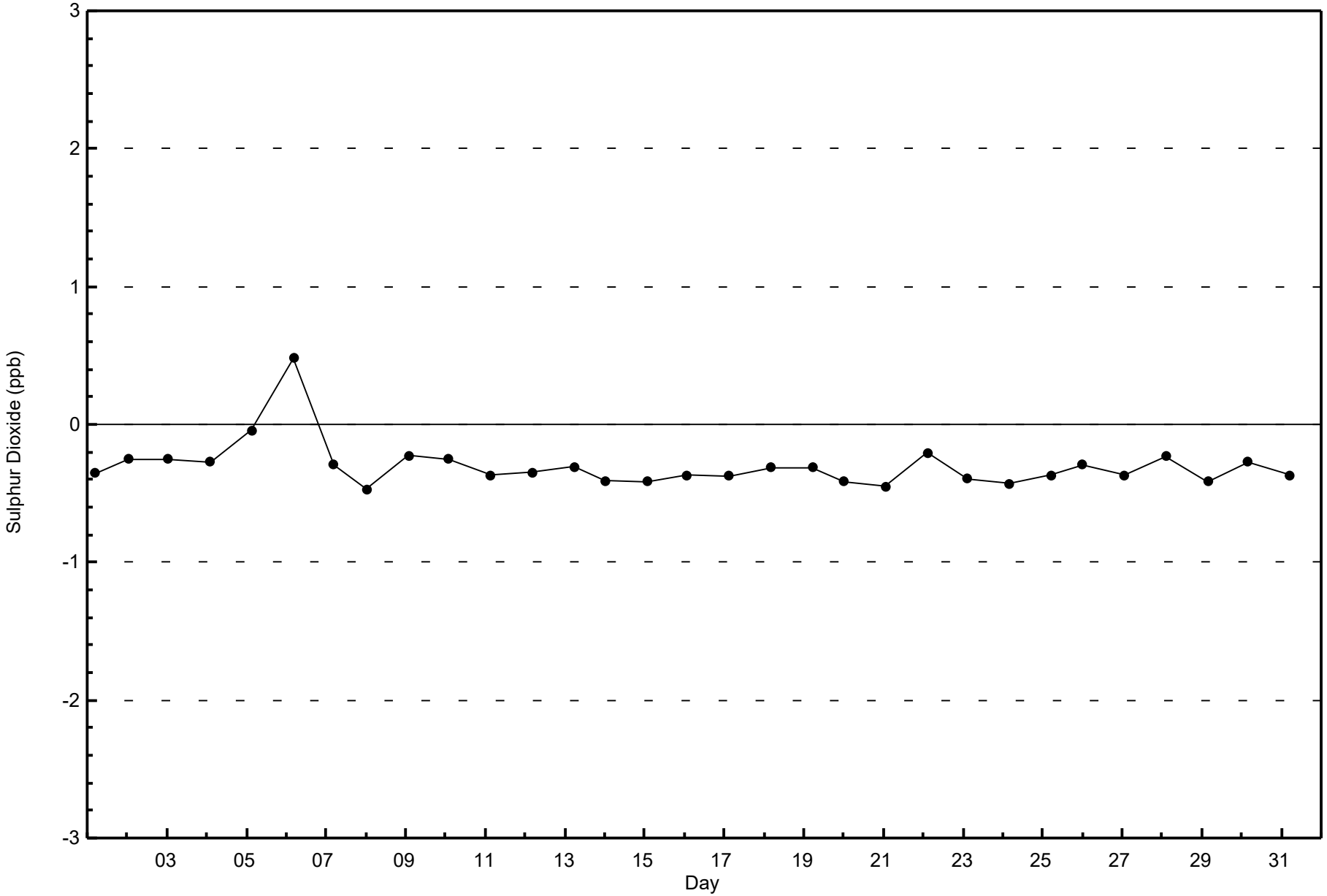
Total Number of Valid Hours: 686

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Ells River - March 2025

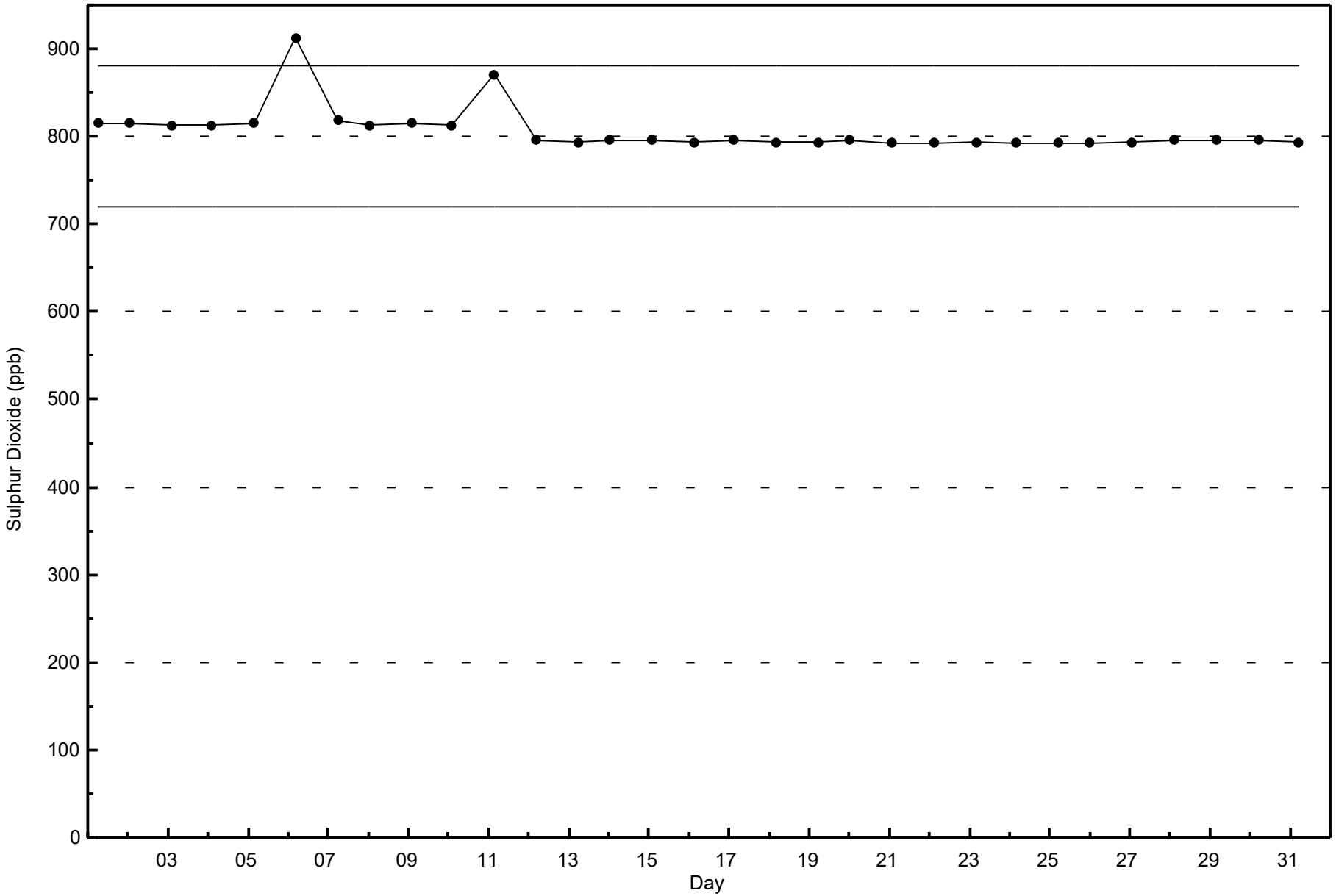


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Ells River - March 2025



Number of Exceedences (AAAQG): 30-Min: 16

Maximum Value: 17.3 ppb on Mar 22 06:00 Maximum Daily Average: 4.6 ppb on Mar 22

Minimum Value: 0.4 ppb on Mar 14 18:00 Minimum Daily Average: 0.4 ppb on Mar 9

Maximum Diurnal Average: 1.2 ppb at hour 10 Minimum Diurnal Average: 0.6 ppb at hour 17

Monthly Average: 0.77 ppb Percentiles: P_1 = 0.4 P_{10} = 0.4 Q_1 = 0.4 Median = 0.5 Q_3 = 0.6 P_{90} = 1.1 P_{99} = 6.8

Periods in Service:	1488
Periods of Valid Data:	1416
Periods of Invalid Data:	72
Periods of Calibration:	72
Percent Operational Time:	100.0

Period Ending At (MST)

Day	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00	Daily Average	Daily Maximum
1-Mar	Z	2.1	2.7	3.5	2.2	3.9	1.0	0.9	3.4	0.8	2.2	1.7	1.3	1.0	0.7	1.8	1.1	1.6	1.9	1.4	1.4	1.2	1.1	1.2	1.7	3.9
	SP	2.3	3.3	2.5	3.1	1.1	0.8	1.3	1.1	1.8	1.9	1.5	1.2	0.9	0.9	2.1	1.2	1.6	1.7	1.4	1.3	1.2	1.2	1.2		
2-Mar	1.1	Z	1.1	1.3	1.2	0.8	0.9	1.2	2.2	2.3	1.8	0.9	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.4	0.4	0.9	2.3
	1.1	SP	1.1	1.4	1.0	1.2	0.9	2.0	2.3	2.0	1.4	0.6	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5		
3-Mar	0.5	0.5	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.7	0.6	0.6	0.8	0.6	0.8	1.4	1.3	0.6	1.5
	0.4	0.4	SP	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.7	0.7	0.6	0.7	0.7	0.7	0.9	1.4	1.5		
4-Mar	1.4	0.9	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	0.6	0.6	0.5	0.5	0.5	1.4
	1.2	0.6	0.4	SP	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.5	0.5		
5-Mar	0.5	0.5	0.5	0.5	Z	0.5	0.4	0.4	0.4	0.4	0.5	0.6	0.5	0.5	0.7	0.7	0.8	0.7	0.8	0.7	0.6	0.5	0.6	0.5	0.6	0.8
	0.5	0.5	0.5	0.5	SP	0.5	0.5	0.4	0.4	0.5	0.7	0.6	0.5	0.5	0.7	0.7	0.7	0.8	0.7	0.6	0.6	0.6	0.5	0.5		
6-Mar	0.6	0.5	0.8	1.0	1.1	Z	1.1	1.1	1.1	1.1	1.7	1.3	3.2	1.9	1.6	1.0	0.7	0.6	0.7	0.8	0.9	1.0	1.3	0.8	1.1	3.2
	0.6	0.7	0.9	1.1	1.1	SP	1.0	1.1	1.1	1.5	1.1	1.7	2.2	1.9	1.1	0.8	0.6	0.7	0.7	0.9	1.0	0.9	1.2	0.7		
7-Mar	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.1	2.4	0.5	0.8	0.7	0.8	0.7	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.4	0.4	0.6	2.4
	SP	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2.2	0.8	0.5	0.8	0.7	0.8	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4		
8-Mar	0.4	Z	0.5	0.5	0.5	0.5	0.6	0.7	1.1	0.7	0.5	0.7	0.4	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
	0.4	SP	0.5	0.5	0.5	0.6	0.8	0.9	0.6	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		
9-Mar	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
	0.4	0.4	SP	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4		
10-Mar	0.4	0.4	0.5	Z	0.5	0.4	0.5	0.5	0.9	1.0	0.8	0.9	0.7	0.7	0.9	0.7	0.7	0.6	0.6	0.8	0.6	0.7	0.6	0.6	0.7	1.1
	0.4	0.4	0.5	SP	0.5	0.5	0.5	0.8	1.1	0.9	0.9	0.9	0.8	0.8	0.7	0.7	0.7	0.6	0.8	0.7	0.6	0.6	0.6	0.6		
11-Mar	0.6	0.5	0.5	0.5	Z	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	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.6
	0.5	0.5	0.4	0.5	SP	0.5	0.5	0.5	0.5	0.5	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		
12-Mar	0.4	0.4	0.4	0.4	0.4	Z	0.4	0.4	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	0.6	0.6	0.5	0.6
	0.4	0.4	0.4	0.4	0.4	SP	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	0.5	0.5	0.5	0.5	0.6		
13-Mar	Z	0.6	0.6	0.6	0.6	0.6	0.6	0.8	0.7	0.7	0.6	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.8
	SP	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5		
14-Mar	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.6	0.4	0.4	C	C	C	C	C	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.6
	0.4	SP	0.4	0.4	0.4	0.4	0.5	0.4	0.5	C	C	C	C	C	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5		
15-Mar	0.6	0.5	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.6	0.6	6.2	4.4	0.5	0.4	0.8	6.2
	0.5	0.5	SP	0.4	0.4	0.4	0.4	0.4	0.4	0.6	0.4	0.6	0.6	0.6	0.5	0.5	0.6	0.5	0.6	1.6	2.8	0.7	0.5	0.5		

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Ells River - March 2025

Day	Period Ending At (MST) 00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00	Daily Average	Daily Maximum
16-Mar	0.5	0.5	0.6	Z	0.6	0.6	0.6	0.5	0.5	0.6	1.0	0.8	0.8	0.5	0.5	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.6	1.3
	0.5	0.5	0.6	SP	0.6	0.6	0.5	0.5	0.5	0.8	1.3	0.9	0.6	0.5	0.5	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5		
17-Mar	0.5	0.5	0.4	0.5	Z	0.7	0.9	0.9	0.8	0.8	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	2.7	2.7	2.0	2.8	2.3	1.1	4.5
	0.5	0.5	0.5	0.6	SP	0.8	0.9	0.9	0.7	1.0	0.6	0.5	0.5	0.5	0.4	0.5	0.5	0.4	1.3	4.5	1.5	3.0	2.5	2.3		
18-Mar	2.0	1.3	1.1	3.1	0.6	Z	0.6	0.5	0.5	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.7	3.1
	1.4	1.1	1.3	0.8	0.6	SP	0.6	0.5	0.5	0.6	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.7	0.6	0.6	0.6	0.5	0.7	0.5		
19-Mar	Z	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.8	0.9	1.7	1.3	0.9	0.7	0.8	1.0	0.6	0.6	0.5	0.5	0.4	0.4	0.7	1.7
	SP	0.6	0.5	0.6	0.5	0.5	0.5	0.4	0.5	0.5	0.8	1.2	1.6	1.1	0.8	0.7	1.4	0.8	0.6	0.5	0.5	0.4	0.4	0.4		
20-Mar	0.4	Z	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5
	0.4	SP	0.4	0.4	0.4	0.4	0.5	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	0.5	0.5	0.5	0.5		
21-Mar	0.5	0.5	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.6	1.2	1.1	0.7	0.6	0.7	0.6	0.5	0.9	0.7	0.6	0.4	0.4	0.4	0.4	0.6	1.2
	0.5	0.5	SP	0.5	0.5	0.5	0.5	0.5	0.6	0.9	1.1	1.0	0.7	0.6	0.6	0.5	0.7	0.8	0.7	0.5	0.4	0.4	0.4	0.4		
22-Mar	0.4	0.6	1.3	Z	11.4	14.5	14.8	6.9	8.4	15.7	13.5	11.2	0.8	0.6	0.7	0.6	0.6	1.0	0.6	0.6	0.6	1.1	0.9	0.8	4.6	17.3
	0.5	1.2	4.0	SP	10.9	17.3	9.0	10.7	11.3	13.5	15.3	1.1	0.6	0.6	0.6	0.6	1.0	1.0	0.6	0.7	0.8	1.0	0.9	0.8		
23-Mar	0.8	0.7	0.6	0.6	Z	0.5	0.5	0.6	0.7	0.8	0.6	0.5	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.7	0.9	1.0	0.8	1.1	0.6	1.2
	0.7	0.6	0.6	0.6	SP	0.5	0.6	0.6	0.8	0.7	0.5	0.6	0.7	0.5	0.5	0.4	0.4	0.4	0.5	0.7	0.8	0.9	1.1	1.2		
24-Mar	1.1	1.0	1.0	0.9	0.9	Z	0.9	0.8	0.9	2.8	1.4	0.9	0.6	1.4	4.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0	4.7
	1.1	1.0	0.9	0.9	0.8	SP	0.9	0.9	4.1	2.0	1.0	0.7	0.8	3.0	1.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4		
25-Mar	Z	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	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.5
	SP	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.5	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.4		
26-Mar	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.6
	0.4	SP	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4		
27-Mar	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	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.5
	0.4	0.4	SP	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		
28-Mar	0.4	0.4	0.4	Z	0.5	0.4	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.6	0.5	0.6
	0.4	0.4	0.4	SP	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.5		
29-Mar	0.6	0.5	0.5	0.6	Z	0.6	0.5	0.5	0.5	0.6	0.5	0.4	0.5	0.5	0.5	0.9	0.7	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.6	0.9
	0.6	0.5	0.5	0.6	SP	0.5	0.5	0.5	0.6	0.6	0.4	0.5	0.5	0.5	0.6	0.7	0.8	0.7	0.6	0.5	0.4	0.5	0.5	0.5		
30-Mar	0.5	0.5	0.4	0.4	0.5	Z	0.5	0.5	0.6	0.6	0.5	0.6	0.6	0.7	0.7	0.8	0.7	0.6	0.6	0.6	0.8	0.4	0.5	0.5	0.6	0.8
	0.5	0.4	0.4	0.5	0.5	SP	0.5	0.5	0.6	0.6	0.5	0.6	0.7	0.8	0.6	0.8	0.6	0.7	0.5	0.6	0.5	0.5	0.5	0.5		
31-Mar	Z	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.7	0.6	0.5	0.6	0.6	0.7	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.7
	SP	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.6	0.7	0.7	0.6	0.6	0.6	0.5	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4		
	0.6	0.6	0.7	0.7	1.0	1.2	0.9	0.9	1.1	1.2	1.2	0.8	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.6	0.6	Diurnal Average	
	2.0	2.3	4.0	3.5	11.4	17.3	14.8	10.7	11.3	15.7	15.3	11.2	3.2	3.0	4.7	2.1	1.4	1.6	1.9	4.5	6.2	4.4	2.8	2.3	Diurnal Maximum	

Z - zerospan C - Calibration SP - Span

Alberta Ambient Air Quality Guideline (AAAQG): 30-Min: 5 ppb

Wood Buffalo Environmental Association

Summary of Hour Averages

Total Reduced Sulphur (TRS) - ppb

Ells River - March 2025

Maximum Value: 15.9 ppb on Mar 22 06:00

Maximum Daily Average: 4.6 ppb on Mar 22

Minimum Value: 0.4 ppb on Mar 14 18:00

Minimum Daily Average: 0.4 ppb on Mar 9

Maximum Diurnal Average: 1.2 ppb at hour 10

Minimum Diurnal Average: 0.6 ppb at hour 17

Monthly Average: 0.77 ppb

Percentiles: P_1 = 0.4 P_{10} = 0.4 Q_1 = 0.4 Median = 0.5 Q_3 = 0.7 P_{90} = 1.1 P_{99} = 6.0

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	Z	2.2	3.0	3.0	2.6	2.5	0.9	1.1	2.3	1.3	2.1	1.6	1.2	1.0	0.8	1.9	1.2	1.6	1.8	1.4	1.4	1.2	1.1	1.2	1.7	3.0
2-Mar	1.1	Z	1.1	1.3	1.1	1.0	0.9	1.6	2.2	2.1	1.6	0.8	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.9	2.2
3-Mar	0.5	0.5	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.6	0.7	0.6	0.7	0.7	0.7	0.8	1.4	1.4	0.6	1.4
4-Mar	1.3	0.8	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	0.6	0.6	0.5	0.5	0.5	1.3
5-Mar	0.5	0.5	0.5	0.5	Z	0.5	0.4	0.4	0.4	0.5	0.6	0.6	0.5	0.5	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.5	0.5	0.5	0.6	0.7
6-Mar	0.6	0.6	0.9	1.1	1.1	Z	1.1	1.1	1.1	1.3	1.4	1.5	2.7	1.9	1.4	0.9	0.6	0.7	0.7	0.8	0.9	0.9	1.2	0.8	1.1	2.7
7-Mar	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.6	1.6	0.5	0.8	0.7	0.8	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.4	0.4	0.6	1.6
8-Mar	0.4	Z	0.5	0.5	0.5	0.6	0.7	0.8	0.9	0.8	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.9
9-Mar	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
10-Mar	0.4	0.4	0.5	Z	0.5	0.5	0.5	0.7	1.0	0.9	0.8	0.9	0.7	0.8	0.8	0.7	0.7	0.6	0.7	0.7	0.6	0.6	0.6	0.6	0.7	1.0
11-Mar	0.5	0.5	0.4	0.5	Z	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	0.4	0.4	0.5
12-Mar	0.4	0.4	0.4	0.4	0.4	Z	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	0.5	0.5	0.6	0.5	0.6
13-Mar	Z	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.7
14-Mar	0.4	Z	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.4	C	C	C	C	C	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.5
15-Mar	0.5	0.5	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.6	0.5	0.5	0.6	0.6	0.5	0.5	0.6	0.5	0.6	1.1	4.5	2.6	0.5	0.5	0.8	4.5
16-Mar	0.5	0.5	0.6	Z	0.6	0.6	0.5	0.5	0.5	0.7	1.2	0.9	0.7	0.5	0.5	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.6	1.2
17-Mar	0.5	0.5	0.4	0.5	Z	0.8	0.9	0.9	0.8	0.9	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.9	3.6	2.1	2.5	2.7	2.3	1.1	3.6
18-Mar	1.7	1.2	1.2	2.0	0.6	Z	0.6	0.5	0.5	0.6	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.5	0.6	0.6	0.7	2.0
19-Mar	Z	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.8	1.0	1.6	1.2	0.9	0.7	1.1	0.9	0.6	0.5	0.5	0.4	0.4	0.4	0.7	1.6
20-Mar	0.4	Z	0.4	0.4	0.4	0.4	0.5	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	0.5	0.5	0.5	0.5	0.5	0.5
21-Mar	0.5	0.5	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.8	1.1	1.0	0.7	0.6	0.7	0.6	0.6	0.9	0.7	0.5	0.4	0.4	0.4	0.4	0.6	1.1
22-Mar	0.4	0.9	2.5	Z	11.2	15.9	11.9	8.8	9.9	14.6	14.4	6.1	0.7	0.6	0.7	0.6	0.8	1.0	0.6	0.6	0.7	1.0	0.9	0.8	4.6	15.9
23-Mar	0.8	0.7	0.6	0.6	Z	0.5	0.5	0.6	0.8	0.7	0.5	0.5	0.7	0.5	0.5	0.4	0.4	0.4	0.5	0.7	0.8	1.0	1.0	1.2	0.6	1.2
24-Mar	1.1	1.0	0.9	0.9	0.9	Z	0.9	0.9	2.5	2.4	1.2	0.8	0.7	2.2	3.1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	1.0	3.1
25-Mar	Z	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	0.4	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.5
26-Mar	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
27-Mar	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	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.5
28-Mar	0.4	0.4	0.4	Z	0.5	0.5	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.6	0.5	0.6
29-Mar	0.6	0.5	0.5	0.6	Z	0.6	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.6	0.8	0.7	0.7	0.6	0.6	0.4	0.5	0.5	0.5	0.6	0.8
30-Mar	0.5	0.5	0.4	0.5	0.5	Z	0.5	0.5	0.6	0.6	0.5	0.6	0.7	0.8	0.7	0.8	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.6	0.8
31-Mar	Z	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.6	0.7	0.7	0.6	0.6	0.6	0.6	0.7	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.7
	0.6	0.6	0.7	0.7	1.0	1.2	0.9	0.9	1.1	1.2	1.2	0.8	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.6	0.6	Diurnal Average	
	1.7	2.2	3.0	3.0	11.2	15.9	11.9	8.8	9.9	14.6	14.4	6.1	2.7	2.2	3.1	1.9	1.2	1.6	1.8	3.6	4.5	2.6	2.7	2.3	Diurnal Maximum	

Z - zerospan C - Calibration

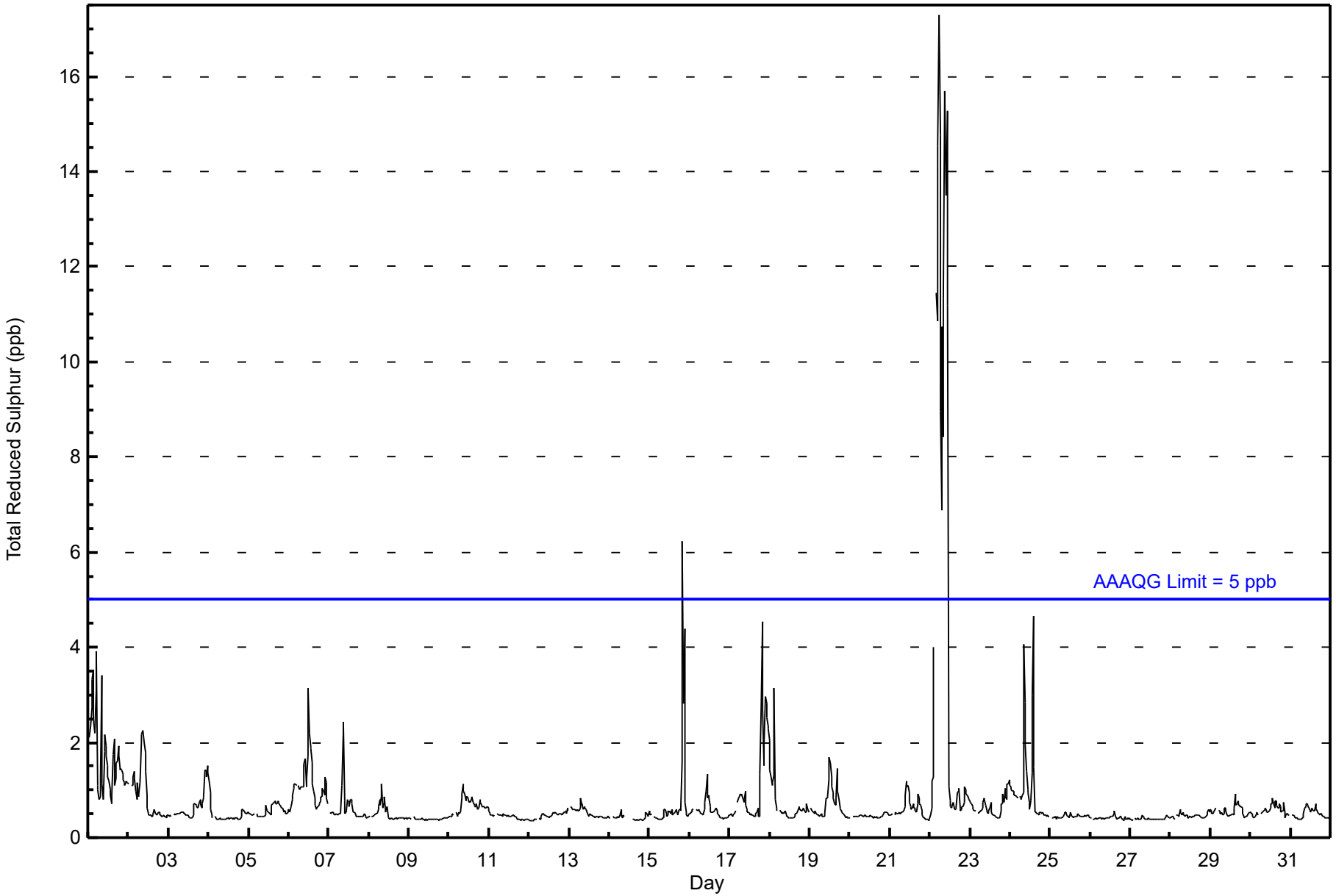
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Ells River - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	689	97.32	97.32
3 - 4	10	1.41	98.73
5 - 7	2	0.28	99.01
8 - 11	2	0.28	99.29
> 11	5	0.71	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Ells River - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	150	147	28	9	11	18	61	56	29	12	19	13	24	30	25	39	671
3 - 4	0	1	1	0	0	0	0	4	2	1	0	1	0	0	0	0	10
5 - 7	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2
8 - 11	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2
> 11	0	0	0	0	0	0	0	2	3	0	0	0	0	0	0	0	5
Totals	150	149	29	9	11	18	61	64	35	13	19	14	24	30	25	39	690

Total Number of Valid Hours: 690

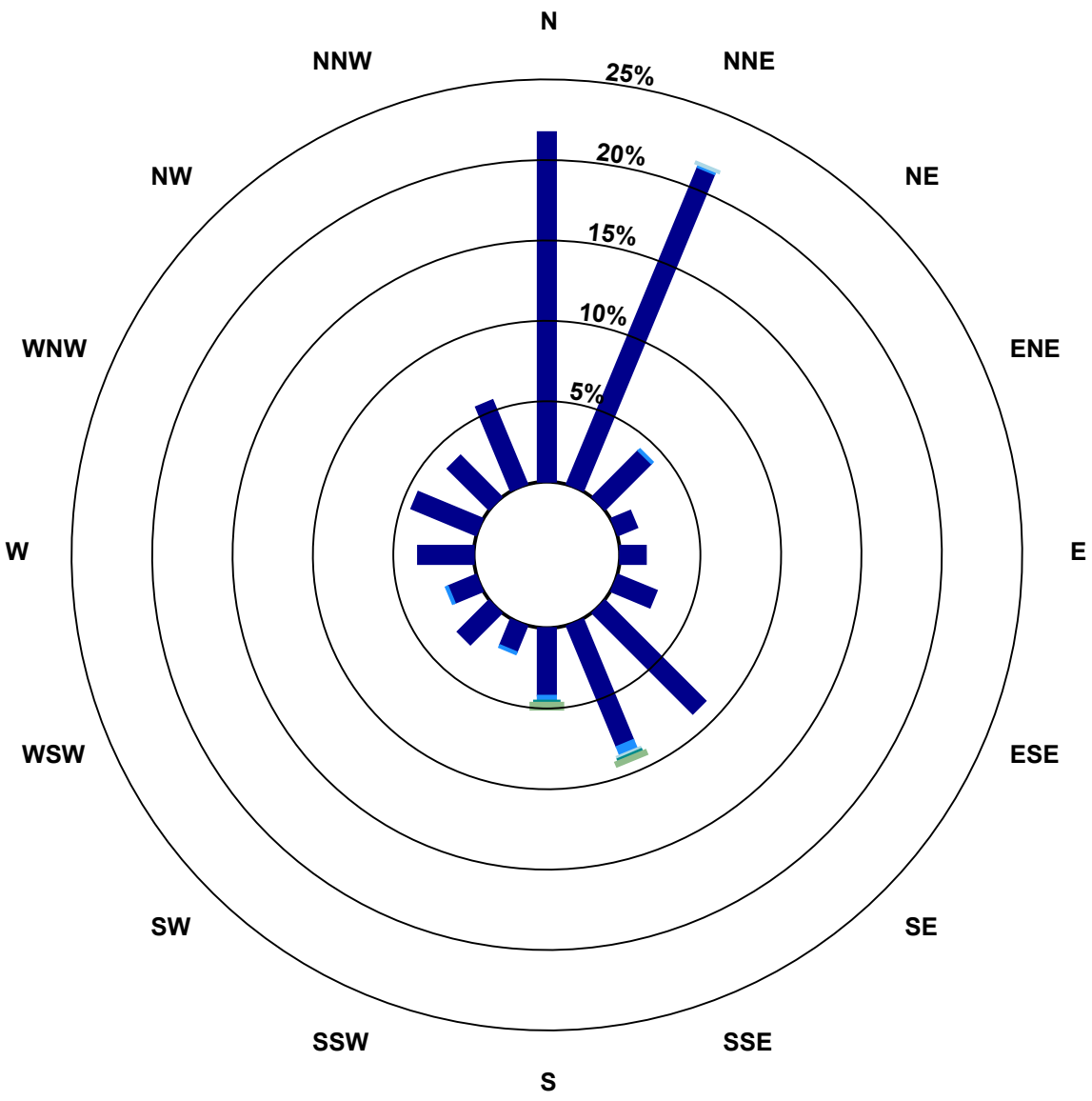
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Total Reduced Sulphur (TRS) - ppb

Ells River



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

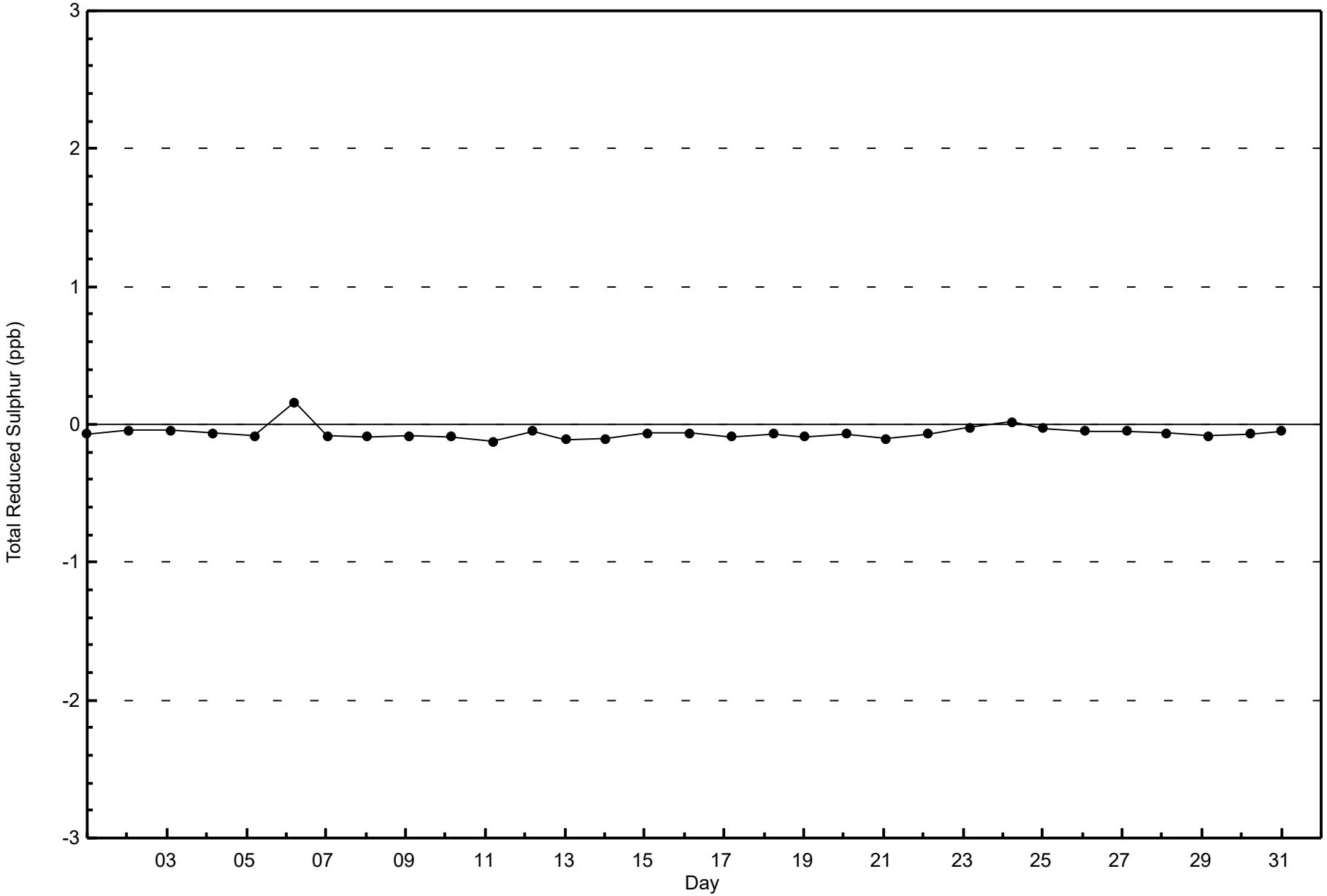
Total Number of Valid Hours: 690

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Ells River - March 2025

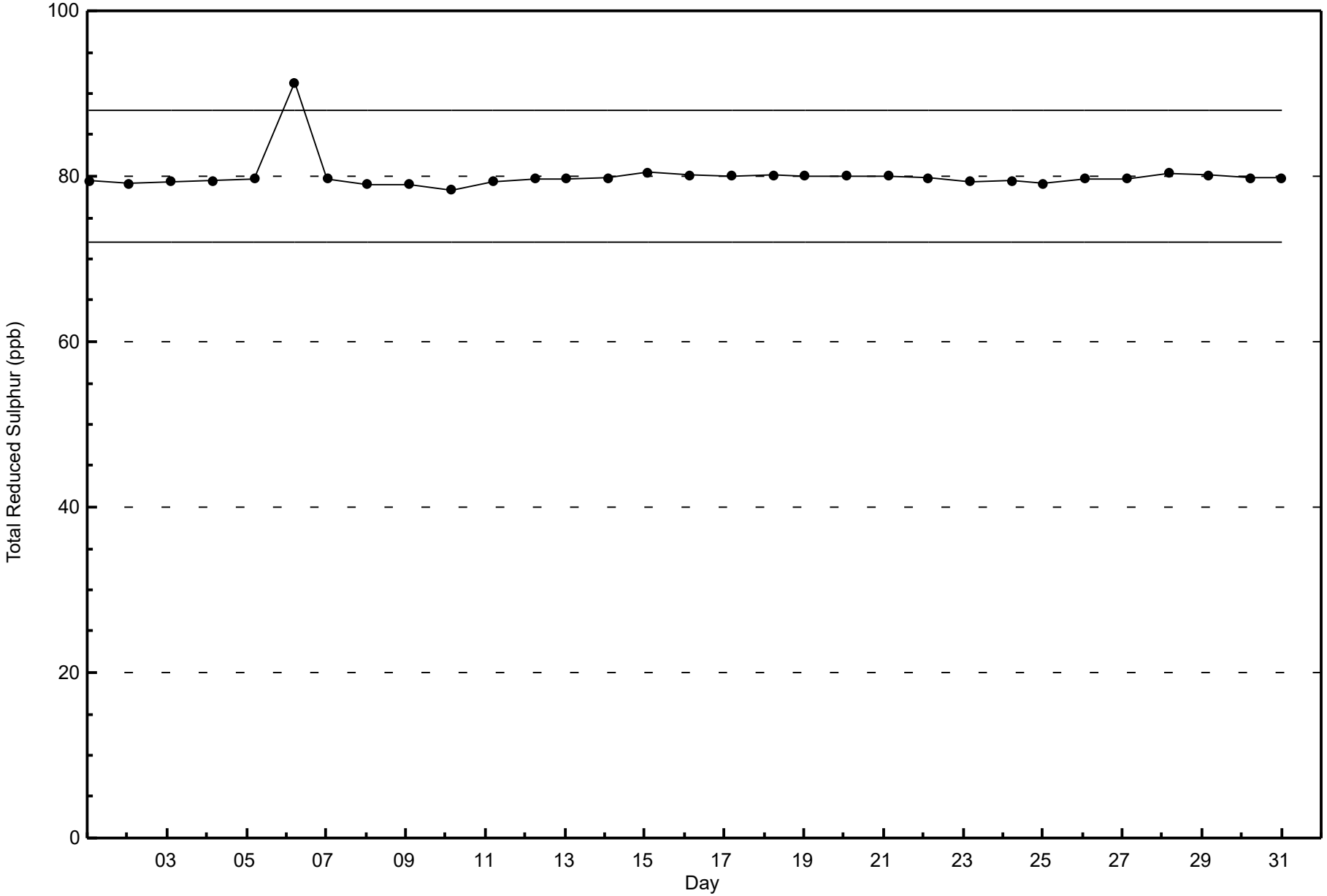


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Ells River - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Ells River - March 2025

Maximum Value: 7.2 ppm on Mar 2 09:00

Maximum Daily Average: 3.2 ppm on Mar 2

Minimum Value: 1.9 ppm on Mar 6 02:00

Minimum Daily Average: 2.0 ppm on Mar 9

Maximum Diurnal Average: 2.8 ppm at hour 9

Minimum Diurnal Average: 2.1 ppm at hour 16

Monthly Average: 2.37 ppm

Percentiles: P_1 = 2.0 P_{10} = 2.0 Q_1 = 2.1 Median = 2.1 Q_3 = 2.5 P_{90} = 2.9 P_{99} = 4.9

Hours in Service:	744
Hours of Data:	705
Hours of Missing Data:	39
Hours of Calibration:	34
Percent Operational Time:	99.3

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	2.2	2.3	2.5	2.6	2.5	Z	2.6	2.7	2.5	2.2	2.5	2.4	2.6	2.5	2.4	2.7	3.1	2.8	2.7	3.2	3.6	3.5	3.5	3.8	2.8	3.8
2-Mar	Z	3.3	3.2	3.6	3.2	2.9	3.0	6.2	7.2	6.9	6.1	3.1	2.0	2.0	2.0	2.5	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	3.2	7.2
3-Mar	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.1	2.2	2.3	2.2	2.1	2.3	2.5	2.7	2.6	2.2	2.7
4-Mar	2.5	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	2.1	2.3	2.3	2.2	2.2	2.1	2.5
5-Mar	2.2	2.2	2.0	Z	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.6	2.5	2.7	2.4	2.3	2.3	2.2	2.7
6-Mar	2.6	1.9	2.2	2.3	Z	UO	UO	UO	UO	UO	2.1	2.1	2.3	2.4	2.5	2.5	2.3	2.3	2.4	2.5	2.9	3.2	4.1	2.8	2.5	4.1
7-Mar	2.2	2.1	2.2	2.1	2.1	Z	2.4	2.4	3.7	3.2	2.2	2.4	2.5	3.7	2.5	2.2	2.1	2.1	2.0	2.1	2.1	2.2	2.1	2.1	2.4	3.7
8-Mar	Z	2.4	2.4	2.6	2.6	2.9	2.8	2.6	2.6	2.8	2.4	2.2	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.3	2.9
9-Mar	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	2.1	2.1	2.2	2.2	2.0	2.2
10-Mar	2.2	2.5	Z	3.0	2.6	2.4	2.6	2.9	3.1	2.9	C	C	C	2.3	2.2	2.1	2.1	2.1	2.6	2.8	2.4	2.5	2.5	2.3	2.5	3.1
11-Mar	2.1	2.1	2.1	Z	2.3	2.4	2.3	2.3	2.3	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.1	2.1	2.1	2.2	2.4
12-Mar	2.1	2.1	2.1	2.1	Z	2.2	2.2	2.2	2.4	2.5	2.3	2.1	2.1	2.1	2.5	2.2	2.6	2.5	2.1	2.4	2.2	2.4	2.5	2.6	2.3	2.6
13-Mar	2.7	2.9	2.9	2.9	2.9	Z	3.0	3.3	3.1	2.5	2.7	2.1	2.1	2.0	2.1	2.0	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.4	3.3
14-Mar	Z	2.0	2.1	2.0	2.0	2.1	2.2	2.3	2.3	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.4	2.6	2.7	2.1	2.7
15-Mar	2.5	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	3.5	2.6	2.2	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.5	2.2	3.5
16-Mar	3.1	3.5	Z	3.6	3.1	2.9	2.8	2.5	2.4	2.6	2.6	2.2	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.4	3.6
17-Mar	2.1	2.1	2.1	Z	2.2	2.2	2.2	2.2	2.2	3.3	2.5	2.2	2.1	2.0	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	3.3
18-Mar	2.1	2.1	2.9	3.4	Z	3.6	3.7	2.9	2.6	2.5	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.4	2.6	2.6	2.6	2.5	3.7
19-Mar	2.6	2.5	2.4	2.4	2.5	Z	2.4	2.4	2.1	2.1	2.2	2.2	2.4	2.4	2.2	2.1	2.6	2.5	2.2	2.3	2.1	2.1	2.1	2.0	2.3	2.6
20-Mar	Z	2.0	2.2	2.2	2.3	2.3	2.4	2.2	2.3	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.5	2.3	2.2	2.2	2.5
21-Mar	2.2	Z	2.2	2.3	2.4	2.5	2.5	2.5	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	2.2	2.5
22-Mar	2.1	2.3	Z	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.4	2.3	2.1	2.1	2.1	2.4	3.0	2.1	2.2	2.4	2.5	2.3	2.6	2.3	3.0
23-Mar	2.5	3.9	3.0	Z	2.4	2.5	2.7	3.4	4.2	3.4	2.2	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.6	5.3	4.3	3.2	3.9	4.8	3.0	5.3
24-Mar	4.9	4.6	4.5	4.5	Z	4.9	4.9	5.2	4.9	2.8	2.6	2.2	2.1	2.3	2.1	2.0	2.0	2.0	2.5	2.2	2.1	2.0	2.0	2.0	3.1	5.2
25-Mar	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.1	2.4	2.6	2.2	2.0	2.1	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.6
26-Mar	Z	2.0	2.1	2.1	2.1	2.2	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.0	2.0	2.1	2.1	2.3	2.1	2.3
27-Mar	2.2	Z	2.2	2.1	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	2.0	2.1	2.2	2.1	2.2	2.2	2.1	2.2
28-Mar	2.5	3.5	Z	2.2	2.6	2.8	2.9	3.2	2.8	2.5	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	3.0	2.9	2.4	3.5
29-Mar	2.6	2.3	2.5	Z	2.8	2.7	2.6	2.5	3.0	3.1	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.2	2.2	2.3	2.3	3.1	3.3	2.5	3.3
30-Mar	3.1	2.7	2.3	2.6	Z	2.7	2.7	2.6	3.7	3.2	2.8	2.6	3.1	3.5	3.2	2.6	2.5	2.5	2.3	2.4	2.2	2.2	2.1	2.2	2.7	3.7
31-Mar	2.2	2.4	2.2	2.1	2.0	Z	2.0	2.1	2.2	2.4	2.4	2.3	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	2.4
	2.4	2.5	2.4	2.5	2.4	2.5	2.5	2.6	2.8	2.7	2.4	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.3	2.3	2.3	2.4	2.4	Diurnal Average	
	4.9	4.6	4.5	4.5	3.2	4.9	4.9	6.2	7.2	6.9	6.1	3.1	3.1	3.7	3.2	2.7	3.1	3.0	2.7	5.3	4.3	3.5	4.1	4.8	Diurnal Maximum	

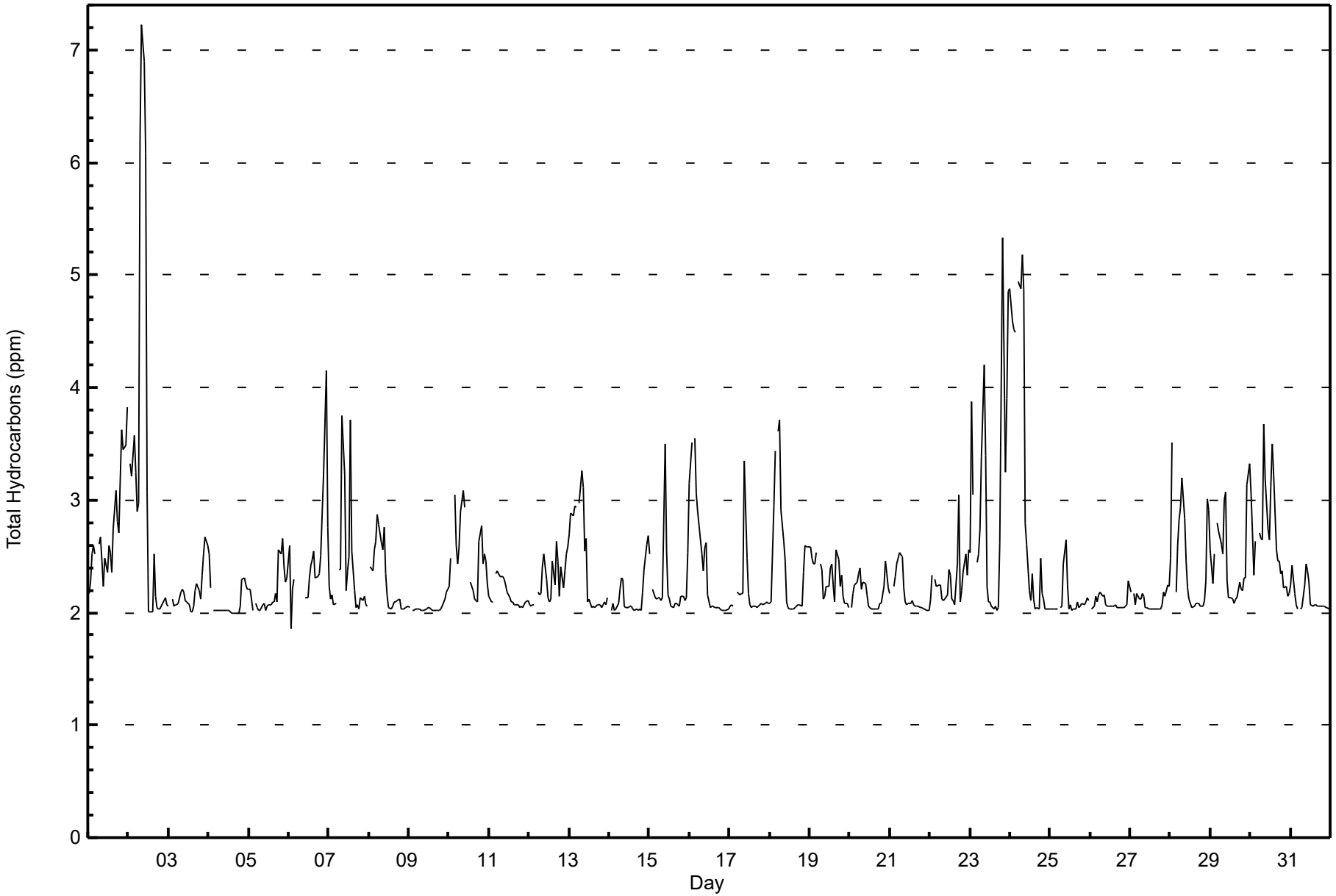
Z - zerospan C - Calibration UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Ells River - March 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm

Ells River - March 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	141	20.00	20.00
2.1 - 3.0	504	71.49	91.49
3.1 - 10.0	60	8.51	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 705

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Ells River - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	18	49	8	0	2	3	14	6	2	6	17	5	3	5	3	0	141
2.1 - 3.0	123	102	20	9	6	15	47	52	24	6	3	6	16	23	15	24	491
3.1 - 10.0	9	3	1	0	2	0	0	2	5	0	0	3	5	2	6	15	53
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	150	154	29	9	10	18	61	60	31	12	20	14	24	30	24	39	685

Total Number of Valid Hours: 685

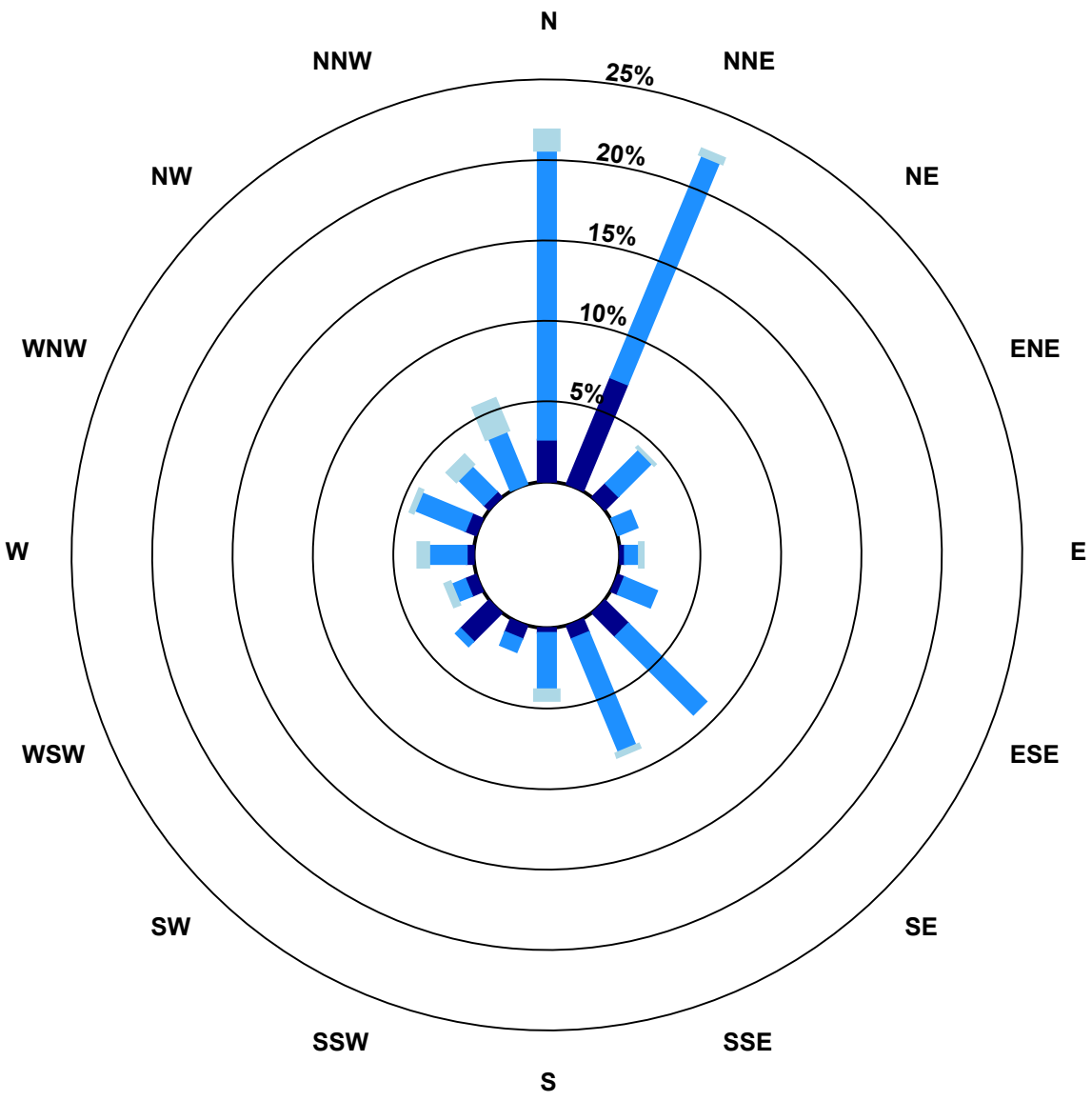
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Total Hydrocarbons (THC) - ppm

Ells River



Classes (ppm)

- 0 - 2.0
- 2.1 - 3.0
- 3.1 - 10.0
- > 10.0

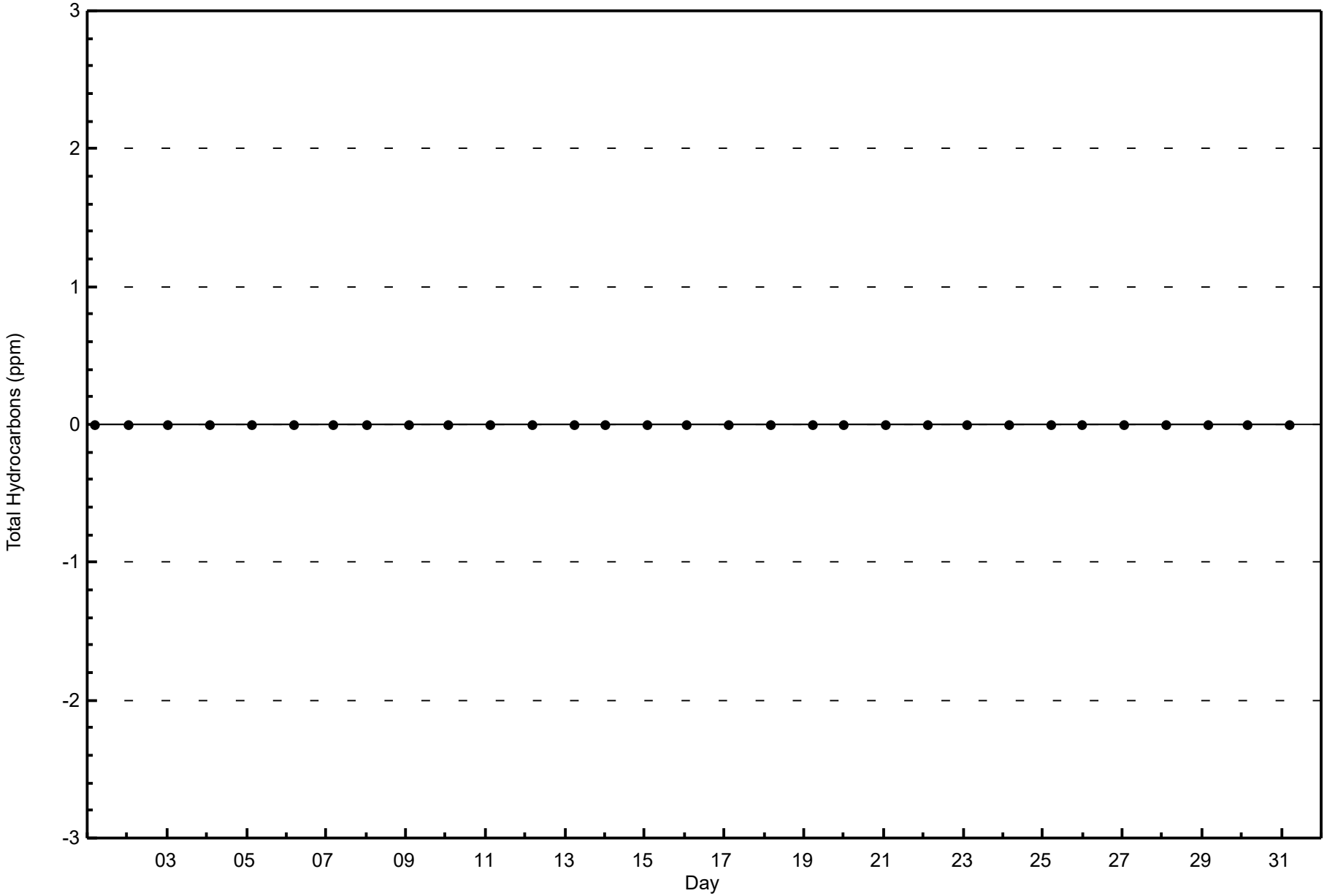
Total Number of Valid Hours: 685

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Ells River - March 2025

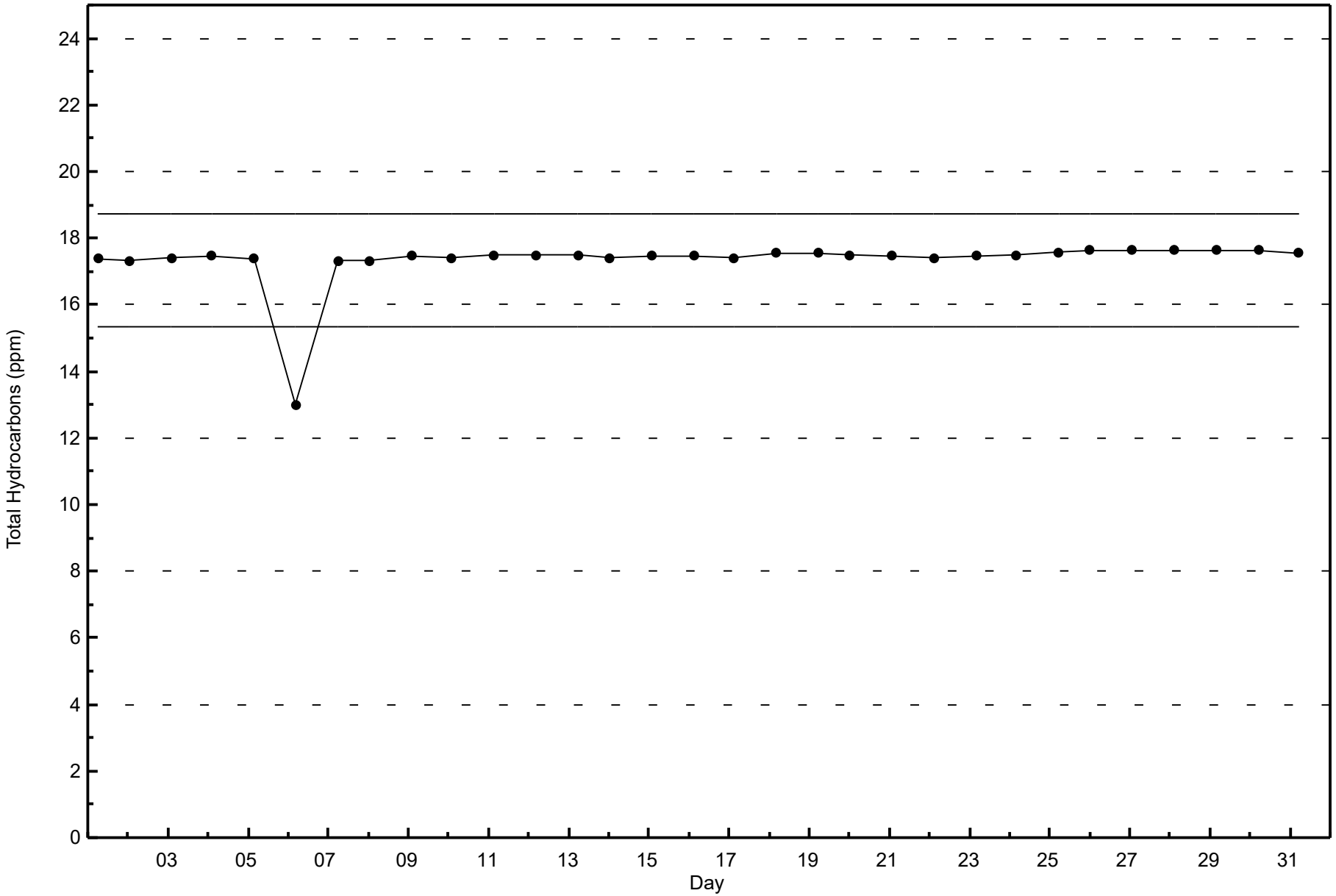


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Ells River - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Ells River - March 2025

Maximum Value: 2.691 ppm on Mar 23 20:00

Maximum Daily Average: 0.551 ppm on Mar 23

Minimum Value: 0.000 ppm on Mar 2 13:00

Minimum Daily Average: 0.000 ppm on Mar 11

Maximum Diurnal Average: 0.192 ppm at hour 9

Minimum Diurnal Average: 0.046 ppm at hour 12

Monthly Average: 0.115 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} = 1.0

Hours in Service:	744
Hours of Data:	705
Hours of Missing Data:	39
Hours of Calibration:	34
Percent Operational Time:	99.3

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.046	0.095	0.189	0.285	0.292	Z	0.369	0.406	0.277	0.113	0.159	0.013	0.272	0.260	0.127	0.401	0.789	0.465	0.373	0.729	0.917	0.918	0.922	0.950	0.407	0.950
2-Mar	Z	0.732	0.674	0.748	0.568	0.406	0.417	1.551	1.994	1.986	1.922	0.600	0.000	0.000	0.010	0.287	0.083	0.010	0.000	0.000	0.000	0.000	0.008	0.010	0.522	1.994
3-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.038	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.104	0.166	0.111	0.008	0.197	0.339	0.419	0.322	0.074	0.419
4-Mar	0.269	0.088	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.016	0.092	0.077	0.008	0.000	0.024	0.269
5-Mar	0.000	0.012	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.028	0.158	0.061	0.268	0.289	0.234	0.146	0.074	0.091	0.059	0.289
6-Mar	0.153	0.041	0.204	0.297	Z	UO	UO	UO	UO	UO	0.063	0.000	0.075	0.168	0.245	0.287	0.190	0.202	0.219	0.311	0.463	0.615	0.634	0.253	0.246	0.634
7-Mar	0.029	0.019	0.070	0.022	0.029	Z	0.064	0.015	0.292	0.177	0.000	0.000	0.182	0.968	0.256	0.112	0.004	0.000	0.000	0.072	0.030	0.000	0.000	0.000	0.102	0.968
8-Mar	Z	0.045	0.016	0.165	0.187	0.199	0.128	0.020	0.037	0.095	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.000	0.000	0.000	0.000	0.000	0.039	0.199
9-Mar	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.116	0.143	0.013	0.143
10-Mar	0.123	0.096	Z	0.066	0.000	0.000	0.005	0.091	0.159	0.185	C	C	C	0.002	0.006	0.000	0.000	0.000	0.335	0.467	0.227	0.265	0.177	0.006	0.111	0.467
11-Mar	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12-Mar	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.006	0.008	0.000	0.000	0.000	0.014	0.271	0.088	0.453	0.323	0.008	0.269	0.088	0.226	0.368	0.357	0.108	0.453
13-Mar	0.331	0.401	0.424	0.486	0.468	Z	0.442	0.444	0.233	0.156	0.183	0.024	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.156	0.486
14-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Mar	0.092	Z	0.016	0.000	0.000	0.000	0.000	0.000	0.002	0.222	0.052	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.029	0.009	0.019	0.019	0.222
16-Mar	0.144	0.179	Z	0.199	0.186	0.167	0.156	0.156	0.078	0.136	0.183	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	0.070	0.199
17-Mar	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.003	0.000	0.251	0.077	0.081	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.018	0.251
18-Mar	0.001	0.001	0.227	0.364	Z	0.099	0.180	0.087	0.158	0.261	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.039	0.058	0.000	0.000	0.064	0.364
19-Mar	0.000	0.000	0.007	0.118	0.233	Z	0.187	0.165	0.004	0.039	0.115	0.000	0.101	0.200	0.103	0.000	0.278	0.217	0.079	0.197	0.057	0.000	0.000	0.000	0.091	0.278
20-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.006
21-Mar	0.000	Z	0.000	0.000	0.001	0.033	0.098	0.103	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	0.010	0.103
22-Mar	0.000	0.088	Z	0.074	0.029	0.015	0.004	0.000	0.000	0.000	0.006	0.179	0.179	0.020	0.000	0.000	0.194	0.359	0.015	0.052	0.091	0.188	0.152	0.346	0.087	0.359
23-Mar	0.340	1.688	0.871	Z	0.300	0.271	0.357	0.696	0.563	0.363	0.042	0.000	0.000	0.000	0.000	0.036	0.000	0.014	0.464	2.691	1.680	0.767	0.788	0.747	0.551	2.691
24-Mar	0.627	0.713	0.674	0.670	Z	0.669	0.652	0.732	0.745	0.224	0.196	0.023	0.000	0.126	0.000	0.000	0.000	0.000	0.265	0.072	0.034	0.000	0.000	0.000	0.279	0.745
25-Mar	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.121	0.344	0.095	0.000	0.002	0.000	0.000	0.000	0.030	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.344
26-Mar	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.025	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	0.007	0.182	0.010	0.182
27-Mar	0.111	Z	0.098	0.013	0.073	0.050	0.043	0.020	0.048	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.013	0.098	0.006	0.000	0.000	0.025	0.111
28-Mar	0.000	0.023	Z	0.000	0.016	0.013	0.079	0.162	0.291	0.254	0.051	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.154	0.163	0.154	0.060	0.291
29-Mar	0.085	0.007	0.114	Z	0.238	0.241	0.214	0.194	0.303	0.253	0.002	0.000	0.000	0.000	0.000	0.002	0.032	0.144	0.097	0.089	0.203	0.130	0.191	0.256	0.121	0.303
30-Mar	0.210	0.024	0.000	0.012	Z	0.211	0.222	0.214	0.318	0.348	0.212	0.326	0.718	0.974	0.857	0.350	0.229	0.232	0.193	0.221	0.120	0.067	0.000	0.000	0.263	0.974
31-Mar	0.021	0.130	0.000	0.000	0.000	Z	0.000	0.000	0.098	0.223	0.197	0.111	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.034	0.223
	0.099	0.168	0.138	0.135	0.101	0.099	0.121	0.170	0.192	0.188	0.119	0.046	0.051	0.088	0.060	0.051	0.082	0.071	0.079	0.177	0.148	0.130	0.130	0.124	Diurnal Average	
	0.627	1.688	0.871	0.748	0.568	0.669	0.652	1.551	1.994	1.986	1.922	0.600	0.718	0.974	0.857	0.401	0.789	0.465	0.464	2.691	1.680	0.918	0.922	0.950	Diurnal Maximum	

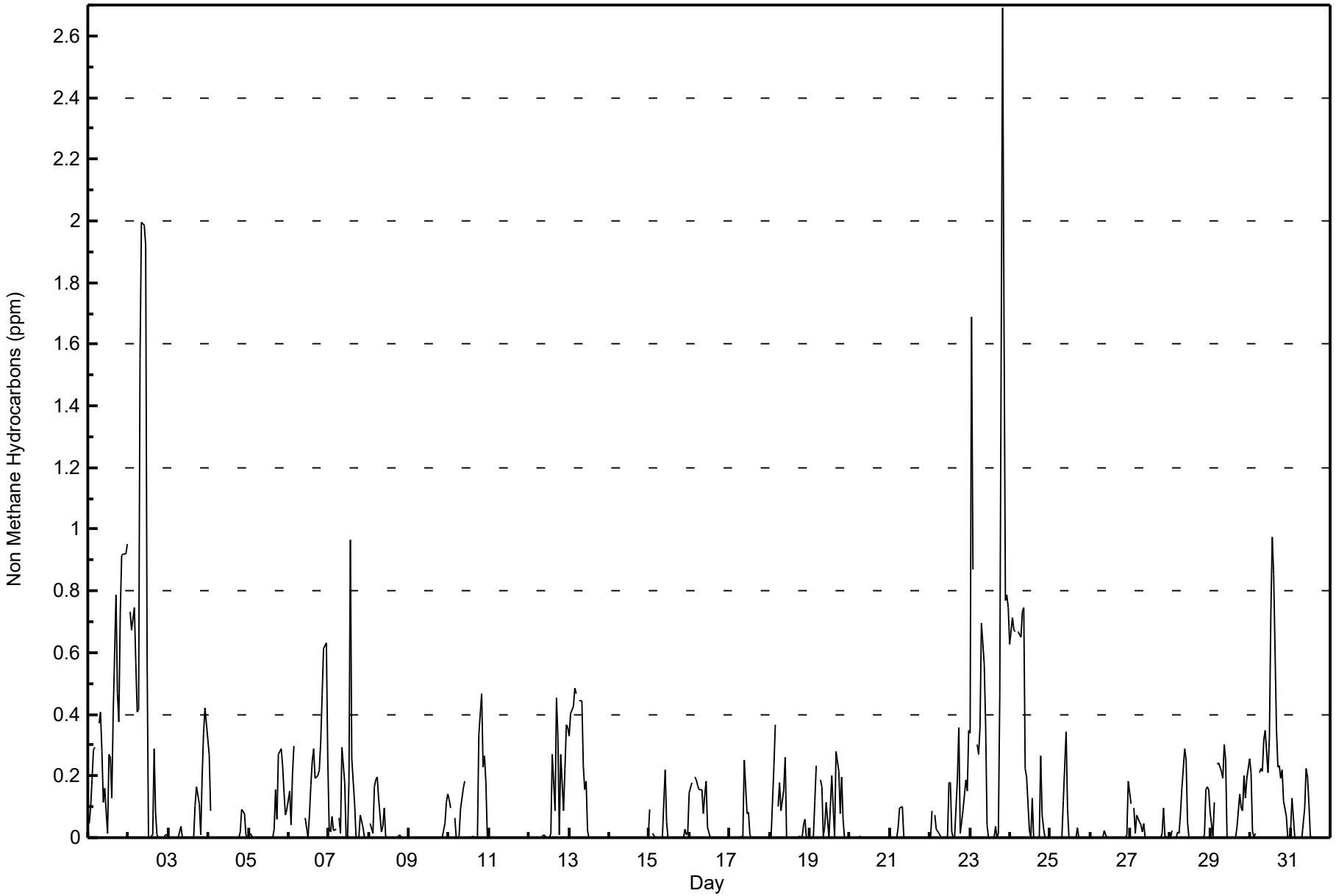
Z - zerospan C - Calibration UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Ells River - March 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Ells River - March 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	386	54.75	54.75
0.006 - 0.05	75	10.64	65.39
0.06 - 0.1	69	9.79	75.18
> 0.1	175	24.82	100.00

Total Number of Valid Hours: 705

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Ells River - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.005	89	108	19	4	5	8	45	28	8	7	18	9	9	9	4	10	380
0.006 - 0.05	22	15	5	0	0	2	5	6	4	1	0	1	1	4	5	3	74
0.06 - 0.1	12	15	0	0	1	2	6	7	6	1	1	0	4	3	4	7	69
> 0.1	27	16	5	5	4	6	5	19	13	3	1	4	10	14	11	19	162
Totals	150	154	29	9	10	18	61	60	31	12	20	14	24	30	24	39	685

Total Number of Valid Hours: 685

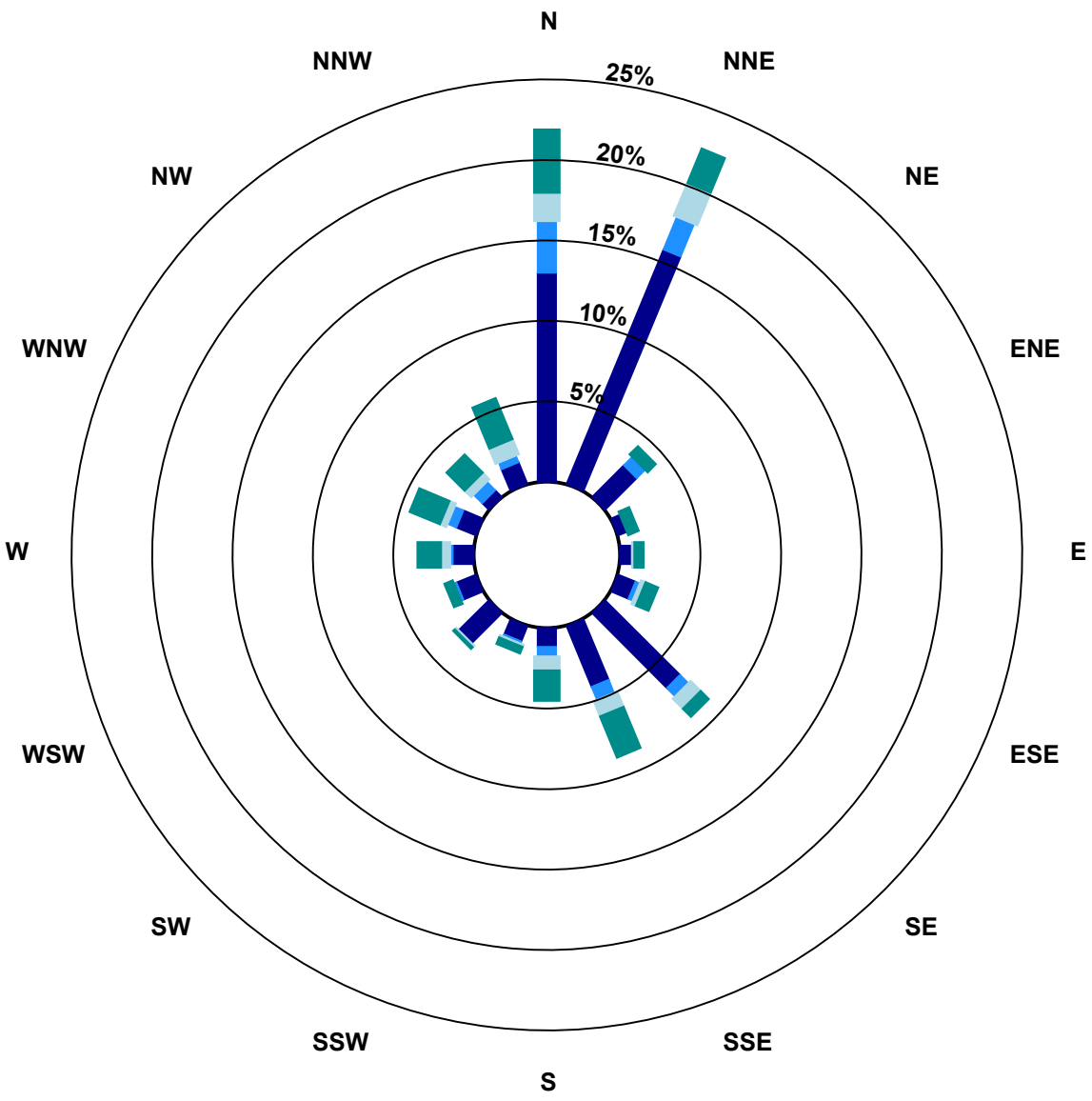
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Non Methane Hydrocarbons (NMHC) - ppm

Ells River



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

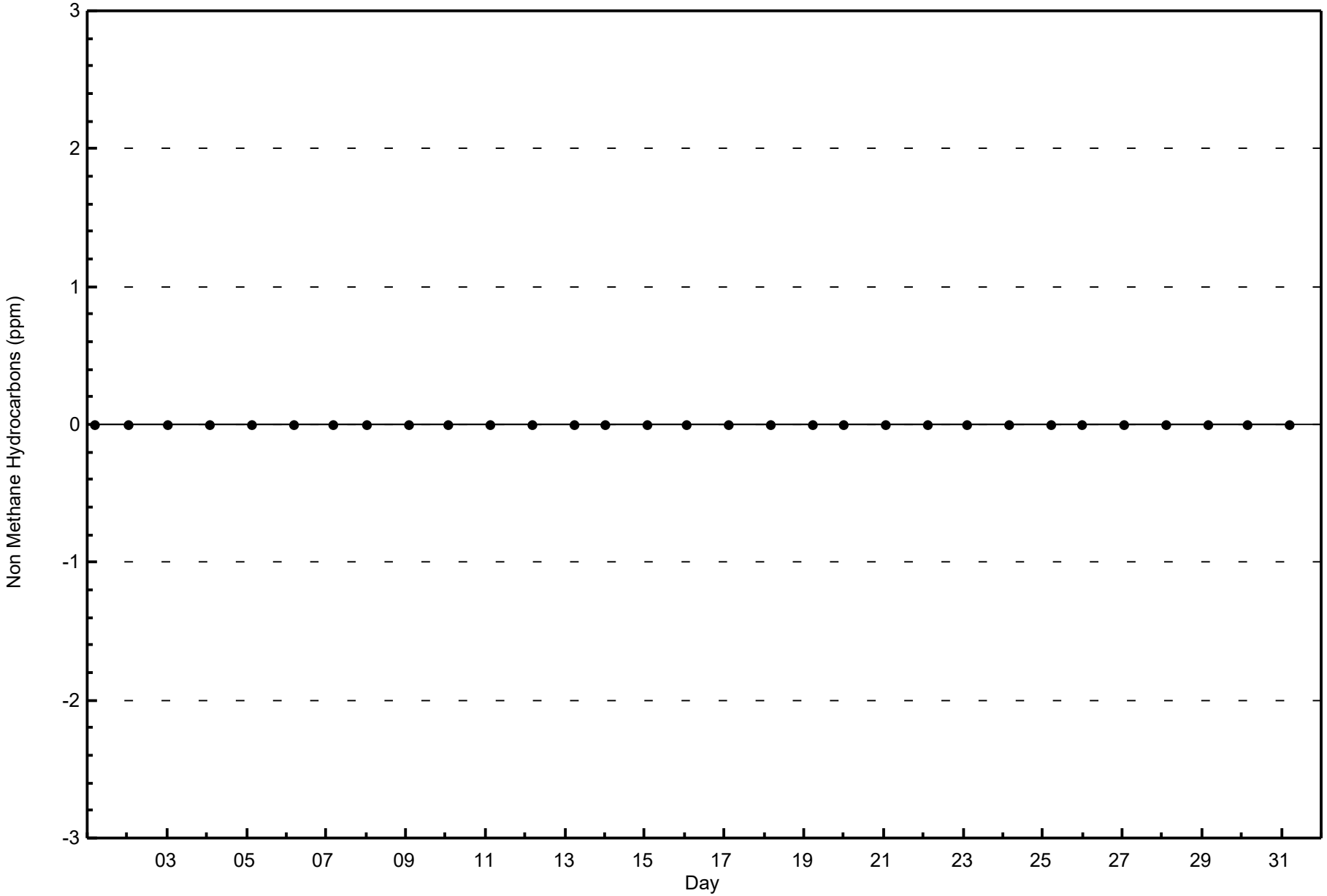
Total Number of Valid Hours: 685

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Ells River - March 2025

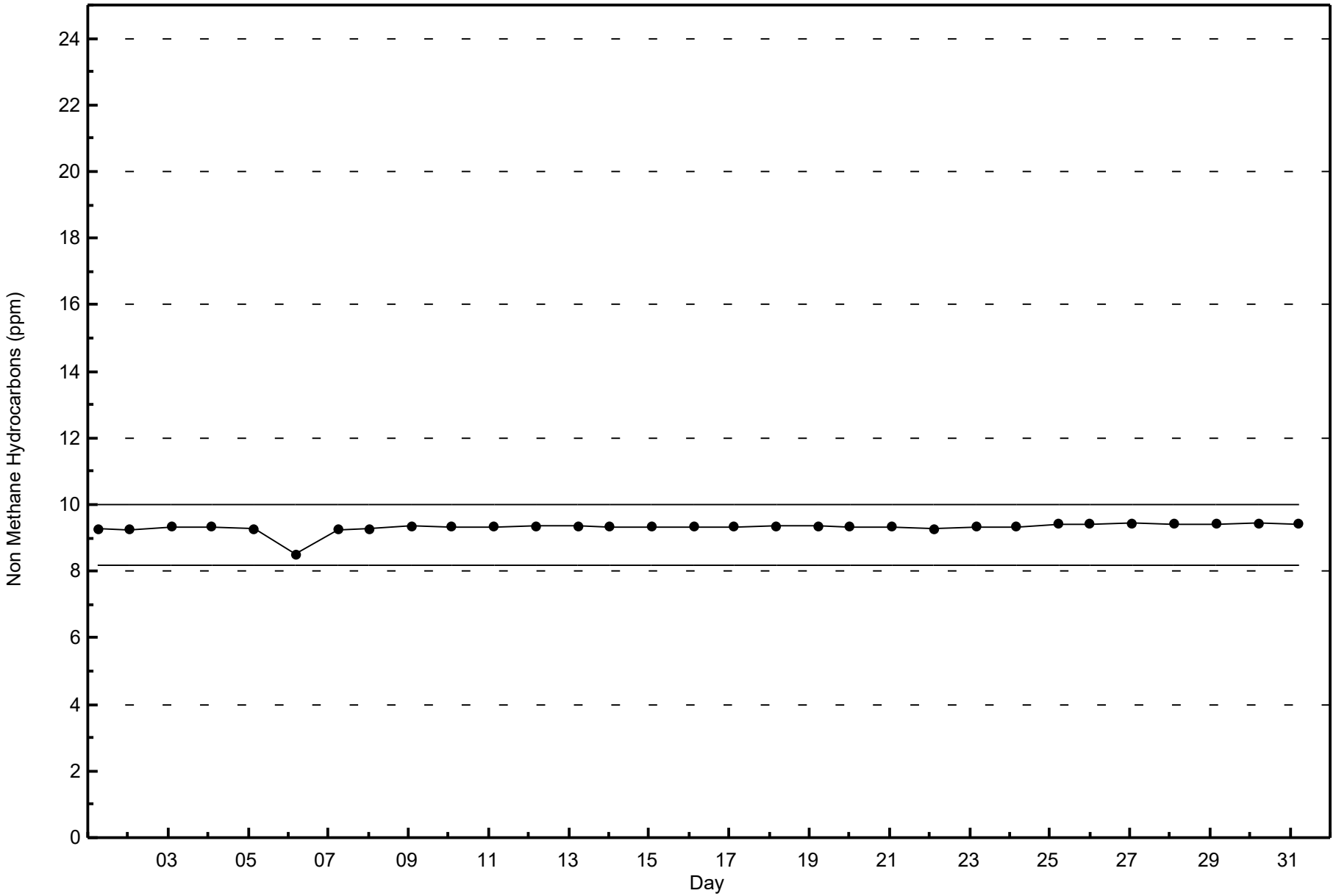


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Ells River - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Ells River - March 2025

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

Maximum Value: 5.2 ppm on Mar 2 09:00

Maximum Daily Average: 2.8 ppm on Mar 24

Minimum Value: 1.8 ppm on Mar 6 02:00

Minimum Daily Average: 2.0 ppm on Mar 9

Maximum Diurnal Average: 2.6 ppm at hour 9

Minimum Diurnal Average: 2.1 ppm at hour 17

Monthly Average: 2.25 ppm

Percentiles: P_1 = 2.0 P_{10} = 2.0 Q_1 = 2.1 Median = 2.1 Q_3 = 2.3 P_{90} = 2.6 P_{99} = 4.2

Hours in Service:	744
Hours of Data:	705
Hours of Missing Data:	39
Hours of Calibration:	34
Percent Operational Time:	99.3

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	2.1	2.2	2.3	2.3	2.2	Z	2.2	2.3	2.2	2.1	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.5	2.7	2.5	2.6	2.9	2.3	2.9
2-Mar	Z	2.6	2.5	2.8	2.7	2.5	2.6	4.6	5.2	4.9	4.2	2.5	2.0	2.0	2.0	2.2	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.7	5.2
3-Mar	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.1	2.3
4-Mar	2.2	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.2	2.2	2.2	2.1	2.2
5-Mar	2.2	2.2	2.0	Z	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.3	2.2	2.4	2.3	2.2	2.2	2.1	2.4
6-Mar	2.4	1.8	2.0	2.0	Z	UO	UO	UO	UO	UO	2.1	2.1	2.2	2.2	2.2	2.3	2.1	2.1	2.1	2.2	2.4	2.6	3.5	2.5	2.3	3.5
7-Mar	2.2	2.1	2.1	2.0	2.1	Z	2.3	2.4	3.5	3.0	2.2	2.4	2.3	2.7	2.3	2.1	2.0	2.1	2.0	2.1	2.1	2.2	2.1	2.1	2.3	3.5
8-Mar	Z	2.4	2.4	2.4	2.4	2.7	2.7	2.6	2.5	2.7	2.3	2.2	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.3	2.7
9-Mar	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	2.1	2.1	2.1	2.1	2.0	2.1
10-Mar	2.1	2.4	Z	3.0	2.6	2.4	2.6	2.8	2.9	2.7	C	C	C	2.3	2.2	2.1	2.1	2.1	2.3	2.3	2.2	2.3	2.3	2.3	2.4	3.0
11-Mar	2.1	2.1	2.1	Z	2.3	2.4	2.3	2.3	2.3	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.1	2.1	2.1	2.2	2.4
12-Mar	2.1	2.1	2.1	2.1	Z	2.2	2.2	2.2	2.4	2.5	2.3	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.5
13-Mar	2.4	2.5	2.4	2.5	2.5	Z	2.5	2.8	2.9	2.4	2.5	2.1	2.1	2.0	2.1	2.0	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.3	2.9
14-Mar	Z	2.0	2.1	2.0	2.0	2.1	2.2	2.3	2.3	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.4	2.6	2.7	2.1	2.7
15-Mar	2.4	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	3.3	2.5	2.2	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.5	2.2	3.3
16-Mar	3.0	3.3	Z	3.4	2.9	2.7	2.6	2.4	2.3	2.4	2.4	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	2.3	3.4
17-Mar	2.1	2.1	2.1	Z	2.2	2.2	2.2	2.2	2.2	3.1	2.4	2.1	2.1	2.0	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	3.1
18-Mar	2.1	2.1	2.7	3.1	Z	3.5	3.5	2.8	2.5	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.3	2.5	2.6	2.6	2.4	3.5
19-Mar	2.6	2.5	2.4	2.3	2.3	Z	2.2	2.2	2.1	2.1	2.1	2.2	2.3	2.2	2.1	2.1	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.0	2.2	2.6
20-Mar	Z	2.0	2.2	2.2	2.3	2.3	2.4	2.2	2.3	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.5	2.3	2.2	2.2	2.5
21-Mar	2.2	Z	2.2	2.3	2.4	2.5	2.4	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.5
22-Mar	2.1	2.2	Z	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.7	2.1	2.1	2.3	2.3	2.2	2.2	2.2	2.7
23-Mar	2.2	2.2	2.2	Z	2.1	2.3	2.4	2.7	3.6	3.0	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.2	2.6	2.6	2.5	3.1	4.1	2.5	4.1
24-Mar	4.3	3.9	3.8	3.8	Z	4.3	4.2	4.4	4.1	2.6	2.4	2.2	2.1	2.2	2.1	2.0	2.0	2.0	2.2	2.1	2.1	2.0	2.0	2.0	2.8	4.4
25-Mar	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.1	2.3	2.3	2.1	2.0	2.1	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3
26-Mar	Z	2.0	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.2
27-Mar	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	2.0	2.1	2.1	2.1	2.2	2.2	2.1	2.2
28-Mar	2.5	3.5	Z	2.2	2.6	2.8	2.9	3.0	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	2.1	2.8	2.8	2.4	3.5
29-Mar	2.5	2.3	2.4	Z	2.6	2.5	2.4	2.3	2.7	2.8	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.9	3.1	2.3	3.1
30-Mar	2.9	2.7	2.3	2.6	Z	2.5	2.4	2.4	3.4	2.8	2.5	2.3	2.4	2.5	2.4	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.1	2.2	2.4	3.4
31-Mar	2.2	2.3	2.2	2.1	2.0	Z	2.0	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	2.0	2.0	2.0	2.1	2.3
	2.3	2.4	2.3	2.4	2.3	2.4	2.4	2.5	2.6	2.5	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.3	Diurnal Average	
	4.3	3.9	3.8	3.8	2.9	4.3	4.2	4.6	5.2	4.9	4.2	2.5	2.4	2.7	2.4	2.3	2.3	2.7	2.3	2.6	2.7	2.6	3.5	4.1	Diurnal Maximum	

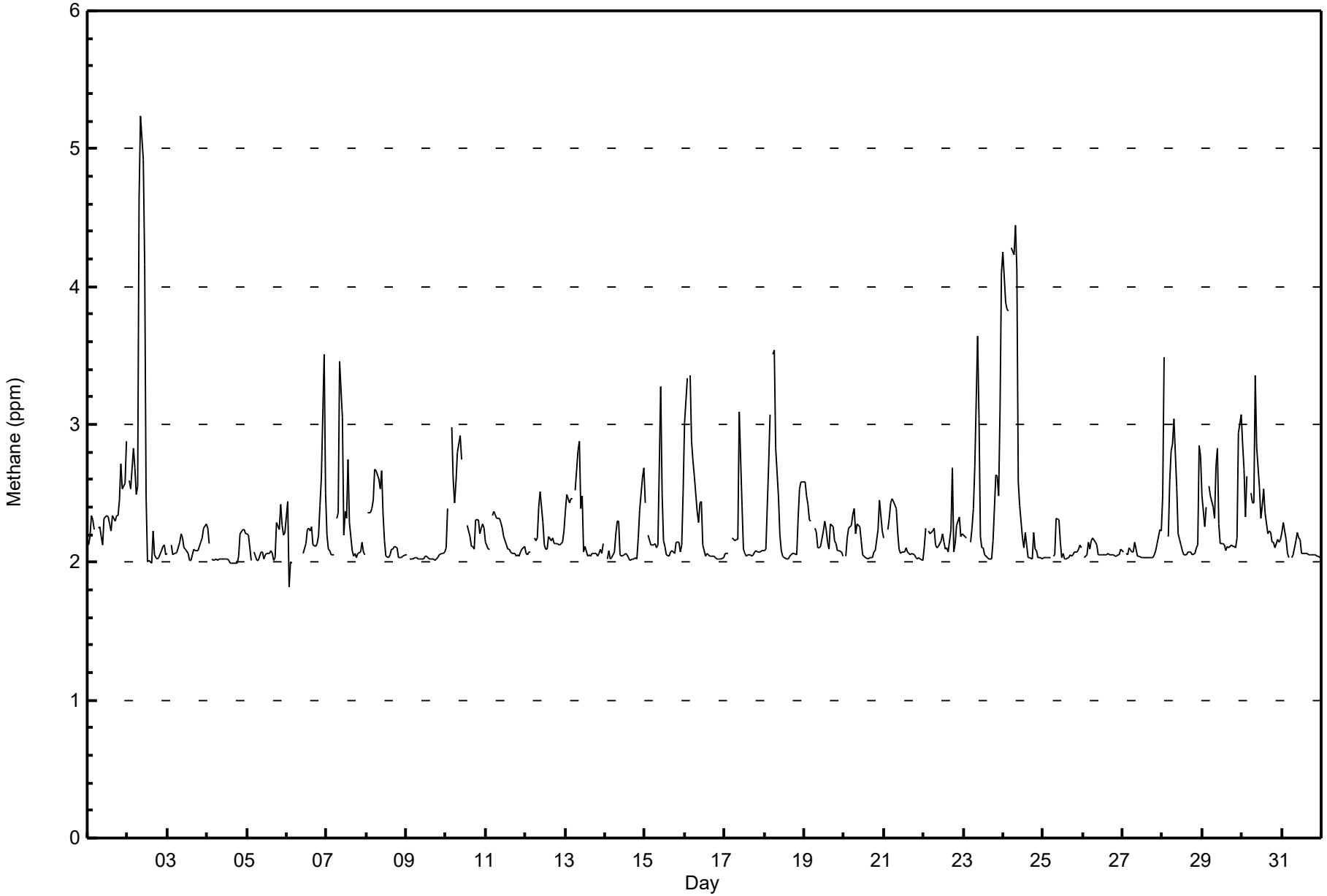
Z - zerospan C - Calibration UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Ells River - March 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Methane (CH_4) - ppm

Ells River - March 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	149	21.13	21.13
2.1 - 3.0	529	75.04	96.17
3.1 - 10.0	27	3.83	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 705

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Ells River - March 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	18	51	8	0	2	4	16	6	2	6	17	5	3	6	5	0	149
2.1 - 3.0	127	102	21	9	8	14	45	54	28	6	3	7	18	23	14	33	512
3.1 - 10.0	5	1	0	0	0	0	0	0	1	0	0	2	3	1	5	6	24
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	150	154	29	9	10	18	61	60	31	12	20	14	24	30	24	39	685

Total Number of Valid Hours: 685

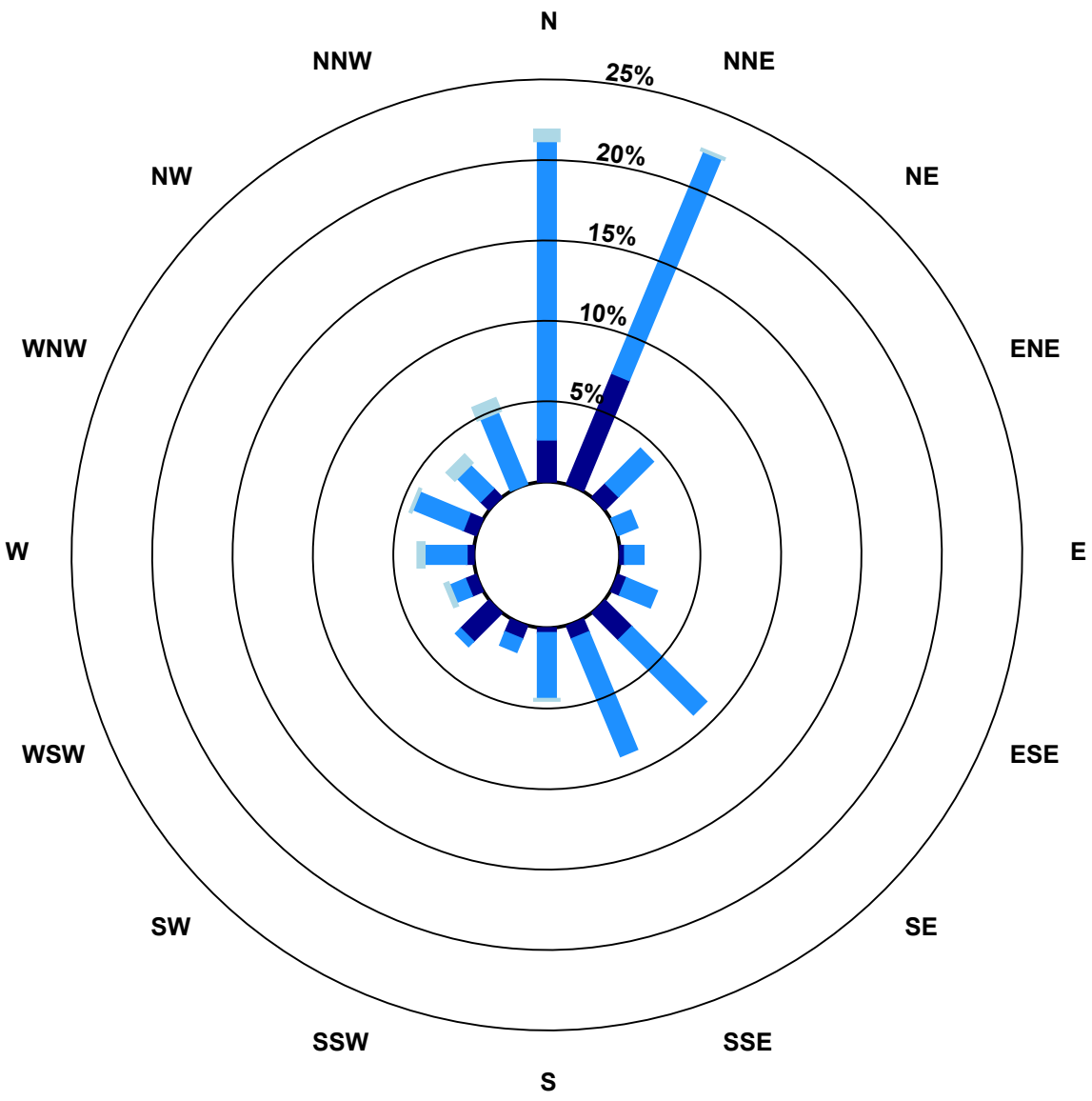
Total Number of Hours: 744

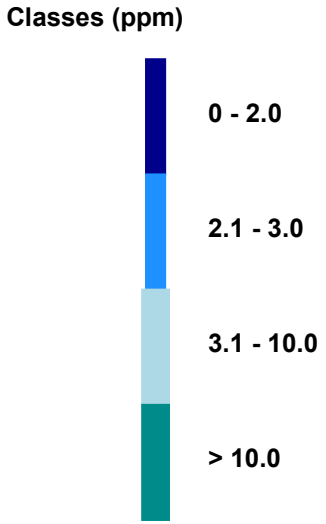
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Methane (CH_4) - ppm

Ells River





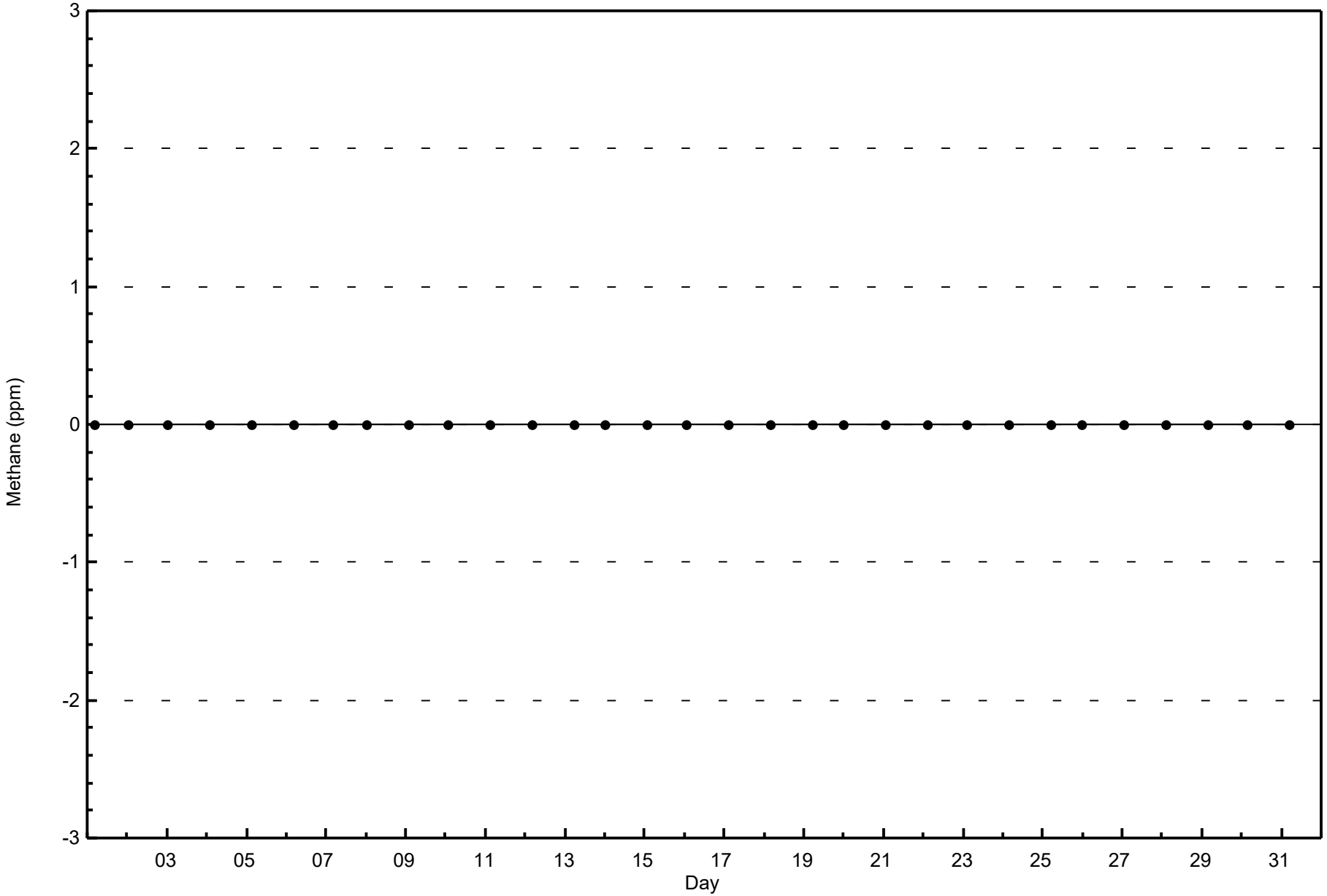
Total Number of Valid Hours: 685

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Ells River - March 2025

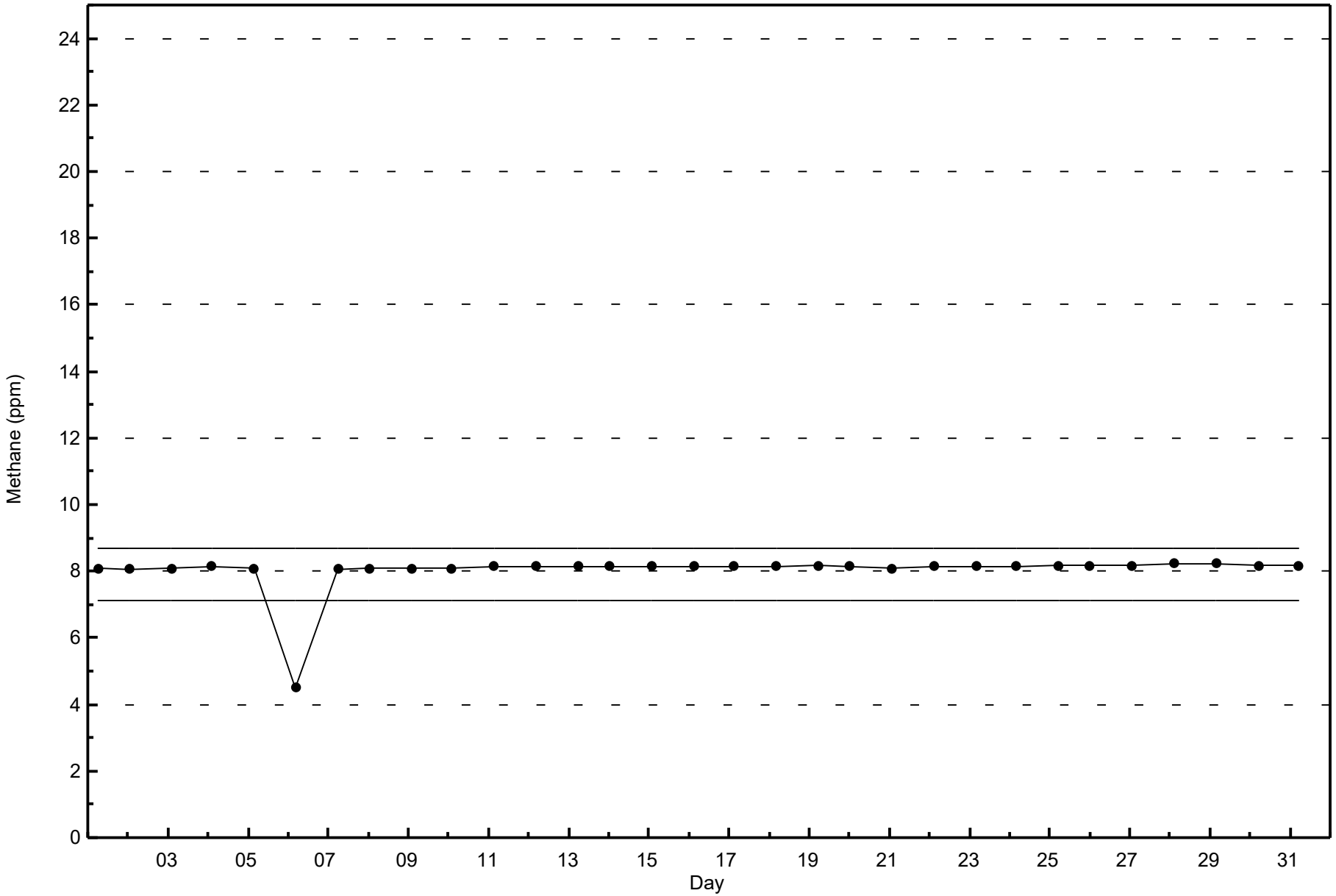


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Ells River - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Ells River - March 2025

Maximum Value: 161.3 ppb on Mar 2 10:00

Maximum Daily Average: 29.6 ppb on Mar 2

Minimum Value: 0.0 ppb on Mar 2 19:00

Minimum Daily Average: 0.4 ppb on Mar 4

Maximum Diurnal Average: 17.1 ppb at hour 10

Minimum Diurnal Average: 1.0 ppb at hour 20

Monthly Average: 5.00 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 1.1 Q_3 = 4.1 P_{90} = 12.3 P_{99} = 62.1

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.2	0.6	6.7	Z	2.6	0.4	0.7	2.0	5.7	4.1	14.6	12.7	6.0	4.0	2.7	4.4	1.4	2.1	0.3	9.3	16.4	2.9	4.9	17.6	5.3	17.6
2-Mar	10.7	10.1	19.7	65.9	Z	22.1	15.5	105.7	147.0	161.3	102.9	13.8	0.3	0.5	0.2	5.0	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	29.6	161.3
3-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.6	2.9	4.3	2.5	3.1	2.4	0.1	0.4	2.3	1.4	0.7	1.2	0.2	0.2	1.3	3.5	6.6	1.5	6.6
4-Mar	Z	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.4	0.1	0.4	0.1	0.1	0.1	0.1	5.3	0.4	5.3
5-Mar	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.1	1.5	2.9	1.3	1.9	2.8	3.4	2.6	1.2	1.2	0.0	12.3	2.1	2.3	0.4	0.3	1.8	1.7	12.3
6-Mar	5.6	1.1	Z	27.3	28.9	23.8	11.3	15.2	13.3	14.8	3.1	3.8	7.6	8.5	4.6	2.2	2.6	2.0	0.8	2.1	3.6	3.2	40.6	2.5	9.9	40.6
7-Mar	0.1	0.1	0.1	Z	0.1	0.1	0.4	2.8	31.5	23.7	7.4	8.9	10.1	31.1	15.6	3.5	1.3	0.7	0.0	0.0	0.0	0.1	0.0	0.0	6.0	31.5
8-Mar	0.1	0.1	0.1	2.3	Z	7.0	0.9	3.6	4.1	12.0	5.1	3.2	0.4	0.5	1.1	1.2	1.5	1.2	0.1	0.0	0.0	0.0	0.0	0.0	1.9	12.0
9-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.3	1.7	1.4	2.0	2.5	3.0	3.2	2.6	2.1	1.2	0.3	0.1	0.0	0.1	0.1	0.1	0.1	0.9	3.2
10-Mar	Z	4.0	10.4	13.7	2.1	4.6	18.6	22.4	30.5	33.4	23.9	15.7	16.4	17.8	10.4	5.0	4.2	2.1	13.4	11.8	0.7	9.5	6.9	2.6	12.2	33.4
11-Mar	0.1	Z	0.1	1.8	1.8	2.1	1.7	5.3	10.2	12.4	11.2	9.6	8.0	5.1	3.8	2.7	1.4	0.6	0.0	0.0	0.0	0.0	0.0	0.0	3.4	12.4
12-Mar	0.0	0.0	Z	0.0	0.0	0.5	0.1	1.9	9.6	10.9	7.0	3.5	2.6	3.4	8.4	6.3	4.1	1.5	0.8	0.0	0.5	3.1	4.4	13.7	3.6	13.7
13-Mar	10.5	12.3	4.4	Z	2.7	2.5	4.1	20.9	19.0	C	C	C	C	C	C	1.0	0.8	0.2	0.1	0.0	0.0	0.0	0.0	0.0	--	20.9
14-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.1	1.0	2.6	0.8	1.3	1.6	2.4	1.7	0.3	0.2	0.3	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.6	2.6
15-Mar	0.7	0.1	0.0	0.2	0.0	Z	0.1	0.5	2.6	30.7	11.8	3.9	3.4	1.8	0.9	2.4	1.7	0.6	0.1	0.0	0.0	0.0	0.0	0.1	2.7	30.7
16-Mar	Z	0.2	1.0	4.2	8.9	12.2	13.5	10.5	8.8	17.2	16.5	6.8	3.0	3.8	3.2	2.1	1.3	0.6	0.2	0.0	0.1	0.1	0.0	0.0	5.0	17.2
17-Mar	0.0	Z	0.1	0.1	0.1	0.1	0.3	2.9	4.6	38.8	10.1	6.1	3.4	1.4	1.5	1.2	1.1	0.9	0.7	0.1	0.0	0.0	0.0	0.0	3.2	38.8
18-Mar	0.0	0.0	Z	44.5	16.3	1.0	3.9	10.1	12.0	7.4	2.6	0.7	0.1	0.1	0.1	0.4	0.6	1.1	0.4	0.1	0.1	0.1	0.1	0.1	4.4	44.5
19-Mar	0.1	0.1	0.3	Z	0.1	0.2	1.4	2.8	5.1	3.0	5.2	10.4	12.5	7.9	5.0	3.4	13.3	6.2	0.8	0.1	0.0	0.0	0.0	0.0	3.4	13.3
20-Mar	0.0	0.0	0.0	0.1	Z	0.1	2.8	4.4	10.5	10.8	6.7	3.0	2.3	1.6	1.6	2.1	1.5	0.8	0.3	0.0	0.1	0.1	0.1	0.1	2.1	10.8
21-Mar	0.1	0.1	0.1	0.0	0.0	Z	3.1	7.3	6.7	6.7	7.3	7.2	5.9	5.2	3.6	3.0	2.1	1.2	0.2	0.1	0.0	0.0	0.0	0.0	2.6	7.3
22-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.4	1.6	2.2	2.7	2.8	2.9	4.3	4.0	2.5	3.4	2.6	0.0	3.6	2.5	0.7	0.0	0.2	1.6	4.3
23-Mar	0.0	Z	0.0	0.0	0.0	0.0	2.0	11.9	33.8	19.0	2.9	2.2	2.7	0.4	0.6	0.7	0.2	0.1	0.1	0.5	7.9	12.3	29.3	49.1	7.6	49.1
24-Mar	41.1	46.9	Z	47.6	50.3	66.1	62.4	69.3	57.1	17.0	9.6	1.6	0.6	3.1	1.7	0.0	0.1	0.0	0.8	0.0	0.0	0.0	0.0	0.0	20.7	69.3
25-Mar	0.0	0.0	0.0	Z	0.0	0.2	0.1	0.4	14.5	8.6	4.1	0.2	1.5	0.1	0.1	0.4	1.2	0.6	0.2	0.1	0.1	0.1	0.0	0.0	1.4	14.5
26-Mar	0.0	0.0	0.0	0.1	Z	0.1	0.6	4.3	6.0	3.2	2.7	2.2	2.1	1.9	1.3	1.4	0.7	0.5	0.2	0.1	0.1	0.1	0.1	0.1	1.2	6.0
27-Mar	0.1	0.1	0.1	0.1	0.1	Z	0.4	2.4	3.0	1.5	1.1	1.0	0.9	1.0	0.9	0.8	0.6	0.3	0.1	0.0	0.1	0.1	0.1	0.1	0.6	3.0
28-Mar	Z	0.1	0.0	0.1	1.2	2.9	11.0	19.6	13.9	11.3	8.0	4.5	3.4	1.2	1.3	2.6	2.3	1.3	0.3	0.1	0.1	0.1	1.4	4.9	4.0	19.6
29-Mar	3.4	Z	0.9	6.2	3.5	1.5	5.2	7.6	25.4	26.7	4.4	2.6	3.0	3.7	2.0	2.5	1.4	1.4	0.6	0.1	0.1	0.1	0.1	2.1	4.5	26.7
30-Mar	2.4	0.1	Z	0.1	1.1	1.8	4.4	8.4	23.6	22.6	12.9	10.8	16.9	28.7	15.5	5.9	4.8	3.8	1.0	0.1	0.1	0.1	0.1	0.1	7.2	28.7
31-Mar	0.1	0.1	0.1	Z	0.1	0.1	0.2	0.5	2.8	5.0	4.8	3.3	1.5	1.3	1.5	1.3	1.0	0.7	0.2	0.1	0.1	0.1	0.1	0.0	1.1	5.0
	2.9	2.9	1.7	8.6	4.6	5.8	5.3	11.2	16.5	17.1	9.9	5.0	4.3	4.9	3.3	2.2	1.9	1.1	1.2	1.0	1.1	1.1	3.0	3.5	Diurnal Average	
	41.1	46.9	19.7	65.9	50.3	66.1	62.4	105.7	147.0	161.3	102.9	15.7	16.9	31.1	15.6	6.3	13.3	6.2	13.4	11.8	16.4	12.3	40.6	49.1	Diurnal Maximum	

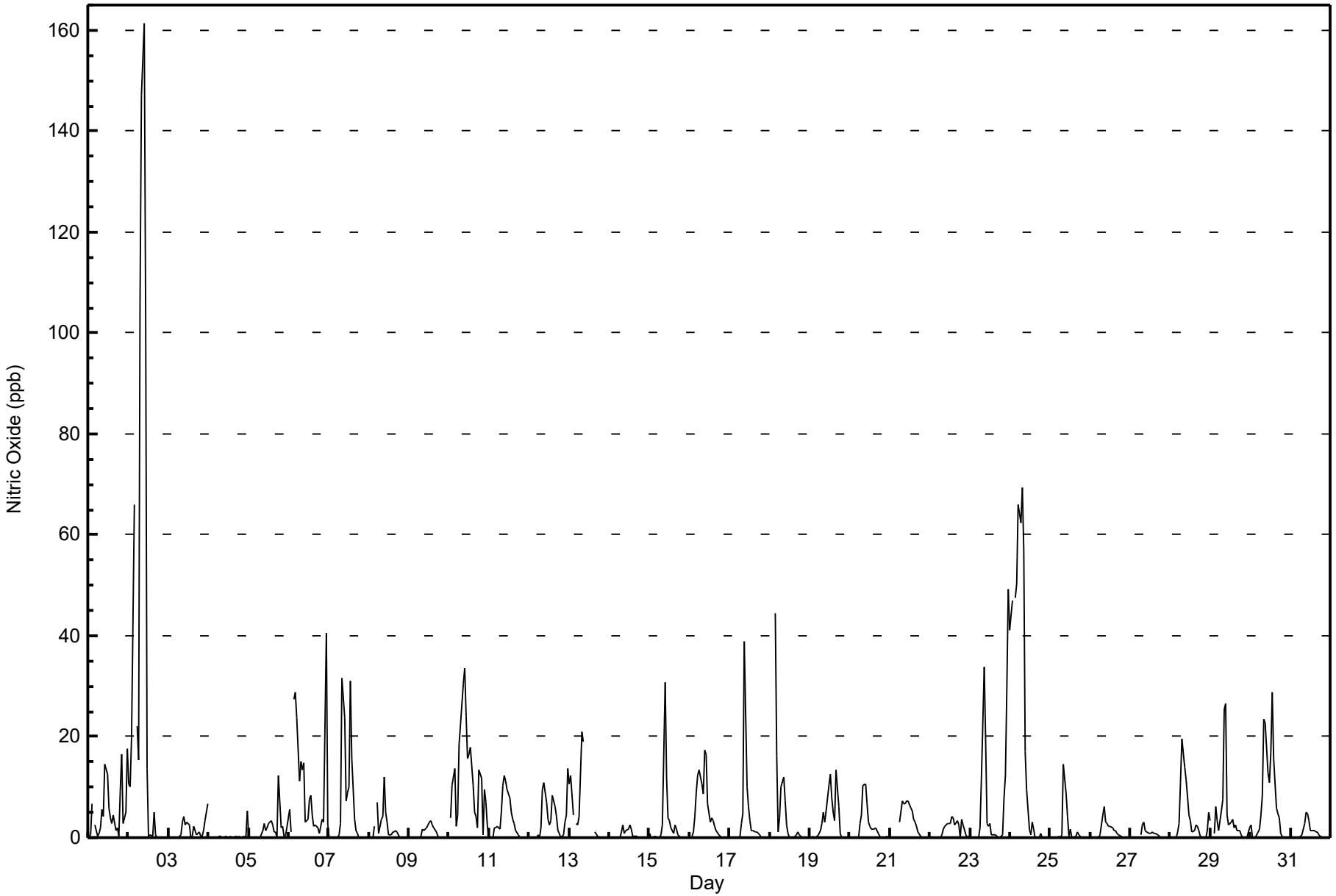
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Ells River - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	670	94.77	94.77
21 - 40	21	2.97	97.74
11 - 80	12	1.70	99.43
81 - 159	3	0.42	99.86
> 159	1	0.14	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Ells River - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	142	146	27	9	8	18	61	62	34	13	19	13	19	29	19	34	653
21 - 40	3	3	2	0	2	0	0	0	1	0	0	0	2	1	1	4	19
11 - 80	3	0	0	0	0	0	0	0	2	0	0	1	2	1	2	0	11
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	3
> 159	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Totals	148	149	29	9	10	18	61	62	37	13	19	14	25	31	24	38	687

Total Number of Valid Hours: 687

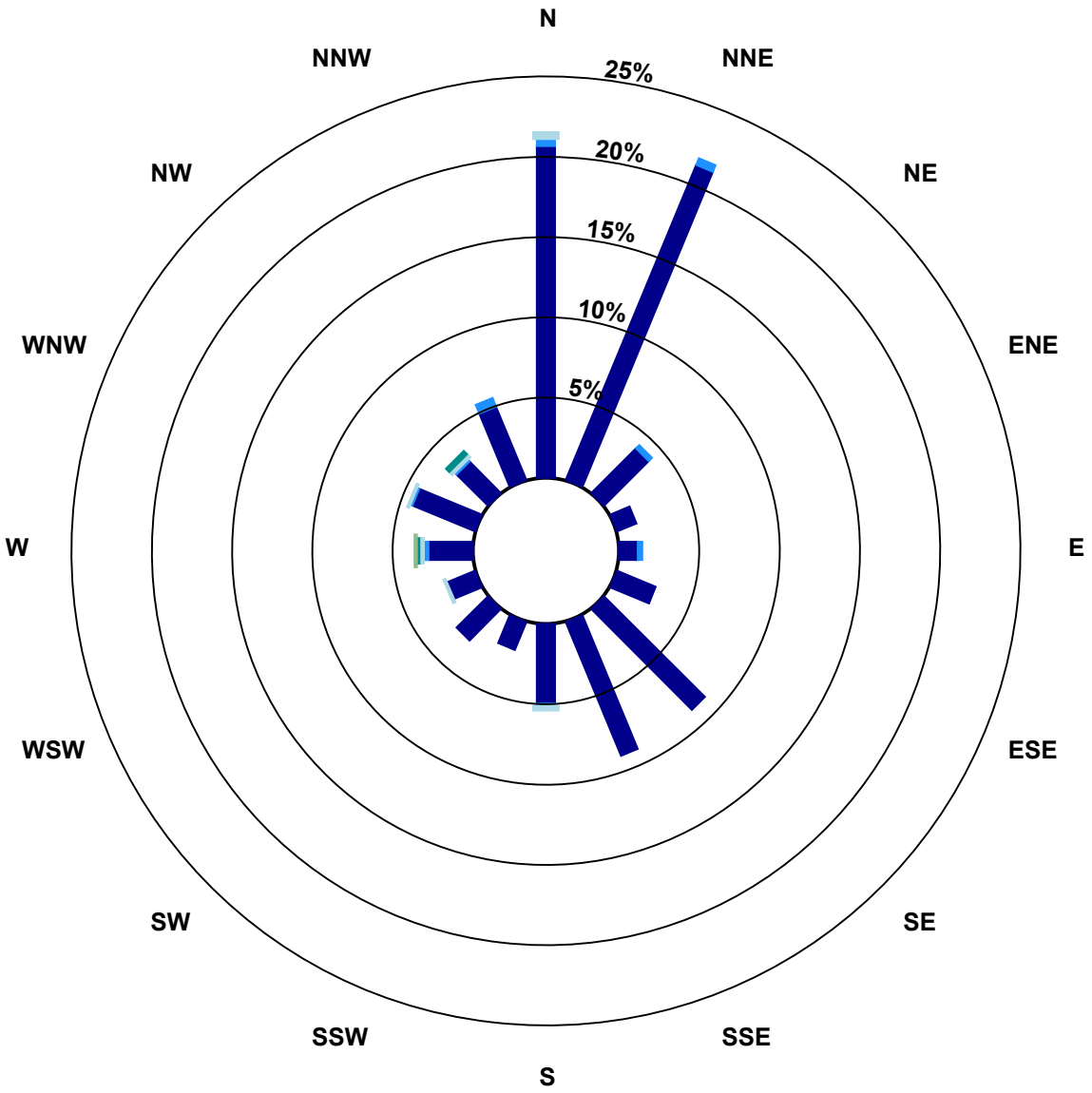
Total Number of Hours: 744

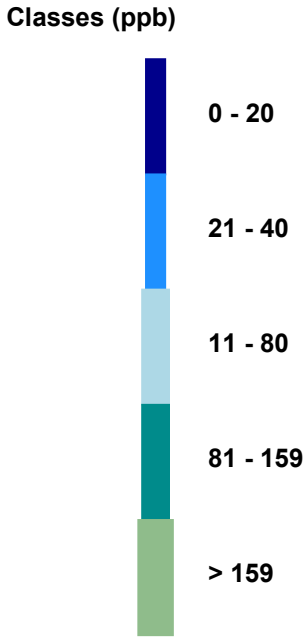
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitric Oxide (NO) - ppb

Ells River





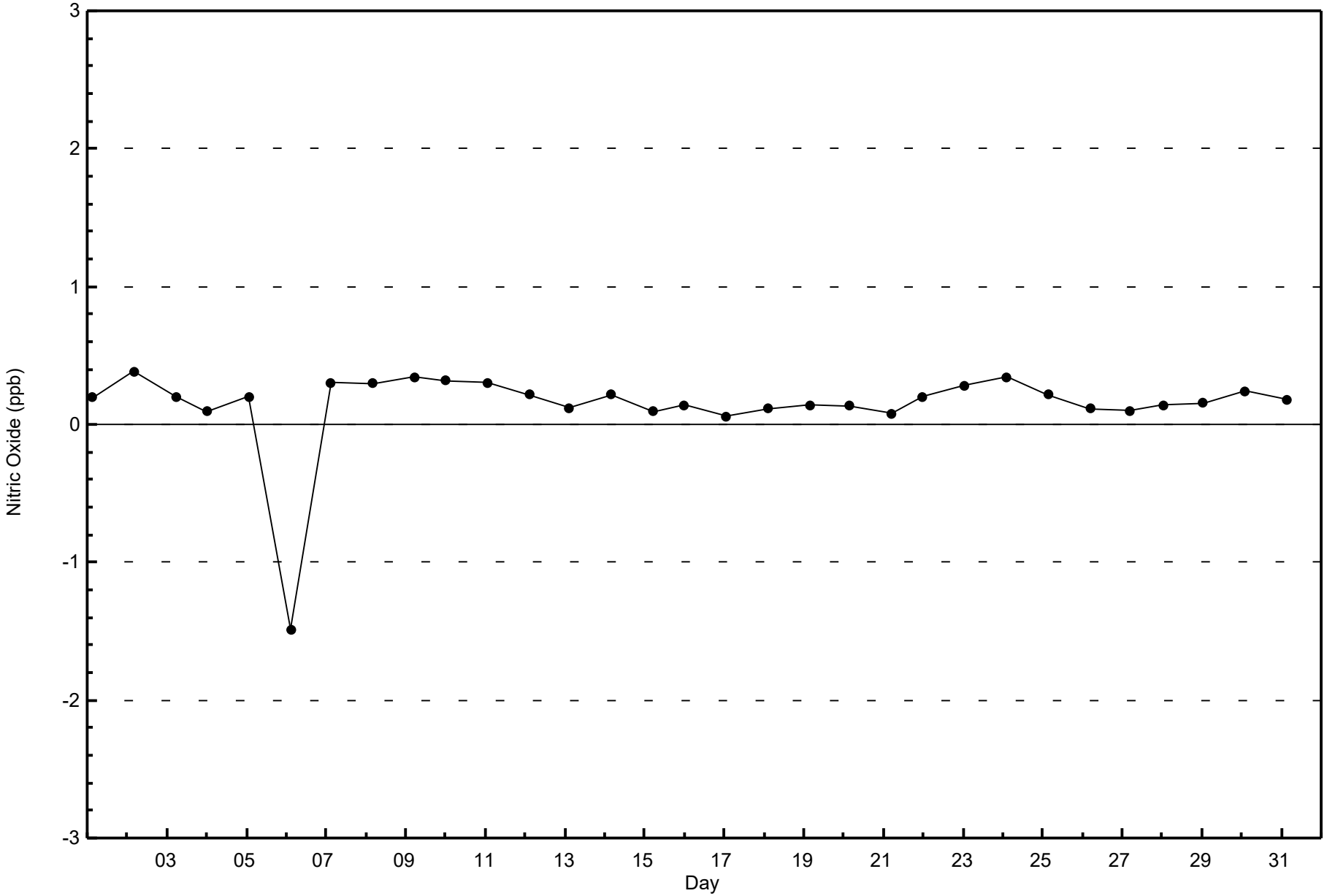
Total Number of Valid Hours: 687

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Ells River - March 2025

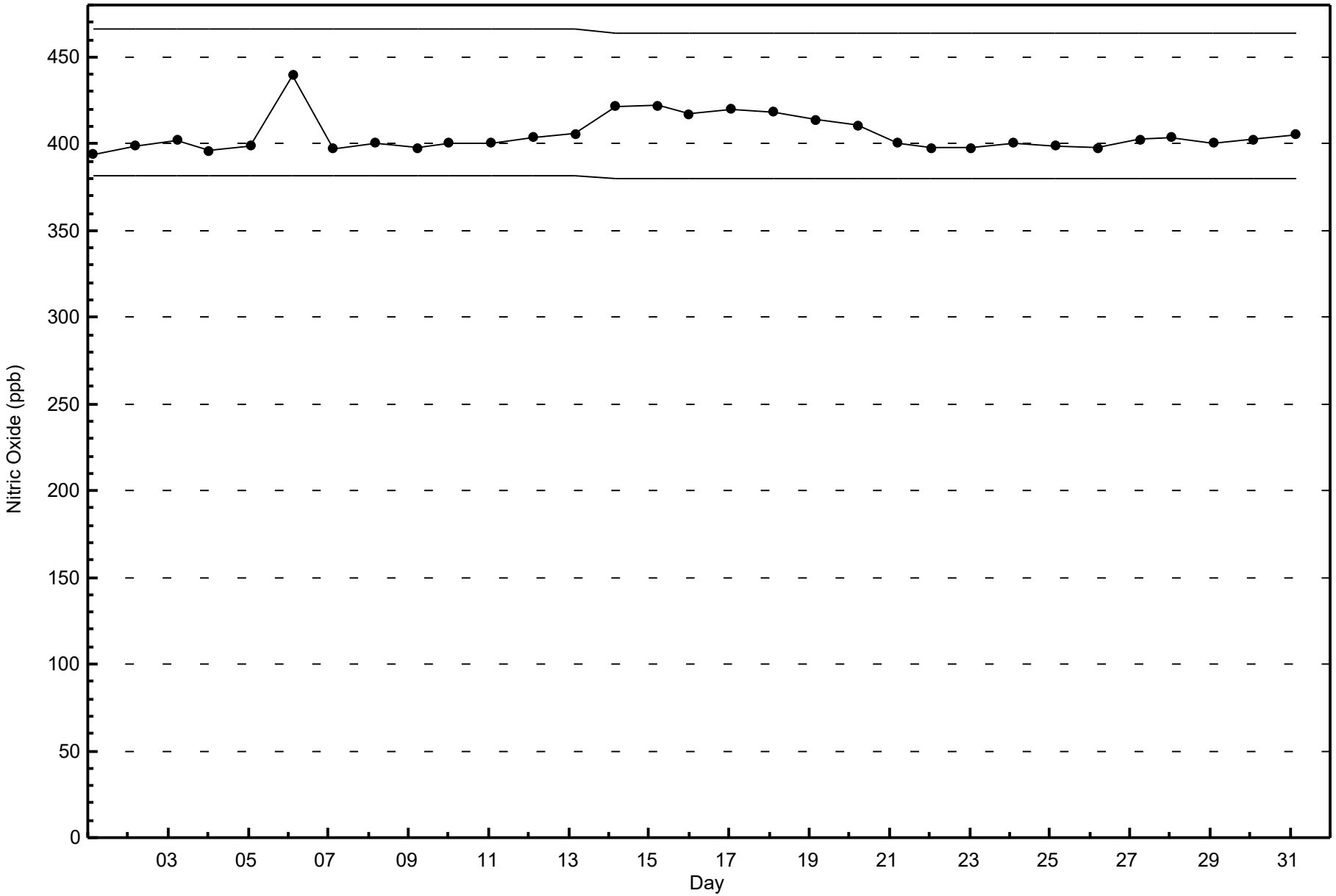


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Ells River - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Ells River - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 40.3 ppb on Mar 6 23:00 Maximum Daily Average: 19.7 ppb on Mar 10

Minimum Value: 0.3 ppb on Mar 4 06:00 Minimum Daily Average: 4.0 ppb on Mar 14
Maximum Diurnal Average: 17.9 ppb at hour 6 Minimum Diurnal Average: 5.5 ppb at hour 16
Monthly Average: 11.68 ppb Percentiles: P_1 = 0.5 P_{10} = 1.8 Q_1 = 4.6 Median = 9.1 Q_3 = 17.0 P_{90} = 25.2 P_{99} = 38.3

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	20.9	20.6	28.4	Z	24.3	17.1	13.3	12.3	12.3	6.4	12.3	10.6	7.6	6.4	6.2	11.4	9.5	17.0	19.5	21.8	27.2	18.1	16.9	23.4	15.8	28.4
2-Mar	21.9	24.2	26.0	31.6	Z	24.1	21.1	29.5	35.4	38.3	34.7	16.0	1.6	1.7	1.3	12.6	5.8	4.5	3.5	4.8	7.8	10.1	11.5	5.7	16.2	38.3
3-Mar	5.9	9.9	11.6	6.4	8.9	Z	8.2	11.8	13.9	10.9	6.5	6.2	4.4	0.4	1.3	5.4	6.4	5.8	9.8	12.5	14.4	17.9	25.3	24.5	9.9	25.3
4-Mar	Z	11.0	1.8	0.8	0.4	0.3	0.6	0.5	0.5	0.5	0.8	0.5	0.5	0.8	0.4	0.4	0.5	0.3	0.6	3.8	17.2	23.6	21.6	21.5	4.7	23.6
5-Mar	20.9	Z	2.6	3.7	8.8	5.6	0.6	1.5	8.3	8.8	3.1	3.6	4.9	6.1	6.0	4.9	8.7	10.6	37.0	39.7	39.7	35.5	30.4	28.4	13.9	39.7
6-Mar	32.3	21.5	Z	28.0	27.3	27.0	21.8	17.1	11.3	13.6	6.8	6.5	10.2	11.6	8.2	5.9	9.1	13.2	15.7	19.0	20.6	27.7	40.3	29.4	18.4	40.3
7-Mar	22.6	15.1	12.2	Z	9.0	13.5	30.9	26.8	32.9	23.5	11.2	12.1	15.1	31.0	20.1	9.3	5.8	8.2	5.1	9.5	10.9	12.7	4.8	5.6	15.1	32.9
8-Mar	24.4	29.3	28.2	37.7	Z	40.3	33.3	28.1	15.9	23.2	11.5	6.9	2.7	2.4	4.5	6.4	8.0	10.4	11.0	5.6	5.1	5.1	5.9	6.8	15.3	40.3
9-Mar	7.1	5.6	4.2	5.4	6.3	Z	6.5	5.1	4.4	3.7	3.7	3.5	3.3	3.1	2.9	3.4	3.0	2.2	2.3	5.9	13.0	16.0	17.5	17.7	6.3	17.7
10-Mar	Z	24.4	24.8	24.4	20.4	19.5	24.2	22.6	20.8	19.5	14.9	11.8	11.8	11.6	9.7	7.6	8.5	9.3	22.8	31.7	27.0	30.1	28.8	26.1	19.7	31.7
11-Mar	14.0	Z	7.3	23.6	26.8	26.0	27.5	22.4	17.6	13.6	12.7	10.9	8.5	6.7	6.7	5.7	4.6	4.6	3.3	4.6	3.9	5.9	8.3	10.9	12.0	27.5
12-Mar	6.1	4.9	Z	7.5	13.5	17.9	14.0	12.4	20.5	17.7	11.1	6.3	4.7	4.8	10.2	9.3	9.7	9.5	16.4	12.7	14.0	14.8	13.5	18.2	11.7	20.5
13-Mar	21.6	23.0	21.3	Z	18.2	16.2	17.0	16.9	16.8	C	C	C	C	C	C	4.6	5.7	4.9	6.2	4.2	5.0	8.1	5.0	10.0	--	23.0
14-Mar	3.0	0.5	2.2	0.6	Z	1.4	6.7	7.8	5.9	1.3	1.9	2.4	3.2	2.7	1.0	0.7	1.1	0.7	2.6	0.8	3.3	9.8	16.0	15.5	4.0	16.0
15-Mar	21.6	18.3	10.4	5.6	6.0	Z	4.8	3.1	5.7	24.1	12.3	6.1	4.4	2.7	2.8	6.8	6.1	4.0	3.8	13.7	19.0	15.5	17.8	16.8	10.1	24.1
16-Mar	Z	31.9	37.1	38.2	38.3	36.1	32.3	22.7	13.2	16.2	15.8	8.1	4.6	6.2	5.3	4.4	5.4	5.1	4.3	1.8	2.0	2.2	1.8	2.7	14.6	38.3
17-Mar	4.2	Z	5.7	8.5	10.0	16.1	13.5	9.9	9.8	25.3	12.2	7.5	5.3	3.8	4.0	3.7	4.0	5.6	12.8	9.8	9.0	8.7	7.9	6.7	8.9	25.3
18-Mar	5.8	12.0	Z	38.4	38.3	33.7	34.1	24.7	16.2	9.3	4.0	1.5	0.6	0.6	0.5	1.3	2.8	6.4	8.5	6.0	13.9	16.7	17.9	16.2	13.5	38.4
19-Mar	17.7	19.7	24.6	Z	18.0	16.1	12.2	7.7	7.8	4.7	7.8	12.0	13.1	10.3	8.2	7.1	19.5	21.4	18.1	16.3	12.6	7.0	6.0	2.9	12.6	24.6
20-Mar	1.9	2.9	13.0	19.6	Z	24.2	28.9	15.5	15.0	12.1	7.7	3.9	3.2	2.4	2.7	4.1	4.3	4.8	7.0	8.3	20.5	27.1	24.6	17.2	11.8	28.9
21-Mar	13.6	12.2	12.4	14.6	17.6	Z	19.1	13.9	11.7	10.2	9.8	9.3	8.2	8.2	6.9	6.9	6.9	7.8	6.2	5.2	2.1	2.5	1.6	1.3	9.1	19.1
22-Mar	Z	5.5	6.3	15.2	13.6	12.5	11.4	8.0	7.8	6.5	8.9	6.9	5.5	8.3	8.5	7.1	16.2	25.4	4.2	10.9	15.4	23.1	19.5	15.0	11.4	25.4
23-Mar	13.5	Z	15.1	15.0	14.7	17.2	14.1	12.2	27.3	18.5	5.9	4.6	5.4	1.9	3.2	3.6	2.2	1.8	8.0	31.3	31.3	30.1	30.1	34.1	14.8	34.1
24-Mar	32.4	23.9	Z	17.8	16.1	20.6	16.6	17.1	21.6	24.9	16.5	7.0	4.5	11.2	6.4	1.1	1.2	0.9	14.6	4.9	2.6	0.8	0.7	0.5	11.5	32.4
25-Mar	0.5	0.5	0.5	Z	0.6	1.3	0.6	1.5	11.5	12.4	5.9	0.7	4.0	0.6	0.6	1.5	4.1	3.3	4.2	7.3	8.3	10.4	7.6	5.1	4.0	12.4
26-Mar	0.6	0.4	2.0	9.5	Z	9.1	10.0	9.9	8.5	4.6	3.8	3.3	3.0	3.1	2.6	4.3	2.6	3.0	3.5	1.5	2.3	4.3	6.1	13.0	4.8	13.0
27-Mar	10.1	13.5	9.2	7.5	13.4	Z	8.1	13.7	9.0	3.6	2.7	1.8	1.4	1.7	1.7	1.6	1.4	1.4	1.3	4.7	11.0	16.5	13.5	15.6	7.1	16.5
28-Mar	Z	22.1	8.2	8.9	22.9	23.5	22.7	19.7	16.5	13.2	9.7	6.5	5.3	2.5	2.8	5.7	6.3	6.5	5.3	5.7	8.4	13.3	28.8	33.2	12.9	33.2
29-Mar	31.6	Z	25.1	26.5	23.4	19.7	14.3	9.4	16.6	21.8	6.5	4.6	5.4	6.6	4.5	6.2	5.0	8.0	10.3	10.8	13.2	20.2	26.8	36.5	15.3	36.5
30-Mar	33.5	10.1	Z	15.2	25.5	26.3	18.9	13.1	23.3	22.7	17.0	15.0	20.8	30.4	22.4	13.4	13.6	18.6	18.4	17.7	10.8	12.8	10.7	14.5	18.5	33.5
31-Mar	18.5	20.4	9.5	Z	1.7	1.3	2.9	3.5	7.9	10.3	10.8	7.6	3.9	3.3	4.0	4.3	4.2	4.4	4.8	4.8	3.9	3.1	2.2	1.5	6.0	20.4
	15.6	14.7	13.5	16.4	16.3	17.9	15.8	13.6	14.4	14.0	9.6	6.8	5.9	6.4	5.5	5.5	6.2	7.4	9.4	10.9	12.8	14.5	15.1	15.4	Diurnal Average	
	33.5	31.9	37.1	38.4	38.3	40.3	34.1	29.5	35.4	38.3	34.7	16.0	20.8	31.0	22.4	13.4	19.5	25.4	37.0	39.7	39.7	35.5	40.3	36.5	Diurnal Maximum	

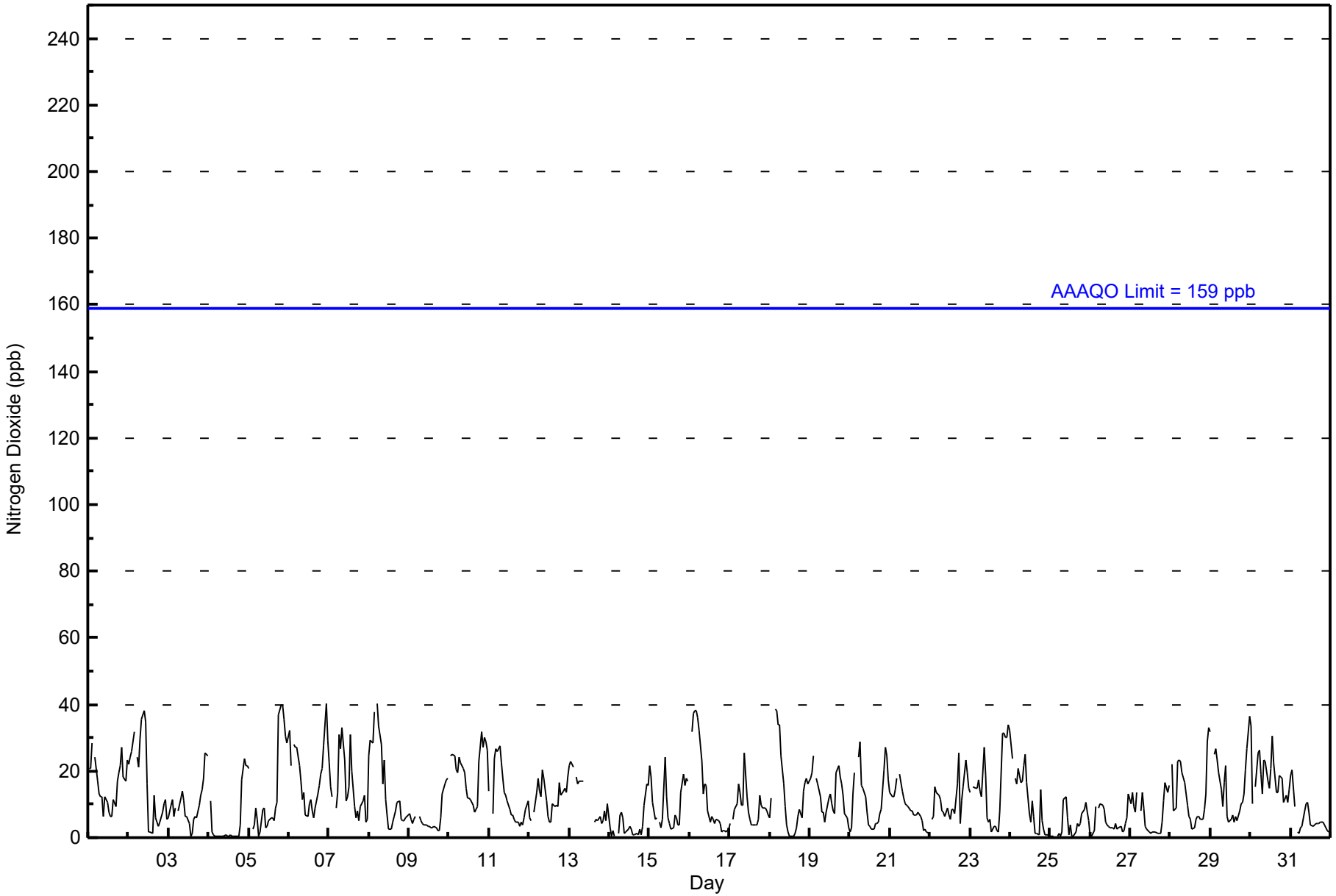
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Ells River - March 2025



Nitrogen Dioxide (NO_2) - ppb
Ells River - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	577	81.61	81.61
21 - 40	130	18.39	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Ells River - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	109	140	27	9	8	18	61	60	24	11	18	13	18	17	16	13	562
21 - 40	39	9	2	0	2	0	0	2	13	2	1	1	7	14	8	25	125
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	148	149	29	9	10	18	61	62	37	13	19	14	25	31	24	38	687

