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ENVIRONMENTAL ASSOCIATION

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Wood Buffalo Environmental Association

FEBRUARY 2025

MONTHLY REPORT

CONTINUOUS MONITORING

March 31, 2025

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

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WOOD BUFFALO ENVIRONMENTAL ASSOCIATION
MONTHLY AMBIENT AIR QUALITY MONITORING REPORT
February 2025

REPORT HISTORY

Revision 1: Resubmission of Ozone (O_3) Data for AMS 17 due to Baseline Correction Error

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

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

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March 31, 2025

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

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

Enclosed is the February 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 McKay First Nation	Smith's Landing First Nation

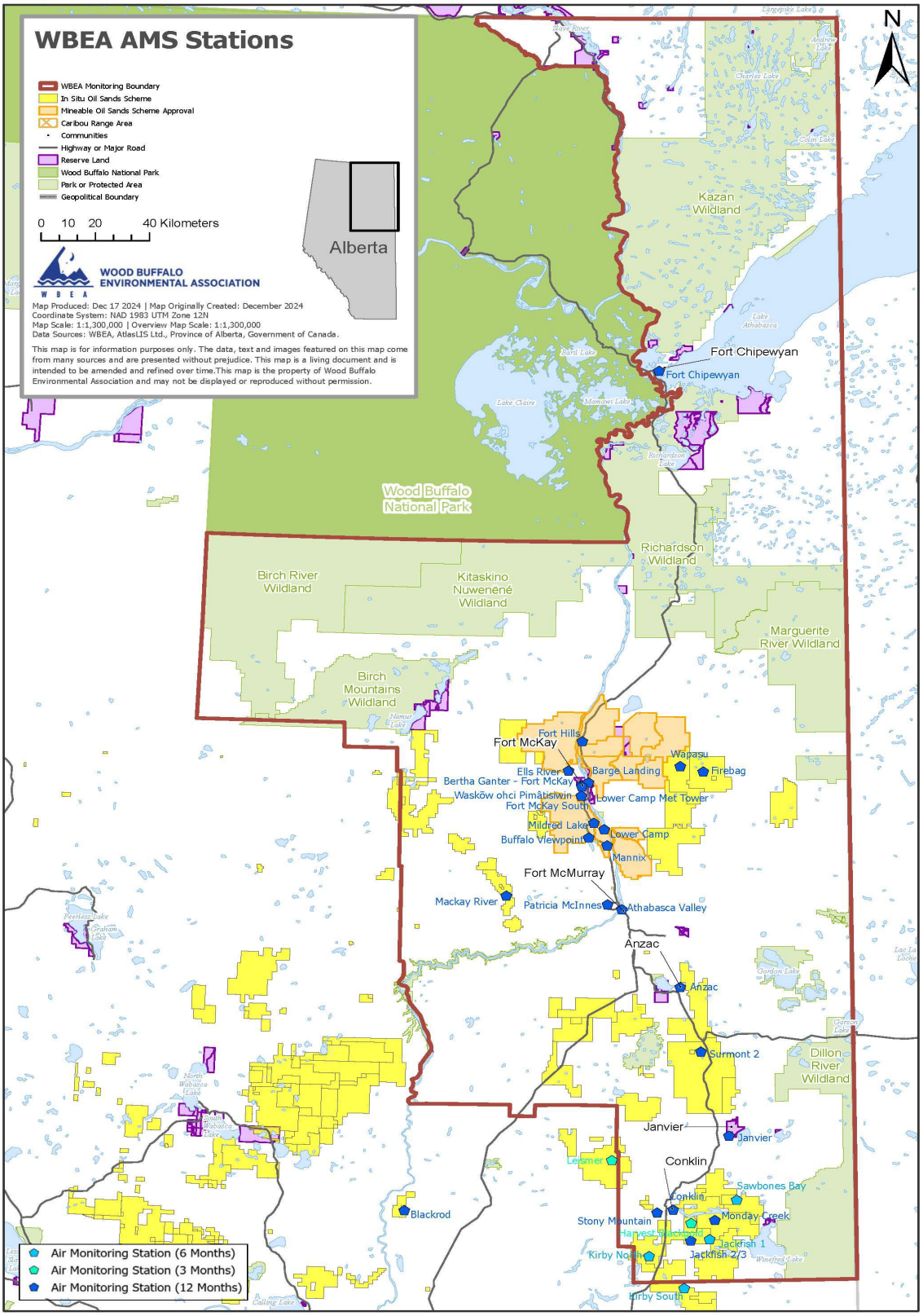


Figure 1. Map of WBEA Continuous Monitoring Network

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 was one ground-level concentrations in excess of the 1-hour H_2S objective reported to AEPA; following data validation and processing, the exceedance was not confirmed.

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

Site	Parameter	Date / Time	Reference	Period	Reported	Final	Status*
Ells River	PM2.5	6Feb25, 22:00	437514	1-hr	83	83.4	exc
Ells River	PM2.5	6Feb25, 23:00	437514	1-hr	88	87.6	exc
Anzac	PM2.5	14Feb25, 07:00	437687	1-hr	127	126.9	exc
Mannix	H2S	15Feb25, 01:00	437711	1-hr	10	9.7	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 February 2025, there were 7 instances that resulted in monitoring instruments operating less than 90% of the time.

Station	Parameter	Details
Fort Chipewyan	Total Reduced Sulphur (TRS)	The TRS analyzer at Fort Chipewyan AMS operated less than 90% of January and February 2025, which is a contravention of the Air Monitoring Directive (AMD) (2016, as amended), Chapter 6, Clause DQ 4-C. This incident was reported to Alberta Environment and Protected Areas (AB EPA) on February 21, 2025 (reference number 437908). On January 27, a power failure at the station disrupted the normal operation of all air quality analyzers for 3 hours. The power failure caused a malfunction of the TRS converter, affecting the accuracy of the daily span results. A site visit was scheduled for February 3, the best available time due to the remote location. During the visit the TRS converter was replaced, and its performance was verified. A period of stabilization and adjustment was needed to ensure optimal performance of the analyzer. Normal operation was restored on February 21. During the data validation process, 96 hours of data from January were invalidated, resulting in an operational time of 86.7%. The validation of February data is in progress.
Stony Mountain	Precipitation Collector (PC)	The precipitation gauge at the Stony Mountain AMS operated less than 90% of February 2025, which is a contravention of the Air Monitoring Directive (AMD) (2016, as amended), Chapter 6, Clause DQ 4-C. This incident was reported to Alberta Environment and Protected Areas (AB EPA) on February 21, 2025 (reference number 437930). During the weekly preparation of the time-integrated precipitation sample from Stony Mountain AMS, it was noted that the sample volume did not compare well with the precipitation data from the gauge that is also located at the Stony Mountain AMS, or with data from other precipitation gauges in the WBEA network. It was determined that the precipitation gauge at Stony Mountain was over-reporting precipitation volumes from approximately February 10-February 21 due to an overfilled collection bucket and snow-covered shield. The issue was resolved by emptying the bucket; the standard maintenance that is completed monthly. Data for the period was invalidated, resulting in an operational time of approximately 70% for February.
Fort Hills	Total Hydrocarbon (THC), Non-methane Hydrocarbon (NMHC) & Methan (CH_4)	The total hydrocarbon (THC)/non-methane hydrocarbon (NMHC)/methane (CH_4) analyzer at the Fort Hills AMS operated less than 90% of February 2025, which is a contravention of the Air Monitoring Directive (AMD) (2016, as amended), Chapter 6, Clause DQ 4-C. This incident was reported to Alberta Environment and Protected Areas (AB EPA) on March 11, 2025 (reference number 438501). During the daily system check on February 18, the baseline data showed evidence of an instrument issue, therefore, a calibration was performed, which subsequently failed. As a result, the analyzer, zero air generator, and pump were replaced. However, the replacement analyzer also malfunctioned, and additional maintenance was required. Ultimately, on February 25, the analyzer was replaced again, its performance was verified, and normal operation was restored. During the data validation process, 147 hours were invalidated, resulting in an operational time of 82.6%.
Wapasu	Wind Speed (WS) & Wind Direction (WD)	The wind speed and wind direction (WS/WD) sensor at the Wapasu AMS operated less than 90% of February 2025, which is a contravention of the Air Monitoring Directive (AMD) (2016, as amended), Chapter 6, Clause DQ 4-C. This incident was reported to Alberta Environment and Protected Areas (AB EPA) on March 11, 2025 (reference number 438503). At the end of February, the WS/WD sensor froze due to weather conditions, resulting in intermittent flatlining. In some instances, normal operation returned once weather conditions changed. However, in another instance the sensor required removal and thawing. Data from these events were invalidated, resulting in an operational time of 82.6% for January.

Mannix	Total Hydrocarbon (THC), Non-methane Hydrocarbon (NMHC) & Methan (CH_4)	The total hydrocarbon (THC)/non-methane hydrocarbon (NMHC)/methane (CH_4) analyzer at the Mannix AMS operated less than 90% of January and February 2025, which is a contravention of the Air Monitoring Directive (AMD) (2016, as amended), Chapter 6, Clause DQ 4-C. This incident was reported to Alberta Environment and Protected Areas (AB EPA) on March 21, 2025 (reference number 438805). In addition, this letter supersedes the written follow-up for incident 437900, previously submitted on February 27, 2025. During the daily system check on January 23, it was noted that the daily span of the THC/NMHC/CH4 analyzer did not meet criteria. As a result, the analyzer was calibrated, the gas cylinder was replaced, and the span was adjusted that day, which temporarily resolved the issue. During the daily system check on February 6, it was noted that the automated daily span had not occurred. An investigation was completed which identified the internal analyzer pump as the cause. On February 13, the internal pump was replaced, performance was verified, and normal operation of the analyzer was restored. During the data validation process, 133 hours of data, resulting in an 82% operational time, and 183 hours of data, resulting in a 72% operational time, were invalidated for the month of January and February, respectively
Mildred Lake	Total Hydrocarbon (THC), Non-methane Hydrocarbon (NMHC) & Methan (CH_4)	The total hydrocarbon (THC)/non-methane hydrocarbon (NMHC)/methane (CH_4) analyzer at the Mildred Lake AMS operated for less than 90% of February 2025, which is a contravention of the Air Monitoring Directive (AMD) (2016, as amended), Chapter 6, Clause DQ 4-C. This incident was reported to Alberta Environment and Protected Areas (AB EPA) on March 24, 2025 (reference number 438873). Throughout February 2025, two issues impacted the operation of the THC/NMHC/CH4 analyzer, leading to 110 hours of invalid data, resulting in an 83% operational time for the month: • On February 1, excessive baseline noise was observed in the data. Maintenance was performed, which included analyzer and gas calibration cylinder replacement and an overnight column bake-out followed by calibration and performance verification. Normal operation was restored on February 4. Data during this period was invalidated, resulting in a total of 76 hours. • From February 23 to 25, intermittent power failures at the station disrupted the normal operation of the analyzer. Power was restored on February 25, and normal operation resumed. Data during this incident was invalidated, resulting in a total of 34 hours.
Patricia McInnes	Total Hydrocarbon (THC), Non-methane Hydrocarbon (NMHC) & Methan (CH_4)	The total hydrocarbon (THC)/non-methane hydrocarbon (NMHC)/methane (CH_4) analyzer at the Patricia McInnes AMS operated less than 90% of February 2025, which is a contravention of the Air Monitoring Directive (AMD) (2016, as amended), Chapter 6, Clause DQ 4-C. This incident was reported to Alberta Environment and Protected Areas (AB EPA) on March 26, 2025 (reference number 438975). Throughout the month of February, excessive baseline noise was consistently observed in the data. In response, the WBEA investigated and carried out several troubleshooting and maintenance procedures, including multiple adjustments to the span and zero, and replacement of the daily zero span valve, support gas cylinder, and actuator. Despite these efforts, the issue remained unresolved. On February 25 the analyzer was replaced, its performance was verified, and normal operation resumed. During the data validation process, a total of 174 hours of data were invalidated, resulting in an operational time of 74%

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.

Station 1, Bertha Ganter – Fort McKay

The NH_3 analyzer required additional time to stabilize to levels below ambient concentrations following the automated daily spans and routine monthly multipoint calibrations. Additional time is required for stabilization after exposure to high concentrations of NH_3 gas, and this is an inherent behavior in the NH_3 analyzer operations due to the properties of the NH_3 gas. Data for 1-2 hours following the daily spans have been reported as invalid for a total of 29 hours this month.

Analyzer failure due to sample pump failure of the SO_3 analyzer on February 3 and 4 resulted in 31 hours of invalid data. Subsequent maintenance to replace the sample pump on February 4 resulted in additional 2 hours of downtime.

An internal audit on February 5 and 6 interrupted the normal operations of all air quality analyzers for 1 to 6 hours.

Maintenance to verify daily QA response for the CO and CO_2 analyzer on February 6 resulted in 1 hour of downtime.

Maintenance to replace the sample pump for preventative maintenance of the CO analyzer on February 18 resulted in 4 hours of downtime.

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

The surface leaf wetness sensor operated out of range on February 27 resulting in 1 hour of invalid data.

Station 2, Mildred Lake

Unstable operation due to excessive baseline noise of the THC/NMHC/CH_4 analyzer on February 1 to 3 resulted in 57 hours of invalid data. Subsequent maintenance to replace calibration gas cylinder and left for stabilization overnight resulted in additional 19 hours of downtime.

Maintenance to replace calibration gas cylinder and stabilization overnight for the SO_2 analyzer on February 1 to 3 resulted in 57 hours of downtime.

Station power failure from February 23 to 25 interrupted the normal operations of all gaseous analyzers for 34 hours.

Intermittent flatlines in the output signal of the wind sensor on February 23 to 25 resulted in 38 hours of invalid data.

Station 3, Lower Camp – Meteorology

Failure to record data of the relative humidity and temperature sensor at 20-meter elevation on February 27 and 28 resulted in 3 hours of invalid data.

Flatline in the output signal of the wind sensor at 20-meter elevation on February 23 resulted in 7 hours of invalid data.

Flatline in the output signal of the wind sensor at 45-meter elevation on February 23 resulted in 5 hours of invalid data.

Flatline in the output signal of the wind sensor at 163-meter elevation on February 27 resulted in 2 hours of invalid data.

Station 4, Buffalo Viewpoint

Unstable operation due to AMD noncompliance of the THC/NMHC/CH_4 analyzer on February 3 and 5 resulted in 49 hours of invalid data.

Maintenance to verify daily QA response for the THC/NMHC/CH_4 analyzer on February 22 resulted in 1 hours of downtime.

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

Flatlines in the output signal of the wind sensor from February 23 to 26 resulted in 43 hours of invalid data.

Station 5, Mannix

Maintenance to verify daily QA response of all gaseous analyzer on February 1 resulted in 1-2 hours of downtime.

Cleaning of the manifold on February 12 interrupted the normal operations of all gaseous analyzers for 1 hour.

Unstable operation due to excessive baseline drift and failing internal pump of the THC/NMHC/CH_4 analyzer on February 5 to 12 resulted in 177 hours of invalid data. Subsequent maintenance on February 13 to replace internal pump of the analyzer resulted in additional 6 hours of downtime.

Flatline in the output signal of the wind sensor at 20-meter elevation on February 27 resulted in 1 hour of invalid data.

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

Flatline in the output signal of the wind sensor at 75-meter elevation on February 27 resulted in 4 hours 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 29 hours this month.

Unstable operation due to excessive baseline noise of the THC/NMHC/CH_4 analyzer from February 1 to 3 resulted in 47 hours of invalid data. Subsequent maintenance to replace daily z/s valve on February 4 resulted in additional 5 hours of downtime.

Unstable operation due to excessive baseline noise of the THC/NMHC/CH_4 analyzer from February 17 to 18 resulted in 17 hours of invalid data. Subsequent maintenance to replace the analyzer on February 18 resulted in additional 4 hours of downtime.

Cleaning of the manifold on February 19 interrupted the normal operations of all gaseous analyzers for 1 hour.

Unstable operation due to excessive baseline noise of the THC/NMHC/CH_4 analyzer from February 21 to 22 resulted in 26 hours of invalid data. Subsequent maintenance to replace support gas cylinder and recalibrate the analyzer on February 22 resulted in additional 2 hours of downtime.

Unstable operation due to excessive baseline noise of the THC/NMHC/CH_4 analyzer from February 22 to 23 resulted in 8 hours of invalid data. Subsequent maintenance to replace support gas cylinder, analyzer and required overnight stabilization on February 25 resulted in additional 45 hours of downtime.

Station 7, Athabasca Valley

Note: The TRS daily zero/span check on February 28 was not conducted due to an issue with the calibrator. This issue has since been resolved, and normal operations have resumed.

Unstable operation due to depleting support gas cylinder of the THC/NMHC/CH_4 analyzer on February 7 to 8 resulted in 35 hours of invalid data. Subsequent maintenance to replace the support gas cylinder on February 8 resulted in additional 1 hour of downtime.

Station 8, Fort Chipewyan

Analyzer failure due to inoperable converter of the TRS analyzer on February 1 to 3 resulted in 61 hours of invalid data.

Unstable operation due to AMD noncompliance of the TRS analyzer on February 6 to 21 resulted in 362 hours of invalid data.

Unstable operation due to flatline in the analyzer output signal of the CO_2 analyzer on February 16 resulted in 1 hour of invalid data.

Unstable operation due to flatline in the analyzer output signal of the NO_X/NO/NO_2 analyzer on February 16 resulted in 1 hour of invalid data.

Station 9, Barge Landing

Flatlines in the output signal of the wind sensor at 10-meter elevation throughout the month resulted in 3 hours of invalid data.

Flatline in the output signal of the wind sensor at 20-meter elevation on February 2 resulted in 1 hour of invalid data.

Note: Relative humidity and temperatures can affect the performance of the SO_X scrubbers in the H_2S and TRS analyzer. During these events, the sulfur concentrations take a longer period to stabilize during the daily span checks. Therefore, the H_2S/TRS span were outside of the 10% AMD criteria on February 13 to 14.

Station 11, Lower Camp

Maintenance to replace support gas cylinder of the THC/NMHC/CH_4 analyzer on February 27 resulted in 2 hours of downtime.

Flatlines in the output signal of the wind sensor on February 12, 15 and 28 resulted in 3 hours of invalid data.

Station 13, Fort McKay South

Note: The TRS daily span check fell outside of the AMD criteria on February 28 due to an extended stabilization period of the newly installed calibration gas cylinder. Daily span checks have since stabilized.

Flatlines in the output signal due to frozen wind sensor throughout the month resulted in 10 hours of invalid data.

Station 14, Anzac

Cleaning of the manifold on February 10 interrupted the normal operations of NO_X/NO/NO_2, O_3, and TRS analyzers for 1 hour.

Maintenance to verify daily QA response of the TRS analyzer on February 19 resulted in 19 hours of downtime.

The daily span check for the TRS analyzer was outside the 10% AMD criteria throughout the month due to extreme cold weather conditions.

Station 17, Wapasu

Unstable operation due to excessive baseline drift of the THC analyzer on February 1-3 resulted in 8 hours of invalid data.

Flatlines in the output signal of the wind sensor on February 23 to 28 resulted in 100 hours of invalid data. Subsequent maintenance to de-ice the sensor on February 26 resulted in additional 2 hours of downtime.

Note: The H_2S span was out of limits from February 27 to 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 noise of the CO analyzer on February 4 resulted in 2 hours of invalid data.

Unstable operation due to excessive baseline noise of the THC/NMHC/CH_4 analyzer on February 4 resulted in 2 hours of invalid data.

Maintenance to verify daily QA response of the CO_2 analyzer on February 20 resulted in 2 hours of downtime.

Station operator activities on February 25 interrupted the normal operations of the THC/NMHC/CH_4 analyzer for 1 hour.

A flatline in the output signal of the wind sensor at the 10-meter elevation on February 23 and 24 resulted in 19 hours of invalid data.

Unstable operation due to excessive signal noise of the precipitation collector sensor on February 9 through 18 resulted in 234 hours of invalid data.

Station 19, Firebag

Unstable operation due to flatline in the output signal of THC/NMHC/CH_4 analyzer on February 7 resulted in 8 hours of downtime. Subsequent maintenance to reboot the analyzer on February 7 resulted in additional 1 hour of downtime.

Flatlines in the output signal of the wind sensor on February 23, 25 and 27 resulted in 57 hours of invalid data.

Station 20, MacKay River

Maintenance to verify daily QA response of the H_2S analyzer on February 1 resulted in 1 hour of downtime.

Maintenance to verify daily QA response of the THC analyzer on February 3 resulted in 1 hour of downtime.

Maintenance to verify daily QA response of the SO_2 analyzer on February 8 resulted in 1 hour of downtime.

Cleaning of the manifold on February 5 interrupted the normal operations all gaseous analyzers for 1 hour.

Maintenance to recalibrate and adjust the span of the THC analyzer on February 6 resulted in 3 hours of downtime.

Flatlines in the output signal of the wind sensor frozen throughout the month resulted in 8 hours of invalid data.

Station 21, Conklin

Maintenance to conduct a field maintenance of the O_3 analyzer on February 11 and 12 resulted in 20 hours of downtime.
Maintenance to verify daily QA response of the SO_2 analyzer on February 12 resulted in 1 hour of downtime.

A flatline in the output signal of the wind sensor on February 14 and 22 resulted in 3 hours of invalid data.

Station 22, Janvier

Maintenance to replace the support gas cylinder for THC/NMHC/CH_4 analyzer on February 24 resulted in 3 hours of downtime.

Cleaning of the manifold on February 28 interrupted the normal operations of O_3, SO_2, THC/NMHC/CH_4 and TRS analyzers for 1 hour.

A flatline in the output signal of the wind sensor at the 10-meter elevation on February 14 resulted in 1 hour of invalid data.

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

Station 23, Fort Hills

Unstable operation of the THC/NMHC/CH4 analyzer due to excessive baseline noise and AMD noncompliance between February 17 and 26 resulted in 85 hours of invalid data. Maintenance activities, including analyzer replacements, internal pump replacement, and recalibration, addressed several issues during this period, leading to an additional 30 hours of downtime.

Failure to record data of all parameters on February 17 and 25 resulted in 2 hours of invalid data.

Cleaning of the manifold on February 20 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 31 hours of invalid data.

Station 25, Waskōw ohci Pimâtisiwin

Maintenance due to station operator activities interrupted the normal operations of the H_2S analyzer on February 11 to 12 resulted in 24 hours of downtime.

An internal audit on February 20 interrupted the normal operations of all air quality analyzers for 2 hours.

Intermittent flatlines in the output signal of the wind sensor throughout the month resulted in 34 hours of invalid data.

Maintenance due to station operator activities interrupted the normal operations of the wind sensor on February 12 resulted in 1 hour of downtime.

Station 27, Jackfish 2/3

Maintenance to verify daily QA response of the H_2S analyzer on February 14 and 19 resulted in 4 hours of downtime.

The daily span check for the H_2S analyzer was outside the 10% AMD criteria throughout the month due to extreme cold weather conditions. Remote QA checks were completed multiple times to verify the response of the analyzer.

Station 29, Surmont 2

Maintenance to reset logger/modem on February 5 interrupted the normal operations of all air quality analyzers for 1 hour.

Maintenance to replace the zero-air generator on February 5 and 6 interrupted the normal operations of the THC analyzer for 19 hours.

A flatline in the output signal of the wind sensor on February 14 resulted in 11 hours of invalid data.

Station 30, Ells River

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

Station 31, Blackrod

Maintenance to reset logger/modem on February 4 interrupted the normal operations of all parameters for 1 hour.

The station power failure on February 10 and 11 interrupted the normal operations of all air quality analyzers for 16 hours.

A flatline in the output signal of the wind sensor on February 2 through 4 resulted in 46 hours of invalid data.

Station operator activities on February 20 interrupted the normal operations of the wind sensor for 1 hour.

Station 33, Monday Creek

Maintenance to reset logger/modem on February 18 interrupted the normal operations of NO_X/NO/NO_2 and SO_2 analyzers for 1 hour.

A flatline in the output signal of the wind sensor on February 14 and 16 resulted in 4 hours of invalid data.

Station 506, Jackfish 1

A flatline in the output signal of the wind sensor on February 16, 23, and 24 resulted in 19 hours of invalid data.

Station 508, Kirby North

Maintenance to replace calibration gas cylinder on February 12 interrupted the normal operations of the SO_2 and THC analyzers for 14 hours.

A flatline in the output signal of the wind sensor on February 24 resulted in 1 hour of invalid data.

Station 512, Hangingstone Expansion

A flatline in the output signal of the wind sensor on February 23 and 25 resulted in 40 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.

Asad Hidayat, Data Technician
Wood Buffalo Environmental Association
T: (780) 215-6000
E: ahidayat@wbea.org

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

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



Dianne McIsaac
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R01_2502

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION
MONTHLY AIR MONITORING SUMMARY

Created: March 28, 2025 10:00:00

APPROVAL NUMBERS	REPORT DATE	
	MONTH	YEAR
289664-00-00	2	2025
241311-00-00		
20809-02-00		
149968-01-00		
237382-00-00		
48522-01-00		
240008-00-00		
48263-01-00		
224816-00-00		
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364232-00-00		
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231302-00-00		
246984-01-00		
153125-01-00		

CONTINUOUS AMBIENT MONITORING

PARAMETER	STN. NO.	% TIME OPERATIONAL	30-MIN AVERAGE		ONE-HOUR AVERAGE		24-HOUR AVERAGE	
			MAXIMUM CONCENTRATION	NO. READINGS > REGULATION	MAXIMUM CONCENTRATION	NO. READINGS > REGULATION	MAXIMUM CONCENTRATION	NO. READINGS > REGULATION
SO2(ppb)	1	95	-	-	30	0	4.8	0
SO2(ppb)	2	92	-	-	69.4	0	7.3	0
SO2(ppb)	4	100	-	-	62.1	0	8.2	0
SO2(ppb)	5	100	-	-	52.5	0	20.1	0
SO2(ppb)	6	100	-	-	19.2	0	4.5	0
SO2(ppb)	7	100	-	-	13.2	0	3.0	0
SO2(ppb)	8	100	-	-	3.6	0	1.3	0
SO2(ppb)	9	100	-	-	18.8	0	2.4	0
SO2(ppb)	11	100	-	-	27.9	0	2.6	0
SO2(ppb)	13	100	-	-	27.8	0	5.6	0
SO2(ppb)	14	100	-	-	10.2	0	2.4	0
SO2(ppb)	17	100	-	-	13.5	0	6.1	0
SO2(ppb)	18	100	-	-	4.5	0	1.6	0
SO2(ppb)	19	100	-	-	15.2	0	5.8	0
SO2(ppb)	20	100	-	-	35.7	0	6.0	0
SO2(ppb)	21	100	-	-	4.6	0	1.5	0
SO2(ppb)	22	100	-	-	4.7	0	1.6	0
SO2(ppb)	23	100	-	-	23.5	0	4.0	0
SO2(ppb)	25	100	-	-	24.9	0	4.1	0
SO2(ppb)	27	100	-	-	8.9	0	2.6	0
SO2(ppb)	29	100	-	-	7.1	0	1.8	0
SO2(ppb)	30	100	-	-	33.5	0	7.6	0
SO2(ppb)	31	97	-	-	3.0	0	0.9	0
SO2(ppb)	33	100	-	-	14.0	0	2.7	0
SO2(ppb)	506	100	-	-	38.4	0	4.4	0
SO2(ppb)	508	98	-	-	16.8	0	4.1	0
SO2(ppb)	512	100	-	-	112.4	0	24.4	0
H2S(ppb)	1	100	-	-	1.7	0	0.6	0
H2S(ppb)	2	95	-	-	6.7	0	1.5	0
H2S(ppb)	4	100	-	-	7.0	0	1.5	0
H2S(ppb)	5	100	-	-	9.7	0	1.8	0
H2S(ppb)	11	100	-	-	2.4	0	1.0	0
H2S(ppb)	17	100	-	-	1.6	0	0.3	0
H2S(ppb)	19	100	-	-	1.5	0	0.4	0
H2S(ppb)	20	100	-	-	1.6	0	0.5	0
H2S(ppb)	25	96	-	-	1.5	0	0.5	0
H2S(ppb)	27	99	-	-	0.4	0	0.2	0
H2S(ppb)	29	100	-	-	0.6	0	0.3	0
H2S(ppb)	31	97	-	-	0.7	0	0.3	0
H2S(ppb)	33	100	-	-	1.1	0	0.5	0
H2S(ppb)	506	100	-	-	0.6	0	0.3	0
H2S(ppb)	508	100	-	-	1.2	0	0.2	0
H2S(ppb)	512	100	-	-	3.3	0	1.2	0
TRS(ppb)	1	100	1.8	0	1.7	0	0.8	0
TRS(ppb)	6	100	1.7	0	1.7	0	0.8	0
TRS(ppb)	7	100	2.3	0	2.1	0	1.0	0
TRS(ppb)	8	37	0.2	0	0.2	0	0.2	0
TRS(ppb)	9	100	1.7	0	1.6	0	0.8	0
TRS(ppb)	13	100	2.4	0	2.2	0	1.0	0
TRS(ppb)	14	99	1.5	0	1.4	0	0.4	0
TRS(ppb)	18	100	0.7	0	0.6	0	0.5	0
TRS(ppb)	21	100	0.5	0	0.4	0	0.3	0
TRS(ppb)	22	100	0.7	0	0.7	0	0.4	0
TRS(ppb)	23	100	3.1	0	2.4	0	0.9	0
TRS(ppb)	30	100	2.5	0	2.2	0	0.8	0
THC(ppm)	1	100	-	-	4.9	-	2.9	-
THC(ppm)	2	83	-	-	5.9	-	3.1	-
THC(ppm)	4	92	-	-	3.7	-	2.9	-
THC(ppm)	5	72	-	-	4.3	-	2.5	-
THC(ppm)	6	74	-	-	2.8	-	2.3	-
THC(ppm)	7	95	-	-	3.0	-	2.4	-
THC(ppm)	9	100	-	-	5.0	-	2.7	-

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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	100	-	0	3.7	-	2.8	-
THC(ppm)	13	100	-	0	4.4	-	3.0	-
THC(ppm)	14	100	-	0	2.5	-	2.2	-
THC(ppm)	17	99	-	0	2.9	-	2.4	-
THC(ppm)	18	100	-	0	2.2	-	2.2	-
THC(ppm)	19	99	-	0	2.8	-	2.4	-
THC(ppm)	20	99	-	0	3.6	-	2.8	-
THC(ppm)	21	100	-	0	2.4	-	2.2	-
THC(ppm)	22	99	-	0	2.3	-	2.1	-
THC(ppm)	23	83	-	0	5.6	-	2.8	-
THC(ppm)	29	97	-	0	2.8	-	2.5	-
THC(ppm)	30	100	-	0	6.7	-	3.0	-
THC(ppm)	508	98	-	0	3.2	-	2.4	-
O3(ppb)	1	100	-	0	34.5	0	30.8	-
O3(ppb)	4	100	-	0	37.1	0	34.2	-
O3(ppb)	6	100	-	0	40.1	0	34.7	-
O3(ppb)	7	100	-	0	38.4	0	32.6	-
O3(ppb)	8	100	-	0	41.5	0	37.5	-
O3(ppb)	13	100	-	0	34.0	0	30.2	-
O3(ppb)	14	100	-	0	44.3	0	35.8	-
O3(ppb)	17	100	-	0	41.3	0	37.6	-
O3(ppb)	18	100	-	0	46.2	0	43.2	-
O3(ppb)	21	97	-	0	50.6	0	44.7	-
O3(ppb)	22	100	-	0	51.4	0	39.2	-
NO2(ppb)	1	100	-	0	45.0	0	24.7	-
NO2(ppb)	4	100	-	0	37.2	0	26.5	-
NO2(ppb)	6	100	-	0	34.6	0	22.3	-
NO2(ppb)	7	100	-	0	39.5	0	21.8	-
NO2(ppb)	8	100	-	0	8.9	0	3.9	-
NO2(ppb)	9	100	-	0	50.1	0	31.9	-
NO2(ppb)	13	100	-	0	39.5	0	23.7	-
NO2(ppb)	14	100	-	0	73.4	0	17.0	-
NO2(ppb)	17	100	-	0	35.9	0	12.7	-
NO2(ppb)	18	100	-	0	6.7	0	2.8	-
NO2(ppb)	19	100	-	0	42.0	0	16.6	-
NO2(ppb)	20	100	-	0	33.0	0	16.4	-
NO2(ppb)	21	100	-	0	22.6	0	7.0	-
NO2(ppb)	22	100	-	0	16.8	0	6.4	-
NO2(ppb)	23	100	-	0	49.5	0	29.7	-
NO2(ppb)	27	100	-	0	26.6	0	11.4	-
NO2(ppb)	29	100	-	0	21.9	0	10.1	-
NO2(ppb)	30	100	-	0	45.5	0	21.7	-
NO2(ppb)	31	97	-	0	32.5	0	12.7	-
NO2(ppb)	33	100	-	0	28.2	0	15.2	-
NO2(ppb)	506	100	-	0	15.9	0	7.8	-
NO2(ppb)	508	100	-	0	25.2	0	9.7	-
NO2(ppb)	512	100	-	0	33.0	0	13.2	-
CO(ppm)	1	99	-	0	0.6	0	0.2	-
CO(ppm)	7	100	-	0	0.5	0	0.3	-
CO(ppm)	8	100	-	0	0.2	0	0.2	-
CO(ppm)	18	100	-	0	0.2	0	0.2	-
CO2(ppm)	1	100	-	0	475.0	-	458.2	-
CO2(ppm)	8	100	-	0	444.2	-	438.8	-
CO2(ppm)	18	100	-	0	460.0	-	451.7	-
NH3(ppb)	1	95	-	0	0.0	0	0.0	-
NH3(ppb)	6	96	-	0	0.0	0	0.0	-
PM2.5(ug/m3)	1	100	0	0	58.2	0	11.7	0
PM2.5(ug/m3)	4	100	0	0	36.6	0	11.7	0
PM2.5(ug/m3)	6	100	0	0	33.1	0	9.2	0
PM2.5(ug/m3)	7	100	0	0	25.2	0	12.2	0
PM2.5(ug/m3)	8	100	0	0	22.4	0	8.0	0
PM2.5(ug/m3)	9	100	0	0	56.6	0	16.2	0

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION
MONTHLY AIR MONITORING SUMMARY

Created: March 28, 2025 10:00:00

APPROVAL NUMBERS	REPORT DATE MONTH	REPORT DATE YEAR
289664-00-00	2	2025
241311-00-00		
20809-02-00		
149968-01-00		
237382-00-00		
48522-01-00		
240008-00-00		
48263-01-00		
224816-00-00		
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246984-01-00		
153125-01-00		

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	-	-	78.6	0	11	0
PM2.5(ug/m3)	14	100	-	-	126.9	1	11.2	0
PM2.5(ug/m3)	17	100	-	-	19.5	0	6.8	0
PM2.5(ug/m3)	18	100	-	-	11.4	0	5.3	0
PM2.5(ug/m3)	21	100	-	-	33.9	0	7.5	0
PM2.5(ug/m3)	22	100	-	-	48.3	0	8.9	0
PM2.5(ug/m3)	23	100	-	-	52	0	10.1	0
PM2.5(ug/m3)	29	100	-	-	12.7	0	7.6	0
PM2.5(ug/m3)	30	100	-	-	87.6	2	11.1	0
WS(km/h)	1	98	-	-	-	-	-	-
WS(km/h)	2	94	-	-	-	-	-	-
WS(km/h)	4	94	-	-	-	-	-	-
WS(km/h)	5	100	-	-	-	-	-	-
WS(km/h)	6	100	-	-	-	-	-	-
WS(km/h)	7	100	-	-	-	-	-	-
WS(km/h)	8	100	-	-	-	-	-	-
WS(km/h)	9	100	-	-	-	-	-	-
WS(km/h)	11	100	-	-	-	-	-	-
WS(km/h)	13	99	-	-	-	-	-	-
WS(km/h)	14	100	-	-	-	-	-	-
WS(km/h)	17	85	-	-	-	-	-	-
WS(km/h)	18	100	-	-	-	-	-	-
WS(km/h)	19	92	-	-	-	-	-	-
WS(km/h)	20	96	-	-	-	-	-	-
WS(km/h)	21	100	-	-	-	-	-	-
WS(km/h)	22	100	-	-	-	-	-	-
WS(km/h)	23	95	-	-	-	-	-	-
WS(km/h)	25	95	-	-	-	-	-	-
WS(km/h)	27	100	-	-	-	-	-	-
WS(km/h)	29	98	-	-	-	-	-	-
WS(km/h)	30	98	-	-	-	-	-	-
WS(km/h)	31	93	-	-	-	-	-	-
WS(km/h)	33	99	-	-	-	-	-	-
WS(km/h)	506	97	-	-	-	-	-	-
WS(km/h)	508	100	-	-	-	-	-	-
WS(km/h)	512	94	-	-	-	-	-	-

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
FEBRUARY 2025

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

March 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT McKAY - BERTHA GANTER (AMS01)
FEBRUARY 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	608	29	64	94.79	-	-	29.9	0	4.8	0
H2S(ppb) Average	636	34	36	99.7	-	-	1.7	0	0.6	0
TRS(ppb) Average	636	34	36	99.7	1.8	0	1.7	0	0.8	0
THC(ppm) Average	637	33	35	99.7	-	-	4.9	-	2.9	-
NMHC(ppm) Average	637	33	35	99.7	-	-	1.301	-	0.395	-
CH4(ppm) Average	637	33	35	99.7	-	-	4.2	-	2.6	-
O3 (ppb) Average	639	32	33	99.85	-	-	34.5	0	30.8	-
NO2 (ppb) Average	635	34	37	99.55	-	-	45	0	24.7	-
NO (ppb) Average	635	34	37	99.55	-	-	121.3	-	24.4	-
NOX (ppb) Average	635	34	37	99.55	-	-	162.2	-	45.7	-
NH3 (ppb) Average	599	38	73	94.79	-	-	0	0	0	-
PM2.5 (ug/m3) Average	669	3	3	100	-	-	58.2	0	11.7	0
CO(ppm) Average	633	32	39	98.96	-	-	0.6	0	0.2	0
CO2(ppm) Average	637	33	35	99.7	-	-	475	0	458.2	0
Temperature 2 m (C) Average	672	0	0	100	-	-	0.2	-	-5.3	-
Temperature 10 m (C) Average	672	0	0	100	-	-	0	-	-5.5	-
Relative Humidity (%) Average	672	0	0	100	-	-	96.5	-	88.4	-
Wind Speed 10 m (km/h) Average	658	0	14	97.92	-	-	21	-	18	-
Wind Direction 10 m (deg) Average	658	0	14	97.92	-	-	-	-	-	-
Precipitation (mm) Total	672	0	0	100	-	-	1	-	5.2	-
Leaf Wetness (% of range) Average	671	0	1	99.85	-	-	20.2	-	18	-
Global Solar Radiation (W/m2) Average	672	0	0	100	-	-	405.5	-	102.2	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BERTHA GANTER FORT McKAY (AMS01)
FEBRUARY 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	608	0.8	2.3	-	0	0	0	0.2	0.5	1.7	29.9
H2S (ppb) Average	636	0.29	0.3	-	0	0.1	0.1	0.2	0.4	0.6	1.7
TRS (ppb) Average	636	0.57	0.2	-	0.3	0.4	0.4	0.5	0.6	0.8	1.7
THC (ppm) Average	637	2.25	0.3	-	1.9	2	2	2.1	2.3	2.6	4.9
NMHC(ppm) Average	637	0.083	0.159	-	0	0	0	0	0.1	0.3	1.301
CH4(ppm) Average	637	2.17	0.2	-	1.9	2	2	2.1	2.2	2.4	
O3 (ppb) Average	639	16.76	9.9	-	0	1.4	8.3	18.1	24.3	29.8	34.5
NO2 (ppb) Average	635	14.09	9.1	-	0.1	3.5	6.1	12.8	21.2	27.5	45
NO (ppb) Average	635	5.84	11	-	0	0	0.1	1.3	7	18	121.3
NOX (ppb) Average	635	19.94	17.5	-	0.1	4.1	7.4	15.4	26.9	41.5	162.2
NH3 (ppb) Average	599	0	0	-	0	0	0	0	0	0	0
PM2.5 (ug/m3) Average	669	6.55	4.6	-	1.4	3.1	3.8	5	8.3	11.5	58.2
CO(ppm) Average	633	0.21	0.1	-	0.1	0.2	0.2	0.2	0.2	0.3	0.6
CO2(ppm) Average	637	448.51	7.3	-	436.3	441.2	443.1	446.9	452	459.3	475
Temperature 2 m (C) Average	672	-18.33	8.5	-	-37.6	-29.4	-24.2	-19.5	-10.8	-7	0.2
Temperature 10 m (C) Average	672	-18.28	8.2	-	-37	-28.8	-24.3	-19.4	-11.1	-7	0
Relative Humidity (%) Average	672	70.14	10.2	-	39.3	57.8	65	70.5	76	82.4	96.5
Wind Speed 10 m (km/h) Average	658	6.9	5	-	0	2	3	6	10	14	21
Wind Direction 10 m (deg) Average	658	-	-	-	-	-	-	-	-	-	-
Precipitation (mm) Total	672	-	-	18.96	-	-	-	-	-	-	-
Leaf Wetness (% of range) Average	671	5.39	5.1	-	2.1	2.6	2.8	3.3	3.8	16.8	20.2
Global Solar Radiation (W/m2) Average	672	59.3	102.5	-	0	0	0	0	74.8	229.8	405.5

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

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
SO2	05 Feb 2025 14:00	05 Feb 2025 15:00	2	Maintenance - WBEA internal audit
H2S	06 Feb 2025 12:00	06 Feb 2025 13:00	2	Maintenance - WBEA internal audit
TRS	05 Feb 2025 13:00	05 Feb 2025 14:00	2	Maintenance - WBEA internal audit
THC/NMHC/CH4	05 Feb 2025 15:00	05 Feb 2025 16:00	2	Maintenance - WBEA internal audit
O3	05 Feb 2025 16:00	05 Feb 2025 16:00	1	Maintenance - WBEA internal audit
NO2	05 Feb 2025 13:00	05 Feb 2025 15:00	3	Maintenance - WBEA internal audit
NH3	06 Feb 2025 12:00	06 Feb 2025 17:00	6	Maintenance - WBEA internal audit
CO	06 Feb 2025 13:00	06 Feb 2025 14:00	2	Maintenance - WBEA internal audit
CO2	06 Feb 2025 15:00	06 Feb 2025 15:00	1	Maintenance - WBEA internal audit
SO2	03 Feb 2025 06:00	04 Feb 2025 12:00	31	Analyzer Failure - sample pump failure
SO2	04 Feb 2025 13:00	04 Feb 2025 14:00	2	Maintenance - sample pump replaced
CO	06 Feb 2025 10:00	06 Feb 2025 10:00	1	Maintenance - reinitiated daily QA check
CO	18 Feb 2025 12:00	18 Feb 2025 15:00	4	Maintenance - sample pump replaced
CO2	06 Feb 2025 10:00	06 Feb 2025 10:00	1	Maintenance - reinitiated daily QA check
NH3	01 Feb 2025 07:00	28 Feb 2025 04:00	29	Stabilization after daily QA check
Wind Speed, Wind Direction	03 Feb 2025 02:00	26 Feb 2025 07:00	14	Flat line in sensor output signal - Sensor frozen
Surface Leaf Wetness	27 Feb 2025 13:00	27 Feb 2025 13:00	1	Sensor operated out of range

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Fort McKay - Bertha Ganter - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 29.9 ppb on Feb 18 16:00 Maximum Daily Average: 4.8 ppb on Feb 18

Minimum Value: 0.0 ppb on Feb 1 01:00 Minimum Daily Average: 0.0 ppb on Feb 2
Maximum Diurnal Average: 2.7 ppb at hour 16 Minimum Diurnal Average: 0.2 ppb at hour 1
Monthly Average: 0.80 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.2 Q_3 = 0.5 P_{90} = 1.7 P_{99} = 10.9

Hours in Service:	672
Hours of Data:	608
Hours of Missing Data:	64
Hours of Calibration:	29
Percent Operational Time:	94.8

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-Feb	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
2-Feb	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
3-Feb	0.0	0.0	0.0	0.0	Z	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	0.0
4-Feb	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	M	M	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	--	0.1
5-Feb	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	M	M	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
6-Feb	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.1	0.0	0.2
7-Feb	0.1	0.1	Z	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2
8-Feb	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.3	0.6	0.7	0.4	0.3	0.2	0.3	0.2	0.1	0.1	0.5	0.2	0.0	0.0	0.0	0.0	0.2	0.7
9-Feb	0.0	0.0	0.0	0.0	Z	0.2	0.1	0.1	0.0	0.0	0.1	0.0	0.0	1.0	4.0	5.1	3.0	0.6	0.6	0.5	0.4	0.1	0.1	0.1	0.7	5.1
10-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.8	2.8	3.8	3.4	1.5	0.9	0.6	0.3	0.7	3.8
11-Feb	Z	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.1	0.5	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
12-Feb	0.0	Z	0.0	0.0	0.2	0.4	0.2	0.2	0.4	0.4	0.3	2.3	3.1	2.9	1.8	1.8	1.7	2.7	2.5	2.0	1.4	0.8	0.4	0.3	1.1	3.1
13-Feb	0.2	0.2	Z	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
14-Feb	0.0	0.0	0.0	Z	0.1	0.1	0.0	0.0	0.1	0.3	0.2	0.3	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.2	0.4
15-Feb	0.4	0.4	0.7	0.6	Z	0.8	0.5	0.6	0.8	0.8	0.7	0.6	0.5	0.4	0.4	0.3	0.4	0.8	0.6	0.3	0.2	0.1	0.2	0.1	0.5	0.8
16-Feb	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.2	0.3	1.1	0.6	1.6	13.7	10.9	8.3	4.7	1.8	0.7	0.5	0.3	0.2	0.2	1.2	2.0	13.7
17-Feb	Z	0.6	0.4	0.5	0.4	0.4	0.3	0.3	1.0	3.0	4.6	5.1	4.8	5.4	5.0	1.6	0.6	0.4	0.4	0.2	0.2	0.2	0.3	0.2	1.6	5.4
18-Feb	0.7	Z	0.5	0.4	0.2	0.2	0.3	0.2	0.4	0.5	1.9	14.9	7.2	10.7	18.9	29.9	14.2	1.4	2.1	1.8	1.1	1.1	0.9	0.9	4.8	29.9
19-Feb	0.9	1.2	Z	1.3	0.9	0.6	0.5	0.5	0.7	0.8	6.0	9.3	3.3	2.0	0.9	2.9	5.8	4.3	1.0	0.3	1.5	5.2	3.7	0.8	2.4	9.3
20-Feb	0.6	0.6	3.3	Z	6.7	0.9	0.5	0.5	0.5	0.4	0.5	0.7	0.6	0.5	0.5	0.6	1.1	2.1	1.4	0.8	0.6	0.2	0.2	0.2	1.0	6.7
21-Feb	0.2	0.2	0.1	0.2	Z	0.3	0.4	0.4	0.4	0.9	1.3	0.7	0.5	0.4	0.5	0.4	0.3	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.4	1.3
22-Feb	0.2	0.2	0.3	0.3	0.3	Z	0.5	0.4	0.4	0.4	0.5	2.4	5.4	4.2	2.7	2.1	1.2	0.8	0.5	0.4	0.3	0.3	0.3	0.4	1.1	5.4
23-Feb	Z	0.6	0.6	0.7	0.7	0.6	0.4	0.5	0.4	0.5	0.6	0.6	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.4	0.7
24-Feb	0.1	Z	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.7	1.5	2.6	4.3	1.3	1.1	0.8	0.6	0.5	0.5	1.8	2.7	1.6	1.0	4.3
25-Feb	0.6	0.4	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.2	0.3	0.1	0.1	0.2	0.2	0.2	0.4	0.2	0.6
26-Feb	0.2	0.4	0.4	Z	0.5	0.4	0.3	0.4	0.4	0.2	0.2	0.4	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.5
27-Feb	0.0	0.0	0.0	0.1	Z	0.2	0.2	0.2	0.7	0.8	0.4	0.5	0.7	0.7	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.8
28-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.1	0.1	0.3	1.2	2.1	9.7	14.1	9.7	6.8	3.6	1.0	0.5	0.3	0.2	0.1	2.2	14.1
	0.2	0.2	0.3	0.2	0.5	0.3	0.2	0.2	0.3	0.4	0.8	1.6	1.2	1.9	2.5	2.7	1.7	1.0	0.7	0.5	0.3	0.4	0.4	0.3	Diurnal Average	
	0.9	1.2	3.3	1.3	6.7	0.9	0.5	0.6	1.0	3.0	6.0	14.9	7.2	13.7	18.9	29.9	14.2	6.8	3.8	3.4	1.5	5.2	3.7	1.6	Diurnal Maximum	

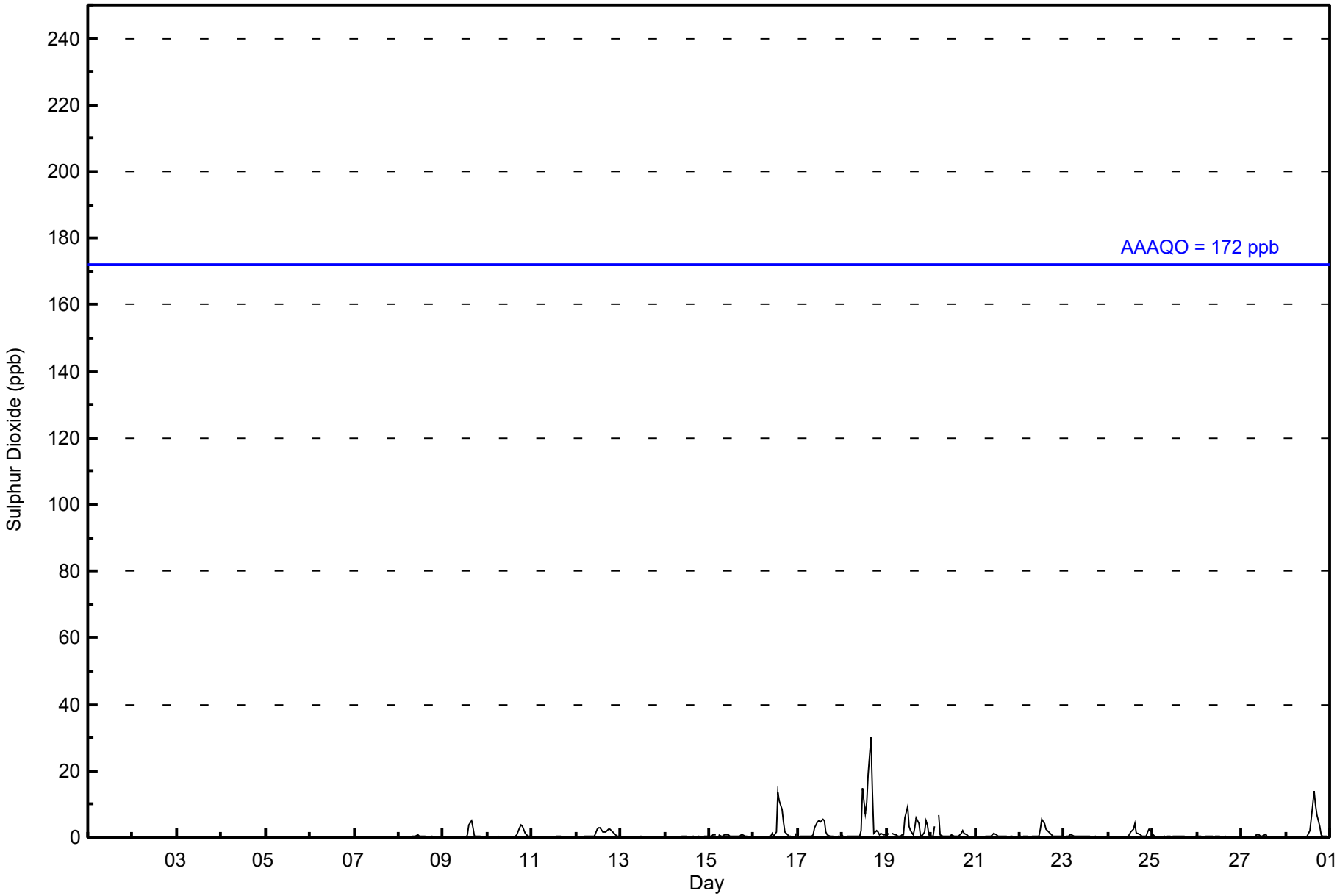
Z - zerospan C - Calibration M - Maintenance AF - Analyzer Failure
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Fort McKay - Bertha Ganter - February 2025



Sulphur Dioxide (SO_2) - ppb

Fort McKay - Bertha Ganter - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	600	98.68	98.68
11 - 20	7	1.15	99.84
21 - 60	1	0.16	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: 608

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Fort McKay - Bertha Ganter - February 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	105	60	25	7	9	10	15	60	120	45	20	17	14	23	23	34	587
11 - 20	0	0	0	0	0	0	0	4	3	0	0	0	0	0	0	0	7
21 - 60	0	0	0	0	0	0	0	0	1	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	105	60	25	7	9	10	15	64	124	45	20	17	14	23	23	34	595

Total Number of Valid Hours: 595

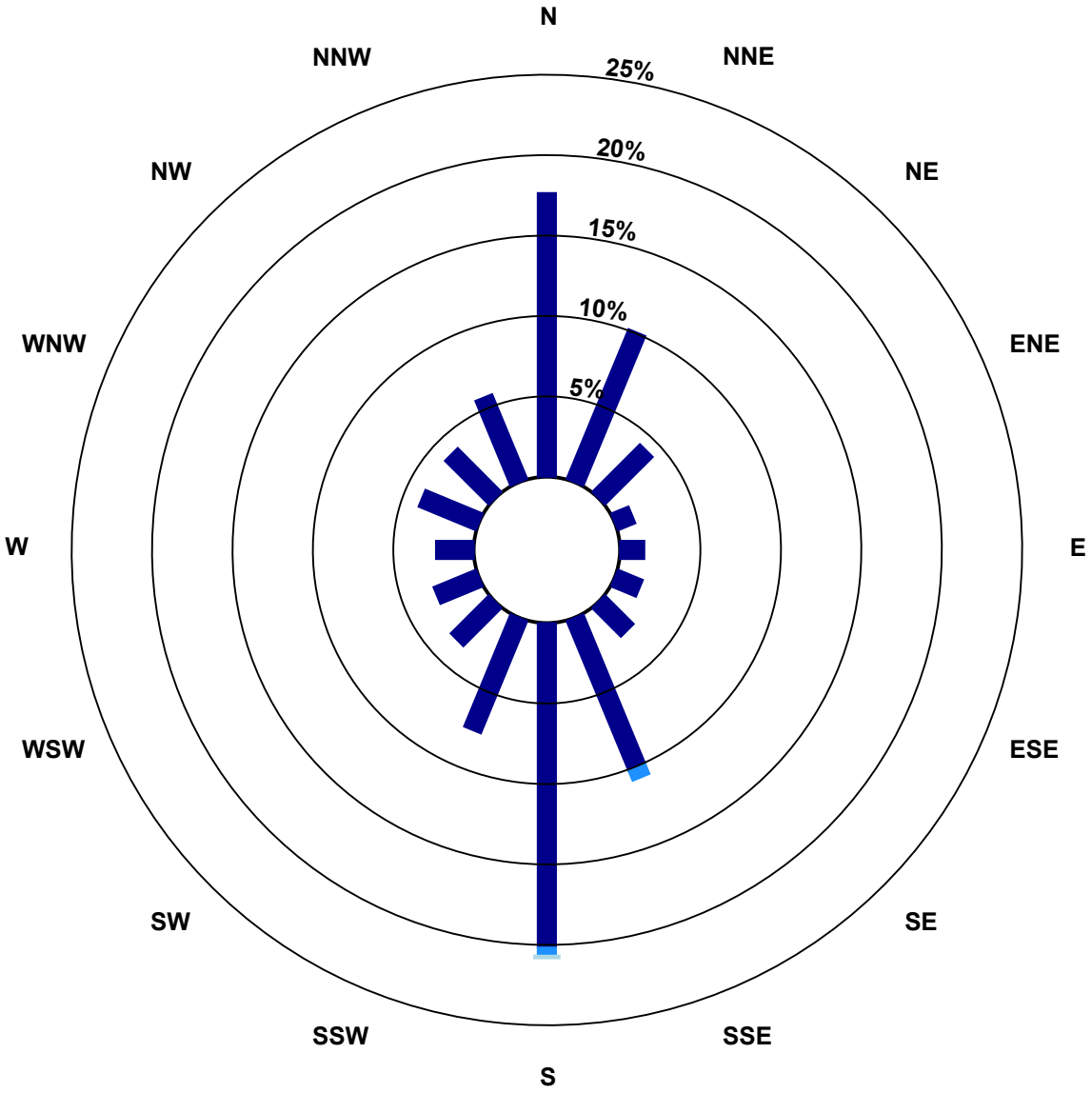
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Sulphur Dioxide (SO_2) - ppb

Fort McKay - Bertha Ganter



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

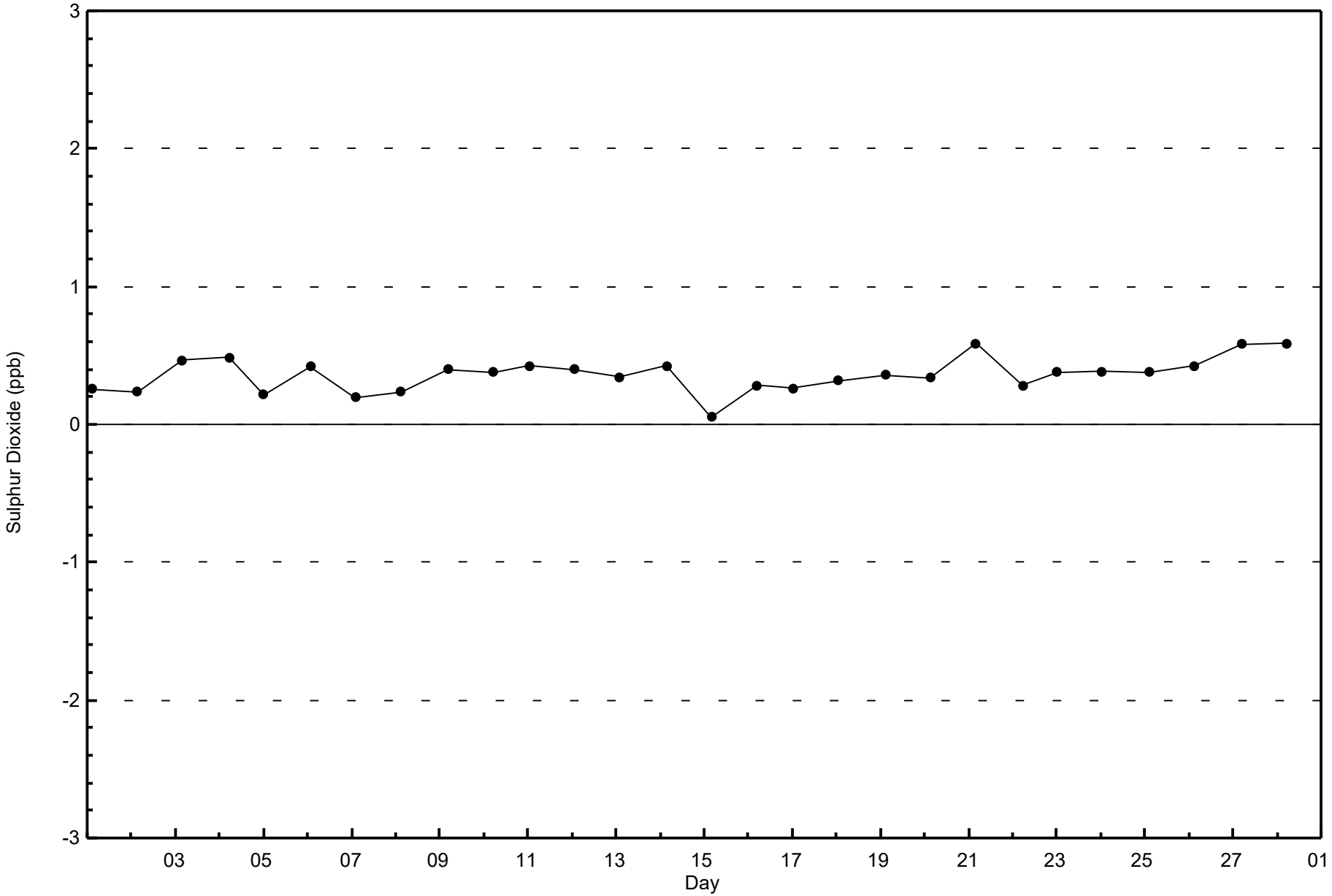
Total Number of Valid Hours: 595

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Fort McKay - Bertha Ganter - February 2025

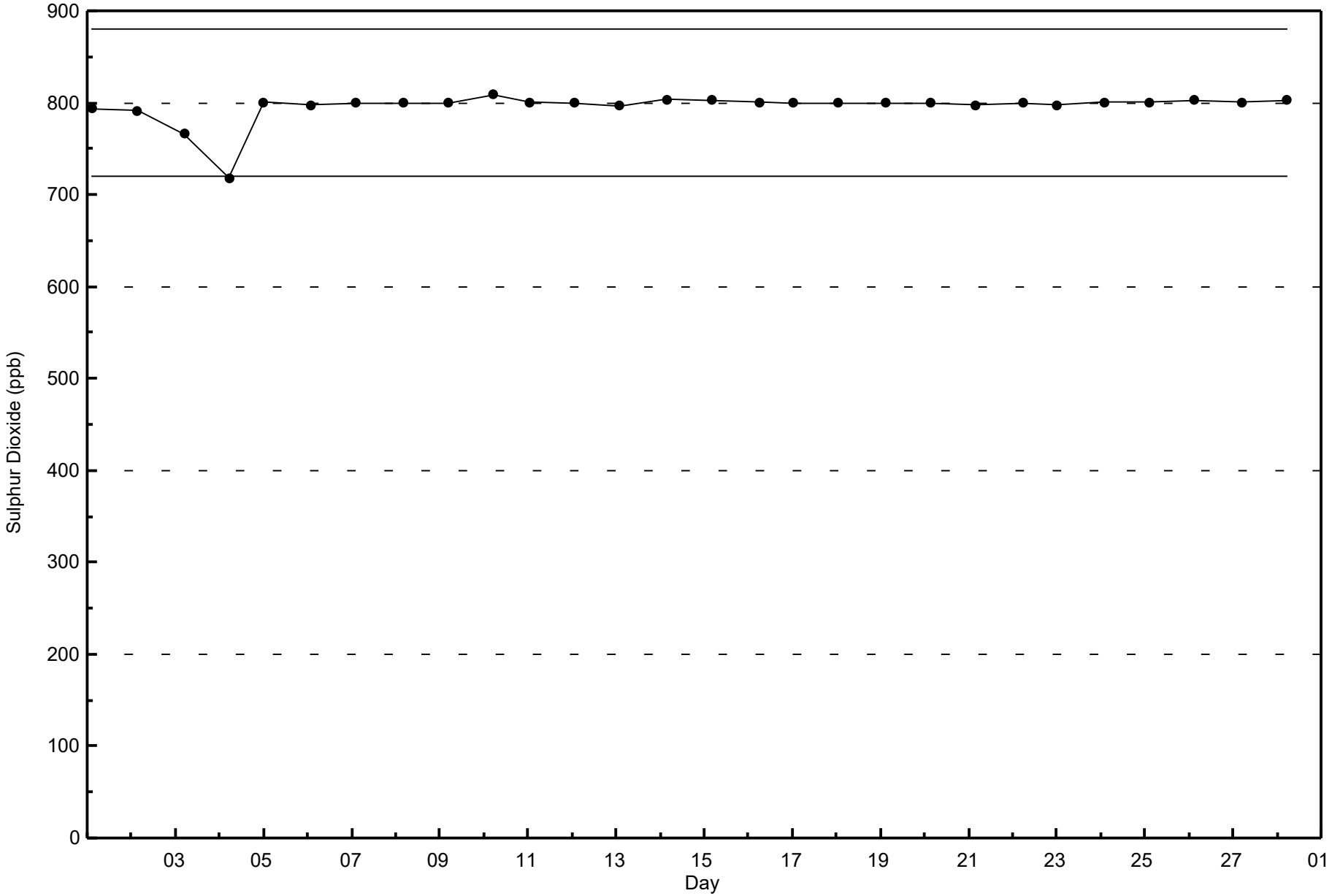


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Fort McKay - Bertha Ganter - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Fort McKay - Bertha Ganter - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.7 ppb on Feb 21 11:00 Maximum Daily Average: 0.6 ppb on Feb 15

Minimum Value: 0.0 ppb on Feb 17 17:00
Maximum Diurnal Average: 0.4 ppb at hour 9
Monthly Average: 0.29 ppb

Minimum Daily Average: 0.1 ppb on Feb 5
Minimum Diurnal Average: 0.2 ppb at hour 16
Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.1 Median = 0.2 Q_3 = 0.4 P_{90} = 0.6 P_{99} = 1.2

Hours in Service:	672
Hours of Data:	636
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-Feb	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
2-Feb	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	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2
3-Feb	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.3	0.4	0.3	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.2	0.4
4-Feb	Z	0.2	0.2	0.2	0.3	0.4	0.3	0.4	0.4	0.4	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.2	0.4
5-Feb	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	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
6-Feb	0.1	0.1	Z	0.1	0.1	0.1	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	0.1	0.1	0.1	0.1
7-Feb	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2
8-Feb	0.1	0.2	0.3	0.3	Z	0.6	0.6	0.6	0.7	0.7	0.8	0.7	0.7	0.6	0.5	0.3	0.4	0.6	1.1	0.5	0.1	0.2	0.1	0.1	0.5	1.1
9-Feb	0.1	0.1	0.1	0.1	0.1	Z	0.3	0.3	0.3	0.3	0.4	0.3	0.1	0.1	0.2	0.3	0.4	0.2	0.3	0.3	0.4	0.3	0.4	0.4	0.3	0.4
10-Feb	Z	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.6	0.5	0.5	0.5	0.4	0.3	0.3	0.6
11-Feb	0.4	Z	0.7	0.6	0.6	0.5	0.4	0.5	0.6	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.4	0.7
12-Feb	0.2	0.2	Z	0.3	0.5	0.6	0.6	0.6	0.7	0.7	0.6	0.6	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.4	0.7
13-Feb	0.2	0.2	0.3	Z	0.3	0.3	0.3	0.3	0.5	0.6	0.5	0.6	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.6
14-Feb	0.3	0.3	0.3	0.3	Z	0.4	0.3	0.3	0.3	0.5	0.4	0.4	0.1	0.2	0.2	0.1	0.2	0.3	0.4	0.4	0.3	0.3	0.4	0.4	0.3	0.5
15-Feb	0.4	0.6	0.9	1.0	1.1	Z	1.0	1.1	1.3	1.4	1.2	0.9	0.6	0.3	0.1	0.1	0.1	0.3	0.3	0.3	0.1	0.1	0.1	0.2	0.6	1.4
16-Feb	Z	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.4	0.5	0.5	0.4	0.4	0.6	0.4	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.6
17-Feb	0.4	Z	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.3	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.4
18-Feb	0.2	0.2	Z	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.5	0.5	0.4	0.2	0.2	0.5	0.6	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.6
19-Feb	0.2	0.3	0.3	Z	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.2	0.2	0.1	0.2	0.4	0.4	0.3	0.2	0.3	0.3	0.3	0.2	0.3	0.5
20-Feb	0.1	0.1	0.2	0.6	Z	0.2	0.2	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.4	0.6	0.5	0.6	0.6	0.6	0.6	0.7	0.3	0.7
21-Feb	0.8	0.7	0.7	0.9	0.8	Z	0.8	0.8	0.8	1.5	1.7	0.6	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.5	1.7
22-Feb	Z	0.3	0.3	0.2	0.2	0.4	0.5	0.4	0.5	0.5	0.7	0.9	0.9	0.9	0.9	0.6	0.3	0.3	0.3	0.3	0.5	0.5	0.4	0.5	0.5	0.9
23-Feb	0.8	Z	1.0	1.2	1.2	1.3	1.2	1.2	1.2	0.4	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	0.5	1.3
24-Feb	0.1	0.2	Z	0.3	0.4	0.3	0.2	0.2	0.3	0.4	0.4	0.4	1.1	1.5	0.7	0.4	0.6	0.5	0.5	0.4	0.5	0.6	0.4	0.4	0.5	1.5
25-Feb	0.2	0.2	0.2	Z	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.4	0.3	0.3	0.4	0.3	0.4	0.5	0.2	0.5
26-Feb	0.4	0.4	0.7	0.6	Z	0.7	0.7	0.9	0.7	0.3	0.3	0.3	C	C	C	C	C	C	0.2	0.1	0.2	0.2	0.2	0.2	--	0.9
27-Feb	0.2	0.2	0.1	0.1	0.1	Z	0.1	0.2	0.5	0.6	0.3	0.2	0.2	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.6
28-Feb	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.2	0.3	0.5	0.3	0.3	0.2	0.1	0.1	0.3	0.2	0.5
	0.2	0.2	0.3	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	Diurnal Average	
	0.8	0.7	1.0	1.2	1.2	1.3	1.2	1.2	1.3	1.5	1.7	0.9	1.1	1.5	0.9	0.6	0.6	0.6	1.1	0.6	0.6	0.6	0.6	0.7	Diurnal Maximum	

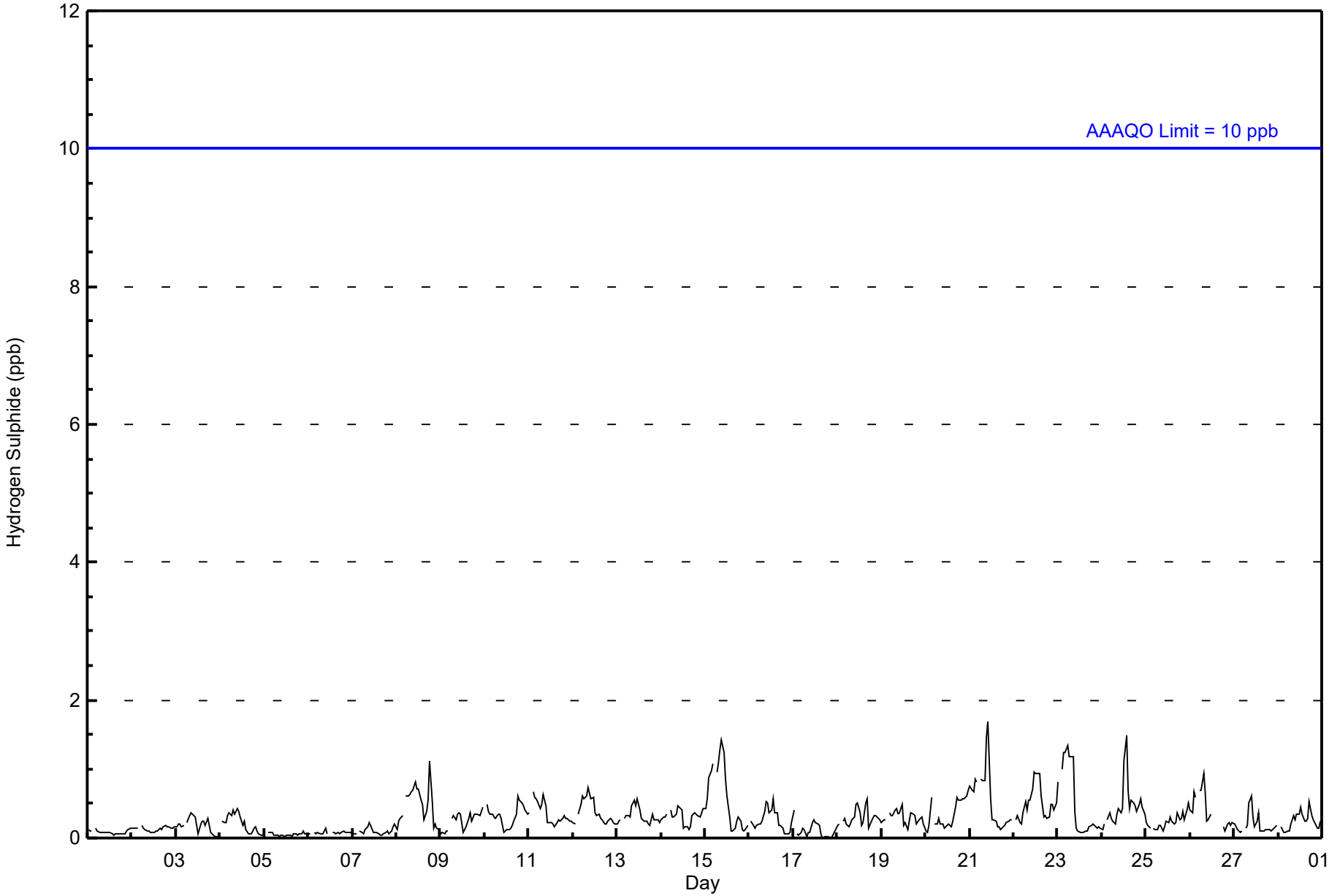
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Fort McKay - Bertha Ganter - February 2025



Hydrogen Sulphide (H_2S) - ppb

Fort McKay - Bertha Ganter - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	636	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: 636

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Fort McKay - Bertha Ganter - February 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	102	60	21	7	7	9	16	70	143	51	21	20	17	23	21	34	622
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	102	60	21	7	7	9	16	70	143	51	21	20	17	23	21	34	622

Total Number of Valid Hours: 622

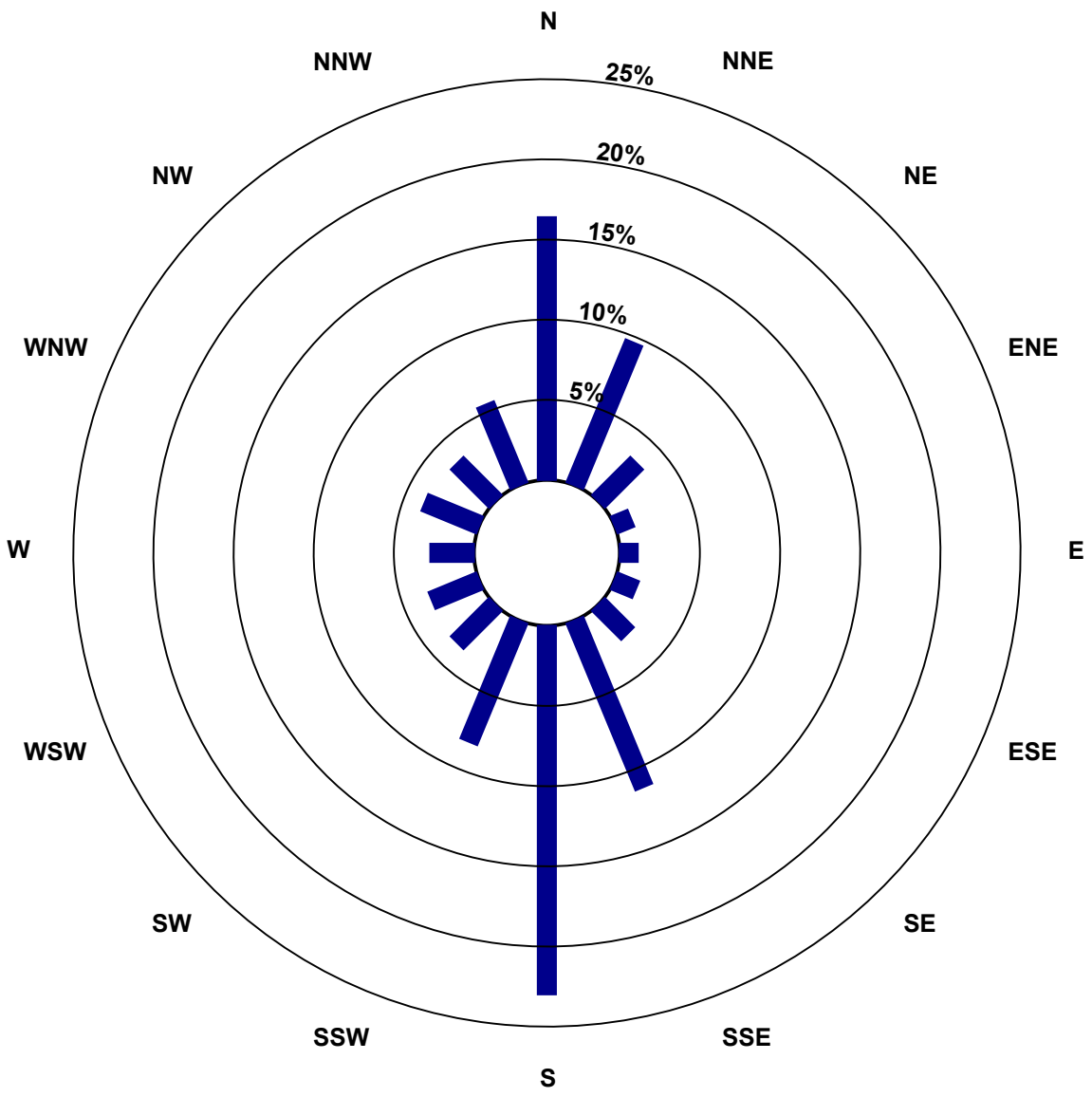
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Hydrogen Sulphide (H_2S) - ppb

Fort McKay - Bertha Ganter



Classes (ppb)

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

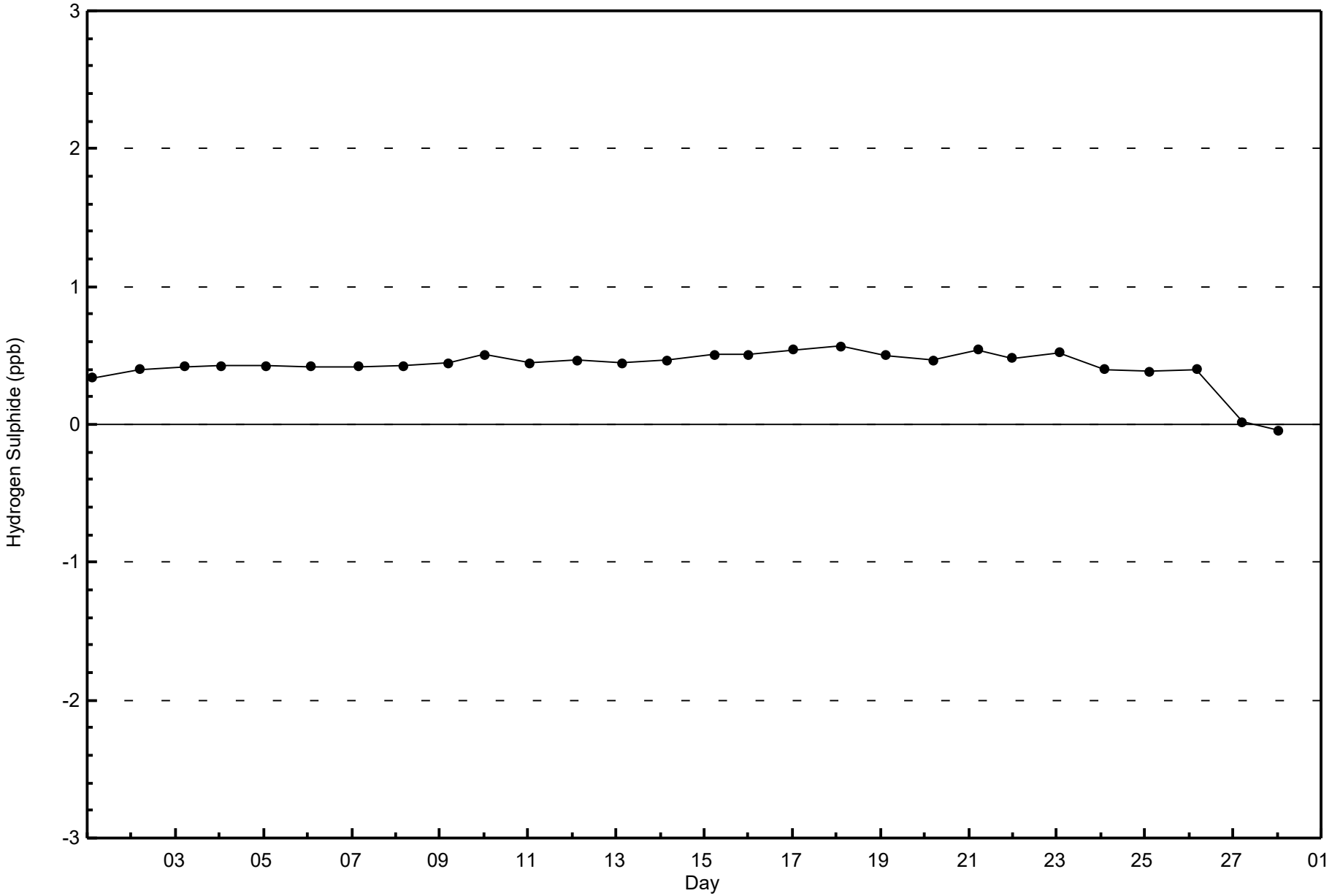
Total Number of Valid Hours: 622

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Fort McKay - Bertha Ganter - February 2025

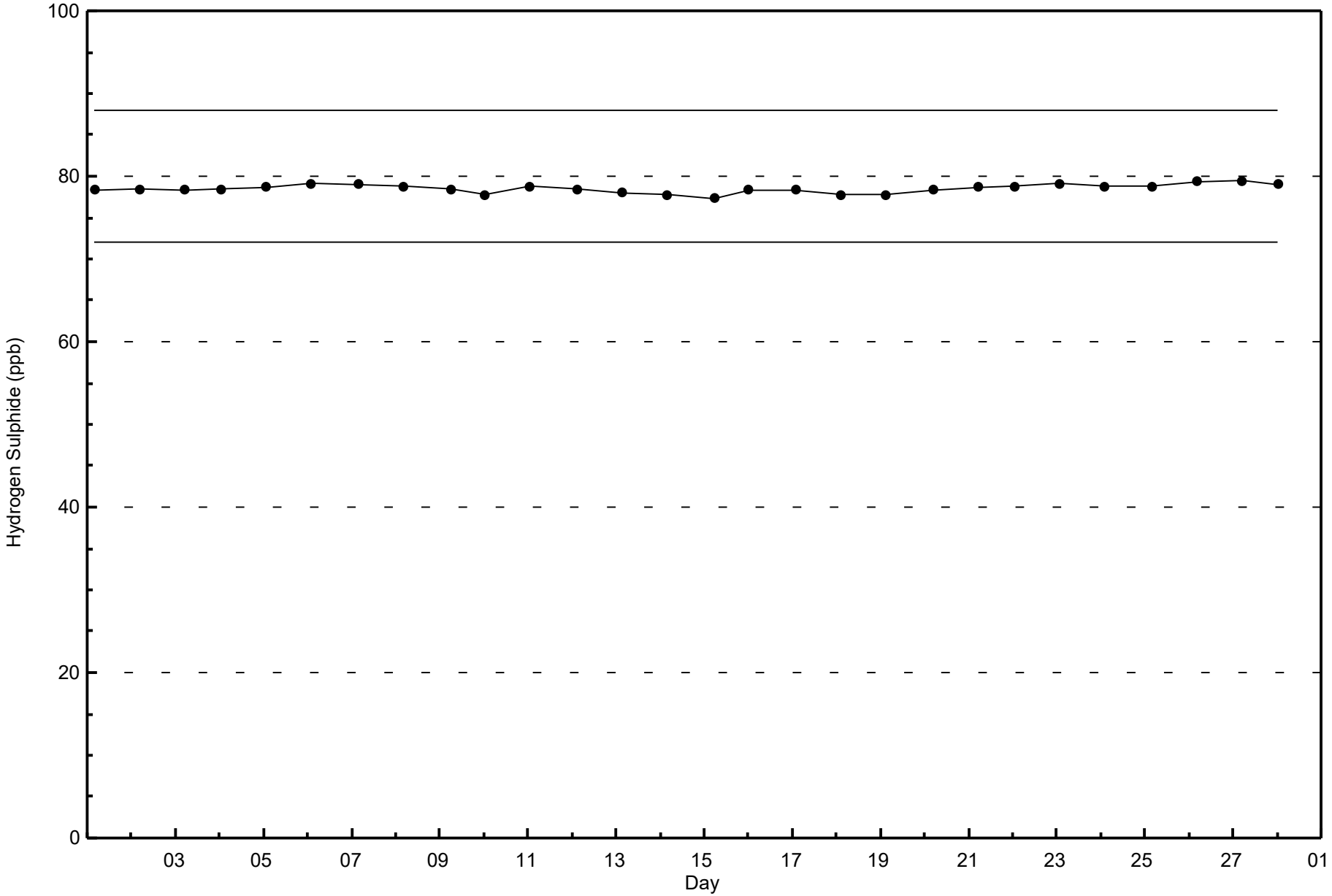


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Fort McKay - Bertha Ganter - February 2025



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort McKay - Bertha Ganter - February 2025

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

Maximum Value: 1.8 ppb on Feb 23 04:00

Maximum Daily Average: 0.8 ppb on Feb 23

Minimum Value: 0.3 ppb on Feb 1 11:00

Minimum Daily Average: 0.4 ppb on Feb 1

Maximum Diurnal Average: 0.7 ppb at hour 9

Minimum Diurnal Average: 0.5 ppb at hour 16

Monthly Average: 0.57 ppb

Percentiles: P_1 = 0.4 P_{10} = 0.4 Q_1 = 0.4 Median = 0.5 Q_3 = 0.6 P_{90} = 0.8 P_{99} = 1.5

Periods in Service:	1344
Periods of Valid Data:	1272
Periods of Invalid Data:	72
Periods of Calibration:	67
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-Feb	0.4	0.4	0.4	Z	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	0.5	0.4	0.5
	0.4	0.4	0.4	SP	0.4	0.4	0.4	0.3	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4		
2-Feb	0.5	0.5	0.4	0.4	Z	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5
	0.4	0.4	0.5	0.5	SP	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4		
3-Feb	0.4	0.4	0.5	0.4	0.5	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.4	0.5	0.5	0.4	0.4	0.3	0.4	0.4	0.4	0.5
	0.4	0.4	0.4	0.4	0.4	SP	0.4	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	0.4	0.4	0.4	0.4		
4-Feb	Z	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.5	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.7
	SP	0.5	0.5	0.5	0.6	0.6	0.5	0.7	0.5	0.7	0.6	0.6	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4		
5-Feb	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	M	M	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.4	0.5
	0.4	SP	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	M	M	M	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4		
6-Feb	0.4	0.4	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	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.5
	0.4	0.4	SP	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4		
7-Feb	0.4	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.5	0.5	0.4	0.6
	0.4	0.4	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	0.5	0.6		
8-Feb	0.5	0.6	0.6	0.6	Z	0.9	0.9	0.9	0.9	0.9	1.0	0.9	0.9	0.8	0.8	0.6	0.6	0.7	0.9	0.8	0.4	0.5	0.4	0.4	0.7	1.1
	0.5	0.6	0.6	0.7	SP	0.9	0.9	0.9	0.9	0.9	1.1	0.9	0.9	0.8	0.7	0.6	0.6	0.8	1.1	0.5	0.5	0.5	0.5	0.4		
9-Feb	0.4	0.4	0.4	0.4	0.4	Z	0.5	0.5	0.5	0.5	0.5	0.7	0.4	0.4	0.5	0.5	0.7	0.6	0.6	0.7	0.7	0.6	0.7	0.7	0.5	0.7
	0.4	0.4	0.4	0.4	0.4	SP	0.5	0.5	0.5	0.5	0.6	0.5	0.4	0.4	0.5	0.7	0.6	0.6	0.6	0.7	0.6	0.6	0.7	0.7		
10-Feb	Z	0.8	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.9	0.8	0.7	0.6	0.6	0.6	0.6	0.9
	SP	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.4	0.5	0.4	0.4	0.5	0.5	0.5	0.7	0.8	0.8	0.6	0.6	0.6	0.6		
11-Feb	0.6	Z	0.9	0.8	0.8	0.7	0.7	0.7	0.8	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.6	0.9
	0.6	SP	0.8	0.8	0.7	0.7	0.6	0.7	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.6	0.5	0.5		
12-Feb	0.5	0.5	Z	0.6	0.7	0.8	0.8	0.8	0.9	0.9	0.7	0.8	0.7	0.6	0.7	0.6	0.6	0.5	0.6	0.5	0.6	0.6	0.5	0.5	0.6	0.9
	0.5	0.5	SP	0.6	0.7	0.8	0.7	0.8	0.9	0.8	0.7	0.9	0.6	0.6	0.6	0.6	0.5	0.6	0.5	0.6	0.6	0.5	0.5	0.5		
13-Feb	0.5	0.5	0.5	Z	0.6	0.6	0.6	0.6	0.7	0.9	0.6	0.7	0.7	0.6	0.5	0.6	0.6	0.5	0.5	0.6	0.6	0.5	0.5	0.6	0.6	0.9
	0.5	0.6	0.6	SP	0.6	0.7	0.6	0.6	0.8	0.7	0.7	0.7	0.6	0.6	0.5	0.6	0.5	0.5	0.5	0.6	0.5	0.5	0.6	0.5		
14-Feb	0.5	0.5	0.5	0.5	Z	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.4	0.4	0.5	0.4	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.6	0.5	0.6
	0.5	0.5	0.5	0.5	SP	0.6	0.5	0.5	0.5	0.6	0.6	0.5	0.4	0.5	0.4	0.4	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.6		
15-Feb	0.6	0.6	0.9	0.9	1.1	Z	1.0	1.1	1.3	1.4	1.3	1.0	0.8	0.6	0.4	0.4	0.4	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.8	1.4
	0.6	0.7	1.0	1.1	1.2	SP	1.0	1.1	1.3	1.4	1.2	0.9	0.7	0.5	0.5	0.4	0.5	0.6	0.6	0.5	0.4	0.5	0.5	0.6		

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort McKay - Bertha Ganter - February 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-Feb	Z	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.7	1.1	0.7	0.7	0.6	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.6	1.1
	SP	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.7	0.7	0.6	0.8	0.7	0.8	0.7	0.6	0.6	0.5	0.4	0.5	0.5	0.4	0.7		
17-Feb	0.9	Z	0.5	0.4	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.7	0.6	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.9
	0.7	SP	0.4	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.7	0.6	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5		
18-Feb	0.5	0.6	Z	0.6	0.6	0.6	0.5	0.5	0.6	0.6	0.8	0.7	0.9	0.5	0.5	0.7	0.7	0.5	0.5	0.6	0.6	0.7	0.6	0.6	0.6	1.1
	0.6	0.5	SP	0.5	0.6	0.5	0.5	0.6	0.6	0.6	0.7	1.0	0.5	0.5	0.6	0.9	1.1	0.4	0.6	0.6	0.6	0.6	0.6	0.5		
19-Feb	0.5	0.6	0.6	Z	0.7	0.5	0.5	0.6	0.6	0.6	0.5	0.9	0.5	0.6	0.4	0.4	0.6	0.6	0.5	0.5	0.6	0.5	0.6	0.5	0.6	0.9
	0.5	0.6	0.6	SP	0.6	0.6	0.6	0.6	0.7	0.5	0.8	0.7	0.4	0.5	0.4	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5		
20-Feb	0.4	0.4	0.4	0.9	Z	0.5	0.4	0.5	0.5	0.6	0.4	0.4	0.5	0.4	0.4	0.5	0.7	0.9	0.8	0.8	0.8	0.8	0.8	0.9	0.6	0.9
	0.4	0.4	0.5	0.8	SP	0.4	0.6	0.6	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.6	0.8	0.9	0.8	0.8	0.8	0.8	0.9	0.8		
21-Feb	0.8	0.8	0.7	0.9	0.9	Z	0.9	0.9	0.8	1.1	1.2	0.7	0.5	0.5	0.6	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.7	1.3
	0.8	0.8	0.8	0.9	1.0	SP	0.9	0.8	0.9	1.3	1.3	0.5	0.5	0.6	0.5	0.4	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.5		
22-Feb	Z	0.5	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.8	1.1	1.1	1.1	1.1	1.0	0.6	0.6	0.6	0.6	0.7	0.8	0.7	0.7	0.7	1.1
	SP	0.5	0.7	0.5	0.5	0.6	0.6	0.5	0.8	0.6	0.8	1.1	1.1	1.1	1.1	0.7	0.6	0.6	0.6	0.7	0.8	0.7	0.7	0.7		
23-Feb	0.8	Z	1.4	1.3	1.6	1.6	1.5	1.5	1.5	0.8	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.8	1.8
	1.1	SP	1.2	1.8	1.5	1.7	1.5	1.5	1.5	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	0.4		
24-Feb	0.4	0.4	Z	0.5	0.6	0.5	0.5	0.4	0.5	0.6	0.6	0.6	1.1	1.7	1.2	0.7	0.9	0.8	0.8	0.7	0.7	1.0	0.7	0.7	0.7	1.7
	0.4	0.5	SP	0.6	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.7	1.5	1.7	0.8	0.8	0.9	0.8	0.8	0.7	0.8	0.8	0.8	0.7		
25-Feb	0.6	0.5	0.5	Z	0.5	0.5	0.5	0.5	0.6	0.5	0.4	0.5	0.6	0.6	0.6	0.5	0.5	0.6	0.6	0.5	0.6	0.6	0.6	0.7	0.5	0.7
	0.5	0.5	0.5	SP	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.6	0.5	0.5	0.7	0.6	0.6	0.7		
26-Feb	0.7	0.6	1.0	0.9	Z	1.0	1.0	1.0	0.9	0.4	0.4	0.5	0.4	C	C	C	C	C	0.5	0.4	0.5	0.5	0.5	0.5	--	1.0
	0.6	0.6	0.9	0.9	SP	1.0	1.0	1.0	0.6	0.4	0.4	0.4	C	C	C	C	C	C	0.4	0.4	0.5	0.5	0.4	0.5		
27-Feb	0.4	0.5	0.4	0.5	0.5	Z	0.6	0.5	0.7	1.1	0.7	0.5	0.6	0.9	0.5	0.4	0.4	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	1.1
	0.5	0.5	0.5	0.4	0.5	SP	0.5	0.6	1.0	0.8	0.6	0.5	0.7	0.6	0.4	0.4	0.4	0.5	0.5	0.4	0.5	0.5	0.5	0.5		
28-Feb	Z	0.5	0.5	0.4	0.4	0.5	0.4	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.6	0.6	0.6	0.9	0.7	0.5	0.6	0.5	0.4	0.6	0.6	0.9
	SP	0.4	0.5	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.7	0.6	0.7	0.6	0.6	0.6	0.7	0.9	0.6	0.6	0.5	0.4	0.5	0.6		
	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	Diurnal Average	
	1.1	0.8	1.4	1.8	1.6	1.7	1.5	1.5	1.5	1.4	1.3	1.1	1.5	1.7	1.2	1.0	1.1	0.9	1.1	0.8	0.8	1.0	0.9	0.9	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance SP - Span

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

Wood Buffalo Environmental Association

Summary of Hour Averages

Total Reduced Sulphur (TRS) - ppb

Fort McKay - Bertha Ganter - February 2025

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

Maximum Value: 1.7 ppb on Feb 23 06:00

Maximum Daily Average: 0.8 ppb on Feb 23

Minimum Value: 0.3 ppb on Feb 1 09:00

Minimum Daily Average: 0.4 ppb on Feb 1

Maximum Diurnal Average: 0.7 ppb at hour 9

Minimum Diurnal Average: 0.5 ppb at hour 16

Monthly Average: 0.57 ppb

Percentiles: P_1 = 0.4 P_{10} = 0.4 Q_1 = 0.4 Median = 0.5 Q_3 = 0.6 P_{90} = 0.8 P_{99} = 1.4

Hours in Service:	672
Hours of Data:	636
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-Feb	0.4	0.4	0.4	Z	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
2-Feb	0.5	0.5	0.4	0.5	Z	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
3-Feb	0.4	0.4	0.4	0.4	0.4	Z	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5
4-Feb	Z	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.7
5-Feb	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	M	M	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-Feb	0.4	0.4	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	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.5
7-Feb	0.4	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.5
8-Feb	0.5	0.6	0.6	0.7	Z	0.9	0.9	0.9	0.9	0.9	1.0	0.9	0.9	0.8	0.7	0.6	0.6	0.7	1.0	0.7	0.5	0.5	0.5	0.4	0.7	1.0
9-Feb	0.4	0.4	0.4	0.4	0.4	Z	0.5	0.5	0.5	0.5	0.6	0.6	0.4	0.4	0.5	0.6	0.7	0.6	0.6	0.7	0.7	0.6	0.7	0.7	0.5	0.7
10-Feb	Z	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.9	0.8	0.7	0.6	0.6	0.6	0.6	0.9
11-Feb	0.6	Z	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.6	0.5	0.5	0.6	0.8
12-Feb	0.5	0.5	Z	0.6	0.7	0.8	0.8	0.8	0.9	0.8	0.7	0.8	0.7	0.6	0.6	0.6	0.6	0.5	0.6	0.5	0.6	0.6	0.5	0.5	0.6	0.9
13-Feb	0.5	0.6	0.6	Z	0.6	0.6	0.6	0.6	0.7	0.8	0.6	0.7	0.6	0.6	0.5	0.6	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.6	0.8
14-Feb	0.5	0.5	0.5	0.5	Z	0.6	0.5	0.5	0.5	0.6	0.6	0.5	0.4	0.4	0.5	0.4	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.5	0.6
15-Feb	0.6	0.7	1.0	1.0	1.2	Z	1.0	1.1	1.3	1.4	1.3	1.0	0.8	0.6	0.4	0.4	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.6	0.8	1.4
16-Feb	Z	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.7	0.7	0.7	0.7	0.9	0.7	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.9
17-Feb	0.8	Z	0.4	0.4	0.5	0.5	0.5	0.4	0.5	0.5	0.6	0.7	0.6	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.8
18-Feb	0.6	0.6	Z	0.6	0.6	0.5	0.5	0.5	0.6	0.6	0.7	0.8	0.7	0.5	0.5	0.8	0.9	0.5	0.5	0.6	0.6	0.6	0.6	0.5	0.6	0.9
19-Feb	0.5	0.6	0.6	Z	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.8	0.5	0.5	0.4	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.6	0.5	0.6	0.8
20-Feb	0.4	0.4	0.5	0.9	Z	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.4	0.4	0.5	0.7	0.9	0.8	0.8	0.8	0.8	0.9	0.9	0.6	0.9
21-Feb	0.8	0.8	0.8	0.9	1.0	Z	0.9	0.9	0.9	1.2	1.2	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.7	1.2
22-Feb	Z	0.5	0.7	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.8	1.1	1.1	1.1	1.1	0.8	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	1.1
23-Feb	1.0	Z	1.3	1.6	1.5	1.7	1.5	1.5	1.5	0.7	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.5	0.4	0.8	1.7
24-Feb	0.4	0.5	Z	0.5	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.6	1.3	1.7	1.0	0.7	0.9	0.8	0.8	0.7	0.8	0.9	0.8	0.7	0.7	1.7
25-Feb	0.6	0.5	0.5	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.6	0.5	0.5	0.6	0.6	0.6	0.7	0.5	0.7
26-Feb	0.7	0.6	1.0	0.9	Z	1.0	1.0	1.0	0.8	0.4	0.4	0.5	C	C	C	C	C	C	0.5	0.4	0.5	0.5	0.5	0.5	--	1.0
27-Feb	0.4	0.5	0.5	0.4	0.5	Z	0.5	0.5	0.9	0.9	0.7	0.5	0.6	0.7	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.9
28-Feb	Z	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.7	0.6	0.7	0.6	0.6	0.6	0.6	0.9	0.7	0.6	0.6	0.5	0.5	0.6	0.6	0.9
	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	Diurnal Average	
	1.0	0.8	1.3	1.6	1.5	1.7	1.5	1.5	1.5	1.4	1.3	1.1	1.3	1.7	1.1	0.8	0.9	0.9	1.0	0.8	0.8	0.9	0.9	0.9	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

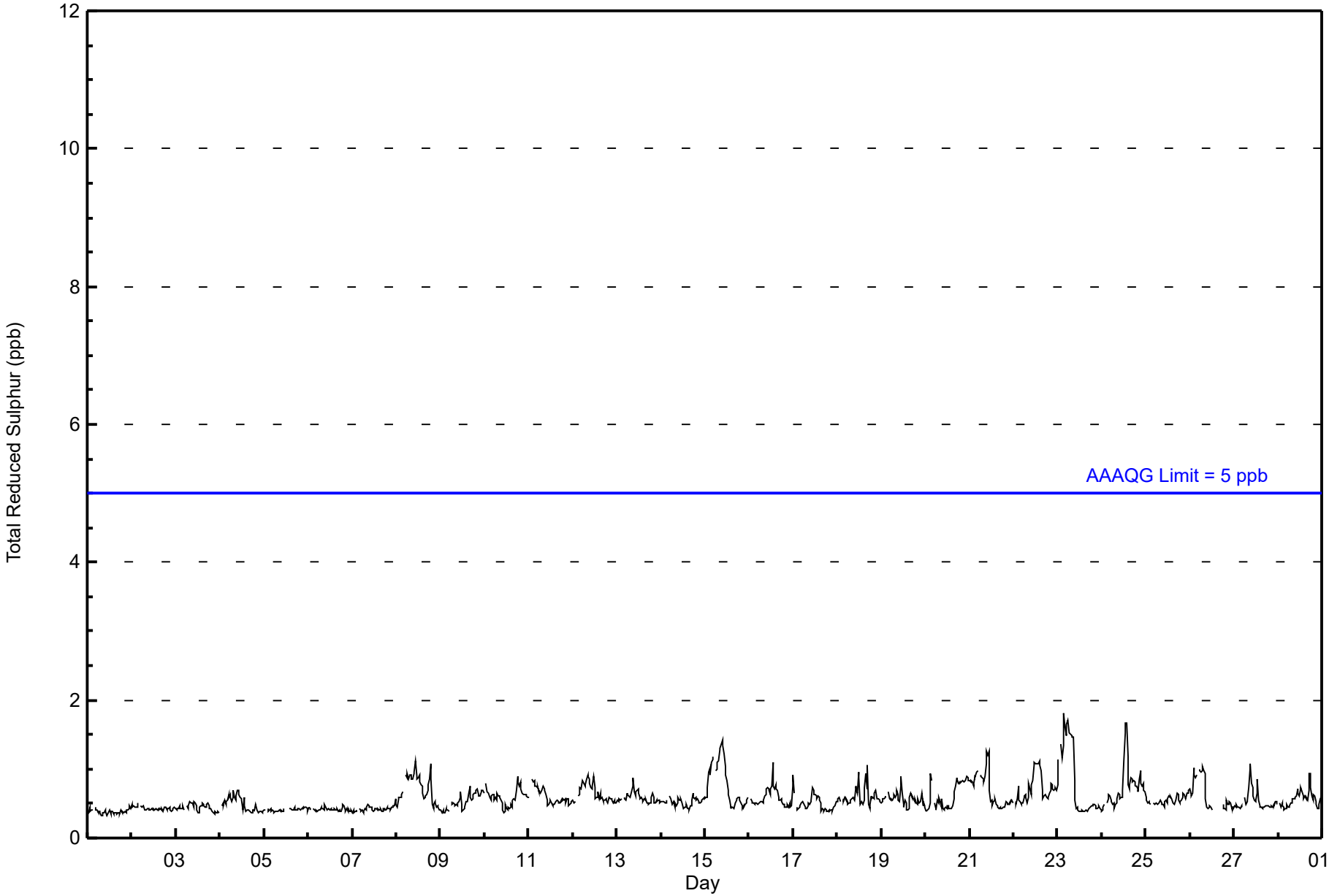
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Fort McKay - Bertha Ganter - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	636	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: 636

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Fort McKay - Bertha Ganter - February 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	104	60	21	7	7	9	16	70	143	49	21	20	17	23	21	34	622
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	104	60	21	7	7	9	16	70	143	49	21	20	17	23	21	34	622

Total Number of Valid Hours: 622

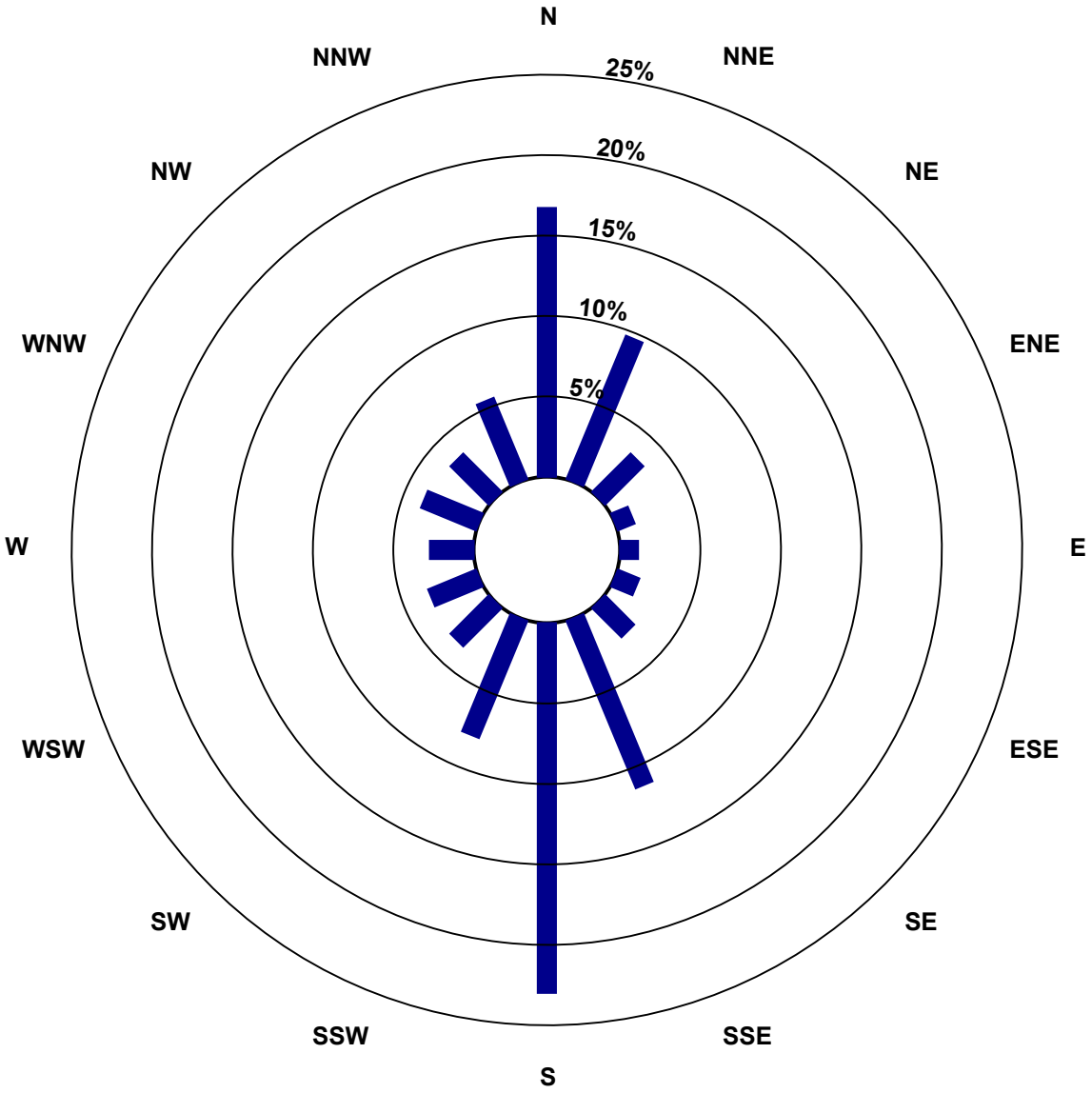
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Total Reduced Sulphur (TRS) - ppb

Fort McKay - Bertha Ganter



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

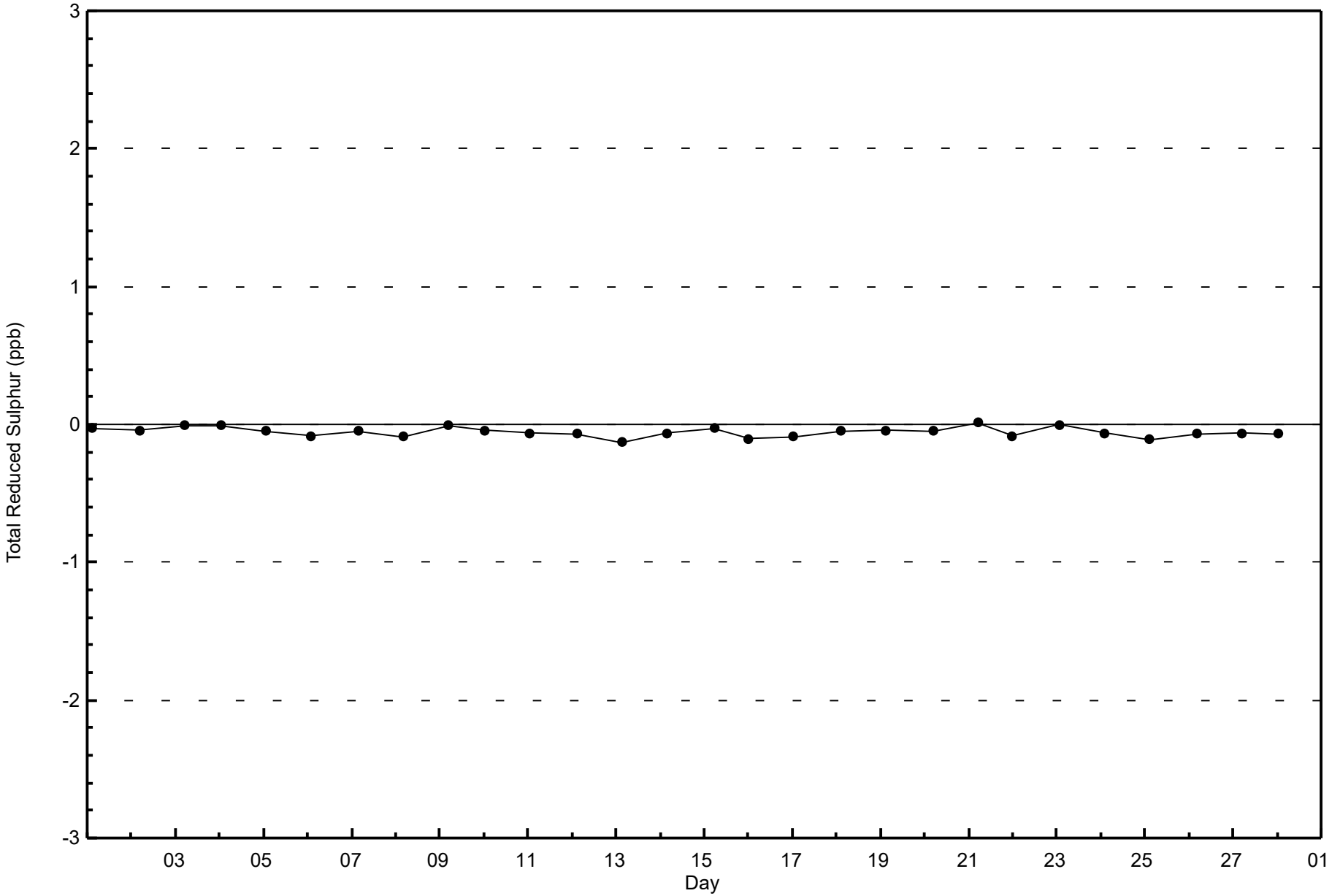
Total Number of Valid Hours: 622

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Fort McKay - Bertha Ganter - February 2025

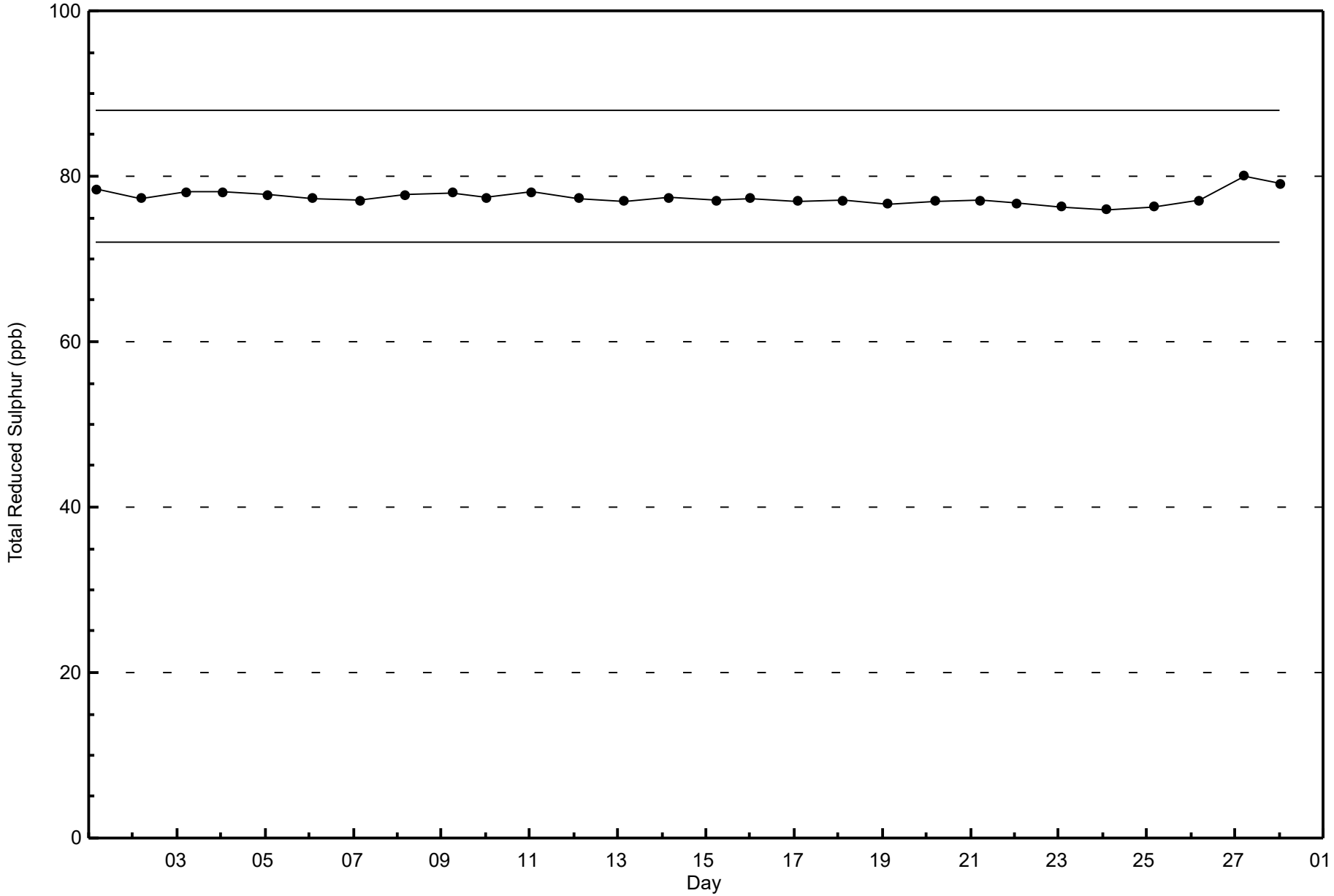


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Fort McKay - Bertha Ganter - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Fort McKay - Bertha Ganter - February 2025

Maximum Value: 4.9 ppm on Feb 21 10:00

Maximum Daily Average: 2.9 ppm on Feb 21

Minimum Value: 1.9 ppm on Feb 4 17:00

Minimum Daily Average: 2.0 ppm on Feb 5

Maximum Diurnal Average: 2.4 ppm at hour 9

Minimum Diurnal Average: 2.2 ppm at hour 16

Monthly Average: 2.25 ppm

Percentiles: P_1 = 2.0 P_{10} = 2.0 Q_1 = 2.0 Median = 2.1 Q_3 = 2.3 P_{90} = 2.6 P_{99} = 3.5

Hours in Service:	672
Hours of Data:	637
Hours of Missing Data:	35
Hours of Calibration:	33
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-Feb	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
2-Feb	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	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.2
3-Feb	2.1	2.1	2.1	2.1	Z	2.0	2.0	2.2	2.1	2.0	2.1	2.0	2.0	2.1	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.2
4-Feb	2.0	2.1	2.1	2.1	2.2	Z	2.1	2.1	2.1	2.1	2.1	C	C	C	C	C	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2
5-Feb	Z	2.0	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
6-Feb	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1
7-Feb	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1
8-Feb	2.0	2.1	2.2	Z	2.1	2.3	2.4	2.4	2.4	2.4	2.5	2.5	2.4	2.3	2.2	2.1	3.1	3.1	3.3	2.6	2.0	2.0	2.0	2.0	2.4	3.3
9-Feb	2.1	2.1	2.0	2.0	Z	2.3	2.6	2.6	2.4	2.3	2.2	2.3	2.1	2.1	2.0	2.2	2.3	2.3	2.3	2.2	2.1	2.1	2.2	2.2	2.2	2.6
10-Feb	2.1	2.1	2.1	2.1	2.1	Z	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.3	2.6	2.5	2.5	2.5	2.5	2.4	2.2	2.6
11-Feb	Z	2.6	2.6	2.6	2.6	2.5	2.4	2.5	2.7	2.4	2.1	2.2	2.3	2.2	2.4	2.6	2.5	2.6	2.6	2.7	2.7	2.5	2.3	2.3	2.5	2.7
12-Feb	2.3	Z	2.3	2.2	2.3	2.3	2.3	2.4	2.5	2.3	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.2	2.5
13-Feb	2.1	2.1	Z	2.1	2.1	2.2	2.2	2.2	2.4	2.5	2.4	2.8	2.8	2.8	2.6	2.4	2.1	2.1	2.2	2.7	2.2	2.1	2.1	2.1	2.3	2.8
14-Feb	2.2	2.2	2.2	Z	2.3	2.4	2.3	2.3	2.3	2.2	2.1	2.1	2.0	2.1	2.1	2.0	2.0	2.1	2.2	2.2	2.2	2.2	2.3	2.6	2.2	2.6
15-Feb	2.4	2.5	2.6	2.6	Z	2.7	2.6	2.7	2.8	2.8	2.7	2.4	2.2	2.1	2.0	2.0	2.0	2.1	2.2	2.1	2.1	2.0	2.1	2.1	2.3	2.8
16-Feb	2.1	2.1	2.1	2.1	2.2	Z	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.0	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2
17-Feb	Z	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1
18-Feb	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.2	2.2	2.1	2.0	2.0	2.1	2.3	2.0	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.3
19-Feb	2.1	2.1	Z	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1
20-Feb	2.1	2.0	2.0	Z	2.4	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.4	2.4	2.6	2.6	2.6	2.7	3.3	2.3	3.3
21-Feb	3.4	3.2	3.2	3.5	Z	3.4	3.5	3.5	3.6	4.9	4.9	2.7	2.3	2.2	2.3	2.1	2.1	2.1	2.2	2.2	2.3	2.5	2.3	2.3	2.9	4.9
22-Feb	2.3	2.2	2.3	2.3	2.3	Z	3.0	2.6	2.7	2.6	2.9	3.1	3.0	3.0	3.0	2.6	2.4	2.5	2.4	2.4	2.6	2.6	2.6	2.8	2.6	3.1
23-Feb	Z	4.1	3.6	3.3	3.3	3.3	3.2	3.3	3.4	2.5	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.3	2.2	2.0	2.1	2.0	2.6	4.1
24-Feb	2.0	Z	2.1	2.1	2.4	2.4	2.2	2.1	2.3	2.4	2.4	2.3	2.6	2.8	2.5	2.2	2.3	2.3	2.3	2.2	2.5	2.6	2.3	2.2	2.3	2.8
25-Feb	2.1	2.1	Z	2.4	2.2	2.6	2.7	2.6	2.6	2.3	2.6	2.8	2.9	3.5	2.3	2.2	2.7	3.6	2.7	2.5	2.4	2.4	2.5	2.8	2.6	3.6
26-Feb	2.7	2.6	2.8	Z	2.8	2.8	2.9	3.2	3.0	2.3	2.5	2.5	2.1	2.1	2.4	2.8	2.8	2.5	2.3	2.2	2.6	2.6	2.3	2.3	2.6	3.2
27-Feb	2.3	2.3	2.2	2.1	Z	2.1	2.1	2.2	2.6	2.7	2.3	2.1	2.2	2.5	2.2	2.1	2.1	2.3	2.2	2.1	2.2	2.1	2.1	2.1	2.2	2.7
28-Feb	2.2	2.1	2.0	2.0	2.0	Z	2.0	2.1	2.2	2.1	2.2	2.2	2.2	2.1	2.0	2.0	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.3	2.1	2.3
	2.2	2.3	2.3	2.2	2.2	2.3	2.3	2.3	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	Diurnal Average	
	3.4	4.1	3.6	3.5	3.3	3.4	3.5	3.5	3.6	4.9	4.9	3.1	3.0	3.5	3.0	2.8	3.1	3.6	3.3	2.7	2.7	2.6	2.7	3.3	Diurnal Maximum	

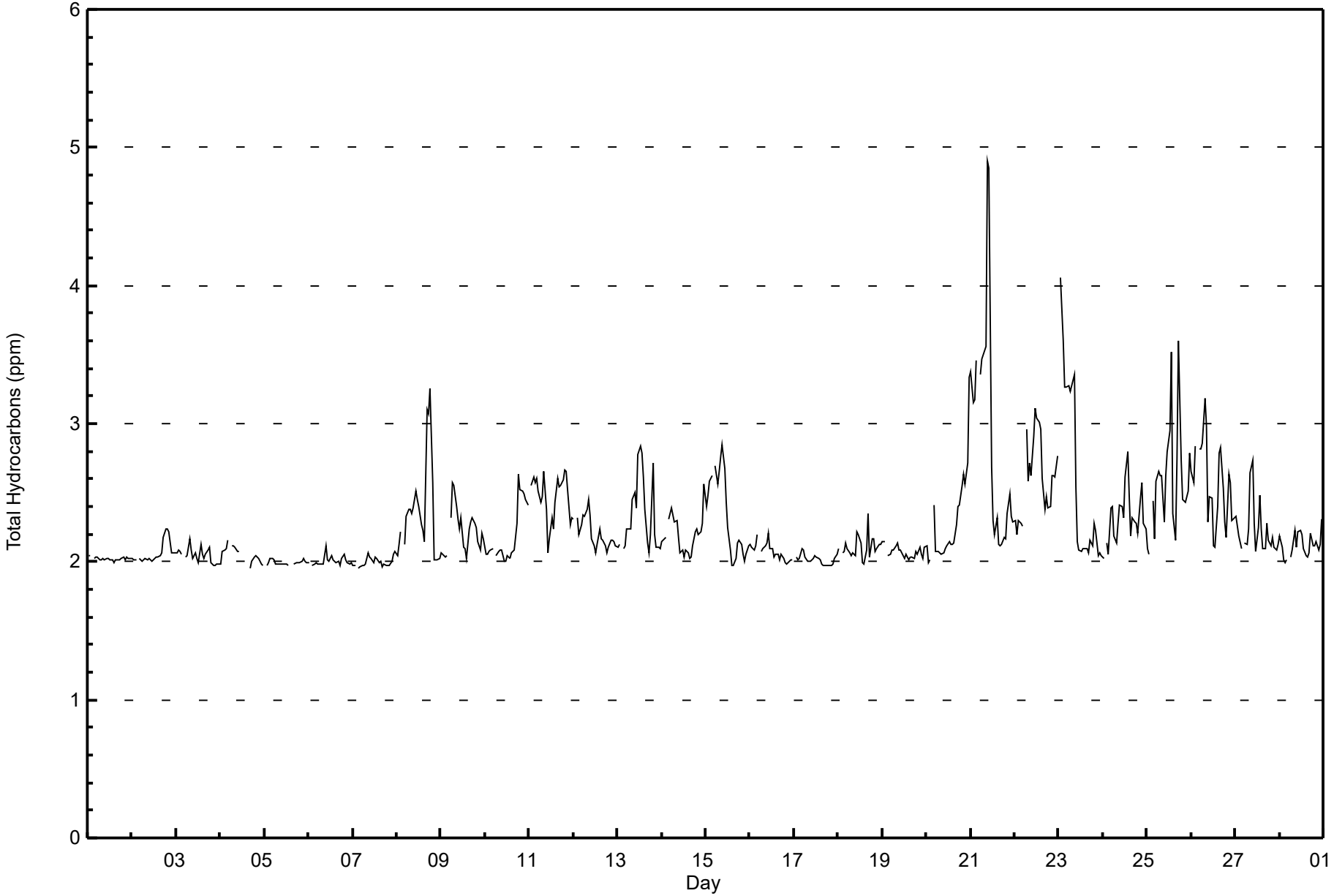
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Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Fort McKay - Bertha Ganter - February 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	193	30.30	30.30
2.1 - 3.0	418	65.62	95.92
3.1 - 10.0	26	4.08	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 637

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Fort McKay - Bertha Ganter - February 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	36	12	5	4	0	6	5	24	39	25	10	8	9	5	4	1	193
2.1 - 3.0	66	45	18	3	8	4	11	45	94	23	9	10	7	17	18	28	406
3.1 - 10.0	3	3	2	0	1	0	0	0	5	2	1	0	1	1	1	5	25
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	105	60	25	7	9	10	16	69	138	50	20	18	17	23	23	34	624

Total Number of Valid Hours: 624

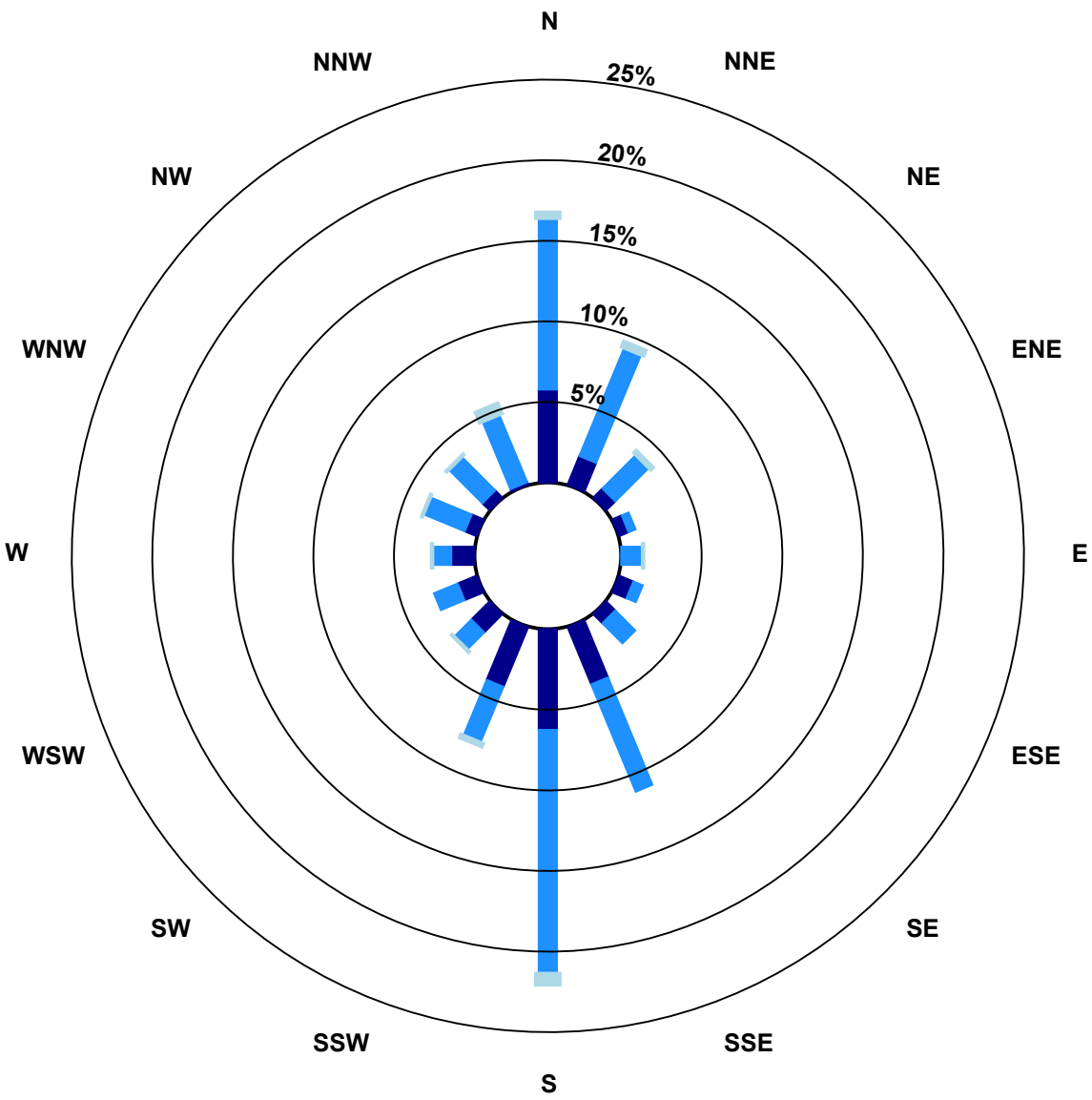
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Total Hydrocarbons (THC) - ppm

Fort McKay - Bertha Ganter



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

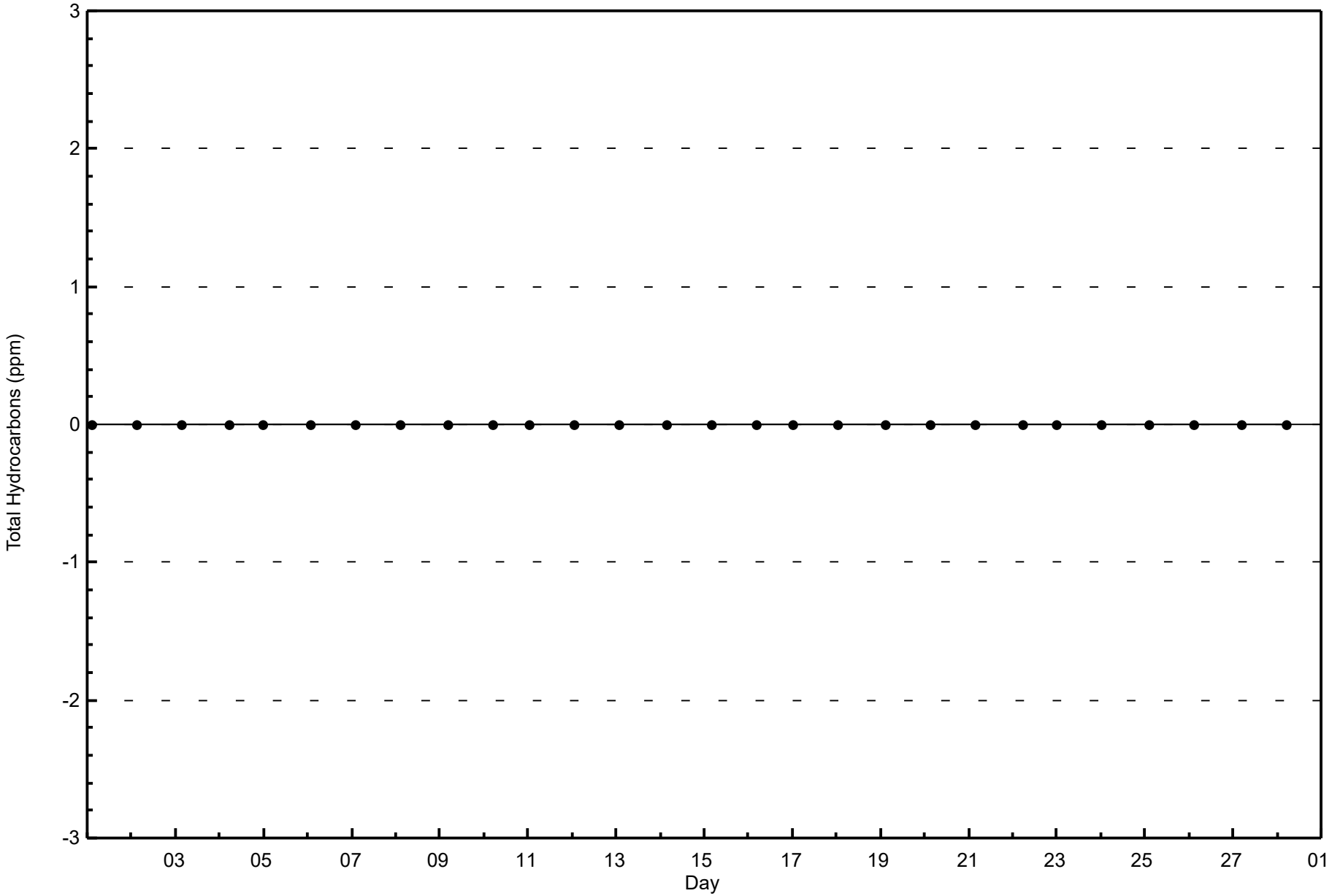
Total Number of Valid Hours: 624

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Fort McKay - Bertha Ganter - February 2025

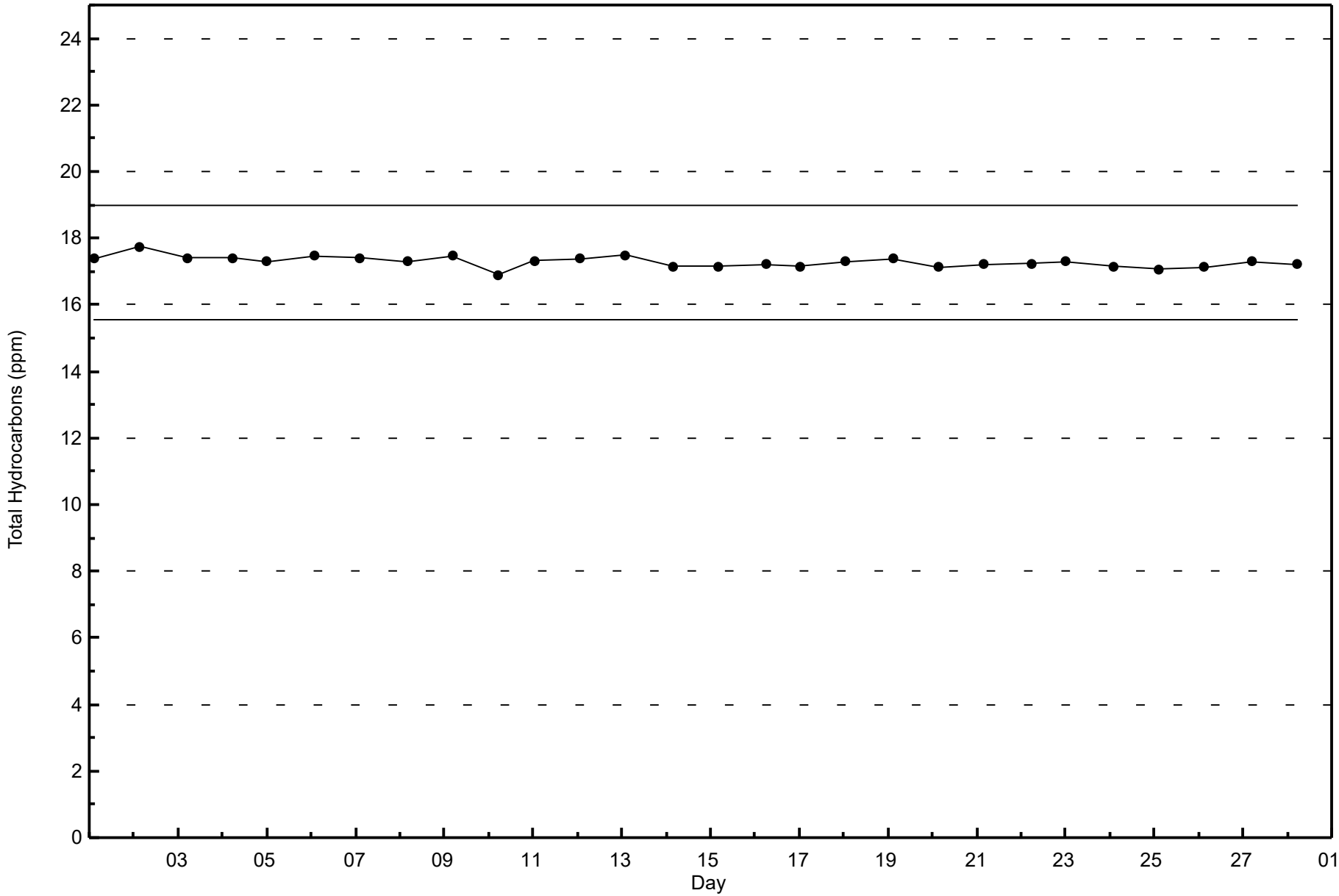


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Fort McKay - Bertha Ganter - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay - Bertha Ganter - February 2025

Maximum Value: 1.301 ppm on Feb 25 14:00

Maximum Daily Average: 0.395 ppm on Feb 25

Minimum Value: 0.000 ppm on Feb 1 01:00

Minimum Daily Average: 0.000 ppm on Feb 1

Maximum Diurnal Average: 0.133 ppm at hour 18

Minimum Diurnal Average: 0.046 ppm at hour 23

Monthly Average: 0.083 ppm

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

Hours in Service:	672
Hours of Data:	637
Hours of Missing Data:	35
Hours of Calibration:	33
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-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.081	0.127	0.142	0.129	0.000	0.000	0.004	0.021	0.142
3-Feb	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.110	0.036	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	0.006	0.110
4-Feb	0.000	0.007	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	0.007
5-Feb	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	M	M	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6-Feb	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.023	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.023
7-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.018
8-Feb	0.011	0.000	0.019	Z	0.000	0.059	0.062	0.069	0.055	0.052	0.127	0.123	0.116	0.069	0.064	0.046	0.924	0.657	0.464	0.198	0.006	0.000	0.000	0.000	0.136	0.924
9-Feb	0.000	0.000	0.000	0.000	Z	0.007	0.069	0.094	0.085	0.057	0.003	0.064	0.086	0.058	0.004	0.164	0.212	0.225	0.197	0.162	0.081	0.016	0.138	0.108	0.079	0.225
10-Feb	0.030	0.011	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.092	0.216	0.205	0.142	0.127	0.123	0.139	0.047	0.216
11-Feb	Z	0.105	0.094	0.089	0.068	0.044	0.021	0.049	0.132	0.054	0.000	0.053	0.204	0.171	0.365	0.506	0.408	0.425	0.470	0.548	0.519	0.345	0.133	0.186	0.217	0.548
12-Feb	0.191	Z	0.160	0.044	0.062	0.097	0.100	0.124	0.176	0.120	0.022	0.000	0.000	0.002	0.011	0.087	0.071	0.000	0.000	0.008	0.005	0.000	0.000	0.000	0.056	0.191
13-Feb	0.000	0.000	Z	0.000	0.001	0.028	0.018	0.002	0.030	0.013	0.002	0.404	0.618	0.636	0.494	0.301	0.088	0.000	0.108	0.512	0.042	0.000	0.000	0.000	0.143	0.636
14-Feb	0.015	0.017	0.000	Z	0.000	0.035	0.034	0.034	0.080	0.011	0.004	0.001	0.009	0.004	0.002	0.000	0.000	0.006	0.008	0.045	0.034	0.025	0.062	0.211	0.028	0.211
15-Feb	0.159	0.191	0.219	0.221	Z	0.226	0.197	0.215	0.232	0.258	0.209	0.081	0.009	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.096	0.258
16-Feb	0.000	0.000	0.000	0.000	0.100	Z	0.000	0.000	0.002	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.005	0.100
17-Feb	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.017	0.006	0.001	0.017
18-Feb	0.001	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.130	0.133	0.095	0.000	0.002	0.075	0.209	0.014	0.046	0.049	0.000	0.000	0.000	0.000	0.033	0.209
19-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.004	0.005	0.001	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.018	0.038	0.000	0.000	0.000	0.003	0.038
20-Feb	0.000	0.000	0.000	Z	0.225	0.012	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.022	0.117	0.118	0.233	0.261	0.201	0.307	0.659	0.094	0.659
21-Feb	0.574	0.433	0.381	0.492	Z	0.447	0.456	0.458	0.496	0.728	0.743	0.152	0.130	0.066	0.159	0.007	0.000	0.000	0.005	0.014	0.125	0.251	0.087	0.016	0.270	0.743
22-Feb	0.007	0.000	0.000	0.000	0.000	Z	0.291	0.087	0.110	0.074	0.219	0.257	0.286	0.319	0.292	0.176	0.107	0.145	0.117	0.124	0.171	0.166	0.168	0.172	0.143	0.319
23-Feb	Z	0.277	0.235	0.237	0.255	0.234	0.245	0.248	0.245	0.126	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.053	0.015	0.075	0.026	0.000	0.000	0.000	0.099	0.277
24-Feb	0.000	Z	0.001	0.000	0.101	0.070	0.000	0.000	0.054	0.148	0.150	0.083	0.204	0.285	0.177	0.025	0.099	0.088	0.067	0.028	0.123	0.216	0.111	0.103	0.093	0.285
25-Feb	0.002	0.000	Z	0.381	0.083	0.506	0.560	0.464	0.502	0.262	0.538	0.619	0.784	1.301	0.116	0.000	0.584	1.208	0.451	0.208	0.147	0.223	0.037	0.104	0.395	1.301
26-Feb	0.161	0.245	0.363	Z	0.452	0.429	0.424	0.381	0.385	0.111	0.257	0.222	0.000	0.000	0.137	0.617	0.594	0.385	0.161	0.001	0.381	0.281	0.094	0.080	0.268	0.617
27-Feb	0.063	0.014	0.000	0.000	Z	0.000	0.000	0.009	0.067	0.179	0.081	0.002	0.046	0.152	0.151	0.003	0.031	0.178	0.000	0.000	0.130	0.007	0.000	0.000	0.048	0.179
28-Feb	0.021	0.009	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.100	0.094	0.047	0.002	0.000	0.005	0.000	0.059	0.000	0.001	0.002	0.000	0.008	0.131	0.021	0.131
	0.051	0.055	0.064	0.064	0.059	0.095	0.088	0.084	0.097	0.079	0.093	0.085	0.098	0.114	0.076	0.077	0.120	0.133	0.092	0.092	0.084	0.066	0.046	0.069	Diurnal Average	
	0.574	0.433	0.381	0.492	0.452	0.506	0.560	0.464	0.502	0.728	0.743	0.619	0.784	1.301	0.494	0.617	0.924	1.208	0.470	0.548	0.519	0.345	0.307	0.659	Diurnal Maximum	

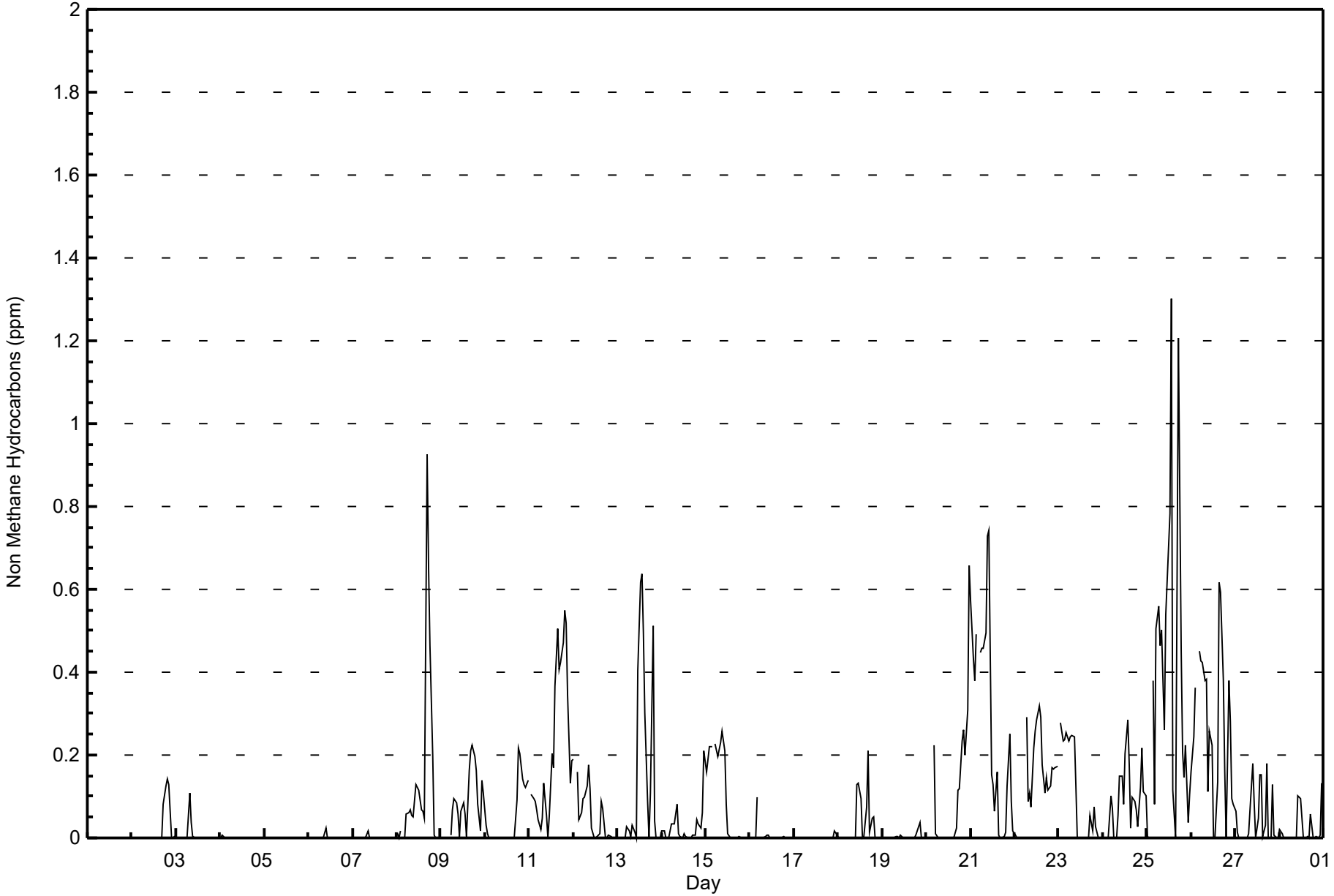
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Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay - Bertha Ganter - February 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay - Bertha Ganter - February 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	351	55.10	55.10
0.006 - 0.05	72	11.30	66.41
0.06 - 0.1	93	14.60	81.00
> 0.1	121	19.00	100.00

Total Number of Valid Hours: 637

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay - Bertha Ganter - February 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	59	26	12	6	3	7	9	36	91	33	14	11	10	11	8	11	347
0.006 - 0.05	3	5	3	1	2	2	1	13	11	3	2	2	1	7	7	8	71
0.06 - 0.1	22	11	3	0	2	0	4	10	16	4	3	3	3	2	4	4	91
> 0.1	21	18	7	0	2	1	2	10	20	10	1	2	3	3	4	11	115
Totals	105	60	25	7	9	10	16	69	138	50	20	18	17	23	23	34	624

Total Number of Valid Hours: 624

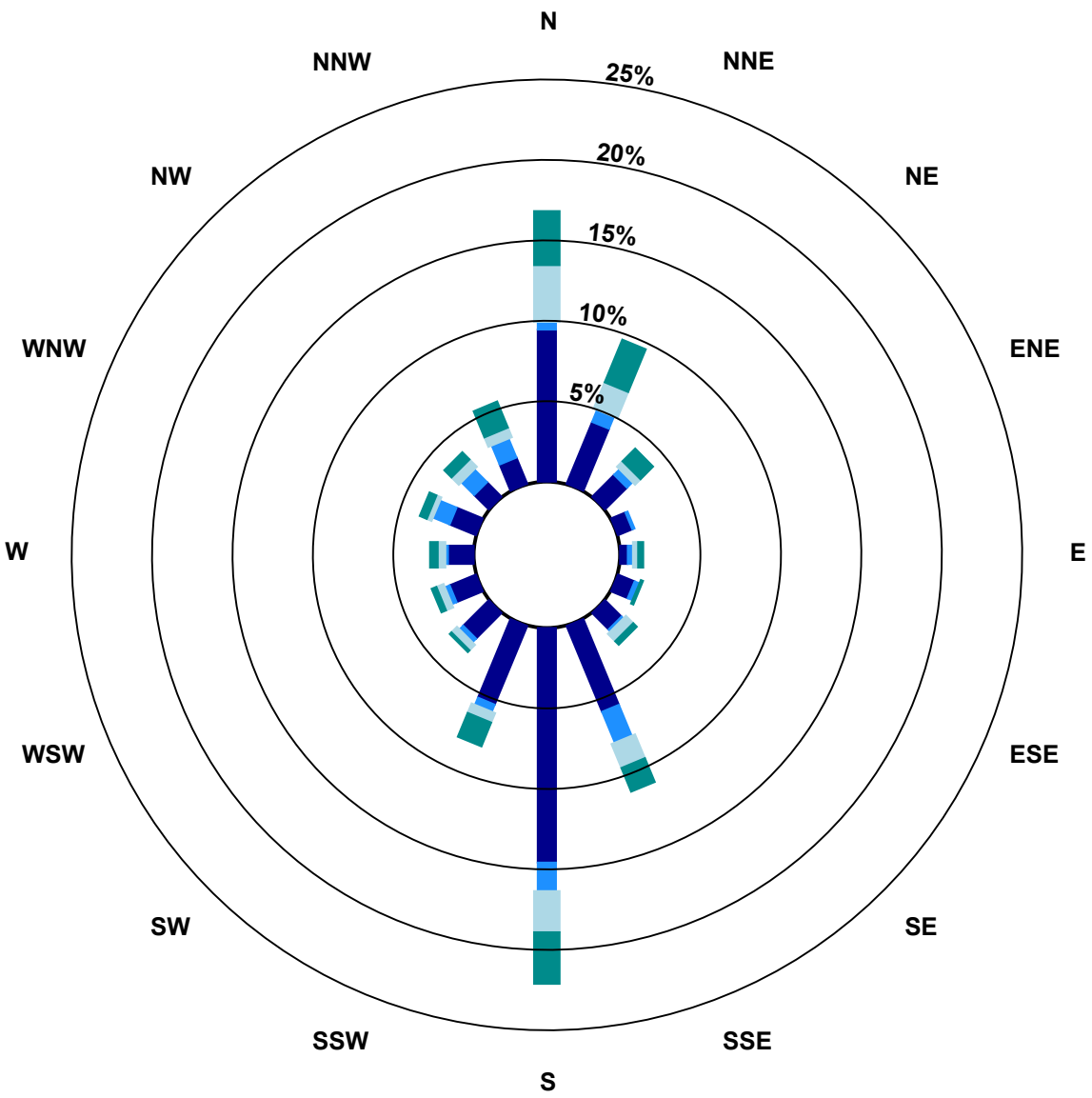
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 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

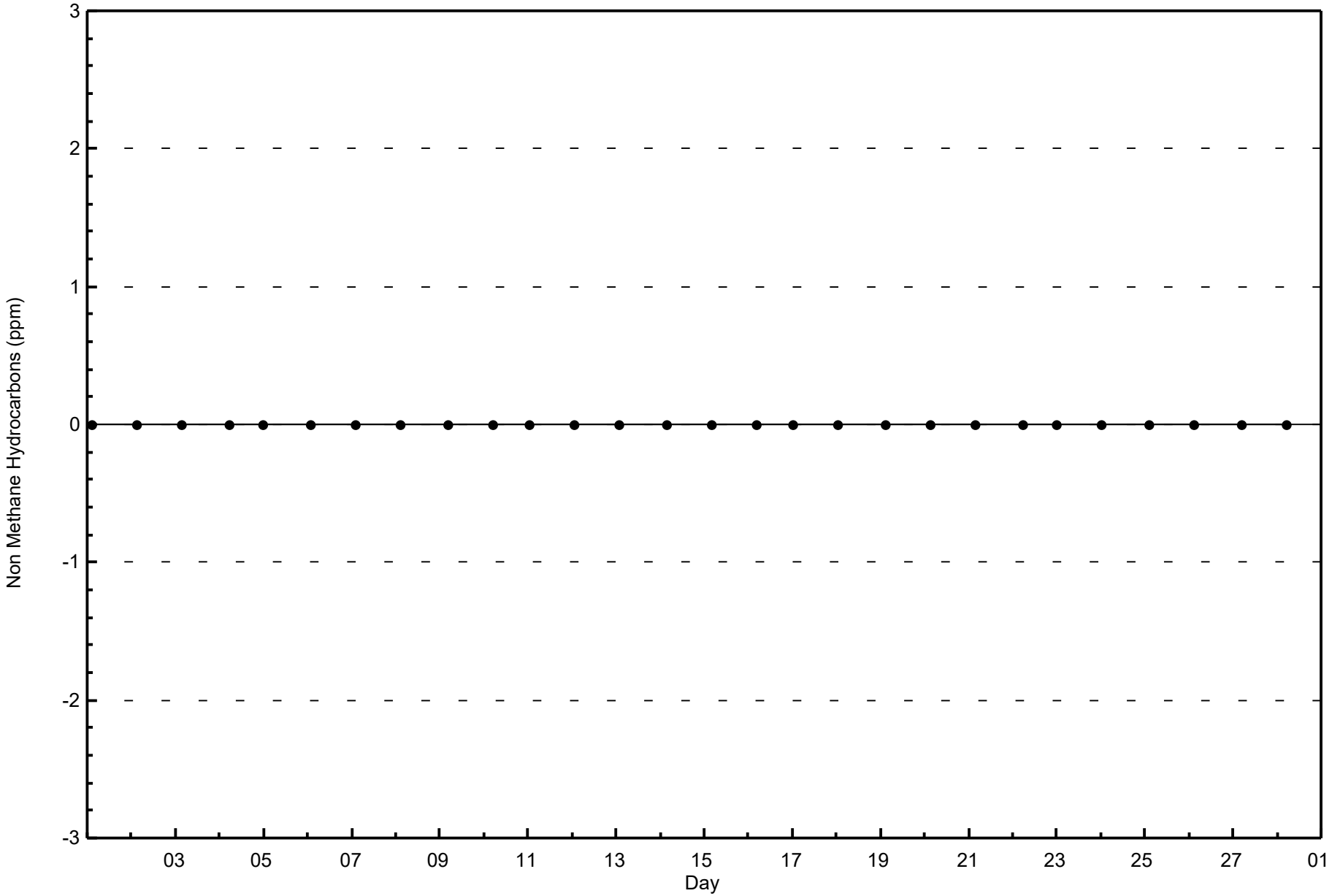
Total Number of Valid Hours: 624

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay - Bertha Ganter - February 2025

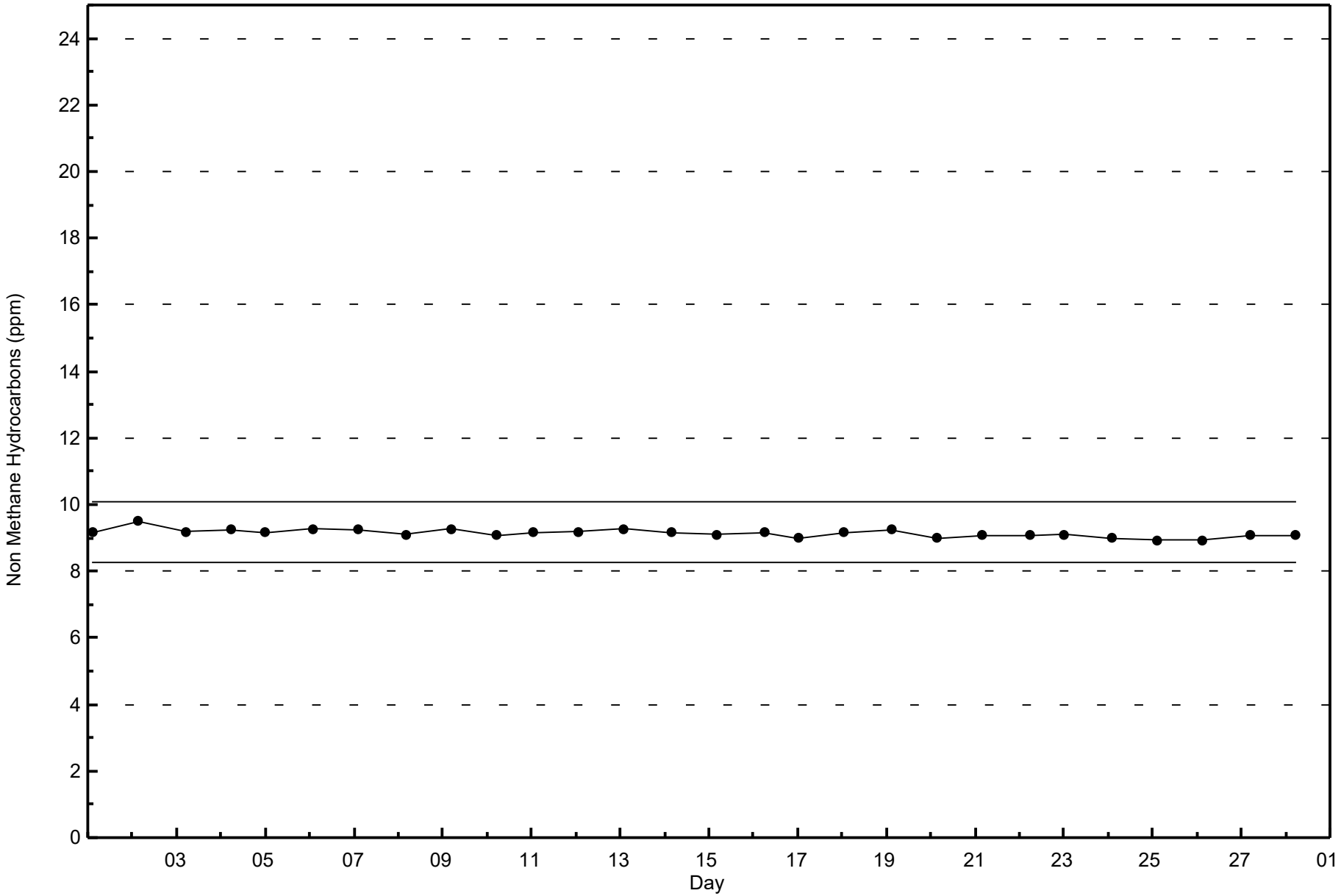


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay - Bertha Ganter - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Fort McKay - Bertha Ganter - February 2025

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

Maximum Value: 4.2 ppm on Feb 21 10:00

Maximum Daily Average: 2.6 ppm on Feb 21

Minimum Value: 1.9 ppm on Feb 4 17:00

Minimum Daily Average: 2.0 ppm on Feb 5

Maximum Diurnal Average: 2.3 ppm at hour 9

Minimum Diurnal Average: 2.1 ppm at hour 16

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} = 2.4 P_{99} = 3.0

Hours in Service:	672
Hours of Data:	637
Hours of Missing Data:	35
Hours of Calibration:	33
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-Feb	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
2-Feb	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1
3-Feb	2.1	2.1	2.1	2.1	Z	2.0	2.0	2.1	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1
4-Feb	2.0	2.1	2.1	2.1	2.2	Z	2.1	2.1	2.1	2.1	2.1	C	C	C	C	C	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2
5-Feb	Z	2.0	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
6-Feb	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1
7-Feb	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1
8-Feb	2.0	2.1	2.2	Z	2.1	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.3	2.2	2.2	2.1	2.2	2.4	2.8	2.4	2.0	2.0	2.0	2.0	2.2	2.8
9-Feb	2.1	2.1	2.0	2.0	Z	2.3	2.5	2.5	2.3	2.3	2.2	2.3	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	2.5
10-Feb	2.0	2.0	2.1	2.1	2.1	Z	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.4	2.3	2.4	2.4	2.3	2.3	2.1	2.4
11-Feb	Z	2.4	2.5	2.5	2.5	2.5	2.4	2.4	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	2.2	2.1	2.1	2.2	2.5
12-Feb	2.1	Z	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.2	2.3
13-Feb	2.1	2.1	Z	2.1	2.1	2.2	2.2	2.2	2.4	2.5	2.4	2.4	2.2	2.1	2.1	2.1	2.0	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.2	2.5
14-Feb	2.1	2.2	2.2	Z	2.3	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.1	2.1	2.0	2.0	2.1	2.2	2.2	2.2	2.2	2.2	2.4	2.2	2.4
15-Feb	2.2	2.3	2.4	2.4	Z	2.5	2.4	2.4	2.5	2.6	2.5	2.4	2.2	2.1	2.0	2.0	2.0	2.1	2.2	2.1	2.1	2.0	2.1	2.1	2.2	2.6
16-Feb	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.0	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2
17-Feb	Z	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1
18-Feb	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
19-Feb	2.1	2.1	Z	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.0	2.1	2.1	2.1
20-Feb	2.1	2.0	2.0	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.7	2.2	2.7
21-Feb	2.8	2.7	2.8	3.0	Z	2.9	3.0	3.0	3.1	4.2	4.1	2.5	2.2	2.1	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.3	2.6	4.2
22-Feb	2.3	2.2	2.3	2.3	2.3	Z	2.7	2.5	2.6	2.6	2.7	2.9	2.8	2.7	2.7	2.4	2.3	2.3	2.3	2.3	2.5	2.5	2.4	2.6	2.5	2.9
23-Feb	Z	3.8	3.4	3.0	3.0	3.0	3.0	3.0	3.1	2.4	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.0	2.1	2.0	2.5	3.8
24-Feb	2.0	Z	2.1	2.1	2.3	2.3	2.2	2.1	2.2	2.3	2.3	2.2	2.4	2.5	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.4	2.2	2.1	2.2	2.5
25-Feb	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.2	2.1	2.0	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.4	2.3	2.2	2.3	2.2	2.5	2.7	2.2	2.7
26-Feb	2.5	2.3	2.5	Z	2.4	2.4	2.4	2.8	2.6	2.2	2.2	2.2	2.1	2.1	2.3	2.2	2.2	2.1	2.1	2.2	2.2	2.3	2.2	2.2	2.3	2.8
27-Feb	2.3	2.2	2.2	2.1	Z	2.1	2.1	2.2	2.6	2.6	2.2	2.1	2.2	2.3	2.1	2.1	2.1	2.1	2.2	2.1	2.0	2.1	2.1	2.1	2.2	2.6
28-Feb	2.2	2.1	2.0	2.0	2.0	Z	2.0	2.1	2.2	2.1	2.1	2.1	2.2	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2
	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	Diurnal Average	
	2.8	3.8	3.4	3.0	3.0	3.0	3.0	3.0	3.1	4.2	4.1	2.9	2.8	2.7	2.7	2.4	2.3	2.4	2.8	2.4	2.5	2.5	2.5	2.7	Diurnal Maximum	

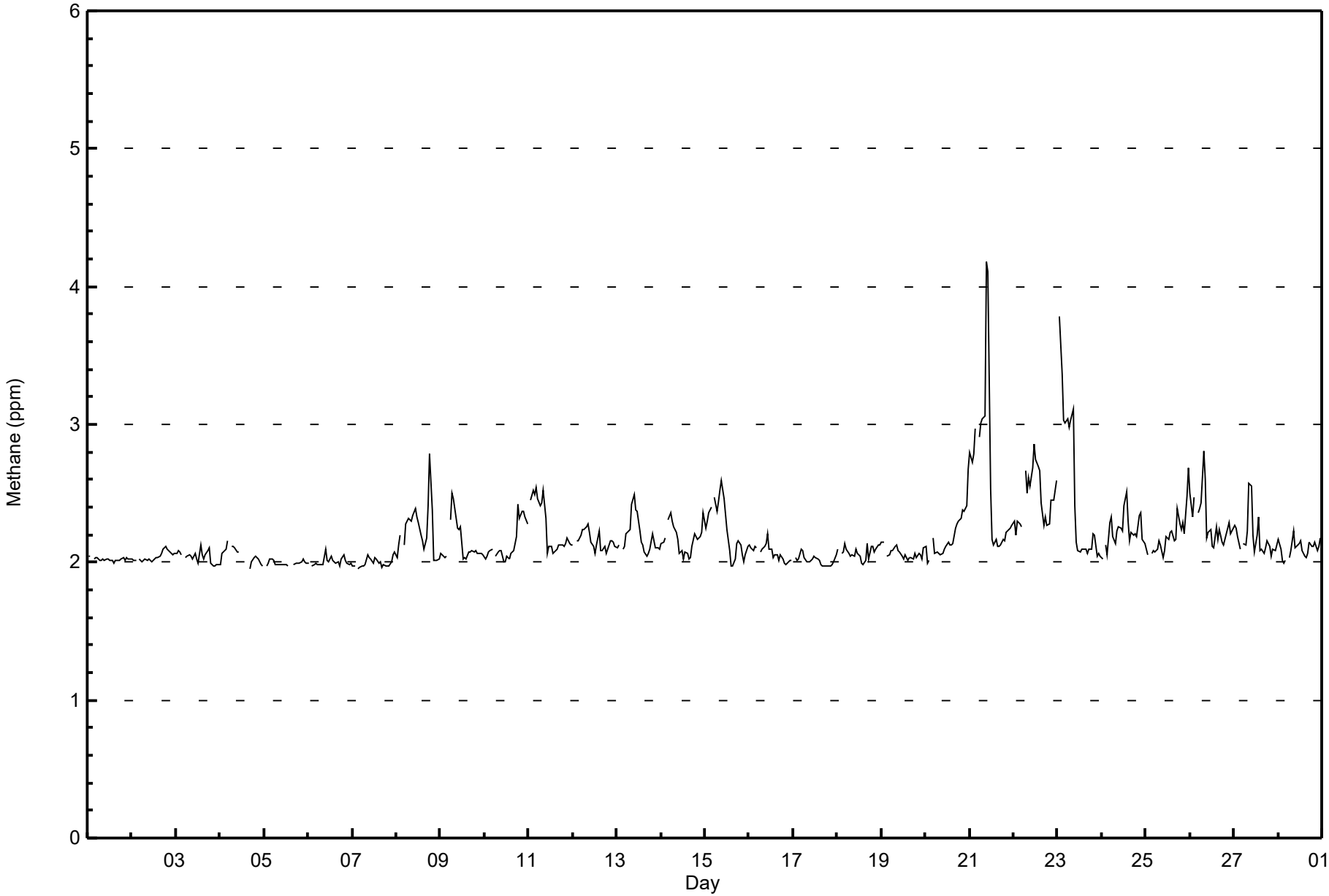
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Fort McKay - Bertha Ganter - February 2025



Methane (CH_4) - ppm

Fort McKay - Bertha Ganter - February 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	204	32.03	32.03
2.1 - 3.0	427	67.03	99.06
3.1 - 10.0	6	0.94	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 637

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Fort McKay - Bertha Ganter - February 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	37	16	5	4	0	6	5	27	42	25	10	8	9	5	4	1	204
2.1 - 3.0	68	42	20	3	9	4	11	42	94	25	10	10	8	18	19	32	415
3.1 - 10.0	0	2	0	0	0	0	0	0	2	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	0
Totals	105	60	25	7	9	10	16	69	138	50	20	18	17	23	23	34	624

Total Number of Valid Hours: 624

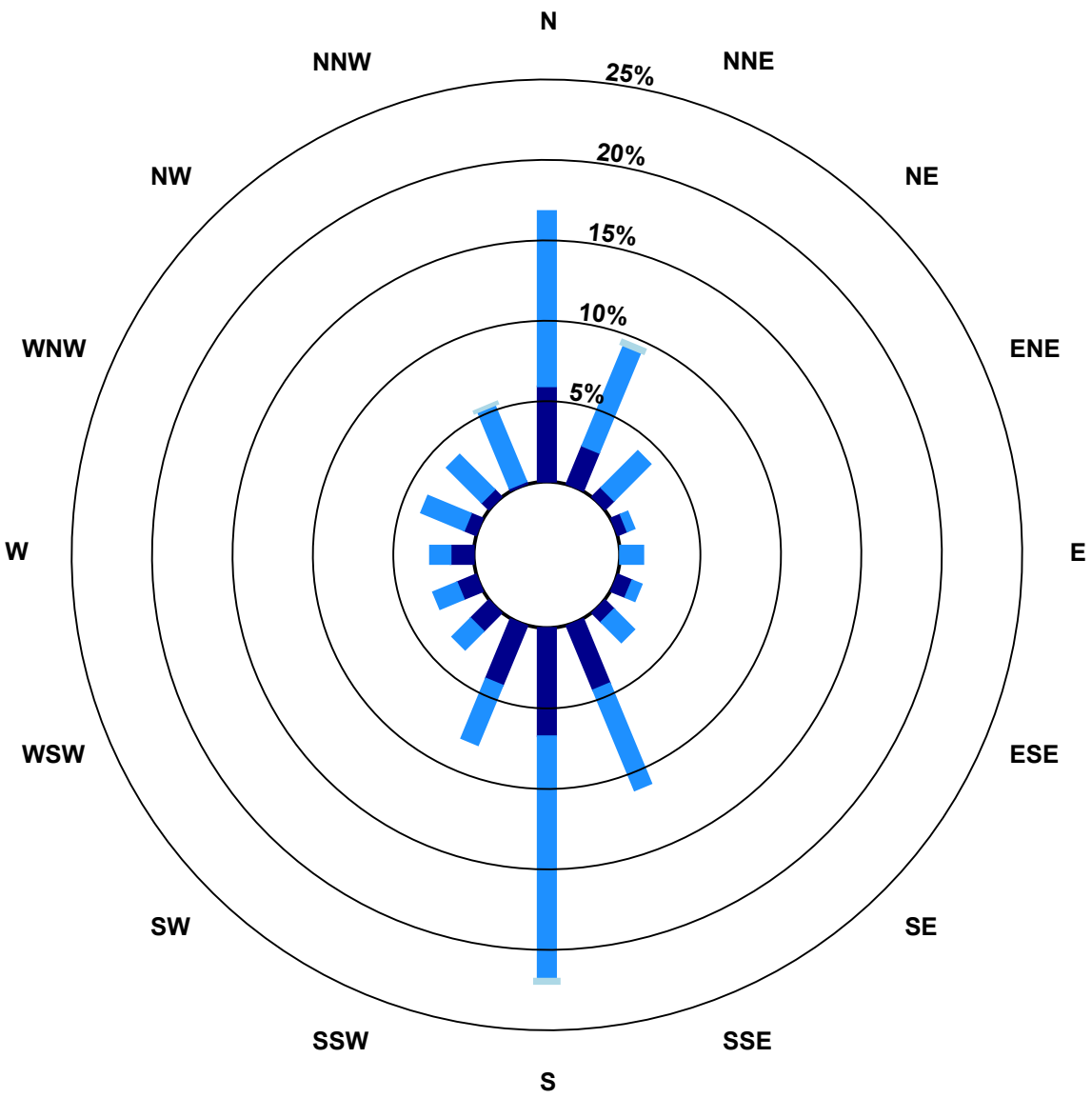
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Methane (CH_4) - ppm

Fort McKay - Bertha Ganter



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

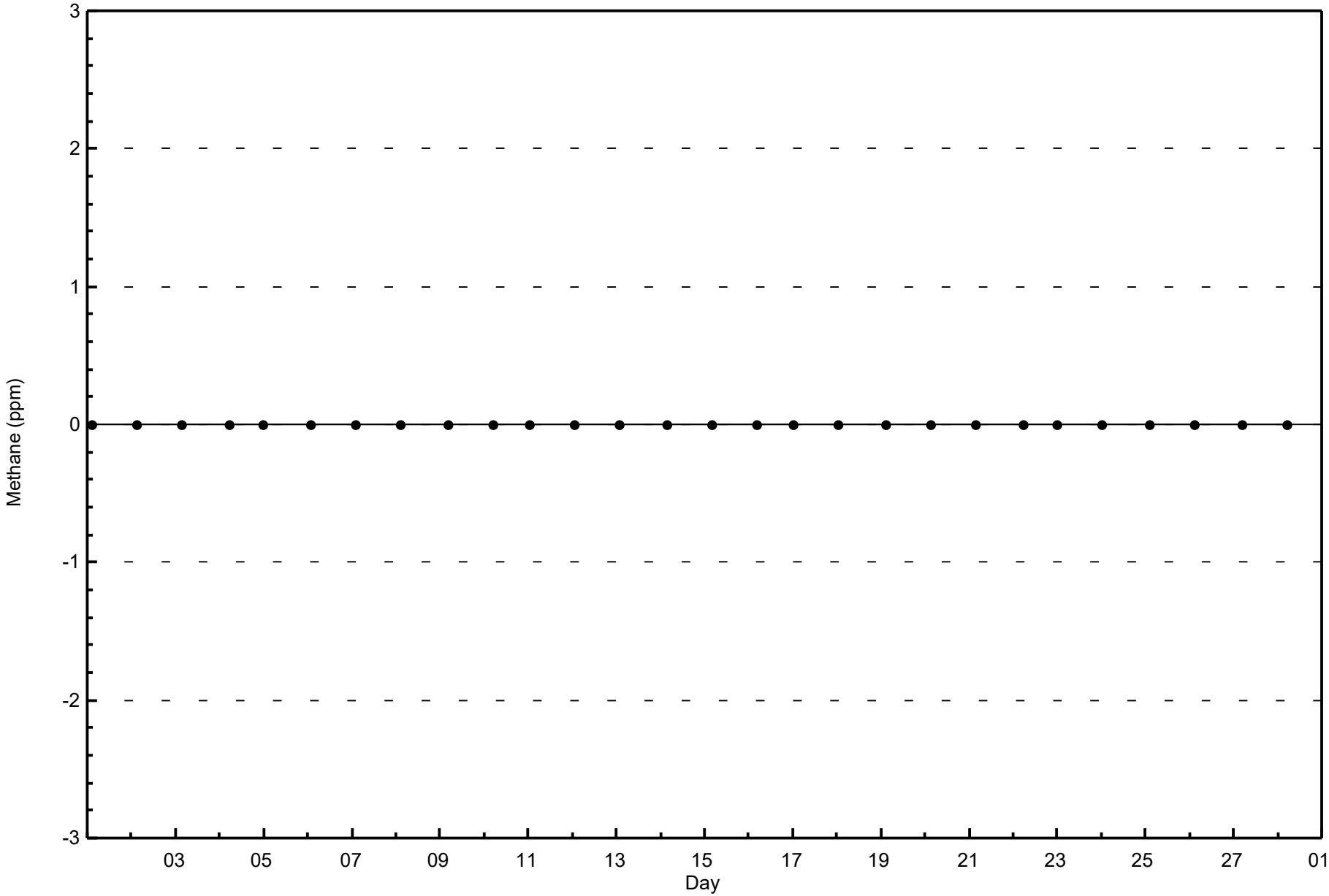
Total Number of Valid Hours: 624

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Fort McKay - Bertha Ganter - February 2025

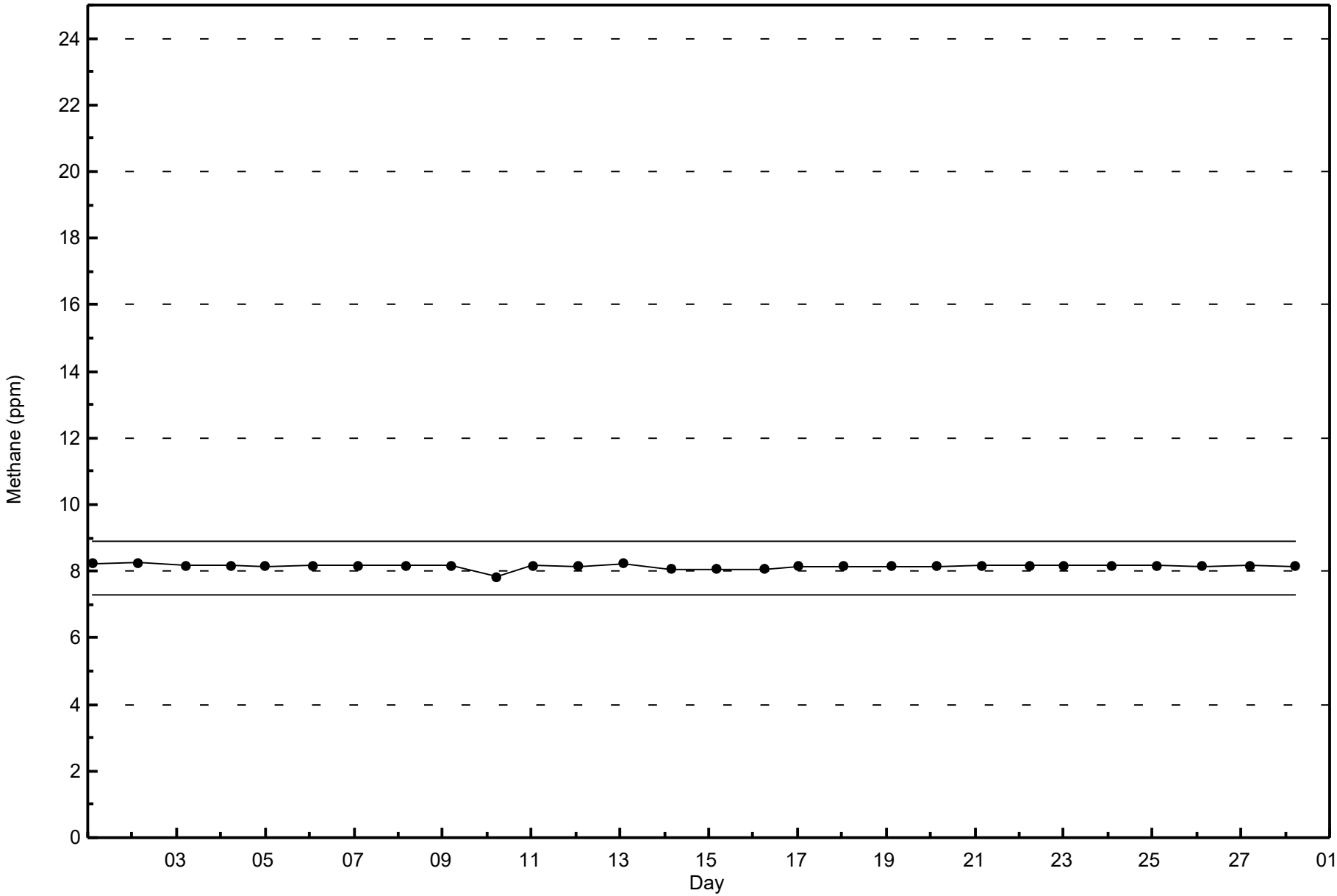


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Fort McKay - Bertha Ganter - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Fort McKay - Bertha Ganter - February 2025

Maximum Value: 121.3 ppb on Feb 21 11:00

Maximum Daily Average: 24.4 ppb on Feb 21

Minimum Value: 0.0 ppb on Feb 1 05:00

Minimum Daily Average: 0.0 ppb on Feb 5

Maximum Diurnal Average: 15.6 ppb at hour 10

Minimum Diurnal Average: 1.7 ppb at hour 22

Monthly Average: 5.84 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 1.3 Q_3 = 7.0 P_{90} = 18.0 P_{99} = 45.5

Hours in Service:	672
Hours of Data:	635
Hours of Missing Data:	37
Hours of Calibration:	34
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-Feb	Z	0.7	0.3	0.1	0.0	0.0	0.0	0.2	0.0	0.4	1.0	1.5	1.6	1.2	0.9	0.9	0.5	0.7	0.5	0.3	0.4	0.2	0.1	0.0	0.5	1.6
2-Feb	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.2	1.1	1.2	1.6	2.0	2.8	2.8	2.6	1.3	0.1	0.0	0.0	0.0	0.0	0.1	0.7	0.7	2.8
3-Feb	1.2	2.9	Z	2.5	2.8	0.9	1.5	10.7	17.1	16.8	11.5	4.6	2.1	9.2	8.3	3.5	3.6	2.0	0.1	0.1	0.3	0.6	0.5	0.4	4.5	17.1
4-Feb	0.4	0.9	0.8	Z	0.7	0.0	0.1	0.0	1.3	3.9	3.8	3.4	2.7	2.4	2.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	3.9
5-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	M	M	M	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
6-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.6	0.6	0.7	1.3	0.9	1.4	0.6	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3	1.4
7-Feb	Z	0.4	0.3	0.3	0.3	0.3	0.2	0.6	3.2	8.2	6.5	2.2	3.2	2.3	1.4	0.4	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.4	1.4	8.2
8-Feb	0.0	Z	0.7	1.0	0.6	7.6	7.4	10.9	15.0	20.1	20.9	21.5	19.7	12.9	8.8	3.9	4.5	10.5	62.0	26.7	0.0	0.0	0.0	0.0	11.1	62.0
9-Feb	0.0	0.0	Z	0.3	0.2	1.4	8.3	12.5	10.6	17.6	16.1	16.7	4.1	5.6	3.4	6.7	8.3	2.5	3.6	1.3	2.0	2.4	6.2	8.8	6.0	17.6
10-Feb	4.2	4.9	2.4	Z	1.4	0.3	0.6	0.4	2.9	6.1	3.5	3.3	5.3	4.0	2.8	2.6	1.2	1.5	11.2	5.9	20.2	15.1	10.3	4.2	5.0	20.2
11-Feb	6.5	8.0	10.8	11.4	Z	11.5	5.2	9.7	27.0	20.0	5.0	4.8	6.1	5.3	4.7	5.3	4.2	0.8	2.4	4.2	3.5	1.7	0.2	0.3	6.9	27.0
12-Feb	0.0	0.1	3.9	3.6	11.5	Z	12.4	12.8	21.4	22.4	24.0	14.1	9.8	10.2	8.9	5.9	8.5	3.1	0.0	0.0	0.0	0.2	0.1	0.1	7.5	24.0
13-Feb	Z	0.4	0.0	0.0	0.2	0.8	1.5	1.2	8.8	19.0	23.1	35.9	21.7	13.1	11.3	8.9	6.4	1.7	0.0	2.7	1.2	1.0	0.7	0.0	6.9	35.9
14-Feb	1.4	Z	3.9	10.0	9.7	12.3	7.4	7.1	14.3	30.9	25.3	23.8	5.0	7.2	7.1	4.1	3.2	6.9	14.0	9.3	7.0	5.8	11.9	18.1	10.7	30.9
15-Feb	18.5	24.4	Z	39.7	43.1	46.2	36.9	44.2	54.2	63.6	51.9	32.7	23.3	9.0	0.4	0.7	2.1	1.4	0.0	0.0	0.0	0.0	0.5	0.2	21.5	63.6
16-Feb	0.1	0.2	0.4	Z	1.3	1.7	1.9	3.5	20.2	29.7	20.6	11.1	8.4	8.5	8.6	6.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	29.7
17-Feb	0.3	0.0	0.0	0.0	Z	0.1	0.1	0.0	0.4	1.2	3.0	5.7	6.0	4.9	4.2	1.3	0.6	0.6	0.8	0.5	0.5	0.9	0.6	0.7	1.4	6.0
18-Feb	0.5	0.6	0.8	2.0	0.6	Z	0.5	1.4	3.9	6.9	9.3	9.1	7.6	5.0	6.4	8.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.3	3.0	9.3
19-Feb	Z	0.9	0.9	0.8	1.0	0.8	0.5	2.5	6.7	7.1	5.1	7.6	2.8	3.7	1.9	2.6	2.4	0.6	0.0	0.0	0.0	0.0	0.0	0.0	2.1	7.6
20-Feb	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.2	2.2	3.6	4.1	4.5	4.4	2.8	0.5	0.0	0.0	0.0	0.0	3.1	19.0	2.0	19.0
21-Feb	32.1	27.0	Z	36.6	29.4	36.5	40.1	42.3	43.5	94.0	121.3	38.1	7.4	4.8	4.2	1.4	1.2	0.2	0.0	0.0	0.0	0.4	0.4	0.5	24.4	121.3
22-Feb	1.3	0.1	0.0	Z	0.0	10.3	26.1	13.9	18.1	21.2	26.0	32.2	26.0	25.3	28.4	17.8	5.5	3.9	1.1	1.5	10.7	9.6	9.5	19.8	13.4	32.2
23-Feb	33.0	23.0	12.2	4.2	Z	6.7	4.6	11.5	19.6	7.5	1.3	0.8	1.0	1.3	1.0	0.6	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	5.6	33.0
24-Feb	0.3	0.2	0.0	0.0	0.2	Z	0.2	0.4	5.3	11.1	10.6	10.3	17.1	22.2	10.3	2.8	2.5	1.0	0.4	0.3	7.6	7.0	0.7	0.2	4.8	22.2
25-Feb	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.7	1.0	3.2	C	C	C	C	C	C	9.2	0.4	0.5	0.2	0.0	9.4	19.1	--	19.1
26-Feb	9.3	Z	4.4	2.0	4.2	6.0	6.8	32.0	34.3	7.7	11.0	18.9	7.5	5.0	12.8	9.7	8.0	2.2	0.0	0.0	1.2	3.4	2.4	6.5	8.5	34.3
27-Feb	2.8	0.8	Z	0.0	0.0	0.0	0.0	0.0	4.1	13.9	5.5	1.5	5.4	15.1	2.5	1.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	15.1
28-Feb	0.0	0.0	0.0	Z	0.9	0.3	0.0	0.5	5.3	3.9	4.4	7.6	10.9	8.9	5.9	5.2	2.9	1.1	0.0	0.0	0.3	0.0	0.0	0.0	2.5	10.9
	4.9	4.2	1.8	5.0	4.5	6.0	5.8	7.8	12.2	15.6	14.9	11.6	8.1	7.5	6.0	4.0	2.8	1.8	3.5	1.9	2.0	1.7	2.0	3.6	Diurnal Average	
	33.0	27.0	12.2	39.7	43.1	46.2	40.1	44.2	54.2	94.0	121.3	38.1	26.0	25.3	28.4	17.8	8.5	10.5	62.0	26.7	20.2	15.1	11.9	19.8	Diurnal Maximum	

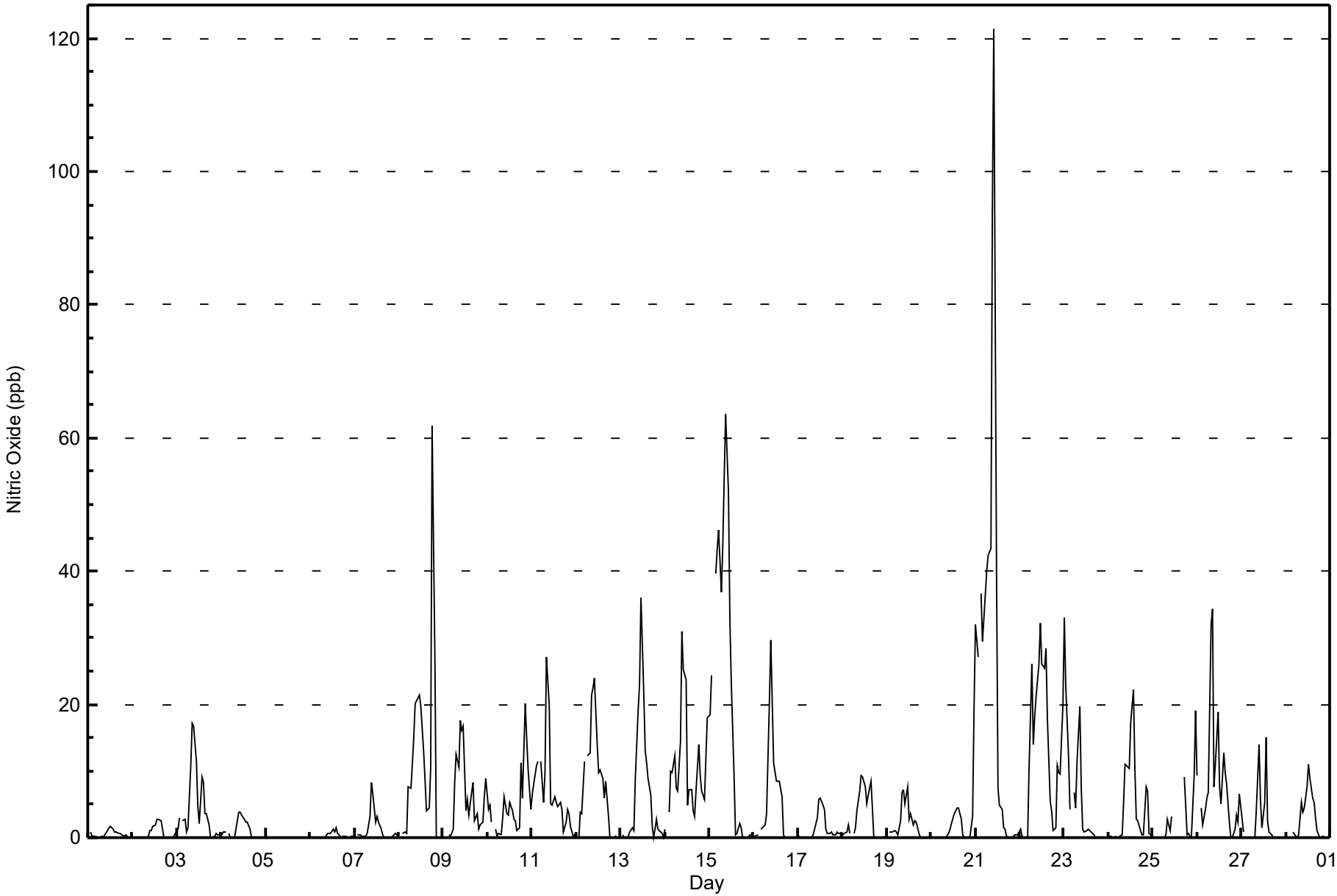
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Fort McKay - Bertha Ganter - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	585	92.13	92.13
21 - 40	39	6.14	98.27
11 - 80	9	1.42	99.69
81 - 159	2	0.31	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 635

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Fort McKay - Bertha Ganter - February 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	56	22	6	7	9	13	60	128	46	21	21	15	18	23	30	572
21 - 40	2	3	1	1	2	0	3	11	6	2	1	0	1	1	1	3	38
11 - 80	1	0	0	0	0	0	0	1	3	2	0	0	0	0	0	2	9
81 - 159	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	100	61	23	7	9	9	16	72	137	50	22	21	16	19	24	35	621

Total Number of Valid Hours: 621

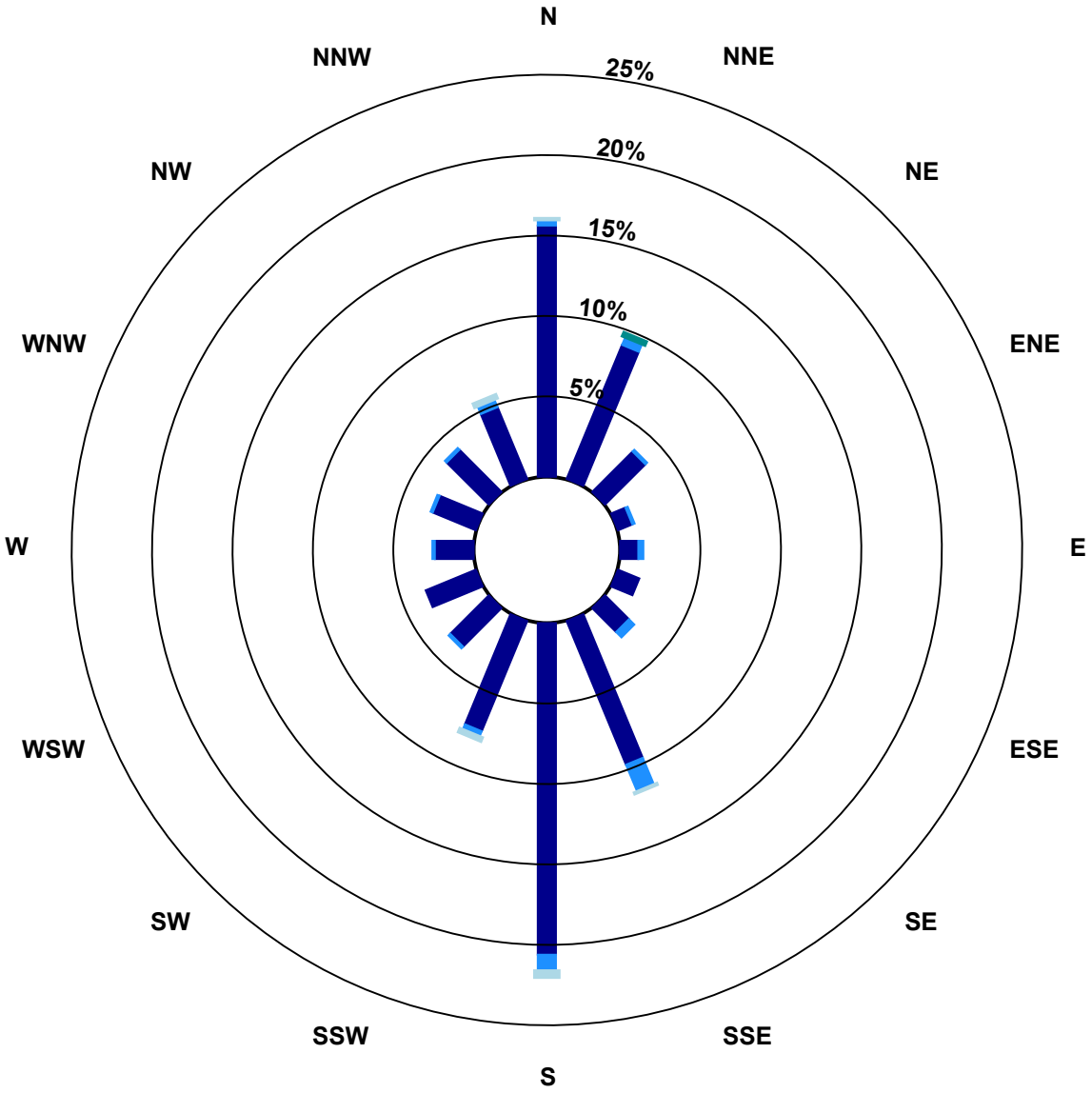
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitric Oxide (NO) - ppb

Fort McKay - Bertha Ganter



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

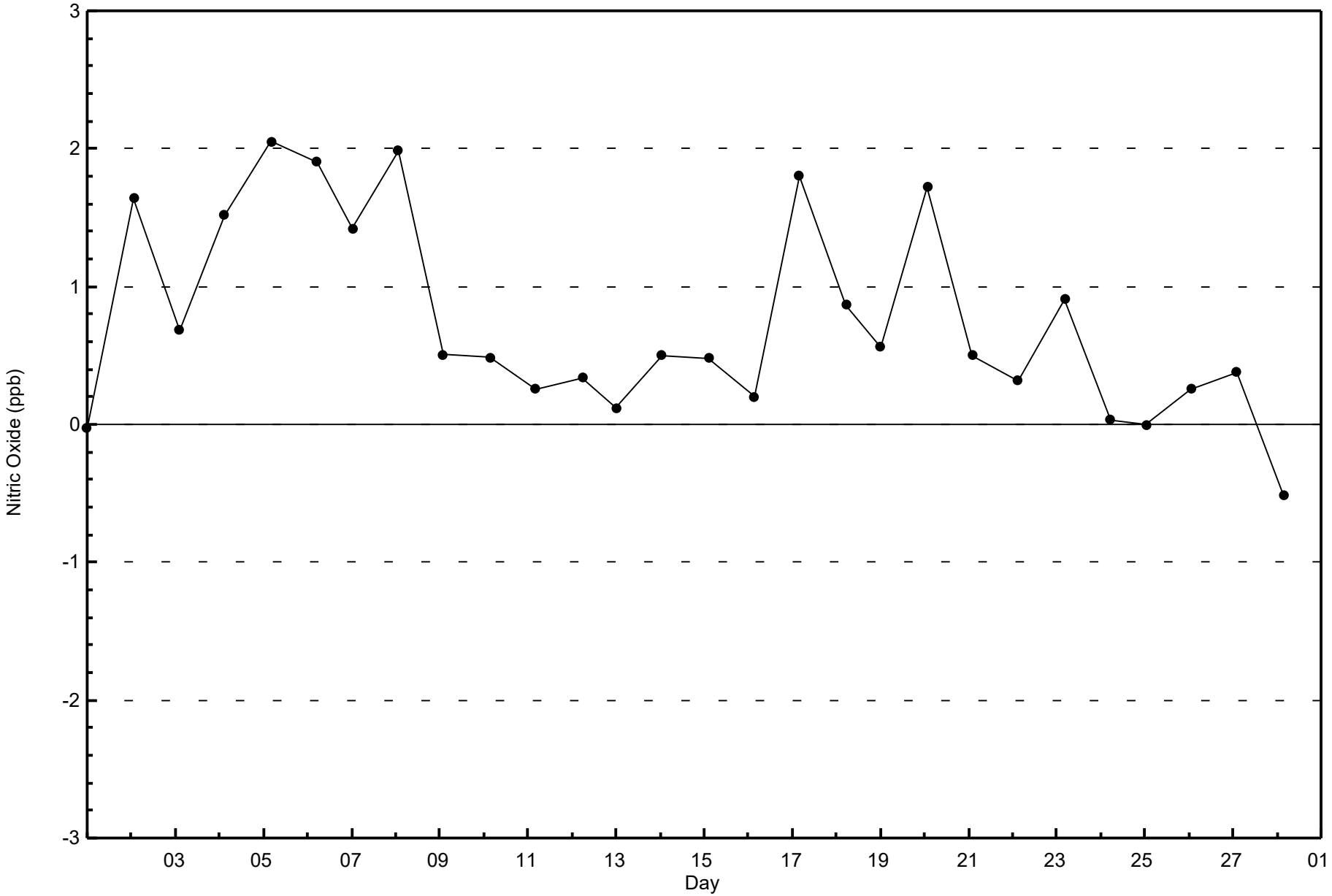
Total Number of Valid Hours: 621

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Fort McKay - Bertha Ganter - February 2025

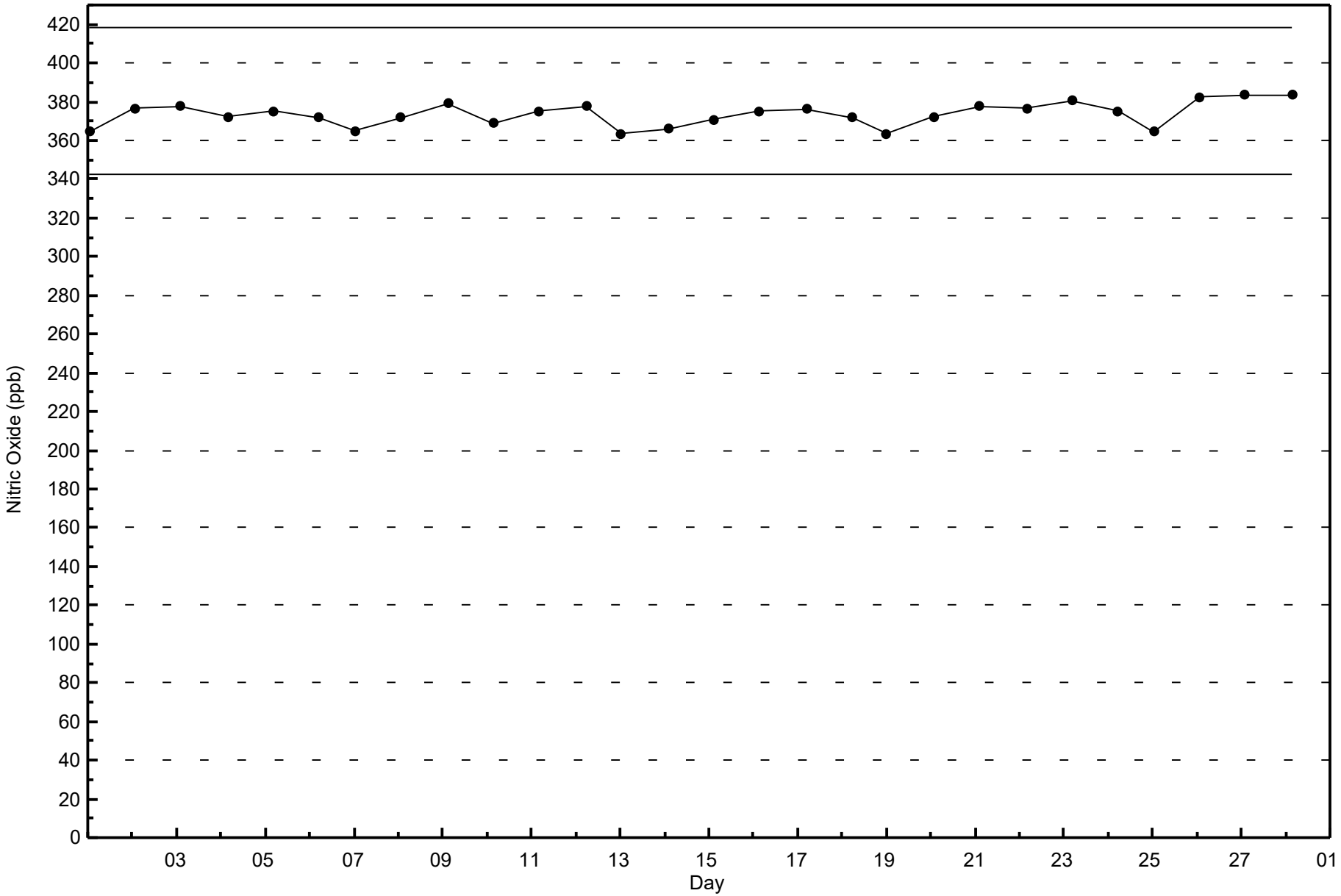


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Fort McKay - Bertha Ganter - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Fort McKay - Bertha Ganter - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 45.0 ppb on Feb 8 19:00 Maximum Daily Average: 24.7 ppb on Feb 22

Minimum Value: 0.1 ppb on Feb 6 07:00 Minimum Daily Average: 2.4 ppb on Feb 5
Maximum Diurnal Average: 18.6 ppb at hour 9 Minimum Diurnal Average: 8.4 ppb at hour 16
Monthly Average: 14.09 ppb Percentiles: P_1 = 0.6 P_{10} = 3.5 Q_1 = 6.1 Median = 12.8 Q_3 = 21.2 P_{90} = 27.5 P_{99} = 34.6

Hours in Service:	672
Hours of Data:	635
Hours of Missing Data:	37
Hours of Calibration:	34
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-Feb	Z	7.8	6.0	6.7	6.8	7.7	4.9	5.3	5.5	4.6	4.4	4.4	4.2	1.8	0.5	1.7	3.4	4.9	3.7	5.4	4.2	6.0	7.6	6.7	5.0	7.8
2-Feb	5.6	Z	5.6	4.9	5.3	5.6	7.3	8.0	6.1	6.3	3.4	2.8	3.3	5.1	5.9	8.3	10.6	14.6	15.5	14.7	13.9	11.8	12.6	16.5	8.4	16.5
3-Feb	16.6	20.8	Z	17.8	18.6	16.2	18.2	23.7	24.2	18.3	10.5	5.0	2.1	9.6	11.2	9.3	17.9	29.0	20.0	7.3	4.3	0.6	0.8	1.9	13.2	29.0
4-Feb	4.7	10.6	13.3	Z	19.5	16.3	18.9	17.8	18.8	12.8	8.0	6.0	5.0	4.7	5.8	5.7	1.4	4.1	12.9	13.7	10.3	7.7	1.3	0.6	9.6	19.5
5-Feb	0.7	0.8	2.0	6.9	Z	5.0	0.6	0.5	0.8	1.5	1.3	1.1	M	M	M	1.7	3.6	3.2	1.5	2.0	4.4	7.0	2.8	0.5	2.4	7.0
6-Feb	0.6	0.6	0.6	1.1	0.7	Z	0.1	0.5	1.3	8.8	3.6	2.5	4.3	3.3	4.8	2.6	3.7	2.5	6.9	5.9	1.8	4.8	7.9	5.9	3.3	8.8
7-Feb	Z	0.9	3.4	1.9	3.5	1.8	1.7	12.5	15.4	15.2	9.0	3.5	5.1	4.3	3.5	2.0	1.0	3.0	6.5	11.4	5.4	11.9	16.2	14.7	6.7	16.2
8-Feb	11.3	Z	23.3	23.4	18.8	28.4	29.5	30.8	28.3	22.8	20.2	19.0	18.0	15.6	15.1	14.0	25.5	37.1	45.0	29.8	5.6	5.2	5.3	7.0	20.8	45.0
9-Feb	5.2	5.7	Z	11.9	11.3	21.3	28.7	29.3	23.6	20.1	14.6	13.2	4.4	5.6	4.4	10.2	14.7	21.1	23.2	21.0	20.3	18.7	20.2	21.5	16.1	29.3
10-Feb	19.7	21.2	20.4	Z	17.9	13.5	16.7	18.5	19.3	13.6	5.6	4.0	6.4	5.2	4.8	6.6	8.2	16.0	35.4	33.8	35.1	34.8	34.0	31.3	18.3	35.4
11-Feb	32.3	31.4	32.4	31.5	Z	31.9	30.1	30.7	28.5	24.8	11.4	9.4	10.4	9.3	9.1	13.5	19.6	22.2	26.7	32.0	25.8	26.9	22.6	22.1	23.2	32.4
12-Feb	19.2	16.6	22.6	26.3	29.7	Z	27.2	27.1	28.0	24.6	21.5	14.3	9.8	11.4	12.9	12.3	14.6	13.2	9.9	17.8	23.1	22.3	22.1	19.5	19.4	29.7
13-Feb	Z	22.3	22.6	16.6	18.9	25.2	26.0	24.7	24.1	22.1	17.0	22.2	17.7	12.7	12.5	13.9	13.3	10.9	12.5	25.0	21.0	22.5	23.5	19.6	19.4	26.0
14-Feb	23.9	Z	25.3	25.1	23.4	22.5	21.2	19.8	17.3	16.5	13.9	12.7	4.8	7.0	8.4	6.9	10.9	22.4	30.4	27.7	27.0	26.3	27.2	26.6	19.4	30.4
15-Feb	24.8	25.6	Z	27.7	28.5	30.2	25.0	26.8	27.8	28.6	24.9	20.5	17.5	10.5	0.8	2.5	8.7	20.2	22.4	18.8	7.7	6.5	8.8	14.4	18.7	30.2
16-Feb	16.1	16.9	16.6	Z	16.8	18.3	18.9	21.6	22.6	20.1	17.3	10.9	9.2	9.8	11.2	13.1	6.9	4.8	6.2	5.5	4.7	5.1	5.9	11.2	12.6	22.6
17-Feb	12.9	2.9	3.3	4.2	Z	11.2	11.7	5.4	4.3	4.0	4.7	6.8	6.1	5.9	6.3	3.5	2.0	4.3	7.0	6.1	7.4	6.3	7.1	11.1	6.3	12.9
18-Feb	14.0	14.3	12.8	17.2	18.7	Z	11.0	15.1	13.6	10.5	9.6	8.8	7.6	6.3	8.4	12.9	14.4	7.6	11.5	15.4	19.2	12.2	11.4	13.0	12.4	19.2
19-Feb	Z	7.4	7.6	9.6	14.4	16.4	20.0	23.3	21.1	12.8	8.2	10.1	4.3	5.5	3.6	6.8	11.9	14.4	12.2	4.5	4.1	10.0	11.2	2.5	10.5	23.3
20-Feb	2.3	Z	5.2	4.9	4.2	3.2	2.7	3.0	3.5	3.9	6.4	8.5	8.3	6.1	6.9	8.6	11.2	11.9	14.7	15.5	16.8	18.0	24.0	28.2	9.5	28.2
21-Feb	28.5	24.2	Z	28.1	25.4	27.2	26.4	24.7	24.7	34.2	40.9	22.9	13.4	10.2	11.2	6.7	8.7	9.3	14.7	14.9	16.9	23.6	23.7	29.1	21.3	40.9
22-Feb	30.9	18.8	10.8	Z	13.9	28.7	34.8	33.3	32.9	29.6	28.2	27.9	24.3	26.2	26.0	20.9	16.3	22.4	24.2	22.2	26.1	25.6	21.8	22.3	24.7	34.8
23-Feb	26.8	29.5	26.5	27.1	Z	24.7	22.9	21.4	18.3	13.6	4.4	2.6	3.5	3.7	4.1	3.8	5.0	7.7	5.8	11.8	9.2	4.0	5.6	5.6	12.5	29.5
24-Feb	3.8	14.2	9.9	8.2	20.3	Z	18.9	17.6	22.7	21.8	18.5	14.0	18.3	20.3	12.9	9.3	12.3	11.9	12.2	11.3	20.5	29.4	19.2	12.9	15.7	29.4
25-Feb	Z	6.5	6.5	8.7	10.2	9.6	9.5	20.9	18.7	6.9	9.5	C	C	C	C	C	C	30.7	28.3	30.9	29.1	17.3	28.3	32.5	--	32.5
26-Feb	31.2	Z	28.0	27.8	28.3	25.9	24.3	24.8	25.2	13.5	14.3	16.6	8.3	6.6	14.0	14.6	18.3	17.1	18.3	15.4	25.6	28.3	28.2	32.0	21.2	32.0
27-Feb	30.4	27.0	Z	9.4	8.7	5.2	6.3	12.1	17.5	21.2	11.3	6.2	6.0	15.8	6.9	6.0	6.9	10.3	12.5	12.6	9.3	9.0	9.8	11.2	11.8	30.4
28-Feb	15.9	12.8	4.5	Z	5.4	8.1	8.2	15.2	25.3	15.1	12.5	15.1	16.0	13.0	8.4	10.2	11.4	13.8	16.6	24.4	23.9	15.1	13.4	13.7	13.8	25.3
	16.4	14.7	13.4	15.1	15.4	16.8	16.8	18.4	18.6	16.0	12.7	10.8	9.2	9.1	8.4	8.4	10.5	14.0	16.3	16.3	15.1	14.9	15.1	15.5	Diurnal Average	
	32.3	31.4	32.4	31.5	29.7	31.9	34.8	33.3	32.9	34.2	40.9	27.9	24.3	26.2	26.0	20.9	25.5	37.1	45.0	33.8	35.1	34.8	34.0	32.5	Diurnal Maximum	

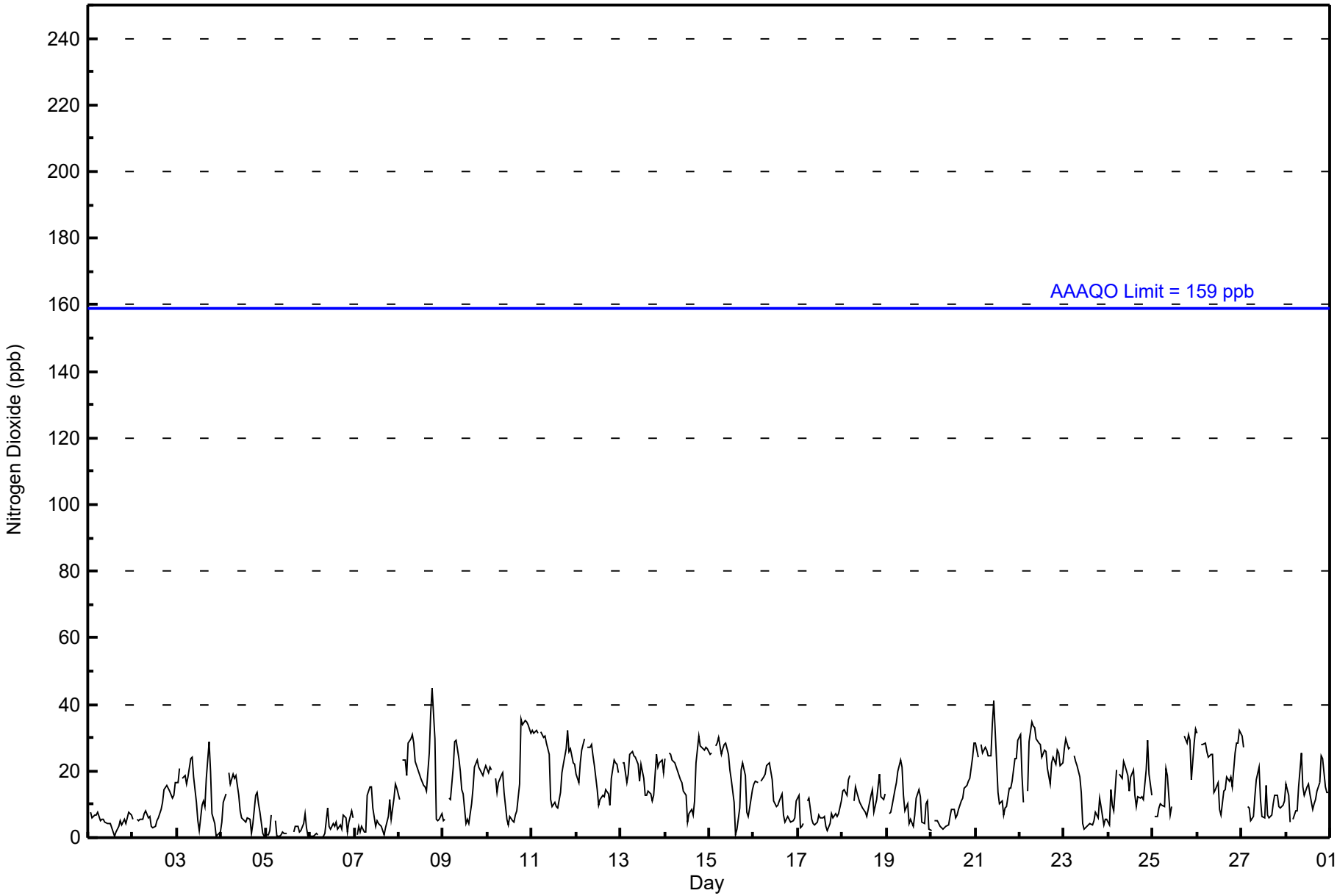
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Fort McKay - Bertha Ganter - February 2025



Nitrogen Dioxide (NO_2) - ppb

Fort McKay - Bertha Ganter - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	466	73.39	73.39
21 - 40	167	26.30	99.69
11 - 80	2	0.31	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 635

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Fort McKay - Bertha Ganter - February 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	55	20	7	7	8	14	62	100	37	19	15	12	9	8	15	461
21 - 40	26	5	3	0	2	1	2	10	37	13	3	6	4	10	16	20	158
11 - 80	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	100	61	23	7	9	9	16	72	137	50	22	21	16	19	24	35	621

Total Number of Valid Hours: 621

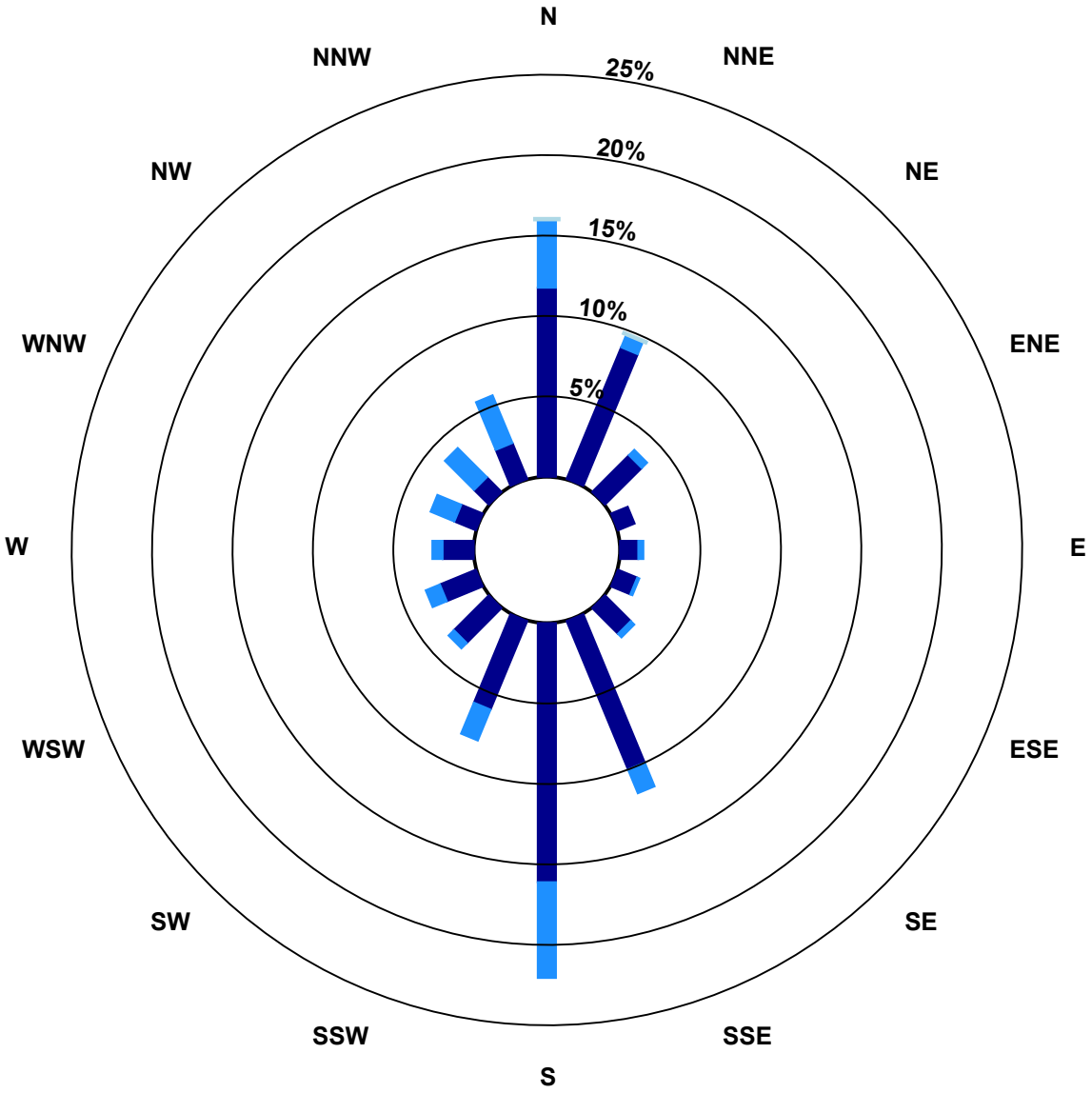
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Dioxide (NO_2) - ppb

Fort McKay - Bertha Ganter



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

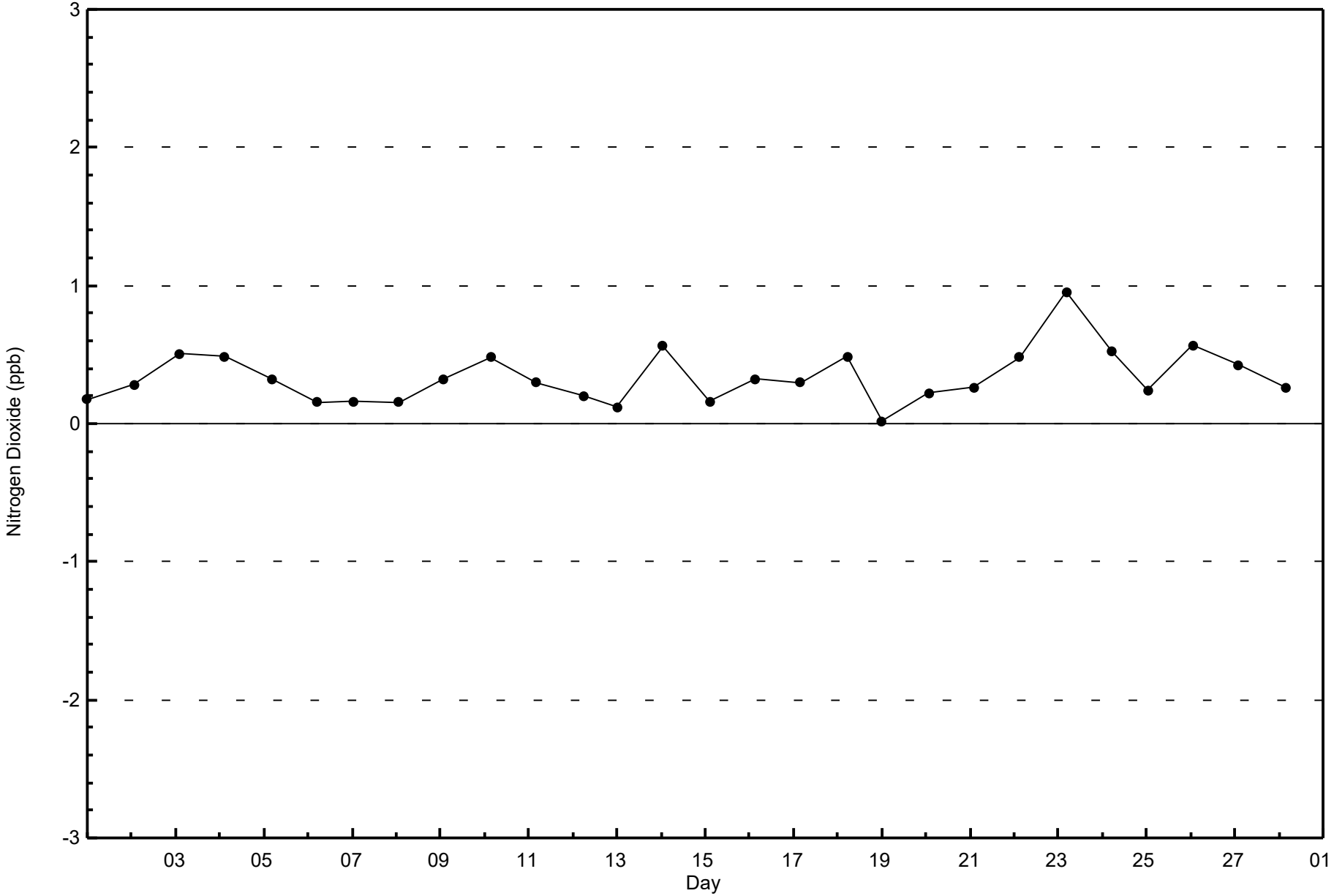
Total Number of Valid Hours: 621

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Fort McKay - Bertha Ganter - February 2025

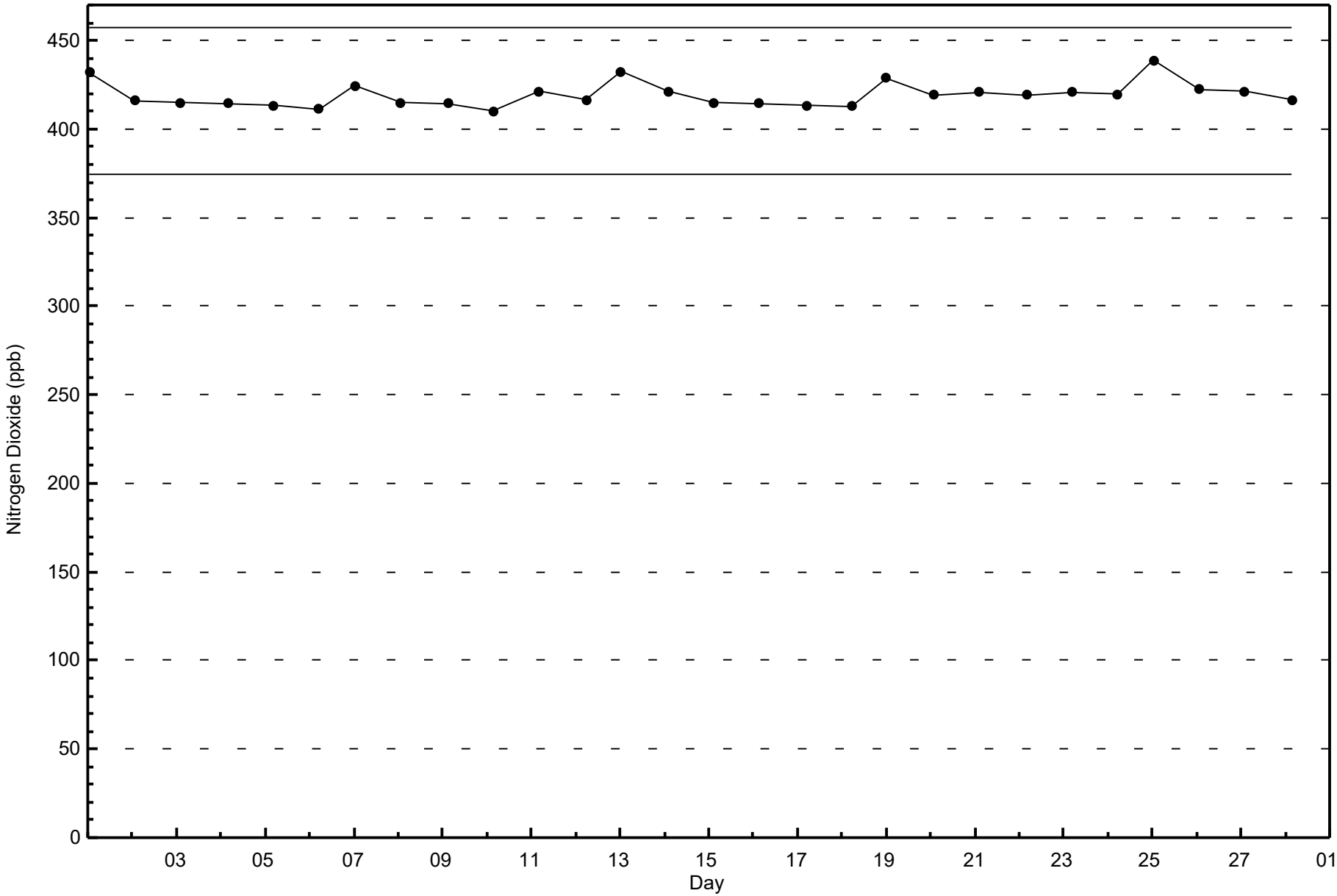


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Fort McKay - Bertha Ganter - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Fort McKay - Bertha Ganter - February 2025

Maximum Value: 162.2 ppb on Feb 21 11:00

Maximum Daily Average: 45.7 ppb on Feb 21

Minimum Value: 0.1 ppb on Feb 6 07:00

Minimum Daily Average: 2.4 ppb on Feb 5

Maximum Diurnal Average: 31.6 ppb at hour 10

Minimum Diurnal Average: 12.5 ppb at hour 16

Monthly Average: 19.94 ppb

Percentiles: P_1 = 0.6 P_{10} = 4.1 Q_1 = 7.4 Median = 15.4 Q_3 = 26.9 P_{90} = 41.5 P_{99} = 74.8

Hours in Service:	672
Hours of Data:	635
Hours of Missing Data:	37
Hours of Calibration:	34
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-Feb	Z	8.5	6.3	6.8	6.8	7.7	4.9	5.5	5.5	5.0	5.4	5.9	5.8	3.0	1.4	2.6	3.9	5.6	4.2	5.7	4.6	6.2	7.7	6.7	5.5	8.5
2-Feb	5.6	Z	5.7	5.0	5.4	5.7	7.4	8.1	6.3	7.4	4.6	4.4	5.3	7.9	8.7	10.9	11.9	14.7	15.5	14.7	13.9	11.8	12.7	17.2	9.2	17.2
3-Feb	17.8	23.7	Z	20.3	21.4	17.1	19.7	34.4	41.3	35.1	22.0	9.6	4.2	18.8	19.5	12.8	21.5	31.0	20.1	7.4	4.6	1.2	1.3	2.3	17.7	41.3
4-Feb	5.1	11.5	14.1	Z	20.2	16.3	19.0	17.8	20.1	16.7	11.8	9.4	7.7	7.1	8.1	7.0	1.4	4.1	12.9	13.7	10.3	7.7	1.3	0.6	10.6	20.2
5-Feb	0.7	0.8	2.0	6.9	Z	5.0	0.6	0.5	0.8	1.5	1.4	1.1	M	M	M	1.8	3.7	3.2	1.5	2.0	4.4	7.0	2.8	0.5	2.4	7.0
6-Feb	0.6	0.6	0.6	1.1	0.7	Z	0.1	0.5	1.3	9.4	4.2	3.2	5.6	4.2	6.2	3.2	3.9	2.6	7.0	6.0	1.9	4.9	8.0	6.2	3.6	9.4
7-Feb	Z	1.3	3.7	2.2	3.8	2.1	1.9	13.1	18.6	23.4	15.5	5.7	8.3	6.6	4.9	2.4	1.0	3.0	6.5	11.4	5.4	12.4	16.7	15.1	8.0	23.4
8-Feb	11.3	Z	24.0	24.4	19.4	36.0	36.9	41.7	43.3	42.9	41.1	40.5	37.7	28.5	23.9	17.9	30.0	47.6	107.0	56.5	5.6	5.2	5.3	7.0	31.9	107.0
9-Feb	5.2	5.7	Z	12.2	11.5	22.7	37.0	41.8	34.2	37.7	30.7	29.9	8.5	11.2	7.8	16.9	23.0	23.6	26.8	22.3	22.3	21.1	26.4	30.3	22.1	41.8
10-Feb	23.9	26.1	22.8	Z	19.3	13.8	17.3	18.9	22.2	19.7	9.1	7.3	11.7	9.2	7.6	9.2	9.4	17.5	46.6	39.7	55.3	49.9	44.3	35.5	23.3	55.3
11-Feb	38.8	39.4	43.2	42.9	Z	43.4	35.3	40.4	55.5	44.8	16.4	14.2	16.5	14.6	13.8	18.8	23.8	23.0	29.1	36.2	29.3	28.6	22.8	22.4	30.1	55.5
12-Feb	19.2	16.7	26.5	29.9	41.2	Z	39.6	39.9	49.4	47.0	45.5	28.4	19.6	21.6	21.8	18.2	23.1	16.3	9.9	17.8	23.1	22.5	22.2	19.6	26.9	49.4
13-Feb	Z	22.7	22.6	16.6	19.1	26.0	27.5	25.9	32.9	41.1	40.1	58.1	39.4	25.8	23.8	22.8	19.7	12.6	12.5	27.7	22.2	23.5	24.2	19.6	26.4	58.1
14-Feb	25.3	Z	29.2	35.1	33.1	34.8	28.6	26.9	31.6	47.4	39.2	36.5	9.8	14.2	15.5	11.0	14.1	29.3	44.4	37.0	34.0	32.1	39.1	44.7	30.1	47.4
15-Feb	43.3	50.0	Z	67.4	71.6	76.4	61.9	71.0	82.0	92.2	76.8	53.2	40.8	19.5	1.2	3.2	10.8	21.6	22.4	18.8	7.7	6.5	9.3	14.6	40.1	92.2
16-Feb	16.2	17.1	17.0	Z	18.1	20.0	20.8	25.1	42.8	49.8	37.9	22.0	17.6	18.3	19.8	19.3	7.3	4.8	6.2	5.5	4.7	5.1	5.9	11.2	17.9	49.8
17-Feb	13.2	2.9	3.3	4.2	Z	11.3	11.8	5.4	4.7	5.2	7.7	12.5	12.1	10.8	10.5	4.8	2.6	4.9	7.8	6.6	7.9	7.2	7.7	11.8	7.7	13.2
18-Feb	14.5	14.9	13.6	19.2	19.3	Z	11.5	16.5	17.5	17.4	18.9	17.9	15.2	11.3	14.8	21.4	18.9	7.6	11.5	15.4	19.2	12.2	11.4	13.3	15.4	21.4
19-Feb	Z	8.3	8.5	10.4	15.4	17.2	20.5	25.8	27.8	19.9	13.3	17.7	7.1	9.2	5.5	9.4	14.3	15.0	12.2	4.5	4.1	10.0	11.2	2.5	12.6	27.8
20-Feb	2.3	Z	5.2	4.9	4.2	3.2	2.7	3.0	3.5	4.5	7.6	10.7	11.9	10.2	11.4	13.0	14.0	12.4	14.7	15.5	16.8	18.0	27.1	47.2	11.5	47.2
21-Feb	60.6	51.2	Z	64.7	54.8	63.7	66.5	67.0	68.2	128.2	162.2	61.0	20.8	15.0	15.4	8.1	9.9	9.5	14.7	14.9	16.9	24.0	24.1	29.6	45.7	162.2
22-Feb	32.2	18.9	10.8	Z	13.9	39.0	60.9	47.2	51.0	50.8	54.2	60.1	50.3	51.5	54.4	38.7	21.8	26.3	25.3	23.7	36.8	35.2	31.3	42.1	38.1	60.9
23-Feb	59.8	52.5	38.7	31.3	Z	31.4	27.5	32.9	37.9	21.1	5.7	3.4	4.5	5.0	5.1	4.4	5.5	7.8	5.8	11.8	9.2	4.0	5.6	5.6	18.1	59.8
24-Feb	4.1	14.4	9.9	8.2	20.5	Z	19.1	18.0	28.0	32.9	29.1	24.3	35.4	42.5	23.2	12.1	14.8	12.9	12.6	11.6	28.1	36.4	19.9	13.1	20.5	42.5
25-Feb	Z	6.5	6.5	8.7	10.2	9.6	9.5	21.3	21.4	7.9	12.7	C	C	C	C	C	C	39.9	28.7	31.4	29.3	17.3	37.7	51.6	--	51.6
26-Feb	40.5	Z	32.4	29.8	32.5	31.9	31.1	56.8	59.5	21.2	25.3	35.5	15.8	11.6	26.8	24.3	26.3	19.3	18.3	15.4	26.8	31.7	30.6	38.5	29.6	59.5
27-Feb	33.2	27.8	Z	9.4	8.7	5.2	6.3	12.1	21.6	35.1	16.8	7.7	11.4	30.9	9.4	7.0	7.3	10.3	12.5	12.6	9.3	9.0	9.8	11.2	14.1	35.1
28-Feb	15.9	12.8	4.5	Z	6.3	8.4	8.2	15.7	30.6	19.0	16.9	22.7	26.9	21.9	14.3	15.4	14.3	14.9	16.6	24.4	24.2	15.1	13.4	13.7	16.4	30.6
	21.3	18.9	15.3	20.1	19.9	22.8	22.6	26.2	30.7	31.6	27.6	22.3	17.3	16.6	14.4	12.5	13.3	15.8	19.8	18.2	17.1	16.6	17.1	19.1	Diurnal Average	
	60.6	52.5	43.2	67.4	71.6	76.4	66.5	71.0	82.0	128.2	162.2	61.0	50.3	51.5	54.4	38.7	30.0	47.6	107.0	56.5	55.3	49.9	44.3	51.6	Diurnal Maximum	

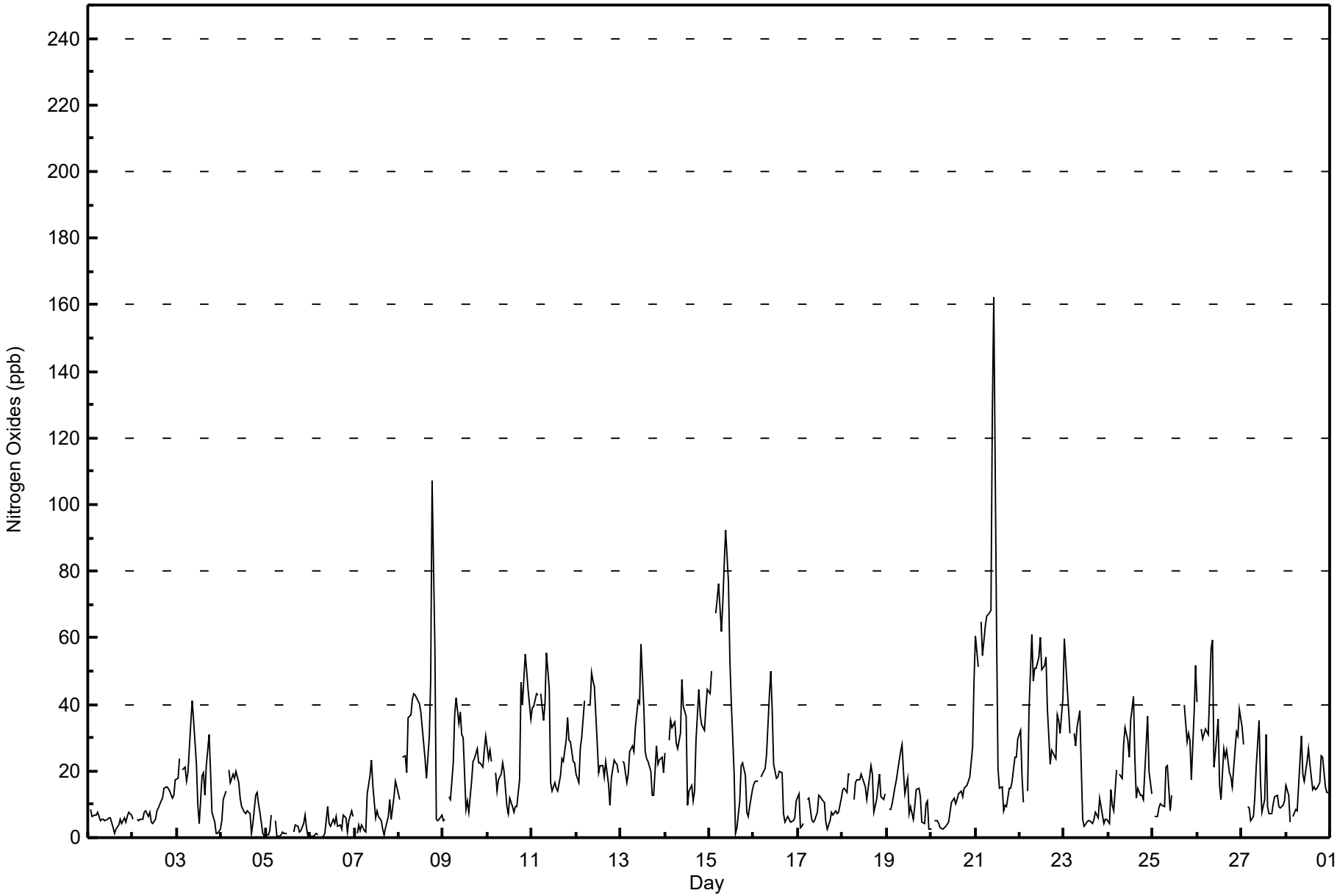
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Fort McKay - Bertha Ganter - February 2025



Nitrogen Oxides (NO_X) - ppb

Fort McKay - Bertha Ganter - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	402	63.31	63.31
21 - 40	164	25.83	89.13
11 - 80	64	10.08	99.21
81 - 159	4	0.63	99.84
> 159	1	0.16	100.00

Total Number of Valid Hours: 635

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Fort McKay - Bertha Ganter - February 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	47	13	6	6	8	9	46	93	35	15	14	10	9	7	15	399
21 - 40	26	9	9	1	1	1	5	16	30	6	6	7	5	8	11	14	155
11 - 80	7	3	1	0	2	0	2	10	12	9	1	0	1	2	6	6	62
81 - 159	1	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	4
> 159	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Totals	100	61	23	7	9	9	16	72	137	50	22	21	16	19	24	35	621

Total Number of Valid Hours: 621

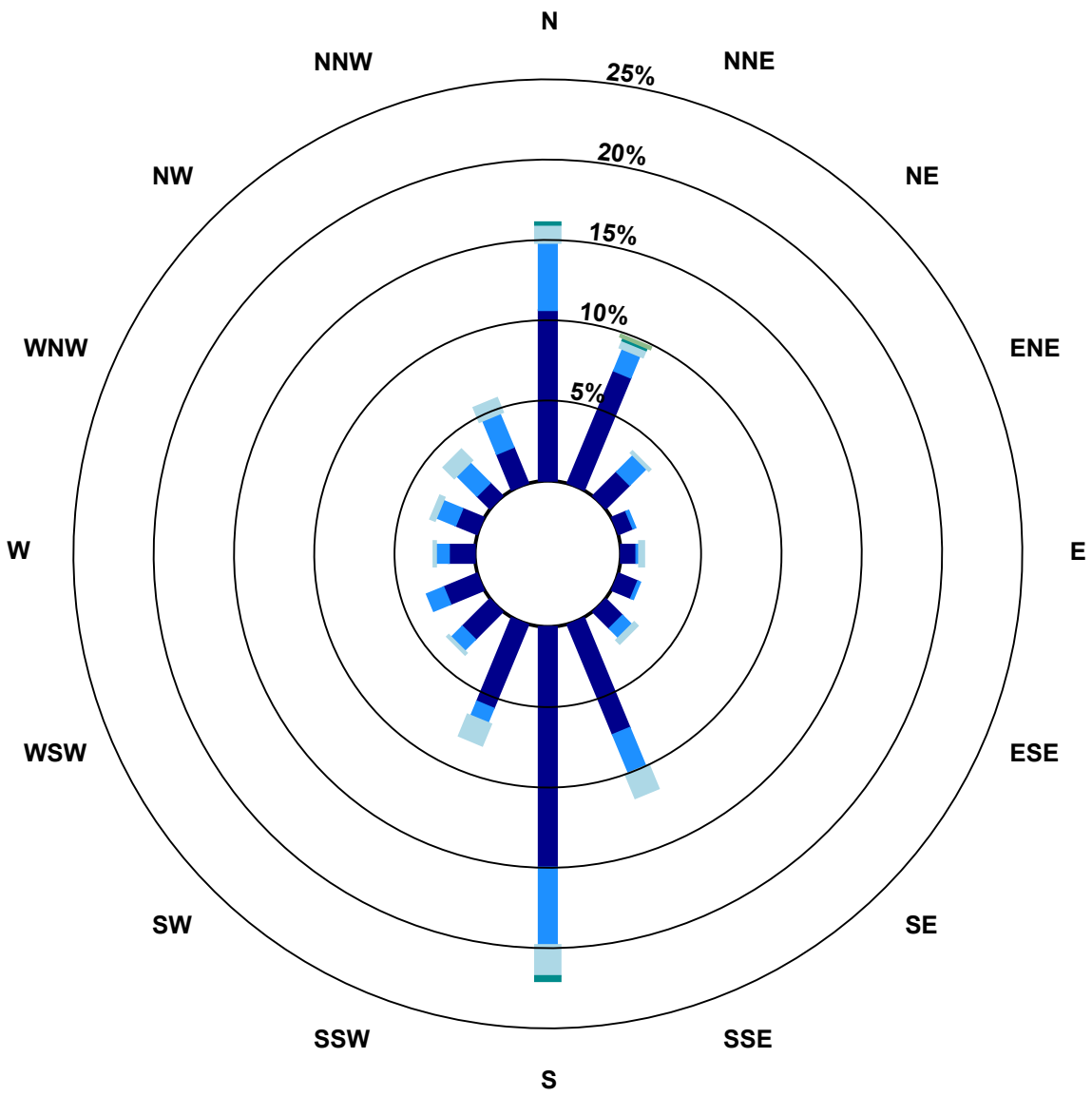
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Oxides (NO_X) - ppb

Fort McKay - Bertha Ganter



Classes (ppb)