Total Number of Valid Hours: 687

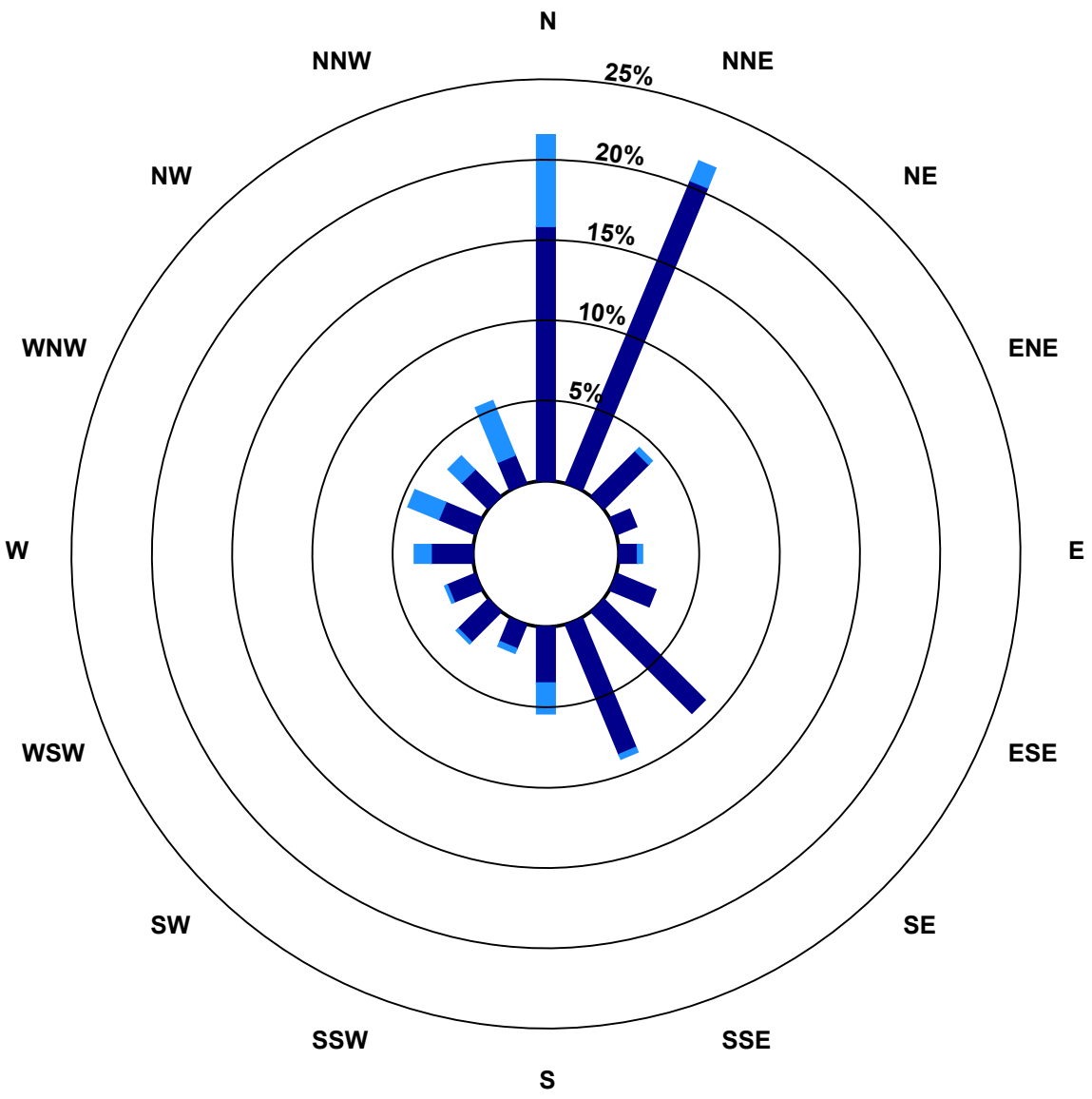
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Dioxide (NO_2) - ppb

Ells River



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

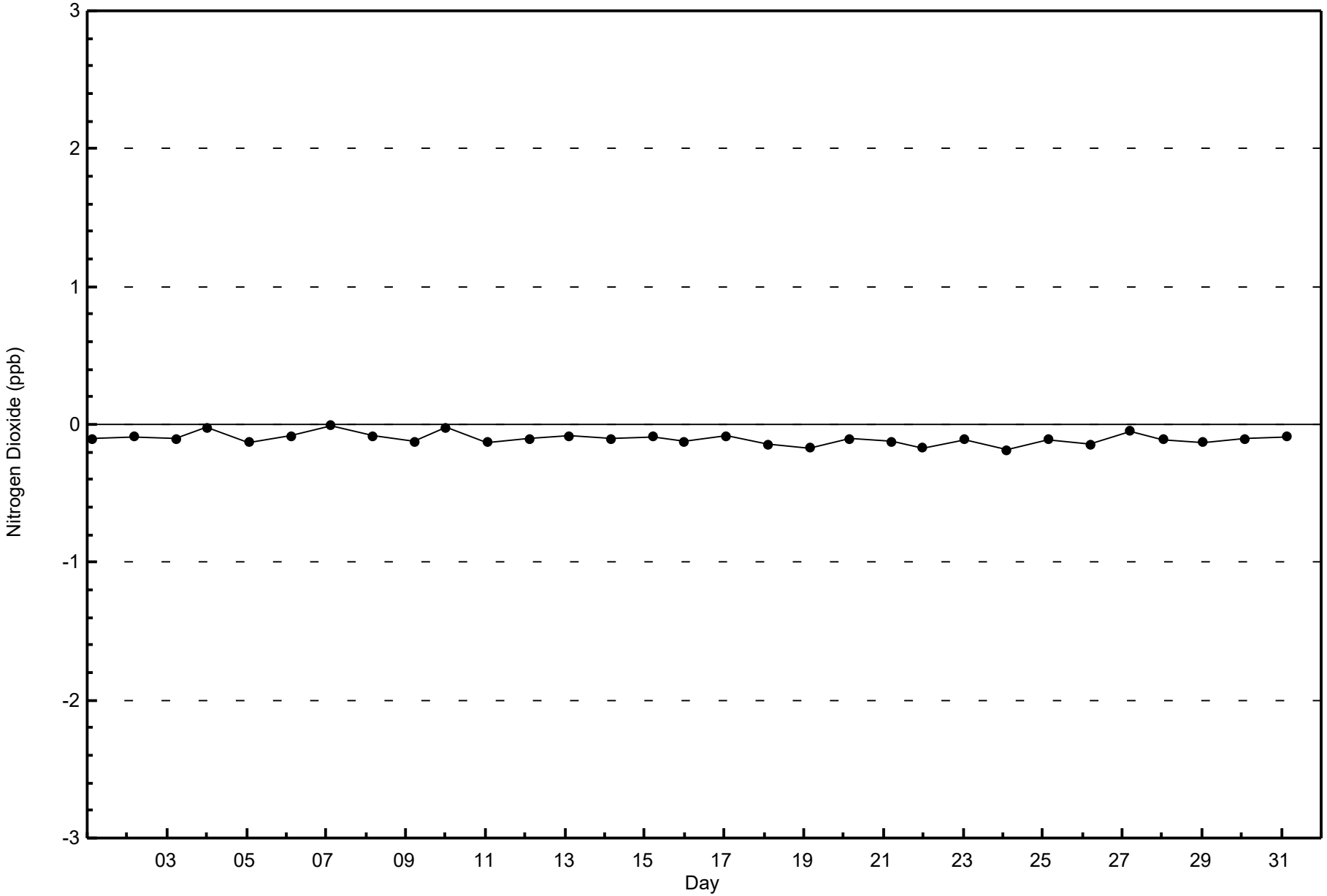
Total Number of Valid Hours: 687

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Ells River - March 2025

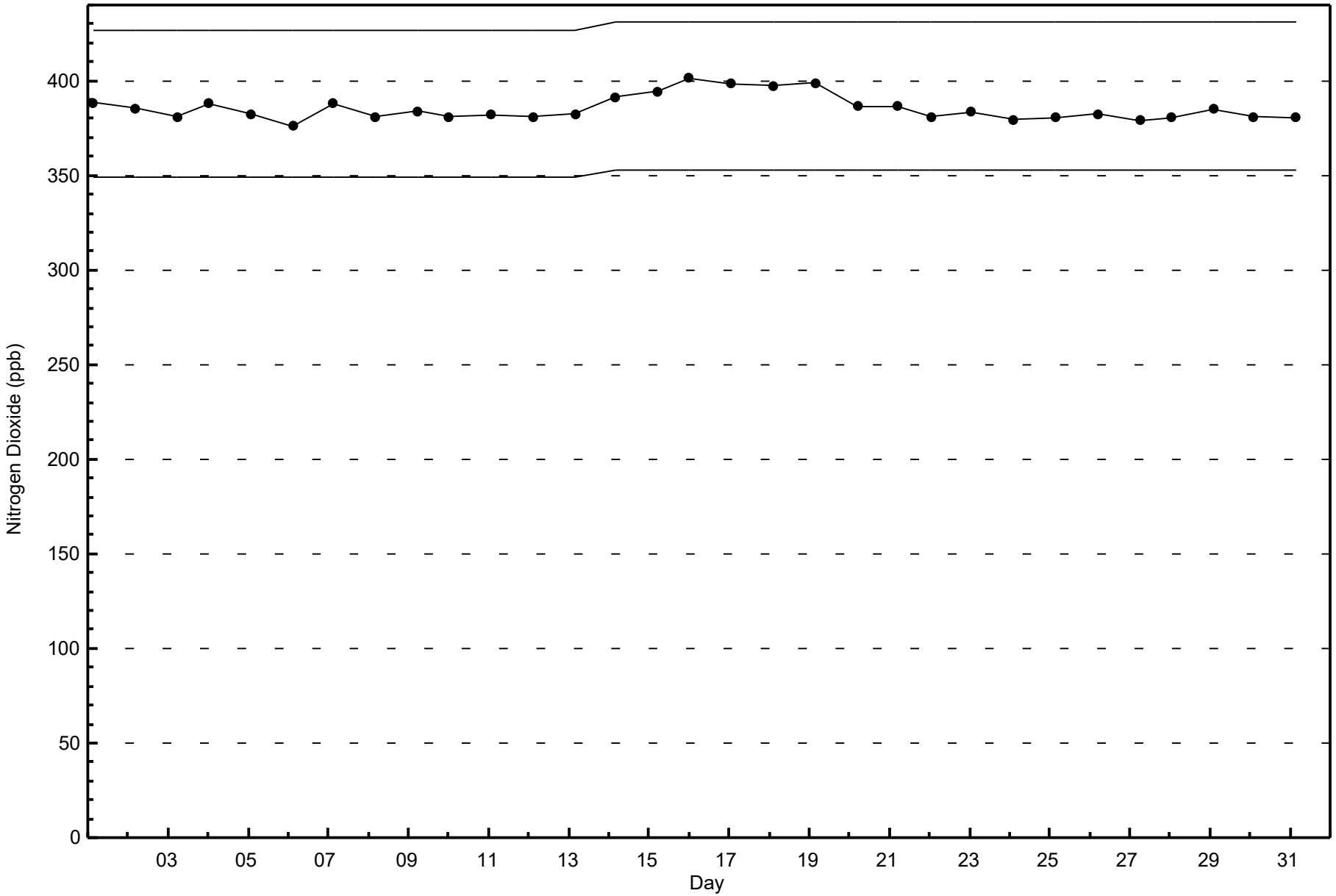


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Ells River - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Ells River - March 2025

Maximum Value: 199.6 ppb on Mar 2 10:00

Maximum Daily Average: 45.9 ppb on Mar 2

Minimum Value: 0.4 ppb on Mar 26 02:00

Minimum Daily Average: 4.5 ppb on Mar 14

Maximum Diurnal Average: 31.2 ppb at hour 10

Minimum Diurnal Average: 7.8 ppb at hour 16

Monthly Average: 16.68 ppb

Percentiles: P_1 = 0.5 P_{10} = 2.1 Q_1 = 5.5 Median = 10.9 Q_3 = 21.6 P_{90} = 35.7 P_{99} = 83.2

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	21.1	21.2	35.1	Z	26.9	17.5	14.0	14.3	18.0	10.5	26.9	23.3	13.6	10.4	8.9	15.8	10.9	19.1	19.8	31.1	43.6	21.0	21.8	41.0	21.1	43.6
2-Mar	32.6	34.3	45.7	97.5	Z	46.2	36.6	135.2	182.4	199.6	137.6	29.8	1.9	2.2	1.5	17.6	6.3	4.6	3.5	4.8	7.8	10.1	11.5	5.7	45.9	199.6
3-Mar	5.9	9.9	11.6	6.4	8.9	Z	8.2	12.4	16.8	15.2	9.0	9.3	6.8	0.5	1.7	7.7	7.8	6.5	11.0	12.7	14.6	19.2	28.8	31.1	11.4	31.1
4-Mar	Z	11.1	1.9	0.9	0.5	0.4	0.8	0.9	0.6	0.6	1.0	0.6	0.6	1.0	0.5	0.5	0.9	0.4	1.0	3.9	17.3	23.7	21.7	26.8	5.1	26.8
5-Mar	21.0	Z	2.6	3.7	8.8	5.6	0.6	1.6	9.8	11.7	4.4	5.5	7.7	9.5	8.6	6.1	9.9	10.6	49.3	41.8	42.0	35.9	30.7	30.2	15.6	49.3
6-Mar	37.9	22.6	Z	55.3	56.2	50.8	33.1	32.3	24.6	28.4	9.9	10.3	17.8	20.1	12.8	8.1	11.7	15.2	16.5	21.1	24.2	30.9	80.9	31.9	28.4	80.9
7-Mar	22.7	15.2	12.3	Z	9.1	13.6	31.3	29.6	64.4	47.2	18.6	21.0	25.2	62.1	35.7	12.8	7.1	8.9	5.1	9.5	10.9	12.8	4.8	5.6	21.1	64.4
8-Mar	24.5	29.4	28.3	40.0	Z	47.3	34.2	31.7	20.0	35.2	16.6	10.1	3.1	2.9	5.6	7.6	9.5	11.6	11.1	5.6	5.1	5.1	5.9	6.8	17.3	47.3
9-Mar	7.1	5.6	4.2	5.4	6.3	Z	6.6	5.4	6.1	5.1	5.7	6.0	6.3	6.3	5.5	5.5	4.2	2.5	2.4	5.9	13.1	16.1	17.6	17.8	7.3	17.8
10-Mar	Z	28.4	35.2	38.1	22.5	24.1	42.8	45.0	51.3	52.9	38.8	27.5	28.2	29.4	20.1	12.6	12.7	11.4	36.2	43.5	27.7	39.6	35.7	28.7	31.8	52.9
11-Mar	14.1	Z	7.4	25.4	28.6	28.1	29.2	27.7	27.8	26.0	23.9	20.5	16.5	11.8	10.5	8.4	6.0	5.2	3.3	4.6	3.9	5.9	8.3	10.9	15.4	29.2
12-Mar	6.1	4.9	Z	7.5	13.5	18.4	14.1	14.3	30.1	28.6	18.1	9.8	7.3	8.2	18.6	15.6	13.8	11.0	17.2	12.7	14.5	17.9	17.9	31.9	15.3	31.9
13-Mar	32.1	35.3	25.7	Z	20.9	18.7	21.1	37.8	35.8	C	C	C	C	C	C	5.6	6.5	5.1	6.3	4.2	5.0	8.1	5.0	10.0	--	37.8
14-Mar	3.0	0.5	2.2	0.6	Z	1.4	6.8	8.8	8.5	2.1	3.2	4.0	5.6	4.4	1.3	0.9	1.4	0.8	2.7	0.8	3.3	9.9	16.1	15.6	4.5	16.1
15-Mar	22.3	18.4	10.4	5.8	6.0	Z	4.9	3.6	8.3	54.8	24.1	10.0	7.8	4.5	3.7	9.2	7.8	4.6	3.9	13.7	19.0	15.5	17.8	16.9	12.8	54.8
16-Mar	Z	32.1	38.1	42.4	47.2	48.3	45.8	33.2	22.0	33.4	32.3	14.9	7.6	10.0	8.5	6.5	6.7	5.7	4.5	1.8	2.1	2.3	1.8	2.7	19.6	48.3
17-Mar	4.2	Z	5.8	8.6	10.1	16.2	13.8	12.8	14.4	64.1	22.3	13.6	8.7	5.2	5.5	4.9	5.1	6.5	13.5	9.9	9.0	8.7	7.9	6.7	12.1	64.1
18-Mar	5.8	12.0	Z	82.9	54.6	34.7	38.0	34.8	28.2	16.7	6.6	2.2	0.7	0.7	0.6	1.7	3.4	7.5	8.9	6.1	14.0	16.8	18.0	16.3	17.9	82.9
19-Mar	17.8	19.8	24.9	Z	18.1	16.3	13.6	10.5	12.9	7.7	13.0	22.4	25.6	18.2	13.2	10.5	32.8	27.6	18.9	16.4	12.6	7.0	6.0	2.9	16.0	32.8
20-Mar	1.9	2.9	13.0	19.7	Z	24.3	31.7	19.9	25.5	22.9	14.4	6.9	5.5	4.0	4.3	6.2	5.8	5.6	7.3	8.3	20.6	27.2	24.7	17.3	13.9	31.7
21-Mar	13.7	12.3	12.5	14.6	17.6	Z	22.2	21.2	18.4	16.9	17.1	16.5	14.1	13.4	10.5	9.9	9.0	9.0	6.4	5.3	2.1	2.5	1.6	1.3	11.7	22.2
22-Mar	Z	5.5	6.3	15.2	13.6	12.5	11.5	8.4	9.4	8.7	11.6	9.7	8.4	12.6	12.5	9.6	19.6	28.0	4.2	14.5	17.9	23.8	19.5	15.2	13.0	28.0
23-Mar	13.5	Z	15.1	15.0	14.7	17.2	16.1	24.1	61.1	37.5	8.8	6.8	8.1	2.3	3.8	4.3	2.4	1.9	8.1	31.8	39.2	42.4	59.4	83.2	22.5	83.2
24-Mar	73.5	70.8	Z	65.4	66.4	86.7	79.0	86.4	78.7	41.9	26.1	8.6	5.1	14.3	8.1	1.1	1.3	0.9	15.4	4.9	2.6	0.8	0.7	0.5	32.1	86.7
25-Mar	0.5	0.5	0.5	Z	0.6	1.5	0.7	1.9	26.0	21.0	10.0	0.9	5.5	0.7	0.7	1.9	5.3	3.9	4.4	7.4	8.4	10.5	7.6	5.1	5.5	26.0
26-Mar	0.6	0.4	2.0	9.6	Z	9.2	10.6	14.2	14.5	7.8	6.5	5.5	5.1	5.0	3.9	5.7	3.3	3.5	3.7	1.6	2.4	4.4	6.2	13.1	6.0	14.5
27-Mar	10.2	13.6	9.3	7.6	13.5	Z	8.5	16.1	12.0	5.1	3.8	2.8	2.3	2.7	2.6	2.4	2.0	1.7	1.4	4.7	11.1	16.6	13.6	15.7	7.8	16.6
28-Mar	Z	22.2	8.2	9.0	24.1	26.4	33.7	39.3	30.4	24.5	17.7	11.0	8.7	3.7	4.1	8.3	8.6	7.8	5.6	5.8	8.5	13.4	30.2	38.1	16.9	39.3
29-Mar	35.0	Z	26.0	32.7	26.9	21.2	19.5	17.0	42.0	48.5	10.9	7.2	8.4	10.3	6.5	8.7	6.4	9.4	10.9	10.9	13.3	20.3	26.9	38.6	19.9	48.5
30-Mar	35.9	10.2	Z	15.3	26.6	28.1	23.3	21.5	46.9	45.3	29.9	25.8	37.7	59.1	37.9	19.3	18.4	22.4	19.4	17.8	10.9	12.9	10.8	14.6	25.6	59.1
31-Mar	18.6	20.5	9.6	Z	1.8	1.4	3.1	4.0	10.7	15.3	15.6	10.9	5.4	4.6	5.5	5.6	5.2	5.1	5.0	4.9	4.0	3.2	2.3	1.5	7.1	20.5
	18.5	17.7	15.1	25.0	20.9	23.7	21.1	24.7	30.9	31.2	19.5	11.8	10.2	11.3	8.8	7.8	8.1	8.5	10.5	11.9	13.9	15.6	18.1	18.8	Diurnal Average	
	73.5	70.8	45.7	97.5	66.4	86.7	79.0	135.2	182.4	199.6	137.6	29.8	37.7	62.1	37.9	19.3	32.8	28.0	49.3	43.5	43.6	42.4	80.9	83.2	Diurnal Maximum	

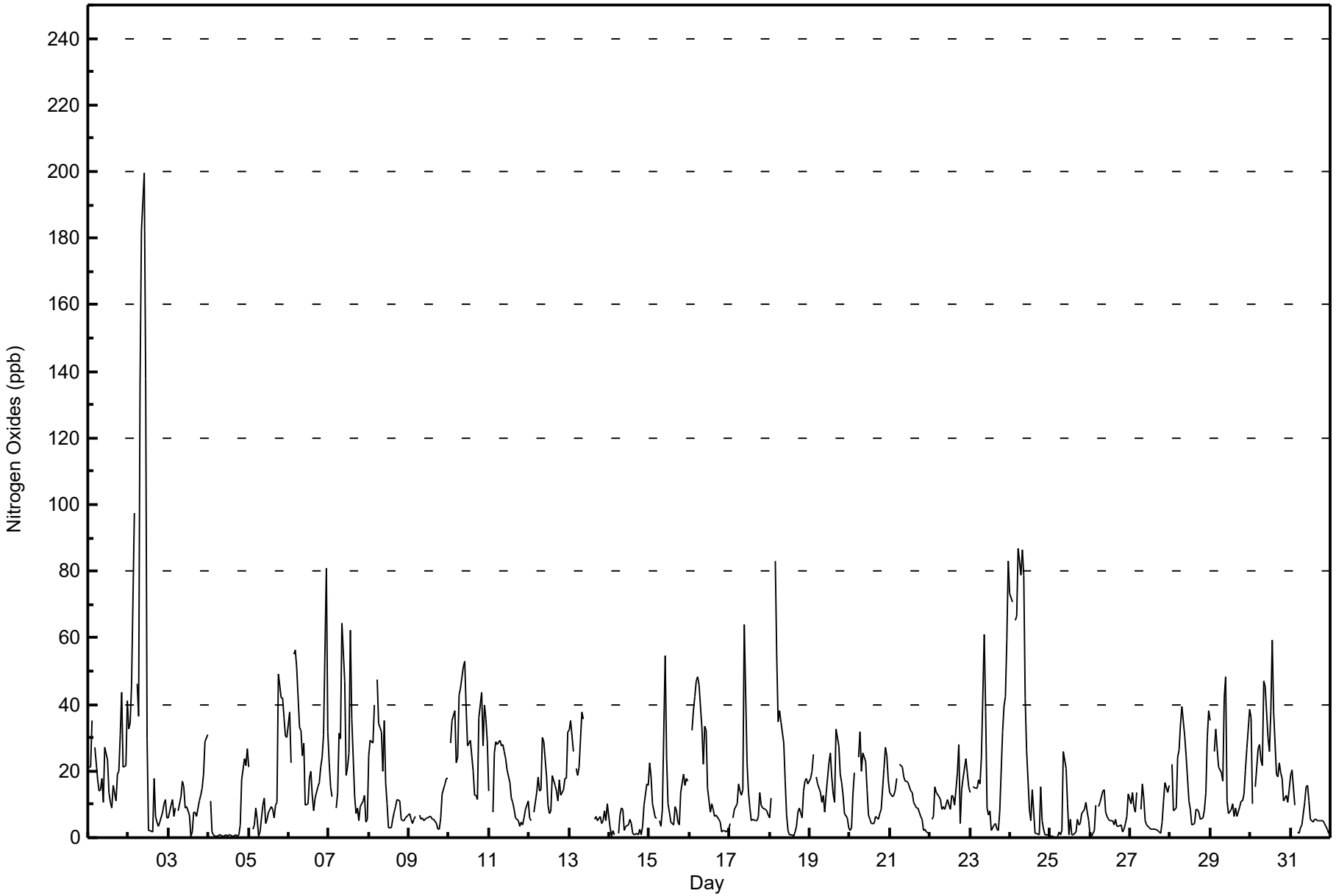
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Ells River - March 2025



Nitrogen Oxides (NO_X) - ppb
Ells River - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	517	73.13	73.13
21 - 40	139	19.66	92.79
11 - 80	41	5.80	98.59
81 - 159	7	0.99	99.58
> 159	2	0.28	99.86

Total Number of Valid Hours: 707

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Ells River - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	97	134	23	9	6	15	59	54	20	11	18	10	12	12	13	12	505
21 - 40	41	10	5	0	2	3	2	7	12	2	0	3	7	16	6	19	135
11 - 80	8	5	1	0	2	0	0	1	4	0	1	1	3	3	2	7	38
81 - 159	1	0	0	0	0	0	0	0	1	0	0	0	2	0	2	0	6
> 159	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2
Totals	147	149	29	9	10	18	61	62	37	13	19	14	25	31	24	38	686

Total Number of Valid Hours: 687

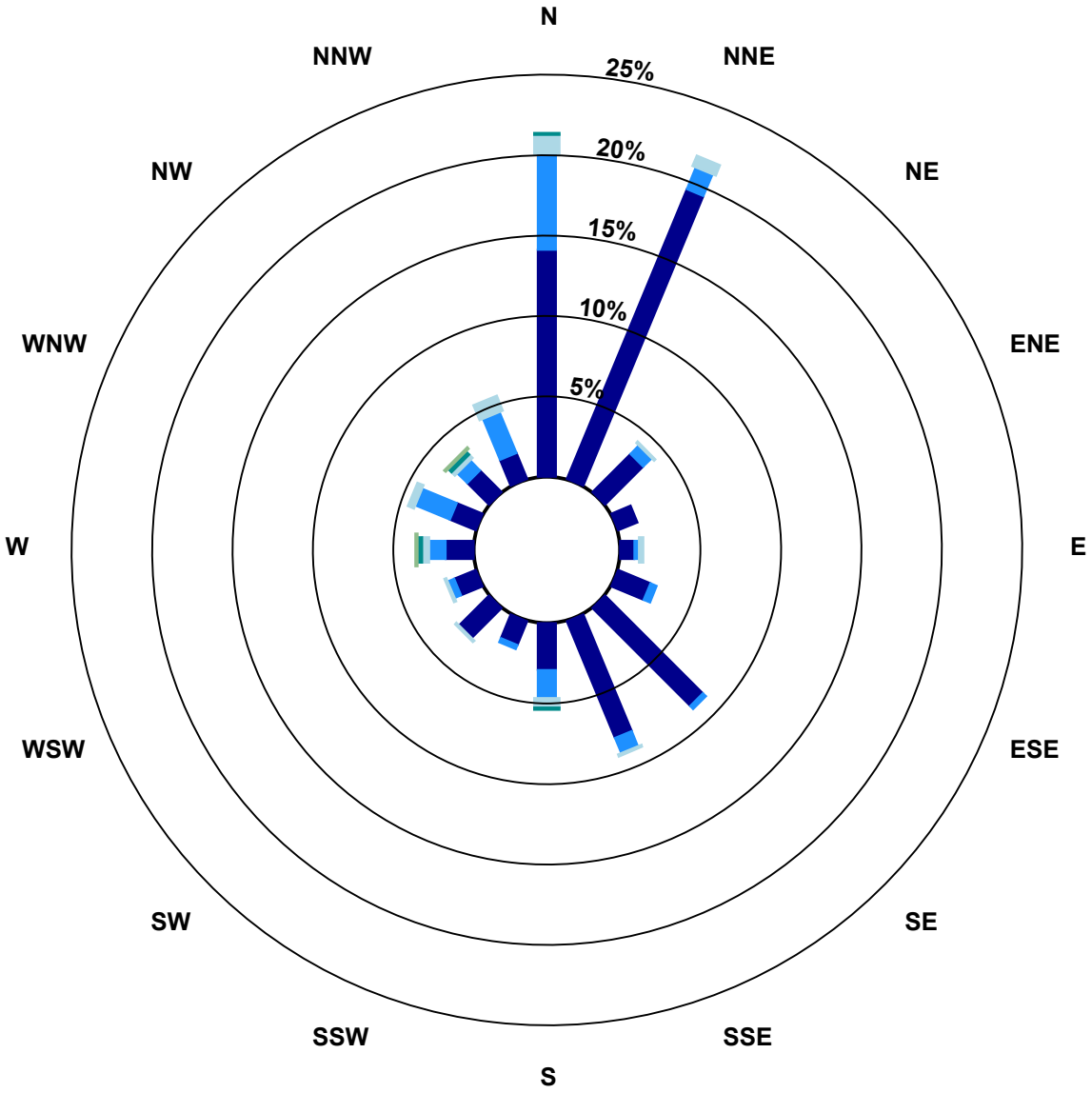
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Oxides (NO_X) - ppb

Ells River



Classes (ppb)

- 0 - 20
- 21 - 40
- 11 - 80
- 81 - 159
- > 159

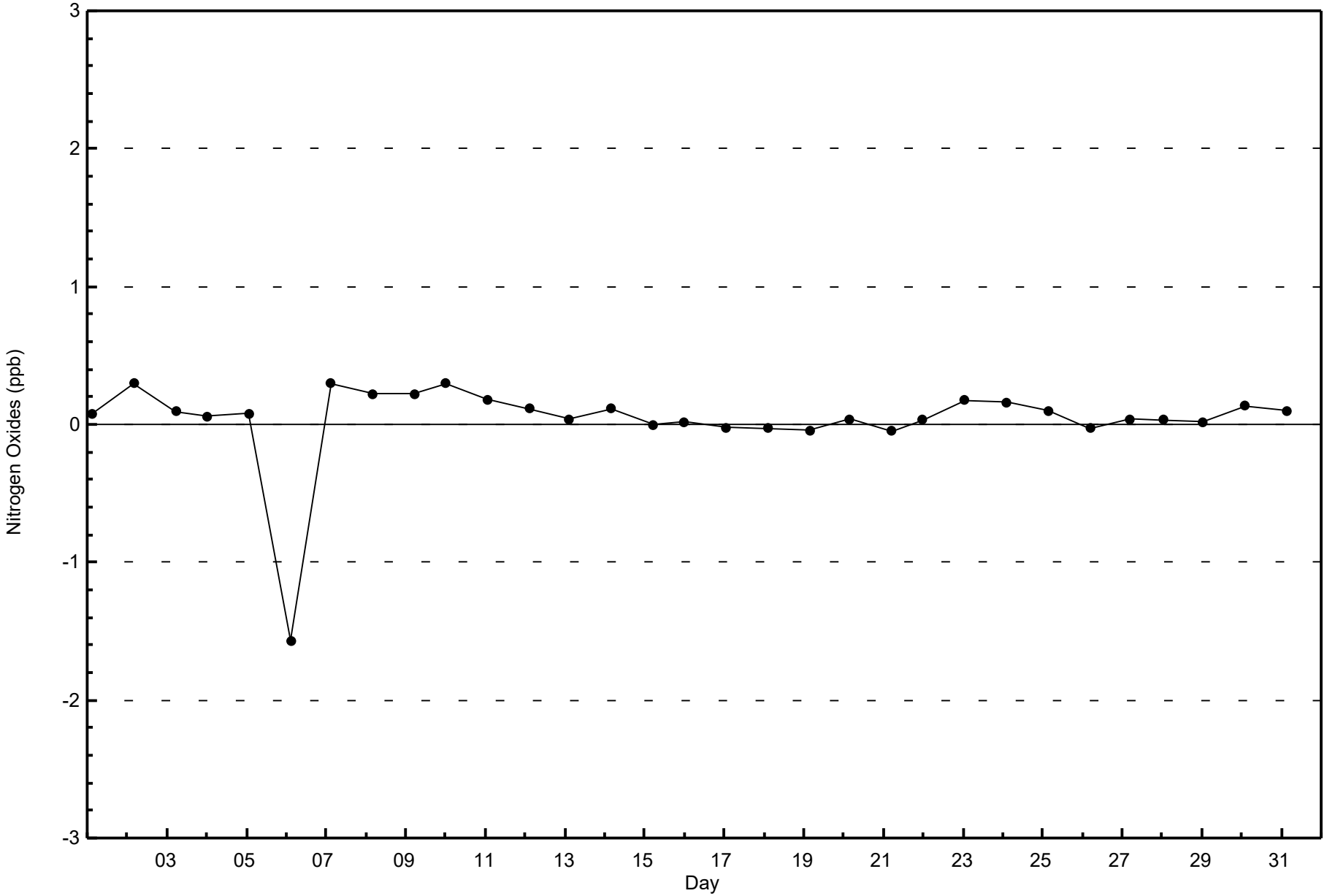
Total Number of Valid Hours: 687

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Ells River - March 2025

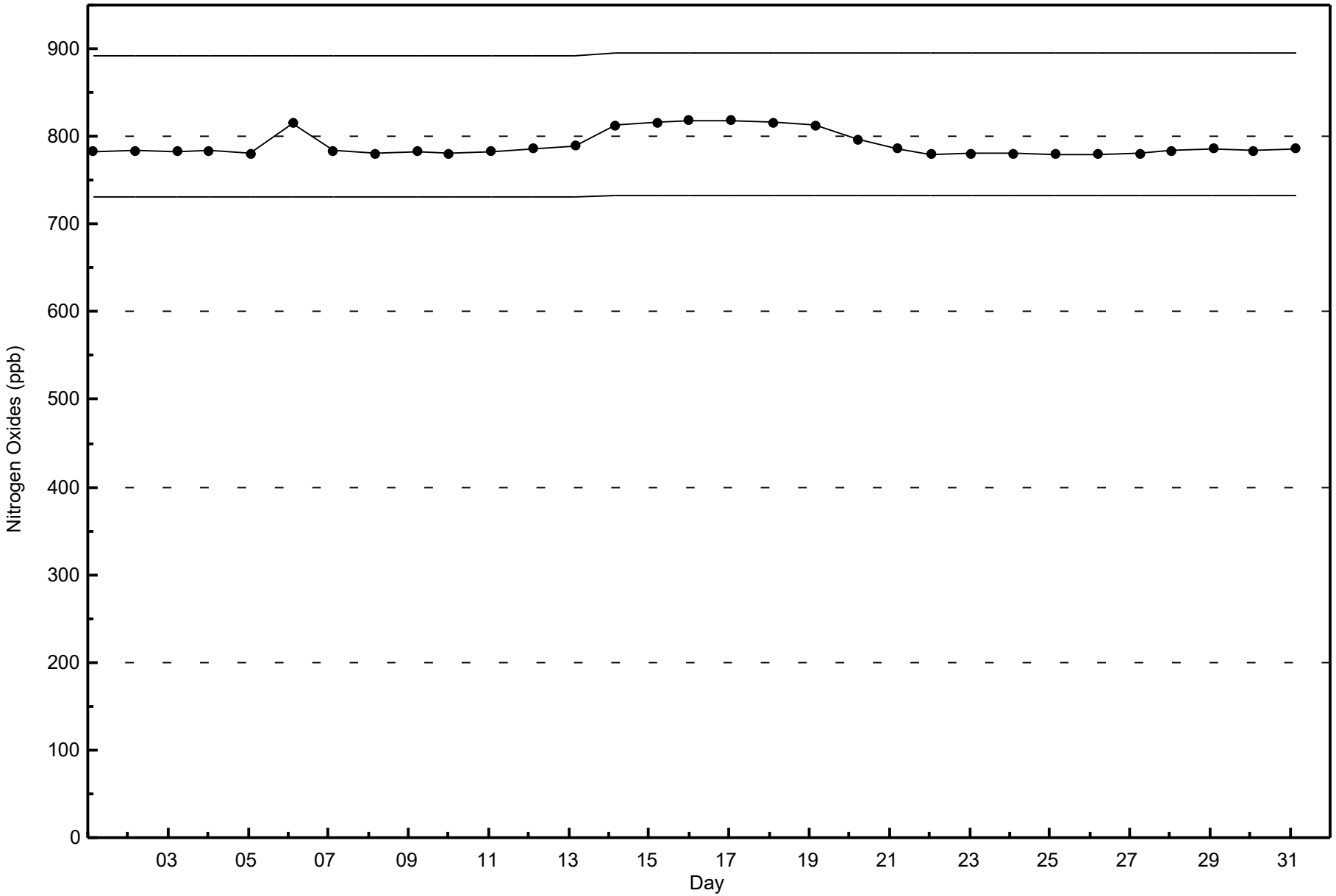


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Ells River - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Ells River - March 2025

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

Maximum Value: 49.9 $\mu g/m^3$ on Mar 30 14:00

Maximum Daily Average: 18.1 $\mu g/m^3$ on Mar 30

Minimum Value: 0.3 $\mu g/m^3$ on Mar 25 15:00

Minimum Daily Average: 1.7 $\mu g/m^3$ on Mar 25

Maximum Diurnal Average: 8.6 $\mu g/m^3$ at hour 10

Minimum Diurnal Average: 4.5 $\mu g/m^3$ at hour 18

Monthly Average: 6.11 $\mu g/m^3$

Percentiles: P_1 = 0.8 P_{10} = 1.8 Q_1 = 2.8 Median = 4.5 Q_3 = 7.2 P_{90} = 12.4 P_{99} = 26.6

Hours in Service:	744
Hours of Data:	743
Hours of Missing Data:	1
Hours of Calibration:	1
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	4.6	4.5	5.0	5.1	4.7	4.6	4.9	5.0	4.7	4.0	5.3	5.1	4.6	4.1	3.4	4.6	4.5	4.7	5.0	4.8	5.6	4.8	4.9	5.2	4.7	5.6
2-Mar	4.9	5.0	5.1	6.1	5.5	4.6	4.4	6.8	9.2	9.8	8.6	4.1	1.1	0.8	0.6	1.5	2.2	2.0	1.9	1.9	1.8	2.1	2.3	2.7	4.0	9.8
3-Mar	3.3	3.3	3.4	3.3	3.3	3.4	3.5	3.7	3.7	3.7	3.3	3.0	2.3	1.2	1.2	1.5	2.7	3.2	3.4	3.4	4.4	5.3	5.1	4.4	3.3	5.3
4-Mar	3.4	1.9	1.5	6.0	9.9	9.7	11.1	9.7	3.5	1.3	1.4	1.9	2.3	1.4	0.9	1.0	1.0	1.0	0.9	1.0	3.8	3.3	2.6	2.6	3.5	11.1
5-Mar	2.5	2.1	1.2	1.4	2.0	2.0	0.8	1.0	2.8	3.3	2.0	2.1	2.6	2.9	2.6	2.6	5.8	6.7	5.5	3.5	3.2	2.9	3.0	3.0	2.8	6.7
6-Mar	3.5	3.1	4.6	4.1	4.0	3.4	3.4	3.1	3.6	4.4	3.4	3.2	4.4	4.6	4.0	3.8	5.3	6.4	7.3	6.5	6.4	5.4	7.7	5.5	4.6	7.7
7-Mar	4.1	3.7	3.6	3.3	3.3	4.0	6.5	7.3	8.3	7.5	5.4	4.4	5.2	12.5	10.4	3.6	2.9	3.7	2.8	4.4	5.3	4.4	2.3	2.3	5.1	12.5
8-Mar	5.5	7.1	7.4	11.4	8.8	4.4	2.6	2.6	2.1	2.4	2.0	1.7	1.0	0.9	0.8	1.2	1.4	1.9	1.9	1.9	2.2	2.0	2.7	2.9	3.3	11.4
9-Mar	3.2	2.7	2.5	2.6	2.9	2.9	3.1	2.7	2.3	2.7	3.1	3.2	3.5	4.0	4.4	4.6	4.5	3.3	2.6	4.8	7.6	10.6	11.4	10.7	4.4	11.4
10-Mar	11.1	10.6	8.8	7.5	5.4	5.7	10.4	9.7	10.9	12.7	10.4	7.5	7.5	7.1	6.2	5.0	5.4	6.1	17.0	24.4	11.7	14.0	9.0	6.4	9.6	24.4
11-Mar	4.3	3.1	3.0	5.6	6.5	6.2	5.2	4.2	3.9	4.0	3.7	3.7	3.8	4.0	3.6	3.3	3.1	2.8	1.8	1.7	1.7	1.5	1.6	1.7	3.5	6.5
12-Mar	1.3	1.2	1.4	1.7	2.2	2.8	2.5	2.1	2.9	2.8	2.4	1.8	1.5	1.8	4.1	4.8	4.8	4.5	7.5	8.0	6.5	5.3	4.8	10.8	3.7	10.8
13-Mar	13.4	15.6	9.4	7.7	6.8	6.4	7.7	13.1	7.1	8.3	5.7	2.4	6.7	7.0	7.9	6.7	7.4	4.9	6.2	3.8	4.1	6.7	4.9	5.2	7.3	15.6
14-Mar	2.6	2.1	2.1	2.1	2.0	2.1	2.4	2.7	2.7	2.7	2.8	3.0	3.1	C	3.0	2.7	2.7	2.0	2.1	1.5	1.4	1.5	1.8	1.7	2.3	3.1
15-Mar	2.8	2.9	2.2	1.5	1.5	1.6	1.5	1.3	1.7	3.8	3.1	2.8	2.8	2.6	2.3	2.6	2.8	2.4	2.6	4.5	6.5	4.7	5.0	3.7	2.9	6.5
16-Mar	4.2	4.7	5.3	5.5	6.5	6.3	6.6	5.4	4.0	5.5	6.3	6.9	3.1	3.4	3.9	3.4	3.5	3.4	3.1	3.2	3.1	1.8	2.2	2.8	4.3	6.9
17-Mar	3.5	3.7	3.6	4.6	5.1	5.6	5.2	4.8	4.2	6.2	4.7	3.6	3.2	3.2	3.8	4.4	3.9	4.4	7.5	5.1	4.0	3.9	3.7	3.5	4.4	7.5
18-Mar	3.5	4.6	16.1	21.6	9.1	3.8	4.4	5.9	6.8	6.2	4.3	3.0	2.6	2.6	2.6	2.9	3.4	4.5	6.1	5.1	7.0	7.8	4.0	3.9	5.9	21.6
19-Mar	4.0	5.7	7.6	10.5	7.4	6.1	4.9	4.1	3.1	3.8	5.8	6.8	9.1	7.3	5.7	5.1	8.7	8.9	6.2	5.3	5.0	4.5	3.6	2.9	5.9	10.5
20-Mar	2.4	2.5	4.7	6.2	7.3	8.0	10.6	8.5	9.3	10.2	8.9	7.2	7.4	6.5	5.4	7.6	7.9	8.6	8.7	6.0	15.5	22.2	17.1	15.3	8.9	22.2
21-Mar	10.7	9.5	8.4	8.2	8.2	9.1	10.6	10.8	17.2	15.7	20.1	16.6	13.8	17.2	16.0	11.8	7.3	4.7	3.1	2.7	2.0	1.9	2.2	2.4	9.6	20.1
22-Mar	5.7	7.1	5.2	9.8	8.7	6.9	7.2	5.7	4.5	4.1	5.3	5.5	5.0	9.4	9.4	10.4	9.1	6.4	3.0	3.2	3.6	6.8	7.0	7.2	6.5	10.4
23-Mar	7.5	7.1	6.1	6.2	5.8	5.8	5.7	5.6	6.8	6.8	4.1	3.2	3.0	2.8	3.1	3.1	2.6	2.4	3.4	6.3	5.3	4.8	4.9	5.0	4.9	7.5
24-Mar	4.1	4.1	4.1	4.1	4.1	4.5	4.1	4.2	4.7	4.7	4.3	3.0	1.8	3.4	2.5	1.7	2.4	1.6	2.1	1.4	1.3	1.0	1.3	1.3	3.0	4.7
25-Mar	1.4	1.3	1.3	1.2	1.1	1.1	1.1	1.2	2.2	3.0	2.1	0.7	0.8	0.5	0.3	0.5	1.4	3.0	2.9	2.8	2.6	2.7	2.6	2.8	1.7	3.0
26-Mar	2.1	2.0	2.6	4.6	4.4	6.0	5.8	6.2	6.3	5.1	4.8	4.8	3.6	2.9	2.9	2.7	2.5	2.4	2.5	2.6	3.5	3.4	4.7	11.5	4.2	11.5
27-Mar	10.2	17.0	11.9	8.4	15.4	11.7	9.6	19.2	15.2	7.8	6.4	6.0	5.3	4.9	4.3	3.8	3.4	3.0	3.0	5.9	19.0	22.1	13.3	14.9	10.1	22.1
28-Mar	15.8	7.7	3.1	6.7	24.2	19.6	24.5	22.2	28.6	23.0	20.9	14.0	16.1	6.1	5.5	6.1	6.0	5.2	5.1	7.5	14.4	23.5	28.6	24.3	14.9	28.6
29-Mar	17.7	12.3	14.3	18.8	16.3	12.1	10.0	9.3	29.9	27.5	7.9	6.2	7.1	8.3	6.6	9.2	6.4	8.1	8.4	10.5	18.3	25.3	25.2	21.2	14.0	29.9
30-Mar	22.1	4.8	9.8	6.8	13.2	18.5	15.9	13.3	21.8	43.7	23.8	24.4	36.1	49.9	28.5	17.2	15.8	12.4	12.7	11.2	7.0	9.2	7.6	9.8	18.1	49.9
31-Mar	11.8	13.3	6.8	3.4	3.2	3.4	3.5	4.8	15.1	19.5	19.2	15.0	12.7	8.8	8.2	9.0	7.3	5.5	4.8	3.4	3.0	2.4	2.3	2.5	7.9	19.5
	6.4	5.7	5.5	6.3	6.7	6.2	6.4	6.6	8.0	8.6	6.8	5.7	5.9	6.4	5.3	4.8	4.8	4.5	4.9	5.1	6.0	7.0	6.4	6.5	Diurnal Average	
	22.1	17.0	16.1	21.6	24.2	19.6	24.5	22.2	29.9	43.7	23.8	24.4	36.1	49.9	28.5	17.2	15.8	12.4	17.0	24.4	19.0	25.3	28.6	24.3	Diurnal Maximum	

C - Calibration

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

Wood Buffalo Environmental Association

Hourly Averages

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

Ells River - March 2025



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

Ells River - March 2025

Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	466	62.72	62.72
6 - 15	224	30.15	92.87
16 - 25	45	6.06	98.92
26 - 80	8	1.08	100.00
> 81.0	0	0.00	100.00

Total Number of Valid Hours: 743

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

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

Ells River - March 2025

Concentration Ranges ($\mu g/m^3$)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	88	109	20	6	7	11	37	49	28	11	15	13	15	13	14	19	455
6 - 15	55	41	9	3	3	6	20	11	11	3	5	0	11	15	10	12	215
16 - 25	12	6	0	0	1	1	4	4	0	0	0	1	1	4	2	8	44
26 - 80	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	8
> 81.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	159	156	30	9	11	18	61	64	39	14	20	14	27	32	26	42	722

Total Number of Valid Hours: 722

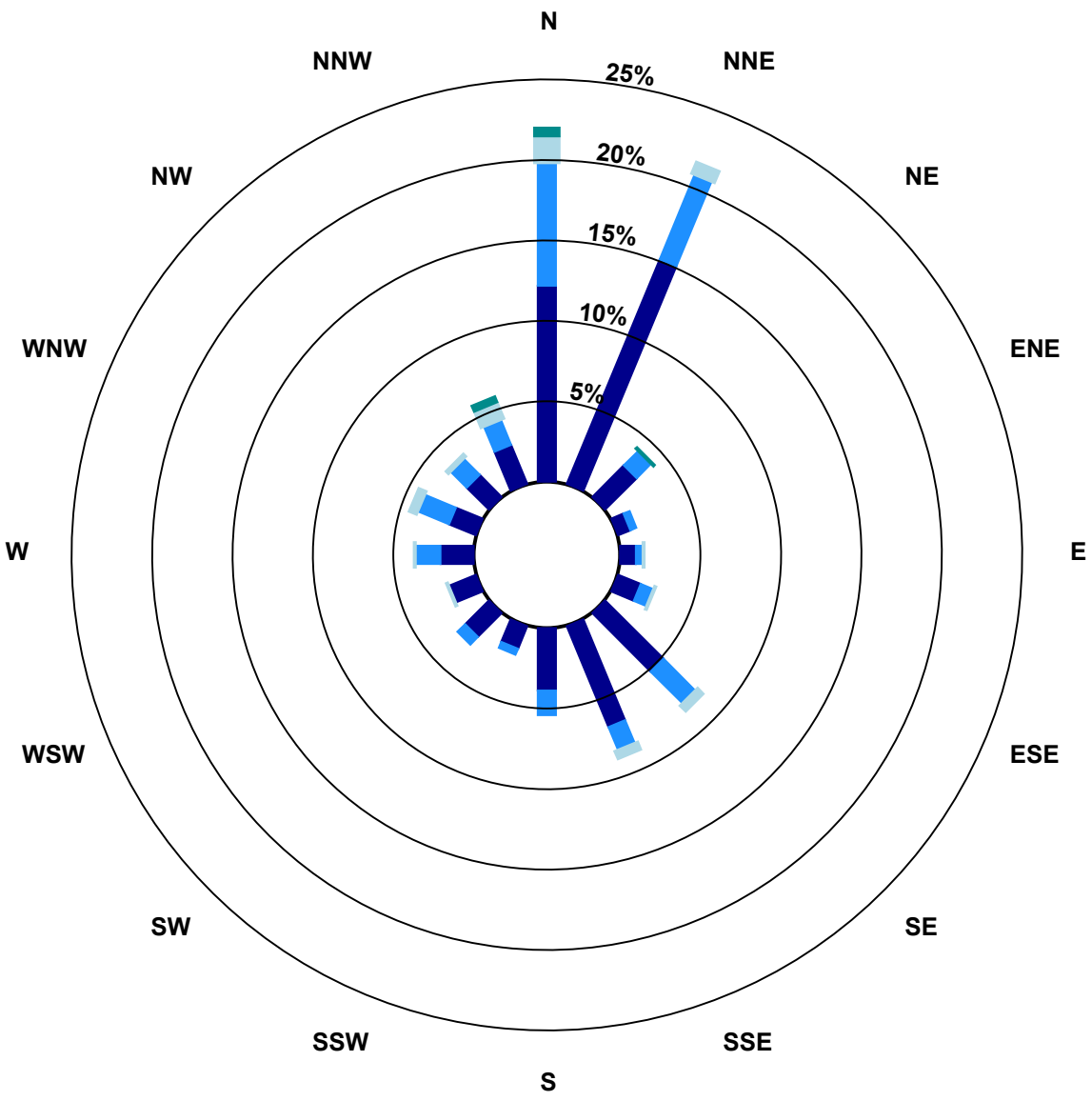
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

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

Ells River



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

0 - 5

6 - 15

16 - 25

26 - 80

> 81.0

Total Number of Valid Hours: 722

Maximum Value: 10.4 C on Mar 25 15:00

Maximum Daily Average: 1.3 C on Mar 2

Minimum Value: -27.6 C on Mar 13 07:00

Minimum Daily Average: -21.2 C on Mar 9

Maximum Diurnal Average: -3.0 C at hour 16

Minimum Diurnal Average: -13.5 C at hour 7

Monthly Average: -8.30 C

Percentiles: P_1 = -23.6 P_{10} = -18.9 Q_1 = -14.1 Median = -8.0 Q_3 = -2.4 P_{90} = 1.5 P_{99} = 7.0

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

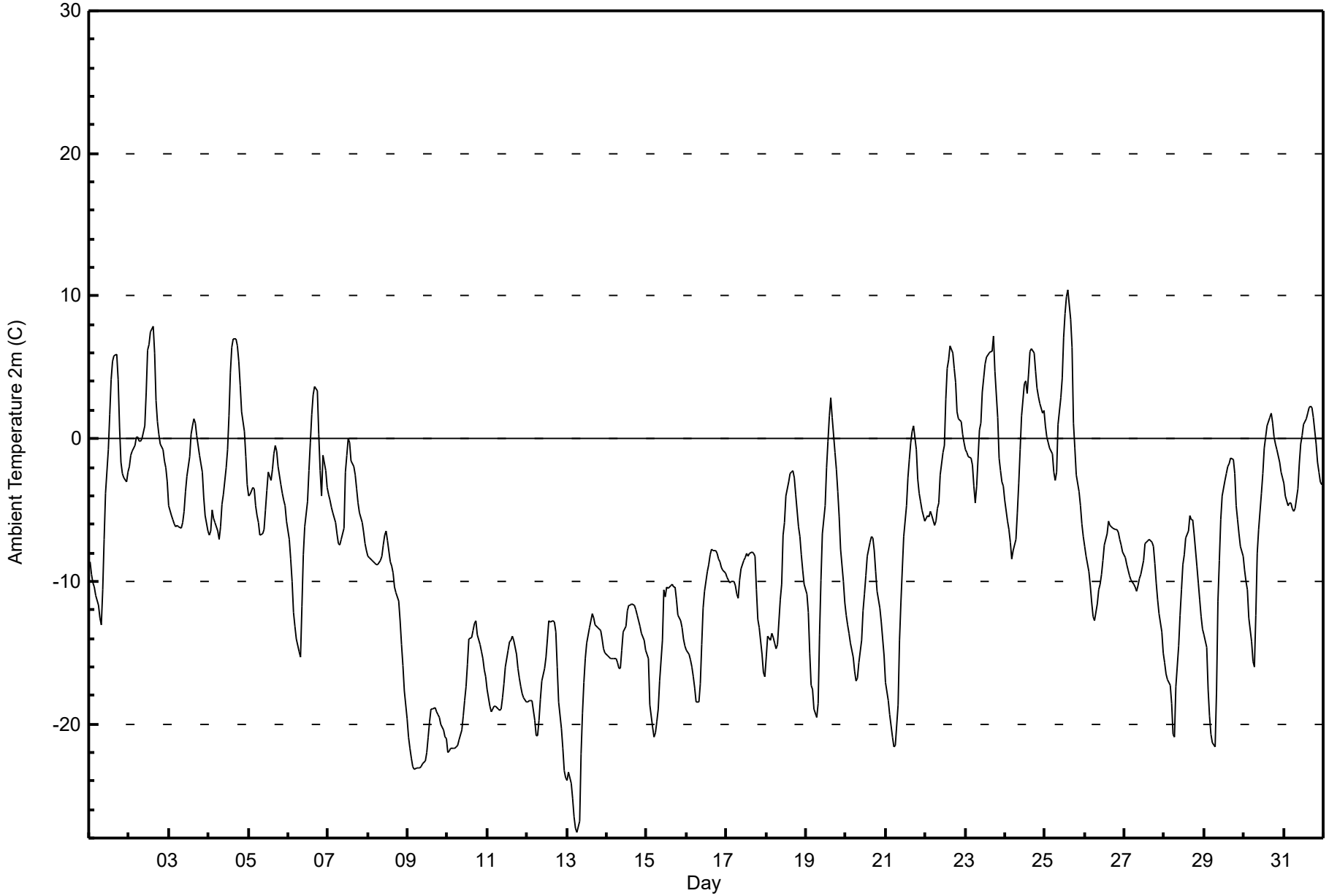
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-8.6	-9.5	-10.1	-10.4	-11.0	-11.7	-12.6	-13.1	-10.6	-7.1	-3.8	-0.8	1.7	4.1	5.4	5.8	5.9	4.2	0.8	-1.6	-2.5	-2.8	-3.0	-2.4	-3.9	5.9
2-Mar	-1.9	-1.2	-0.9	-0.4	0.1	0.2	-0.2	-0.2	0.0	0.9	3.3	6.2	6.6	7.5	7.8	6.0	2.7	1.2	0.4	-0.4	-0.7	-1.6	-2.1	-3.0	1.3	7.8
3-Mar	-4.7	-5.4	-5.7	-6.0	-6.1	-6.1	-6.2	-6.3	-5.8	-5.1	-3.7	-2.7	-1.3	0.3	0.9	1.4	1.1	0.2	-1.2	-1.8	-2.3	-4.1	-5.4	-6.5	-3.4	1.4
4-Mar	-6.8	-6.4	-5.0	-5.6	-5.8	-6.5	-7.1	-6.2	-4.6	-3.9	-2.1	-0.8	1.6	4.6	6.4	7.0	7.0	6.5	5.5	3.8	1.9	0.5	-1.3	-3.3	-0.9	7.0
5-Mar	-4.0	-3.9	-3.5	-3.5	-4.7	-5.4	-5.9	-6.8	-6.6	-6.4	-5.0	-3.7	-2.4	-2.9	-2.2	-1.0	-0.5	-0.9	-1.9	-3.2	-3.8	-4.3	-4.7	-5.8	-3.9	-0.5
6-Mar	-7.1	-8.4	-10.1	-12.2	-13.1	-14.1	-15.0	-15.3	-11.8	-8.1	-6.2	-4.4	-2.3	-0.2	1.7	3.0	3.6	3.3	0.3	-2.2	-4.0	-1.2	-2.3	-3.4	-5.4	3.6
7-Mar	-3.9	-4.3	-4.8	-5.2	-5.9	-6.7	-7.4	-7.4	-7.1	-6.2	-2.4	-1.1	0.0	-0.3	-1.6	-1.9	-2.6	-3.6	-4.5	-5.2	-5.9	-6.6	-7.4	-7.8	-4.6	0.0
8-Mar	-8.2	-8.4	-8.5	-8.6	-8.8	-8.8	-8.8	-8.6	-8.2	-7.5	-6.8	-6.5	-7.2	-8.6	-8.9	-9.4	-10.4	-10.8	-11.4	-12.8	-14.5	-15.9	-17.6	-19.7	-10.2	-6.5
9-Mar	-21.0	-21.7	-22.4	-23.0	-23.1	-23.1	-23.1	-23.1	-23.0	-22.8	-22.6	-22.0	-21.0	-19.9	-19.0	-19.0	-18.9	-19.1	-19.3	-19.6	-20.1	-20.4	-20.9	-21.0	-21.2	-18.9
10-Mar	-22.0	-21.9	-21.7	-21.7	-21.7	-21.6	-21.5	-21.1	-20.4	-19.4	-18.4	-17.3	-15.9	-14.0	-13.9	-13.5	-12.9	-12.7	-13.7	-14.4	-14.9	-15.4	-16.2	-16.7	-17.6	-12.7
11-Mar	-17.6	-18.7	-19.1	-19.0	-18.8	-18.8	-19.0	-19.0	-19.0	-18.2	-17.2	-16.0	-14.8	-14.2	-14.1	-13.8	-14.1	-15.2	-16.1	-16.8	-17.4	-17.9	-18.2	-18.5	-17.1	-13.8
12-Mar	-18.5	-18.4	-18.4	-18.4	-19.7	-20.9	-20.8	-19.8	-18.2	-17.0	-16.1	-15.3	-14.0	-12.8	-12.9	-12.7	-12.9	-13.5	-16.0	-18.5	-20.3	-21.7	-23.3	-23.8	-17.7	-12.7
13-Mar	-23.9	-23.4	-24.2	-25.2	-26.5	-27.3	-27.6	-26.8	-22.1	-19.3	-17.1	-15.4	-14.3	-13.3	-12.8	-12.2	-12.6	-13.0	-13.3	-13.4	-13.4	-14.0	-14.8	-15.1	-18.4	-12.2
14-Mar	-15.2	-15.3	-15.4	-15.4	-15.4	-15.5	-15.7	-16.2	-16.1	-14.8	-13.6	-13.1	-12.1	-11.7	-11.6	-11.6	-11.7	-12.0	-12.4	-12.8	-13.2	-13.6	-14.2	-14.8	-13.9	-11.6
15-Mar	-15.1	-15.5	-18.6	-20.2	-20.9	-20.6	-19.8	-19.0	-17.0	-14.1	-10.6	-11.1	-10.4	-10.5	-10.3	-10.2	-10.4	-10.4	-11.3	-12.4	-12.7	-13.3	-14.0	-14.5	-14.3	-10.2
16-Mar	-14.8	-15.1	-15.5	-16.1	-16.7	-17.5	-18.4	-18.5	-17.2	-14.4	-11.9	-10.7	-9.3	-8.8	-8.2	-7.7	-7.9	-7.9	-8.0	-8.4	-8.7	-9.0	-9.2	-9.4	-12.0	-7.7
17-Mar	-9.8	-9.9	-10.1	-10.0	-10.0	-10.3	-10.9	-11.2	-9.9	-9.1	-8.6	-8.4	-8.1	-8.2	-8.0	-7.9	-8.0	-8.3	-10.6	-12.7	-13.2	-15.1	-16.4	-16.7	-10.5	-7.9
18-Mar	-15.3	-13.8	-14.1	-13.7	-14.0	-14.3	-14.7	-14.4	-11.3	-10.2	-6.8	-5.8	-4.0	-3.0	-2.4	-2.4	-2.3	-2.7	-3.9	-6.2	-6.9	-8.1	-9.2	-10.2	-8.7	-2.3
19-Mar	-10.9	-12.2	-15.0	-17.3	-17.6	-19.0	-19.6	-18.5	-13.7	-10.0	-6.7	-4.7	-2.1	-0.2	1.6	2.9	1.5	-0.9	-2.1	-3.7	-5.5	-7.8	-10.0	-11.5	-8.5	2.9
20-Mar	-12.3	-13.1	-13.7	-14.3	-15.3	-16.3	-16.9	-16.8	-15.7	-14.2	-12.1	-10.8	-9.6	-8.2	-7.3	-6.8	-7.0	-7.8	-9.3	-10.7	-11.9	-12.8	-14.0	-15.2	-12.2	-6.8
21-Mar	-17.0	-18.4	-19.4	-20.1	-20.9	-21.6	-21.5	-18.6	-14.1	-11.5	-9.2	-6.8	-4.7	-2.7	-1.5	-0.2	0.5	0.9	-0.7	-2.8	-3.8	-4.4	-5.0	-5.8	-9.6	0.9
22-Mar	-5.6	-5.4	-5.5	-5.1	-5.4	-6.0	-5.8	-4.9	-4.5	-2.5	-1.0	-0.5	2.8	4.9	5.5	6.5	6.0	4.9	3.9	1.9	1.4	1.2	0.3	-0.3	-0.5	6.5
23-Mar	-0.8	-1.0	-1.2	-1.4	-1.8	-3.3	-4.5	-3.4	0.6	1.1	3.2	4.2	5.2	5.7	6.0	6.2	6.1	7.2	4.8	1.5	-1.4	-2.3	-3.1	-3.3	1.0	7.2
24-Mar	-4.3	-5.8	-6.4	-7.3	-8.4	-7.9	-7.0	-5.2	-3.1	-0.7	1.6	3.8	4.1	3.2	4.5	6.1	6.3	6.1	4.7	3.5	3.0	2.5	1.7	2.0	-0.1	6.3
25-Mar	0.9	0.1	-0.2	-0.6	-1.1	-2.3	-2.9	-2.3	1.0	2.8	4.2	7.1	8.7	10.0	10.4	8.4	6.4	1.1	-0.7	-2.5	-3.7	-4.7	-6.0	-6.9	1.1	10.4
26-Mar	-7.6	-8.3	-9.3	-10.3	-11.5	-12.4	-12.7	-11.5	-10.6	-10.2	-9.5	-8.6	-7.4	-6.7	-5.8	-6.1	-6.2	-6.3	-6.4	-6.4	-6.6	-7.1	-7.4	-7.9	-8.5	-5.8
27-Mar	-8.4	-8.8	-9.2	-9.6	-9.9	-10.2	-10.4	-10.7	-10.3	-9.8	-9.5	-8.5	-7.3	-7.3	-7.1	-7.1	-7.3	-7.6	-8.7	-10.2	-11.2	-12.2	-13.6	-15.1	-9.6	-7.1
28-Mar	-15.7	-16.5	-16.8	-17.3	-18.6	-20.7	-21.0	-17.4	-14.6	-12.3	-10.6	-8.8	-8.1	-7.0	-6.5	-5.4	-5.7	-5.6	-6.7	-8.9	-10.1	-11.3	-12.5	-13.3	-12.1	-5.4
29-Mar	-13.7	-14.7	-17.6	-19.4	-20.7	-21.3	-21.6	-17.7	-11.4	-8.6	-5.7	-4.0	-3.0	-2.5	-1.9	-1.7	-1.3	-1.5	-2.4	-4.7	-5.7	-6.7	-7.5	-8.3	-9.3	-1.3
30-Mar	-9.2	-10.1	-10.6	-12.6	-14.3	-15.6	-16.0	-12.4	-8.0	-6.4	-3.8	-2.4	-0.7	0.2	0.9	1.5	1.8	1.1	0.1	-0.4	-0.8	-1.6	-2.3	-2.7	-5.2	1.8
31-Mar	-3.1	-4.0	-4.7	-4.6	-4.5	-4.9	-5.1	-4.9	-3.5	-1.7	-0.4	0.2	1.0	1.4	1.8	2.2	2.3	2.2	1.5	-0.4	-1.7	-2.3	-3.0	-3.2	-1.6	2.3
	-10.5	-10.9	-11.5	-12.1	-12.6	-13.2	-13.5	-12.8	-10.9	-9.3	-7.4	-6.1	-4.8	-3.9	-3.3	-3.0	-3.3	-3.9	-5.1	-6.5	-7.4	-8.2	-9.1	-9.8	Diurnal Average	
	0.9	0.1	-0.2	-0.4	0.1	0.2	-0.2	-0.2	1.0	2.8	4.2	7.1	8.7	10.0	10.4	8.4	7.0	7.2	5.5	3.8	3.0	2.5	1.7	2.0	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Ells River - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	53	7.12	7.12
-20 - 0	584	78.49	85.62
0 - 10	106	14.25	99.87
10 - 20	1	0.13	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Ells River - March 2025

Maximum Value: 92.8 % on Mar 22 21:00

Maximum Daily Average: 77.9 % on Mar 24

Minimum Value: 27.6 % on Mar 25 15:00

Minimum Daily Average: 49.0 % on Mar 29

Maximum Diurnal Average: 76.2 % at hour 7

Minimum Diurnal Average: 49.5 % at hour 16

Monthly Average: 63.81 %

Percentiles: P_1 = 32.4 P_{10} = 44.0 Q_1 = 53.7 Median = 65.3 Q_3 = 74.6 P_{90} = 80.5 P_{99} = 88.8

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

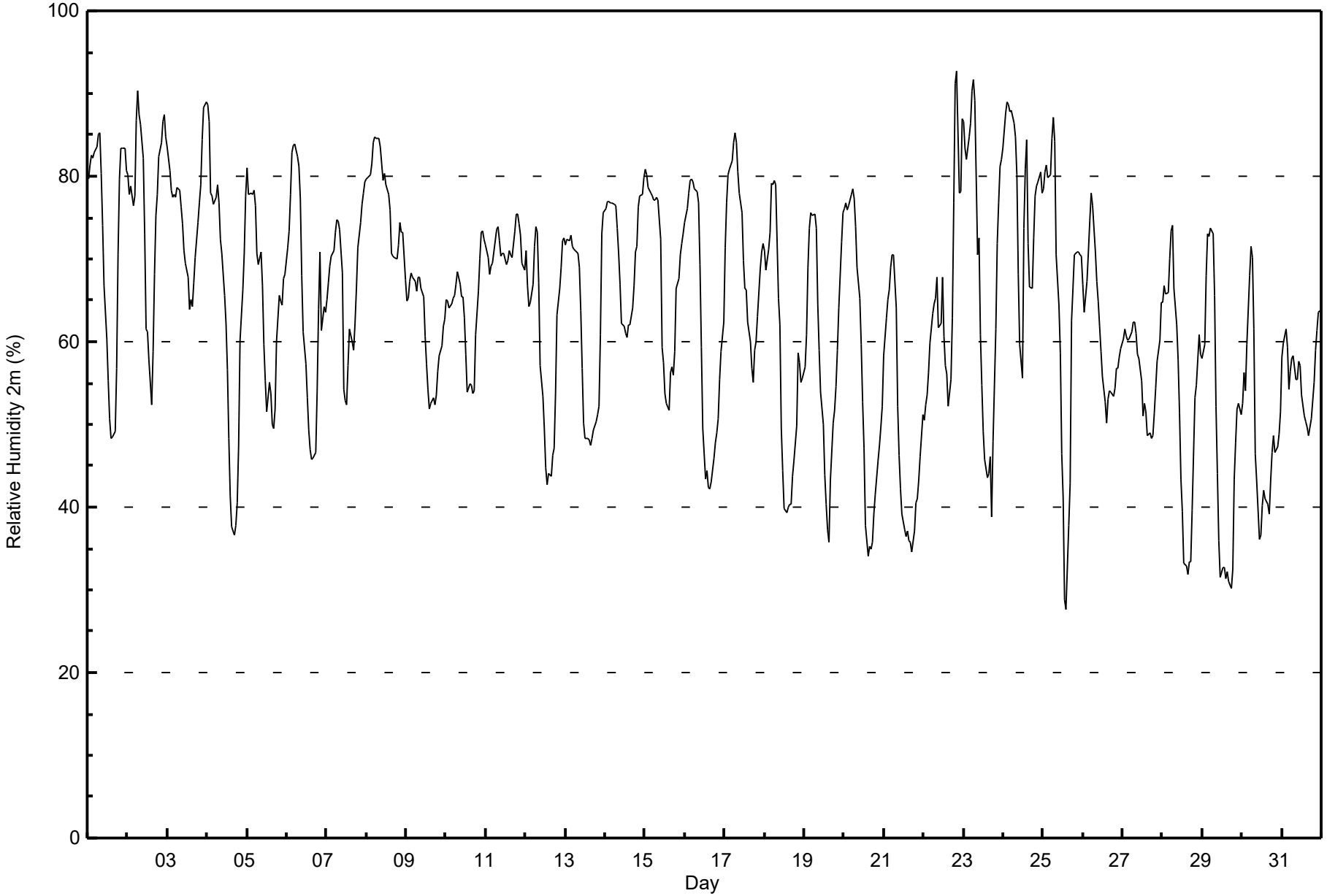
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	79.7	81.3	82.5	82.3	82.9	83.6	85.1	85.2	80.3	74.0	66.8	60.4	55.3	50.7	48.3	48.4	49.2	56.7	70.4	79.6	83.4	83.4	83.4	80.7	72.2	85.2
2-Mar	80.3	77.7	78.7	76.5	77.6	86.8	90.4	87.5	86.4	82.2	73.1	61.5	61.3	57.8	52.4	58.8	68.1	75.2	77.7	82.4	84.0	86.6	87.4	84.7	76.5	90.4
3-Mar	83.6	80.6	78.3	77.5	77.8	77.5	78.6	78.3	76.2	74.3	71.0	69.4	67.8	63.9	65.1	64.2	67.1	70.2	74.4	76.8	78.9	84.4	88.3	89.0	75.5	89.0
4-Mar	88.7	86.6	77.9	77.6	76.6	77.4	78.9	76.9	72.3	70.7	65.6	62.2	56.6	48.3	41.3	37.6	36.5	37.7	40.5	47.5	60.2	66.3	70.7	77.7	63.8	88.7
5-Mar	81.0	77.8	78.0	77.7	78.4	76.5	70.7	69.4	70.8	66.9	59.7	55.2	51.6	55.1	53.8	49.9	49.5	51.9	59.9	65.5	64.9	64.4	67.6	68.2	65.2	81.0
6-Mar	71.4	73.5	77.7	82.9	83.8	84.0	82.4	81.1	77.3	68.0	61.3	57.4	53.2	49.3	47.0	45.7	45.9	46.5	54.1	63.8	70.8	61.3	64.3	63.6	65.3	84.0
7-Mar	65.1	67.1	69.1	70.4	71.0	73.2	74.8	74.6	73.6	68.2	54.2	52.8	52.4	57.1	61.6	60.1	59.0	62.2	66.5	71.3	74.3	76.5	77.9	79.4	67.2	79.4
8-Mar	79.7	79.8	80.2	81.5	84.0	84.7	84.5	84.5	83.6	81.6	79.5	80.4	79.0	77.9	76.0	70.6	70.4	70.2	70.0	71.8	74.4	73.2	73.1	67.4	77.4	84.7
9-Mar	64.9	65.3	67.3	68.2	67.7	67.3	66.2	67.8	67.8	66.5	65.5	60.7	57.4	54.3	51.8	52.6	53.3	52.3	53.5	56.5	58.4	59.5	61.8	62.7	61.2	68.2
10-Mar	65.1	65.0	64.1	64.5	65.3	65.6	66.9	68.5	66.9	65.5	65.5	63.0	58.5	53.9	54.9	54.7	53.7	54.1	60.9	66.1	70.0	73.3	73.5	72.4	63.8	73.5
11-Mar	71.7	70.2	68.1	69.2	69.5	70.9	73.5	73.8	72.2	70.3	70.7	70.6	69.4	69.8	71.0	70.5	70.1	73.5	75.4	75.4	74.3	72.9	69.5	68.6	71.3	75.4
12-Mar	71.1	66.8	64.3	64.7	66.9	71.6	73.8	73.1	67.1	57.0	53.4	49.5	44.7	42.7	44.1	43.7	46.3	47.2	53.6	63.2	66.4	69.1	72.1	72.6	60.2	73.8
13-Mar	71.7	72.3	72.3	72.9	71.6	71.2	71.0	70.7	69.0	63.8	56.8	50.2	48.4	48.2	48.1	47.5	48.2	49.4	50.4	51.2	52.1	60.9	73.1	75.6	61.1	75.6
14-Mar	76.2	76.9	76.9	76.7	76.8	76.5	76.4	73.8	70.6	67.0	62.1	61.8	60.9	60.6	62.0	62.0	64.0	66.8	70.8	71.6	76.3	77.5	77.8	79.8	70.9	79.8
15-Mar	80.9	80.2	78.7	77.9	77.7	77.1	77.1	77.5	77.1	72.4	59.2	57.5	53.8	52.5	51.7	56.2	56.9	56.0	58.8	66.5	67.7	70.5	71.9	73.0	67.9	80.9
16-Mar	74.4	76.2	77.9	79.4	79.7	79.4	78.5	78.1	76.7	69.3	59.2	49.5	43.3	44.4	42.4	42.2	43.0	45.9	47.9	48.9	50.7	55.4	58.9	62.4	61.0	79.7
17-Mar	71.3	76.8	80.1	80.9	81.9	84.0	85.2	84.0	80.5	78.0	75.5	69.8	66.5	66.3	62.3	60.0	56.8	55.1	59.1	60.0	63.0	68.8	70.8	71.9	71.2	85.2
18-Mar	71.0	68.6	71.2	73.2	79.1	79.0	79.5	79.0	65.3	62.0	49.6	44.3	39.8	39.4	40.0	40.3	40.3	43.7	45.6	49.8	58.7	57.4	55.0	55.5	57.8	79.5
19-Mar	56.9	60.8	68.9	73.7	75.6	75.2	75.4	73.8	64.5	59.0	53.9	50.0	43.9	40.3	37.3	35.8	43.2	50.1	51.7	54.6	59.0	64.0	72.0	75.6	59.0	75.6
20-Mar	76.1	76.8	75.9	76.4	77.8	78.5	77.2	73.9	69.0	65.2	59.7	52.8	47.2	37.8	34.1	35.3	34.9	35.8	39.1	41.5	45.5	47.4	49.7	52.2	56.7	78.5
21-Mar	58.3	62.9	65.1	66.3	68.9	70.5	70.6	64.1	52.2	46.2	42.2	39.2	37.3	36.5	37.1	35.9	35.8	34.6	37.1	40.5	41.0	43.3	46.1	51.2	49.3	70.6
22-Mar	50.5	52.4	53.6	56.2	59.9	63.4	64.7	65.2	67.8	61.8	62.3	67.9	60.7	57.1	56.1	52.2	55.5	62.9	76.9	91.2	92.8	78.0	78.1	86.9	65.6	92.8
23-Mar	86.6	83.4	82.1	84.7	86.4	90.4	91.6	89.1	70.5	72.5	60.8	54.8	49.2	45.7	43.5	44.1	46.1	38.9	47.9	61.6	71.9	76.7	81.2	82.0	68.4	91.6
24-Mar	83.4	87.7	88.9	88.6	87.8	88.0	86.4	84.8	80.1	68.2	59.6	55.5	73.8	80.9	84.5	71.9	66.5	66.5	72.5	77.6	78.9	79.4	80.4	78.0	77.9	88.9
25-Mar	78.4	80.5	81.3	79.9	80.2	84.6	87.1	84.3	70.5	64.4	58.6	46.5	41.3	28.8	27.6	37.8	42.9	62.5	66.5	70.4	70.9	70.9	70.4	70.4	64.9	87.1
26-Mar	66.9	63.6	67.3	70.8	74.6	78.0	76.5	70.8	67.2	64.9	61.9	58.8	55.7	52.8	50.1	53.0	54.0	53.9	53.3	54.4	56.9	56.8	58.1	59.1	61.6	78.0
27-Mar	60.3	61.6	60.7	60.1	60.4	61.2	62.4	62.4	61.0	58.4	58.0	55.2	51.1	52.5	51.5	48.6	48.9	48.3	48.7	51.4	54.5	57.6	60.2	64.7	56.7	64.7
28-Mar	64.8	66.7	65.8	66.0	69.9	73.4	74.1	66.4	62.0	57.7	51.4	43.4	39.4	33.2	32.9	31.8	33.4	33.4	39.6	53.3	54.8	57.7	60.8	58.4	53.8	74.1
29-Mar	57.9	59.7	68.0	73.1	72.6	73.8	73.1	65.5	52.2	44.0	35.9	31.5	32.7	32.7	31.3	32.2	31.0	30.1	32.6	43.3	47.8	51.8	52.6	51.2	49.0	73.8
30-Mar	52.6	56.3	54.1	59.7	67.9	71.5	70.2	61.6	46.4	43.2	36.1	36.7	40.1	42.1	41.0	40.3	39.1	43.2	46.6	48.7	46.6	47.2	48.8	51.5	49.7	71.5
31-Mar	58.1	59.9	61.6	59.3	54.3	56.4	57.9	58.3	55.4	55.4	57.6	57.0	53.6	51.0	50.3	49.7	48.7	49.6	50.7	55.0	59.0	61.3	63.6	63.7	56.1	63.7
	70.9	71.4	72.1	73.2	74.3	75.8	76.2	74.3	69.4	65.1	59.6	55.7	53.1	51.1	50.0	49.5	50.3	52.4	56.5	61.7	64.8	66.2	68.4	69.4	Diurnal Average	
	88.7	87.7	88.9	88.6	87.8	90.4	91.6	89.1	86.4	82.2	79.5	80.4	79.0	80.9	84.5	71.9	70.4	75.2	77.7	91.2	92.8	86.6	88.3	89.0	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Ells River - March 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	45	6.05	6.05
40 - 60	240	32.26	38.31
60 - 80	374	50.27	88.58
80 - 100	85	11.42	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Global Radiation (GR) - W/m2

Ells River - March 2025

Maximum Value: 613.2 W/m2 on Mar 29 13:00

Maximum Daily Average: 193.2 W/m2 on Mar 29

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

Minimum Daily Average: 46.9 W/m2 on Mar 8

Maximum Diurnal Average: 432.1 W/m2 at hour 13

Minimum Diurnal Average: 0.0 W/m2 at hour 2

Monthly Average: 121.40 W/m2

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 4.0 Q_3 = 222.1 P_{90} = 408.6 P_{99} = 589.7

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

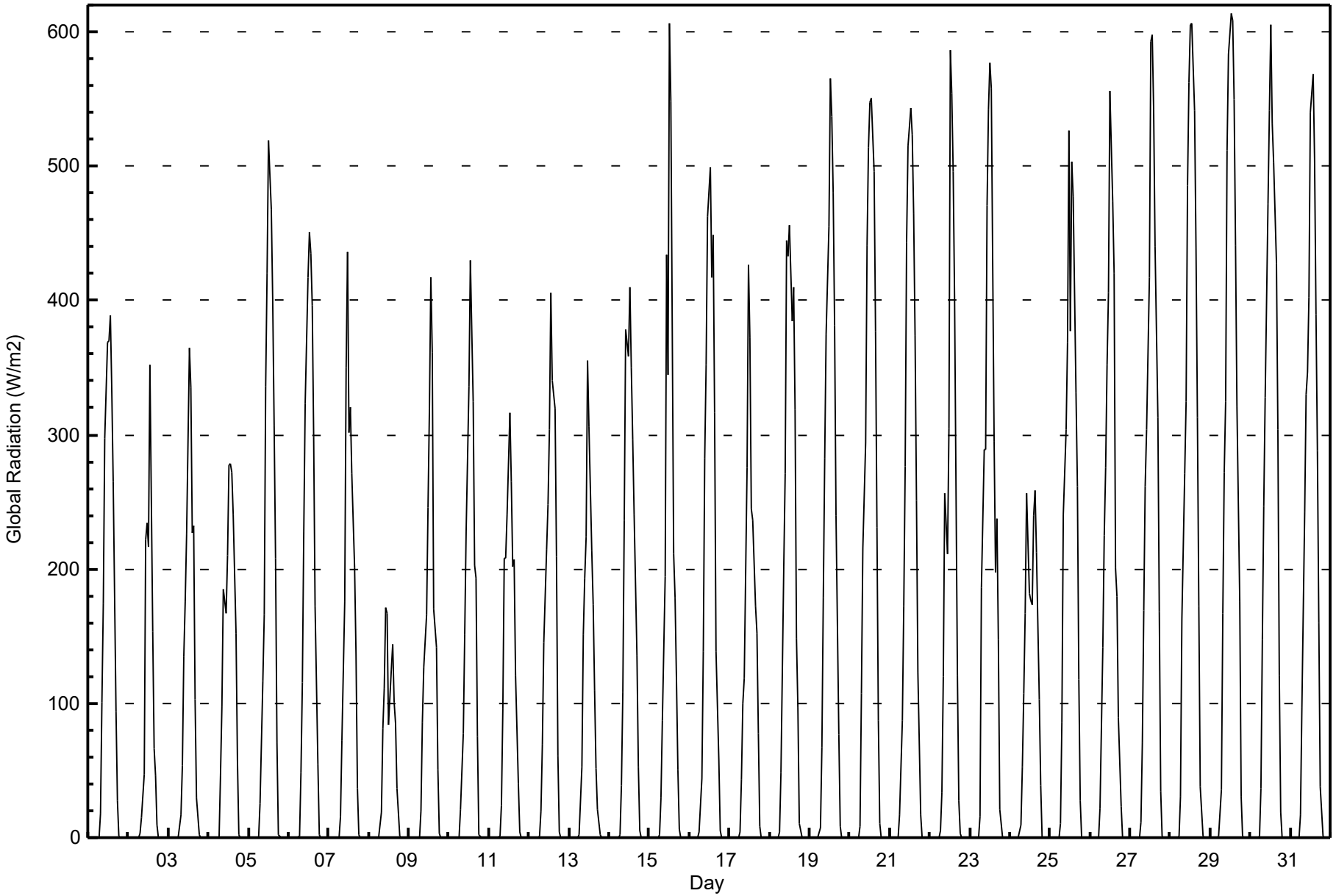
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.0	101.1	174.6	297.9	369.0	370.3	389.1	333.5	264.7	93.9	27.5	0.7	0.0	0.0	0.0	0.0	0.0	101.7	389.1
2-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	14.9	47.2	221.5	234.0	216.1	352.4	153.5	66.5	46.3	9.0	0.2	0.0	0.0	0.0	0.0	0.0	56.9	352.4
3-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.1	53.5	134.4	176.0	226.3	365.1	335.6	227.5	232.4	102.8	29.1	1.7	0.0	0.1	0.2	0.1	0.0	79.2	365.1
4-Mar	0.2	0.0	0.0	0.1	0.0	0.1	0.4	46.2	97.6	184.5	166.8	210.3	277.3	278.1	271.7	240.8	152.0	58.1	1.6	0.0	0.0	0.0	0.1	0.1	82.8	278.1
5-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.2	117.1	166.5	336.5	419.8	519.2	467.4	399.5	306.4	208.1	70.4	1.8	0.0	0.0	0.0	0.0	0.0	126.6	519.2
6-Mar	0.0	0.0	0.2	0.1	0.3	0.4	1.0	47.9	115.9	228.3	323.2	416.7	450.8	435.5	396.5	298.8	172.8	55.1	2.5	0.1	0.0	0.0	0.0	0.0	122.8	450.8
7-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.3	72.6	175.6	349.5	436.4	301.5	320.7	271.2	200.8	136.2	36.6	1.8	0.0	0.0	0.0	0.0	0.0	96.6	436.4
8-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.4	80.6	111.0	171.8	166.9	84.0	124.8	143.5	101.2	85.1	36.6	1.4	0.0	0.0	0.0	0.0	0.0	46.9	171.8
9-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.2	19.5	86.5	126.8	166.2	245.6	319.7	417.4	361.2	170.3	142.1	49.9	3.1	0.0	0.0	0.0	0.0	0.0	87.9	417.4
10-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.4	21.5	77.5	151.5	228.5	281.4	336.2	430.2	324.8	203.0	193.2	75.6	2.4	0.0	0.0	0.0	0.0	0.0	96.9	430.2
11-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.7	24.0	95.8	208.1	208.0	240.3	316.3	264.3	201.4	206.6	121.2	40.2	3.8	0.0	0.0	0.0	0.0	0.0	80.4	316.3
12-Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.9	19.5	69.6	145.0	214.8	247.5	303.6	405.9	340.7	318.9	209.5	60.8	4.6	0.0	0.1	0.0	0.0	0.0	97.6	405.9
13-Mar	0.0	0.0	0.1	0.0	0.0	0.0	2.6	52.5	151.4	193.5	223.9	355.2	305.4	213.3	173.8	109.6	51.1	21.5	1.9	0.0	0.0	0.0	0.0	0.0	77.3	355.2
14-Mar	0.0	0.0	0.0	0.0	0.0	0.0	2.4	39.3	108.6	236.7	378.4	358.6	410.2	349.6	296.6	240.2	135.1	53.0	5.4	0.0	0.0	0.0	0.0	0.0	108.9	410.2
15-Mar	0.0	0.0	0.1	0.0	0.0	0.0	1.8	29.9	87.3	194.4	433.5	345.1	606.3	548.7	211.2	178.8	117.0	50.0	6.4	0.0	0.0	0.0	0.0	0.0	117.1	606.3
16-Mar	0.0	0.0	0.0	0.0	0.0	0.0	3.9	44.1	139.2	282.9	351.8	462.4	499.6	416.7	448.2	316.6	138.8	57.8	5.2	0.0	0.0	0.0	0.0	0.0	132.0	499.6
17-Mar	0.0	0.0	0.0	0.0	0.0	0.0	3.9	43.1	100.0	118.9	275.7	426.1	371.9	245.3	236.4	172.5	152.2	78.0	8.7	0.0	0.0	0.1	0.0	0.0	93.0	426.1
18-Mar	0.0	0.0	0.0	0.0	0.0	0.0	4.1	48.0	201.6	271.3	444.9	432.5	456.2	384.4	409.8	317.9	147.7	96.8	10.1	0.1	0.0	0.0	0.0	0.0	134.4	456.2
19-Mar	0.0	0.1	0.1	0.0	0.0	0.1	7.0	66.9	179.2	282.3	374.8	455.2	565.3	536.5	480.7	381.9	240.0	76.9	8.7	0.0	0.0	0.0	0.0	0.0	152.3	565.3
20-Mar	0.0	0.0	0.0	0.0	0.0	0.0	8.2	107.5	215.2	294.1	441.4	513.9	548.0	550.2	495.8	376.9	231.4	87.4	10.6	0.0	0.0	0.0	0.0	0.0	161.7	550.2
21-Mar	0.0	0.0	0.0	0.0	0.0	0.0	16.5	87.2	171.9	276.1	443.2	515.0	543.5	523.8	464.7	374.1	251.5	123.4	16.6	0.3	0.1	0.0	0.0	0.0	158.7	543.5
22-Mar	0.0	0.0	0.0	0.0	0.0	0.1	5.0	33.2	119.9	256.3	211.3	304.6	586.0	553.6	496.3	399.9	121.1	27.3	3.4	0.0	0.0	0.0	0.0	0.0	129.9	586.0
23-Mar	0.0	0.0	0.0	0.0	0.0	0.2	16.1	185.9	289.5	288.7	470.7	542.7	577.3	558.4	295.5	197.3	237.6	146.8	20.5	0.4	0.0	0.0	0.0	0.0	159.5	577.3
24-Mar	0.1	0.0	0.0	0.0	0.0	0.0	9.7	52.8	106.9	167.0	256.0	181.9	176.1	173.7	239.2	258.8	211.9	103.5	39.2	0.3	0.0	0.0	0.0	0.0	82.4	258.8
25-Mar	0.1	0.0	0.0	0.0	0.0	0.3	10.8	86.7	240.8	304.1	369.2	526.6	377.0	503.7	476.6	330.9	261.5	117.3	27.8	0.4	0.0	0.0	0.0	0.0	151.4	526.6
26-Mar	0.0	0.0	0.0	0.0	0.0	0.1	22.3	141.7	224.9	275.4	351.5	405.9	556.2	474.4	420.8	201.0	179.3	89.8	23.5	0.0	0.0	0.0	0.0	0.0	140.3	556.2
27-Mar	0.0	0.0	0.0	0.0	0.0	0.0	11.9	70.9	169.7	261.9	303.4	417.1	592.5	598.1	541.9	440.0	313.5	168.5	34.8	0.6	0.0	0.0	0.0	0.0	163.5	598.1
28-Mar	0.0	0.0	0.0	0.1	0.2	0.7	30.0	162.5	270.9	324.3	485.1	562.1	605.3	606.3	541.1	439.1	312.9	172.4	37.5	0.6	0.0	0.0	0.0	0.1	189.6	606.3
29-Mar	0.1	0.1	0.1	0.2	0.2	0.8	35.3	166.7	272.6	325.1	511.6	582.8	613.2	608.2	549.7	440.9	321.7	175.9	30.2	0.6	0.0	0.0	0.0	0.0	193.2	613.2
30-Mar	0.0	0.0	0.0	0.1	0.0	1.0	36.7	147.0	246.9	328.1	471.7	541.6	605.1	531.9	502.2	428.1	303.3	121.1	18.8	0.3	0.0	0.0	0.0	0.0	178.5	605.1
31-Mar	0.0	0.0	0.0	0.0	0.0	0.3	17.1	96.7	242.6	330.2	346.9	402.1	539.9	568.1	504.5	389.7	287.8	159.3	37.3	1.3	0.2	0.1	0.1	0.1	163.5	568.1
	0.0	0.0	0.0	0.0	0.0	0.1	8.0	62.6	145.9	221.4	322.8	381.5	432.1	424.7	361.6	277.6	183.2	79.9	12.0	0.2	0.0	0.0	0.0	0.0	Diurnal Average	
	0.2	0.1	0.2	0.2	0.3	1.0	36.7	185.9	289.5	330.2	511.6	582.8	613.2	608.2	549.7	440.9	321.7	175.9	39.2	1.3	0.2	0.2	0.1	0.1	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Global Radiation (GR) - W/m2

Ells River - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Ells River - March 2025

Maximum Speed: 25 km/h on Mar 25 18:00

Maximum Daily Speed Average: 18.6 km/h on Mar 14

Minimum Speed Value: 0 km/h on Mar 24 08:00

Minimum Daily Speed Average: 1.2 km/h on Mar 15

Maximum Diurnal Speed Average: 9.2 km/h at hour 22

Minimum Diurnal Speed Average: 2.7 km/h at hour 11

Monthly Average Velocity: 4.7 km/h 22.4 deg

Percentiles: P_1 = 1 P_{10} = 3 Q_1 = 5 Median = 9 Q_3 = 14 P_{90} = 19 P_{99} = 24

Hours in Service:	744
Hours of Data:	723
Hours of Missing Data:	21
Percent Operational Time:	97.2

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	S10	S9	S10	SSE9	SSE8	SSE6	SSE8	SSE8	SSE10	S12	SSE11	SSE11	SSE13	SSE12	S12	SSE12	SSE8	SSE4	NNW3	W2	UO	UO	W2	S5	SSE7.8	SSE13
2-Mar	S5	S6	SSE5	S6	S4	E3	WNW5	NW6	NW5	W4	W2	WSW2	WNW6	NW6	WNW10	NNW14	NNE20	NNE16	NE13	NNE11	NNE12	NNE13	NNE11	NNE17	N4.4	NNE20
3-Mar	NNE17	NNE14	NNE12	NNE8	NNE7	NE1	ENE2	SSE3	SSE4	SE5	SSE4	SSE7	S10	SSW8	SSE10	SE10	SE12	SE9	SSE7	S9	S4	UO	SSW5	S7	SE3.2	NNE17
4-Mar	SSW7	SW7	SSW8	SSW9	SW10	SW10	SW8	SW9	SW11	SW11	SSW13	SSW13	SSW12	SSW12	SW12	SW16	SW14	SW10	SW7	NW6	N17	NNE10	NE5	N3	SW6.8	N17
5-Mar	NNW4	NNE12	N13	NNE15	NNE17	N22	N24	NNE17	NNE14	NNE11	NNE7	NNE6	ESE7	SE15	SSE15	SE9	ESE7	SE7	NNE6	N8	N7	NNW3	N5	NNW4	NNE7.1	N24
6-Mar	N5	N5	NW5	WNW4	W3	S3	S4	S4	S4	SSE9	SSE15	SSE13	SSE13	SSE14	SSE15	SSE14	SE10	SSE9	S6	WNW4	WNW4	WNW9	N8	N11	SSE3.6	SSE15
7-Mar	N8	N7	NNE8	NNE7	N12	N12	N8	N4	N4	NNE5	NE3	SSE8	NE7	E9	NNE23	NNE21	NNE23	NNE19	NNE19	NNE15	N14	N13	N11	N11	NNE10.3	NNE23
8-Mar	N12	N8	N7	N9	N9	N10	NNW9	NNW8	N9	N7	N6	NNE12	N18	N23	NNE22	NNE23	NNE18	NNE12	NNE14	NNE19	NNE19	NNE19	NNE22	NNE23	NNE13.8	NNE23
9-Mar	NNE19	NNE18	NNE14	NE13	NE15	NNE15	NNE15	NNE13	NNE16	NNE17	NNE15	NNE13	NNE10	NNE10	NE11	NE12	NE14	NE14	NNE10	NNE13	NNE11	N9	N6	N6	NNE12.7	NNE19
10-Mar	N8	NNW8	N4	N5	N6	N6	N3	W1	NNE1	NE3	NE3	S7	SSE5	E4	SE8	SSE7	SE5	ENE6	NNE8	NNE10	NNE9	N11	N12	N12	NNE3.5	N12
11-Mar	N13	N12	N14	N12	N13	N11	N12	N13	N16	NNE16	N13	NNE16	NNE20	N20	NNE24	NNE25	NNE25	N24	N21	N21	N21	N20	N19	N17	N17.3	NNE25
12-Mar	N17	N12	N14	N10	N7	NE2	WSW4	W4	WNW4	NNE3	NE3	NNE3	N3	NE4	ENE7	E7	ENE11	ENE7	ESE3	N1	WNW2	NW3	WNW4	NW4	NNE3.9	N17
13-Mar	W3	WNW2	WNW4	NW2	WNW4	WNW4	WNW5	NW3	N6	N7	NNE7	N13	NNE16	NNE18	N19	NNE20	N22	N23	N21	N22	N24	NNE23	N20	N19	N11.8	N24
14-Mar	N21	N24	N25	N25	N23	N21	N18	N20	N18	NNE19	N25	N21	NNE19	NNE22	N22	N22	N20	N19	NNE14	NNE14	N11	N12	N9	NNW4	N18.6	N25
15-Mar	WNW7	NW7	W5	W6	W4	W3	UO	UO	UO	UO	UO	ENE3	ESE7	SSE11	SE8	SSE7	SSE9	SSE9	ESE4	NE8	NNE10	NNE11	N12	N11	NE1.2	N12
16-Mar	NNW9	NNW7	NNW4	NW5	NNW2	WNW3	SW2	S4	SE5	ESE6	ESE7	SE13	SSE17	SE15	SE13	SE13	SSE14	SE13	ESE8	ESE7	ESE5	SE8	SE11	SE8	SE5.6	SSE17
17-Mar	SSE7	SSE6	SE5	SSE7	W2	WNW3	UO	UO	UO	NNW8	NNE12	NNE15	NE17	NNE17	NNE15	NNE15	NE12	NE10	NE7	NE9	NNE5	WNW2	WSW1	WSW4	NE5.7	NE17
18-Mar	SW6	NNE2	NNE3	NW9	NNW8	NNW3	WSW2	SSW3	NNE1	ENE4	ESE6	S3	W9	W9	WSW5	SSE9	S9	SE9	SE7	E0	N14	N13	NNW11	N13	NW1.4	N14
19-Mar	NNW11	NNW7	WNW4	W5	W2	SSW1	S3	SSW2	SE2	SE7	SSE12	SE10	SE8	SE7	SE8	SE8	NNE12	N19	NNE20	NNE18	NNE19	N23	N24	N24	NNE5.2	N24
20-Mar	N20	N21	N18	NNE17	N12	N14	N13	N16	N13	N14	N13	NNE14	NNE14	NNE17	NNE16	NNE15	NNE15	NNE15	N14	N12	N12	N11	N8	NNE4	N13.9	N21
21-Mar	N3	NW0	WNW2	NW3	WNW2	WNW4	W3	W2	SSE5	SSE10	SE10	SE10	SE11	SSE9	SE14	SSE14	SSE16	SSE12	SE5	SE7	SE7	SE5	NNE1	NW2	SSE4.7	SSE16
22-Mar	S4	S4	S6	S9	S10	S10	S9	S11	SSE14	SSE12	SSE12	SSE11	SSE13	SSE14	SE14	SE15	N9	NW4	NW5	NW3	NW5	NNE11	ESE1	SE6	SSE5.6	SE15
23-Mar	ESE4	UO	UO	UO	UO	UO	UO	UO	UO	E4	ESE6	SE10	SE11	SE15	SE13	SE9	SE7	SSE5	ENE6	NNW3	NNW4	NNW4	NNW3	N5	----	SE15
24-Mar	N2	NW3	NNW3	WNW1	W3	UO	WSW2	W0	S4	S10	S8	SSW9	S13	SSE10	SSW5	WSW11	W13	WNW12	NNW12	NW11	WSW7	SW8	WSW6	WSW9	WSW4.2	S13
25-Mar	SW8	SW9	SW9	SW8	WSW5	S4	SW3	W2	NW2	ESE2	S5	S8	WSW7	WNW24	WNW20	NW22	N21	NNE25	NNE22	NNE19	NNE20	NNE23	NNE21	NNE19	NNW6.2	NNE25
26-Mar	N22	NNE19	NNE14	N14	N8	NNE7	NE7	NE10	NE15	NE12	NNE9	NNE9	NNE10	NNE9	NNE7	NNE12	NNE14	NNE15	NNE12	NNE13	N11	NNE12	NNE12	N14	NNE11.8	N22
27-Mar	NNE14	N14	NNE15	NNE16	NNE15	NNE15	NNE14	N15	NNE19	NNE20	NNE21	NNE20	NNE21	NNE23	NNE24	NNE23	NNE23	NNE20	NNE19	NNE17	NNE16	N13	N13	N7	NNE17.2	NNE24
28-Mar	NNW7	N7	N8	NNW5	NW4	WNW3	WNW3	N4	N8	NNW9	N10	NNW8	N11	NNE9	N10	NNW8	N9	NNE6	NNE9	N11	N10	N9	NNW8	NNW6	N7.2	N11
29-Mar	NNW8	NNW4	NW3	W4	UO	W3	W3	W2	N1	NNW1	NNW2	N4	NE5	SE10	SSE12	SE16	SSE16	SSE13	ESE7	NNE10	N14	N11	NNW10	NNW8	NE1.4	SE16
30-Mar	NNW7	N7	N4	NW4	WNW4	WNW4	WSW1	WNW2	NNE2	NNW3	N3	N6	N6	N8	NE8	ESE10	E7	NE10	NE11	NNE11	NNE11	N12	N11	N10	NNE5.2	N12
31-Mar	NNE6	N4	ENE4	E4	E6	E4	E5	SE4	SE7	SE8	SSE12	SSE11	SE13	SE14	SE13	SE15	SE15	SE14	SE10	SE7	ESE6	SE8	SE9	SSE7	SE7.5	SE15
	N6.0	N6.0	N4.9	N4.3	N4.3	N3.8	N3.1	N2.8	NNE3.3	NE3.2	ENE2.7	ENE3.0	ENE3.4	ENE3.7	ENE4.0	ENE4.6	NE6.1	NE6.3	NNE7.3	NNE8.2	NNE9.1	N9.2	N7.7	N6.8	Diurnal Average	
	N22	N24	N25	N25	N23	N22	N24	N20	NNE19	NNE20	N25	N21	NNE21	WNW24	NNE24	NNE25	NNE25	NNE25	NNE22	N22	N24	NNE23	N24	N24	Diurnal Maximum	

UO - Unstable Operation

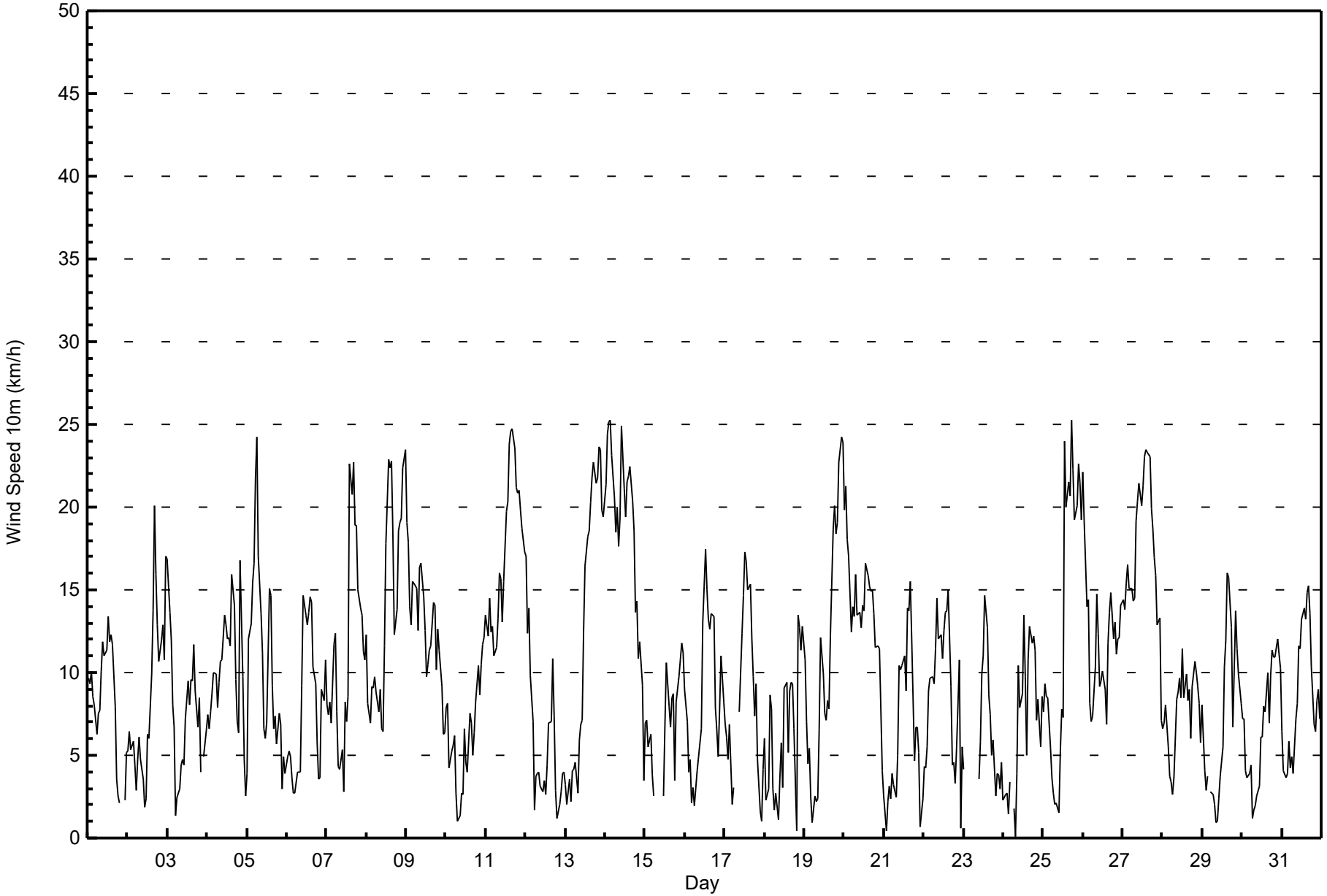
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Ells River - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	190	26.28	26.28
6 - 11	265	36.65	62.93
12 - 19	201	27.80	90.73
20 - 28	67	9.27	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 723

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Ells River - March 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	19	11	9	4	7	6	8	8	16	5	2	9	23	25	19	19	190
6 - 11	53	36	11	5	4	12	34	31	20	5	15	5	3	4	6	21	265
12 - 19	53	80	10	0	0	0	19	25	3	4	3	0	1	1	0	2	201
20 - 28	34	30	0	0	0	0	0	0	0	0	0	0	0	2	1	0	67
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	159	157	30	9	11	18	61	64	39	14	20	14	27	32	26	42	723

Total Number of Valid Hours: 723

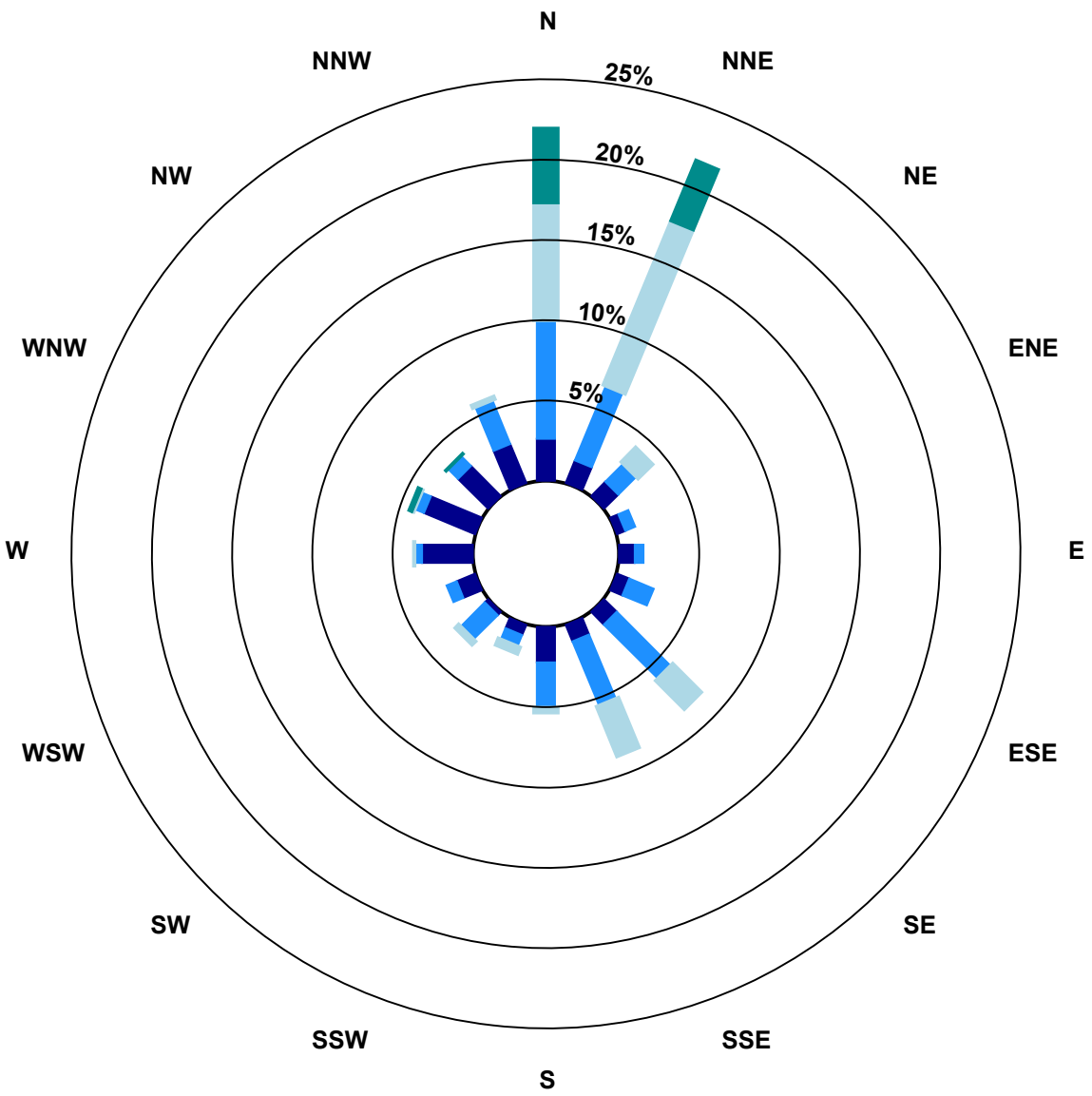
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 10m (WS10) - km/h

Ells River



Classes (km/h)

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

Total Number of Valid Hours: 723

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8 km/h on Mar 2 16:00

Minimum Value: 1 km/h on Mar 12 19:00

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

Hours in Service:	744
Hours of Data:	723
Hours of Missing Data:	21
Hours of Calibration:	0
Percent Operational Time:	97.2

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

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Ells River - March 2025

Direction of Maximum Speed: 26 deg on Mar 25 18:00
Direction of Maximum Daily Speed Average: 5.1 deg on Mar 14

Direction of Minimum Speed: 274 deg on Mar 24 08:00

Direction of Minimum Daily Speed Average: 1.2 deg on Mar 15

Monthly Average Direction: 22.4 deg

Hours in Service:	744
Hours of Data:	723
Hours of Missing Data:	21
Percent Operational Time:	97.2

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	172	175	172	168	163	152	154	160	164	169	162	152	158	156	174	156	155	149	332	279	UO	UO	269	181	164.6
2-Mar	183	183	154	179	179	98	285	317	316	265	273	245	296	314	287	347	15	31	35	31	23	21	21	26	5.4
3-Mar	26	27	27	26	30	44	65	148	163	144	168	167	185	201	163	134	134	142	158	173	184	UO	193	186	128.6
4-Mar	193	224	213	210	230	223	223	227	228	224	204	201	196	212	228	230	232	230	225	309	6	22	41	7	225.7
5-Mar	344	15	10	14	16	8	8	24	30	25	13	16	103	130	147	126	116	144	24	355	0	348	6	343	30.0
6-Mar	8	350	309	285	265	186	184	178	185	160	164	149	164	166	158	148	139	164	181	289	296	295	356	4	167.9
7-Mar	2	7	23	28	2	9	11	351	8	14	49	165	41	83	18	15	14	15	18	12	3	5	6	4	15.4
8-Mar	2	6	356	5	6	357	339	343	359	2	8	12	11	9	14	17	22	30	24	26	30	25	21	24	14.2
9-Mar	27	27	31	35	37	29	24	30	31	32	29	26	29	32	42	44	35	36	33	13	21	9	4	1	28.7
10-Mar	359	342	349	7	5	354	2	267	33	42	34	174	157	94	135	168	142	78	33	21	17	4	2	357	23.3
11-Mar	2	358	359	1	6	4	6	3	9	12	2	12	14	11	14	13	17	8	7	5	4	8	3	5	7.5
12-Mar	4	6	4	9	7	38	245	262	289	25	38	33	349	45	65	84	76	73	104	360	295	314	296	313	16.6
13-Mar	277	299	284	306	286	289	282	323	354	1	16	8	16	20	10	18	10	11	10	10	10	13	10	5	5.9
14-Mar	3	6	5	3	4	2	355	356	357	12	7	8	16	13	7	10	10	8	14	13	356	354	352	338	5.1
15-Mar	290	325	278	273	274	265	UO	UO	UO	UO	UO	68	121	148	135	148	165	160	106	37	32	21	4	349	42.9
16-Mar	344	343	348	306	344	302	221	176	135	112	116	134	153	132	141	136	149	138	112	105	113	140	141	144	133.3
17-Mar	155	152	139	162	265	296	UO	UO	UO	346	22	27	39	29	32	32	38	55	39	36	17	296	255	243	36.5
18-Mar	230	25	17	316	345	342	255	192	28	65	103	176	260	261	251	162	173	141	138	89	359	354	348	349	325.2
19-Mar	342	332	285	275	264	192	187	194	136	138	167	146	143	134	142	146	23	10	14	16	16	11	8	5	21.8
20-Mar	6	6	8	13	9	4	2	8	7	2	10	21	18	26	19	19	19	14	8	359	353	356	8	24	10.0
21-Mar	353	314	290	305	302	288	272	263	160	152	134	132	139	151	142	154	147	154	135	127	133	125	13	320	147.5
22-Mar	179	189	181	176	179	177	172	171	166	165	165	148	155	165	134	132	10	326	314	306	316	26	109	136	159.2
23-Mar	102	UO	UO	UO	UO	UO	UO	UO	UO	86	116	133	137	132	126	130	139	147	76	344	332	333	347	0	--
24-Mar	350	311	328	303	277	UO	251	274	177	173	185	192	182	150	199	249	273	290	327	307	258	236	258	242	242.8
25-Mar	217	232	226	229	245	181	216	268	323	103	182	181	247	290	284	309	350	26	29	27	22	13	14	15	341.1
26-Mar	7	12	15	6	8	22	48	35	37	43	24	17	20	16	24	24	29	29	26	22	11	25	17	11	21.0
27-Mar	17	10	12	14	16	17	15	9	16	26	23	28	32	19	16	29	26	32	32	15	19	10	353	354	19.3
28-Mar	339	352	357	342	325	290	288	3	356	347	349	339	8	20	3	344	4	21	15	4	11	6	346	336	355.5
29-Mar	340	344	313	278	UO	273	267	263	8	336	334	358	43	133	152	146	152	149	118	18	11	355	343	337	55.1
30-Mar	343	4	350	304	294	284	240	298	15	338	355	352	8	10	52	119	83	42	35	28	22	2	5	8	14.9
31-Mar	12	355	75	88	87	95	101	126	131	135	162	151	145	144	140	144	145	145	143	127	120	135	134	147	133.9
	0.9	1.3	1.9	355.6	358.8	359.6	356.5	2.4	24.0	45.3	59.7	74.3	71.9	65.7	61.3	62.1	45.4	44.5	29.8	15.9	12.4	9.5	6.4	4.6	
	Diurnal Average																								

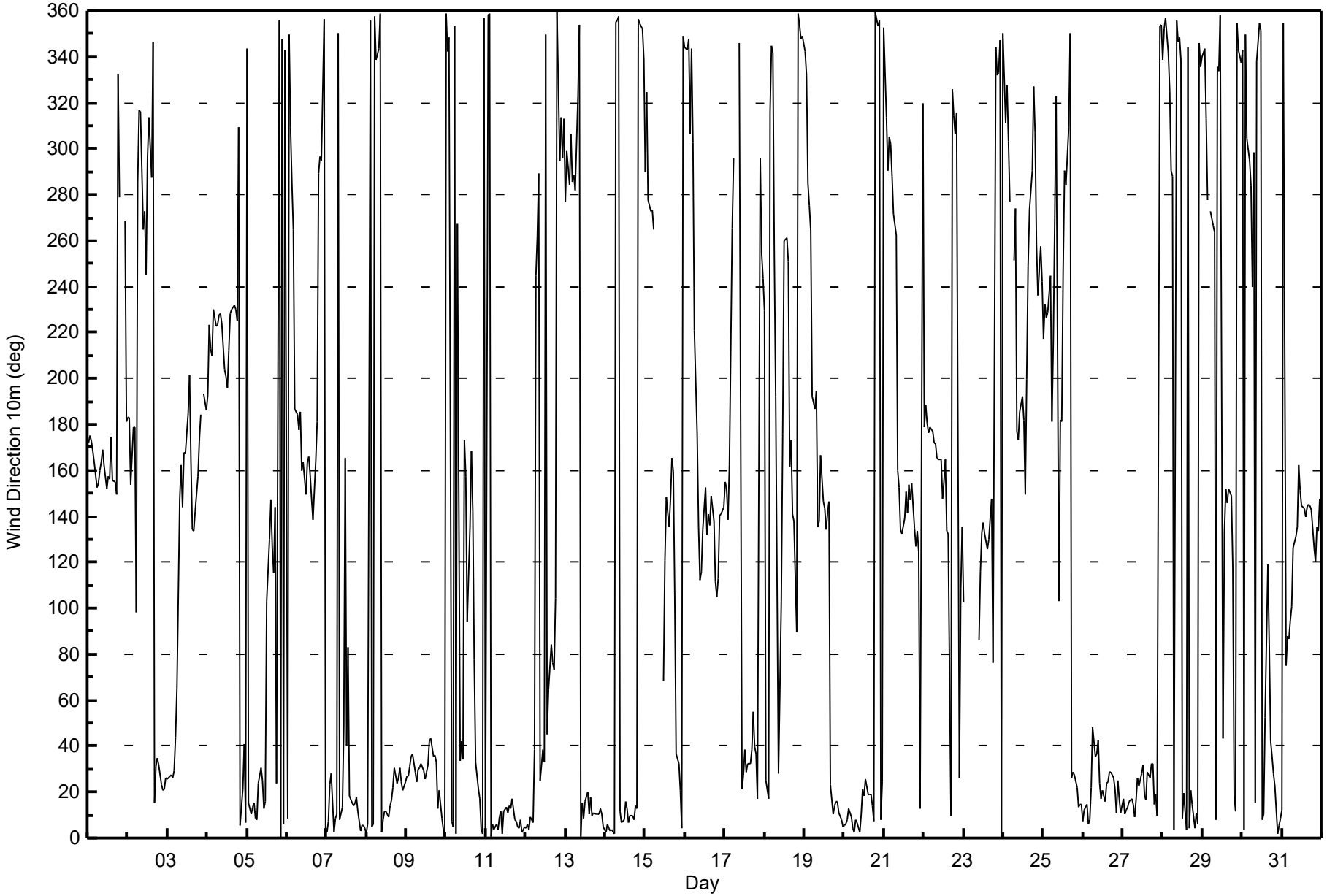
UO - Unstable Operation
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Ells River - March 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Ells River - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 88 deg on Mar 22 23:00

Minimum Value: 5 deg on Mar 31 20:00

Percentiles: P_1 = 6 P_{10} = 8 Q_1 = 10 Median = 14 Q_3 = 25 P_{90} = 41 P_{99} = 75

Hours in Service:	744
Hours of Data:	723
Hours of Missing Data:	21
Hours of Calibration:	0
Percent Operational Time:	97.2

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	7	7	6	7	10	12	10	13	8	11	14	13	12	13	13	10	20	62	44	26	UO	UO	40	22	62
2-Mar	32	21	25	20	64	76	27	21	21	31	41	78	39	55	26	31	8	10	11	10	8	8	9	9	78
3-Mar	7	7	9	13	23	47	33	37	20	24	43	28	33	38	21	16	6	10	56	8	22	UO	16	9	56
4-Mar	7	24	18	20	16	19	15	18	19	19	14	14	16	22	21	20	19	18	15	50	9	8	20	29	50
5-Mar	16	20	8	11	9	11	11	10	10	13	22	35	37	12	13	23	28	10	37	13	15	24	9	20	37
6-Mar	7	18	17	10	33	20	13	23	22	24	13	11	16	16	14	11	13	9	16	39	44	25	21	13	44
7-Mar	12	9	18	7	14	5	9	17	18	19	57	37	65	48	8	9	9	8	7	10	13	12	11	11	65
8-Mar	10	17	14	11	10	12	9	9	11	16	16	10	9	9	8	9	9	8	14	10	10	9	9	10	17
9-Mar	9	8	10	11	10	8	9	12	8	14	16	14	22	23	21	20	14	11	11	10	7	10	11	10	23
10-Mar	12	15	16	8	8	10	28	59	18	32	50	38	70	58	28	26	41	23	17	8	16	10	9	10	70
11-Mar	8	11	9	10	7	11	10	10	7	7	10	11	10	11	8	8	10	9	9	10	11	9	11	11	11
12-Mar	11	10	10	9	18	67	26	22	42	25	35	26	57	35	38	27	18	18	24	38	39	30	20	19	67
13-Mar	34	53	32	20	27	9	20	61	9	9	9	6	14	11	12	11	9	9	9	9	7	9	8	9	61
14-Mar	12	10	11	11	12	12	13	13	14	9	12	10	12	14	15	9	10	11	7	8	10	9	9	29	29
15-Mar	12	17	11	6	18	27	UO	UO	UO	UO	UO	37	33	25	26	38	25	11	46	8	5	9	12	11	46
16-Mar	7	10	28	28	67	48	56	12	12	11	19	10	14	14	17	16	12	6	11	10	13	8	7	8	67
17-Mar	8	7	10	9	52	12	UO	UO	UO	17	17	14	11	12	15	14	13	12	9	7	19	54	68	30	68
18-Mar	29	74	69	47	10	46	51	39	64	29	28	83	44	36	67	48	26	19	7	84	10	11	9	8	84
19-Mar	7	10	19	13	47	65	54	38	47	27	18	26	33	35	26	33	51	7	8	8	6	9	10	11	65
20-Mar	10	9	9	7	6	8	9	6	8	10	16	16	17	14	15	14	17	9	5	10	10	10	11	20	20
21-Mar	30	85	22	37	26	12	10	30	51	19	17	16	20	26	17	19	14	11	18	5	7	7	41	37	85
22-Mar	41	11	8	7	8	7	9	10	9	12	13	12	22	17	8	11	54	53	72	49	48	30	88	14	88
23-Mar	24	UO	UO	UO	UO	UO	UO	UO	UO	42	22	17	15	12	10	13	9	21	29	27	15	19	26	16	42
24-Mar	24	20	24	31	22	UO	27	80	70	13	21	20	14	17	40	23	22	25	19	7	27	11	31	18	80
25-Mar	19	15	17	20	38	53	51	69	44	86	68	42	63	17	27	11	32	9	11	9	9	9	9	8	86
26-Mar	10	9	8	11	8	15	12	13	14	17	26	25	26	33	42	17	14	11	9	8	8	8	9	7	42
27-Mar	8	9	6	6	7	8	9	8	10	13	11	17	14	15	13	11	14	10	9	8	7	9	10	13	17
28-Mar	12	10	12	15	13	19	26	39	14	11	14	21	23	35	23	27	20	25	11	9	6	10	7	8	39
29-Mar	7	10	21	17	UO	41	18	23	28	38	24	29	40	38	25	15	15	15	14	35	9	9	7	7	41
30-Mar	6	9	12	23	17	10	64	62	22	28	25	21	33	31	48	29	33	17	8	5	10	15	10	13	64
31-Mar	13	17	30	48	14	17	30	56	14	23	24	22	25	19	17	13	14	11	10	5	7	9	6	12	56
	41	85	69	48	67	76	64	80	70	86	68	83	70	58	67	48	54	62	72	84	48	54	88	37	
	Diurnal Maximum																								

UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS31
BLACKROD
MARCH 2025

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

April 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BLACKROD (AMS31)
MARCH 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	708	34	36	99.73	5.4	0	2.3	0
H2S (ppb) Average	706	36	38	99.73	1	0	0.3	0
NO2 (ppb) Average	707	37	37	100	27.8	0	9.8	-
NO (ppb) Average	707	37	37	100	60.5	-	15.2	-
NOX (ppb) Average	707	37	37	100	88.3	-	25	-
Temperature 2 m (C) Average	744	0	0	100	11.2	-	4.5	-
Relative Humidity (%) Average	744	0	0	100	92.6	-	85	-
Wind Speed 10 m (km/h) Average	744	0	0	100	25	-	17	-
Wind Direction 10 m (deg) Average	744	0	0	100	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BLACKROD (AMS31)
MARCH 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	708	0.31	0.6	-	0	0	0	0.1	0.3	0.6	5.4
H2S (ppb) Average	706	0.12	0.1	-	0	0	0.1	0.1	0.1	0.2	1
NO2 (ppb) Average	707	5.19	4.8	-	0.3	0.9	1.5	3.2	8	11.7	27.8
NO (ppb) Average	707	5.17	6.5	-	0	0	0.3	2	9	14.2	60.5
NOX (ppb) Average	707	10.36	10.8	-	0.4	1.1	1.8	5.2	17.1	26.6	88.3
Temperature 2 m (C) Average	744	-4.43	7.1	-	-21.1	-14.8	-9.8	-4	1.1	5	11.2
Relative Humidity (%) Average	744	65.99	15.7	-	24.5	43.2	55	69.1	78.8	83.6	92.6
Wind Speed 10 m (km/h) Average	744	10.1	5	-	0	4	7	10	13	16	25
Wind Direction 10 m (deg) Average	744	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BLACKROD 2/3 (AMS31)
MARCH 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
H2S, SO2	25 Mar 2025 12:00	25 Mar 2025 13:00	2	Maintenance - sample manifold cleaned

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Blackrod - March 2025

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

Maximum Value: 5.4 ppb on Mar 15 03:00

Maximum Daily Average: 2.3 ppb on Mar 12

Minimum Value: 0.0 ppb on Mar 1 19:00

Minimum Daily Average: 0.0 ppb on Mar 7

Maximum Diurnal Average: 0.6 ppb at hour 3

Minimum Diurnal Average: 0.1 ppb at hour 21

Monthly Average: 0.31 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.3 P_{90} = 0.6 P_{99} = 3.9

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	34
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.1	0.2	0.2	0.2	0.2	Z	0.2	0.1	0.3	0.3	0.3	0.5	0.4	0.2	0.2	0.3	0.4	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.5
2-Mar	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.3	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
3-Mar	0.1	Z	0.0	0.1	0.2	0.1	0.5	0.5	0.2	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
4-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.2
5-Mar	0.0	0.2	0.3	Z	1.0	0.3	0.3	0.2	0.1	0.3	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.0	0.1	0.0	0.0	0.0	0.1	0.2	1.0
6-Mar	0.0	0.1	0.1	0.1	Z	0.0	0.0	0.1	0.1	0.1	0.6	0.6	0.4	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6
7-Mar	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	0.1	0.0	0.1
8-Mar	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	0.1	0.0	0.0	0.0	0.0	0.7	0.0	0.7
9-Mar	0.4	Z	1.0	1.1	0.7	0.3	0.2	0.1	0.4	0.8	0.7	0.5	0.4	0.3	0.5	0.6	0.6	0.4	0.3	0.5	0.4	0.3	0.5	0.4	0.5	1.1
10-Mar	0.4	0.6	Z	0.4	0.4	0.4	0.3	0.2	0.1	0.1	0.2	0.5	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6
11-Mar	0.0	0.0	0.0	Z	0.1	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.4	0.4	0.6	0.5	0.9	1.4	0.9	0.2	1.4
12-Mar	2.3	3.9	4.6	4.0	Z	3.7	3.5	4.3	4.6	4.3	3.0	1.5	1.7	1.3	1.2	1.8	1.5	1.1	0.8	0.7	0.6	0.8	0.7	0.6	2.3	4.6
13-Mar	0.5	0.5	0.5	0.6	0.6	Z	0.5	0.5	0.6	0.4	0.3	0.3	0.3	0.1	0.1	0.1	0.1	0.0	0.1	0.3	0.0	0.0	0.2	0.4	0.3	0.6
14-Mar	Z	0.1	0.4	1.9	1.9	1.7	0.4	1.4	3.6	4.0	1.8	2.0	1.0	0.4	0.0	0.3	0.2	0.1	0.2	0.5	0.1	0.0	0.0	0.3	1.0	4.0
15-Mar	3.3	Z	5.4	2.5	2.5	1.9	1.6	1.4	2.1	1.4	0.4	0.2	0.1	0.2	0.4	0.4	0.3	0.6	0.6	0.1	0.0	0.0	0.5	0.3	1.1	5.4
16-Mar	0.6	0.8	Z	0.0	0.0	0.0	0.0	0.0	0.3	0.4	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	0.8
17-Mar	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.2	0.4	0.4	0.3	0.5	0.4	0.3	0.4	0.3	0.2	0.3	0.3	0.4	0.5	0.5	0.3	0.5
18-Mar	0.2	0.3	0.3	0.2	Z	0.4	0.2	0.2	0.3	0.7	0.3	0.2	0.2	0.3	0.3	0.5	0.3	0.4	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.7
19-Mar	0.3	0.3	0.3	0.3	0.3	Z	0.3	0.3	0.3	0.3	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	0.0	0.2	0.3
20-Mar	Z	0.0	0.0	1.1	0.8	0.2	0.1	0.0	0.0	0.0	0.4	0.3	0.4	0.2	0.1	0.2	0.2	0.1	0.0	0.0	0.2	0.1	0.1	0.3	0.2	1.1
21-Mar	0.3	Z	0.2	0.2	0.3	0.3	0.1	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.1	0.2	0.3	0.2	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.4
22-Mar	0.2	0.2	Z	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.3
23-Mar	0.1	0.0	0.1	Z	0.1	0.0	0.1	0.1	0.0	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.3
24-Mar	0.1	0.2	0.2	0.2	Z	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.1	0.2
25-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.0	M	M	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.1	0.0	0.0	0.2
26-Mar	Z	0.2	0.2	0.3	0.4	0.5	0.9	1.0	0.8	0.2	C	C	C	0.2	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	1.0
27-Mar	0.0	Z	0.2	0.2	0.1	0.1	0.2	0.2	0.5	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.6	0.2	0.6
28-Mar	0.8	0.7	Z	0.2	0.3	0.2	0.3	0.3	0.4	0.4	0.3	0.3	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.8
29-Mar	0.3	0.1	0.1	Z	0.1	0.2	0.2	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.3
30-Mar	0.1	0.2	0.3	0.4	Z	0.3	0.3	0.3	0.5	0.7	1.2	0.3	0.3	0.3	0.4	0.5	1.1	1.3	0.4	0.1	0.2	0.7	0.4	0.2	0.5	1.3
31-Mar	0.1	0.1	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	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.3	0.2	0.1	0.3
	0.4	0.3	0.6	0.5	0.4	0.4	0.3	0.4	0.5	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	Diurnal Average	
	3.3	3.9	5.4	4.0	2.5	3.7	3.5	4.3	4.6	4.3	3.0	2.0	1.7	1.3	1.2	1.8	1.5	1.3	0.8	0.7	0.6	0.9	1.4	0.9	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

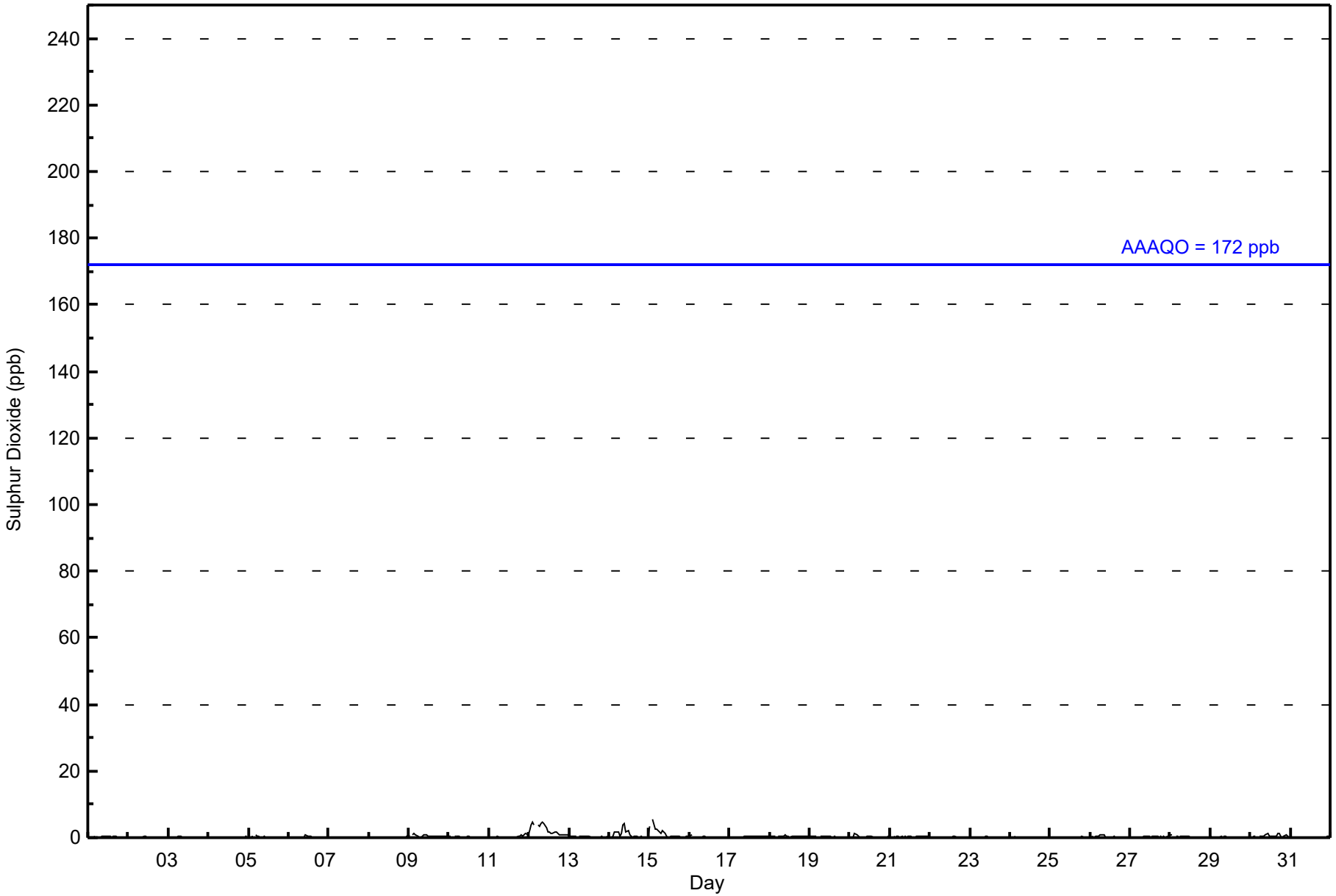
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Blackrod - March 2025



Sulphur Dioxide (SO_2) - ppb
Blackrod - March 2025

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

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Blackrod - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	43	85	78	15	10	7	10	71	177	51	28	18	16	44	23	32	708
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	43	85	78	15	10	7	10	71	177	51	28	18	16	44	23	32	708

Total Number of Valid Hours: 708

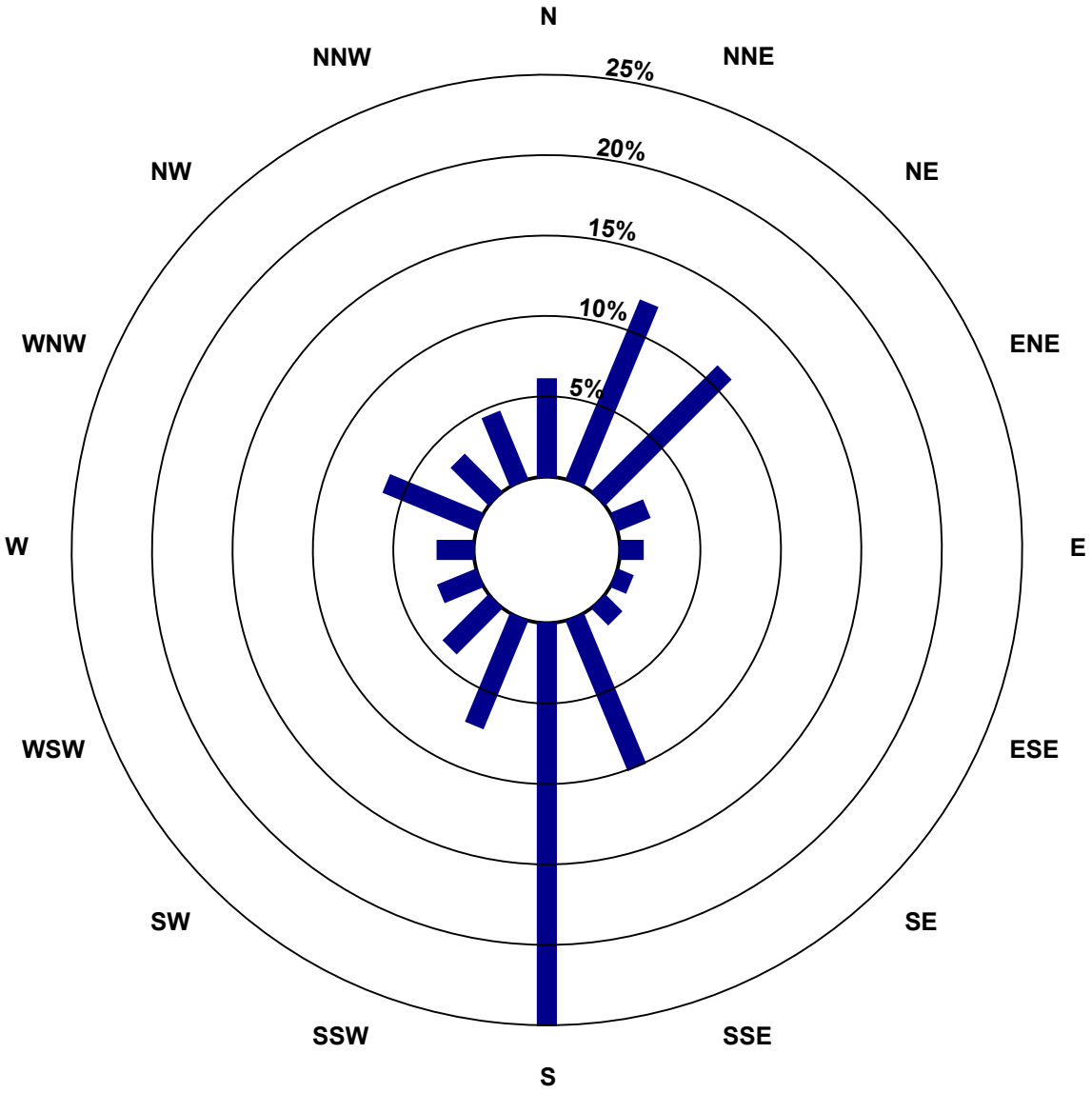
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Sulphur Dioxide (SO_2) - ppb

Blackrod



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

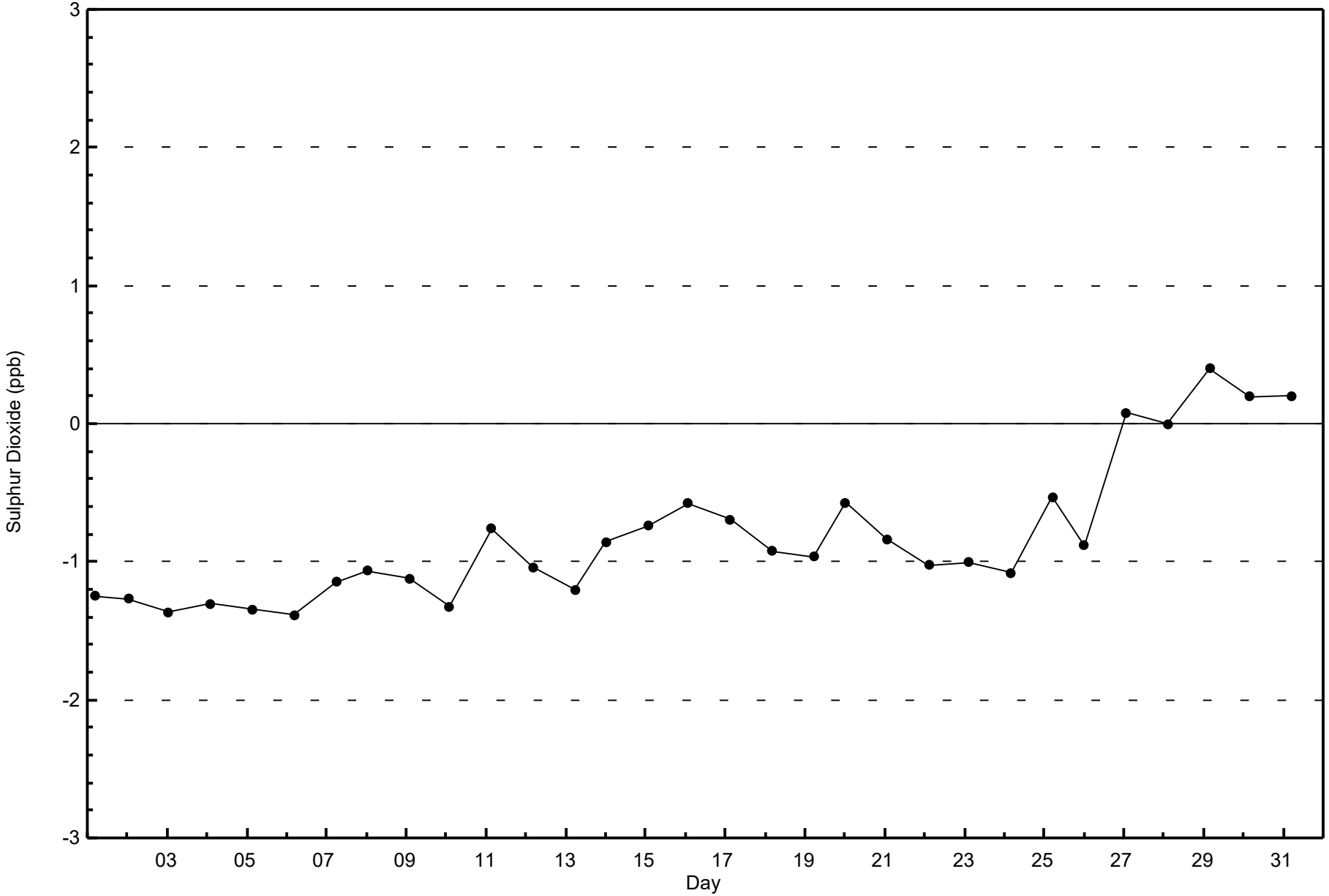
Total Number of Valid Hours: 708

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Blackrod - March 2025

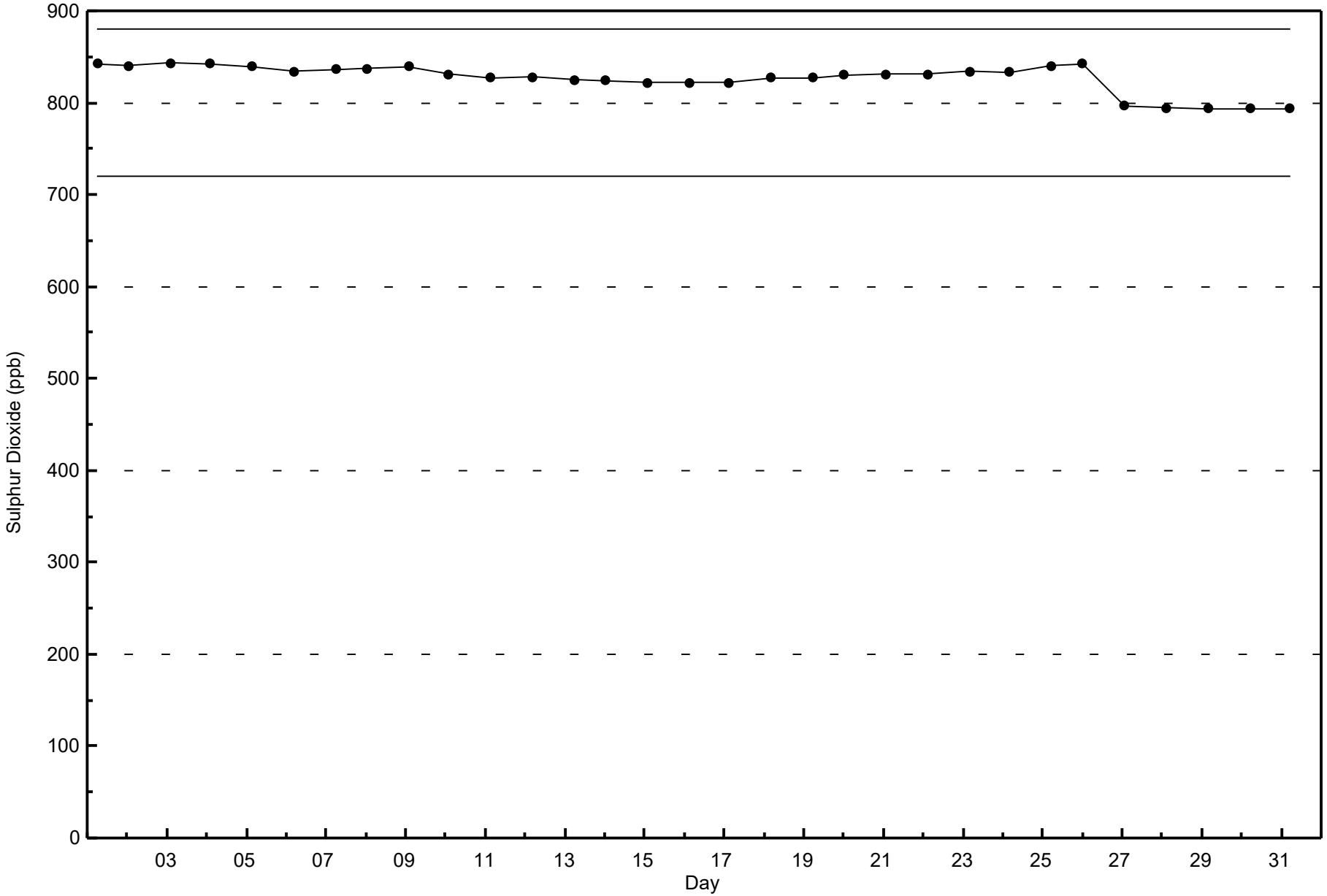


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Blackrod - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Blackrod - March 2025