- 0 - 20
- 21 - 40
- 11 - 80
- 81 - 159
- > 159

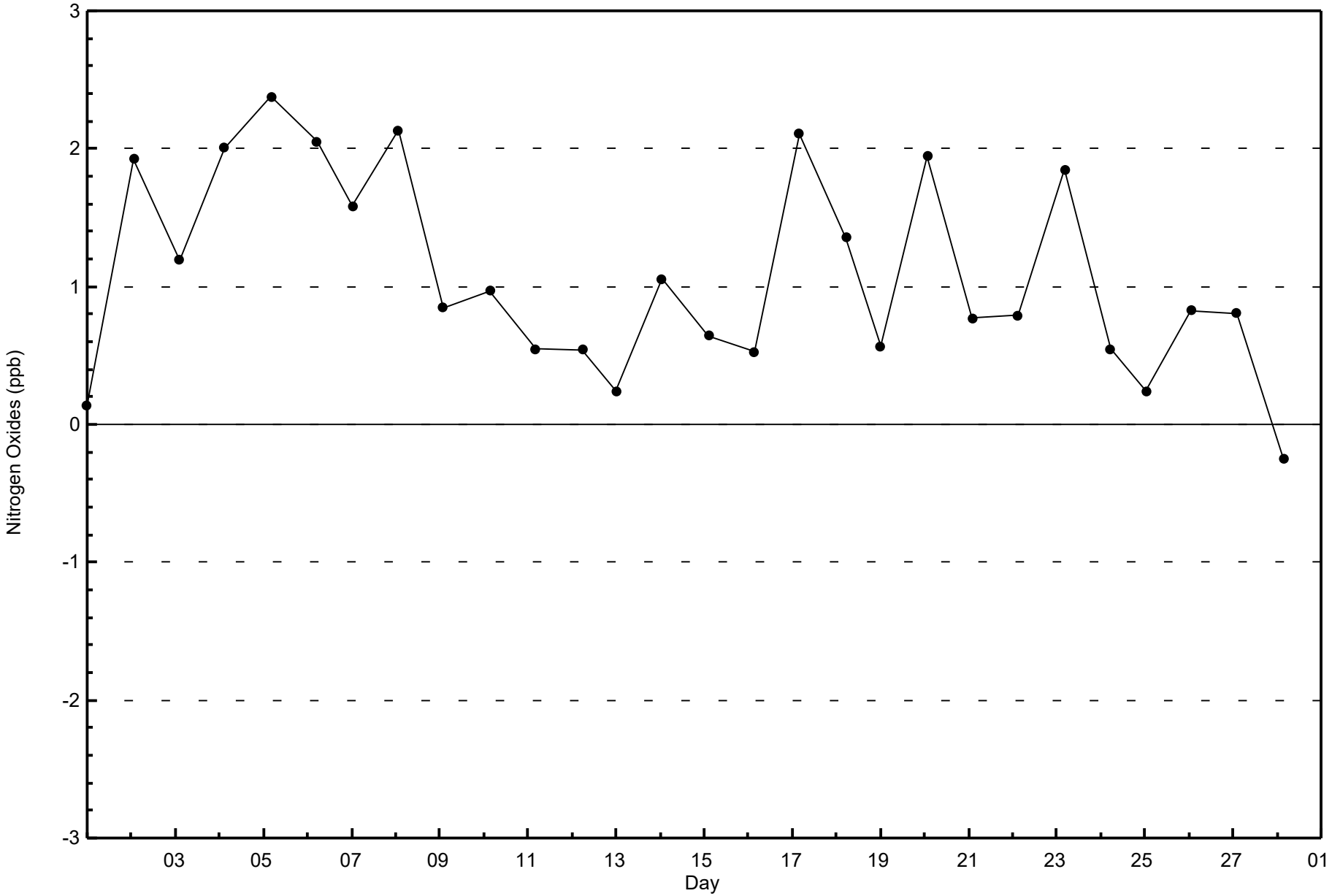
Total Number of Valid Hours: 621

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Fort McKay - Bertha Ganter - February 2025

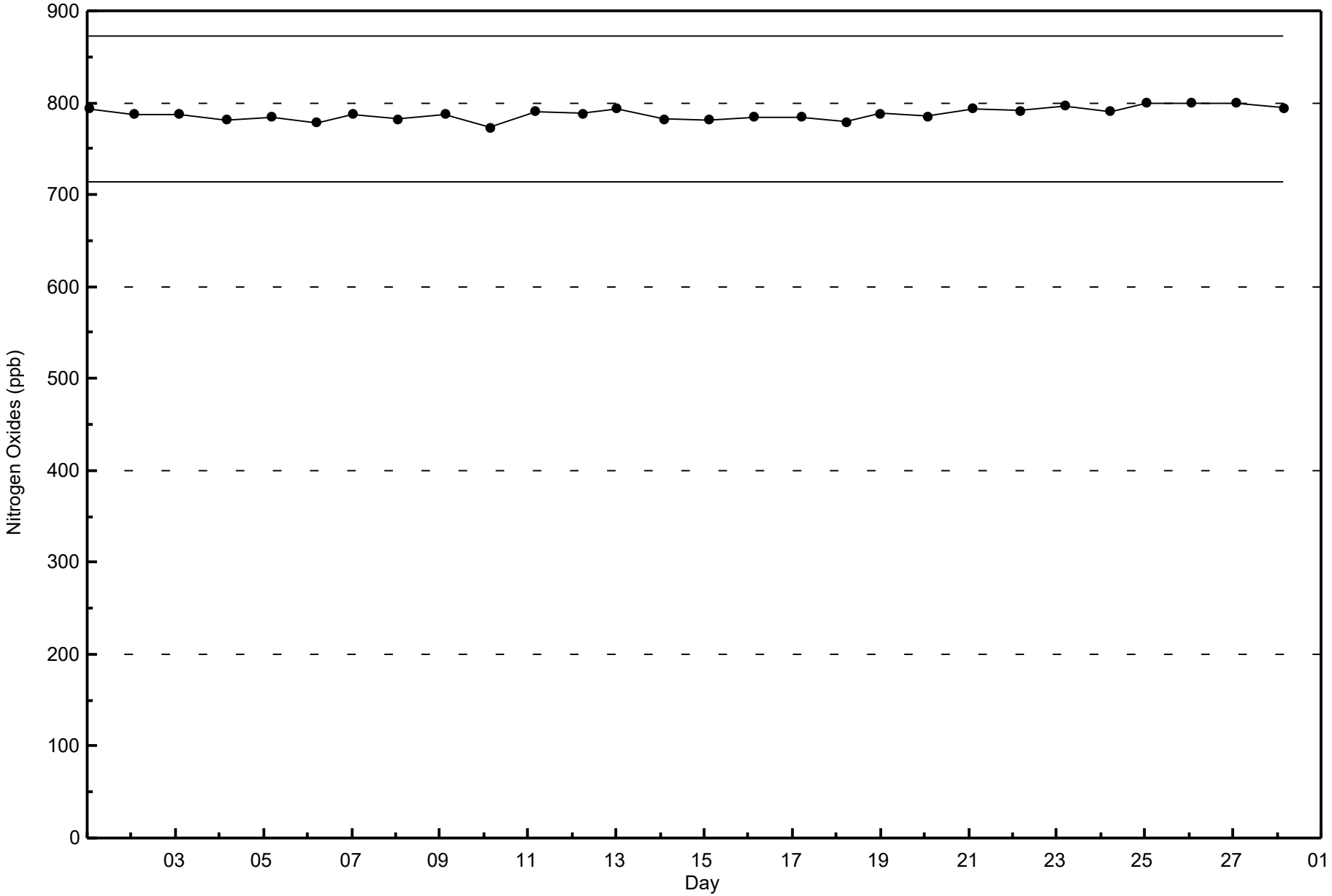


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Fort McKay - Bertha Ganter - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Fort McKay - Bertha Ganter - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 34.5 ppb on Feb 7 17:00 Maximum Daily Average: 30.8 ppb on Feb 5

Minimum Value: 0.0 ppb on Feb 21 05:00 Minimum Daily Average: 7.5 ppb on Feb 14
Maximum Diurnal Average: 24.6 ppb at hour 15 Minimum Diurnal Average: 11.0 ppb at hour 8
Monthly Average: 16.76 ppb Percentiles: P_1 = 0.2 P_{10} = 1.4 Q_1 = 8.3 Median = 18.1 Q_3 = 24.3 P_{90} = 29.8 P_{99} = 33.5

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	32
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-Feb	21.2	21.5	23.4	23.0	Z	24.2	29.0	29.7	29.0	29.2	28.0	27.5	27.5	30.1	30.9	27.4	23.0	20.3	21.7	19.8	20.9	18.8	16.9	17.3	24.4	30.9
2-Feb	19.0	20.3	20.9	22.1	21.6	Z	20.2	19.9	21.7	21.5	23.7	24.7	23.8	22.7	22.1	19.9	17.8	13.4	12.6	13.9	13.5	13.7	12.2	7.3	18.6	24.7
3-Feb	Z	3.2	3.5	5.7	5.0	8.3	6.3	3.2	3.2	9.5	16.4	25.2	31.0	24.0	22.6	24.2	16.8	7.0	14.8	26.3	29.0	32.3	31.7	31.1	16.5	32.3
4-Feb	28.4	Z	19.6	15.3	12.4	15.3	13.1	14.6	14.4	19.9	25.2	28.0	29.3	30.3	29.8	30.5	33.6	29.6	19.8	18.1	21.4	24.0	31.4	31.9	23.3	33.6
5-Feb	31.9	32.0	Z	25.9	24.1	28.0	32.3	32.7	32.7	32.3	32.7	32.8	33.2	33.0	33.1	M	30.0	30.4	31.6	31.1	28.6	25.9	30.3	33.1	30.8	33.2
6-Feb	33.2	33.5	33.5	Z	33.1	33.7	33.2	32.4	31.6	25.3	30.2	31.4	29.8	30.5	28.8	31.1	29.6	30.5	24.7	25.4	29.5	25.0	22.6	23.7	29.7	33.7
7-Feb	29.8	29.9	28.2	30.0	Z	30.5	29.5	20.1	16.6	16.5	22.2	30.9	29.6	31.1	32.5	34.4	34.5	31.9	27.4	22.7	27.7	19.9	16.0	17.8	26.5	34.5
8-Feb	19.4	9.8	7.5	6.5	8.4	Z	1.0	1.0	3.6	9.7	14.9	16.5	17.8	20.6	21.7	23.7	14.7	4.1	0.9	11.1	26.8	26.1	25.6	24.1	13.7	26.8
9-Feb	Z	23.0	23.0	16.2	15.6	6.0	0.2	1.0	3.5	7.8	12.8	15.5	21.6	20.6	21.5	16.3	11.7	5.7	4.0	4.5	4.1	4.1	1.1	1.2	10.5	23.0
10-Feb	2.2	Z	4.7	5.6	8.4	14.2	11.5	11.0	12.2	17.8	26.7	28.2	26.1	27.3	28.1	26.5	24.9	16.2	1.1	1.6	1.0	0.9	0.7	2.1	13.0	28.2
11-Feb	0.7	0.6	Z	0.7	0.5	1.6	3.3	1.8	2.4	8.6	22.2	23.9	23.7	24.6	25.5	22.2	16.6	13.0	8.0	2.9	6.4	5.6	10.9	8.1	10.2	25.5
12-Feb	9.7	10.4	2.4	Z	0.3	0.1	0.6	1.2	2.4	5.9	8.5	13.6	C	C	C	C	22.8	19.5	20.1	12.4	9.1	10.8	11.6	14.9	9.3	22.8
13-Feb	15.0	11.8	11.6	16.1	Z	6.9	5.6	4.6	6.2	8.8	11.9	13.4	18.4	21.6	21.2	19.1	18.0	18.9	15.6	4.6	9.0	6.5	5.4	8.2	12.1	21.6
14-Feb	3.3	0.8	0.8	0.3	0.7	Z	0.6	1.8	4.5	7.9	13.0	15.3	23.0	22.4	21.7	22.2	19.2	8.4	1.0	1.6	1.5	1.4	0.6	0.5	7.5	23.0
15-Feb	Z	0.4	0.7	0.6	0.6	0.6	0.8	1.4	1.9	3.6	8.3	12.7	16.3	23.4	32.5	30.1	24.1	14.3	12.1	15.6	27.7	28.1	24.2	17.9	13.0	32.5
16-Feb	14.2	Z	9.2	11.0	7.2	5.5	5.0	2.5	4.7	9.8	14.9	19.1	21.2	23.7	22.5	21.1	27.1	27.0	24.5	22.9	21.9	19.4	14.0	7.8	15.5	27.1
17-Feb	8.2	17.1	Z	17.0	15.1	10.7	12.5	19.7	21.1	20.6	21.7	20.9	21.8	22.9	22.9	25.6	25.9	23.1	20.8	19.8	17.5	19.1	18.7	14.5	19.0	25.9
18-Feb	12.4	11.5	10.9	Z	7.0	11.4	16.0	12.9	14.5	18.1	19.2	21.1	23.1	24.8	24.2	19.8	18.2	23.7	18.5	14.3	12.0	20.6	21.4	20.5	17.2	24.8
19-Feb	24.7	26.1	24.9	22.1	Z	14.5	10.2	8.0	10.5	18.6	23.3	22.6	27.6	27.6	30.7	28.4	24.8	23.1	24.5	29.9	29.0	24.1	25.0	33.1	23.2	33.1
20-Feb	34.0	34.4	31.4	30.2	29.6	Z	30.4	30.0	29.3	28.5	25.7	23.5	23.6	25.8	25.3	23.8	21.9	21.1	17.4	14.5	11.4	8.3	2.8	0.6	22.8	34.4
21-Feb	Z	1.0	0.5	0.1	0.0	0.0	0.5	0.6	1.9	2.2	3.0	10.9	18.0	21.9	21.7	25.8	25.0	24.2	19.2	19.7	17.1	10.7	9.6	6.2	10.4	25.8
22-Feb	4.3	Z	20.2	23.0	17.3	4.4	1.0	1.0	2.2	4.8	6.7	7.9	10.9	9.8	10.8	14.3	14.2	7.7	4.8	4.4	1.2	0.6	0.4	0.4	7.5	23.0
23-Feb	0.3	0.2	Z	0.6	0.4	0.3	0.4	0.9	1.7	11.0	23.7	27.0	28.3	28.8	28.0	28.5	27.5	24.7	25.3	19.6	21.4	26.4	25.7	26.1	16.4	28.8
24-Feb	27.9	18.7	22.6	Z	12.2	5.3	13.2	12.8	9.2	11.0	13.4	17.1	14.3	14.0	18.5	19.3	16.5	15.7	12.1	11.9	5.3	3.9	10.2	16.9	14.0	27.9
25-Feb	21.7	24.3	25.3	24.0	Z	23.4	23.4	12.8	16.4	27.0	25.2	21.3	22.3	20.1	21.3	23.7	18.9	6.9	5.7	2.5	3.5	11.4	3.1	0.6	16.7	27.0
26-Feb	0.6	0.9	1.0	1.2	0.5	Z	0.2	0.9	5.8	16.5	16.6	16.8	23.2	24.1	18.8	19.9	15.5	15.0	11.7	13.5	4.5	2.3	3.2	0.7	9.3	24.1
27-Feb	Z	3.8	10.1	17.4	17.7	18.1	17.8	12.2	8.1	6.6	13.2	17.8	18.2	14.1	24.0	25.7	24.7	21.7	20.7	21.8	25.7	26.7	26.1	24.1	18.1	26.7
28-Feb	20.0	Z	30.3	32.4	28.1	25.2	23.3	18.4	11.2	20.1	20.5	17.5	17.0	20.0	23.9	22.7	21.9	20.5	15.3	8.0	8.9	15.1	15.5	13.1	19.5	32.4
	16.6	14.6	15.3	14.4	11.6	12.5	12.2	11.0	11.5	15.0	18.7	20.8	23.0	23.7	24.6	24.1	22.1	18.5	15.6	14.8	15.6	15.4	14.9	14.4	Diurnal Average	
	34.0	34.4	33.5	32.4	33.1	33.7	33.2	32.7	32.7	32.3	32.7	32.8	33.2	33.0	33.1	34.4	34.5	31.9	31.6	31.1	29.5	32.3	31.7	33.1	Diurnal Maximum	

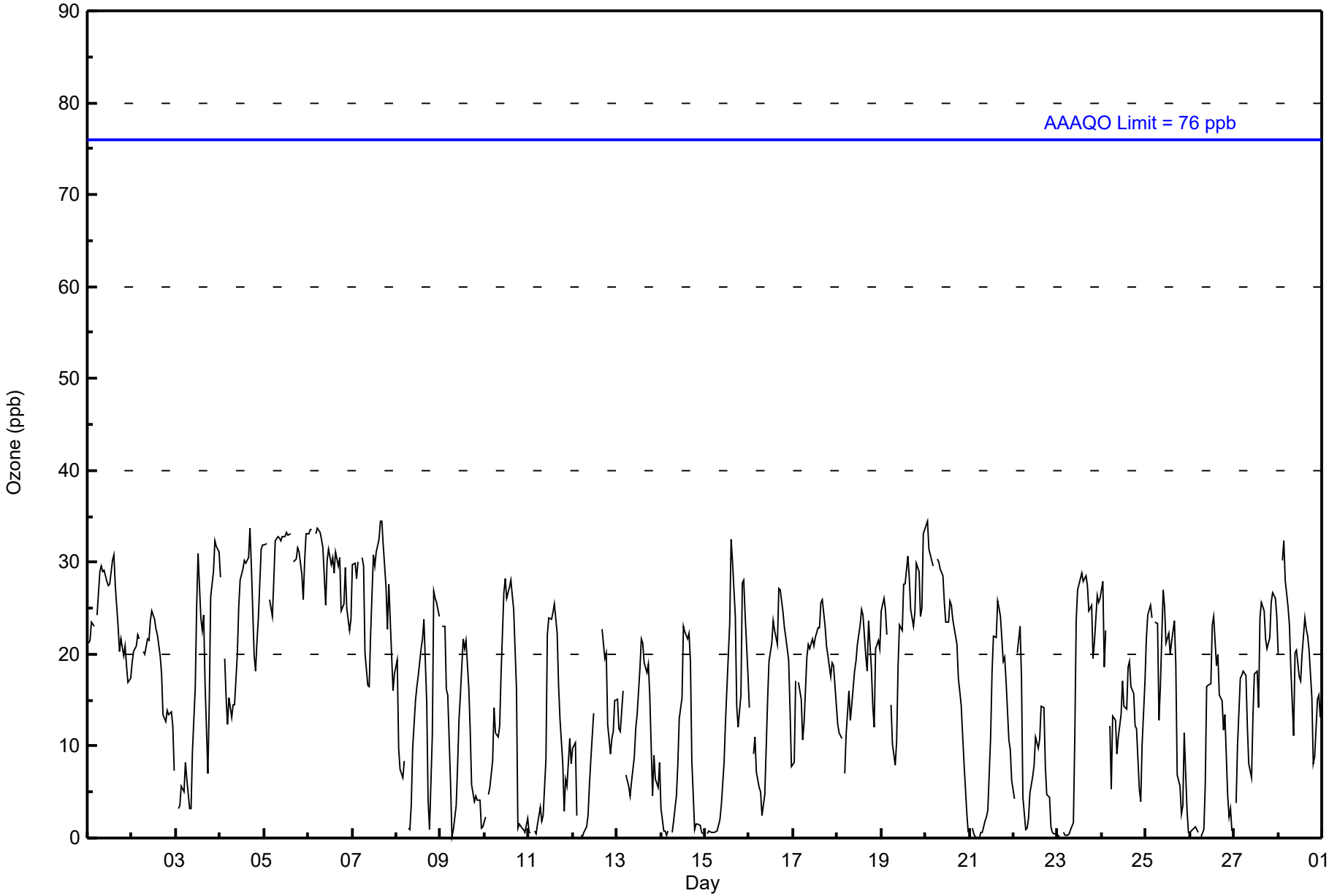
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Fort McKay - Bertha Ganter - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	371	58.06	58.06
21 - 50	268	41.94	100.00
51 - 82	0	0.00	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 639

Total Number of Hours: 672

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	62	23	8	1	6	4	11	38	90	22	8	11	8	15	19	32	358
21 - 50	44	35	15	6	3	5	6	33	52	29	9	10	8	6	4	3	268
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	106	58	23	7	9	9	17	71	142	51	17	21	16	21	23	35	626

Total Number of Valid Hours: 626

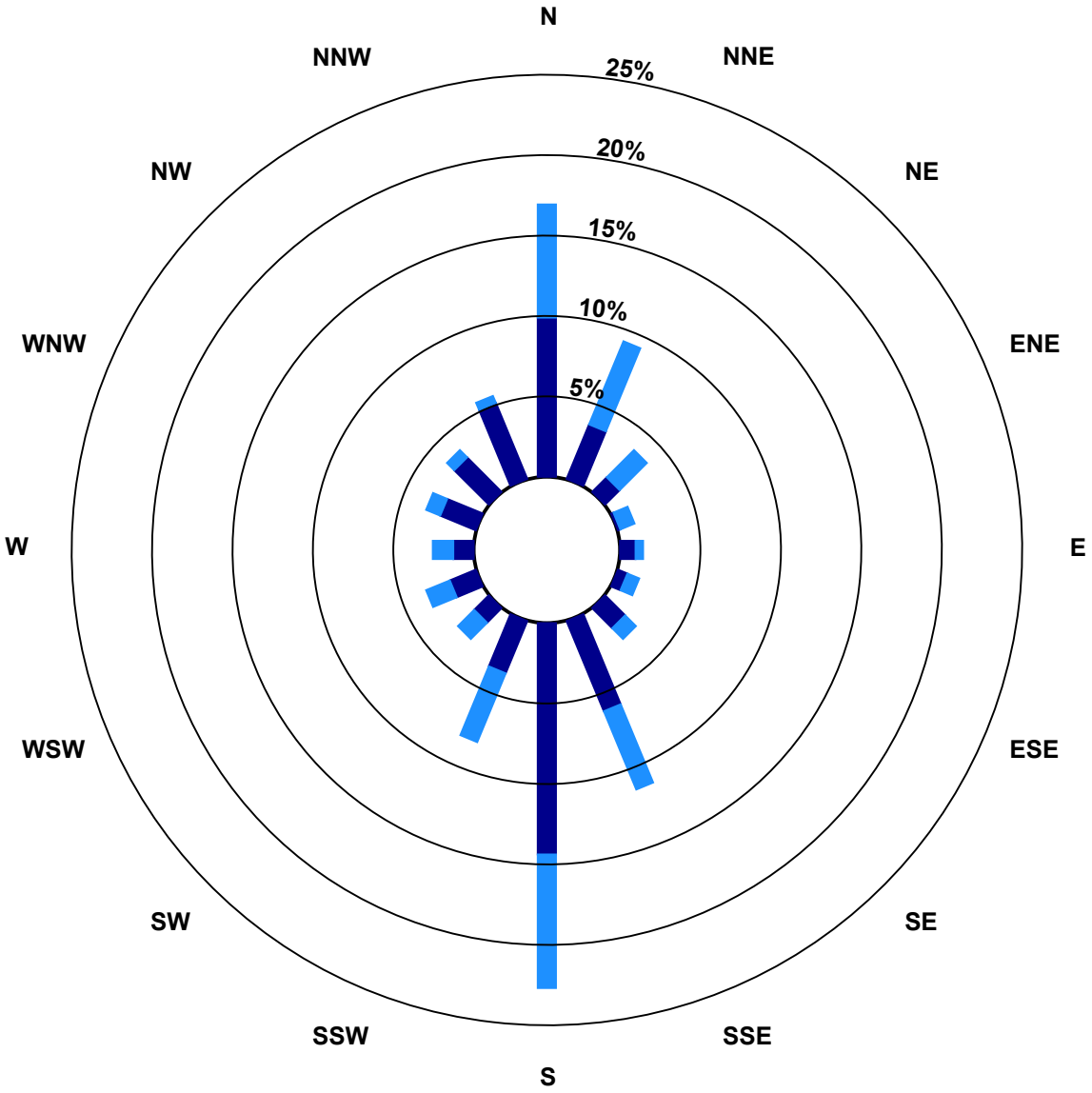
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Ozone (O_3) - ppb

Fort McKay - Bertha Ganter



Classes (ppb)

0 - 20

21 - 50

51 - 82

> 83

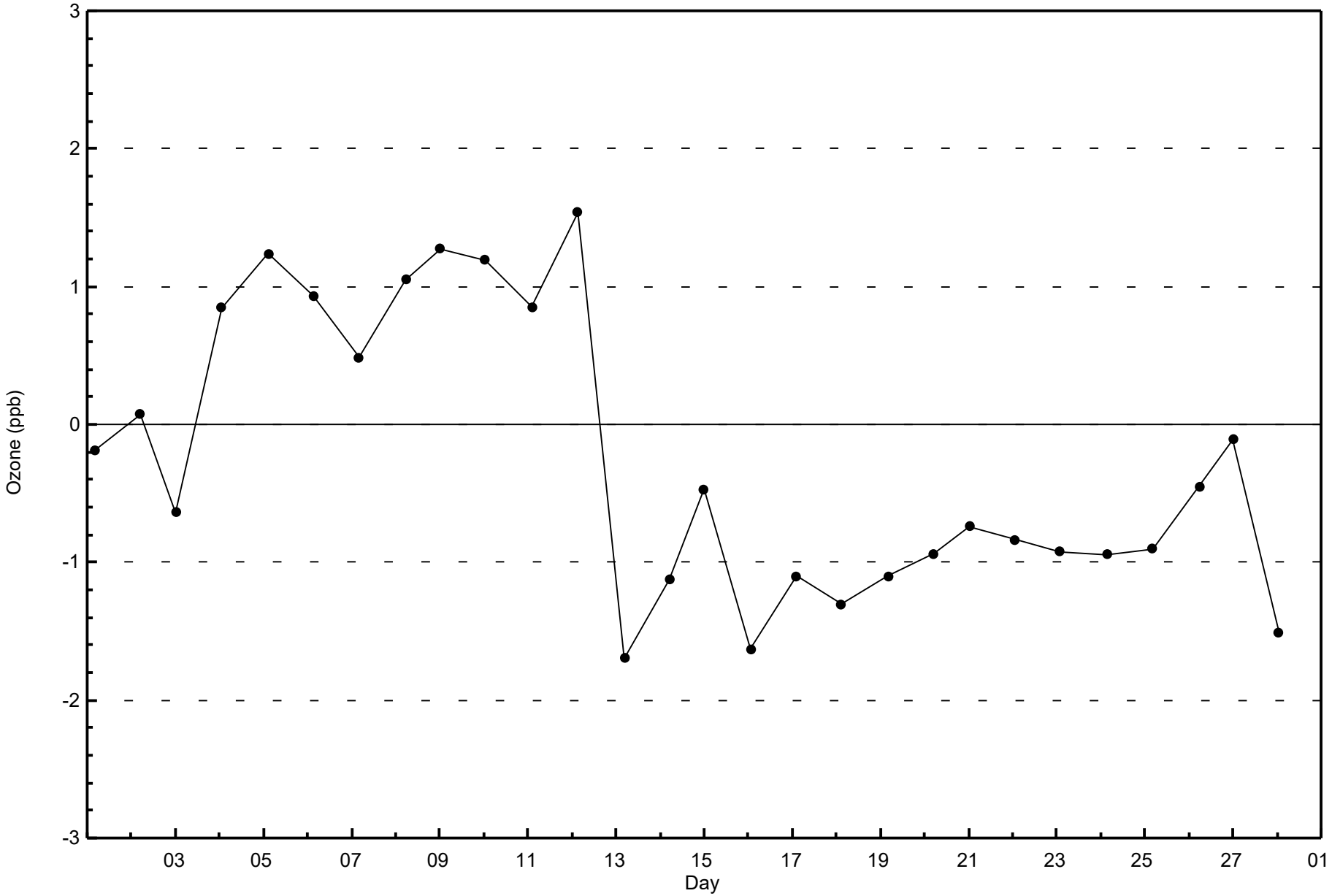
Total Number of Valid Hours: 626

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Fort McKay - Bertha Ganter - February 2025

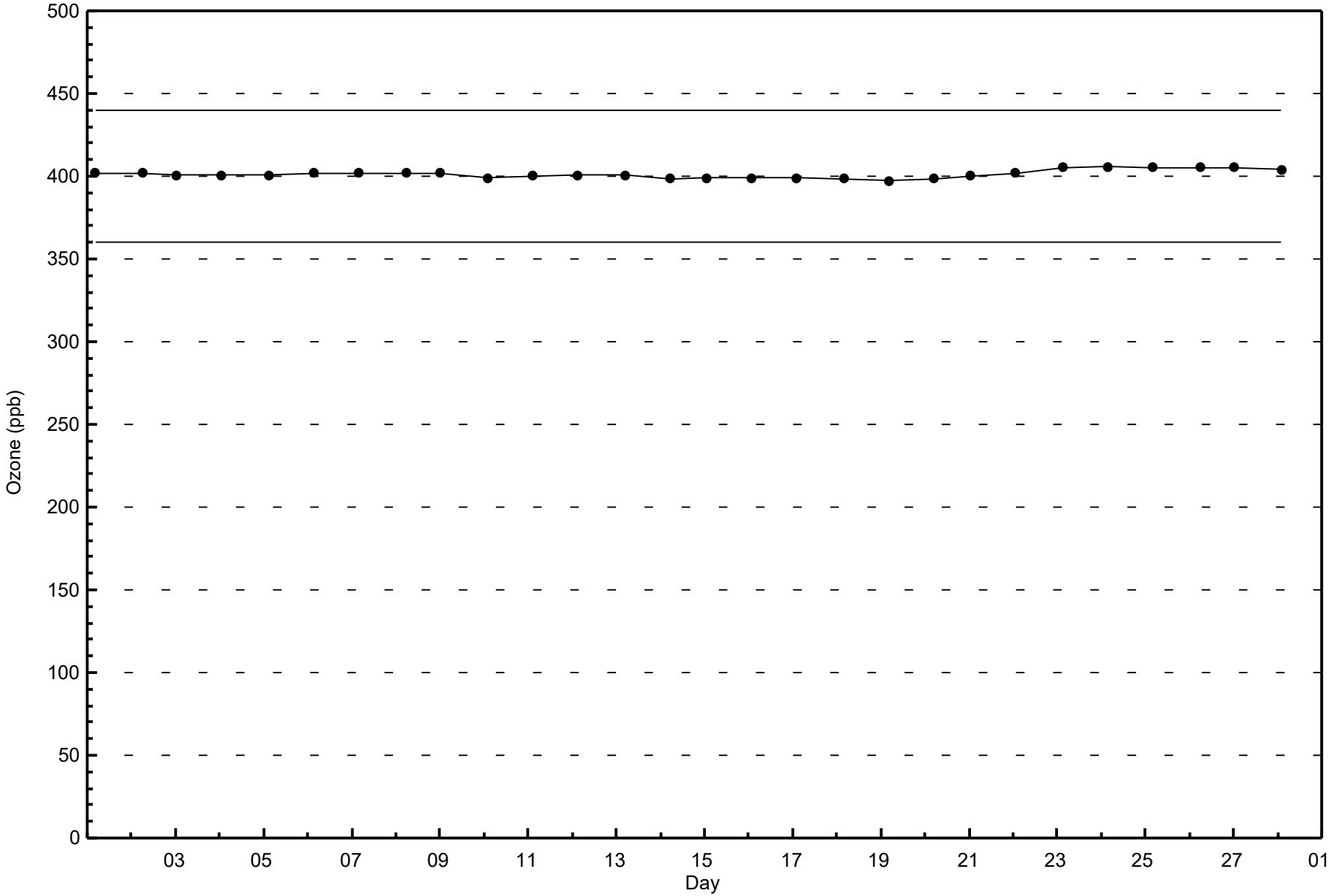


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Fort McKay - Bertha Ganter - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Fort McKay - Bertha Ganter - February 2025

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

Maximum Value: 58.2 $\mu g/m^3$ on Feb 6 20:00

Maximum Daily Average: 11.7 $\mu g/m^3$ on Feb 21

Minimum Value: 1.4 $\mu g/m^3$ on Feb 6 09:00

Minimum Daily Average: 2.2 $\mu g/m^3$ on Feb 5

Maximum Diurnal Average: 8.3 $\mu g/m^3$ at hour 20

Minimum Diurnal Average: 5.5 $\mu g/m^3$ at hour 5

Monthly Average: 6.55 $\mu g/m^3$

Percentiles: P_1 = 1.6 P_{10} = 3.1 Q_1 = 3.8 Median = 5.0 Q_3 = 8.3 P_{90} = 11.5 P_{99} = 22.5

Hours in Service:	672
Hours of Data:	669
Hours of Missing Data:	3
Hours of Calibration:	3
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	4.4	4.3	4.4	4.3	4.5	4.3	3.8	3.5	3.7	4.0	4.3	4.3	4.2	3.7	3.5	3.9	4.7	5.4	5.1	5.1	5.5	5.8	6.2	6.0	4.5	6.2
2-Feb	5.7	5.3	4.9	4.3	4.1	4.1	4.2	4.3	4.4	4.4	4.3	4.3	4.3	4.4	4.4	4.4	4.4	4.5	4.4	4.4	4.3	4.1	4.1	4.3	4.4	5.7
3-Feb	6.5	7.6	7.7	24.5	7.6	4.6	6.9	33.3	14.4	5.4	3.4	3.2	2.5	3.1	3.2	3.1	3.1	3.3	3.6	3.3	2.1	1.6	2.0	1.9	6.6	33.3
4-Feb	3.8	2.4	3.8	2.7	3.1	3.1	3.0	2.9	2.8	2.9	3.3	3.2	2.8	3.2	2.4	2.1	1.8	2.0	2.5	2.6	2.5	2.7	2.4	2.5	2.8	3.8
5-Feb	2.4	2.1	2.1	2.1	2.2	2.0	1.9	1.7	1.8	2.2	2.4	2.1	1.9	1.8	1.9	2.1	2.0	2.0	1.8	2.1	2.8	2.4	2.3	4.6	2.2	4.6
6-Feb	1.6	2.5	3.2	1.5	1.4	1.4	1.4	1.4	1.4	2.6	3.4	4.2	4.1	6.7	8.4	7.6	7.9	8.2	8.6	58.2	34.5	19.1	8.9	10.5	8.7	58.2
7-Feb	5.4	4.4	3.8	3.7	3.7	3.4	3.4	12.5	7.7	5.4	4.0	3.3	3.4	3.2	3.1	3.0	3.1	3.2	4.0	4.4	3.7	9.8	3.9	21.9	5.3	21.9
8-Feb	14.3	6.0	11.0	13.2	4.9	4.8	6.1	6.1	6.4	6.8	9.1	6.8	7.2	5.7	6.5	4.8	6.3	8.4	13.8	8.3	5.0	5.6	4.9	4.5	7.3	14.3
9-Feb	6.2	5.7	5.9	6.2	5.8	6.2	7.0	11.3	8.4	10.8	7.3	7.7	6.6	6.8	6.4	7.7	8.2	8.7	9.2	16.8	10.2	8.4	21.2	25.0	9.3	25.0
10-Feb	14.5	17.9	13.9	6.5	6.5	10.8	8.1	6.5	5.7	4.8	4.3	4.0	3.8	3.5	3.5	3.2	3.3	5.9	11.4	10.4	8.7	7.7	6.8	5.8	7.4	17.9
11-Feb	5.2	4.9	4.8	4.4	4.3	3.9	4.4	3.5	13.7	12.5	3.4	2.9	3.2	3.3	3.1	3.3	3.4	3.4	3.5	6.0	4.5	4.2	3.6	5.1	4.8	13.7
12-Feb	3.5	3.6	4.5	4.9	5.3	5.5	5.8	5.4	6.6	5.6	4.9	4.5	3.9	4.0	3.9	4.3	4.1	4.3	4.6	5.0	5.1	4.5	4.5	4.4	4.7	6.6
13-Feb	4.7	4.4	5.0	3.9	3.3	3.4	3.3	3.2	3.4	3.7	3.7	4.6	4.4	4.4	3.9	4.3	4.4	4.1	3.8	4.9	4.5	4.6	4.4	3.8	4.1	5.0
14-Feb	3.7	4.3	4.2	3.9	3.8	18.3	3.6	4.7	16.8	4.7	5.6	5.7	3.6	3.8	3.8	3.6	5.5	5.9	7.8	6.6	6.4	6.1	6.6	6.4	6.1	18.3
15-Feb	15.2	8.4	10.1	10.8	10.2	9.9	7.0	8.7	10.6	11.2	11.4	7.4	5.7	5.3	2.7	2.6	3.2	4.4	4.6	4.0	3.5	2.8	3.0	3.7	6.9	15.2
16-Feb	3.8	3.7	3.7	3.3	3.5	3.0	3.1	4.8	4.3	10.6	5.9	4.7	4.9	28.8	5.9	5.5	4.1	4.5	8.1	3.7	3.3	4.2	4.3	6.8	5.8	28.8
17-Feb	7.4	3.7	3.6	3.6	3.7	4.3	4.3	3.4	3.8	4.1	4.3	5.2	5.1	5.1	5.1	3.7	3.3	3.7	3.5	3.2	3.3	3.3	5.3	6.1	4.3	7.4
18-Feb	12.9	6.5	3.8	5.9	5.5	4.8	4.5	5.2	6.1	6.3	8.4	9.7	9.9	11.4	16.3	23.8	21.1	5.7	6.9	7.4	7.9	5.0	4.4	4.5	8.5	23.8
19-Feb	4.3	4.3	4.5	4.6	4.7	5.4	7.2	9.9	8.4	8.9	9.1	12.3	7.9	6.6	5.0	8.4	12.3	11.4	8.3	5.7	10.8	10.6	10.3	4.1	7.7	12.3
20-Feb	3.3	3.2	4.9	6.7	6.3	6.1	6.7	7.2	7.2	7.4	8.4	9.5	8.3	7.3	7.4	8.5	10.5	11.9	13.5	14.2	14.0	12.1	16.5	12.4	8.9	16.5
21-Feb	12.5	17.3	12.0	13.2	12.5	13.1	12.1	11.3	14.1	18.5	20.9	13.2	9.5	8.9	9.6	8.2	8.4	7.9	8.3	8.7	9.7	10.4	10.3	9.7	11.7	20.9
22-Feb	9.7	7.5	6.1	5.8	6.8	10.9	13.5	11.4	11.1	10.8	11.2	10.9	11.7	12.9	13.6	12.2	9.2	9.6	9.4	9.6	10.8	10.1	9.3	9.5	10.2	13.6
23-Feb	11.2	13.9	13.0	13.0	12.4	12.7	12.9	13.4	13.4	8.9	6.6	6.5	5.6	5.0	4.6	4.1	4.0	4.5	4.6	4.9	4.9	4.3	4.3	3.9	8.0	13.9
24-Feb	3.9	4.4	4.2	4.1	4.8	4.8	4.7	4.8	5.5	6.6	7.0	8.4	13.8	17.1	13.8	7.8	9.5	9.5	9.6	8.8	8.4	9.7	9.3	6.9	7.8	17.1
25-Feb	5.2	4.3	4.1	3.7	3.7	3.9	4.3	4.5	4.9	4.1	4.8	5.4	5.8	7.7	7.4	6.3	8.1	10.1	7.9	8.1	10.7	8.6	7.4	7.9	6.2	10.7
26-Feb	8.0	8.1	9.5	10.4	12.5	11.7	10.9	10.0	8.5	4.0	4.3	4.9	4.1	4.3	5.2	C	C	C	4.7	4.9	6.1	6.0	6.1	6.5	7.2	12.5
27-Feb	6.1	5.8	4.7	4.3	4.5	4.7	5.0	6.0	7.2	9.1	7.6	6.4	6.7	8.0	3.7	3.5	3.8	4.0	3.9	3.8	3.7	3.7	3.8	4.2	5.2	9.1
28-Feb	4.6	4.1	3.2	3.0	3.1	3.4	3.4	4.1	4.6	6.4	11.9	12.1	10.3	8.8	9.9	11.3	9.4	6.9	6.6	8.1	8.7	5.8	8.6	8.4	6.9	12.1
	6.8	6.1	6.0	6.4	5.5	6.2	5.8	7.3	7.4	6.9	6.6	6.3	5.9	7.0	6.0	6.1	6.3	6.0	6.6	8.3	7.3	6.6	6.6	7.2	Diurnal Average	
	15.2	17.9	13.9	24.5	12.5	18.3	13.5	33.3	16.8	18.5	20.9	13.2	13.8	28.8	16.3	23.8	21.1	11.9	13.8	58.2	34.5	19.1	21.2	25.0	Diurnal Maximum	

C - Calibration

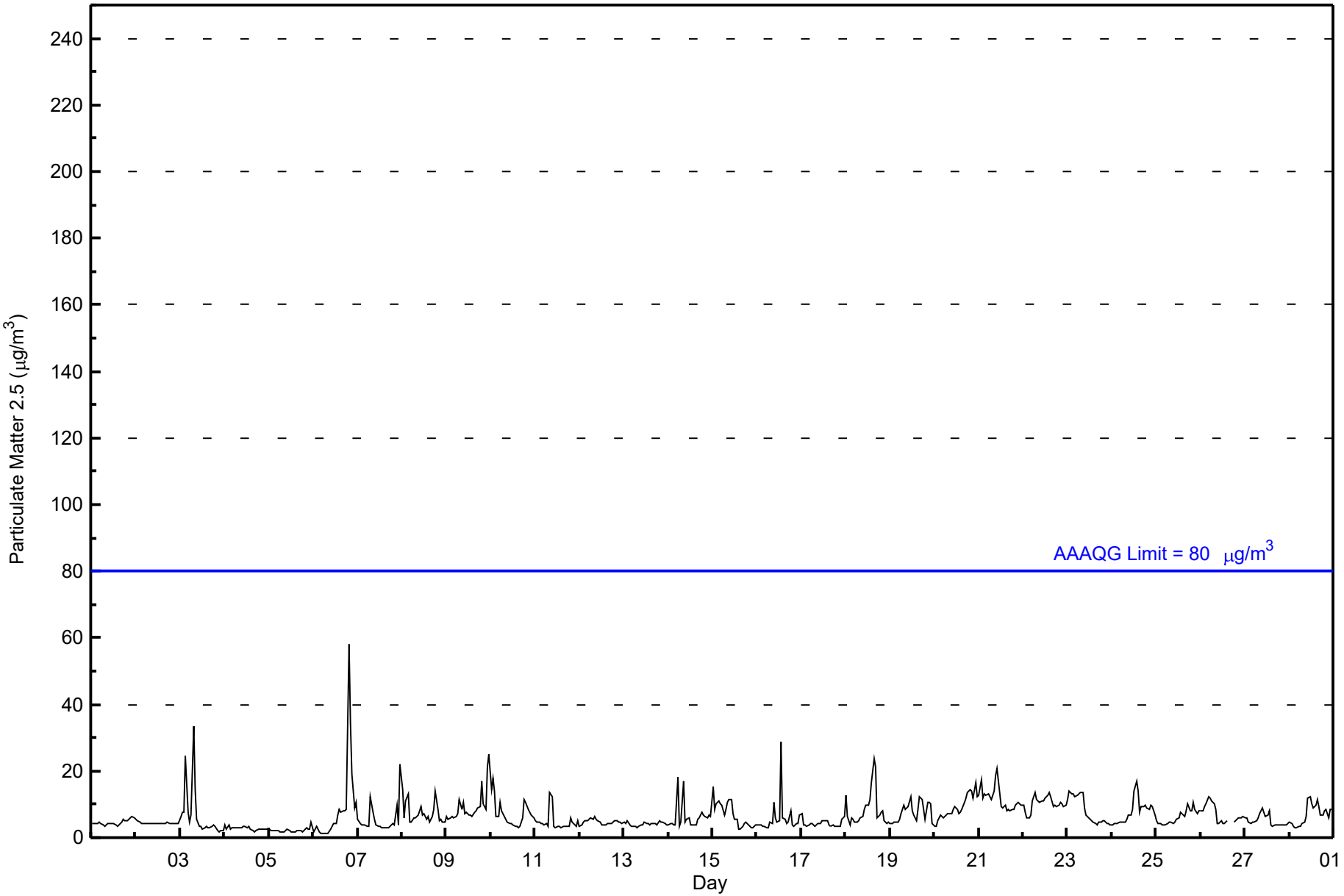
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Fort McKay - Bertha Ganter - February 2025



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

Fort McKay - Bertha Ganter - February 2025

Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	365	54.56	54.56
6 - 15	283	42.30	96.86
16 - 25	17	2.54	99.40
26 - 80	4	0.60	100.00
> 81.0	0	0.00	100.00

Total Number of Valid Hours: 669

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

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

Fort McKay - Bertha Ganter - February 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	63	42	20	6	6	8	9	31	60	33	14	13	11	15	13	14	358
6 - 15	43	18	5	1	3	2	7	40	82	17	7	6	5	6	11	23	276
16 - 25	0	2	0	0	0	0	1	1	5	4	1	2	0	1	0	0	17
26 - 80	0	0	0	0	0	0	0	0	2	0	0	0	1	1	0	0	4
> 81.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	106	62	25	7	9	10	17	72	149	54	22	21	17	23	24	37	655

Total Number of Valid Hours: 655

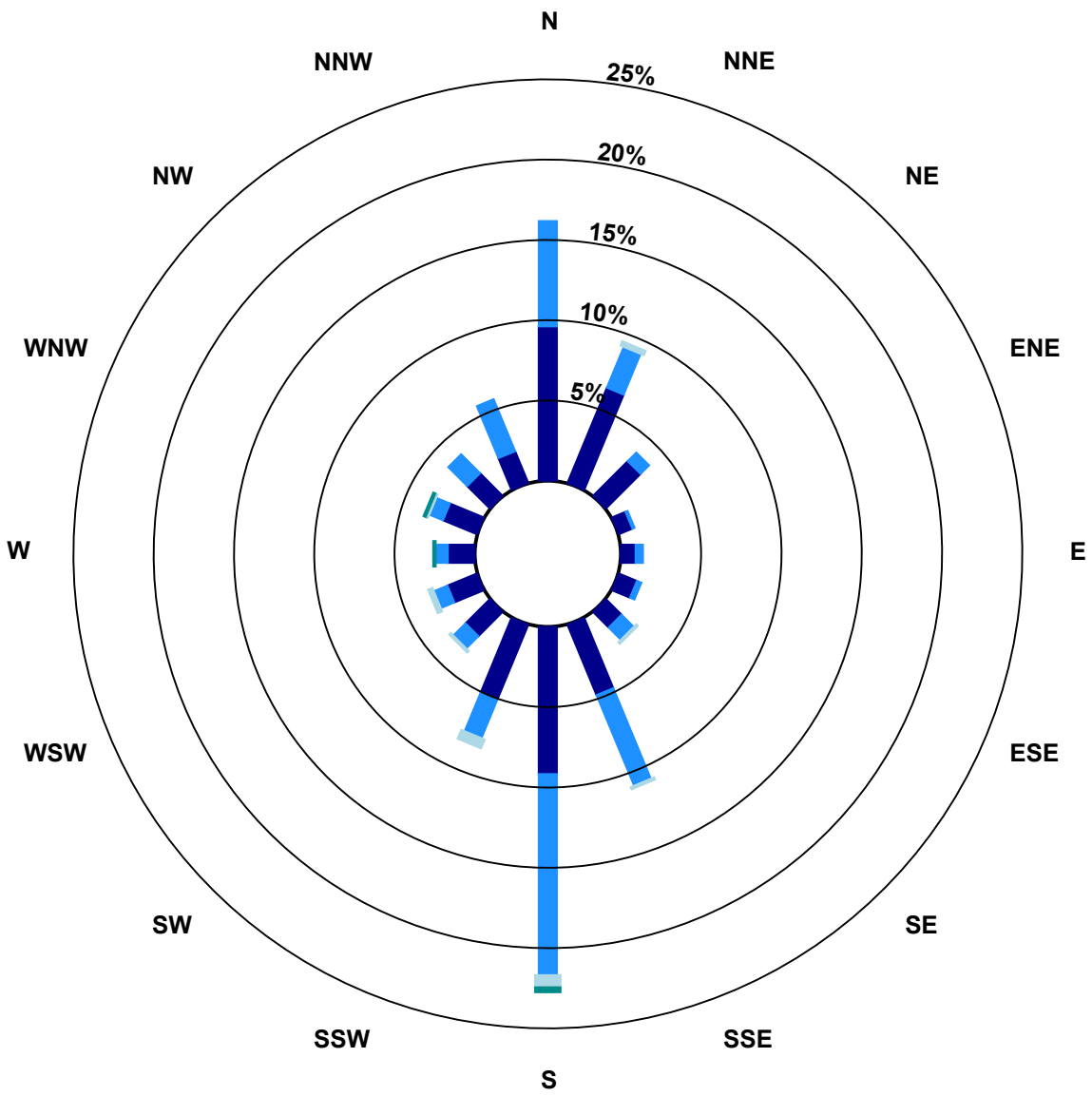
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 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: 655

Wood Buffalo Environmental Association

Summary of Hour Averages

Carbon Monoxide (CO) - ppm

Fort McKay - Bertha Ganter - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 0.6 ppm on Feb 14 18:00 Maximum Daily Average: 0.2 ppm on Feb 23

Minimum Value: 0.1 ppm on Feb 14 08:00 Minimum Daily Average: 0.2 ppm on Feb 2
Maximum Diurnal Average: 0.2 ppm at hour 9 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:	672
Hours of Data:	633
Hours of Missing Data:	39
Hours of Calibration:	32
Percent Operational Time:	99.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	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-Feb	0.1	0.2	Z	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
3-Feb	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.6	0.5	0.3	0.2	C	C	C	C	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.6
4-Feb	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
5-Feb	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
6-Feb	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	M	0.2	0.2	M	M	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.3
7-Feb	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.3	0.6	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.6
8-Feb	0.3	0.2	Z	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
9-Feb	0.2	0.1	0.1	Z	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.2	0.2	0.4
10-Feb	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	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3
11-Feb	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.3	0.2	0.2	0.2	0.2	0.4
12-Feb	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	0.2	0.2	0.2	0.3
13-Feb	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
14-Feb	0.2	0.2	Z	0.1	0.1	0.3	0.1	0.1	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.6	0.2	0.2	0.2	0.2	0.2	0.5	0.2	0.6
15-Feb	0.3	0.3	0.3	Z	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
16-Feb	0.2	0.2	0.2	0.2	Z	0.2	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
17-Feb	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
18-Feb	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	M	M	M	M	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3
19-Feb	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4
20-Feb	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.2	0.2	0.3
21-Feb	0.3	0.3	0.2	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
22-Feb	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	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.2	0.4	0.2	0.2	0.4
23-Feb	0.3	0.3	0.3	0.3	0.3	Z	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4
24-Feb	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	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3
25-Feb	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
26-Feb	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
27-Feb	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
28-Feb	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	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Diurnal Average	
	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.6	0.6	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.6	0.3	0.4	0.3	0.4	0.4	0.5	Diurnal Maximum	

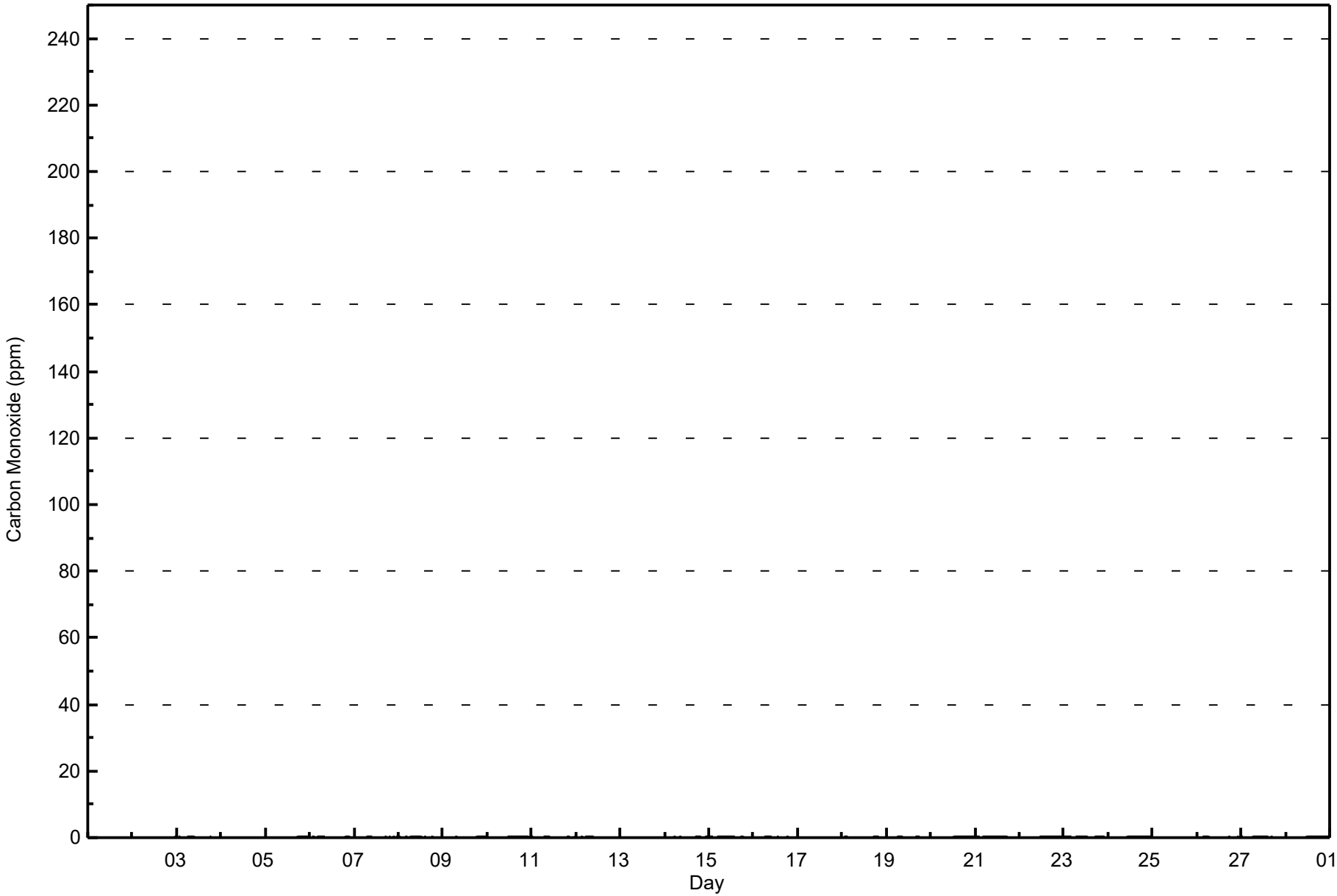
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm

Wood Buffalo Environmental Association

Hourly Averages

Carbon Monoxide (CO) - ppm

Fort McKay - Bertha Ganter - February 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.3	622	98.26	98.26
0.4 - 0.5	8	1.26	99.53
0.6 - 0.7	3	0.47	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: 633

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Carbon Monoxide (CO) - ppm

Fort McKay - Bertha Ganter - February 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	102	60	23	7	9	8	17	68	131	49	20	19	16	22	22	36	609
0.4 - 0.5	0	0	0	0	0	0	0	0	5	2	1	0	0	0	0	0	8
0.6 - 0.7	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0	3
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	102	60	23	7	9	9	17	68	137	51	22	19	16	22	22	36	620

Total Number of Valid Hours: 620

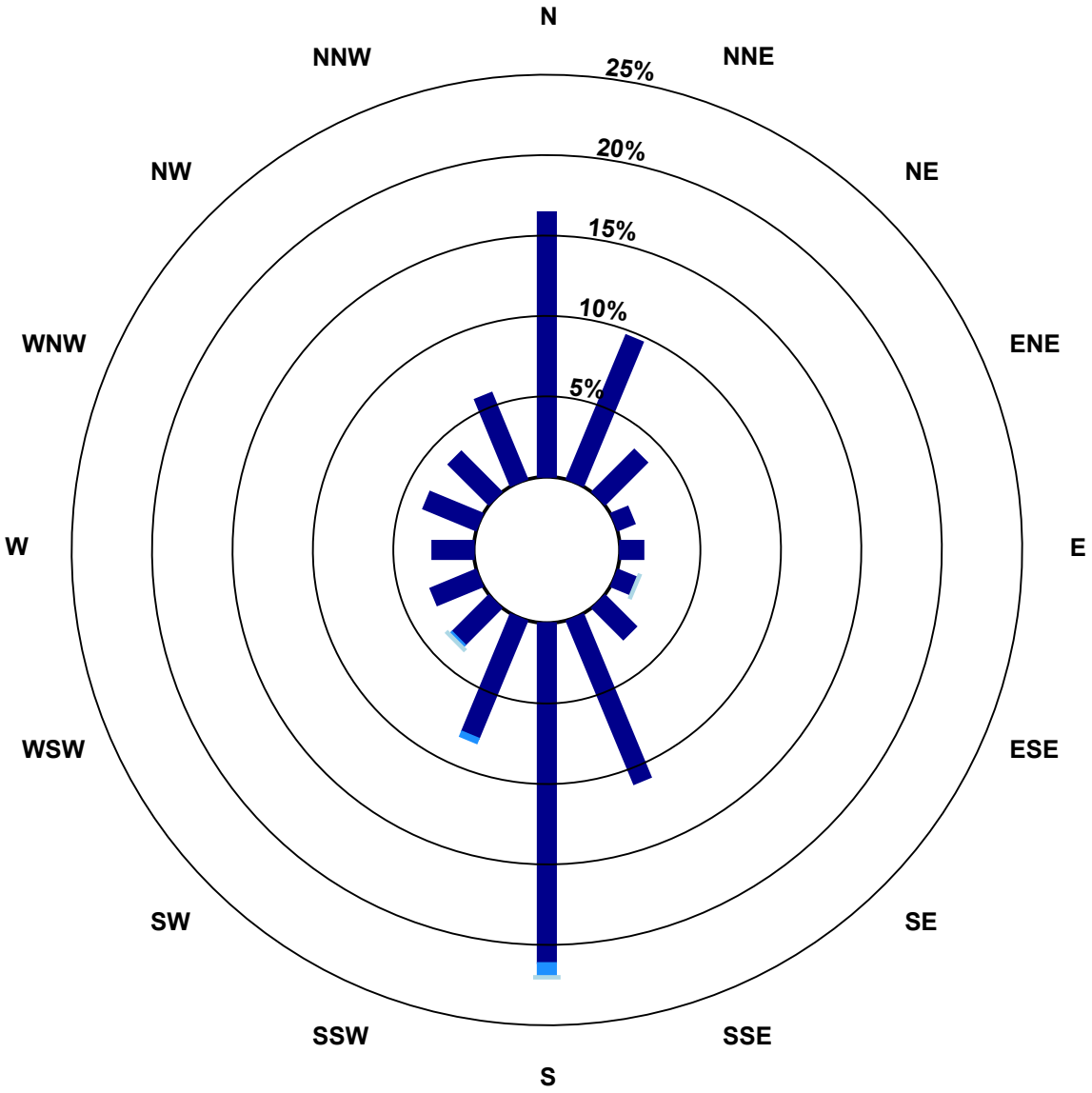
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 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: 620

Wood Buffalo Environmental Association

Summary of Hour Averages

Carbon Dioxide (CO_2) - ppm

Fort McKay - Bertha Ganter - February 2025

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

Maximum Value: 475.0 ppm on Feb 23 09:00

Maximum Daily Average: 458.2 ppm on Feb 22

Minimum Value: 436.3 ppm on Feb 15 15:00

Minimum Daily Average: 439.9 ppm on Feb 17

Maximum Diurnal Average: 454.1 ppm at hour 9

Minimum Diurnal Average: 445.8 ppm at hour 18

Monthly Average: 448.51 ppm

Percentiles: P_1 = 437.2 P_{10} = 441.2 Q_1 = 443.1 Median = 446.9 Q_3 = 452.0 P_{90} = 459.3 P_{99} = 470.1

Hours in Service:	672
Hours of Data:	637
Hours of Missing Data:	35
Hours of Calibration:	33
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-Feb	448.7	Z	447.3	447.5	446.4	446.6	445.6	445.6	446.1	445.4	445.0	444.4	443.8	442.9	442.5	442.5	442.5	442.4	442.7	442.6	444.2	442.8	445.5	445.7	444.7	448.7
2-Feb	443.7	443.3	Z	441.9	441.3	441.8	443.1	444.0	443.3	442.6	441.2	441.7	442.7	441.2	441.7	442.6	442.6	443.0	441.5	441.6	441.6	442.4	444.2	450.8	442.8	450.8
3-Feb	451.6	452.6	452.5	Z	453.5	450.9	460.0	470.3	470.4	459.2	449.3	442.6	439.1	440.8	441.8	440.1	442.3	442.8	443.1	440.3	438.8	438.3	438.6	438.6	447.7	470.4
4-Feb	440.6	443.6	443.1	443.1	Z	444.2	444.3	444.0	443.2	443.5	443.2	442.3	441.0	442.0	441.1	441.3	439.3	440.1	442.5	442.7	442.6	442.4	441.3	441.3	442.3	444.3
5-Feb	441.7	442.1	442.9	444.5	445.3	Z	443.5	443.8	444.0	444.3	444.5	446.4	447.0	446.6	447.1	447.2	446.9	446.5	446.6	447.4	449.5	451.9	448.7	446.9	445.9	451.9
6-Feb	Z	447.0	446.8	446.9	447.0	446.3	446.0	446.3	448.1	M	445.6	444.6	445.6	446.7	M	443.6	442.8	442.4	443.3	445.2	444.4	448.3	446.0	447.3	445.7	448.3
7-Feb	444.1	Z	443.5	443.1	443.4	442.8	444.5	457.9	462.4	460.3	449.3	443.5	443.0	442.9	442.7	442.5	442.7	445.2	445.7	446.4	446.6	453.6	450.7	452.4	447.4	462.4
8-Feb	452.6	452.6	Z	459.5	457.7	460.5	462.3	464.2	465.7	461.2	459.0	453.4	453.3	450.7	456.1	459.3	456.6	457.0	461.3	449.8	443.3	443.3	442.9	441.0	454.9	465.7
9-Feb	441.5	441.7	440.5	Z	441.1	443.4	444.8	453.1	451.8	453.1	445.9	443.4	439.1	439.4	440.5	441.3	441.6	442.9	448.0	451.0	451.8	453.2	456.7	457.0	446.2	457.0
10-Feb	453.7	454.5	450.2	447.6	Z	446.0	446.8	445.1	444.4	442.5	438.5	C	C	C	C	C	437.0	439.1	445.0	444.8	445.2	445.8	446.3	444.9	445.4	454.5
11-Feb	445.4	446.4	446.7	446.7	447.8	Z	451.2	454.1	468.2	454.8	442.2	442.5	440.9	441.7	441.5	443.3	445.8	445.9	452.4	458.4	453.4	448.9	444.0	449.7	448.4	468.2
12-Feb	Z	446.7	456.4	453.8	456.9	460.0	460.8	461.1	463.3	459.5	456.2	452.5	449.8	450.5	452.2	449.0	445.3	445.7	445.4	449.2	448.7	447.0	445.6	444.8	452.2	463.3
13-Feb	446.0	Z	446.0	446.6	450.2	453.7	454.0	449.7	448.6	448.5	448.8	450.8	448.5	448.2	450.1	444.3	441.2	439.0	439.4	440.9	440.3	442.1	442.8	445.8	446.3	454.0
14-Feb	447.4	448.1	Z	448.7	447.9	453.1	450.3	453.0	460.6	459.1	450.2	449.1	448.3	445.6	447.4	442.7	441.1	444.8	446.8	449.4	448.6	446.2	451.4	454.0	449.3	460.6
15-Feb	457.4	459.1	461.2	Z	464.8	466.8	468.0	469.2	468.3	466.0	462.1	452.5	447.9	442.2	436.3	436.8	439.0	441.8	444.3	441.8	438.1	436.7	438.8	438.5	451.2	469.2
16-Feb	442.3	443.8	446.9	442.4	Z	453.7	453.1	453.6	455.5	455.2	447.9	444.2	447.0	447.3	446.2	447.2	441.5	440.0	441.4	440.7	439.8	439.4	438.8	441.4	445.6	455.5
17-Feb	447.8	438.6	438.9	439.2	440.2	Z	440.6	439.0	438.6	439.3	442.0	444.4	443.2	442.8	441.9	438.1	436.6	437.3	437.2	437.1	437.6	439.7	437.7	440.5	439.9	447.8
18-Feb	Z	447.1	447.0	446.1	444.8	441.5	440.8	442.3	442.3	442.2	449.0	450.9	449.1	443.0	445.8	457.9	456.2	444.3	447.4	449.7	443.4	442.0	443.1	442.8	446.0	457.9
19-Feb	440.3	Z	441.1	442.7	446.4	444.8	445.5	452.5	454.7	444.1	444.6	449.4	445.2	445.2	442.9	446.2	449.3	449.2	444.6	441.4	440.6	442.6	446.1	441.5	445.3	454.7
20-Feb	441.3	441.7	Z	447.1	445.1	442.8	443.0	443.6	443.9	444.3	445.0	446.0	446.3	446.2	446.7	448.1	448.7	450.0	451.9	452.0	451.7	453.1	460.2	457.5	447.7	460.2
21-Feb	463.3	469.6	463.7	Z	470.2	467.2	465.9	467.2	464.4	468.1	469.8	457.5	452.8	450.8	448.4	447.4	445.5	444.8	445.0	444.9	445.7	447.1	447.2	448.3	456.3	470.2
22-Feb	449.3	448.1	447.4	446.4	Z	451.8	454.4	453.3	454.5	454.8	456.6	461.3	462.2	461.9	460.4	457.9	456.0	461.0	462.4	461.8	467.0	468.4	469.0	472.5	458.2	472.5
23-Feb	471.5	468.2	467.0	467.9	469.5	Z	468.4	475.0	475.0	463.1	454.4	452.0	452.8	449.0	448.9	449.0	447.5	447.2	447.7	450.3	450.0	446.8	447.1	446.9	457.2	475.0
24-Feb	Z	447.5	447.2	446.2	448.2	447.5	446.9	447.9	449.6	451.6	451.6	452.5	454.7	456.7	459.2	453.7	454.5	454.6	454.7	455.4	456.0	460.5	458.0	452.7	452.5	460.5
25-Feb	448.5	Z	445.6	444.9	444.8	444.9	445.9	445.9	447.3	448.6	447.1	446.5	447.2	449.5	452.5	453.3	458.7	451.4	448.5	449.2	449.4	447.9	450.0	452.5	448.7	458.7
26-Feb	452.5	453.3	Z	456.2	458.4	460.7	460.1	461.7	456.1	446.5	448.0	452.9	457.3	447.4	447.8	449.7	448.2	446.6	445.8	445.6	448.7	449.1	449.1	451.5	451.9	461.7
27-Feb	451.8	450.6	449.6	Z	449.9	451.4	451.2	453.1	457.5	460.0	456.0	453.9	454.1	457.0	449.1	449.5	448.8	446.5	447.8	447.8	443.5	444.3	445.3	443.5	450.5	460.0
28-Feb	443.4	443.6	442.5	441.5	Z	443.2	442.8	443.8	445.5	445.5	445.5	446.5	449.5	448.7	450.6	451.8	450.2	450.4	450.6	450.0	449.9	449.2	451.0	450.7	447.2	451.8
	448.6	449.1	448.4	447.4	450.5	450.2	450.9	452.9	454.1	452.0	449.2	448.4	447.8	446.9	447.0	446.9	446.0	445.8	446.9	447.1	446.4	446.9	447.4	447.9	Diurnal Average	
	471.5	469.6	467.0	467.9	470.2	467.2	468.4	475.0	475.0	468.1	469.8	461.3	462.2	461.9	460.4	459.3	458.7	461.0	462.4	461.8	467.0	468.4	469.0	472.5	Diurnal Maximum	

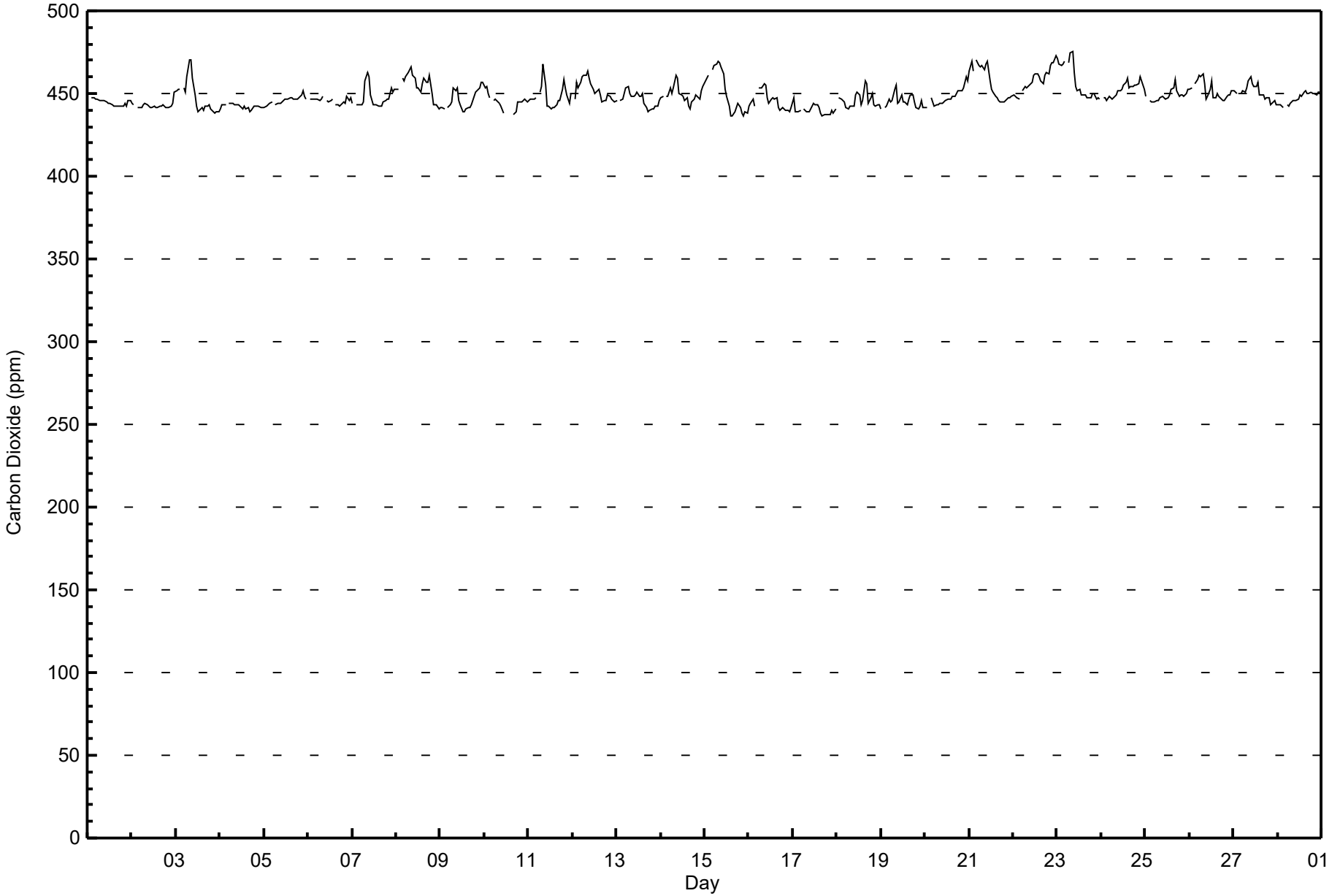
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Carbon Dioxide (CO_2) - ppm

Fort McKay - Bertha Ganter - February 2025



Carbon Dioxide (CO_2) - ppm

Fort McKay - Bertha Ganter - February 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
400 - 420	0	0.00	0.00
420 - 440	45	7.06	7.06
440 - 460	539	84.62	91.68
460 - 480	53	8.32	100.00
480 - 500	0	0.00	100.00
> 500	0	0.00	100.00

Total Number of Valid Hours: 637

Total Number of Hours: 672



Wood Buffalo Environmental Association

Frequency Distribution

Carbon Dioxide (CO_2) - ppm

Fort McKay - Bertha Ganter - February 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	3	2	2	2	0	4	1	9	10	4	1	1	3	0	0	3	45
440 - 460	97	57	21	5	8	5	14	57	105	42	18	17	13	20	21	29	529
460 - 480	2	2	0	0	1	0	1	3	24	6	3	1	0	2	1	4	50
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	102	61	23	7	9	9	16	69	139	52	22	19	16	22	22	36	624

Total Number of Valid Hours: 624

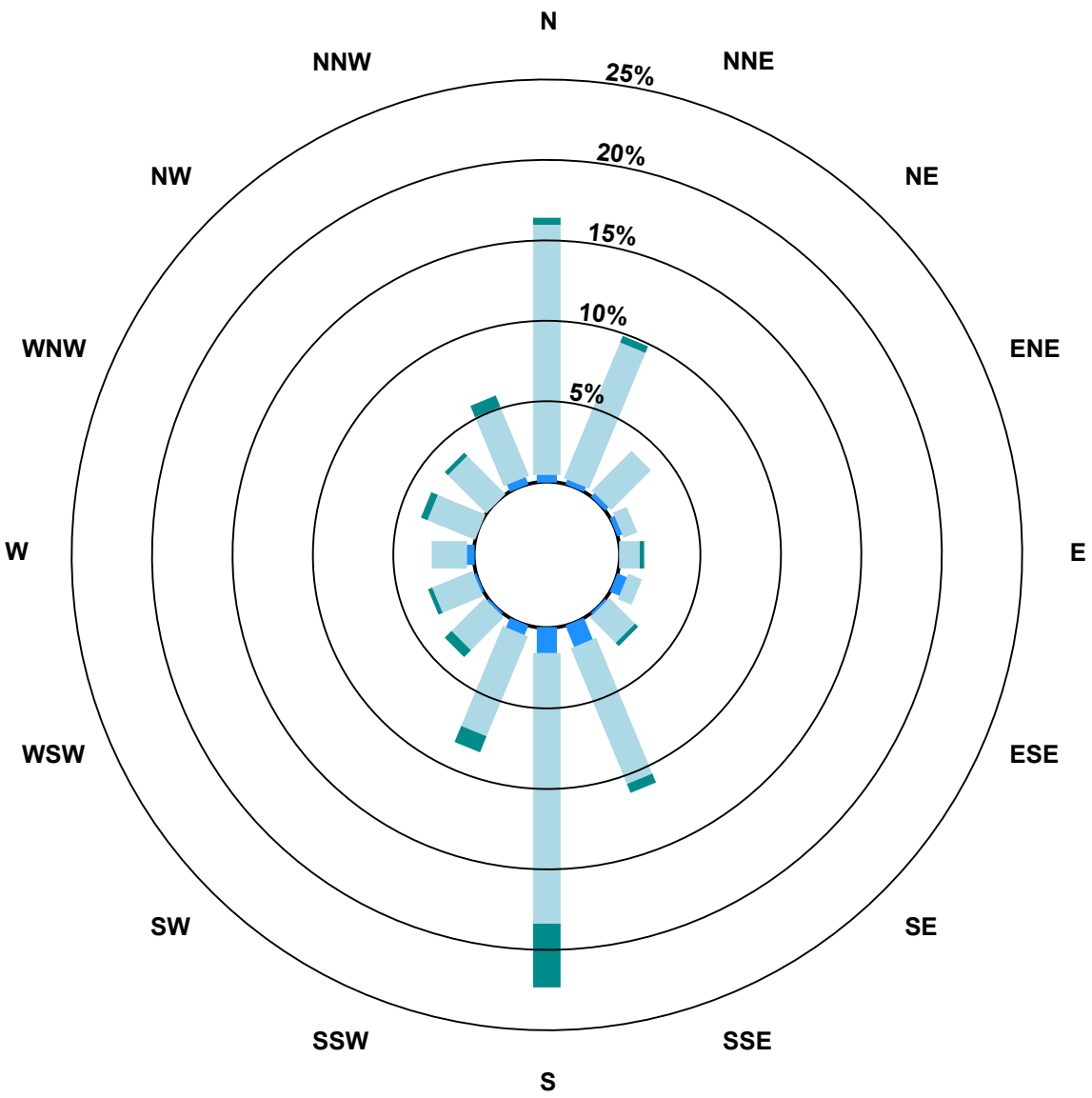
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 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: 624

Wood Buffalo Environmental Association

Summary of Hour Averages

Ammonia (NH_3) - ppb

Fort McKay - Bertha Ganter - February 2025

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

Maximum Value: 0.0 ppb on Feb 1 01:00

Maximum Daily Average: 0.0 ppb on Feb 1

Minimum Value: 0.0 ppb on Feb 1 01:00

Minimum Daily Average: 0.0 ppb on Feb 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:	672
Hours of Data:	599
Hours of Missing Data:	73
Hours of Calibration:	38
Percent Operational Time:	94.8

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-Feb	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
2-Feb	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
3-Feb	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
4-Feb	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
5-Feb	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
6-Feb	0.0	0.0	0.0	0.0	Z	RE	0.0	0.0	0.0	0.0	0.0	M	M	M	M	M	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.0
7-Feb	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
8-Feb	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
9-Feb	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
10-Feb	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
11-Feb	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
12-Feb	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
13-Feb	0.0	0.0	0.0	0.0	0.0	Z	RE	0.0	0.0	0.0	0.0	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14-Feb	Z	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	C	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	--	0.0
15-Feb	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
16-Feb	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
17-Feb	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
18-Feb	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
19-Feb	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
20-Feb	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
21-Feb	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
22-Feb	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
23-Feb	0.0	0.0	0.0	Z	RE	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24-Feb	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
25-Feb	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
26-Feb	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
27-Feb	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
28-Feb	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	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

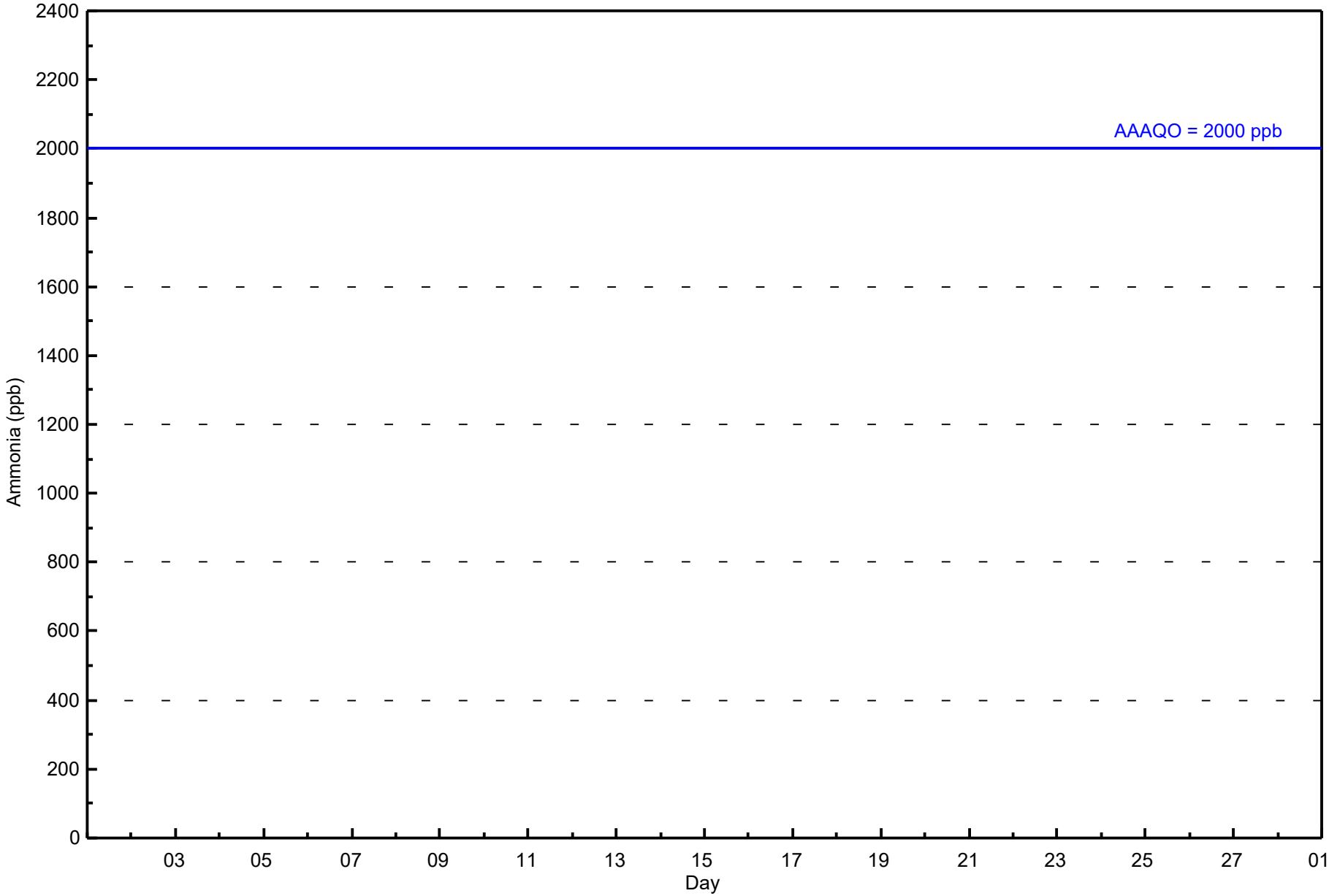
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 2000 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ammonia (NH_3) - ppb

Fort McKay - Bertha Ganter - February 2025



Ammonia (NH_3) - ppb

Fort McKay - Bertha Ganter - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 5	599	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: 599

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Ammonia (NH_3) - ppb

Fort McKay - Bertha Ganter - February 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	98	55	21	6	8	8	14	70	128	50	22	19	16	19	19	34	587
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	98	55	21	6	8	8	14	70	128	50	22	19	16	19	19	34	587

Total Number of Valid Hours: 587

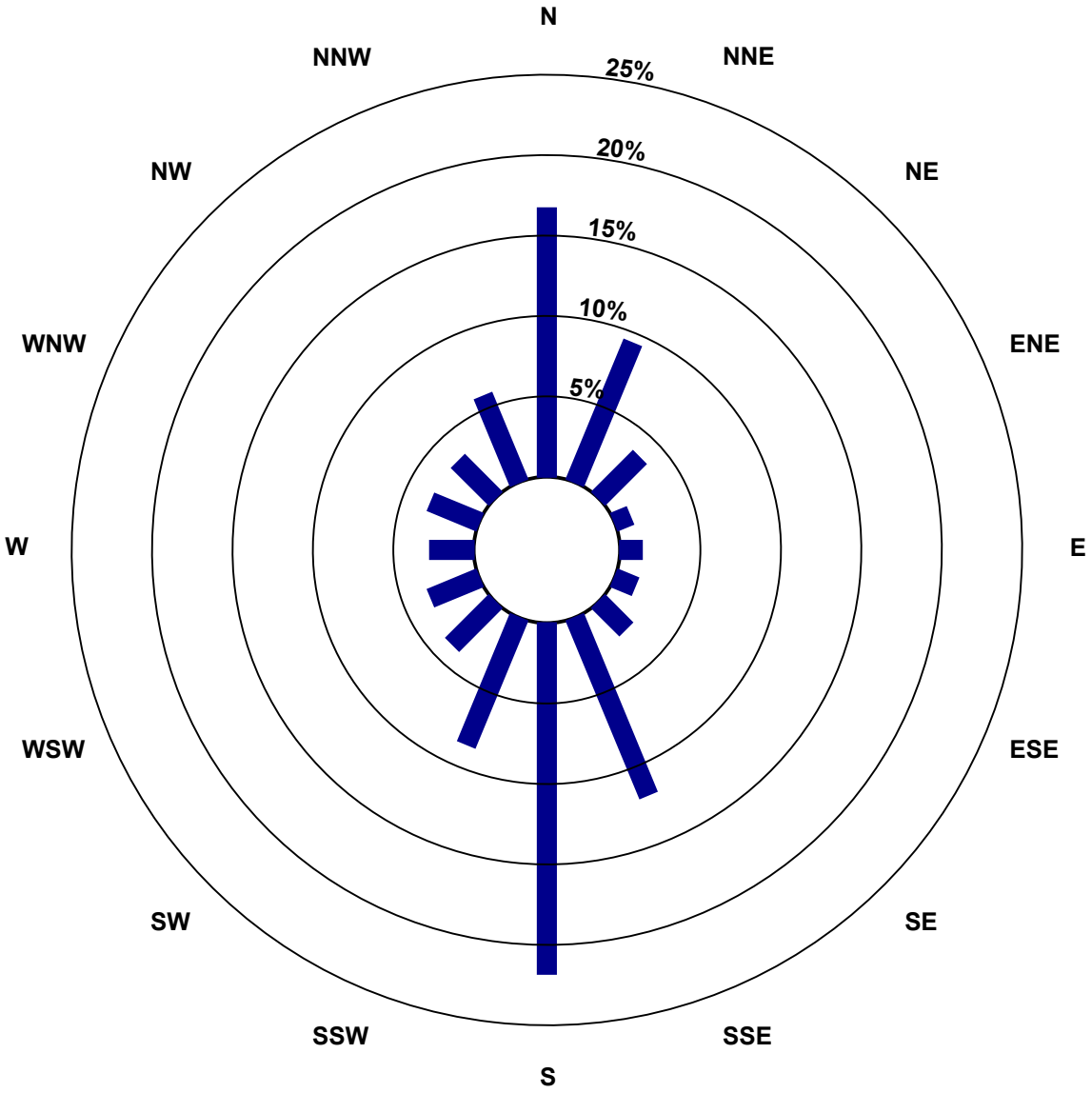
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Ammonia (NH_3) - ppb

Fort McKay - Bertha Ganter



Classes (ppb)

0 - 5

6 - 10

11 - 15

16 - 20

21 - 25

> 26

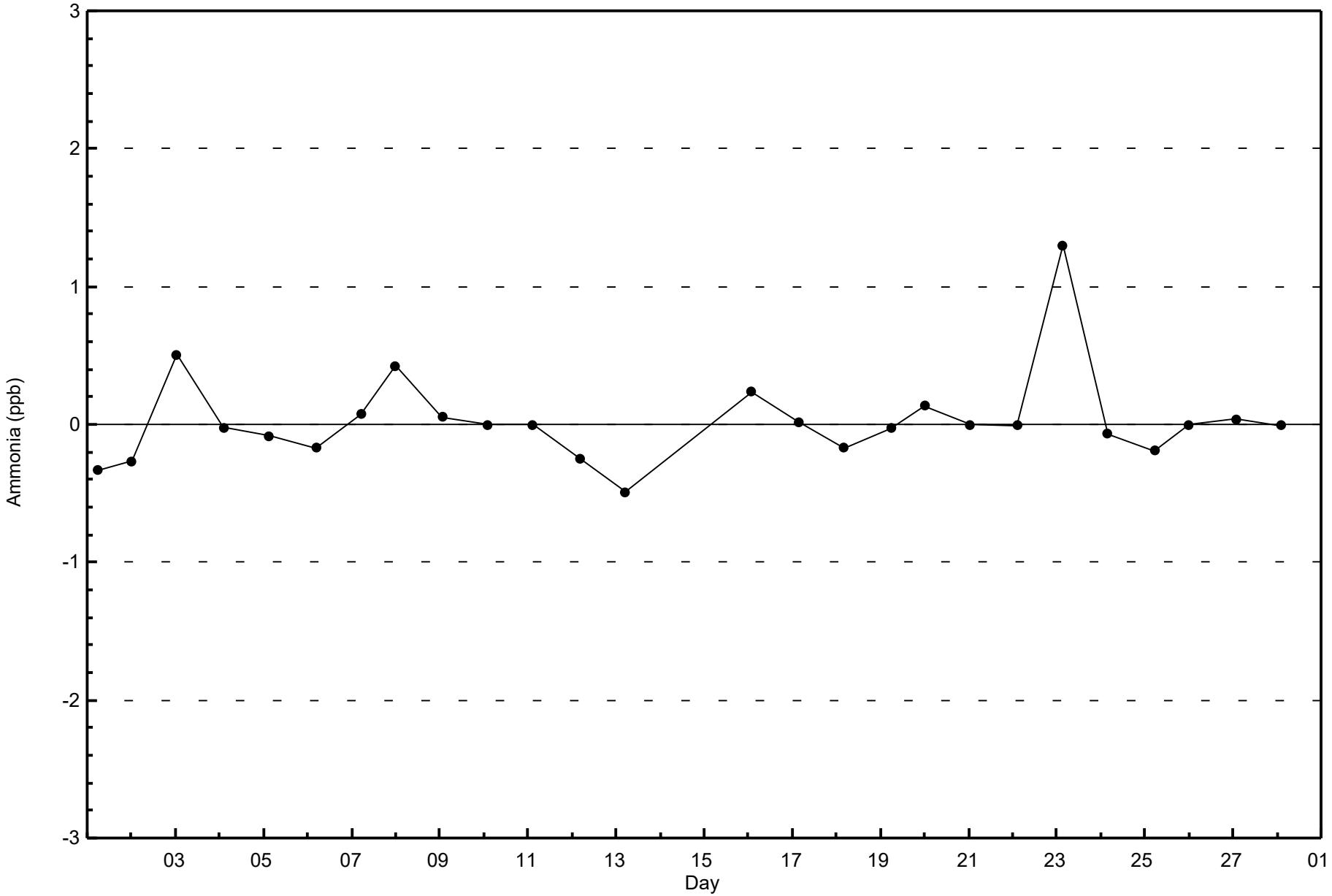
Total Number of Valid Hours: 587

Wood Buffalo Environmental Association

Zero Responses

Ammonia (NH_3) - ppb

Fort McKay - Bertha Ganter - February 2025

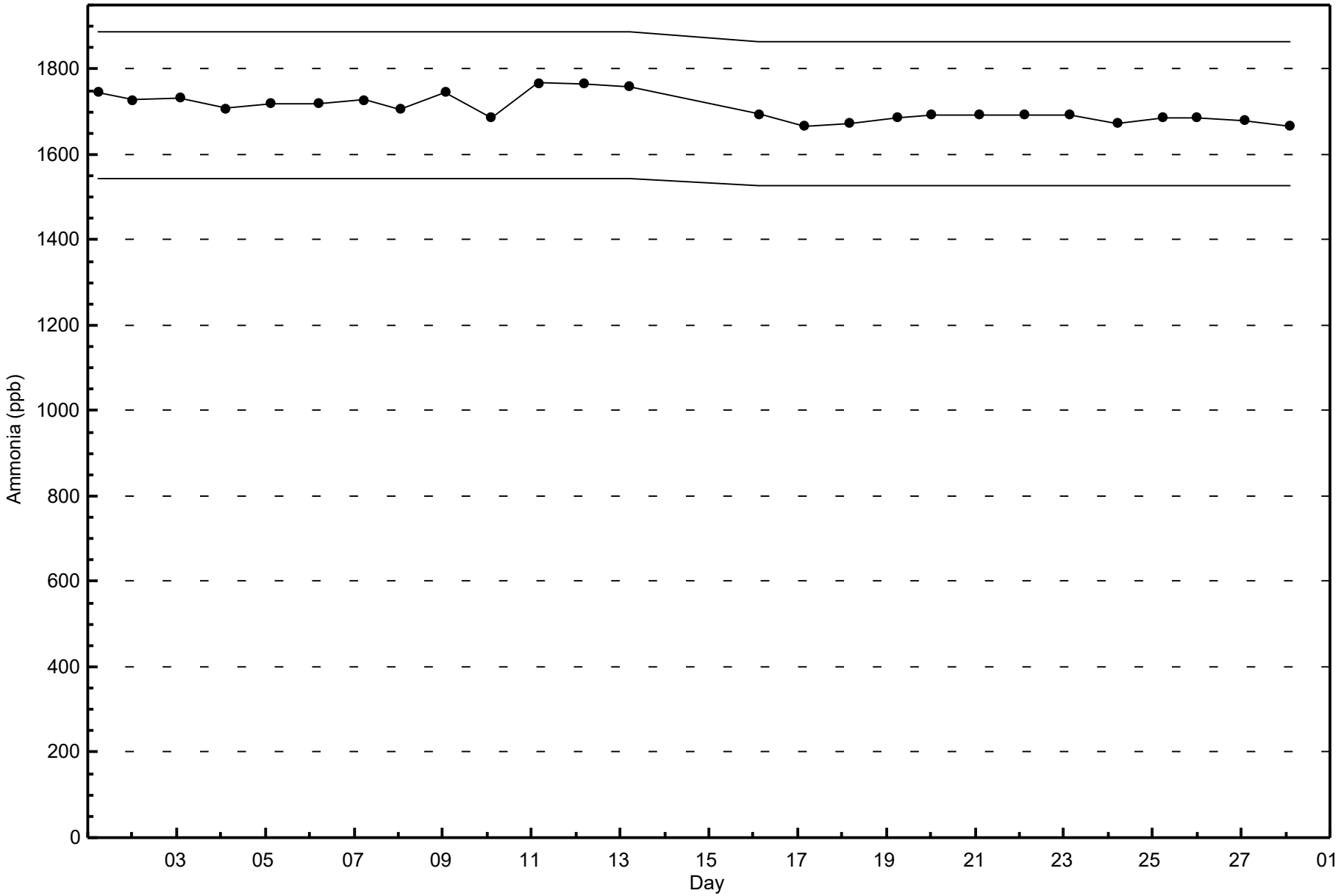


Wood Buffalo Environmental Association

Span Responses

Ammonia (NH_3) - ppb

Fort McKay - Bertha Ganter - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 10m (AT10) - C

Fort McKay - Bertha Ganter - February 2025

Maximum Value: 0.0 C on Feb 27 13:00

Maximum Daily Average: -5.5 C on Feb 23

Minimum Value: -37.0 C on Feb 14 09:00

Minimum Daily Average: -29.8 C on Feb 14

Maximum Diurnal Average: -14.1 C at hour 16

Minimum Diurnal Average: -21.5 C at hour 8

Monthly Average: -18.28 C

Percentiles: P_1 = -35.0 P_{10} = -28.8 Q_1 = -24.3 Median = -19.4 Q_3 = -11.1 P_{90} = -7.0 P_{99} = -2.0

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

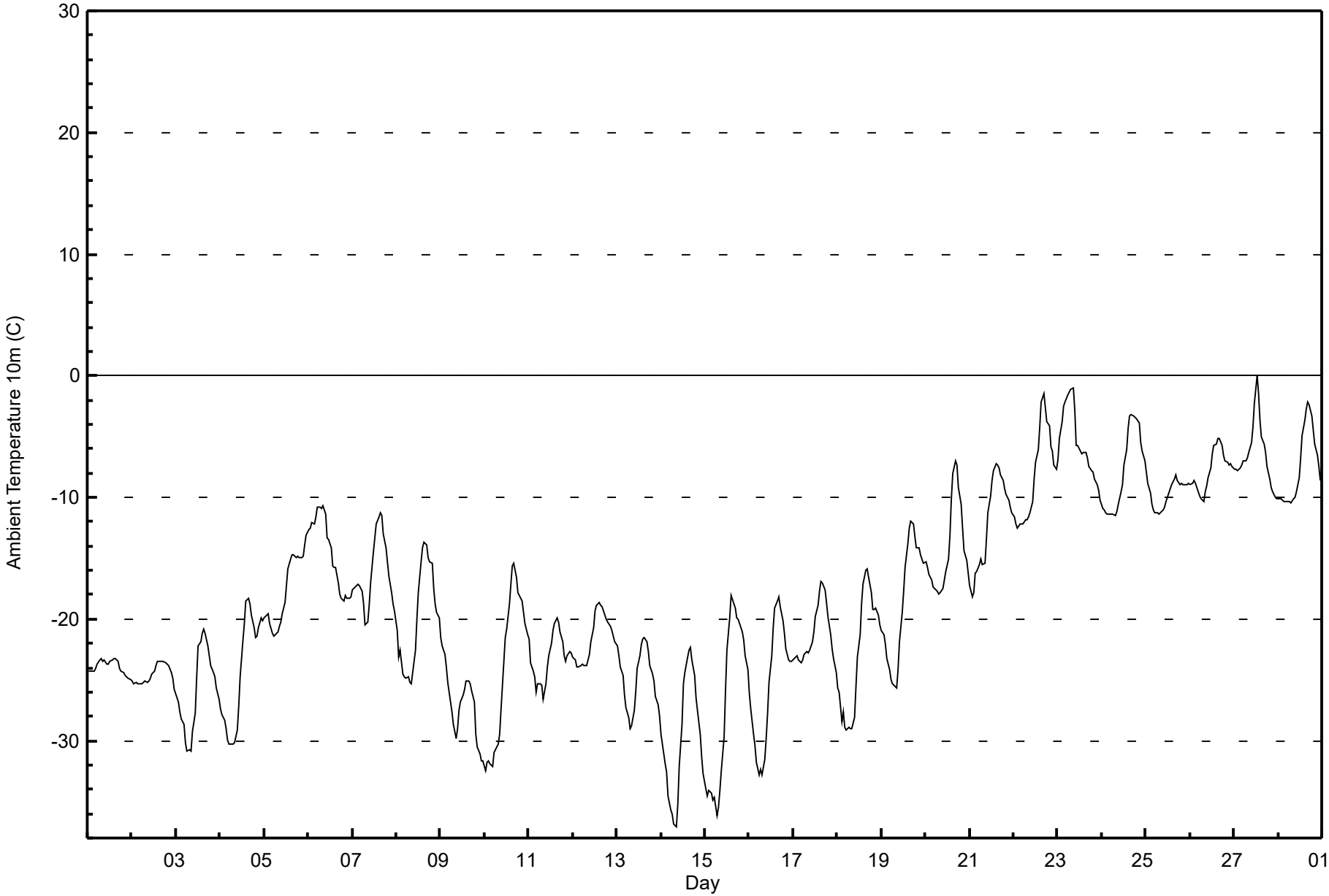
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-24.3	-24.3	-24.3	-24.3	-24.1	-23.8	-23.4	-23.2	-23.5	-23.4	-23.7	-23.7	-23.5	-23.3	-23.2	-23.3	-23.5	-24.1	-24.3	-24.4	-24.7	-24.7	-24.9	-24.9	-23.9	-23.2
2-Feb	-25.1	-25.3	-25.3	-25.3	-25.3	-25.3	-25.3	-25.1	-25.2	-25.1	-24.8	-24.5	-24.3	-23.8	-23.5	-23.5	-23.5	-23.5	-23.6	-23.7	-23.9	-24.4	-24.8	-25.8	-24.6	-23.5
3-Feb	-26.5	-26.9	-27.7	-28.2	-28.7	-30.2	-30.9	-30.8	-30.8	-29.2	-27.8	-24.9	-22.3	-21.9	-21.2	-20.8	-21.2	-22.2	-23.0	-23.8	-24.4	-24.7	-25.7	-26.6	-25.8	-20.8
4-Feb	-27.4	-27.9	-28.4	-29.0	-29.9	-30.3	-30.3	-30.3	-30.2	-29.2	-27.1	-24.8	-21.8	-20.4	-18.5	-18.3	-18.7	-19.7	-20.7	-21.5	-21.4	-20.8	-20.0	-20.1	-24.4	-18.3
5-Feb	-19.9	-19.6	-19.6	-20.3	-21.2	-21.4	-21.2	-21.0	-20.6	-20.2	-19.6	-18.6	-17.2	-15.9	-15.0	-14.7	-14.7	-14.9	-14.8	-15.0	-15.0	-14.8	-13.9	-13.1	-17.6	-13.1
6-Feb	-12.6	-12.5	-12.1	-12.1	-11.6	-10.8	-10.8	-10.9	-10.7	-11.4	-13.3	-13.4	-14.2	-15.7	-15.8	-15.8	-17.0	-18.0	-18.2	-18.5	-18.0	-18.3	-18.3	-18.2	-14.5	-10.7
7-Feb	-17.7	-17.4	-17.2	-17.1	-17.2	-17.7	-18.8	-20.5	-20.2	-18.9	-17.0	-14.4	-13.3	-12.2	-11.6	-11.3	-11.5	-13.0	-14.1	-15.3	-16.5	-17.8	-18.7	-19.4	-16.2	-11.3
8-Feb	-20.9	-23.2	-22.6	-24.5	-24.8	-24.8	-24.8	-25.3	-25.3	-24.4	-22.5	-20.0	-17.8	-15.3	-14.1	-13.7	-13.9	-14.9	-15.3	-15.4	-17.5	-18.8	-19.5	-19.9	-20.0	-13.7
9-Feb	-21.5	-22.2	-22.9	-24.0	-25.2	-26.9	-27.6	-28.7	-29.8	-29.0	-27.5	-26.8	-26.3	-25.8	-25.1	-25.1	-25.4	-26.0	-26.8	-29.4	-30.5	-31.0	-31.6	-31.7	-26.9	-21.5
10-Feb	-32.5	-31.8	-31.7	-31.8	-32.1	-31.0	-30.8	-30.3	-29.4	-27.4	-23.4	-21.5	-20.8	-18.8	-17.1	-15.7	-15.4	-16.6	-17.9	-18.1	-18.6	-19.4	-20.3	-21.3	-23.9	-15.4
11-Feb	-21.7	-23.6	-24.2	-24.7	-26.0	-25.3	-25.3	-25.5	-26.6	-25.4	-23.9	-23.0	-22.0	-21.0	-20.4	-19.9	-20.3	-21.1	-21.9	-23.0	-23.4	-23.0	-22.7	-22.8	-23.2	-19.9
12-Feb	-23.2	-23.3	-23.9	-23.9	-23.8	-23.7	-23.8	-23.8	-23.4	-22.9	-21.8	-20.7	-19.4	-18.9	-18.6	-18.8	-19.0	-19.7	-20.0	-20.2	-20.6	-20.9	-21.4	-21.9	-21.6	-18.6
13-Feb	-22.2	-23.0	-23.9	-24.7	-26.3	-27.2	-28.1	-29.0	-28.8	-27.6	-26.1	-24.1	-23.0	-22.2	-21.7	-21.5	-21.9	-22.7	-23.9	-24.5	-25.1	-26.4	-27.0	-27.9	-24.9	-21.5
14-Feb	-29.4	-31.1	-31.9	-32.6	-34.5	-35.7	-36.0	-36.8	-37.0	-35.2	-32.2	-28.7	-25.3	-24.5	-23.1	-22.6	-22.4	-23.3	-24.6	-26.5	-27.5	-29.5	-31.4	-32.8	-29.8	-22.4
15-Feb	-34.0	-34.6	-34.1	-34.3	-34.9	-34.7	-36.1	-35.4	-34.1	-32.5	-29.7	-25.9	-22.5	-19.9	-18.0	-18.4	-19.1	-19.9	-20.0	-20.7	-21.1	-21.8	-23.0	-24.1	-27.0	-18.0
16-Feb	-26.1	-27.4	-29.5	-30.4	-31.8	-32.8	-32.4	-32.8	-31.5	-29.8	-27.8	-25.2	-23.0	-20.7	-19.1	-18.5	-18.2	-19.0	-20.2	-21.2	-22.4	-23.3	-23.5	-23.4	-25.4	-18.2
17-Feb	-23.2	-23.1	-23.1	-23.4	-23.6	-23.3	-22.9	-22.6	-22.8	-22.5	-21.8	-21.0	-19.8	-18.9	-17.7	-16.9	-17.0	-17.6	-18.6	-19.8	-21.3	-22.4	-23.3	-24.4	-21.3	-16.9
18-Feb	-25.6	-26.1	-28.4	-27.7	-28.9	-29.1	-28.9	-29.0	-29.0	-28.1	-25.5	-23.1	-21.3	-18.8	-17.1	-16.0	-15.9	-16.6	-17.8	-19.2	-19.2	-19.0	-19.6	-20.4	-22.9	-15.9
19-Feb	-21.0	-21.3	-22.1	-23.3	-24.2	-24.9	-25.3	-25.5	-25.7	-24.2	-21.8	-19.4	-17.7	-15.8	-13.8	-12.5	-11.9	-12.2	-13.2	-14.1	-14.2	-14.7	-15.1	-15.4	-18.7	-11.9
20-Feb	-15.3	-15.8	-16.3	-16.8	-17.4	-17.5	-17.8	-17.9	-17.9	-17.5	-16.8	-16.1	-15.1	-13.1	-10.1	-8.0	-7.0	-7.3	-9.2	-10.5	-12.5	-14.4	-15.2	-16.2	-14.2	-7.0
21-Feb	-17.3	-18.2	-17.8	-16.2	-16.1	-15.6	-15.1	-15.5	-15.5	-13.5	-11.3	-9.9	-8.6	-7.8	-7.2	-7.3	-7.6	-8.1	-8.6	-9.3	-9.8	-10.3	-10.8	-11.2	-12.0	-7.2
22-Feb	-11.6	-12.1	-12.5	-12.2	-12.2	-12.2	-11.8	-11.8	-11.6	-11.2	-10.3	-8.5	-7.1	-6.0	-4.3	-2.2	-1.5	-2.6	-3.7	-4.1	-5.8	-6.2	-7.3	-7.7	-8.2	-1.5
23-Feb	-6.9	-5.2	-3.8	-2.4	-2.1	-1.6	-1.4	-1.1	-1.0	-2.9	-5.7	-5.8	-6.2	-6.4	-6.3	-6.3	-6.8	-7.4	-7.9	-8.0	-8.5	-8.9	-9.4	-10.3	-5.5	-1.0
24-Feb	-11.0	-11.0	-11.2	-11.4	-11.3	-11.4	-11.4	-11.5	-11.2	-10.6	-9.6	-8.9	-7.3	-6.1	-4.4	-3.3	-3.2	-3.3	-3.5	-3.5	-3.9	-5.5	-6.2	-7.0	-7.8	-3.2
25-Feb	-8.0	-8.8	-9.7	-10.6	-11.0	-11.3	-11.3	-11.4	-11.3	-11.1	-10.8	-10.3	-9.7	-9.3	-9.0	-8.5	-8.2	-8.6	-9.0	-8.8	-9.0	-9.0	-8.9	-8.8	-9.7	-8.0
26-Feb	-9.0	-8.8	-8.6	-8.9	-9.5	-9.9	-10.1	-10.3	-9.5	-9.0	-8.4	-7.6	-6.4	-5.8	-5.6	-5.1	-5.2	-5.7	-6.5	-7.0	-7.1	-7.4	-7.3	-7.5	-7.8	-5.1
27-Feb	-7.7	-7.7	-7.8	-7.5	-7.4	-6.9	-7.0	-6.8	-6.3	-5.5	-4.2	-2.3	0.0	-1.5	-3.6	-5.1	-5.7	-6.3	-7.4	-8.5	-9.2	-9.6	-9.9	-10.1	-6.4	0.0
28-Feb	-10.1	-10.1	-10.2	-10.3	-10.3	-10.3	-10.4	-10.4	-10.2	-10.0	-9.5	-8.4	-6.8	-5.0	-3.6	-2.7	-2.1	-2.4	-3.3	-4.5	-5.6	-6.6	-7.5	-8.6	-7.5	-2.1
	-19.7	-20.1	-20.4	-20.6	-21.1	-21.3	-21.4	-21.5	-21.4	-20.6	-19.4	-17.9	-16.5	-15.5	-14.6	-14.1	-14.2	-14.9	-15.6	-16.4	-17.0	-17.6	-18.1	-18.6	Diurnal Average	
	-6.9	-5.2	-3.8	-2.4	-2.1	-1.6	-1.4	-1.1	-1.0	-2.9	-4.2	-2.3	0.0	-1.5	-3.6	-2.2	-1.5	-2.4	-3.3	-3.5	-3.9	-5.5	-6.2	-7.0	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 10m (AT10) - C

Fort McKay - Bertha Ganter - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	319	47.47	47.47
-20 - 0	352	52.38	99.85
0 - 10	1	0.15	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Maximum Value: 0.2 C on Feb 27 13:00

Maximum Daily Average: -5.3 C on Feb 23

Minimum Value: -37.6 C on Feb 14 08:00

Minimum Daily Average: -30.3 C on Feb 14

Maximum Diurnal Average: -13.8 C at hour 16

Minimum Diurnal Average: -21.9 C at hour 8

Monthly Average: -18.33 C

Percentiles: P_1 = -35.4 P_{10} = -29.4 Q_1 = -24.2 Median = -19.5 Q_3 = -10.8 P_{90} = -7.0 P_{99} = -1.8

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

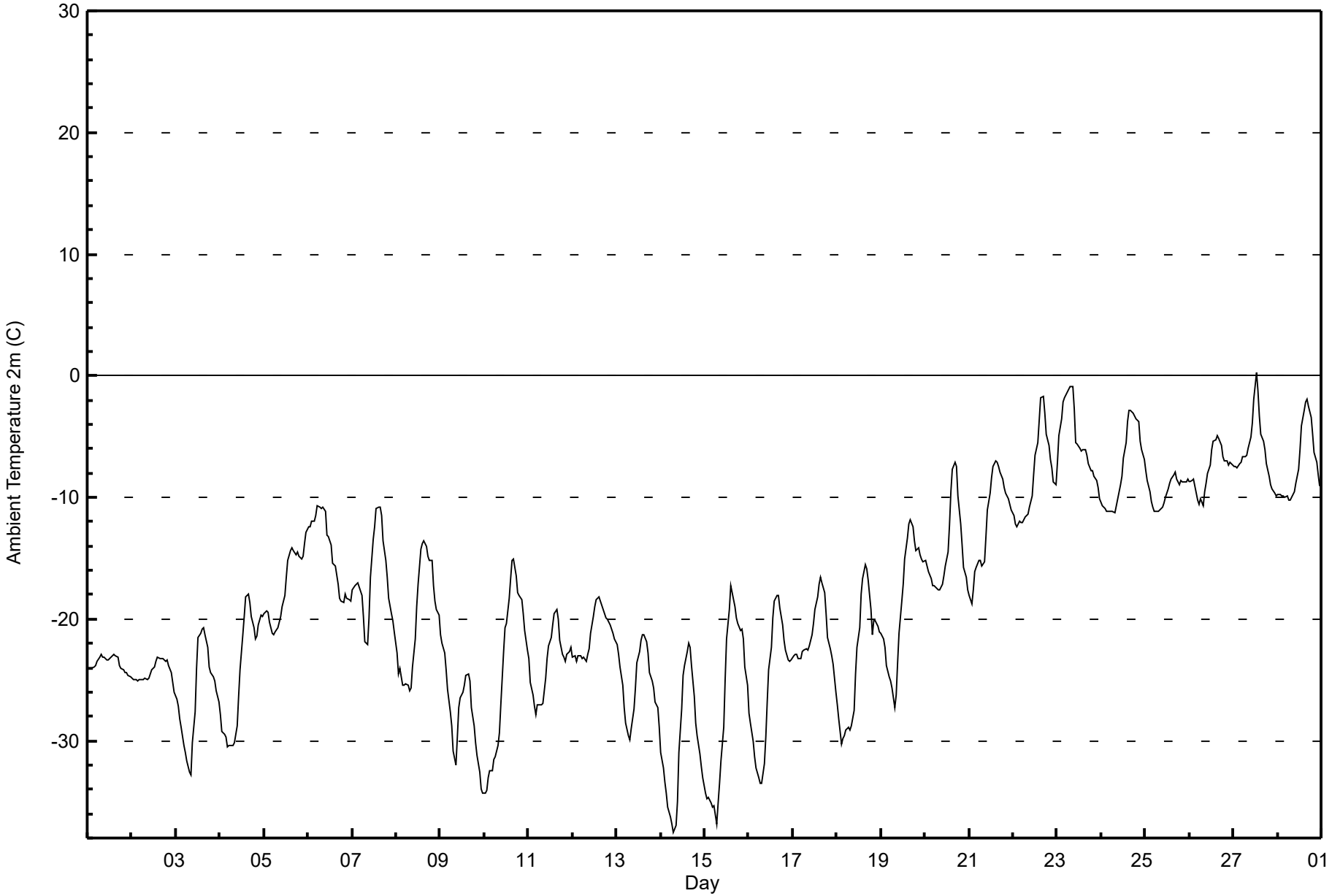
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-24.0	-24.0	-24.0	-24.0	-23.8	-23.5	-23.1	-23.0	-23.2	-23.1	-23.4	-23.4	-23.2	-23.0	-23.0	-23.0	-23.2	-23.8	-24.0	-24.2	-24.4	-24.4	-24.6	-24.7	-23.7	-23.0
2-Feb	-24.9	-25.0	-25.0	-25.0	-25.0	-25.0	-25.0	-24.9	-24.9	-24.9	-24.5	-24.2	-23.9	-23.5	-23.2	-23.2	-23.2	-23.3	-23.4	-23.4	-23.8	-24.4	-25.2	-26.0	-24.4	-23.2
3-Feb	-26.6	-27.1	-28.2	-28.9	-30.4	-31.0	-31.7	-32.6	-32.9	-30.1	-27.6	-24.1	-21.5	-21.2	-20.8	-20.7	-21.3	-22.3	-24.0	-24.4	-24.8	-25.1	-25.9	-26.8	-26.2	-20.7
4-Feb	-27.8	-29.2	-29.5	-29.7	-30.5	-30.4	-30.4	-30.4	-30.1	-28.8	-26.4	-24.2	-21.3	-19.8	-18.2	-18.0	-18.7	-19.8	-20.8	-21.6	-21.4	-20.5	-19.7	-19.8	-24.4	-18.0
5-Feb	-19.6	-19.4	-19.4	-20.2	-21.2	-21.3	-21.0	-20.7	-20.3	-19.8	-19.0	-18.0	-16.6	-15.1	-14.4	-14.1	-14.4	-14.7	-14.5	-14.8	-15.0	-14.9	-13.8	-12.9	-17.3	-12.9
6-Feb	-12.4	-12.5	-12.0	-11.9	-11.5	-10.7	-10.8	-10.9	-10.8	-11.2	-13.1	-13.2	-13.9	-15.4	-15.5	-15.6	-17.1	-18.3	-18.5	-18.6	-18.0	-18.3	-18.4	-18.5	-14.5	-10.7
7-Feb	-17.6	-17.3	-17.1	-17.0	-17.4	-18.0	-19.8	-21.9	-22.1	-19.9	-16.6	-13.5	-12.4	-10.9	-10.8	-10.8	-11.5	-13.5	-15.2	-16.5	-18.2	-19.6	-20.1	-21.0	-16.6	-10.8
8-Feb	-22.7	-24.6	-24.0	-25.4	-25.5	-25.3	-25.4	-25.9	-25.6	-23.9	-21.6	-19.0	-17.1	-14.2	-13.8	-13.6	-14.0	-14.8	-15.1	-15.2	-17.3	-18.6	-19.3	-19.7	-20.1	-13.6
9-Feb	-21.2	-22.0	-22.8	-24.2	-25.8	-27.7	-28.8	-30.8	-32.0	-29.7	-27.3	-26.5	-26.0	-25.4	-24.6	-24.6	-25.1	-27.3	-28.8	-30.2	-31.2	-32.6	-34.0	-34.3	-27.6	-21.2
10-Feb	-34.4	-34.1	-33.0	-32.5	-32.5	-31.5	-31.3	-30.4	-29.4	-27.0	-22.7	-20.7	-20.4	-18.3	-16.7	-15.2	-15.1	-16.5	-17.8	-18.0	-18.5	-19.6	-21.0	-22.5	-24.1	-15.1
11-Feb	-23.3	-25.2	-26.2	-27.2	-27.8	-27.0	-27.1	-27.0	-26.9	-24.9	-23.2	-22.2	-21.6	-20.4	-19.5	-19.2	-20.1	-21.7	-22.8	-23.2	-23.5	-22.8	-22.7	-22.4	-23.7	-19.2
12-Feb	-23.1	-23.0	-23.5	-23.1	-23.0	-23.2	-23.2	-23.5	-22.9	-22.4	-21.1	-19.8	-19.0	-18.5	-18.2	-18.5	-18.8	-19.5	-19.9	-20.0	-20.4	-20.8	-21.2	-21.7	-21.2	-18.2
13-Feb	-22.0	-22.9	-23.9	-25.5	-27.3	-28.5	-29.5	-29.9	-29.0	-27.4	-25.6	-23.6	-22.6	-21.7	-21.3	-21.2	-21.8	-22.8	-24.4	-25.1	-25.6	-26.8	-27.3	-28.9	-25.2	-21.2
14-Feb	-31.0	-32.3	-33.3	-34.3	-35.4	-36.2	-36.9	-37.6	-37.0	-35.0	-31.0	-27.4	-24.7	-23.8	-22.7	-22.0	-22.4	-23.8	-26.4	-28.5	-29.6	-31.0	-32.1	-33.1	-30.3	-22.0
15-Feb	-34.3	-34.8	-34.7	-35.1	-35.5	-35.3	-36.8	-35.1	-33.6	-31.7	-28.9	-25.0	-21.6	-19.2	-17.2	-17.8	-19.0	-19.9	-20.4	-21.0	-20.9	-21.6	-23.9	-25.4	-27.0	-17.2
16-Feb	-27.7	-28.6	-30.1	-31.3	-32.3	-33.1	-33.5	-33.5	-31.9	-29.7	-26.9	-24.2	-22.4	-19.9	-18.6	-18.1	-18.1	-19.1	-20.5	-21.7	-22.6	-23.4	-23.5	-23.3	-25.6	-18.1
17-Feb	-23.1	-22.9	-22.9	-23.2	-23.2	-22.6	-22.6	-22.4	-22.5	-22.2	-21.3	-20.4	-19.2	-18.2	-17.2	-16.5	-17.0	-17.8	-19.5	-21.5	-22.4	-23.1	-23.8	-26.0	-21.3	-16.5
18-Feb	-27.0	-28.2	-30.3	-29.8	-29.6	-29.2	-28.9	-29.1	-28.7	-27.5	-24.5	-22.3	-20.7	-18.0	-16.6	-15.6	-15.9	-16.8	-19.2	-21.2	-20.1	-20.1	-20.6	-21.0	-23.4	-15.6
19-Feb	-21.2	-21.6	-22.3	-23.8	-24.7	-25.1	-25.7	-27.2	-26.2	-23.5	-21.2	-18.5	-17.1	-15.0	-13.4	-12.2	-11.9	-12.5	-13.6	-14.3	-14.1	-14.7	-15.0	-15.3	-18.8	-11.9
20-Feb	-15.2	-15.7	-16.1	-16.7	-17.2	-17.2	-17.5	-17.7	-17.6	-17.1	-16.4	-15.6	-14.5	-12.3	-9.5	-7.7	-7.1	-7.5	-9.9	-12.2	-13.9	-15.7	-16.6	-17.6	-14.4	-7.1
21-Feb	-18.0	-18.7	-17.6	-16.1	-15.8	-15.2	-15.2	-15.6	-15.3	-13.2	-11.0	-9.6	-8.3	-7.5	-6.9	-7.1	-7.4	-8.0	-8.5	-9.2	-9.7	-10.1	-10.6	-11.1	-11.9	-6.9
22-Feb	-11.5	-12.2	-12.4	-12.0	-12.0	-12.0	-11.6	-11.5	-11.4	-10.8	-9.9	-8.1	-6.5	-5.4	-3.7	-1.8	-1.7	-3.1	-4.8	-5.8	-6.9	-7.6	-8.7	-9.0	-8.3	-1.7
23-Feb	-7.1	-5.0	-3.6	-2.1	-1.8	-1.4	-1.1	-0.9	-0.9	-2.7	-5.5	-5.6	-6.0	-6.2	-6.1	-6.1	-6.6	-7.2	-7.8	-7.8	-8.3	-8.7	-9.2	-10.1	-5.3	-0.9
24-Feb	-10.7	-10.8	-11.0	-11.2	-11.1	-11.1	-11.2	-11.3	-10.7	-10.1	-9.0	-8.3	-6.7	-5.5	-3.7	-2.8	-2.8	-3.1	-3.3	-3.5	-3.8	-5.3	-6.1	-6.8	-7.5	-2.8
25-Feb	-7.8	-8.6	-9.5	-10.4	-10.8	-11.1	-11.1	-11.2	-11.1	-10.8	-10.5	-9.9	-9.3	-8.9	-8.5	-8.1	-7.9	-8.4	-9.0	-8.6	-8.8	-8.8	-8.7	-8.5	-9.4	-7.8
26-Feb	-8.7	-8.6	-8.5	-9.1	-10.2	-10.6	-10.1	-10.6	-9.5	-8.8	-8.1	-7.3	-6.1	-5.4	-5.3	-4.9	-5.1	-5.7	-6.7	-7.0	-7.0	-7.3	-7.1	-7.3	-7.7	-4.9
27-Feb	-7.5	-7.5	-7.5	-7.3	-7.1	-6.7	-6.7	-6.5	-6.0	-5.1	-3.9	-1.9	0.2	-1.2	-3.3	-4.8	-5.4	-6.1	-7.2	-8.3	-9.0	-9.4	-9.7	-9.9	-6.1	0.2
28-Feb	-9.8	-9.8	-9.9	-9.9	-10.0	-9.9	-10.2	-10.2	-9.8	-9.5	-8.9	-7.7	-6.1	-4.1	-2.9	-2.1	-1.9	-2.5	-3.4	-4.8	-6.3	-7.2	-8.1	-9.1	-7.2	-1.9
	-20.0	-20.4	-20.7	-21.0	-21.4	-21.4	-21.6	-21.9	-21.5	-20.4	-18.9	-17.3	-16.0	-14.9	-14.1	-13.8	-14.1	-15.0	-16.0	-16.8	-17.3	-17.9	-18.5	-19.0	Diurnal Average	
	-7.1	-5.0	-3.6	-2.1	-1.8	-1.4	-1.1	-0.9	-0.9	-2.7	-3.9	-1.9	0.2	-1.2	-2.9	-1.8	-1.7	-2.5	-3.3	-3.5	-3.8	-5.3	-6.1	-6.8	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Fort McKay - Bertha Ganter - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	319	47.47	47.47
-20 - 0	352	52.38	99.85
0 - 10	1	0.15	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Fort McKay - Bertha Ganter - February 2025

Maximum Value: 96.5 % on Feb 23 08:00

Maximum Daily Average: 88.4 % on Feb 23

Minimum Value: 39.3 % on Feb 18 15:00

Minimum Daily Average: 49.9 % on Feb 19

Maximum Diurnal Average: 73.6 % at hour 8

Minimum Diurnal Average: 61.7 % at hour 15

Monthly Average: 70.14 %

Percentiles: P_1 = 42.4 P_{10} = 57.8 Q_1 = 65.0 Median = 70.5 Q_3 = 76.0 P_{90} = 82.4 P_{99} = 93.3

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

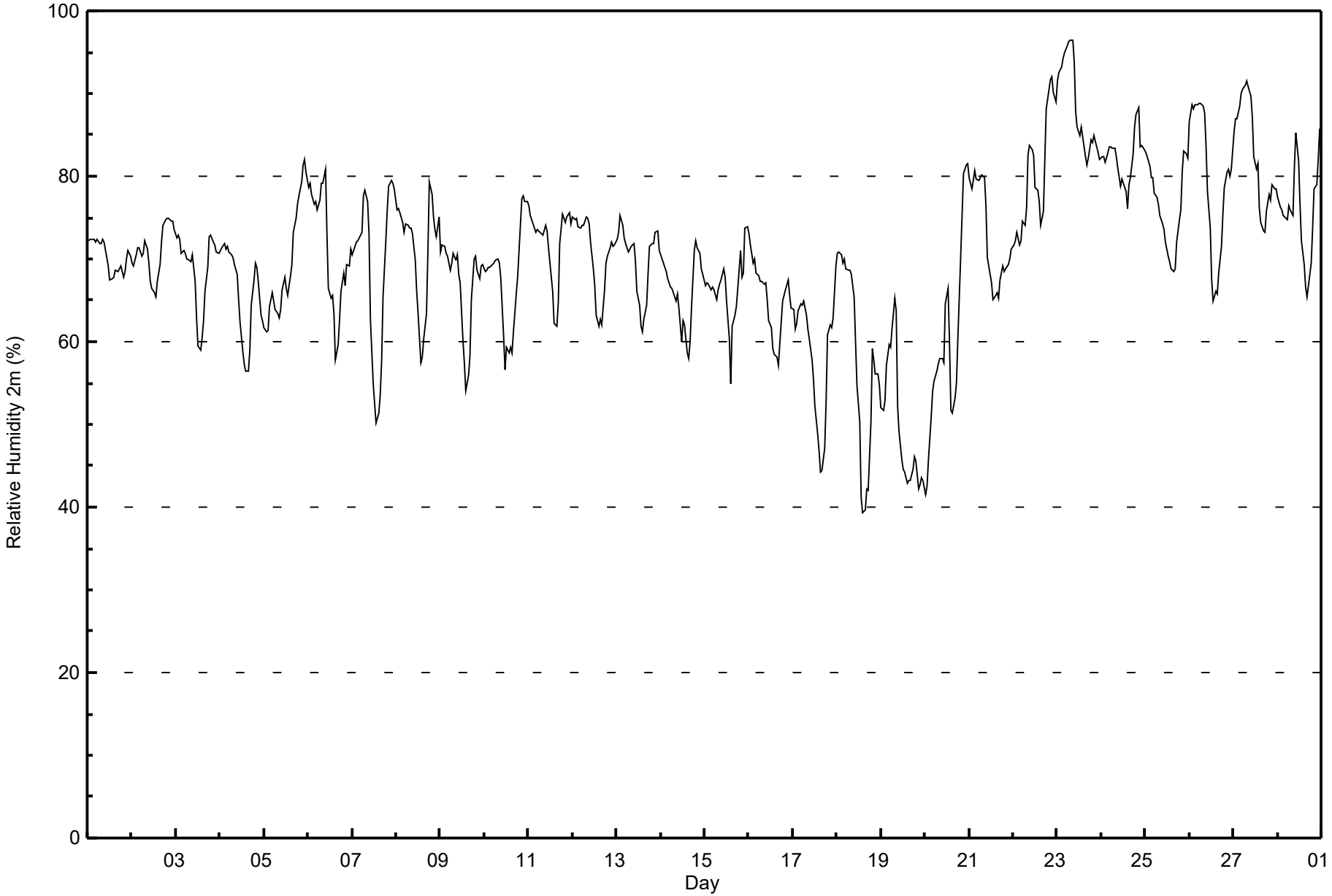
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	72.2	72.4	72.3	72.3	72.0	72.4	71.9	71.8	72.4	72.0	70.2	69.2	67.5	67.6	67.9	68.6	68.6	68.8	69.1	67.8	68.5	70.1	70.9	70.3	70.3	72.4
2-Feb	69.4	69.2	70.5	71.3	71.4	70.3	70.7	72.2	71.2	69.5	67.4	66.4	65.9	65.5	67.3	69.4	72.1	74.1	74.7	74.9	74.9	74.6	74.6	73.5	70.9	74.9
3-Feb	72.6	72.8	72.3	70.6	71.1	70.7	70.1	69.8	69.6	70.6	67.3	62.9	59.4	58.9	60.5	62.6	66.2	68.9	72.8	72.9	72.1	71.6	70.8	70.6	68.7	72.9
4-Feb	71.1	71.4	71.9	71.2	71.5	70.8	70.5	70.1	69.3	68.1	65.0	62.4	58.8	57.4	56.5	56.4	58.9	64.4	67.4	69.5	69.0	67.3	63.3	62.5	66.0	71.9
5-Feb	61.7	61.1	61.4	64.2	65.9	64.8	63.9	63.4	62.8	63.8	66.2	67.8	66.4	65.6	67.9	69.3	73.2	75.0	76.6	77.6	79.4	81.3	82.0	80.5	69.2	82.0
6-Feb	78.6	79.2	77.8	76.5	77.0	76.0	77.1	79.2	79.1	80.8	73.0	66.5	65.2	65.6	63.4	57.8	59.7	62.8	66.1	68.2	66.7	69.3	69.2	71.1	71.1	80.8
7-Feb	70.6	71.6	72.0	72.2	72.6	73.2	77.6	78.3	76.9	73.1	62.8	54.8	52.6	50.2	51.4	53.5	57.7	65.4	72.2	76.0	78.8	79.5	79.1	78.5	68.8	79.5
8-Feb	75.9	76.1	75.6	74.5	73.2	74.2	74.0	73.7	73.7	73.0	69.9	66.1	63.4	57.5	58.1	60.4	63.3	70.8	79.3	77.7	75.2	73.6	72.8	75.0	71.1	79.3
9-Feb	70.8	71.6	71.6	70.7	70.3	68.6	69.4	70.7	69.9	70.5	68.2	67.1	60.2	57.5	54.0	55.9	58.2	65.1	70.0	70.3	68.6	67.6	69.1	69.3	66.9	71.6
10-Feb	68.5	68.6	68.9	69.0	69.3	69.5	69.8	69.9	69.5	67.6	60.7	56.7	59.3	58.6	59.3	58.7	61.2	65.7	67.8	71.0	77.3	77.6	77.0	76.9	67.4	77.6
11-Feb	76.5	75.3	74.2	73.7	73.3	73.6	73.2	73.1	72.8	74.1	73.3	71.4	67.7	66.1	62.1	61.8	64.7	71.9	75.4	74.9	74.4	75.1	75.5	74.3	72.0	76.5
12-Feb	75.0	74.8	74.9	73.9	73.8	74.0	74.1	75.1	74.9	74.2	72.0	68.9	66.8	63.2	61.8	62.7	62.0	66.2	69.5	70.4	71.3	72.0	71.5	71.7	70.6	75.1
13-Feb	72.4	73.3	75.2	74.1	72.6	71.9	70.9	71.1	71.5	71.9	69.8	66.2	64.4	61.8	61.2	62.7	64.4	68.1	71.5	71.9	71.8	73.1	73.3	71.1	69.8	75.2
14-Feb	70.4	69.4	68.9	68.5	67.6	66.6	66.5	65.9	64.9	65.7	64.0	59.9	62.6	62.0	58.7	58.0	60.1	64.0	71.0	72.2	71.3	70.7	68.8	68.2	66.1	72.2
15-Feb	66.8	67.2	67.0	66.3	66.5	66.3	65.0	66.2	66.9	67.5	68.8	67.8	65.0	60.3	54.9	61.9	63.2	64.2	66.4	71.1	67.9	68.3	73.7	74.0	66.4	74.0
16-Feb	73.0	71.6	69.4	70.0	68.4	67.9	67.2	67.2	66.9	67.1	65.0	62.6	61.7	59.1	58.5	58.2	57.2	59.9	64.9	65.6	66.2	67.5	65.5	64.0	65.2	73.0
17-Feb	63.8	61.5	62.2	63.7	64.6	64.4	64.8	63.2	61.6	60.3	57.8	55.4	52.2	48.8	46.8	44.2	44.4	47.0	52.7	60.8	62.1	61.7	62.8	69.2	58.2	69.2
18-Feb	70.6	70.9	70.6	69.5	70.0	68.8	68.7	68.6	68.1	65.4	60.0	54.7	50.4	41.2	39.3	39.7	42.2	42.0	50.3	59.1	57.8	56.0	56.1	54.8	58.1	70.9
19-Feb	52.1	51.7	52.9	57.1	59.6	59.3	61.5	65.3	63.8	52.1	49.1	45.8	44.6	44.2	43.0	43.3	43.2	44.6	46.1	45.5	42.2	42.7	43.6	43.2	49.9	65.3
20-Feb	41.6	42.5	45.8	51.0	54.1	55.3	56.5	57.3	57.9	58.0	57.4	64.5	66.4	60.0	51.8	51.4	53.2	55.2	60.5	70.3	75.4	80.4	81.3	81.6	59.6	81.6
21-Feb	79.8	78.5	79.4	80.7	79.7	79.5	79.8	80.2	79.9	76.5	70.2	68.1	67.1	65.1	65.6	65.9	65.3	67.4	69.2	68.4	68.9	69.4	69.9	71.2	72.7	80.7
22-Feb	71.7	72.3	73.2	71.7	72.3	74.5	74.1	76.2	82.5	83.7	83.1	82.5	78.6	78.4	77.0	74.1	75.7	82.0	88.1	90.6	91.6	92.0	90.1	89.1	80.2	92.0
23-Feb	91.6	92.5	93.2	94.2	94.9	95.8	96.3	96.5	96.5	93.8	87.8	85.9	84.9	86.0	84.8	82.4	81.3	82.2	84.3	84.1	85.0	83.6	82.8	82.0	88.4	96.5
24-Feb	82.4	82.4	81.6	82.2	83.6	83.6	83.4	83.4	82.4	81.0	78.9	79.7	79.1	78.1	76.1	78.9	79.9	82.8	86.0	87.5	88.3	83.6	83.8	83.2	82.2	88.3
25-Feb	82.9	82.4	81.1	79.7	79.8	77.9	77.5	76.6	75.3	74.3	73.5	72.1	70.4	69.7	68.8	68.5	68.8	72.0	74.8	75.9	80.6	83.1	82.7	82.3	76.3	83.1
26-Feb	86.6	88.6	88.1	88.6	88.7	88.9	88.7	88.4	87.7	83.5	78.2	73.7	67.4	64.8	66.1	65.7	68.3	71.5	75.3	78.6	80.5	80.8	79.9	80.8	79.6	88.9
27-Feb	85.4	87.0	86.9	88.5	90.1	90.4	90.9	91.5	90.9	89.6	87.2	82.4	80.8	81.4	76.1	74.4	73.4	73.2	75.8	77.8	77.2	79.0	78.5	78.4	82.8	91.5
28-Feb	77.4	76.2	76.0	75.3	75.0	74.7	76.5	76.0	75.3	81.2	85.3	81.8	76.7	72.3	69.4	66.6	65.5	66.7	69.4	73.7	78.5	78.9	82.0	85.8	75.7	85.8
	72.6	72.6	72.7	72.9	73.2	73.0	73.2	73.6	73.4	72.5	69.7	67.2	65.2	63.1	61.7	61.9	63.3	66.5	70.3	72.3	72.9	73.2	73.2	73.3	Diurnal Average	
	91.6	92.5	93.2	94.2	94.9	95.8	96.3	96.5	96.5	93.8	87.8	85.9	84.9	86.0	84.8	82.4	81.3	82.8	88.1	90.6	91.6	92.0	90.1	89.1	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Fort McKay - Bertha Ganter - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Precipitation (PC) - mm

Fort McKay - Bertha Ganter - February 2025

Maximum Value: 1.0 mm on Feb 22 10:00

Maximum Daily Total: 5.2 mm on Feb 1

Minimum Value: 0.0 mm on Feb 2 12:00

Minimum Daily Total: 0.0 mm on Feb 3

Maximum Diurnal Total: 2.4 mm at hour 10

Minimum Diurnal Total: 0.2 mm at hour 7

Monthly Total: 18.96 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} = 0.4

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

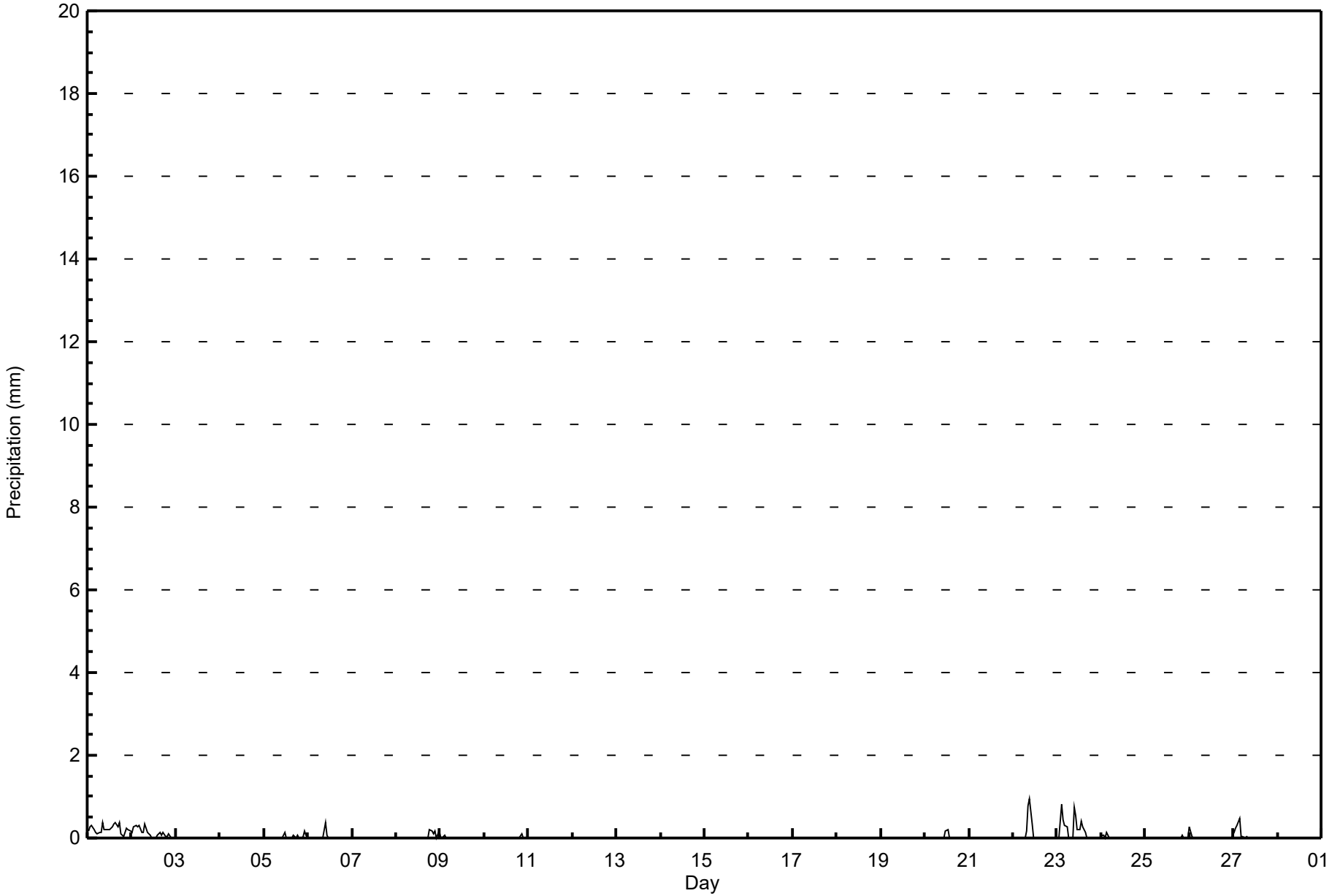
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Total	Maximum
1-Feb	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.4	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.4	0.1	0.1	0.1	0.2	0.2	0.2	5.2	0.4
2-Feb	0.1	0.3	0.3	0.3	0.3	0.1	0.1	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	2.8	0.3
3-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.2	0.1	0.6	0.2
6-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4
7-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.2	0.0	0.2	0.9	0.2
9-Feb	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
10-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1
11-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	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	0.0	0.0	0.0	0.0	0.4	0.2
21-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8	1.0	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	2.3	1.0
23-Feb	0.0	0.0	0.8	0.5	0.3	0.3	0.0	0.0	0.0	0.8	0.6	0.2	0.2	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	0.8
24-Feb	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1
25-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1
26-Feb	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3
27-Feb	0.1	0.3	0.3	0.5	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.5
28-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.8	0.9	1.8	1.5	0.8	0.6	0.2	0.7	1.3	2.4	1.2	0.7	0.6	0.7	0.7	0.6	0.4	0.5	0.4	0.3	0.5	0.5	0.4	0.4	Diurnal Average	
	0.3	0.3	0.8	0.5	0.3	0.3	0.1	0.3	0.8	1.0	0.6	0.2	0.2	0.4	0.3	0.4	0.3	0.4	0.2	0.2	0.1	0.2	0.2	0.2	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Precipitation (PC) - mm

Fort McKay - Bertha Ganter - February 2025



Concentration Ranges (mm)	Number of Hours	%	Cumulative %
0 - 0.3	660	98.21	98.21
0.4 - 0.5	7	1.04	99.26
0.6 - 0.7	1	0.15	99.40
0.8 - 1.4	4	0.60	100.00
1.5 - 10	0	0.00	100.00
> 10	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Leaf Wetness (LW) - %

Fort McKay - Bertha Ganter - February 2025

Maximum Value: 20.2 % on Feb 23 10:00

Maximum Daily Average: 18.0 % on Feb 24

Minimum Value: 2.1 % on Feb 20 16:00

Minimum Daily Average: 2.6 % on Feb 19

Maximum Diurnal Average: 6.0 % at hour 10

Minimum Diurnal Average: 4.8 % at hour 16

Monthly Average: 5.39 %

Percentiles: P_1 = 2.2 P_{10} = 2.6 Q_1 = 2.8 Median = 3.3 Q_3 = 3.8 P_{90} = 16.8 P_{99} = 18.7

Hours in Service:	672
Hours of Data:	671
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-Feb	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	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
2-Feb	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.7	2.7	2.7	2.7	2.7	2.8	3.0	3.2	3.4	3.6	3.7	3.8	3.8	3.0	3.8
3-Feb	3.8	3.8	3.8	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.8	3.5	3.3	3.3	3.2	3.3	3.4	3.4	3.5	3.5	3.6	3.6	3.6	3.7	3.6	3.9
4-Feb	3.7	3.7	3.8	3.8	3.8	3.8	3.9	3.9	3.9	3.9	3.8	3.5	3.1	3.1	3.0	3.0	3.1	3.1	3.1	3.2	3.1	3.1	3.1	3.1	3.4	3.9
5-Feb	3.1	3.0	3.0	3.1	3.1	3.1	3.0	3.0	3.0	3.0	2.9	2.9	2.8	2.7	2.6	2.6	2.7	2.8	2.8	2.9	2.9	3.1	3.2	3.3	2.9	3.3
6-Feb	3.3	3.3	3.3	3.2	3.3	3.2	3.2	3.2	3.2	3.2	2.9	2.7	2.7	2.7	2.6	2.6	2.7	2.8	2.8	2.8	2.8	2.8	2.8	2.8	3.0	3.3
7-Feb	2.8	2.8	2.8	2.9	2.9	3.0	3.2	3.5	3.6	3.7	3.5	2.5	2.3	2.2	2.2	2.3	2.5	2.8	3.0	3.3	3.5	3.8	4.0	4.2	3.1	4.2
8-Feb	4.3	4.4	4.5	4.6	4.7	4.7	4.7	4.8	4.9	4.9	4.8	4.2	3.3	2.5	2.3	2.4	2.6	2.7	2.8	2.8	2.8	2.8	2.8	2.8	3.7	4.9
9-Feb	2.8	2.8	2.9	3.0	3.2	3.3	3.4	3.5	3.5	3.6	3.5	3.3	2.9	2.6	2.5	2.5	2.7	2.9	3.0	3.1	3.2	3.3	3.3	3.4	3.1	3.6
10-Feb	3.4	3.5	3.6	3.6	3.7	3.7	3.8	3.8	3.8	3.8	3.3	2.6	2.6	2.5	2.5	2.3	2.5	2.7	2.7	2.8	2.9	3.1	3.3	3.5	3.2	3.8
11-Feb	3.7	3.8	3.9	4.0	4.1	4.3	4.4	4.6	4.6	4.6	4.5	4.4	4.1	3.9	3.7	3.6	3.6	3.7	3.7	3.7	3.7	3.7	3.7	3.7	4.0	4.6
12-Feb	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.6	3.5	3.3	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.5	3.7
13-Feb	3.3	3.3	3.3	3.4	3.4	3.5	3.5	3.5	3.4	3.4	3.3	3.2	3.1	3.0	3.0	3.1	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.5
14-Feb	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.2	3.0	2.9	2.9	2.8	2.8	3.1	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.2	3.4
15-Feb	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.4	3.3	3.3	3.3	3.1	3.0	3.0	3.0	3.0	3.1	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.4
16-Feb	3.3	3.3	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.2	3.0	3.0	2.9	2.9	2.9	3.0	3.0	3.1	3.1	3.1	3.1	3.1	3.1	3.2	3.4
17-Feb	3.1	3.1	3.0	3.1	3.1	3.1	3.0	3.0	3.0	3.0	2.7	2.6	2.4	2.4	2.4	2.4	2.5	2.6	2.8	2.9	3.0	3.0	2.9	3.1	2.8	3.1
18-Feb	3.2	3.3	3.4	3.5	3.6	3.6	3.7	3.8	3.8	3.8	3.3	2.6	2.4	2.4	2.3	2.3	2.5	2.6	2.7	2.9	2.9	2.9	2.8	2.8	3.0	3.8
19-Feb	2.8	2.8	2.8	2.9	2.9	2.9	2.9	3.0	3.0	2.8	2.6	2.4	2.3	2.3	2.2	2.3	2.4	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.6	3.0
20-Feb	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.6	2.6	2.5	2.5	2.5	2.3	2.2	2.1	2.3	2.4	2.6	2.9	3.0	3.2	3.4	3.6	2.6	3.6
21-Feb	3.7	3.7	3.7	3.6	3.5	3.3	3.3	3.3	3.3	2.8	2.5	2.4	2.5	2.4	2.4	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.6	2.7	2.9	3.7
22-Feb	2.7	2.8	2.7	2.7	2.7	2.7	2.7	2.7	2.8	2.7	3.1	3.2	2.5	2.4	2.3	2.2	2.6	2.9	3.5	4.0	4.4	4.7	5.0	5.1	3.1	5.1
23-Feb	5.0	8.0	13.7	15.0	16.1	19.1	14.5	14.7	16.7	20.2	18.4	18.4	18.5	18.4	18.4	18.4	18.5	18.6	18.6	18.6	18.7	18.7	18.7	18.7	16.8	20.2
24-Feb	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.6	18.5	18.3	17.8	16.9	16.2	16.5	16.8	17.2	17.3	17.5	17.5	18.1	18.2	18.2	18.0	18.7
25-Feb	18.2	18.2	18.2	18.2	18.2	18.2	18.1	18.1	18.0	17.9	17.8	17.7	17.5	17.3	17.2	17.0	16.9	16.9	16.9	16.8	16.8	16.7	16.7	16.7	17.5	18.2
26-Feb	16.7	16.7	16.7	16.8	16.8	16.8	16.8	16.9	16.8	16.6	16.4	15.8	15.0	15.0	14.9	14.5	14.4	14.2	14.2	14.1	14.0	13.9	13.8	13.6	15.5	16.9
27-Feb	13.6	13.5	13.6	15.6	17.4	17.5	17.6	17.7	17.7	17.4	16.8	15.2	OR	16.9	6.3	5.7	5.0	4.5	4.2	4.0	3.9	3.8	3.7	3.7	11.1	17.7
28-Feb	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.1	2.9	2.8	2.6	2.5	2.2	2.3	2.5	2.6	2.7	2.9	3.2	3.1	3.5	3.9	3.1	3.9
	5.3	5.4	5.6	5.7	5.9	6.0	5.8	5.9	6.0	6.0	5.8	5.5	5.0	5.3	4.8	4.8	4.9	4.9	5.0	5.1	5.1	5.2	5.2	5.3	Diurnal Average	
	18.7	18.7	18.7	18.7	18.7	19.1	18.7	18.7	18.7	20.2	18.5	18.4	18.5	18.4	18.4	18.4	18.5	18.6	18.6	18.6	18.7	18.7	18.7	18.7	Diurnal Maximum	

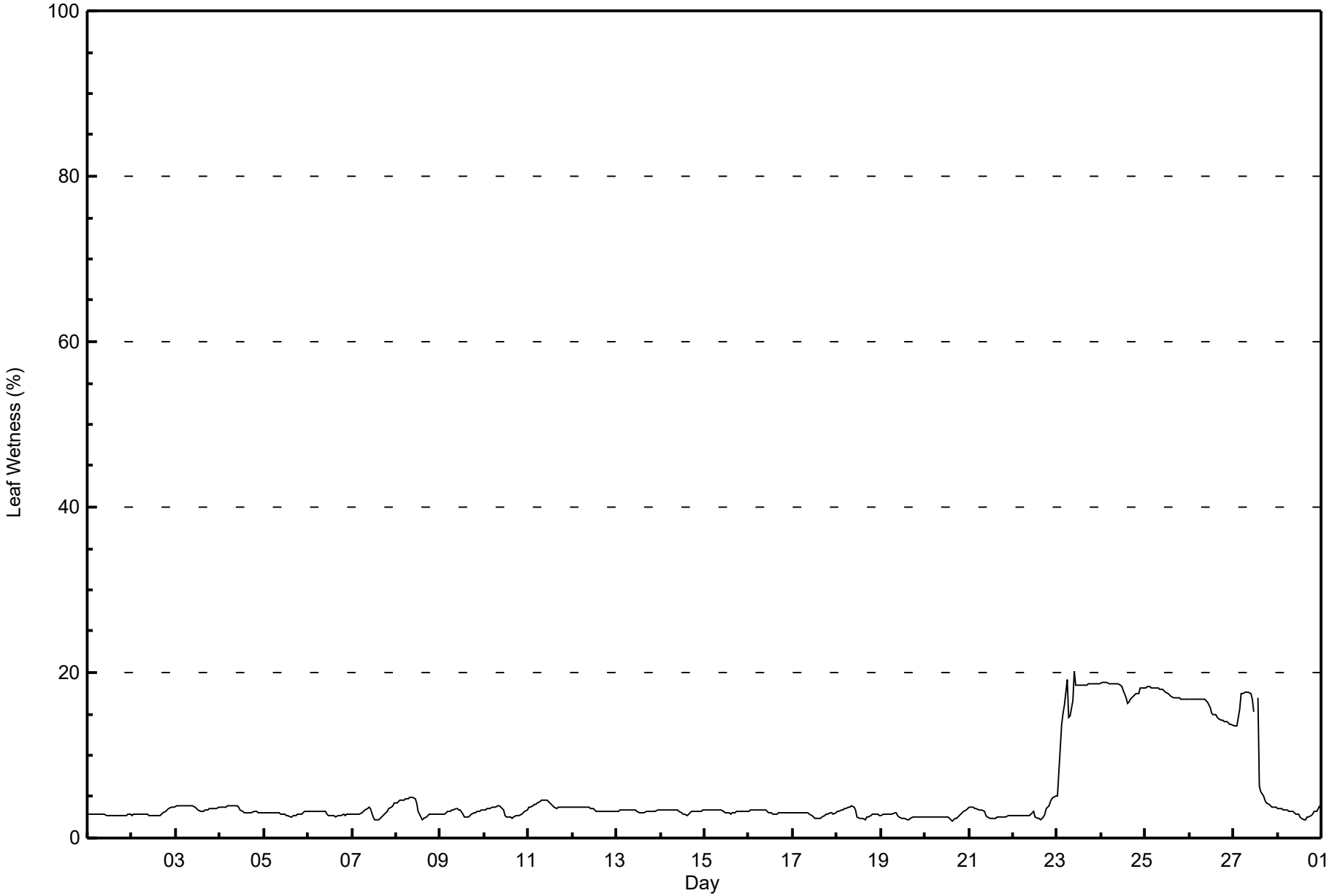
OR - Out of Range

Wood Buffalo Environmental Association

Hourly Averages

Leaf Wetness (LW) - %

Fort McKay - Bertha Ganter - February 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	0	0.00	0.00
1.5 - 10	564	84.05	84.05
> 10	107	15.95	100.00

Total Number of Valid Hours: 671

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Global Radiation (GR) - W/m2

Fort McKay - Bertha Ganter - February 2025

Maximum Value: 405.5 W/m2 on Feb 18 13:00

Maximum Daily Average: 102.2 W/m2 on Feb 18

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

Minimum Daily Average: 21.1 W/m2 on Feb 23

Maximum Diurnal Average: 259.1 W/m2 at hour 13

Minimum Diurnal Average: 0.0 W/m2 at hour 21

Monthly Average: 59.30 W/m2

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 74.8 P_{90} = 229.8 P_{99} = 388.4

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

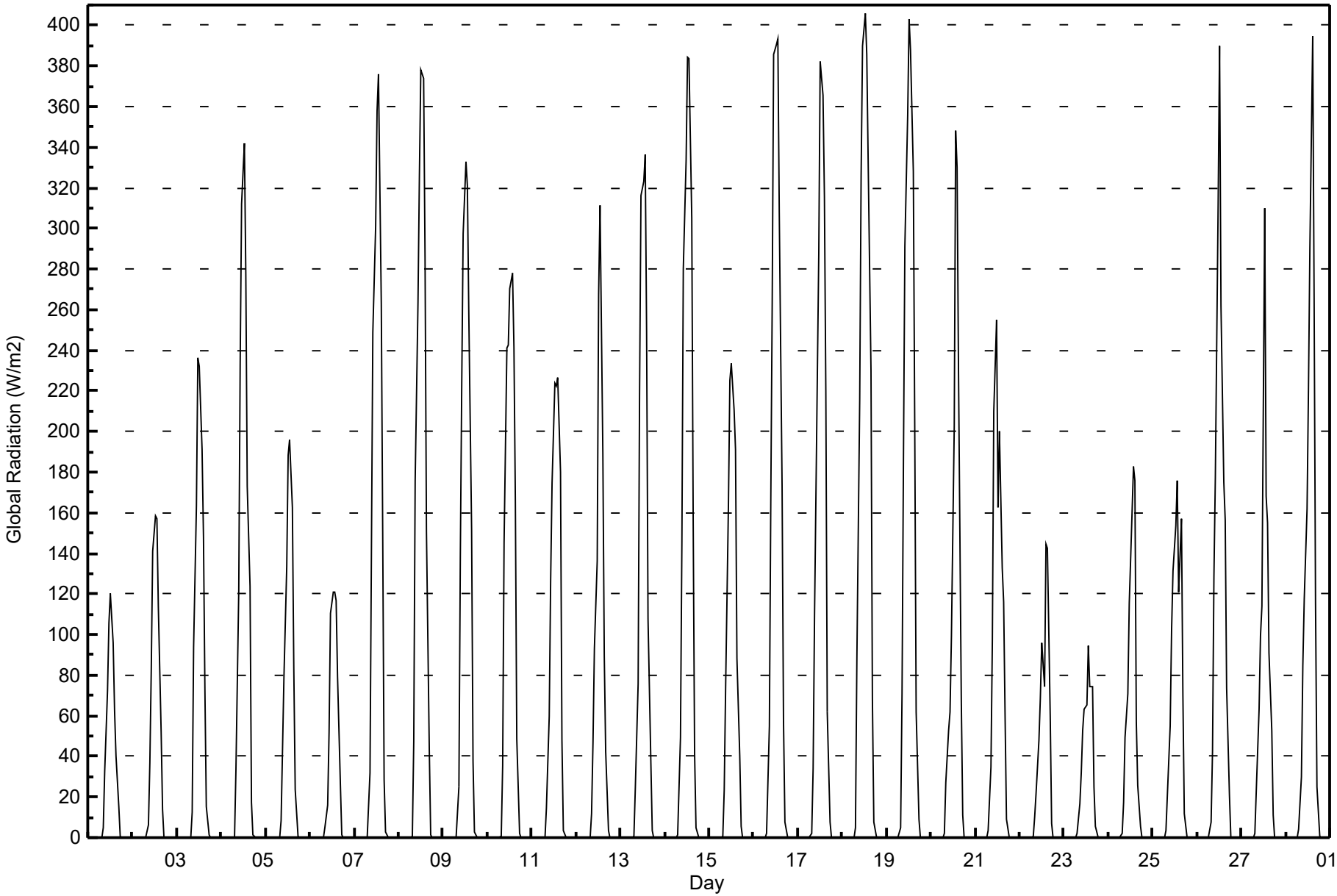
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	32.3	72.5	105.6	120.3	95.6	62.9	40.6	15.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	22.9	120.3
2-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	36.8	82.6	141.2	158.6	157.1	114.2	52.0	13.9	0.2	0.0	0.0	0.0	0.0	0.0	0.0	31.8	158.6
3-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.3	93.9	163.5	236.5	232.3	191.3	148.1	73.8	15.6	1.2	0.0	0.0	0.0	0.0	0.0	0.1	48.7	236.5
4-Feb	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.3	33.6	121.8	233.4	311.7	341.9	277.5	173.1	123.9	17.6	1.2	0.0	0.0	0.0	0.0	0.0	0.0	68.2	341.9
5-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.5	42.9	78.6	133.5	188.5	196.1	162.9	83.6	23.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	38.3	196.1
6-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	15.8	51.8	110.8	121.0	120.8	116.8	79.0	26.5	1.4	0.0	0.0	0.0	0.0	0.0	0.0	27.0	121.0
7-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31.8	140.4	248.8	300.7	358.1	376.0	262.9	149.9	28.6	2.8	0.0	0.0	0.0	0.0	0.0	0.0	79.2	376.0
8-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	47.0	175.9	263.1	325.7	377.9	374.1	285.6	151.1	43.8	1.3	0.0	0.0	0.0	0.0	0.0	0.0	85.3	377.9
9-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	25.3	138.2	223.4	297.1	332.9	320.7	258.6	151.7	37.3	2.5	0.0	0.0	0.0	0.0	0.0	0.0	74.5	332.9
10-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	35.6	145.1	241.0	242.4	270.2	278.0	241.3	165.4	48.3	2.2	0.0	0.0	0.0	0.0	0.0	0.0	69.6	278.0
11-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	14.3	59.6	126.7	174.6	223.6	222.0	226.4	180.0	48.1	3.4	0.0	0.0	0.0	0.0	0.0	0.0	53.3	226.4
12-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	11.6	46.4	93.4	136.4	267.7	311.2	189.2	89.5	42.4	3.2	0.0	0.0	0.0	0.0	0.0	0.0	49.6	311.2
13-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	24.5	76.0	217.5	315.9	323.0	336.3	248.7	107.4	37.8	3.5	0.0	0.0	0.0	0.0	0.0	0.0	70.5	336.3
14-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	49.2	144.9	280.1	333.3	384.5	383.4	305.2	156.1	41.8	5.0	0.0	0.0	0.0	0.0	0.0	0.0	86.9	384.5
15-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	23.5	74.1	164.7	225.3	233.6	210.3	191.1	88.4	40.1	5.8	0.0	0.0	0.0	0.0	0.0	0.0	52.4	233.6
16-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	55.2	166.0	263.4	385.8	390.8	393.3	307.9	173.1	57.6	7.5	0.1	0.0	0.0	0.0	0.0	0.0	91.8	393.3
17-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	34.3	109.6	228.5	287.7	382.2	365.6	315.5	219.8	61.7	8.0	0.0	0.0	0.0	0.0	0.0	0.0	83.9	382.2
18-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	88.3	215.3	325.8	390.1	405.5	385.6	332.8	230.0	67.9	7.9	0.0	0.0	0.0	0.0	0.1	0.0	102.2	405.5
19-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	71.1	186.0	291.0	355.6	402.8	387.9	328.3	202.3	61.6	9.1	0.0	0.0	0.0	0.0	0.0	0.0	95.9	402.8
20-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	27.1	53.1	61.7	99.2	203.1	348.3	330.4	230.6	66.4	11.4	0.0	0.0	0.0	0.0	0.0	0.0	59.7	348.3
21-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	34.7	97.4	210.2	255.4	162.7	199.9	133.1	115.9	60.1	9.3	0.0	0.0	0.0	0.0	0.0	0.0	53.4	255.4
22-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	10.5	22.2	48.0	68.7	96.1	74.4	144.5	142.4	59.8	7.0	0.0	0.0	0.0	0.0	0.0	0.0	28.1	144.5
23-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	17.0	31.8	53.2	63.1	65.6	94.7	74.4	74.2	25.3	5.7	0.0	0.0	0.0	0.0	0.0	0.0	21.1	94.7
24-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	17.7	49.2	70.9	115.1	137.5	182.8	175.8	57.1	25.4	5.3	0.0	0.0	0.0	0.0	0.0	0.0	34.9	182.8
25-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	20.6	54.6	101.9	131.7	153.8	176.0	121.2	156.7	70.7	11.7	0.0	0.0	0.0	0.0	0.0	0.0	41.8	176.0
26-Feb	0.0	0.0	0.0	0.1	0.0	0.0	0.0	7.3	42.5	128.7	177.5	312.6	389.9	262.0	175.2	156.2	73.6	20.6	0.0	0.0	0.0	0.0	0.0	0.0	72.8	389.9
27-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	23.1	63.5	99.0	113.8	309.9	168.5	155.2	91.2	52.8	11.4	0.0	0.0	0.0	0.0	0.0	0.0	45.4	309.9
28-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	29.6	85.0	117.4	162.1	220.9	290.7	394.5	264.7	115.3	25.2	0.7	0.0	0.0	0.0	0.0	0.0	71.3	394.5
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	28.7	93.1	163.9	219.0	259.1	256.4	213.4	136.0	45.7	6.3	0.0	0.0	0.0	0.0	0.0	0.0	Diurnal Average	
	0.0	0.1	0.0	0.1	0.0	0.0	0.0	7.3	88.3	215.3	325.8	390.1	405.5	393.3	394.5	264.7	115.3	25.2	0.7	0.0	0.0	0.0	0.1	0.1	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Global Radiation (GR) - W/m2

Fort McKay - Bertha Ganter - February 2025



Concentration Ranges (W/m2)	Number of Hours	%	Cumulative %
0 - 20	433	64.43	64.43
21 - 100	89	13.24	77.68
101 - 300	110	16.37	94.05
301 - 600	40	5.95	100.00
601 - 900	0	0.00	100.00
> 900	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Fort McKay - Bertha Ganter - February 2025

Maximum Speed: 21 km/h on Feb 1 11:00

Maximum Daily Speed Average: 17.9 km/h on Feb 1

Minimum Speed Value: 0 km/h on Feb 21 03:00

Minimum Daily Speed Average: 0.3 km/h on Feb 14

Maximum Diurnal Speed Average: 2.3 km/h at hour 15

Minimum Diurnal Speed Average: 0.0 km/h at hour 3

Monthly Average Velocity: 0.3 km/h 72.2 deg

Percentiles: $P_1 = 0$ $P_{10} = 2$ $Q_1 = 3$ Median = 6 $Q_3 = 10$ $P_{90} = 14$ $P_{99} = 19$

Hours in Service:	672
Hours of Data:	658
Hours of Missing Data:	14
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-Feb	N21	N21	N20	N18	N19	N18	N19	N18	N19	N19	N21	N19	N21	N17	N17	N16	N15	N18	N16	N17	N15	N15	N17	N16	N17.9	N21
2-Feb	NNE18	N17	N17	NNE12	NNE12	NNE14	N11	NNE9	N11	N14	N15	NNE16	N15	NNE12	NNE8	NNE5	N4	NNE4	NNE4	SE0	W2	WNW3	WNW3	SSW2	N9.0	NNE18
3-Feb	SW2	UO	S3	S3	SE2	SE0	SSE2	S2	S3	S4	SSE6	S6	SSW7	SSE9	SSE10	SSE10	S7	S6	SSW3	WSW5	W6	W6	W5	SW3	S3.9	SSE10
4-Feb	SSW5	SSW5	S6	S6	S7	S8	S9	S9	S10	S10	S11	SSE12	S12	SSE13	S13	S12	S9	S9	S9	S9	S9	S8	SSW10	SSW11	S9.1	S13
5-Feb	SSW10	SSW10	SSW8	S8	S9	SSW9	SSW11	SSW9	SSW9	SSW10	SSW9	SSW10	SSW10	SW7	SSW9	SW7	SSW6	SW6	SW5	SSW4	S4	S4	SSW3	SW5	SSW7.4	SSW11
6-Feb	WSW4	SW4	WSW7	SW4	W6	WNW6	WNW9	WNW7	WNW5	NNE13	NNE18	N19	N17	N17	N13	NW14	NW13	NW11	WNW6	WNW4	W3	WSW2	WSW2	WSW2	NNW6.0	N19
7-Feb	W4	WSW4	WSW4	SW5	SW5	NW2	ENE1	S2	SW2	S3	SSE5	SW6	SW8	SSW9	SSW8	S7	SSW5	SW5	WSW4	W4	W3	W3	SW0	SSW4	SW3.7	SSW9
8-Feb	SSW4	SE3	S4	S4	S5	S5	S5	S5	S5	S6	SSE7	SSE7	SE5	SSE3	NE4	NNE5	N5	N7	N8	NNE13	NNE16	NNE16	N14	N14	NE1.9	NNE16
9-Feb	NNE14	N13	N10	NNW7	NNW7	NNW5	NNW3	SSW2	WSW1	NW1	NE4	NNE9	NNE11	NNE6	ENE4	ESE5	E3	UO	W2	WSW1	SW2	SW2	SSW3	S4	NNE3.1	NNE14
10-Feb	SSE5	S6	S6	S7	S8	S7	S7	S8	S7	S9	SSW8	S8	SSE13	SSE14	SSE12	SE8	ESE2	N8	N5	N8	N7	N6	N3	NW5	SSE3.7	SSE14
11-Feb	NNW6	N6	NW5	NW6	WNW4	NW3	WNW4	WNW2	S2	SSE2	E3	E3	NE3	NNW0	SSE3	SE2	UO	NW3	W2	SSW0	UO	NE1	NNW2	WSW3	NW1.4	NW6
12-Feb	WNW3	WSW0	SSE2	S3	UO	S1	SE2	WSW1	S1	NNE1	SE2	SSE3	NNE4	NE7	NE7	NNE9	N12	N11	N12	N13	N11	NNW8	NNW11	NNW9	N4.3	N13
13-Feb	NNW8	N11	N5	NW3	W2	S1	WSW2	WNW3	NW3	NW2	ENE3	NE5	NNE6	NNE7	NNE8	NNE8	N6	N6	N7	N9	NNW8	N7	N4	WNW3	N4.5	N11
14-Feb	NW3	WNW2	NW3	NW2	NW2	WNW2	WNW3	W3	SW2	SSE4	SSE4	SE3	NE3	NE5	E1	SE7	SSE7	ESE2	NW3	NW3	WNW2	WNW4	W1	SSW1	WSW0.3	SE7
15-Feb	SSW3	S5	S5	S4	SSW1	SSW3	SSW1	S4	S4	S4	SSE4	SSE5	SSE6	SSE5	SSW4	ESE5	NE4	NNE2	UO	N4	NE6	ENE4	NNW3	NNW3	SSE1.8	NE6
16-Feb	NW2	UO	WSW1	WNW2	UO	SSW2	WSW2	UO	SSW2	SSE4	SSE6	S8	S10	S13	SSE14	S10	S10	S7	SSE5	SE6	SSE7	S7	SSE8	SSE8	S5.9	SSE14
17-Feb	S12	S13	S12	S8	S4	S3	SSE7	SSE8	SSE11	SSE11	S14	SSE13	SSE12	SSE14	S12	SSE13	SSE12	SSE6	SE4	ESE4	ESE4	S8	S5	WSW1	SSE8.6	S14
18-Feb	S2	S3	S1	S5	S6	S6	S8	S7	S8	SSE8	SSE9	SSE11	SSE12	S12	S13	S11	SSE9	S6	SSE2	SSE3	S6	SSW5	S6	S8	S6.9	S13
19-Feb	S7	SSW5	S3	ESE1	SSE5	S6	SSW4	SW3	S4	S9	SSE16	S13	S15	S15	SSE15	S15	S12	S7	SSE7	SSE11	S20	S18	S12	S11	S9.6	S20
20-Feb	S15	S15	S14	S13	S13	S14	S14	S14	S14	S14	SSW13	SSW11	S12	S12	S11	SSE10	SSE9	S8	SSE5	N1	NNW4	NNW3	SSW3	NNW2	S9.2	S15
21-Feb	SW2	SSW2	SSW0	W2	UO	E0	WNW2	NNW1	NNW3	NNE3	NNE5	N11	N11	N11	N12	N13	N12	N9	N10	N12	N9	N6	N7	NNW9	N6.1	N13
22-Feb	NNW10	NNW7	NNW6	N5	NNE4	NNW3	NNW2	NNE1	WNW2	E2	NNW2	NW3	SSE2	SSE4	SSE5	S5	SW3	S3	S3	SSW4	S3	UO	S5	S4	W0.5	NNW10
23-Feb	S7	S7	S6	S2	S2	NE0	NNW0	S2	UO	N19	N19	NNE16	N18	NNE16	NNE13	NNE13	NNE11	NNE9	NNW5	E2	ENE3	ENE4	NE5	NE5	NNE5.5	N19
24-Feb	NE5	NNE5	NE5	N3	N5	N4	N5	NNE2	SSE1	WSW2	SSW1	SE6	SSE7	SE7	SSE6	SSW3	S1	N2	N3	UO	N11	N15	N14	NNE11	NNE2.6	N15
25-Feb	N11	N10	NNE11	NNE12	NNE9	NNE10	NNE6	N7	N8	NNE8	N7	N6	NNE5	NE5	NE4	N5	NNE6	NNE6	N4	NW2	NNW5	NW5	NW4	SSW1	N6.1	NNE12
26-Feb	SSE7	S9	S8	SSE5	S4	WNW2	UO	NNW5	N7	N9	NE6	NE4	NE5	NE6	NE9	NNE10	N11	N8	NNW8	N8	N7	N7	N8	N8	NNE3.9	N11
27-Feb	NNW6	NNW6	NNW4	N1	N3	NNW2	E3	NNW1	W2	SSW3	S7	WSW6	NNW10	NNE13	NNE15	NNE13	NNE10	NNE10	NNE9	NNE10	NNE8	NE7	ENE5	N1	NNE4.7	NNE15
28-Feb	E3	ESE2	SE3	ESE3	ESE3	WSW0	NE2	NNE2	SW0	SE2	SSE4	SSE4	SSE5	SSE7	SSE9	SSE9	S9	S8	S7	S6	S5	S5	S6	S6	SSE4.0	S9
	NNW0.8	NNW0.4	WSW0.0	SW0.4	SW0.4	WSW0.5	SW0.8	SSW1.0	SSW1.3	SE0.9	SE1.6	ESE1.2	ESE1.2	ESE2.2	ESE2.3	ESE1.6	ENE0.6	NNE1.4	N1.7	N2.0	N1.8	N1.4	NNW1.2	WNW0.9	Diurnal Average	
	N21	N21	N20	N18	N19	N18	N19	N18	N19	N19	N21	N19	N21	NNE17	N17	N16	N15	N18	N16	N17	S20	S18	N17	N16	Diurnal Maximum	

UO - Unstable Operation

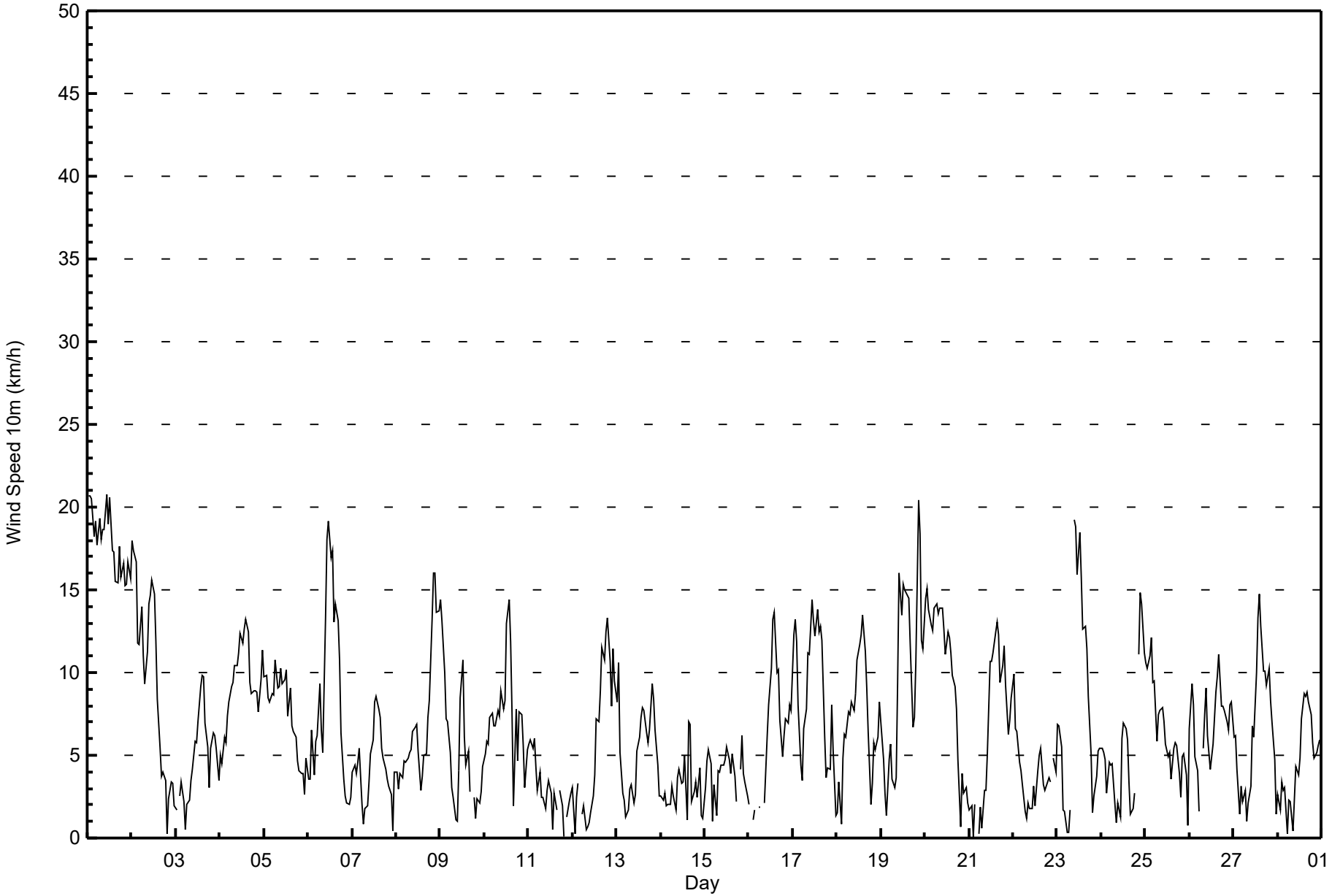
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Fort McKay - Bertha Ganter - February 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	310	47.11	47.11
6 - 11	232	35.26	82.37
12 - 19	110	16.72	99.09
20 - 28	6	0.91	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 658

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Fort McKay - Bertha Ganter - February 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	20	15	18	7	9	10	12	27	50	31	18	19	14	19	20	21	310
6 - 11	42	26	7	0	0	0	5	31	68	22	4	2	3	4	2	16	232
12 - 19	41	22	0	0	0	0	0	14	30	1	0	0	0	0	2	0	110
20 - 28	5	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	6
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	108	63	25	7	9	10	17	72	149	54	22	21	17	23	24	37	658

Total Number of Valid Hours: 658

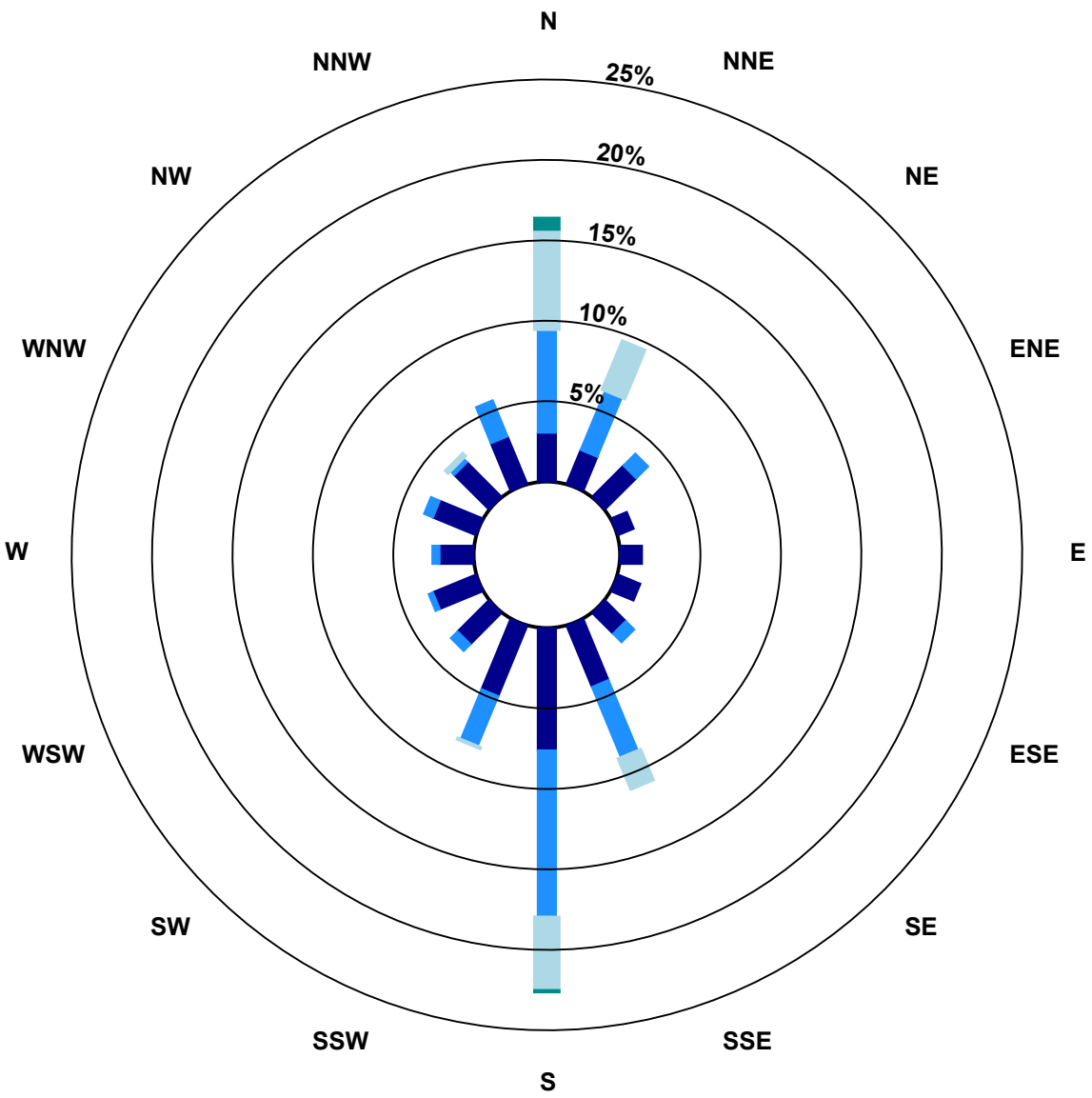
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 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: 658

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Fort McKay - Bertha Ganter - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 6 km/h on Feb 6 11:00

Minimum Value: 0 km/h on Feb 11 20:00

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

Hours in Service:	672
Hours of Data:	658
Hours of Missing Data:	14
Hours of Calibration:	0
Percent Operational Time:	97.9

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

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Fort McKay - Bertha Ganter - February 2025

Direction of Maximum Speed: 3 deg on Feb 1 11:00
Direction of Maximum Daily Speed Average: 4.2 deg on Feb 1

Direction of Minimum Speed: 209 deg on Feb 21 03:00
Direction of Minimum Daily Speed Average: 0.3 deg on Feb 14

Monthly Average Direction: 72.2 deg

Hours in Service:	672
Hours of Data:	658
Hours of Missing Data:	14
Percent Operational Time:	97.9

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-Feb	5	3	7	2	5	6	8	8	7	6	3	356	355	353	359	353	358	6	8	11	10	11	10	11	4.2
2-Feb	14	10	8	12	18	13	2	15	8	9	9	16	10	12	12	28	1	19	21	130	279	287	283	198	9.3
3-Feb	225	UO	180	177	143	133	167	177	172	170	160	174	193	159	160	161	171	179	197	247	259	264	263	233	187.8
4-Feb	195	200	189	177	175	179	179	176	173	175	172	163	175	162	177	185	191	183	177	178	177	177	213	210	180.4
5-Feb	201	196	193	186	184	194	200	200	202	203	209	207	212	214	210	219	213	220	217	207	172	172	213	235	203.1
6-Feb	241	223	257	236	266	290	292	284	288	16	14	6	11	11	7	319	312	311	292	289	270	246	237	254	329.3
7-Feb	266	250	244	217	228	322	63	185	214	188	154	224	218	208	200	190	201	218	244	264	269	263	221	194	218.6
8-Feb	202	141	176	190	187	182	187	182	182	178	166	162	142	147	44	23	3	3	358	19	18	18	11	1	40.9
9-Feb	12	11	7	346	331	333	344	205	253	316	39	16	32	23	75	106	84	UO	275	239	227	219	192	177	11.3
10-Feb	161	170	171	173	172	173	170	173	171	170	203	187	160	159	155	139	103	9	359	2	5	353	353	318	163.0
11-Feb	334	353	308	317	299	313	282	296	184	155	86	86	40	347	155	139	UO	312	281	192	UO	56	329	245	320.6
12-Feb	286	257	160	191	UO	191	140	244	183	31	139	151	31	45	40	18	6	9	0	359	360	344	347	347	6.0
13-Feb	348	2	352	323	270	173	251	295	307	313	60	37	29	14	20	20	10	359	359	356	337	354	1	296	357.4
14-Feb	310	288	321	312	312	285	298	266	220	152	149	137	50	56	91	145	157	112	317	319	283	297	276	212	244.1
15-Feb	196	172	188	188	212	211	195	189	181	180	163	158	150	156	196	120	43	25	UO	8	39	60	340	328	158.3
16-Feb	309	UO	240	294	UO	198	237	UO	208	163	162	175	178	173	168	180	176	172	152	146	157	171	165	166	172.3
17-Feb	169	172	170	181	175	180	166	158	164	165	171	164	164	167	174	168	159	150	131	104	123	170	178	245	165.7
18-Feb	184	186	174	186	184	186	178	176	175	161	167	159	162	171	169	177	168	178	167	164	184	201	180	174	173.6
19-Feb	182	195	174	106	156	172	204	225	188	172	168	180	174	170	167	169	172	174	165	164	170	170	174	181	172.7
20-Feb	179	177	172	175	182	184	186	188	188	191	192	192	191	186	179	161	164	179	165	353	336	341	203	328	183.0
21-Feb	234	210	209	271	UO	84	301	339	348	18	16	2	350	6	355	5	360	6	3	5	6	10	2	340	358.9
22-Feb	347	330	345	356	12	336	337	33	299	96	329	305	154	148	148	189	217	176	185	196	188	UO	189	183	273.7
23-Feb	178	177	179	180	178	34	347	178	UO	3	10	19	8	17	13	17	12	13	334	85	62	77	54	56	19.3
24-Feb	55	20	41	8	358	355	356	23	152	254	208	144	159	144	163	199	171	3	350	UO	356	4	3	12	20.8
25-Feb	8	2	16	20	13	25	14	358	7	29	10	6	29	45	36	4	15	15	3	325	344	318	319	212	10.0
26-Feb	166	170	171	168	176	283	UO	342	358	10	39	34	46	45	34	17	9	7	346	354	5	353	349	358	15.3
27-Feb	338	335	345	360	6	336	88	340	261	209	186	240	346	19	32	33	28	28	33	33	28	38	57	11	18.5
28-Feb	82	106	124	105	120	237	40	20	216	139	161	157	167	167	156	166	175	174	175	172	188	175	174	176	160.9
	336.9	339.8	256.5	215.3	216.5	252.9	226.5	210.1	199.2	129.1	126.2	123.6	104.2	111.0	122.0	120.3	70.0	12.5	352.4	8.5	4.5	360.0	340.8	301.5	
	Diurnal Average																								

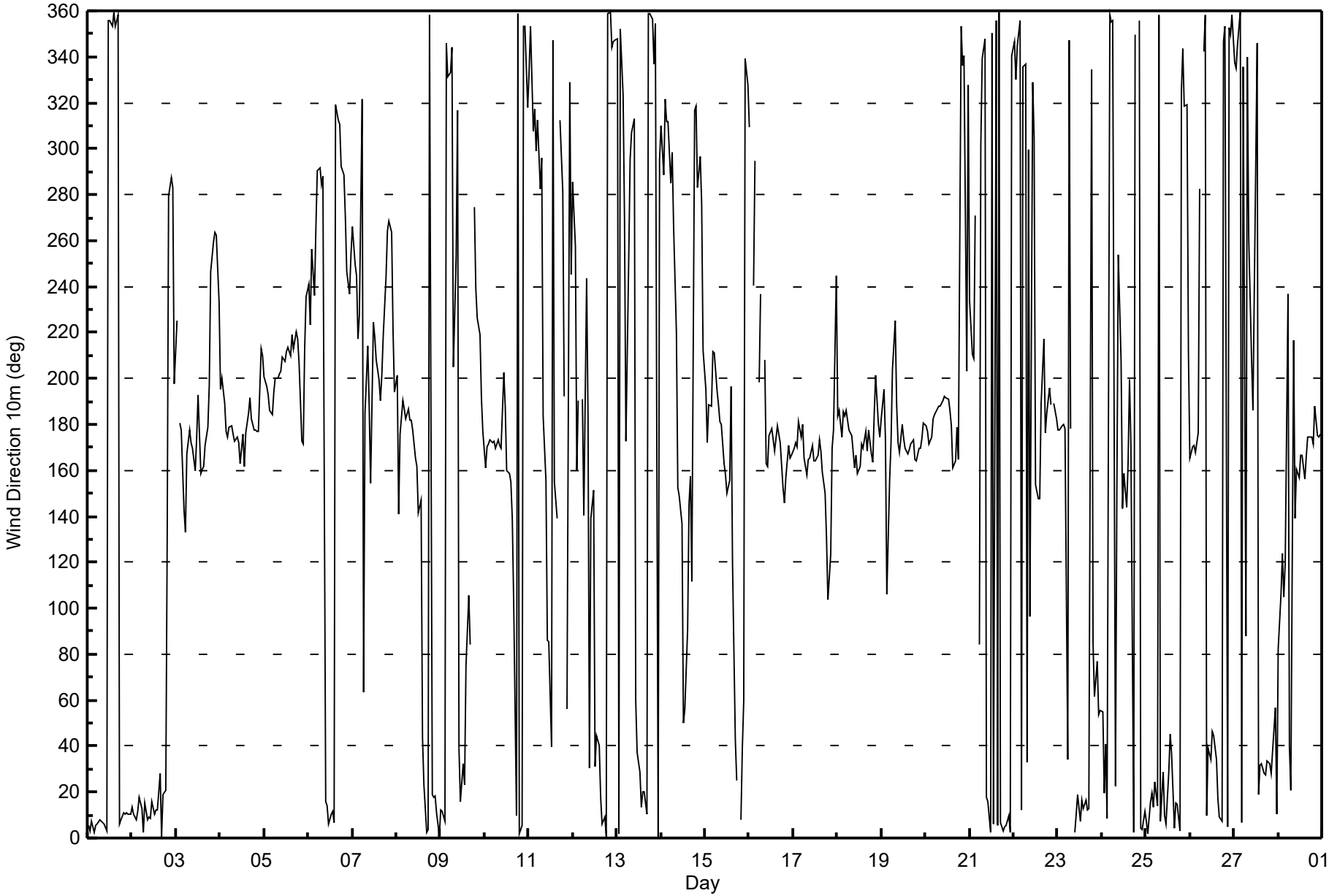
UO - Unstable Operation
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Fort McKay - Bertha Ganter - February 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Fort McKay - Bertha Ganter - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 101 deg on Feb 12 02:00

Minimum Value: 6 deg on Feb 6 18:00

Percentiles: P_1 = 10 P_{10} = 12 Q_1 = 17 Median = 23 Q_3 = 33 P_{90} = 58 P_{99} = 91

Hours in Service:	672
Hours of Data:	658
Hours of Missing Data:	14
Hours of Calibration:	0
Percent Operational Time:	97.9

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-Feb	20	20	19	20	18	20	19	19	18	18	19	21	21	22	22	20	20	20	20	21	22	21	22	22	22
2-Feb	19	19	23	20	17	19	21	18	21	22	22	20	22	22	23	21	27	17	23	65	40	16	19	32	65
3-Feb	44	UO	23	19	32	81	17	44	18	25	10	33	28	19	14	9	9	10	43	40	30	34	37	45	81
4-Feb	27	32	27	26	11	11	10	9	10	11	11	10	15	9	13	16	17	11	10	10	10	13	36	28	36
5-Feb	24	21	21	18	11	21	22	20	23	23	25	26	25	33	28	36	29	30	33	32	14	15	64	55	64
6-Feb	61	50	42	57	44	41	17	20	29	21	22	22	19	22	23	19	10	6	16	28	31	43	42	55	61
7-Feb	37	34	41	35	53	73	86	54	39	44	34	52	31	32	27	25	21	19	24	18	53	37	89	24	89
8-Feb	45	25	19	21	14	23	16	15	12	12	13	12	11	52	32	26	22	22	27	21	20	21	22	23	52
9-Feb	20	20	22	25	11	30	42	48	78	73	23	21	21	35	35	25	25	UO	16	59	35	30	27	21	78
10-Feb	11	13	16	15	11	11	10	9	12	10	32	32	10	10	12	17	53	20	22	21	22	24	32	27	53
11-Feb	10	26	10	14	22	59	26	29	42	50	33	32	42	90	27	49	UO	15	37	72	UO	59	21	23	90
12-Feb	30	101	62	15	UO	58	38	87	90	89	55	55	45	25	31	20	24	20	24	25	24	21	19	21	101
13-Feb	23	24	24	38	58	32	53	29	34	65	36	31	34	30	24	21	21	22	26	26	19	25	20	44	65
14-Feb	29	17	14	12	37	37	19	18	37	15	13	22	44	39	82	12	12	51	27	25	18	11	67	71	82
15-Feb	26	12	13	18	80	29	58	19	23	25	12	16	11	32	55	21	35	24	UO	41	26	34	27	52	80
16-Feb	69	UO	56	64	UO	29	38	UO	20	15	14	18	16	14	14	16	14	18	13	14	13	13	11	18	69
17-Feb	12	11	13	12	18	19	14	13	13	13	13	14	14	13	15	13	19	14	19	26	32	11	62	69	69
18-Feb	78	17	91	19	12	18	13	15	15	12	19	11	16	16	16	18	13	14	37	18	11	13	14	8	91
19-Feb	11	17	37	59	18	15	26	39	24	16	13	21	16	14	15	14	12	16	13	10	11	11	12	14	59
20-Feb	15	14	12	13	15	15	15	18	17	20	19	20	19	17	18	13	13	14	50	94	19	77	41	38	94
21-Feb	53	59	94	46	UO	86	60	95	43	26	40	25	24	25	24	24	24	24	25	22	24	23	24	19	95
22-Feb	22	16	27	25	23	30	53	57	29	48	72	40	79	21	21	28	47	21	19	25	33	UO	14	18	79
23-Feb	18	15	17	73	76	84	91	66	UO	24	22	21	22	20	22	20	22	21	34	59	42	25	32	28	91
24-Feb	30	23	27	41	26	27	23	60	83	69	75	12	23	12	28	54	75	91	24	UO	26	24	24	21	91
25-Feb	23	24	18	18	21	17	24	26	22	22	28	31	36	40	41	27	26	16	23	28	16	12	19	73	73
26-Feb	10	11	18	18	51	76	UO	29	25	21	27	38	40	27	17	24	20	22	21	25	23	25	25	25	76
27-Feb	25	24	30	68	41	84	76	98	96	68	26	39	46	21	18	19	18	17	19	19	21	23	32	25	98
28-Feb	23	68	30	26	32	85	32	33	74	61	25	29	28	20	17	17	15	13	11	12	18	11	11	10	85
	78	101	94	73	80	86	91	98	96	89	75	55	79	90	82	54	75	91	50	94	53	77	89	73	
	Diurnal Maximum																								

UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS02
MILDRED LAKE
FEBRUARY 2025

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

March 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MILDRED LAKE (AMS02)
FEBRUARY 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	586	33	86	92.11	69.4	0	7.3	0
H2S (ppb) Average	604	34	68	94.94	6.7	0	1.5	0
THC (ppm) Average	526	33	146	83.18	5.9	-	3.1	-
NMHC(ppm) Average	526	33	146	83.18	0.338	-	0.104	-
CH4(ppm) Average	526	33	146	83.18	5.7	-	3	-
Temperature (C) Average	672	0	0	100	2.4	-	-4.4	-
Relative Humidity (%) Average	672	0	0	100	99.2	-	92	-
Wind Speed 10 m (km/h) Average	634	0	38	94.35	23	-	17	-
Wind Direction 10 m (deg) Average	634	0	38	94.35	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MILDRED LAKE (AMS02)
FEBRUARY 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	586	1.01	3.8	-	0	0	0.1	0.3	1	2	69.4
H2S (ppb) Average	604	0.44	0.6	-	0	0.1	0.1	0.2	0.5	1.1	6.7
THC (ppm) Average	526	2.3	0.4	-	2	2.1	2.1	2.2	2.4	2.7	5.9
NMHC(ppm) Average	526	0.033	0.048	-	0	0	0	0	0.1	0.1	0.338
CH4(ppm) Average	526	2.26	0.3	-	2	2.1	2.1	2.1	2.3	2.6	5.7
Temperature 2 m (C) Average	672	-17.93	8.2	-	-35.2	-28	-23.9	-19.4	-10.8	-6.6	2.4
Relative Humidity (%) Average	672	72.99	11	-	38.1	59	67.2	74.1	79.2	86.9	99.2
Wind Speed 10 m (km/h) Average	634	8.3	5	-	0	3	4	8	11	15	23
Wind Direction 10 m (deg) Average	634	-	-	-	-	-	-	-	-	-	-

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

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL GASEOUS ANALYZERS	23 Feb 2025 05:00	23 Feb 2025 08:00	4	Station power failure
ALL GASEOUS ANALYZERS	24 Feb 2025 14:00	25 Feb 2025 19:00	30	Station power failure
SO2	03 Feb 2025 17:00	04 Feb 2025 11:00	19	Maintenance - calibration gas cylinder replaced
THC/NMHC/CH4	01 Feb 2025 01:00	01 Feb 2025 04:00	4	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	01 Feb 2025 06:00	02 Feb 2025 05:00	24	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	02 Feb 2025 07:00	03 Feb 2025 00:00	18	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	03 Feb 2025 02:00	03 Feb 2025 12:00	11	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	03 Feb 2025 17:00	04 Feb 2025 11:00	19	Maintenance - calibration gas cylinder replaced
Wind Speed, Wind Direction	23 Feb 2025 11:00	24 Feb 2025 14:00	28	Flat line in sensor output signal
Wind Speed, Wind Direction	24 Feb 2025 22:00	25 Feb 2025 01:00	4	Flat line in sensor output signal
Wind Speed, Wind Direction	25 Feb 2025 07:00	25 Feb 2025 12:00	6	Flat line in sensor output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Mildred Lake - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 69.4 ppb on Feb 14 17:00 Maximum Daily Average: 7.3 ppb on Feb 14

Minimum Value: 0.0 ppb on Feb 1 01:00 Minimum Daily Average: 0.0 ppb on Feb 1
Maximum Diurnal Average: 3.6 ppb at hour 17 Minimum Diurnal Average: 0.5 ppb at hour 4
Monthly Average: 1.01 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.3 Q_3 = 1.0 P_{90} = 2.0 P_{99} = 10.4

Hours in Service:	672
Hours of Data:	586
Hours of Missing Data:	86
Hours of Calibration:	33
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-Feb	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
2-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1
3-Feb	Z	0.4	0.3	0.3	0.3	0.1	0.0	0.4	0.2	0.1	0.7	1.8	C	C	C	C	M	M	M	M	M	M	M	M	--	1.8
4-Feb	M	M	M	M	M	M	M	M	M	M	M	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
5-Feb	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.2	0.1	0.2	0.2	1.2	11.4	3.2	10.2	1.8	1.7	0.3	1.4	11.4
6-Feb	4.7	4.8	3.8	Z	12.7	1.9	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	1.3	12.7
7-Feb	0.0	0.0	1.3	2.1	Z	3.4	1.2	0.8	0.2	1.3	0.9	0.7	0.1	0.1	0.1	1.1	1.0	3.0	1.5	1.4	0.2	0.0	0.0	0.0	0.9	3.4
8-Feb	0.0	0.1	0.1	0.1	0.0	Z	0.2	0.5	0.6	0.2	0.8	1.2	1.8	0.9	1.8	1.6	1.0	0.6	0.4	0.3	0.0	0.0	0.1	0.1	0.5	1.8
9-Feb	Z	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.9	0.2	0.0	0.0	0.0	0.0	0.3	1.6	1.4	1.0	0.6	0.9	1.1	0.2	0.2	1.0	0.4	1.6
10-Feb	0.4	Z	0.3	0.2	0.4	0.2	0.5	0.3	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.2	0.3	0.6	0.4	1.4	1.7	1.0	0.5	0.3	0.4	1.7
11-Feb	0.2	0.1	Z	0.1	0.0	0.0	0.1	0.2	0.1	0.0	0.1	0.2	0.9	0.7	1.2	1.6	0.6	0.6	0.5	1.1	0.8	0.4	0.5	0.8	0.5	1.6
12-Feb	1.4	1.8	1.8	Z	2.3	0.9	2.2	2.2	1.1	0.8	1.3	4.0	2.4	1.7	1.8	1.4	1.3	1.3	1.4	1.2	1.1	0.8	0.6	0.4	1.5	4.0
13-Feb	0.2	0.1	0.1	0.0	Z	0.0	0.3	0.0	0.1	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
14-Feb	0.1	0.0	0.1	0.1	0.2	Z	0.6	1.1	1.3	1.3	0.9	0.8	0.5	0.8	7.9	47.3	69.4	18.3	5.3	2.2	2.1	1.7	3.2	2.4	7.3	69.4
15-Feb	2.2	1.7	Z	2.3	1.0	0.9	1.1	0.7	0.4	0.6	0.7	0.7	0.6	0.3	0.2	0.2	0.3	0.5	0.4	0.5	0.2	0.1	0.2	0.1	0.7	2.3
16-Feb	0.1	Z	0.2	0.1	0.2	0.4	0.4	0.4	1.4	0.5	0.2	0.5	0.8	0.9	0.7	0.9	1.1	1.3	4.5	3.1	1.0	1.3	1.6	1.2	1.0	4.5
17-Feb	0.9	0.1	Z	0.2	0.4	4.2	1.8	1.4	1.2	1.0	1.1	1.1	0.8	0.7	0.8	1.6	7.0	3.7	7.8	12.7	5.9	3.6	0.8	0.5	2.6	12.7
18-Feb	0.6	1.4	0.5	Z	0.3	0.4	0.4	0.5	0.4	0.5	0.5	0.6	0.7	0.7	0.7	0.8	0.6	0.9	2.9	2.4	2.2	4.3	1.0	2.5	1.1	4.3
19-Feb	4.5	2.6	3.0	2.2	Z	1.8	2.5	0.9	1.4	0.8	1.2	1.0	0.8	0.9	1.0	1.7	2.0	1.9	1.0	1.4	2.0	1.6	2.4	2.0	1.8	4.5
20-Feb	0.5	0.4	0.4	0.4	0.3	Z	0.2	0.3	0.4	0.5	0.6	0.5	0.6	0.6	0.8	0.6	1.0	4.7	1.8	1.3	1.1	0.8	0.6	0.3	0.8	4.7
21-Feb	Z	0.6	0.7	0.5	0.6	0.7	1.2	1.1	1.1	1.3	1.5	1.2	1.1	0.8	0.6	0.5	0.4	0.3	0.2	0.2	0.2	0.1	0.0	0.1	0.6	1.5
22-Feb	0.0	Z	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.3	1.6	1.2	1.0	0.9	1.1	1.5	0.9	0.6	0.4	0.4	0.8	0.8	0.6	0.5	0.6	1.6
23-Feb	0.4	0.6	Z	0.9	PF	PF	PF	PF	7.3	0.9	0.4	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.6	7.3
24-Feb	0.1	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	--	0.3
25-Feb	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	0.0	0.5	0.3	0.1	0.0	--	0.5
26-Feb	0.0	0.0	0.0	0.2	3.0	Z	2.1	2.2	2.7	2.7	2.7	2.8	0.0	2.1	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	3.0
27-Feb	Z	0.1	0.0	0.0	0.1	0.2	0.2	0.2	0.4	0.4	0.8	0.8	0.3	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.8
28-Feb	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	1.1	0.7	0.4	0.4	0.6	0.6	0.9	0.5	0.9	1.0	0.2	0.1	0.1	0.0	0.4	1.1
	0.8	0.7	0.6	0.5	1.1	0.8	0.6	0.6	0.8	0.5	0.7	0.8	0.6	0.6	0.9	2.6	3.6	1.6	1.7	1.3	1.2	0.7	0.6	0.5	Diurnal Average	
	4.7	4.8	3.8	2.3	12.7	4.2	2.5	2.2	7.3	2.7	2.7	4.0	2.4	2.1	7.9	47.3	69.4	18.3	11.4	12.7	10.2	4.3	3.2	2.5	Diurnal Maximum	

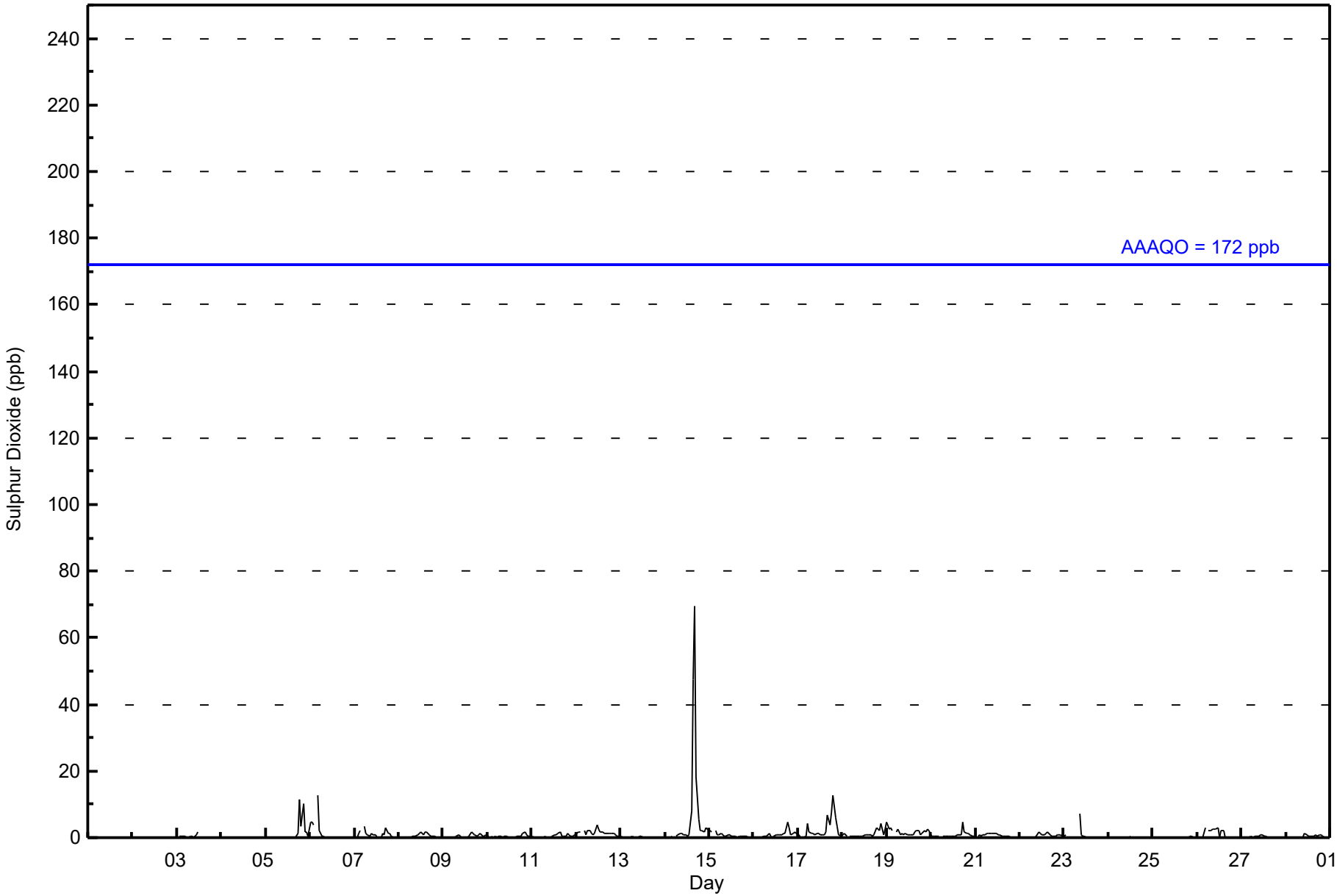
Z - zerospan C - Calibration M - Maintenance PF - Power Failure
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Mildred Lake - February 2025



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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	580	98.98	98.98
11 - 20	4	0.68	99.66
21 - 60	1	0.17	99.83
61 - 110	1	0.17	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 586

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Mildred Lake - February 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	136	32	17	7	8	11	53	63	33	62	31	17	18	13	16	37	554
11 - 20	0	0	0	1	0	0	1	0	0	0	0	1	1	0	0	0	4
21 - 60	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
61 - 110	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	136	32	17	8	8	12	54	63	33	63	31	18	19	13	16	37	560

Total Number of Valid Hours: 560

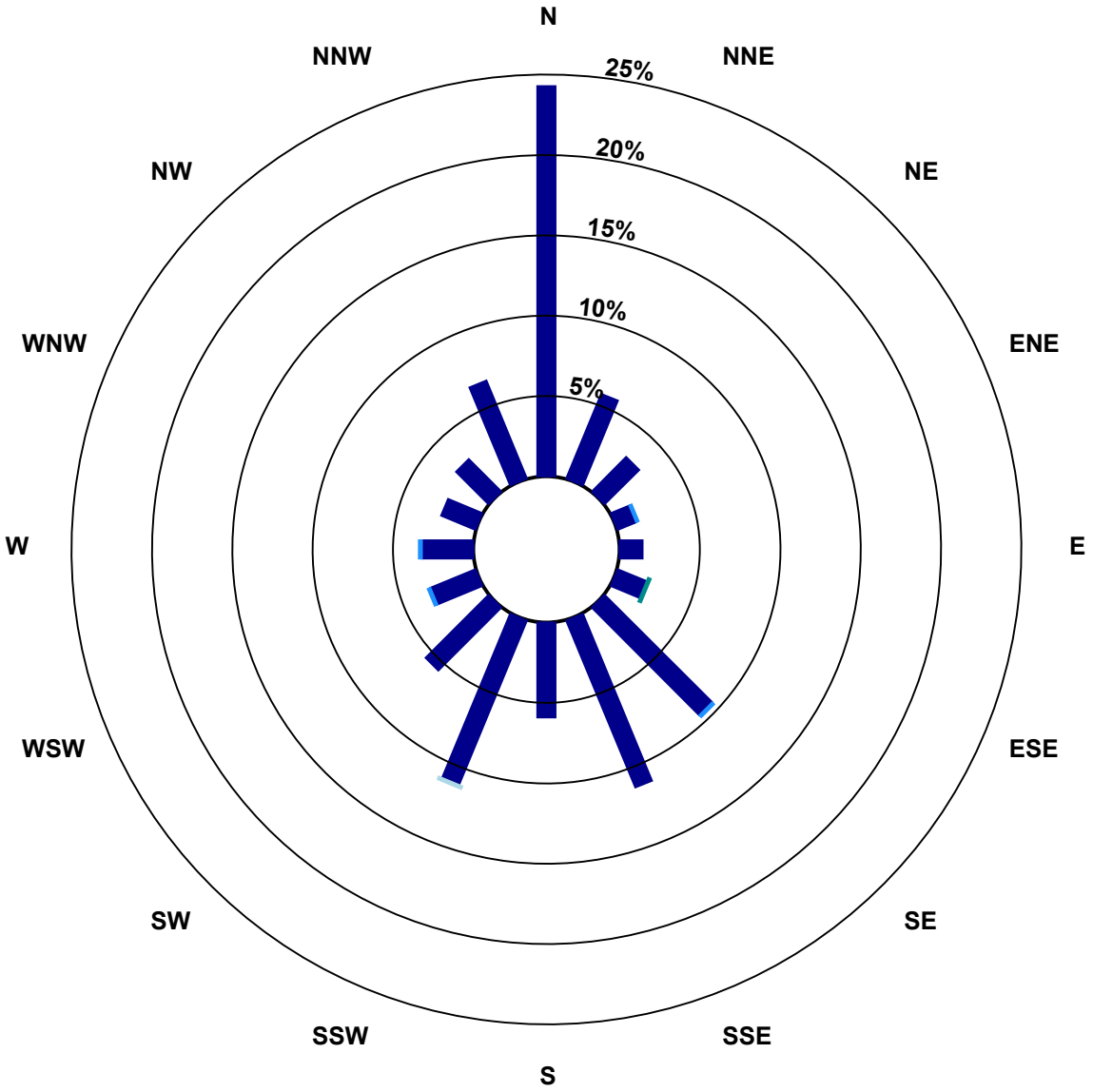
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Sulphur Dioxide (SO_2) - ppb

Mildred Lake



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

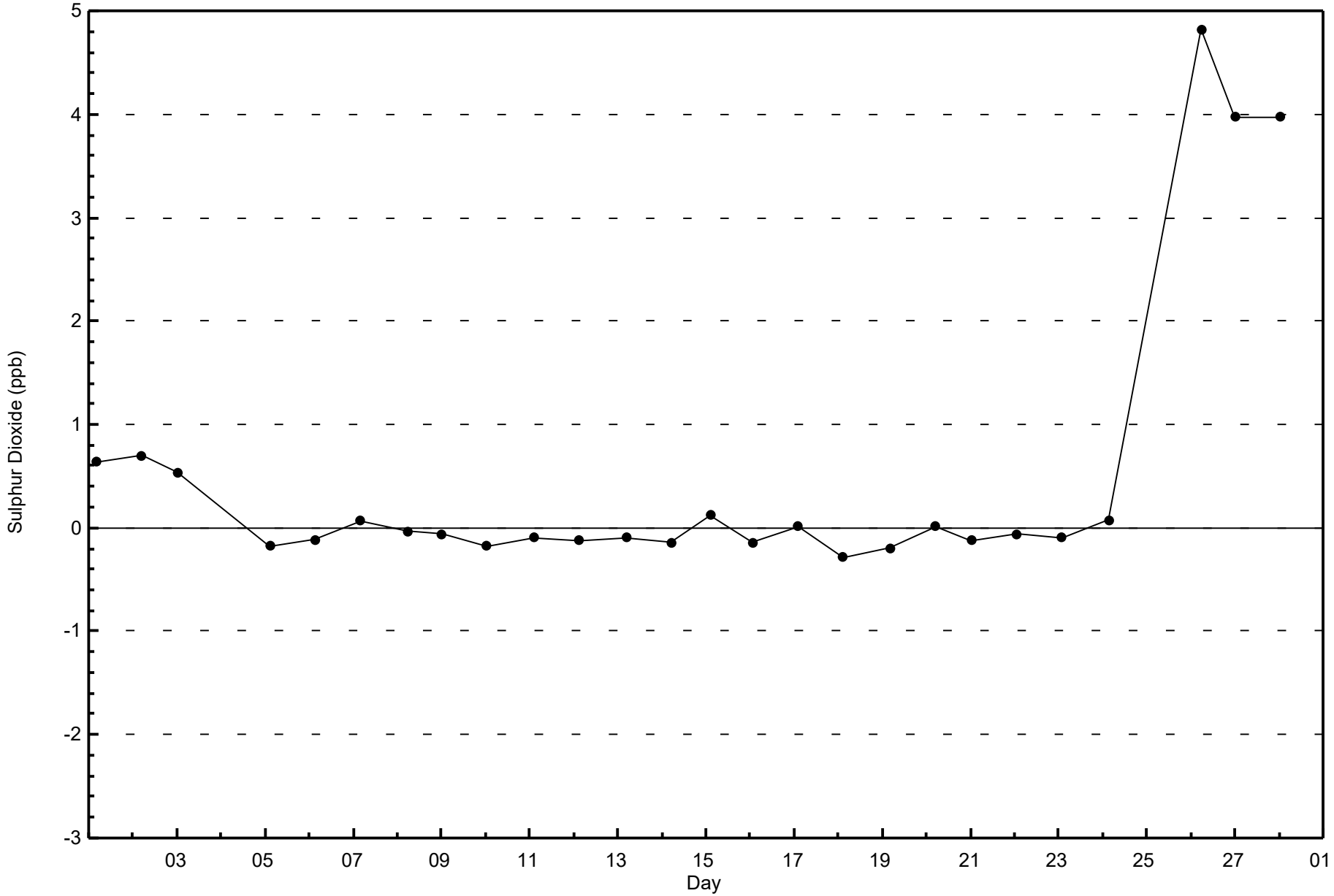
Total Number of Valid Hours: 560

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Mildred Lake - February 2025

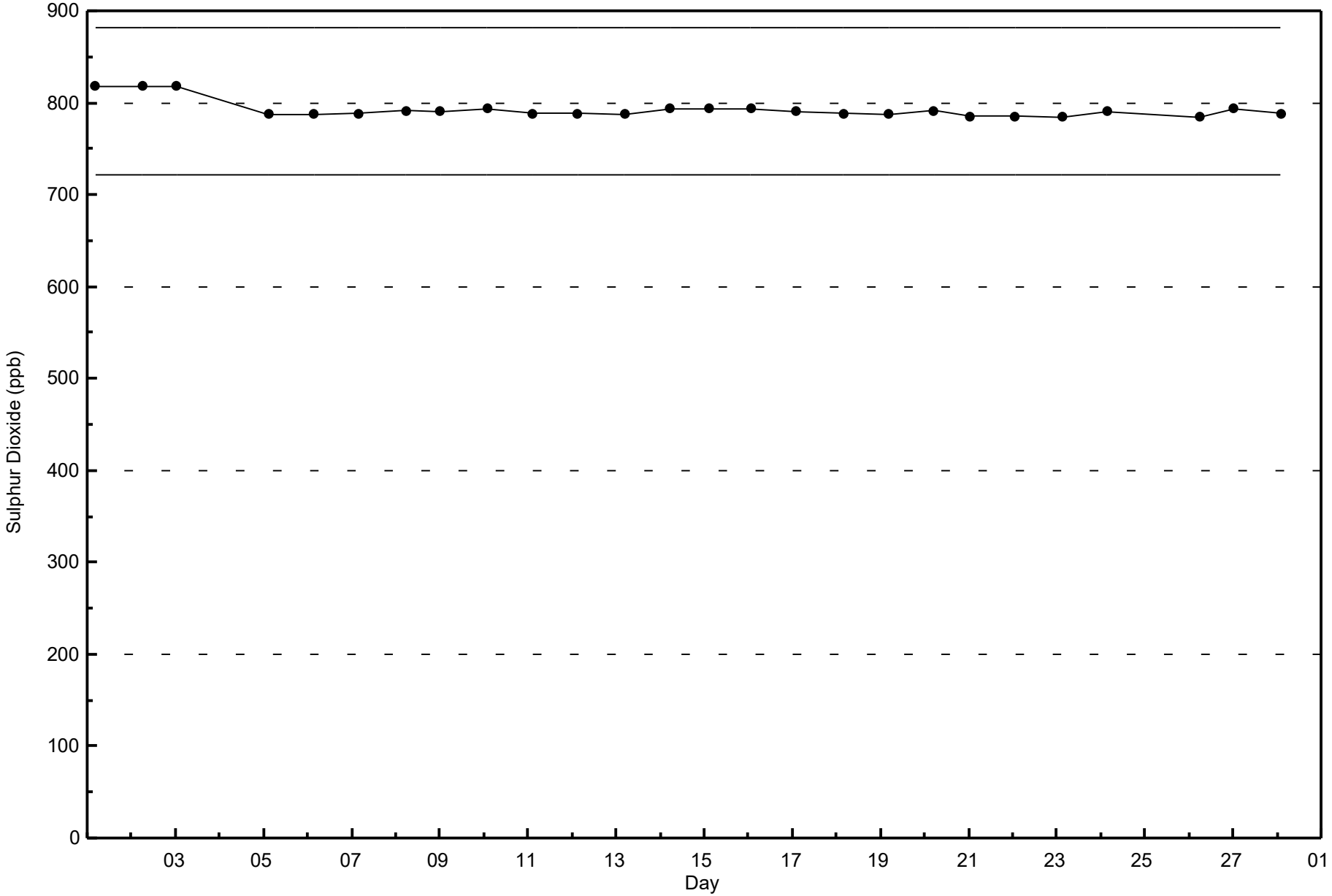


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Mildred Lake - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Mildred Lake - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 6.7 ppb on Feb 15 00:00 Maximum Daily Average: 1.5 ppb on Feb 14

Minimum Value: 0.0 ppb on Feb 5 01:00 Minimum Daily Average: 0.1 ppb on Feb 1
Maximum Diurnal Average: 0.6 ppb at hour 1 Minimum Diurnal Average: 0.2 ppb at hour 14
Monthly Average: 0.44 ppb Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.1 Median = 0.2 Q_3 = 0.5 P_{90} = 1.1 P_{99} = 2.5

Hours in Service:	672
Hours of Data:	604
Hours of Missing Data:	68
Hours of Calibration:	34
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-Feb	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
2-Feb	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
3-Feb	0.3	Z	0.5	0.7	0.6	0.5	0.4	0.8	0.8	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.6	1.1	0.6	0.5	0.4	1.1
4-Feb	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.3	0.3	0.3	0.2	0.2	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.3
5-Feb	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	0.2	0.5	0.3	0.9	1.0	1.2	0.6	0.2	1.2
6-Feb	0.8	0.8	0.7	0.3	Z	0.3	0.3	1.0	0.5	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.5	0.5	1.5	0.4	1.5
7-Feb	0.7	0.5	0.4	0.2	0.1	Z	0.5	0.5	0.7	1.3	1.0	0.6	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.7	2.0	0.8	0.3	0.2	0.5	2.0
8-Feb	Z	0.3	0.2	0.2	0.1	0.3	0.2	0.7	0.7	0.4	0.7	0.7	0.8	0.4	0.6	0.7	0.9	1.0	0.6	0.7	0.2	0.2	0.2	0.1	0.5	1.0
9-Feb	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.4	1.1	0.4	0.2	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.7	1.1	1.0	0.7	1.9	0.7	0.4	1.9
10-Feb	0.2	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	0.1	0.1	0.4	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.4
11-Feb	0.1	0.2	0.3	Z	0.3	0.2	0.4	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.6	0.6	1.1	0.9	0.6	0.5	0.7	0.4	1.1
12-Feb	0.7	0.9	1.0	1.1	Z	1.0	1.1	1.3	0.9	0.8	0.7	0.7	0.2	0.2	0.4	0.2	0.5	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.6	1.3
13-Feb	0.2	0.1	0.1	0.1	0.2	Z	0.5	0.3	0.4	0.5	0.6	0.5	0.4	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.6
14-Feb	Z	0.2	0.2	0.3	0.4	0.5	0.9	1.3	2.6	2.6	1.7	1.2	0.5	0.5	1.3	1.2	1.2	0.8	1.1	1.4	1.2	1.4	4.6	6.7	1.5	6.7
15-Feb	5.1	3.3	2.0	Z	1.5	1.4	1.7	1.2	0.4	1.0	1.2	1.0	0.6	0.3	0.2	0.3	0.3	0.4	0.2	0.3	0.2	0.1	0.1	0.2	1.0	5.1
16-Feb	0.2	0.3	Z	0.3	0.6	0.9	1.1	1.0	0.6	0.4	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.6	0.3	0.4	0.5	0.2	0.4	0.4	1.1
17-Feb	0.3	0.1	0.1	Z	0.4	0.6	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.4	0.5	0.4	0.4	0.5	0.2	0.1	0.3	0.6
18-Feb	0.2	0.4	0.4	0.2	Z	0.3	0.2	0.3	0.3	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.4	0.6	0.2	0.4	0.7	0.2	0.3	0.3	0.7
19-Feb	0.5	0.3	0.3	0.4	0.3	Z	0.6	0.4	0.2	0.3	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.5	0.3	0.6
20-Feb	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	1.2	1.2	1.4	2.0	1.9	0.9	0.8	0.5	2.0
21-Feb	1.0	Z	1.3	1.3	1.4	1.3	1.7	1.3	1.1	1.3	1.2	1.0	0.9	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.7	1.7
22-Feb	0.2	0.2	Z	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.7	1.3	1.9	1.5	1.0	1.1	1.0	0.8	0.8	0.9	1.2	1.4	1.5	1.3	0.8	1.9
23-Feb	2.2	1.5	2.5	Z	PF	PF	PF	PF	1.5	1.0	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.5	2.5
24-Feb	0.2	0.2	0.1	0.2	Z	0.2	0.2	0.4	0.3	0.3	0.5	0.5	0.6	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	--	0.6
25-Feb	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	0.4	0.6	0.5	0.4	0.3	--	0.6
26-Feb	Z	0.7	0.3	0.4	0.5	1.2	0.6	1.5	1.0	0.6	0.3	0.2	0.1	0.2	0.2	0.2	0.4	0.3	0.5	0.5	0.4	0.2	0.3	0.3	0.5	1.5
27-Feb	0.3	Z	0.3	0.3	0.3	0.4	0.3	0.4	1.0	1.5	2.0	C	C	C	C	C	C	C	0.1	0.0	0.0	0.0	0.1	0.1	--	2.0
28-Feb	0.0	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.6	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.2	0.2	0.6
	0.6	0.5	0.5	0.3	0.3	0.5	0.5	0.6	0.6	0.6	0.5	0.4	0.3	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.6	0.6	Diurnal Average	
	5.1	3.3	2.5	1.3	1.5	1.4	1.7	1.5	2.6	2.6	2.0	1.3	1.9	1.5	1.3	1.2	1.2	1.2	1.2	1.4	2.0	1.9	4.6	6.7	Diurnal Maximum	

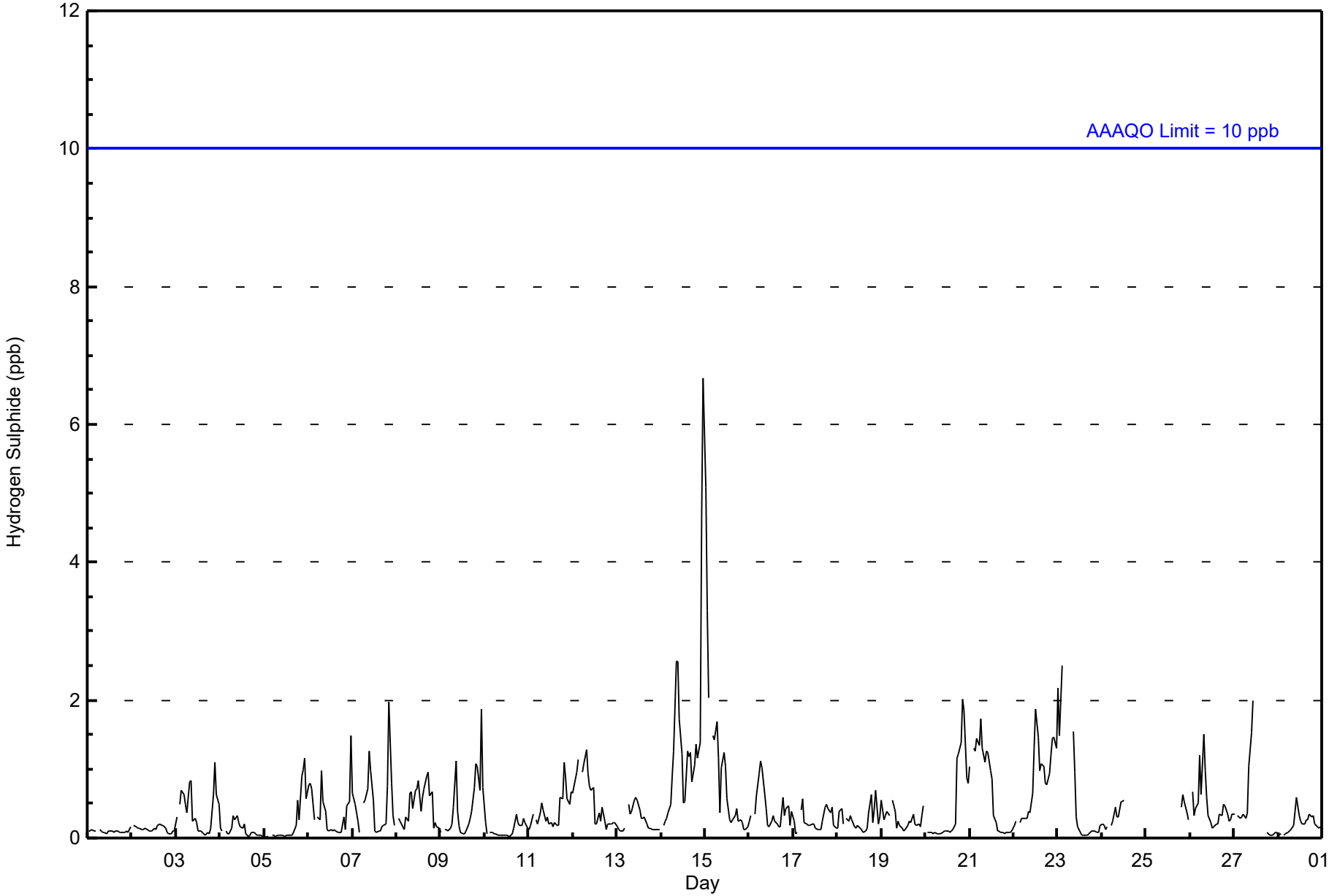
Z - zerospan C - Calibration PF - Power Failure
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Mildred Lake - February 2025



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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	598	99.01	99.01
3 - 4	3	0.50	99.50
5 - 7	3	0.50	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 604

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Mildred Lake - February 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	28	16	9	7	12	53	62	39	66	41	19	19	14	15	36	572
3 - 4	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	3
5 - 7	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	3
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	136	28	16	9	7	12	53	63	41	69	41	19	19	14	15	36	578

Total Number of Valid Hours: 578

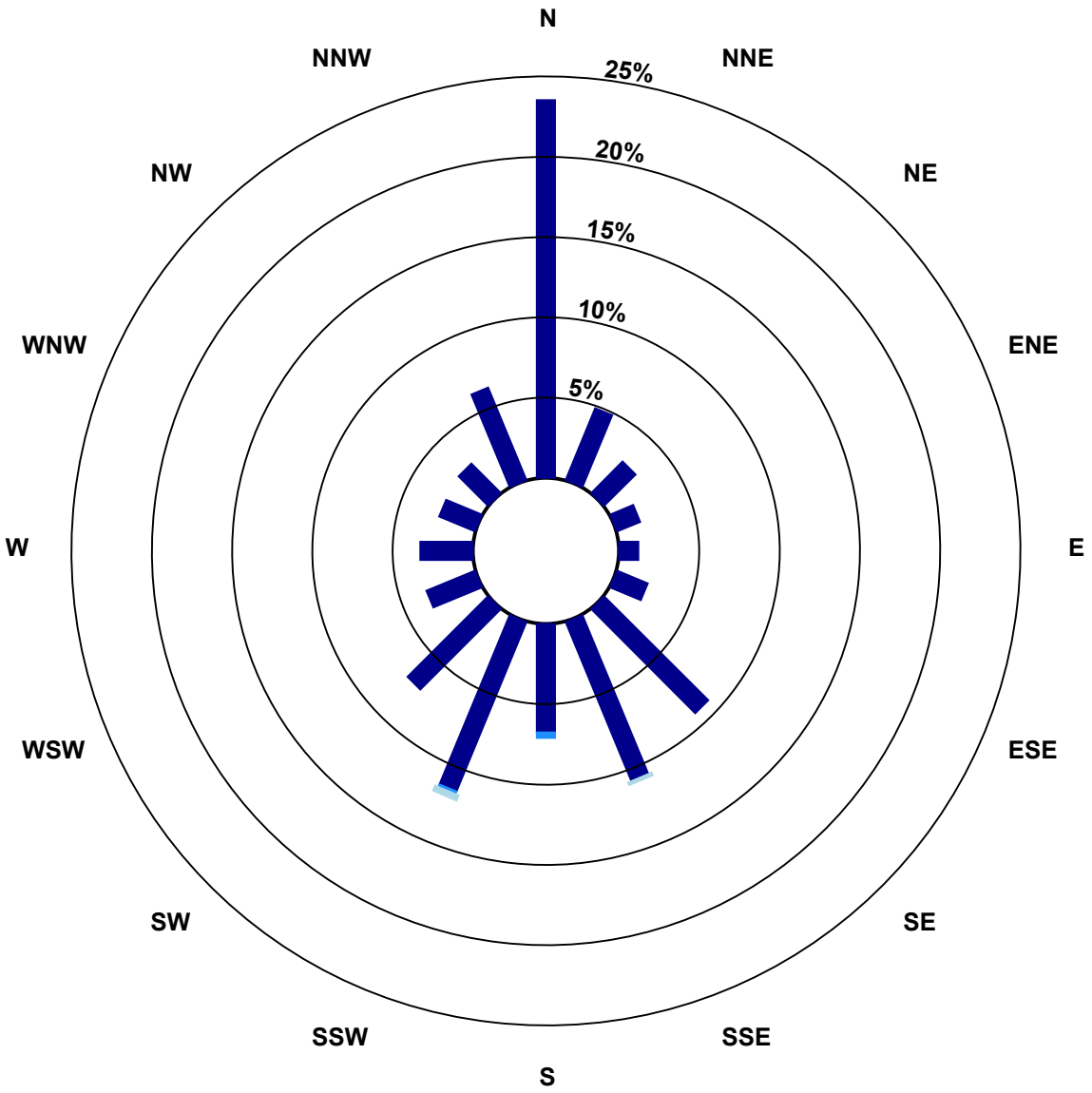
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Hydrogen Sulphide (H_2S) - ppb

Mildred Lake



Classes (ppb)

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

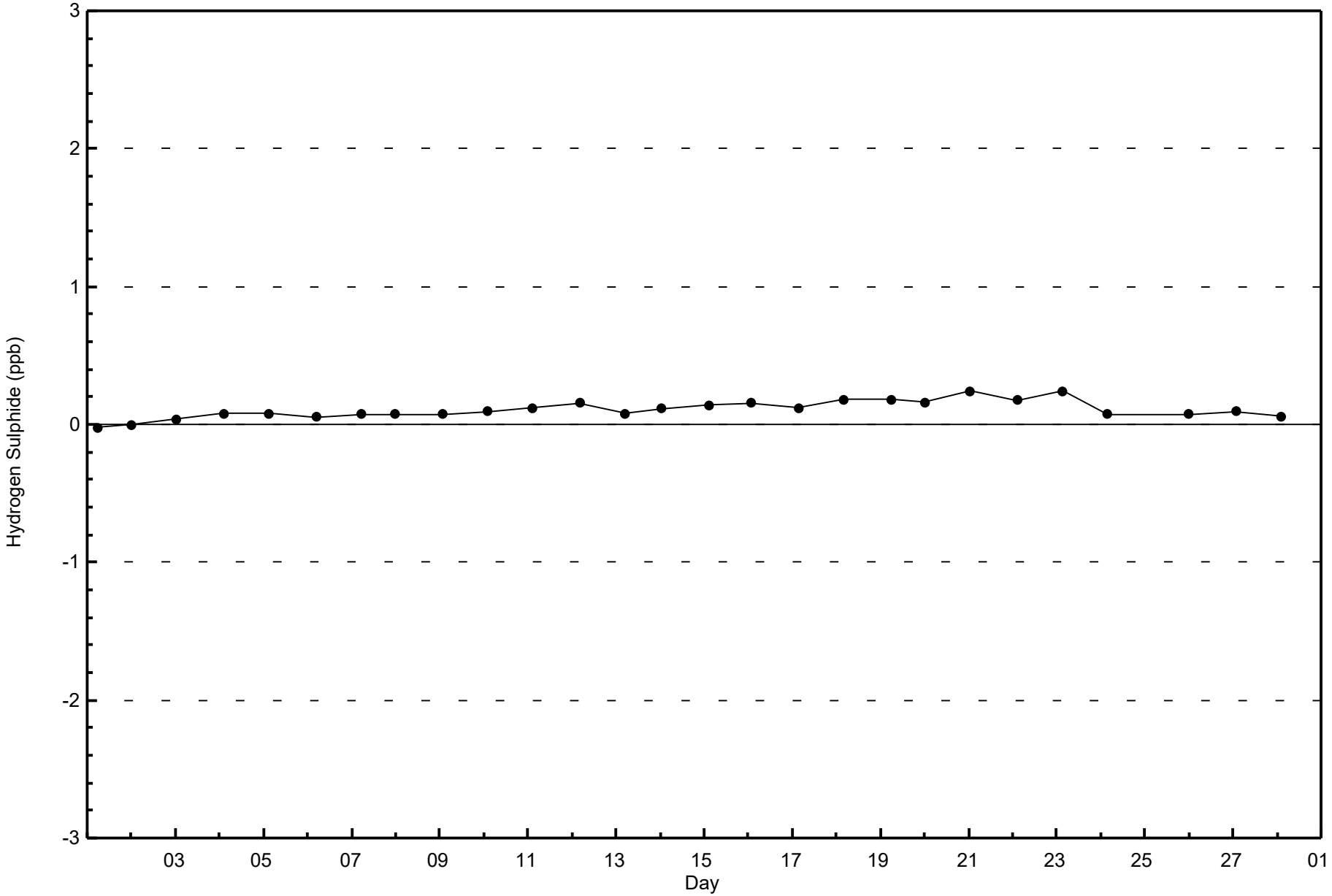
Total Number of Valid Hours: 578

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Mildred Lake - February 2025

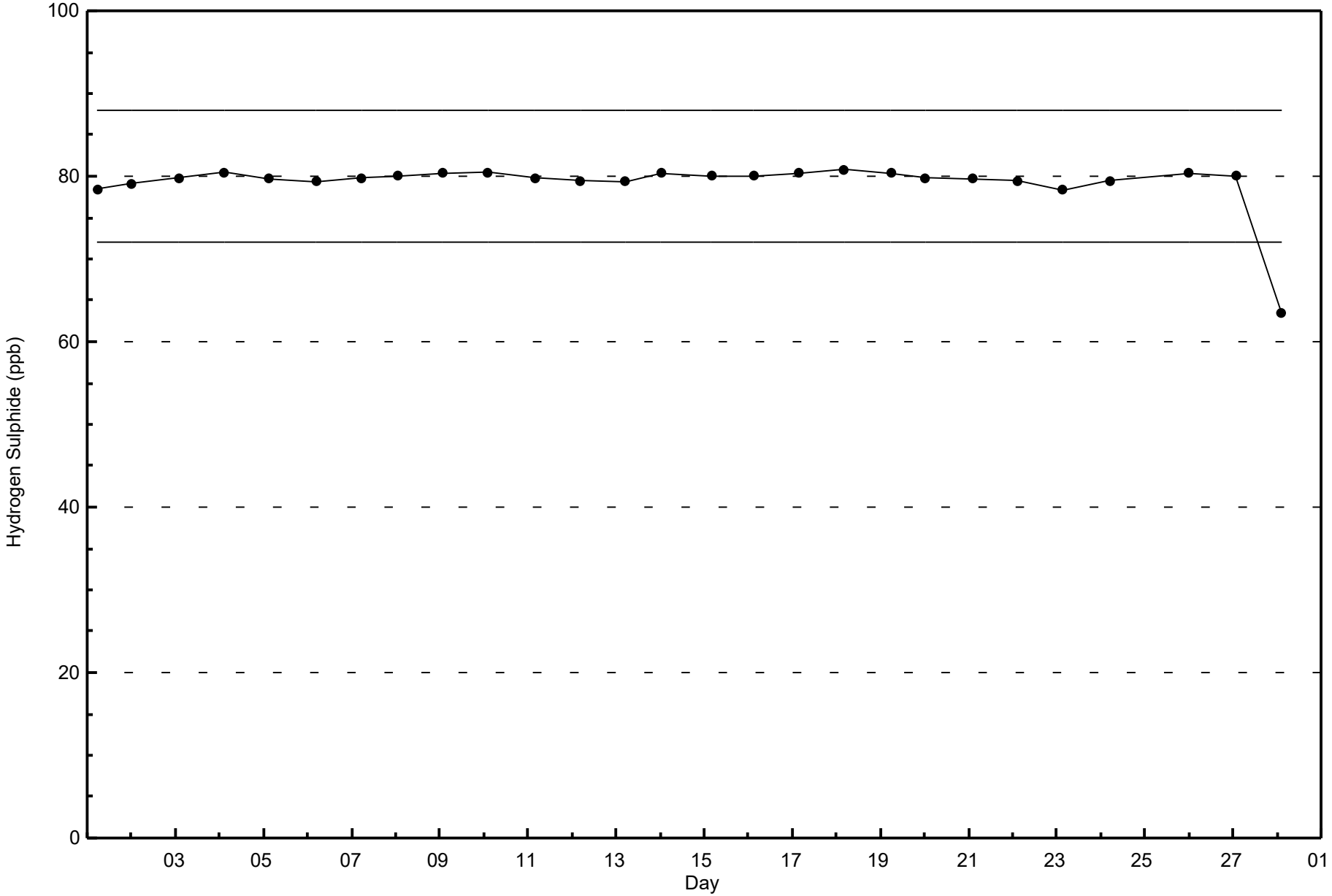


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Mildred Lake - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Mildred Lake - February 2025

Maximum Value: 5.9 ppm on Feb 22 22:00

Maximum Daily Average: 3.1 ppm on Feb 22

Minimum Value: 2.0 ppm on Feb 4 16:00

Minimum Daily Average: 2.1 ppm on Feb 10

Maximum Diurnal Average: 2.4 ppm at hour 22

Minimum Diurnal Average: 2.2 ppm at hour 15

Monthly Average: 2.30 ppm

Percentiles: P_1 = 2.0 P_{10} = 2.1 Q_1 = 2.1 Median = 2.2 Q_3 = 2.4 P_{90} = 2.7 P_{99} = 3.7

Hours in Service:	672
Hours of Data:	526
Hours of Missing Data:	146
Hours of Calibration:	33
Percent Operational Time:	83.2

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	UO	UO	UO	UO	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
2-Feb	UO	UO	UO	UO	UO	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
3-Feb	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	M	M	M	M	M	M	M	M	--	--
4-Feb	M	M	M	M	M	M	M	M	M	M	M	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	--	2.0
5-Feb	2.0	2.0	Z	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.4	2.4	2.5	2.3	2.1	2.5
6-Feb	2.4	2.3	2.3	Z	2.4	2.3	2.4	2.5	2.5	2.2	2.1	2.1	2.2	2.1	2.2	2.2	2.1	2.1	2.2	2.8	3.0	2.4	2.3	2.5	2.3	3.0
7-Feb	2.3	2.4	2.2	2.1	Z	2.1	2.2	2.3	2.4	2.4	2.4	2.2	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.4	2.2	2.1	2.1	2.2	2.4
8-Feb	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.2	2.2	2.2	2.7	2.6	2.4	2.2	2.3	2.3	2.3	2.4	2.5	2.7	2.1	2.1	2.1	2.1	2.3	2.7
9-Feb	Z	2.1	2.1	2.1	2.2	2.1	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.5	2.6	2.3	2.2	2.2	2.6
10-Feb	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.2
11-Feb	2.1	2.2	Z	2.4	2.3	2.2	2.3	2.8	2.4	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.8
12-Feb	2.3	2.4	2.5	Z	2.6	2.6	2.6	2.7	2.4	2.3	2.3	2.3	2.1	2.1	2.2	2.1	2.2	2.1	2.1	2.3	2.3	2.3	2.3	2.3	2.3	2.7
13-Feb	2.2	2.2	2.1	2.1	Z	2.1	2.2	2.2	2.3	2.5	2.5	2.5	2.4	2.3	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.5
14-Feb	2.1	2.1	2.1	2.2	2.3	Z	2.7	2.6	2.9	3.1	2.7	2.7	2.4	2.3	2.4	2.5	2.3	2.3	2.3	2.4	2.3	2.4	2.7	2.9	2.5	3.1
15-Feb	2.7	2.6	Z	2.3	2.4	2.5	2.4	2.3	2.1	2.2	2.2	2.3	2.4	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.7
16-Feb	2.1	Z	2.1	2.1	2.2	2.3	2.4	2.3	2.3	2.4	2.1	2.3	2.2	2.4	2.3	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.4
17-Feb	2.2	2.3	Z	2.5	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.3	2.4	2.1	2.5
18-Feb	2.5	2.2	2.5	Z	2.1	2.0	2.0	2.2	2.0	2.0	2.3	2.1	2.2	2.1	2.0	2.0	2.1	2.4	2.2	2.1	2.1	2.1	2.5	2.2	2.2	2.5
19-Feb	2.1	2.1	2.1	2.1	Z	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2
20-Feb	2.4	2.1	2.0	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.6	2.6	3.0	2.9	2.8	2.6	2.6	2.3	3.0
21-Feb	Z	3.1	2.9	2.7	2.8	2.8	3.0	3.2	3.2	3.5	3.3	3.2	3.3	2.6	2.5	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.7	3.5
22-Feb	2.4	Z	2.3	2.4	2.6	2.6	2.5	2.5	2.6	2.6	2.7	3.1	3.2	2.9	2.7	3.9	3.8	3.1	2.8	2.7	4.4	5.9	4.6	3.7	3.1	5.9
23-Feb	3.6	3.2	Z	2.7	PF	PF	PF	PF	PF	PF	2.4	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	--	3.6
24-Feb	2.1	2.1	2.1	Z	2.1	2.1	2.2	2.6	2.2	2.2	2.2	2.2	2.4	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	--	2.6
25-Feb	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	2.3	2.3	2.4	2.4	--	2.4
26-Feb	3.2	2.7	2.6	2.6	2.4	Z	2.3	2.8	3.0	2.5	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.4	2.4	2.4	2.3	2.3	2.3	2.6	2.4	3.2
27-Feb	Z	2.5	2.6	2.5	2.4	2.4	2.4	2.4	2.7	3.0	3.3	2.9	2.7	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.4	3.3
28-Feb	2.0	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.3	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.5	2.5	2.2	2.3	2.2	2.5
	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.4	2.4	2.3	2.3	Diurnal Average	
	3.6	3.2	2.9	2.7	2.8	2.8	3.0	3.2	3.2	3.5	3.3	3.2	3.3	2.9	2.7	3.9	3.8	3.1	2.8	3.0	4.4	5.9	4.6	3.7	Diurnal Maximum	

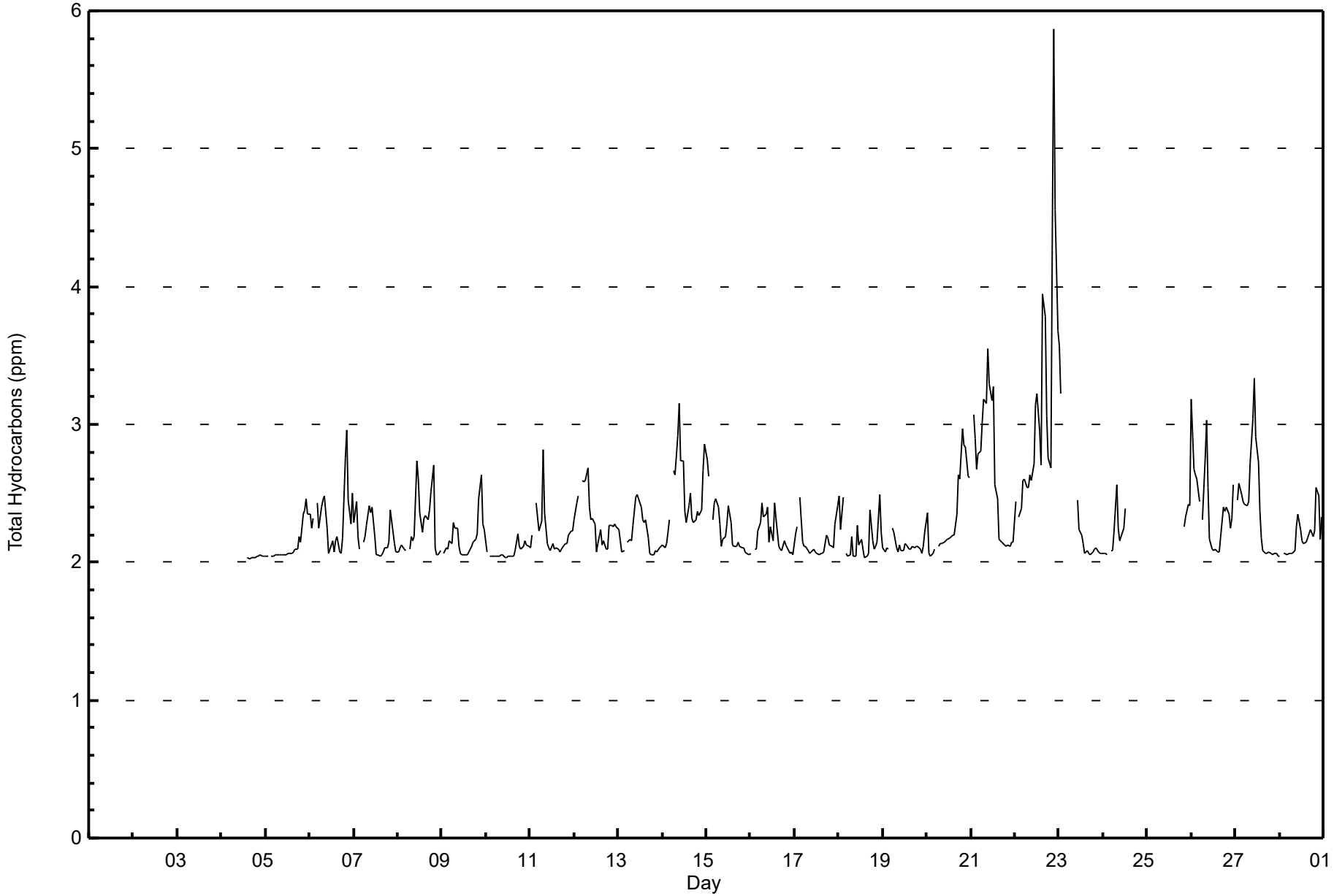
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation PF - Power Failure

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Mildred Lake - February 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	38	7.22	7.22
2.1 - 3.0	467	88.78	96.01
3.1 - 10.0	21	3.99	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 526

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Mildred Lake - February 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	1	1	0	0	0	0	2	4	20	9	1	0	0	0	0	38
2.1 - 3.0	94	28	15	8	8	12	52	59	25	35	18	13	17	13	15	29	441
3.1 - 10.0	1	1	1	0	0	0	2	2	3	5	0	2	0	0	0	4	21
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	95	30	17	8	8	12	54	63	32	60	27	16	17	13	15	33	500

Total Number of Valid Hours: 500

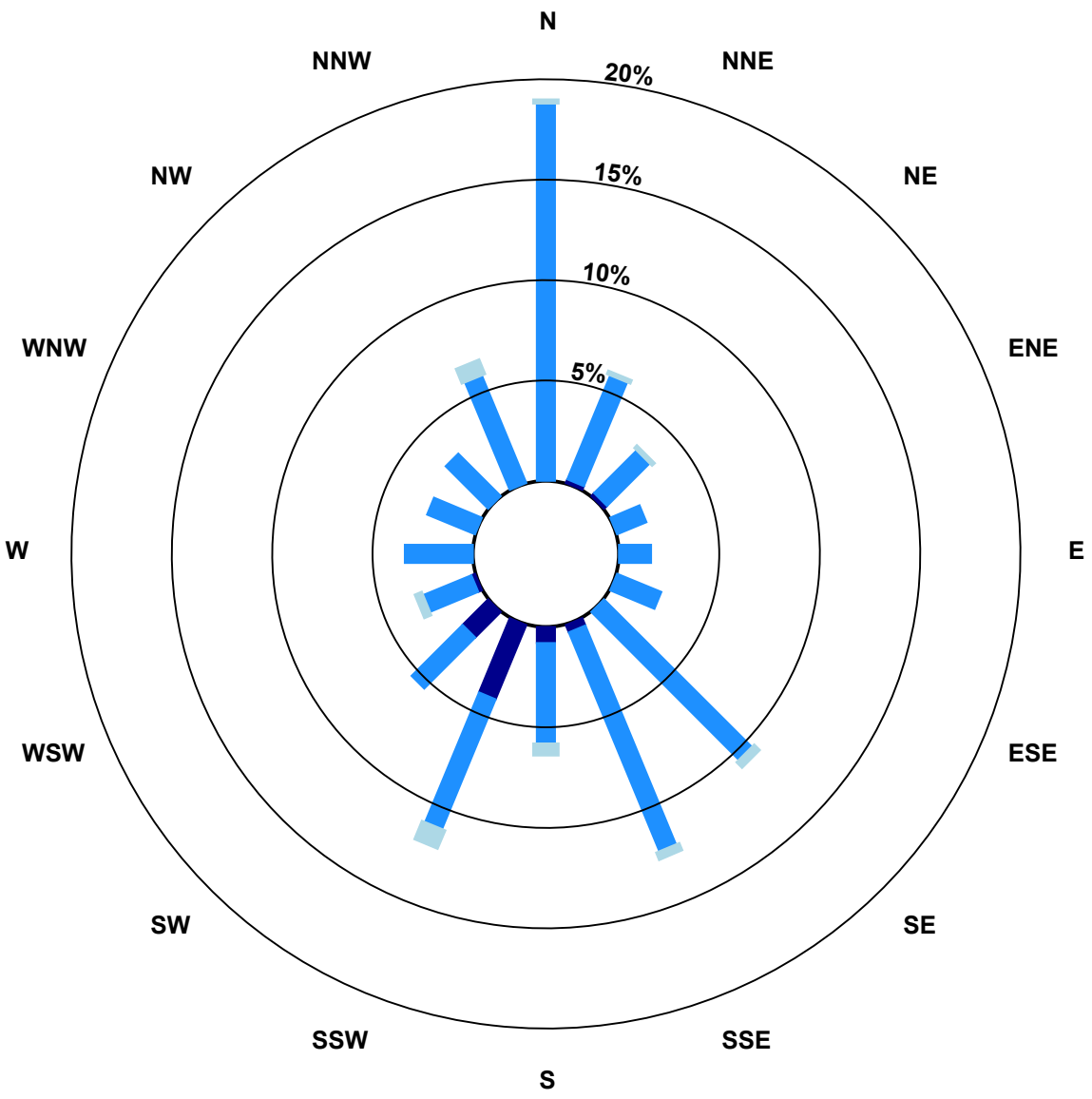
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Total Hydrocarbons (THC) - ppm

Mildred Lake



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

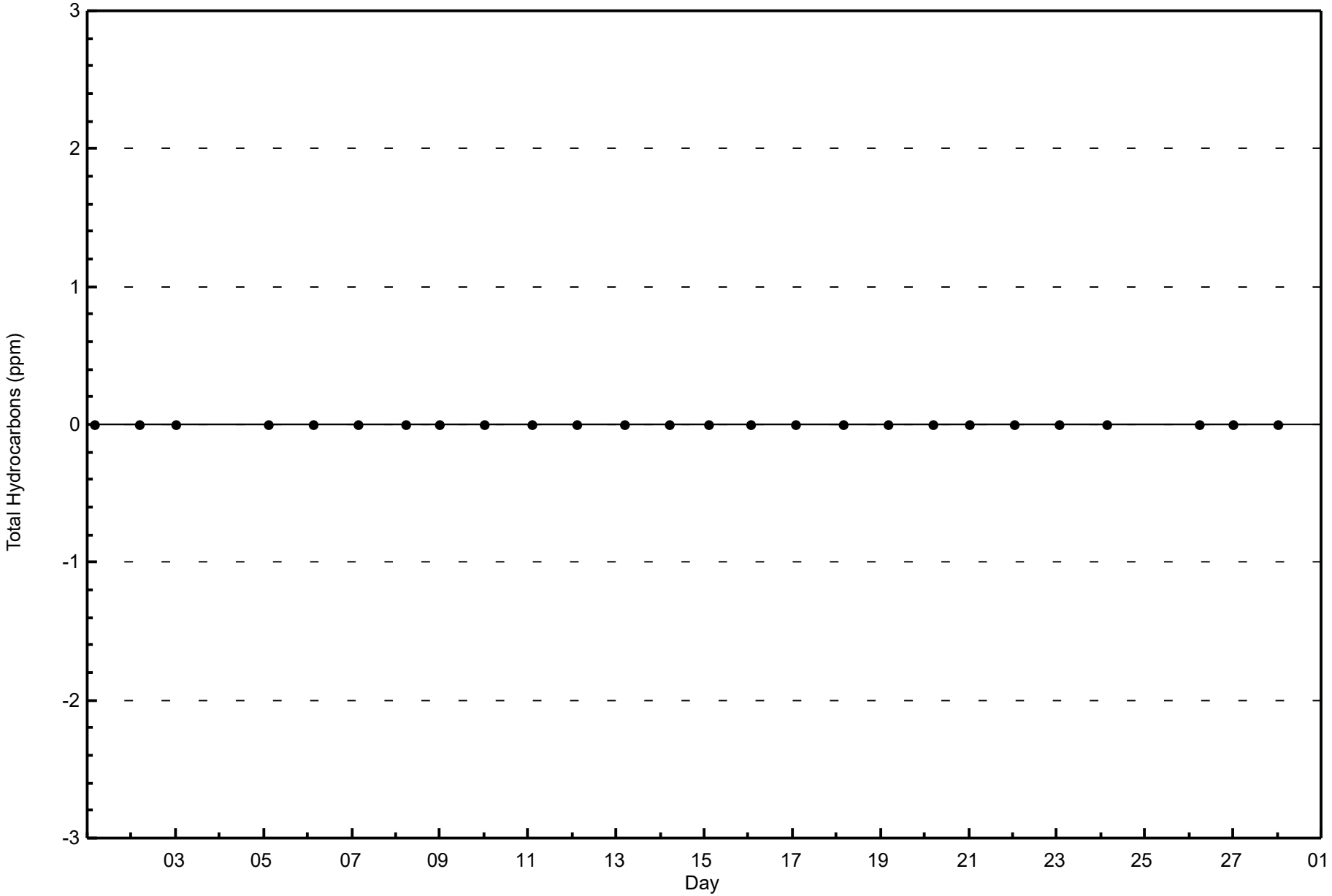
Total Number of Valid Hours: 500

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Mildred Lake - February 2025

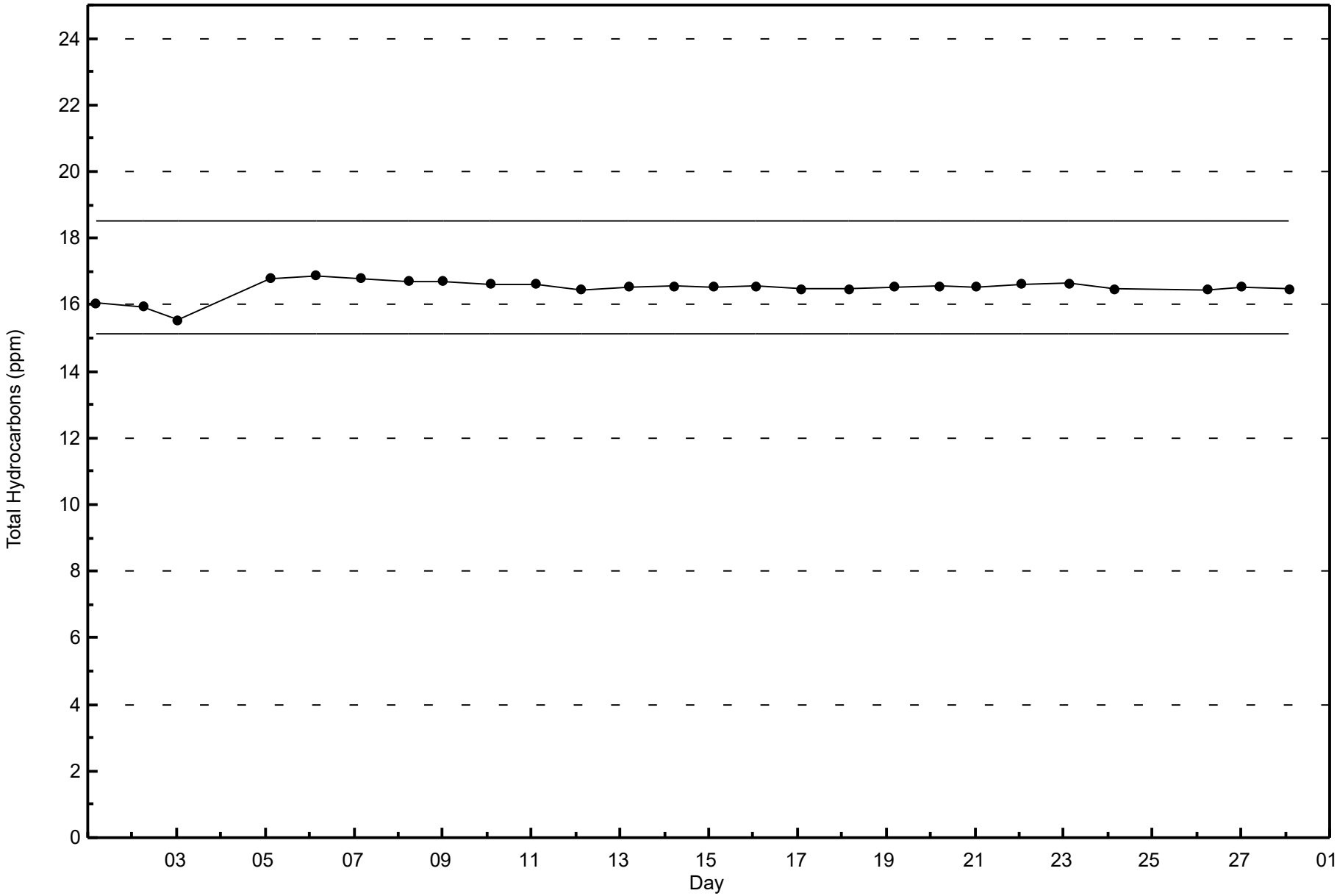


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Mildred Lake - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Mildred Lake - February 2025

Maximum Value: 0.338 ppm on Feb 26 02:00

Maximum Daily Average: 0.104 ppm on Feb 26

Minimum Value: 0.000 ppm on Feb 4 15:00

Minimum Daily Average: 0.002 ppm on Feb 10

Maximum Diurnal Average: 0.046 ppm at hour 9

Minimum Diurnal Average: 0.018 ppm at hour 17

Monthly Average: 0.033 ppm

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

Hours in Service:	672
Hours of Data:	526
Hours of Missing Data:	146
Hours of Calibration:	33
Percent Operational Time:	83.2

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-Feb	UO	UO	UO	UO	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
2-Feb	UO	UO	UO	UO	UO	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
3-Feb	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	M	M	M	M	M	M	M	M	--	--
4-Feb	M	M	M	M	M	M	M	M	M	M	M	C	C	C	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.000	--	0.001
5-Feb	0.000	0.000	Z	0.001	0.001	0.001	0.000	0.001	0.002	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.003	0.026	0.005	0.042	0.044	0.069	0.015	0.009	0.069
6-Feb	0.051	0.032	0.101	Z	0.167	0.040	0.007	0.007	0.039	0.011	0.000	0.010	0.045	0.001	0.063	0.079	0.000	0.000	0.000	0.012	0.000	0.015	0.020	0.041	0.032	0.167
7-Feb	0.014	0.014	0.011	0.007	Z	0.023	0.025	0.061	0.073	0.077	0.150	0.053	0.000	0.000	0.000	0.000	0.003	0.020	0.019	0.012	0.044	0.018	0.000	0.000	0.027	0.150
8-Feb	0.000	0.003	0.001	0.000	0.001	Z	0.013	0.023	0.025	0.015	0.027	0.037	0.021	0.030	0.051	0.053	0.049	0.029	0.082	0.148	0.004	0.000	0.000	0.000	0.027	0.148
9-Feb	Z	0.001	0.000	0.003	0.063	0.016	0.005	0.005	0.012	0.004	0.001	0.000	0.001	0.000	0.000	0.010	0.036	0.056	0.068	0.087	0.086	0.010	0.015	0.077	0.024	0.087
10-Feb	0.009	Z	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.019	0.003	0.001	0.001	0.004	0.003	0.004	0.002	0.019
11-Feb	0.001	0.024	Z	0.065	0.063	0.034	0.042	0.074	0.043	0.008	0.002	0.003	0.022	0.002	0.010	0.014	0.007	0.013	0.017	0.014	0.014	0.051	0.070	0.065	0.029	0.074
12-Feb	0.042	0.051	0.043	Z	0.051	0.058	0.034	0.038	0.021	0.020	0.032	0.037	0.001	0.004	0.004	0.000	0.010	0.003	0.001	0.078	0.083	0.073	0.077	0.048	0.035	0.083
13-Feb	0.034	0.017	0.000	0.000	Z	0.006	0.027	0.003	0.026	0.061	0.063	0.073	0.092	0.065	0.054	0.058	0.037	0.000	0.000	0.000	0.000	0.001	0.003	0.011	0.027	0.092
14-Feb	0.003	0.000	0.005	0.036	0.042	Z	0.027	0.016	0.051	0.053	0.043	0.032	0.012	0.014	0.049	0.185	0.078	0.065	0.078	0.077	0.063	0.074	0.064	0.043	0.048	0.185
15-Feb	0.056	0.074	Z	0.046	0.057	0.056	0.048	0.032	0.002	0.003	0.005	0.015	0.013	0.002	0.002	0.000	0.002	0.002	0.000	0.002	0.003	0.001	0.000	0.000	0.018	0.074
16-Feb	0.000	Z	0.004	0.002	0.024	0.033	0.043	0.032	0.024	0.039	0.005	0.001	0.008	0.031	0.004	0.001	0.000	0.000	0.001	0.000	0.000	0.000	0.001	0.001	0.011	0.043
17-Feb	0.000	0.000	Z	0.003	0.003	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.001	0.000	0.001	0.000	0.046	0.024	0.004	0.001	0.008	0.006	0.000	0.004	0.046
18-Feb	0.001	0.009	0.051	Z	0.001	0.006	0.009	0.016	0.006	0.000	0.000	0.001	0.000	0.001	0.000	0.000	0.004	0.009	0.006	0.005	0.013	0.016	0.009	0.008	0.007	0.051
19-Feb	0.019	0.003	0.002	0.004	Z	0.004	0.005	0.002	0.001	0.002	0.001	0.005	0.017	0.012	0.010	0.007	0.003	0.004	0.002	0.004	0.000	0.003	0.008	0.011	0.006	0.019
20-Feb	0.005	0.007	0.003	0.010	0.018	Z	0.022	0.032	0.031	0.035	0.036	0.046	0.050	0.049	0.057	0.058	0.066	0.084	0.083	0.070	0.094	0.090	0.068	0.081	0.048	0.094
21-Feb	Z	0.080	0.064	0.044	0.056	0.063	0.121	0.221	0.295	0.307	0.184	0.195	0.247	0.175	0.181	0.024	0.024	0.018	0.007	0.005	0.006	0.003	0.003	0.009	0.101	0.307
22-Feb	0.100	Z	0.024	0.073	0.137	0.122	0.096	0.087	0.096	0.092	0.122	0.146	0.161	0.137	0.103	0.081	0.068	0.080	0.077	0.076	0.101	0.117	0.102	0.103	0.100	0.161
23-Feb	0.071	0.066	Z	0.107	PF	PF	PF	PF	PF	PF	0.086	0.051	0.036	0.018	0.004	0.003	0.001	0.001	0.000	0.001	0.002	0.001	0.001	0.001	--	0.107
24-Feb	0.000	0.000	0.001	Z	0.001	0.001	0.017	0.066	0.024	0.009	0.025	0.023	0.027	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	--	0.066
25-Feb	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	0.077	0.094	0.116	0.120	--	0.120
26-Feb	0.263	0.338	0.270	0.219	0.119	Z	0.077	0.084	0.163	0.103	0.016	0.001	0.000	0.001	0.000	0.000	0.020	0.111	0.075	0.090	0.102	0.060	0.076	0.199	0.104	0.338
27-Feb	Z	0.064	0.089	0.064	0.052	0.046	0.050	0.061	0.084	0.076	0.077	0.057	0.020	0.058	0.023	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.036	0.089
28-Feb	0.000	Z	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.029	0.033	0.020	0.018	0.009	0.007	0.017	0.012	0.011	0.053	0.060	0.032	0.015	0.010	0.047	0.016	0.060
	0.033	0.041	0.037	0.036	0.045	0.028	0.030	0.039	0.046	0.043	0.039	0.035	0.034	0.028	0.027	0.026	0.018	0.025	0.027	0.033	0.032	0.029	0.030	0.037	Diurnal Average	
	0.263	0.338	0.270	0.219	0.167	0.122	0.121	0.221	0.295	0.307	0.184	0.195	0.247	0.175	0.181	0.185	0.078	0.111	0.083	0.148	0.102	0.117	0.116	0.199	Diurnal Maximum	

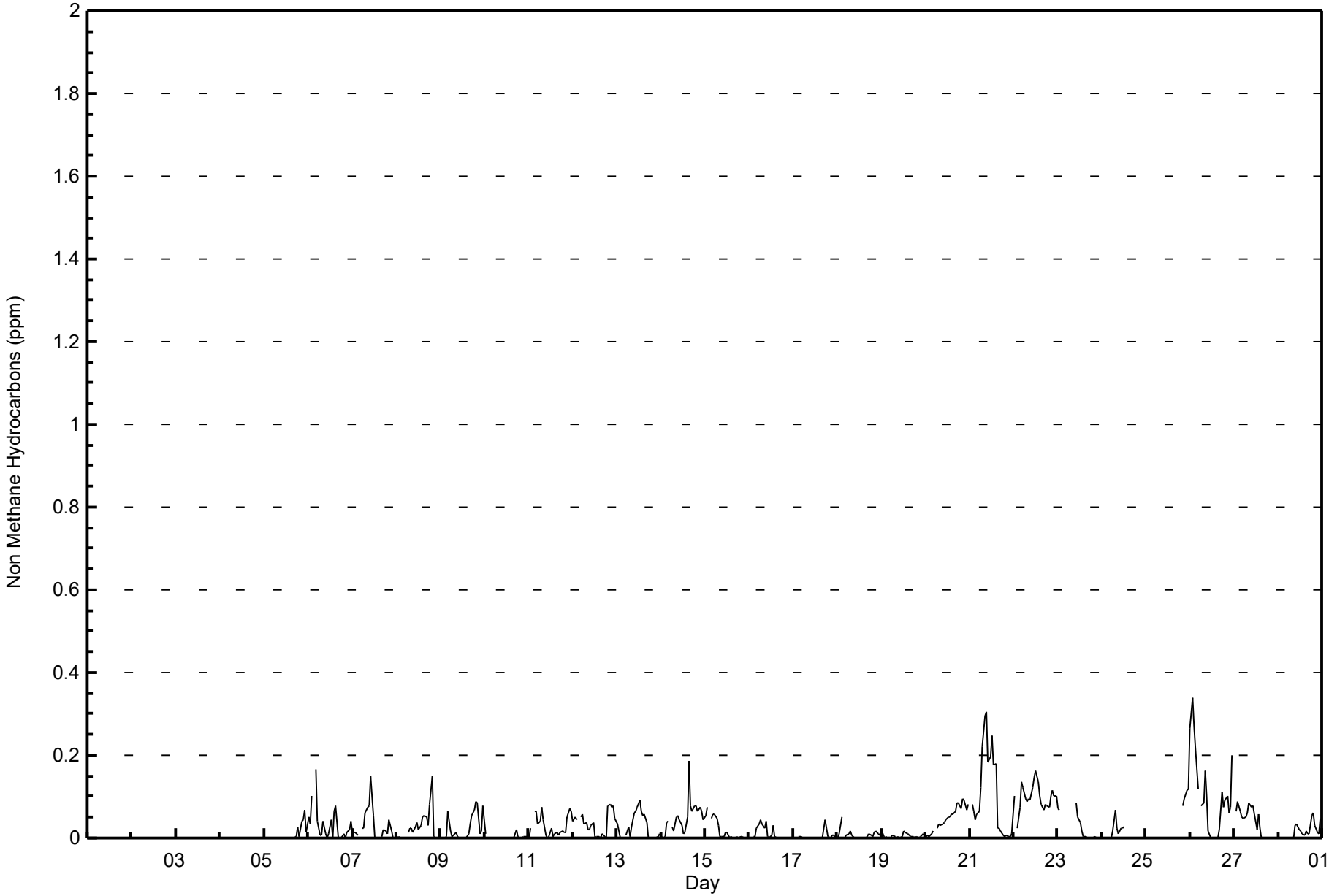
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation PF - Power Failure

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Mildred Lake - February 2025



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

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	221	42.02	42.02
0.006 - 0.05	180	34.22	76.24
0.06 - 0.1	108	20.53	96.77
> 0.1	17	3.23	100.00

Total Number of Valid Hours: 526

Total Number of Hours: 672

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	38	19	12	4	1	2	31	26	8	34	18	1	1	3	5	3	206
0.006 - 0.05	25	6	2	2	4	6	16	33	17	12	7	11	10	7	4	9	171
0.06 - 0.1	28	4	3	2	3	4	7	3	5	11	2	4	5	3	6	16	106
> 0.1	4	1	0	0	0	0	0	1	2	3	0	0	1	0	0	5	17
Totals	95	30	17	8	8	12	54	63	32	60	27	16	17	13	15	33	500

Total Number of Valid Hours: 500

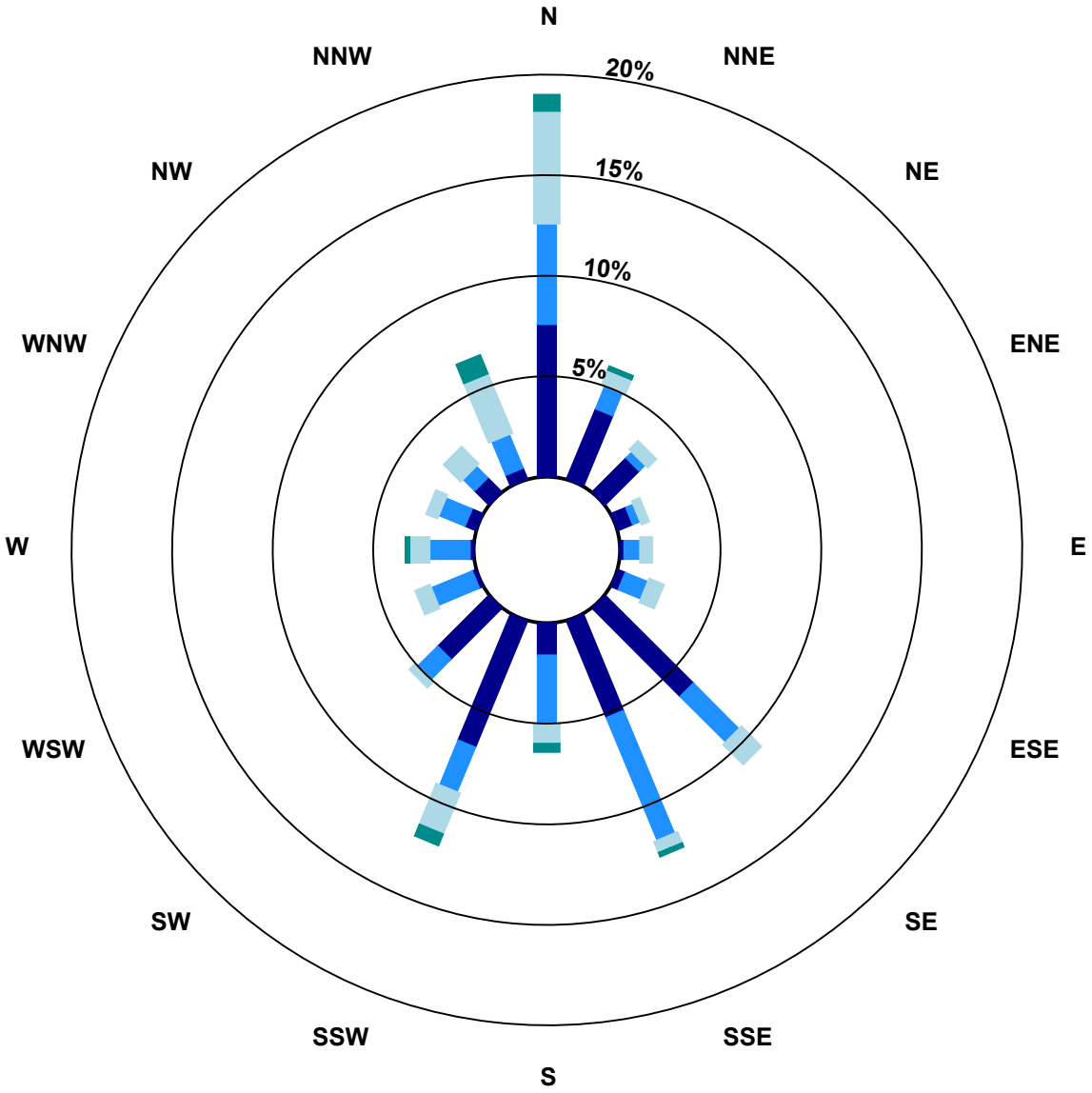
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Non Methane Hydrocarbons (NMHC) - ppm

Mildred Lake



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

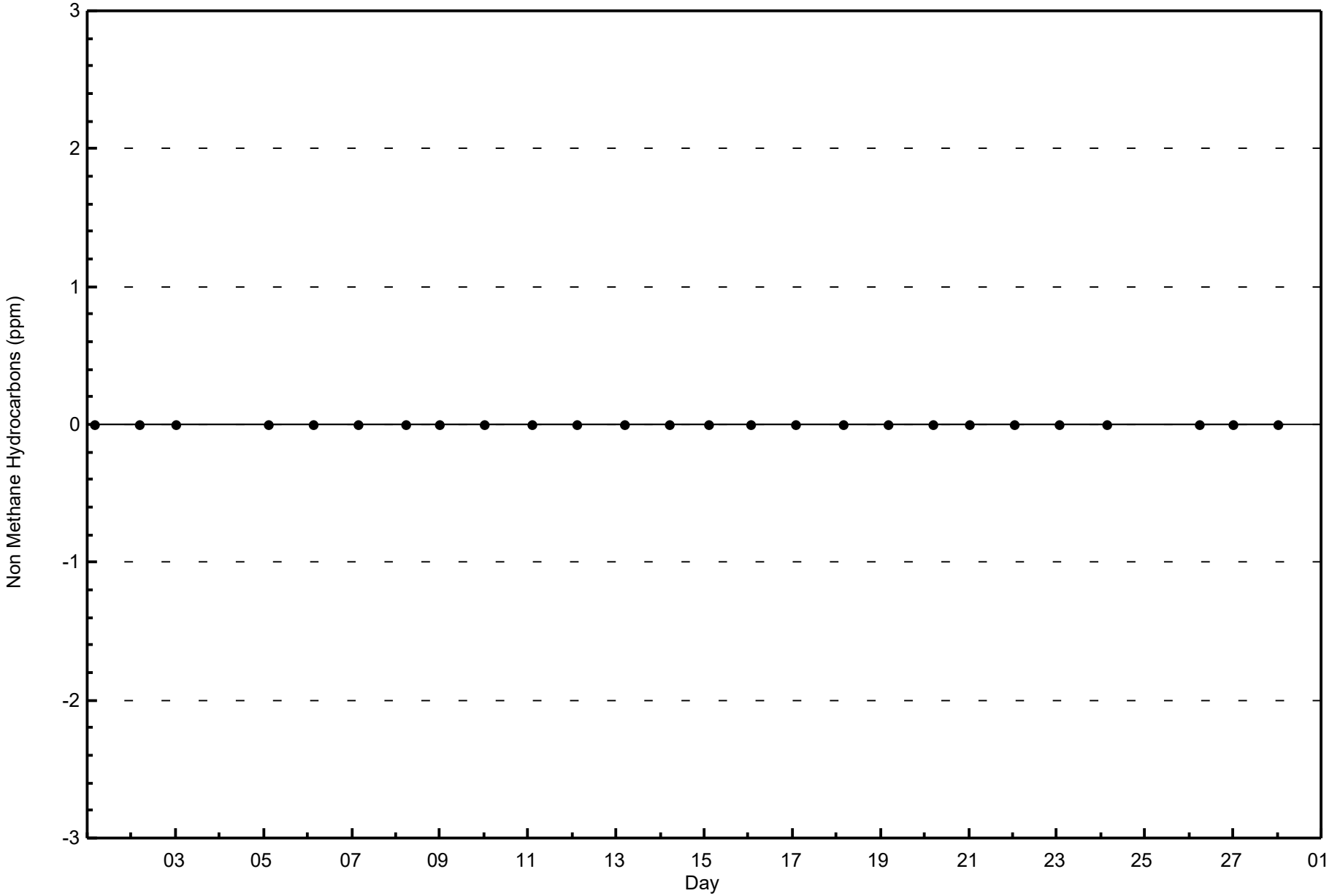
Total Number of Valid Hours: 500

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Mildred Lake - February 2025

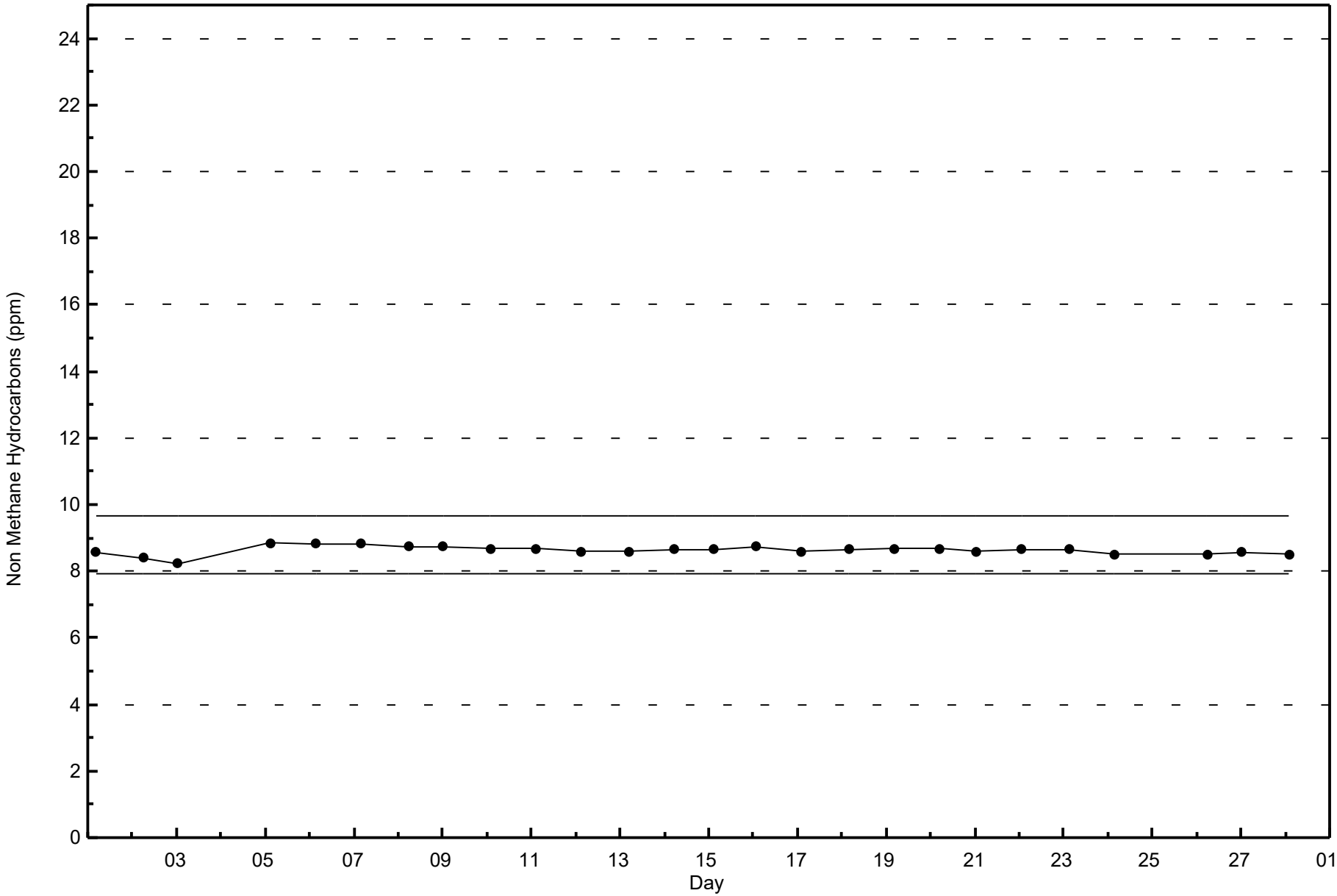


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Mildred Lake - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Mildred Lake - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 5.7 ppm on Feb 22 22:00
Maximum Daily Average: 3.0 ppm on Feb 22

Minimum Value: 2.0 ppm on Feb 4 16:00
Maximum Diurnal Average: 2.4 ppm at hour 22
Monthly Average: 2.26 ppm
Minimum Daily Average: 2.1 ppm on Feb 10
Minimum Diurnal Average: 2.2 ppm at hour 15
Percentiles: P_1 = 2.0 P_{10} = 2.1 Q_1 = 2.1 Median = 2.1 Q_3 = 2.3 P_{90} = 2.6 P_{99} = 3.6

Hours in Service:	672
Hours of Data:	526
Hours of Missing Data:	146
Hours of Calibration:	33
Percent Operational Time:	83.2

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	UO	UO	UO	UO	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
2-Feb	UO	UO	UO	UO	UO	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
3-Feb	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	M	M	M	M	M	M	M	M	--	--
4-Feb	M	M	M	M	M	M	M	M	M	M	M	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	--	2.0
5-Feb	2.0	2.0	Z	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.3	2.3	2.4	2.3	2.1	2.4
6-Feb	2.3	2.2	2.2	Z	2.3	2.2	2.4	2.4	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.7	3.0	2.4	2.3	2.5	2.3	3.0
7-Feb	2.3	2.4	2.2	2.1	Z	2.1	2.2	2.2	2.3	2.3	2.3	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.3	2.2	2.1	2.1	2.2	2.4
8-Feb	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.2	2.1	2.2	2.7	2.6	2.3	2.2	2.3	2.3	2.3	2.4	2.4	2.6	2.1	2.1	2.1	2.1	2.2	2.7
9-Feb	Z	2.1	2.1	2.1	2.1	2.1	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.4	2.6	2.3	2.2	2.2	2.6
10-Feb	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.2
11-Feb	2.1	2.2	Z	2.4	2.3	2.2	2.3	2.7	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.7
12-Feb	2.3	2.4	2.4	Z	2.5	2.5	2.6	2.6	2.4	2.3	2.3	2.2	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.3	2.6
13-Feb	2.2	2.1	2.1	2.1	Z	2.1	2.1	2.2	2.2	2.4	2.4	2.4	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.4
14-Feb	2.1	2.1	2.1	2.2	2.3	Z	2.6	2.6	2.9	3.1	2.7	2.7	2.4	2.3	2.4	2.3	2.2	2.2	2.2	2.3	2.3	2.3	2.6	2.8	2.4	3.1
15-Feb	2.7	2.6	Z	2.3	2.4	2.4	2.4	2.2	2.1	2.2	2.2	2.3	2.4	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.7
16-Feb	2.1	Z	2.1	2.1	2.2	2.3	2.4	2.3	2.3	2.4	2.1	2.3	2.1	2.4	2.3	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.4
17-Feb	2.2	2.3	Z	2.5	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.3	2.4	2.1	2.5
18-Feb	2.5	2.2	2.4	Z	2.1	2.0	2.0	2.2	2.0	2.0	2.3	2.1	2.2	2.1	2.0	2.0	2.1	2.4	2.2	2.1	2.1	2.1	2.5	2.2	2.2	2.5
19-Feb	2.1	2.1	2.1	2.1	Z	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2
20-Feb	2.4	2.1	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	2.3	2.5	2.5	2.9	2.8	2.8	2.6	2.5	2.3	2.9
21-Feb	Z	3.0	2.8	2.6	2.7	2.7	2.9	3.0	2.9	3.2	3.1	3.0	3.0	2.4	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.6	3.2
22-Feb	2.3	Z	2.3	2.3	2.5	2.5	2.5	2.5	2.5	2.5	2.6	3.0	3.1	2.8	2.6	3.9	3.7	3.0	2.7	2.6	4.3	5.7	4.5	3.6	3.0	5.7
23-Feb	3.5	3.2	Z	2.6	PF	PF	PF	PF	PF	PF	2.4	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	--	3.5
24-Feb	2.1	2.1	2.1	Z	2.1	2.1	2.2	2.5	2.2	2.1	2.2	2.2	2.4	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	--	2.5
25-Feb	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	2.2	2.2	2.3	2.3	--	2.3
26-Feb	2.9	2.3	2.4	2.4	2.3	Z	2.2	2.7	2.9	2.4	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.3	2.2	2.2	2.2	2.4	2.3	2.9
27-Feb	Z	2.4	2.5	2.4	2.4	2.4	2.4	2.4	2.6	3.0	3.3	2.8	2.7	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.4	3.3
28-Feb	2.0	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.2	2.5	2.5	2.2	2.3	2.2	2.5
	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	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.4	2.3	2.3	Diurnal Average	
	3.5	3.2	2.8	2.6	2.7	2.7	2.9	3.0	2.9	3.2	3.3	3.0	3.1	2.8	2.6	3.9	3.7	3.0	2.7	2.9	4.3	5.7	4.5	3.6	Diurnal Maximum	

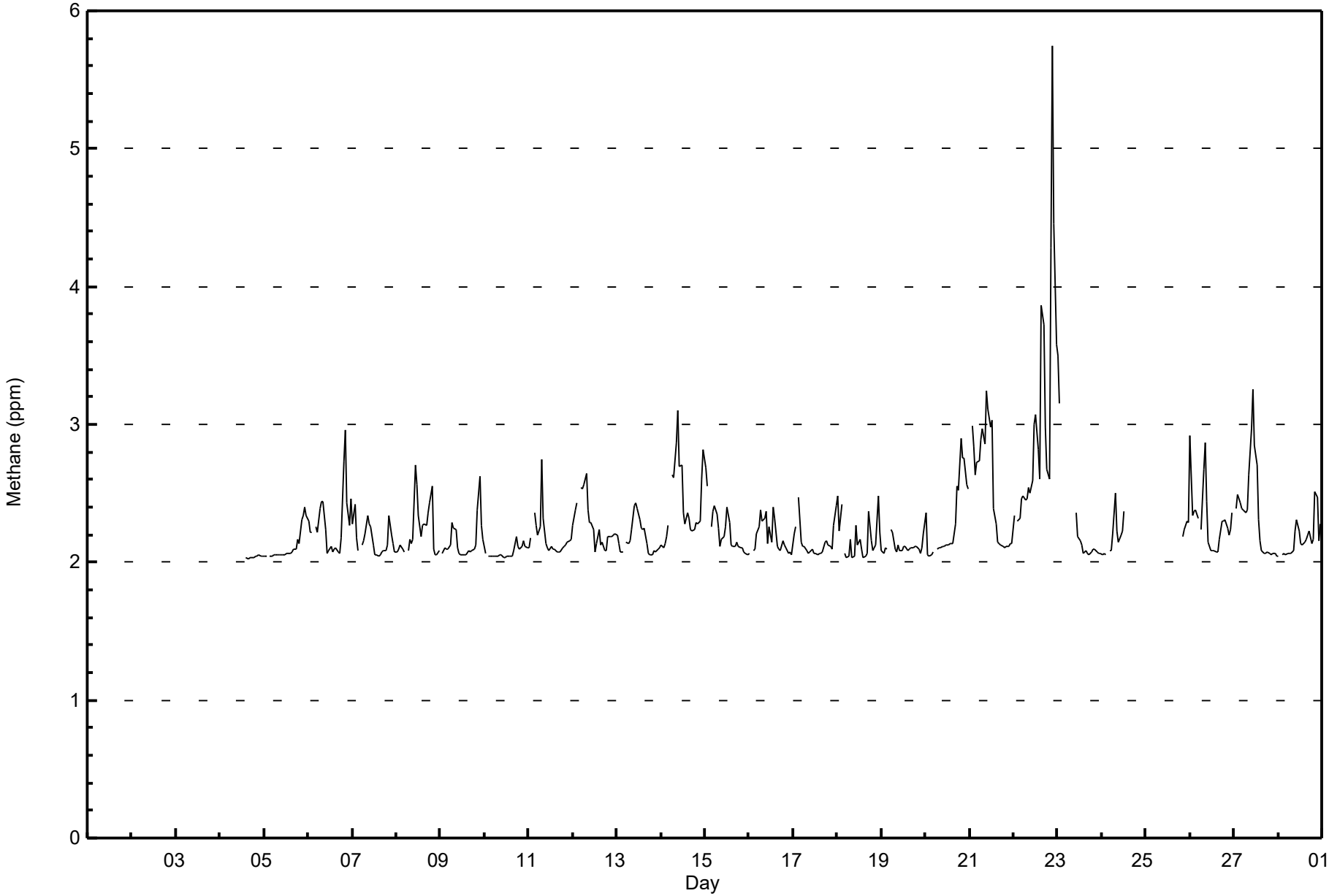
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation PF - Power Failure

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Mildred Lake - February 2025



Methane (CH_4) - ppm
Mildred Lake - February 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	38	7.22	7.22
2.1 - 3.0	475	90.30	97.53
3.1 - 10.0	13	2.47	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 526

Total Number of Hours: 672

Methane (CH_4) - ppm
Mildred Lake - February 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	1	1	0	0	0	0	2	4	20	9	1	0	0	0	0	38
2.1 - 3.0	95	29	15	8	8	12	53	60	25	36	18	14	17	13	15	31	449
3.1 - 10.0	0	0	1	0	0	0	1	1	3	4	0	1	0	0	0	2	13
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	95	30	17	8	8	12	54	63	32	60	27	16	17	13	15	33	500

Total Number of Valid Hours: 500

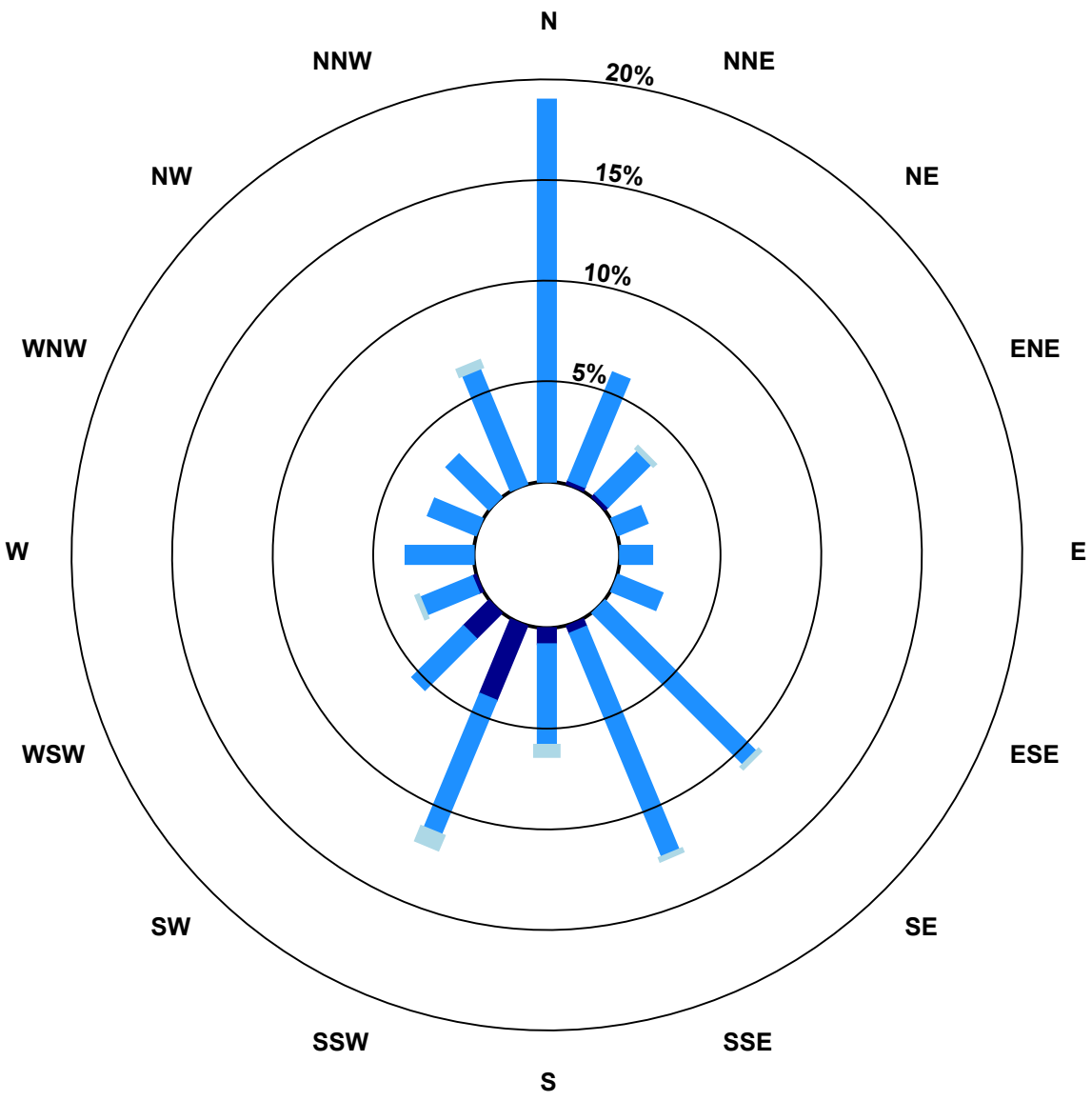
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Methane (CH_4) - ppm

Mildred Lake



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

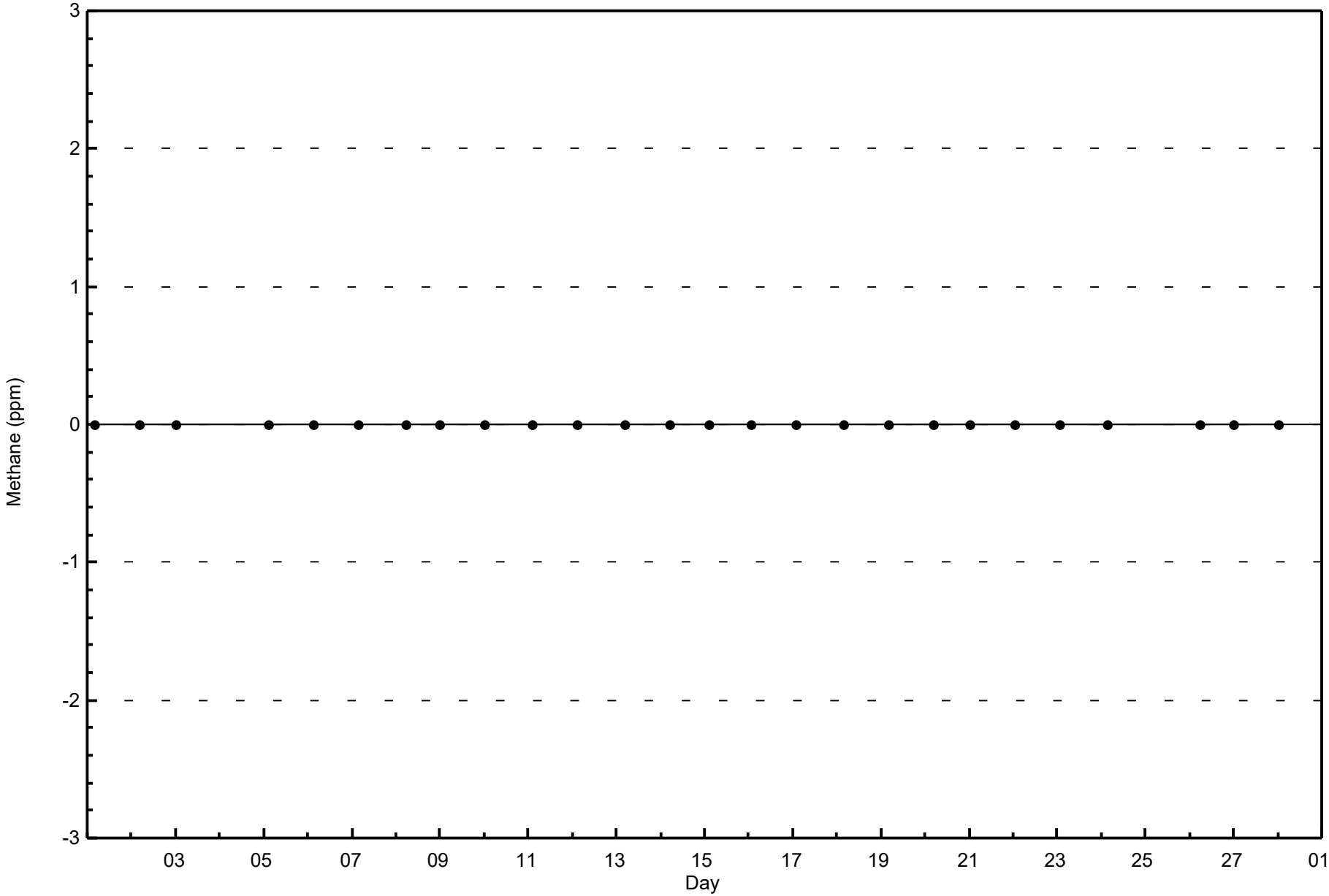
Total Number of Valid Hours: 500

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Mildred Lake - February 2025

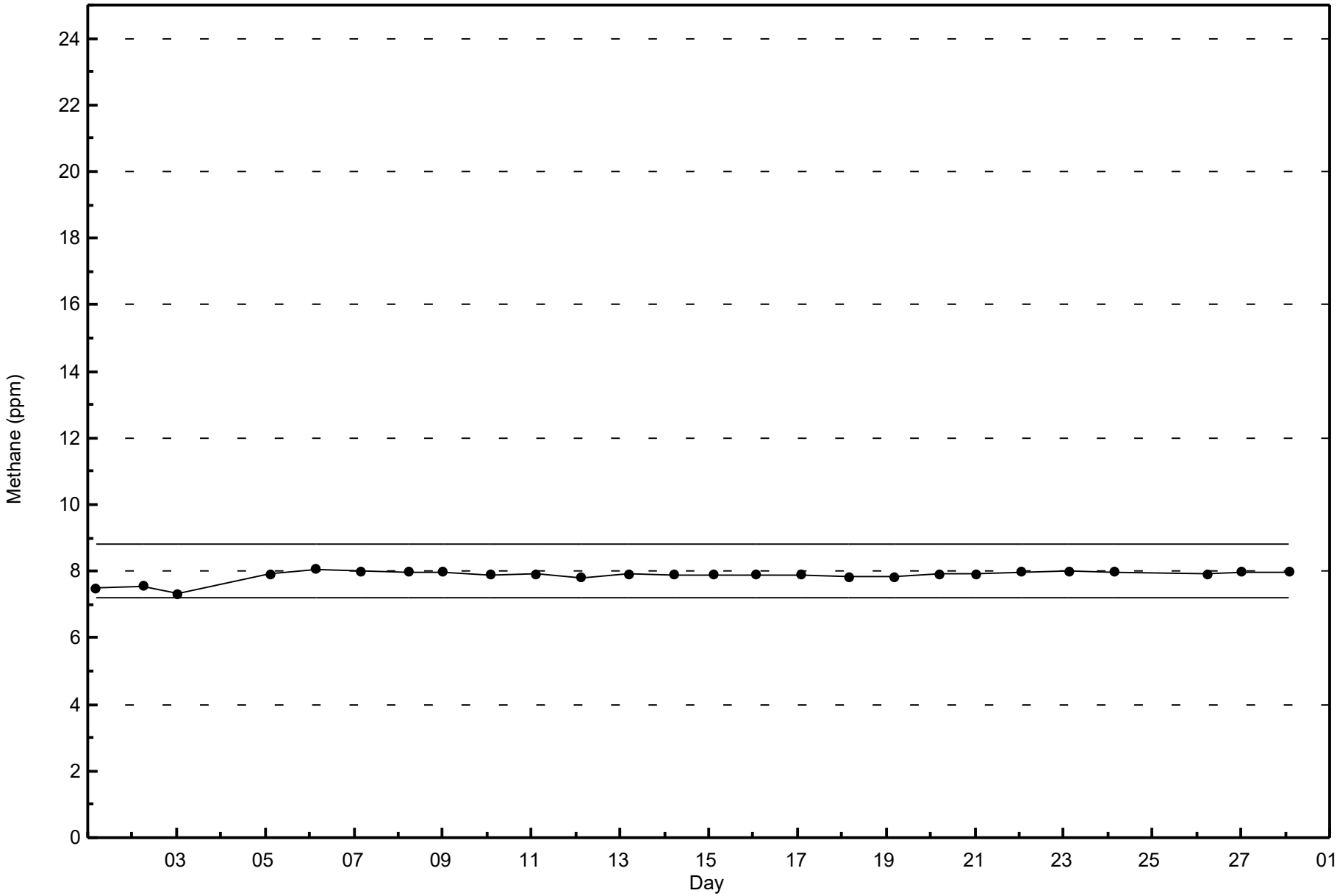


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Mildred Lake - February 2025



Maximum Value: 2.4 C on Feb 23 09:00

Maximum Daily Average: -4.4 C on Feb 23

Minimum Value: -35.2 C on Feb 14 08:00

Minimum Daily Average: -29.2 C on Feb 14

Maximum Diurnal Average: -13.9 C at hour 16

Minimum Diurnal Average: -20.8 C at hour 8

Monthly Average: -17.93 C

Percentiles: P_1 = -33.5 P_{10} = -28.0 Q_1 = -23.9 Median = -19.4 Q_3 = -10.8 P_{90} = -6.6 P_{99} = -0.1

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

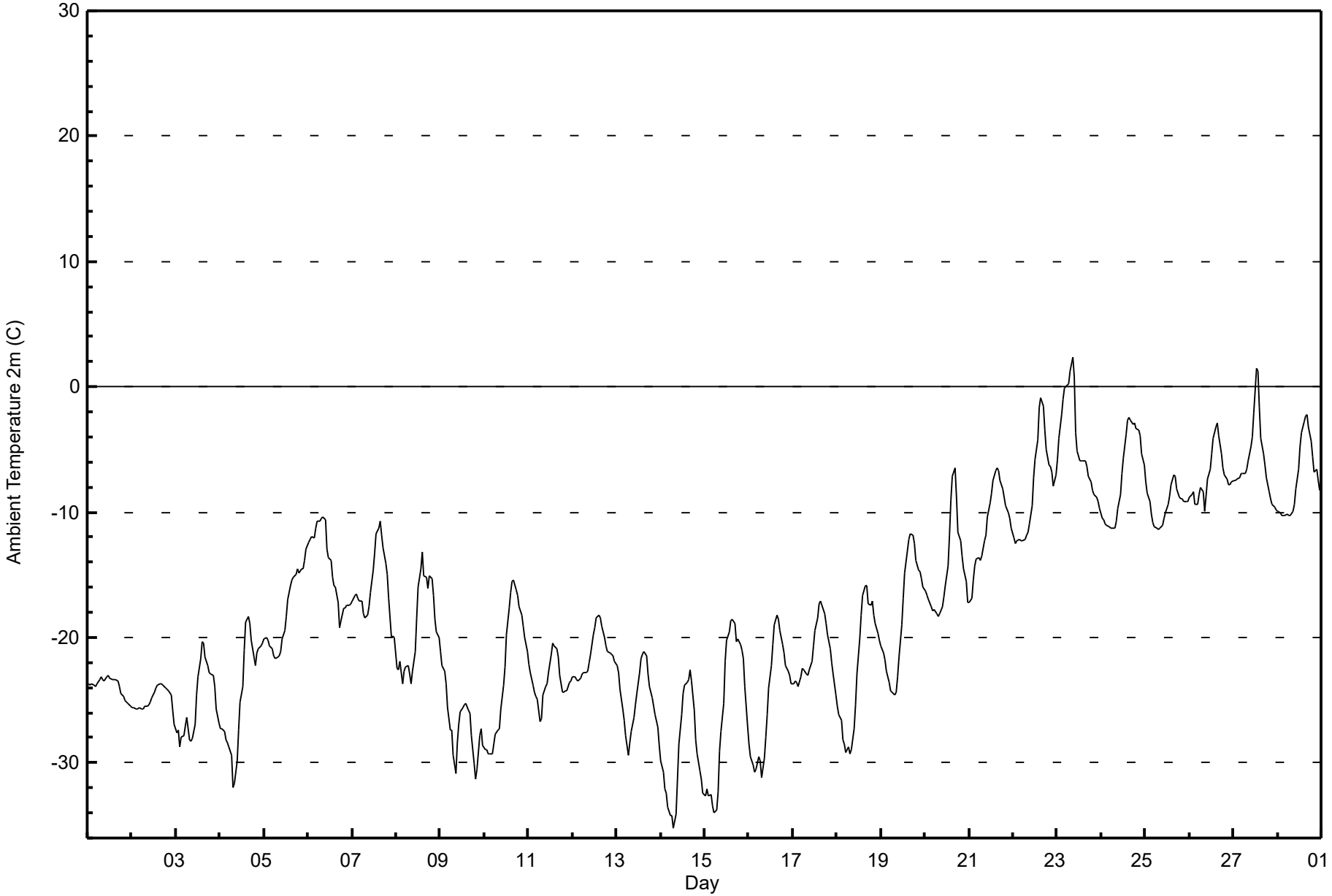
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-23.6	-23.8	-23.7	-23.8	-23.9	-23.7	-23.3	-23.2	-23.4	-23.4	-23.1	-23.0	-23.3	-23.4	-23.4	-23.4	-23.5	-23.9	-24.5	-24.7	-25.0	-25.2	-25.3	-25.5	-23.9	-23.0
2-Feb	-25.5	-25.6	-25.7	-25.7	-25.6	-25.7	-25.7	-25.5	-25.5	-25.4	-25.2	-24.8	-24.4	-24.0	-23.8	-23.7	-23.7	-23.9	-24.0	-24.2	-24.2	-24.5	-25.9	-27.0	-25.0	-23.7
3-Feb	-27.6	-27.4	-28.8	-28.0	-27.9	-27.1	-26.4	-28.2	-28.3	-28.0	-27.0	-24.6	-23.1	-21.6	-20.3	-20.5	-21.5	-22.2	-22.8	-22.9	-23.1	-23.9	-25.7	-26.8	-25.2	-20.3
4-Feb	-27.3	-27.3	-27.5	-28.2	-28.3	-28.7	-29.4	-32.0	-31.7	-29.9	-27.4	-25.2	-23.9	-21.0	-18.7	-18.4	-18.8	-20.2	-21.6	-22.3	-21.2	-20.9	-20.7	-20.5	-24.6	-18.4
5-Feb	-20.1	-20.0	-20.3	-20.6	-20.9	-21.4	-21.7	-21.5	-21.5	-21.1	-20.2	-19.4	-18.4	-17.0	-15.9	-15.4	-15.2	-14.9	-14.5	-14.8	-14.6	-14.6	-13.8	-13.0	-17.9	-13.0
6-Feb	-12.4	-12.2	-12.0	-12.1	-11.3	-10.8	-10.7	-10.5	-10.4	-10.6	-12.9	-13.7	-13.9	-15.1	-15.8	-15.9	-17.2	-19.2	-18.6	-17.7	-17.6	-17.4	-17.5	-17.3	-14.3	-10.4
7-Feb	-17.1	-16.7	-16.5	-16.9	-17.1	-17.1	-18.1	-18.4	-18.2	-17.6	-16.4	-14.7	-13.3	-11.7	-11.3	-10.8	-11.8	-12.9	-14.1	-14.9	-16.9	-20.0	-19.9	-20.0	-15.9	-10.8
8-Feb	-22.5	-22.6	-21.9	-23.7	-22.7	-22.3	-22.2	-23.0	-23.7	-22.7	-21.1	-18.4	-16.0	-14.5	-13.2	-15.1	-15.2	-16.1	-15.0	-15.3	-16.7	-18.6	-19.6	-20.0	-19.3	-13.2
9-Feb	-21.1	-22.2	-22.7	-23.7	-25.6	-27.3	-27.4	-29.4	-30.8	-28.4	-26.9	-25.9	-25.6	-25.4	-25.3	-25.8	-26.1	-27.8	-30.1	-31.3	-30.5	-27.9	-27.3	-28.6	-26.8	-21.1
10-Feb	-29.0	-28.9	-29.3	-29.3	-29.3	-28.5	-27.7	-27.4	-27.3	-25.7	-23.8	-22.4	-19.8	-17.7	-16.4	-15.6	-15.4	-16.2	-16.7	-17.6	-18.3	-19.1	-20.0	-21.1	-22.6	-15.4
11-Feb	-22.1	-22.8	-23.8	-24.4	-24.7	-24.9	-26.7	-26.5	-24.6	-23.9	-23.7	-22.8	-21.3	-20.5	-20.7	-20.9	-21.6	-23.1	-24.3	-24.4	-24.2	-24.2	-23.6	-23.4	-23.5	-20.5
12-Feb	-23.2	-23.2	-23.4	-23.4	-23.2	-22.9	-22.8	-22.8	-22.7	-22.0	-21.4	-19.8	-19.2	-18.4	-18.2	-18.4	-19.1	-20.0	-20.7	-21.1	-21.3	-21.3	-21.5	-21.9	-21.3	-18.2
13-Feb	-22.2	-22.8	-24.2	-25.7	-26.6	-27.8	-29.4	-28.4	-27.5	-26.4	-25.3	-24.5	-22.8	-21.7	-21.4	-21.1	-21.5	-22.9	-23.9	-24.8	-25.5	-26.2	-27.1	-28.6	-24.9	-21.1
14-Feb	-29.9	-30.7	-32.1	-32.4	-33.5	-34.3	-34.2	-35.2	-34.1	-31.3	-28.6	-26.1	-24.5	-23.8	-23.6	-23.4	-22.5	-23.5	-25.8	-28.1	-29.2	-30.6	-31.3	-32.4	-29.2	-22.5
15-Feb	-32.6	-32.1	-32.7	-32.5	-33.5	-34.0	-33.8	-32.3	-29.1	-27.5	-25.3	-21.9	-20.2	-19.6	-18.6	-18.5	-18.8	-20.4	-20.2	-20.6	-21.0	-21.7	-23.9	-27.1	-25.7	-18.5
16-Feb	-28.5	-29.5	-30.2	-30.7	-30.5	-29.5	-29.9	-31.2	-29.6	-27.9	-26.2	-24.0	-22.2	-20.5	-19.1	-18.2	-18.6	-19.5	-20.5	-21.2	-22.2	-22.7	-23.1	-23.6	-25.0	-18.2
17-Feb	-23.7	-23.5	-23.6	-23.9	-23.2	-22.5	-22.6	-22.9	-23.0	-22.6	-21.9	-20.7	-19.5	-18.4	-17.3	-17.1	-17.4	-18.1	-18.9	-19.8	-20.9	-22.0	-22.9	-24.6	-21.3	-17.1
18-Feb	-25.4	-26.1	-26.6	-28.1	-28.5	-29.2	-28.7	-29.3	-29.0	-27.2	-25.3	-22.9	-20.1	-18.2	-16.7	-15.9	-15.8	-17.3	-17.4	-17.1	-18.2	-18.9	-19.7	-20.3	-22.6	-15.8
19-Feb	-20.7	-21.3	-21.8	-22.7	-23.5	-24.2	-24.3	-24.6	-24.4	-23.2	-21.5	-18.9	-16.9	-14.8	-13.1	-12.2	-11.7	-11.9	-12.5	-13.9	-14.7	-14.8	-15.3	-16.0	-18.3	-11.7
20-Feb	-16.3	-16.6	-17.0	-17.6	-17.8	-17.8	-18.1	-18.3	-18.1	-17.5	-16.7	-15.8	-14.3	-11.8	-9.1	-7.2	-6.5	-8.8	-11.6	-12.3	-13.5	-14.5	-15.5	-17.2	-14.6	-6.5
21-Feb	-17.2	-16.9	-15.4	-14.3	-13.8	-13.6	-13.9	-13.5	-12.3	-11.9	-10.4	-9.3	-8.5	-7.5	-6.7	-6.5	-6.7	-7.5	-8.2	-8.8	-9.5	-10.0	-10.5	-11.2	-11.0	-6.5
22-Feb	-12.1	-12.5	-12.2	-12.2	-12.3	-12.3	-12.2	-11.8	-11.6	-11.0	-9.5	-7.3	-5.8	-4.2	-1.7	-0.9	-1.6	-3.5	-5.0	-6.2	-6.3	-6.8	-8.0	-7.0	-8.1	-0.9
23-Feb	-5.8	-4.1	-2.2	-1.0	-0.1	0.1	0.3	1.3	2.4	0.8	-3.6	-5.2	-5.9	-5.9	-5.9	-5.9	-6.4	-7.2	-7.6	-8.3	-8.6	-8.9	-9.2	-9.7	-4.4	2.4
24-Feb	-10.5	-10.6	-10.9	-11.1	-11.2	-11.3	-11.3	-11.3	-10.7	-9.7	-8.5	-6.9	-5.7	-3.8	-2.7	-2.5	-2.7	-3.0	-2.9	-3.3	-3.4	-3.8	-5.3	-6.3	-7.1	-2.5
25-Feb	-7.6	-8.5	-9.1	-10.2	-10.8	-11.2	-11.2	-11.4	-11.3	-11.0	-10.5	-10.0	-9.3	-8.7	-7.8	-7.1	-7.2	-8.1	-8.8	-8.9	-8.9	-9.2	-9.2	-9.1	-9.4	-7.1
26-Feb	-8.8	-8.6	-8.4	-9.3	-9.4	-8.6	-8.1	-8.3	-9.9	-8.7	-7.4	-6.6	-5.4	-4.1	-3.2	-2.9	-3.9	-5.4	-6.4	-7.1	-7.4	-7.8	-7.8	-7.6	-7.1	-2.9
27-Feb	-7.5	-7.5	-7.4	-7.3	-6.9	-6.9	-6.9	-6.6	-5.9	-4.8	-4.1	-2.1	1.4	1.3	-1.7	-4.1	-5.3	-6.3	-7.3	-8.3	-8.9	-9.4	-9.6	-9.8	-5.9	1.4
28-Feb	-9.9	-10.0	-10.2	-10.3	-10.3	-10.2	-10.2	-10.3	-10.0	-9.3	-8.1	-6.6	-4.8	-3.7	-2.8	-2.4	-2.2	-3.2	-4.4	-5.5	-6.8	-6.6	-7.5	-8.2	-7.2	-2.2
	-19.6	-19.8	-20.0	-20.3	-20.4	-20.5	-20.6	-20.8	-20.4	-19.6	-18.6	-17.3	-15.9	-14.8	-14.1	-13.9	-14.2	-15.2	-16.0	-16.6	-17.1	-17.6	-18.1	-18.7	Diurnal Average	
	-5.8	-4.1	-2.2	-1.0	-0.1	0.1	0.3	1.3	2.4	0.8	-3.6	-2.1	1.4	1.3	-1.7	-0.9	-1.6	-3.0	-2.9	-3.3	-3.4	-3.8	-5.3	-6.3	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Mildred Lake - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	324	48.21	48.21
-20 - 0	341	50.74	98.96
0 - 10	7	1.04	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Mildred Lake - February 2025

Maximum Value: 99.2 % on Feb 23 08:00

Maximum Daily Average: 92.0 % on Feb 23

Minimum Value: 38.1 % on Feb 18 16:00

Minimum Daily Average: 47.7 % on Feb 19

Maximum Diurnal Average: 76.2 % at hour 6

Minimum Diurnal Average: 64.6 % at hour 15

Monthly Average: 72.99 %

Percentiles: P_1 = 42.9 P_{10} = 59.0 Q_1 = 67.2 Median = 74.1 Q_3 = 79.2 P_{90} = 86.9 P_{99} = 96.1

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

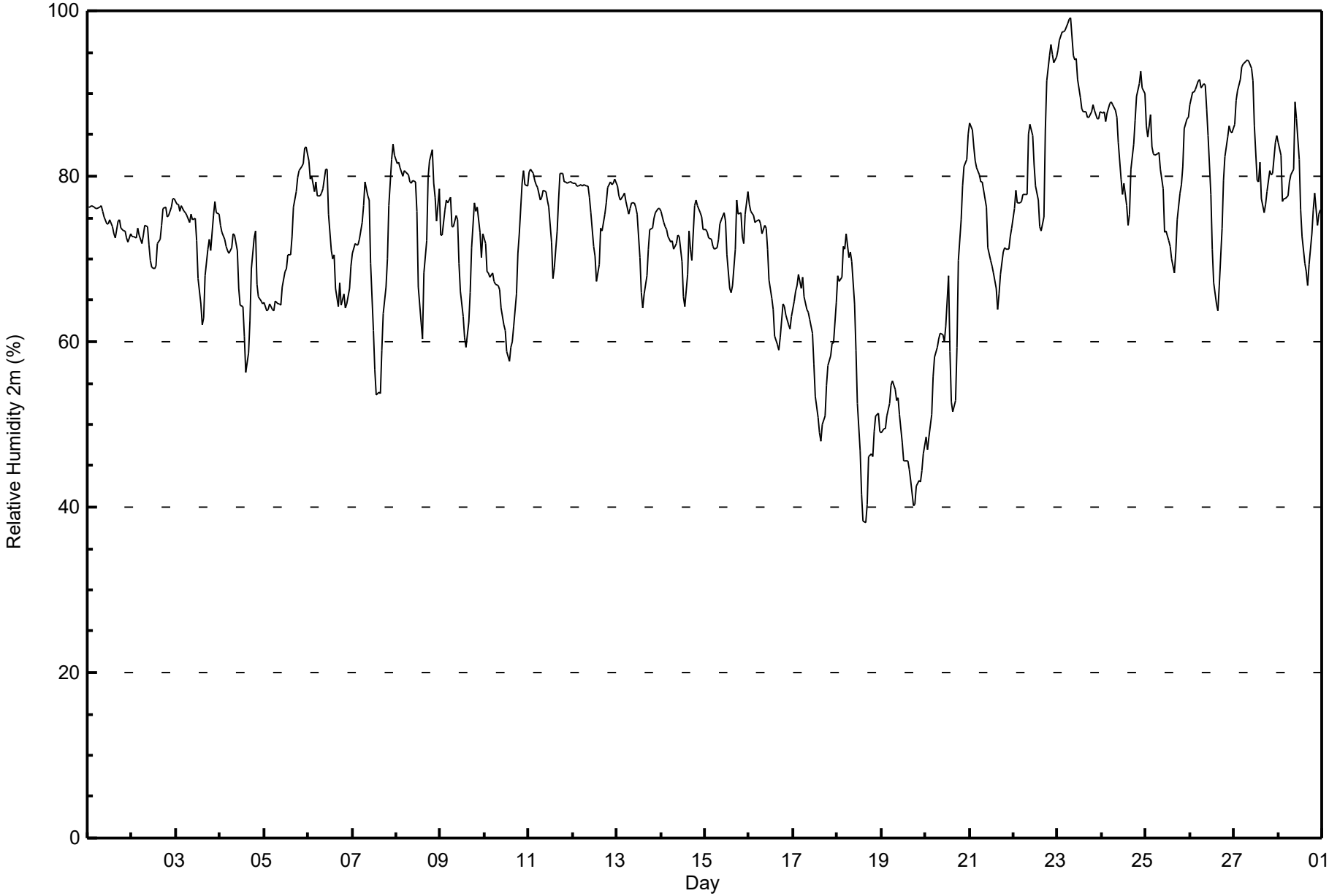
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	76.3	76.3	76.4	76.3	76.1	76.1	76.2	76.5	75.8	75.2	74.3	74.2	74.8	73.9	73.0	72.5	74.6	74.7	73.7	73.4	73.4	72.5	72.1	73.1	74.6	76.5
2-Feb	72.7	72.7	72.5	73.7	72.9	71.9	72.9	74.1	73.9	71.7	69.8	68.9	68.8	69.1	71.8	72.3	74.0	76.2	76.2	75.0	75.3	76.3	77.2	77.3	73.2	77.3
3-Feb	76.6	76.6	75.7	76.4	75.7	75.7	75.2	74.5	75.4	74.8	75.0	72.1	67.6	64.6	62.1	62.9	67.9	71.2	72.3	71.1	75.3	76.9	75.6	75.4	72.8	76.9
4-Feb	74.0	73.2	72.3	71.6	71.0	70.6	71.3	73.0	72.8	71.0	66.5	64.4	64.2	60.6	56.3	58.7	62.6	68.9	72.6	73.4	66.9	65.3	64.8	64.7	68.0	74.0
5-Feb	64.8	63.6	63.9	64.6	63.9	63.7	64.9	64.6	64.6	64.5	66.6	68.4	68.8	70.4	70.5	72.7	76.2	78.1	79.9	80.7	81.1	81.5	83.3	83.6	71.0	83.6
6-Feb	81.8	79.6	80.0	78.1	79.3	77.7	77.5	78.0	78.4	80.9	80.9	75.4	71.1	70.0	70.5	66.5	64.2	67.1	64.5	65.7	64.1	64.6	66.4	69.2	73.0	81.8
7-Feb	70.8	71.9	71.7	71.7	72.4	74.4	76.4	79.3	77.7	77.2	69.5	61.3	56.7	53.6	53.9	53.8	59.0	63.4	66.7	70.0	76.4	82.1	83.9	82.5	69.8	83.9
8-Feb	81.5	81.8	81.0	80.0	80.7	80.5	80.2	79.3	79.1	79.5	79.4	75.8	66.6	62.4	60.3	68.3	72.2	79.8	81.8	83.2	79.2	77.4	74.6	78.4	76.8	83.2
9-Feb	72.9	72.9	75.9	77.1	76.7	77.4	73.9	73.9	75.2	74.7	69.6	66.1	63.1	60.5	59.2	62.4	65.9	71.4	76.8	75.7	76.2	73.2	70.2	73.0	71.4	77.4
10-Feb	71.8	68.4	68.3	67.7	68.3	67.3	67.0	66.7	66.2	64.1	62.1	61.4	58.9	57.7	59.4	60.0	61.9	65.7	70.7	73.1	79.1	80.7	78.9	78.9	67.7	80.7
11-Feb	80.5	80.8	80.3	79.5	78.9	78.7	77.1	77.4	78.4	78.1	77.1	76.3	72.0	67.5	69.0	73.4	77.1	80.4	80.4	79.4	79.4	79.2	79.3	79.3	77.5	80.8
12-Feb	79.2	79.2	78.8	78.9	78.9	78.9	79.0	78.9	78.7	77.5	75.7	71.6	70.3	67.2	69.3	73.7	73.4	75.4	76.9	78.7	79.4	79.0	79.1	79.6	76.5	79.6
13-Feb	78.9	77.7	77.2	77.7	78.0	77.0	75.5	76.1	76.8	76.8	76.4	75.4	70.2	65.9	64.1	65.7	67.9	71.2	73.5	73.8	74.8	75.6	76.1	76.0	74.1	78.9
14-Feb	75.7	74.4	73.9	73.5	72.6	72.0	72.2	71.2	71.9	72.9	72.7	69.6	65.4	64.3	68.2	73.4	71.3	69.9	76.5	77.1	76.4	75.6	75.0	73.6	72.5	77.1
15-Feb	73.6	73.2	72.6	72.4	71.5	71.2	71.4	72.4	74.2	74.8	75.6	74.5	70.5	66.4	65.9	66.7	71.2	77.1	75.5	75.6	72.6	71.9	75.5	78.1	72.7	78.1
16-Feb	76.6	75.7	75.3	74.5	74.6	74.8	74.2	73.1	74.1	73.7	71.1	67.5	65.2	63.9	60.7	59.7	58.9	60.5	64.6	64.3	63.2	62.1	61.5	63.0	68.0	76.6
17-Feb	64.9	66.1	66.9	68.2	66.5	67.8	65.4	64.0	63.6	62.7	61.0	57.3	53.3	50.8	48.9	47.9	50.0	51.0	54.8	57.1	58.3	59.9	59.9	64.7	59.6	68.2
18-Feb	68.0	67.3	67.8	71.6	71.1	73.0	70.2	70.8	69.6	64.5	58.9	52.5	46.7	41.5	38.3	38.1	40.3	46.1	46.4	46.1	49.2	51.0	51.4	49.1	56.2	73.0
19-Feb	49.0	49.5	49.5	51.1	52.5	54.7	55.2	54.2	52.9	53.2	51.1	47.8	45.6	45.6	45.5	44.5	43.3	40.2	40.4	42.5	43.3	43.0	44.5	46.4	47.7	55.2
20-Feb	48.5	47.0	48.4	51.3	55.8	58.2	59.3	60.3	61.0	60.9	59.9	61.8	68.0	58.8	52.7	51.6	52.9	59.4	69.8	74.7	78.8	81.1	82.1	85.1	62.0	85.1
21-Feb	86.5	85.7	83.5	81.9	81.1	80.1	79.3	79.3	77.3	76.3	71.4	69.8	69.2	68.2	66.4	63.9	65.7	68.2	70.8	71.3	71.2	71.1	72.7	73.8	74.4	86.5
22-Feb	76.2	78.2	76.7	76.7	77.0	77.8	77.8	77.8	85.0	86.3	84.9	81.3	78.8	77.1	73.9	73.5	75.2	85.6	91.5	94.6	96.0	94.8	93.8	94.4	82.7	96.0
23-Feb	95.2	96.4	97.5	97.4	97.7	98.4	98.9	99.2	94.5	94.1	94.3	91.7	89.4	88.1	87.8	87.8	87.1	87.1	87.8	88.6	87.9	86.9	87.0	87.8	92.0	99.2
24-Feb	87.7	87.7	86.7	87.6	88.9	89.0	88.6	88.0	87.1	84.1	79.6	77.9	79.2	76.4	74.1	75.4	80.9	83.9	86.7	89.7	91.1	92.7	90.7	90.0	85.2	92.7
25-Feb	86.1	84.8	87.4	83.6	82.8	82.6	82.7	82.8	80.9	78.4	73.2	73.4	72.2	71.5	70.1	68.4	70.8	74.8	78.0	78.9	81.3	85.7	87.0	87.1	79.4	87.4
26-Feb	88.6	90.2	90.2	90.6	91.6	91.7	90.7	91.1	91.1	88.2	84.9	77.7	71.2	67.2	64.6	63.7	66.9	73.7	79.5	82.4	84.7	86.1	85.5	85.3	82.4	91.7
27-Feb	86.3	89.2	90.4	91.7	93.3	93.5	93.9	94.0	93.8	93.0	91.5	86.1	79.5	79.4	81.8	77.4	75.6	76.5	78.1	80.6	80.2	80.4	84.0	85.0	85.6	94.0
28-Feb	84.1	82.6	77.0	77.3	77.3	77.7	79.4	80.2	80.8	89.0	87.0	82.0	75.9	72.7	69.4	68.4	66.8	69.3	73.0	76.0	77.9	74.1	75.3	76.0	77.1	89.0
	76.0	75.8	75.6	75.8	76.0	76.2	75.9	76.1	76.1	75.6	73.6	70.8	68.0	65.5	64.6	65.1	66.9	70.2	72.8	74.0	74.7	75.0	75.3	76.1	Diurnal Average	
	95.2	96.4	97.5	97.4	97.7	98.4	98.9	99.2	94.5	94.1	94.3	91.7	89.4	88.1	87.8	87.8	87.1	87.1	91.5	94.6	96.0	94.8	93.8	94.4	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Mildred Lake - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Mildred Lake - February 2025

Maximum Speed: 23 km/h on Feb 19 20:00

Maximum Daily Speed Average: 16.8 km/h on Feb 1

Minimum Speed Value: 0 km/h on Feb 12 00:00

Minimum Daily Speed Average: 0.1 km/h on Feb 15

Maximum Diurnal Speed Average: 2.0 km/h at hour 21

Minimum Diurnal Speed Average: 0.2 km/h at hour 3

Monthly Average Velocity: 0.0 km/h 112.9 deg

Percentiles: P_1 = 1 P_{10} = 3 Q_1 = 4 Median = 8 Q_3 = 11 P_{90} = 15 P_{99} = 20

Hours in Service:	672
Hours of Data:	634
Hours of Missing Data:	38
Percent Operational Time:	94.4

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-Feb	N16	N19	N19	N18	N19	N19	N18	N18	N20	N20	N17	N14	NNW15	NNW17	N19	N17	NNW14	N16	N16	N15	N13	N16	N15	N16	N16.8	N20
2-Feb	N18	N18	N17	N17	N16	N14	N11	N12	N12	N14	N15	N15	N16	N15	N11	N9	N7	N4	NNE5	NNE6	N6	N5	N4	NW3	N11.1	N18
3-Feb	SW2	SSW4	SW3	SW4	SW5	W5	W7	W2	SW4	SSW5	S3	SSW5	SSW10	SSW11	SSW9	SSW9	SW10	SW8	SW7	WSW9	W6	SW4	S3	SW6	SW5.5	SSW11
4-Feb	SW7	SW7	SW7	SSW10	SSW10	SSW12	S11	S8	S10	S10	SSE10	SSE10	SSE11	S10	SSW11	SSW11	SSW8	SSW8	SSW8	SSW8	SW12	SW12	SW13	SW13	SSW9.1	SW13
5-Feb	SSW11	SW13	SSW13	SSW13	SSW12	SSW12	SSW13	SSW14	SSW14	SSW13	SSW13	SSW13	SW12	SSW11	SSW12	SSW11	SW7	SW9	WSW7	SW7	WSW6	WSW7	WSW7	W9	SW10.6	SSW14
6-Feb	W9	WSW9	W8	SW9	W9	WNW11	NW8	WNW12	WNW10	NNW9	NNE18	NNE17	N17	N18	N15	N14	NNW11	NW10	NW8	NW6	NW8	WNW6	W6	W5	NW7.9	N18
7-Feb	W7	WNW9	WSW7	SW9	WSW10	WSW7	SW5	W7	W8	WSW5	W5	WSW8	SW9	SSW8	SSW9	WSW5	W7	W8	WSW7	W7	WSW6	SW5	SW6	SW4	WSW6.6	WSW10
8-Feb	ESE3	SSW5	SSW4	S4	S4	S5	S4	SSE3	SSE4	SSE4	SE4	SE4	S4	SSW4	SSW4	SW3	W1	N7	N7	N11	NNE17	N18	N17	N11	NNE1.3	N18
9-Feb	N18	N14	N10	N8	N5	N6	N6	WNW1	NE2	NE5	NNE9	NNE11	N12	NNW11	NW9	NNW6	N3	NW2	NNW3	NNW2	WNW4	WNW8	W7	W5	N5.9	N18
10-Feb	SW7	SW6	SSW7	SW9	SSW9	SW9	SW8	SSW10	SW12	SW11	SSW14	SSW13	SW12	SSW13	SSW12	S6	E6	ENE5	NNE7	N7	N9	N9	N7	N8	SW4.4	SSW14
11-Feb	N7	N7	N7	N6	NNW5	NNW5	WNW3	NW4	NNW3	NNE7	NNE6	NE5	ENE3	N1	SSW5	SSW4	E1	S2	SSW1	N3	NNE3	NNE3	SSW2	NNE0	N2.4	N7
12-Feb	SSE1	SSE3	E3	E4	E4	SE3	SE3	ESE3	ESE4	ESE4	E5	SE1	NE7	N2	SSW5	SE2	NNE7	N9	N10	N10	N9	N9	N8	N8	NE2.7	N10
13-Feb	N10	N11	N10	N6	N5	NNE2	N2	NNW4	NNW5	NNW7	NNW6	NW7	NW9	NW10	NW11	NNW10	N9	N7	N8	N8	NNE8	N8	N8	N6	N7.0	N11
14-Feb	N7	N5	N6	NNW2	N5	N5	NNW2	NNW1	SSW3	S2	SSW3	SW4	SW3	WSW7	WSW6	SSW2	ESE4	ENE5	E3	NE3	N4	WNW1	SSW3	SSE2	NW0.8	WSW7
15-Feb	SSW4	S4	S4	SSW4	ESE3	ESE3	SSE3	SSW4	SSW4	S2	S3	SSW3	W5	NW8	WNW6	WNW4	ENE2	ENE5	NE3	NE3	NNE8	NE6	NNE3	N3	SSW0.1	NW8
16-Feb	N3	WNW1	SSE1	ENE3	ESE4	SE4	SE3	S3	SSE5	S5	SSE8	SE9	SE9	SSE8	SSE9	SSE13	SSE16	SE13	SE11	SE12	SE15	SSE19	SSE22	SE19	SE8.4	SSE22
17-Feb	SSE12	SSE10	SSE7	SSE10	SE15	SE10	SE12	SE19	SE15	SE17	SE14	SE12	SSE15	SSE15	SE14	SE14	ESE11	ESE9	SE8	SE9	SE9	SSE12	SE12	SSE5	SE11.8	SSE19
18-Feb	SE7	SSE6	SSE6	S6	S8	S8	SSE8	S6	S7	SSE9	SSE12	SSE11	SE14	SSE11	SSW9	SSW7	S6	SSE7	SSE13	SE15	SSE12	SSE11	SSE12	SSE12	SSE9.0	SE15
19-Feb	SE14	SE16	SSE18	SSE17	SSE15	SSE13	SE14	SSE15	SSE21	SE16	SSE22	SSE15	SSE12	SSE13	SSE18	SE17	SE15	SE15	SE21	SE23	SE22	SE19	SE17	SSE14	SSE16.7	SE23
20-Feb	SSE12	SSE13	S13	S16	S16	S15	S15	S14	S15	S15	S14	S13	SSW10	SSW9	SSW11	SSW9	S8	SE6	E4	ESE4	SSE1	N5	N4	NNE1	S8.8	S16
21-Feb	SSW4	SE2	ENE3	N0	SE1	NNE4	N6	N4	NNE4	NNW7	NNW9	NNW10	NNW12	N10	NNW12	N12	N11	N11	N11	N11	N11	N10	N9	N9	N10	N6.8	NNW12
22-Feb	N10	N8	N7	NNW5	N4	NNW4	NNW6	N4	NNW3	NE3	WNW2	WSW2	SSW3	SSW3	S4	WSW2	SSW4	SSW4	SE2	SSW4	SSE4	S4	NE2	S2	NNW1.2	N10
23-Feb	SSW0	SE4	ESE3	E4	SE3	SSE3	S3	SW4	WSW7	NNW14	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	----	NNW14
24-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	SSE5	SSE5	NNE3	ENE5	NE5	N8	NNE5	UO	UO	UO	----	N8
25-Feb	UO	N12	N10	N13	N12	N10	UO	UO	UO	UO	UO	UO	N4	N8	NNE3	N3	NNW9	N7	N6	N5	N7	NNW8	NNW8	NW4	----	N13
26-Feb	SSE1	S4	S8	SSW8	SW3	SW2	N2	N6	N10	N10	N9	N9	N7	N6	NNE7	N10	N12	N11	N10	N8	N7	N9	N11	N10	N5.3	N12
27-Feb	NNW6	NNW7	N4	N4	NE3	NNW5	N4	NNE2	SSE4	NNW7	SSW7	SW4	NW17	NNW16	N14	NNE13	NNE13	NNE12	NNE11	NNE12	NNE12	NNE9	NE6	NNE4	N6.1	NW17
28-Feb	NE4	ENE3	NE4	NE4	ENE1	SE2	NE4	NE4	N2	SSE1	SE4	SSE8	SSE9	SE10	SE10	SE10	SE10	SE14	SE10	SE8	SSE6	SSE10	S9	SSE10	SE5.2	SSE14
	NNW1.1	NNW0.6	N0.2	S0.8	S0.8	SW0.7	SSW0.9	SSW1.2	SSW1.8	SE0.3	SE1.6	SSE1.2	WSW1.2	W1.3	SW1.7	S0.5	NE0.8	NE1.4	NE1.8	NE1.8	NNE2.0	NNE1.3	NNE0.6	WNW0.6	Diurnal Average	
	N18	N19	N19	N18	N19	N19	N18	SSE19	SSE21	N20	SSE22	NNE17	NW17	N18	N19	N17	SSE16	N16	SE21	SE23	SE22	SSE19	SSE22	SE19	Diurnal Maximum	

UO - Unstable Operation

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

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Mildred Lake - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 6 km/h on Feb 27 14:00

Minimum Value: 0 km/h on Feb 15 18:00

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

Hours in Service:	672
Hours of Data:	634
Hours of Missing Data:	38
Hours of Calibration:	0
Percent Operational Time:	94.4

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

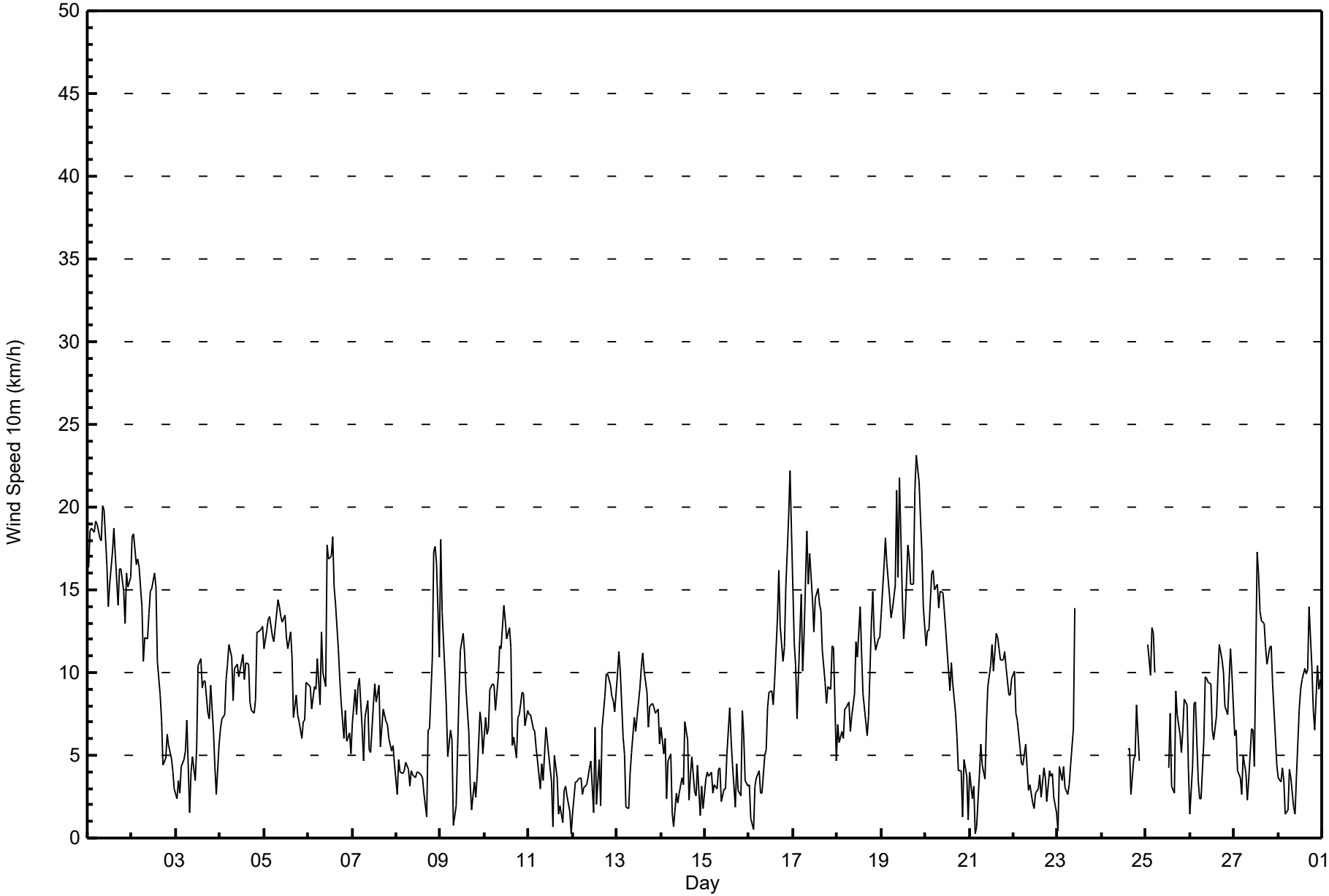
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Mildred Lake - February 2025



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

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	220	34.70	34.70
6 - 11	258	40.69	75.39
12 - 19	148	23.34	98.74
20 - 28	8	1.26	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 634

Total Number of Hours: 672



Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Mildred Lake - February 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	29	14	15	10	8	10	15	18	20	28	16	5	6	7	4	15	220
6 - 11	75	14	3	0	1	3	14	22	14	29	20	15	14	6	11	17	258
12 - 19	47	8	0	0	0	0	23	28	9	16	8	0	0	1	1	7	148
20 - 28	2	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	8
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	153	36	18	10	9	13	55	71	43	73	44	20	20	14	16	39	634

Total Number of Valid Hours: 634

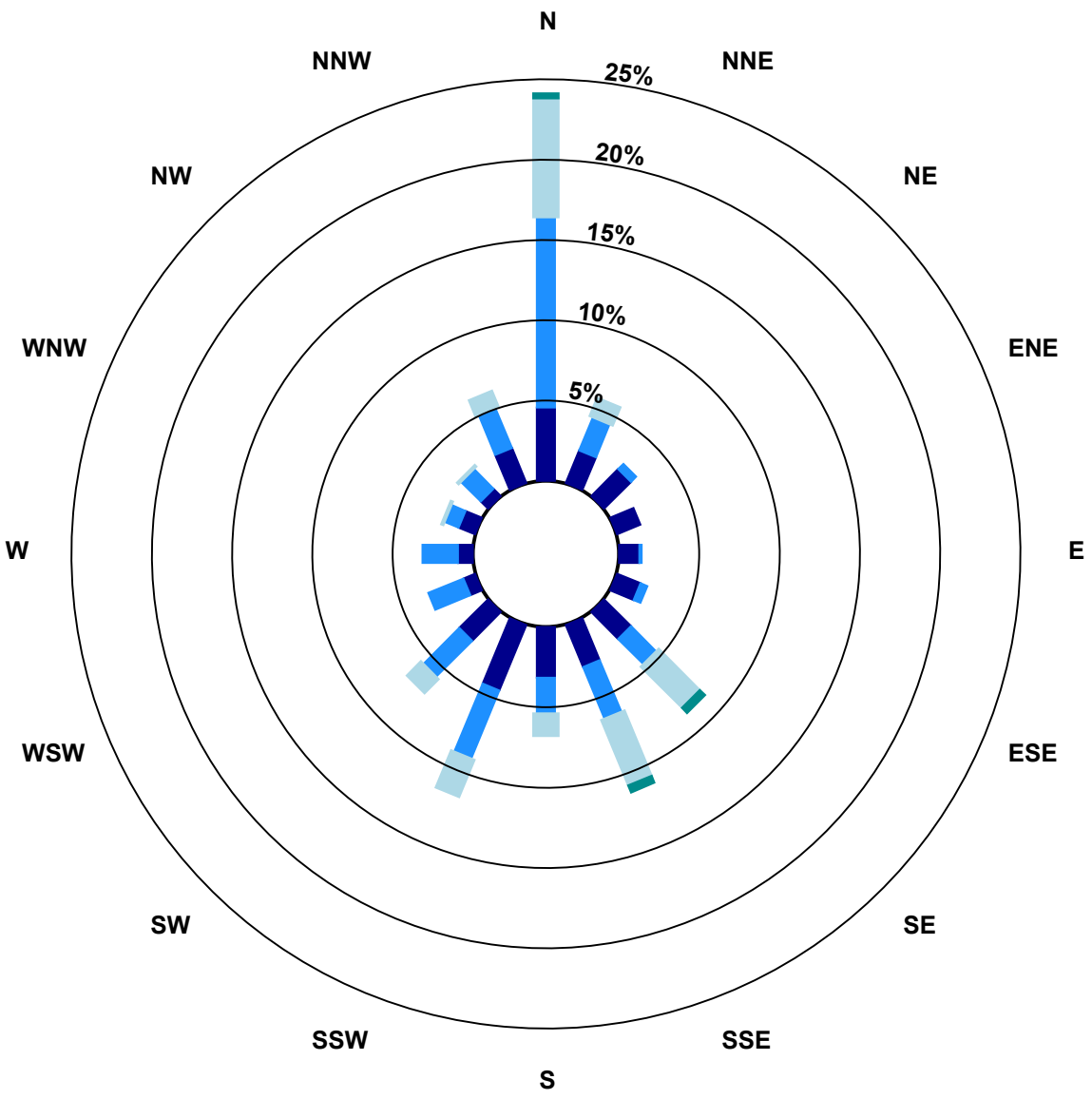
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 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: 634

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Mildred Lake - February 2025

Direction of Maximum Speed: 143 deg on Feb 19 20:00
Direction of Maximum Daily Speed Average: 357.6 deg on Feb 1

Direction of Minimum Speed: 26 deg on Feb 12 00:00

Direction of Minimum Daily Speed Average: 0.1 deg on Feb 15

Monthly Average Direction: 112.9 deg

Hours in Service:	672
Hours of Data:	634
Hours of Missing Data:	38
Percent Operational Time:	94.4

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Feb	1	359	2	3	1	358	2	4	4	6	5	351	339	343	352	351	342	349	353	353	7	6	2	0	357.6
2-Feb	6	4	3	9	11	5	357	4	2	8	9	6	349	350	354	356	357	360	23	17	3	356	354	308	2.3
3-Feb	224	204	229	220	214	275	276	259	221	212	190	201	202	203	203	211	215	217	231	241	259	234	188	223	221.3
4-Feb	222	221	214	206	207	207	191	182	185	178	155	156	149	172	206	206	210	210	201	206	219	222	222	218	199.0
5-Feb	212	214	212	207	209	212	210	206	210	210	213	211	214	212	208	211	219	226	239	223	242	248	254	273	217.1
6-Feb	264	249	264	216	277	283	320	298	287	348	12	12	2	360	355	351	331	324	315	309	311	283	270	268	321.1
7-Feb	272	283	253	232	237	255	233	277	273	248	273	251	232	210	211	239	259	259	253	261	250	216	222	226	247.1
8-Feb	123	200	192	176	182	182	179	167	165	156	143	145	175	194	194	228	277	357	8	11	16	6	7	357	25.6
9-Feb	0	10	2	2	351	349	4	292	48	55	28	19	358	330	318	335	352	316	348	342	295	302	278	261	349.8
10-Feb	233	217	195	221	210	214	215	208	214	216	201	204	218	208	206	184	92	66	12	10	4	3	11	357	216.5
11-Feb	2	355	352	3	344	335	301	320	345	17	33	50	74	356	203	204	91	179	208	350	15	28	207	26	359.9
12-Feb	166	147	97	96	87	126	145	108	109	113	97	135	46	8	195	143	16	4	2	358	358	356	351	352	34.2
13-Feb	2	5	7	7	10	21	8	343	344	336	332	320	322	323	324	345	358	2	11	10	13	5	357	349	351.3
14-Feb	350	351	356	343	353	356	342	328	196	190	202	214	222	240	247	205	118	77	81	35	349	302	210	160	313.6
15-Feb	192	183	172	194	119	118	164	195	209	178	169	206	272	314	284	301	68	61	45	42	30	35	27	8	194.3
16-Feb	2	300	164	78	118	124	139	174	153	181	164	143	144	154	153	148	147	138	134	136	146	149	149	143	145.2
17-Feb	150	153	154	156	144	142	140	146	135	140	138	138	152	147	139	127	122	119	124	136	133	148	142	154	140.7
18-Feb	134	147	168	178	176	171	163	170	174	158	150	151	146	159	205	198	174	152	147	144	152	147	150	150	158.3
19-Feb	143	142	147	149	157	149	145	149	149	144	148	157	164	163	151	143	143	142	144	143	141	142	146	150	147.3
20-Feb	156	165	170	169	170	173	177	176	176	180	183	179	192	192	196	192	173	130	100	103	153	352	356	33	173.1
21-Feb	194	137	78	5	129	31	2	5	14	348	344	340	328	353	347	355	354	3	5	5	359	4	357	350	355.9
22-Feb	356	351	349	342	0	337	345	3	329	44	302	258	204	203	176	248	210	208	133	193	149	178	45	180	329.3
23-Feb	198	129	104	85	136	151	171	226	247	333	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--
24-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	159	147	25	61	36	356	19	UO	UO	UO	--
25-Feb	UO	5	5	7	3	11	UO	UO	UO	UO	UO	UO	11	9	28	358	347	0	8	357	1	341	347	326	--
26-Feb	163	171	186	200	222	226	358	352	349	354	359	11	354	353	18	6	349	352	352	1	357	350	351	354	352.7
27-Feb	346	328	6	358	35	343	4	31	161	336	192	233	305	339	3	30	17	22	25	23	15	29	45	32	3.7
28-Feb	47	60	37	49	61	136	54	43	349	147	132	150	149	135	140	137	140	146	142	138	163	164	174	168	137.2
	346.4	340.1	356.8	183.7	187.5	232.8	191.5	199.7	197.3	142.4	134.0	161.0	248.5	266.5	221.8	183.6	44.0	50.0	44.2	37.0	23.4	19.7	19.4	302.9	
	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: 109 deg on Feb 23 01:00

Minimum Value: 6 deg on Feb 2 23:00

Percentiles: P_1 = 9 P_{10} = 12 Q_1 = 15 Median = 19 Q_3 = 26 P_{90} = 46 P_{99} = 87

Hours in Service:	672
Hours of Data:	634
Hours of Missing Data:	38
Hours of Calibration:	0
Percent Operational Time:	94.4

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Feb	16	15	17	16	16	16	16	16	18	18	20	19	14	15	16	14	14	15	14	16	18	19	19	17	20
2-Feb	18	18	17	18	18	19	16	17	17	19	19	19	16	14	17	15	14	15	19	15	13	13	6	25	25
3-Feb	48	11	21	30	15	31	18	77	30	25	39	23	16	16	19	22	21	20	28	26	31	36	58	24	77
4-Feb	16	21	28	23	21	18	14	12	11	11	14	12	10	15	18	17	21	16	14	17	23	24	22	22	28
5-Feb	24	23	21	20	19	20	18	17	19	20	21	20	22	22	19	23	26	25	27	22	29	19	18	20	29
6-Feb	20	21	23	36	47	23	17	19	18	41	19	19	18	15	15	14	14	8	11	16	12	20	21	28	47
7-Feb	26	19	18	28	22	25	29	20	19	25	23	21	27	26	23	37	24	21	17	21	12	16	16	56	56
8-Feb	51	23	27	22	15	17	22	31	22	20	19	17	24	27	21	29	38	12	15	17	19	18	18	17	51
9-Feb	17	18	16	14	14	12	16	83	82	20	24	22	19	16	13	16	47	60	33	47	52	17	23	23	83
10-Feb	16	25	21	25	19	22	24	22	21	21	16	20	23	20	19	66	20	35	16	18	15	14	16	14	66
11-Feb	13	10	13	15	23	22	30	13	21	23	22	30	44	99	17	19	25	45	45	21	11	27	46	85	99
12-Feb	57	23	15	23	27	50	37	53	27	21	23	68	24	90	28	78	19	15	15	13	12	11	11	12	90
13-Feb	14	16	16	30	27	81	74	30	17	12	16	12	16	13	14	14	14	13	16	16	16	16	14	9	81
14-Feb	9	11	13	45	10	9	57	74	12	59	43	36	60	22	17	61	32	14	40	32	29	57	22	39	74
15-Feb	38	31	18	34	23	32	22	37	29	36	34	44	41	16	24	25	57	9	60	22	20	18	15	13	60
16-Feb	14	66	89	27	20	11	50	24	15	18	20	16	17	20	15	13	12	17	14	13	15	11	10	11	89
17-Feb	13	13	17	11	14	13	14	12	16	14	16	17	15	15	19	19	19	16	16	14	17	12	12	35	35
18-Feb	9	23	14	13	11	10	13	26	14	19	12	15	14	16	17	19	19	12	10	12	9	8	8	9	26
19-Feb	10	12	11	12	14	16	11	15	11	14	12	22	19	16	15	13	12	13	13	12	13	12	10	10	22
20-Feb	12	13	12	12	12	13	13	15	14	14	15	13	18	21	15	15	22	14	15	19	69	50	44	79	79
21-Feb	36	45	39	85	94	36	23	19	40	14	21	15	14	19	14	15	15	17	17	18	16	16	13	12	94
22-Feb	14	13	17	16	24	22	19	30	28	24	76	80	48	38	31	58	18	25	51	20	23	34	35	66	80
23-Feb	109	20	32	12	29	49	63	70	32	30	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	109
24-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	30	19	58	15	20	11	16	UO	UO	UO	58
25-Feb	UO	17	17	18	18	18	UO	UO	UO	UO	UO	UO	23	27	74	69	15	14	18	21	14	12	12	23	74
26-Feb	70	26	18	20	58	78	63	26	16	14	22	24	29	34	29	24	14	14	12	17	13	11	13	15	78
27-Feb	15	19	34	31	44	44	56	98	88	36	38	47	18	23	27	21	19	19	20	20	17	22	25	24	98
28-Feb	26	32	25	22	75	57	21	20	46	71	41	18	22	19	21	19	17	11	17	15	17	14	11	11	75
	109	66	89	85	94	81	74	98	88	71	76	80	60	99	74	78	58	60	60	47	69	57	58	85	
	Diurnal Maximum																								

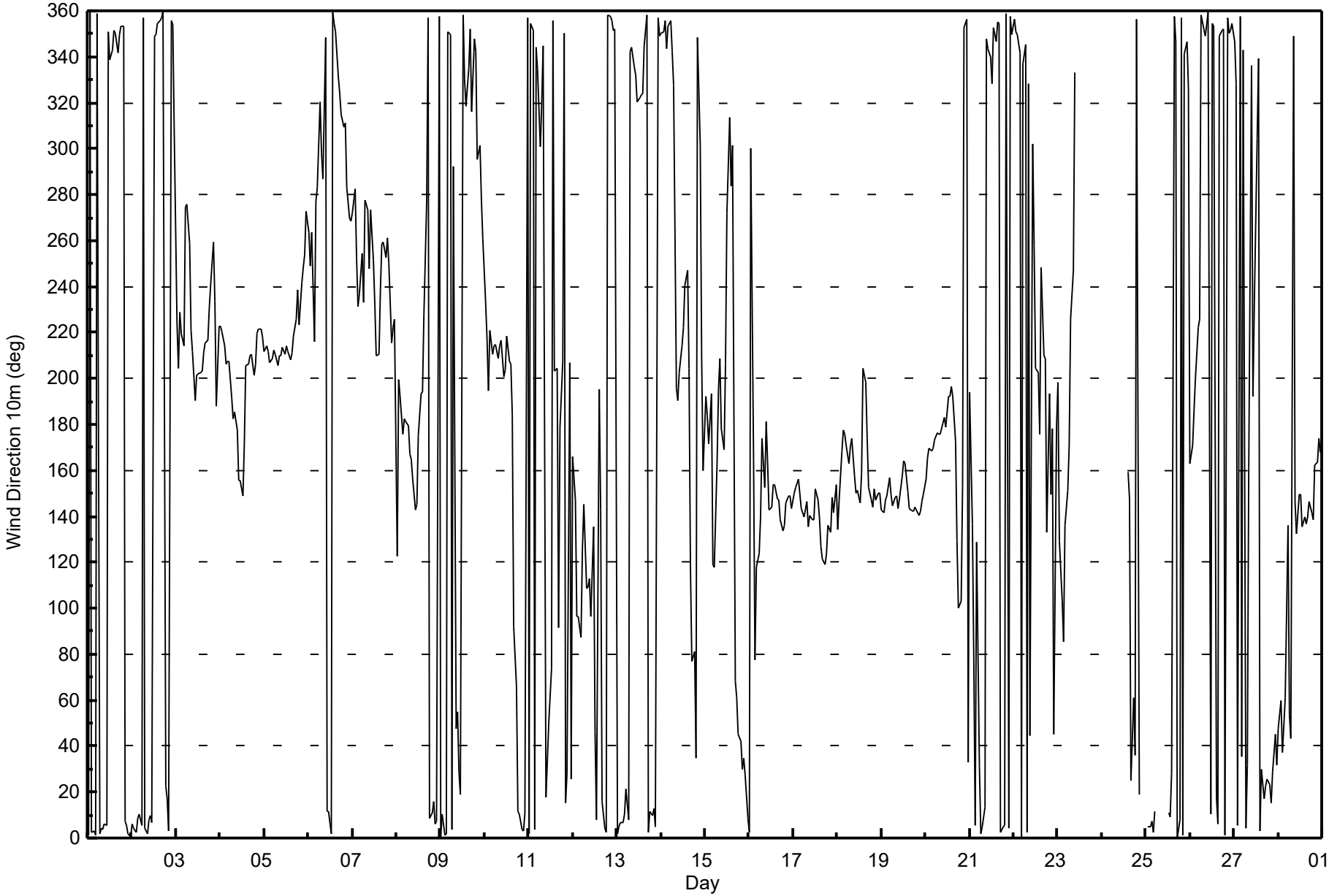
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Mildred Lake - February 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS03
LOWER CAMP METEOROLOGY
FEBRUARY 2025

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

March 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - LOWER CAMP MET TOWER (AMS03)
FEBRUARY 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	669	0	3	99.55	1.4	-	-4.5	-
Temperature 45 m (C) Average	672	0	0	100	2.2	-	-4.2	-
Temperature 100 m (C) Average	672	0	0	100	3	-	-3.5	-
Temperature 163 m (C) Average	672	0	0	100	3.5	-	-3.3	-
Relative Humidity 20 m (%) Average	669	0	3	99.55	96.1	-	87.6	-
Relative Humidity 45 m (%) Average	672	0	0	100	96.4	-	86.9	-
Relative Humidity 100 m (%) Average	672	0	0	100	96	-	87.2	-
Relative Humidity 163 m (%) Average	672	0	0	100	93.2	-	85.8	-
Wind Speed 20 m (km/h) Average	665	0	7	98.96	26	-	17.0	-
Wind Speed 45 m (km/h) Average	667	0	5	99.26	38	-	25.0	-
Wind Speed 100 m (km/h) Average	672	0	0	100	43	-	32.0	-
Wind Speed 163 m (km/h) Average	670	0	2	99.7	46	-	34.0	-
Wind Direction 20 m (deg) Average	665	0	7	98.96	-	-	-	-
Wind Direction 45 m (deg) Average	667	0	5	99.26	-	-	-	-
Wind Direction 100 m (deg) Average	672	0	0	100	-	-	-	-
Wind Direction 163 m (deg) Average	670	0	2	99.7	-	-	-	-
Vertical Wind Speed 20 m (km/h) Average	665	0	7	98.96	0.6	-	0.0	-
Vertical Wind Speed 45 m (km/h) Average	667	0	5	99.26	1.8	-	0.7	-
Vertical Wind Speed 100 m (km/h) Average	672	0	0	100	3.5	-	1.0	-
Vertical Wind Speed 163 m (km/h) Average	670	0	2	99.7	5.5	-	1.9	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - LOWER CAMP MET TOWER (AMS03)
FEBRUARY 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	669	-17.92	8.5	-	-37.7	-28.9	-24	-19	-10.5	-6.2	1.4
Temperature 45 m (C) Average	672	-17.45	8.2	-	-35.5	-27.4	-23.6	-18.9	-10.4	-5.9	2.2
Temperature 100 m (C) Average	672	-17.27	7.9	-	-31.9	-26.7	-23.5	-18.9	-10.7	-6.3	3
Temperature 163 m (C) Average	672	-17.28	7.9	-	-30	-26.3	-23.9	-19.4	-10.9	-6.5	3.5
Relative Humidity 20 m (%) Average	669	70.53	10.8	-	37.1	56.2	65.6	72.2	77.1	82.4	96.1
Relative Humidity 45 m (%) Average	672	69.67	11	-	35.2	55.6	64.4	71.1	76.6	82.2	96.4
Relative Humidity 100 m (%) Average	672	71.07	11.3	-	34.8	56.8	64.6	73.1	78.3	84.8	96
Relative Humidity 163 m (%) Average	672	70.04	11.2	-	34	55.4	63.3	71.6	76.9	84.5	93.2
Wind Speed 20 m (km/h) Average	665	7.8	5	-	0	2	3	7	12	15	26
Wind Speed 45 m (km/h) Average	667	11.2	7	-	0	3	5	10	16	22	38
Wind Speed 100 m (km/h) Average	672	14.1	9	-	0	4	8	12	19	27	43
Wind Speed 163 m (km/h) Average	670	16.8	9	-	0	5	10	16	23	30	46
Wind Direction 20 m (deg) Average	665	-	-	-	-	-	-	-	-	-	-
Wind Direction 45 m (deg) Average	667	-	-	-	-	-	-	-	-	-	-
Wind Direction 100 m (deg) Average	672	-	-	-	-	-	-	-	-	-	-
Wind Direction 163 m (deg) Average	670	-	-	-	-	-	-	-	-	-	-
Vertical Wind Speed 20 m (km/h) Average	665	-0.14	0.2	-	-1	-0.5	-0.3	-0.1	0	0.1	0.6
Vertical Wind Speed 45 m (km/h) Average	667	0.26	0.3	-	-0.5	0	0.1	0.2	0.4	0.7	1.8
Vertical Wind Speed 100 m (km/h) Average	672	0.14	0.5	-	-1.7	-0.3	-0.1	0	0.2	0.8	3.5
Vertical Wind Speed 163 m (km/h) Average	670	0.54	0.8	-	-0.9	-0.1	0	0.2	0.8	1.6	5.5

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

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
Relative Humidity, Temeprature, 20m	27 Feb 2025 11:00	27 Feb 2025 12:00	2	DAS Failure - data not recorded
Relative Humidity, Temeprature, 20m	28 Feb 2025 13:00	28 Feb 2025 13:00	1	DAS Failure - data not recorded
Wind Speed, Wind Direction, Vertical Wind Speed, 20m	23 Feb 2025 03:00	23 Feb 2025 09:00	7	Flat line in sensor output signal
Wind Speed, Wind Direction, Vertical Wind Speed, 45m	23 Feb 2025 04:00	23 Feb 2025 08:00	5	Flat line in sensor output signal
Wind Speed, Wind Direction, Vertical Wind Speed, 163m	27 Feb 2025 10:00	27 Feb 2025 11:00	2	Flat line in sensor output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 20m (AT20) - C

Lower Camp Met Tower - February 2025

Maximum Value: 1.4 C on Feb 27 14:00

Maximum Daily Average: -4.5 C on Feb 23

Minimum Value: -37.7 C on Feb 14 08:00

Minimum Daily Average: -30.4 C on Feb 14

Maximum Diurnal Average: -13.4 C at hour 16

Minimum Diurnal Average: -21.3 C at hour 8

Monthly Average: -17.92 C

Percentiles: P_1 = -34.6 P_{10} = -28.9 Q_1 = -24.0 Median = -19.0 Q_3 = -10.5 P_{90} = -6.2 P_{99} = -0.8

Hours in Service:	672
Hours of Data:	669
Hours of Missing Data:	3
Hours of Calibration:	0
Percent Operational Time:	99.6

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-22.8	-22.8	-22.8	-22.9	-23.0	-22.9	-22.6	-22.5	-22.6	-22.7	-22.4	-22.2	-22.4	-22.6	-22.8	-22.8	-22.9	-23.3	-23.9	-24.2	-24.6	-24.7	-24.9	-25.1	-23.2	-22.2
2-Feb	-25.1	-25.2	-25.2	-25.1	-25.0	-25.2	-25.1	-25.0	-25.0	-24.9	-24.7	-24.3	-23.8	-23.4	-23.3	-23.1	-23.1	-23.3	-23.5	-23.6	-23.7	-23.8	-24.2	-25.0	-24.3	-23.1
3-Feb	-25.5	-26.0	-26.2	-26.6	-26.9	-27.3	-28.3	-29.6	-29.6	-28.2	-27.9	-26.1	-24.4	-22.7	-20.3	-20.5	-20.9	-21.6	-23.4	-24.0	-24.1	-24.7	-26.1	-26.4	-25.3	-20.3
4-Feb	-27.3	-28.3	-29.2	-29.7	-29.8	-30.3	-30.6	-30.5	-30.3	-29.9	-28.5	-26.2	-23.7	-21.4	-19.7	-17.9	-18.3	-19.0	-19.8	-20.5	-21.1	-20.8	-20.5	-19.7	-24.7	-17.9
5-Feb	-19.6	-19.1	-19.2	-20.3	-21.1	-21.9	-22.6	-22.7	-21.6	-21.4	-20.0	-18.8	-18.0	-16.9	-15.5	-14.8	-14.7	-14.7	-14.4	-14.2	-14.5	-14.8	-14.3	-14.0	-17.9	-14.0
6-Feb	-13.1	-12.4	-13.2	-11.7	-11.4	-11.4	-10.4	-10.5	-10.7	-10.7	-12.2	-13.1	-13.4	-14.3	-15.1	-15.4	-16.1	-17.3	-18.4	-18.5	-18.5	-17.9	-17.7	-17.3	-14.2	-10.4
7-Feb	-17.0	-16.8	-16.5	-16.5	-16.5	-17.2	-17.8	-19.2	-19.4	-18.6	-17.6	-15.9	-14.1	-12.5	-11.9	-11.4	-11.9	-13.6	-13.9	-16.4	-16.8	-17.5	-17.8	-19.3	-16.1	-11.4
8-Feb	-20.5	-21.2	-23.1	-23.9	-24.2	-24.4	-25.0	-25.4	-25.9	-25.3	-24.2	-21.6	-18.8	-16.6	-15.1	-14.1	-14.2	-15.5	-15.9	-15.8	-16.3	-18.0	-19.0	-19.6	-20.2	-14.1
9-Feb	-20.6	-21.7	-22.4	-23.2	-24.4	-25.8	-27.3	-27.3	-29.5	-28.7	-26.7	-25.1	-24.0	-23.3	-23.3	-24.3	-24.9	-25.7	-27.6	-29.0	-30.3	-31.7	-31.1	-29.5	-26.1	-20.6
10-Feb	-29.3	-30.2	-31.4	-32.3	-31.8	-31.3	-31.1	-30.9	-30.2	-28.9	-26.7	-23.8	-20.9	-18.5	-16.0	-15.2	-15.6	-15.9	-16.2	-17.0	-17.6	-18.4	-19.3	-20.8	-23.7	-15.2
11-Feb	-22.4	-23.4	-24.7	-26.0	-26.7	-27.1	-28.6	-28.9	-29.2	-27.5	-24.6	-22.2	-20.9	-20.5	-20.1	-20.4	-20.2	-21.3	-22.7	-23.7	-24.0	-24.2	-24.6	-24.7	-24.1	-20.1
12-Feb	-24.2	-24.4	-23.9	-23.6	-23.6	-23.3	-23.3	-23.1	-22.7	-22.0	-21.1	-20.1	-19.5	-19.0	-18.1	-17.9	-18.4	-19.6	-20.8	-21.1	-21.2	-21.3	-21.4	-21.6	-21.5	-17.9
13-Feb	-21.8	-22.5	-23.8	-25.3	-26.5	-27.4	-28.8	-29.5	-29.1	-27.6	-25.8	-23.1	-21.1	-19.6	-18.9	-19.4	-20.8	-22.2	-23.7	-24.9	-26.4	-27.5	-28.3	-29.3	-24.7	-18.9
14-Feb	-30.4	-32.2	-33.9	-34.7	-35.7	-36.7	-37.5	-37.7	-36.8	-35.2	-31.5	-28.5	-26.4	-24.8	-24.0	-22.7	-21.9	-23.2	-24.9	-27.2	-28.9	-30.6	-31.3	-32.5	-30.4	-21.9
15-Feb	-33.6	-32.9	-33.1	-33.6	-33.9	-34.0	-34.6	-34.2	-33.4	-32.0	-30.0	-27.3	-24.4	-20.8	-19.3	-18.1	-18.4	-19.2	-20.2	-19.7	-20.6	-21.0	-22.4	-24.7	-26.7	-18.1
16-Feb	-26.5	-28.4	-29.7	-30.5	-31.3	-31.8	-31.4	-31.9	-31.9	-30.5	-28.4	-26.0	-23.3	-21.1	-18.8	-17.8	-18.1	-18.8	-19.5	-20.2	-21.3	-21.9	-22.2	-22.5	-25.2	-17.8
17-Feb	-22.5	-22.4	-22.5	-22.8	-22.4	-22.0	-22.1	-22.5	-22.7	-22.4	-21.6	-20.6	-19.4	-18.2	-17.2	-16.9	-16.7	-17.1	-17.9	-18.6	-19.9	-21.0	-21.5	-22.2	-20.5	-16.7
18-Feb	-23.5	-24.8	-25.9	-26.9	-27.6	-27.8	-28.3	-29.5	-30.2	-29.1	-27.0	-23.4	-20.9	-18.2	-16.3	-15.1	-14.8	-15.0	-16.0	-16.4	-16.9	-17.3	-17.8	-18.7	-22.0	-14.8
19-Feb	-19.7	-20.6	-21.4	-22.2	-22.7	-23.3	-23.2	-23.7	-23.6	-22.4	-21.0	-18.5	-16.1	-13.9	-12.6	-11.5	-10.7	-11.0	-12.2	-13.5	-14.2	-14.0	-14.1	-14.6	-17.5	-10.7
20-Feb	-15.0	-15.3	-15.7	-16.5	-16.9	-17.3	-17.5	-17.6	-17.5	-17.1	-16.4	-15.4	-14.4	-12.3	-10.1	-9.0	-8.1	-8.2	-9.5	-10.7	-12.7	-14.8	-15.6	-16.6	-14.2	-8.1
21-Feb	-17.3	-16.9	-16.8	-17.2	-16.5	-15.5	-15.2	-14.9	-14.1	-12.5	-10.0	-8.0	-7.4	-6.7	-5.8	-5.5	-5.9	-6.7	-7.5	-8.1	-8.7	-9.4	-9.8	-10.6	-11.1	-5.5
22-Feb	-11.6	-12.2	-12.4	-12.1	-11.9	-11.9	-11.8	-11.5	-11.4	-11.0	-9.9	-7.9	-6.4	-4.9	-2.8	-0.9	-1.8	-2.7	-3.6	-4.7	-5.8	-5.9	-8.0	-7.4	-7.9	-0.9
23-Feb	-6.7	-5.3	-3.0	-2.1	-1.2	-0.3	-0.4	-0.2	0.8	1.2	-2.7	-4.5	-5.3	-5.4	-5.3	-5.4	-5.9	-6.8	-7.2	-8.0	-8.2	-8.3	-8.6	-9.1	-4.5	1.2
24-Feb	-9.8	-10.0	-10.3	-10.4	-10.6	-10.7	-10.7	-10.7	-10.4	-9.6	-8.7	-6.8	-5.5	-3.0	-1.6	-1.9	-1.9	-2.4	-2.5	-2.6	-2.8	-3.0	-4.3	-5.6	-6.5	-1.6
25-Feb	-7.0	-7.9	-8.6	-9.5	-10.0	-10.5	-10.6	-10.7	-10.8	-10.3	-9.7	-9.1	-8.3	-7.6	-7.2	-6.2	-5.2	-7.1	-8.1	-8.2	-8.4	-8.6	-8.8	-8.8	-8.6	-5.2
26-Feb	-8.7	-8.6	-8.3	-7.7	-7.3	-7.7	-8.4	-9.3	-10.0	-8.7	-6.4	-5.0	-3.9	-1.9	-1.8	-1.0	-2.2	-4.2	-5.4	-6.6	-7.1	-7.4	-7.5	-7.2	-6.4	-1.0
27-Feb	-7.0	-7.0	-7.0	-7.0	-6.8	-6.6	-6.6	-6.5	-5.9	-4.9	DF	DF	0.6	1.4	-1.3	-4.0	-5.0	-5.9	-6.8	-7.8	-8.4	-8.7	-9.1	-9.3	-5.9	1.4
28-Feb	-9.4	-9.5	-9.6	-9.8	-9.7	-9.7	-9.7	-9.6	-9.4	-9.0	-7.7	-6.2	DF	-3.5	-2.7	-2.3	-1.9	-2.7	-3.5	-4.5	-5.3	-6.2	-6.7	-7.6	-6.8	-1.9
	-19.2	-19.6	-20.0	-20.4	-20.6	-20.8	-21.0	-21.3	-21.2	-20.4	-19.8	-18.1	-16.5	-14.7	-13.8	-13.4	-13.6	-14.4	-15.3	-16.1	-16.7	-17.3	-17.8	-18.2	Diurnal Average	
	-6.7	-5.3	-3.0	-2.1	-1.2	-0.3	-0.4	-0.2	0.8	1.2	-2.7	-4.5	0.6	1.4	-1.3	-0.9	-1.8	-2.4	-2.5	-2.6	-2.8	-3.0	-4.3	-5.6	Diurnal Maximum	

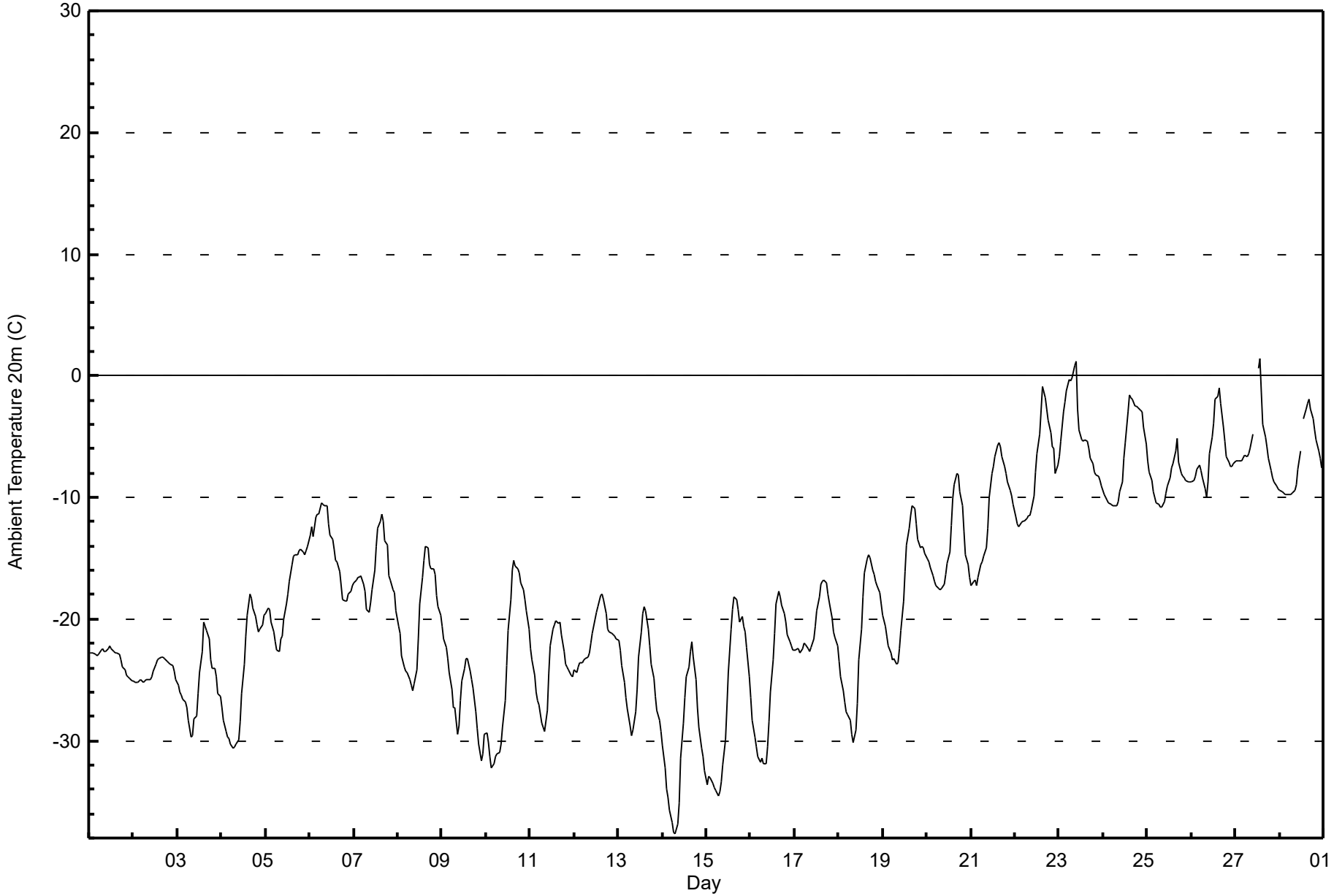
DF - DAS Failure

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 20m (AT20) - C

Lower Camp Met Tower - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	310	46.34	46.34
-20 - 0	355	53.06	99.40
0 - 10	4	0.60	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 669

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 45m (AT45) - C

Lower Camp Met Tower - February 2025

Maximum Value: 2.2 C on Feb 23 09:00

Maximum Daily Average: -4.2 C on Feb 23

Minimum Value: -35.5 C on Feb 14 08:00

Minimum Daily Average: -28.8 C on Feb 14

Maximum Diurnal Average: -13.5 C at hour 16

Minimum Diurnal Average: -20.6 C at hour 8

Monthly Average: -17.45 C

Percentiles: P_1 = -32.9 P_{10} = -27.4 Q_1 = -23.6 Median = -18.9 Q_3 = -10.4 P_{90} = -5.9 P_{99} = -0.3

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

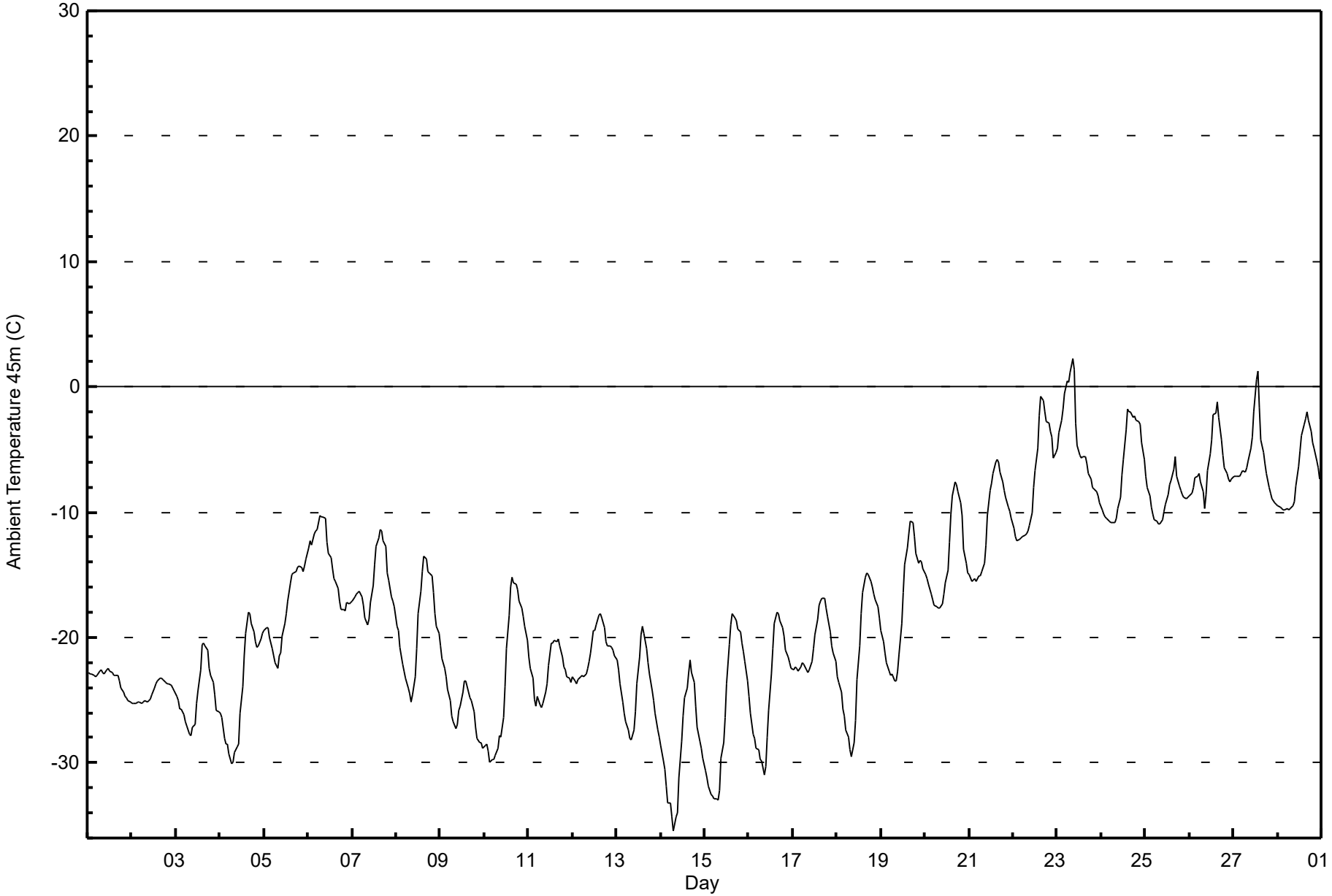
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-22.9	-22.9	-22.9	-23.0	-23.1	-23.0	-22.7	-22.6	-22.8	-22.9	-22.6	-22.4	-22.6	-22.8	-23.0	-23.0	-23.0	-23.4	-24.1	-24.4	-24.7	-24.9	-25.0	-25.2	-23.3	-22.4
2-Feb	-25.3	-25.3	-25.3	-25.2	-25.2	-25.3	-25.2	-25.1	-25.1	-25.1	-24.9	-24.5	-24.0	-23.7	-23.5	-23.2	-23.2	-23.3	-23.5	-23.7	-23.7	-23.8	-24.0	-24.2	-24.4	-23.2
3-Feb	-24.7	-25.0	-25.7	-25.7	-26.2	-26.7	-27.0	-27.7	-27.8	-27.2	-26.9	-25.2	-24.2	-22.6	-20.6	-20.5	-20.7	-21.0	-22.5	-23.1	-23.5	-24.6	-25.8	-25.9	-24.6	-20.5
4-Feb	-26.0	-26.4	-28.1	-28.5	-28.5	-29.3	-30.0	-29.9	-29.2	-28.7	-28.5	-26.0	-23.9	-21.5	-19.7	-18.0	-18.2	-18.9	-19.5	-20.3	-20.8	-20.7	-20.2	-19.7	-24.2	-18.0
5-Feb	-19.5	-19.2	-19.2	-20.0	-20.8	-21.4	-22.0	-22.4	-21.5	-21.2	-19.9	-18.9	-18.1	-17.1	-15.6	-15.0	-14.9	-14.8	-14.5	-14.3	-14.4	-14.8	-14.3	-13.7	-17.8	-13.7
6-Feb	-12.8	-12.3	-12.7	-11.7	-11.5	-11.4	-10.3	-10.4	-10.4	-10.5	-12.4	-13.3	-13.7	-14.5	-15.4	-15.5	-16.1	-17.1	-17.7	-17.8	-17.8	-17.2	-17.4	-17.2	-14.0	-10.3
7-Feb	-17.1	-16.7	-16.5	-16.4	-16.3	-16.8	-17.5	-18.5	-19.0	-18.6	-17.3	-15.9	-14.2	-12.7	-12.0	-11.4	-11.5	-12.3	-12.7	-14.9	-15.4	-16.8	-17.1	-17.5	-15.6	-11.4
8-Feb	-19.2	-19.4	-20.8	-22.1	-22.7	-23.3	-24.0	-24.4	-25.2	-24.6	-23.1	-20.9	-18.1	-16.3	-14.8	-13.5	-13.8	-14.7	-14.8	-15.1	-16.4	-18.1	-19.1	-19.7	-19.3	-13.5
9-Feb	-20.7	-21.7	-22.4	-23.2	-24.2	-25.1	-26.3	-26.7	-27.3	-27.0	-25.8	-25.5	-24.4	-23.5	-23.4	-24.3	-24.8	-25.1	-26.0	-27.1	-28.0	-28.4	-28.4	-28.9	-25.3	-20.7
10-Feb	-28.6	-28.5	-29.1	-30.0	-29.7	-29.7	-29.4	-28.9	-27.8	-27.9	-26.4	-23.9	-20.9	-18.2	-16.0	-15.2	-15.6	-15.8	-16.2	-17.1	-17.6	-18.3	-19.2	-20.2	-22.9	-15.2
11-Feb	-21.5	-22.4	-23.2	-24.9	-25.5	-24.7	-25.3	-25.6	-25.2	-24.4	-23.7	-22.2	-20.5	-20.4	-20.2	-20.3	-20.1	-20.6	-21.5	-22.3	-22.6	-23.2	-23.2	-23.6	-22.8	-20.1
12-Feb	-23.1	-23.4	-23.7	-23.4	-23.1	-23.0	-23.1	-23.0	-22.4	-22.0	-21.2	-19.5	-19.5	-19.1	-18.2	-18.1	-18.5	-19.3	-20.3	-20.6	-20.7	-20.8	-21.1	-21.4	-21.2	-18.1
13-Feb	-21.8	-22.5	-23.7	-25.1	-26.1	-26.7	-27.4	-28.1	-28.2	-27.4	-25.9	-23.7	-21.6	-19.8	-19.1	-19.6	-20.9	-22.0	-23.0	-24.3	-25.0	-26.1	-27.4	-27.9	-24.3	-19.1
14-Feb	-28.7	-29.8	-30.5	-31.9	-33.2	-33.3	-34.3	-35.5	-34.3	-34.0	-31.1	-28.2	-26.2	-24.8	-24.0	-22.8	-21.8	-22.8	-23.6	-25.5	-27.2	-28.2	-28.9	-29.6	-28.8	-21.8
15-Feb	-30.6	-31.2	-31.9	-32.5	-32.6	-32.8	-32.9	-33.0	-32.2	-29.7	-28.4	-26.4	-23.7	-20.6	-19.0	-18.1	-18.4	-18.6	-19.3	-19.5	-20.4	-21.1	-22.0	-23.4	-25.8	-18.1
16-Feb	-24.7	-26.0	-27.8	-28.0	-28.8	-28.9	-29.7	-29.8	-30.9	-30.3	-28.0	-25.8	-22.9	-20.9	-18.9	-18.0	-18.1	-18.7	-19.2	-19.9	-21.0	-21.6	-22.0	-22.5	-24.3	-18.0
17-Feb	-22.5	-22.4	-22.4	-22.7	-22.4	-22.1	-22.2	-22.6	-22.8	-22.5	-21.9	-20.9	-19.8	-18.6	-17.5	-17.1	-16.8	-16.9	-17.6	-18.4	-19.5	-20.7	-21.2	-21.9	-20.6	-16.8
18-Feb	-23.1	-23.6	-24.4	-25.8	-26.3	-27.3	-28.0	-28.9	-29.5	-28.3	-26.6	-23.4	-20.7	-18.1	-16.4	-15.2	-14.8	-14.9	-15.6	-16.0	-16.6	-16.9	-17.5	-18.4	-21.5	-14.8
19-Feb	-19.4	-20.3	-21.3	-22.0	-22.7	-23.0	-22.9	-23.5	-23.4	-22.7	-21.3	-18.9	-16.5	-14.2	-12.8	-11.7	-10.7	-10.8	-11.9	-13.3	-14.0	-13.8	-14.0	-14.5	-17.5	-10.7
20-Feb	-15.0	-15.3	-15.7	-16.5	-17.0	-17.4	-17.6	-17.7	-17.7	-17.3	-16.5	-15.6	-14.6	-12.4	-10.2	-8.8	-7.6	-7.9	-8.3	-9.2	-10.2	-12.9	-14.1	-14.8	-13.8	-7.6
21-Feb	-15.0	-15.5	-15.4	-15.3	-15.5	-15.1	-15.0	-14.8	-14.1	-12.6	-10.2	-8.3	-7.7	-6.9	-6.0	-5.8	-6.0	-6.8	-7.6	-8.2	-8.9	-9.6	-9.9	-10.5	-10.9	-5.8
22-Feb	-11.3	-11.9	-12.3	-12.2	-12.0	-12.0	-11.9	-11.7	-11.6	-11.1	-10.1	-8.1	-6.7	-4.9	-2.4	-0.7	-1.1	-1.9	-2.8	-2.9	-3.6	-4.0	-5.7	-5.2	-7.4	-0.7
23-Feb	-4.9	-3.7	-2.6	-1.8	-0.6	0.5	0.3	1.2	2.2	1.3	-2.9	-4.7	-5.5	-5.7	-5.5	-5.6	-6.2	-6.9	-7.3	-8.0	-8.2	-8.4	-8.7	-9.2	-4.2	2.2
24-Feb	-9.8	-10.2	-10.4	-10.5	-10.7	-10.8	-10.9	-10.8	-10.5	-9.7	-8.8	-7.0	-5.8	-3.4	-1.8	-2.0	-2.0	-2.4	-2.4	-2.7	-2.8	-3.0	-4.4	-5.8	-6.6	-1.8
25-Feb	-7.1	-8.1	-8.7	-9.6	-10.2	-10.6	-10.7	-10.9	-10.9	-10.6	-10.0	-9.4	-8.6	-7.8	-7.4	-6.6	-5.5	-7.1	-8.0	-8.3	-8.6	-8.8	-8.9	-8.8	-8.8	-5.5
26-Feb	-8.7	-8.5	-8.1	-7.2	-7.1	-6.9	-7.6	-8.4	-9.7	-8.6	-6.7	-5.4	-4.2	-2.2	-2.2	-1.2	-2.4	-4.3	-5.4	-6.5	-6.9	-7.4	-7.6	-7.4	-6.3	-1.2
27-Feb	-7.2	-7.2	-7.1	-7.1	-6.9	-6.7	-6.8	-6.5	-5.9	-4.9	-4.0	-2.0	0.5	1.2	-1.7	-4.3	-5.2	-6.1	-6.9	-8.0	-8.5	-8.9	-9.3	-9.4	-5.8	1.2
28-Feb	-9.5	-9.6	-9.7	-9.8	-9.8	-9.7	-9.8	-9.8	-9.5	-9.1	-7.9	-6.4	-5.1	-3.9	-3.0	-2.6	-2.0	-2.7	-3.5	-4.4	-4.9	-5.9	-6.4	-7.4	-6.8	-2.0
	-18.6	-18.9	-19.3	-19.7	-20.0	-20.1	-20.4	-20.6	-20.5	-19.9	-19.0	-17.6	-16.2	-14.8	-13.9	-13.5	-13.6	-14.2	-14.9	-15.6	-16.1	-16.7	-17.2	-17.7	Diurnal Average	
	-4.9	-3.7	-2.6	-1.8	-0.6	0.5	0.3	1.2	2.2	1.3	-2.9	-2.0	0.5	1.2	-1.7	-0.7	-1.1	-1.9	-2.4	-2.7	-2.8	-3.0	-4.4	-5.2	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 45m (AT45) - C

Lower Camp Met Tower - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	304	45.24	45.24
-20 - 0	361	53.72	98.96
0 - 10	7	1.04	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Maximum Value: 3.0 C on Feb 23 09:00
Maximum Daily Average: -3.5 C on Feb 23

Minimum Value: -31.9 C on Feb 14 08:00
Minimum Daily Average: -27.2 C on Feb 14
Maximum Diurnal Average: -13.9 C at hour 17
Minimum Diurnal Average: -19.8 C at hour 8
Monthly Average: -17.27 C
Percentiles: P_1 = -29.4 P_{10} = -26.7 Q_1 = -23.5 Median = -18.9 Q_3 = -10.7 P_{90} = -6.3 P_{99} = 1.3

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

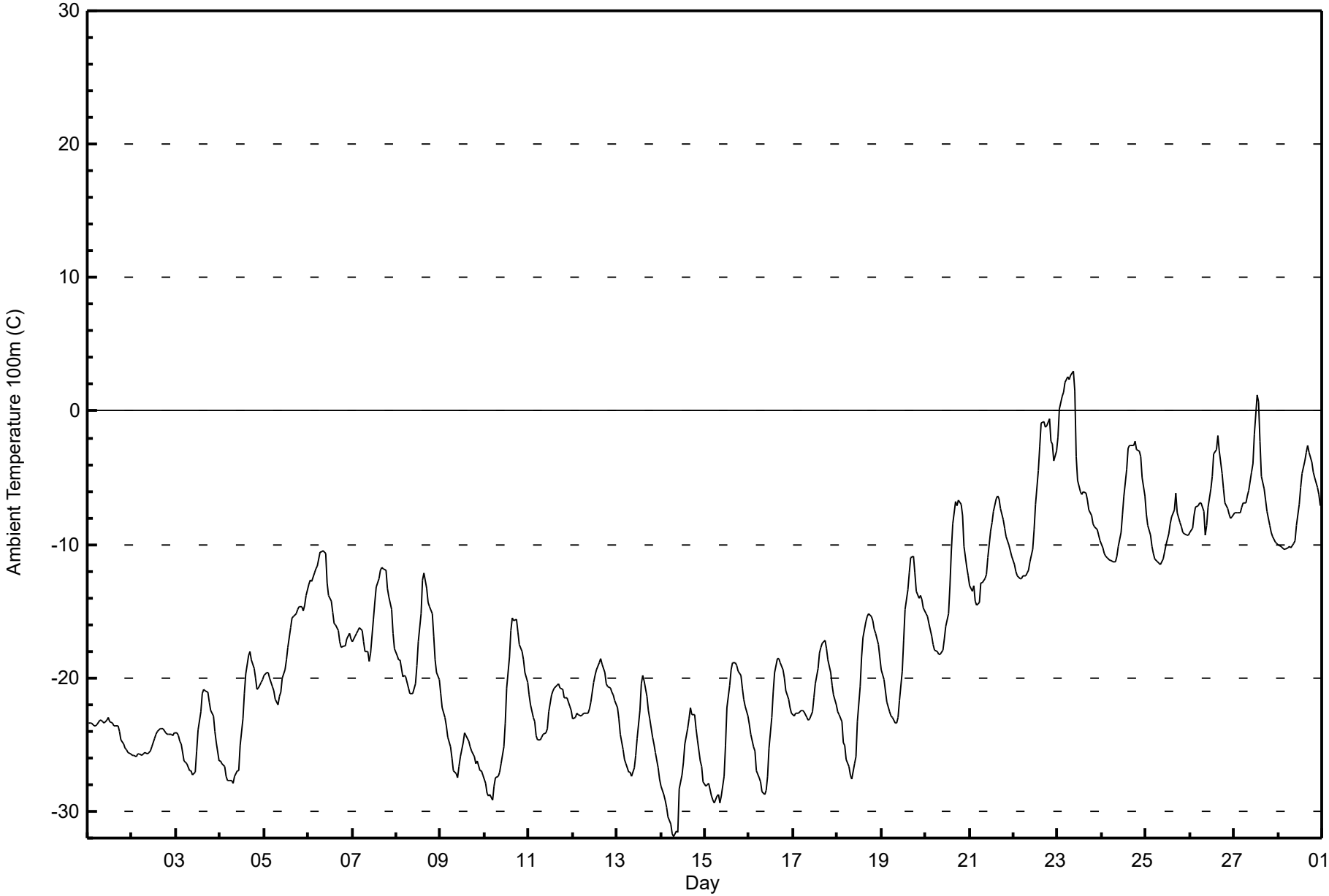
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-23.4	-23.4	-23.4	-23.6	-23.6	-23.5	-23.2	-23.1	-23.3	-23.4	-23.2	-23.0	-23.2	-23.4	-23.6	-23.5	-23.5	-24.0	-24.6	-24.9	-25.3	-25.4	-25.5	-25.7	-23.9	-23.0
2-Feb	-25.8	-25.8	-25.9	-25.7	-25.7	-25.8	-25.7	-25.6	-25.7	-25.6	-25.5	-25.1	-24.6	-24.2	-24.0	-23.8	-23.8	-23.8	-24.1	-24.2	-24.2	-24.2	-24.3	-24.1	-24.9	-23.8
3-Feb	-24.1	-24.4	-24.7	-25.0	-26.2	-26.3	-26.4	-26.9	-27.0	-27.2	-27.1	-25.5	-23.9	-22.6	-21.2	-20.9	-21.0	-21.1	-21.8	-22.4	-22.8	-24.0	-24.9	-26.2	-24.3	-20.9
4-Feb	-26.2	-26.4	-26.7	-27.3	-27.7	-27.7	-27.7	-27.9	-27.4	-27.0	-26.9	-25.0	-23.1	-21.2	-19.7	-18.3	-18.1	-18.7	-19.3	-20.0	-20.8	-20.8	-20.3	-20.1	-23.5	-18.1
5-Feb	-19.8	-19.7	-19.6	-20.0	-20.6	-21.0	-21.6	-22.0	-21.4	-21.1	-20.0	-19.4	-18.7	-17.7	-16.3	-15.5	-15.4	-15.2	-14.8	-14.7	-14.7	-15.0	-14.6	-13.8	-18.0	-13.8
6-Feb	-13.0	-12.7	-12.8	-12.1	-11.9	-11.6	-10.6	-10.6	-10.4	-10.7	-12.9	-13.9	-14.2	-15.1	-15.9	-16.0	-16.5	-17.3	-17.7	-17.6	-17.6	-17.1	-16.7	-17.1	-14.2	-10.4
7-Feb	-17.3	-16.9	-16.6	-16.5	-16.2	-16.5	-17.3	-18.0	-18.0	-18.8	-18.1	-15.6	-14.4	-13.2	-12.5	-11.9	-11.7	-11.8	-12.0	-13.3	-13.9	-14.9	-16.6	-17.8	-15.4	-11.7
8-Feb	-18.3	-18.7	-18.7	-19.9	-19.8	-19.9	-20.8	-21.2	-21.2	-21.2	-20.4	-19.1	-17.3	-15.2	-12.7	-12.1	-13.3	-14.3	-14.6	-15.2	-16.9	-18.7	-19.6	-20.2	-17.9	-12.1
9-Feb	-21.2	-22.3	-22.9	-23.6	-24.5	-25.2	-26.0	-27.0	-27.2	-27.5	-26.7	-25.9	-24.9	-24.1	-24.3	-24.8	-25.2	-25.5	-25.9	-26.4	-26.2	-26.9	-27.0	-27.3	-25.4	-21.2
10-Feb	-27.9	-28.7	-28.8	-28.7	-29.2	-28.1	-27.5	-27.4	-27.0	-26.4	-25.2	-23.4	-20.7	-18.4	-16.5	-15.5	-15.7	-15.6	-16.5	-17.5	-18.1	-18.7	-19.6	-20.4	-22.6	-15.5
11-Feb	-21.2	-22.0	-22.9	-23.3	-24.3	-24.6	-24.7	-24.4	-24.3	-24.2	-23.8	-22.6	-21.2	-21.0	-20.8	-20.5	-20.5	-20.7	-20.9	-21.5	-21.5	-21.5	-22.2	-22.5	-22.4	-20.5
12-Feb	-23.0	-23.0	-22.7	-22.7	-22.8	-22.7	-22.6	-22.7	-22.6	-22.4	-21.8	-20.3	-19.8	-19.4	-18.8	-18.5	-19.0	-19.6	-20.5	-20.7	-20.8	-21.0	-21.3	-21.7	-21.3	-18.5
13-Feb	-22.2	-23.0	-24.2	-25.4	-26.2	-26.4	-27.0	-27.0	-27.3	-26.8	-25.8	-24.6	-22.5	-20.4	-19.8	-20.2	-21.4	-22.4	-23.0	-24.5	-25.0	-25.6	-26.8	-27.6	-24.4	-19.8
14-Feb	-28.1	-28.7	-29.1	-29.6	-30.4	-31.0	-31.7	-31.9	-31.4	-31.5	-28.3	-27.2	-26.3	-24.9	-23.8	-23.0	-22.2	-22.7	-22.8	-23.8	-24.7	-26.3	-26.6	-27.8	-27.2	-22.2
15-Feb	-28.1	-28.0	-27.9	-28.8	-29.2	-29.3	-28.8	-28.8	-29.3	-28.9	-27.4	-25.1	-22.2	-20.5	-19.4	-18.9	-18.9	-19.1	-19.5	-19.8	-20.8	-21.6	-22.2	-22.8	-24.4	-18.9
16-Feb	-23.4	-24.3	-25.1	-25.5	-27.0	-27.5	-27.7	-28.5	-28.7	-28.5	-27.3	-25.3	-23.0	-21.0	-19.6	-18.5	-18.5	-18.9	-19.4	-20.1	-21.0	-21.6	-22.2	-22.7	-23.6	-18.5
17-Feb	-22.8	-22.6	-22.6	-22.6	-22.5	-22.5	-22.6	-23.0	-23.2	-23.0	-22.5	-21.5	-20.4	-19.2	-18.1	-17.7	-17.4	-17.2	-17.8	-18.7	-19.6	-20.5	-21.3	-22.0	-20.9	-17.2
18-Feb	-22.5	-22.8	-23.3	-24.9	-25.0	-26.2	-26.7	-27.3	-27.6	-26.4	-25.9	-23.3	-20.7	-18.5	-17.0	-15.8	-15.4	-15.2	-15.4	-15.7	-16.3	-16.7	-17.5	-18.4	-21.0	-15.2
19-Feb	-19.4	-20.2	-21.0	-21.8	-22.6	-22.8	-23.0	-23.3	-23.4	-22.9	-21.7	-19.5	-17.1	-14.8	-13.4	-12.2	-10.9	-10.9	-12.1	-13.5	-14.1	-13.8	-14.1	-14.7	-17.6	-10.9
20-Feb	-15.2	-15.4	-15.9	-16.9	-17.5	-17.9	-18.1	-18.3	-18.2	-17.9	-17.1	-16.2	-15.2	-13.0	-10.5	-8.5	-6.7	-7.1	-6.6	-7.0	-7.8	-10.2	-11.7	-12.3	-13.4	-6.6
21-Feb	-13.1	-13.5	-13.1	-14.3	-14.5	-14.3	-12.9	-12.9	-12.5	-12.2	-11.0	-9.0	-8.3	-7.5	-6.5	-6.4	-6.6	-7.3	-8.1	-8.7	-9.4	-10.1	-10.5	-10.9	-10.6	-6.4
22-Feb	-11.5	-12.0	-12.3	-12.6	-12.5	-12.4	-12.3	-12.2	-11.9	-11.3	-10.3	-8.8	-7.0	-4.5	-2.6	-0.9	-0.8	-1.2	-1.1	-0.6	-2.3	-2.5	-3.7	-3.0	-7.1	-0.6
23-Feb	-2.0	0.2	1.1	1.4	2.1	2.6	2.4	2.7	3.0	1.6	-3.4	-5.2	-6.0	-6.2	-6.1	-6.1	-6.7	-7.4	-7.8	-8.5	-8.7	-8.9	-9.2	-9.7	-3.5	3.0
24-Feb	-10.3	-10.7	-10.9	-11.0	-11.2	-11.2	-11.3	-11.3	-10.8	-10.2	-9.1	-7.7	-6.3	-4.3	-2.8	-2.6	-2.5	-2.5	-2.3	-2.9	-3.0	-3.4	-5.0	-6.3	-7.1	-2.3
25-Feb	-7.7	-8.6	-9.3	-10.2	-10.7	-11.1	-11.3	-11.4	-11.5	-11.1	-10.5	-10.0	-9.2	-8.4	-8.0	-7.4	-6.2	-7.6	-8.3	-8.7	-9.0	-9.2	-9.3	-9.3	-9.3	-6.2
26-Feb	-9.0	-8.7	-7.9	-7.2	-7.1	-6.9	-6.9	-7.5	-9.3	-8.6	-7.2	-5.8	-4.9	-3.2	-2.9	-1.8	-3.0	-4.7	-5.8	-6.9	-7.3	-7.7	-8.0	-7.9	-6.5	-1.8
27-Feb	-7.6	-7.6	-7.6	-7.6	-7.2	-6.9	-6.9	-6.3	-5.9	-4.6	-4.0	-1.7	1.2	0.7	-2.2	-4.9	-5.8	-6.6	-7.5	-8.6	-9.1	-9.4	-9.8	-9.9	-6.1	1.2
28-Feb	-10.1	-10.2	-10.2	-10.3	-10.3	-10.2	-10.2	-10.2	-10.0	-9.7	-8.6	-7.0	-5.7	-4.6	-3.7	-3.1	-2.6	-3.1	-3.8	-4.6	-5.0	-5.8	-6.2	-7.1	-7.2	-2.6
	-18.4	-18.6	-18.7	-19.1	-19.4	-19.5	-19.6	-19.8	-19.8	-19.6	-19.0	-17.7	-16.4	-15.2	-14.4	-13.9	-13.9	-14.3	-14.8	-15.4	-15.9	-16.5	-17.0	-17.5	Diurnal Average	
	-2.0	0.2	1.1	1.4	2.1	2.6	2.4	2.7	3.0	1.6	-3.4	-1.7	1.2	0.7	-2.2	-0.9	-0.8	-1.2	-1.1	-0.6	-2.3	-2.5	-3.7	-3.0	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 100m (AT100) - C

Lower Camp Met Tower - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	308	45.83	45.83
-20 - 0	353	52.53	98.36
0 - 10	11	1.64	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 163m (AT163) - C

Lower Camp Met Tower - February 2025

Maximum Value: 3.5 C on Feb 23 03:00

Maximum Daily Average: -3.3 C on Feb 23

Minimum Value: -30.0 C on Feb 14 10:00

Minimum Daily Average: -26.4 C on Feb 14

Maximum Diurnal Average: -14.4 C at hour 17

Minimum Diurnal Average: -19.5 C at hour 8

Monthly Average: -17.28 C

Percentiles: P_1 = -29.1 P_{10} = -26.3 Q_1 = -23.9 Median = -19.4 Q_3 = -10.9 P_{90} = -6.5 P_{99} = 2.9

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

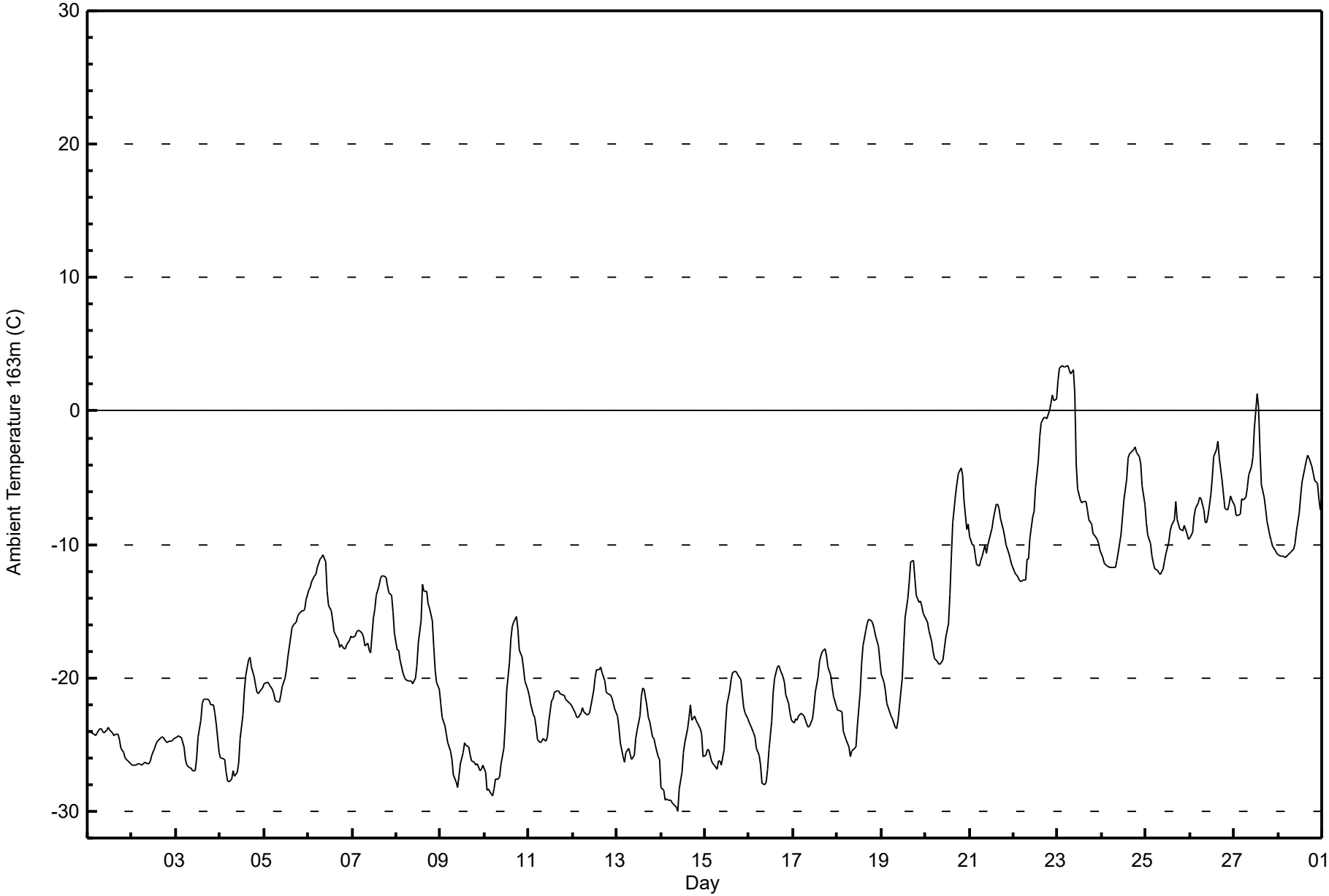
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-24.0	-24.0	-24.1	-24.3	-24.3	-24.1	-23.8	-23.8	-24.0	-24.1	-23.9	-23.7	-24.0	-24.1	-24.3	-24.2	-24.2	-24.7	-25.3	-25.6	-26.0	-26.1	-26.3	-26.5	-24.6	-23.7
2-Feb	-26.5	-26.5	-26.5	-26.4	-26.4	-26.5	-26.4	-26.3	-26.4	-26.4	-26.2	-25.8	-25.3	-24.9	-24.7	-24.5	-24.5	-24.5	-24.8	-24.9	-24.8	-24.7	-24.6	-24.5	-25.5	-24.5
3-Feb	-24.4	-24.4	-24.4	-24.5	-25.2	-26.1	-26.5	-26.8	-26.8	-26.9	-26.9	-26.0	-24.4	-23.1	-21.9	-21.6	-21.6	-21.6	-21.7	-22.0	-22.0	-22.7	-23.5	-25.6	-24.2	-21.6
4-Feb	-26.0	-26.0	-26.2	-27.1	-27.7	-27.8	-27.6	-26.9	-27.3	-27.0	-26.3	-24.6	-22.7	-20.9	-19.8	-18.7	-18.5	-19.2	-19.9	-20.6	-21.1	-21.1	-20.9	-20.8	-23.5	-18.5
5-Feb	-20.4	-20.3	-20.3	-20.5	-20.8	-21.2	-21.7	-21.8	-21.8	-21.3	-20.6	-20.0	-19.4	-18.4	-17.0	-16.2	-16.1	-15.8	-15.4	-15.2	-15.0	-14.9	-14.8	-14.2	-18.5	-14.2
6-Feb	-13.4	-13.2	-12.8	-12.4	-12.3	-11.7	-11.1	-11.0	-10.8	-11.3	-13.5	-14.6	-14.9	-15.8	-16.6	-16.7	-17.2	-17.7	-17.5	-17.8	-17.8	-17.5	-17.1	-16.8	-14.6	-10.8
7-Feb	-17.0	-16.8	-16.6	-16.4	-16.4	-16.6	-17.0	-17.6	-17.4	-17.9	-18.1	-15.5	-14.9	-13.8	-13.1	-12.5	-12.3	-12.4	-12.4	-13.1	-13.6	-13.8	-15.0	-16.6	-15.3	-12.3
8-Feb	-17.9	-17.9	-18.7	-19.7	-19.9	-20.1	-20.3	-20.2	-20.2	-20.5	-20.1	-19.1	-17.4	-15.7	-13.0	-13.5	-13.5	-14.4	-14.7	-15.7	-17.6	-19.4	-20.3	-20.8	-17.9	-13.0
9-Feb	-21.9	-23.0	-23.6	-24.2	-24.8	-25.5	-26.1	-27.2	-27.8	-28.2	-27.4	-26.5	-25.6	-24.8	-25.1	-25.2	-25.8	-26.2	-26.4	-26.5	-26.4	-26.9	-26.9	-26.5	-25.8	-21.9
10-Feb	-27.0	-28.5	-28.4	-28.5	-28.9	-28.3	-27.5	-27.6	-27.4	-26.5	-25.3	-23.5	-21.0	-18.9	-17.1	-16.1	-15.8	-15.4	-16.4	-17.9	-18.5	-19.3	-20.2	-20.9	-22.7	-15.4
11-Feb	-21.3	-21.9	-22.7	-23.0	-23.7	-24.6	-24.9	-24.7	-24.6	-24.7	-24.4	-23.3	-21.7	-21.6	-21.1	-20.9	-20.9	-21.1	-21.3	-21.3	-21.6	-21.7	-21.9	-22.0	-22.5	-20.9
12-Feb	-22.2	-22.6	-22.9	-23.0	-22.6	-22.2	-22.6	-22.7	-22.7	-22.7	-22.2	-20.9	-20.0	-19.3	-19.4	-19.2	-19.6	-20.3	-21.0	-21.2	-21.3	-21.5	-21.9	-22.3	-21.5	-19.2
13-Feb	-22.9	-23.7	-24.8	-25.9	-26.3	-25.6	-25.3	-25.7	-26.1	-25.8	-24.6	-23.9	-22.9	-21.4	-20.7	-20.9	-22.1	-22.9	-23.2	-24.5	-24.5	-25.1	-25.9	-26.1	-24.2	-20.7
14-Feb	-28.2	-28.4	-29.1	-29.1	-29.1	-29.2	-29.4	-29.5	-29.6	-30.0	-28.4	-27.1	-25.6	-24.9	-23.8	-23.0	-22.0	-23.2	-22.9	-23.1	-23.3	-23.8	-24.2	-26.0	-26.4	-22.0
15-Feb	-25.8	-25.4	-25.4	-26.2	-26.4	-26.6	-26.8	-26.3	-26.2	-26.6	-25.4	-23.6	-22.0	-20.9	-20.1	-19.6	-19.5	-19.6	-19.9	-20.1	-21.3	-22.3	-22.7	-23.1	-23.4	-19.5
16-Feb	-23.4	-23.6	-24.1	-24.4	-25.3	-25.8	-26.5	-27.8	-28.0	-27.8	-26.9	-25.3	-23.2	-21.1	-20.1	-19.2	-19.1	-19.4	-19.9	-20.3	-21.3	-21.9	-22.6	-23.2	-23.3	-19.1
17-Feb	-23.4	-23.1	-23.2	-22.9	-22.6	-22.8	-22.9	-23.5	-23.7	-23.6	-23.1	-22.2	-21.1	-19.9	-18.8	-18.4	-18.0	-17.8	-18.4	-19.2	-19.9	-20.7	-21.3	-22.1	-21.4	-17.8
18-Feb	-22.5	-22.4	-22.5	-24.0	-24.3	-24.6	-25.2	-25.9	-25.5	-25.3	-25.2	-23.6	-21.0	-19.0	-17.6	-16.5	-16.0	-15.6	-15.7	-15.9	-16.3	-16.9	-17.6	-18.7	-20.7	-15.6
19-Feb	-19.7	-20.4	-20.9	-21.9	-22.5	-22.9	-23.1	-23.7	-23.8	-23.2	-22.1	-20.0	-17.7	-15.5	-14.0	-12.7	-11.3	-11.2	-12.6	-13.9	-14.3	-14.2	-14.7	-15.1	-18.0	-11.2
20-Feb	-15.6	-15.8	-16.4	-17.3	-18.1	-18.6	-18.8	-19.0	-19.0	-18.6	-17.9	-16.9	-15.9	-13.7	-10.9	-8.4	-6.3	-5.5	-4.7	-4.3	-4.8	-6.6	-8.9	-8.5	-12.9	-4.3
21-Feb	-9.4	-10.0	-10.0	-10.7	-11.5	-11.6	-11.2	-10.9	-10.1	-10.7	-10.1	-9.2	-8.7	-8.1	-7.0	-7.0	-7.3	-8.0	-8.8	-9.4	-10.1	-10.7	-11.1	-11.6	-9.7	-7.0
22-Feb	-12.1	-12.2	-12.4	-12.7	-12.8	-12.7	-12.6	-11.1	-11.1	-9.5	-7.9	-7.5	-5.8	-3.7	-2.0	-0.9	-0.5	-0.5	-0.6	0.1	0.6	1.2	0.7	0.9	-6.0	1.2
23-Feb	2.3	3.3	3.5	3.3	3.3	3.4	3.1	2.8	3.2	1.4	-3.9	-5.8	-6.7	-6.9	-6.8	-6.8	-7.4	-8.1	-8.4	-9.1	-9.3	-9.6	-9.9	-10.4	-3.3	3.5
24-Feb	-10.9	-11.4	-11.5	-11.6	-11.7	-11.7	-11.7	-11.7	-11.2	-10.5	-9.2	-8.0	-6.7	-5.1	-3.5	-3.2	-3.1	-2.9	-2.7	-3.1	-3.4	-3.9	-5.6	-7.0	-7.6	-2.7
25-Feb	-8.4	-9.3	-9.9	-10.8	-11.4	-11.8	-11.9	-12.1	-12.2	-11.8	-11.2	-10.7	-9.8	-9.0	-8.5	-8.1	-6.8	-8.2	-8.9	-8.9	-9.0	-8.6	-9.2	-9.6	-9.8	-6.8
26-Feb	-9.5	-9.1	-7.9	-7.3	-6.9	-6.5	-6.6	-7.5	-8.3	-8.3	-7.8	-6.2	-4.9	-3.4	-2.9	-2.3	-3.5	-5.2	-6.3	-7.3	-7.4	-7.0	-6.3	-6.7	-6.5	-2.3
27-Feb	-7.1	-7.8	-7.9	-7.7	-6.6	-6.7	-6.5	-5.7	-4.8	-4.2	-3.4	-1.3	1.3	0.2	-2.9	-5.5	-6.5	-7.3	-8.2	-9.3	-9.8	-10.1	-10.5	-10.6	-6.2	1.3
28-Feb	-10.7	-10.8	-10.9	-10.9	-11.0	-10.8	-10.7	-10.6	-10.4	-9.9	-9.0	-7.7	-6.3	-5.3	-4.3	-3.7	-3.3	-3.5	-4.1	-4.7	-5.2	-5.5	-6.5	-7.4	-7.6	-3.3
	-18.2	-18.4	-18.6	-18.9	-19.2	-19.2	-19.3	-19.5	-19.4	-19.4	-19.0	-17.9	-16.7	-15.7	-14.9	-14.5	-14.4	-14.7	-15.1	-15.5	-15.9	-16.3	-16.8	-17.2	Diurnal Average	
	2.3	3.3	3.5	3.3	3.3	3.4	3.1	2.8	3.2	1.4	-3.4	-1.3	1.3	0.2	-2.0	-0.9	-0.5	-0.5	-0.6	0.1	0.6	1.2	0.7	0.9	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 163m (AT163) - C

Lower Camp Met Tower - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	320	47.62	47.62
-20 - 0	335	49.85	97.47
0 - 10	17	2.53	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 20m (RH20) - %

Lower Camp Met Tower - February 2025

Maximum Value: 96.1 % on Feb 23 06:00

Maximum Daily Average: 87.6 % on Feb 23

Minimum Value: 37.1 % on Feb 19 18:00

Minimum Daily Average: 46.1 % on Feb 19

Maximum Diurnal Average: 74.4 % at hour 8

Minimum Diurnal Average: 61.4 % at hour 16

Monthly Average: 70.53 %

Percentiles: P_1 = 39.9 P_{10} = 56.2 Q_1 = 65.6 Median = 72.2 Q_3 = 77.1 P_{90} = 82.4 P_{99} = 93.4

Hours in Service:	672
Hours of Data:	669
Hours of Missing Data:	3
Hours of Calibration:	0
Percent Operational Time:	99.6

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	74.1	74.6	74.2	73.8	73.9	73.6	73.9	72.7	72.7	73.2	70.8	69.6	70.8	72.9	73.2	72.3	74.1	74.9	70.3	68.8	69.2	67.3	67.2	68.7	72.0	74.9
2-Feb	69.0	70.4	69.3	70.9	69.5	69.2	68.7	69.7	68.4	65.6	64.5	63.7	63.5	64.0	66.1	67.7	70.3	72.4	72.7	73.2	74.7	75.2	75.8	76.8	69.6	76.8
3-Feb	76.8	76.0	74.9	74.5	74.1	72.1	72.4	72.9	73.7	72.4	72.2	71.9	71.6	67.1	57.7	60.6	62.6	66.4	70.9	70.7	69.7	70.0	71.5	73.4	70.7	76.8
4-Feb	75.0	74.5	74.2	73.8	73.5	73.2	73.0	73.0	72.6	72.0	70.7	69.8	65.1	61.4	57.4	57.4	60.5	63.7	65.2	66.0	66.8	65.6	65.4	61.1	68.0	75.0
5-Feb	62.2	60.2	59.1	64.0	66.3	68.2	71.4	69.1	65.5	67.1	68.2	67.3	67.6	68.6	68.4	69.1	72.2	76.0	77.0	76.8	76.5	77.8	79.0	82.1	70.0	82.1
6-Feb	80.1	76.6	78.4	74.3	74.1	75.7	75.0	75.6	77.2	80.9	79.7	70.3	66.1	65.6	63.9	61.0	65.6	62.9	65.4	65.5	66.6	64.9	66.2	66.9	70.8	80.9
7-Feb	68.5	70.4	70.6	70.0	68.0	71.0	72.7	76.4	75.5	71.3	68.0	64.6	59.3	54.9	54.0	54.6	57.3	64.0	64.1	72.3	74.1	76.3	79.0	79.7	68.2	79.7
8-Feb	81.1	80.3	79.1	78.4	78.2	78.1	77.5	77.2	76.7	76.6	77.4	79.0	77.4	71.5	66.7	65.2	67.2	73.0	79.9	83.2	75.2	74.2	70.0	72.6	75.7	83.2
9-Feb	67.7	66.9	70.9	71.2	70.5	72.7	73.9	70.7	73.5	70.9	63.9	57.8	54.2	51.4	50.6	54.9	58.9	63.3	70.8	75.3	74.4	74.1	73.3	70.1	66.7	75.3
10-Feb	69.2	68.0	71.2	71.7	71.7	71.2	71.4	71.6	70.9	69.5	67.5	63.8	58.4	56.6	56.2	56.2	60.0	62.5	65.9	69.1	76.5	78.7	76.3	77.6	68.0	78.7
11-Feb	80.8	80.3	79.3	78.4	77.4	76.9	75.4	74.9	74.1	75.2	76.6	75.9	70.2	66.6	66.3	68.6	69.4	75.2	78.8	80.1	78.8	78.9	77.5	77.7	75.6	80.8
12-Feb	77.5	77.5	78.2	78.1	78.1	78.0	78.2	78.2	78.4	78.3	76.5	74.6	73.4	72.4	71.2	74.1	71.1	73.8	77.2	77.9	78.3	78.0	77.9	77.4	76.4	78.4
13-Feb	76.2	74.3	75.0	76.5	77.7	77.3	76.4	75.1	75.0	73.9	72.5	66.2	62.0	55.5	53.7	56.2	60.7	66.3	72.4	74.0	76.1	77.3	76.6	75.4	70.9	77.7
14-Feb	74.7	72.8	71.3	70.7	70.2	69.2	68.5	68.7	68.5	68.3	67.4	68.4	65.9	67.0	66.8	64.0	59.7	71.8	75.7	76.4	75.7	73.6	73.1	71.4	70.0	76.4
15-Feb	70.8	71.5	71.4	71.0	70.8	70.6	70.2	70.6	71.0	71.7	72.9	74.4	75.2	70.8	64.8	62.7	66.4	71.4	74.3	69.4	69.9	68.8	71.9	78.1	70.9	78.1
16-Feb	77.7	76.7	75.4	73.1	72.3	72.0	72.4	71.9	72.0	72.7	73.3	74.1	71.3	68.0	62.8	58.9	57.8	58.2	60.2	60.3	60.5	60.8	61.1	62.4	67.8	77.7
17-Feb	61.1	64.9	64.9	65.7	63.8	62.8	62.5	60.3	60.6	60.5	58.6	55.6	51.6	49.5	46.0	44.9	44.9	45.4	49.3	50.7	53.9	56.3	57.9	57.1	56.2	65.7
18-Feb	61.9	66.2	68.3	70.3	70.7	72.2	72.2	72.4	72.4	71.4	67.9	57.2	49.0	44.6	37.7	37.5	38.5	39.7	42.3	44.2	46.6	46.4	45.0	44.3	55.8	72.4
19-Feb	45.2	48.0	50.3	53.5	54.7	54.0	51.0	53.1	52.9	49.4	48.7	47.4	47.0	46.5	45.0	41.8	39.2	37.1	39.9	40.7	40.2	39.5	40.2	40.9	46.1	54.7
20-Feb	42.5	44.7	43.4	45.8	49.6	53.0	55.9	57.1	57.6	57.8	57.5	58.4	66.2	60.1	53.0	52.3	52.0	57.3	62.6	68.2	75.1	82.1	82.4	84.3	59.1	84.3
21-Feb	84.2	82.6	82.0	81.5	81.4	80.5	80.1	79.4	78.0	75.1	66.8	62.8	63.8	64.1	62.4	59.9	61.5	64.2	67.7	68.3	68.3	68.0	69.2	71.0	71.8	84.2
22-Feb	73.4	76.0	76.0	74.5	74.5	75.2	74.6	75.3	84.0	84.7	83.2	77.7	75.2	75.0	72.5	68.1	75.2	80.5	84.3	89.2	93.6	93.2	93.5	93.3	80.1	93.6
23-Feb	92.6	91.8	91.1	93.8	95.2	96.1	95.6	95.5	92.2	91.8	90.1	87.1	84.6	81.3	81.1	81.3	81.3	81.7	83.3	83.3	83.6	82.9	81.7	82.5	87.6	96.1
24-Feb	83.2	82.1	82.0	83.9	84.8	85.5	85.1	84.9	83.9	81.3	79.6	74.9	77.7	71.6	68.5	73.5	75.0	78.5	81.2	84.6	86.5	87.4	86.3	85.9	81.2	87.4
25-Feb	82.8	80.5	80.4	78.8	78.0	76.9	77.1	78.3	77.1	74.9	69.4	66.8	65.8	65.0	64.9	63.7	61.1	69.0	73.2	74.2	77.7	82.1	83.6	84.2	74.4	84.2
26-Feb	86.7	89.2	88.8	86.0	84.4	86.0	88.5	88.8	87.9	82.3	78.2	69.0	64.1	57.6	58.2	55.4	59.6	68.2	74.7	78.2	80.8	82.8	82.5	81.7	77.5	89.2
27-Feb	82.8	85.3	87.3	89.4	91.3	91.4	91.4	91.6	91.3	90.6	DF	DF	79.7	77.5	77.2	73.1	72.3	72.6	74.0	75.7	76.2	75.5	78.9	78.3	82.0	91.6
28-Feb	76.8	75.7	74.8	74.3	74.6	74.3	76.2	77.3	76.8	79.5	80.3	76.9	DF	69.8	66.6	65.1	63.8	66.6	69.5	72.1	73.9	73.8	73.4	73.2	73.3	80.3
	73.4	73.5	73.6	73.9	73.9	74.2	74.3	74.4	74.3	73.5	71.2	68.3	66.6	64.2	61.9	61.4	62.8	66.3	69.4	71.0	72.1	72.6	72.7	73.1	Diurnal Average	
	92.6	91.8	91.1	93.8	95.2	96.1	95.6	95.5	92.2	91.8	90.1	87.1	84.6	81.3	81.1	81.3	81.3	81.7	84.3	89.2	93.6	93.2	93.5	93.3	Diurnal Maximum	

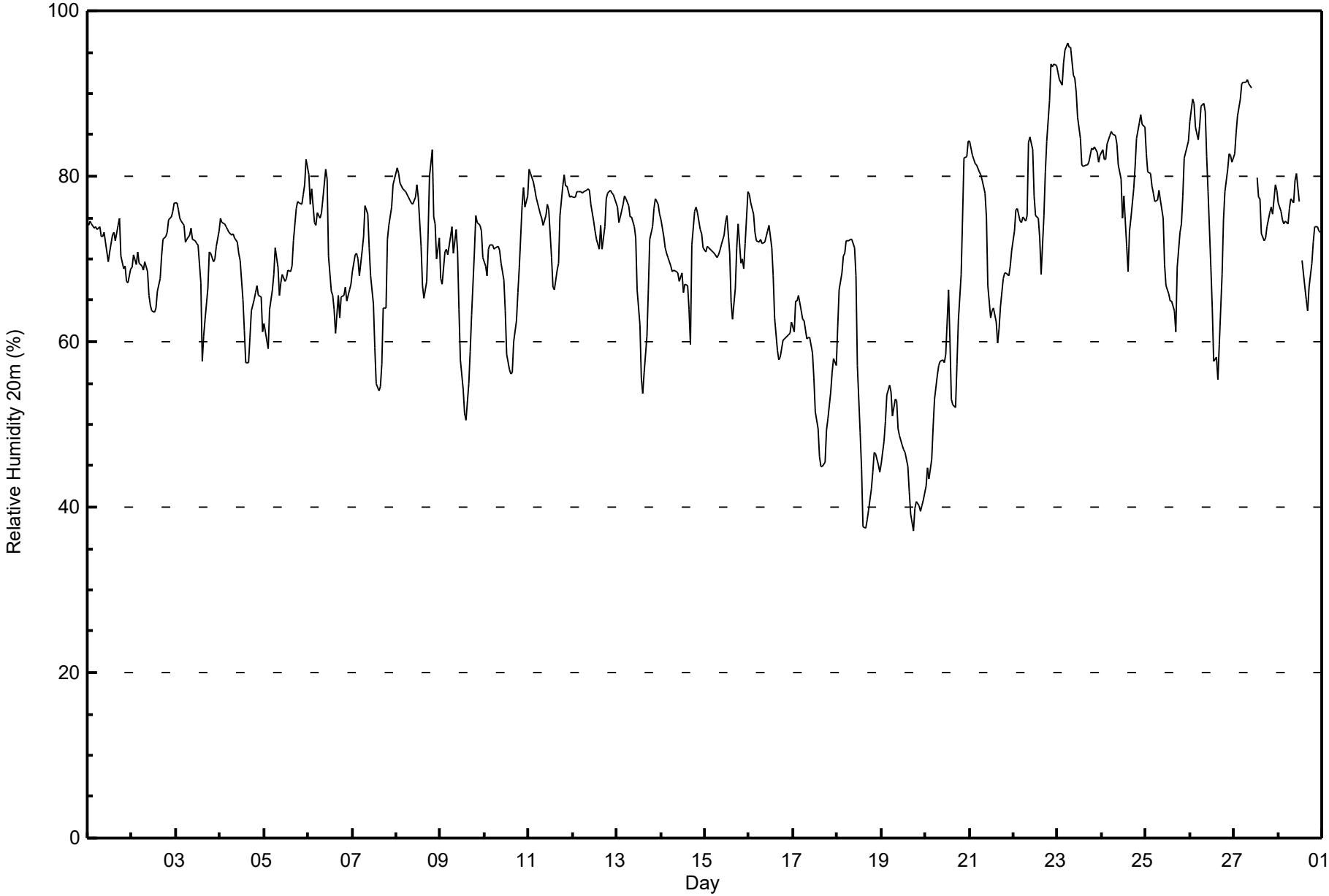
DF - DAS Failure

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 20m (RH20) - %

Lower Camp Met Tower - February 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	8	1.20	1.20
40 - 60	90	13.45	14.65
60 - 80	471	70.40	85.05
80 - 100	100	14.95	100.00

Total Number of Valid Hours: 669

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 45m (RH45) - %

Lower Camp Met Tower - February 2025

Maximum Value: 96.4 % on Feb 23 06:00

Maximum Daily Average: 86.9 % on Feb 23

Minimum Value: 35.2 % on Feb 19 18:00

Minimum Daily Average: 44.5 % on Feb 19

Maximum Diurnal Average: 73.7 % at hour 8

Minimum Diurnal Average: 61.1 % at hour 16

Monthly Average: 69.67 %

Percentiles: P_1 = 37.9 P_{10} = 55.6 Q_1 = 64.4 Median = 71.1 Q_3 = 76.6 P_{90} = 82.2 P_{99} = 92.3

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

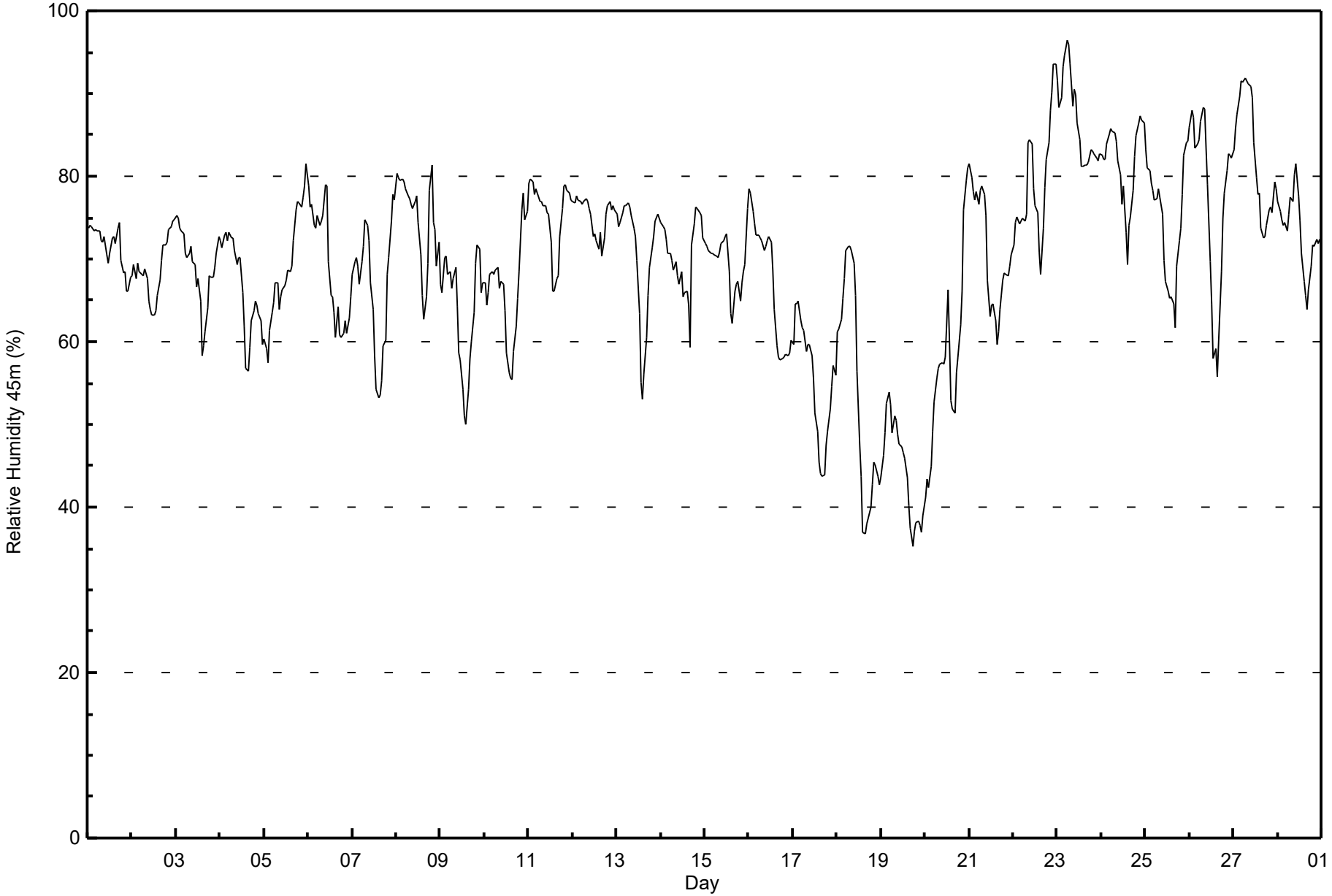
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	73.7	74.1	73.9	73.4	73.6	73.3	73.4	72.3	72.0	72.6	70.5	69.5	70.6	72.5	72.8	71.9	73.6	74.3	69.8	68.3	68.4	66.1	66.1	67.8	71.4	74.3
2-Feb	68.0	69.3	67.7	69.5	68.4	68.2	68.0	68.8	67.6	64.9	63.9	63.3	63.2	63.7	65.7	67.4	69.8	71.7	71.7	72.1	73.6	73.9	74.6	74.8	68.7	74.8
3-Feb	75.3	74.8	73.8	73.3	73.0	70.6	70.1	70.7	71.5	69.7	69.3	66.6	67.6	64.9	58.3	59.5	61.1	64.1	68.0	67.8	67.9	69.0	70.7	72.6	68.8	75.3
4-Feb	72.1	71.3	72.9	73.2	72.2	73.2	72.5	72.6	71.0	69.2	70.2	70.2	66.0	61.9	56.9	56.5	59.3	62.6	63.8	65.0	64.4	63.5	62.5	59.7	66.8	73.2
5-Feb	60.3	59.1	57.4	61.4	63.6	64.7	67.0	67.1	63.9	65.3	66.3	66.8	67.5	68.6	68.4	69.1	72.2	76.0	76.9	76.8	76.3	77.5	78.9	81.6	68.9	81.6
6-Feb	78.9	76.3	76.7	74.0	73.7	75.3	74.0	74.5	75.3	79.0	78.8	69.7	65.6	65.5	63.6	60.6	64.3	60.8	60.6	61.1	62.5	61.0	62.8	65.4	69.2	79.0
7-Feb	68.1	69.6	70.2	69.2	67.0	69.6	71.5	74.7	74.0	72.2	67.1	63.9	58.4	54.2	53.3	53.5	55.3	59.5	60.2	68.1	70.1	74.5	77.8	77.2	66.6	77.8
8-Feb	80.4	79.8	79.6	79.6	79.3	78.5	77.6	77.3	76.6	76.1	77.0	77.6	74.4	70.5	65.5	62.7	65.4	69.5	78.4	81.4	74.3	73.6	69.2	72.0	74.8	81.4
9-Feb	66.9	66.0	70.2	70.3	68.1	68.5	66.4	67.6	68.9	64.2	58.7	57.7	54.2	51.0	50.0	54.3	57.9	59.9	63.6	69.6	71.8	71.2	65.9	67.1	63.8	71.8
10-Feb	67.2	64.4	65.9	68.1	68.4	68.1	68.6	69.0	66.4	67.2	67.0	63.7	58.7	56.2	55.7	55.4	58.9	61.8	65.2	68.5	76.0	77.9	74.7	75.8	66.2	77.9
11-Feb	79.2	79.7	79.3	77.8	78.4	78.0	77.0	77.0	76.4	76.5	75.6	75.5	72.1	66.1	66.1	67.6	68.0	72.8	76.2	78.7	79.1	78.3	78.0	77.2	75.4	79.7
12-Feb	77.0	76.8	77.7	77.0	77.0	76.6	77.0	77.3	77.0	76.0	75.5	72.8	73.1	72.2	71.2	73.3	70.3	72.5	75.3	76.4	76.9	76.0	76.4	75.9	75.3	77.7
13-Feb	75.4	73.9	74.4	75.6	76.5	76.5	76.7	76.2	75.2	73.8	72.6	69.8	63.3	55.0	53.1	56.1	60.5	65.5	69.1	71.4	72.7	74.6	75.5	74.9	70.3	76.7
14-Feb	74.4	73.8	73.5	72.4	70.7	70.7	69.9	68.7	69.6	67.9	66.9	68.4	65.4	65.9	66.0	64.4	59.4	71.7	74.3	76.3	76.2	75.5	75.3	72.5	70.4	76.3
15-Feb	71.9	71.5	71.1	70.7	70.7	70.4	70.3	70.1	70.9	71.8	72.2	72.7	73.0	68.5	63.4	62.2	66.1	66.9	67.4	64.9	67.1	68.5	69.3	76.0	69.5	76.0
16-Feb	78.4	77.9	75.8	74.2	72.9	72.9	72.6	72.3	71.0	71.6	72.3	72.8	72.1	68.7	63.8	59.5	58.1	57.7	58.0	58.1	58.5	58.3	58.6	60.1	67.3	78.4
17-Feb	59.6	64.6	64.5	64.9	62.6	61.8	61.3	58.8	59.7	59.7	58.3	55.6	51.4	49.2	45.5	44.1	43.8	44.0	47.4	49.2	51.8	54.5	57.1	56.0	55.2	64.9
18-Feb	61.2	61.5	62.7	65.3	67.6	71.0	71.6	71.5	71.1	69.5	65.6	56.4	47.4	43.8	36.9	36.8	38.0	38.6	40.0	42.8	45.4	45.0	43.7	42.7	54.0	71.6
19-Feb	43.6	46.3	49.0	52.5	54.0	52.4	49.0	51.0	50.4	48.9	47.7	47.2	46.7	45.9	43.6	40.2	37.4	35.2	37.1	38.1	38.3	37.7	37.0	39.0	44.5	54.0
20-Feb	41.2	43.3	42.4	44.9	49.2	52.7	55.5	56.9	57.4	57.5	57.3	58.1	66.2	60.0	52.8	51.9	51.3	56.3	58.1	62.0	66.1	75.9	79.4	81.1	57.4	81.1
21-Feb	81.5	79.9	78.1	77.1	78.1	76.5	78.3	78.9	77.9	75.2	67.4	63.0	64.4	64.5	62.6	59.7	61.2	63.9	67.5	68.3	68.2	67.9	69.2	70.5	70.8	81.5
22-Feb	71.7	74.5	75.1	74.3	74.6	74.9	74.6	75.4	84.0	84.4	83.9	78.4	76.4	75.6	70.8	68.2	73.8	78.6	82.1	84.0	88.0	90.2	93.5	93.5	79.2	93.5
23-Feb	91.5	88.3	89.6	93.3	94.6	96.4	96.0	93.5	88.4	90.5	89.8	86.5	84.4	81.2	81.3	81.4	81.4	81.7	83.2	83.0	82.8	82.2	81.8	82.6	86.9	96.4
24-Feb	82.6	82.0	82.0	83.8	85.0	85.8	85.4	85.2	84.3	81.8	80.2	76.7	78.8	73.2	69.4	74.0	75.0	78.3	82.4	84.9	86.5	87.3	86.9	86.5	81.6	87.3
25-Feb	83.2	80.9	80.7	79.2	78.3	77.1	77.3	78.5	77.5	75.5	69.9	67.3	66.2	65.3	65.4	64.6	61.7	69.1	72.2	73.8	77.8	82.6	84.0	84.2	74.7	84.2
26-Feb	85.9	88.0	87.2	83.4	83.8	84.3	86.6	88.3	88.2	83.4	79.0	69.7	64.6	58.0	59.1	55.7	60.1	68.4	74.8	77.9	80.7	82.8	82.6	82.2	77.3	88.3
27-Feb	83.2	85.7	87.5	89.7	91.6	91.4	91.9	91.6	91.3	90.9	89.4	84.1	79.9	77.8	78.0	73.7	72.5	72.7	74.1	75.9	76.2	75.6	79.4	78.5	82.6	91.9
28-Feb	76.9	75.8	74.7	74.1	74.5	73.4	75.4	77.5	77.0	80.2	81.5	77.6	74.6	70.7	67.3	65.5	63.8	66.3	69.2	71.7	71.6	72.4	71.9	72.3	73.2	81.5
	72.5	72.5	72.6	72.9	73.1	73.3	73.4	73.7	73.4	72.7	71.2	68.6	66.6	64.0	61.7	61.1	62.2	65.0	67.4	69.1	70.3	71.2	71.5	72.1	Diurnal Average	
	91.5	88.3	89.6	93.3	94.6	96.4	96.0	93.5	91.3	90.9	89.8	86.5	84.4	81.2	81.3	81.4	81.4	81.7	83.2	84.9	88.0	90.2	93.5	93.5	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 45m (RH45) - %

Lower Camp Met Tower - February 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	12	1.79	1.79
40 - 60	104	15.48	17.26
60 - 80	467	69.49	86.76
80 - 100	89	13.24	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 100m (RH100) - %

Lower Camp Met Tower - February 2025

Maximum Value: 96.0 % on Feb 23 07:00

Maximum Daily Average: 87.2 % on Feb 23

Minimum Value: 34.8 % on Feb 19 18:00

Minimum Daily Average: 45.3 % on Feb 19

Maximum Diurnal Average: 74.9 % at hour 8

Minimum Diurnal Average: 63.2 % at hour 16

Monthly Average: 71.07 %

Percentiles: P_1 = 38.9 P_{10} = 56.8 Q_1 = 64.6 Median = 73.1 Q_3 = 78.3 P_{90} = 84.8 P_{99} = 93.3

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

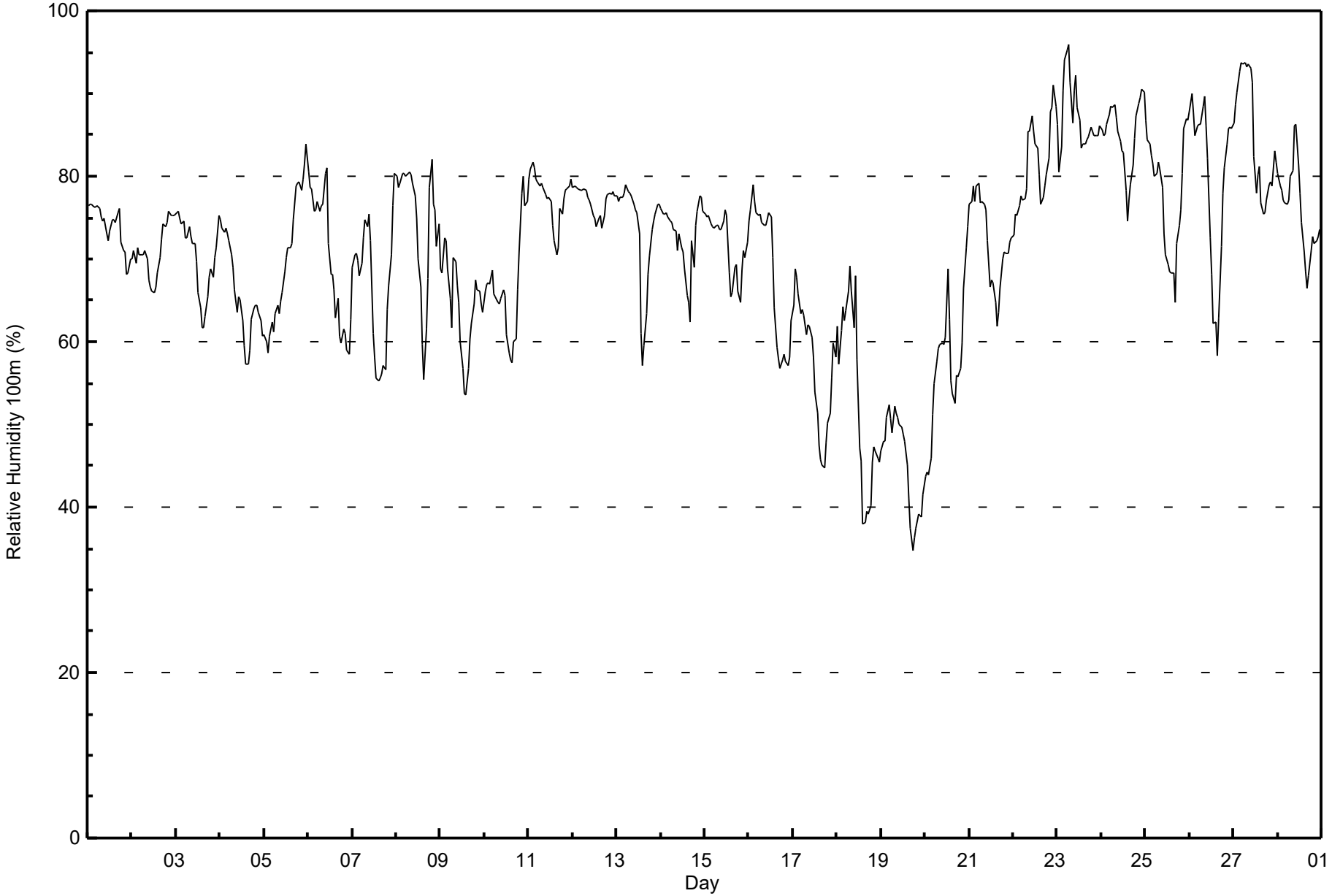
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	76.4	76.7	76.6	76.2	76.3	76.4	76.1	75.0	74.5	74.9	73.1	72.2	73.3	74.8	74.8	74.4	75.6	76.2	72.0	70.9	70.9	68.2	68.3	70.0	73.9	76.7
2-Feb	70.0	71.0	69.5	71.3	70.5	70.5	70.5	71.1	69.9	67.5	66.6	66.1	66.0	66.6	68.3	70.1	72.4	74.2	73.8	74.4	75.8	75.3	75.3	75.3	70.9	75.8
3-Feb	75.6	75.8	74.9	74.2	74.6	72.6	72.6	73.9	72.8	71.8	71.9	69.6	65.9	64.1	61.7	61.8	63.0	65.5	67.9	68.9	67.8	70.1	71.4	75.2	70.1	75.8
4-Feb	74.7	73.8	73.3	73.7	73.1	72.2	70.4	69.0	66.3	63.5	65.4	65.0	62.5	59.5	57.3	57.2	58.9	62.7	64.1	64.4	64.5	63.6	62.5	60.7	65.8	74.7
5-Feb	60.8	60.0	58.6	60.6	62.3	61.2	63.4	64.4	63.4	64.9	66.0	68.4	70.1	71.4	71.4	71.9	74.7	78.8	79.2	79.3	78.3	79.6	81.5	84.0	69.8	84.0
6-Feb	80.6	78.6	78.4	75.8	75.9	77.0	75.8	76.4	76.6	80.4	80.9	71.8	68.1	68.1	66.3	62.8	65.2	60.6	59.8	61.5	61.0	59.0	58.4	62.6	70.1	80.9
7-Feb	69.0	70.5	70.7	69.9	68.0	69.4	72.5	74.7	73.9	75.4	72.2	61.0	58.1	55.6	55.3	55.5	56.1	57.1	56.7	63.9	66.7	70.6	76.5	80.3	66.6	80.3
8-Feb	80.0	78.6	79.1	80.3	80.3	80.0	80.4	80.5	80.1	79.2	77.6	74.9	70.1	66.7	59.7	55.4	61.5	67.7	78.7	82.0	76.7	76.0	71.5	74.2	74.6	82.0
9-Feb	68.8	68.3	72.5	72.1	68.9	65.2	61.7	70.1	69.6	66.7	64.8	60.0	56.7	53.8	53.6	56.8	60.4	62.2	64.5	67.4	66.4	66.1	64.6	63.6	64.4	72.5
10-Feb	66.2	66.9	67.1	67.0	68.7	65.8	65.4	64.8	64.7	65.2	66.3	65.5	60.9	58.7	57.8	57.5	59.9	60.3	66.3	70.7	78.0	79.9	76.5	76.9	66.5	79.9
11-Feb	79.7	80.8	81.7	80.9	79.7	79.3	78.9	79.1	78.6	77.8	77.3	77.5	77.0	74.1	72.1	70.5	71.3	76.2	75.4	77.3	78.3	78.4	78.8	79.7	77.5	81.7
12-Feb	78.6	78.8	78.7	78.4	78.3	78.3	78.5	78.3	77.5	77.1	76.7	75.3	74.8	73.8	74.9	75.2	73.6	75.3	77.3	77.8	77.9	77.9	78.1	77.6	77.0	78.8
13-Feb	77.7	77.0	77.5	77.5	77.9	79.0	78.2	77.9	77.7	76.6	75.9	75.6	73.1	61.0	57.0	59.5	63.3	68.1	70.4	73.5	74.6	75.4	76.6	76.6	73.2	79.0
14-Feb	76.1	75.4	75.4	75.5	75.1	74.5	74.5	73.6	73.4	71.0	73.0	71.4	70.8	68.7	65.5	64.7	62.4	72.2	68.9	74.1	75.8	77.6	77.4	75.8	72.6	77.6
15-Feb	75.5	75.1	75.2	74.3	73.9	73.8	74.0	74.1	73.6	73.5	74.6	75.9	75.3	68.4	65.4	66.0	69.0	69.4	66.1	64.7	68.6	71.1	70.1	72.0	71.6	75.9
16-Feb	74.6	75.9	79.0	77.0	75.6	75.3	75.4	74.4	74.1	74.1	74.7	75.6	75.1	70.2	64.1	59.2	57.9	56.8	57.8	58.4	57.6	57.0	58.1	62.6	68.4	79.0
17-Feb	64.5	68.9	67.7	65.8	63.4	63.9	63.2	60.8	62.0	61.9	60.5	58.2	53.8	51.4	47.4	45.8	45.0	44.7	47.8	50.2	51.3	55.6	59.9	58.2	57.2	68.9
18-Feb	61.9	57.3	61.3	64.2	62.5	63.6	66.0	69.2	66.1	61.6	67.9	57.8	47.2	45.5	38.0	38.1	39.4	39.1	40.1	45.4	47.4	46.8	45.9	45.4	53.2	69.2
19-Feb	46.7	48.0	48.0	50.8	52.3	50.6	49.0	52.2	51.3	50.8	50.0	49.7	48.8	48.0	45.0	41.1	37.5	34.8	36.3	37.4	39.1	39.0	38.8	41.6	45.3	52.3
20-Feb	43.7	44.3	44.0	45.9	51.3	54.9	57.6	59.1	59.7	59.9	59.6	60.5	68.8	62.7	55.2	53.8	52.5	55.9	55.8	56.7	59.8	66.5	71.3	73.8	57.2	73.8
21-Feb	76.6	76.9	78.9	76.9	78.8	79.1	76.8	77.0	76.7	76.0	72.2	66.5	67.4	67.1	64.7	61.9	63.6	66.4	70.1	70.9	70.8	70.7	72.0	72.6	72.1	79.1
22-Feb	72.8	75.5	75.2	76.5	77.6	77.2	77.3	78.5	85.5	85.5	87.2	85.4	83.9	83.4	80.1	76.6	77.5	78.8	80.1	82.3	87.7	88.2	91.1	88.5	81.3	91.1
23-Feb	86.2	80.5	83.5	90.4	94.1	95.2	96.0	91.3	86.5	90.3	92.2	88.4	86.8	83.4	83.9	83.9	84.4	84.8	85.9	85.4	84.8	84.9	84.9	86.1	87.2	96.0
24-Feb	85.5	84.8	85.1	86.2	87.5	88.5	88.2	88.7	87.1	85.5	84.2	83.1	82.8	78.3	74.6	77.1	79.0	81.3	84.5	87.3	88.9	89.4	90.5	90.3	84.9	90.5
25-Feb	86.8	84.4	84.0	82.6	81.5	80.1	80.4	81.7	80.9	78.7	73.0	70.5	69.4	68.4	68.3	68.3	64.8	71.9	74.1	75.9	80.3	85.7	86.9	86.8	77.7	86.9
26-Feb	87.9	90.0	87.6	84.8	86.1	86.2	86.4	88.6	89.7	86.2	82.3	72.6	68.1	62.2	62.4	58.3	62.9	71.5	77.9	81.0	83.9	85.8	85.9	85.8	79.7	90.0
27-Feb	86.4	88.6	90.2	92.7	93.7	93.5	93.7	93.3	93.6	93.1	91.4	82.3	77.9	80.2	81.2	76.8	75.5	75.6	77.2	79.0	79.2	78.9	83.0	81.6	84.9	93.7
28-Feb	80.4	78.8	78.3	77.1	76.8	76.6	77.1	80.1	80.7	86.1	86.3	81.4	78.0	74.5	70.8	68.4	66.4	68.0	71.0	72.7	71.9	72.2	72.7	73.5	75.8	86.3
	73.7	73.6	74.0	74.2	74.5	74.3	74.3	74.9	74.5	74.1	73.7	70.8	69.0	66.5	64.2	63.2	64.1	66.3	67.8	69.8	70.9	71.8	72.4	73.3	Diurnal Average	
	87.9	90.0	90.2	92.7	94.1	95.2	96.0	93.3	93.6	93.1	92.2	88.4	86.8	83.4	83.9	83.9	84.4	84.8	85.9	87.3	88.9	89.4	91.1	90.3	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 100m (RH100) - %

Lower Camp Met Tower - February 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	11	1.64	1.64
40 - 60	94	13.99	15.63
60 - 80	443	65.92	81.55
80 - 100	124	18.45	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 163m (RH163) - %

Lower Camp Met Tower - February 2025

Maximum Value: 93.2 % on Feb 27 05:00

Maximum Daily Average: 85.8 % on Feb 24

Minimum Value: 34.0 % on Feb 19 18:00

Minimum Daily Average: 47.3 % on Feb 19

Maximum Diurnal Average: 74.0 % at hour 8

Minimum Diurnal Average: 63.4 % at hour 16

Monthly Average: 70.04 %

Percentiles: P_1 = 38.0 P_{10} = 55.4 Q_1 = 63.3 Median = 71.6 Q_3 = 76.9 P_{90} = 84.5 P_{99} = 92.4

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

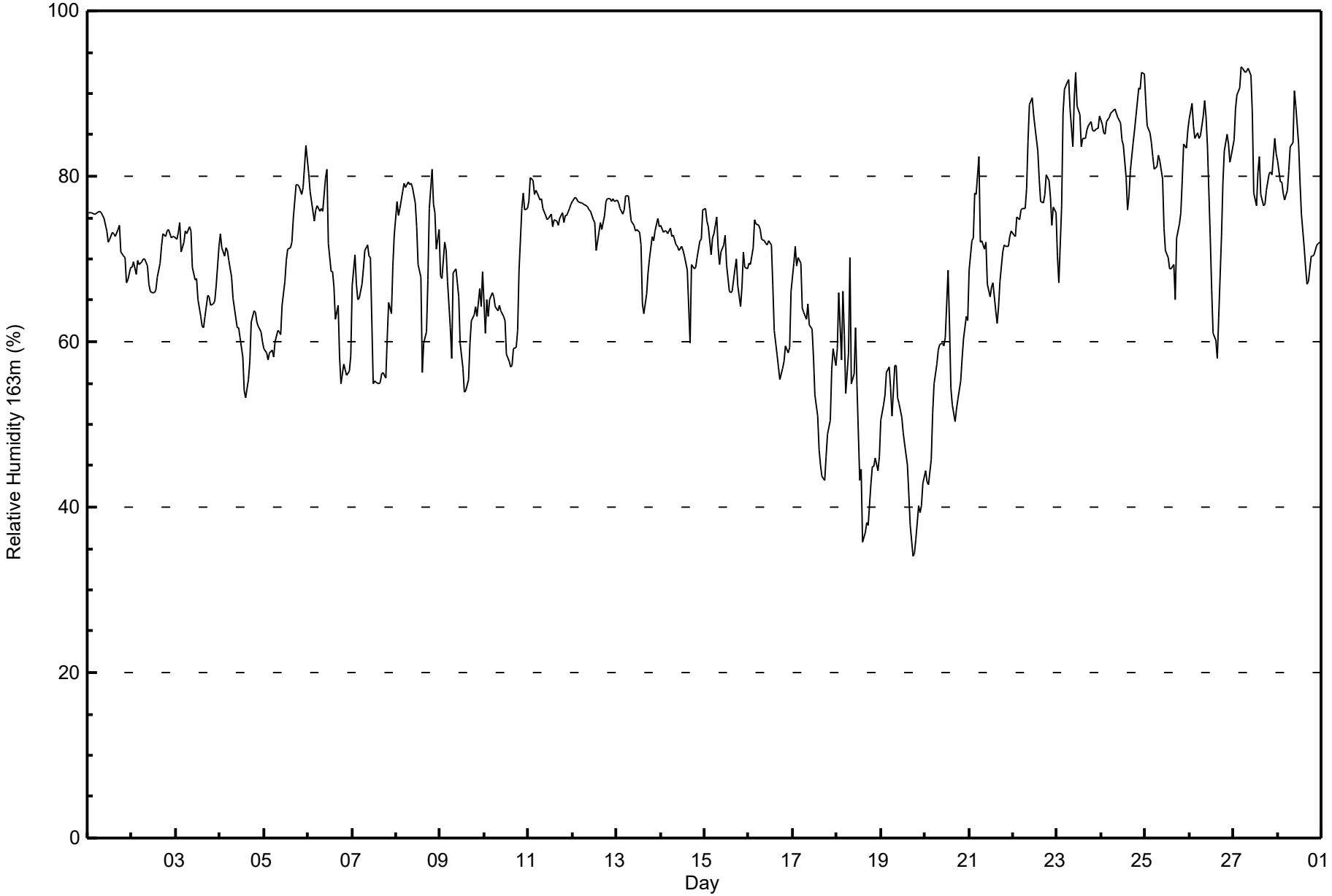
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	75.6	75.7	75.6	75.5	75.4	75.6	75.7	75.6	75.2	74.9	73.4	72.0	72.3	73.2	73.1	72.7	73.5	74.1	70.8	70.4	70.2	67.1	67.5	68.9	73.1	75.7
2-Feb	68.9	69.7	68.1	69.9	69.3	69.7	70.0	70.0	69.2	67.0	66.1	65.9	65.9	66.3	67.8	69.5	71.6	73.0	72.7	73.3	73.5	72.5	72.7	72.7	69.8	73.5
3-Feb	72.4	73.2	74.3	70.9	72.1	73.4	73.1	73.9	73.3	69.0	67.5	67.6	65.1	63.0	61.9	61.7	63.0	65.6	65.5	64.3	64.6	64.9	66.7	71.5	68.3	74.3
4-Feb	73.0	71.3	70.3	71.3	71.0	69.9	67.8	65.3	64.1	61.7	61.6	60.6	58.2	54.1	53.2	55.4	57.6	62.3	63.8	63.6	62.3	61.8	61.2	60.0	63.4	73.0
5-Feb	59.1	58.6	57.8	58.7	59.0	58.2	60.0	61.4	61.1	60.9	64.4	67.3	69.9	71.2	71.3	72.1	74.9	79.0	79.0	78.8	77.9	78.6	81.2	83.7	68.5	83.7
6-Feb	80.4	78.1	76.9	74.7	75.9	76.4	75.8	76.1	75.7	79.8	80.9	71.8	68.4	68.5	66.6	62.7	64.4	58.2	54.9	57.4	56.6	55.9	56.4	58.3	68.8	80.9
7-Feb	66.8	70.5	66.9	65.1	65.2	66.9	68.9	71.0	71.7	70.3	70.2	54.9	55.3	55.1	55.0	55.1	56.0	56.4	55.6	60.5	64.7	63.4	69.1	72.8	63.6	72.8
8-Feb	76.9	75.2	76.2	78.1	79.1	78.7	79.4	78.9	79.1	78.6	76.7	73.8	69.4	67.8	56.3	59.9	61.2	67.4	76.1	80.9	76.6	75.6	71.1	73.6	73.6	80.9
9-Feb	67.9	67.7	72.0	71.0	67.3	61.7	57.9	68.4	68.9	67.1	65.4	59.8	56.7	53.8	54.1	55.5	59.9	62.6	63.2	64.3	63.1	66.5	64.3	68.5	63.6	72.0
10-Feb	61.0	65.0	63.0	65.0	65.9	65.5	64.3	63.7	64.4	63.7	63.0	62.5	58.5	57.6	57.0	57.1	59.1	59.2	61.3	68.6	76.1	78.0	75.9	76.2	64.7	78.0
11-Feb	76.9	79.9	79.5	77.8	78.3	78.0	77.1	77.2	76.2	75.2	74.8	75.0	75.4	73.8	74.8	74.6	74.1	74.9	75.6	74.3	75.3	75.3	76.1	76.7	76.1	79.9
12-Feb	76.9	77.5	77.3	76.9	76.9	76.8	76.6	76.5	76.3	75.9	75.7	74.8	74.4	71.0	73.3	74.3	73.5	75.2	76.9	77.4	77.3	76.9	77.2	77.0	75.9	77.5
13-Feb	77.0	76.7	76.2	75.5	75.8	77.6	77.6	76.1	74.5	74.0	73.4	73.5	73.3	71.7	64.5	63.4	65.8	68.4	70.1	72.7	72.3	73.3	75.0	73.8	73.0	77.6
14-Feb	74.1	73.3	73.5	73.5	73.1	73.8	72.8	72.9	71.7	71.6	71.0	71.5	70.9	70.3	68.7	64.3	59.9	69.3	68.8	69.1	70.1	72.2	72.4	76.0	71.0	76.0
15-Feb	76.1	74.6	73.9	70.5	72.5	73.1	75.0	71.3	69.4	70.8	71.7	72.9	69.4	66.1	65.9	66.1	68.8	70.0	66.7	64.3	66.6	70.9	69.0	68.8	70.2	76.1
16-Feb	69.5	69.4	71.4	74.8	74.3	74.1	73.6	72.4	72.2	71.8	71.7	72.1	71.7	66.8	61.4	58.5	57.0	55.4	56.8	57.6	59.5	58.7	59.3	66.2	66.5	74.8
17-Feb	69.5	71.5	69.2	70.2	69.5	64.1	63.5	62.7	64.5	62.0	61.5	58.2	53.6	51.0	47.0	45.1	43.7	43.3	46.1	48.8	50.5	56.5	59.2	57.2	57.9	71.5
18-Feb	59.1	66.0	57.9	66.0	60.8	53.7	58.6	70.1	54.9	56.0	61.7	54.7	43.3	44.6	35.8	37.0	38.1	37.8	42.8	44.9	45.0	45.9	44.5	46.2	51.1	70.1
19-Feb	50.5	52.4	53.6	56.3	57.0	54.4	51.0	57.1	57.1	53.2	52.6	50.8	49.0	47.7	45.1	41.5	37.7	34.0	34.5	36.2	40.2	39.4	40.2	42.9	47.3	57.1
20-Feb	44.5	43.0	42.8	45.7	51.3	54.9	57.3	58.9	59.7	59.9	59.5	60.5	68.7	62.2	54.4	52.3	50.3	51.9	53.1	55.2	58.0	60.4	63.1	62.5	55.4	68.7
21-Feb	68.7	72.2	72.6	78.0	77.8	82.4	72.1	72.2	71.2	72.0	66.9	65.5	66.6	67.1	63.8	62.3	64.2	67.2	70.8	71.7	71.6	71.5	72.8	73.4	70.6	82.4
22-Feb	72.9	72.8	75.1	74.8	76.0	76.2	76.1	78.5	84.2	88.7	89.6	87.5	85.9	83.0	79.6	77.0	76.8	77.7	80.2	79.5	77.5	74.0	76.3	75.6	79.0	89.6
23-Feb	70.3	67.2	76.4	87.7	90.5	91.4	91.8	88.2	83.6	89.5	92.6	88.5	87.5	83.6	84.6	84.6	85.7	86.1	86.6	85.6	85.5	85.8	85.8	87.3	85.3	92.6
24-Feb	86.3	85.3	85.1	86.6	87.2	87.6	87.8	88.2	87.6	87.1	86.4	84.4	83.7	79.8	75.9	77.7	80.7	84.0	85.6	87.3	90.7	90.5	92.5	92.4	85.8	92.5
25-Feb	89.0	86.1	85.3	84.0	82.4	80.8	81.2	82.6	81.9	79.6	73.7	71.1	70.1	68.8	68.8	69.4	65.2	72.5	74.2	75.6	79.5	83.9	83.5	85.7	78.1	89.0
26-Feb	87.0	88.8	86.1	84.5	85.3	84.6	85.0	87.3	89.2	87.2	83.5	72.6	66.3	60.9	60.2	57.9	62.9	72.7	79.2	83.1	85.0	83.9	81.8	82.6	79.1	89.2
27-Feb	84.4	88.1	89.8	90.7	93.2	93.1	92.6	92.6	93.1	92.2	87.6	78.0	76.4	80.5	82.4	77.9	76.5	76.5	78.3	80.3	80.4	80.1	84.6	82.7	84.7	93.2
28-Feb	81.8	79.4	79.4	77.9	77.1	78.2	80.7	83.6	84.1	90.4	88.5	83.8	79.3	75.4	71.3	69.0	66.9	67.3	70.4	70.4	70.5	71.8	71.9	72.1	76.7	90.4
	72.0	72.5	72.4	73.3	73.5	73.2	73.0	74.0	73.4	73.2	72.6	69.7	68.0	66.3	64.1	63.4	63.9	65.8	67.1	68.4	69.3	69.8	70.4	71.6	Diurnal Average	
	89.0	88.8	89.8	90.7	93.2	93.1	92.6	92.6	93.1	92.2	92.6	88.5	87.5	83.6	84.6	84.6	85.7	86.1	86.6	87.3	90.7	90.5	92.5	92.4	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 163m (RH163) - %

Lower Camp Met Tower - February 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	9	1.34	1.34
40 - 60	116	17.26	18.60
60 - 80	439	65.33	83.93
80 - 100	108	16.07	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 20m (WS20) - km/h

Lower Camp Met Tower - February 2025

Maximum Speed: 26 km/h on Feb 19 23:00

Maximum Daily Speed Average: 16.4 km/h on Feb 19

Minimum Speed Value: 0 km/h on Feb 11 17:00

Minimum Daily Speed Average: 1.3 km/h on Feb 12

Maximum Diurnal Speed Average: 3.1 km/h at hour 9

Minimum Diurnal Speed Average: 0.1 km/h at hour 15

Monthly Average Velocity: 1.1 km/h 89.2 deg

Percentiles: P_1 = 1 P_{10} = 2 Q_1 = 3 Median = 7 Q_3 = 12 P_{90} = 15 P_{99} = 20

Hours in Service: 672

Hours of Data: 665

Hours of Missing Data: 7

Percent Operational Time: 99.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	NNW12	NNW11	NNW13	NNW13	NNW13	NNW12	NNW13	N15	N17	N15	N15	NNW13	NNW13	NNW13	NNW15	NNW13	NNW11	NNW13	NNW17	NNW15	N16	N17	N17	NNW17	NNW14.0	N17
2-Feb	N18	N17	N17	N17	N17	N12	NNW12	N14	N13	N14	N14	N15	NNW14	NNW16	NNW14	NNW10	NNW8	NNW4	N4	NNW4	NW3	NW4	NW3	WNW1	N10.8	NNW18
3-Feb	NW2	WNW1	W2	SW1	W0	WSW4	SW3	S3	SE3	SE6	ESE7	ESE7	ESE7	ESE6	SE2	S4	SSW11	SW9	WSW7	WSW9	WSW11	W6	WSW6	SE5	SSW2.7	WSW11
4-Feb	SE9	SE11	SE11	SE13	SE13	SE13	SE14	SE13	SE16	SE18	SE15	SE17	SE15	SE14	SE12	SSE11	SSE11	SSE11	SSE12	SSE13	SE12	SE11	SSE9	SSW11	SE12.2	SE18
5-Feb	SSE11	S11	S11	SSE12	SE14	SE14	SE14	SE13	SSE10	SE10	SSE7	SW10	SW12	SW11	SSW8	SW9	SW11	SSW6	SW8	SW10	SW8	SSE2	ESE2	SSE4	S7.6	SE14
6-Feb	SSW6	S6	SSE5	SW13	WSW8	W7	NW5	NNW4	N4	N7	N16	N18	N18	N18	NNW17	NNW15	NNW10	NW7	NNW5	NNW5	NW3	NW2	WSW6	WSW7	NNW5.7	N18
7-Feb	NW2	WSW5	SW3	SSW6	WSW9	SW5	NW4	NW2	SW2	SSE1	SE4	SW12	WSW11	WSW12	WSW11	SW8	SW9	WSW6	WSW9	WSW4	WSW8	W4	SE2	SE6	SW5.0	SW12
8-Feb	SE7	SE8	SE8	SE8	SE12	SE13	SE13	SE12	SE13	SE12	SE11	SE10	SE8	SE8	SE7	SSE3	SW1	NW1	NNW3	N6	N17	N15	N17	NNW13	ESE4.5	N17
9-Feb	NNW19	N16	NNW12	NNW9	NNW5	NNW5	NNW2	W3	NNW2	W3	NW4	N13	N10	NNW8	NNW6	WNW6	WNW4	WNW3	NW2	WNW1	NNW3	ESE0	SE3	WSW2	NNW5.1	NNW19
10-Feb	SE5	SE11	SE13	SE13	SE13	SE15	SE15	SE16	SE16	SE14	SE14	SE11	SE8	SE8	S6	SSE4	ESE7	NNE2	NNW6	NNW5	NNW7	NNW6	NNW5	NNW6	ESE6.5	SE16
11-Feb	NNW6	NNW3	NW4	NW3	NW3	NW3	NW1	NW2	NW3	WNW2	WNW3	NW2	NW3	SW4	SW5	WSW5	SE0	WSW1	NW2	NW3	NNW2	WNW2	NNW2	NW2	WNW2.3	NNW6
12-Feb	N1	ESE2	SE5	SE4	NNW1	NW2	SE4	ESE3	WNW1	NW0	SSE1	S2	SSW3	SW5	SSW2	NW2	N8	NNW7	NNW5	NNW5	NNW6	NNW7	NNW6	NNW6	NNW1.3	N8
13-Feb	NNW6	NNW9	NNW7	NNW4	NNW3	NW1	NW2	NNW4	NW4	NNW3	WNW2	NNW4	NW5	NNW9	NNW8	N9	N10	NNW7	NNW7	NNW4	N7	NNW5	NW3	NW2	NNW5.0	N10
14-Feb	NW4	NW3	NW3	NNW3	NW3	NNW3	NNW2	WNW2	SE1	SE5	SE3	SW4	SW6	WSW11	WSW11	WSW5	SE2	SSE1	W1	NW3	WNW4	WNW2	SE1	SE1	W2.0	WSW11
15-Feb	S1	SE5	SE8	SE8	SE6	SE7	SE7	SE10	SE12	SE12	SE12	SE11	SE7	ESE1	ESE2	SE1	ESE2	NE1	WNW2	NW1	NNW5	NNW2	N2	NW2	SE4.1	SE12
16-Feb	NW1	NW3	SSW1	WNW0	NW2	NNW1	SE3	NNW1	SE6	SSE5	SSE2	SE4	SE6	SE8	SE10	SE12	SE12	SE12	ESE12	ESE13	ESE12	SE15	SE17	SE21	SE6.6	SE21
17-Feb	SE19	SE12	SE10	SE11	SE11	SE14	SE14	SE18	ESE15	SE16	SE14	SE13	SE15	SE15	ESE16	SE17	ESE15	ESE10	SE8	SE12	ESE9	SE10	SE14	SSE6	SE12.8	SE19
18-Feb	SE7	ESE5	ESE3	WSW1	SE6	ESE5	ESE7	SE8	SE14	SE9	SSE7	ESE5	SE13	SE8	S11	SSE9	SSE7	SE11	SE12	SE15	SE11	SE13	SE14	SE13	SE8.6	SE15
19-Feb	SE11	SE11	SSE11	SSE11	SSE12	SE11	SE14	SE13	SE15	SE16	SE19	SE14	SE17	SSE19	SE22	SE20	SE15	ESE14	SE20	SE22	ESE21	SE20	SE26	SE23	SE16.4	SE26
20-Feb	SE19	SSE19	SSE20	SSE19	SSE19	SSE18	SSE18	SSE15	SSE18	S20	S18	S17	S15	S12	SSE10	SE14	SE13	SE10	ESE2	W1	WSW1	NW5	WNW2	W1	SSE11.6	SSE20
21-Feb	S2	SSE2	NNW1	NW2	N1	NNW2	NW2	NW3	NNW3	NNW5	NNW7	NNW7	NW10	NW7	NW9	N10	N11	N11	N11	NNW10	NNW11	NNW9	NNW7	NNW6	NNW5.6	N11
22-Feb	NNW4	NNW4	NNW4	NW4	NNW4	NW3	NW5	NW3	NNW3	N3	NW3	N5	NNW3	NNW2	NW2	W2	SW5	WNW3	WNW1	W1	NW2	WNW2	WNW2	SW3	NW2.5	N5
23-Feb	WSW1	SE5	UO	UO	UO	UO	UO	UO	UO	NW9	NNW21	N16	N19	N17	NNW14	N13	N13	N9	N6	NNW3	N2	NNE2	NNE4	NNE5	----	NNW21
24-Feb	N5	NNW7	NNW5	NW4	NNW4	NW4	NNW5	NW3	W2	SW2	WSW3	SE1	SE4	ESE2	S3	SSE4	N4	NW3	NW3	NW4	NNW3	NNW7	N12	N13	NNW2.9	N13
25-Feb	N13	NNW13	NNW13	NNW14	NNW12	N12	NNW7	NNW6	NNW8	N9	NNW8	NNW8	NNW7	NNW7	NW6	NW5	NNW6	NNW7	NNW5	NNW4	NNW5	NW7	NNW7	NW4	NNW7.8	NNW14
26-Feb	ENE1	ESE4	SE8	SE8	SE2	ESE3	ESE3	NNW4	NNW7	NNW6	NNW8	NNW9	NW7	NNW7	NW5	NNW10	NNW10	NNW7	NW6	NNW4	NNW4	NNW4	NNW5	NNW5	NNW3.5	NNW10
27-Feb	NW4	NW5	N4	NNW4	NW3	N5	NNW4	NNW2	ESE2	N7	SSE2	ENE2	NNW8	NNW13	N15	NNE15	N14	N11	N10	NNE11	N11	N8	NNE5	NNW4	N6.4	NNE15
28-Feb	NE3	NNE2	N2	NNW2	NW1	NNW2	NNE2	NNE2	WNW3	NNE2	S1	SE6	SE12	SE10	SE10	SE12	SE12	SSE10	SE7	SSE5	SE3	SE4	SE6	SE7	SE3.8	SE12
	NE1.1	E1.1	E1.4	SE1.3	SE1.4	ESE1.8	ESE2.4	ESE2.4	ESE3.1	ESE2.8	E2.1	E1.6	E1.0	ENE0.2	S0.1	E0.6	ENE0.7	NNE0.7	N0.9	NNE0.6	N1.8	NNE1.5	NE1.3	E0.6	Diurnal Average	
	NNW19	SSE19	SSE20	SSE19	SSE19	SSE18	SSE18	SE18	SSE18	SSE20	NNW21	N18	NNW19	SSE19	SE22	SE20	SE15	ESE14	SE20	SE22	ESE21	SE20	SE26	SE23	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 - February 2025

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

Minimum Value: 1 km/h on Feb 11 19:00

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

Hours in Service:	672
Hours of Data:	665
Hours of Missing Data:	7
Hours of Calibration:	0
Percent Operational Time:	99.0

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

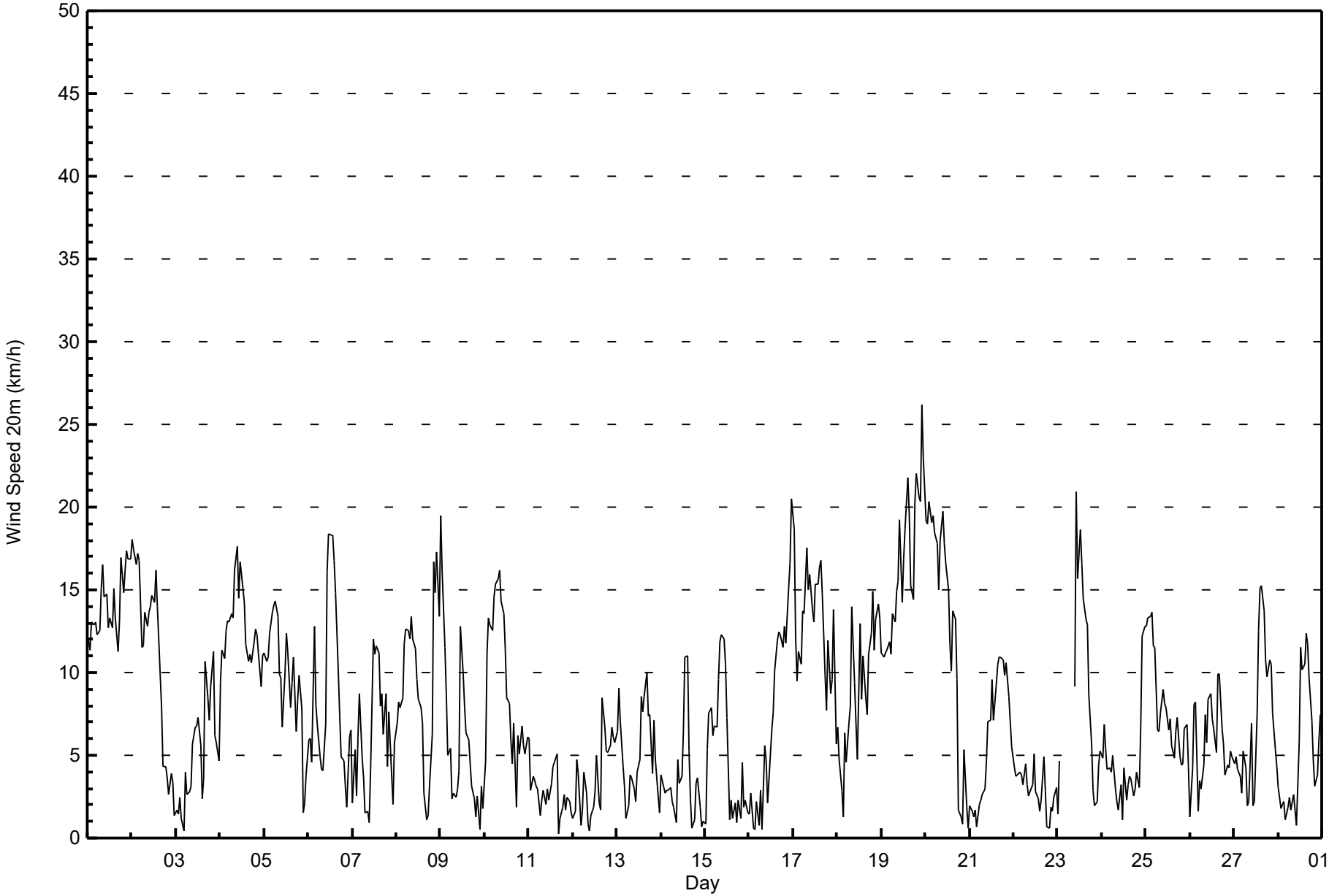
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 20m (WS20) - km/h

Lower Camp Met Tower - February 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	282	42.41	42.41
6 - 11	201	30.23	72.63
12 - 19	170	25.56	98.20
20 - 28	12	1.80	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 665

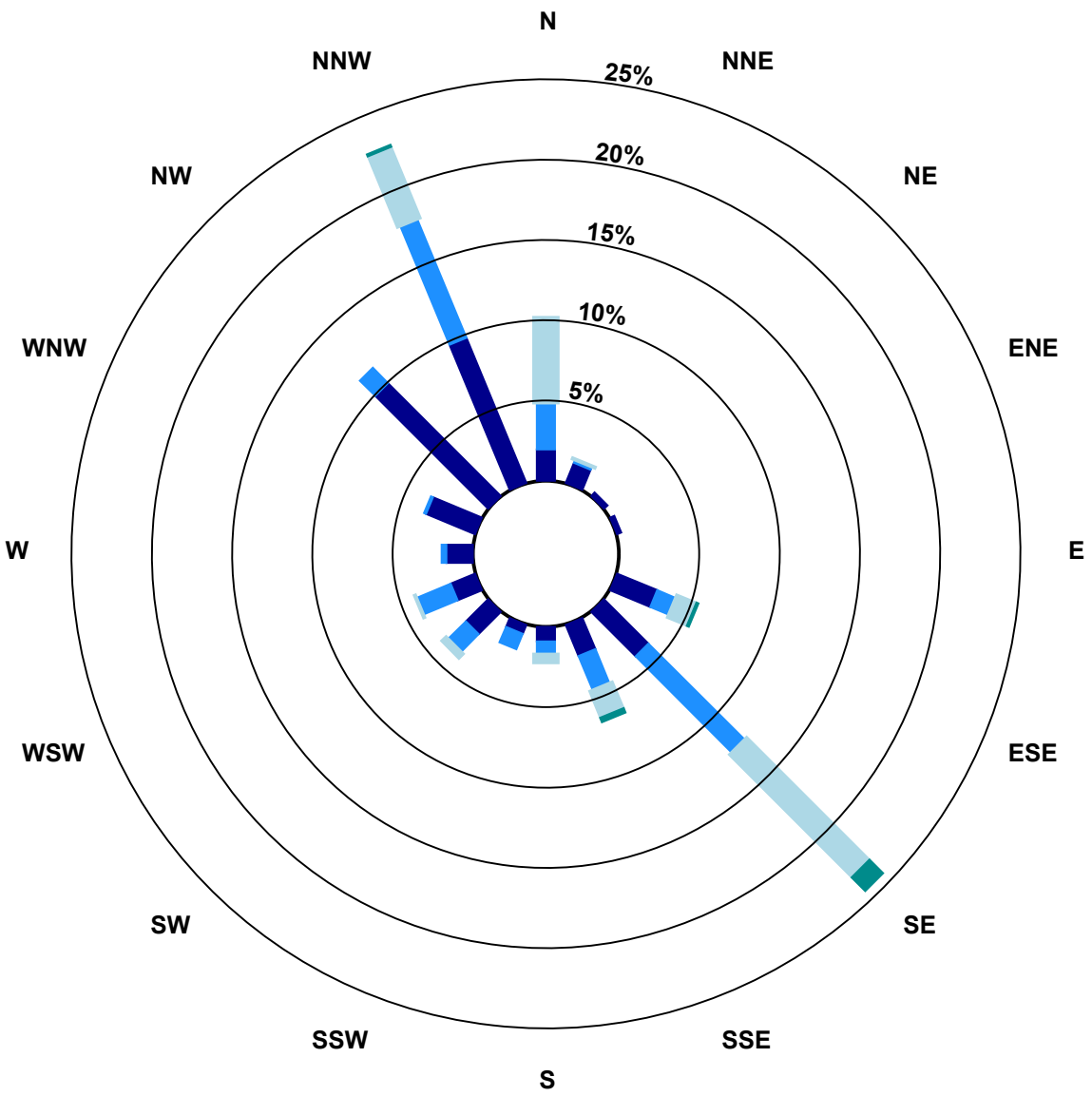
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 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: 665

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 45m (WS45) - km/h

Lower Camp Met Tower - February 2025

Maximum Speed: 38 km/h on Feb 19 23:00

Maximum Daily Speed Average: 25.0 km/h on Feb 19

Minimum Speed Value: 0 km/h on Feb 12 12:00

Minimum Daily Speed Average: 2.0 km/h on Feb 14

Maximum Diurnal Speed Average: 3.0 km/h at hour 8

Minimum Diurnal Speed Average: 1.0 km/h at hour 4

Monthly Average Velocity: 1.5 km/h 57.6 deg

Percentiles: P_1 = 1 P_{10} = 3 Q_1 = 5 Median = 10 Q_3 = 16 P_{90} = 22 P_{99} = 31