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

Maximum Value: 1.0 ppb on Mar 16 02:00 Maximum Daily Average: 0.3 ppb on Mar 12

Minimum Value: 0.0 ppb on Mar 6 02:00 Minimum Daily Average: 0.0 ppb on Mar 30

Maximum Diurnal Average: 0.1 ppb at hour 13 Minimum Diurnal Average: 0.1 ppb at hour 23

Monthly Average: 0.12 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.1 Q_3 = 0.1 P_{90} = 0.2 P_{99} = 0.5

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	36
Percent Operational Time:	99.7

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

Z - zerospan C - Calibration M - Maintenance

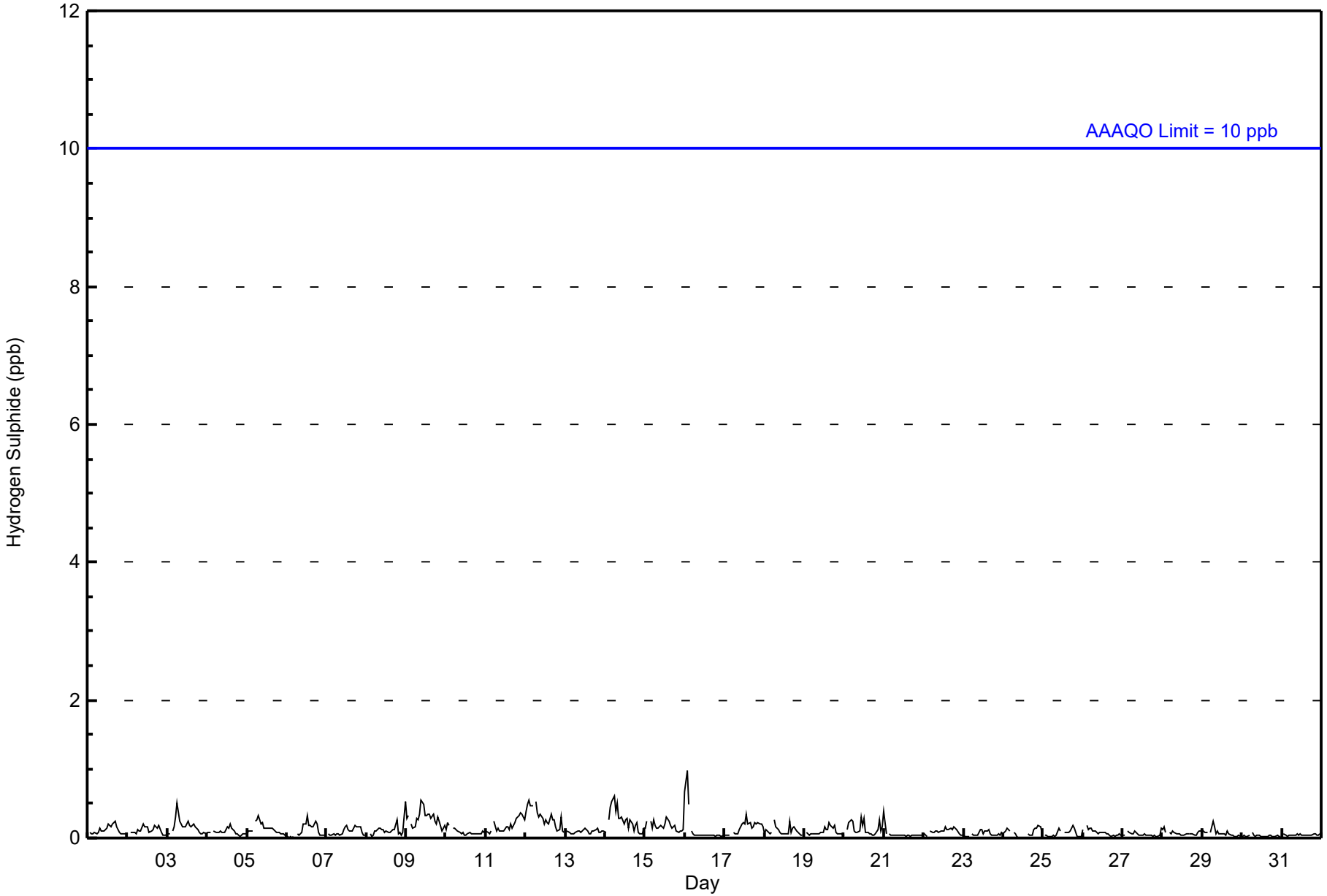
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Blackrod - March 2025



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

Total Number of Valid Hours: 706

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Blackrod - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	41	86	82	14	11	7	8	71	179	48	27	18	16	43	23	32	706
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	41	86	82	14	11	7	8	71	179	48	27	18	16	43	23	32	706

Total Number of Valid Hours: 706

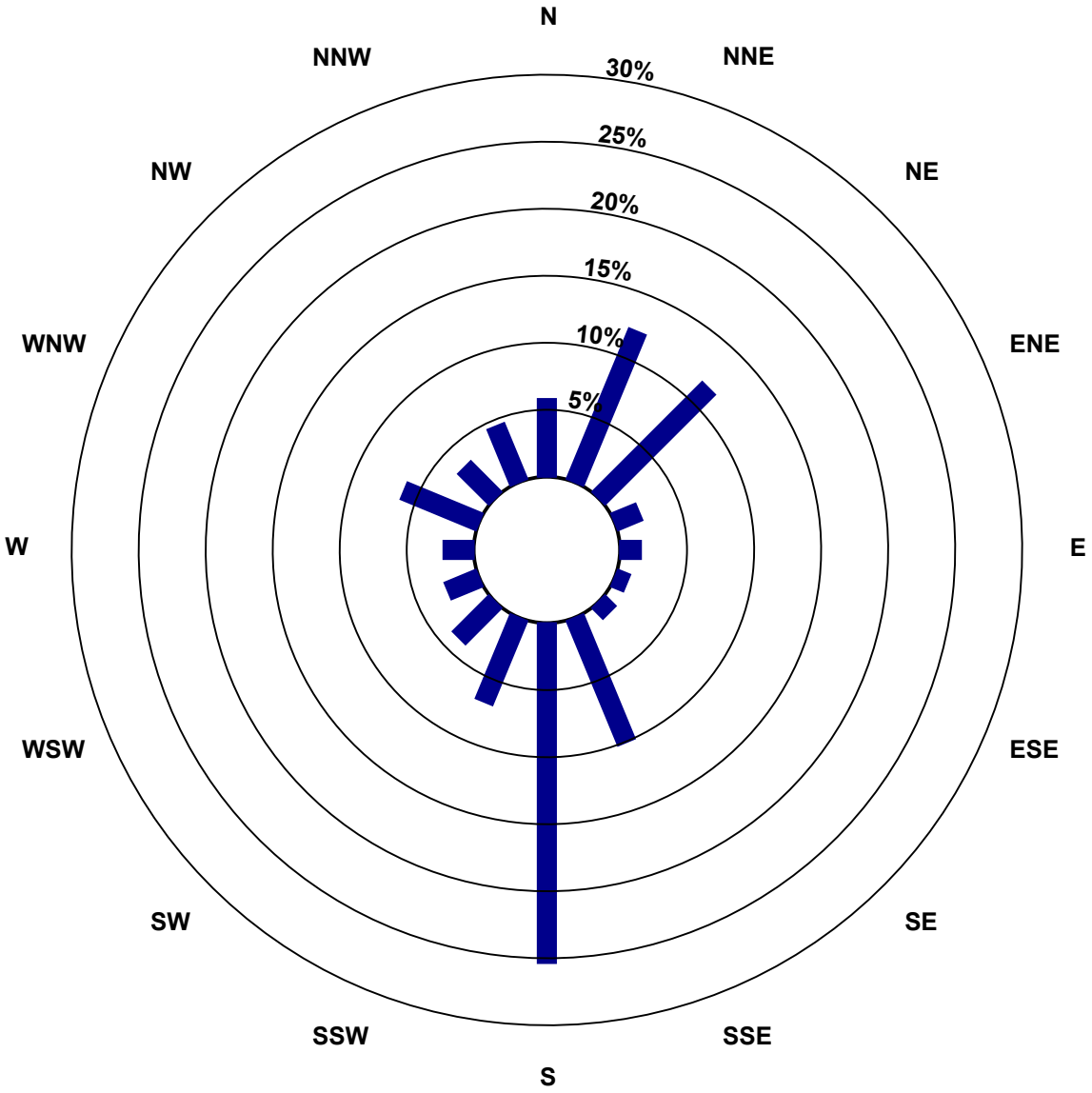
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Hydrogen Sulphide (H_2S) - ppb

Blackrod



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

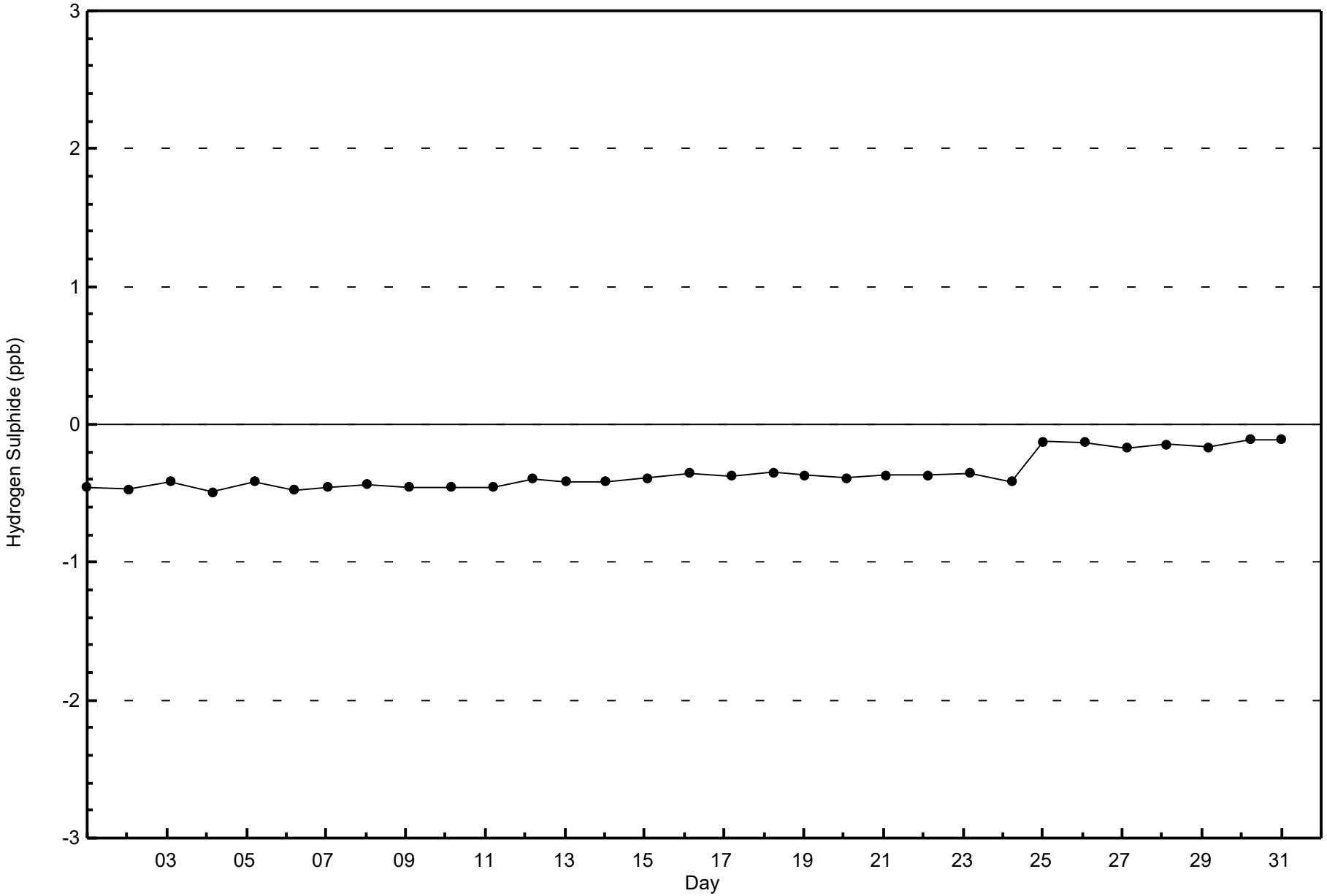
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Blackrod - March 2025

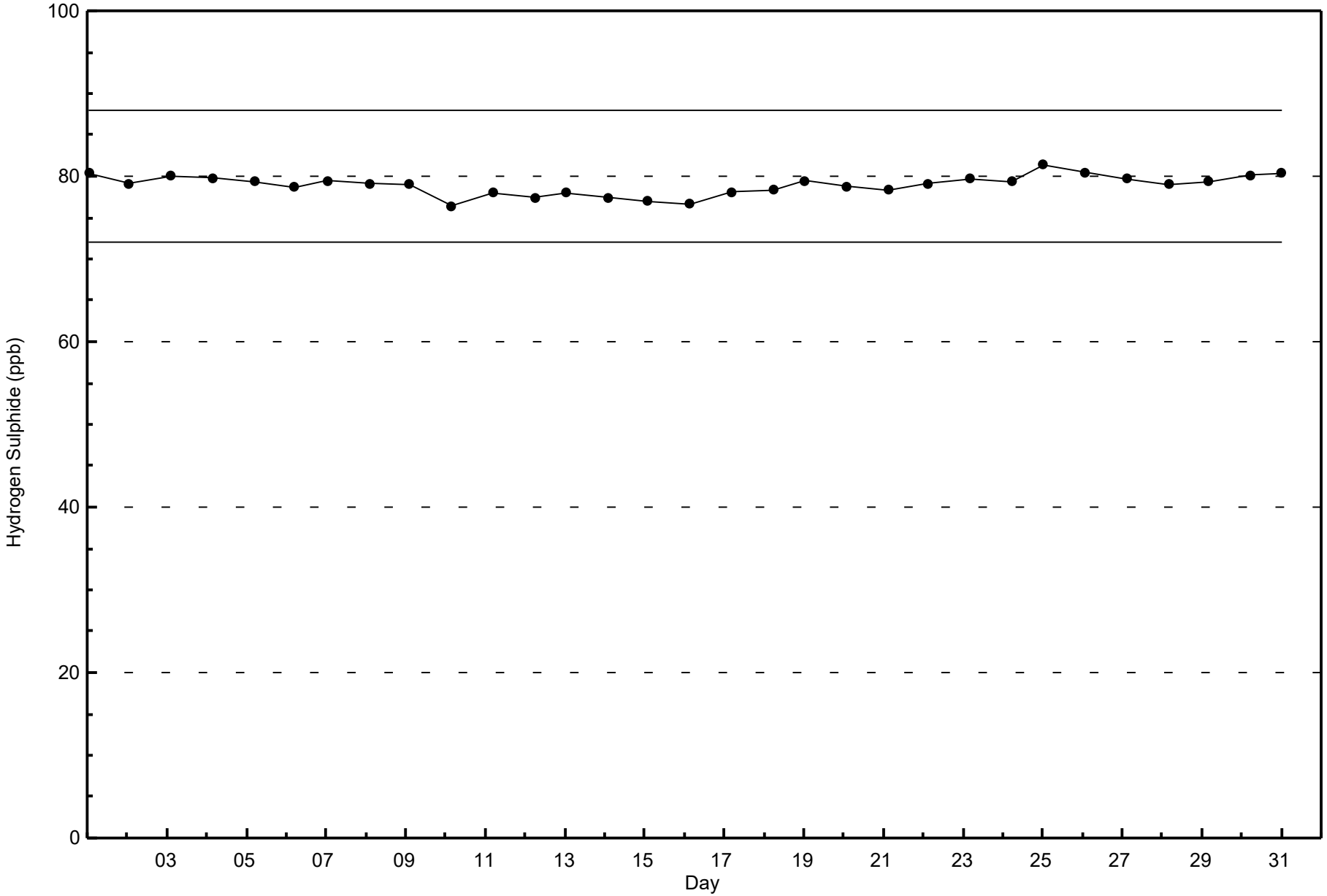


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Blackrod - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxide (NO) - ppb

Blackrod - March 2025

Maximum Value: 60.5 ppb on Mar 16 02:00

Maximum Daily Average: 15.2 ppb on Mar 9

Minimum Value: 0.0 ppb on Mar 1 21:00

Minimum Daily Average: 0.2 ppb on Mar 31

Maximum Diurnal Average: 8.9 ppb at hour 16

Minimum Diurnal Average: 1.5 ppb at hour 1

Monthly Average: 5.17 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.3 Median = 2.0 Q_3 = 9.0 P_{90} = 14.2 P_{99} = 24.1

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	1.0	0.3	0.1	Z	0.9	0.4	1.0	8.9	3.8	4.4	1.9	8.1	14.6	12.5	11.2	14.4	14.5	3.6	4.1	0.4	0.0	0.3	0.2	0.4	4.6	14.6
2-Mar	0.0	0.0	0.9	0.2	Z	0.1	3.4	1.1	3.1	14.5	12.0	10.9	11.4	5.1	6.2	9.2	15.6	13.1	11.8	17.2	6.2	1.2	1.0	0.3	6.3	17.2
3-Mar	0.5	0.3	1.0	2.1	9.5	Z	30.8	14.1	11.5	10.1	7.1	8.9	18.8	13.1	9.0	11.8	13.4	9.6	3.3	2.3	0.2	0.0	0.0	0.0	7.7	30.8
4-Mar	Z	0.1	0.0	0.1	0.1	0.3	0.6	1.6	1.5	1.3	2.5	6.7	10.9	11.8	19.0	10.3	6.8	2.9	1.0	1.3	0.1	0.1	0.0	1.5	3.5	19.0
5-Mar	1.4	Z	2.0	1.3	3.3	22.1	21.7	7.6	11.0	14.6	8.7	9.3	10.5	12.2	9.5	10.3	8.1	3.8	2.2	1.4	0.0	0.0	0.0	0.0	7.0	22.1
6-Mar	0.0	0.0	Z	0.0	0.2	0.0	1.3	0.5	0.9	2.1	14.2	16.3	16.7	12.9	13.4	11.7	13.4	22.2	13.1	0.4	0.3	0.1	0.0	0.0	6.1	22.2
7-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.3	0.5	1.2	10.2	12.1	13.7	11.1	8.8	8.5	11.4	17.8	12.3	11.9	10.6	2.8	0.9	0.0	5.8	17.8
8-Mar	0.1	2.1	0.1	0.0	Z	8.9	9.7	14.8	12.3	7.1	11.3	7.5	9.6	6.9	7.9	10.1	11.7	6.1	14.6	0.1	0.1	0.1	0.8	16.0	6.9	16.0
9-Mar	1.6	10.3	3.8	7.0	4.3	Z	13.4	11.1	21.9	31.2	25.5	16.6	19.1	22.8	22.4	18.1	22.5	17.7	13.1	21.0	18.9	5.4	9.6	12.7	15.2	31.2
10-Mar	Z	10.8	7.6	6.0	1.5	8.9	3.9	5.7	2.8	2.3	5.9	1.1	1.2	2.5	2.6	1.4	0.4	0.3	0.0	0.0	0.2	0.6	3.3	1.8	3.1	10.8
11-Mar	4.5	Z	1.1	2.4	6.5	12.2	2.4	6.7	3.8	2.9	2.1	1.4	7.1	6.8	4.1	13.2	5.5	11.8	17.8	20.5	21.8	20.5	17.5	11.7	8.9	21.8
12-Mar	3.6	10.2	Z	14.7	16.2	19.6	27.0	12.7	11.7	15.2	11.2	6.3	14.6	11.6	9.6	20.8	15.2	14.2	7.2	1.2	5.3	16.2	0.7	1.3	11.6	27.0
13-Mar	0.9	1.3	1.1	Z	1.0	1.3	4.4	4.4	5.0	2.5	7.3	8.2	8.8	4.6	2.1	2.8	5.8	3.5	6.1	7.7	1.1	1.1	4.5	2.9	3.8	8.8
14-Mar	1.8	14.4	6.7	15.9	Z	32.2	13.6	23.0	7.4	15.7	17.4	10.6	15.4	16.6	8.8	14.8	9.8	1.1	8.4	12.4	2.8	0.5	1.8	6.9	11.2	32.2
15-Mar	0.6	2.8	2.7	4.3	3.9	Z	3.7	1.3	1.3	8.6	10.3	9.1	15.2	21.6	17.9	10.2	8.5	8.1	6.8	0.5	0.1	0.0	0.4	5.2	6.2	21.6
16-Mar	Z	60.5	25.5	0.0	0.9	0.5	0.2	0.5	0.6	0.5	0.6	0.8	0.3	0.4	0.3	0.5	0.4	0.2	0.1	0.1	0.0	0.1	0.1	0.1	4.0	60.5
17-Mar	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.3	0.8	6.7	16.0	14.0	13.0	24.2	13.0	9.6	3.4	6.2	8.1	13.0	11.1	12.2	11.4	6.2	7.4	24.2
18-Mar	1.2	10.1	Z	0.4	1.1	14.2	11.8	6.3	6.1	0.5	0.8	1.7	0.8	0.8	3.4	21.4	1.4	10.3	6.1	2.9	0.4	0.1	0.0	0.4	4.5	21.4
19-Mar	0.0	0.0	0.1	Z	0.8	0.4	0.8	1.2	1.4	1.2	3.4	4.3	12.0	7.2	8.6	17.6	14.1	7.9	9.5	0.5	0.1	0.1	0.2	0.0	4.0	17.6
20-Mar	0.0	12.0	6.3	3.5	Z	11.7	0.9	1.7	1.2	4.4	20.3	10.4	19.5	2.1	1.1	0.9	1.5	0.4	0.5	0.5	7.0	10.9	0.4	4.0	5.3	20.3
21-Mar	12.4	0.0	0.0	0.0	0.0	Z	0.3	0.3	0.3	1.5	2.3	2.2	0.5	0.5	1.2	0.5	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	1.0	12.4
22-Mar	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.9	3.5	8.4	13.6	12.5	11.7	13.1	9.6	11.8	5.2	3.3	0.2	0.0	0.0	4.1	13.6
23-Mar	0.0	Z	0.0	0.0	0.1	0.1	0.3	0.9	0.5	5.3	10.8	10.6	6.1	9.7	8.3	10.8	4.1	1.6	0.1	0.0	0.0	0.0	0.0	0.0	3.0	10.8
24-Mar	0.0	0.0	Z	0.1	0.1	0.1	0.2	0.1	0.4	0.4	2.9	0.8	1.6	5.5	14.3	10.4	8.8	7.8	13.7	15.9	14.0	18.2	11.8	1.0	5.6	18.2
25-Mar	0.0	0.0	0.0	Z	0.1	0.3	1.5	0.9	1.1	C	C	C	C	C	C	10.3	8.4	13.3	8.1	4.7	0.0	0.6	1.9	0.5	--	13.3
26-Mar	2.6	3.8	6.4	2.3	Z	2.2	2.5	3.3	2.1	1.4	3.9	3.1	4.3	4.8	3.7	2.2	0.7	0.6	0.4	0.2	0.2	0.5	2.0	0.3	2.3	6.4
27-Mar	0.3	0.3	0.5	2.0	0.9	Z	2.3	1.2	3.6	1.7	1.6	1.2	2.1	2.5	1.8	2.7	1.3	0.7	0.7	0.7	0.5	0.5	1.7	9.0	1.7	9.0
28-Mar	Z	11.1	5.5	1.1	2.0	3.8	6.8	4.4	3.1	3.9	4.4	1.3	1.3	0.7	3.4	2.3	3.2	2.2	0.8	0.3	1.2	3.5	5.4	4.5	3.3	11.1
29-Mar	5.4	Z	0.6	1.6	0.0	0.9	11.4	8.6	1.4	3.6	1.2	0.3	2.0	0.6	1.0	6.9	1.6	0.7	0.0	0.0	0.0	0.5	0.1	0.1	2.1	11.4
30-Mar	0.0	0.0	Z	0.0	0.0	0.1	0.7	0.2	0.3	0.5	0.6	0.4	0.3	0.3	0.3	0.4	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.7
31-Mar	0.0	0.1	0.0	Z	0.1	0.4	0.3	0.1	0.6	0.2	0.2	0.2	0.4	0.4	0.5	0.4	0.3	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.2	0.6
	1.5	5.8	2.8	2.6	2.1	5.4	5.7	4.6	3.9	5.5	7.3	6.3	8.7	8.2	7.5	8.9	7.3	6.4	5.9	4.6	3.4	3.1	2.4	2.8	Diurnal Average	
	12.4	60.5	25.5	15.9	16.2	32.2	30.8	23.0	21.9	31.2	25.5	16.6	19.5	24.2	22.4	21.4	22.5	22.2	17.8	21.0	21.8	20.5	17.5	16.0	Diurnal Maximum	

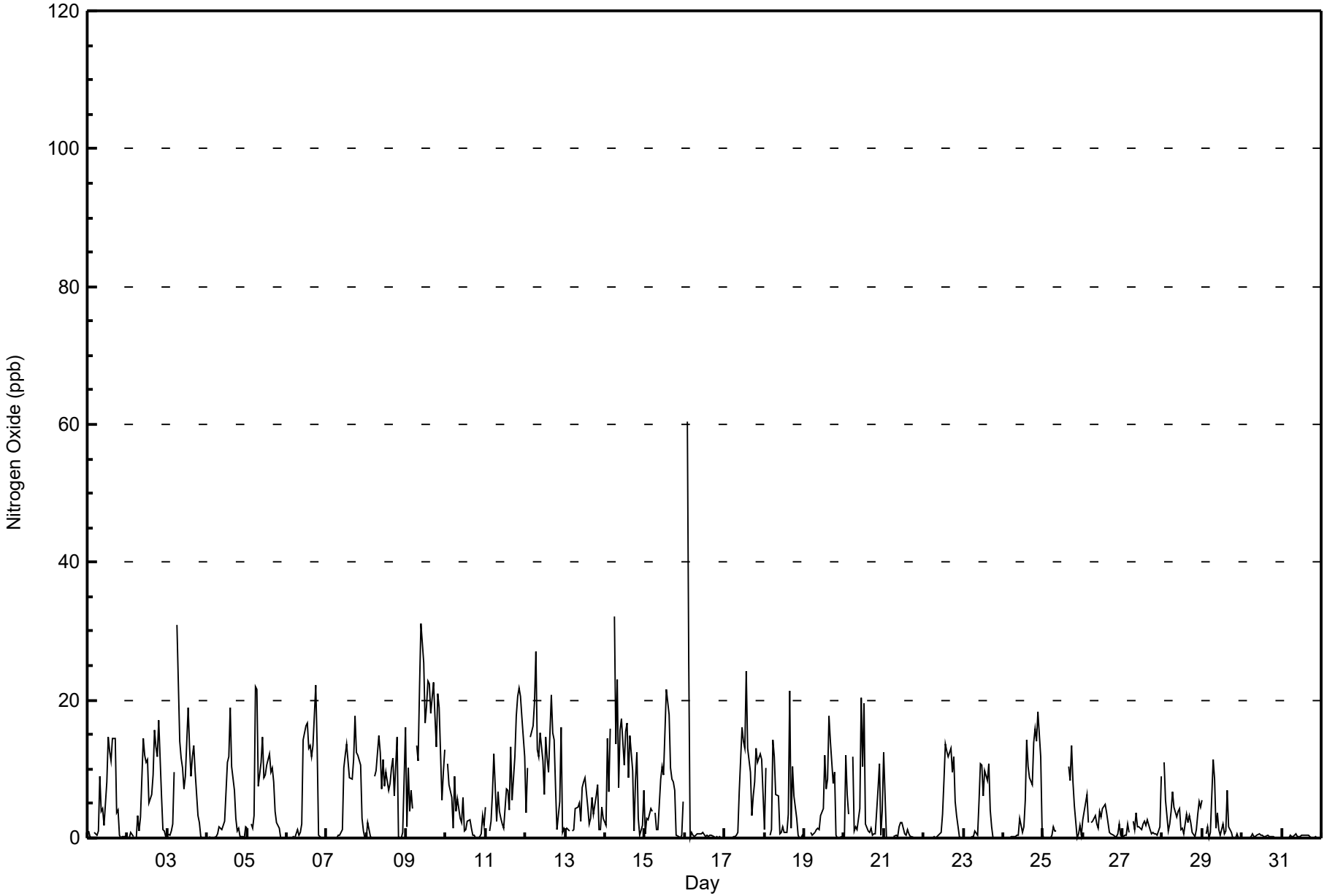
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Blackrod - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	685	96.89	96.89
21 - 40	21	2.97	99.86
11 - 80	1	0.14	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxide (NO) - ppb

Blackrod - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	34	78	81	15	11	7	10	70	177	51	26	16	16	42	18	33	685
21 - 40	8	6	0	0	0	0	0	1	0	0	1	0	0	1	4	0	21
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	42	84	81	15	11	7	10	72	177	51	27	16	16	43	22	33	707

Total Number of Valid Hours: 707

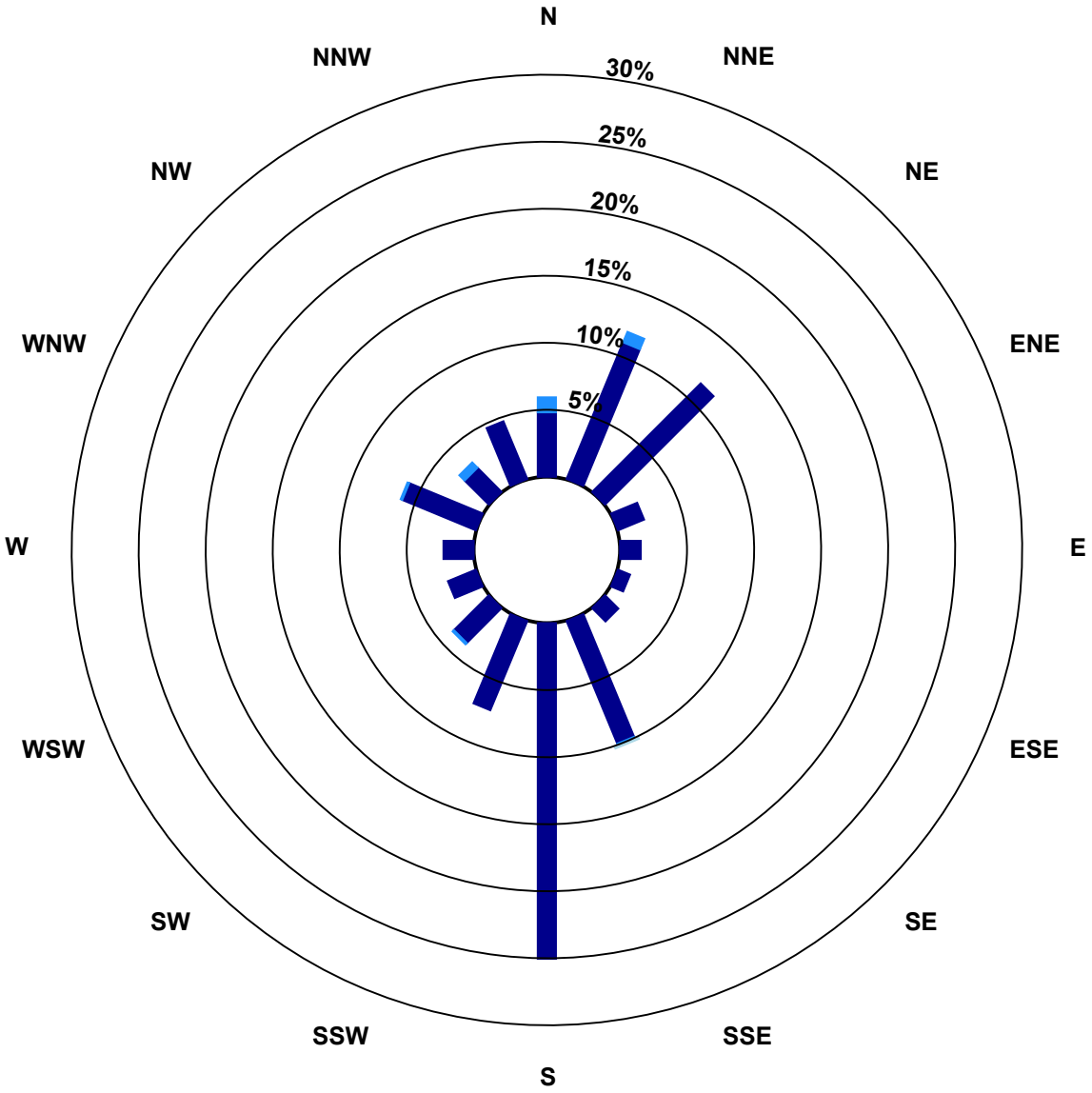
Total Number of Hours: 744

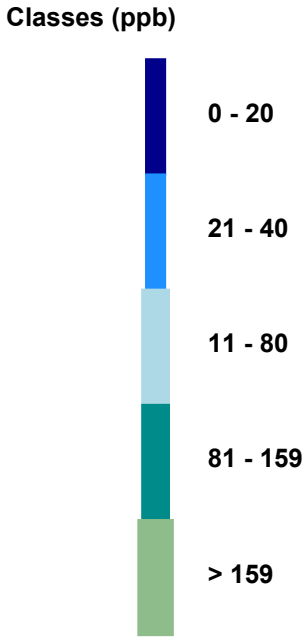
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Oxide (NO) - ppb

Blackrod





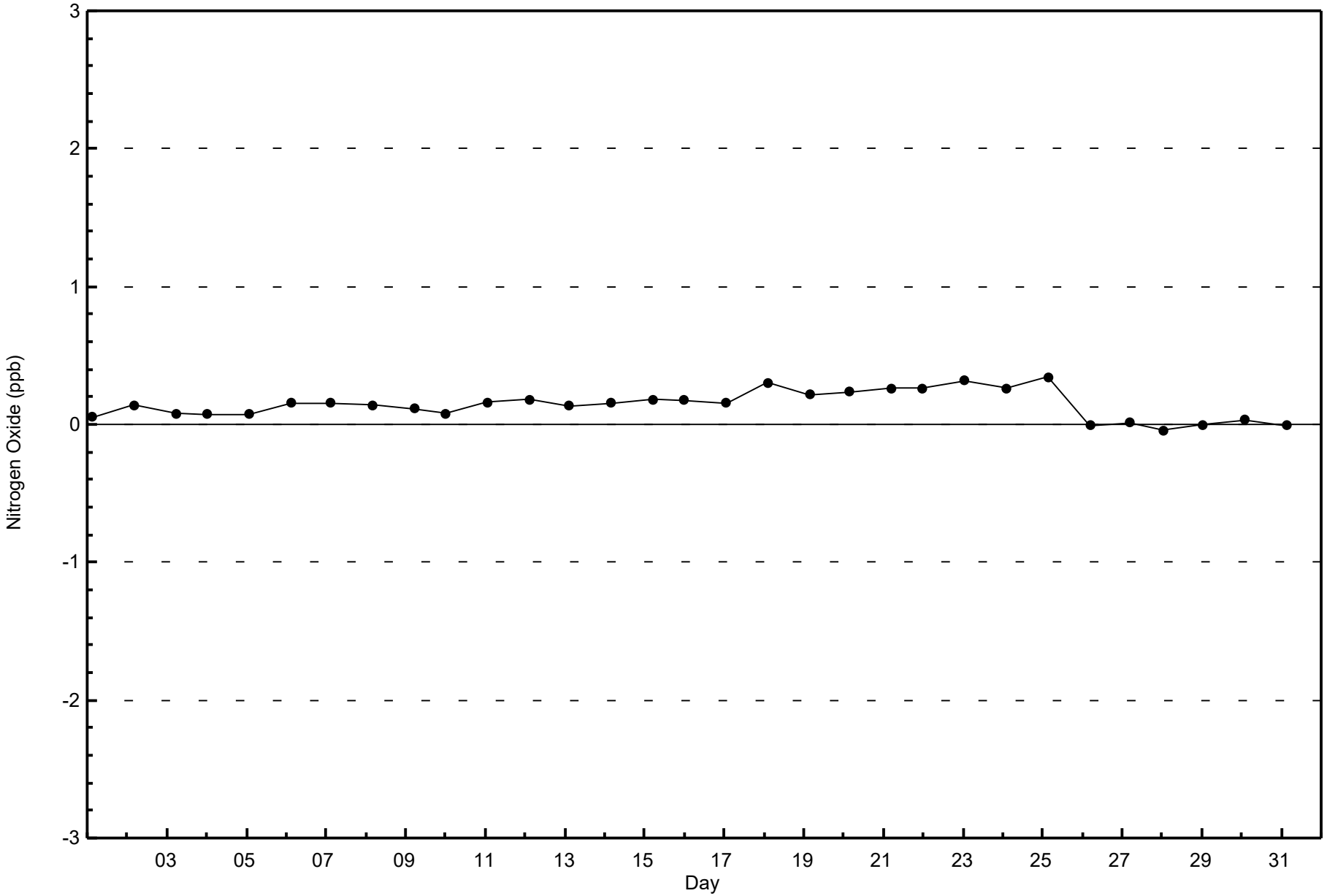
Total Number of Valid Hours: 707

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxide (NO) - ppb

Blackrod - March 2025

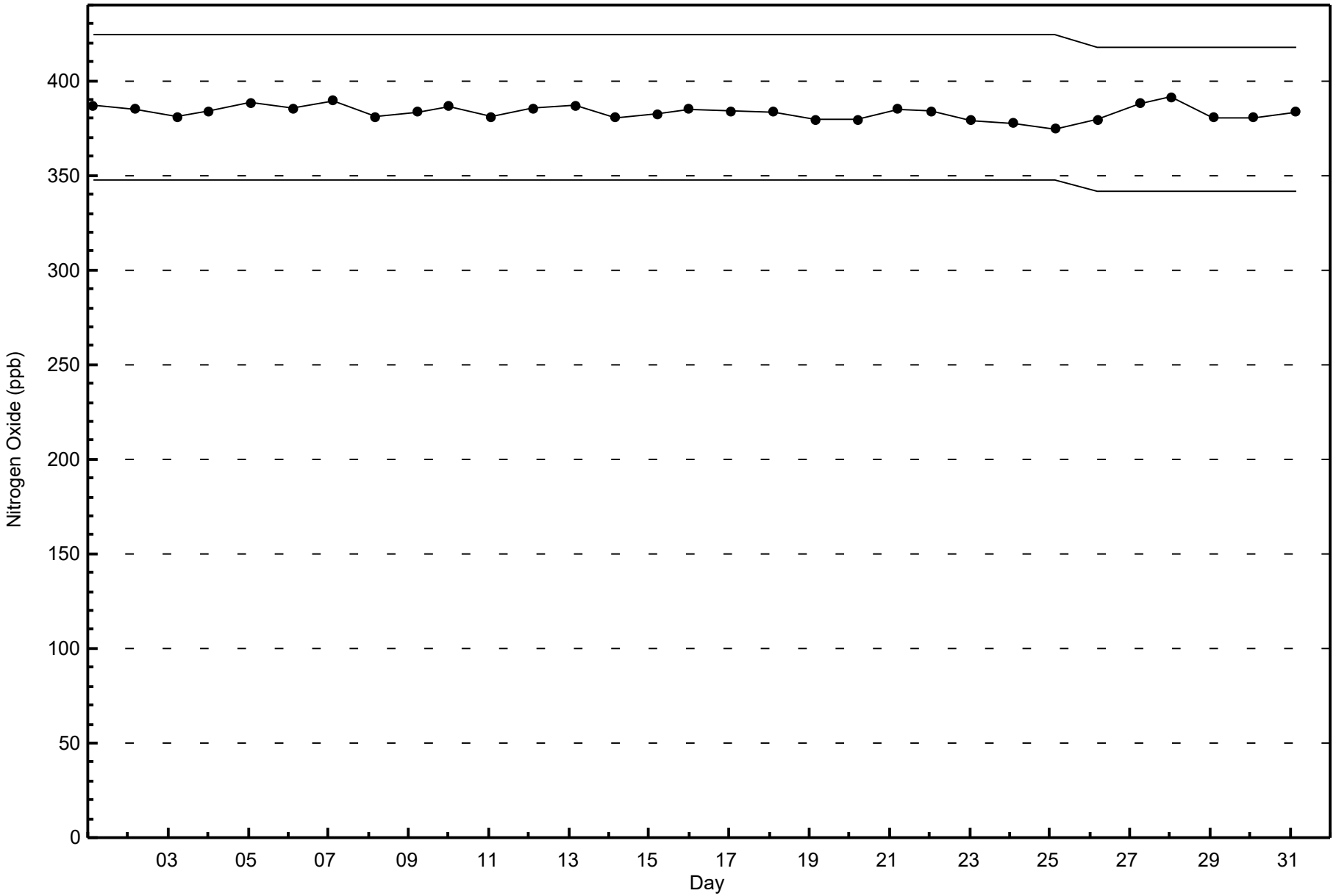


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxide (NO) - ppb

Blackrod - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Blackrod - March 2025

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

Maximum Value: 27.8 ppb on Mar 16 02:00

Maximum Daily Average: 9.8 ppb on Mar 9

Minimum Value: 0.3 ppb on Mar 3 00:00

Minimum Daily Average: 1.3 ppb on Mar 31

Maximum Diurnal Average: 7.2 ppb at hour 16

Minimum Diurnal Average: 2.9 ppb at hour 1

Monthly Average: 5.19 ppb

Percentiles: $P_1 = 0.4$ $P_{10} = 0.9$ $Q_1 = 1.5$ Median = 3.2 $Q_3 = 8.0$ $P_{90} = 11.7$ $P_{99} = 20.6$

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	3.4	2.1	1.4	Z	2.8	1.2	1.6	3.9	4.9	4.3	3.3	8.4	12.2	14.0	12.9	18.9	20.8	14.8	7.8	4.1	0.9	1.3	1.0	1.7	6.4	20.8
2-Mar	1.2	1.1	3.0	2.1	Z	1.7	9.3	4.7	8.3	13.2	7.3	7.0	6.7	4.7	4.5	6.6	17.2	14.0	11.0	8.3	3.8	1.0	0.6	0.3	6.0	17.2
3-Mar	0.7	0.6	0.5	1.5	5.5	Z	21.2	11.2	7.7	8.0	5.7	6.0	13.5	9.9	7.3	10.9	9.9	7.6	8.5	2.6	1.5	0.5	0.4	0.4	6.2	21.2
4-Mar	Z	0.8	0.9	0.5	0.5	0.9	1.2	2.4	2.6	2.0	2.4	5.0	7.0	10.7	10.1	10.2	6.2	5.8	2.8	3.0	1.6	2.1	2.4	3.9	3.7	10.7
5-Mar	4.5	Z	9.9	6.4	12.0	10.9	18.2	12.4	7.8	9.1	4.7	6.5	7.2	7.0	8.0	8.7	7.2	10.6	5.5	4.2	0.8	0.4	0.7	0.6	7.1	18.2
6-Mar	0.6	0.6	Z	1.2	1.6	1.8	3.1	2.5	2.9	3.9	13.1	13.2	14.0	10.1	8.9	9.2	5.8	11.5	16.6	2.9	2.3	0.9	1.0	0.9	5.6	16.6
7-Mar	1.3	1.4	1.2	Z	1.4	1.6	1.6	2.3	2.0	2.5	10.9	10.8	11.3	9.8	8.4	7.9	8.7	12.6	15.8	18.2	22.2	6.7	2.6	0.9	7.0	22.2
8-Mar	0.8	1.0	1.0	0.7	Z	3.2	3.6	7.7	14.4	10.0	10.1	6.1	8.6	6.7	7.5	7.3	6.3	4.8	8.6	0.7	0.6	0.5	1.6	10.0	5.3	14.4
9-Mar	3.2	9.0	4.7	6.0	6.2	Z	9.5	8.7	11.8	14.1	13.0	9.0	10.8	12.1	11.3	10.9	13.9	8.5	11.1	13.7	11.2	7.3	9.5	9.0	9.8	14.1
10-Mar	Z	8.0	8.1	5.6	5.8	6.3	3.8	9.9	4.4	1.9	3.6	1.4	1.4	1.8	1.9	1.4	1.5	1.6	1.3	1.1	1.2	2.0	4.7	3.8	3.6	9.9
11-Mar	4.5	Z	3.9	7.5	6.1	9.9	4.8	6.9	8.9	3.1	3.8	3.3	7.4	8.3	6.4	11.9	5.5	7.8	9.5	10.6	10.7	11.7	11.7	9.5	7.6	11.9
12-Mar	7.5	11.8	Z	11.5	16.7	15.1	15.7	17.1	10.0	7.4	7.8	4.4	5.8	6.2	7.4	11.4	6.0	9.6	6.2	2.5	5.4	13.5	2.9	2.8	8.9	17.1
13-Mar	2.5	2.7	2.3	Z	2.0	2.3	5.3	6.5	6.8	2.9	6.1	8.6	10.2	4.8	2.4	1.9	4.1	4.0	6.2	5.8	2.1	1.5	4.1	3.3	4.3	10.2
14-Mar	1.9	10.8	6.0	11.8	Z	24.3	20.4	27.1	7.9	9.1	9.5	6.2	8.2	7.1	3.5	8.2	4.3	1.2	7.4	8.7	4.6	2.4	3.1	8.5	8.8	27.1
15-Mar	4.3	8.4	7.0	8.8	8.5	Z	9.6	6.1	2.8	8.0	7.3	7.6	13.7	13.3	10.0	5.7	5.7	5.5	8.9	2.7	1.8	3.9	2.3	5.0	6.8	13.7
16-Mar	Z	27.8	18.2	0.6	1.6	1.2	0.8	1.4	1.2	0.9	0.7	1.2	0.6	0.9	0.8	1.1	1.5	1.6	1.5	1.8	1.6	1.5	1.3	1.2	3.1	27.8
17-Mar	1.3	Z	1.2	1.1	1.2	1.3	1.4	1.7	2.2	5.6	11.2	12.9	7.8	11.9	8.1	7.6	4.5	6.1	7.4	11.1	6.2	3.9	9.0	5.8	5.7	12.9
18-Mar	3.9	4.8	Z	5.2	8.1	18.4	17.4	6.3	4.1	1.4	1.2	1.8	1.1	1.3	2.0	8.3	3.3	9.9	16.1	13.6	6.1	1.8	0.9	1.8	6.0	18.4
19-Mar	0.5	1.2	1.2	Z	3.0	2.4	2.3	3.9	2.4	1.8	3.2	3.9	10.5	7.7	8.3	15.7	13.1	10.8	15.4	5.3	2.1	0.9	1.1	0.5	5.1	15.7
20-Mar	0.5	20.4	8.6	6.4	Z	13.6	3.9	2.5	2.4	4.3	14.9	6.9	12.5	3.1	2.1	2.0	2.1	1.4	1.3	1.8	10.2	19.9	11.0	8.4	7.0	20.4
21-Mar	17.2	0.8	0.8	0.9	0.9	Z	1.1	1.2	1.1	1.9	2.4	2.1	1.4	1.4	1.6	1.2	1.4	1.4	1.7	1.9	1.9	1.6	1.6	1.8	2.1	17.2
22-Mar	Z	1.5	1.5	1.5	1.7	1.6	1.7	1.6	1.6	1.6	2.5	3.5	7.1	12.8	10.0	9.5	11.6	8.4	17.3	20.4	20.7	4.1	0.9	0.7	6.3	20.7
23-Mar	0.6	Z	1.1	1.5	1.8	2.1	2.2	3.5	1.5	5.6	9.3	7.5	5.3	7.6	9.0	8.4	5.2	2.6	0.5	0.4	0.5	0.4	0.5	0.6	3.4	9.3
24-Mar	0.7	0.9	Z	1.0	1.1	1.1	1.4	1.2	1.1	1.1	3.8	1.8	3.0	7.4	12.6	11.7	7.9	6.7	10.8	11.9	9.9	20.6	20.0	12.2	6.5	20.6
25-Mar	0.9	0.4	0.6	Z	1.4	2.4	3.6	2.7	2.0	C	C	C	C	C	C	5.5	5.6	10.5	7.2	11.4	0.8	2.1	2.0	3.7	--	11.4
26-Mar	3.0	4.6	5.9	1.8	Z	3.1	3.0	4.2	2.7	1.4	3.2	2.9	4.0	4.5	3.8	2.8	1.7	1.7	1.2	0.8	0.7	0.7	2.4	0.8	2.6	5.9
27-Mar	0.8	1.3	1.0	2.0	1.5	Z	3.0	2.1	3.8	1.7	1.8	1.4	2.5	2.7	2.2	2.3	1.9	1.3	1.5	1.3	1.2	1.3	2.0	8.9	2.2	8.9
28-Mar	Z	8.0	4.8	1.8	3.0	3.5	8.4	6.1	4.9	4.0	3.0	1.7	1.5	0.9	2.4	3.0	3.8	3.1	1.3	1.0	1.8	3.0	5.8	5.4	3.6	8.4
29-Mar	8.0	Z	6.1	4.3	1.6	3.4	16.6	10.1	2.7	5.0	2.0	0.8	2.4	1.3	2.5	9.6	3.3	2.3	0.6	0.5	0.5	1.9	1.5	1.1	3.8	16.6
30-Mar	0.6	0.4	Z	0.7	0.9	1.1	1.7	1.2	1.4	1.7	2.1	1.4	1.3	1.3	1.3	1.5	1.5	1.8	1.6	1.3	1.1	1.7	1.3	1.0	1.3	2.1
31-Mar	1.0	1.0	0.9	Z	0.9	1.4	1.3	1.0	1.5	1.0	0.9	1.1	1.1	1.1	1.4	1.6	1.8	1.8	1.5	1.2	1.5	1.5	1.5	1.5	1.3	1.8
	2.9	5.1	3.9	3.7	3.8	5.2	6.4	5.8	4.5	4.6	5.7	5.1	6.7	6.4	6.0	7.2	6.2	6.2	6.9	5.6	4.4	4.0	3.6	3.7	Diurnal Average	
	17.2	27.8	18.2	11.8	16.7	24.3	21.2	27.1	14.4	14.1	14.9	13.2	14.0	14.0	12.9	18.9	20.8	14.8	17.3	20.4	22.2	20.6	20.0	12.2	Diurnal Maximum	

Z - zerospan C - Calibration

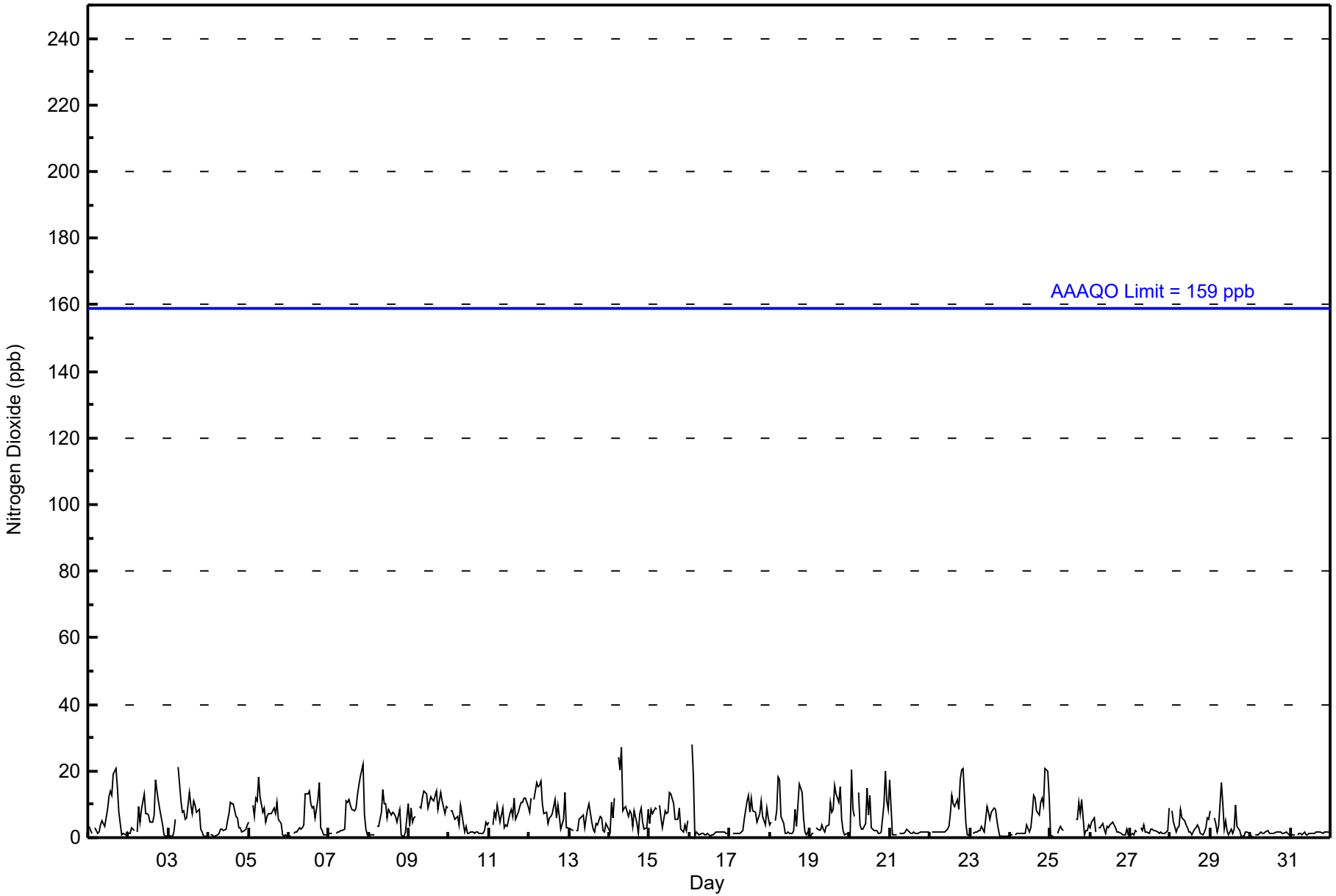
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Blackrod - March 2025



Nitrogen Dioxide (NO_2) - ppb
Blackrod - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	699	98.87	98.87
21 - 40	8	1.13	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Blackrod - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	39	84	81	15	11	7	10	71	177	51	27	14	15	42	22	33	699
21 - 40	3	0	0	0	0	0	0	1	0	0	0	2	1	1	0	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	42	84	81	15	11	7	10	72	177	51	27	16	16	43	22	33	707

Total Number of Valid Hours: 707

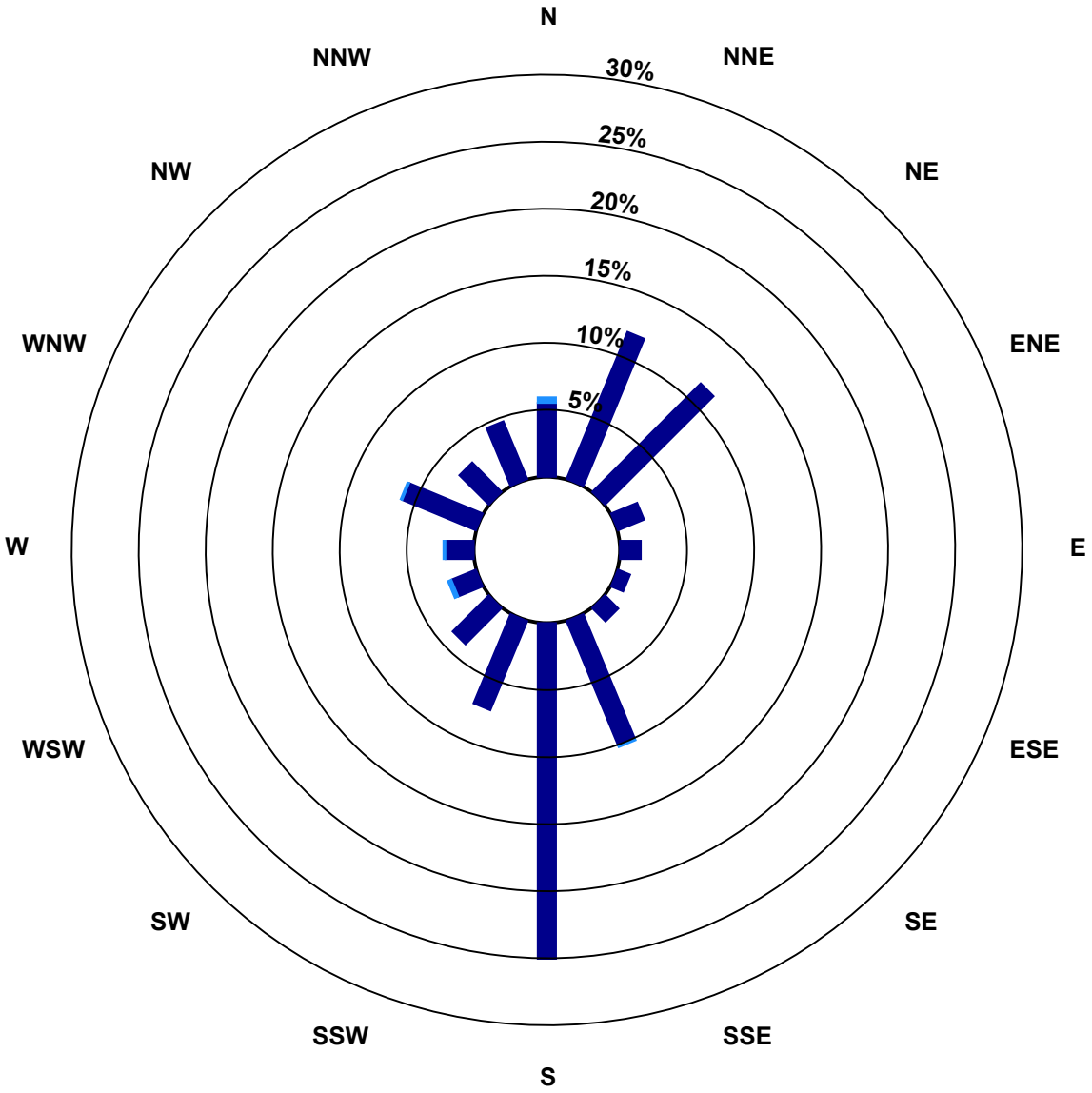
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Dioxide (NO_2) - ppb

Blackrod



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

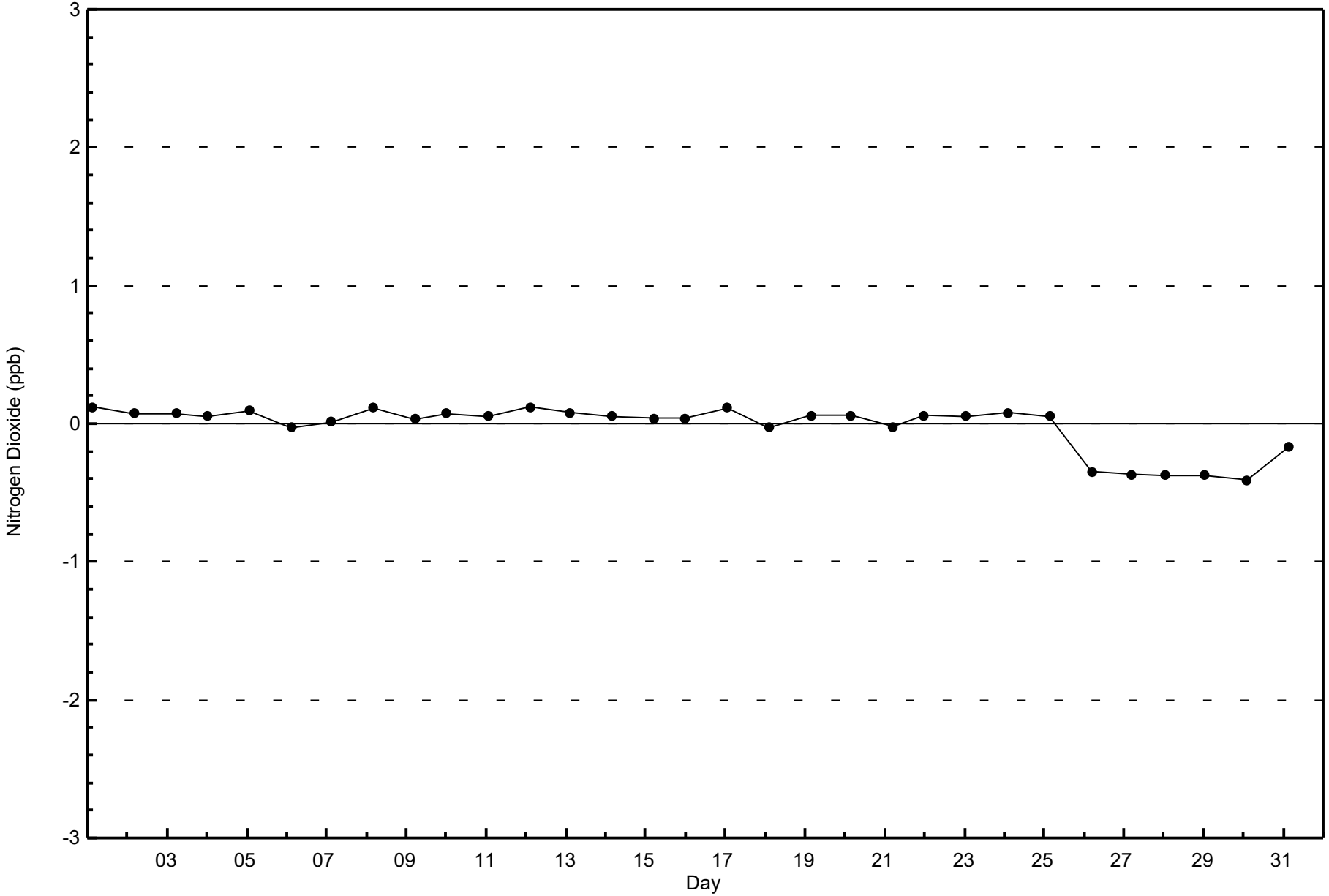
Total Number of Valid Hours: 707

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Blackrod - March 2025

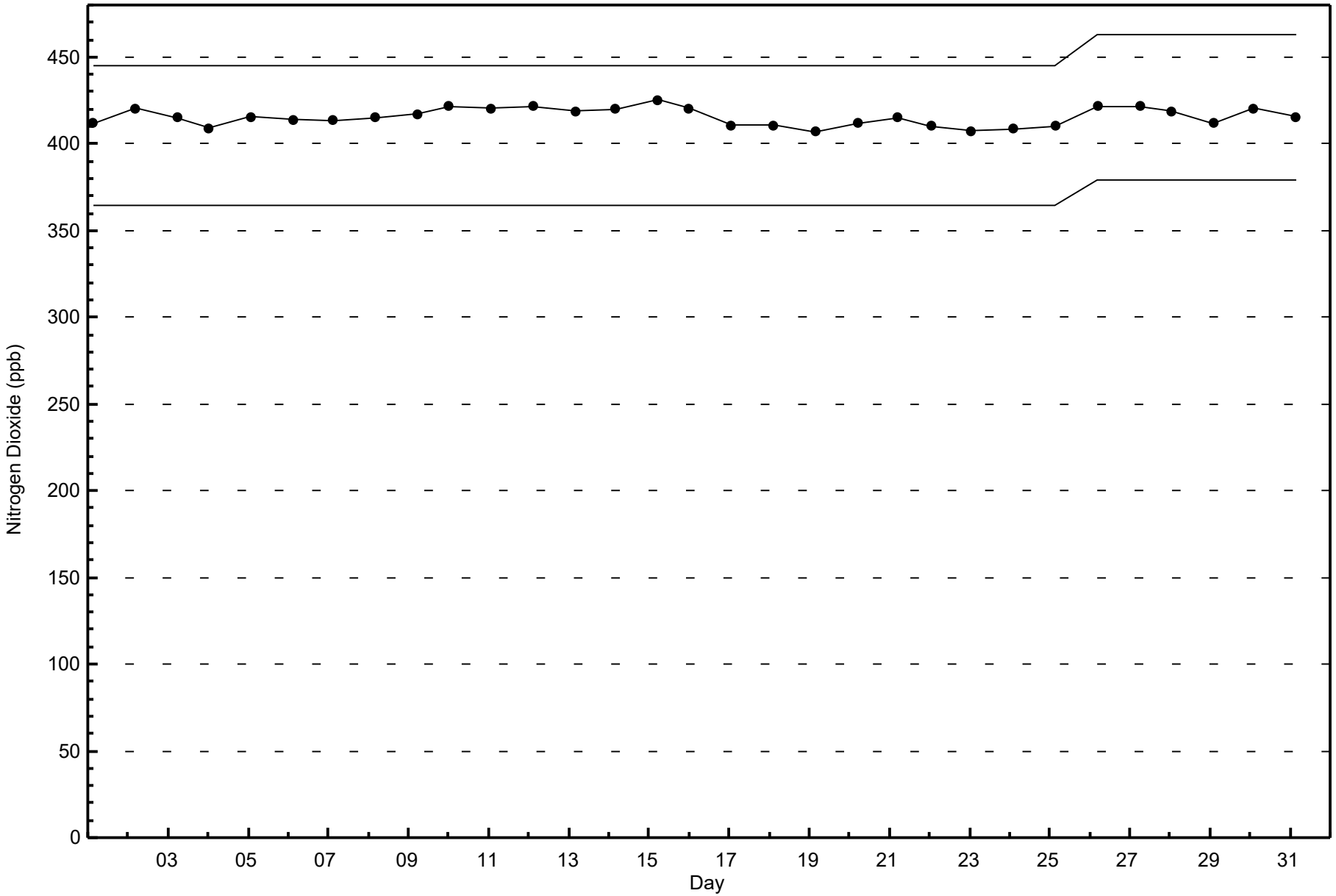


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Blackrod - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Blackrod - March 2025

Maximum Value: 88.3 ppb on Mar 16 02:00

Maximum Daily Average: 25.0 ppb on Mar 9

Minimum Value: 0.4 ppb on Mar 3 23:00

Minimum Daily Average: 1.5 ppb on Mar 31

Maximum Diurnal Average: 16.1 ppb at hour 16

Minimum Diurnal Average: 4.4 ppb at hour 1

Monthly Average: 10.36 ppb

Percentiles: P_1 = 0.5 P_{10} = 1.1 Q_1 = 1.8 Median = 5.2 Q_3 = 17.1 P_{90} = 26.6 P_{99} = 39.8

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	37
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	4.4	2.4	1.5	Z	3.7	1.6	2.6	12.8	8.7	8.7	5.2	16.5	26.8	26.5	24.1	33.3	35.3	18.4	11.9	4.5	0.9	1.6	1.2	2.1	11.1	35.3
2-Mar	1.2	1.1	3.9	2.3	Z	1.8	12.7	5.8	11.4	27.7	19.3	17.9	18.1	9.8	10.7	15.8	32.8	27.1	22.8	25.5	10.0	2.2	1.6	0.6	12.3	32.8
3-Mar	1.2	0.9	1.5	3.6	15.0	Z	52.0	25.3	19.2	18.1	12.8	14.9	32.3	23.0	16.3	22.7	23.3	17.2	11.8	4.9	1.7	0.5	0.4	0.4	13.9	52.0
4-Mar	Z	0.9	0.9	0.6	0.6	1.2	1.8	4.0	4.1	3.3	4.9	11.7	17.9	22.5	29.1	20.5	13.0	8.7	3.8	4.3	1.7	2.2	2.4	5.4	7.2	29.1
5-Mar	5.9	Z	11.9	7.7	15.3	33.0	39.9	20.0	18.8	23.7	13.4	15.8	17.7	19.2	17.5	19.0	15.3	14.4	7.7	5.6	0.8	0.4	0.7	0.6	14.1	39.9
6-Mar	0.6	0.6	Z	1.2	1.8	1.8	4.4	3.0	3.8	6.0	27.3	29.5	30.7	23.0	22.3	20.9	19.2	33.7	29.7	3.3	2.6	1.0	1.0	0.9	11.7	33.7
7-Mar	1.3	1.4	1.2	Z	1.4	1.6	1.6	2.6	2.5	3.7	21.1	22.9	25.0	20.9	17.2	16.4	20.1	30.4	28.1	30.1	32.8	9.5	3.5	0.9	12.9	32.8
8-Mar	0.9	3.1	1.1	0.7	Z	12.1	13.3	22.5	26.7	17.1	21.4	13.6	18.2	13.6	15.4	17.4	18.0	10.9	23.2	0.8	0.7	0.6	2.4	26.0	12.2	26.7
9-Mar	4.8	19.3	8.5	13.0	10.5	Z	22.9	19.8	33.7	45.3	38.5	25.6	29.9	34.9	33.7	29.0	36.4	26.2	24.2	34.7	30.1	12.7	19.1	21.7	25.0	45.3
10-Mar	Z	18.8	15.7	11.6	7.3	15.2	7.7	15.6	7.2	4.2	9.5	2.5	2.6	4.3	4.5	2.8	1.9	1.9	1.3	1.1	1.4	2.6	8.0	5.6	6.7	18.8
11-Mar	9.0	Z	5.0	9.9	12.6	22.1	7.2	13.6	12.7	6.0	5.9	4.7	14.5	15.1	10.5	25.1	11.0	19.6	27.3	31.1	32.5	32.2	29.2	21.2	16.4	32.5
12-Mar	11.1	22.0	Z	26.2	32.9	34.7	42.7	29.8	21.7	22.6	19.0	10.7	20.4	17.8	17.0	32.2	21.2	23.8	13.4	3.7	10.7	29.7	3.6	4.1	20.5	42.7
13-Mar	3.4	4.0	3.4	Z	3.0	3.6	9.7	10.9	11.8	5.4	13.4	16.8	19.0	9.4	4.5	4.7	9.9	7.5	12.3	13.5	3.2	2.6	8.6	6.2	8.1	19.0
14-Mar	3.7	25.2	12.7	27.7	Z	56.5	34.0	50.1	15.3	24.8	26.9	16.8	23.6	23.7	12.3	23.0	14.1	2.3	15.8	21.1	7.4	2.9	4.9	15.4	20.0	56.5
15-Mar	4.9	11.2	9.7	13.1	12.4	Z	13.3	7.4	4.1	16.6	17.6	16.7	28.9	34.9	27.9	15.9	14.2	13.6	15.7	3.2	1.9	3.9	2.7	10.2	13.0	34.9
16-Mar	Z	88.3	43.7	0.6	2.5	1.7	1.0	1.9	1.8	1.4	1.3	2.0	0.9	1.3	1.1	1.6	1.9	1.8	1.6	1.9	1.6	1.6	1.4	1.3	7.1	88.3
17-Mar	1.4	Z	1.3	1.2	1.3	1.4	1.6	2.0	3.0	12.3	27.2	26.9	20.8	36.1	21.1	17.2	7.9	12.3	15.5	24.1	17.3	16.1	20.4	12.0	13.1	36.1
18-Mar	5.1	14.9	Z	5.6	9.2	32.6	29.2	12.6	10.2	1.9	2.0	3.5	1.9	2.1	5.4	29.7	4.7	20.2	22.2	16.5	6.5	1.9	0.9	2.2	10.5	32.6
19-Mar	0.5	1.2	1.3	Z	3.8	2.8	3.1	5.1	3.8	3.0	6.6	8.2	22.5	14.9	16.9	33.3	27.2	18.7	24.9	5.8	2.2	1.0	1.3	0.5	9.1	33.3
20-Mar	0.5	32.4	14.9	9.9	Z	25.3	4.8	4.2	3.6	8.7	35.2	17.3	32.0	5.2	3.2	2.9	3.6	1.8	1.8	2.3	17.2	30.8	11.4	12.4	12.2	35.2
21-Mar	29.6	0.8	0.8	0.9	0.9	Z	1.4	1.5	1.4	3.4	4.7	4.3	1.9	1.9	2.8	1.7	1.6	1.6	1.8	1.9	1.9	1.6	1.6	1.8	3.1	29.6
22-Mar	Z	1.5	1.5	1.5	1.7	1.7	1.8	1.7	1.8	1.9	3.4	7.0	15.5	26.4	22.5	21.2	24.7	18.0	29.1	25.6	24.0	4.3	0.9	0.7	10.4	29.1
23-Mar	0.6	Z	1.1	1.5	1.9	2.2	2.5	4.4	2.0	10.9	20.1	18.1	11.4	17.3	17.3	19.2	9.3	4.2	0.6	0.4	0.5	0.4	0.5	0.6	6.4	20.1
24-Mar	0.7	0.9	Z	1.1	1.2	1.2	1.6	1.3	1.5	1.5	6.7	2.6	4.6	12.9	26.9	22.1	16.7	14.5	24.5	27.8	23.9	38.8	31.8	13.2	12.1	38.8
25-Mar	0.9	0.4	0.6	Z	1.5	2.7	5.1	3.6	3.1	C	C	C	C	C	C	15.8	14.0	23.8	15.3	16.1	0.8	2.7	3.9	4.2	--	23.8
26-Mar	5.6	8.4	12.3	4.1	Z	5.3	5.5	7.5	4.8	2.8	7.1	6.0	8.3	9.3	7.5	5.0	2.4	2.3	1.6	1.0	0.9	1.2	4.4	1.1	5.0	12.3
27-Mar	1.1	1.6	1.5	4.0	2.4	Z	5.3	3.3	7.4	3.4	3.4	2.6	4.6	5.2	4.0	5.0	3.2	2.0	2.2	2.0	1.7	1.8	3.7	17.9	3.9	17.9
28-Mar	Z	19.1	10.3	2.9	5.0	7.3	15.2	10.5	8.0	7.9	7.4	3.0	2.8	1.6	5.8	5.3	7.0	5.3	2.1	1.3	3.0	6.5	11.2	9.9	6.9	19.1
29-Mar	13.4	Z	6.7	5.9	1.6	4.3	28.0	18.7	4.1	8.6	3.2	1.1	4.4	1.9	3.5	16.5	4.9	3.0	0.6	0.5	0.5	2.4	1.6	1.2	5.9	28.0
30-Mar	0.6	0.4	Z	0.7	0.9	1.2	2.4	1.4	1.7	2.2	2.7	1.8	1.6	1.6	1.6	1.9	1.8	2.0	1.7	1.4	1.2	1.7	1.3	1.0	1.5	2.7
31-Mar	1.0	1.1	0.9	Z	1.0	1.8	1.6	1.1	2.1	1.2	1.1	1.3	1.5	1.5	1.9	2.0	2.1	2.0	1.6	1.2	1.6	1.5	1.5	1.5	1.5	2.1
	4.4	10.8	6.7	6.3	5.8	10.7	12.1	10.4	8.5	10.1	12.9	11.4	15.3	14.6	13.5	16.1	13.5	12.6	12.8	10.2	7.8	7.1	6.0	6.5	Diurnal Average	
	29.6	88.3	43.7	27.7	32.9	56.5	52.0	50.1	33.7	45.3	38.5	29.5	32.3	36.1	33.7	33.3	36.4	33.7	29.7	34.7	32.8	38.8	31.8	26.0	Diurnal Maximum	

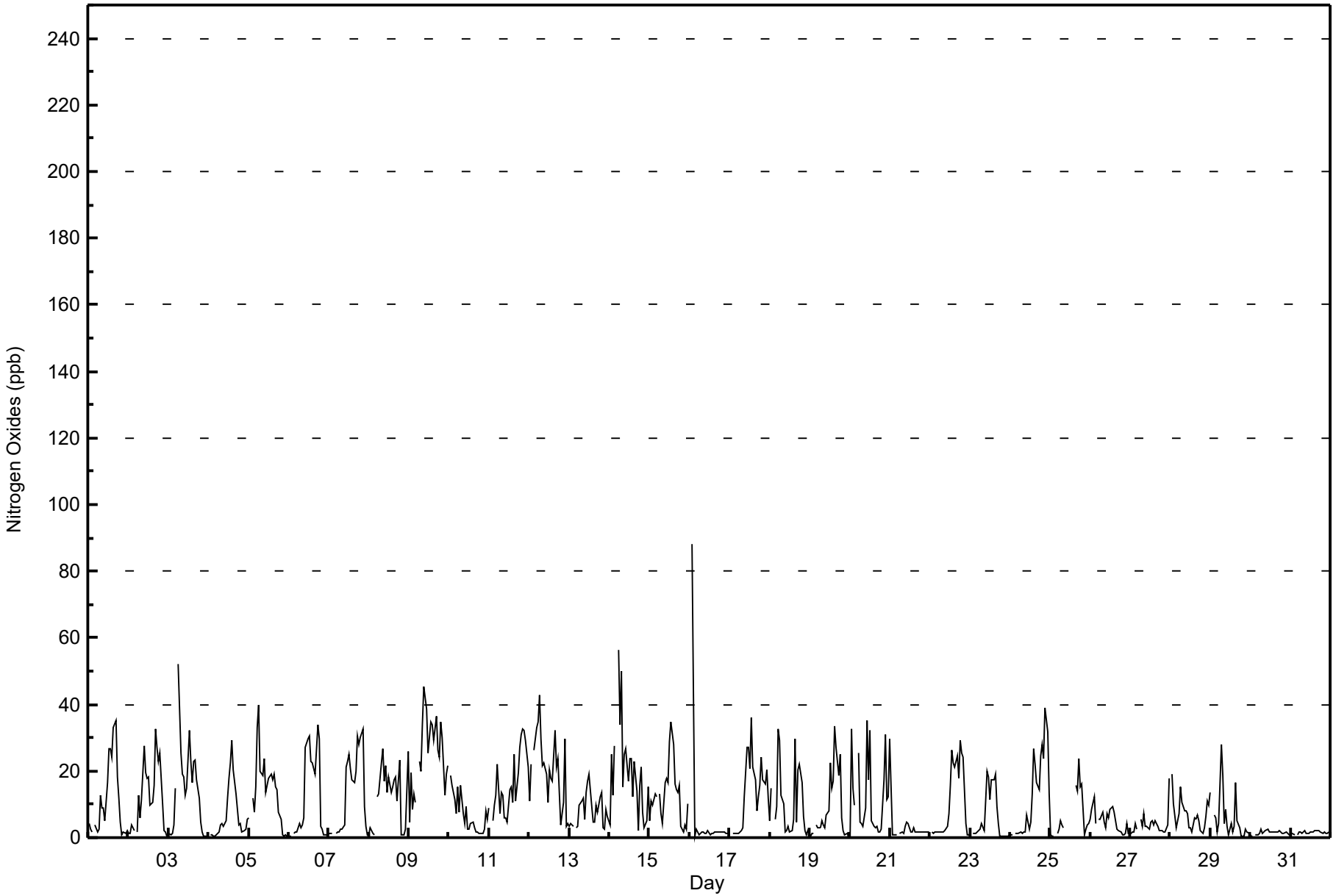
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Blackrod - March 2025



Nitrogen Oxides (NO_X) - ppb
Blackrod - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	577	81.61	81.61
21 - 40	123	17.40	99.01
11 - 80	6	0.85	99.86
81 - 159	1	0.14	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 707

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Blackrod - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	21	55	81	15	11	7	8	70	177	49	17	9	4	15	11	27	577
21 - 40	17	28	0	0	0	0	2	0	0	2	10	7	12	28	11	6	123
11 - 80	4	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	6
81 - 159	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	42	84	81	15	11	7	10	72	177	51	27	16	16	43	22	33	707

Total Number of Valid Hours: 707

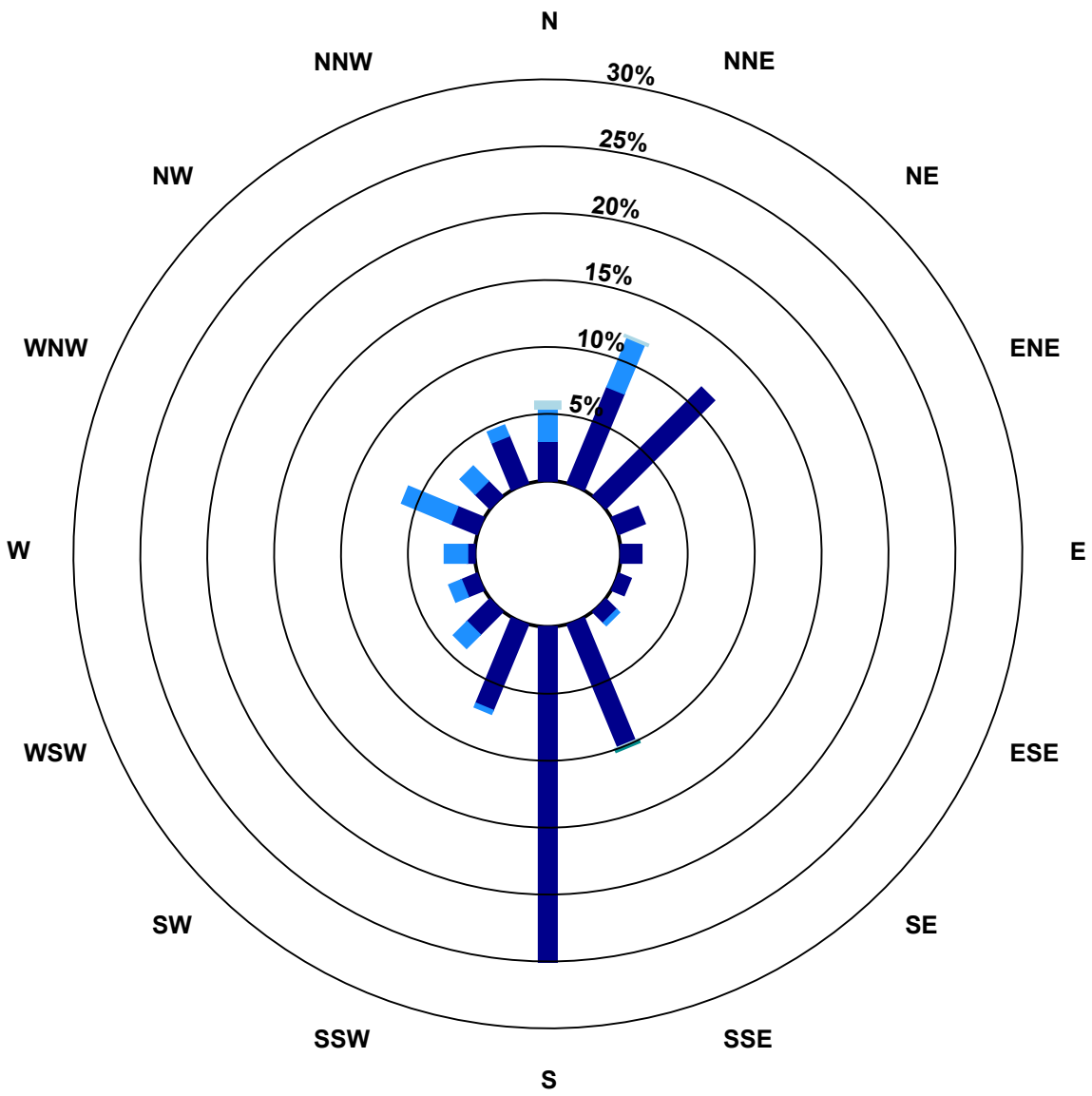
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Oxides (NO_X) - ppb

Blackrod



Classes (ppb)

- 0 - 20
- 21 - 40
- 11 - 80
- 81 - 159
- > 159

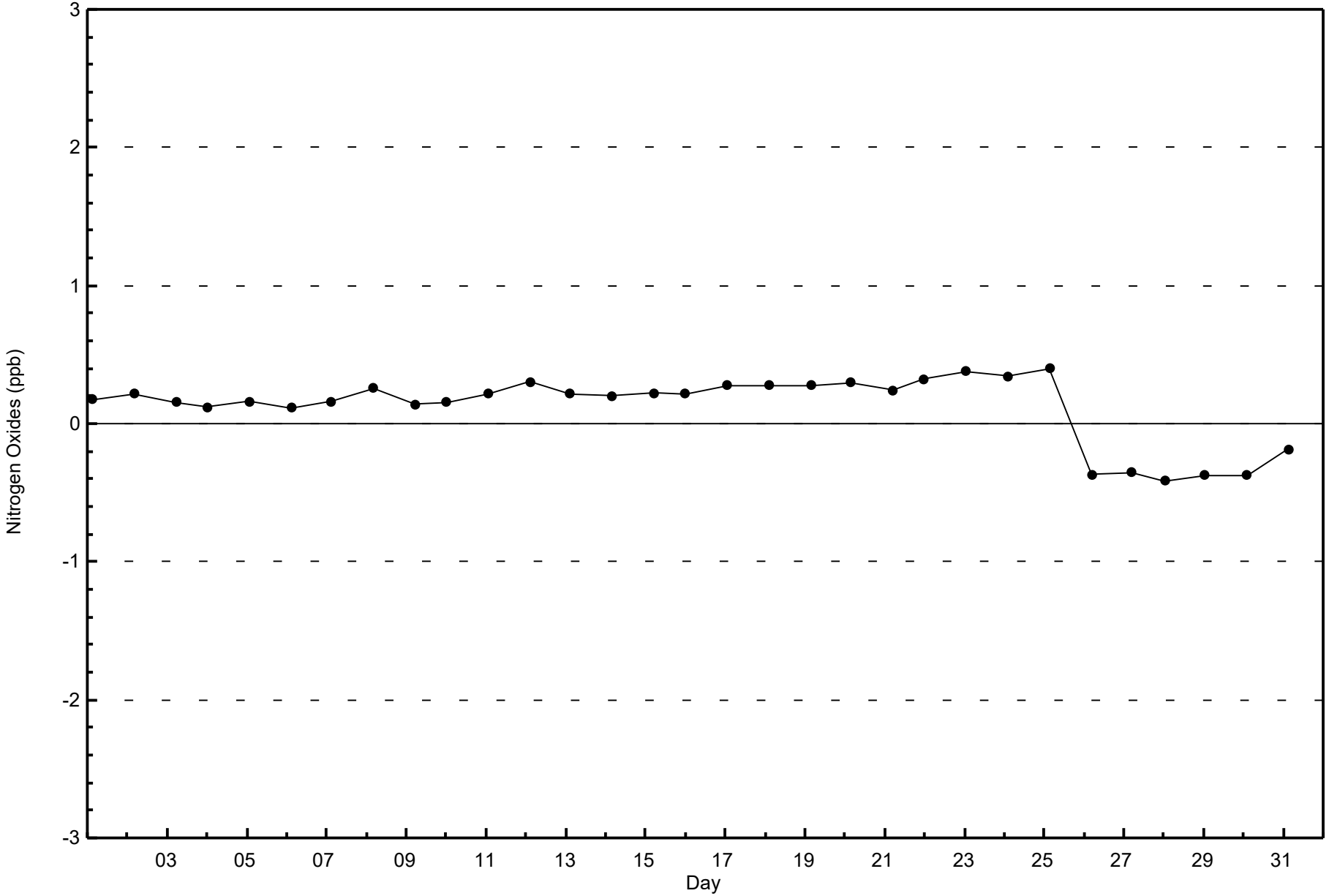
Total Number of Valid Hours: 707

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Blackrod - March 2025

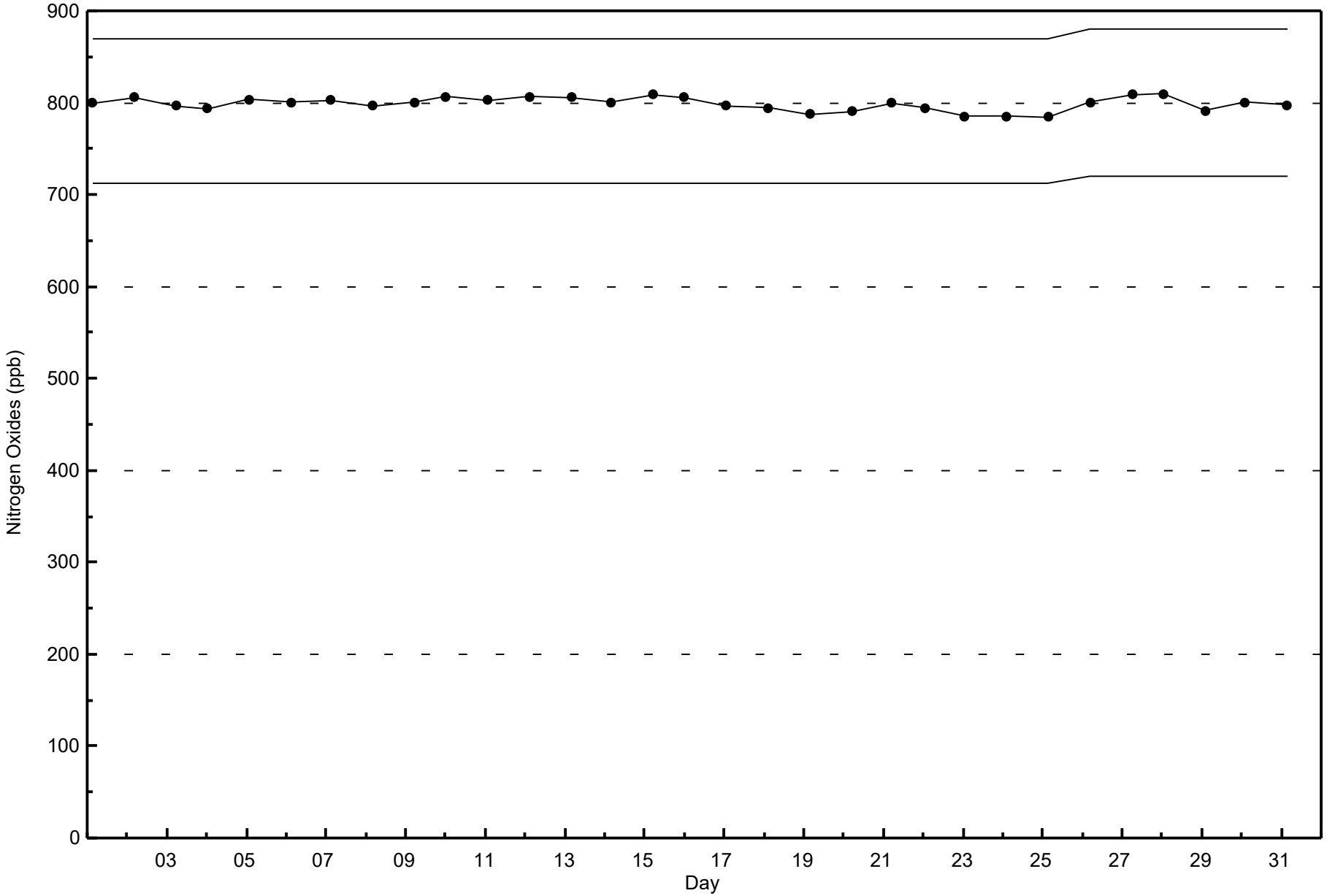


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Blackrod - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

Blackrod - March 2025

Maximum Value: 11.2 C on Mar 1 17:00

Maximum Daily Average: 4.5 C on Mar 2

Minimum Value: -21.1 C on Mar 16 01:00

Minimum Daily Average: -15.2 C on Mar 14

Maximum Diurnal Average: 0.0 C at hour 16

Minimum Diurnal Average: -8.0 C at hour 7

Monthly Average: -4.43 C

Percentiles: P_1 = -19.0 P_{10} = -14.8 Q_1 = -9.8 Median = -4.0 Q_3 = 1.1 P_{90} = 5.0 P_{99} = 9.5

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

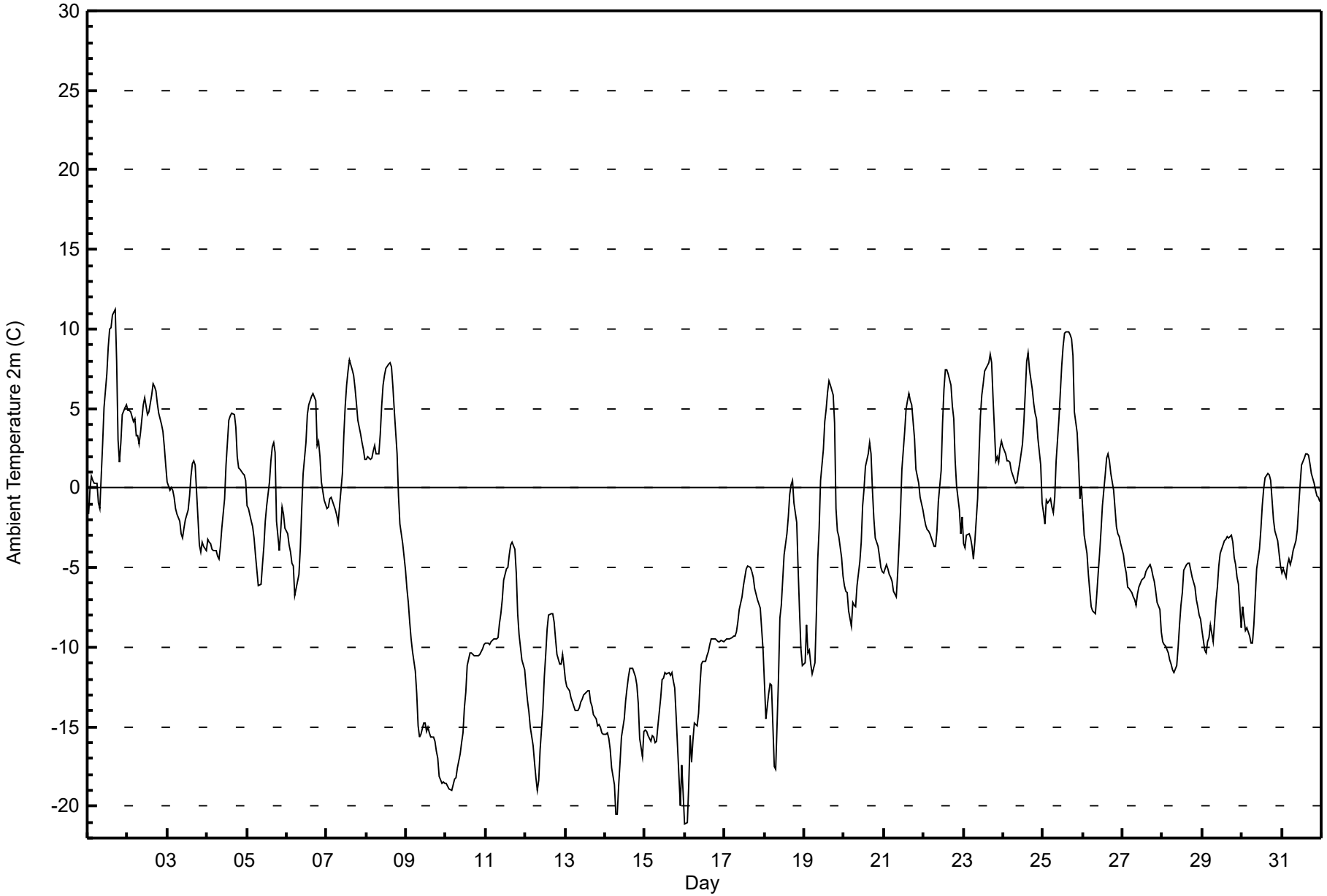
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-1.7	-0.1	0.7	0.4	0.3	0.3	-0.9	-1.3	0.7	2.7	5.0	7.1	8.9	10.0	10.1	10.9	11.2	7.9	3.0	1.6	2.9	4.6	5.1	5.3	4.0	11.2
2-Mar	4.8	4.9	4.8	4.2	4.3	3.3	3.3	2.8	3.5	5.2	5.7	5.1	4.6	4.8	5.9	6.6	6.4	6.1	5.3	4.7	4.0	3.5	2.6	1.5	4.5	6.6
3-Mar	0.4	-0.2	0.0	-0.2	-0.6	-1.3	-1.6	-2.1	-2.9	-3.1	-2.5	-2.0	-1.3	-0.5	0.7	1.5	1.7	1.4	-1.9	-3.6	-4.0	-3.4	-3.6	-4.0	-1.4	1.7
4-Mar	-3.2	-3.4	-3.5	-3.8	-3.9	-3.9	-4.3	-4.5	-3.7	-2.5	-0.7	1.5	2.9	4.2	4.6	4.7	4.6	3.9	1.9	1.3	1.1	0.9	0.9	0.5	-0.2	4.7
5-Mar	-1.1	-1.3	-2.1	-2.4	-3.1	-4.2	-5.2	-6.2	-6.0	-4.8	-3.6	-2.1	-1.1	0.4	1.7	2.6	2.8	2.2	-2.1	-3.9	-2.7	-1.2	-1.6	-2.5	-2.0	2.8
6-Mar	-2.9	-3.6	-4.1	-4.7	-4.9	-6.8	-5.8	-5.4	-3.7	-1.3	0.9	2.8	4.6	5.3	5.5	5.8	5.9	5.5	2.7	3.0	2.0	0.4	-0.8	-1.1	0.0	5.9
7-Mar	-1.3	-1.2	-0.7	-0.6	-1.1	-1.3	-1.7	-2.1	-1.1	0.9	3.3	5.2	6.4	7.4	8.0	7.5	7.1	6.3	5.4	4.2	3.3	2.8	2.4	1.8	2.5	8.0
8-Mar	1.8	2.0	1.8	1.8	2.3	2.7	2.2	2.2	3.4	5.1	6.5	7.1	7.5	7.8	7.9	7.6	6.4	4.9	2.2	-0.5	-2.3	-2.9	-3.5	-5.1	2.9	7.9
9-Mar	-6.4	-7.1	-8.4	-9.4	-10.3	-11.5	-13.0	-15.0	-15.7	-15.5	-14.8	-14.7	-15.3	-15.0	-15.4	-15.7	-15.6	-15.9	-16.5	-17.0	-18.1	-18.6	-18.5	-18.5	-14.2	-6.4
10-Mar	-18.6	-18.7	-18.9	-19.0	-18.7	-18.3	-18.2	-17.6	-16.7	-16.0	-15.4	-13.8	-12.8	-11.1	-10.4	-10.3	-10.4	-10.6	-10.5	-10.5	-10.5	-10.3	-10.1	-9.8	-14.1	-9.8
11-Mar	-9.8	-9.7	-9.8	-9.6	-9.6	-9.5	-9.5	-9.4	-8.5	-7.9	-7.0	-5.8	-5.1	-5.0	-4.2	-3.6	-3.4	-3.8	-5.3	-7.9	-9.2	-10.0	-10.8	-11.5	-7.7	-3.4
12-Mar	-12.5	-13.4	-14.1	-15.1	-16.2	-17.2	-18.2	-19.0	-18.4	-16.4	-13.9	-11.8	-10.5	-8.8	-8.0	-7.9	-7.9	-8.4	-9.5	-10.4	-11.1	-11.1	-10.4	-11.2	-12.6	-7.9
13-Mar	-12.1	-12.4	-12.8	-13.2	-13.5	-13.7	-14.0	-14.0	-13.8	-13.5	-13.3	-13.0	-12.9	-12.8	-12.8	-13.5	-13.7	-14.2	-14.5	-14.9	-14.8	-15.0	-15.4	-15.5	-13.7	-12.1
14-Mar	-15.5	-15.4	-15.8	-16.5	-17.6	-18.6	-20.5	-20.5	-18.8	-17.3	-15.7	-14.5	-13.4	-12.6	-11.8	-11.4	-11.3	-11.6	-11.9	-12.4	-13.6	-15.7	-16.9	-15.3	-15.2	-11.3
15-Mar	-15.2	-15.3	-15.5	-15.9	-15.6	-15.7	-16.0	-15.9	-15.0	-13.2	-12.0	-11.9	-11.6	-11.7	-11.6	-11.8	-11.6	-12.1	-12.5	-14.4	-18.1	-20.0	-17.4	-19.2	-14.6	-11.6
16-Mar	-21.1	-21.0	-18.6	-15.6	-17.3	-15.8	-14.8	-14.9	-14.2	-12.4	-11.1	-10.9	-10.9	-10.6	-10.3	-9.8	-9.5	-9.5	-9.5	-9.6	-9.7	-9.7	-9.6	-9.6	-12.7	-9.5
17-Mar	-9.6	-9.5	-9.5	-9.5	-9.4	-9.3	-9.3	-9.0	-8.4	-7.6	-6.8	-6.1	-5.6	-5.0	-4.9	-5.0	-5.3	-5.6	-6.3	-6.6	-7.0	-7.5	-8.8	-10.2	-7.6	-4.9
18-Mar	-12.3	-14.5	-12.9	-12.3	-12.4	-15.0	-17.5	-17.7	-11.9	-8.2	-7.4	-5.8	-4.2	-2.9	-1.8	-0.4	0.2	0.5	-1.0	-2.2	-5.1	-7.7	-10.1	-11.2	-8.1	0.5
19-Mar	-11.0	-8.6	-10.4	-10.2	-11.1	-11.7	-11.0	-8.0	-4.4	-2.5	0.5	2.4	4.1	4.9	6.0	6.7	6.5	5.9	4.0	-1.3	-2.7	-3.1	-4.4	-5.5	-2.7	6.7
20-Mar	-6.2	-6.5	-6.6	-7.7	-8.7	-7.2	-7.4	-7.4	-6.1	-4.6	-3.4	-1.1	-0.1	1.4	2.2	2.9	2.2	-0.1	-1.9	-3.2	-3.7	-4.2	-5.0	-5.2	-3.7	2.9
21-Mar	-5.4	-4.9	-5.1	-5.5	-5.6	-5.9	-6.5	-6.8	-5.4	-3.5	-1.5	1.2	3.5	4.9	5.5	5.9	5.5	5.2	3.1	1.2	0.7	0.3	-0.5	-1.4	-0.9	5.9
22-Mar	-1.9	-2.3	-2.6	-2.7	-2.8	-3.4	-3.6	-3.7	-2.7	-0.9	1.1	4.1	6.2	7.4	7.4	7.2	6.5	5.1	4.4	1.7	0.1	-1.4	-2.9	-1.8	0.8	7.4
23-Mar	-3.5	-3.8	-3.0	-2.8	-3.2	-3.7	-4.5	-3.4	-0.7	2.1	4.6	5.9	6.6	7.3	7.7	7.9	8.4	7.9	5.7	1.7	2.0	1.7	2.5	2.9	1.9	8.4
24-Mar	2.6	2.1	1.7	1.7	1.6	1.1	0.6	0.3	0.4	1.0	1.5	2.8	4.1	6.0	8.0	8.5	7.4	6.2	5.4	4.7	4.4	3.1	1.4	-0.9	3.2	8.5
25-Mar	-1.6	-2.3	-0.7	-0.9	-0.7	-1.2	-1.5	-0.6	1.7	4.3	6.0	7.7	8.9	9.7	9.8	9.8	9.6	9.3	8.3	4.8	3.5	1.6	-0.7	0.1	3.5	9.8
26-Mar	-1.4	-2.9	-4.1	-5.4	-6.5	-7.5	-7.8	-7.9	-6.7	-5.3	-4.2	-2.7	-1.1	0.8	1.9	2.1	1.7	0.9	-0.1	-1.3	-2.4	-2.8	-3.0	-3.5	-2.9	2.1
27-Mar	-4.2	-4.9	-5.4	-6.2	-6.3	-6.6	-6.9	-7.0	-7.4	-6.7	-6.2	-5.8	-5.7	-5.6	-5.2	-5.1	-4.8	-5.1	-5.5	-5.9	-6.5	-7.2	-7.6	-9.1	-6.1	-4.2
28-Mar	-9.7	-9.9	-10.0	-10.4	-10.8	-11.1	-11.5	-11.6	-11.2	-10.0	-8.6	-7.3	-6.6	-5.2	-4.8	-4.7	-4.7	-5.2	-5.6	-6.2	-7.0	-7.5	-8.0	-8.3	-8.2	-4.7
29-Mar	-9.0	-10.2	-10.4	-9.6	-9.4	-8.6	-9.7	-8.4	-7.1	-6.2	-4.9	-4.1	-3.6	-3.3	-3.2	-3.1	-3.1	-2.9	-3.4	-4.4	-4.8	-5.6	-6.0	-8.8	-6.2	-2.9
30-Mar	-7.5	-8.2	-8.9	-8.8	-9.3	-9.8	-9.8	-8.6	-6.9	-5.1	-3.9	-2.6	-1.2	0.0	0.7	0.9	0.8	0.5	-0.7	-2.0	-2.7	-3.3	-4.1	-4.9	-4.4	0.9
31-Mar	-5.3	-5.1	-5.6	-4.8	-4.4	-4.8	-4.4	-4.0	-3.3	-2.6	-1.1	0.2	1.4	1.9	2.2	2.2	2.0	1.5	0.9	0.3	-0.1	-0.5	-0.6	-0.8	-1.5	2.2
	-6.5	-6.7	-6.8	-6.9	-7.2	-7.6	-8.0	-8.0	-6.8	-5.3	-4.0	-2.7	-1.7	-0.8	-0.3	0.0	-0.1	-0.8	-2.1	-3.5	-4.3	-4.8	-5.3	-5.9	Diurnal Average	
	4.8	4.9	4.8	4.2	4.3	3.3	3.3	2.8	3.5	5.2	6.5	7.7	8.9	10.0	10.1	10.9	11.2	9.3	8.3	4.8	4.4	4.6	5.1	5.3	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Blackrod - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	4	0.54	0.54
-20 - 0	518	69.62	70.16
0 - 10	219	29.44	99.60
10 - 20	3	0.40	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Blackrod - March 2025

Maximum Value: 92.6 % on Mar 24 10:00

Maximum Daily Average: 85.0 % on Mar 11

Minimum Value: 24.5 % on Mar 23 18:00

Minimum Daily Average: 49.9 % on Mar 21

Maximum Diurnal Average: 76.5 % at hour 7

Minimum Diurnal Average: 50.7 % at hour 16

Monthly Average: 65.99 %

Percentiles: P_1 = 27.9 P_{10} = 43.2 Q_1 = 55.0 Median = 69.1 Q_3 = 78.8 P_{90} = 83.6 P_{99} = 90.5

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

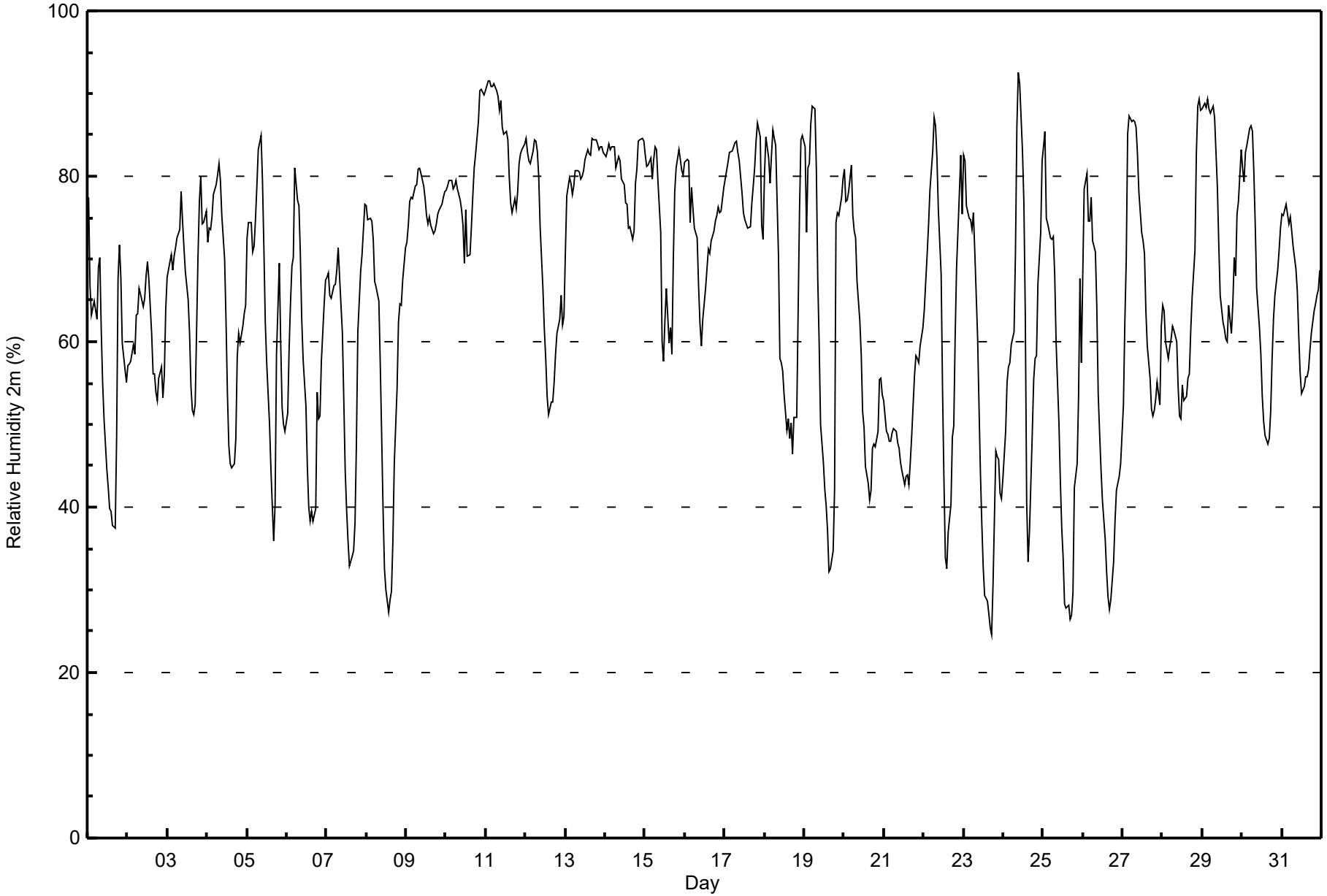
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	77.4	66.7	63.1	64.1	64.8	62.6	68.9	70.2	61.5	55.1	50.6	44.6	42.3	39.9	39.6	37.8	37.4	48.6	67.7	71.7	67.8	59.9	56.6	55.1	57.3	77.4
2-Mar	57.0	57.3	57.5	59.7	58.5	63.2	63.4	66.4	65.8	64.2	65.3	68.0	69.6	67.4	60.9	56.1	56.2	53.9	52.9	55.6	56.9	53.3	56.0	63.9	60.4	69.6
3-Mar	67.8	69.7	70.5	68.7	70.4	71.4	72.5	73.5	78.1	74.5	71.3	68.4	65.2	60.9	54.5	51.7	51.2	52.4	70.2	76.9	80.0	74.3	74.4	75.7	68.5	80.0
4-Mar	72.0	73.7	73.6	75.1	77.8	79.0	80.2	81.6	79.5	75.3	70.0	62.5	53.7	47.5	45.2	44.7	45.2	48.2	58.2	61.0	59.8	61.8	63.4	64.4	64.7	81.6
5-Mar	72.5	74.4	74.4	70.9	71.6	74.7	78.8	83.3	85.0	79.5	71.4	62.4	57.4	50.1	44.8	40.2	35.9	40.3	58.5	69.5	59.8	52.1	50.0	49.1	62.8	85.0
6-Mar	51.4	59.2	64.7	69.2	70.1	81.1	77.0	76.4	70.7	62.8	57.8	52.1	45.0	39.9	38.4	39.6	38.3	39.9	54.0	50.7	51.1	57.6	64.5	67.4	57.4	81.1
7-Mar	67.7	68.3	65.6	65.3	66.9	67.0	68.7	71.3	67.7	61.0	52.8	44.5	39.6	35.9	32.9	34.0	34.7	38.1	47.8	61.2	68.5	70.6	73.6	76.6	57.5	76.6
8-Mar	76.4	74.8	75.0	74.7	72.4	67.3	66.6	65.0	57.2	48.7	39.7	32.5	29.9	27.3	28.8	29.8	35.9	45.3	54.4	62.3	64.6	64.5	67.4	71.4	55.5	76.4
9-Mar	72.0	74.1	77.0	77.5	77.4	78.8	79.0	80.8	80.9	80.4	78.8	77.3	75.3	74.2	75.1	74.0	73.1	73.5	74.2	75.4	75.9	76.6	77.4	78.1	76.5	80.9
10-Mar	78.3	78.8	79.4	79.6	78.5	78.9	79.5	78.4	77.1	75.9	74.1	69.5	76.0	70.4	70.5	73.8	77.6	81.1	82.7	86.6	90.3	90.6	90.1	89.9	79.5	90.6
11-Mar	90.4	91.6	91.4	90.9	90.8	91.2	90.4	89.7	88.0	89.2	85.9	85.0	85.4	84.4	79.8	76.8	75.7	77.2	76.1	78.2	81.4	82.6	83.2	83.9	85.0	91.6
12-Mar	84.5	82.8	81.8	81.5	83.0	84.4	84.3	83.0	80.0	73.9	66.4	61.5	57.9	53.3	51.2	52.8	52.7	55.0	58.4	61.0	62.7	65.6	62.0	63.0	68.4	84.5
13-Mar	70.7	77.6	79.8	79.2	77.8	78.8	80.7	80.7	80.6	79.7	80.0	80.6	82.1	83.3	82.7	82.6	84.6	84.4	84.5	83.9	83.2	83.6	83.5	82.9	81.1	84.6
14-Mar	82.3	83.1	83.9	83.3	83.5	83.5	80.9	81.7	82.5	81.9	79.7	78.9	76.8	76.5	73.7	73.9	72.4	73.3	79.2	80.8	84.3	84.3	84.7	84.3	80.4	84.7
15-Mar	82.6	81.2	81.3	82.1	79.7	82.1	83.5	83.2	79.4	73.2	60.0	57.6	62.5	66.5	59.9	61.7	58.4	69.9	78.1	81.1	83.3	82.1	80.6	80.1	74.6	83.5
16-Mar	81.7	82.1	81.9	74.5	78.7	76.1	73.8	72.5	66.8	62.2	59.5	62.6	66.5	68.8	71.2	70.8	72.2	73.3	74.6	75.2	76.3	75.5	75.8	78.7	73.0	82.1
17-Mar	79.6	80.6	81.7	82.9	83.1	83.6	84.0	84.2	82.9	81.9	78.0	75.6	74.7	74.3	73.7	73.8	76.8	78.8	81.1	84.3	86.5	84.7	74.0	72.4	79.7	86.5
18-Mar	80.2	84.7	82.3	79.2	82.5	85.6	84.7	83.8	70.3	58.0	57.5	56.4	53.6	49.3	50.6	48.3	50.2	46.4	50.9	50.8	63.6	75.9	84.4	84.9	67.2	85.6
19-Mar	83.6	73.3	81.0	81.6	86.3	88.4	88.2	80.9	67.6	59.9	50.0	45.5	42.2	40.1	37.1	32.3	32.6	34.7	42.2	74.4	75.6	75.3	77.5	79.7	63.8	88.4
20-Mar	80.9	77.0	77.2	78.2	81.3	75.2	73.3	72.6	67.3	62.6	58.5	51.6	49.6	45.0	42.9	40.8	42.0	47.2	47.7	47.3	49.2	55.5	55.6	53.6	59.7	81.3
21-Mar	52.8	49.2	48.8	48.0	48.0	49.0	49.6	49.1	47.9	47.1	45.4	44.3	42.8	43.7	43.8	42.8	45.5	48.6	56.0	58.3	57.9	57.5	59.4	61.6	49.9	61.6
22-Mar	63.9	67.3	70.5	74.0	78.2	83.0	87.2	86.2	82.1	75.9	68.1	54.0	43.2	34.0	32.6	36.9	40.3	48.5	49.8	60.6	69.0	78.0	82.6	75.5	64.2	87.2
23-Mar	82.5	81.9	76.5	74.8	74.7	73.6	75.6	70.9	60.6	52.3	44.2	38.0	32.8	29.3	28.6	27.1	25.4	24.5	30.8	46.7	46.1	45.8	41.7	41.0	51.1	82.5
24-Mar	43.3	49.1	55.0	56.9	57.5	59.7	61.1	70.8	85.9	92.6	91.1	83.1	76.9	63.4	40.4	33.4	37.2	48.9	55.4	58.0	58.4	67.0	73.3	81.8	62.5	92.6
25-Mar	83.6	85.5	75.0	74.2	72.5	72.4	72.7	67.9	59.8	50.1	43.2	37.5	33.9	28.3	27.8	28.1	26.4	27.0	29.6	42.4	45.3	53.4	67.6	57.5	52.6	85.5
26-Mar	68.1	78.4	80.3	74.5	74.6	77.5	72.1	70.8	64.2	53.7	48.9	44.6	40.9	36.1	32.2	29.1	27.7	28.9	33.4	38.2	42.1	42.9	43.8	45.3	52.0	80.3
27-Mar	52.4	62.4	69.8	85.2	87.4	86.6	86.8	86.7	86.0	82.7	78.2	73.2	72.3	70.7	63.7	59.6	55.6	51.9	51.0	51.6	53.1	55.1	52.4	61.9	68.2	87.4
28-Mar	64.4	63.8	60.0	57.9	59.3	60.3	61.9	61.3	59.9	54.5	51.1	50.8	54.8	52.9	53.4	55.5	56.1	61.4	65.4	71.0	82.6	88.5	89.3	87.9	63.5	89.3
29-Mar	88.2	88.9	88.4	89.3	88.2	87.7	88.4	87.1	82.8	78.6	71.6	65.5	62.3	61.5	60.4	59.9	64.3	61.0	64.5	70.1	67.9	75.4	76.9	83.3	75.5	89.3
30-Mar	80.8	79.4	82.8	83.7	85.8	86.2	85.4	80.5	74.1	66.5	61.7	58.5	53.5	50.3	48.7	47.7	48.4	51.5	57.8	62.6	65.6	68.7	71.0	73.8	67.7	86.2
31-Mar	75.4	75.2	76.7	75.4	74.2	75.1	73.4	71.5	68.7	66.1	60.9	56.3	53.8	54.6	55.7	55.8	56.7	59.0	61.0	63.7	64.6	65.6	66.3	68.7	65.6	76.7
	73.1	73.9	74.4	74.6	75.3	76.3	76.5	76.2	72.9	68.4	63.6	59.4	57.2	54.2	51.6	50.7	51.2	54.0	59.6	64.9	66.9	68.5	69.7	70.8	Diurnal Average	
	90.4	91.6	91.4	90.9	90.8	91.2	90.4	89.7	88.0	92.6	91.1	85.0	85.4	84.4	82.7	82.6	84.6	84.4	84.5	86.6	90.3	90.6	90.1	89.9	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Blackrod - March 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	55	7.39	7.39
40 - 60	200	26.88	34.27
60 - 80	326	43.82	78.09
80 - 100	163	21.91	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Blackrod - March 2025

Maximum Speed: 25 km/h on Mar 24 17:00

Maximum Daily Speed Average: 16.6 km/h on Mar 21

Minimum Speed Value: 0 km/h on Mar 14 07:00

Minimum Daily Speed Average: 1.7 km/h on Mar 17

Maximum Diurnal Speed Average: 4.9 km/h at hour 16

Minimum Diurnal Speed Average: 1.2 km/h at hour 19

Monthly Average Velocity: 1.2 km/h 183.7 deg

Percentiles: P_1 = 1 P_{10} = 4 Q_1 = 7 Median = 10 Q_3 = 13 P_{90} = 16 P_{99} = 21

Hours in Service: 744

Hours of Data: 744

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	S7	S9	S9	S9	S10	S10	S8	S9	S12	SSW11	SSW10	SSW12	SW13	WSW11	SW11	W10	WSW8	WSW4	SSE5	SSE6	S9	S10	S10	S9	SSW8.1	SW13
2-Mar	S8	S9	S9	S11	S10	S10	S9	S10	SSW6	WNW15	NW16	WNW17	NW15	NNW17	NNW16	NW15	WNW10	WNW12	WNW10	NW10	NNW10	NNW10	NNW13	NNW14	WNW5.8	NNW17
3-Mar	N12	NNW10	NNW14	N16	N15	NNE14	N12	NNE12	NNE13	NNE11	N8	NNW8	NW8	WNW7	WNW5	WNW6	NW7	NNW5	SSE2	SSE3	SSE5	SSE7	S7	SSE8	N5.5	N16
4-Mar	S10	S11	S12	S12	S12	S11	S13	SSE14	S14	S16	S16	SSW16	SSW16	SW14	SW15	SW11	SSW11	SSW8	S9	SSE12	S12	S11	S10	SSW8	S11.7	S16
5-Mar	SSE4	N3	NNE5	N5	N6	NW4	NW6	N6	NNW6	N9	N8	NNW6	NNW7	WNW7	W7	W6	NW4	N4	SE2	SE2	SSE10	SSE11	S11	S9	NW1.8	SSE11
6-Mar	S10	S8	S9	S8	S8	SSE7	S9	S8	S10	SSW7	W6	W10	WNW12	WNW16	WNW15	WNW14	NW13	NW10	SSW2	SW7	SSW6	S8	S7	S7	SW4.9	WNW16
7-Mar	S9	S10	S10	S10	S9	S11	S10	S11	S10	SSW9	W8	W11	WNW12	WNW17	WNW17	WNW17	WNW13	NW11	WNW10	W10	W5	SSW5	SSW6	S4	WSW6.4	WNW17
8-Mar	S7	S10	S10	S13	S13	SSW13	SSW14	SSW11	SW12	WSW13	W18	WNW23	WNW21	WNW23	WNW22	WNW19	NW18	NNW18	NNE14	NE13	NE11	NNE10	NNE10	NNE14	WNW5.9	WNW23
9-Mar	NNE11	NNE11	NNE11	NNE11	NNE10	NNE13	NNE14	NNE15	NNE12	N14	N13	N17	NNE16	NNE13	N16	N14	N13	NNE13	NNE11	NNE13	NNE11	NNE10	NNE9	NNE7	NNE12.3	N17
10-Mar	NNE5	N6	N7	NNE8	SE1	NW3	NNE3	SSW1	S5	S8	SSW9	S5	S5	S6	SSW8	S9	SSW8	S8	S5	S6	SSE3	ESE2	NNE2	ENE2	S2.2	SSW9
11-Mar	NE2	NE4	E5	NE2	N2	NNW3	NE3	NNE3	SSW3	S8	SSW4	S6	SW5	NW5	NNW1	NW3	N6	N9	N11	N13	NNE13	N13	N14	NNE12	N3.7	N14
12-Mar	N15	N13	N13	NNE11	NNE8	N7	NNE8	NNE8	NNE7	NNE8	NNE8	NNE9	NNE10	NNE10	NNE8	NNE12	NNE13	NNE13	NNE12	NE11	NNE9	NNE6	E7	E5	NNE9.1	N15
13-Mar	ENE8	ENE7	NE11	NE11	NE12	NE13	NNE11	NNE7	NE8	NE9	NE12	NNE12	NNE13	NE15	NE16	NE16	NNE12	NNE15	NNE12	NNE11	NE13	NE13	NNE13	NNE13	NE11.5	NE16
14-Mar	NNE12	NNE9	NNW10	N10	N6	N4	SW0	N3	NNW6	NNW12	N14	N15	N14	NNW13	NW15	NNW15	NNW14	NNW14	N10	NNE6	NE3	NE3	NE2	NNE5	N8.3	N15
15-Mar	ENE7	NE4	NE4	NE4	S0	WSW3	NNW2	SSE1	S6	SW3	SW3	W4	WSW5	WNW10	WNW12	NNW13	NNW10	N9	NNE6	ENE3	E4	ESE3	ESE5	ESE3	NNW1.8	NNW13
16-Mar	SSE2	SSE3	SSE6	SE9	SE7	SSE9	SSE12	SSE13	SSE14	SSE15	SSE17	SSE15	S15	S16	S16	SSE14	SSE15	SSE12	SSE12	SSE12	SSE15	SSE16	S15	S14	SSE12.0	SSE17
17-Mar	S15	S14	S13	S11	S10	S11	S9	S10	SSW9	SSW8	SW6	WNW7	NNW7	NW8	NW10	N11	NNW11	NNW10	N6	NNE8	NNW4	NNW7	N9	NNE6	WSW1.7	S15
18-Mar	ENE3	E2	S4	S3	E1	SE2	SE2	SE2	SSW3	S4	SSW10	SSW13	SSW16	SSW18	SSW15	SW16	SW14	W11	WSW5	WSW6	SW4	SSW4	SSE4	SSE5	SSW5.7	SSW18
19-Mar	SSE7	S10	S8	SSE8	SSE8	SSE7	S8	S9	S12	S11	SSW12	SW14	WSW14	WSW13	WSW13	W14	WNW15	WNW14	WNW5	SE2	SSE4	SSE6	SSE4	SE4	SSW6.4	WNW15
20-Mar	SE4	N1	NNE7	NE11	NNE12	NNE7	E5	ENE7	ENE7	NE5	N3	NNE4	NNW5	NE6	ENE9	E6	ENE12	ENE13	ENE14	E8	SSW3	WNW2	E4	NE1	ENE5.4	ENE14
21-Mar	SW2	SSE18	SSE20	S19	S18	S19	S20	S21	S22	S17	S15	S14	SSE15	S18	S20	S19	S14	SSE13	S12	S14	S17	S19	S17	S20	S16.6	S22
22-Mar	S20	S20	S19	S15	S15	S16	S15	S16	S17	S15	SSW12	SSW10	SW10	W10	WNW17	WNW20	WNW19	WNW18	WNW9	WSW3	WSW2	S4	S5	SSW6	SSW8.7	S20
23-Mar	S6	S6	S9	S9	S9	S9	S8	S8	S10	SW5	SW7	SW10	SW12	SW10	WSW5	WSW4	SW5	SSW9	S8	SSE9	SSE11	SSE10	SSE10	SSE12	S7.4	SSE12
24-Mar	SSE13	SSE14	SSE13	S13	S12	S12	S12	S11	S8	S9	SSW11	SSW10	SSW10	SW9	WNW20	W20	WNW25	WNW22	WNW13	WNW12	WNW13	WNW6	W3	SSW2	SW7.1	WNW25
25-Mar	SSE6	SSE6	S9	S9	S9	S9	S9	S9	S8	WSW7	SW9	WSW11	WSW12	WNW19	NW18	NW18	NW18	NW14	NNW8	NNE6	NE8	NE8	NE3	NE9	W3.2	WNW19
26-Mar	NNE13	NNE12	NNE14	NNE13	NNE13	NNE12	NNE11	NNE11	NE11	NE11	NE12	NE11	NNE10	NNE10	NE11	NE15	ENE12	E10	NE11	NE15	NE18	NE15	NE9	NE14	NE11.8	NE18
27-Mar	ENE14	NE14	NE12	NE13	NE13	NE17	NE17	NE18	NNE16	NE16	NE16	NE17	NE16	NE16	NE17	NE19	NE16	NE16	NE14	NE12	NE13	NE15	NE12	NNE11	NE14.9	NE19
28-Mar	NNE9	NNE8	NE6	NE7	NE7	NE8	NE8	NE7	NNE9	NE8	NE5	ENE5	ESE4	ESE4	NE4	NE7	NE7	NE7	NE8	NE7	NE7	NNE5	NE4	NE4	NE6.1	NNE9
29-Mar	NE3	NE4	ESE2	SSE3	SSE5	S5	NNE2	SSW2	SSW4	WSW2	SSW3	S8	SW6	SSW9	SSW8	WSW7	SW6	SSW5	S9	S8	S6	SSE4	S7	SSE4	S3.9	SSW9
30-Mar	S8	S7	SSE10	S11	S11	SSE12	S13	S13	S15	S17	SSW19	S16	SSW18	S18	S17	S18	S18	S16	S14	SSE11	S14	S15	S15	S14	S13.9	SSW19
31-Mar	S15	S16	S12	SSE13	SSE12	SSE10	SE10	SSE11	S14	S13	SSE13	S14	S18	S18	S18	S18	SSE16	S15	S14	S13	S14	SSE14	SSE15	SSE15	S14.0	S18
	SE2.8	SE3.0	SSE3.1	SE3.4	SE3.4	SSE3.5	SSE3.4	SSE3.6	S4.0	SSW2.9	SW2.6	WSW3.1	WSW4.0	W4.3	W4.7	WNW4.9	NW3.9	NW3.5	NNE1.2	E1.6	ESE2.1	SE2.5	SE2.6	ESE2.5	Diurnal Average	
	S20	S20	SSE20	S19	S18	S19	S20	S21	S22	S17	SSW19	WNW23	WNW21	WNW23	WNW22	W20	WNW25	WNW22	S14	NE15	NE18	S19	S17	S20	Diurnal Maximum	

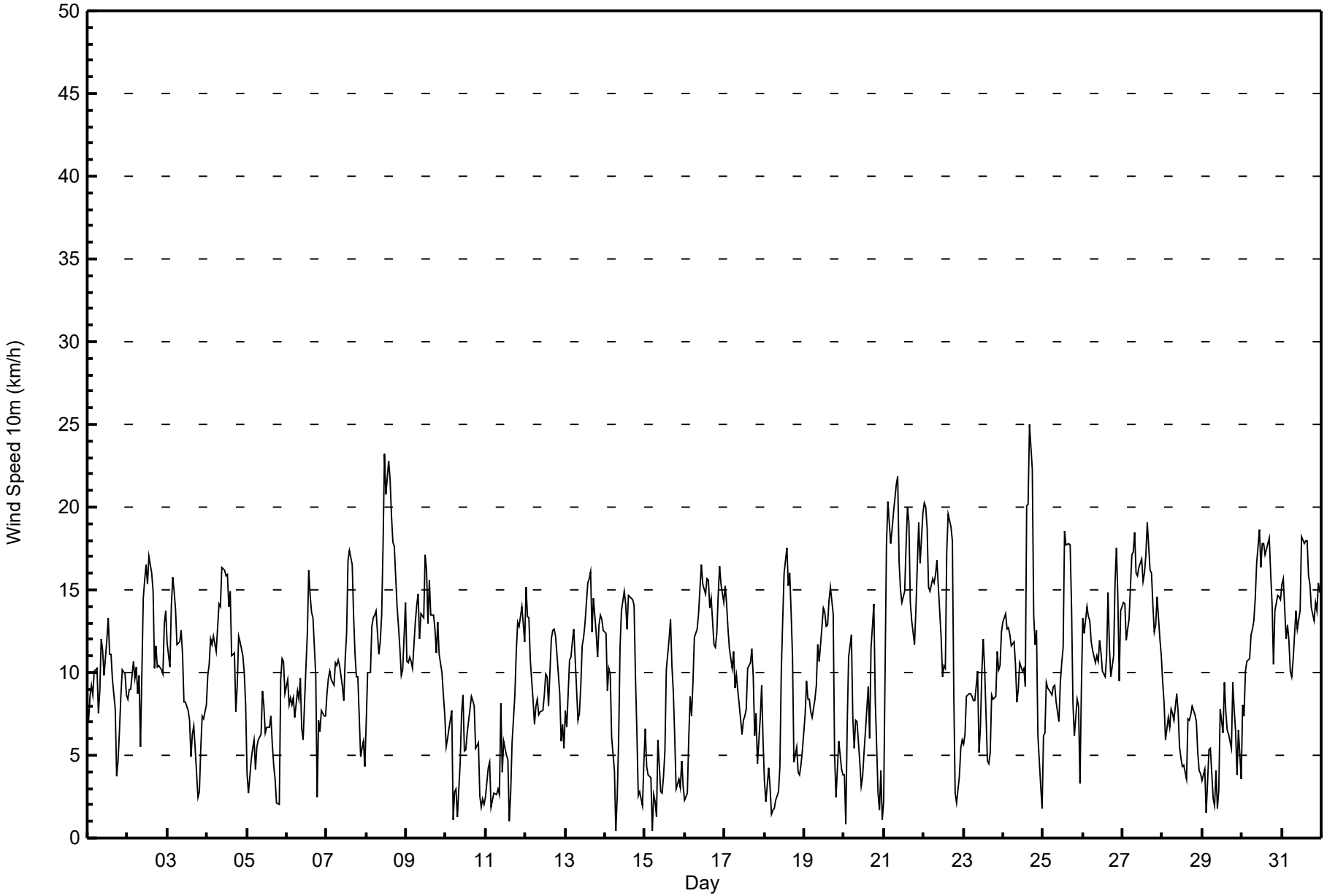
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Blackrod - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	139	18.68	18.68
6 - 11	315	42.34	61.02
12 - 19	273	36.69	97.72
20 - 28	17	2.28	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Blackrod - March 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	8	9	19	4	7	7	7	19	12	13	8	9	3	3	5	6	139
6 - 11	18	46	30	6	4	0	3	25	97	25	12	6	10	10	8	15	315
12 - 19	19	35	36	5	0	0	0	32	73	13	8	5	2	23	10	12	273
20 - 28	0	0	0	0	0	0	0	1	7	0	0	0	1	8	0	0	17
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	45	90	85	15	11	7	10	77	189	51	28	20	16	44	23	33	744

Total Number of Valid Hours: 744

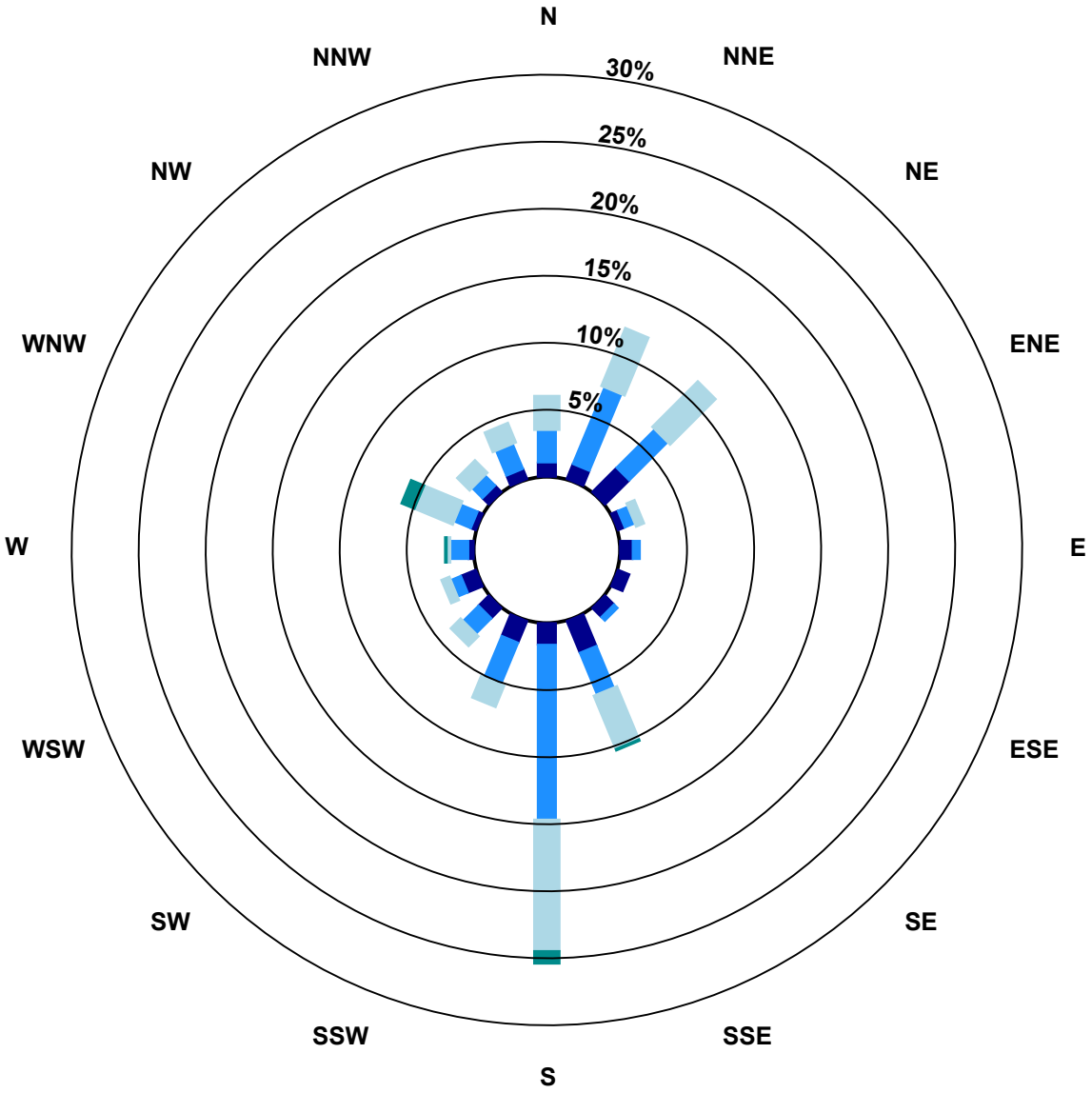
Total Number of Hours: 744

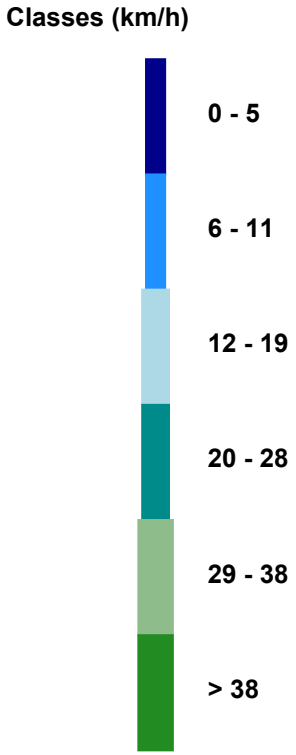
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 10m (WS10) - km/h

Blackrod





Total Number of Valid Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Blackrod - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7 km/h on Mar 24 15:00

Minimum Value: 0 km/h on Mar 3 19:00

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

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

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

Direction of Maximum Speed: 294 deg on Mar 24 17:00

Direction of Maximum Daily Speed Average: 176.3 deg on Mar 21

Direction of Minimum Speed: 230 deg on Mar 14 07:00

Direction of Minimum Daily Speed Average: 1.7 deg on Mar 17

Monthly Average Direction: 183.7 deg

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	171	177	175	177	184	179	178	188	183	195	192	209	222	241	234	266	247	247	167	161	169	175	179	183	195.5
2-Mar	178	177	178	176	181	181	185	186	197	295	309	300	314	344	341	319	292	296	298	313	336	340	340	348	296.5
3-Mar	352	347	343	354	360	12	9	13	21	21	355	333	305	297	301	301	324	337	157	148	164	166	171	166	352.3
4-Mar	182	181	180	181	181	176	174	168	173	182	188	193	204	225	219	218	206	205	171	167	172	177	177	195	187.5
5-Mar	168	354	16	1	4	315	326	353	332	353	358	329	335	298	279	279	317	358	135	136	158	165	182	182	318.9
6-Mar	186	175	176	176	172	164	179	180	183	202	271	281	287	301	299	295	313	313	198	216	203	182	181	173	229.5
7-Mar	175	179	179	176	182	183	183	185	177	197	260	265	285	290	287	293	299	305	284	268	265	212	206	175	238.7
8-Mar	176	184	180	177	181	195	197	213	227	245	279	290	284	287	285	303	310	344	15	36	39	31	26	15	281.7
9-Mar	27	18	22	21	21	22	16	19	13	7	8	9	14	16	1	2	10	18	19	13	20	28	24	25	15.5
10-Mar	12	357	6	33	140	321	16	206	187	186	201	174	190	190	197	189	193	178	178	178	163	121	28	68	180.2
11-Mar	48	45	81	41	6	342	37	26	211	187	194	180	225	318	330	311	3	2	5	7	14	9	4	17	8.4
12-Mar	351	359	0	17	17	1	14	20	18	16	27	25	14	18	24	12	17	20	27	34	31	19	80	83	18.3
13-Mar	63	60	52	55	53	52	31	31	42	47	37	27	30	39	45	39	31	30	23	24	36	34	27	26	37.9
14-Mar	31	18	334	8	350	6	230	9	339	339	351	349	351	347	324	340	345	345	359	18	41	53	55	33	353.8
15-Mar	62	44	44	34	170	258	336	164	189	218	222	266	252	293	301	343	340	356	27	64	100	109	114	120	344.5
16-Mar	161	161	160	145	142	147	155	154	152	160	160	166	174	171	172	164	161	164	166	164	164	162	170	178	162.7
17-Mar	174	174	180	180	179	171	173	185	194	212	230	294	327	325	325	350	344	347	356	15	330	334	360	22	241.3
18-Mar	60	80	187	180	91	135	142	140	197	184	196	203	194	204	206	226	223	277	248	245	224	197	164	162	205.5
19-Mar	163	177	170	168	165	164	169	179	186	191	213	220	246	240	239	274	283	289	294	132	152	160	151	146	210.4
20-Mar	146	6	26	35	31	29	85	58	65	55	11	33	337	43	67	87	74	67	75	92	200	294	84	56	57.6
21-Mar	232	163	166	171	174	174	176	178	178	186	182	179	168	178	178	185	175	164	191	182	176	180	175	174	176.3
22-Mar	178	184	183	180	188	184	181	186	185	186	194	213	234	270	293	300	294	297	298	253	250	177	169	192	213.7
23-Mar	177	172	175	176	180	175	169	175	183	214	233	236	219	228	251	242	222	208	187	158	161	157	155	167	188.3
24-Mar	166	162	166	170	174	176	186	187	185	190	203	207	206	230	283	275	294	291	302	301	302	297	266	208	233.0
25-Mar	166	164	176	178	176	175	176	181	188	251	230	247	252	292	305	318	322	310	332	26	46	44	50	36	267.3
26-Mar	26	26	19	31	31	33	32	29	41	50	40	46	31	33	43	45	74	88	53	51	54	55	39	51	42.4
27-Mar	65	54	51	40	44	46	42	41	27	34	46	47	44	36	38	40	52	54	51	50	49	49	46	20	44.4
28-Mar	21	21	37	42	46	37	36	43	33	38	47	74	121	122	45	34	38	45	46	53	40	30	39	39	42.6
29-Mar	53	54	112	162	163	174	25	200	207	241	194	179	218	194	209	252	219	213	187	172	170	159	171	147	186.5
30-Mar	173	173	167	170	175	168	169	177	185	190	194	189	194	189	189	189	187	180	180	168	177	188	186	183	182.6
31-Mar	180	179	177	168	157	150	145	156	169	173	161	170	181	184	178	180	167	180	179	178	171	165	162	161	170.9
	132.9	143.9	147.9	137.8	145.7	148.1	148.6	156.0	169.9	193.8	219.5	241.2	250.1	269.7	279.0	297.6	306.0	324.6	18.9	81.2	114.7	126.4	130.9	123.1	
	Diurnal Average																								

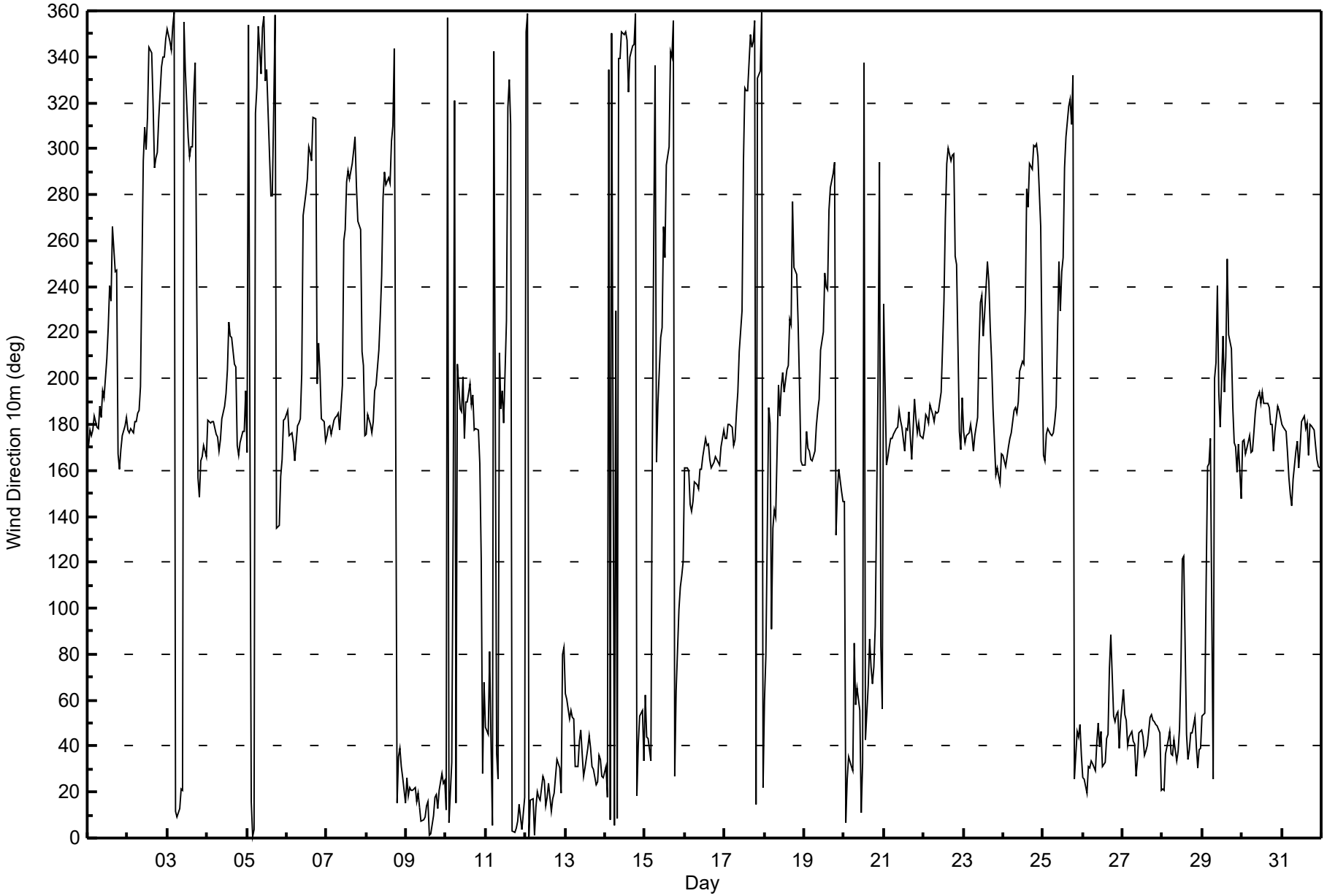
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Blackrod - March 2025



Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 99 deg on Mar 20 02:00

Minimum Value: 7 deg on Mar 4 20:00

Percentiles: P_1 = 8 P_{10} = 9 Q_1 = 12 Median = 16 Q_3 = 24 P_{90} = 41 P_{99} = 79

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	13	8	8	10	9	12	12	10	13	13	13	17	20	29	21	24	24	42	20	10	8	10	12	10	42
2-Mar	10	11	17	14	12	12	29	9	29	19	18	16	19	16	20	21	16	11	11	16	14	12	13	13	29
3-Mar	12	13	14	15	19	15	14	17	15	17	18	28	26	29	63	46	48	33	25	15	10	8	8	7	63
4-Mar	11	7	9	8	9	11	11	8	11	9	12	14	17	25	19	21	16	16	9	7	9	11	12	27	27
5-Mar	36	62	19	12	16	18	9	13	18	27	43	62	46	49	41	44	37	29	34	24	8	12	8	7	62
6-Mar	8	9	8	8	9	9	10	8	10	27	32	19	25	19	19	21	19	15	51	19	21	10	9	9	51
7-Mar	8	9	9	9	10	8	8	9	10	24	30	26	25	18	17	15	15	15	24	19	26	15	13	17	30
8-Mar	12	11	11	9	12	11	10	16	15	22	21	16	20	18	16	20	16	18	17	13	14	11	13	13	22
9-Mar	14	13	14	13	14	15	13	15	12	13	13	15	14	15	15	15	14	16	13	13	14	13	16	17	17
10-Mar	22	16	23	15	85	67	33	84	27	16	19	34	22	33	23	23	21	18	19	16	61	55	39	46	85
11-Mar	62	73	31	54	42	33	24	51	37	21	35	34	42	47	95	54	39	17	17	16	14	18	17	18	95
12-Mar	12	14	12	14	14	15	16	12	24	22	23	26	28	25	36	24	18	13	14	13	14	34	32	53	53
13-Mar	39	40	18	19	15	13	15	24	19	17	17	16	13	15	16	15	17	13	13	13	12	12	12	12	40
14-Mar	11	13	15	21	27	35	80	76	13	17	17	15	17	20	18	23	18	12	20	18	22	26	23	30	80
15-Mar	18	22	32	34	96	61	37	83	12	45	50	61	45	20	26	27	27	28	13	27	16	18	21	36	96
16-Mar	72	46	25	11	12	13	14	15	16	16	17	17	20	15	17	19	15	17	18	15	13	13	12	12	72
17-Mar	12	12	11	12	11	10	12	14	15	22	21	32	32	24	23	16	15	19	26	16	16	16	16	23	32
18-Mar	15	61	32	41	54	33	24	17	22	18	21	19	18	17	17	20	22	29	28	24	20	28	17	11	61
19-Mar	8	9	8	8	8	7	9	9	9	11	18	19	27	22	25	28	20	13	65	16	30	11	13	11	65
20-Mar	14	99	12	10	10	41	43	20	30	60	73	70	62	48	36	52	25	19	21	64	67	65	35	91	99
21-Mar	78	13	13	12	13	12	12	12	12	15	15	20	19	21	18	16	16	14	11	9	11	11	11	10	78
22-Mar	10	9	10	14	9	11	10	10	12	12	15	27	38	30	17	17	21	16	18	43	51	19	10	16	51
23-Mar	10	9	9	9	8	9	8	9	10	51	34	33	31	38	74	66	54	29	22	11	7	10	11	10	74
24-Mar	8	9	8	10	10	11	11	8	8	10	18	17	21	26	21	24	19	15	18	15	16	24	53	76	76
25-Mar	11	18	11	8	9	8	9	10	17	29	31	29	33	25	18	16	18	17	20	22	9	9	44	8	44
26-Mar	11	12	12	12	12	13	15	14	27	25	22	23	31	44	32	21	28	31	17	15	14	20	23	18	44
27-Mar	18	17	18	17	14	12	12	13	14	14	18	19	21	18	16	15	17	15	16	18	16	16	20	13	21
28-Mar	14	17	18	15	21	16	16	19	15	24	56	60	75	76	76	33	26	27	16	16	14	9	13	39	76
29-Mar	21	23	54	23	13	19	67	64	27	72	54	29	43	27	32	26	27	27	13	9	10	15	9	22	72
30-Mar	11	9	8	9	10	8	8	12	11	15	15	18	16	19	18	18	14	17	12	11	11	10	10	10	19
31-Mar	10	11	11	12	16	16	18	16	18	20	20	23	23	20	20	18	15	15	12	12	12	12	13	13	23
	78	99	54	54	96	67	80	84	37	72	73	70	75	76	95	66	54	42	65	64	67	65	53	91	
	Diurnal Maximum																								

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS33
MONDAY CREEK
MARCH 2025

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

April 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MONDAY CREEK (AMS33)
MARCH 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	708	35	36	99.87	10.4	0	2	0
H2S (ppb) Average	708	35	36	99.87	0.5	0	0.2	0
NO2 (ppb) Average	708	36	36	100	23.2	0	10.7	-
NO (ppb) Average	708	36	36	100	40.4	-	11.2	-
NOX (ppb) Average	708	36	36	100	61.9	-	21.9	-
Temperature 2 m (C) Average	744	0	0	100	10.6	-	4.1	-
Relative Humidity (%) Average	744	0	0	100	94.1	-	84	-
Wind Speed 10 m (km/h) Average	744	0	0	100	34	-	17	-
Wind Direction 10 m (deg) Average	744	0	0	100	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MONDAY CREEK (AMS33)
MARCH 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	708	0.57	0.9	-	0	0	0.1	0.3	0.7	1.3	10.4
H2S (ppb) Average	708	0.09	0.1	-	0	0	0	0.1	0.1	0.2	0.5
NO2 (ppb) Average	708	3.04	3.7	-	0.2	0.5	0.9	1.7	3.6	7.9	23.2
NO (ppb) Average	708	1.55	4.3	-	0	0	0	0.2	0.7	4	40.4
NOX (ppb) Average	708	4.59	7.4	-	0.2	0.6	1	2	4.3	11.3	61.9
Temperature 2 m (C) Average	744	-5.36	7.8	-	-30.4	-15	-10.9	-4.8	0.2	4.8	10.6
Relative Humidity (%) Average	744	64.51	15.9	-	25.5	40.3	52.2	67.5	77.4	83.3	94.1
Wind Speed 10 m (km/h) Average	744	9.2	5	-	0	4	6	9	12	15	34
Wind Direction 10 m (deg) Average	744	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MONDAY CREEK (AMS33)
MARCH 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
H2S, SO2	13 Mar 2025 14:00	13 Mar 2025 14:00	1	Maintenance - sample manifold cleaned

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Monday Creek - March 2025

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

Maximum Value: 10.4 ppb on Mar 6 23:00

Maximum Daily Average: 2.0 ppb on Mar 4

Minimum Value: 0.0 ppb on Mar 7 14:00

Minimum Daily Average: 0.0 ppb on Mar 13

Maximum Diurnal Average: 1.1 ppb at hour 9

Minimum Diurnal Average: 0.3 ppb at hour 19

Monthly Average: 0.57 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.3 Q_3 = 0.7 P_{90} = 1.3 P_{99} = 4.0

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.3	0.7	0.3	0.4	0.4	Z	0.2	0.1	0.3	1.0	2.3	2.1	2.0	0.9	2.6	1.7	1.2	0.8	1.2	0.4	0.6	0.7	0.7	0.4	0.9	2.6
2-Mar	Z	0.6	0.8	0.9	0.8	0.9	0.8	2.3	4.0	0.6	0.4	0.5	0.4	0.4	0.6	0.8	1.0	0.7	0.5	0.8	0.9	0.3	0.4	0.4	0.9	4.0
3-Mar	0.7	Z	1.0	0.6	0.8	1.3	1.1	1.1	1.4	1.0	0.8	0.7	0.6	0.9	1.0	0.6	1.1	0.9	0.4	0.3	0.3	0.5	0.6	1.2	0.8	1.4
4-Mar	1.2	1.6	Z	5.3	1.5	3.5	1.5	3.8	3.5	3.9	2.5	1.0	1.1	0.6	0.9	0.9	1.6	1.7	1.4	0.6	0.9	2.0	1.7	3.5	2.0	5.3
5-Mar	1.1	0.5	0.6	Z	1.7	1.3	1.2	1.0	0.6	0.9	0.7	C	C	C	C	0.8	0.7	0.3	0.1	0.0	0.3	0.4	0.3	1.0	0.7	1.7
6-Mar	1.1	2.6	1.1	0.9	Z	1.5	0.7	0.4	0.6	1.4	3.5	3.5	1.3	0.4	0.3	0.4	0.2	0.3	0.3	1.2	1.9	3.9	10.4	1.1	1.7	10.4
7-Mar	0.9	3.8	7.6	5.7	1.8	Z	8.8	2.2	1.4	0.3	0.2	0.1	0.0	0.0	0.2	0.1	0.0	0.0	0.1	0.1	0.2	0.6	0.0	0.0	1.5	8.8
8-Mar	Z	0.8	0.6	0.6	0.1	0.4	1.2	5.0	7.7	0.5	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.3	1.5	0.8	0.6	0.4	0.5	0.9	7.7
9-Mar	0.4	Z	0.3	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.4	0.4	0.4	0.4	0.8	0.7	0.3	0.2	0.1	0.2	0.1	0.0	0.3	0.8
10-Mar	0.1	0.0	Z	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.4	0.9	1.4	1.6	1.2	0.7	0.5	0.2	0.2	0.2	0.3	0.4	0.4	0.4	1.6
11-Mar	0.7	0.7	0.7	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.7
12-Mar	0.1	0.2	0.2	0.3	Z	0.5	0.3	0.4	0.5	1.1	1.3	1.9	0.4	0.5	0.7	1.2	0.9	0.7	0.6	0.3	0.1	0.1	0.1	0.1	0.5	1.9
13-Mar	0.1	0.1	0.2	0.2	0.1	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	M	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2
14-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.2	0.2	0.0	0.1	0.2	0.1	0.1	0.3	0.5	0.7	0.7	0.1	0.7
15-Mar	0.5	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.1	0.0	0.2	0.1	0.2	0.4	0.4	0.9	1.3	1.0	0.8	0.4	0.4	0.3	0.3	1.3
16-Mar	0.3	0.3	Z	0.2	0.1	0.2	0.1	0.3	0.5	0.7	0.7	0.7	0.4	0.3	0.3	0.4	0.3	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.3	0.7
17-Mar	0.4	0.4	0.5	Z	0.6	0.4	0.3	0.4	1.2	0.9	1.1	0.9	0.4	0.2	0.0	0.1	0.1	0.3	0.2	0.3	1.1	1.4	1.4	0.9	0.6	1.4
18-Mar	0.6	0.4	0.4	0.5	Z	0.2	0.3	0.4	0.7	1.8	2.2	1.4	0.9	0.8	0.8	0.8	1.1	0.9	0.9	1.3	0.9	1.1	0.5	0.6	0.8	2.2
19-Mar	1.0	1.5	1.4	0.4	0.3	Z	0.8	0.5	0.9	2.6	1.7	0.9	0.5	1.1	1.2	0.5	0.3	0.2	0.2	0.2	0.3	0.2	0.4	0.4	0.8	2.6
20-Mar	Z	0.3	0.4	0.5	0.5	0.5	0.3	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5
21-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.0	0.2	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.2
22-Mar	0.1	0.2	Z	0.3	0.3	0.4	0.5	1.0	1.4	1.7	2.1	2.0	1.5	1.2	1.0	0.7	0.0	1.6	0.0	0.1	0.1	0.1	0.1	0.1	0.7	2.1
23-Mar	0.7	1.6	0.7	Z	0.7	0.6	0.4	0.8	1.1	0.1	0.3	0.5	0.8	0.0	0.1	0.2	0.2	0.1	0.3	0.1	0.0	0.1	0.0	0.1	0.4	1.6
24-Mar	0.0	0.1	0.0	0.0	Z	0.1	0.0	0.2	2.7	2.3	1.1	0.4	0.8	0.6	0.3	0.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.7
25-Mar	0.5	0.8	0.0	0.3	0.5	Z	1.0	0.9	0.5	1.7	0.7	1.1	1.2	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.4	1.7
26-Mar	Z	0.2	0.0	0.2	0.2	0.2	0.1	0.0	0.2	0.4	0.2	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
27-Mar	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	0.1	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.2
28-Mar	0.0	0.0	Z	0.0	0.1	0.1	0.0	0.2	0.4	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.5
29-Mar	0.1	0.1	0.0	Z	0.1	0.1	0.0	0.0	1.2	0.8	0.7	1.7	3.1	2.6	1.0	0.3	0.0	0.4	0.4	0.7	1.0	0.8	0.2	0.2	0.7	3.1
30-Mar	0.2	0.2	0.3	0.1	Z	0.4	0.1	0.2	2.2	0.9	1.0	0.7	0.6	0.7	2.2	1.8	1.2	0.7	0.2	0.2	0.2	0.1	0.6	1.2	0.7	2.2
31-Mar	0.6	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.3	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	0.0	0.1	0.1	0.6
	0.4	0.7	0.7	0.7	0.4	0.5	0.7	0.7	1.1	0.8	0.8	0.7	0.6	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.4	0.5	0.7	0.4	Diurnal Average	
	1.2	3.8	7.6	5.7	1.8	3.5	8.8	5.0	7.7	3.9	3.5	3.5	3.1	2.6	2.6	1.8	1.6	1.7	1.4	1.5	1.9	3.9	10.4	3.5	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

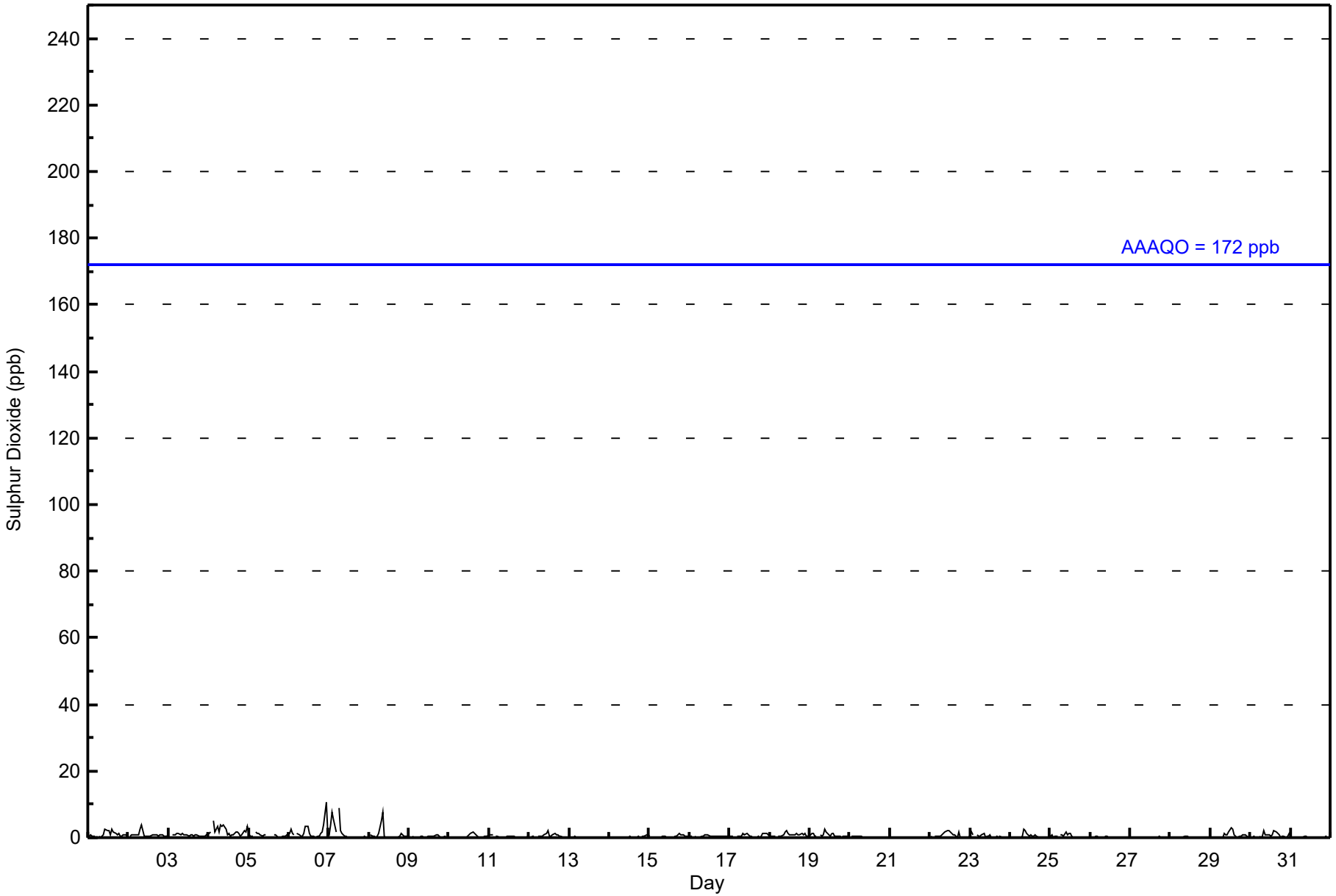
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Monday Creek - March 2025



Sulphur Dioxide (SO_2) - ppb
Monday Creek - March 2025

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

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Monday Creek - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	26	53	57	81	37	28	51	21	34	32	38	59	80	65	22	24	708
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	26	53	57	81	37	28	51	21	34	32	38	59	80	65	22	24	708

Total Number of Valid Hours: 708

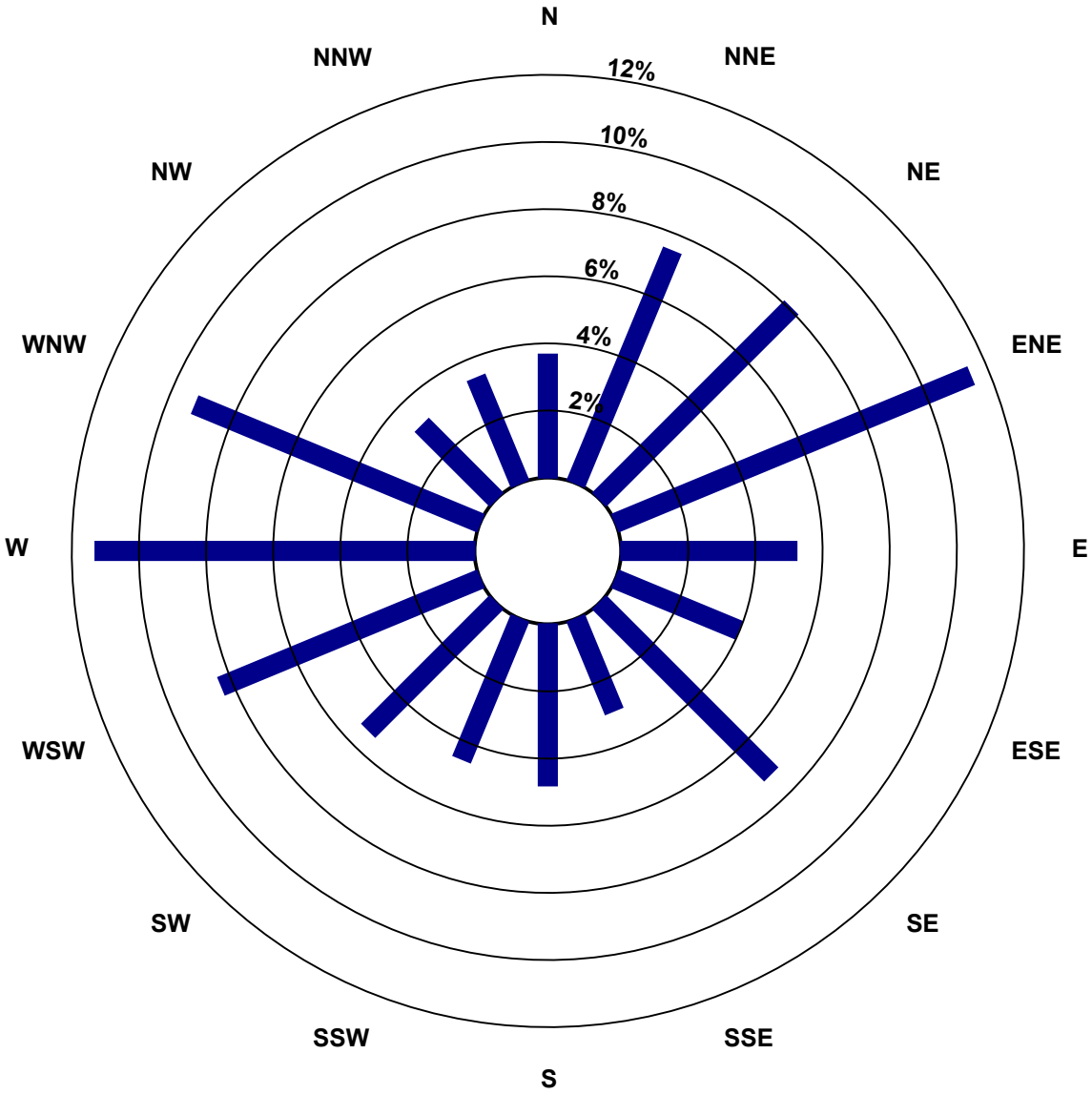
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Sulphur Dioxide (SO_2) - ppb

Monday Creek



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

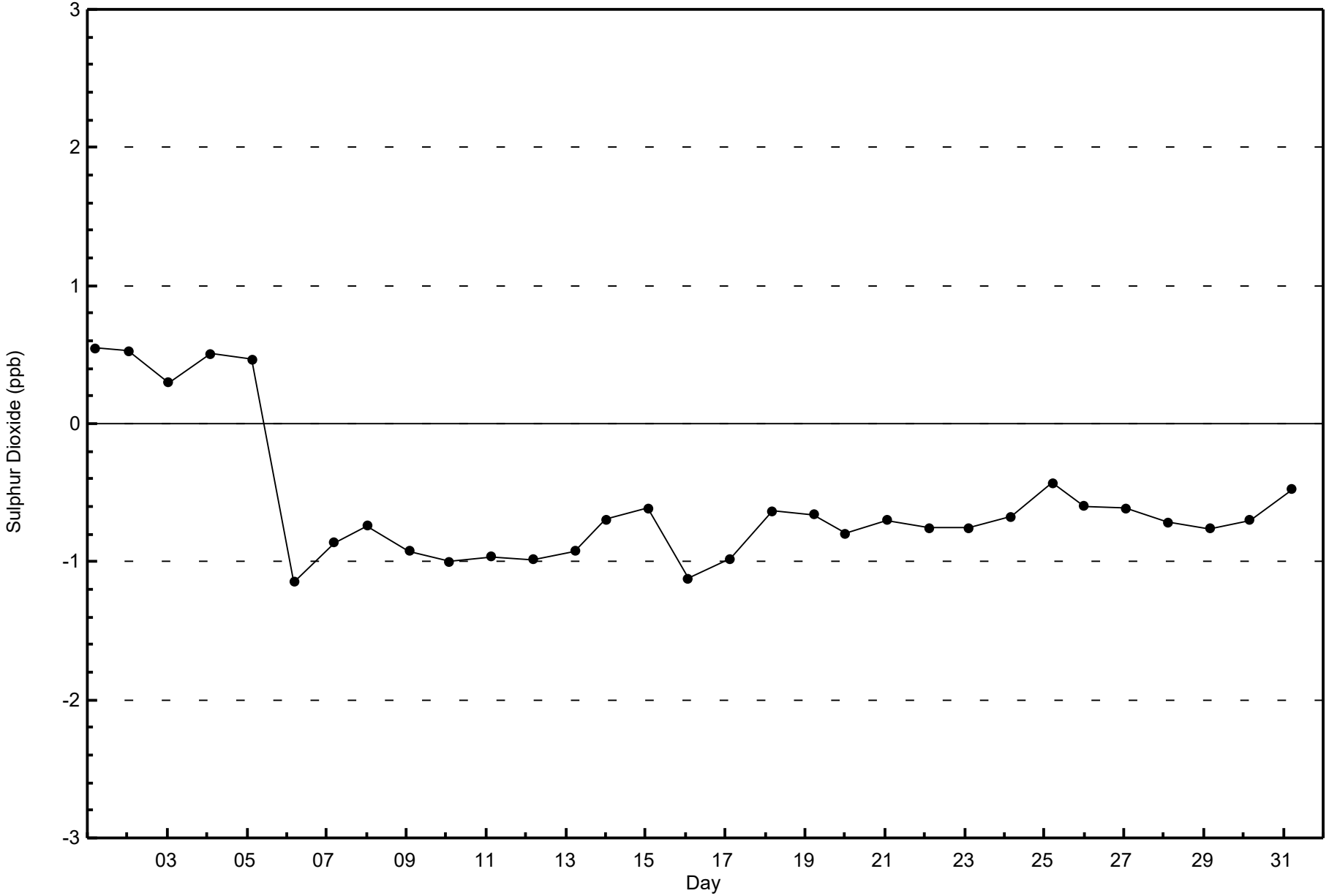
Total Number of Valid Hours: 708

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Monday Creek - March 2025

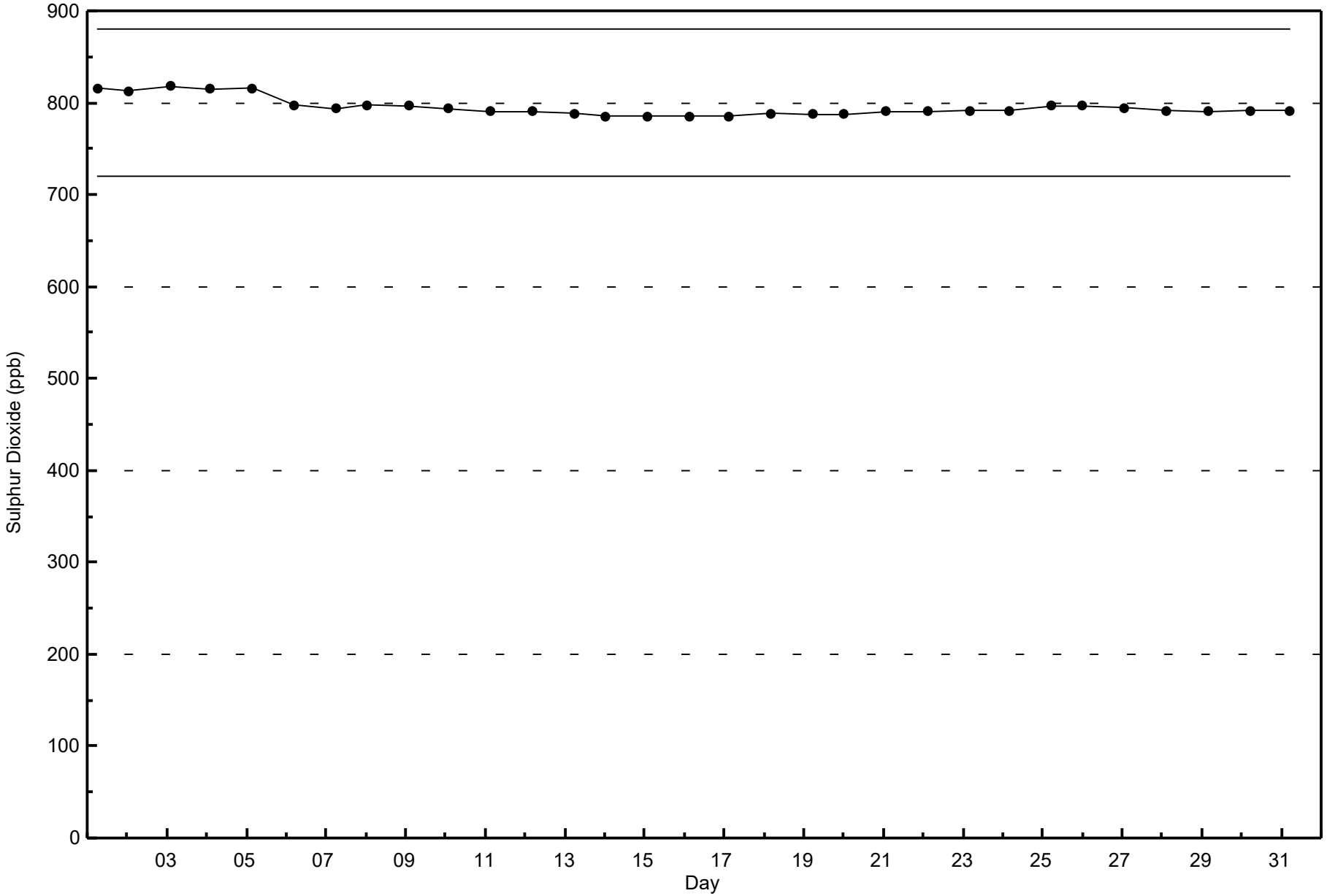


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Monday Creek - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Monday Creek - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 0.5 ppb on Mar 23 04:00 Maximum Daily Average: 0.2 ppb on Mar 2

Minimum Value: 0.0 ppb on Mar 21 00:00 Minimum Daily Average: 0.0 ppb on Mar 21
Maximum Diurnal Average: 0.2 ppb at hour 8 Minimum Diurnal Average: 0.1 ppb at hour 19
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} = 0.4

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	Z	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	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.3
2-Mar	0.2	Z	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.1	0.1	0.2	0.2	0.2	0.4	0.2	0.3	0.1	0.1	0.2	0.1	0.1	0.2	0.3	0.2	0.4
3-Mar	0.2	0.3	Z	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.3	0.3	0.1	0.2	0.3
4-Mar	0.1	0.1	0.2	Z	0.2	0.1	0.2	0.4	0.2	0.2	0.1	C	C	C	C	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.4
5-Mar	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	0.1	0.1	0.2	0.2	0.1	0.2
6-Mar	0.2	0.1	0.2	0.2	0.2	Z	0.2	0.3	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.3
7-Mar	Z	0.1	0.1	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	0.0	0.1	0.1	0.0	0.0	0.0	0.2
8-Mar	0.1	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.1	0.0	0.1	0.2	0.1	0.1	0.0	0.0	0.1	0.4
9-Mar	0.0	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	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1
10-Mar	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	0.2	0.1	0.1	0.2
11-Mar	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
12-Mar	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2
13-Mar	Z	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.1	M	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
14-Mar	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.3	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.2	0.1	0.3
15-Mar	0.2	0.1	Z	0.1	0.2	0.2	0.2	0.3	0.3	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3
16-Mar	0.1	0.1	0.1	Z	0.1	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	0.3
17-Mar	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	0.2	0.2	0.2	0.2	0.1	0.2
18-Mar	0.1	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	0.1	0.1	0.2
19-Mar	Z	0.4	0.2	0.1	0.2	0.3	0.5	0.5	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.5
20-Mar	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
21-Mar	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	0.0	0.0	0.1
22-Mar	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2
23-Mar	0.4	0.2	0.3	0.5	Z	0.2	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	0.1	0.5
24-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.1	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	0.0	0.0	0.0	0.0	0.1	0.2
25-Mar	Z	0.2	0.0	0.1	0.1	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.2
26-Mar	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	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
27-Mar	0.0	0.0	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
28-Mar	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.1	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
29-Mar	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	0.1	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.1	0.2	0.1	0.2
30-Mar	0.2	0.2	0.2	0.1	0.1	Z	0.2	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.3
31-Mar	Z	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	Diurnal Average	
	0.4	0.4	0.3	0.5	0.3	0.3	0.5	0.5	0.4	0.3	0.2	0.2	0.3	0.2	0.4	0.4	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	Diurnal Maximum	

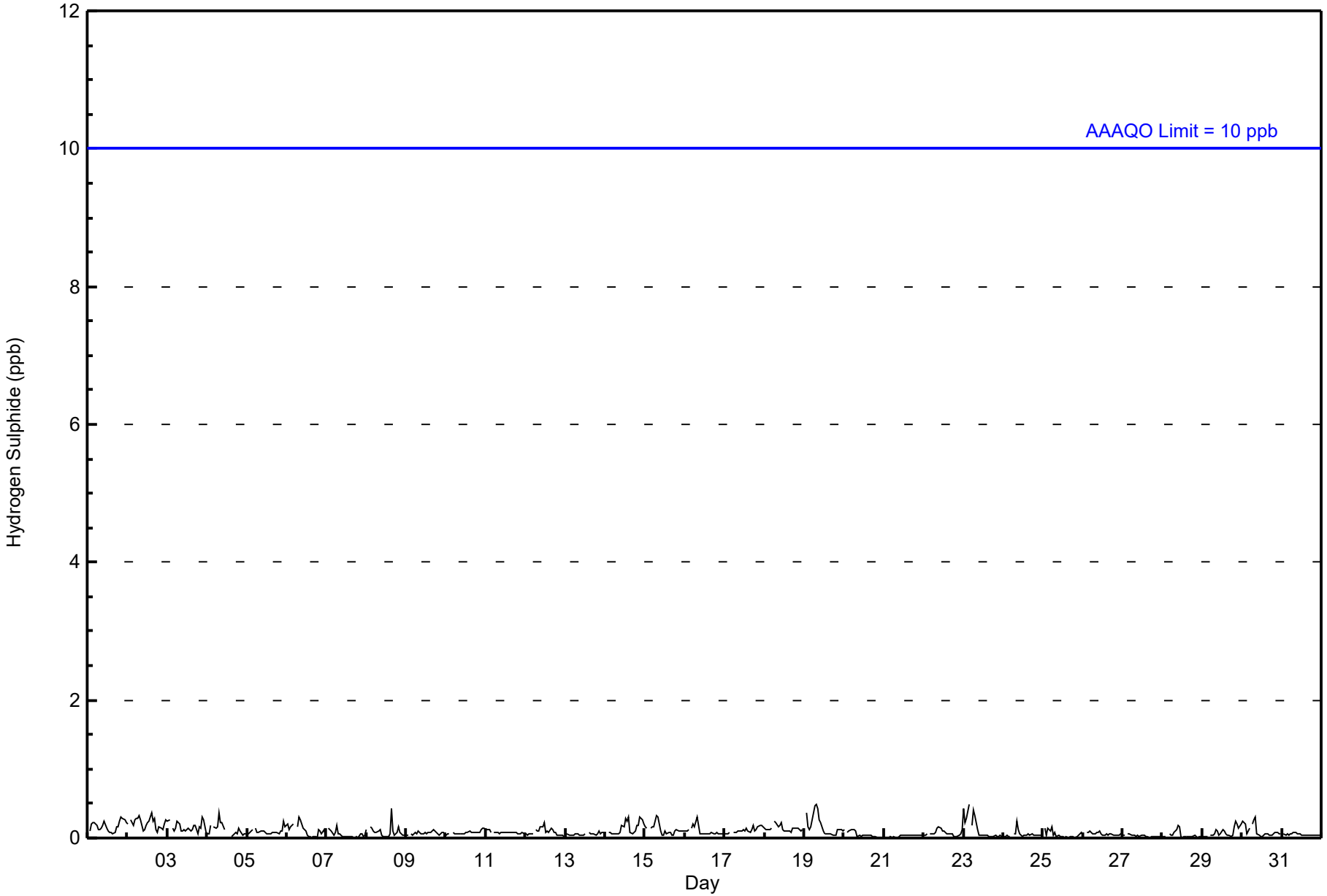
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Monday Creek - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	708	100.00	100.00
3 - 4	0	0.00	100.00
5 - 7	0	0.00	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Monday Creek - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	26	53	56	81	36	29	53	21	32	33	39	53	80	65	24	27	708
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	26	53	56	81	36	29	53	21	32	33	39	53	80	65	24	27	708

Total Number of Valid Hours: 708

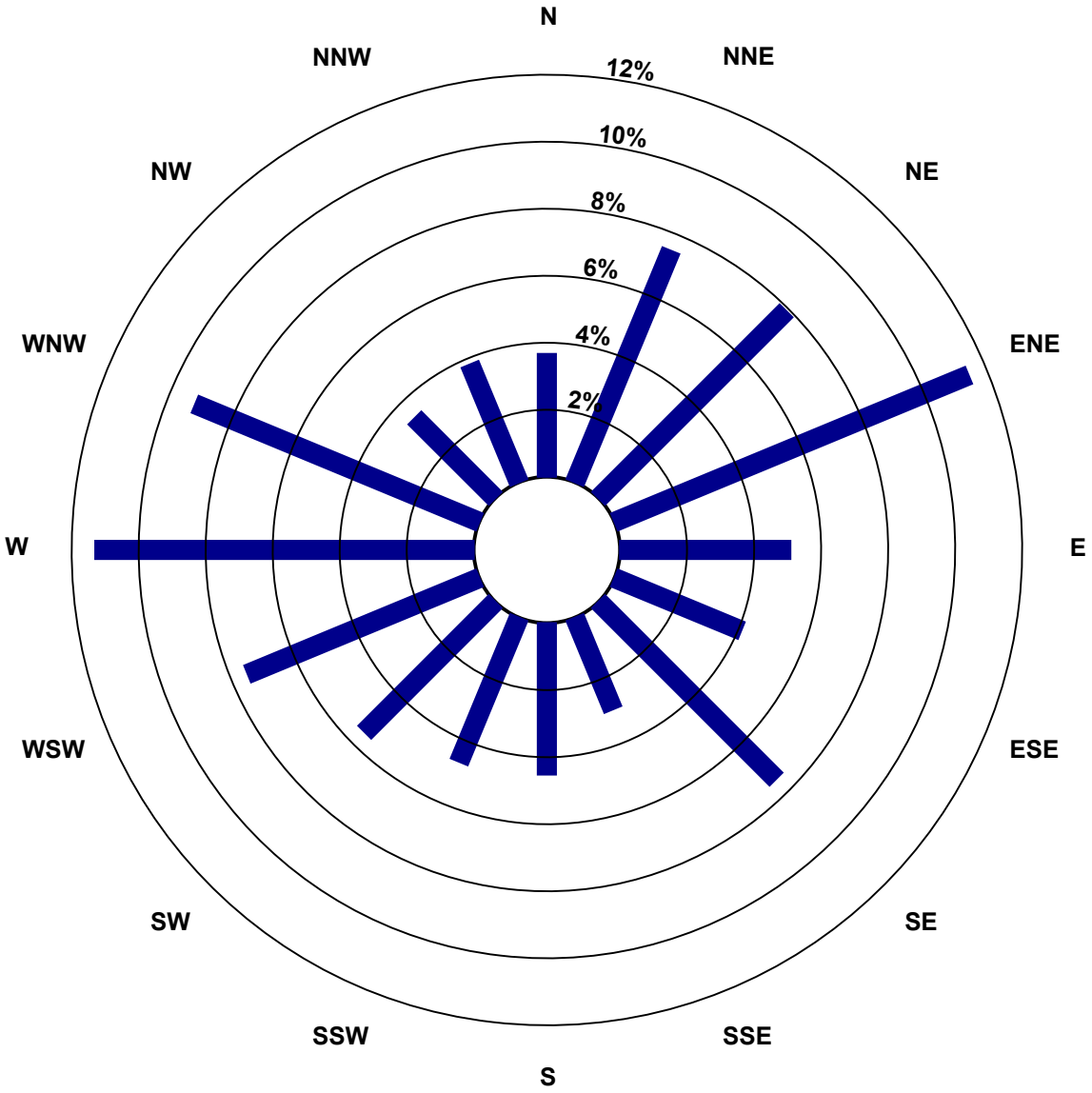
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Hydrogen Sulphide (H_2S) - ppb

Monday Creek



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

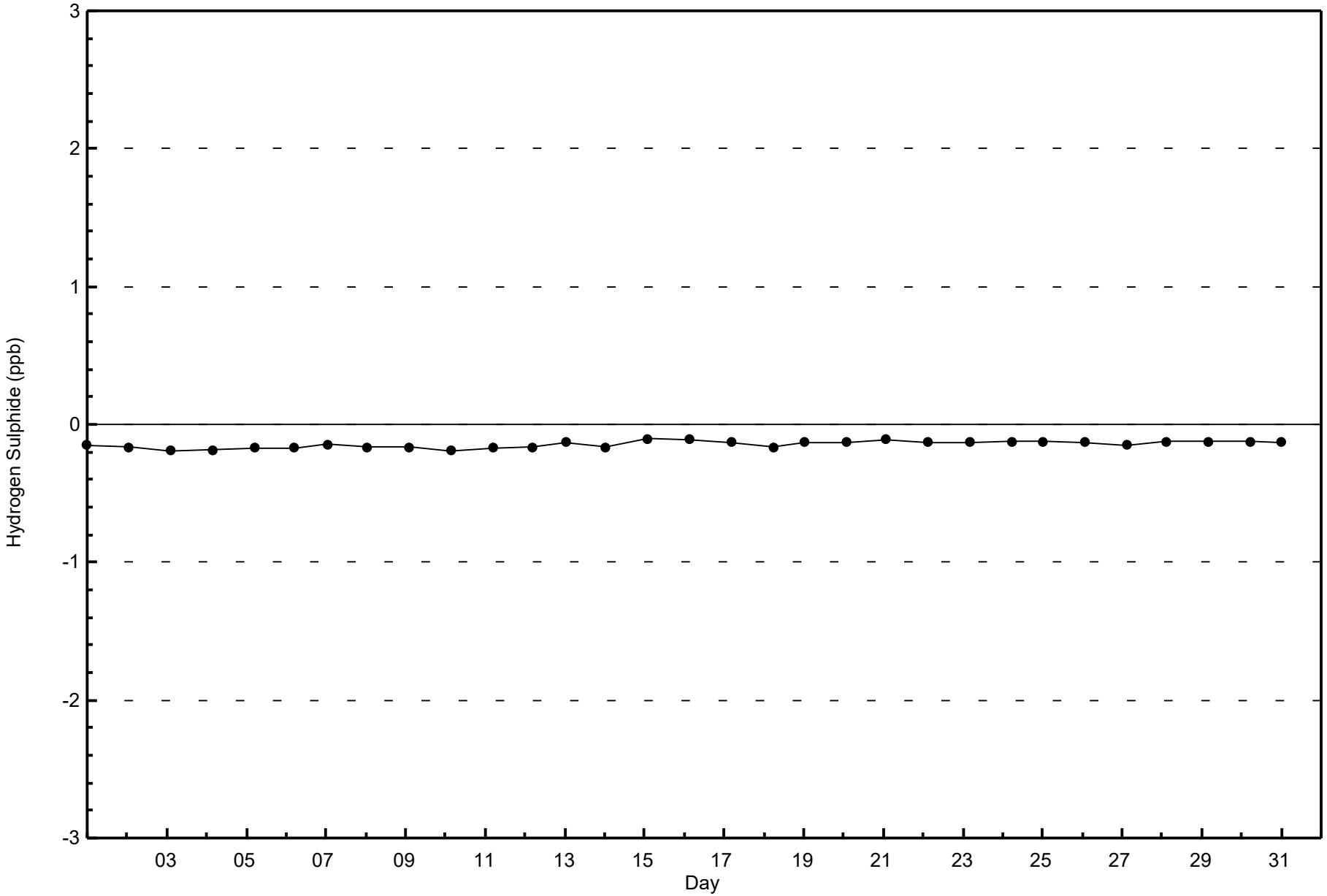
Total Number of Valid Hours: 708

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Monday Creek - March 2025

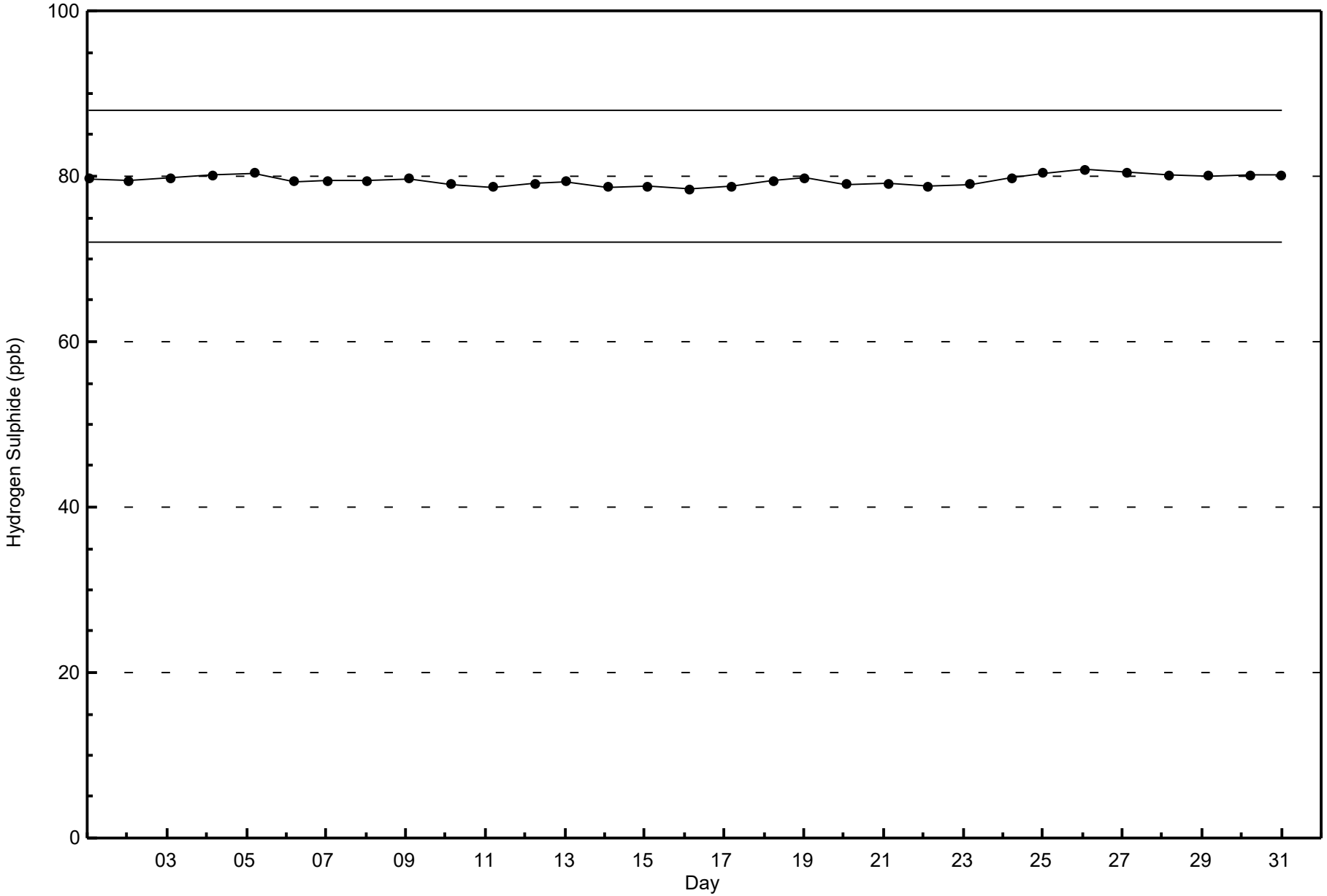


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Monday Creek - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Monday Creek - March 2025

Maximum Value: 40.4 ppb on Mar 2 15:00

Maximum Daily Average: 11.2 ppb on Mar 2

Minimum Value: 0.0 ppb on Mar 4 19:00

Minimum Daily Average: 0.0 ppb on Mar 13

Maximum Diurnal Average: 3.4 ppb at hour 8

Minimum Diurnal Average: 0.3 ppb at hour 5

Monthly Average: 1.55 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.2 Q_3 = 0.7 P_{90} = 4.0 P_{99} = 24.7

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	2.3	0.4	1.3	Z	4.4	2.9	4.2	5.0	5.4	3.1	3.2	4.0	6.5	4.4	3.7	2.9	6.0	4.3	1.6	1.9	4.7	1.8	4.6	2.5	3.5	6.5
2-Mar	1.2	0.3	7.6	1.9	Z	1.8	1.2	0.4	1.7	3.5	9.9	20.0	24.2	25.8	40.4	24.1	27.6	5.0	0.4	3.6	5.2	9.0	18.8	24.7	11.2	40.4
3-Mar	16.4	17.6	26.0	3.0	0.9	Z	18.0	13.2	0.4	0.4	0.8	3.4	6.6	5.4	5.9	8.3	13.6	13.8	0.9	4.7	1.7	0.5	0.1	0.1	7.0	26.0
4-Mar	Z	0.1	0.0	0.7	0.9	0.4	3.5	28.4	7.0	8.9	2.1	1.5	2.5	5.0	0.6	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	2.7	28.4
5-Mar	0.1	Z	0.0	0.1	0.1	0.1	0.1	0.1	0.3	0.6	0.6	0.4	0.3	0.3	0.3	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.6
6-Mar	0.1	0.0	Z	0.1	0.1	0.0	0.2	11.7	9.4	2.7	2.8	2.1	0.8	0.3	0.3	0.2	0.2	0.2	0.1	0.0	0.1	0.1	0.8	0.0	1.4	11.7
7-Mar	0.0	0.0	0.2	Z	0.0	0.0	0.3	0.2	0.5	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
8-Mar	0.0	0.1	0.1	0.1	Z	0.0	0.0	0.9	2.0	0.2	0.5	0.1	0.1	2.3	4.0	33.0	4.5	0.2	0.1	0.1	0.1	0.1	0.0	0.0	2.1	33.0
9-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.3	0.2	0.2	0.4	0.3	0.3	0.5	0.4	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
10-Mar	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.4	0.5	1.1	1.7	1.2	0.8	0.5	0.4	0.1	0.1	0.1	0.4	0.1	0.1	0.3	1.7
11-Mar	0.1	Z	0.1	0.1	0.1	0.2	0.0	0.2	0.1	0.3	0.3	0.4	0.5	0.3	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
12-Mar	0.0	0.0	Z	0.0	0.0	0.1	0.4	0.5	0.7	1.8	2.3	3.3	1.0	4.8	0.7	1.1	0.8	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.8	4.8
13-Mar	0.0	0.0	0.0	Z	0.2	0.2	0.2	0.0	0.1	0.1	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
14-Mar	0.0	0.0	0.0	0.0	Z	0.1	1.3	0.1	0.8	1.8	13.7	10.2	20.3	18.3	26.0	0.5	0.3	0.3	3.9	10.7	8.7	18.8	9.8	3.7	6.5	26.0
15-Mar	1.0	0.2	0.4	0.6	0.1	Z	3.5	9.5	17.3	4.3	0.5	1.5	8.2	4.5	5.2	5.2	0.7	0.1	0.0	0.0	0.1	0.1	0.6	1.7	2.8	17.3
16-Mar	Z	1.5	0.7	3.1	1.2	5.0	2.1	17.0	6.9	1.1	0.6	0.5	0.3	0.4	0.4	0.3	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.8	17.0
17-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.6	0.8	0.7	0.6	0.4	6.7	1.1	0.8	4.8	3.6	0.0	0.0	0.0	0.1	0.1	0.1	0.9	6.7
18-Mar	0.1	0.0	Z	0.1	0.1	0.1	1.5	1.0	1.0	3.9	6.5	0.7	1.4	0.7	0.4	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.8	6.5
19-Mar	0.2	0.1	0.2	Z	0.1	0.3	7.1	7.8	6.1	3.5	1.2	0.6	0.5	0.7	0.8	0.7	0.6	0.1	0.2	0.1	0.5	0.1	0.6	0.9	1.4	7.8
20-Mar	0.1	0.3	0.1	0.1	Z	0.0	0.0	0.2	0.4	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
21-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.3	0.2	0.3	0.3	0.4	0.5	0.2	0.2	0.1	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
22-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.9	1.0	1.0	1.1	1.2	0.6	0.6	0.4	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.2
23-Mar	0.0	Z	0.0	0.0	0.0	0.0	8.4	1.7	1.0	0.3	0.3	0.3	0.4	0.1	0.2	0.4	0.1	0.1	0.1	0.3	0.2	0.2	0.2	0.1	0.6	8.4
24-Mar	0.0	0.0	Z	0.0	0.0	0.1	0.6	0.9	1.5	0.9	0.3	0.2	0.4	0.4	0.2	0.3	0.7	0.4	2.0	1.2	1.0	0.0	0.2	0.3	0.5	2.0
25-Mar	0.0	0.0	0.0	Z	0.0	0.1	0.2	0.7	0.3	0.9	0.6	0.7	1.0	0.3	1.8	0.5	0.6	1.4	0.7	0.1	0.1	0.2	0.1	0.1	0.5	1.8
26-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.4	0.6	0.6	0.4	0.3	0.2	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.6
27-Mar	0.1	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.2	0.4	0.1	0.2	0.4	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6
28-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.8	0.7	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.8
29-Mar	0.0	Z	0.0	0.0	0.1	0.0	0.1	2.9	2.1	1.0	1.4	1.6	1.5	1.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	2.9
30-Mar	0.1	0.1	Z	0.0	0.0	0.0	3.0	2.1	0.9	0.5	0.7	0.3	0.2	0.2	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	3.0
31-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.4	0.5	0.7	0.4	0.2	0.2	0.1	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.7
	0.8	0.8	1.4	0.4	0.3	0.5	1.8	3.4	2.2	1.5	1.8	1.9	2.7	2.9	3.2	2.7	2.1	1.0	0.3	0.8	0.7	1.0	1.2	1.1	Diurnal Average	
	16.4	17.6	26.0	3.1	4.4	5.0	18.0	28.4	17.3	8.9	13.7	20.0	24.2	25.8	40.4	33.0	27.6	13.8	3.9	10.7	8.7	18.8	18.8	24.7	Diurnal Maximum	

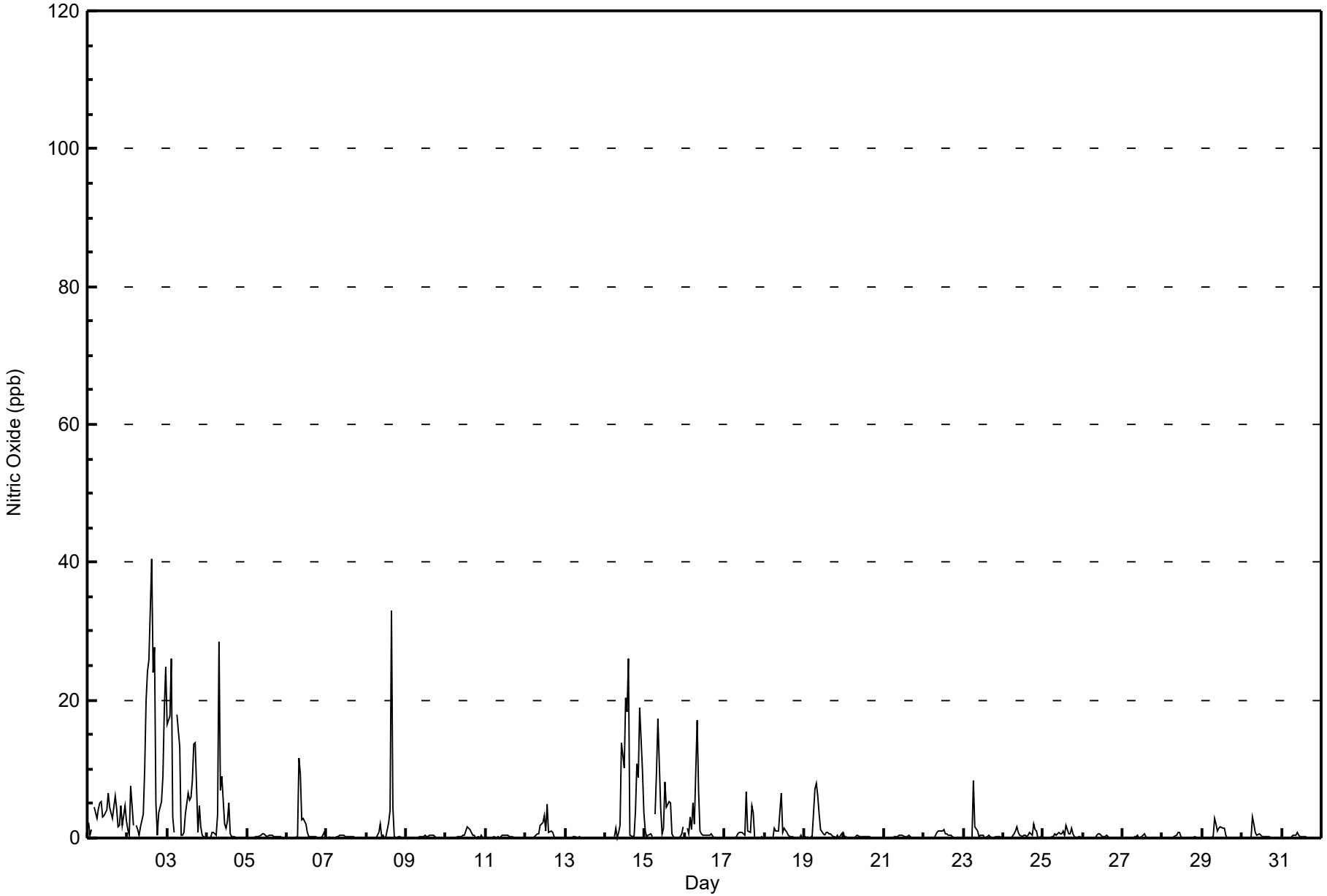
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Monday Creek - March 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Nitric Oxide (NO) - ppb

Monday Creek - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	698	98.59	98.59
21 - 40	10	1.41	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Monday Creek - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	26	52	57	78	35	26	55	21	34	30	37	59	78	63	21	26	698
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	1	3	3	3	10
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	26	52	57	78	35	26	55	21	34	30	37	59	79	66	24	29	708

Total Number of Valid Hours: 708

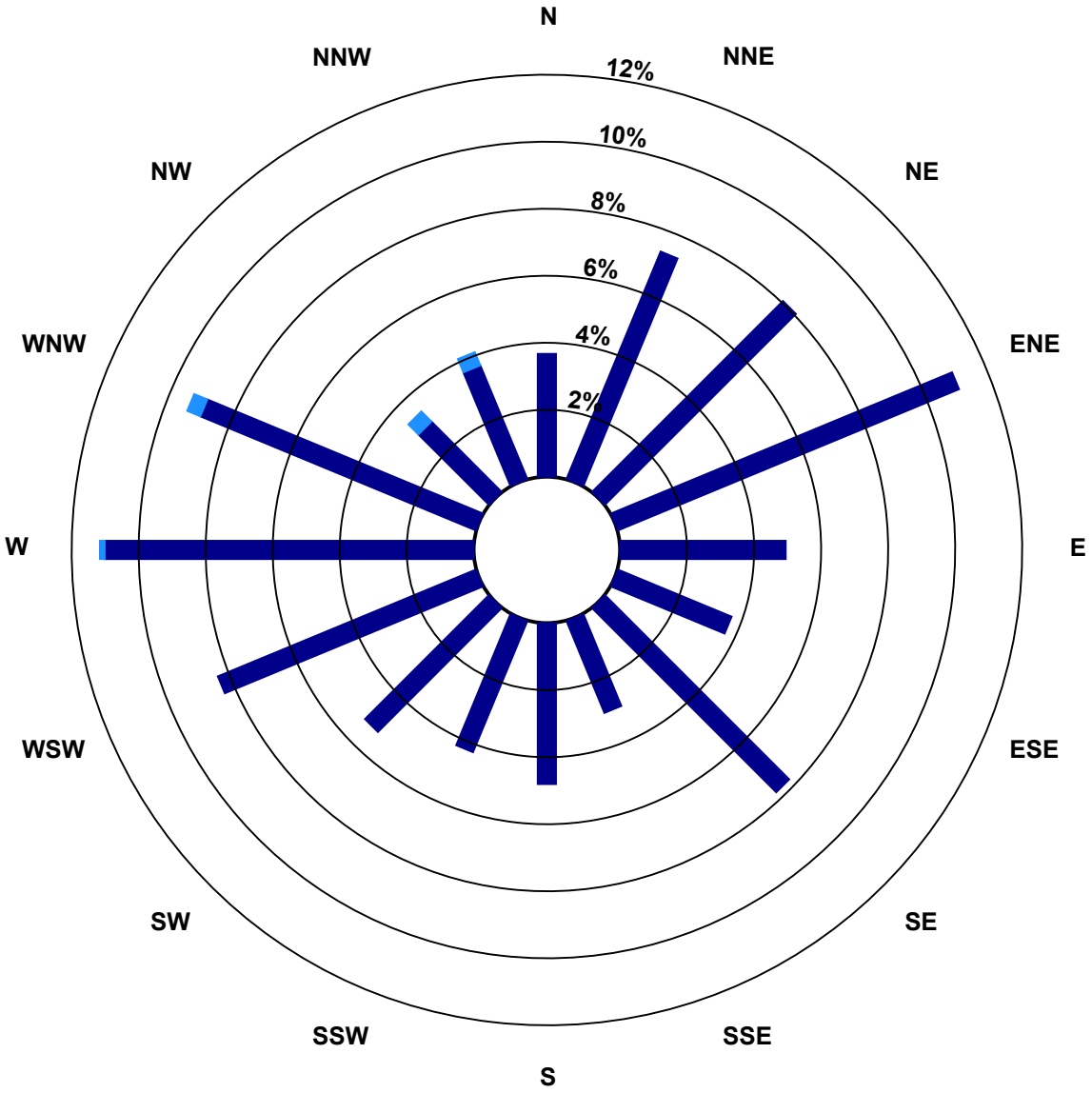
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitric Oxide (NO) - ppb

Monday Creek



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

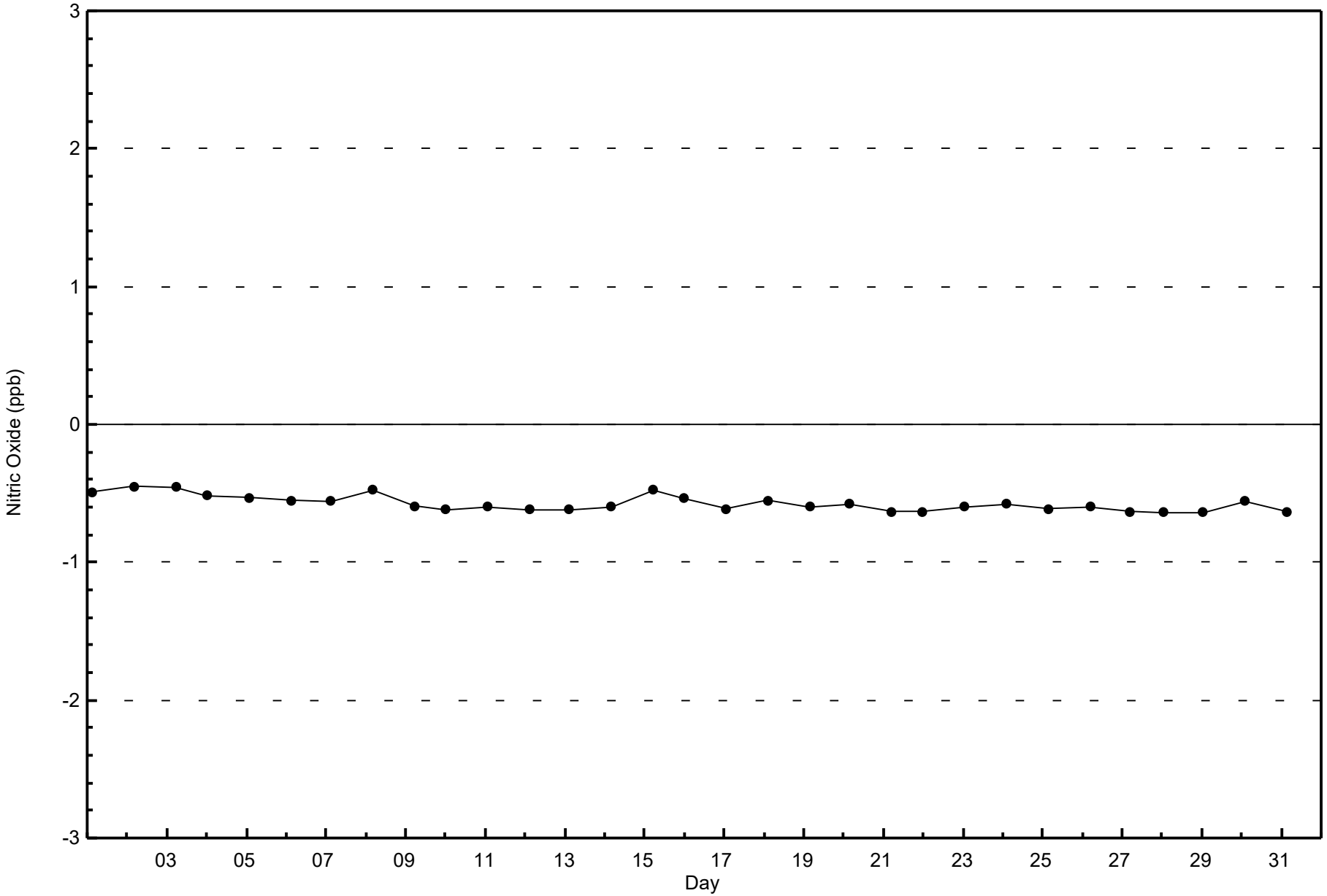
Total Number of Valid Hours: 708

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Monday Creek - March 2025

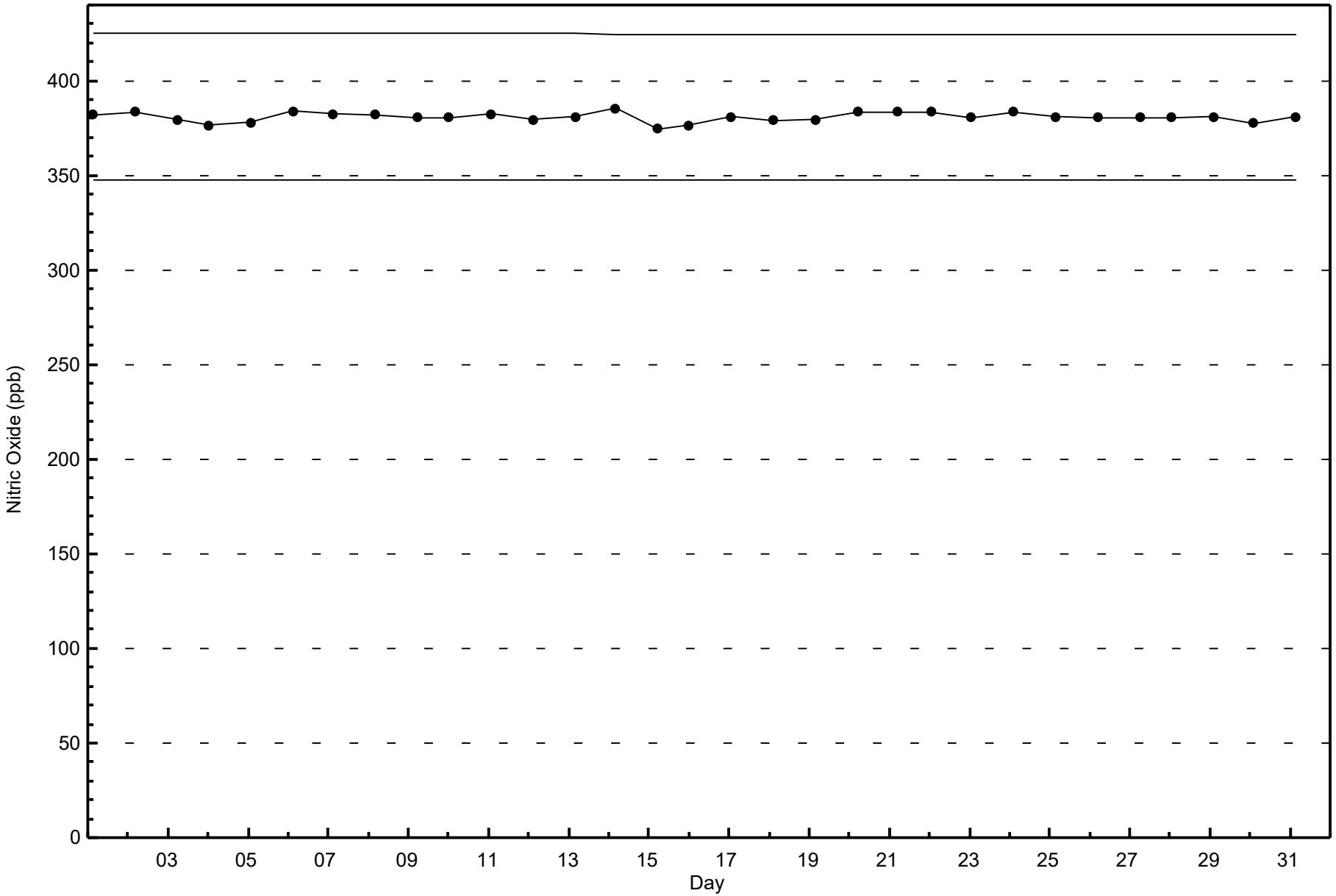


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Monday Creek - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Monday Creek - March 2025

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

Maximum Value: 23.2 ppb on Mar 6 08:00

Maximum Daily Average: 10.7 ppb on Mar 2

Minimum Value: 0.2 ppb on Mar 9 21:00

Minimum Daily Average: 0.6 ppb on Mar 27

Maximum Diurnal Average: 6.0 ppb at hour 8

Minimum Diurnal Average: 1.8 ppb at hour 19

Monthly Average: 3.04 ppb

Percentiles: $P_1 = 0.3$ $P_{10} = 0.5$ $Q_1 = 0.9$ Median = 1.7 $Q_3 = 3.6$ $P_{90} = 7.9$ $P_{99} = 18.6$

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	5.9	5.8	6.3	Z	13.1	11.5	13.6	13.0	8.6	4.3	5.1	5.9	5.4	4.4	4.7	4.7	6.4	8.3	6.0	5.2	10.3	10.3	10.6	8.9	7.8	13.6
2-Mar	6.3	9.5	7.4	4.7	Z	7.9	6.8	7.8	6.8	3.6	6.4	11.3	16.4	20.2	21.5	12.6	18.8	7.1	3.9	7.9	5.8	11.7	18.6	22.3	10.7	22.3
3-Mar	12.7	12.5	18.6	5.4	3.6	Z	12.6	10.6	2.8	2.4	2.2	3.7	4.8	6.0	6.3	7.4	9.3	9.4	1.8	9.9	8.4	3.1	2.6	1.8	6.9	18.6
4-Mar	Z	2.4	4.7	12.1	5.4	8.0	9.6	17.8	9.9	5.6	3.6	1.7	1.6	2.1	1.3	1.1	1.6	2.7	1.8	1.3	1.7	2.0	2.2	5.1	4.6	17.8
5-Mar	1.6	Z	1.9	2.0	2.8	2.3	2.0	2.0	1.7	1.7	1.2	0.8	0.6	0.7	0.9	1.0	1.2	1.4	1.6	5.0	6.3	6.0	1.6	1.5	2.1	6.3
6-Mar	2.1	4.9	Z	3.1	3.7	6.0	8.0	23.2	13.2	5.7	5.2	3.8	1.7	0.8	0.8	0.8	0.8	2.4	2.7	3.1	4.7	5.3	14.1	1.6	5.1	23.2
7-Mar	1.4	5.8	9.4	Z	2.3	3.2	10.9	3.1	2.1	1.1	1.0	0.7	0.6	0.6	0.7	0.8	1.2	0.5	3.6	2.6	2.1	3.4	2.4	1.2	2.6	10.9
8-Mar	2.8	3.5	4.7	4.8	Z	1.5	2.6	8.6	8.6	0.9	0.7	0.5	0.7	1.9	2.9	9.6	2.9	0.4	1.8	5.9	2.7	1.9	1.5	1.1	3.2	9.6
9-Mar	0.9	1.1	1.4	0.6	0.7	Z	1.1	2.0	1.7	0.9	0.5	0.8	0.9	1.1	1.1	1.2	2.1	2.0	1.1	0.4	0.2	1.1	0.9	0.3	1.0	2.1
10-Mar	Z	1.3	0.4	1.1	1.3	1.4	2.3	0.9	0.5	0.5	0.5	0.8	1.2	1.8	1.9	2.3	1.9	2.7	1.6	2.4	3.5	4.5	4.1	3.8	1.9	4.5
11-Mar	4.2	Z	4.0	2.8	2.1	2.1	2.4	2.1	0.7	0.7	0.7	0.8	1.2	1.0	0.7	1.4	1.0	0.7	0.7	1.0	0.8	0.4	0.7	0.3	1.4	4.2
12-Mar	0.3	0.6	Z	0.4	0.5	3.3	3.1	3.3	2.1	3.3	2.4	3.0	1.2	2.2	1.0	1.8	2.2	1.7	1.6	0.6	0.6	0.8	1.8	0.6	1.7	3.3
13-Mar	0.5	0.6	0.5	Z	1.0	1.1	1.0	0.5	0.7	0.5	C	C	C	C	C	0.6	0.4	0.3	0.6	0.3	1.5	0.3	0.3	0.2	0.6	1.5
14-Mar	0.4	0.4	0.2	0.2	Z	0.6	1.3	0.8	2.4	1.6	2.9	4.6	10.7	8.0	8.8	1.3	1.7	2.3	3.9	10.1	10.6	18.9	13.6	7.6	4.9	18.9
15-Mar	5.4	2.9	4.6	6.5	6.4	Z	13.8	12.5	8.8	4.1	0.8	1.4	4.0	1.4	3.1	3.2	1.3	1.4	2.4	2.4	4.3	9.0	9.8	9.1	5.2	13.8
16-Mar	Z	8.3	9.3	12.5	12.0	18.3	16.4	17.6	7.5	1.4	0.9	0.7	0.6	0.8	0.9	1.0	1.5	1.0	1.1	1.5	1.7	1.1	1.0	1.3	5.1	18.3
17-Mar	1.4	Z	1.8	1.7	1.9	1.5	1.7	2.0	3.5	2.9	2.4	2.1	1.7	3.6	1.9	1.7	3.9	5.0	1.4	2.1	3.4	4.6	4.7	3.8	2.6	5.0
18-Mar	2.0	2.0	Z	2.9	2.9	2.5	4.3	3.8	2.3	3.7	4.4	1.4	1.6	1.7	1.0	1.0	1.5	1.3	1.7	3.3	3.2	4.7	4.1	1.9	2.6	4.7
19-Mar	3.3	4.1	5.8	Z	5.9	11.0	21.2	15.6	9.4	4.9	2.0	1.0	0.9	1.3	1.4	1.3	1.2	1.1	2.6	2.0	4.5	4.3	7.6	8.0	5.2	21.2
20-Mar	5.2	3.3	1.5	1.8	Z	2.0	1.5	1.2	1.2	0.7	0.6	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.3	0.2	0.5	0.9	0.5	0.4	1.1	5.2
21-Mar	0.4	0.5	0.4	0.9	1.0	Z	2.8	1.3	1.1	0.8	1.0	0.8	0.6	0.7	0.7	1.2	0.9	0.7	0.7	0.6	0.6	0.6	0.9	1.0	0.9	2.8
22-Mar	Z	1.3	1.6	1.6	2.4	3.2	3.5	4.0	4.6	3.6	3.4	3.3	2.7	1.8	2.0	1.3	0.9	2.3	0.6	0.7	0.6	0.6	0.7	0.9	2.1	4.6
23-Mar	1.7	Z	1.7	2.6	3.6	3.5	9.0	7.1	2.7	0.8	0.8	1.0	1.0	0.5	0.5	1.1	0.8	0.7	1.4	4.2	3.7	3.7	3.9	1.7	2.5	9.0
24-Mar	1.6	1.2	Z	1.9	2.2	3.2	9.0	5.2	6.1	2.6	1.2	1.2	2.1	1.6	1.1	1.7	2.4	1.5	4.5	2.9	1.7	0.7	1.2	1.1	2.5	9.0
25-Mar	2.6	2.9	0.5	Z	3.2	3.2	2.0	2.5	1.3	2.2	1.2	1.6	1.2	1.0	2.2	0.6	1.1	2.6	2.2	0.9	0.8	3.7	1.3	0.9	1.8	3.7
26-Mar	0.5	1.2	1.0	1.2	Z	1.4	1.2	1.0	1.7	1.3	1.4	0.8	0.6	0.7	0.8	0.5	0.5	0.6	0.3	0.3	0.3	0.3	0.5	0.8	0.8	1.7
27-Mar	0.5	0.3	0.5	0.4	0.4	Z	1.0	1.0	0.8	1.1	0.4	0.5	0.9	1.1	0.5	0.4	0.5	0.6	0.3	0.3	0.2	0.3	0.4	0.3	0.6	1.1
28-Mar	Z	0.4	0.4	0.4	0.8	0.8	0.7	1.4	1.6	1.9	1.4	0.5	0.3	0.3	0.3	0.3	0.5	0.4	0.8	1.9	0.8	0.2	0.3	0.4	0.7	1.9
29-Mar	0.9	Z	0.9	1.3	3.2	1.2	0.8	6.6	4.5	2.8	2.5	2.7	2.8	2.7	1.3	0.6	0.6	0.8	0.9	2.0	3.5	2.7	1.9	3.6	2.2	6.6
30-Mar	2.0	2.9	Z	1.1	1.1	1.6	9.2	5.2	2.4	1.3	1.4	1.0	0.6	0.6	1.1	0.9	1.1	1.0	0.8	1.1	1.5	1.3	2.0	3.2	1.9	9.2
31-Mar	2.2	1.4	1.3	Z	1.8	2.0	3.3	3.5	3.1	3.1	1.4	1.1	1.1	0.9	1.0	0.6	0.7	0.7	0.9	0.7	0.6	0.8	1.1	1.1	1.5	3.5
	2.6	3.1	3.5	3.0	3.3	4.0	5.8	6.0	4.0	2.3	2.0	2.0	2.3	2.4	2.4	2.1	2.3	2.1	1.8	2.7	2.9	3.5	3.8	3.1	Diurnal Average	
	12.7	12.5	18.6	12.5	13.1	18.3	21.2	23.2	13.2	5.7	6.4	11.3	16.4	20.2	21.5	12.6	18.8	9.4	6.0	10.1	10.6	18.9	18.6	22.3	Diurnal Maximum	

Z - zerospan C - Calibration

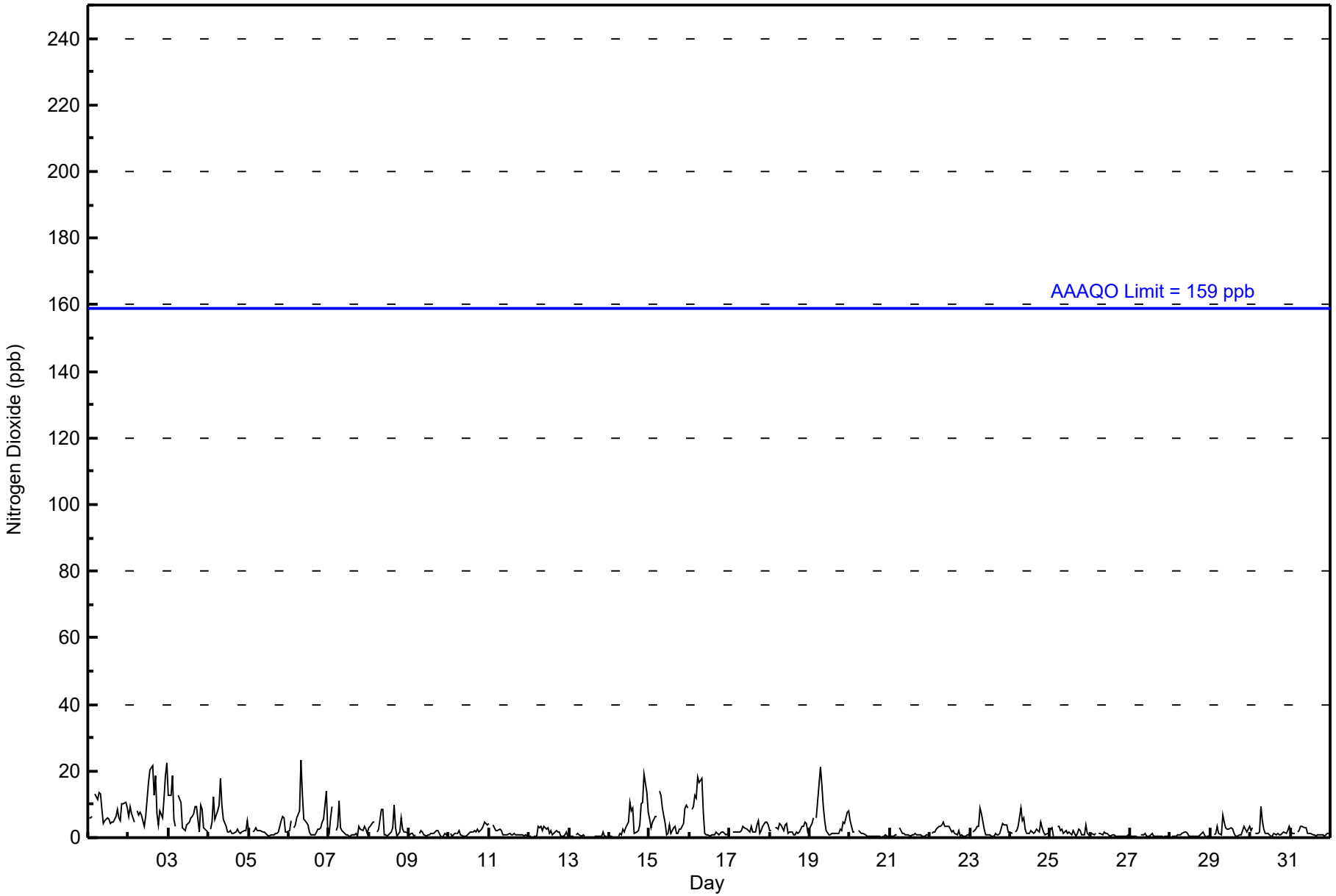
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Monday Creek - March 2025



Nitrogen Dioxide (NO_2) - ppb
Monday Creek - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	704	99.44	99.44
21 - 40	4	0.56	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Monday Creek - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	26	52	57	78	34	26	55	21	34	30	37	58	79	66	22	29	704
21 - 40	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2	0	4
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	26	52	57	78	35	26	55	21	34	30	37	59	79	66	24	29	708

Total Number of Valid Hours: 708

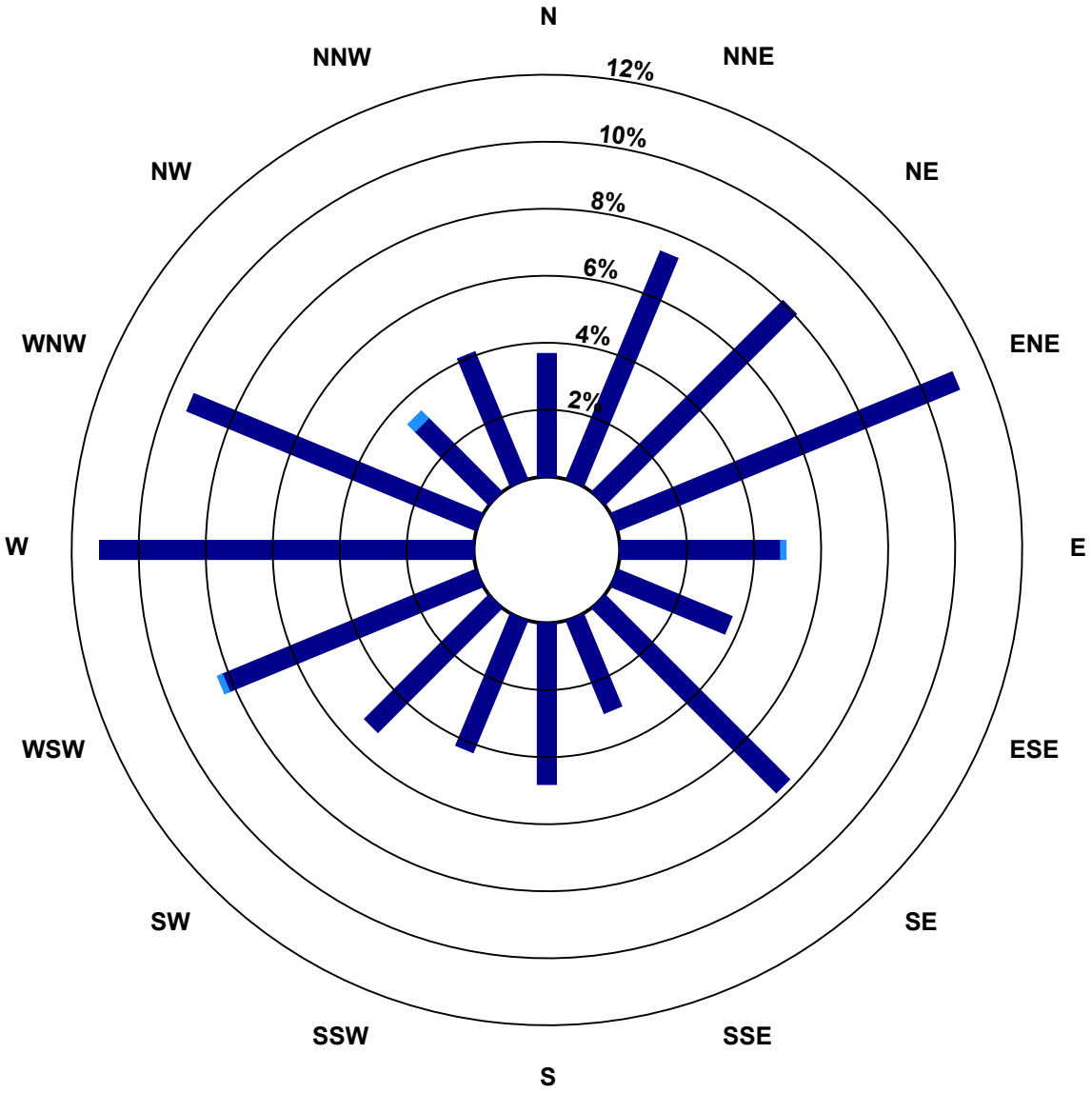
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Dioxide (NO_2) - ppb

Monday Creek



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

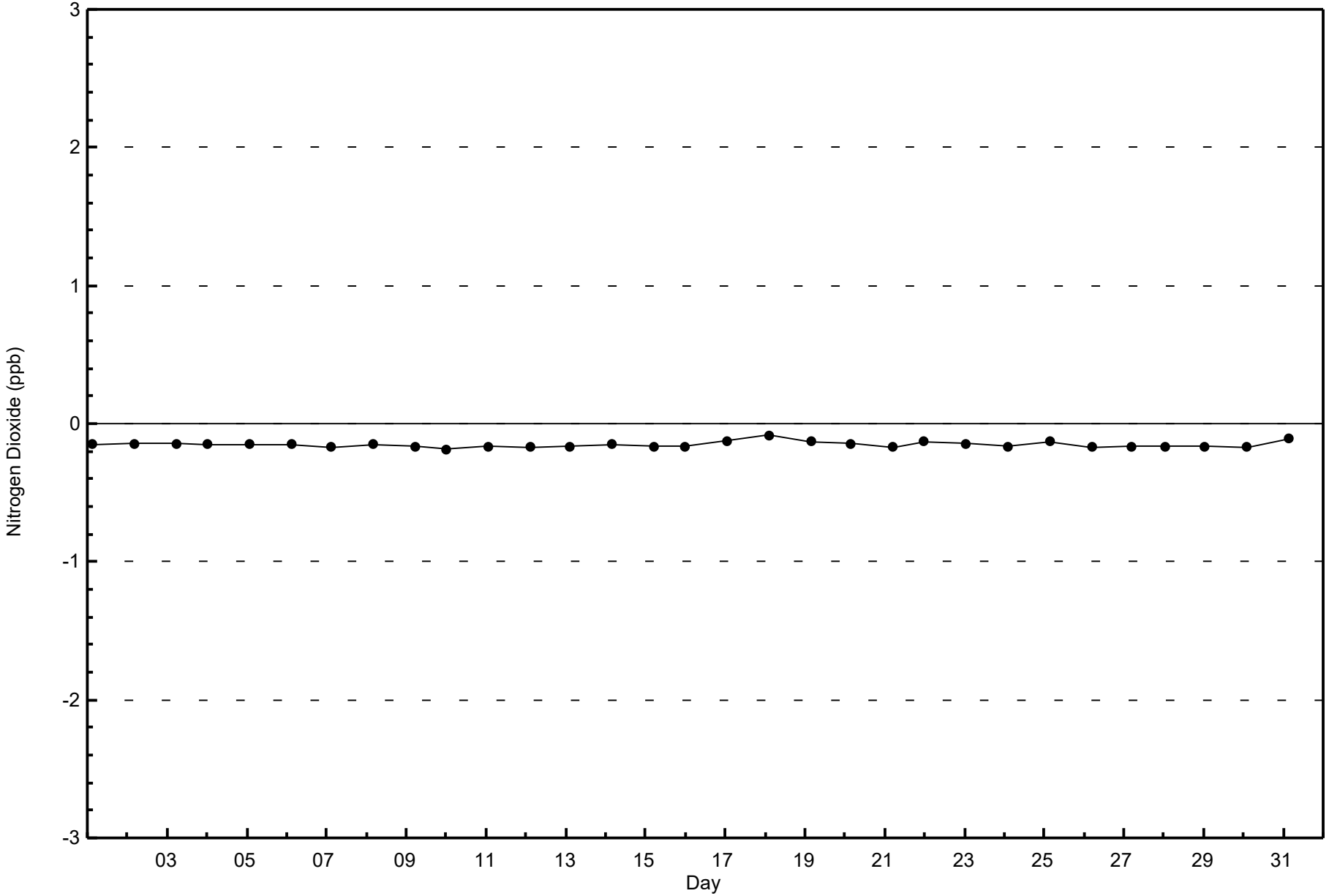
Total Number of Valid Hours: 708

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Monday Creek - March 2025

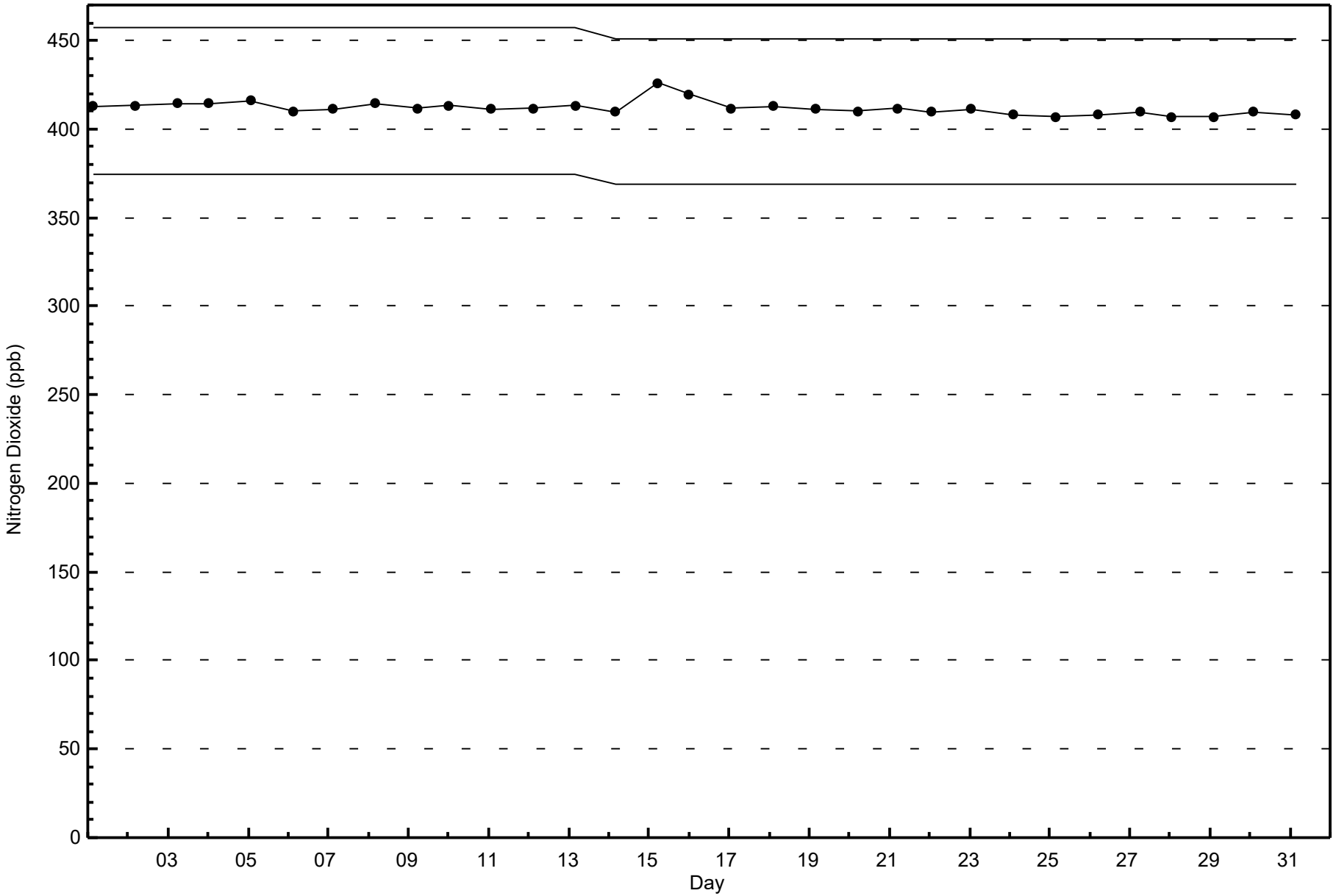


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Monday Creek - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Monday Creek - March 2025

Maximum Value: 61.9 ppb on Mar 2 15:00

Maximum Daily Average: 21.9 ppb on Mar 2

Minimum Value: 0.2 ppb on Mar 14 04:00

Minimum Daily Average: 0.6 ppb on Mar 27

Maximum Diurnal Average: 9.5 ppb at hour 8

Minimum Diurnal Average: 2.1 ppb at hour 19

Monthly Average: 4.59 ppb

Percentiles: P_1 = 0.3 P_{10} = 0.6 Q_1 = 1.0 Median = 2.0 Q_3 = 4.3 P_{90} = 11.3 P_{99} = 40.4

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	8.2	6.2	7.6	Z	17.5	14.4	17.8	18.0	14.0	7.4	8.3	9.9	11.9	8.8	8.4	7.6	12.4	12.6	7.6	7.1	15.0	12.1	15.2	11.4	11.3	18.0
2-Mar	7.5	9.8	15.0	6.6	Z	9.7	8.0	8.2	8.5	7.1	16.3	31.3	40.6	46.0	61.9	36.7	46.4	12.1	4.3	11.5	11.0	20.7	37.4	47.0	21.9	61.9
3-Mar	29.1	30.1	44.6	8.4	4.5	Z	30.6	23.8	3.2	2.8	3.0	7.1	11.4	11.4	12.2	15.7	22.9	23.2	2.7	14.6	10.1	3.6	2.7	1.9	13.9	44.6
4-Mar	Z	2.5	4.7	12.8	6.3	8.4	13.1	46.2	16.9	14.5	5.7	3.2	4.1	7.1	1.9	1.3	1.7	2.8	1.8	1.3	1.7	2.0	2.2	5.2	7.3	46.2
5-Mar	1.7	Z	1.9	2.1	2.9	2.4	2.1	2.1	2.0	2.3	1.8	1.2	0.9	1.0	1.2	1.4	1.5	1.6	1.7	5.1	6.4	6.1	1.7	1.6	2.3	6.4
6-Mar	2.2	4.9	Z	3.2	3.8	6.0	8.2	34.9	22.6	8.4	8.0	5.9	2.5	1.1	1.1	1.0	1.0	2.6	2.8	3.1	4.8	5.4	14.9	1.6	6.5	34.9
7-Mar	1.4	5.8	9.6	Z	2.3	3.2	11.2	3.3	2.6	1.5	1.4	1.0	0.8	0.8	0.9	1.0	1.4	0.6	3.6	2.6	2.1	3.4	2.4	1.2	2.8	11.2
8-Mar	2.8	3.6	4.8	4.9	Z	1.5	2.6	9.5	10.6	1.1	1.2	0.6	0.8	4.2	6.9	42.6	7.4	0.6	1.9	6.0	2.8	2.0	1.5	1.1	5.3	42.6
9-Mar	0.9	1.1	1.4	0.6	0.7	Z	1.1	2.1	2.0	1.1	0.7	1.2	1.2	1.4	1.6	1.6	2.5	2.2	1.1	0.4	0.2	1.1	0.9	0.3	1.2	2.5
10-Mar	Z	1.3	0.4	1.1	1.3	1.5	2.4	1.0	0.7	0.7	0.9	1.3	2.3	3.5	3.1	3.1	2.4	3.1	1.7	2.5	3.6	4.9	4.2	3.9	2.2	4.9
11-Mar	4.3	Z	4.1	2.9	2.2	2.3	2.4	2.3	0.8	1.0	1.0	1.2	1.7	1.3	0.8	1.6	1.2	0.8	0.7	1.0	0.8	0.4	0.7	0.3	1.6	4.3
12-Mar	0.3	0.6	Z	0.4	0.5	3.4	3.5	3.8	2.8	5.1	4.7	6.3	2.2	7.0	1.7	2.9	3.0	2.0	1.7	0.6	0.6	0.8	1.8	0.6	2.4	7.0
13-Mar	0.5	0.6	0.5	Z	1.2	1.3	1.2	0.5	0.8	0.6	C	C	C	C	C	0.6	0.4	0.3	0.6	0.3	1.5	0.3	0.3	0.2	0.6	1.5
14-Mar	0.4	0.4	0.2	0.2	Z	0.7	2.6	0.9	3.2	3.4	16.6	14.8	31.0	26.3	34.8	1.8	2.0	2.6	7.8	20.8	19.3	37.7	23.4	11.3	11.4	37.7
15-Mar	6.4	3.1	5.0	7.1	6.5	Z	17.3	22.0	26.1	8.4	1.3	2.9	12.2	5.9	8.3	8.4	2.0	1.5	2.4	2.4	4.4	9.1	10.4	10.8	8.0	26.1
16-Mar	Z	9.8	10.0	15.6	13.2	23.3	18.5	34.6	14.4	2.5	1.5	1.2	0.9	1.2	1.3	1.3	2.0	1.1	1.1	1.5	1.7	1.1	1.0	1.3	7.0	34.6
17-Mar	1.4	Z	1.8	1.7	1.9	1.5	1.7	2.1	4.1	3.7	3.1	2.7	2.1	10.3	3.0	2.5	8.7	8.6	1.4	2.1	3.4	4.7	4.8	3.9	3.5	10.3
18-Mar	2.1	2.0	Z	3.0	3.0	2.6	5.8	4.8	3.3	7.6	10.9	2.1	3.0	2.4	1.4	1.3	1.8	1.4	1.8	3.4	3.3	4.8	4.4	2.0	3.4	10.9
19-Mar	3.5	4.2	6.0	Z	6.0	11.3	28.3	23.4	15.5	8.4	3.2	1.6	1.4	2.0	2.2	2.0	1.8	1.2	2.8	2.1	5.0	4.4	8.2	8.9	6.7	28.3
20-Mar	5.3	3.6	1.6	1.9	Z	2.0	1.5	1.4	1.6	0.9	0.8	0.6	0.7	0.7	0.7	0.7	0.6	0.5	0.3	0.2	0.5	0.9	0.5	0.4	1.2	5.3
21-Mar	0.4	0.5	0.4	0.9	1.0	Z	3.1	1.5	1.4	1.1	1.4	1.3	0.8	0.9	0.8	1.6	1.0	0.8	0.7	0.6	0.6	0.6	0.9	1.0	1.0	3.1
22-Mar	Z	1.3	1.6	1.6	2.4	3.2	3.6	4.5	5.5	4.6	4.4	4.4	3.9	2.4	2.6	1.7	1.2	2.5	0.6	0.7	0.6	0.6	0.7	0.9	2.4	5.5
23-Mar	1.7	Z	1.7	2.6	3.6	3.5	17.4	8.8	3.7	1.1	1.1	1.3	1.4	0.6	0.7	1.5	0.9	0.8	1.5	4.5	3.9	3.9	4.1	1.8	3.1	17.4
24-Mar	1.6	1.2	Z	1.9	2.2	3.3	9.6	6.1	7.6	3.5	1.5	1.4	2.5	2.0	1.3	2.0	3.1	1.9	6.5	4.1	2.7	0.7	1.4	1.4	3.0	9.6
25-Mar	2.6	2.9	0.5	Z	3.2	3.3	2.2	3.2	1.6	3.1	1.8	2.3	2.2	1.3	4.0	1.1	1.7	4.0	2.9	1.0	0.9	3.9	1.4	1.0	2.3	4.0
26-Mar	0.5	1.2	1.0	1.2	Z	1.4	1.2	1.1	2.1	1.9	2.0	1.2	0.9	0.9	1.2	0.6	0.6	0.6	0.3	0.3	0.3	0.3	0.5	0.9	1.0	2.1
27-Mar	0.6	0.3	0.5	0.4	0.4	Z	1.0	1.1	1.0	1.5	0.5	0.7	1.3	1.7	0.6	0.4	0.5	0.6	0.3	0.3	0.2	0.3	0.4	0.3	0.6	1.7
28-Mar	Z	0.4	0.4	0.4	0.8	0.8	0.7	1.6	2.0	2.7	2.1	0.7	0.4	0.4	0.3	0.3	0.5	0.4	0.8	2.0	0.9	0.2	0.3	0.4	0.8	2.7
29-Mar	0.9	Z	0.9	1.3	3.3	1.2	0.9	9.5	6.6	3.8	3.9	4.3	4.3	4.0	1.6	0.7	0.6	0.8	0.9	2.0	3.5	2.7	1.9	3.7	2.8	9.5
30-Mar	2.1	3.0	Z	1.1	1.1	1.6	12.2	7.3	3.3	1.8	2.1	1.3	0.8	0.8	1.4	1.1	1.3	1.1	0.8	1.1	1.5	1.3	2.0	3.2	2.3	12.2
31-Mar	2.2	1.4	1.3	Z	1.8	2.0	3.4	3.9	3.6	3.8	1.8	1.3	1.3	1.0	1.2	0.7	0.7	0.8	0.9	0.7	0.6	0.8	1.1	1.1	1.6	3.9
	3.5	3.9	4.9	3.4	3.6	4.5	7.6	9.5	6.3	3.8	3.8	3.9	5.0	5.3	5.6	4.7	4.4	3.1	2.1	3.4	3.7	4.5	4.9	4.2	Diurnal Average	
	29.1	30.1	44.6	15.6	17.5	23.3	30.6	46.2	26.1	14.5	16.6	31.3	40.6	46.0	61.9	42.6	46.4	23.2	7.8	20.8	19.3	37.7	37.4	47.0	Diurnal Maximum	

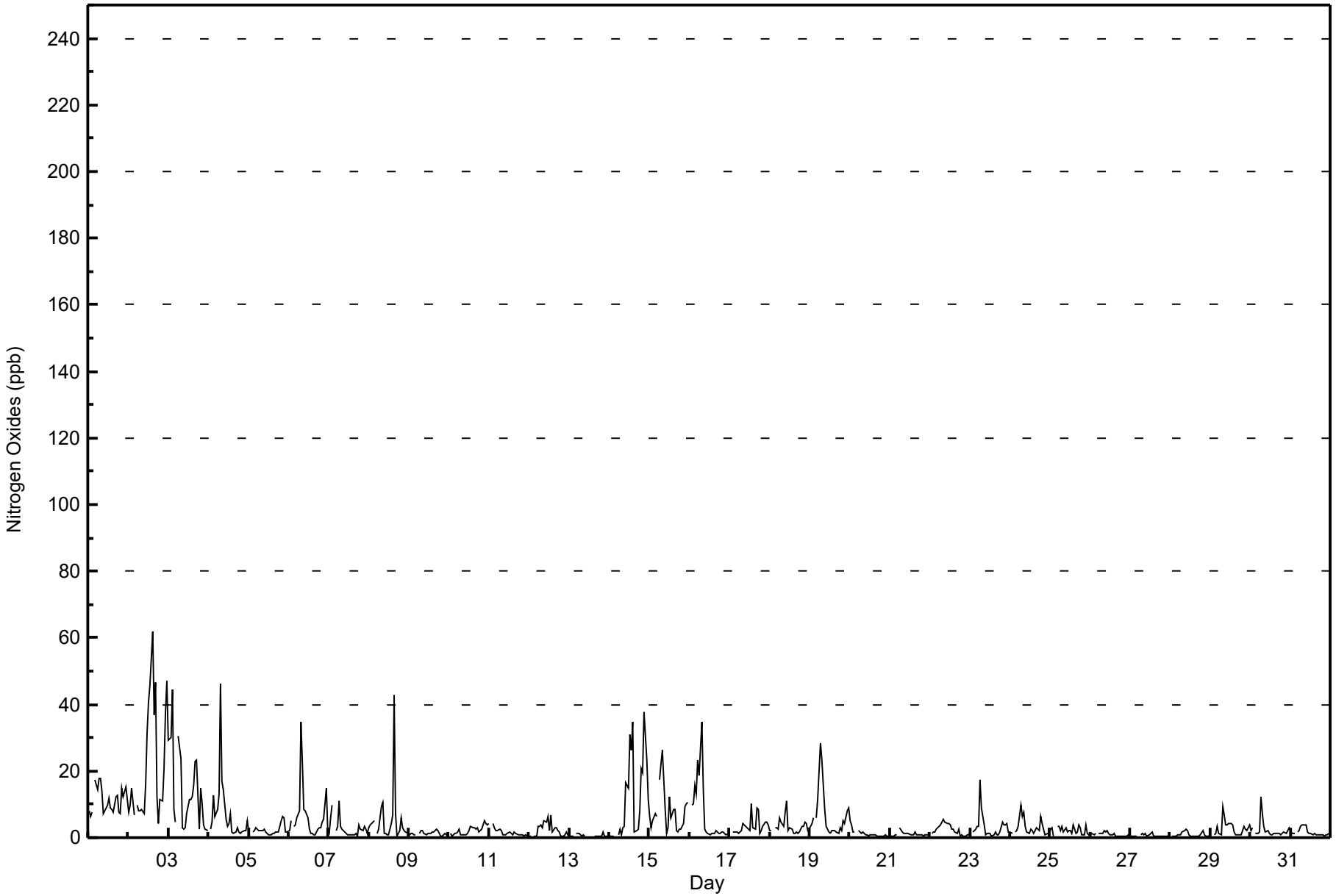
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Monday Creek - March 2025



Nitrogen Oxides (NO_X) - ppb
Monday Creek - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	676	95.48	95.48
21 - 40	24	3.39	98.87
11 - 80	8	1.13	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Monday Creek - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	23	52	57	78	32	25	55	21	33	30	37	57	78	57	19	22	676
21 - 40	3	0	0	0	3	1	0	0	1	0	0	2	0	6	2	6	24
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	1	3	3	1	8
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	26	52	57	78	35	26	55	21	34	30	37	59	79	66	24	29	708

Total Number of Valid Hours: 708

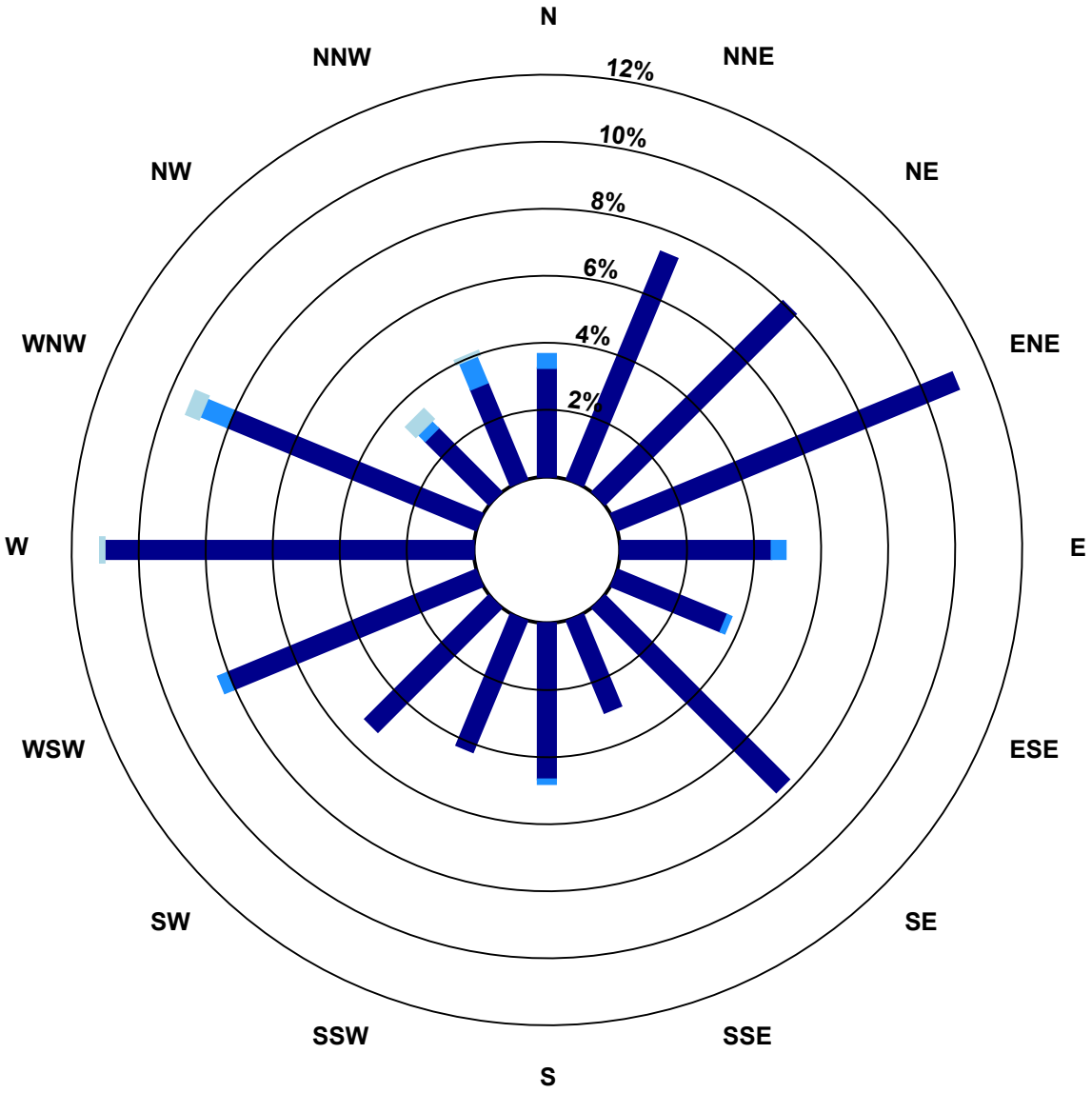
Total Number of Hours: 744

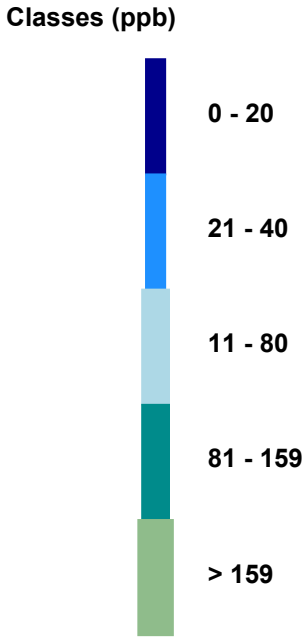
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Oxides (NO_X) - ppb

Monday Creek





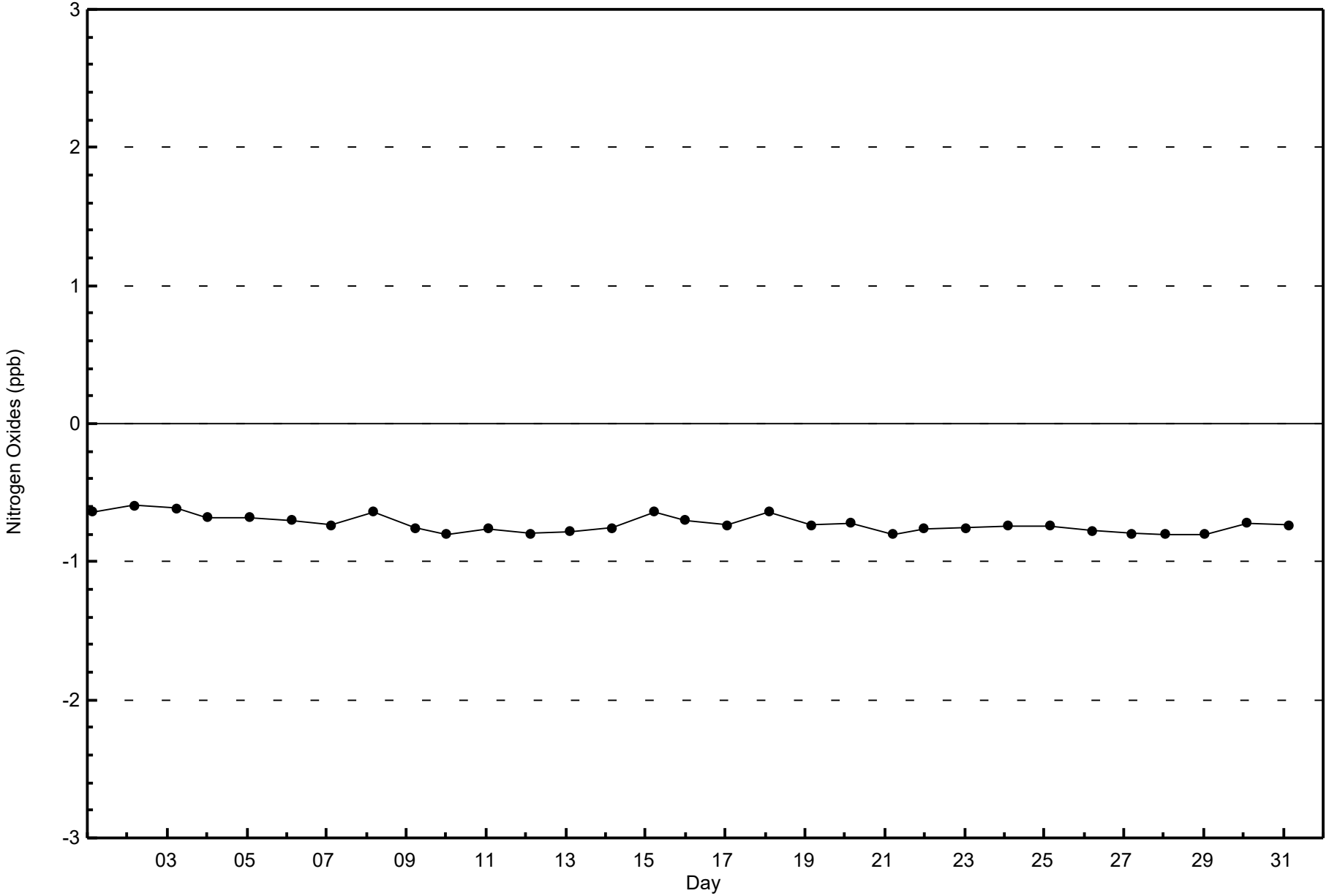
Total Number of Valid Hours: 708

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Monday Creek - March 2025

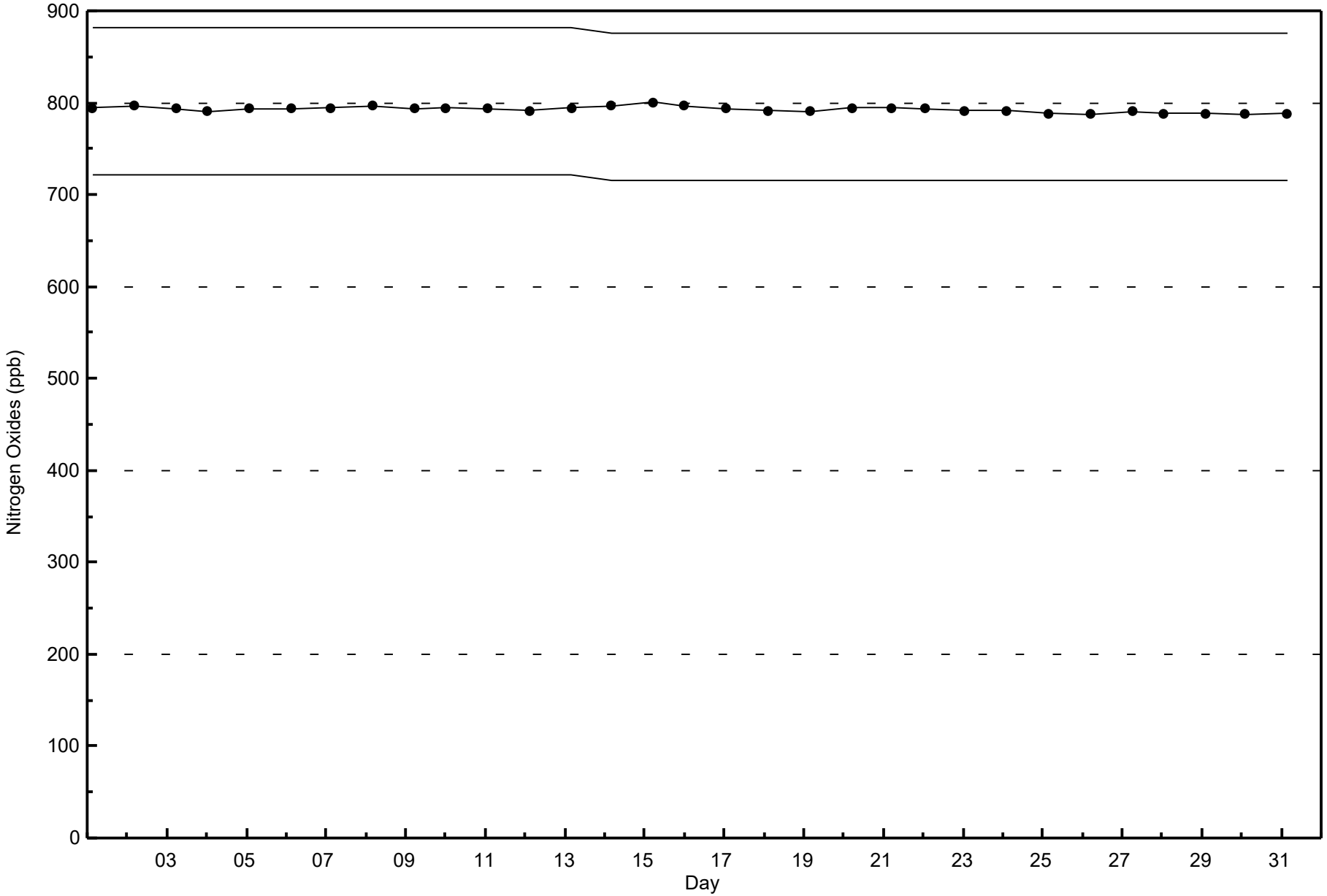


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Monday Creek - March 2025



Maximum Value: 10.6 C on Mar 1 17:00

Maximum Daily Average: 4.1 C on Mar 2

Minimum Value: -30.4 C on Mar 16 07:00

Minimum Daily Average: -18.1 C on Mar 15

Maximum Diurnal Average: -0.6 C at hour 16

Minimum Diurnal Average: -10.0 C at hour 7

Monthly Average: -5.36 C

Percentiles: P_1 = -27.0 P_{10} = -15.0 Q_1 = -10.9 Median = -4.8 Q_3 = 0.2 P_{90} = 4.8 P_{99} = 9.5

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

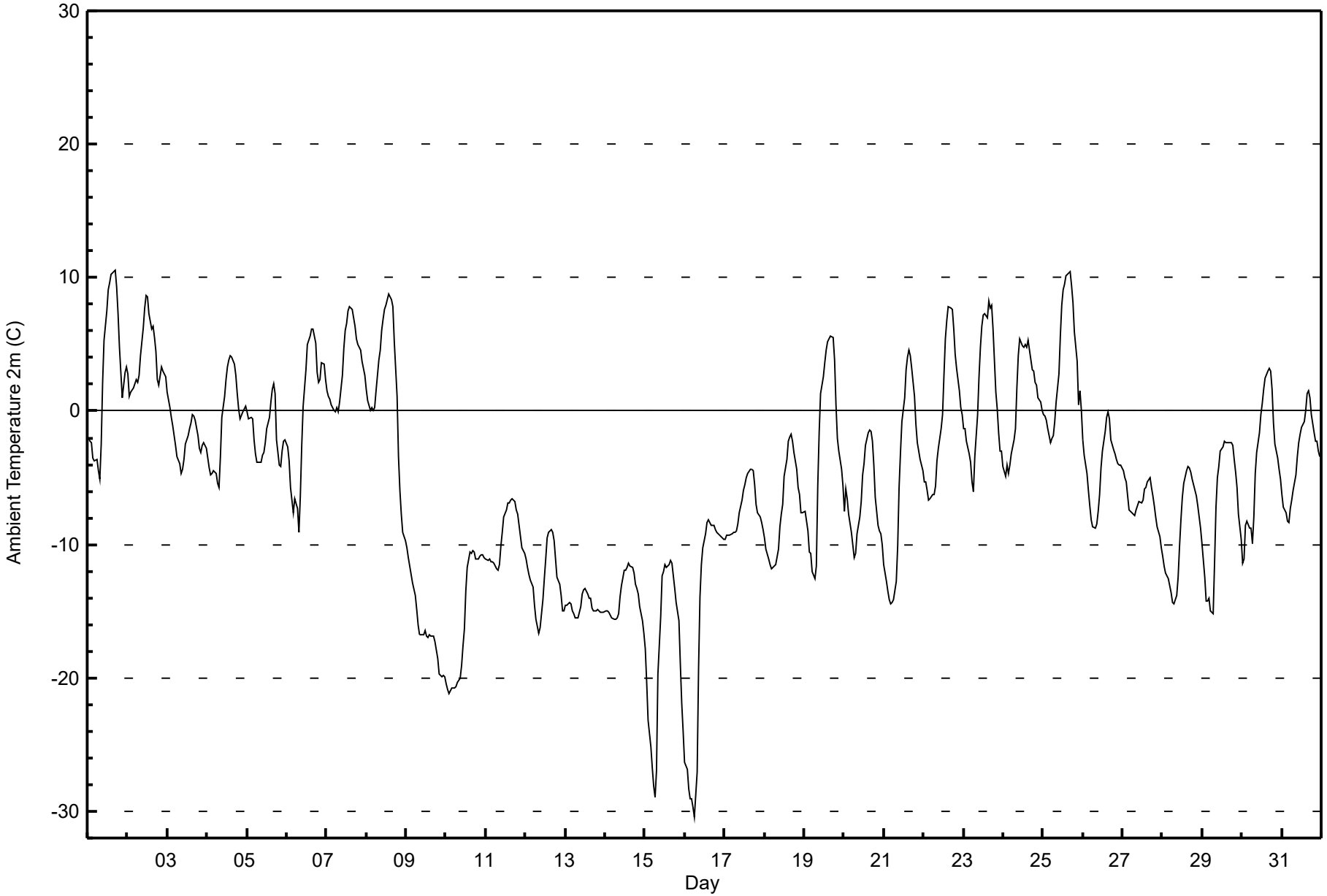
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-2.0	-2.3	-2.4	-3.5	-3.8	-3.6	-4.5	-5.1	-2.5	2.1	5.3	7.6	9.0	9.6	10.3	10.3	10.6	9.3	7.3	4.8	2.9	1.0	2.9	3.3	2.8	10.6
2-Mar	2.8	1.1	1.4	1.8	2.0	2.4	2.2	2.7	4.1	6.3	7.7	8.7	8.6	7.3	6.2	6.4	5.6	4.5	2.3	2.0	3.3	3.0	2.7	2.6	4.1	8.7
3-Mar	1.4	0.3	-0.5	-1.1	-1.8	-2.6	-3.4	-3.9	-4.7	-4.3	-3.6	-2.5	-1.8	-1.3	-0.8	-0.3	-0.4	-0.7	-1.8	-2.8	-3.1	-2.5	-2.4	-2.8	-2.0	1.4
4-Mar	-3.6	-4.2	-4.8	-4.6	-4.5	-4.7	-5.4	-5.7	-3.4	-0.5	1.1	2.4	3.3	3.8	4.2	4.0	3.5	2.7	1.3	0.2	-0.5	0.0	0.2	0.3	-0.6	4.2
5-Mar	0.0	-0.5	-0.5	-0.6	-2.1	-3.2	-3.9	-3.8	-3.9	-3.3	-3.1	-2.3	-1.4	-0.4	0.7	1.6	2.0	1.3	-2.2	-4.1	-4.2	-3.0	-2.2	-2.1	-1.7	2.0
6-Mar	-2.6	-3.8	-5.7	-6.6	-7.6	-6.5	-7.3	-9.1	-6.3	-2.6	0.4	3.1	5.0	5.3	5.6	6.1	6.2	5.1	2.9	2.2	2.4	3.6	3.5	2.4	-0.2	6.2
7-Mar	1.5	1.1	0.8	0.5	0.1	-0.1	0.2	-0.1	0.7	2.7	4.6	6.0	6.6	7.5	7.8	7.6	7.0	6.4	5.4	5.0	4.6	3.8	3.2	2.7	3.6	7.8
8-Mar	1.6	0.8	0.1	0.2	0.1	0.3	1.5	3.8	4.6	6.0	6.9	7.6	7.9	8.7	8.5	8.3	7.8	5.2	1.1	-3.4	-6.0	-7.8	-9.0	-9.7	1.9	8.7
9-Mar	-10.2	-11.0	-11.6	-12.2	-12.9	-13.8	-14.8	-16.0	-16.8	-16.8	-16.8	-16.5	-16.9	-17.0	-16.8	-16.8	-16.9	-17.3	-17.9	-18.5	-19.7	-19.9	-19.8	-19.9	-16.1	-10.2
10-Mar	-20.5	-20.8	-21.1	-20.8	-20.7	-20.7	-20.7	-20.4	-20.0	-19.0	-17.6	-16.3	-13.5	-11.7	-10.6	-10.6	-10.5	-10.5	-11.0	-11.1	-10.9	-10.8	-10.8	-10.9	-15.5	-10.5
11-Mar	-11.1	-11.2	-11.1	-11.3	-11.3	-11.4	-11.8	-12.0	-11.5	-10.2	-9.1	-7.9	-7.4	-6.9	-6.9	-6.7	-6.6	-6.8	-7.4	-7.7	-8.6	-9.4	-10.2	-10.7	-9.4	-6.6
12-Mar	-11.1	-11.7	-12.2	-12.7	-13.2	-14.6	-15.7	-16.1	-16.6	-16.2	-14.1	-12.5	-11.1	-9.5	-9.1	-8.9	-9.1	-9.7	-11.1	-12.4	-13.0	-13.9	-15.0	-14.9	-12.7	-8.9
13-Mar	-14.5	-14.5	-14.4	-14.4	-15.0	-15.2	-15.5	-15.5	-15.1	-14.6	-13.7	-13.4	-13.3	-13.7	-14.0	-14.1	-14.7	-15.0	-14.9	-14.9	-15.0	-15.0	-15.1	-15.1	-14.6	-13.3
14-Mar	-15.0	-15.0	-15.1	-15.3	-15.5	-15.6	-15.6	-15.6	-15.2	-14.0	-13.1	-12.0	-11.9	-11.7	-11.5	-11.7	-11.8	-12.2	-13.0	-13.3	-13.7	-14.6	-15.7	-16.7	-13.9	-11.5
15-Mar	-17.8	-20.4	-23.1	-25.2	-26.8	-28.1	-28.9	-27.0	-19.7	-15.4	-12.4	-12.0	-11.5	-11.7	-11.6	-11.2	-11.4	-12.4	-13.3	-14.3	-15.7	-19.0	-22.0	-24.1	-18.1	-11.2
16-Mar	-26.3	-26.9	-28.4	-29.0	-29.1	-29.7	-30.4	-27.1	-19.3	-13.9	-11.5	-10.2	-9.2	-8.3	-8.2	-8.3	-8.6	-8.6	-8.9	-9.1	-9.1	-9.3	-9.5	-9.6	-16.2	-8.2
17-Mar	-9.6	-9.3	-9.3	-9.3	-9.2	-9.1	-9.1	-9.0	-8.5	-7.6	-6.6	-5.9	-5.5	-5.0	-4.7	-4.3	-4.3	-4.5	-5.6	-6.9	-7.6	-8.0	-8.3	-8.9	-7.3	-4.3
18-Mar	-9.5	-10.3	-11.1	-11.5	-11.8	-11.8	-11.6	-11.5	-10.3	-8.7	-7.7	-7.0	-4.8	-3.7	-2.3	-1.9	-1.7	-2.2	-3.0	-4.3	-5.8	-6.3	-7.7	-7.6	-7.3	-1.7
19-Mar	-7.5	-8.2	-9.0	-10.5	-10.7	-12.0	-12.5	-11.6	-5.7	-1.6	1.3	2.5	3.6	4.5	5.2	5.4	5.6	5.5	3.9	0.5	-2.1	-3.0	-4.4	-5.6	-2.8	5.6
20-Mar	-7.5	-5.8	-6.5	-7.8	-9.0	-10.0	-10.9	-10.6	-9.2	-7.9	-6.7	-4.8	-3.9	-2.5	-1.7	-1.4	-1.5	-2.3	-4.0	-6.4	-8.6	-9.0	-9.2	-10.0	-6.6	-1.4
21-Mar	-11.5	-12.8	-13.5	-14.2	-14.4	-14.4	-14.2	-12.8	-10.1	-5.8	-3.1	-0.8	1.0	3.1	4.0	4.6	4.2	3.3	1.1	-1.0	-2.4	-2.9	-3.6	-4.5	-5.0	4.6
22-Mar	-5.3	-5.3	-5.9	-6.6	-6.6	-6.2	-6.3	-5.6	-3.8	-2.8	-1.3	-0.3	2.7	5.4	6.8	7.9	7.7	7.6	6.2	4.3	3.2	1.5	0.3	-0.2	-0.1	7.9
23-Mar	-1.3	-1.3	-2.2	-3.2	-3.9	-5.3	-6.1	-3.4	-0.2	2.6	4.8	6.3	7.2	7.3	7.0	8.3	7.7	7.9	6.2	1.5	0.2	-1.7	-2.9	-3.0	1.3	8.3
24-Mar	-4.1	-4.9	-4.1	-4.7	-4.1	-3.2	-2.1	-1.3	1.7	4.2	5.4	4.9	4.8	5.0	4.8	5.3	4.6	3.1	3.0	2.2	2.0	1.0	0.7	0.0	1.0	5.4
25-Mar	-0.3	-0.3	-0.7	-1.3	-2.4	-2.0	-1.9	-0.8	0.6	2.8	5.6	7.9	9.1	9.5	10.1	10.3	10.5	9.4	8.1	5.9	3.7	0.5	1.5	0.0	3.6	10.5
26-Mar	-2.2	-3.3	-4.7	-5.9	-7.1	-8.1	-8.6	-8.8	-8.5	-7.5	-6.2	-4.3	-3.0	-1.6	-0.5	-0.1	-0.6	-2.2	-2.9	-3.2	-3.6	-4.0	-4.1	-4.1	-4.4	-0.1
27-Mar	-4.5	-5.0	-5.3	-6.4	-7.4	-7.6	-7.8	-7.8	-7.4	-7.1	-6.8	-6.9	-6.7	-5.9	-5.7	-5.3	-5.0	-5.7	-6.4	-7.1	-7.9	-8.7	-9.4	-10.2	-6.8	-4.5
28-Mar	-10.9	-11.6	-12.1	-12.5	-13.1	-13.6	-14.4	-14.5	-13.8	-12.4	-10.2	-8.2	-6.5	-5.4	-4.5	-4.1	-4.3	-4.6	-5.1	-5.9	-6.3	-7.1	-7.9	-8.8	-9.1	-4.1
29-Mar	-10.0	-12.5	-14.3	-14.2	-14.0	-15.0	-15.2	-11.3	-7.2	-5.0	-4.1	-3.0	-2.7	-2.2	-2.3	-2.4	-2.4	-2.3	-2.6	-3.6	-4.6	-5.7	-7.7	-9.6	-7.2	-2.2
30-Mar	-11.4	-11.1	-8.5	-8.2	-8.7	-8.8	-9.9	-7.9	-4.6	-3.1	-1.6	-0.3	0.6	1.7	2.5	3.0	3.2	3.0	1.6	-0.9	-2.4	-3.5	-4.3	-5.1	-3.5	3.2
31-Mar	-6.3	-7.2	-7.6	-8.2	-8.4	-7.3	-6.7	-5.9	-4.7	-3.4	-2.4	-1.7	-1.2	-0.8	0.1	1.3	1.5	1.0	-0.3	-1.7	-2.3	-2.3	-3.0	-3.4	-3.4	1.5
	-7.4	-8.0	-8.5	-9.0	-9.4	-9.7	-10.0	-9.5	-7.7	-5.7	-4.1	-3.0	-2.0	-1.3	-0.9	-0.6	-0.7	-1.3	-2.6	-4.0	-4.9	-5.6	-6.1	-6.7	Diurnal Average	
	2.8	1.1	1.4	1.8	2.0	2.4	2.2	3.8	4.6	6.3	7.7	8.7	9.1	9.6	10.3	10.3	10.6	9.4	8.1	5.9	4.6	3.8	3.5	3.3	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Monday Creek - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	26	3.49	3.49
-20 - 0	524	70.43	73.92
0 - 10	188	25.27	99.19
10 - 20	6	0.81	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Monday Creek - March 2025

Maximum Value: 94.1 % on Mar 24 22:00

Maximum Daily Average: 84.0 % on Mar 11

Minimum Value: 25.5 % on Mar 25 17:00

Minimum Daily Average: 46.8 % on Mar 21

Maximum Diurnal Average: 77.4 % at hour 6

Minimum Diurnal Average: 49.6 % at hour 16

Monthly Average: 64.51 %

Percentiles: P_1 = 28.5 P_{10} = 40.3 Q_1 = 52.2 Median = 67.5 Q_3 = 77.4 P_{90} = 83.3 P_{99} = 89.5

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

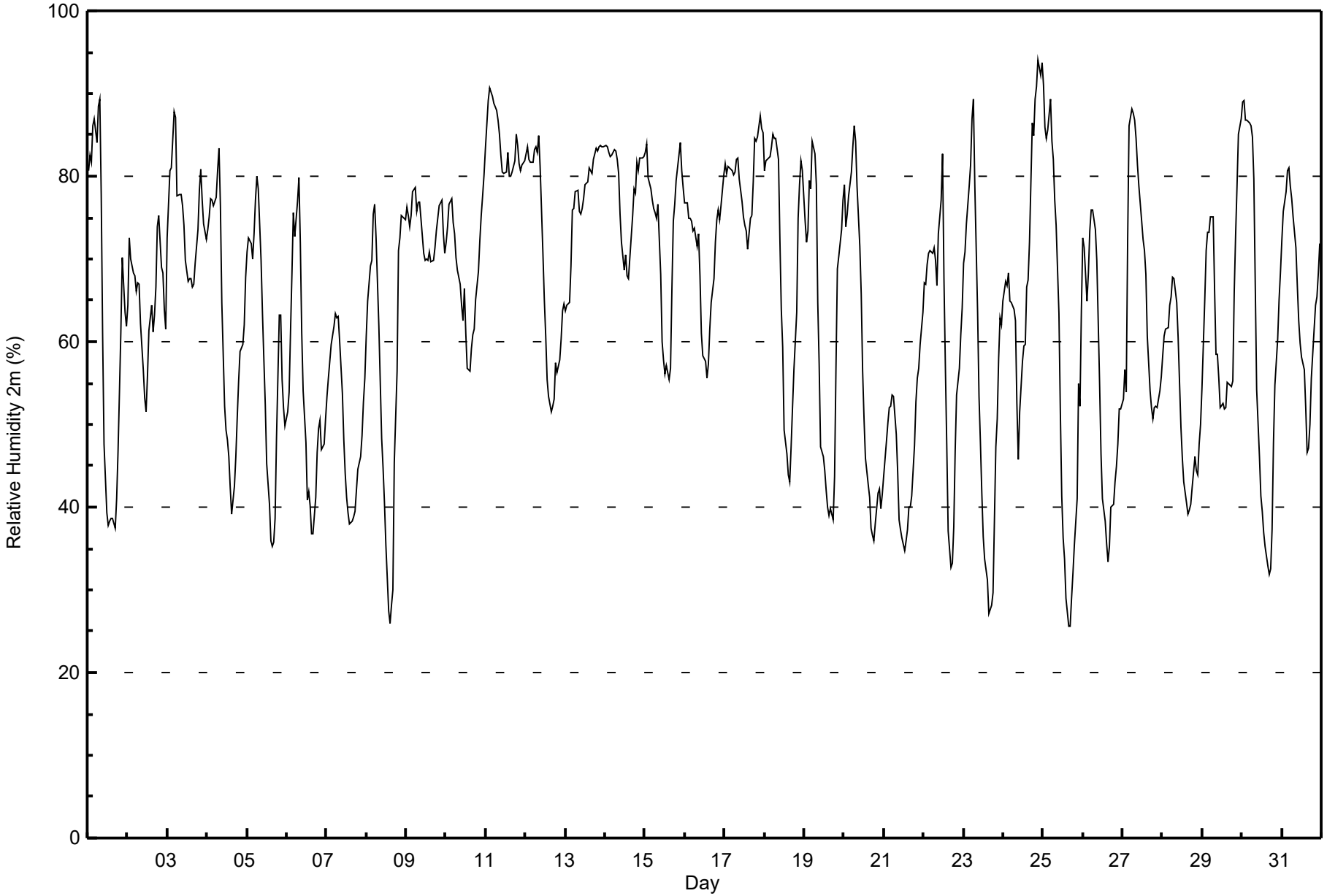
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	80.6	82.6	81.7	86.2	86.9	84.1	88.4	89.3	77.9	60.8	47.6	39.2	37.7	38.2	38.6	38.7	37.5	41.0	46.7	53.9	61.3	70.1	63.6	61.9	62.3	89.3
2-Mar	64.4	72.6	70.0	68.3	68.0	66.1	67.2	66.9	62.3	56.7	53.3	51.5	56.0	61.4	64.4	61.2	63.2	66.7	73.9	75.3	68.9	68.4	63.9	61.5	64.7	75.3
3-Mar	72.5	80.6	81.0	84.3	87.8	87.1	77.6	77.8	77.7	76.4	74.1	69.9	67.3	67.7	67.7	66.6	66.9	69.6	73.5	78.3	80.8	77.0	74.3	72.4	75.4	87.8
4-Mar	73.5	75.2	77.2	77.2	76.5	77.4	80.7	83.5	76.5	64.7	52.2	49.3	48.2	46.2	42.4	39.1	42.6	46.0	50.9	55.2	58.8	59.7	62.0	67.8	61.8	83.5
5-Mar	70.9	72.5	71.9	70.1	73.0	77.1	80.0	78.4	69.8	63.4	57.9	52.4	45.2	40.3	35.9	35.2	35.7	38.6	48.3	63.2	63.2	55.4	52.0	49.8	58.3	80.0
6-Mar	51.4	53.9	61.2	68.2	75.6	72.7	77.0	79.9	71.8	61.1	54.1	47.7	40.9	41.9	40.2	36.8	36.8	41.2	46.6	49.4	50.6	46.9	47.6	50.6	54.3	79.9
7-Mar	53.4	55.5	57.6	59.6	61.9	63.3	62.9	63.1	60.2	53.7	48.1	44.0	41.2	39.2	37.9	38.3	38.8	39.4	42.0	44.6	46.1	48.6	52.8	55.5	50.3	63.3
8-Mar	60.7	65.0	69.1	69.8	75.4	76.6	72.6	61.8	55.2	48.3	44.8	40.5	35.4	27.5	26.0	28.1	30.0	45.4	56.5	71.1	72.5	75.2	75.0	74.7	56.6	76.6
9-Mar	76.2	75.2	73.9	75.3	78.1	78.7	75.8	76.8	77.0	74.8	70.7	69.9	70.0	69.8	70.8	69.7	69.8	71.4	73.4	74.8	76.5	77.1	73.0	70.6	73.7	78.7
10-Mar	72.1	74.0	76.7	77.4	74.3	73.0	70.1	68.6	66.9	64.4	62.5	66.4	61.1	56.8	56.4	59.1	60.8	61.6	65.0	68.4	72.3	75.2	77.6	80.2	68.4	80.2
11-Mar	83.4	89.2	90.7	90.2	89.6	88.9	88.0	86.8	85.1	82.6	80.5	80.4	80.6	82.9	80.0	80.0	80.6	81.9	85.2	83.8	81.5	80.7	81.3	81.9	84.0	90.7
12-Mar	82.7	83.6	82.1	81.7	81.8	83.3	83.6	82.8	85.0	81.1	70.7	65.1	60.7	55.5	53.4	51.6	52.2	53.1	57.4	56.3	57.8	60.3	63.7	64.5	68.7	85.0
13-Mar	63.7	64.3	64.7	69.1	76.0	76.1	78.1	78.4	75.7	75.4	76.1	77.3	79.0	79.3	80.9	80.8	80.4	82.0	83.3	83.0	83.5	83.7	83.6	83.6	77.4	83.7
14-Mar	83.7	83.5	82.9	82.4	82.6	83.3	83.0	82.0	80.3	75.4	72.1	68.6	70.4	68.0	67.6	70.2	75.2	78.4	77.9	81.6	80.7	82.3	82.2	82.4	78.2	83.7
15-Mar	83.0	83.9	79.8	78.5	77.1	76.2	75.7	74.9	76.6	68.1	60.1	57.7	56.1	57.1	55.5	56.8	66.4	74.6	76.7	79.5	82.5	84.2	80.7	78.6	72.5	84.2
16-Mar	76.8	76.7	75.0	74.9	74.5	73.4	73.7	71.6	73.0	68.0	61.0	58.3	57.6	55.7	57.3	61.6	64.8	67.6	72.0	74.7	75.9	74.7	76.5	80.2	69.8	80.2
17-Mar	81.5	80.4	81.2	81.0	80.6	80.2	80.5	82.0	82.1	79.7	76.9	75.2	74.1	73.4	71.1	74.9	75.3	79.3	84.6	84.2	84.8	87.3	85.8	85.3	80.1	87.3
18-Mar	80.7	81.9	82.3	82.3	83.6	85.0	84.5	84.7	82.1	72.4	63.9	59.4	49.3	46.5	44.0	43.0	47.3	52.0	56.7	63.6	75.0	79.1	81.8	80.7	69.2	85.0
19-Mar	74.6	72.0	73.4	79.4	78.5	84.3	82.7	79.0	64.7	57.3	47.4	46.1	44.4	42.1	40.0	39.0	39.8	38.4	43.7	57.0	68.8	70.3	73.5	77.0	61.4	84.3
20-Mar	79.0	73.8	75.4	77.6	80.5	83.5	86.0	84.3	78.7	71.6	65.7	56.4	50.6	46.0	42.8	41.3	37.5	36.6	35.9	38.0	41.8	42.3	39.9	41.6	58.6	86.0
21-Mar	43.8	48.0	50.1	52.0	52.3	53.6	53.3	48.9	44.3	38.6	37.2	36.3	34.8	35.9	37.3	40.0	40.0	41.4	47.4	52.7	55.7	56.8	59.7	63.5	46.8	63.5
22-Mar	67.1	66.9	69.3	70.7	71.1	70.7	71.4	69.8	66.8	73.0	77.1	82.8	67.6	57.1	47.4	37.1	32.8	33.2	37.5	46.8	53.5	56.8	60.8	64.0	60.5	82.8
23-Mar	69.5	70.9	74.2	78.9	81.4	87.0	89.4	78.9	63.5	53.5	47.8	41.7	36.5	33.8	31.1	27.2	27.6	28.1	29.7	47.2	50.6	58.0	62.9	62.0	55.5	89.4
24-Mar	65.0	67.3	66.7	68.4	65.0	64.8	64.0	62.5	52.6	45.8	51.5	57.7	59.5	59.6	66.6	67.5	72.0	86.4	85.0	89.3	90.9	94.1	92.3	93.7	70.3	94.1
25-Mar	91.0	86.0	84.6	85.6	89.3	84.3	82.1	77.1	74.1	63.4	51.5	41.4	36.2	33.8	29.0	25.7	25.5	29.0	32.0	35.5	40.9	54.8	52.2	63.7	57.0	91.0
26-Mar	72.6	71.4	64.9	68.2	73.5	76.0	75.9	73.6	69.9	62.6	55.0	46.5	41.0	38.3	35.6	33.4	35.2	40.0	40.3	43.0	45.0	47.6	51.8	51.8	54.7	76.0
27-Mar	53.0	56.6	53.9	72.2	86.2	88.1	87.7	86.7	84.5	81.4	78.7	74.6	72.3	71.0	68.2	60.6	54.1	52.0	50.7	52.0	52.2	52.0	54.0	55.7	66.6	88.1
28-Mar	58.4	60.7	61.5	61.7	64.4	65.4	67.9	67.6	64.7	60.5	55.1	49.7	46.0	43.0	40.5	39.2	39.6	40.4	42.3	46.1	44.4	43.9	47.6	49.9	52.5	67.9
29-Mar	54.5	65.1	71.0	73.2	73.2	75.2	75.1	66.3	58.5	58.4	55.7	52.1	52.5	51.8	52.1	55.1	55.0	54.6	55.3	65.9	72.9	78.8	85.1	87.0	64.4	87.0
30-Mar	89.1	89.1	86.8	86.7	86.5	86.2	84.7	79.6	66.9	54.2	46.2	41.4	39.6	36.9	35.3	32.8	31.8	32.5	37.2	47.7	54.7	60.4	65.1	68.4	60.0	89.1
31-Mar	72.4	75.8	78.1	80.6	81.1	78.8	77.4	75.1	71.3	66.8	62.5	59.9	58.2	56.6	52.0	46.6	47.1	50.0	55.5	61.5	64.4	65.5	68.3	71.8	65.7	81.1
	71.0	72.7	73.2	75.2	77.0	77.4	77.3	75.4	70.8	65.0	59.9	56.8	53.9	52.0	50.6	49.6	50.4	53.3	56.9	62.1	64.8	66.7	67.4	68.8	Diurnal Average	
	91.0	89.2	90.7	90.2	89.6	88.9	89.4	89.3	85.1	82.6	80.5	82.8	80.6	82.9	80.9	80.8	80.6	86.4	85.2	89.3	90.9	94.1	92.3	93.7	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Monday Creek - March 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	73	9.81	9.81
40 - 60	199	26.75	36.56
60 - 80	325	43.68	80.24
80 - 100	147	19.76	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Monday Creek - March 2025

Maximum Speed: 34 km/h on Mar 8 15:00

Maximum Daily Speed Average: 16.3 km/h on Mar 27

Minimum Speed Value: 0 km/h on Mar 10 14:00

Minimum Daily Speed Average: 1.8 km/h on Mar 29

Maximum Diurnal Speed Average: 5.2 km/h at hour 15

Minimum Diurnal Speed Average: 0.6 km/h at hour 23

Monthly Average Velocity: 1.4 km/h 346.8 deg

Percentiles: P_1 = 1 P_{10} = 4 Q_1 = 6 Median = 9 Q_3 = 12 P_{90} = 15 P_{99} = 24

Hours in Service: 744

Hours of Data: 744

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	S5	S4	S6	SSW2	S3	SSE4	SE4	SE3	S5	S4	WSW7	WSW7	W14	W16	W15	W14	W11	W8	WSW7	SW7	SSW4	SSW4	WSW7	WSW4	WSW5.4	W16
2-Mar	S2	SSE3	S4	S5	S5	S4	SSW5	SW7	WSW8	WNW15	WNW18	WNW17	WNW18	WNW17	NW15	NNW14	NW10	WNW6	SW5	SW6	W10	WNW10	WNW9	NW10	WNW7.1	WNW18
3-Mar	N8	N8	NNW7	N10	NNE10	NNE12	NNW15	N11	NNE12	NNE10	N6	NNW8	NNW10	NNW12	NNW12	NNW10	WNW8	WNW6	W4	WSW3	SSW4	WSW6	WSW5	W7	NNW6.5	NNW15
4-Mar	W6	W5	W6	W6	WSW7	WSW6	W4	W5	WSW5	W11	WSW15	WSW15	WSW16	W17	WSW15	WSW15	WSW13	WSW10	SW8	SSW9	SW7	SW10	SW14	W14	WSW9.6	W17
5-Mar	W13	W7	NW6	NNW8	NNW9	NNW8	NNW12	NNW12	NNW16	NNW14	N14	NNW12	NNW10	NNW9	NW14	NW12	NW12	WNW7	W2	S1	SW3	SW5	SW8	SW9	NW7.3	NNW16
6-Mar	SW7	SW4	SSW3	WSW4	WSW5	WSW6	W3	E3	S2	S3	W6	N3	WNW5	WNW15	WNW17	WNW17	WNW16	WNW13	W8	WSW9	SW10	W17	W17	W12	W7.4	W17
7-Mar	W10	W10	W14	W14	W10	W11	WSW14	W13	W15	W13	WNW11	WNW11	WNW18	WNW17	WNW18	WNW17	WNW14	WNW8	WNW8	WNW11	W10	W9	NW6	N4	W11.4	WNW18
8-Mar	NE5	ENE4	ESE3	SSE3	SSW7	SSW8	SW11	WSW19	W22	W25	W27	W25	WNW28	WNW32	WNW34	WNW31	WNW25	NW21	N16	NE16	NE15	NE13	NE13	NE12	WNW10.8	WNW34
9-Mar	NE10	ENE11	NE10	NE11	NE12	ENE12	NE14	NE14	NE14	NE13	NE14	NNE14	NNE14	NE12	NNE12	NNE12	NE12	NE12	NE12	NNE11	NNE11	NE11	NE10	ENE11	NE11.8	NNE14
10-Mar	NE6	NE5	NE7	ENE4	ENE5	E5	ESE6	SE6	SE6	SE7	S5	S4	SE3	W0	S3	ENE7	E8	ESE7	SE7	ESE6	ESE6	SE5	SE6	SE7	ESE4.4	E8
11-Mar	SE7	ESE7	ENE7	E9	E8	E8	ENE8	ENE9	ENE9	ENE9	E10	E8	E8	ENE10	NE11	ENE9	E9	E8	ENE8	ENE8	NNE9	NNE11	NNE10	NE11	ENE8.1	ENE11
12-Mar	NNE10	NNE11	NNE13	NNE13	NNE10	N10	N10	NNE11	NNE10	NE5	NE5	NE6	NE8	NNE7	NE9	NNE9	NE10	ENE10	NE11	ENE13	ENE10	ENE10	ENE9	ENE9	NE8.9	NNE13
13-Mar	ENE11	ENE11	E10	E12	E13	E14	E13	E13	E14	E15	E15	ENE18	ENE18	ENE20	ENE20	ENE20	ENE19	ENE16	ENE14	NE11	NE11	NNE10	NNE11	NNE13	ENE13.5	ENE20
14-Mar	NNE12	NNE14	NNE13	NNE12	N9	N9	NNW10	N11	N10	N11	NNW12	NNW13	NNW13	NNW12	NNW13	NNE10	NNE9	N11	N8	NNW7	NW8	NW7	NW7	NW6	N9.4	NNE14
15-Mar	NW4	NW3	WNW3	WNW3	WNW3	W2	SSW2	WSW1	WNW4	SSE1	ESE3	N4	N6	WNW10	WNW11	NW10	N8	NE9	NE7	ENE7	ENE4	E2	ESE1	E3	NNW2.5	WNW11
16-Mar	E1	ESE2	ESE3	E3	ESE2	E4	E2	E4	ESE5	SE7	S10	SE9	SSE9	S11	S10	SSW12	SSE8	SSE7	SE7	SE7	SSE7	SSE8	SSE7	SSE5	SSE5.5	SSW12
17-Mar	S6	S7	SSE6	S6	S6	SSW9	SSW9	SSW10	SSW9	SW9	SW9	W11	WNW11	WNW11	WNW10	WNW8	WNW8	NW7	N9	NNE9	NNE7	N4	N4	NE4	WSW3.1	WNW11
18-Mar	NE7	N6	NNE6	N5	SE5	S4	WNW5	WNW5	W4	NW6	WNW7	W11	W13	WSW14	WSW12	WSW15	WSW16	SW12	SW7	SSW4	W7	WSW4	NW5	W7	W5.3	WSW16
19-Mar	W7	W6	W3	SW3	W2	SSW4	WSW2	ESE1	SSW1	W7	SW9	WSW12	WSW14	WSW15	WSW17	WNW17	WNW12	WNW13	WNW6	W1	SW2	NNE1	WSW4	E1	W6.0	WSW17
20-Mar	NNW1	NNE8	NNE7	NNE9	NE10	NE8	NE7	ENE7	ENE9	ENE10	ENE13	ENE13	ENE14	E13	ENE13	ENE12	ENE14	ENE14	NE13	ENE13	ENE10	E10	ESE12	ESE10	ENE9.6	ENE14
21-Mar	SE10	SE7	SE7	ESE6	ESE7	ESE6	ESE8	SE7	SE7	S9	SSE9	SE11	ESE12	ESE13	SE13	SE15	SE16	ESE14	SE12	SE10	SE9	SE6	SE6	SE5	SE9.1	SE16
22-Mar	SE6	SE6	SE6	SE6	SSE5	S6	S6	S6	SSW7	S7	SSW8	SW7	SSW8	SW10	WSW12	W15	W15	W14	WNW12	W14	W13	W10	W10	W10	WSW6.1	W15
23-Mar	W8	W10	W9	W5	WSW5	WSW5	SSW4	WSW5	W9	WNW9	WNW8	W6	W12	NW10	WNW9	WNW5	WNW7	NE2	WSW2	ESE4	ESE5	E6	ESE4	SE4	W3.9	W12
24-Mar	SE3	SSE3	ESE3	SE4	SE5	SE4	SSE3	SSW4	SW5	SW10	SW17	SW16	SW14	SW14	WSW15	WSW13	W8	NNE7	NW8	NNW8	WNW15	W8	WNW6	WNW5	WSW5.1	SW17
25-Mar	WSW8	W7	W7	WSW5	WSW6	W7	W5	W7	W10	W12	WSW11	WSW11	W13	WSW16	W19	WNW22	WNW21	NW14	NW7	N6	N5	NNW4	NNE11	NNE14	WNW8.0	WNW22
26-Mar	NNE12	NNE14	NNE15	NNE16	NNE13	NNE11	NNE10	NNE11	NNE11	NNE9	ENE8	ENE9	E11	E9	NE9	ENE12	NE14	NE16	ENE15	ENE12	NE12	ENE13	ENE12	E13	NE11.0	NE16
27-Mar	E13	ENE13	E13	ENE12	ENE13	ENE13	ENE14	ENE16	ENE17	ENE20	ENE21	ENE23	ENE21	ENE17	NE18	ENE19	NE17	NE18	ENE18	ENE17	ENE16	ENE15	ENE16	ENE15	ENE16.3	ENE23
28-Mar	ENE12	ENE13	ENE11	NE10	NNE9	NE7	NNE9	NNE7	NNE7	NNE7	ENE7	ENE7	ENE8	E7	ENE7	ENE5	NE6	ENE7	E7	E8	ESE8	SE8	SE7	SSE6	ENE6.6	ENE13
29-Mar	SE5	E3	ENE2	WNW1	NE1	NE1	SW1	ENE1	NE1	NE4	NE3	NE2	NW6	WNW3	W8	W8	WNW7	WNW7	WSW6	WSW7	WSW9	WSW5	SSW3	SSW2	W1.8	WSW9
30-Mar	S1	SSW4	SW5	SW8	SW7	WSW5	S2	S2	SSW5	SSW9	SSW8	WSW8	WSW11	W11	SW10	SW8	WSW9	WSW8	SW8	SW8	SW7	SW7	SSW8	SSW9	SW6.6	W11
31-Mar	S7	S7	SSE6	SSE7	SE7	SE7	SE7	SE7	SE9	SE9	SSE11	S12	SSE12	SSE13	S11	SE11	SE13	SE13	SE13	SE11	SE8	SE7	ESE7	ESE6	SE8.7	SSE13
	ENE1.4	NE1.7	NE1.9	NE2.0	ENE1.7	ENE1.3	NNE1.3	NNE1.5	N0.9	NW1.2	W1.4	NW2.0	WNW3.1	WNW4.2	WNW5.2	NW4.5	NW3.9	N2.9	NNE2.2	NE2.1	NNE1.1	N0.6	NE0.6	NE1.2	Diurnal Average	
	E13	NNE14	NNE15	NNE16	E13	E14	NNW15	WSW19	W22	W25	WNW27	W25	WNW28	WNW32	WNW34	WNW31	WNW25	NW21	ENE18	ENE17	ENE16	W17	W17	ENE15	Diurnal Maximum	

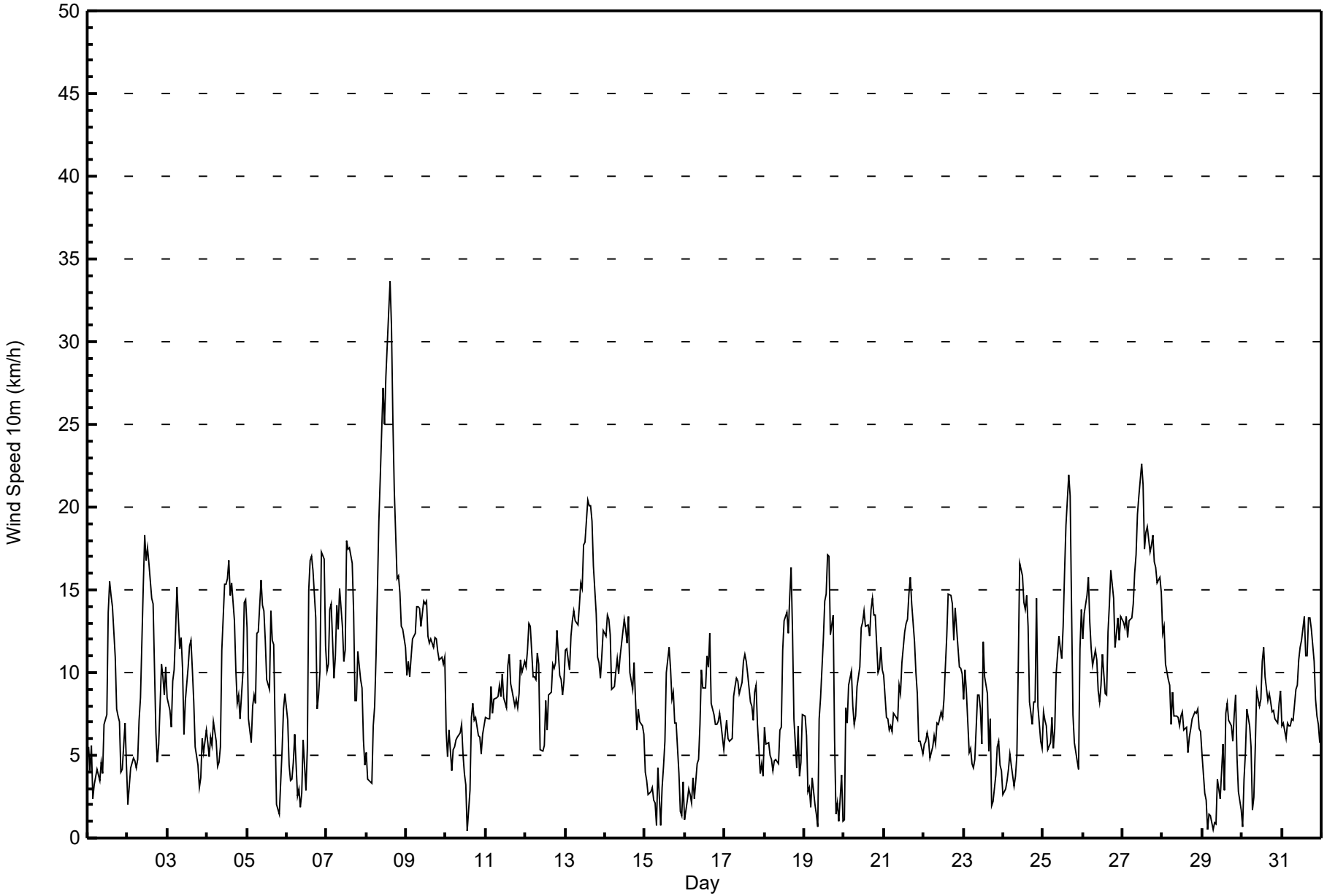
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Monday Creek - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	162	21.77	21.77
6 - 11	366	49.19	70.97
12 - 19	197	26.48	97.45
20 - 28	16	2.15	99.60
29 - 38	3	0.40	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Monday Creek - March 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	7	1	12	7	11	12	12	8	19	18	7	18	14	11	3	2	162
6 - 11	18	36	25	33	17	13	37	12	16	14	26	22	42	27	15	13	366
12 - 19	2	19	22	38	11	4	7	2	1	1	6	20	25	20	5	14	197
20 - 28	0	0	0	7	0	0	0	0	0	0	0	0	3	5	1	0	16
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	27	56	59	85	39	29	56	22	36	33	39	60	84	66	24	29	744

Total Number of Valid Hours: 744

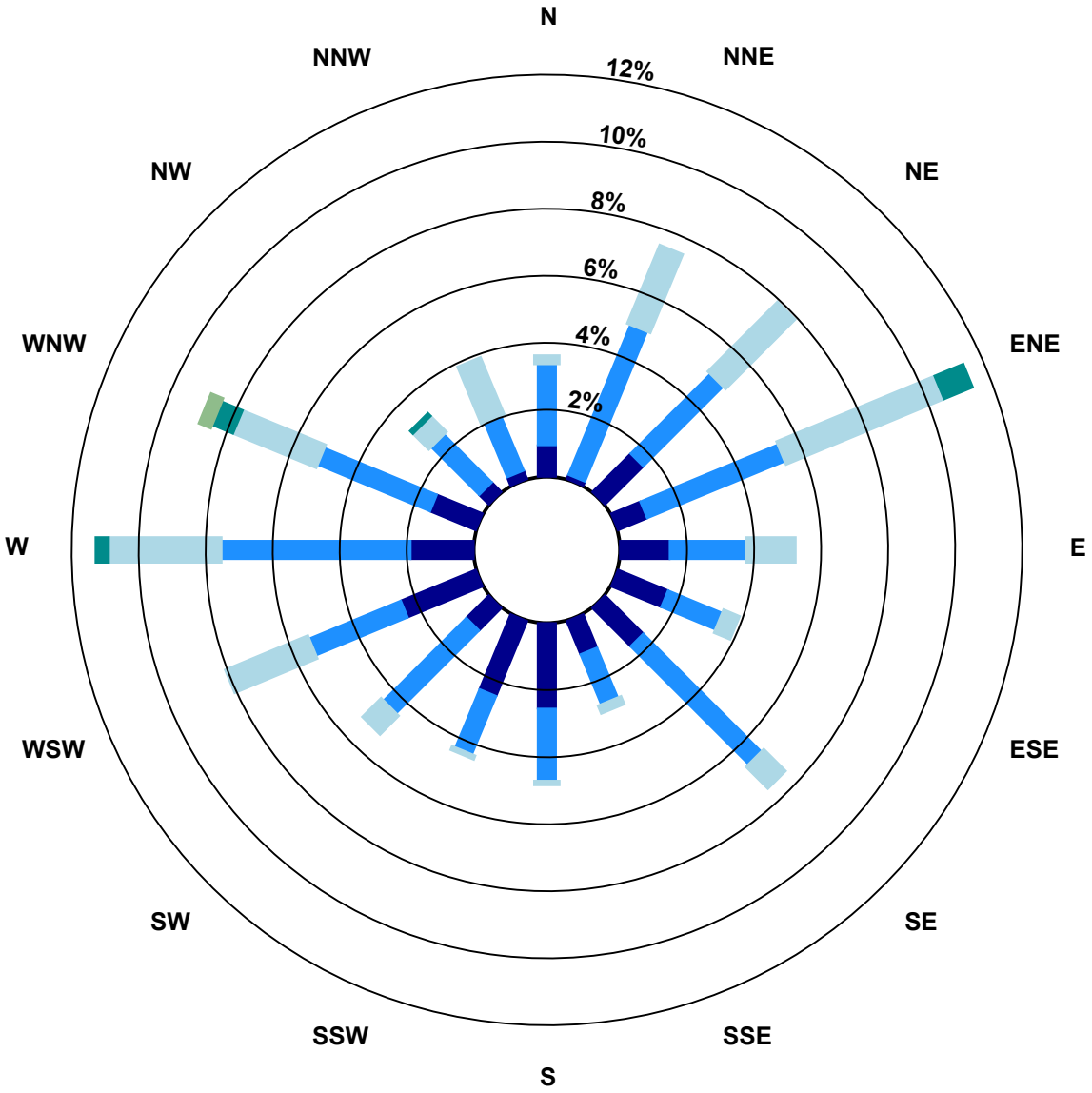
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 10m (WS10) - km/h

Monday Creek



Classes (km/h)

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

Total Number of Valid Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Monday Creek - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7 km/h on Mar 24 17:00

Minimum Value: 1 km/h on Mar 15 05:00

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

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

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

Direction of Maximum Speed: 292 deg on Mar 8 15:00

Direction of Maximum Daily Speed Average: 63.8 deg on Mar 27

Direction of Minimum Speed: 276 deg on Mar 10 14:00

Direction of Minimum Daily Speed Average: 1.8 deg on Mar 29

Monthly Average Direction: 346.8 deg

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	182	176	180	203	178	159	138	141	172	188	238	244	275	264	263	269	270	259	238	220	209	206	242	240	236.4
2-Mar	185	150	181	191	189	189	210	219	258	282	288	301	303	303	318	336	308	283	227	235	275	290	297	307	284.2
3-Mar	5	349	332	10	20	25	347	358	27	19	7	331	344	335	340	340	292	282	272	241	213	240	252	266	342.9
4-Mar	271	267	260	266	252	256	261	270	251	267	256	244	247	272	246	249	237	240	219	211	217	233	232	260	248.5
5-Mar	276	280	314	327	341	328	340	340	341	342	3	347	342	344	306	306	306	303	278	176	214	236	226	226	318.2
6-Mar	234	234	200	246	246	249	263	94	178	184	268	3	295	283	288	289	295	287	274	241	235	266	263	273	269.1
7-Mar	266	259	262	262	263	262	258	274	267	276	288	294	285	297	292	291	289	294	282	287	272	277	305	4	279.3
8-Mar	38	73	105	153	194	207	231	255	264	270	281	280	285	289	292	291	295	325	350	37	41	45	44	34	297.5
9-Mar	35	65	48	40	37	57	43	47	53	51	49	28	25	35	25	32	39	41	38	31	33	35	55	61	41.7
10-Mar	54	51	38	64	74	92	120	127	135	134	182	185	132	276	181	72	83	112	132	111	119	143	130	125	110.0
11-Mar	125	117	78	83	82	83	62	66	76	75	82	88	85	70	56	74	83	83	57	57	20	27	30	38	69.0
12-Mar	28	12	21	27	33	9	11	14	20	41	48	54	37	15	43	28	55	65	55	57	64	73	66	71	38.7
13-Mar	78	78	81	80	91	88	85	79	90	82	87	77	69	67	65	65	57	60	63	50	39	15	15	28	67.8
14-Mar	30	31	24	18	5	349	339	6	1	360	345	346	330	339	337	18	16	3	353	328	321	304	314	312	354.6
15-Mar	315	307	296	300	302	268	200	250	285	152	105	6	350	295	295	306	359	46	42	60	64	84	118	88	340.9
16-Mar	95	103	110	89	108	87	99	90	121	139	180	130	153	177	190	197	163	154	138	144	157	164	161	157	153.1
17-Mar	170	182	165	183	188	194	195	201	204	218	214	263	283	294	287	294	297	323	7	28	29	3	7	37	250.1
18-Mar	37	9	22	0	134	169	290	286	270	318	295	281	272	254	238	245	247	236	223	212	264	254	313	272	265.4
19-Mar	268	260	273	215	268	209	239	119	213	264	231	244	245	257	257	287	288	283	287	259	220	17	243	80	260.9
20-Mar	337	32	17	30	35	37	39	58	72	63	68	57	77	84	78	72	67	67	54	59	73	96	115	120	65.9
21-Mar	127	125	129	121	120	109	113	136	129	173	156	124	109	118	135	142	125	120	125	128	134	146	140	139	129.3
22-Mar	130	134	134	142	162	174	184	186	197	182	212	219	196	229	255	259	278	280	289	280	279	269	266	267	239.7
23-Mar	263	263	268	260	249	248	212	239	264	284	289	280	276	320	300	290	295	47	242	114	106	81	109	143	271.7
24-Mar	139	153	111	141	132	141	149	207	217	228	233	224	216	228	237	243	280	13	320	337	295	275	289	286	242.4
25-Mar	257	261	271	257	246	264	259	270	266	266	248	256	263	255	278	293	297	315	322	349	353	344	17	33	285.3
26-Mar	33	17	24	20	21	18	27	33	25	31	70	67	82	91	54	67	46	51	62	62	56	57	78	90	48.0
27-Mar	88	74	83	66	65	65	63	63	63	66	63	63	73	66	52	58	52	47	57	58	58	64	69	72	63.8
28-Mar	73	66	63	51	31	37	25	29	19	22	61	63	66	83	75	73	55	76	87	83	115	135	141	147	66.8
29-Mar	136	86	78	296	42	47	229	73	56	39	50	48	322	284	276	274	282	282	254	249	239	239	192	202	269.6
30-Mar	189	211	227	229	224	242	174	176	205	212	213	240	250	265	236	230	252	250	234	224	229	218	209	204	229.2
31-Mar	186	170	162	151	136	142	138	136	140	132	149	180	164	150	173	146	133	125	124	132	135	127	123	123	144.7
	57.4	51.8	48.0	41.3	58.0	64.5	30.8	33.2	3.5	319.8	278.5	306.9	300.4	295.4	294.6	304.6	320.9	357.4	27.2	51.7	30.1	7.4	37.0	50.8	
	Diurnal Average																								

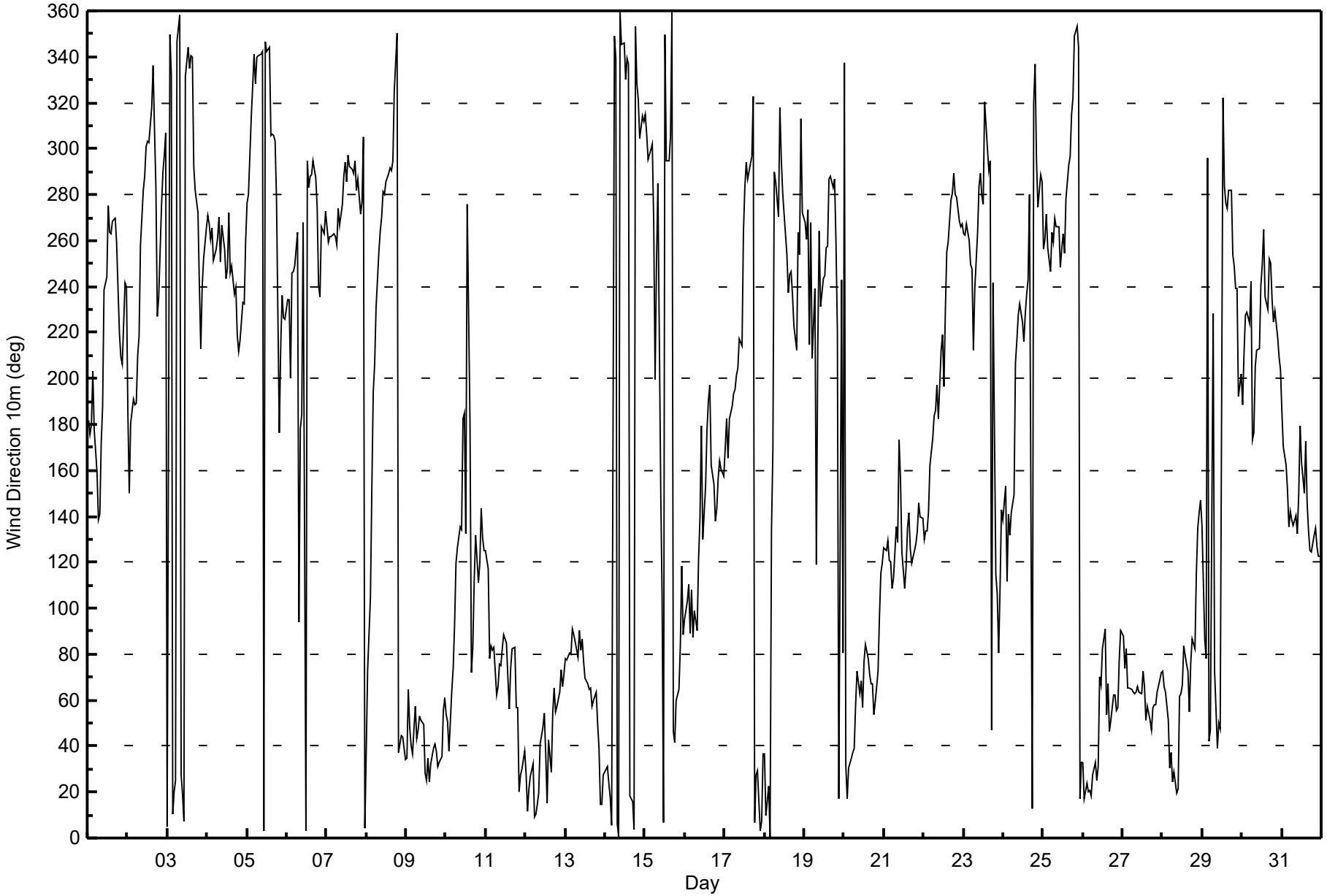
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Monday Creek - March 2025



Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 101 deg on Mar 10 14:00

Minimum Value: 6 deg on Mar 15 20:00

Percentiles: P_1 = 8 P_{10} = 11 Q_1 = 13 Median = 17 Q_3 = 24 P_{90} = 39 P_{99} = 79

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	16	23	16	38	26	23	16	23	15	46	23	23	20	17	20	13	20	13	10	10	20	17	12	16	46
2-Mar	55	47	16	38	32	25	19	14	29	13	15	19	17	16	23	19	21	22	12	17	11	10	18	19	55
3-Mar	23	19	22	19	14	14	19	26	15	18	42	29	23	24	21	23	26	22	11	23	19	12	11	10	42
4-Mar	10	14	9	10	10	15	22	28	18	19	20	16	19	17	19	14	16	14	15	12	13	13	14	21	28
5-Mar	11	15	18	17	14	17	19	17	17	20	22	25	33	40	24	22	21	20	40	37	23	12	10	9	40
6-Mar	18	31	21	19	19	11	68	32	53	54	38	69	67	17	16	16	14	11	13	16	16	10	13	13	69
7-Mar	11	12	12	12	12	12	12	17	12	14	30	21	16	18	17	14	11	10	9	12	16	10	42	35	42
8-Mar	23	30	26	31	20	19	15	15	12	13	13	14	13	12	13	13	15	21	29	10	12	12	14	14	31
9-Mar	17	14	14	11	14	15	18	15	15	16	16	20	16	16	20	18	17	17	13	11	12	12	16	15	20
10-Mar	23	42	12	50	37	27	23	26	25	29	47	58	78	101	81	27	23	20	19	19	24	28	20	16	101
11-Mar	14	19	19	16	12	12	11	13	12	16	15	14	15	15	15	14	12	31	18	28	29	19	20	15	31
12-Mar	14	13	12	14	17	15	15	13	17	39	38	40	28	47	33	30	19	14	9	10	12	9	7	11	47
13-Mar	10	11	12	12	9	10	10	11	11	11	14	11	12	11	12	12	12	12	12	13	13	14	15	11	15
14-Mar	11	11	12	12	17	16	17	17	20	19	25	22	19	21	20	18	19	20	21	19	17	18	17	18	25
15-Mar	22	17	19	18	14	26	21	56	22	72	44	61	47	30	17	22	30	12	9	6	35	63	51	16	72
16-Mar	67	60	41	29	52	9	39	10	15	22	25	28	39	28	29	26	20	17	12	12	16	17	17	19	67
17-Mar	18	18	18	19	19	16	18	16	16	16	21	19	14	18	15	14	14	24	27	19	20	19	24	24	27
18-Mar	12	14	33	47	28	34	40	19	31	29	30	17	25	23	23	20	17	16	14	17	26	51	32	10	51
19-Mar	11	15	41	25	44	29	73	74	91	21	27	23	21	20	21	16	15	11	14	78	65	82	39	63	91
20-Mar	81	15	18	11	9	9	8	16	15	17	15	18	17	17	17	22	18	15	11	9	9	11	15	14	81
21-Mar	13	12	13	15	15	13	16	15	17	28	34	26	18	19	29	23	16	13	11	10	12	16	14	11	34
22-Mar	7	9	8	12	16	17	14	17	17	21	24	20	29	27	24	23	17	19	15	9	10	8	8	8	29
23-Mar	8	10	9	10	12	26	12	18	17	20	37	53	29	21	23	61	42	82	71	42	17	13	17	33	82
24-Mar	35	29	25	18	9	12	20	30	23	21	16	19	17	19	15	19	52	43	35	31	20	9	19	13	52
25-Mar	10	12	14	23	14	15	9	19	12	18	19	27	27	20	21	15	17	21	19	30	16	20	17	12	30
26-Mar	12	14	14	14	15	17	18	14	18	29	32	32	24	34	40	23	24	14	12	12	12	11	12	9	40
27-Mar	12	12	14	12	10	10	11	12	12	12	12	14	12	18	13	15	13	16	11	11	11	11	10	11	18
28-Mar	10	11	12	11	12	15	13	16	18	21	27	27	31	47	51	63	48	28	17	11	16	10	12	10	63
29-Mar	17	17	19	52	38	43	69	39	80	36	72	76	57	79	34	24	25	20	18	17	11	18	16	18	80
30-Mar	77	24	16	12	12	19	49	37	30	30	45	45	31	28	39	41	40	27	17	13	14	12	15	16	77
31-Mar	16	16	16	15	13	14	14	15	15	17	27	26	28	22	36	32	21	17	12	11	11	21	11	14	36
	81	60	41	52	52	43	73	74	91	72	72	76	78	101	81	63	52	82	71	78	65	82	51	63	
	Diurnal Maximum																								

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS506
JACKFISH 1
MARCH 2025

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

April 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JACKFISH 1 (AMS506)
MARCH 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	707	35	37	99.73	10.2	0	2.3	0
H2S (ppb) Average	706	36	38	99.73	0.5	0	0.2	0
NO2 (ppb) Average	708	36	36	100	11.6	0	3.9	-
NO (ppb) Average	708	36	36	100	9.8	-	1	-
NOX (ppb) Average	708	36	36	100	20.2	-	4.6	-
Temperature 2 m (C) Average	744	0	0	100	10.4	-	4	-
Relative Humidity (%) Average	744	0	0	100	94.9	-	85.8	-
Wind Speed 10 m (km/h) Average	744	0	0	100	16	-	10	-
Wind Direction 10 m (deg) Average	744	0	0	100	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JACKFISH 1 (AMS506)
MARCH 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	707	0.65	1.1	-	0	0	0.1	0.3	0.7	1.6	10.2
H2S (ppb) Average	706	0.09	0.1	-	0	0	0	0.1	0.1	0.2	0.5
NO2 (ppb) Average	708	1.91	1.6	-	0.1	0.5	0.9	1.4	2.5	4	11.6
NO (ppb) Average	708	0.47	0.9	-	0	0	0	0.1	0.6	1.3	9.8
NOX (ppb) Average	708	2.38	2.2	-	0.2	0.5	1	1.8	3.1	4.8	20.2
Temperature 2 m (C) Average	744	-5.25	7.4	-	-22.4	-15.4	-10.9	-4.9	-0.1	4.5	10.4
Relative Humidity (%) Average	744	65.92	16	-	25.7	41.6	54.6	68.1	79.8	84.8	94.9
Wind Speed 10 m (km/h) Average	744	5.9	3	-	1	3	4	6	7	9	16
Wind Direction 10 m (deg) Average	744	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JACKFISH 1 (AMS506)
MARCH 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
H2S, SO2	25 Mar 2025 11:00	25 Mar 2025 12:00	2	Maintenance - sample manifold cleaned

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Jackfish 1 - March 2025

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

Maximum Value: 10.2 ppb on Mar 25 17:00

Maximum Daily Average: 2.3 ppb on Mar 25

Minimum Value: 0.0 ppb on Mar 6 00:00

Minimum Daily Average: 0.0 ppb on Mar 27

Maximum Diurnal Average: 1.2 ppb at hour 16

Minimum Diurnal Average: 0.3 ppb at hour 19

Monthly Average: 0.65 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.0$ $Q_1 = 0.1$ Median = 0.3 $Q_3 = 0.7$ $P_{90} = 1.6$ $P_{99} = 6.1$

Hours in Service:	744
Hours of Data:	707
Hours of Missing Data:	37
Hours of Calibration:	35
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.1	0.3	0.1	0.1	0.1	Z	0.1	0.1	0.3	0.2	0.2	0.7	1.5	0.8	0.8	0.7	0.7	0.5	0.3	0.2	0.2	0.1	0.2	0.4	0.4	1.5
2-Mar	Z	0.7	0.5	0.2	0.3	0.5	0.9	1.0	1.1	1.5	1.5	4.6	2.6	7.5	6.2	0.7	0.7	1.8	0.6	0.5	0.4	0.8	4.6	7.2	2.0	7.5
3-Mar	2.5	Z	1.7	0.8	0.5	0.9	1.1	1.6	1.4	1.1	1.3	1.4	1.5	0.8	1.0	0.7	0.9	1.1	0.7	0.3	0.4	0.3	0.6	0.8	1.0	2.5
4-Mar	1.6	1.2	Z	0.3	0.3	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.6	0.3	0.6	0.9	1.1	0.5	0.2	0.1	0.1	0.0	0.1	0.4	1.6
5-Mar	0.4	0.9	1.1	Z	1.5	1.6	1.6	1.2	0.9	1.2	1.9	1.1	0.3	0.3	0.7	3.4	2.8	1.1	0.3	0.8	2.5	0.4	0.1	0.0	1.1	3.4
6-Mar	0.1	0.3	0.1	0.1	Z	0.9	1.6	1.4	1.8	5.7	5.8	3.9	1.6	1.4	1.2	1.0	4.0	5.1	0.2	1.7	0.3	0.5	0.9	1.8	1.8	5.8
7-Mar	2.8	2.7	0.8	0.4	0.5	Z	1.3	0.7	2.3	2.8	2.2	1.6	0.8	1.2	2.0	7.2	1.4	0.1	0.1	0.3	1.2	1.6	0.6	2.6	1.6	7.2
8-Mar	Z	0.9	0.5	0.3	0.2	0.2	0.1	0.2	0.8	1.2	1.0	0.9	1.4	0.4	3.1	5.5	6.1	5.9	0.2	0.8	0.9	0.7	1.1	0.7	1.4	6.1
9-Mar	0.5	Z	0.4	0.3	0.4	0.5	0.5	0.4	0.4	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.3	0.3	0.3	0.5
10-Mar	0.1	0.2	Z	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.4	0.3	0.4	0.5	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.5
11-Mar	0.2	0.3	0.4	Z	0.2	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	0.1	0.4
12-Mar	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.1	0.3	0.2	0.3	0.6	0.9	0.9	0.7	1.0	0.4	0.3	0.4	0.2	0.1	0.0	0.0	0.1	0.3	1.0
13-Mar	0.1	0.2	0.1	0.0	0.0	Z	0.3	0.3	0.2	0.3	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.3
14-Mar	Z	0.1	0.0	0.1	0.0	0.2	0.1	0.2	0.4	0.6	0.4	0.2	0.6	0.4	0.2	0.3	0.2	0.2	0.3	0.3	0.3	2.4	1.2	1.0	0.4	2.4
15-Mar	1.0	Z	2.4	3.0	1.1	0.7	0.5	0.6	1.3	1.3	0.4	1.0	1.2	0.8	2.1	2.7	0.5	0.4	0.6	0.8	0.6	0.7	0.5	0.4	1.1	3.0
16-Mar	0.4	0.2	Z	0.4	0.1	0.3	0.3	0.3	0.3	0.6	0.6	0.5	0.4	0.3	0.4	0.2	0.2	0.2	0.1	0.1	0.2	0.3	0.2	0.2	0.3	0.6
17-Mar	0.2	0.2	0.4	Z	0.2	0.1	0.2	0.2	0.2	0.3	0.5	0.3	0.5	0.6	1.0	0.9	0.6	0.6	0.2	0.2	0.5	0.9	1.1	0.7	0.5	1.1
18-Mar	0.6	0.3	0.4	0.4	Z	0.3	0.3	0.3	1.1	3.3	2.4	2.5	1.6	0.6	0.2	0.2	0.0	0.1	0.0	0.1	0.2	0.1	0.9	2.9	0.8	3.3
19-Mar	3.8	3.1	1.0	0.6	0.3	Z	0.2	0.7	C	C	C	C	0.5	0.9	0.7	1.0	0.7	0.8	0.6	1.0	0.2	0.3	0.5	0.5	0.9	3.8
20-Mar	Z	0.9	0.4	0.4	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.9
21-Mar	0.2	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.3	0.5	0.4	0.3	0.2	0.2	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.5
22-Mar	0.1	0.2	Z	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.5	0.6	0.5	0.8	0.4	0.3	0.2	0.2	0.7	1.7	0.4	1.7
23-Mar	2.3	1.6	2.1	Z	0.9	0.4	0.5	0.6	2.4	1.9	2.3	2.6	2.5	3.0	0.4	0.5	0.3	0.1	0.1	0.2	0.1	0.0	0.0	0.1	1.1	3.0
24-Mar	0.0	0.0	0.1	0.0	Z	0.0	0.0	0.1	0.1	0.0	0.2	0.2	0.1	0.0	0.0	0.2	0.2	0.1	0.5	0.5	0.8	0.2	0.0	0.0	0.2	0.8
25-Mar	0.7	0.9	0.4	1.4	1.2	Z	1.7	2.5	2.7	4.3	M	M	1.3	0.5	1.7	6.5	10.2	7.8	0.3	0.4	0.0	1.3	0.7	0.5	2.3	10.2
26-Mar	Z	0.3	0.2	0.1	0.1	0.0	0.0	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
27-Mar	0.0	Z	0.0	0.0	0.1	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	0.2	0.1	0.1	0.1	0.0	0.2
28-Mar	0.0	0.1	Z	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2
29-Mar	0.0	0.0	0.0	Z	0.2	0.1	0.0	0.0	0.2	0.6	0.6	1.2	2.0	2.7	2.6	1.3	1.1	1.1	0.7	0.2	0.1	0.1	0.1	0.1	0.7	2.7
30-Mar	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.6	0.4	0.2	0.2	0.7	1.4	1.4	0.6	0.4	0.2	0.2	0.1	0.2	0.2	0.1	0.3	1.4
31-Mar	0.1	0.0	0.1	0.0	0.0	Z	0.1	0.3	0.4	0.4	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.4	0.2	0.4
	0.7	0.6	0.5	0.4	0.3	0.3	0.4	0.5	0.7	1.0	0.8	0.9	0.8	0.8	0.9	1.2	1.1	1.0	0.3	0.3	0.4	0.4	0.5	0.7	Diurnal Average	
	3.8	3.1	2.4	3.0	1.5	1.6	1.7	2.5	2.7	5.7	5.8	4.6	2.6	7.5	6.2	7.2	10.2	7.8	0.7	1.7	2.5	2.4	4.6	7.2	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

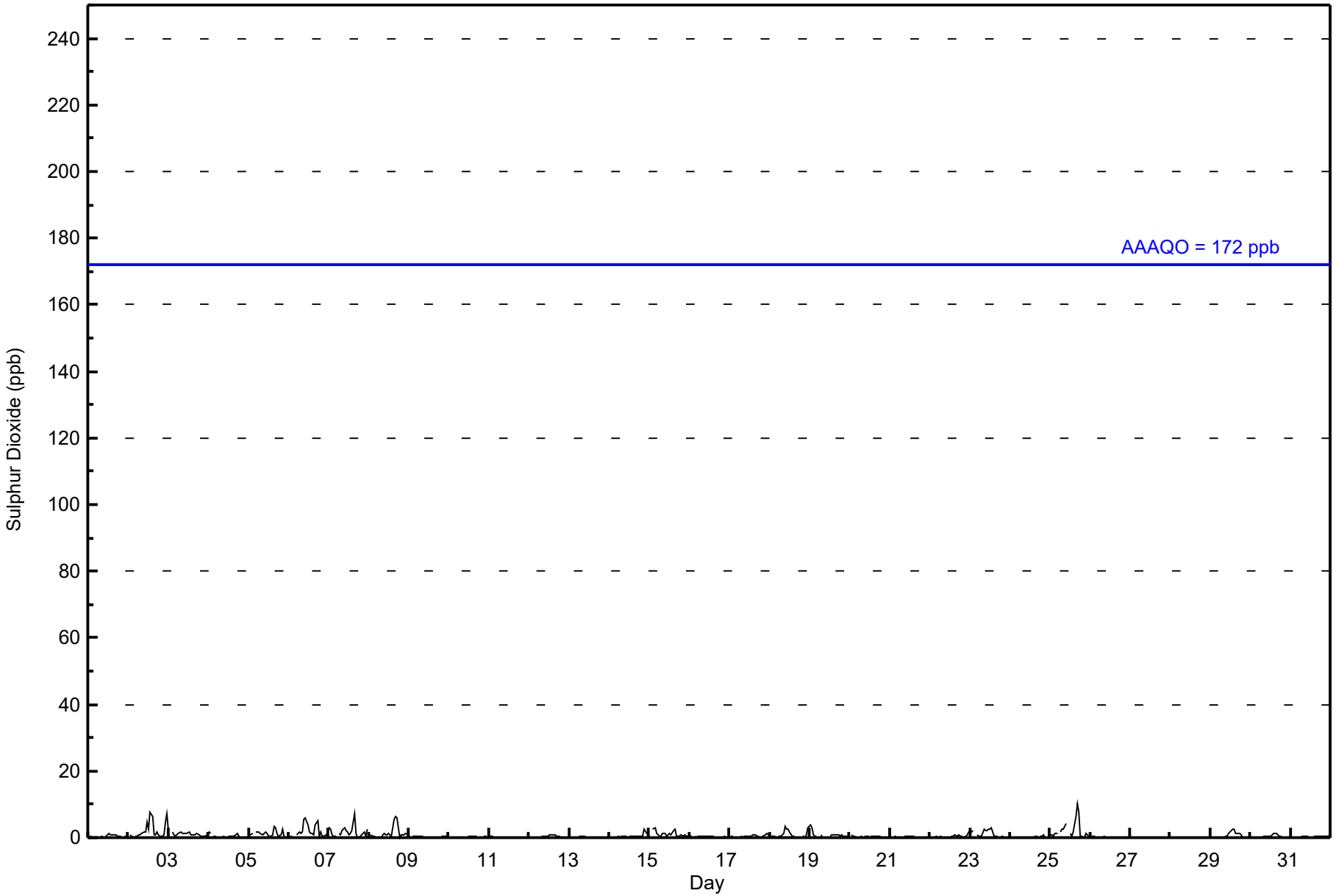
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Jackfish 1 - March 2025



Sulphur Dioxide (SO_2) - ppb
Jackfish 1 - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	707	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: 707

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Jackfish 1 - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	58	44	39	23	20	10	48	47	74	80	52	19	41	43	57	52	707
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	58	44	39	23	20	10	48	47	74	80	52	19	41	43	57	52	707

Total Number of Valid Hours: 707

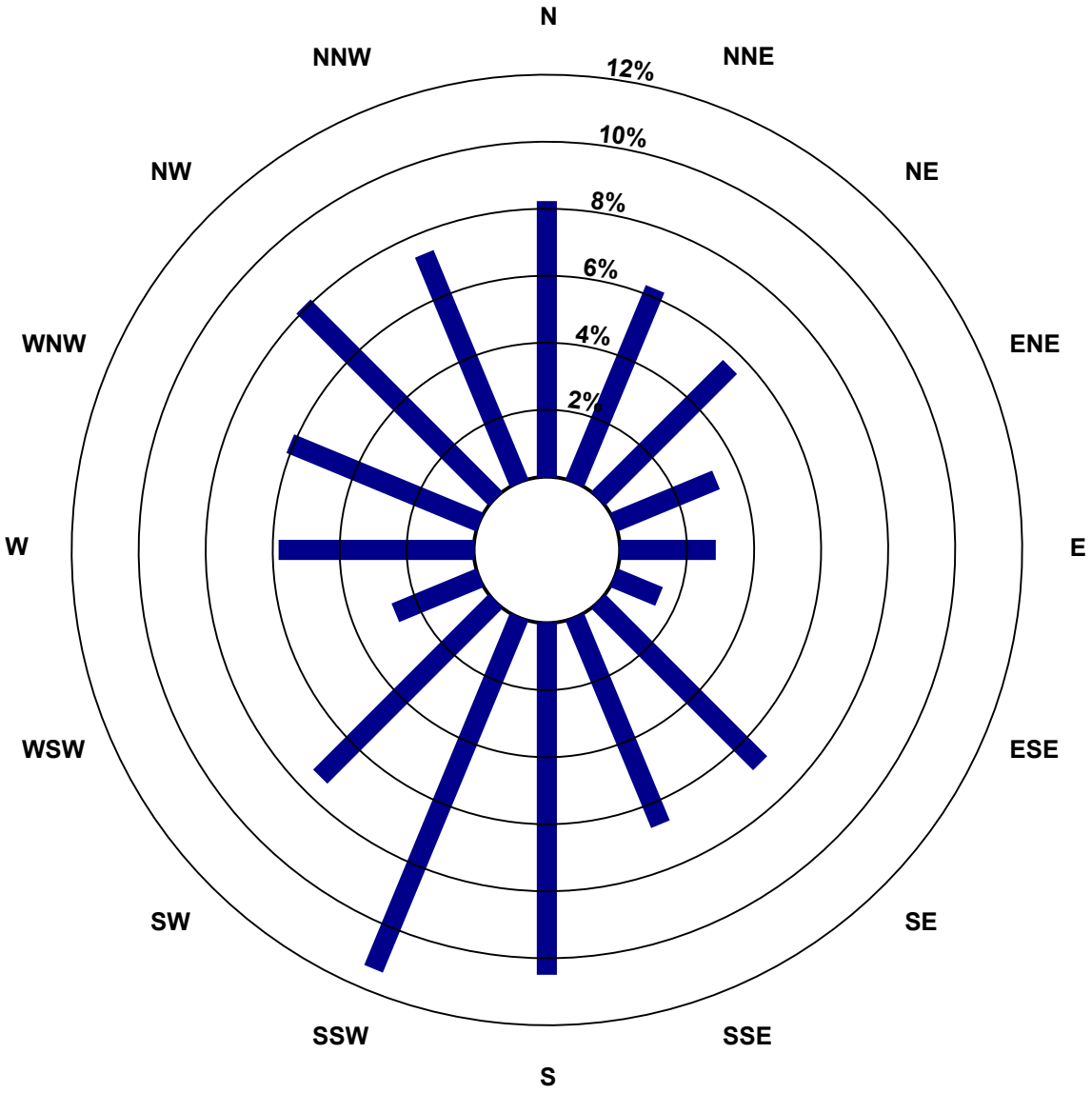
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Sulphur Dioxide (SO_2) - ppb

Jackfish 1



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

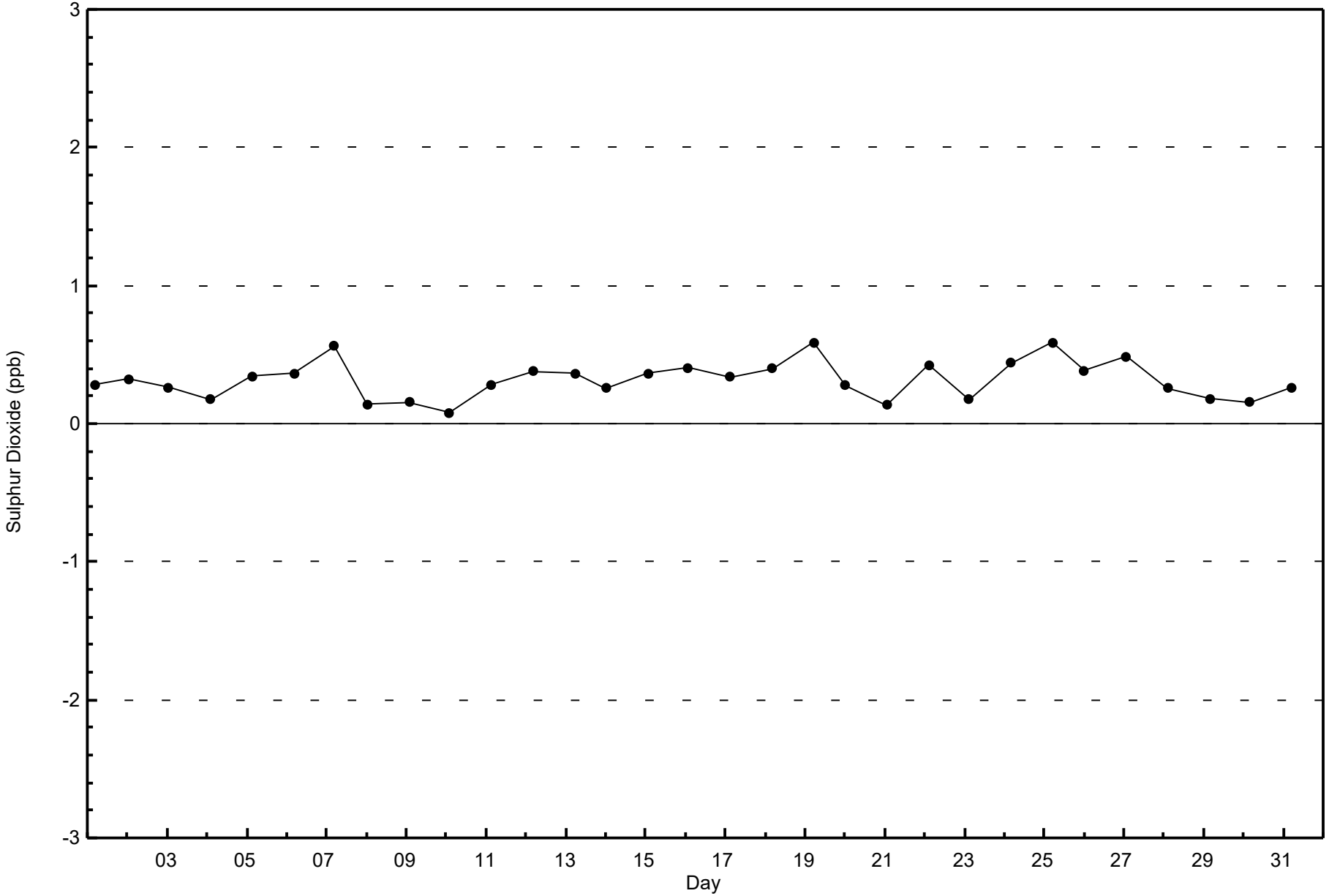
Total Number of Valid Hours: 707

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Jackfish 1 - March 2025

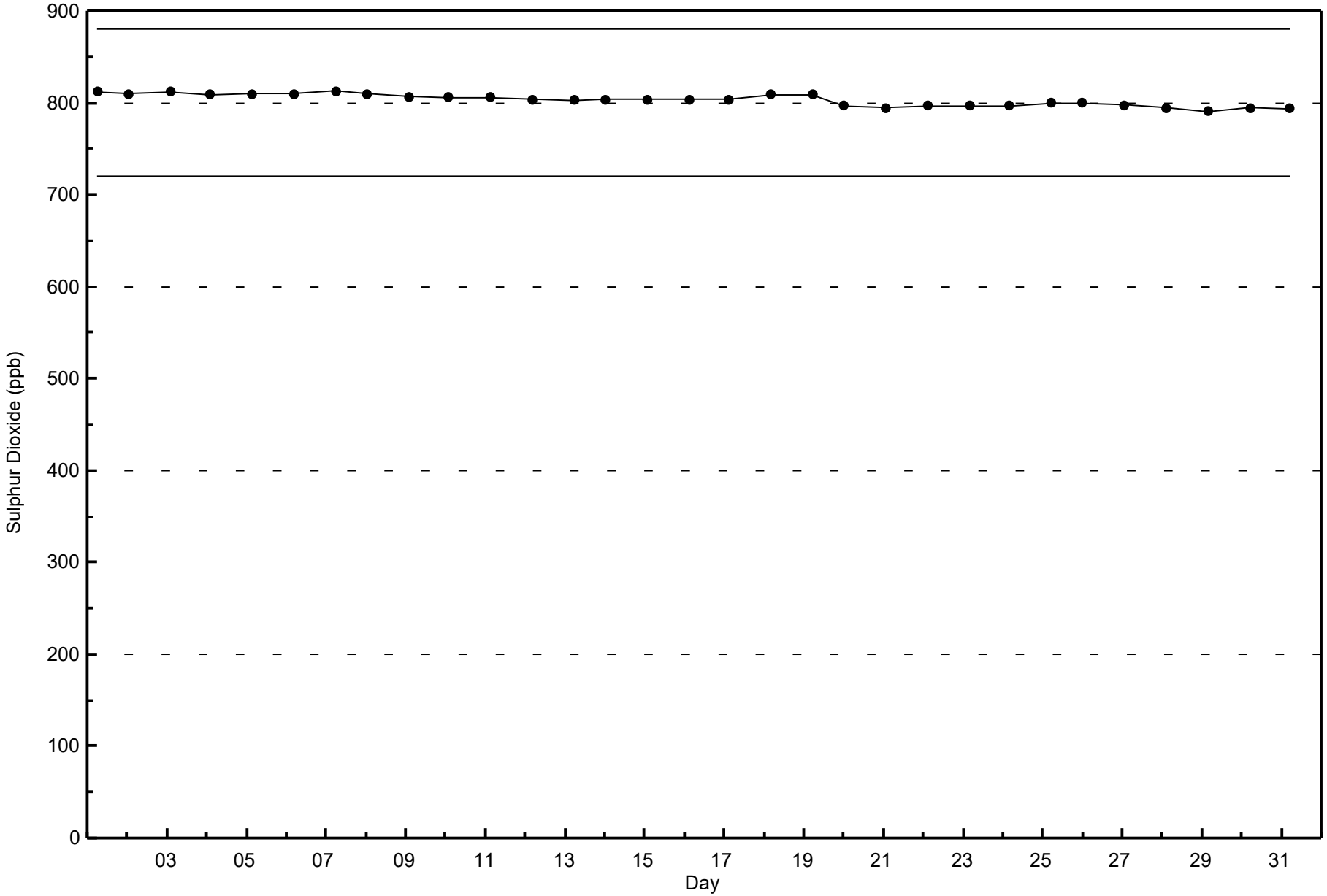


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Jackfish 1 - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H2S) - ppb

Jackfish 1 - March 2025

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

Maximum Value: 0.5 ppb on Mar 3 02:00 Maximum Daily Average: 0.2 ppb on Mar 2

Minimum Value: 0.0 ppb on Mar 4 23:00 Minimum Daily Average: 0.0 ppb on Mar 30

Maximum Diurnal Average: 0.1 ppb at hour 2 Minimum Diurnal Average: 0.1 ppb at hour 19

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} = 0.4

Hours in Service:	744
Hours of Data:	706
Hours of Missing Data:	38
Hours of Calibration:	36
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	Z	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1
2-Mar	0.0	Z	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	0.1	0.2	0.3	0.1	0.1	0.0	0.1	0.4	0.3	0.2	0.4
3-Mar	0.4	0.5	Z	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	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.5
4-Mar	0.1	0.1	0.1	Z	0.1	0.1	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	0.2
5-Mar	0.0	0.1	0.1	0.4	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.3	0.1	0.0	0.1	0.1	0.4
6-Mar	0.1	0.1	0.1	0.1	0.1	Z	0.2	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.3
7-Mar	Z	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.2
8-Mar	0.1	Z	0.1	0.0	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	0.2	0.0	0.2	0.2	0.2	0.2	0.1	0.1	0.2
9-Mar	0.1	0.1	Z	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	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1
10-Mar	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
11-Mar	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.2
12-Mar	0.1	0.0	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
13-Mar	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.0	0.2
14-Mar	0.2	Z	0.2	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.3	0.3	0.4	0.1	0.4
15-Mar	0.3	0.2	Z	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3
16-Mar	0.1	0.1	0.1	Z	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	0.0	0.1	0.1	0.1	0.1	0.2
17-Mar	0.0	0.0	0.1	0.0	Z	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.3	0.3	0.2	0.3	0.1	0.3
18-Mar	0.2	0.3	0.2	0.1	0.2	Z	0.2	0.2	0.4	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	0.3	0.1	0.4
19-Mar	Z	0.3	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.1	0.3
20-Mar	0.1	Z	0.1	0.2	0.2	0.1	0.0	0.0	C	C	C	C	C	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
21-Mar	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	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
22-Mar	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.1	0.4
23-Mar	0.3	0.2	0.2	0.2	Z	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.3
24-Mar	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
25-Mar	Z	0.3	0.2	0.3	0.2	0.1	0.1	0.3	0.2	0.1	M	M	0.0	0.0	0.0	0.1	0.2	0.1	0.2	0.5	0.1	0.1	0.1	0.2	0.2	0.5
26-Mar	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	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.2
27-Mar	0.0	0.0	Z	0.1	0.0	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	0.1	0.1	0.1	0.0	0.0	0.1
28-Mar	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1
29-Mar	0.0	0.0	0.0	0.0	Z	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	0.0	0.0	0.0	0.0	0.0	0.1	0.1
30-Mar	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
31-Mar	Z	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	Diurnal Average	
	0.4	0.5	0.2	0.4	0.2	0.2	0.2	0.3	0.4	0.3	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.5	0.3	0.3	0.4	0.4	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

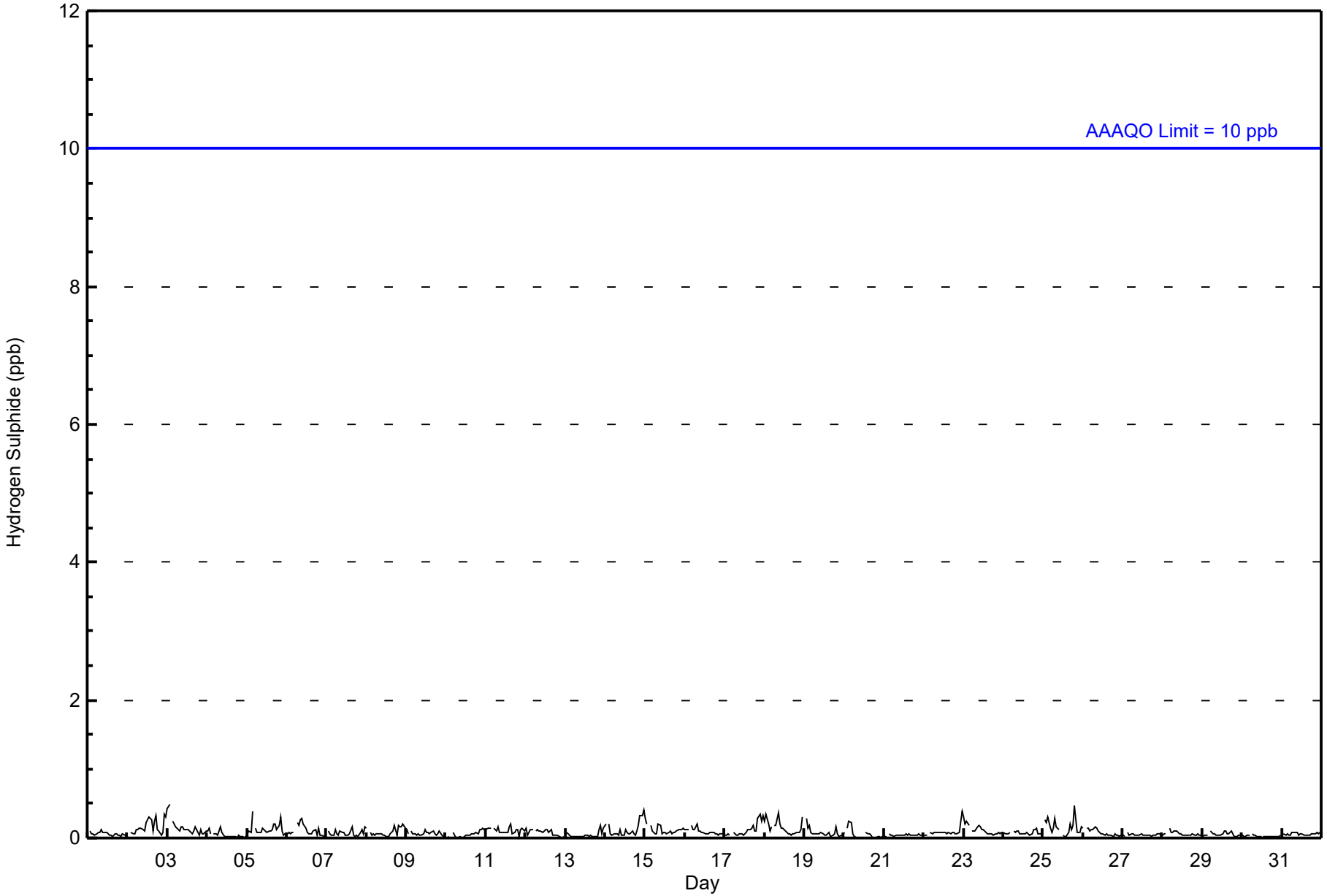
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H2S) - ppb

Jackfish 1 - March 2025



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

Total Number of Valid Hours: 706

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H2S) - ppb

Jackfish 1 - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	54	41	40	23	20	10	49	48	73	84	50	21	40	44	57	52	706
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	54	41	40	23	20	10	49	48	73	84	50	21	40	44	57	52	706

Total Number of Valid Hours: 706

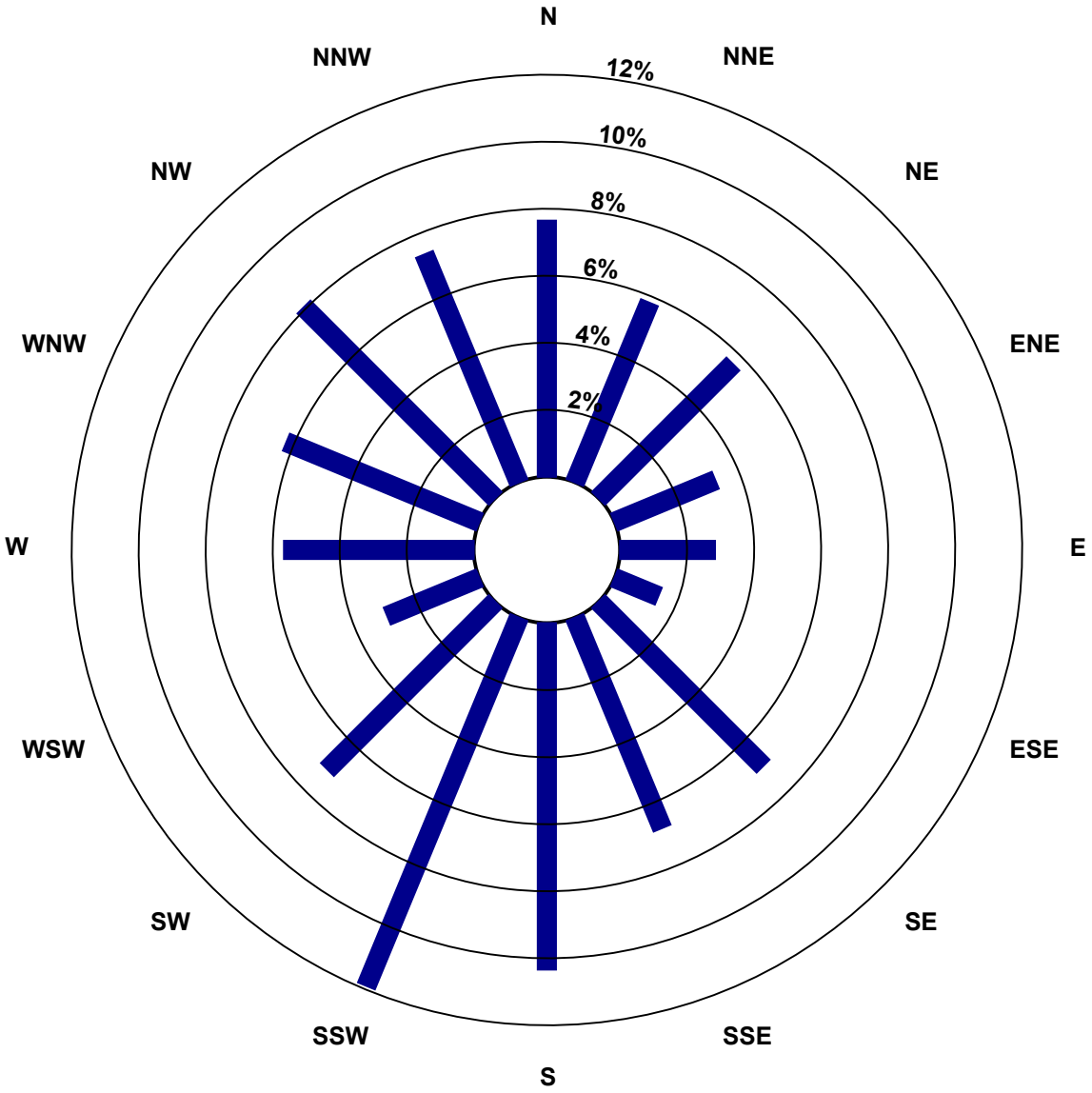
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Hydrogen Sulphide (H2S) - ppb

Jackfish 1



Classes (ppb)

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

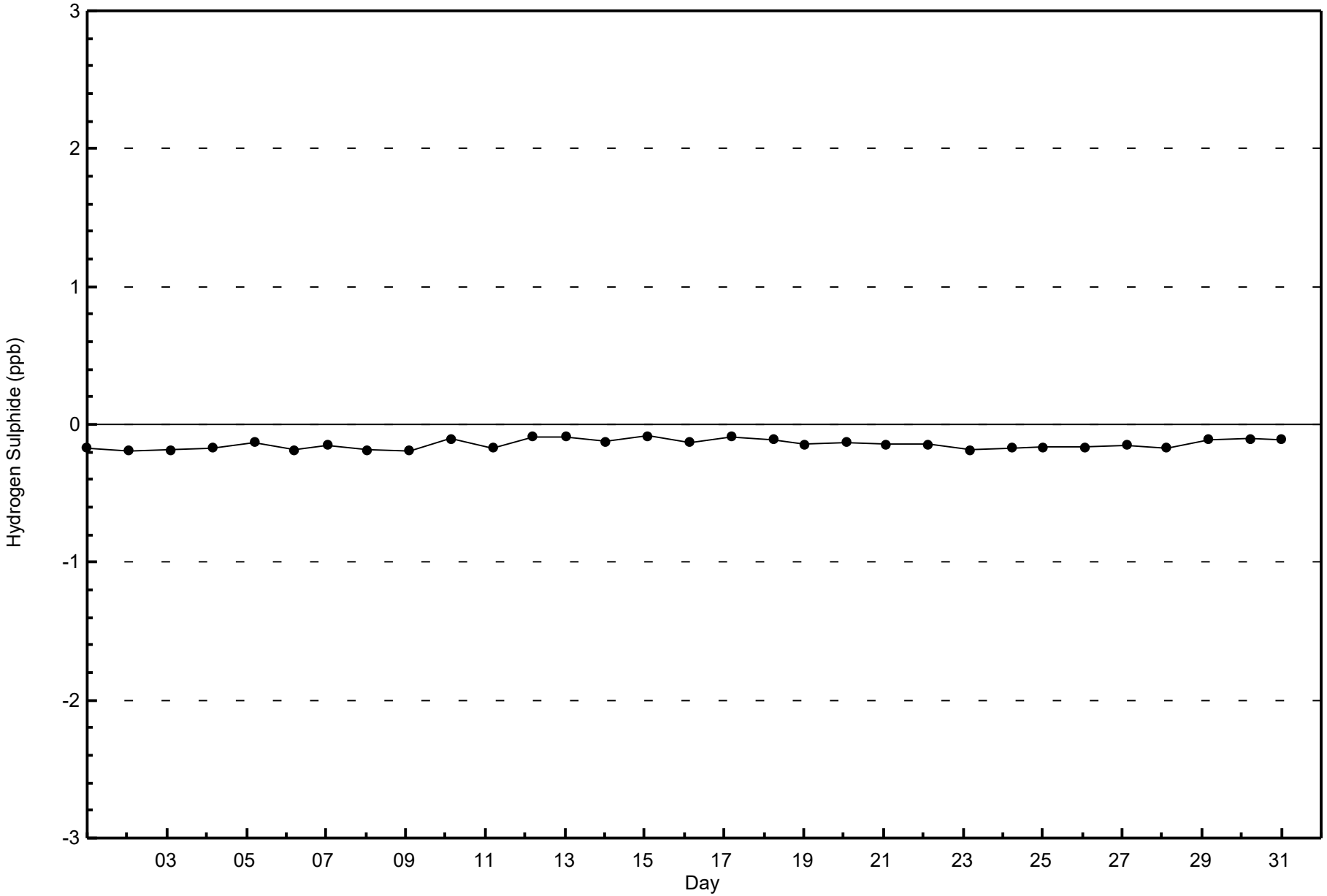
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H2S) - ppb

Jackfish 1 - March 2025

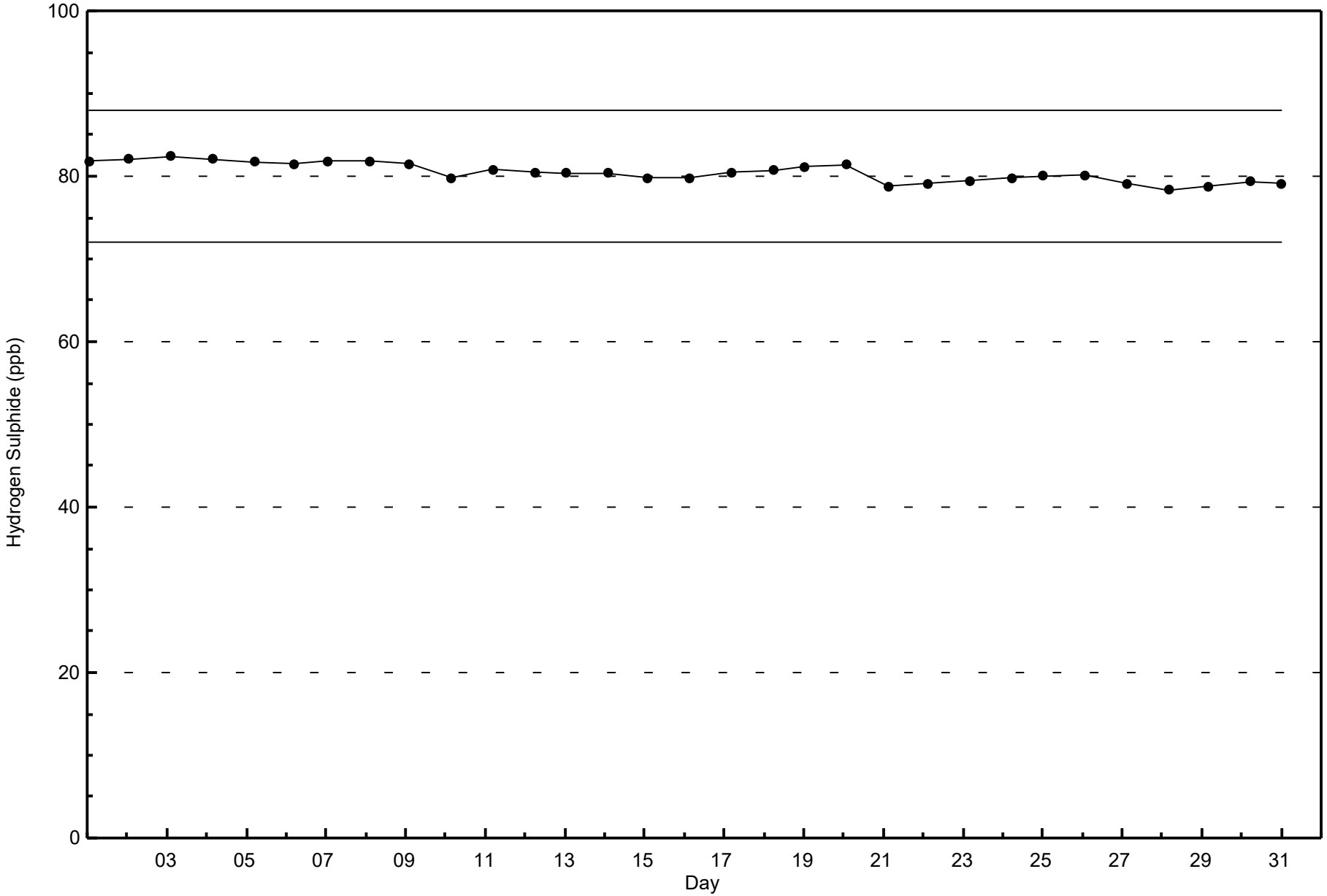


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H2S) - ppb

Jackfish 1 - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Jackfish 1 - March 2025

Maximum Value: 9.8 ppb on Mar 6 09:00

Maximum Daily Average: 1.0 ppb on Mar 12

Minimum Value: 0.0 ppb on Mar 4 04:00

Minimum Daily Average: 0.1 ppb on Mar 4

Maximum Diurnal Average: 1.3 ppb at hour 8

Minimum Diurnal Average: 0.0 ppb at hour 2

Monthly Average: 0.47 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.6 P_{90} = 1.3 P_{99} = 3.8

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.1	0.1	0.1	Z	0.0	0.1	1.3	0.7	2.8	0.6	1.0	1.2	0.5	0.7	0.4	0.2	0.5	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.5	2.8
2-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.6	0.5	0.6	2.7	1.3	3.9	2.2	0.4	0.3	0.3	0.1	0.0	0.0	0.1	0.8	2.0	0.7	3.9
3-Mar	0.7	0.1	0.4	0.1	0.0	Z	0.1	0.1	0.2	0.4	0.5	0.6	0.7	0.4	0.4	0.2	0.2	0.2	0.3	0.1	0.0	0.0	0.0	0.0	0.2	0.7
4-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.4	0.2	0.2	0.2	0.2	0.7	0.2	0.4	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.7
5-Mar	0.0	Z	0.2	0.3	0.0	0.0	0.4	0.7	0.6	1.4	1.5	1.5	1.0	0.8	0.4	1.7	1.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.7
6-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.6	9.8	1.4	1.1	1.1	0.9	0.5	0.5	1.1	1.4	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.9	9.8
7-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.2	0.5	0.8	0.6	0.4	0.5	0.3	2.4	2.6	0.6	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.4	2.6
8-Mar	0.1	0.0	0.1	0.0	Z	0.1	0.2	0.2	0.5	1.0	0.3	0.9	0.6	0.2	2.1	2.4	1.8	1.5	0.0	0.0	0.0	0.1	0.0	0.0	0.5	2.4
9-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.2	0.6	0.5	0.2	1.0	4.1	0.6	0.9	0.1	1.5	0.9	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.5	4.1
10-Mar	Z	0.0	0.0	0.0	0.1	0.7	0.4	1.4	0.2	0.7	0.7	0.6	1.4	0.9	0.7	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.4
11-Mar	0.0	Z	0.0	0.0	0.0	0.3	0.1	6.1	0.2	0.2	1.2	1.7	1.1	3.8	0.5	2.6	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.8	6.1
12-Mar	0.0	0.0	Z	0.0	0.0	0.5	0.5	0.6	1.1	4.2	2.1	3.2	2.7	2.4	2.6	1.6	0.4	0.1	0.0	0.0	0.0	0.1	0.0	0.0	1.0	4.2
13-Mar	0.0	0.0	0.0	Z	0.0	2.2	0.4	2.6	0.0	2.0	0.3	1.9	0.9	1.9	0.5	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.6	2.6
14-Mar	0.0	0.0	0.0	0.0	Z	0.3	0.0	0.1	0.3	1.7	0.7	1.0	1.0	1.5	0.5	0.4	0.3	0.1	0.0	0.0	0.0	0.8	0.0	0.1	0.4	1.7
15-Mar	0.0	0.0	0.0	0.1	0.0	Z	0.1	1.0	2.5	2.9	0.9	1.2	1.0	0.6	1.5	1.4	0.5	0.0	0.5	0.0	0.9	0.0	0.0	0.0	0.7	2.9
16-Mar	Z	0.0	0.0	0.0	0.0	1.3	0.2	8.6	0.9	2.7	0.7	0.7	0.9	0.8	0.7	1.0	0.9	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.8	8.6
17-Mar	0.0	Z	0.0	0.0	0.0	0.4	0.3	0.6	0.3	2.0	0.7	0.5	0.3	0.5	0.7	0.8	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.3	2.0
18-Mar	0.0	0.0	Z	0.0	0.0	0.2	0.3	0.5	1.8	2.0	1.0	1.8	0.6	0.3	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.4	2.0
19-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.3	0.5	0.9	1.6	0.4	0.3	0.3	0.3	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.6
20-Mar	0.0	0.1	0.0	0.0	Z	1.9	0.2	3.4	1.1	0.8	0.9	0.6	0.8	0.8	0.1	1.8	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.6	3.4
21-Mar	0.0	0.0	0.0	0.0	0.0	Z	1.5	0.7	0.3	1.0	1.1	0.9	0.9	1.0	0.4	0.5	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.5
22-Mar	Z	0.0	0.0	0.0	0.0	0.1	0.2	0.9	1.3	1.9	0.8	0.6	0.9	0.6	0.6	0.7	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.9
23-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.7	0.8	0.6	1.2	1.3	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.3
24-Mar	0.0	0.0	Z	0.0	0.0	1.5	0.6	2.1	2.1	0.8	0.5	0.7	0.7	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.5	0.1	0.0	0.0	0.5	2.1
25-Mar	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.3	C	C	C	C	C	0.0	0.8	2.7	3.8	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.6	3.8
26-Mar	0.0	0.0	0.0	0.0	Z	0.3	0.3	0.5	1.4	0.5	0.7	0.3	1.8	0.1	3.0	0.2	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	3.0
27-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.8	1.5	0.4	0.6	0.4	0.8	0.3	0.4	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.5
28-Mar	Z	0.0	0.0	0.0	0.0	0.1	1.3	0.1	0.7	0.5	0.7	0.5	0.5	0.2	0.2	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.3
29-Mar	0.0	Z	0.0	0.0	1.5	0.1	0.4	3.9	1.6	1.3	1.0	0.7	0.9	1.0	0.6	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.6	3.9
30-Mar	0.0	0.0	Z	0.0	0.0	0.2	0.0	0.7	1.1	0.7	0.9	1.9	0.5	0.9	0.3	1.1	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.4	1.9
31-Mar	0.0	0.0	0.0	Z	0.0	0.2	0.1	0.2	1.1	1.4	0.4	0.8	0.7	0.3	0.2	0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.4
	0.0	0.0	0.0	0.0	0.1	0.4	0.3	1.3	1.2	1.2	0.8	1.1	0.9	0.9	0.8	0.9	0.5	0.2	0.1	0.0	0.1	0.0	0.0	0.1	Diurnal Average	
	0.7	0.1	0.4	0.3	1.5	2.2	1.5	8.6	9.8	4.2	2.1	4.1	2.7	3.9	3.0	2.7	3.8	2.6	0.5	0.1	0.9	0.8	0.8	2.0	Diurnal Maximum	

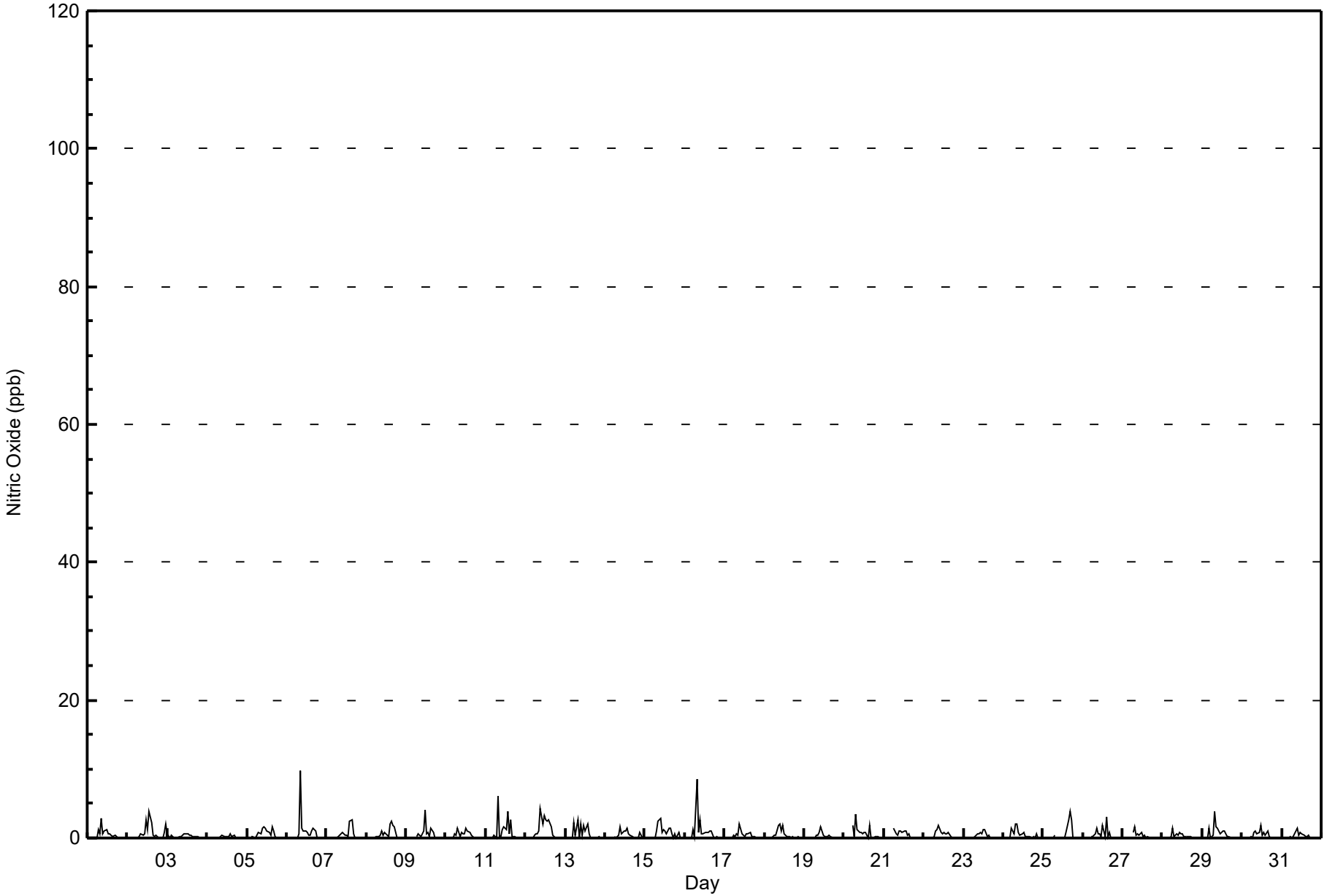
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Jackfish 1 - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	708	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Jackfish 1 - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	59	44	38	24	21	9	49	46	76	82	52	18	40	43	59	48	708
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	59	44	38	24	21	9	49	46	76	82	52	18	40	43	59	48	708

Total Number of Valid Hours: 708

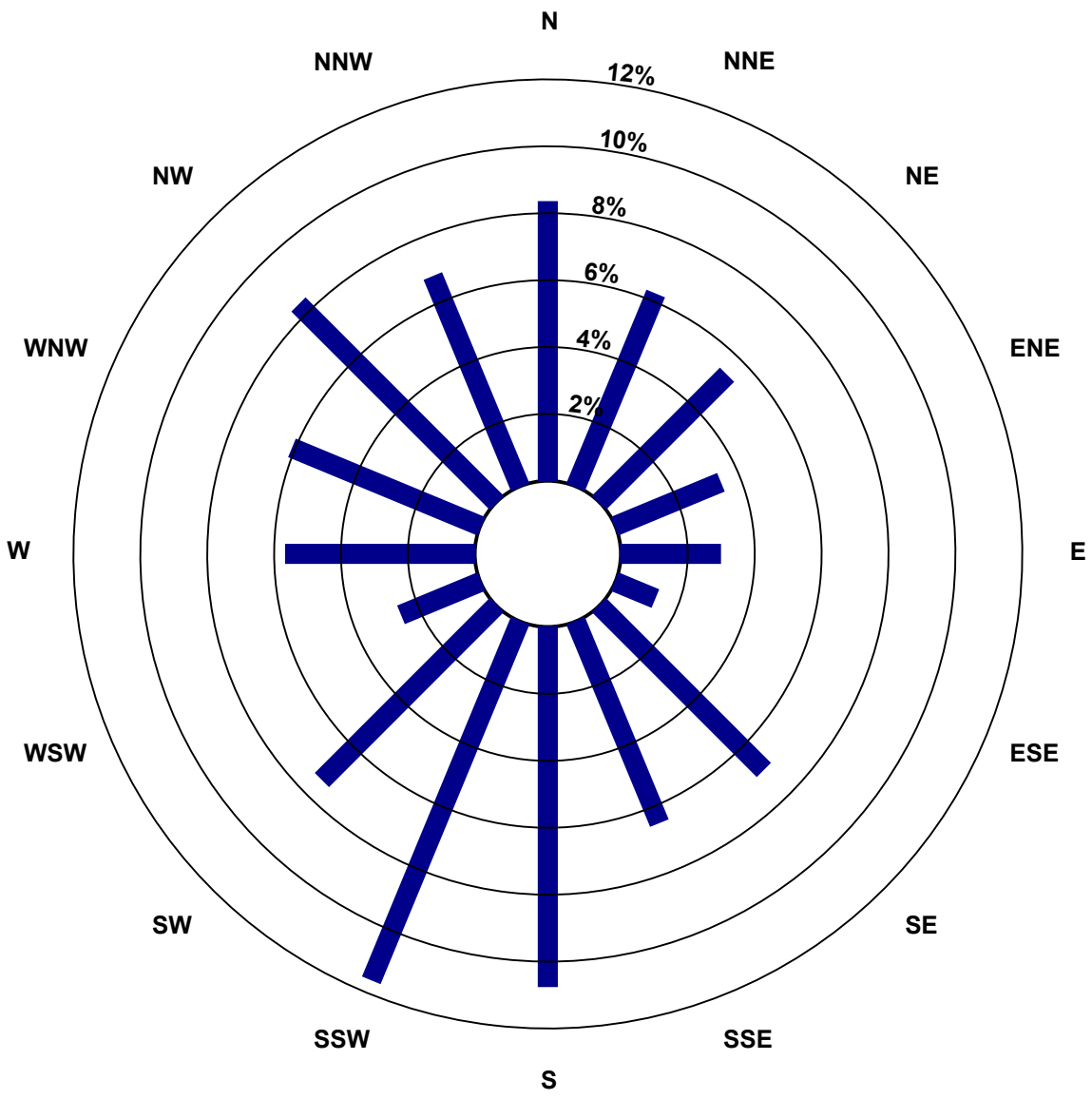
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitric Oxide (NO) - ppb

Jackfish 1



Classes (ppb)

- 0 - 20
- 21 - 40
- 11 - 80
- 81 - 159
- > 159

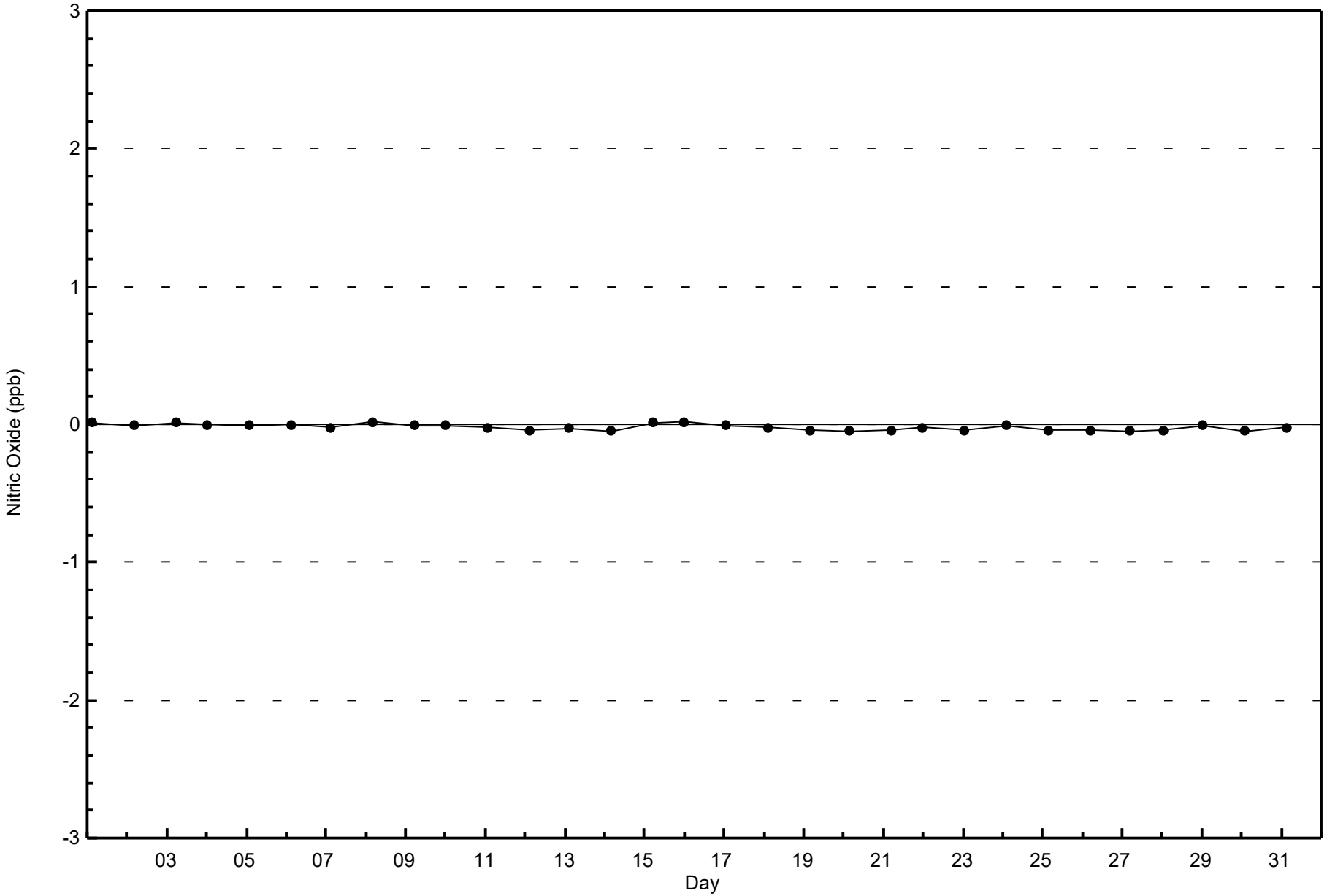
Total Number of Valid Hours: 708

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Jackfish 1 - March 2025

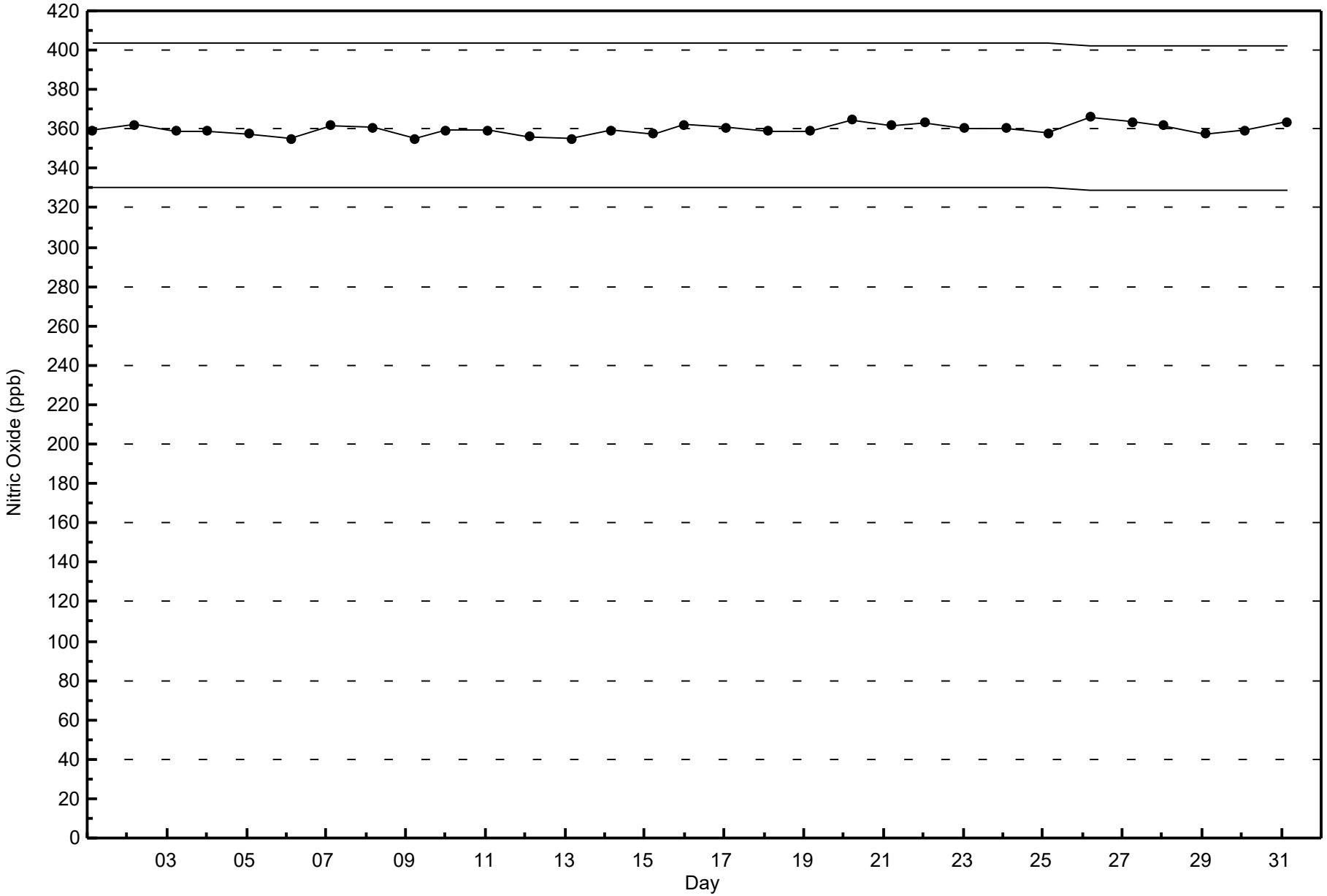


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Jackfish 1 - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Jackfish 1 - March 2025

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

Maximum Value: 11.6 ppb on Mar 16 08:00

Maximum Daily Average: 3.9 ppb on Mar 2

Minimum Value: 0.1 ppb on Mar 20 13:00

Minimum Daily Average: 0.5 ppb on Mar 27

Maximum Diurnal Average: 3.4 ppb at hour 8

Minimum Diurnal Average: 1.4 ppb at hour 20

Monthly Average: 1.91 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.5$ $Q_1 = 0.9$ Median = 1.4 $Q_3 = 2.5$ $P_{90} = 4.0$ $P_{99} = 8.1$

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	3.6	3.9	2.5	Z	1.8	2.7	5.9	5.2	7.3	2.2	2.9	3.3	1.9	1.4	1.4	1.1	1.6	1.6	1.0	1.1	1.1	1.2	1.4	1.1	2.5	7.3
2-Mar	1.1	1.7	1.5	1.8	Z	3.3	4.5	4.5	4.4	2.7	2.6	5.1	3.4	8.4	7.1	1.4	2.4	5.5	5.1	1.6	1.1	2.8	8.1	9.9	3.9	9.9
3-Mar	5.3	2.9	4.4	2.9	1.7	Z	2.9	4.1	2.6	2.4	2.7	2.1	2.6	1.5	1.5	1.4	1.8	3.3	4.5	4.3	1.4	1.8	1.4	1.4	2.6	5.3
4-Mar	Z	1.7	1.1	0.9	0.8	1.0	1.5	1.6	1.5	1.4	0.6	0.6	0.8	0.8	1.3	0.8	2.3	1.4	1.8	1.6	1.2	0.7	1.0	1.1	1.2	2.3
5-Mar	1.7	Z	4.1	4.1	2.5	2.2	3.1	4.2	2.2	3.0	3.9	2.5	2.2	1.6	1.5	5.0	4.4	2.8	2.3	1.1	1.7	0.9	0.5	0.4	2.5	5.0
6-Mar	0.7	1.0	Z	1.1	1.4	2.9	6.4	3.5	6.7	3.9	3.0	2.4	1.7	1.6	1.7	2.4	5.4	8.1	1.6	1.6	1.5	1.2	1.5	2.0	2.8	8.1
7-Mar	2.2	2.2	1.3	Z	1.6	2.8	3.2	2.7	2.9	2.6	1.9	1.4	1.3	1.0	2.1	6.9	3.3	1.6	2.3	1.0	1.4	1.2	0.7	2.1	2.2	6.9
8-Mar	4.9	1.2	1.1	1.1	Z	1.4	2.4	1.6	2.2	2.7	1.3	1.3	1.6	0.6	3.0	5.8	6.1	5.8	0.4	4.7	3.9	3.7	5.1	1.9	2.8	6.1
9-Mar	2.0	1.3	1.4	1.4	1.0	Z	1.1	1.2	0.6	0.4	0.5	0.4	0.7	1.1	0.6	1.0	1.1	1.1	0.8	0.6	1.2	1.6	0.7	0.3	1.0	2.0
10-Mar	Z	0.8	0.6	0.9	0.8	1.5	1.7	0.8	0.5	0.9	0.8	0.8	1.6	1.5	1.7	1.1	0.9	1.2	1.1	1.5	3.8	3.5	3.3	3.2	1.5	3.8
11-Mar	3.6	Z	3.8	2.7	1.6	1.6	0.8	3.2	0.8	0.6	1.0	0.9	0.9	0.3	1.2	1.6	0.8	0.8	0.9	0.6	0.6	0.8	1.0	1.0	1.4	3.8
12-Mar	1.1	0.6	Z	0.4	0.6	2.4	4.1	4.0	4.2	3.4	2.8	3.3	3.6	2.6	2.7	3.3	1.5	1.5	1.4	0.7	0.3	0.5	0.5	0.2	2.0	4.2
13-Mar	0.2	0.2	0.2	Z	0.2	2.0	0.6	2.3	0.3	1.4	0.7	1.0	0.8	0.4	1.0	0.4	0.3	0.2	0.2	0.2	0.9	1.0	0.5	0.5	0.7	2.3
14-Mar	0.4	0.4	0.4	0.3	Z	1.6	1.3	1.2	1.2	1.3	1.4	1.1	2.2	2.3	1.8	1.9	2.2	1.9	2.6	2.7	3.2	5.7	4.1	3.9	2.0	5.7
15-Mar	4.7	5.9	7.0	8.1	4.0	Z	3.2	4.4	5.0	3.6	1.3	1.7	2.0	1.5	2.8	3.2	1.6	1.0	2.8	2.3	3.6	2.5	2.0	2.8	3.3	8.1
16-Mar	Z	2.8	4.2	4.7	4.2	6.6	4.8	11.6	2.3	2.4	1.1	0.8	1.0	1.3	1.1	2.0	1.6	1.0	1.3	2.2	1.5	1.1	1.3	1.4	2.7	11.6
17-Mar	1.4	Z	1.7	1.6	1.6	1.8	2.0	2.3	2.2	3.9	2.7	1.7	1.8	2.7	3.2	2.7	2.6	2.8	1.7	1.7	2.6	4.0	4.8	3.3	2.5	4.8
18-Mar	1.9	1.7	Z	2.0	2.0	2.9	4.7	4.6	5.7	4.0	2.4	2.6	1.3	1.0	0.8	0.9	0.8	1.0	1.0	1.1	2.1	1.3	2.2	3.5	2.2	5.7
19-Mar	3.2	2.6	1.5	Z	1.0	1.1	1.1	2.2	1.6	2.1	2.4	1.1	0.8	0.9	0.9	1.3	0.9	1.1	1.2	1.1	0.8	1.1	1.4	1.2	1.4	3.2
20-Mar	1.5	2.9	1.9	3.4	Z	2.2	1.1	2.6	1.0	1.1	0.8	0.9	0.1	0.5	0.5	1.2	0.5	0.5	0.4	0.6	0.4	0.4	0.2	0.2	1.1	3.4
21-Mar	0.2	0.2	0.4	0.3	0.3	Z	4.3	1.6	1.4	1.5	1.7	1.5	1.9	1.8	1.3	1.7	0.9	1.4	1.3	0.8	0.6	0.8	1.3	1.3	1.2	4.3
22-Mar	Z	1.4	1.5	1.6	2.4	3.6	4.1	4.0	4.0	4.5	2.4	2.4	2.4	1.8	1.0	1.9	1.2	1.5	1.2	0.8	0.7	0.6	1.3	2.4	2.1	4.5
23-Mar	2.5	Z	2.3	1.6	1.8	1.5	1.3	1.4	2.3	1.9	1.7	1.6	2.1	2.6	0.6	0.9	0.5	0.5	0.5	1.1	1.5	0.9	1.1	0.6	1.4	2.6
24-Mar	0.5	0.6	Z	0.9	1.9	5.2	5.0	6.1	4.4	2.9	1.8	2.5	2.3	1.3	1.2	1.3	0.9	1.1	3.5	2.9	4.0	0.7	0.7	0.6	2.3	6.1
25-Mar	2.3	2.6	1.2	Z	2.4	2.9	2.8	3.0	C	C	C	C	C	0.7	2.2	6.4	10.1	8.0	0.5	1.2	1.0	4.3	2.1	1.4	3.1	10.1
26-Mar	0.4	0.7	0.9	1.0	Z	1.6	1.5	2.8	2.8	1.6	0.9	0.8	1.3	0.5	1.2	0.4	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.9	2.8
27-Mar	0.2	0.2	0.2	0.2	0.3	Z	1.3	1.6	0.5	0.6	0.4	0.5	0.7	0.8	0.4	0.7	0.4	0.3	0.3	0.5	0.9	0.9	0.3	0.3	0.5	1.6
28-Mar	Z	0.3	0.6	0.8	0.4	1.1	1.5	1.4	1.8	1.3	1.5	0.6	1.1	0.4	0.7	0.6	0.4	0.5	0.2	0.4	0.2	0.2	0.2	0.3	0.7	1.8
29-Mar	0.2	Z	0.4	0.8	3.8	5.7	7.5	10.6	4.2	2.6	2.1	1.9	2.6	2.9	2.7	1.6	1.2	1.2	1.0	0.8	0.6	0.6	0.6	0.6	2.4	10.6
30-Mar	0.5	0.5	Z	0.7	0.8	1.6	0.7	2.6	2.2	1.6	1.6	1.9	0.9	1.4	1.0	1.9	1.1	0.9	1.3	0.7	0.6	0.6	0.9	1.2	1.2	2.6
31-Mar	1.0	0.9	1.1	Z	1.5	2.5	2.0	2.6	3.4	2.8	1.5	1.5	1.5	1.0	0.9	0.7	1.0	0.8	1.1	0.9	0.8	0.7	0.7	0.9	1.4	3.4
	1.8	1.6	1.8	1.8	1.6	2.5	2.9	3.4	2.7	2.2	1.7	1.7	1.6	1.6	1.6	2.0	1.9	2.0	1.5	1.4	1.5	1.5	1.6	1.7	Diurnal Average	
	5.3	5.9	7.0	8.1	4.2	6.6	7.5	11.6	7.3	4.5	3.9	5.1	3.6	8.4	7.1	6.9	10.1	8.1	5.1	4.7	4.0	5.7	8.1	9.9	Diurnal Maximum	

Z - zerospan C - Calibration

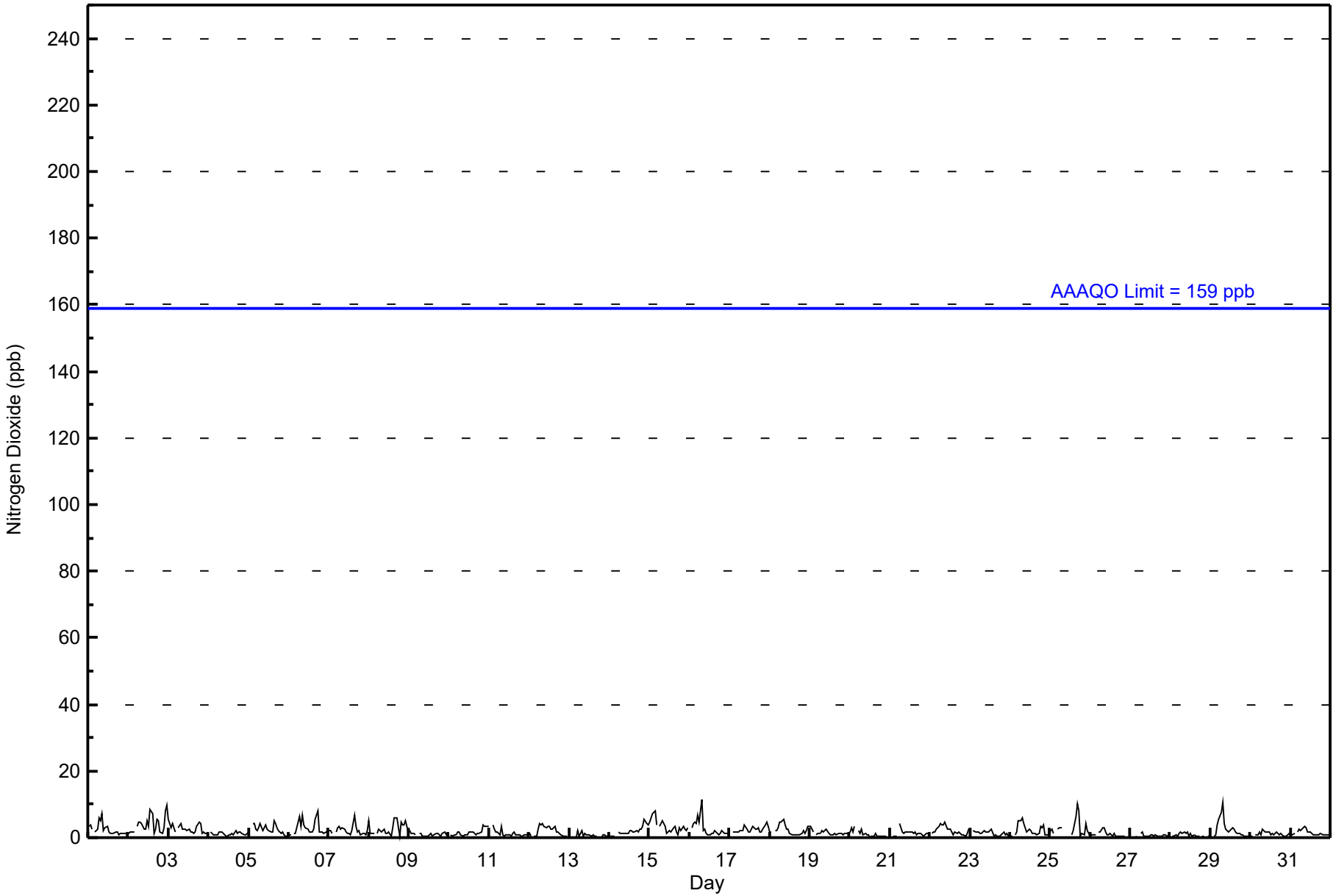
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Jackfish 1 - March 2025



Nitrogen Dioxide (NO_2) - ppb
Jackfish 1 - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	708	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Jackfish 1 - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	59	44	38	24	21	9	49	46	76	82	52	18	40	43	59	48	708
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	59	44	38	24	21	9	49	46	76	82	52	18	40	43	59	48	708

Total Number of Valid Hours: 708

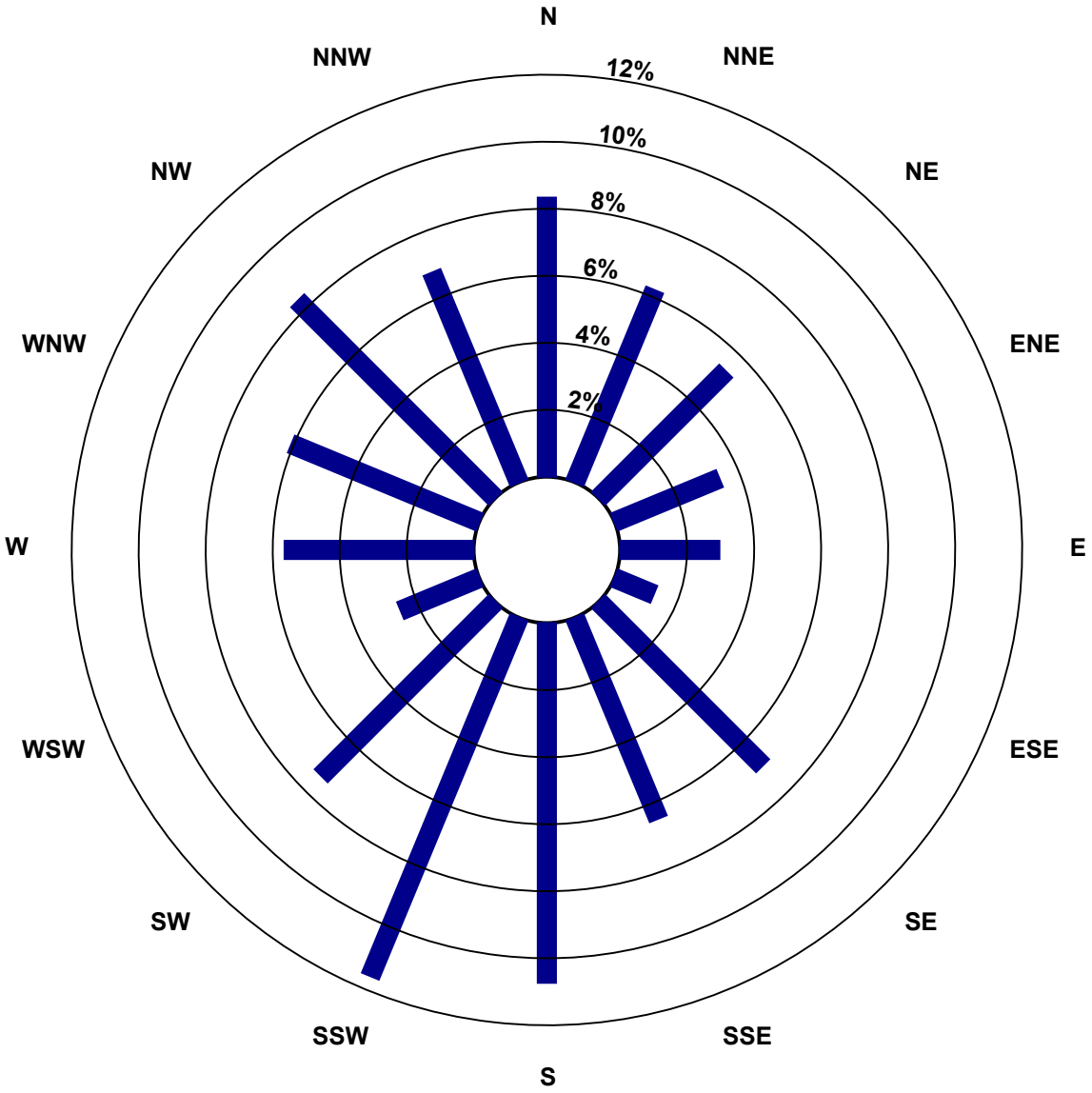
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Dioxide (NO_2) - ppb

Jackfish 1



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

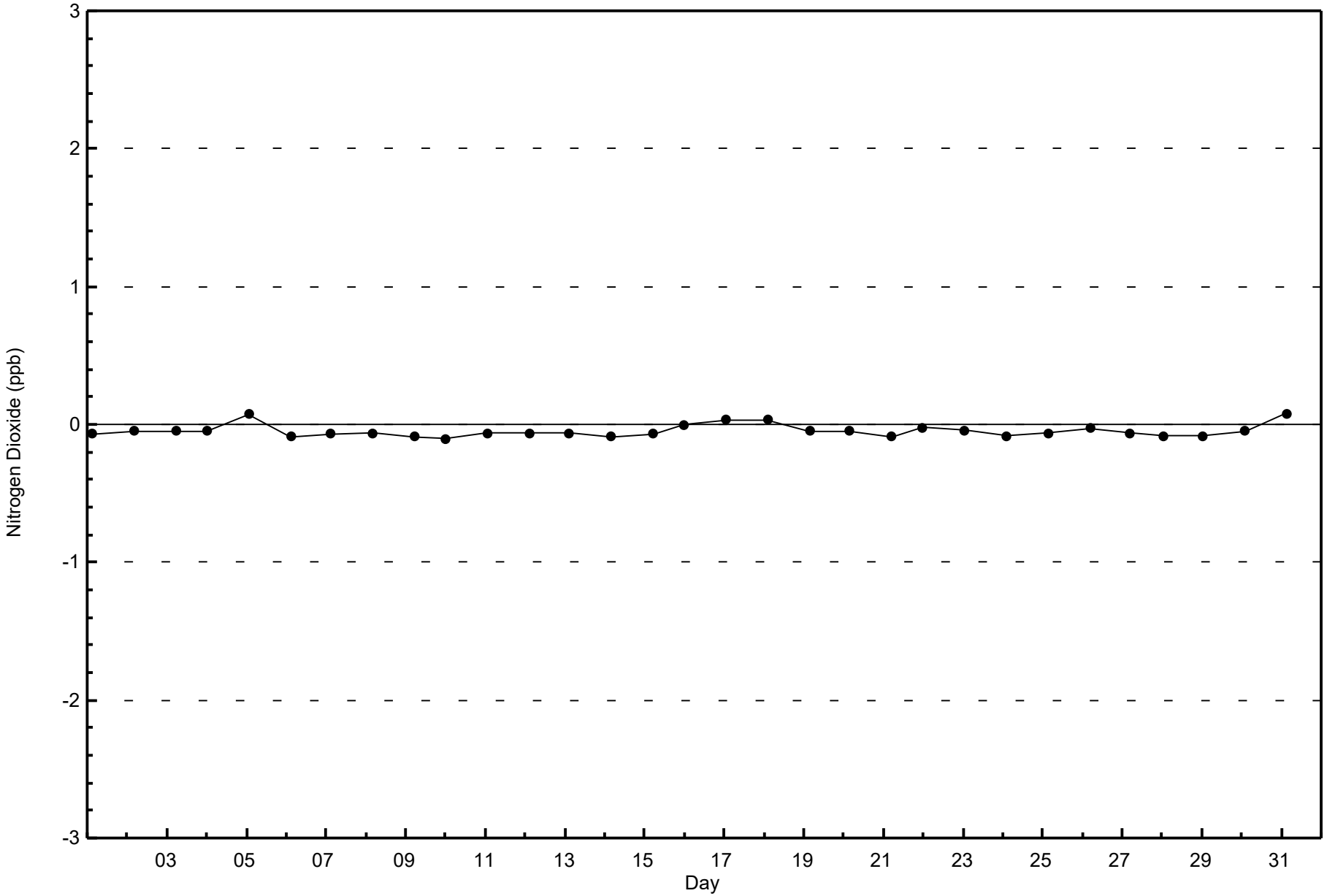
Total Number of Valid Hours: 708

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Jackfish 1 - March 2025

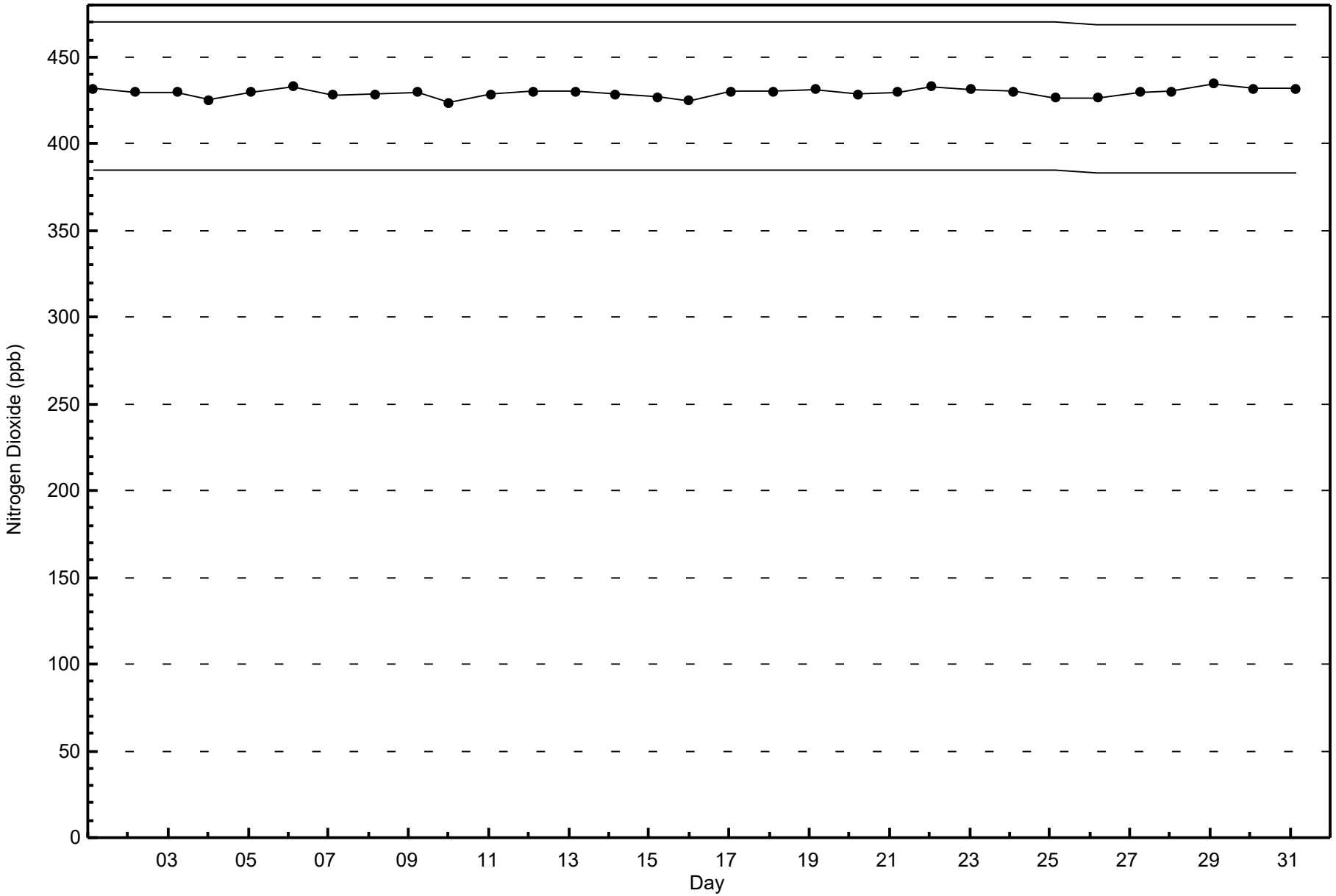


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Jackfish 1 - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Jackfish 1 - March 2025

Maximum Value: 20.2 ppb on Mar 16 08:00

Maximum Daily Average: 4.6 ppb on Mar 2

Minimum Value: 0.2 ppb on Mar 20 23:00

Minimum Daily Average: 0.8 ppb on Mar 27

Maximum Diurnal Average: 4.7 ppb at hour 8

Minimum Diurnal Average: 1.4 ppb at hour 20

Monthly Average: 2.38 ppb

Percentiles: P_1 = 0.2 P_{10} = 0.5 Q_1 = 1.0 Median = 1.8 Q_3 = 3.1 P_{90} = 4.8 P_{99} = 10.1

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	3.7	4.0	2.6	Z	1.8	2.8	7.2	5.9	10.1	2.8	3.9	4.5	2.4	2.1	1.8	1.3	2.1	1.7	1.1	1.2	1.1	1.2	1.4	1.1	2.9	10.1
2-Mar	1.1	1.7	1.5	1.8	Z	3.3	4.5	4.6	5.0	3.2	3.2	7.8	4.7	12.3	9.3	1.8	2.7	5.8	5.2	1.6	1.1	2.9	8.9	11.9	4.6	12.3
3-Mar	6.0	3.0	4.8	3.0	1.7	Z	3.0	4.2	2.8	2.8	3.2	2.7	3.3	1.9	1.9	1.6	2.0	3.5	4.8	4.4	1.4	1.8	1.4	1.4	2.9	6.0
4-Mar	Z	1.7	1.1	0.9	0.8	1.0	1.5	1.7	1.8	1.8	0.8	0.8	1.0	1.0	2.0	1.0	2.7	1.4	1.9	1.7	1.3	0.8	1.0	1.1	1.3	2.7
5-Mar	1.7	Z	4.3	4.4	2.5	2.2	3.5	4.9	2.8	4.4	5.4	4.0	3.2	2.4	1.9	6.7	5.4	2.9	2.3	1.1	1.7	0.9	0.5	0.4	3.0	6.7
6-Mar	0.7	1.0	Z	1.1	1.4	2.9	6.5	4.1	16.5	5.3	4.1	3.5	2.6	2.1	2.2	3.5	6.8	9.2	1.6	1.6	1.5	1.2	1.5	2.0	3.6	16.5
7-Mar	2.2	2.2	1.3	Z	1.6	2.8	3.3	2.9	3.4	3.4	2.5	1.8	1.8	1.3	4.5	9.5	3.9	1.6	2.4	1.0	1.4	1.2	0.7	2.1	2.6	9.5
8-Mar	5.0	1.2	1.2	1.1	Z	1.5	2.6	1.8	2.7	3.7	1.6	2.2	2.2	0.8	5.1	8.2	7.9	7.3	0.4	4.7	3.9	3.8	5.1	1.9	3.3	8.2
9-Mar	2.0	1.3	1.4	1.4	1.0	Z	1.3	1.8	1.1	0.6	1.5	4.5	1.3	2.0	0.7	2.5	2.0	1.2	0.8	0.6	1.3	1.6	0.7	0.3	1.4	4.5
10-Mar	Z	0.8	0.6	0.9	0.9	2.2	2.1	2.2	0.7	1.6	1.5	1.4	3.0	2.4	2.4	1.5	1.0	1.3	1.1	1.5	3.8	3.5	3.3	3.2	1.9	3.8
11-Mar	3.6	Z	3.8	2.7	1.6	1.9	0.9	9.3	1.0	0.8	2.2	2.6	2.0	4.1	1.7	4.2	1.0	1.0	0.9	0.6	0.6	0.8	1.0	1.0	2.1	9.3
12-Mar	1.1	0.6	Z	0.4	0.6	2.9	4.6	4.6	5.3	7.6	4.9	6.5	6.3	5.0	5.3	4.9	1.9	1.6	1.4	0.7	0.3	0.6	0.5	0.2	2.9	7.6
13-Mar	0.2	0.2	0.2	Z	0.2	4.2	1.0	4.9	0.3	3.4	1.0	2.9	1.7	2.3	1.5	0.4	0.3	0.2	0.2	0.2	1.1	1.0	0.5	0.5	1.2	4.9
14-Mar	0.4	0.4	0.4	0.3	Z	1.9	1.3	1.3	1.5	3.0	2.1	2.1	3.2	3.8	2.3	2.3	2.5	2.0	2.6	2.7	3.2	6.5	4.1	4.0	2.3	6.5
15-Mar	4.7	5.9	7.0	8.2	4.0	Z	3.3	5.4	7.5	6.5	2.2	2.9	3.0	2.1	4.3	4.6	2.1	1.0	3.3	2.3	4.5	2.5	2.0	2.8	4.0	8.2
16-Mar	Z	2.8	4.2	4.7	4.2	7.9	5.0	20.2	3.2	5.1	1.8	1.5	1.9	2.1	1.8	3.0	2.5	1.0	1.4	2.3	1.5	1.1	1.3	1.4	3.6	20.2
17-Mar	1.4	Z	1.7	1.6	1.6	2.2	2.3	2.9	2.5	5.9	3.4	2.2	2.1	3.2	3.9	3.5	2.9	3.0	1.8	1.7	2.6	4.0	4.8	3.3	2.8	5.9
18-Mar	1.9	1.7	Z	2.0	2.0	3.1	5.0	5.1	7.5	6.0	3.4	4.4	1.9	1.3	0.9	1.1	0.9	1.1	1.1	1.2	2.2	1.3	2.2	3.5	2.6	7.5
19-Mar	3.2	2.6	1.5	Z	1.0	1.1	1.1	2.5	2.1	3.0	4.0	1.5	1.1	1.2	1.2	1.7	1.1	1.2	1.2	1.1	0.8	1.1	1.4	1.2	1.7	4.0
20-Mar	1.5	3.0	1.9	3.4	Z	4.1	1.3	6.0	2.1	1.9	1.7	1.5	0.9	1.3	0.6	3.0	0.6	0.5	0.4	0.7	0.5	0.4	0.2	0.2	1.6	6.0
21-Mar	0.2	0.2	0.4	0.3	0.3	Z	5.8	2.3	1.7	2.5	2.8	2.4	2.8	2.8	1.7	2.2	1.0	1.5	1.3	0.8	0.6	0.8	1.3	1.3	1.6	5.8
22-Mar	Z	1.4	1.5	1.6	2.4	3.7	4.3	4.9	5.3	6.4	3.2	3.0	3.3	2.4	1.6	2.6	1.3	1.6	1.2	0.8	0.7	0.6	1.3	2.4	2.5	6.4
23-Mar	2.5	Z	2.3	1.6	1.8	1.5	1.3	1.6	2.9	2.6	2.5	2.2	3.3	3.9	0.8	1.3	0.5	0.5	0.5	1.1	1.5	0.9	1.1	0.6	1.7	3.9
24-Mar	0.5	0.6	Z	0.9	1.9	6.7	5.6	8.2	6.5	3.7	2.3	3.2	3.0	1.6	1.5	1.5	1.0	1.2	3.6	3.0	4.5	0.8	0.7	0.6	2.7	8.2
25-Mar	2.3	2.6	1.2	Z	2.4	3.0	2.9	3.3	C	C	C	C	C	0.7	3.0	9.1	13.9	10.6	0.5	1.2	1.0	4.3	2.1	1.4	3.6	13.9
26-Mar	0.4	0.7	0.9	1.0	Z	1.9	1.8	3.3	4.2	2.1	1.6	1.1	3.1	0.6	4.2	0.6	1.1	0.4	0.3	0.3	0.3	0.2	0.2	0.2	1.3	4.2
27-Mar	0.2	0.2	0.2	0.2	0.3	Z	2.1	3.1	0.9	1.2	0.8	1.3	1.0	1.2	0.5	0.9	0.4	0.3	0.3	0.5	0.9	0.9	0.3	0.3	0.8	3.1
28-Mar	Z	0.3	0.6	0.8	0.4	1.2	2.8	1.5	2.5	1.8	2.2	1.1	1.6	0.6	0.9	0.9	0.6	0.7	0.2	0.4	0.2	0.2	0.2	0.3	1.0	2.8
29-Mar	0.2	Z	0.4	0.8	5.3	5.8	7.9	14.5	5.8	3.9	3.1	2.6	3.5	3.9	3.3	1.8	1.4	1.3	1.0	0.8	0.6	0.6	0.6	0.7	3.0	14.5
30-Mar	0.5	0.5	Z	0.7	0.8	1.8	0.7	3.3	3.3	2.3	2.5	3.8	1.4	2.3	1.3	3.0	1.4	1.0	1.4	0.7	0.6	0.6	0.9	1.2	1.6	3.8
31-Mar	1.0	0.9	1.1	Z	1.5	2.7	2.1	2.8	4.5	4.2	1.9	2.3	2.2	1.3	1.1	0.9	1.5	0.8	1.1	0.9	0.8	0.7	0.7	0.9	1.6	4.5
	1.9	1.6	1.8	1.8	1.7	2.9	3.2	4.7	3.9	3.4	2.6	2.8	2.5	2.4	2.4	2.9	2.5	2.2	1.5	1.4	1.5	1.6	1.7	1.7	Diurnal Average	
	6.0	5.9	7.0	8.2	5.3	7.9	7.9	20.2	16.5	7.6	5.4	7.8	6.3	12.3	9.3	9.5	13.9	10.6	5.2	4.7	4.5	6.5	8.9	11.9	Diurnal Maximum	

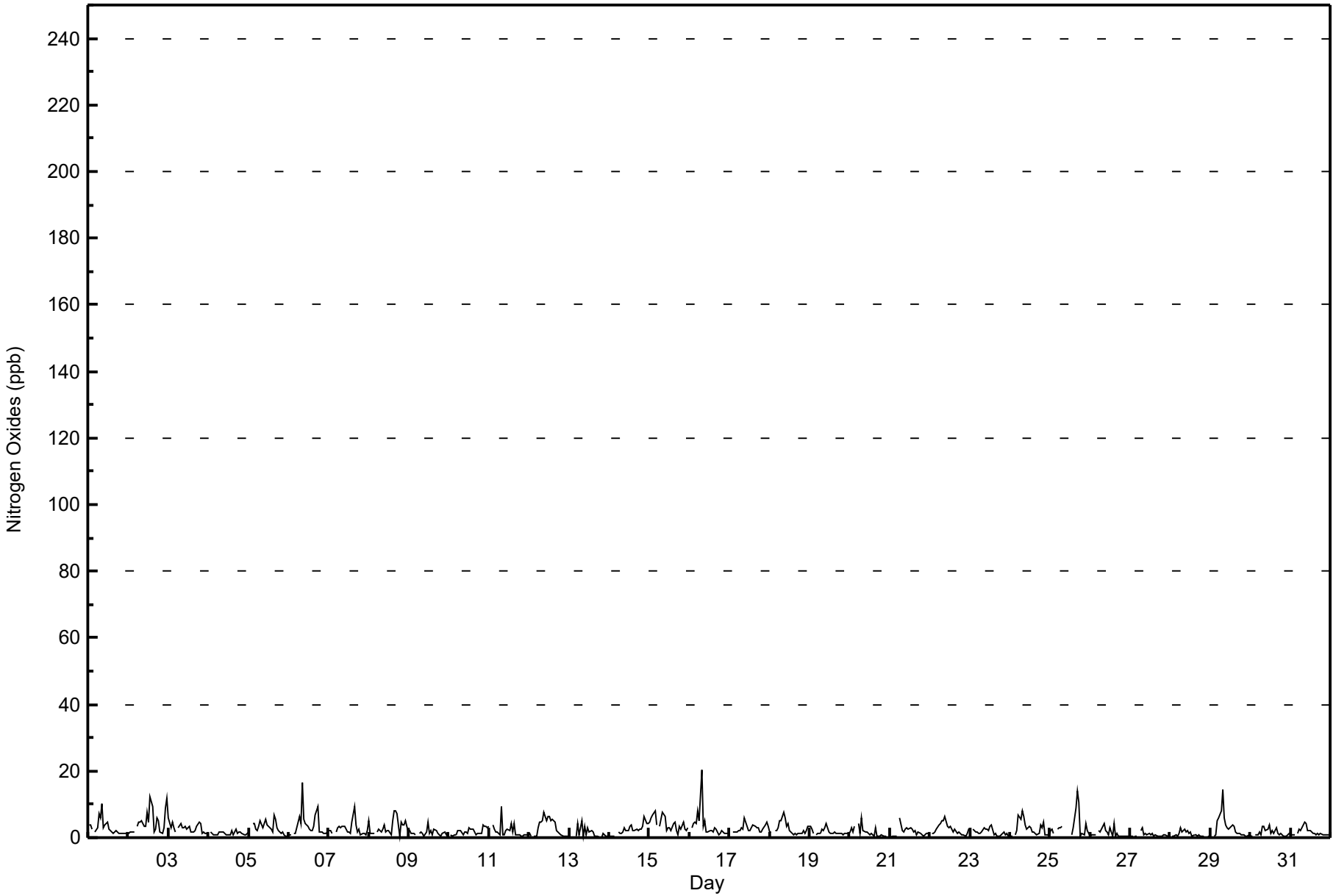
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Jackfish 1 - March 2025



Nitrogen Oxides (NO_X) - ppb

Jackfish 1 - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	708	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Jackfish 1 - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	59	44	38	24	21	9	49	46	76	82	52	18	40	43	59	48	708
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	59	44	38	24	21	9	49	46	76	82	52	18	40	43	59	48	708

Total Number of Valid Hours: 708

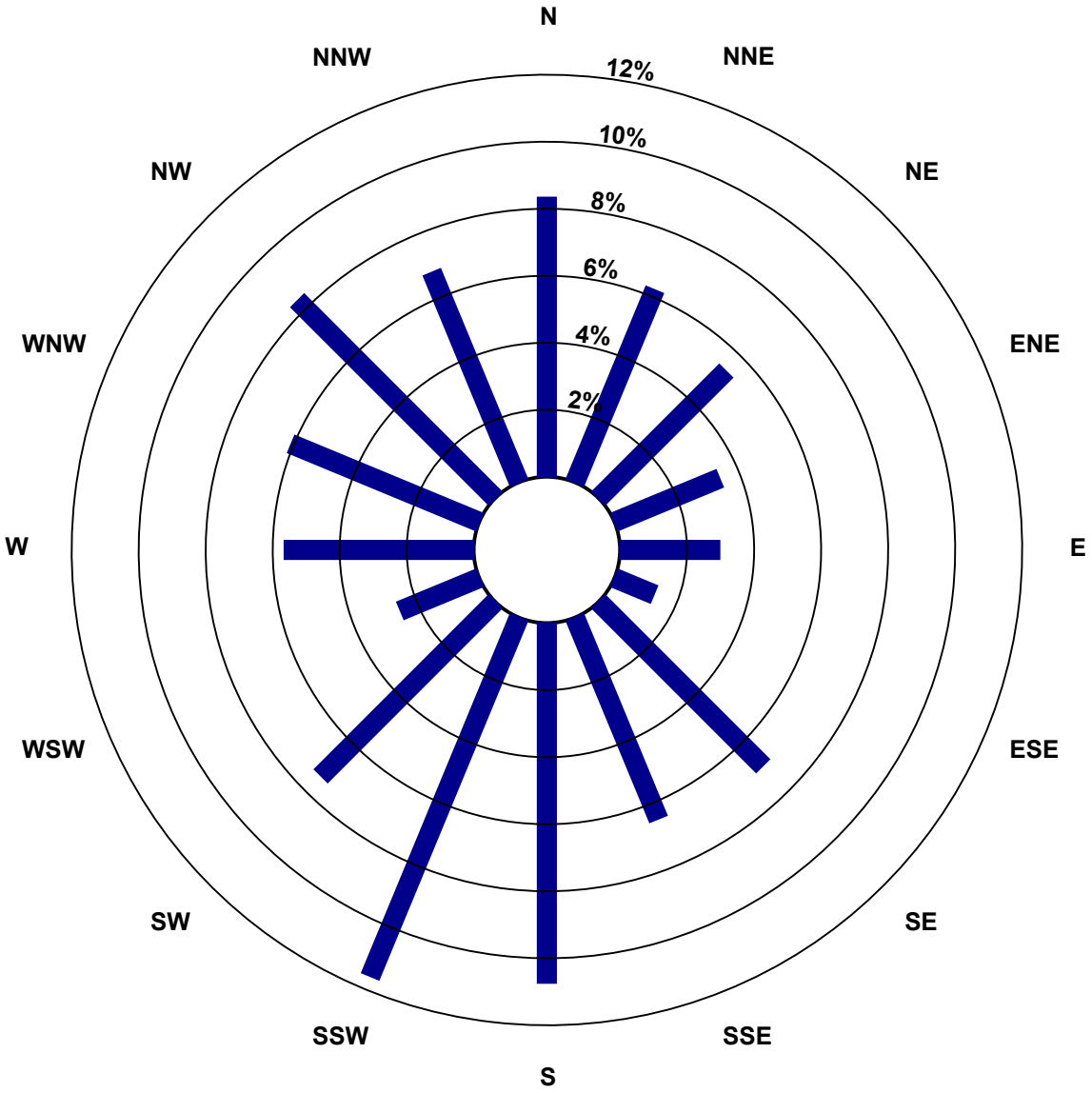
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Oxides (NO_X) - ppb