Hours in Service:	672
Hours of Data:	667
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-Feb	NNW17	NNW17	NNW19	N19	NNW20	NNW18	NNW20	N23	N25	N22	N22	NNW19	NNW19	NNW19	NNW22	NNW20	NNW17	NNW21	NNW24	NNW21	N23	N28	N26	NNW25	NNW21.0	N28
2-Feb	N27	N26	N26	N27	N27	N19	N17	N21	N20	N21	N22	N22	NNW21	NNW23	NNW20	NNW14	NNW12	NNW8	N7	NNW6	NNW5	NNW7	NW7	NW4	N16.9	N27
3-Feb	WSW5	SW4	WSW5	SW6	SW4	SW7	WSW7	SW9	SW7	SSW5	S3	SSE5	SE8	SE5	SE2	SSW4	SW16	SW15	SW14	WSW17	WSW22	WSW11	WSW11	SE3	SW6.7	WSW22
4-Feb	SSE8	SE8	ESE12	SE13	SE12	SE17	SE19	SE17	SE16	SE18	SE20	SE21	SE19	SE17	SE12	S12	S14	SSE13	SSE15	SSE15	SSE13	SSE10	S8	SSW13	SE13.4	SE21
5-Feb	S12	S12	SSW13	S12	SSE15	SSE13	SSE14	SE15	SSE10	SE10	S8	SW11	SW13	SW12	SW8	SW11	SW13	SW8	SW11	SW13	SW12	SW4	SSW4	SSW4	SSW9.1	SE15
6-Feb	SW10	SSW8	SSW6	SW17	WSW13	W11	NW8	NW7	NNW6	N12	N26	N28	N29	N27	N24	NNW22	NNW15	NW13	NNW11	NNW8	NNW7	W6	WSW10	WSW11	NNW9.5	N29
7-Feb	W6	WSW10	SW7	SW10	WSW14	SW11	W5	WNW2	W4	SW3	S5	SW17	WSW16	SW15	WSW14	SW10	SW13	SW13	SW16	WSW10	WSW16	SW9	SSW4	SSE5	SW9.4	SW17
8-Feb	SE8	SSE8	SE11	SE12	ESE14	ESE14	ESE12	SE13	SE15	ESE12	ESE11	ESE12	SE10	ESE7	ESE4	S2	W1	NNW3	NNW8	NNW12	N26	N23	N26	N20	E5.3	N26
9-Feb	NNW29	N26	N17	NNW14	NNW11	NNW12	N8	NW4	NNW2	NW2	NNW6	N19	N14	N10	NW7	NW8	WNW6	WNW4	NNW5	NW3	W5	WSW5	SW7	SW6	NNW8.1	NNW29
10-Feb	SSW6	SSE7	SSE7	SE10	SE10	SE14	SE15	SE15	SSE12	SE15	SE15	SE13	SE9	SSE8	SSW8	SSE4	ESE9	NE3	N9	NNW8	NNW11	NNW10	NNW9	NNW11	SE4.8	SE15
11-Feb	NNW12	NNW8	NNW10	NNW8	NNW7	NW8	WNW3	NW2	NW4	NNW7	NNW7	NNW3	NNW4	WSW4	WSW4	WSW5	ESE1	SSW1	NW2	NNW5	NW3	NNW3	NW2	NNW3	NW4.1	NNW12
12-Feb	NNE0	SE4	SE8	ESE4	E2	W1	SE4	ESE4	SE2	SE1	E1	SSW0	SSW3	SSW5	SSW2	NNW2	N13	NNW11	NNW10	NNW10	NNW12	NNW11	NNW9	NNW10	N2.5	N13
13-Feb	NNW11	NNW14	NNW11	NNW8	NNW6	NNW5	NW3	NW5	NW7	NW5	NW4	NW5	NW6	NNW11	NNW10	N12	N16	NNW13	NNW13	NNW9	NNW12	NNW11	NNW9	NNW7	NNW8.6	N16
14-Feb	NNW7	NNW6	NW6	NW4	NW4	NW5	NW4	NNW1	SE3	SE10	SE4	WSW3	WSW5	WSW11	WSW13	WSW7	ESE3	E4	ESE2	NNW4	NNW6	NNW4	WSW3	SE3	WNW2.0	WSW13
15-Feb	SSE6	SE10	SE12	SE13	SE11	SE13	SE14	SE15	SE13	SE9	ESE10	ESE8	ESE5	NNE2	E1	SSE1	ESE1	ENE4	NNE2	NNW1	N7	N3	N4	NNW5	ESE5.4	SE15
16-Feb	NW3	NW3	NNW1	SE2	SSE1	SE5	SE8	SSE5	SE9	SE6	SE4	SE7	SE8	SE10	SE13	ESE18	SE21	SE22	SE22	SE24	SE25	SE29	SE31	SE35	SE12.3	SE35
17-Feb	SE29	SE19	SE16	SE18	SE20	SE23	SE24	SE31	ESE23	SE25	ESE22	SE18	ESE23	ESE21	ESE24	ESE24	ESE22	ESE17	ESE13	SE18	ESE18	SE15	SE20	SE9	SE20.4	SE31
18-Feb	SE11	ESE11	ESE10	ESE4	SE12	SE11	ESE10	SE9	SE13	SE10	SE6	ESE5	SE14	SE10	S12	SSE9	SE9	SE13	SE18	SE20	SE17	SE18	SE20	SE19	SE11.9	SE20
19-Feb	SE18	SE17	SE14	SE15	SE13	SE19	SE23	SE24	SE27	SE26	SE31	SE20	SE23	SE22	SE30	SE30	SE25	ESE24	SE32	SE35	ESE31	SE32	SE38	SE32	SE25.0	SE38
20-Feb	SE25	SSE22	SSE23	SSE22	SSE22	SSE21	SSE20	SSE17	SSE19	S21	S18	S18	S15	S12	SE10	SE13	SE13	ESE12	ESE7	SE3	SW2	NNW8	NNW4	WNW1	SSE13.0	SE25
21-Feb	SSE3	SE6	SE3	W1	NE1	N2	NNW5	NNW5	NNW5	NW5	NNW8	NNW9	NW12	NNW9	NNW13	N16	N18	N18	N16	N15	N16	N13	NNW11	NNW10	NNW7.9	N18
22-Feb	NNW10	NNW8	NNW8	NNW7	NNW5	NW6	NNW7	NW4	NW3	N4	NW4	NNW5	NW3	NW2	NW1	WNW2	SW5	W3	NNW2	WSW1	ESE0	SSE3	NW2	SSE2	NW3.2	NNW10
23-Feb	SSE4	SE12	SE11	UO	UO	UO	UO	UO	S6	NW15	NNW30	N26	N28	N26	N20	N21	N20	N14	N9	N6	N4	NNE4	NNE6	NNE8	N10.8	NNW30
24-Feb	N7	N10	N9	NW6	NNW7	NW6	NNW8	NNW5	W2	SW1	WSW3	SSE1	SE6	ESE3	SSE4	SE4	N4	N3	N5	NNW7	N5	NNW11	N18	N20	NNW4.7	N20
25-Feb	N20	NNW20	N21	NNW20	NNW17	N17	NNW10	NNW10	NNW11	N13	NNW11	NNW11	NNW8	NNW10	NW7	NW6	NNW9	NNW11	NNW8	NNW7	NNW7	NW10	NNW11	NW7	NNW11.5	N21
26-Feb	N1	SE4	SE10	SSE8	SSW5	SE3	ESE5	NNW4	NNW13	NNW8	NNW12	NNW12	NW8	NNW8	NW8	NNW13	NNW14	NNW11	NNW10	NNW7	NNW8	NNW8	NNW8	NNW8	NNW5.4	NNW14
27-Feb	NW7	NW7	N5	NNW5	NNW3	NNW6	NNW6	NNW3	SSE2	N7	SSW3	W0	NW12	NNW19	N23	N23	N21	N18	N15	N17	N17	N12	NNE8	NNW7	N9.3	N23
28-Feb	NE5	NNE3	N3	N3	NNE1	N2	NNE4	NE3	NW3	N1	SSE1	ESE8	SE15	SE12	SE13	SE15	SE14	SE10	SE9	SE6	SE7	SE7	SE9	SE11	ESE5.2	SE15
	NNE1.9	NE1.4	ENE1.7	ESE1.0	ESE1.4	ESE1.9	ESE2.8	ESE3.0	ESE2.8	E2.8	ENE2.7	NE2.4	NE1.5	NNE1.6	N1.1	NE1.7	NE1.8	NNE1.8	NNE1.8	NNE1.4	N2.5	NNE2.5	NNE1.8	NE1.2	Diurnal Average	
	SE29	N26	N26	N27	N27	SE23	SE24	SE31	SE27	SE26	SE31	N28	N29	N27	SE30	SE30	SE25	ESE24	SE32	SE35	ESE31	SE32	SE38	SE35	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 - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7 km/h on Feb 9 01:00

Minimum Value: 1 km/h on Feb 12 01:00

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

Hours in Service:	672
Hours of Data:	667
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-Feb	3	3	4	4	4	4	4	4	5	4	5	5	5	5	5	4	4	4	5	4	4	7	6	6	7
2-Feb	5	5	5	5	5	5	4	5	4	4	5	5	4	4	4	3	2	2	2	2	1	1	1	2	5
3-Feb	2	1	2	2	2	3	2	1	2	2	2	1	1	2	1	3	2	3	4	4	5	7	6	2	7
4-Feb	2	3	1	2	2	2	1	2	2	2	2	2	2	2	3	3	2	2	1	2	2	2	3	4	4
5-Feb	3	3	5	3	2	2	2	2	3	3	3	4	4	3	2	5	3	2	4	4	3	3	2	2	5
6-Feb	4	3	4	7	4	4	2	2	1	3	5	5	5	5	4	5	4	2	1	1	2	2	3	4	7
7-Feb	4	3	4	5	7	4	3	2	3	2	3	3	2	2	2	2	2	3	3	3	3	6	3	2	7
8-Feb	1	2	2	1	2	1	1	1	2	1	1	1	1	2	1	1	1	2	1	3	5	5	6	4	6
9-Feb	7	5	3	3	2	2	2	1	1	1	3	4	3	3	2	3	1	1	1	1	2	1	3	3	7
10-Feb	2	3	3	2	2	3	2	2	2	2	2	2	2	3	3	2	1	2	3	2	2	2	2	2	3
11-Feb	2	1	2	2	1	2	2	1	1	2	1	1	1	1	2	2	1	1	1	1	2	2	1	1	2
12-Feb	1	2	2	2	1	1	2	2	1	1	1	1	1	1	1	2	3	2	2	4	2	2	2	2	4
13-Feb	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2	3	3	3	2	2	1	1	3	1	3
14-Feb	1	1	1	1	1	1	2	1	3	2	2	1	2	3	2	5	2	2	1	3	3	2	1	1	5
15-Feb	2	1	1	1	1	1	1	1	3	2	1	1	2	1	1	1	1	1	1	1	4	2	2	1	4
16-Feb	1	1	1	1	1	1	1	1	2	2	1	2	2	2	4	4	3	3	3	3	4	3	3	6	6
17-Feb	5	4	4	3	4	4	5	4	4	4	4	4	5	5	5	5	5	3	3	4	4	3	3	5	5
18-Feb	3	1	3	3	2	2	2	2	2	2	1	2	2	3	4	3	2	2	3	2	3	3	3	3	4
19-Feb	3	3	3	3	2	4	3	3	2	5	4	5	5	5	5	6	5	5	5	4	4	5	4	5	6
20-Feb	3	3	4	3	3	3	4	4	4	4	3	3	2	3	2	2	1	3	2	2	1	2	2	1	4
21-Feb	2	1	1	1	1	3	2	3	2	2	2	2	3	3	3	3	2	3	3	4	3	3	3	2	4
22-Feb	2	2	2	2	1	1	2	2	1	1	2	1	2	1	1	2	2	2	1	1	1	2	1	2	2
23-Feb	2	2	3	UO	UO	UO	UO	UO	3	5	5	7	6	6	5	4	4	3	3	3	2	2	2	2	7
24-Feb	1	2	3	2	2	1	2	2	1	1	2	1	2	1	2	2	3	1	1	2	2	3	3	5	5
25-Feb	4	4	4	3	4	4	3	3	3	3	2	2	2	3	3	2	2	2	2	2	2	3	2	2	4
26-Feb	1	2	2	2	2	3	2	5	3	2	3	3	2	2	2	2	3	3	2	2	1	2	2	2	5
27-Feb	2	2	2	1	1	3	3	4	4	4	3	1	6	5	4	4	5	4	3	4	4	4	3	2	6
28-Feb	1	1	2	2	1	1	2	1	1	1	2	3	3	4	3	3	2	3	3	2	2	2	2	2	4
	7	5	5	7	7	5	5	5	5	5	5	7	6	6	5	6	5	5	5	4	5	7	6	6	
	Diurnal Maximum																								

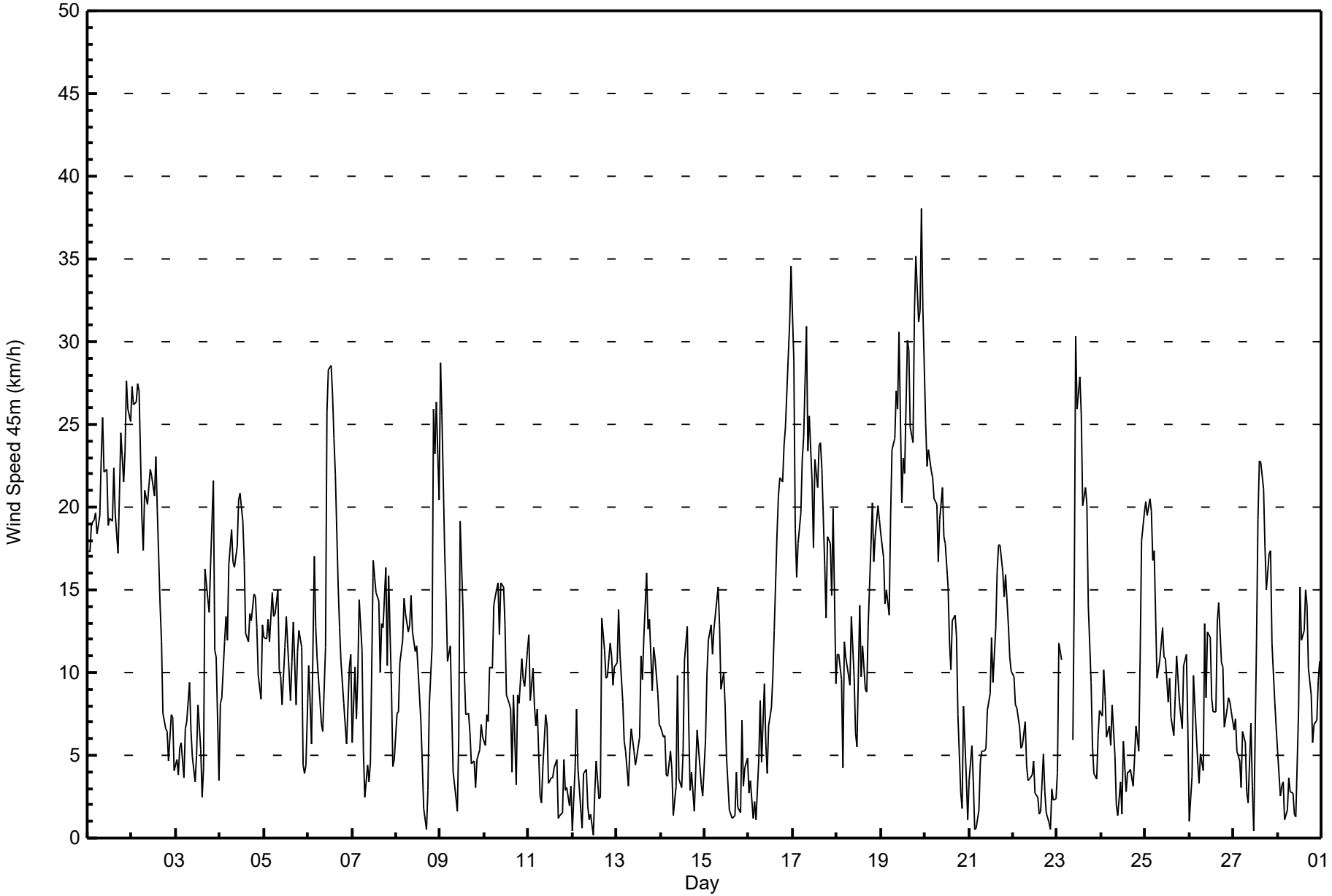
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 45m (WS45) - km/h

Lower Camp Met Tower - February 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	181	27.14	27.14
6 - 11	211	31.63	58.77
12 - 19	167	25.04	83.81
20 - 28	91	13.64	97.45
29 - 38	17	2.55	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 667

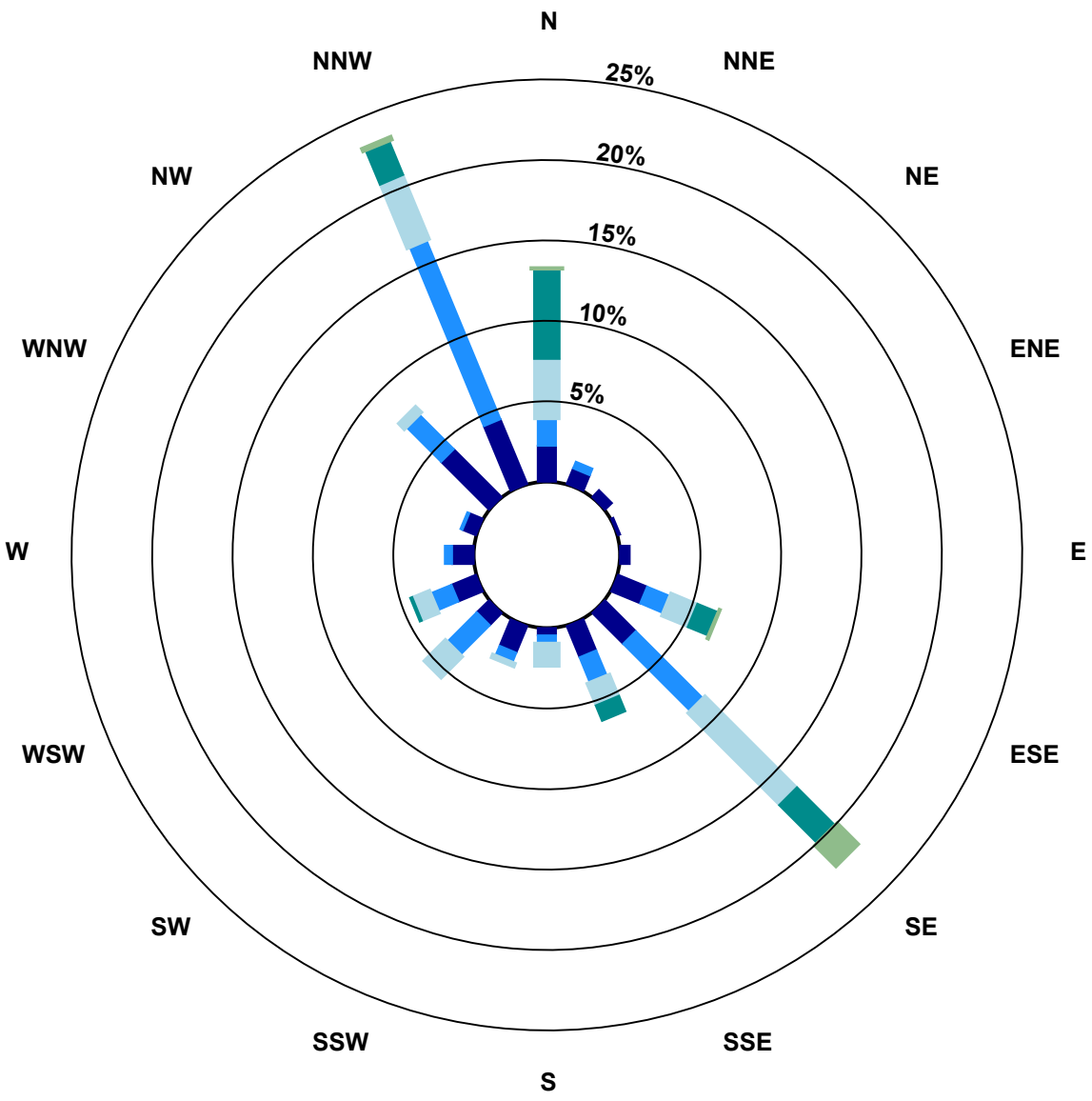
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 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: 667

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 100m (WS100) - km/h

Lower Camp Met Tower - February 2025

Maximum Speed: 43 km/h on Feb 19 23:00

Maximum Daily Speed Average: 31.9 km/h on Feb 19

Minimum Speed Value: 0 km/h on Feb 24 09:00

Minimum Daily Speed Average: 0.8 km/h on Feb 22

Maximum Diurnal Speed Average: 2.5 km/h at hour 22

Minimum Diurnal Speed Average: 0.1 km/h at hour 10

Monthly Average Velocity: 0.7 km/h 5.7 deg

Percentiles: P_1 = 1 P_{10} = 4 Q_1 = 8 Median = 12 Q_3 = 19 P_{90} = 27 P_{99} = 37

Hours in Service:	672
Hours of Data:	672
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-Feb	N21	N21	N23	N24	N24	N23	N24	N27	N29	N26	N26	N22	NNW23	NNW24	NNW28	NNW25	NNW22	NNW27	NNW30	N26	N27	N33	N31	N30	N25.4	N33
2-Feb	N32	N32	N32	N32	N32	N24	N22	N24	N25	N25	N26	N25	N23	NNW25	NNW22	NNW16	NNW15	N11	N9	N8	NNW7	N9	N11	NW7	N20.4	N32
3-Feb	W7	WSW10	W10	WSW12	WSW13	WSW10	W9	WSW11	WSW11	SW12	SW11	SW7	SSW8	SSW5	SSW3	SW8	SW20	SW20	WSW23	WSW27	WSW33	WSW23	WSW21	SSW7	WSW13.0	WSW33
4-Feb	SSW8	SSW9	SW7	SSW9	SSW11	SSW11	S13	S14	S16	S16	SSE16	SSE17	SSE15	SSE14	S11	S15	SSW18	SSW18	SSW18	SSW19	SSW15	SSW13	SW13	SW18	S13.1	SSW19
5-Feb	SSW16	SSW16	SSW17	SSW16	SSW15	SSW13	SSW13	S14	SSW14	SSW9	SW11	SW14	SW15	SW14	SW10	SW12	SW16	SW13	SW17	SW18	WSW19	SW14	SW12	WSW12	SW13.6	WSW19
6-Feb	WSW17	SW15	WSW13	WSW23	WSW18	W16	NW14	NW12	NW12	N15	N29	N32	N31	N29	N27	N26	NNW20	NW19	NW17	NW12	NW11	WNW11	W12	WSW14	NW13.2	N32
7-Feb	WSW14	WSW16	WSW15	SW18	WSW24	WSW21	WSW16	WSW12	WSW18	SW13	SW10	WSW20	SW19	SW17	WSW16	SW13	WSW19	WSW20	WSW25	WSW20	W19	WSW17	WSW15	SW8	WSW16.6	WSW25
8-Feb	SW4	SW11	SW10	SW7	SSW9	SSW8	S7	S9	S9	S10	SSE8	SSE6	SE4	S3	S1	WNW1	NW2	N9	NNE11	N16	N29	N27	N30	N25	NNW2.3	N30
9-Feb	N35	N29	N20	N19	N15	NNW19	N15	N6	NNE5	NE5	NNE10	N20	N14	N11	NW9	NNW10	NW8	NW5	NNW6	N5	WNW7	NW9	W13	WSW23	NNW11.2	N35
10-Feb	WSW18	SW12	SW14	SW11	SW13	SSW12	SW11	SSW13	SW13	SSW10	S10	S9	SSW7	SSW12	SSW10	SSW5	SE8	E5	NNE9	N11	N14	N13	N12	N15	SW4.6	WSW18
11-Feb	N18	NNW17	NNW15	N17	NNW13	NNW11	NNW9	NW7	NNW12	N10	NNE8	N4	N3	W3	WNW4	W2	SE2	S3	SSW2	N3	N4	NE5	E2	SE2	NNW6.1	N18
12-Feb	SE3	SSE3	SE4	SE6	ESE7	ESE6	SSE4	SE7	ESE6	ESE5	E5	N2	WSW2	SW3	S3	N2	N13	N15	N15	NNW17	NNW17	N15	NNW14	NNW15	NNE3.8	NNW17
13-Feb	NNW16	NNW18	N13	NNW10	NNW10	NNE11	N9	NNW10	NNW11	NNW11	NW10	NW6	NW7	NNW12	NNW10	N13	N17	N16	N19	N13	N15	N16	N14	N9	N11.9	N19
14-Feb	NNW9	NNW8	NNW10	NNW10	N10	NNW11	NNW9	NW6	WSW5	WSW4	NNW2	NNW3	WNW6	W7	W8	WSW6	ESE3	ESE6	ESE8	ESE5	NNW4	NW6	WSW4	SW3	NW3.5	NNW11
15-Feb	SW5	SW5	SSW5	SSW6	SSW4	WSW5	SW9	SW8	SW10	SW7	SSW6	S3	WSW6	WNW5	NW3	SW3	SSW1	ENE4	NE7	NE3	NNE12	NNE6	NNE5	N5	WSW1.8	NNE12
16-Feb	N4	N4	NNE2	SE8	SE11	SE13	SE15	SE8	SE12	SE10	SE9	SE11	SSE8	SE15	SE17	SE22	SE24	SE29	SE28	SE31	SE34	SE37	SE37	SE38	SE17.1	SE38
17-Feb	SE33	SE23	SE21	SE24	SE28	SE27	SE29	SE35	SE29	SE29	SE27	SE21	SE26	SE25	ESE27	SE27	ESE28	ESE24	SE21	SE24	SE26	SE23	SE23	SE15	SE25.5	SE35
18-Feb	SE16	SE17	SE17	SE14	SSE17	SSE17	SSE16	SSE13	SSE16	SSE11	SSE9	SSE9	SSE15	SSE10	S14	SSE10	SE10	SE18	SE26	SE27	SE24	SE26	SE25	SE26	SSE16.4	SE27
19-Feb	SE27	SE26	SE24	SE24	SE22	SE27	SE32	SE31	SE32	SE33	SE35	SE25	SE26	SE24	SE34	SE36	SE34	SE32	SE39	SE43	SE39	SE42	SE43	SE36	SE31.9	SE43
20-Feb	SE29	SSE27	SSE30	SSE30	SSE28	SSE25	S25	SSE21	S22	S24	S20	S19	S16	S12	SSE9	S10	SSE10	SE16	SE13	SE10	SE7	N4	N5	ENE2	SSE16.0	SSE30
21-Feb	SSE4	SSE3	ESE6	ESE2	S2	NNE3	NNE9	N7	NNE7	NNW10	NW8	NNW9	NW13	NNW11	NNW15	N17	N18	N18	N18	N18	N18	N13	N14	NNW15	N9.1	N18
22-Feb	NNW17	NNW14	NNW16	NNW10	NNW7	NNW6	NNW9	NNW5	WNW5	NNE3	NW4	WNW4	SW2	S5	SE6	SSE7	S7	SSW5	S4	SSE9	SE11	SE11	SE11	SSE6	NNW0.8	NNW17
23-Feb	S3	SE11	SSE10	SE9	SSE13	SSE9	SSE12	SW9	WSW19	NW22	NNW35	N29	N32	N30	N23	N22	N21	N16	N11	N8	NNE6	NE4	NNE7	NE7	N7.9	NNW35
24-Feb	NNE8	N12	NNE9	NNW7	NNW9	NNW6	NNW9	N6	E0	SSE0	SSW4	S6	SE9	ESE4	SSE5	SE4	N2	NE2	NE8	N9	NNE10	N13	N19	N22	N5.1	N22
25-Feb	N22	N23	N23	N23	N21	N20	NNW12	NNW14	N13	N13	N11	NNW12	NNW8	NNW10	NNW7	NW7	NNW8	N12	N10	N8	N8	NNW12	NNW16	NW10	N13.3	N23
26-Feb	W3	S4	S10	SW13	SW15	SW8	SW4	N4	NNW17	N13	N14	NNW12	NNW9	NNW7	NNW9	N14	NNW16	NNW15	NNW15	NNW11	NNW10	NNW13	NNW12	NNW11	NNW7.2	NNW17
27-Feb	NNW8	NW8	NNW5	NNW5	N2	NW6	N5	NNW2	SSW6	WNW3	SSW8	WSW12	WNW24	NNW23	N24	NNE24	N22	N19	NNE17	NNE20	N20	N13	NNE9	NNW8	N9.5	NNE24
28-Feb	NE6	NNE4	NNE2	NNE3	ENE3	NW1	NNE3	ENE5	N1	SW1	SE5	SE10	SE17	SE14	SE13	SE15	SE15	SE14	SE15	SE13	SE11	SE15	SE12	SSE13	SE7.4	SE17
	NNW2.0	NW1.7	NW0.9	WSW1.0	SW1.4	SW0.9	S0.8	S1.2	SW1.9	S0.1	NE1.2	N1.2	NW1.3	NNW1.7	N1.3	NE1.6	NNE1.3	NE1.8	NE2.1	NE1.6	NNE2.5	NNE2.5	NNE1.8	NNW0.9	Diurnal Average	
	N35	N32	N32	N32	N32	SE27	SE32	SE35	SE32	SE33	SE35	N32	N32	N30	SE34	SE36	SE34	SE32	SE39	SE43	SE39	SE42	SE43	SE38	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 Feb 3 22:00

Minimum Value: 0 km/h on Feb 8 16:00

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

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

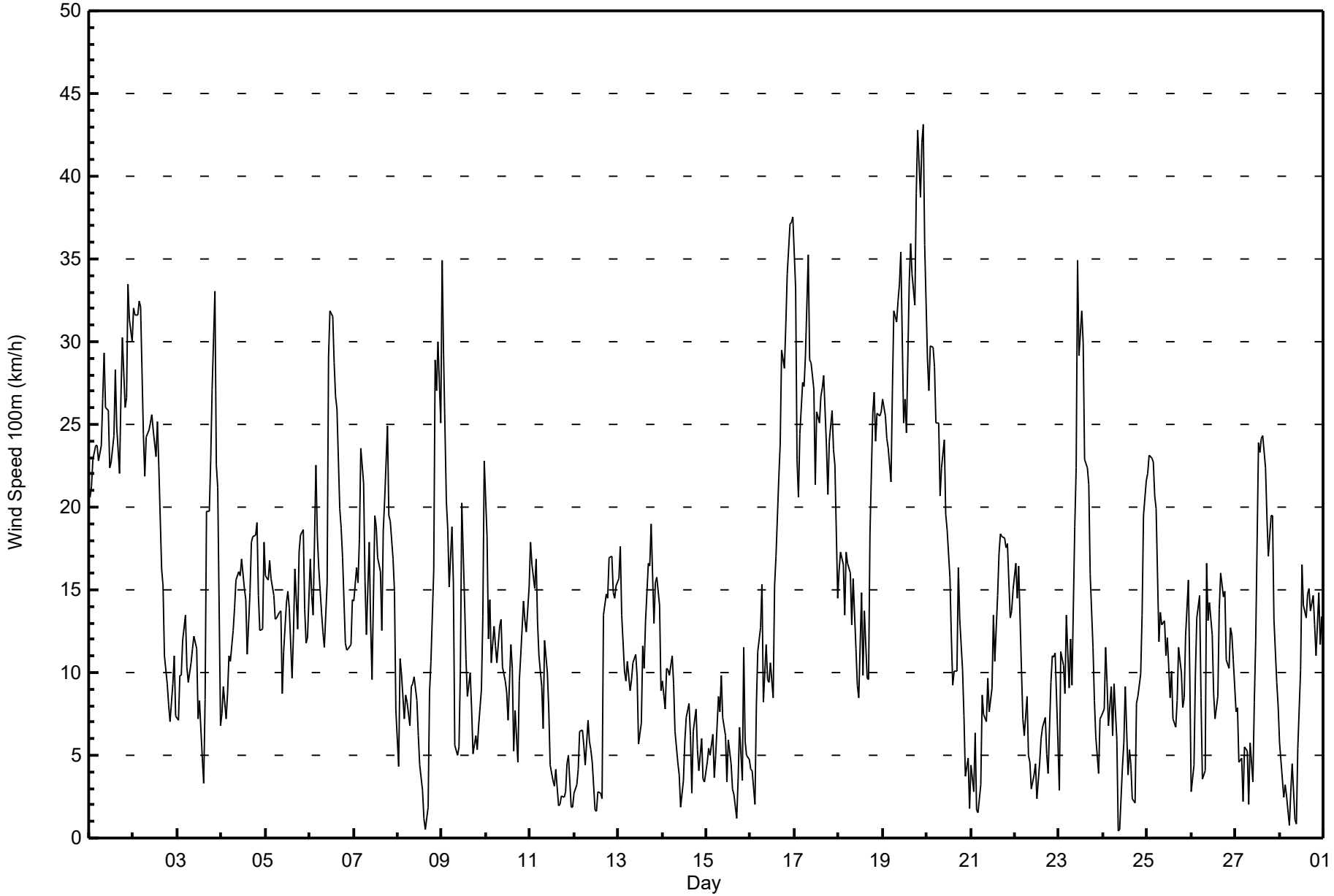
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Feb	2	2	3	3	2	2	3	3	4	3	4	4	5	5	5	4	4	4	5	4	4	6	5	5	6
2-Feb	5	5	5	5	5	4	4	3	4	4	4	4	3	3	3	2	2	3	2	1	1	1	1	1	5
3-Feb	1	1	2	2	2	2	1	1	1	3	2	2	2	1	1	5	1	1	3	2	3	7	4	4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

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 100m (WS100) - km/h

Lower Camp Met Tower - February 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	111	16.52	16.52
6 - 11	199	29.61	46.13
12 - 19	198	29.46	75.60
20 - 28	112	16.67	92.26
29 - 38	47	6.99	99.26
> 38	5	0.74	100.00

Total Number of Valid Hours: 672

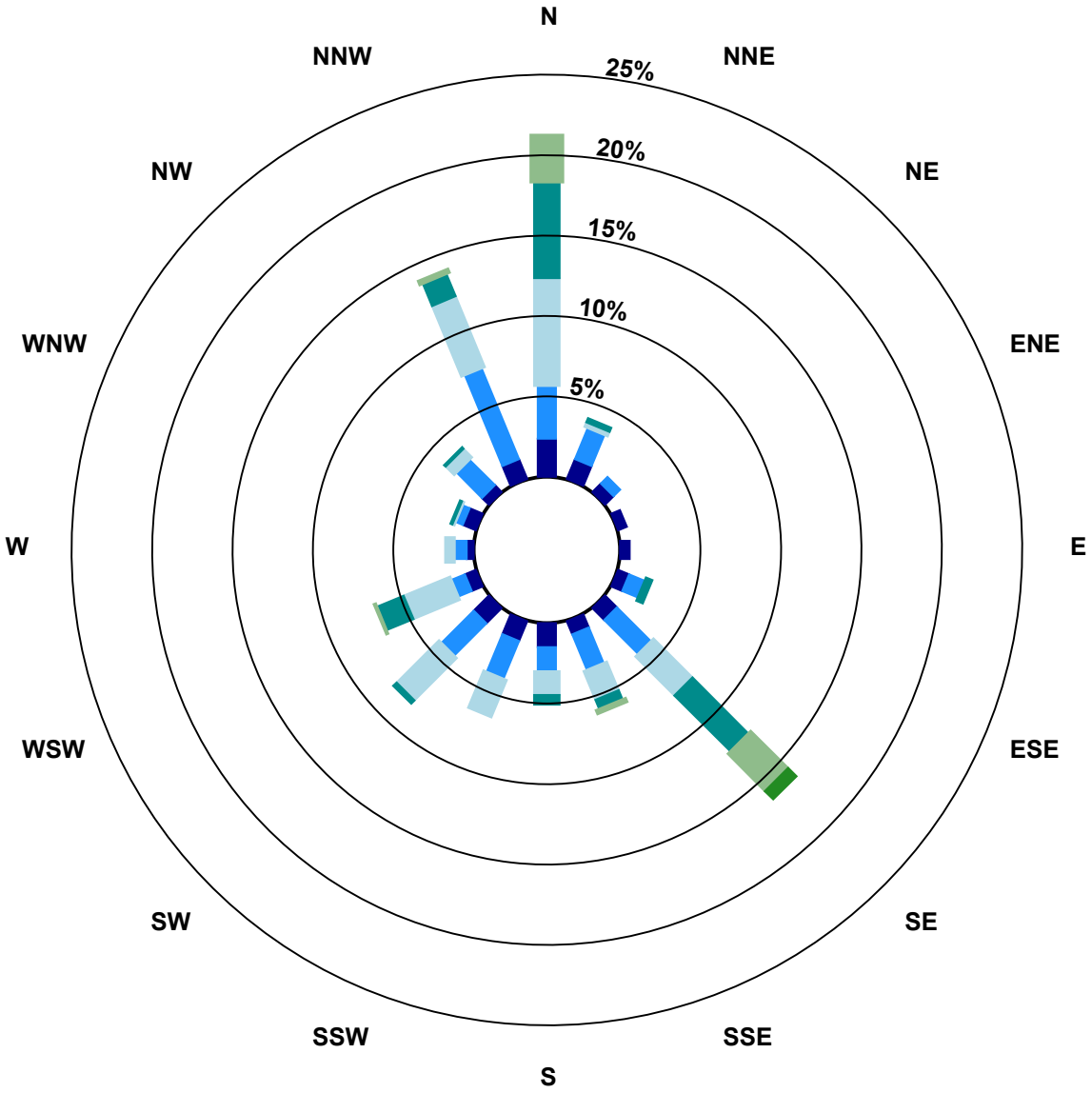
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Wind Speed 100m (WS100) - km/h

Lower Camp Met Tower



Classes (km/h)

0 - 5

6 - 11

12 - 19

20 - 28

29 - 38

> 38

Total Number of Valid Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 163m (WS163) - km/h

Lower Camp Met Tower - February 2025

Maximum Speed: 46 km/h on Feb 19 20:00

Maximum Daily Speed Average: 33.6 km/h on Feb 19

Minimum Speed Value: 0 km/h on Feb 28 07:00

Minimum Daily Speed Average: 4.0 km/h on Feb 12

Maximum Diurnal Speed Average: 3.6 km/h at hour 21

Minimum Diurnal Speed Average: 0.5 km/h at hour 11

Monthly Average Velocity: 0.9 km/h 327.9 deg

Percentiles: P_1 = 1 P_{10} = 5 Q_1 = 10 Median = 16 Q_3 = 23 P_{90} = 30 P_{99} = 40

Hours in Service:	672
Hours of Data:	670
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-Feb	N21	N22	N24	N25	N25	N24	N25	N27	N31	N28	N27	N24	NNW25	NNW27	NNW32	N28	NNW25	NNW30	N32	N29	N29	N39	N35	N34	N27.6	N39
2-Feb	N35	N35	N37	NNE38	N37	N28	N24	N27	N28	N28	N28	N25	N24	N25	N22	N17	N17	N13	NNE13	N10	N10	N15	N15	NW8	N23.1	NNE38
3-Feb	NW7	W5	WNW11	W12	W17	W14	W15	WNW8	WNW10	W16	WSW15	SW12	SW10	SSW8	SSW8	SW13	SW21	WSW23	WSW31	WSW36	W34	W27	W23	WSW20	WSW15.4	WSW36
4-Feb	WSW19	WSW22	WSW21	SW20	SW20	SW17	SW17	SW17	SW18	SW18	SSW17	SSW16	SSW15	SSW13	SSW14	SSW16	SSW17	SW20	SW19	SW21	SW20	SW17	SW19	SW22	SW17.7	WSW22
5-Feb	SSW20	SW19	SW21	SW21	SW19	SW21	SW22	SW17	SW19	SW16	SW15	SW17	SW17	SW17	SW12	SW14	WSW19	WSW18	WSW21	WSW23	WSW22	WSW20	WSW18	W17	SW17.9	WSW23
6-Feb	W20	WSW20	WSW22	WSW25	W22	W20	NW19	NW20	WNW18	N18	NNE30	N35	N33	N29	N27	N28	NNW22	NNW24	NNW24	NW17	NNW17	NW12	WNW11	W15	NW16.6	N35
7-Feb	W17	W19	W19	WSW24	WSW28	W27	W21	W22	W25	WSW22	WSW19	WSW15	WSW18	WSW18	WSW17	WSW14	WSW19	WSW23	W26	W23	WNW23	WNW17	W16	WSW22	W19.8	WSW28
8-Feb	WSW17	WSW13	WSW18	WSW16	SW13	SW14	SW12	SW11	SW11	SW10	SW8	SSW6	SSW5	W5	NW1	NE3	N5	NNE12	NNE16	NNE21	NNE31	N30	N33	N29	NW4.9	N33
9-Feb	N38	N33	N22	N22	N21	N23	N22	NNE10	NNE7	NE13	NNE15	NNE20	N14	N11	NNW9	NNW10	N9	N6	N7	NNW7	NW11	WNW19	WNW15	W21	N13.9	N38
10-Feb	W24	WSW25	WSW27	WSW19	WSW25	WSW20	WSW20	SW18	SW21	WSW18	SW14	SW12	SW15	SW17	SW14	SSW9	S6	WSW2	NNE11	NNE17	NNE20	NNE16	NNE15	N17	WSW9.5	WSW27
11-Feb	NNE21	N24	NNE21	NNE23	NNE22	N18	N13	NNW11	N12	NNE14	NNE11	NNE6	NNE3	WNW4	NNW4	N1	E2	SE1	SSW3	W1	N4	ENE4	SE4	SE2	N8.4	N24
12-Feb	S2	SSW6	S6	S8	SE7	SE6	SSE6	SSE7	SE9	SE8	ESE5	NE2	N4	N1	SSE3	NE2	N13	N17	N18	N18	N18	NNE17	N15	N17	NNE4.0	N18
13-Feb	N16	N17	N13	N11	NNE13	NNE20	NNE22	NNE18	NNE11	N10	N9	N8	NNW8	N11	N10	N13	N16	N21	NNE25	NNE23	NNE24	NNE24	NNE21	NE15	NNE15.3	NNE25
14-Feb	NNE11	NNE13	N10	N12	N14	N14	N14	N11	NW6	WNW6	NNW8	NNW7	NNW8	NW6	WNW5	WSW3	S4	ESE5	SSE6	SE6	ESE3	WSW2	W3	WNW3	N4.8	N14
15-Feb	WNW6	WSW7	W8	W16	W16	WNW15	WNW9	W14	W19	W19	W18	W13	WNW11	WNW9	NW7	WSW2	WSW1	NE4	NE8	NE9	NE19	NE10	NE7	NE6	WNW6.2	W19
16-Feb	ENE4	ESE4	SSE3	SSE6	SSE8	SE10	SSE14	SSE9	SE15	SSE13	SSE11	SSE13	SE14	SE21	SE21	SE23	SE26	SE32	SE33	SE36	SE36	SE40	SE40	SE36	SE19.2	SE40
17-Feb	SE30	SE22	SE21	SE26	SE26	SE29	SE31	SE35	SE31	SE31	SE29	SE23	SE26	SE26	SE28	SE29	SE33	SE29	SE27	SE29	SE32	SE27	SSE29	SSE20	SE27.7	SE35
18-Feb	SSE21	SSE18	SSE20	SSE18	SSE25	SSE29	SSE25	SSE22	SSE27	SSE19	SSE17	SSE13	SSE19	SSE11	S17	S11	SSE10	SE23	SE26	SSE30	SSE30	SSE30	SSE30	SSE27	SSE21.3	SSE30
19-Feb	SSE29	SE27	SE26	SE26	SE25	SE30	SE36	SE31	SE32	SE36	SE37	SE29	SE29	SSE26	SE33	SE37	SE37	SE36	SE44	SE46	SE41	SE43	SSE40	SSE35	SE33.6	SE46
20-Feb	SSE29	SSE32	SSE34	S36	S37	S31	S30	S26	S25	S26	S21	S20	S17	S13	SSW10	SW15	SSW12	S11	S8	SSE3	ENE1	SW2	N7	NE8	S17.1	S37
21-Feb	SE5	SSE10	SE9	SSE3	WSW2	NNE1	NE8	NNE11	NE11	NNE13	N10	NNW11	NNW14	N12	N15	N17	N18	N17	N19	N19	N18	NNE14	N14	N15	N9.4	N19
22-Feb	N18	N18	N14	N9	NNE8	NNE5	N7	NE5	W2	SE10	SE10	S9	SE12	S13	SSE16	SSE12	SSE12	S13	SSE10	SSE18	SSE23	S22	S10	SSW9	SSE4.9	SSE23
23-Feb	SSW12	SSW10	SSW18	SSW14	S17	SSW13	SSW15	WSW19	W29	NW26	N34	N30	N33	N33	N24	N23	N21	N16	N12	NNE11	NNE7	NE5	NE9	NE7	NNW7.6	N34
24-Feb	NE9	NNE13	NE12	N6	N9	NNE5	N8	NE7	ESE4	SE3	S11	S12	SE9	SE6	SSE7	SE5	WSW1	SSE2	NNE5	NNE11	N13	NNE16	N19	N21	NNE4.7	N21
25-Feb	N22	N24	N23	N23	N22	NNE22	N12	N15	N14	N13	N11	N12	N8	N10	N7	NNW7	NNW8	N11	NNE11	NE8	NE10	N7	N16	NNW11	N13.3	N24
26-Feb	W5	SW7	SW14	WSW20	WSW24	WSW19	WSW15	NNW7	N16	NNE16	N15	N11	N8	NNW7	NNW9	N13	N16	N17	N15	NNE13	NNE9	NE7	NE8	NNE13	NNW6.6	WSW24
27-Feb	NNE7	NNW6	NW3	NW3	ESE7	W3	NNE2	SE5	S11	UO	UO	W23	WNW35	NNW25	N25	NNE24	N23	NNE21	NNE18	NNE20	NNE21	NNE14	NE10	N8	N9.6	WNW35
28-Feb	NNE7	NNE5	NE1	ENE2	E3	SW3	NNW0	E4	SE4	S5	SE12	SE11	SE17	SE15	SE13	SE14	SE17	SE19	SE21	SE22	SE16	SE18	SSE13	SSE14	SE9.5	SE22
	NNW2.6	NW2.4	W2.3	WSW3.2	WSW2.9	WSW2.6	WSW2.0	WSW1.3	SW2.7	WSW0.6	NE0.5	NW1.0	NW1.6	NNW1.5	N0.9	NE1.3	NNE1.0	NE1.7	NE2.6	ENE2.5	NE3.6	NE2.9	NNE2.5	NNW1.6	Diurnal Average	
	N38	N35	N37	NNE38	N37	S31	SE36	SE35	SE32	SE36	SE37	N35	WNW35	N33	SE33	SE37	SE37	SE36	SE44	SE46	SE41	SE43	SSE40	SE36	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 - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8 km/h on Feb 27 13:00

Minimum Value: 0 km/h on Feb 9 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:	672
Hours of Data:	670
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-Feb	2	3	4	3	3	3	3	3	3	3	4	3	5	4	5	3	3	3	4	4	4	6	5	5	6
2-Feb	5	5	5	5	5	5	4	4	4	5	5	4	3	4	3	2	2	3	3	2	2	2	3	1	5
3-Feb	1	1	3	3	2	5	2	1	3	1	1	2	2	1	2	3	2	2	3	2	2	2	2	5	5
4-Feb	4	3	3	2	2	2	2	1	2	2	2	2	2	2	2	4	2	2	1	2	2	3	5	3	5
5-Feb	3	4	4	4	4	5	4	3	3	3	3	4	3	3	2	6	2	2	2	2	2	1	1	1	6
6-Feb	2	3	4	5	3	3	4	3	4	4	6	6	5	4	3	4	3	2	3	2	2	2	1	4	6
7-Feb	1	2	1	3	4	3	2	2	2	2	3	2	2	1	1	1	1	3	2	3	2	3	3	4	4
8-Feb	2	3	1	2	2	2	1	1	1	1	1	2	1	1	1	2	1	3	1	3	5	6	5	4	6
9-Feb	7	5	3	2	2	2	2	5	2	3	2	4	2	3	2	1	2	1	0	1	5	2	2	2	7
10-Feb	1	2	3	2	2	3	4	2	2	3	3	2	3	2	3	3	2	2	5	2	2	2	3	2	5
11-Feb	2	1	2	0	1	3	2	2	1	6	4	1	1	2	2	1	1	1	1	1	1	1	1	1	6
12-Feb	1	2	2	1	1	1	2	2	1	1	2	1	2	1	1	2	3	2	3	1	1	1	1	1	3
13-Feb	1	2	1	2	2	4	2	3	4	2	2	1	3	2	2	2	2	2	2	3	1	1	1	2	4
14-Feb	1	2	1	2	1	1	1	2	1	1	1	2	1	1	1	2	3	1	1	1	1	1	1	1	3
15-Feb	1	1	3	1	2	4	2	2	1	1	1	2	1	2	3	1	1	1	1	2	6	4	2	2	6
16-Feb	1	1	1	2	2	1	2	1	2	2	2	2	3	3	3	3	2	2	3	2	3	3	4	3	4
17-Feb	3	3	5	2	2	2	2	2	3	2	2	3	3	3	3	3	4	2	3	3	3	3	4	5	5
18-Feb	5	2	3	2	4	1	4	4	2	5	3	2	5	3	4	3	3	3	2	4	5	4	4	3	5
19-Feb	2	3	2	2	2	4	4	5	3	4	3	4	4	4	5	4	3	4	4	4	3	4	5	4	5
20-Feb	4	4	3	2	3	3	3	4	4	4	4	3	2	3	2	3	3	2	1	2	1	2	2	1	4
21-Feb	2	1	1	2	1	2	3	1	3	3	2	3	3	2	2	2	2	2	3	3	3	3	2	1	3
22-Feb	1	2	1	1	1	1	1	2	1	4	4	2	4	2	3	2	2	3	2	2	3	4	3	2	4
23-Feb	4	3	1	1	2	2	2	4	2	5	3	6	5	6	5	5	4	3	3	5	1	2	2	3	6
24-Feb	2	1	2	1	1	1	1	2	2	3	4	3	2	2	2	2	1	1	2	2	1	3	2	3	4
25-Feb	3	3	3	3	4	4	2	2	2	2	2	2	2	2	3	2	2	2	1	1	1	2	1	2	4
26-Feb	1	2	2	1	2	4	3	3	4	2	3	2	2	2	3	2	2	1	1	3	1	1	2	1	4
27-Feb	3	2	2	1	3	3	3	6	4	UO	UO	2	8	3	3	4	4	3	3	4	4	4	3	2	8
28-Feb	2	1	1	2	1	1	1	1	1	1	3	2	2	2	3	2	2	3	2	2	2	2	2	2	3
	7	5	5	5	5	5	4	6	4	6	6	6	8	6	5	6	4	4	5	5	6	6	5	5	
	Diurnal Maximum																								

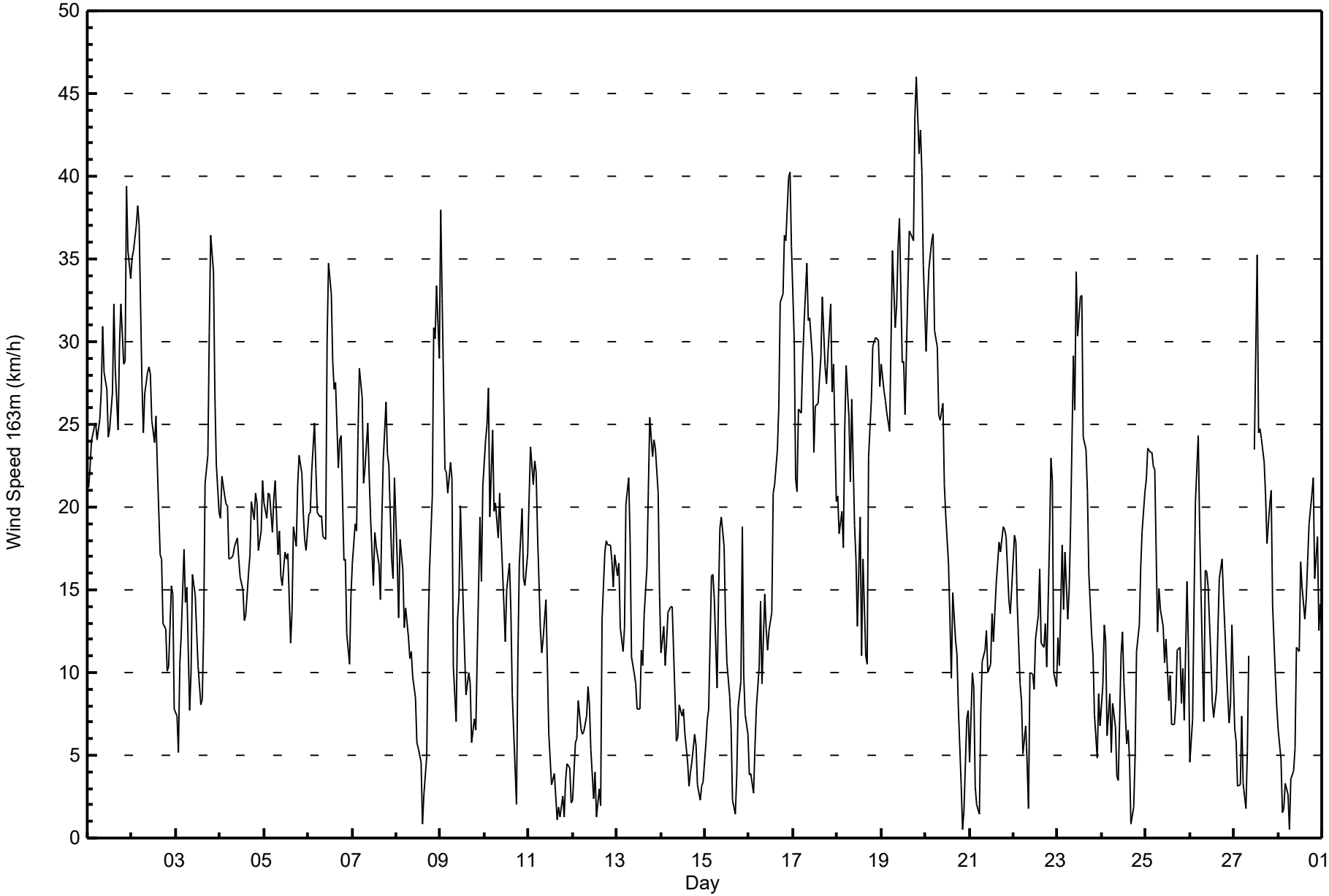
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 163m (WS163) - km/h

Lower Camp Met Tower - February 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	73	10.90	10.90
6 - 11	145	21.64	32.54
12 - 19	209	31.19	63.73
20 - 28	159	23.73	87.46
29 - 38	76	11.34	98.81
> 38	8	1.19	100.00

Total Number of Valid Hours: 670

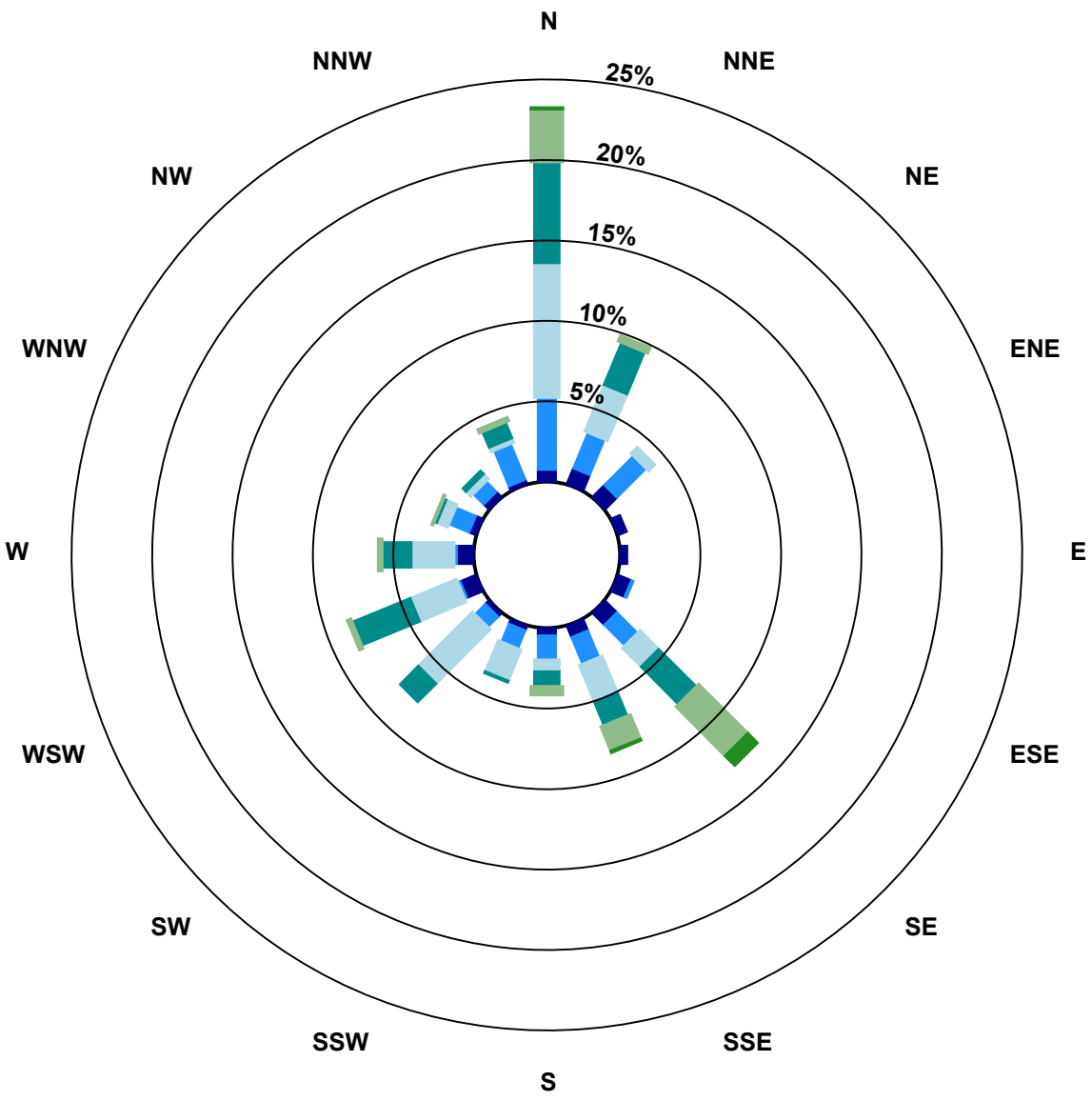
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 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: 670

Direction of Maximum Speed: 136 deg on Feb 19 23:00
Direction of Maximum Daily Speed Average: 133.6 deg on Feb 19

Direction of Minimum Speed: 124 deg on Feb 11 17:00

Direction of Minimum Daily Speed Average: 1.3 deg on Feb 12

Monthly Average Direction: 89.2 deg

Hours in Service:	672
Hours of Data:	665
Hours of Missing Data:	7
Percent Operational Time:	99.0

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-Feb	343	339	343	346	344	340	344	349	352	351	349	344	336	332	336	336	330	330	340	344	350	359	356	345	343.9
2-Feb	349	350	358	4	5	356	346	352	353	358	359	354	347	344	345	341	340	336	356	340	326	325	322	290	350.9
3-Feb	305	286	280	220	262	243	227	174	129	131	119	118	121	121	143	174	213	224	250	250	254	264	248	129	203.7
4-Feb	140	125	130	131	129	133	133	133	134	132	130	130	131	133	139	165	160	157	153	154	145	142	150	198	140.3
5-Feb	163	180	189	151	142	136	137	137	150	126	157	218	219	214	211	228	228	211	220	223	225	160	122	147	178.7
6-Feb	209	190	161	234	254	264	319	348	11	358	2	1	357	352	348	344	335	319	337	344	323	310	255	252	329.7
7-Feb	305	252	234	211	239	228	310	313	219	167	143	233	240	240	239	225	228	240	242	249	244	264	135	128	234.4
8-Feb	139	139	131	133	131	133	135	137	136	135	133	128	124	127	135	164	225	314	336	350	8	358	355	348	108.6
9-Feb	344	357	345	336	335	334	346	265	332	275	316	5	352	346	328	303	285	285	322	283	337	103	137	255	337.0
10-Feb	139	127	126	129	125	125	124	128	126	124	128	130	128	139	184	159	117	22	347	337	343	342	333	337	122.2
11-Feb	341	331	326	305	307	318	312	319	319	300	301	313	318	231	233	241	124	249	316	315	333	293	338	306	302.0
12-Feb	349	105	130	127	330	313	126	123	301	318	163	188	201	214	206	306	350	345	345	341	340	344	345	343	345.1
13-Feb	340	342	344	333	333	314	320	329	318	328	298	338	320	339	341	355	358	342	346	337	351	336	306	315	338.9
14-Feb	304	313	321	333	304	330	336	302	137	139	140	219	229	243	244	256	141	161	263	325	295	298	144	144	260.5
15-Feb	188	133	133	138	140	135	133	133	132	128	127	134	127	115	112	124	107	40	295	308	348	342	352	323	128.1
16-Feb	312	313	202	282	322	327	146	337	135	147	149	137	135	144	144	128	134	125	123	120	123	127	131	136	131.6
17-Feb	137	138	135	141	130	125	125	126	120	127	126	132	125	124	120	124	118	115	127	127	110	140	138	162	127.9
18-Feb	125	118	114	248	128	112	111	136	135	140	147	120	137	141	178	165	152	143	136	137	133	139	138	137	138.4
19-Feb	135	142	150	153	152	136	127	134	131	125	129	129	132	149	138	132	131	123	128	128	121	130	136	137	133.6
20-Feb	139	150	161	160	157	155	165	163	166	169	175	172	175	171	147	135	129	127	104	276	243	320	297	269	158.6
21-Feb	182	168	334	319	8	328	315	320	329	341	348	336	316	324	326	357	354	357	351	346	347	345	337	327	340.3
22-Feb	337	329	334	323	341	321	325	321	337	349	314	353	338	341	326	277	236	298	291	271	310	296	295	235	318.1
23-Feb	244	131	UO	UO	UO	UO	UO	UO	UO	316	341	360	349	355	346	356	354	9	9	345	349	21	22	25	--
24-Feb	351	348	348	318	331	318	327	322	271	224	240	139	137	121	175	151	354	324	323	324	335	336	352	351	336.3
25-Feb	352	342	346	345	342	349	335	333	343	351	343	337	337	333	317	310	344	337	341	329	340	324	329	314	339.2
26-Feb	66	113	130	134	142	111	122	336	339	337	340	337	323	342	313	340	337	329	325	338	338	332	338	328	344.1
27-Feb	318	320	1	330	322	349	333	348	112	356	168	62	338	342	0	13	1	3	6	12	7	3	29	338	357.9
28-Feb	48	22	354	344	321	346	20	13	301	15	191	128	128	128	130	134	142	153	146	151	129	131	139	130	128.5
	52.1	84.6	99.5	135.6	124.1	116.5	115.8	115.8	118.3	108.7	94.2	78.8	95.4	67.3	173.1	79.8	56.7	29.9	10.3	30.3	8.6	19.5	56.1	87.5	
	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: 106 deg on Feb 3 05:00

Minimum Value: 4 deg on Feb 10 04:00

Percentiles: P_1 = 6 P_{10} = 9 Q_1 = 14 Median = 18 Q_3 = 34 P_{90} = 60 P_{99} = 93

Hours in Service:	672
Hours of Data:	665
Hours of Missing Data:	7
Hours of Calibration:	0
Percent Operational Time:	99.0

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-Feb	14	16	15	16	15	16	16	15	16	16	17	19	17	18	17	16	17	16	15	15	14	20	16	17	20
2-Feb	15	17	18	16	16	21	17	15	16	18	17	17	16	14	14	15	15	18	22	17	17	13	14	59	59
3-Feb	39	44	45	72	106	70	45	27	28	21	15	10	13	14	30	43	9	16	33	30	27	60	63	44	106
4-Feb	12	10	8	9	8	9	7	8	7	6	10	10	10	10	11	12	7	6	5	8	7	8	23	29	29
5-Feb	16	19	28	16	9	7	9	11	26	15	36	40	13	16	20	16	14	14	17	14	19	84	62	49	84
6-Feb	48	45	46	21	30	30	26	21	33	22	19	17	16	15	14	15	19	10	14	15	30	54	19	32	54
7-Feb	81	35	89	60	66	62	43	69	72	97	35	14	11	12	9	12	12	26	21	50	27	81	67	23	97
8-Feb	12	9	11	9	5	6	6	7	6	8	7	8	10	9	7	30	70	60	18	12	18	17	15	15	70
9-Feb	15	16	15	14	15	23	47	67	42	29	23	19	19	20	28	31	17	36	29	44	19	88	40	88	88
10-Feb	39	12	11	4	10	5	5	7	8	6	7	9	13	18	40	51	15	51	13	18	16	14	16	15	51
11-Feb	18	31	28	19	26	38	53	58	26	44	28	39	31	40	56	11	84	83	28	29	44	33	28	53	84
12-Feb	44	60	11	17	90	39	47	49	70	92	51	45	23	17	28	65	13	13	14	59	15	14	9	12	92
13-Feb	15	15	12	24	36	65	43	20	18	30	63	31	37	18	20	23	18	13	10	29	6	18	31	35	65
14-Feb	23	18	13	18	14	13	20	27	60	23	23	16	12	9	10	62	32	78	55	27	34	48	86	56	86
15-Feb	76	11	9	8	7	10	11	7	8	9	8	8	17	70	42	46	48	80	49	52	39	61	35	44	80
16-Feb	29	33	66	79	19	99	34	85	16	37	27	27	11	11	20	19	14	15	15	17	20	16	19	16	99
17-Feb	15	15	16	14	17	16	18	18	17	16	18	18	18	19	17	16	16	15	17	12	23	18	10	55	55
18-Feb	35	26	80	75	13	27	12	8	5	6	12	23	8	12	25	20	13	8	7	8	10	9	10	9	80
19-Feb	14	12	9	10	7	17	15	16	15	17	15	20	17	15	14	15	16	17	14	14	13	14	11	11	20
20-Feb	10	8	9	9	8	9	10	11	11	10	11	12	9	13	15	8	7	9	72	70	84	26	72	97	97
21-Feb	26	54	68	46	95	38	40	39	36	24	19	22	21	19	18	18	16	18	15	17	15	15	16	16	95
22-Feb	18	25	24	23	23	33	18	33	35	28	48	21	51	46	64	65	18	31	91	83	28	77	35	23	91
23-Feb	89	40	UO	UO	UO	UO	UO	UO	UO	44	14	17	17	18	16	15	17	21	27	40	41	56	16	18	89
24-Feb	16	16	19	20	19	18	17	42	48	63	31	60	31	51	36	28	71	27	24	20	22	17	16	16	71
25-Feb	17	15	15	15	16	16	18	19	15	16	17	18	21	18	30	30	20	20	16	25	19	15	16	19	30
26-Feb	55	11	10	12	88	75	67	20	14	17	19	18	21	22	35	14	15	18	17	26	17	17	22	25	88
27-Feb	22	24	21	24	39	48	44	95	89	57	61	38	26	16	23	18	18	21	18	22	19	20	34	21	95
28-Feb	33	59	55	48	62	39	37	33	24	62	99	26	16	16	18	13	12	9	17	19	35	27	14	11	99
	89	60	89	79	106	99	67	95	89	97	99	60	51	70	64	65	84	83	91	83	84	88	86	97	
	Diurnal Maximum																								

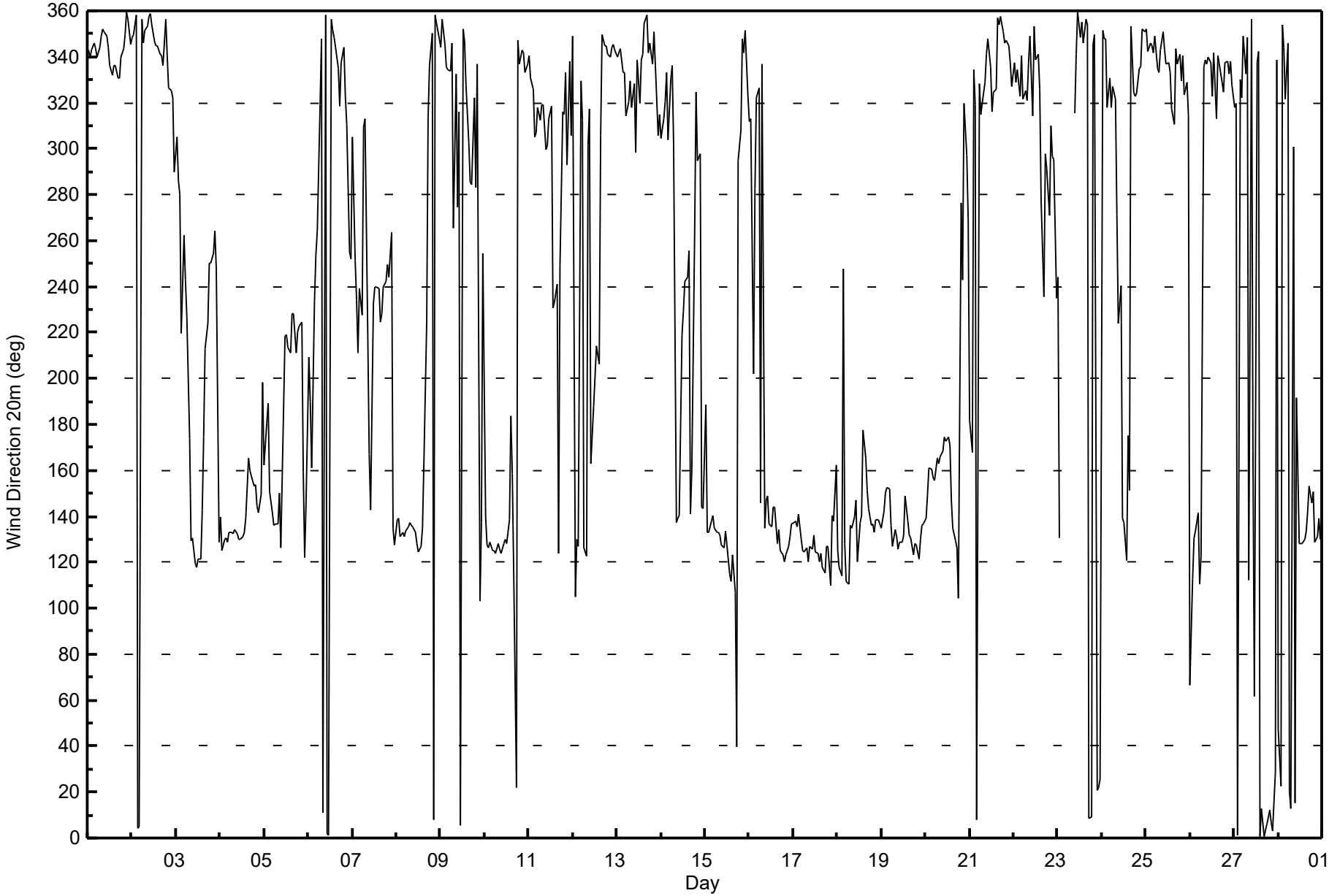
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 20m (WD20) - deg

Lower Camp Met Tower - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 45m (WD45) - deg

Lower Camp Met Tower - February 2025

Direction of Maximum Speed: 134 deg on Feb 19 23:00
Direction of Maximum Daily Speed Average: 129.3 deg on Feb 19

Direction of Minimum Speed: 201 deg on Feb 12 12:00

Direction of Minimum Daily Speed Average: 2.0 deg on Feb 14

Monthly Average Direction: 57.6 deg

Hours in Service:	672
Hours of Data:	667
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-Feb	347	344	347	349	347	342	347	351	354	354	352	346	336	335	338	337	332	333	341	346	352	359	358	348	346.2
2-Feb	351	354	360	4	4	359	350	355	357	1	360	357	348	347	347	343	343	343	358	347	337	333	325	307	353.0
3-Feb	242	224	253	223	225	234	237	231	221	198	173	153	129	128	137	192	215	217	235	240	249	258	247	143	223.6
4-Feb	148	142	123	128	133	131	129	132	142	137	131	134	131	132	143	169	170	167	165	168	155	161	184	208	145.5
5-Feb	177	189	200	172	151	148	148	142	166	140	180	217	218	216	214	229	230	220	228	228	230	221	202	203	192.5
6-Feb	227	213	206	235	251	260	312	326	348	0	2	1	358	354	349	346	338	322	327	339	337	280	257	245	326.5
7-Feb	266	246	233	221	237	236	268	284	262	216	185	234	237	236	237	227	228	232	236	239	240	236	201	152	234.4
8-Feb	125	154	132	127	123	123	123	125	125	123	116	118	128	115	111	176	261	342	343	347	6	359	357	351	79.0
9-Feb	347	358	349	340	339	334	351	318	345	322	334	5	354	351	326	313	300	296	331	324	260	239	231	230	336.8
10-Feb	196	163	163	142	136	131	135	138	147	124	124	128	129	166	195	161	108	47	354	345	346	342	340	333	128.1
11-Feb	340	329	332	340	329	314	303	304	326	336	333	331	337	248	248	240	119	194	312	335	319	336	320	332	322.6
12-Feb	13	133	126	106	86	262	128	106	126	130	100	201	209	210	201	329	353	344	339	333	333	338	337	341	351.9
13-Feb	341	343	345	338	331	343	312	311	322	319	310	319	314	343	343	356	359	346	344	339	337	337	337	328	338.5
14-Feb	340	334	325	312	318	326	320	327	129	130	143	244	255	251	248	251	114	91	123	330	331	327	238	128	287.1
15-Feb	150	127	133	131	131	135	133	131	125	125	113	119	113	24	80	162	111	74	12	337	4	359	358	339	118.8
16-Feb	321	312	330	132	160	131	131	153	132	143	130	131	134	134	133	123	129	124	126	124	126	128	129	131	128.8
17-Feb	131	132	130	129	124	124	125	126	119	125	122	124	122	120	119	122	119	117	123	126	114	127	133	144	124.4
18-Feb	125	117	122	123	125	125	120	126	126	127	125	119	135	141	178	160	143	137	128	131	129	132	134	131	131.8
19-Feb	127	128	134	135	140	127	127	130	130	126	127	125	127	140	132	128	127	123	129	128	123	130	134	134	129.3
20-Feb	136	150	158	160	156	155	166	162	166	169	175	173	175	171	146	136	127	123	120	126	215	339	342	286	156.0
21-Feb	149	125	134	268	38	352	327	335	339	321	333	332	316	329	329	358	356	358	353	351	351	349	341	333	345.0
22-Feb	338	331	335	329	340	322	328	326	319	353	307	335	312	309	325	289	223	270	341	238	116	167	308	162	321.4
23-Feb	163	130	128	UO	UO	UO	UO	UO	190	317	343	1	351	357	349	358	357	9	8	353	5	23	18	27	359.1
24-Feb	360	351	354	326	335	324	329	333	274	222	243	159	126	103	160	141	350	356	356	336	354	343	354	354	347.5
25-Feb	354	346	350	348	345	352	338	336	344	354	347	340	339	336	323	314	344	343	345	335	340	326	331	318	342.5
26-Feb	4	135	138	166	208	136	122	332	332	327	344	339	325	340	315	342	338	333	329	333	334	332	336	335	335.4
27-Feb	320	320	352	332	328	341	334	338	163	350	195	280	317	343	0	11	1	4	8	10	6	3	29	342	355.1
28-Feb	42	19	1	356	18	356	21	35	311	1	162	122	126	124	125	129	134	143	134	142	139	130	131	129	120.6
	32.7	52.6	75.0	101.3	105.6	109.0	110.8	110.8	114.9	92.8	62.0	47.4	50.8	12.6	7.5	40.1	34.9	33.6	21.3	23.4	7.0	12.0	31.6	37.4	
	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 45m (WD45) - deg

Lower Camp Met Tower - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 107 deg on Feb 12 12:00

Minimum Value: 3 deg on Feb 15 02:00

Percentiles: P_1 = 3 P_{10} = 6 Q_1 = 8 Median = 12 Q_3 = 23 P_{90} = 44 P_{99} = 84

Hours in Service:	672
Hours of Data:	667
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-Feb	9	8	9	9	9	10	10	8	8	9	10	13	12	11	11	10	10	11	11	10	8	13	10	11	13
2-Feb	8	10	9	8	8	11	11	9	9	10	10	10	9	8	7	9	10	12	16	11	10	7	6	26	26
3-Feb	19	16	16	20	35	26	8	6	20	32	39	22	15	19	25	47	5	6	10	15	9	39	28	51	51
4-Feb	15	20	7	8	11	5	3	4	8	6	4	4	4	5	14	11	6	7	5	10	9	12	26	21	26
5-Feb	15	18	20	20	9	11	14	9	26	18	32	31	11	14	18	16	10	13	12	11	11	43	53	42	53
6-Feb	26	37	47	15	18	21	18	18	17	15	13	10	8	9	8	10	16	5	5	10	11	18	9	12	47
7-Feb	69	15	44	48	34	22	49	65	44	58	44	7	6	7	5	11	6	7	5	15	8	50	47	30	69
8-Feb	12	19	8	6	3	3	3	3	3	5	4	4	6	7	13	33	76	19	7	11	10	11	9	8	76
9-Feb	9	8	8	9	8	9	14	32	34	66	16	12	12	14	26	21	13	31	7	36	17	17	13	27	66
10-Feb	25	25	32	12	16	10	9	13	13	6	6	7	16	23	30	50	11	35	9	14	9	7	10	7	50
11-Feb	7	6	6	6	19	11	32	47	13	15	9	26	17	44	47	14	52	36	41	8	30	18	22	27	52
12-Feb	86	29	4	12	60	83	39	18	47	70	71	107	31	16	29	62	5	8	7	27	6	6	6	6	107
13-Feb	9	8	8	10	20	19	23	23	26	17	25	27	31	12	15	18	10	6	4	8	4	5	11	7	31
14-Feb	6	11	7	15	21	9	12	53	34	7	42	23	18	10	7	41	34	16	59	31	13	35	39	27	59
15-Feb	10	3	3	4	4	3	4	4	7	8	8	8	19	35	50	51	62	8	68	48	33	51	23	11	68
16-Feb	15	20	82	31	50	7	6	26	9	20	19	11	7	7	17	10	6	6	5	6	6	4	4	5	82
17-Feb	7	9	9	8	8	6	7	5	8	6	9	13	10	12	10	10	9	8	10	7	9	10	7	31	31
18-Feb	13	12	12	49	5	11	10	8	5	8	12	15	7	10	24	25	12	8	5	6	8	8	7	7	49
19-Feb	8	7	8	9	8	7	6	5	3	6	6	12	11	14	9	8	8	9	6	5	6	7	5	6	14
20-Feb	7	8	8	8	8	8	9	11	11	10	10	10	8	14	16	9	11	4	8	40	41	21	28	68	68
21-Feb	32	10	34	77	71	72	18	27	20	18	16	19	15	14	14	10	7	9	8	12	9	8	9	10	77
22-Feb	8	8	13	13	14	25	11	27	32	22	36	21	59	42	72	79	24	42	50	57	93	48	50	61	93
23-Feb	43	5	5	UO	UO	UO	UO	UO	36	40	8	9	9	10	11	7	9	12	20	21	24	37	14	12	43
24-Feb	13	10	10	15	13	12	10	22	52	71	33	61	19	40	33	32	66	23	20	13	16	12	10	9	71
25-Feb	8	9	8	8	10	9	13	13	10	8	11	11	13	12	25	24	15	18	9	16	12	9	9	16	25
26-Feb	57	21	10	17	42	76	15	75	7	9	12	14	18	17	25	8	10	11	10	11	7	9	13	16	76
27-Feb	16	14	19	14	35	40	41	95	91	74	77	106	17	12	18	13	10	10	11	13	9	12	27	14	106
28-Feb	25	37	40	37	80	48	28	22	25	63	99	18	9	12	14	9	11	10	18	18	11	15	8	8	99
	86	37	82	77	80	83	49	95	91	74	99	107	59	44	72	79	76	42	68	57	93	51	53	68	
	Diurnal Maximum																								

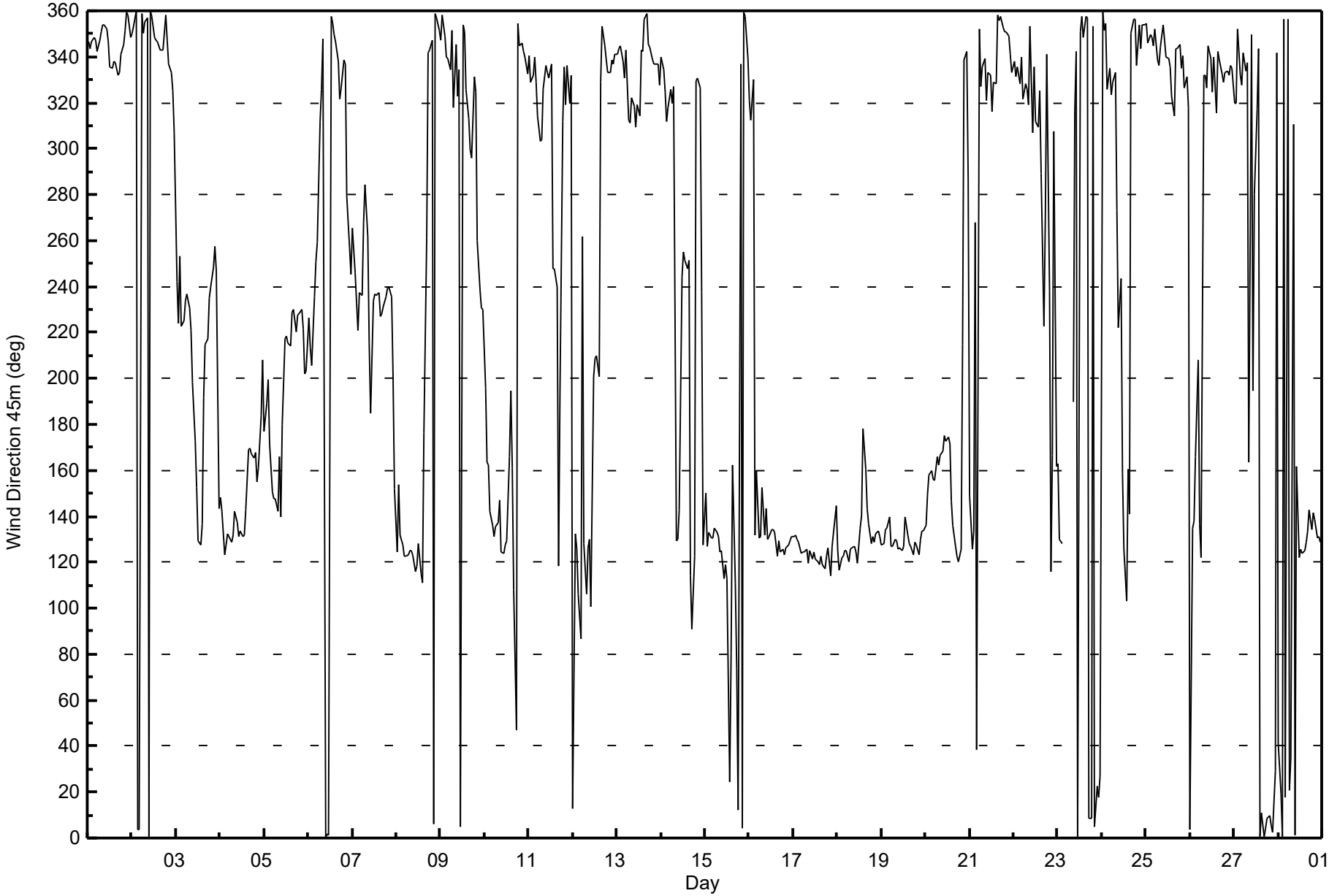
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 45m (WD45) - deg

Lower Camp Met Tower - February 2025



Direction of Maximum Speed: 139 deg on Feb 19 23:00
Direction of Maximum Daily Speed Average: 133.5 deg on Feb 19

Direction of Minimum Speed: 98 deg on Feb 24 09:00

Direction of Minimum Daily Speed Average: 0.8 deg on Feb 22

Monthly Average Direction: 5.7 deg

Hours in Service:	672
Hours of Data:	672
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-Feb	354	353	354	353	354	351	354	355	357	357	354	349	339	338	341	342	335	337	344	349	354	1	360	352	350.1
2-Feb	352	355	2	6	5	1	355	358	359	3	1	358	349	347	348	345	348	353	6	358	348	350	350	310	356.0
3-Feb	271	244	263	249	243	256	263	252	246	236	234	214	203	199	204	222	223	230	240	244	247	248	245	211	240.3
4-Feb	197	210	215	206	206	195	185	179	186	184	159	161	157	154	175	189	192	199	197	204	201	204	220	218	190.3
5-Feb	199	204	210	205	193	210	204	187	210	202	219	221	219	218	214	229	233	233	236	236	240	236	233	244	218.7
6-Feb	243	235	242	242	256	263	304	305	313	357	4	4	359	358	352	349	337	326	322	309	313	286	275	254	317.7
7-Feb	253	256	242	235	242	248	242	248	256	236	232	242	235	234	237	232	240	247	255	254	263	257	239	221	244.9
8-Feb	231	227	225	220	201	200	180	169	172	169	168	151	145	179	190	289	322	352	17	2	8	2	0	356	346.9
9-Feb	350	1	356	350	352	347	359	359	12	43	14	8	354	351	326	327	326	326	346	350	300	307	261	249	343.2
10-Feb	238	228	235	232	222	212	214	202	217	194	183	174	199	212	212	196	125	92	23	7	0	355	356	350	229.3
11-Feb	351	344	347	350	348	337	334	317	332	355	12	3	4	271	289	274	129	174	196	3	350	51	98	135	346.0
12-Feb	146	154	132	135	112	123	148	129	113	105	94	8	257	220	176	353	358	354	350	344	346	354	348	348	13.1
13-Feb	348	348	350	346	348	12	7	346	328	327	324	313	325	344	344	2	2	354	0	357	356	1	357	351	350.2
14-Feb	343	346	340	346	349	340	330	324	242	241	328	328	303	274	265	248	106	111	123	116	341	326	252	232	322.3
15-Feb	215	236	197	203	204	238	235	224	233	231	206	185	252	296	318	222	204	67	51	44	28	24	22	3	241.4
16-Feb	6	9	23	127	124	126	130	133	142	144	136	138	147	134	128	124	129	129	131	130	131	132	133	136	130.5
17-Feb	135	139	136	133	128	126	128	129	127	127	126	128	125	124	121	124	123	123	127	130	128	132	140	143	128.9
18-Feb	140	134	143	133	152	154	155	162	165	166	148	156	151	151	179	165	144	134	134	139	140	141	143	139	146.4
19-Feb	137	135	130	132	132	129	133	134	132	130	131	131	131	141	135	132	134	131	132	131	132	138	139	140	133.5
20-Feb	143	153	156	163	163	162	171	167	171	172	179	176	180	178	168	175	165	139	138	125	126	3	5	66	161.0
21-Feb	159	150	123	121	178	29	15	2	13	328	318	330	321	339	337	2	357	360	356	354	354	357	350	342	352.0
22-Feb	345	338	337	333	342	332	332	339	299	16	306	284	228	181	143	153	169	207	177	160	139	141	132	156	327.8
23-Feb	178	145	151	140	162	162	161	229	246	318	348	2	353	1	353	1	0	6	6	3	18	39	25	39	357.5
24-Feb	17	1	12	344	345	345	344	11	98	152	205	173	130	109	151	139	349	55	38	5	16	2	355	358	9.6
25-Feb	358	352	356	354	352	0	347	343	349	357	351	345	345	342	334	324	341	355	6	351	354	340	341	324	349.5
26-Feb	273	191	190	216	229	226	223	354	348	350	352	347	332	335	329	350	345	345	343	344	344	339	341	342	329.5
27-Feb	330	316	340	336	10	315	355	339	207	297	210	244	301	343	2	13	4	9	13	13	11	10	33	348	350.8
28-Feb	37	14	12	23	75	304	21	62	349	235	137	124	128	127	127	128	132	133	133	129	146	136	145	147	125.9
	340.7	320.4	309.5	255.7	214.9	230.3	180.9	170.6	223.0	173.4	38.9	8.1	326.3	348.0	0.1	37.4	31.1	45.7	47.0	54.5	21.3	26.4	18.2	334.7	
	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 100m (WD100) - deg

Lower Camp Met Tower - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 102 deg on Feb 27 08:00

Minimum Value: 2 deg on Feb 14 05:00

Percentiles: P_1 = 3 P_{10} = 4 Q_1 = 6 Median = 9 Q_3 = 16 P_{90} = 29 P_{99} = 75

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

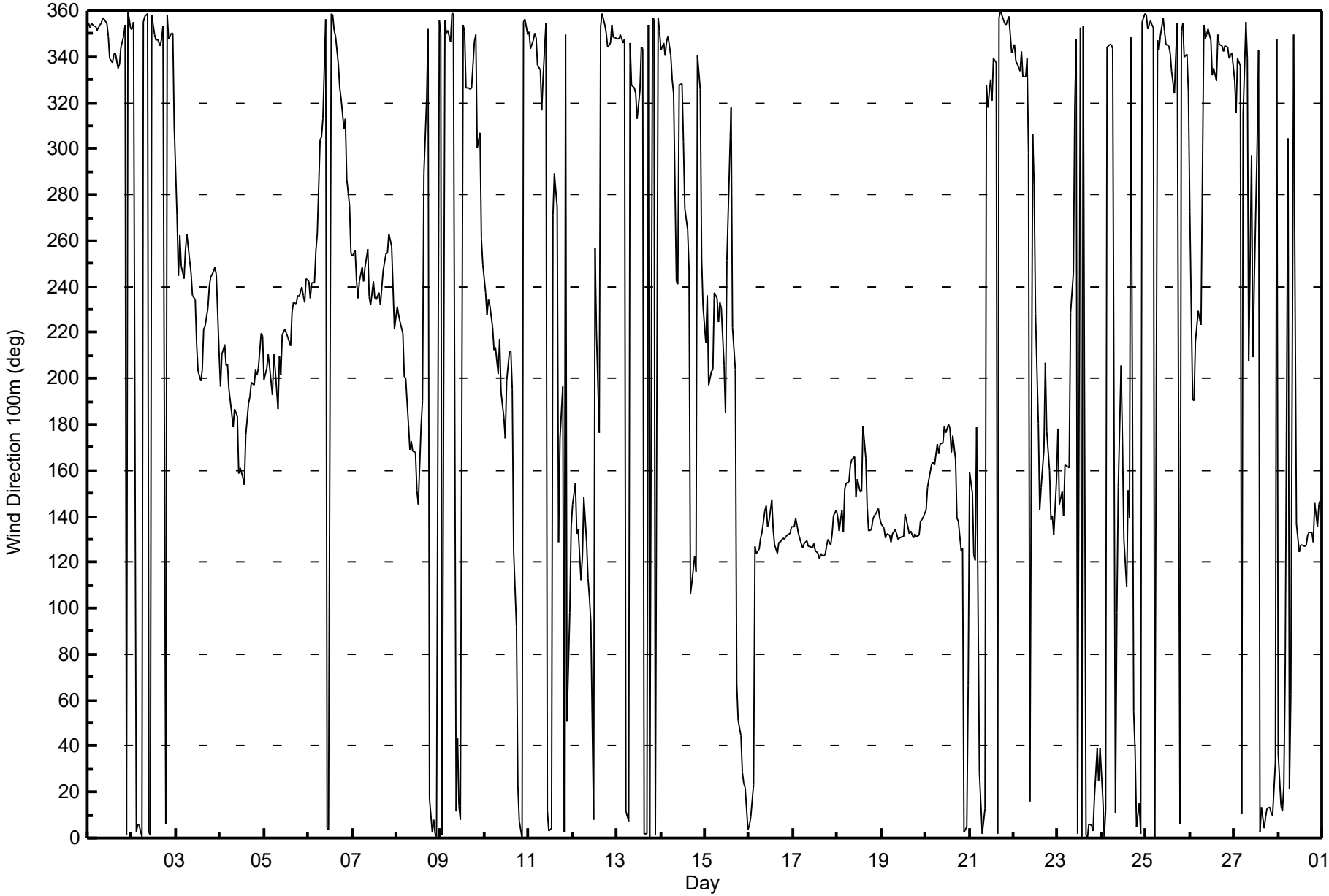
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Feb	6	6	6	6	6	6	5	5	6	6	7	9	9	8	8	7	7	7	8	7	6	9	7	8	9
2-Feb	6	8	7	6	7	8	8	6	6	8	7	7	7	5	4	7	5	8	12	9	6	6	5	17	17
3-Feb	20	5	12	11	9	14	5	5	6	12	10	13	9	15	21	17	4	4	3	2	4	13	6	38	38
4-Feb	26	21	18	20	12	11	8	9	9	12	6	7	9	9	21	11	4	4	4	5	8	11	13	13	26
5-Feb	12	13	13	15	13	17	20	12	16	25	15	11	9	13	14	14	9	9	7	7	4	9	13	11	25
6-Feb	8	14	18	9	12	16	11	13	12	23	10	9	6	8	6	7	13	3	4	6	6	15	6	10	23
7-Feb	14	5	10	7	5	4	11	22	6	19	22	4	3	5	5	7	5	2	3	3	6	14	16	35	35
8-Feb	39	10	7	10	8	9	11	5	6	4	4	12	14	17	41	59	30	11	10	7	8	8	8	6	59
9-Feb	6	7	6	5	5	6	10	20	29	27	18	10	10	11	18	9	10	21	4	8	22	14	17	4	29
10-Feb	9	17	13	12	15	12	12	8	9	13	15	15	23	16	14	36	26	18	19	11	8	7	10	7	36
11-Feb	2	3	4	2	5	11	7	16	7	19	6	21	26	45	25	48	31	24	17	69	6	24	36	31	69
12-Feb	20	16	10	10	11	14	20	12	6	10	19	40	46	45	25	86	5	5	7	3	4	3	3	3	86
13-Feb	4	3	5	7	9	11	10	15	5	9	9	19	20	10	13	15	8	5	5	8	6	5	6	9	20
14-Feb	4	8	5	4	2	4	10	19	9	14	43	26	19	13	10	24	51	9	7	21	31	12	19	34	51
15-Feb	34	29	28	15	37	20	7	9	9	14	19	28	18	17	61	36	63	11	20	25	24	33	21	11	63
16-Feb	13	9	30	22	4	3	4	10	7	8	4	6	12	7	9	6	3	2	3	3	3	3	3	4	30
17-Feb	4	6	6	3	2	3	3	3	5	4	5	7	5	7	7	7	6	6	6	5	5	6	6	12	12
18-Feb	7	5	7	12	4	5	7	7	5	4	13	14	11	13	17	23	14	7	4	6	8	8	7	6	23
19-Feb	5	4	3	3	4	3	3	3	3	3	4	8	8	11	8	4	5	5	4	3	5	4	3	5	11
20-Feb	7	6	6	5	6	7	7	10	10	9	9	9	8	14	15	21	31	4	6	8	5	62	35	51	62
21-Feb	46	37	13	75	56	48	18	15	18	16	14	11	9	11	11	8	5	7	6	9	7	7	4	6	75
22-Feb	4	4	4	7	11	11	8	22	16	27	48	16	61	34	29	25	17	31	31	10	8	8	7	16	61
23-Feb	62	11	6	6	14	16	11	25	6	36	6	6	6	9	9	6	7	8	17	11	12	32	12	12	62
24-Feb	13	8	12	13	8	8	7	27	86	95	75	21	12	30	24	21	68	22	8	12	7	11	8	6	95
25-Feb	7	6	6	6	8	8	11	8	8	7	10	9	13	10	20	18	12	16	9	13	7	6	4	15	20
26-Feb	46	16	15	8	11	25	44	45	10	6	9	13	15	16	17	7	7	7	7	6	5	5	8	11	46
27-Feb	13	17	25	17	43	58	44	102	55	78	36	14	15	10	17	10	7	8	9	8	7	11	21	11	102
28-Feb	18	23	34	38	39	74	29	8	61	77	30	13	7	8	10	7	8	8	10	10	8	9	9	6	77
	62	37	34	75	56	74	44	102	86	95	75	40	61	45	61	86	68	31	31	69	31	62	36	51	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 100m (WD100) - deg

Lower Camp Met Tower - February 2025



Direction of Maximum Speed: 138 deg on Feb 19 20:00
Direction of Maximum Daily Speed Average: 141.7 deg on Feb 19

Direction of Minimum Speed: 348 deg on Feb 28 07:00

Direction of Minimum Daily Speed Average: 4.0 deg on Feb 12

Monthly Average Direction: 327.9 deg

Hours in Service:	672
Hours of Data:	670
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-Feb	9	8	8	4	6	6	7	4	4	4	1	356	346	346	347	349	343	345	351	355	360	6	6	359	358.5
2-Feb	358	1	8	12	11	7	3	4	5	8	7	4	354	349	350	349	353	4	13	11	2	11	2	325	2.7
3-Feb	315	262	303	277	279	279	277	299	283	261	252	231	216	209	213	234	233	243	251	254	265	263	270	245	257.8
4-Feb	243	242	240	234	232	229	225	222	220	222	204	201	205	198	212	207	211	216	215	223	225	228	228	228	222.4
5-Feb	213	218	219	219	221	233	228	228	226	228	224	223	223	222	217	231	240	244	246	246	254	258	252	261	232.7
6-Feb	259	247	257	256	267	279	304	304	302	354	12	9	3	6	357	353	340	330	329	324	330	314	298	277	321.9
7-Feb	278	279	261	251	253	262	262	264	271	257	253	251	237	237	239	239	246	253	263	275	293	303	267	249	260.4
8-Feb	247	246	245	244	227	232	233	226	218	216	216	206	199	260	318	51	5	13	32	17	14	9	7	2	313.4
9-Feb	356	8	5	4	359	351	0	32	28	50	29	15	359	354	332	341	349	349	350	340	314	302	287	277	352.6
10-Feb	260	246	245	240	239	237	243	235	236	238	232	218	227	218	219	213	179	251	29	32	20	15	16	11	250.2
11-Feb	12	6	12	14	14	9	356	335	351	22	26	24	17	301	338	357	92	138	203	260	2	60	124	137	10.3
12-Feb	186	206	181	171	134	144	163	148	129	129	122	36	354	359	150	42	7	8	9	3	7	20	10	1	33.5
13-Feb	0	359	3	8	15	25	31	33	32	3	3	354	341	349	349	9	9	9	18	22	26	27	24	38	15.4
14-Feb	18	24	8	360	359	357	358	351	323	299	339	333	334	320	293	243	180	117	147	140	123	248	272	298	351.5
15-Feb	295	252	270	260	272	284	291	263	266	270	264	270	283	302	310	253	253	50	51	39	43	39	48	52	291.5
16-Feb	76	103	148	165	151	146	152	149	141	150	159	148	145	134	131	129	131	134	134	138	140	142	141	143	139.3
17-Feb	144	145	144	141	140	136	138	137	138	134	135	135	130	130	127	128	129	129	131	135	136	143	151	154	136.7
18-Feb	153	151	159	152	157	161	159	159	168	165	162	167	165	164	178	172	160	138	143	150	152	151	152	150	156.5
19-Feb	147	146	142	142	140	137	139	143	141	137	139	141	139	147	142	140	142	139	138	138	142	145	147	150	141.7
20-Feb	153	156	160	172	172	172	177	174	177	177	184	181	186	191	201	219	213	189	177	156	74	220	356	48	174.6
21-Feb	133	166	128	152	238	29	37	26	50	17	355	347	335	354	354	10	3	7	5	5	2	14	8	355	9.3
22-Feb	359	359	358	5	25	14	351	41	260	133	142	171	138	169	166	159	152	170	163	168	163	179	184	192	151.2
23-Feb	206	201	201	204	189	195	198	251	259	323	359	6	360	7	2	8	7	7	3	13	23	51	36	52	341.2
24-Feb	39	17	35	7	5	21	2	43	104	145	180	172	144	137	153	143	255	164	20	22	11	12	2	7	33.2
25-Feb	7	2	6	5	5	12	3	354	359	7	2	357	359	359	352	333	343	9	28	38	47	10	349	341	4.0
26-Feb	269	225	223	241	250	249	251	329	355	23	6	5	350	345	348	6	358	1	2	12	33	42	42	31	334.7
27-Feb	31	328	322	318	116	261	28	127	187	UO	UO	259	301	342	4	17	11	16	20	19	19	21	41	2	358.1
28-Feb	32	14	46	64	85	220	348	93	125	174	137	133	135	133	134	132	134	136	136	133	144	146	156	161	135.4
	327.2	307.2	269.7	257.9	253.0	256.8	250.1	249.4	234.7	255.5	34.3	311.3	303.8	339.3	2.0	45.6	26.7	46.6	49.1	59.9	39.2	41.2	27.2	339.3	
	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 163m (WD163) - deg

Lower Camp Met Tower - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 93 deg on Feb 28 07:00

Minimum Value: 2 deg on Feb 7 19:00

Percentiles: P_1 = 2 P_{10} = 4 Q_1 = 5 Median = 8 Q_3 = 12 P_{90} = 21 P_{99} = 79

Hours in Service:	672
Hours of Data:	670
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-Feb	7	7	7	7	6	6	6	6	6	6	7	9	7	7	6	6	6	5	6	6	7	8	7	7	9
2-Feb	6	8	7	6	6	8	8	6	6	7	7	8	7	4	4	5	4	7	7	8	6	4	13	10	13
3-Feb	15	11	10	5	5	8	5	10	11	7	7	8	6	11	16	8	5	4	2	3	6	11	8	10	16
4-Feb	7	4	5	9	4	6	7	5	8	9	9	11	10	11	17	11	6	4	5	5	6	10	10	9	17
5-Feb	9	12	11	10	9	10	8	7	11	10	10	10	7	10	12	13	8	5	4	4	4	4	6	6	13
6-Feb	6	8	10	9	7	9	7	10	8	25	10	8	6	8	6	6	10	2	2	4	4	13	10	7	25
7-Feb	7	5	13	5	4	6	4	4	3	9	6	5	3	5	5	6	5	2	2	8	6	3	13	6	13
8-Feb	8	4	3	4	9	7	6	9	7	7	7	16	11	23	61	26	16	17	7	6	6	8	7	6	61
9-Feb	6	6	6	5	4	5	14	13	23	10	13	10	10	12	16	8	7	12	9	9	5	6	9	5	23
10-Feb	7	4	4	5	4	6	8	6	5	6	8	10	9	10	11	19	33	59	12	7	5	7	10	7	59
11-Feb	3	3	4	2	3	7	9	7	7	16	5	12	25	41	22	55	25	50	14	45	17	20	22	14	55
12-Feb	29	7	21	8	14	13	19	15	7	10	21	35	22	87	24	78	5	5	6	6	6	3	4	4	87
13-Feb	4	5	8	11	10	6	4	7	10	18	8	13	16	9	12	13	6	4	6	3	2	3	2	4	18
14-Feb	6	4	5	5	2	3	5	3	17	10	8	7	10	11	14	26	57	20	13	12	29	38	21	19	57
15-Feb	25	6	16	6	3	15	10	8	7	3	3	4	9	9	29	42	69	7	7	8	13	20	15	12	69
16-Feb	8	18	29	26	8	4	4	7	4	6	6	6	7	5	6	5	2	2	3	4	3	4	3	4	29
17-Feb	5	5	7	4	3	4	4	4	5	4	5	6	5	6	6	5	4	4	4	5	4	7	5	8	8
18-Feb	6	5	9	7	4	2	5	5	9	11	7	8	9	14	10	16	16	5	5	6	7	7	6	6	16
19-Feb	5	5	5	4	4	4	3	4	4	4	4	7	7	10	9	5	4	5	4	4	5	5	6	6	10
20-Feb	6	6	5	4	4	5	5	7	9	8	8	7	7	12	16	13	9	8	16	41	71	65	16	11	71
21-Feb	41	5	11	40	55	76	19	5	13	9	17	10	9	11	8	7	6	6	6	8	7	9	6	5	76
22-Feb	4	3	7	5	15	17	11	28	83	21	32	14	14	8	10	8	8	11	5	5	4	10	8	6	83
23-Feb	16	19	5	4	7	9	17	11	3	33	6	5	6	9	9	7	6	7	15	7	10	19	11	11	33
24-Feb	11	6	10	17	11	9	8	23	28	65	11	10	8	19	14	20	91	37	9	7	5	6	7	6	91
25-Feb	7	7	6	7	8	8	12	6	9	9	13	9	18	13	25	14	9	14	10	12	6	22	4	10	25
26-Feb	36	12	10	4	4	8	8	25	14	8	9	12	12	14	15	9	6	6	8	12	9	17	17	17	36
27-Feb	25	34	63	39	18	75	83	82	42	UO	UO	14	11	13	15	9	7	7	9	7	6	10	18	11	83
28-Feb	14	16	62	85	39	28	93	20	29	27	9	11	8	9	11	8	7	5	5	4	7	6	7	5	93
	41	34	63	85	55	76	93	82	83	65	32	35	25	87	61	78	91	59	16	45	71	65	22	19	
	Diurnal Maximum																								

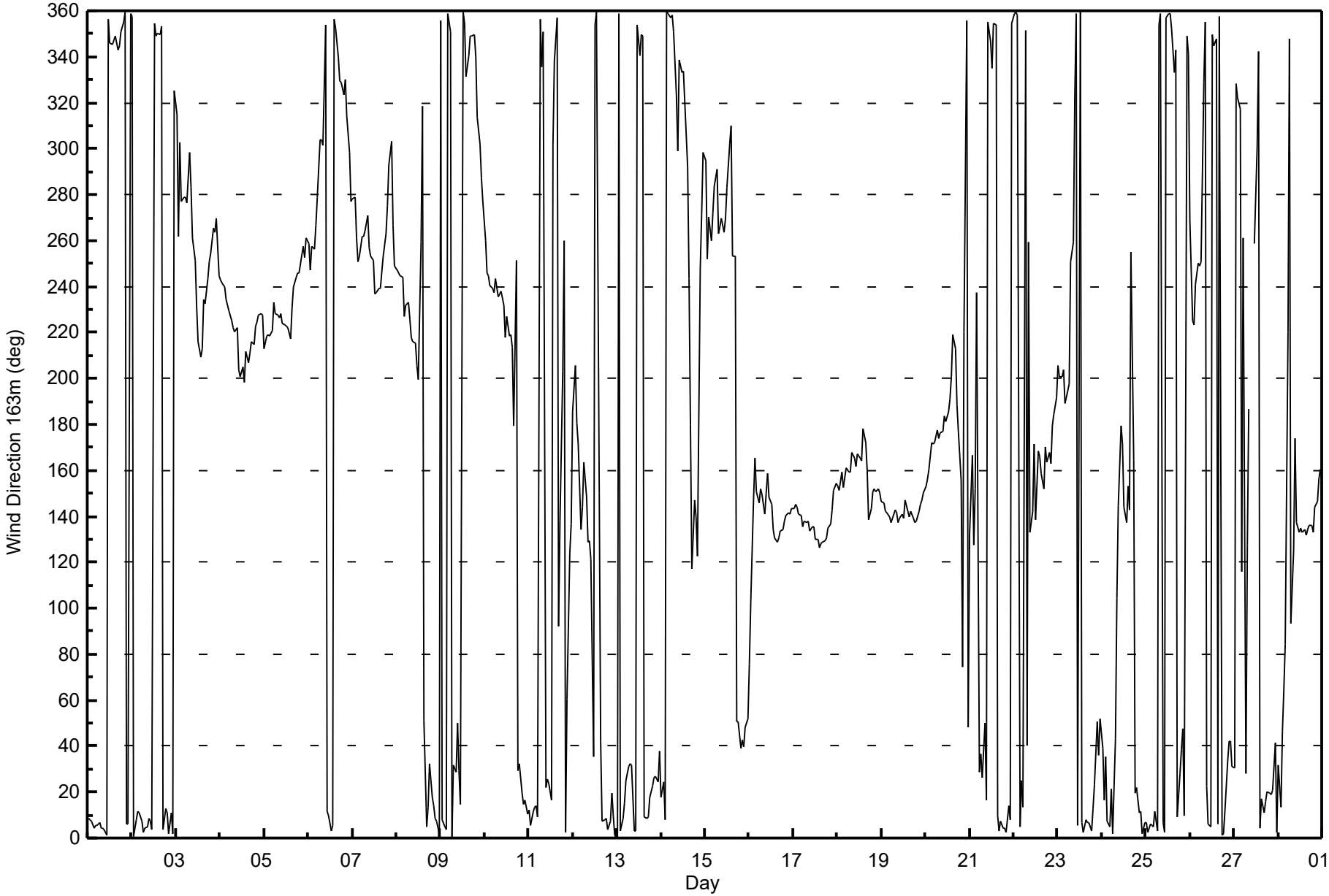
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 163m (WD163) - deg

Lower Camp Met Tower - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Lower Camp Met Tower - February 2025

Maximum Value: 0.6 km/h on Feb 10 03:00

Maximum Daily Average: 0.0 km/h on Feb 15

Minimum Value: -1.0 km/h on Feb 20 10:00

Minimum Daily Average: -0.4 km/h on Feb 20

Maximum Diurnal Average: 0.0 km/h at hour 8

Minimum Diurnal Average: -0.3 km/h at hour 14

Monthly Average: -0.14 km/h

Percentiles: P_1 = -0.8 P_{10} = -0.5 Q_1 = -0.3 Median = -0.1 Q_3 = 0.0 P_{90} = 0.1 P_{99} = 0.4

Hours in Service:	672
Hours of Data:	665
Hours of Missing Data:	7
Hours of Calibration:	0
Percent Operational Time:	99.0

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

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

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

Lower Camp Met Tower - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.9 km/h on Feb 19 11:00

Minimum Value: 0.1 km/h on Feb 16 01:00

Percentiles: P_1 = 0.1 P_{10} = 0.3 Q_1 = 0.6 Median = 1.0 Q_3 = 1.7 P_{90} = 2.6 P_{99} = 3.5

Hours in Service:	672
Hours of Data:	665
Hours of Missing Data:	7
Hours of Calibration:	0
Percent Operational Time:	99.0

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

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

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

Lower Camp Met Tower - February 2025

Maximum Value: 1.8 km/h on Feb 7 22:00

Maximum Daily Average: 0.7 km/h on Feb 19

Minimum Value: -0.5 km/h on Feb 13 14:00

Minimum Daily Average: 0.1 km/h on Feb 25

Maximum Diurnal Average: 0.4 km/h at hour 3

Minimum Diurnal Average: 0.1 km/h at hour 14

Monthly Average: 0.26 km/h

Percentiles: P_1 = -0.3 P_{10} = 0.0 Q_1 = 0.1 Median = 0.2 Q_3 = 0.4 P_{90} = 0.7 P_{99} = 1.1

Hours in Service:	672
Hours of Data:	667
Hours of Missing Data:	5
Hours of Calibration:	0
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-Feb	0.0	0.1	0.2	0.2	0.1	0.0	0.3	0.3	0.3	0.4	0.1	0.1	-0.2	0.2	-0.2	0.0	0.1	-0.1	-0.2	0.1	0.1	0.4	0.3	0.2	0.1	0.4
2-Feb	0.0	0.1	0.6	0.5	0.4	0.6	0.3	0.3	0.5	0.4	0.4	0.2	-0.1	-0.1	0.0	-0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.2	0.6
3-Feb	0.2	0.3	0.1	0.0	0.0	0.0	0.2	0.1	0.3	0.3	0.2	0.2	0.2	0.1	-0.1	0.2	0.8	1.1	1.0	1.2	1.5	1.0	0.5	0.4	0.4	1.5
4-Feb	0.4	0.6	1.0	0.9	0.7	0.9	0.8	0.6	0.8	0.6	0.3	0.2	0.2	0.1	0.1	0.1	0.0	0.1	-0.1	0.0	0.4	0.1	0.5	0.6	0.4	1.0
5-Feb	0.3	0.5	0.7	0.4	0.4	0.5	0.5	0.5	0.4	0.5	1.0	0.4	0.5	0.4	0.5	0.2	0.3	0.4	0.7	0.8	1.1	0.5	0.4	0.3	0.5	1.1
6-Feb	1.1	0.7	0.4	0.9	0.4	0.1	-0.1	0.0	0.2	0.4	0.5	0.4	0.4	0.1	0.0	0.0	0.1	-0.1	0.0	0.1	0.0	0.1	0.7	0.4	0.3	1.1
7-Feb	0.4	0.6	0.7	0.8	1.0	1.1	0.1	0.2	-0.2	0.0	0.0	0.9	0.2	0.1	0.1	0.2	0.5	0.7	0.7	0.4	-0.3	1.8	-0.1	0.3	0.4	1.8
8-Feb	0.4	0.4	0.7	0.8	1.1	0.6	0.5	0.6	0.4	0.5	0.5	0.0	0.1	0.1	0.3	0.1	0.2	0.2	0.1	0.1	0.5	0.4	0.2	0.4	0.4	1.1
9-Feb	0.2	0.3	0.3	0.2	0.2	0.1	0.3	0.1	0.2	0.1	0.1	0.1	-0.1	0.1	0.2	0.1	0.0	0.2	0.2	0.2	0.2	0.1	0.1	-0.3	0.1	0.3
10-Feb	0.0	0.3	0.3	0.6	0.6	0.5	0.4	0.7	0.5	0.3	0.0	-0.1	0.2	0.1	0.3	0.2	0.2	0.1	0.2	0.3	0.2	0.3	0.1	0.0	0.3	0.7
11-Feb	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2
12-Feb	0.1	0.3	0.5	0.4	0.2	0.2	0.3	0.3	0.3	0.1	0.1	0.0	-0.1	0.0	-0.2	-0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.5
13-Feb	0.3	0.3	0.1	0.2	0.1	0.2	0.2	0.0	0.0	0.0	0.4	0.6	1.1	-0.5	0.0	0.1	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	1.1
14-Feb	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.7	0.2	0.1	-0.1	-0.1	-0.2	0.3	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.7
15-Feb	0.2	0.4	0.7	0.8	0.7	0.8	0.9	1.0	0.9	0.8	0.7	0.3	0.3	0.0	0.0	-0.1	0.1	0.1	0.1	0.2	0.2	-0.1	0.1	0.2	0.4	1.0
16-Feb	0.2	0.1	0.1	0.2	0.1	0.3	0.5	0.2	0.5	0.1	0.1	0.2	0.2	-0.1	0.3	0.4	0.7	0.6	0.6	0.8	1.1	0.9	0.9	1.3	0.4	1.3
17-Feb	0.8	0.5	0.6	0.8	1.0	0.7	0.9	0.7	0.6	0.6	0.7	0.6	0.6	0.7	0.4	0.5	0.3	0.3	0.3	0.2	0.7	0.4	0.4	0.1	0.6	1.0
18-Feb	0.4	0.6	0.6	0.4	0.4	-0.1	-0.1	0.4	0.0	0.4	0.1	0.1	-0.2	-0.1	0.6	0.0	-0.1	0.0	0.2	0.0	0.0	-0.1	0.5	0.2	0.2	0.6
19-Feb	0.4	0.3	0.1	0.5	0.2	0.7	0.7	0.9	0.7	0.5	0.3	0.7	0.6	1.2	1.0	0.9	1.0	0.8	0.6	0.5	0.5	0.9	1.3	0.8	0.7	1.3
20-Feb	0.6	0.9	0.1	-0.3	-0.1	0.1	-0.2	-0.1	-0.2	-0.4	0.2	0.2	-0.1	0.0	-0.2	0.2	0.1	0.3	0.4	0.2	0.2	0.1	0.2	0.1	0.1	0.9
21-Feb	0.2	0.4	0.3	0.2	0.2	0.2	0.1	0.0	0.0	0.1	0.4	-0.1	-0.2	0.1	-0.2	0.4	0.0	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.4
22-Feb	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.3	0.2	0.1	0.2	0.0	0.0	0.0	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.3
23-Feb	0.2	0.6	0.3	UO	UO	UO	UO	UO	0.1	0.1	-0.4	0.5	0.0	0.2	-0.1	0.1	0.3	0.7	0.4	0.2	0.1	0.2	0.1	0.1	0.2	0.7
24-Feb	0.2	0.1	0.3	0.1	0.2	0.1	0.1	0.1	0.0	-0.1	0.0	0.0	0.1	0.1	-0.5	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.1	0.3
25-Feb	0.4	0.1	0.2	0.1	0.0	0.2	0.1	0.3	0.2	0.0	-0.1	0.1	-0.1	-0.2	-0.3	0.4	-0.1	0.2	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.4
26-Feb	0.1	0.2	0.4	0.1	0.1	0.4	0.6	0.2	0.1	0.1	0.1	0.1	0.4	0.0	0.9	-0.2	0.0	0.3	0.2	0.1	0.2	0.2	0.3	0.1	0.2	0.9
27-Feb	0.1	0.1	0.1	0.1	0.0	-0.1	-0.1	0.1	0.0	0.0	0.2	0.2	0.1	0.0	0.2	0.4	0.2	0.4	0.3	0.4	0.4	0.3	0.1	0.2	0.2	0.4
28-Feb	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.5	-0.1	0.2	0.1	0.4	0.4	0.2	0.5	0.2	0.0	0.1	0.4	0.2	0.5	0.0	0.2	0.5
	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	Diurnal Average	
	1.1	0.9	1.0	0.9	1.1	1.1	0.9	1.0	0.9	0.8	1.0	0.9	1.1	1.2	1.0	0.9	1.0	1.1	1.0	1.2	1.5	1.8	1.3	1.3	Diurnal Maximum	

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

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

Lower Camp Met Tower - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.0 km/h on Feb 1 15:00

Minimum Value: 0.1 km/h on Feb 21 00:00

Percentiles: P_1 = 0.2 P_{10} = 0.3 Q_1 = 0.5 Median = 1.0 Q_3 = 1.6 P_{90} = 2.2 P_{99} = 2.8

Hours in Service:	672
Hours of Data:	667
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-Feb	1.8	1.8	1.9	2.0	1.9	2.1	1.9	2.0	2.3	2.2	2.2	2.3	2.6	2.8	3.0	2.4	2.3	2.7	2.6	2.3	2.1	3.0	2.9	2.8	3.0
2-Feb	2.4	2.8	2.7	2.7	2.7	2.4	2.1	2.0	2.1	2.5	2.5	2.2	2.0	2.0	1.7	1.5	1.2	0.9	0.8	0.8	0.4	0.5	0.3	0.3	2.8
3-Feb	0.4	0.4	0.8	0.8	1.2	1.0	0.6	0.5	0.7	1.3	1.0	0.7	0.8	0.8	0.7	0.9	1.1	1.1	0.9	1.1	1.8	2.1	1.4	1.2	2.1
4-Feb	1.2	1.4	0.8	1.2	1.2	1.1	0.7	0.7	0.8	0.8	1.0	1.1	1.1	1.0	1.1	1.2	0.8	0.7	0.6	1.1	1.2	1.1	1.7	1.8	1.8
5-Feb	1.7	1.9	2.2	1.9	1.1	1.4	1.7	1.1	1.8	1.8	1.8	1.8	2.0	2.1	1.7	1.5	1.5	1.2	1.6	1.4	1.3	1.3	1.4	1.4	2.2
6-Feb	1.6	1.8	1.4	2.0	2.1	1.9	1.0	1.0	1.0	1.2	2.4	2.8	2.5	2.4	2.0	2.1	1.4	0.8	0.5	0.4	0.3	0.6	1.2	1.5	2.8
7-Feb	1.6	1.3	1.5	1.4	1.6	1.4	1.5	0.9	1.3	1.4	1.3	1.3	0.9	1.0	0.7	0.7	0.8	0.7	0.9	1.0	2.0	2.2	1.6	1.2	2.2
8-Feb	0.9	0.9	0.6	0.4	0.5	0.3	0.3	0.4	0.4	0.5	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.3	0.3	0.8	2.7	2.5	2.6	2.0	2.7
9-Feb	2.7	2.5	1.6	1.5	0.9	0.7	0.3	0.6	0.4	0.6	0.9	1.9	1.4	1.7	1.9	1.4	0.6	0.4	0.2	0.2	0.5	0.4	1.0	1.3	2.7
10-Feb	1.2	1.6	1.5	1.1	1.5	0.9	0.9	1.0	1.0	0.7	0.8	1.1	1.3	1.4	1.6	0.9	0.6	0.4	0.8	1.0	1.1	0.9	1.0	0.7	1.6
11-Feb	0.4	0.5	0.4	0.3	0.3	0.8	0.3	0.3	0.2	0.4	0.5	1.0	1.2	1.2	0.9	0.4	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	1.2
12-Feb	0.2	0.3	0.3	0.4	0.2	0.2	0.4	0.4	0.3	0.3	0.5	0.5	0.5	0.7	0.5	0.6	0.7	0.8	0.7	0.8	0.8	0.6	0.6	0.8	0.8
13-Feb	1.2	1.3	0.9	0.5	0.3	0.8	0.5	0.5	0.4	0.5	1.1	1.2	1.7	1.5	1.5	1.4	1.3	0.8	0.6	0.7	0.4	0.4	0.5	0.3	1.7
14-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.6	0.8	1.2	1.1	0.8	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	1.2
15-Feb	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	1.0	0.9	0.8	0.5	0.6	0.5	0.8	0.5	0.3	0.2	0.4	0.3	1.3	1.3	0.6	0.3	1.3
16-Feb	0.2	0.2	0.2	0.3	0.2	0.2	0.4	0.3	0.5	0.6	0.3	0.7	0.6	0.9	1.9	2.0	1.4	1.6	1.3	1.7	2.0	1.6	1.7	2.0	2.0
17-Feb	2.4	1.9	1.5	1.5	1.9	1.9	1.9	2.4	2.3	2.0	2.5	2.4	2.5	2.6	2.6	2.6	2.4	1.4	1.4	1.3	1.6	1.4	1.5	1.2	2.6
18-Feb	0.7	0.5	0.5	0.7	0.6	1.4	1.0	0.7	0.8	0.5	0.5	0.9	1.2	1.1	1.9	1.6	1.3	1.3	1.2	1.5	1.6	1.7	1.7	1.6	1.9
19-Feb	1.8	1.6	1.5	1.5	1.3	1.5	1.7	1.6	1.2	2.2	2.3	2.7	2.6	2.5	2.5	2.7	2.6	2.3	2.1	2.4	2.3	2.7	2.1	2.1	2.7
20-Feb	1.9	2.1	2.1	2.0	2.4	2.3	2.2	2.3	2.3	2.5	2.2	2.3	1.8	1.8	1.2	1.2	0.7	0.6	0.4	0.4	0.3	0.4	0.3	0.1	2.5
21-Feb	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.4	0.5	0.7	1.2	1.5	2.0	1.6	1.7	1.5	1.2	1.3	1.4	1.5	1.4	1.0	1.1	1.1	2.0
22-Feb	0.8	0.6	0.7	0.9	0.6	0.3	0.8	0.7	0.4	0.5	1.0	0.9	0.8	0.7	0.7	0.5	0.7	0.5	0.2	0.2	0.3	0.8	0.3	0.3	1.0
23-Feb	0.6	0.5	0.6	UO	UO	UO	UO	UO	1.3	2.1	2.8	2.3	2.6	2.7	2.2	1.7	1.8	1.5	1.0	0.7	0.5	0.6	0.8	0.9	2.8
24-Feb	0.6	1.0	0.9	0.7	1.0	0.7	1.0	0.6	0.4	0.6	0.8	0.6	1.2	1.2	0.9	1.0	0.6	0.3	0.4	0.7	0.5	1.0	1.4	1.7	1.7
25-Feb	1.9	1.9	1.9	1.7	1.9	1.8	1.2	1.5	1.2	1.2	1.2	1.5	1.4	1.3	1.2	1.6	1.3	1.0	0.6	0.5	0.8	1.2	1.4	0.7	1.9
26-Feb	0.2	0.3	0.6	1.2	1.3	1.1	0.6	0.4	1.1	0.8	1.5	1.4	2.0	1.6	1.8	1.4	1.4	1.3	1.4	0.8	0.5	0.9	1.0	1.1	2.0
27-Feb	0.8	0.9	0.6	0.8	0.5	0.6	0.6	0.6	0.7	1.4	0.8	0.6	1.8	1.9	2.3	2.3	2.2	2.0	1.8	2.1	1.8	1.4	1.3	1.0	2.3
28-Feb	0.6	0.5	0.5	0.4	0.4	0.2	0.2	0.5	0.6	0.7	0.8	1.4	1.8	1.9	1.8	1.5	1.5	1.2	1.2	1.0	0.7	1.1	0.8	0.9	1.9
	2.7	2.8	2.7	2.7	2.7	2.4	2.2	2.4	2.3	2.5	2.8	2.8	2.6	2.8	3.0	2.7	2.6	2.7	2.6	2.4	2.7	3.0	2.9	2.8	
	Diurnal Maximum																								

UO - Unstable Operation

Maximum Value: 3.5 km/h on Feb 7 22:00

Maximum Daily Average: 1.0 km/h on Feb 19

Minimum Value: -1.7 km/h on Feb 7 23:00

Minimum Daily Average: -0.1 km/h on Feb 10

Maximum Diurnal Average: 0.4 km/h at hour 22

Minimum Diurnal Average: -0.1 km/h at hour 10

Monthly Average: 0.14 km/h

Percentiles: P_1 = -0.7 P_{10} = -0.3 Q_1 = -0.1 Median = 0.0 Q_3 = 0.2 P_{90} = 0.8 P_{99} = 2.1

Hours in Service:	672
Hours of Data:	672
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-Feb	-0.1	0.0	0.2	0.3	0.2	-0.1	0.1	0.1	0.0	0.1	0.1	0.0	-0.3	-0.4	-0.5	-0.2	-0.6	-0.6	-0.6	0.0	-0.2	-0.1	0.1	-0.1	-0.1	0.3
2-Feb	-0.3	-0.1	0.3	0.4	0.0	0.4	0.1	0.1	0.2	0.3	0.3	0.0	-0.4	-0.5	-0.7	-0.3	0.1	0.1	-0.2	-0.1	0.0	-0.1	-0.2	-0.1	0.0	0.4
3-Feb	-0.1	0.2	-0.1	-0.7	-1.3	-0.6	-0.1	-0.2	0.3	0.3	0.1	0.0	0.0	0.1	0.0	0.2	0.8	1.1	1.5	2.1	2.7	2.5	1.2	0.2	0.4	2.7
4-Feb	0.0	0.0	0.0	-0.1	-0.4	-0.1	-0.2	-0.1	0.0	-0.4	0.0	-0.4	-0.1	0.0	0.2	0.3	0.5	0.7	0.4	0.7	0.3	0.1	0.6	0.4	0.1	0.7
5-Feb	0.4	0.6	0.7	0.9	0.3	0.6	0.9	0.0	0.8	0.0	1.4	0.5	0.5	0.1	0.4	0.3	0.3	0.5	0.9	1.2	1.6	1.3	0.9	0.6	0.7	1.6
6-Feb	1.4	0.7	0.5	1.5	0.9	0.3	-0.6	-0.4	-0.5	0.0	0.7	0.0	0.0	0.0	-0.4	0.0	-0.3	-0.3	-0.5	-0.5	-0.5	-0.2	0.2	0.7	0.1	1.5
7-Feb	1.5	1.0	2.1	1.5	1.4	1.5	0.8	0.2	-0.3	-0.8	0.1	1.6	0.2	0.1	-0.1	0.1	0.3	0.4	0.7	0.4	0.1	3.5	-1.7	-0.7	0.6	3.5
8-Feb	0.1	0.3	0.3	-0.1	-0.2	-0.3	-0.1	-0.1	-0.1	-0.3	-0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	-0.1	0.1	-0.1	-0.1	0.5	0.0	0.5
9-Feb	-0.2	0.4	0.0	0.0	0.0	-0.1	0.1	0.0	-0.1	0.1	0.1	0.0	-0.4	-0.3	0.3	0.3	-0.1	0.1	0.0	0.0	-0.2	-0.2	0.0	-1.4	-0.1	0.4
10-Feb	-0.7	-0.5	-0.6	0.0	0.2	-0.2	-0.3	-0.3	0.0	-0.2	-0.1	-0.1	0.0	-0.1	0.2	0.1	0.0	0.0	0.0	0.2	0.0	-0.1	-0.3	-0.1	-0.1	0.2
11-Feb	0.0	0.0	0.0	0.1	0.0	-0.1	0.0	-0.2	-0.1	-0.1	0.0	-0.1	-0.4	0.2	0.0	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
12-Feb	0.0	0.0	0.1	0.3	0.2	0.1	0.0	0.2	0.2	0.1	-0.1	-0.4	-0.2	-0.4	-0.3	-0.2	0.0	0.0	0.0	0.0	-0.1	0.0	-0.1	-0.1	0.0	0.3
13-Feb	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0	-0.1	-0.1	-0.2	0.2	1.0	-1.0	-0.4	0.0	-0.1	0.0	-0.2	-0.1	-0.1	-0.1	-0.1	0.0	0.0	1.0
14-Feb	0.0	0.0	0.0	0.0	0.1	0.1	-0.1	-0.1	0.0	0.0	0.0	0.0	-0.5	-0.1	-0.1	0.2	0.0	0.1	0.2	0.1	0.0	-0.1	0.0	0.0	0.0	0.2
15-Feb	0.0	0.1	0.0	-0.1	0.0	-0.1	0.0	0.0	-0.1	-0.1	0.0	0.0	-0.1	-0.2	-0.4	-0.1	-0.1	-0.1	0.0	0.0	0.1	-0.4	0.0	0.0	-0.1	0.1
16-Feb	0.0	0.1	0.0	0.2	0.2	0.2	0.3	0.2	0.3	-0.1	0.2	0.1	-0.1	-0.1	0.8	0.6	1.1	0.9	0.6	0.9	1.3	0.7	0.6	1.9	0.5	1.9
17-Feb	2.1	1.4	1.2	1.9	1.5	0.6	0.8	0.4	0.8	0.3	1.0	1.1	0.9	1.3	0.4	0.4	0.2	0.2	0.4	0.0	1.0	0.7	0.7	0.5	0.8	2.1
18-Feb	0.4	0.8	0.8	0.6	0.0	-0.4	-0.7	0.0	-0.2	-0.3	0.1	0.2	-0.3	-0.3	0.9	0.6	0.2	-0.3	0.6	0.5	0.4	0.8	1.0	0.6	0.2	1.0
19-Feb	0.7	0.7	0.3	1.2	0.6	0.9	0.5	1.3	0.1	0.0	-0.3	1.1	1.3	3.2	2.3	1.7	2.0	1.2	0.0	-0.2	0.4	1.3	1.7	1.9	1.0	3.2
20-Feb	1.4	1.5	0.2	-0.8	-0.5	-0.1	-0.2	-0.1	0.0	-0.4	0.3	0.0	0.0	-0.2	-0.2	-0.2	0.0	0.7	0.6	0.3	0.2	0.0	0.0	0.0	0.1	1.5
21-Feb	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	-0.1	-0.1	0.0	-0.2	-0.5	0.2	-0.2	0.3	-0.4	-0.4	-0.2	0.2	0.0	-0.1	0.0	0.0	-0.1	0.3
22-Feb	-0.1	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	0.0	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	0.1	0.2	-0.2	0.0	0.0	0.0	0.7	0.2	0.3	0.0	0.0	0.7
23-Feb	0.0	0.4	0.1	0.3	0.3	0.0	0.1	-0.3	-0.1	-0.1	-0.2	0.3	0.1	0.0	-0.1	-0.2	0.3	0.7	0.2	0.1	0.0	-0.1	0.1	0.0	0.1	0.7
24-Feb	0.0	0.0	0.3	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1	0.1	-0.2	0.0	-0.1	-0.4	0.0	-0.1	0.0	0.0	-0.1	0.3	0.2	0.1	0.1	0.0	0.3
25-Feb	0.1	0.1	0.2	0.1	-0.1	0.0	-0.1	-0.1	-0.1	-0.2	-0.4	-0.1	-0.4	-0.4	-0.5	0.4	-0.3	0.1	0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.1	0.4
26-Feb	-0.1	-0.2	-0.1	-0.2	-0.2	-0.1	0.0	-0.1	0.0	-0.2	-0.1	-0.1	0.7	-0.1	1.2	-0.4	-0.2	0.1	0.0	-0.1	-0.1	-0.1	0.0	-0.2	0.0	1.2
27-Feb	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	0.0	-0.2	0.0	0.0	-0.2	-0.2	0.1	0.1	0.0	0.5	0.0	0.3	0.1	0.2	-0.3	0.0	0.0	0.5
28-Feb	0.0	0.1	0.1	0.0	-0.1	-0.1	-0.1	0.1	0.0	0.3	-0.1	0.0	-0.6	0.3	0.3	-0.1	0.6	0.8	0.2	0.1	0.1	0.1	0.2	-0.5	0.1	0.8
	0.2	0.3	0.2	0.3	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	0.2	0.2	0.2	0.3	0.4	0.2	0.1	Diurnal Average	
	2.1	1.5	2.1	1.9	1.5	1.5	0.9	1.3	0.8	0.3	1.4	1.6	1.3	3.2	2.3	1.7	2.0	1.2	1.5	2.1	2.7	3.5	1.7	1.9	Diurnal Maximum	

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

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

Lower Camp Met Tower - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.5 km/h on Feb 1 22:00

Minimum Value: 0.1 km/h on Feb 14 04:00

Percentiles: P_1 = 0.2 P_{10} = 0.3 Q_1 = 0.6 Median = 1.0 Q_3 = 1.6 P_{90} = 2.2 P_{99} = 3.0

Hours in Service:	672
Hours of Data:	672
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-Feb	1.5	1.6	1.9	1.6	1.6	1.5	1.6	1.8	2.2	2.0	2.3	2.3	2.5	2.5	2.6	2.1	1.8	2.1	2.3	2.4	2.3	3.5	3.1	2.9	3.5
2-Feb	2.5	2.7	3.1	3.0	3.1	2.6	2.3	2.1	2.2	2.7	2.7	2.6	1.9	1.9	1.4	1.4	1.0	0.7	1.0	0.8	0.5	0.6	0.3	0.5	3.1
3-Feb	0.4	0.6	0.8	0.9	1.6	1.2	0.6	0.3	0.8	1.6	1.3	0.9	0.7	0.6	0.6	1.0	0.7	0.7	0.6	0.8	0.9	1.7	1.2	1.6	1.7
4-Feb	1.5	1.6	1.2	1.4	1.3	1.0	0.9	0.7	1.1	1.2	0.9	1.1	1.1	1.1	1.3	1.2	0.8	0.9	0.8	1.1	1.1	1.2	2.1	2.0	2.1
5-Feb	2.1	2.2	2.6	2.4	1.6	2.1	2.2	1.3	2.2	2.0	1.9	2.0	1.9	2.0	1.8	1.6	1.4	1.3	1.1	1.2	1.0	1.5	1.9	1.5	2.6
6-Feb	1.4	1.8	1.6	2.0	1.9	1.9	1.4	1.4	1.5	1.6	2.7	3.1	2.8	2.5	1.7	2.0	1.2	0.6	0.6	0.6	0.5	0.7	0.6	1.2	3.1
7-Feb	1.6	1.1	1.2	1.1	1.4	1.4	2.2	1.3	1.1	1.7	1.9	1.2	0.4	0.7	0.6	0.7	0.4	0.4	0.4	0.5	1.2	2.2	1.7	1.8	2.2
8-Feb	1.1	1.0	0.6	0.5	0.5	0.4	0.3	0.3	0.4	0.3	0.4	0.4	0.3	0.3	0.1	0.2	0.2	0.3	0.6	1.2	3.0	2.7	3.0	2.0	3.0
9-Feb	2.4	2.7	1.7	1.1	0.8	0.6	0.6	0.9	0.6	1.3	1.0	2.4	1.7	1.9	2.2	1.4	0.7	0.5	0.2	0.2	0.5	0.5	0.7	1.0	2.7
10-Feb	1.2	1.9	1.8	0.8	1.8	0.9	0.8	0.9	1.1	1.1	1.0	1.0	1.4	1.6	1.7	1.2	0.7	0.4	0.9	1.3	1.2	0.8	1.3	0.8	1.9
11-Feb	0.3	0.4	0.5	0.3	0.4	1.3	0.3	0.5	0.3	0.8	0.5	0.7	1.0	1.5	1.1	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	1.5
12-Feb	0.3	0.3	0.4	0.5	0.3	0.4	0.5	0.6	0.5	0.4	0.3	0.6	0.5	0.6	0.6	0.8	0.8	0.9	1.0	0.7	0.5	0.5	0.3	0.5	1.0
13-Feb	0.8	0.8	0.8	0.6	0.6	1.4	0.9	0.8	0.4	0.5	0.9	1.2	2.0	1.5	1.9	1.7	1.4	0.7	0.8	1.0	0.5	0.6	0.6	0.4	2.0
14-Feb	0.3	0.3	0.2	0.1	0.1	0.4	0.6	0.4	0.2	0.3	0.2	0.7	0.9	1.0	0.9	0.7	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.3	1.0
15-Feb	0.3	0.5	0.4	0.6	0.6	0.7	0.3	0.5	0.9	0.9	0.7	0.6	0.4	0.5	0.8	0.6	0.3	0.2	0.5	0.7	1.7	1.9	0.9	0.5	1.9
16-Feb	0.2	0.1	0.2	0.3	0.2	0.3	0.4	0.4	0.6	0.5	0.4	0.6	0.8	1.0	1.9	1.9	1.2	1.0	1.0	1.4	1.2	1.3	1.4	2.0	2.0
17-Feb	2.0	2.0	1.6	1.0	1.1	1.2	1.4	1.6	1.9	1.8	2.0	2.1	2.5	2.6	2.7	2.5	2.2	1.1	1.5	1.5	1.6	1.4	1.8	1.5	2.7
18-Feb	1.1	0.7	0.8	0.6	1.0	1.2	1.2	0.6	0.6	0.3	0.8	0.9	1.6	1.4	2.1	1.6	1.6	1.5	1.4	1.9	2.1	2.2	2.2	1.8	2.2
19-Feb	1.9	1.5	1.3	1.2	1.2	1.2	1.4	1.6	1.2	1.4	1.7	2.5	2.7	3.0	2.6	2.2	2.1	2.1	2.2	2.2	2.1	2.7	2.6	2.5	3.0
20-Feb	2.3	2.5	2.2	1.8	2.4	2.4	2.1	2.4	2.6	2.4	2.3	2.4	2.0	2.1	1.3	1.5	0.8	0.6	0.5	0.5	0.5	0.6	0.3	0.2	2.6
21-Feb	0.3	0.3	0.2	0.2	0.1	0.2	0.3	0.3	0.3	0.6	1.2	1.4	1.9	1.7	1.5	1.8	1.0	1.3	1.4	1.6	1.3	0.9	0.7	0.8	1.9
22-Feb	0.6	0.4	0.4	0.5	0.4	0.2	0.4	0.6	0.2	0.2	0.6	0.7	0.7	0.5	0.8	0.7	0.8	1.0	0.4	0.6	0.7	0.7	0.4	0.4	1.0
23-Feb	0.8	0.7	0.6	0.5	0.7	0.8	0.7	1.0	1.0	1.4	2.1	2.1	2.3	2.8	2.4	1.7	2.0	1.6	1.0	0.8	0.6	0.7	1.1	1.0	2.8
24-Feb	0.6	1.0	1.0	0.7	0.7	0.3	0.5	0.4	0.3	0.6	0.7	0.8	1.1	1.4	1.2	1.0	0.6	0.3	0.5	0.5	0.5	1.0	1.4	1.6	1.6
25-Feb	1.8	1.5	1.7	1.6	1.7	1.8	1.1	1.2	1.0	1.1	1.2	1.4	1.3	1.5	1.3	2.0	1.6	0.9	0.5	0.4	0.5	0.6	0.7	0.4	2.0
26-Feb	0.3	0.3	0.9	1.2	1.3	1.5	0.6	0.3	0.5	0.6	1.4	1.4	2.2	1.9	2.0	1.4	1.1	1.1	0.8	0.7	0.3	0.5	0.9	0.8	2.2
27-Feb	0.5	0.6	0.5	0.6	0.4	0.6	0.6	0.7	1.2	1.7	1.0	1.1	2.3	1.7	2.6	2.8	2.3	2.2	2.1	2.2	1.7	1.6	1.4	0.9	2.8
28-Feb	0.6	0.5	0.5	0.3	0.5	0.2	0.2	0.4	0.3	0.6	1.1	1.4	1.8	2.1	2.0	1.9	1.7	1.4	1.5	1.5	1.0	1.3	1.0	1.0	2.1
	2.5	2.7	3.1	3.0	3.1	2.6	2.3	2.4	2.6	2.7	2.7	3.1	2.8	3.0	2.7	2.8	2.3	2.2	2.3	2.4	3.0	3.5	3.1	2.9	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Summary of Hour Averages

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

Lower Camp Met Tower - February 2025

Maximum Value: 5.5 km/h on Feb 3 20:00

Maximum Daily Average: 1.9 km/h on Feb 5

Minimum Value: -0.9 km/h on Feb 8 00:00

Minimum Daily Average: -0.1 km/h on Feb 1

Maximum Diurnal Average: 0.7 km/h at hour 4

Minimum Diurnal Average: 0.3 km/h at hour 14

Monthly Average: 0.54 km/h

Percentiles: P_1 = -0.7 P_{10} = -0.1 Q_1 = 0.0 Median = 0.2 Q_3 = 0.8 P_{90} = 1.6 P_{99} = 3.5

Hours in Service:	672
Hours of Data:	670
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-Feb	0.0	-0.1	0.2	0.3	0.1	0.0	0.0	0.1	-0.4	-0.2	0.0	0.4	0.0	-0.1	-0.3	-0.1	-0.4	-0.3	-0.4	0.0	-0.4	-0.5	-0.3	-0.6	-0.1	0.4
2-Feb	-0.7	-0.1	-0.3	0.2	-0.3	0.2	0.0	0.1	0.0	0.5	0.1	-0.1	-0.1	-0.6	-0.7	-0.3	0.2	0.2	-0.3	0.0	0.0	-0.3	-0.2	0.1	-0.1	0.5
3-Feb	0.1	0.5	0.2	-0.2	-0.7	-0.1	0.6	0.3	0.7	1.2	1.0	0.8	0.6	0.5	0.6	1.0	1.9	2.3	3.8	5.5	5.1	5.1	2.5	2.5	1.5	5.5
4-Feb	1.6	0.6	0.9	0.9	0.7	0.9	0.7	0.8	0.6	0.4	0.1	-0.1	0.1	0.4	1.3	1.5	1.2	1.4	1.0	1.6	1.6	1.3	1.6	1.4	0.9	1.6
5-Feb	1.4	1.4	2.1	2.6	1.5	2.1	2.7	1.4	1.6	0.9	2.0	1.4	1.3	0.8	0.8	1.3	1.4	1.6	2.2	3.0	3.4	3.2	2.5	1.7	1.9	3.4
6-Feb	2.8	2.3	2.1	3.5	2.7	1.8	0.1	0.1	0.0	0.2	0.7	-0.4	-0.3	0.0	-0.5	0.0	0.0	0.0	0.0	-0.1	0.0	0.2	0.4	1.3	0.7	3.5
7-Feb	2.6	2.0	3.9	3.5	3.5	3.4	2.8	2.0	1.1	0.9	1.5	2.4	1.2	1.0	0.7	0.8	1.1	2.0	2.0	1.6	1.2	2.4	-0.8	-0.9	1.8	3.9
8-Feb	0.6	1.0	1.0	0.8	0.6	0.7	0.8	0.5	0.6	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	-0.1	0.0	0.0	-0.4	-0.3	0.4	0.3	1.0
9-Feb	-0.3	0.2	0.0	-0.2	0.0	0.1	0.2	0.1	0.0	-0.2	0.3	0.1	-0.6	-0.3	0.7	0.5	0.3	0.5	0.1	0.2	0.0	0.2	0.7	0.0	0.1	0.7
10-Feb	-0.1	0.0	0.8	1.0	1.9	1.1	1.1	0.8	1.1	1.1	1.2	0.7	0.8	0.5	1.0	0.6	0.2	0.1	0.1	0.4	0.2	0.0	-0.2	-0.1	0.6	1.9
11-Feb	0.0	-0.1	0.1	0.2	0.3	0.0	0.1	0.1	0.2	0.8	0.3	0.0	-0.2	0.5	0.2	0.0	0.1	0.1	0.2	0.2	0.1	0.0	0.2	0.1	0.2	0.8
12-Feb	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.2	0.1	0.3	0.0	0.2	0.0	0.0	-0.1	0.0	0.1	0.0	-0.1	0.5	0.0	-0.1	0.2	0.5
13-Feb	0.0	0.3	0.1	0.0	0.2	0.4	0.2	0.3	0.7	0.6	0.5	0.5	1.1	-0.9	-0.4	0.0	0.0	-0.1	0.0	0.1	0.2	0.3	0.1	0.0	0.2	1.1
14-Feb	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	-0.3	0.0	0.1	0.4	0.2	0.1	0.3	0.3	0.1	0.2	0.3	0.2	0.2	0.4
15-Feb	0.2	0.3	0.4	0.9	0.8	0.5	0.3	0.8	0.9	0.8	0.9	0.5	0.3	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.2	-0.3	0.0	-0.1	0.3	0.9
16-Feb	0.0	0.1	0.2	0.2	0.5	0.5	0.8	0.5	1.0	0.6	0.4	0.5	0.5	0.4	1.5	0.5	1.4	1.4	0.9	1.5	1.8	1.2	1.5	2.4	0.8	2.4
17-Feb	2.5	1.8	1.3	1.9	1.8	1.1	1.8	1.2	1.3	0.2	1.2	1.6	0.5	1.3	0.0	0.0	-0.2	0.1	0.4	0.0	1.5	1.2	2.2	1.5	1.1	2.5
18-Feb	0.7	0.8	0.5	1.0	1.2	1.5	0.3	1.0	0.6	0.0	0.5	0.4	0.4	-0.2	2.0	1.5	1.2	0.3	0.9	1.5	1.9	2.3	2.6	1.7	1.0	2.6
19-Feb	1.5	1.2	0.8	1.5	1.4	1.2	0.9	1.2	0.4	0.3	0.2	1.9	2.1	4.4	3.3	2.5	2.7	1.3	-0.1	-0.2	0.9	2.2	2.8	2.8	1.5	4.4
20-Feb	2.5	1.4	0.2	-0.2	0.1	0.4	0.5	0.9	0.8	0.4	0.7	0.6	0.6	0.3	0.6	0.9	0.5	0.2	0.1	0.2	0.1	0.3	0.1	-0.1	0.5	2.5
21-Feb	0.2	0.3	0.2	0.2	0.2	0.1	0.0	0.3	-0.2	0.1	0.1	-0.2	-0.1	0.3	0.2	0.3	-0.6	-0.4	-0.3	0.3	0.0	0.0	0.1	0.1	0.0	0.3
22-Feb	-0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.0	0.3	0.2	0.2	0.3	0.5	0.3	0.5	0.4	0.3	0.7	0.4	0.2	1.4	0.1	0.1	0.2	0.3	1.4
23-Feb	0.4	0.3	0.4	0.5	0.5	0.3	0.5	0.7	1.8	0.7	-0.1	0.0	0.0	0.2	0.1	-0.5	0.4	0.8	0.3	0.2	0.1	-0.3	0.1	0.0	0.3	1.8
24-Feb	0.0	0.1	0.4	0.1	0.2	0.1	0.1	-0.1	0.1	0.2	0.8	0.0	0.1	0.0	0.3	-0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.0	0.1	0.8
25-Feb	0.1	0.2	0.1	0.1	-0.1	-0.2	0.1	0.1	0.0	-0.2	-0.2	0.0	0.0	-0.2	-0.3	0.7	0.0	0.3	0.2	0.0	-0.3	0.0	0.0	0.2	0.0	0.7
26-Feb	0.3	0.2	0.7	0.9	0.9	0.7	0.7	0.2	0.0	0.1	0.1	0.1	0.8	0.0	1.1	0.0	0.0	0.2	0.1	0.0	0.2	0.0	0.0	0.1	0.3	1.1
27-Feb	0.0	0.2	0.1	0.1	0.3	0.3	0.2	0.3	0.6	UO	UO	1.1	1.0	0.0	0.2	0.4	-0.1	0.6	-0.1	0.5	0.1	0.3	-0.4	0.1	0.3	1.1
28-Feb	0.1	0.1	0.2	0.0	-0.1	0.2	0.1	0.2	0.2	0.5	0.6	-0.1	-0.7	-0.2	0.1	-0.1	0.7	2.0	0.9	0.6	0.5	0.7	0.4	-0.3	0.3	2.0
	0.6	0.5	0.6	0.7	0.7	0.6	0.6	0.5	0.5	0.4	0.5	0.5	0.3	0.3	0.5	0.4	0.5	0.6	0.5	0.6	0.7	0.7	0.6	0.5	Diurnal Average	
	2.8	2.3	3.9	3.5	3.5	3.4	2.8	2.0	1.8	1.2	2.0	2.4	2.1	4.4	3.3	2.5	2.7	2.3	3.8	5.5	5.1	5.1	2.8	2.8	Diurnal Maximum	

UO - Unstable Operation

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.5 km/h on Feb 19 22:00

Minimum Value: 0.1 km/h on Feb 14 11:00

Percentiles: P_1 = 0.2 P_{10} = 0.3 Q_1 = 0.6 Median = 1.1 Q_3 = 1.7 P_{90} = 2.3 P_{99} = 3.2

Hours in Service:	672
Hours of Data:	670
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-Feb	1.6	1.8	2.3	2.0	1.8	1.8	1.9	2.1	2.5	2.3	2.6	2.3	2.5	2.3	2.2	1.9	1.5	1.6	2.1	2.3	2.4	3.5	3.4	2.9	3.5
2-Feb	2.7	3.1	3.3	3.0	2.9	2.8	2.6	2.2	2.3	2.9	2.9	2.8	2.1	1.8	1.3	1.1	0.7	0.6	1.1	1.0	0.7	0.6	0.5	0.7	3.3
3-Feb	0.5	0.5	0.5	0.7	0.7	0.9	0.6	0.6	0.7	1.0	0.6	1.0	0.7	0.7	0.6	1.2	0.7	0.9	0.7	1.1	1.3	1.4	0.9	1.4	1.4
4-Feb	1.5	0.9	0.9	1.0	1.0	1.2	0.9	0.9	1.4	1.4	1.2	0.9	1.1	1.2	1.6	1.4	1.1	1.0	0.9	1.2	1.3	1.4	2.2	1.9	2.2
5-Feb	2.1	2.3	2.7	2.6	2.0	2.3	2.4	1.7	2.1	1.9	2.0	1.7	1.6	1.8	1.6	1.5	1.3	1.1	0.9	0.8	0.7	0.9	1.1	1.1	2.7
6-Feb	1.0	1.3	1.4	2.6	1.8	1.5	1.7	1.6	1.5	1.8	2.8	3.3	2.8	2.9	2.0	2.0	1.2	0.6	0.4	0.4	0.6	0.7	0.5	1.2	3.3
7-Feb	1.0	0.9	1.1	0.7	1.2	1.6	1.6	1.3	0.9	1.7	1.8	1.1	0.5	0.8	0.8	0.8	0.5	0.5	0.4	0.7	0.9	1.1	1.0	1.7	1.8
8-Feb	1.4	0.7	0.7	0.5	0.5	0.5	0.3	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.2	0.3	0.2	0.5	0.5	1.4	2.9	2.8	3.3	2.1	3.3
9-Feb	2.5	2.8	1.9	1.3	0.9	0.5	0.6	1.2	0.9	1.6	1.4	2.8	1.9	1.8	2.1	1.2	0.5	0.4	0.2	0.4	0.6	0.7	0.6	0.6	2.8
10-Feb	1.1	1.4	1.2	0.9	1.0	1.2	1.3	1.3	1.2	1.4	1.2	1.2	1.3	1.3	1.4	1.4	0.9	0.5	0.8	1.4	1.2	1.1	1.6	1.0	1.6
11-Feb	0.3	0.3	0.6	0.4	0.6	1.2	0.5	0.6	0.4	2.8	0.9	0.6	0.8	1.5	1.0	0.3	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.2	2.8
12-Feb	0.4	0.5	0.6	0.7	0.5	0.5	0.7	0.8	0.7	0.7	0.4	0.6	0.8	0.7	0.6	0.8	0.9	1.1	1.1	0.9	0.5	0.6	0.4	0.6	1.1
13-Feb	0.6	0.7	0.9	1.2	1.1	2.1	1.3	1.4	1.4	1.0	0.7	0.9	1.8	1.6	2.2	1.9	1.7	0.8	0.6	1.0	0.3	0.4	0.4	0.3	2.2
14-Feb	0.5	0.6	0.2	0.1	0.3	0.1	0.2	0.1	0.1	0.2	0.1	0.8	0.7	0.5	0.5	0.7	0.4	0.4	0.3	0.3	0.2	0.2	0.3	0.2	0.8
15-Feb	0.3	0.4	0.4	0.4	0.4	0.6	0.6	0.5	0.6	0.5	0.5	0.4	0.5	0.7	1.1	0.9	0.5	0.2	0.4	0.6	1.5	2.1	1.3	0.8	2.1
16-Feb	0.3	0.3	0.2	0.3	0.3	0.4	0.6	0.4	0.6	0.6	0.6	0.7	1.0	1.0	1.7	2.0	1.1	1.1	1.2	1.8	2.0	2.0	1.9	2.7	2.7
17-Feb	2.3	1.9	1.9	1.7	1.5	1.3	1.6	1.8	2.2	1.8	1.9	2.1	2.3	2.6	2.6	2.5	1.7	1.2	1.5	1.8	1.9	1.7	2.1	1.8	2.6
18-Feb	1.4	1.2	1.0	0.8	1.2	0.8	1.1	0.6	0.7	0.6	0.9	1.0	1.7	1.6	2.1	1.7	2.0	1.6	1.9	2.6	3.0	2.7	2.5	2.1	3.0
19-Feb	2.0	1.9	1.9	1.6	1.5	1.7	1.6	1.9	1.8	2.1	2.3	2.7	2.7	3.1	3.1	2.6	2.7	2.6	2.6	2.6	3.2	3.5	3.4	2.9	3.5
20-Feb	2.7	2.8	2.4	1.5	1.8	1.7	1.6	2.0	2.3	2.1	2.1	2.2	1.8	1.7	1.2	1.5	0.6	0.6	0.5	0.4	0.4	0.6	0.4	0.3	2.8
21-Feb	0.4	0.3	0.3	0.3	0.2	0.3	0.4	0.3	0.5	0.3	0.7	1.2	1.2	1.3	1.3	1.9	1.1	1.4	1.4	1.6	1.4	1.2	0.7	0.7	1.9
22-Feb	0.4	0.3	0.3	0.2	0.3	0.2	0.3	0.5	0.6	0.7	0.5	0.9	1.1	0.9	1.0	1.2	1.1	1.6	0.8	1.1	1.0	0.9	0.5	0.4	1.6
23-Feb	1.2	0.8	0.6	0.4	0.5	0.6	0.8	1.4	0.8	1.4	1.5	2.1	2.3	3.2	2.5	1.8	2.2	1.8	1.1	0.7	0.7	0.8	1.0	0.9	3.2
24-Feb	0.7	1.0	1.0	0.6	0.3	0.2	0.2	0.4	0.3	0.4	0.9	1.1	1.1	1.2	1.4	1.0	0.6	0.5	0.5	0.7	0.6	1.1	1.5	1.6	1.6
25-Feb	1.9	1.6	1.8	2.0	2.0	2.3	1.1	1.0	0.8	1.1	1.1	1.2	1.4	1.4	1.3	2.1	1.6	0.7	0.6	0.4	0.3	0.3	0.2	0.2	2.3
26-Feb	0.3	0.4	1.0	0.8	1.2	1.3	0.6	0.4	0.6	0.6	1.3	1.3	1.8	2.0	1.7	1.3	1.0	0.8	0.7	0.3	0.4	0.3	0.6	0.7	2.0
27-Feb	0.4	0.4	0.5	0.4	0.5	1.1	0.7	1.2	1.7	UO	UO	1.2	2.7	1.8	2.5	3.2	2.7	2.2	2.2	2.1	1.7	1.7	1.3	0.9	3.2
28-Feb	0.7	0.7	0.4	0.3	0.5	0.3	0.3	0.4	0.4	0.8	1.4	1.5	1.9	2.1	2.1	1.8	1.7	1.4	1.1	1.2	1.3	1.1	1.0	1.0	2.1
	2.7	3.1	3.3	3.0	2.9	2.8	2.6	2.2	2.5	2.9	2.9	3.3	2.8	3.2	3.1	3.2	2.7	2.6	2.6	2.6	3.2	3.5	3.4	2.9	
	Diurnal Maximum																								

UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS04
BUFFALO VIEWPOINT
FEBRUARY 2025

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

March 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BUFFALO VIEWPOINT (AMS04)
FEBRUARY 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	638	33	34	99.85	62.1	0	8.2	0
H2S (ppb) Average	638	33	34	99.85	7	0	1.5	0
THC (ppm) Average	589	32	83	92.41	3.7	-	2.9	-
NMHC(ppm) Average	589	32	83	92.41	0.406	-	0.057	-
CH4(ppm) Average	589	32	83	92.41	3.7	-	2.8	-
O3(ppb) Average	640	31	32	99.85	37.1	0	34.2	-
NO2(ppb) Average	638	33	34	99.85	37.2	0	26.5	-
NO(ppb) Average	638	33	34	99.85	122.2	-	31	-
NOX(ppb) Average	638	33	34	99.85	156.9	-	54.7	-
PM2.5(ug/m3) Average	670	2	2	100	36.6	0	11.7	0
Temperature (C) Average	672	0	0	100	2.5	-	-4.2	-
Relative Humidity (%) Average	672	0	0	100	97.6	-	90.8	-
Wind Speed 10 m (km/h) Average	629	0	43	93.6	22	-	17	-
Wind Direction 10 m (deg) Average	629	0	43	93.6	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BUFFALO VIEWPOINT (AMS04)
FEBRUARY 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	638	0.7	3.5	-	0	0	0	0.2	0.6	1.1	62.1
H2S (ppb) Average	638	0.33	0.6	-	0	0	0.1	0.1	0.3	0.8	7
THC (ppm) Average	589	2.21	0.3	-	2	2	2	2.1	2.2	2.6	3.7
NMHC(ppm) Average	589	0.005	0.027	-	0	0	0	0	0	0	0.406
CH4(ppm) Average	589	2.2	0.3	-	2	2	2	2.1	2.2	2.6	3.7
O3(ppb) Average	640	22	10.3	-	0.9	5.3	14.3	24.8	30.6	33.5	37.1
NO2(ppb) Average	638	10.07	9.9	-	0.3	1.2	2.2	5.7	16.2	26.8	37.2
NO(ppb) Average	638	4.56	12	-	0	0.1	0.2	0.6	2.8	12.4	122.2
NOX(ppb) Average	638	14.63	19.5	-	0.4	1.3	2.6	6.8	20	39.9	156.9
PM2.5(ug/m3) Average	670	4.62	3.3	-	1.1	1.9	2.7	3.6	5.7	8	36.6
Temperature 2 m (C) Average	672	-17.89	8.4	-	-36.3	-27.8	-24.2	-19.3	-10.7	-6.2	2.5
Relative Humidity (%) Average	672	72.21	11	-	36.4	57.7	66.8	73.6	78.1	86.7	97.6
Wind Speed 10 m (km/h) Average	629	7.9	4	-	0	3	5	7	10	14	22
Wind Direction 10 m (deg) Average	629	-	-	-	-	-	-	-	-	-	-

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

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL GASEOUS ANALYZERS	26 Feb 2025 08:00	26 Feb 2025 08:00	1	Maintenance - sample manifold cleaned
THC/NMHC/CH4	03 Feb 2025 05:00	05 Feb 2025 05:00	49	Unstable Operation - AMD noncompliance
THC/NMHC/CH4	22 Feb 2025 07:00	22 Feb 2025 07:00	1	Maintenance - reinitiated daily QA check
Wind Speed, Wind Direction	23 Feb 2025 19:00	24 Feb 2025 13:00	19	Flat line in sensor output signal
Wind Speed, Wind Direction	24 Feb 2025 15:00	25 Feb 2025 06:00	16	Flat line in sensor output signal
Wind Speed, Wind Direction	25 Feb 2025 20:00	25 Feb 2025 21:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction	26 Feb 2025 01:00	26 Feb 2025 01:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	26 Feb 2025 04:00	26 Feb 2025 08:00	5	Flat line in sensor output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Buffalo Viewpoint - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 62.1 ppb on Feb 14 16:00 Maximum Daily Average: 8.2 ppb on Feb 14

Minimum Value: 0.0 ppb on Feb 1 04:00 Minimum Daily Average: 0.0 ppb on Feb 3
Maximum Diurnal Average: 2.7 ppb at hour 16 Minimum Diurnal Average: 0.3 ppb at hour 1
Monthly Average: 0.70 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.2 Q_3 = 0.6 P_{90} = 1.1 P_{99} = 7.0

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	33
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-Feb	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	1.7	0.7	0.1	0.2	0.9	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.2	1.7
2-Feb	0.0	0.1	Z	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.2
3-Feb	0.0	0.1	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	0.1
4-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.0	0.0	0.1	0.2	0.3	0.0	0.2	0.1	0.1	0.0	0.1	0.1	0.3
5-Feb	0.1	0.1	0.1	0.1	0.1	Z	0.3	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.3
6-Feb	Z	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.4	0.3	0.2	0.2	0.1	0.2	0.1	0.0	0.0	0.1	0.4
7-Feb	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.1
8-Feb	0.1	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.8	1.5	0.6	0.5	0.3	0.0	0.1	0.1	0.0	0.3	1.5
9-Feb	0.0	0.0	0.0	Z	0.1	0.1	0.9	1.8	0.3	0.3	0.1	0.0	0.0	0.0	7.0	0.3	0.3	0.7	0.9	0.7	0.0	0.0	0.0	0.0	0.6	7.0
10-Feb	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	0.3	0.6	1.4	1.0	0.6	0.3	0.2	1.4
11-Feb	0.1	0.0	0.1	0.0	0.1	Z	1.9	1.1	0.2	0.0	0.0	0.0	0.7	2.9	2.9	0.9	1.4	4.2	3.9	3.1	3.6	2.0	0.9	0.9	1.4	4.2
12-Feb	Z	0.5	0.6	1.4	2.2	1.5	1.5	1.4	1.5	1.1	0.8	0.7	2.3	2.3	1.3	1.3	1.2	0.9	1.1	0.7	0.7	0.6	0.4	0.4	1.2	2.3
13-Feb	0.2	Z	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.9	3.1	1.1	1.3	4.6	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	4.6
14-Feb	0.0	0.0	Z	0.3	0.6	0.6	0.4	0.2	0.1	0.0	0.1	0.2	0.6	2.8	16.3	62.1	56.3	10.4	7.4	4.6	5.7	9.9	6.2	4.3	8.2	62.1
15-Feb	2.0	1.9	1.9	Z	1.8	1.7	1.5	1.1	0.9	0.6	0.6	0.4	0.5	0.5	0.4	0.4	0.3	1.1	1.0	2.4	0.9	0.1	0.3	0.4	1.0	2.4
16-Feb	0.1	0.2	0.2	0.1	Z	0.2	0.0	0.1	0.1	0.1	0.1	0.4	0.9	0.9	1.4	1.4	0.7	0.5	0.2	0.0	0.1	0.1	0.0	0.1	0.3	1.4
17-Feb	0.2	0.4	0.3	0.3	0.3	Z	0.4	0.4	0.7	0.7	0.9	0.9	0.8	0.7	0.7	0.4	0.4	0.3	0.3	0.2	0.2	0.1	0.0	0.2	0.4	0.9
18-Feb	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.4	0.7	0.7	0.5	0.4	0.4	0.4	0.3	0.2	0.3	0.3	0.3	0.4	0.5	0.3	0.7
19-Feb	0.5	Z	0.9	0.8	0.7	0.7	0.6	0.8	0.7	0.9	0.8	0.9	1.0	1.0	1.1	1.1	1.0	0.7	0.5	0.4	0.4	0.4	0.5	0.6	0.7	1.1
20-Feb	0.4	0.6	Z	0.5	0.4	0.3	0.3	0.4	0.4	0.6	0.7	0.6	0.6	0.7	0.6	0.5	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.7	0.5	0.7
21-Feb	0.2	0.4	0.2	Z	0.4	0.7	0.9	1.1	1.3	1.8	1.9	1.0	6.9	0.9	0.6	0.5	0.3	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.8	6.9
22-Feb	0.1	0.2	0.5	0.1	Z	0.1	0.3	0.2	0.4	0.6	0.6	0.8	0.6	0.6	0.7	0.7	0.6	0.3	0.2	0.3	0.2	0.1	0.1	0.1	0.4	0.8
23-Feb	0.1	0.1	0.1	0.1	0.2	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2
24-Feb	Z	0.1	0.0	0.1	0.0	0.0	0.0	C	C	C	C	C	0.3	0.3	0.5	0.5	0.6	1.1	0.9	0.3	0.7	0.6	1.0	2.0	0.5	2.0
25-Feb	1.5	Z	0.5	0.4	0.3	0.2	0.2	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.7	2.4	2.8	0.4	0.1	0.1	0.0	0.0	0.1	0.3	0.4	2.8
26-Feb	0.2	0.5	Z	0.8	0.9	0.5	0.6	M	0.6	0.5	0.3	0.2	0.2	1.4	1.7	0.7	0.4	0.2	0.0	0.0	0.1	0.1	0.1	0.0	0.5	1.7
27-Feb	0.0	0.1	0.3	Z	0.3	0.3	0.6	0.4	0.5	0.4	0.4	0.4	0.3	0.1	0.6	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.2	0.6
28-Feb	0.0	0.3	0.1	0.2	Z	1.5	0.2	0.8	0.8	0.2	0.2	0.2	0.4	0.6	0.5	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.0	0.1	0.3	1.5
	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.7	0.7	1.5	2.7	2.5	0.9	0.7	0.6	0.6	0.6	0.4	0.4	Diurnal Average	
	2.0	1.9	1.9	1.4	2.2	1.7	1.9	1.8	1.5	1.8	1.9	3.1	6.9	2.9	16.3	62.1	56.3	10.4	7.4	4.6	5.7	9.9	6.2	4.3	Diurnal Maximum	

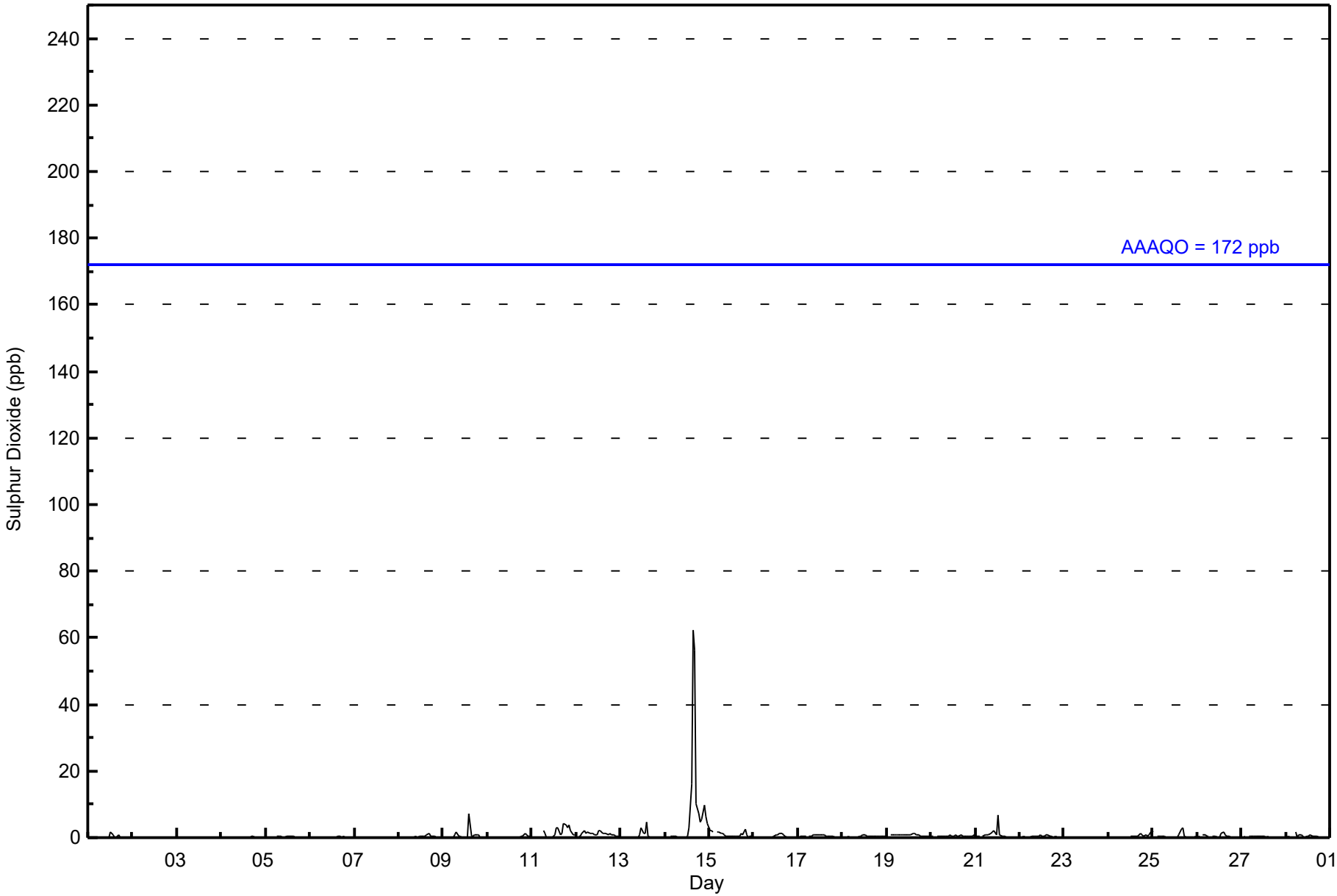
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Buffalo Viewpoint - February 2025



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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	635	99.53	99.53
11 - 20	1	0.16	99.69
21 - 60	1	0.16	99.84
61 - 110	1	0.16	100.00
111 - 172	0	0.00	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 638

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Buffalo Viewpoint - February 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	26	14	5	2	15	56	91	25	18	50	30	38	17	29	49	600
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
21 - 60	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	135	26	14	5	2	16	56	91	25	18	50	30	39	18	29	49	603

Total Number of Valid Hours: 603

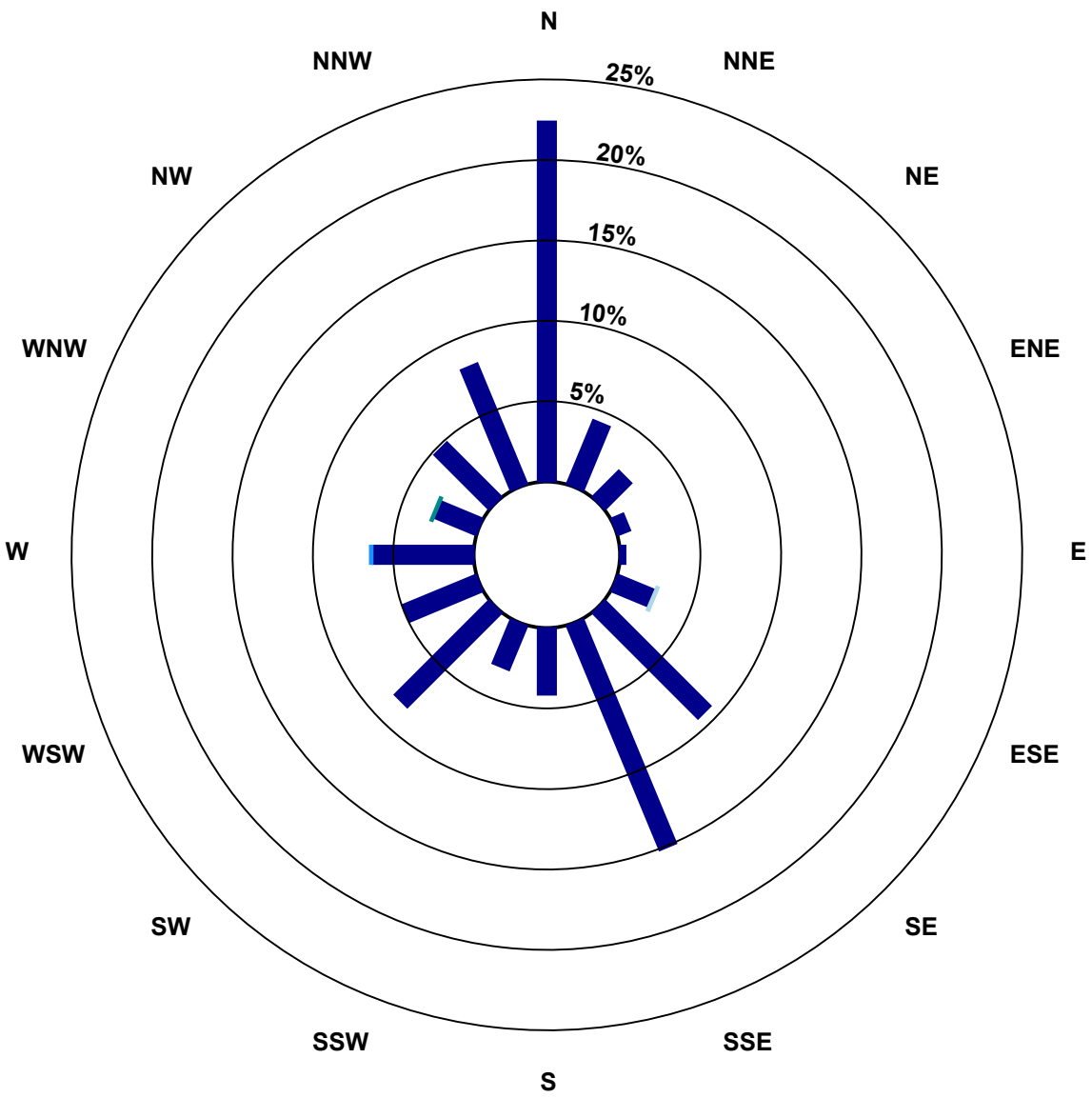
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Sulphur Dioxide (SO_2) - ppb

Buffalo Viewpoint



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

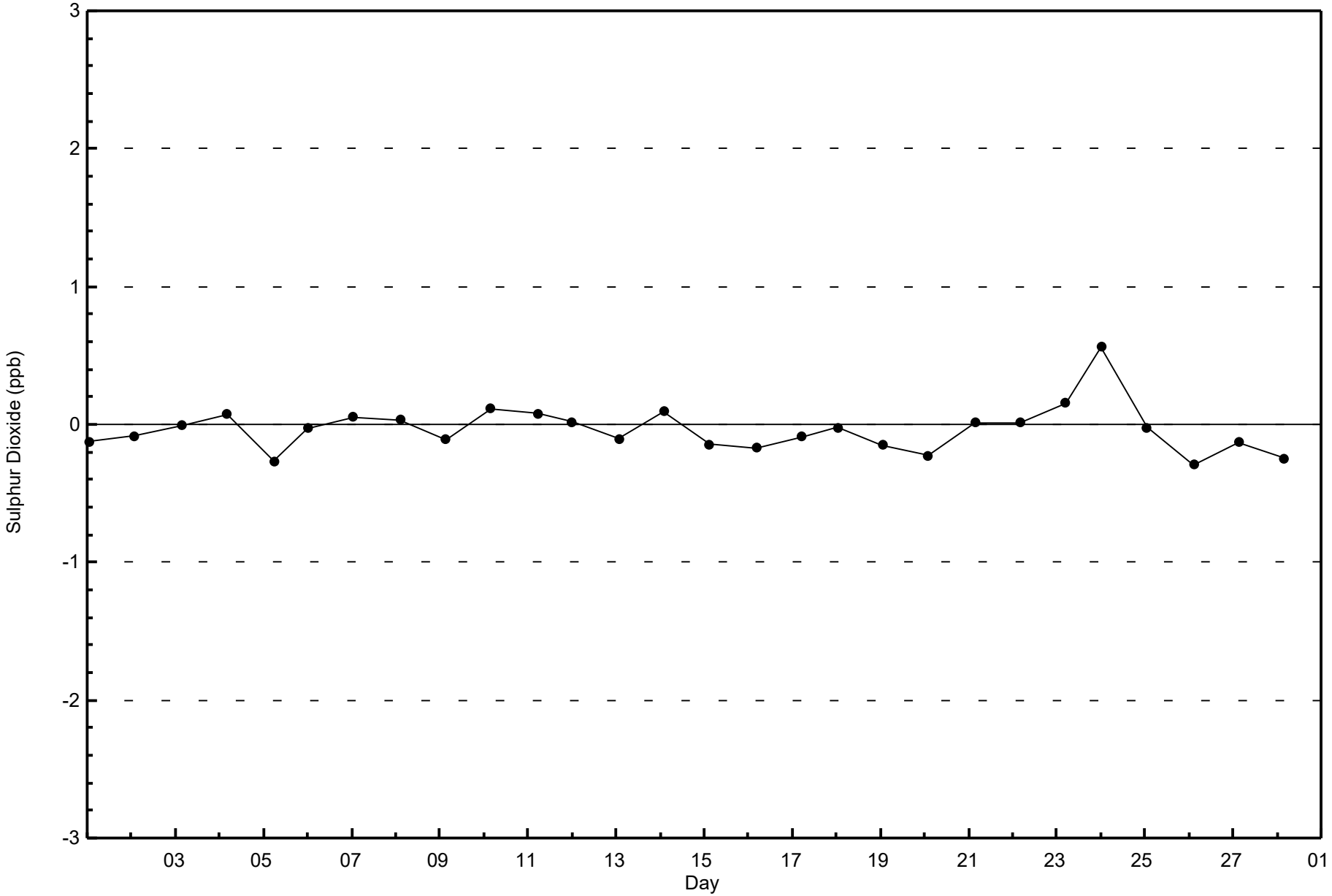
Total Number of Valid Hours: 603

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Buffalo Viewpoint - February 2025

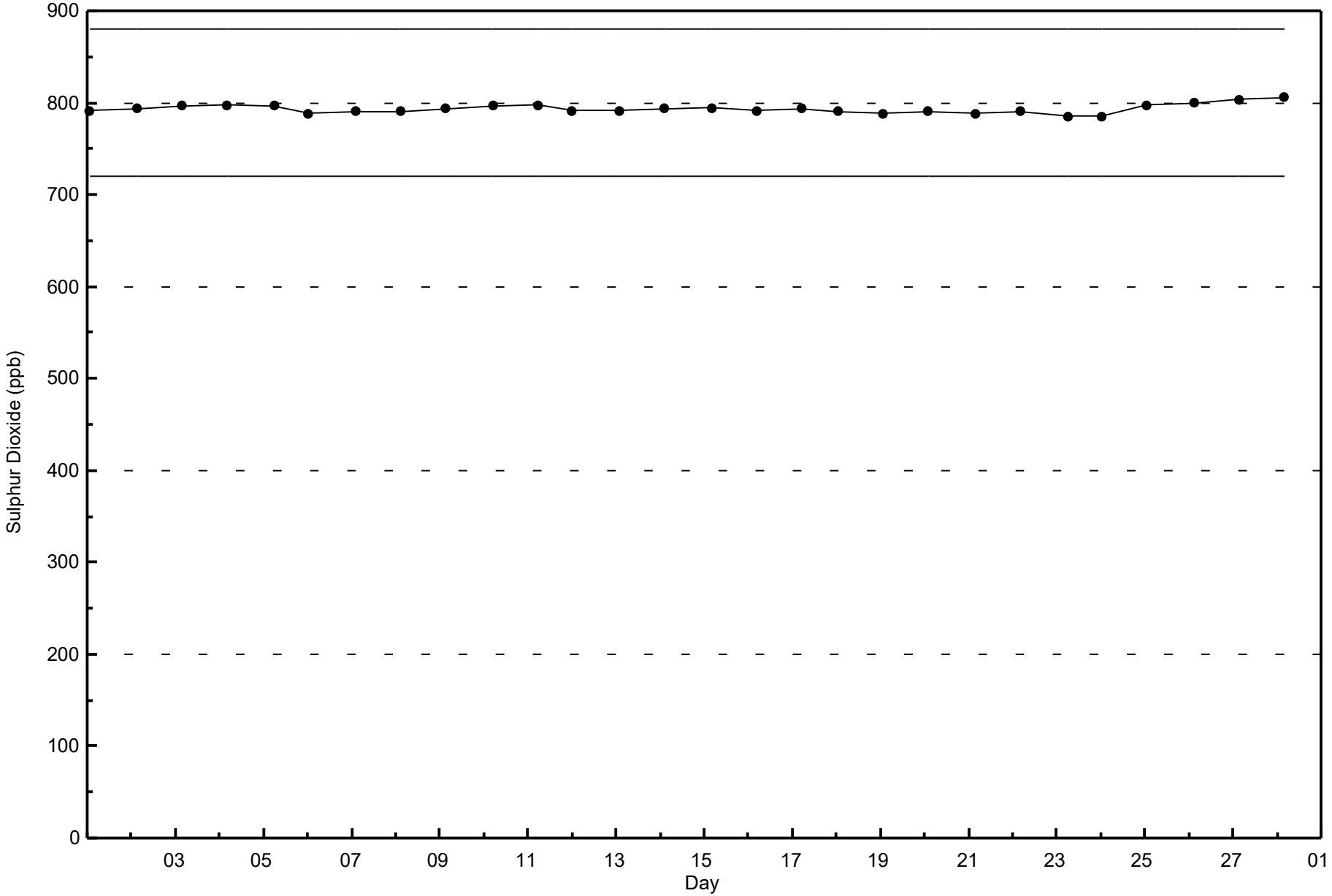


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Buffalo Viewpoint - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Buffalo Viewpoint - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7.0 ppb on Feb 14 22:00 Maximum Daily Average: 1.5 ppb on Feb 14

Minimum Value: 0.0 ppb on Feb 3 20:00
Maximum Diurnal Average: 0.4 ppb at hour 22
Monthly Average: 0.33 ppb

Minimum Daily Average: 0.0 ppb on Feb 5
Minimum Diurnal Average: 0.2 ppb at hour 1
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} = 2.4

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	33
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-Feb	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
2-Feb	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	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2
3-Feb	0.2	0.2	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
4-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1
5-Feb	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1
6-Feb	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.6	1.1	0.2	0.7	0.4	0.0	0.1	0.2	1.1
7-Feb	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1
8-Feb	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	0.2	0.2	0.3	0.8	1.1	0.6	0.2	0.2	0.1	0.1	0.2	1.1
9-Feb	0.1	0.1	0.1	0.1	Z	0.2	0.3	0.9	0.4	0.2	0.2	0.1	0.0	0.1	0.1	0.1	0.2	0.4	1.3	2.2	0.6	0.2	0.2	0.1	0.4	2.2
10-Feb	0.1	0.1	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.3	0.2	0.2	0.3	0.3	0.2	0.1	0.3
11-Feb	Z	0.2	0.3	0.4	0.3	0.2	0.5	1.0	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.1	0.2	0.3	0.3	0.4	0.5	0.5	0.4	0.3	0.3	1.0
12-Feb	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.4	0.4	1.2	1.0	0.7	0.3	0.3	0.4	0.2	0.2	0.3	0.3	0.3	0.3	0.4	1.2
13-Feb	0.3	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.4	0.8	2.2	1.5	1.5	0.9	0.7	0.4	0.3	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.5	2.2
14-Feb	0.2	0.2	0.2	Z	2.3	3.1	2.3	1.6	0.8	0.7	0.6	0.5	0.8	0.4	0.6	0.8	1.1	0.4	0.5	0.9	2.4	7.0	4.7	1.9	1.5	7.0
15-Feb	1.2	0.7	0.9	0.6	Z	0.8	0.8	0.6	0.3	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.8	0.3	0.1	0.1	0.1	0.4	1.2
16-Feb	0.1	0.1	0.1	0.3	0.2	Z	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.3
17-Feb	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
18-Feb	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
19-Feb	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
20-Feb	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.2	0.6	1.4	0.2	1.4
21-Feb	0.9	1.2	0.7	0.7	Z	2.2	1.6	1.6	1.6	1.8	2.1	1.1	1.4	0.5	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.8	2.2
22-Feb	0.2	0.3	0.7	0.3	0.4	Z	0.5	0.4	0.8	2.4	2.6	3.2	2.1	0.9	2.7	1.6	1.0	0.9	1.0	1.0	0.8	0.5	0.6	0.6	1.1	3.2
23-Feb	Z	0.6	0.4	0.4	0.3	0.2	0.2	0.2	0.1	0.4	0.4	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	0.2	0.6
24-Feb	0.3	Z	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.5	0.7	0.6	0.4	0.3	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.7	0.5	0.4	0.7
25-Feb	0.3	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	0.3	0.3	1.3	0.9	0.3	0.4	0.6	0.7	0.7	1.9	0.4	1.9
26-Feb	0.3	0.3	0.4	Z	0.5	0.6	0.7	M	1.5	0.8	0.4	0.3	0.2	1.1	1.7	1.4	0.4	0.4	0.5	0.5	0.4	0.4	0.3	0.4	0.6	1.7
27-Feb	0.4	1.0	2.3	1.1	Z	0.8	1.9	C	C	C	C	C	0.3	1.1	0.5	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.6	2.3
28-Feb	0.1	0.1	0.1	0.1	0.1	Z	0.3	0.3	0.3	0.3	0.2	0.1	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3
	0.2	0.3	0.3	0.2	0.3	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	Diurnal Average	
	1.2	1.2	2.3	1.1	2.3	3.1	2.3	1.6	1.6	2.4	2.6	3.2	2.1	1.1	2.7	1.6	1.3	0.9	1.3	2.2	2.4	7.0	4.7	1.9	Diurnal Maximum	

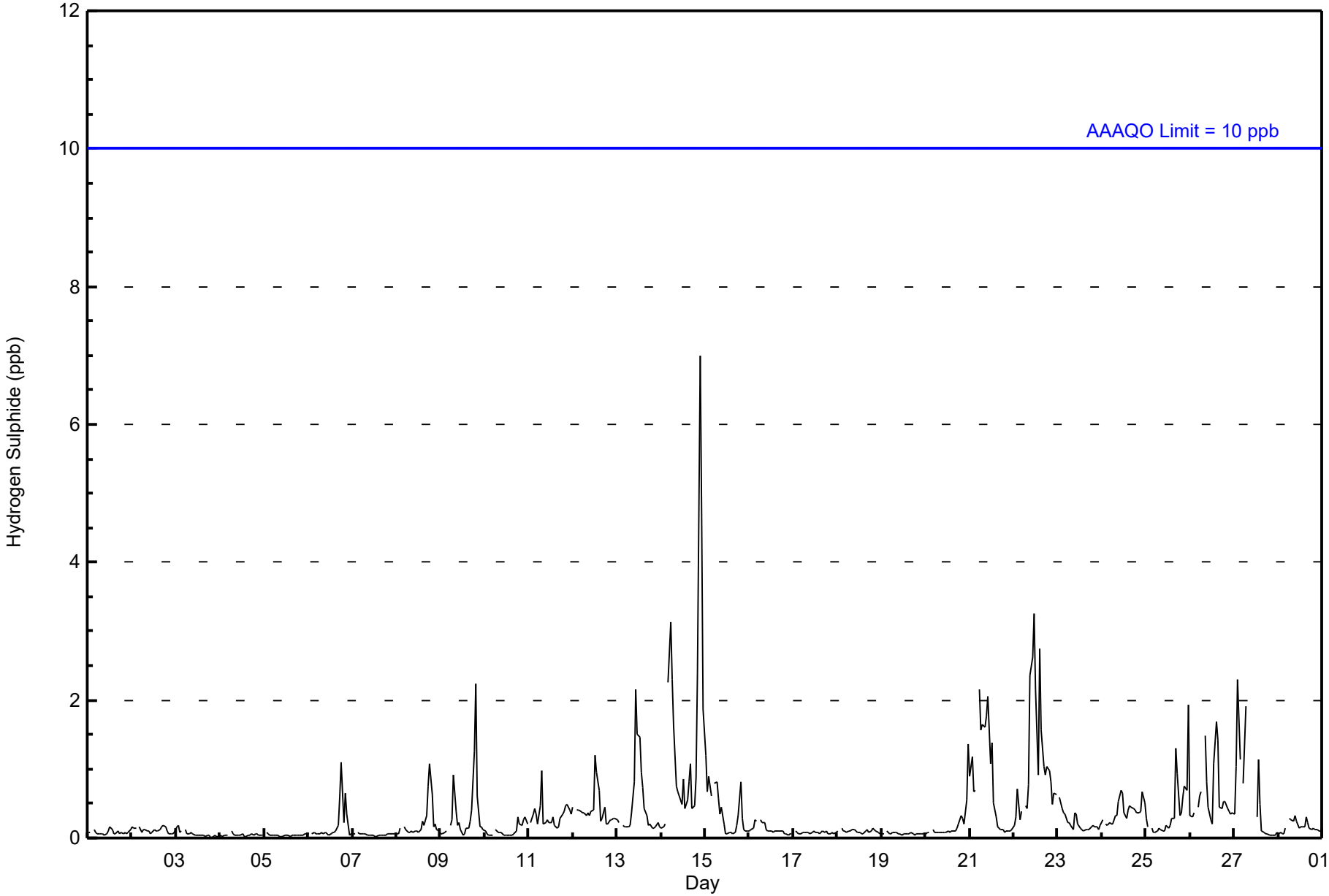
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Buffalo Viewpoint - February 2025



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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	632	99.06	99.06
3 - 4	4	0.63	99.69
5 - 7	2	0.31	100.00
8 - 11	0	0.00	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 638

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Buffalo Viewpoint - February 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	135	26	13	5	2	16	56	93	23	15	52	28	36	17	26	50	593
3 - 4	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	4
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	136	26	13	5	2	16	56	93	23	15	52	28	38	18	28	50	599

Total Number of Valid Hours: 599

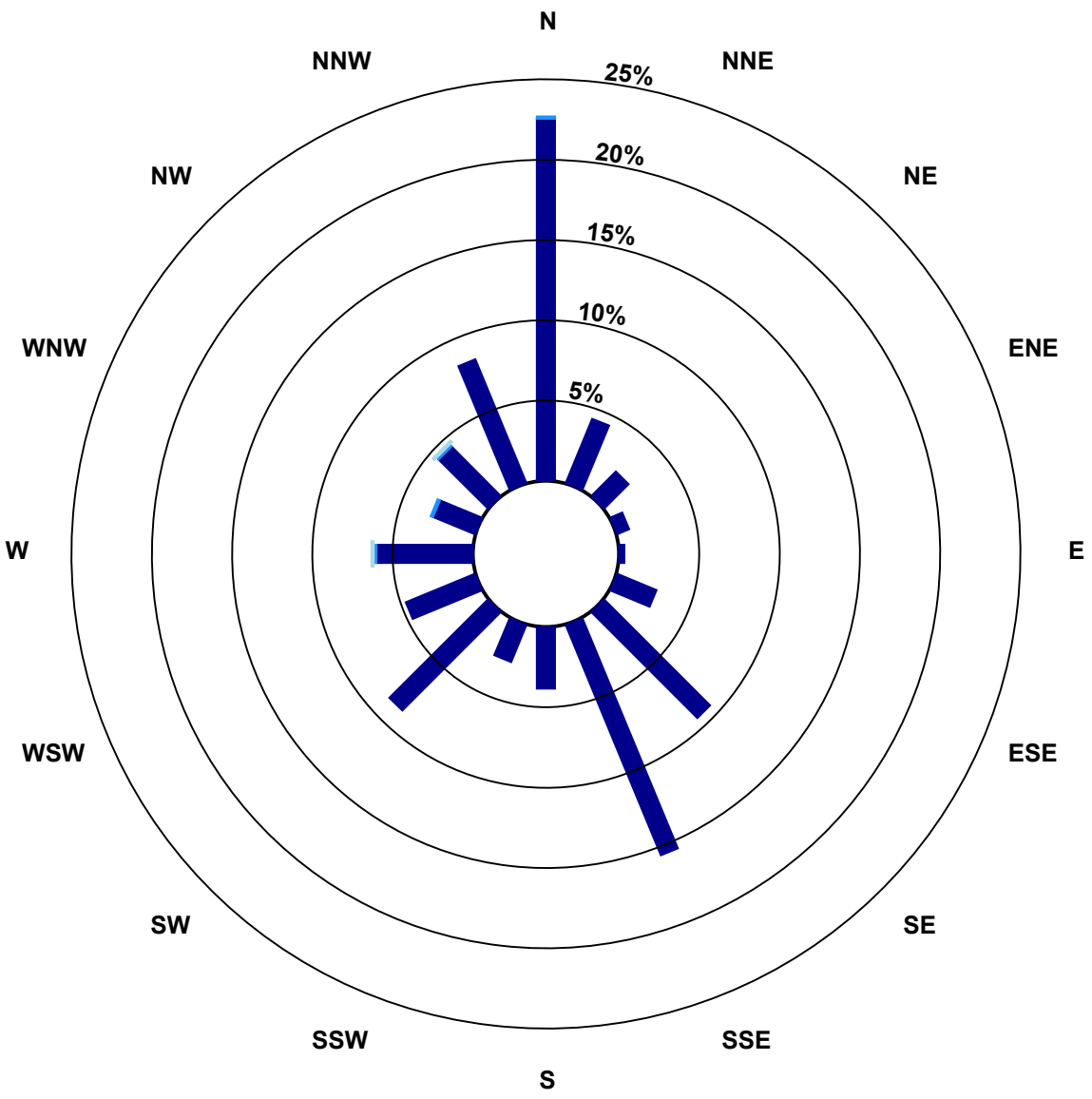
Total Number of Hours: 672

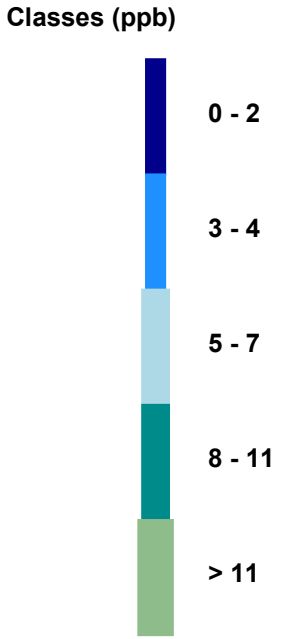
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Hydrogen Sulphide (H_2S) - ppb

Buffalo Viewpoint





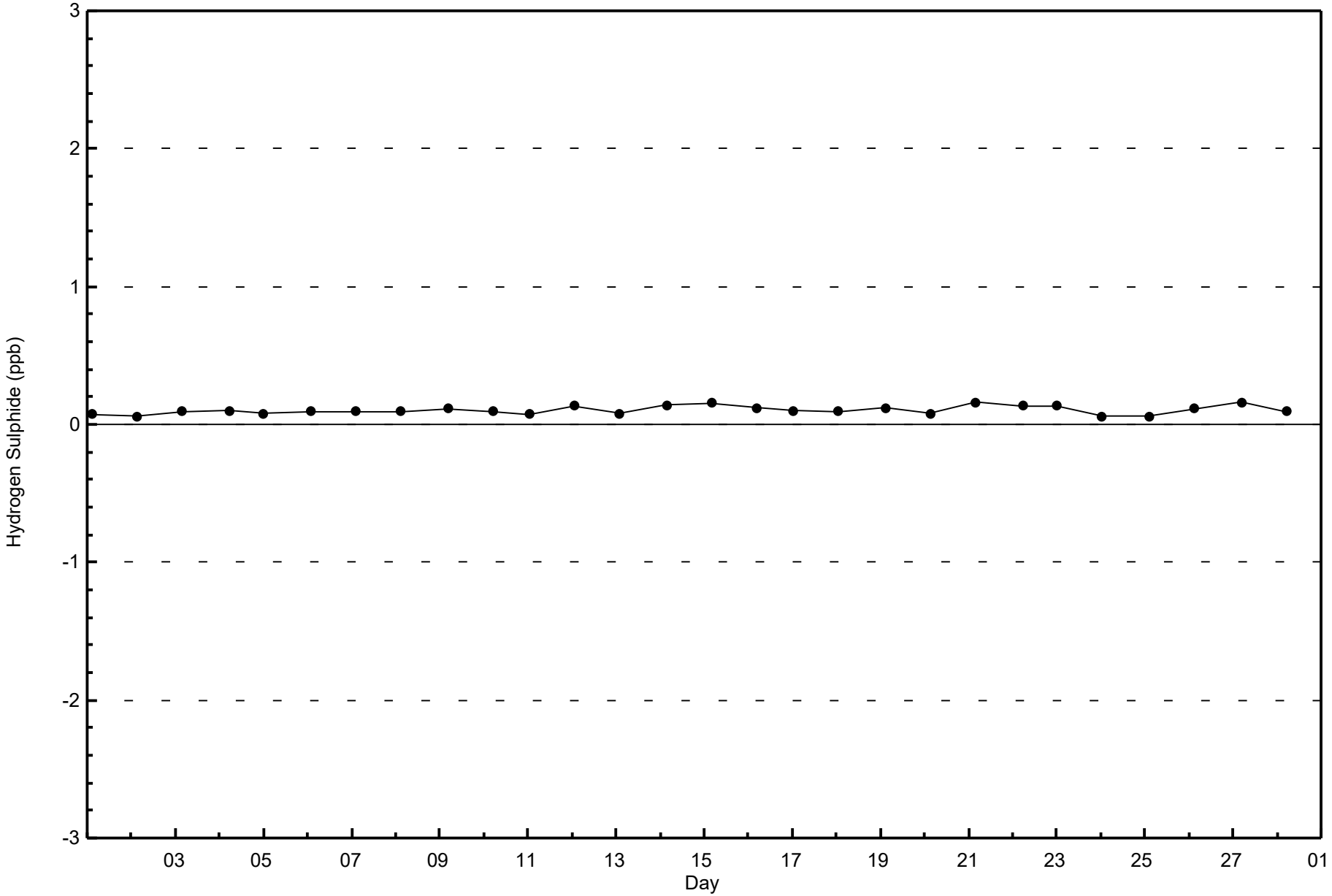
Total Number of Valid Hours: 599

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Buffalo Viewpoint - February 2025

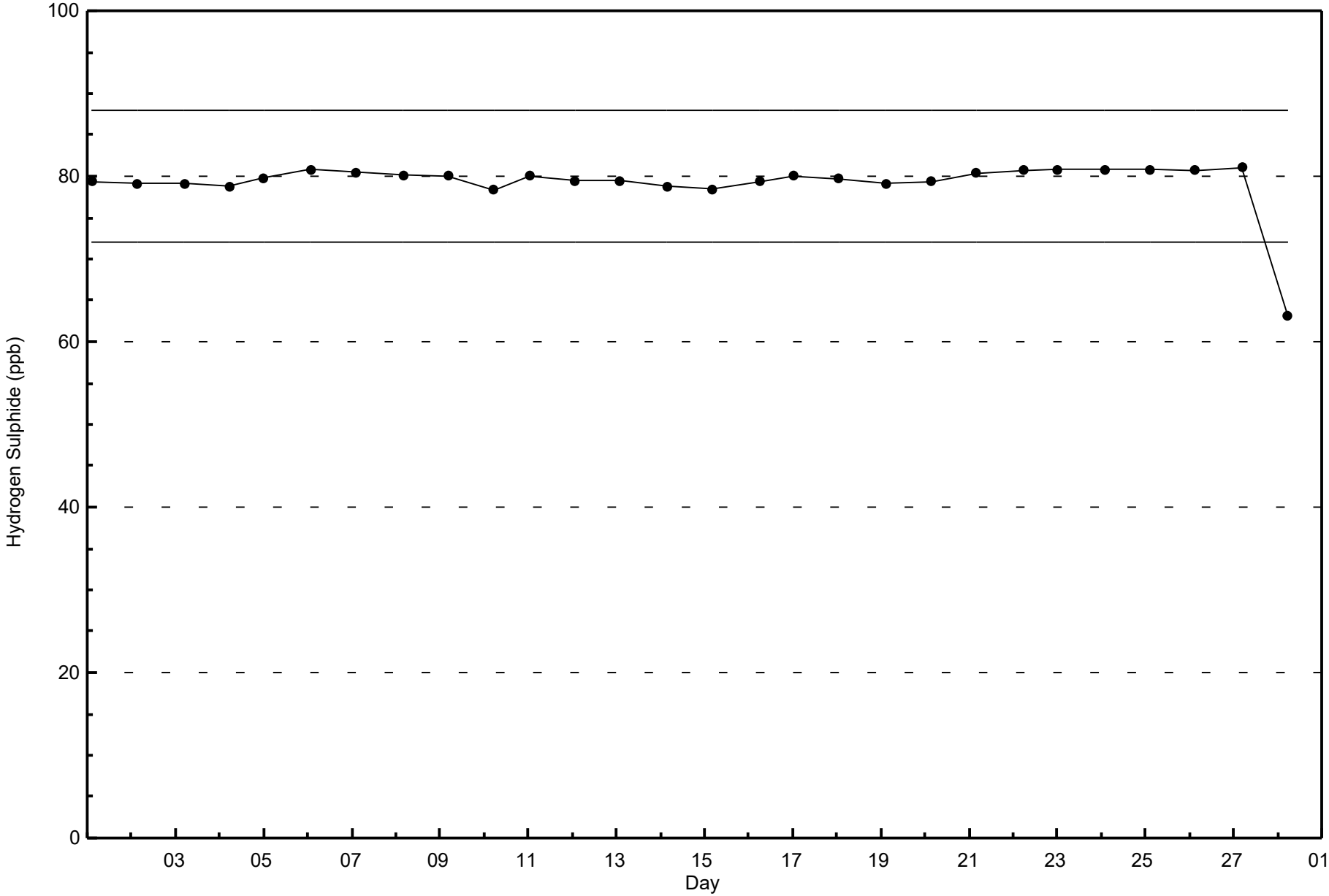


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Buffalo Viewpoint - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Buffalo Viewpoint - February 2025

Maximum Value: 3.7 ppm on Feb 21 02:00

Maximum Daily Average: 2.9 ppm on Feb 22

Minimum Value: 2.0 ppm on Feb 28 00:00

Minimum Daily Average: 2.0 ppm on Feb 17

Maximum Diurnal Average: 2.3 ppm at hour 11

Minimum Diurnal Average: 2.2 ppm at hour 18

Monthly Average: 2.21 ppm

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

Hours in Service:	672
Hours of Data:	589
Hours of Missing Data:	83
Hours of Calibration:	32
Percent Operational Time:	92.4

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

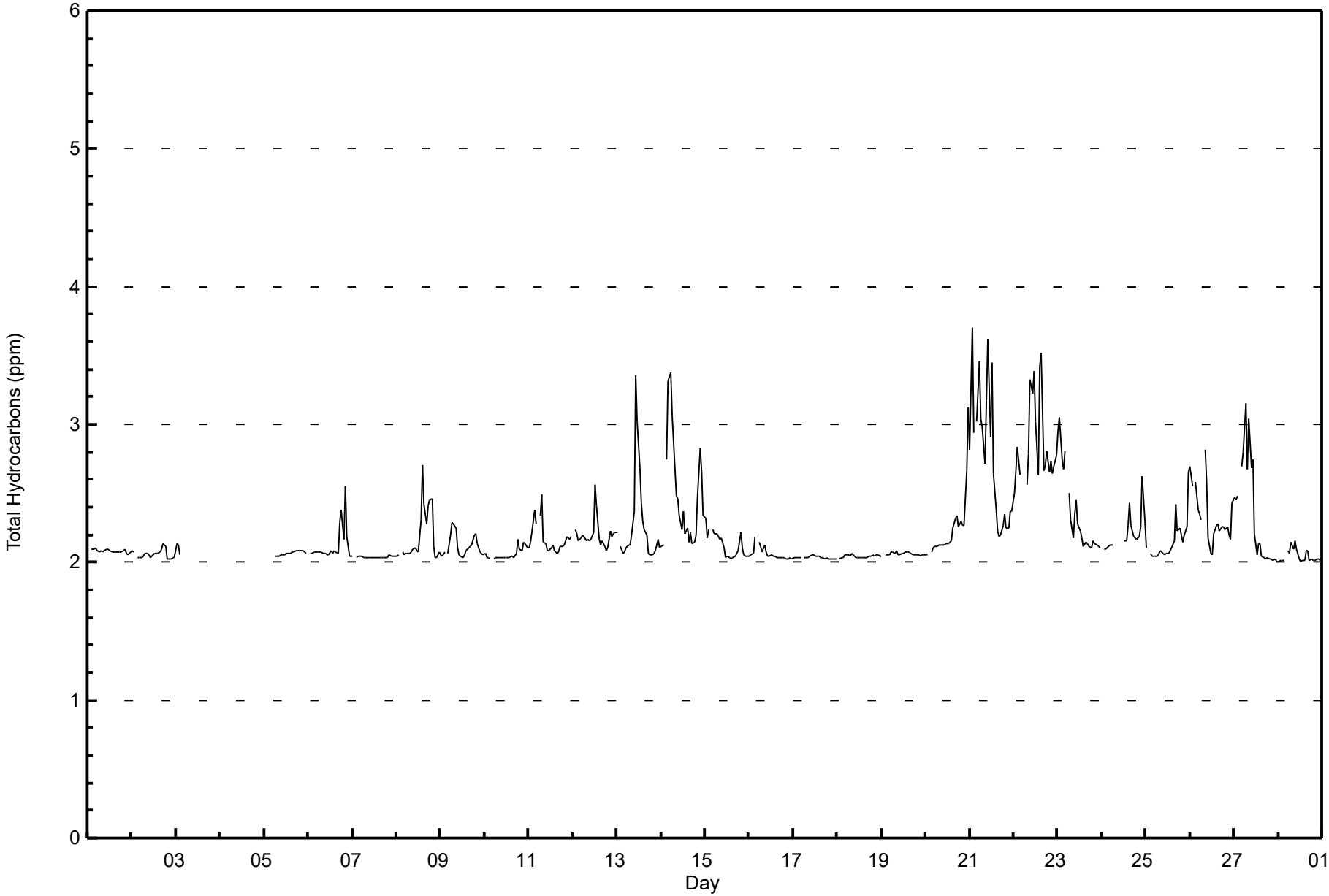
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Buffalo Viewpoint - February 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	153	25.98	25.98
2.1 - 3.0	419	71.14	97.11
3.1 - 10.0	17	2.89	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 589

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Buffalo Viewpoint - February 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	13	9	3	3	0	7	24	30	9	2	20	9	13	5	0	3	150
2.1 - 3.0	118	16	11	2	2	9	26	57	15	9	15	9	21	11	24	42	387
3.1 - 10.0	3	1	0	0	0	0	2	0	0	0	0	0	1	1	5	4	17
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	134	26	14	5	2	16	52	87	24	11	35	18	35	17	29	49	554

Total Number of Valid Hours: 554

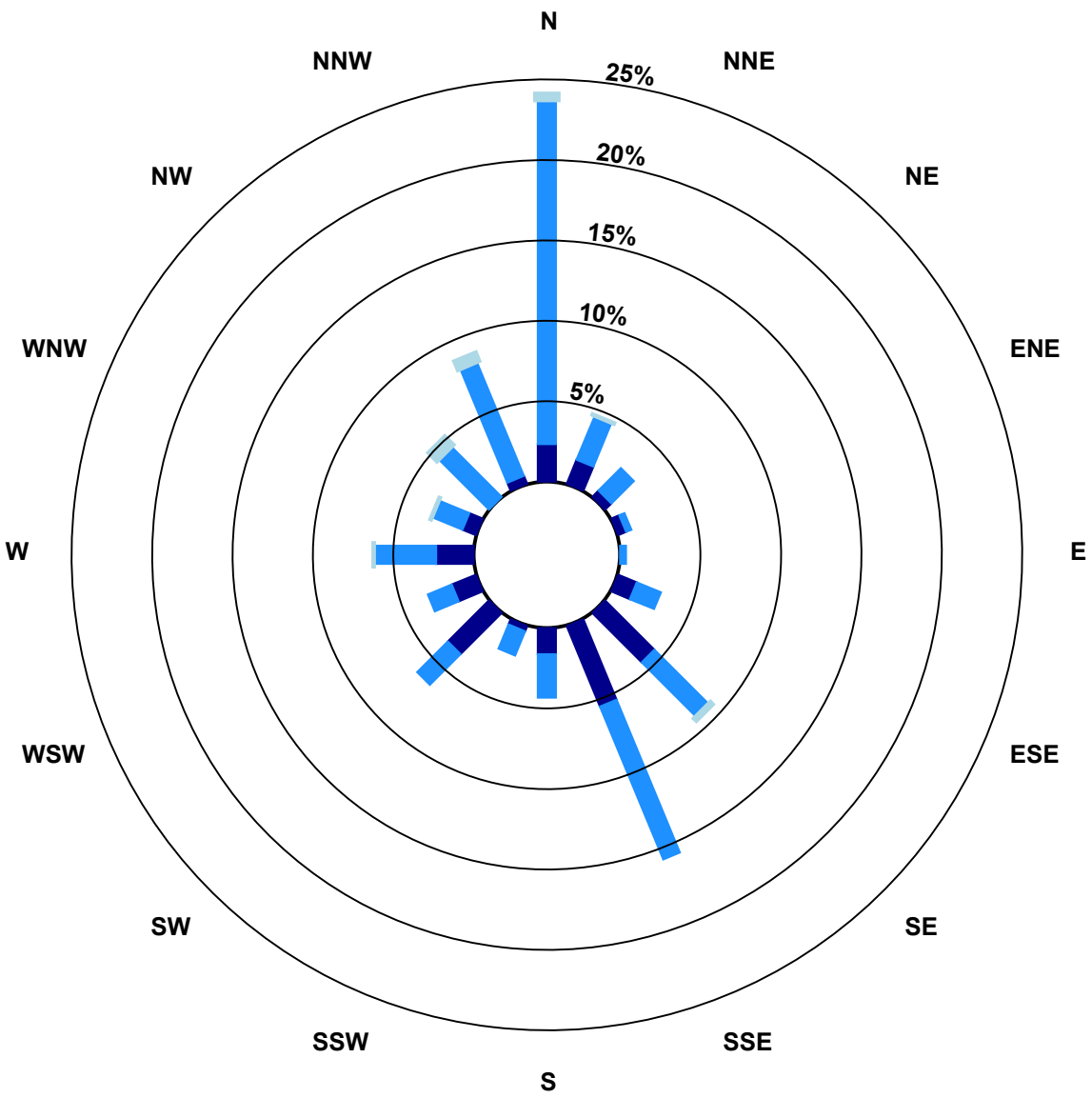
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Total Hydrocarbons (THC) - ppm

Buffalo Viewpoint



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

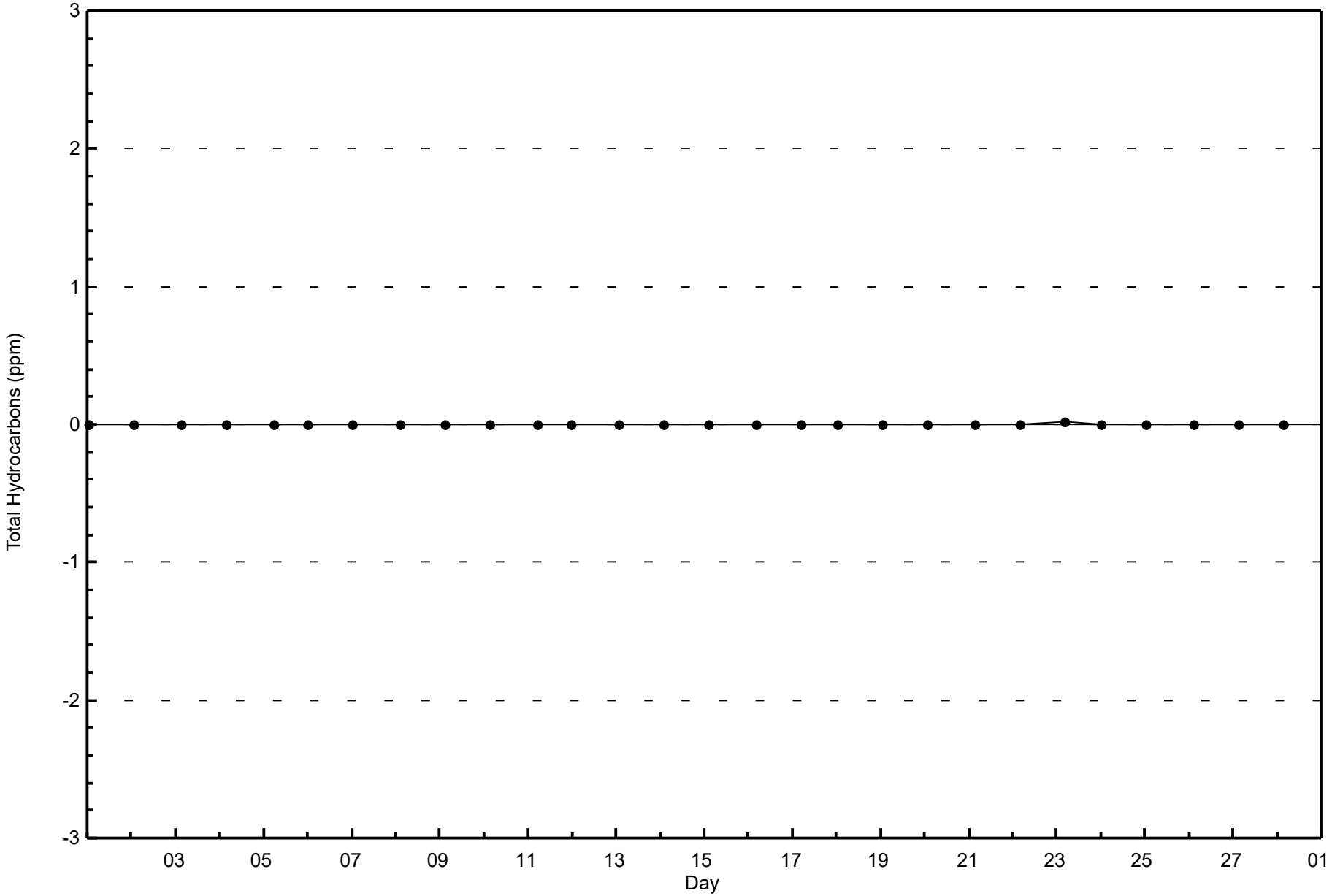
Total Number of Valid Hours: 554

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Buffalo Viewpoint - February 2025

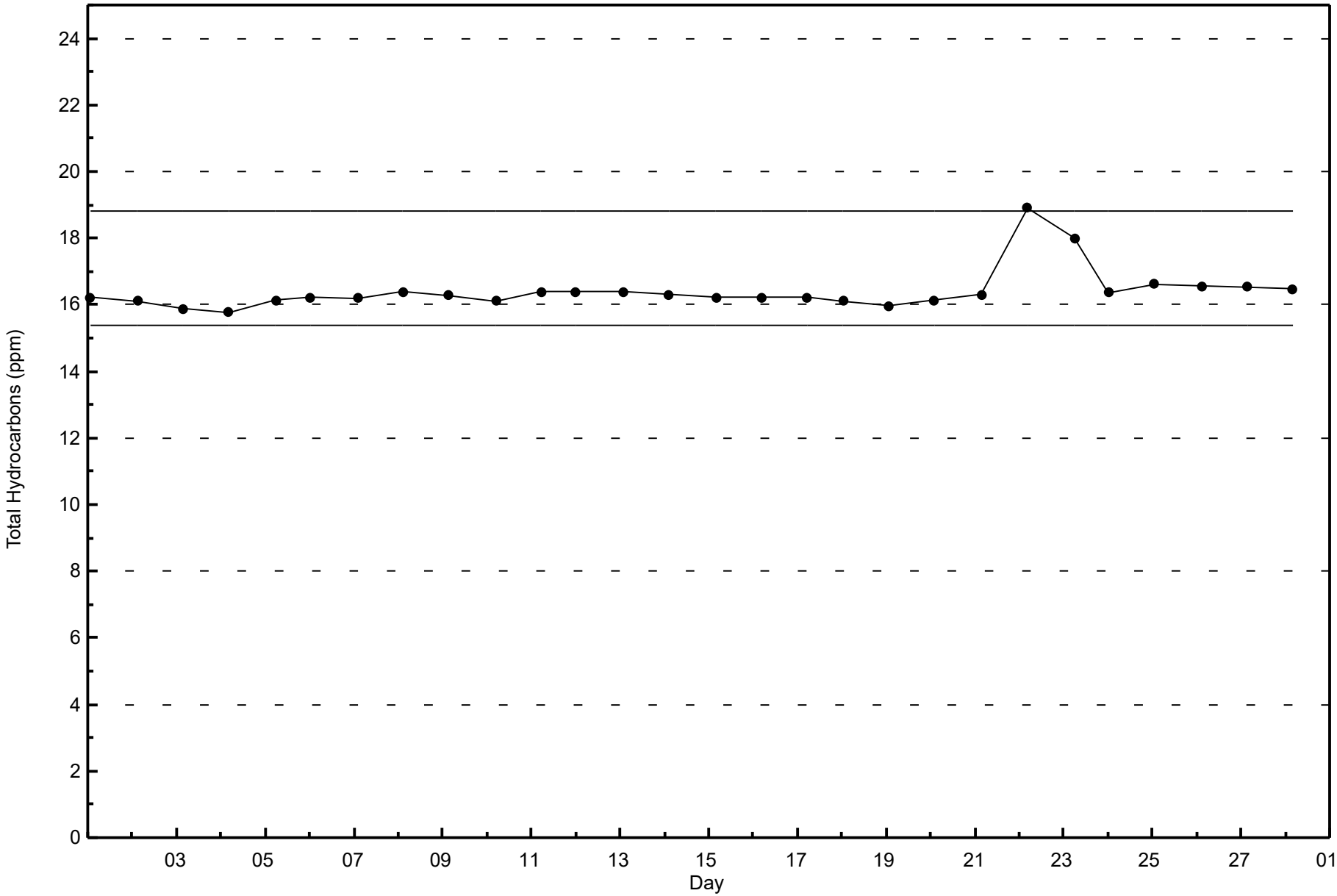


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Buffalo Viewpoint - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Buffalo Viewpoint - February 2025

Maximum Value: 0.406 ppm on Feb 26 01:00

Maximum Daily Average: 0.057 ppm on Feb 26

Minimum Value: 0.000 ppm on Feb 1 01:00

Minimum Daily Average: 0.000 ppm on Feb 1

Maximum Diurnal Average: 0.026 ppm at hour 1

Minimum Diurnal Average: 0.000 ppm at hour 21

Monthly Average: 0.005 ppm

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

Hours in Service:	672
Hours of Data:	589
Hours of Missing Data:	83
Hours of Calibration:	32
Percent Operational Time:	92.4

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	0.000	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	0.000
4-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
5-Feb	UO	UO	UO	UO	UO	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	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-Feb	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-Feb	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.084	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.084
14-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	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
17-Feb	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
18-Feb	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.000	0.012	0.006	0.011	0.001	0.000	0.000	0.000	0.002	0.012
21-Feb	0.000	0.004	0.000	Z	0.000	0.007	0.000	0.000	0.000	0.066	0.074	0.040	0.145	0.000	0.000	0.000	0.000	0.000	0.004	0.002	0.000	0.004	0.043	0.000	0.017	0.145
22-Feb	0.000	0.000	0.001	0.000	Z	0.000	M	0.000	0.000	0.000	0.000	0.088	0.007	0.000	0.014	0.004	0.015	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.006	0.088
23-Feb	0.000	0.000	0.007	0.003	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007
24-Feb	Z	0.000	0.000	0.000	0.000	0.000	0.000	C	C	C	C	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.041	0.000	0.002	0.041
25-Feb	0.000	Z	0.000	0.000	0.000	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	0.075	0.003	0.075
26-Feb	0.406	0.232	Z	0.216	0.082	0.039	0.001	M	0.090	0.005	0.000	0.000	0.000	0.000	0.000	0.040	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.131	0.057	0.406
27-Feb	0.158	0.007	0.007	Z	0.118	0.160	0.165	0.002	0.026	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	0.028	0.165
28-Feb	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
	0.026	0.012	0.001	0.010	0.010	0.009	0.007	0.000	0.005	0.003	0.003	0.005	0.009	0.000	0.001	0.002	0.001	0.000	0.001	0.000	0.000	0.000	0.003	0.008	Diurnal Average	
	0.406	0.232	0.007	0.216	0.118	0.160	0.165	0.002	0.090	0.066	0.074	0.088	0.145	0.003	0.014	0.040	0.015	0.012	0.006	0.011	0.001	0.004	0.043	0.131	Diurnal Maximum	

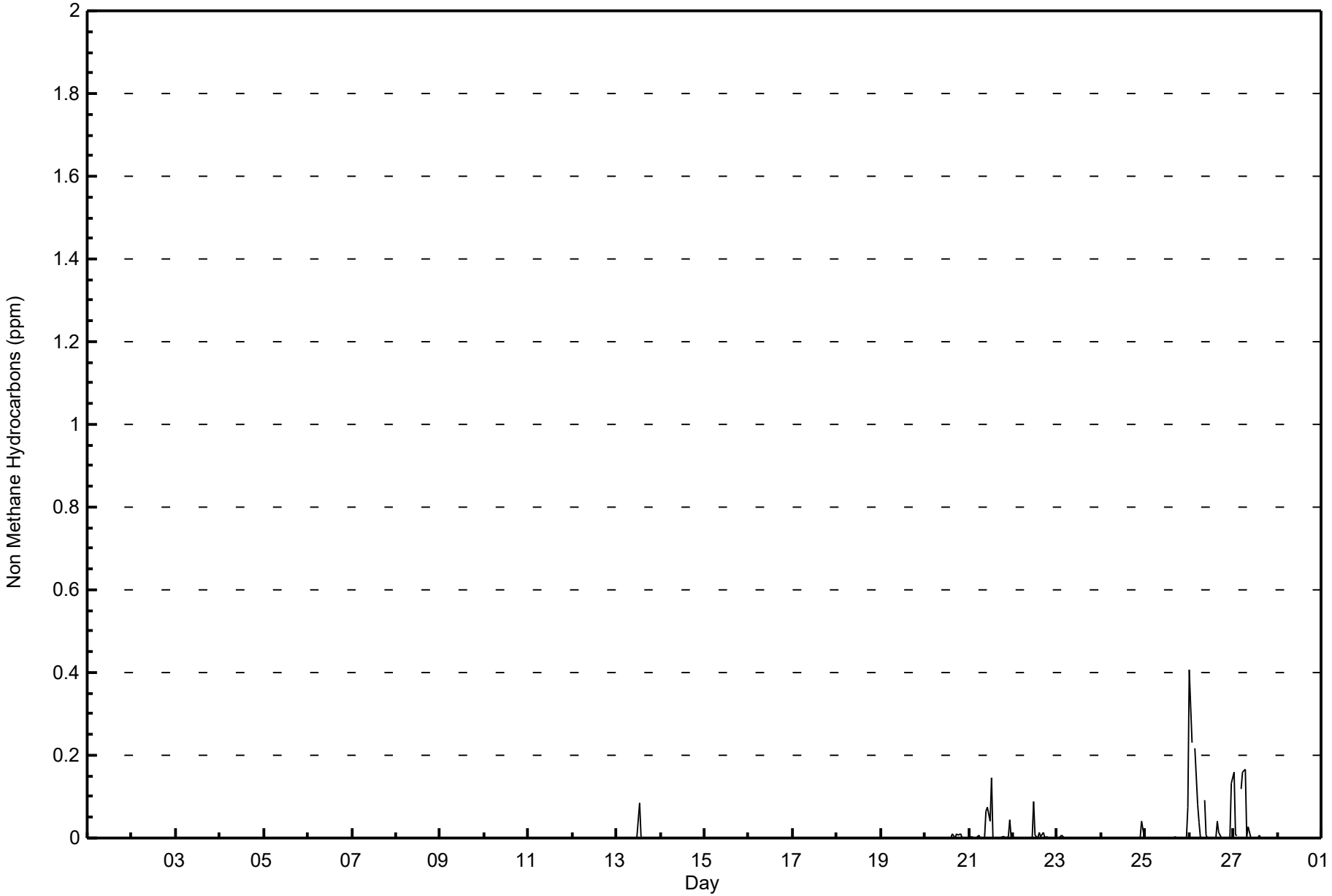
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Buffalo Viewpoint - February 2025



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

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	555	94.23	94.23
0.006 - 0.05	18	3.06	97.28
0.06 - 0.1	10	1.70	98.98
> 0.1	6	1.02	100.00

Total Number of Valid Hours: 589

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Buffalo Viewpoint - February 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	129	25	13	5	2	15	48	87	23	10	34	18	33	15	25	43	525
0.006 - 0.05	3	1	0	0	0	1	4	0	0	1	1	0	1	0	2	2	16
0.06 - 0.1	2	0	1	0	0	0	0	0	0	0	0	0	1	2	1	2	9
> 0.1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	2	4
Totals	134	26	14	5	2	16	52	87	24	11	35	18	35	17	29	49	554

Total Number of Valid Hours: 554

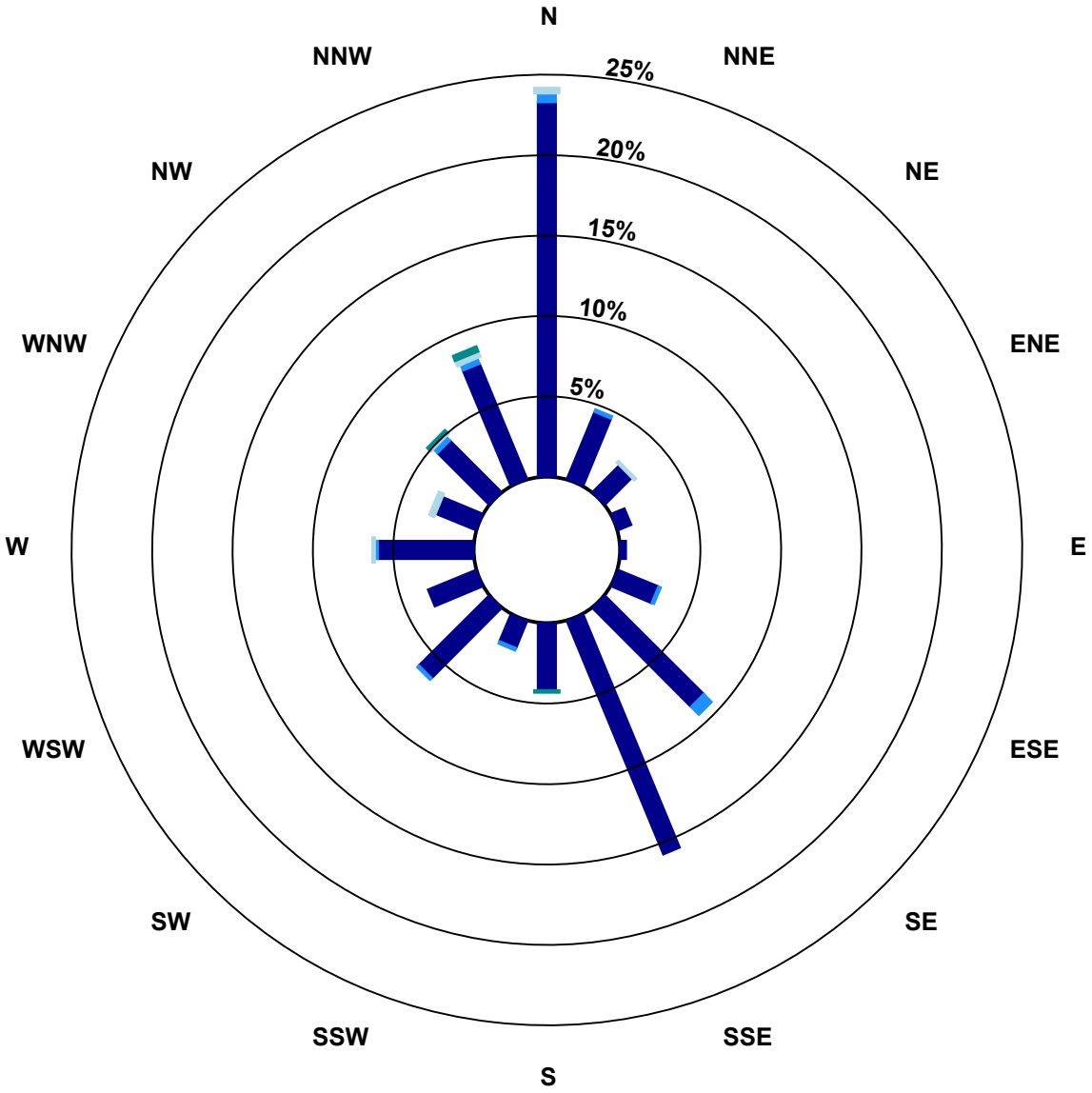
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Non Methane Hydrocarbons (NMHC) - ppm

Buffalo Viewpoint



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

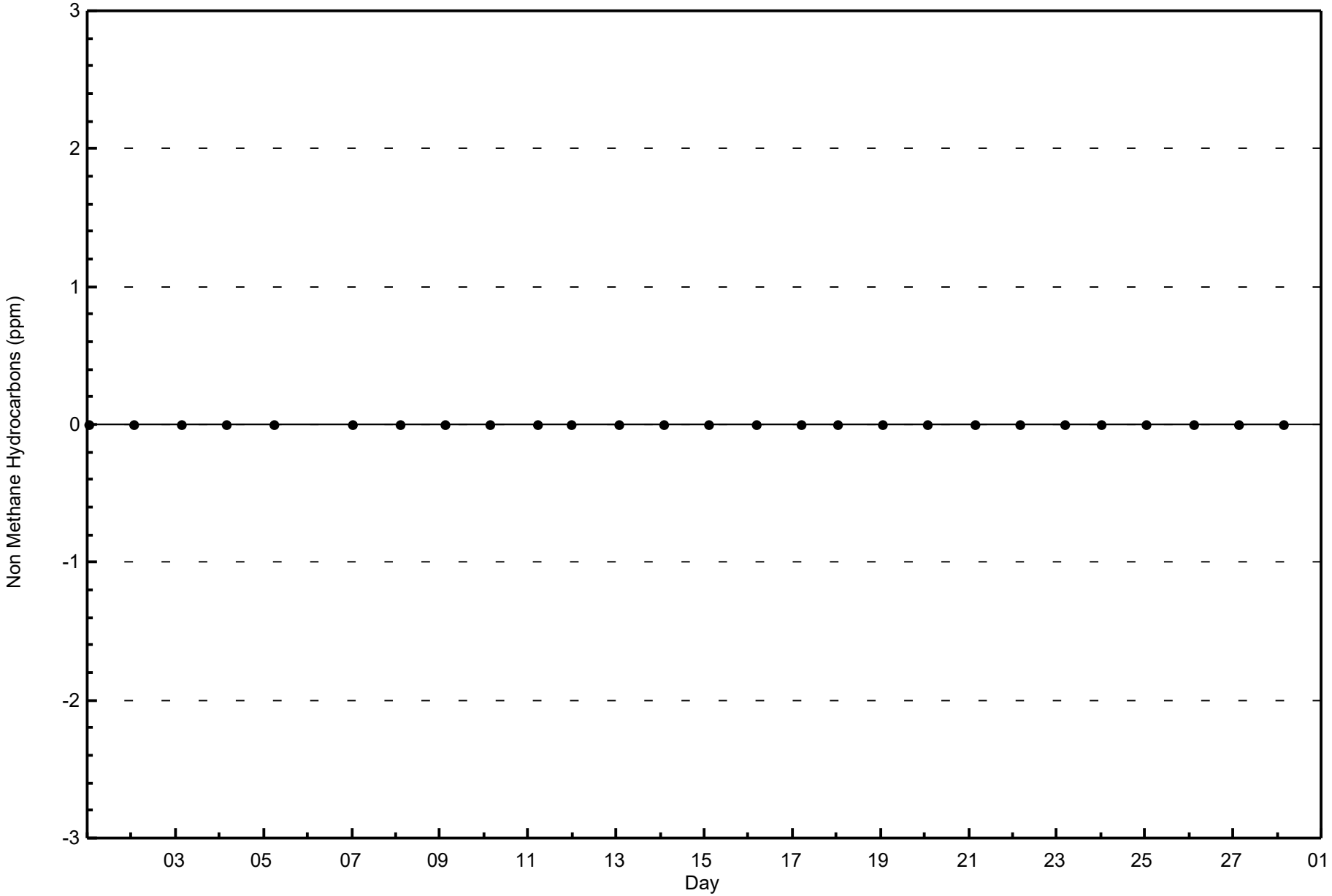
Total Number of Valid Hours: 554

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Buffalo Viewpoint - February 2025

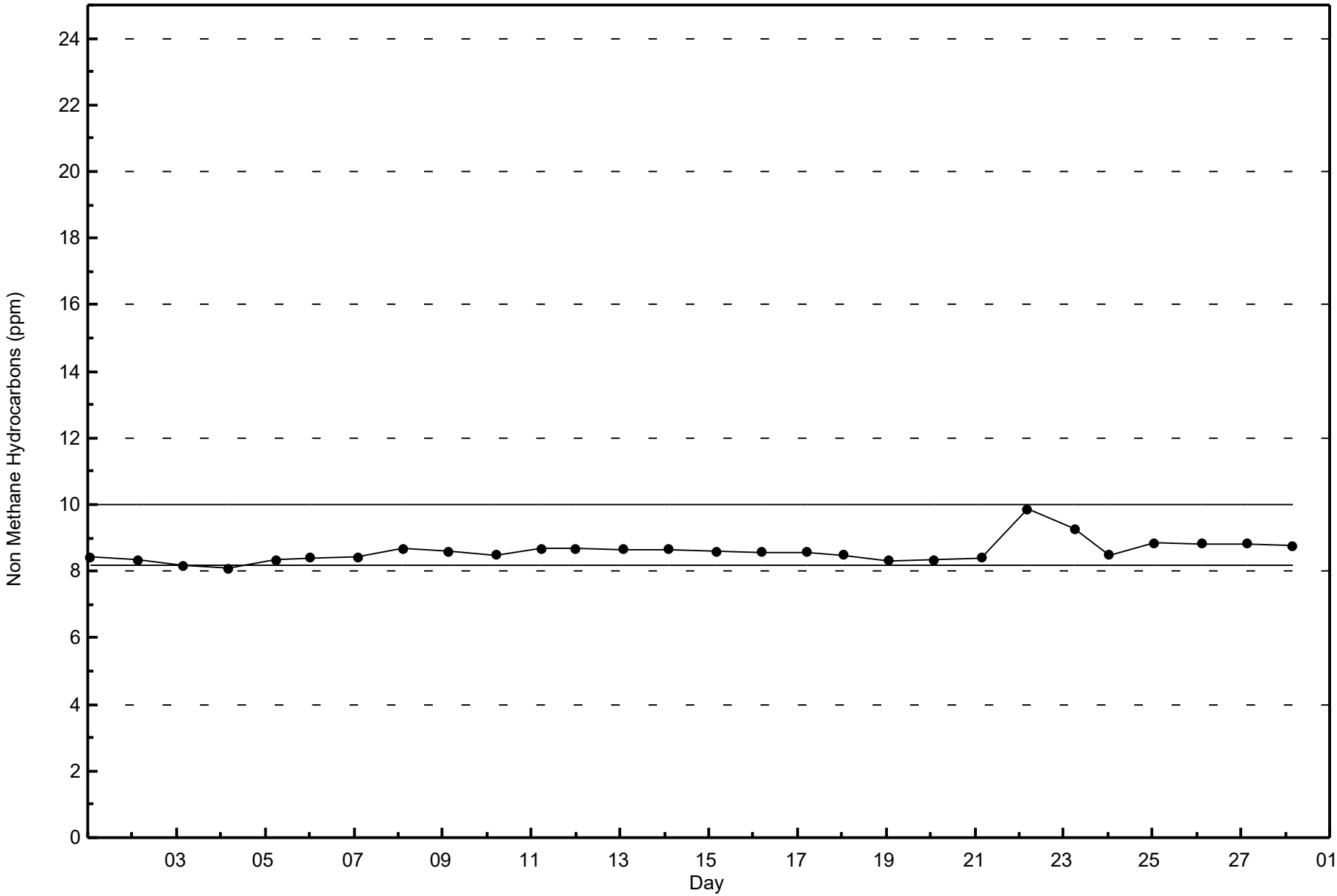


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Buffalo Viewpoint - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Buffalo Viewpoint - February 2025

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

Maximum Value: 3.7 ppm on Feb 21 02:00

Maximum Daily Average: 2.8 ppm on Feb 22

Minimum Value: 2.0 ppm on Feb 28 00:00

Minimum Daily Average: 2.0 ppm on Feb 17

Maximum Diurnal Average: 2.3 ppm at hour 11

Minimum Diurnal Average: 2.2 ppm at hour 17

Monthly Average: 2.20 ppm

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

Hours in Service:	672
Hours of Data:	589
Hours of Missing Data:	83
Hours of Calibration:	32
Percent Operational Time:	92.4

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

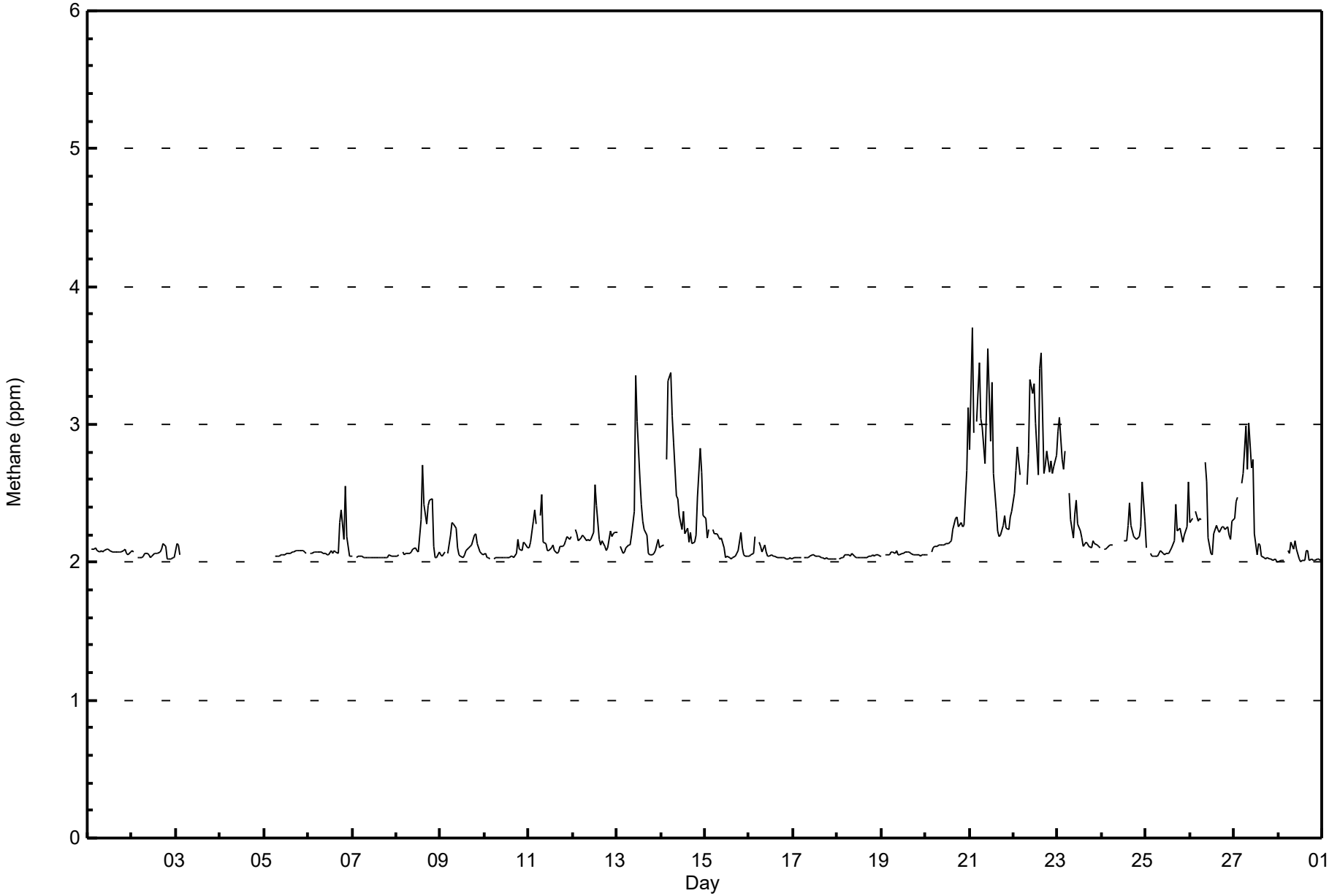
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Buffalo Viewpoint - February 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	153	25.98	25.98
2.1 - 3.0	420	71.31	97.28
3.1 - 10.0	16	2.72	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 589

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Buffalo Viewpoint - February 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	13	9	3	3	0	7	24	30	9	2	20	9	13	5	0	3	150
2.1 - 3.0	118	16	11	2	2	9	26	57	15	9	15	9	21	11	24	43	388
3.1 - 10.0	3	1	0	0	0	0	2	0	0	0	0	0	1	1	5	3	16
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	134	26	14	5	2	16	52	87	24	11	35	18	35	17	29	49	554

Total Number of Valid Hours: 554

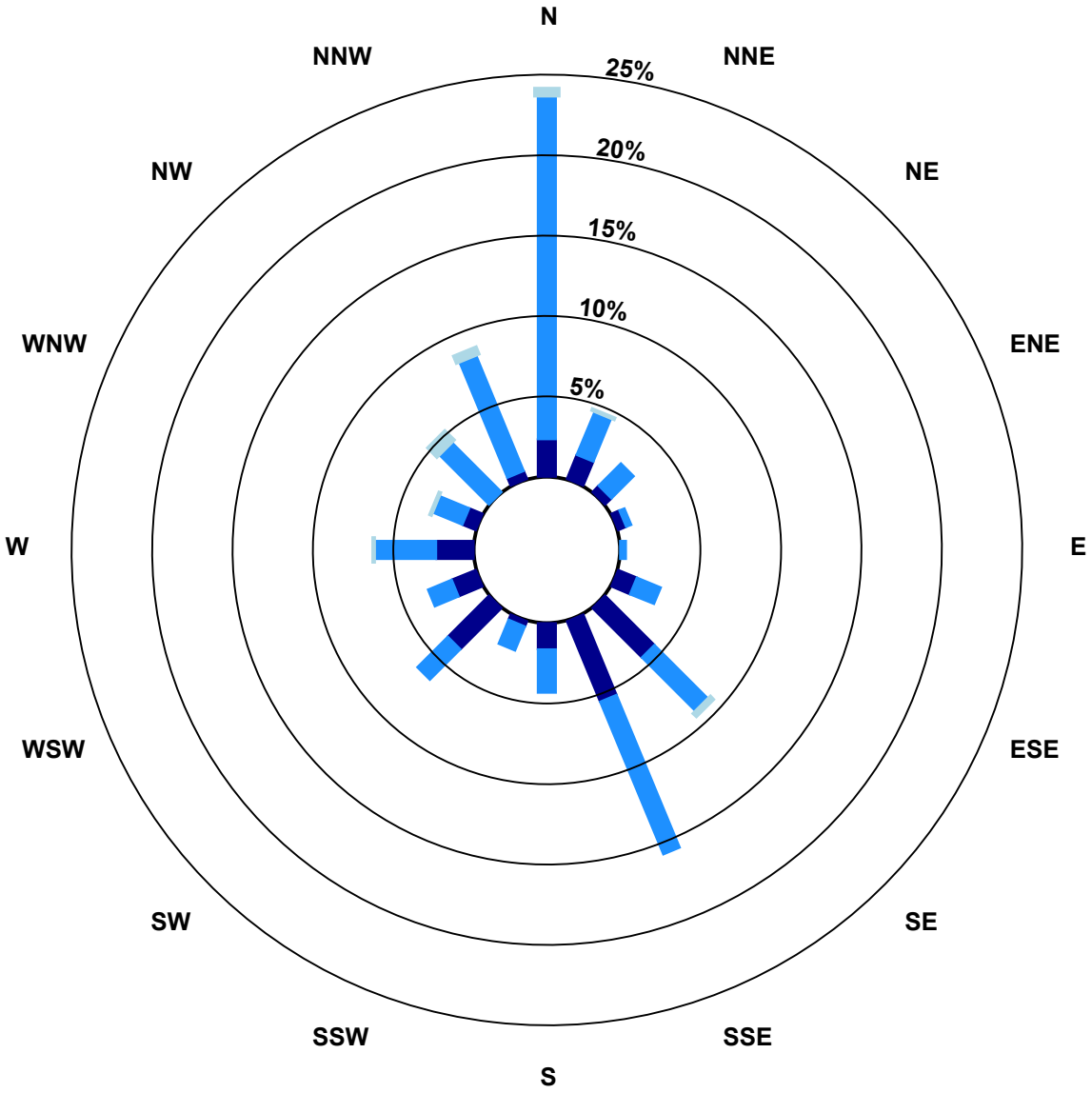
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Methane (CH_4) - ppm

Buffalo Viewpoint



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

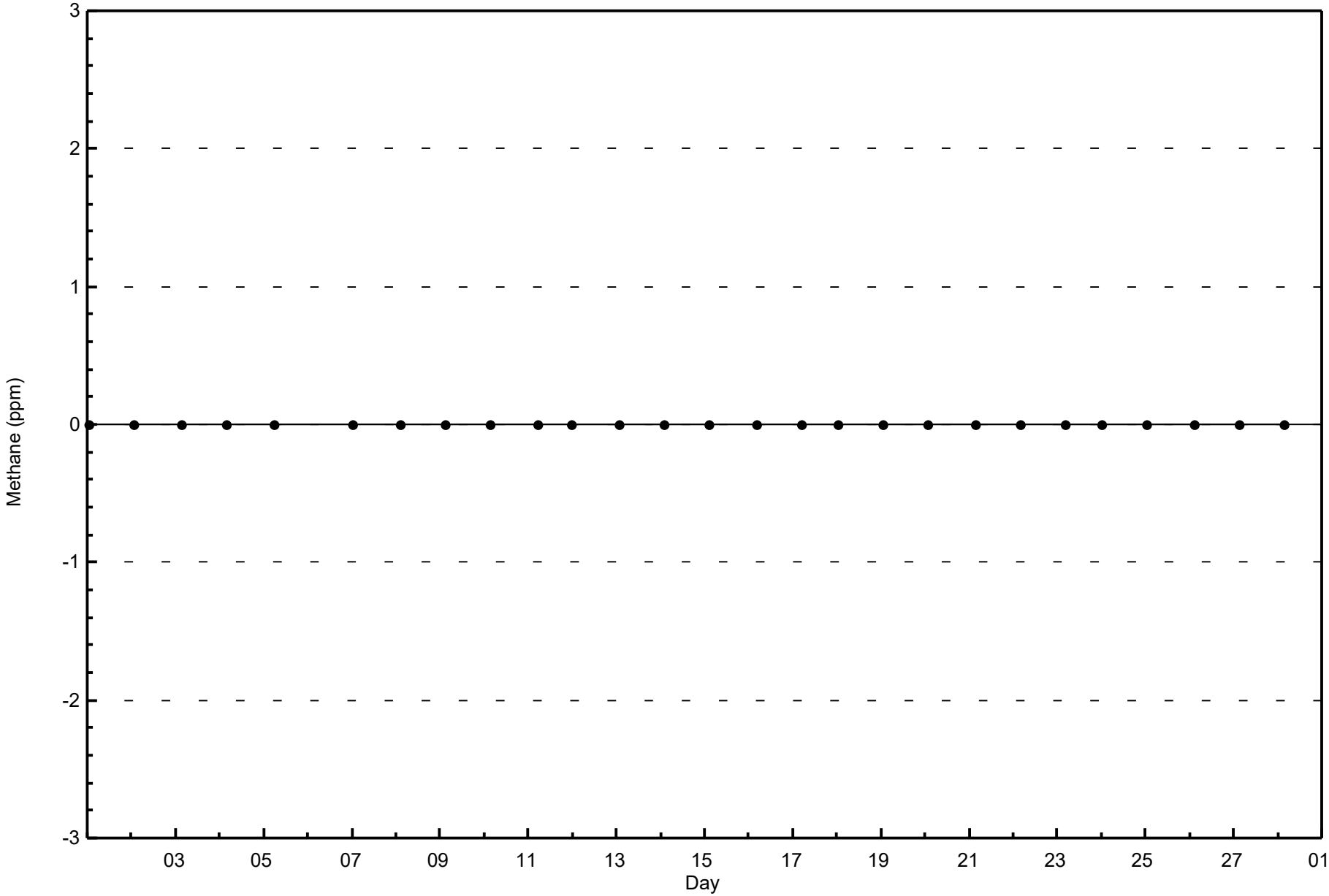
Total Number of Valid Hours: 554

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Buffalo Viewpoint - February 2025

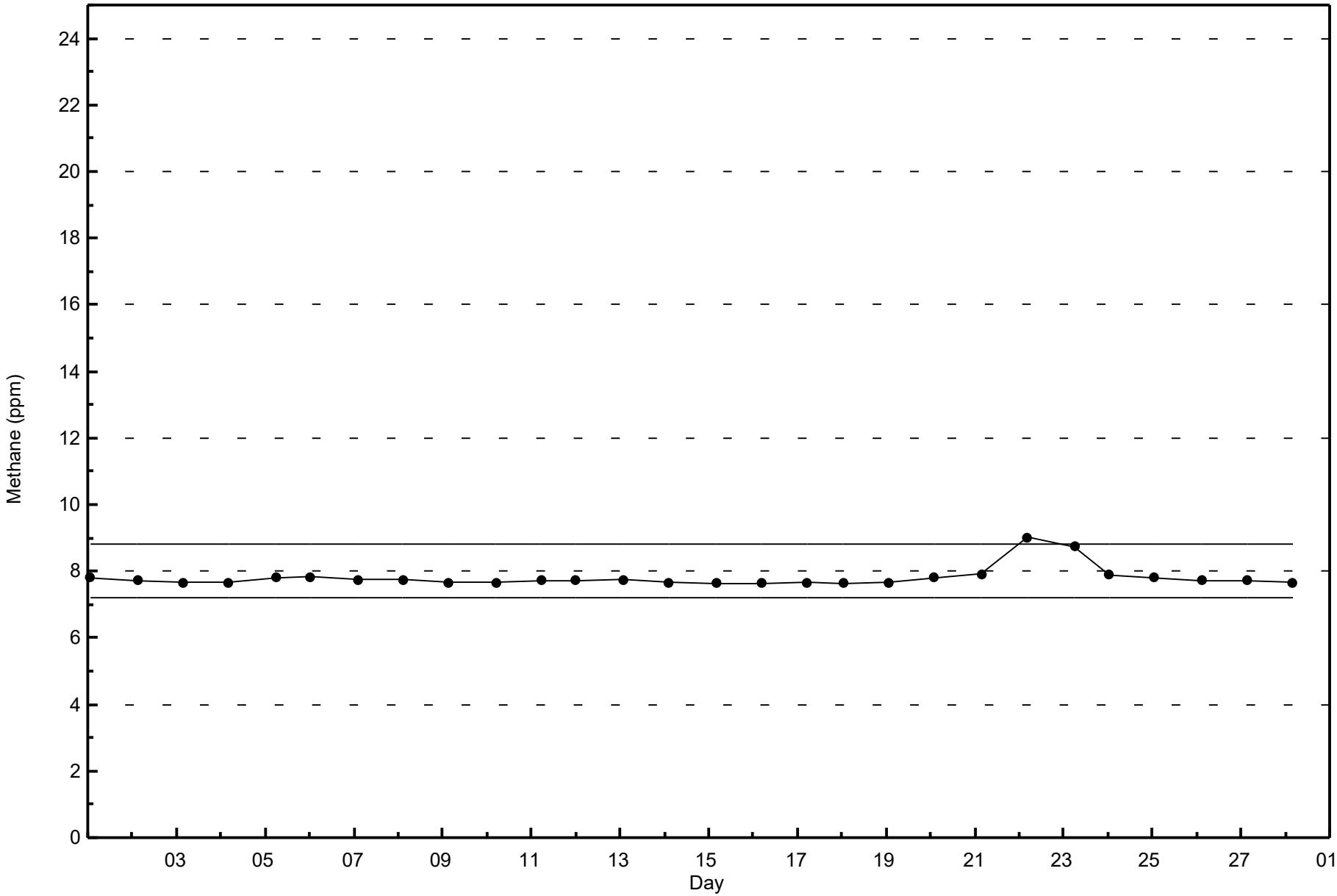


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Buffalo Viewpoint - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Buffalo Viewpoint - February 2025

Maximum Value: 122.2 ppb on Feb 14 05:00

Maximum Daily Average: 31.0 ppb on Feb 14

Minimum Value: 0.0 ppb on Feb 2 22:00

Minimum Daily Average: 0.2 ppb on Feb 7

Maximum Diurnal Average: 12.5 ppb at hour 11

Minimum Diurnal Average: 0.8 ppb at hour 1

Monthly Average: 4.56 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.2 Median = 0.6 Q_3 = 2.8 P_{90} = 12.4 P_{99} = 63.3

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	33
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-Feb	0.1	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.7	1.2	2.2	4.3	2.8	1.4	0.8	1.0	0.5	0.3	0.3	0.3	0.3	0.2	0.2	0.8	4.3
2-Feb	0.2	0.2	0.3	0.1	0.2	Z	0.3	0.4	0.6	0.8	0.4	1.3	2.2	2.3	2.5	2.6	1.9	1.1	0.6	0.1	0.0	0.0	0.0	0.0	0.8	2.6
3-Feb	Z	0.8	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.7	0.4	0.4	0.6	0.2	0.1	0.2	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.2	0.8
4-Feb	0.1	Z	0.2	0.1	0.2	0.0	0.2	0.2	0.4	1.8	0.9	1.3	2.7	0.6	0.6	0.1	0.1	0.0	0.2	0.2	0.1	0.2	0.0	0.1	0.5	2.7
5-Feb	0.0	0.1	Z	0.3	0.2	0.1	0.3	0.0	0.2	0.3	0.5	0.5	0.5	0.5	0.5	0.2	0.3	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.5
6-Feb	0.0	0.1	0.0	Z	0.2	0.1	0.0	0.1	0.0	0.0	0.2	0.5	2.3	1.3	1.9	1.3	0.5	3.0	11.4	1.7	21.8	2.4	0.1	0.0	2.1	21.8
7-Feb	0.0	0.0	0.0	0.0	Z	0.2	0.0	0.1	0.0	0.1	0.3	0.3	0.3	0.2	0.3	0.3	0.0	0.1	0.2	0.3	0.3	0.1	0.3	0.3	0.2	0.3
8-Feb	0.4	0.4	0.5	0.6	0.5	Z	0.7	0.7	1.6	3.3	4.5	4.0	4.3	5.1	8.0	2.6	1.8	3.1	7.1	16.1	0.7	0.3	0.2	0.4	2.9	16.1
9-Feb	Z	0.4	0.4	0.5	0.3	0.8	1.0	2.2	6.0	4.6	3.6	3.0	1.7	2.4	3.4	4.0	2.6	0.9	3.2	5.6	3.6	0.4	0.8	0.3	2.3	6.0
10-Feb	0.3	Z	0.4	0.2	0.1	0.1	0.2	0.2	0.8	1.7	0.5	0.6	0.3	0.3	0.1	0.3	0.1	0.0	1.7	0.5	0.3	0.5	0.4	0.3	0.4	1.7
11-Feb	0.2	0.0	Z	3.1	3.0	0.5	3.3	13.9	1.4	3.0	3.1	3.5	3.5	4.6	2.8	2.2	2.3	0.7	0.5	0.9	6.9	6.2	1.4	0.9	2.9	13.9
12-Feb	1.4	0.7	1.1	Z	0.8	0.6	0.7	0.8	2.8	7.2	16.8	17.0	24.3	10.6	5.8	2.1	2.1	1.7	0.9	0.4	0.6	0.6	0.5	0.7	4.4	24.3
13-Feb	0.6	0.4	0.2	0.0	Z	0.1	0.2	0.2	2.1	21.5	106.7	65.4	40.7	25.5	15.1	11.5	8.6	0.5	1.0	0.0	0.0	0.0	0.4	0.3	13.1	106.7
14-Feb	0.1	0.4	0.3	64.6	122.2	Z	94.6	67.8	42.0	31.7	25.4	12.5	24.5	14.7	12.3	8.7	14.1	4.5	5.5	14.8	15.1	52.2	61.3	23.4	31.0	122.2
15-Feb	Z	9.6	21.5	8.4	19.6	17.9	20.5	22.3	8.1	15.4	5.4	0.5	0.3	0.4	0.5	0.3	0.4	0.6	1.3	1.1	0.7	0.5	0.3	0.4	6.8	22.3
16-Feb	0.3	Z	0.7	0.7	1.0	1.4	0.9	0.8	3.5	2.9	2.7	1.6	1.9	2.0	1.3	1.2	0.9	0.8	0.3	0.3	0.3	0.2	0.1	0.1	1.1	3.5
17-Feb	0.2	0.3	Z	0.3	0.1	0.3	0.3	0.4	0.4	0.6	0.8	0.8	1.0	0.7	1.0	1.8	1.5	0.4	0.3	0.2	0.2	0.3	0.1	0.0	0.5	1.8
18-Feb	0.1	0.2	0.3	Z	0.5	0.3	0.3	0.2	1.5	2.9	2.2	1.6	1.0	0.8	0.9	0.7	0.7	0.3	0.4	0.3	0.3	0.2	0.1	0.4	0.7	2.9
19-Feb	0.2	0.2	0.2	0.2	Z	0.4	0.4	0.3	1.0	1.7	1.3	1.1	1.3	1.2	1.1	0.8	0.5	0.2	0.3	0.2	0.3	0.2	0.2	0.3	0.6	1.7
20-Feb	0.1	0.4	0.2	0.4	0.3	Z	0.4	0.3	0.4	0.3	0.4	0.5	0.7	1.0	1.1	0.8	0.8	1.0	0.8	0.8	1.4	0.3	7.5	12.3	1.4	12.3
21-Feb	Z	15.5	7.4	2.9	23.9	50.6	35.0	24.5	24.4	39.0	71.9	42.7	61.2	26.3	7.7	2.1	1.0	0.4	0.1	0.1	0.1	0.1	0.2	0.2	19.0	71.9
22-Feb	0.4	Z	3.7	0.9	4.7	8.0	11.1	8.1	9.6	28.0	34.7	56.4	44.9	15.1	29.1	18.8	7.8	2.8	1.8	10.7	15.3	3.8	2.0	2.5	13.9	56.4
23-Feb	5.3	4.5	Z	1.0	0.9	0.4	0.3	0.3	0.5	3.1	5.8	2.5	2.0	1.7	0.3	0.9	0.5	0.2	0.1	0.1	0.0	0.0	0.0	0.0	1.3	5.8
24-Feb	0.0	0.0	0.0	Z	0.2	0.2	0.2	1.5	2.9	4.7	7.4	5.2	3.2	3.8	5.0	3.7	2.5	1.3	0.7	0.5	0.5	2.1	14.0	2.2	2.7	14.0
25-Feb	0.4	0.2	0.3	0.2	Z	0.3	0.3	0.2	1.1	1.1	1.2	1.7	2.0	2.5	2.3	3.4	6.9	2.7	1.4	0.5	0.6	0.4	1.0	18.5	2.1	18.5
26-Feb	6.8	4.6	6.3	6.7	4.6	Z	5.9	M	35.7	31.7	C	C	C	C	C	8.8	6.2	4.8	1.7	0.6	0.7	0.5	0.4	1.1	--	35.7
27-Feb	Z	11.9	12.2	17.7	10.4	12.5	15.0	14.8	23.3	19.4	33.5	5.5	1.0	2.0	3.0	0.9	0.4	0.4	0.0	0.0	0.1	0.0	0.0	0.0	8.0	33.5
28-Feb	0.0	Z	0.2	0.0	0.1	0.1	0.2	0.6	1.8	5.3	6.4	1.5	0.8	0.7	0.5	3.1	3.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	1.1	6.4
	0.8	2.2	2.4	4.5	8.4	4.1	6.9	6.0	6.2	8.3	12.5	8.7	8.7	4.8	4.0	3.0	2.4	1.1	1.5	2.0	2.5	2.6	3.3	2.3	Diurnal Average	
	6.8	15.5	21.5	64.6	122.2	50.6	94.6	67.8	42.0	39.0	106.7	65.4	61.2	26.3	29.1	18.8	14.1	4.8	11.4	16.1	21.8	52.2	61.3	23.4	Diurnal Maximum	

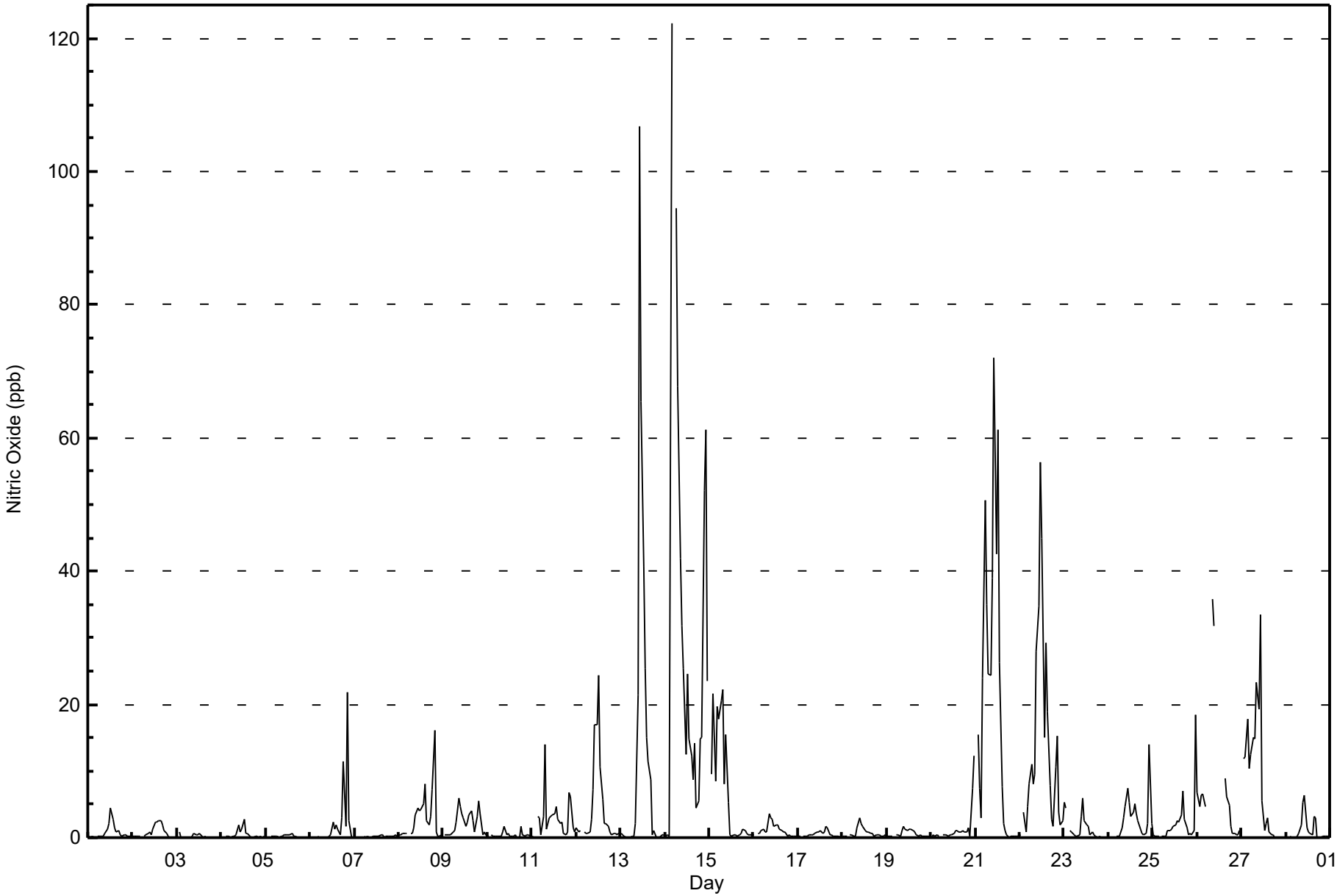
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Buffalo Viewpoint - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	598	93.73	93.73
21 - 40	24	3.76	97.49
11 - 80	13	2.04	99.53
81 - 159	3	0.47	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 638

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Buffalo Viewpoint - February 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	126	23	14	3	2	15	57	89	23	19	46	28	38	16	17	43	559
21 - 40	7	2	0	1	0	0	0	3	1	1	1	0	1	1	3	3	24
11 - 80	1	1	0	0	0	1	0	0	0	0	1	0	2	1	4	2	13
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	134	26	14	4	2	16	57	92	24	20	48	28	41	18	26	49	599

Total Number of Valid Hours: 599

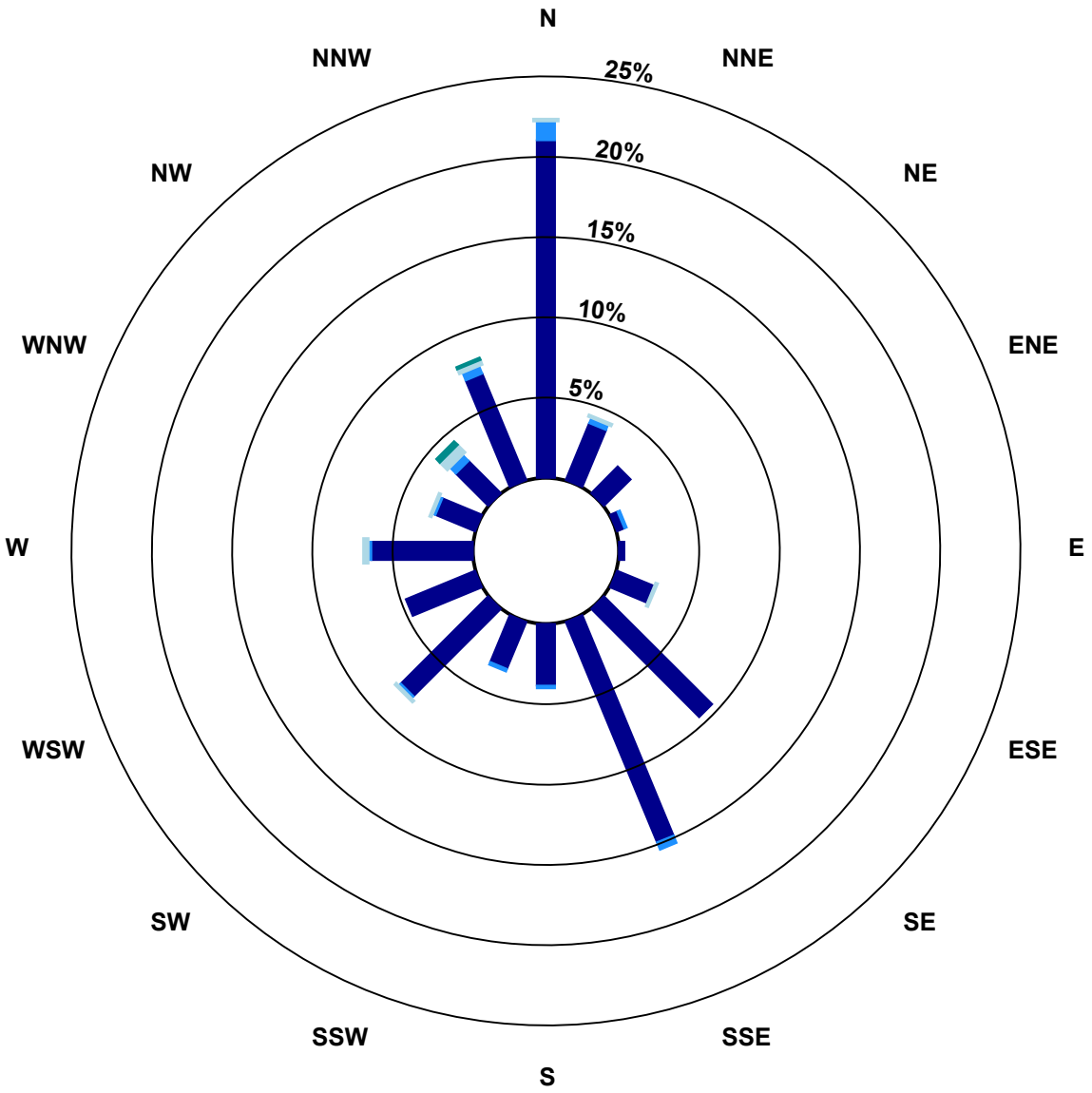
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitric Oxide (NO) - ppb

Buffalo Viewpoint



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

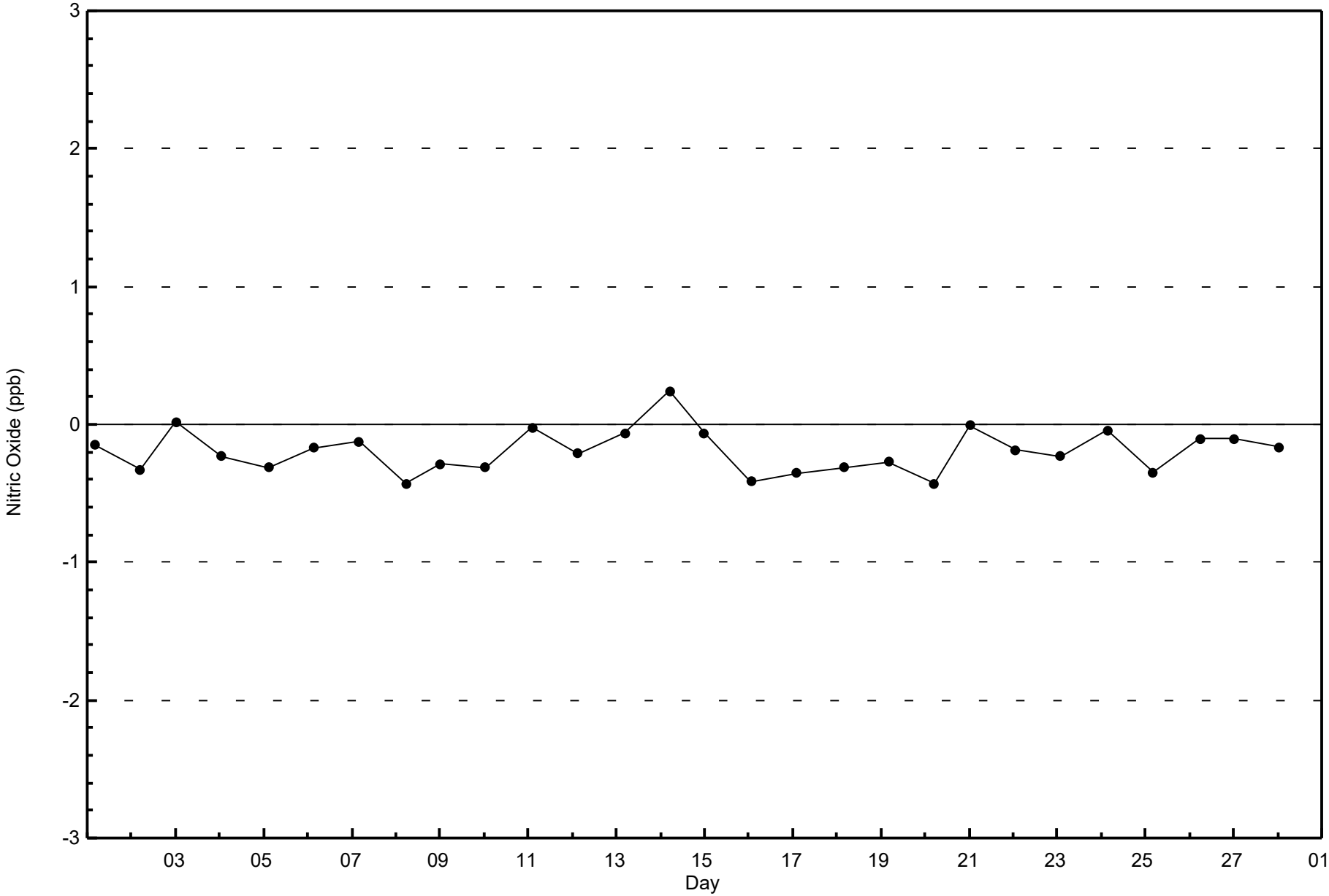
Total Number of Valid Hours: 599

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Buffalo Viewpoint - February 2025

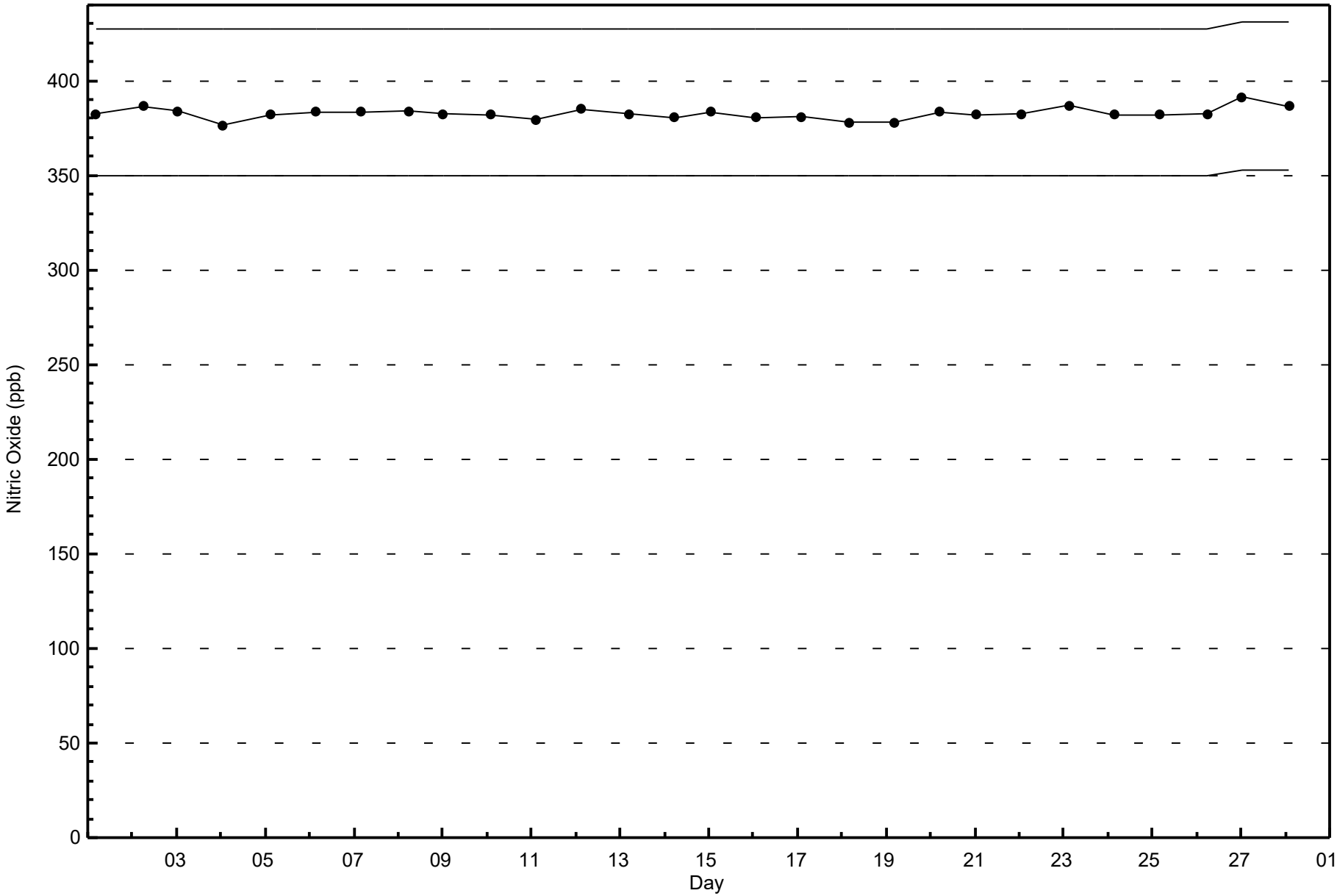


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Buffalo Viewpoint - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Buffalo Viewpoint - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 37.2 ppb on Feb 8 20:00 Maximum Daily Average: 26.5 ppb on Feb 22

Minimum Value: 0.3 ppb on Feb 7 14:00 Minimum Daily Average: 1.3 ppb on Feb 5
Maximum Diurnal Average: 14.3 ppb at hour 19 Minimum Diurnal Average: 6.1 ppb at hour 15
Monthly Average: 10.07 ppb Percentiles: P_1 = 0.4 P_{10} = 1.2 Q_1 = 2.2 Median = 5.7 Q_3 = 16.2 P_{90} = 26.8 P_{99} = 34.2

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	33
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-Feb	3.4	3.9	4.3	4.0	Z	4.5	3.4	3.8	3.9	4.1	4.8	6.2	9.5	7.5	4.8	4.5	7.9	6.3	5.4	5.0	6.9	3.3	2.2	4.5	5.0	9.5
2-Feb	5.3	5.3	2.5	1.0	0.6	Z	2.8	5.0	5.4	4.1	1.4	2.4	4.0	4.4	6.1	8.6	12.7	17.8	13.1	5.5	3.1	1.5	2.8	4.7	5.2	17.8
3-Feb	Z	13.4	5.9	3.7	2.9	2.6	0.9	2.2	5.3	3.4	1.1	0.8	1.3	0.8	0.4	1.0	0.9	1.1	1.7	0.6	0.4	0.6	0.6	1.3	2.3	13.4
4-Feb	1.0	Z	2.5	2.2	2.4	2.7	5.8	3.3	3.3	6.0	2.0	2.3	4.2	1.2	0.9	0.4	0.4	0.5	1.3	0.9	0.6	0.6	1.2	1.3	2.0	6.0
5-Feb	0.6	0.5	Z	0.6	0.6	1.0	1.3	1.3	1.4	1.3	1.7	1.6	1.4	1.5	1.4	1.5	2.0	2.0	1.8	1.5	1.3	1.4	1.4	1.1	1.3	2.0
6-Feb	1.2	0.9	0.9	Z	1.4	1.5	0.8	0.9	0.8	1.0	1.4	2.4	6.0	4.0	6.4	6.3	3.9	25.9	32.6	17.8	34.5	11.7	1.4	1.5	7.2	34.5
7-Feb	1.0	0.4	1.2	1.2	Z	1.2	1.0	0.6	0.9	0.4	0.7	0.6	0.4	0.3	0.6	0.6	0.7	2.1	3.7	6.2	3.4	1.8	3.5	5.4	1.6	6.2
8-Feb	4.3	4.1	11.4	12.7	12.0	Z	11.4	11.8	12.9	8.8	7.3	5.6	6.1	7.8	13.2	8.4	12.7	22.2	36.1	37.2	10.8	0.7	1.6	6.7	11.6	37.2
9-Feb	Z	4.5	8.5	12.2	10.5	16.2	22.8	24.3	22.8	12.0	6.2	3.9	2.7	4.1	5.1	7.2	10.2	13.7	22.6	27.7	23.7	7.3	9.9	7.1	12.4	27.7
10-Feb	7.1	Z	2.2	2.3	1.6	2.2	5.9	5.6	6.3	5.8	1.2	1.3	0.8	0.9	0.7	1.5	1.4	4.0	24.0	14.7	10.8	18.1	12.5	9.4	6.1	24.0
11-Feb	11.8	10.6	Z	31.1	26.8	15.9	23.9	32.4	13.4	12.9	8.7	7.2	6.7	9.1	6.6	7.0	10.4	14.6	21.5	25.9	30.2	30.9	27.1	20.3	17.6	32.4
12-Feb	27.2	20.9	22.3	Z	20.3	18.6	19.7	19.8	17.7	15.3	18.6	16.5	19.9	13.2	11.1	7.0	12.1	19.9	14.0	14.5	21.4	19.4	19.3	23.3	17.9	27.2
13-Feb	24.5	16.3	8.6	4.8	Z	9.3	12.0	10.8	16.5	25.7	35.1	30.2	25.3	20.5	17.2	17.8	20.3	10.7	20.1	9.3	8.7	10.9	20.3	18.1	17.1	35.1
14-Feb	15.9	20.0	16.0	29.8	34.7	Z	32.6	28.9	27.5	19.7	16.8	10.5	15.2	12.1	12.3	13.0	23.7	24.7	30.4	33.8	32.8	31.9	32.7	30.5	23.7	34.7
15-Feb	Z	24.4	26.6	22.1	27.6	26.7	28.6	25.8	16.7	15.1	7.6	1.2	0.7	1.3	1.1	0.9	1.5	7.5	15.6	19.1	14.9	7.2	6.1	6.5	13.3	28.6
16-Feb	6.4	Z	11.0	11.6	11.9	16.4	13.4	11.5	11.8	5.5	3.8	2.0	2.4	2.7	2.1	2.7	4.4	8.7	7.4	1.7	0.6	0.3	0.3	1.0	6.1	16.4
17-Feb	1.0	2.0	Z	1.2	1.5	2.0	2.7	2.2	2.3	2.1	1.7	1.3	1.2	1.3	1.4	3.7	4.8	3.0	8.7	2.5	1.9	2.5	2.6	2.6	2.4	8.7
18-Feb	2.9	3.8	6.9	Z	6.6	4.7	4.9	5.5	7.4	6.1	3.3	2.4	1.5	1.2	1.5	2.1	2.4	3.9	11.5	7.6	4.8	3.2	2.7	2.8	4.3	11.5
19-Feb	2.7	2.8	3.2	3.9	Z	3.7	5.4	7.7	5.6	4.3	2.5	2.0	1.9	2.2	2.5	2.6	2.7	2.8	2.6	2.5	1.4	1.1	1.4	1.4	3.0	7.7
20-Feb	1.3	1.8	2.4	2.6	2.5	Z	1.5	2.2	1.8	2.1	2.1	2.2	2.4	2.3	2.5	2.9	5.1	12.9	23.8	26.3	23.0	15.5	30.0	31.9	8.7	31.9
21-Feb	Z	30.7	24.5	25.6	27.6	29.3	32.1	32.1	29.3	30.2	35.9	28.8	36.4	23.3	16.1	8.0	6.1	6.4	4.7	3.6	3.9	3.5	4.4	6.0	19.5	36.4
22-Feb	15.8	Z	32.8	21.0	32.4	33.1	33.3	30.9	28.0	29.8	28.1	31.8	30.4	19.8	25.8	23.3	18.9	20.7	24.4	30.5	31.1	25.8	20.3	22.0	26.5	33.3
23-Feb	20.9	18.7	Z	13.4	12.5	5.5	5.3	4.3	2.4	6.0	11.9	6.5	5.5	4.3	1.6	4.1	4.5	2.5	2.7	4.7	5.3	3.5	1.4	1.7	6.5	20.9
24-Feb	1.9	3.2	3.0	Z	7.5	8.2	9.2	19.6	15.0	11.8	13.3	8.9	5.8	5.9	8.6	11.1	12.2	13.0	13.8	10.3	10.9	13.4	29.8	23.7	11.3	29.8
25-Feb	6.2	2.3	3.4	1.0	Z	1.6	1.9	4.1	7.1	5.3	4.1	4.7	4.5	5.1	5.7	8.4	16.9	17.7	24.8	17.4	19.1	19.9	22.2	32.1	10.2	32.1
26-Feb	31.5	31.5	31.7	31.5	26.3	Z	24.9	M	22.3	23.4	C	C	C	C	C	12.7	15.2	23.5	25.7	21.0	21.7	18.0	15.1	25.3	--	31.7
27-Feb	Z	30.0	29.5	30.3	29.9	29.2	28.0	27.6	26.9	21.8	23.3	9.8	3.0	5.9	6.9	2.7	2.5	2.9	3.9	2.6	3.0	1.8	2.5	1.1	14.1	30.3
28-Feb	1.4	Z	2.9	3.0	4.1	5.3	7.1	12.3	12.0	14.7	13.3	3.9	2.0	1.6	1.1	5.4	8.0	2.5	3.8	1.3	1.5	1.3	2.0	2.8	4.9	14.7
	8.5	11.0	11.0	11.4	13.2	10.5	12.2	12.5	11.7	10.7	9.6	7.3	7.5	6.1	6.1	6.3	8.0	10.5	14.3	12.6	11.8	9.2	9.9	10.6	Diurnal Average	
	31.5	31.5	32.8	31.5	34.7	33.1	33.3	32.4	29.3	30.2	35.9	31.8	36.4	23.3	25.8	23.3	23.7	25.9	36.1	37.2	34.5	31.9	32.7	32.1	Diurnal Maximum	

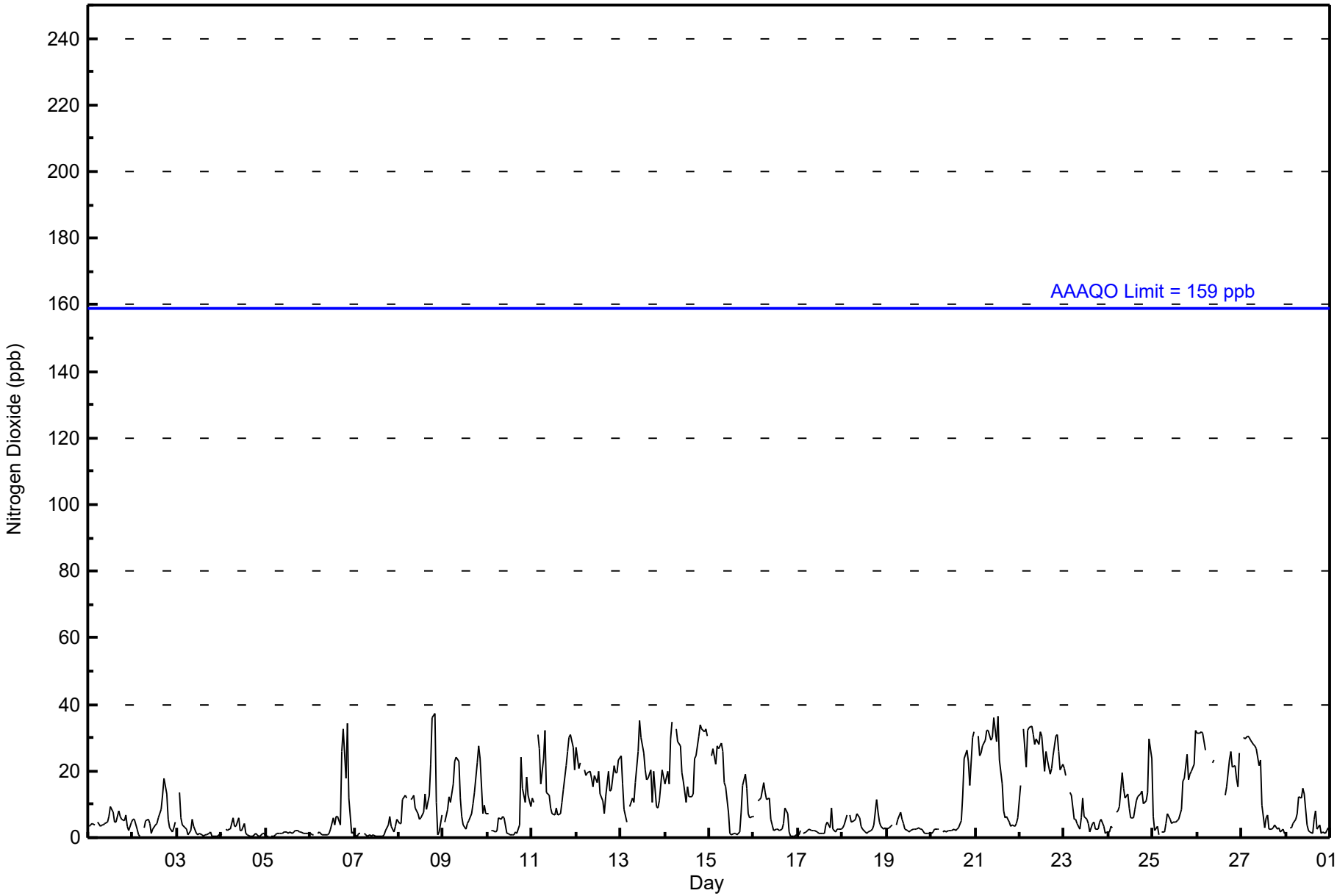
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Buffalo Viewpoint - February 2025



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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	519	81.35	81.35
21 - 40	119	18.65	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: 638

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Buffalo Viewpoint - February 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	24	11	4	1	11	48	83	20	17	45	28	36	14	9	30	486
21 - 40	29	2	3	0	1	5	9	9	4	3	3	0	5	4	17	19	113
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	134	26	14	4	2	16	57	92	24	20	48	28	41	18	26	49	599

Total Number of Valid Hours: 599

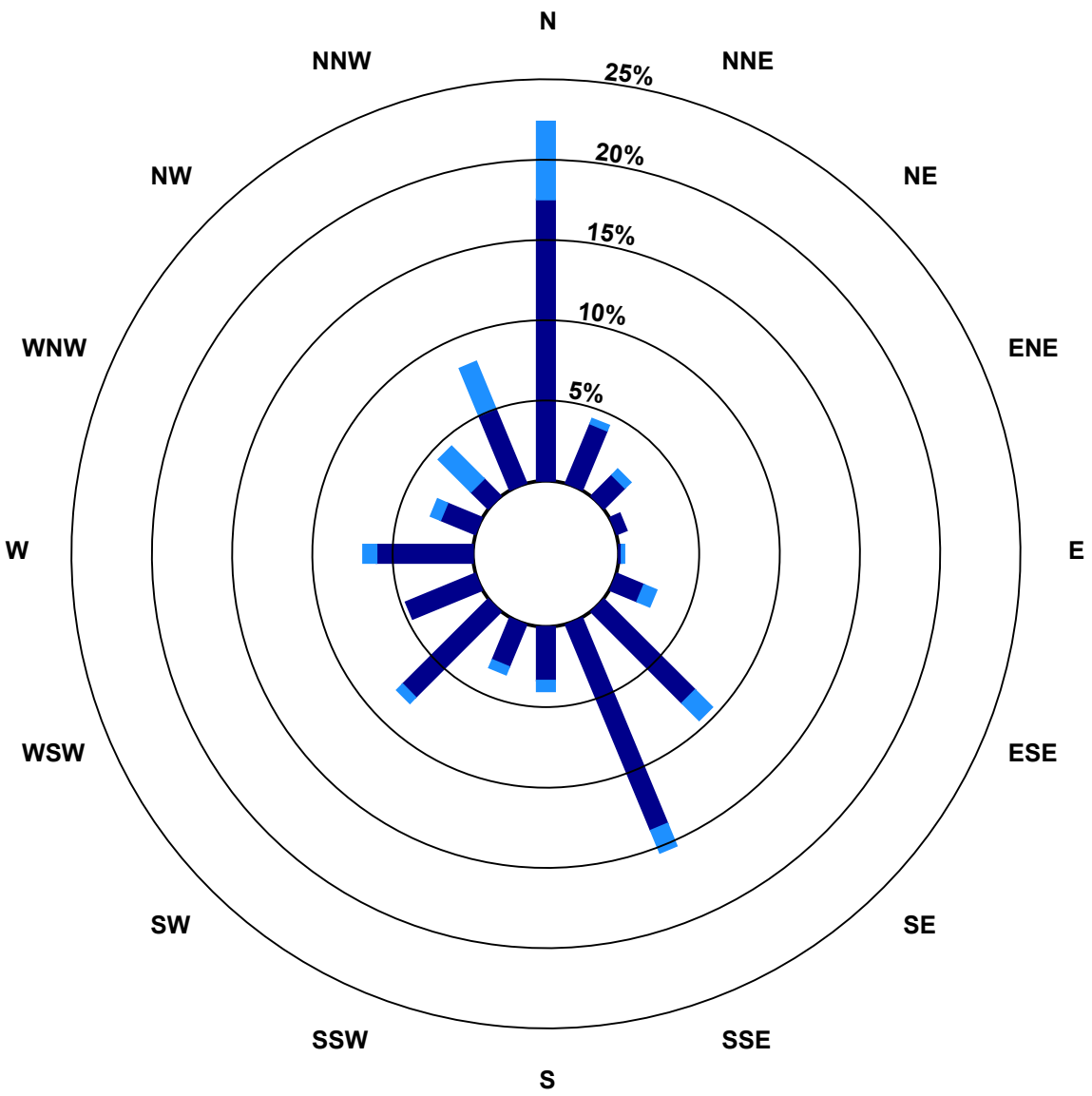
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Dioxide (NO_2) - ppb

Buffalo Viewpoint



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

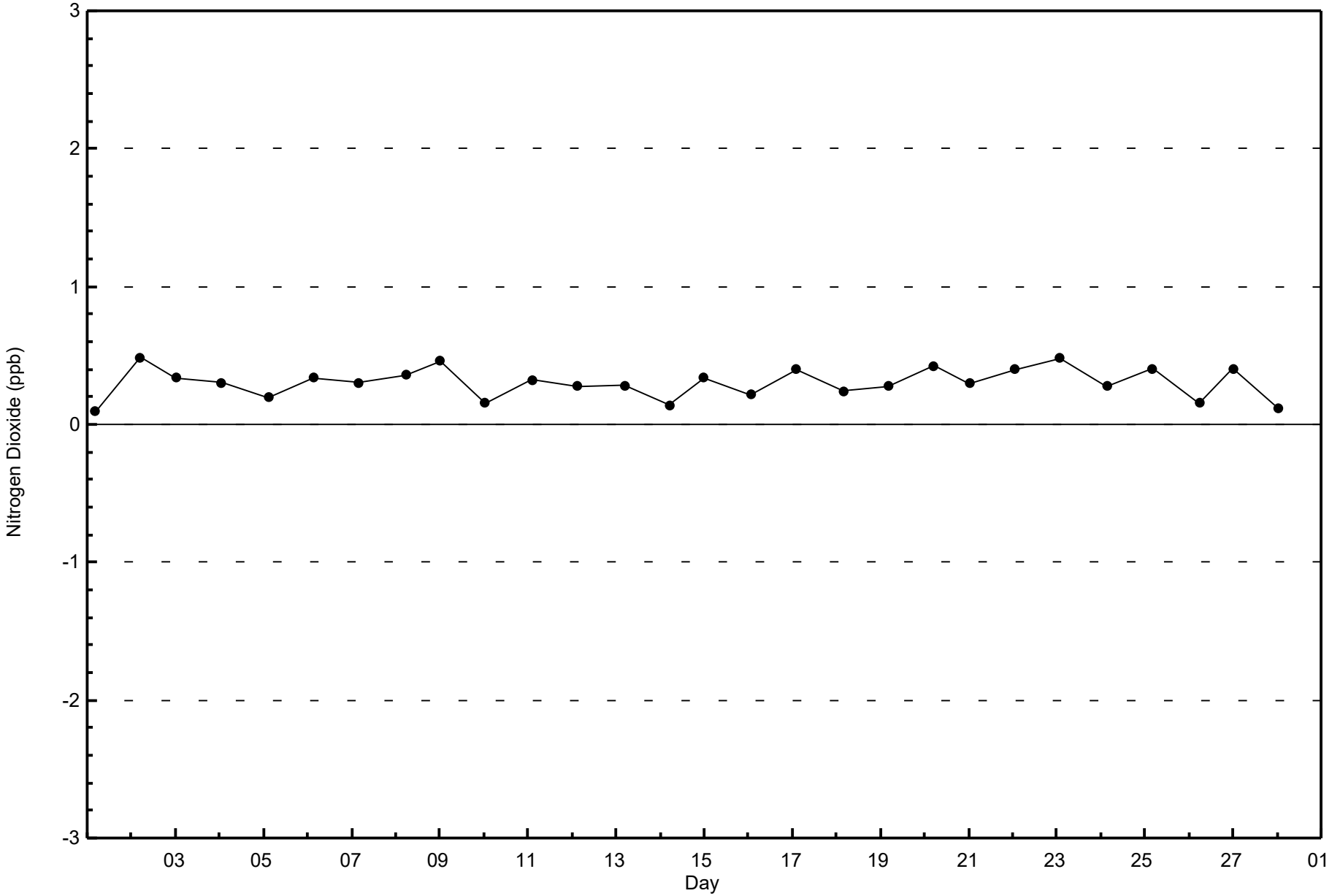
Total Number of Valid Hours: 599

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Buffalo Viewpoint - February 2025

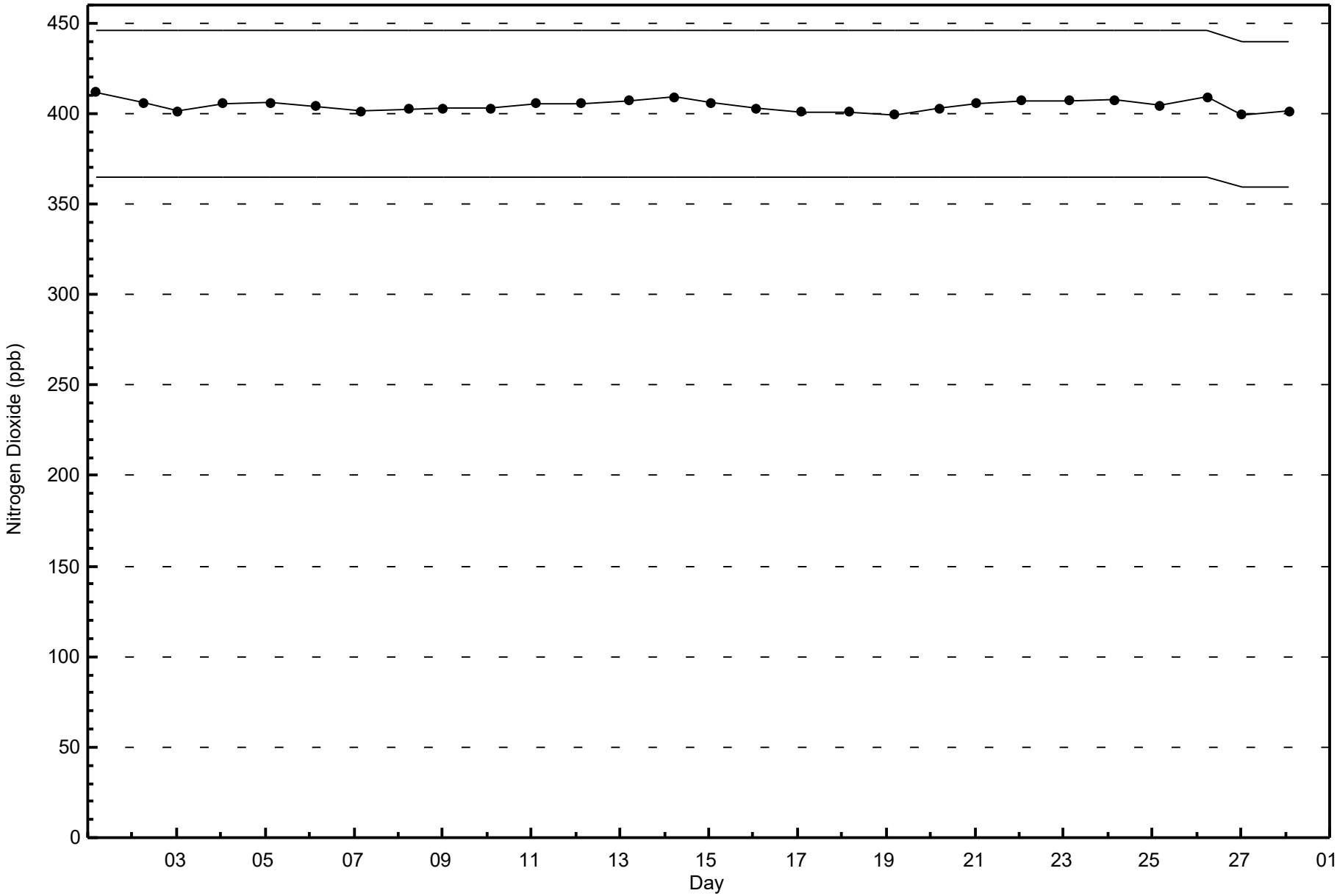


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Buffalo Viewpoint - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Buffalo Viewpoint - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 156.9 ppb on Feb 14 05:00 Maximum Daily Average: 54.7 ppb on Feb 14

Minimum Value: 0.4 ppb on Feb 7 02:00 Minimum Daily Average: 1.5 ppb on Feb 5
Maximum Diurnal Average: 22.1 ppb at hour 11 Minimum Diurnal Average: 9.2 ppb at hour 1
Monthly Average: 14.63 ppb Percentiles: P_1 = 0.5 P_{10} = 1.3 Q_1 = 2.6 Median = 6.8 Q_3 = 20.0 P_{90} = 39.9 P_{99} = 95.2

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	33
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-Feb	3.5	4.0	4.4	4.1	Z	4.7	3.6	4.0	4.1	4.8	6.0	8.4	13.8	10.3	6.2	5.3	8.9	6.8	5.7	5.3	7.2	3.6	2.4	4.7	5.7	13.8
2-Feb	5.5	5.5	2.8	1.1	0.8	Z	3.1	5.4	6.0	4.9	1.8	3.7	6.2	6.7	8.6	11.2	14.6	18.9	13.7	5.6	3.1	1.5	2.8	4.7	6.0	18.9
3-Feb	Z	14.2	5.9	3.8	2.9	2.6	0.9	2.2	5.5	4.1	1.5	1.2	1.9	1.0	0.5	1.2	0.9	1.1	1.7	0.7	0.5	0.6	0.7	1.4	2.5	14.2
4-Feb	1.1	Z	2.7	2.3	2.6	2.7	6.0	3.5	3.7	7.8	2.9	3.6	6.9	1.8	1.5	0.5	0.5	0.5	1.5	1.1	0.7	0.8	1.2	1.4	2.5	7.8
5-Feb	0.6	0.6	Z	0.9	0.8	1.1	1.6	1.3	1.6	1.6	2.2	2.1	1.9	2.0	1.9	1.7	2.3	2.1	1.8	1.5	1.3	1.5	1.4	1.1	1.5	2.3
6-Feb	1.2	1.0	0.9	Z	1.6	1.6	0.8	1.0	0.8	1.0	1.6	2.9	8.3	5.3	8.3	7.6	4.4	28.9	44.0	19.5	56.3	14.1	1.5	1.5	9.3	56.3
7-Feb	1.0	0.4	1.2	1.2	Z	1.4	1.0	0.7	0.9	0.5	1.0	0.9	0.7	0.5	0.9	0.9	0.7	2.2	3.9	6.5	3.7	1.9	3.8	5.7	1.8	6.5
8-Feb	4.7	4.5	11.9	13.3	12.5	Z	12.1	12.5	14.5	12.1	11.8	9.6	10.4	12.9	21.2	11.0	14.5	25.3	43.2	53.3	11.5	1.0	1.8	7.1	14.5	53.3
9-Feb	Z	4.9	8.9	12.7	10.8	17.0	23.8	26.5	28.8	16.6	9.8	6.9	4.4	6.5	8.5	11.2	12.8	14.6	25.8	33.3	27.3	7.7	10.7	7.4	14.6	33.3
10-Feb	7.4	Z	2.6	2.5	1.7	2.3	6.1	5.8	7.1	7.5	1.7	1.9	1.1	1.2	0.8	1.8	1.5	4.0	25.7	15.2	11.1	18.6	12.9	9.7	6.5	25.7
11-Feb	12.0	10.6	Z	34.2	29.8	16.4	27.2	46.3	14.8	15.9	11.8	10.7	10.2	13.7	9.4	9.2	12.7	15.3	22.0	26.8	37.1	37.1	28.5	21.2	20.6	46.3
12-Feb	28.6	21.6	23.4	Z	21.1	19.2	20.4	20.6	20.5	22.5	35.4	33.5	44.2	23.8	16.9	9.1	14.2	21.6	14.9	14.9	22.0	20.0	19.8	24.0	22.3	44.2
13-Feb	25.1	16.7	8.8	4.8	Z	9.4	12.2	11.0	18.6	47.2	141.8	95.6	66.0	46.0	32.3	29.3	28.9	11.2	21.1	9.3	8.7	10.9	20.7	18.4	30.2	141.8
14-Feb	16.0	20.4	16.3	94.4	156.9	Z	127.2	96.7	69.5	51.4	42.2	23.0	39.7	26.8	24.6	21.7	37.8	29.2	35.9	48.6	47.9	84.1	94.0	53.9	54.7	156.9
15-Feb	Z	34.0	48.1	30.5	47.2	44.6	49.1	48.1	24.8	30.5	13.0	1.7	1.0	1.7	1.6	1.2	1.9	8.1	16.9	20.2	15.6	7.7	6.4	6.9	20.0	49.1
16-Feb	6.7	Z	11.7	12.3	12.9	17.8	14.3	12.3	15.3	8.4	6.5	3.6	4.3	4.7	3.4	3.9	5.3	9.5	7.7	2.0	0.9	0.5	0.4	1.1	7.2	17.8
17-Feb	1.2	2.3	Z	1.5	1.6	2.3	3.0	2.6	2.7	2.7	2.5	2.1	2.2	2.0	2.4	5.5	6.3	3.4	9.0	2.7	2.1	2.8	2.7	2.6	3.0	9.0
18-Feb	3.0	4.0	7.2	Z	7.1	5.0	5.2	5.7	8.9	9.0	5.5	4.0	2.5	2.0	2.4	2.8	3.1	4.2	11.9	7.9	5.1	3.4	2.8	3.2	5.0	11.9
19-Feb	2.9	3.0	3.4	4.1	Z	4.1	5.8	8.0	6.6	6.0	3.8	3.1	3.2	3.4	3.6	3.4	3.2	3.0	2.9	2.7	1.7	1.3	1.6	1.7	3.6	8.0
20-Feb	1.4	2.2	2.6	3.0	2.8	Z	1.9	2.5	2.2	2.4	2.5	2.7	3.1	3.3	3.6	3.7	5.9	13.9	24.6	27.1	24.4	15.8	37.5	44.2	10.1	44.2
21-Feb	Z	46.2	31.9	28.5	51.5	79.9	67.1	56.6	53.7	69.2	107.8	71.5	97.6	49.6	23.8	10.1	7.1	6.8	4.8	3.7	4.0	3.6	4.6	6.2	38.5	107.8
22-Feb	16.2	Z	36.5	21.9	37.1	41.1	44.4	39.0	37.6	57.8	62.8	88.2	75.3	34.9	54.9	42.1	26.7	23.5	26.2	41.2	46.4	29.6	22.3	24.5	40.4	88.2
23-Feb	26.2	23.2	Z	14.4	13.4	5.9	5.6	4.6	2.9	9.1	17.7	9.0	7.5	6.0	1.9	5.0	5.0	2.7	2.8	4.8	5.3	3.5	1.4	1.7	7.8	26.2
24-Feb	1.9	3.2	3.0	Z	7.7	8.4	9.4	21.1	17.9	16.5	20.7	14.1	9.0	9.7	13.6	14.8	14.7	14.3	14.5	10.8	11.4	15.5	43.8	25.9	14.0	43.8
25-Feb	6.6	2.5	3.7	1.2	Z	1.9	2.2	4.3	8.2	6.4	5.3	6.4	6.5	7.6	8.0	11.8	23.8	20.4	26.2	17.9	19.7	20.3	23.2	50.6	12.4	50.6
26-Feb	38.3	36.1	38.0	38.2	30.9	Z	30.8	M	58.0	55.1	C	C	C	C	C	21.5	21.4	28.3	27.4	21.6	22.4	18.5	15.5	26.4	--	58.0
27-Feb	Z	41.9	41.7	48.0	40.3	41.7	43.0	42.4	50.2	41.2	56.8	15.3	4.0	7.9	9.9	3.6	2.9	3.3	3.9	2.6	3.1	1.8	2.5	1.1	22.1	56.8
28-Feb	1.4	Z	3.1	3.0	4.2	5.4	7.3	12.9	13.8	20.0	19.7	5.4	2.8	2.3	1.6	8.5	11.0	2.6	3.9	1.3	1.6	1.4	2.1	2.9	6.0	20.0
	9.2	13.2	13.4	15.9	21.7	14.6	19.1	18.4	17.8	19.0	22.1	16.0	16.1	10.9	10.1	9.3	10.5	11.6	15.9	14.6	14.4	11.7	13.2	12.9	Diurnal Average	
	38.3	46.2	48.1	94.4	156.9	79.9	127.2	96.7	69.5	69.2	141.8	95.6	97.6	49.6	54.9	42.1	37.8	29.2	44.0	53.3	56.3	84.1	94.0	53.9	Diurnal Maximum	

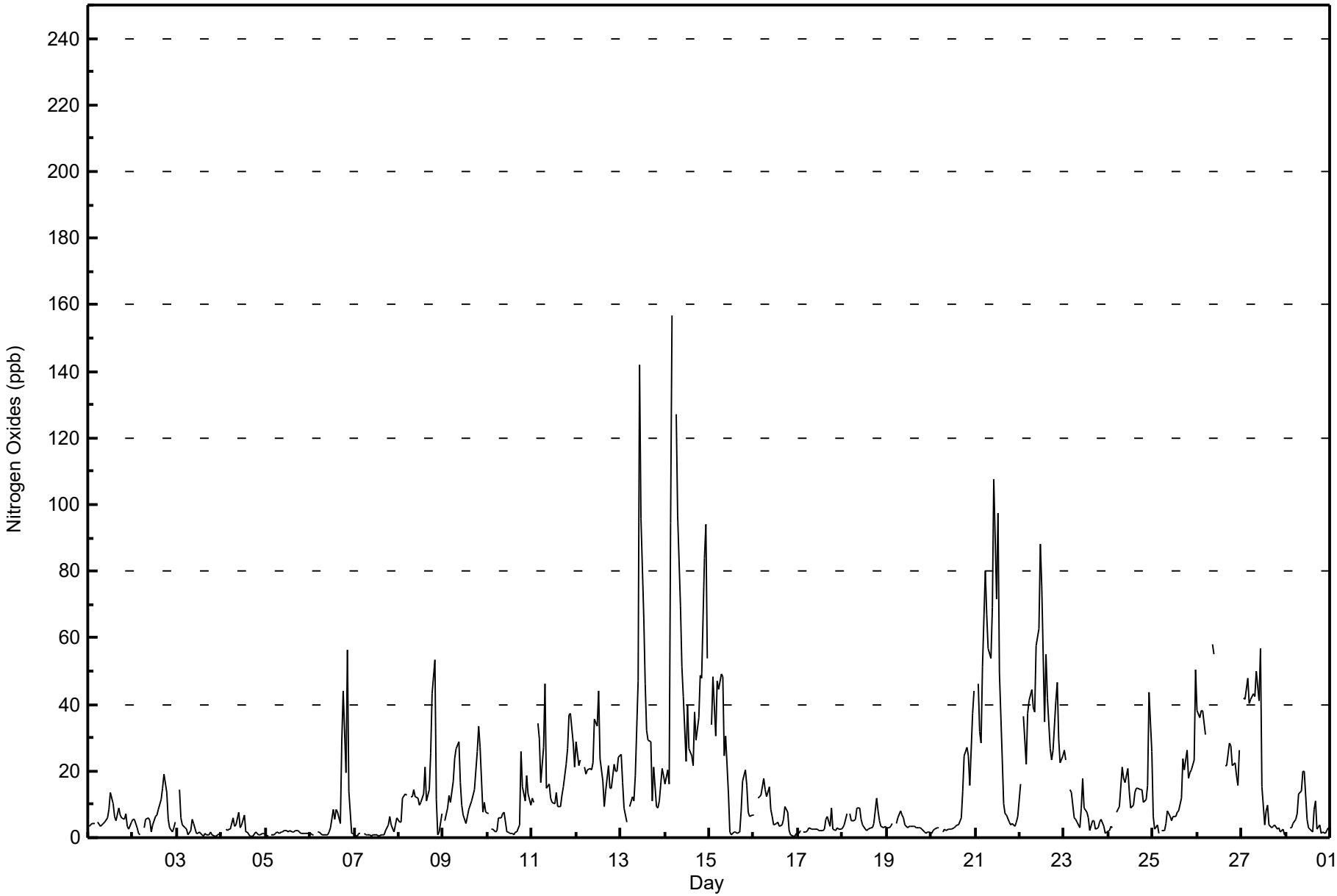
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Buffalo Viewpoint - February 2025



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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	485	76.02	76.02
21 - 40	90	14.11	90.13
11 - 80	52	8.15	98.28
81 - 159	11	1.72	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 638

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Buffalo Viewpoint - February 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	100	22	11	3	1	9	46	78	19	16	44	27	34	12	6	26	454
21 - 40	22	1	3	0	1	5	8	11	4	1	2	1	3	3	7	11	83
11 - 80	12	3	0	1	0	2	3	3	1	3	2	0	2	3	7	9	51
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	2	0	6	3	11
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	134	26	14	4	2	16	57	92	24	20	48	28	41	18	26	49	599

Total Number of Valid Hours: 599

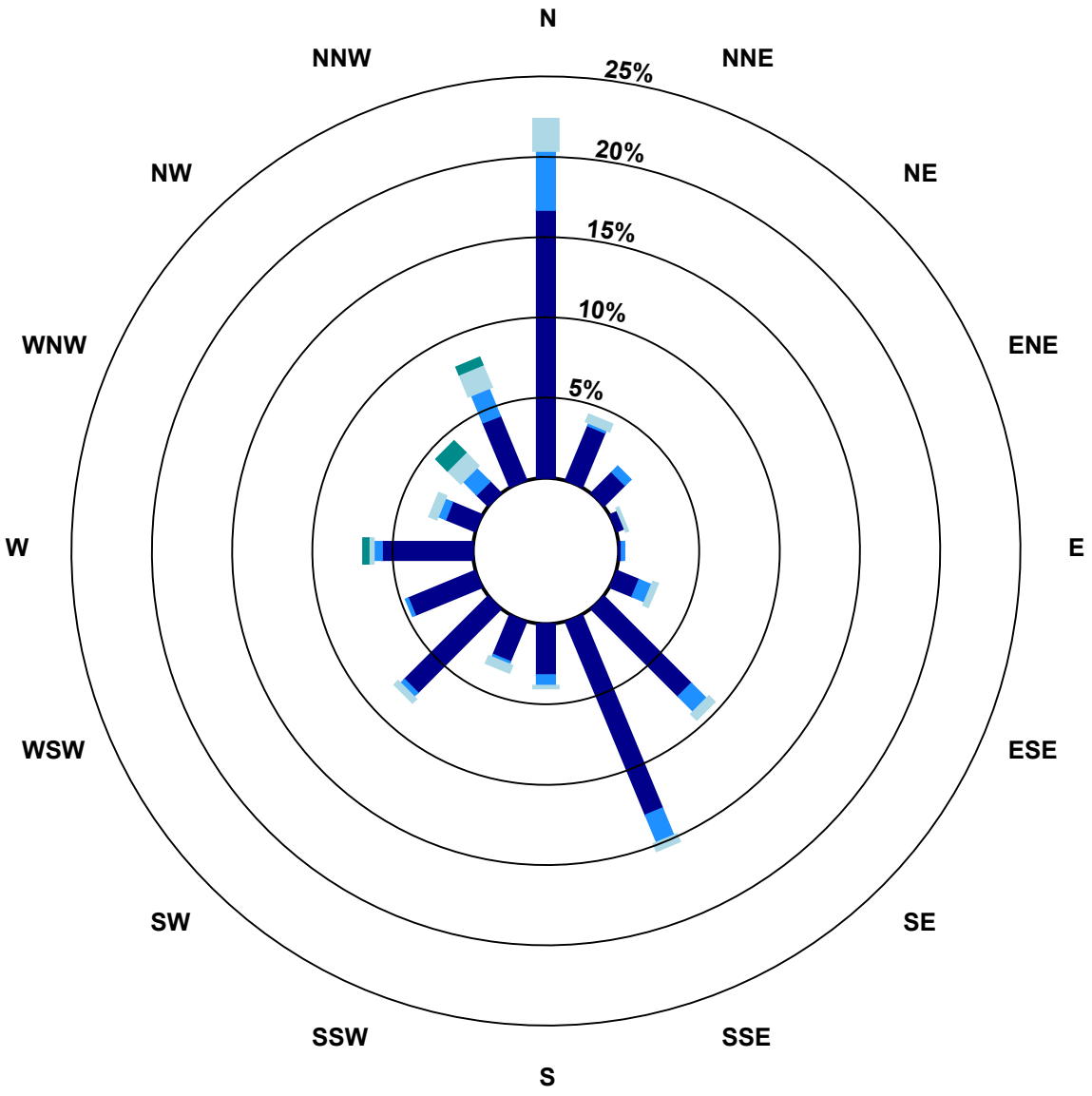
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Oxides (NO_X) - ppb

Buffalo Viewpoint



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

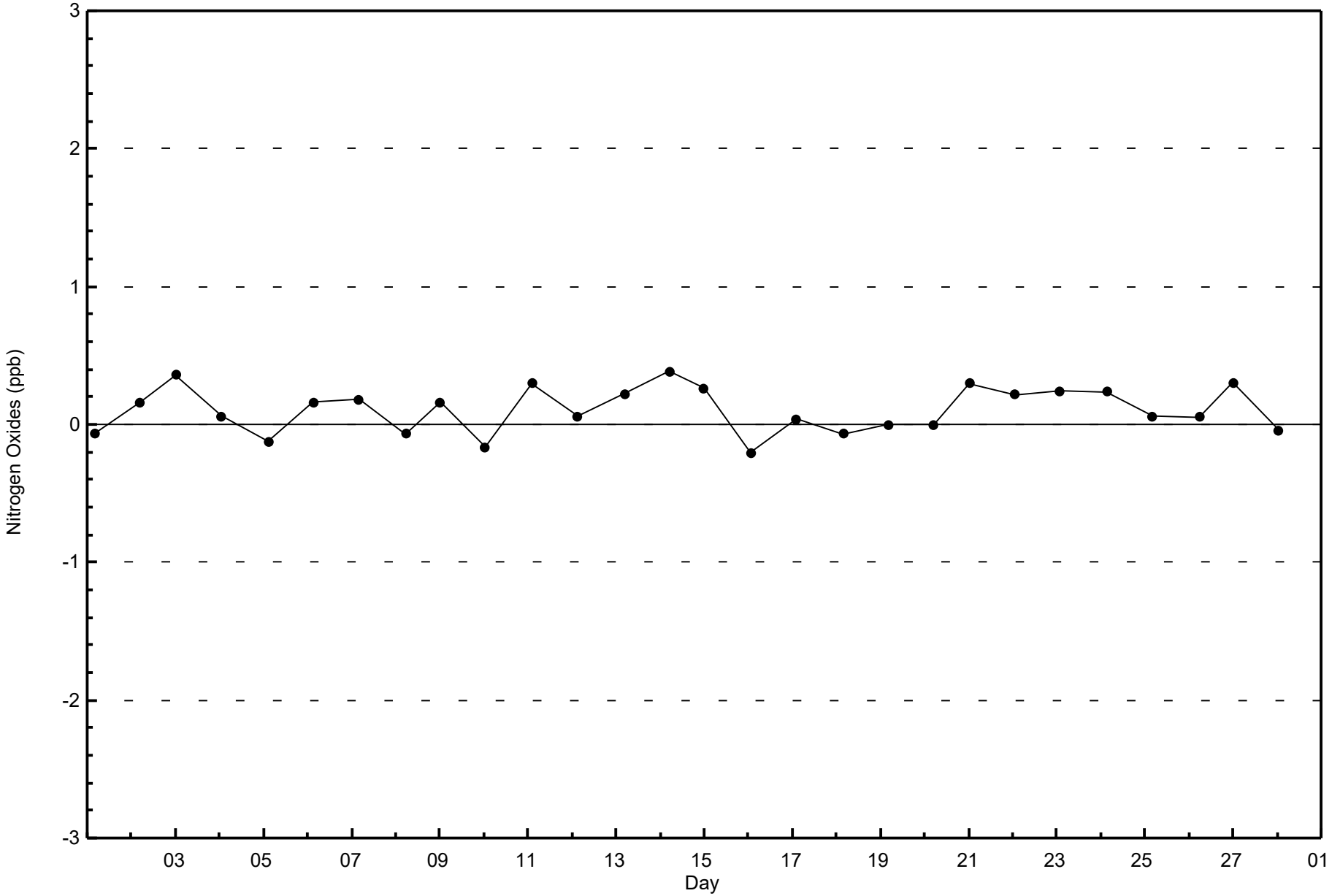
Total Number of Valid Hours: 599

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Buffalo Viewpoint - February 2025

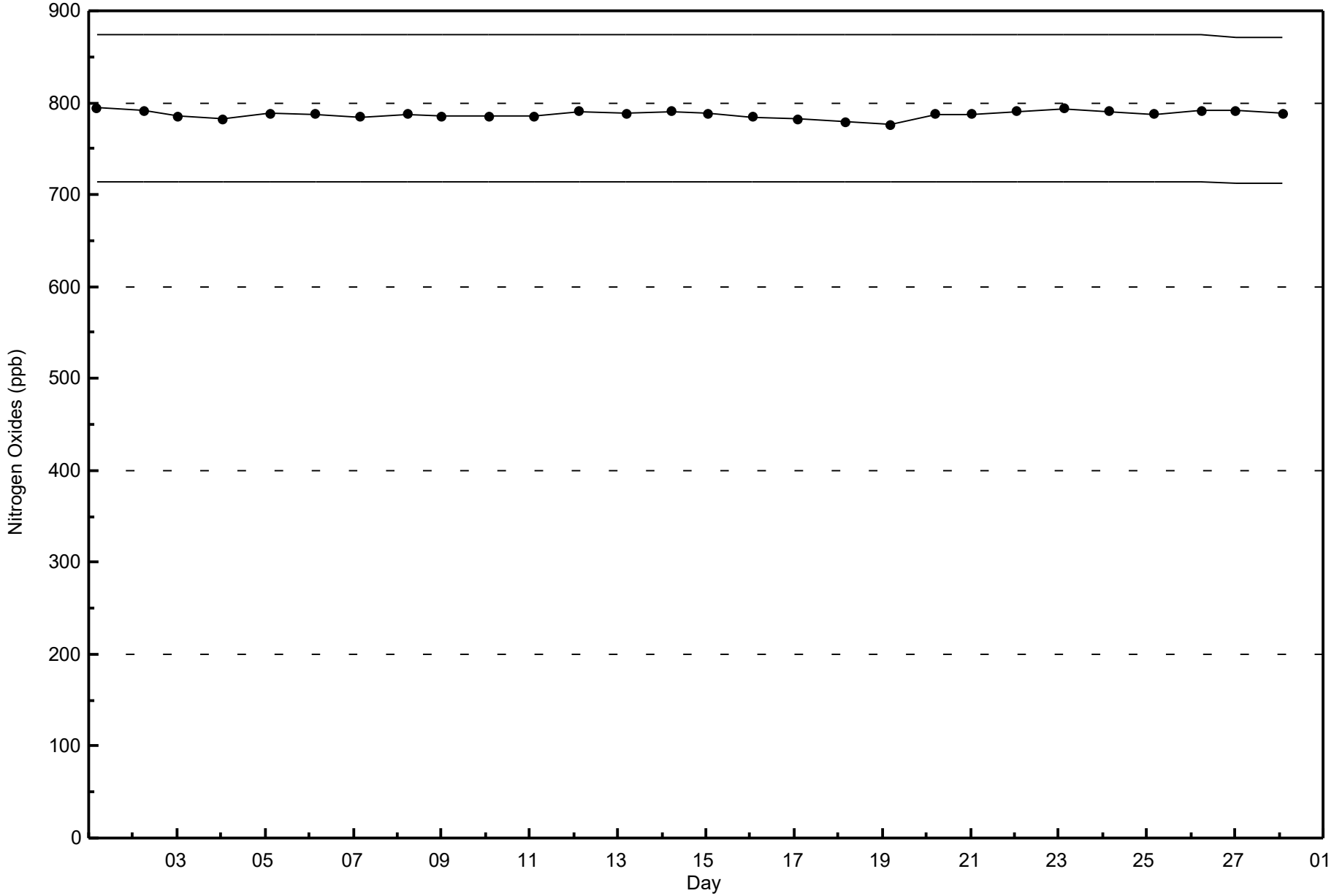


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Buffalo Viewpoint - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Buffalo Viewpoint - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 37.1 ppb on Feb 4 14:00 Maximum Daily Average: 34.2 ppb on Feb 5

Minimum Value: 0.9 ppb on Feb 14 08:00 Minimum Daily Average: 7.4 ppb on Feb 14
Maximum Diurnal Average: 27.8 ppb at hour 15 Minimum Diurnal Average: 18.0 ppb at hour 4
Monthly Average: 22.00 ppb Percentiles: P_1 = 1.1 P_{10} = 5.3 Q_1 = 14.3 Median = 24.8 Q_3 = 30.6 P_{90} = 33.5 P_{99} = 36.1

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	31
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-Feb	26.2	25.6	25.9	Z	25.7	27.1	29.5	30.6	31.3	30.7	29.3	27.5	23.4	25.2	28.3	27.2	21.3	20.3	20.0	19.8	18.3	21.6	22.3	20.1	25.1	31.3
2-Feb	19.7	20.3	24.2	26.5	Z	27.0	25.0	22.8	22.4	24.0	26.3	25.4	23.9	23.5	22.4	19.8	15.8	10.6	15.9	22.7	25.3	26.6	25.2	23.1	22.5	27.0
3-Feb	12.4	13.5	23.1	25.2	25.8	Z	28.3	26.7	24.1	26.3	29.8	31.2	31.6	33.0	34.9	33.5	32.7	32.8	33.2	34.1	34.1	33.3	32.5	31.8	28.9	34.9
4-Feb	Z	33.4	31.5	32.1	31.1	29.4	27.0	28.0	27.6	25.6	30.0	30.6	30.6	37.1	37.0	37.1	36.6	35.4	33.7	33.3	33.8	33.9	33.6	33.6	32.3	37.1
5-Feb	34.1	Z	34.4	34.8	35.4	35.4	34.7	34.6	34.3	34.5	34.4	34.2	34.4	34.6	34.8	34.3	33.3	32.7	33.0	33.3	33.1	33.1	34.1	34.3	34.2	35.4
6-Feb	34.4	34.4	Z	33.8	32.4	32.8	34.3	34.7	35.0	33.9	33.0	32.4	29.6	31.3	29.1	28.6	30.3	9.0	2.6	16.1	1.5	24.6	32.4	32.5	27.8	35.0
7-Feb	32.3	32.6	32.6	Z	32.7	33.0	33.0	33.1	32.7	32.7	33.0	34.4	35.1	36.1	35.8	36.3	36.0	34.4	31.9	29.1	31.6	32.7	31.2	29.0	33.1	36.3
8-Feb	29.9	29.2	21.6	18.7	Z	22.2	20.1	19.8	19.4	21.8	22.8	26.2	27.6	25.9	23.5	28.3	27.6	14.9	3.2	2.5	26.1	32.5	30.6	25.0	22.6	32.5
9-Feb	26.7	25.7	20.6	16.7	18.3	Z	7.1	5.2	7.8	18.4	22.4	24.9	26.0	24.2	23.7	21.4	18.0	14.3	5.4	1.1	4.8	21.5	18.5	21.4	17.1	26.7
10-Feb	Z	26.2	28.1	28.1	29.2	28.8	24.6	25.6	25.0	26.7	31.7	31.9	32.8	33.4	33.9	33.4	33.8	29.8	10.6	17.7	21.2	14.2	20.0	22.8	26.5	33.9
11-Feb	20.7	Z	9.4	4.0	9.6	20.0	11.2	5.2	22.3	23.2	26.2	26.7	27.3	25.7	28.3	27.2	23.4	19.7	13.3	9.0	5.2	3.6	5.5	8.1	16.3	28.3
12-Feb	3.3	5.6	Z	6.3	7.0	6.2	5.8	7.1	9.9	12.6	11.0	13.9	13.4	19.8	22.6	26.4	21.1	15.2	18.0	16.4	9.9	11.4	12.0	9.5	12.4	26.4
13-Feb	9.2	17.9	25.8	Z	27.1	23.4	21.2	21.2	16.3	10.9	5.5	9.1	13.3	15.4	17.8	15.7	13.1	19.6	11.6	21.1	20.5	18.1	9.4	11.4	16.3	27.1
14-Feb	11.8	8.2	11.1	1.7	Z	0.9	0.9	0.9	2.8	7.0	12.0	17.6	15.0	18.4	18.6	18.9	10.0	7.2	2.2	1.0	1.0	1.1	1.1	1.1	7.4	18.9
15-Feb	1.0	1.7	1.2	2.4	3.9	Z	1.4	1.9	8.0	12.0	21.1	30.4	31.3	31.7	32.1	31.9	31.2	25.5	16.9	13.7	17.7	26.0	26.8	26.3	17.2	32.1
16-Feb	Z	23.5	19.4	16.0	14.8	9.1	12.3	16.1	14.5	21.7	25.0	27.5	28.1	28.5	30.8	30.3	27.6	22.7	23.4	26.4	23.1	19.4	18.2	17.3	21.6	30.8
17-Feb	17.8	Z	18.2	19.5	20.9	22.5	22.6	23.8	24.3	24.9	25.9	26.6	27.1	28.4	29.0	25.7	24.4	26.4	21.1	26.1	25.7	24.9	25.0	25.1	24.2	29.0
18-Feb	25.1	24.7	Z	22.7	18.9	21.2	21.1	21.3	19.7	22.2	24.9	27.2	29.5	30.4	30.1	29.5	28.4	26.6	20.0	24.5	28.4	30.4	31.8	31.9	25.7	31.9
19-Feb	31.6	30.1	28.0	Z	26.1	26.0	24.3	22.8	24.4	26.2	28.2	29.6	30.4	31.7	32.7	33.4	34.6	35.4	35.2	33.4	34.8	35.6	35.8	35.9	30.7	35.9
20-Feb	36.1	35.4	34.4	33.5	Z	33.0	32.6	31.6	31.6	31.0	C	C	C	31.2	31.4	31.4	28.7	21.1	10.1	8.9	10.8	15.3	2.4	1.8	24.6	36.1
21-Feb	2.5	1.4	1.9	2.1	1.3	Z	1.3	1.6	4.0	6.0	6.4	9.7	7.1	13.8	19.5	27.6	29.3	29.2	30.4	31.5	31.3	31.9	29.8	27.7	15.1	31.9
22-Feb	Z	5.3	3.2	12.5	2.4	1.6	1.5	3.8	6.0	6.1	9.6	9.1	9.9	17.7	13.2	14.4	16.0	13.2	7.6	2.8	2.3	6.1	9.2	6.4	7.8	17.7
23-Feb	7.1	Z	10.7	11.8	11.7	19.1	18.8	21.6	28.0	22.7	15.6	23.8	28.1	31.5	33.1	30.9	30.4	31.6	30.6	28.8	28.0	29.7	31.6	30.6	24.2	33.1
24-Feb	30.7	29.4	Z	28.3	24.4	23.0	20.8	12.0	16.4	19.2	18.9	22.6	25.1	25.6	23.4	21.1	18.8	17.5	15.1	15.4	13.9	10.7	1.7	7.0	19.2	30.7
25-Feb	24.7	29.8	28.7	Z	33.6	33.1	32.1	29.5	27.6	30.4	31.5	30.9	30.8	30.2	29.9	28.2	20.0	16.9	9.6	15.8	14.0	12.6	9.7	2.0	24.0	33.6
26-Feb	2.0	1.8	1.7	1.8	Z	3.2	3.5	M	4.5	7.6	17.2	25.1	28.6	26.2	24.2	21.5	18.2	10.4	7.7	10.5	8.7	11.6	14.0	5.6	11.6	28.6
27-Feb	3.2	2.2	2.1	2.1	2.1	Z	2.0	2.4	3.5	7.2	7.6	19.1	31.1	31.1	26.3	29.4	30.9	30.3	29.9	32.2	33.1	35.2	34.7	36.2	18.9	36.2
28-Feb	Z	35.3	34.6	33.7	32.2	30.5	27.4	21.4	21.3	18.5	20.7	28.5	31.3	32.2	32.6	29.2	27.5	30.1	28.2	30.8	29.9	29.6	28.4	27.4	28.8	35.3
	19.3	20.6	19.7	18.0	20.3	22.1	18.7	18.7	19.5	20.9	22.2	25.0	26.0	27.6	27.8	27.6	25.7	22.6	18.6	19.9	20.3	22.4	21.7	20.9	Diurnal Average	
	36.1	35.4	34.6	34.8	35.4	35.4	34.7	34.7	35.0	34.5	34.4	34.4	35.1	37.1	37.0	37.1	36.6	35.4	35.2	34.1	34.8	35.6	35.8	36.2	Diurnal Maximum	

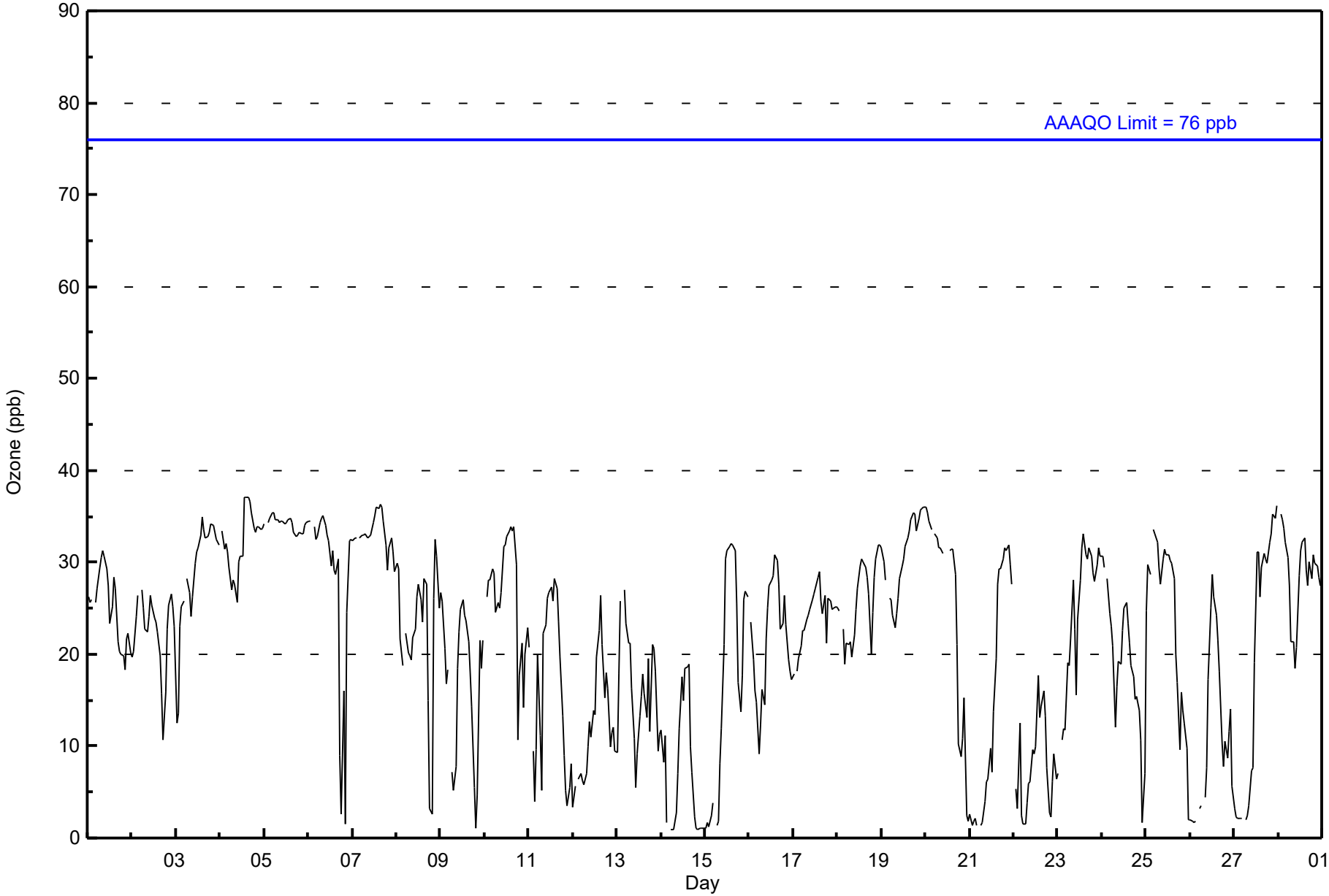
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Buffalo Viewpoint - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	239	37.34	37.34
21 - 50	401	62.66	100.00
51 - 82	0	0.00	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 640

Total Number of Hours: 672

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	6	6	1	1	8	16	33	9	5	6	2	8	7	21	32	221
21 - 50	77	19	8	3	1	8	40	62	12	12	44	27	31	11	7	18	380
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	137	25	14	4	2	16	56	95	21	17	50	29	39	18	28	50	601

Total Number of Valid Hours: 601

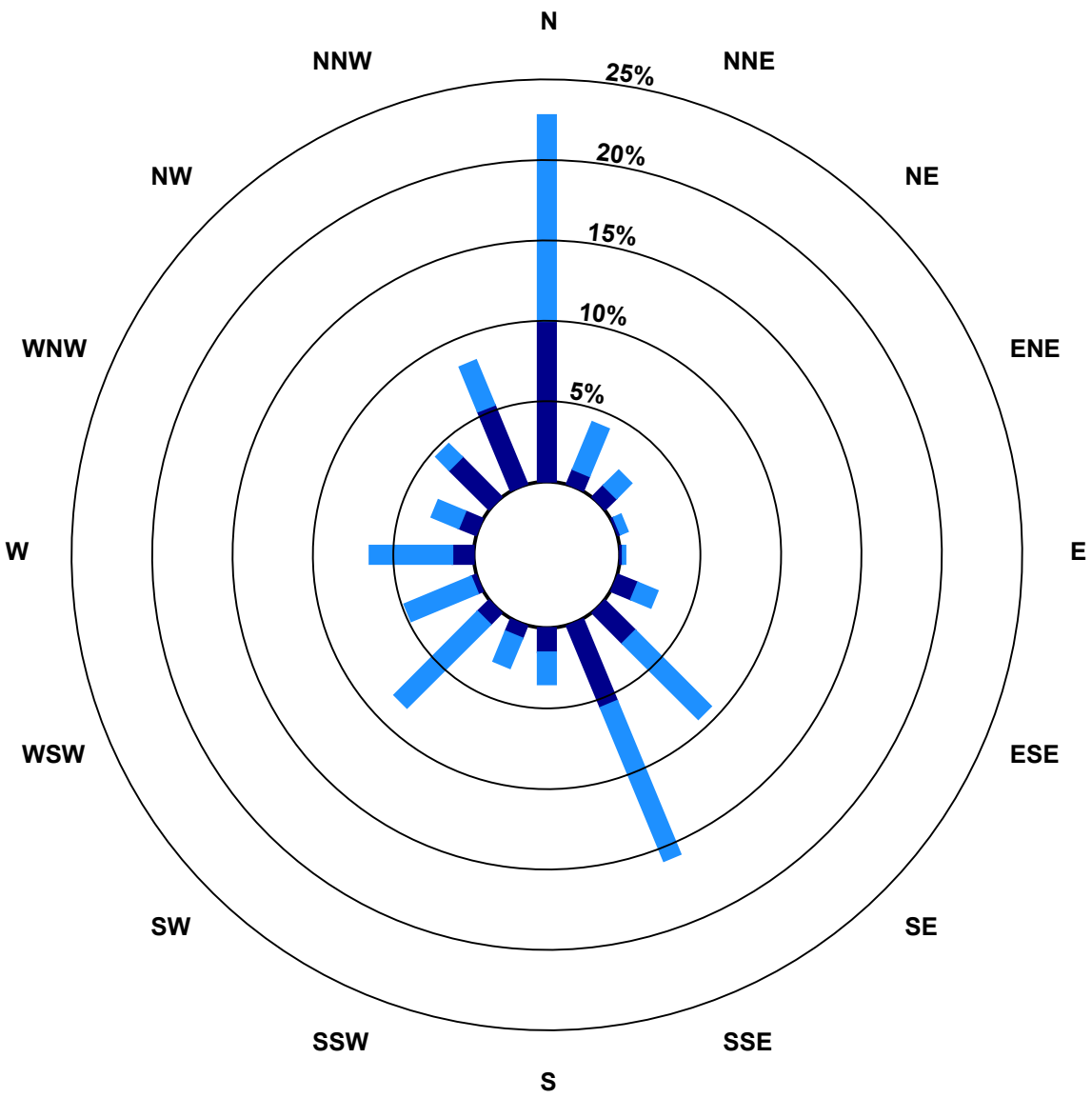
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Ozone (O_3) - ppb

Buffalo Viewpoint



Classes (ppb)

0 - 20

21 - 50

51 - 82

> 83

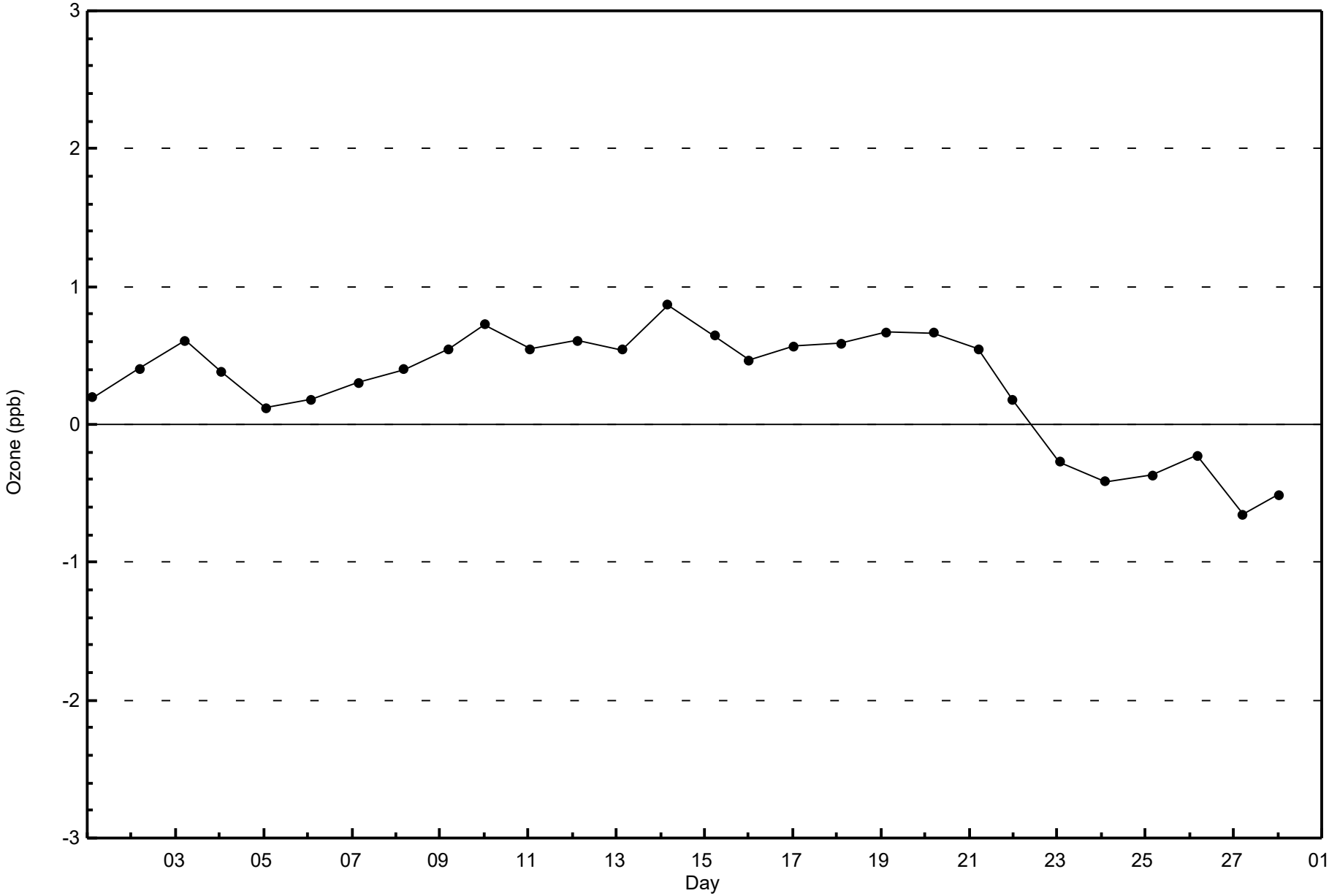
Total Number of Valid Hours: 601

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Buffalo Viewpoint - February 2025

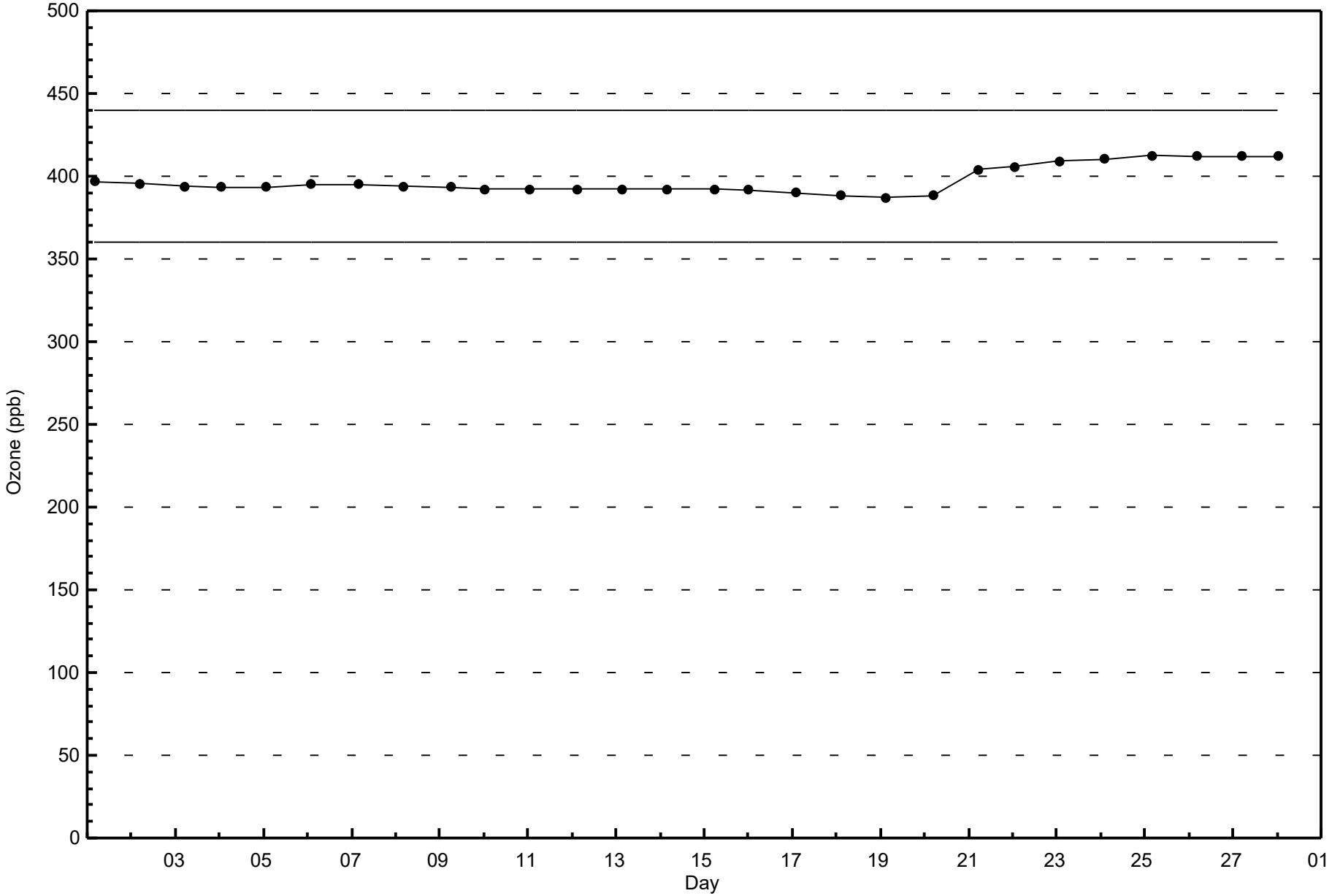


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Buffalo Viewpoint - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Buffalo Viewpoint - February 2025

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

Maximum Value: 36.6 $\mu g/m^3$ on Feb 14 17:00

Maximum Daily Average: 11.7 $\mu g/m^3$ on Feb 14

Minimum Value: 1.1 $\mu g/m^3$ on Feb 6 02:00

Minimum Daily Average: 1.6 $\mu g/m^3$ on Feb 4

Maximum Diurnal Average: 5.3 $\mu g/m^3$ at hour 17

Minimum Diurnal Average: 4.0 $\mu g/m^3$ at hour 14

Monthly Average: 4.62 $\mu g/m^3$

Percentiles: P_1 = 1.3 P_{10} = 1.9 Q_1 = 2.7 Median = 3.6 Q_3 = 5.7 P_{90} = 8.0 P_{99} = 15.9

Hours in Service:	672
Hours of Data:	670
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-Feb	3.1	3.3	3.2	3.2	3.3	3.1	2.9	2.7	2.6	2.7	3.1	3.4	11.7	5.4	3.4	3.5	5.7	4.6	4.9	4.9	4.9	4.6	4.6	4.8	4.2	11.7
2-Feb	4.7	4.5	4.0	3.7	3.4	3.5	3.5	3.8	3.8	3.7	3.6	3.7	4.0	3.9	3.7	3.9	4.0	4.1	3.9	3.3	3.2	3.1	3.1	3.3	3.7	4.7
3-Feb	3.6	3.4	3.0	2.8	2.6	2.7	2.6	2.7	2.8	2.6	2.5	2.4	2.4	2.6	1.7	1.8	1.9	1.7	1.5	1.5	1.5	1.5	1.5	1.4	2.3	3.6
4-Feb	1.2	1.4	2.0	2.2	1.5	2.0	1.8	1.4	1.3	1.6	1.3	1.3	1.6	1.3	1.3	1.3	1.3	1.4	2.5	1.8	1.7	1.6	1.7	2.2	1.6	2.5
5-Feb	1.7	1.6	1.7	1.7	1.6	1.4	1.6	1.7	1.6	1.6	1.8	2.1	1.7	1.7	1.6	1.6	1.7	1.7	1.8	1.6	1.6	1.4	1.3	1.2	1.6	2.1
6-Feb	1.2	1.1	1.3	1.8	2.6	2.5	1.6	1.4	1.3	1.6	1.9	2.8	4.0	4.6	6.6	7.9	6.8	7.7	8.4	6.9	7.5	6.8	6.2	5.2	4.2	8.4
7-Feb	3.9	3.3	3.2	3.2	3.2	3.1	3.0	2.8	2.8	2.7	2.7	2.7	2.7	2.7	2.7	2.6	2.5	2.6	2.6	2.8	2.8	2.7	2.2	2.3	2.8	3.9
8-Feb	2.6	2.2	2.8	3.7	3.3	2.8	3.9	3.2	3.5	3.8	4.0	2.7	2.6	3.0	4.7	4.0	6.5	7.8	8.4	6.7	3.3	2.8	3.7	3.7	4.0	8.4
9-Feb	4.6	5.0	5.2	5.6	5.4	5.5	5.7	6.3	5.9	5.6	5.7	5.3	5.0	5.1	5.7	6.5	7.1	7.9	9.3	10.1	7.7	4.3	4.6	4.3	6.0	10.1
10-Feb	4.6	4.8	4.8	4.9	4.3	3.5	3.9	3.6	3.4	3.1	2.8	2.5	2.3	2.1	1.7	1.7	1.4	1.9	4.6	3.4	3.8	4.3	3.9	3.3	3.4	4.9
11-Feb	3.2	2.9	3.5	3.6	3.3	2.7	3.2	3.4	2.3	2.4	2.8	2.5	2.9	3.9	3.5	2.7	3.2	5.3	5.9	5.7	6.3	6.5	6.7	6.5	4.0	6.7
12-Feb	6.7	6.5	6.7	6.3	6.2	6.0	5.5	5.0	4.9	4.6	4.6	4.0	5.2	4.5	3.9	3.1	3.3	3.8	3.6	3.6	4.7	4.5	4.1	4.0	4.8	6.7
13-Feb	4.1	3.1	2.3	1.7	1.6	1.9	2.0	2.0	2.9	3.5	6.6	6.3	5.6	4.9	5.5	3.9	3.7	2.9	3.2	2.6	2.4	2.7	3.4	3.1	3.4	6.6
14-Feb	2.9	3.0	2.9	4.5	5.7	6.7	6.7	6.1	13.9	6.0	5.5	4.5	6.7	5.3	12.0	21.8	36.6	19.6	16.0	9.8	14.1	26.5	28.3	15.9	11.7	36.6
15-Feb	18.3	13.4	14.0	9.9	9.8	12.8	11.6	12.9	6.2	7.1	4.5	2.7	2.4	2.1	2.2	2.4	2.4	2.6	3.2	7.6	4.7	2.5	2.7	2.8	6.7	18.3
16-Feb	2.5	2.6	2.7	3.2	3.3	3.3	4.0	4.1	3.7	3.0	2.6	2.4	2.6	2.7	2.7	2.8	2.8	3.1	2.9	2.7	3.0	3.2	3.3	3.3	3.0	4.1
17-Feb	3.1	3.1	3.2	3.1	2.9	2.9	2.9	2.8	2.7	2.8	2.9	2.9	2.8	2.6	2.6	3.8	4.0	2.7	3.3	2.6	2.5	2.5	2.4	2.3	2.9	4.0
18-Feb	2.4	2.6	2.7	2.7	2.7	3.0	3.4	4.1	4.4	4.4	4.0	3.5	2.9	2.7	2.9	2.8	2.8	2.9	4.2	3.3	2.7	2.3	2.3	2.7	3.1	4.4
19-Feb	2.6	2.5	2.5	2.6	2.6	2.5	2.7	2.8	2.8	3.1	3.1	3.4	3.5	3.5	3.5	3.3	3.0	2.7	2.5	2.6	2.3	2.2	2.5	2.6	2.8	3.5
20-Feb	2.6	2.6	2.7	3.2	4.2	4.8	5.1	5.2	5.3	5.3	5.4	5.7	5.8	5.6	5.7	5.8	6.0	7.6	8.8	8.3	7.8	8.0	9.4	10.7	5.9	10.7
21-Feb	8.9	10.2	9.0	10.0	11.3	12.5	15.7	10.7	10.1	C	15.9	11.2	13.8	10.1	8.2	6.6	5.8	6.0	5.4	5.2	5.0	4.9	4.8	5.1	9.0	15.9
22-Feb	6.6	7.7	8.1	6.5	8.5	8.6	9.2	8.4	7.7	9.0	10.0	12.0	10.6	7.6	9.4	9.4	7.6	8.0	8.4	8.7	8.8	8.3	8.4	8.2	8.6	12.0
23-Feb	7.9	7.9	7.1	5.9	6.4	5.6	6.4	5.4	2.9	3.1	5.5	5.4	4.9	4.3	3.7	3.5	3.3	3.3	3.4	3.6	3.6	3.5	3.4	3.4	4.7	7.9
24-Feb	3.4	3.4	3.4	3.6	3.7	3.8	3.9	4.9	5.1	6.4	7.8	6.6	5.1	5.4	5.7	6.0	6.1	5.9	6.0	6.1	6.9	6.5	8.0	8.2	5.5	8.2
25-Feb	5.5	3.6	3.5	3.1	2.7	2.5	2.6	2.7	2.8	2.8	2.7	2.8	3.0	3.4	3.8	4.9	6.2	5.1	6.0	5.5	7.0	6.3	7.4	7.7	4.3	7.7
26-Feb	7.2	6.6	6.8	7.1	7.9	9.3	11.2	C	14.8	7.3	4.5	3.6	3.2	4.6	5.5	4.9	4.3	4.9	7.5	5.3	5.6	5.4	5.0	5.7	6.4	14.8
27-Feb	6.0	6.8	6.6	6.8	7.4	7.2	7.5	7.0	7.9	8.2	8.0	5.5	3.7	2.9	3.7	2.7	2.7	2.9	2.8	2.5	2.5	2.5	2.5	2.7	5.0	8.2
28-Feb	2.8	3.2	2.9	2.7	4.2	4.4	5.1	6.2	6.6	8.8	7.0	5.0	3.9	3.7	3.7	4.3	4.5	3.9	3.9	3.3	3.2	3.2	2.9	3.2	4.3	8.8
	4.6	4.4	4.3	4.3	4.5	4.7	5.0	4.6	4.9	4.3	4.7	4.2	4.5	4.0	4.3	4.6	5.3	4.8	5.2	4.7	4.7	4.8	5.0	4.6	Diurnal Average	
	18.3	13.4	14.0	10.0	11.3	12.8	15.7	12.9	14.8	9.0	15.9	12.0	13.8	10.1	12.0	21.8	36.6	19.6	16.0	10.1	14.1	26.5	28.3	15.9	Diurnal Maximum	

C - Calibration

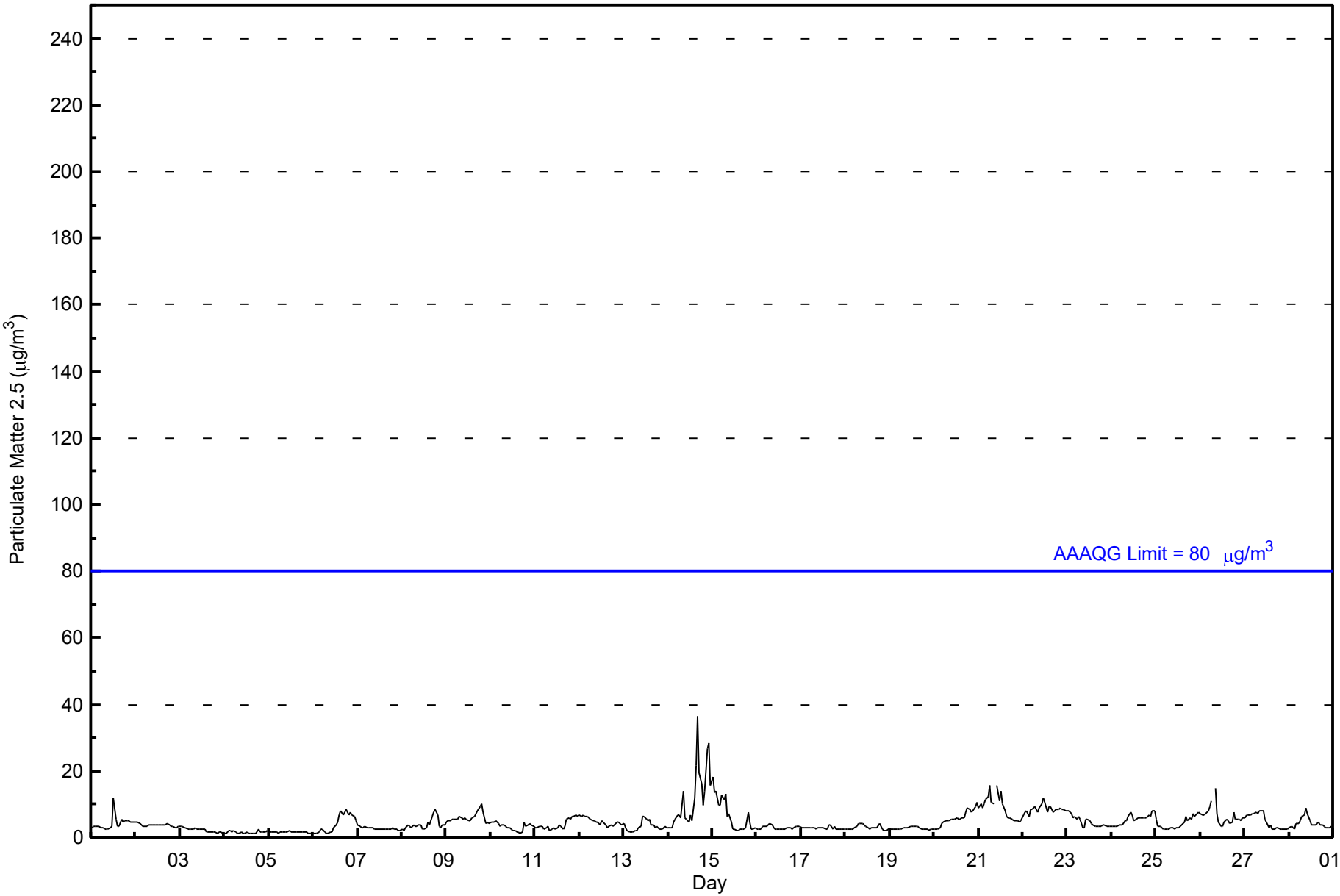
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Buffalo Viewpoint - February 2025



Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	486	72.54	72.54
6 - 15	174	25.97	98.51
16 - 25	7	1.04	99.55
26 - 80	3	0.45	100.00
> 81.0	0	0.00	100.00

Total Number of Valid Hours: 670

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

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

Buffalo Viewpoint - February 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	21	8	5	1	9	45	78	18	15	45	30	30	11	8	27	464
6 - 15	29	4	6	0	1	5	14	18	7	5	7	0	9	6	19	24	154
16 - 25	0	1	0	0	0	1	0	1	0	0	1	0	1	1	1	0	7
26 - 80	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	3
> 81.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	142	26	14	5	2	16	59	97	25	20	53	30	41	18	29	51	628

Total Number of Valid Hours: 628

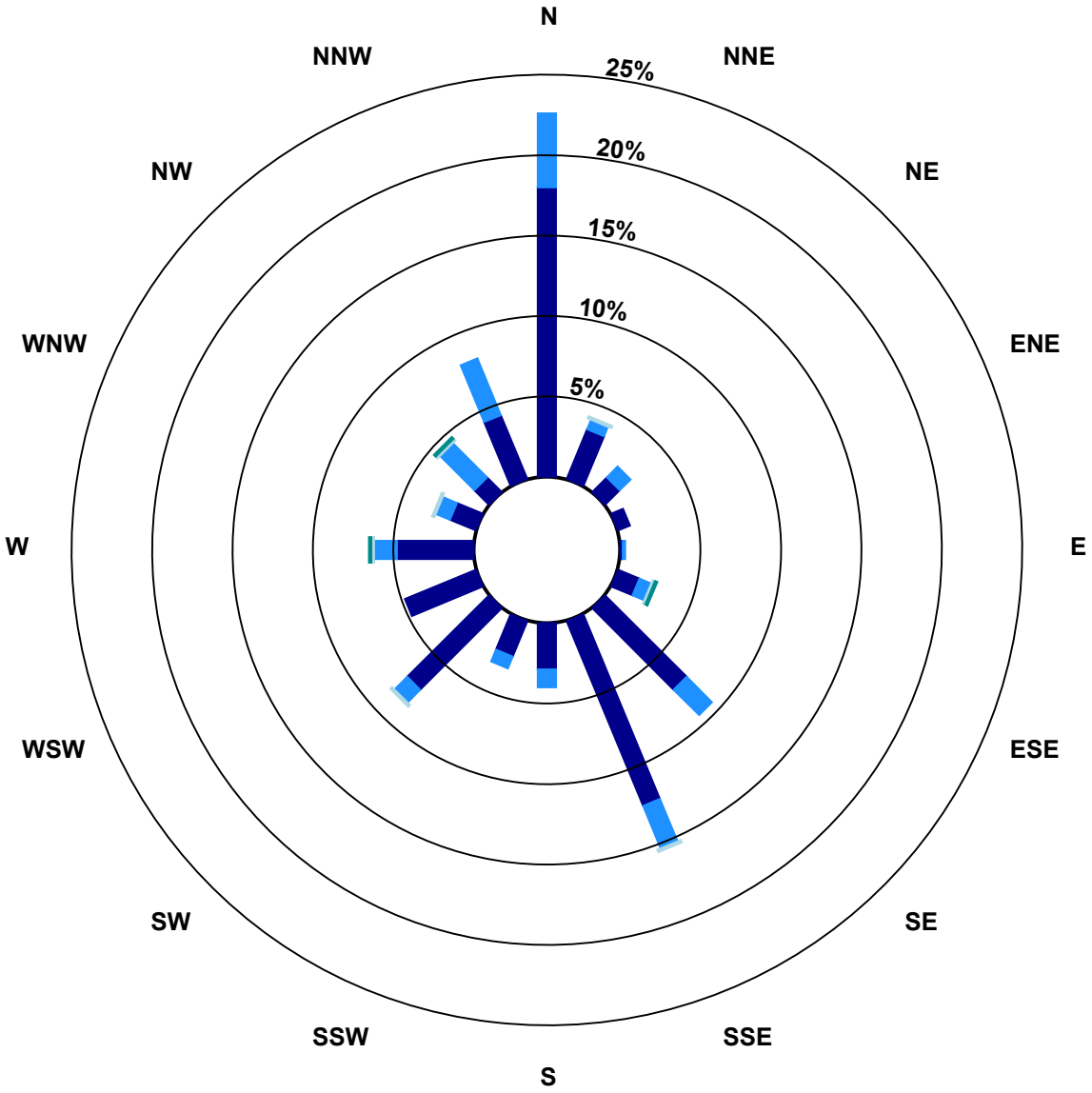
Total Number of Hours: 672

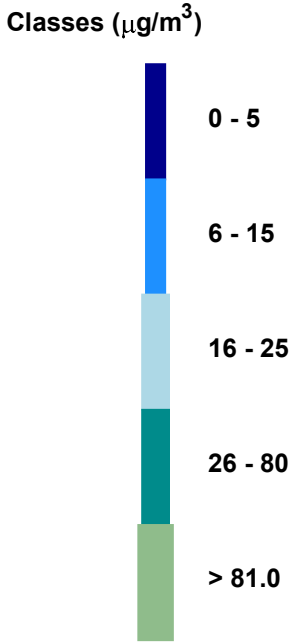
Wood Buffalo Environmental Association

Wind Rose Feb 2025

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

Buffalo Viewpoint





Total Number of Valid Hours: 628

Maximum Value: 2.5 C on Feb 27 13:00

Maximum Daily Average: -4.2 C on Feb 23

Minimum Value: -36.3 C on Feb 14 09:00

Minimum Daily Average: -28.5 C on Feb 14

Maximum Diurnal Average: -13.6 C at hour 16

Minimum Diurnal Average: -21.1 C at hour 7

Monthly Average: -17.89 C

Percentiles: P_1 = -34.3 P_{10} = -27.8 Q_1 = -24.2 Median = -19.3 Q_3 = -10.7 P_{90} = -6.2 P_{99} = 0.0

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

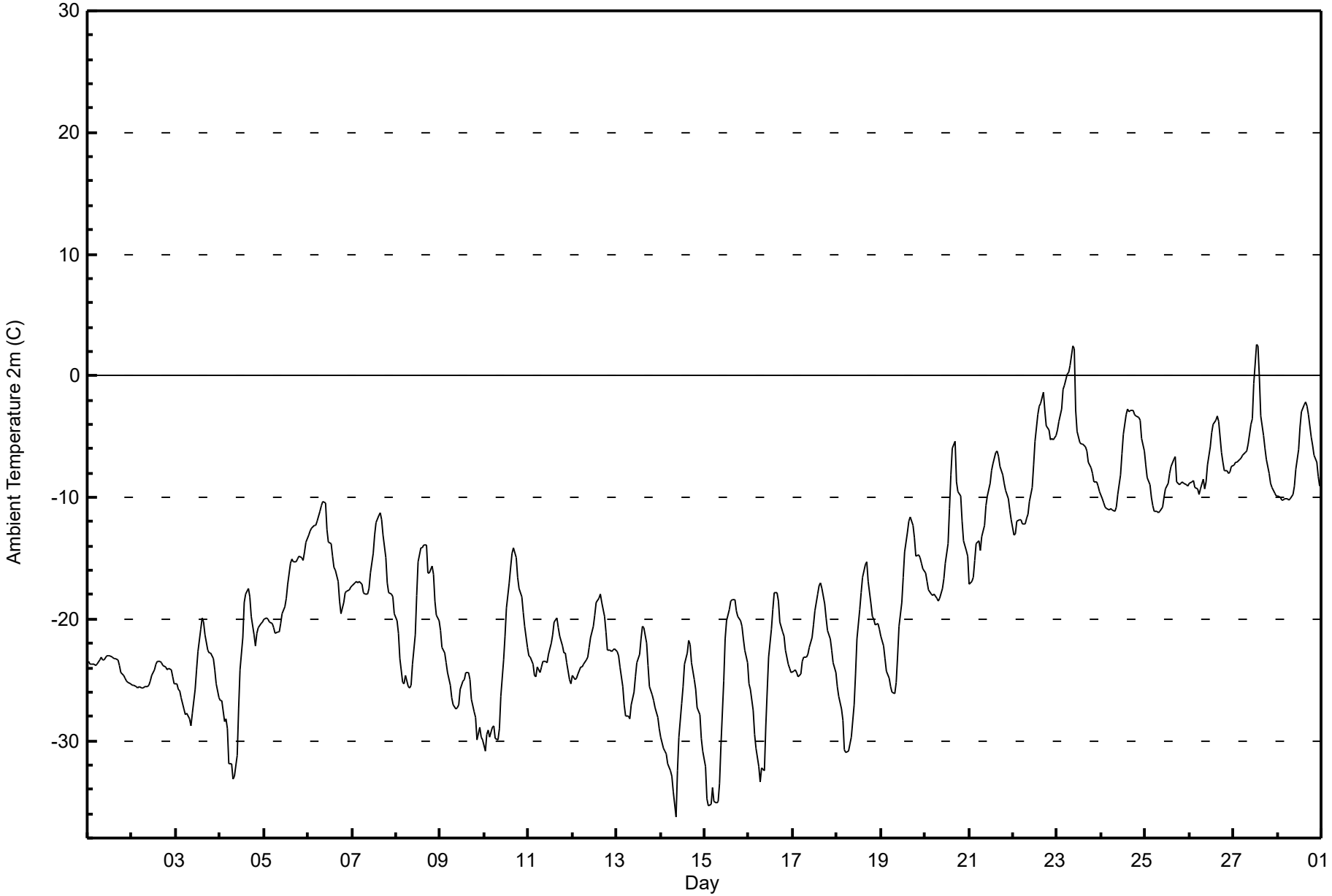
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-23.5	-23.7	-23.7	-23.7	-23.8	-23.7	-23.3	-23.1	-23.3	-23.4	-23.0	-23.0	-23.0	-23.2	-23.2	-23.3	-23.4	-23.8	-24.4	-24.6	-24.9	-25.1	-25.2	-25.3	-23.8	-23.0
2-Feb	-25.4	-25.5	-25.6	-25.7	-25.6	-25.7	-25.7	-25.5	-25.5	-25.4	-25.1	-24.6	-24.2	-23.8	-23.4	-23.4	-23.6	-23.8	-23.9	-24.2	-24.1	-24.2	-24.7	-25.3	-24.7	-23.4
3-Feb	-25.3	-25.8	-25.9	-26.5	-27.4	-27.9	-27.8	-28.2	-28.7	-27.7	-25.8	-24.2	-22.6	-20.9	-19.9	-20.3	-21.3	-22.5	-22.8	-22.8	-23.2	-24.1	-25.3	-26.5	-24.7	-19.9
4-Feb	-26.7	-26.7	-28.5	-28.2	-29.0	-31.9	-31.9	-33.2	-33.0	-31.1	-27.4	-24.1	-21.5	-18.6	-17.9	-17.4	-18.2	-19.8	-21.3	-22.2	-21.2	-20.7	-20.3	-20.3	-24.6	-17.4
5-Feb	-20.0	-19.9	-20.0	-20.2	-20.4	-20.7	-21.2	-21.1	-21.1	-20.4	-19.6	-19.0	-18.3	-17.1	-15.4	-15.1	-15.3	-15.3	-15.0	-14.8	-15.0	-15.2	-14.5	-13.7	-17.8	-13.7
6-Feb	-13.2	-12.8	-12.5	-12.3	-12.3	-11.9	-11.1	-10.7	-10.3	-10.4	-12.7	-13.7	-13.8	-14.9	-15.8	-16.0	-16.9	-18.5	-19.5	-18.6	-17.8	-17.7	-17.6	-17.3	-14.5	-10.3
7-Feb	-17.2	-17.1	-16.9	-17.0	-16.9	-17.2	-17.8	-17.9	-18.0	-17.5	-16.2	-14.6	-13.1	-12.1	-11.5	-11.2	-11.8	-13.2	-15.0	-17.0	-17.9	-17.9	-18.1	-19.6	-15.9	-11.2
8-Feb	-20.1	-21.2	-23.2	-25.2	-25.3	-24.6	-25.5	-25.7	-25.4	-23.7	-21.2	-18.1	-15.3	-14.2	-14.2	-13.9	-13.9	-16.2	-16.3	-15.6	-16.4	-18.5	-19.7	-20.2	-19.7	-13.9
9-Feb	-21.0	-22.3	-22.8	-23.6	-24.4	-25.5	-26.5	-27.1	-27.5	-27.2	-27.1	-25.8	-25.1	-25.0	-24.3	-24.4	-24.9	-26.5	-27.6	-28.1	-29.9	-28.9	-29.7	-29.9	-26.0	-21.0
10-Feb	-30.8	-29.4	-29.1	-29.7	-28.9	-28.7	-29.8	-29.9	-29.0	-26.4	-23.4	-21.4	-19.2	-17.0	-15.8	-14.6	-14.1	-14.9	-16.5	-17.4	-18.2	-19.4	-20.6	-22.3	-22.8	-14.1
11-Feb	-23.1	-23.1	-23.8	-24.6	-24.7	-23.9	-24.4	-23.9	-23.5	-23.4	-23.6	-22.9	-22.0	-21.3	-20.2	-19.9	-20.7	-21.4	-22.2	-22.8	-22.8	-23.6	-25.0	-25.3	-23.0	-19.9
12-Feb	-24.7	-25.0	-24.9	-24.5	-24.0	-24.0	-23.7	-23.4	-23.1	-22.4	-21.5	-20.6	-19.7	-18.6	-18.3	-17.9	-18.6	-19.8	-21.0	-22.6	-22.5	-22.6	-22.6	-22.4	-22.0	-17.9
13-Feb	-22.7	-23.0	-23.9	-25.6	-27.0	-28.0	-28.0	-28.2	-27.1	-26.0	-24.7	-23.6	-22.9	-21.7	-20.6	-20.8	-21.9	-23.8	-25.6	-26.3	-26.7	-27.3	-28.1	-29.0	-25.1	-20.6
14-Feb	-29.7	-30.6	-30.8	-31.1	-31.9	-32.5	-32.9	-34.2	-36.3	-32.5	-29.7	-26.9	-25.6	-23.7	-22.8	-21.7	-22.1	-23.6	-25.0	-25.7	-27.3	-27.8	-29.8	-30.8	-28.5	-21.7
15-Feb	-32.2	-34.8	-35.4	-35.3	-33.9	-35.0	-35.1	-35.0	-33.5	-30.3	-25.1	-21.6	-20.1	-19.3	-18.5	-18.4	-18.4	-19.3	-19.8	-20.1	-20.6	-21.7	-22.5	-23.6	-26.2	-18.4
16-Feb	-25.3	-25.8	-27.5	-29.5	-30.6	-32.1	-33.4	-32.3	-32.4	-28.8	-25.9	-23.1	-20.8	-19.3	-17.8	-17.8	-18.5	-20.3	-21.1	-21.5	-22.5	-23.7	-24.0	-24.4	-24.9	-17.8
17-Feb	-24.3	-24.2	-24.4	-24.7	-24.6	-23.5	-23.1	-23.1	-22.9	-22.3	-21.5	-20.5	-19.3	-17.9	-17.2	-17.1	-17.4	-18.8	-19.9	-20.9	-21.6	-22.6	-23.6	-24.4	-21.7	-17.1
18-Feb	-25.6	-26.3	-27.4	-28.4	-30.7	-31.0	-30.8	-30.2	-29.7	-27.0	-24.5	-21.6	-19.2	-17.8	-16.6	-15.5	-15.3	-16.9	-18.8	-19.8	-20.0	-20.5	-20.4	-20.8	-23.1	-15.3
19-Feb	-21.4	-22.2	-23.2	-24.3	-24.9	-25.5	-26.0	-26.2	-25.2	-23.0	-20.6	-18.6	-16.5	-14.5	-12.9	-11.9	-11.6	-12.3	-13.3	-14.9	-14.7	-14.9	-15.5	-15.9	-18.7	-11.6
20-Feb	-16.2	-16.9	-17.6	-17.9	-18.1	-18.0	-18.3	-18.6	-18.3	-17.5	-16.7	-15.5	-13.9	-10.9	-8.1	-6.0	-5.4	-8.7	-9.6	-9.8	-12.0	-13.5	-14.4	-14.9	-14.0	-5.4
21-Feb	-17.1	-16.9	-16.5	-15.1	-13.8	-13.6	-14.4	-13.3	-12.3	-10.7	-9.8	-8.9	-7.8	-7.2	-6.3	-6.2	-6.6	-7.5	-8.2	-8.8	-9.5	-10.1	-11.0	-11.9	-11.0	-6.2
22-Feb	-13.1	-12.9	-12.0	-11.9	-11.9	-12.2	-12.1	-11.7	-11.4	-10.3	-9.2	-7.3	-5.4	-3.1	-2.5	-2.3	-1.4	-2.9	-4.1	-4.4	-5.3	-5.1	-5.2	-4.9	-7.6	-1.4
23-Feb	-4.5	-3.8	-2.7	-1.2	-0.8	0.2	0.3	0.8	2.4	2.3	-2.8	-4.6	-5.5	-5.6	-5.6	-5.8	-6.2	-7.1	-7.6	-8.1	-8.7	-8.8	-9.1	-9.5	-4.2	2.4
24-Feb	-10.1	-10.4	-10.8	-10.9	-11.0	-10.9	-11.0	-11.2	-10.8	-9.8	-8.1	-6.5	-4.8	-3.1	-2.8	-2.9	-2.8	-2.8	-3.2	-3.3	-3.5	-3.7	-5.1	-6.1	-6.9	-2.8
25-Feb	-7.4	-8.3	-8.9	-10.0	-10.7	-11.1	-11.2	-11.3	-11.1	-10.8	-10.0	-9.3	-8.8	-8.0	-7.4	-6.9	-6.6	-8.7	-9.0	-8.8	-8.7	-8.8	-9.0	-9.0	-9.2	-6.6
26-Feb	-8.8	-8.7	-8.6	-9.2	-9.2	-9.7	-9.3	-8.5	-9.3	-8.7	-7.4	-5.8	-4.7	-4.0	-3.7	-3.4	-3.8	-6.3	-7.1	-7.8	-7.8	-8.0	-7.9	-7.5	-7.3	-3.4
27-Feb	-7.3	-7.1	-7.2	-6.9	-6.7	-6.6	-6.3	-6.2	-5.7	-4.0	-3.5	-0.6	2.5	2.5	-0.1	-3.3	-4.9	-5.9	-6.9	-8.1	-8.9	-9.2	-9.6	-9.8	-5.4	2.5
28-Feb	-9.9	-10.0	-10.2	-10.3	-10.2	-10.1	-10.2	-10.1	-9.8	-9.1	-7.7	-6.1	-4.2	-3.0	-2.4	-2.2	-2.5	-3.2	-5.0	-5.7	-6.5	-7.1	-8.2	-9.0	-7.2	-2.2
	-19.5	-19.8	-20.1	-20.5	-20.7	-20.9	-21.1	-21.0	-20.8	-19.6	-18.4	-16.9	-15.5	-14.4	-13.8	-13.6	-13.9	-15.1	-16.1	-16.6	-17.1	-17.5	-18.1	-18.6	Diurnal Average	
	-4.5	-3.8	-2.7	-1.2	-0.8	0.2	0.3	0.8	2.4	2.3	-2.8	-0.6	2.5	2.5	-0.1	-2.2	-1.4	-2.8	-3.2	-3.3	-3.5	-3.7	-5.1	-4.9	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Buffalo Viewpoint - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	319	47.47	47.47
-20 - 0	346	51.49	98.96
0 - 10	7	1.04	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Buffalo Viewpoint - February 2025

Maximum Value: 97.6 % on Feb 23 08:00

Maximum Daily Average: 90.8 % on Feb 23

Minimum Value: 36.4 % on Feb 18 15:00

Minimum Daily Average: 48.7 % on Feb 19

Maximum Diurnal Average: 75.9 % at hour 8

Minimum Diurnal Average: 63.7 % at hour 15

Monthly Average: 72.21 %

Percentiles: P_1 = 41.6 P_{10} = 57.7 Q_1 = 66.8 Median = 73.6 Q_3 = 78.1 P_{90} = 86.7 P_{99} = 94.2

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

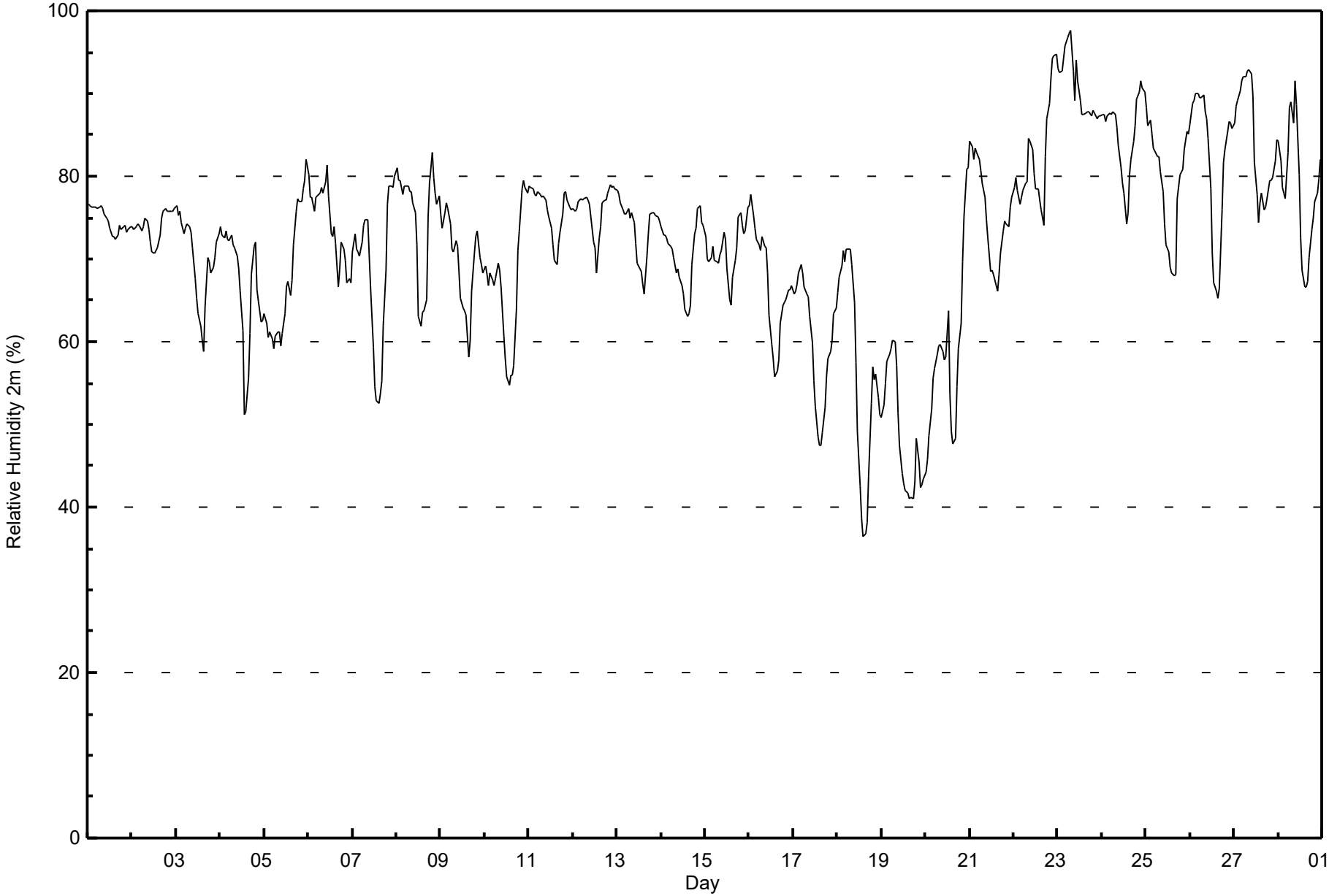
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	76.5	76.4	76.3	76.2	76.2	76.1	76.2	76.4	76.1	75.5	74.9	74.5	73.7	72.8	72.7	72.3	72.9	74.0	73.5	73.9	74.0	73.1	73.6	73.9	74.7	76.5
2-Feb	73.8	73.6	73.8	74.3	74.1	73.3	73.9	74.9	74.6	73.6	72.0	70.8	70.7	71.0	71.3	72.9	74.9	75.8	76.0	75.8	75.7	75.7	75.8	76.1	73.9	76.1
3-Feb	76.4	75.3	75.7	74.4	73.1	73.7	74.3	73.9	73.3	71.4	67.7	65.3	63.5	61.9	60.1	58.8	64.2	70.1	69.7	68.2	69.0	70.1	72.0	73.1	69.8	76.4
4-Feb	73.9	72.8	72.5	73.3	72.3	72.2	72.8	71.7	71.4	70.3	68.8	66.1	61.3	51.1	51.5	55.6	61.0	68.1	71.6	72.0	66.3	64.8	62.5	62.5	66.9	73.9
5-Feb	63.4	62.3	60.6	61.2	60.3	59.1	60.6	61.2	61.1	59.5	61.0	63.4	66.6	67.3	65.6	67.4	71.7	75.7	77.4	77.0	77.0	78.4	79.5	82.0	67.5	82.0
6-Feb	80.2	77.4	77.4	75.7	77.5	77.7	78.0	78.6	77.9	79.3	81.3	77.6	73.1	72.8	73.9	71.8	66.6	68.9	72.0	71.2	69.9	67.0	67.7	67.1	74.2	81.3
7-Feb	70.9	73.0	71.3	70.8	70.4	72.1	74.1	74.7	74.8	70.5	66.4	59.4	54.5	52.9	52.6	53.7	55.3	61.8	68.6	76.6	78.8	78.9	78.6	80.0	68.4	80.0
8-Feb	81.0	79.5	79.4	77.7	78.9	78.8	78.8	78.1	78.1	76.8	75.5	71.7	63.1	61.8	63.6	63.8	65.1	75.1	79.2	82.8	79.8	78.0	76.6	77.6	75.0	82.8
9-Feb	75.4	73.8	75.7	76.8	76.1	74.3	71.2	70.9	72.3	71.5	68.4	65.3	64.1	63.7	63.3	58.2	60.1	66.1	70.7	72.7	73.4	70.2	69.3	68.3	69.6	76.8
10-Feb	69.1	68.1	66.9	68.3	67.5	66.8	67.6	69.5	68.6	66.6	60.6	57.9	55.8	54.7	55.9	55.9	57.1	64.0	71.1	73.4	78.4	79.4	78.6	78.0	66.7	79.4
11-Feb	78.8	78.6	78.4	77.8	77.7	78.1	77.7	77.5	77.6	77.1	76.0	75.1	73.7	71.8	69.8	69.3	71.9	73.2	75.4	78.1	78.2	77.2	76.3	75.9	75.9	78.8
12-Feb	76.2	75.8	76.2	77.0	77.3	77.2	77.3	77.5	77.2	76.5	75.1	72.0	71.3	68.4	72.5	74.0	76.8	77.1	77.2	77.9	78.9	78.6	78.8	78.5	76.0	78.9
13-Feb	78.3	77.8	76.9	76.0	75.4	75.5	76.1	74.8	75.5	74.5	71.8	69.5	68.8	68.4	66.9	65.7	70.4	73.1	75.5	75.6	75.6	75.3	75.0	74.5	73.6	78.3
14-Feb	73.8	73.0	72.9	72.6	71.9	71.5	71.2	70.1	68.3	68.8	67.8	66.8	65.8	63.9	63.1	63.4	64.5	69.4	73.0	73.7	76.1	76.5	74.3	74.0	70.3	76.5
15-Feb	72.8	70.1	69.7	70.2	71.4	69.8	69.6	69.4	70.4	71.0	73.2	72.3	68.8	65.1	64.4	67.9	69.8	71.3	75.0	75.6	74.0	73.0	73.4	76.4	71.0	76.4
16-Feb	76.5	77.8	75.2	73.7	72.4	71.8	71.0	72.8	71.5	71.4	68.3	63.2	59.7	58.0	55.8	56.4	57.8	62.2	64.4	64.7	65.1	66.3	66.3	66.7	67.0	77.8
17-Feb	65.8	66.2	66.9	68.3	69.3	68.3	66.6	65.7	65.5	63.0	59.9	55.2	52.1	48.4	47.5	47.5	49.0	52.1	55.7	57.9	58.9	60.1	63.4	64.1	59.9	69.3
18-Feb	66.0	67.9	69.1	71.1	69.6	71.1	71.2	71.2	69.4	64.8	57.4	49.2	42.6	38.6	36.4	36.7	38.1	43.7	52.6	57.0	55.3	56.1	53.1	51.2	56.6	71.2
19-Feb	50.9	52.4	54.9	57.7	58.5	59.2	60.1	60.0	57.1	51.4	47.4	44.0	42.8	42.0	41.7	40.9	41.2	41.0	43.0	48.3	45.4	42.4	42.8	43.4	48.7	60.1
20-Feb	44.2	45.7	48.7	51.9	55.6	56.8	58.5	59.5	59.7	58.9	57.7	58.1	63.7	53.6	49.2	47.7	48.2	54.6	59.2	62.2	69.7	75.0	80.8	81.0	58.3	81.0
21-Feb	84.2	83.5	82.0	83.4	82.9	82.1	80.6	79.1	77.4	74.8	72.5	68.6	68.7	68.1	66.7	66.1	68.2	70.7	73.5	74.6	74.2	74.0	76.2	77.5	75.4	84.2
22-Feb	78.7	79.9	78.3	76.7	77.5	78.4	79.2	79.3	84.6	84.2	83.2	80.4	78.4	78.4	77.2	75.9	74.1	82.4	86.9	88.8	91.9	94.2	94.6	94.8	82.4	94.8
23-Feb	93.1	92.5	92.7	94.2	95.8	96.8	97.2	97.6	92.8	89.2	94.0	91.6	89.1	87.4	87.5	87.6	87.8	87.7	87.3	88.0	87.7	87.0	87.3	87.3	90.8	97.6
24-Feb	87.5	87.4	86.7	87.3	87.6	87.5	87.8	87.4	86.0	83.7	81.0	79.1	78.0	74.2	75.6	80.2	82.1	84.2	86.2	89.3	90.2	91.5	90.7	90.2	85.1	91.5
25-Feb	88.3	86.1	86.7	85.1	83.5	83.0	82.4	82.4	80.4	78.1	74.3	71.6	70.9	69.0	68.3	67.9	68.1	77.3	80.2	80.5	80.8	83.2	85.5	85.1	79.1	88.3
26-Feb	86.3	88.9	89.2	90.0	90.0	89.4	89.5	89.9	87.7	87.0	84.6	78.4	70.7	67.0	66.1	65.3	66.5	75.9	81.7	83.2	85.4	86.6	86.4	85.8	82.1	90.0
27-Feb	86.5	88.5	89.2	90.3	91.5	92.0	92.1	92.7	92.9	92.4	89.6	81.8	77.9	74.3	76.9	78.0	76.0	76.2	77.3	79.5	79.5	79.9	81.9	84.4	84.2	92.9
28-Feb	84.3	81.8	78.7	78.0	77.3	82.9	88.4	88.9	86.4	91.6	88.7	80.2	72.6	68.7	66.6	66.6	67.3	70.1	73.6	74.8	77.0	78.0	79.7	82.1	78.5	91.6
	75.5	75.2	75.1	75.4	75.4	75.5	75.9	75.9	75.3	74.0	72.1	68.9	66.5	64.1	63.7	63.8	65.2	69.4	72.4	74.0	74.5	74.7	75.0	75.4	Diurnal Average	
	93.1	92.5	92.7	94.2	95.8	96.8	97.2	97.6	92.9	92.4	94.0	91.6	89.1	87.4	87.5	87.6	87.8	87.7	87.3	89.3	91.9	94.2	94.6	94.8	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Buffalo Viewpoint - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Buffalo Viewpoint - February 2025

Maximum Speed: 22 km/h on Feb 27 14:00

Maximum Daily Speed Average: 17.0 km/h on Feb 1

Minimum Speed Value: 0 km/h on Feb 16 01:00

Minimum Daily Speed Average: 1.3 km/h on Feb 15

Maximum Diurnal Speed Average: 2.8 km/h at hour 14

Minimum Diurnal Speed Average: 0.2 km/h at hour 4

Monthly Average Velocity: 1.4 km/h 317.1 deg

Percentiles: P_1 = 1 P_{10} = 3 Q_1 = 5 Median = 7 Q_3 = 10 P_{90} = 14 P_{99} = 20

Hours in Service: 672

Hours of Data: 629

Hours of Missing Data: 43

Percent Operational Time: 93.6

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-Feb	N16	N17	N18	N16	N16	N17	N15	N14	N16	N18	N18	NNW17	NNW18	N20	N19	N17	NNW16	N17	NNW19	N18	N17	N18	N20	N18	N17.0	N20
2-Feb	N19	N18	N19	N19	N17	N15	N14	N12	N14	N16	N19	N17	N16	N14	N11	N8	N7	N6	N4	N5	NNW5	NNW5	N3	W2	N11.7	N19
3-Feb	SW4	SSW5	W4	SW5	WSW5	WSW2	WNW2	W3	SW3	WSW7	W10	WSW8	SW8	SW6	WSW8	WSW9	SW7	SSW7	WSW10	WSW14	WSW14	WSW10	W8	WSW5	WSW6.4	WSW14
4-Feb	W4	WSW4	SSW6	SSW5	SSW5	SE8	SE7	SE8	SSE7	SSE6	SSE7	SE7	S5	SW10	SW11	SW11	SW11	SSW9	SSE6	SSW7	SSW10	SW10	SW12	SW11	SSW6.4	SW12
5-Feb	SSW12	SW12	SW13	SW12	SW10	SW11	SW12	SW9	SW11	SW9	SW10	SW11	SW12	SW12	SW10	SW11	WSW10	WSW9	WSW10	WSW10	W10	W9	W9	W10	SW10.3	SW13
6-Feb	W11	W12	W15	WSW13	W10	W16	W10	WNW10	WNW12	WNW10	N21	N18	N20	N20	N16	N12	NNW15	NW12	NW9	WNW8	NW8	W6	W8	WSW7	NW9.3	NNE21
7-Feb	W7	W9	W7	SW8	SW8	W9	WSW10	W15	W16	W13	W13	W12	WSW9	WSW9	WSW10	WSW11	WSW9	SW6	SW7	SW4	WNW7	W8	WSW6	SW5	WSW8.7	W16
8-Feb	SW2	W1	SSW5	S7	SE8	SSE7	SSE9	SSE7	SSE7	SSE5	SE4	ESE4	SE3	NE3	NNE5	NNE5	NNW2	N5	N5	N9	N17	N17	N18	N15	NE2.1	N18
9-Feb	N20	N15	N11	N8	N7	N7	NNW4	NW3	NE3	NE6	NNE6	NNE8	N9	N8	WNW6	W5	NW2	NW3	NW4	WNW4	W5	W8	WSW7	WSW5	NNW5.2	N20
10-Feb	SSW6	SW7	SSW7	SSE4	SW6	SSW7	SE8	SE7	SE7	S6	SW10	SW11	SW10	SW11	SW8	SW8	W7	N3	N8	NNE8	N7	NNW6	NNW7	N10	SW2.7	SW11
11-Feb	N8	N10	N10	N10	N10	NNW9	NNW7	NNW6	N8	N7	NE7	NNE6	NNE6	NNE5	N3	NNE3	SE2	SSE3	SSE3	N1	NE5	E1	SSE4	SSE2	N4.3	N10
12-Feb	N1	SE3	SE3	SE4	SSE4	S2	SSE4	SSE4	SSE4	SE3	ESE4	WSW1	NE3	SSE2	SE1	N4	N6	N8	N9	N7	NNW6	N7	N7	N8	NE1.6	NNE9
13-Feb	N7	N9	N10	N7	N8	N4	NNW3	NNW5	NNW4	NNW5	NW6	NW7	WNW7	NW8	NW7	NNW7	NNW9	N7	N8	N7	N9	N8	N9	N5	NNW6.6	N10
14-Feb	N6	N6	NNW6	NNW4	NNW5	NW5	NW4	NW2	SW2	SSE1	NNE3	N3	N4	WNW5	W5	WNW3	ESE4	ESE5	SSE4	ESE3	NNW4	NW5	W4	W3	NNW2.1	NNW6
15-Feb	SW1	SSE5	SSE8	SSE8	SSW3	SSW4	SSE5	S5	SSW4	SW5	WSW5	W9	WNW10	WNW9	WNW8	WNW7	WNW5	NE2	NE3	NE4	NNE7	NE6	NE3	N3	W1.3	WNW10
16-Feb	SW0	NNW2	SSW1	SE6	SSE5	SSE6	SSE6	S6	SSE7	SSE7	SSE8	SSE7	SSE8	SE9	SE8	ESE10	ESE10	ESE9	SE9	SE10	SE11	SE10	SE9	SSE8	SE6.8	SE11
17-Feb	SSE9	S8	SSE7	S6	SSE6	SE8	SE9	SE9	SE8	SE10	SSE10	SE11	SSE10	SSE10	ESE13	ESE14	ESE10	ESE7	SE7	SE7	SE8	SE8	SSE8	SSE6	SE8.3	ESE14
18-Feb	SSE6	S4	S6	SSE5	SSE6	SSE6	SSE6	SSE7	SSE7	SSE8	SSE8	SSE8	SSE11	S9	S9	S9	S8	SE4	SE5	SSE6	SSE6	S7	SSE8	SSE8	SSE6.8	SSE11
19-Feb	SSE9	SSE7	SSE6	SSE5	SSE5	SSE6	SSE7	SSE5	SE6	SE9	SSE11	SSE11	SSE11	SSE12	SSE13	SSE13	SSE10	SE8	SE8	SE8	SSE11	SSE12	SSE12	SSE11	SSE9.0	SSE13
20-Feb	SSE9	SSE10	SSE9	SSE11	SSE11	S12	S11	S11	S11	S11	S10	S8	SSW8	SW9	SW11	SW9	SSE5	SE10	SE8	SE5	S4	NNE1	N6	N1	S7.0	S12
21-Feb	SSE7	SE6	SSE3	N1	NW1	NNE4	NNE7	NNW2	N4	NNW5	NW7	N9	NNW9	N9	NNW9	N10	N11	NNW10	N11	N12	N11	N9	N7	NNW8	N5.7	N12
22-Feb	N9	NNW7	NNW5	N6	N5	NNW4	N5	N4	NW3	N1	WNW3	W4	ESE1	S3	N3	NW5	W1	SW3	ESE2	SE4	SE5	S4	ESE2	SE4	NNW1.5	N9
23-Feb	SE2	SE6	SE7	ESE6	SSE6	SE4	SSE5	SW5	W9	NW10	N20	N16	N19	N17	N15	N13	N13	NNE10	UO	UO	UO	UO	UO	UO	N5.4	N20
24-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	E3	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	----	E3
25-Feb	UO	UO	UO	UO	UO	UO	NNW8	NNW9	N10	N9	N9	N9	N7	NNW5	NW5	NNW4	NW6	NNW6	N7	UO	UO	NNW6	NNW7	NW5	----	N10
26-Feb	UO	S4	SSE5	UO	UO	UO	UO	UO	N8	N8	N9	N8	N6	NW5	NW6	NW8	NNW8	N10	NNW10	N7	NNW7	N8	N8	N8	NNW6.0	NNW10
27-Feb	NNW5	NW6	NNW4	NNW3	NE1	NW3	NNW1	N1	SSW3	W3	SW5	W7	NW20	NW22	N15	NNE17	NNE14	NNE8	NNE10	NNE10	NNE10	NNE9	NNE6	NE4	N5.7	NW22
28-Feb	ENE5	ENE4	NE4	ENE3	SE2	SSW3	ENE4	NE3	NNW2	SSE2	SSE5	SE6	SE8	SSE7	SE8	SE8	SE7	SSE7	SE7	SSE7	SSE6	SSE6	SSE7	SSE7	SE4.2	SE8
	NW1.6	NW1.2	WNW0.9	SSW0.2	W0.9	WSW1.2	SW0.4	WSW0.9	W1.2	WNW1.0	NNW1.7	NW2.1	NW2.6	NW2.8	NW2.6	NW2.2	NNW1.8	N1.5	N1.7	N1.5	NNW2.2	NNW2.1	NW1.9	NW1.5	Diurnal Average	
	N20	N18	N19	N19	N17	N17	N15	W15	N16	N18	NNE21	N18	NW20	NW22	N19	N17	NNW16	N17	NNW19	N18	N17	N18	N20	N18	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 Feb 27 13:00

Minimum Value: 1 km/h on Feb 11 18:00

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

Hours in Service:	672
Hours of Data:	629
Hours of Missing Data:	43
Hours of Calibration:	0
Percent Operational Time:	93.6

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

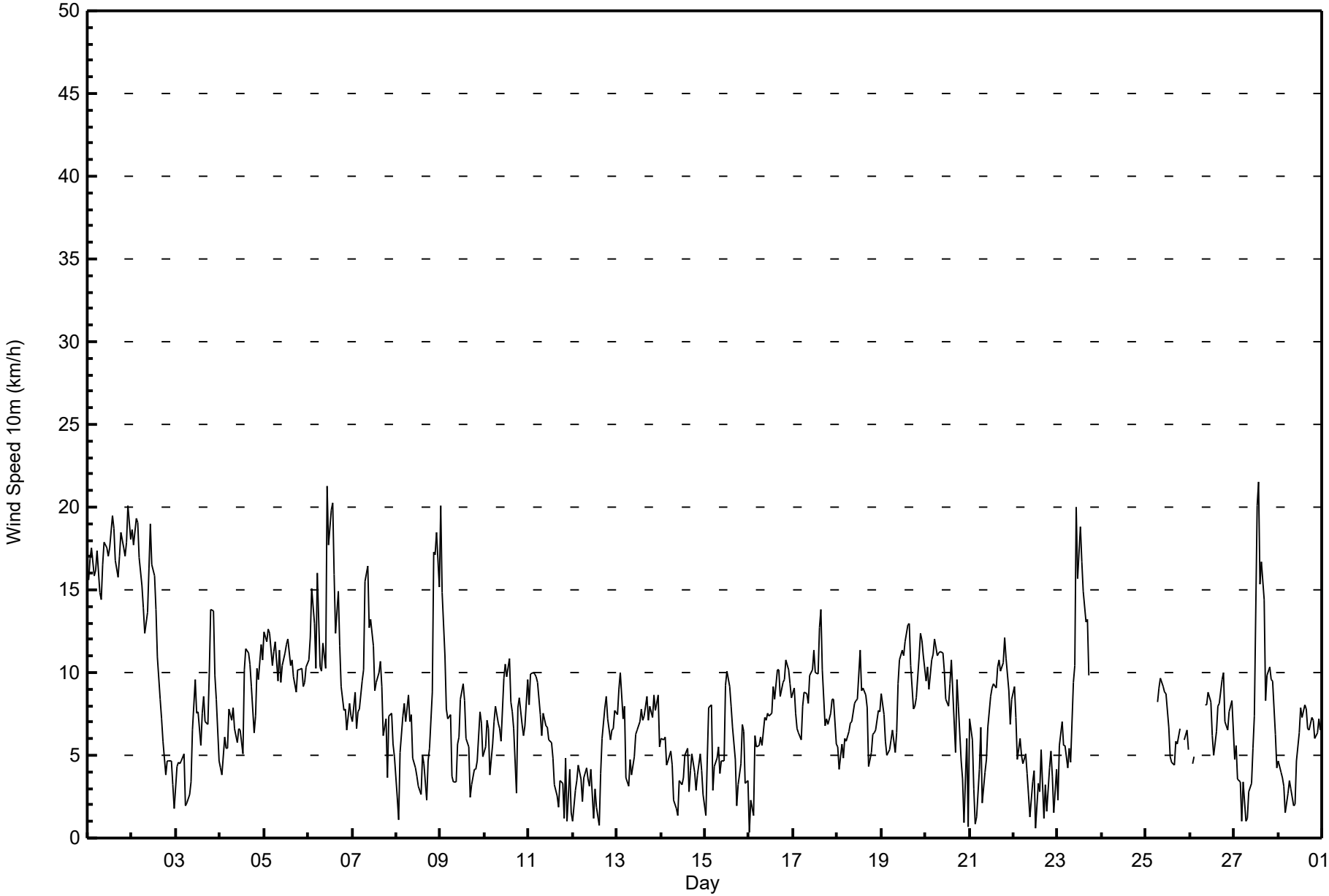
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Buffalo Viewpoint - February 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	195	31.00	31.00
6 - 11	341	54.21	85.21
12 - 19	84	13.35	98.57
20 - 28	9	1.43	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 629

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Buffalo Viewpoint - February 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	7	11	5	2	8	17	26	8	10	13	7	13	7	14	24	195
6 - 11	65	16	3	0	0	6	42	66	16	9	33	20	20	10	12	23	341
12 - 19	48	2	0	0	0	2	0	5	1	1	7	3	8	1	1	5	84
20 - 28	6	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	9
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	26	14	5	2	16	59	97	25	20	53	30	41	18	29	52	629

Total Number of Valid Hours: 629

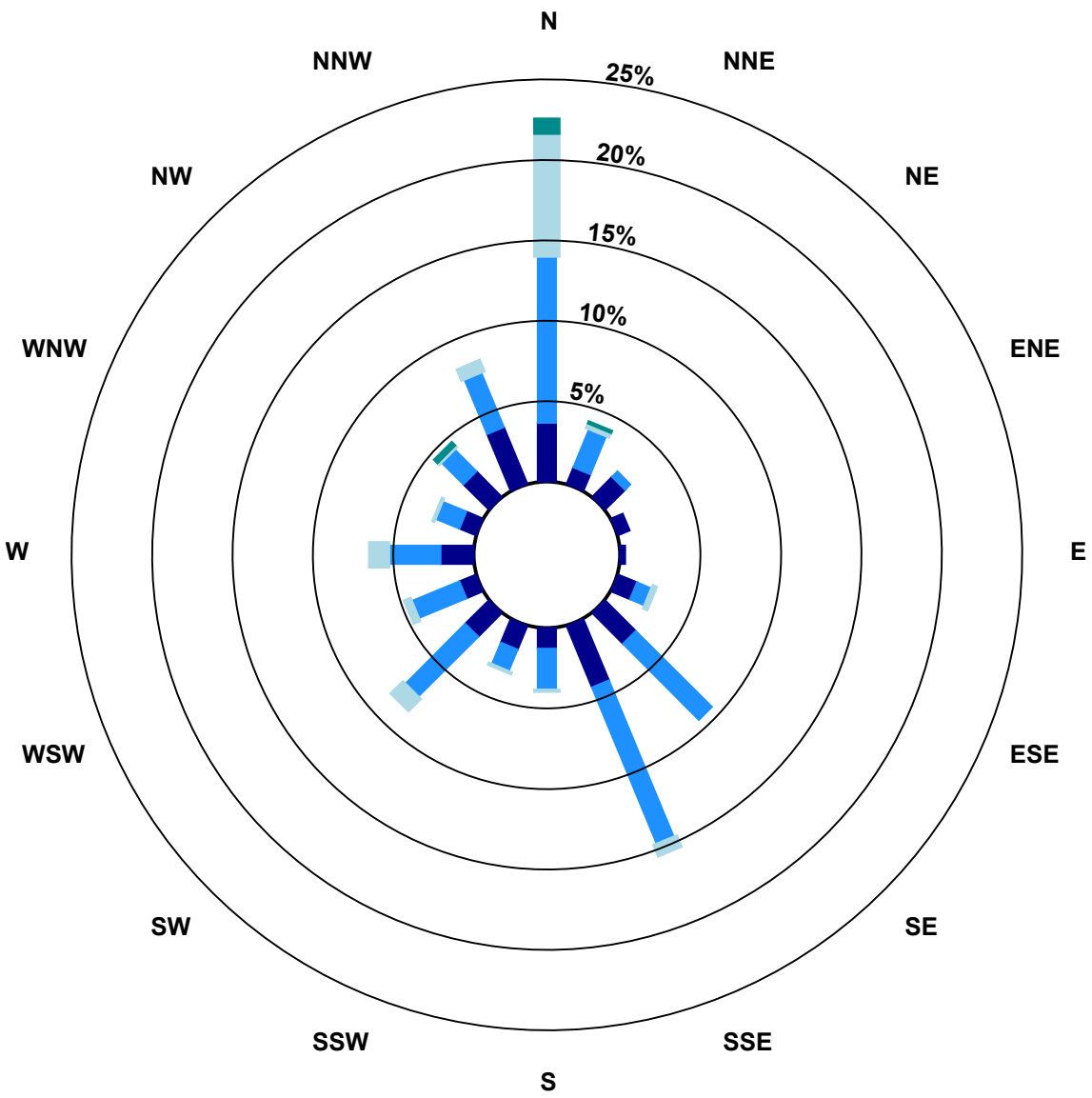
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Wind Speed 10m (WS10) - km/h

Buffalo Viewpoint



Classes (km/h)

0 - 5

6 - 11

12 - 19

20 - 28

29 - 38

> 38

Total Number of Valid Hours: 629

Direction of Maximum Speed: 317 deg on Feb 27 14:00
Direction of Maximum Daily Speed Average: 356.1 deg on Feb 1

Direction of Minimum Speed: 227 deg on Feb 16 01:00
Direction of Minimum Daily Speed Average: 1.3 deg on Feb 15

Monthly Average Direction: 317.1 deg

Hours in Service:	672
Hours of Data:	629
Hours of Missing Data:	43
Percent Operational Time:	93.6

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-Feb	7	7	10	5	2	2	355	352	352	354	352	347	348	350	351	351	348	349	348	352	2	3	3	360	356.1
2-Feb	353	357	358	358	358	357	5	7	5	6	3	358	358	352	350	358	359	1	353	0	348	345	5	277	358.4
3-Feb	228	212	268	223	250	257	289	276	225	242	261	250	227	219	245	244	218	211	241	254	256	255	273	250	245.0
4-Feb	271	247	198	195	204	142	136	144	158	151	152	140	177	233	230	218	215	200	166	197	213	222	230	232	198.6
5-Feb	213	216	223	217	220	230	232	228	226	232	230	233	235	231	234	233	244	238	258	251	259	263	261	277	235.6
6-Feb	265	260	270	252	275	265	277	297	282	293	11	5	360	2	359	350	329	319	311	299	322	273	272	256	311.3
7-Feb	275	269	259	232	233	269	255	270	266	263	266	264	251	255	244	257	251	234	227	232	299	266	247	227	257.4
8-Feb	227	277	204	172	145	149	160	161	163	152	140	121	125	39	29	23	348	3	4	355	5	6	3	359	38.2
9-Feb	3	5	1	1	355	349	347	319	36	47	25	17	357	350	303	278	324	316	318	285	261	279	252	239	342.7
10-Feb	205	226	201	151	228	210	131	140	139	172	228	236	232	227	225	227	260	349	10	14	353	345	346	359	231.0
11-Feb	350	350	352	1	352	348	341	339	360	11	35	29	28	18	5	23	129	158	156	9	36	93	161	150	6.4
12-Feb	9	146	142	133	157	172	151	148	154	133	111	243	56	168	138	349	5	4	11	3	345	360	352	0	35.2
13-Feb	352	2	360	353	352	352	338	331	341	348	313	312	303	306	318	344	344	351	357	352	353	351	354	352	342.9
14-Feb	351	357	344	344	331	322	323	320	218	153	12	351	4	292	272	300	114	111	157	117	343	307	267	268	330.1
15-Feb	214	155	158	151	212	212	162	172	213	229	245	281	285	300	301	285	289	41	54	42	28	35	52	1	262.0
16-Feb	227	330	202	134	158	158	166	177	151	165	148	153	148	142	142	116	120	122	133	143	141	139	143	159	143.8
17-Feb	168	171	166	169	153	143	142	138	136	134	148	145	149	148	120	117	116	117	126	134	130	143	160	160	141.3
18-Feb	152	173	180	149	166	158	159	162	163	162	154	148	151	172	181	182	178	146	138	153	165	169	164	159	162.5
19-Feb	155	152	154	158	162	147	149	151	144	137	148	166	165	160	159	154	149	145	134	130	150	150	155	156	151.9
20-Feb	163	167	168	162	167	179	178	178	180	190	188	186	204	218	227	225	158	129	135	131	191	27	6	7	178.2
21-Feb	157	125	159	351	318	21	13	329	349	329	324	358	330	356	346	351	352	348	359	359	351	355	352	343	353.1
22-Feb	350	346	343	351	357	344	355	360	312	5	287	272	108	184	356	322	272	215	103	141	140	179	119	140	342.2
23-Feb	132	144	131	122	153	146	167	215	271	309	358	353	359	2	358	355	357	16	UO	UO	UO	UO	UO	UO	359.3
24-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	94	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--
25-Feb	UO	UO	UO	UO	UO	UO	346	346	352	353	356	350	355	346	325	327	305	341	3	UO	UO	344	333	304	--
26-Feb	UO	171	163	UO	UO	UO	UO	UO	356	352	350	1	354	304	305	304	347	351	346	349	343	351	4	2	345.6
27-Feb	339	310	334	348	48	309	331	1	205	264	216	263	308	317	355	19	18	22	21	29	24	24	24	50	350.7
28-Feb	58	63	46	62	132	194	66	44	346	156	152	133	141	152	127	134	141	152	135	149	157	158	163	155	134.0
	323.5	309.7	286.4	207.6	258.8	257.7	218.4	248.6	263.2	289.8	333.7	319.8	319.8	306.2	306.6	314.0	330.2	5.0	10.3	358.0	342.2	332.7	324.1	313.3	
	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 - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 105 deg on Feb 27 07:00

Minimum Value: 6 deg on Feb 8 07:00

Percentiles: P_1 = 9 P_{10} = 14 Q_1 = 18 Median = 21 Q_3 = 28 P_{90} = 42 P_{99} = 89

Hours in Service:	672
Hours of Data:	629
Hours of Missing Data:	43
Hours of Calibration:	0
Percent Operational Time:	93.6

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-Feb	18	19	20	20	20	19	20	21	21	21	19	21	20	20	20	21	18	19	21	20	22	22	21	22	22
2-Feb	21	23	22	21	21	21	19	17	19	20	19	20	21	21	20	19	18	17	22	19	19	18	12	62	62
3-Feb	23	15	15	17	22	75	15	24	31	16	13	24	15	29	22	22	15	14	18	14	14	25	16	51	75
4-Feb	25	43	22	23	20	19	10	11	21	18	19	20	47	22	19	16	14	16	18	32	16	18	18	20	47
5-Feb	17	19	18	18	16	16	17	21	21	20	19	18	19	19	20	19	19	22	18	20	19	12	16	19	22
6-Feb	19	18	16	21	27	13	21	23	20	44	22	22	21	22	21	21	16	15	13	19	17	18	15	19	44
7-Feb	19	14	15	18	18	19	18	13	11	13	12	12	22	21	21	14	14	13	14	41	23	8	14	18	41
8-Feb	57	69	22	18	12	19	6	12	8	12	21	40	64	63	13	11	32	11	18	18	21	21	21	20	69
9-Feb	21	20	20	16	15	18	43	30	34	20	19	18	18	22	33	19	35	21	24	12	15	11	18	37	43
10-Feb	40	25	35	59	34	34	25	27	28	49	23	22	20	19	21	21	35	43	16	18	18	17	19	14	59
11-Feb	13	14	15	12	13	15	17	20	17	20	15	17	21	19	30	35	46	8	41	26	12	74	12	72	74
12-Feb	44	48	19	12	36	49	23	25	32	35	20	83	60	79	91	20	20	16	14	14	12	10	11	13	91
13-Feb	12	15	16	13	13	20	40	11	17	22	19	20	21	21	23	20	19	13	10	12	12	14	14	16	40
14-Feb	14	12	9	9	12	11	7	14	50	73	31	32	42	24	22	55	23	21	24	22	24	14	28	57	73
15-Feb	78	27	14	19	52	24	21	17	29	22	32	19	20	21	22	22	22	62	67	15	19	19	29	23	78
16-Feb	81	37	67	7	14	10	14	20	17	21	27	31	34	31	32	20	21	22	25	27	25	25	28	27	81
17-Feb	27	26	30	25	28	27	28	26	30	29	32	32	31	35	26	21	19	22	24	25	28	30	25	27	35
18-Feb	23	19	15	28	14	16	19	17	24	29	31	32	30	38	31	26	25	21	19	24	28	25	27	25	38
19-Feb	26	29	28	27	27	28	27	27	28	28	34	32	33	32	30	28	30	29	29	23	26	27	29	32	34
20-Feb	29	26	28	27	28	25	27	26	25	23	25	27	24	24	19	18	35	12	9	46	39	90	15	81	90
21-Feb	13	27	62	68	54	36	20	29	25	21	26	20	24	18	21	20	18	21	19	17	21	19	17	16	68
22-Feb	12	16	21	17	20	19	18	31	26	33	48	31	95	59	69	22	63	41	81	16	17	33	62	32	95
23-Feb	88	41	24	24	16	39	21	42	21	46	20	23	24	23	24	21	21	23	UO	UO	UO	UO	UO	UO	88
24-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	61	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	61
25-Feb	UO	UO	UO	UO	UO	UO	24	22	21	23	20	21	22	33	36	43	31	22	16	UO	UO	18	15	24	43
26-Feb	UO	23	19	UO	UO	UO	UO	UO	21	21	19	23	27	29	23	23	21	15	17	18	15	14	14	17	29
27-Feb	20	23	63	44	90	82	105	99	97	66	65	32	22	20	30	20	19	25	22	24	22	21	26	21	105
28-Feb	19	20	20	30	58	41	22	28	34	67	42	37	40	41	32	27	31	27	25	25	22	22	22	21	67
	88	69	67	68	90	82	105	99	97	73	65	83	95	79	91	55	63	62	81	46	39	90	62	81	
	Diurnal Maximum																								

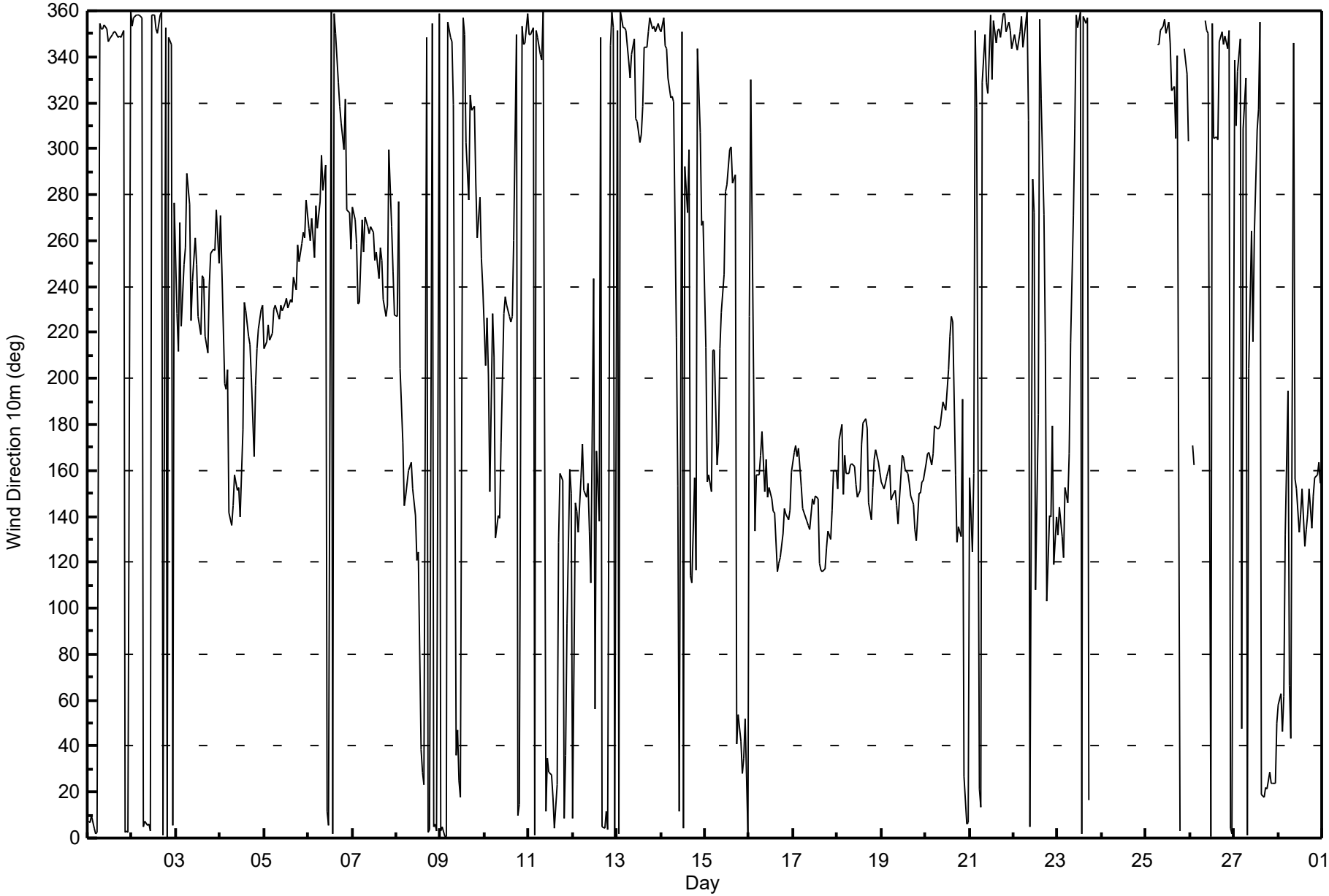
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Buffalo Viewpoint - February 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS05
MANNIX
FEBRUARY 2025

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

March 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MANNIX (AMS05)
FEBRUARY 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	638	31	34	99.55	52.5	0	20.1	0
H2S (ppb) Average	637	32	35	99.55	10	0	1.8	0
THC (ppm) Average	463	24	209	72.47	4.3	-	2.5	-
NMHC(ppm) Average	463	24	209	72.47	0.413	-	0.08	-
CH4(ppm) Average	463	24	209	72.47	4.2	-	2.5	-
Temperature 2 m (C) Average	672	0	0	100	2.8	-	-3.8	-
Temperature 20 m (C) Average	672	0	0	100	2.6	-	-3.8	-
Temperature 45 m (C) Average	672	0	0	100	2.6	-	-3.5	-
Temperature 75 m (C) Average	672	0	0	100	4.2	-	-2.9	-
Temperature 90 m (C) Average	672	0	0	100	4	-	-3.8	-
Relative Humidity 2 m (%) Average	672	0	0	100	100	-	91	-
Relative Humidity 20 m (%) Average	672	0	0	100	98	-	88	-
Relative Humidity 45 m (%) Average	672	0	0	100	96	-	86	-
Relative Humidity 75 m (%) Average	672	0	0	100	96	-	88	-
Relative Humidity 90 m (%) Average	672	0	0	100	97	-	89	-
Wind Speed 20 m (km/h) Average	671	0	1	99.85	27	-	20	-
Wind Speed 45 m (km/h) Average	671	0	1	99.85	35	-	26	-
Wind Speed 75 m (km/h) Average	668	0	4	99.4	39	-	30	-
Wind Speed 90 m (km/h) Average	672	0	0	100	41	-	31	-
Wind Direction 20 m (deg) Average	671	0	1	99.85	-	-	-	-
Wind Direction 45 m (deg) Average	671	0	1	99.85	-	-	-	-
Wind Direction 75 m (deg) Average	668	0	4	99.4	-	-	-	-
Wind Direction 90 m (deg) Average	672	0	0	100	-	-	-	-
Vertical Wind Speed 20 m (km/h) Average	671	0	1	99.85	1.2	-	0.9	-
Vertical Wind Speed 45 m (km/h) Average	671	0	1	99.85	2	-	1.3	-
Vertical Wind Speed 75 m (km/h) Average	668	0	4	99.4	1.2	-	0.3	-
Vertical Wind Speed 90 m (km/h) Average	672	0	0	100	2	-	0.6	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MANNIX (AMS05)
FEBRUARY 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	638	1.81	5.3	-	0	0.1	0.2	0.5	1.2	3	52.5
H2S (ppb) Average	637	0.51	0.7	-	0	0.1	0.2	0.3	0.6	1	9.7
THC (ppm) Average	463	2.2	0.3	-	1.9	2	2	2.1	2.3	2.6	4.3
NMHC(ppm) Average	463	0.025	0.045	-	0	0	0	0	0	0.1	0.413
CH4(ppm) Average	463	2.18	0.3	-	1.9	2	2	2.1	2.2	2.5	4.2
Temperature 2 m (C) Average	672	-17.93	8.5	-	-34.3	-28.5	-24.1	-19.6	-10.5	-5.7	2.8
Temperature 20 m (C) Average	672	-17.68	8.1	-	-32.3	-27.1	-23.9	-19.4	-10.7	-6.3	2.6
Temperature 45 m (C) Average	672	-17.98	8.2	-	-32.3	-27.3	-24.6	-19.9	-11.2	-6.7	2.6
Temperature 75 m (C) Average	672	-17.25	8	-	-30.9	-26.2	-24	-19.4	-10.7	-5.8	4.2
Temperature 90 m (C) Average	672	-18.44	8.3	-	-32.3	-27.7	-25.4	-20.7	-11.8	-6.6	4
Relative Humidity 2 m (%) Average	672	74.8	11	-	37	60	72	76	80	87	100
Relative Humidity 20 m (%) Average	672	71.2	12	-	33	56	66	73	78	85	98
Relative Humidity 45 m (%) Average	672	70.8	12	-	32	55	65	72	78	86	96
Relative Humidity 75 m (%) Average	672	71.2	12	-	32	56	64	73	78	87	96
Relative Humidity 90 m (%) Average	672	71.4	13	-	31	55	64	73	79	88	97
Wind Speed 20 m (km/h) Average	671	9.9	6	-	0	3	6	9	13	18	27
Wind Speed 45 m (km/h) Average	671	13.2	7	-	1	4	8	12	18	23	35
Wind Speed 75 m (km/h) Average	668	15.3	8	-	0	5	9	14	21	27	39
Wind Speed 90 m (km/h) Average	672	16.4	9	-	0	5	9	16	22	28	41
Wind Direction 20 m (deg) Average	671	-	-	-	-	-	-	-	-	-	-
Wind Direction 45 m (deg) Average	671	-	-	-	-	-	-	-	-	-	-
Wind Direction 75 m (deg) Average	668	-	-	-	-	-	-	-	-	-	-
Wind Direction 90 m (deg) Average	672	-	-	-	-	-	-	-	-	-	-
Vertical Wind Speed 20 m (km/h) Average	671	0.05	0.4	-	-1.2	-0.5	-0.2	0	0.3	0.7	1.2
Vertical Wind Speed 45 m (km/h) Average	671	0.09	0.7	-	-1.9	-0.9	-0.4	0	0.6	1.2	2
Vertical Wind Speed 75 m (km/h) Average	668	-0.08	0.4	-	-1.5	-0.6	-0.3	0	0.2	0.4	1.2
Vertical Wind Speed 90 m (km/h) Average	672	0.24	0.4	-	-1.4	-0.1	0	0.2	0.4	0.7	2

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MANNIX (AMS05)
FEBRUARY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL GASEOUS ANALYZERS	01 Feb 2025 10:00	01 Feb 2025 12:00	1-2	Maintenance - verify daily QA response
ALL GASEOUS ANALYZERS	12 Feb 2025 15:00	12 Feb 2025 15:00	1	Maintenance - sample manifold cleaned
THC/NMHC/CH4	05 Feb 2025 03:00	12 Feb 2025 11:00	177	Unstable Operation - AMD noncompliance
THC/NMHC/CH4	13 Feb 2025 11:00	13 Feb 2025 16:00	6	Maintenance - replaced internal pump
Wind Speed, Wind Direction, Vertical Wind Speed, 20m	27 Feb 2025 10:00	27 Feb 2025 10:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction, Vertical Wind Speed, 45m	27 Feb 2025 10:00	27 Feb 2025 10:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction, Vertical Wind Speed, 75m	27 Feb 2025 09:00	27 Feb 2025 12:00	4	Flat line in sensor output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Mannix - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 52.5 ppb on Feb 1 06:00 Maximum Daily Average: 20.1 ppb on Feb 1

Minimum Value: 0.0 ppb on Feb 3 22:00 Minimum Daily Average: 0.1 ppb on Feb 4
Maximum Diurnal Average: 3.7 ppb at hour 3 Minimum Diurnal Average: 0.8 ppb at hour 19
Monthly Average: 1.81 ppb Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.2 Median = 0.5 Q_3 = 1.2 P_{90} = 3.0 P_{99} = 33.2

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	31
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-Feb	17.0	31.7	23.9	31.5	37.9	52.5	43.8	34.1	49.4	36.8	M	M	0.9	Z	1.6	15.4	1.0	0.7	2.0	4.2	11.8	6.4	15.9	3.9	20.1	52.5
2-Feb	1.8	2.5	26.7	11.2	14.4	Z	7.3	6.1	7.6	6.3	9.4	6.0	2.1	2.0	1.7	2.8	3.4	2.7	0.6	0.8	0.8	0.9	2.0	1.9	5.3	26.7
3-Feb	0.3	0.4	0.3	0.2	0.1	Z	0.3	0.3	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.4
4-Feb	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	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	0.1	0.2
5-Feb	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.2	0.2	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.3
6-Feb	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	4.2	8.9	3.3	3.2	1.3	1.0	0.3	0.1	0.4	0.3	0.6	0.2	0.2	1.1	8.9
7-Feb	0.2	0.2	Z	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
8-Feb	0.0	0.1	0.1	Z	0.1	0.2	0.2	0.3	0.5	0.2	0.0	0.1	0.1	0.1	0.5	2.6	3.6	1.6	0.7	0.3	0.1	0.3	2.3	2.4	0.7	3.6
9-Feb	0.5	2.1	3.0	1.3	Z	0.4	0.7	0.3	0.2	0.2	0.2	0.1	0.8	0.7	0.2	3.5	2.1	1.5	1.4	2.2	0.9	0.4	0.2	0.1	1.0	3.5
10-Feb	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.3	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.2	0.2	0.3	0.3	1.2	0.9	0.6	0.7	0.3	1.2
11-Feb	Z	1.0	0.9	1.3	2.0	0.6	0.3	0.2	0.2	0.6	0.3	0.8	2.0	2.8	5.9	3.2	2.5	2.5	2.8	2.0	1.9	1.5	1.1	1.2	1.6	5.9
12-Feb	2.0	Z	2.4	2.2	1.9	1.3	1.0	1.3	1.2	1.0	C	C	C	C	M	0.3	0.4	1.1	1.0	1.4	1.5	0.8	0.6	1.5	1.3	2.4
13-Feb	17.8	41.0	13.0	10.7	5.4	2.6	Z	0.6	0.8	0.8	1.1	1.0	0.8	0.6	0.4	0.5	0.3	2.6	0.4	0.2	0.3	0.1	0.2	0.5	4.4	41.0
14-Feb	0.3	0.2	0.2	Z	0.6	0.4	0.5	0.7	0.8	0.5	0.4	0.4	1.0	2.0	2.7	1.1	4.3	1.9	2.1	5.5	4.5	3.6	2.5	3.2	1.7	5.5
15-Feb	3.4	2.8	2.3	1.7	Z	0.9	0.8	0.8	0.9	1.2	0.7	0.7	0.6	0.9	4.3	1.5	0.5	1.5	1.6	1.4	0.8	0.3	0.1	0.1	1.3	4.3
16-Feb	0.1	0.5	0.4	0.3	0.4	Z	0.1	0.2	0.2	0.2	0.3	0.5	0.5	0.8	0.8	0.8	0.7	0.6	0.4	0.2	0.2	0.2	0.1	0.1	0.4	0.8
17-Feb	Z	0.2	0.2	0.3	0.4	0.4	0.4	0.5	0.6	0.6	0.7	0.7	0.7	0.7	0.6	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.4	0.7
18-Feb	0.1	Z	0.2	0.1	0.1	0.2	0.2	0.1	0.3	0.4	0.4	0.5	0.6	0.5	0.4	0.4	0.5	0.7	0.7	0.6	0.5	0.6	0.7	0.6	0.4	0.7
19-Feb	0.6	0.8	Z	0.8	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.8	0.5	0.2	0.2	0.2	0.2	0.3	0.4	0.6	0.9
20-Feb	0.4	0.4	0.5	Z	0.6	0.7	0.6	0.5	0.6	0.5	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.7	0.6	0.6	0.6	0.6	0.4	0.6	0.8
21-Feb	0.2	0.3	0.3	0.3	Z	0.4	1.1	1.1	1.1	3.2	2.2	1.8	1.5	1.8	2.0	1.8	1.8	1.2	1.0	2.1	3.4	1.8	1.0	1.6	1.4	3.4
22-Feb	1.8	2.5	2.6	2.0	1.6	Z	1.2	2.0	0.9	0.8	1.0	1.0	1.0	1.0	1.1	1.3	1.0	0.5	0.4	0.2	0.2	0.1	0.2	0.2	1.1	2.6
23-Feb	Z	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.6	3.3	2.7	3.8	7.3	7.8	2.1	1.0	1.9	0.5	0.4	0.2	0.1	0.1	1.4	7.8
24-Feb	0.1	Z	0.1	0.1	0.3	0.9	0.5	0.5	0.6	1.0	0.7	0.6	0.5	0.8	0.6	0.3	0.2	0.1	0.2	0.3	0.3	0.5	0.8	1.9	0.5	1.9
25-Feb	3.6	1.8	19.0	Z	11.6	15.8	3.7	2.7	2.4	4.9	5.1	1.8	1.2	1.2	0.8	2.9	2.3	2.0	0.9	0.5	0.4	0.4	0.5	0.2	3.7	19.0
26-Feb	0.1	0.1	0.2	Z	0.7	0.6	0.6	0.5	0.7	1.9	1.3	0.6	0.9	4.5	6.4	4.5	0.9	0.8	0.7	1.3	1.6	1.6	1.6	2.5	1.5	6.4
27-Feb	1.5	0.4	0.3	0.4	Z	0.4	0.6	0.5	0.3	0.2	0.4	0.5	0.6	6.9	1.0	0.9	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.7	6.9
28-Feb	0.2	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.2	0.3	0.2	0.2	0.3	0.4	0.5	0.3	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.5
	2.2	3.7	3.7	2.8	3.3	3.6	2.4	2.0	2.5	2.3	1.1	1.0	1.1	1.4	1.7	2.0	1.1	0.9	0.8	0.9	1.2	0.8	1.1	0.9	Diurnal Average	
	17.8	41.0	26.7	31.5	37.9	52.5	43.8	34.1	49.4	36.8	9.4	6.0	8.9	6.9	7.3	15.4	4.3	2.7	2.8	5.5	11.8	6.4	15.9	3.9	Diurnal Maximum	

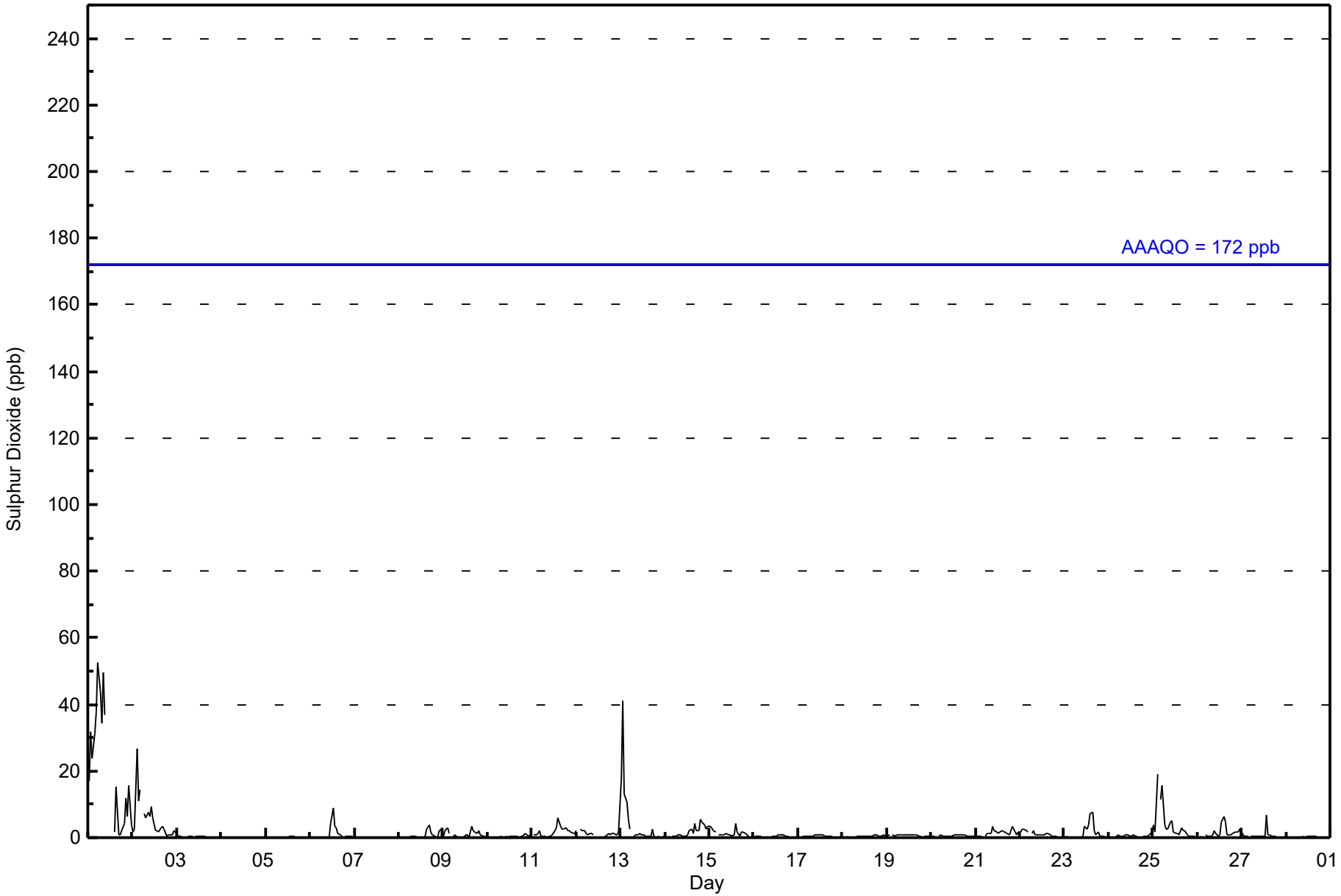
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Mannix - February 2025



Sulphur Dioxide (SO_2) - ppb

Mannix - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	615	96.39	96.40
11 - 20	12	1.88	98.28
21 - 60	11	1.72	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: 638

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Mannix - February 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	71	51	11	1	7	9	84	114	32	20	30	46	22	28	38	50	614
11 - 20	7	4	0	0	0	0	0	0	0	0	0	0	0	0	0	1	12
21 - 60	7	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
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	85	59	11	1	7	9	84	114	32	20	30	46	22	28	38	51	637

Total Number of Valid Hours: 637

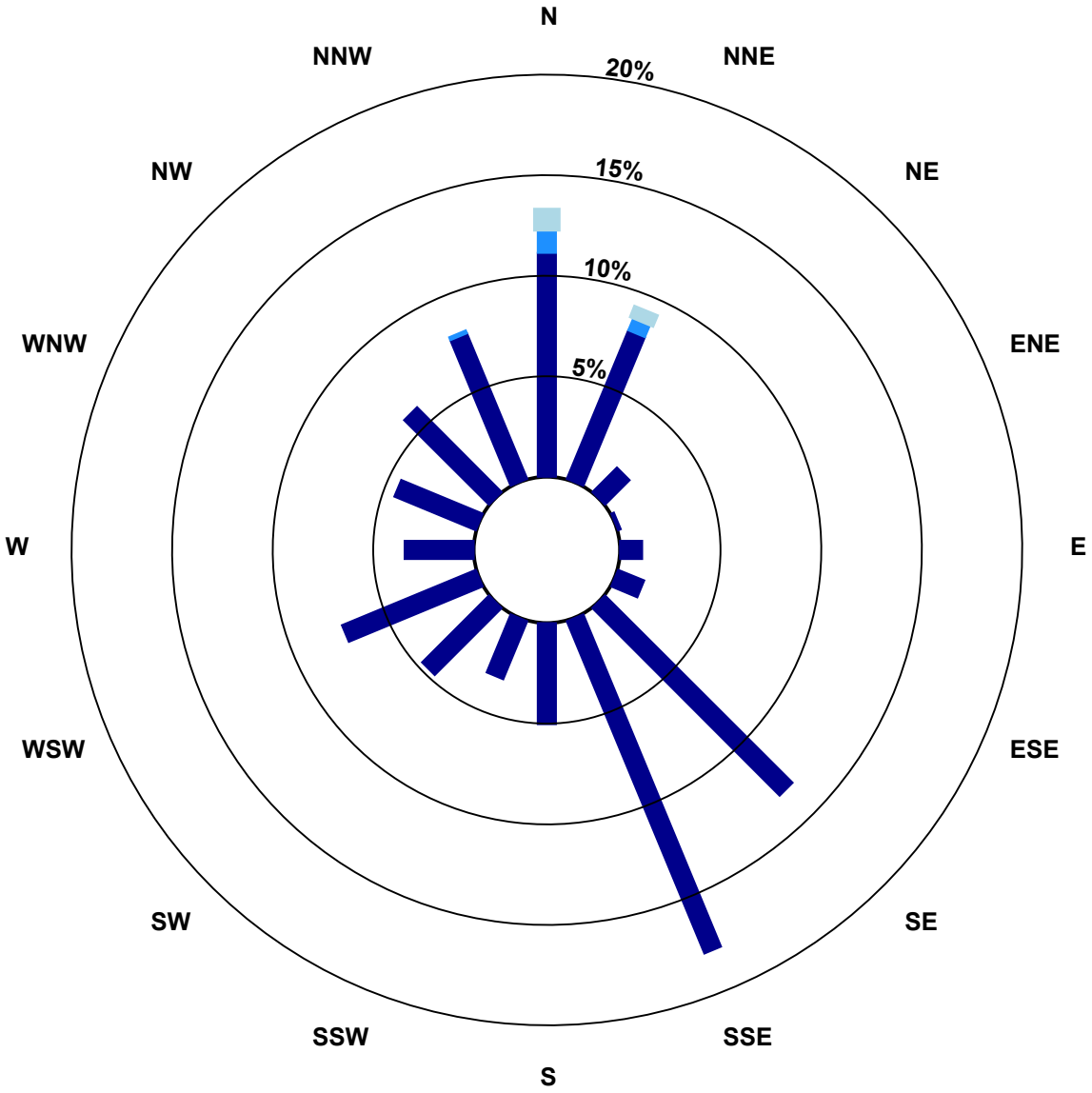
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Sulphur Dioxide (SO_2) - ppb

Mannix



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

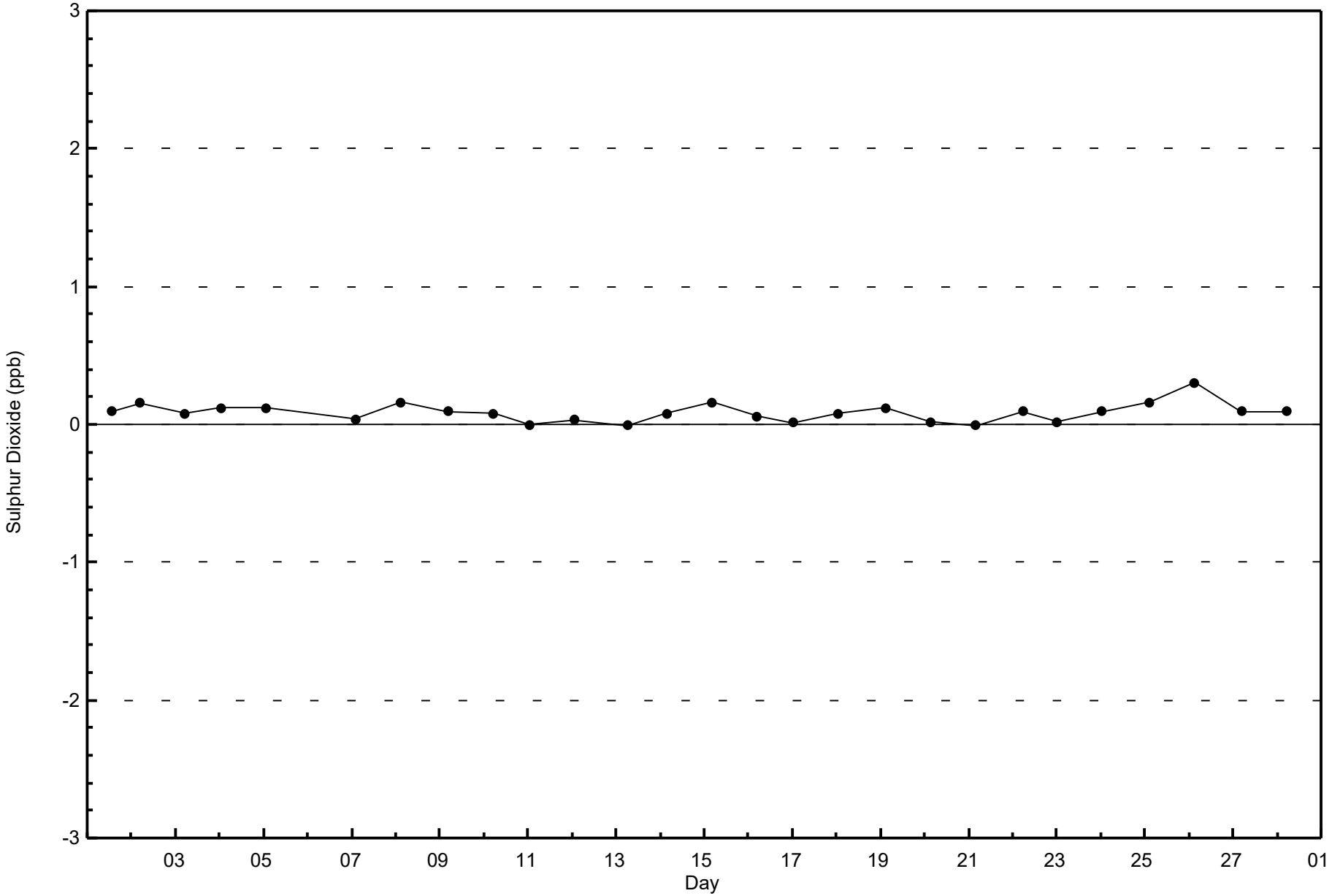
Total Number of Valid Hours: 637

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Mannix - February 2025

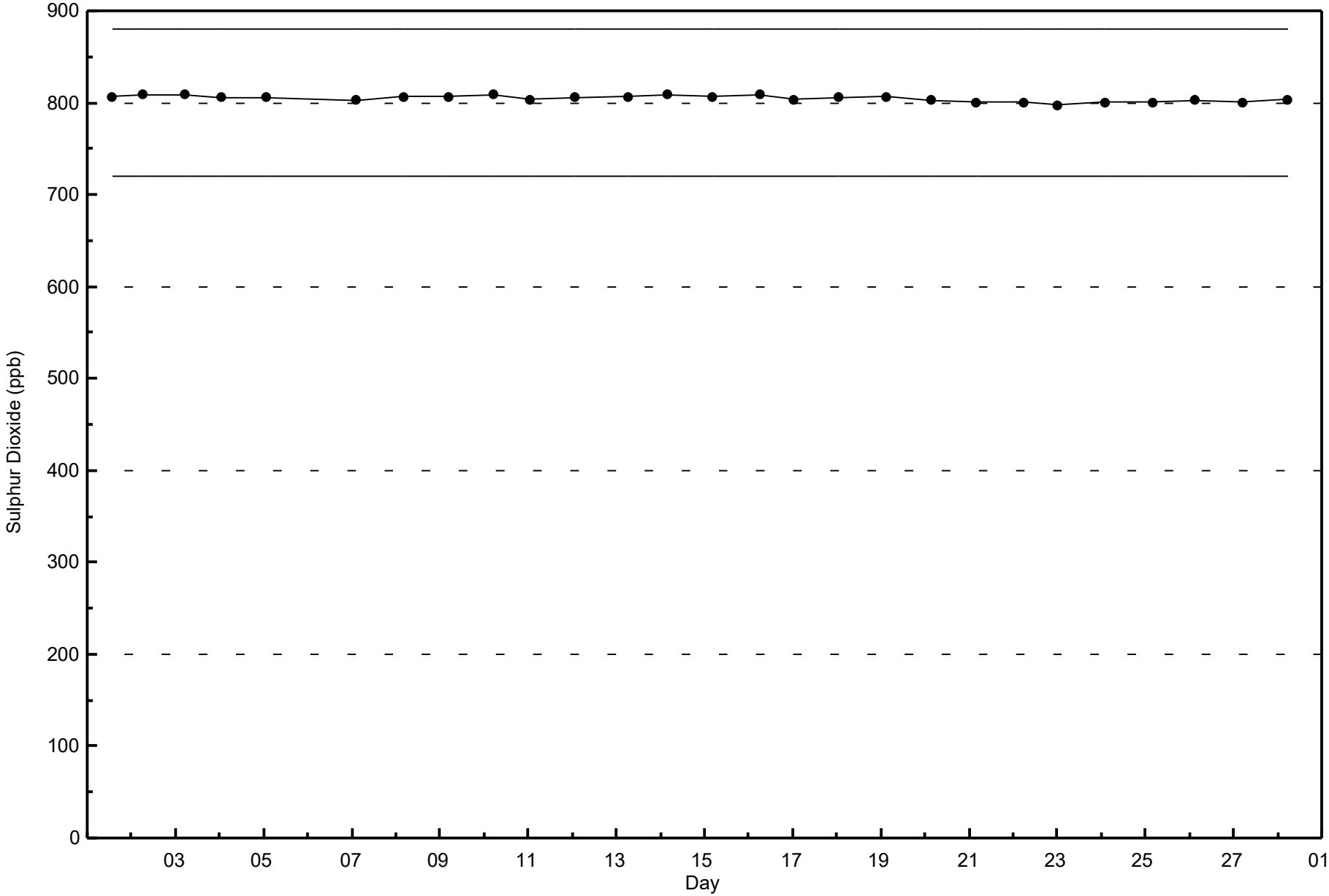


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Mannix - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Mannix - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 9.7 ppb on Feb 15 01:00 Maximum Daily Average: 1.8 ppb on Feb 15

Minimum Value: 0.0 ppb on Feb 5 16:00 Minimum Daily Average: 0.1 ppb on Feb 5
Maximum Diurnal Average: 0.8 ppb at hour 1 Minimum Diurnal Average: 0.2 ppb at hour 15
Monthly Average: 0.51 ppb Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.2 Median = 0.3 Q_3 = 0.6 P_{90} = 1.0 P_{99} = 3.0

Hours in Service:	672
Hours of Data:	637
Hours of Missing Data:	35
Hours of Calibration:	32
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-Feb	0.8	1.0	0.8	1.6	1.6	1.8	2.4	1.5	1.2	M	M	0.2	0.1	0.1	Z	0.4	0.1	0.1	0.2	0.3	0.5	0.4	0.7	0.4	0.8	2.4
2-Feb	0.3	0.2	0.6	0.4	0.5	0.7	0.7	0.5	0.4	0.3	0.3	Z	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.1	0.1	0.3	0.3	0.3	0.7
3-Feb	Z	0.3	0.3	0.2	0.1	0.3	0.5	0.6	0.5	0.2	0.1	0.1	0.2	0.3	0.3	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.6
4-Feb	0.2	Z	0.3	0.3	0.3	0.4	0.4	0.6	0.5	0.5	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.3	0.3	0.1	0.0	0.0	0.0	0.2	0.6
5-Feb	0.0	0.0	Z	0.2	0.2	0.2	0.3	0.3	0.1	0.2	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
6-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	1.0	0.2	0.1	0.2	0.2	0.1	0.1	0.9	0.5	0.3	0.1	0.1	0.2	1.0
7-Feb	0.1	0.1	0.1	Z	0.1	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.4
8-Feb	0.4	0.6	0.4	0.3	Z	0.7	0.7	0.8	1.0	0.6	0.3	0.2	0.3	0.2	0.2	0.5	1.2	1.3	0.8	0.6	0.2	0.3	0.2	0.2	0.5	1.3
9-Feb	0.2	0.2	0.1	0.2	0.1	Z	0.2	0.3	0.3	1.7	0.4	0.1	0.1	0.1	0.1	0.2	0.2	0.4	0.5	1.0	0.9	0.6	0.3	0.1	0.4	1.7
10-Feb	Z	0.1	0.1	0.2	0.2	0.4	0.2	0.7	0.3	0.3	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.5	0.8	0.3	0.2	0.3	0.3	0.4	0.3	0.8
11-Feb	0.4	Z	0.3	0.4	0.6	0.3	0.4	0.3	0.3	0.3	0.3	0.5	0.5	0.5	0.4	0.3	0.5	0.6	0.6	0.9	1.0	2.3	1.3	0.6	0.6	2.3
12-Feb	0.5	0.4	Z	0.6	1.6	0.5	0.5	0.7	0.9	0.7	0.6	0.5	0.4	0.2	M	0.7	1.0	0.5	0.5	0.8	1.3	0.8	0.5	0.7	0.7	1.6
13-Feb	0.5	1.1	0.7	0.6	0.5	0.4	0.4	Z	0.6	0.7	0.6	0.7	0.6	0.5	0.3	0.3	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.8	0.5	1.1
14-Feb	0.6	0.5	0.5	0.3	Z	0.8	1.2	1.6	2.0	1.1	2.2	2.6	0.8	0.6	0.7	0.4	0.3	1.2	1.2	1.3	5.1	3.1	2.1	2.6	1.4	5.1
15-Feb	9.7	2.2	2.7	0.8	1.2	Z	2.1	2.6	2.1	3.0	0.6	0.5	0.6	0.3	0.2	0.1	0.1	0.4	0.5	6.8	0.9	1.9	1.2	0.3	1.8	9.7
16-Feb	Z	0.9	1.1	0.7	0.7	0.9	0.3	0.4	0.3	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.3	1.1
17-Feb	0.1	Z	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	0.2	0.1	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.3
18-Feb	0.2	0.2	Z	0.2	0.2	0.5	0.5	0.4	0.5	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.5
19-Feb	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2
20-Feb	0.1	0.1	0.1	0.2	Z	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.2	0.4	0.7	2.2	1.1	0.4	2.2
21-Feb	0.7	0.5	1.0	0.6	1.8	Z	4.3	3.0	2.3	3.1	0.9	1.2	1.0	0.9	0.4	0.2	0.2	0.2	0.3	0.4	0.6	0.4	0.4	0.3	1.1	4.3
22-Feb	Z	0.7	0.7	0.9	0.6	0.6	0.8	1.2	0.7	1.0	2.1	0.4	0.4	0.5	0.3	0.2	0.4	0.6	0.9	0.4	0.3	0.2	0.2	0.2	0.6	2.1
23-Feb	0.2	Z	0.2	0.1	0.1	0.2	0.2	0.6	2.6	0.4	0.5	0.3	0.7	0.6	0.3	0.2	0.2	0.1	0.2	0.3	0.2	0.2	0.7	0.7	0.4	2.6
24-Feb	0.4	0.4	Z	0.4	0.5	0.5	0.4	0.6	0.8	0.8	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.5	1.0	0.7	0.4	0.3	0.5	0.6	0.5	1.0
25-Feb	0.6	0.5	0.8	0.7	0.5	0.4	0.3	Z	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.6	0.4	0.4	0.5	0.7	0.7	0.9	0.6	0.6	0.5	0.9
26-Feb	1.8	1.0	0.4	1.1	Z	1.0	1.2	1.1	1.3	1.2	0.8	0.2	0.3	0.3	0.5	0.5	0.7	0.5	0.5	0.7	0.7	0.7	1.1	0.6	0.8	1.8
27-Feb	0.8	0.4	0.5	0.9	1.0	Z	2.4	1.4	1.1	0.8	1.2	0.9	0.6	0.6	0.3	0.1	0.2	0.2	0.3	0.4	0.1	0.6	0.3	0.2	0.7	2.4
28-Feb	Z	0.4	0.2	0.6	0.6	0.3	0.4	0.7	0.7	0.6	0.2	0.2	0.2	0.3	0.2	0.7	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.3	0.7
	0.8	0.5	0.5	0.5	0.6	0.5	0.8	0.8	0.8	0.7	0.5	0.4	0.4	0.3	0.2	0.3	0.3	0.4	0.4	0.7	0.6	0.6	0.5	0.4	Diurnal Average	
	9.7	2.2	2.7	1.6	1.8	1.8	4.3	3.0	2.6	3.1	2.2	2.6	1.0	0.9	0.7	0.7	1.2	1.3	1.2	6.8	5.1	3.1	2.2	2.6	Diurnal Maximum	

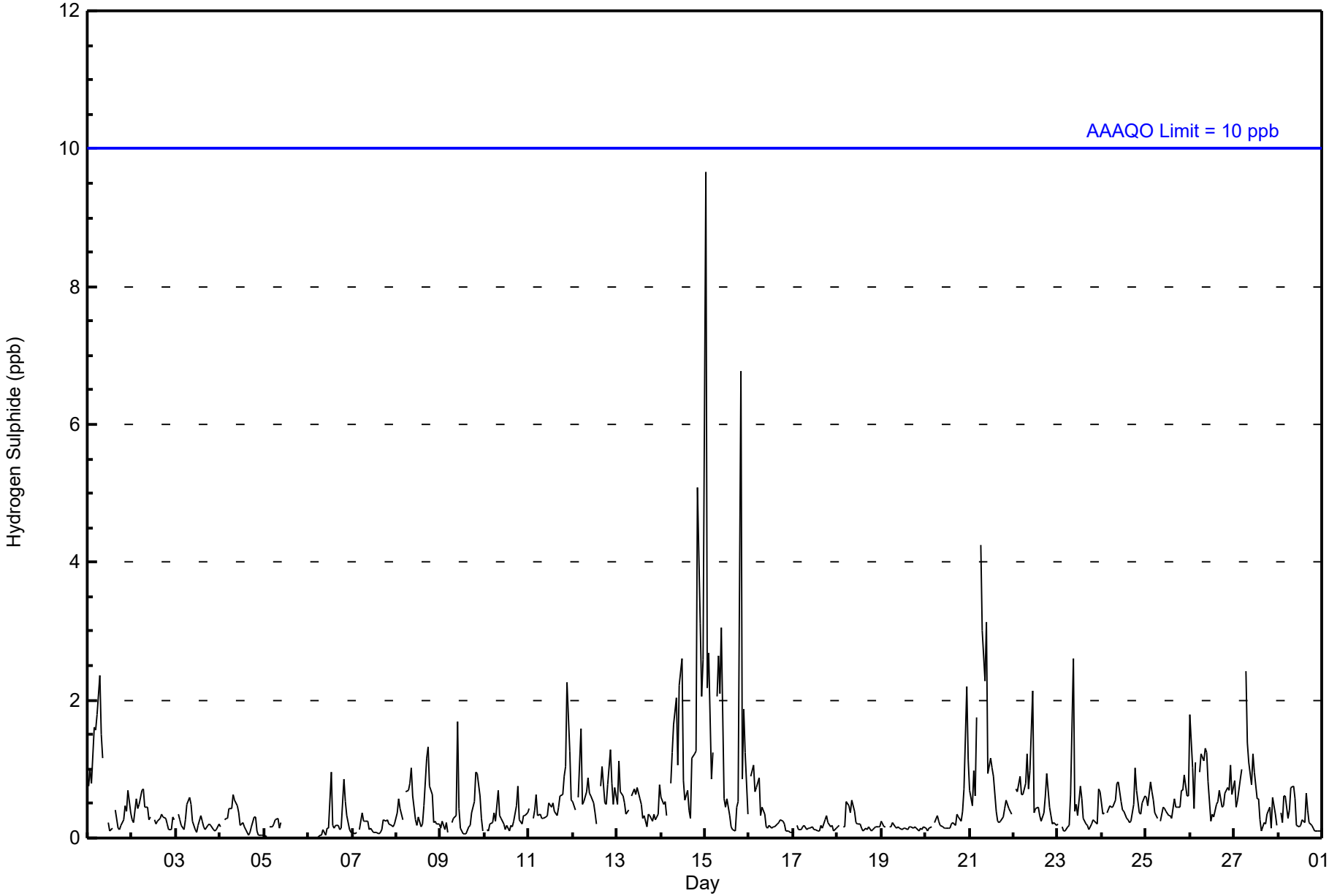
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Mannix - February 2025



Hydrogen Sulphide (H_2S) - ppb

Mannix - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	624	97.96	97.96
3 - 4	10	1.57	99.53
5 - 7	2	0.31	99.84
8 - 11	1	0.16	100.00
> 11	0	0.00	100.00

Total Number of Valid Hours: 637

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Mannix - February 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	59	9	0	6	14	84	112	32	21	25	45	20	28	37	48	623
3 - 4	2	0	0	0	0	0	0	1	2	0	1	0	1	0	3	0	10
5 - 7	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
8 - 11	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	85	59	10	1	6	14	84	113	34	21	26	46	21	28	40	48	636

Total Number of Valid Hours: 636

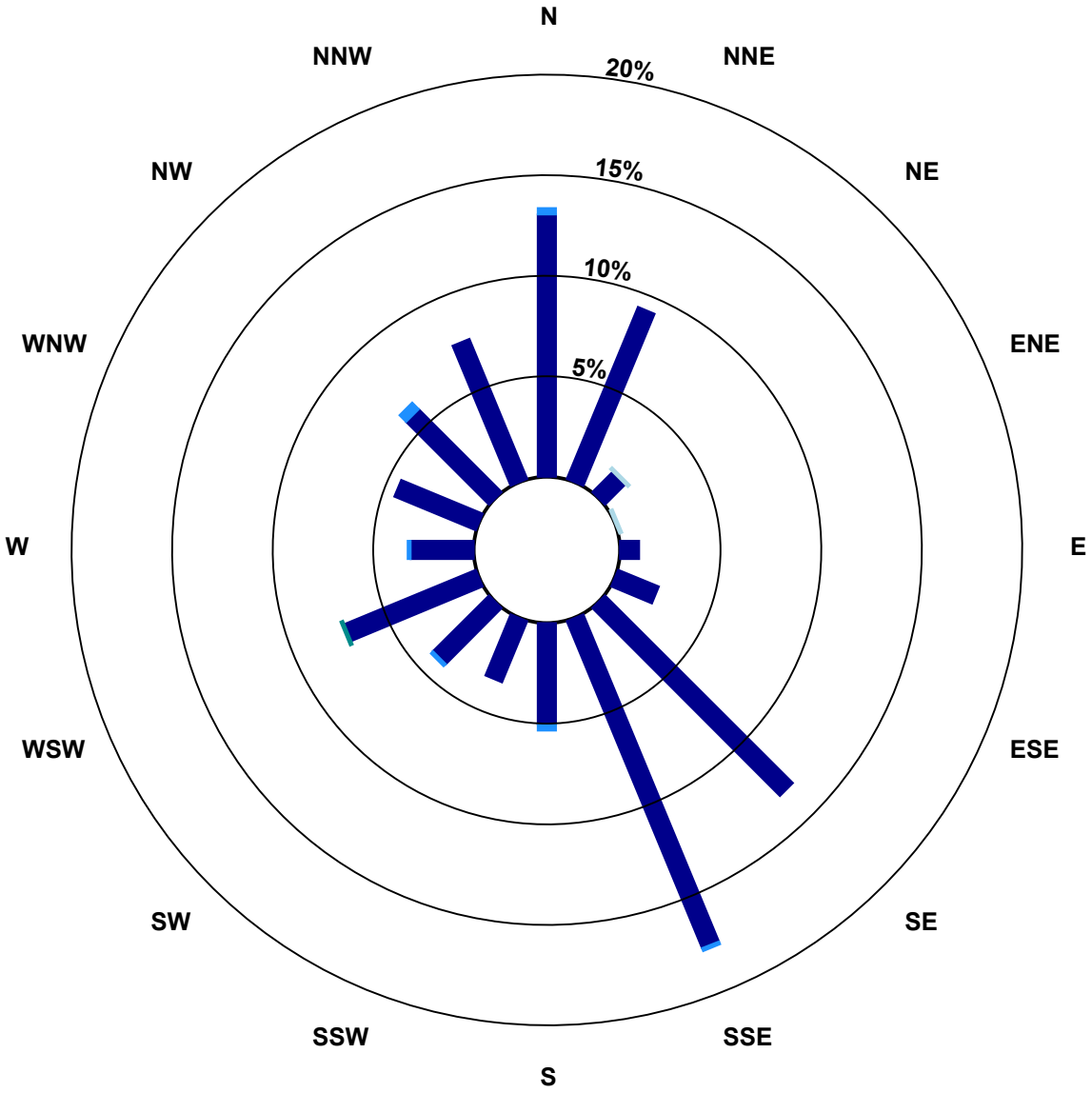
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Hydrogen Sulphide (H_2S) - ppb

Mannix



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

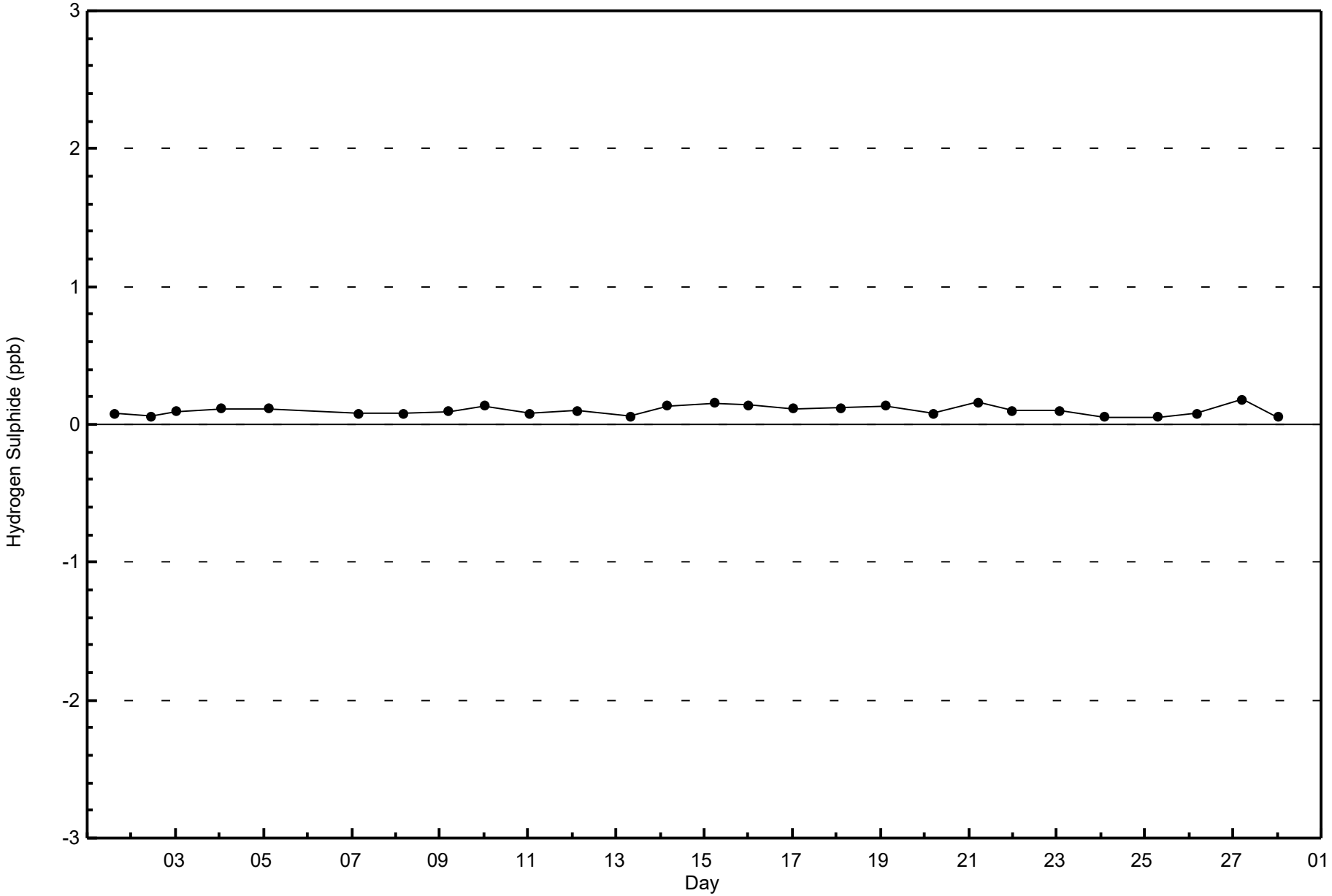
Total Number of Valid Hours: 636

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Mannix - February 2025

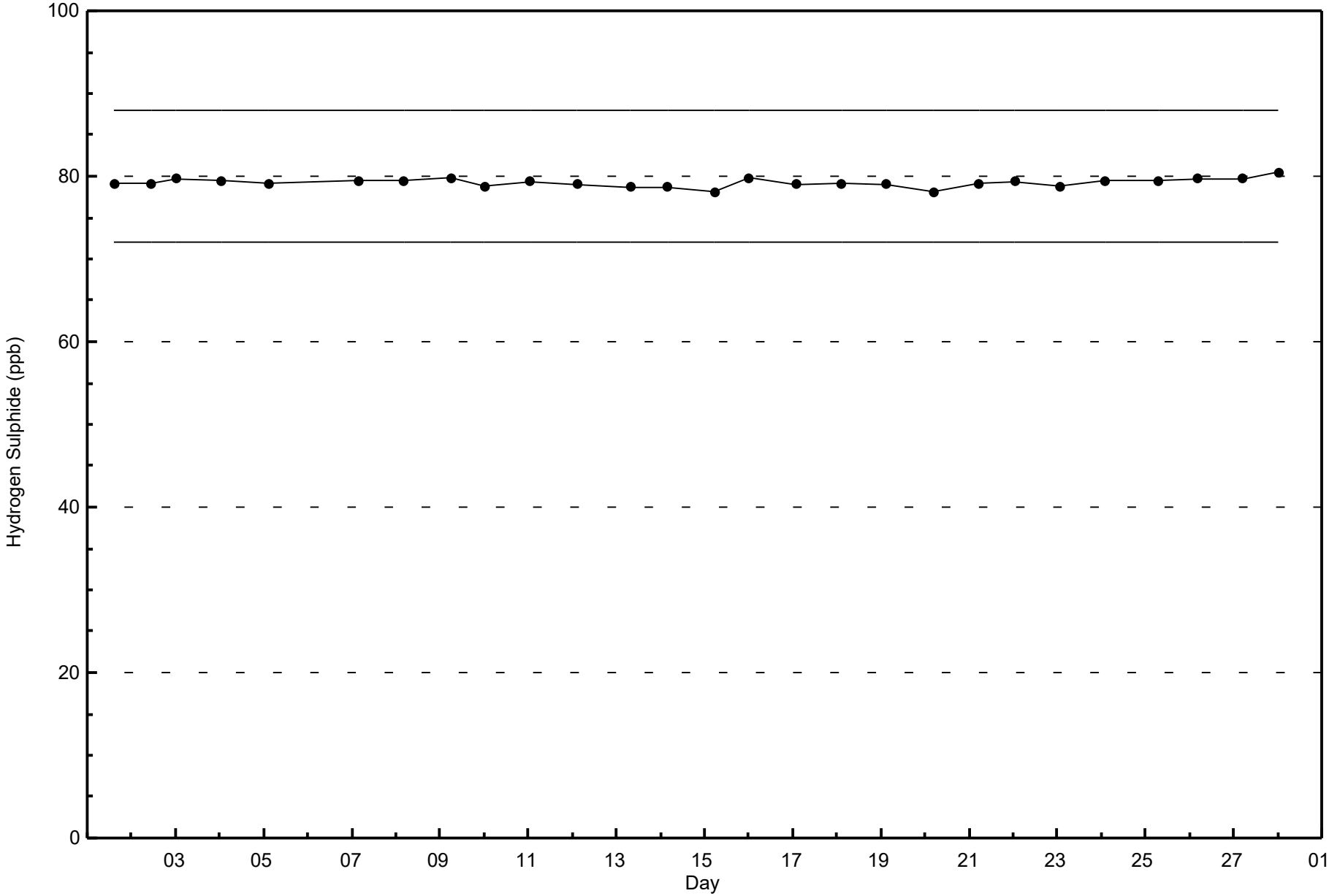


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Mannix - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Mannix - February 2025

Maximum Value: 4.3 ppm on Feb 16 02:00

Maximum Daily Average: 2.5 ppm on Feb 21

Minimum Value: 1.9 ppm on Feb 3 16:00

Minimum Daily Average: 2.0 ppm on Feb 4

Maximum Diurnal Average: 2.3 ppm at hour 11

Minimum Diurnal Average: 2.1 ppm at hour 17

Monthly Average: 2.20 ppm

Percentiles: P_1 = 1.9 P_{10} = 2.0 Q_1 = 2.0 Median = 2.1 Q_3 = 2.3 P_{90} = 2.6 P_{99} = 3.5

Hours in Service:	672
Hours of Data:	463
Hours of Missing Data:	209
Hours of Calibration:	24
Percent Operational Time:	72.5

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-Feb	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	M	2.0	2.0	Z	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-Feb	2.0	2.1	2.0	2.0	2.1	Z	2.1	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.0	2.2
3-Feb	2.0	2.1	2.0	2.0	2.0	Z	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.1
4-Feb	Z	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0
5-Feb	2.0	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	2.0
6-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
7-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
8-Feb	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-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
10-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
11-Feb	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-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	M	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.2	--	2.2
13-Feb	2.2	2.2	2.1	2.1	2.4	2.4	Z	2.2	2.2	3.2	M	M	M	M	M	M	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.2	--	3.2
14-Feb	2.4	2.1	2.2	Z	2.6	2.6	2.9	2.8	2.8	2.6	2.6	2.7	2.7	2.3	2.3	2.2	2.1	2.2	2.2	2.3	2.6	2.6	2.8	2.8	2.5	2.9
15-Feb	3.5	2.4	2.6	2.2	Z	2.4	2.3	2.3	2.2	2.4	2.3	2.3	2.4	2.0	2.0	2.1	2.0	2.2	2.2	2.5	2.3	2.2	2.2	2.2	2.3	3.5
16-Feb	2.4	4.3	3.1	2.4	2.2	Z	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	4.3
17-Feb	Z	2.0	2.0	2.0	2.0	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	2.0	2.0	2.0	2.0	2.0	2.0	2.1
18-Feb	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Feb	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Feb	2.0	2.0	2.0	Z	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.4	2.3	2.2	2.2	2.8	2.9	2.2	2.9
21-Feb	2.4	2.2	2.3	2.2	Z	2.7	2.9	2.5	2.5	2.9	3.8	3.7	3.1	3.3	2.6	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.5	3.8
22-Feb	2.2	2.2	2.6	2.5	2.8	Z	3.8	3.0	2.8	2.6	2.6	2.2	2.2	2.3	2.2	2.1	2.1	2.3	2.5	2.2	2.2	2.1	2.2	2.2	2.4	3.8
23-Feb	Z	2.1	2.2	2.1	2.1	2.2	2.2	2.4	2.5	2.2	2.6	2.3	2.3	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.6
24-Feb	2.1	Z	2.1	2.3	2.6	2.2	2.5	2.1	2.2	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.7	2.4	2.2	2.2	2.2	2.3	2.4	2.3	2.7
25-Feb	2.2	2.2	2.1	Z	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.2	2.2	2.3	2.5	2.5	2.2	2.2	2.2	2.7	2.4	2.7	2.2	2.7
26-Feb	2.5	2.6	2.5	Z	2.4	2.4	2.3	2.3	2.7	2.6	2.6	2.1	2.3	2.3	2.2	2.1	2.3	2.3	2.2	2.1	2.3	2.5	2.7	2.2	2.4	2.7
27-Feb	2.9	2.5	2.7	3.1	Z	2.9	3.2	3.6	2.8	2.3	3.0	2.5	2.1	2.1	2.2	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.4	3.6
28-Feb	2.0	2.0	2.0	2.1	2.2	Z	2.1	2.3	2.3	2.2	2.0	2.0	2.0	2.1	2.0	2.3	2.3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3
	2.3	2.3	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	Diurnal Average	
	3.5	4.3	3.1	3.1	2.8	2.9	3.8	3.6	2.8	3.2	3.8	3.7	3.1	3.3	2.6	2.3	2.5	2.7	2.5	2.5	2.6	2.7	2.8	2.9	Diurnal Maximum	

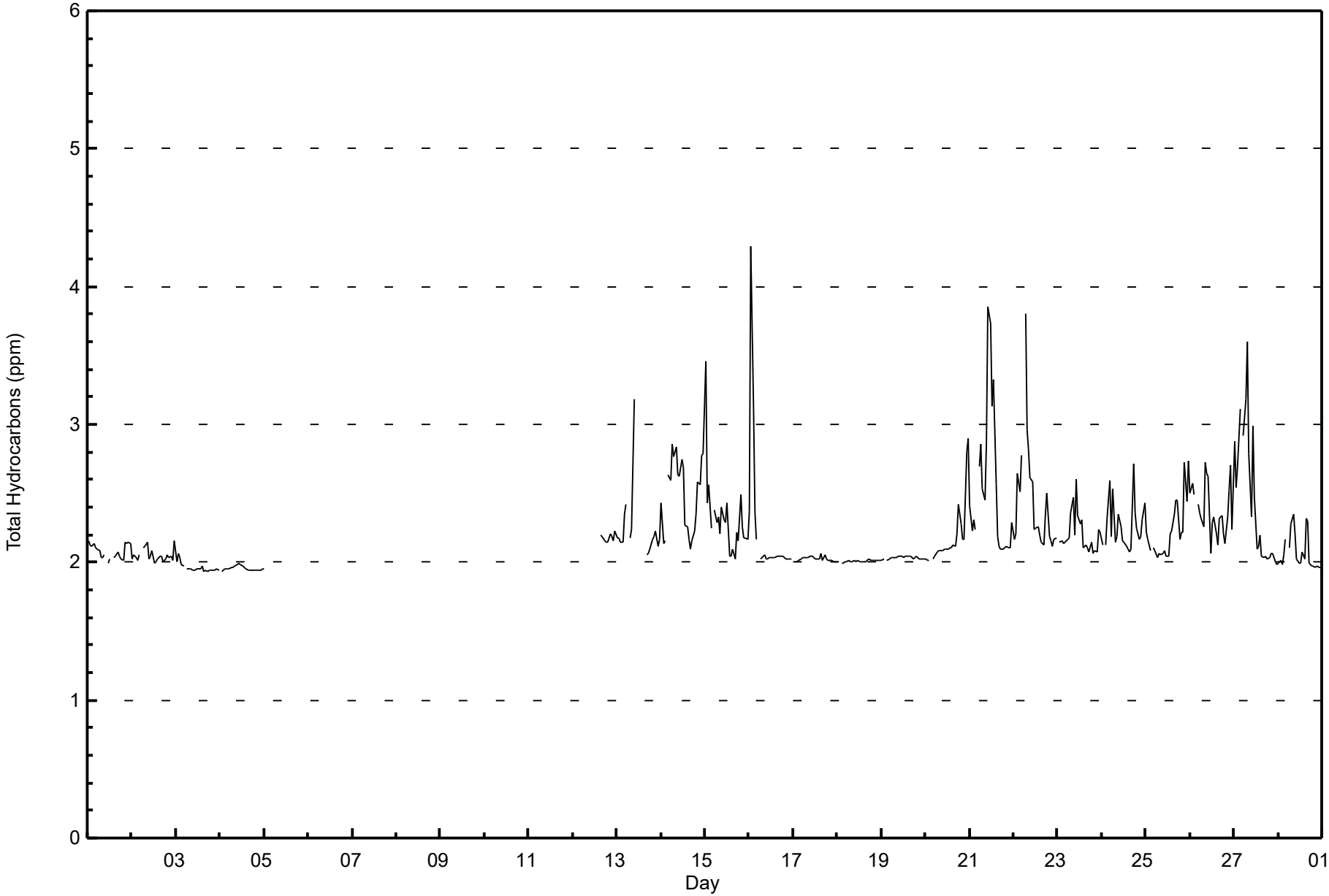
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Mannix - February 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	187	40.39	40.39
2.1 - 3.0	264	57.02	97.41
3.1 - 10.0	12	2.59	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 463

Total Number of Hours: 672

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	12	11	3	0	0	0	64	47	8	8	6	11	3	2	1	11	187
2.1 - 3.0	60	30	6	1	5	5	18	35	15	6	5	5	10	13	20	29	263
3.1 - 10.0	0	0	0	0	0	0	0	1	0	1	0	1	0	3	5	1	12
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	72	41	9	1	5	5	82	83	23	15	11	17	13	18	26	41	462

Total Number of Valid Hours: 462

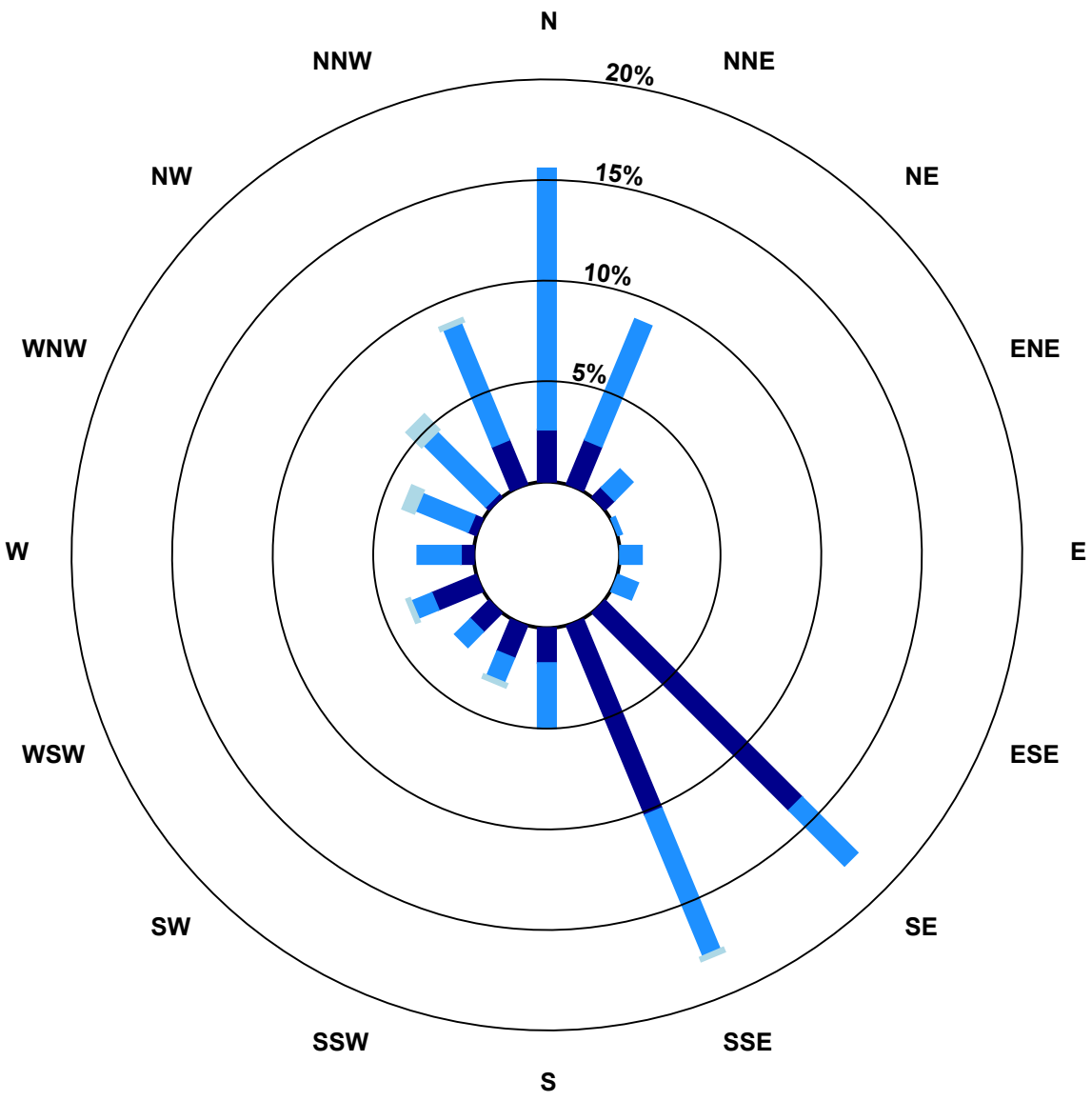
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Total Hydrocarbons (THC) - ppm

Mannix



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

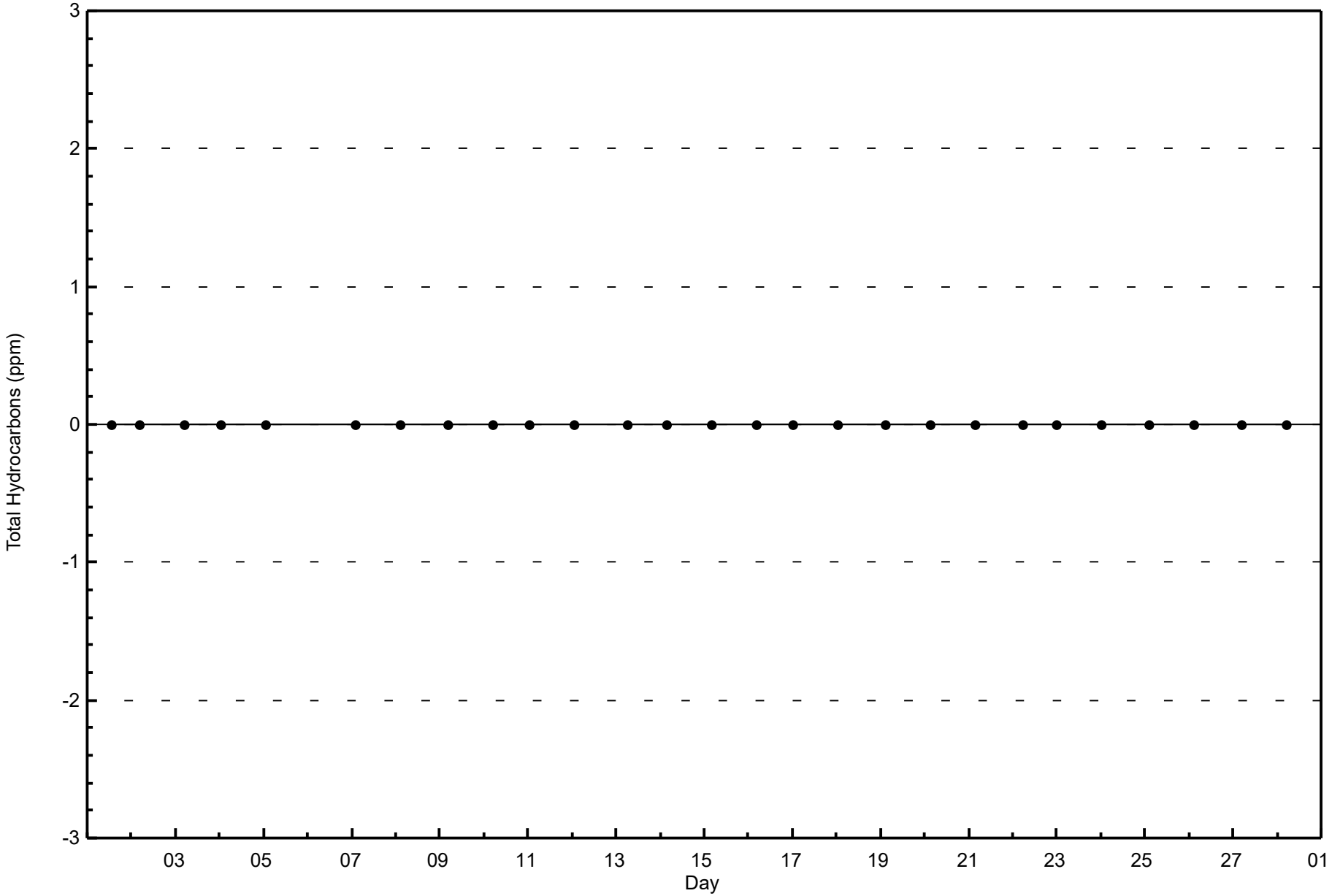
Total Number of Valid Hours: 462

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Mannix - February 2025

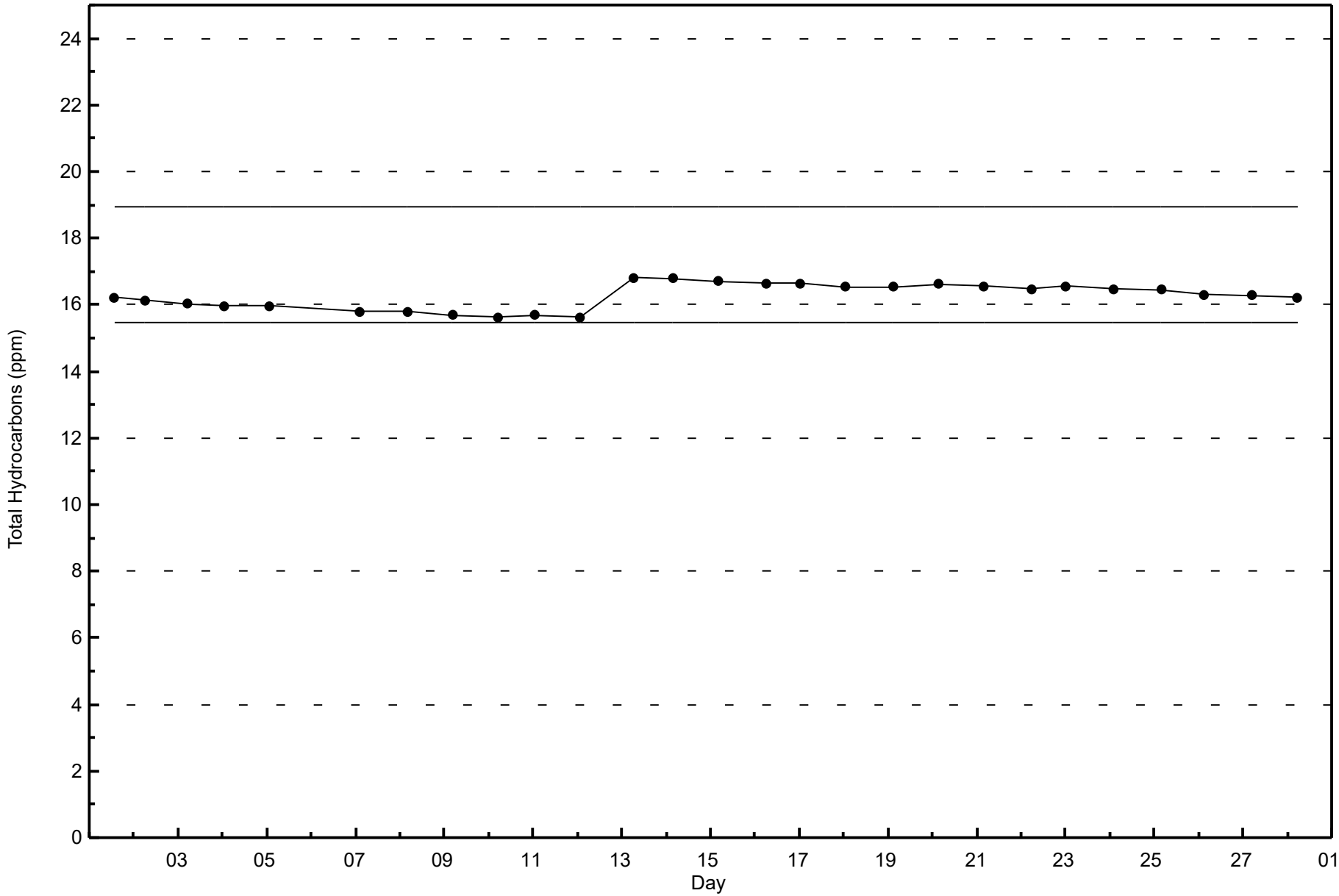


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Mannix - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Mannix - February 2025