Jackfish 1



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

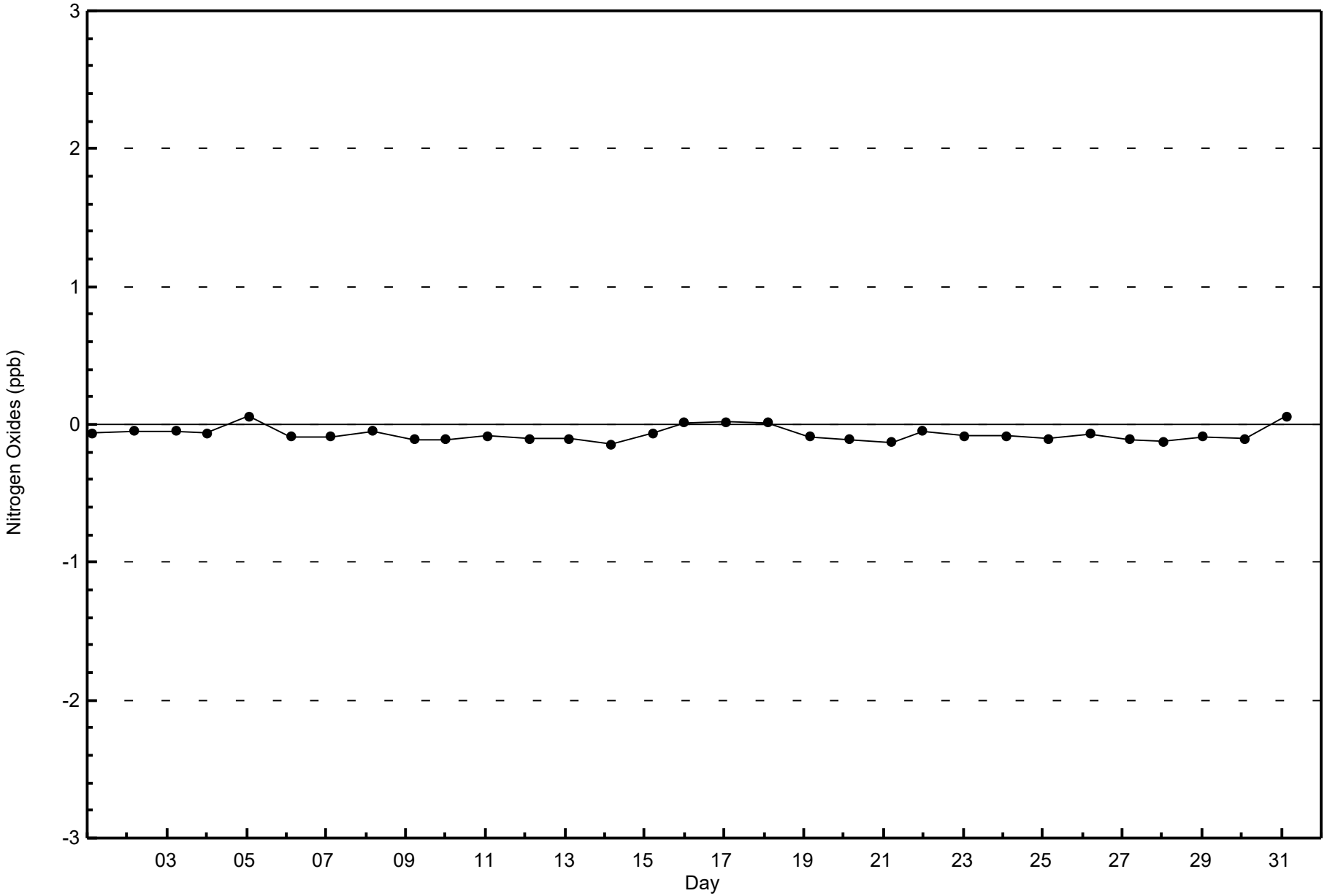
Total Number of Valid Hours: 708

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Jackfish 1 - March 2025

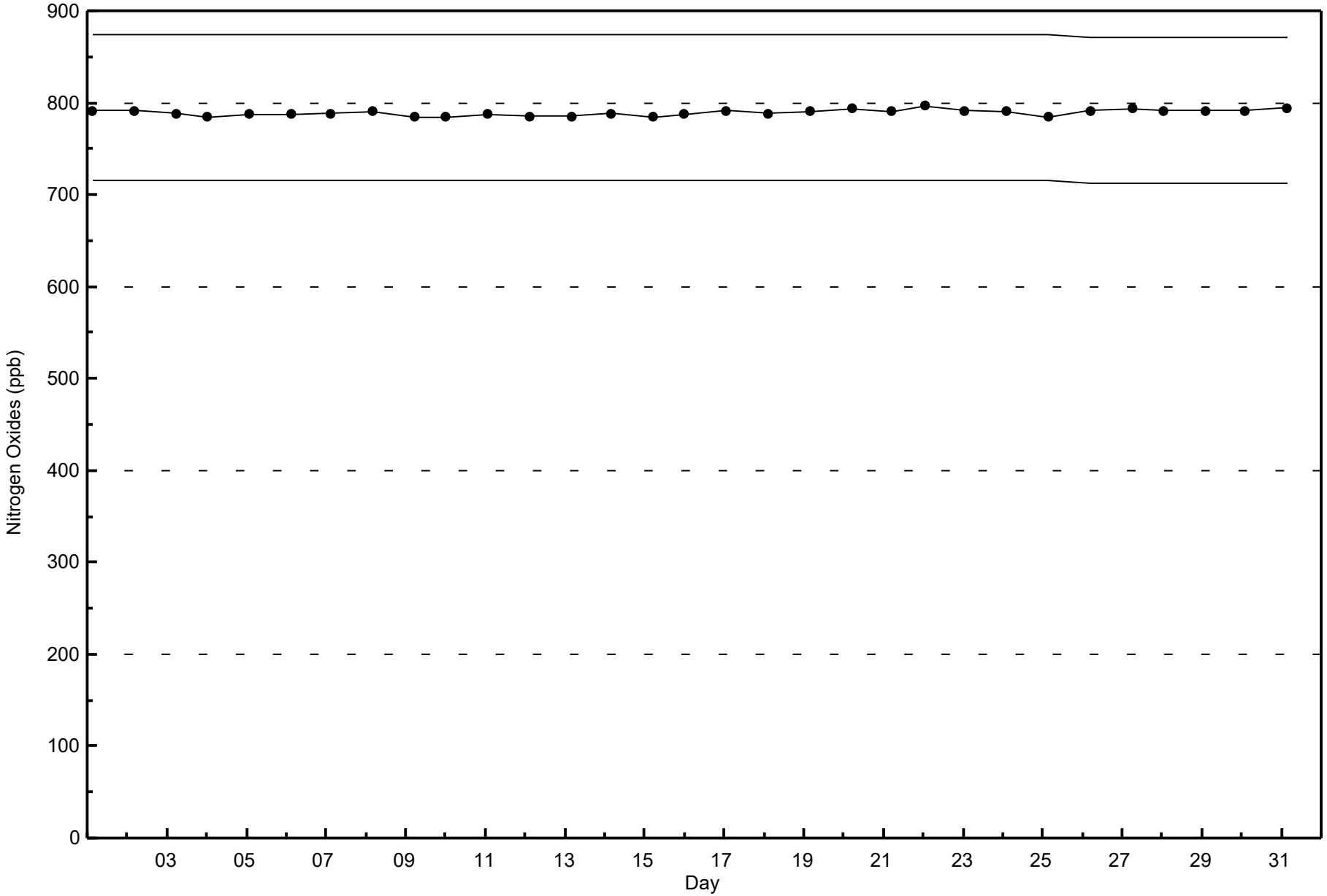


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Jackfish 1 - March 2025



Maximum Value: 10.4 C on Mar 25 15:00

Maximum Daily Average: 4.0 C on Mar 2

Minimum Value: -22.4 C on Mar 16 05:00

Minimum Daily Average: -16.1 C on Mar 9

Maximum Diurnal Average: -0.7 C at hour 16

Minimum Diurnal Average: -9.3 C at hour 7

Monthly Average: -5.25 C

Percentiles: P_1 = -21.9 P_{10} = -15.4 Q_1 = -10.9 Median = -4.9 Q_3 = -0.1 P_{90} = 4.5 P_{99} = 9.7

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

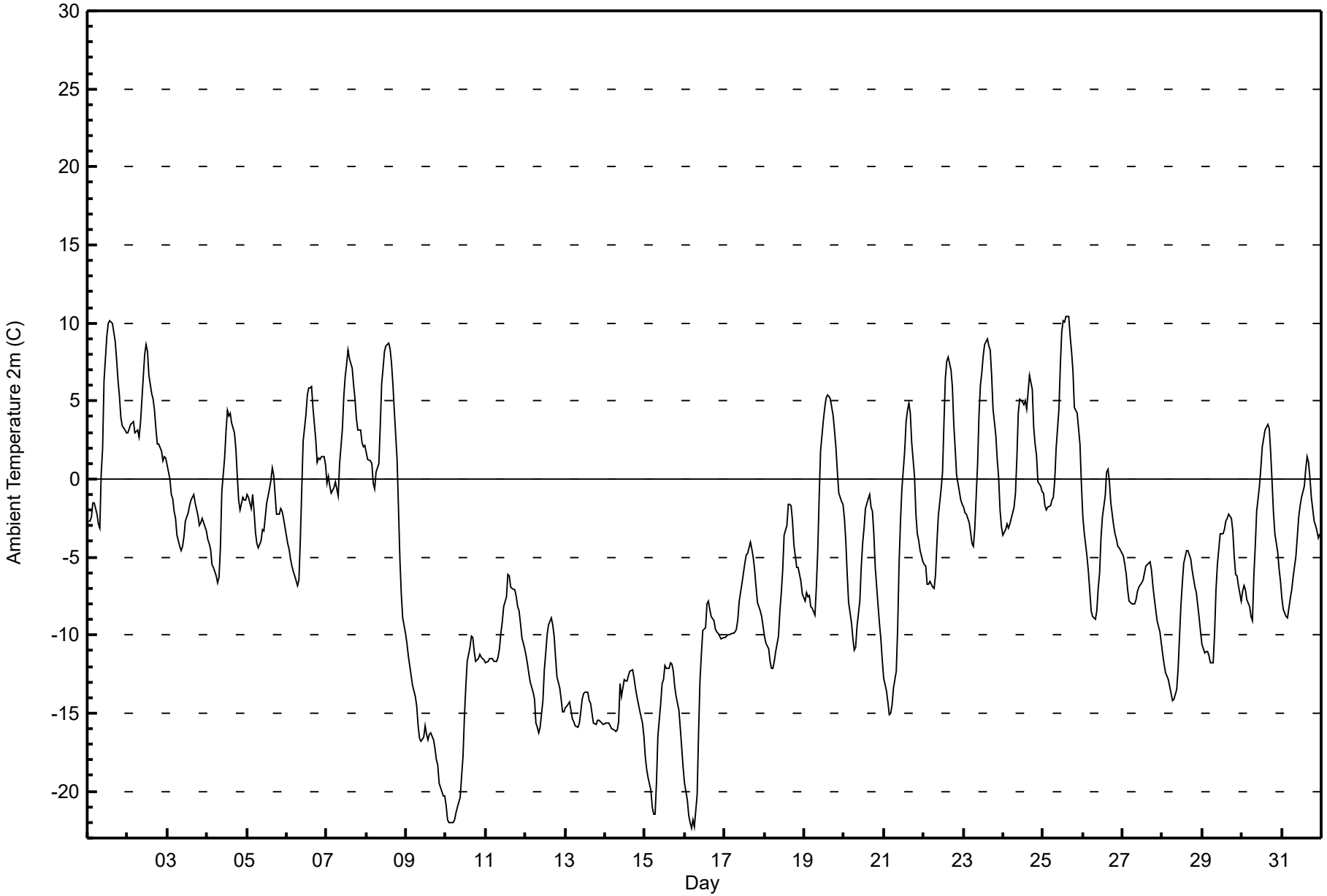
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-2.7	-2.7	-2.4	-1.5	-1.6	-2.2	-2.9	-3.2	0.3	2.0	6.3	9.1	10.0	10.2	10.0	10.0	8.8	7.7	6.3	5.3	4.0	3.4	3.1	3.0	3.3	10.2
2-Mar	2.9	3.2	3.5	3.7	2.9	3.0	3.1	2.7	3.5	6.6	8.0	8.6	8.2	6.6	5.5	5.1	4.4	3.3	2.2	2.3	1.8	1.2	1.4	1.3	4.0	8.6
3-Mar	0.9	0.0	-0.9	-1.3	-2.1	-2.6	-3.6	-4.3	-4.6	-4.3	-3.7	-2.7	-2.1	-1.7	-1.4	-1.1	-1.0	-1.5	-2.4	-3.0	-2.8	-2.5	-2.8	-3.4	-2.3	0.9
4-Mar	-3.8	-4.1	-4.5	-5.4	-5.7	-6.2	-6.6	-6.3	-4.4	-0.8	1.4	3.1	4.4	4.0	4.2	3.6	3.0	2.0	0.2	-1.3	-2.0	-1.2	-1.3	-1.3	-1.2	4.4
5-Mar	-1.0	-1.1	-1.9	-1.0	-2.1	-3.4	-4.1	-4.4	-4.0	-3.2	-3.3	-2.5	-1.5	-0.7	-0.1	0.7	0.3	-1.0	-2.3	-2.3	-1.9	-2.0	-2.5	-3.0	-2.0	0.7
6-Mar	-4.1	-4.5	-5.1	-5.6	-5.9	-6.2	-6.8	-6.5	-3.9	-0.7	2.5	4.2	5.4	5.9	5.9	5.9	4.5	2.5	1.1	1.3	1.2	1.5	1.4	0.9	-0.2	5.9
7-Mar	-0.2	0.2	-0.4	-0.9	-0.5	-0.1	-0.6	-1.1	1.0	3.3	5.3	6.5	7.4	8.3	7.8	7.1	6.1	5.2	3.9	3.2	3.1	2.4	2.0	2.2	3.0	8.3
8-Mar	1.7	1.3	1.2	0.9	-0.3	-0.6	0.4	1.0	3.5	6.1	7.1	8.1	8.5	8.7	8.3	7.4	6.1	4.4	1.2	-1.9	-5.1	-7.3	-8.9	-9.9	1.8	8.7
9-Mar	-10.5	-11.3	-12.0	-12.6	-13.2	-13.9	-14.6	-15.8	-16.6	-16.8	-16.5	-15.8	-16.3	-16.7	-16.4	-16.3	-16.7	-17.2	-18.0	-18.4	-19.5	-20.0	-20.3	-20.3	-16.1	-10.5
10-Mar	-20.9	-21.8	-22.0	-22.1	-22.1	-21.9	-21.4	-21.0	-20.4	-19.0	-17.8	-15.3	-13.3	-11.7	-10.8	-10.1	-10.1	-11.0	-11.7	-11.5	-11.2	-11.4	-11.5	-11.6	-15.9	-10.1
11-Mar	-11.8	-11.7	-11.5	-11.5	-11.5	-11.7	-11.6	-11.4	-10.9	-9.9	-9.2	-8.2	-7.5	-6.1	-6.2	-6.9	-7.0	-7.1	-7.6	-8.2	-8.5	-9.3	-10.2	-10.9	-9.4	-6.1
12-Mar	-11.4	-11.9	-12.5	-13.0	-13.7	-14.1	-15.6	-15.9	-16.3	-15.9	-14.2	-12.3	-11.1	-10.0	-9.4	-8.9	-9.4	-10.1	-11.4	-12.7	-13.4	-14.1	-14.9	-15.0	-12.8	-8.9
13-Mar	-14.7	-14.5	-14.3	-14.9	-15.3	-15.5	-15.8	-15.9	-15.6	-14.9	-14.1	-13.7	-13.7	-13.6	-14.2	-14.3	-15.0	-15.7	-15.7	-15.5	-15.5	-15.6	-15.7	-15.7	-15.0	-13.6
14-Mar	-15.6	-15.6	-15.7	-15.8	-16.0	-16.1	-16.2	-16.1	-15.5	-13.1	-13.9	-12.9	-13.0	-12.9	-12.6	-12.3	-12.2	-12.8	-13.4	-13.9	-14.4	-14.8	-15.6	-16.5	-14.5	-12.2
15-Mar	-17.8	-18.6	-19.1	-20.0	-21.0	-21.5	-21.5	-19.4	-16.5	-14.4	-13.1	-12.8	-11.9	-12.1	-12.1	-11.8	-11.9	-12.3	-13.3	-13.9	-14.9	-16.0	-17.2	-18.5	-15.9	-11.8
16-Mar	-19.5	-20.6	-21.6	-22.0	-22.4	-21.9	-22.3	-20.2	-16.3	-12.9	-11.2	-9.7	-9.5	-8.0	-7.8	-8.4	-8.8	-9.1	-9.6	-9.8	-9.9	-10.1	-10.2	-10.2	-13.8	-7.8
17-Mar	-10.1	-10.1	-10.0	-10.0	-9.9	-9.9	-9.8	-9.6	-9.0	-7.8	-6.6	-6.0	-5.4	-4.8	-4.7	-4.0	-4.5	-5.0	-5.9	-6.9	-7.9	-8.5	-8.8	-9.5	-7.7	-4.0
18-Mar	-10.0	-10.5	-10.9	-11.7	-12.2	-12.1	-11.7	-11.0	-10.1	-8.5	-7.3	-5.8	-3.6	-3.0	-1.6	-1.6	-1.8	-2.7	-4.3	-5.6	-5.7	-6.1	-6.6	-7.3	-7.1	-1.6
19-Mar	-7.8	-7.3	-7.5	-7.4	-8.2	-8.3	-8.7	-6.9	-4.6	-1.2	1.8	3.8	4.6	5.2	5.4	5.3	5.1	4.1	3.1	2.0	0.5	-0.9	-1.4	-1.7	-1.3	5.4
20-Mar	-2.5	-4.0	-6.1	-7.9	-9.2	-10.1	-11.0	-10.8	-9.5	-7.8	-5.7	-4.1	-3.2	-1.9	-1.2	-1.0	-1.8	-2.0	-3.5	-5.7	-8.0	-9.3	-10.3	-11.6	-6.2	-1.0
21-Mar	-12.8	-13.6	-14.3	-15.1	-15.0	-14.5	-13.4	-12.3	-9.6	-5.4	-2.7	-0.6	1.8	3.7	4.4	4.9	4.2	2.3	0.2	-2.2	-3.5	-4.0	-4.6	-5.3	-5.3	4.9
22-Mar	-5.5	-5.6	-6.7	-6.7	-6.5	-7.0	-7.0	-6.1	-4.1	-2.3	-0.6	0.4	3.6	6.5	7.5	7.8	7.0	6.0	3.5	2.0	0.2	-0.8	-1.4	-1.7	-0.7	7.8
23-Mar	-1.8	-2.2	-2.3	-2.8	-3.4	-4.2	-4.3	-3.2	1.0	4.2	6.0	6.8	7.9	8.6	9.0	8.5	8.3	6.6	4.5	2.8	1.2	0.1	-2.0	-3.1	1.9	9.0
24-Mar	-3.6	-3.2	-2.9	-3.1	-2.9	-2.5	-1.8	-0.9	1.3	4.2	5.1	5.0	4.8	5.0	4.5	5.6	6.7	5.8	3.3	2.2	1.5	-0.2	-0.4	-0.8	1.4	6.7
25-Mar	-0.9	-1.7	-2.0	-1.8	-1.7	-1.4	-1.2	-0.1	2.0	4.5	7.3	9.4	10.2	10.1	10.4	10.4	9.2	8.2	6.9	4.6	4.2	3.2	2.3	-0.3	3.8	10.4
26-Mar	-2.3	-3.4	-4.9	-5.9	-7.2	-8.5	-8.8	-9.0	-8.4	-7.0	-6.0	-3.7	-2.4	-1.1	0.4	0.6	-0.2	-1.5	-2.9	-3.5	-3.9	-4.3	-4.4	-4.6	-4.3	0.6
27-Mar	-5.0	-5.5	-6.1	-7.1	-7.8	-8.0	-8.0	-8.0	-7.7	-7.2	-6.9	-6.7	-6.5	-6.0	-5.6	-5.5	-5.3	-5.8	-6.9	-7.6	-8.4	-9.1	-9.8	-10.6	-7.1	-5.0
28-Mar	-11.2	-11.9	-12.4	-12.8	-13.3	-13.7	-14.2	-14.1	-13.5	-12.1	-10.1	-8.1	-6.7	-5.4	-4.6	-4.5	-4.8	-5.1	-5.8	-6.9	-7.3	-8.0	-8.9	-9.8	-9.4	-4.5
29-Mar	-10.6	-11.2	-11.1	-11.1	-11.3	-11.8	-11.8	-9.9	-7.1	-5.5	-4.5	-3.5	-3.5	-3.2	-2.7	-2.5	-2.3	-2.5	-3.3	-4.9	-6.2	-6.2	-6.8	-7.8	-6.7	-2.3
30-Mar	-7.2	-6.8	-7.1	-7.7	-8.2	-8.8	-9.1	-6.2	-4.3	-2.1	-0.5	0.7	2.0	2.6	3.1	3.5	3.2	1.7	-0.2	-2.1	-3.5	-4.6	-5.7	-6.6	-3.1	3.5
31-Mar	-7.7	-8.3	-8.8	-8.9	-8.3	-7.6	-7.1	-6.3	-4.9	-3.7	-2.4	-1.7	-1.2	-0.5	0.7	1.4	1.1	0.1	-1.1	-2.7	-3.0	-3.3	-3.8	-3.5	-3.8	1.4
	-7.3	-7.7	-8.1	-8.5	-8.9	-9.1	-9.3	-8.8	-7.3	-5.3	-3.9	-2.6	-1.7	-1.1	-0.8	-0.7	-1.1	-2.0	-3.3	-4.4	-5.1	-5.7	-6.3	-6.9	Diurnal Average	
	2.9	3.2	3.5	3.7	2.9	3.0	3.1	2.7	3.5	6.6	8.0	9.4	10.2	10.2	10.4	10.4	9.2	8.2	6.9	5.3	4.2	3.4	3.1	3.0	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Jackfish 1 - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	22	2.96	2.96
-20 - 0	539	72.45	75.40
0 - 10	177	23.79	99.19
10 - 20	6	0.81	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Maximum Value: 94.9 % on Mar 24 23:00

Maximum Daily Average: 85.8 % on Mar 11

Minimum Value: 25.7 % on Mar 23 15:00

Minimum Daily Average: 52.1 % on Mar 23

Maximum Diurnal Average: 78.6 % at hour 7

Minimum Diurnal Average: 51.5 % at hour 16

Monthly Average: 65.92 %

Percentiles: P_1 = 29.7 P_{10} = 41.6 Q_1 = 54.6 Median = 68.1 Q_3 = 79.8 P_{90} = 84.8 P_{99} = 89.6

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

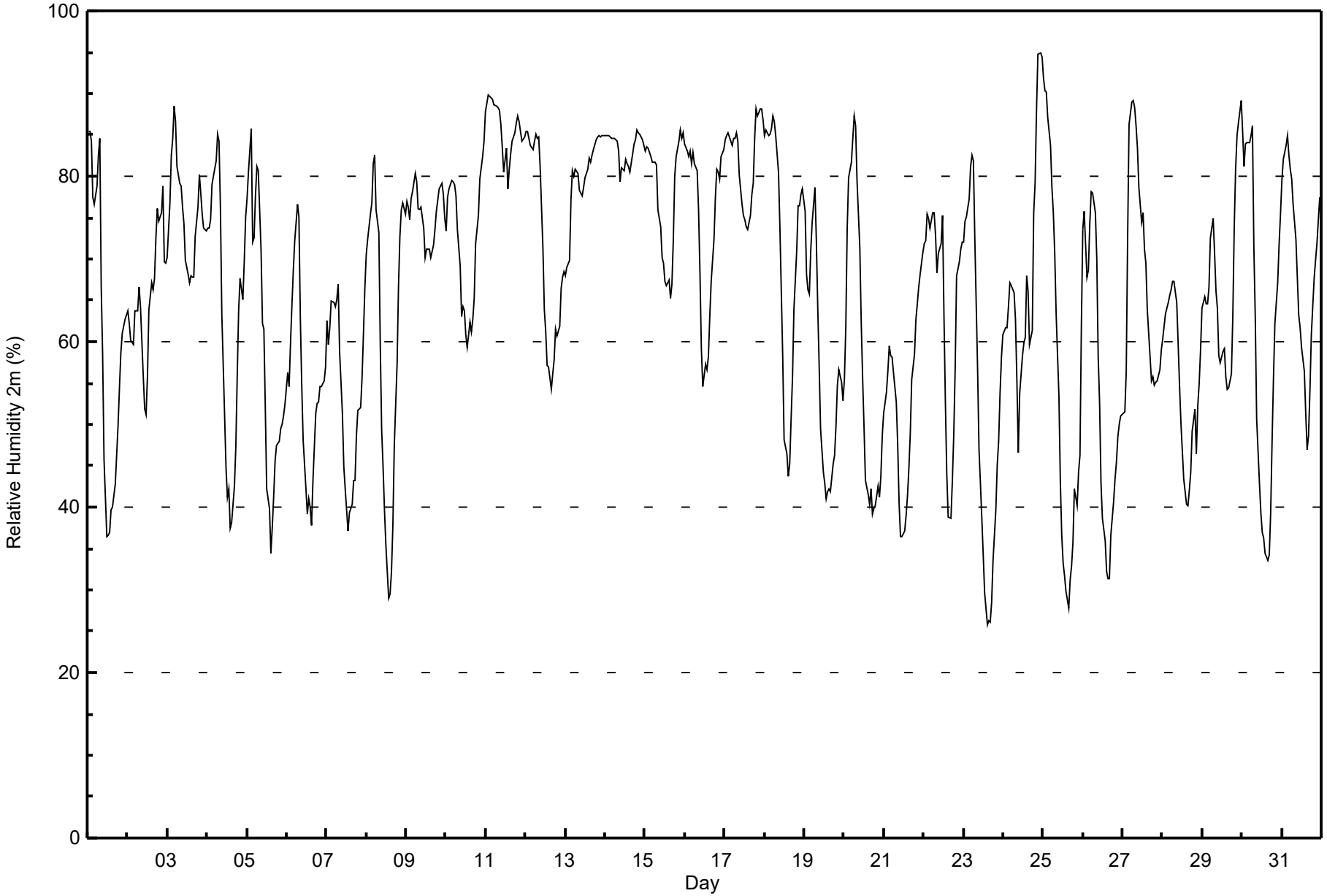
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	85.4	85.5	84.2	77.4	76.5	78.9	82.5	84.5	66.6	58.5	45.8	36.4	36.6	37.0	39.7	40.0	42.7	46.3	49.8	54.4	58.7	61.1	62.7	63.3	60.6	85.5
2-Mar	63.8	62.2	60.1	59.7	63.7	63.7	63.8	66.7	64.2	55.7	51.8	51.2	55.9	63.9	67.1	66.3	67.6	72.6	76.2	74.5	75.6	78.9	69.7	69.4	65.2	78.9
3-Mar	70.2	76.7	82.5	84.5	88.5	86.6	81.2	79.2	78.8	76.3	74.2	69.8	68.2	67.1	68.0	67.9	67.8	72.7	76.2	80.2	78.0	75.5	73.8	73.4	75.7	88.5
4-Mar	73.8	73.8	74.8	79.0	80.0	81.9	85.0	84.2	76.3	63.3	51.1	44.8	41.3	42.2	37.5	38.1	42.6	47.2	56.0	63.7	67.6	65.1	69.7	75.1	63.1	85.0
5-Mar	77.3	80.5	85.7	72.1	72.5	77.7	81.1	80.6	71.0	62.2	61.5	52.3	42.1	39.9	34.5	37.7	41.3	45.7	47.5	47.9	49.4	49.9	51.0	52.4	58.9	85.7
6-Mar	56.2	54.6	59.9	64.5	68.7	72.2	76.7	75.0	62.9	54.8	48.2	42.2	39.2	41.0	40.0	37.8	43.2	51.4	52.6	52.6	54.6	54.5	55.3	57.0	54.8	76.7
7-Mar	62.5	59.7	61.6	64.9	64.8	64.2	65.1	66.9	58.7	51.3	45.0	42.2	39.6	37.1	39.4	40.4	43.3	43.2	48.7	51.8	52.0	55.5	60.9	66.4	53.5	66.9
8-Mar	70.6	72.4	75.4	76.8	81.6	82.6	76.0	73.2	59.6	49.3	44.9	39.7	35.5	29.1	29.4	32.3	37.7	47.4	57.4	66.7	72.7	75.9	76.7	75.5	59.9	82.6
9-Mar	76.9	76.3	74.8	77.2	78.2	80.4	79.4	76.1	75.9	76.3	73.7	70.2	71.2	71.2	71.2	70.1	71.7	73.5	75.7	77.1	78.5	79.2	77.8	75.0	75.3	80.4
10-Mar	73.3	77.4	78.5	79.5	79.3	79.1	77.6	73.5	69.2	63.0	64.3	63.8	60.8	59.4	62.4	61.1	62.7	65.3	71.9	75.3	79.6	80.9	82.3	84.2	71.8	84.2
11-Mar	87.9	89.8	89.6	89.5	89.3	88.6	88.5	88.4	88.0	86.3	83.6	80.6	83.4	78.5	80.9	82.7	84.2	85.3	86.5	87.3	86.7	85.5	84.2	84.7	85.8	89.8
12-Mar	85.5	85.4	84.5	83.7	83.3	84.2	85.2	84.6	84.7	81.2	71.4	63.9	61.1	57.2	56.9	54.3	56.1	57.8	61.4	60.7	61.8	66.5	67.7	68.5	71.1	85.5
13-Mar	68.0	69.0	69.9	77.1	80.6	80.0	80.8	80.4	78.4	77.9	77.6	78.7	79.8	80.8	82.3	81.7	82.6	83.2	84.3	84.7	84.8	84.8	84.9	84.8	79.9	84.9
14-Mar	85.0	84.9	84.9	84.7	84.5	84.5	84.5	84.2	83.1	79.3	80.9	80.7	82.1	81.6	81.2	80.6	82.8	83.8	84.4	85.5	85.3	85.1	84.3	83.7	83.4	85.5
15-Mar	83.0	83.6	83.3	82.4	81.7	81.7	81.7	81.3	75.9	73.9	70.2	69.5	67.2	66.8	67.5	65.3	67.0	72.4	80.0	82.5	84.2	85.7	84.6	85.3	77.4	85.7
16-Mar	83.9	83.1	82.4	83.1	81.5	82.8	81.5	80.7	75.9	68.2	59.2	54.6	57.4	56.5	58.2	63.1	67.2	72.3	77.4	80.8	80.5	79.6	82.4	83.2	74.0	83.9
17-Mar	84.3	84.9	85.3	84.8	83.7	84.5	84.6	85.3	84.3	80.2	76.6	75.3	74.8	73.9	73.6	75.3	77.7	79.2	84.5	88.2	87.3	88.1	88.1	86.9	82.1	88.2
18-Mar	85.0	85.6	84.9	85.1	85.8	87.3	86.7	84.9	80.5	73.9	66.1	58.3	48.1	46.5	43.8	45.3	50.7	55.7	64.0	71.0	76.4	76.4	77.9	78.5	70.8	87.3
19-Mar	75.8	68.2	66.3	65.8	71.1	74.5	78.7	72.2	64.0	57.2	49.5	44.2	42.8	41.0	41.9	42.3	41.8	45.3	46.3	49.8	54.7	56.6	55.1	52.9	56.6	78.7
20-Mar	55.5	61.7	73.7	79.8	81.7	84.5	87.3	86.1	79.6	71.4	62.4	55.6	49.7	43.2	41.5	40.4	42.2	39.1	39.8	40.2	42.6	41.2	43.7	48.7	58.0	87.3
21-Mar	51.3	53.9	56.5	59.5	58.4	58.1	56.3	52.7	47.6	40.6	36.4	36.4	37.2	39.0	41.4	44.8	48.9	55.4	58.4	62.6	64.6	66.7	68.2	70.9	52.7	70.9
22-Mar	71.8	72.2	75.4	74.9	73.7	75.6	75.6	72.9	68.3	70.7	71.9	75.3	63.3	52.9	44.0	38.8	38.6	43.1	48.8	56.7	68.0	69.7	71.2	72.0	64.4	75.6
23-Mar	72.0	74.5	75.1	77.3	81.2	82.6	81.8	72.5	56.7	46.9	42.9	38.6	34.2	29.6	25.7	26.2	26.1	28.4	33.6	39.7	45.0	48.0	53.7	58.1	52.1	82.6
24-Mar	60.9	61.7	61.7	64.2	67.1	66.7	66.0	62.7	55.5	46.6	53.7	58.4	59.8	60.4	68.0	66.0	59.7	61.4	75.7	79.2	87.9	94.7	94.9	94.5	67.8	94.9
25-Mar	91.8	90.3	90.1	87.1	83.7	78.6	75.6	70.7	63.4	53.3	43.0	36.6	33.2	31.8	29.8	27.8	31.1	32.9	35.7	42.3	40.2	44.2	46.3	61.8	55.1	91.8
26-Mar	73.6	75.7	67.8	68.7	74.3	78.1	78.0	75.5	70.0	58.2	52.5	42.9	38.7	36.0	32.1	31.4	31.3	36.6	40.7	43.5	45.4	48.5	50.0	50.9	54.2	78.1
27-Mar	51.4	51.4	56.4	72.6	86.3	88.9	89.1	88.3	86.1	83.4	78.7	74.3	75.6	71.1	69.4	63.9	58.1	55.3	55.8	54.8	55.1	55.2	56.5	59.0	68.2	89.1
28-Mar	60.3	61.9	63.4	64.7	65.5	66.2	67.2	67.2	64.8	59.9	54.8	50.1	46.7	43.4	40.3	40.1	42.0	44.2	49.1	51.9	46.4	52.3	54.9	59.0	54.8	67.2
29-Mar	64.0	65.4	64.6	64.6	66.7	72.6	74.9	70.7	66.2	64.1	58.4	57.5	58.8	59.1	55.8	54.2	54.4	56.0	63.0	73.8	80.8	84.9	86.5	89.2	66.9	89.2
30-Mar	85.3	81.2	83.9	84.0	84.0	85.0	86.2	71.5	63.0	50.7	42.9	39.3	37.0	36.3	34.4	33.5	34.3	39.3	47.9	55.6	62.2	67.2	71.7	75.3	60.5	86.2
31-Mar	79.5	82.1	83.8	84.9	82.6	80.9	79.7	76.7	72.4	67.9	63.3	61.6	59.4	56.5	51.3	46.9	48.7	54.0	60.9	67.6	69.8	71.8	74.7	77.5	68.9	84.9
	73.1	73.7	74.9	75.9	77.4	78.5	78.6	76.4	70.7	64.6	59.9	56.3	54.2	52.6	51.9	51.5	53.1	56.3	61.0	64.6	67.0	68.7	69.7	71.5	Diurnal Average	
	91.8	90.3	90.1	89.5	89.3	88.9	89.1	88.4	88.0	86.3	83.6	80.7	83.4	81.6	82.3	82.7	84.2	85.3	86.5	88.2	87.9	94.7	94.9	94.5	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Jackfish 1 - March 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	59	7.93	7.93
40 - 60	199	26.75	34.68
60 - 80	304	40.86	75.54
80 - 100	182	24.46	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Jackfish 1 - March 2025

Maximum Speed: 16 km/h on Mar 8 19:00

Maximum Daily Speed Average: 9.4 km/h on Mar 27

Minimum Speed Value: 1 km/h on Mar 3 19:00

Minimum Daily Speed Average: 1.2 km/h on Mar 17

Maximum Diurnal Speed Average: 2.8 km/h at hour 16

Minimum Diurnal Speed Average: 0.2 km/h at hour 1

Monthly Average Velocity: 0.7 km/h 322.4 deg

Percentiles: $P_1 = 1$ $P_{10} = 3$ $Q_1 = 4$ Median = 6 $Q_3 = 7$ $P_{90} = 9$ $P_{99} = 13$

Hours in Service: 744

Hours of Data: 744

Hours of Missing Data: 0

Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	S6	S5	S5	SW7	SW6	S4	S4	S4	SSW4	SSW7	S4	SSW2	W4	W4	W5	W4	SW4	SSW4	SSW2	SSW6	SSW6	SSW5	SSW4	SSW6	SSW4.2	SSW7
2-Mar	SSW5	SSW4	SSW8	SSW8	SSW6	SSW7	SSW8	SSW7	SW5	WNW5	WNW6	WNW9	NW12	WNW10	NW10	NW13	NW10	WNW3	S2	SSW4	SW2	WNW4	WNW7	WNW7	W4.6	NW13
3-Mar	NW10	NW12	NW9	NNW10	NNW8	NNW9	NNW13	NNW11	NNW9	NNW8	NNW7	NNW8	NW8	NW10	NNW10	NW9	NW6	NNW1	ESE1	SSE2	SSW4	SW4	SW4	SW4	NW6.1	NNW13
4-Mar	SW3	SW4	SSW5	SW4	SSW6	SSW5	SSW5	SSW6	SSW6	SSW5	SW6	SW6	WSW6	W6	SW7	SW6	WSW4	SSW4	S5	S5	S5	SSW6	SSW6	SSW5	SSW5.0	SW7
5-Mar	WSW3	WNW4	WNW4	NW11	NW11	NW11	NW14	NW13	NW14	NW12	NW11	NW11	NW9	NW10	NW12	NW9	NW7	WNW3	SW1	SW3	SW4	SSW4	SSW6	SSW6	NW6.7	NW14
6-Mar	SSW5	SSW5	SSW6	SSW6	SSW6	SSW4	SSW3	S1	ENE1	SW2	WNW3	W4	W4	WNW6	WNW6	WNW6	WNW7	WNW4	WSW1	SSW4	SSW4	SW4	SW4	W3	WSW3.2	WNW7
7-Mar	W2	SW4	SSW5	SSW5	SSW4	SW4	SSW5	SW4	W5	W4	W3	WNW5	WNW6	W6	WNW6	WNW7	WNW4	WSW2	W2	WSW2	SW2	W2	W2	WNW2	WSW3.2	WNW7
8-Mar	WNW2	SSW2	SSW3	S4	S5	S6	SSW6	SSW5	W5	WNW6	WNW8	WNW8	WNW8	WNW9	WNW10	WNW9	WNW9	NW15	NW16	N9	N10	N8	NNE8	N8	WNW4.6	NW16
9-Mar	NNE7	NE7	NNE8	NNE6	NNE7	NE7	NE8	NNE10	NNE9	NNE9	N9	N9	N10	N8	N8	N8	N7	NNE7	N9	N8	NNE8	N7	NE6	NNE7	NNE7.6	N10
10-Mar	NNE5	NE2	NNE4	NE2	E2	E3	ESE4	ESE5	SE5	SE5	SE4	S3	SSE6	SSE3	SSE5	SSE2	SE3	E5	SE5	SSE3	SSE4	ESE3	SE4	ESE5	SE3.0	SSE6
11-Mar	ESE6	ESE5	ENE4	E4	E4	E4	ENE4	ENE4	E5	E5	ENE6	E6	NE5	ENE6	N7	N7	NE6	ENE4	N6	NNE5	NNE6	NNW6	N6	N7	NE4.1	N7
12-Mar	N7	NNW7	NNW8	N9	N8	N6	NNW6	NNW6	NNE6	NE4	N5	NNW6	NNW7	NNW6	N6	NNE6	NNE7	NE6	NE6	NNE7	NE5	ENE4	NE4	ENE5	N5.5	N9
13-Mar	ENE6	ENE6	E7	ENE6	E7	ENE8	ENE8	ENE8	E10	ENE8	ENE10	ENE10	ENE11	NE10	NE10	NE12	NNE12	NNE10	NE8	NNE6	N7	NNW7	NNW7	NNW7	NE7.3	NE12
14-Mar	NNW6	N8	NNW7	NNW6	NNW8	NNW10	NW10	NNW8	NW8	N8	NW11	NNW11	NW10	NW12	NW12	NNW9	NNW7	NW11	NNW9	NW8	NW9	NW8	NW9	NW8	NNW8.7	NW12
15-Mar	NW5	WNW4	WNW3	W1	WSW2	WSW2	W3	WNW1	NNW3	N4	NNW5	NNW5	NNW4	NW7	NW7	NNW6	NNW6	N5	NNE4	NNE4	ENE3	E2	S3	S3	NNW2.5	NW7
16-Mar	S4	S4	S4	S3	S4	S5	S5	S6	SSE4	SE6	SE9	SE8	SE7	SSE7	SSE7	S6	SE6	SE6	SE5	SE4	SSE6	SSE6	SSE5	SSE4	SSE5.3	SE9
17-Mar	SSE5	SSE4	SSE4	S5	S6	SSE5	S6	S6	S6	S4	S4	SSW4	WSW4	WNW3	NW4	NW4	NW4	NW6	NW9	NNW6	N6	NNW5	NNW4	N4	SW1.2	NW9
18-Mar	N3	NNW3	NNW4	NNW5	SE3	SSE4	SSW3	NNW1	NW2	NW3	NW3	NW5	W4	W5	SSW6	SW5	SW5	SSW5	S3	SSE2	SSW4	SSW5	SW3	WSW2	WSW2.0	SSW6
19-Mar	SW2	SW5	SW5	SW5	SW6	SW6	SW5	SSW6	S5	SSW6	SSW5	WSW4	W6	WSW5	W6	WNW5	W5	W4	SW3	SW4	SSW5	SSW4	SSW4	SW4	SW4.1	SW6
20-Mar	WSW1	N4	NNW6	NNW6	N7	NNE7	NNE6	NNE5	NNE5	NNE7	N8	N9	N10	NNE10	N9	N9	NNE8	NE8	NE6	NE7	ENE4	E8	ESE8	ESE8	NNE5.4	N10
21-Mar	SE8	SE7	SE7	SE6	SE6	SE6	SE7	SSE8	SSE8	SSE7	SE8	SE10	SE10	SE10	SE10	SSE9	SE9	SE8	SE7	SE7	SSE7	SSE6	SSE5	SSE5	SE7.4	SE10
22-Mar	SSE4	SSE5	SSE4	S6	S6	S6	S5	S4	S4	S4	S4	S5	S5	SSW4	SW5	W4	W4	WSW3	W3	W4	W3	W3	WSW2	WSW2	SSW3.1	S6
23-Mar	SW3	SW3	SW4	SW5	SW5	SSW6	SSW6	SSW6	WSW3	W3	W3	W5	WNW5	W5	SW5	SSW4	WSW4	SW4	SSW2	S4	S5	S4	E3	SE4	SW3.3	SSW6
24-Mar	S4	S5	S4	S5	S6	S6	S7	S7	S4	SSW6	SSW8	S7	S7	SSW7	SSW7	SW5	SW5	NW2	NW6	NW4	NW9	W3	WNW4	W2	SSW3.5	NW9
25-Mar	SW2	SW1	W1	WSW2	SSW4	SSW4	SW3	W3	W4	WNW4	W4	W4	WSW5	WSW7	WNW7	WNW8	WNW9	NW10	NW10	NW6	NNW6	NW8	NW8	N8	WNW4.2	NW10
26-Mar	N9	N8	N11	N11	NNW8	N9	N7	N8	N7	NNE8	NNE7	N7	N9	N8	N6	N9	NNE11	NNE10	NE8	NNE6	NNE8	NE7	E6	E9	NNE7.5	N11
27-Mar	ENE8	ENE8	ENE8	E8	NE6	NE7	NE7	NE8	NE10	NE10	NE12	NE13	NE11	NE12	NE11	NE12	NE10	NNE11	NNE9	NNE11	NNE10	NE9	NE9	NE8	NE9.4	NE13
28-Mar	NE8	NE7	NE5	NNE5	N5	N6	N6	N6	N6	N6	N6	NNW7	NNW5	ESE6	E5	ENE5	SE4	SE5	SSE3	NE1	E4	SE3	SE4	SSE4	NE3.1	NE8
29-Mar	S3	S4	S5	S5	S5	S4	S4	SSE3	SE4	SE4	SE4	SSW2	E1	NNE4	NNE3	NNW2	WNW3	W3	SSW4	SSW4	SW2	SSW3	SSW3	SW3	S2.0	S5
30-Mar	SSW4	SSW6	SSW6	SSW6	SSW5	SW3	SW3	S3	SSE4	SSE6	S6	S5	SSE6	SSE7	S6	SSW5	SW4	S4	S5	S4	S6	S6	S5	S4	S4.6	SSE7
31-Mar	S5	S6	SSE5	SSE5	SE5	SSE5	SE5	SE5	SE7	SE8	SE8	SSE7	SSE8	SSE8	SSE9	SE8	SE9	SE10	SE8	SSE6	SE6	SE6	SSE6	SSE5	SE6.5	SE10
	SSE0.2	SSW0.4	SW0.4	WSW0.6	SSW0.7	S0.5	SW0.6	SW0.2	NE0.5	NNE0.6	NNW0.8	NNW1.5	NW2.1	NW2.2	NW2.4	NW2.8	NNW2.3	N1.5	N1.3	N0.7	NNE0.5	WSW0.2	SSW0.3	ESE0.2		Diurnal Average
	NW10	NW12	N11	N11	NW11	NW11	NW14	NW13	NW14	NW12	NE12	NE13	NW12	NE12	NW12	NW13	NNE12	NW15	NW16	NNE11	NNE10	NNE9	NE9	E9		Diurnal Maximum

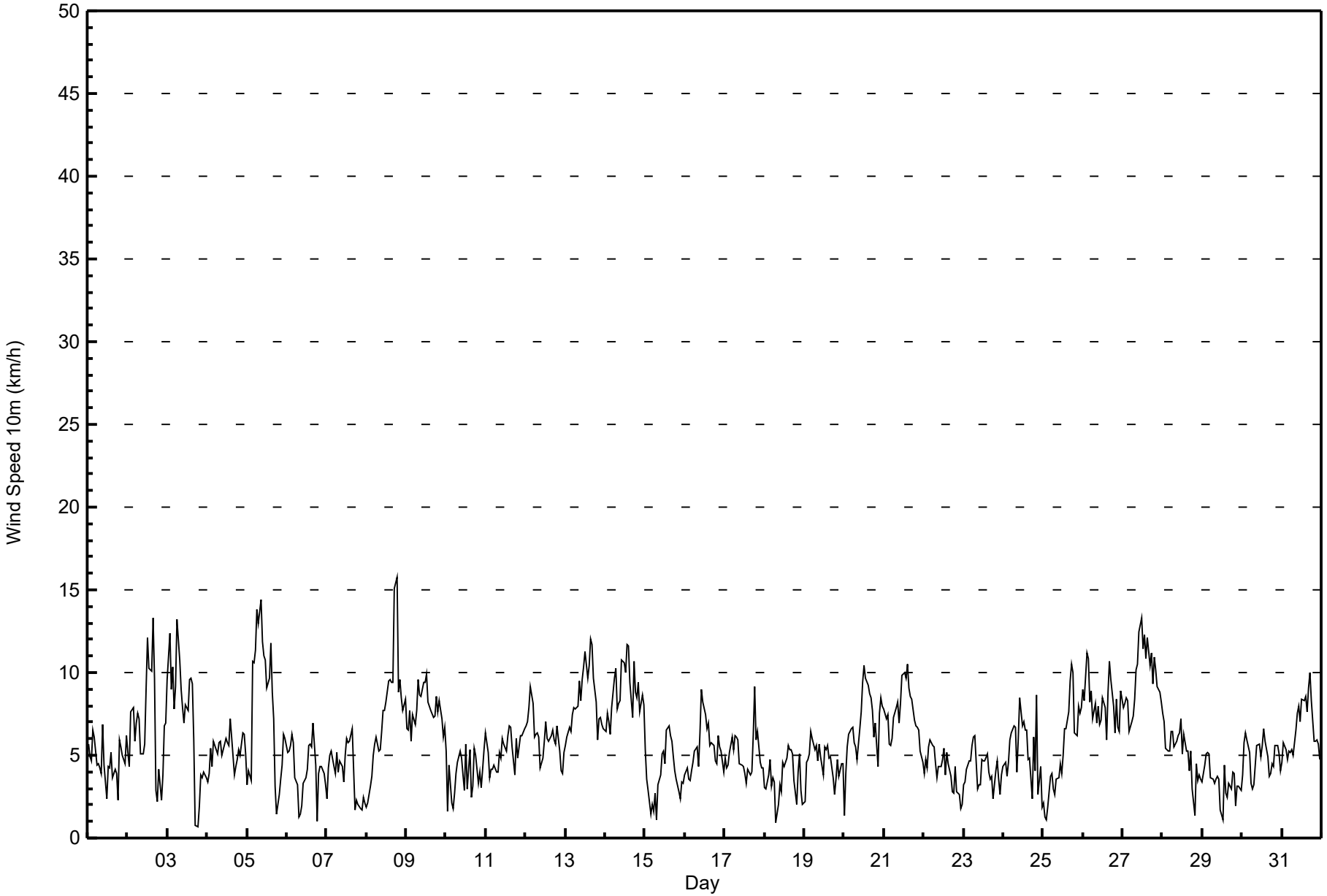
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Jackfish 1 - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	362	48.66	48.66
6 - 11	363	48.79	97.45
12 - 19	19	2.55	100.00
20 - 28	0	0.00	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Jackfish 1 - March 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	6	10	8	10	13	6	19	29	58	53	47	19	39	22	9	14	362
6 - 11	54	34	28	15	8	4	31	20	22	34	8	2	4	23	38	38	363
12 - 19	0	1	5	0	0	0	0	0	0	0	0	0	0	0	12	1	19
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	60	45	41	25	21	10	50	49	80	87	55	21	43	45	59	53	744

Total Number of Valid Hours: 744

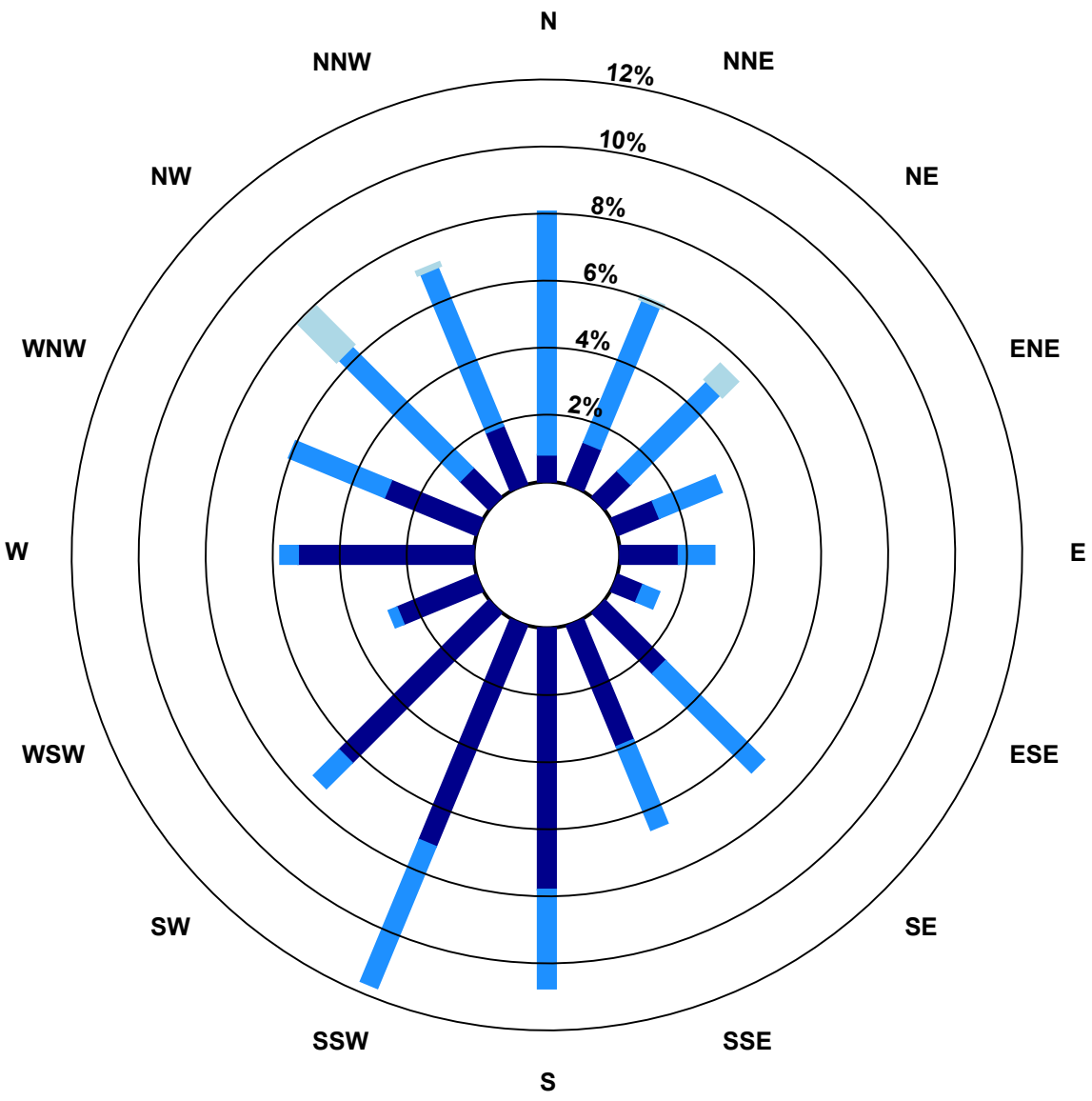
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Wind Speed 10m (WS10) - km/h

Jackfish 1



Classes (km/h)

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

Total Number of Valid Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Jackfish 1 - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 6 km/h on Mar 24 21:00

Minimum Value: 0 km/h on Mar 29 01:00

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

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

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

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Jackfish 1 - March 2025

Direction of Maximum Speed: 322 deg on Mar 8 19:00
Direction of Maximum Daily Speed Average: 43.5 deg on Mar 27

Direction of Minimum Speed: 122 deg on Mar 3 19:00
Direction of Minimum Daily Speed Average: 1.2 deg on Mar 17

Monthly Average Direction: 322.4 deg

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	175	180	191	216	215	187	180	180	195	210	190	210	280	273	274	268	222	203	209	205	210	208	205	206	209.9
2-Mar	213	206	211	212	203	209	211	208	220	291	287	303	309	302	309	321	317	299	190	212	225	291	298	295	268.5
3-Mar	309	319	316	328	346	346	327	330	348	347	336	336	324	321	327	322	316	328	122	150	211	214	216	218	323.3
4-Mar	220	220	213	223	206	209	207	208	205	202	227	222	246	260	219	215	243	207	187	173	180	197	199	209	212.1
5-Mar	245	284	289	319	324	322	321	319	322	323	321	319	322	319	319	312	307	300	231	236	221	210	209	205	308.3
6-Mar	212	203	212	208	206	198	206	186	75	228	291	269	271	287	282	296	291	285	249	207	206	218	224	263	240.6
7-Mar	260	223	204	203	204	214	205	218	270	277	271	283	287	277	291	295	284	247	262	256	235	260	263	291	254.9
8-Mar	291	200	203	191	174	177	199	212	259	289	287	287	291	290	291	291	292	311	322	351	6	7	14	7	301.4
9-Mar	17	37	12	32	31	42	38	19	31	26	9	5	3	7	355	6	6	13	3	4	13	11	37	29	16.8
10-Mar	28	43	19	54	82	89	123	122	125	142	135	169	153	167	158	167	132	91	140	161	162	121	126	118	124.5
11-Mar	116	115	77	95	81	84	68	64	98	94	78	92	55	60	7	9	40	66	11	30	24	344	4	2	53.1
12-Mar	352	337	347	355	358	351	336	343	13	44	3	346	348	343	1	22	29	35	38	32	47	61	56	63	8.4
13-Mar	65	75	86	57	80	76	70	63	83	73	65	67	57	42	44	42	31	32	37	24	4	346	336	346	48.7
14-Mar	348	350	343	334	329	327	325	330	325	349	320	327	314	322	324	332	343	324	329	325	324	312	316	316	327.7
15-Mar	309	283	282	264	256	244	264	295	328	356	346	348	334	321	318	332	332	359	33	31	62	94	174	177	329.1
16-Mar	175	175	174	169	175	176	177	174	164	142	135	140	141	158	157	171	143	139	135	144	153	158	159	165	155.9
17-Mar	160	161	165	170	173	167	169	169	176	176	186	210	241	291	304	304	307	314	325	339	352	346	338	6	233.9
18-Mar	358	341	340	327	132	164	209	330	316	304	309	306	267	269	209	224	235	212	188	164	213	211	230	239	247.3
19-Mar	234	216	219	214	218	216	218	204	191	199	200	250	271	249	280	285	277	266	215	225	212	210	211	215	227.8
20-Mar	248	349	338	343	1	19	21	26	29	17	3	358	359	14	358	6	20	52	39	34	66	99	110	122	23.1
21-Mar	133	136	135	136	140	136	138	151	149	154	127	129	129	139	135	148	143	142	146	146	158	167	162	164	142.2
22-Mar	168	168	164	170	173	173	175	178	175	172	185	190	176	208	232	264	278	247	268	279	274	263	254	248	200.8
23-Mar	226	228	222	219	217	213	211	213	248	268	264	279	292	266	231	212	249	218	194	181	180	182	94	146	222.4
24-Mar	172	175	172	171	173	169	173	174	170	199	197	180	186	198	213	232	225	316	323	311	308	275	284	272	204.9
25-Mar	228	219	276	241	207	213	227	275	270	284	259	263	244	241	284	293	296	305	318	317	336	323	324	350	290.6
26-Mar	358	353	349	352	346	351	356	360	5	28	14	10	356	356	4	7	13	19	37	30	32	34	80	86	11.5
27-Mar	74	66	74	82	54	49	37	40	41	48	45	48	34	38	36	36	44	19	24	29	33	34	45	50	43.5
28-Mar	51	49	42	19	7	9	9	4	351	4	351	347	341	117	100	60	132	124	150	55	96	141	143	152	43.3
29-Mar	170	174	173	173	173	182	178	162	126	129	125	192	87	14	16	327	290	280	207	204	219	206	193	219	180.7
30-Mar	212	207	205	204	209	232	225	175	153	167	177	174	168	168	185	197	226	190	188	186	176	179	188	181	188.8
31-Mar	175	169	166	156	143	147	138	145	132	134	145	158	147	151	153	138	130	126	132	148	144	142	154	160	145.5
	167.4	193.3	226.1	244.2	191.6	179.8	225.7	225.7	37.3	26.6	344.3	329.2	321.5	315.1	310.9	325.4	327.9	348.8	359.3	5.1	15.5	253.5	198.4	123.0	
	Diurnal Average																								

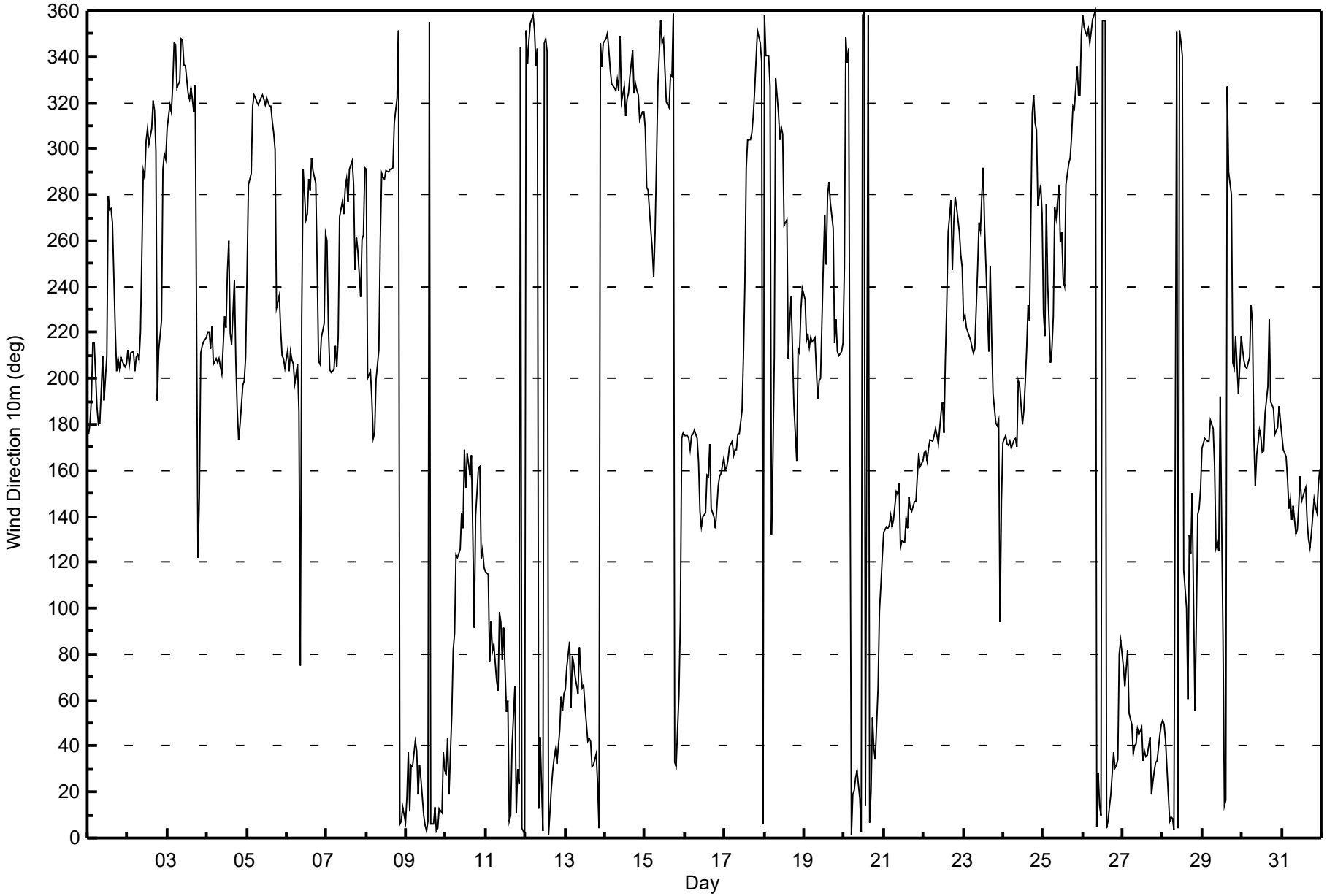
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Jackfish 1 - March 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Jackfish 1 - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 104 deg on Mar 29 13:00

Minimum Value: 5 deg on Mar 29 01:00

Percentiles: P_1 = 9 P_{10} = 14 Q_1 = 20 Median = 27 Q_3 = 38 P_{90} = 59 P_{99} = 84

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	16	20	20	20	15	17	18	16	30	30	37	96	66	82	68	68	59	32	22	17	19	19	23	17	96
2-Mar	20	23	17	19	19	26	17	19	55	48	38	23	15	14	16	14	18	51	39	20	36	24	18	19	55
3-Mar	14	12	15	21	25	26	17	19	25	26	26	28	23	17	19	19	29	91	79	45	15	21	25	20	91
4-Mar	19	21	19	28	20	26	26	26	23	45	61	56	66	64	53	53	70	48	19	14	21	26	38	51	70
5-Mar	59	30	28	11	11	12	13	14	15	19	18	17	21	20	18	20	17	23	24	21	18	24	19	26	59
6-Mar	37	20	19	27	25	42	21	84	49	67	53	66	53	57	53	54	31	31	84	20	27	46	58	68	84
7-Mar	66	37	27	23	29	52	28	64	77	63	83	55	51	58	50	31	35	33	49	56	83	48	38	57	83
8-Mar	56	20	20	21	13	23	38	61	74	59	53	56	47	45	38	29	24	19	14	33	27	25	31	25	74
9-Mar	31	31	23	26	28	29	29	28	30	28	27	32	28	30	29	30	32	30	25	26	28	27	31	29	32
10-Mar	30	63	28	49	70	28	21	35	34	34	42	70	37	74	39	82	53	36	18	18	24	29	27	21	82
11-Mar	17	20	40	33	31	24	29	31	26	30	31	34	34	37	36	30	32	60	28	42	40	29	31	30	60
12-Mar	25	20	26	26	26	27	20	24	39	52	52	38	33	42	52	41	36	28	23	27	25	24	24	25	52
13-Mar	26	22	26	24	24	25	26	27	24	29	25	29	26	33	30	28	28	30	30	31	24	22	21	26	33
14-Mar	27	27	25	21	14	15	14	17	17	27	15	20	15	16	15	18	26	13	16	12	13	15	13	14	27
15-Mar	26	22	33	38	32	29	24	36	28	44	32	35	48	31	21	24	28	32	24	23	32	35	11	9	48
16-Mar	11	10	7	7	7	6	8	10	20	22	22	28	25	31	31	36	20	19	14	15	15	18	17	20	36
17-Mar	20	19	19	18	17	15	16	19	22	31	35	62	60	46	25	37	29	15	13	20	24	25	22	25	62
18-Mar	29	19	34	19	46	29	39	26	29	55	77	44	68	67	58	57	58	50	19	23	42	27	49	69	77
19-Mar	59	22	23	19	23	17	23	25	44	23	45	72	64	69	57	58	75	72	19	15	21	28	18	18	75
20-Mar	80	40	18	23	25	23	22	31	32	35	31	29	28	32	32	35	33	30	24	24	22	19	18	12	80
21-Mar	13	14	14	14	12	13	15	14	19	28	24	22	22	24	24	22	21	17	12	12	13	16	16	14	28
22-Mar	15	16	12	14	19	17	18	29	32	30	35	40	34	72	67	64	62	67	46	31	37	45	62	37	72
23-Mar	18	18	20	22	21	19	16	22	51	57	74	62	63	66	62	65	77	59	21	11	13	16	47	38	77
24-Mar	10	13	10	11	12	10	12	14	30	39	31	35	30	37	39	64	63	79	32	49	32	31	24	36	79
25-Mar	46	92	82	89	26	33	40	55	57	54	55	68	67	66	55	38	20	22	12	31	14	10	15	24	92
26-Mar	25	26	26	26	26	25	29	28	33	36	45	46	39	44	61	33	28	30	31	31	27	28	26	25	61
27-Mar	29	25	26	26	24	28	27	27	28	31	31	31	34	30	32	31	34	28	30	28	26	28	27	26	34
28-Mar	24	27	28	25	26	25	28	31	29	37	38	31	56	40	59	51	53	28	26	44	27	13	14	13	59
29-Mar	5	7	10	10	10	10	13	29	39	53	58	87	104	51	76	74	48	44	30	32	24	18	18	19	104
30-Mar	22	20	18	17	27	40	27	37	30	39	48	65	47	39	56	66	73	44	20	18	17	18	21	22	73
31-Mar	14	12	14	14	13	14	17	18	18	20	25	25	24	30	31	34	23	16	15	12	12	11	10	12	34
	80	92	82	89	70	52	40	84	77	67	83	96	104	82	76	82	77	91	84	56	83	48	62	69	
	Diurnal Maximum																								

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS508
KIRBY NORTH
MARCH 2025

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

April 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - KIRBY NORTH (AMS 508)
MARCH 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	708	35	36	99.87	9.8	0	2.3	0
H2S (ppb) Average	704	39	40	99.87	1.1	0	0.1	0
THC (ppm) Average	708	35	36	99.87	2.6	-	2.3	-
NO2 (ppb) Average	704	39	40	99.87	9.8	0	3	-
NO (ppb) Average	704	39	40	99.87	3.6	-	0.8	-
NOX (ppb) Average	704	39	40	99.87	10.5	-	3.3	-
Temperature 2 m (C) Average	744	0	0	100	9.4	-	3.1	-
Relative Humidity (%) Average	744	0	0	100	91.5	-	86.7	-
Wind Speed 10 m (km/h) Average	744	0	0	100	27	-	19	-
Wind Direction 10 m (deg) Average	744	0	0	100	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - KIRBY NORTH (AMS508)
MARCH 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	708	0.67	1.1	-	0	0	0.1	0.3	0.8	1.8	9.8
H2S (ppb) Average	704	0.05	0.1	-	0	0	0	0	0.1	0.1	1.1
THC (ppm) Average	708	2.26	0.1	-	2.1	2.2	2.2	2.3	2.3	2.3	2.6
NO2 (ppb) Average	704	1.68	1.1	-	0.2	0.6	1	1.4	2.1	3.1	9.8
NO (ppb) Average	704	0.25	0.4	-	0	0	0	0.1	0.3	0.7	3.6
NOX (ppb) Average	704	1.92	1.3	-	0.2	0.7	1.1	1.6	2.4	3.7	10.5
Temperature 2 m (C) Average	744	-5.71	7.1	-	-23.2	-15.5	-10.9	-5.6	-0.3	4	9.4
Relative Humidity (%) Average	744	67.74	15.8	-	26.7	43.9	56.6	70.7	80.9	86.1	91.5
Wind Speed 10 m (km/h) Average	744	10.6	4	-	1	6	8	10	13	16	27
Wind Direction 10 m (deg) Average	744	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - KIRBY NORTH (AMS508)
MARCH 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL GASEOUS ANALYZERS	13 Mar 2025 12:00	13 Mar 2025 12:00	1	Maintenance - station modem replaced

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Kirby North - March 2025

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

Maximum Value: 9.8 ppb on Mar 8 14:00

Maximum Daily Average: 2.3 ppb on Mar 8

Minimum Value: 0.0 ppb on Mar 1 21:00

Minimum Daily Average: 0.1 ppb on Mar 31

Maximum Diurnal Average: 1.5 ppb at hour 15

Minimum Diurnal Average: 0.3 ppb at hour 3

Monthly Average: 0.67 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.3 Q_3 = 0.8 P_{90} = 1.8 P_{99} = 4.9

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.1	0.1	0.1	0.1	0.2	Z	0.1	0.1	0.2	0.3	0.2	0.2	0.5	0.2	0.7	0.4	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.7
2-Mar	Z	0.0	0.0	0.2	0.7	1.1	1.3	1.0	0.7	0.7	1.6	0.3	0.3	0.2	0.1	0.0	0.1	0.1	0.0	0.1	0.4	0.0	0.1	0.1	0.4	1.6
3-Mar	0.1	Z	0.2	0.2	1.6	1.6	0.8	0.8	0.7	0.7	0.9	1.0	1.0	1.0	1.5	0.8	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.0	0.6	1.6
4-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6	0.6	0.5	0.7	1.5	1.7	1.0	0.6	0.7	0.3	0.1	0.1	0.0	0.4	1.7
5-Mar	0.1	0.6	0.2	Z	1.0	2.4	1.8	2.2	1.4	1.0	1.1	0.8	1.4	1.6	1.7	0.5	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.8	2.4
6-Mar	0.1	0.1	0.2	0.1	Z	0.0	0.0	0.0	0.1	0.2	1.1	0.5	2.5	2.9	3.4	2.9	1.9	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.7	3.4
7-Mar	0.0	0.0	0.0	0.1	0.1	Z	0.1	0.0	0.1	0.0	0.2	2.0	2.5	3.4	3.3	1.6	1.4	0.4	1.0	0.0	1.9	0.4	0.2	0.6	0.8	3.4
8-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	1.5	9.2	5.7	5.8	9.8	9.7	3.7	1.8	0.1	0.1	0.2	0.8	1.7	1.1	0.8	2.3	9.8
9-Mar	1.5	Z	0.7	0.4	0.2	0.8	1.0	0.9	1.3	2.1	3.0	2.0	0.8	1.0	1.7	1.6	0.7	0.6	1.5	1.3	0.3	0.5	0.8	2.3	1.2	3.0
10-Mar	1.3	1.1	Z	0.0	0.1	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	1.3
11-Mar	0.0	0.1	0.3	Z	0.4	0.2	0.1	0.0	0.0	0.2	0.3	0.2	0.1	0.4	1.4	1.0	2.0	1.8	1.4	0.6	0.4	0.1	0.1	0.0	0.5	2.0
12-Mar	0.0	0.1	0.1	0.0	Z	0.1	0.2	0.2	0.2	0.2	0.5	0.9	0.9	0.5	0.5	0.8	3.0	2.2	1.7	0.8	1.2	1.3	0.2	0.4	0.7	3.0
13-Mar	0.5	0.1	0.1	0.1	0.1	Z	0.0	C	C	C	C	M	1.0	0.7	1.0	0.8	0.3	0.5	1.7	0.8	0.1	0.0	0.0	0.0	0.4	1.7
14-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.3	0.6	1.3	2.2	2.4	2.5	1.2	0.6	1.0	2.0	4.7	5.5	4.0	1.2	5.5
15-Mar	2.4	Z	2.1	1.8	1.1	1.0	0.8	0.5	0.4	0.2	0.1	0.0	0.0	0.1	0.4	0.1	0.1	0.0	0.2	0.4	0.9	1.0	0.8	1.0	0.7	2.4
16-Mar	0.9	0.9	Z	0.5	0.3	0.2	0.4	0.6	0.6	0.5	0.5	0.6	0.7	0.4	0.3	0.1	0.1	0.3	0.1	0.2	0.3	0.5	0.4	0.4	0.4	0.9
17-Mar	0.4	0.3	0.2	Z	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.4	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.4	1.7	2.1	0.3	2.1
18-Mar	1.1	1.1	0.7	0.6	Z	0.8	0.7	0.5	0.8	2.2	3.1	1.9	0.9	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.4	0.7	0.8	3.1
19-Mar	0.3	0.3	0.3	0.3	0.3	Z	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.7	2.4	0.6	2.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.4	2.4
20-Mar	Z	0.0	0.0	0.0	0.0	0.6	1.1	1.9	1.1	0.8	0.8	1.5	1.7	1.3	1.5	2.3	1.9	1.1	1.3	0.6	0.4	0.8	0.0	0.0	0.9	2.3
21-Mar	0.0	Z	0.7	0.7	0.4	0.4	0.5	0.6	0.6	0.6	0.6	0.4	0.3	0.4	0.4	0.4	0.3	0.4	0.6	0.7	0.9	0.5	0.3	0.4	0.5	0.9
22-Mar	0.6	0.6	Z	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.7	1.4	0.8	1.0	3.6	2.7	1.7	0.7	0.5	0.1	0.8	3.6
23-Mar	0.1	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.7	0.1	0.8	1.9	1.0	1.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.9
24-Mar	0.0	0.0	0.0	0.1	Z	0.1	0.0	0.1	0.1	0.2	0.3	0.3	0.3	0.2	0.2	0.1	0.2	0.2	0.4	2.8	1.0	1.2	4.3	1.9	0.6	4.3
25-Mar	1.6	2.2	0.6	0.2	0.2	Z	0.2	0.2	0.3	0.3	0.4	0.3	1.5	4.9	5.2	2.5	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.3	1.0	5.2
26-Mar	Z	0.3	0.3	0.4	0.3	0.4	0.3	0.2	0.7	0.5	1.8	3.5	2.8	2.1	1.7	2.1	1.9	1.2	2.1	2.3	1.6	0.9	1.3	0.3	1.3	3.5
27-Mar	0.1	Z	0.2	0.1	0.2	1.7	1.4	1.1	1.4	1.4	0.6	0.8	0.9	1.0	1.0	0.6	0.7	0.4	0.4	0.3	0.1	0.6	2.1	2.6	0.9	2.6
28-Mar	1.1	1.8	Z	0.9	0.4	0.0	0.2	1.0	3.1	4.5	4.7	3.9	0.6	0.0	0.0	0.0	0.0	0.7	0.2	0.0	0.0	0.0	0.0	0.0	1.0	4.7
29-Mar	0.0	0.0	0.1	Z	0.0	0.0	0.1	0.3	0.6	0.2	0.4	0.3	0.3	0.3	0.4	0.3	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.6
30-Mar	0.2	0.2	0.2	0.2	Z	0.1	0.2	0.2	0.2	0.4	0.3	1.3	2.8	1.8	1.8	0.9	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	2.8
31-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.4	0.3	0.1	0.1	0.4
	0.5	0.4	0.3	0.3	0.3	0.5	0.4	0.4	0.5	0.7	1.1	1.0	1.1	1.2	1.5	1.0	0.8	0.5	0.6	0.5	0.5	0.5	0.7	0.6	Diurnal Average	
	2.4	2.2	2.1	1.8	1.6	2.4	1.8	2.2	3.1	4.5	9.2	5.7	5.8	9.8	9.7	3.7	3.0	2.2	3.6	2.8	2.0	4.7	5.5	4.0	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

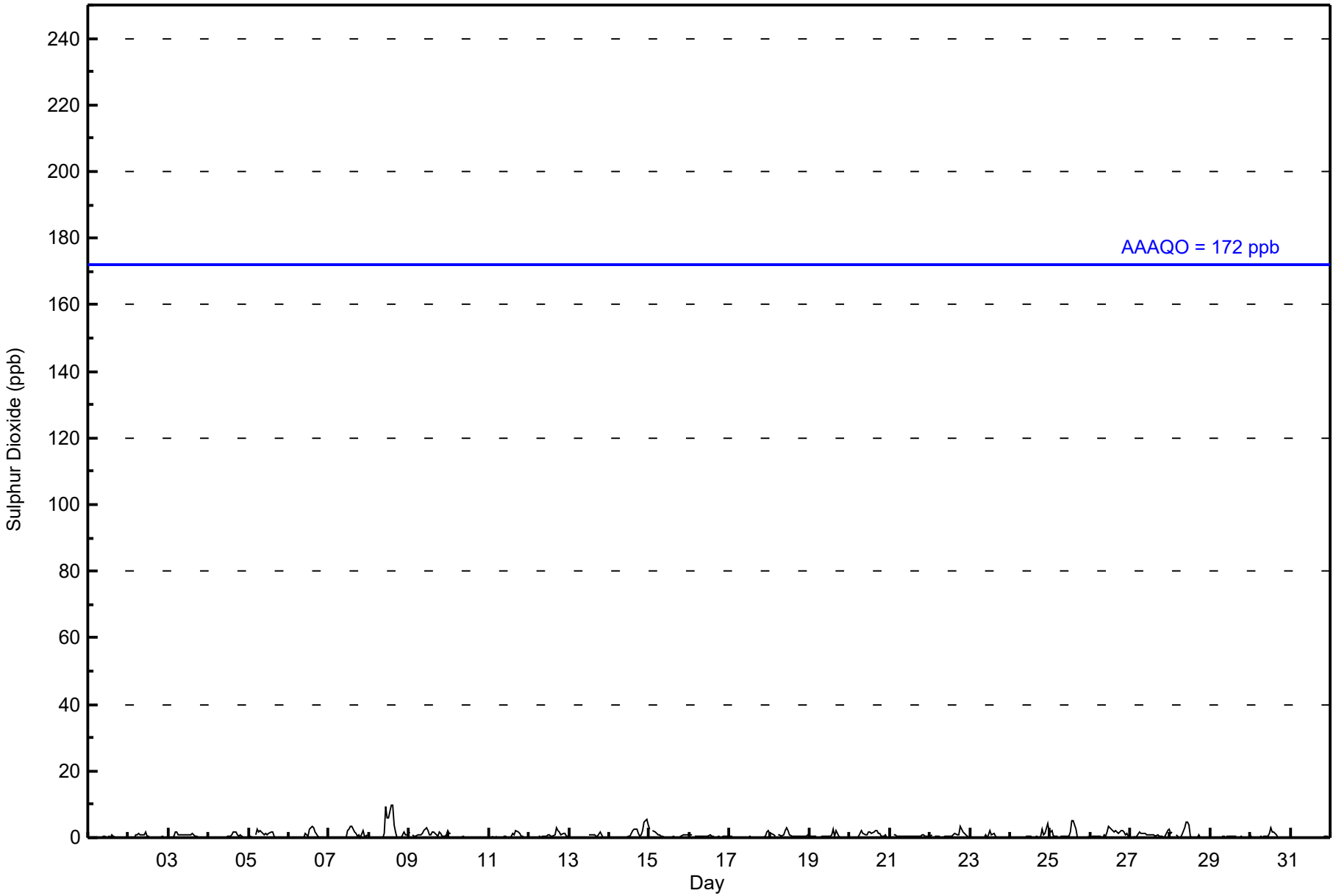
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Kirby North - March 2025



Sulphur Dioxide (SO_2) - ppb
Kirby North - March 2025

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

Total Number of Valid Hours: 708

Total Number of Hours: 744



Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Kirby North - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	29	39	103	57	13	8	23	55	82	77	63	46	37	20	27	29	708
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	29	39	103	57	13	8	23	55	82	77	63	46	37	20	27	29	708

Total Number of Valid Hours: 708

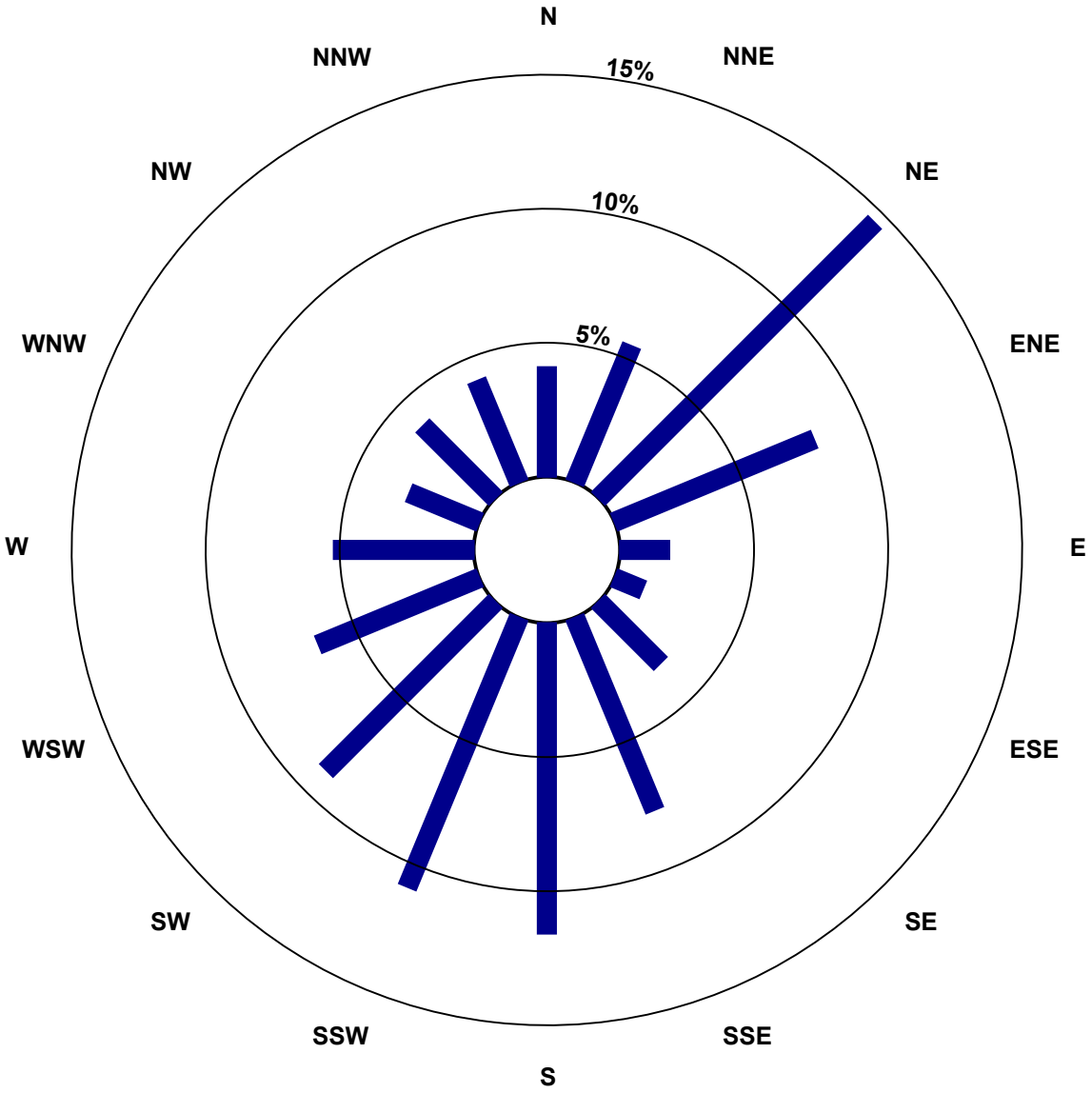
Total Number of Hours: 744

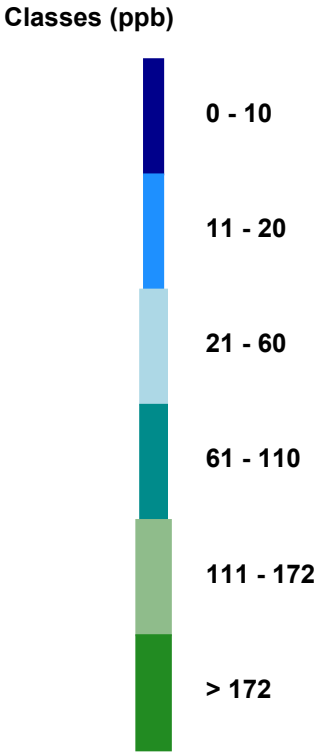
Wood Buffalo Environmental Association

Wind Rose Mar 2025

Sulphur Dioxide (SO_2) - ppb

Kirby North





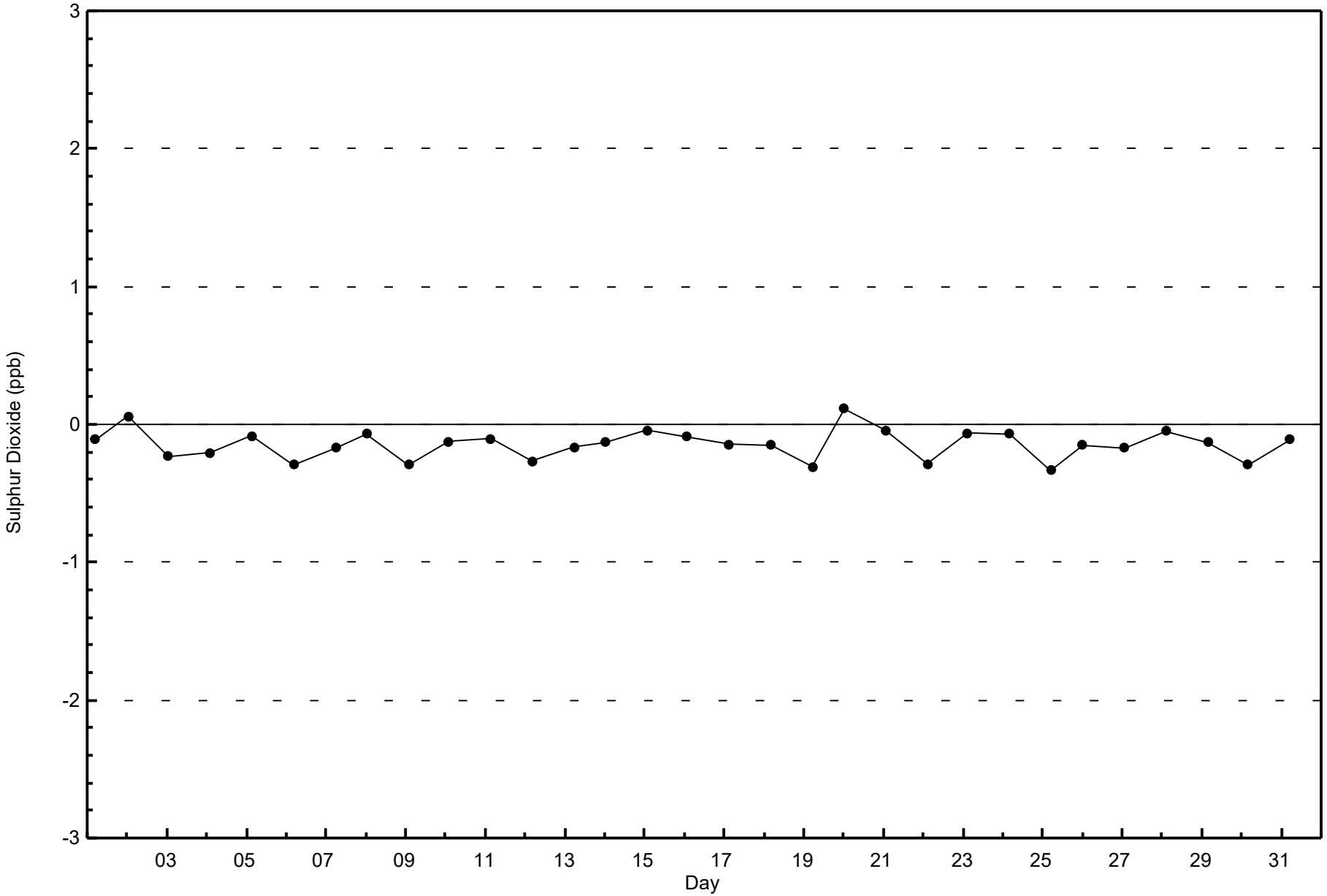
Total Number of Valid Hours: 708

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Kirby North - March 2025

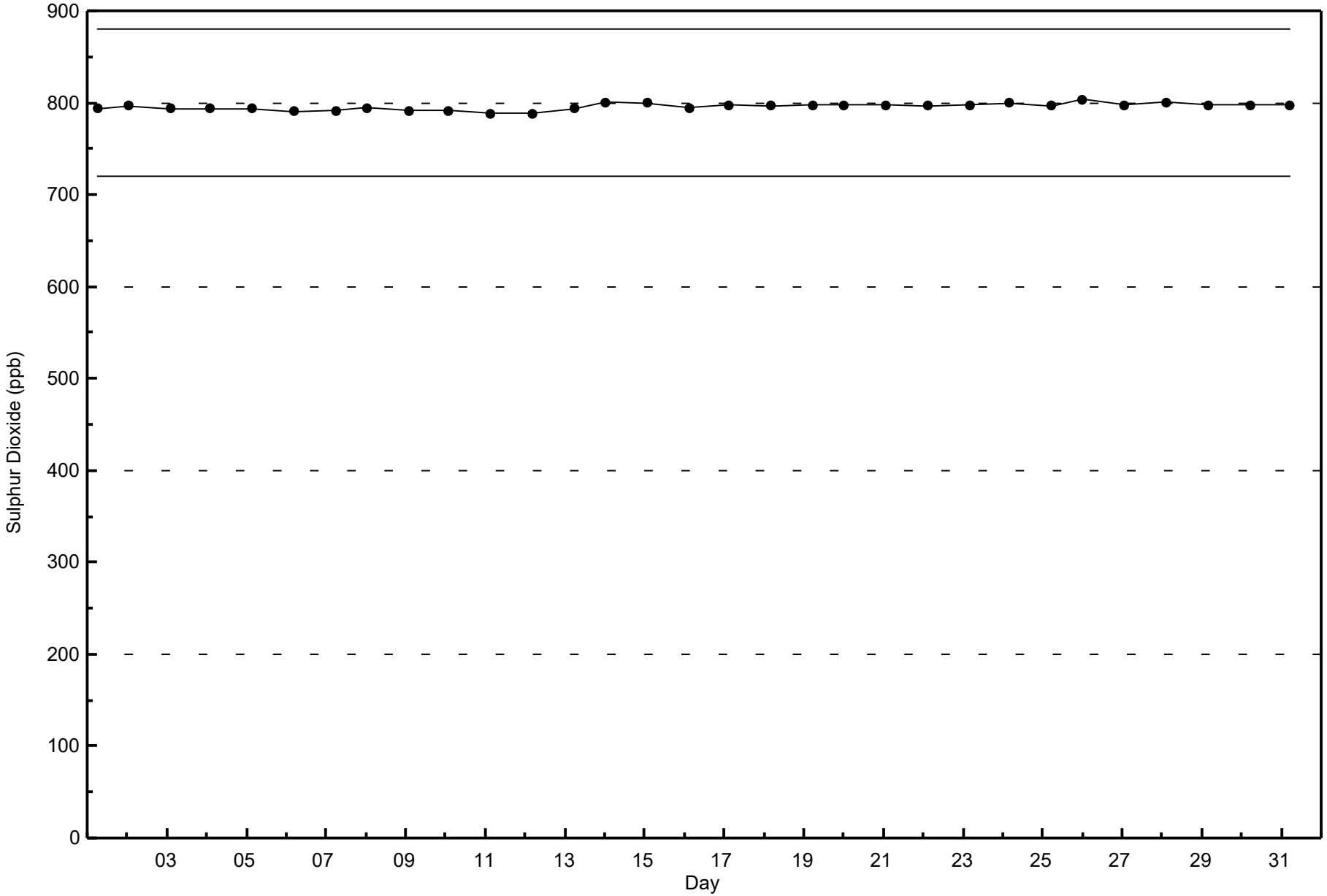


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Kirby North - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Kirby North - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.1 ppb on Mar 24 23:00 Maximum Daily Average: 0.1 ppb on Mar 24

Minimum Value: 0.0 ppb on Mar 10 11:00 Minimum Daily Average: 0.0 ppb on Mar 28
Maximum Diurnal Average: 0.1 ppb at hour 23 Minimum Diurnal Average: 0.0 ppb at hour 18
Monthly Average: 0.05 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} = 0.2

Hours in Service:	744
Hours of Data:	704
Hours of Missing Data:	40
Hours of Calibration:	39
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	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
2-Mar	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	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
3-Mar	0.0	0.0	Z	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
4-Mar	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.2
5-Mar	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	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1
6-Mar	0.0	0.0	0.0	0.0	0.0	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
7-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1
8-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.2
9-Mar	0.1	0.0	Z	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
10-Mar	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
11-Mar	0.0	0.0	0.0	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2
12-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	C	C	C	C	C	C	C	C	0.3	0.1	0.0	0.0	0.1	--	0.3
13-Mar	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	M	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1
14-Mar	0.0	Z	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.2	0.2	0.1	0.2
15-Mar	0.2	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	0.1	0.1	0.2
16-Mar	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	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.1
17-Mar	0.1	0.1	0.0	0.0	Z	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2
18-Mar	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
19-Mar	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	0.3	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
20-Mar	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	0.0	0.0	0.1	0.1
21-Mar	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
22-Mar	0.0	0.1	0.0	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1
23-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
24-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.1	1.1	0.3	0.1	1.1
25-Mar	Z	0.2	0.1	0.1	0.0	0.0	0.0	0.0	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	0.1	0.2
26-Mar	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
27-Mar	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
28-Mar	0.0	0.1	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
29-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
30-Mar	0.0	0.1	0.0	0.1	0.1	Z	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
31-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	Diurnal Average	
	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	0.3	0.1	0.2	0.1	0.1	0.3	0.2	0.2	1.1	0.3	Diurnal Maximum	

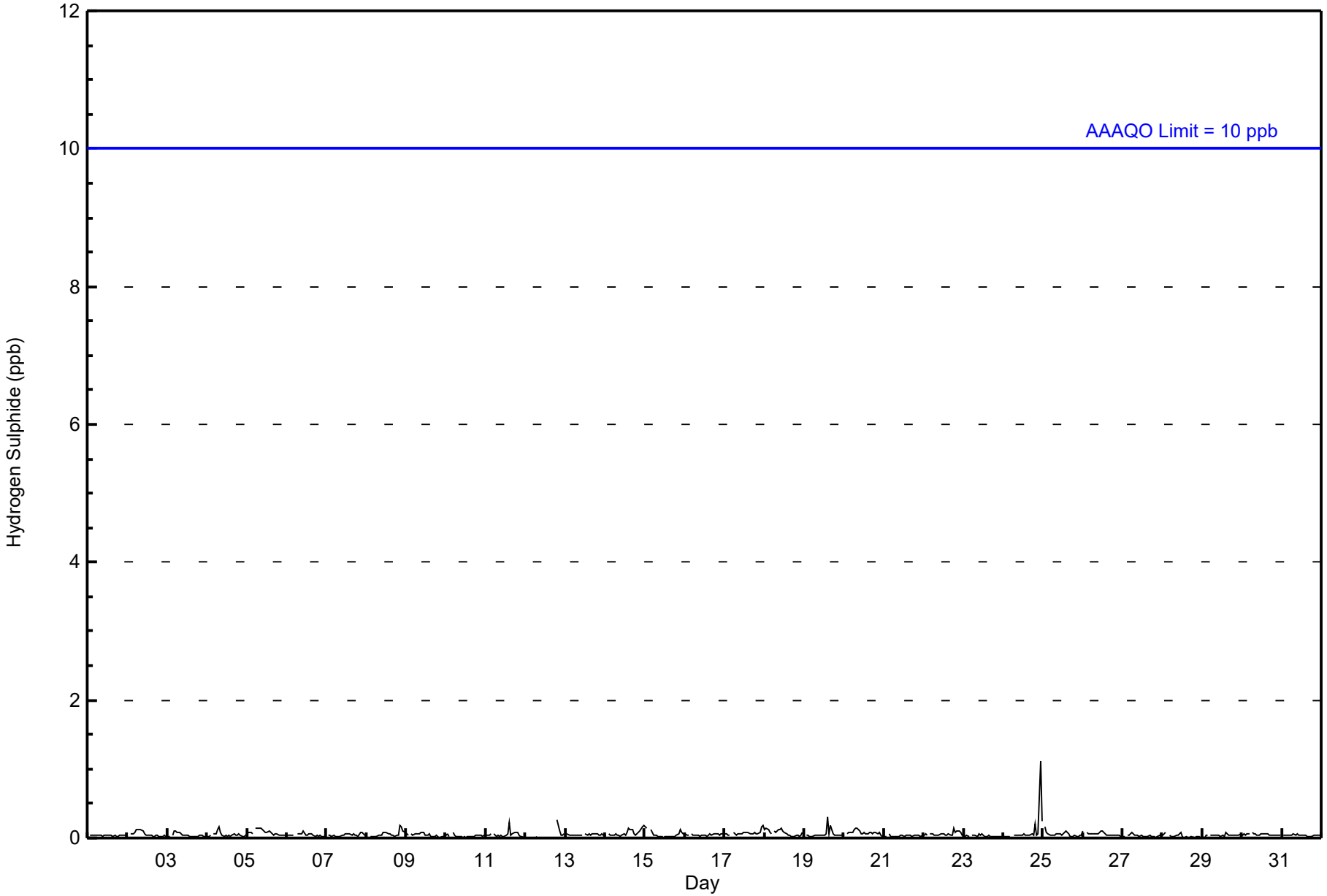
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Kirby North - March 2025



Hydrogen Sulphide (H_2S) - ppb
Kirby North - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	704	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: 704

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Kirby North - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	29	39	100	56	13	9	26	55	82	74	62	47	36	20	27	29	704
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	29	39	100	56	13	9	26	55	82	74	62	47	36	20	27	29	704

Total Number of Valid Hours: 704

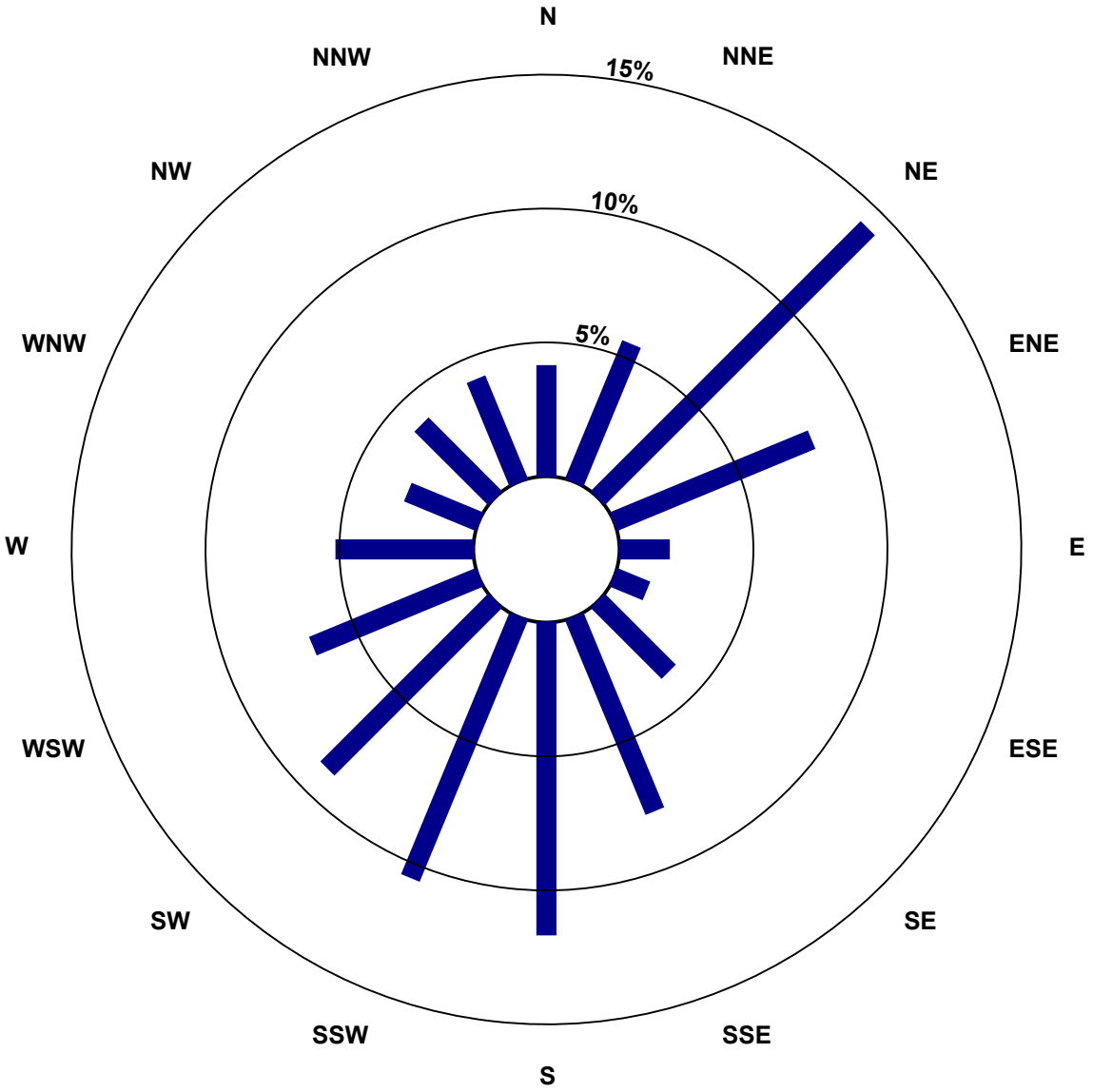
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Hydrogen Sulphide (H_2S) - ppb

Kirby North



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

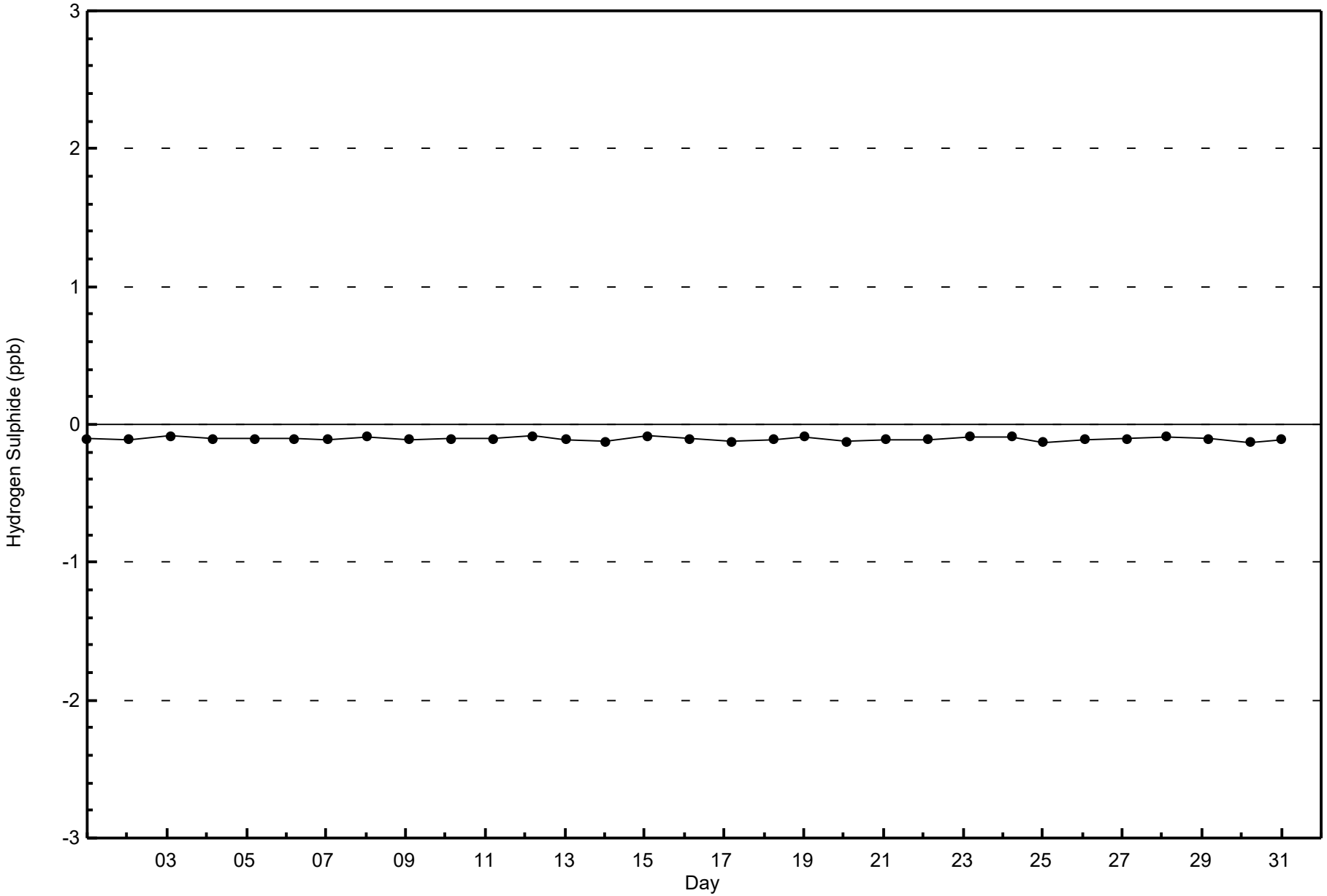
Total Number of Valid Hours: 704

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Kirby North - March 2025

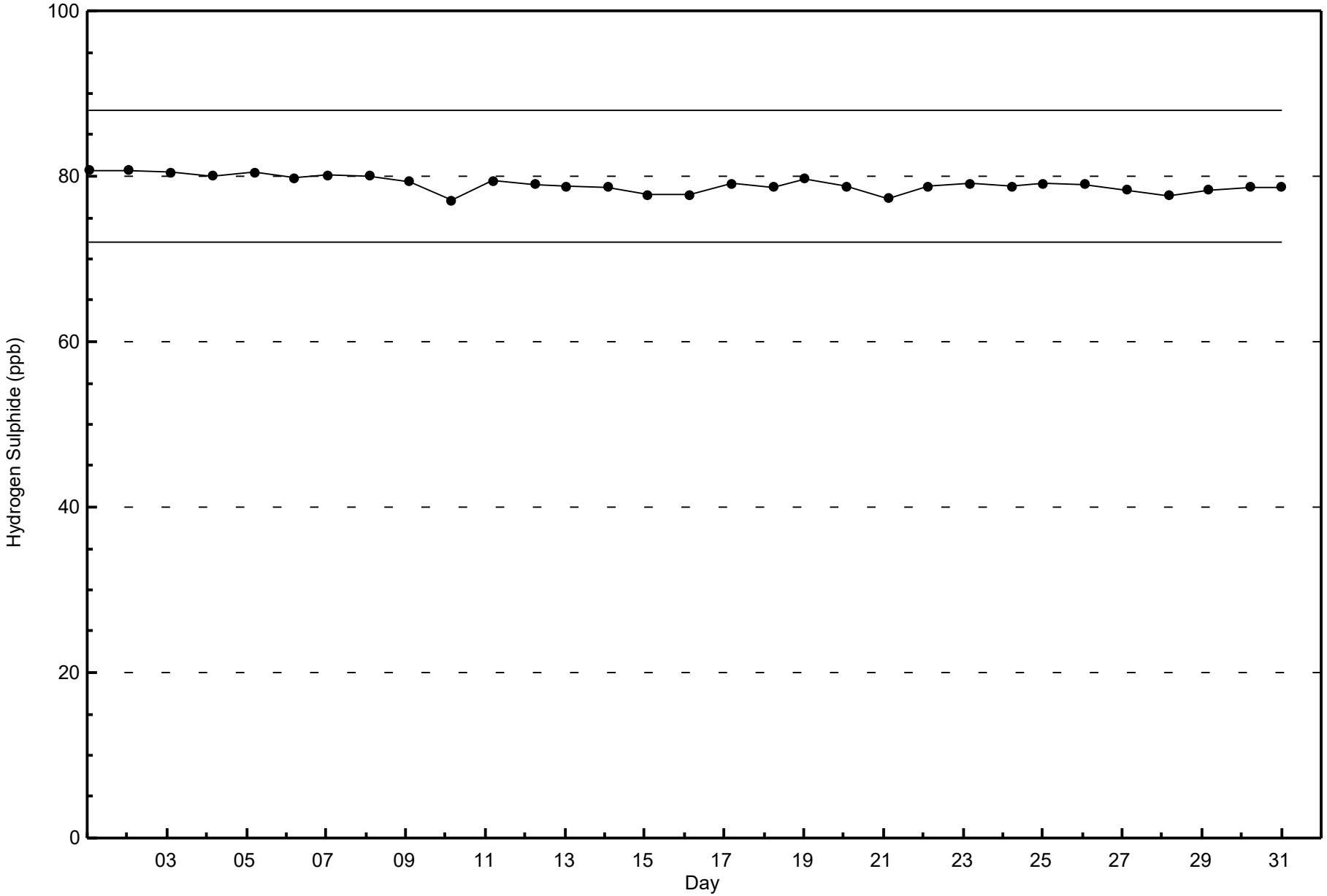


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Kirby North - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Kirby North - March 2025

Maximum Value: 2.6 ppm on Mar 17 00:00

Maximum Daily Average: 2.3 ppm on Mar 17

Minimum Value: 2.1 ppm on Mar 8 16:00

Minimum Daily Average: 2.2 ppm on Mar 8

Maximum Diurnal Average: 2.3 ppm at hour 6

Minimum Diurnal Average: 2.2 ppm at hour 13

Monthly Average: 2.26 ppm

Percentiles: P_1 = 2.1 P_{10} = 2.2 Q_1 = 2.2 Median = 2.3 Q_3 = 2.3 P_{90} = 2.3 P_{99} = 2.4

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	35
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	2.3	2.4	2.4	2.4	2.4	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	2.3	2.3	2.3	2.3	2.3	2.3	2.4
2-Mar	Z	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.2	2.2	2.2	2.5	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.5
3-Mar	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.3
4-Mar	2.3	2.4	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.4
5-Mar	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.2	2.3	2.2	2.3
6-Mar	2.3	2.3	2.4	2.3	Z	2.3	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.4
7-Mar	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
8-Mar	Z	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	2.3	2.3	2.2	2.2	2.3
9-Mar	2.2	Z	2.3	2.2	2.2	2.3	2.3	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	2.3	2.2	2.3
10-Mar	2.2	2.2	Z	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.3
11-Mar	2.2	2.3	2.3	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3
12-Mar	2.2	2.2	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.2	2.3
13-Mar	2.3	2.3	2.3	2.3	2.3	Z	2.2	C	C	C	C	M	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
14-Mar	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	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.3	2.4
15-Mar	2.4	Z	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4
16-Mar	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.6	2.3	2.6
17-Mar	2.3	2.3	2.3	Z	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.3	2.4
18-Mar	2.4	2.4	2.4	2.4	Z	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4
19-Mar	2.3	2.4	2.4	2.4	2.4	Z	2.4	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.4
20-Mar	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	2.2	2.3	2.3	2.3	2.3	2.3
21-Mar	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.3
22-Mar	2.3	2.3	Z	2.3	2.3	2.3	2.4	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.4
23-Mar	2.3	2.3	2.3	Z	2.4	2.4	2.4	2.4	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.4	2.3	2.4
24-Mar	2.3	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.3
25-Mar	2.3	2.3	2.3	2.3	2.3	Z	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	2.3	2.3	2.3	2.3	2.3	2.4
26-Mar	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4
27-Mar	2.3	Z	2.3	2.3	2.3	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	2.3	2.3	2.4
28-Mar	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
29-Mar	2.3	2.3	2.3	Z	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	2.4	2.4	2.3	2.4
30-Mar	2.4	2.4	2.3	2.3	Z	2.5	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	2.4	2.4	2.4	2.3	2.5
31-Mar	2.4	2.4	2.3	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4
	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	Diurnal Average	
	2.4	2.4	2.4	2.4	2.4	2.5	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.5	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.6	Diurnal Maximum	

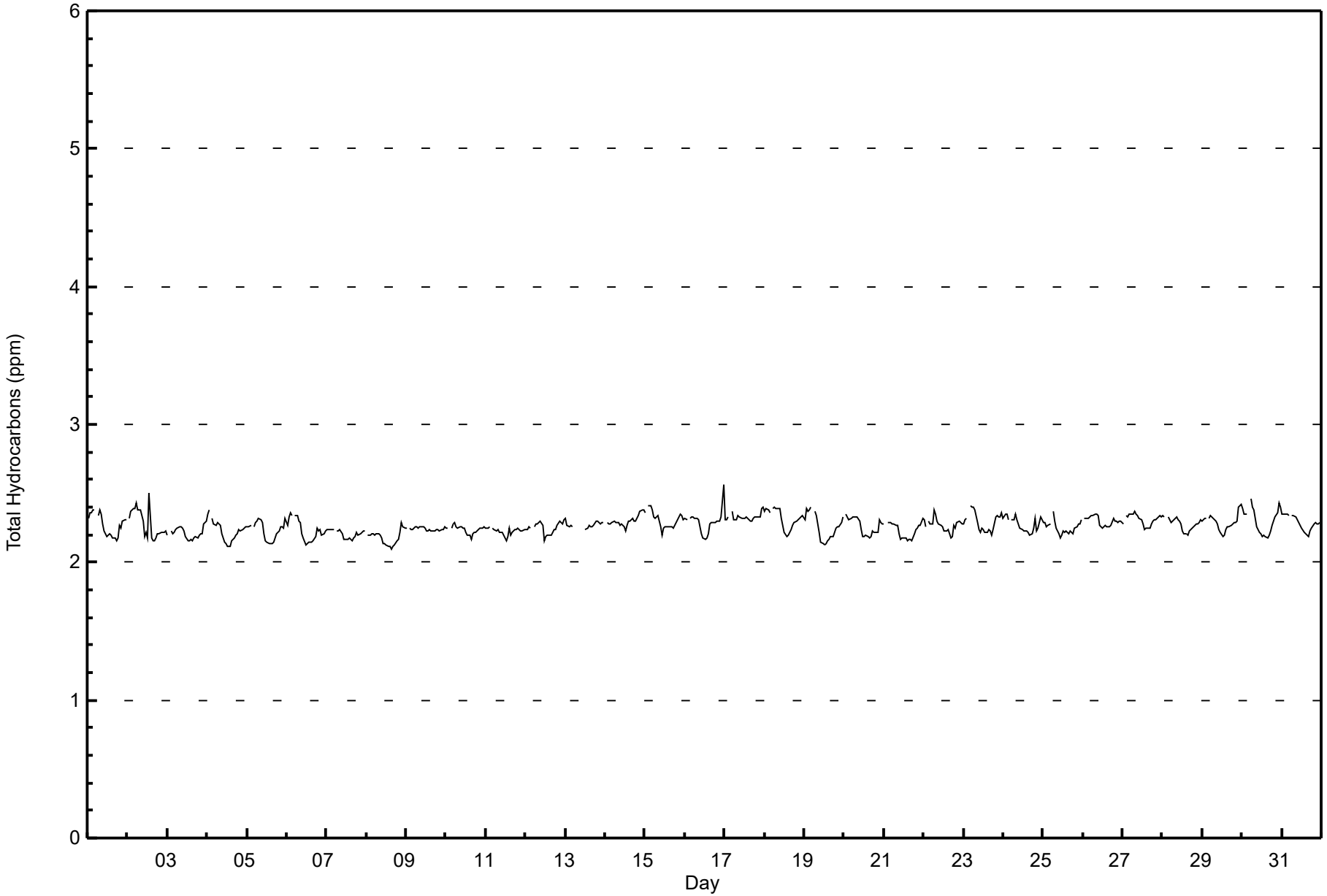
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Kirby North - March 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm

Kirby North - March 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	0	0.00	0.00
2.1 - 3.0	708	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: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Kirby North - March 2025

Concentration Ranges (ppm)	Wind Direction N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Totals
0 - 2.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.1 - 3.0	29	39	103	57	13	8	23	55	82	77	63	46	37	20	27	29	708
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	39	103	57	13	8	23	55	82	77	63	46	37	20	27	29	708

Total Number of Valid Hours: 708

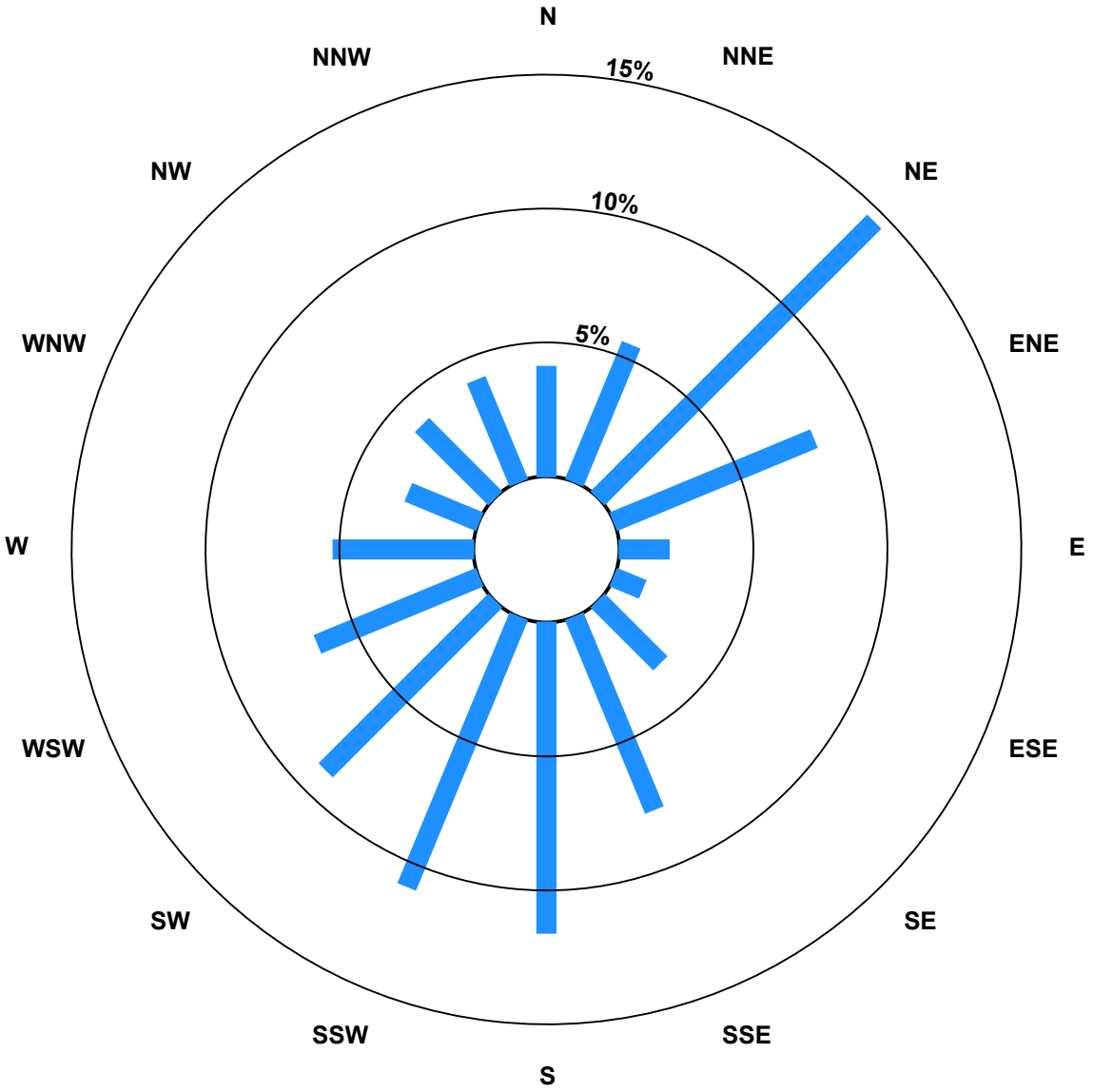
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Total Hydrocarbons (THC) - ppm

Kirby North



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

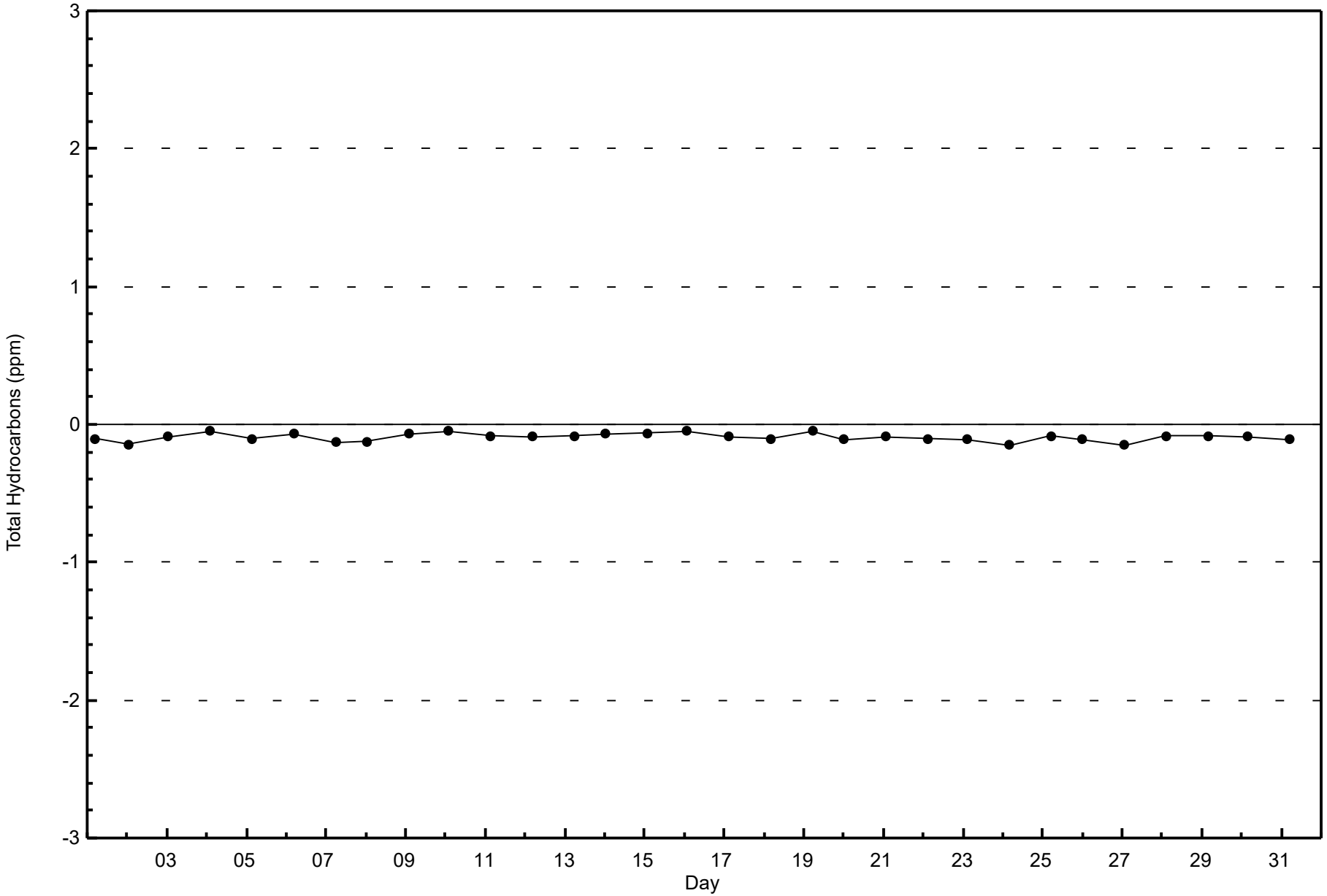
Total Number of Valid Hours: 708

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Kirby North - March 2025

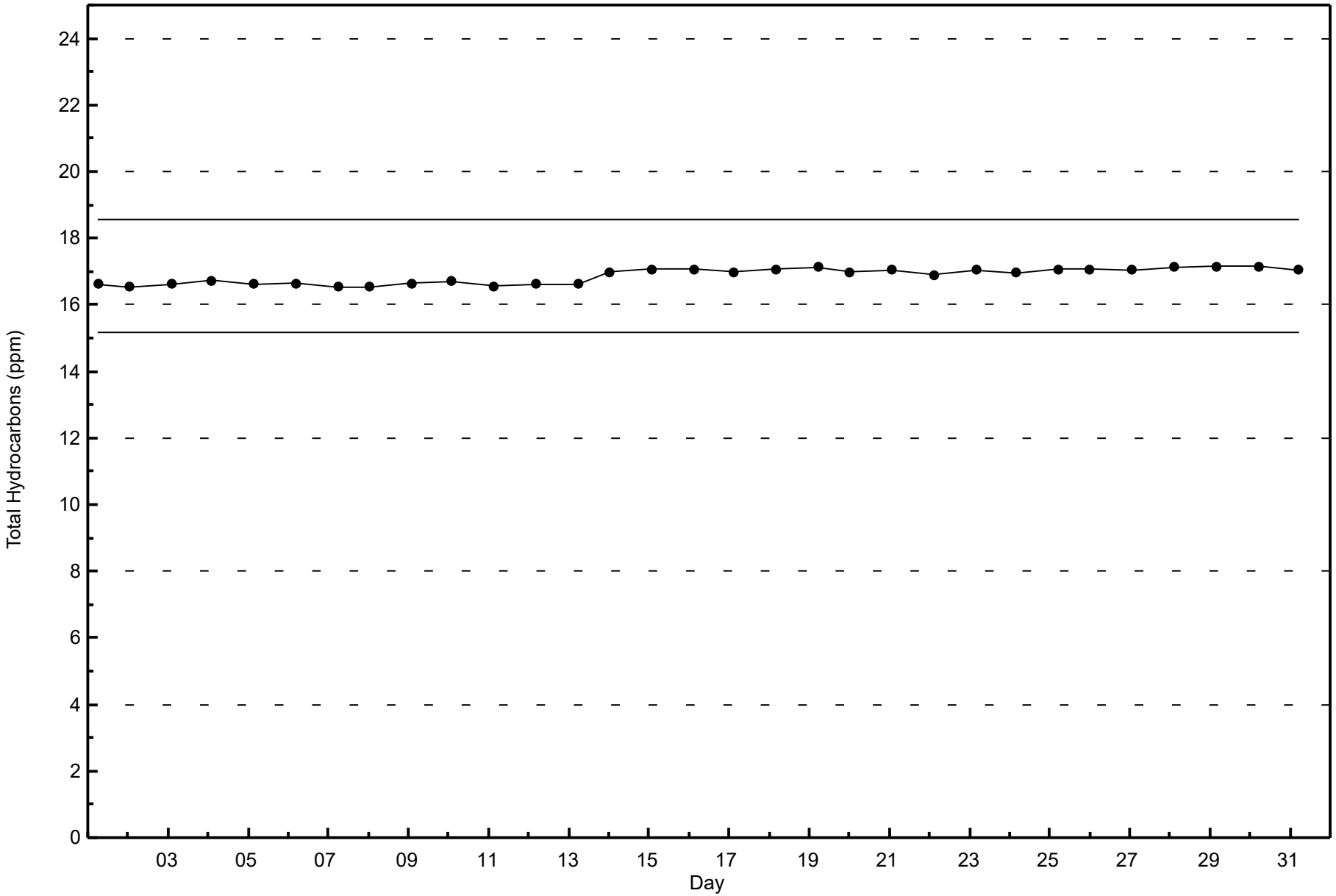


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Kirby North - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Kirby North - March 2025

Maximum Value: 3.6 ppb on Mar 8 15:00

Maximum Daily Average: 0.8 ppb on Mar 8

Minimum Value: 0.0 ppb on Mar 1 03:00

Minimum Daily Average: 0.1 ppb on Mar 13

Maximum Diurnal Average: 0.7 ppb at hour 11

Minimum Diurnal Average: 0.0 ppb at hour 22

Monthly Average: 0.25 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.3 P_{90} = 0.7 P_{99} = 2.3

Hours in Service:	744
Hours of Data:	704
Hours of Missing Data:	40
Hours of Calibration:	39
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.3	0.5	0.8	0.5	0.2	0.3	0.3	0.2	0.1	0.2	0.5	0.2	0.0	0.1	0.0	0.0	0.0	0.2	0.8
2-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.2	0.5	0.9	1.2	0.7	0.7	0.3	0.1	0.1	0.0	0.0	0.1	0.0	0.2	0.1	0.1	0.1	0.2	1.2
3-Mar	0.0	0.0	0.1	0.1	0.0	Z	0.0	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
4-Mar	Z	0.1	0.3	0.7	0.3	0.3	1.0	0.9	1.4	0.3	0.3	0.3	0.4	0.2	0.2	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.4
5-Mar	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.2	0.4	0.8	0.8	0.5	0.6	0.7	0.9	0.3	0.1	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.3	0.9
6-Mar	0.0	0.0	Z	0.0	0.1	0.3	0.1	0.2	0.5	0.5	1.5	0.6	1.0	1.4	1.3	1.6	0.7	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.4	1.6
7-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.2	0.4	1.0	1.4	1.3	1.6	1.3	0.6	0.6	0.1	0.3	0.0	0.7	0.1	0.2	0.2	0.5	1.6
8-Mar	0.1	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.3	0.9	3.6	2.5	2.4	3.6	3.6	1.3	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	3.6
9-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.3	0.7	1.0	1.0	0.4	0.4	0.7	0.7	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0
10-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
11-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.3	0.4	0.4	0.4	0.5	0.4	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5
12-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.2	0.6	1.0	C	C	C	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	--	1.0
13-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	M	0.3	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
14-Mar	0.0	0.0	0.1	0.0	Z	0.1	0.1	0.2	0.2	0.2	0.9	0.8	0.8	0.7	1.1	0.8	1.0	0.3	0.1	0.0	0.1	0.0	0.1	0.1	0.3	1.1
15-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.5	0.7	0.4	0.1	0.1	0.2	0.4	0.5	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
16-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.4	0.3	0.4	0.4	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
17-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.3	0.4	0.7	0.7	0.6	0.9	0.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.9
18-Mar	0.0	0.0	Z	0.1	0.0	0.3	0.1	0.4	1.3	1.8	2.0	1.3	1.1	0.2	0.2	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.2	0.5	0.4	2.0
19-Mar	0.2	0.0	0.0	Z	0.0	0.0	0.1	0.4	0.3	0.4	0.4	0.1	0.2	0.5	1.3	0.4	1.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.2	1.3
20-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.5	0.5	0.5	0.4	0.6	0.7	0.4	0.4	0.5	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
21-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.4	0.5	0.5	0.4	0.3	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
22-Mar	Z	0.0	0.0	0.0	0.1	0.0	0.1	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.4	0.7	0.4	0.2	0.8	0.6	0.4	0.2	0.2	0.1	0.3	0.8
23-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.3	0.5	0.7	0.5	0.6	0.7	0.4	0.5	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
24-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.4	0.1	0.2	0.1	0.6	0.1	0.3	1.1	0.7	0.2	1.1
25-Mar	0.6	0.6	0.3	Z	0.1	0.0	0.1	0.2	0.2	0.7	0.3	0.5	0.7	2.5	2.2	1.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.5
26-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.3	0.4	0.9	1.8	1.1	0.8	0.5	0.5	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.8
27-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.2	0.2	0.2	0.3	0.4	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
28-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8	1.4	2.3	2.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.3
29-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.3
30-Mar	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.4	0.2	0.7	0.0	0.4	0.2	0.0	0.0	0.0	0.0	0.2	0.7
31-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.2	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	0.1	0.2
	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.4	0.5	0.7	0.7	0.6	0.6	0.6	0.4	0.3	0.1	0.1	0.0	0.1	0.0	0.1	0.1	Diurnal Average	
	0.6	0.6	0.3	0.7	0.3	0.3	1.0	0.9	1.4	1.8	3.6	2.5	2.4	3.6	3.6	1.6	1.0	0.5	0.8	0.6	0.7	0.3	1.1	0.7	Diurnal Maximum	

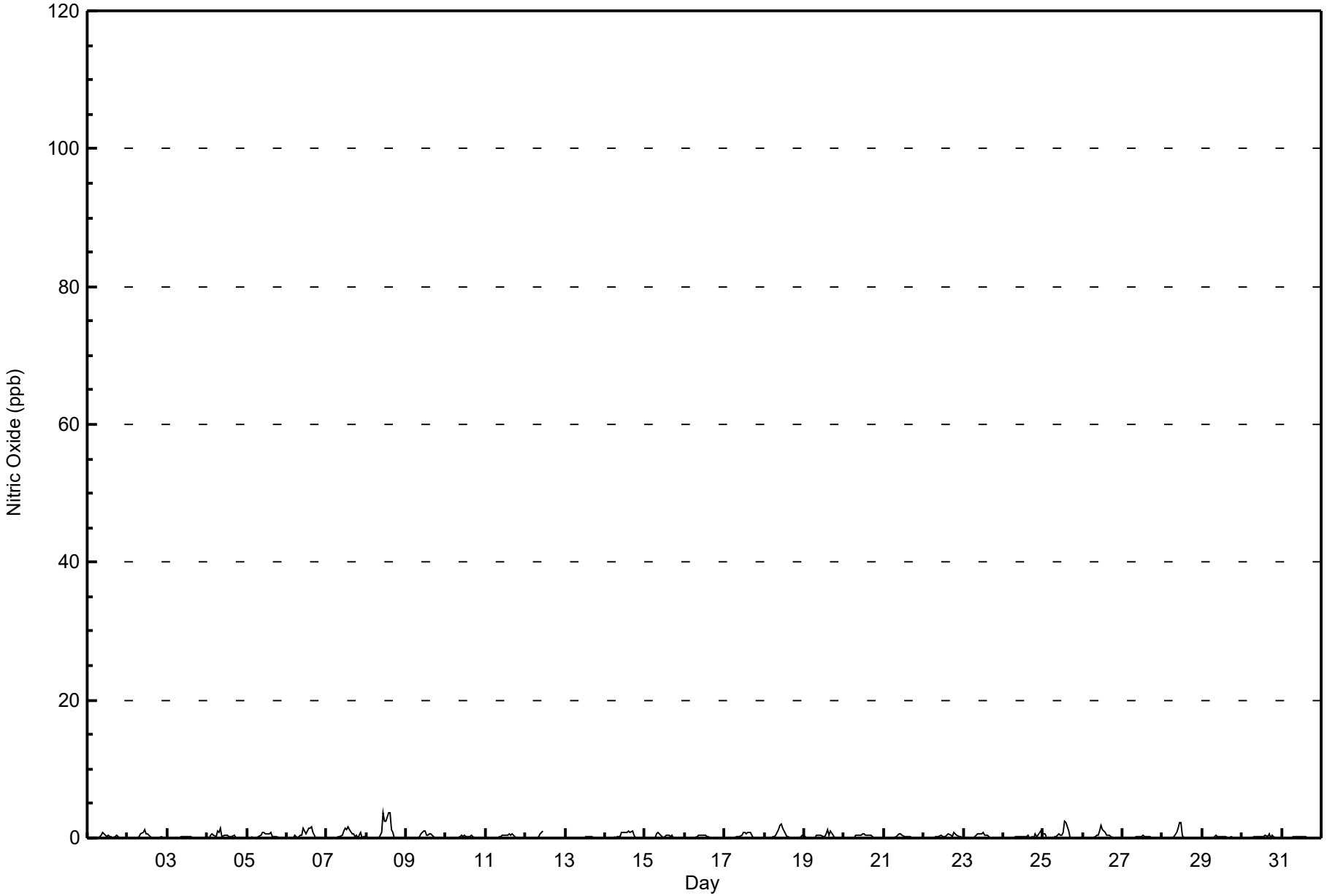
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Kirby North - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	704	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 704

Total Number of Hours: 744

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	26	38	100	56	13	9	24	56	82	76	62	47	36	20	28	31	704
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	26	38	100	56	13	9	24	56	82	76	62	47	36	20	28	31	704

Total Number of Valid Hours: 704

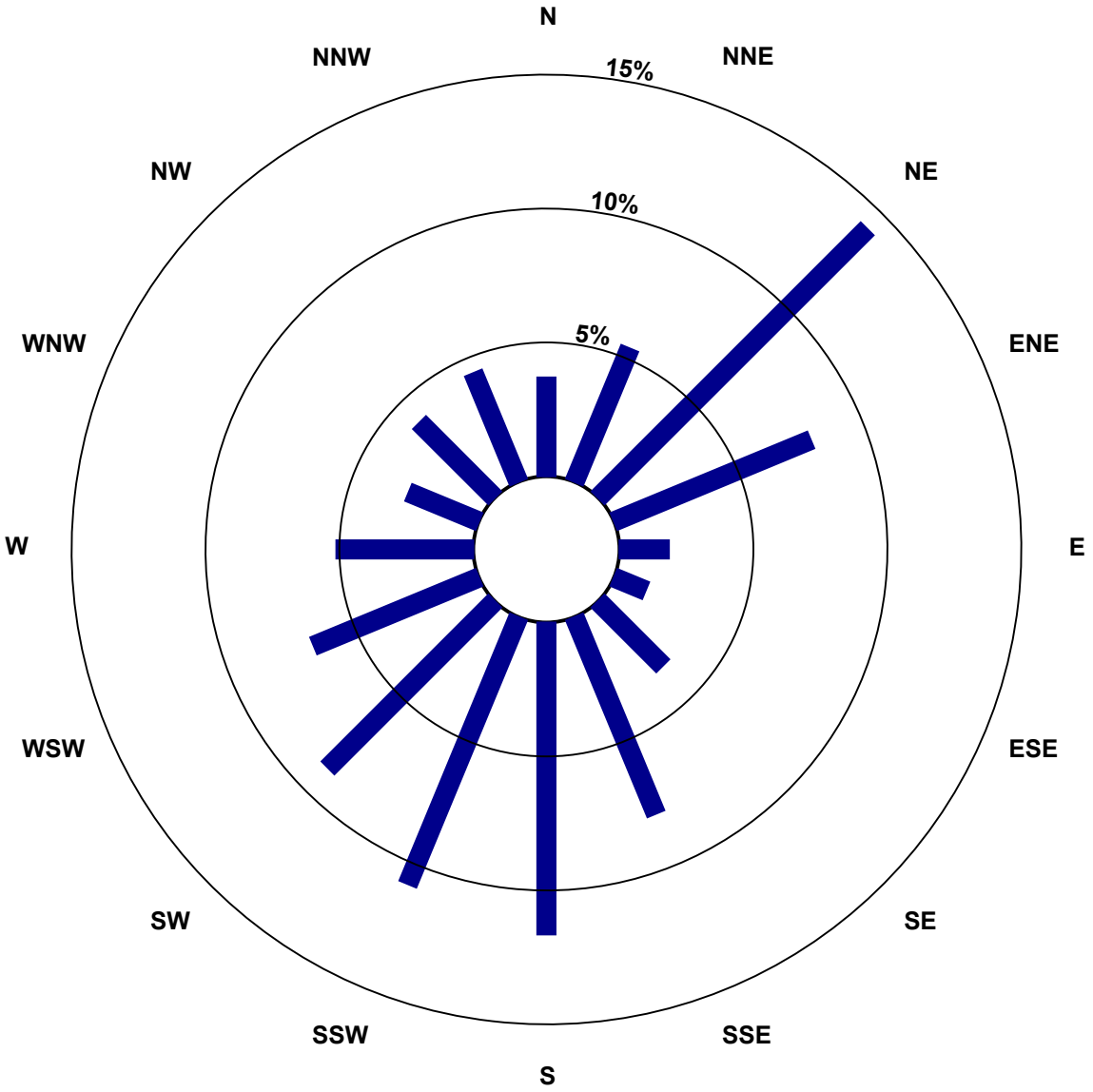
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitric Oxide (NO) - ppb

Kirby North



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

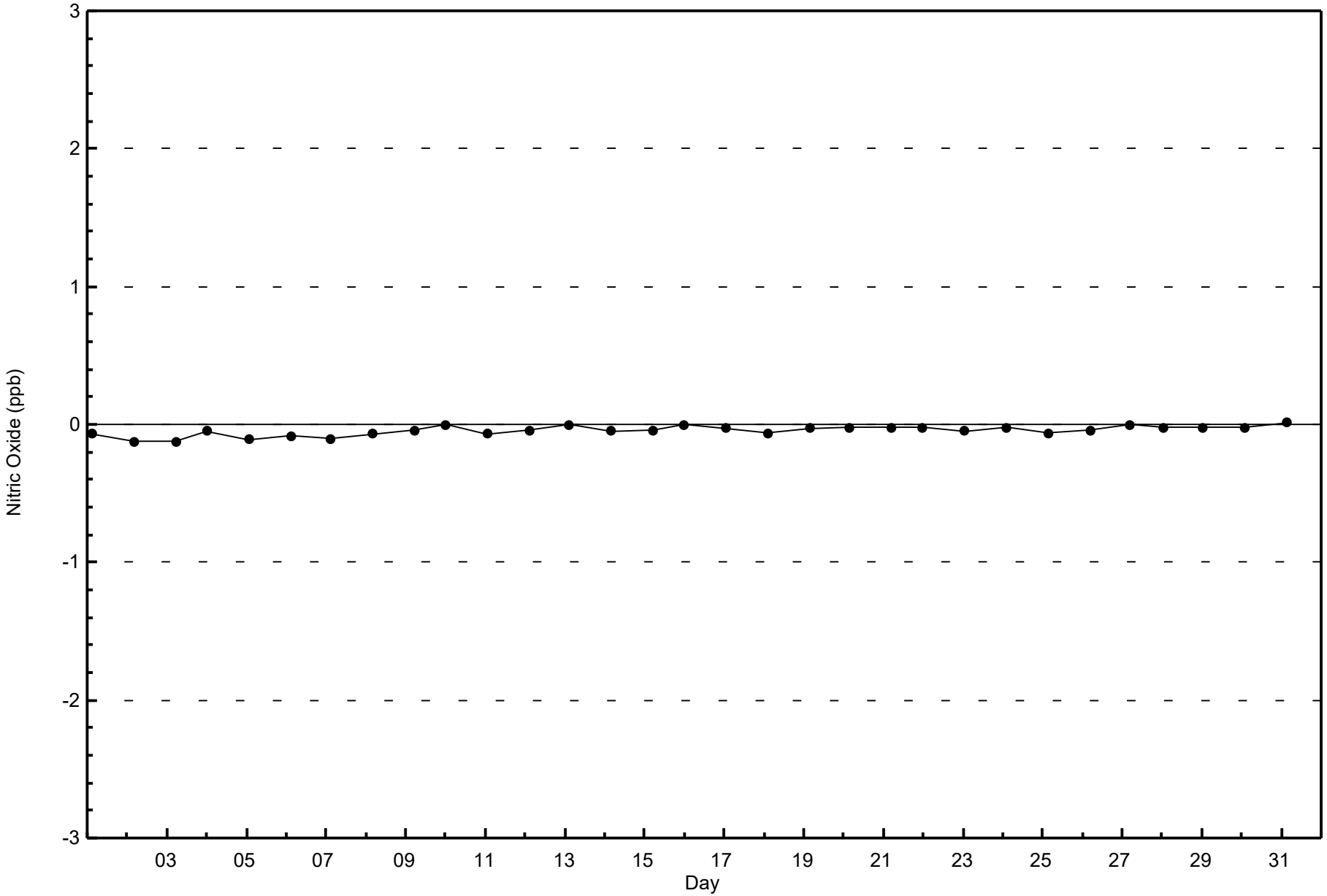
Total Number of Valid Hours: 704

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Kirby North - March 2025

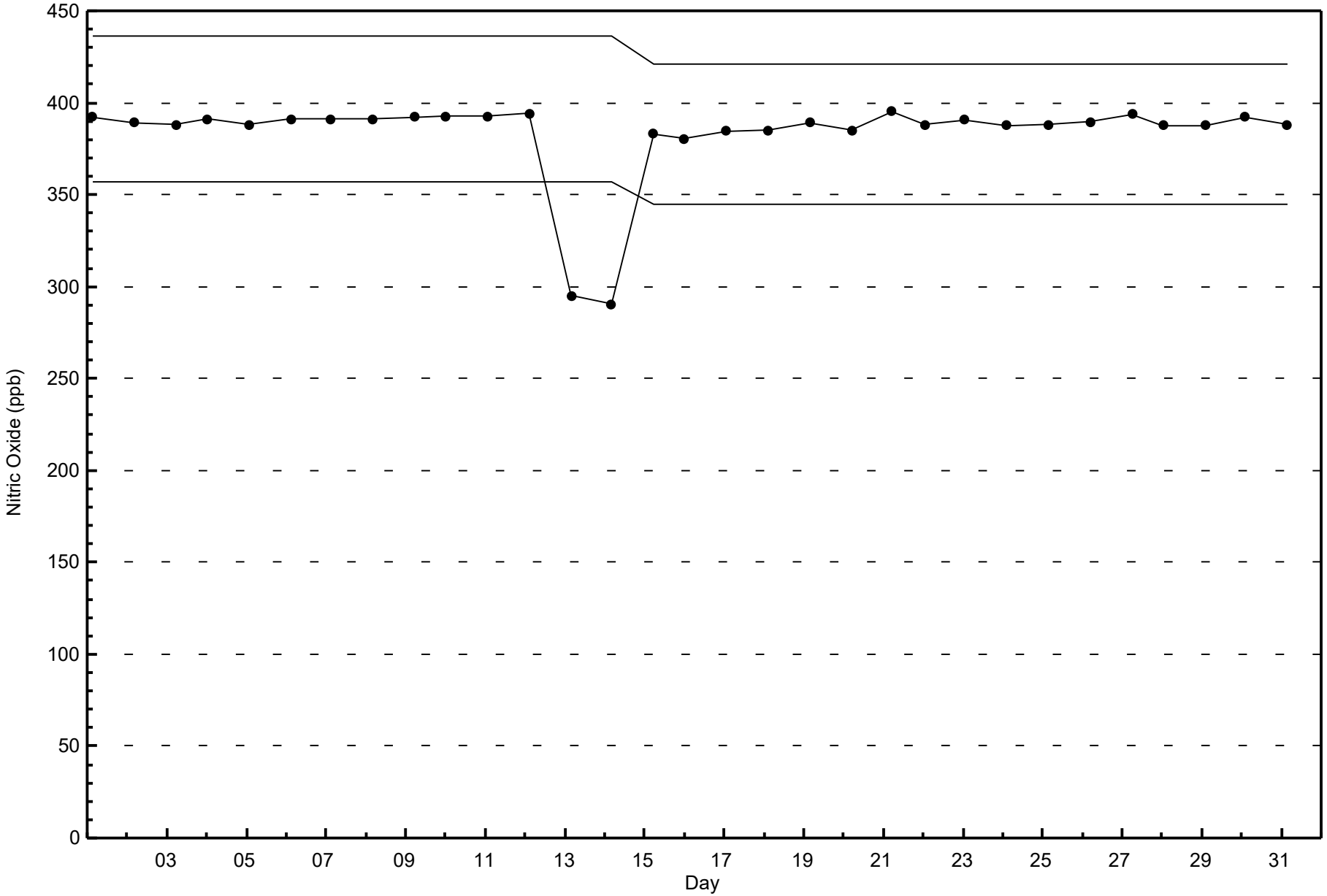


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Kirby North - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Kirby North - March 2025

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

Maximum Value: 9.8 ppb on Mar 4 04:00

Maximum Daily Average: 3.0 ppb on Mar 4

Minimum Value: 0.2 ppb on Mar 14 03:00

Minimum Daily Average: 0.8 ppb on Mar 27

Maximum Diurnal Average: 2.2 ppb at hour 8

Minimum Diurnal Average: 1.3 ppb at hour 18

Monthly Average: 1.68 ppb

Percentiles: $P_1 = 0.3$ $P_{10} = 0.6$ $Q_1 = 1.0$ Median = 1.4 $Q_3 = 2.1$ $P_{90} = 3.1$ $P_{99} = 5.4$

Hours in Service:	744
Hours of Data:	704
Hours of Missing Data:	40
Hours of Calibration:	39
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	2.0	3.3	2.9	Z	2.8	1.8	3.8	5.5	2.7	2.3	1.7	1.4	1.2	0.8	1.0	0.7	1.0	2.5	3.9	2.7	3.6	2.0	1.7	1.5	2.3	5.5
2-Mar	1.8	2.1	2.8	4.2	Z	5.2	5.8	5.4	4.4	3.4	2.7	1.8	2.0	1.4	0.8	0.6	0.7	0.5	2.3	2.1	1.6	1.1	2.5	1.8	2.5	5.8
3-Mar	0.3	0.3	0.5	0.3	1.3	Z	1.4	1.3	1.8	1.2	1.1	0.9	0.9	0.8	1.1	0.7	0.8	0.9	0.5	2.3	1.2	5.7	2.6	0.8	1.2	5.7
4-Mar	Z	2.6	7.7	9.8	4.5	3.8	9.2	6.5	4.4	0.9	0.9	1.2	1.1	0.8	0.8	1.3	1.8	1.2	1.4	1.6	1.3	1.7	1.7	2.2	3.0	9.8
5-Mar	1.6	Z	3.0	1.3	1.7	2.9	2.6	3.7	3.3	2.3	1.9	1.5	1.4	1.7	2.0	1.1	1.0	1.4	3.4	1.6	1.3	3.0	1.4	1.8	2.0	3.7
6-Mar	1.7	1.6	Z	1.8	2.7	4.8	3.1	2.6	1.8	1.4	2.9	1.3	2.0	2.7	2.4	2.7	2.0	1.0	1.5	2.3	1.2	0.6	0.7	0.9	2.0	4.8
7-Mar	1.0	0.8	0.8	Z	1.1	1.0	0.9	1.1	1.1	1.0	1.6	2.1	2.0	2.6	2.7	1.7	2.6	1.7	3.6	1.2	2.7	1.9	2.1	2.0	1.7	3.6
8-Mar	2.7	1.4	0.7	0.8	Z	0.9	1.0	1.0	1.3	1.5	4.2	3.1	2.6	4.2	5.0	2.5	2.2	0.6	0.3	0.3	2.2	4.9	2.7	2.1	2.1	5.0
9-Mar	2.3	1.5	1.2	1.0	0.8	Z	2.4	2.3	2.6	3.2	2.9	2.2	1.5	1.6	1.9	2.0	1.3	1.4	3.0	2.3	0.7	1.2	1.6	3.9	1.9	3.9
10-Mar	Z	3.4	2.1	1.1	1.3	1.7	0.8	0.6	1.3	1.0	0.7	0.8	0.6	0.6	0.4	0.6	0.8	1.0	1.8	2.6	3.5	3.0	2.6	2.9	1.5	3.5
11-Mar	2.7	Z	4.2	4.1	3.2	2.4	1.9	2.0	1.2	1.3	1.2	1.2	1.4	1.5	2.3	2.0	3.0	3.1	3.6	2.2	1.2	0.5	0.4	0.3	2.0	4.2
12-Mar	0.3	0.4	Z	0.3	0.3	0.7	1.9	1.3	1.2	1.3	1.3	C	C	C	C	C	C	C	C	3.4	2.4	2.3	1.2	1.1	--	3.4
13-Mar	1.3	0.8	1.2	Z	0.8	0.8	0.7	1.0	0.8	0.5	0.5	M	2.0	1.1	1.3	1.3	1.6	1.7	2.0	1.8	0.8	0.2	0.4	0.2	1.0	2.0
14-Mar	0.3	0.2	0.2	0.3	Z	0.8	0.7	0.7	0.6	0.6	1.2	1.1	1.3	1.7	2.7	2.8	3.4	2.2	2.0	2.4	3.4	4.6	5.4	5.3	1.9	5.4
15-Mar	4.6	4.3	3.7	3.4	3.0	Z	3.4	2.4	1.8	0.8	0.5	0.4	0.6	1.0	1.1	0.8	1.1	0.6	0.7	1.3	3.3	3.5	2.4	2.0	2.0	4.6
16-Mar	Z	1.5	2.0	1.7	1.5	1.6	1.9	1.7	1.3	0.8	0.9	1.0	1.1	0.9	1.1	1.1	1.3	1.6	1.5	1.7	1.6	1.7	1.4	3.3	1.5	3.3
17-Mar	1.6	Z	1.4	1.4	2.0	1.7	1.8	2.1	2.3	1.9	1.7	2.4	2.6	2.2	2.8	3.0	2.6	1.6	1.5	1.4	1.1	2.2	4.6	4.8	2.2	4.8
18-Mar	3.1	2.8	Z	1.6	1.6	4.4	2.9	3.0	3.2	3.1	3.1	2.0	1.6	1.1	1.0	0.9	0.9	1.1	1.2	1.2	1.5	1.5	2.5	4.3	2.2	4.4
19-Mar	1.6	1.6	1.6	Z	2.8	2.0	1.8	2.0	1.1	1.1	1.0	0.8	0.8	1.3	2.1	1.2	2.2	2.3	2.7	2.7	0.8	0.7	1.2	1.2	1.6	2.8
20-Mar	1.5	1.7	1.2	1.2	Z	2.0	3.1	3.3	1.9	1.5	1.2	1.4	1.5	1.3	1.2	1.9	1.9	1.5	1.4	1.2	1.2	1.4	0.5	0.2	1.5	3.3
21-Mar	0.3	1.3	2.7	2.8	1.4	Z	1.4	1.5	1.4	1.4	1.4	1.3	1.2	1.4	1.4	1.4	1.4	1.5	1.7	1.6	1.6	1.5	1.3	2.1	1.5	2.8
22-Mar	Z	1.9	1.8	1.9	2.7	2.2	2.2	2.6	1.9	2.0	2.0	1.7	1.7	1.4	1.3	1.5	1.7	1.7	2.9	2.6	3.0	3.0	2.2	1.3	2.1	3.0
23-Mar	1.0	Z	1.1	0.9	0.9	1.0	0.9	1.2	1.4	1.4	1.2	1.1	1.4	1.0	1.1	0.7	0.6	0.5	0.9	0.9	0.8	0.9	0.7	0.7	1.0	1.4
24-Mar	0.4	0.7	Z	0.7	0.7	0.8	1.0	2.0	1.1	1.3	1.1	1.1	1.1	1.1	0.8	1.0	0.8	1.3	0.8	2.4	0.8	1.2	3.2	3.7	1.3	3.7
25-Mar	3.5	2.9	2.2	Z	1.8	1.0	1.1	1.2	0.6	1.2	0.9	1.1	1.3	3.5	3.2	2.0	0.5	0.4	0.3	0.3	0.3	0.3	0.4	0.8	1.3	3.5
26-Mar	1.4	1.0	1.1	1.1	Z	1.4	1.4	1.1	1.5	1.0	1.8	2.8	2.0	1.6	1.3	1.4	1.8	1.6	1.6	0.9	1.2	1.2	1.1	0.5	1.4	2.8
27-Mar	0.4	0.2	0.4	0.3	0.6	Z	1.6	1.5	1.3	1.1	0.9	0.8	1.1	0.6	1.0	1.0	1.2	0.6	0.7	0.5	0.5	1.1	0.9	0.8	0.8	1.6
28-Mar	Z	1.1	1.2	0.9	1.2	0.6	0.7	1.7	3.1	3.6	4.0	3.8	0.9	0.4	0.4	0.3	0.3	0.8	0.5	0.4	0.6	0.7	0.6	0.5	1.2	4.0
29-Mar	0.7	Z	1.8	1.3	0.8	1.0	1.1	1.5	1.3	0.8	0.7	0.6	0.7	0.7	0.9	0.7	0.6	0.9	1.1	1.4	1.6	2.3	0.8	0.8	1.0	2.3
30-Mar	1.3	1.2	Z	1.6	0.8	0.8	0.9	1.1	1.0	0.8	0.7	0.8	1.2	1.2	1.9	1.5	1.1	0.8	2.1	1.6	1.5	0.9	1.4	1.1	1.2	2.1
31-Mar	1.0	1.0	1.3	Z	1.3	1.6	2.0	1.9	1.9	1.7	1.5	1.3	1.3	1.3	1.2	1.1	1.0	1.0	1.3	1.9	1.9	1.7	1.4	1.4	1.4	2.0
	1.6	1.6	2.0	1.8	1.7	1.9	2.1	2.2	1.8	1.5	1.6	1.5	1.4	1.5	1.6	1.4	1.4	1.3	1.7	1.7	1.6	1.9	1.7	1.8	Diurnal Average	
	4.6	4.3	7.7	9.8	4.5	5.2	9.2	6.5	4.4	3.6	4.2	3.8	2.6	4.2	5.0	3.0	3.4	3.1	3.9	3.4	3.6	5.7	5.4	5.3	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

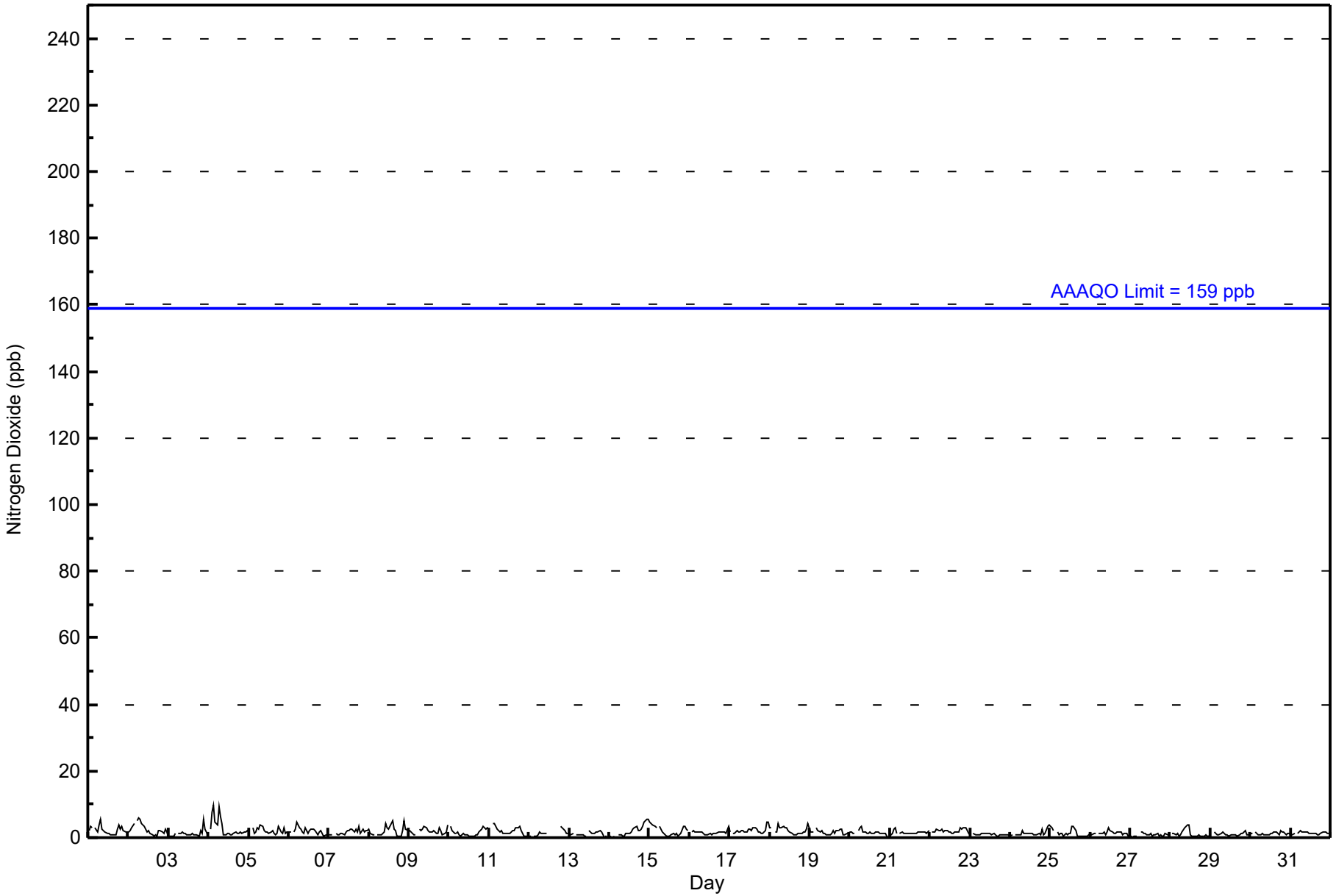
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Kirby North - March 2025



Nitrogen Dioxide (NO_2) - ppb
Kirby North - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	704	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 704

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Kirby North - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	26	38	100	56	13	9	24	56	82	76	62	47	36	20	28	31	704
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	26	38	100	56	13	9	24	56	82	76	62	47	36	20	28	31	704

Total Number of Valid Hours: 704

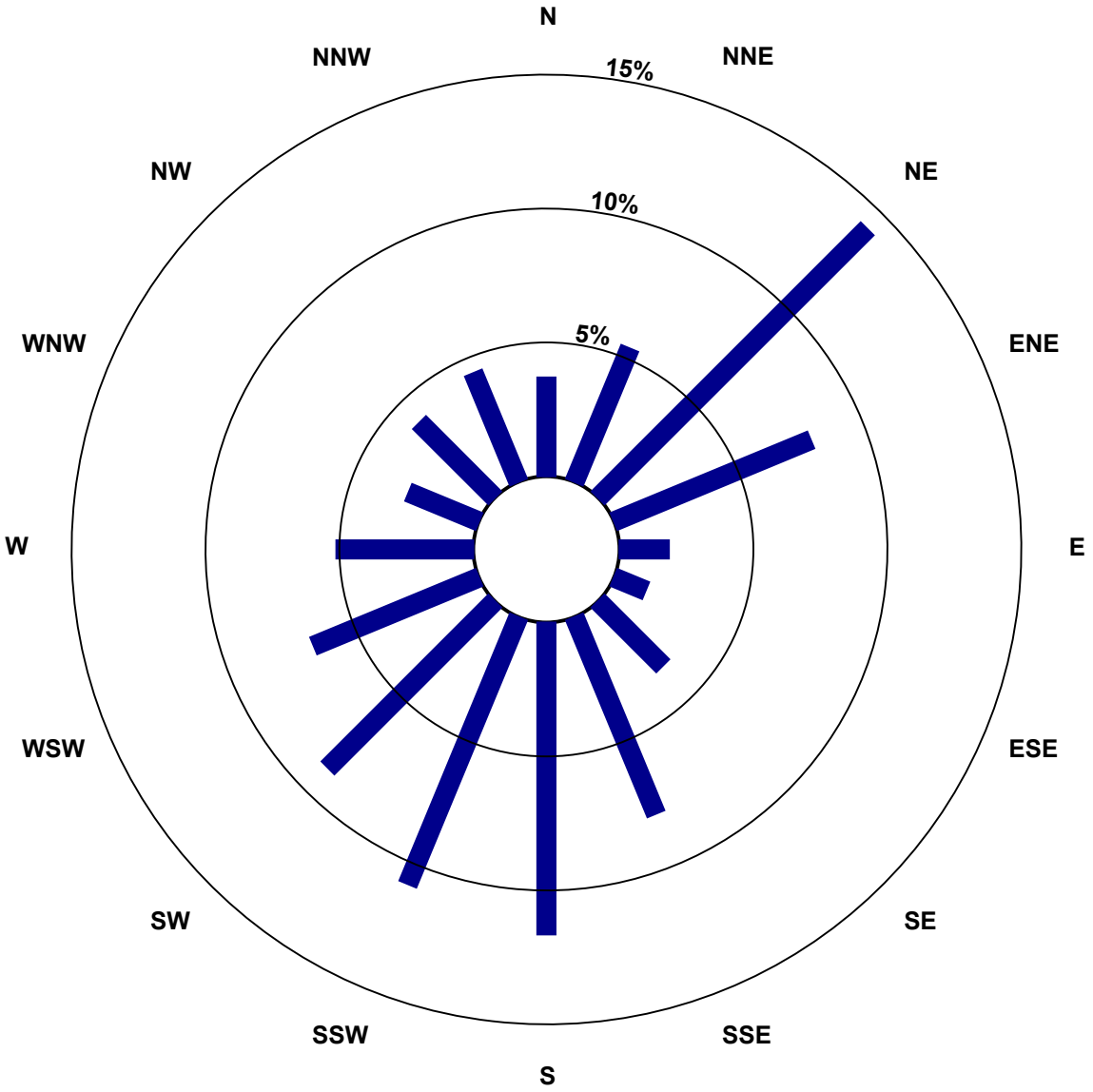
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Dioxide (NO_2) - ppb

Kirby North



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

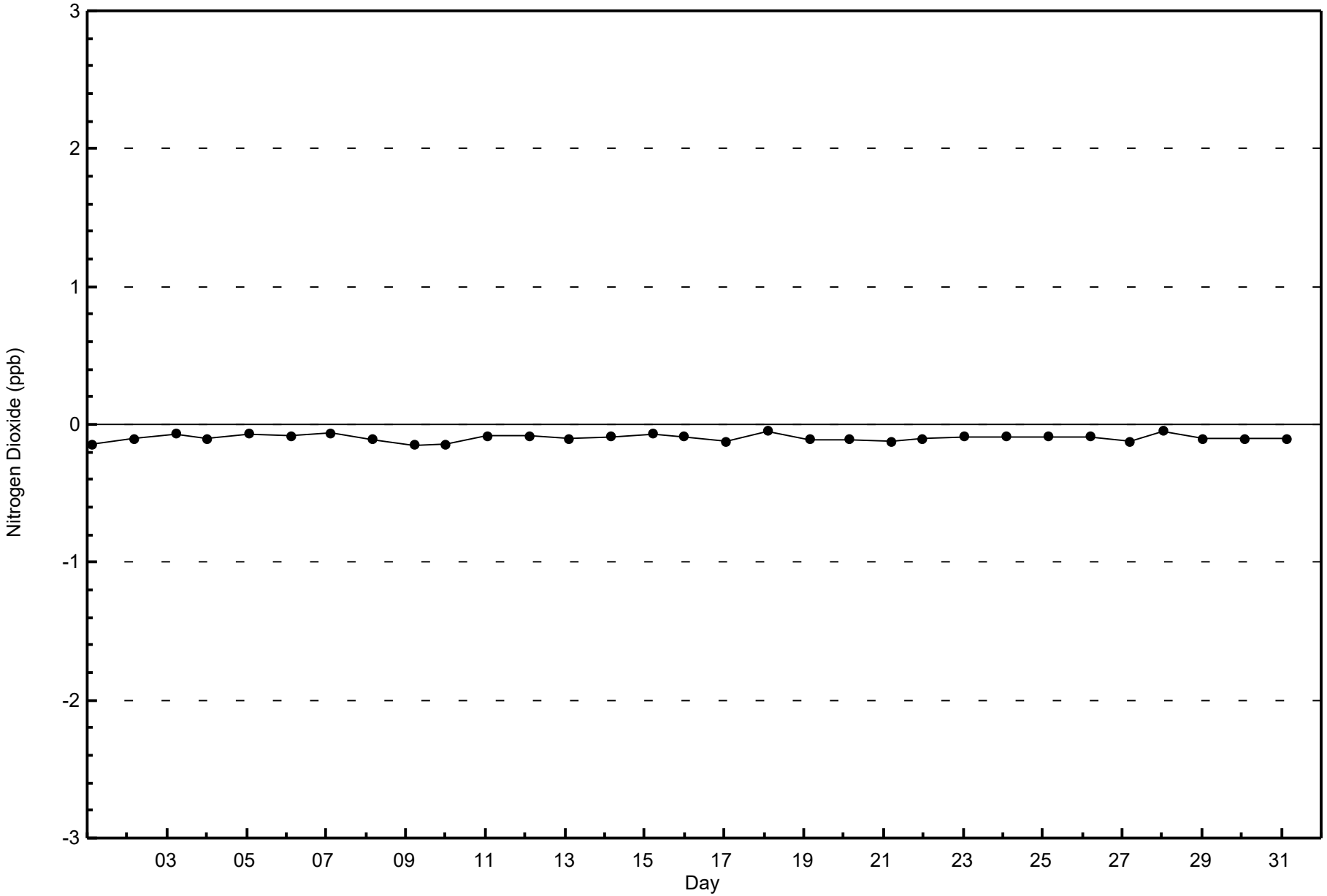
Total Number of Valid Hours: 704

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Kirby North - March 2025

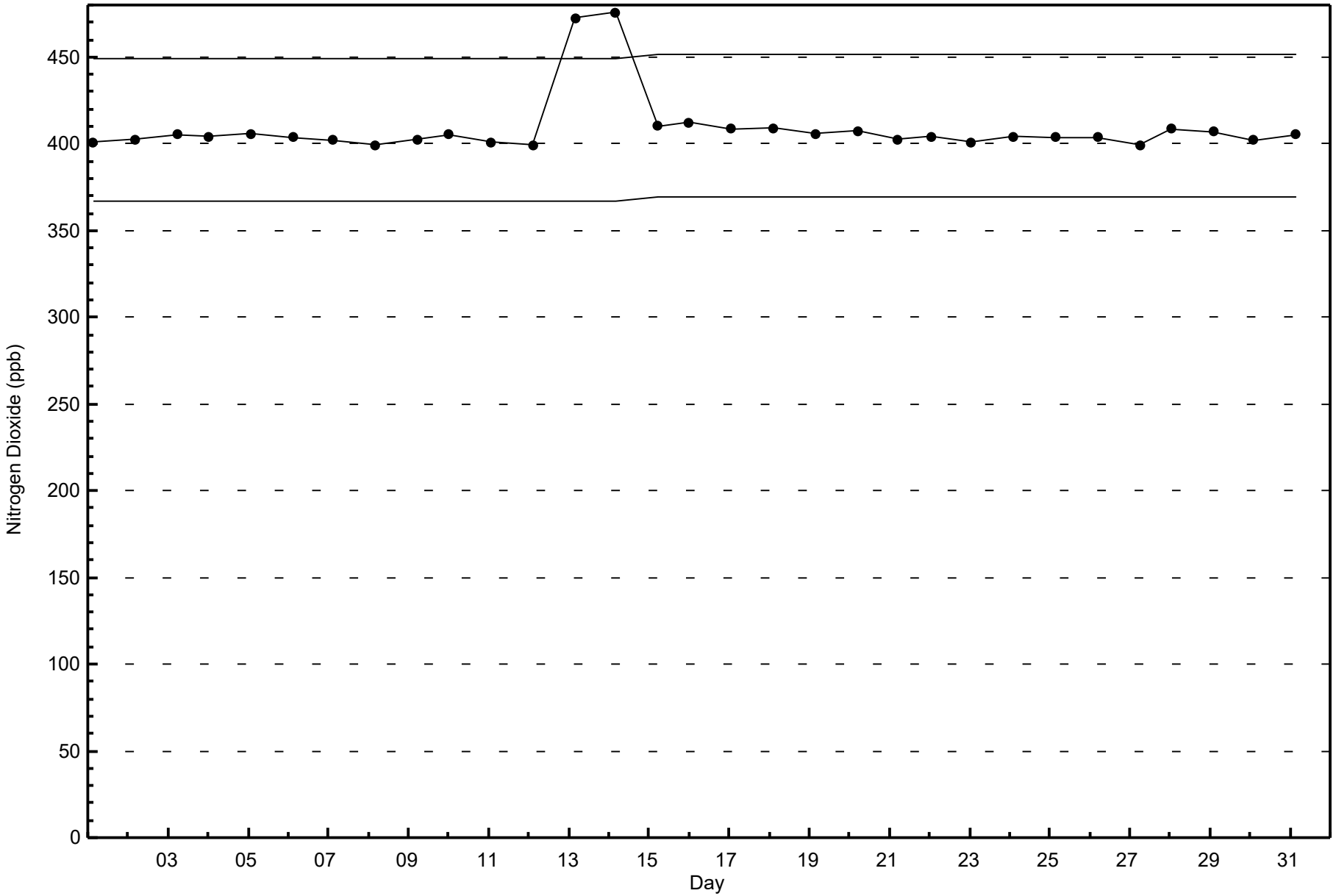


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Kirby North - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Kirby North - March 2025

Maximum Value: 10.5 ppb on Mar 4 04:00

Maximum Daily Average: 3.3 ppb on Mar 4

Minimum Value: 0.2 ppb on Mar 27 02:00

Minimum Daily Average: 0.9 ppb on Mar 27

Maximum Diurnal Average: 2.4 ppb at hour 8

Minimum Diurnal Average: 1.4 ppb at hour 18

Monthly Average: 1.92 ppb

Percentiles: P_1 = 0.3 P_{10} = 0.7 Q_1 = 1.1 Median = 1.6 Q_3 = 2.4 P_{90} = 3.7 P_{99} = 6.3

Hours in Service:	744
Hours of Data:	704
Hours of Missing Data:	40
Hours of Calibration:	39
Percent Operational Time:	99.9

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	2.0	3.3	2.9	Z	2.8	1.8	3.8	5.8	3.2	3.1	2.2	1.6	1.5	1.1	1.2	0.8	1.2	3.0	4.1	2.7	3.7	2.0	1.7	1.5	2.5	5.8
2-Mar	1.8	2.1	2.8	4.2	Z	5.2	5.9	5.6	4.9	4.3	3.9	2.5	2.7	1.7	0.9	0.7	0.7	0.5	2.4	2.1	1.8	1.2	2.6	1.9	2.7	5.9
3-Mar	0.3	0.3	0.6	0.4	1.3	Z	1.4	1.4	1.9	1.4	1.3	1.2	1.1	1.0	1.3	0.8	0.9	0.9	0.5	2.3	1.2	5.7	2.6	0.8	1.3	5.7
4-Mar	Z	2.7	8.0	10.5	4.8	4.1	10.2	7.4	5.8	1.2	1.2	1.5	1.5	1.0	1.0	1.5	2.2	1.2	1.4	1.6	1.3	1.7	1.7	2.2	3.3	10.5
5-Mar	1.6	Z	3.1	1.3	1.7	2.9	2.6	3.9	3.7	3.1	2.7	2.0	2.0	2.4	2.9	1.4	1.1	1.5	3.7	1.6	1.3	3.0	1.4	1.8	2.3	3.9
6-Mar	1.7	1.6	Z	1.8	2.8	5.1	3.2	2.8	2.3	1.9	4.4	1.9	3.0	4.1	3.7	4.3	2.7	1.0	1.5	2.3	1.2	0.6	0.8	0.9	2.4	5.1
7-Mar	1.0	0.8	0.8	Z	1.1	1.0	1.0	1.2	1.3	1.4	2.6	3.5	3.3	4.2	4.0	2.3	3.2	1.8	3.9	1.2	3.4	2.0	2.3	2.2	2.2	4.2
8-Mar	2.8	1.4	0.7	0.8	Z	0.9	1.0	1.1	1.6	2.4	7.8	5.6	5.0	7.8	8.6	3.8	2.9	0.6	0.3	0.3	2.2	4.9	2.7	2.1	2.9	8.6
9-Mar	2.3	1.5	1.2	1.0	0.8	Z	2.4	2.4	2.9	3.9	3.9	3.2	1.9	2.0	2.6	2.7	1.6	1.5	3.0	2.3	0.7	1.2	1.6	3.9	2.2	3.9
10-Mar	Z	3.4	2.1	1.1	1.3	1.7	0.8	0.6	1.6	1.3	0.9	1.1	0.8	0.8	0.6	1.0	1.0	1.1	1.8	2.6	3.5	3.0	2.6	2.9	1.6	3.5
11-Mar	2.7	Z	4.2	4.1	3.2	2.4	1.9	2.1	1.4	1.6	1.5	1.6	1.8	1.9	2.8	2.4	3.5	3.3	3.6	2.2	1.2	0.5	0.4	0.3	2.2	4.2
12-Mar	0.3	0.4	Z	0.3	0.3	0.7	1.9	1.4	1.4	1.9	2.3	C	C	C	C	C	C	C	C	3.4	2.4	2.3	1.2	1.1	--	3.4
13-Mar	1.3	0.8	1.2	Z	0.8	0.8	0.7	1.0	0.8	0.5	0.5	M	2.3	1.2	1.5	1.4	1.8	1.7	2.0	1.8	0.8	0.2	0.4	0.2	1.1	2.3
14-Mar	0.3	0.2	0.3	0.3	Z	0.9	0.8	0.9	0.8	0.8	2.1	1.9	2.1	2.4	3.8	3.6	4.4	2.5	2.1	2.4	3.5	4.6	5.5	5.4	2.2	5.5
15-Mar	4.6	4.3	3.7	3.4	3.0	Z	3.5	2.9	2.5	1.2	0.6	0.5	0.8	1.4	1.6	1.1	1.4	0.6	0.7	1.3	3.3	3.5	2.4	2.0	2.2	4.6
16-Mar	Z	1.5	2.0	1.7	1.5	1.6	1.9	2.0	1.7	1.2	1.2	1.4	1.5	1.2	1.3	1.2	1.4	1.7	1.5	1.7	1.6	1.7	1.4	3.3	1.6	3.3
17-Mar	1.6	Z	1.4	1.4	2.0	1.7	1.8	2.2	2.6	2.2	2.1	3.1	3.3	2.8	3.7	3.7	3.0	1.6	1.5	1.4	1.1	2.2	4.6	4.9	2.4	4.9
18-Mar	3.1	2.8	Z	1.7	1.6	4.7	3.0	3.4	4.5	4.9	5.1	3.3	2.7	1.3	1.2	1.0	1.0	1.1	1.3	1.2	1.6	1.5	2.7	4.8	2.6	5.1
19-Mar	1.8	1.6	1.6	Z	2.8	2.0	1.9	2.4	1.4	1.5	1.4	0.9	1.0	1.8	3.4	1.6	3.2	2.6	2.8	2.7	0.8	0.7	1.2	1.2	1.8	3.4
20-Mar	1.5	1.7	1.2	1.2	Z	2.0	3.2	3.8	2.4	2.0	1.6	2.0	2.2	1.7	1.6	2.4	2.3	1.6	1.4	1.2	1.2	1.4	0.5	0.2	1.8	3.8
21-Mar	0.3	1.3	2.7	2.8	1.4	Z	1.4	1.6	1.8	1.9	1.9	1.7	1.5	1.6	1.6	1.6	1.5	1.5	1.7	1.6	1.6	1.5	1.3	2.1	1.6	2.8
22-Mar	Z	1.9	1.8	1.9	2.8	2.2	2.3	2.9	2.2	2.3	2.3	2.0	1.9	1.6	1.7	2.2	2.1	1.9	3.7	3.2	3.4	3.2	2.4	1.4	2.3	3.7
23-Mar	1.0	Z	1.1	0.9	0.9	1.0	0.9	1.5	1.9	2.1	1.7	1.7	2.1	1.4	1.6	1.0	0.7	0.5	0.9	0.9	0.8	0.9	0.7	0.7	1.2	2.1
24-Mar	0.4	0.7	Z	0.7	0.7	0.8	1.0	2.2	1.3	1.5	1.2	1.3	1.2	1.3	1.0	1.4	0.9	1.5	0.9	3.0	0.9	1.5	4.3	4.4	1.5	4.4
25-Mar	4.1	3.5	2.5	Z	1.9	1.0	1.2	1.4	0.8	1.9	1.2	1.6	2.0	6.0	5.4	3.0	0.6	0.4	0.3	0.3	0.3	0.3	0.4	0.8	1.8	6.0
26-Mar	1.4	1.0	1.1	1.1	Z	1.4	1.4	1.2	1.8	1.4	2.7	4.6	3.1	2.4	1.8	1.9	2.3	1.8	1.6	0.9	1.2	1.2	1.1	0.5	1.7	4.6
27-Mar	0.4	0.2	0.4	0.3	0.6	Z	1.6	1.6	1.5	1.3	1.1	1.1	1.5	0.7	1.2	1.2	1.4	0.6	0.7	0.5	0.5	1.1	0.9	0.8	0.9	1.6
28-Mar	Z	1.1	1.2	0.9	1.2	0.6	0.7	1.9	3.9	5.0	6.3	6.1	1.2	0.4	0.4	0.3	0.3	0.8	0.5	0.4	0.6	0.7	0.6	0.5	1.5	6.3
29-Mar	0.7	Z	1.8	1.3	0.8	1.0	1.2	1.7	1.6	1.1	0.9	0.7	0.8	0.8	1.1	0.8	0.7	1.0	1.2	1.4	1.6	2.4	0.8	0.8	1.1	2.4
30-Mar	1.3	1.2	Z	1.6	0.8	0.8	0.9	1.3	1.2	1.1	0.9	1.0	1.4	1.4	2.3	1.7	1.8	0.8	2.5	1.8	1.5	0.9	1.4	1.1	1.3	2.5
31-Mar	1.0	1.0	1.3	Z	1.3	1.6	2.0	2.0	2.1	1.9	1.7	1.4	1.5	1.5	1.4	1.2	1.0	1.0	1.3	1.9	1.9	1.7	1.4	1.4	1.5	2.1
	1.6	1.6	2.0	1.9	1.7	1.9	2.2	2.4	2.2	2.0	2.3	2.1	2.0	2.0	2.2	1.8	1.8	1.4	1.8	1.7	1.7	1.9	1.8	1.9	Diurnal Average	
	4.6	4.3	8.0	10.5	4.8	5.2	10.2	7.4	5.8	5.0	7.8	6.1	5.0	7.8	8.6	4.3	4.4	3.3	4.1	3.4	3.7	5.7	5.5	5.4	Diurnal Maximum	

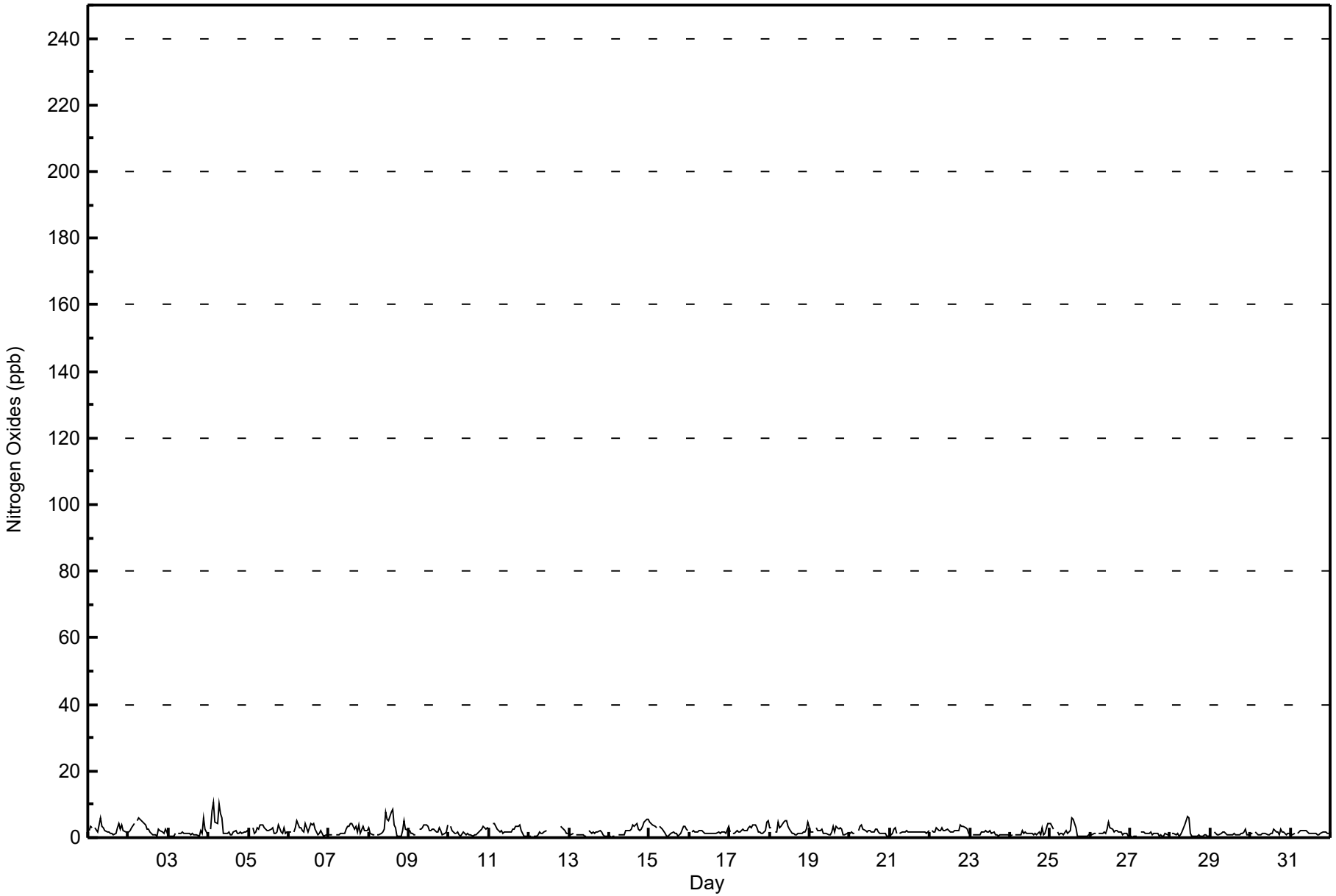
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Kirby North - March 2025



Nitrogen Oxides (NO_X) - ppb
Kirby North - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	704	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 704

Total Number of Hours: 744

Nitrogen Oxides (NO_X) - ppb
Kirby North - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	26	38	100	56	13	9	24	56	82	76	62	47	36	20	28	31	704
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	26	38	100	56	13	9	24	56	82	76	62	47	36	20	28	31	704

Total Number of Valid Hours: 704

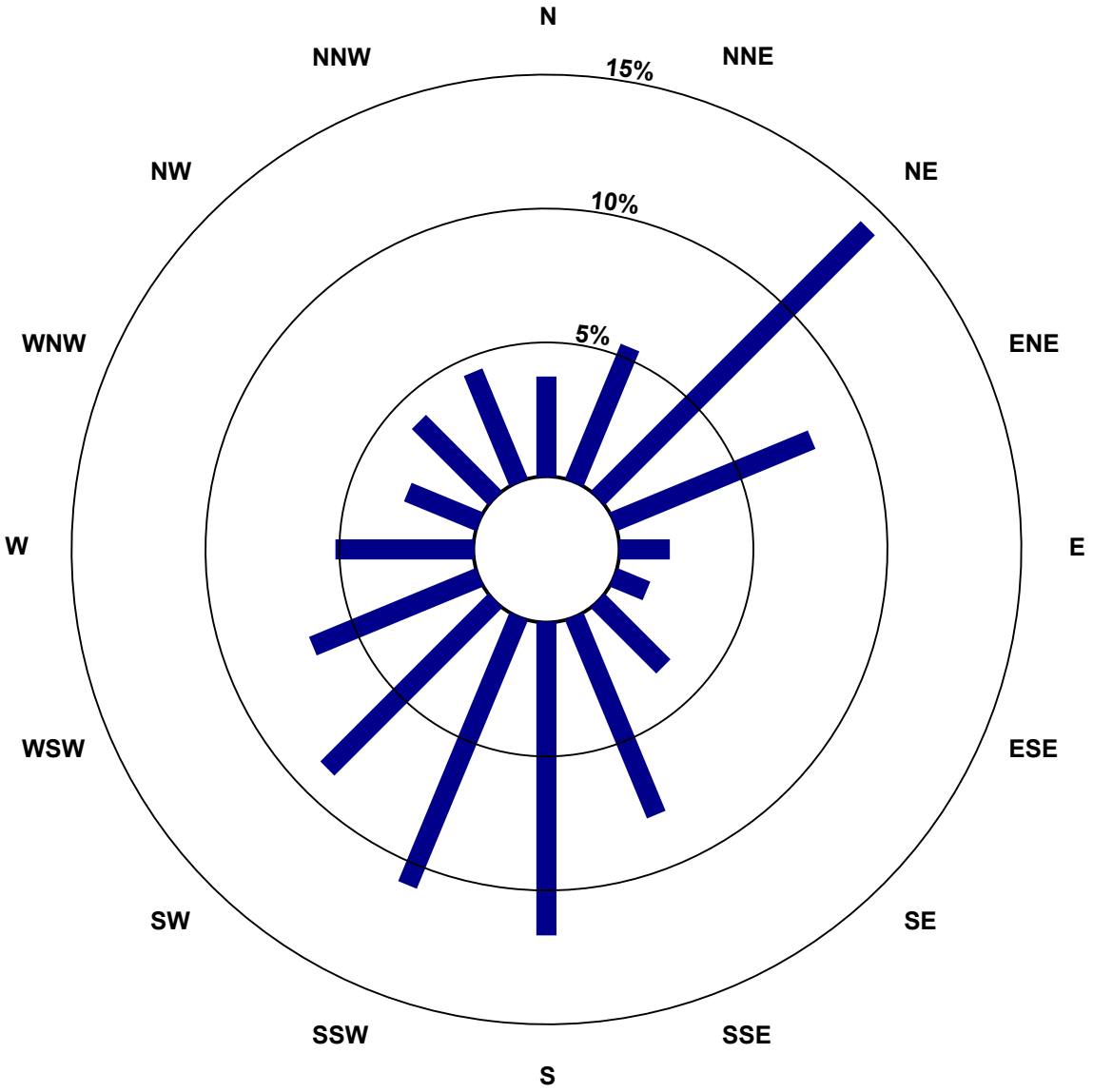
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Oxides (NO_X) - ppb

Kirby North



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

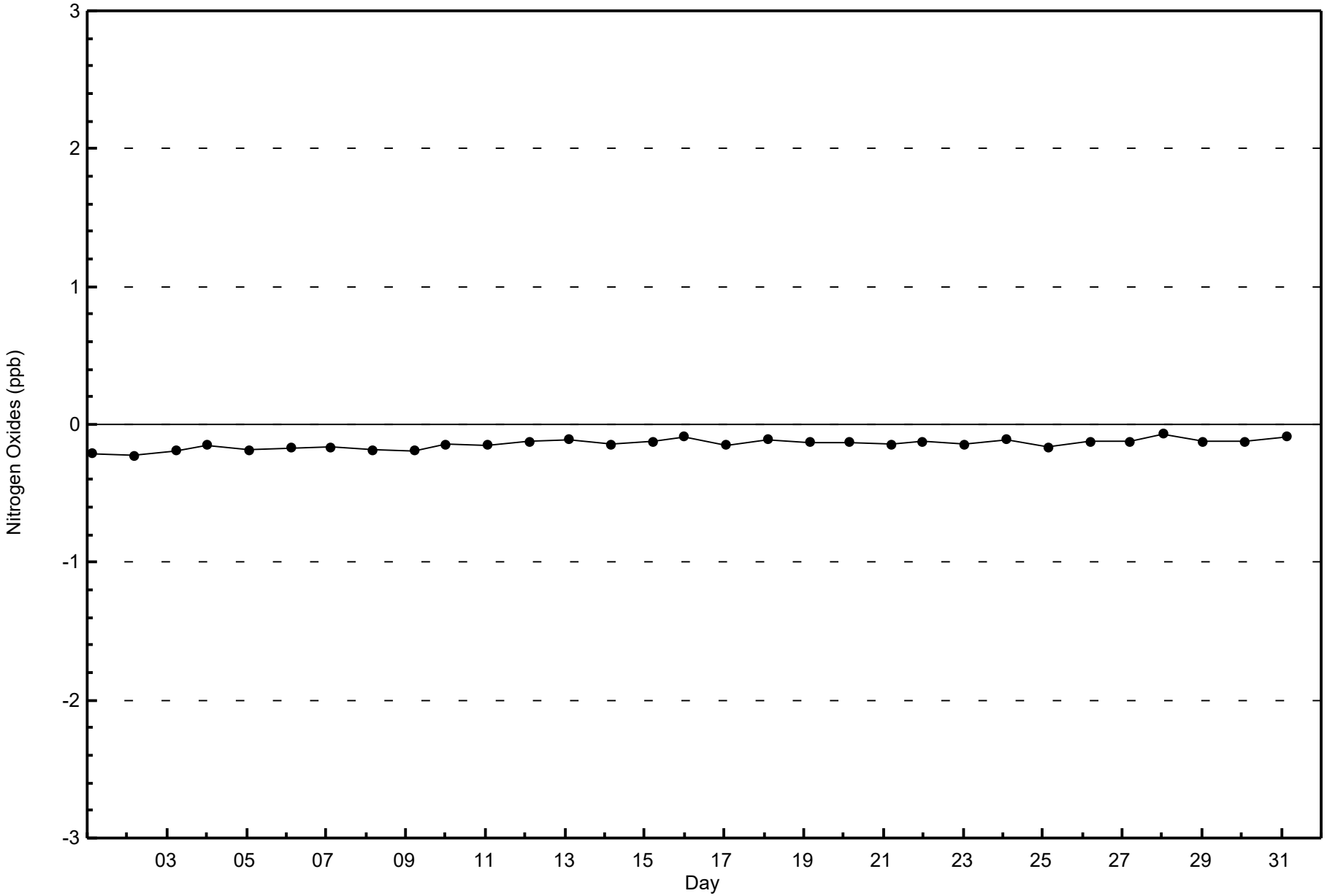
Total Number of Valid Hours: 704

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Kirby North - March 2025

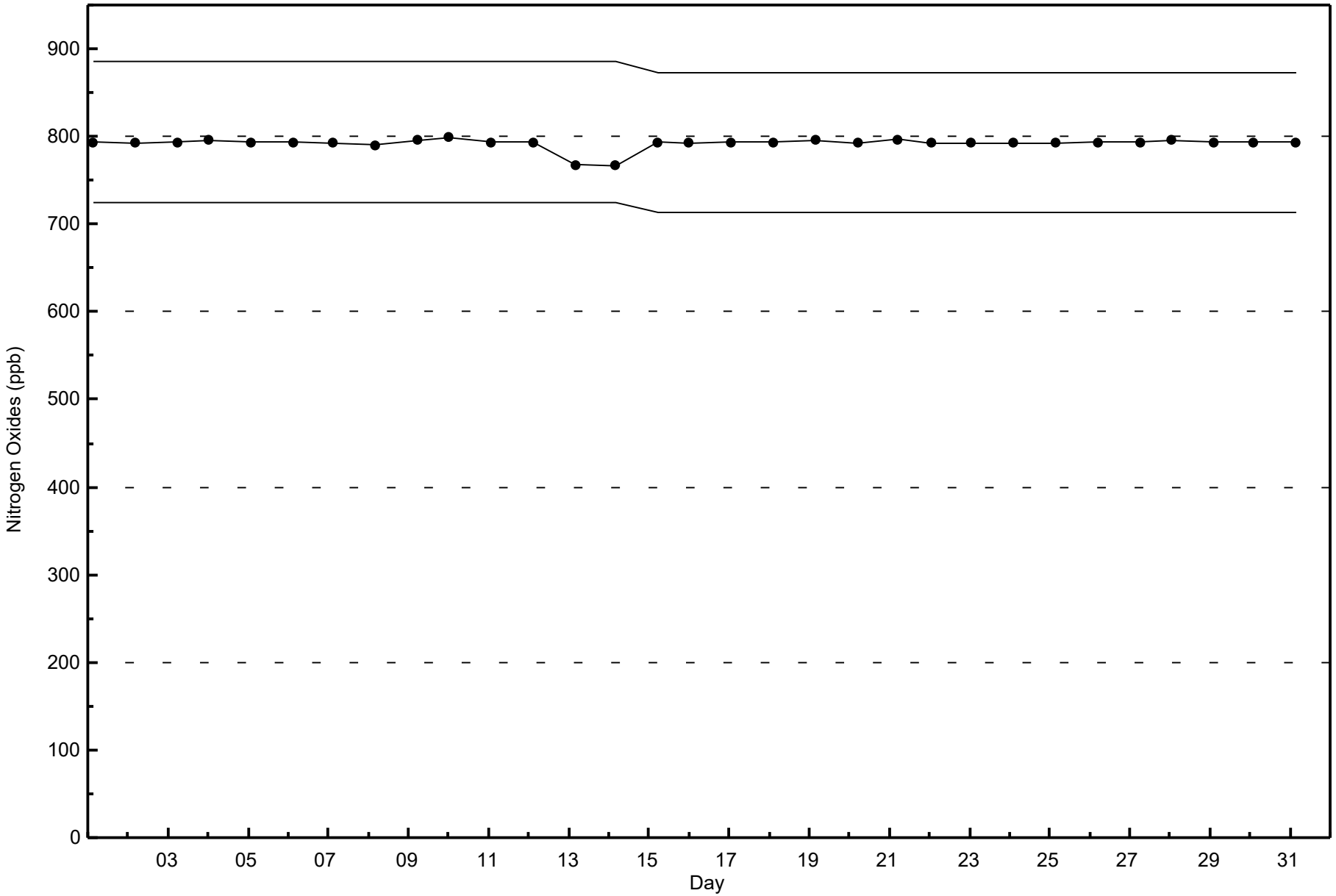


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Kirby North - March 2025



Maximum Value: 9.4 C on Mar 25 17:00

Maximum Daily Average: 3.1 C on Mar 2

Minimum Value: -23.2 C on Mar 15 07:00

Minimum Daily Average: -16.7 C on Mar 15

Maximum Diurnal Average: -1.3 C at hour 16

Minimum Diurnal Average: -9.7 C at hour 7

Monthly Average: -5.71 C

Percentiles: P_1 = -22.3 P_{10} = -15.5 Q_1 = -10.9 Median = -5.6 Q_3 = -0.3 P_{90} = 4.0 P_{99} = 8.3

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

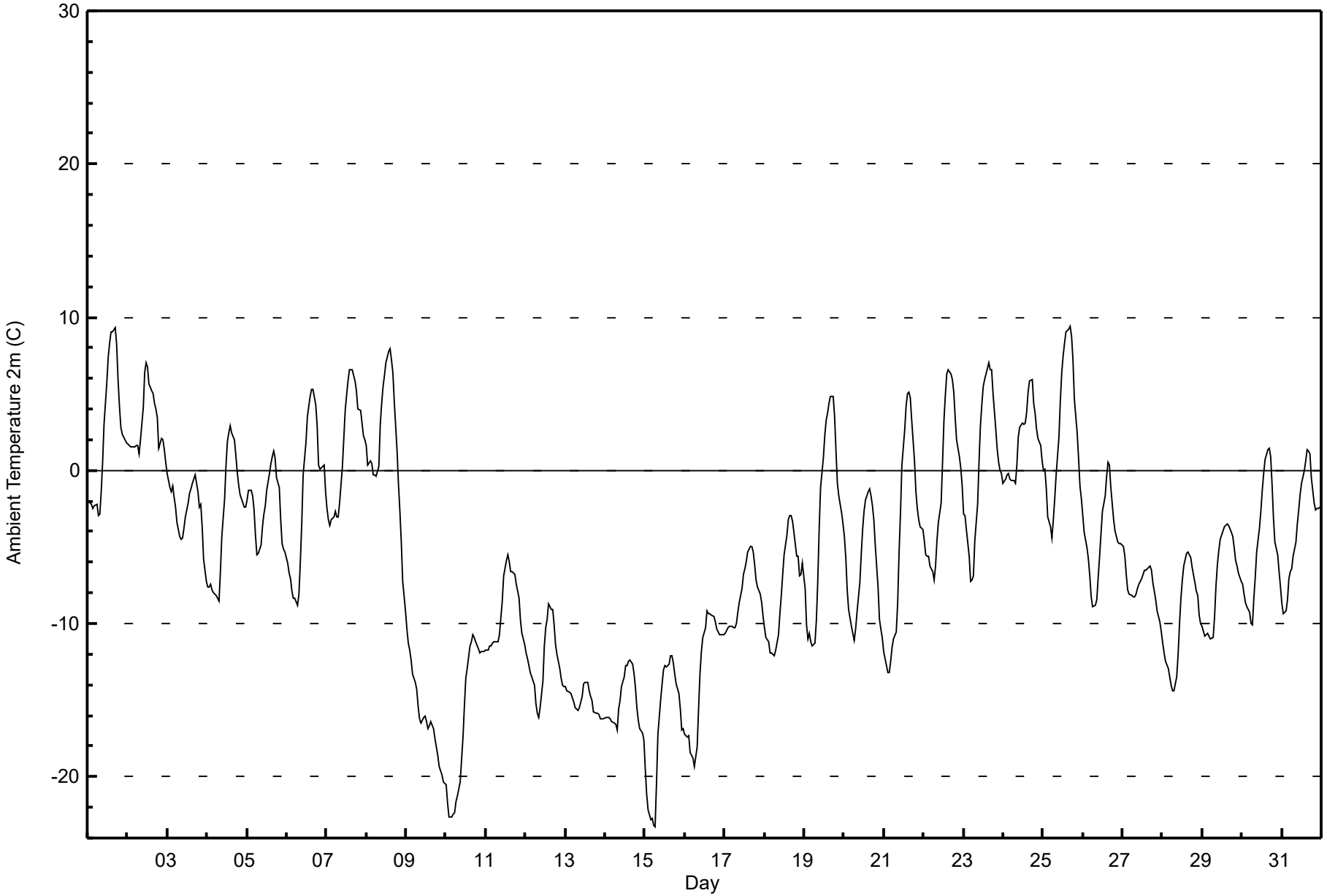
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-2.0	-2.1	-2.2	-2.4	-2.3	-2.2	-3.0	-2.9	-1.4	0.5	3.0	5.8	7.4	8.3	9.0	9.0	9.3	8.2	5.9	4.2	2.9	2.4	1.9	1.8	2.5	9.3
2-Mar	1.7	1.6	1.5	1.5	1.5	1.6	1.7	1.1	2.0	4.1	6.4	7.0	6.8	5.7	5.2	5.0	4.4	4.0	3.5	1.4	2.0	2.0	1.4	0.5	3.1	7.0
3-Mar	-0.2	-1.1	-1.4	-1.0	-1.8	-2.4	-3.4	-4.3	-4.5	-4.4	-3.8	-3.0	-2.1	-1.5	-1.2	-0.9	-0.5	-0.3	-1.4	-2.4	-2.2	-3.7	-5.8	-7.2	-2.5	-0.2
4-Mar	-7.7	-7.6	-7.4	-7.8	-8.0	-8.1	-8.3	-8.5	-6.6	-4.3	-1.8	0.4	1.9	2.4	2.9	2.4	2.0	1.0	-0.1	-0.9	-1.6	-2.1	-2.4	-2.4	-3.0	2.9
5-Mar	-2.0	-1.3	-1.3	-1.7	-2.5	-4.3	-5.5	-5.4	-4.9	-3.7	-2.8	-2.3	-1.3	-0.2	0.5	0.9	1.2	0.8	-0.5	-1.1	-3.3	-4.7	-5.2	-5.3	-2.3	1.2
6-Mar	-6.0	-6.7	-7.0	-7.9	-8.3	-8.3	-8.8	-8.1	-6.0	-3.5	-0.3	1.8	3.4	4.2	4.8	5.3	5.3	4.3	2.9	0.4	0.1	0.1	0.4	-1.4	-1.6	5.3
7-Mar	-2.5	-3.2	-3.6	-3.2	-3.0	-2.7	-3.1	-3.1	-2.1	0.2	2.0	3.9	4.9	5.8	6.6	6.6	6.2	5.9	5.2	4.0	3.9	3.1	2.3	2.0	1.5	6.6
8-Mar	1.7	0.4	0.7	0.4	-0.3	-0.3	-0.4	0.2	3.0	4.4	5.4	6.2	7.0	7.7	7.9	7.2	6.4	4.4	1.3	-1.0	-2.6	-4.7	-7.2	-9.2	1.6	7.9
9-Mar	-10.4	-11.3	-11.7	-12.4	-13.3	-13.8	-14.3	-15.4	-16.2	-16.5	-16.1	-16.0	-16.4	-16.8	-16.7	-16.4	-16.8	-17.5	-18.1	-18.6	-19.3	-19.9	-20.3	-20.5	-16.0	-10.4
10-Mar	-20.5	-21.7	-22.7	-22.6	-22.5	-22.3	-21.6	-21.2	-20.4	-18.9	-17.4	-15.4	-13.6	-13.0	-11.5	-11.2	-10.7	-10.9	-11.2	-11.7	-11.9	-11.8	-11.9	-11.8	-16.2	-10.7
11-Mar	-11.7	-11.7	-11.5	-11.4	-11.3	-11.2	-11.2	-11.2	-10.8	-9.7	-8.5	-6.9	-5.9	-5.5	-5.9	-6.7	-6.6	-6.8	-7.5	-7.9	-8.4	-9.8	-10.6	-11.4	-9.2	-5.5
12-Mar	-11.9	-12.3	-12.8	-13.2	-13.8	-14.0	-15.2	-15.9	-16.1	-15.5	-13.8	-11.5	-10.3	-9.7	-8.8	-9.1	-9.1	-10.1	-11.4	-12.0	-12.9	-13.6	-14.0	-14.1	-12.5	-8.8
13-Mar	-14.2	-14.4	-14.5	-14.6	-14.9	-15.1	-15.5	-15.7	-15.5	-15.1	-14.8	-14.0	-13.9	-13.9	-14.4	-14.8	-15.0	-15.8	-15.9	-15.8	-15.9	-16.2	-16.2	-16.2	-15.1	-13.9
14-Mar	-16.1	-16.1	-16.1	-16.3	-16.4	-16.5	-16.6	-17.0	-15.5	-15.0	-14.2	-13.5	-12.7	-12.7	-12.4	-12.4	-12.7	-13.3	-14.2	-15.5	-16.3	-16.9	-17.2	-17.6	-15.1	-12.4
15-Mar	-19.5	-21.2	-22.2	-22.8	-22.7	-23.2	-23.2	-20.5	-17.3	-15.0	-13.9	-13.0	-12.7	-12.8	-12.6	-12.1	-12.1	-12.6	-13.3	-14.0	-14.5	-15.6	-17.0	-16.9	-16.7	-12.1
16-Mar	-17.3	-17.4	-17.3	-18.4	-18.6	-18.8	-19.3	-18.1	-15.5	-13.3	-11.8	-10.9	-10.3	-9.1	-9.4	-9.4	-9.5	-9.5	-9.9	-10.3	-10.6	-10.7	-10.7	-10.7	-13.2	-9.1
17-Mar	-10.6	-10.4	-10.3	-10.2	-10.2	-10.3	-10.3	-10.0	-9.3	-8.6	-7.7	-6.8	-6.4	-6.0	-5.3	-4.9	-5.0	-5.3	-6.2	-7.2	-7.6	-8.1	-8.6	-9.5	-8.1	-4.9
18-Mar	-10.2	-10.9	-11.2	-11.9	-12.0	-12.0	-12.1	-11.8	-10.7	-9.4	-8.1	-6.8	-5.5	-4.2	-3.3	-3.0	-3.0	-3.3	-4.1	-5.6	-5.6	-6.9	-6.8	-6.0	-7.7	-3.0
19-Mar	-7.7	-10.1	-11.0	-10.6	-11.2	-11.5	-11.3	-9.8	-7.2	-3.8	-1.1	0.8	2.3	3.3	3.7	4.4	4.8	4.9	3.6	1.2	-0.9	-1.7	-2.8	-3.5	-3.1	4.9
20-Mar	-4.3	-5.7	-7.8	-9.0	-10.2	-10.7	-11.1	-10.4	-9.2	-7.4	-5.5	-3.9	-2.7	-1.9	-1.4	-1.2	-1.7	-2.4	-3.2	-4.9	-7.6	-9.7	-10.4	-10.9	-6.4	-1.2
21-Mar	-11.8	-12.7	-13.2	-13.2	-12.5	-11.5	-11.0	-10.5	-8.7	-5.3	-2.8	0.4	2.6	4.2	5.0	5.1	4.7	3.3	0.6	-1.4	-2.4	-3.2	-3.7	-3.9	-4.2	5.1
22-Mar	-4.6	-5.5	-5.6	-5.6	-6.2	-6.6	-7.2	-6.2	-4.6	-3.4	-2.1	0.6	3.3	4.9	6.3	6.5	6.3	6.0	5.1	3.5	2.0	0.9	0.1	-1.0	-0.6	6.5
23-Mar	-2.9	-3.0	-3.8	-5.6	-7.2	-7.2	-6.8	-4.6	-2.2	0.5	2.9	4.3	5.5	5.9	6.6	7.0	6.6	6.6	5.1	2.6	1.3	0.5	0.0	-0.2	0.5	7.0
24-Mar	-0.8	-0.6	-0.3	-0.2	-0.5	-0.7	-0.7	-0.8	0.3	2.2	2.8	3.1	3.0	3.1	3.9	5.1	5.9	5.9	4.4	3.8	2.7	2.1	1.6	0.6	1.9	5.9
25-Mar	-0.1	0.1	-1.2	-3.1	-3.6	-4.5	-3.2	-1.9	-0.3	2.2	4.6	6.4	7.5	8.3	9.0	9.3	9.4	8.8	7.2	4.6	2.4	0.8	-1.0	-1.9	2.5	9.4
26-Mar	-2.9	-4.1	-5.0	-5.8	-6.9	-8.3	-8.9	-8.8	-8.5	-7.0	-5.6	-4.2	-2.7	-1.6	-0.4	0.5	0.3	-1.2	-3.2	-4.0	-4.3	-4.7	-4.8	-4.8	-4.4	0.5
27-Mar	-5.0	-5.6	-6.7	-7.8	-8.1	-8.2	-8.3	-8.3	-8.1	-7.7	-7.4	-7.1	-6.8	-6.6	-6.5	-6.4	-6.3	-6.5	-7.4	-7.9	-8.5	-9.2	-9.9	-10.6	-7.5	-5.0
28-Mar	-11.3	-11.9	-12.4	-13.0	-13.5	-14.1	-14.4	-14.3	-13.4	-12.0	-10.0	-8.4	-7.1	-6.2	-5.4	-5.3	-5.5	-5.7	-6.3	-7.3	-7.9	-8.2	-9.5	-10.0	-9.7	-5.3
29-Mar	-10.2	-10.9	-10.7	-10.6	-10.8	-11.0	-11.0	-9.5	-7.6	-6.2	-5.3	-4.5	-3.9	-3.7	-3.6	-3.5	-3.6	-4.0	-4.4	-5.1	-5.9	-6.3	-6.7	-7.2	-6.9	-3.5
30-Mar	-7.4	-8.1	-8.6	-8.9	-9.2	-10.0	-10.1	-8.4	-7.0	-5.3	-3.8	-2.7	-1.3	-0.2	0.8	1.4	1.4	0.9	-1.0	-3.1	-4.7	-5.5	-6.6	-7.6	-4.8	1.4
31-Mar	-8.7	-9.3	-9.2	-8.4	-7.1	-6.6	-6.5	-5.6	-4.6	-3.5	-2.6	-1.6	-0.8	0.0	0.7	1.4	1.3	1.0	-0.5	-2.2	-2.5	-2.5	-2.5	-2.4	-3.5	1.4
	-7.7	-8.2	-8.6	-9.0	-9.3	-9.5	-9.7	-9.3	-8.0	-6.5	-5.0	-3.6	-2.6	-2.0	-1.5	-1.3	-1.4	-1.9	-3.1	-4.3	-5.2	-5.9	-6.6	-7.1	Diurnal Average	
	1.7	1.6	1.5	1.5	1.5	1.6	1.7	1.1	3.0	4.4	6.4	7.0	7.5	8.3	9.0	9.3	9.4	8.8	7.2	4.6	3.9	3.1	2.3	2.0	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Kirby North - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	18	2.42	2.42
-20 - 0	551	74.06	76.48
0 - 10	175	23.52	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Maximum Value: 91.5 % on Mar 23 05:00

Maximum Daily Average: 86.7 % on Mar 11

Minimum Value: 26.7 % on Mar 23 16:00

Minimum Daily Average: 48.1 % on Mar 21

Maximum Diurnal Average: 80.8 % at hour 7

Minimum Diurnal Average: 52.7 % at hour 16

Monthly Average: 67.74 %

Percentiles: P_1 = 29.0 P_{10} = 43.9 Q_1 = 56.6 Median = 70.7 Q_3 = 80.9 P_{90} = 86.1 P_{99} = 89.7

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

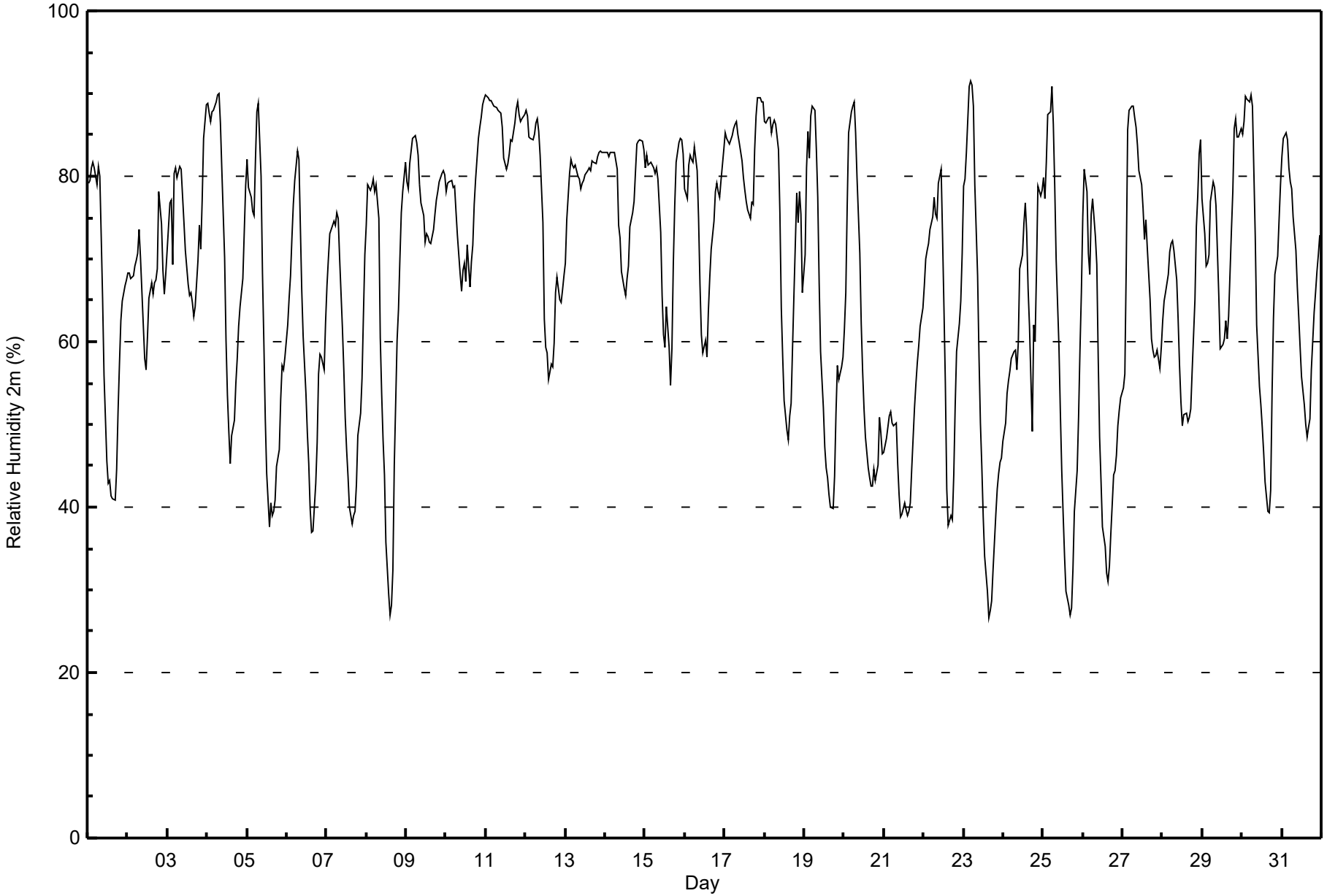
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	79.1	79.4	81.1	81.7	80.9	79.0	81.2	80.1	72.7	65.0	56.0	45.6	42.8	43.3	41.4	41.0	40.9	44.6	51.4	57.3	62.6	64.9	66.8	67.5	62.8	81.7
2-Mar	68.3	68.3	67.7	68.0	69.1	69.8	70.7	73.5	70.1	62.0	58.0	56.5	60.7	65.3	67.0	65.7	67.1	67.4	68.8	78.1	74.2	68.6	65.7	68.1	67.5	78.1
3-Mar	71.1	76.8	77.1	69.3	80.4	80.9	79.8	81.2	80.8	77.6	74.4	71.1	66.9	65.5	66.0	64.7	63.1	64.2	69.9	74.1	71.2	77.1	84.7	88.6	74.0	88.6
4-Mar	88.9	87.7	86.6	87.8	87.9	88.9	89.9	90.0	86.4	80.8	70.2	60.2	53.6	49.1	45.3	48.7	50.4	54.9	58.0	61.9	64.3	67.7	73.2	78.8	71.3	90.0
5-Mar	82.1	78.7	77.5	75.7	75.3	82.0	87.8	88.8	80.1	68.3	59.9	50.6	44.1	37.7	40.5	39.0	39.4	40.8	44.9	46.9	53.1	57.0	56.6	58.2	61.0	88.8
6-Mar	62.1	65.3	67.9	72.5	76.7	79.5	83.1	82.0	74.0	66.3	60.6	53.7	49.0	45.2	39.9	37.0	37.1	42.8	47.9	56.1	58.5	58.1	56.6	62.3	59.8	83.1
7-Mar	66.8	69.9	73.0	73.6	74.6	74.1	75.5	75.0	70.2	61.7	56.6	50.9	47.0	43.7	40.1	37.9	39.0	39.5	42.7	48.7	51.4	55.7	63.2	70.5	58.4	75.5
8-Mar	74.0	79.0	78.3	78.8	79.7	78.1	78.9	74.9	60.5	53.7	48.2	43.9	35.8	29.5	26.9	28.2	32.3	45.2	60.1	63.8	69.9	75.6	78.2	81.6	60.6	81.6
9-Mar	79.2	78.5	81.5	83.0	84.6	85.0	84.0	82.5	78.9	76.7	75.3	72.1	73.1	72.7	72.0	71.8	73.5	75.3	77.2	78.2	79.4	80.3	80.6	80.2	78.2	85.0
10-Mar	78.1	79.1	79.3	79.5	78.7	78.7	75.8	72.9	68.1	66.2	68.7	69.5	67.3	71.6	66.6	69.6	71.8	76.5	79.6	84.5	85.9	87.1	88.7	89.4	76.4	89.4
11-Mar	89.8	89.4	89.1	89.1	88.8	88.5	88.4	88.0	87.7	87.7	85.9	82.3	80.8	81.6	82.7	84.5	84.2	86.4	88.1	89.0	87.4	86.7	86.9	87.5	86.7	89.8
12-Mar	88.0	87.3	84.8	84.6	84.3	85.1	86.5	87.0	85.4	82.5	74.5	62.8	59.3	58.6	55.4	57.3	56.9	59.8	65.9	67.8	65.0	64.7	66.3	68.0	72.4	88.0
13-Mar	69.5	74.7	80.4	82.1	81.3	81.0	81.3	80.0	79.7	78.5	79.1	79.4	80.2	80.7	81.0	80.6	81.8	81.7	81.6	82.4	82.9	83.0	82.9	82.9	80.4	83.0
14-Mar	82.8	82.8	82.5	82.9	82.9	82.9	81.9	80.9	74.1	72.6	68.5	66.4	65.7	67.6	69.2	73.9	75.6	77.0	80.5	83.8	84.3	84.4	84.2	83.1	77.9	84.4
15-Mar	81.1	82.5	81.4	81.7	81.3	81.1	80.4	80.9	79.7	73.2	65.7	60.9	59.2	64.2	59.4	54.8	59.1	69.6	76.4	81.7	84.1	84.6	84.4	82.8	74.6	84.6
16-Mar	78.5	77.3	81.4	82.5	82.1	81.7	83.5	80.7	75.0	66.9	60.9	58.7	60.2	58.1	63.7	67.8	71.2	74.6	78.1	79.1	78.2	77.4	79.4	83.2	74.2	83.5
17-Mar	85.2	84.6	84.2	83.9	84.9	85.7	86.2	86.7	85.2	84.1	81.9	79.8	78.2	77.0	76.0	75.0	76.9	76.5	83.3	87.2	89.6	89.5	88.9	89.0	83.3	89.6
18-Mar	86.6	86.5	87.2	87.1	85.3	86.2	86.8	86.3	83.2	75.6	64.1	58.2	52.8	49.3	48.2	51.0	52.5	59.2	65.6	78.0	74.5	78.1	75.4	65.9	71.8	87.2
19-Mar	70.5	81.1	85.4	82.2	87.3	88.5	88.0	83.3	77.5	67.2	58.9	52.0	47.3	44.8	43.6	41.5	40.0	39.8	43.7	51.3	57.1	55.4	57.0	58.2	62.6	88.5
20-Mar	61.5	65.9	76.4	85.2	87.8	88.4	89.1	85.3	79.9	70.6	62.1	56.4	51.8	48.4	44.7	43.6	42.6	42.5	44.5	43.1	45.1	50.9	49.0	46.5	60.9	89.1
21-Mar	46.5	48.3	49.7	51.0	51.6	50.1	49.8	50.1	45.2	41.5	38.7	39.2	40.5	39.6	39.0	39.5	40.6	44.7	52.1	54.9	57.5	59.5	61.8	64.1	48.1	64.1
22-Mar	66.7	70.0	71.0	71.8	73.6	75.1	77.4	75.5	74.9	79.2	80.8	72.7	64.0	55.0	42.1	37.7	39.0	38.5	43.9	52.2	58.9	62.2	64.9	70.7	63.2	80.8
23-Mar	78.8	79.6	82.9	90.9	91.5	91.0	88.5	79.0	67.9	58.2	50.2	44.9	38.9	34.0	29.9	26.7	27.5	28.6	32.4	39.1	42.3	44.1	45.4	46.0	55.8	91.5
24-Mar	48.0	50.2	53.7	55.3	56.5	58.0	58.8	59.0	56.5	59.9	68.9	70.4	74.2	76.8	73.3	66.4	61.9	49.1	62.0	60.0	68.6	78.8	77.7	78.4	63.4	78.8
25-Mar	79.8	77.2	81.7	87.4	87.8	90.8	86.2	78.7	70.1	59.5	51.5	44.5	39.2	34.1	29.9	28.1	26.9	27.9	32.6	39.5	44.3	50.9	58.9	65.9	57.2	90.8
26-Mar	75.1	80.9	78.1	70.7	68.2	75.4	77.3	72.6	69.3	58.1	48.5	43.3	37.7	35.2	32.1	31.0	32.9	36.9	44.0	44.5	46.3	49.9	51.8	53.3	54.7	80.9
27-Mar	54.4	56.1	69.2	85.7	88.0	88.5	88.4	87.2	85.9	83.7	80.7	78.9	76.2	72.4	74.8	71.3	65.1	60.3	59.0	58.2	58.3	59.0	56.8	59.4	71.6	88.5
28-Mar	62.6	64.9	65.9	68.2	70.8	71.9	72.1	71.0	67.4	62.7	57.1	52.8	49.8	51.2	51.4	50.3	50.9	51.9	56.4	65.1	73.9	77.7	82.6	84.4	63.9	84.4
29-Mar	77.3	73.1	69.2	69.5	70.4	76.9	79.4	78.7	76.4	71.1	65.5	59.1	59.7	60.3	62.5	60.4	63.1	73.3	78.1	85.7	87.0	84.8	84.8	85.8	73.0	87.0
30-Mar	85.1	86.6	89.6	89.4	89.0	89.8	88.4	80.8	72.7	62.0	54.5	52.3	49.7	46.5	43.1	39.5	39.3	42.1	53.9	62.9	68.1	70.3	74.8	79.0	67.1	89.8
31-Mar	82.4	84.6	85.3	84.5	81.0	79.4	78.5	75.1	71.0	66.6	63.0	59.3	55.8	52.3	50.0	48.5	49.6	50.6	56.6	63.5	65.9	68.4	70.5	72.8	67.3	85.3
	74.2	75.7	77.4	78.6	79.4	80.4	80.8	79.0	74.4	69.0	64.2	59.6	56.8	55.2	53.5	52.7	53.3	55.6	60.6	65.1	67.4	69.4	70.9	72.7	Diurnal Average	
	89.8	89.4	89.6	90.9	91.5	91.0	89.9	90.0	87.7	87.7	85.9	82.3	80.8	81.6	82.7	84.5	84.2	86.4	88.1	89.0	89.6	89.5	88.9	89.4	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Kirby North - March 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	48	6.45	6.45
40 - 60	186	25.00	31.45
60 - 80	303	40.73	72.18
80 - 100	207	27.82	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Kirby North - March 2025

Maximum Speed: 27 km/h on Mar 8 15:00

Maximum Daily Speed Average: 18.5 km/h on Mar 27

Minimum Speed Value: 1 km/h on Mar 10 17:00

Minimum Daily Speed Average: 2.6 km/h on Mar 17

Maximum Diurnal Speed Average: 4.1 km/h at hour 15

Minimum Diurnal Speed Average: 0.8 km/h at hour 20

Monthly Average Velocity: 0.3 km/h 106.6 deg

Percentiles: $P_1 = 3$ $P_{10} = 6$ $Q_1 = 8$ Median = 10 $Q_3 = 13$ $P_{90} = 16$ $P_{99} = 24$

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	S10	S9	S10	S9	S11	S10	S10	S9	S10	SSW10	SW11	SW10	WSW15	WSW17	WSW15	WSW14	WSW11	WSW10	SSW7	SSW8	SSW9	SSW9	SSW10	SSW10	SSW9.4	WSW17
2-Mar	S8	S8	S11	S10	S10	S10	SSW10	SSW11	SSW9	SW11	WNW16	NW17	NW17	NW16	NW15	NNW13	NNW11	NW6	W6	SSW5	W9	NW10	WNW9	NW10	W5.7	NW17
3-Mar	NW11	NW10	NNW9	NNW16	N14	N14	N14	N15	N14	NNE12	NNE11	NNE11	N9	NNW10	NNW12	N11	NNW8	NW8	NNW4	WSW2	WSW4	SE3	ESE3	E2	N8.2	NNW16
4-Mar	SSE3	S8	SSW10	SSW10	SSW10	SSW10	SSW11	SSW9	SSW10	SSW11	SW12	SW15	SW15	SW16	SW14	SW14	SW15	SW11	SSW9	SSW9	SSW8	SSW10	SSW10	SSW10	SSW10.5	SW16
5-Mar	SW10	W10	NW9	NNW9	NNW8	NNW10	N13	N12	N14	NNE13	N11	NNW13	NNW12	NNW11	NW13	NW13	NW12	WNW12	WNW7	WNW4	SSW5	SSW8	SSW8	S9	NW6.8	N14
6-Mar	SSW10	S10	S10	S10	S5	SSW5	SSW5	SSW6	SSW7	SW6	W7	WSW9	W11	W14	WNW15	W18	WNW17	NW13	WNW8	S3	SSW6	SSW10	SW10	SSW5	WSW6.7	W18
7-Mar	SSW5	SSW7	SSW9	S7	SSW8	SSW8	SSW9	SSW11	SW10	SW13	WSW15	WSW14	W15	W16	W17	WNW16	W11	WNW9	WNW10	WSW12	W14	WNW8	W7	W8	WSW9.0	W17
8-Mar	WSW8	SSW6	SSW7	SSW8	SSW10	SSW11	SSW12	SW14	WSW19	WSW22	W24	W23	W26	W26	WNW27	WNW24	WNW19	NW17	NNW13	N11	NNE14	NE13	NE14	NE13	W9.1	WNW27
9-Mar	NE13	NE10	NE10	NE10	NE10	NE11	NE15	NE17	NE17	NE17	NE17	NE18	NE18	NE14	NE14	NE14	NE14	NE15	ENE13	NE13	NE14	NE13	NE11	NE12	NE13.6	NE18
10-Mar	NE11	NE5	NE8	NE7	E4	ENE5	ESE6	SE7	SE6	SSE6	S5	S4	S6	SSW6	SSW7	SW7	W1	SSE5	SE7	S8	S8	SE5	ESE5	E6	SE3.1	NE11
11-Mar	E8	E8	ENE7	E7	E6	E6	ENE8	ENE9	E8	E7	ENE9	ENE8	NE9	ENE10	NE13	NE12	NE10	NE9	NE11	NE10	NE13	NNE14	NNE13	NNE13	NE8.9	NNE14
12-Mar	NNE14	NNE13	NNE15	NNE13	NE14	NNE10	NNE13	NE12	NE9	NNE8	NE8	NE9	NE9	NE9	ENE8	ENE10	ENE11	ENE12	ENE9	NE10	NE14	ENE14	ENE12	NE10	NE10.6	NNE15
13-Mar	ENE10	ENE12	ENE13	NE14	ENE16	ENE13	ENE15	ENE16	ENE15	ENE16	ENE19	ENE19	ENE21	ENE23	NE23	NE26	NE25	NE23	ENE20	NE16	NNE14	NNE15	NNE16	NNE17	NE17.0	NE26
14-Mar	NNE16	NNE16	NNE16	NNE12	N10	N11	N13	N9	N11	NNW11	NNW12	N14	N14	NNW14	N14	NNW14	NNW14	N12	N10	N8	NNW6	N6	N6	N5	N11.0	NNE16
15-Mar	N4	NNW4	NW5	NNW5	NNW5	N3	NNE3	NNE3	NE4	ENE5	NE6	NNE5	NNW6	NW8	NW9	NW10	NNW8	NNE8	NE6	NE6	ENE6	E5	ESE4	ESE8	N3.7	NW10
16-Mar	SE10	ESE10	SE8	SSE7	SSE8	SSE9	SSE9	SSE8	SSE10	SSE12	SE13	SE13	SSE10	SSE11	S10	SSE10	SSE10	SSE10	SSE8	SSE9	SSE10	S10	S10	S10	SSE9.5	SE13
17-Mar	S10	S10	S9	S9	S8	S8	S8	S7	S8	SW10	SW10	WSW11	WSW12	W8	NW9	NW8	NW8	NNW9	N8	NNW6	NNE5	NNE7	NE6	NE8	SW2.6	WSW12
18-Mar	ENE7	NE6	NNE6	NNE7	ESE5	SSW5	SSW4	SW4	WNW6	NW8	W11	WSW13	WSW14	SW16	SW15	SW18	SW15	SW9	SSW8	SSW8	SW9	SW9	WSW11	WSW11	SW6.2	SW18
19-Mar	SW7	S4	SSW4	SSW7	S10	S10	S9	S9	SSW8	SSW8	SW10	SW12	SW15	WSW17	WSW18	WSW19	W15	WSW10	W7	W3	SW10	SSW10	SSW10	S9	SW8.7	WSW19
20-Mar	SSE4	S5	NNE10	NE13	NE14	NE16	NE11	NE12	ENE12	ENE13	ENE15	ENE15	ENE14	ENE14	ENE13	ENE12	NE15	NE16	ENE14	NE12	NE10	NE8	E7	ESE10	ENE11.0	NE16
21-Mar	SE9	SE11	SE10	SE6	SSE9	SSE11	SSE12	SSE12	SSE11	SSE10	SSE9	SSE10	SSE11	SSE13	S11	S12	SSE13	SE13	SSE11	SSE12	S13	S13	S10	S11	SSE10.7	S13
22-Mar	S10	S10	S10	S9	S9	S9	S9	SSW10	SSW12	SSW13	SW13	SW13	SW12	SW13	WSW16	WSW15	WSW12	NW11	W12	WNW14	W10	W10	WSW9	WSW7	SW8.9	WSW16
23-Mar	SSE2	SW4	SSW3	SE2	S5	S6	S9	S6	SW5	W6	SW7	WSW11	WSW12	WSW11	WSW11	SW11	SW8	SW8	SSW5	S7	S7	S7	S8	S8	SSW5.9	WSW12
24-Mar	S8	S8	S8	S8	SSE8	SSE8	SSE7	SSW8	SSW11	SW13	SW10	SW12	SSW12	SW14	SW13	WSW15	WSW15	WSW18	NW12	WNW12	NNW10	WNW14	W13	W12	SW8.1	WSW18
25-Mar	W13	W11	WSW9	SSW6	SSW7	S5	S3	SSW8	SW11	WSW12	WSW12	SW13	WSW14	W15	W18	WNW17	NW17	NW16	NNW10	N7	NNE8	NE7	N2	NNE11	W6.4	W18
26-Mar	NNE11	NE13	NE14	NNE17	NNE18	NNE16	NE15	NE14	NE14	NE13	ENE14	ENE12	ENE13	ENE12	ENE13	NE12	NE16	NE16	NE17	NE15	NE15	NE14	ENE13	ENE11	NE13.8	NNE18
27-Mar	ENE14	ENE16	ENE16	ENE15	ENE16	NE16	NE17	NE18	NE18	NE21	NE24	NE23	NE23	NE24	NE22	NE21	NE21	NE19	NE18	NE18	NE17	NE15	ENE16	ENE16	NE18.5	ENE24
28-Mar	ENE14	ENE11	NE10	NE10	NNE10	NE12	NE12	NE13	NE11	NE11	ENE11	ENE11	ENE10	ESE6	E5	NE7	ENE6	NE7	E6	SSE4	SSE4	SSE4	SE4	SE5	ENE7.3	ENE14
29-Mar	SE6	SE8	SSE7	SSE6	SSE7	SSE7	SSE7	SSE6	S5	W2	W5	SW7	SW9	SW8	W7	SW9	WSW10	SW8	SW8	SSW6	SSW6	SSW7	S6	SSW6	SSW5.2	WSW10
30-Mar	SSW7	S7	S7	SSW7	S7	S6	S7	S7	SW8	WSW9	SW14	WSW13	WSW12	SW11	SW12	SW12	SW12	SW12	SW10	SW7	SSW7	S7	S7	S7	SSW8.2	WSW14
31-Mar	S7	S8	SSE8	SE7	SSE7	SE7	SE7	SSE8	SSE9	SSE11	SSE11	SSE11	SSE11	SE14	SE10	SE10	SE11	SSE11	SE12	SSE11	SSE11	SSE12	SSE12	S11	SSE9.7	SE14
	ESE2.2	SE2.6	ESE2.3	E2.3	ESE2.7	ESE2.7	ESE2.9	ESE2.5	SE1.7	S0.9	WSW0.8	WSW1.6	W2.6	W3.1	WNW4.1	WNW4.0	NW3.1	NNW2.7	NNE2.1	ENE0.8	ENE0.8	ESE1.0	SE1.4	ESE1.7	Diurnal Average	
	NNE16	ENE16	NNE16	NNE17	NNE18	ENE16	NE17	NE18	WSW19	WSW22	W24	W23	W26	W26	WNW27	NE26	NE25	NE23	ENE20	NE18	NE17	NNE15	NNE16	NNE17	Diurnal Maximum	

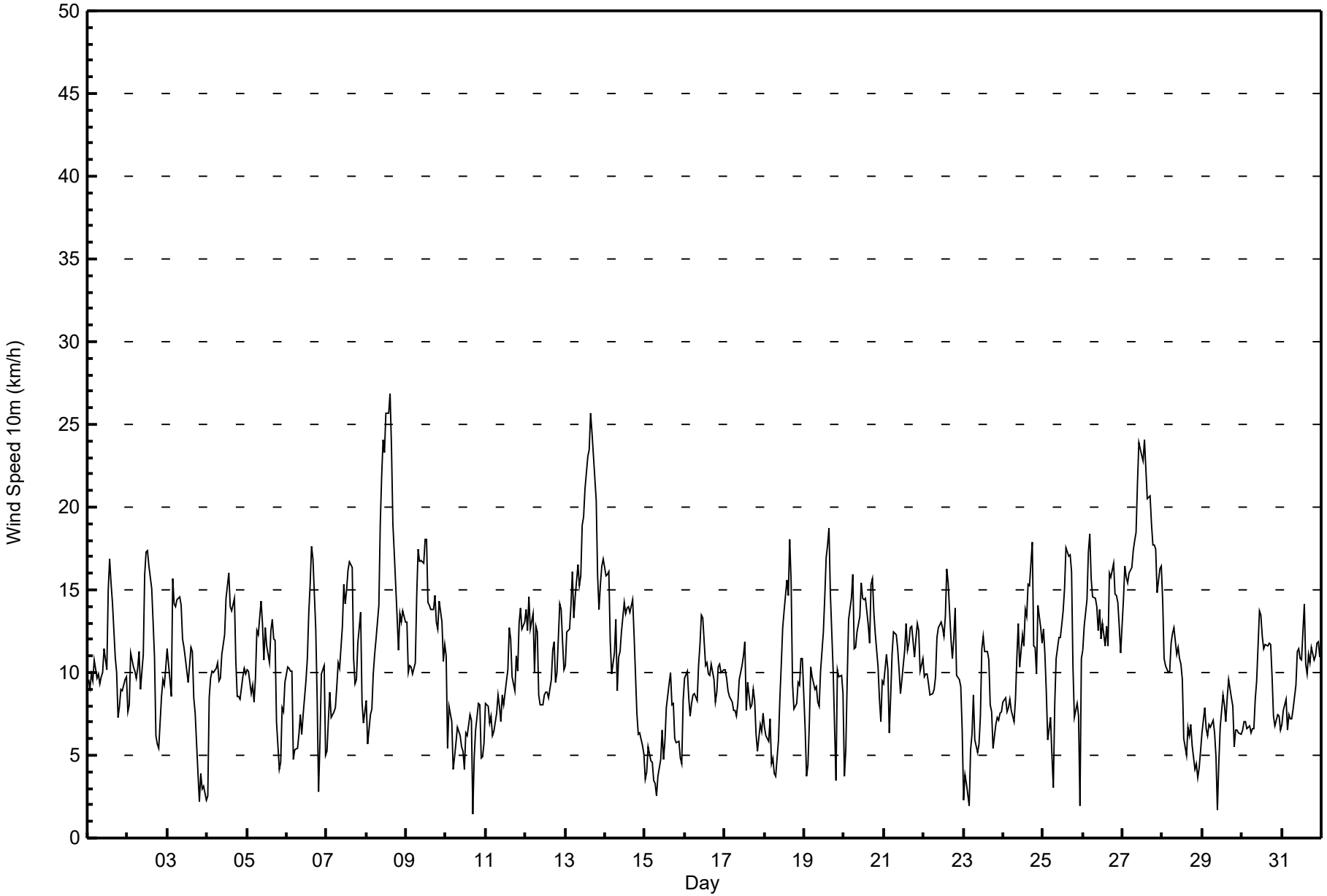
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Kirby North - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	68	9.14	9.14
6 - 11	402	54.03	63.17
12 - 19	252	33.87	97.04
20 - 28	22	2.96	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Kirby North - March 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	4	4	2	2	4	4	5	7	10	11	3	2	4	1	1	4	68
6 - 11	13	13	37	19	10	5	17	43	77	64	32	17	16	7	15	17	402
12 - 19	12	24	57	39	0	0	5	8	3	4	28	27	13	10	12	10	252
20 - 28	0	0	11	4	0	0	0	0	0	0	0	1	4	2	0	0	22
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	41	107	64	14	9	27	58	90	79	63	47	37	20	28	31	744

Total Number of Valid Hours: 744

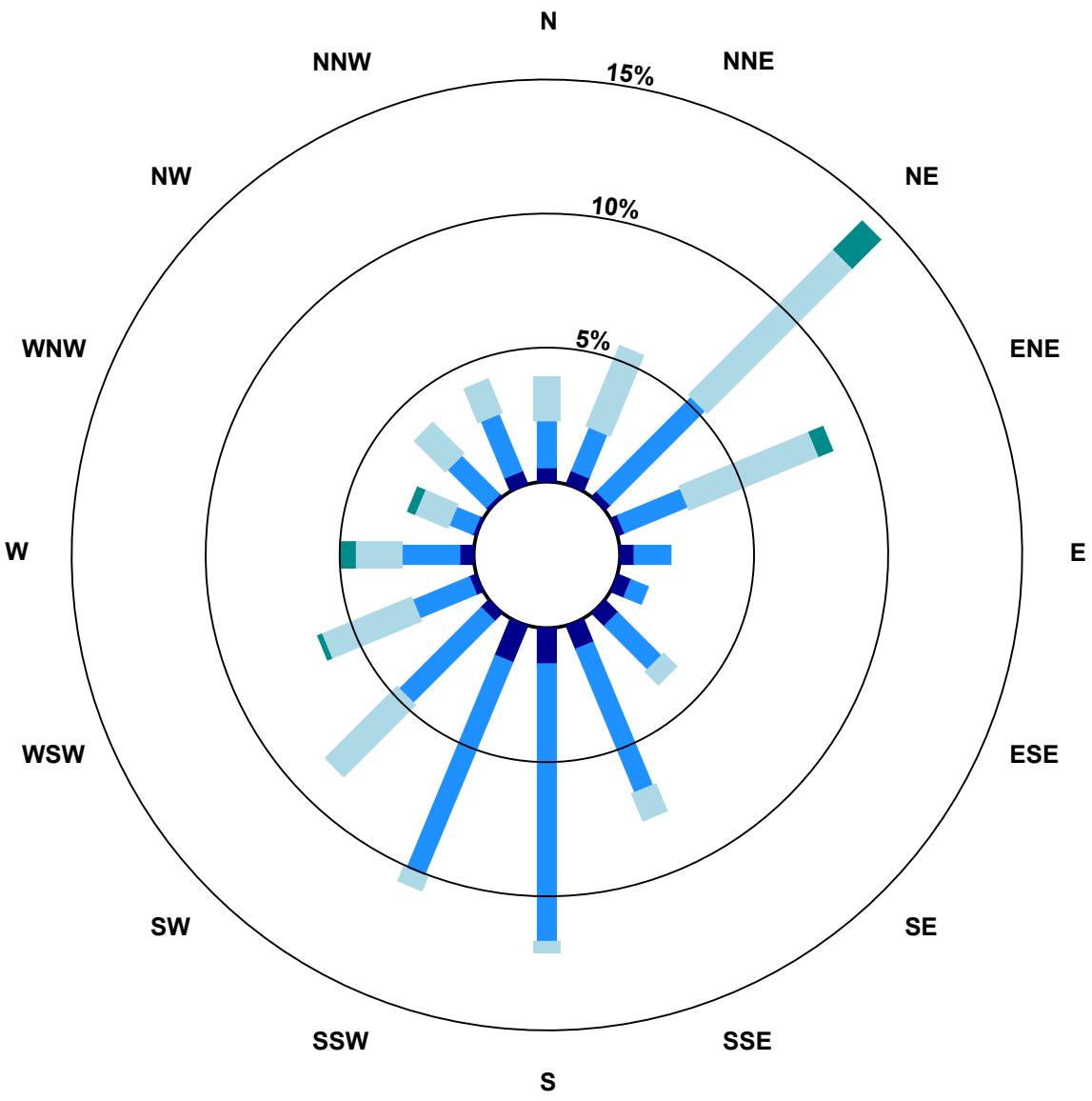
Total Number of Hours: 744

Wood Buffalo Environmental Association

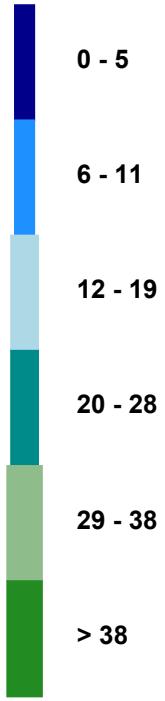
Wind Rose Mar 2025

Wind Speed 10m (WS10) - km/h

Kirby North



Classes (km/h)



Total Number of Valid Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Kirby North - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7 km/h on Mar 8 15:00

Minimum Value: 0 km/h on Mar 28 21:00

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

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

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

Direction of Maximum Speed: 286 deg on Mar 8 15:00
Direction of Maximum Daily Speed Average: 55.3 deg on Mar 27

Direction of Minimum Speed: 268 deg on Mar 10 17:00

Direction of Minimum Daily Speed Average: 2.6 deg on Mar 17

Monthly Average Direction: 106.6 deg

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	181	186	188	187	177	171	181	183	186	200	218	222	243	254	252	237	239	244	210	193	201	200	199	192	209.7
2-Mar	181	172	174	180	189	184	192	195	211	235	298	307	306	316	321	328	327	322	274	204	275	307	300	317	269.5
3-Mar	323	318	329	338	1	3	3	351	11	16	15	19	1	348	338	356	345	319	337	245	239	142	110	92	352.5
4-Mar	167	179	195	193	202	198	194	196	197	211	215	221	228	225	222	222	222	218	205	205	198	198	193	198	207.7
5-Mar	221	269	305	329	335	346	358	354	353	14	5	338	341	340	309	308	314	302	302	290	204	203	197	191	320.3
6-Mar	197	186	185	183	189	213	192	200	207	218	269	239	273	274	283	281	297	310	296	187	198	211	232	210	241.4
7-Mar	200	198	194	190	195	202	204	207	216	233	249	257	262	260	277	299	275	292	284	244	272	285	275	271	249.7
8-Mar	237	201	203	192	194	200	207	224	247	255	265	260	262	271	286	293	298	325	343	350	20	47	53	43	274.1
9-Mar	49	50	42	41	41	50	47	48	49	50	45	43	39	49	41	43	36	39	57	40	37	41	43	49	44.5
10-Mar	42	46	37	37	96	59	109	133	130	152	179	191	187	206	210	236	268	153	140	171	174	144	102	87	133.8
11-Mar	79	89	77	79	85	83	73	68	80	87	72	60	43	60	40	42	49	51	52	39	47	26	29	29	55.6
12-Mar	22	24	27	33	34	31	26	37	44	31	37	38	55	34	63	70	71	58	57	50	55	65	60	56	44.3
13-Mar	57	68	63	55	68	69	63	64	73	74	67	68	59	57	56	53	47	56	58	51	31	25	29	31	55.9
14-Mar	30	26	27	25	5	357	8	2	1	339	341	353	359	347	356	336	348	349	355	349	348	349	352	354	359.6
15-Mar	349	331	320	327	340	8	16	31	49	58	39	33	328	315	306	319	327	25	36	53	63	81	103	116	8.0
16-Mar	124	123	126	147	150	151	149	150	157	166	146	142	155	165	179	147	153	150	151	158	163	175	179	181	153.9
17-Mar	177	176	175	178	180	172	171	174	187	215	225	242	250	273	307	310	323	330	353	347	13	32	55	41	229.8
18-Mar	61	48	17	25	118	199	196	225	293	306	273	246	241	226	226	224	225	218	209	198	221	214	246	258	234.8
19-Mar	231	184	196	192	183	186	182	190	199	208	225	230	225	252	257	255	271	254	270	261	221	210	200	186	224.6
20-Mar	162	179	28	35	36	41	47	51	60	61	67	65	61	61	62	58	55	56	61	49	47	53	86	120	57.7
21-Mar	134	140	144	145	165	163	160	165	161	161	150	149	147	151	173	170	151	141	151	162	174	181	176	184	158.8
22-Mar	177	174	178	188	191	189	187	195	209	212	214	217	217	229	247	253	251	305	278	290	275	264	258	250	228.5
23-Mar	154	230	205	138	176	176	183	182	214	275	224	253	257	253	241	235	223	218	195	179	177	182	173	176	213.3
24-Mar	175	183	175	170	165	161	166	199	212	222	216	214	213	226	227	241	238	249	322	284	332	294	279	262	230.7
25-Mar	263	272	247	203	205	179	180	203	214	240	243	234	247	270	273	298	315	319	339	349	13	41	10	25	273.5
26-Mar	33	47	41	32	32	32	45	40	43	50	65	65	58	57	60	55	43	47	51	56	51	49	64	63	48.4
27-Mar	68	72	67	67	62	56	51	54	55	55	53	53	54	56	55	48	49	48	46	48	48	52	60	62	55.3
28-Mar	62	57	54	41	33	34	34	43	42	50	62	62	72	119	82	49	72	55	89	150	152	149	141	139	61.6
29-Mar	137	143	163	162	154	153	153	154	187	267	278	233	229	217	268	234	237	228	229	199	211	211	189	196	200.4
30-Mar	193	188	187	192	184	182	179	188	218	241	236	246	240	230	221	220	224	219	232	223	197	186	184	174	213.3
31-Mar	174	170	158	143	149	143	142	147	150	156	149	162	167	133	145	141	141	151	146	149	156	158	166	172	152.6
	113.5	125.2	110.5	95.2	112.0	112.1	109.0	120.2	139.1	189.4	256.3	257.3	268.2	272.6	286.8	295.1	314.9	341.5	18.3	64.2	74.7	104.5	130.2	114.3	
	Diurnal Average																								

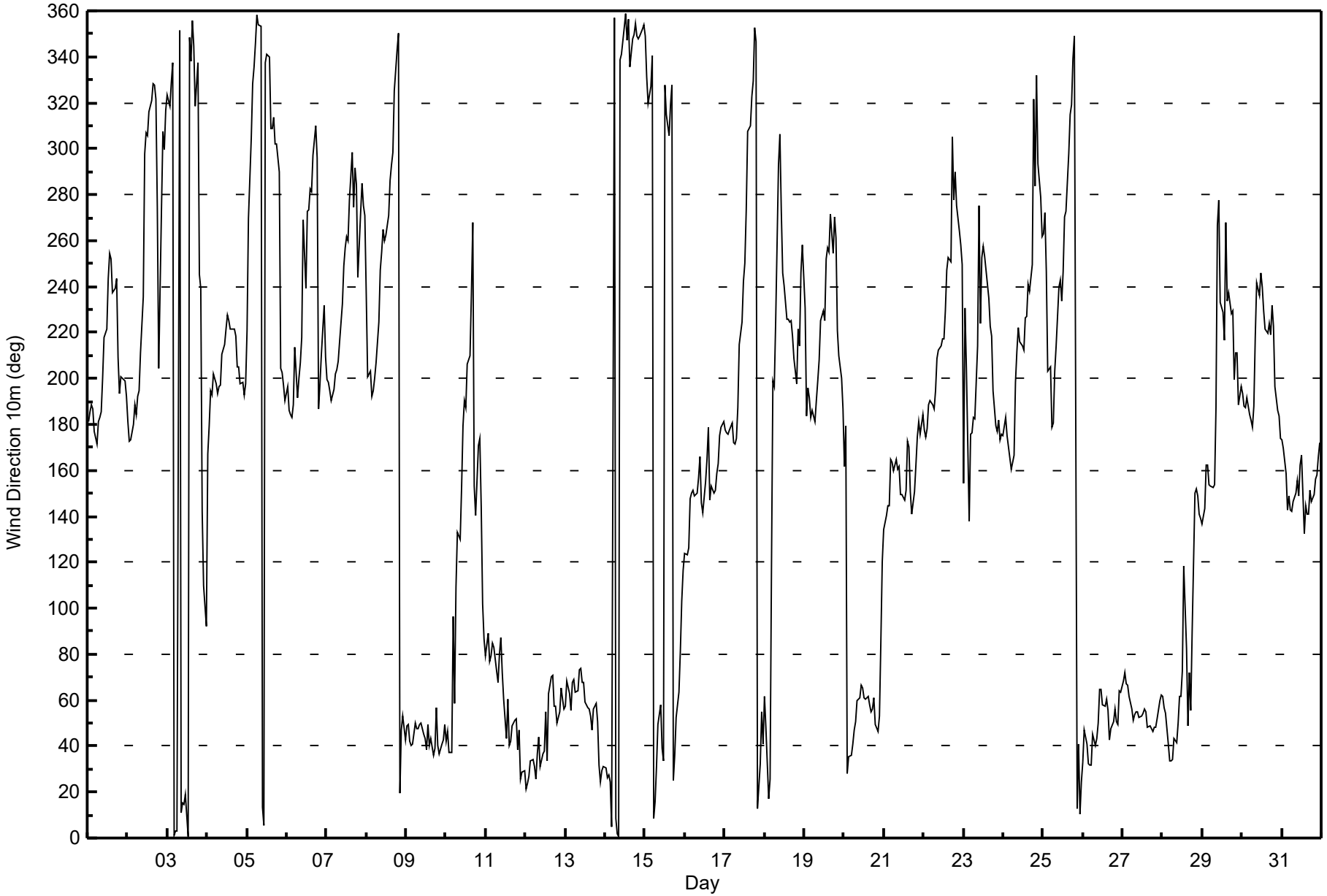
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Kirby North - March 2025



Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 80 deg on Mar 29 10:00

Minimum Value: 4 deg on Mar 29 00:00

Percentiles: P_1 = 8 P_{10} = 11 Q_1 = 13 Median = 16 Q_3 = 21 P_{90} = 31 P_{99} = 65

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	15	14	14	11	10	12	14	12	14	18	16	17	19	14	16	15	16	14	17	11	12	11	13	13	19
2-Mar	16	16	11	13	15	14	15	14	22	22	19	15	21	16	17	19	15	15	31	39	36	13	13	14	39
3-Mar	14	16	18	17	16	15	15	18	16	15	17	23	23	23	18	20	21	17	65	35	74	46	43	31	74
4-Mar	48	10	11	11	13	13	13	14	16	17	17	18	19	18	19	17	15	16	15	14	14	13	14	15	48
5-Mar	20	26	18	13	13	15	18	15	17	22	29	21	22	37	22	20	17	15	14	46	23	11	11	11	46
6-Mar	11	9	10	8	47	43	50	18	23	31	24	22	35	25	27	24	18	15	19	72	57	14	12	51	72
7-Mar	30	16	14	18	20	18	16	14	17	17	14	20	21	22	23	17	22	17	17	14	24	26	18	28	30
8-Mar	28	40	11	14	15	16	14	15	13	14	13	15	14	17	15	15	17	23	17	15	18	16	13	12	40
9-Mar	13	13	12	11	10	13	14	13	14	14	15	14	14	16	17	18	15	12	14	14	12	12	16	15	18
10-Mar	14	19	10	13	45	23	19	19	34	38	36	62	39	34	42	25	73	33	16	20	19	30	20	20	73
11-Mar	16	16	20	17	17	17	17	14	17	19	14	22	17	20	14	15	21	29	14	18	15	16	13	12	29
12-Mar	12	12	12	14	12	13	11	13	23	22	26	24	32	37	32	26	18	12	11	12	12	13	12	14	37
13-Mar	14	13	12	11	12	13	14	14	16	15	13	13	13	13	12	12	13	13	12	14	11	10	10	10	16
14-Mar	10	10	10	11	13	15	14	15	21	21	21	20	20	19	18	16	16	15	14	13	13	14	12	18	21
15-Mar	37	15	9	15	16	9	13	10	18	22	23	46	40	22	18	17	34	13	13	14	23	45	34	13	46
16-Mar	8	8	11	12	10	11	12	14	15	22	21	25	31	28	29	23	20	17	17	18	17	19	18	18	31
17-Mar	18	18	18	18	18	17	16	17	20	19	17	20	14	35	15	19	20	14	16	15	16	12	14	14	35
18-Mar	13	17	17	17	43	23	18	39	29	18	27	22	22	17	18	16	17	21	17	13	18	12	20	13	43
19-Mar	41	46	46	21	11	9	10	12	18	18	17	19	21	21	16	15	24	16	27	62	11	18	12	12	62
20-Mar	61	33	19	7	7	11	13	13	13	15	16	21	20	17	23	20	18	14	11	12	11	9	24	21	61
21-Mar	20	16	18	17	18	17	17	16	18	24	25	25	25	26	30	27	23	16	16	16	17	16	17	17	30
22-Mar	17	15	15	17	16	16	15	19	15	17	16	19	22	19	21	17	30	26	17	18	18	14	17	35	35
23-Mar	65	72	59	56	39	42	13	41	30	31	33	21	20	23	27	30	25	20	15	13	10	10	9	11	72
24-Mar	9	12	10	10	9	12	16	17	17	17	19	21	21	18	18	16	17	14	26	16	28	16	15	14	28
25-Mar	17	22	17	32	25	18	70	47	16	20	19	20	23	24	20	19	18	16	20	13	15	6	65	19	70
26-Mar	10	11	11	11	10	10	12	13	13	21	19	29	25	26	22	22	16	14	13	12	11	13	14	15	29
27-Mar	14	13	13	13	12	12	12	13	14	13	14	14	15	15	15	15	14	13	12	13	12	12	12	13	15
28-Mar	12	13	12	10	10	11	10	13	15	17	20	22	25	47	64	36	37	24	26	23	8	10	5	4	64
29-Mar	7	7	12	11	10	7	9	14	33	80	42	39	28	33	38	27	18	17	18	11	10	13	10	11	80
30-Mar	13	13	11	12	11	8	9	20	22	19	19	17	23	31	28	27	21	18	13	13	18	18	16	14	31
31-Mar	14	17	16	11	17	15	17	19	18	20	26	32	34	27	36	34	24	23	15	15	15	14	14	16	36
	65	72	59	56	47	43	70	47	34	80	42	62	40	47	64	36	73	33	65	72	74	46	65	51	
	Diurnal Maximum																								

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS512
HANGINGSTONE EXPANSION
MARCH 2025

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

April 30, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - HANGINGSTONE EXPANSION (AMS512)
MARCH 2025

MONTHLY SUMMARY

Parameter	Hours of Data	Hours of Calibration	Hours without Data	Operational Time	Maximum 1-Hour Value	1-Hour Exceedances	Maximum 24-Hour Value	24-Hour Exceedances
SO2 (ppb) Average	710	34	34	100	78.1	0	9.1	0
H2S (ppb) Average	708	36	36	100	1.5	0	0.3	0
NO2 (ppb) Average	709	35	35	100	32.9	0	5.4	-
NO (ppb) Average	709	35	35	100	4	-	0.9	-
NOX (ppb) Average	709	35	35	100	33.2	-	5.9	-
Temperature 2 m (C) Average	744	0	0	100	9.2	-	3.6	-
Relative Humidity (%) Average	744	0	0	100	97.6	-	81.4	-
Wind Speed 10 m (km/h) Average	742	0	2	99.73	25	-	15	-
Wind Direction 10 m (deg) Average	742	0	2	99.73	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - HANGINGSTONE EXPANSION (AMS512)
MARCH 2025

MONTHLY SUMMARY FOR AIR QUALITY/ METEOROLOGICAL MONITORING MEASUREMENTS

					Percentile						
Parameter	Number	Mean	StnDev	Total	Min	P10	Q1	Median	Q3	P90	Max
SO2 (ppb) Average	710	1.83	4.4	-	0	0.1	0.2	0.6	1.5	5	78.1
H2S (ppb) Average	708	0.09	0.1	-	0	0	0	0.1	0.1	0.2	1.5
NO2 (ppb) Average	709	2.41	2.7	-	0.1	0.5	0.9	1.5	2.8	5.3	32.9
NO (ppb) Average	709	0.28	0.4	-	0	0	0	0.1	0.3	0.7	4
NOX (ppb) Average	709	2.68	2.9	-	0.1	0.6	1.1	1.8	3.2	5.9	33.2
Temperature 2 m (C) Average	744	-6.3	8	-	-24.5	-17.6	-12.7	-5.7	0.1	4.2	9.2
Relative Humidity (%) Average	744	65.38	15.6	-	25.7	42.3	54	67.2	78.6	83.8	97.6
Wind Speed 10 m (km/h) Average	742	9.6	4	-	1	5	7	9	12	14	25
Wind Direction 10 m (deg) Average	742	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - HANGINGSTONE EXPANSION (AMS512)
MARCH 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
Wind Speed, Wind Direction	24 Mar 2025 22:00	24 Mar 2025 23:00	2	Flat line in sensor output signal - Sensor frozen

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Hangingstone Expansion - March 2025

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

Maximum Value: 78.1 ppb on Mar 8 07:00 Maximum Daily Average: 9.1 ppb on Mar 4

Minimum Value: 0.0 ppb on Mar 3 18:00 Minimum Daily Average: 0.1 ppb on Mar 26

Maximum Diurnal Average: 3.9 ppb at hour 7 Minimum Diurnal Average: 0.9 ppb at hour 22

Monthly Average: 1.83 ppb Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.2 Median = 0.6 Q_3 = 1.5 P_{90} = 5.0 P_{99} = 18.2

Hours in Service:	744
Hours of Data:	710
Hours of Missing Data:	34
Hours of Calibration:	34
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.4	Z	0.6	0.5	0.6	0.5	0.6	0.5	0.5	0.9	9.3	16.9	19.6	3.0	1.3	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	2.6	19.6
2-Mar	0.5	0.6	Z	6.6	10.7	9.4	0.8	10.9	7.3	0.8	0.3	1.1	2.5	2.9	1.0	0.3	0.3	0.4	0.3	0.2	0.7	1.4	0.3	0.2	2.6	10.9
3-Mar	0.5	1.5	1.9	Z	2.1	1.6	1.8	5.2	2.6	1.3	1.0	0.5	0.2	0.2	0.1	0.1	0.1	0.0	0.2	0.8	2.1	0.5	10.8	9.6	1.9	10.8
4-Mar	9.1	8.9	8.1	1.4	Z	2.1	11.3	18.2	32.9	20.5	23.9	2.7	12.3	7.6	17.8	6.4	8.4	5.8	1.9	0.6	2.4	7.5	0.2	0.4	9.1	32.9
5-Mar	1.8	3.1	2.1	0.7	1.0	Z	3.7	2.6	1.0	2.3	1.6	2.4	3.0	1.9	0.7	0.2	0.1	0.1	0.2	1.5	0.3	0.2	0.6	1.0	1.4	3.7
6-Mar	Z	0.8	0.3	1.0	0.6	0.6	0.8	0.4	0.2	2.7	11.7	9.3	0.6	0.2	0.2	0.2	0.1	0.1	1.9	9.2	3.2	0.2	0.8	0.6	2.0	11.7
7-Mar	6.8	Z	10.0	10.5	9.9	2.6	10.0	C	C	C	0.6	5.5	1.5	3.3	0.0	0.0	0.0	0.0	2.1	10.6	6.4	4.3	3.7	2.6	4.5	10.6
8-Mar	1.9	1.9	Z	2.2	1.5	0.9	78.1	5.1	2.7	0.3	0.2	0.2	0.1	0.2	0.1	0.1	3.9	4.6	2.3	2.2	3.2	1.9	0.1	0.1	4.9	78.1
9-Mar	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	0.0	0.1	0.5	0.8	0.1	0.8
10-Mar	0.9	0.9	0.7	0.7	Z	0.4	0.4	0.2	0.1	0.1	0.3	0.7	5.4	10.9	8.8	5.6	4.7	1.2	1.3	0.5	0.4	0.4	0.4	0.5	2.0	10.9
11-Mar	0.3	0.3	0.2	0.2	0.3	Z	0.5	0.6	0.5	0.3	0.1	0.3	0.7	0.5	0.4	0.3	0.1	0.1	0.1	0.2	0.3	0.9	0.8	1.5	0.4	1.5
12-Mar	Z	2.2	2.0	2.4	2.2	1.8	1.5	1.4	1.3	0.9	0.5	0.6	0.8	0.9	0.7	0.4	0.3	0.6	1.4	2.6	1.2	0.6	1.1	0.7	1.2	2.6
13-Mar	0.7	Z	0.6	0.9	1.3	0.5	1.2	1.0	0.9	0.9	0.5	0.1	0.1	0.2	0.1	0.4	0.6	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.5	1.3
14-Mar	0.1	0.1	Z	0.3	0.7	1.0	1.1	1.5	2.1	4.5	3.6	3.0	3.3	4.3	2.4	6.8	12.0	9.9	6.6	3.0	1.1	0.6	0.7	0.7	3.0	12.0
15-Mar	0.4	0.8	0.6	Z	0.8	1.0	0.9	0.8	1.2	2.7	3.0	1.8	1.5	1.8	5.1	3.7	2.0	1.1	0.8	0.7	1.0	1.3	1.5	2.1	1.6	5.1
16-Mar	2.0	1.7	2.6	1.2	Z	2.2	2.0	2.2	2.8	1.6	1.1	0.7	0.7	0.6	1.0	0.9	0.6	0.7	0.6	0.5	0.7	0.7	0.6	0.5	1.2	2.8
17-Mar	0.5	0.4	0.4	0.4	0.9	Z	1.1	0.9	1.3	0.4	0.4	0.5	0.5	0.4	0.3	0.3	1.1	3.0	4.5	4.8	1.2	1.0	0.7	0.5	1.1	4.8
18-Mar	Z	0.3	0.4	2.2	2.5	1.8	1.3	1.2	1.1	0.3	6.0	2.8	10.9	5.3	7.0	5.1	5.0	1.3	1.6	0.3	0.3	0.5	0.2	0.4	2.5	10.9
19-Mar	0.2	Z	2.9	0.2	2.5	1.6	0.1	0.2	2.1	1.1	11.6	6.0	3.7	0.3	0.2	0.1	0.1	0.0	0.1	0.3	0.3	1.1	3.2	2.3	1.8	11.6
20-Mar	1.2	0.5	Z	0.3	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.3	0.2	0.2	0.1	0.1	0.1	0.0	0.2	0.2	0.0	0.0	0.2	1.2
21-Mar	0.0	0.1	0.4	Z	0.6	0.6	0.7	0.9	0.9	0.9	0.8	0.8	0.7	0.6	0.7	1.0	1.1	0.8	0.6	0.4	0.3	0.4	0.6	0.7	0.6	1.1
22-Mar	0.5	0.4	0.3	0.6	Z	0.7	1.0	1.1	1.0	7.6	7.1	9.8	9.9	1.3	1.5	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	1.9	9.9
23-Mar	0.1	0.1	2.0	0.9	6.7	Z	0.4	1.4	1.9	0.7	0.4	0.1	0.5	0.2	1.0	5.4	1.8	0.2	0.3	0.3	0.5	0.5	0.6	0.4	1.1	6.7
24-Mar	Z	0.5	0.6	0.9	1.4	2.1	1.2	0.8	7.1	9.2	19.8	1.6	0.7	21.5	7.0	0.3	0.6	0.2	0.2	0.2	0.2	0.2	0.2	1.6	3.4	21.5
25-Mar	2.1	Z	6.8	3.5	0.7	0.5	0.4	10.5	10.6	11.6	0.4	4.9	13.1	1.2	0.3	0.1	0.1	0.4	0.8	0.3	0.7	0.1	0.1	0.0	3.0	13.1
26-Mar	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	0.3	0.6	0.1	0.0	0.0	0.3	0.1	0.6
27-Mar	0.5	0.3	0.2	Z	0.0	0.1	0.1	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.5
28-Mar	0.1	0.1	0.1	0.1	Z	0.1	0.6	0.6	0.2	0.2	0.3	0.4	0.3	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.3	0.2	0.2	0.3	0.6
29-Mar	0.1	0.1	0.1	0.2	0.2	Z	0.3	0.1	0.2	1.8	4.8	1.2	0.5	0.5	0.3	0.3	1.0	2.3	1.8	0.3	0.2	0.1	0.2	0.1	0.7	4.8
30-Mar	Z	0.0	0.1	0.1	0.3	0.4	0.2	0.2	0.7	2.1	1.5	1.0	1.2	0.9	0.9	1.1	1.1	1.0	0.6	1.0	0.9	0.5	0.9	2.2	0.8	2.2
31-Mar	0.3	Z	0.4	0.2	0.1	0.1	0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.4	0.2	0.3	0.4	0.5	0.4	0.4	0.3	0.3	0.4	0.8	0.3	0.8
	1.2	1.0	1.7	1.5	1.8	1.3	3.9	2.3	2.8	2.5	3.6	2.4	3.1	2.3	1.9	1.3	1.5	1.1	1.0	1.4	0.9	0.9	1.0	1.0	Diurnal Average	
	9.1	8.9	10.0	10.5	10.7	9.4	78.1	18.2	32.9	20.5	23.9	16.9	19.6	21.5	17.8	6.8	12.0	9.9	6.6	10.6	6.4	7.5	10.8	9.6	Diurnal Maximum	

Z - zerospan C - Calibration

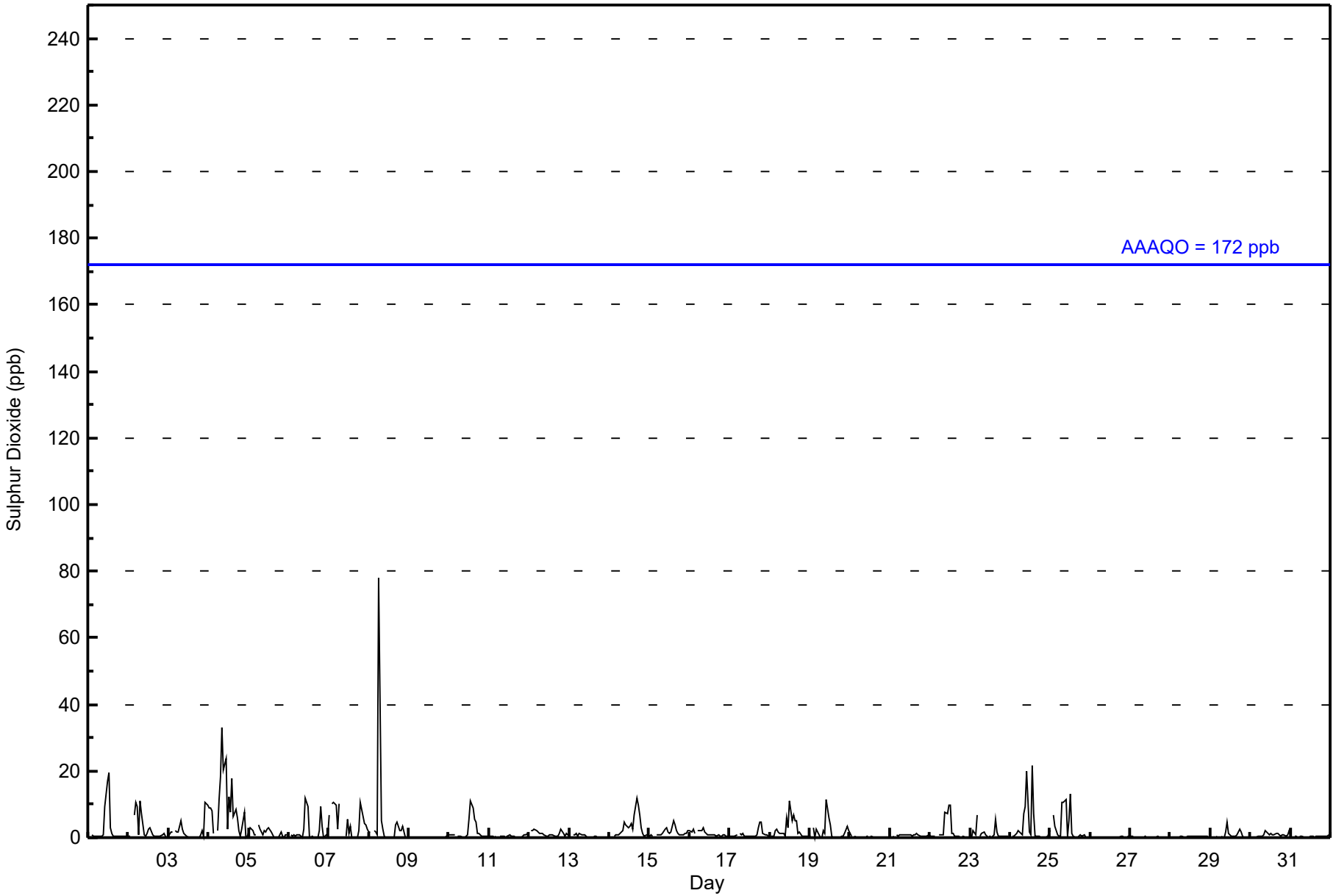
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Hangingstone Expansion - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	686	96.62	96.62
11 - 20	20	2.82	99.44
21 - 60	3	0.42	99.86
61 - 110	1	0.14	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 710

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Hangingstone Expansion - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	46	73	90	24	24	17	24	55	68	59	33	58	44	26	24	19	684
11 - 20	1	1	1	0	0	0	0	0	0	0	9	7	0	1	0	0	20
21 - 60	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3
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	47	74	91	24	24	17	24	55	68	59	46	65	44	27	24	19	708

Total Number of Valid Hours: 708

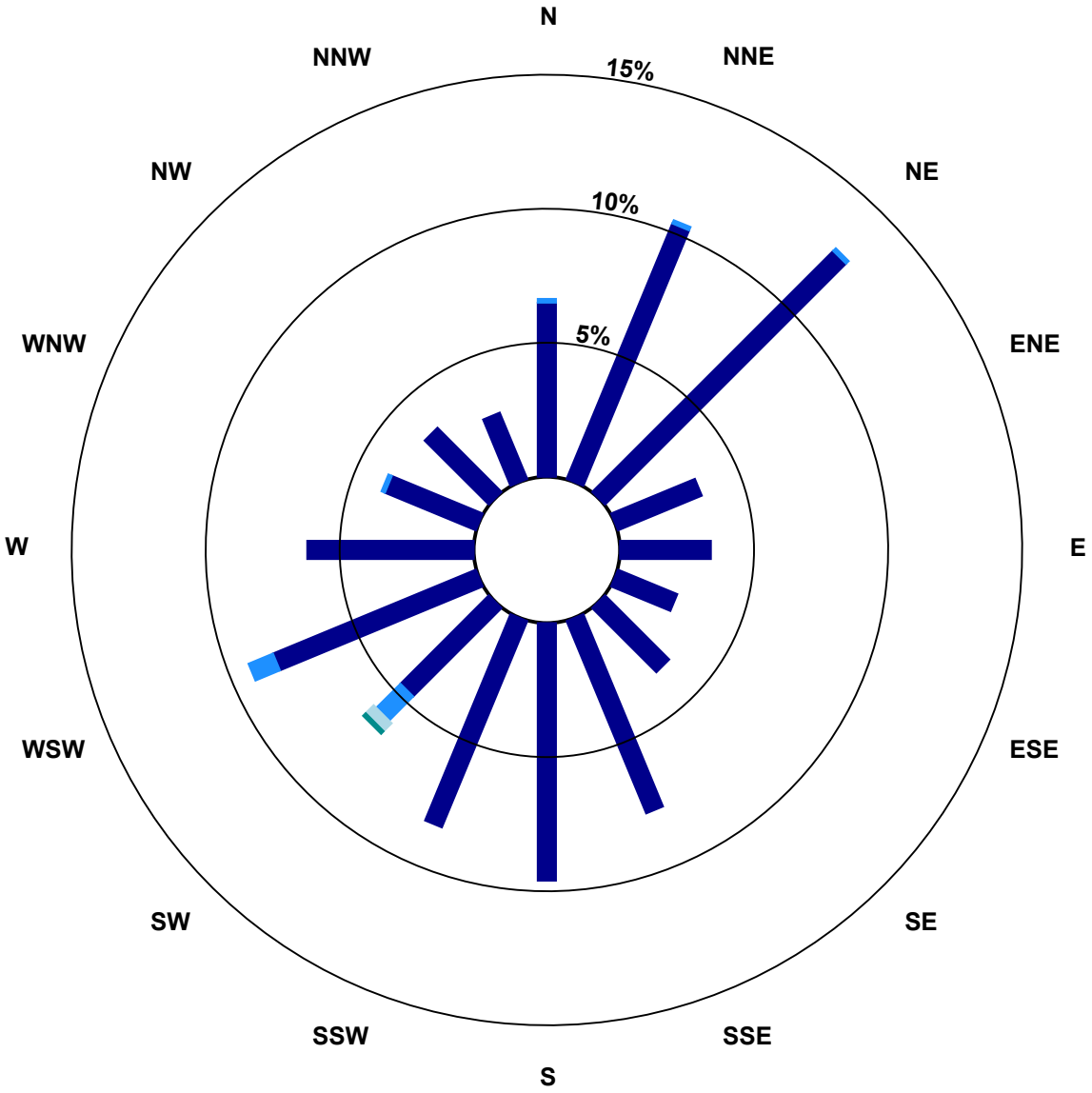
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Sulphur Dioxide (SO_2) - ppb

Hangingstone Expansion



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

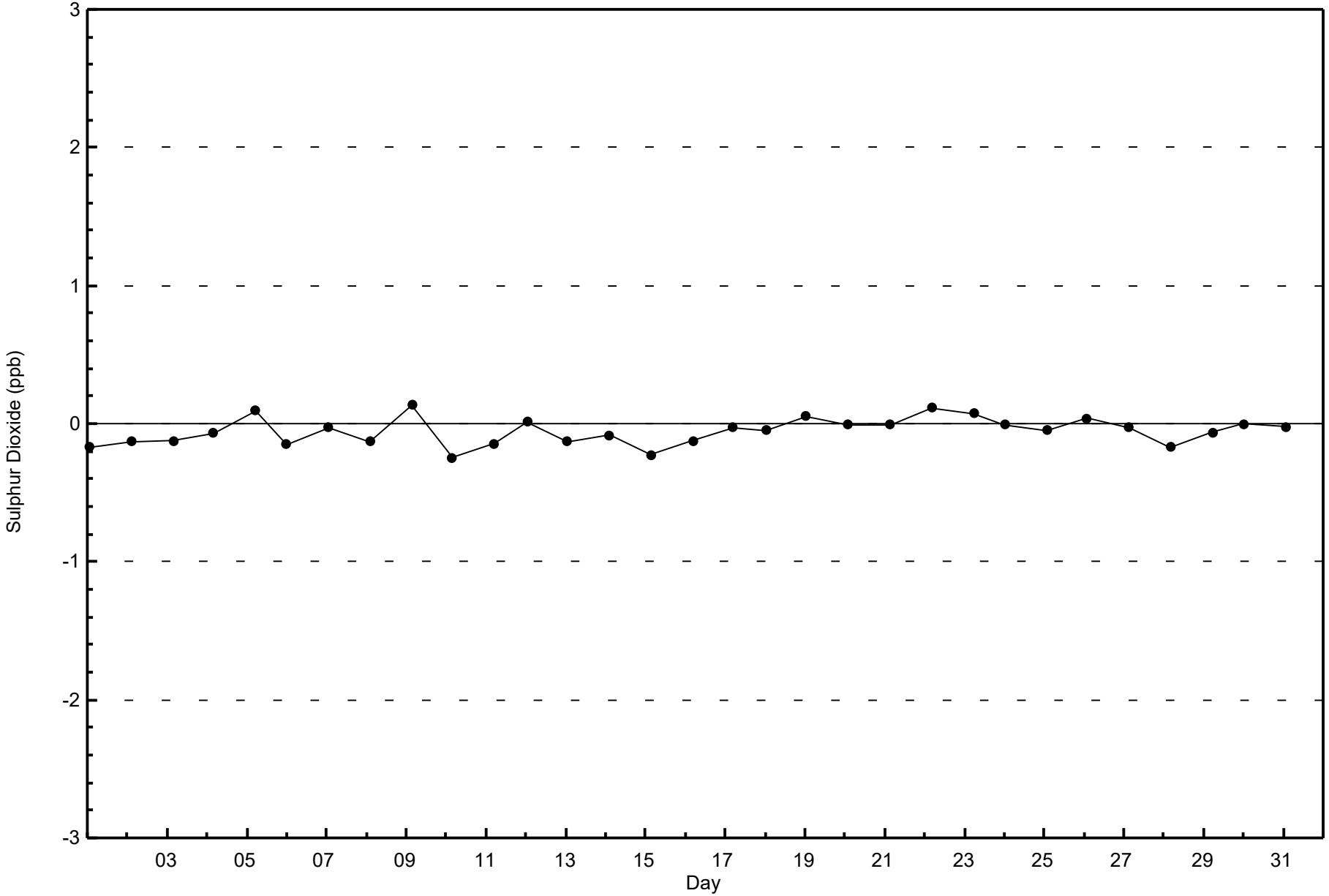
Total Number of Valid Hours: 708

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Hangingstone Expansion - March 2025

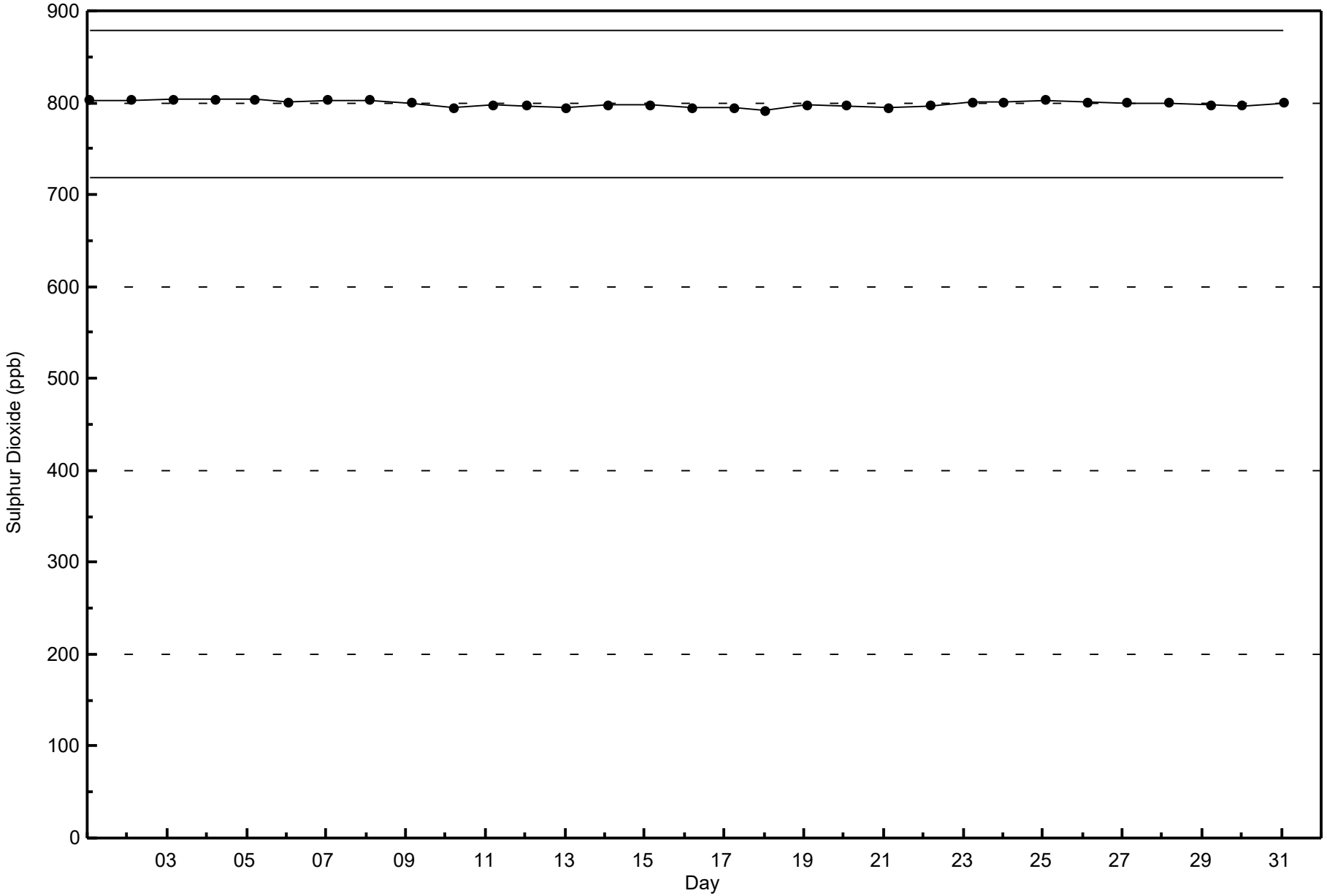


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Hangingstone Expansion - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Hangingstone Expansion - March 2025

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

Maximum Value: 1.5 ppb on Mar 8 07:00 Maximum Daily Average: 0.3 ppb on Mar 7

Minimum Value: 0.0 ppb on Mar 2 03:00 Minimum Daily Average: 0.0 ppb on Mar 13

Maximum Diurnal Average: 0.1 ppb at hour 7 Minimum Diurnal Average: 0.1 ppb at hour 16

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} = 0.5

Hours in Service:	744
Hours of Data:	708
Hours of Missing Data:	36
Hours of Calibration:	36
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.0	0.1	Z	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.4	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.4
2-Mar	0.0	0.0	0.0	Z	0.3	0.4	0.1	0.2	0.3	0.1	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.4
3-Mar	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	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2
4-Mar	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.2
5-Mar	Z	0.3	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.1	0.3
6-Mar	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.2	0.0	0.1	0.1	0.1	0.5
7-Mar	0.3	0.4	Z	0.3	0.2	0.1	0.2	0.6	0.5	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.9	0.7	0.4	0.3	0.2	0.3	0.9
8-Mar	0.2	0.2	0.2	Z	0.1	0.1	1.5	0.2	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.7	0.5	0.2	0.2	0.1	0.1	0.1	0.1	0.2	1.5
9-Mar	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	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
10-Mar	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
11-Mar	Z	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
12-Mar	0.2	Z	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.2
13-Mar	0.0	0.0	Z	0.1	0.0	0.0	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
14-Mar	0.0	0.0	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.5	0.4	0.2	0.2	0.2	0.1	0.1	0.2	0.3	0.5	0.2	0.1	0.1	0.1	0.1	0.2	0.5
15-Mar	0.0	0.1	0.1	0.1	Z	0.2	0.2	0.1	0.1	0.3	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3
16-Mar	0.1	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
17-Mar	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	0.1	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.3
18-Mar	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	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.1
19-Mar	0.1	0.2	Z	0.1	0.4	0.3	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.2	0.2	0.2	0.3	0.3	0.1	0.4
20-Mar	0.2	0.2	0.2	Z	0.2	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	0.1	0.2
21-Mar	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
22-Mar	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.3	0.4	0.3	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.4
23-Mar	Z	0.1	0.3	0.1	0.4	0.1	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.4
24-Mar	0.1	Z	0.1	0.0	0.0	0.0	0.1	0.0	0.2	0.2	0.3	0.1	0.1	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.1	0.4
25-Mar	0.2	0.4	Z	0.2	0.1	0.0	0.0	0.3	0.3	0.4	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.4
26-Mar	0.1	0.1	0.1	Z	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	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1
27-Mar	0.2	0.2	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	0.1	0.0	0.0	0.0	0.0	0.2
28-Mar	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
29-Mar	Z	0.1	0.1	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.1	0.2
30-Mar	0.0	Z	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	0.1	0.1	0.1	0.1	0.1	0.1
31-Mar	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	0.0	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	Diurnal Average	
	0.3	0.4	0.3	0.3	0.4	0.4	1.5	0.6	0.5	0.5	0.4	0.3	0.3	0.4	0.2	0.1	0.7	0.5	0.5	0.9	0.7	0.4	0.3	0.3	Diurnal Maximum	

Z - zerospan C - Calibration

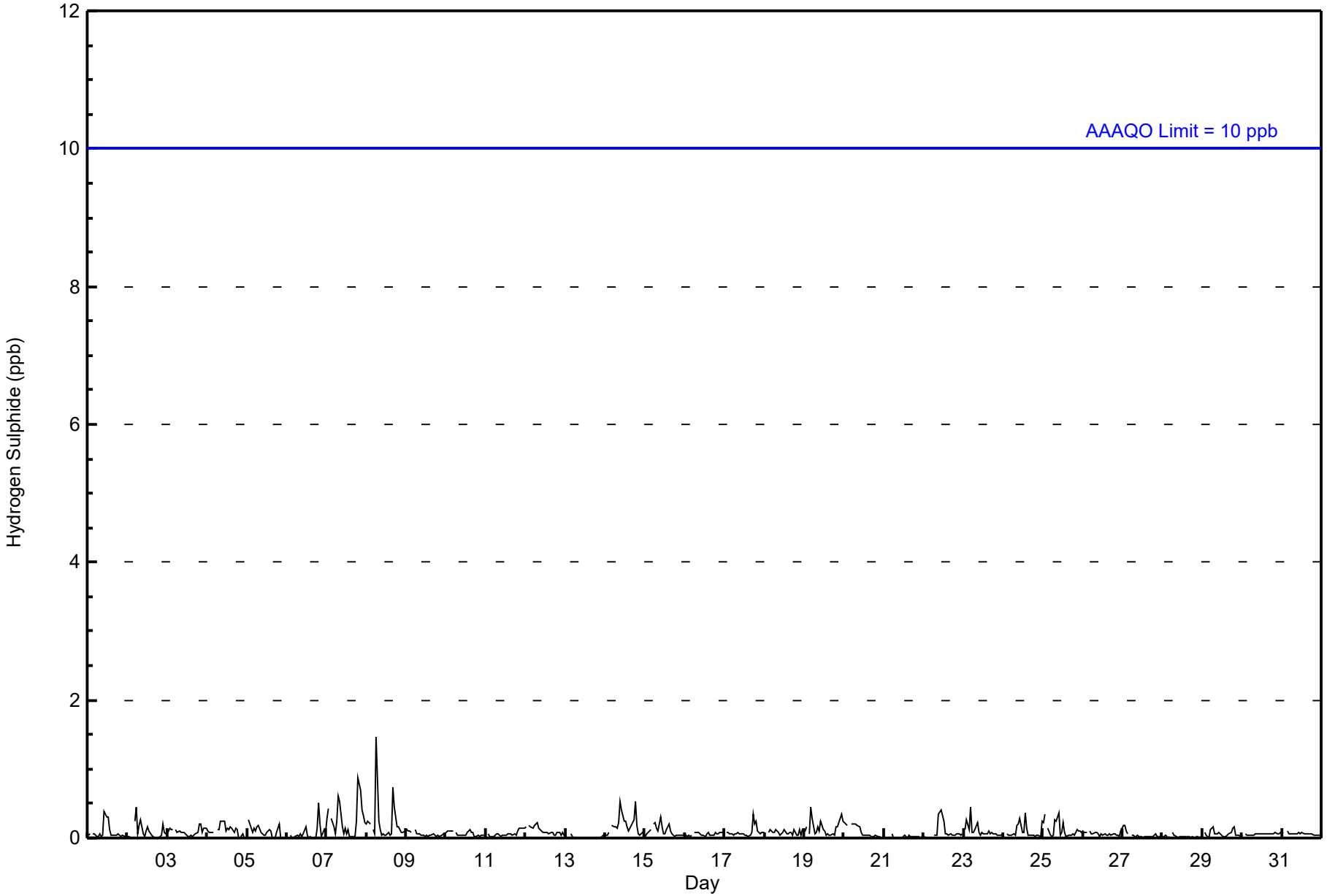
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Hangingstone Expansion - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	708	100.00	100.00
3 - 4	0	0.00	100.00
5 - 7	0	0.00	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 708

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Hangingstone Expansion - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	46	76	92	21	21	18	23	57	66	61	45	67	43	27	24	19	706
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	46	76	92	21	21	18	23	57	66	61	45	67	43	27	24	19	706