Maximum Value: 0.413 ppm on Feb 21 06:00

Maximum Daily Average: 0.080 ppm on Feb 15

Minimum Value: 0.000 ppm on Feb 1 13:00

Minimum Daily Average: 0.000 ppm on Feb 4

Maximum Diurnal Average: 0.056 ppm at hour 6

Minimum Diurnal Average: 0.004 ppm at hour 17

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:	672
Hours of Data:	463
Hours of Missing Data:	209
Hours of Calibration:	24
Percent Operational Time:	72.5

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-Feb	0.052	0.061	0.068	0.059	0.057	0.037	0.029	0.009	0.010	0.008	M	0.001	0.000	Z	0.000	0.000	0.000	0.000	0.001	0.001	0.045	0.026	0.044	0.033	0.025	0.068
2-Feb	0.003	0.012	0.007	0.021	0.066	Z	0.023	0.022	0.036	0.021	0.053	0.021	0.006	0.000	0.000	0.005	0.005	0.009	0.034	0.062	0.043	0.051	0.000	0.001	0.022	0.066
3-Feb	0.008	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	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.001	0.009
4-Feb	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	0.000
6-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
7-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
8-Feb	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-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
10-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
11-Feb	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-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	M	0.013	0.013	0.003	0.000	0.000	0.000	0.008	0.003	0.002	--	0.013
13-Feb	0.000	0.003	0.013	0.011	0.000	0.002	Z	0.045	0.001	0.008	M	M	M	M	M	M	0.004	0.007	0.039	0.069	0.058	0.140	0.002	0.000	--	0.140
14-Feb	0.000	0.000	0.000	Z	0.002	0.009	0.005	0.000	0.001	0.004	0.145	0.061	0.003	0.000	0.000	0.000	0.000	0.034	0.015	0.040	0.160	0.112	0.068	0.035	0.030	0.160
15-Feb	0.236	0.036	0.085	0.008	Z	0.160	0.105	0.138	0.066	0.195	0.144	0.134	0.218	0.013	0.003	0.000	0.000	0.084	0.022	0.125	0.006	0.026	0.012	0.025	0.080	0.236
16-Feb	0.001	0.061	0.043	0.020	0.004	Z	0.000	0.000	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.009	0.011	0.000	0.000	0.003	0.002	0.002	0.000	0.008	0.061
17-Feb	Z	0.000	0.000	0.000	0.000	0.011	0.010	0.008	0.002	0.010	0.003	0.004	0.001	0.003	0.006	0.010	0.001	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.003	0.011
18-Feb	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	Z	0.000	0.000	0.002	0.000	0.000	0.000	0.007	0.007	0.010	0.000	0.001	0.003	0.004	0.000	0.001	0.005	0.022	0.010	0.000	0.000	0.000	0.003	0.022
20-Feb	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.001	0.005	0.046	0.244	0.128	0.028	0.023	0.087	0.088	0.028	0.244
21-Feb	0.043	0.027	0.079	0.051	Z	0.413	0.047	0.030	0.041	0.073	0.105	0.131	0.137	0.204	0.100	0.038	0.002	0.001	0.013	0.000	0.000	0.000	0.001	0.000	0.067	0.413
22-Feb	0.000	0.011	0.080	0.047	0.074	Z	0.095	0.098	0.080	0.101	0.113	0.017	0.021	0.015	0.010	0.009	0.007	0.021	0.025	0.008	0.012	0.000	0.001	0.003	0.037	0.113
23-Feb	Z	0.001	0.000	0.000	0.000	0.000	0.018	0.140	0.213	0.012	0.075	0.054	0.041	0.057	0.033	0.033	0.009	0.016	0.020	0.001	0.004	0.001	0.131	0.143	0.044	0.213
24-Feb	0.008	Z	0.038	0.005	0.004	0.000	0.002	0.013	0.013	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.013	0.035	0.030	0.047	0.046	0.035	0.084	0.016	0.084
25-Feb	0.031	0.010	0.007	Z	0.067	0.058	0.003	0.000	0.000	0.000	0.001	0.000	0.002	0.001	0.000	0.000	0.000	0.000	0.025	0.000	0.042	0.007	0.014	0.055	0.014	0.067
26-Feb	0.104	0.171	0.192	Z	0.113	0.093	0.076	0.063	0.085	0.110	0.070	0.022	0.000	0.000	0.001	0.001	0.000	0.000	0.005	0.000	0.004	0.019	0.039	0.017	0.052	0.192
27-Feb	0.059	0.085	0.092	0.069	Z	0.056	0.074	0.078	0.032	0.024	0.036	0.019	0.001	0.006	0.023	0.044	0.037	0.061	0.035	0.055	0.087	0.089	0.025	0.006	0.048	0.092
28-Feb	0.016	0.008	0.002	0.039	0.021	Z	0.009	0.035	0.033	0.000	0.000	0.000	0.002	0.018	0.002	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.039
	0.031	0.027	0.037	0.021	0.024	0.056	0.026	0.034	0.031	0.029	0.042	0.025	0.023	0.018	0.010	0.008	0.004	0.015	0.025	0.026	0.026	0.026	0.022	0.023	Diurnal Average	
	0.236	0.171	0.192	0.069	0.113	0.413	0.105	0.140	0.213	0.195	0.145	0.134	0.218	0.204	0.100	0.044	0.037	0.084	0.244	0.128	0.160	0.140	0.131	0.143	Diurnal Maximum	

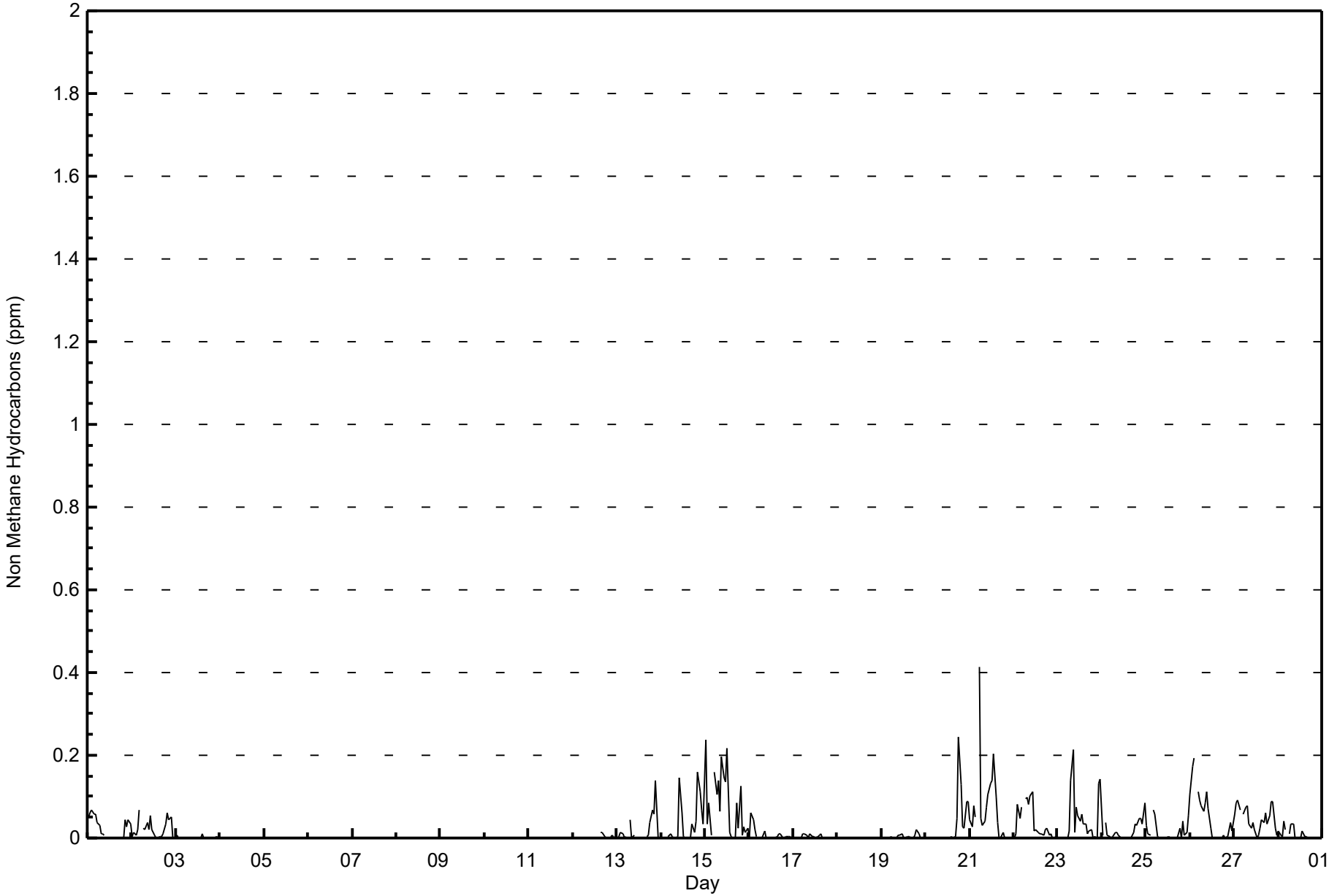
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Mannix - February 2025



Non Methane Hydrocarbons (NMHC) - ppm

Mannix - February 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	249	53.78	53.78
0.006 - 0.05	138	29.81	83.59
0.06 - 0.1	65	14.04	97.62
> 0.1	11	2.38	100.00

Total Number of Valid Hours: 463

Total Number of Hours: 672

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	26	3	0	0	1	0	57	63	15	10	8	11	7	10	11	27	249
0.006 - 0.05	40	24	5	0	3	3	20	15	2	1	2	5	1	3	6	7	137
0.06 - 0.1	5	14	4	0	1	1	4	5	3	3	1	0	4	5	8	7	65
> 0.1	1	0	0	1	0	1	1	0	3	1	0	1	1	0	1	0	11
Totals	72	41	9	1	5	5	82	83	23	15	11	17	13	18	26	41	462

Total Number of Valid Hours: 462

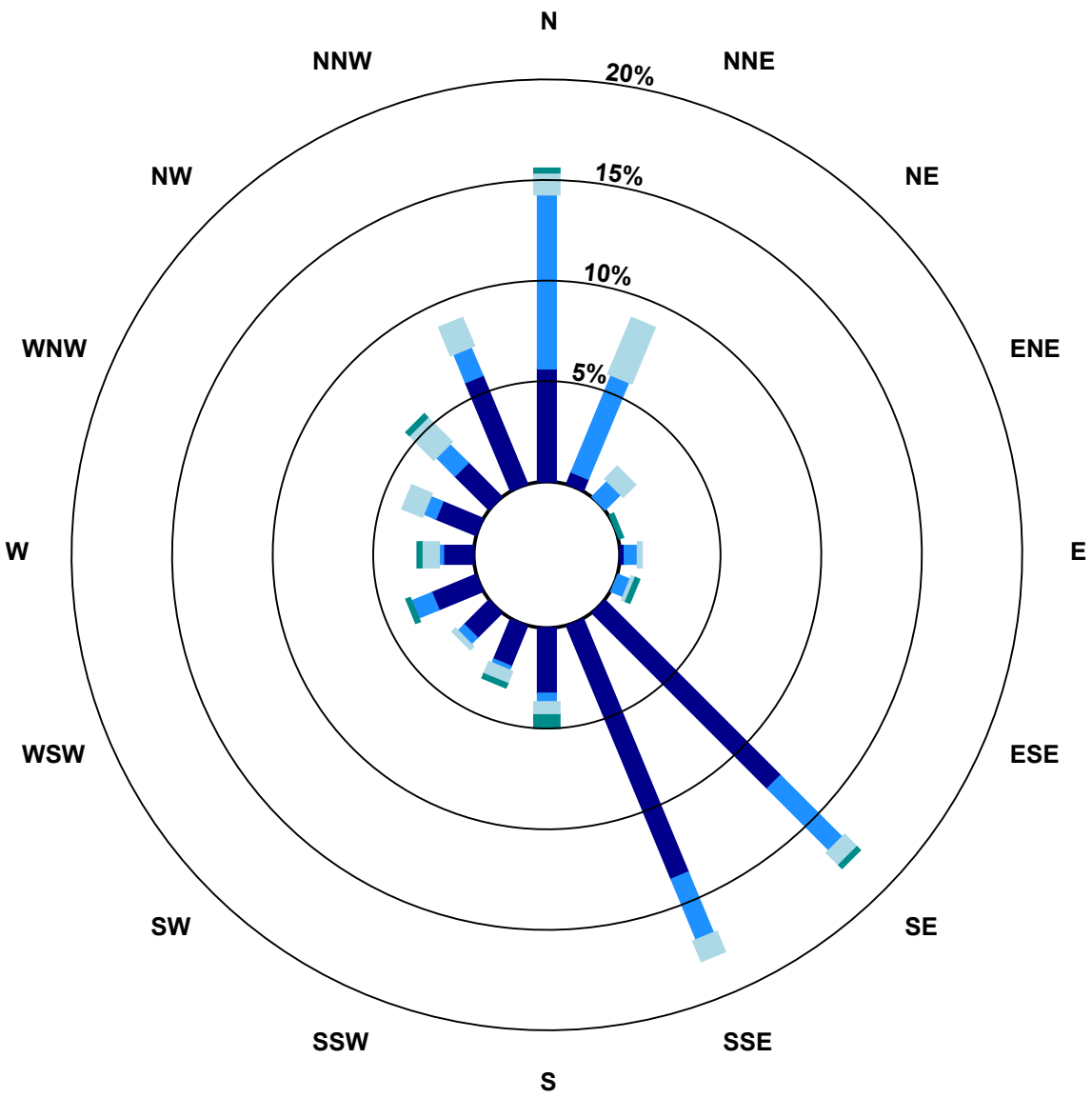
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Non Methane Hydrocarbons (NMHC) - ppm

Mannix



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

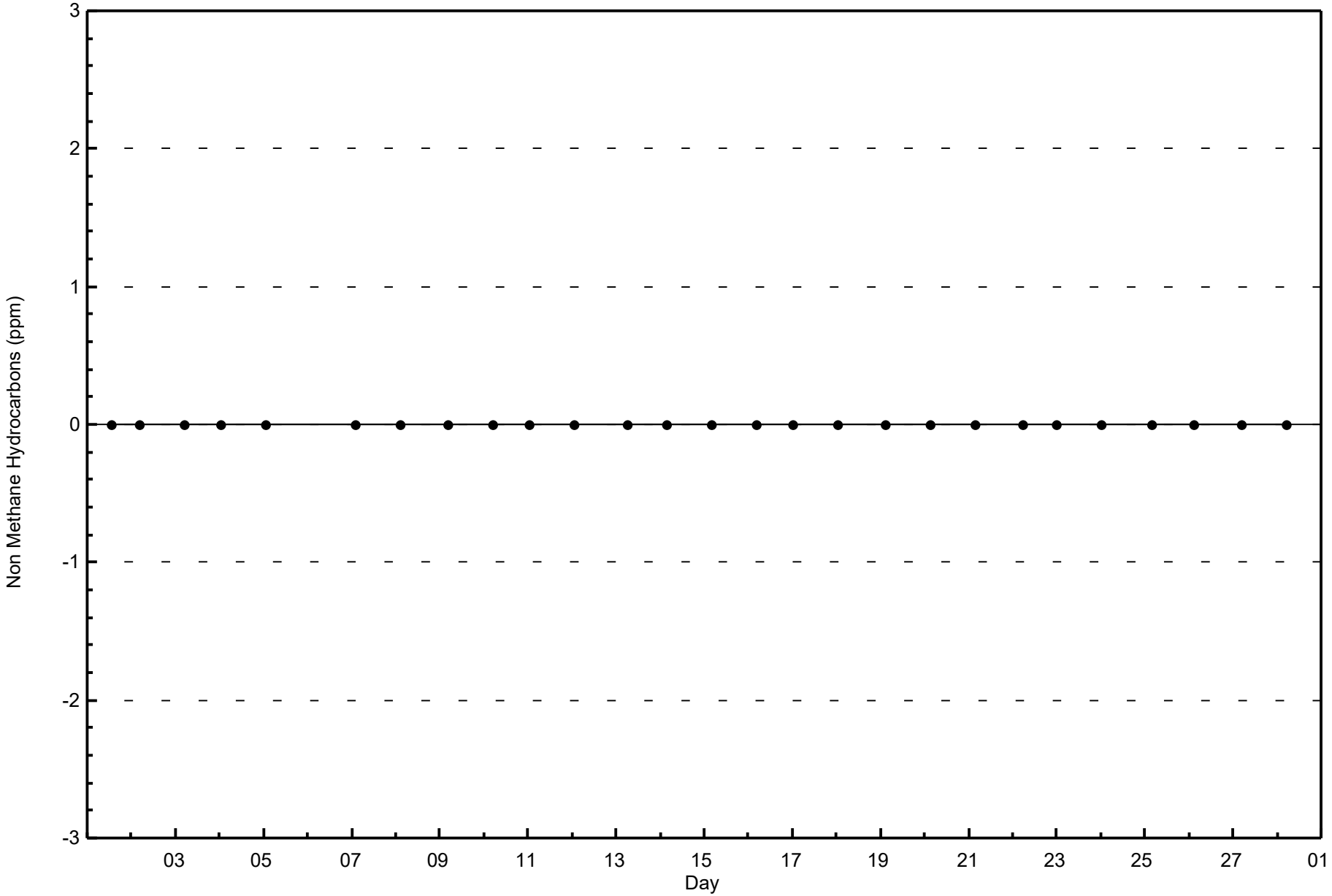
Total Number of Valid Hours: 462

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Mannix - February 2025

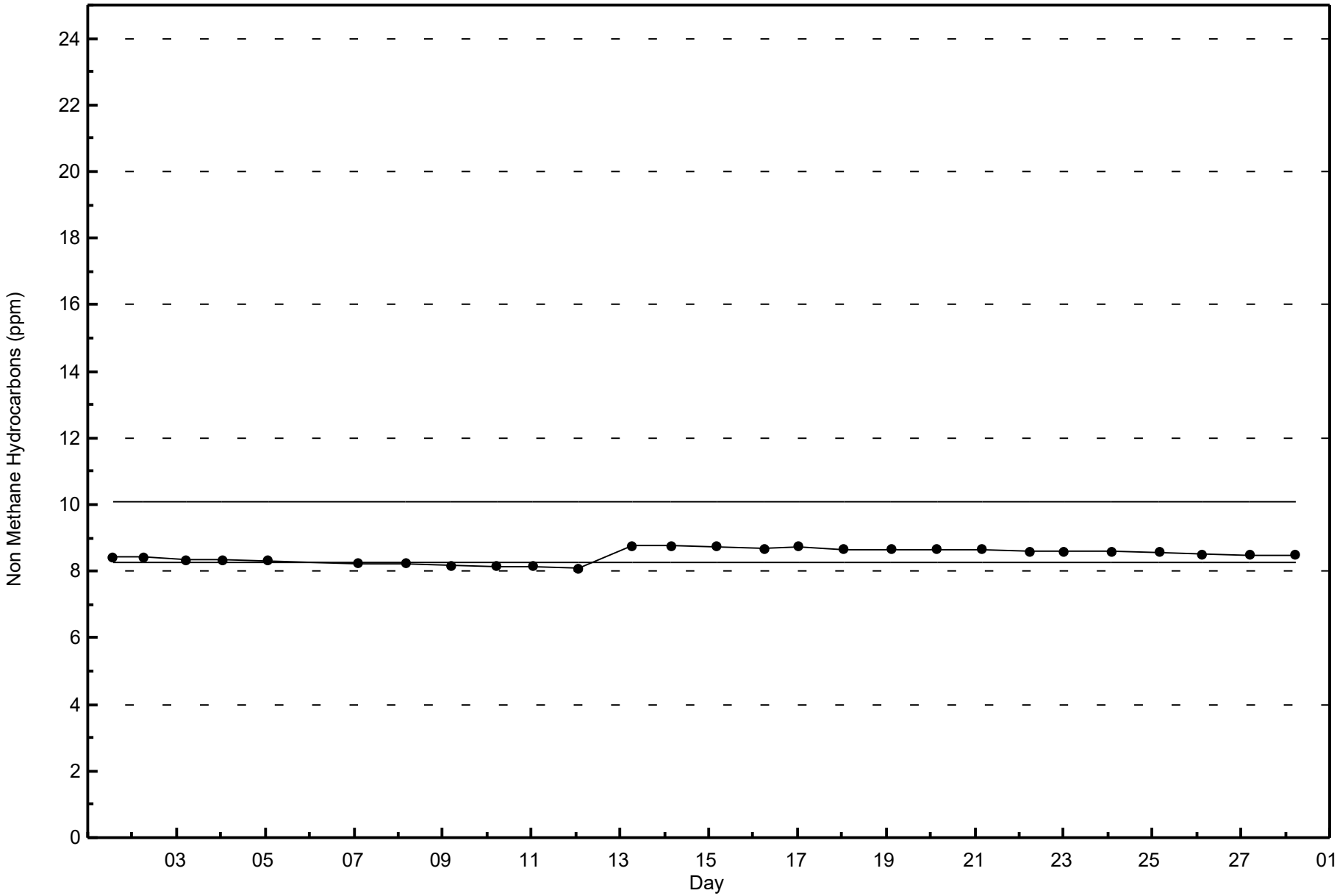


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Mannix - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Mannix - February 2025

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

Maximum Value: 4.2 ppm on Feb 16 02:00

Maximum Daily Average: 2.5 ppm on Feb 21

Minimum Value: 1.9 ppm on Feb 3 16:00

Minimum Daily Average: 2.0 ppm on Feb 4

Maximum Diurnal Average: 2.3 ppm at hour 7

Minimum Diurnal Average: 2.1 ppm at hour 20

Monthly Average: 2.18 ppm

Percentiles: P_1 = 1.9 P_{10} = 2.0 Q_1 = 2.0 Median = 2.1 Q_3 = 2.2 P_{90} = 2.5 P_{99} = 3.3

Hours in Service:	672
Hours of Data:	463
Hours of Missing Data:	209
Hours of Calibration:	24
Percent Operational Time:	72.5

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-Feb	2.1	2.1	2.0	2.1	2.0	2.1	2.1	2.0	2.0	2.0	M	2.0	2.0	Z	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1
2-Feb	2.0	2.0	2.0	2.0	2.0	Z	2.1	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.0	2.2
3-Feb	2.0	2.1	2.0	2.0	2.0	Z	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.1
4-Feb	Z	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0
5-Feb	2.0	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	2.0
6-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
7-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
8-Feb	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-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
10-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
11-Feb	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-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	M	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.1	2.2	--	2.2
13-Feb	2.2	2.2	2.1	2.1	2.4	2.4	Z	2.1	2.2	3.2	M	M	M	M	M	M	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	--	3.2
14-Feb	2.4	2.1	2.2	Z	2.6	2.6	2.9	2.8	2.8	2.6	2.5	2.7	2.7	2.3	2.3	2.2	2.1	2.1	2.2	2.3	2.4	2.4	2.7	2.7	2.5	2.9
15-Feb	3.2	2.4	2.5	2.2	Z	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.0	2.0	2.1	2.0	2.1	2.1	2.4	2.3	2.1	2.2	2.1	2.2	3.2
16-Feb	2.4	4.2	3.1	2.3	2.2	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	4.2
17-Feb	Z	2.0	2.0	2.0	2.0	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	2.0	2.0	2.0	2.0	2.0	2.0	2.1
18-Feb	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Feb	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Feb	2.0	2.0	2.0	Z	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.7	2.8	2.2	2.8
21-Feb	2.4	2.2	2.2	2.2	Z	2.3	2.8	2.5	2.4	2.8	3.7	3.6	3.0	3.1	2.5	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.5	3.7
22-Feb	2.2	2.2	2.6	2.5	2.7	Z	3.7	2.9	2.7	2.5	2.5	2.2	2.2	2.2	2.2	2.1	2.1	2.3	2.5	2.2	2.1	2.1	2.2	2.2	2.4	3.7
23-Feb	Z	2.1	2.2	2.1	2.1	2.2	2.2	2.2	2.3	2.2	2.5	2.3	2.2	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.5
24-Feb	2.1	Z	2.1	2.3	2.6	2.2	2.5	2.1	2.2	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.7	2.3	2.2	2.1	2.1	2.3	2.4	2.2	2.7
25-Feb	2.2	2.2	2.1	Z	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.2	2.2	2.3	2.5	2.5	2.1	2.2	2.2	2.7	2.4	2.7	2.2	2.7
26-Feb	2.4	2.4	2.3	Z	2.3	2.3	2.2	2.2	2.6	2.5	2.6	2.0	2.3	2.3	2.2	2.1	2.3	2.3	2.2	2.1	2.3	2.5	2.7	2.2	2.3	2.7
27-Feb	2.8	2.5	2.6	3.0	Z	2.9	3.1	3.5	2.8	2.3	3.0	2.5	2.1	2.1	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.4	3.5
28-Feb	2.0	2.0	2.0	2.0	2.1	Z	2.1	2.2	2.3	2.2	2.0	2.0	2.0	2.1	2.0	2.3	2.3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.3
	2.2	2.3	2.2	2.2	2.2	2.2	2.3	2.3	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	2.1	2.2	2.2	Diurnal Average	
	3.2	4.2	3.1	3.0	2.7	2.9	3.7	3.5	2.8	3.2	3.7	3.6	3.0	3.1	2.5	2.3	2.5	2.7	2.5	2.4	2.4	2.7	2.7	2.8	Diurnal Maximum	

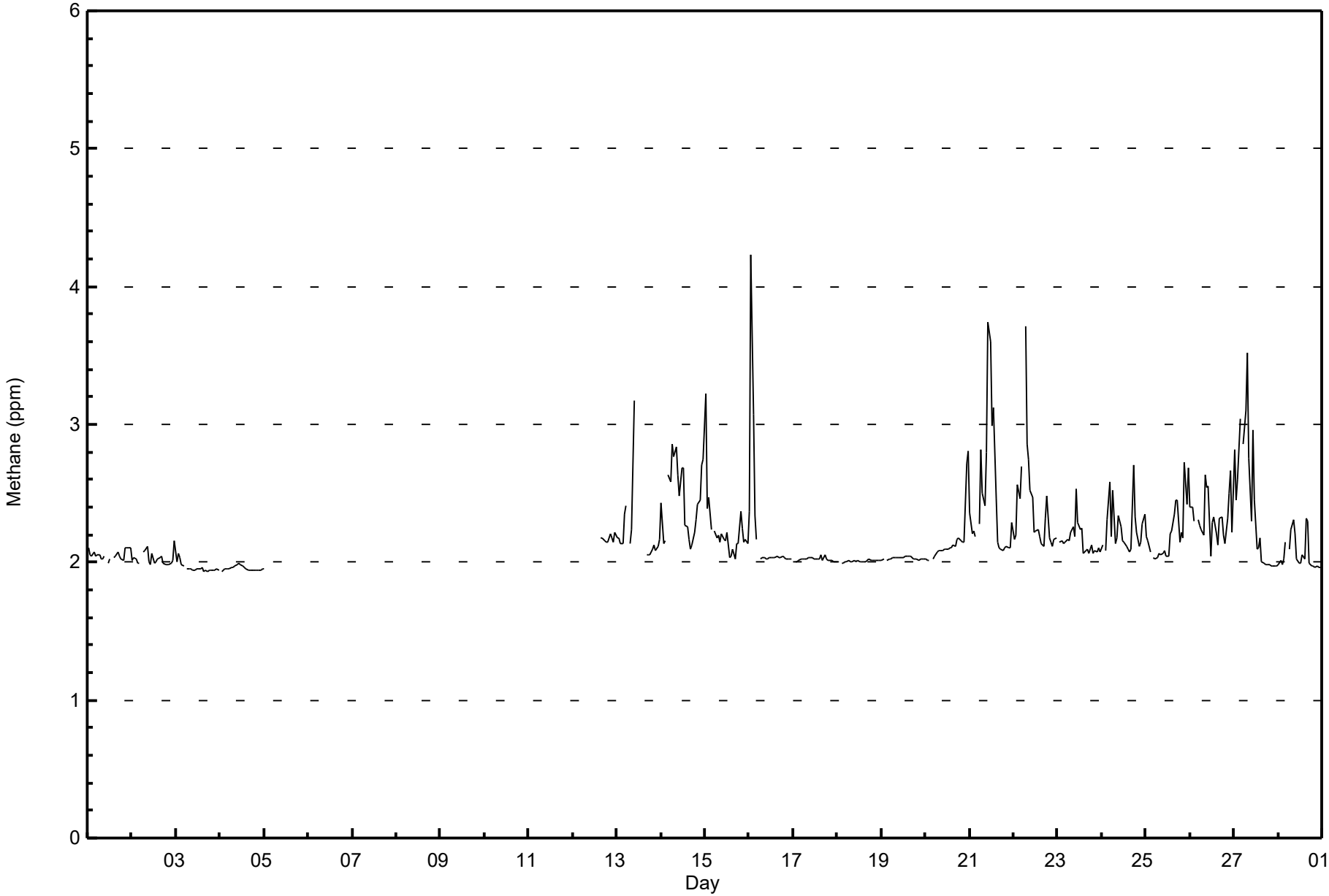
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Mannix - February 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	199	42.98	42.98
2.1 - 3.0	254	54.86	97.84
3.1 - 10.0	10	2.16	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 463

Total Number of Hours: 672

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	18	3	0	0	0	64	48	8	8	6	11	3	2	1	12	199
2.1 - 3.0	57	23	6	1	5	5	18	34	15	6	5	5	10	15	20	28	253
3.1 - 10.0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	5	1	10
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	72	41	9	1	5	5	82	83	23	15	11	17	13	18	26	41	462

Total Number of Valid Hours: 462

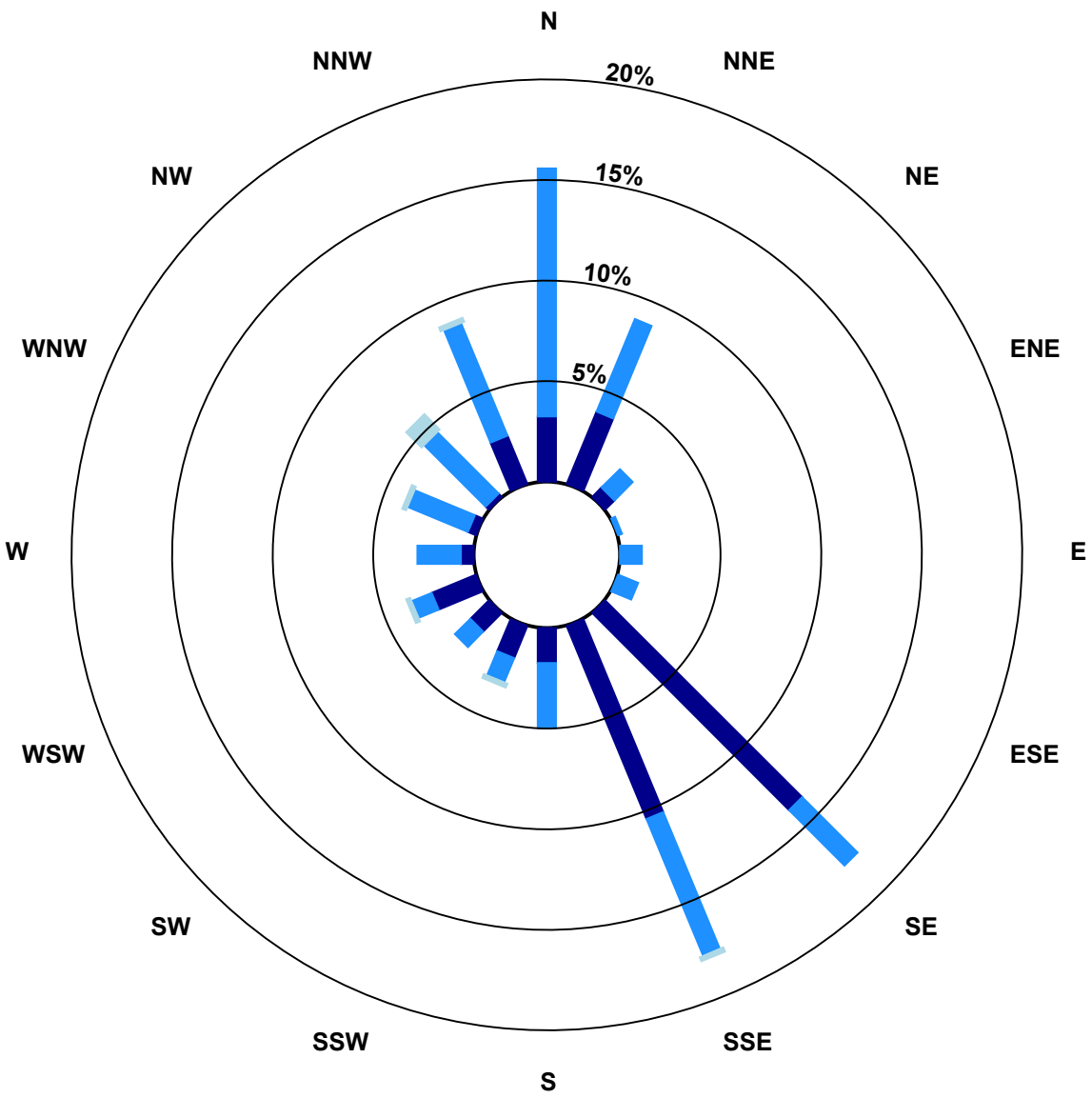
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Methane (CH_4) - ppm

Mannix



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

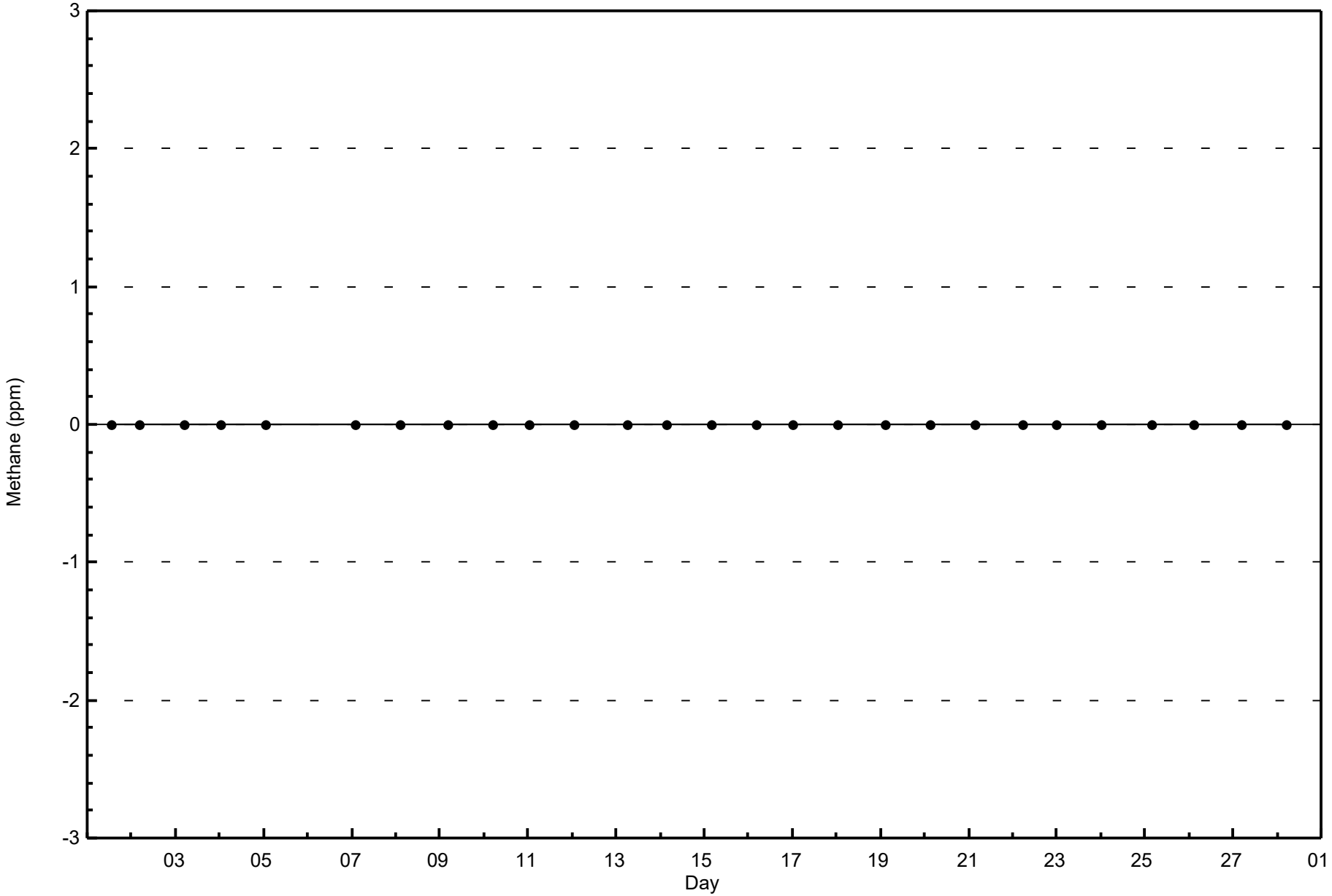
Total Number of Valid Hours: 462

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Mannix - February 2025

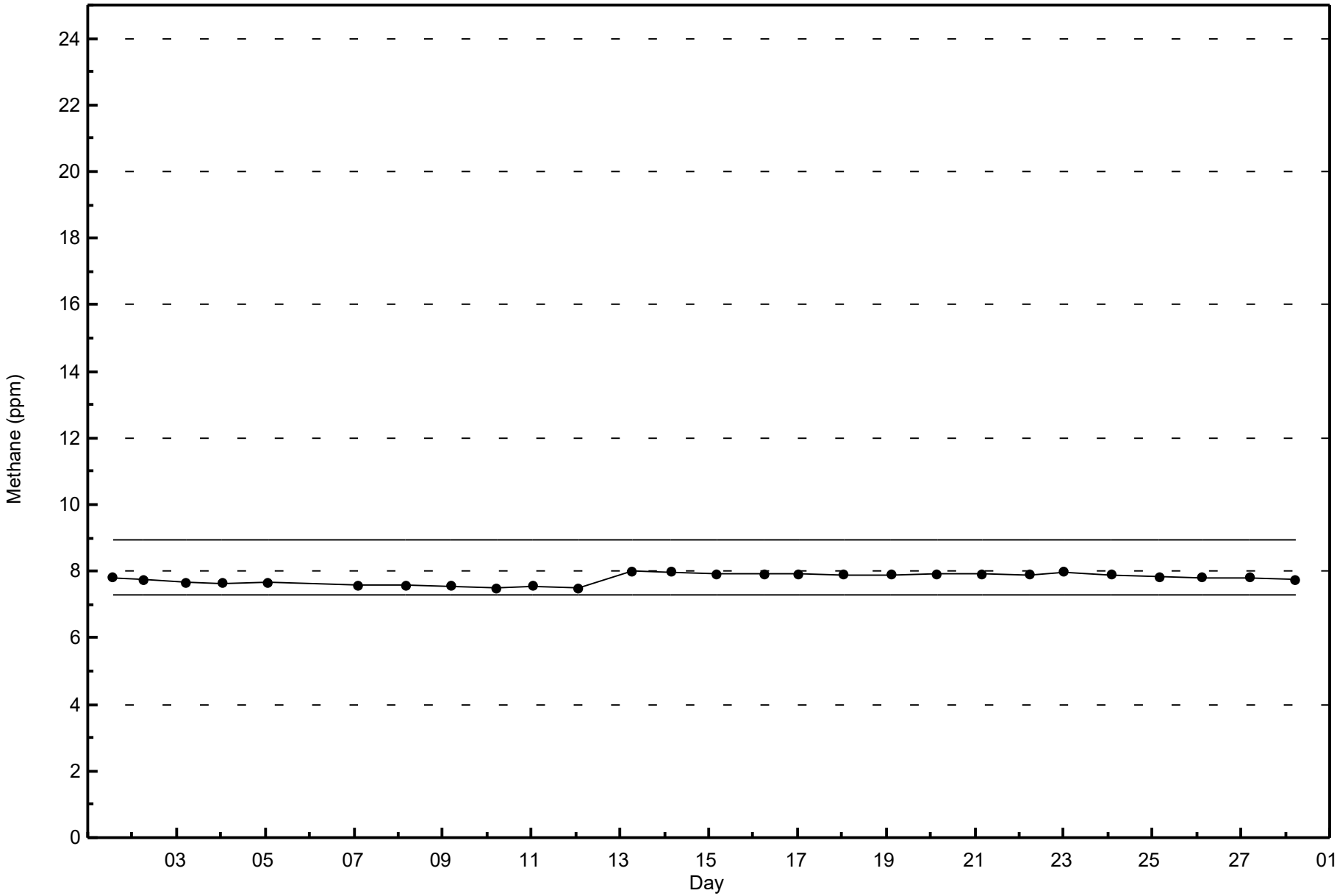


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Mannix - February 2025



Maximum Value: 2.8 C on Feb 27 14:00

Maximum Daily Average: -3.8 C on Feb 23

Minimum Value: -34.3 C on Feb 14 08:00

Minimum Daily Average: -28.9 C on Feb 14

Maximum Diurnal Average: -13.9 C at hour 16

Minimum Diurnal Average: -20.8 C at hour 6

Monthly Average: -17.93 C

Percentiles: P_1 = -33.3 P_{10} = -28.5 Q_1 = -24.1 Median = -19.6 Q_3 = -10.5 P_{90} = -5.7 P_{99} = -0.1

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

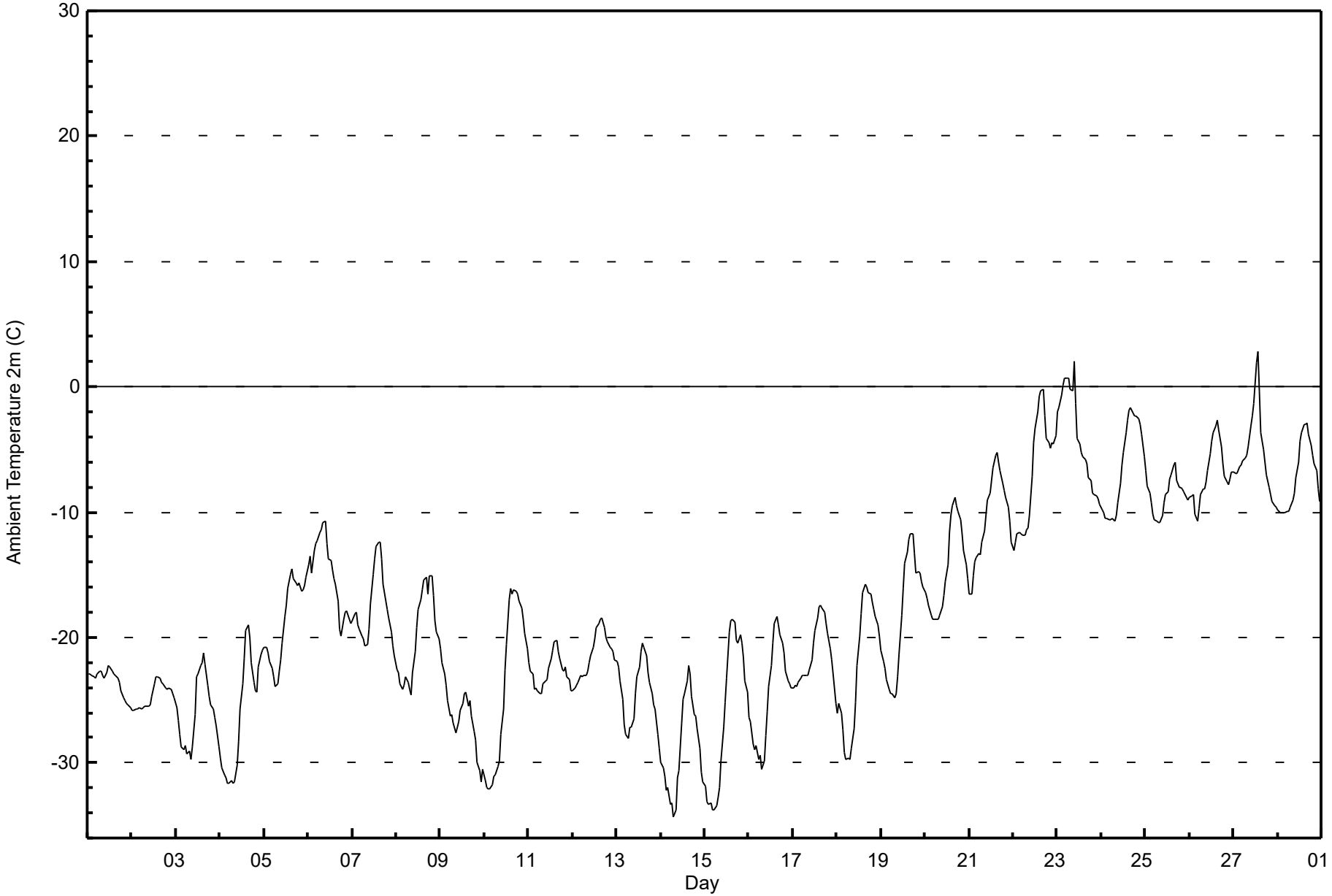
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-22.9	-22.9	-23.0	-23.1	-23.2	-22.9	-22.7	-22.7	-23.0	-23.2	-22.8	-22.3	-22.4	-22.7	-22.9	-23.0	-23.2	-23.6	-24.3	-24.8	-25.1	-25.2	-25.3	-25.6	-23.5	-22.3
2-Feb	-25.8	-25.8	-25.7	-25.7	-25.6	-25.7	-25.6	-25.4	-25.4	-25.5	-25.4	-24.7	-23.7	-23.2	-23.1	-23.3	-23.6	-23.7	-24.0	-24.1	-24.1	-24.1	-24.4	-24.8	-24.7	-23.1
3-Feb	-25.6	-26.6	-27.7	-28.7	-29.0	-28.7	-29.3	-29.1	-29.7	-28.7	-26.1	-23.2	-22.9	-22.2	-22.0	-21.3	-22.2	-23.8	-24.7	-25.4	-25.7	-26.4	-27.1	-28.8	-26.0	-21.3
4-Feb	-29.6	-30.5	-30.9	-31.2	-31.6	-31.7	-31.4	-31.6	-31.5	-30.1	-28.3	-25.7	-23.7	-21.7	-19.5	-19.0	-20.0	-22.0	-23.6	-24.3	-24.4	-22.4	-21.4	-21.0	-26.1	-19.0
5-Feb	-20.8	-20.8	-21.2	-21.9	-22.5	-23.2	-23.9	-23.7	-22.7	-21.8	-20.5	-18.3	-17.4	-16.1	-14.9	-14.6	-15.3	-15.7	-15.8	-15.7	-16.3	-16.2	-15.9	-15.2	-18.8	-14.6
6-Feb	-14.2	-13.6	-14.8	-13.0	-12.5	-12.2	-11.7	-11.3	-10.8	-10.7	-12.5	-13.8	-13.8	-14.6	-15.3	-15.8	-17.1	-19.3	-19.9	-18.6	-18.0	-17.9	-18.5	-18.9	-15.0	-10.7
7-Feb	-18.6	-18.1	-17.9	-18.9	-19.3	-19.9	-20.1	-20.7	-20.6	-19.3	-17.4	-15.0	-13.8	-12.8	-12.4	-12.4	-13.7	-15.7	-17.1	-17.8	-18.5	-19.5	-20.7	-21.4	-17.6	-12.4
8-Feb	-22.6	-22.8	-23.7	-24.1	-23.8	-23.1	-23.5	-24.1	-24.6	-22.8	-21.2	-19.3	-17.8	-17.0	-16.2	-15.4	-15.2	-16.6	-15.1	-15.1	-16.6	-18.7	-19.6	-20.1	-20.0	-15.1
9-Feb	-20.9	-22.1	-22.9	-23.8	-25.1	-26.3	-26.1	-26.8	-27.6	-27.2	-26.7	-25.8	-25.3	-24.5	-24.4	-25.5	-25.0	-26.3	-27.6	-28.2	-29.9	-30.7	-31.6	-30.5	-26.3	-20.9
10-Feb	-31.4	-32.0	-32.1	-32.1	-31.7	-31.0	-31.0	-30.3	-29.9	-27.7	-25.8	-22.6	-20.6	-17.0	-16.1	-16.5	-16.2	-16.3	-16.5	-17.1	-17.7	-18.6	-19.7	-20.9	-23.8	-16.1
11-Feb	-22.0	-22.6	-22.9	-24.1	-24.0	-24.2	-24.5	-24.5	-23.7	-23.4	-23.4	-22.5	-21.7	-21.0	-20.3	-20.2	-21.1	-21.7	-22.6	-22.7	-22.4	-23.1	-23.4	-24.3	-22.8	-20.2
12-Feb	-24.2	-24.0	-23.8	-23.6	-23.1	-23.1	-23.1	-23.0	-22.7	-22.0	-21.4	-20.8	-20.1	-19.3	-18.9	-18.6	-18.4	-19.2	-20.0	-20.3	-20.8	-20.8	-21.1	-21.8	-21.4	-18.4
13-Feb	-21.9	-22.4	-23.5	-24.9	-26.9	-27.8	-28.0	-27.2	-27.2	-26.5	-24.5	-23.2	-22.4	-21.1	-20.4	-20.7	-21.4	-22.8	-23.6	-24.4	-25.4	-25.7	-27.7	-28.8	-24.5	-20.4
14-Feb	-30.0	-30.5	-31.0	-32.2	-31.9	-33.3	-33.2	-34.3	-33.8	-31.2	-30.7	-26.8	-25.0	-24.5	-23.5	-22.3	-22.9	-24.7	-26.1	-26.2	-27.3	-28.8	-30.8	-31.6	-28.9	-22.3
15-Feb	-31.9	-33.1	-33.3	-33.2	-33.8	-33.8	-33.5	-32.8	-32.0	-29.8	-27.2	-25.1	-23.2	-19.6	-18.6	-18.5	-18.8	-20.2	-20.5	-19.8	-20.5	-21.6	-23.5	-24.4	-26.2	-18.5
16-Feb	-26.4	-26.7	-28.5	-29.0	-28.6	-29.8	-29.3	-30.6	-29.8	-27.8	-26.0	-23.9	-22.2	-20.4	-18.9	-18.4	-19.0	-19.8	-20.4	-21.2	-22.7	-23.4	-23.7	-24.1	-24.6	-18.4
17-Feb	-24.0	-23.8	-23.9	-23.6	-23.2	-23.0	-23.0	-23.1	-23.0	-22.6	-21.8	-20.5	-19.5	-18.5	-17.6	-17.5	-17.7	-18.0	-18.9	-19.6	-20.9	-21.8	-22.9	-25.2	-21.4	-17.5
18-Feb	-26.0	-25.2	-26.0	-27.4	-29.2	-29.7	-29.7	-29.8	-28.8	-27.3	-25.2	-22.2	-19.9	-18.1	-16.4	-15.8	-16.0	-16.5	-16.5	-17.2	-17.8	-18.3	-19.0	-19.9	-22.4	-15.8
19-Feb	-21.0	-21.9	-22.4	-23.4	-24.2	-24.5	-24.5	-24.8	-24.5	-23.1	-21.3	-18.2	-16.1	-14.1	-13.2	-12.2	-11.8	-11.7	-13.3	-14.8	-14.7	-14.8	-15.5	-16.0	-18.4	-11.7
20-Feb	-16.4	-16.9	-17.4	-18.2	-18.6	-18.5	-18.6	-18.6	-18.2	-17.6	-16.6	-15.6	-14.2	-11.6	-10.2	-9.5	-8.8	-9.5	-9.9	-10.6	-11.8	-13.1	-14.2	-15.3	-14.6	-8.8
21-Feb	-16.5	-16.5	-15.1	-13.9	-13.6	-13.3	-13.5	-12.4	-11.5	-10.3	-9.1	-8.5	-7.5	-6.5	-5.4	-5.3	-6.0	-6.7	-7.7	-8.3	-8.8	-9.6	-10.7	-12.4	-10.4	-5.3
22-Feb	-13.0	-12.4	-11.7	-11.6	-11.7	-11.9	-11.8	-11.4	-11.3	-10.3	-7.2	-4.5	-3.3	-2.0	-0.8	-0.3	-0.2	-2.4	-4.2	-4.4	-4.9	-4.5	-4.6	-3.9	-6.8	-0.2
23-Feb	-2.0	-1.7	-0.7	0.1	0.7	0.7	0.7	-0.2	-0.3	2.1	-1.3	-4.1	-4.6	-5.2	-5.6	-5.8	-6.1	-7.2	-7.5	-8.5	-8.6	-8.7	-8.9	-9.3	-3.8	2.1
24-Feb	-9.8	-10.0	-10.5	-10.5	-10.6	-10.6	-10.5	-10.7	-10.3	-9.3	-7.7	-6.2	-5.2	-3.7	-2.7	-1.9	-1.7	-2.1	-2.3	-2.4	-2.6	-3.0	-3.8	-5.5	-6.4	-1.7
25-Feb	-6.7	-7.9	-8.5	-9.3	-10.1	-10.6	-10.7	-10.9	-10.8	-10.2	-9.3	-8.6	-8.3	-7.4	-7.0	-6.3	-6.1	-7.4	-8.0	-8.0	-8.2	-8.3	-8.8	-9.0	-8.6	-6.1
26-Feb	-8.9	-8.7	-8.6	-10.2	-10.8	-9.7	-8.6	-8.1	-8.2	-7.6	-6.6	-5.4	-4.3	-3.7	-3.1	-2.6	-3.4	-4.8	-6.1	-7.1	-7.6	-7.9	-7.4	-6.8	-6.9	-2.6
27-Feb	-6.8	-6.9	-6.9	-6.4	-6.2	-5.9	-5.7	-5.4	-4.8	-3.1	-2.4	-1.3	2.0	2.8	-0.4	-3.7	-5.1	-6.0	-7.0	-8.0	-8.6	-9.1	-9.5	-9.6	-5.2	2.8
28-Feb	-9.8	-10.0	-10.1	-10.1	-10.0	-10.0	-9.9	-9.6	-9.1	-8.5	-7.3	-6.0	-4.4	-3.7	-3.0	-3.0	-2.9	-3.7	-4.6	-5.4	-6.1	-6.7	-8.2	-9.2	-7.1	-2.9
	-19.6	-19.9	-20.2	-20.5	-20.7	-20.8	-20.8	-20.8	-20.6	-19.5	-18.4	-16.9	-15.8	-14.6	-14.0	-13.9	-14.2	-15.3	-16.0	-16.4	-17.0	-17.5	-18.1	-18.7	Diurnal Average	
	-2.0	-1.7	-0.7	0.1	0.7	0.7	0.7	-0.2	-0.3	2.1	-1.3	-1.3	2.0	2.8	-0.4	-0.3	-0.2	-2.1	-2.3	-2.4	-2.6	-3.0	-3.8	-3.9	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Mannix - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	328	48.81	48.81
-20 - 0	337	50.15	98.96
0 - 10	7	1.04	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Maximum Value: 2.6 C on Feb 23 10:00

Maximum Daily Average: -3.8 C on Feb 23

Minimum Value: -32.3 C on Feb 14 08:00

Minimum Daily Average: -27.5 C on Feb 14

Maximum Diurnal Average: -14.2 C at hour 17

Minimum Diurnal Average: -20.4 C at hour 8

Monthly Average: -17.68 C

Percentiles: P_1 = -30.7 P_{10} = -27.1 Q_1 = -23.9 Median = -19.4 Q_3 = -10.7 P_{90} = -6.3 P_{99} = 1.1

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

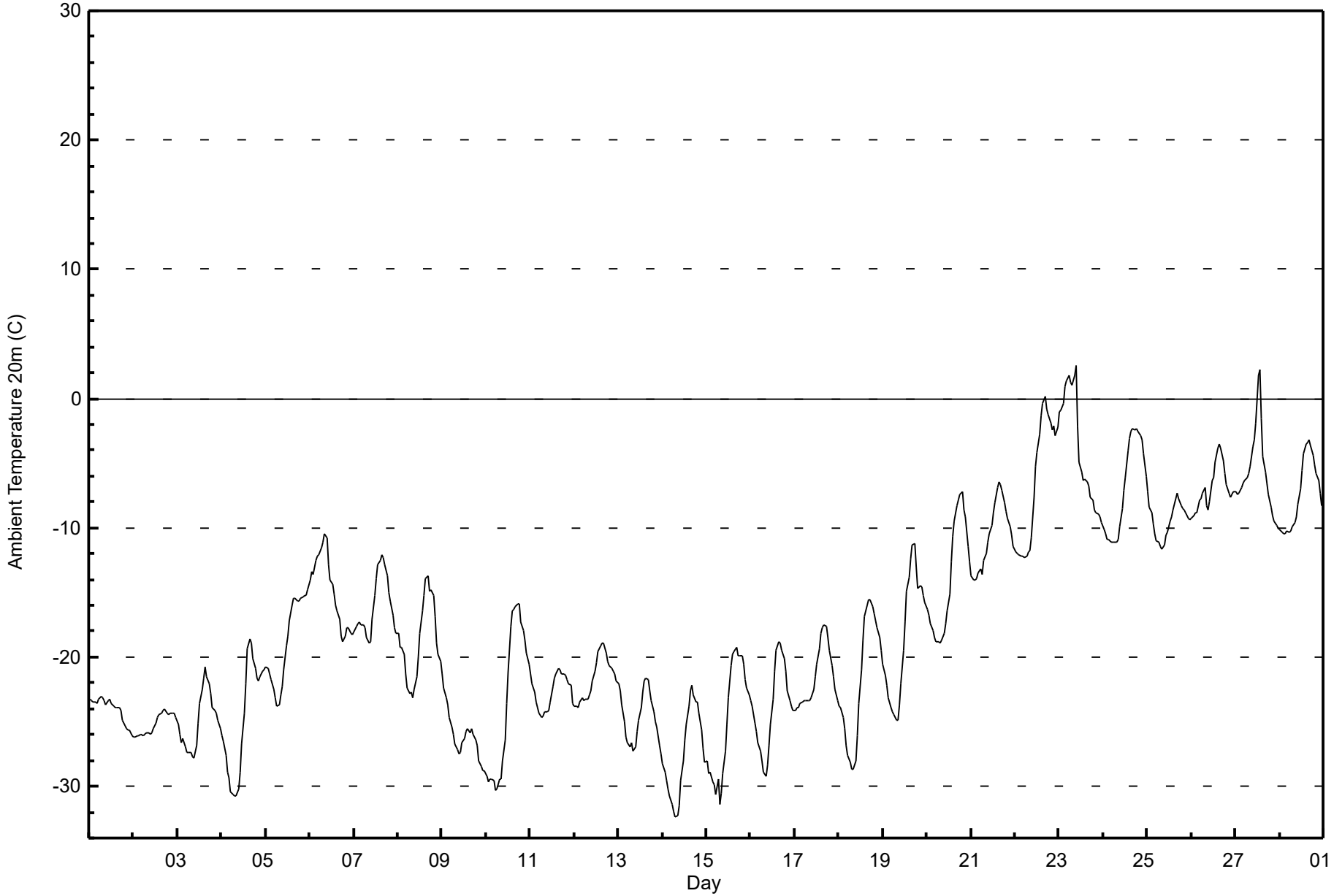
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-23.3	-23.3	-23.4	-23.5	-23.6	-23.3	-23.1	-23.1	-23.4	-23.6	-23.4	-23.3	-23.6	-23.8	-23.9	-23.9	-23.9	-24.2	-24.8	-25.3	-25.5	-25.7	-25.7	-26.0	-24.0	-23.1
2-Feb	-26.2	-26.2	-26.1	-26.0	-26.0	-26.1	-26.0	-25.8	-25.9	-26.0	-25.9	-25.5	-25.1	-24.6	-24.4	-24.3	-24.2	-24.0	-24.4	-24.4	-24.4	-24.4	-24.4	-24.7	-25.2	-24.0
3-Feb	-25.3	-26.0	-26.6	-26.3	-26.9	-27.4	-27.4	-27.4	-27.7	-27.8	-26.8	-25.1	-23.6	-22.5	-21.7	-20.8	-21.5	-22.0	-22.8	-23.9	-24.1	-24.4	-24.9	-25.6	-24.9	-20.8
4-Feb	-26.0	-26.5	-27.6	-28.9	-29.4	-30.4	-30.7	-30.7	-30.8	-30.2	-28.9	-26.8	-24.3	-22.0	-19.4	-18.6	-18.9	-20.1	-20.9	-21.6	-21.9	-21.5	-21.1	-20.9	-24.9	-18.6
5-Feb	-20.8	-20.9	-21.3	-21.7	-22.5	-23.2	-23.8	-23.7	-23.0	-22.3	-21.0	-19.2	-18.3	-17.2	-16.0	-15.5	-15.5	-15.7	-15.7	-15.5	-15.4	-15.3	-15.2	-14.8	-18.9	-14.8
6-Feb	-14.0	-13.4	-13.6	-12.5	-12.2	-12.1	-11.5	-11.1	-10.5	-10.8	-12.8	-14.0	-14.3	-15.1	-16.0	-16.4	-17.0	-18.4	-18.8	-18.4	-17.7	-17.7	-18.1	-18.3	-14.8	-10.5
7-Feb	-18.1	-17.7	-17.4	-17.3	-17.5	-17.5	-17.8	-18.5	-18.9	-18.8	-17.1	-15.2	-14.0	-12.9	-12.5	-12.1	-12.3	-12.9	-13.7	-15.0	-15.7	-16.8	-17.7	-18.2	-16.1	-12.1
8-Feb	-18.2	-19.2	-19.3	-19.8	-21.3	-22.4	-22.8	-22.8	-23.2	-22.5	-21.6	-20.0	-18.2	-16.4	-15.3	-13.9	-13.8	-14.9	-14.8	-15.3	-16.9	-18.9	-19.8	-20.3	-18.8	-13.8
9-Feb	-21.3	-22.3	-23.2	-23.7	-24.6	-25.4	-26.0	-26.7	-27.2	-27.5	-27.4	-26.7	-26.3	-25.8	-25.5	-25.9	-25.5	-26.0	-26.5	-26.8	-28.1	-28.5	-28.8	-28.8	-26.0	-21.3
10-Feb	-29.3	-29.7	-29.5	-29.4	-29.5	-30.3	-30.2	-29.4	-29.4	-28.1	-26.4	-23.6	-21.2	-17.6	-16.4	-16.3	-16.0	-15.9	-15.9	-17.3	-18.0	-18.8	-19.6	-20.5	-23.3	-15.9
11-Feb	-21.3	-22.1	-22.7	-23.5	-23.9	-24.3	-24.7	-24.5	-24.3	-24.2	-24.2	-23.4	-22.3	-21.7	-21.3	-20.9	-21.0	-21.3	-21.3	-21.4	-21.8	-22.0	-22.1	-23.6	-22.7	-20.9
12-Feb	-23.8	-23.9	-23.9	-23.5	-23.1	-23.3	-23.2	-23.2	-22.9	-22.7	-21.9	-21.1	-20.4	-19.6	-19.2	-18.9	-18.9	-19.6	-20.3	-20.7	-20.9	-21.1	-21.3	-21.8	-21.6	-18.9
13-Feb	-22.1	-22.7	-23.7	-25.0	-26.2	-26.6	-27.0	-26.6	-27.3	-27.0	-25.8	-24.9	-23.9	-22.7	-21.8	-21.7	-21.7	-22.6	-23.3	-24.3	-25.0	-25.5	-26.8	-27.5	-24.6	-21.7
14-Feb	-28.3	-28.9	-29.6	-30.2	-30.7	-31.4	-32.0	-32.3	-32.3	-31.5	-29.6	-28.1	-26.4	-25.3	-23.8	-22.6	-22.2	-22.9	-23.5	-23.5	-24.4	-25.6	-27.1	-28.1	-27.5	-22.2
15-Feb	-28.0	-29.0	-28.9	-29.6	-29.9	-30.6	-29.4	-31.4	-30.5	-29.0	-27.3	-25.3	-23.2	-20.7	-19.8	-19.5	-19.3	-19.9	-19.9	-19.9	-20.5	-21.8	-22.4	-22.9	-24.9	-19.3
16-Feb	-23.4	-23.8	-25.1	-25.8	-26.7	-27.3	-28.0	-28.9	-29.3	-28.4	-26.9	-25.2	-23.2	-21.1	-19.5	-18.8	-18.9	-19.4	-20.1	-21.1	-22.6	-23.4	-23.8	-24.1	-23.9	-18.8
17-Feb	-24.2	-24.0	-23.9	-23.6	-23.5	-23.4	-23.4	-23.4	-23.3	-23.2	-22.6	-21.6	-20.6	-19.4	-18.2	-17.7	-17.5	-17.6	-18.5	-19.4	-20.7	-21.6	-22.5	-23.3	-21.5	-17.5
18-Feb	-23.8	-23.9	-24.6	-25.6	-26.8	-27.6	-28.1	-28.7	-28.7	-28.0	-26.1	-23.6	-21.0	-18.7	-16.9	-16.0	-15.6	-15.5	-16.1	-16.7	-17.2	-17.8	-18.5	-19.4	-21.9	-15.5
19-Feb	-20.5	-21.4	-22.2	-23.1	-23.9	-24.2	-24.5	-24.9	-24.9	-23.7	-22.1	-19.4	-17.3	-14.9	-13.8	-12.4	-11.4	-11.2	-13.1	-14.7	-14.5	-14.6	-15.2	-15.8	-18.5	-11.2
20-Feb	-16.3	-16.8	-17.4	-17.9	-18.5	-18.8	-18.8	-18.9	-18.7	-18.2	-17.4	-16.4	-15.2	-12.6	-10.7	-9.5	-8.3	-7.8	-7.4	-7.2	-8.6	-9.2	-11.5	-12.7	-13.9	-7.2
21-Feb	-13.7	-14.0	-14.0	-14.0	-13.5	-13.2	-13.6	-12.5	-12.0	-11.1	-10.5	-9.8	-8.8	-8.1	-6.9	-6.4	-6.6	-7.1	-8.0	-8.7	-9.3	-9.9	-10.6	-11.5	-10.6	-6.4
22-Feb	-11.9	-12.0	-12.1	-12.2	-12.2	-12.3	-12.2	-11.9	-11.8	-10.8	-7.6	-5.3	-4.2	-2.7	-1.4	-0.4	0.2	-0.8	-1.3	-1.9	-2.4	-2.1	-2.9	-2.2	-6.4	0.2
23-Feb	-1.0	-0.9	-0.3	1.0	1.4	1.8	1.3	1.1	1.8	2.6	-2.2	-4.9	-5.7	-6.3	-6.2	-6.4	-6.7	-7.6	-7.9	-8.6	-8.8	-9.0	-9.2	-9.6	-3.8	2.6
24-Feb	-10.1	-10.5	-10.9	-10.9	-11.1	-11.1	-11.1	-11.1	-10.8	-10.0	-8.5	-7.1	-6.1	-4.1	-3.1	-2.5	-2.3	-2.4	-2.3	-2.5	-2.8	-3.2	-4.3	-6.0	-6.9	-2.3
25-Feb	-7.3	-8.4	-8.9	-9.7	-10.5	-11.0	-11.1	-11.4	-11.6	-11.3	-10.6	-10.4	-9.5	-9.2	-8.6	-7.7	-7.3	-7.8	-8.3	-8.5	-8.6	-8.9	-9.3	-9.4	-9.4	-7.3
26-Feb	-9.3	-9.1	-8.8	-8.8	-7.9	-7.7	-7.4	-6.8	-8.3	-8.6	-7.9	-6.4	-6.1	-4.9	-3.8	-3.6	-3.9	-4.9	-5.8	-6.6	-7.3	-7.7	-7.5	-7.2	-6.9	-3.6
27-Feb	-7.3	-7.4	-7.3	-6.9	-6.6	-6.3	-6.1	-5.8	-5.3	-3.7	-3.2	-1.9	1.8	2.2	-1.5	-4.5	-5.7	-6.5	-7.4	-8.4	-9.0	-9.5	-9.8	-10.0	-5.7	2.2
28-Feb	-10.2	-10.3	-10.5	-10.5	-10.3	-10.4	-10.2	-9.9	-9.5	-9.2	-8.1	-6.9	-5.6	-4.3	-3.5	-3.4	-3.2	-3.6	-4.4	-5.1	-5.8	-6.3	-7.4	-8.3	-7.4	-3.2
	-18.7	-19.1	-19.4	-19.6	-19.9	-20.2	-20.3	-20.4	-20.3	-19.8	-19.1	-17.9	-16.7	-15.4	-14.7	-14.3	-14.2	-14.7	-15.3	-15.8	-16.4	-16.8	-17.4	-17.9	Diurnal Average	
	-1.0	-0.9	-0.3	1.0	1.4	1.8	1.3	1.1	1.8	2.6	-2.2	-1.9	1.8	2.2	-1.4	-0.4	0.2	-0.8	-1.3	-1.9	-2.4	-2.1	-2.9	-2.2	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 20m (AT20) - C

Mannix - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	321	47.77	47.77
-20 - 0	341	50.74	98.51
0 - 10	10	1.49	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Maximum Value: 2.6 C on Feb 23 09:00
Maximum Daily Average: -3.5 C on Feb 23

Minimum Value: -32.3 C on Feb 14 08:00
Minimum Daily Average: -27.8 C on Feb 14
Maximum Diurnal Average: -14.8 C at hour 17
Minimum Diurnal Average: -20.4 C at hour 9
Monthly Average: -17.98 C
Percentiles: P_1 = -30.6 P_{10} = -27.3 Q_1 = -24.6 Median = -19.9 Q_3 = -11.2 P_{90} = -6.7 P_{99} = 2.2

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

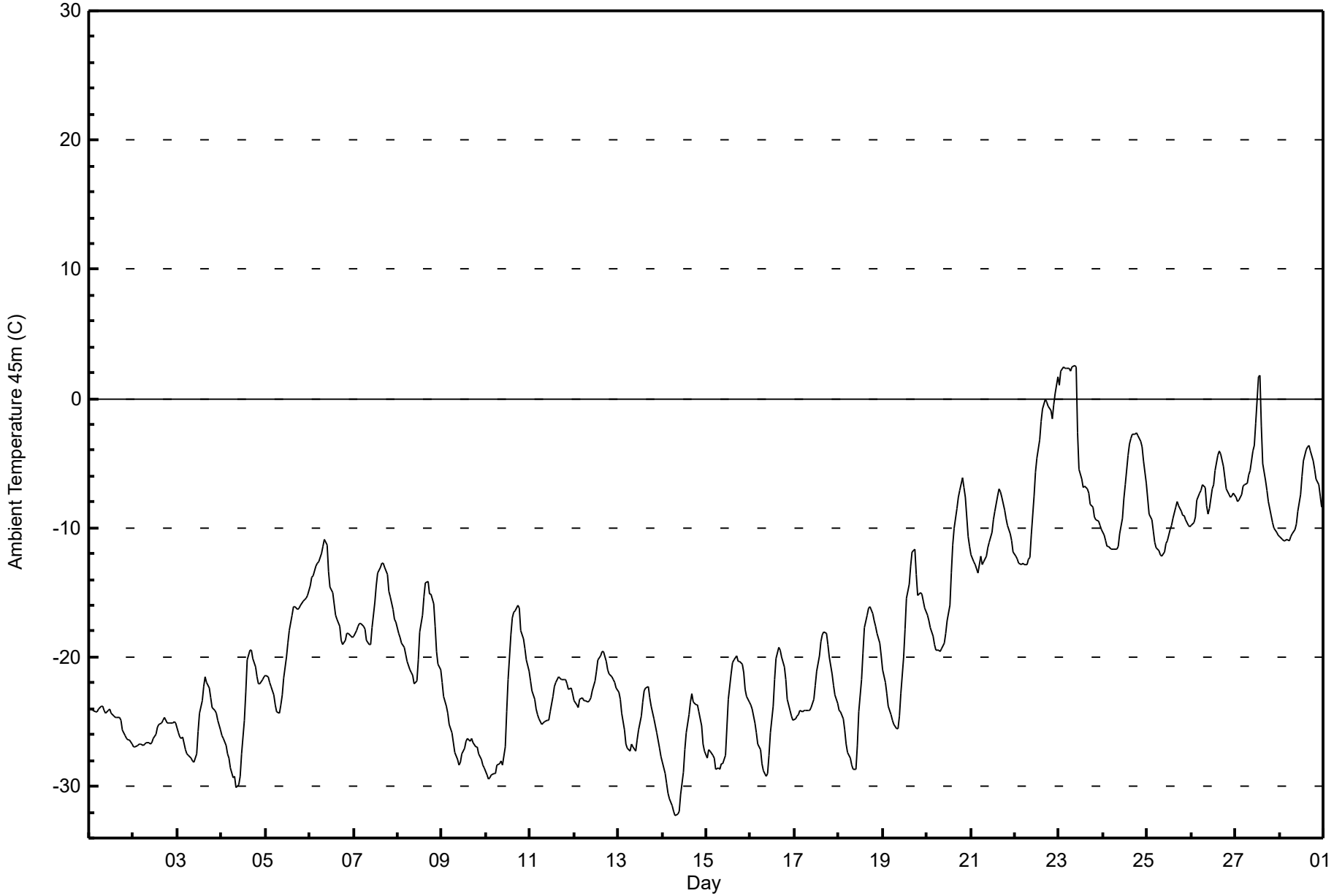
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-24.0	-24.0	-24.1	-24.2	-24.3	-24.0	-23.8	-23.8	-24.1	-24.4	-24.2	-24.0	-24.3	-24.5	-24.7	-24.6	-24.6	-24.9	-25.6	-26.0	-26.3	-26.4	-26.4	-26.8	-24.8	-23.8
2-Feb	-26.9	-26.9	-26.8	-26.8	-26.7	-26.8	-26.7	-26.6	-26.6	-26.8	-26.7	-26.3	-25.9	-25.4	-25.2	-25.1	-24.9	-24.7	-25.1	-25.2	-25.1	-25.1	-25.0	-25.2	-25.9	-24.7
3-Feb	-25.8	-26.2	-26.3	-26.2	-27.1	-27.5	-27.6	-27.8	-28.0	-28.1	-27.4	-25.8	-24.4	-23.3	-22.3	-21.5	-22.0	-22.3	-23.1	-23.9	-24.1	-24.3	-24.9	-25.6	-25.2	-21.5
4-Feb	-26.1	-26.3	-26.9	-27.5	-27.9	-28.6	-29.4	-29.2	-30.1	-29.9	-29.2	-27.4	-24.8	-22.7	-20.2	-19.4	-19.5	-20.1	-20.8	-21.6	-22.1	-22.0	-21.7	-21.6	-24.8	-19.4
5-Feb	-21.4	-21.5	-22.0	-22.3	-23.0	-23.7	-24.3	-24.3	-23.7	-22.9	-21.6	-20.0	-18.9	-17.9	-16.8	-16.1	-16.1	-16.3	-16.2	-16.0	-15.7	-15.6	-15.4	-15.2	-19.4	-15.2
6-Feb	-14.4	-13.9	-13.7	-13.0	-12.7	-12.7	-12.0	-11.5	-10.9	-11.3	-13.4	-14.6	-15.0	-15.8	-16.7	-17.0	-17.6	-18.7	-19.0	-18.7	-18.2	-18.2	-18.4	-18.4	-15.2	-10.9
7-Feb	-18.4	-17.9	-17.7	-17.5	-17.4	-17.6	-17.9	-18.8	-19.0	-19.1	-17.7	-15.7	-14.5	-13.5	-13.1	-12.7	-12.7	-13.1	-13.6	-14.9	-15.3	-16.3	-17.0	-17.3	-16.2	-12.7
8-Feb	-18.1	-18.5	-18.9	-19.3	-19.8	-20.4	-20.9	-21.2	-21.5	-22.1	-21.8	-20.2	-18.1	-16.8	-15.4	-14.3	-14.2	-15.1	-15.2	-15.8	-17.6	-19.6	-20.5	-21.0	-18.6	-14.2
9-Feb	-22.0	-23.0	-23.8	-24.3	-25.2	-25.9	-26.6	-27.4	-27.9	-28.3	-28.2	-27.5	-27.1	-26.6	-26.3	-26.6	-26.3	-26.6	-26.9	-26.9	-27.5	-28.0	-28.3	-28.6	-26.5	-22.0
10-Feb	-29.1	-29.4	-29.3	-29.1	-29.1	-29.0	-28.4	-28.2	-28.0	-28.3	-26.9	-24.2	-21.7	-18.3	-17.0	-16.5	-16.5	-16.0	-16.2	-17.9	-18.6	-19.4	-20.3	-21.1	-23.3	-16.0
11-Feb	-21.8	-22.6	-23.2	-24.0	-24.5	-24.8	-25.2	-25.1	-25.0	-24.9	-24.9	-24.2	-23.0	-22.3	-22.0	-21.6	-21.6	-21.8	-21.7	-21.8	-22.1	-22.5	-22.4	-22.8	-23.2	-21.6
12-Feb	-23.4	-23.7	-23.9	-23.3	-23.2	-23.3	-23.3	-23.5	-23.3	-23.2	-22.6	-21.8	-21.1	-20.3	-19.9	-19.6	-19.6	-20.3	-21.0	-21.3	-21.5	-21.7	-21.9	-22.4	-22.0	-19.6
13-Feb	-22.7	-23.3	-24.3	-25.7	-26.7	-27.0	-27.2	-26.8	-26.9	-27.3	-26.4	-25.6	-24.6	-23.5	-22.6	-22.4	-22.3	-23.1	-23.8	-24.8	-25.4	-25.9	-27.1	-27.7	-25.1	-22.3
14-Feb	-28.1	-29.1	-29.8	-30.5	-31.0	-31.5	-32.0	-32.3	-32.2	-31.9	-30.7	-28.9	-27.2	-25.9	-24.5	-23.4	-22.8	-23.5	-23.7	-23.7	-24.3	-25.4	-26.7	-27.3	-27.8	-22.8
15-Feb	-27.8	-27.1	-27.2	-27.6	-27.8	-28.7	-28.6	-28.7	-28.3	-28.3	-27.6	-25.4	-23.2	-21.3	-20.5	-20.2	-19.9	-20.3	-20.3	-20.5	-21.2	-22.5	-23.0	-23.5	-24.6	-19.9
16-Feb	-23.7	-24.0	-25.1	-25.9	-26.8	-27.2	-28.3	-28.8	-29.3	-29.0	-27.7	-25.8	-23.8	-21.7	-20.1	-19.3	-19.5	-20.0	-20.8	-21.7	-23.3	-24.1	-24.6	-24.8	-24.4	-19.3
17-Feb	-24.8	-24.6	-24.4	-24.2	-24.2	-24.1	-24.1	-24.1	-24.1	-23.9	-23.3	-22.1	-21.1	-19.9	-18.8	-18.3	-18.1	-18.2	-19.1	-20.0	-21.3	-22.2	-23.0	-23.6	-22.1	-18.1
18-Feb	-24.1	-24.3	-24.8	-25.7	-26.7	-27.4	-27.8	-28.4	-28.7	-28.7	-26.8	-24.2	-21.7	-19.6	-17.8	-16.8	-16.2	-16.1	-16.6	-17.1	-17.6	-18.2	-19.0	-19.9	-22.3	-16.1
19-Feb	-21.0	-22.0	-22.8	-23.8	-24.4	-24.8	-25.2	-25.6	-25.6	-24.5	-22.8	-20.0	-17.9	-15.5	-14.3	-12.9	-11.8	-11.7	-13.7	-15.2	-15.0	-15.1	-15.7	-16.2	-19.1	-11.7
20-Feb	-16.7	-17.2	-17.8	-18.4	-19.0	-19.4	-19.4	-19.6	-19.4	-18.9	-18.1	-17.2	-16.0	-13.5	-11.4	-10.0	-8.5	-7.6	-7.1	-6.1	-6.8	-7.6	-10.7	-11.4	-14.1	-6.1
21-Feb	-12.1	-12.6	-12.8	-13.2	-13.5	-12.2	-12.8	-12.7	-12.2	-11.5	-11.1	-10.4	-9.4	-8.7	-7.5	-7.0	-7.2	-7.7	-8.6	-9.2	-9.8	-10.5	-11.0	-11.8	-10.7	-7.0
22-Feb	-12.2	-12.4	-12.7	-12.8	-12.8	-12.9	-12.8	-12.5	-12.3	-10.6	-7.6	-5.7	-4.6	-3.2	-1.8	-0.8	-0.1	-0.2	-0.6	-0.9	-1.6	-0.5	0.4	1.7	-6.2	1.7
23-Feb	1.0	2.2	2.4	2.3	2.3	2.4	2.1	2.5	2.6	2.5	-2.7	-5.4	-6.2	-6.9	-6.8	-7.0	-7.3	-8.2	-8.4	-9.2	-9.4	-9.5	-9.8	-10.2	-3.5	2.6
24-Feb	-10.6	-11.0	-11.4	-11.4	-11.6	-11.7	-11.7	-11.7	-11.4	-10.5	-9.2	-7.8	-6.7	-4.4	-3.5	-3.1	-2.8	-2.8	-2.6	-2.9	-3.3	-3.7	-4.8	-6.5	-7.4	-2.6
25-Feb	-7.8	-9.0	-9.4	-10.3	-11.1	-11.6	-11.7	-12.1	-12.2	-11.9	-11.3	-11.0	-10.1	-9.8	-9.3	-8.4	-8.0	-8.2	-8.7	-9.0	-9.0	-9.4	-9.8	-10.0	-10.0	-7.8
26-Feb	-9.8	-9.6	-9.1	-7.9	-7.4	-7.0	-6.6	-6.8	-8.3	-9.0	-8.5	-7.0	-6.6	-5.5	-4.4	-4.1	-4.3	-5.3	-6.1	-7.0	-7.4	-7.7	-7.6	-7.3	-7.1	-4.1
27-Feb	-7.6	-7.9	-7.8	-7.5	-6.8	-6.7	-6.5	-5.9	-5.6	-4.1	-3.6	-1.9	1.7	1.8	-2.1	-5.1	-6.3	-7.1	-8.0	-9.0	-9.6	-10.1	-10.4	-10.6	-6.1	1.8
28-Feb	-10.7	-10.9	-11.0	-11.0	-10.9	-11.0	-10.7	-10.4	-10.1	-9.7	-8.8	-7.5	-6.0	-4.8	-4.0	-3.7	-3.6	-4.0	-4.8	-5.5	-6.2	-6.6	-7.5	-8.4	-7.8	-3.6
	-18.9	-19.2	-19.5	-19.7	-20.0	-20.2	-20.3	-20.4	-20.4	-20.2	-19.7	-18.5	-17.2	-16.1	-15.3	-14.9	-14.8	-15.1	-15.6	-16.1	-16.6	-17.1	-17.6	-18.0	Diurnal Average	
	1.0	2.2	2.4	2.3	2.3	2.4	2.1	2.5	2.6	2.5	-2.7	-1.9	1.7	1.8	-1.8	-0.8	-0.1	-0.2	-0.6	-0.9	-1.6	-0.5	0.4	1.7	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 45m (AT45) - C

Mannix - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	334	49.70	49.70
-20 - 0	324	48.21	97.92
0 - 10	14	2.08	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Maximum Value: 4.2 C on Feb 23 02:00
Maximum Daily Average: -2.9 C on Feb 23

Minimum Value: -30.9 C on Feb 14 09:00
Minimum Daily Average: -26.7 C on Feb 14
Maximum Diurnal Average: -14.4 C at hour 17
Minimum Diurnal Average: -19.4 C at hour 8
Monthly Average: -17.25 C
Percentiles: P_1 = -29.6 P_{10} = -26.2 Q_1 = -24.0 Median = -19.4 Q_3 = -10.7 P_{90} = -5.8 P_{99} = 3.1

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

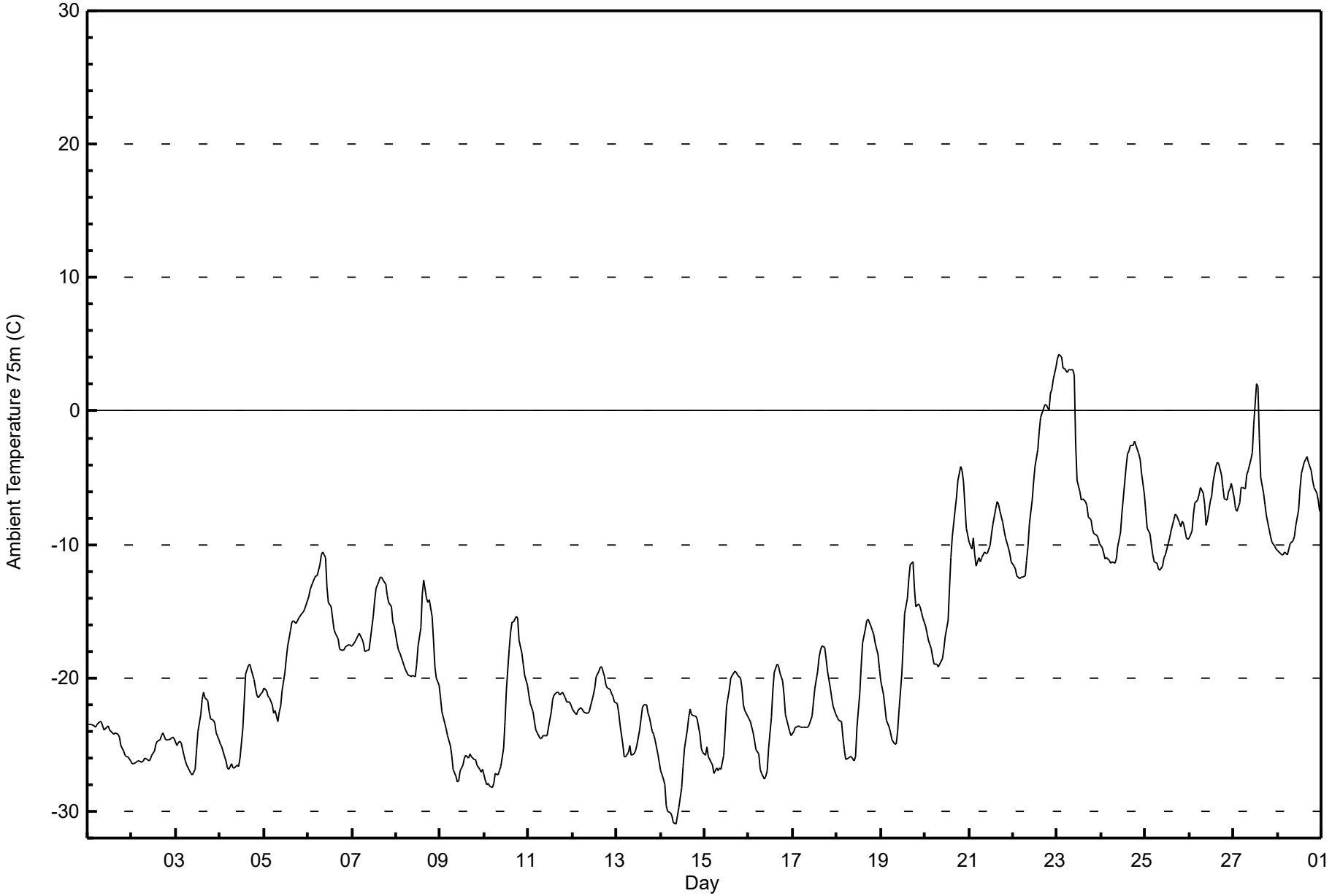
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-23.5	-23.5	-23.5	-23.6	-23.7	-23.5	-23.3	-23.3	-23.6	-23.9	-23.7	-23.6	-23.9	-24.1	-24.2	-24.2	-24.2	-24.4	-25.1	-25.5	-25.7	-25.9	-25.9	-26.3	-24.2	-23.3
2-Feb	-26.4	-26.4	-26.3	-26.2	-26.2	-26.3	-26.2	-26.1	-26.1	-26.3	-26.2	-25.8	-25.5	-25.0	-24.8	-24.6	-24.3	-24.1	-24.6	-24.7	-24.6	-24.5	-24.5	-24.5	-25.4	-24.1
3-Feb	-25.0	-24.9	-24.8	-24.8	-25.8	-26.2	-26.6	-27.0	-27.2	-27.3	-26.9	-25.4	-24.0	-22.8	-21.6	-21.0	-21.5	-21.7	-22.5	-23.1	-23.1	-23.4	-24.1	-24.6	-24.4	-21.0
4-Feb	-25.0	-25.2	-25.9	-26.3	-26.7	-26.9	-26.4	-26.7	-26.8	-26.6	-26.6	-26.0	-23.8	-21.8	-19.7	-19.0	-19.0	-19.4	-20.1	-20.8	-21.3	-21.5	-21.2	-21.0	-23.5	-19.0
5-Feb	-20.8	-20.9	-21.4	-21.5	-22.0	-22.7	-22.4	-23.3	-22.5	-22.1	-20.9	-19.6	-18.6	-17.6	-16.4	-15.8	-15.7	-15.9	-15.7	-15.5	-15.2	-15.1	-14.9	-14.6	-18.8	-14.6
6-Feb	-14.0	-13.4	-13.1	-12.6	-12.3	-12.3	-11.5	-10.8	-10.5	-11.0	-13.2	-14.3	-14.7	-15.5	-16.4	-16.7	-17.1	-17.8	-17.9	-18.0	-17.7	-17.6	-17.5	-17.6	-14.7	-10.5
7-Feb	-17.7	-17.3	-17.1	-16.9	-16.7	-17.1	-17.3	-18.1	-17.9	-18.0	-17.1	-15.4	-14.2	-13.2	-12.8	-12.4	-12.4	-12.6	-12.9	-13.9	-14.3	-14.7	-15.8	-16.1	-15.5	-12.4
8-Feb	-17.4	-17.9	-18.2	-18.7	-19.1	-19.4	-19.8	-19.8	-19.9	-19.8	-19.9	-18.9	-17.6	-16.2	-13.7	-12.6	-14.0	-14.3	-14.2	-15.3	-17.2	-19.2	-20.1	-20.5	-17.7	-12.6
9-Feb	-21.5	-22.6	-23.3	-23.8	-24.3	-25.0	-25.9	-26.8	-27.3	-27.8	-27.7	-27.0	-26.6	-26.0	-25.8	-26.0	-25.7	-25.9	-26.1	-26.1	-26.5	-26.8	-27.1	-26.8	-25.8	-21.5
10-Feb	-27.7	-28.0	-27.9	-28.1	-28.3	-27.9	-27.2	-27.2	-27.0	-26.7	-25.3	-23.2	-20.9	-17.8	-16.5	-15.8	-15.8	-15.4	-15.5	-17.2	-18.2	-19.0	-19.8	-20.6	-22.4	-15.4
11-Feb	-21.3	-21.9	-22.6	-23.3	-23.9	-24.1	-24.5	-24.5	-24.4	-24.4	-24.4	-23.7	-22.5	-21.6	-21.3	-21.1	-21.1	-21.2	-21.1	-21.2	-21.5	-21.8	-21.8	-22.0	-22.5	-21.1
12-Feb	-22.3	-22.6	-22.7	-22.4	-22.2	-22.3	-22.6	-22.7	-22.6	-22.5	-22.1	-21.3	-20.7	-19.9	-19.5	-19.2	-19.2	-19.9	-20.5	-20.8	-20.8	-21.2	-21.4	-21.8	-21.4	-19.2
13-Feb	-21.9	-22.6	-23.5	-24.9	-25.9	-25.9	-25.6	-25.1	-25.7	-25.7	-25.5	-25.0	-24.0	-23.0	-22.2	-22.0	-22.0	-22.6	-23.0	-24.1	-24.2	-24.6	-25.7	-26.3	-24.2	-21.9
14-Feb	-26.9	-27.6	-28.0	-29.6	-30.0	-30.1	-30.3	-30.8	-30.9	-30.3	-29.7	-28.2	-26.6	-25.3	-23.9	-23.0	-22.4	-22.8	-22.9	-22.9	-23.1	-24.2	-25.2	-25.5	-26.7	-22.4
15-Feb	-25.8	-25.2	-25.9	-26.3	-26.6	-27.2	-26.7	-27.0	-26.8	-26.9	-25.9	-24.1	-22.1	-20.9	-20.1	-19.8	-19.5	-19.6	-19.8	-20.0	-20.7	-22.0	-22.5	-22.8	-23.5	-19.5
16-Feb	-23.0	-23.3	-24.1	-24.8	-25.4	-25.7	-26.8	-27.1	-27.5	-27.4	-26.9	-25.3	-23.0	-21.0	-19.6	-18.9	-19.1	-19.6	-20.3	-21.2	-22.8	-23.6	-24.0	-24.3	-23.5	-18.9
17-Feb	-24.0	-23.7	-23.7	-23.6	-23.7	-23.7	-23.7	-23.7	-23.7	-23.5	-22.9	-21.8	-20.8	-19.5	-18.4	-17.9	-17.7	-17.7	-18.5	-19.5	-20.8	-21.5	-22.1	-22.8	-21.6	-17.7
18-Feb	-23.0	-23.2	-23.2	-24.5	-25.4	-26.1	-26.0	-26.0	-25.9	-26.2	-25.9	-23.7	-21.2	-19.1	-17.4	-16.4	-15.7	-15.6	-16.1	-16.5	-16.8	-17.4	-18.3	-19.3	-21.2	-15.6
19-Feb	-20.2	-21.2	-22.2	-23.2	-23.7	-24.2	-24.6	-25.0	-24.9	-24.1	-22.4	-19.7	-17.5	-15.2	-14.0	-12.6	-11.5	-11.3	-13.3	-14.7	-14.4	-14.7	-15.1	-15.6	-18.6	-11.3
20-Feb	-16.1	-16.6	-17.2	-17.9	-18.4	-18.9	-19.0	-19.2	-19.0	-18.6	-17.8	-16.8	-15.7	-13.3	-11.0	-9.4	-7.4	-6.4	-5.2	-4.2	-4.5	-5.3	-8.8	-9.3	-13.2	-4.2
21-Feb	-9.8	-10.3	-9.5	-10.8	-11.6	-11.0	-11.3	-11.0	-10.5	-10.6	-10.7	-10.1	-9.2	-8.5	-7.3	-6.8	-7.0	-7.5	-8.4	-9.0	-9.5	-10.2	-10.7	-11.3	-9.7	-6.8
22-Feb	-11.6	-11.9	-12.3	-12.5	-12.5	-12.4	-12.3	-11.2	-10.2	-8.4	-6.6	-5.3	-4.2	-2.9	-1.5	-0.5	0.2	0.4	0.5	0.0	1.4	1.7	2.3	3.4	-5.3	3.4
23-Feb	3.9	4.2	4.1	3.2	3.2	2.9	3.1	3.1	3.1	2.7	-2.5	-5.2	-6.1	-6.7	-6.6	-6.8	-7.1	-7.9	-8.1	-8.9	-9.1	-9.3	-9.6	-9.9	-2.9	4.2
24-Feb	-10.3	-10.7	-11.1	-11.0	-11.2	-11.4	-11.2	-11.4	-11.1	-10.1	-9.1	-7.6	-6.4	-4.1	-3.2	-3.0	-2.6	-2.5	-2.3	-2.6	-3.2	-3.6	-4.7	-6.3	-7.1	-2.3
25-Feb	-7.5	-8.7	-9.2	-10.0	-10.8	-11.3	-11.4	-11.8	-11.9	-11.6	-11.0	-10.7	-9.9	-9.5	-9.0	-8.2	-7.7	-7.9	-8.4	-8.7	-8.2	-8.5	-9.5	-9.6	-9.6	-7.5
26-Feb	-9.6	-9.0	-7.7	-6.9	-6.7	-6.3	-5.7	-6.2	-7.0	-8.6	-8.2	-6.8	-6.3	-5.3	-4.2	-3.8	-3.9	-4.8	-5.7	-6.6	-6.7	-6.0	-5.8	-5.4	-6.4	-3.8
27-Feb	-6.5	-7.3	-7.6	-6.9	-5.7	-5.8	-5.8	-4.8	-4.5	-3.6	-3.1	-1.0	2.0	1.9	-2.0	-5.0	-6.2	-7.0	-7.8	-8.9	-9.4	-9.9	-10.2	-10.4	-5.6	2.0
28-Feb	-10.5	-10.7	-10.8	-10.7	-10.6	-10.7	-10.3	-10.0	-9.7	-9.4	-8.6	-7.4	-5.8	-4.6	-3.8	-3.6	-3.4	-3.8	-4.5	-5.2	-5.8	-6.1	-6.6	-7.5	-7.5	-3.4
	-18.0	-18.3	-18.5	-18.9	-19.1	-19.3	-19.3	-19.4	-19.4	-19.2	-18.9	-18.0	-16.8	-15.7	-14.9	-14.5	-14.4	-14.6	-15.0	-15.5	-15.9	-16.3	-16.8	-17.1	Diurnal Average	
	3.9	4.2	4.1	3.2	3.2	2.9	3.1	3.1	3.1	2.7	-2.5	-1.0	2.0	1.9	-1.5	-0.5	0.2	0.4	0.5	0.0	1.4	1.7	2.3	3.4	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 75m (AT75) - C

Mannix - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	315	46.88	46.88
-20 - 0	337	50.15	97.02
0 - 10	20	2.98	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Maximum Value: 4.0 C on Feb 23 01:00

Maximum Daily Average: -3.8 C on Feb 23

Minimum Value: -32.3 C on Feb 14 09:00

Minimum Daily Average: -28.0 C on Feb 14

Maximum Diurnal Average: -15.6 C at hour 17

Minimum Diurnal Average: -20.6 C at hour 9

Monthly Average: -18.44 C

Percentiles: P_1 = -30.9 P_{10} = -27.7 Q_1 = -25.4 Median = -20.7 Q_3 = -11.8 P_{90} = -6.6 P_{99} = 2.5

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

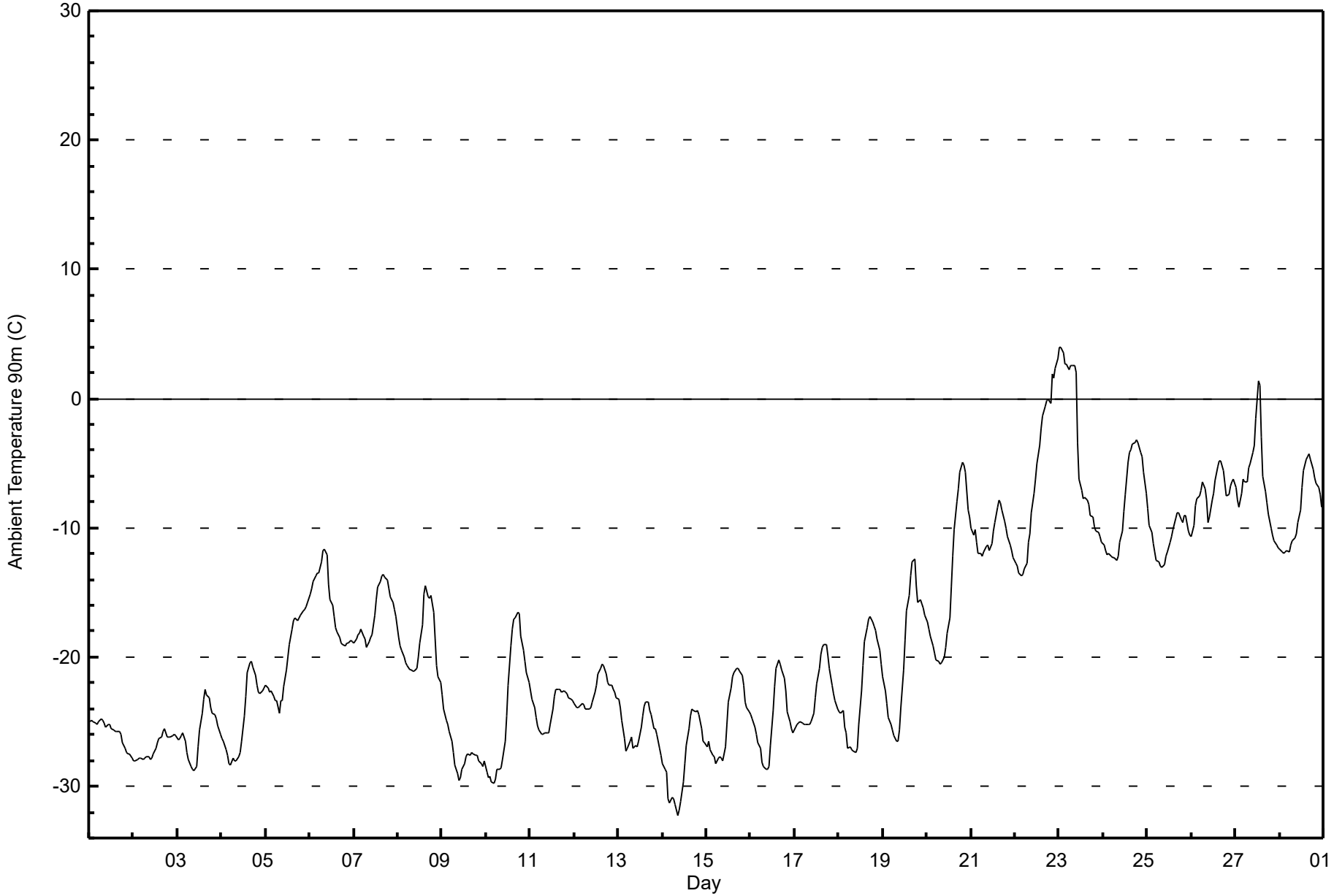
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-25.0	-24.9	-25.0	-25.1	-25.2	-25.0	-24.8	-24.8	-25.1	-25.4	-25.2	-25.2	-25.5	-25.7	-25.8	-25.7	-25.7	-26.0	-26.7	-27.1	-27.3	-27.5	-27.5	-27.9	-25.8	-24.8
2-Feb	-28.0	-28.0	-27.9	-27.8	-27.8	-27.9	-27.8	-27.7	-27.7	-27.9	-27.8	-27.4	-27.1	-26.6	-26.4	-26.2	-25.8	-25.6	-26.2	-26.2	-26.2	-26.1	-26.0	-26.0	-27.0	-25.6
3-Feb	-26.5	-26.3	-26.0	-25.9	-26.5	-27.4	-28.0	-28.5	-28.7	-28.8	-28.4	-27.0	-25.6	-24.3	-23.2	-22.5	-23.0	-23.2	-23.9	-24.4	-24.4	-24.7	-25.3	-26.0	-25.8	-22.5
4-Feb	-26.3	-26.6	-27.2	-27.6	-28.2	-28.4	-27.8	-28.1	-28.1	-27.7	-27.4	-26.5	-24.6	-23.0	-21.2	-20.5	-20.4	-20.8	-21.4	-22.2	-22.7	-22.9	-22.6	-22.4	-24.8	-20.4
5-Feb	-22.2	-22.3	-22.7	-22.6	-23.0	-23.4	-23.3	-24.3	-23.4	-23.3	-22.3	-21.0	-20.0	-19.0	-17.8	-17.1	-17.0	-17.2	-17.0	-16.7	-16.4	-16.3	-16.1	-15.8	-20.0	-15.8
6-Feb	-15.2	-14.6	-14.2	-13.7	-13.5	-13.5	-12.6	-11.8	-11.7	-12.1	-14.4	-15.6	-15.9	-16.8	-17.7	-18.0	-18.4	-19.0	-19.0	-19.2	-19.0	-18.9	-18.7	-18.9	-15.9	-11.7
7-Feb	-18.9	-18.6	-18.3	-18.1	-17.9	-18.4	-18.6	-19.3	-18.8	-18.5	-18.3	-16.7	-15.5	-14.5	-14.1	-13.7	-13.6	-13.8	-14.0	-14.7	-15.3	-15.7	-16.3	-16.9	-16.6	-13.6
8-Feb	-18.5	-19.2	-19.5	-20.0	-20.4	-20.6	-20.9	-21.0	-21.1	-21.1	-20.9	-20.0	-18.9	-17.5	-15.1	-14.4	-15.4	-15.4	-15.2	-16.6	-18.6	-20.6	-21.5	-21.9	-18.9	-14.4
9-Feb	-23.0	-24.1	-24.9	-25.3	-25.7	-26.5	-27.3	-28.4	-29.0	-29.5	-29.4	-28.6	-28.2	-27.7	-27.5	-27.6	-27.3	-27.5	-27.6	-27.6	-28.0	-28.2	-28.4	-28.0	-27.3	-23.0
10-Feb	-28.9	-29.4	-29.2	-29.6	-29.8	-29.4	-28.7	-28.7	-28.5	-28.0	-26.5	-24.6	-22.1	-19.2	-17.8	-17.0	-16.9	-16.5	-16.7	-18.3	-19.5	-20.4	-21.2	-22.0	-23.7	-16.5
11-Feb	-22.7	-23.3	-24.0	-24.7	-25.4	-25.6	-26.0	-26.0	-25.9	-25.9	-25.9	-25.2	-24.1	-23.1	-22.6	-22.5	-22.5	-22.7	-22.6	-22.7	-22.8	-23.1	-23.2	-23.3	-24.0	-22.5
12-Feb	-23.6	-23.9	-23.9	-23.8	-23.6	-23.7	-24.0	-24.0	-24.0	-23.9	-23.5	-22.8	-22.1	-21.3	-20.9	-20.6	-20.7	-21.3	-21.9	-22.2	-22.1	-22.5	-22.7	-23.1	-22.8	-20.6
13-Feb	-23.2	-23.9	-24.8	-26.3	-27.2	-27.1	-26.6	-26.2	-27.1	-26.8	-26.9	-26.5	-25.4	-24.5	-23.8	-23.4	-23.5	-24.1	-24.5	-25.5	-25.5	-26.0	-27.0	-27.6	-25.6	-23.2
14-Feb	-28.2	-28.7	-28.9	-31.0	-31.3	-30.9	-31.0	-31.4	-32.3	-31.8	-31.1	-29.7	-28.3	-26.8	-25.5	-24.6	-24.0	-24.1	-24.2	-24.2	-24.5	-25.5	-26.5	-26.6	-28.0	-24.0
15-Feb	-26.9	-26.5	-27.2	-27.6	-27.7	-28.3	-27.8	-27.7	-27.9	-28.1	-26.9	-25.3	-23.4	-22.3	-21.5	-21.2	-20.9	-20.9	-21.1	-21.4	-22.2	-23.5	-23.9	-24.2	-24.8	-20.9
16-Feb	-24.5	-24.7	-25.4	-26.0	-26.6	-27.0	-28.1	-28.5	-28.7	-28.7	-28.5	-26.8	-24.1	-22.3	-20.9	-20.3	-20.5	-21.0	-21.7	-22.7	-24.2	-25.0	-25.6	-25.8	-24.9	-20.3
17-Feb	-25.5	-25.2	-25.2	-25.0	-25.1	-25.2	-25.2	-25.2	-25.2	-25.0	-24.3	-23.2	-22.1	-20.9	-19.8	-19.3	-19.0	-19.1	-19.9	-20.9	-22.2	-22.8	-23.4	-24.0	-23.0	-19.0
18-Feb	-24.3	-24.4	-24.2	-25.5	-25.9	-27.1	-26.9	-27.2	-27.3	-27.4	-27.1	-25.2	-22.7	-20.6	-18.8	-17.7	-17.0	-16.9	-17.3	-17.6	-17.9	-18.6	-19.5	-20.6	-22.4	-16.9
19-Feb	-21.5	-22.6	-23.6	-24.6	-25.2	-25.6	-26.1	-26.5	-26.5	-25.6	-23.9	-21.0	-18.8	-16.4	-15.2	-13.7	-12.6	-12.4	-14.5	-15.8	-15.6	-15.9	-16.3	-16.7	-19.9	-12.4
20-Feb	-17.3	-17.9	-18.4	-19.1	-19.7	-20.2	-20.3	-20.6	-20.4	-20.0	-19.2	-18.2	-17.0	-14.6	-12.2	-10.2	-8.0	-7.0	-5.7	-4.9	-5.2	-5.6	-8.6	-9.1	-14.1	-4.9
21-Feb	-10.0	-10.6	-10.2	-11.1	-12.0	-11.9	-12.2	-11.9	-11.4	-11.4	-11.7	-11.2	-10.3	-9.6	-8.4	-7.9	-8.1	-8.6	-9.4	-10.0	-10.6	-11.4	-11.8	-12.3	-10.6	-7.9
22-Feb	-12.7	-12.9	-13.5	-13.7	-13.6	-13.2	-12.7	-11.1	-10.4	-8.9	-7.3	-6.2	-5.0	-3.6	-2.3	-1.4	-0.6	-0.1	0.0	-0.4	1.9	1.5	2.3	3.1	-5.9	3.1
23-Feb	4.0	4.0	3.5	2.6	2.7	2.3	2.6	2.5	2.5	2.0	-3.4	-6.2	-7.1	-7.7	-7.7	-7.9	-8.2	-9.0	-9.2	-9.9	-10.3	-10.4	-10.7	-11.1	-3.8	4.0
24-Feb	-11.3	-11.8	-12.1	-12.0	-12.2	-12.3	-12.3	-12.5	-12.2	-11.1	-10.2	-8.7	-7.5	-5.0	-4.2	-3.9	-3.5	-3.4	-3.2	-3.5	-4.2	-4.5	-5.6	-7.3	-8.1	-3.2
25-Feb	-8.5	-9.8	-10.3	-11.2	-11.9	-12.5	-12.6	-13.0	-13.1	-12.8	-12.2	-11.9	-11.1	-10.7	-10.1	-9.3	-8.8	-8.9	-9.4	-9.6	-9.1	-9.1	-10.2	-10.6	-10.7	-8.5
26-Feb	-10.6	-9.8	-8.3	-7.8	-7.5	-7.1	-6.5	-7.0	-7.9	-9.6	-9.2	-7.9	-7.4	-6.4	-5.2	-4.8	-4.8	-5.6	-6.6	-7.5	-7.4	-6.7	-6.5	-6.2	-7.3	-4.8
27-Feb	-6.9	-7.8	-8.4	-7.3	-6.3	-6.5	-6.4	-5.3	-5.0	-4.1	-3.6	-1.5	1.3	1.1	-3.0	-6.0	-7.2	-8.0	-8.9	-10.0	-10.6	-11.0	-11.4	-11.5	-6.4	1.3
28-Feb	-11.7	-11.8	-12.0	-11.9	-11.8	-11.8	-11.4	-11.0	-10.8	-10.4	-9.6	-8.6	-6.9	-5.6	-4.7	-4.5	-4.3	-4.7	-5.4	-6.1	-6.6	-6.9	-7.5	-8.4	-8.5	-4.3
	-19.2	-19.5	-19.7	-20.1	-20.3	-20.5	-20.5	-20.5	-20.6	-20.4	-20.2	-19.2	-18.0	-17.0	-16.2	-15.8	-15.6	-15.8	-16.2	-16.7	-17.0	-17.4	-17.9	-18.3	Diurnal Average	
	4.0	4.0	3.5	2.6	2.7	2.3	2.6	2.5	2.5	2.0	-3.4	-1.5	1.3	1.1	-2.3	-1.4	-0.6	-0.1	0.0	-0.4	1.9	1.5	2.3	3.1	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 90m (AT90) - C

Mannix - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	353	52.53	52.53
-20 - 0	303	45.09	97.62
0 - 10	16	2.38	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity (RH) - %

Mannix - February 2025

Maximum Value: 100 % on Feb 23 07:00

Maximum Daily Average: 90.8 % on Feb 23

Minimum Value: 37 % on Feb 18 15:00

Minimum Daily Average: 47.2 % on Feb 19

Maximum Diurnal Average: 78.0 % at hour 7

Minimum Diurnal Average: 68.3 % at hour 15

Monthly Average: 74.8 %

Percentiles: P_1 = 42 P_{10} = 60 Q_1 = 72 Median = 76 Q_3 = 80 P_{90} = 87 P_{99} = 95

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

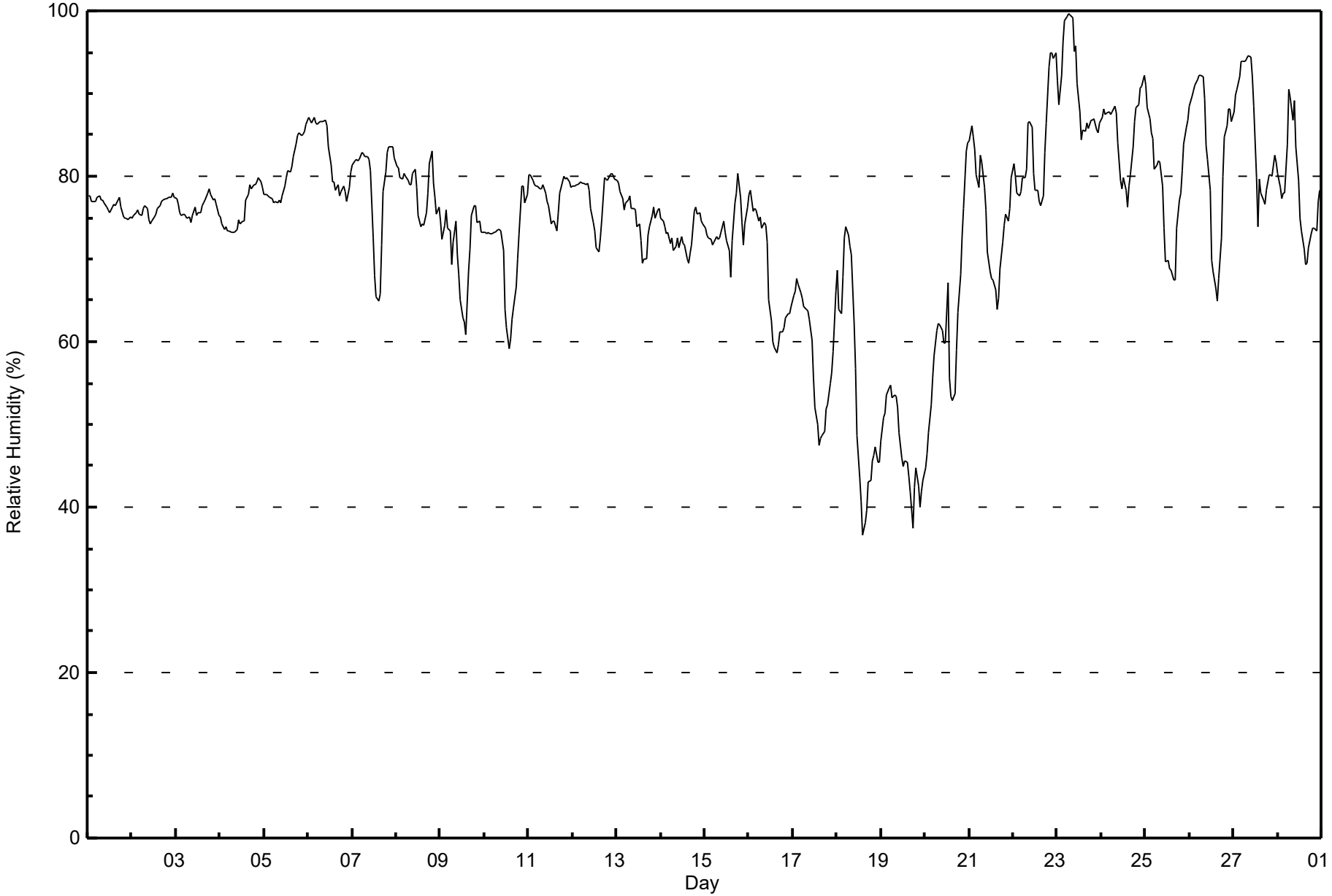
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	78	78	77	77	77	77	78	77	77	77	76	76	76	76	77	76	77	77	76	75	75	75	75	75	76.5	78
2-Feb	75	75	76	76	75	75	76	76	76	75	74	75	75	75	76	76	77	77	77	77	77	77	78	77	76.1	78
3-Feb	77	77	76	75	75	75	75	75	74	75	76	75	76	76	76	77	77	78	78	78	77	77	77	75	76.2	78
4-Feb	75	74	74	74	73	73	73	73	73	74	75	74	75	75	77	78	79	78	79	79	79	80	79	79	75.9	80
5-Feb	78	78	78	78	77	77	77	77	77	77	78	79	80	81	80	81	82	84	85	85	85	85	85	86	80.4	86
6-Feb	87	87	86	87	87	86	87	87	87	87	86	83	81	79	79	78	79	78	78	79	78	77	79	81	82.6	87
7-Feb	81	82	82	82	82	83	83	82	82	82	81	73	68	65	65	66	72	78	80	83	84	84	84	82	78.5	84
8-Feb	81	81	80	80	80	80	79	79	79	80	81	79	75	74	74	74	76	78	81	83	79	77	75	76	78.5	83
9-Feb	75	72	74	76	74	73	69	72	75	70	68	65	63	62	61	68	71	75	76	76	74	75	73	73	71.4	76
10-Feb	73	73	73	73	73	73	73	74	73	73	71	64	62	59	60	63	64	67	70	73	79	79	77	78	70.7	79
11-Feb	80	80	80	79	79	79	79	78	79	78	77	77	74	75	75	73	76	78	79	80	80	80	79	79	78.0	80
12-Feb	79	79	79	79	79	79	79	79	79	78	76	74	73	71	71	73	75	80	80	79	80	80	80	80	77.6	80
13-Feb	79	79	78	77	76	77	77	78	76	76	76	74	74	72	70	70	70	73	74	75	76	75	76	76	75.2	79
14-Feb	75	75	74	73	73	72	72	71	72	73	71	73	72	72	70	69	71	72	76	76	75	76	75	74	72.9	76
15-Feb	74	73	73	72	72	72	73	72	73	73	74	73	72	71	68	72	77	78	80	77	74	72	74	76	73.6	80
16-Feb	78	78	76	76	76	75	75	74	74	74	72	65	63	60	59	59	60	61	61	62	63	63	63	64	68.0	78
17-Feb	66	66	68	67	66	65	64	64	64	63	60	56	52	50	47	48	49	49	52	52	55	56	59	66	58.5	68
18-Feb	69	64	63	68	73	74	73	72	70	62	57	49	44	41	37	38	40	43	43	46	46	47	45	45	54.5	74
19-Feb	48	51	51	54	54	55	53	54	53	52	49	46	45	46	46	44	42	37	42	45	43	40	42	43	47.2	55
20-Feb	45	46	49	52	56	58	61	62	62	61	60	60	67	56	53	53	54	59	64	68	73	76	83	84	60.9	84
21-Feb	84	86	85	83	80	79	83	82	79	76	71	68	68	67	66	64	65	69	72	74	75	75	76	80	75.3	86
22-Feb	81	80	78	78	78	80	80	81	86	87	86	80	78	78	77	76	78	83	87	93	95	95	94	95	83.5	95
23-Feb	92	89	92	96	99	99	100	100	99	95	96	91	88	84	86	85	86	86	87	87	87	86	85	86	90.8	100
24-Feb	87	88	87	88	88	87	88	88	88	84	80	78	80	78	76	79	80	84	87	88	89	91	91	92	85.2	92
25-Feb	91	88	87	85	85	81	81	82	82	79	74	70	70	69	69	68	68	74	77	78	81	84	86	87	78.9	91
26-Feb	88	90	90	91	92	92	92	92	89	84	82	78	70	69	66	65	68	73	80	85	86	88	88	87	82.7	92
27-Feb	88	90	91	92	94	94	94	94	95	94	92	88	80	74	80	78	77	77	78	80	80	80	82	82	85.6	95
28-Feb	80	79	77	78	78	84	90	89	87	89	84	79	75	73	71	69	69	71	73	74	74	73	77	78	78.1	90
	77.3	77.0	76.9	77.3	77.5	77.7	78.0	78.0	77.9	76.7	75.1	72.2	70.5	68.9	68.3	68.6	69.9	72.0	74.1	75.3	75.7	75.8	76.4	77.0	Diurnal Average	
	92	90	92	96	99	99	100	100	99	95	96	91	88	84	86	85	86	86	87	93	95	95	94	95	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity (RH) - %

Mannix - February 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	4	0.60	0.60
40 - 60	63	9.38	9.97
60 - 80	432	64.29	74.26
80 - 100	173	25.74	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 20m (RH20) - %

Mannix - February 2025

Maximum Value: 98 % on Feb 23 07:00

Maximum Daily Average: 87.9 % on Feb 23

Minimum Value: 33 % on Feb 19 18:00

Minimum Daily Average: 44.3 % on Feb 19

Maximum Diurnal Average: 75.4 % at hour 8

Minimum Diurnal Average: 64.1 % at hour 16

Monthly Average: 71.2 %

Percentiles: P_1 = 37 P_{10} = 56 Q_1 = 66 Median = 73 Q_3 = 78 P_{90} = 85 P_{99} = 93

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

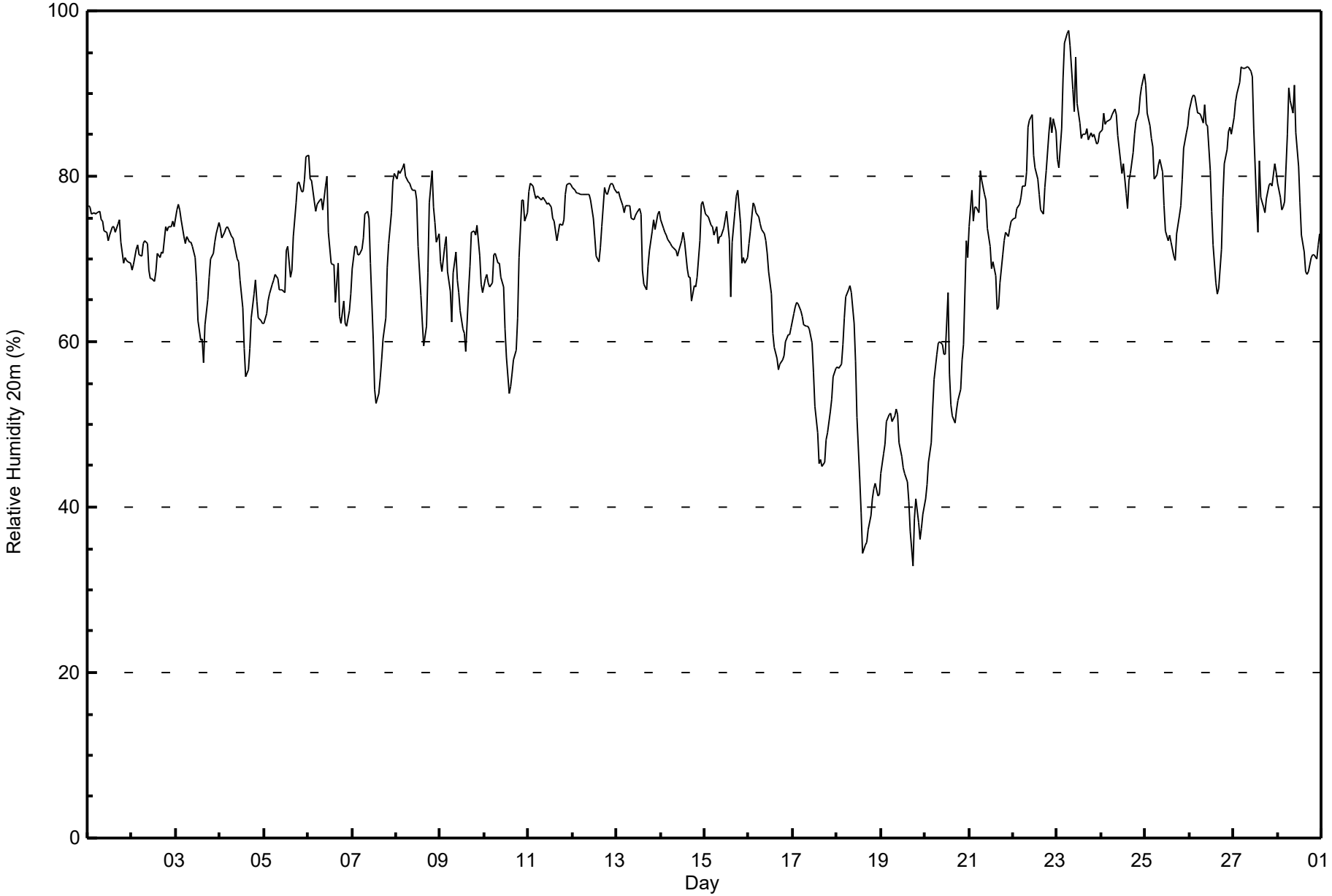
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	76	76	75	76	75	76	76	75	75	73	73	72	73	74	74	73	74	75	72	69	70	70	70	70	73.4	76
2-Feb	69	69	71	72	71	70	72	72	72	69	68	68	67	68	71	70	71	71	74	73	74	74	75	74	71.0	75
3-Feb	76	77	76	75	73	72	73	72	72	71	70	67	62	60	60	58	62	65	68	70	71	72	73	74	69.6	77
4-Feb	74	73	73	74	74	74	73	72	72	70	70	67	64	59	56	57	59	63	66	67	65	63	63	62	67.0	74
5-Feb	62	63	65	66	67	68	68	68	66	66	66	66	71	72	68	69	73	77	79	79	78	78	80	82	70.7	82
6-Feb	83	80	79	77	76	77	77	77	76	79	80	73	69	69	69	65	69	63	62	65	62	62	64	66	71.6	83
7-Feb	69	72	72	71	71	71	72	75	76	75	70	60	54	53	54	56	58	60	63	69	72	76	79	80	67.7	80
8-Feb	80	81	80	81	81	80	79	79	79	78	78	77	71	66	62	60	62	68	77	81	76	74	72	73	74.8	81
9-Feb	70	69	72	73	68	66	62	68	71	68	66	64	62	61	59	66	69	73	73	73	74	70	67	66	67.9	74
10-Feb	68	68	67	67	67	70	71	70	70	68	67	61	58	54	55	56	58	59	63	70	77	77	75	76	66.2	77
11-Feb	78	79	79	78	77	78	77	77	77	77	77	77	76	75	75	72	73	74	74	75	78	79	79	79	76.7	79
12-Feb	79	78	78	78	78	78	78	78	78	78	77	75	73	70	70	71	74	79	78	78	79	79	79	79	76.7	79
13-Feb	78	78	77	77	76	77	76	76	75	75	75	76	76	75	69	67	66	69	71	73	75	73	75	76	74.2	78
14-Feb	75	74	73	73	72	72	72	71	71	70	71	72	73	72	69	68	68	65	67	67	68	72	77	77	71.2	77
15-Feb	75	75	75	74	74	73	74	72	73	73	74	75	76	72	65	72	76	78	78	74	70	70	70	70	73.2	78
16-Feb	72	73	77	77	76	75	74	74	73	72	71	68	66	61	59	58	57	57	58	58	60	61	61	62	66.6	77
17-Feb	63	64	65	65	64	63	62	62	62	62	60	56	52	49	45	46	45	45	48	49	52	53	56	57	56.0	65
18-Feb	57	57	57	60	63	65	66	67	66	62	58	51	43	39	34	36	36	37	39	41	42	43	41	41	50.1	67
19-Feb	44	46	48	50	51	51	50	51	52	51	48	46	45	44	43	41	37	33	39	41	38	36	37	39	44.3	52
20-Feb	41	43	45	48	52	55	59	60	60	60	59	58	66	56	52	51	50	52	53	54	58	60	72	70	55.5	72
21-Feb	74	78	75	76	76	76	81	79	78	77	74	71	69	70	68	64	64	67	70	72	73	73	74	75	73.1	81
22-Feb	75	75	76	77	77	79	79	81	86	87	87	83	81	80	78	76	75	79	81	85	87	85	87	86	80.9	87
23-Feb	82	81	86	92	96	97	98	96	91	88	94	89	87	85	85	85	86	84	85	85	85	84	84	85	87.9	98
24-Feb	86	88	86	87	87	87	87	88	88	85	82	80	82	78	76	80	80	83	85	87	88	90	91	92	85.0	92
25-Feb	91	88	86	84	84	80	80	81	82	80	76	73	72	73	72	70	70	73	75	77	80	83	85	86	79.3	91
26-Feb	88	89	90	90	88	88	88	87	89	86	86	81	76	72	67	66	67	71	77	82	83	86	86	85	81.9	90
27-Feb	87	89	90	91	93	93	93	93	93	93	92	86	77	73	82	78	76	76	77	79	79	79	81	80	84.6	93
28-Feb	79	77	76	76	77	85	91	89	88	91	85	81	77	73	71	68	68	69	70	71	70	70	72	73	77.0	91
	73.2	73.6	73.9	74.3	74.4	74.8	75.3	75.4	75.3	74.4	73.3	70.5	68.5	66.2	64.6	64.1	65.1	66.6	68.7	70.2	70.8	71.1	72.3	72.7	Diurnal Average	
	91	89	90	92	96	97	98	96	93	93	94	89	87	85	85	85	86	84	85	87	88	90	91	92	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 20m (RH20) - %

Mannix - February 2025



Relative Humidity 20m (RH20) - %

Mannix - February 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	13	1.93	1.93
40 - 60	88	13.10	15.03
60 - 80	453	67.41	82.44
80 - 100	118	17.56	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 45m (RH45) - %

Mannix - February 2025

Maximum Value: 96 % on Feb 23 06:00

Maximum Daily Average: 86.5 % on Feb 23

Minimum Value: 32 % on Feb 19 18:00

Minimum Daily Average: 43.5 % on Feb 19

Maximum Diurnal Average: 74.9 % at hour 9

Minimum Diurnal Average: 64.3 % at hour 16

Monthly Average: 70.8 %

Percentiles: P_1 = 36 P_{10} = 55 Q_1 = 65 Median = 72 Q_3 = 78 P_{90} = 86 P_{99} = 94

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

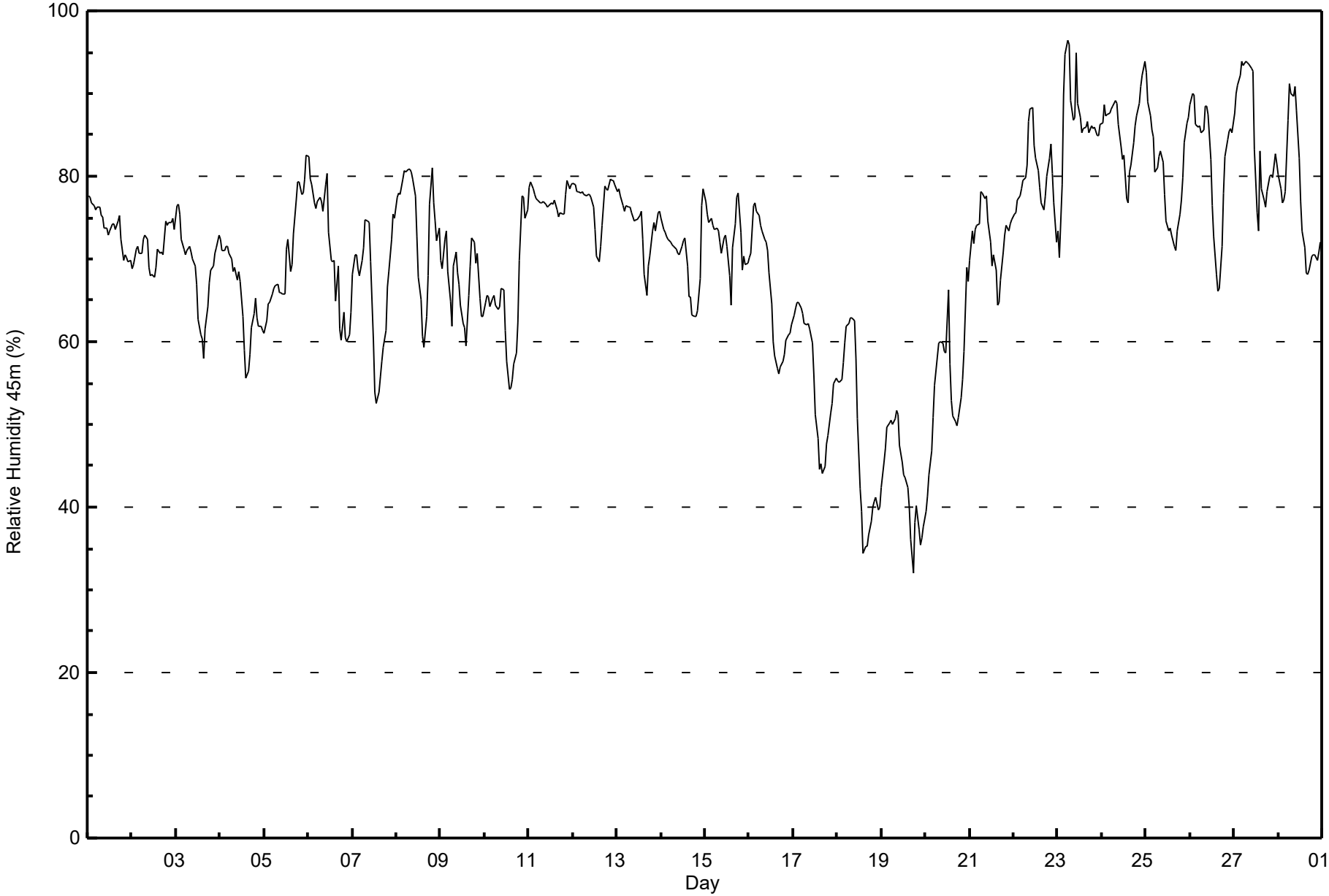
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	78	77	77	76	76	76	76	75	75	74	74	73	73	74	74	73	75	75	72	70	71	70	70	70	73.9	78
2-Feb	69	69	71	72	71	71	72	73	72	69	68	68	68	69	71	71	71	71	74	74	74	74	75	74	71.3	75
3-Feb	76	77	75	72	71	71	71	71	71	70	69	67	63	61	60	58	62	64	67	69	69	71	71	73	68.7	77
4-Feb	72	71	71	72	72	71	70	68	69	67	69	67	63	59	56	56	59	62	63	65	63	62	62	61	65.4	72
5-Feb	61	63	65	65	66	66	67	67	66	66	66	66	71	72	69	69	73	77	79	79	78	78	80	83	70.4	83
6-Feb	82	80	79	77	76	77	77	77	76	79	80	73	70	70	70	65	69	62	60	64	61	60	61	64	71.1	82
7-Feb	68	71	71	69	68	70	71	75	75	74	70	60	54	53	54	56	58	59	61	67	69	72	75	75	66.4	75
8-Feb	77	78	78	80	81	81	81	81	80	80	78	73	68	65	61	59	63	68	77	81	77	75	72	74	74.4	81
9-Feb	70	69	72	73	69	65	62	69	71	68	67	64	62	62	59	66	69	73	72	70	71	65	63	63	67.2	73
10-Feb	65	66	65	64	65	66	64	64	64	66	66	61	58	54	54	55	57	59	62	70	78	78	75	76	64.7	78
11-Feb	79	79	79	78	77	77	77	77	77	77	76	76	77	77	77	76	75	76	75	75	78	79	79	79	77.1	79
12-Feb	79	79	78	78	78	78	78	78	78	78	77	76	74	70	70	72	74	79	78	78	80	80	79	79	77.0	80
13-Feb	78	78	78	77	76	76	76	76	76	75	75	75	75	76	72	68	66	69	70	73	74	73	76	76	74.3	78
14-Feb	75	74	73	73	72	72	72	71	71	71	70	71	72	73	69	65	66	63	63	63	64	68	76	78	70.3	78
15-Feb	77	75	74	75	74	74	74	73	72	71	73	73	71	68	64	71	74	77	78	73	69	70	69	70	72.5	78
16-Feb	70	71	76	77	76	75	74	73	72	72	71	68	65	60	58	57	56	57	58	58	60	61	61	62	66.2	77
17-Feb	63	64	65	65	64	63	62	62	62	62	60	56	51	48	45	45	44	45	48	49	51	52	55	56	55.7	65
18-Feb	55	55	55	57	60	62	62	63	63	63	58	51	42	39	34	35	35	37	38	40	41	41	40	40	48.6	63
19-Feb	42	45	47	50	50	50	50	51	52	51	47	45	44	43	42	40	36	32	38	40	37	35	36	38	43.5	52
20-Feb	40	41	44	47	51	55	58	60	60	60	59	59	66	57	53	51	50	50	51	53	55	59	69	67	54.8	69
21-Feb	70	73	72	74	74	74	78	78	77	78	75	72	69	70	69	64	65	68	71	73	74	73	74	75	72.5	78
22-Feb	75	76	77	78	78	80	80	81	87	88	88	84	82	81	79	77	76	78	80	82	84	80	77	72	79.9	88
23-Feb	73	70	79	90	95	96	96	89	87	87	95	89	87	85	86	86	87	85	86	86	86	85	85	86	86.5	96
24-Feb	86	89	87	87	88	88	88	89	89	86	84	82	83	77	77	80	81	84	86	87	89	91	92	94	86.1	94
25-Feb	92	89	87	86	85	80	81	82	83	82	78	75	73	74	73	72	71	73	75	77	80	84	86	87	80.3	92
26-Feb	89	90	90	86	86	86	85	86	88	88	87	82	76	73	68	66	66	71	78	82	84	85	86	85	81.9	90
27-Feb	88	90	91	92	94	93	94	94	94	93	93	83	76	73	83	78	77	76	78	80	80	80	83	82	85.2	94
28-Feb	80	78	77	77	78	87	91	90	90	91	88	82	77	73	71	68	68	69	70	71	70	70	71	72	77.5	91
	72.5	72.8	73.3	73.7	73.9	74.3	74.6	74.8	74.9	74.5	73.6	70.4	68.2	66.3	65.0	64.3	65.1	66.3	68.3	69.6	70.2	70.4	71.4	71.7	Diurnal Average	
	92	90	91	92	95	96	96	94	94	93	95	89	87	85	86	86	87	85	86	87	89	91	92	94	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 45m (RH45) - %

Mannix - February 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	17	2.53	2.53
40 - 60	86	12.80	15.33
60 - 80	451	67.11	82.44
80 - 100	118	17.56	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 75m (RH75) - %

Mannix - February 2025

Maximum Value: 96 % on Feb 23 06:00

Maximum Daily Average: 88.1 % on Feb 24

Minimum Value: 32 % on Feb 19 18:00

Minimum Daily Average: 43.6 % on Feb 19

Maximum Diurnal Average: 74.7 % at hour 8

Minimum Diurnal Average: 65.5 % at hour 16

Monthly Average: 71.2 %

Percentiles: P_1 = 36 P_{10} = 56 Q_1 = 64 Median = 73 Q_3 = 78 P_{90} = 87 P_{99} = 94

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

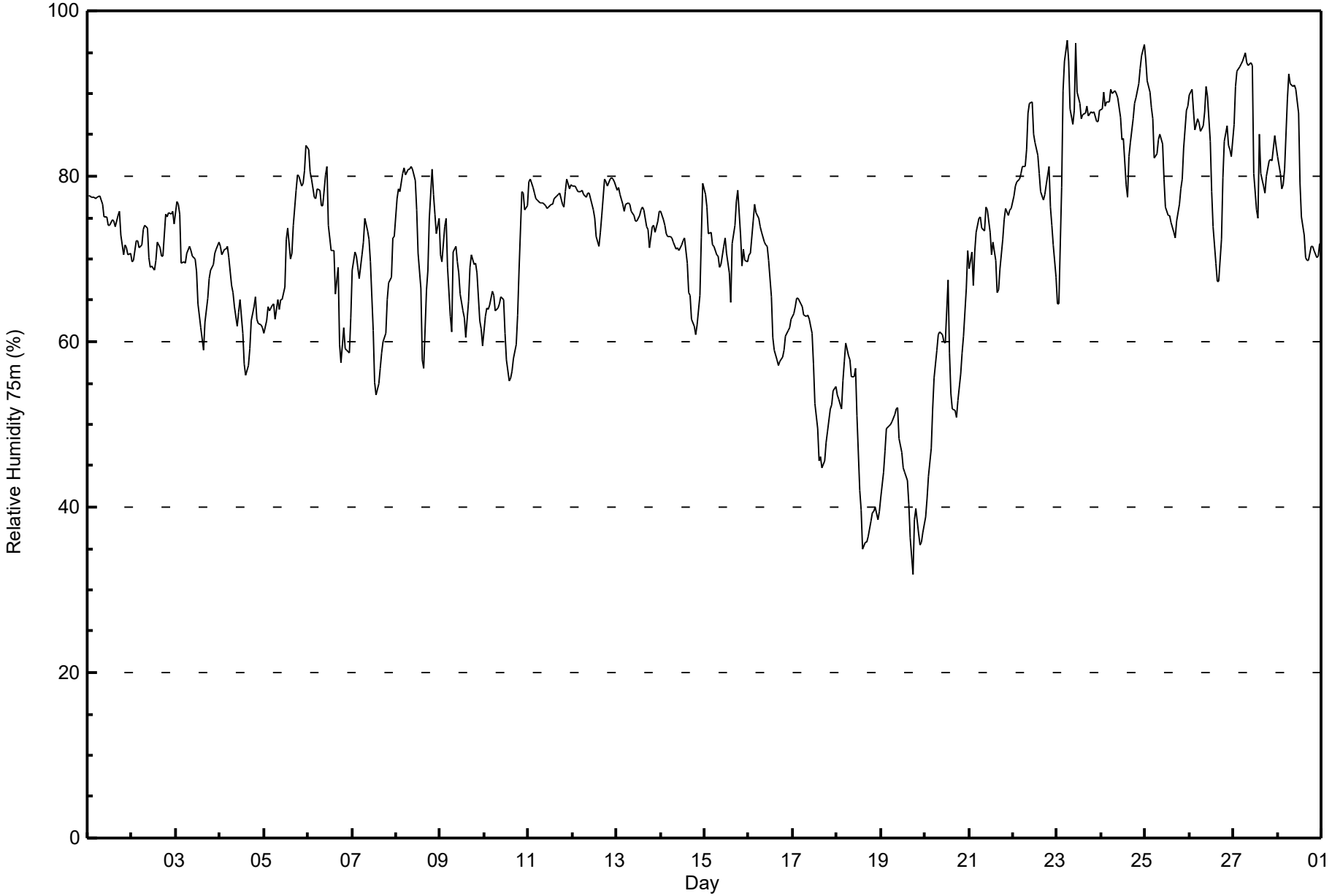
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	78	78	77	77	77	78	78	77	77	75	75	74	74	75	75	74	75	76	73	70	72	71	71	71	74.9	78
2-Feb	70	70	72	72	71	72	74	74	74	70	69	69	69	70	72	71	70	70	75	75	76	75	76	74	72.1	76
3-Feb	77	77	75	70	70	69	71	71	71	70	70	69	65	62	60	59	62	65	68	69	69	71	71	72	68.8	77
4-Feb	72	70	71	71	72	70	67	66	64	62	64	65	61	57	56	57	59	62	64	65	63	62	62	62	64.4	72
5-Feb	61	63	64	64	64	64	63	65	64	65	65	67	72	74	70	71	74	78	80	80	79	79	81	84	70.4	84
6-Feb	83	81	80	77	77	78	78	76	77	80	81	74	71	71	71	66	69	60	57	62	59	59	59	63	71.2	83
7-Feb	69	71	70	69	68	70	72	75	73	72	70	61	55	54	55	57	59	60	61	65	67	68	73	73	66.1	75
8-Feb	77	78	78	80	81	80	81	81	81	81	79	76	71	66	58	57	66	69	75	81	78	75	73	75	74.9	81
9-Feb	70	70	74	75	69	63	61	71	72	70	68	66	64	63	61	65	69	70	69	70	68	63	61	59	67.1	75
10-Feb	63	64	64	64	66	66	64	64	65	65	65	61	58	55	56	57	58	60	63	69	78	78	76	77	64.8	78
11-Feb	79	80	79	78	77	77	77	77	77	76	76	76	77	77	77	78	78	78	77	76	78	80	79	79	77.5	80
12-Feb	79	79	78	78	78	78	78	77	78	78	77	76	75	73	72	73	75	80	79	79	80	80	80	79	77.5	80
13-Feb	78	79	78	77	76	77	77	77	76	75	75	75	75	76	76	76	74	74	71	74	74	73	75	76	75.5	79
14-Feb	76	75	74	73	73	73	73	72	71	71	71	72	72	73	69	66	66	63	62	61	62	66	73	79	70.1	79
15-Feb	78	76	73	73	72	72	71	70	69	69	72	73	71	68	65	72	74	77	78	73	69	71	70	70	71.9	78
16-Feb	71	71	75	77	76	75	74	73	72	72	72	70	65	60	59	58	57	58	58	59	61	61	62	63	66.5	77
17-Feb	63	64	65	65	65	64	63	63	63	63	61	57	53	49	46	46	45	46	48	49	52	52	54	55	56.3	65
18-Feb	54	53	52	55	58	60	58	58	56	56	57	51	42	40	35	36	36	37	38	39	40	40	38	39	46.9	60
19-Feb	41	44	47	49	50	50	50	51	52	52	48	47	45	44	43	40	36	32	39	40	37	35	36	37	43.6	52
20-Feb	39	41	44	47	52	56	59	61	61	61	60	60	67	59	54	52	52	51	53	56	59	61	66	71	55.8	71
21-Feb	69	71	67	71	73	75	75	74	73	76	76	73	71	72	70	66	66	69	72	75	76	75	76	76	72.4	76
22-Feb	78	79	79	80	80	81	81	83	88	89	89	85	84	83	80	78	77	78	79	81	76	74	72	68	80.1	89
23-Feb	65	65	79	90	94	96	94	88	86	88	96	90	89	87	87	88	89	87	88	88	88	87	87	88	86.8	96
24-Feb	88	90	89	89	89	91	90	90	90	89	87	84	85	79	77	82	84	87	89	89	91	93	95	96	88.1	96
25-Feb	94	91	90	88	87	82	83	84	85	84	80	76	75	75	74	73	72	75	77	78	80	83	88	89	81.9	94
26-Feb	90	91	88	86	87	86	85	86	88	91	90	84	78	74	70	67	67	72	80	84	86	84	83	82	82.5	91
27-Feb	86	91	93	93	94	94	95	94	93	94	93	80	76	75	85	80	79	78	80	82	82	82	85	84	86.1	95
28-Feb	82	80	78	79	81	89	92	91	91	91	91	88	79	75	73	70	70	70	72	72	71	70	70	72	79.0	92
	72.5	72.8	73.3	73.9	74.1	74.5	74.4	74.7	74.5	74.5	74.1	71.4	69.2	67.3	65.9	65.5	66.4	67.1	68.8	70.0	70.3	70.3	71.0	71.8	Diurnal Average	
	94	91	93	93	94	96	95	94	93	94	96	90	89	87	87	88	89	87	89	89	91	93	95	96	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 75m (RH75) - %

Mannix - February 2025



Relative Humidity 75m (RH75) - %

Mannix - February 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	19	2.83	2.83
40 - 60	90	13.39	16.22
60 - 80	434	64.58	80.80
80 - 100	129	19.20	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 90m (RH90) - %

Mannix - February 2025

Maximum Value: 97 % on Feb 23 11:00

Maximum Daily Average: 89.4 % on Feb 24

Minimum Value: 31 % on Feb 19 18:00

Minimum Daily Average: 42.6 % on Feb 19

Maximum Diurnal Average: 74.8 % at hour 8

Minimum Diurnal Average: 66.2 % at hour 16

Monthly Average: 71.4 %

Percentiles: P_1 = 35 P_{10} = 55 Q_1 = 64 Median = 73 Q_3 = 79 P_{90} = 88 P_{99} = 94

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

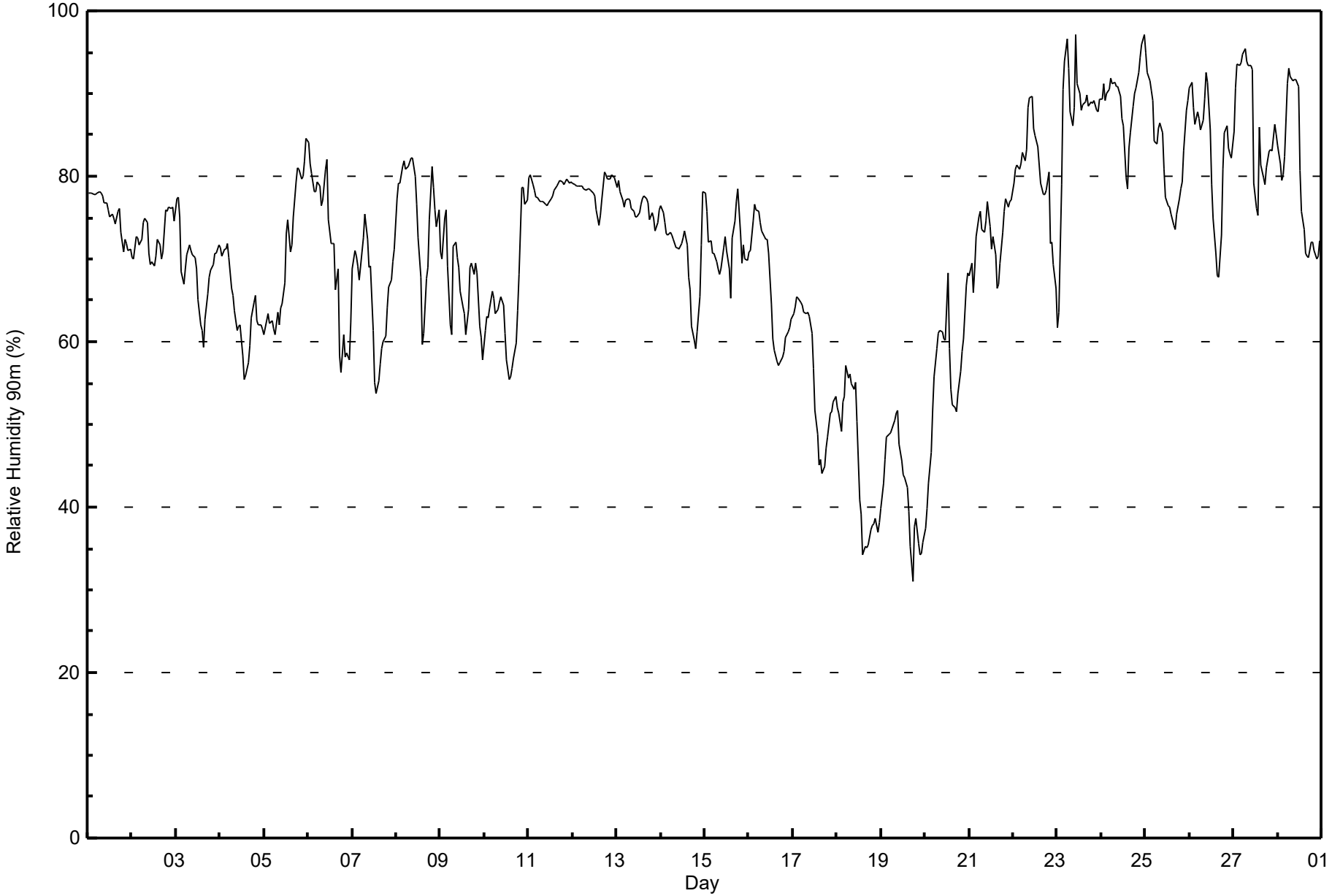
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	78	78	78	78	78	78	78	78	78	77	77	76	75	75	75	74	76	76	73	71	72	72	71	71	75.5	78
2-Feb	70	70	73	73	72	72	74	75	74	71	69	70	69	70	72	72	70	71	76	76	76	76	76	75	72.6	76
3-Feb	77	77	75	68	67	69	71	72	71	70	70	69	65	62	61	59	63	66	68	69	69	71	71	72	68.8	77
4-Feb	71	70	71	71	72	70	66	66	64	61	62	62	58	55	56	57	59	63	65	66	63	62	62	62	64.0	72
5-Feb	61	62	63	62	63	62	61	64	62	64	65	67	73	75	71	72	75	79	81	81	80	80	82	85	70.3	85
6-Feb	84	81	80	78	78	79	79	76	77	81	82	75	72	72	72	66	69	58	56	61	58	59	58	62	71.5	84
7-Feb	69	71	70	69	68	71	73	75	72	69	69	61	55	54	55	57	59	60	61	64	67	67	70	71	65.7	75
8-Feb	77	79	79	81	82	81	81	82	82	82	80	77	73	68	60	61	68	69	75	81	79	76	74	76	75.9	82
9-Feb	71	70	75	76	69	62	61	72	72	70	69	66	64	63	61	64	69	69	68	70	68	62	61	58	67.1	76
10-Feb	61	63	63	64	66	65	63	64	65	65	64	61	58	55	56	57	58	60	64	68	79	79	77	77	64.7	79
11-Feb	80	80	79	78	78	77	77	77	77	77	76	77	77	78	78	79	79	79	79	79	79	80	79	79	78.3	80
12-Feb	79	79	79	79	79	79	78	78	79	78	78	78	78	76	74	75	77	80	80	80	80	80	80	80	78.5	80
13-Feb	79	79	78	77	76	77	77	77	76	76	75	75	76	77	77	78	77	77	75	76	75	73	74	76	76.4	79
14-Feb	76	76	74	73	73	73	73	72	71	71	71	72	73	73	72	68	66	62	60	59	61	65	72	78	70.3	78
15-Feb	78	76	72	72	71	71	70	69	68	69	71	73	71	69	65	73	75	77	78	73	69	72	70	70	71.7	78
16-Feb	71	71	75	77	76	76	74	73	73	72	72	71	65	60	59	58	57	58	58	59	61	61	62	63	66.7	77
17-Feb	63	64	65	65	65	64	63	63	64	63	61	57	52	49	45	46	44	45	47	49	51	52	53	53	56.0	65
18-Feb	52	51	49	53	53	57	56	56	55	54	55	50	41	39	34	35	35	35	37	38	38	39	37	38	45.4	57
19-Feb	40	43	46	49	49	49	50	50	51	52	48	46	44	43	42	40	35	31	38	39	36	34	34	36	42.6	52
20-Feb	37	40	43	47	52	56	59	61	61	61	60	60	68	59	54	52	52	52	54	57	59	60	67	68	55.8	68
21-Feb	68	69	66	69	73	75	76	74	73	75	77	74	71	73	70	66	67	69	73	76	77	76	77	77	72.6	77
22-Feb	79	81	81	81	81	83	82	83	88	89	90	86	85	84	81	79	78	78	78	81	72	72	69	66	80.3	90
23-Feb	62	64	79	91	94	97	93	88	86	88	97	91	90	88	89	89	90	89	89	89	89	88	88	89	87.3	97
24-Feb	89	91	89	90	91	92	91	91	91	91	90	87	86	80	79	83	85	88	90	91	92	94	96	97	89.4	97
25-Feb	95	93	92	90	89	84	84	86	86	85	81	77	76	76	75	74	74	75	77	78	79	83	88	89	82.9	95
26-Feb	91	91	88	86	88	87	86	87	89	93	91	86	79	75	71	68	68	73	81	85	86	83	83	82	83.2	93
27-Feb	85	91	94	93	94	95	95	94	93	93	93	79	76	75	86	81	80	79	81	83	83	83	86	85	86.6	95
28-Feb	84	82	80	80	82	91	93	92	92	92	92	91	81	76	74	71	70	70	72	72	71	70	70	72	79.9	93
	72.4	73.0	73.4	73.9	74.1	74.7	74.4	74.8	74.7	74.7	74.5	71.9	69.7	67.9	66.6	66.2	67.0	67.5	69.1	70.2	70.3	70.3	70.9	71.7	Diurnal Average	
	95	93	94	93	94	97	95	94	93	93	97	91	90	88	89	89	90	89	90	91	92	94	96	97	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 90m (RH90) - %

Mannix - February 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	23	3.42	3.42
40 - 60	84	12.50	15.92
60 - 80	421	62.65	78.57
80 - 100	144	21.43	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 20m (WS20) - km/h

Mannix - February 2025

Maximum Speed: 27 km/h on Feb 8 22:00

Maximum Daily Speed Average: 18.9 km/h on Feb 19

Minimum Speed Value: 0 km/h on Feb 22 10:00

Minimum Daily Speed Average: 0.1 km/h on Feb 15

Maximum Diurnal Speed Average: 2.3 km/h at hour 7

Minimum Diurnal Speed Average: 0.3 km/h at hour 17

Monthly Average Velocity: 0.5 km/h 101.0 deg

Percentiles: P_1 = 1 P_{10} = 3 Q_1 = 6 Median = 9 Q_3 = 13 P_{90} = 18 P_{99} = 24

Hours in Service:	672
Hours of Data:	671
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-Feb	NNE18	N19	NNE24	NNE22	NNE23	N24	N23	N23	N22	N18	N16	N14	NNW18	NNW18	NNW18	NNW17	NW15	NNW17	NNW19	NNW19	N19	N21	N24	NNW22	N18.8	N24
2-Feb	NNW23	NNW23	N23	N26	NNE25	N17	N13	N13	N15	N21	N20	N15	NNW14	NNW16	NNW15	NNW13	N12	N11	NNE10	NNE10	NNE10	NNE10	N7	NW6	N14.7	N26
3-Feb	WSW2	SW5	W8	W9	WSW10	W6	SW2	WSW4	WSW6	SW7	SW4	SW4	SSW5	SSE6	SE5	WSW7	WSW11	SW11	WSW12	WSW13	WSW14	WSW12	WSW10	SW7	WSW6.8	WSW14
4-Feb	SSW8	SSW9	S10	SSE13	SSE11	SSE12	SSE11	SSE14	SSE15	SSE17	SSE15	SSE13	SSE11	SSE13	S11	SSW11	SSW11	S11	S11	S9	SSW11	SSW10	SSW9	SSW9	S10.9	SSE17
5-Feb	S11	S11	SSE12	SSE14	S15	SSE12	SSE11	SSE12	S11	SSE10	SSE8	SSW6	SW9	SW8	SW11	SW9	WSW11	SW11	SW8	SW10	WSW9	WSW12	WSW11	SW6	SSW8.5	S15
6-Feb	WSW9	SW8	SSW5	WSW10	WSW7	W9	WNW12	WNW15	WNW15	NW13	NNE21	NNE23	N24	N19	N16	NNW16	NNW13	NW12	NW11	WNW8	NW10	W11	W9	SW8	NW8.7	N24
7-Feb	WSW8	WSW10	WSW9	SW10	WSW12	SW5	WSW11	WSW9	WSW10	WSW9	WSW5	WSW8	WSW10	WSW11	WSW10	WSW10	SW8	SW8	SW11	WSW8	W9	W12	WSW10	SW6	WSW8.9	W12
8-Feb	SSE7	SSE7	S7	S8	SSE10	SSE10	SSE9	SSE10	SSE9	SSE8	SSE6	SSE5	SSE4	SE4	ESE2	ESE1	WSW2	NNE4	NNE12	NNE14	NNE23	NNE27	NNE27	N17	ENE2.7	NNE27
9-Feb	NNW22	N21	N15	N11	NNW12	NNW14	N9	N3	NNE5	NE8	NE9	NNE15	N11	NNW8	WNW9	WNW11	WNW7	WNW6	NW4	NW5	W9	W9	W10	W12	NNW7.6	NNW22
10-Feb	WSW10	SW7	SSW8	S9	S9	SSE11	SSE11	SSE10	SSE11	SSE9	SSE9	SSE9	SSE8	SSW7	S5	ESE4	ESE4	E2	NNE6	NNE13	NNE13	NNE14	NNE16	NNE11	SE2.7	NNE16
11-Feb	NNW6	NNW8	N10	NNW3	NNW4	WNW7	NW8	NNW7	NNW8	N10	NNE9	N6	N2	WSW2	WSW3	WSW3	SSE2	SW4	SSW4	WSW2	N2	E2	S2	SW4	NNW3.1	N10
12-Feb	WSW2	SSW4	SSE5	SSE4	SE2	S4	SSE6	SSE6	SSE2	S2	ESE2	ESE2	ESE4	ESE4	E5	E4	N5	N10	N12	N11	N7	N9	N7	N7	NE1.6	N12
13-Feb	N11	N11	N11	NNE8	NW4	N5	NNE6	N6	WNW5	NW6	NW7	NW9	WNW10	NW9	NW10	NW8	N10	N13	N16	NNE18	NNE15	NNE12	N9	N7	N8.3	NNE18
14-Feb	N6	N10	N5	NW4	NNW3	NW3	WNW3	WNW4	W4	WSW2	E2	NW4	WNW4	W6	W5	SW4	SSW1	E4	SSE7	SE6	ENE2	SW2	NNW1	NW4	NW1.5	N10
15-Feb	WSW1	W2	SSE5	SSE8	SSE4	SE3	SSE4	S4	SSW3	S2	SSE2	SE2	S0	WNW12	WNW9	WNW7	W3	SE3	ESE2	NE6	NNE8	NE8	NNE6	NNE5	ENE0.1	WNW12
16-Feb	E2	WNW1	SSE3	SE4	SE7	SSE9	SSE11	S9	SSE11	SSE11	SSE10	SSE9	SSE8	SSE9	SE11	SE16	SE15	SE15	SE17	SE20	SE18	SE17	SE20	SE15	SE10.8	SE20
17-Feb	SSE13	SSE14	SSE10	SE14	SE18	SE17	SE20	SE19	SE17	SE18	SE17	SE15	SE17	SE18	SE20	SE17	SE17	SE14	SE16	SE21	SE19	SE17	SSE13	SSE10	SE16.2	SE21
18-Feb	SSE9	SE11	SSE13	SSE11	SSE12	SSE12	SSE13	SSE11	SSE9	SSE12	SSE10	SSE11	SSE12	S9	S10	SSE12	SSE11	SE15	SE20	SE17	SE16	SE16	SE16	SE15	SSE12.5	SE20
19-Feb	SE15	SE14	SE18	SE16	SE15	SE17	SE24	SE20	SE20	SE20	SE24	SE19	SSE15	SE16	SE23	SE17	SE16	SE20	SE23	SE24	SE24	SE20	SE18	SE18	SE18.9	SE24
20-Feb	SSE16	SSE17	SSE17	SSE16	SSE18	SSE18	SSE16	SSE17	S16	S16	S14	S13	S11	S10	SSE9	SE6	SSE9	SE6	ESE4	SE3	SSE4	SE3	NE7	SE5	SSE10.5	SSE18
21-Feb	S5	SSE4	SE2	WSW2	SSW1	N2	N8	N5	NNE4	NW5	NW7	NW7	WNW11	NW9	NW9	N10	N9	N9	N11	N12	N10	N9	N7	NNW8	NNW5.3	N12
22-Feb	N8	NNW6	NNW5	NNW5	N4	NW4	NW4	NNW3	W6	NW0	SSE7	SE8	SSE6	SSE8	SSE8	SSE9	SSE9	SSW6	SSE5	SSE8	SSE10	SSE11	SSE11	SSE11	SSE3.1	SSE11
23-Feb	SSE7	SSE10	SSE11	SSE9	SSE11	SSE8	SSE10	SSE5	W2	WNW12	N20	N21	N20	N18	NNE18	NNE15	N13	NNE14	N7	N7	NNE4	NNE4	NE7	NE7	NNE4.7	N21
24-Feb	NNE6	N9	NNE8	NW4	NNW4	NNW4	NNW6	N3	WSW3	SW2	SSW3	SSE6	SSE9	SE7	SSE9	SSE9	W4	NE3	NNE5	NNE6	NNE7	NNE8	N12	N14	NNE2.4	N14
25-Feb	N14	N13	N13	N15	N15	NNE17	N8	NNW9	NNW9	NNW9	NNW6	NW9	N6	NW9	WNW8	NW5	NW7	NW7	N7	NNW5	NNE6	NW8	NNW8	WNW8	NNW8.4	NNE17
26-Feb	W3	SSW3	S5	SSE8	SSW6	S7	S5	WNW4	NNW11	NNW4	NNW8	N7	NW8	WNW6	NNW4	WNW8	NW10	NNW9	NNW8	NNW5	NNW4	NW4	NNW4	N5	NW3.3	NNW11
27-Feb	WNW5	W8	NW2	WNW3	ESE1	W4	NNW2	SSW2	SW4	UO	WSW3	WSW8	WNW21	NW27	N20	NNE22	NNE15	NNE13	NNE12	NNE12	NNE13	NNE11	NE10	NNE7	NNW6.6	NW27
28-Feb	NE6	NE6	NNE5	NNE4	ESE1	SSW4	E3	E5	S1	S3	SE8	SE9	SE12	SE8	SSE9	SE11	SE13	SE13	SE14	SE14	SE13	SE13	SSE13	SSE12	SE6.9	SE14
	NNW0.8	N0.5	E1.2	SSE1.4	SSE1.9	SSE1.8	SSE2.3	SSE2.0	S1.4	SSE1.6	E1.8	E1.0	W1.0	WNW1.5	WSW0.5	WNW0.3	NW0.3	ENE0.9	ENE1.9	ENE2.2	NE2.1	NNE1.7	NNE1.7	NNW0.5	Diurnal Average	
	NNW23	NNW23	NNE24	N26	NNE25	N24	SE24	N23	N22	N21	SE24	NNE23	N24	NW27	SE23	NNE22	SE17	SE20	SE23	SE24	SE24	NNE27	NNE27	NNW22	Diurnal Maximum	

UO - Unstable Operation

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

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 20m (WS20) - km/h

Mannix - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 9 km/h on Feb 27 14:00

Minimum Value: 1 km/h on Feb 7 23:00

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

Hours in Service:	672
Hours of Data:	671
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-Feb	5	5	5	6	6	6	6	6	7	6	6	4	5	5	5	5	4	5	6	5	6	9	8	7	9
2-Feb	7	7	6	6	7	7	4	4	5	7	6	5	4	5	4	3	3	3	3	3	2	3	2	2	7
3-Feb	1	2	3	1	1	4	1	1	1	2	1	1	3	1	2	5	2	1	2	2	1	2	4	2	5
4-Feb	1	3	1	2	1	2	2	3	2	3	4	3	3	3	4	4	3	2	1	2	3	3	3	3	4
5-Feb	3	3	2	2	2	2	2	2	3	2	2	3	4	3	3	3	3	3	2	2	2	1	1	1	4
6-Feb	2	3	2	4	3	3	4	3	3	4	6	7	7	6	5	4	4	2	2	2	3	1	2	1	7
7-Feb	1	2	1	1	3	2	3	2	2	2	3	2	2	3	3	3	2	2	2	1	2	2	1	2	3
8-Feb	2	2	2	1	2	1	1	2	2	2	2	2	1	1	1	1	1	2	3	4	7	7	7	5	7
9-Feb	6	6	5	3	4	4	3	2	1	2	3	4	4	3	2	2	2	1	1	1	1	1	1	2	6
10-Feb	2	1	1	2	1	1	1	2	1	2	2	2	2	3	3	2	2	1	3	2	3	3	3	4	4
11-Feb	2	3	5	2	2	2	2	2	2	4	3	2	2	1	1	1	1	1	1	1	1	1	1	2	5
12-Feb	1	1	1	2	1	2	2	2	1	1	1	1	1	2	2	2	4	3	3	2	2	2	2	2	4
13-Feb	3	3	4	2	1	3	2	2	2	2	2	2	2	2	2	2	2	3	4	3	3	3	2	2	4
14-Feb	2	2	3	1	1	1	1	1	1	1	1	2	2	1	1	1	1	2	2	2	1	1	1	2	3
15-Feb	1	3	2	2	1	1	1	1	1	1	1	1	3	3	3	2	2	1	1	2	5	3	2	1	5
16-Feb	1	1	1	1	2	2	2	1	1	2	2	2	2	2	3	4	4	4	4	5	5	5	5	6	6
17-Feb	3	3	2	3	4	5	5	5	5	5	5	4	4	5	5	6	4	4	4	5	5	4	3	2	6
18-Feb	2	4	2	2	1	1	2	2	2	2	2	2	3	3	3	2	2	5	4	4	4	3	4	3	5
19-Feb	3	4	4	4	4	5	5	5	6	6	6	6	4	5	6	5	4	5	6	6	6	4	4	4	6
20-Feb	3	3	3	3	4	3	3	3	5	5	5	4	4	4	2	2	2	2	1	1	2	1	1	2	5
21-Feb	2	2	2	1	1	3	3	2	2	2	3	2	3	3	3	3	3	3	3	3	3	3	2	2	3
22-Feb	2	2	2	2	2	1	2	2	2	1	4	3	2	2	3	3	2	2	2	1	3	2	2	1	4
23-Feb	3	2	2	1	2	1	2	2	2	3	5	7	7	6	4	5	4	3	3	3	2	2	2	3	7
24-Feb	2	2	2	1	2	1	2	2	2	1	2	3	3	2	2	2	2	1	2	2	2	2	4	4	4
25-Feb	4	4	4	4	5	5	4	3	3	3	2	3	2	2	4	2	2	2	2	2	1	2	2	2	5
26-Feb	2	1	1	2	2	1	2	2	3	3	3	3	2	2	2	2	2	3	2	2	1	2	1	2	3
27-Feb	2	4	3	1	2	4	2	4	4	UO	3	2	9	9	5	5	5	4	4	4	4	4	5	2	9
28-Feb	2	2	1	2	2	2	2	1	1	1	2	2	3	3	3	3	3	3	3	3	3	3	2	2	3
	7	7	6	6	7	7	6	6	7	7	6	7	9	9	6	6	5	5	6	6	7	9	8	7	
	Diurnal Maximum																								

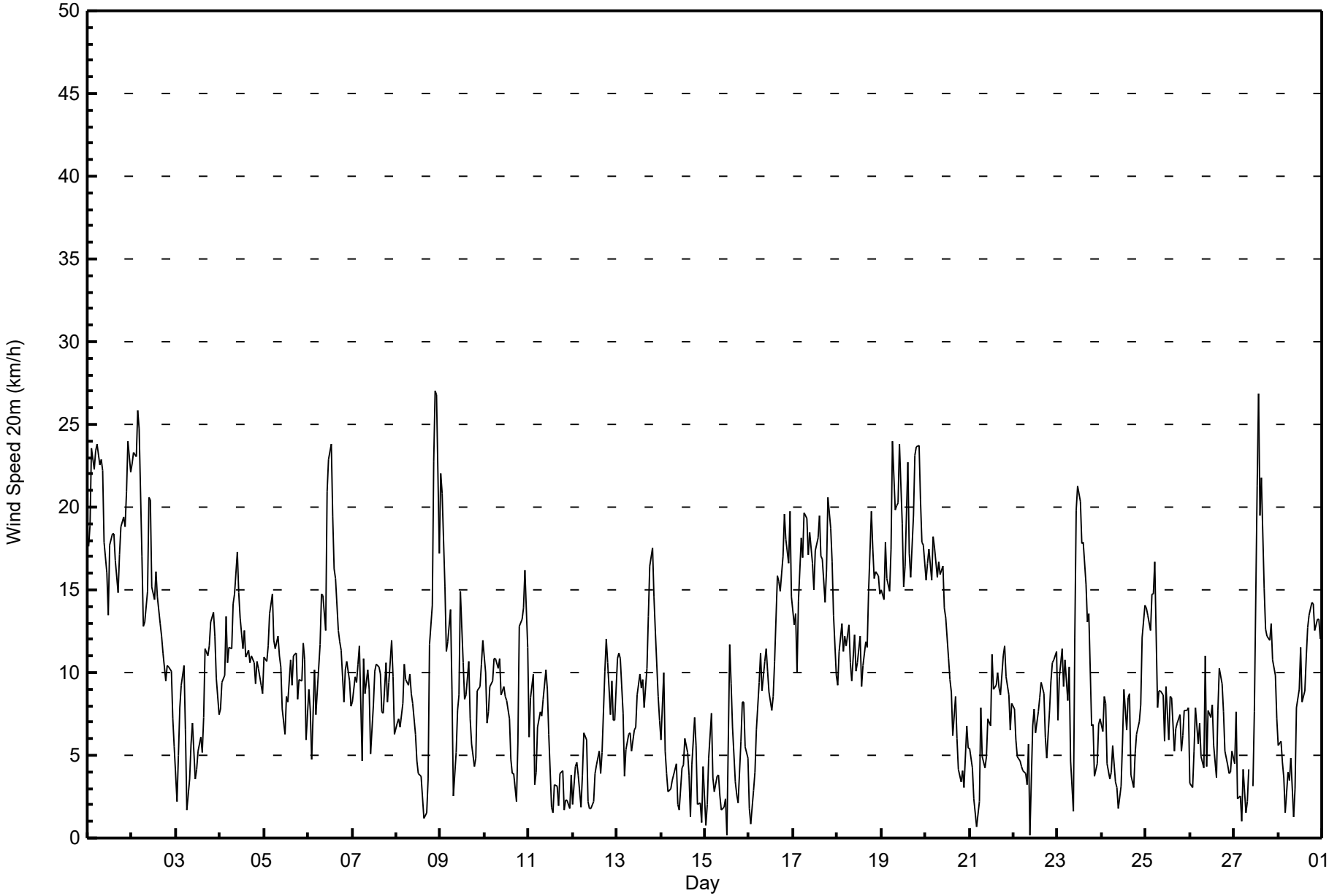
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 20m (WS20) - km/h

Mannix - February 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	164	24.44	24.44
6 - 11	293	43.67	68.11
12 - 19	165	24.59	92.70
20 - 28	49	7.30	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 671

Total Number of Hours: 672



Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 20m (WS20) - km/h

Mannix - February 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	10	1	1	8	14	10	15	12	11	11	14	8	8	15	16	164
6 - 11	37	19	10	0	0	0	12	72	17	13	19	28	12	14	21	19	293
12 - 19	27	21	0	0	0	0	47	34	5	0	0	6	2	5	3	15	165
20 - 28	16	10	0	0	0	0	17	0	0	0	0	0	0	1	1	4	49
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	90	60	11	1	8	14	86	121	34	24	30	48	22	28	40	54	671

Total Number of Valid Hours: 671

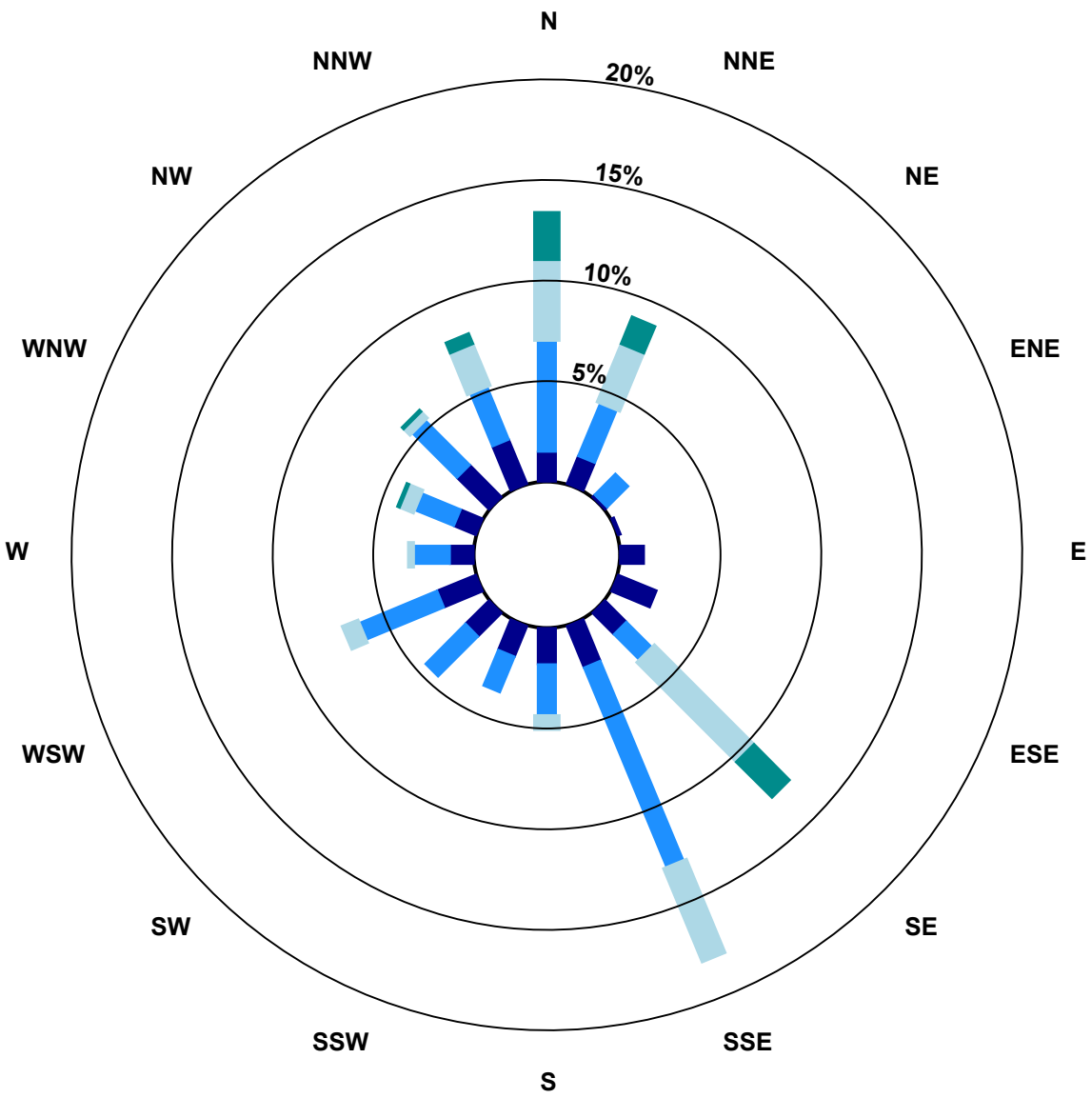
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 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: 671

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 45m (WS45) - km/h

Mannix - February 2025

Maximum Speed: 35 km/h on Feb 8 23:00

Maximum Daily Speed Average: 25.2 km/h on Feb 1

Minimum Speed Value: 1 km/h on Feb 11 20:00

Minimum Daily Speed Average: 2.2 km/h on Feb 10

Maximum Diurnal Speed Average: 2.6 km/h at hour 20

Minimum Diurnal Speed Average: 0.3 km/h at hour 3

Monthly Average Velocity: 0.3 km/h 26.3 deg

Percentiles: P_1 = 1 P_{10} = 4 Q_1 = 8 Median = 12 Q_3 = 18 P_{90} = 23 P_{99} = 31

Hours in Service: 672

Hours of Data: 671

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-Feb	N23	N25	N31	N29	N31	N32	N30	N31	N31	N26	N20	N17	NNW23	NNW24	NNW25	NNW22	NW19	NNW22	NNW25	NNW26	N25	N28	N32	NNW29	N25.2	N32
2-Feb	NNW31	NNW31	N31	N34	N33	N23	N17	N18	N20	N27	N27	N21	NNW19	NNW20	NNW19	NNW17	NNW17	N15	NNE12	NNE13	NNE13	N13	N11	NNW7	N19.6	N34
3-Feb	W4	WSW9	W15	W13	W15	W11	W6	W8	W10	WSW11	SW5	SW5	SSW7	S7	SSE5	WSW10	WSW16	SW16	WSW16	WSW20	WSW20	WSW18	WSW15	WSW11	WSW10.5	WSW20
4-Feb	SW11	SW12	SSW13	SSW14	SSW13	S15	S18	S19	SSE20	SSE20	SSE18	SSE16	SSE13	SSE14	S16	SSW18	SSW18	S18	S18	SSW16	SSW19	SSW17	SSW15	SSW14	S15.0	SSE20
5-Feb	S18	S16	S15	S18	S20	S17	S16	SSE16	S14	SSE12	S10	SSW10	SW11	SW10	SW14	SW11	WSW15	SW15	SW13	SW14	WSW14	WSW16	WSW15	WSW10	SSW11.7	S20
6-Feb	WSW13	SW12	SW8	WSW15	WSW10	W12	WNW17	WNW21	WNW20	NW16	NNE26	N29	N29	N25	N21	NNW20	NNW18	NW18	NW18	WNW12	NW14	WNW13	W14	WSW12	NW12.5	N29
7-Feb	WSW13	W15	WSW13	WSW15	WSW18	WSW8	WSW17	WSW13	W16	WSW14	WSW8	WSW10	WSW12	WSW12	WSW12	WSW13	SW10	SW10	WSW16	WSW14	W15	W19	WSW15	WSW13	WSW13.2	W19
8-Feb	SSW7	SSW4	SW8	SSW8	SSW9	SSW9	S9	SSE10	SSE12	SSE12	SSE9	SE5	SE4	SE3	SE2	ESE1	WSW1	N6	NNE17	NNE19	N30	N34	N35	N23	NNE2.8	N35
9-Feb	NNW29	N27	N19	N16	NNW18	NNW21	N13	N4	NNE6	NE9	NNE10	NNE17	N13	NNW10	WNW10	WNW12	WNW9	NW7	NNW8	NNW8	W10	WNW16	W17	W19	NNW10.8	NNW29
10-Feb	WSW16	WSW13	SW12	SW13	SSW10	SSW10	S10	SSW11	S14	S12	SSE10	SSE9	SSE9	SSW11	SSW7	ESE3	E4	NNE2	NNE7	NNE16	NNE17	NNE18	NNE21	N16	SSW2.2	NNE21
11-Feb	N9	NNW13	N14	N6	NNW6	NW7	NNW9	NNW10	NNW11	N13	N11	N7	N2	WSW1	WSW3	WSW3	SE2	SSW3	S4	S1	N2	ENE4	ESE2	S6	NNW4.1	N14
12-Feb	S7	S9	S9	SSE8	ESE3	SSE4	SSE9	SE7	ESE3	SSE2	ESE2	ESE2	E4	E5	E6	E4	N6	N14	N16	N14	N11	N14	N10	N10	NE2.3	N16
13-Feb	N15	N16	N15	N10	NNW4	N9	NNE11	NNE11	N7	NW8	NW7	NW10	NW11	NW11	NW11	NW10	N14	N18	N24	NNE23	NNE21	NNE19	N15	N11	N11.9	N24
14-Feb	N10	N12	N8	N5	NNW6	NNW8	NNW6	NNW6	WNW6	WNW4	NNW2	NW6	WNW5	W6	WSW6	SW5	SSW2	ESE5	SE8	SE8	SE4	S3	NNW1	NW7	NNW2.5	N12
15-Feb	WNW6	W8	WSW5	SW8	WSW7	WSW5	W5	WSW9	WSW12	W9	WSW3	SSW3	W5	WNW14	WNW11	WNW8	W5	ESE2	E3	NE7	NNE11	NE11	NNE7	NE7	WNW3.5	WNW14
16-Feb	ENE3	ENE3	SE3	SE6	SE10	SE12	SE16	SE14	SE16	SSE14	SSE12	SSE10	SSE8	SSE9	SE13	SE18	SE18	SE17	SE21	SE24	SE22	SE21	SE24	SE19	SE13.5	SE24
17-Feb	SE17	SE18	SE14	SE19	SE23	SE20	SE24	SE23	SE21	SE22	SE20	SE17	SE20	SE20	SE21	SE19	SE20	SE17	SE20	SE24	SE23	SE22	SSE20	SSE14	SE19.7	SE24
18-Feb	SSE15	SE17	SE18	SE16	SSE17	SSE19	SSE20	SSE18	SSE17	SSE15	SSE11	SSE12	SSE14	SSE11	S13	SSE13	SSE14	SE19	SE25	SE23	SE23	SE23	SE23	SE21	SSE17.1	SE25
19-Feb	SE22	SE20	SE23	SE20	SE20	SE23	SE29	SE25	SE25	SE25	SE28	SE22	SE18	SE19	SE27	SE22	SE20	SE24	SE27	SE27	SE29	SE25	SE25	SE25	SE23.7	SE29
20-Feb	SE22	SSE22	SSE24	SSE22	SSE25	SSE23	SSE20	SSE20	S21	S21	S20	S18	S16	S13	SSE9	SSE7	SSE10	SE10	SE10	SE8	SSE6	SSE4	NNE6	ESE5	SSE14.2	SSE25
21-Feb	SSE11	S11	SE4	NNW1	WSW2	ENE1	NNE14	N10	NNE8	NNW6	NW8	NW8	WNW12	NW11	NW11	N12	N11	N11	N15	N16	N14	N12	N10	NNW12	NNW6.8	N16
22-Feb	N12	N10	NNW7	NNW6	N5	NW5	NW5	NNW4	W6	E3	SE12	SE10	SE9	SSE11	SSE12	SSE12	SSE12	S12	SSE9	SSE12	SSE17	SSE20	SSE16	SSE18	SSE5.3	SSE20
23-Feb	SSE14	SSE18	SSE18	SSE14	S17	SSE14	S16	SW8	W9	WNW17	N27	N28	N26	N23	N23	N20	N16	N17	N9	N9	NNE5	NNE5	NE8	NE9	N4.5	N28
24-Feb	NNE7	N11	NNE10	NW5	NNW5	NNW5	NNW7	N4	WSW3	S2	SSW3	SSE7	SE11	SE8	SE10	SSE11	W5	NNE3	NNE7	NNE8	NNE9	NNE10	N15	N17	NNE3.0	N17
25-Feb	N18	N18	N17	N19	N20	N22	N10	NNW11	NNW11	NNW11	NNW7	NNW11	N7	NW9	NW10	NW6	NW8	NNW10	N10	NNW6	NNE7	NW9	NNW11	NW10	NNW10.7	N22
26-Feb	W4	SSW4	S8	SSW8	SW9	SW9	WSW9	WNW9	NNW17	NNW7	NNW10	N9	NW9	NW6	NNW4	WNW9	NW13	NNW14	NNW12	N9	N7	NNW6	N7	N9	NW5.5	NNW17
27-Feb	WNW5	W8	NW3	WNW3	ESE2	WSW4	NNW2	SSE3	SW6	UO	SW5	WSW14	WNW29	NW34	N25	NNE27	NNE19	NNE16	NNE15	NNE16	NNE17	NNE14	NE12	NNE8	NNW8.2	NW34
28-Feb	NNE6	NE6	NNE5	NNE4	E2	SSW5	E4	E5	SSE2	SSE4	SE9	SE10	SE13	SE9	SSE10	SE12	SE15	SE17	SE19	SE19	SE17	SE19	SSE19	SSE18	SE8.7	SE19
	NW1.3	NW1.0	NE0.3	SSW1.1	S1.6	SSE1.2	SSE1.8	S1.6	SSW1.8	S1.3	E1.9	NE1.0	WNW1.6	WNW2.2	W0.8	WNW0.7	NW0.7	NE1.3	NE2.4	NE2.6	NE2.6	NNE2.2	NNE2.3	NW1.1	Diurnal Average	
	NNW31	NNW31	N31	N34	N33	N32	N30	N31	N31	N27	SE28	N29	N29	NW34	SE27	NNE27	SE20	SE24	SE27	SE27	N30	N34	N35	NNW29	Diurnal Maximum	

UO - Unstable Operation

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

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 45m (WS45) - km/h

Mannix - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 10 km/h on Feb 27 14:00

Minimum Value: 1 km/h on Feb 7 00:00

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

Hours in Service:	672
Hours of Data:	671
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-Feb	5	4	5	6	5	6	5	5	6	6	7	4	5	4	5	4	3	4	5	5	6	10	8	6	10
2-Feb	6	6	6	6	6	8	4	5	5	7	5	6	4	5	3	3	3	4	3	3	2	2	2	3	8
3-Feb	2	2	2	2	2	4	1	2	1	2	2	1	3	2	2	5	2	2	2	2	1	1	4	3	5
4-Feb	2	1	1	2	2	1	2	2	2	1	4	2	2	2	4	3	2	2	1	2	2	3	2	2	4
5-Feb	2	3	2	2	2	2	2	2	3	1	2	2	4	3	3	3	3	3	2	1	2	1	1	2	4
6-Feb	2	3	3	6	4	3	5	2	2	4	6	8	7	5	4	3	4	3	2	2	2	1	2	1	8
7-Feb	2	1	1	1	3	3	3	2	2	2	4	2	3	3	3	3	2	3	2	1	3	2	1	2	4
8-Feb	2	1	1	1	1	1	1	2	2	2	2	2	1	1	1	1	2	3	4	4	7	6	6	6	7
9-Feb	5	5	4	3	3	4	4	2	1	2	3	3	3	2	2	2	1	1	2	1	2	2	1	2	5
10-Feb	1	2	3	1	1	1	2	2	1	1	1	1	2	3	4	2	1	2	3	2	3	3	3	4	4
11-Feb	2	3	6	2	2	2	2	2	2	3	3	2	2	1	1	1	1	1	1	1	1	1	1	1	6
12-Feb	1	2	2	2	2	2	2	2	1	1	1	1	1	2	2	2	5	3	2	2	2	2	2	2	5
13-Feb	2	2	5	2	2	5	2	4	2	1	1	1	1	2	2	2	2	2	4	3	2	3	3	2	5
14-Feb	2	2	3	1	1	1	1	1	1	2	1	2	1	1	1	1	1	2	2	1	2	2	1	1	3
15-Feb	2	3	1	1	2	2	2	2	2	3	1	1	4	2	3	2	2	1	1	2	6	4	2	1	6
16-Feb	1	1	2	1	3	3	2	2	1	2	2	2	2	2	3	4	4	4	4	4	5	5	5	7	7
17-Feb	3	3	3	4	4	5	5	5	4	4	4	4	4	4	4	6	4	5	4	5	5	3	3	3	6
18-Feb	3	4	2	2	1	2	3	2	2	2	2	2	3	2	3	2	2	5	4	3	4	3	3	3	5
19-Feb	3	3	4	4	4	5	5	5	5	6	6	6	4	4	6	5	4	5	6	6	6	4	3	4	6
20-Feb	3	3	3	3	3	3	3	3	4	3	4	3	3	4	2	1	1	3	2	3	2	2	2	2	4
21-Feb	3	3	1	1	1	3	2	2	2	2	3	1	2	3	2	2	2	2	3	3	3	3	1	2	3
22-Feb	2	2	1	2	2	1	2	2	2	2	4	4	3	2	2	3	2	2	2	2	2	2	1	3	4
23-Feb	5	3	2	1	2	2	3	2	4	3	5	7	7	6	4	5	4	3	3	4	2	2	2	3	7
24-Feb	2	2	2	1	2	1	1	2	2	1	2	2	3	3	2	2	2	1	2	2	2	2	4	3	4
25-Feb	4	4	4	4	5	5	5	4	4	2	2	2	2	2	4	2	1	2	2	1	1	2	2	2	5
26-Feb	2	1	1	2	2	2	2	2	3	2	3	3	2	2	2	1	2	2	2	2	2	1	1	2	3
27-Feb	1	4	3	1	2	4	2	4	5	UO	4	3	9	10	4	4	5	4	4	5	5	5	5	2	10
28-Feb	2	2	1	2	2	2	2	1	1	2	2	2	3	3	2	3	3	3	3	3	2	3	2	2	3
	6	6	6	6	6	8	5	5	6	7	7	8	9	10	6	6	5	5	6	6	7	10	8	7	
	Diurnal Maximum																								

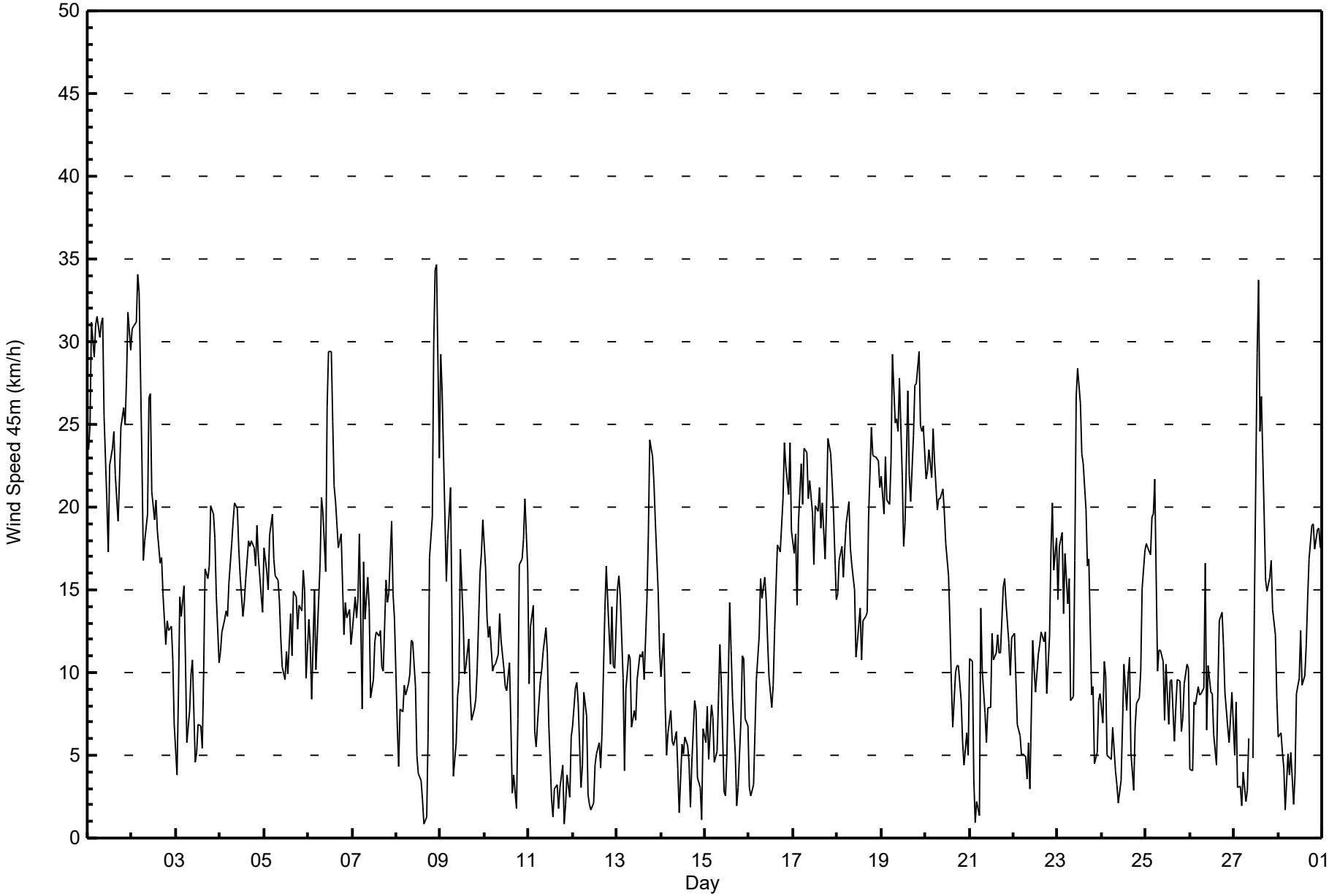
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 45m (WS45) - km/h

Mannix - February 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	99	14.75	14.75
6 - 11	213	31.74	46.50
12 - 19	228	33.98	80.48
20 - 28	107	15.95	96.42
29 - 38	24	3.58	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 671

Total Number of Hours: 672



Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 45m (WS45) - km/h

Mannix - February 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	6	6	0	4	9	11	8	7	4	7	4	10	6	4	4	9	99
6 - 11	32	18	7	0	1	0	16	22	10	12	13	13	11	9	22	27	213
12 - 19	36	18	1	0	0	0	31	35	22	10	8	31	11	8	6	11	228
20 - 28	25	5	0	0	0	0	47	12	4	0	0	2	0	2	0	10	107
29 - 38	16	0	0	0	0	0	2	0	0	0	0	0	0	1	1	4	24
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	115	47	8	4	10	11	104	76	40	29	25	56	28	24	33	61	671

Total Number of Valid Hours: 671

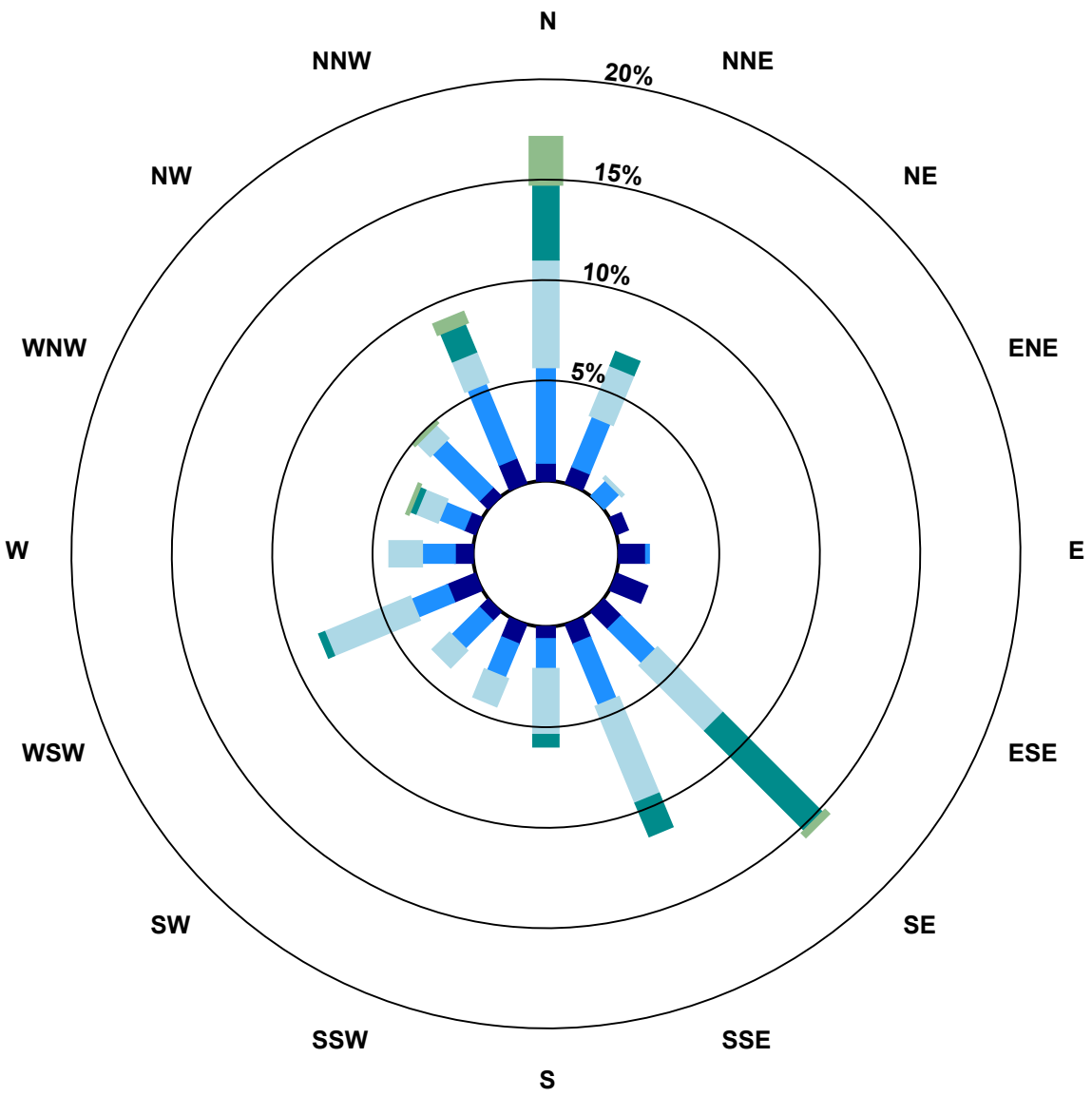
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Wind Speed 45m (WS45) - km/h

Mannix



Classes (km/h)

0 - 5

6 - 11

12 - 19

20 - 28

29 - 38

> 38

Total Number of Valid Hours: 671

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 75m (WS75) - km/h

Mannix - February 2025

Maximum Speed: 39 km/h on Feb 2 04:00

Maximum Daily Speed Average: 29.2 km/h on Feb 1

Minimum Speed Value: 0 km/h on Feb 11 14:00

Minimum Daily Speed Average: 3.2 km/h on Feb 14

Maximum Diurnal Speed Average: 3.3 km/h at hour 21

Minimum Diurnal Speed Average: 0.4 km/h at hour 3

Monthly Average Velocity: 0.8 km/h 0.8 deg

Percentiles: P_1 = 2 P_{10} = 5 Q_1 = 9 Median = 14 Q_3 = 21 P_{90} = 27 P_{99} = 36

Hours in Service: 672

Hours of Data: 668

Hours of Missing Data: 4

Percent Operational Time: 99.4

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	NNE27	NNE29	NNE35	NNE33	NNE35	NNE36	N35	N37	N37	N31	N23	N19	NNW25	NNW27	NNW28	NNW25	NNW22	NNW25	NNW29	N30	N29	N31	N36	N34	N29.2	N37
2-Feb	N36	N36	N36	NNE39	NNE38	NNE27	N19	N20	N22	NNE30	NNE31	N24	NNW22	NNW22	NNW20	NNW18	N20	N17	NNE14	NNE16	NNE14	NNE15	N13	N8	N22.7	NNE39
3-Feb	W7	W11	WNW17	WNW17	W21	W16	W12	W12	W14	WSW13	WSW7	SW6	SW8	SSW8	S6	WSW11	WSW18	WSW18	WSW20	WSW26	W23	W22	W19	WSW15	W13.6	WSW26
4-Feb	WSW13	WSW15	SW16	SW15	SW16	SW15	SSW17	SSW18	SSW18	SSW21	S21	SSE20	S17	SSE17	SSW17	SSW21	SSW22	SSW22	SSW21	SSW20	SW24	SW21	SW18	SSW16	SSW17.2	SW24
5-Feb	SSW21	SSW20	S18	S23	S23	S22	SSW21	S20	S19	S13	S12	SSW11	SW12	SW11	SW15	SW12	WSW18	WSW17	WSW15	WSW17	W16	W19	W18	W13	SSW14.6	S23
6-Feb	W16	WSW14	WSW12	WSW19	W12	W15	WNW20	WNW25	WNW23	NW18	NNE29	NNE33	N32	NNE28	N24	NNW23	NNW22	NNW24	NW24	NW16	NNW17	WNW14	WNW16	W15	NW15.2	NNE33
7-Feb	W16	W18	W16	WSW17	WSW22	W11	W20	W18	W21	W20	W12	WSW11	WSW13	WSW13	WSW13	WSW14	WSW11	WSW12	WSW17	WSW19	W19	W23	W21	WSW17	WSW16.1	W23
8-Feb	SW9	WSW5	WSW7	WSW8	SW9	SW8	SW8	SW6	SSW8	SSW8	S7	SSE7	SSE4	SSE4	SE1	E1	NNW1	NNE10	NNE22	NNE25	NNE33	NNE38	NNE39	N27	N4.7	NNE39
9-Feb	N34	N31	N21	N18	N23	N25	N17	NNE5	NNE6	NE10	NE11	NNE19	NNE14	N10	NW10	WNW12	NW9	NNW8	NNW9	NNW10	WNW10	WNW21	W21	W25	NNW12.8	N34
10-Feb	W21	WSW19	WSW16	WSW17	SW12	SW12	SW12	SW13	SSW14	SSW13	SSW11	S9	SSW10	SW13	SW9	S1	ESE3	NNW4	N9	NNE20	NNE21	NNE21	NNE23	NNE19	W4.1	NNE23
11-Feb	N12	N17	NNE16	N11	N7	N7	N11	N12	N12	NNE14	NNE13	N7	NNE3	SW0	WSW2	WSW2	ESE2	S2	S3	SSE1	NE3	ENE5	ESE3	SSE7	N5.3	N17
12-Feb	SSE7	S11	S13	SSE8	SE5	SSE6	SSE9	SE7	ESE3	ESE2	E2	ESE2	E5	E5	E6	E4	NNE7	N16	N19	N17	N13	NNE17	NNE13	N14	ENE3.7	N19
13-Feb	NNE17	NNE18	NNE17	N11	N6	NNE14	NNE19	NNE19	NNE10	N9	N6	NNW8	NW10	NW11	NW11	NNW10	NNE17	N20	NNE29	NNE27	NNE27	NNE27	NNE22	NNE16	NNE15.0	NNE29
14-Feb	NNE12	NNE14	N11	N8	N9	N10	N10	N7	NW4	NW8	NW7	NNW7	NW5	W5	WSW6	SW5	SSW2	SE4	SSE8	SE9	SSE7	S6	WNW3	NW5	NNW3.2	NNE14
15-Feb	WNW7	W10	W10	WSW11	W13	W13	W14	W15	W18	W16	W12	W8	WNW11	WNW14	WNW11	WNW9	W6	SE1	E3	ENE8	NE13	NE14	NE10	NE9	WNW6.6	W18
16-Feb	ENE5	E4	SE4	SE9	SE11	SE15	SE15	SE15	SE19	SE18	SSE14	SSE11	SE8	SE11	SE12	SE14	SE13	SE13	SE18	SE24	SE24	SE23	SE26	SE22	SE14.3	SE26
17-Feb	SSE23	SE24	SE19	SE24	SE24	SE19	SE22	SE23	SE21	SE18	SE18	SE15	SE17	SE16	SE16	SE13	SE15	SE14	SE16	SE22	SE22	SE23	SSE27	SSE21	SE19.5	SSE27
18-Feb	SSE22	SE22	SSE22	SE19	SSE24	SSE24	SSE29	SSE25	SSE26	SSE21	SSE14	SSE14	SSE15	SSE12	S14	SSE14	SSE15	SE23	SE30	SSE29	SSE30	SSE30	SSE30	SSE27	SSE21.8	SSE30
19-Feb	SE28	SE26	SE28	SE26	SE26	SE25	SE29	SE29	SE28	SE24	SE27	SE23	SSE18	SE19	SE27	SE23	SE23	SE27	SE25	SE27	SE34	SE29	SSE31	SSE32	SE26.3	SE34
20-Feb	SSE28	SSE28	SSE29	S27	SSE29	SSE27	S23	S23	S23	S23	S22	S19	S17	SSW14	S10	S7	S9	SSE14	SSE12	SSW5	W3	W2	NNE6	NE7	S15.4	SSE29
21-Feb	SE6	SSE12	ESE4	ESE4	SE2	ESE3	NE12	NNE12	NE12	N8	NNW7	NNW8	WNW12	NNW11	NNW11	N13	N12	N13	N17	N18	N17	N13	N12	N15	N7.8	N18
22-Feb	N15	N12	N8	N7	N5	NW5	N6	NE3	SSE4	ESE6	SE17	SE12	SE10	SSE15	SSE15	SSE15	SSE17	SSE15	SSE20	SSE28	S24	SSW12	SSW11	SSE7.0	SSE28
23-Feb	SSW15	SSW13	SSW20	SSW13	S20	S14	SSW17	WSW14	W15	WNW20	N31	N33	N29	N26	NNE25	NNE22	N18	NNE19	N10	N10	NNE5	NE6	NE9	NE10	N5.6	N33
24-Feb	NE7	N12	NNE11	N4	N5	N5	NNW6	NNE5	SW2	SSE3	S4	S8	SSE12	SSE8	SSE10	S12	WSW6	NNE2	N7	NNE9	NNE10	NNE12	N16	N19	NNE3.3	N19
25-Feb	N20	N20	N20	NNE22	N22	NNE25	N12	N13	N13	N11	N7	NNW10	N7	NNW8	NW9	NW5	NNW7	NNW10	NNE10	N7	NE8	NNW9	NNW13	NW11	N11.7	NNE25
26-Feb	WNW5	SW5	SW12	WSW12	WSW13	WSW14	W15	WNW13	NNW17	N10	N12	NNE10	NNW7	NNW6	N5	NW9	NNW13	N17	N14	NNE12	NNE9	NE7	NE7	NNE8	NNW6.4	NNW17
27-Feb	N4	WNW6	NNW3	NNW2	SE5	S3	NE2	SE7	UO	UO	UO	UO	WNW35	NW37	N27	NNE29	NNE23	NNE19	NNE17	NNE19	NNE20	NNE17	NE14	NNE9	N10.8	NW37
28-Feb	NE7	NE6	NE5	NE5	ESE2	SSW6	E4	E5	SE4	SSE5	SE8	SE10	SE10	SE8	SSE10	SE9	SE13	SE17	SE21	SE22	SE21	SE23	SSE22	SSE21	SE9.7	SE23
	NNW1.7	NNW1.5	NNW0.4	SW0.9	SW1.5	SW0.9	SW1.2	SW1.1	SW1.8	SW0.7	ENE1.6	ENE1.7	WNW2.0	WNW2.2	NW0.9	NW1.2	NNW1.3	NNE1.9	NE2.9	NE3.1	NE3.3	NNE2.9	NNE2.8	N1.7	Diurnal Average	
	N36	N36	N36	NNE39	NNE38	NNE36	NNE35	NNE37	N37	N31	NNE31	NNE33	WNW35	NW37	NNW28	NNE29	SE23	SE27	SE30	N30	SE34	NNE38	NNE39	N34	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: 10 km/h on Feb 27 14:00

Minimum Value: 0 km/h on Feb 20 21:00

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

Hours in Service:	672
Hours of Data:	668
Hours of Missing Data:	4
Hours of Calibration:	0
Percent Operational Time:	99.4

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

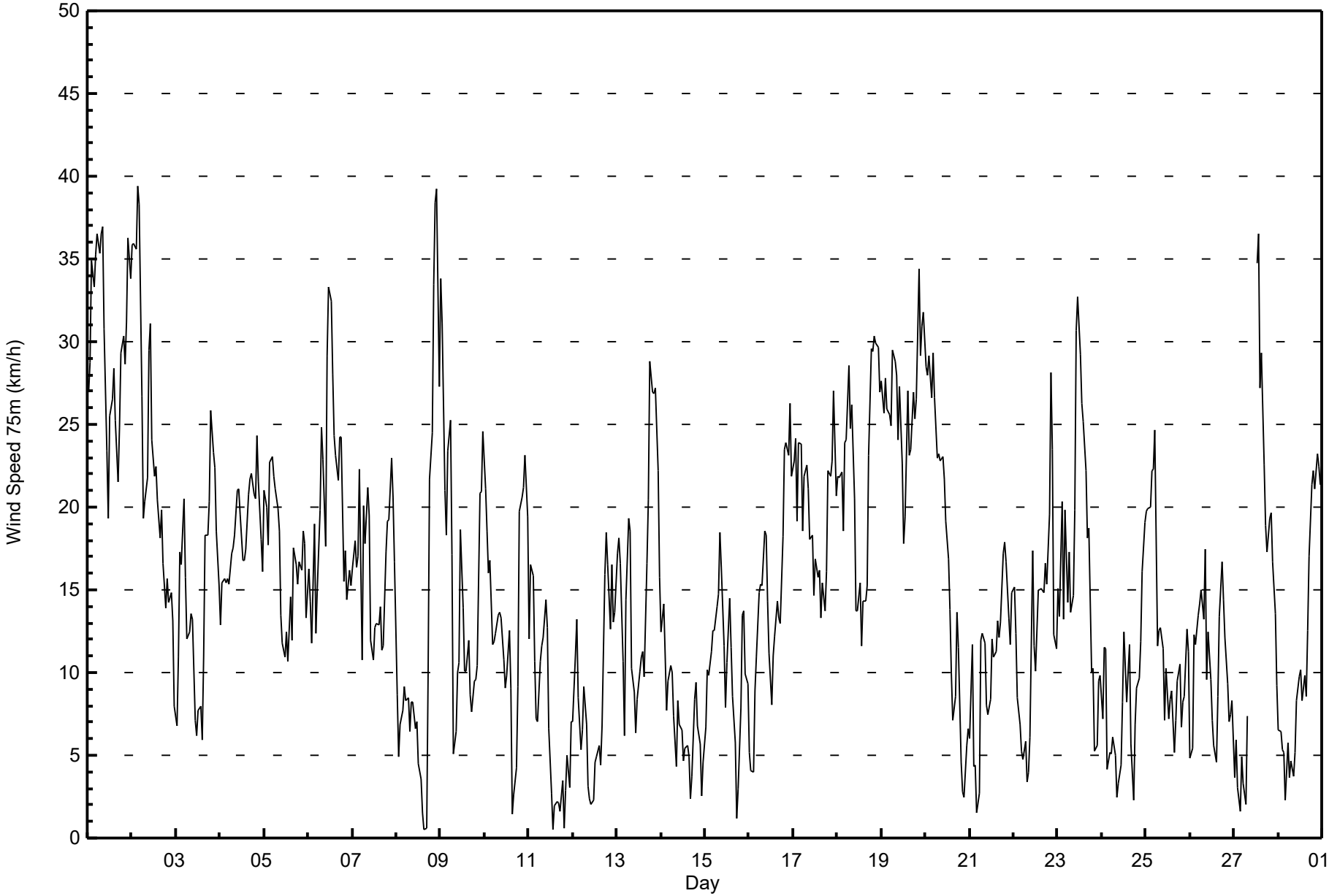
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 75m (WS75) - km/h

Mannix - February 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	79	11.83	11.83
6 - 11	162	24.25	36.08
12 - 19	228	34.13	70.21
20 - 28	148	22.16	92.37
29 - 38	49	7.34	99.70
> 38	2	0.30	100.00

Total Number of Valid Hours: 668

Total Number of Hours: 672



Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 75m (WS75) - km/h

Mannix - February 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	5	5	2	8	11	8	6	5	2	4	3	3	2	5	4	79
6 - 11	27	15	14	1	1	1	12	14	9	8	9	9	7	6	10	19	162
12 - 19	35	31	5	0	0	0	27	20	11	13	14	31	26	8	2	5	228
20 - 28	17	19	0	0	0	0	36	19	13	10	2	3	10	6	1	12	148
29 - 38	15	17	0	0	0	0	5	9	0	0	0	0	0	1	1	1	49
> 38	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Totals	100	89	24	3	9	12	88	68	38	33	29	46	46	23	19	41	668

Total Number of Valid Hours: 668

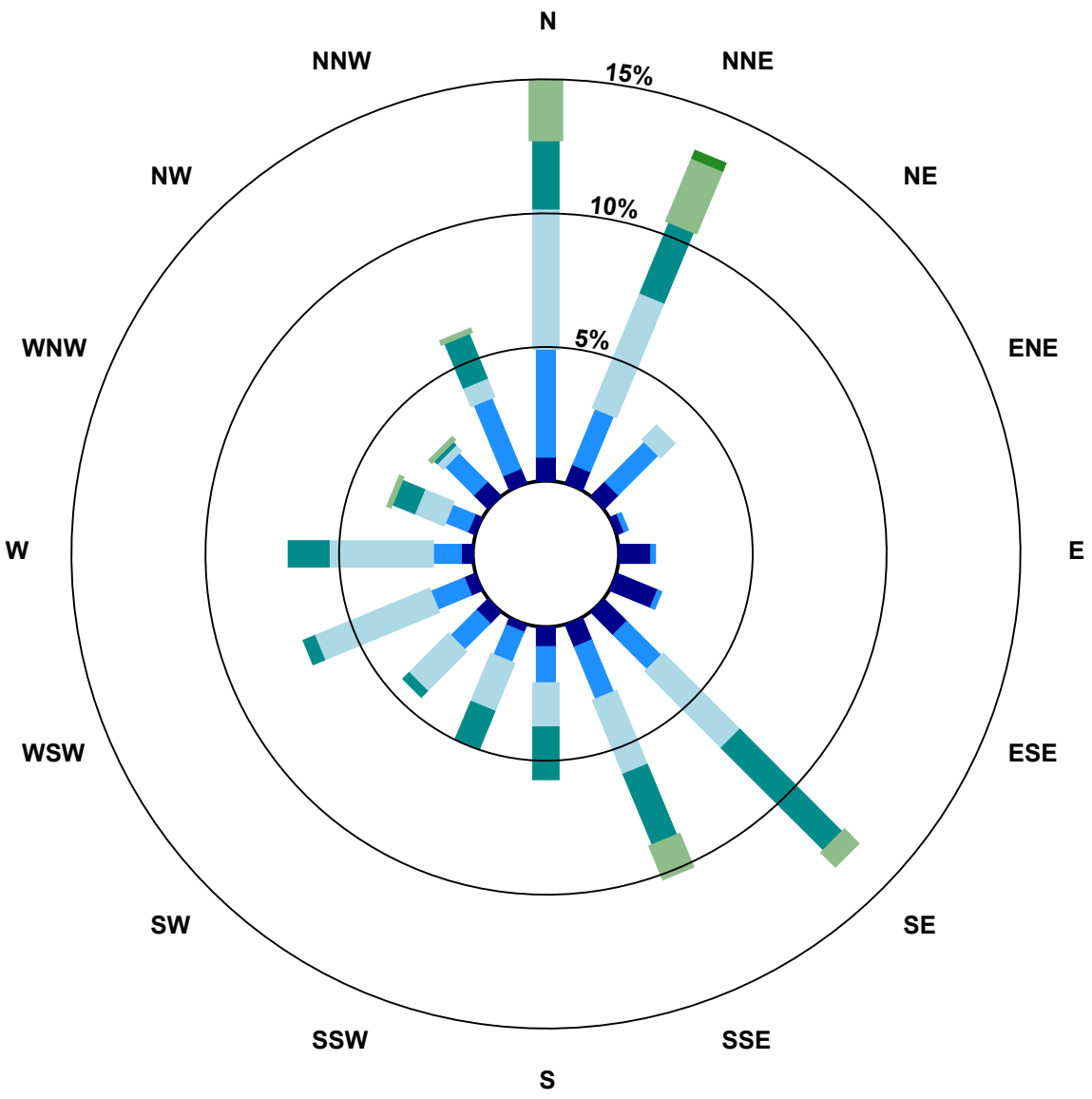
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 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: 668

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 90m (WS90) - km/h

Mannix - February 2025

Maximum Speed: 41 km/h on Feb 2 04:00

Maximum Daily Speed Average: 30.7 km/h on Feb 1

Minimum Speed Value: 0 km/h on Feb 8 16:00

Minimum Daily Speed Average: 3.0 km/h on Feb 24

Maximum Diurnal Speed Average: 3.2 km/h at hour 20

Minimum Diurnal Speed Average: 0.9 km/h at hour 11

Monthly Average Velocity: 1.1 km/h 332.4 deg

Percentiles: P_1 = 2 P_{10} = 5 Q_1 = 9 Median = 16 Q_3 = 22 P_{90} = 28 P_{99} = 38

Hours in Service: 672

Hours of Data: 672

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-Feb	N28	N30	N36	N35	N36	N38	N37	N38	N38	N32	N25	N20	NNW27	NNW28	NNW31	NNW27	NNW23	NNW27	NNW31	N32	N30	N33	N38	N36	N30.7	N38
2-Feb	N38	N38	N37	N41	NNE40	N28	N20	N21	N23	N30	NNE32	N26	NNW23	NNW24	NNW21	NNW19	N21	N17	NNE15	NNE17	NNE15	NNE15	N14	N9	N23.8	N41
3-Feb	W8	W11	WNW18	WNW19	W24	WNW19	W15	W15	W16	W15	WSW9	WSW7	SW8	SW9	S6	WSW12	WSW19	WSW20	WSW23	WSW29	W26	W25	W21	W18	W15.4	WSW29
4-Feb	W16	WSW18	WSW18	WSW17	SW17	SW16	SW17	SW17	SW18	SSW20	SSW22	S19	S18	S17	SSW18	SSW21	SSW23	SSW23	SSW21	SW22	SW26	SW23	SW19	SW17	SW18.1	SW26
5-Feb	SSW21	SSW21	S18	SSW23	SSW23	SSW22	SSW21	S21	SSW19	SSW15	SSW12	SSW11	SW13	SW11	SW15	SW12	WSW18	WSW18	WSW17	WSW18	W18	W20	W19	W15	SW15.7	SSW23
6-Feb	W18	WSW16	WSW14	WSW21	W14	W16	WNW22	WNW27	WNW25	NW19	NNE30	NNE34	N33	N29	N25	NNW25	NNW23	NNW27	NW27	NW17	NW19	WNW16	WNW17	W17	NW16.9	NNE34
7-Feb	W19	W20	W18	WSW19	WSW24	W13	W22	W21	W25	W22	W14	WSW12	WSW13	WSW13	WSW14	WSW15	WSW12	WSW12	WSW18	W23	W22	W22	W21	W19	W17.7	W25
8-Feb	WSW10	WSW6	WSW7	WSW9	SW9	WSW9	WSW10	SW8	SW9	SW8	SSW5	S5	SSE4	S3	W1	N0	NNE2	NNE11	NNE22	NNE26	NNE34	NNE40	NNE40	N29	N5.8	NNE40
9-Feb	NNW36	N32	N21	N20	N25	N26	N18	NNE5	NNE7	NE10	NE11	NNE19	NNE14	NNW10	NW11	WNW12	NW9	NNW8	NNW9	NNW10	NW12	WNW24	WNW23	W26	NNW13.8	NNW36
10-Feb	W24	W22	WSW19	WSW19	WSW13	SW13	SW15	SW15	SW14	SW15	SW13	SSW10	SSW11	SW13	SW10	SW2	SE2	NW6	N10	NNE21	NNE22	NNE22	NNE24	NNE20	W6.1	NNE24
11-Feb	N14	N18	N17	N13	N8	N8	N12	NNW12	N13	NNE15	NNE13	N7	NNE2	W1	WSW1	WSW2	E3	S1	SSW4	S1	NNE3	ENE5	ESE4	SSE7	N5.8	N18
12-Feb	SSE7	S11	S13	SSE9	SE7	SSE7	SE9	SE8	ESE4	ESE3	ESE2	ESE2	E5	E6	E6	E4	N7	N17	N19	N17	N13	NNE17	NNE13	N15	ENE4.1	N19
13-Feb	NNE17	NNE19	NNE17	N11	N8	NNE17	NNE22	NNE21	NNE12	NNE12	N7	NNW8	NNW10	NW12	NW12	NNW10	NNE17	N21	NNE29	NNE28	NNE28	NNE29	NNE23	NNE18	NNE16.2	NNE29
14-Feb	NNE13	NNE13	N13	N9	N12	N13	N12	N9	NNW4	NW9	NW9	NNW7	NW5	W5	WSW6	WSW5	SSW3	SE5	SSE8	SSE10	S7	SSW8	WNW3	NW5	NNW3.6	NNE13
15-Feb	WNW7	W11	W13	W14	W16	W17	WNW18	W18	W22	W20	W16	W11	WNW13	WNW15	WNW12	WNW9	W6	S1	E3	NE8	NE14	NE15	NE11	NE11	WNW8.4	W22
16-Feb	ENE6	E5	SSE4	SE9	SE13	SE17	SE18	SE17	SE18	SE20	SSE15	SSE12	SE9	SE12	SE13	SE16	SE17	SE17	SE20	SE25	SE27	SE27	SE29	SE24	SE16.0	SE29
17-Feb	SE24	SE25	SE21	SE26	SE26	SE22	SE25	SE25	SE23	SE21	SE20	SE16	SE19	SE19	SE20	SE18	SE19	SE17	SE20	SE26	SE25	SE25	SSE29	SSE23	SE22.0	SSE29
18-Feb	SSE24	SE24	SSE22	SE21	SSE27	SSE27	SSE27	SSE24	SSE26	SSE22	SSE15	SSE14	SSE16	SSE12	S14	SSE14	SSE16	SE24	SE31	SSE31	SSE32	SSE31	SSE31	SSE28	SSE22.8	SSE32
19-Feb	SE28	SE26	SE29	SE28	SE27	SE27	SE32	SE31	SE31	SE27	SE30	SE24	SE18	SE20	SE29	SE25	SE25	SE29	SE30	SE33	SE37	SE31	SSE32	SSE33	SE28.4	SE37
20-Feb	SSE30	SSE30	SSE31	S28	S30	S27	S24	S24	S23	S23	S22	S19	S17	SSW14	S10	SSW7	SSW8	SSE12	SSE9	SW4	WNW4	WNW4	N5	NE8	S15.1	SSE31
21-Feb	ESE7	SSE11	ESE8	ESE7	SE4	SE3	NE11	NE11	NE11	NNE10	NNW8	NNW9	WNW12	NNW11	NNW12	N14	N13	N14	N18	N19	N17	N14	N13	N15	N8.0	N19
22-Feb	N16	N13	N10	N8	N6	NNW3	N5	E5	SE7	ESE11	SE20	SE14	SE12	SSE17	SSE16	SSE16	SSE16	SSE18	SSE18	SSE22	S30	SSW22	SW16	SW13	SSE8.0	S30
23-Feb	SW16	SSW14	SSW21	SSW13	SSW20	S14	SSW17	WSW16	W18	WNW22	N33	N34	N31	N28	N26	N23	N19	NNE19	N11	N11	NNE5	NE6	NE10	NE10	NNW6.7	N34
24-Feb	NE7	N11	NE12	N4	N6	N5	NNW6	NNE5	SW2	SSE5	S5	S9	SSE13	SSE9	SSE10	S12	WSW6	N2	N6	NNE9	NNE10	NNE12	N17	N20	NNE3.0	N20
25-Feb	N21	N21	N21	N23	N23	NNE25	N12	N13	N13	N12	N7	NNW10	N7	NNW8	NW9	NW5	NNW7	NNW9	NNE10	NNE6	NE8	NNW8	NNW14	NW12	N12.1	NNE25
26-Feb	WNW6	WSW7	SW14	WSW15	W17	W17	W18	WNW15	NNW18	N11	N13	NNE10	NNW7	NNW6	N4	NW9	NNW13	N17	N15	NNE13	NNE9	ENE6	ENE7	NE7	NW6.8	W18
27-Feb	NE4	W4	NNW3	E2	SE8	SSE4	ESE3	SE10	S13	S14	SW7	W25	WNW38	NW39	N28	NNE30	NNE23	NNE20	NNE18	NNE21	NNE20	NNE18	NE14	NNE9	N7.6	NW39
28-Feb	NE6	NE6	NE5	ENE5	ESE2	SSW6	E4	ESE5	SE4	SSE6	SE9	SE10	SE12	SE9	SSE10	SE10	SE14	SE19	SE23	SE23	SE22	SE25	SSE23	SE21	SE10.5	SE25
	NW2.4	NW1.9	NW1.2	WSW1.5	WSW1.8	WSW1.4	WSW1.5	WSW1.4	WSW2.4	SW1.1	ENE0.9	N1.0	WNW2.5	WNW2.5	WNW1.2	NW1.4	NW1.4	NNE2.0	NE2.9	NE3.2	NE3.2	NNE3.1	NNE3.0	NNW2.2	Diurnal Average	
	N38	N38	N37	N41	NNE40	N38	N37	N38	N38	N32	N33	N34	WNW38	NW39	NNW31	NNE30	SE25	SE29	NNW31	SE33	SE37	NNE40	NNE40	N36	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 90m (WS90) - km/h

Mannix - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 11 km/h on Feb 27 14:00

Minimum Value: 1 km/h on Feb 14 01:00

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

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

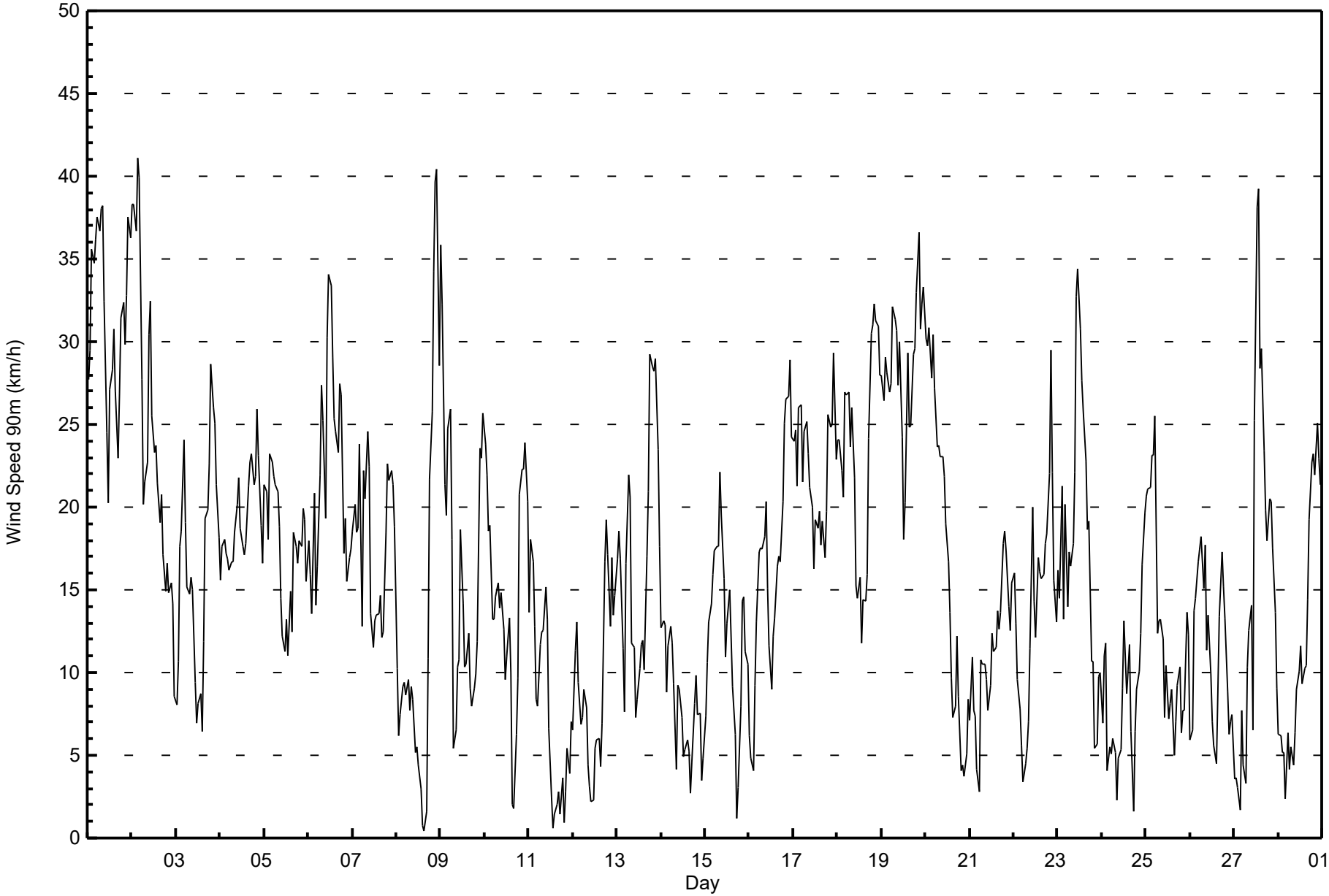
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Feb	4	4	3	5	4	5	4	4	4	6	8	5	5	4	4	4	4	4	4	5	6	10	8	6	10
2-Feb	6	5	6	6	5	9	4	5	5	8	5	6	4	5	3	2	1	4	3	3	2	2	2	4	9
3-Feb	2	1	1	2	1	4	1	2	1	2	2	2	3	2	2	4	3	2	3	2	3	2	4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

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 90m (WS90) - km/h

Mannix - February 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	70	10.42	10.42
6 - 11	148	22.02	32.44
12 - 19	224	33.33	65.77
20 - 28	163	24.26	90.03
29 - 38	62	9.23	99.26
> 38	5	0.74	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672



Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 90m (WS90) - km/h

Mannix - February 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	8	1	2	7	9	5	4	6	3	3	3	4	3	3	3	70
6 - 11	22	11	16	3	2	4	12	12	5	7	9	11	5	3	7	19	148
12 - 19	38	25	4	0	0	0	22	16	12	8	21	26	27	12	7	6	224
20 - 28	24	18	0	0	0	0	41	12	8	15	3	4	20	6	1	11	163
29 - 38	25	7	0	0	0	0	13	10	2	0	0	1	0	1	0	3	62
> 38	1	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	5
Totals	116	72	21	5	9	13	93	54	33	33	36	45	56	25	19	42	672

Total Number of Valid Hours: 672

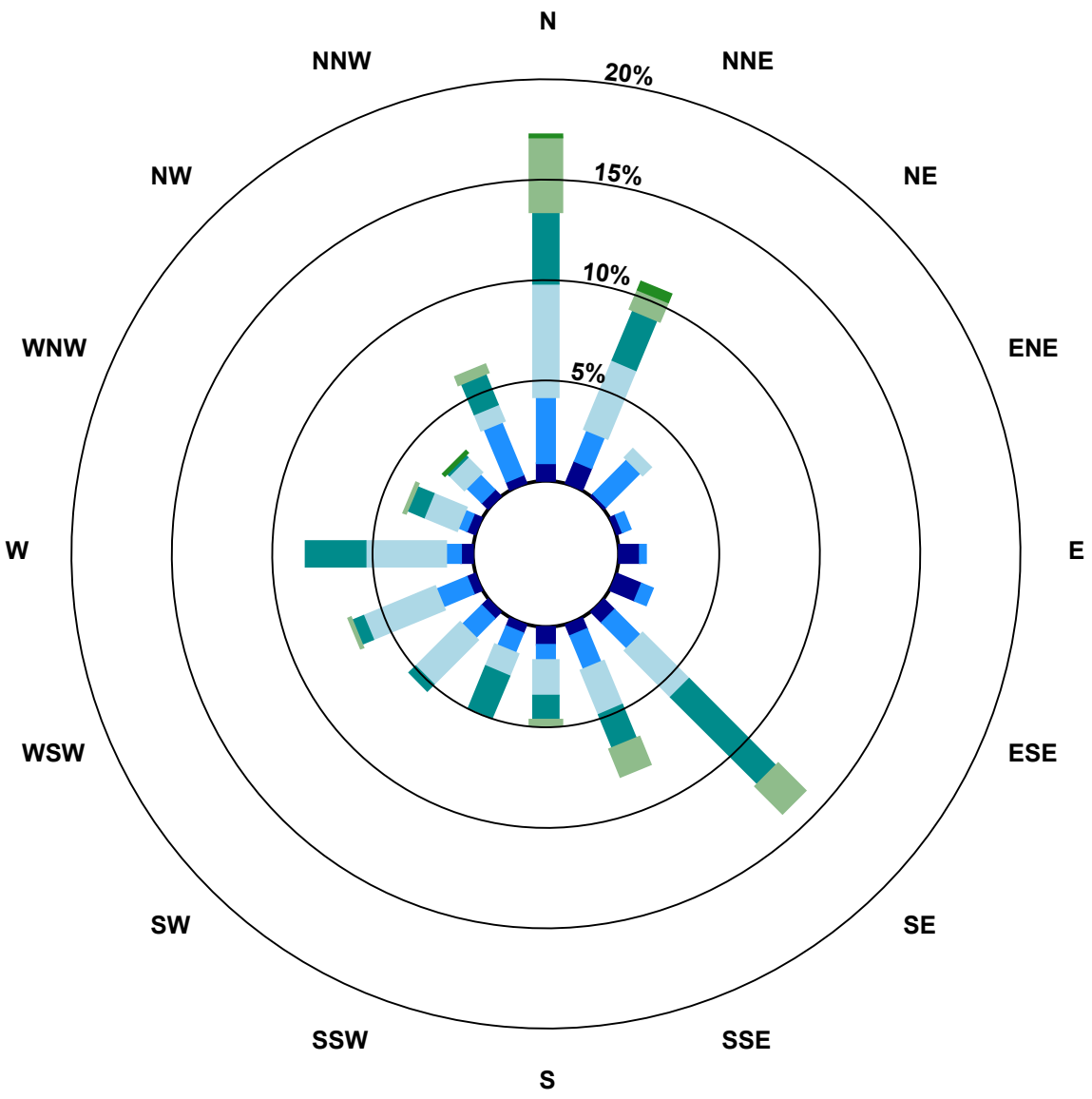
Total Number of Hours: 672

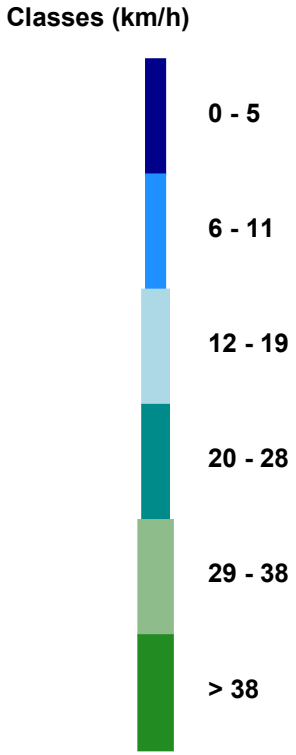
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Wind Speed 90m (WS90) - km/h

Mannix





Total Number of Valid Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 20m (WD20) - deg

Mannix - February 2025

Direction of Maximum Speed: 14 deg on Feb 8 22:00
Direction of Maximum Daily Speed Average: 138.2 deg on Feb 19

Direction of Minimum Speed: 310 deg on Feb 22 10:00
Direction of Minimum Daily Speed Average: 0.1 deg on Feb 15

Monthly Average Direction: 101.0 deg

Hours in Service:	672
Hours of Data:	671
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-Feb	12	11	15	12	13	11	10	9	7	5	3	352	330	330	333	333	323	329	341	346	360	354	5	346	356.2
2-Feb	343	345	6	10	14	10	357	353	358	8	11	358	335	334	329	334	350	8	23	21	16	15	349	312	358.0
3-Feb	241	222	269	264	253	259	234	251	243	227	215	222	199	163	144	252	244	231	237	244	247	252	246	218	238.6
4-Feb	203	198	182	165	167	160	155	161	160	161	160	155	149	150	187	196	194	178	171	183	200	203	206	196	174.1
5-Feb	178	181	166	165	169	166	167	161	169	158	161	193	228	223	218	234	246	231	228	235	247	252	240	225	199.0
6-Feb	243	231	196	248	255	260	288	284	285	316	20	12	356	7	355	341	339	322	314	294	309	278	266	234	316.0
7-Feb	240	250	245	231	239	216	246	242	254	242	247	258	248	241	241	245	234	225	228	246	271	261	246	216	243.4
8-Feb	161	160	189	178	165	159	164	160	160	155	157	149	150	128	103	106	247	12	21	24	14	14	14	353	71.1
9-Feb	340	7	7	354	343	342	359	2	23	52	34	17	9	346	296	286	300	298	323	320	262	280	260	260	337.7
10-Feb	238	222	197	188	179	159	160	160	159	155	151	152	150	201	181	108	106	85	24	14	17	15	16	12	140.4
11-Feb	347	340	0	342	338	300	312	344	341	5	12	8	11	255	258	254	156	215	200	251	7	83	179	231	335.2
12-Feb	246	208	166	167	143	182	166	165	166	188	112	108	109	103	98	88	3	1	358	360	355	3	0	351	35.5
13-Feb	6	9	7	12	315	1	13	8	299	305	316	305	302	307	310	322	3	2	11	15	14	22	5	356	352.3
14-Feb	360	9	359	306	341	315	302	295	269	248	82	309	302	268	261	235	192	101	152	135	77	215	338	313	308.6
15-Feb	257	265	167	168	161	132	160	176	193	182	156	131	190	286	297	296	279	125	113	51	28	51	28	33	64.8
16-Feb	79	303	150	124	142	147	148	169	155	159	159	152	164	158	145	134	133	132	138	139	137	137	138	136	143.1
17-Feb	150	150	156	144	138	133	134	134	136	134	134	133	134	134	134	131	135	137	137	138	136	141	148	162	138.1
18-Feb	152	141	150	153	165	161	161	163	166	163	160	156	159	169	173	163	154	138	139	140	145	144	145	145	152.7
19-Feb	144	139	140	142	145	138	138	139	136	135	136	138	148	142	136	135	136	138	133	128	136	139	142	146	138.2
20-Feb	149	155	157	168	160	160	165	165	172	173	182	175	183	187	154	146	148	130	119	124	151	140	38	142	160.8
21-Feb	184	162	144	255	211	358	4	358	15	309	311	306	288	321	323	350	356	356	4	352	349	358	351	331	338.9
22-Feb	349	347	341	335	353	314	313	343	273	310	154	145	159	164	154	151	162	195	162	149	154	150	147	155	158.4
23-Feb	154	152	156	158	159	150	157	154	275	290	351	1	349	358	13	13	4	12	359	350	22	27	42	42	16.7
24-Feb	14	4	17	322	332	328	328	5	257	214	192	162	148	133	147	167	280	37	27	21	21	21	353	0	15.4
25-Feb	356	350	0	7	6	12	356	333	337	346	336	326	4	309	303	309	314	324	4	345	14	311	331	302	343.9
26-Feb	270	193	177	165	194	186	190	290	346	328	340	8	305	303	330	285	304	335	336	347	329	308	347	349	310.7
27-Feb	295	274	317	284	110	264	327	210	235	UO	252	248	294	310	356	18	20	20	23	25	20	23	37	14	347.3
28-Feb	36	49	15	24	109	208	89	83	173	191	145	146	137	128	148	130	134	136	142	144	146	146	156	153	135.8
	329.5	6.2	99.3	154.9	153.0	147.0	147.1	156.4	188.8	159.6	97.7	80.4	273.9	282.8	253.7	287.7	306.6	58.0	70.9	60.5	42.0	30.6	28.6	330.6	
	Diurnal Average																								

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

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 20m (WD20) - deg

Mannix - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 100 deg on Feb 27 05:00

Minimum Value: 3 deg on Feb 4 04:00

Percentiles: P_1 = 5 P_{10} = 8 Q_1 = 9 Median = 13 Q_3 = 21 P_{90} = 35 P_{99} = 89