Total Number of Valid Hours: 706

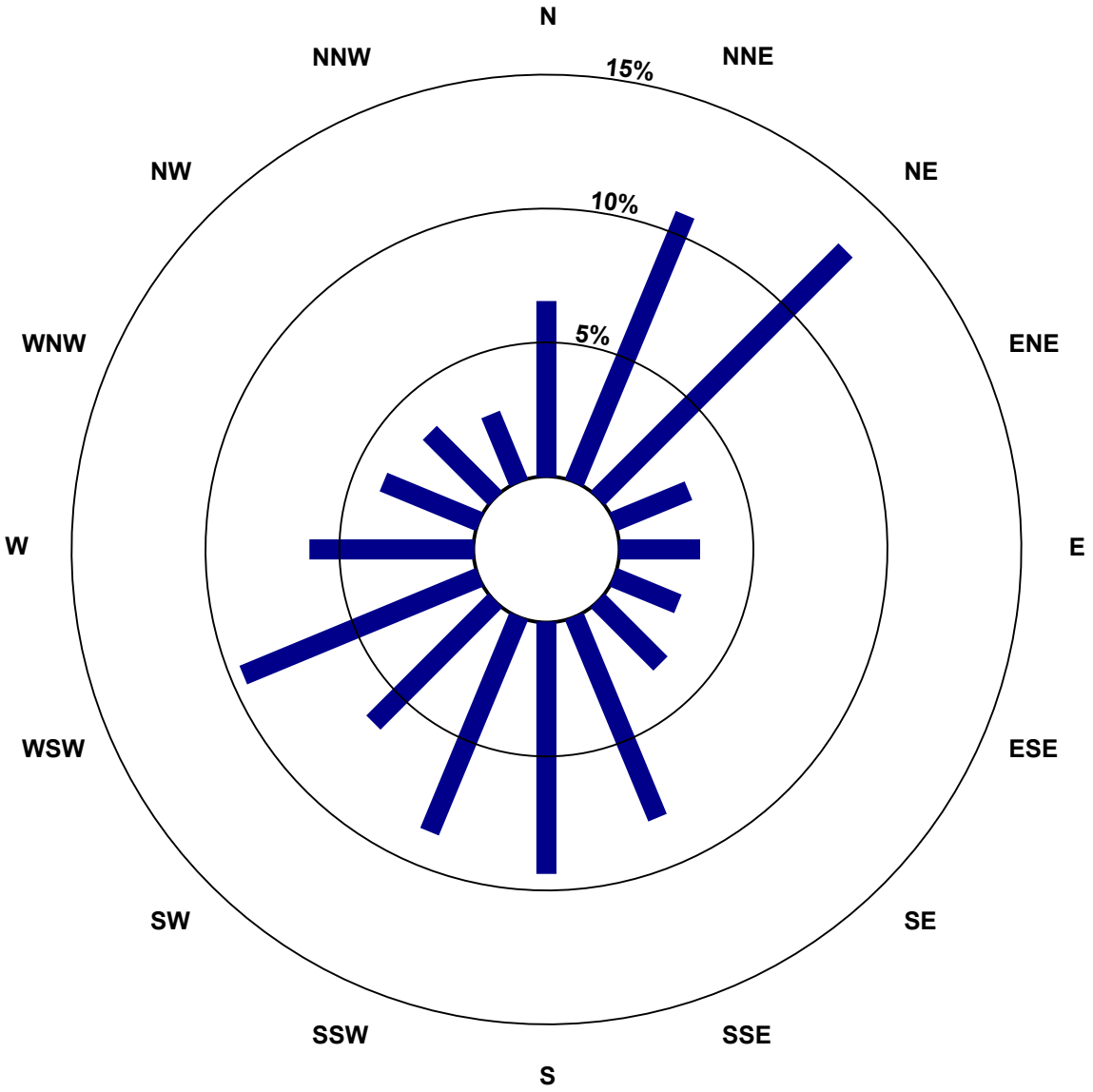
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Hydrogen Sulphide (H_2S) - ppb

Hangingstone Expansion



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

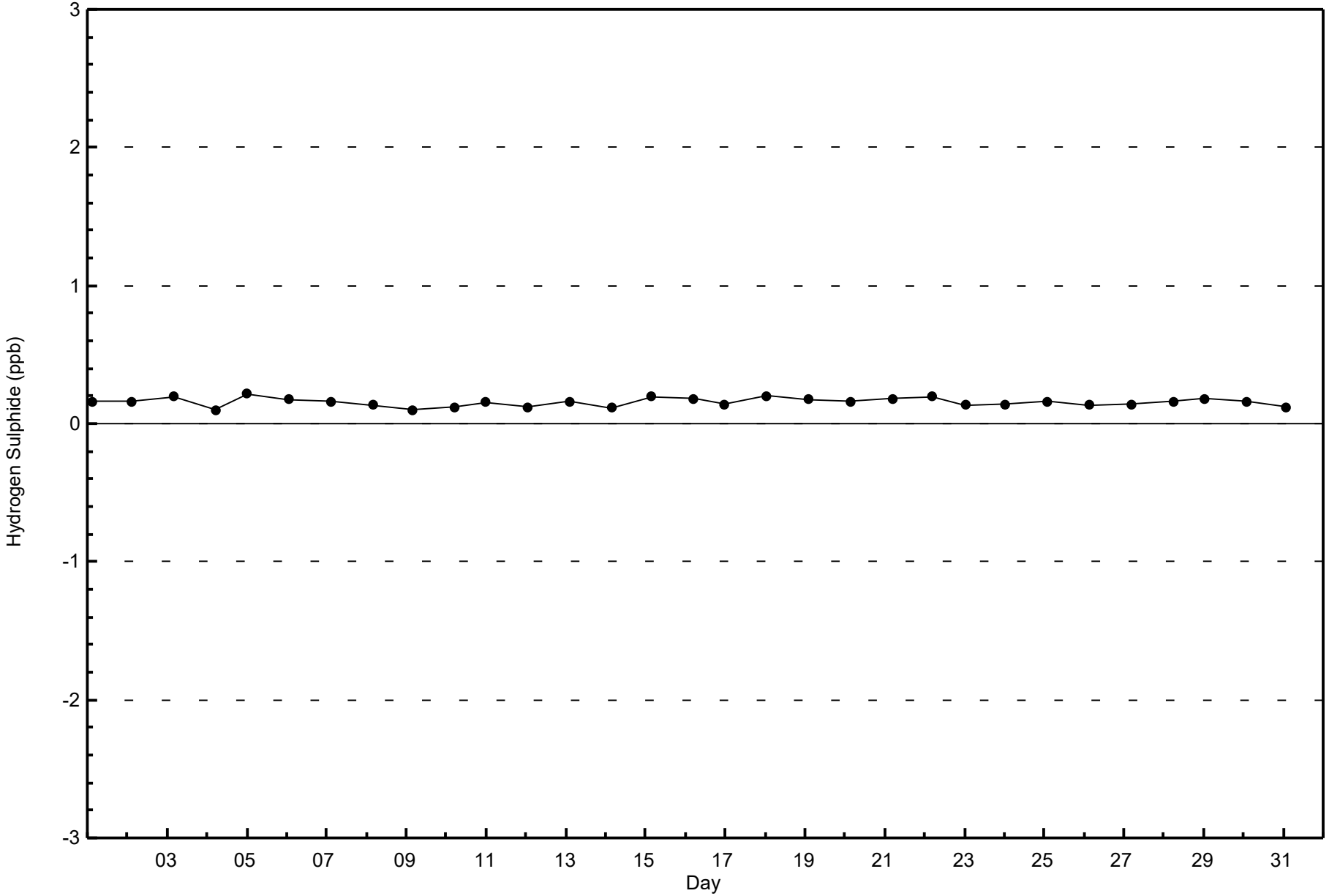
Total Number of Valid Hours: 706

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Hangingstone Expansion - March 2025

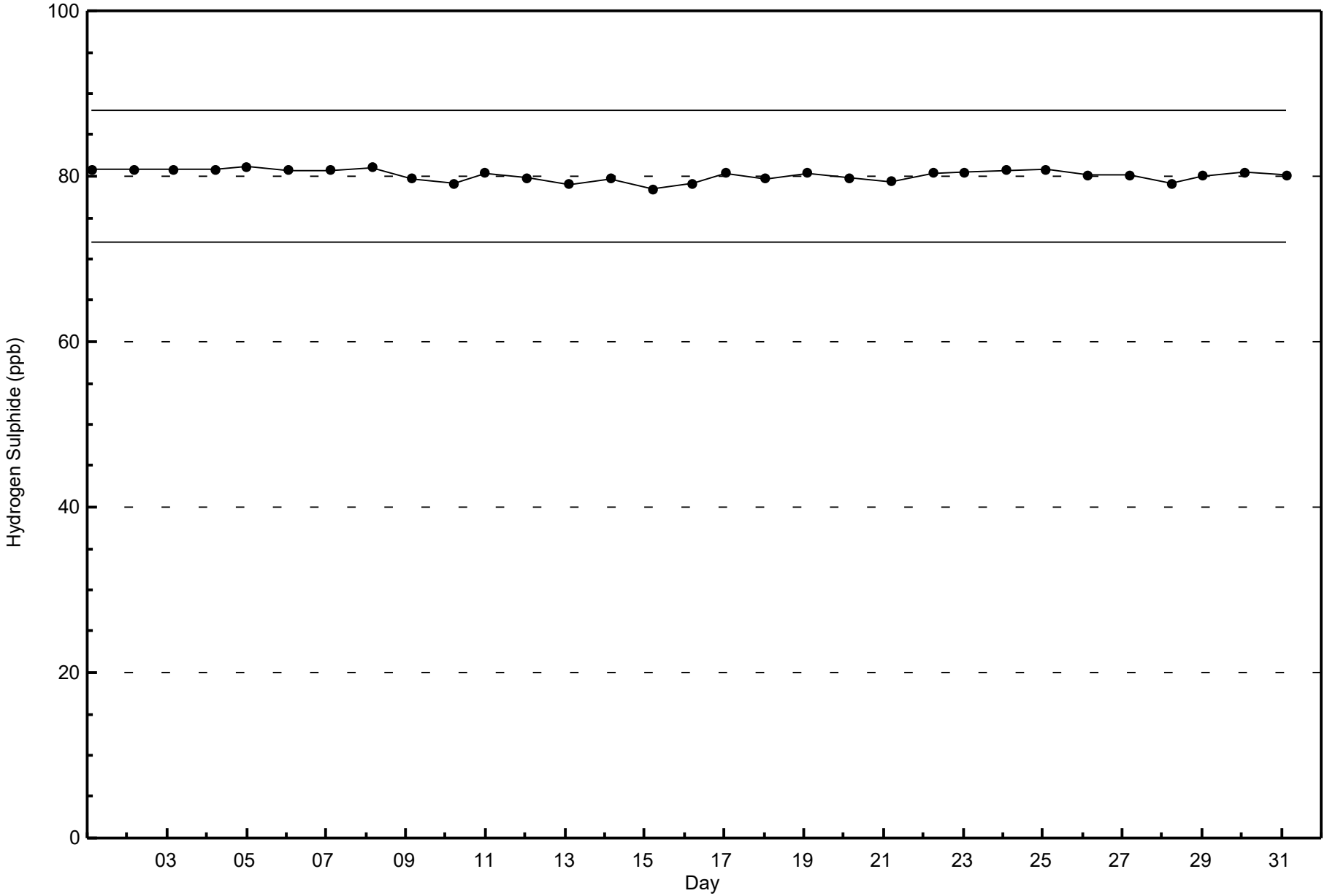


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Hangingstone Expansion - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Hangingstone Expansion - March 2025

Maximum Value: 4.0 ppb on Mar 20 09:00

Maximum Daily Average: 0.9 ppb on Mar 14

Minimum Value: 0.0 ppb on Mar 1 01:00

Minimum Daily Average: 0.1 ppb on Mar 27

Maximum Diurnal Average: 0.7 ppb at hour 10

Minimum Diurnal Average: 0.1 ppb at hour 1

Monthly Average: 0.28 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} = 2.1

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.0	0.0	0.0	0.1	0.0	Z	0.1	0.3	0.7	0.5	0.8	0.6	0.8	0.4	0.4	0.3	0.2	1.4	0.1	0.1	0.1	0.1	0.1	0.1	0.3	1.4
2-Mar	Z	0.1	0.1	0.2	0.1	0.2	0.2	0.5	0.3	0.4	0.3	0.5	1.4	1.7	0.6	0.2	0.7	0.2	0.5	0.2	0.1	0.1	0.1	0.1	0.4	1.7
3-Mar	0.1	Z	0.1	0.1	0.0	0.2	0.3	0.3	C	C	C	C	0.0	0.1	0.0	1.1	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.1
4-Mar	0.1	0.0	Z	0.1	0.2	0.1	0.2	0.5	0.9	1.1	1.1	0.3	0.5	0.5	0.8	0.5	0.4	0.3	0.0	0.1	0.1	0.1	0.0	0.1	0.4	1.1
5-Mar	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.1	0.4	0.7	1.1	1.2	0.7	0.5	0.3	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.3	1.2
6-Mar	0.0	0.0	0.0	0.1	Z	0.0	0.1	0.5	1.0	0.6	0.6	0.5	0.3	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.1	0.1	0.1	0.1	0.2	1.0
7-Mar	0.1	0.2	0.2	0.2	0.2	Z	0.2	0.4	0.5	0.3	0.3	0.4	0.2	0.2	0.0	0.1	0.1	0.0	0.1	0.3	0.4	0.2	0.2	0.1	0.2	0.5
8-Mar	Z	0.1	0.2	0.1	0.1	0.0	0.8	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.4	0.9	0.1	0.1	0.2	0.1	0.1	0.1	0.2	1.4
9-Mar	0.2	Z	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.4	0.5	0.6	0.6	0.9	0.9	1.1	0.4	0.2	0.1	0.0	0.1	0.1	0.0	0.1	0.3	1.1
10-Mar	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.5	0.1	0.1	0.3	0.6	0.8	0.6	0.4	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8
11-Mar	0.0	0.2	0.0	Z	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.8	0.8	0.5	0.4	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8
12-Mar	0.0	0.0	0.0	0.0	Z	0.0	0.8	2.9	1.8	2.1	1.7	1.8	1.1	0.8	0.8	1.1	0.9	0.4	0.1	0.0	0.0	0.1	0.3	0.2	0.7	2.9
13-Mar	0.1	0.1	0.1	0.3	0.1	Z	0.3	0.4	0.6	0.5	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.2	0.6
14-Mar	Z	0.0	0.0	0.1	0.1	0.1	0.1	0.5	1.2	3.3	3.3	2.4	2.2	1.9	0.8	1.3	1.8	0.9	0.2	0.0	0.0	0.1	0.1	0.1	0.9	3.3
15-Mar	0.1	Z	0.0	0.0	0.2	0.1	0.1	0.4	0.9	1.8	1.5	0.9	0.9	1.1	1.4	0.8	0.3	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.5	1.8
16-Mar	0.0	0.1	Z	0.1	0.1	0.1	0.1	0.4	0.8	0.6	0.6	0.4	0.4	0.5	0.6	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8
17-Mar	0.0	0.0	0.0	Z	0.0	0.1	0.0	0.3	0.3	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.8	0.4	0.1	0.2	0.0	0.0	0.1	0.2	0.8
18-Mar	0.2	0.1	0.2	0.0	Z	0.0	0.1	0.2	0.4	0.6	0.5	0.2	0.6	0.4	0.6	0.3	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.2	0.6
19-Mar	0.0	0.0	0.1	0.1	0.1	Z	0.2	1.1	0.9	0.6	0.9	0.6	0.4	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.3	1.1
20-Mar	Z	0.2	0.2	0.3	0.3	0.3	0.5	2.7	4.0	3.6	1.8	0.6	0.4	0.4	0.4	0.3	0.2	0.1	0.0	0.2	0.2	0.1	0.0	0.0	0.7	4.0
21-Mar	0.0	Z	0.1	0.0	0.0	0.0	0.1	0.2	0.4	0.5	0.6	0.7	0.5	0.3	0.4	0.4	0.3	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.7
22-Mar	0.0	0.1	Z	0.0	0.0	0.0	0.1	0.2	0.3	0.5	0.4	0.5	0.5	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
23-Mar	0.0	0.0	0.1	Z	0.1	0.0	0.1	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.2	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.3
24-Mar	0.0	0.0	0.0	0.1	Z	0.1	0.0	0.2	0.2	0.3	0.5	0.2	0.2	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6
25-Mar	0.0	0.0	0.1	0.0	0.0	Z	0.0	0.5	0.5	0.6	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	0.1	0.6
26-Mar	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.4	0.6	0.6	0.5	0.3	0.2	0.3	0.1	0.2	0.1	0.0	0.0	0.0	0.1	0.0	0.2	0.6
27-Mar	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.3
28-Mar	0.0	0.0	Z	0.1	0.0	0.4	0.8	1.8	0.4	0.2	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.1	0.1	0.0	0.1	0.2	0.1	0.2	0.3	1.8
29-Mar	0.1	0.2	0.3	Z	0.1	0.2	0.5	1.6	1.6	1.3	0.7	0.3	0.1	0.1	0.2	0.2	0.1	0.1	0.0	0.5	0.1	0.0	0.0	0.0	0.4	1.6
30-Mar	0.1	0.1	0.0	0.0	Z	0.1	0.2	0.3	0.3	0.4	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.4
31-Mar	0.0	0.0	0.1	0.1	0.1	Z	0.0	0.2	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.3
	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.6	0.7	0.7	0.6	0.5	0.5	0.5	0.4	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	Diurnal Average	
	0.2	0.2	0.3	0.3	0.3	0.4	0.8	2.9	4.0	3.6	3.3	2.4	2.2	1.9	1.4	1.3	1.8	1.4	0.5	0.5	0.4	0.2	0.3	0.2	Diurnal Maximum	

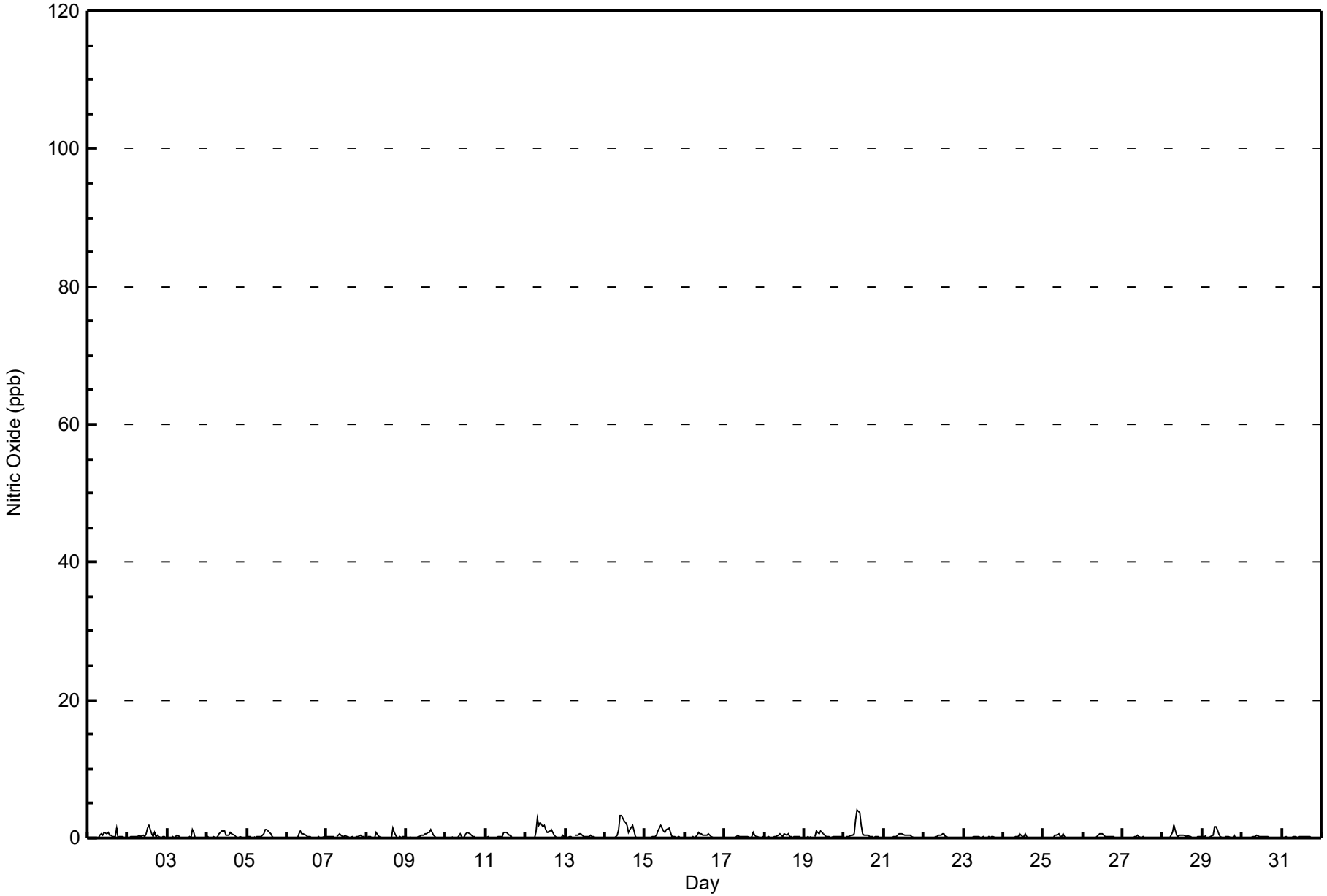
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Hangingstone Expansion - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	709	100.00	100.00
21 - 40	0	0.00	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Hangingstone Expansion - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	46	75	92	23	22	19	23	57	66	59	48	68	43	25	22	19	707
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	46	75	92	23	22	19	23	57	66	59	48	68	43	25	22	19	707

Total Number of Valid Hours: 707

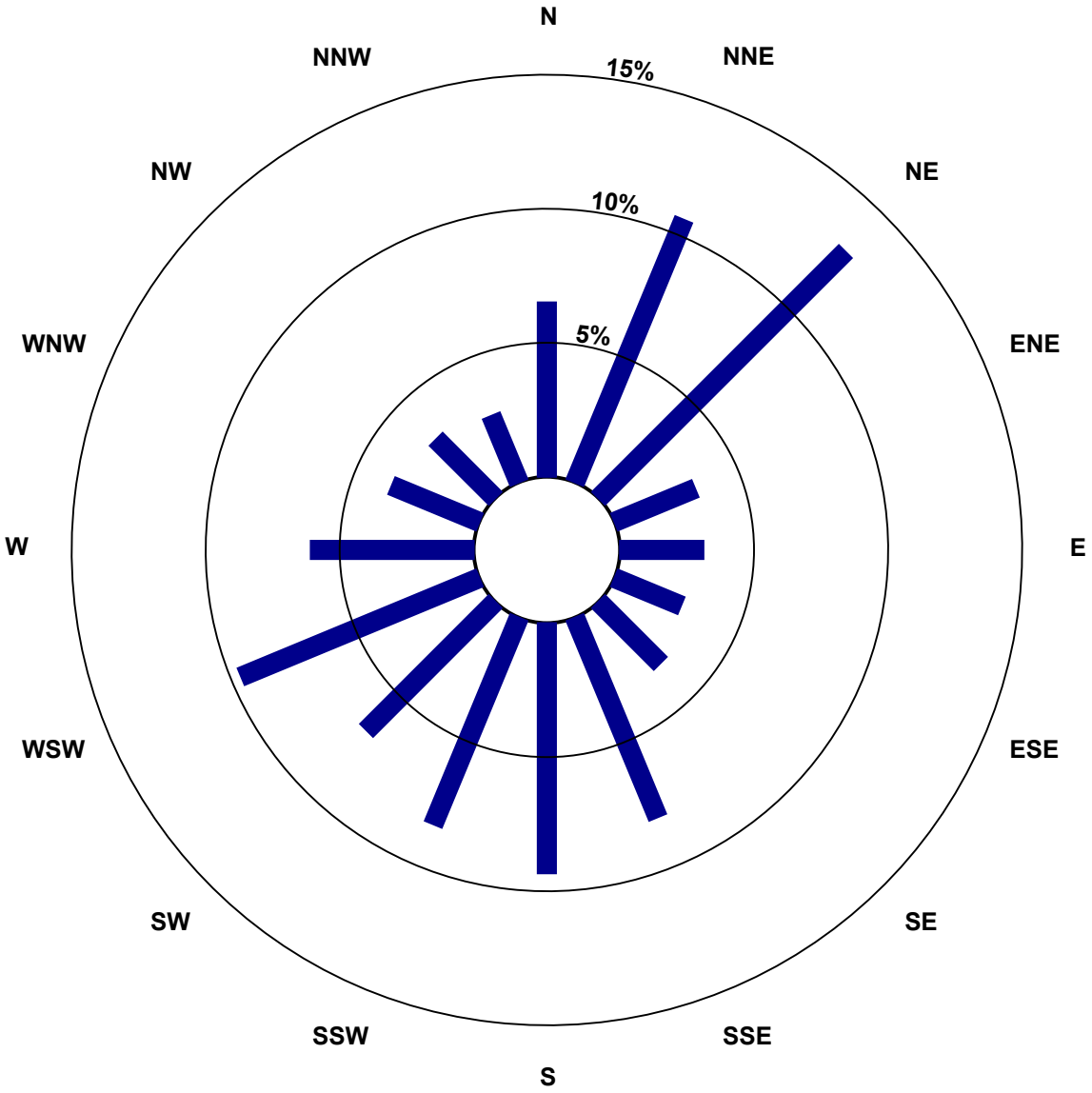
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitric Oxide (NO) - ppb

Hangingstone Expansion



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

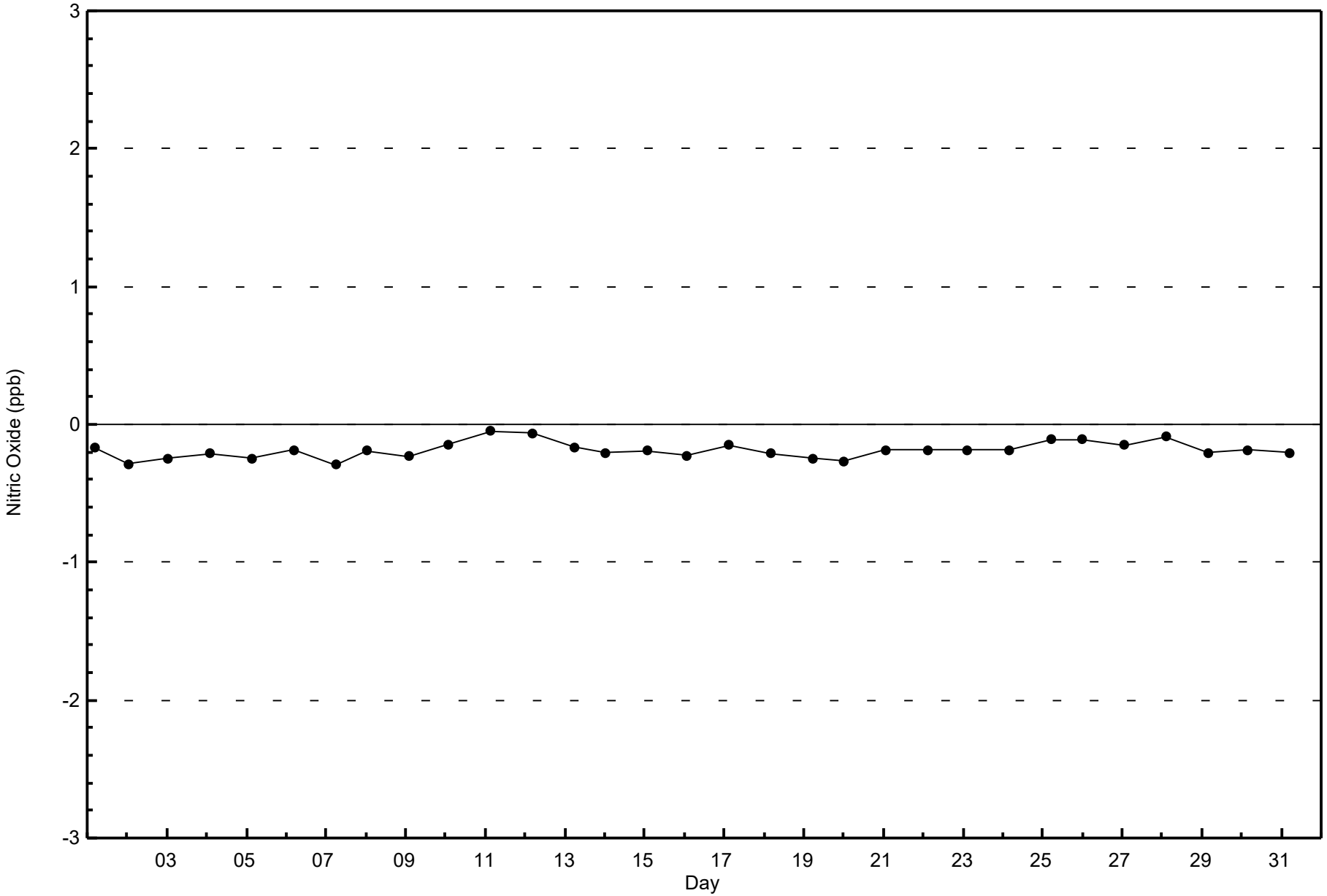
Total Number of Valid Hours: 707

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Hangingstone Expansion - March 2025

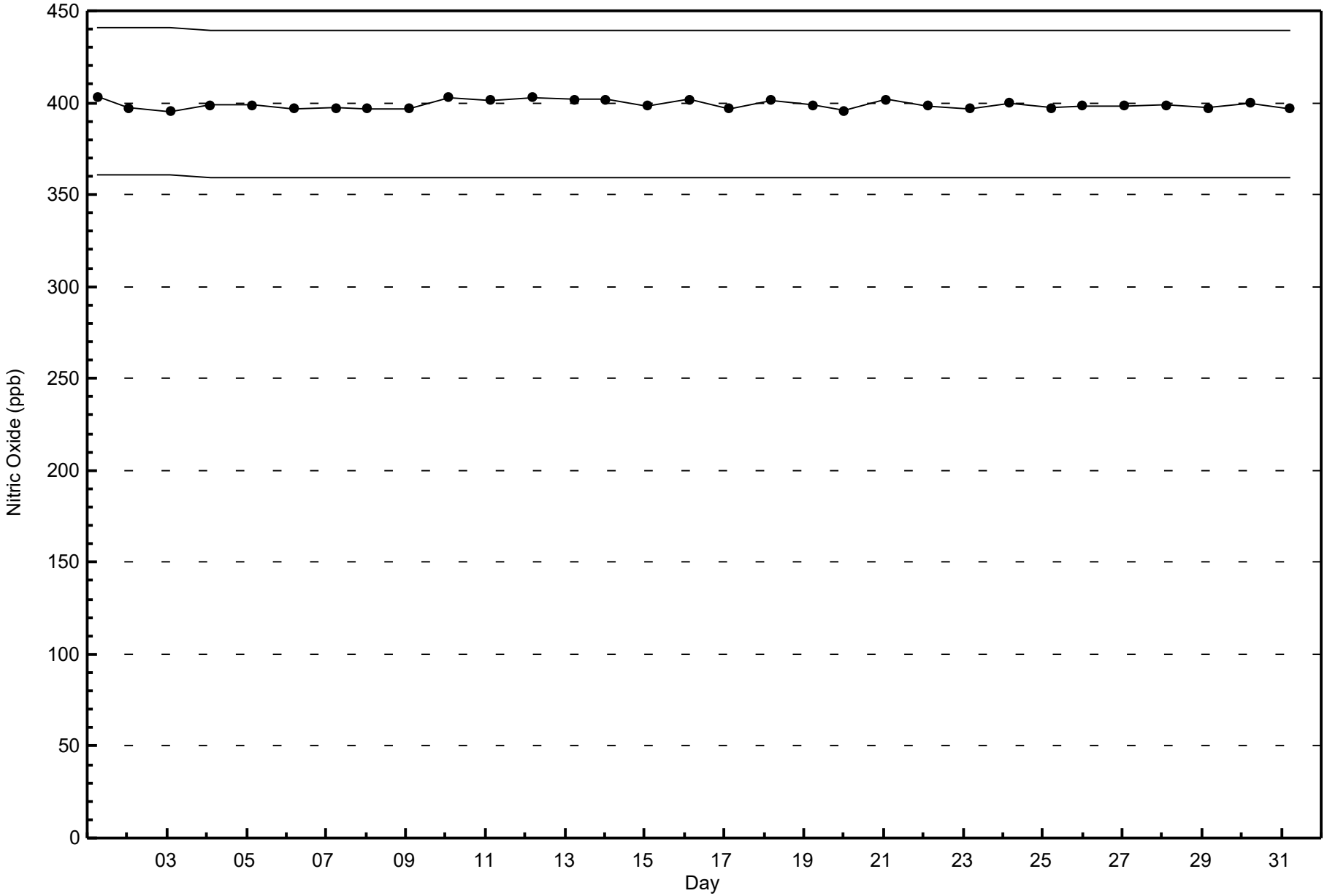


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Hangingstone Expansion - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Hangingstone Expansion - March 2025

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

Maximum Value: 32.9 ppb on Mar 7 20:00 Maximum Daily Average: 5.4 ppb on Mar 7

Minimum Value: 0.1 ppb on Mar 3 18:00 Minimum Daily Average: 0.8 ppb on Mar 23

Maximum Diurnal Average: 3.9 ppb at hour 20 Minimum Diurnal Average: 1.1 ppb at hour 16

Monthly Average: 2.41 ppb Percentiles: $P_1 = 0.2$ $P_{10} = 0.5$ $Q_1 = 0.9$ Median = 1.5 $Q_3 = 2.8$ $P_{90} = 5.3$ $P_{99} = 12.0$

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.8	1.6	1.1	1.2	1.5	Z	2.2	3.3	3.0	1.8	2.1	1.9	2.2	1.2	1.2	1.1	1.1	4.0	1.6	2.7	2.3	1.9	1.4	1.7	1.9	4.0
2-Mar	Z	1.3	1.1	1.5	1.9	2.7	2.0	2.2	1.9	1.9	1.4	2.6	5.0	4.6	1.6	0.4	1.0	0.9	1.0	2.7	1.6	6.1	2.5	2.2	2.2	6.1
3-Mar	1.4	Z	3.0	3.0	3.7	3.7	3.3	5.0	C	C	C	C	0.3	0.4	0.4	1.4	1.3	0.1	0.5	2.8	2.2	1.7	1.9	1.5	2.0	5.0
4-Mar	1.3	1.3	Z	0.8	1.7	1.4	2.1	2.8	3.8	3.2	2.2	0.8	1.1	0.9	1.7	1.6	1.6	1.7	1.9	2.9	2.6	1.8	0.5	0.6	1.8	3.8
5-Mar	2.2	7.4	4.7	Z	4.0	2.5	6.3	4.5	2.1	2.3	1.8	2.1	2.1	1.5	1.4	0.9	0.3	0.2	0.4	2.0	2.0	2.2	1.9	1.2	2.4	7.4
6-Mar	1.4	1.3	1.2	1.2	Z	1.4	2.9	6.5	5.2	1.5	1.6	1.4	0.8	0.6	0.5	0.3	0.2	0.2	0.8	2.1	0.8	0.2	0.4	0.5	1.4	6.5
7-Mar	1.2	1.9	1.8	1.8	1.6	Z	1.6	3.4	2.7	0.9	0.6	0.9	0.5	0.6	0.4	0.2	0.2	0.2	8.0	32.9	28.5	14.6	11.0	8.9	5.4	32.9
8-Mar	Z	7.9	7.9	6.5	2.7	1.1	5.2	1.1	0.8	0.3	0.3	0.2	0.3	0.5	0.3	0.1	5.4	7.6	4.7	4.2	4.3	3.5	3.4	5.3	3.2	7.9
9-Mar	4.9	Z	4.2	3.5	4.1	4.7	2.8	0.7	0.7	1.4	1.5	1.4	1.2	1.2	1.5	2.1	1.1	1.5	3.9	4.0	4.3	5.1	5.5	5.4	2.9	5.5
10-Mar	5.2	4.8	Z	4.9	5.0	4.1	2.0	0.9	0.7	0.5	0.4	0.6	1.0	1.6	1.6	1.8	1.7	2.3	2.1	2.9	2.7	2.5	1.3	1.8	2.3	5.2
11-Mar	1.3	1.8	5.4	Z	1.3	1.4	1.5	2.6	1.7	1.0	0.9	1.6	1.8	1.8	1.6	1.6	1.1	1.1	1.1	5.2	6.3	5.1	4.5	4.5	2.4	6.3
12-Mar	4.5	4.0	4.0	4.1	Z	6.5	13.6	13.5	5.1	3.8	2.6	2.2	1.6	1.3	1.5	2.1	3.0	4.0	6.7	8.2	7.3	6.2	10.8	3.1	5.2	13.6
13-Mar	1.9	2.1	2.0	3.0	4.0	Z	3.3	3.6	3.0	1.9	1.1	0.6	0.8	0.7	0.7	1.9	2.6	0.9	0.6	0.4	0.6	0.7	0.4	0.5	1.6	4.0
14-Mar	Z	0.7	1.4	3.0	4.7	3.8	4.2	4.3	4.5	6.0	4.3	2.8	3.1	3.2	2.7	4.2	6.6	7.4	6.2	4.2	3.5	3.1	2.6	2.3	3.9	7.4
15-Mar	3.5	Z	4.3	4.6	6.5	5.1	5.4	3.7	4.0	3.7	2.5	1.7	1.7	2.5	3.6	2.0	1.2	0.9	3.6	2.6	3.1	2.7	1.6	1.3	3.1	6.5
16-Mar	2.1	2.1	Z	2.4	2.3	3.7	3.3	2.9	2.5	1.6	1.3	1.0	1.0	0.9	1.4	1.5	1.0	1.3	1.6	1.3	1.4	1.8	1.7	1.5	1.8	3.7
17-Mar	1.5	1.6	1.5	Z	1.8	2.2	2.9	3.0	2.2	1.3	1.2	1.3	1.2	1.1	1.0	0.9	2.3	8.1	8.7	7.4	7.0	6.1	5.9	7.7	3.4	8.7
18-Mar	8.3	8.0	5.5	3.9	Z	3.0	2.8	2.3	1.5	0.9	0.8	0.7	1.1	0.9	1.2	0.9	0.9	0.7	1.3	7.6	4.5	2.1	0.7	1.3	2.6	8.3
19-Mar	1.1	1.0	2.0	0.4	1.2	Z	6.3	6.0	2.4	1.4	1.7	1.0	0.8	0.6	0.5	0.5	0.3	0.3	0.4	3.6	9.8	8.8	11.6	9.5	3.1	11.6
20-Mar	Z	8.0	8.0	9.5	10.2	10.9	11.0	9.1	6.9	4.9	2.5	1.0	0.8	0.7	0.7	0.6	0.8	1.1	1.1	1.7	1.3	0.5	0.4	0.3	4.0	11.0
21-Mar	0.3	Z	0.9	1.0	0.9	1.0	1.7	1.8	1.5	1.5	1.4	1.3	1.7	1.5	1.4	1.8	1.8	1.7	1.9	2.0	1.3	1.2	1.3	1.5	1.4	2.0
22-Mar	1.6	1.4	Z	1.6	1.7	2.0	2.7	2.9	2.2	2.8	1.9	1.8	1.6	0.8	0.7	0.4	0.4	0.5	0.5	0.5	0.6	0.4	0.3	0.3	1.3	2.9
23-Mar	0.3	0.6	1.0	Z	1.8	1.0	1.4	1.0	1.1	0.5	0.3	0.3	0.3	0.2	0.4	0.6	0.5	1.0	2.3	1.3	1.2	0.7	0.5	0.5	0.8	2.3
24-Mar	0.4	0.6	0.6	0.9	Z	2.4	2.7	2.4	2.2	1.2	2.0	1.2	1.3	2.6	1.4	0.5	0.6	0.5	0.4	0.4	0.3	0.4	0.4	1.0	1.1	2.7
25-Mar	1.2	1.4	2.1	1.1	0.8	Z	1.0	2.5	2.0	1.6	0.5	0.7	1.4	0.6	0.3	0.2	0.2	0.3	0.6	0.3	2.5	1.9	1.8	2.0	1.2	2.5
26-Mar	Z	1.4	1.3	1.4	1.4	1.5	1.8	1.0	1.2	1.1	1.2	1.2	1.2	1.0	1.0	0.8	1.0	1.2	2.2	2.4	0.7	0.6	0.9	3.5	1.3	3.5
27-Mar	4.8	Z	4.2	1.9	0.6	0.8	1.1	1.2	0.8	1.1	0.5	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.5	2.9	4.2	2.6	1.6	1.8	1.4	4.8
28-Mar	3.4	7.2	Z	3.0	5.3	12.0	7.8	6.2	1.1	0.7	1.0	0.9	0.7	0.7	0.8	0.9	1.0	1.2	1.6	2.8	4.4	6.2	5.7	6.2	3.5	12.0
29-Mar	9.5	14.1	14.2	Z	1.2	4.2	5.7	6.4	4.1	2.3	1.3	0.7	0.5	0.6	0.5	0.5	0.7	0.9	1.0	3.7	2.0	2.2	1.3	1.0	3.4	14.2
30-Mar	1.2	1.0	1.1	0.8	Z	2.1	2.9	1.7	1.0	1.2	0.9	0.7	0.8	0.8	0.9	1.0	1.1	1.2	1.4	1.9	1.5	1.1	1.4	1.9	1.3	2.9
31-Mar	1.2	1.2	1.2	1.1	1.1	Z	1.7	1.4	1.0	0.9	0.9	1.0	0.9	1.1	0.9	0.9	1.0	1.3	1.6	1.8	1.1	0.9	1.1	1.7	1.2	1.8
	2.6	3.3	3.3	2.6	2.8	3.4	3.7	3.5	2.4	1.8	1.4	1.2	1.3	1.2	1.1	1.1	1.4	1.8	2.3	3.9	3.7	3.1	2.8	2.7	Diurnal Average	
	9.5	14.1	14.2	9.5	10.2	12.0	13.6	13.5	6.9	6.0	4.3	2.8	5.0	4.6	3.6	4.2	6.6	8.1	8.7	32.9	28.5	14.6	11.6	9.5	Diurnal Maximum	

Z - zerospan C - Calibration

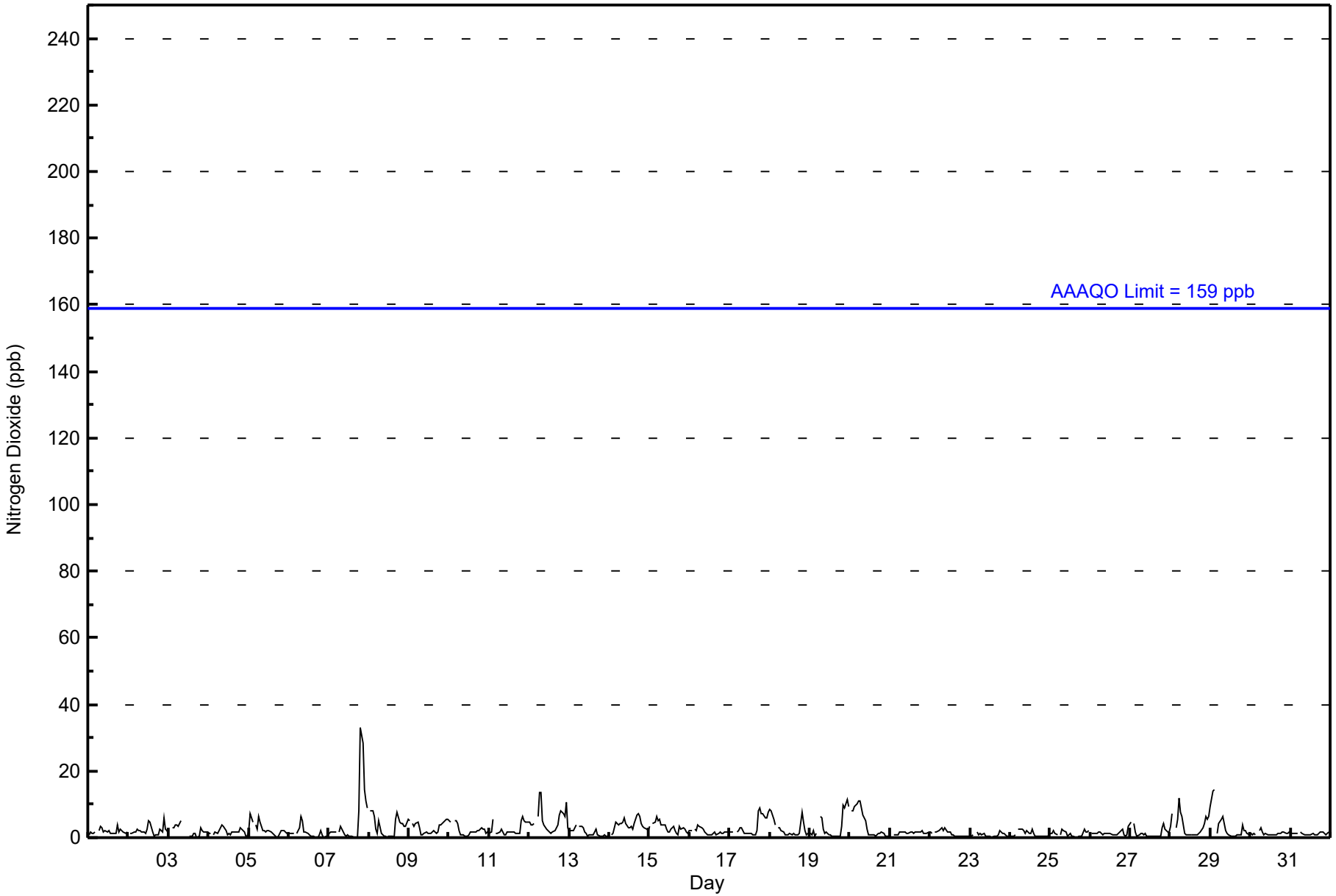
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Hangingstone Expansion - March 2025



Nitrogen Dioxide (NO_2) - ppb
Hangingstone Expansion - March 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	707	99.72	99.72
21 - 40	2	0.28	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Hangingstone Expansion - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	46	74	91	23	22	19	23	57	66	59	48	68	43	25	22	19	705
21 - 40	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	46	75	92	23	22	19	23	57	66	59	48	68	43	25	22	19	707

Total Number of Valid Hours: 707

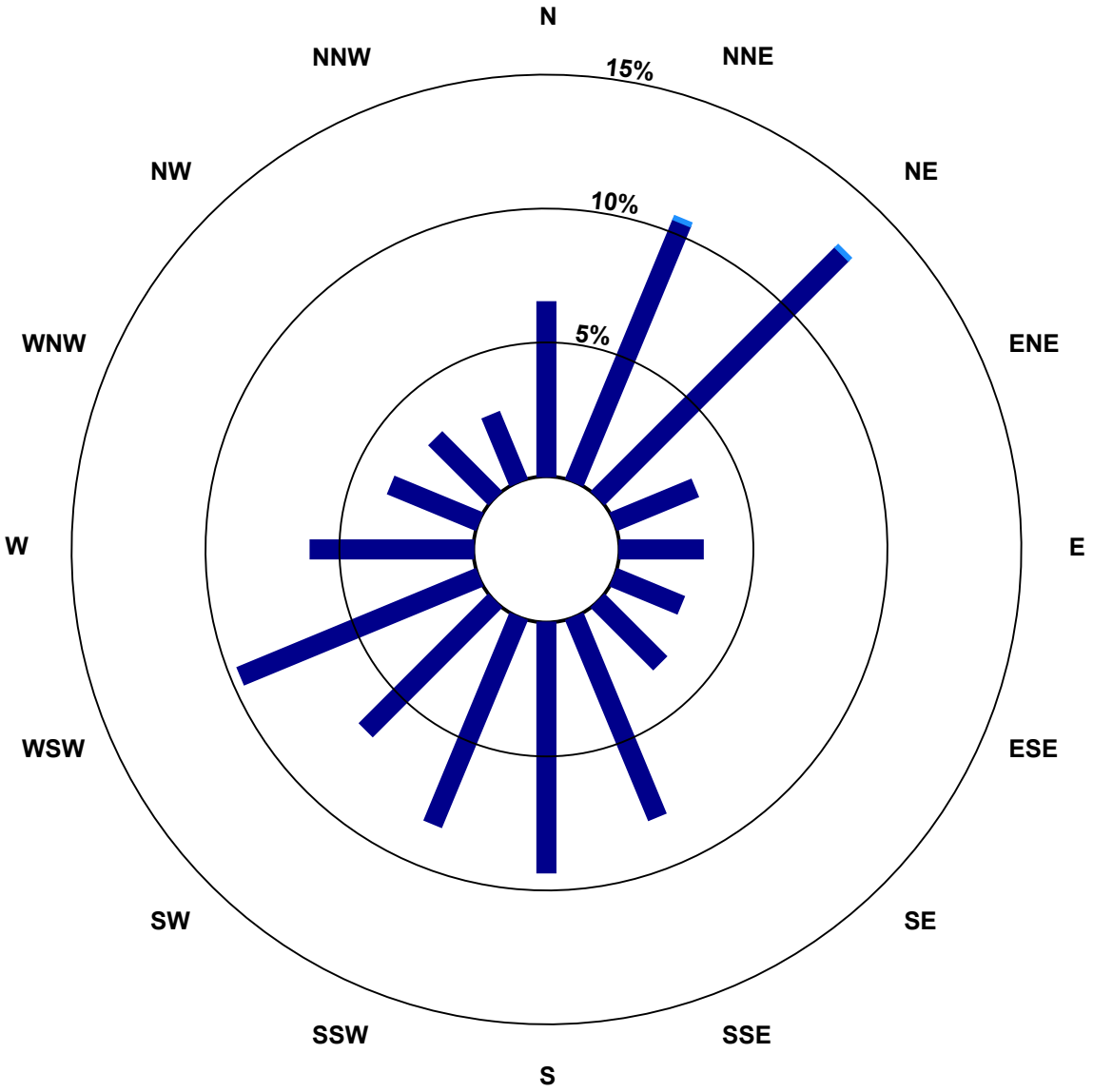
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Dioxide (NO_2) - ppb

Hangingstone Expansion



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

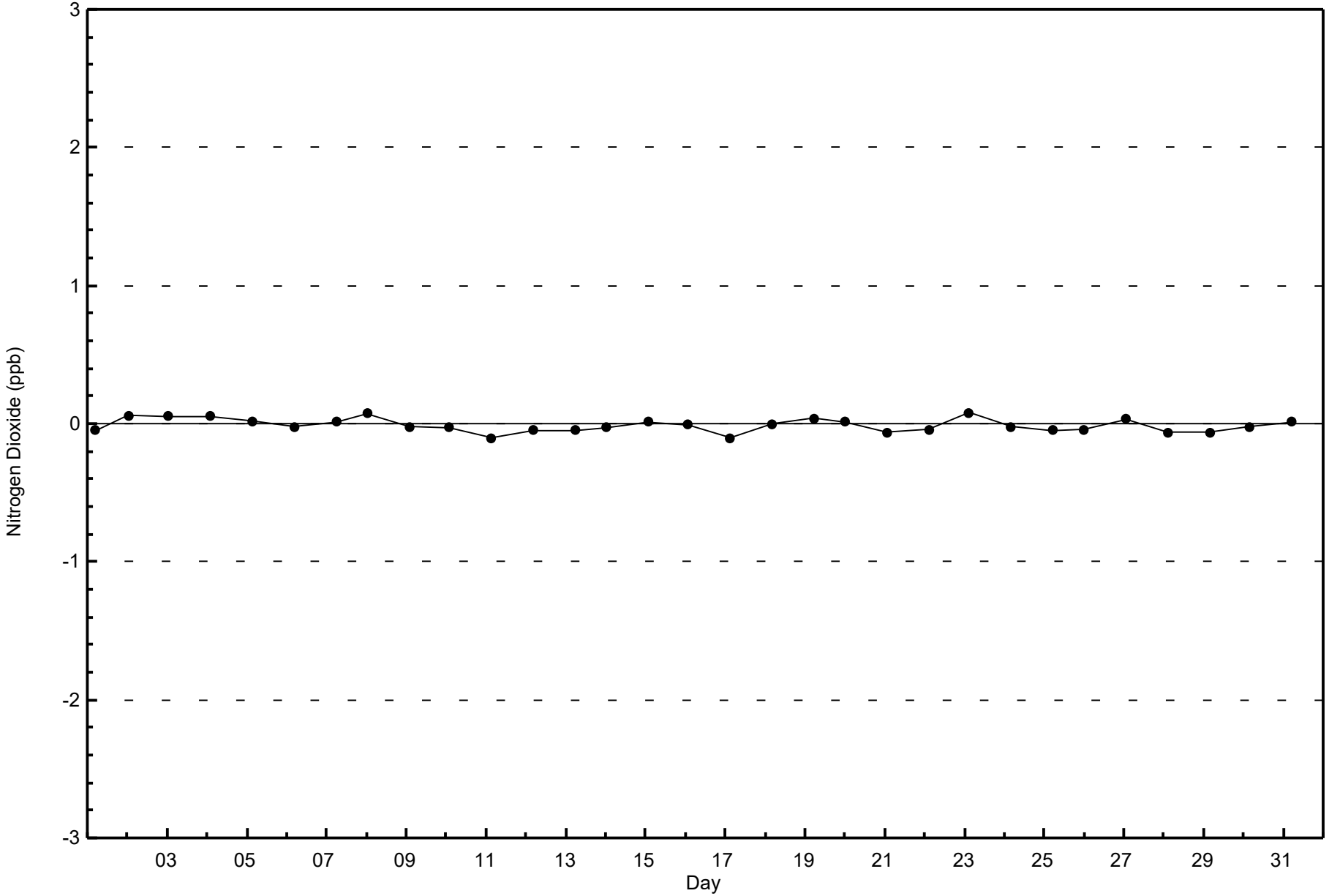
Total Number of Valid Hours: 707

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Hangingstone Expansion - March 2025

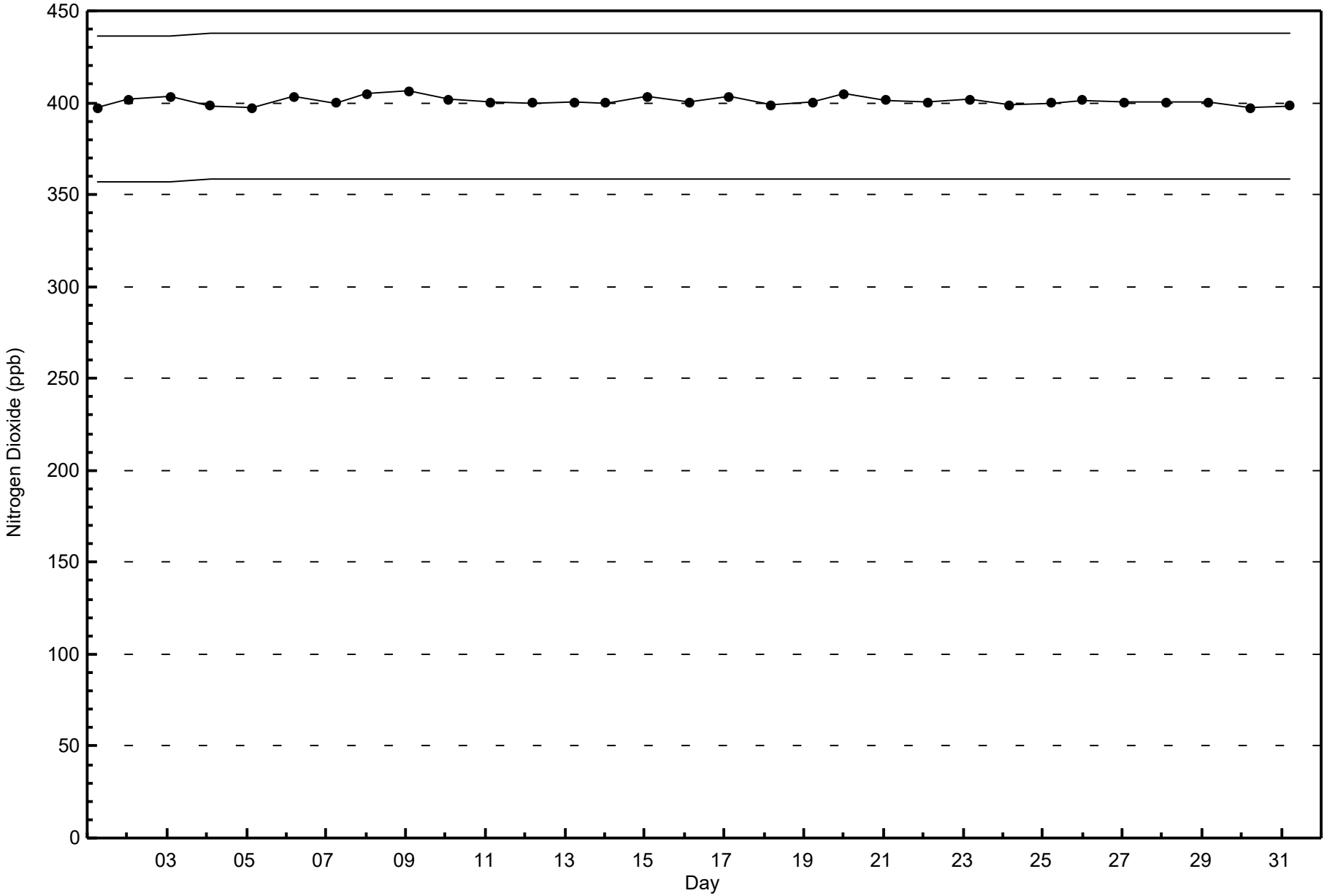


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Hangingstone Expansion - March 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Hangingstone Expansion - March 2025

Maximum Value: 33.2 ppb on Mar 7 20:00

Maximum Daily Average: 5.9 ppb on Mar 12

Minimum Value: 0.1 ppb on Mar 3 18:00

Minimum Daily Average: 0.9 ppb on Mar 23

Maximum Diurnal Average: 4.1 ppb at hour 8

Minimum Diurnal Average: 1.5 ppb at hour 15

Monthly Average: 2.68 ppb

Percentiles: $P_1 = 0.3$ $P_{10} = 0.6$ $Q_1 = 1.1$ Median = 1.8 $Q_3 = 3.2$ $P_{90} = 5.9$ $P_{99} = 12.4$

Hours in Service:	744
Hours of Data:	709
Hours of Missing Data:	35
Hours of Calibration:	35
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	0.8	1.6	1.1	1.3	1.5	Z	2.3	3.6	3.7	2.3	2.9	2.5	3.0	1.6	1.6	1.4	1.3	5.4	1.7	2.8	2.4	2.0	1.5	1.8	2.2	5.4
2-Mar	Z	1.4	1.2	1.7	2.0	2.9	2.2	2.7	2.2	2.3	1.7	3.1	6.4	6.3	2.2	0.6	1.7	1.1	1.5	2.9	1.7	6.2	2.6	2.3	2.6	6.4
3-Mar	1.5	Z	3.1	3.1	3.7	3.9	3.6	5.3	C	C	C	C	0.3	0.5	0.4	2.5	2.1	0.1	0.5	2.8	2.2	1.7	1.9	1.5	2.1	5.3
4-Mar	1.4	1.3	Z	0.9	1.9	1.5	2.3	3.3	4.7	4.3	3.3	1.1	1.6	1.4	2.5	2.1	2.0	2.0	1.9	3.0	2.7	1.9	0.5	0.7	2.1	4.7
5-Mar	2.3	7.5	4.8	Z	4.1	2.6	6.4	4.7	2.2	2.7	2.5	3.2	3.3	2.2	1.9	1.2	0.4	0.3	0.5	2.0	2.0	2.3	1.9	1.2	2.7	7.5
6-Mar	1.4	1.3	1.2	1.3	Z	1.4	3.0	7.0	6.2	2.1	2.2	1.9	1.1	0.7	0.6	0.4	0.3	0.3	0.8	2.3	0.9	0.3	0.5	0.6	1.6	7.0
7-Mar	1.3	2.1	2.0	2.0	1.8	Z	1.8	3.8	3.2	1.2	0.9	1.3	0.7	0.8	0.4	0.3	0.3	0.2	8.1	33.2	28.9	14.8	11.2	9.0	5.6	33.2
8-Mar	Z	8.0	8.1	6.6	2.8	1.1	6.0	1.3	1.0	0.4	0.4	0.3	0.4	0.6	0.4	0.2	6.8	8.5	4.8	4.3	4.5	3.6	3.5	5.4	3.4	8.5
9-Mar	5.1	Z	4.3	3.6	4.2	4.7	2.9	0.8	0.8	1.8	2.0	2.0	1.8	2.1	2.4	3.2	1.5	1.7	4.0	4.0	4.4	5.2	5.5	5.5	3.2	5.5
10-Mar	5.2	4.8	Z	5.0	5.0	4.1	2.0	0.9	1.2	0.6	0.5	0.9	1.6	2.4	2.2	2.2	1.9	2.5	2.1	2.9	2.7	2.5	1.3	1.8	2.4	5.2
11-Mar	1.3	2.0	5.4	Z	1.3	1.4	1.5	2.7	1.9	1.2	1.1	2.4	2.6	2.3	2.0	2.0	1.2	1.1	1.1	5.2	6.3	5.1	4.5	4.5	2.6	6.3
12-Mar	4.5	4.0	4.0	4.1	Z	6.5	14.4	16.4	6.9	5.9	4.3	4.0	2.7	2.1	2.3	3.2	3.9	4.4	6.8	8.2	7.3	6.3	11.1	3.3	5.9	16.4
13-Mar	2.0	2.2	2.1	3.3	4.1	Z	3.6	4.0	3.6	2.4	1.4	0.8	1.0	0.9	0.9	2.2	2.8	1.0	0.7	0.4	0.7	0.8	0.4	0.5	1.8	4.1
14-Mar	Z	0.7	1.4	3.1	4.8	3.9	4.3	4.8	5.7	9.3	7.6	5.2	5.3	5.1	3.5	5.5	8.4	8.3	6.4	4.2	3.5	3.2	2.7	2.4	4.8	9.3
15-Mar	3.6	Z	4.3	4.6	6.7	5.2	5.5	4.1	4.9	5.5	4.0	2.6	2.6	3.6	5.0	2.8	1.5	1.1	3.7	2.6	3.2	2.8	1.7	1.4	3.6	6.7
16-Mar	2.1	2.2	Z	2.5	2.4	3.8	3.4	3.3	3.3	2.2	1.9	1.4	1.4	1.4	2.0	1.9	1.2	1.4	1.6	1.3	1.4	1.8	1.7	1.5	2.1	3.8
17-Mar	1.5	1.6	1.5	Z	1.8	2.3	2.9	3.3	2.5	1.4	1.4	1.5	1.4	1.2	1.1	1.0	2.5	8.9	9.1	7.5	7.2	6.1	5.9	7.8	3.5	9.1
18-Mar	8.5	8.1	5.7	3.9	Z	3.0	2.9	2.5	1.9	1.5	1.3	0.9	1.7	1.3	1.8	1.2	1.1	0.8	1.4	7.8	4.6	2.2	0.8	1.3	2.9	8.5
19-Mar	1.1	1.0	2.1	0.5	1.3	Z	6.5	7.1	3.3	2.0	2.6	1.6	1.2	0.8	0.7	0.6	0.4	0.4	0.6	3.8	10.0	8.9	11.8	9.7	3.4	11.8
20-Mar	Z	8.2	8.2	9.8	10.5	11.2	11.5	11.8	10.9	8.5	4.3	1.6	1.2	1.1	1.1	0.9	1.0	1.2	1.1	1.9	1.5	0.6	0.4	0.3	4.7	11.8
21-Mar	0.3	Z	1.0	1.0	0.9	1.0	1.8	2.0	1.9	2.0	2.0	2.0	2.2	1.8	1.8	2.2	2.1	1.8	1.9	2.0	1.4	1.2	1.3	1.5	1.6	2.2
22-Mar	1.6	1.5	Z	1.6	1.7	2.0	2.8	3.1	2.5	3.3	2.3	2.3	2.1	1.0	0.8	0.5	0.5	0.5	0.5	0.5	0.6	0.4	0.3	0.3	1.4	3.3
23-Mar	0.3	0.6	1.1	Z	1.9	1.0	1.5	1.2	1.4	0.7	0.4	0.4	0.4	0.3	0.4	0.8	0.6	1.2	2.4	1.4	1.2	0.7	0.5	0.5	0.9	2.4
24-Mar	0.4	0.6	0.6	1.0	Z	2.5	2.7	2.6	2.4	1.5	2.5	1.4	1.5	3.2	1.6	0.5	0.6	0.5	0.4	0.4	0.3	0.4	0.4	1.0	1.3	3.2
25-Mar	1.2	1.4	2.2	1.1	0.8	Z	1.0	3.0	2.5	2.2	0.6	0.9	1.9	0.7	0.3	0.2	0.2	0.3	0.6	0.3	2.5	1.9	1.8	2.0	1.3	3.0
26-Mar	Z	1.4	1.3	1.4	1.4	1.5	1.8	1.1	1.5	1.5	1.8	1.8	1.7	1.3	1.2	1.1	1.1	1.4	2.3	2.4	0.7	0.6	1.0	3.5	1.5	3.5
27-Mar	4.8	Z	4.3	1.9	0.6	0.8	1.1	1.4	1.0	1.4	0.7	0.4	0.4	0.4	0.3	0.3	0.4	0.3	0.6	2.9	4.2	2.6	1.6	1.8	1.5	4.8
28-Mar	3.4	7.2	Z	3.1	5.3	12.4	8.6	8.0	1.5	0.9	1.5	1.3	1.1	1.1	1.1	1.2	1.3	1.3	1.7	2.8	4.5	6.4	5.8	6.4	3.8	12.4
29-Mar	9.6	14.3	14.5	Z	1.3	4.4	6.2	8.0	5.7	3.6	2.0	1.0	0.6	0.7	0.7	0.7	0.8	1.0	1.0	4.2	2.1	2.2	1.3	1.0	3.8	14.5
30-Mar	1.3	1.1	1.1	0.8	Z	2.2	3.1	2.0	1.3	1.6	1.1	0.9	1.0	1.0	1.0	1.2	1.2	1.3	1.4	2.0	1.6	1.1	1.4	2.0	1.4	3.1
31-Mar	1.2	1.2	1.3	1.2	1.2	Z	1.7	1.6	1.1	1.0	1.0	1.1	1.1	1.4	1.1	1.1	1.1	1.4	1.7	1.9	1.1	0.9	1.1	1.7	1.3	1.9
	2.6	3.3	3.4	2.7	2.9	3.5	3.9	4.1	3.1	2.6	2.1	1.7	1.8	1.7	1.5	1.5	1.7	2.0	2.4	4.0	3.8	3.1	2.8	2.7	Diurnal Average	
	9.6	14.3	14.5	9.8	10.5	12.4	14.4	16.4	10.9	9.3	7.6	5.2	6.4	6.3	5.0	5.5	8.4	8.9	9.1	33.2	28.9	14.8	11.8	9.7	Diurnal Maximum	

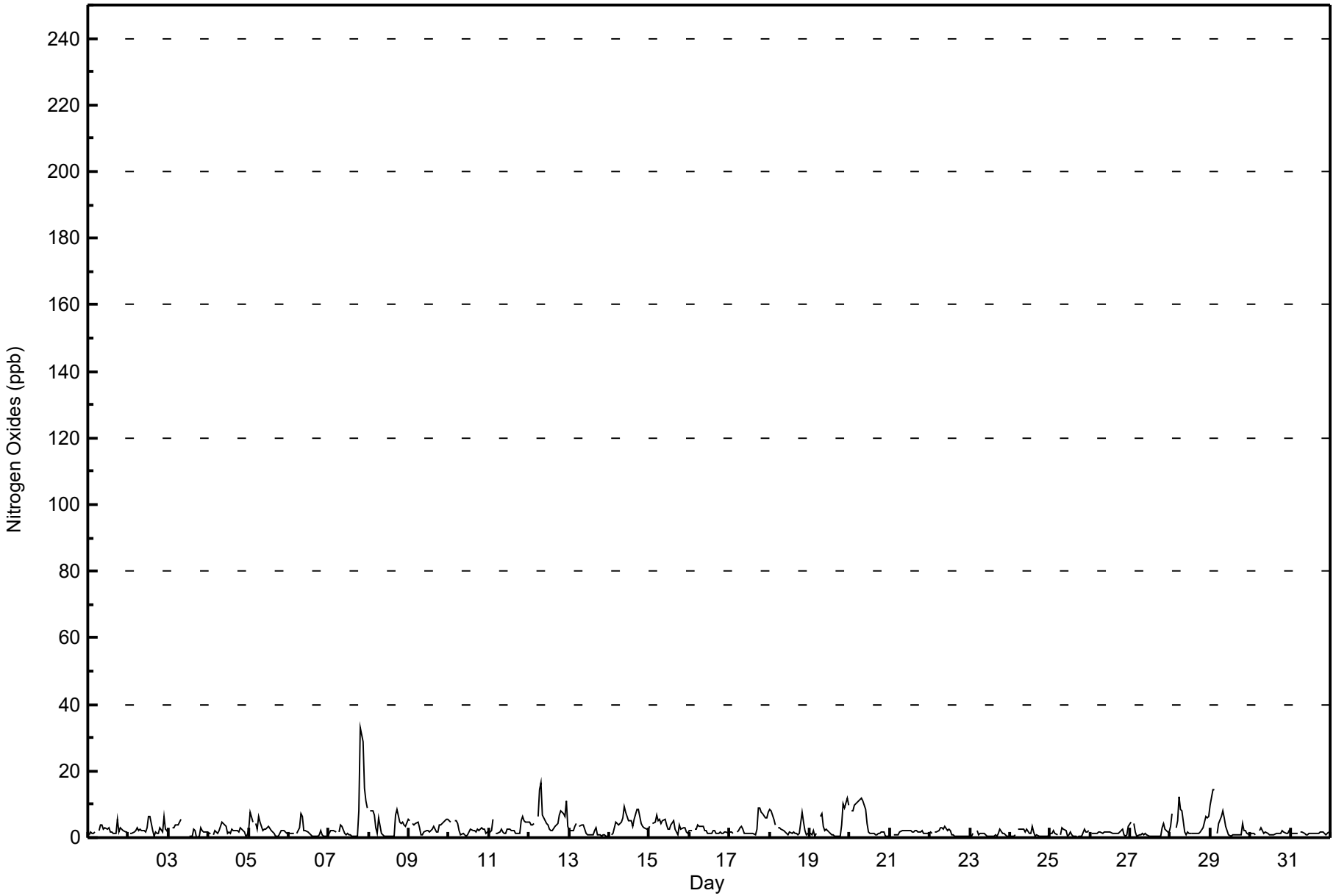
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Hangingstone Expansion - March 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	707	99.72	99.72
21 - 40	2	0.28	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 709

Total Number of Hours: 744

Nitrogen Oxides (NO_X) - ppb

Hangingstone Expansion - March 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	46	74	91	23	22	19	23	57	66	59	48	68	43	25	22	19	705
21 - 40	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	46	75	92	23	22	19	23	57	66	59	48	68	43	25	22	19	707

Total Number of Valid Hours: 707

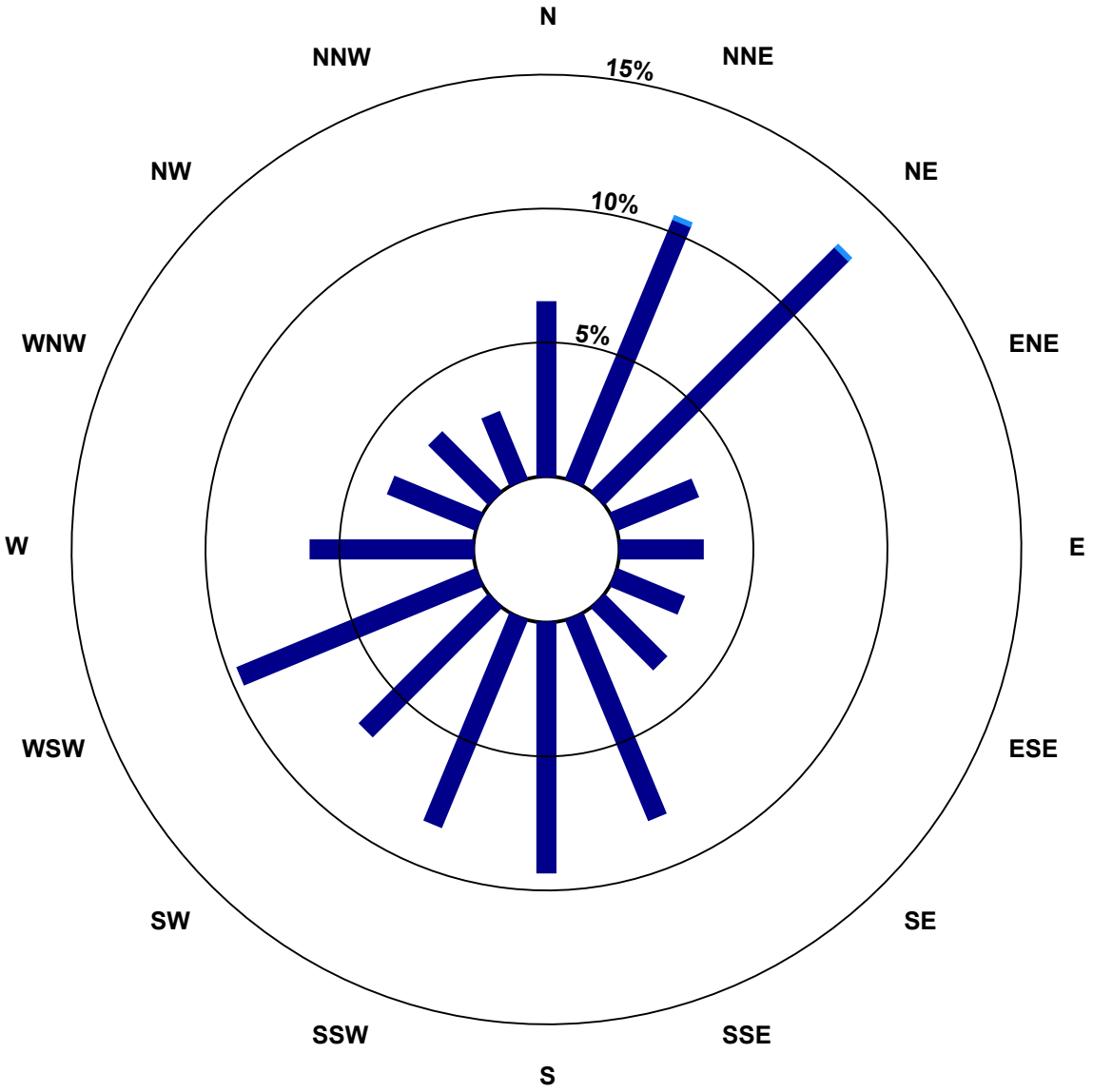
Total Number of Hours: 744

Wood Buffalo Environmental Association

Wind Rose Mar 2025

Nitrogen Oxides (NO_X) - ppb

Hangingstone Expansion



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

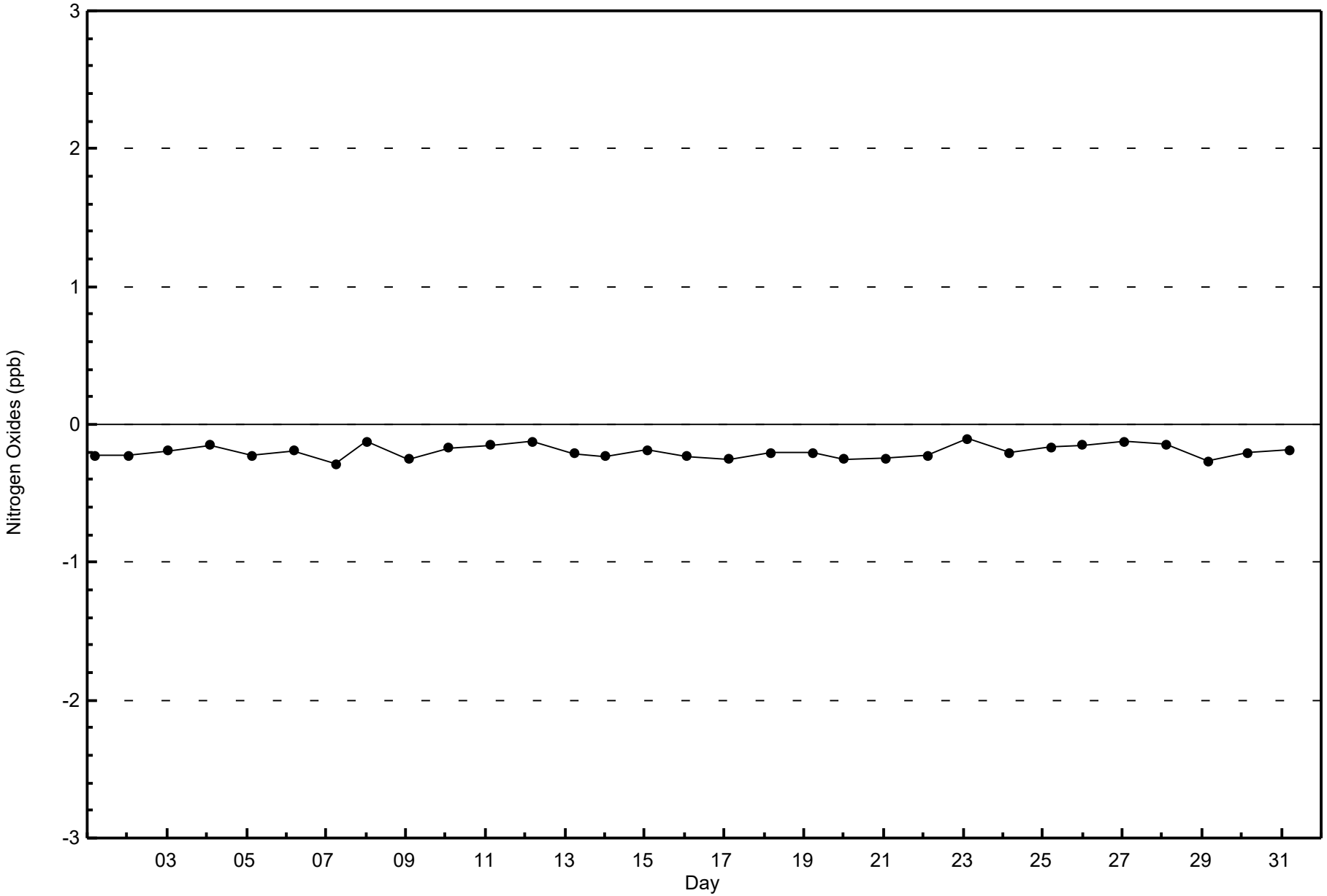
Total Number of Valid Hours: 707

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Hangingstone Expansion - March 2025

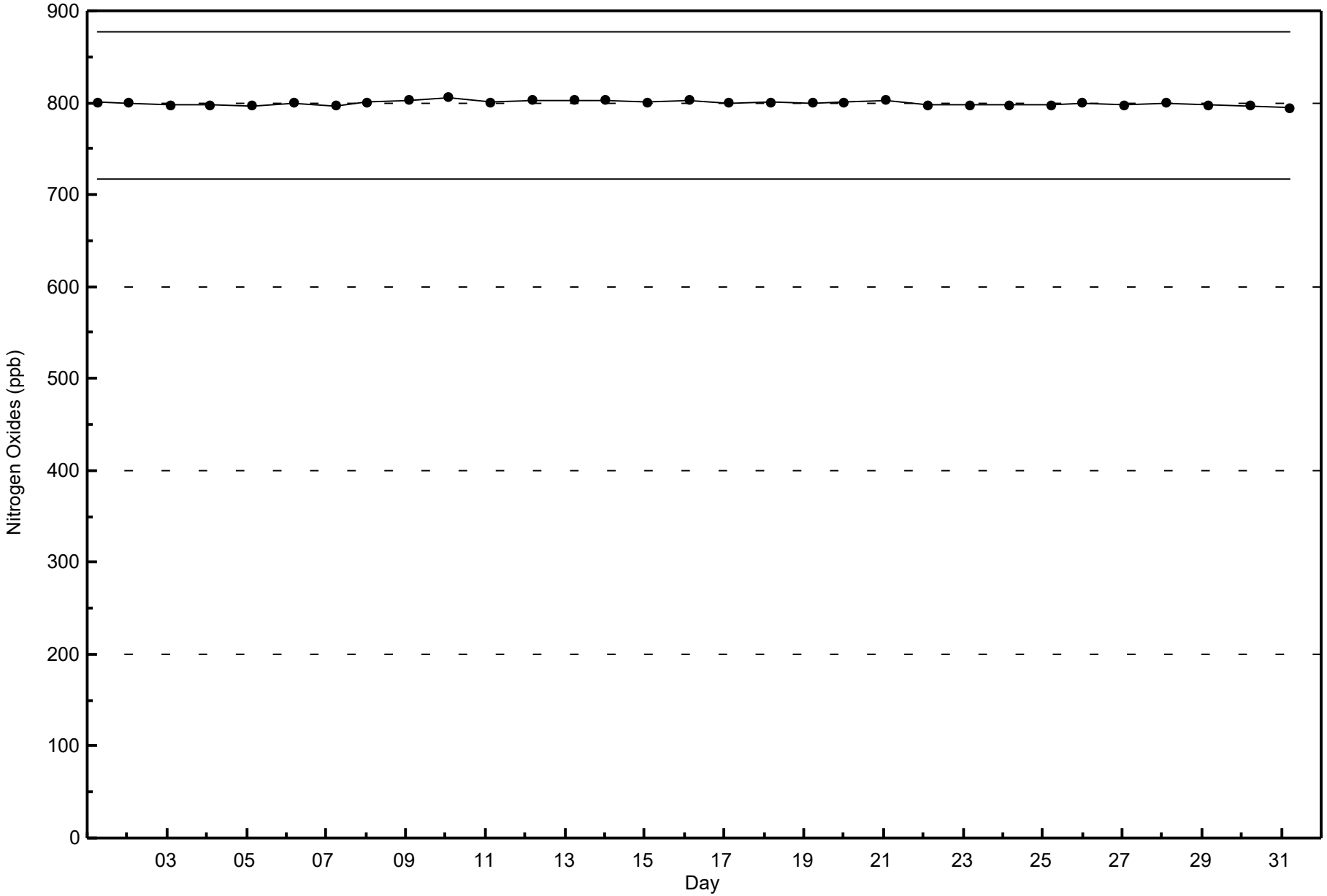


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Hangingstone Expansion - March 2025



Maximum Value: 9.2 C on Mar 1 16:00

Maximum Daily Average: 3.6 C on Mar 2

Minimum Value: -24.5 C on Mar 12 07:00

Minimum Daily Average: -20.8 C on Mar 9

Maximum Diurnal Average: -1.8 C at hour 16

Minimum Diurnal Average: -9.8 C at hour 7

Monthly Average: -6.30 C

Percentiles: P_1 = -22.5 P_{10} = -17.6 Q_1 = -12.7 Median = -5.7 Q_3 = 0.1 P_{90} = 4.2 P_{99} = 8.2

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

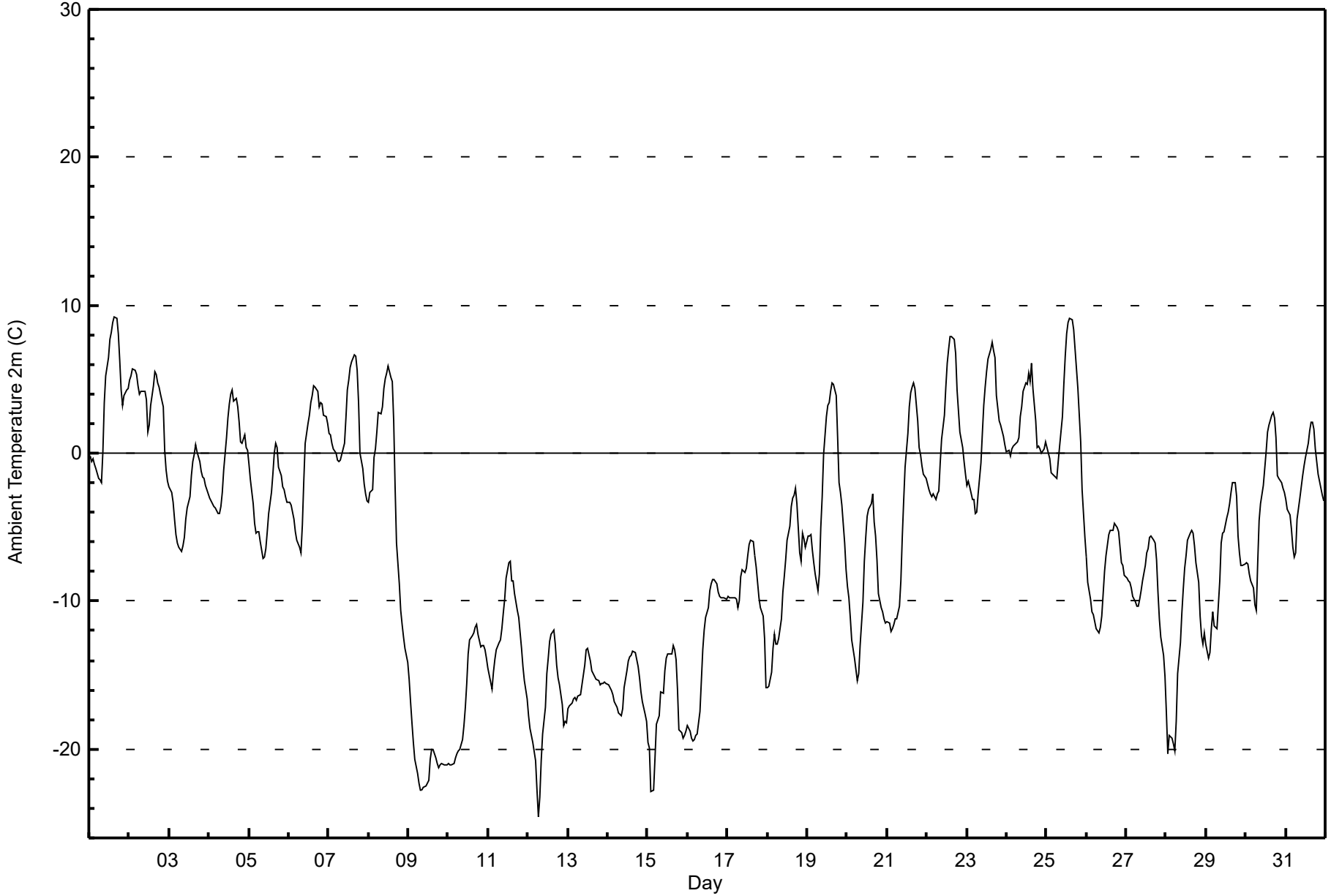
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	-0.1	-0.5	-0.4	-0.7	-1.0	-1.7	-1.8	-2.0	0.1	3.4	5.2	6.4	7.7	8.2	8.8	9.2	9.1	8.1	6.3	4.3	3.2	3.9	4.3	4.4	3.5	9.2
2-Mar	4.9	5.3	5.7	5.6	5.3	4.6	4.0	4.2	4.2	4.2	3.6	1.4	1.9	3.2	4.6	5.6	5.3	4.7	4.4	4.0	3.1	0.2	-1.1	-1.9	3.6	5.7
3-Mar	-2.3	-2.7	-3.3	-4.4	-5.5	-6.0	-6.3	-6.6	-6.2	-5.7	-4.4	-3.7	-2.9	-1.5	-0.6	-0.1	0.6	0.1	-0.6	-1.2	-1.6	-1.7	-2.1	-2.8	-3.0	0.6
4-Mar	-3.1	-3.2	-3.4	-3.6	-3.7	-4.1	-4.1	-3.6	-2.7	-1.1	1.0	2.4	3.3	4.0	4.3	3.6	3.7	3.1	2.1	0.7	0.7	1.2	0.4	0.2	-0.1	4.3
5-Mar	-0.7	-1.8	-3.4	-4.8	-5.4	-5.3	-5.3	-5.9	-7.1	-7.0	-6.5	-5.3	-4.1	-2.7	-1.4	0.0	0.6	0.4	-0.9	-1.5	-2.3	-2.5	-2.9	-3.3	-3.3	0.6
6-Mar	-3.3	-3.5	-4.0	-4.4	-5.3	-5.9	-6.3	-6.8	-4.8	-1.9	0.6	2.0	2.6	3.4	3.9	4.6	4.5	4.2	3.1	3.4	3.3	2.6	2.4	2.0	-0.2	4.6
7-Mar	1.3	1.2	0.6	0.3	0.0	-0.5	-0.6	-0.5	0.0	0.7	2.4	4.3	4.9	5.8	6.1	6.6	6.5	5.6	3.4	0.0	-1.0	-2.1	-2.7	-3.2	1.6	6.6
8-Mar	-3.3	-2.7	-2.4	-0.3	0.3	1.5	2.8	2.7	3.1	4.3	5.0	5.4	5.9	5.2	4.9	2.2	-2.3	-6.1	-8.8	-10.7	-11.6	-12.4	-13.2	-14.1	-1.9	5.9
9-Mar	-15.3	-16.8	-18.2	-19.6	-20.7	-21.7	-22.3	-22.8	-22.8	-22.6	-22.4	-22.3	-22.1	-20.7	-20.0	-20.1	-20.6	-20.9	-21.3	-21.1	-21.0	-21.1	-21.1	-21.0	-20.8	-15.3
10-Mar	-21.0	-21.0	-21.1	-21.0	-20.6	-20.3	-20.1	-20.0	-19.4	-18.4	-17.2	-15.6	-13.6	-12.6	-12.3	-12.1	-11.7	-11.5	-12.2	-13.1	-13.0	-13.0	-13.3	-13.8	-16.2	-11.5
11-Mar	-14.5	-15.4	-16.0	-14.8	-14.0	-13.3	-12.8	-12.6	-11.9	-10.8	-9.9	-8.4	-7.4	-7.3	-8.7	-8.6	-9.4	-10.6	-11.1	-12.1	-13.2	-14.4	-15.4	-16.6	-12.0	-7.3
12-Mar	-17.7	-18.6	-19.1	-19.5	-20.8	-22.8	-24.5	-23.2	-20.8	-19.0	-17.1	-14.9	-13.8	-12.8	-12.2	-11.9	-12.9	-14.3	-15.2	-15.7	-17.0	-18.4	-18.1	-18.2	-17.4	-11.9
13-Mar	-17.2	-17.0	-16.9	-16.6	-16.5	-16.7	-16.5	-16.3	-15.6	-15.0	-14.3	-13.3	-13.2	-14.0	-14.7	-14.9	-15.1	-15.3	-15.4	-15.7	-15.6	-15.6	-15.5	-15.5	-15.5	-13.2
14-Mar	-15.7	-15.8	-16.0	-16.3	-16.8	-17.2	-17.6	-17.6	-17.7	-17.2	-15.8	-14.7	-14.0	-13.7	-13.7	-13.4	-13.5	-13.9	-14.4	-15.2	-16.1	-16.8	-17.6	-18.1	-15.8	-13.4
15-Mar	-19.6	-19.9	-22.8	-22.8	-20.6	-18.3	-18.1	-17.7	-16.1	-16.2	-14.7	-13.9	-13.5	-13.6	-13.6	-13.0	-13.3	-13.9	-16.0	-18.7	-18.9	-19.3	-19.1	-18.8	-17.2	-13.0
16-Mar	-18.4	-18.7	-19.3	-19.4	-19.3	-19.1	-19.0	-17.4	-15.3	-13.3	-12.0	-11.1	-10.4	-9.3	-8.8	-8.5	-8.6	-8.8	-9.4	-9.7	-9.8	-9.8	-9.8	-9.8	-13.1	-8.5
17-Mar	-9.7	-9.8	-9.8	-9.8	-9.8	-9.9	-10.4	-9.9	-8.4	-7.9	-8.0	-7.8	-7.0	-6.2	-5.9	-6.0	-6.9	-7.7	-8.8	-9.7	-10.4	-11.0	-12.5	-15.8	-9.1	-5.9
18-Mar	-15.9	-15.8	-14.8	-13.1	-12.3	-12.9	-12.9	-12.5	-11.2	-9.4	-8.4	-7.2	-5.8	-4.9	-3.6	-3.0	-2.9	-2.4	-3.4	-6.8	-7.3	-5.4	-5.8	-6.4	-8.5	-2.4
19-Mar	-5.6	-5.6	-5.5	-6.6	-7.4	-8.2	-9.3	-8.1	-5.0	-2.9	-0.1	2.5	3.2	3.4	4.2	4.8	4.6	3.9	1.1	-2.0	-2.6	-3.5	-6.0	-7.8	-2.4	4.8
20-Mar	-9.0	-9.8	-11.1	-12.7	-13.9	-14.7	-15.4	-14.9	-13.0	-10.1	-7.3	-5.7	-4.3	-3.8	-3.4	-2.8	-4.7	-5.6	-7.2	-9.4	-10.4	-10.7	-11.2	-11.5	-9.3	-2.8
21-Mar	-11.4	-11.5	-12.0	-11.9	-11.6	-11.1	-11.2	-10.3	-8.6	-5.7	-3.3	-1.0	1.3	3.1	4.1	4.4	4.7	4.4	2.2	0.3	-0.1	-0.9	-1.4	-1.7	-3.7	4.7
22-Mar	-2.0	-2.4	-2.7	-2.9	-2.8	-3.1	-2.8	-2.6	-0.7	0.9	2.5	4.4	6.1	7.0	7.9	7.8	7.7	6.7	4.3	2.9	1.5	0.4	-0.5	-1.5	1.5	7.9
23-Mar	-2.2	-1.9	-2.3	-3.2	-3.1	-4.1	-4.0	-2.8	-0.7	1.3	3.2	4.5	5.5	6.3	7.0	7.5	6.9	6.4	3.9	2.2	1.9	1.5	1.1	0.6	1.5	7.5
24-Mar	0.1	0.2	-0.2	0.3	0.5	0.5	0.8	1.1	2.5	3.2	4.2	4.8	4.7	5.4	4.8	6.1	4.4	2.2	0.4	0.5	0.3	0.0	0.3	0.8	2.0	6.1
25-Mar	0.4	0.0	-0.4	-1.4	-1.5	-1.6	-1.7	-0.5	0.5	2.5	4.6	6.5	8.1	8.8	9.1	9.0	8.4	7.0	5.7	4.4	0.8	-2.5	-4.1	-5.7	2.4	9.1
26-Mar	-7.0	-8.7	-9.8	-10.7	-11.0	-11.4	-11.9	-12.2	-11.8	-11.0	-9.5	-7.9	-6.9	-5.5	-5.3	-5.2	-5.2	-4.7	-5.0	-5.3	-6.3	-7.4	-7.6	-8.2	-8.1	-4.7
27-Mar	-8.5	-8.6	-8.7	-9.1	-9.7	-10.0	-10.4	-10.3	-9.9	-9.3	-8.6	-7.6	-6.8	-6.5	-5.7	-5.6	-5.9	-6.1	-7.2	-9.4	-11.2	-12.4	-13.7	-15.0	-9.0	-5.6
28-Mar	-17.5	-20.3	-19.1	-19.3	-19.7	-20.1	-18.1	-14.9	-12.9	-10.8	-9.2	-7.7	-6.9	-5.9	-5.4	-5.2	-5.4	-6.2	-7.4	-8.7	-11.0	-12.4	-12.9	-12.2	-12.0	-5.2
29-Mar	-12.9	-13.8	-13.5	-11.9	-10.7	-11.7	-11.9	-10.3	-8.6	-6.1	-5.4	-5.3	-4.3	-4.0	-3.4	-2.7	-2.0	-2.0	-2.9	-5.6	-6.7	-7.6	-7.6	-7.5	-7.4	-2.0
30-Mar	-7.4	-7.5	-8.1	-8.6	-9.1	-10.2	-10.6	-7.4	-4.5	-3.5	-2.2	-1.1	0.1	1.4	1.9	2.6	2.8	2.4	1.0	-1.5	-1.7	-2.0	-2.4	-2.7	-3.3	2.8
31-Mar	-3.1	-3.8	-4.2	-5.1	-6.3	-7.0	-6.7	-4.5	-3.0	-2.3	-1.5	-0.9	-0.3	0.6	1.5	2.1	2.1	1.6	0.3	-1.5	-1.9	-2.4	-2.9	-3.2	-2.2	2.1
	-8.3	-8.7	-9.1	-9.3	-9.4	-9.7	-9.8	-9.2	-8.0	-6.7	-5.3	-4.2	-3.3	-2.5	-2.1	-1.8	-2.2	-2.9	-4.2	-5.5	-6.3	-6.9	-7.5	-8.0	Diurnal Average	
	4.9	5.3	5.7	5.6	5.3	4.6	4.0	4.2	4.2	4.3	5.2	6.5	8.1	8.8	9.1	9.2	9.1	8.1	6.3	4.4	3.3	3.9	4.3	4.4	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Hangingstone Expansion - March 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	37	4.97	4.97
-20 - 0	517	69.49	74.46
0 - 10	190	25.54	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Hangingstone Expansion - March 2025

Maximum Value: 97.6 % on Mar 24 20:00

Maximum Daily Average: 81.4 % on Mar 14

Minimum Value: 25.7 % on Mar 25 16:00

Minimum Daily Average: 43.7 % on Mar 21

Maximum Diurnal Average: 76.4 % at hour 7

Minimum Diurnal Average: 49.9 % at hour 16

Monthly Average: 65.38 %

Percentiles: P_1 = 33.2 P_{10} = 42.3 Q_1 = 54.0 Median = 67.2 Q_3 = 78.6 P_{90} = 83.8 P_{99} = 92.9

Hours in Service:	744
Hours of Data:	744
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

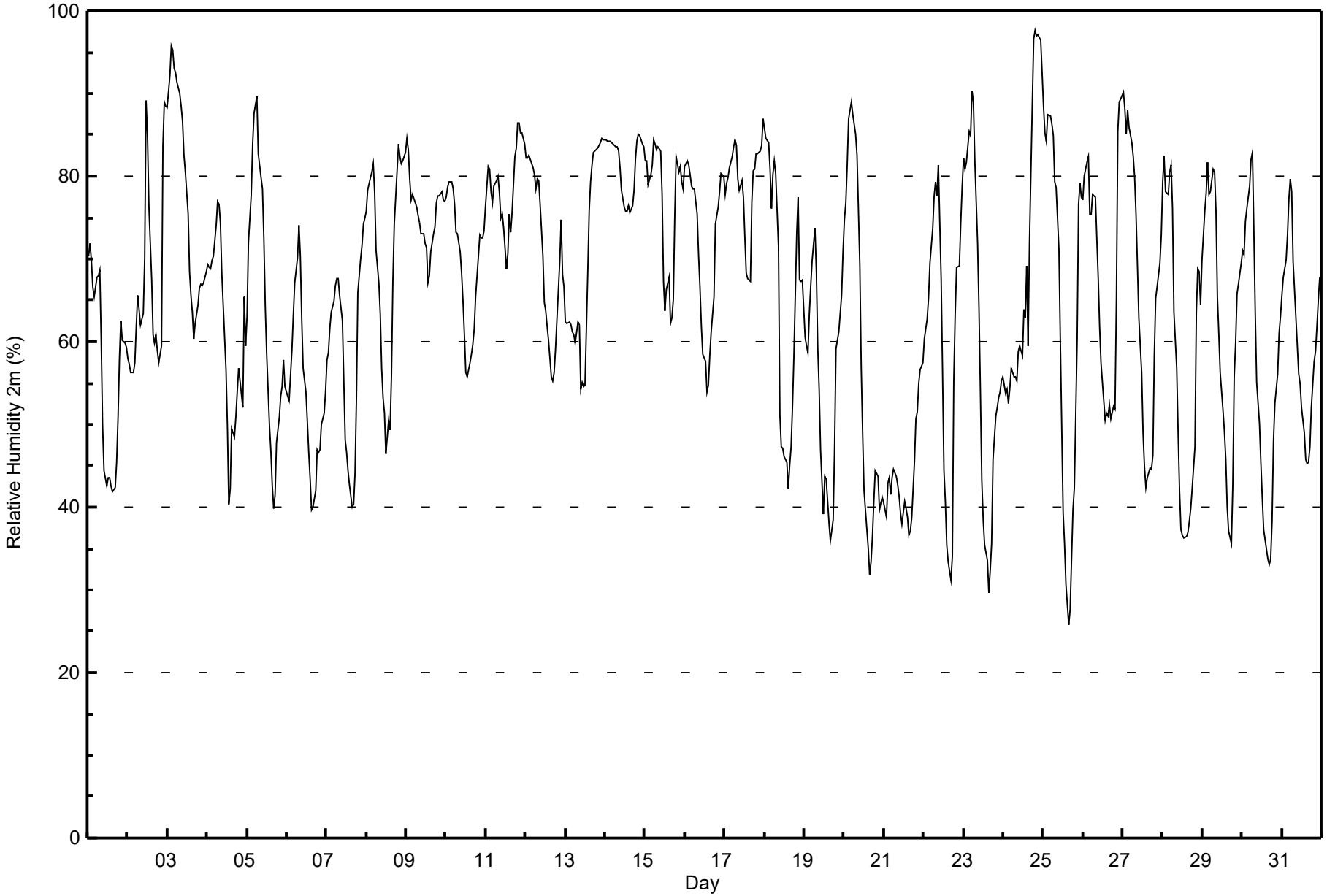
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	70.4	71.9	69.8	66.6	65.5	67.7	68.0	68.7	60.2	49.8	44.5	42.5	43.6	43.5	42.6	41.9	42.3	45.4	50.9	58.0	62.5	60.2	59.9	59.3	56.5	71.9
2-Mar	58.0	57.2	56.3	56.3	57.4	61.9	65.6	63.9	62.1	63.3	70.0	89.1	84.9	76.5	67.4	60.8	59.8	60.9	59.0	57.4	59.6	83.8	88.9	88.5	67.0	89.1
3-Mar	88.4	92.2	95.7	95.3	93.1	92.5	91.4	90.1	88.5	86.6	82.5	80.6	75.4	68.4	65.7	63.6	60.4	62.2	64.3	66.4	67.0	66.8	67.1	68.5	78.0	95.7
4-Mar	69.3	68.9	68.8	69.8	70.4	74.1	76.9	76.6	74.4	68.3	60.4	56.6	49.7	40.3	42.2	49.4	48.4	50.8	53.9	56.8	55.2	52.1	65.4	59.6	60.8	76.9
5-Mar	63.0	72.0	77.7	83.9	87.6	88.6	89.7	82.7	79.9	78.5	72.3	64.3	58.5	49.9	46.7	42.5	39.8	41.5	47.7	50.8	53.5	54.6	57.7	54.6	64.1	89.7
6-Mar	53.3	52.9	56.0	58.9	63.2	67.2	70.1	74.1	70.3	62.7	56.7	53.9	50.4	46.6	43.5	39.6	39.9	42.1	47.0	46.6	47.0	50.0	51.3	54.0	54.1	74.1
7-Mar	57.8	58.6	61.5	63.5	65.0	66.7	67.6	67.6	65.6	62.5	55.3	48.2	46.5	44.4	42.7	39.9	40.4	44.0	53.0	66.0	70.0	71.7	74.3	74.9	58.6	74.9
8-Mar	75.8	78.3	79.8	80.6	81.5	78.0	71.0	67.1	63.4	56.7	53.3	51.3	46.4	50.5	49.3	56.0	67.4	74.3	80.8	83.8	82.3	81.5	81.8	82.9	69.7	83.8
9-Mar	84.6	83.3	79.6	77.1	77.8	76.8	76.3	75.3	74.4	73.1	73.0	71.9	71.3	67.1	68.1	70.8	73.1	73.8	76.8	77.6	77.6	78.1	77.1	76.9	75.5	84.6
10-Mar	77.4	78.6	79.3	79.3	78.4	76.7	73.3	73.0	70.9	68.2	64.8	60.8	56.2	55.8	57.5	58.4	59.7	61.6	65.4	70.3	72.8	72.5	72.6	73.3	69.0	79.3
11-Mar	76.3	81.3	80.8	78.1	76.7	78.8	79.6	80.1	77.9	75.0	75.5	73.7	68.7	70.7	75.5	73.3	75.5	82.4	83.3	86.4	86.4	85.2	85.3	83.9	78.8	86.4
12-Mar	82.3	82.2	82.5	82.0	81.1	80.2	78.5	79.6	79.5	76.5	70.3	64.7	63.7	61.8	60.1	55.8	55.2	56.3	59.1	62.8	69.7	74.7	68.1	66.6	70.6	82.5
13-Mar	62.4	62.2	62.3	62.0	61.3	60.8	59.8	62.3	62.0	54.2	55.1	54.5	54.7	68.6	75.7	79.4	81.4	82.9	83.2	83.3	83.7	84.1	84.6	84.4	69.4	84.6
14-Mar	84.5	84.2	84.3	84.3	84.0	83.7	83.6	83.5	83.1	81.1	78.4	76.2	75.8	75.8	76.4	75.6	76.5	78.3	82.0	84.3	85.2	84.9	83.9	83.6	81.4	85.2
15-Mar	81.9	81.9	79.0	80.1	81.3	84.5	83.9	83.2	83.5	83.0	77.9	67.3	63.8	66.3	67.8	62.1	62.9	65.2	74.9	82.3	80.5	81.1	79.3	78.4	76.3	84.5
16-Mar	81.2	81.9	81.3	80.1	78.8	78.5	78.5	75.4	70.6	66.5	61.9	58.5	57.6	53.9	54.7	58.3	61.1	65.4	74.2	75.3	76.2	78.1	80.4	80.0	71.2	81.9
17-Mar	77.7	79.1	79.8	81.0	82.3	83.6	84.4	83.7	79.7	78.2	79.5	77.4	72.7	68.3	67.6	67.2	77.0	80.6	80.8	82.7	82.7	83.0	83.7	86.9	79.2	86.9
18-Mar	85.8	84.5	84.0	80.8	76.1	80.1	81.8	80.3	71.5	51.2	47.3	47.0	46.2	45.4	42.2	45.1	47.3	52.1	58.3	73.0	77.5	67.5	67.2	67.5	65.0	85.8
19-Mar	60.6	59.4	58.6	63.4	66.8	69.9	73.8	68.5	59.3	54.3	47.0	39.1	43.7	43.4	40.9	38.1	35.9	38.4	47.3	59.1	60.2	61.2	65.6	70.8	55.2	73.8
20-Mar	74.7	76.7	81.4	86.9	89.0	87.5	86.3	85.0	82.6	69.3	57.0	49.0	42.1	39.7	35.1	31.9	33.4	36.5	40.7	44.5	43.7	39.7	40.5	41.3	58.1	89.0
21-Mar	40.5	38.8	42.9	43.5	41.5	43.5	44.6	43.7	42.7	41.3	39.3	38.0	40.7	39.9	38.7	36.6	37.2	38.7	45.6	50.7	51.5	54.9	56.6	57.5	43.7	57.5
22-Mar	60.3	61.6	62.8	65.3	69.5	73.7	77.6	79.3	77.6	81.3	67.6	56.3	44.4	40.7	35.5	33.4	31.2	34.1	55.3	63.2	69.0	69.1	74.5	78.7	60.9	81.3
23-Mar	82.1	80.9	81.6	85.4	84.9	90.4	89.0	82.0	71.8	63.9	54.0	43.1	38.4	35.4	33.5	29.7	32.3	35.5	45.8	50.9	52.1	53.2	53.9	55.3	59.4	90.4
24-Mar	55.8	53.8	54.2	52.5	54.4	56.8	55.7	55.8	55.2	58.9	59.5	58.4	63.8	62.9	69.1	59.5	72.0	88.6	96.7	97.6	97.0	97.2	96.4	92.6	69.3	97.6
25-Mar	88.4	85.2	84.2	87.5	87.2	86.3	84.9	79.4	78.6	71.1	60.1	49.6	39.3	35.6	30.6	25.7	27.5	33.8	39.7	42.4	60.3	76.6	79.1	77.4	62.9	88.4
26-Mar	77.1	80.0	81.7	82.3	75.5	75.4	77.7	77.5	72.5	67.8	61.8	57.5	55.2	50.5	51.3	51.1	52.4	50.6	52.2	51.9	65.3	85.4	89.0	89.3	68.0	89.3
27-Mar	90.2	88.2	85.0	88.0	86.0	84.1	82.3	79.7	75.3	69.1	62.9	56.3	49.0	44.9	42.4	43.5	44.7	44.6	46.2	58.2	65.2	66.6	69.5	72.8	66.5	90.2
28-Mar	79.4	82.3	78.2	77.8	80.5	81.3	76.0	63.5	56.8	49.1	42.0	37.4	36.6	36.3	36.4	36.9	38.4	39.8	42.2	47.3	63.6	68.9	68.6	64.4	57.7	82.3
29-Mar	69.8	75.7	78.0	81.6	77.9	78.2	80.8	80.6	75.8	65.4	61.0	56.2	51.7	49.2	45.7	40.1	37.2	35.6	42.7	55.8	59.8	65.8	67.0	69.4	62.5	81.6
30-Mar	71.0	70.5	74.6	76.0	78.9	82.1	82.8	73.5	63.4	55.1	50.1	45.5	41.2	37.4	36.0	33.8	33.1	33.8	38.2	48.0	52.6	56.2	61.1	63.1	56.6	82.8
31-Mar	65.6	67.7	69.9	73.0	77.2	79.7	78.1	69.6	62.9	59.5	56.2	54.8	52.0	49.0	45.7	45.3	45.4	47.3	52.1	57.6	58.8	61.9	65.1	67.8	60.9	79.7
	72.4	73.3	73.9	74.9	75.2	76.4	76.4	74.4	70.7	65.9	61.2	57.4	54.3	52.2	51.2	49.9	51.3	54.1	59.3	64.2	67.4	69.9	71.5	71.8	Diurnal Average	
	90.2	92.2	95.7	95.3	93.1	92.5	91.4	90.1	88.5	86.6	82.5	89.1	84.9	76.5	76.4	79.4	81.4	88.6	96.7	97.6	97.0	97.2	96.4	92.6	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Hangingstone Expansion - March 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	54	7.26	7.26
40 - 60	218	29.30	36.56
60 - 80	314	42.20	78.76
80 - 100	158	21.24	100.00

Total Number of Valid Hours: 744

Total Number of Hours: 744

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Hangingstone Expansion - March 2025

Maximum Speed: 25 km/h on Mar 8 16:00

Maximum Daily Speed Average: 14.4 km/h on Mar 21

Minimum Speed Value: 1 km/h on Mar 29 20:00

Minimum Daily Speed Average: 0.3 km/h on Mar 15

Maximum Diurnal Speed Average: 4.5 km/h at hour 15

Minimum Diurnal Speed Average: 1.5 km/h at hour 20

Monthly Average Velocity: 0.3 km/h 188.3 deg

Percentiles: $P_1 = 2$ $P_{10} = 5$ $Q_1 = 7$ Median = 9 $Q_3 = 12$ $P_{90} = 14$ $P_{99} = 20$

Hours in Service:	744
Hours of Data:	742
Hours of Missing Data:	2
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Mar	S9	S9	SSW8	SSW9	SSW8	S6	SSW5	S7	SSW10	SSW9	SW11	SW11	WSW10	WSW11	W12	W12	W8	WSW6	SSW7	SSW8	S7	SSW7	SSW6	S6	SW7.3	W12
2-Mar	SSW8	SSW9	SSW9	SW9	SW9	SW8	SSW7	SW8	SW11	W9	NW11	N10	NNW8	NW11	WNW11	WNW12	W7	WSW5	WNW9	NW14	NW12	N9	N10	NE7	WNW5.3	NW14
3-Mar	NE7	N8	N12	NNE14	NNE11	N9	N9	N7	NNW7	WNW7	NW5	NW7	NW8	NW7	NW9	WNW9	WNW8	W5	WSW4	SSW6	SSW6	SSW8	SW8	SSW9	NW4.2	NNE14
4-Mar	SW9	SW9	SW10	SSW10	SW11	SW10	SW11	SW12	SW12	SW10	SW12	WSW15	WSW12	WSW13	WSW12	WSW11	WSW10	WSW7	SW8	SSW7	SSW8	WSW9	W8	NW8	SW9.5	WSW15
5-Mar	NNW7	NNE9	NNE7	N7	N6	N9	N9	N13	NNE13	N10	NNW11	NNW6	NW6	NW9	WNW11	W10	WNW11	W6	WSW6	SW7	SSW9	SSW7	SSW8	SSW8	NW4.5	N13
6-Mar	SSW9	SSW9	SSW8	SSW9	SSW8	SSW7	SSW6	SW7	SSW8	SW8	SW8	WSW10	W11	WNW13	WNW15	WNW15	WNW16	W9	SW8	SW10	WSW10	WSW9	WSW10	WSW8	WSW8.1	WNW16
7-Mar	SW8	SW8	SW8	SW8	SW9	SW9	SW9	SW8	SW10	WSW11	WSW9	WSW9	W11	WSW10	WSW12	W12	W11	W9	N6	NE8	NNE8	NE8	NE7	NE8	WSW5.2	W12
8-Mar	ENE5	ENE1	SE3	S9	S11	SSW14	SW16	WSW17	WSW16	W18	W18	WNW19	WNW20	NW21	NW22	NW25	N17	NNE13	NNE12	NE10	NE10	NE9	NE11	NNE10	NW6.2	NW25
9-Mar	NNE11	NNE14	NNE13	NNE13	NNE13	NE12	NNE12	NE12	NE12	NNE13	NNE13	NNE12	NNE12	NNE10	NNE10	NNE10	NNE10	NE9	NNE9	NE8	NE7	NNE7	NE7	NE5	NNE10.6	NNE14
10-Mar	NE5	NNE5	ENE3	NE5	NE2	SE3	SE3	SSE5	SSE8	SSE7	S7	SSW5	ENE2	NNE3	NNW3	NNE6	E5	NE6	NE7	NE5	ENE4	ESE5	SE7	ESE7	E2.7	SSE8
11-Mar	SE10	ESE6	ESE11	SE11	ESE11	ESE10	ESE10	E10	E11	ESE12	E10	E10	ENE9	NNE10	NNE13	NE12	NE15	NE14	NE12	NNE12	NNE11	N11	NNE11	N11	ENE8.2	NE15
12-Mar	NNE10	N8	N8	N7	NNE5	NNE4	NE3	ESE3	NNE4	NE5	NE5	NNE6	N7	N7	N9	NNE10	NE12	NE11	NE8	NE6	ENE5	ENE6	E8	E9	NE6.0	NE12
13-Mar	ESE12	ESE11	ESE11	E8	E10	E10	E10	E11	E12	ENE12	ENE15	E14	E16	ENE13	ENE16	ENE15	NE15	NE17	NE16	NE15	NE13	NE13	NNE12	NNE13	ENE11.7	NE17
14-Mar	NNE14	NE14	NNE10	N11	N11	N10	NNE8	N9	N13	N13	N12	N14	N15	N15	N13	N13	N13	N13	N9	N7	N5	NNW5	NNW4	N4	N10.3	N15
15-Mar	NW2	WNW4	WSW4	SSW5	SW2	NNE2	SE4	SE5	ESE3	NNW6	N5	N9	N8	NNW8	N8	NNW7	NNW8	N3	SSE5	S8	S9	S8	S9	S10	WNW0.3	S10
16-Mar	S9	S9	SSE9	SSE9	SSE9	SSE10	SSE9	SSE11	SSE14	SSE13	S13	SSE14	SSE14	SSE14	SSE14	SSE11	SSE10	SSE11	SE10	SSE8	S12	S15	S12	S13	SSE11.2	S15
17-Mar	S14	S11	S10	S10	S8	S8	S7	SSW6	WSW8	W10	NW10	NW9	NW9	NW10	NW11	NNW11	NNE10	NE9	NNE10	NE8	NE4	NNE5	NNE4	NNW3	WNW1.7	S14
18-Mar	SSE4	S4	S6	SSW4	W6	WSW7	WSW6	WSW6	WSW6	W8	W9	W10	WSW9	WSW7	WSW9	SW7	WSW7	WSW5	S2	S4	S5	WSW9	WSW8	WSW7	WSW5.7	W10
19-Mar	WSW7	WSW8	WSW8	WSW8	SW5	SSW5	S6	SSE5	WSW5	W6	WNW3	SW8	WSW12	W13	W13	W15	WNW15	WNW9	W3	SSW5	SSW5	N7	NNE10	NE8	WSW5.3	WNW15
20-Mar	NE9	NE12	NE12	NE11	NE11	NE9	NE8	NE7	N7	NNE10	NE11	NE10	ENE10	ENE11	E10	E10	NE12	ENE10	E10	E10	ESE11	SE16	SE19	SE19	ENE8.7	SE19
21-Mar	SE19	SE18	SSE20	SSE21	SSE20	SSE20	SSE18	SSE16	SSE16	S9	SSE7	SE10	SSE11	SSE12	SSE13	SSE14	SSE15	SSE13	SE9	SE12	SSE16	SSE17	SSE14	S13	SSE14.4	SSE21
22-Mar	S14	S12	S13	S11	S9	S8	S7	SSW7	SSW8	SW8	SW9	SW10	WSW11	W13	WSW14	W14	W14	W13	WNW15	WNW10	W6	W7	W9	WSW9	SW8.0	WNW15
23-Mar	W6	WSW7	SW9	SSW8	SW8	SSW8	SSW8	SW8	WSW7	WSW7	W7	WNW6	W6	W8	W7	WSW7	NW4	ENE6	ESE10	SE11	SE13	SE14	SE15	SSE11	SSW4.1	SE15
24-Mar	SSE10	S10	S9	S12	S10	S9	S9	SSW9	WSW11	WSW12	WSW11	SW11	SW12	SW13	WSW14	W14	WSW13	W10	W9	WSW7	W9	UO	UO	WSW8	SW8.7	WSW14
25-Mar	WSW10	WSW10	SW9	SSW8	SSW9	SSW10	SSW10	SW9	SW10	WSW10	WSW8	WSW10	WSW11	WSW14	WNW17	WNW23	WNW19	NNW14	NNW10	NNW9	NNE14	NNE15	NNE13	NNE13	W6.5	WNW23
26-Mar	NNE15	NNE16	NNE14	NNE12	NNE16	NE14	NE14	NNE14	NNE9	NE12	NE8	NE8	NNE9	NNE8	NNE12	NNE12	NE12	NE10	NE8	E8	E10	ENE9	NE9	NE10	NE10.8	NNE16
27-Mar	NE11	NE10	NE12	NE12	NE12	NE13	NE12	NE12	NE14	NE14	NE17	NE17	NNE17	NNE17	NE17	NE17	NE18	NE20	NE15	NNE10	NNE8	NE9	NE7	ENE6	NE13.1	NE20
28-Mar	E6	ESE7	E7	E6	ENE4	ENE5	E8	ENE5	NNE7	NE9	NE9	NE10	NE10	NNE10	NNE9	NE10	NE11	NE13	NNE10	NE6	ESE5	ESE7	ESE6	ENE5	NE6.8	NE13
29-Mar	ENE2	SE3	S4	S5	SSE4	NNW2	N2	NE1	NNE3	NNE3	NNE4	WNW4	NNW6	NW7	WNW7	NW6	WNW6	W7	WSW5	S1	SSE7	S8	S8	SSW9	WSW1.5	SSW9
30-Mar	SSW8	SSW7	SSW7	SSW8	S8	S7	S7	S7	S8	SSW10	SSW9	SSW9	SSW6	SSE4	S6	S6	SSE8	SSE9	SSE8	S8	S10	SSW9	S10	SSW10	S7.6	SSW10
31-Mar	SSW7	S10	S11	S11	S10	SSE10	SSE9	S10	S13	S13	S12	SSE14	SSE15	SSE14	SSE14	SSE15	SSE14	SSE15	SE12	SE12	SE17	SSE18	SSE19	SSE18	SSE12.7	SSE19
	SE2.4	SE2.0	SSE2.6	SSE2.7	SSE2.3	SSE2.3	SSE2.6	SSE2.3	SSW1.8	WSW1.7	WNW1.6	WNW1.6	WNW2.3	NW3.4	NW4.5	NW4.4	NNW3.7	N2.6	NE2.2	E1.5	SE2.1	ESE2.3	SE2.1	SE1.8	Diurnal Average	
	SE19	SE18	SSE20	SSE21	SSE20	SSE20	SSE18	WSW17	WSW16	W18	W18	WNW19	WNW20	NW21	NW22	NW25	WNW19	NE20	NE16	NE15	SE17	SSE18	SSE19	SE19	Diurnal Maximum	

UO - Unstable Operation

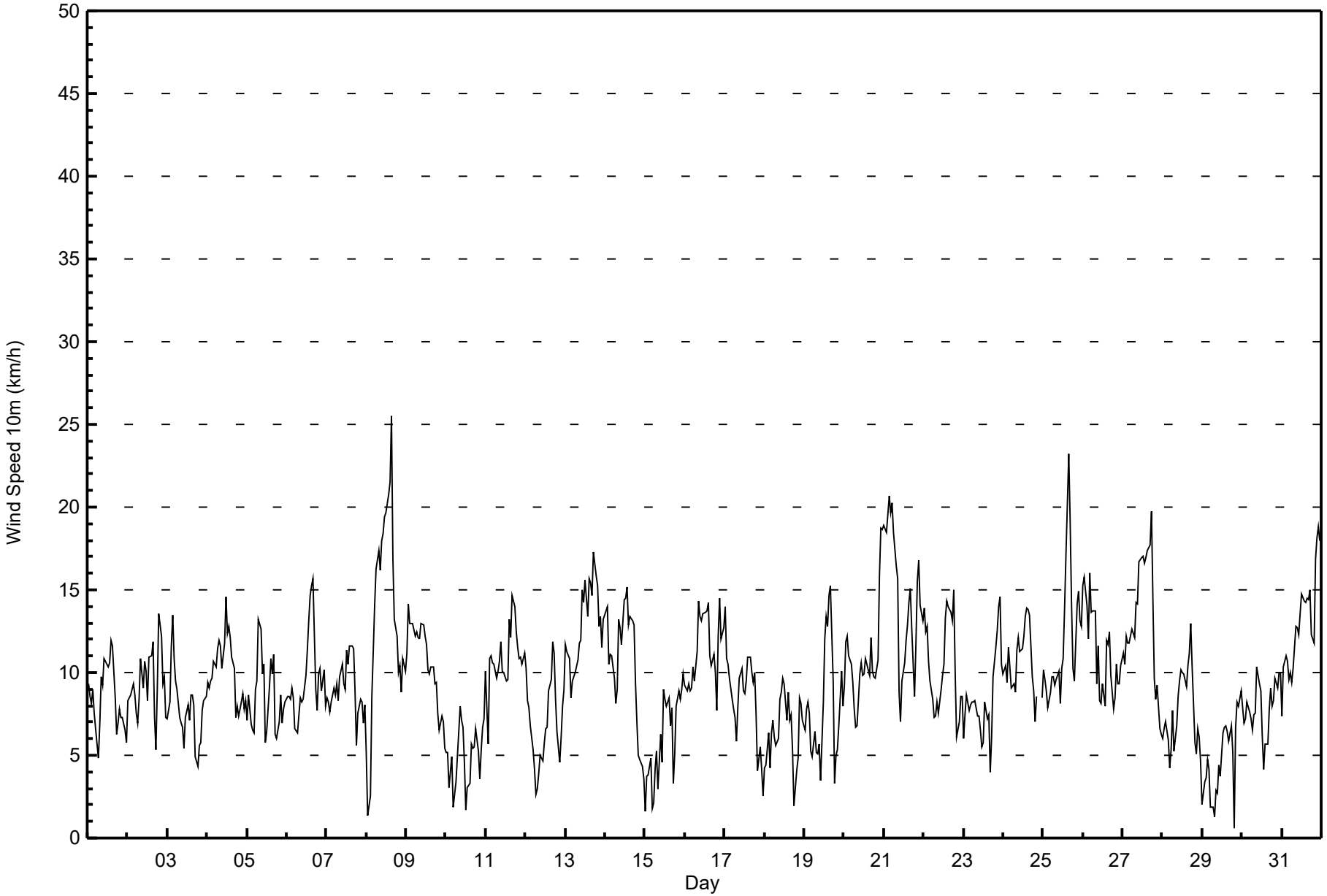
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Hangingstone Expansion - March 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	89	11.99	11.99
6 - 11	452	60.92	72.91
12 - 19	191	25.74	98.65
20 - 28	10	1.35	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 742

Total Number of Hours: 744

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Hangingstone Expansion - March 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	5	12	9	11	1	4	6	6	7	7	2	6	2	3	3	5	89
6 - 11	31	34	47	9	20	13	7	22	51	56	42	49	29	12	16	14	452
12 - 19	12	33	37	5	3	2	12	27	14	1	6	13	13	10	2	1	191
20 - 28	0	0	1	0	0	0	0	4	0	0	0	0	0	2	3	0	10
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	48	79	94	25	24	19	25	59	72	64	50	68	44	27	24	20	742

Total Number of Valid Hours: 742

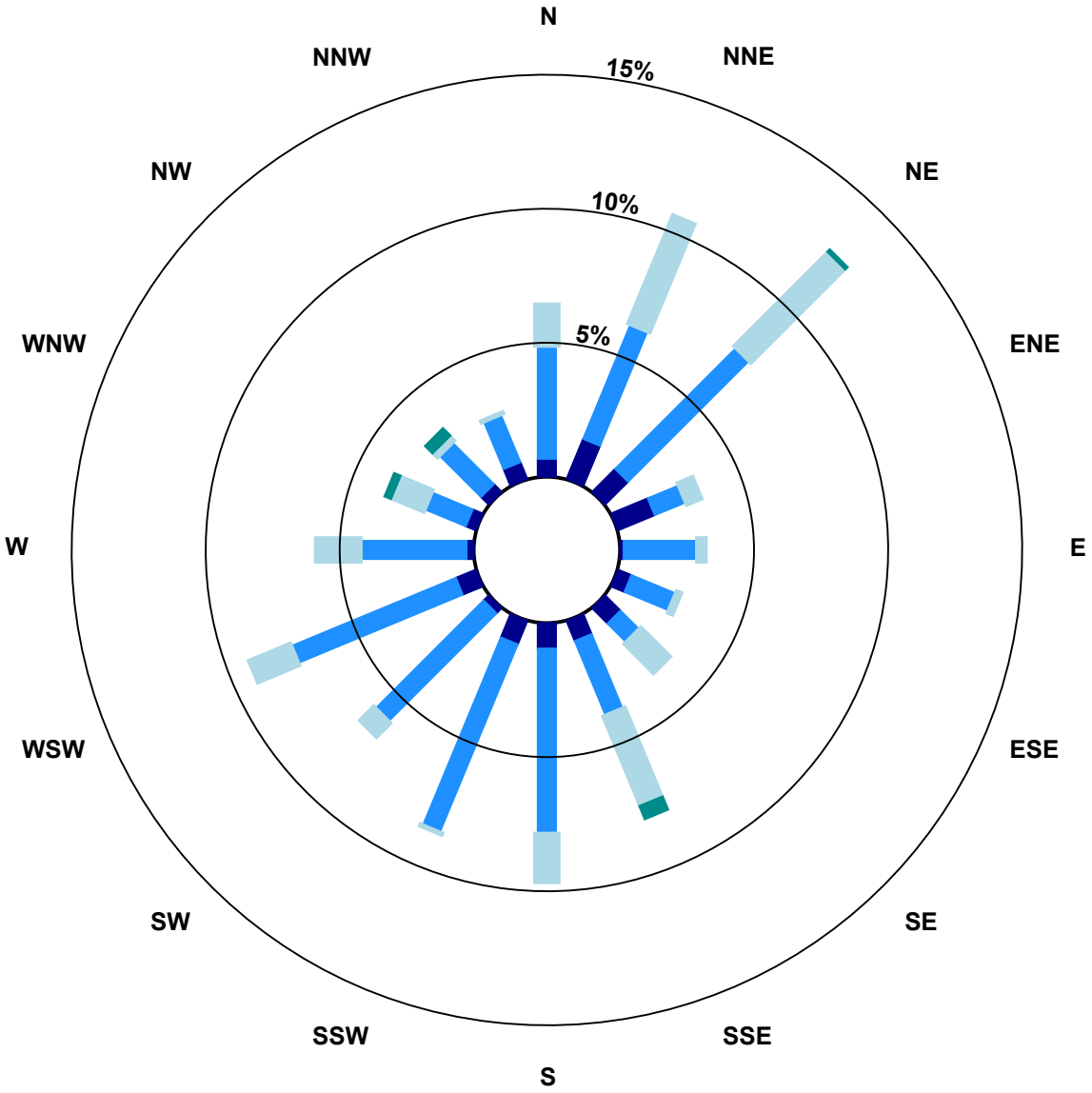
Total Number of Hours: 744

Wood Buffalo Environmental Association

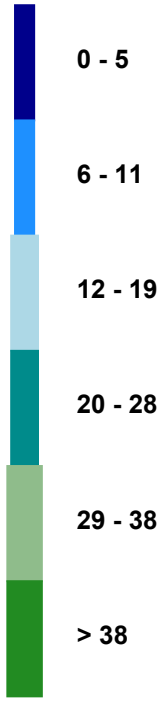
Wind Rose Mar 2025

Wind Speed 10m (WS10) - km/h

Hangingstone Expansion



Classes (km/h)



Total Number of Valid Hours: 742

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Hangingstone Expansion - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 6 km/h on Mar 25 16:00

Minimum Value: 1 km/h on Mar 15 03:00

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

Hours in Service:	744
Hours of Data:	742
Hours of Missing Data:	2
Hours of Calibration:	0
Percent Operational Time:	99.7

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

UO - Unstable Operation

Direction of Maximum Speed: 320 deg on Mar 8 16:00
Direction of Maximum Daily Speed Average: 155.8 deg on Mar 21

Direction of Minimum Speed: 191 deg on Mar 29 20:00
Direction of Minimum Daily Speed Average: 0.3 deg on Mar 15

Monthly Average Direction: 188.3 deg

Hours in Service:	744
Hours of Data:	742
Hours of Missing Data:	2
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Mar	181	188	196	200	196	187	196	191	196	209	222	223	245	251	263	265	269	257	205	196	190	197	200	189	215.6
2-Mar	192	195	204	217	224	219	203	224	235	262	311	357	330	316	303	291	277	252	292	316	319	1	3	37	281.7
3-Mar	44	6	11	17	14	10	7	9	341	303	309	323	312	305	310	289	296	272	239	213	213	209	218	213	323.9
4-Mar	216	215	215	213	216	216	219	220	222	221	233	253	246	241	242	243	238	241	228	210	213	237	269	319	231.6
5-Mar	348	18	19	2	6	355	352	10	21	4	347	344	305	308	300	274	288	272	244	219	208	204	201	200	322.8
6-Mar	201	204	209	211	206	210	202	215	209	215	233	248	264	282	292	296	301	267	234	235	246	247	243	244	244.5
7-Mar	219	221	222	220	214	216	217	227	235	250	248	245	263	253	258	266	269	276	3	43	25	34	40	42	251.8
8-Mar	77	58	125	175	186	208	236	245	249	268	280	290	292	315	307	320	7	19	30	43	46	39	35	33	306.4
9-Mar	25	21	26	21	26	39	33	36	35	28	32	27	26	30	26	16	26	37	25	45	44	32	40	50	30.0
10-Mar	39	30	67	46	48	124	128	149	164	160	176	198	70	15	346	16	86	48	51	34	67	111	124	110	90.6
11-Mar	137	114	122	125	121	106	111	93	101	105	93	85	65	33	19	52	45	40	42	26	20	10	17	8	67.2
12-Mar	12	5	10	4	18	27	45	116	25	52	34	21	1	5	5	26	51	37	42	50	64	74	87	100	34.9
13-Mar	115	107	106	92	79	90	89	91	89	78	78	80	79	72	69	60	46	44	43	42	41	35	27	24	67.4
14-Mar	29	39	25	3	360	356	14	2	358	354	2	7	353	357	353	359	354	2	3	353	8	347	329	4	3.3
15-Mar	313	296	256	205	218	16	125	132	113	327	2	6	359	337	349	335	342	356	158	171	176	174	177	177	286.6
16-Mar	180	173	163	161	156	156	153	154	157	166	171	158	154	152	153	162	166	150	143	156	170	172	185	187	162.5
17-Mar	187	186	181	183	188	187	182	192	251	272	304	311	316	319	325	339	18	35	24	36	55	22	29	344	289.8
18-Mar	159	185	169	206	268	252	254	249	245	260	260	263	238	250	251	236	244	246	186	172	190	250	253	242	239.3
19-Mar	247	246	243	247	233	199	187	167	256	267	282	226	244	268	263	264	286	293	270	206	207	9	32	35	257.9
20-Mar	38	41	40	42	44	44	39	37	8	32	39	44	76	69	84	81	40	77	81	96	114	128	133	138	70.4
21-Mar	139	143	147	153	155	158	155	157	157	174	160	138	148	158	168	166	160	160	146	140	152	162	168	188	155.8
22-Mar	179	178	180	182	190	191	188	194	201	224	219	220	245	266	256	264	275	267	302	290	270	263	262	257	234.2
23-Mar	261	245	225	209	217	207	207	214	243	255	274	300	277	268	280	252	321	71	113	126	133	133	138	152	201.9
24-Mar	163	171	169	180	180	183	184	198	238	245	242	215	216	221	257	268	256	267	272	254	261	UO	UO	238	223.5
25-Mar	242	241	231	213	209	213	213	220	218	242	258	248	237	252	282	295	296	333	336	330	25	26	16	15	278.4
26-Mar	27	25	23	26	31	34	49	32	32	35	40	35	33	33	18	27	44	45	53	84	84	71	54	44	38.7
27-Mar	43	41	46	39	35	34	37	42	40	51	40	34	30	33	37	37	39	39	46	13	19	35	51	62	38.1
28-Mar	87	105	96	93	74	63	89	68	32	37	49	42	37	28	29	41	36	37	30	47	102	110	107	69	56.2
29-Mar	65	136	179	173	165	335	8	45	19	24	15	298	329	315	294	306	282	260	240	191	167	176	188	196	243.2
30-Mar	201	201	197	196	190	177	170	178	181	193	193	211	212	150	176	173	164	166	168	170	187	201	189	198	186.3
31-Mar	192	178	180	179	174	161	161	179	179	179	179	156	151	159	164	153	149	148	145	138	146	155	161	163	162.0
	142.9	144.6	150.8	162.4	162.4	158.3	156.3	166.2	200.3	252.0	288.6	301.0	299.0	305.2	305.5	311.5	335.2	10.0	37.1	81.1	125.3	119.8	127.9	137.6	
	Diurnal Average																								

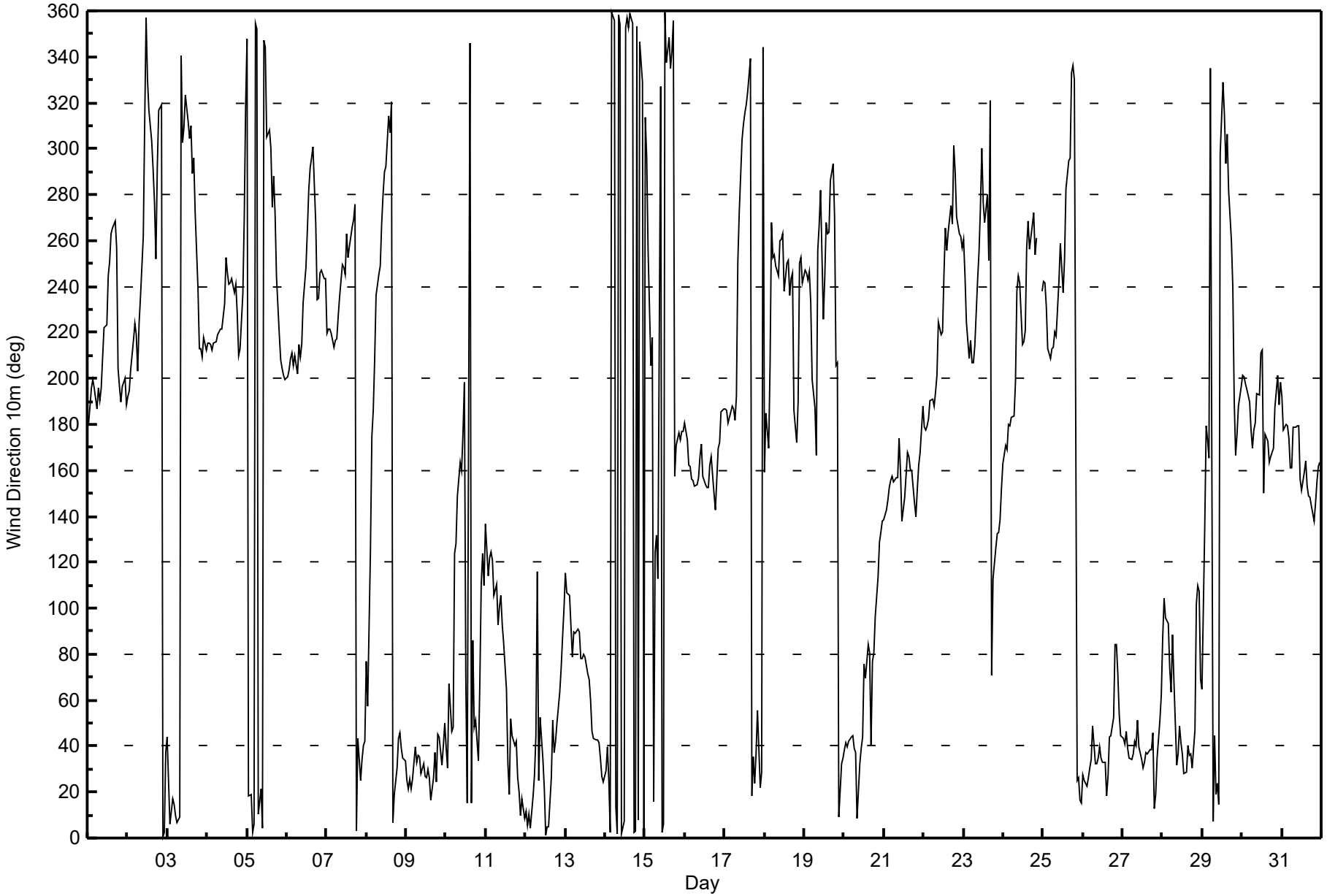
UO - Unstable Operation
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Hangingstone Expansion - March 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Hangingstone Expansion - March 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 91 deg on Mar 10 13:00

Minimum Value: 7 deg on Mar 16 04:00

Percentiles: P_1 = 8 P_{10} = 12 Q_1 = 15 Median = 19 Q_3 = 25 P_{90} = 33 P_{99} = 68

Hours in Service:	744
Hours of Data:	742
Hours of Missing Data:	2
Hours of Calibration:	0
Percent Operational Time:	99.7

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Mar	12	13	17	16	14	13	16	15	15	21	24	26	30	28	25	24	22	20	23	13	10	14	17	12	30
2-Mar	15	16	21	23	24	21	20	25	24	26	27	17	22	17	20	19	21	21	21	14	25	16	17	21	27
3-Mar	20	18	16	19	15	16	17	17	22	31	39	26	27	42	32	24	25	18	20	20	19	20	24	22	42
4-Mar	23	24	22	21	23	24	25	23	25	27	27	24	28	30	29	28	30	26	23	20	21	33	23	21	33
5-Mar	16	15	11	12	17	17	16	18	15	22	23	49	39	32	23	28	23	20	17	19	16	16	19	17	49
6-Mar	18	19	21	19	18	18	18	18	20	26	33	29	26	23	21	20	15	22	25	26	25	22	23	25	33
7-Mar	24	26	24	24	27	24	25	26	27	24	27	33	27	30	25	24	22	19	66	18	27	21	18	13	66
8-Mar	26	65	65	15	18	25	25	23	24	23	20	20	17	18	20	16	24	19	14	12	13	15	13	14	65
9-Mar	12	13	13	15	13	14	14	19	14	14	13	16	16	22	22	20	15	17	15	17	24	13	14	34	34
10-Mar	17	24	56	18	53	35	28	20	20	23	29	54	91	58	68	27	36	22	24	23	29	16	14	14	91
11-Mar	16	29	13	13	14	14	16	20	20	16	19	23	27	26	14	25	15	14	14	12	14	14	14	16	29
12-Mar	15	16	15	15	18	22	24	28	29	30	36	39	33	35	26	29	15	11	10	10	9	9	9	14	39
13-Mar	14	16	17	18	15	16	16	16	17	18	18	19	18	18	16	14	13	10	12	12	11	12	15	13	19
14-Mar	12	13	17	15	16	15	15	16	16	19	19	19	20	19	19	17	19	17	15	15	21	19	13	29	29
15-Mar	47	13	23	15	68	56	52	14	54	19	34	24	26	27	19	34	21	48	18	7	8	8	8	9	68
16-Mar	9	10	8	7	8	9	8	12	14	19	19	20	18	22	22	22	23	15	15	21	17	17	19	18	23
17-Mar	18	18	17	16	17	15	14	27	26	24	21	21	26	24	21	23	16	14	12	19	27	14	21	38	38
18-Mar	47	36	16	22	18	21	21	20	23	31	33	32	40	46	36	39	37	38	60	54	59	22	20	19	60
19-Mar	19	21	27	20	31	13	12	22	28	33	66	41	32	26	27	23	22	16	50	18	12	69	14	9	69
20-Mar	9	10	9	9	9	10	10	11	15	14	17	24	27	26	24	30	17	20	14	12	14	12	13	13	30
21-Mar	14	14	14	13	13	13	13	13	13	26	37	20	21	19	22	20	18	14	12	13	14	14	15	21	37
22-Mar	16	15	14	14	17	16	15	18	22	27	26	28	32	28	25	27	24	22	16	19	19	20	21	22	32
23-Mar	22	21	27	20	25	18	20	22	28	28	38	52	51	46	51	47	74	24	13	11	12	13	13	11	74
24-Mar	9	13	10	14	13	14	14	19	29	25	28	24	26	27	26	25	25	22	24	23	21	UO	UO	27	29
25-Mar	26	25	25	23	19	22	22	24	25	26	31	29	35	27	26	18	20	22	16	15	17	14	16	15	35
26-Mar	14	14	14	13	14	14	13	13	25	19	26	28	24	30	19	20	14	15	20	16	17	16	15	11	30
27-Mar	11	11	11	12	11	11	12	12	12	18	15	18	16	17	19	17	15	13	15	13	13	12	13	24	24
28-Mar	13	14	13	13	22	13	14	19	19	23	25	29	27	28	32	22	20	14	12	19	16	11	19	18	32
29-Mar	19	29	26	10	50	24	33	40	22	42	59	66	47	40	42	36	55	30	28	89	10	9	14	15	89
30-Mar	18	18	17	15	13	11	8	14	23	26	34	31	72	79	72	66	39	22	12	11	19	20	18	22	79
31-Mar	21	16	17	17	15	12	13	18	20	21	20	24	19	20	22	22	19	17	14	12	13	13	14	14	24
	47	65	65	24	68	56	52	40	54	42	66	66	91	79	72	66	74	48	66	89	59	69	24	38	
	Diurnal Maximum																								

UO - Unstable Operation

ELECTRONIC TRANSFER SYSTEM
AIRDATA
SUBMISSION REPORT

April 29, 2025
3:31:53 PM
Request # 4797027

Submitted by: EN6138
Submission Date: Apr 29, 2025 3:28:59 PM

File Type	File Name
Ambient Data	AMB-WBEA-202503.xml

Total Number of Files: 1

*** End of Report ***

ELECTRONIC TRANSFER SYSTEM
AIRDATA
SUBMISSION REPORT

April 30, 2025
2:05:24 PM
Request # 4797468

Submitted by: EN6138_DENNY
Submission Date: Apr 30, 2025 2:05:14 PM

File Type	File Name
Airshed Monitoring Report	WBEA-202503.pdf

Total Number of Files: 1

*** End of Report ***

ELECTRONIC TRANSFER SYSTEM
AIRDATA
SUBMISSION REPORT

April 30, 2025
2:06:02 PM
Request # 4797469

Submitted by: EN6138_DENNY
Submission Date: Apr 30, 2025 2:05:56 PM

File Type	File Name
Calibration Report	CAL-WBEA-202503.pdf

Total Number of Files: 1

*** End of Report ***



End of Report