Hours in Service:	672
Hours of Data:	671
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-Feb	11	10	10	10	11	11	12	12	13	15	15	15	11	12	13	14	14	12	13	12	17	14	13	14	17
2-Feb	12	14	12	11	12	16	14	14	14	13	13	17	14	12	12	14	11	21	16	13	11	10	14	32	32
3-Feb	42	12	20	10	7	26	65	20	11	13	16	26	30	16	17	46	9	7	7	10	8	7	20	18	65
4-Feb	14	18	8	3	9	7	8	5	6	5	9	8	9	8	25	15	13	8	5	12	12	14	12	15	25
5-Feb	12	12	8	6	9	8	7	7	8	8	19	23	30	16	16	11	12	11	11	10	10	7	5	17	30
6-Feb	13	23	24	63	17	16	11	8	10	43	13	15	13	14	17	12	15	12	10	10	11	14	14	8	63
7-Feb	12	10	8	7	5	20	8	9	7	13	34	11	16	12	13	13	8	5	6	8	9	9	3	31	34
8-Feb	19	16	21	8	5	4	6	5	5	7	12	19	27	28	18	60	53	42	9	11	11	10	11	16	60
9-Feb	11	17	12	13	12	11	20	73	16	17	25	12	17	29	19	10	12	14	26	20	7	7	5	7	73
10-Feb	10	11	15	8	15	7	6	12	6	8	8	8	11	29	39	29	34	48	21	8	11	11	9	15	48
11-Feb	20	17	23	34	28	11	13	12	11	16	12	13	63	90	22	31	31	12	20	44	49	34	38	22	90
12-Feb	22	12	19	44	55	23	14	17	35	54	51	38	15	18	16	24	33	11	9	10	11	9	12	11	55
13-Feb	11	10	13	12	41	43	13	35	28	13	12	12	10	14	12	20	11	13	9	7	8	11	12	8	43
14-Feb	15	6	30	15	32	16	11	15	7	46	35	29	22	12	15	20	78	24	15	13	59	61	78	41	78
15-Feb	94	89	31	15	29	28	27	22	39	35	34	33	81	10	18	19	19	37	47	13	23	15	15	13	94
16-Feb	24	65	22	20	14	8	10	12	7	8	11	10	10	11	14	8	9	8	8	8	9	9	9	8	65
17-Feb	9	8	12	10	8	9	8	9	9	9	8	8	8	9	8	12	8	10	8	9	9	10	10	8	12
18-Feb	12	10	9	12	4	5	10	12	10	6	9	9	10	18	16	9	7	8	7	8	9	8	8	8	18
19-Feb	8	8	8	9	8	9	8	9	8	9	8	11	11	12	8	8	8	9	9	7	8	8	8	8	12
20-Feb	8	7	8	8	7	7	9	9	12	14	15	13	16	22	11	12	10	13	9	9	21	36	25	34	36
21-Feb	33	33	71	67	85	63	19	21	25	22	17	15	16	16	19	16	16	15	13	13	13	14	18	11	85
22-Feb	13	15	22	20	27	27	23	39	11	91	32	16	22	22	19	9	9	17	34	8	8	6	6	5	91
23-Feb	21	8	6	7	7	9	5	31	94	35	14	14	13	17	11	12	15	11	32	29	34	23	13	15	94
24-Feb	15	15	12	25	23	15	17	52	34	61	42	28	13	17	12	16	49	37	23	15	12	15	14	13	61
25-Feb	14	12	15	13	17	11	28	13	14	14	25	18	23	13	22	20	14	11	17	24	13	15	15	16	28
26-Feb	27	27	22	8	28	17	32	41	17	36	22	24	13	21	42	18	20	14	15	20	19	34	26	27	42
27-Feb	31	17	71	53	100	79	82	90	74	UO	89	20	11	17	20	10	15	14	15	15	12	16	19	24	100
28-Feb	23	22	20	32	67	31	53	14	65	42	14	13	11	23	18	13	8	8	9	9	9	12	8	8	67
	94	89	71	67	100	79	82	90	94	91	89	38	81	90	42	60	78	48	47	44	59	61	78	41	
	Diurnal Maximum																								

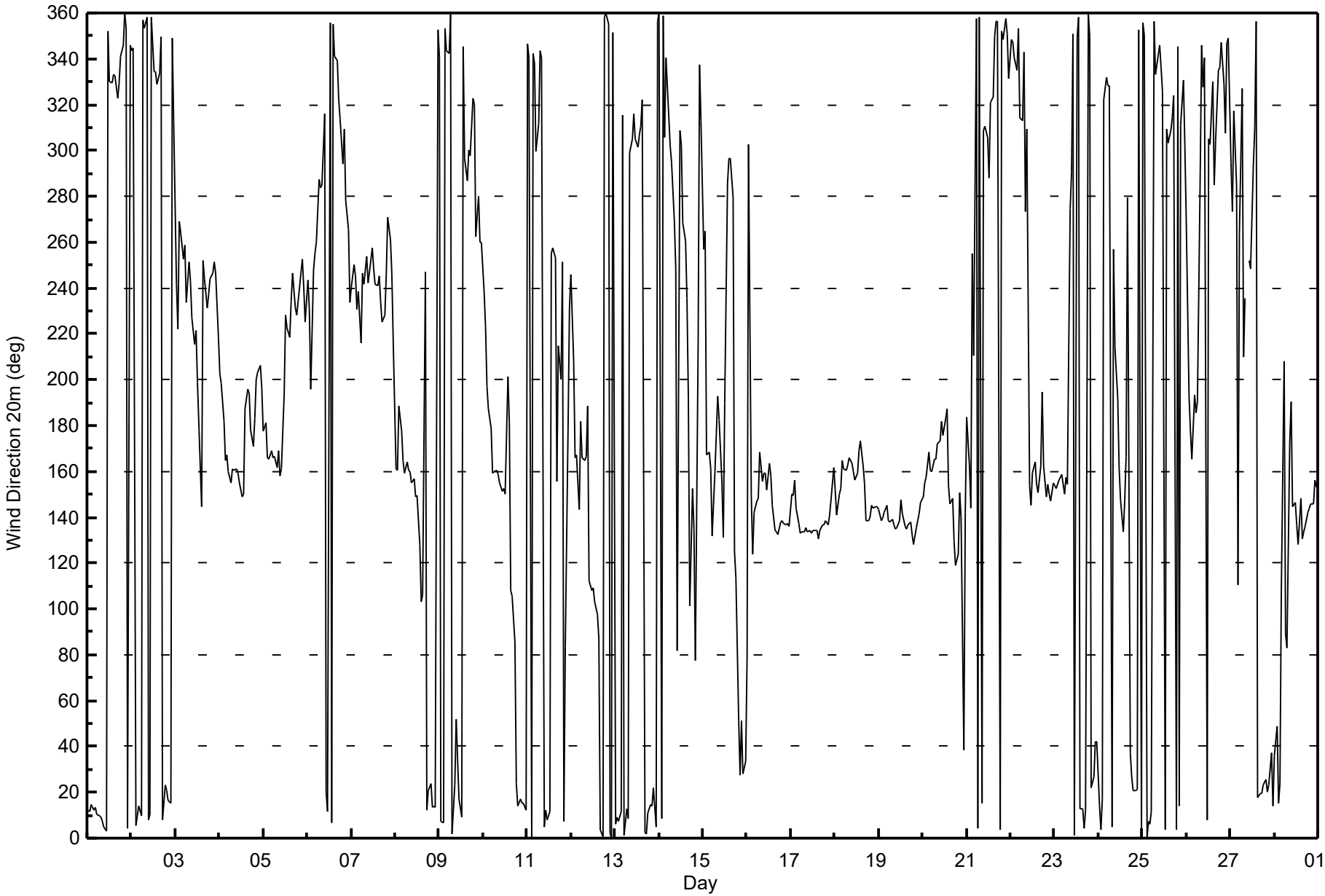
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 20m (WD20) - deg

Mannix - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 45m (WD45) - deg

Mannix - February 2025

Direction of Maximum Speed: 10 deg on Feb 8 23:00
Direction of Maximum Daily Speed Average: 353.7 deg on Feb 1

Direction of Minimum Speed: 190 deg on Feb 11 20:00

Direction of Minimum Daily Speed Average: 2.2 deg on Feb 10

Monthly Average Direction: 26.3 deg

Hours in Service:	672
Hours of Data:	671
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-Feb	8	8	8	7	8	6	5	5	5	3	360	350	328	329	333	332	323	329	339	345	359	352	3	345	353.7
2-Feb	343	345	3	7	11	7	355	352	356	5	8	357	334	333	329	333	348	3	20	16	13	11	355	333	356.2
3-Feb	260	254	275	268	260	268	266	264	259	243	232	224	205	180	150	250	242	232	240	247	251	256	257	242	248.3
4-Feb	227	228	208	193	203	182	171	169	166	165	162	153	150	149	187	193	195	190	183	197	206	206	207	197	185.6
5-Feb	181	183	169	169	171	170	172	165	172	164	169	195	231	220	217	231	244	232	232	236	250	254	249	247	202.5
6-Feb	250	236	231	250	257	263	287	283	283	310	17	9	353	5	353	340	338	324	314	302	313	283	269	248	313.2
7-Feb	256	262	252	238	238	246	253	251	261	251	250	251	245	240	240	242	235	236	239	245	270	260	251	240	248.6
8-Feb	201	200	229	213	199	200	184	163	164	161	153	142	140	140	126	121	257	6	20	20	11	11	10	351	26.6
9-Feb	340	5	4	352	343	343	356	7	20	45	30	15	9	341	296	289	302	308	333	338	275	287	267	261	335.7
10-Feb	246	240	224	218	209	192	189	194	184	169	161	157	160	207	200	116	101	16	14	14	16	13	12	8	204.9
11-Feb	350	347	1	355	336	320	328	341	337	5	9	4	9	242	248	244	137	205	183	190	9	67	118	171	348.2
12-Feb	178	184	172	161	122	153	155	146	118	155	107	108	99	98	93	80	1	1	358	357	356	0	1	356	46.0
13-Feb	4	5	4	6	338	10	18	17	351	324	326	310	305	304	308	324	4	359	9	13	12	19	5	359	356.6
14-Feb	358	3	355	350	340	338	339	333	286	285	335	316	303	268	255	227	197	104	142	131	144	179	339	312	326.7
15-Feb	285	267	253	217	251	255	261	243	256	259	237	211	270	283	293	293	275	113	99	52	30	42	33	36	284.0
16-Feb	73	57	136	134	130	130	135	145	143	149	156	153	157	149	140	130	128	127	132	135	134	133	134	135	136.0
17-Feb	145	144	146	139	134	129	130	130	132	129	131	131	130	130	129	125	129	130	130	132	132	137	147	156	133.9
18-Feb	149	135	141	141	153	159	155	150	159	155	155	157	160	166	172	161	152	136	138	140	143	143	143	143	148.7
19-Feb	141	137	136	138	139	133	133	136	133	131	132	135	143	140	133	133	135	135	129	126	134	137	141	144	135.2
20-Feb	146	152	155	166	160	159	166	164	171	172	179	174	182	186	158	147	148	132	133	145	152	162	32	102	160.0
21-Feb	165	174	128	340	240	58	13	3	25	329	316	313	289	323	324	350	354	357	2	352	350	356	353	338	345.3
22-Feb	352	352	344	334	351	311	322	347	272	98	142	137	145	165	156	149	161	174	160	162	156	159	162	167	157.0
23-Feb	168	161	168	167	169	154	171	219	263	287	349	359	349	357	10	9	2	9	356	351	16	28	36	39	4.3
24-Feb	19	0	18	325	336	332	327	4	248	185	199	164	144	137	146	168	268	30	13	20	19	17	352	359	12.6
25-Feb	354	351	0	6	4	8	357	336	339	347	340	327	360	312	305	307	315	328	10	348	22	314	331	304	345.3
26-Feb	271	201	186	206	235	233	243	294	344	348	341	7	310	310	341	289	309	337	345	357	359	346	0	353	316.7
27-Feb	298	277	316	298	122	254	337	157	219	UO	215	255	291	307	354	15	17	18	21	23	18	18	34	13	345.0
28-Feb	31	41	18	31	100	209	85	84	156	168	141	143	132	125	148	126	130	133	137	140	143	141	151	147	133.0
	304.9	312.8	55.3	194.7	188.7	168.6	158.3	169.6	211.3	169.5	90.9	51.0	287.2	287.6	275.9	301.1	312.3	36.1	56.2	51.0	39.9	19.9	14.6	323.4	
	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 45m (WD45) - deg

Mannix - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 98 deg on Feb 27 08:00

Minimum Value: 1 deg on Feb 18 06:00

Percentiles: P_1 = 3 P_{10} = 5 Q_1 = 7 Median = 10 Q_3 = 16 P_{90} = 27 P_{99} = 74

Hours in Service:	672
Hours of Data:	671
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-Feb	8	7	6	7	7	7	7	7	8	10	12	14	9	9	9	10	10	10	9	9	13	11	9	10	14
2-Feb	9	12	8	8	9	11	11	11	11	10	10	13	11	9	9	10	7	19	11	10	8	8	10	25	25
3-Feb	32	5	7	10	4	5	11	10	6	8	16	20	20	18	13	34	6	4	5	6	5	6	9	11	34
4-Feb	7	17	7	6	12	13	11	9	8	3	8	5	8	7	20	7	6	5	4	10	7	8	8	8	20
5-Feb	6	7	5	4	4	4	5	6	6	7	14	16	14	13	12	9	9	9	7	6	8	4	3	10	16
6-Feb	9	15	14	48	13	13	8	5	8	42	9	10	9	11	14	9	11	8	7	6	8	14	7	5	48
7-Feb	6	5	7	4	3	14	7	8	4	7	16	10	13	9	10	10	6	3	3	5	11	6	2	11	16
8-Feb	16	17	19	8	10	8	10	5	5	5	9	14	17	18	22	71	78	30	6	8	8	7	7	14	78
9-Feb	8	14	9	10	7	6	15	60	16	14	21	9	13	28	14	7	9	12	13	7	11	7	6	4	60
10-Feb	7	5	5	7	19	10	13	10	8	9	9	10	11	18	32	46	33	67	21	6	8	8	6	11	67
11-Feb	14	13	15	21	20	14	10	8	7	16	8	11	54	86	21	24	41	14	21	74	48	25	28	12	86
12-Feb	6	5	11	12	58	26	10	16	29	51	62	44	16	14	14	26	32	7	6	5	6	5	8	7	62
13-Feb	6	4	9	9	25	25	9	24	29	17	12	10	8	9	10	21	8	8	5	4	5	7	9	6	29
14-Feb	6	4	13	8	5	5	5	14	7	27	55	21	20	9	14	13	52	21	11	5	25	68	62	24	68
15-Feb	27	8	21	8	20	15	10	12	7	5	41	34	42	6	16	14	16	56	35	11	18	12	11	9	56
16-Feb	20	17	19	10	8	5	6	5	5	6	8	8	13	11	13	7	7	6	6	6	7	7	7	7	20
17-Feb	6	6	9	7	7	7	6	6	7	6	6	7	6	7	7	11	6	9	6	8	7	8	7	8	11
18-Feb	8	7	7	6	4	1	6	6	5	6	8	10	7	13	11	7	8	6	5	6	6	6	5	5	13
19-Feb	5	6	6	7	6	6	6	6	5	6	6	9	9	10	6	6	6	7	6	6	7	6	6	5	10
20-Feb	6	5	5	5	5	5	7	7	8	9	9	7	9	14	11	8	8	9	6	12	18	22	17	28	28
21-Feb	17	15	34	73	34	74	7	12	15	18	16	13	14	14	16	12	12	10	10	10	9	8	13	7	74
22-Feb	7	9	16	16	25	23	23	41	10	58	15	11	18	14	15	7	7	6	8	6	3	5	4	5	58
23-Feb	17	7	4	4	9	5	17	16	18	33	12	11	10	14	8	9	11	8	29	23	25	18	10	9	33
24-Feb	14	9	10	31	17	11	14	58	43	54	53	24	9	13	9	14	43	29	20	11	9	12	10	10	58
25-Feb	11	9	10	8	12	8	17	10	10	10	22	17	17	12	20	15	11	11	12	21	10	13	13	14	22
26-Feb	25	23	13	19	17	13	16	22	11	22	18	18	12	20	35	14	18	12	10	10	8	21	13	16	35
27-Feb	33	16	71	49	80	83	78	98	67	UO	74	17	8	16	17	7	11	11	11	11	9	11	14	20	98
28-Feb	18	19	18	27	62	17	42	15	51	36	13	11	9	21	17	12	5	6	6	6	6	8	5	5	62
	33	23	71	73	80	83	78	98	67	58	74	44	54	86	35	71	78	67	35	74	48	68	62	28	
	Diurnal Maximum																								

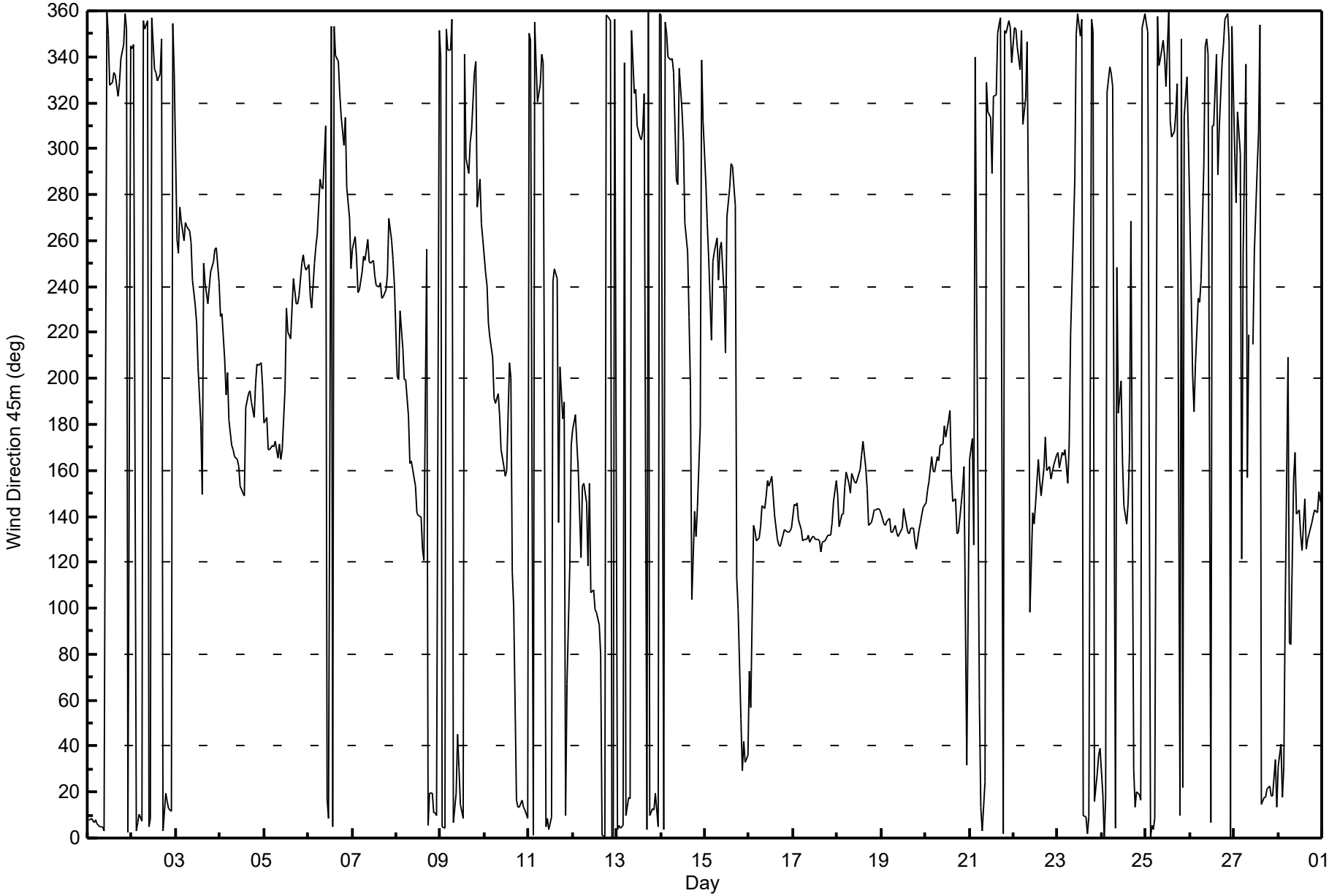
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 45m (WD45) - deg

Mannix - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 75m (WD75) - deg

Mannix - February 2025

Direction of Maximum Speed: 13 deg on Feb 2 04:00
Direction of Maximum Daily Speed Average: 1.1 deg on Feb 1

Direction of Minimum Speed: 236 deg on Feb 11 14:00
Direction of Minimum Daily Speed Average: 3.2 deg on Feb 14

Monthly Average Direction: 0.8 deg

Hours in Service:	672
Hours of Data:	668
Hours of Missing Data:	4
Percent Operational Time:	99.4

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Feb	14	13	14	12	13	12	11	11	11	10	7	358	337	338	343	343	334	339	348	353	6	359	9	354	1.1
2-Feb	353	354	10	13	17	14	3	1	3	12	15	5	343	342	339	342	356	8	23	22	19	17	4	353	4.0
3-Feb	268	275	292	282	273	280	274	275	271	255	253	233	215	205	175	254	245	239	249	253	260	263	263	256	259.3
4-Feb	256	251	234	228	228	217	207	203	203	199	188	168	170	164	194	199	203	204	200	213	217	215	216	209	206.5
5-Feb	194	196	183	183	185	184	197	180	191	183	185	204	234	222	220	233	247	237	242	245	259	261	259	263	213.2
6-Feb	259	247	251	255	264	270	294	294	289	315	24	16	1	12	2	348	347	334	326	318	327	298	282	262	320.8
7-Feb	268	272	262	247	246	261	260	262	272	263	259	254	249	244	244	246	241	245	253	256	274	275	260	258	258.4
8-Feb	235	240	250	238	226	236	230	219	211	206	178	156	154	168	140	83	347	17	31	26	18	17	16	360	4.5
9-Feb	349	11	10	0	355	353	4	25	29	50	37	24	18	351	305	300	317	331	346	344	301	297	281	275	345.5
10-Feb	260	257	248	237	235	225	226	223	211	209	205	187	194	218	218	174	109	331	7	25	25	22	22	18	259.0
11-Feb	6	3	14	10	356	351	349	350	349	16	16	8	27	236	242	245	107	180	184	152	34	65	112	160	8.4
12-Feb	168	179	175	151	135	149	148	135	110	111	101	109	97	99	95	82	12	11	10	9	9	14	15	10	57.9
13-Feb	14	14	14	11	7	21	32	29	17	10	359	331	324	315	323	342	14	8	18	23	23	28	21	23	12.7
14-Feb	13	15	8	359	354	358	1	357	322	314	325	334	313	276	252	233	197	125	148	143	161	188	294	318	346.1
15-Feb	295	272	270	255	277	276	280	268	269	271	269	273	287	291	299	297	277	138	87	60	40	48	45	51	291.9
16-Feb	74	82	145	143	139	138	137	138	139	141	156	160	146	146	143	135	132	131	136	139	139	139	140	143	139.0
17-Feb	147	146	146	142	140	136	137	137	139	135	138	138	136	136	133	128	133	132	134	136	137	142	154	159	140.0
18-Feb	153	141	147	143	152	157	157	160	164	151	153	162	166	165	175	166	156	141	143	147	149	148	148	148	152.5
19-Feb	145	142	142	142	143	139	139	141	140	138	139	141	147	146	140	141	142	142	136	136	142	144	147	149	141.7
20-Feb	150	156	159	170	168	167	174	170	176	177	184	180	188	193	171	171	172	152	159	203	278	266	19	53	169.1
21-Feb	144	163	117	102	146	121	34	28	48	7	337	334	301	340	337	1	3	7	11	2	2	5	6	356	7.3
22-Feb	7	7	0	350	5	322	350	45	159	123	142	139	143	166	164	155	164	165	166	166	166	181	202	198	158.7
23-Feb	205	197	194	193	189	174	196	244	265	291	359	6	358	4	15	15	8	16	3	1	28	40	45	49	349.1
24-Feb	40	11	32	352	1	356	341	25	234	157	182	169	151	148	150	175	258	27	9	20	27	23	2	8	31.8
25-Feb	4	2	9	12	11	17	11	350	354	0	356	344	11	330	320	321	332	344	26	11	48	340	343	316	359.2
26-Feb	282	225	219	247	255	256	259	297	347	7	355	18	330	333	5	307	328	353	2	12	20	40	43	33	327.3
27-Feb	360	294	333	338	125	187	53	146	UO	UO	UO	UO	297	314	359	22	23	25	28	29	27	26	42	23	4.8
28-Feb	38	47	34	54	110	203	90	99	141	152	144	145	134	132	151	129	137	138	141	142	145	144	149	147	136.3
	331.0	332.9	336.4	234.0	217.0	220.6	218.7	215.3	234.5	227.0	77.1	58.4	303.6	300.4	306.4	323.8	329.6	28.2	44.6	47.0	48.9	27.8	23.1	358.4	
	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 75m (WD75) - deg

Mannix - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 84 deg on Feb 27 07:00

Minimum Value: 2 deg on Feb 15 10:00

Percentiles: P_1 = 2 P_{10} = 4 Q_1 = 6 Median = 8 Q_3 = 13 P_{90} = 23 P_{99} = 70

Hours in Service:	672
Hours of Data:	668
Hours of Missing Data:	4
Hours of Calibration:	0
Percent Operational Time:	99.4

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Feb	5	5	4	5	5	5	5	5	5	7	10	12	8	8	8	9	8	8	8	7	12	9	8	8	12
2-Feb	7	10	7	6	6	9	10	10	10	9	8	11	8	8	7	9	4	16	9	8	7	6	7	17	17
3-Feb	25	4	8	13	5	3	5	6	4	6	12	16	13	15	19	24	5	3	5	5	3	5	6	7	25
4-Feb	4	14	6	6	5	5	8	7	11	6	11	5	6	7	16	6	5	4	4	8	5	7	6	7	16
5-Feb	7	6	6	4	6	4	8	6	7	6	9	15	11	14	11	8	7	7	6	5	7	3	3	6	15
6-Feb	7	12	12	31	13	11	7	4	8	42	8	9	8	10	12	7	9	5	6	7	6	15	7	3	42
7-Feb	6	4	7	4	3	11	7	7	3	5	9	8	11	8	9	8	7	6	4	2	10	6	2	5	11
8-Feb	12	14	20	9	7	6	10	8	9	9	11	9	19	18	43	63	77	19	4	5	7	6	6	11	77
9-Feb	6	12	8	8	4	3	11	23	16	13	17	8	11	27	15	8	9	11	5	3	18	5	6	6	27
10-Feb	5	4	7	4	12	7	10	9	8	9	12	15	14	12	20	83	46	62	18	5	6	7	5	9	83
11-Feb	10	9	8	12	18	15	8	8	7	13	6	14	48	82	45	50	30	28	14	75	10	17	23	6	82
12-Feb	6	4	5	8	17	12	9	13	19	30	34	37	14	15	13	24	32	5	5	4	4	4	7	5	37
13-Feb	3	3	6	12	22	7	5	10	8	7	11	13	12	10	12	19	6	7	3	3	2	4	6	8	22
14-Feb	4	2	9	5	5	3	5	5	16	10	9	18	26	14	13	12	43	23	9	7	13	45	15	14	45
15-Feb	10	10	9	6	10	4	4	8	3	2	5	7	10	6	16	13	16	60	26	10	13	9	8	6	60
16-Feb	10	13	30	8	9	5	5	5	4	4	6	8	13	10	12	9	10	9	8	6	6	7	5	5	30
17-Feb	4	4	7	4	6	8	7	6	7	8	7	9	7	9	10	12	10	11	9	8	8	9	5	5	12
18-Feb	6	3	6	5	5	2	4	6	2	6	10	8	6	11	8	6	9	4	4	4	4	4	3	4	11
19-Feb	3	3	4	5	4	5	5	4	4	7	7	8	9	9	6	6	5	7	8	7	5	5	4	4	9
20-Feb	4	4	4	3	4	4	6	6	7	9	8	6	8	12	12	14	17	8	6	38	23	53	13	30	53
21-Feb	27	20	17	18	64	47	4	10	10	11	17	11	12	15	15	11	11	8	8	8	7	6	8	5	64
22-Feb	5	6	11	17	26	33	21	62	35	15	9	11	15	10	11	5	6	3	4	3	4	8	10	15	62
23-Feb	20	15	3	7	8	5	21	10	11	34	10	9	9	12	7	8	10	6	26	18	20	16	8	8	34
24-Feb	12	6	9	37	12	12	18	48	44	46	26	17	8	12	9	12	38	37	17	13	8	9	8	9	48
25-Feb	9	7	8	6	9	7	14	10	12	10	18	16	16	16	22	21	14	14	9	19	8	18	10	18	22
26-Feb	22	14	12	11	10	8	10	18	7	12	14	15	17	28	28	14	17	10	6	8	7	13	21	17	28
27-Feb	47	34	69	71	27	83	84	63	UO	UO	UO	UO	7	16	16	6	9	9	8	8	7	9	13	17	84
28-Feb	15	17	16	24	52	19	32	15	30	24	13	9	12	20	16	13	8	7	4	4	5	5	3	3	52
	47	34	69	71	64	83	84	63	44	46	34	37	48	82	45	83	77	62	26	75	23	53	23	30	
	Diurnal Maximum																								

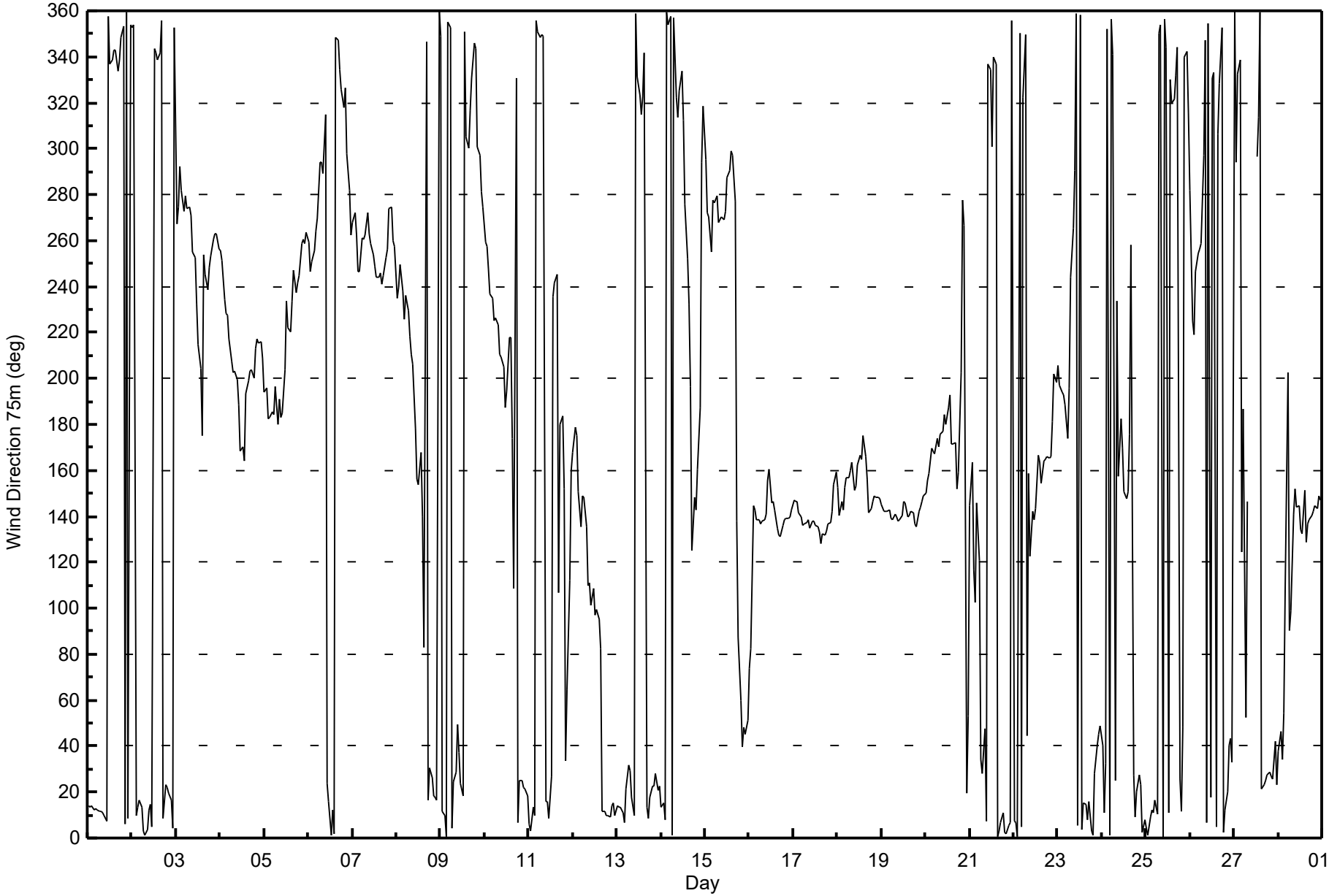
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 75m (WD75) - deg

Mannix - February 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 90m (WD90) - deg

Mannix - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 91 deg on Feb 11 14:00

Minimum Value: 1 deg on Feb 7 20:00

Percentiles: P_1 = 2 P_{10} = 4 Q_1 = 5 Median = 8 Q_3 = 13 P_{90} = 22 P_{99} = 76

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

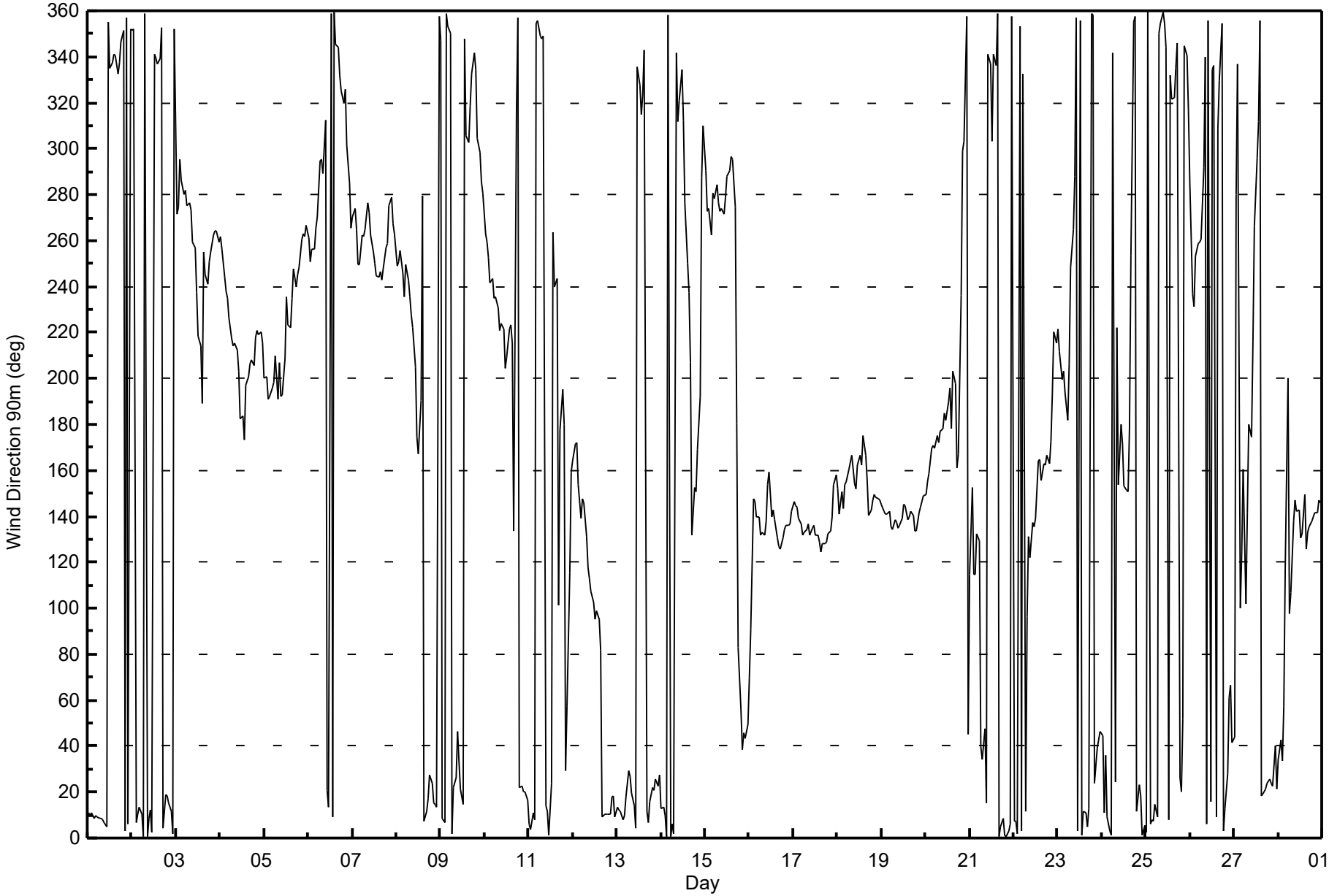
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Feb	5	5	4	4	4	4	5	5	5	7	9	12	6	7	7	8	8	7	7	6	11	9	8	7	12
2-Feb	7	10	7	6	5	10	10	10	9	9	7	11	7	7	6	8	3	15	8	7	6	6	7	18	18
3-Feb	20	6	6	10	4	2	4	5	4	5	9	14	12	12	19	17	5	3	4	4	2	4	5	6	20
4-Feb	4	10	5	5	4	6	6	7	8	5	9	6	7	7	13	5	4	3	4	8	4	6	6	7	13
5-Feb	7	5	7	5	8	6	7	9	6	7	7	15	9	13	11	7	7	7	6	5	6	3	3	5	15
6-Feb	7	10	11	20	11	10	7	4	8	41	7	9	8	10	11	6	8	4	6	6	5	14	6	3	41
7-Feb	6	3	7	4	3	9	6	6	3	7	7	7	10	8	8	7	7	6	3	1	9	3	3	4	10
8-Feb	8	11	18	7	6	6	7	6	8	8	13	18	22	22	61	81	53	15	5	5	6	5	6	10	81
9-Feb	6	11	8	7	3	3	10	20	17	14	16	8	10	25	14	8	8	9	7	4	14	3	4	5	25
10-Feb	6	3	5	4	9	6	8	8	8	7	9	15	13	12	18	64	75	55	22	6	5	6	5	9	75
11-Feb	10	7	8	10	18	15	7	8	8	12	6	16	51	91	83	51	24	34	13	79	18	18	23	5	91
12-Feb	5	5	4	5	12	10	9	10	13	21	31	35	14	13	14	26	31	5	6	4	5	5	10	5	35
13-Feb	3	3	6	9	16	6	3	6	7	7	8	12	12	10	12	19	6	7	4	3	2	3	4	6	19
14-Feb	3	3	6	5	5	2	4	5	18	7	7	15	25	17	10	11	35	21	8	8	11	20	17	16	35
15-Feb	10	12	8	5	9	3	4	10	4	2	2	5	8	6	14	12	15	57	25	11	11	8	7	5	57
16-Feb	10	13	22	7	9	3	4	4	3	3	8	10	11	9	12	7	6	5	6	5	5	5	5	5	22
17-Feb	3	3	7	3	4	6	5	6	6	6	6	8	6	8	7	8	7	8	6	7	6	9	4	4	9
18-Feb	5	3	7	5	3	2	3	6	2	7	10	8	7	11	8	7	10	3	3	3	3	3	2	3	11
19-Feb	3	3	3	4	3	5	4	3	3	5	5	8	10	8	5	6	5	7	6	5	5	5	3	3	10
20-Feb	3	4	3	3	4	4	6	6	8	8	7	7	8	12	13	21	26	7	7	42	12	27	24	28	42
21-Feb	28	18	10	11	23	48	6	14	10	10	15	10	11	16	15	10	11	8	7	7	6	5	7	4	48
22-Feb	5	6	9	18	25	53	34	32	13	8	8	10	15	9	9	5	6	3	3	4	6	12	6	12	53
23-Feb	15	12	3	8	8	4	21	9	9	32	10	8	9	12	7	8	10	7	23	16	20	16	9	9	32
24-Feb	11	6	10	36	11	14	18	43	46	26	21	14	8	13	9	12	34	54	19	16	8	9	8	8	54
25-Feb	8	6	7	5	8	6	11	9	13	8	18	14	15	16	23	25	14	15	9	20	7	21	8	19	25
26-Feb	13	18	9	8	7	6	8	17	8	9	12	14	18	28	28	12	16	9	5	7	8	22	24	15	28
27-Feb	56	82	64	55	16	76	76	45	49	62	78	13	6	15	15	6	8	8	7	7	6	8	13	15	82
28-Feb	16	18	16	23	50	22	32	13	28	17	13	9	9	19	16	10	7	5	3	4	5	4	4	3	50
	56	82	64	55	50	76	76	45	49	62	78	35	51	91	83	81	75	57	25	79	20	27	24	28	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 90m (WD90) - deg

Mannix - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Mannix - February 2025

Maximum Value: 1.2 km/h on Feb 17 16:00

Maximum Daily Average: 0.9 km/h on Feb 19

Minimum Value: -1.2 km/h on Feb 6 13:00

Minimum Daily Average: -0.7 km/h on Feb 1

Maximum Diurnal Average: 0.1 km/h at hour 10

Minimum Diurnal Average: 0.0 km/h at hour 2

Monthly Average: 0.05 km/h

Percentiles: P_1 = -0.9 P_{10} = -0.5 Q_1 = -0.2 Median = 0.0 Q_3 = 0.3 P_{90} = 0.7 P_{99} = 1.0

Hours in Service:	672
Hours of Data:	671
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-Feb	-0.5	-0.7	-0.9	-0.9	-0.8	-0.7	-0.5	-0.7	-0.5	-0.5	-0.7	-0.3	-0.8	-0.6	-0.6	-0.5	-0.5	-0.7	-0.7	-0.7	-0.6	-0.8	-0.7	-0.9	-0.7	-0.3
2-Feb	-0.8	-0.9	-0.8	-0.9	-0.6	-0.3	-0.4	-0.3	-0.5	-0.5	-0.6	-0.3	-0.6	-0.6	-0.4	-0.6	-0.5	-0.3	0.0	-0.1	-0.3	-0.3	-0.2	-0.2	-0.5	0.0
3-Feb	-0.1	-0.2	0.0	0.0	-0.2	0.0	0.1	0.0	0.0	-0.1	-0.3	-0.1	0.2	0.2	0.5	-0.1	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.2	-0.1	-0.1	0.5
4-Feb	-0.1	-0.2	0.1	0.2	0.2	0.2	0.3	0.5	0.5	0.8	0.6	0.9	0.6	0.6	0.3	0.2	0.0	0.1	0.2	0.0	0.0	0.1	0.1	0.0	0.3	0.9
5-Feb	0.3	0.1	0.6	0.7	0.6	0.7	0.5	0.6	0.4	0.6	0.3	0.3	0.2	-0.1	0.0	-0.1	0.0	-0.2	-0.1	-0.1	-0.1	-0.2	-0.2	-0.1	0.2	0.7
6-Feb	-0.1	0.0	0.0	-0.1	-0.1	0.0	-0.2	-0.3	-0.1	-0.4	-0.5	-0.6	-1.2	-0.6	-0.5	-0.7	-0.5	-0.5	-0.5	-0.2	-0.3	-0.1	0.0	-0.1	-0.3	0.0
7-Feb	-0.2	-0.1	-0.1	-0.2	-0.1	-0.1	-0.3	-0.2	-0.2	-0.1	0.0	-0.2	-0.1	0.1	0.0	0.1	-0.1	-0.1	-0.2	-0.1	-0.1	-0.2	-0.1	0.0	-0.1	0.1
8-Feb	0.2	0.1	0.0	0.1	0.1	0.0	0.1	0.3	0.3	0.3	0.2	0.3	0.1	0.2	0.1	0.1	0.1	-0.1	-0.1	-0.3	-0.7	-0.9	-0.9	-0.4	0.0	0.3
9-Feb	-0.9	-0.7	-0.5	-0.3	-0.3	-0.5	-0.2	-0.1	0.0	0.2	0.1	-0.4	-0.2	-0.1	0.1	-0.2	-0.1	-0.1	-0.1	-0.2	0.1	-0.2	-0.1	-0.1	-0.2	0.2
10-Feb	-0.2	0.0	-0.1	-0.1	-0.1	0.0	0.1	0.0	0.2	0.3	0.3	0.4	0.4	0.2	0.2	0.3	0.4	0.1	-0.1	-0.5	-0.5	-0.4	-0.6	-0.4	0.0	0.4
11-Feb	-0.3	-0.2	-0.2	-0.1	-0.1	-0.1	-0.3	-0.4	-0.3	-0.3	-0.3	-0.2	0.2	-0.3	-0.1	-0.1	0.1	-0.2	-0.1	0.0	0.0	0.1	0.0	0.0	-0.1	0.2
12-Feb	0.0	-0.1	0.2	0.2	0.0	0.1	0.3	0.4	0.1	0.1	0.3	0.1	0.1	0.1	0.2	0.3	0.0	-0.3	-0.5	-0.5	-0.4	-0.3	-0.2	-0.3	0.0	0.4
13-Feb	-0.3	-0.2	-0.4	-0.2	-0.1	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.2	-0.2	-0.2	-0.4	-0.1	-0.4	-0.6	-0.5	-0.6	-0.4	-0.3	-0.2	-0.3	-0.3	-0.1
14-Feb	-0.1	-0.3	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	0.0	0.0	0.0	-0.1	-0.1	-0.4	-0.3	-0.1	0.0	0.2	0.4	0.4	0.1	0.0	0.0	-0.1	0.0	0.4
15-Feb	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.2	0.0	-0.1	-0.1	0.0	0.2	0.1	0.1	0.0	0.1	-0.1	0.0	0.1	0.3
16-Feb	0.1	0.0	0.1	0.1	0.7	0.7	0.5	0.2	0.3	0.4	0.2	0.2	-0.2	0.2	0.5	0.6	0.8	0.5	0.7	0.7	0.9	0.9	0.8	0.8	0.5	0.9
17-Feb	0.6	0.6	0.4	0.9	0.8	1.0	1.0	0.9	0.8	0.8	0.8	0.6	0.7	0.6	0.8	1.2	0.8	0.7	0.6	0.8	1.0	0.8	0.7	0.4	0.8	1.2
18-Feb	0.4	0.6	0.7	0.5	0.4	0.5	0.6	0.5	0.4	0.5	0.2	0.2	0.6	0.3	0.2	0.4	0.5	0.7	0.9	0.9	0.9	1.0	0.9	0.8	0.6	1.0
19-Feb	0.9	0.9	0.8	0.9	0.8	0.7	0.8	0.7	0.9	1.0	0.9	1.1	0.9	1.1	1.0	0.9	0.7	0.9	0.9	0.8	1.1	0.7	1.0	1.0	0.9	1.1
20-Feb	0.9	0.9	0.9	0.6	1.0	1.0	0.9	0.8	0.4	0.5	0.2	0.3	0.4	0.5	0.5	0.6	0.4	0.4	0.1	0.1	0.2	0.1	-0.1	0.2	0.5	1.0
21-Feb	0.0	0.1	0.1	0.0	0.1	0.0	-0.4	-0.2	0.0	-0.1	-0.2	-0.2	-0.2	-0.2	-0.3	-0.4	-0.3	-0.4	-0.3	-0.5	-0.2	-0.4	-0.2	-0.3	-0.2	0.1
22-Feb	-0.3	-0.2	-0.1	0.0	-0.1	-0.1	0.0	0.0	0.0	0.0	0.4	0.6	0.2	0.4	0.4	0.5	0.4	-0.1	0.2	0.3	0.4	0.4	0.3	0.4	0.2	0.6
23-Feb	0.1	0.2	0.5	0.2	0.5	0.3	0.4	0.0	0.0	-0.2	-0.9	-0.7	-0.8	-0.5	-0.5	-0.3	-0.4	-0.5	-0.2	-0.2	0.1	0.0	0.3	0.1	-0.1	0.5
24-Feb	-0.1	-0.3	-0.1	-0.1	0.0	-0.1	-0.2	-0.1	0.1	0.3	0.6	0.4	0.6	0.3	0.4	0.2	0.0	0.1	0.0	-0.1	-0.1	-0.1	-0.4	-0.5	0.0	0.6
25-Feb	-0.6	-0.6	-0.3	-0.4	-0.5	-0.6	-0.4	-0.3	-0.3	-0.3	0.2	-0.2	0.0	-0.3	-0.1	0.0	0.0	-0.2	-0.3	-0.2	-0.1	-0.1	-0.1	-0.1	-0.2	0.2
26-Feb	0.1	0.1	0.1	0.2	0.0	-0.1	0.0	-0.1	-0.3	0.3	-0.2	0.0	-0.1	0.2	0.1	-0.1	-0.3	-0.4	-0.3	-0.2	-0.2	-0.1	-0.1	-0.2	-0.1	0.3
27-Feb	-0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	UO	0.3	0.0	-0.4	-0.9	-0.6	-0.6	-0.1	-0.1	-0.1	0.2	-0.1	-0.2	0.1	-0.1	-0.1	0.3
28-Feb	0.2	0.1	0.0	0.1	0.2	-0.1	0.1	0.3	0.2	0.0	0.5	0.5	0.5	0.9	0.4	0.6	0.5	0.5	0.7	0.7	0.7	0.7	0.6	0.5	0.4	0.9
	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Diurnal Average	
	0.9	0.9	0.9	0.9	1.0	1.0	1.0	0.9	0.9	1.0	0.9	1.1	0.9	1.1	1.0	1.2	0.8	0.9	0.9	0.9	1.1	1.0	1.0	1.0	Diurnal Maximum	

UO - Unstable Operation

Summary of Hour Standard Deviations

Mannix - February 2025

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

Maximum Value: 3.6 km/h on Feb 2 04:00

Minimum Value: 0.1 km/h on Feb 14 23:00

Percentiles: P_1 = 0.2 P_{10} = 0.4 Q_1 = 0.6 Median = 1.0 Q_3 = 1.6 P_{90} = 2.2 P_{99} = 3.4

Hours in Service:	672
Hours of Data:	671
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-Feb	2.4	2.6	2.9	2.7	3.2	3.2	3.3	3.4	3.5	3.3	2.7	2.1	2.5	2.5	2.7	2.4	2.0	2.3	2.7	2.7	2.9	3.2	3.6	3.4	3.6
2-Feb	3.4	3.4	3.3	3.6	3.6	2.7	2.1	2.3	2.4	2.9	3.0	2.6	2.3	2.3	2.0	1.7	1.7	1.6	1.4	1.5	1.2	1.2	1.0	0.8	3.6
3-Feb	0.6	0.5	0.3	0.3	0.4	0.5	0.4	0.6	0.4	0.5	0.8	1.0	1.3	0.9	0.8	0.9	1.1	0.5	0.7	0.9	0.7	0.6	0.6	0.5	1.3
4-Feb	0.4	0.4	0.5	0.4	0.4	0.7	0.8	0.8	0.9	1.2	1.1	1.3	1.2	1.2	1.8	1.9	1.6	0.8	0.6	0.8	1.3	1.7	1.3	1.3	1.9
5-Feb	1.5	1.4	1.0	0.9	1.2	1.0	0.9	1.0	1.0	0.9	1.1	1.4	1.4	1.3	1.5	1.0	1.5	1.2	0.9	0.9	0.7	0.8	0.5	0.6	1.5
6-Feb	0.9	0.9	0.5	1.6	1.1	1.4	1.4	1.3	1.4	1.7	2.7	3.1	3.3	2.7	2.4	2.1	1.8	1.3	1.1	0.7	1.0	0.6	0.3	0.3	3.3
7-Feb	0.6	0.7	0.5	0.4	0.5	0.4	0.7	0.6	0.6	0.7	0.9	0.9	1.3	1.3	1.3	1.2	0.7	0.2	0.4	0.4	0.2	0.4	0.2	0.3	1.3
8-Feb	0.4	0.2	0.2	0.3	0.3	0.3	0.4	0.5	0.5	0.6	0.8	0.8	0.7	0.8	0.4	0.3	0.3	0.4	1.3	1.9	2.9	3.2	3.3	2.6	3.3
9-Feb	3.0	2.7	2.1	1.6	1.6	1.8	1.3	0.7	0.6	1.3	1.5	2.0	1.9	1.6	1.4	0.7	0.9	0.4	0.4	0.4	0.3	0.3	0.5	0.3	3.0
10-Feb	0.3	0.5	0.4	0.5	0.4	0.4	0.5	0.5	0.5	0.8	0.8	0.9	1.0	1.5	1.0	0.6	0.6	0.4	0.5	1.3	1.6	1.7	1.7	1.4	1.7
11-Feb	0.8	1.2	1.3	0.8	0.7	0.7	0.7	0.8	1.0	1.4	1.4	1.0	1.1	0.9	0.9	0.6	0.4	0.3	0.3	0.2	0.2	0.3	0.2	0.2	1.4
12-Feb	0.2	0.2	0.4	0.4	0.5	0.4	0.5	0.7	0.5	0.6	0.7	0.9	0.9	0.9	0.9	0.9	1.0	1.4	1.5	1.3	0.9	1.2	0.9	0.9	1.5
13-Feb	1.3	1.4	1.5	0.9	0.4	0.7	0.7	0.7	0.5	0.7	0.8	1.0	1.1	1.3	1.2	1.0	1.4	1.6	1.9	1.5	1.4	1.6	1.0	0.5	1.9
14-Feb	0.4	0.5	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.5	0.4	0.9	1.1	0.7	0.7	0.8	0.5	0.3	0.4	0.6	0.3	0.2	0.1	0.2	1.1
15-Feb	0.1	0.2	0.2	0.3	0.4	0.2	0.3	0.3	0.3	0.3	0.6	0.6	0.8	1.3	1.2	0.7	0.5	0.4	0.4	0.7	1.3	1.3	0.6	0.3	1.3
16-Feb	0.2	0.2	0.2	0.4	0.8	0.8	1.1	0.6	0.7	0.9	1.1	1.1	1.1	1.1	1.4	1.8	1.9	1.7	1.9	2.1	2.0	2.1	2.3	1.9	2.3
17-Feb	1.3	1.4	1.1	1.7	2.1	2.0	2.2	2.2	2.1	2.1	1.9	1.5	2.0	1.9	2.0	2.2	2.0	1.8	1.8	2.3	2.1	1.8	1.6	0.6	2.3
18-Feb	0.9	1.3	0.9	0.8	0.4	0.5	0.8	0.8	0.7	0.9	0.9	1.1	1.2	1.4	1.6	1.1	0.9	1.6	2.1	1.8	1.9	1.8	1.9	1.7	2.1
19-Feb	1.8	1.7	2.0	2.0	1.7	2.0	2.4	2.2	2.2	2.4	2.6	2.2	1.7	2.0	2.5	2.0	1.8	2.2	2.5	2.4	2.5	2.2	2.0	1.9	2.6
20-Feb	1.7	1.5	1.5	1.3	1.5	1.5	1.4	1.5	1.9	2.0	2.1	1.9	2.1	2.0	1.0	0.9	0.6	0.7	0.5	0.4	0.2	0.2	0.3	0.3	2.1
21-Feb	0.3	0.2	0.2	0.1	0.2	0.3	0.8	0.7	0.6	0.7	1.0	1.0	1.1	1.3	1.3	1.4	1.4	1.4	1.5	1.6	1.4	1.2	0.8	0.8	1.6
22-Feb	0.9	0.8	0.8	0.8	0.7	0.6	0.7	0.6	0.6	0.5	1.3	1.4	1.2	1.1	1.1	1.0	0.6	0.4	0.4	0.4	0.6	0.7	0.7	0.5	1.4
23-Feb	0.9	0.7	0.7	0.4	0.5	0.5	0.6	0.5	0.5	1.5	2.8	3.2	3.0	2.8	2.4	2.2	2.0	1.7	1.0	1.0	0.7	0.6	1.1	1.1	3.2
24-Feb	0.7	1.0	1.0	0.5	0.6	0.6	0.7	0.8	0.6	0.8	1.2	1.1	1.2	1.1	1.1	1.2	0.7	0.4	0.4	0.7	0.8	1.1	1.6	1.7	1.7
25-Feb	1.9	1.9	1.9	2.1	2.2	2.3	1.3	1.2	1.3	1.4	1.2	1.3	1.3	1.1	1.2	1.1	1.0	0.7	0.8	0.7	0.6	0.8	1.1	0.8	2.3
26-Feb	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.6	1.2	0.9	1.4	1.4	1.1	1.2	1.2	0.9	1.2	1.2	1.0	0.7	0.3	0.3	0.5	0.7	1.4
27-Feb	0.5	0.6	0.6	0.6	0.6	0.7	0.6	0.9	1.1	UO	0.8	1.1	2.5	3.0	2.8	2.6	2.4	1.9	1.8	2.1	1.9	1.9	1.6	1.0	3.0
28-Feb	0.9	0.9	0.8	0.6	0.6	0.6	0.6	0.8	0.7	0.8	1.1	1.2	1.5	1.5	1.3	1.2	1.3	1.5	1.6	1.5	1.4	1.4	1.0	0.9	1.6
	3.4	3.4	3.3	3.6	3.6	3.2	3.3	3.4	3.5	3.3	3.0	3.2	3.3	3.0	2.8	2.6	2.4	2.3	2.7	2.7	2.9	3.2	3.6	3.4	
	Diurnal Maximum																								

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

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

Mannix - February 2025

Maximum Value: 2.0 km/h on Feb 20 05:00

Maximum Daily Average: 1.3 km/h on Feb 19

Minimum Value: -1.9 km/h on Feb 2 00:00

Minimum Daily Average: -1.2 km/h on Feb 1

Maximum Diurnal Average: 0.2 km/h at hour 10

Minimum Diurnal Average: 0.0 km/h at hour 18

Monthly Average: 0.09 km/h

Percentiles: P_1 = -1.6 P_{10} = -0.9 Q_1 = -0.4 Median = 0.0 Q_3 = 0.6 P_{90} = 1.2 P_{99} = 1.7

Hours in Service:	672
Hours of Data:	671
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-Feb	-1.0	-0.9	-1.4	-1.3	-1.4	-1.2	-1.0	-1.2	-1.3	-0.8	-0.9	-0.5	-1.2	-1.1	-1.4	-1.2	-0.9	-1.3	-1.4	-1.4	-0.8	-1.5	-1.3	-1.9	-1.2	-0.5
2-Feb	-1.8	-1.7	-0.9	-1.5	-1.3	-0.4	-0.4	-0.2	-0.4	-0.9	-0.9	-0.6	-1.2	-1.1	-1.0	-1.2	-1.1	-0.7	0.0	-0.2	-0.6	-0.6	-0.3	-0.5	-0.8	0.0
3-Feb	-0.3	-0.6	-0.1	0.0	-0.1	0.0	0.0	0.0	0.1	0.1	-0.1	0.1	0.6	0.5	0.6	0.2	0.0	-0.1	-0.1	-0.2	-0.2	-0.2	-0.1	0.0	0.0	0.6
4-Feb	0.1	0.1	0.2	0.3	0.2	0.4	0.6	1.0	1.0	1.3	1.1	1.4	1.0	0.9	0.9	0.8	0.6	0.7	0.9	0.4	0.4	0.4	0.4	0.5	0.6	1.4
5-Feb	1.0	0.9	1.1	1.3	1.1	1.3	0.9	1.2	0.9	0.9	0.8	0.6	0.9	0.3	0.3	0.0	0.1	0.1	0.2	0.2	0.2	-0.2	-0.2	0.0	0.6	1.3
6-Feb	0.0	0.2	0.1	0.2	0.1	-0.1	-0.3	-0.4	-0.2	-0.6	-0.9	-1.4	-1.8	-1.1	-1.1	-1.3	-1.2	-1.2	-1.1	-0.3	-0.6	-0.2	-0.1	-0.1	-0.6	0.2
7-Feb	-0.1	-0.1	-0.1	-0.1	0.0	-0.1	-0.2	-0.3	-0.2	0.1	0.1	0.0	0.1	0.3	0.2	0.2	0.1	0.0	-0.1	-0.2	-0.2	-0.2	0.0	0.2	0.0	0.3
8-Feb	0.3	0.1	0.1	0.1	0.1	0.0	0.2	0.3	0.5	0.6	0.4	0.3	0.4	0.2	0.2	0.2	0.1	-0.2	-0.6	-0.7	-1.6	-1.7	-1.4	-0.6	-0.1	0.6
9-Feb	-1.9	-1.2	-0.6	-0.3	-0.9	-1.2	-0.6	-0.1	-0.2	0.4	0.1	-0.6	-0.4	0.0	0.0	-0.4	-0.3	-0.3	-0.3	-0.4	0.0	-0.5	-0.2	-0.2	-0.4	0.4
10-Feb	-0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.4	0.5	0.4	0.4	0.5	0.6	0.3	0.4	0.6	0.0	-0.3	-0.7	-0.6	-0.7	-1.2	-0.7	0.0	0.6
11-Feb	-0.6	-0.5	-0.4	-0.2	-0.1	-0.4	-0.7	-0.6	-0.7	-0.5	-0.5	-0.4	0.4	-0.1	0.0	0.0	0.2	0.0	0.2	0.2	0.0	0.1	0.2	0.6	-0.2	0.6
12-Feb	0.6	0.4	0.7	0.7	0.3	0.3	0.8	0.8	0.2	0.3	0.4	0.1	0.1	-0.1	0.2	0.5	0.0	-0.7	-1.0	-0.8	-0.6	-0.8	-0.5	-0.4	0.1	0.8
13-Feb	-0.6	-0.5	-0.8	-0.4	-0.1	-0.4	-0.4	-0.4	-0.3	-0.2	-0.1	-0.1	-0.5	-0.4	-0.5	-0.3	-0.7	-1.2	-1.0	-1.2	-0.9	-0.7	-0.5	-0.6	-0.5	-0.1
14-Feb	-0.1	-0.7	-0.3	-0.2	-0.3	-0.4	-0.3	-0.2	-0.1	0.0	0.0	-0.3	-0.2	-0.3	0.0	0.1	0.2	0.3	0.6	0.7	0.3	0.3	0.1	-0.2	0.0	0.7
15-Feb	-0.1	-0.1	0.0	0.1	0.1	0.0	-0.1	0.0	0.0	-0.1	0.2	0.3	0.3	0.0	0.0	-0.2	-0.1	0.2	0.2	0.1	-0.1	-0.2	-0.2	-0.2	0.0	0.3
16-Feb	0.2	0.2	0.3	0.4	1.1	0.9	0.9	0.7	0.9	0.8	0.5	0.3	0.0	0.5	0.5	0.4	0.5	0.5	0.9	1.3	1.3	1.1	1.2	1.3	0.7	1.3
17-Feb	1.2	1.3	0.9	1.4	1.3	1.1	1.1	1.2	1.0	0.5	0.9	0.5	0.5	0.5	0.6	1.7	0.7	1.1	0.6	0.9	1.2	1.4	1.5	0.8	1.0	1.7
18-Feb	0.9	1.1	1.2	0.9	1.1	1.3	1.4	1.5	1.2	1.0	0.5	0.4	1.0	0.7	0.8	0.7	0.8	1.2	1.6	1.7	1.8	1.7	1.7	1.4	1.1	1.8
19-Feb	1.6	1.4	1.3	1.6	1.2	1.1	1.6	1.3	1.2	1.2	1.2	1.2	1.1	1.6	1.1	1.2	1.2	1.3	1.1	1.0	1.9	1.5	1.6	1.8	1.3	1.9
20-Feb	1.6	1.7	1.8	1.5	2.0	1.7	1.6	1.6	1.6	1.8	1.2	1.1	1.0	0.9	0.8	0.6	0.7	0.9	0.4	0.4	0.4	0.4	-0.1	0.2	1.1	2.0
21-Feb	0.8	0.7	0.3	0.1	0.1	0.1	-0.5	-0.5	-0.2	-0.2	-0.3	-0.3	-0.2	-0.5	-0.6	-0.8	-0.4	-0.5	-0.6	-1.0	-0.6	-0.8	-0.5	-0.6	-0.3	0.8
22-Feb	-0.6	-0.4	-0.3	-0.2	-0.2	-0.1	-0.1	0.0	0.1	0.2	0.8	1.1	0.5	0.7	0.7	0.9	0.9	0.6	0.6	0.7	1.2	1.2	0.8	0.7	0.4	1.2
23-Feb	0.6	0.8	1.0	0.6	1.1	0.9	0.9	0.2	-0.1	-0.5	-1.7	-1.3	-1.4	-0.9	-1.1	-0.8	-0.6	-1.1	-0.3	-0.4	0.2	-0.1	0.4	0.0	-0.2	1.1
24-Feb	-0.1	-0.5	-0.3	-0.1	-0.1	-0.2	-0.3	-0.1	0.2	0.6	1.0	0.6	1.0	0.4	0.5	0.8	0.0	0.1	-0.2	-0.3	-0.1	-0.3	-0.9	-0.7	0.0	1.0
25-Feb	-0.9	-1.0	-0.4	-0.5	-0.8	-1.3	-0.5	-0.6	-0.6	-0.7	0.6	-0.2	-0.2	-0.3	-0.3	0.0	-0.2	-0.5	-0.4	-0.3	-0.1	-0.2	-0.2	-0.1	-0.4	0.6
26-Feb	0.1	0.2	0.2	0.1	0.1	0.0	0.0	-0.2	-0.8	0.2	-0.4	-0.3	-0.4	0.3	0.0	-0.2	-0.6	-0.7	-0.5	-0.3	-0.3	-0.2	-0.2	-0.5	-0.2	0.3
27-Feb	-0.1	0.0	0.0	0.1	0.2	0.1	0.1	0.3	0.5	UO	0.4	0.0	-0.5	-1.2	-1.3	-1.0	-0.3	-0.3	-0.3	0.1	-0.4	-0.4	0.0	-0.2	-0.2	0.5
28-Feb	0.4	0.1	0.1	0.0	0.2	0.1	0.1	0.2	0.4	0.2	0.6	0.8	0.5	1.6	0.8	0.5	0.4	0.7	1.1	1.2	1.2	1.2	1.2	1.2	0.6	1.6
	0.0	0.0	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	Diurnal Average	
	1.6	1.7	1.8	1.6	2.0	1.7	1.6	1.6	1.6	1.8	1.2	1.4	1.1	1.6	1.1	1.7	1.2	1.3	1.6	1.7	1.9	1.7	1.7	1.8	Diurnal Maximum	

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

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

Mannix - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.8 km/h on Feb 2 02:00

Minimum Value: 0.1 km/h on Feb 11 18:00

Percentiles: P_1 = 0.2 P_{10} = 0.4 Q_1 = 0.6 Median = 1.0 Q_3 = 1.6 P_{90} = 2.4 P_{99} = 3.5

Hours in Service:	672
Hours of Data:	671
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-Feb	2.1	2.3	2.2	2.5	2.7	2.9	3.1	3.2	3.4	3.3	2.8	2.5	2.7	2.9	3.2	2.7	2.2	2.7	3.0	3.2	3.1	3.5	3.7	3.7	3.7
2-Feb	3.7	3.8	3.3	3.5	3.7	3.1	2.5	2.7	2.7	2.9	3.0	2.9	2.5	2.7	2.2	1.7	1.6	1.6	1.6	1.8	1.4	1.3	1.2	1.0	3.8
3-Feb	0.8	0.4	0.2	0.2	0.3	0.3	0.6	0.6	0.3	0.3	0.7	1.0	1.3	1.1	0.9	0.9	0.9	0.6	0.7	0.8	0.4	0.4	0.4	0.6	1.3
4-Feb	0.4	0.5	0.4	0.5	0.4	0.7	0.7	0.6	0.8	0.7	1.0	1.4	1.3	1.3	1.6	1.7	1.3	1.0	0.7	0.9	1.3	1.6	1.2	1.1	1.7
5-Feb	1.2	1.3	0.9	1.0	1.0	1.0	0.9	1.0	1.1	0.9	1.0	1.3	1.7	1.4	1.4	1.1	1.5	1.2	0.8	0.8	0.7	0.6	0.5	0.6	1.7
6-Feb	0.9	1.0	0.5	1.5	1.3	1.6	1.2	1.0	1.3	1.9	2.8	3.1	3.5	2.7	2.5	2.4	1.9	1.3	1.1	0.7	1.3	0.6	0.2	0.2	3.5
7-Feb	0.3	0.4	0.4	0.4	0.5	0.4	0.7	0.8	0.6	0.6	0.9	1.1	1.3	1.6	1.5	1.3	0.6	0.2	0.2	0.4	0.2	0.3	0.2	0.3	1.6
8-Feb	0.6	0.4	0.2	0.3	0.3	0.3	0.5	0.4	0.5	0.7	0.7	0.7	0.7	0.6	0.4	0.3	0.3	0.5	1.4	2.0	2.6	3.1	3.4	2.9	3.4
9-Feb	3.4	3.1	2.2	1.8	1.7	1.7	1.4	0.7	0.9	1.6	1.9	2.3	2.1	2.1	1.4	0.5	0.9	0.4	0.5	0.3	0.3	0.3	0.3	0.4	3.4
10-Feb	0.4	0.3	0.3	0.7	0.5	0.6	0.9	0.9	0.6	0.8	0.9	1.0	1.0	1.6	1.1	0.6	0.8	0.5	0.6	1.1	1.7	1.6	1.6	1.2	1.7
11-Feb	1.0	1.3	1.3	1.1	1.0	0.9	0.8	0.7	1.0	1.5	1.3	0.9	1.3	0.9	0.8	0.6	0.4	0.1	0.2	0.2	0.2	0.3	0.3	0.3	1.5
12-Feb	0.3	0.2	0.4	0.4	0.6	0.4	0.5	0.8	0.6	0.8	0.7	0.9	1.0	0.9	1.1	1.2	1.1	1.3	1.1	1.1	0.8	1.0	0.8	0.9	1.3
13-Feb	1.0	1.0	1.2	0.9	0.5	0.9	0.9	0.9	0.6	0.4	0.7	1.0	1.1	1.5	1.5	1.2	1.2	1.3	1.6	1.2	1.1	1.7	0.9	0.6	1.7
14-Feb	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.3	0.4	0.8	1.0	0.7	0.6	0.8	0.5	0.5	0.5	0.7	0.4	0.2	0.1	0.4	1.0
15-Feb	0.2	0.2	0.2	0.4	0.5	0.4	0.3	0.3	0.4	0.4	0.6	0.6	1.3	1.2	1.4	0.7	0.5	0.4	0.5	0.7	1.4	1.4	0.8	0.5	1.4
16-Feb	0.3	0.3	0.4	0.7	1.1	1.0	1.3	0.6	0.7	0.9	1.1	1.2	1.0	1.3	1.7	1.9	2.0	1.8	2.0	2.4	2.2	2.3	2.5	2.1	2.5
17-Feb	1.3	1.4	1.4	2.0	2.1	2.2	2.3	2.3	2.2	2.1	2.0	1.9	2.0	2.2	2.4	3.0	2.1	2.3	1.9	2.6	2.1	1.9	1.6	1.0	3.0
18-Feb	1.1	1.3	0.8	0.8	0.4	0.3	0.7	0.5	0.5	0.8	1.0	1.1	1.4	1.3	1.6	1.1	1.0	1.7	2.2	1.9	1.9	1.9	1.8	1.8	2.2
19-Feb	1.6	1.9	2.0	2.3	1.9	2.0	2.5	2.4	2.1	2.5	2.9	2.5	2.2	2.4	2.7	2.0	1.9	2.3	2.9	2.4	2.7	2.4	2.1	2.1	2.9
20-Feb	1.8	1.7	1.5	1.3	1.6	1.5	1.7	1.7	1.9	2.0	1.9	1.6	1.8	2.0	1.4	1.0	0.7	0.8	0.7	0.5	0.3	0.3	0.3	0.4	2.0
21-Feb	0.4	0.3	0.3	0.2	0.2	0.3	0.5	0.7	0.6	0.6	0.9	1.0	1.1	1.4	1.5	1.6	1.6	1.4	1.5	1.5	1.5	1.1	0.8	0.9	1.6
22-Feb	0.8	0.8	0.8	0.8	0.7	0.5	0.6	0.5	0.6	0.6	1.6	1.8	1.3	1.1	1.1	1.0	0.7	0.3	0.4	0.4	0.6	0.6	0.6	0.6	1.8
23-Feb	1.1	0.7	0.4	0.3	0.5	0.4	0.9	0.9	1.0	1.8	2.8	3.2	3.3	3.2	2.3	2.2	2.0	1.6	1.2	1.0	1.0	0.8	1.3	1.1	3.3
24-Feb	0.6	0.7	1.0	0.4	0.5	0.5	0.6	0.9	0.6	0.8	1.1	1.3	1.4	1.3	1.3	1.1	0.8	0.5	0.4	0.6	1.0	1.2	1.6	1.7	1.7
25-Feb	1.7	2.0	2.0	1.9	2.1	2.2	1.3	1.2	1.3	1.4	1.4	1.5	1.6	1.2	1.3	1.1	1.0	0.6	0.7	0.6	0.5	0.6	1.1	0.8	2.2
26-Feb	0.5	0.3	0.5	0.8	0.9	0.5	0.4	0.5	1.1	1.3	1.6	1.6	1.0	1.2	1.1	0.9	1.1	1.2	0.9	0.7	0.3	0.3	0.7	0.6	1.6
27-Feb	0.4	0.4	0.6	0.5	0.6	0.6	0.7	0.9	1.3	UO	0.7	1.2	2.7	3.2	2.8	2.4	2.5	2.2	2.0	2.3	1.9	2.0	1.6	1.2	3.2
28-Feb	1.2	1.2	1.0	0.9	0.8	0.6	0.6	0.8	0.6	0.9	1.3	1.6	2.2	1.8	1.7	1.6	1.3	1.5	1.6	1.6	1.3	1.5	0.8	0.8	2.2
	3.7	3.8	3.3	3.5	3.7	3.1	3.1	3.2	3.4	3.3	3.0	3.2	3.5	3.2	3.2	3.0	2.5	2.7	3.0	3.2	3.1	3.5	3.7	3.7	
	Diurnal Maximum																								

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

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

Mannix - February 2025

Maximum Value: 1.2 km/h on Feb 28 14:00

Maximum Daily Average: 0.3 km/h on Feb 5

Minimum Value: -1.5 km/h on Feb 17 13:00

Minimum Daily Average: -0.7 km/h on Feb 19

Maximum Diurnal Average: 0.1 km/h at hour 14

Minimum Diurnal Average: -0.3 km/h at hour 20

Monthly Average: -0.08 km/h

Percentiles: P_1 = -1.1 P_{10} = -0.6 Q_1 = -0.3 Median = 0.0 Q_3 = 0.2 P_{90} = 0.4 P_{99} = 0.8

Hours in Service:	672
Hours of Data:	668
Hours of Missing Data:	4
Hours of Calibration:	0
Percent Operational Time:	99.4

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

UO - Unstable Operation

Summary of Hour Standard Deviations

Mannix - February 2025

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

Maximum Value: 3.6 km/h on Feb 2 02:00

Minimum Value: 0.1 km/h on Feb 11 20:00

Percentiles: P_1 = 0.2 P_{10} = 0.4 Q_1 = 0.6 Median = 1.0 Q_3 = 1.5 P_{90} = 2.2 P_{99} = 3.3

Hours in Service:	672
Hours of Data:	668
Hours of Missing Data:	4
Hours of Calibration:	0
Percent Operational Time:	99.4

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

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

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

Mannix - February 2025

Maximum Value: 2.0 km/h on Feb 2 03:00

Maximum Daily Average: 0.6 km/h on Feb 2

Minimum Value: -1.4 km/h on Feb 16 18:00

Minimum Daily Average: -0.2 km/h on Feb 17

Maximum Diurnal Average: 0.4 km/h at hour 3

Minimum Diurnal Average: 0.1 km/h at hour 17

Monthly Average: 0.24 km/h

Percentiles: P_1 = -1.0 P_{10} = -0.1 Q_1 = 0.0 Median = 0.2 Q_3 = 0.4 P_{90} = 0.7 P_{99} = 1.5

Hours in Service:	672
Hours of Data:	672
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-Feb	0.7	1.1	0.3	0.4	0.7	1.0	0.6	0.7	0.8	1.2	0.9	0.9	-0.2	0.0	-0.2	0.1	0.1	0.0	0.1	0.1	1.7	0.1	0.9	0.0	0.5	1.7
2-Feb	0.2	-0.1	2.0	1.1	1.0	1.2	1.5	1.6	1.8	1.4	1.1	1.6	-0.1	-0.3	-0.2	-0.7	-0.1	0.3	0.5	0.6	-0.1	0.1	0.5	-0.5	0.6	2.0
3-Feb	-0.1	-0.3	0.5	0.3	0.1	0.4	0.3	0.4	0.4	0.4	0.1	0.2	0.4	0.3	0.3	0.4	-0.1	-0.3	-0.2	-0.2	-0.1	-0.1	0.1	0.2	0.1	0.5
4-Feb	0.3	0.2	0.0	0.1	0.0	0.0	-0.1	-0.1	0.0	0.0	-0.3	0.2	0.0	0.1	0.2	0.0	-0.3	-0.2	-0.2	-0.2	-0.1	0.0	0.1	0.0	0.0	0.3
5-Feb	0.1	-0.1	0.3	0.1	-0.1	0.2	0.0	0.1	-0.1	0.1	0.3	0.3	1.0	0.2	-0.1	-0.1	0.1	-0.1	0.2	0.3	0.4	-0.2	-0.2	0.2	0.1	1.0
6-Feb	0.1	0.2	0.3	0.3	0.3	0.2	0.4	0.5	0.4	0.1	0.6	0.5	0.2	0.9	0.4	-0.5	-0.2	-0.2	-0.2	0.1	-0.1	0.2	0.1	0.1	0.2	0.9
7-Feb	0.2	0.2	0.0	-0.1	0.0	0.1	0.0	-0.1	0.0	0.6	0.4	0.2	0.2	0.1	0.1	0.3	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.4	0.1	0.6
8-Feb	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.1	0.2	0.2	0.1	0.3	0.3	0.2	0.3	0.0	0.7	1.1	0.2	1.1
9-Feb	-0.4	0.8	1.4	1.4	0.5	0.2	0.4	0.4	0.1	0.5	0.6	0.3	0.6	0.8	0.4	-0.2	-0.2	-0.1	0.1	0.0	0.3	0.3	0.1	0.1	0.4	1.4
10-Feb	0.0	0.4	0.0	-0.2	-0.1	-0.1	-0.2	-0.2	0.0	-0.2	-0.3	-0.3	-0.2	0.3	0.0	0.3	0.5	0.1	0.1	0.2	0.3	0.1	-0.3	0.4	0.0	0.5
11-Feb	0.4	0.8	0.8	0.6	0.2	-0.2	-0.4	-0.2	-0.1	0.4	0.0	0.1	0.6	0.1	-0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.3	0.1	0.3	0.2	0.8
12-Feb	0.3	0.2	0.5	0.3	0.2	0.3	0.4	0.2	0.2	0.0	0.3	0.2	-0.1	-0.2	0.1	0.4	0.4	0.4	0.2	0.1	0.0	0.2	0.3	0.3	0.2	0.5
13-Feb	0.5	0.9	0.3	0.2	0.3	0.4	0.5	0.5	0.1	0.2	0.1	0.2	-0.1	-0.1	-0.1	0.3	0.3	-0.1	0.4	0.0	0.5	0.6	1.2	0.5	0.3	1.2
14-Feb	0.5	0.0	0.2	0.0	0.0	0.0	-0.1	0.1	0.2	0.2	0.1	0.0	0.0	-0.2	0.0	0.1	0.1	0.3	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.5
15-Feb	0.2	0.3	0.1	0.3	0.3	0.3	0.1	0.2	0.3	0.2	0.3	0.3	0.6	0.6	0.6	0.3	0.1	0.2	0.2	0.3	0.5	0.2	-0.1	0.0	0.3	0.6
16-Feb	0.1	0.3	0.3	0.2	0.7	0.8	-0.7	-0.5	-0.6	0.5	0.2	-0.1	0.1	0.1	-0.5	-1.0	-1.2	-1.4	-0.7	0.0	0.3	0.1	0.3	0.7	-0.1	0.8
17-Feb	1.0	1.0	0.6	0.8	0.5	-0.6	-0.3	-0.4	-0.1	-1.1	-0.5	-0.3	-1.3	-0.9	-1.0	0.7	-1.0	-0.2	-1.2	-0.7	-0.6	0.2	0.8	0.3	-0.2	1.0
18-Feb	0.6	0.9	0.5	0.5	0.3	0.7	0.4	0.6	0.4	0.5	0.3	0.1	0.3	0.2	0.2	-0.1	0.0	0.7	1.1	0.9	0.9	0.8	0.9	0.7	0.5	1.1
19-Feb	0.9	1.0	1.0	1.0	0.8	0.0	0.0	0.8	0.5	-0.3	-0.1	0.1	0.0	0.9	-0.1	0.3	0.5	0.4	-0.8	-0.6	1.1	0.7	1.0	0.8	0.4	1.1
20-Feb	0.8	0.7	0.7	0.4	0.7	0.5	0.8	0.6	0.8	0.8	0.3	0.1	0.2	0.3	0.2	0.1	0.1	0.5	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.8
21-Feb	0.2	0.3	0.1	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.0	0.2	0.2	0.1	0.1	0.6	0.4	0.8	0.2	0.3	-0.1	0.2	0.3	0.2	0.8
22-Feb	0.3	0.3	0.3	0.1	0.1	0.2	0.4	0.3	0.3	0.0	0.2	0.5	0.0	0.4	0.3	0.5	0.4	0.4	0.3	0.3	0.4	0.0	0.0	-0.1	0.2	0.5
23-Feb	-0.1	-0.1	-0.1	0.0	0.0	0.1	0.1	0.1	0.3	0.0	-0.1	0.4	0.4	0.6	0.5	0.6	0.6	-0.1	0.1	0.1	0.4	0.0	0.6	0.3	0.2	0.6
24-Feb	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.5	0.5	0.1	0.4	0.0	0.0	0.3	0.0	0.2	0.1	0.1	0.3	0.0	0.1	0.6	0.2	0.6
25-Feb	0.3	0.3	1.2	0.9	0.6	-0.3	0.3	0.1	0.1	0.1	1.4	0.2	0.1	0.2	0.3	0.2	0.1	0.1	0.2	0.2	0.3	0.3	0.5	0.3	0.3	1.4
26-Feb	0.2	0.0	-0.2	0.0	0.3	0.2	0.3	0.2	0.2	0.6	0.2	0.2	0.0	0.7	0.3	0.2	0.1	0.3	0.3	0.4	0.2	0.3	0.3	0.2	0.2	0.7
27-Feb	0.3	0.3	0.2	0.2	0.5	0.2	0.3	0.4	0.6	0.4	0.5	0.4	0.8	0.6	0.2	0.6	0.7	0.5	0.4	0.8	0.8	0.3	0.5	0.5	0.5	0.8
28-Feb	0.7	0.5	0.4	0.2	0.1	0.0	0.0	0.1	0.4	0.1	0.1	0.2	-0.4	1.6	0.5	-0.1	-0.7	0.0	0.2	0.4	0.7	0.6	0.6	0.6	0.3	1.6
	0.3	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.4	0.3	Diurnal Average	
	1.0	1.1	2.0	1.4	1.0	1.2	1.5	1.6	1.8	1.4	1.4	1.6	1.0	1.6	0.6	0.7	0.7	0.7	1.1	0.9	1.7	0.8	1.2	1.1	Diurnal Maximum	

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

Maximum Value: 3.8 km/h on Feb 1 23:00

Minimum Value: 0.1 km/h on Feb 11 19:00

Percentiles: P_1 = 0.2 P_{10} = 0.3 Q_1 = 0.5 Median = 0.9 Q_3 = 1.5 P_{90} = 2.2 P_{99} = 3.4

Hours in Service:	672
Hours of Data:	672
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-Feb	1.6	1.7	1.7	2.0	2.2	2.4	2.6	2.5	2.7	3.0	3.0	2.7	2.1	2.5	2.7	2.3	2.0	2.1	2.5	2.8	3.4	3.5	3.8	3.3	3.8
2-Feb	3.3	3.4	3.4	3.4	3.4	3.1	2.5	2.9	2.8	3.0	2.8	2.9	2.1	2.2	1.8	1.4	0.8	1.2	1.4	1.7	1.3	1.1	1.1	1.3	3.4
3-Feb	0.9	0.2	0.3	0.3	0.2	0.4	0.5	0.5	0.4	0.4	0.5	0.9	1.2	1.0	0.9	1.0	0.7	0.7	0.7	0.7	0.6	0.5	0.5	0.8	1.2
4-Feb	0.6	0.6	0.4	0.5	0.4	0.7	0.7	0.8	0.9	0.6	0.6	0.7	0.8	0.7	1.5	1.4	1.0	0.8	0.7	0.9	1.1	1.3	1.0	1.0	1.5
5-Feb	1.1	1.1	0.7	0.8	0.6	0.7	0.8	0.7	0.6	0.8	0.9	1.2	1.8	1.5	1.4	1.2	1.2	1.2	0.9	0.7	0.9	0.5	0.4	0.5	1.8
6-Feb	0.7	1.0	0.6	1.5	1.6	1.7	1.3	1.0	1.2	2.0	2.7	3.0	3.7	2.6	2.2	1.9	1.5	1.0	0.6	0.6	1.1	0.7	0.2	0.2	3.7
7-Feb	0.4	0.5	0.4	0.6	0.5	0.6	0.8	0.9	0.5	0.5	0.7	1.0	1.2	1.5	1.6	1.3	0.8	0.4	0.3	0.2	0.3	0.2	0.2	0.3	1.6
8-Feb	0.5	0.7	0.5	0.6	0.3	0.3	0.4	0.3	0.4	0.4	0.4	0.5	0.6	0.5	0.3	0.3	0.3	0.4	0.4	1.4	2.4	2.7	3.2	2.7	3.2
9-Feb	2.7	2.9	2.5	1.7	1.1	0.9	1.0	1.0	0.9	1.7	1.8	2.1	2.2	2.4	1.6	0.5	0.8	0.3	0.3	0.3	0.6	0.4	0.2	0.3	2.9
10-Feb	0.4	0.5	0.4	0.7	0.6	0.6	1.1	1.4	1.0	0.8	0.9	1.1	1.0	1.5	1.2	0.8	0.9	0.6	0.5	0.8	1.3	1.4	1.7	1.2	1.7
11-Feb	1.4	1.5	1.1	1.2	1.5	1.2	0.9	0.8	1.0	1.5	1.2	0.8	1.3	0.9	0.7	0.6	0.5	0.2	0.1	0.2	0.2	0.3	0.5	0.2	1.5
12-Feb	0.2	0.2	0.5	0.3	0.6	0.5	0.5	1.0	0.8	0.8	0.7	1.0	1.0	1.0	1.3	1.3	1.0	1.0	0.9	0.7	0.7	0.5	0.7	0.7	1.3
13-Feb	0.8	0.9	1.1	1.0	0.7	0.9	0.5	0.5	0.5	0.4	0.7	1.0	1.0	1.6	1.5	1.1	0.9	1.0	0.7	1.1	0.6	0.5	0.4	0.3	1.6
14-Feb	0.4	0.4	0.4	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.5	0.6	0.7	0.6	0.6	0.7	0.6	0.6	0.3	0.3	0.4	0.3	0.2	0.2	0.7
15-Feb	0.2	0.2	0.3	0.6	0.5	0.4	0.4	0.3	0.5	0.2	0.4	0.4	1.5	1.3	1.5	0.8	0.4	0.4	0.4	0.6	1.3	1.1	0.7	0.4	1.5
16-Feb	0.6	0.5	0.3	0.5	0.9	0.4	0.9	0.8	0.8	0.6	0.8	0.9	1.0	1.4	1.7	1.7	1.9	1.5	1.7	2.0	1.7	1.9	1.9	1.5	2.0
17-Feb	0.8	0.8	1.1	1.1	1.6	1.9	2.0	2.0	2.0	1.9	1.8	2.0	1.8	2.3	2.4	3.4	2.1	2.5	1.8	2.5	2.0	1.6	0.9	0.9	3.4
18-Feb	0.8	0.8	0.4	0.6	0.4	0.3	0.4	0.3	0.3	0.5	0.9	1.0	1.3	1.2	1.6	1.1	1.0	1.1	1.5	1.4	1.4	1.3	1.1	1.2	1.6
19-Feb	1.0	1.0	1.3	1.6	1.4	1.6	2.1	1.7	1.4	2.1	2.4	2.4	2.3	2.6	2.5	1.9	1.9	2.4	2.8	2.3	2.4	2.3	1.7	1.5	2.8
20-Feb	1.3	1.4	1.2	1.0	1.6	1.2	1.8	1.6	2.0	2.1	2.0	1.6	1.9	2.2	1.2	1.0	0.5	0.5	0.2	0.4	0.2	0.3	0.4	0.5	2.2
21-Feb	0.4	0.3	0.5	0.5	0.5	0.3	0.3	0.4	0.3	0.8	0.9	1.0	1.1	1.4	1.5	1.5	1.6	1.3	1.4	1.1	1.2	0.8	0.7	0.7	1.6
22-Feb	0.7	0.5	0.6	0.6	0.5	0.9	1.0	0.8	1.1	1.5	1.7	1.8	1.3	0.9	0.8	0.7	0.8	0.3	0.5	0.3	0.6	0.7	0.8	0.7	1.8
23-Feb	1.2	0.8	0.4	0.2	0.4	0.3	1.1	1.4	1.3	1.8	2.2	2.8	3.1	3.1	2.3	2.2	2.1	1.6	1.5	1.0	1.1	0.6	1.1	0.8	3.1
24-Feb	0.5	0.4	0.7	0.5	0.3	0.3	0.3	0.6	0.4	0.9	1.1	1.2	1.1	1.3	1.4	1.1	0.9	0.6	0.4	0.6	0.9	1.1	1.6	1.5	1.6
25-Feb	1.5	1.8	1.7	1.7	2.0	2.1	1.5	1.1	1.0	1.2	1.7	1.7	1.6	1.2	1.3	1.2	0.9	0.5	0.5	0.3	0.4	0.5	0.9	0.7	2.1
26-Feb	0.4	0.2	0.7	1.0	1.2	0.6	0.4	0.4	0.7	1.1	1.3	1.4	1.0	1.3	1.3	1.1	0.9	0.8	0.7	0.6	0.4	0.6	1.3	0.4	1.4
27-Feb	0.8	0.6	0.5	0.5	1.0	0.8	0.8	1.2	1.7	1.3	1.3	1.5	2.8	3.3	2.3	2.0	2.2	1.8	1.6	1.9	1.5	1.6	1.5	1.3	3.3
28-Feb	1.1	1.3	1.0	1.2	0.7	0.5	0.7	0.8	0.6	0.9	1.2	1.8	2.3	2.2	1.8	2.0	1.3	1.3	1.2	1.5	0.7	1.2	0.8	0.7	2.3
	3.3	3.4	3.4	3.4	3.4	3.1	2.6	2.9	2.8	3.0	3.0	3.0	3.7	3.3	2.7	3.4	2.2	2.5	2.8	2.8	3.4	3.5	3.8	3.3	
	Diurnal Maximum																								

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS06
PATRICIA MCINNES
FEBRUARY 2025

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

March 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - PATRICIA McINNES (AMS06)
FEBRUARY 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	639	32	33	99.85	-	-	19.2	0	4.5	0
TRS (ppb) Average	638	34	34	100	1.7	0	1.7	0	0.8	0
THC (ppm) Average	462	35	210	73.96	-	-	2.8	-	2.3	-
NMHC(ppm) Average	462	35	210	73.96	-	-	0.263	-	0.094	-
CH4(ppm) Average	462	35	210	73.96	-	-	2.6	-	2.2	-
O3 (ppb) Average	639	32	33	99.85	-	-	40.1	0	34.7	-
NO2 (ppb) Average	638	33	34	99.85	-	-	34.6	0	22.3	-
NO (ppb) Average	638	33	34	99.85	-	-	59.9	-	19.3	-
NOX (ppb) Average	638	33	34	99.85	-	-	86.9	-	41.6	-
NH3 (ppb) Average	604	38	68	95.54	-	-	0	0	0	-
PM2.5 (ug/m3) Average	671	1	1	100	-	-	33.1	0	9.2	0
Temperature 2 m (C) Average	672	0	0	100	-	-	5.3	-	-2.3	-
Relative Humidity (%) Average	672	0	0	100	-	-	97.9	-	87.2	-
Wind Speed 10 m (km/h) Average	672	0	0	100	-	-	33	-	18	-
Wind Direction 10 m (deg) Average	672	0	0	100	-	-	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - PATRICIA McINNES (AMS06)
FEBRUARY 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	639	1.3	2.2	-	0	0.1	0.2	0.5	1.3	3.5	19.2
TRS (ppb) Average	638	0.29	0.2	-	0.1	0.1	0.2	0.2	0.3	0.5	1.7
THC (ppm) Average	462	2.03	0.1	-	1.8	1.9	2	2	2.1	2.1	2.8
NMHC(ppm) Average	462	0.01	0.038	-	0	0	0	0	0	0	0.263
CH4(ppm) Average	462	2.02	0.1	-	1.8	1.9	2	2	2.1	2.1	2.6
O3 (ppb) Average	639	23.76	9.4	-	1.2	9.4	16.9	25.9	31.1	34.7	40.1
NO2 (ppb) Average	638	10.06	8.2	-	0	2.3	3.8	7.3	14.5	23.9	34.6
NO (ppb) Average	638	3.49	6.2	-	0	0.2	0.6	1.4	3.3	9.1	59.9
NOX (ppb) Average	638	13.55	12.6	-	0	3.1	5	9.2	17.9	30.2	86.9
NH3 (ppb) Average	604	0	0	-	0	0	0	0	0	0	0
PM2.5 (ug/m3) Average	671	4.52	2.7	-	0.7	2	2.8	3.7	5.6	7.6	33.1
Temperature 2 m (C) Average	672	-17.59	9.1	-	-37	-28.6	-24	-19.2	-9.5	-4.8	5.3
Relative Humidity (%) Average	672	72.53	10.8	-	36.1	56.7	66.8	75	78.7	84.8	97.9
Wind Speed 10 m (km/h) Average	672	9.9	5	-	0	3	6	9	13	17	33
Wind Direction 10 m (deg) Average	672	-	-	-	-	-	-	-	-	-	-

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

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL GASEOUS ANALYZERS	19 Feb 2025 16:00	19 Feb 2025 16:00	1	Maintenance - sample manifold cleaned
NH3	01 Feb 2025 07:00	28 Feb 2025 04:00	29	Stabilization after daily QA check
THC/NMHC/CH4	01 Feb 2025 07:00	01 Feb 2025 08:00	2	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	01 Feb 2025 10:00	01 Feb 2025 15:00	6	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	01 Feb 2025 17:00	01 Feb 2025 18:00	2	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	01 Feb 2025 20:00	02 Feb 2025 01:00	6	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	02 Feb 2025 05:00	03 Feb 2025 11:00	31	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	04 Feb 2025 11:00	04 Feb 2025 15:00	5	Maintenance - replace dailyz/s valve
THC/NMHC/CH4	17 Feb 2025 18:00	18 Feb 2025 01:00	8	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	18 Feb 2025 03:00	18 Feb 2025 11:00	9	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	18 Feb 2025 12:00	18 Feb 2025 15:00	4	Maintenance - analyzer replaced
THC/NMHC/CH4	21 Feb 2025 06:00	22 Feb 2025 07:00	26	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	22 Feb 2025 08:00	22 Feb 2025 09:00	2	Maintenance - analyzer recalibration to adjust span
THC/NMHC/CH4	22 Feb 2025 10:00	23 Feb 2025 13:00	28	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	23 Feb 2025 14:00	25 Feb 2025 10:00	45	Maintenance - replaced support gas cylinder and analyzer

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Patricia McInnes - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 19.2 ppb on Feb 26 13:00 Maximum Daily Average: 4.5 ppb on Feb 26

Minimum Value: 0.0 ppb on Feb 3 16:00 Minimum Daily Average: 0.0 ppb on Feb 4
Maximum Diurnal Average: 2.5 ppb at hour 17 Minimum Diurnal Average: 0.6 ppb at hour 21
Monthly Average: 1.30 ppb Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.2 Median = 0.5 Q_3 = 1.3 P_{90} = 3.5 P_{99} = 10.8

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	32
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-Feb	10.4	7.3	Z	4.0	4.4	4.3	2.7	1.6	2.1	2.7	1.3	0.3	3.2	8.1	4.5	1.0	2.9	5.5	4.8	0.5	0.3	2.0	5.6	5.8	3.7	10.4
2-Feb	0.6	0.3	2.1	Z	1.5	3.4	2.2	3.2	2.0	2.3	4.0	2.0	0.6	3.8	8.3	12.4	3.1	1.6	0.8	0.5	0.5	1.0	0.6	0.2	2.5	12.4
3-Feb	0.2	0.2	0.1	0.1	Z	0.1	0.1	0.2	0.2	0.2	0.4	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
4-Feb	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	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
5-Feb	Z	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.3
6-Feb	0.5	Z	0.5	0.4	0.4	0.4	0.4	0.2	0.2	0.1	0.1	0.1	1.8	1.3	1.2	0.8	0.7	0.7	0.1	0.0	0.1	0.2	0.0	0.1	0.5	1.8
7-Feb	0.2	0.2	Z	0.5	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.5
8-Feb	0.1	0.0	0.1	Z	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.3	0.2	0.2	0.2	0.3	5.1	3.4	2.4	6.0	1.2	0.3	0.5	0.7	1.0	6.0
9-Feb	0.6	0.6	2.2	1.2	Z	0.2	0.1	0.3	0.2	0.3	0.2	0.2	0.7	4.3	10.0	7.8	14.7	14.9	2.0	0.5	0.4	0.1	0.1	0.2	2.7	14.9
10-Feb	0.2	0.2	0.1	0.1	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.4	1.3	1.1	0.5	0.2	1.3
11-Feb	Z	0.5	0.3	0.2	0.5	0.8	0.4	2.2	3.1	2.0	4.5	3.5	4.3	6.3	4.6	4.5	6.1	8.2	4.2	2.8	2.5	2.4	2.0	1.7	2.9	8.2
12-Feb	3.1	Z	3.3	4.0	2.1	2.2	2.0	1.2	0.6	0.7	1.1	1.3	1.2	1.2	1.0	0.7	0.8	0.7	1.0	1.8	1.7	1.5	1.4	1.2	1.6	4.0
13-Feb	1.1	1.7	Z	2.7	3.8	2.8	4.4	4.5	2.1	1.5	1.1	0.6	0.4	0.4	3.5	7.8	3.8	3.0	1.3	0.5	0.3	0.7	0.9	0.8	2.2	7.8
14-Feb	0.5	0.6	0.3	Z	0.2	0.2	0.5	0.3	0.3	1.0	0.9	1.4	2.0	3.4	5.7	9.5	7.9	3.8	2.6	2.3	2.2	1.7	2.1	1.5	2.2	9.5
15-Feb	1.0	0.8	0.9	0.8	Z	0.5	0.3	0.3	0.6	0.6	0.5	0.6	0.5	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.8	0.6	0.2	0.5	1.0
16-Feb	0.2	0.1	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.1	0.3	0.5	0.6	0.8	0.7	0.7	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.8
17-Feb	Z	0.3	0.2	0.2	0.3	0.4	0.4	0.5	0.6	0.6	0.7	0.8	0.8	0.6	0.5	0.3	0.3	0.4	0.3	0.2	0.2	0.1	0.1	0.2	0.4	0.8
18-Feb	0.1	Z	0.2	0.2	0.2	0.1	0.1	0.2	0.3	0.3	0.4	0.5	0.6	0.6	0.6	0.7	0.7	0.8	0.6	0.4	0.5	0.5	0.7	0.7	0.4	0.8
19-Feb	0.6	1.0	Z	0.8	0.8	0.9	0.8	0.7	0.8	0.9	0.9	0.9	1.0	1.0	1.1	M	1.0	0.8	0.4	0.2	0.2	0.3	0.5	0.6	0.7	1.1
20-Feb	0.6	0.7	0.7	Z	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.6	0.7	0.6	0.4	0.4	0.4	0.2	0.2	0.5	0.7
21-Feb	0.3	0.2	0.3	0.4	Z	0.6	0.4	0.4	1.6	3.4	2.3	3.1	6.2	6.5	8.7	9.6	2.4	2.1	1.4	1.0	1.8	2.1	2.7	1.4	2.6	9.6
22-Feb	0.7	1.7	3.1	5.7	9.2	Z	4.4	1.8	1.3	1.0	0.8	0.8	0.7	0.8	1.0	1.0	0.8	0.5	0.4	0.2	0.2	0.3	0.2	0.3	1.6	9.2
23-Feb	Z	0.5	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.3	0.5	1.5	2.1	1.1	2.0	1.0	0.9	0.5	1.0	0.8	1.1	1.2	1.2	0.4	0.8	2.1
24-Feb	0.2	Z	0.2	0.1	0.2	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	0.4	0.3	0.3	0.3	0.6	0.8	0.4	0.8
25-Feb	2.9	4.9	Z	4.0	3.8	3.1	2.3	1.8	2.3	3.1	3.5	5.7	3.7	3.7	2.2	1.4	0.8	0.6	1.3	2.8	1.7	0.8	0.9	1.8	2.6	5.7
26-Feb	7.9	6.1	2.3	Z	1.0	0.8	0.8	0.7	0.6	1.1	5.6	11.0	19.2	6.1	4.1	5.2	14.0	13.3	1.4	0.8	0.6	0.6	0.6	0.8	4.5	19.2
27-Feb	0.6	0.6	0.6	0.6	Z	0.4	0.4	0.4	0.3	0.3	0.4	0.9	0.7	0.4	0.3	0.6	2.5	2.6	3.5	2.0	0.4	0.3	0.2	0.3	0.8	3.5
28-Feb	0.2	0.1	0.2	0.1	0.1	Z	0.2	0.2	0.1	0.2	0.3	0.3	0.4	0.5	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5
	1.4	1.2	0.8	1.2	1.3	1.0	0.9	0.8	0.7	0.9	1.1	1.4	1.9	2.0	2.3	2.5	2.5	2.4	1.1	0.9	0.6	0.7	0.8	0.7	Diurnal Average	
	10.4	7.3	3.3	5.7	9.2	4.3	4.4	4.5	3.1	3.4	5.6	11.0	19.2	8.1	10.0	12.4	14.7	14.9	4.8	6.0	2.5	2.4	5.6	5.8	Diurnal Maximum	

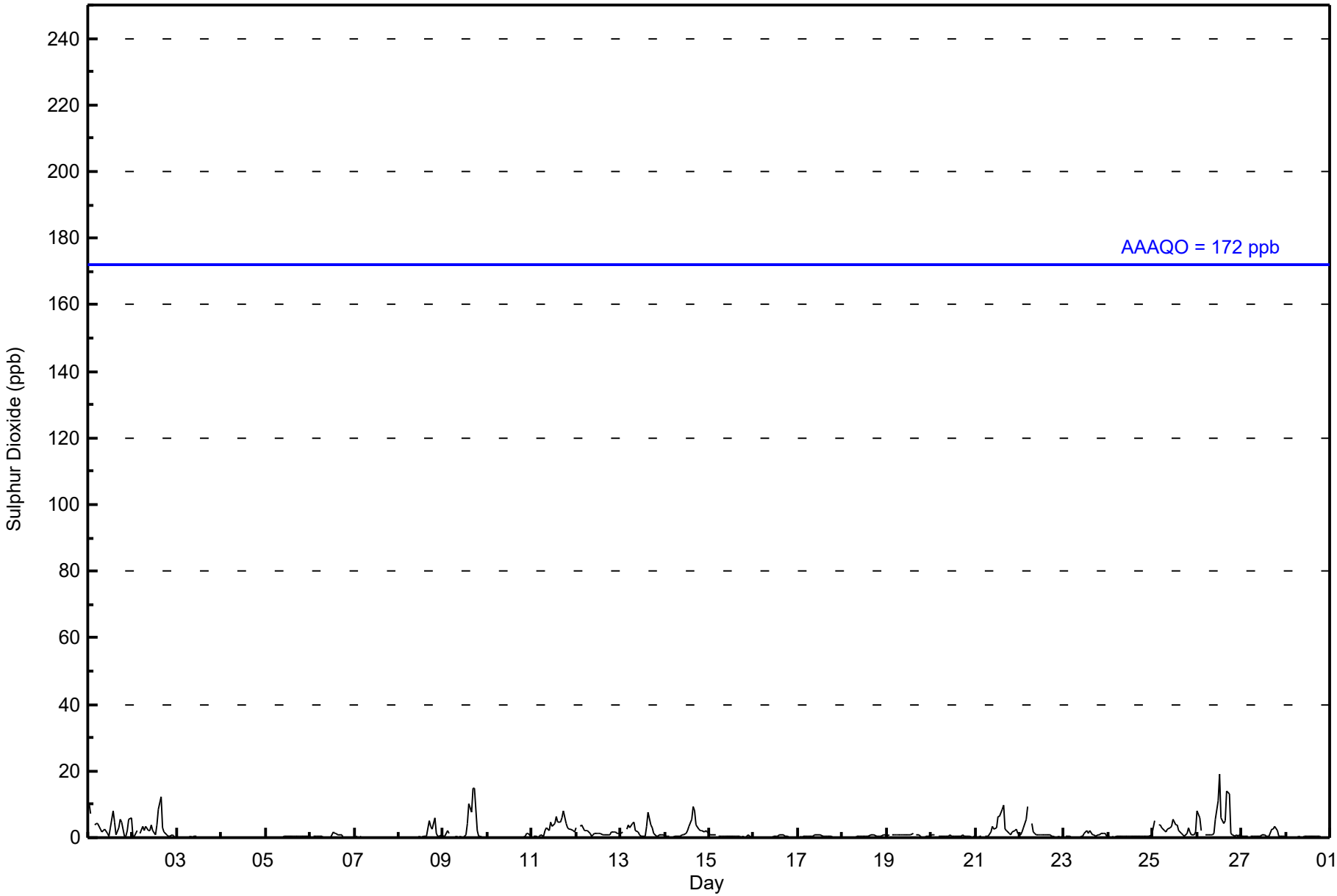
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Patricia McInnes - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	632	98.90	98.90
11 - 20	7	1.10	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: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Patricia McInnes - February 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	98	32	18	12	10	41	84	16	23	34	64	55	15	17	16	97	632
11 - 20	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	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	102	32	18	12	10	41	84	16	23	34	64	55	15	17	16	100	639

Total Number of Valid Hours: 639

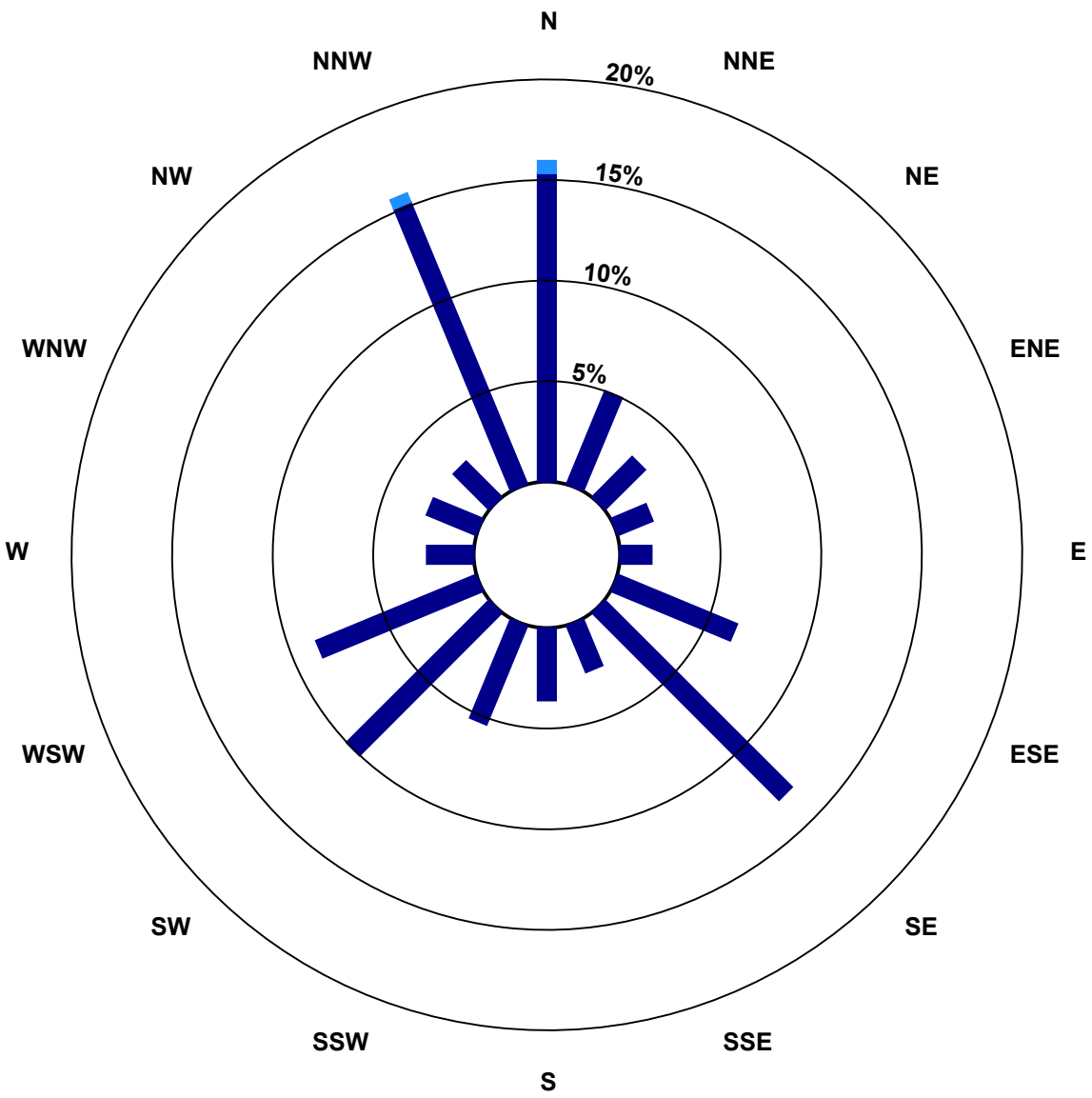
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Sulphur Dioxide (SO_2) - ppb

Patricia McInnes



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

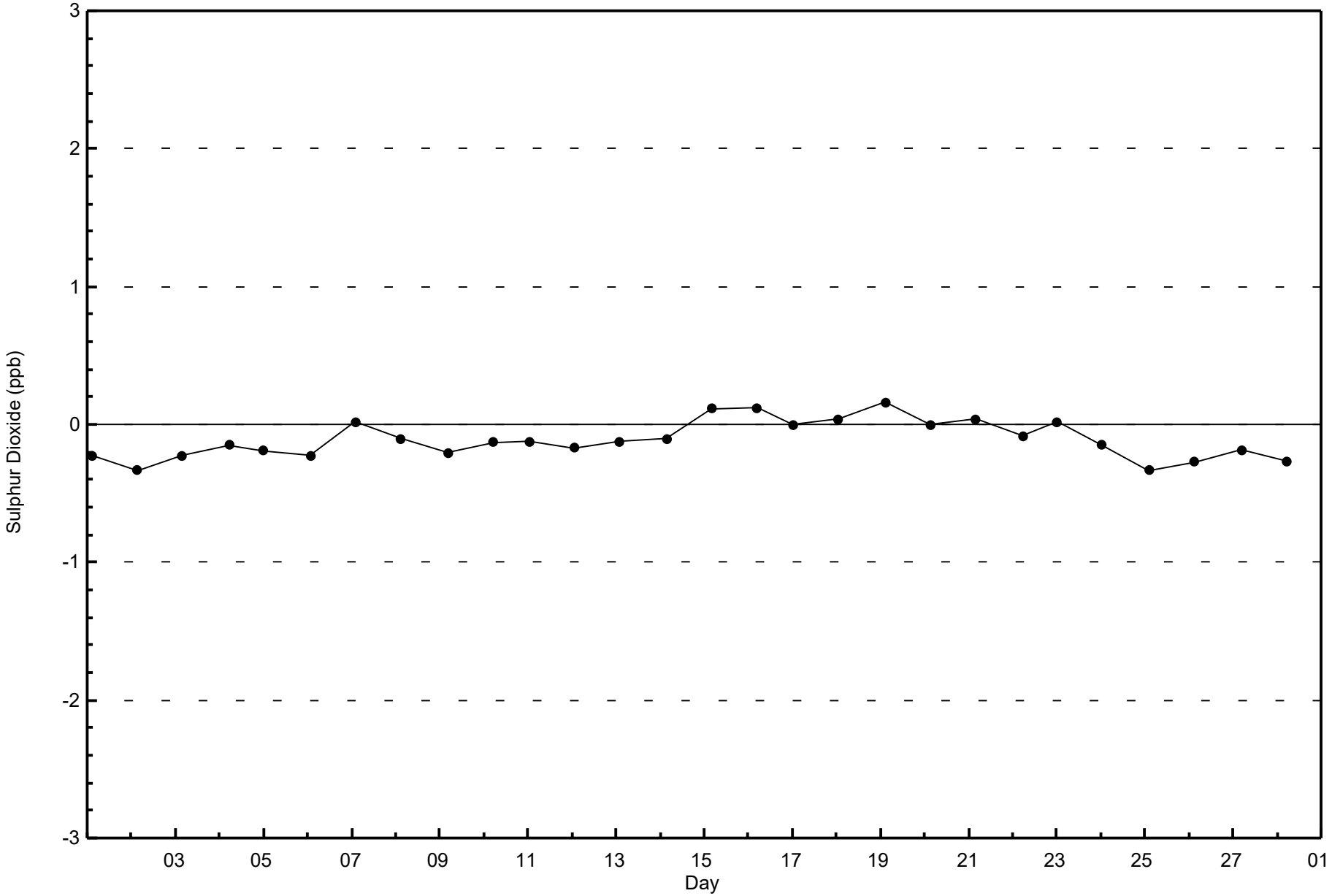
Total Number of Valid Hours: 639

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Patricia McInnes - February 2025

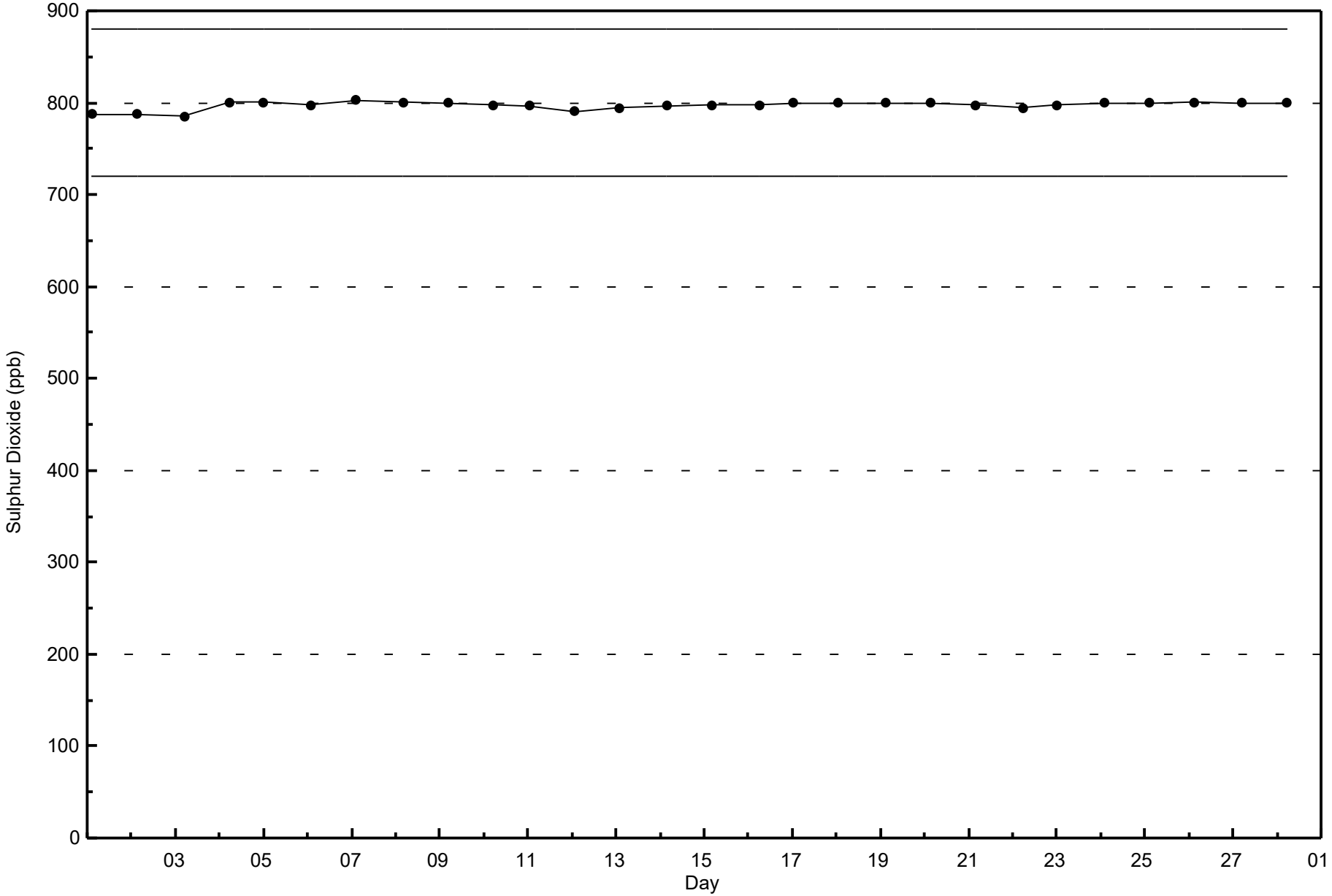


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Patricia McInnes - February 2025



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Patricia McInnes - February 2025

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

Maximum Value: 1.7 ppb on Feb 26 00:00 Maximum Daily Average: 0.8 ppb on Feb 26

Minimum Value: 0.1 ppb on Feb 19 20:00 Minimum Daily Average: 0.1 ppb on Feb 17

Maximum Diurnal Average: 0.4 ppb at hour 2 Minimum Diurnal Average: 0.3 ppb at hour 17

Monthly Average: 0.29 ppb Percentiles: P_1 = 0.1 P_{10} = 0.1 Q_1 = 0.2 Median = 0.2 Q_3 = 0.3 P_{90} = 0.5 P_{99} = 1.4

Periods in Service:	1344
Periods of Valid Data:	1277
Periods of Invalid Data:	67
Periods of Calibration:	67
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-Feb	0.9	0.7	0.5	Z	0.6	0.5	0.3	0.2	0.3	0.2	0.2	0.1	0.1	0.3	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.4	0.3	0.9
	0.8	0.6	0.4	SP	0.5	0.4	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.2	0.3	0.2		
2-Feb	0.2	0.2	0.2	0.3	Z	0.4	0.2	0.5	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5
	0.2	0.2	0.3	0.3	SP	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2		
3-Feb	0.1	0.3	0.3	0.2	0.1	Z	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4
	0.2	0.3	0.2	0.1	0.1	SP	0.3	0.3	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	0.1	0.2	0.2		
4-Feb	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	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	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1		
5-Feb	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	0.1	0.2	0.1	0.2
	0.1	SP	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.2		
6-Feb	0.1	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	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	0.1	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		
7-Feb	0.1	0.1	0.2	Z	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
	0.1	0.1	0.2	SP	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		
8-Feb	0.1	0.1	0.1	0.1	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.7	0.6	0.2	0.3	0.2	0.2	0.7
	0.1	0.1	0.1	0.1	SP	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	0.3	0.6	0.4	0.2	0.3	0.2		
9-Feb	0.2	0.1	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	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.3
	0.2	0.2	0.2	0.1	0.1	SP	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1		
10-Feb	Z	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.3	0.2	0.3	0.2	0.3
	SP	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.2	0.3		
11-Feb	0.3	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.4	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.6
	0.3	SP	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.5	0.5	0.5	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.3		
12-Feb	0.3	0.3	Z	0.5	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.6	0.5	0.3	0.3	0.3	0.3	0.6
	0.4	0.4	SP	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.4	0.6	0.4	0.2	0.3	0.3		
13-Feb	0.2	0.4	0.3	Z	0.4	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.6
	0.3	0.3	0.3	SP	0.3	0.3	0.3	0.4	0.3	0.4	0.3	0.3	0.2	0.3	0.4	0.6	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3		
14-Feb	0.3	0.4	0.4	0.5	Z	0.6	0.4	0.3	0.3	0.4	0.5	0.4	0.3	0.3	0.5	0.6	0.7	0.6	0.6	0.4	0.4	0.4	0.3	0.3	0.4	0.7
	0.4	0.5	0.4	0.5	SP	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.3	0.4	0.6	0.7	0.6	0.6	0.5	0.4	0.4	0.4	0.3	0.2		
15-Feb	0.2	0.2	0.2	0.2	0.2	Z	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.4
	0.2	0.2	0.2	0.2	0.2	SP	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	0.3	0.2	0.2		

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Patricia McInnes - February 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-Feb	Z	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3
	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1		
17-Feb	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	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	0.2	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		
18-Feb	0.1	0.1	Z	0.3	0.1	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	0.1	0.1	SP	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
19-Feb	0.2	0.2	0.2	Z	0.3	0.2	0.2	0.1	0.2	0.1	C	C	C	C	C	C	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	--	0.3
	0.2	0.2	0.2	SP	0.2	0.2	0.1	0.2	0.1	0.1	C	C	C	C	C	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2		
20-Feb	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	0.3	0.2	0.3	0.3	0.2	0.3	0.3	0.2	0.3	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	0.3	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2		
21-Feb	0.3	0.2	0.2	0.3	0.3	Z	0.4	0.3	0.7	1.7	1.4	1.6	1.4	1.4	1.3	1.0	0.4	0.4	0.2	0.3	0.4	0.3	0.4	0.3	0.7	1.7
	0.3	0.2	0.3	0.3	0.2	SP	0.3	0.3	1.1	1.6	1.6	1.6	1.4	1.3	1.2	0.6	0.4	0.3	0.3	0.3	0.3	0.4	0.3	0.3		
22-Feb	Z	0.4	0.4	0.6	0.7	0.8	1.0	1.1	1.0	0.8	0.4	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.5	1.2
	SP	0.4	0.5	0.6	0.7	0.8	1.2	1.0	1.1	0.6	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.3		
23-Feb	0.2	Z	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.1	0.2	0.5	0.3	0.3	0.6	0.6	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.7
	0.2	SP	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.2	0.4	0.4	0.3	0.7	0.4	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.3		
24-Feb	0.2	0.3	Z	0.4	0.6	0.4	0.4	0.3	0.4	0.5	0.4	0.3	0.6	0.4	0.3	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.4	0.4	0.4	0.6
	0.3	0.3	SP	0.6	0.5	0.4	0.3	0.4	0.5	0.4	0.4	0.5	0.6	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.6	0.5		
25-Feb	0.7	0.7	0.4	Z	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.7	0.5	0.4	0.4	0.4	0.6	0.6	0.7	0.6	0.9	0.5	1.7
	0.7	0.7	0.4	SP	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.7	0.5	0.4	0.4	0.3	0.5	0.7	0.7	0.6	0.6	1.7		
26-Feb	0.9	1.4	1.0	0.8	Z	0.6	0.4	0.3	0.2	0.6	1.0	0.7	0.8	0.6	0.4	0.4	0.5	0.9	0.7	0.9	0.9	1.0	1.2	1.2	0.8	1.4
	1.2	1.4	0.8	0.7	SP	0.5	0.4	0.3	0.3	0.7	1.0	0.8	0.8	0.4	0.4	0.4	0.7	0.8	0.9	0.9	0.9	1.0	1.3	1.0		
27-Feb	1.1	1.7	1.3	1.5	1.6	Z	0.7	0.9	0.5	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.4	0.3	0.3	0.4	0.3	0.3	0.3	0.2	0.6	1.7
	1.5	1.7	1.1	1.7	1.5	SP	0.8	0.8	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.3	0.3	0.3	0.3	0.4	0.2	0.3	0.3	0.2		
28-Feb	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	0.1	0.2	0.1	0.1	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		
	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	Diurnal Average	
	1.5	1.7	1.3	1.7	1.6	0.8	1.2	1.1	1.1	1.7	1.6	1.6	1.4	1.4	1.3	1.0	0.7	0.9	0.9	0.9	0.9	1.0	1.3	1.7	Diurnal Maximum	

Z - zerospan C - Calibration SP - Span

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

Wood Buffalo Environmental Association

Summary of Hour Averages

Total Reduced Sulphur (TRS) - ppb

Patricia McInnes - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.7 ppb on Feb 27 02:00 Maximum Daily Average: 0.8 ppb on Feb 26

Minimum Value: 0.1 ppb on Feb 8 02:00 Minimum Daily Average: 0.1 ppb on Feb 17
Maximum Diurnal Average: 0.4 ppb at hour 2 Minimum Diurnal Average: 0.3 ppb at hour 17
Monthly Average: 0.29 ppb Percentiles: P_1 = 0.1 P_{10} = 0.1 Q_1 = 0.2 Median = 0.2 Q_3 = 0.3 P_{90} = 0.5 P_{99} = 1.4

Hours in Service:	672
Hours of Data:	638
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-Feb	0.8	0.7	0.5	Z	0.6	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.3	0.2	0.1	0.1	0.2	0.3	0.3	0.3	0.8
2-Feb	0.2	0.2	0.2	0.3	Z	0.3	0.3	0.4	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4
3-Feb	0.2	0.3	0.2	0.1	0.1	Z	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4
4-Feb	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2
5-Feb	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.1	0.2
6-Feb	0.2	0.2	Z	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	0.1	0.1	0.1	0.1	0.1	0.2	0.2
7-Feb	0.1	0.1	0.2	Z	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
8-Feb	0.1	0.1	0.1	0.1	Z	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.7	0.5	0.2	0.3	0.2	0.2	0.7
9-Feb	0.2	0.1	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	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.3
10-Feb	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.2	0.3	0.2	0.3
11-Feb	0.3	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.5
12-Feb	0.4	0.4	Z	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.3	0.6	0.4	0.2	0.3	0.3	0.3	0.6
13-Feb	0.3	0.4	0.3	Z	0.4	0.3	0.3	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5
14-Feb	0.3	0.4	0.4	0.5	Z	0.5	0.4	0.3	0.3	0.4	0.5	0.4	0.3	0.4	0.5	0.6	0.6	0.6	0.5	0.4	0.4	0.4	0.3	0.3	0.4	0.6
15-Feb	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	0.3	0.2	0.3	0.2	0.2	0.3
16-Feb	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	0.1	0.1	0.1	0.1	0.1	0.2	0.3
17-Feb	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	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
18-Feb	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
19-Feb	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.1	0.1	C	C	C	C	C	C	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	--	0.2
20-Feb	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	0.3	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.3
21-Feb	0.3	0.2	0.3	0.3	0.3	Z	0.3	0.3	0.9	1.6	1.5	1.6	1.4	1.3	1.3	0.8	0.4	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.7	1.6
22-Feb	Z	0.4	0.4	0.6	0.7	0.8	1.1	1.0	1.1	0.7	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.5	1.1
23-Feb	0.2	Z	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.2	0.4	0.4	0.3	0.6	0.5	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.6
24-Feb	0.2	0.3	Z	0.5	0.5	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.6	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.2	0.3	0.5	0.5	0.4	0.6
25-Feb	0.7	0.7	0.4	Z	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.6	0.6	0.5	0.4	0.4	0.4	0.6	0.7	0.6	0.6	1.3	0.5	1.3
26-Feb	1.0	1.4	0.9	0.8	Z	0.5	0.4	0.3	0.3	0.7	1.0	0.8	0.8	0.5	0.4	0.4	0.6	0.8	0.8	0.9	0.9	1.0	1.2	1.1	0.8	1.4
27-Feb	1.3	1.7	1.2	1.6	1.6	Z	0.8	0.9	0.4	0.3	0.3	0.3	0.2	0.2	0.1	0.2	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.2	0.6	1.7
28-Feb	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3
	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	Diurnal Average	
	1.3	1.7	1.2	1.6	1.6	0.8	1.1	1.0	1.1	1.6	1.5	1.6	1.4	1.3	1.3	0.8	0.6	0.8	0.8	0.9	0.9	1.0	1.2	1.3	Diurnal Maximum	

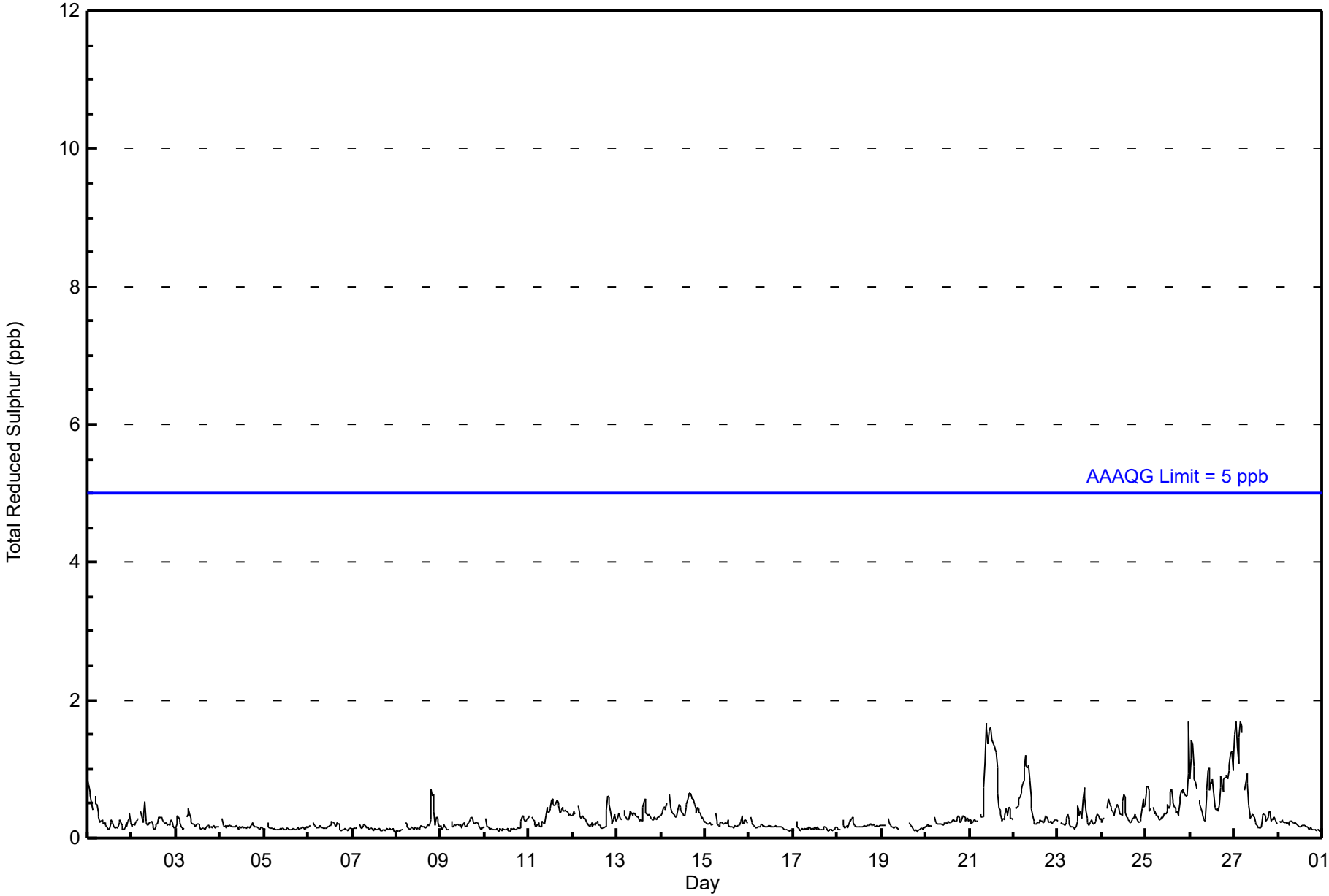
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Patricia McInnes - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	638	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: 638

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Patricia McInnes - February 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	102	31	18	12	12	39	80	16	23	33	69	53	17	15	17	101	638
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	102	31	18	12	12	39	80	16	23	33	69	53	17	15	17	101	638

Total Number of Valid Hours: 638

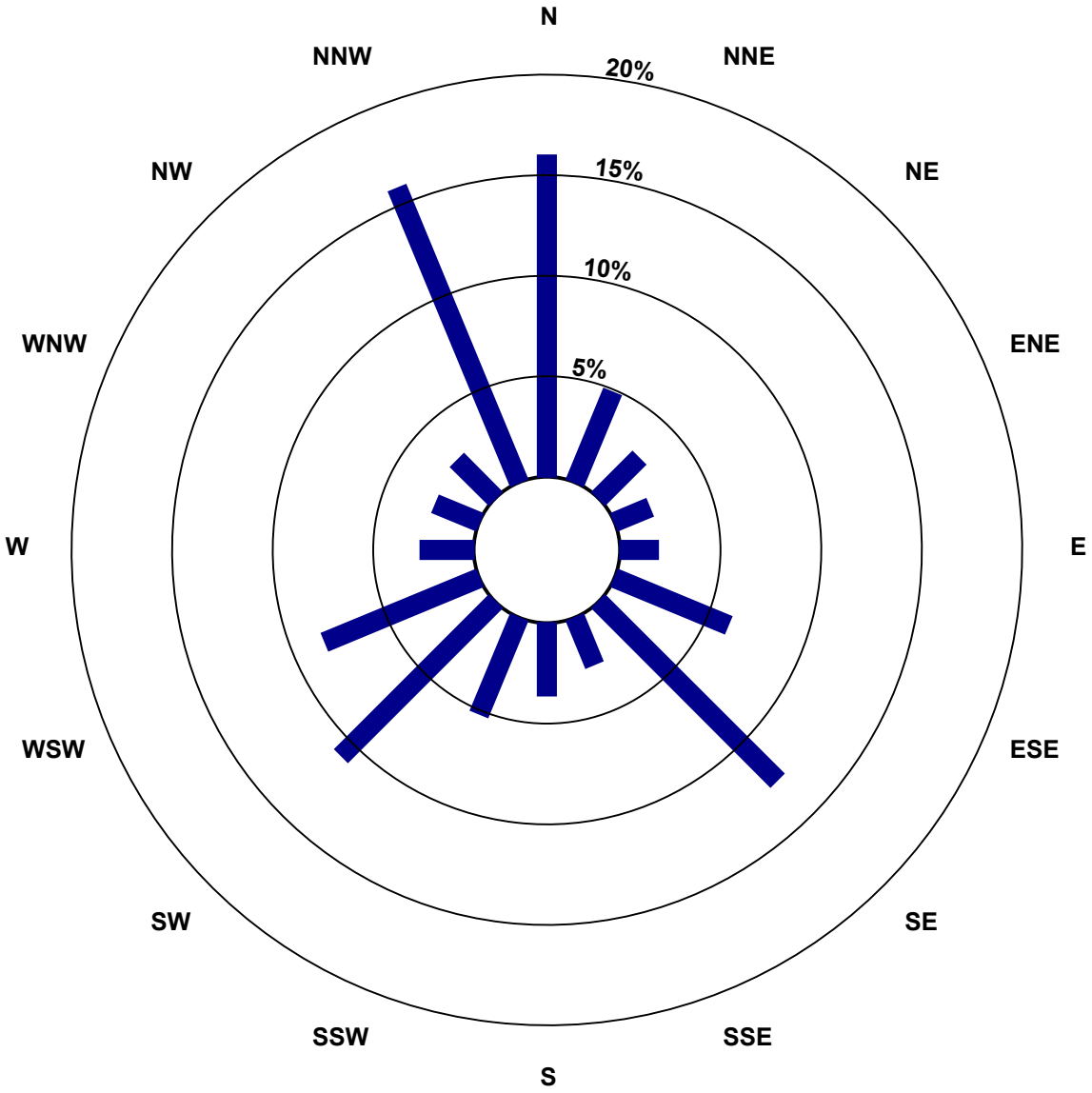
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Total Reduced Sulphur (TRS) - ppb

Patricia McInnes



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

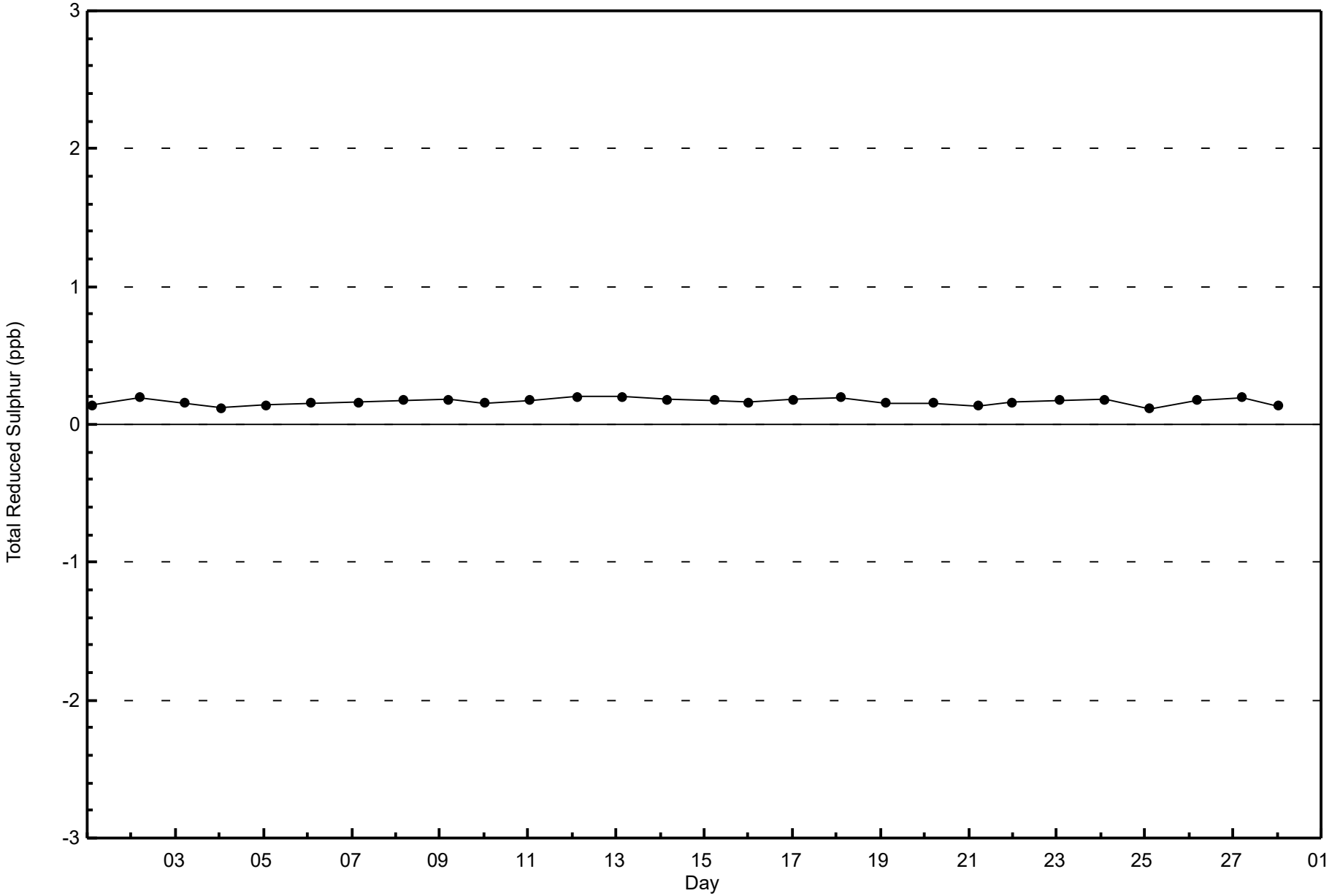
Total Number of Valid Hours: 638

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Patricia McInnes - February 2025

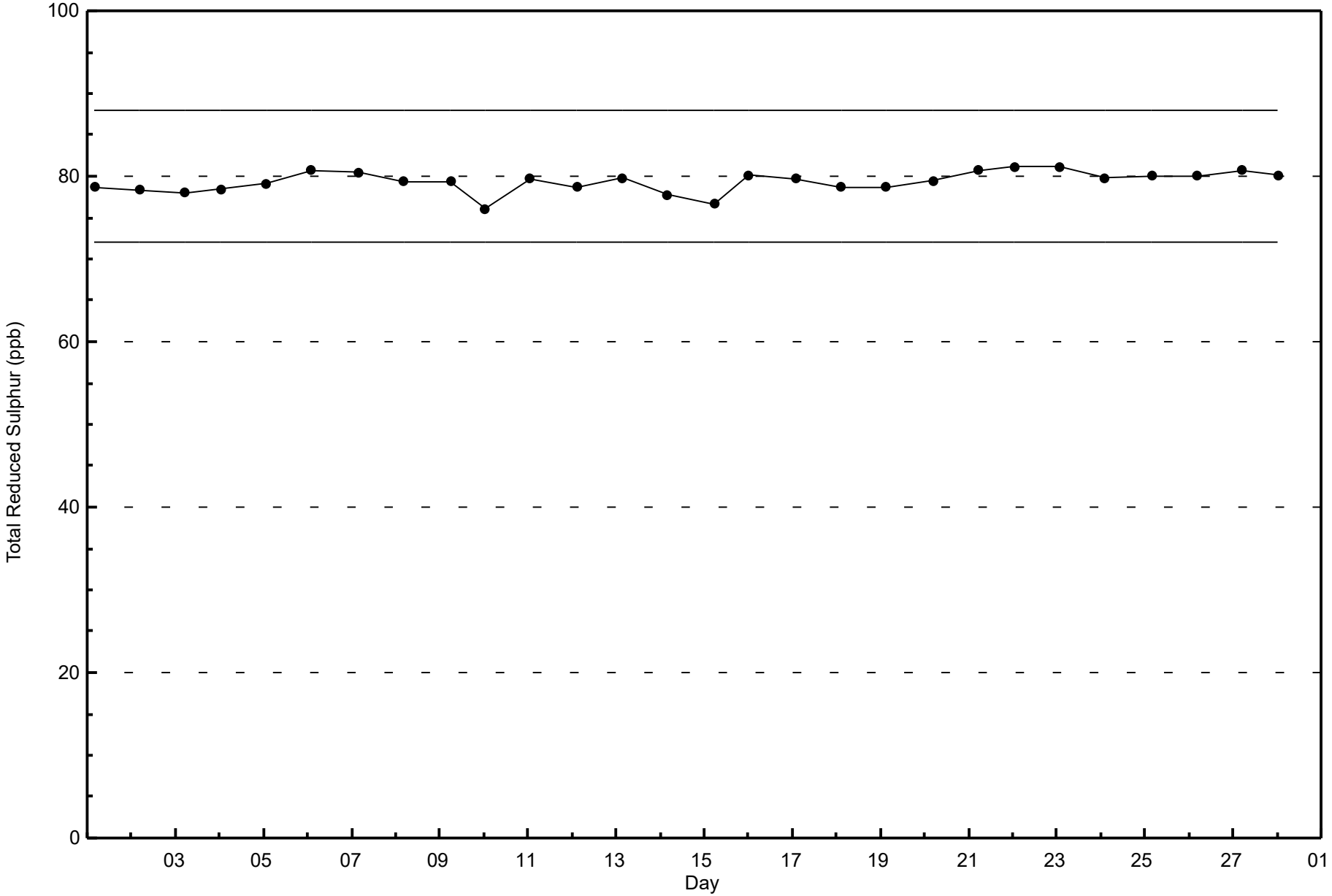


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Patricia McInnes - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Patricia McInnes - February 2025

Maximum Value: 2.8 ppm on Feb 26 11:00

Maximum Daily Average: 2.3 ppm on Feb 26

Minimum Value: 1.8 ppm on Feb 27 13:00

Minimum Daily Average: 1.9 ppm on Feb 16

Maximum Diurnal Average: 2.1 ppm at hour 1

Minimum Diurnal Average: 2.0 ppm at hour 16

Monthly Average: 2.03 ppm

Percentiles: P_1 = 1.9 P_{10} = 1.9 Q_1 = 2.0 Median = 2.0 Q_3 = 2.1 P_{90} = 2.1 P_{99} = 2.5

Hours in Service:	672
Hours of Data:	462
Hours of Missing Data:	210
Hours of Calibration:	35
Percent Operational Time:	74.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	2.2	2.1	Z	2.1	2.1	2.1	UO	UO	2.0	UO	UO	UO	UO	UO	UO	2.0	UO	UO	2.0	UO	UO	UO	UO	UO	--	2.2
2-Feb	UO	2.0	2.0	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	2.0
3-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	--	1.9
4-Feb	1.9	1.9	1.9	1.9	1.9	Z	1.9	1.9	1.9	1.9	M	M	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
5-Feb	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Feb	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Feb	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
8-Feb	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.0	2.0	2.0	2.0	2.2
9-Feb	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	1.9	2.0	2.0	2.0
10-Feb	1.9	1.9	1.9	2.0	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.1	2.0	2.0	2.0	2.1
11-Feb	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1
12-Feb	2.2	Z	2.2	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.2
13-Feb	2.1	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
14-Feb	2.0	2.0	2.1	Z	2.1	2.3	2.4	2.3	2.3	2.4	2.4	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.4
15-Feb	2.1	2.1	2.0	2.1	Z	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1
16-Feb	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0
17-Feb	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	UO	UO	UO	UO	UO	UO	UO	--	1.9
18-Feb	UO	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	M	M	C	C	2.1	2.1	2.1	2.1	2.1	2.1	2.1	--	2.1
19-Feb	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	M	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
20-Feb	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	2.2	2.2	2.2	2.4	2.4	2.3	2.3	2.2	2.4
21-Feb	2.3	2.2	2.2	2.1	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	2.3
22-Feb	UO	UO	UO	UO	UO	UO	UO	M	M	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
23-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	M	M	M	M	M	M	M	M	M	--	--
24-Feb	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--
25-Feb	M	M	M	M	M	M	M	M	M	M	C	C	C	C	C	C	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.5	--	2.5
26-Feb	2.6	2.6	2.3	Z	2.1	2.2	2.1	2.1	2.0	2.3	2.8	2.6	2.3	2.2	2.1	2.1	2.1	2.1	2.4	2.5	2.4	2.4	2.3	2.4	2.3	2.8
27-Feb	2.5	2.5	2.4	2.5	Z	2.1	2.2	2.3	2.0	1.9	2.0	1.9	1.8	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.5
28-Feb	2.0	2.0	2.0	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1	Diurnal Average	
	2.6	2.6	2.4	2.5	2.1	2.3	2.4	2.3	2.3	2.4	2.8	2.6	2.3	2.2	2.1	2.1	2.1	2.2	2.4	2.5	2.4	2.4	2.3	2.5	Diurnal Maximum	

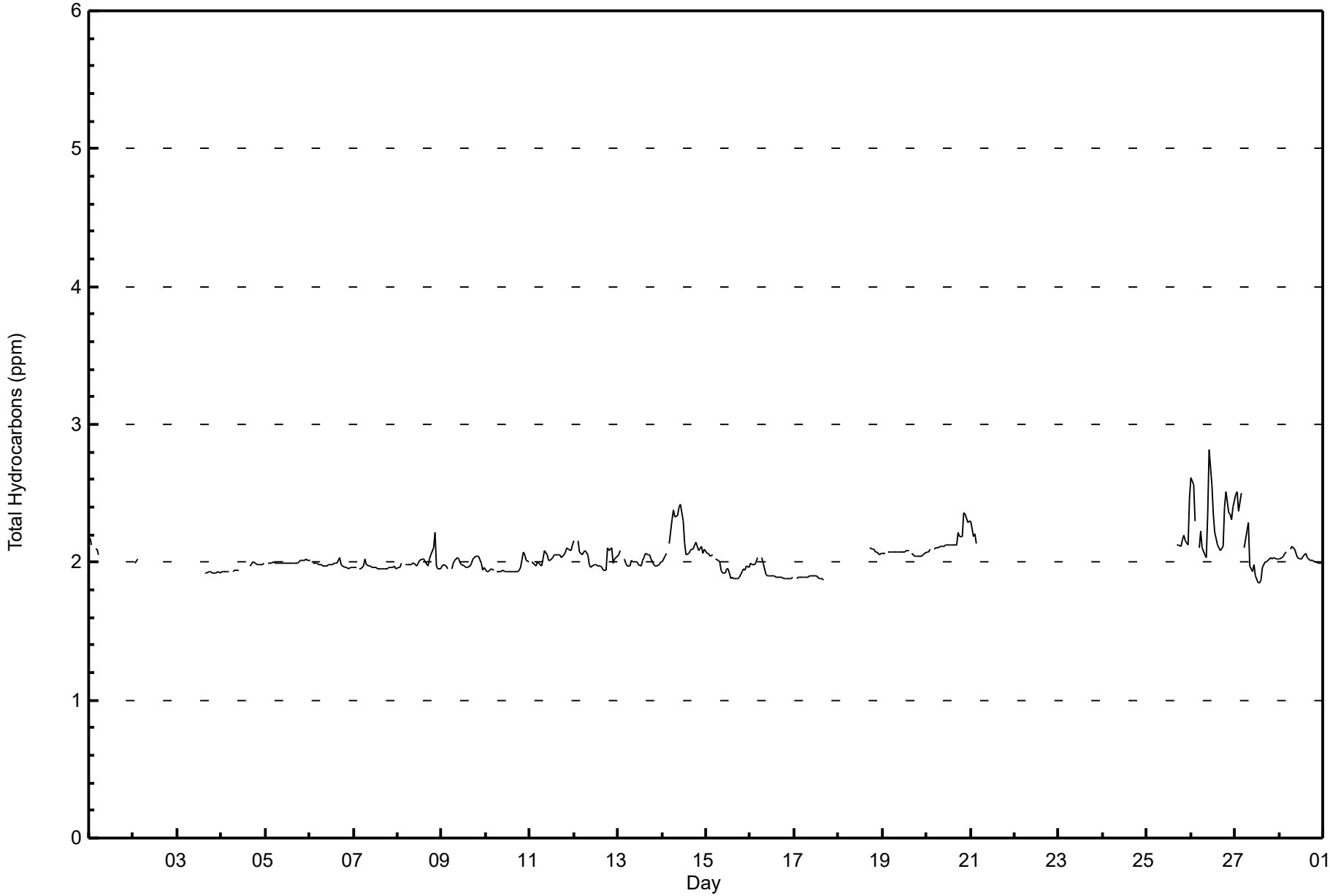
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Patricia McInnes - February 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	308	66.67	66.67
2.1 - 3.0	154	33.33	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 462

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Patricia McInnes - February 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	33	19	5	5	3	25	34	5	3	15	48	44	12	9	12	36	308
2.1 - 3.0	22	6	9	6	4	11	25	5	9	12	8	7	1	5	2	22	154
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	55	25	14	11	7	36	59	10	12	27	56	51	13	14	14	58	462

Total Number of Valid Hours: 462

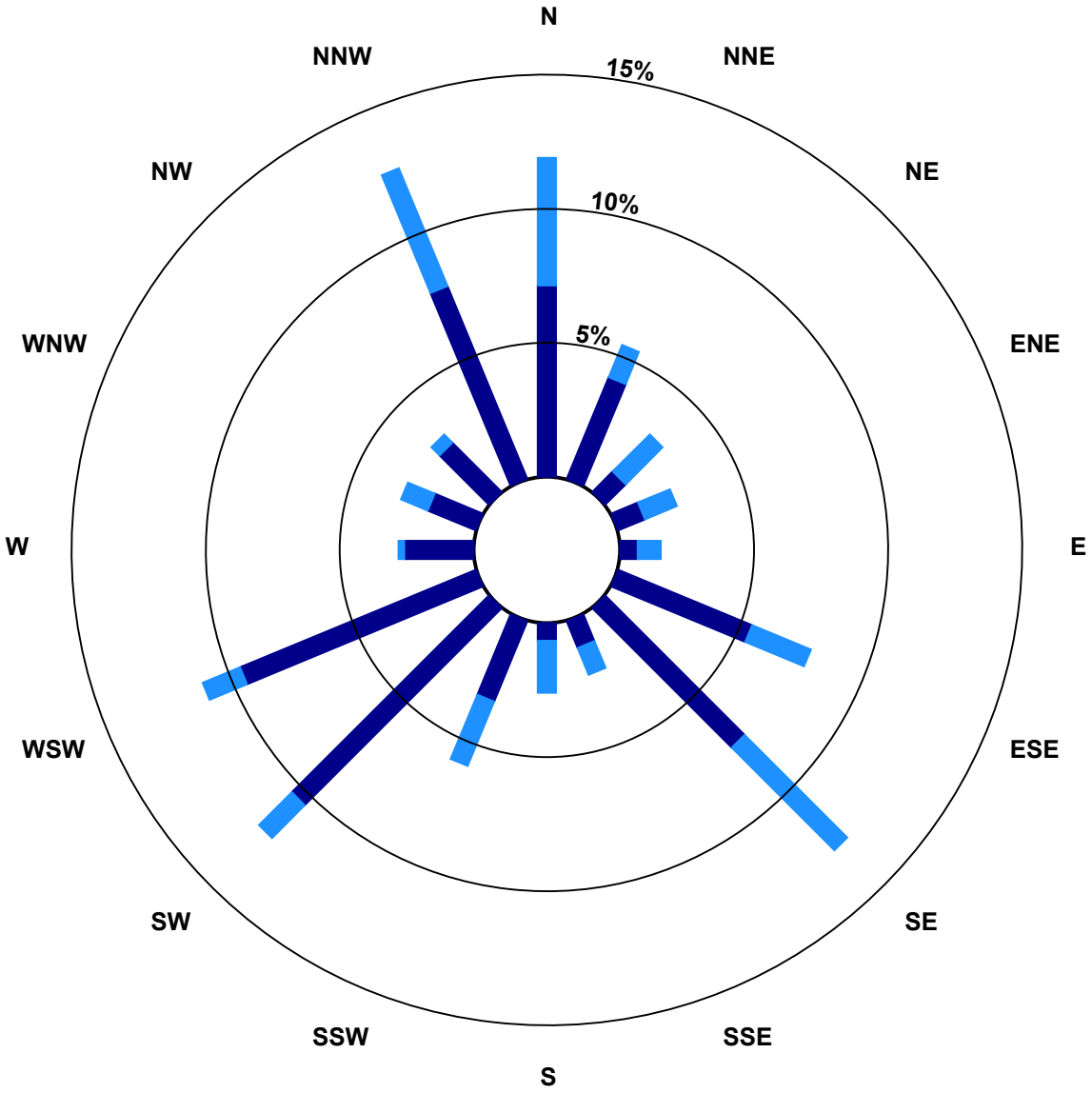
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Total Hydrocarbons (THC) - ppm

Patricia McInnes



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

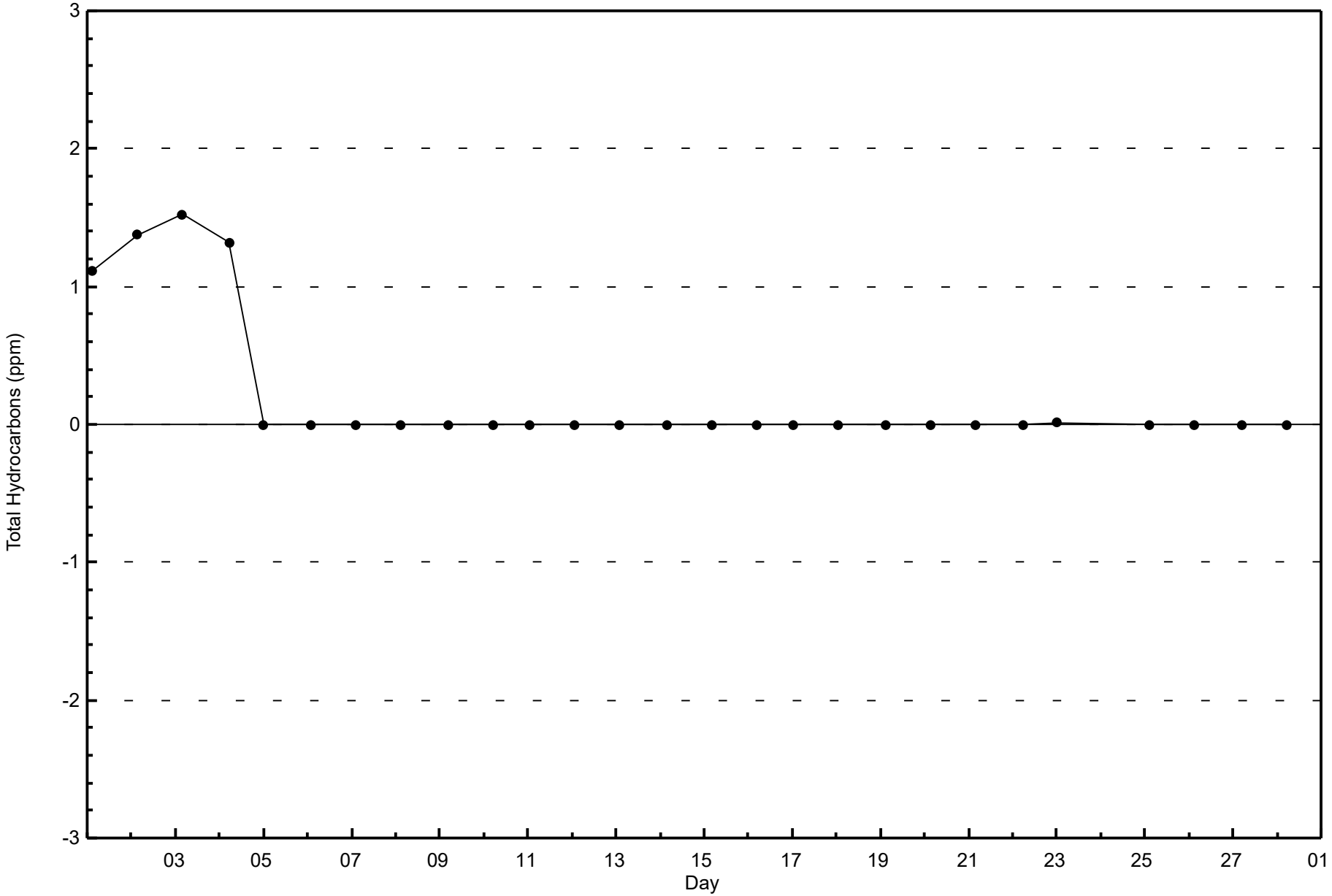
Total Number of Valid Hours: 462

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Patricia McInnes - February 2025

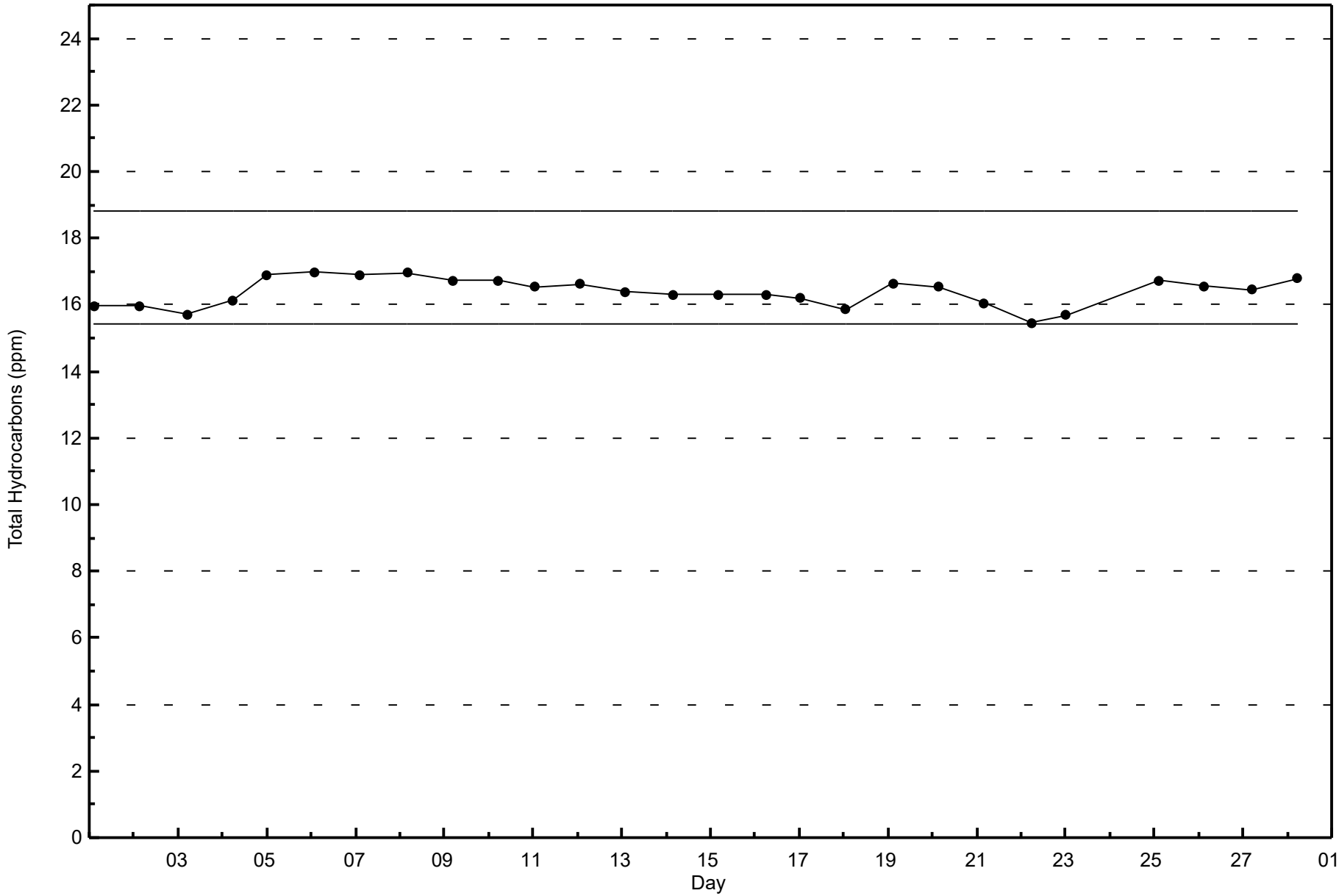


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Patricia McInnes - February 2025



Maximum Value: 0.263 ppm on Feb 26 02:00

Maximum Daily Average: 0.094 ppm on Feb 26

Minimum Value: 0.000 ppm on Feb 1 01:00

Minimum Daily Average: 0.000 ppm on Feb 4

Maximum Diurnal Average: 0.029 ppm at hour 1

Minimum Diurnal Average: 0.000 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:	672
Hours of Data:	462
Hours of Missing Data:	210
Hours of Calibration:	35
Percent Operational Time:	74.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	0.000	0.000	Z	0.000	0.000	0.000	UO	UO	0.000	UO	UO	UO	UO	UO	UO	0.000	UO	UO	0.000	UO	UO	UO	UO	UO	--	0.000
2-Feb	UO	0.000	0.000	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	0.000
3-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	--	0.000
4-Feb	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	M	M	M	M	M	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5-Feb	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.000	0.000	0.000	0.000	0.001	0.012
6-Feb	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	Z	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	0.000	0.000	0.000	0.000	0.005
8-Feb	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.045	0.000	0.019	0.000	0.000	0.000	0.003	0.045
9-Feb	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	0.003	0.003	0.010	0.000	0.000	0.000	0.000	0.001	0.010
10-Feb	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11-Feb	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.007	0.000	0.000	0.000	0.002	0.000	0.000	0.001	0.007
12-Feb	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
13-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
14-Feb	0.000	0.000	0.000	Z	0.000	0.000	0.012	0.005	0.015	0.134	0.173	0.118	0.033	0.000	0.000	0.000	0.000	0.003	0.015	0.000	0.002	0.025	0.000	0.018	0.024	0.173
15-Feb	0.000	0.000	0.000	0.000	Z	0.016	0.000	0.000	0.000	0.005	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	0.000	0.001	0.016
16-Feb	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17-Feb	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	UO	UO	UO	UO	UO	UO	UO	--	0.002
18-Feb	UO	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	M	M	C	C	0.024	0.005	0.002	0.000	0.000	0.000	0.000	--	0.024
19-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.002	0.000	0.000	0.000	M	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007
20-Feb	0.000	0.000	0.000	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	0.051	0.041	0.017	0.096	0.109	0.078	0.086	0.021	0.109
21-Feb	0.075	0.011	0.020	0.021	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	0.075
22-Feb	UO	UO	UO	UO	UO	UO	UO	M	M	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
23-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	M	M	M	M	M	M	M	M	M	--	--
24-Feb	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--
25-Feb	M	M	M	M	M	M	M	M	M	M	C	C	C	C	C	C	0.000	0.007	0.000	0.017	0.009	0.001	0.020	0.176	--	0.176
26-Feb	0.259	0.263	0.088	Z	0.006	0.073	0.011	0.000	0.000	0.097	0.244	0.120	0.043	0.009	0.000	0.007	0.001	0.015	0.193	0.221	0.134	0.127	0.099	0.156	0.094	0.263
27-Feb	0.185	0.217	0.132	0.206	Z	0.023	0.091	0.133	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.043	0.217
28-Feb	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.001	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.004	0.000	0.001	0.000	0.000	0.000	0.001	0.005
	0.029	0.025	0.013	0.013	0.000	0.007	0.006	0.007	0.001	0.013	0.024	0.014	0.004	0.000	0.000	0.000	0.000	0.005	0.014	0.013	0.012	0.013	0.009	0.021	Diurnal Average	
	0.259	0.263	0.132	0.206	0.006	0.073	0.091	0.133	0.015	0.134	0.244	0.120	0.043	0.009	0.000	0.007	0.007	0.051	0.193	0.221	0.134	0.127	0.099	0.176	Diurnal Maximum	

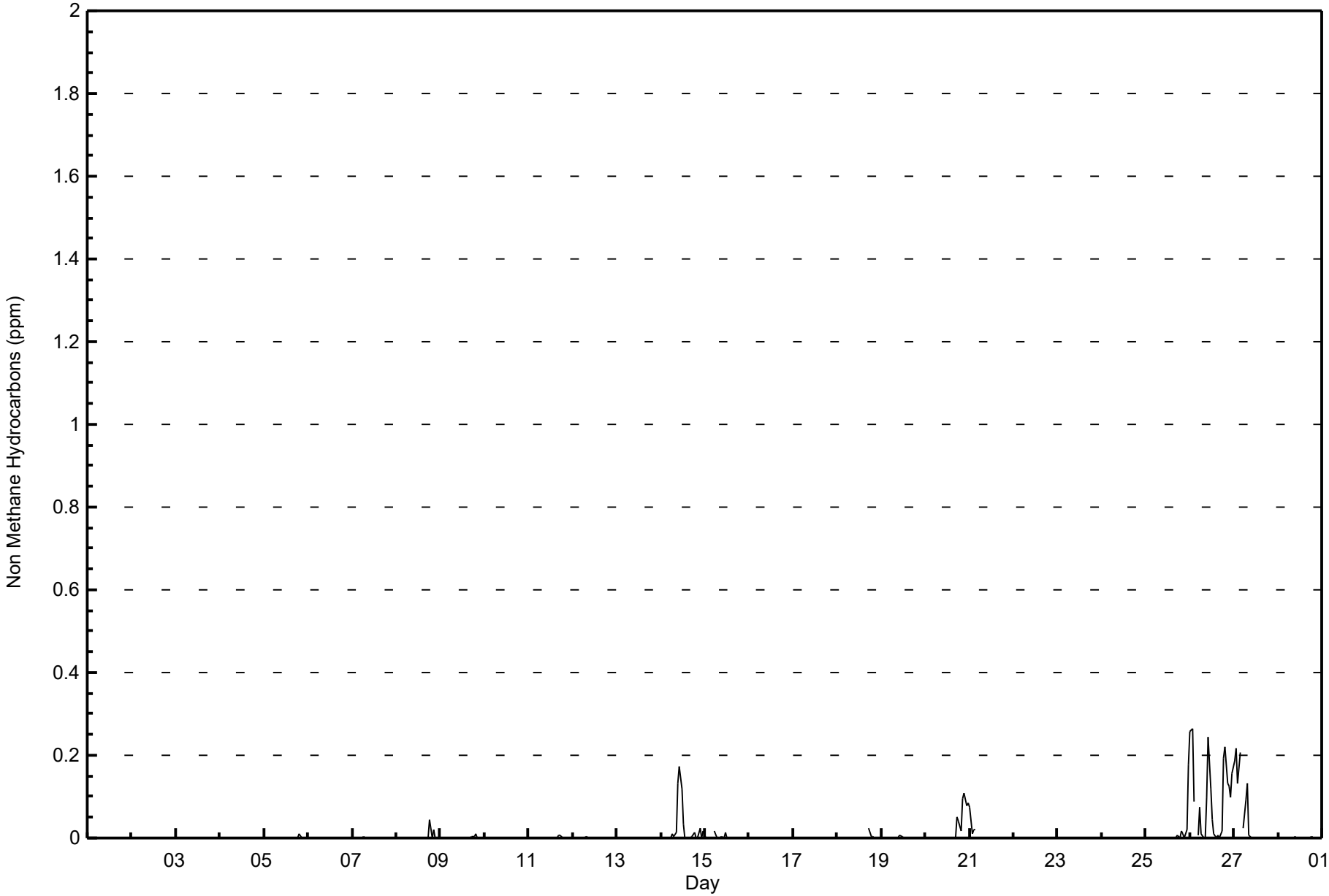
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Patricia McInnes - February 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	401	86.80	86.80
0.006 - 0.05	33	7.14	93.94
0.06 - 0.1	17	3.68	97.62
> 0.1	11	2.38	100.00

Total Number of Valid Hours: 462

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Patricia McInnes - February 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 0.005	45	20	10	7	6	33	56	5	10	20	55	49	11	13	12	49	401
0.006 - 0.05	4	3	2	1	0	1	3	4	2	4	1	2	2	0	0	4	33
0.06 - 0.1	4	1	2	2	1	2	0	1	0	2	0	0	0	0	1	1	17
> 0.1	2	1	0	1	0	0	0	0	0	1	0	0	0	1	1	4	11
Totals	55	25	14	11	7	36	59	10	12	27	56	51	13	14	14	58	462

Total Number of Valid Hours: 462

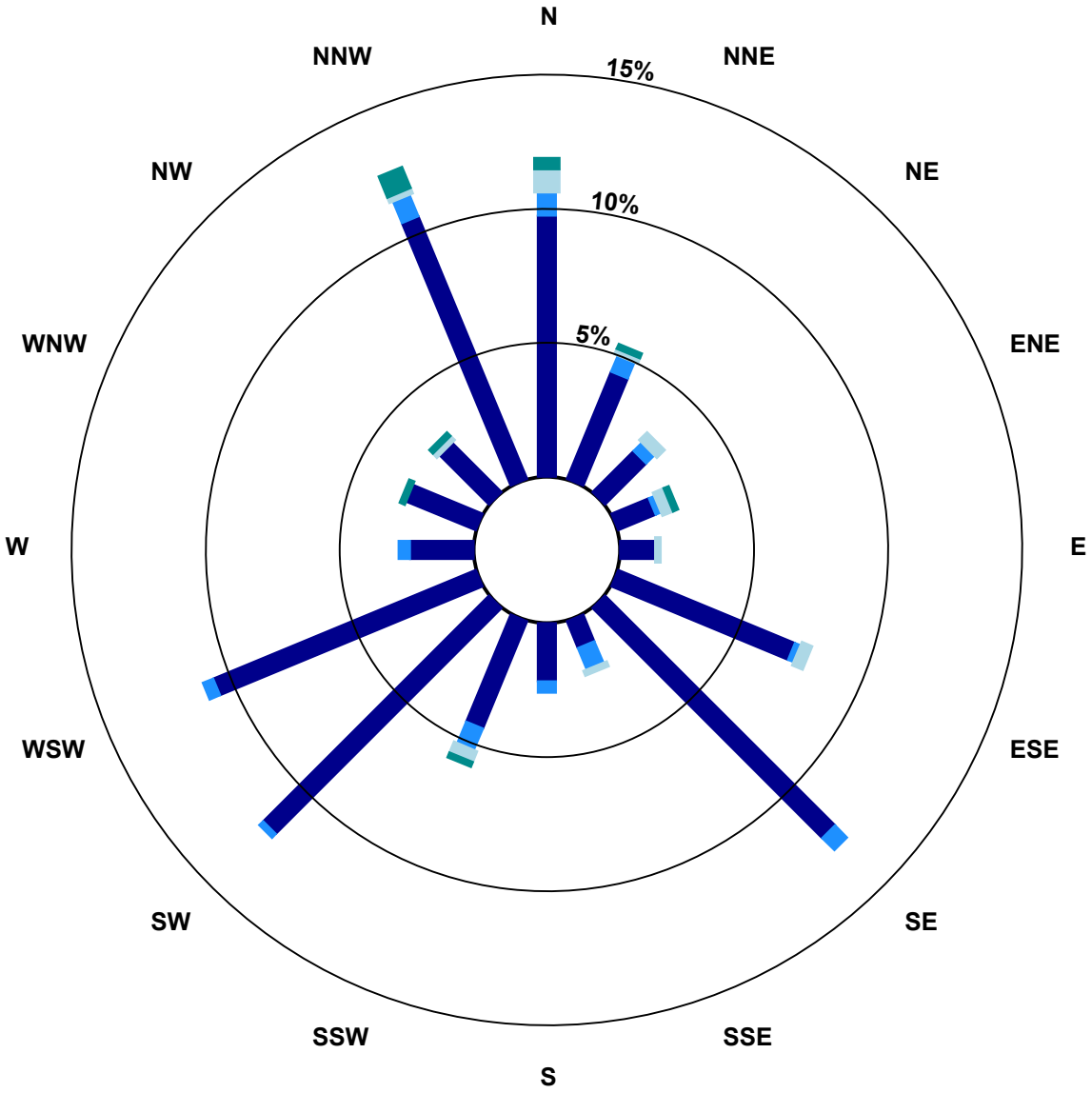
Total Number of Hours: 672

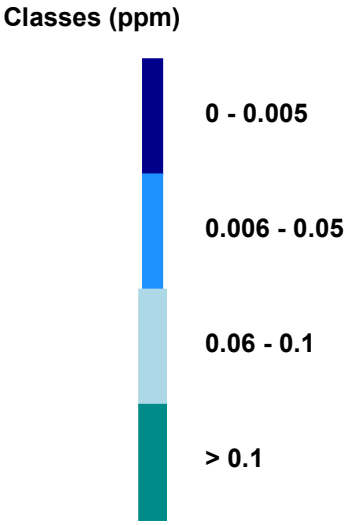
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Non Methane Hydrocarbons (NMHC) - ppm

Patricia McInnes





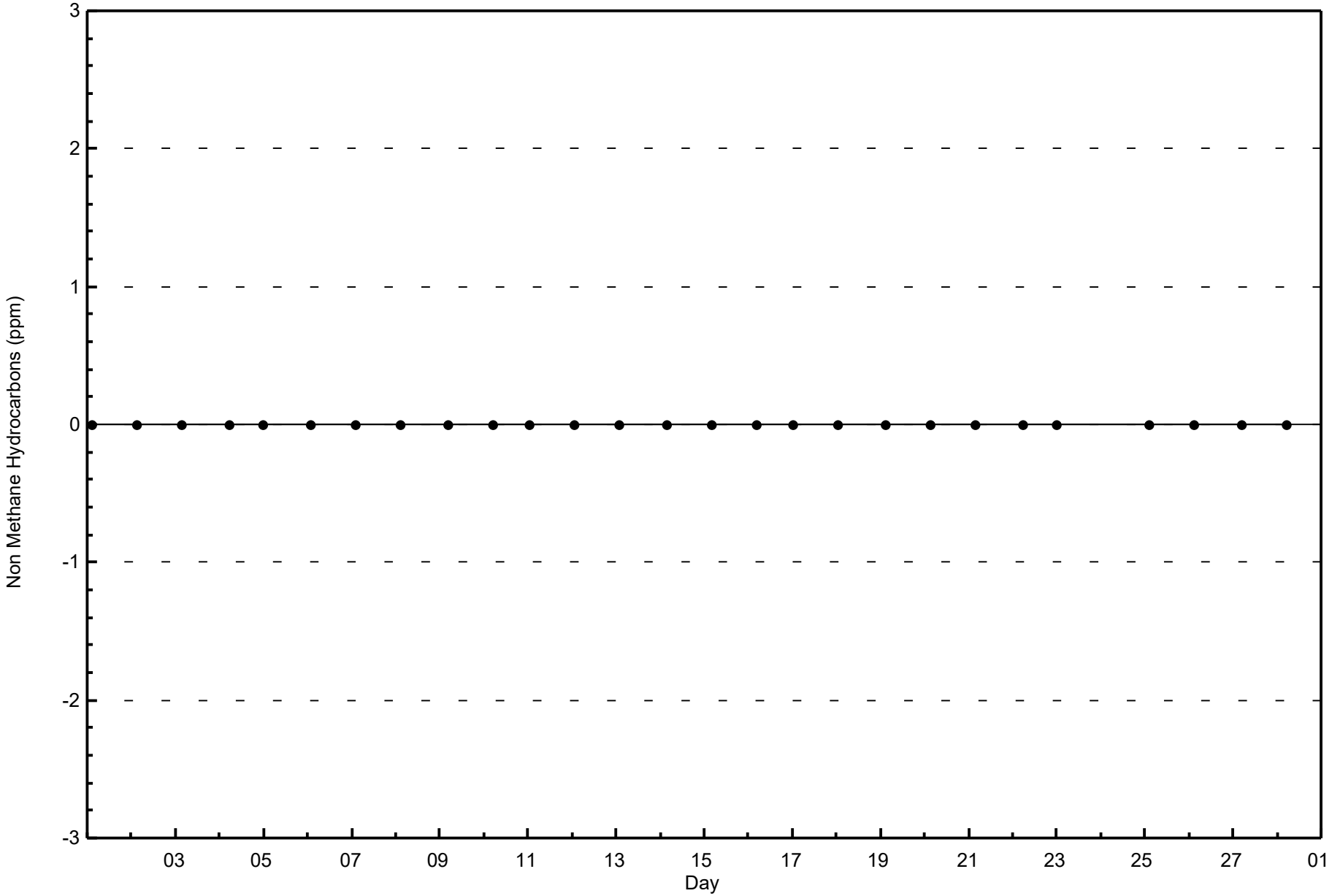
Total Number of Valid Hours: 462

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Patricia McInnes - February 2025

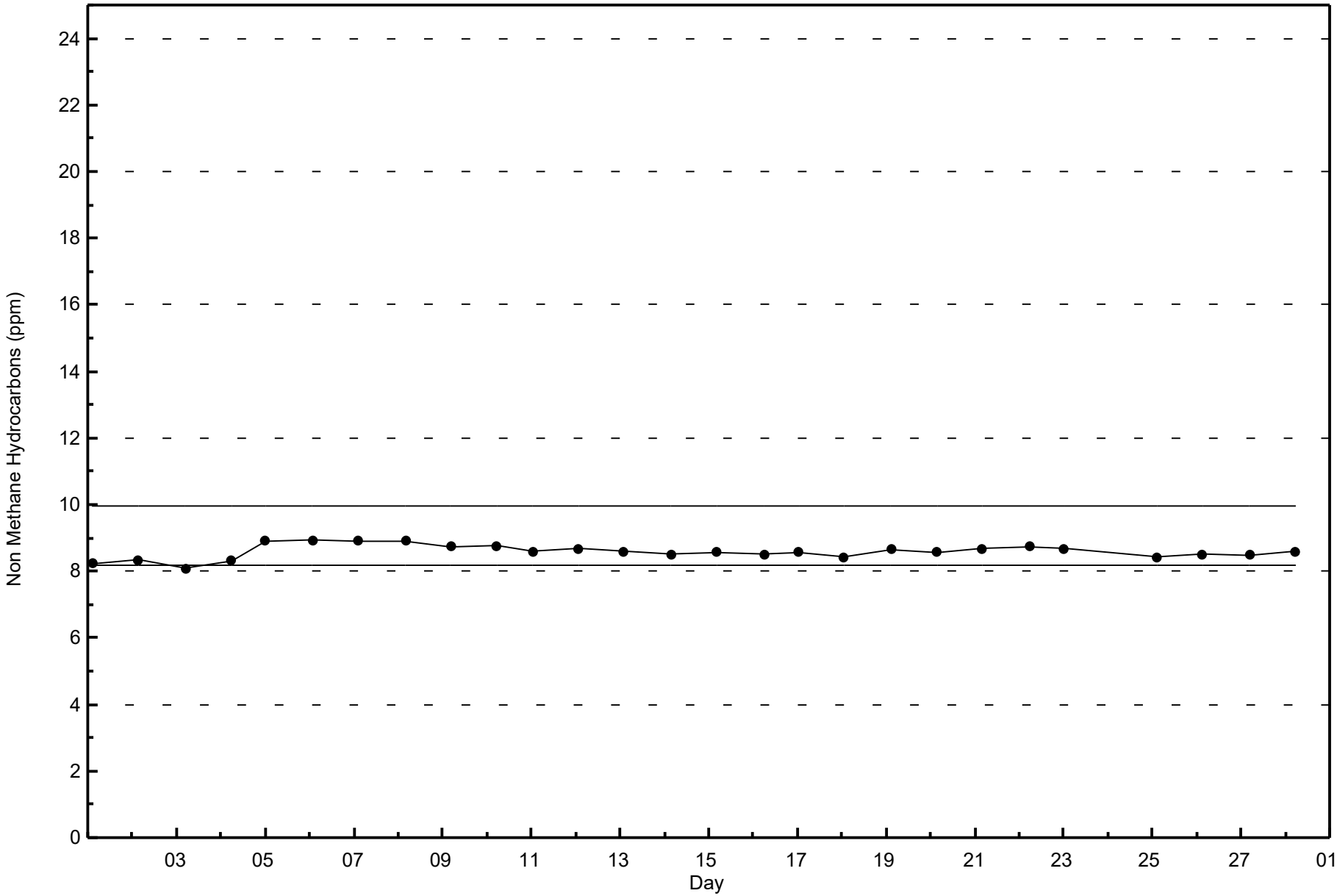


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Patricia McInnes - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Patricia McInnes - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 2.6 ppm on Feb 26 11:00 Maximum Daily Average: 2.2 ppm on Feb 26

Minimum Value: 1.8 ppm on Feb 27 13:00 Minimum Daily Average: 1.9 ppm on Feb 16
Maximum Diurnal Average: 2.1 ppm at hour 1 Minimum Diurnal Average: 2.0 ppm at hour 16
Monthly Average: 2.02 ppm Percentiles: P_1 = 1.9 P_{10} = 1.9 Q_1 = 2.0 Median = 2.0 Q_3 = 2.1 P_{90} = 2.1 P_{99} = 2.3

Hours in Service:	672
Hours of Data:	462
Hours of Missing Data:	210
Hours of Calibration:	35
Percent Operational Time:	74.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	2.2	2.1	Z	2.1	2.1	2.1	UO	UO	2.0	UO	UO	UO	UO	UO	UO	2.0	UO	UO	2.0	UO	UO	UO	UO	UO	--	2.2
2-Feb	UO	2.0	2.0	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	2.0
3-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	C	C	C	C	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	--	1.9
4-Feb	1.9	1.9	1.9	1.9	1.9	Z	1.9	1.9	1.9	1.9	M	M	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
5-Feb	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Feb	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Feb	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
8-Feb	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.0	2.0	2.0	2.0	2.2
9-Feb	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	1.9	2.0	2.0	2.0
10-Feb	1.9	1.9	1.9	2.0	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.1	2.0	2.0	2.0	2.1
11-Feb	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1
12-Feb	2.2	Z	2.2	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.2
13-Feb	2.1	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
14-Feb	2.0	2.0	2.1	Z	2.1	2.3	2.4	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.4
15-Feb	2.1	2.1	2.0	2.1	Z	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1
16-Feb	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0
17-Feb	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	UO	UO	UO	UO	UO	UO	UO	--	1.9
18-Feb	UO	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	M	M	C	C	2.1	2.1	2.1	2.1	2.1	2.1	2.1	--	2.1
19-Feb	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	M	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
20-Feb	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	2.2	2.1	2.2	2.3	2.2	2.2	2.2	2.1	2.3
21-Feb	2.2	2.2	2.2	2.1	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	2.2
22-Feb	UO	UO	UO	UO	UO	UO	UO	M	M	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
23-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	M	M	M	M	M	M	M	M	M	--	--
24-Feb	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	--
25-Feb	M	M	M	M	M	M	M	M	M	M	C	C	C	C	C	C	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.3	--	2.3
26-Feb	2.4	2.3	2.2	Z	2.1	2.1	2.1	2.1	2.0	2.3	2.6	2.4	2.3	2.2	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.6
27-Feb	2.3	2.3	2.2	2.3	Z	2.1	2.1	2.2	2.0	1.9	2.0	1.9	1.8	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3
28-Feb	2.0	2.0	2.0	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	Diurnal Average	
	2.4	2.3	2.2	2.3	2.1	2.3	2.4	2.3	2.3	2.3	2.6	2.4	2.3	2.2	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.2	2.2	2.3	Diurnal Maximum	

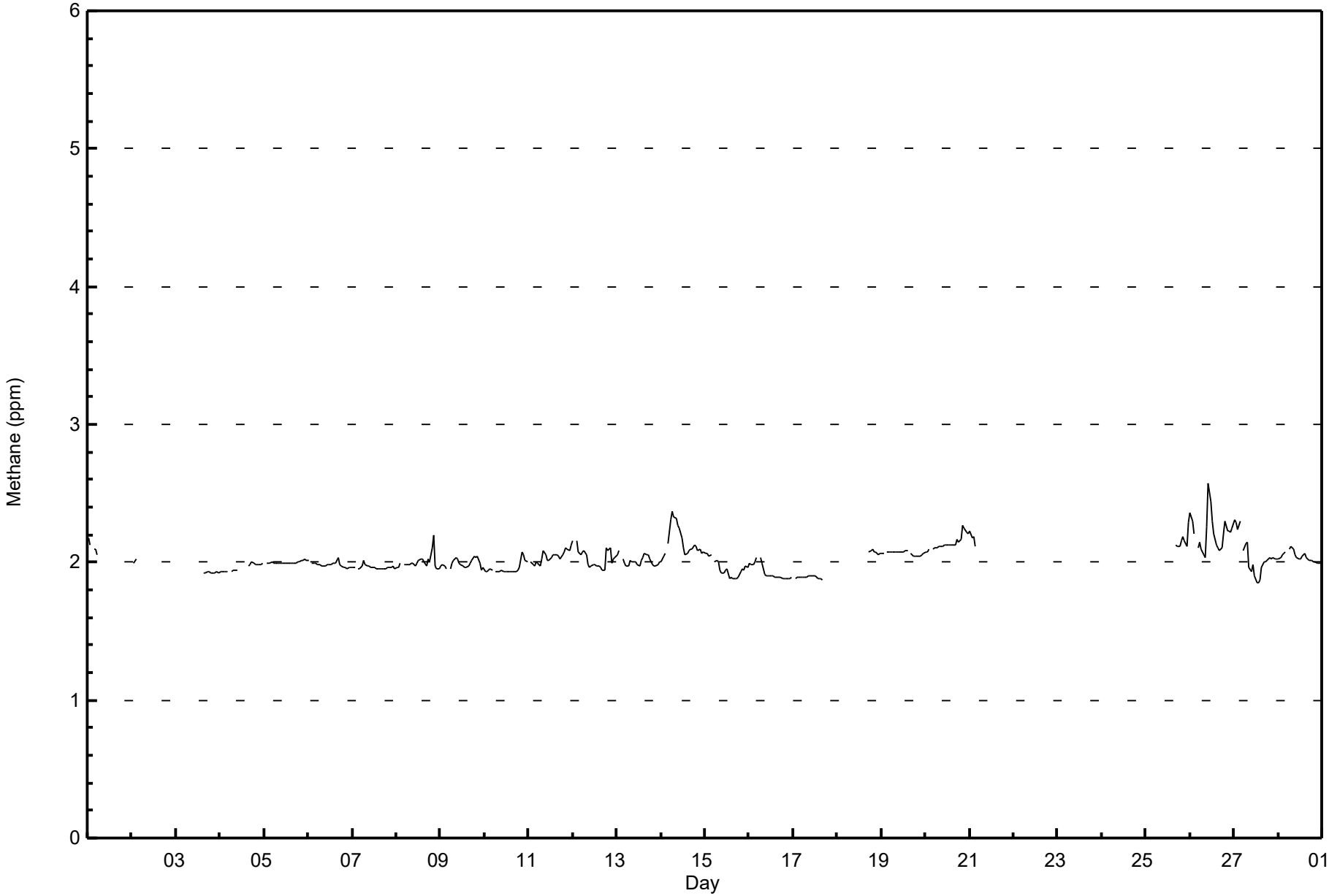
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Patricia McInnes - February 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	309	66.88	66.88
2.1 - 3.0	153	33.12	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 462

Total Number of Hours: 672



Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Patricia McInnes - February 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	34	19	5	5	3	25	34	5	3	15	48	44	12	9	12	36	309
2.1 - 3.0	21	6	9	6	4	11	25	5	9	12	8	7	1	5	2	22	153
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	55	25	14	11	7	36	59	10	12	27	56	51	13	14	14	58	462

Total Number of Valid Hours: 462

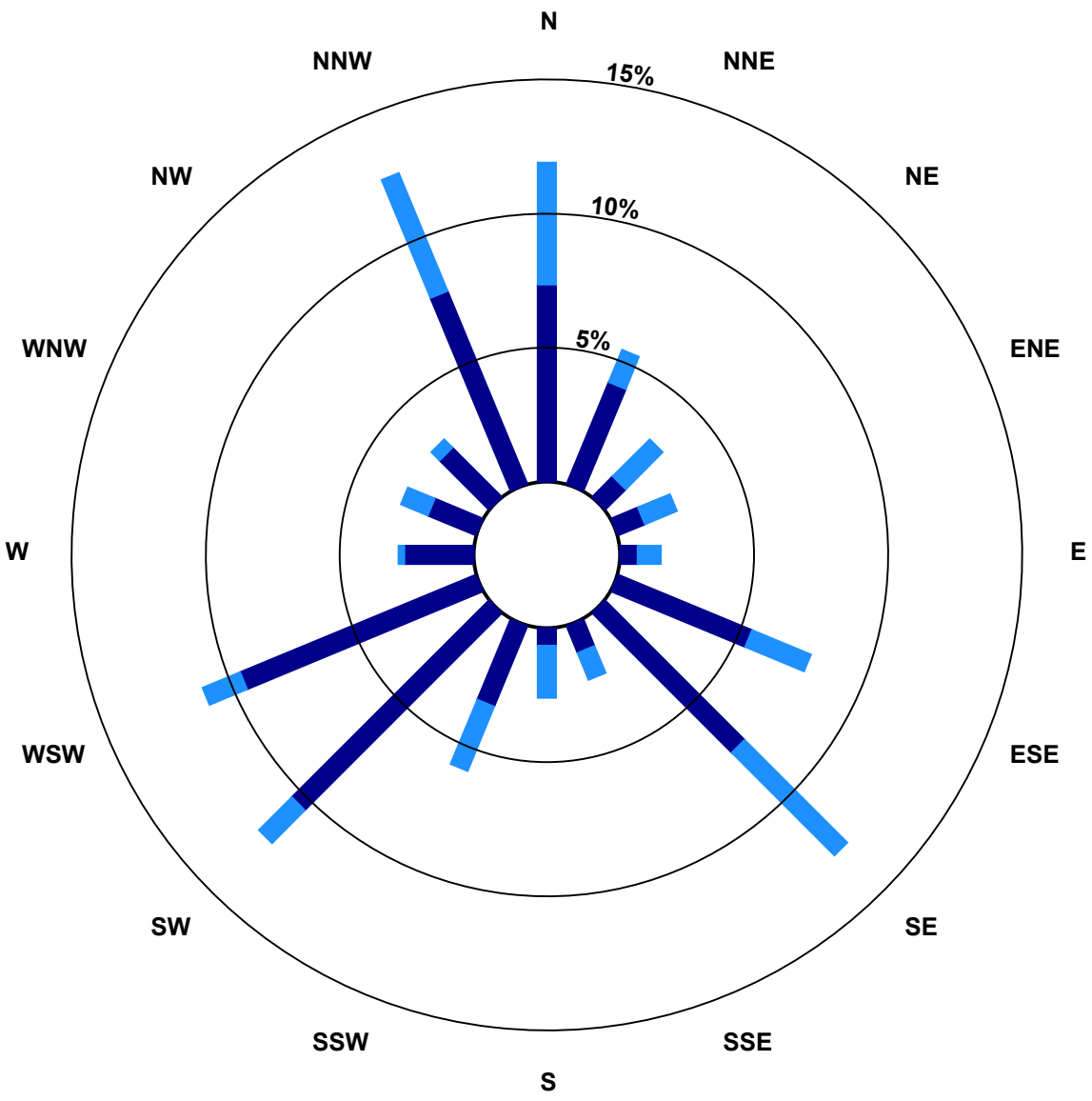
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Methane (CH_4) - ppm

Patricia McInnes



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

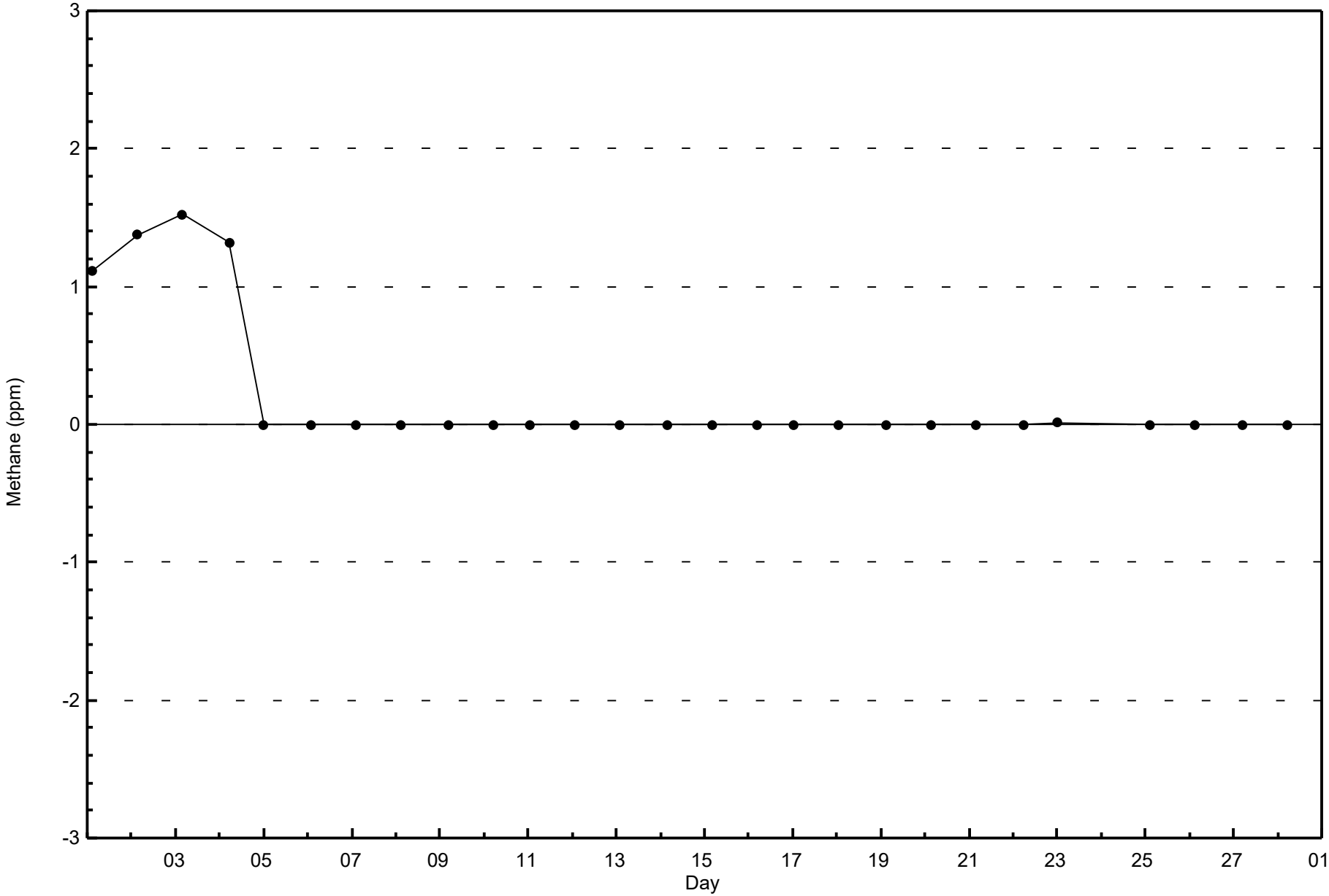
Total Number of Valid Hours: 462

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Patricia McInnes - February 2025

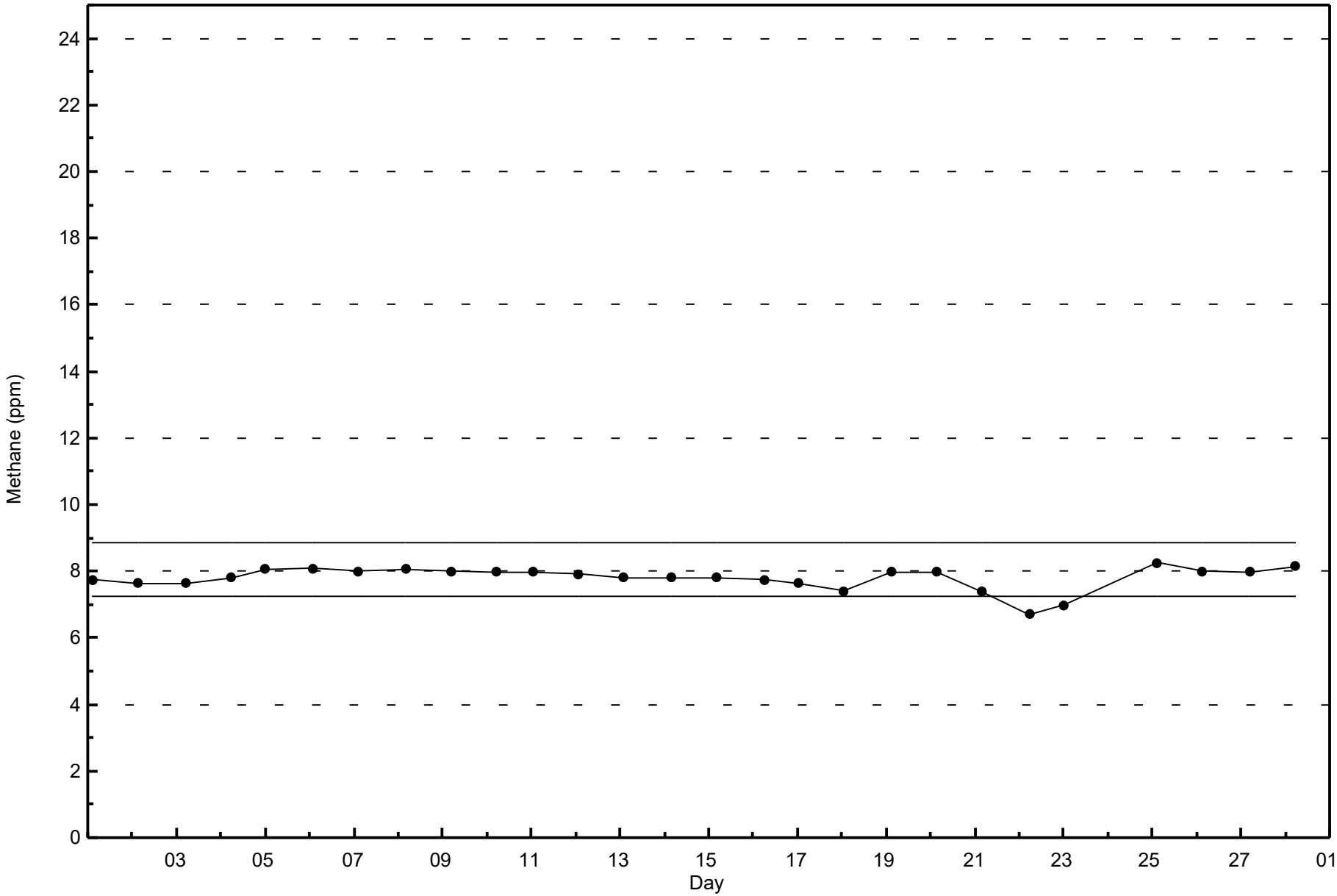


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Patricia McInnes - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Patricia McInnes - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 40.1 ppb on Feb 27 14:00
Maximum Daily Average: 34.7 ppb on Feb 6

Minimum Value: 1.2 ppb on Feb 14 07:00
Minimum Daily Average: 9.1 ppb on Feb 14
Maximum Diurnal Average: 29.9 ppb at hour 15
Minimum Diurnal Average: 19.7 ppb at hour 7
Monthly Average: 23.76 ppb
Percentiles: P_1 = 2.3 P_{10} = 9.4 Q_1 = 16.9 Median = 25.9 Q_3 = 31.1 P_{90} = 34.7 P_{99} = 37.4

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	32
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-Feb	18.0	21.6	23.9	23.7	Z	25.2	27.5	30.1	31.5	32.5	33.4	33.6	31.1	28.1	27.5	28.9	27.6	26.9	22.6	20.0	20.4	22.0	22.3	21.0	26.1	33.6
2-Feb	23.8	23.0	21.8	23.3	26.4	Z	25.9	24.1	25.4	25.4	26.6	27.2	28.0	25.6	24.9	22.5	20.3	16.8	16.9	16.9	22.6	22.2	25.4	25.6	23.5	28.0
3-Feb	Z	12.6	16.5	25.6	29.2	25.6	14.6	3.9	12.2	20.5	26.6	28.4	31.0	34.1	36.9	36.3	36.6	26.7	29.7	36.1	34.3	32.1	31.2	29.7	26.5	36.9
4-Feb	28.8	Z	29.5	30.6	30.8	30.3	27.5	28.9	28.0	31.1	33.1	35.4	36.1	37.2	37.3	36.2	33.7	28.1	26.7	33.2	35.8	35.6	35.5	35.1	32.4	37.3
5-Feb	34.7	34.4	Z	34.2	34.2	34.6	34.0	34.3	34.9	34.8	34.9	35.4	36.2	36.4	36.3	36.8	36.4	36.1	34.2	33.5	32.5	30.8	31.0	32.3	34.5	36.8
6-Feb	32.8	34.6	34.4	Z	35.1	37.1	35.1	39.0	38.3	38.4	37.4	35.0	34.9	33.9	33.7	32.1	29.0	34.2	36.0	33.6	32.9	34.8	32.8	33.2	34.7	39.0
7-Feb	35.3	36.0	35.7	34.5	Z	31.6	12.9	21.6	26.3	29.9	33.3	34.6	35.0	35.8	37.0	36.9	34.2	35.1	29.1	29.5	28.3	32.6	29.1	34.3	31.7	37.0
8-Feb	34.2	33.8	23.7	23.9	28.4	Z	25.9	27.7	26.3	27.1	32.4	31.0	29.2	25.8	26.7	29.9	30.5	19.8	22.8	17.4	11.1	33.1	33.3	32.5	27.3	34.2
9-Feb	Z	30.1	28.0	27.5	27.5	26.7	22.4	16.2	15.3	14.9	21.2	23.2	26.8	28.0	25.9	26.4	22.4	16.4	16.6	10.3	5.6	18.5	27.6	20.4	21.7	30.1
10-Feb	26.9	Z	28.0	29.6	31.0	31.0	30.9	31.4	32.1	32.7	33.6	34.4	34.8	35.2	36.2	36.9	35.5	33.7	30.9	23.6	13.3	20.0	22.3	24.1	29.9	36.9
11-Feb	23.6	26.9	Z	30.0	27.7	30.0	30.0	25.0	20.2	26.2	29.8	29.1	28.1	26.8	22.0	18.9	14.2	13.7	4.9	3.4	3.5	5.3	5.5	2.7	19.5	30.0
12-Feb	2.1	1.7	1.6	Z	15.3	12.1	11.3	12.7	16.6	21.3	19.2	20.8	22.0	20.9	22.8	25.5	25.0	15.5	8.3	12.1	17.4	23.9	19.0	19.1	15.9	25.5
13-Feb	18.7	15.0	15.0	20.4	Z	24.9	24.2	21.0	23.8	27.0	28.0	28.8	28.4	26.5	25.4	22.2	19.0	12.4	16.2	22.1	21.6	21.1	19.6	16.0	21.6	28.8
14-Feb	15.3	9.9	6.9	4.2	3.1	Z	1.2	1.2	5.0	9.8	11.3	15.5	18.5	21.1	21.3	19.4	15.1	6.3	2.7	4.2	4.0	2.6	4.6	5.0	9.1	21.3
15-Feb	Z	3.2	4.9	3.4	7.7	9.4	9.9	11.3	20.1	25.7	27.6	23.6	20.9	35.8	35.6	35.8	35.7	31.7	19.1	15.5	11.3	15.9	10.4	13.8	18.6	35.8
16-Feb	14.7	Z	15.2	15.1	11.9	11.0	9.4	16.0	24.5	25.7	27.2	28.3	29.1	31.1	32.7	33.0	31.6	28.2	26.1	24.5	19.5	17.3	16.6	15.9	21.9	33.0
17-Feb	16.6	17.6	Z	20.7	22.6	23.6	23.5	23.8	24.0	24.4	24.6	25.2	26.6	27.6	28.8	30.1	29.6	27.9	24.3	26.1	24.6	25.4	25.4	19.1	24.4	30.1
18-Feb	21.2	25.6	24.0	Z	20.3	10.4	9.6	5.2	7.5	21.6	25.8	27.0	28.3	28.7	30.1	29.5	29.1	23.4	21.5	21.8	28.2	30.8	30.4	29.8	23.0	30.8
19-Feb	30.0	28.2	26.9	27.0	Z	27.1	26.9	26.1	26.5	27.7	28.6	30.1	31.7	33.2	34.1	M	34.8	36.1	36.4	36.1	35.4	35.3	35.1	35.3	31.3	36.4
20-Feb	34.9	33.5	31.9	32.4	34.6	Z	32.8	32.6	32.4	31.7	C	C	C	C	33.3	33.2	31.4	19.0	12.8	16.8	5.7	3.7	7.1	9.0	24.7	34.9
21-Feb	Z	11.9	15.7	24.7	24.0	17.8	11.6	10.8	7.3	9.6	12.0	18.5	17.2	16.0	11.9	11.3	20.8	27.1	29.5	29.5	29.3	29.5	29.7	30.7	19.4	30.7
22-Feb	30.3	Z	20.2	11.2	5.3	2.5	3.1	4.6	8.2	11.2	26.3	32.5	32.4	30.5	29.6	27.7	24.5	9.1	6.1	9.6	9.7	16.4	12.9	7.5	16.1	32.5
23-Feb	14.5	28.2	Z	30.3	25.6	4.5	16.8	33.3	34.5	36.8	34.7	18.0	26.2	31.4	33.4	34.0	32.0	32.6	29.9	32.5	29.3	22.7	23.8	22.6	27.3	36.8
24-Feb	10.2	16.2	16.6	Z	21.2	21.0	21.3	24.1	23.1	21.0	22.4	23.1	21.5	25.8	26.8	28.6	25.3	7.9	3.2	13.2	9.3	5.4	12.1	12.7	17.9	28.6
25-Feb	2.2	12.9	26.5	27.3	Z	30.3	31.2	30.8	30.4	29.3	29.7	29.3	29.2	29.2	30.5	29.2	25.7	22.4	21.1	19.1	14.1	13.4	14.1	9.0	23.3	31.2
26-Feb	1.4	5.3	8.4	6.1	9.7	Z	11.4	16.6	20.8	14.4	12.9	14.8	17.2	22.3	25.5	24.8	21.5	19.5	16.6	9.4	11.8	12.4	11.2	7.8	14.0	25.5
27-Feb	Z	5.2	5.8	2.5	2.4	13.5	4.4	4.8	18.4	20.6	20.3	30.3	38.4	40.1	40.0	32.8	27.9	28.3	27.9	26.9	29.4	31.5	31.4	30.1	22.3	40.1
28-Feb	30.9	Z	29.1	24.9	20.2	18.8	15.2	9.4	17.7	25.1	28.9	31.2	31.6	31.7	32.2	30.5	30.4	31.6	28.8	31.1	30.7	30.9	32.4	31.1	27.1	32.4
	21.8	20.3	20.4	22.2	21.5	21.7	19.7	20.2	22.5	24.9	26.7	27.6	28.5	29.6	29.9	29.2	27.8	23.8	21.5	21.7	20.4	22.3	22.6	21.6	Diurnal Average	
	35.3	36.0	35.7	34.5	35.1	37.1	35.1	39.0	38.3	38.4	37.4	35.4	38.4	40.1	40.0	36.9	36.6	36.1	36.4	36.1	35.8	35.6	35.5	35.3	Diurnal Maximum	

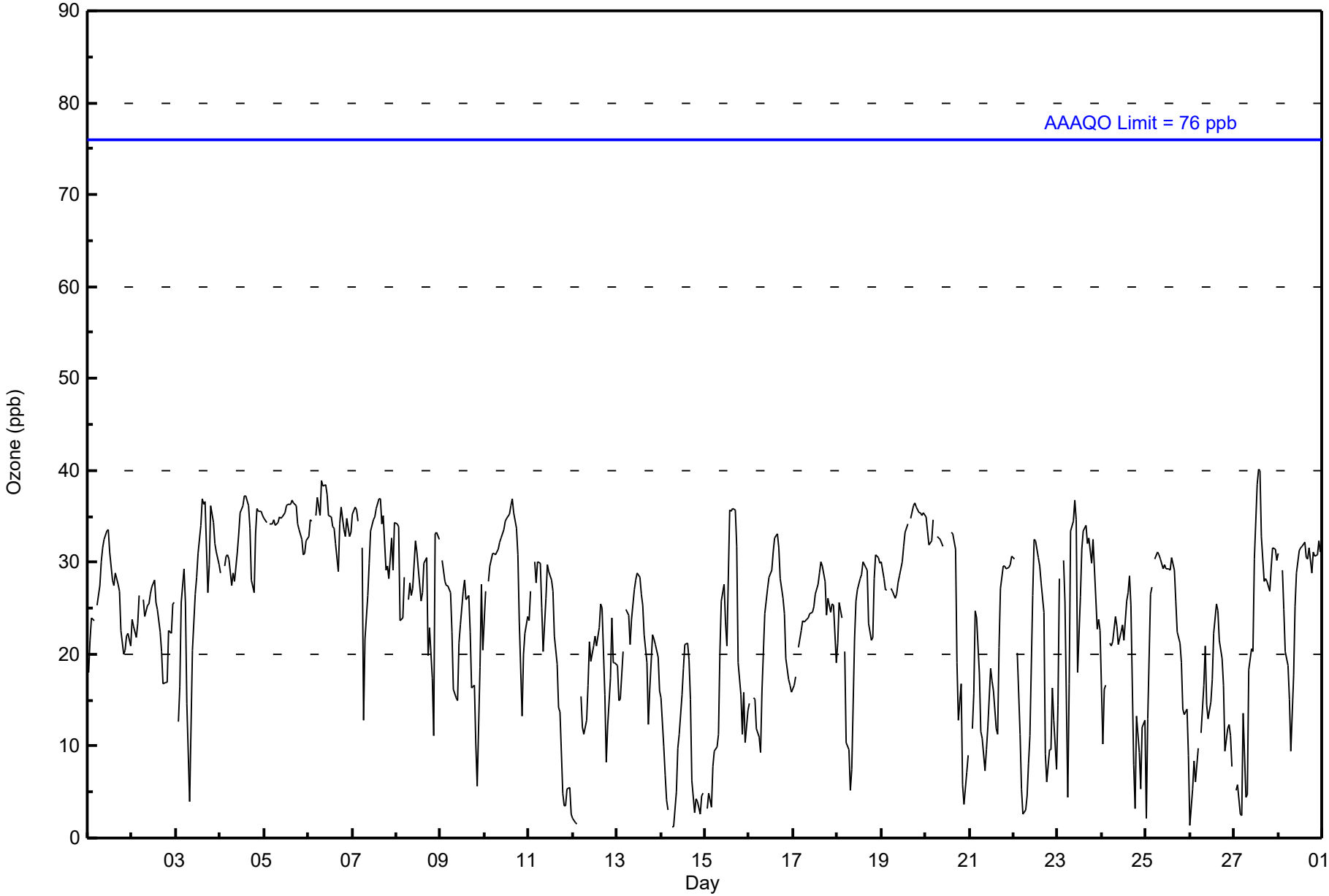
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Patricia McInnes - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	204	31.92	31.92
21 - 50	435	68.08	100.00
51 - 82	0	0.00	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Ozone (O_3) - ppb

Patricia McInnes - February 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	43	11	5	8	5	7	13	10	14	14	13	8	4	7	6	36	204
21 - 50	60	20	13	4	7	34	69	6	11	16	55	45	12	9	11	63	435
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	103	31	18	12	12	41	82	16	25	30	68	53	16	16	17	99	639

Total Number of Valid Hours: 639

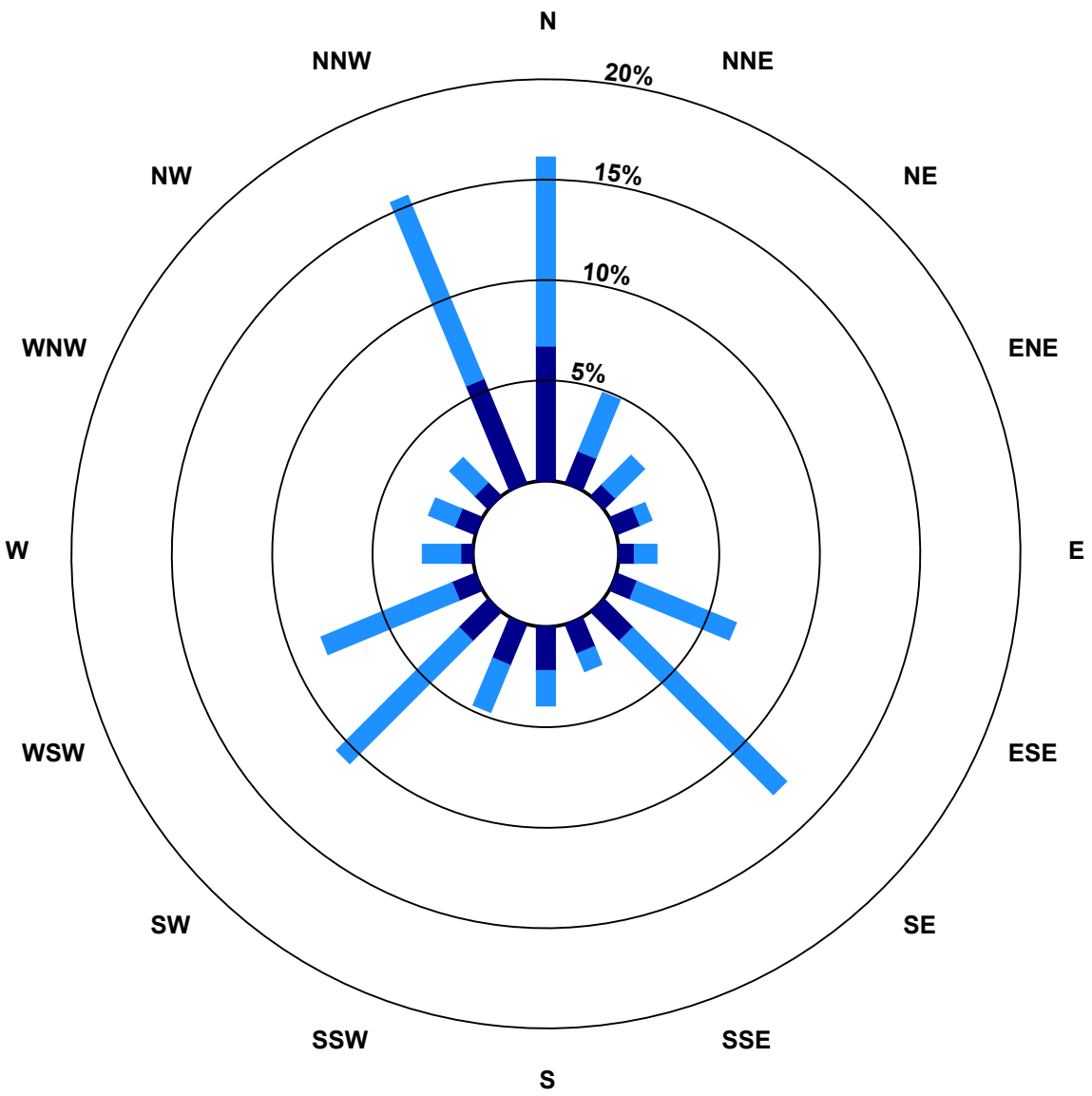
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Ozone (O_3) - ppb

Patricia McInnes



Classes (ppb)

0 - 20

21 - 50

51 - 82

> 83

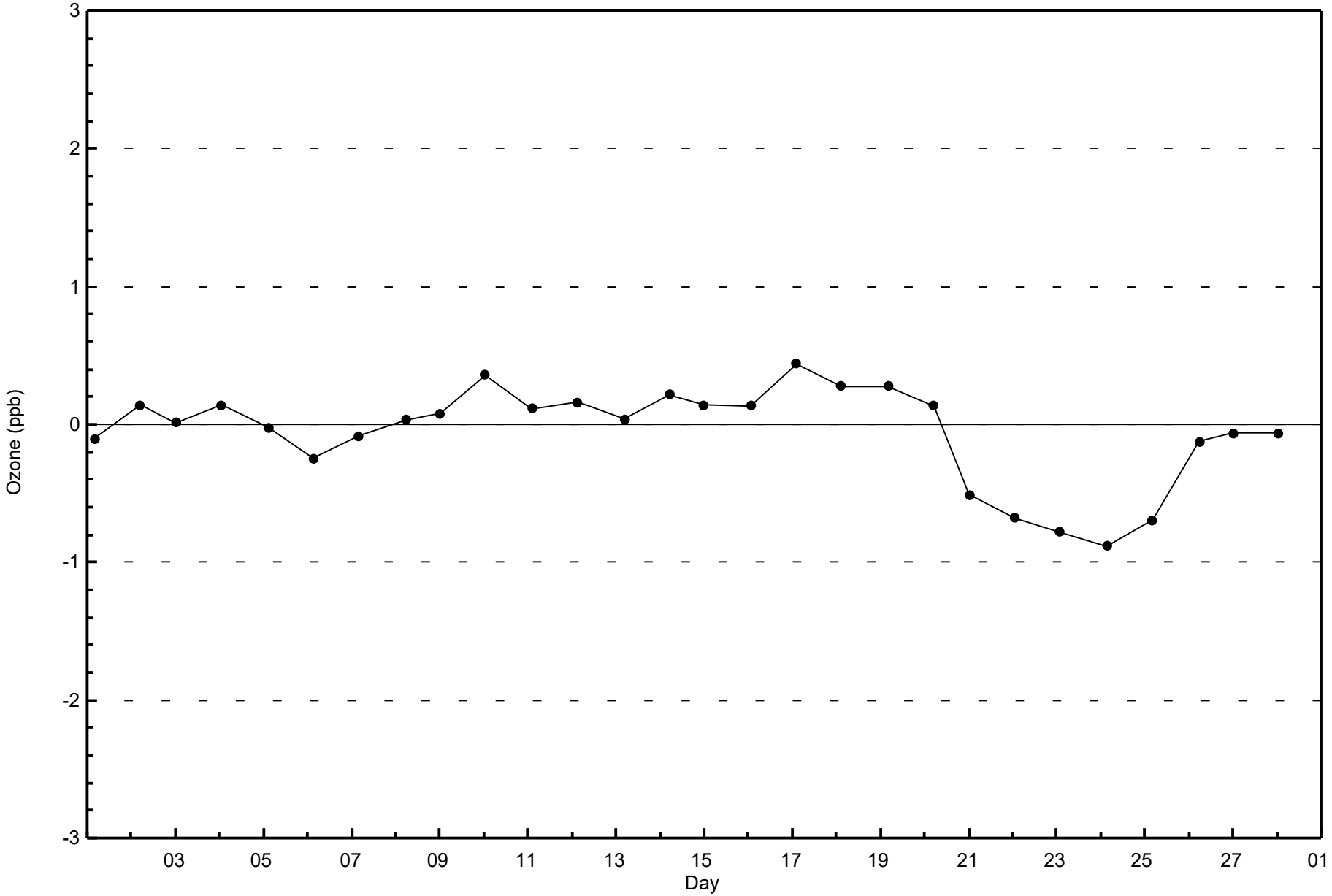
Total Number of Valid Hours: 639

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Patricia McInnes - February 2025

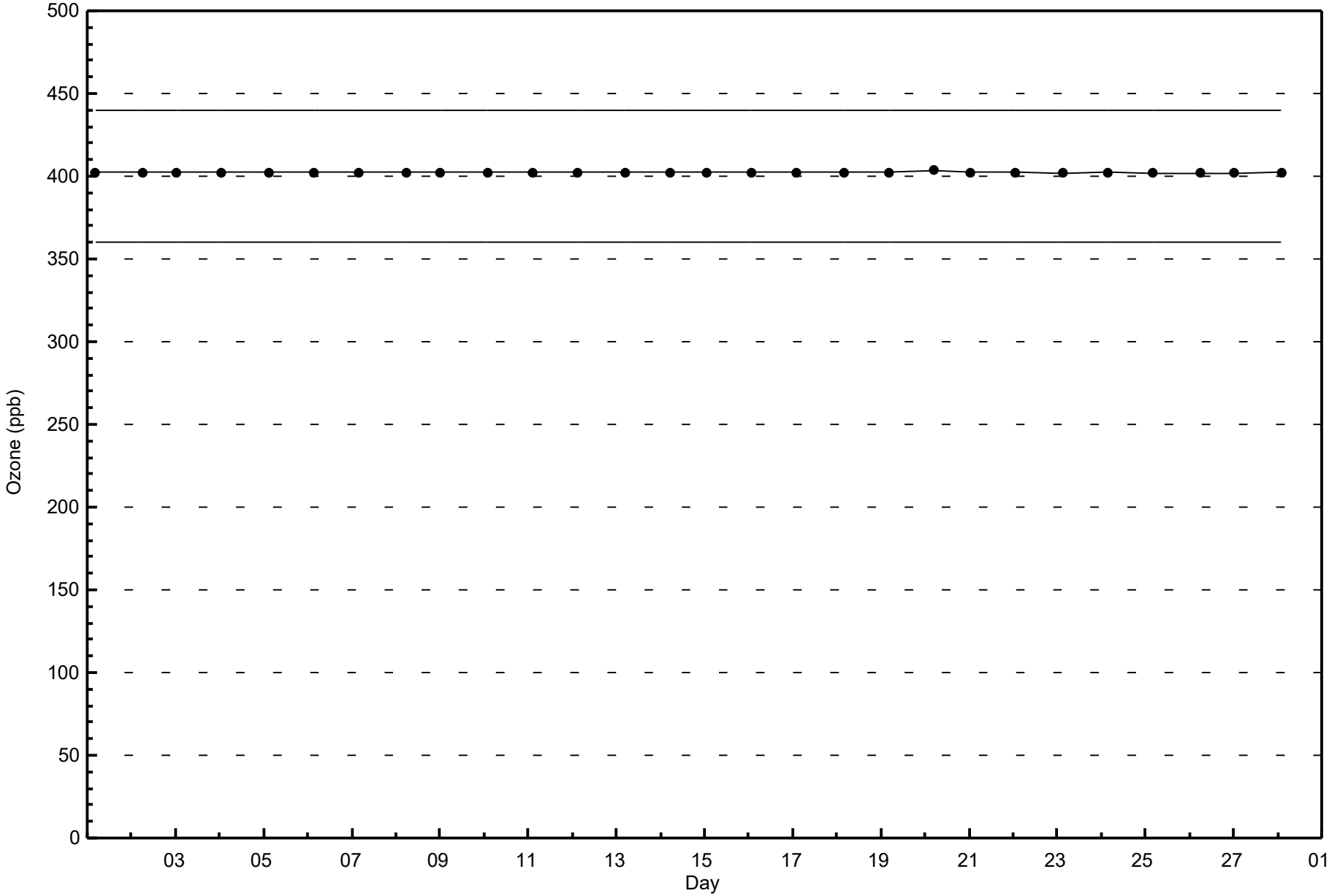


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Patricia McInnes - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Patricia McInnes - February 2025

Maximum Value: 59.9 ppb on Feb 14 11:00

Maximum Daily Average: 19.3 ppb on Feb 14

Minimum Value: 0.0 ppb on Feb 2 19:00

Minimum Daily Average: 0.3 ppb on Feb 6

Maximum Diurnal Average: 7.5 ppb at hour 11

Minimum Diurnal Average: 0.8 ppb at hour 3

Monthly Average: 3.49 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.2 Q_1 = 0.6 Median = 1.4 Q_3 = 3.3 P_{90} = 9.1 P_{99} = 29.5

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	33
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-Feb	Z	0.3	0.3	0.4	0.5	0.4	0.6	0.3	0.6	1.2	1.2	1.0	1.9	3.3	3.1	1.6	1.0	0.2	0.6	0.3	1.1	0.9	0.7	0.9	1.0	3.3
2-Feb	0.5	Z	0.6	0.5	0.5	0.7	0.8	0.5	0.9	1.4	1.9	2.5	2.6	3.2	3.5	4.7	1.5	1.0	0.0	0.0	0.1	0.0	0.0	0.0	1.2	4.7
3-Feb	0.0	2.5	Z	0.0	0.0	1.5	13.6	21.4	4.8	5.8	3.5	5.7	4.6	1.3	0.4	0.9	0.5	2.0	1.6	0.7	1.0	1.0	0.8	0.8	3.2	21.4
4-Feb	1.0	0.9	1.0	Z	0.9	1.2	1.9	1.7	2.1	1.8	1.7	0.8	0.9	0.8	1.0	1.0	1.0	1.5	2.2	0.8	0.8	0.6	0.5	0.3	1.2	2.2
5-Feb	0.5	0.4	0.3	0.5	Z	0.7	0.9	0.8	0.9	0.9	1.0	0.8	0.7	1.0	1.1	0.7	0.3	0.0	0.5	0.3	0.8	0.7	0.4	0.3	0.6	1.1
6-Feb	0.2	0.0	0.1	0.0	0.1	Z	0.4	0.0	0.0	0.0	C	C	C	C	C	1.7	1.1	0.0	0.0	0.5	0.4	0.1	0.5	0.4	0.3	1.7
7-Feb	Z	0.1	0.1	0.2	0.7	0.7	9.6	5.7	3.0	2.6	2.0	1.4	1.3	1.6	1.4	1.1	0.8	0.0	0.6	1.0	1.4	0.7	1.0	0.6	1.6	9.6
8-Feb	0.5	Z	1.5	2.0	0.8	1.3	1.6	0.9	2.2	4.3	3.9	6.9	6.7	11.3	9.8	4.6	1.9	4.4	1.5	1.0	2.2	0.7	0.6	0.5	3.1	11.3
9-Feb	0.5	0.2	Z	0.2	0.1	0.1	0.3	0.6	1.9	12.7	11.0	10.2	4.9	3.1	5.2	2.9	2.8	2.8	3.9	13.3	14.7	0.9	0.4	2.1	4.1	14.7
10-Feb	0.9	0.9	0.9	Z	0.7	1.1	1.6	1.3	1.5	1.2	1.3	0.8	0.9	0.9	0.9	0.8	1.0	0.8	0.9	1.3	1.2	0.6	0.6	0.4	1.0	1.6
11-Feb	0.3	0.3	0.0	0.0	Z	0.3	0.6	0.5	1.7	3.3	4.0	5.9	7.7	9.4	14.9	13.9	12.4	3.7	17.2	12.6	16.1	12.1	7.7	8.9	6.7	17.2
12-Feb	11.7	6.5	6.9	2.2	1.1	Z	3.0	2.8	3.9	3.6	7.7	6.9	6.4	9.0	5.8	1.8	1.2	2.4	2.0	1.5	0.7	0.2	0.4	0.3	3.8	11.7
13-Feb	Z	0.0	0.3	0.1	0.1	0.3	0.6	0.6	1.8	4.2	5.9	6.3	7.1	10.5	10.2	10.4	5.7	3.4	1.3	0.7	0.5	0.3	0.2	0.3	3.1	10.5
14-Feb	0.3	Z	0.2	0.9	10.3	34.9	32.2	27.3	28.6	39.4	59.9	34.4	22.2	14.2	12.9	12.2	9.9	15.8	25.0	9.2	29.0	16.0	5.0	4.2	19.3	59.9
15-Feb	2.5	4.9	Z	3.8	3.3	1.5	2.2	1.3	2.1	4.4	5.0	7.7	15.4	0.0	0.0	0.0	0.0	0.4	1.7	2.1	4.4	1.3	2.3	1.0	2.9	15.4
16-Feb	0.2	0.4	0.2	Z	0.5	0.3	1.4	3.1	3.6	4.5	3.6	3.2	3.5	2.8	2.3	2.1	1.6	2.3	3.0	1.1	1.5	2.1	1.2	1.3	2.0	4.5
17-Feb	1.1	1.0	0.9	0.9	Z	1.0	1.6	0.9	1.6	1.7	2.3	3.0	2.7	2.8	2.6	1.6	1.5	2.3	3.2	2.2	2.6	1.9	1.2	2.6	1.9	3.2
18-Feb	1.5	1.3	1.9	1.4	2.1	Z	6.0	14.6	27.5	8.0	4.9	3.8	3.3	3.6	2.7	3.4	3.2	3.7	4.0	3.3	2.1	1.5	0.9	0.9	4.6	27.5
19-Feb	Z	1.1	1.1	1.0	1.2	1.5	2.2	2.3	2.3	2.8	3.6	3.3	3.5	3.5	2.9	M	2.6	1.7	1.6	1.3	1.1	1.4	1.2	0.6	2.0	3.6
20-Feb	0.7	Z	0.9	0.7	0.5	0.9	1.3	1.1	1.3	1.5	1.3	1.5	1.7	1.6	1.7	1.4	1.4	4.3	7.5	1.1	18.1	22.1	5.2	6.9	3.7	22.1
21-Feb	3.1	0.3	Z	0.4	0.6	1.4	2.5	2.0	16.6	21.3	26.3	17.1	21.3	26.9	40.0	28.0	3.9	0.7	0.0	0.1	0.0	0.1	0.0	0.0	9.2	40.0
22-Feb	0.0	0.1	0.2	Z	1.0	2.9	2.9	2.3	8.3	17.5	5.3	1.6	1.8	2.3	3.9	4.0	4.3	10.8	16.1	6.0	7.8	2.8	3.5	5.2	4.8	17.5
23-Feb	1.3	0.4	0.0	0.2	Z	11.5	6.7	0.2	0.4	0.2	1.1	5.7	2.2	1.3	1.5	0.7	0.9	0.4	0.3	0.0	0.2	0.9	0.3	0.2	1.6	11.5
24-Feb	0.8	0.1	0.2	0.0	0.1	Z	0.2	0.3	1.4	5.7	5.2	5.3	8.9	4.5	2.8	1.6	3.2	14.3	19.1	2.4	2.3	2.7	0.4	0.7	3.6	19.1
25-Feb	Z	0.2	0.0	0.1	0.1	0.2	0.3	0.4	0.7	1.3	2.0	2.9	3.2	3.9	3.7	4.2	3.3	1.1	0.6	0.3	0.6	0.1	0.2	1.8	1.4	4.2
26-Feb	7.1	Z	1.4	3.5	2.5	2.6	1.8	1.7	1.8	11.7	29.8	28.8	22.2	10.9	6.2	5.7	5.6	2.1	0.5	0.6	0.6	0.5	0.5	0.4	6.5	29.8
27-Feb	0.4	0.3	Z	1.7	3.4	1.5	4.0	4.8	2.8	3.0	4.3	2.2	0.8	0.3	0.1	0.8	1.1	0.7	0.4	0.5	0.4	0.2	0.0	0.0	1.5	4.8
28-Feb	0.1	0.2	0.1	Z	0.1	0.0	1.7	2.5	3.1	2.6	2.3	2.2	1.4	1.9	1.3	1.8	1.8	1.1	1.3	1.0	0.8	1.1	0.6	0.4	1.3	3.1
	1.5	1.0	0.8	0.9	1.3	2.9	3.7	3.6	4.5	6.0	7.5	6.4	5.9	5.0	5.3	4.2	2.7	3.0	4.2	2.3	4.0	2.6	1.3	1.5	Diurnal Average	
	11.7	6.5	6.9	3.8	10.3	34.9	32.2	27.3	28.6	39.4	59.9	34.4	22.2	26.9	40.0	28.0	12.4	15.8	25.0	13.3	29.0	22.1	7.7	8.9	Diurnal Maximum	

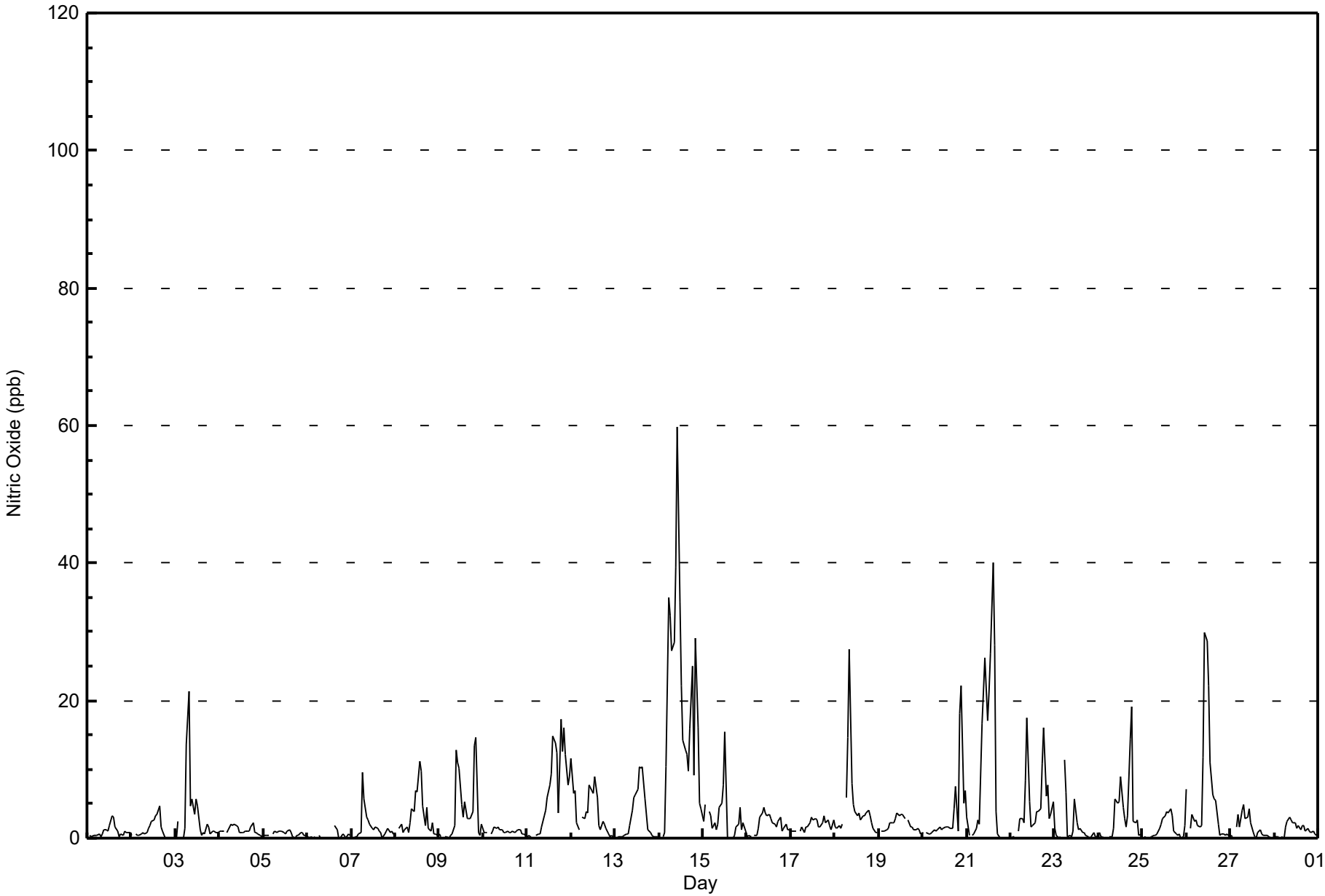
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Patricia McInnes - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	616	96.55	96.55
21 - 40	21	3.29	99.84
11 - 80	1	0.16	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 638

Total Number of Hours: 672

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	92	28	17	10	12	40	83	13	23	34	68	54	14	15	17	96	616
21 - 40	8	1	1	0	0	0	0	2	2	1	0	1	0	1	0	4	21
11 - 80	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	100	29	18	11	12	40	83	15	25	35	68	55	14	16	17	100	638

Total Number of Valid Hours: 638

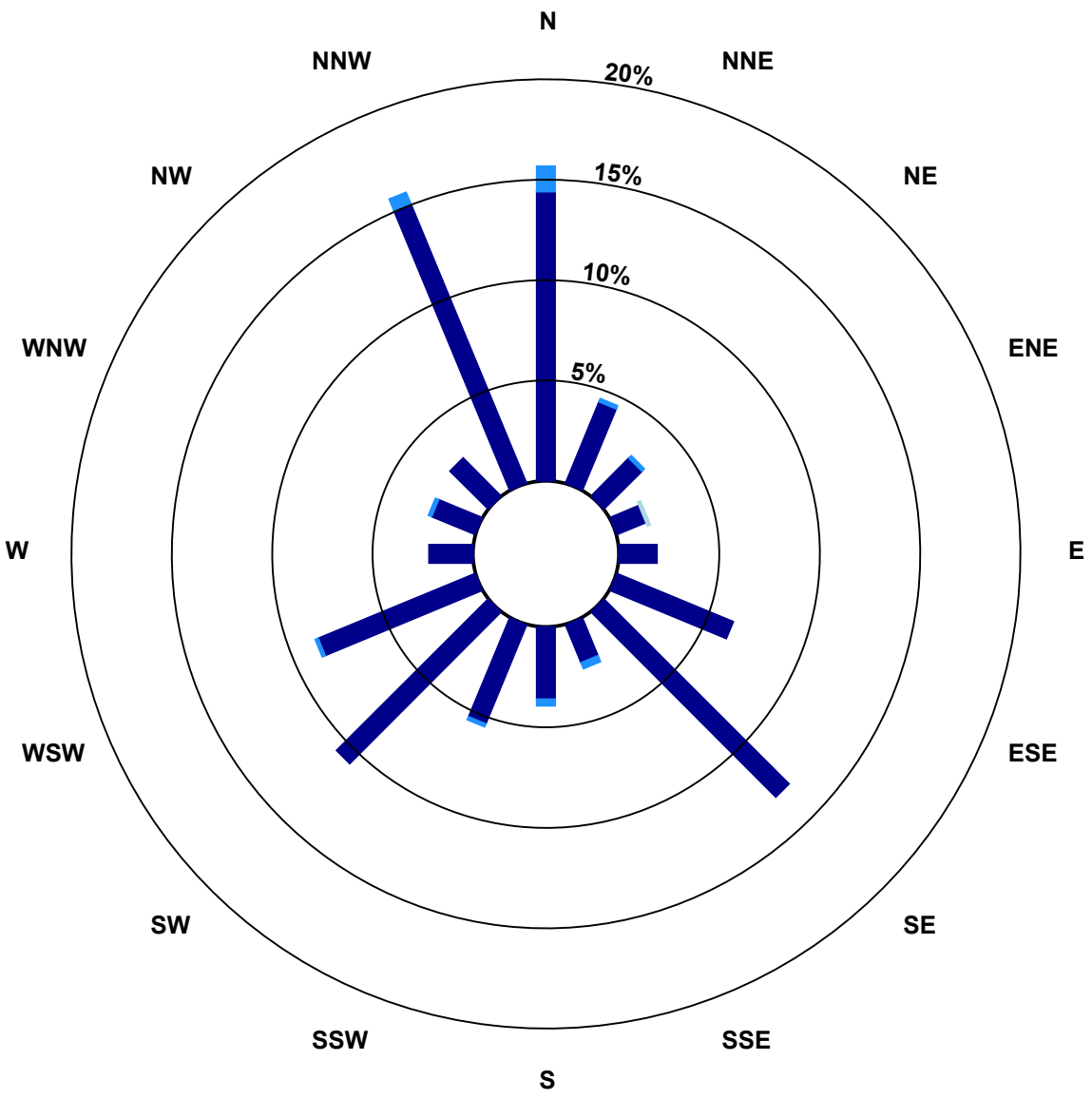
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitric Oxide (NO) - ppb

Patricia McInnes



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

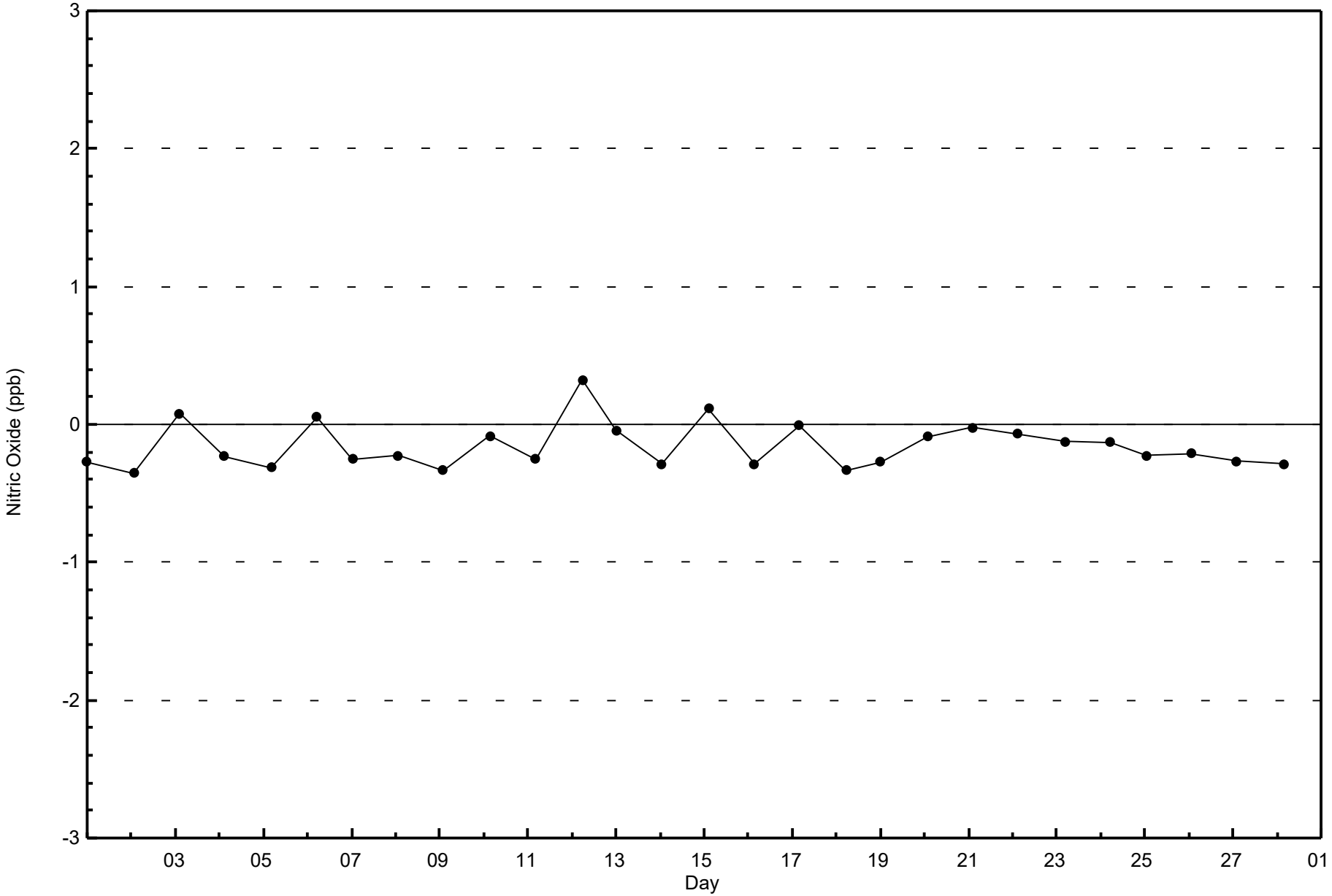
Total Number of Valid Hours: 638

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Patricia McInnes - February 2025

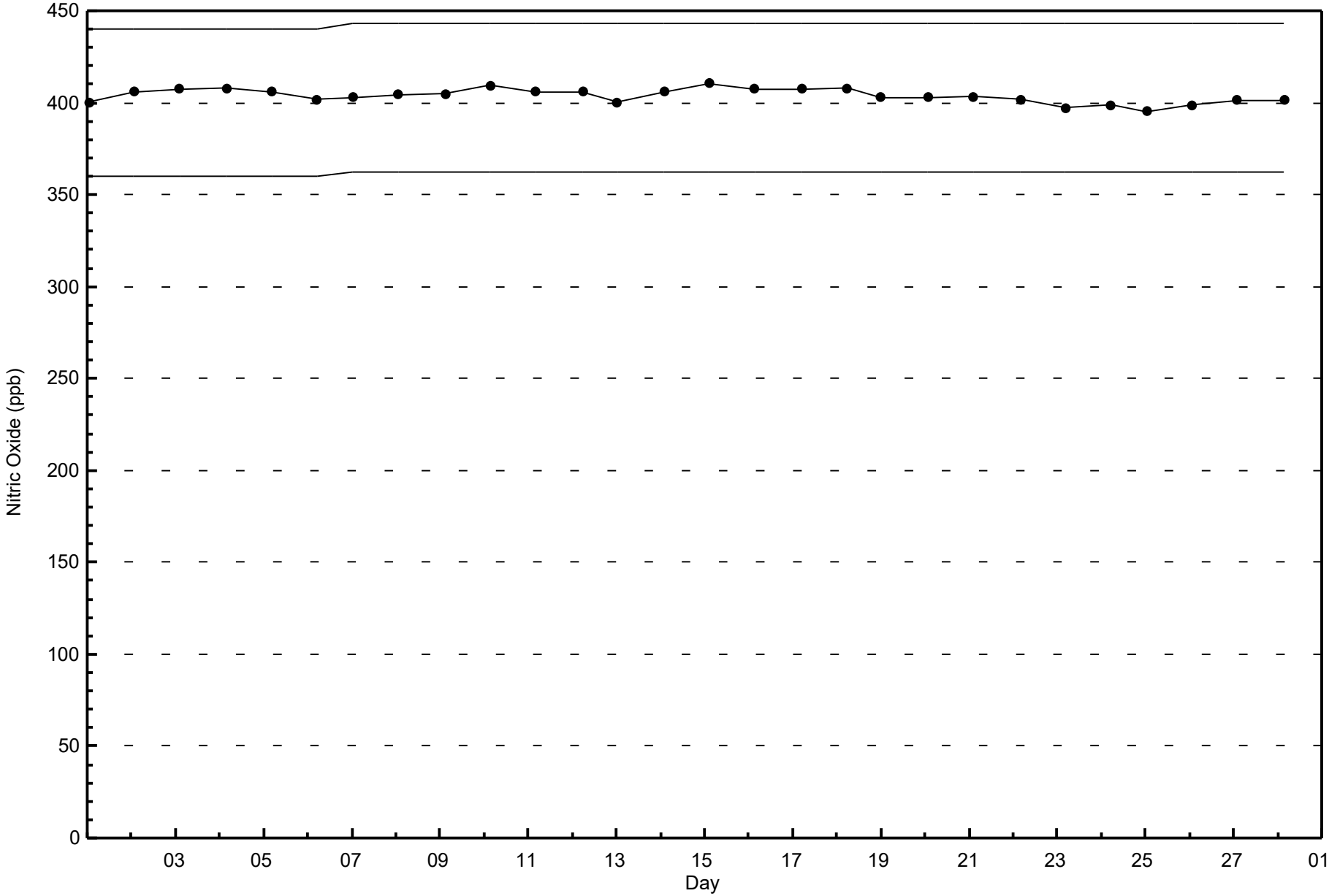


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Patricia McInnes - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Patricia McInnes - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 34.6 ppb on Feb 22 06:00 Maximum Daily Average: 22.3 ppb on Feb 14

Minimum Value: 0.0 ppb on Feb 15 17:00 Minimum Daily Average: 2.7 ppb on Feb 5
Maximum Diurnal Average: 14.7 ppb at hour 19 Minimum Diurnal Average: 5.7 ppb at hour 14
Monthly Average: 10.06 ppb Percentiles: P_1 = 0.6 P_{10} = 2.3 Q_1 = 3.8 Median = 7.3 Q_3 = 14.5 P_{90} = 23.9 P_{99} = 32.9

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	33
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-Feb	Z	9.5	7.3	7.8	8.4	7.2	5.5	4.0	4.6	4.6	3.3	2.5	4.4	6.5	7.1	5.8	6.1	5.2	6.2	6.4	5.3	4.1	3.6	4.9	5.7	9.5
2-Feb	1.6	Z	5.1	4.7	2.8	5.2	4.0	5.6	4.6	4.2	3.6	3.4	2.4	4.3	5.7	8.3	9.9	13.3	12.2	12.1	7.0	6.6	3.8	3.5	5.8	13.3
3-Feb	5.4	14.8	Z	4.5	2.1	7.3	20.3	34.5	20.0	10.6	4.6	5.8	5.0	1.7	1.0	2.4	4.3	14.5	8.5	1.7	3.0	4.2	3.1	3.3	7.9	34.5
4-Feb	3.9	2.2	3.0	Z	2.6	3.9	7.3	6.4	6.7	3.3	2.2	1.0	1.3	1.2	1.6	2.1	4.5	10.7	12.4	4.9	2.4	1.9	1.6	1.5	3.9	12.4
5-Feb	1.5	1.4	1.6	1.8	Z	1.8	2.9	2.5	2.0	2.4	2.0	1.7	1.5	1.9	2.4	2.2	2.3	2.2	3.6	3.7	4.2	6.1	5.5	3.8	2.7	6.1
6-Feb	4.1	3.1	2.7	2.0	2.4	Z	5.0	0.5	0.9	0.9	C	C	C	C	C	6.4	8.7	2.9	0.8	3.3	3.8	2.0	3.3	2.7	3.1	8.7
7-Feb	Z	0.5	0.8	1.7	2.6	4.9	25.6	14.5	9.7	5.6	2.7	1.7	1.6	1.9	1.9	2.6	5.2	3.9	10.4	9.8	10.8	6.1	9.6	3.0	6.0	25.6
8-Feb	2.8	Z	14.0	13.2	8.4	10.2	10.6	7.5	10.5	8.4	5.2	7.4	7.4	11.4	12.5	10.3	10.7	20.5	16.2	21.3	28.3	3.9	2.3	2.2	10.7	28.3
9-Feb	3.7	3.8	Z	3.9	2.8	3.1	6.7	12.0	9.9	13.3	11.1	8.7	4.4	3.0	5.6	5.1	9.6	15.1	13.0	20.1	24.5	8.9	2.3	11.3	8.8	24.5
10-Feb	4.4	3.4	3.6	Z	2.1	2.5	3.0	2.4	2.2	1.5	1.3	0.8	1.0	1.3	1.4	1.6	3.5	4.9	8.2	15.5	24.1	14.7	12.6	11.0	5.5	24.1
11-Feb	10.6	7.4	6.1	4.9	Z	7.5	8.0	12.6	16.8	11.3	8.4	9.2	10.4	11.6	17.9	21.3	25.6	24.5	32.8	32.0	32.4	27.5	24.4	23.9	16.8	32.8
12-Feb	30.2	27.9	30.0	26.2	16.2	Z	20.7	18.4	13.8	8.4	11.1	9.4	9.2	12.0	8.5	5.6	6.7	17.0	26.9	22.0	14.8	8.1	13.5	13.1	16.1	30.2
13-Feb	Z	18.7	19.8	15.4	13.8	11.2	11.7	14.7	11.0	8.2	7.4	6.3	6.6	8.7	10.2	14.1	16.1	21.9	17.1	10.0	9.6	10.2	11.1	14.1	12.5	21.9
14-Feb	13.6	Z	21.9	24.9	26.0	30.9	30.8	26.2	20.9	22.5	27.0	17.9	13.3	10.2	10.8	14.3	19.4	30.1	32.1	26.6	30.4	25.2	20.1	17.6	22.3	32.1
15-Feb	16.7	18.7	Z	18.2	15.9	15.6	16.3	11.4	8.8	7.5	6.3	9.2	14.7	0.3	0.1	0.1	0.0	4.6	19.1	20.5	26.5	19.8	26.1	20.8	12.9	26.5
16-Feb	15.6	13.1	11.4	Z	11.2	11.5	12.0	13.6	7.4	5.7	3.8	3.2	3.2	2.5	2.8	3.1	4.0	7.3	6.2	2.5	2.7	2.8	1.6	2.5	6.5	15.6
17-Feb	2.4	2.5	2.4	3.0	Z	3.9	4.3	3.9	3.7	3.6	3.0	3.1	2.6	2.5	2.8	2.2	3.4	8.5	11.7	4.8	5.9	4.6	5.6	13.3	4.5	13.3
18-Feb	10.7	6.7	8.2	9.0	11.2	Z	16.3	24.0	27.6	9.9	5.0	3.7	3.0	3.2	3.1	4.5	5.8	14.5	17.9	18.8	11.4	8.3	8.9	9.1	10.5	27.6
19-Feb	Z	6.7	6.2	5.6	5.3	5.8	5.7	6.6	6.0	4.5	3.7	3.7	4.4	4.6	4.2	M	7.9	7.8	7.0	3.1	3.0	4.4	6.4	6.0	5.4	7.9
20-Feb	6.4	Z	9.5	7.8	4.3	4.6	5.4	4.7	4.5	4.8	3.9	4.2	3.9	2.8	2.9	3.7	6.4	20.2	24.8	16.9	32.0	33.3	23.0	20.9	10.9	33.3
21-Feb	21.4	14.9	Z	8.4	9.1	16.8	22.2	20.0	26.8	25.5	24.2	16.9	22.0	25.9	32.5	29.1	16.1	10.0	7.7	7.3	7.2	7.4	6.8	5.6	16.7	32.5
22-Feb	5.9	10.3	14.9	Z	31.1	34.6	33.4	30.6	27.4	26.1	10.5	4.3	4.1	6.0	6.8	8.6	12.3	28.4	33.0	27.8	25.2	16.6	20.5	25.2	19.3	34.6
23-Feb	17.2	7.9	5.4	10.4	Z	29.4	18.0	1.9	1.6	0.9	2.5	9.4	4.7	2.8	3.3	2.2	3.8	3.2	5.5	3.0	6.5	12.8	11.0	11.1	7.6	29.4
24-Feb	24.1	16.9	15.3	12.4	9.3	Z	9.7	7.6	8.3	11.3	9.4	8.3	11.1	7.4	6.4	5.1	9.0	28.4	33.6	20.6	23.4	25.7	16.9	14.1	14.5	33.6
25-Feb	Z	16.0	5.6	5.6	5.3	5.2	4.7	3.9	4.3	4.7	4.8	6.0	6.3	6.8	5.7	7.3	10.4	13.1	14.4	15.7	20.1	18.8	18.1	24.3	9.9	24.3
26-Feb	33.4	Z	21.0	22.6	15.4	13.9	11.5	7.1	3.9	9.4	15.0	15.2	13.3	9.4	7.7	8.9	13.1	14.9	17.0	23.9	20.2	18.3	18.8	21.7	15.5	33.4
27-Feb	23.4	23.8	Z	26.3	26.8	14.8	25.1	24.0	12.4	9.5	7.4	4.7	2.0	0.8	0.3	2.9	5.3	5.6	6.1	7.2	5.3	4.0	4.6	5.6	10.8	26.8
28-Feb	5.2	6.2	6.9	Z	14.7	15.4	18.7	25.5	16.2	9.0	5.3	2.7	2.3	2.5	2.4	3.9	4.2	3.1	6.1	3.5	4.1	4.1	2.5	3.7	7.3	25.5
	11.5	10.3	9.7	10.4	10.4	11.1	13.1	12.4	10.4	8.5	7.2	6.3	6.2	5.7	6.2	6.8	8.4	12.7	14.7	13.0	14.1	11.1	10.3	10.7	Diurnal Average	
	33.4	27.9	30.0	26.3	31.1	34.6	33.4	34.5	27.6	26.1	27.0	17.9	22.0	25.9	32.5	29.1	25.6	30.1	33.6	32.0	32.4	33.3	26.1	25.2	Diurnal Maximum	

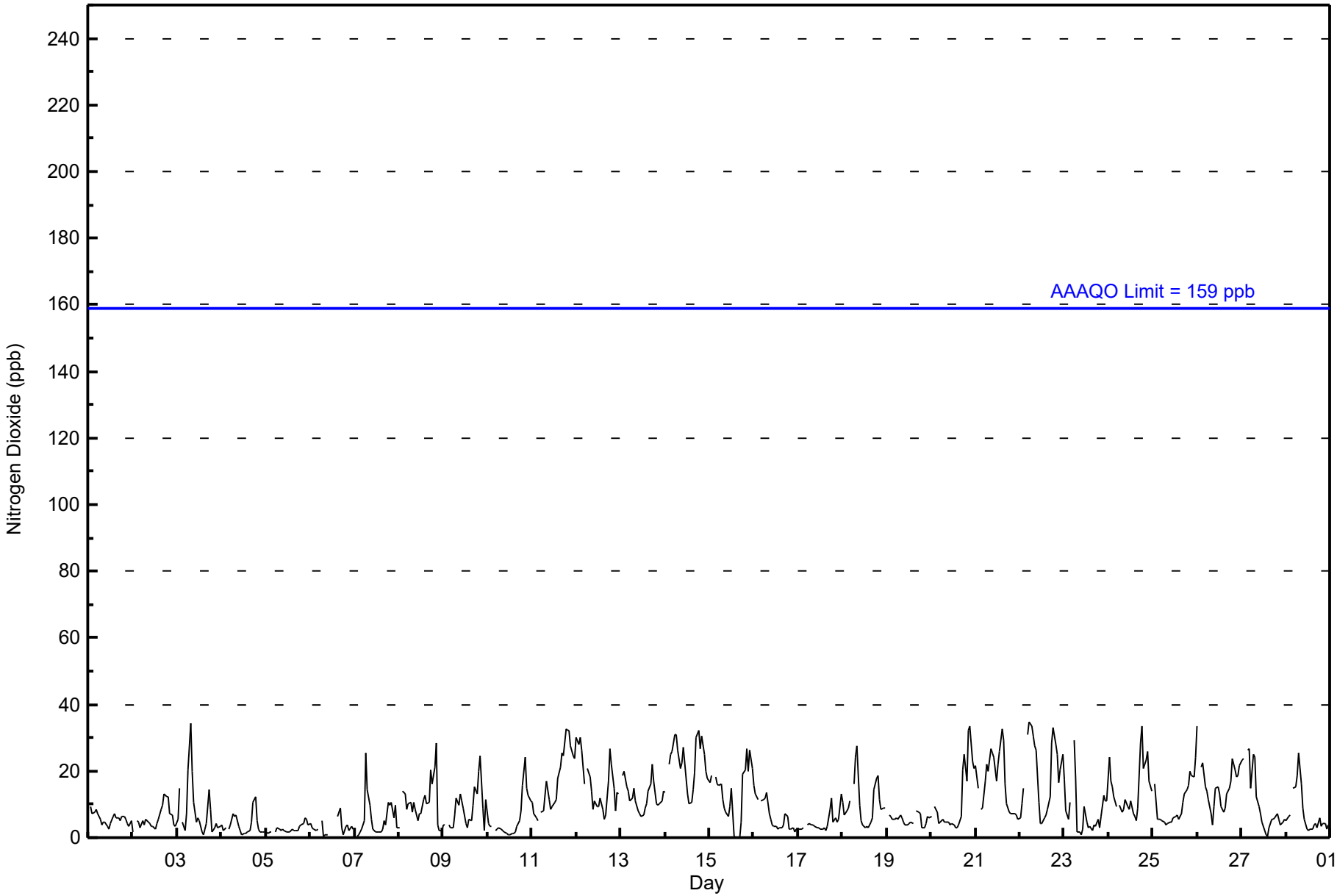
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Patricia McInnes - February 2025



Nitrogen Dioxide (NO_2) - ppb

Patricia McInnes - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	548	85.89	85.89
21 - 40	90	14.11	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: 638

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Patricia McInnes - February 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	79	22	15	6	8	36	80	11	15	32	65	50	13	12	15	89	548
21 - 40	21	7	3	5	4	4	3	4	10	3	3	5	1	4	2	11	90
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	100	29	18	11	12	40	83	15	25	35	68	55	14	16	17	100	638

Total Number of Valid Hours: 638

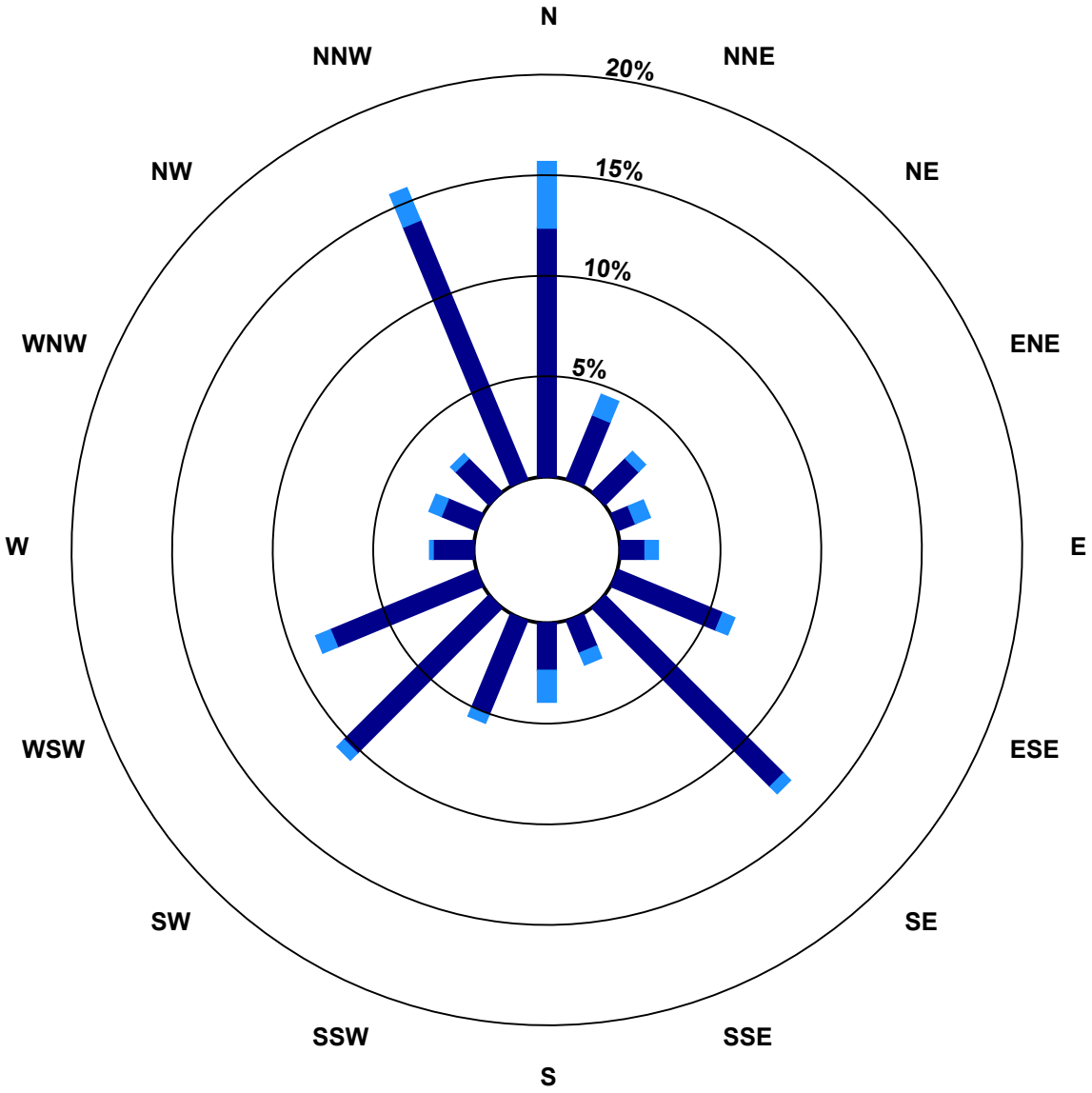
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Dioxide (NO_2) - ppb

Patricia McInnes



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

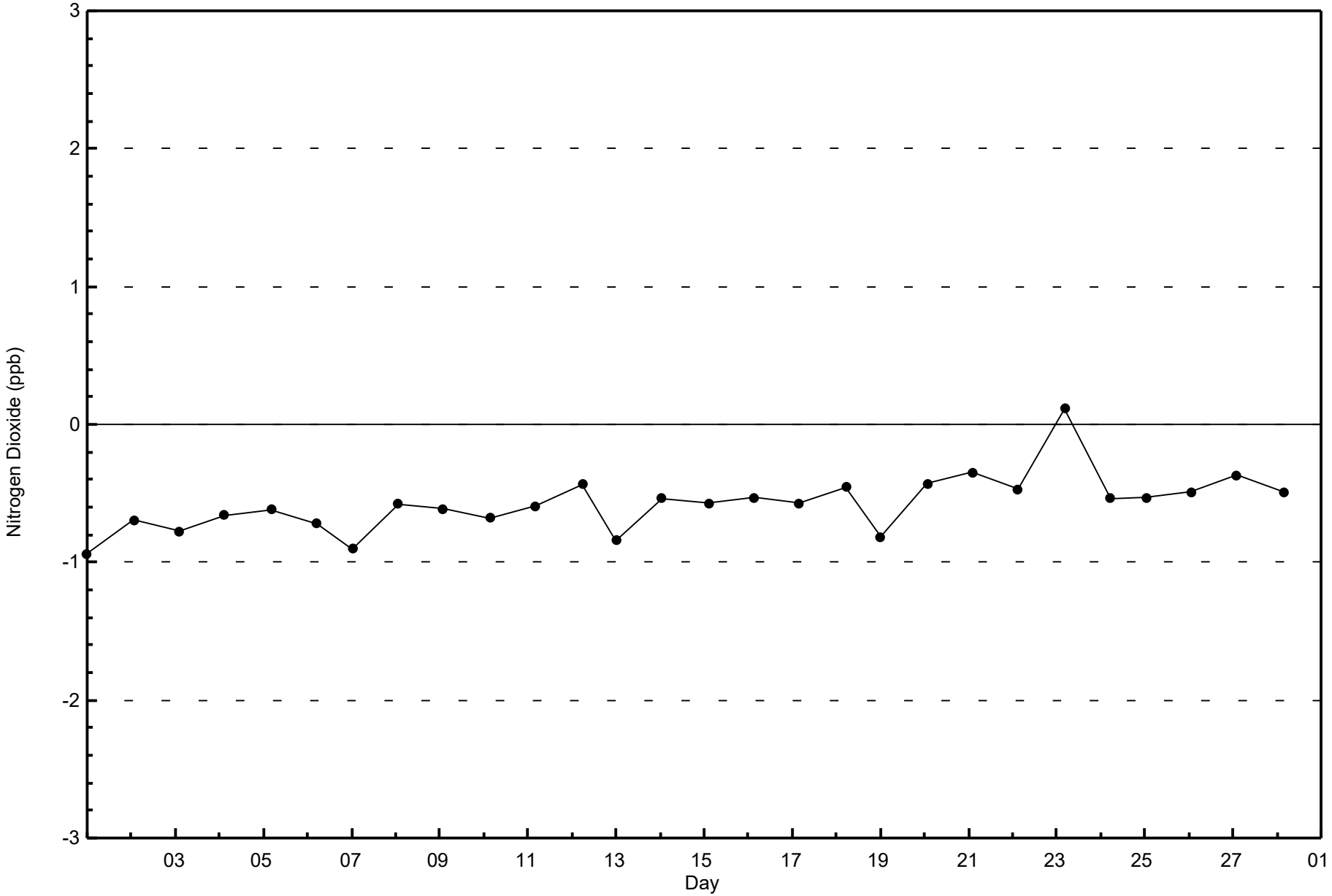
Total Number of Valid Hours: 638

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Patricia McInnes - February 2025

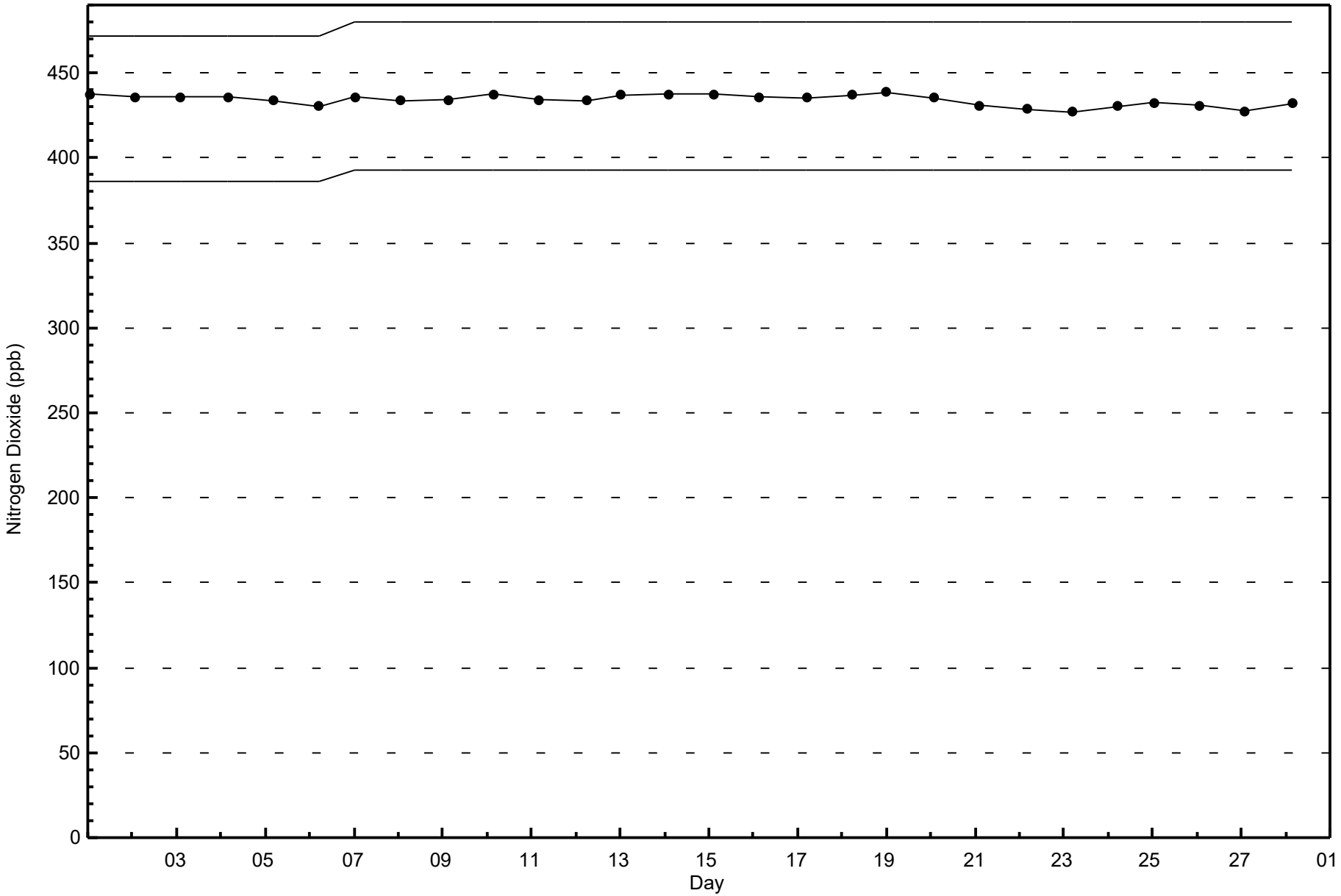


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Patricia McInnes - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Patricia McInnes - February 2025

Maximum Value: 86.9 ppb on Feb 14 11:00

Maximum Daily Average: 41.6 ppb on Feb 14

Minimum Value: 0.0 ppb on Feb 15 17:00

Minimum Daily Average: 3.3 ppb on Feb 5

Maximum Diurnal Average: 18.8 ppb at hour 19

Minimum Diurnal Average: 10.5 ppb at hour 3

Monthly Average: 13.55 ppb

Percentiles: P_1 = 0.7 P_{10} = 3.1 Q_1 = 5.0 Median = 9.2 Q_3 = 17.9 P_{90} = 30.2 P_{99} = 57.1

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	33
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-Feb	Z	9.8	7.6	8.2	8.9	7.6	6.1	4.3	5.2	5.8	4.5	3.5	6.3	9.8	10.2	7.4	7.1	5.4	6.8	6.7	6.4	5.0	4.3	5.8	6.6	10.2
2-Feb	2.1	Z	5.7	5.2	3.3	5.9	4.8	6.1	5.5	5.6	5.5	5.9	5.0	7.5	9.2	13.0	11.4	14.3	12.2	12.1	7.1	6.6	3.8	3.5	7.0	14.3
3-Feb	5.4	17.3	Z	4.5	2.1	8.8	33.9	55.9	24.8	16.4	8.1	11.5	9.6	3.0	1.4	3.3	4.8	16.5	10.1	2.4	4.0	5.2	3.9	4.1	11.2	55.9
4-Feb	4.9	3.1	4.0	Z	3.5	5.1	9.2	8.1	8.8	5.1	3.9	1.8	2.2	2.0	2.6	3.1	5.5	12.2	14.6	5.7	3.2	2.5	2.1	1.8	5.0	14.6
5-Feb	2.0	1.8	1.9	2.3	Z	2.5	3.8	3.3	2.9	3.3	3.0	2.5	2.2	2.9	3.5	2.9	2.6	2.2	4.1	4.0	5.0	6.8	5.9	4.1	3.3	6.8
6-Feb	4.3	3.1	2.8	2.0	2.5	Z	5.4	0.5	0.9	0.9	C	C	C	C	C	8.1	9.8	2.9	0.8	3.8	4.2	2.1	3.8	3.1	3.4	9.8
7-Feb	Z	0.6	0.9	1.9	3.3	5.6	35.2	20.2	12.7	8.2	4.7	3.1	2.9	3.5	3.3	3.7	6.0	3.9	11.0	10.8	12.2	6.8	10.6	3.6	7.6	35.2
8-Feb	3.3	Z	15.5	15.2	9.2	11.5	12.2	8.4	12.7	12.7	9.1	14.3	14.1	22.7	22.3	14.9	12.6	24.9	17.7	22.3	30.5	4.6	2.9	2.7	13.8	30.5
9-Feb	4.2	4.0	Z	4.1	2.9	3.2	7.0	12.6	11.8	26.0	22.1	18.9	9.3	6.1	10.8	8.0	12.4	17.9	16.9	33.4	39.2	9.8	2.7	13.4	12.9	39.2
10-Feb	5.3	4.3	4.5	Z	2.8	3.6	4.6	3.7	3.7	2.7	2.6	1.6	1.9	2.2	2.3	2.4	4.5	5.7	9.1	16.8	25.3	15.3	13.2	11.4	6.5	25.3
11-Feb	10.9	7.7	6.1	4.9	Z	7.8	8.6	13.1	18.5	14.6	12.4	15.1	18.1	21.0	32.8	35.2	38.0	28.2	50.0	44.6	48.5	39.6	32.1	32.8	23.5	50.0
12-Feb	41.9	34.4	36.9	28.4	17.3	Z	23.7	21.2	17.7	12.0	18.8	16.3	15.6	21.0	14.3	7.4	7.9	19.4	28.9	23.5	15.5	8.3	13.9	13.4	19.9	41.9
13-Feb	Z	18.7	20.1	15.5	13.9	11.5	12.3	15.3	12.8	12.4	13.3	12.6	13.7	19.2	20.4	24.5	21.8	25.3	18.4	10.7	10.1	10.5	11.3	14.4	15.6	25.3
14-Feb	13.9	Z	22.1	25.8	36.3	65.8	63.0	53.5	49.5	61.9	86.9	52.3	35.5	24.4	23.7	26.5	29.3	45.9	57.1	35.8	59.4	41.2	25.1	21.8	41.6	86.9
15-Feb	19.2	23.6	Z	22.0	19.2	17.1	18.5	12.7	10.9	11.9	11.3	16.9	30.1	0.3	0.1	0.1	0.0	5.0	20.8	22.6	30.9	21.1	28.4	21.8	15.8	30.9
16-Feb	15.8	13.5	11.6	Z	11.7	11.8	13.4	16.7	11.0	10.2	7.4	6.4	6.7	5.3	5.1	5.2	5.6	9.6	9.2	3.6	4.2	4.9	2.8	3.8	8.5	16.7
17-Feb	3.5	3.5	3.3	3.9	Z	4.9	5.9	4.8	5.3	5.3	5.3	6.1	5.3	5.3	5.4	3.8	4.9	10.8	14.9	7.0	8.5	6.5	6.8	15.9	6.4	15.9
18-Feb	12.2	8.0	10.1	10.4	13.3	Z	22.3	38.6	55.1	17.9	9.9	7.5	6.3	6.8	5.8	7.9	9.0	18.2	21.9	22.1	13.5	9.8	9.8	10.0	15.1	55.1
19-Feb	Z	7.8	7.3	6.6	6.5	7.3	7.9	8.9	8.3	7.3	7.3	7.0	7.9	8.1	7.1	M	10.5	9.5	8.6	4.4	4.1	5.8	7.6	6.6	7.4	10.5
20-Feb	7.1	Z	10.4	8.5	4.8	5.5	6.7	5.8	5.8	6.3	5.2	5.7	5.6	4.4	4.6	5.1	7.8	24.5	32.3	18.0	50.1	55.4	28.2	27.8	14.6	55.4
21-Feb	24.5	15.2	Z	8.8	9.7	18.2	24.7	22.0	43.4	46.8	50.5	34.0	43.3	52.8	72.5	57.1	20.0	10.7	7.7	7.4	7.2	7.5	6.8	5.6	25.9	72.5
22-Feb	5.9	10.4	15.1	Z	32.1	37.5	36.3	32.9	35.7	43.6	15.8	5.9	5.9	8.3	10.7	12.6	16.6	39.2	49.1	33.8	33.0	19.4	24.0	30.4	24.1	49.1
23-Feb	18.5	8.3	5.4	10.6	Z	40.9	24.7	2.1	2.0	1.1	3.6	15.1	6.9	4.1	4.8	2.9	4.7	3.6	5.8	3.0	6.7	13.7	11.3	11.3	9.2	40.9
24-Feb	24.9	17.0	15.5	12.4	9.4	Z	9.9	7.9	9.7	17.0	14.6	13.6	20.0	11.9	9.2	6.7	12.2	42.7	52.7	23.0	25.7	28.4	17.3	14.8	18.1	52.7
25-Feb	Z	16.2	5.6	5.7	5.4	5.4	5.0	4.3	5.0	6.0	6.8	8.9	9.5	10.7	9.4	11.5	13.7	14.2	15.0	16.0	20.7	18.9	18.3	26.1	11.2	26.1
26-Feb	40.5	Z	22.4	26.1	17.9	16.5	13.3	8.8	5.7	21.1	44.8	44.0	35.5	20.3	13.9	14.6	18.7	17.0	17.5	24.5	20.8	18.8	19.3	22.1	21.9	44.8
27-Feb	23.8	24.1	Z	28.0	30.2	16.3	29.1	28.8	15.2	12.5	11.7	6.9	2.8	1.1	0.4	3.7	6.4	6.3	6.5	7.7	5.7	4.2	4.6	5.6	12.2	30.2
28-Feb	5.3	6.4	7.0	Z	14.8	15.4	20.4	28.0	19.3	11.6	7.6	4.9	3.7	4.4	3.7	5.7	6.0	4.2	7.4	4.5	4.9	5.2	3.1	4.1	8.6	28.0
	13.0	11.3	10.5	11.4	11.7	14.0	16.7	16.0	15.0	14.5	14.7	12.7	12.1	10.7	11.5	11.0	11.1	15.7	18.8	15.3	18.1	13.7	11.6	12.2	Diurnal Average	
	41.9	34.4	36.9	28.4	36.3	65.8	63.0	55.9	55.1	61.9	86.9	52.3	43.3	52.8	72.5	57.1	38.0	45.9	57.1	44.6	59.4	55.4	32.1	32.8	Diurnal Maximum	

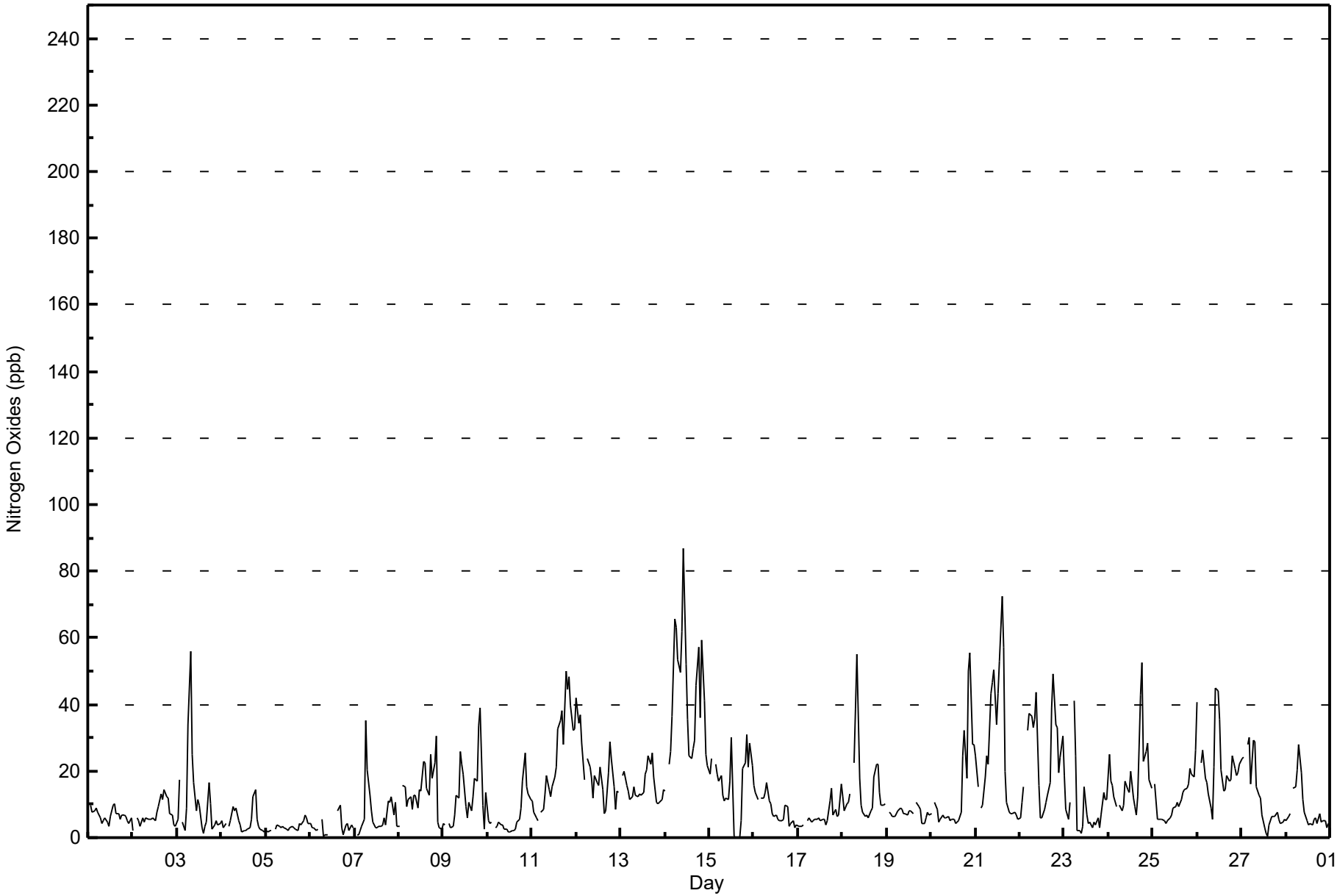
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Patricia McInnes - February 2025



Nitrogen Oxides (NO_X) - ppb

Patricia McInnes - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	509	79.78	79.78
21 - 40	96	15.05	94.83
11 - 80	32	5.02	99.84
81 - 159	1	0.16	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 638

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Patricia McInnes - February 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	71	18	11	1	6	36	76	11	14	28	63	48	11	12	15	88	509
21 - 40	21	11	6	8	3	3	6	2	8	5	4	3	3	3	2	8	96
11 - 80	8	0	1	1	3	1	1	2	3	2	1	4	0	1	0	4	32
81 - 159	0	0	0	1	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	100	29	18	11	12	40	83	15	25	35	68	55	14	16	17	100	638

Total Number of Valid Hours: 638

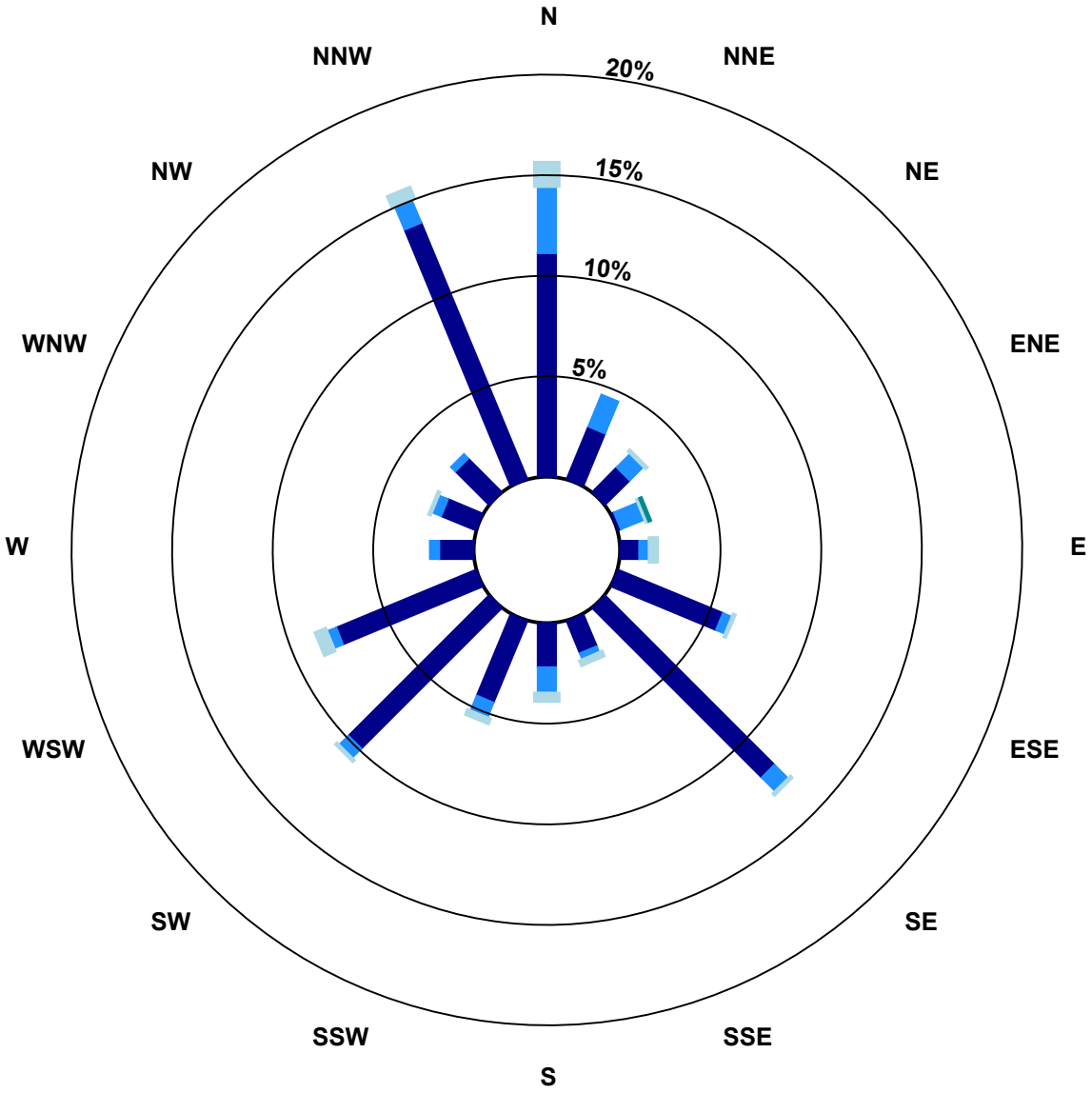
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Oxides (NO_X) - ppb

Patricia McInnes



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

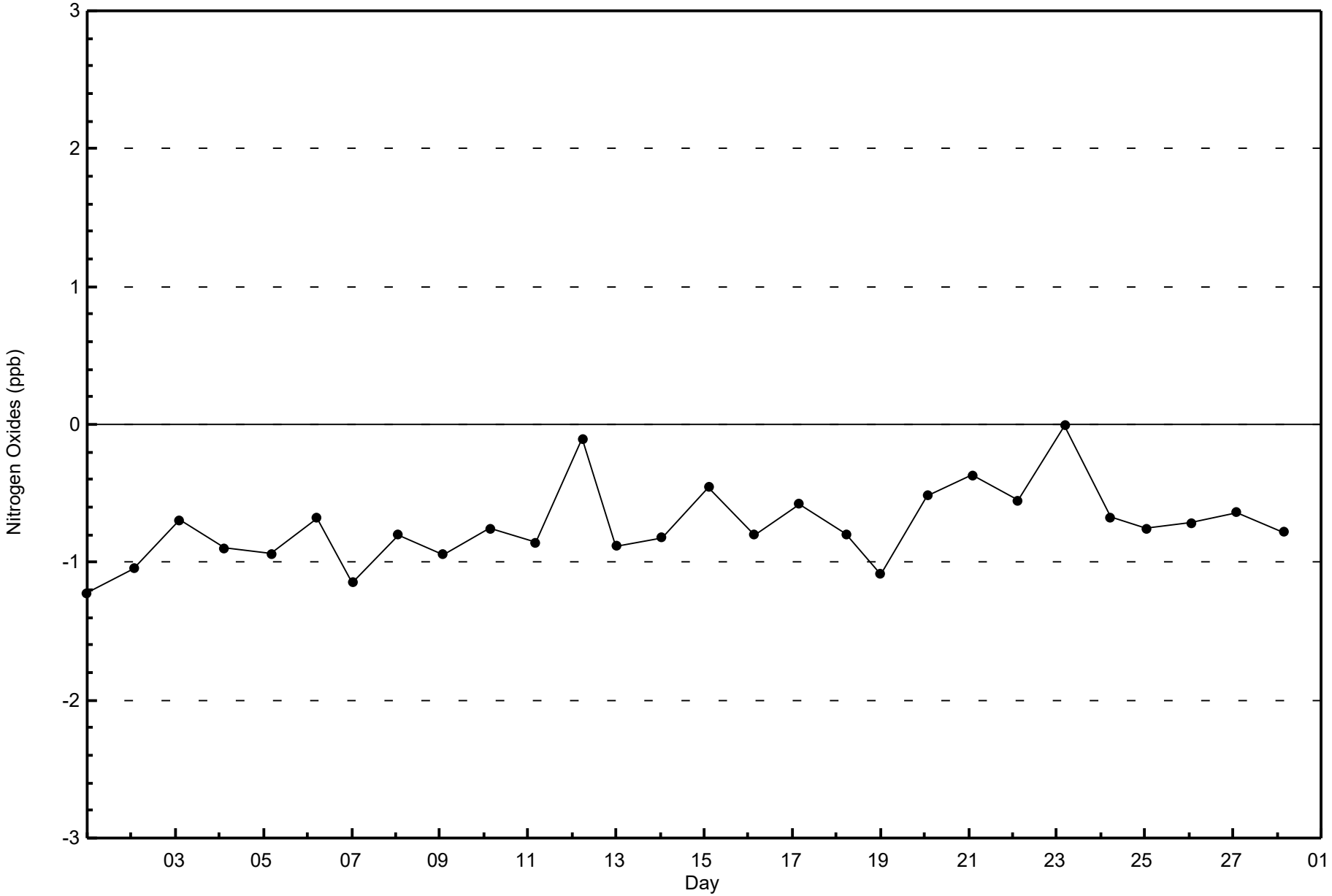
Total Number of Valid Hours: 638

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Patricia McInnes - February 2025

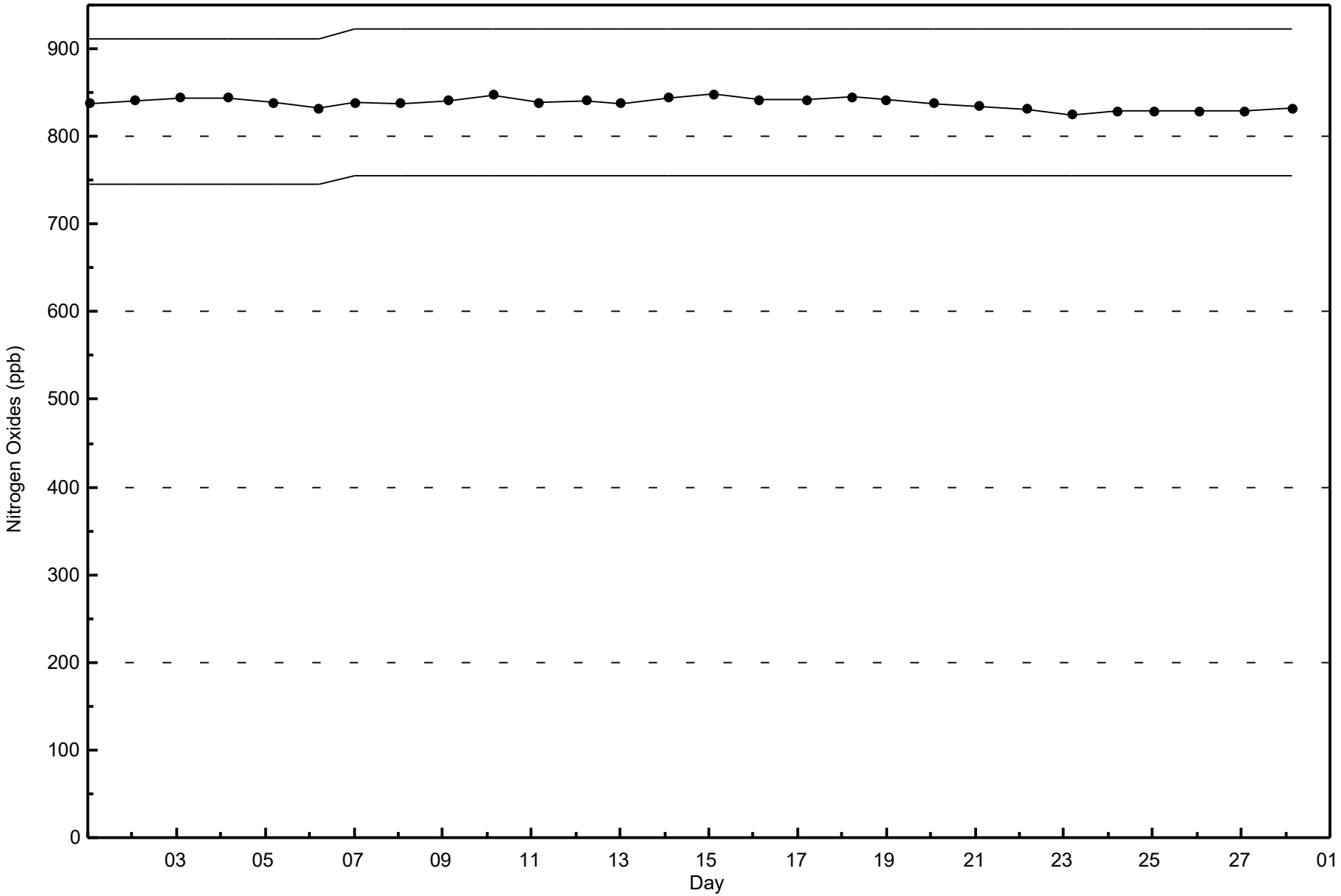


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Patricia McInnes - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ammonia (NH_3) - ppb

Patricia McInnes - February 2025

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

Maximum Value: 0.0 ppb on Feb 1 01:00

Maximum Daily Average: 0.0 ppb on Feb 1

Minimum Value: 0.0 ppb on Feb 1 01:00

Minimum Daily Average: 0.0 ppb on Feb 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:	672
Hours of Data:	604
Hours of Missing Data:	68
Hours of Calibration:	38
Percent Operational Time:	95.5

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-Feb	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
2-Feb	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
3-Feb	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
4-Feb	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
5-Feb	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
6-Feb	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
7-Feb	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
8-Feb	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
9-Feb	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
10-Feb	0.0	0.0	Z	RE	0.0	0.0	0.0	0.0	0.0	0.0	C	C	C	C	C	C	C	C	C	C	0.0	0.0	0.0	0.0	--	0.0
11-Feb	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
12-Feb	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
13-Feb	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-Feb	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
15-Feb	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
16-Feb	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
17-Feb	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
18-Feb	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
19-Feb	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	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20-Feb	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
21-Feb	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
22-Feb	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
23-Feb	0.0	0.0	0.0	Z	RE	RE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24-Feb	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
25-Feb	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
26-Feb	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
27-Feb	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
28-Feb	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	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

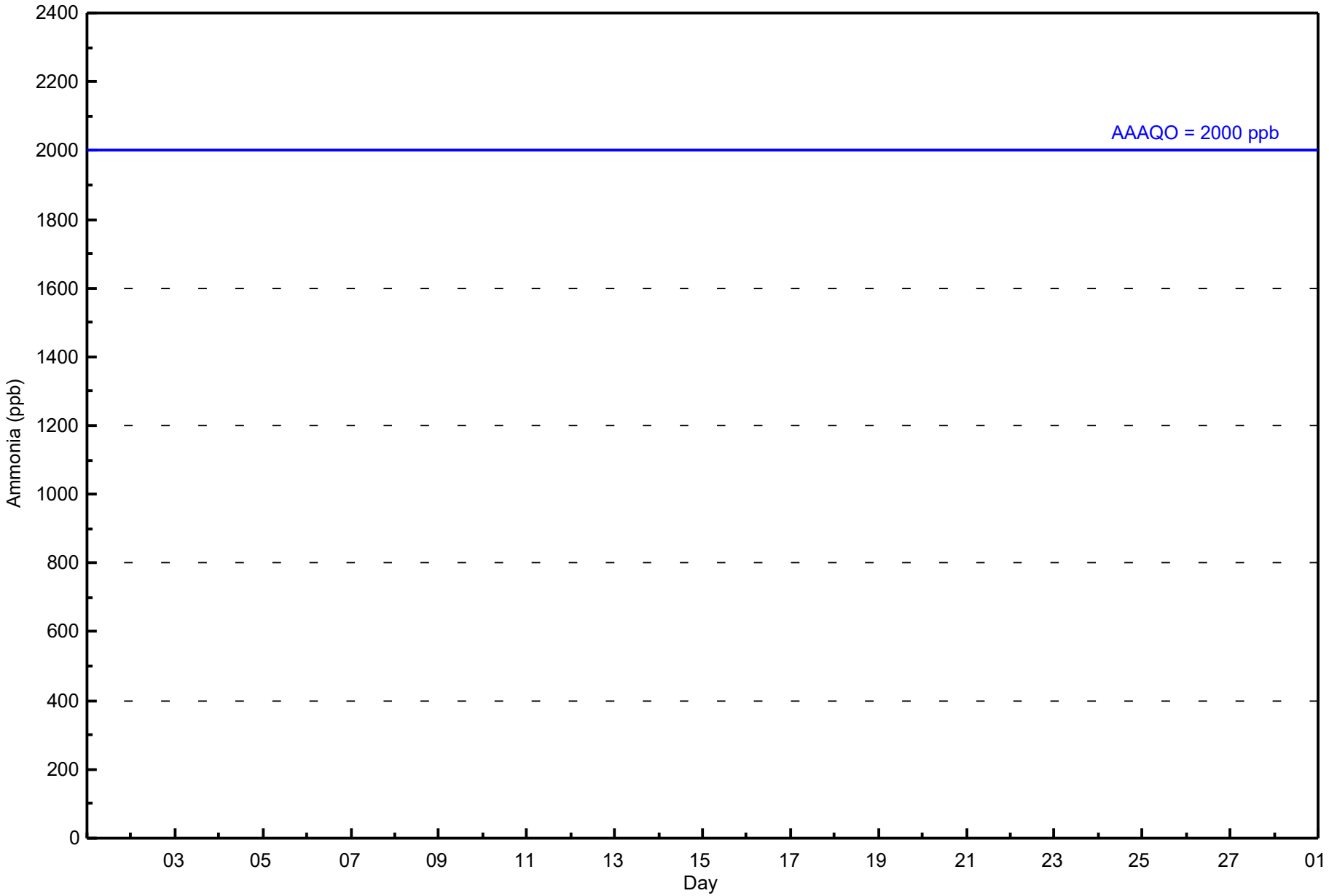
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 2000 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ammonia (NH_3) - ppb

Patricia McInnes - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 5	604	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: 604

Total Number of Hours: 672

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	96	30	18	11	12	40	78	13	24	34	59	48	15	15	15	96	604
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	96	30	18	11	12	40	78	13	24	34	59	48	15	15	15	96	604

Total Number of Valid Hours: 604

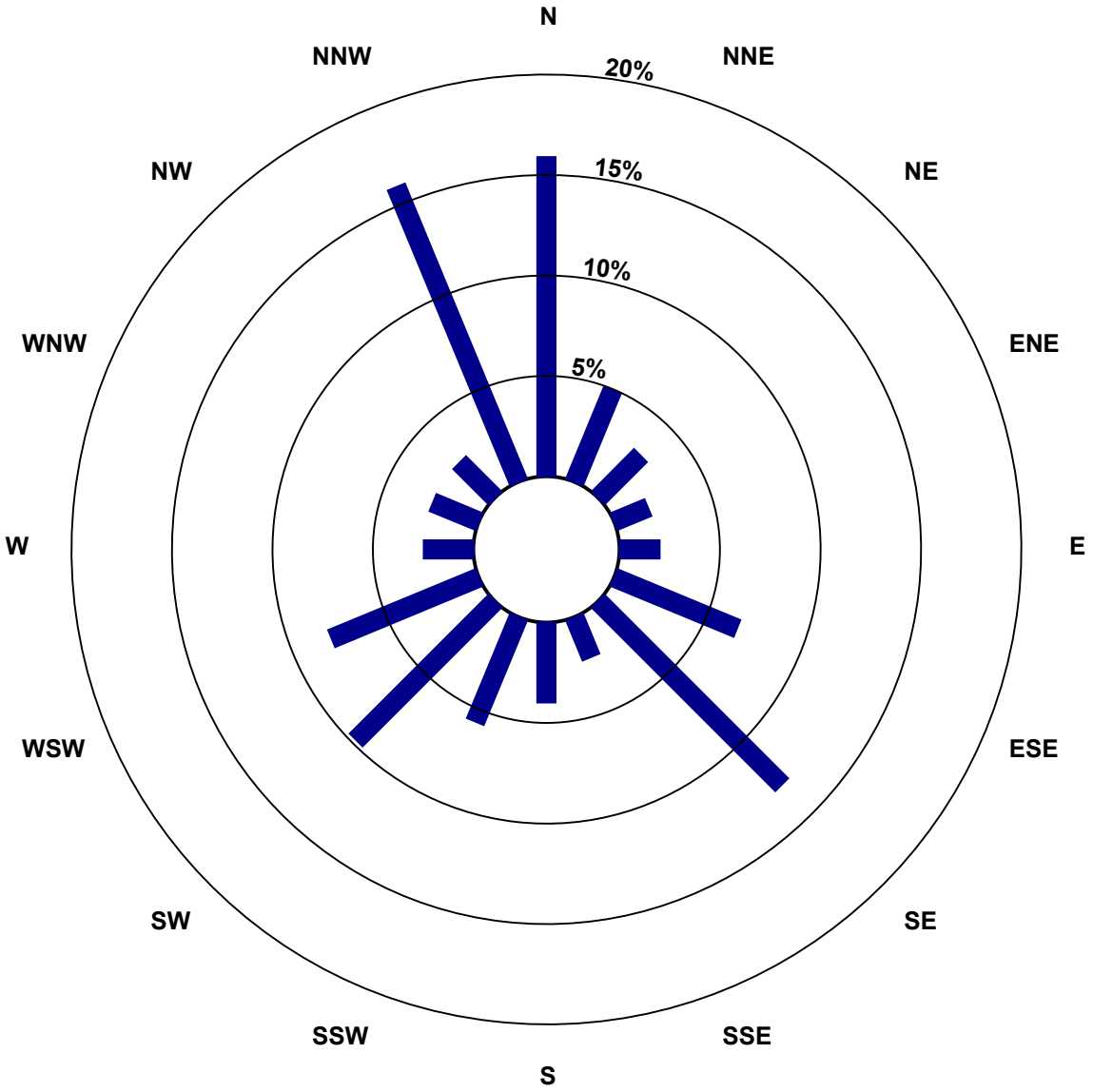
Total Number of Hours: 672

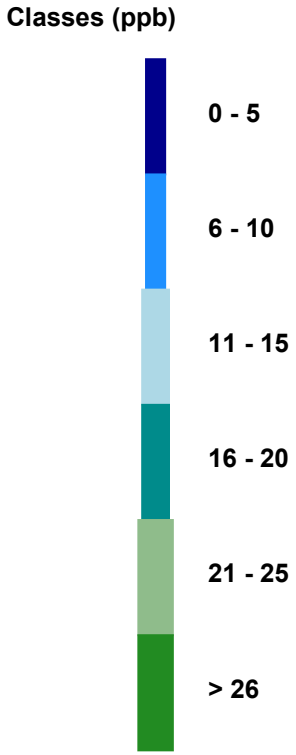
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Ammonia (NH_3) - ppb

Patricia McInnes





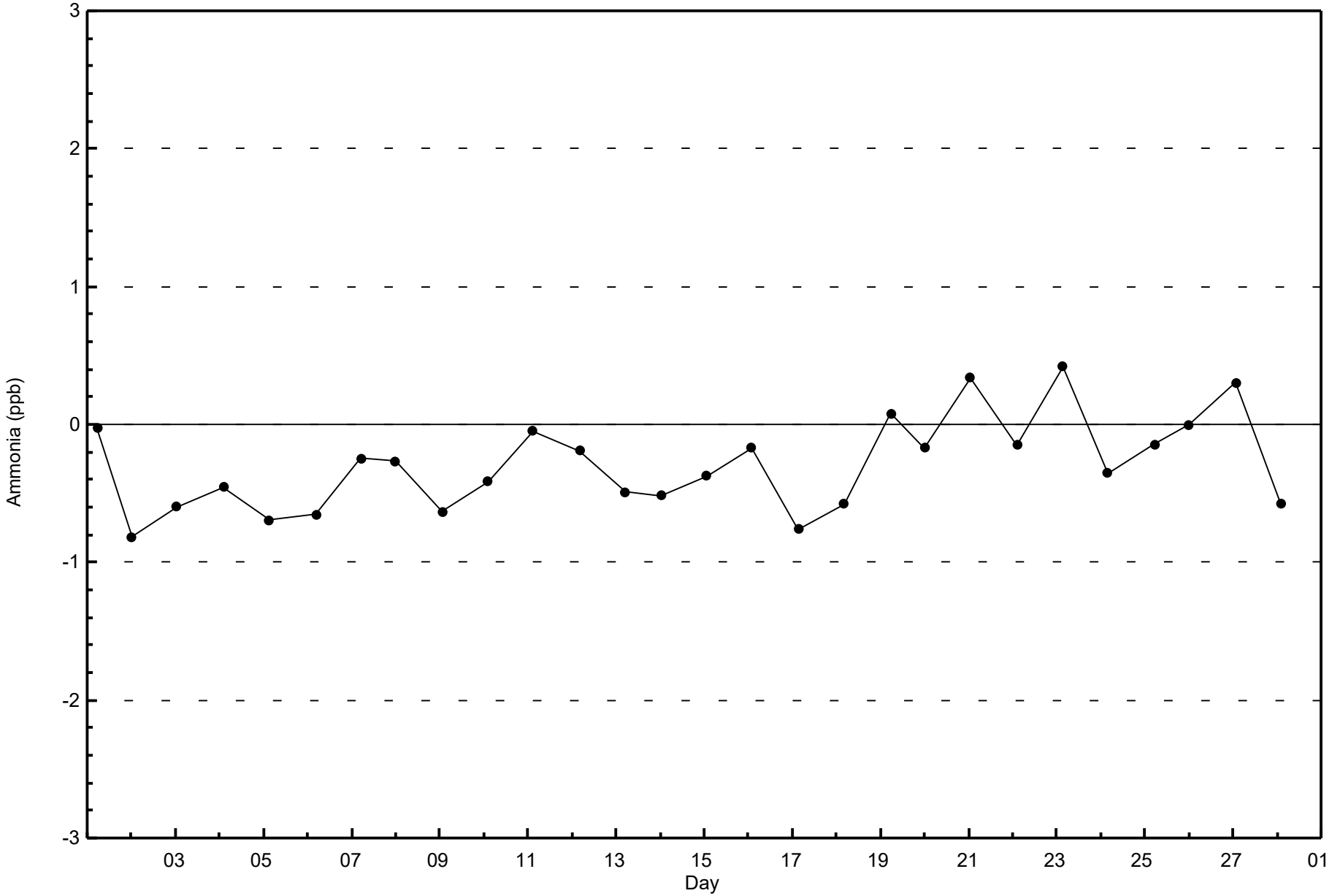
Total Number of Valid Hours: 604

Wood Buffalo Environmental Association

Zero Responses

Ammonia (NH_3) - ppb

Patricia McInnes - February 2025

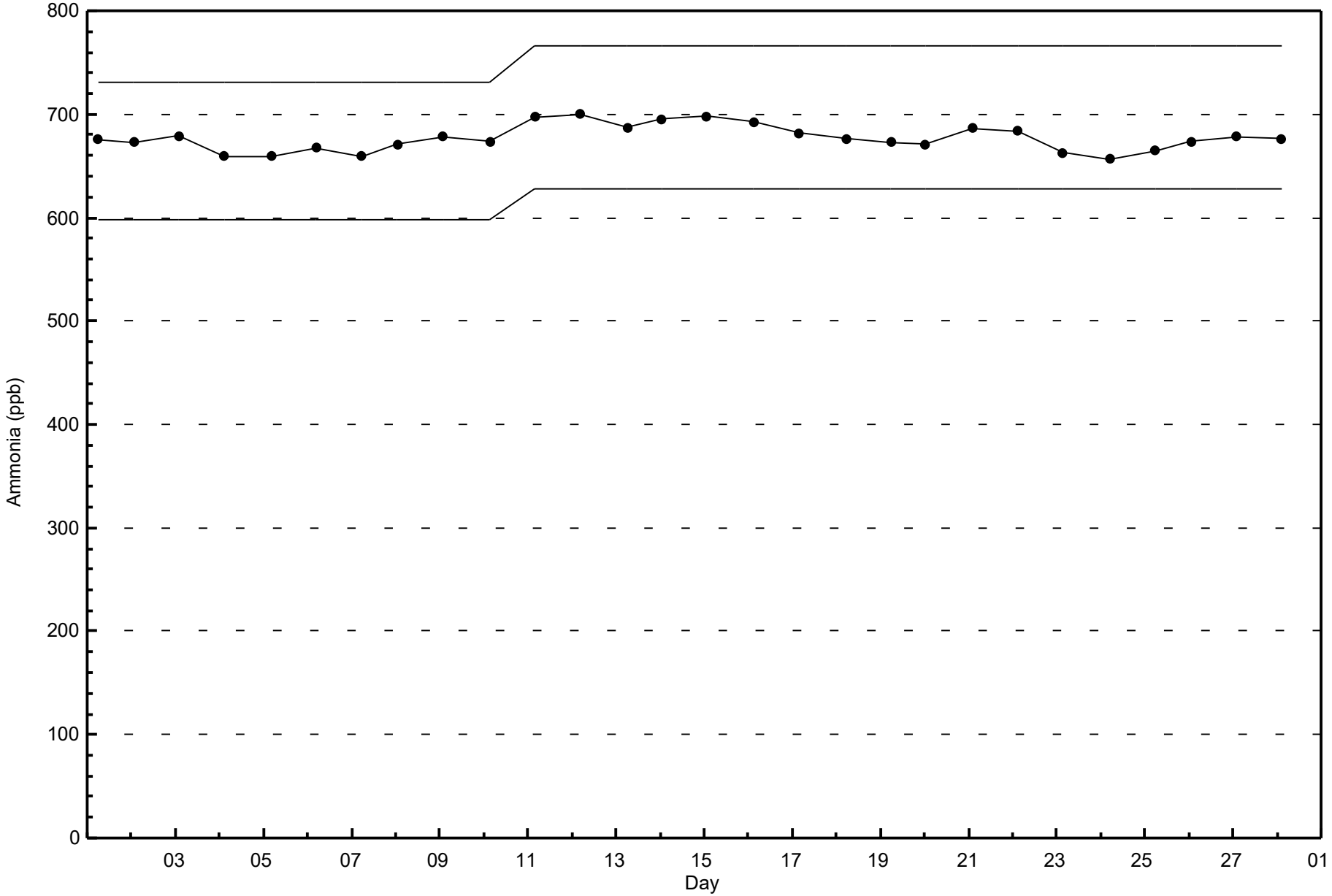


Wood Buffalo Environmental Association

Span Responses

Ammonia (NH_3) - ppb

Patricia McInnes - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Patricia McInnes - February 2025

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

Maximum Value: 33.1 $\mu g/m^3$ on Feb 22 23:00

Maximum Daily Average: 9.2 $\mu g/m^3$ on Feb 22

Minimum Value: 0.7 $\mu g/m^3$ on Feb 23 10:00

Minimum Daily Average: 1.9 $\mu g/m^3$ on Feb 5

Maximum Diurnal Average: 5.7 $\mu g/m^3$ at hour 23

Minimum Diurnal Average: 3.8 $\mu g/m^3$ at hour 5

Monthly Average: 4.52 $\mu g/m^3$

Percentiles: P_1 = 1.3 P_{10} = 2.0 Q_1 = 2.8 Median = 3.7 Q_3 = 5.6 P_{90} = 7.6 P_{99} = 14.4

Hours in Service:	672
Hours of Data:	671
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-Feb	4.2	3.7	3.6	3.4	3.4	3.3	3.0	2.7	2.6	2.5	2.4	2.6	3.7	6.7	8.3	3.7	4.1	5.2	5.6	5.0	5.0	4.8	4.8	5.1	4.1	8.3
2-Feb	4.5	4.5	4.4	4.2	3.6	3.9	3.5	3.9	3.9	4.1	3.8	4.2	3.8	5.6	6.5	8.1	4.6	5.1	4.6	4.2	3.9	4.0	3.6	3.4	4.4	8.1
3-Feb	4.1	4.4	3.7	2.8	2.6	2.9	3.8	6.7	9.3	2.9	3.0	2.8	3.0	2.3	2.1	2.5	1.7	2.1	2.1	1.3	1.5	2.0	2.0	2.1	3.1	9.3
4-Feb	3.1	1.9	1.7	1.8	1.4	1.4	1.6	3.8	1.6	1.4	1.4	1.4	1.4	1.2	1.8	2.1	1.8	2.7	3.3	2.2	2.5	1.8	1.7	1.8	2.0	3.8
5-Feb	2.1	2.2	2.4	2.4	2.1	1.8	1.9	2.1	1.7	1.8	1.7	1.7	1.6	1.6	1.6	1.6	1.7	1.8	2.0	2.0	2.0	2.0	1.9	1.8	1.9	2.4
6-Feb	1.6	1.5	1.9	2.4	2.5	1.9	2.6	1.3	1.5	1.6	1.5	2.3	2.9	4.9	4.7	6.8	9.2	7.0	5.9	6.0	5.9	6.3	6.0	5.3	3.9	9.2
7-Feb	4.1	3.2	3.0	2.9	2.9	3.0	6.3	3.7	3.0	2.6	2.7	2.5	2.6	2.8	2.8	2.7	3.0	2.7	2.7	2.7	2.6	3.4	4.5	1.5	3.1	6.3
8-Feb	1.9	2.9	3.4	2.4	1.2	1.6	1.3	2.0	1.3	2.8	1.8	2.7	2.8	3.0	3.6	3.2	2.8	3.4	4.5	6.0	6.0	3.4	3.3	3.5	2.9	6.0
9-Feb	3.2	4.4	4.9	4.8	4.9	4.9	5.2	5.2	5.3	5.7	6.3	6.1	5.6	5.6	8.8	7.6	7.5	8.1	5.3	8.2	5.9	4.2	3.5	4.5	5.6	8.8
10-Feb	3.6	4.4	4.3	4.0	3.5	3.6	3.3	2.8	3.0	2.7	2.5	2.3	2.0	2.1	1.7	1.5	2.0	1.7	2.4	3.8	4.1	4.3	5.0	3.7	3.1	5.0
11-Feb	3.6	3.2	2.9	2.7	2.7	2.3	2.1	2.7	3.1	2.7	3.3	3.3	3.6	4.6	4.9	5.0	5.7	7.5	6.4	5.4	5.3	7.0	5.5	7.3	4.3	7.5
12-Feb	7.5	7.2	7.5	6.7	4.7	4.3	4.6	5.6	3.5	3.2	3.8	4.0	4.2	4.3	3.9	3.4	3.5	3.6	4.8	5.0	4.1	3.3	4.0	4.3	4.6	7.5
13-Feb	4.2	3.6	3.3	2.8	2.7	2.5	3.2	3.1	2.9	2.9	3.5	3.5	3.6	3.1	3.2	4.2	4.1	4.1	3.8	3.0	2.9	2.8	2.9	3.2	3.3	4.2
14-Feb	3.1	3.5	3.4	3.6	3.9	4.5	4.4	4.6	5.1	6.9	8.5	6.3	5.0	4.4	4.9	5.1	7.3	15.7	8.7	5.9	6.1	4.7	4.4	4.0	5.6	15.7
15-Feb	4.2	3.9	3.7	3.7	3.2	3.1	4.0	3.1	2.4	2.1	3.5	3.8	4.1	2.0	1.8	1.8	1.9	1.8	3.5	2.6	3.9	4.1	3.9	3.5	3.1	4.2
16-Feb	3.0	3.0	2.7	2.6	2.9	3.3	3.5	5.2	3.5	3.0	2.7	2.9	2.7	2.7	2.5	2.7	2.6	2.6	2.8	2.8	3.4	3.6	3.6	3.6	3.1	5.2
17-Feb	3.5	3.4	3.3	3.0	2.8	2.8	2.8	2.8	2.8	3.0	3.3	3.3	3.5	3.6	3.0	2.8	2.7	3.0	3.4	2.8	2.7	2.7	2.8	3.3	3.0	3.6
18-Feb	4.5	2.7	3.0	3.1	3.5	6.9	5.7	8.4	7.0	5.3	4.1	3.9	3.8	3.4	2.9	2.9	2.9	3.2	3.2	3.2	2.9	2.6	3.2	3.6	4.0	8.4
19-Feb	3.1	2.7	2.8	2.7	2.5	2.7	2.7	2.8	3.1	3.3	3.6	3.7	3.8	3.9	3.7	3.5	3.2	3.2	3.1	2.6	2.6	3.4	2.8	2.8	3.1	3.9
20-Feb	2.8	2.9	5.8	7.6	4.5	5.3	5.5	5.6	5.5	5.6	5.7	5.8	5.8	6.2	C	7.2	8.0	6.4	8.0	6.6	8.2	8.0	12.4	8.1	6.4	12.4
21-Feb	8.7	6.8	6.4	5.8	5.6	7.2	7.0	6.3	8.6	10.3	9.0	8.8	9.8	12.2	14.0	11.3	7.8	6.7	6.2	6.0	5.9	7.4	6.2	5.2	7.9	14.0
22-Feb	5.5	6.1	6.5	7.0	7.7	7.6	8.1	8.4	8.6	8.1	6.6	5.6	5.9	6.5	7.4	7.4	8.1	12.0	14.7	8.6	8.8	7.6	33.1	14.3	9.2	33.1
23-Feb	14.8	5.9	3.6	8.3	4.0	12.3	4.9	2.1	1.2	0.7	0.9	5.6	5.4	4.8	4.7	4.0	3.9	3.5	3.7	3.6	5.0	4.8	5.0	5.3	4.9	14.8
24-Feb	5.6	6.2	5.1	5.4	5.0	4.3	4.4	4.5	5.0	5.7	5.3	5.6	6.2	5.9	5.8	6.0	7.0	9.7	11.4	7.4	6.6	8.4	11.8	8.4	6.5	11.8
25-Feb	10.4	10.0	5.7	4.3	3.5	3.3	3.3	2.8	3.0	3.0	3.1	3.2	3.5	3.9	4.2	4.3	5.3	5.5	4.8	5.4	6.1	6.0	7.6	9.6	5.1	10.4
26-Feb	9.2	9.3	7.7	7.2	6.0	6.0	6.9	8.6	6.8	15.8	17.3	15.8	13.8	7.8	6.1	5.6	5.7	5.5	6.9	7.0	11.2	10.7	7.2	7.4	8.8	17.3
27-Feb	7.5	7.5	7.5	7.5	7.7	6.7	7.1	8.1	9.3	5.5	5.6	4.1	2.7	2.2	1.7	2.5	3.1	3.3	3.4	3.5	3.6	3.3	3.6	3.5	5.0	9.3
28-Feb	3.5	4.0	4.4	4.6	5.1	5.5	6.0	6.6	7.2	7.1	4.0	3.5	3.9	4.3	4.9	4.6	4.2	3.6	3.6	3.2	3.0	2.9	2.7	2.8	4.4	7.2
	4.9	4.5	4.2	4.3	3.8	4.3	4.2	4.5	4.3	4.4	4.3	4.3	4.3	4.3	4.5	4.4	4.5	5.0	5.0	4.5	4.7	4.6	5.7	4.8	Diurnal Average	
	14.8	10.0	7.7	8.3	7.7	12.3	8.1	8.6	9.3	15.8	17.3	15.8	13.8	12.2	14.0	11.3	9.2	15.7	14.7	8.6	11.2	10.7	33.1	14.3	Diurnal Maximum	

C - Calibration

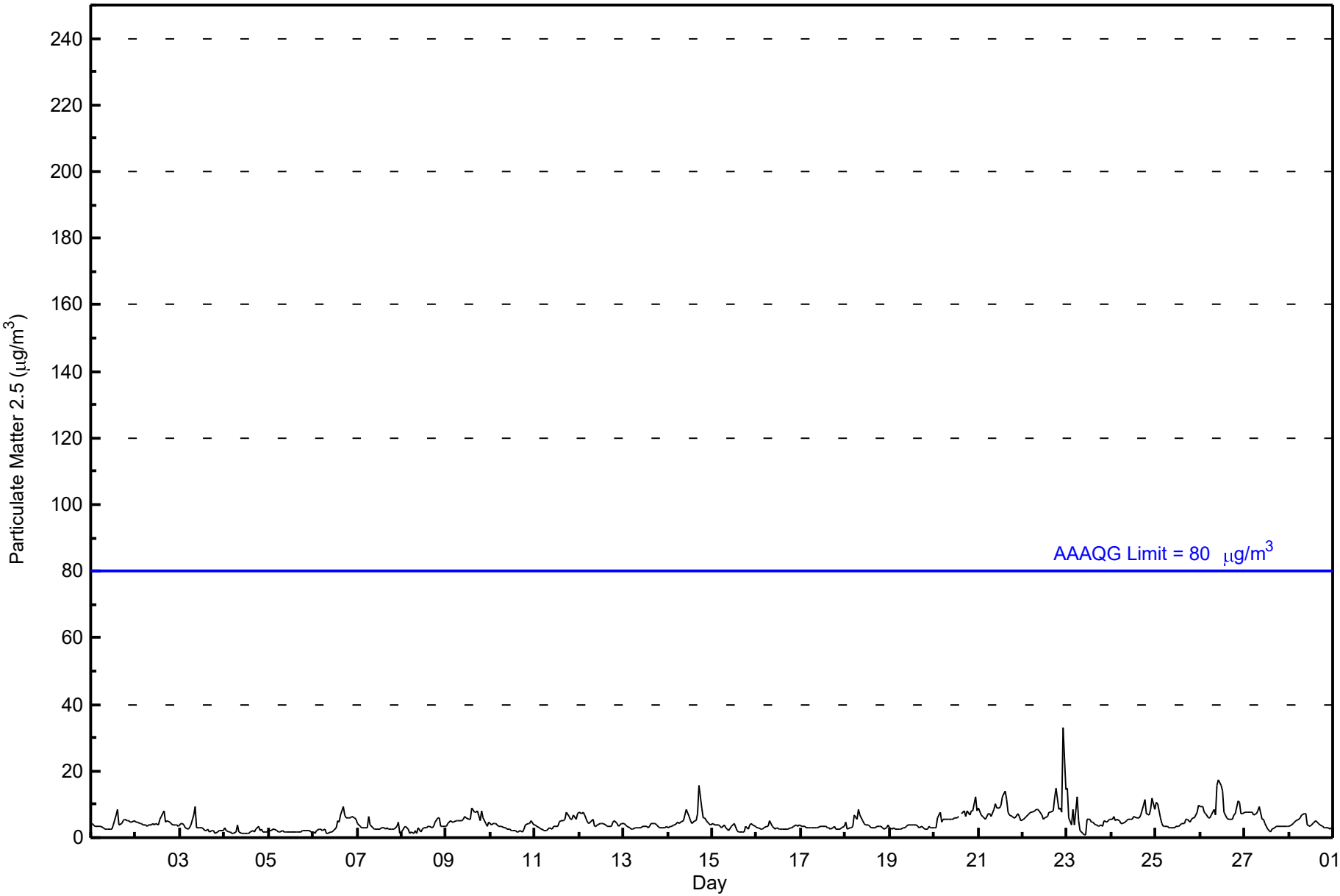
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Patricia McInnes - February 2025



Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	484	72.13	72.13
6 - 15	182	27.12	99.25
16 - 25	4	0.60	99.85
26 - 80	1	0.15	100.00
> 81.0	0	0.00	100.00

Total Number of Valid Hours: 671

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

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

Patricia McInnes - February 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	71	23	9	5	7	34	76	5	7	20	63	51	12	14	12	75	484
6 - 15	34	8	9	7	5	8	11	11	18	15	8	5	5	3	5	30	182
16 - 25	2	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	4
26 - 80	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
> 81.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	107	32	18	12	12	42	87	16	26	36	71	56	17	17	17	105	671

Total Number of Valid Hours: 671

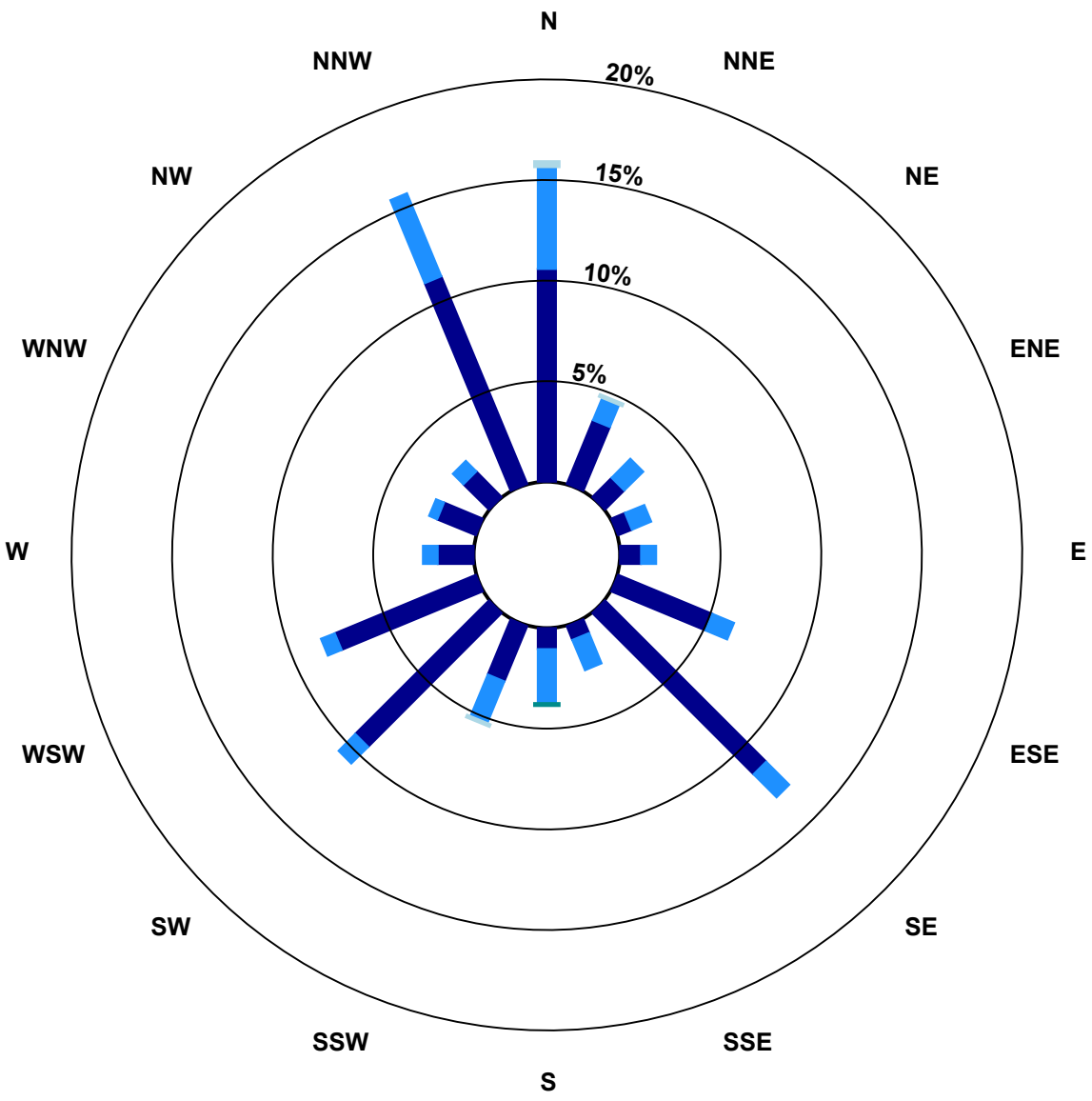
Total Number of Hours: 672

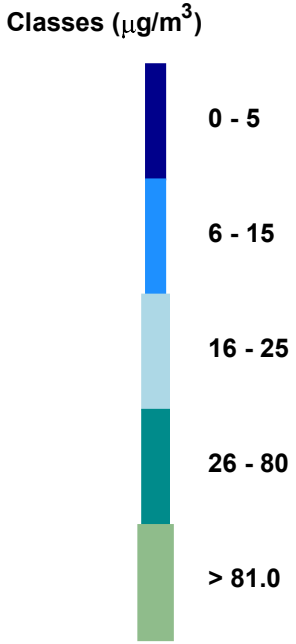
Wood Buffalo Environmental Association

Wind Rose Feb 2025

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

Patricia McInnes





Total Number of Valid Hours: 671

Maximum Value: 5.3 C on Feb 27 13:00

Maximum Daily Average: -2.3 C on Feb 23

Minimum Value: -37.0 C on Feb 14 09:00

Minimum Daily Average: -29.1 C on Feb 14

Maximum Diurnal Average: -13.1 C at hour 16

Minimum Diurnal Average: -20.8 C at hour 8

Monthly Average: -17.59 C

Percentiles: P_1 = -35.9 P_{10} = -28.6 Q_1 = -24.0 Median = -19.2 Q_3 = -9.5 P_{90} = -4.8 P_{99} = 2.5

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

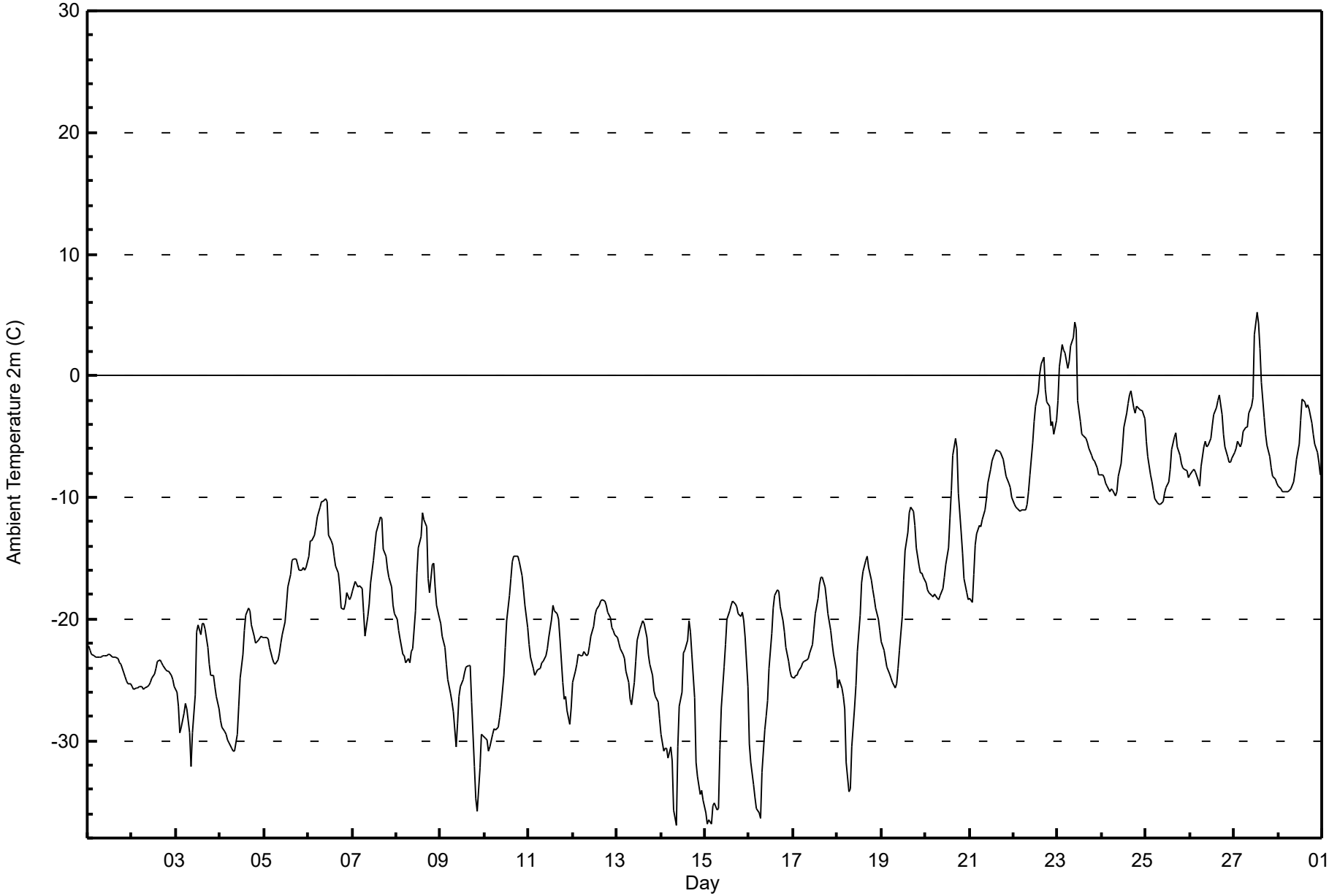
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-22.2	-22.6	-22.9	-23.0	-23.2	-23.2	-23.2	-23.1	-23.0	-23.0	-23.0	-22.9	-22.9	-23.1	-23.1	-23.1	-23.2	-23.6	-23.7	-24.4	-24.7	-25.1	-25.3	-25.4	-23.5	-22.2
2-Feb	-25.6	-25.7	-25.7	-25.7	-25.6	-25.5	-25.7	-25.6	-25.5	-25.4	-25.3	-24.8	-24.5	-24.0	-23.4	-23.4	-23.5	-23.8	-24.2	-24.3	-24.3	-24.6	-25.0	-25.6	-24.9	-23.4
3-Feb	-26.1	-27.2	-29.4	-28.9	-27.7	-26.9	-27.4	-29.3	-32.1	-29.3	-26.2	-21.1	-20.5	-21.3	-20.4	-20.4	-20.8	-22.3	-23.7	-24.7	-24.6	-25.5	-26.3	-27.4	-25.4	-20.4
4-Feb	-28.3	-28.9	-29.2	-29.5	-29.9	-30.1	-30.6	-30.9	-30.9	-29.5	-27.2	-24.9	-23.0	-21.0	-19.7	-19.1	-19.3	-20.5	-21.5	-22.0	-21.9	-21.8	-21.4	-21.5	-25.1	-19.1
5-Feb	-21.5	-21.5	-21.6	-22.3	-23.3	-23.6	-23.7	-23.4	-22.7	-22.0	-21.3	-20.3	-18.8	-17.4	-16.3	-15.2	-15.1	-15.1	-15.5	-15.9	-16.0	-15.8	-15.9	-15.7	-19.2	-15.1
6-Feb	-14.9	-13.6	-13.6	-13.1	-12.5	-11.5	-10.8	-10.3	-10.3	-10.1	-10.3	-13.1	-13.5	-13.9	-14.8	-15.6	-16.2	-17.4	-19.2	-19.3	-18.8	-17.9	-18.4	-18.2	-14.5	-10.1
7-Feb	-17.7	-16.9	-17.1	-17.4	-17.3	-17.5	-19.5	-21.4	-19.8	-18.8	-17.0	-15.2	-14.0	-12.8	-12.0	-11.6	-11.7	-14.2	-14.9	-15.9	-16.6	-17.3	-18.9	-19.5	-16.5	-11.6
8-Feb	-20.0	-20.9	-21.6	-22.9	-23.0	-23.6	-23.3	-23.5	-22.6	-22.5	-19.3	-16.2	-14.2	-13.2	-11.2	-11.8	-12.4	-16.7	-17.8	-15.5	-15.4	-17.3	-18.9	-19.9	-18.5	-11.2
9-Feb	-20.4	-21.4	-22.3	-23.7	-25.0	-26.1	-26.8	-27.7	-30.6	-28.6	-26.4	-25.5	-25.0	-24.4	-24.0	-23.8	-23.8	-26.8	-32.1	-34.8	-35.8	-32.3	-29.5	-29.6	-26.9	-20.4
10-Feb	-29.8	-30.0	-30.8	-30.5	-29.5	-29.0	-29.1	-28.9	-28.1	-27.2	-24.7	-22.3	-20.1	-18.1	-16.7	-15.3	-14.9	-14.8	-14.9	-15.3	-16.5	-17.6	-18.9	-20.7	-22.6	-14.8
11-Feb	-22.1	-23.2	-24.0	-24.6	-24.4	-24.1	-24.1	-23.6	-23.5	-23.0	-22.4	-21.5	-20.0	-18.9	-19.3	-19.6	-20.0	-21.6	-25.2	-26.5	-26.3	-27.5	-28.7	-27.3	-23.4	-18.9
12-Feb	-25.2	-24.3	-23.7	-22.9	-23.1	-23.0	-22.7	-23.0	-22.9	-22.2	-21.4	-20.6	-19.7	-19.3	-18.9	-18.5	-18.4	-18.6	-18.9	-19.5	-19.9	-20.7	-21.0	-21.3	-21.2	-18.4
13-Feb	-21.5	-22.0	-22.5	-22.9	-23.3	-24.3	-25.3	-26.6	-27.0	-25.2	-23.5	-21.8	-20.8	-20.5	-20.1	-20.3	-21.5	-22.9	-23.7	-24.6	-25.8	-26.4	-26.8	-28.2	-23.6	-20.1
14-Feb	-29.4	-30.8	-30.6	-30.6	-31.4	-30.5	-31.7	-35.7	-37.0	-30.5	-27.2	-26.0	-22.8	-22.5	-21.8	-20.2	-21.1	-22.8	-26.5	-31.8	-33.0	-34.4	-34.1	-34.9	-29.1	-20.2
15-Feb	-35.9	-36.8	-36.5	-36.9	-35.4	-35.1	-35.7	-35.6	-30.8	-27.3	-23.9	-22.1	-20.0	-19.4	-18.9	-18.6	-18.7	-19.0	-19.5	-19.8	-19.4	-20.1	-21.5	-25.6	-26.3	-18.6
16-Feb	-30.2	-31.8	-33.6	-34.7	-35.6	-35.9	-36.4	-32.6	-29.2	-27.9	-26.7	-24.0	-21.2	-19.1	-18.1	-17.6	-17.7	-18.9	-20.1	-21.0	-22.3	-23.5	-24.3	-24.8	-26.1	-17.6
17-Feb	-24.9	-24.6	-24.6	-24.3	-23.9	-23.6	-23.4	-23.4	-23.2	-22.8	-22.0	-20.8	-19.6	-18.3	-17.1	-16.6	-16.6	-17.4	-18.4	-19.5	-20.9	-22.0	-23.0	-24.2	-21.5	-16.6
18-Feb	-25.7	-25.0	-25.7	-26.4	-27.4	-31.7	-34.2	-34.0	-30.5	-27.2	-25.5	-22.6	-19.7	-17.1	-16.2	-15.1	-14.8	-15.8	-16.8	-17.6	-18.3	-19.1	-20.0	-21.0	-22.8	-14.8
19-Feb	-21.9	-22.6	-23.3	-24.0	-24.5	-24.8	-25.2	-25.6	-25.3	-24.1	-22.6	-19.8	-16.8	-14.4	-12.9	-11.3	-10.8	-11.1	-12.2	-14.2	-15.7	-16.2	-16.2	-16.6	-18.8	-10.8
20-Feb	-17.1	-17.6	-17.9	-18.1	-18.2	-18.0	-18.3	-18.4	-18.1	-17.5	-16.6	-15.5	-14.2	-11.7	-9.4	-6.5	-5.2	-5.9	-9.6	-12.9	-14.6	-16.7	-17.8	-18.4	-14.7	-5.2
21-Feb	-18.2	-18.6	-16.4	-13.9	-13.0	-12.3	-12.4	-11.9	-11.0	-10.1	-8.9	-7.7	-7.0	-6.6	-6.0	-6.2	-6.1	-6.4	-6.8	-7.6	-8.3	-8.8	-9.2	-10.0	-10.1	-6.0
22-Feb	-10.6	-10.8	-11.0	-11.1	-11.1	-11.1	-11.0	-10.6	-9.6	-8.1	-5.5	-3.7	-2.5	-1.3	0.2	1.0	1.5	-1.1	-2.1	-2.5	-4.1	-3.8	-4.8	-3.6	-5.7	1.5
23-Feb	-2.0	0.7	2.6	2.1	1.8	0.6	1.2	2.5	3.2	4.5	3.9	-2.0	-3.8	-4.8	-4.9	-5.2	-5.5	-5.9	-6.6	-6.8	-7.0	-7.6	-8.2	-8.2	-2.3	4.5
24-Feb	-8.2	-8.4	-8.8	-9.0	-9.5	-9.4	-9.4	-9.8	-9.5	-8.3	-7.2	-5.8	-4.2	-3.0	-2.3	-1.5	-1.2	-2.6	-3.1	-2.5	-2.7	-2.8	-2.9	-3.5	-5.7	-1.2
25-Feb	-5.3	-6.6	-8.1	-8.7	-9.5	-10.1	-10.4	-10.6	-10.6	-10.3	-9.6	-9.2	-8.7	-7.7	-6.1	-5.1	-4.7	-5.9	-6.5	-7.2	-7.5	-7.7	-7.8	-8.3	-8.0	-4.7
26-Feb	-8.1	-7.8	-7.7	-7.9	-8.6	-9.1	-7.4	-5.9	-5.4	-5.8	-5.7	-5.1	-4.2	-3.2	-2.6	-2.0	-1.6	-3.2	-4.8	-5.9	-6.6	-7.2	-7.1	-6.8	-5.8	-1.6
27-Feb	-6.3	-6.0	-5.4	-5.8	-5.5	-4.5	-4.3	-4.3	-3.1	-2.5	-1.8	3.3	5.3	4.3	2.3	-0.6	-3.5	-4.8	-5.7	-6.6	-7.6	-8.2	-8.5	-8.8	-3.7	5.3
28-Feb	-9.1	-9.3	-9.5	-9.5	-9.5	-9.5	-9.4	-9.3	-8.8	-7.9	-6.9	-5.6	-3.6	-1.9	-2.2	-2.7	-2.4	-2.7	-3.9	-4.8	-5.6	-6.3	-7.1	-8.1	-6.5	-1.9
	-19.6	-19.8	-20.0	-20.2	-20.3	-20.5	-20.7	-20.8	-20.3	-19.0	-17.7	-16.3	-15.0	-14.1	-13.4	-13.1	-13.2	-14.4	-15.6	-16.6	-17.2	-17.7	-18.1	-18.7	Diurnal Average	
	-2.0	0.7	2.6	2.1	1.8	0.6	1.2	2.5	3.2	4.5	3.9	3.3	5.3	4.3	2.3	1.0	1.5	-1.1	-2.1	-2.5	-2.7	-2.8	-2.9	-3.5	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Patricia McInnes - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	313	46.58	46.58
-20 - 0	342	50.89	97.47
0 - 10	17	2.53	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Patricia McInnes - February 2025

Maximum Value: 97.9 % on Feb 23 06:00

Maximum Daily Average: 87.2 % on Feb 23

Minimum Value: 36.1 % on Feb 19 18:00

Minimum Daily Average: 48.6 % on Feb 19

Maximum Diurnal Average: 76.7 % at hour 7

Minimum Diurnal Average: 63.7 % at hour 16

Monthly Average: 72.53 %

Percentiles: P_1 = 41.0 P_{10} = 56.7 Q_1 = 66.8 Median = 75.0 Q_3 = 78.7 P_{90} = 84.8 P_{99} = 92.5

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

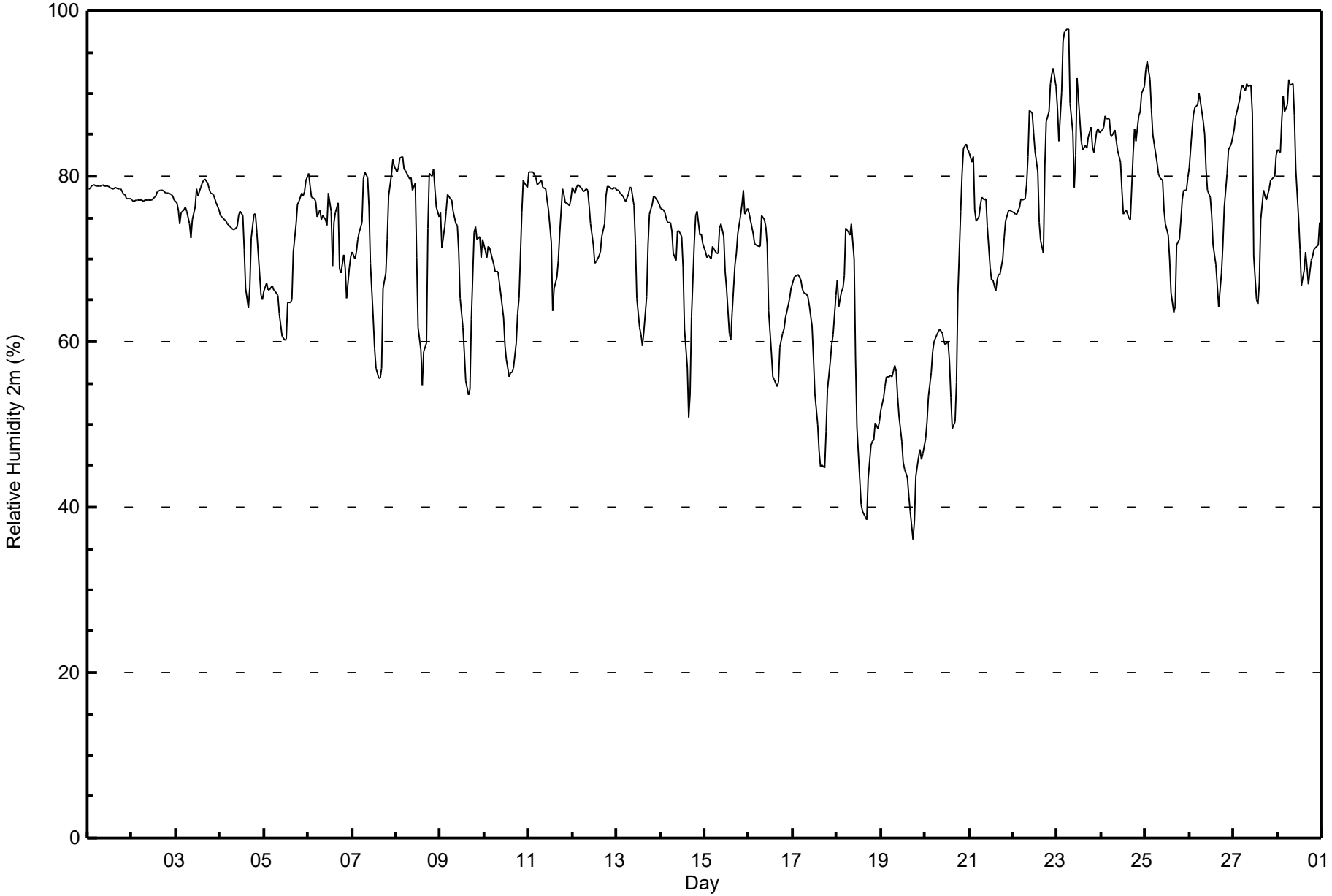
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	78.5	78.5	78.8	78.9	78.8	78.8	78.8	78.9	79.0	78.9	78.7	78.8	78.7	78.6	78.5	78.6	78.6	78.5	78.4	77.8	77.7	77.4	77.3	77.3	78.4	79.0
2-Feb	77.1	77.0	77.0	77.1	77.2	77.1	77.0	77.1	77.1	77.1	77.1	77.2	77.4	77.6	78.1	78.2	78.3	78.3	78.0	77.9	77.9	77.7	77.5	77.1	77.5	78.3
3-Feb	76.8	76.0	74.2	75.5	75.9	76.3	75.8	74.3	72.6	74.7	76.3	78.4	77.6	78.6	79.1	79.5	79.6	79.2	78.5	77.9	77.9	77.3	76.7	75.9	76.9	79.6
4-Feb	75.3	75.0	74.8	74.5	74.3	74.1	73.8	73.6	73.5	73.8	75.3	75.7	75.3	71.2	66.5	64.0	66.7	72.5	75.4	75.4	73.2	70.6	65.7	65.1	72.3	75.7
5-Feb	66.1	67.1	66.3	66.2	66.7	66.3	66.1	65.6	63.5	62.0	60.6	60.1	60.3	64.7	64.7	65.1	70.8	74.2	76.6	76.9	77.9	77.6	78.2	79.4	68.5	79.4
6-Feb	80.3	78.9	77.4	77.2	76.9	75.2	75.9	74.7	75.3	74.7	74.0	77.9	75.8	69.1	74.4	75.6	76.9	68.8	68.4	70.5	68.9	65.2	69.0	70.3	73.8	80.3
7-Feb	70.9	70.0	70.8	72.3	73.3	74.4	79.6	80.5	79.8	76.3	69.4	62.8	59.1	56.9	55.5	55.6	56.7	66.4	68.3	72.3	77.7	80.1	82.0	81.3	70.5	82.0
8-Feb	80.6	81.0	82.2	82.4	80.9	80.7	80.0	79.7	79.8	78.3	79.2	70.1	61.7	59.0	54.8	58.8	59.9	73.8	80.4	79.9	80.9	78.4	76.3	75.0	74.7	82.4
9-Feb	75.6	71.3	73.8	75.8	77.8	77.3	77.1	75.8	74.2	74.0	70.8	65.2	61.7	58.6	55.3	53.5	54.2	62.8	73.3	73.9	72.5	72.8	70.2	72.4	69.6	77.8
10-Feb	71.1	70.2	71.6	71.3	70.0	69.3	68.5	68.4	67.1	65.8	62.9	59.5	57.8	55.8	56.3	56.3	56.8	59.8	63.4	65.2	75.5	79.5	79.2	78.7	66.7	79.5
11-Feb	80.6	80.6	80.4	80.1	79.8	78.9	79.4	79.5	78.7	78.5	77.2	76.0	72.1	63.7	66.4	67.8	69.8	73.0	78.5	77.8	76.9	76.8	76.5	77.2	76.1	80.6
12-Feb	78.6	78.0	78.7	79.0	78.7	78.5	78.1	78.4	78.2	76.4	74.2	71.6	69.5	69.7	70.4	70.8	72.7	74.3	77.6	78.9	78.7	78.4	78.5	78.6	76.1	79.0
13-Feb	78.4	78.3	78.0	77.6	77.2	77.0	77.8	78.6	78.7	76.5	71.8	65.2	61.7	60.9	59.5	61.2	65.5	71.7	75.4	76.6	77.7	77.5	77.0	76.6	73.2	78.7
14-Feb	76.1	75.9	75.6	74.9	74.4	74.4	73.4	70.7	69.8	73.3	73.3	72.7	68.9	61.6	57.0	50.8	53.7	63.1	72.0	75.3	75.7	72.9	73.1	71.9	70.0	76.1
15-Feb	70.8	70.2	70.5	70.0	71.5	71.2	70.7	70.7	73.7	74.2	72.7	68.5	66.4	61.0	60.2	63.6	69.3	70.7	73.0	75.2	76.6	78.3	75.3	76.1	70.9	78.3
16-Feb	75.6	74.7	73.0	71.9	71.7	71.5	71.5	75.3	74.8	73.9	71.7	63.7	58.7	55.8	55.4	54.6	55.1	59.4	61.1	61.5	62.9	64.3	65.2	66.5	66.2	75.6
17-Feb	67.6	68.0	68.0	68.1	67.5	66.4	65.9	65.7	65.4	64.4	61.8	58.0	53.8	50.0	46.8	44.9	45.1	44.8	49.1	54.2	57.6	59.7	60.9	65.6	59.1	68.1
18-Feb	67.4	64.2	66.2	66.5	67.9	73.7	73.2	73.0	74.3	69.9	58.0	49.7	43.4	40.3	39.5	38.8	38.5	43.4	47.4	47.9	48.2	50.1	49.6	50.4	55.9	74.3
19-Feb	51.6	53.2	54.6	55.7	55.8	55.9	55.7	57.1	56.5	53.4	51.1	47.9	45.4	44.5	43.6	41.3	39.5	36.1	38.4	43.7	46.1	46.9	45.7	46.4	48.6	57.1
20-Feb	48.3	50.3	53.4	56.2	58.9	59.9	60.9	61.2	61.5	61.1	60.0	59.6	60.0	57.6	53.3	49.6	50.3	55.1	65.8	75.7	80.3	83.4	84.0	83.2	62.0	84.0
21-Feb	82.9	81.7	82.3	75.9	74.6	75.1	76.4	77.5	77.1	77.3	73.9	69.1	67.5	67.4	66.2	67.5	68.1	68.2	70.1	72.6	74.6	75.8	75.9	75.8	73.9	82.9
22-Feb	75.6	75.4	75.4	76.3	77.2	77.2	77.4	79.1	82.4	88.0	87.7	85.3	83.0	80.6	74.3	72.2	70.7	81.1	86.6	87.8	91.2	92.4	93.0	90.8	81.7	93.0
23-Feb	88.3	84.2	90.2	96.2	97.5	97.9	97.8	88.9	85.3	78.7	82.5	91.9	86.7	84.2	83.2	83.8	83.3	84.7	85.9	83.5	82.9	85.4	85.8	85.2	87.2	97.9
24-Feb	85.7	86.0	87.3	87.0	86.9	85.0	84.8	85.6	84.2	83.1	81.8	78.4	75.4	76.0	75.5	74.9	74.7	82.7	85.8	84.3	87.3	87.8	90.0	90.8	83.4	90.8
25-Feb	92.8	93.9	91.6	88.1	85.2	83.9	81.6	80.4	79.9	79.5	75.9	74.2	72.9	70.0	65.9	63.5	64.2	71.8	72.4	74.5	77.1	78.4	78.3	79.8	78.2	93.9
26-Feb	81.0	85.6	87.5	88.4	88.6	90.0	89.1	86.5	85.1	80.8	78.2	77.5	75.2	71.8	69.3	66.8	64.3	68.2	71.8	76.3	80.3	83.2	83.5	83.9	79.7	90.0
27-Feb	85.6	87.2	87.8	89.3	90.5	90.9	90.4	91.2	90.8	91.1	87.7	70.4	65.2	64.5	67.0	74.7	78.4	77.7	77.1	78.4	79.5	79.6	79.9	82.6	81.6	91.2
28-Feb	83.3	82.9	86.8	89.6	87.9	88.6	91.7	91.0	91.2	87.3	80.9	74.9	71.2	66.8	68.6	70.8	69.0	66.9	69.8	70.3	71.2	71.5	71.6	74.4	78.3	91.7
	75.8	75.5	76.2	76.5	76.6	76.6	76.7	76.4	76.0	75.1	73.0	70.0	67.2	64.9	63.8	63.7	64.7	68.1	71.4	72.9	74.5	75.0	74.9	75.3	Diurnal Average	
	92.8	93.9	91.6	96.2	97.5	97.9	97.8	91.2	91.2	91.1	87.7	91.9	86.7	84.2	83.2	83.8	83.3	84.7	86.6	87.8	91.2	92.4	93.0	90.8	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Patricia McInnes - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Patricia McInnes - February 2025

Maximum Speed: 33 km/h on Feb 27 14:00

Maximum Daily Speed Average: 18.1 km/h on Feb 1

Minimum Speed Value: 0 km/h on Feb 20 23:00

Minimum Daily Speed Average: 1.6 km/h on Feb 22

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

Minimum Diurnal Speed Average: 0.9 km/h at hour 7

Monthly Average Velocity: 1.5 km/h 314.0 deg

Percentiles: P_1 = 1 P_{10} = 3 Q_1 = 6 Median = 9 Q_3 = 13 P_{90} = 17 P_{99} = 23

Hours in Service: 672

Hours of Data: 672

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-Feb	N14	N17	N16	N18	N19	N21	NNW20	NNW21	NNW22	N23	NNW21	NNW20	NNW20	NNW20	NNW21	NNW17	NNW15	NNW13	NNW15	NNW19	N15	N16	N20	N19	NNW18.1	N23
2-Feb	N22	N23	N18	N16	N19	N16	N17	NNW11	N13	N15	N18	N19	NNW20	NNW18	NNW15	NNW12	NNW8	N8	NNW6	NNW7	NNW8	NW6	NW6	WNW7	N13.3	N23
3-Feb	W7	WSW7	W6	WNW7	W8	WSW7	SW2	S3	SSW5	SSW6	S7	E1	SW4	SW9	WSW11	WSW10	WSW8	WSW6	WSW9	WSW14	WSW13	WSW11	SW12	WSW9	WSW6.9	WSW14
4-Feb	SW9	SW14	SW12	SW13	SW14	SW12	SSW10	SSW12	SSW8	SSW12	SW15	WSW17	SW18	SW18	SW16	SW14	SSW10	SSW6	SSW7	SW10	SW16	SW17	SW16	SW15	SW12.8	SW18
5-Feb	SW17	SW21	SW16	SW15	SW17	SW20	SW17	SW18	SW19	SW18	SW19	SW19	WSW19	WSW18	WSW19	WSW18	WSW17	W10	WSW12	WSW12	WSW11	WSW8	SW9	SW10	SW15.6	SW21
6-Feb	SW9	SW9	SW12	WSW10	WSW6	W13	W5	WNW17	WNW17	WNW18	NNW17	N22	N18	N20	NNE18	N14	N12	NW12	NW9	W7	W7	W7	WSW9	WSW9	NW8.2	NNE22
7-Feb	W9	W11	W10	WSW9	WSW11	SW7	S3	SW7	SW11	WSW11	WSW13	SW13	SW11	SSW11	SW13	WSW13	WSW7	WNW7	W9	WSW10	WSW10	WSW10	SW7	WSW14	WSW9.5	WSW14
8-Feb	WSW11	WSW10	SSE3	S7	SSW5	SSW5	SSW6	SW6	SSW5	SSW5	SSW6	SE5	ESE5	ENE5	ENE3	NE4	NE3	N1	N7	NNW10	N17	N21	N23	N17	NNW1.9	N23
9-Feb	N16	N16	N13	N8	NNW7	NNW7	NNW6	NW3	N3	NNE3	NE9	NNE11	NNE11	N12	NNW11	NNW9	NNW5	NNW3	NW3	W4	W4	WNW10	WNW9	SW5	NNW6.6	N16
10-Feb	WSW9	SW11	SW10	SW12	WSW11	SW13	SW16	WSW17	WSW19	WSW17	WSW20	SW20	SW19	SW16	SW17	SW15	SW10	WSW10	NNW4	N7	N10	NNW11	N9	NNW11	WSW10.1	SW20
11-Feb	NNW9	NNW9	NNW9	NNW8	NNW10	NNW11	NNW11	NNW11	NNW7	NNW8	N7	NNE4	E1	E2	E5	E5	ENE4	NNE2	WSW4	SW4	WSW2	ENE1	WSW2	S2	NNW4.1	NNW11
12-Feb	ESE2	SW0	WNW3	SE2	SSE5	WNW1	ESE4	SE5	SE5	ESE4	E5	E2	NE4	ENE4	NE5	N7	N9	N11	N10	N11	N9	NNW10	NNW11	NNW10	NNE3.4	N11
13-Feb	NNW10	NNW9	NNW11	NNW12	NNW12	NNW10	NNW10	NNW8	NNW8	NNW7	N8	N8	N9	NNE10	N11	N11	NNW10	NNW12	NNW13	NNW13	NNW10	NNW10	NNW7	NNW8	NNW9.5	NNW13
14-Feb	NNW6	N8	NNW8	NNW8	N7	NNW7	NNW7	WNW1	S2	SSW2	ENE3	NE5	NNE3	NE5	NE6	ENE2	S3	SSW5	SSE3	WNW0	WSW3	WSW3	SW4	W3	NNW2.0	N8
15-Feb	WSW3	WSW3	SW4	SSW3	SSW4	S2	SSE3	SW4	SW5	SSW5	SE4	SE3	ENE3	NW11	NW11	NW10	NW7	W4	WSW5	NNE3	NNE5	N6	NNE8	N3	WNW1.6	NW11
16-Feb	WNW3	WNW3	NW2	ESE1	ESE2	SW2	SSE3	SSE6	SE7	SE8	SE7	SE6	SE8	ESE13	SE14	ESE14	ESE12	ESE11	ESE13	SE18	SE13	ESE14	SE17	SE12	SE7.9	SE18
17-Feb	SE12	SE13	SE12	SE12	ESE16	ESE15	ESE16	ESE17	SE16	ESE15	SE15	SE13	ESE16	ESE17	ESE16	ESE17	ESE15	SE11	SE11	SE14	SE12	SE13	SE11	SE7	SE13.8	ESE17
18-Feb	SE7	ESE8	SE7	SE8	SE7	S4	SE5	SE6	SSE6	SE9	SE9	SE6	SE8	ESE10	SE13	ESE12	SE12	SE9	SE10	SE10	SE11	SE12	SE12	SE11	SE8.7	SE13
19-Feb	SE12	SE13	SE14	SE14	SE14	SE17	SE18	SE15	ESE18	ESE19	SE20	SE20	ESE17	ESE18	SE21	SE17	SE14	SE16	SE16	SE21	SE18	SE14	SE14	SE13	SE16.3	SE21
20-Feb	SE12	SE12	SE10	S7	S11	S13	S14	S14	S14	S13	SSW13	SSW12	SSW11	SW15	SW17	SW10	SW8	SSW6	SW5	SSW3	E3	N1	NW0	ESE1	SSW8.0	SW17
21-Feb	ESE4	SSE1	SSE3	SSE5	E2	S2	SSE2	N6	N6	NNW7	N7	N9	N10	N11	N8	NNW11	NNW10	NNW11	N11	NNW11	NNW12	N11	NNW9	NNW8	N5.8	NNW12
22-Feb	N12	N11	N9	N9	N8	N6	N7	N7	N4	E5	ESE10	ESE12	SE11	SE7	SE8	SSE7	SE4	S3	S6	SSW6	S6	SW7	S8	S8	E1.6	ESE12
23-Feb	SSW7	SSW8	SSW6	SSW5	SE3	SE4	SSW8	SW13	SW14	WSW18	WNW22	NNW23	NNW24	N23	N18	N16	N13	N12	NNE9	NW8	N5	NE3	NE6	N4	NW5.6	NNW24
24-Feb	NNE4	N7	N9	NNW6	N7	NNW5	N5	N7	NNW3	SSE4	S4	S3	E5	SSE6	SSE3	ESE1	NE2	E4	ENE2	NE4	NNE6	N7	N8	N12	NNE3.1	N12
25-Feb	NNW15	NNW15	NNW16	NNW15	NNW16	N15	N12	NNW8	N11	NNW10	NNW9	N11	NNE11	NNE8	NNE7	NNE7	NNW3	NNW4	NNE9	NNW7	NNE8	NNW10	NNW11	NNW11	N10.0	NNW16
26-Feb	WNW4	SSW4	SSE4	S5	SSW5	SSW6	SSW5	SW11	WSW12	N10	N14	N13	N10	NE8	NE8	NE8	N8	N9	NNW9	N9	N8	NNW8	N8	NNW9	NNW4.1	N14
27-Feb	NNW6	NW4	ENE4	NNE4	N1	ESE7	NE3	ENE1	SE6	S9	SW8	WNW17	NW28	NW33	NW31	N16	NNE17	NNE15	NNE15	NNE15	N13	NNE13	N9	N10	NNW7.8	NW33
28-Feb	NNE10	NNE8	NNE7	NNE6	NE4	NW1	ENE2	NE3	NNW1	ESE6	SE9	ESE9	ESE10	ESE10	ESE9	ESE11	SE11	SE12	ESE10	SE11	SE9	SE9	SE11	SE8	ESE6.0	SE12
	NW2.3	WNW2.7	NW1.9	WNW1.7	WNW1.4	W1.6	W0.9	WSW2.3	WSW2.6	WSW2.0	WSW1.1	NNW1.7	NNW2.3	NNW2.5	NNW2.0	N1.7	N1.5	NNW1.5	N1.7	NNW1.6	NNW1.9	NNW2.4	NNW1.7	NW2.0	Diurnal Average	
	N22	N23	N18	N18	N19	N21	NNW20	NNW21	NNW22	N23	WNW22	NNW23	NW28	NW33	NW31	WSW18	WSW17	SE16	SE16	SE21	SE18	N21	N23	N19	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 Feb 27 15:00

Minimum Value: 1 km/h on Feb 3 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:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

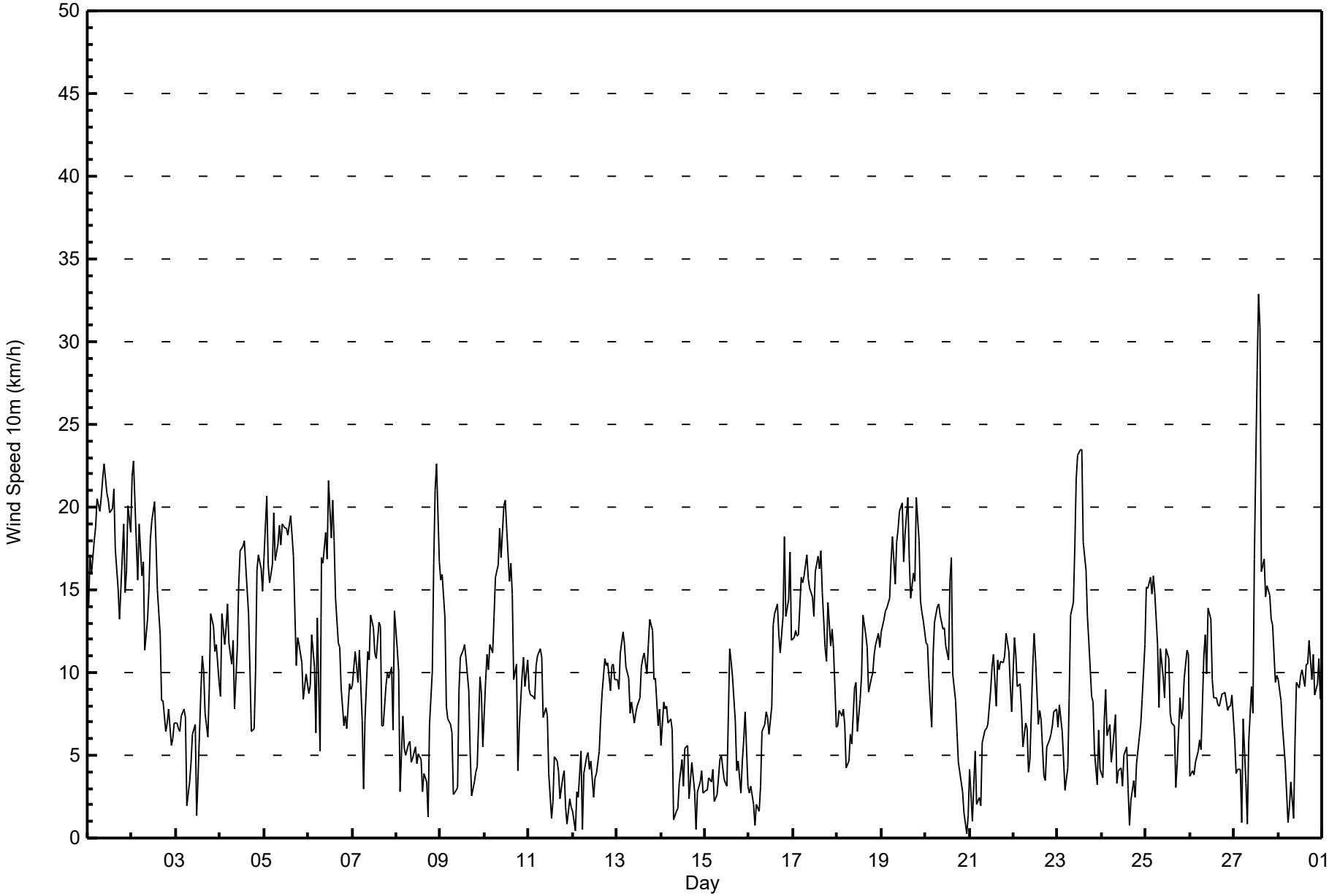
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Feb	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	3	3	4	4	4	4	6	6
2-Feb	5	5	5	5	5	4	5	2	3	3	4	5	3	4	3	3	1	2	1	1	1	1	1	1	5
3-Feb	1	1	1	1	1	1	2	1	1	2	2	2	3	3	2	2	3	1	1	2	2	2	2	2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

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Patricia McInnes - February 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	156	23.21	23.21
6 - 11	288	42.86	66.07
12 - 19	195	29.02	95.09
20 - 28	31	4.61	99.70
29 - 38	2	0.30	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Patricia McInnes - February 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	9	8	12	12	12	9	10	12	12	15	11	8	5	7	6	8	156
6 - 11	52	17	6	0	0	12	35	4	9	17	21	27	11	5	7	65	288
12 - 19	38	6	0	0	0	21	38	0	5	4	37	20	1	4	1	20	195
20 - 28	8	1	0	0	0	0	4	0	0	0	3	1	0	1	1	12	31
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	107	32	18	12	12	42	87	16	26	36	72	56	17	17	17	105	672

Total Number of Valid Hours: 672

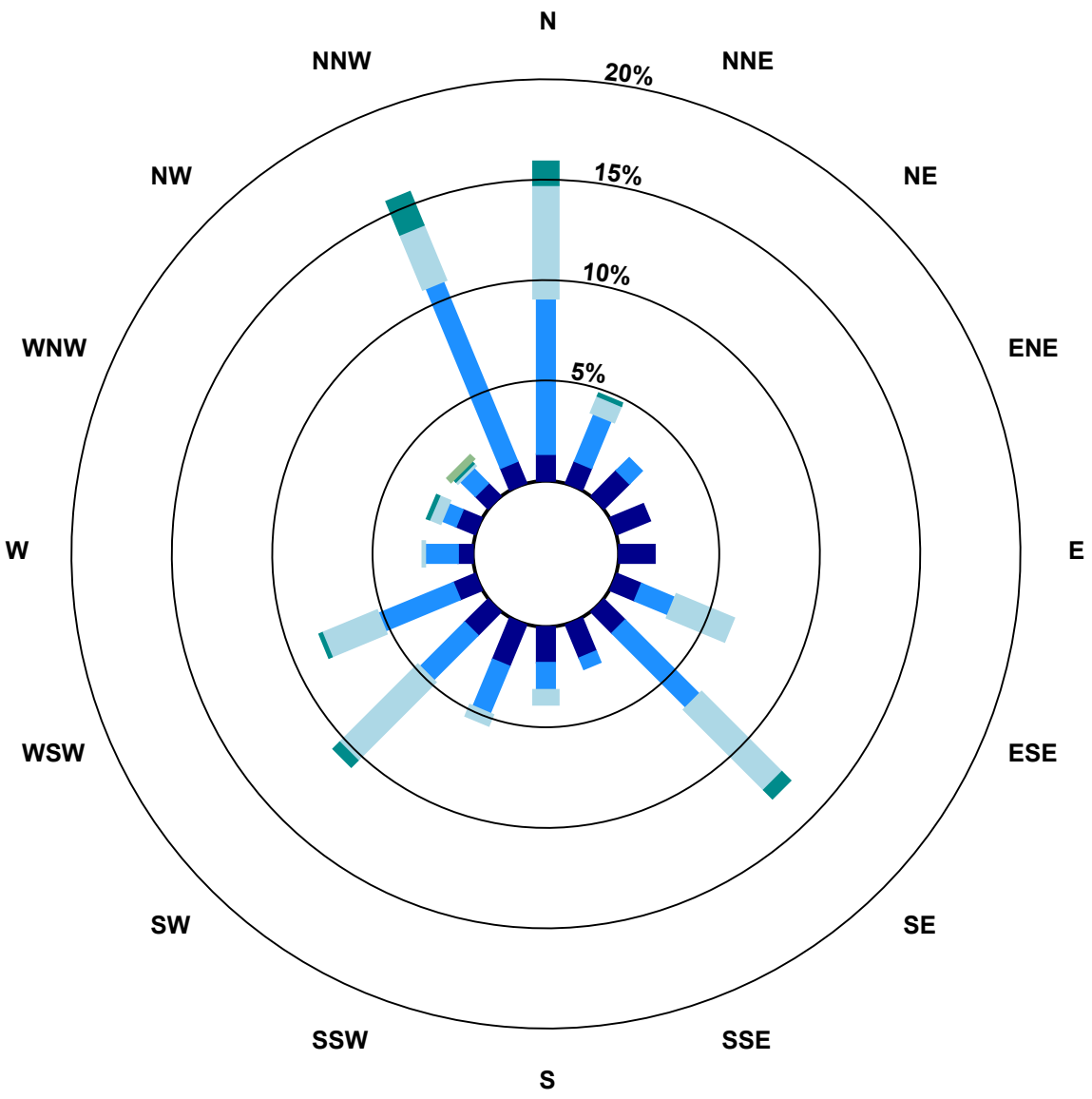
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Wind Speed 10m (WS10) - km/h

Patricia McInnes



Classes (km/h)

0 - 5

6 - 11

12 - 19

20 - 28

29 - 38

> 38

Total Number of Valid Hours: 672

Direction of Maximum Speed: 314 deg on Feb 27 14:00
Direction of Maximum Daily Speed Average: 346.8 deg on Feb 1

Direction of Minimum Speed: 313 deg on Feb 20 23:00

Direction of Minimum Daily Speed Average: 1.6 deg on Feb 22

Monthly Average Direction: 314.0 deg

Hours in Service:	672
Hours of Data:	672
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-Feb	2	351	352	350	352	350	343	345	348	349	346	346	340	337	342	338	339	328	333	336	350	350	5	5	346.8
2-Feb	1	352	356	356	360	3	358	348	349	1	3	356	345	344	340	344	346	352	329	334	338	315	315	297	350.0
3-Feb	268	247	271	286	278	249	216	171	205	212	191	96	218	223	249	237	248	237	240	255	254	243	235	239	242.5
4-Feb	226	223	226	229	223	220	209	212	211	212	225	237	229	229	233	223	213	206	213	221	229	230	236	235	224.9
5-Feb	231	229	228	226	224	227	232	231	235	230	231	234	242	241	242	247	253	261	246	245	245	238	224	223	235.6
6-Feb	219	235	236	246	247	269	269	301	293	292	342	11	357	356	13	6	356	326	308	273	275	269	240	252	309.0
7-Feb	262	275	262	251	241	221	186	236	228	241	244	235	222	208	226	240	253	283	262	254	249	243	232	243	242.6
8-Feb	242	239	150	189	203	199	210	215	205	211	196	146	102	74	57	48	35	9	355	347	8	8	4	3	347.3
9-Feb	356	355	357	354	338	334	329	311	1	23	36	20	15	1	348	338	346	343	308	273	267	303	295	234	345.0
10-Feb	243	236	224	223	239	229	234	238	243	239	242	233	236	229	234	231	226	244	327	5	349	348	353	347	246.1
11-Feb	336	330	333	327	344	347	348	344	327	331	355	24	84	90	89	83	72	32	253	236	239	75	249	176	344.6
12-Feb	123	235	289	128	150	285	117	136	128	119	94	87	41	62	51	10	2	10	1	2	350	342	347	347	20.5
13-Feb	348	340	344	343	346	347	344	333	328	339	353	360	8	16	10	7	339	339	347	346	335	338	337	333	347.0
14-Feb	341	350	333	334	351	345	344	292	174	193	59	47	26	40	37	61	184	200	157	290	242	244	230	276	345.7
15-Feb	241	237	231	209	195	190	155	225	214	207	145	140	76	326	326	324	320	268	251	18	28	10	29	353	300.4
16-Feb	286	291	306	119	113	227	165	147	134	143	145	137	135	123	128	121	121	115	116	124	129	122	127	127	128.3
17-Feb	126	131	130	126	121	121	123	123	124	122	124	125	118	113	111	117	121	135	129	127	127	125	141	135	123.8
18-Feb	143	123	128	140	146	184	138	140	158	146	140	144	130	118	130	122	127	129	129	135	130	138	140	140	135.2
19-Feb	136	132	129	128	133	124	124	132	121	122	125	124	123	120	124	130	133	135	134	129	133	137	140	141	128.9
20-Feb	138	140	143	181	182	177	188	184	187	188	200	200	201	229	235	226	215	205	215	212	80	1	313	122	191.5
21-Feb	122	168	156	166	91	179	162	353	1	334	1	1	356	7	357	347	342	347	356	345	347	356	348	343	354.5
22-Feb	352	355	356	5	2	354	1	359	356	79	116	123	131	143	146	149	133	171	174	196	190	215	189	179	101.3
23-Feb	195	207	199	197	133	145	209	234	236	252	284	345	347	349	3	353	352	1	17	326	1	54	37	10	322.1
24-Feb	18	1	6	344	349	347	351	11	335	152	179	174	97	149	156	119	44	91	73	41	22	357	359	352	15.8
25-Feb	344	342	348	347	348	355	352	333	351	344	344	354	15	20	16	24	329	345	19	347	16	337	345	330	351.6
26-Feb	283	207	167	170	195	212	213	232	245	11	4	1	359	38	36	34	354	355	347	350	352	348	351	343	345.1
27-Feb	346	314	61	19	8	112	52	74	142	175	218	282	312	314	311	355	17	22	19	21	9	12	358	352	344.1
28-Feb	15	28	32	31	35	307	64	56	330	109	133	123	116	115	120	111	127	130	122	127	132	125	135	141	108.7
	314.5	299.6	311.2	292.4	294.0	269.2	268.3	252.4	247.8	236.3	256.9	341.3	344.9	343.4	333.4	356.2	352.9	348.4	349.0	338.5	342.9	337.0	338.7	311.7	
	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 10m (WD10) - deg

Patricia McInnes - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 103 deg on Feb 27 08:00

Minimum Value: 6 deg on Feb 11 03:00

Percentiles: P_1 = 7 P_{10} = 10 Q_1 = 11 Median = 14 Q_3 = 19 P_{90} = 37 P_{99} = 86

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

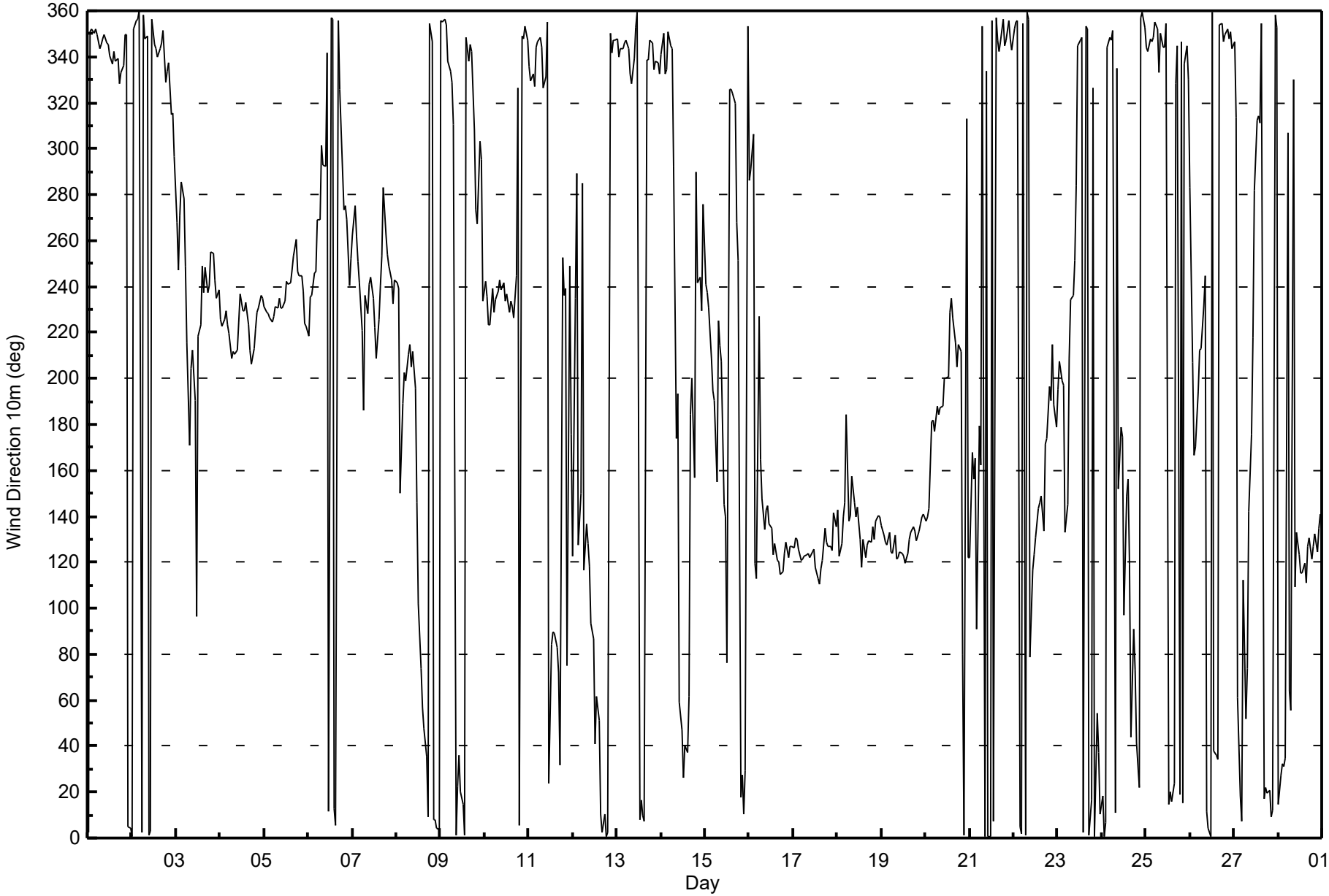
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Feb	16	13	14	14	14	13	8	10	11	13	12	12	12	9	11	10	13	10	12	9	13	13	15	16	16
2-Feb	15	16	15	15	15	14	16	13	13	16	15	15	12	12	10	11	11	16	9	9	13	10	7	9	16
3-Feb	10	7	12	6	6	13	65	20	14	13	16	90	75	28	19	17	19	14	10	7	9	11	11	17	90
4-Feb	13	11	10	9	10	11	12	12	13	12	12	11	11	12	13	13	12	13	13	12	9	10	12	11	13
5-Feb	12	10	10	10	10	9	11	12	11	12	12	11	12	11	12	12	11	16	13	11	10	11	9	10	16
6-Feb	11	15	13	18	62	13	68	11	12	10	38	15	16	16	15	15	17	10	7	21	15	18	10	9	68
7-Feb	8	9	9	12	11	19	39	12	11	10	10	12	13	14	18	12	15	9	8	8	7	11	23	8	39
8-Feb	9	9	49	13	19	17	15	20	17	15	20	28	21	19	47	18	15	59	12	11	14	16	14	15	59
9-Feb	15	15	15	13	16	13	14	45	36	62	11	17	18	17	16	14	20	39	23	20	10	8	10	17	62
10-Feb	9	10	10	10	14	9	10	11	10	11	11	10	14	13	12	11	14	12	51	16	12	11	13	9	51
11-Feb	6	8	6	10	11	11	11	14	11	13	17	26	85	74	19	19	23	66	17	8	37	93	47	32	93
12-Feb	77	82	22	72	35	83	67	21	18	25	28	47	40	36	28	14	14	12	13	15	12	8	12	11	83
13-Feb	10	8	9	9	10	10	12	12	8	12	21	18	19	18	19	14	12	8	10	9	8	7	8	9	21
14-Feb	14	11	7	9	11	9	6	62	25	52	32	18	31	23	24	50	20	15	45	76	29	28	23	55	76
15-Feb	23	15	20	22	14	51	22	15	14	19	24	26	48	12	16	12	15	20	13	53	20	19	13	18	53
16-Feb	14	19	42	87	26	58	22	11	14	15	14	19	19	14	15	13	12	13	13	12	14	14	12	12	87
17-Feb	12	12	12	12	12	12	12	11	12	14	14	15	15	13	14	13	12	12	11	12	12	13	11	24	24
18-Feb	14	19	11	19	21	21	15	11	12	13	14	21	17	17	15	15	12	11	8	10	11	12	11	11	21
19-Feb	12	11	11	13	12	10	11	12	11	12	13	13	14	11	11	14	12	12	12	11	12	12	12	12	14
20-Feb	11	10	11	18	14	13	12	13	15	14	14	16	18	15	12	13	12	11	19	47	41	68	94	58	94
21-Feb	33	65	44	27	67	45	76	32	18	16	16	17	15	17	18	17	11	13	14	11	12	13	14	16	76
22-Feb	14	15	14	15	15	15	15	18	36	24	15	13	15	18	14	14	40	22	17	10	10	12	14	17	40
23-Feb	19	10	17	28	49	19	29	10	11	10	31	13	14	14	16	17	15	15	16	21	55	67	11	29	67
24-Feb	29	14	13	10	16	17	21	14	32	57	31	40	25	27	40	96	37	16	34	27	12	13	14	16	96
25-Feb	11	11	14	14	12	14	15	11	15	13	15	16	14	20	32	32	25	26	15	17	20	8	11	12	32
26-Feb	37	21	22	26	24	19	27	11	30	14	15	16	20	17	15	16	16	13	14	11	13	11	14	13	37
27-Feb	14	37	31	31	85	27	59	103	59	24	44	24	14	11	11	37	14	12	11	11	13	13	16	15	103
28-Feb	14	21	17	22	41	88	79	32	73	20	18	17	17	22	21	13	18	14	12	13	18	11	12	12	88
	77	82	49	87	85	88	79	103	73	62	44	90	85	74	47	96	40	66	51	76	55	93	94	58	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Patricia McInnes - February 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS07
ATHABASCA VALLEY
FEBRUARY 2025

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

March 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ATHABASCA VALLEY (AMS07)
FEBRUARY 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	640	32	32	100	-	-	13.2	0	3	0
TRS (ppb) Average	637	35	35	100	2.3	0	2.1	0	1	0
THC (ppm) Average	605	31	67	94.64	-	-	3	-	2.4	-
NMHC (ppm) Average	605	31	67	94.64	-	-	0.434	-	0.041	-
CH4(ppm) Average	605	31	67	94.64	-	-	2.8	-	2.4	-
O3 (ppb) Average	640	32	32	100	-	-	38.4	0	32.6	-
NO2 (ppb) Average	639	33	33	100	-	-	39.5	0	21.8	-
NO (ppb) Average	639	33	33	100	-	-	35	-	11.1	-
NOX (ppb) Average	639	33	33	100	-	-	74.5	-	32.6	-
PM2.5 (ug/m3) Average	670	2	2	100	-	-	25.2	0	12.2	0
CO(ppm) Average	640	32	32	100	-	-	0.5	0	0.3	-
Temperature 2 m (C) Average	672	0	0	100	-	-	5.1	-	-3.5	-
Relative Humidity (%) Average	672	0	0	100	-	-	93.4	-	85.1	-
Barometric Pressure (inHg) Average	672	0	0	100	-	-	29.9	-	29.8	-
Wind Speed 10 m (km/h) Average	672	0	0	100	-	-	33	-	20	-
Wind Direction 10 m (deg) Average	672	0	0	100	-	-	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ATHABASCA VALLEY (AMS07)
FEBRUARY 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	640	0.66	1.4	-	0	0	0.1	0.2	0.6	1.3	13.2
TRS (ppb) Average	637	0.31	0.3	-	0.1	0.1	0.2	0.2	0.3	0.6	2.1
THC (ppm) Average	605	2.19	0.1	-	2	2	2.1	2.2	2.2	2.3	3
NMHC (ppm) Average	605	0.005	0.027	-	0	0	0	0	0	0	0.434
CH4(ppm) Average	605	2.18	0.1	-	2	2	2.1	2.2	2.2	2.3	2.8
O3 (ppb) Average	640	20.19	9.1	-	1.4	6.9	13.4	21	27.4	32	38.4
NO2 (ppb) Average	639	12.86	8.3	-	1	3.3	6.4	11.3	18	25.1	39.5
NO (ppb) Average	639	4.77	6.5	-	0	0.1	0.6	2.3	6.2	12.9	35
NOX (ppb) Average	639	17.63	12.9	-	1	4.5	8.2	14.1	24.1	35.8	74.5
PM2.5 (ug/m3) Average	670	5.82	3.1	-	1.7	3	3.7	4.9	7.1	9.9	25.2
CO(ppm) Average	640	0.18	0.1	-	0.1	0.1	0.1	0.2	0.2	0.3	0.5
Temperature 2 m (C) Average	672	-17.71	9.5	-	-37.8	-30.5	-24	-18.7	-9.1	-4.8	5.1
Relative Humidity (%) Average	672	67.04	10.9	-	32.3	51.7	62.5	68.5	73	80.2	93.4
Barometric Pressure (inHg) Average	672	29.24	0.4	-	28.2	28.7	29	29.3	29.6	29.7	29.9
Wind Speed 10 m (km/h) Average	672	8.2	6	-	0	2	4	7	11	16	33
Wind Direction 10 m (deg) Average	672	-	-	-	-	-	-	-	-	-	-

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

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
THC/NMHC/CH4	07 Feb 2025 03:00	08 Feb 2025 13:00	35	Unstable Operations - deplpeting support gas cylinder
THC/NMHC/CH4	08 Feb 2025 14:00	08 Feb 2025 14:00	1	Maintenance - replaced support gas cylinder

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Athabasca Valley - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 13.2 ppb on Feb 9 17:00 Maximum Daily Average: 3.0 ppb on Feb 26

Minimum Value: 0.0 ppb on Feb 2 09:00 Minimum Daily Average: 0.1 ppb on Feb 4
Maximum Diurnal Average: 1.8 ppb at hour 17 Minimum Diurnal Average: 0.2 ppb at hour 8
Monthly Average: 0.66 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.2 Q_3 = 0.6 P_{90} = 1.3 P_{99} = 8.3

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.2	0.2	0.3	0.3	0.1	0.2	0.6	0.7	1.3	0.3	0.6	0.7	0.4	0.0	0.3	1.3
2-Feb	0.9	0.9	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.5	3.7	0.7	1.7	1.5	1.5	0.3	0.1	0.1	0.2	0.3	0.6	3.7
3-Feb	0.2	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.1	0.2
4-Feb	0.0	0.0	0.0	0.0	Z	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.1	0.0	0.0	0.1	0.2
5-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
6-Feb	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.4	0.0	1.3	1.6	0.6	0.3	0.1	0.1	0.1	0.1	0.1	0.3	1.6
7-Feb	0.1	Z	0.2	0.1	0.0	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.0	0.1	0.1	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.2
8-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.6	0.8	0.1	0.0	0.0	0.1	0.8
9-Feb	0.0	0.1	0.0	Z	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.9	1.5	5.6	13.2	12.8	8.0	5.5	5.3	4.3	2.8	3.2	2.8	13.2
10-Feb	2.2	1.0	0.9	1.3	Z	0.8	0.6	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.5	0.5	0.3	0.5	2.2
11-Feb	0.2	0.2	0.2	0.2	0.1	Z	0.1	0.1	0.3	0.8	1.6	0.4	2.2	2.9	4.1	8.3	8.3	5.9	3.7	2.8	2.9	2.5	1.9	1.3	2.2	8.3
12-Feb	Z	1.5	1.3	1.2	1.0	0.9	0.8	0.5	0.4	0.3	0.4	0.6	0.9	1.0	0.8	0.6	0.5	0.6	0.7	0.9	0.6	0.4	0.8	0.7	0.8	1.5
13-Feb	0.7	Z	1.8	1.0	0.4	0.3	0.2	0.1	0.2	0.3	0.3	0.4	0.5	0.3	0.6	1.7	1.1	1.3	1.0	0.3	0.2	0.1	0.1	0.1	0.6	1.8
14-Feb	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.6	2.4	2.4	5.0	5.9	3.6	2.0	1.3	1.0	0.8	0.7	0.9	1.2	5.9
15-Feb	0.9	0.7	0.4	Z	0.3	0.3	0.2	0.2	0.3	0.3	0.4	0.4	0.6	0.6	0.4	0.4	0.3	0.3	0.2	0.2	0.3	0.6	0.4	0.2	0.4	0.9
16-Feb	0.1	0.1	0.1	0.1	Z	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.6	0.6	0.6	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.2	0.6
17-Feb	0.1	0.1	0.1	0.1	0.2	Z	0.5	0.5	0.6	0.6	0.7	0.7	0.7	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.3	0.7
18-Feb	Z	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	C	C	C	C	0.6	0.8	0.7	0.7	0.5	0.4	0.4	0.5	0.4	0.3	0.8
19-Feb	0.5	Z	0.7	0.6	0.6	0.7	0.7	0.7	0.8	0.9	0.9	1.0	1.0	1.1	1.2	1.1	0.8	0.5	0.3	0.3	0.2	0.2	0.2	0.2	0.7	1.2
20-Feb	0.3	0.3	Z	0.7	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.9	0.7	0.6	0.6	0.7	0.6	0.6	0.4	0.2	0.2	0.1	0.1	0.6	0.9
21-Feb	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.4	0.8	1.2	2.2	4.3	2.7	4.4	1.8	1.7	1.2	0.6	1.2	1.4	0.5	0.4	1.1	4.4
22-Feb	0.5	0.5	0.6	1.4	Z	1.4	1.0	0.6	0.5	0.5	0.5	0.6	0.6	0.5	0.8	0.8	0.7	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.6	1.4
23-Feb	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.3	0.8	0.7	0.4	0.9	0.1	0.1	0.3	0.2	0.9	0.9	0.3	0.2	0.1	0.3	0.9
24-Feb	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.5	0.4	0.3	0.4	0.3	0.2	0.2	0.1	0.1	0.2	0.6	0.2	0.6
25-Feb	0.8	Z	2.9	0.8	0.3	0.3	0.2	0.2	0.9	1.1	0.7	2.0	1.5	1.1	0.8	0.5	0.4	0.3	0.2	1.1	1.2	0.4	0.3	0.7	0.8	2.9
26-Feb	1.7	1.7	Z	1.7	1.2	0.7	0.5	0.5	0.5	0.8	4.2	10.8	10.2	3.7	3.3	4.4	10.3	9.2	2.2	0.6	0.4	0.4	0.3	0.2	3.0	10.8
27-Feb	0.2	0.3	0.3	Z	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.3	0.4	0.5	0.3	0.7	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.7
28-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.3	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.4
	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.5	0.8	0.9	0.9	1.0	1.4	1.8	1.5	0.9	0.6	0.6	0.5	0.4	0.4	Diurnal Average	
	2.2	1.7	2.9	1.7	1.2	1.4	1.0	0.9	0.9	1.1	4.2	10.8	10.2	4.3	4.1	8.3	13.2	12.8	8.0	5.5	5.3	4.3	2.8	3.2	Diurnal Maximum	

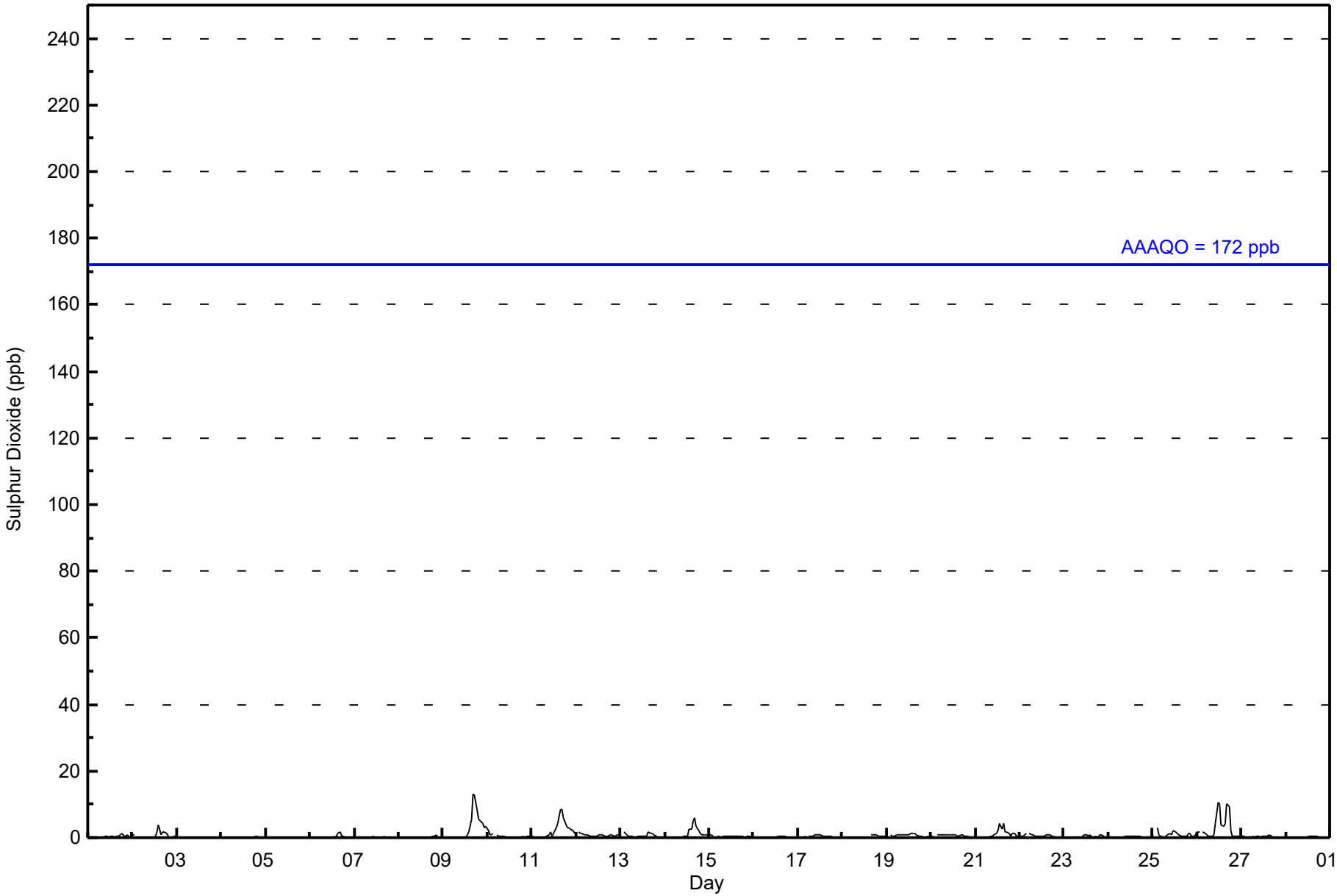
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Athabasca Valley - February 2025



Sulphur Dioxide (SO_2) - ppb

Athabasca Valley - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	637	99.53	99.53
11 - 20	3	0.47	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: 640

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Athabasca Valley - February 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	7	8	17	18	100	55	18	30	53	30	15	11	22	88	148	637
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	3
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	17	7	8	17	18	100	55	18	30	53	30	15	12	22	90	148	640

Total Number of Valid Hours: 640

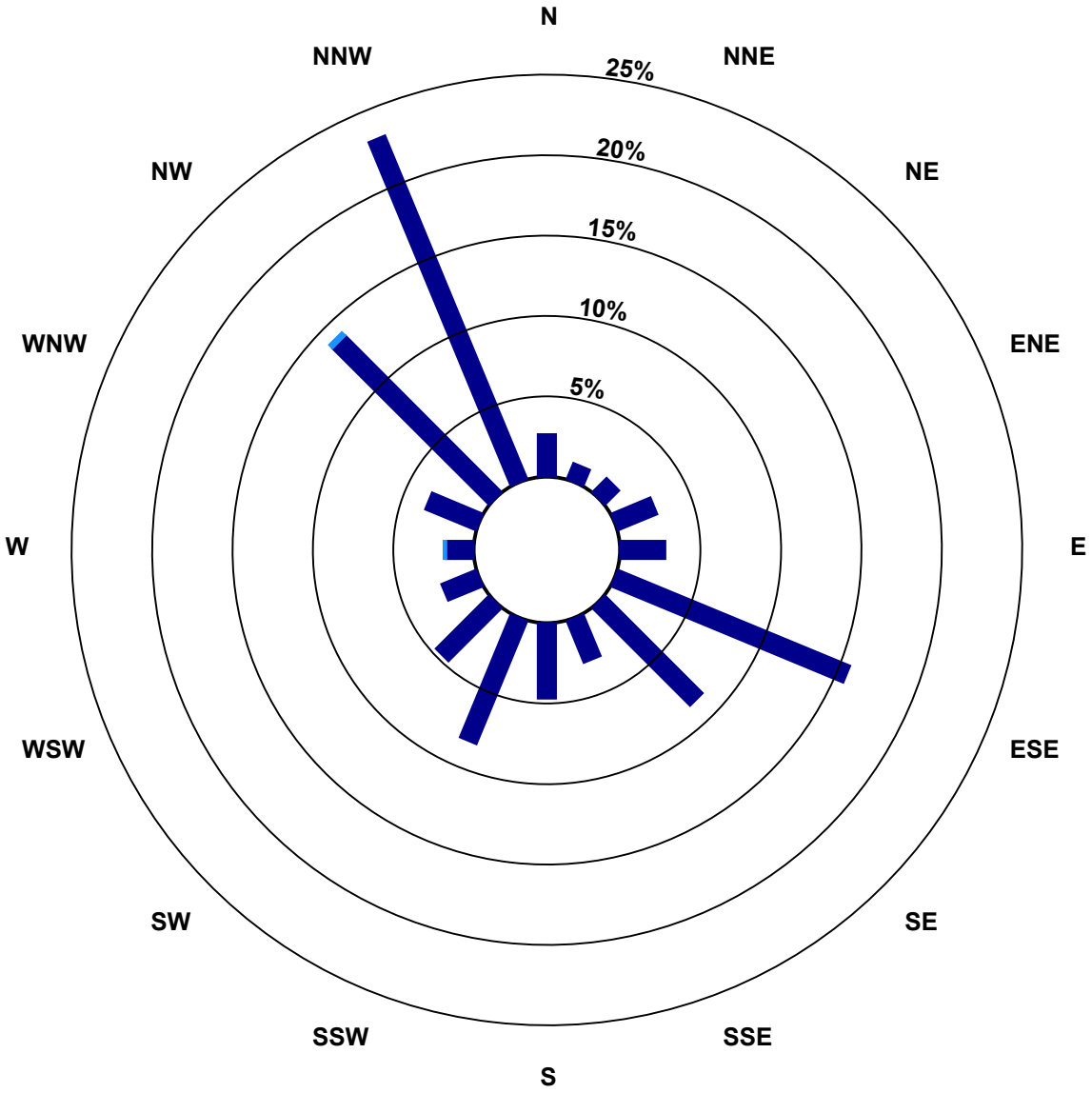
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Sulphur Dioxide (SO_2) - ppb

Athabasca Valley



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

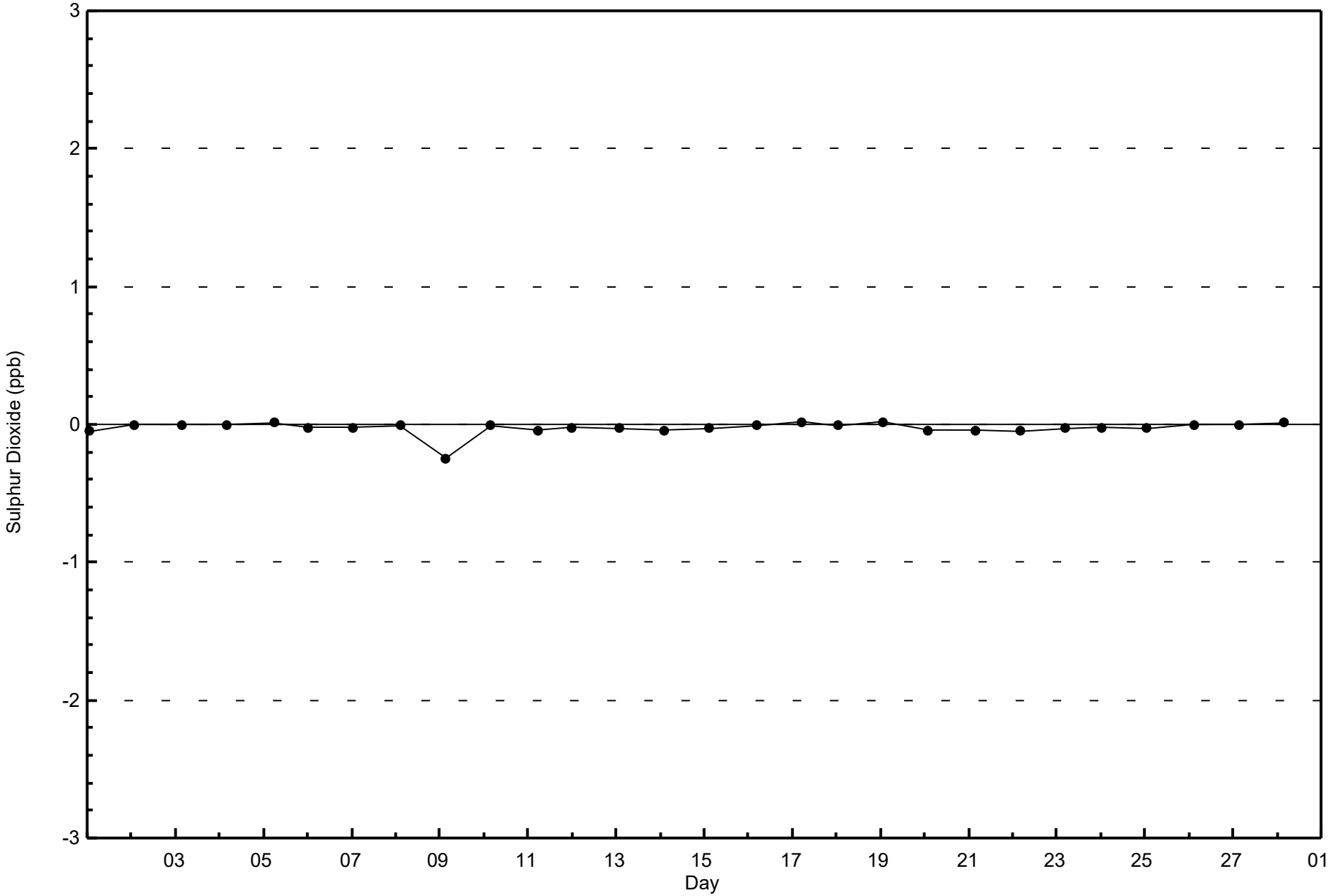
Total Number of Valid Hours: 640

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Athabasca Valley - February 2025

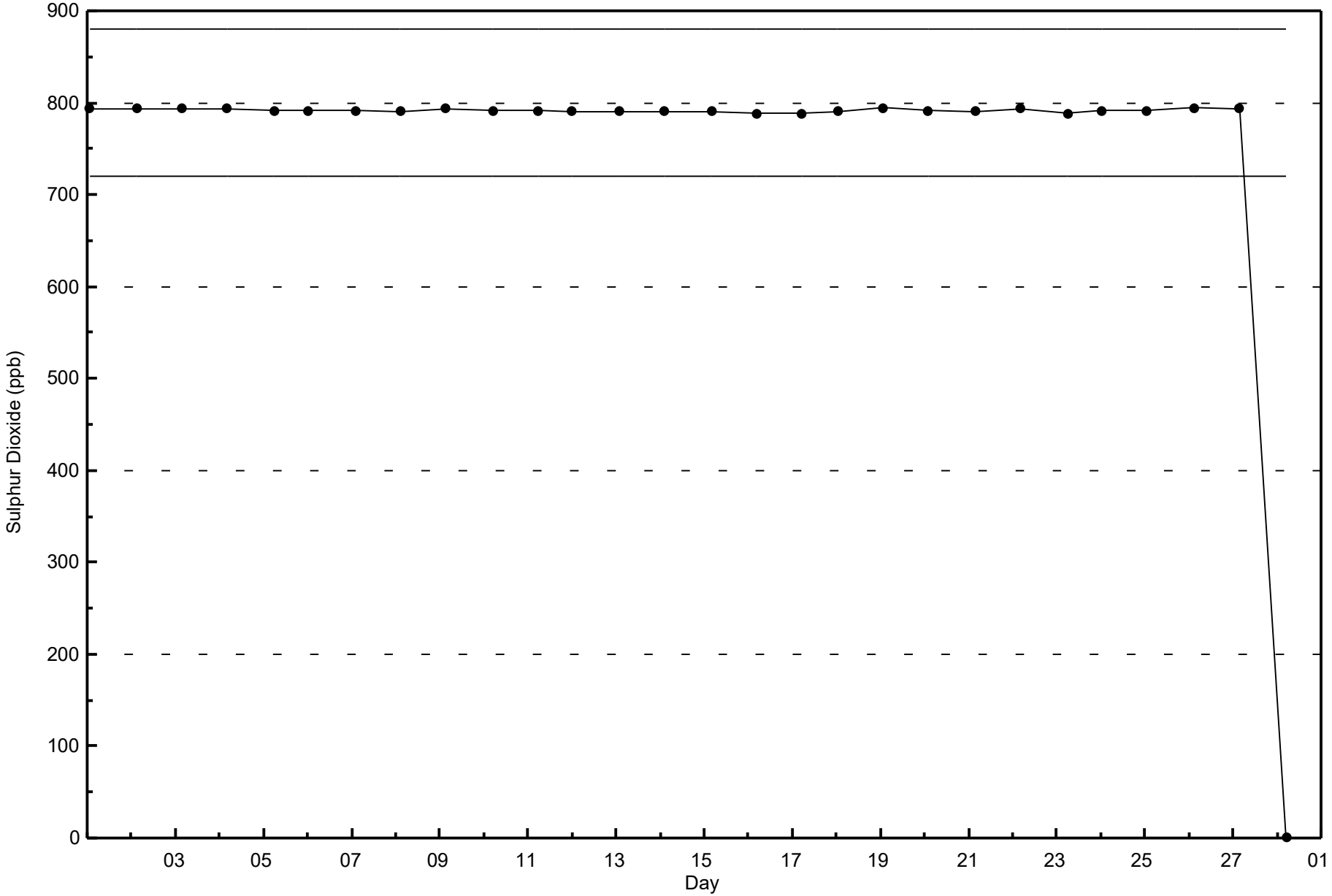


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Athabasca Valley - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Reduced Sulphur (TRS) - ppb

Athabasca Valley - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 2.1 ppb on Feb 26 01:00 Maximum Daily Average: 1.0 ppb on Feb 26

Minimum Value: 0.1 ppb on Feb 17 16:00 Minimum Daily Average: 0.1 ppb on Feb 17
Maximum Diurnal Average: 0.4 ppb at hour 9 Minimum Diurnal Average: 0.2 ppb at hour 15
Monthly Average: 0.31 ppb Percentiles: P_1 = 0.1 P_{10} = 0.1 Q_1 = 0.2 Median = 0.2 Q_3 = 0.3 P_{90} = 0.6 P_{99} = 1.5

Hours in Service:	672
Hours of Data:	637
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-Feb	0.3	0.3	Z	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.3
2-Feb	0.2	0.3	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	0.3	0.3	0.2	0.2	0.2	0.2	0.3
3-Feb	0.1	0.2	0.2	0.2	Z	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.3	0.2	0.2	0.2	0.2	0.3
4-Feb	0.2	0.2	0.2	0.2	0.2	Z	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.1	0.1	0.2	0.3
5-Feb	Z	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
6-Feb	0.2	Z	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	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.3
7-Feb	0.1	0.1	Z	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.3
8-Feb	0.2	0.2	0.1	Z	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.9	0.8	0.5	0.3	0.5	0.9	0.3	0.3	0.2	0.3	0.9
9-Feb	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.5	0.3	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	0.5
10-Feb	0.2	0.2	0.3	0.3	0.2	Z	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.6	0.4	0.4	0.3	0.5	0.2	0.6
11-Feb	Z	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.6	0.4	0.5	0.6	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.6
12-Feb	0.4	Z	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.4	0.3	0.2	0.2	0.2	0.4	0.3	0.4	0.5	0.5	0.3	0.5
13-Feb	0.5	0.6	Z	0.5	0.4	0.4	0.4	0.5	0.6	0.6	0.4	0.5	0.5	0.3	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.4	0.4	0.3	0.4	0.6
14-Feb	0.3	0.3	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.6	0.5	0.5	0.6	0.6	0.6	0.5	0.4	0.3	0.3	0.3	0.4	0.6
15-Feb	0.2	0.2	0.2	0.2	Z	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.3	0.3	0.3	0.4
16-Feb	0.3	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3
17-Feb	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2
18-Feb	0.1	Z	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.2
19-Feb	0.1	0.1	Z	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
20-Feb	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.3
21-Feb	0.2	0.2	0.2	0.2	Z	0.3	0.3	0.3	0.7	0.6	C	C	C	C	C	C	C	0.4	0.4	0.4	0.6	0.5	0.4	0.5	--	0.7
22-Feb	0.3	0.3	0.3	0.4	0.4	Z	0.5	0.6	0.6	1.1	1.1	0.9	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.4	1.1
23-Feb	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.5	0.2	0.2	0.3	0.2	0.3	0.2	0.3	0.3	0.4	0.4	0.7	0.6	0.3	0.7
24-Feb	0.3	Z	0.5	0.6	0.5	0.5	0.5	0.4	0.5	0.6	0.5	0.4	0.4	0.3	0.2	0.2	0.2	0.3	0.5	0.8	0.6	0.4	0.6	0.5	0.5	0.8
25-Feb	0.8	0.8	Z	0.5	0.4	0.3	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.5	0.4	0.7	0.7	0.7	0.8	1.3	0.6	1.3
26-Feb	2.1	1.7	1.4	Z	1.5	1.3	0.9	0.9	1.3	1.3	1.1	1.2	1.0	0.6	0.4	0.4	0.5	0.7	0.7	1.1	1.1	0.9	0.9	0.6	1.0	2.1
27-Feb	0.7	1.0	1.1	1.7	Z	1.6	1.9	1.5	1.7	1.0	0.4	0.4	0.3	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.7	1.9
28-Feb	0.1	0.2	0.1	0.2	0.2	Z	0.2	0.2	0.3	0.3	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.3
	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	Diurnal Average	
	2.1	1.7	1.4	1.7	1.5	1.6	1.9	1.5	1.7	1.3	1.1	1.2	1.0	0.6	0.6	0.9	0.8	0.7	0.7	1.1	1.1	0.9	0.9	1.3	Diurnal Maximum	

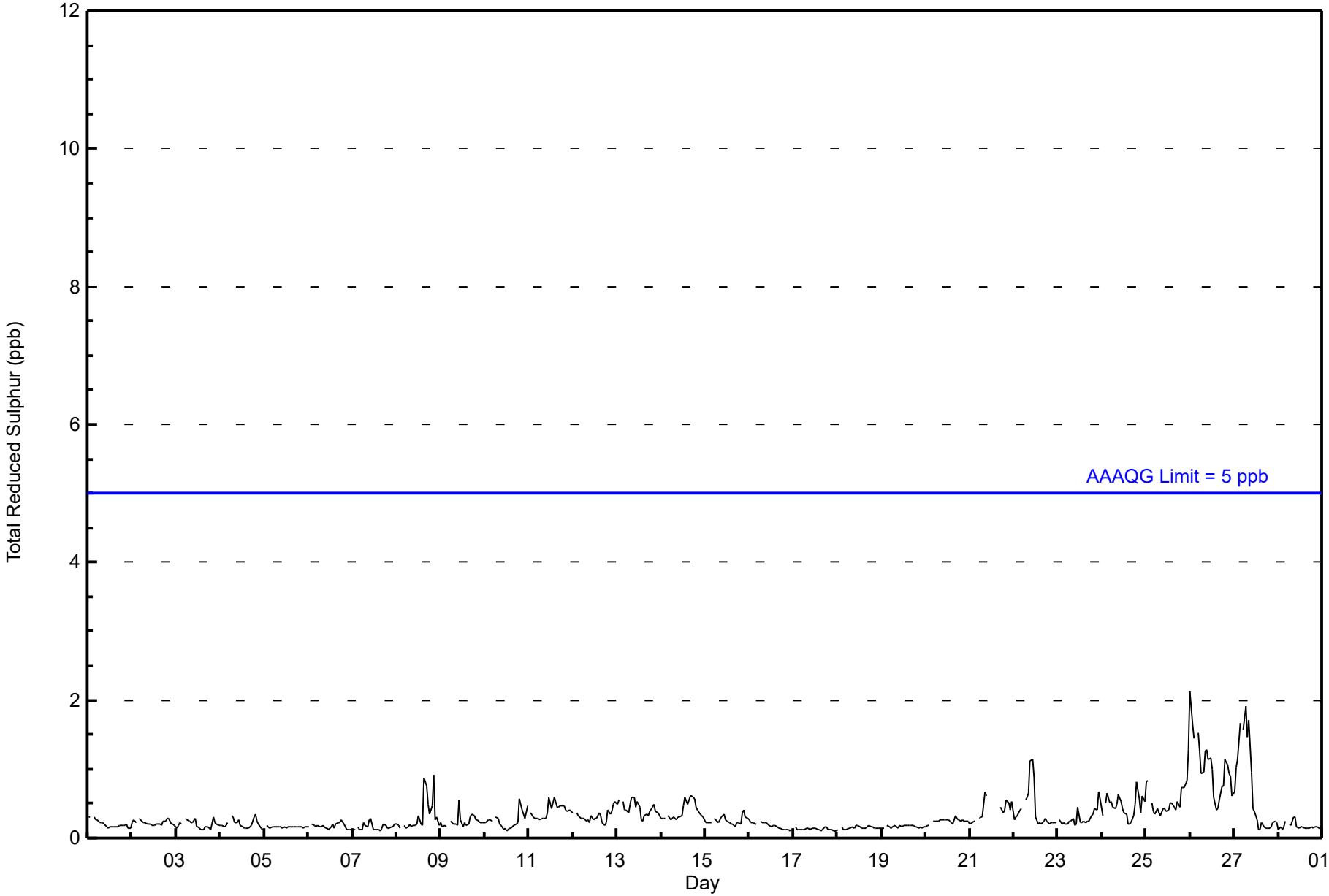
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Athabasca Valley - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	637	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: 637

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Athabasca Valley - February 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	7	8	18	17	102	55	19	28	54	31	15	12	22	88	144	637
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	7	8	18	17	102	55	19	28	54	31	15	12	22	88	144	637

Total Number of Valid Hours: 637

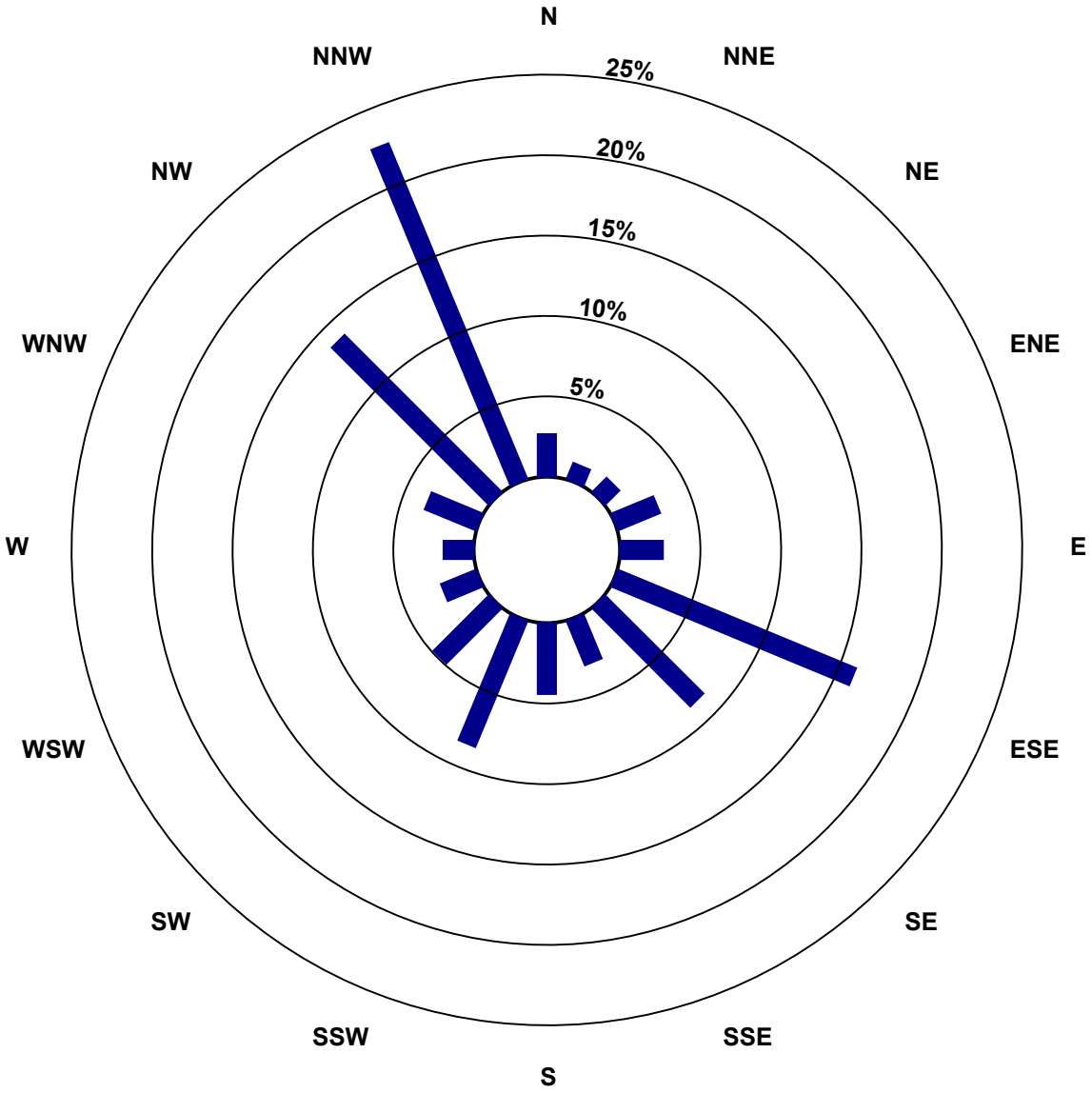
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Total Reduced Sulphur (TRS) - ppb

Athabasca Valley



Classes (ppb)

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

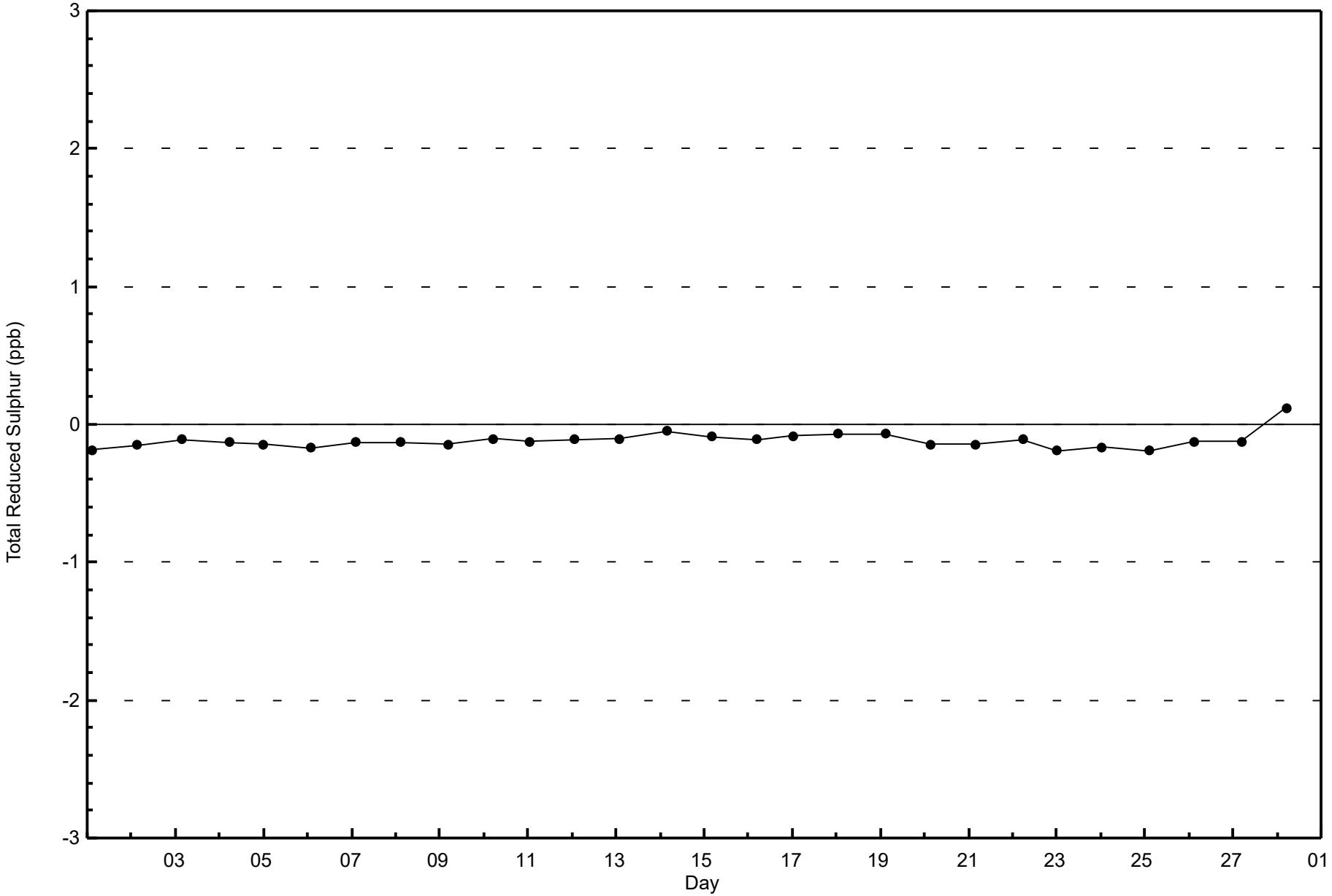
Total Number of Valid Hours: 637

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Athabasca Valley - February 2025

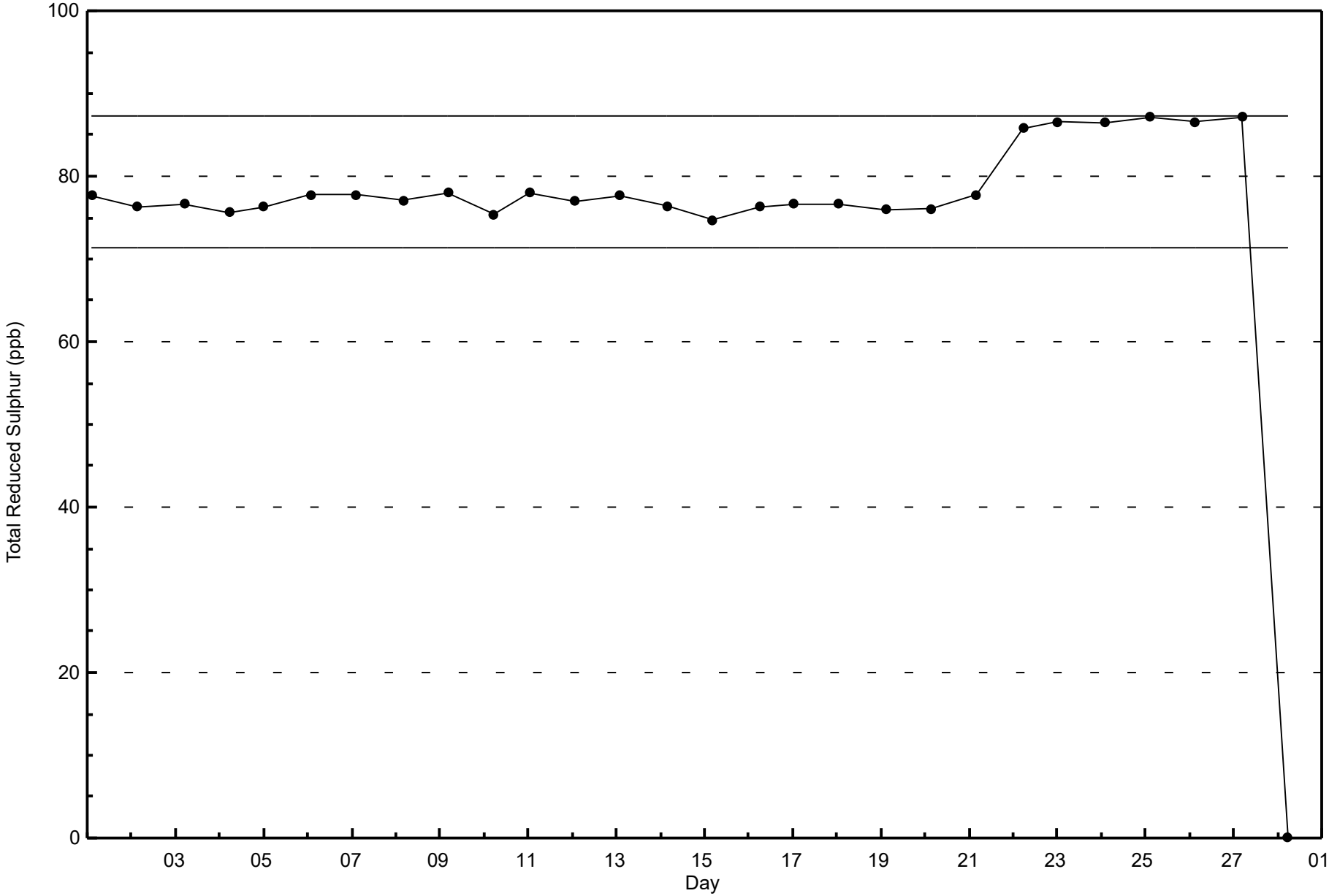


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Athabasca Valley - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Athabasca Valley - February 2025

Maximum Value: 3.0 ppm on Feb 21 16:00

Maximum Daily Average: 2.4 ppm on Feb 21

Minimum Value: 2.0 ppm on Feb 1 12:00

Minimum Daily Average: 2.0 ppm on Feb 1

Maximum Diurnal Average: 2.2 ppm at hour 9

Minimum Diurnal Average: 2.2 ppm at hour 15

Monthly Average: 2.19 ppm

Percentiles: P_1 = 2.0 P_{10} = 2.0 Q_1 = 2.1 Median = 2.2 Q_3 = 2.2 P_{90} = 2.3 P_{99} = 2.7

Hours in Service:	672
Hours of Data:	605
Hours of Missing Data:	67
Hours of Calibration:	31
Percent Operational Time:	94.6

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-Feb	2.1	Z	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1
2-Feb	2.0	2.0	Z	2.0	2.0	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	2.0	2.0	2.1
3-Feb	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	2.0	2.0	2.1	2.1	2.1	2.0	2.1	2.1
4-Feb	2.1	2.1	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	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.2
5-Feb	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.1
6-Feb	Z	2.1	2.1	2.1	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	2.4	2.4	2.4	2.2	2.3	2.3	2.1	2.3	2.4
7-Feb	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
8-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.1	2.1	2.1	--	2.3
9-Feb	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-Feb	2.2	2.2	2.3	2.2	Z	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.1	2.2	2.2	2.3
11-Feb	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	2.3	2.2	2.3
12-Feb	Z	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.3
13-Feb	2.3	Z	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.3	2.2	2.2	2.3
14-Feb	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.4	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4
15-Feb	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.3
16-Feb	2.2	2.1	2.1	2.2	Z	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
17-Feb	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	2.1	2.1	2.2	2.1	2.1	2.1	2.2
18-Feb	Z	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	C	C	C	C	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.2
19-Feb	2.2	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.2
20-Feb	2.1	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.4	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.2	2.4
21-Feb	2.2	2.2	2.2	Z	2.3	2.3	2.3	2.3	2.4	2.4	2.5	2.7	2.6	2.7	2.9	3.0	2.5	2.4	2.2	2.2	2.3	2.2	2.2	2.2	2.4	3.0
22-Feb	2.2	2.2	2.3	2.3	Z	2.5	2.6	2.5	2.6	2.8	2.8	2.6	2.2	2.2	2.2	2.1	2.2	2.2	2.6	2.2	2.2	2.2	2.3	2.3	2.4	2.8
23-Feb	2.4	2.2	2.2	2.3	2.2	Z	2.4	2.4	2.5	2.3	2.2	2.4	2.2	2.2	2.1	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.5
24-Feb	Z	2.2	2.3	2.5	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.4	2.3	2.3	2.5
25-Feb	2.5	Z	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.4	2.3	2.3	2.2	2.5
26-Feb	2.4	2.5	Z	2.6	2.5	2.4	2.3	2.4	2.5	2.4	2.5	2.5	2.5	2.3	2.2	2.2	2.2	2.2	2.2	2.4	2.4	2.3	2.4	2.3	2.4	2.6
27-Feb	2.4	2.4	2.5	Z	2.6	2.7	2.7	2.7	2.7	2.4	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	2.3	2.7
28-Feb	2.1	2.1	2.1	2.1	Z	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	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	
	2.5	2.5	2.5	2.6	2.6	2.7	2.7	2.7	2.7	2.8	2.8	2.7	2.6	2.7	2.9	3.0	2.5	2.4	2.6	2.4	2.4	2.4	2.4	2.3	Diurnal Maximum	

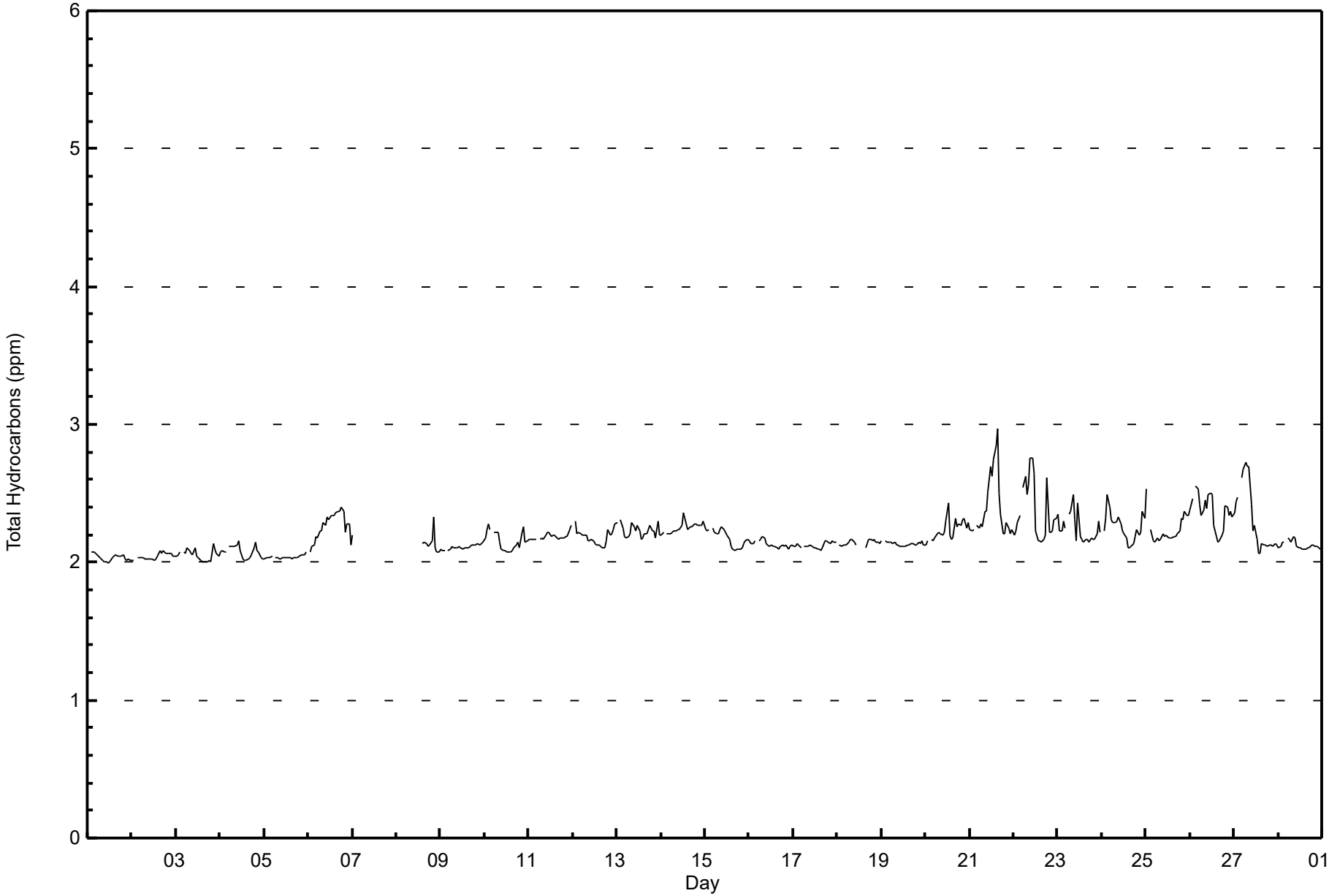
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Athabasca Valley - February 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	69	11.40	11.41
2.1 - 3.0	536	88.60	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 605

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Athabasca Valley - February 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	1	0	1	0	4	4	18	8	1	1	2	17	12	69
2.1 - 3.0	17	7	7	16	16	89	53	10	21	29	20	13	11	19	73	135	536
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	17	7	7	17	16	90	53	14	25	47	28	14	12	21	90	147	605

Total Number of Valid Hours: 605

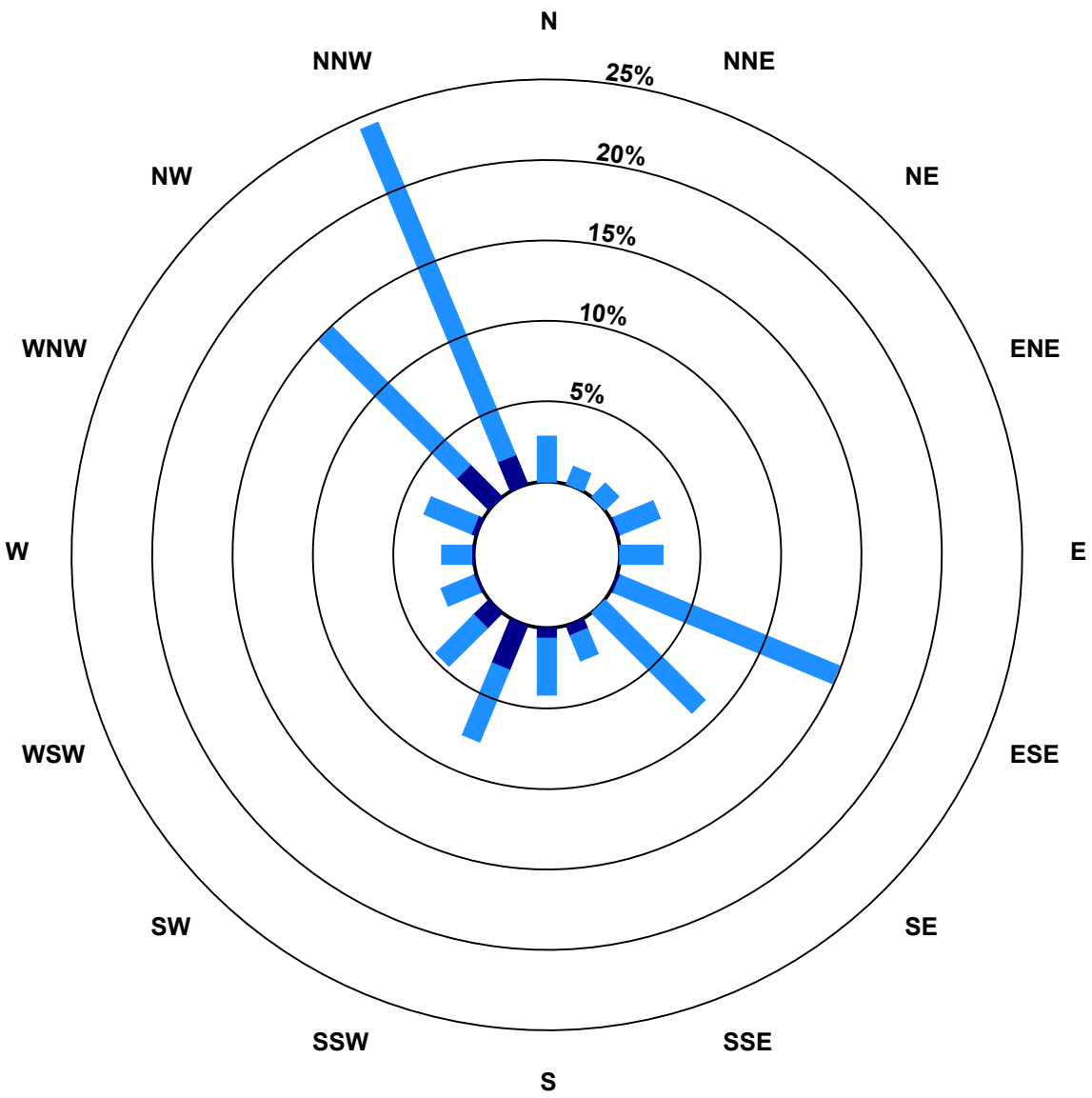
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Total Hydrocarbons (THC) - ppm

Athabasca Valley



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

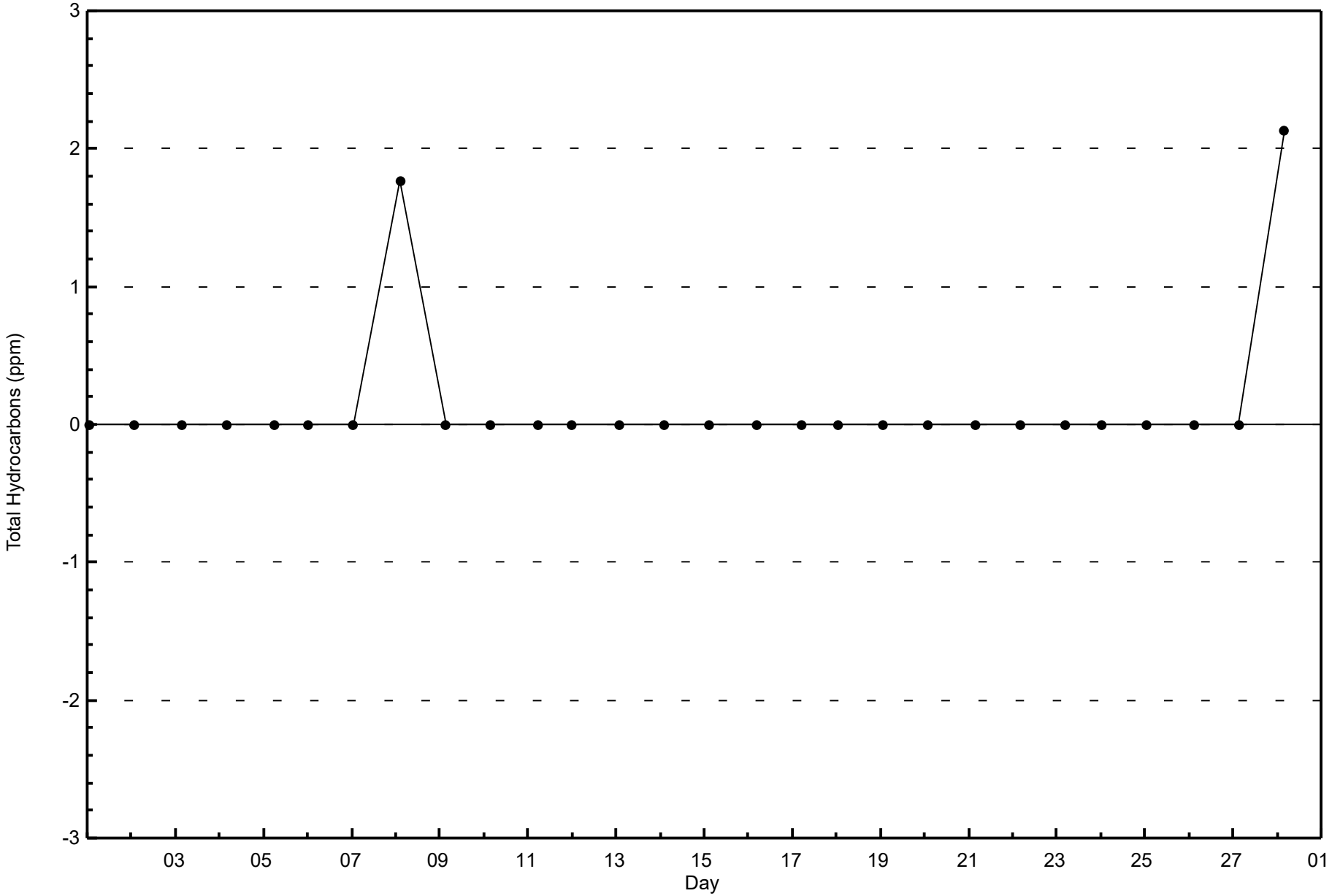
Total Number of Valid Hours: 605

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Athabasca Valley - February 2025

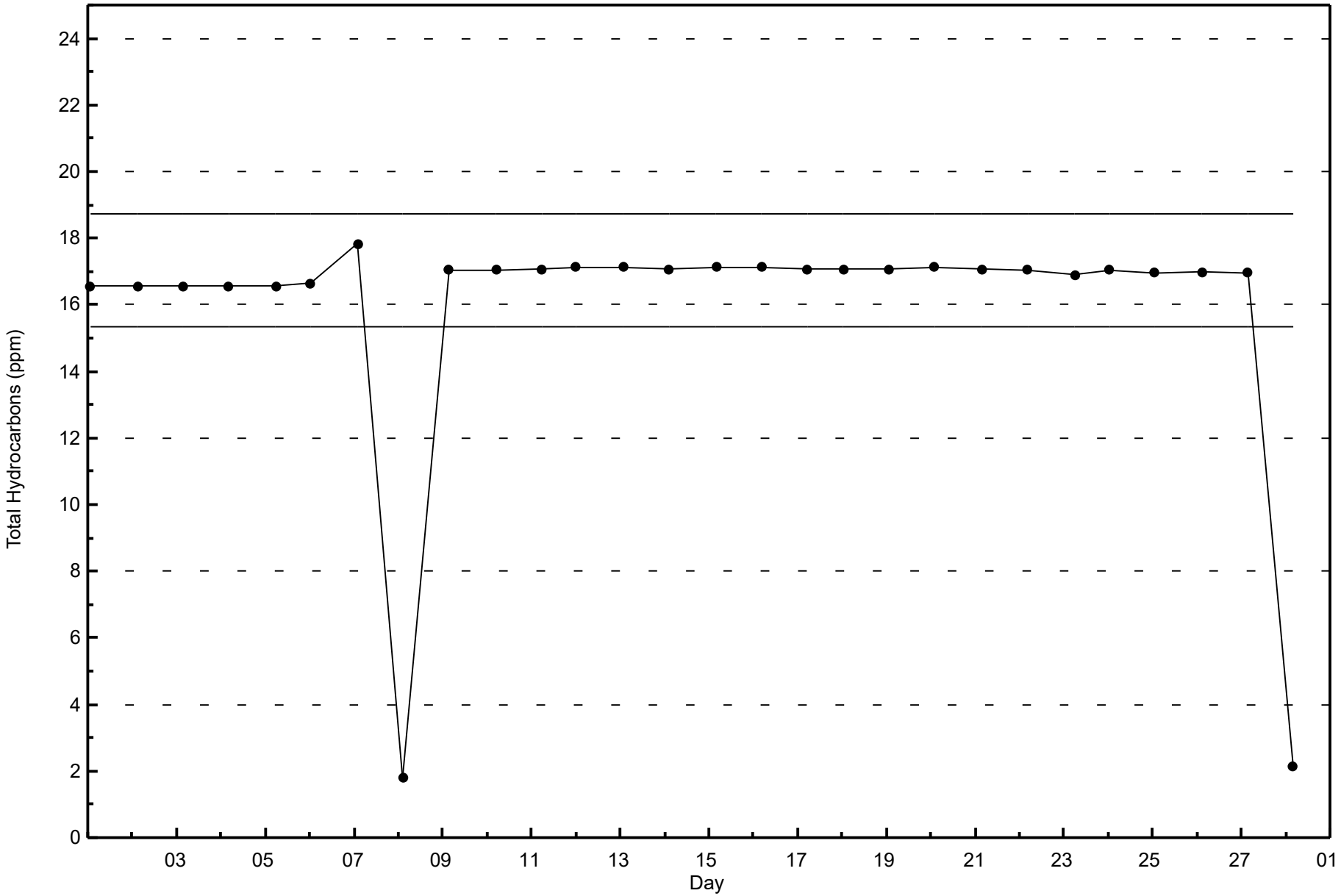


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Athabasca Valley - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Athabasca Valley - February 2025

Maximum Value: 0.434 ppm on Feb 22 19:00

Maximum Daily Average: 0.041 ppm on Feb 22

Minimum Value: 0.000 ppm on Feb 1 01:00

Minimum Daily Average: 0.000 ppm on Feb 1

Maximum Diurnal Average: 0.016 ppm at hour 19

Minimum Diurnal Average: 0.000 ppm at hour 3

Monthly Average: 0.005 ppm

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

Hours in Service:	672
Hours of Data:	605
Hours of Missing Data:	67
Hours of Calibration:	31
Percent Operational Time:	94.6

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-Feb	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	0.000	0.000	Z	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
5-Feb	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-Feb	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
7-Feb	0.000	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	0.000
8-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	--	0.000
9-Feb	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	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-Feb	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-Feb	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
15-Feb	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	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
17-Feb	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
18-Feb	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
19-Feb	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.073	0.206	0.000	0.000	0.001	0.032	0.003	0.000	0.000	0.040	0.027	0.000	0.000	0.017	0.206
21-Feb	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.083	0.115	0.173	0.106	0.080	0.000	0.000	0.000	0.000	0.000	0.000	0.025	0.173
22-Feb	0.000	0.000	0.000	0.000	Z	0.083	0.041	0.000	0.042	0.085	0.087	0.071	0.001	0.000	0.000	0.000	0.000	0.000	0.434	0.043	0.009	0.002	0.038	0.002	0.041	0.434
23-Feb	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.004	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.026
24-Feb	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.024	0.000	0.000	0.001	0.024
25-Feb	0.075	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.003	0.075
26-Feb	0.016	0.087	Z	0.089	0.043	0.008	0.000	0.006	0.010	0.012	0.049	0.082	0.085	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.030	0.007	0.023	0.089
27-Feb	0.025	0.010	0.000	Z	0.105	0.124	0.130	0.126	0.115	0.060	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.030	0.130
28-Feb	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	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
	0.005	0.004	0.000	0.004	0.007	0.010	0.007	0.005	0.006	0.006	0.005	0.010	0.012	0.004	0.004	0.006	0.005	0.003	0.016	0.002	0.002	0.002	0.003	0.000	Diurnal Average	
	0.075	0.087	0.000	0.089	0.105	0.124	0.130	0.126	0.115	0.085	0.087	0.082	0.206	0.083	0.115	0.173	0.106	0.080	0.434	0.043	0.040	0.027	0.038	0.007	Diurnal Maximum	

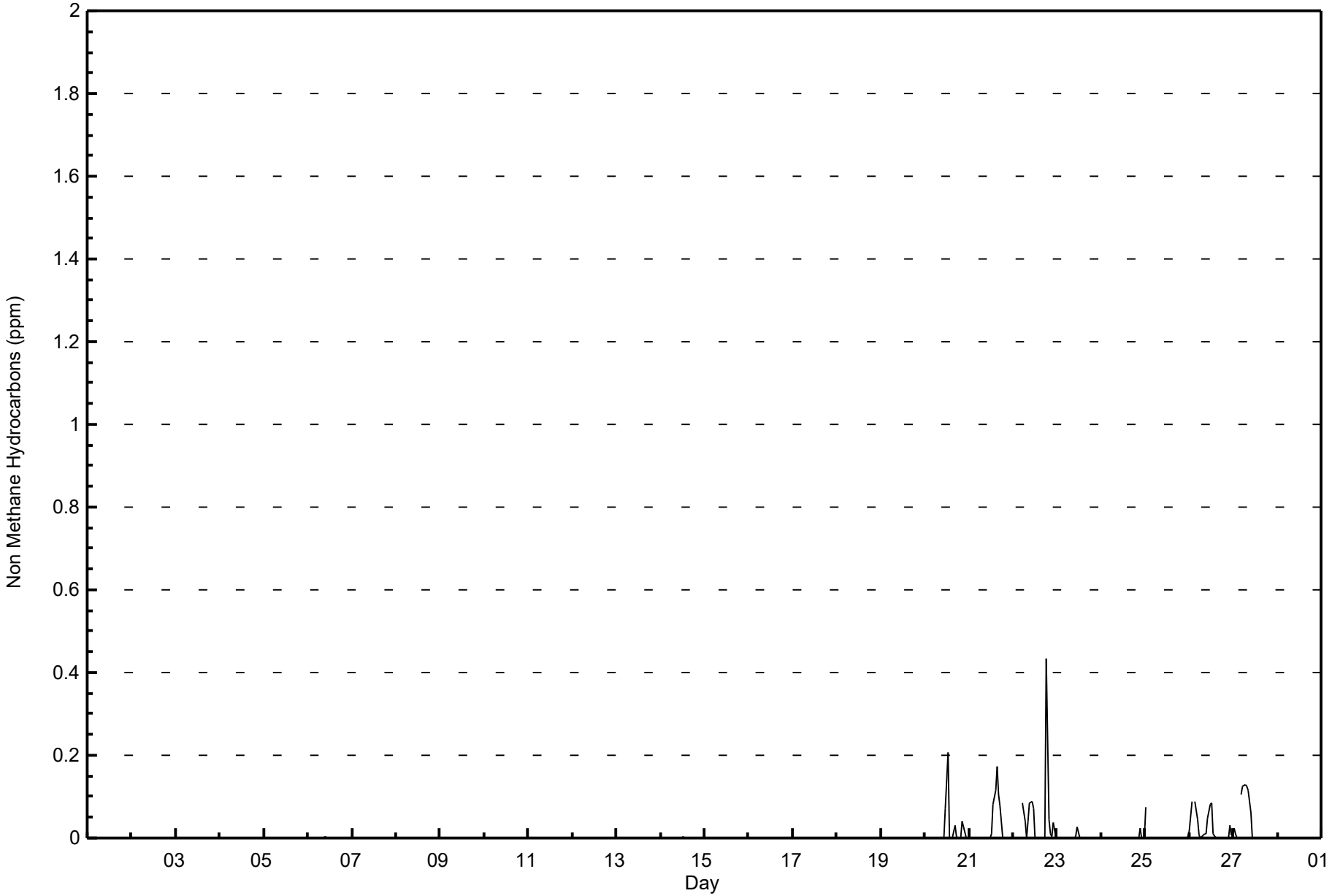
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Athabasca Valley - February 2025



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

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	559	92.40	92.40
0.006 - 0.05	23	3.80	96.20
0.06 - 0.1	20	3.31	99.50
> 0.1	3	0.50	100.00

Total Number of Valid Hours: 605

Total Number of Hours: 672



Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Athabasca Valley - February 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	14	6	6	17	14	88	46	12	25	47	28	13	12	21	82	128	559
0.006 - 0.05	1	0	1	0	2	1	5	0	0	0	0	0	0	0	4	9	23
0.06 - 0.1	2	1	0	0	0	0	1	2	0	0	0	1	0	0	4	9	20
> 0.1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	3
Totals	17	7	7	17	16	90	53	14	25	47	28	14	12	21	90	147	605

Total Number of Valid Hours: 605

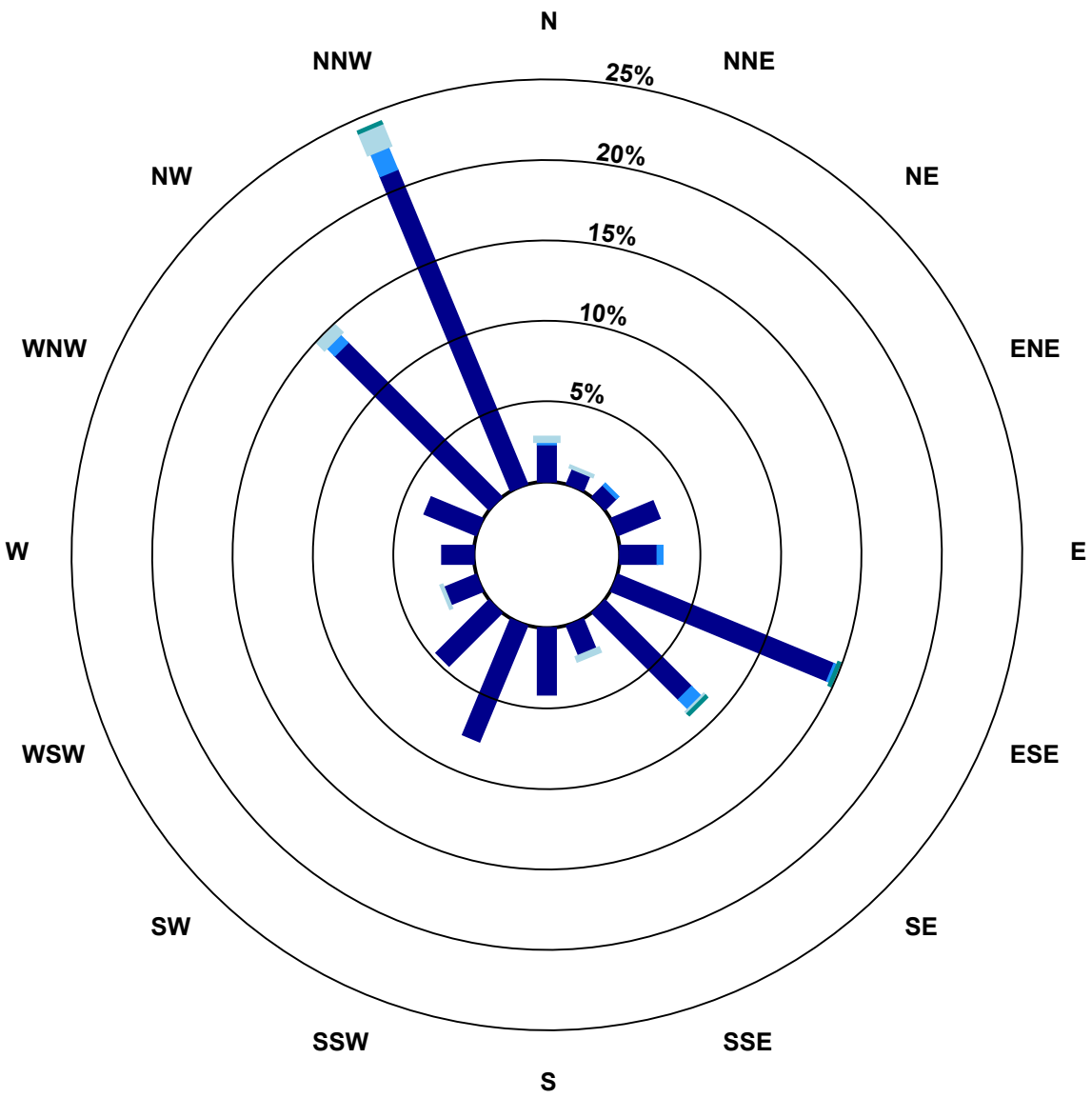
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Non Methane Hydrocarbons (NMHC) - ppm

Athabasca Valley



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

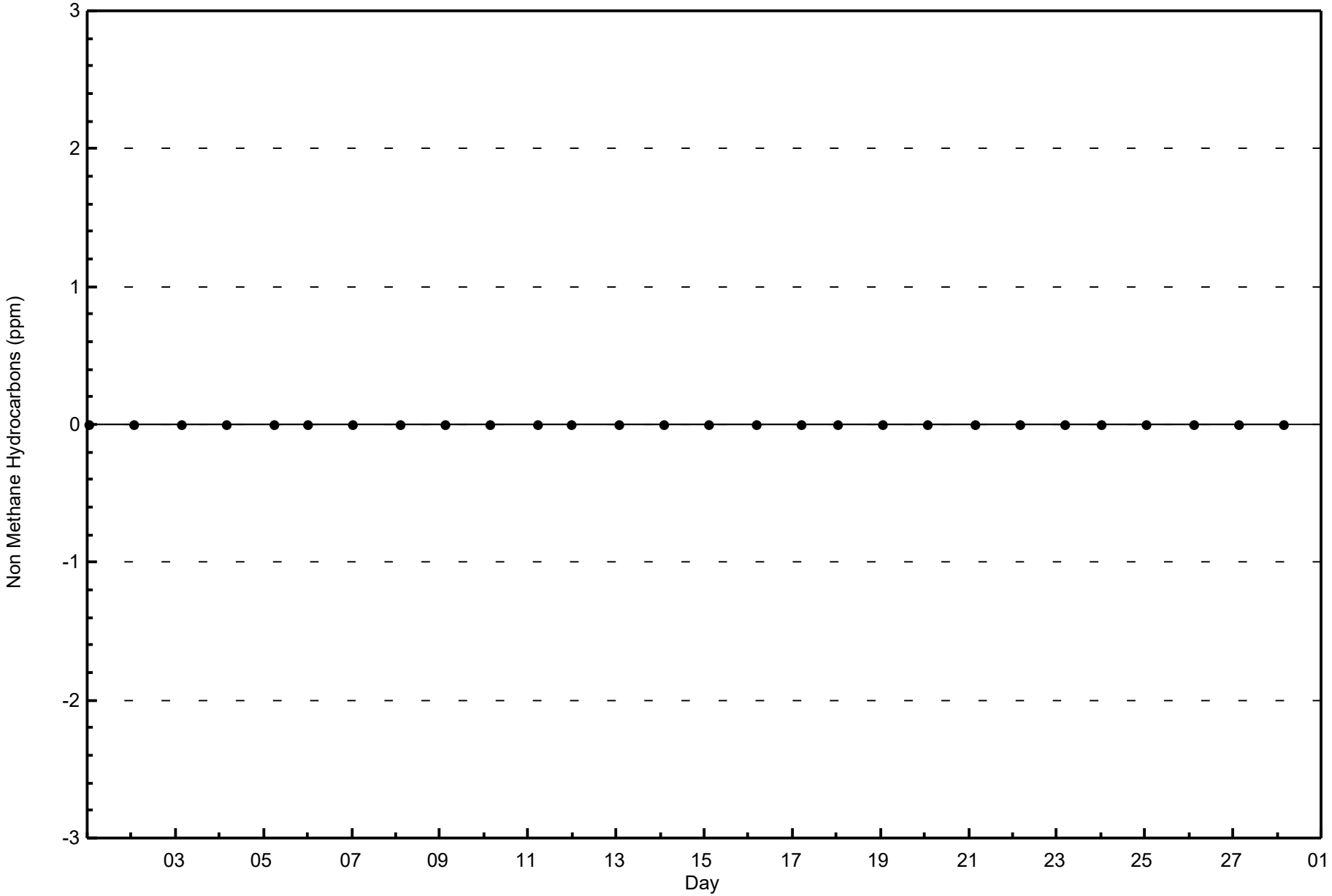
Total Number of Valid Hours: 605

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Athabasca Valley - February 2025

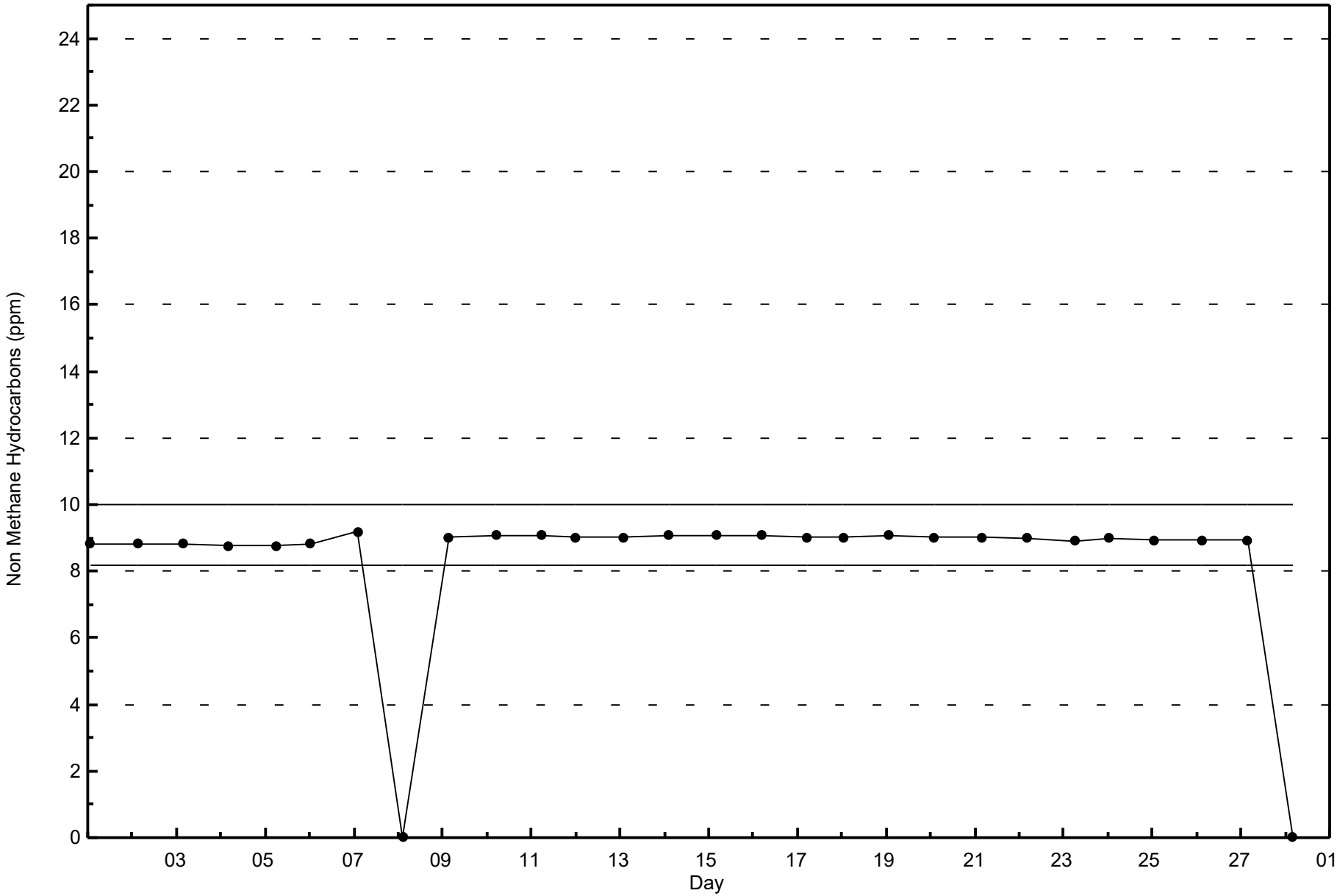


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Athabasca Valley - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Athabasca Valley - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 2.8 ppm on Feb 21 16:00
Maximum Daily Average: 2.4 ppm on Feb 21

Minimum Value: 2.0 ppm on Feb 1 12:00
Minimum Daily Average: 2.0 ppm on Feb 1
Maximum Diurnal Average: 2.2 ppm at hour 9
Minimum Diurnal Average: 2.1 ppm at hour 17
Monthly Average: 2.18 ppm
Percentiles: P_1 = 2.0 P_{10} = 2.0 Q_1 = 2.1 Median = 2.2 Q_3 = 2.2 P_{90} = 2.3 P_{99} = 2.6

Hours in Service:	672
Hours of Data:	605
Hours of Missing Data:	67
Hours of Calibration:	31
Percent Operational Time:	94.6

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-Feb	2.1	Z	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1
2-Feb	2.0	2.0	Z	2.0	2.0	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	2.0	2.0	2.1
3-Feb	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	2.0	2.0	2.1	2.1	2.1	2.0	2.1	2.1
4-Feb	2.1	2.1	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	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.2
5-Feb	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.1
6-Feb	Z	2.1	2.1	2.1	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	2.4	2.4	2.4	2.2	2.3	2.3	2.1	2.3	2.4
7-Feb	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
8-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.1	2.1	2.1	--	2.3
9-Feb	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-Feb	2.2	2.2	2.3	2.2	Z	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.1	2.2	2.2	2.3
11-Feb	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	2.3	2.2	2.3
12-Feb	Z	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.3
13-Feb	2.3	Z	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.3	2.2	2.2	2.3
14-Feb	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.4	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4
15-Feb	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.3
16-Feb	2.2	2.1	2.1	2.2	Z	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
17-Feb	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	2.1	2.1	2.2	2.1	2.1	2.1	2.2
18-Feb	Z	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	C	C	C	C	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.2
19-Feb	2.2	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.2
20-Feb	2.1	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	2.3	2.3	2.3	2.2	2.3	2.2	2.3
21-Feb	2.2	2.2	2.2	Z	2.3	2.3	2.3	2.3	2.4	2.4	2.5	2.7	2.6	2.7	2.7	2.8	2.4	2.3	2.2	2.2	2.3	2.2	2.2	2.2	2.4	2.8
22-Feb	2.2	2.2	2.3	2.3	Z	2.5	2.6	2.5	2.5	2.7	2.7	2.6	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.7
23-Feb	2.4	2.2	2.2	2.3	2.2	Z	2.4	2.4	2.5	2.3	2.1	2.4	2.2	2.2	2.1	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.5
24-Feb	Z	2.2	2.3	2.5	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.4	2.3	2.3	2.5
25-Feb	2.5	Z	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.4	2.3	2.3	2.2	2.5
26-Feb	2.4	2.4	Z	2.5	2.5	2.4	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.2	2.2	2.2	2.2	2.2	2.4	2.4	2.3	2.3	2.3	2.3	2.5
27-Feb	2.3	2.4	2.5	Z	2.5	2.6	2.6	2.6	2.6	2.4	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	2.3	2.6
28-Feb	2.1	2.1	2.1	2.1	Z	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	Diurnal Average	
	2.5	2.4	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.7	2.7	2.7	2.6	2.7	2.7	2.8	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	Diurnal Maximum	

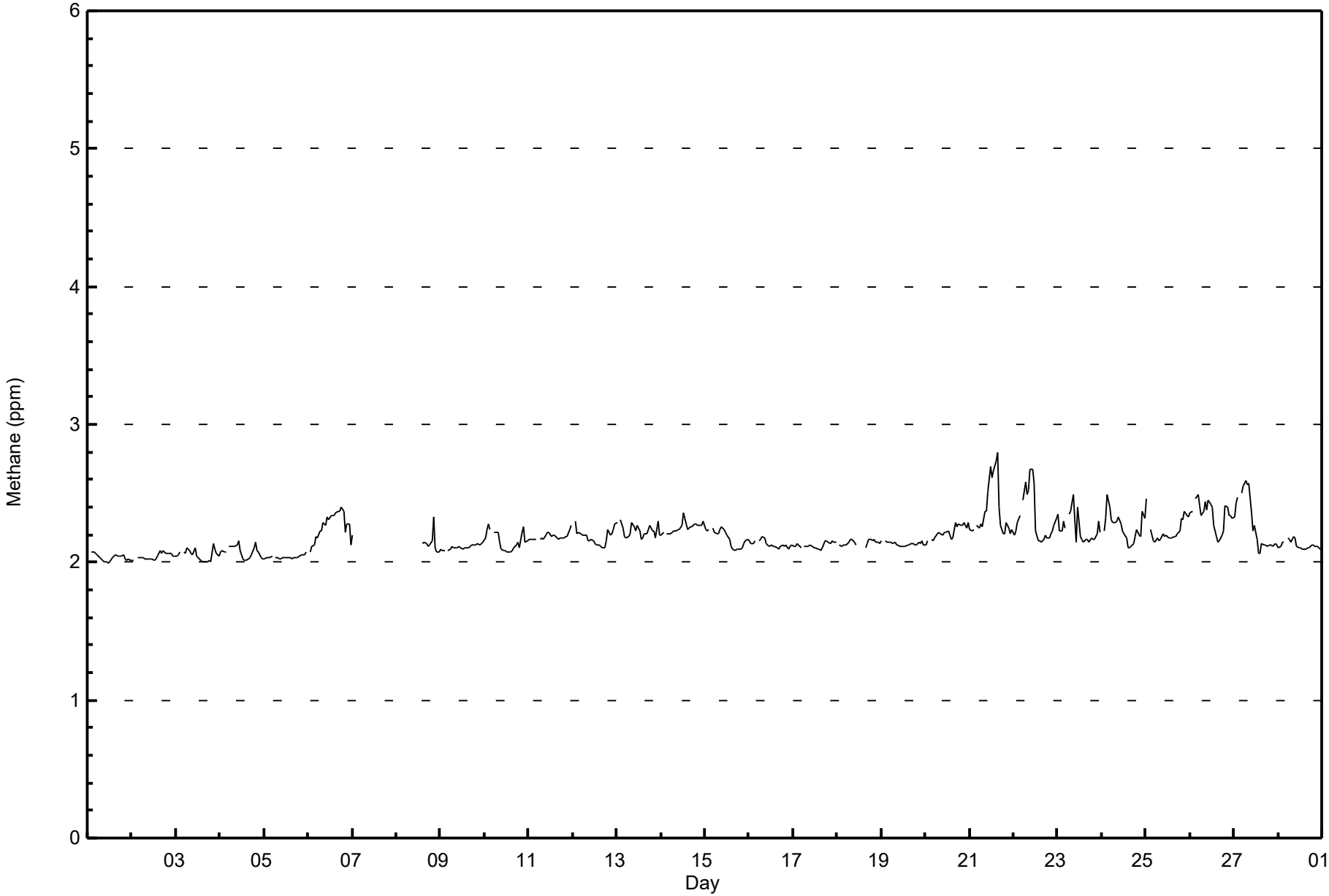
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Athabasca Valley - February 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	69	11.40	11.41
2.1 - 3.0	536	88.60	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 605

Total Number of Hours: 672

Methane (CH_4) - ppm
Athabasca Valley - February 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	1	0	1	0	4	4	18	8	1	1	2	17	12	69
2.1 - 3.0	17	7	7	16	16	89	53	10	21	29	20	13	11	19	73	135	536
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	17	7	7	17	16	90	53	14	25	47	28	14	12	21	90	147	605

Total Number of Valid Hours: 605

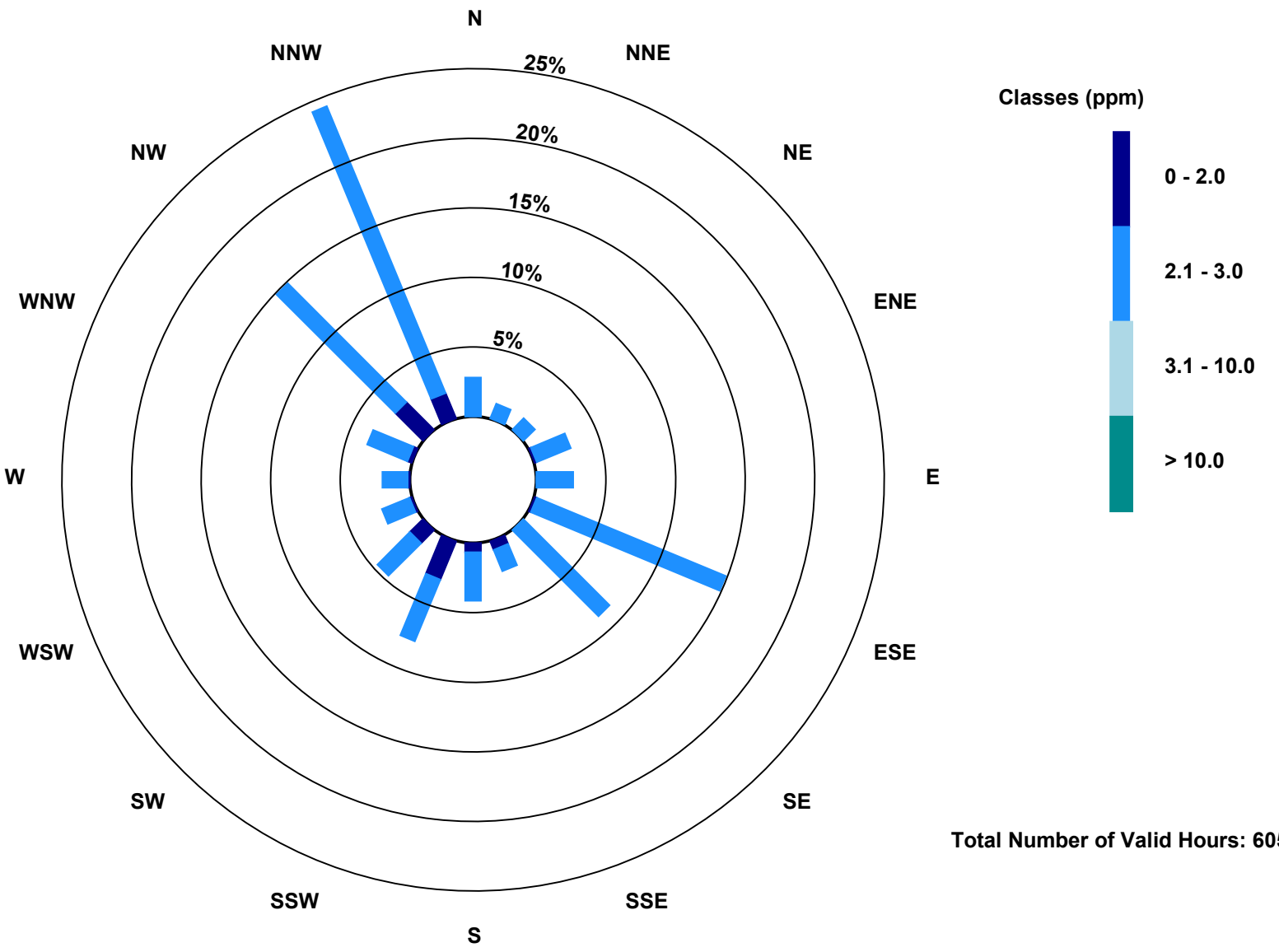
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Methane (CH_4) - ppm

Athabasca Valley



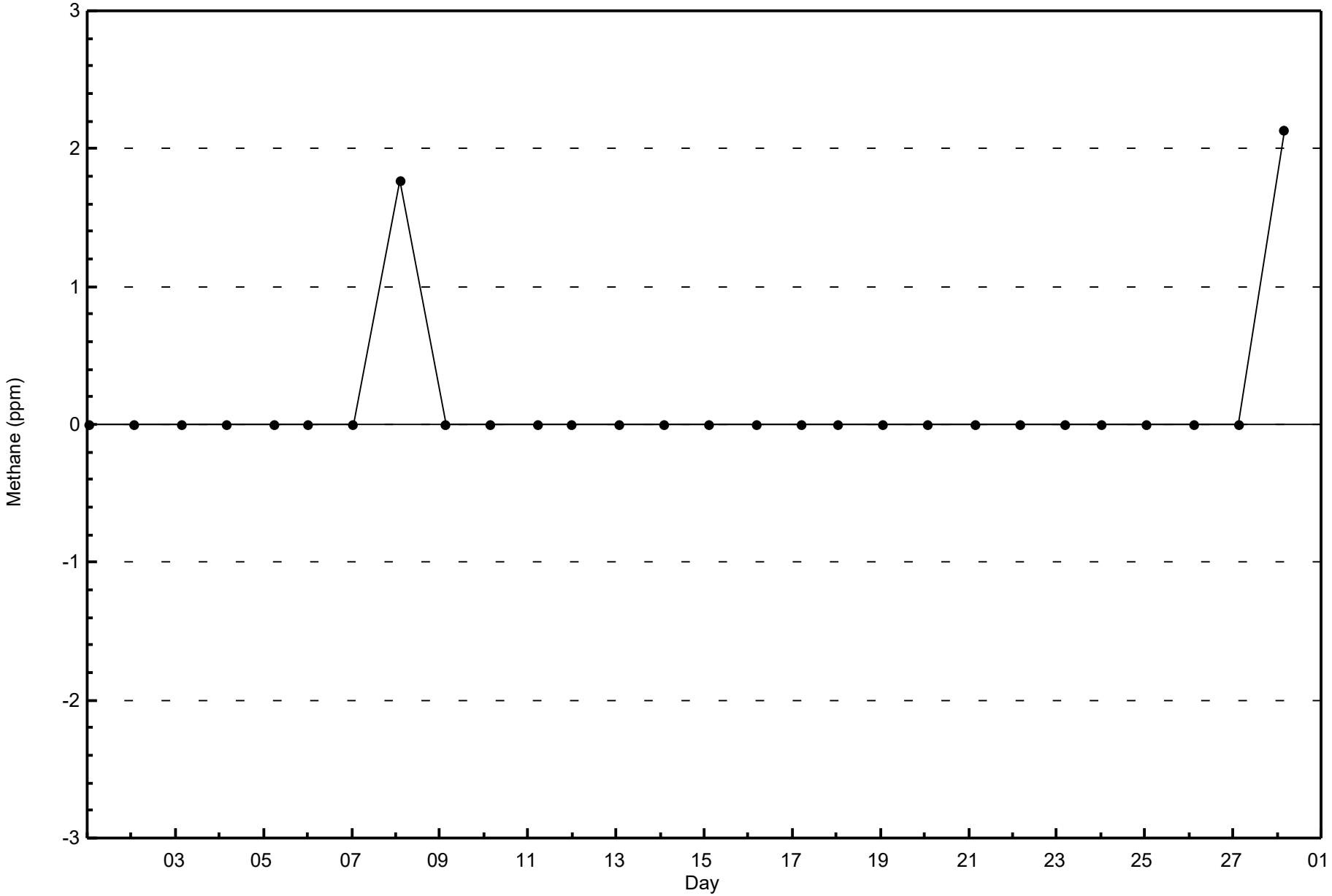
Total Number of Valid Hours: 605

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Athabasca Valley - February 2025

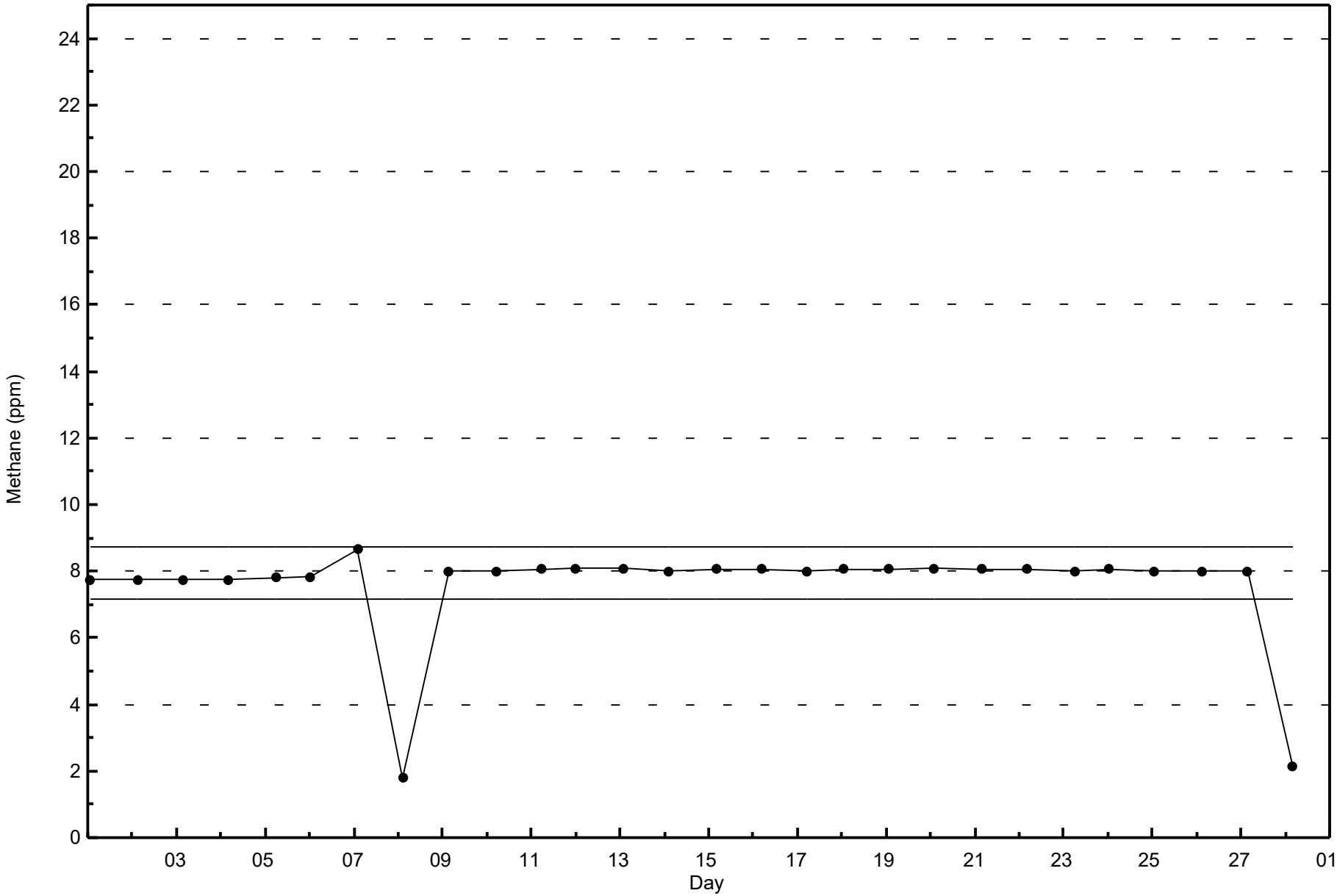


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Athabasca Valley - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Athabasca Valley - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 38.4 ppb on Feb 27 15:00 Maximum Daily Average: 32.6 ppb on Feb 5

Minimum Value: 1.4 ppb on Feb 15 22:00 Minimum Daily Average: 8.8 ppb on Feb 14
Maximum Diurnal Average: 28.4 ppb at hour 15 Minimum Diurnal Average: 14.9 ppb at hour 8
Monthly Average: 20.19 ppb Percentiles: P_1 = 2.3 P_{10} = 6.9 Q_1 = 13.4 Median = 21.0 Q_3 = 27.4 P_{90} = 32.0 P_{99} = 34.9

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	21.9	23.5	24.9	Z	26.7	25.7	27.2	29.3	31.5	33.2	34.4	34.4	33.0	29.1	28.1	27.6	26.3	22.5	20.7	19.6	22.6	23.4	23.8	24.1	26.7	34.4
2-Feb	24.0	24.6	25.5	24.8	Z	26.9	26.6	26.4	25.6	26.4	26.7	27.4	27.4	27.1	24.7	23.8	20.4	18.1	15.7	18.1	18.2	22.4	24.9	22.3	23.8	27.4
3-Feb	20.0	18.3	17.1	17.0	15.4	Z	7.0	8.0	10.3	14.2	13.3	22.6	26.2	29.8	29.6	30.8	26.6	19.5	21.8	27.4	4.8	6.0	9.7	14.6	17.8	30.8
4-Feb	Z	8.6	12.8	12.1	7.1	6.6	4.1	3.7	6.4	12.5	14.6	25.2	33.4	34.9	34.9	33.2	27.7	20.5	10.0	5.2	14.8	17.6	30.2	33.1	17.8	34.9
5-Feb	33.9	Z	33.9	33.8	29.8	30.6	26.7	30.5	33.1	33.2	34.4	34.9	34.6	33.9	34.6	34.5	35.4	32.8	32.6	32.7	32.4	30.5	30.7	31.3	32.6	35.4
6-Feb	33.2	33.2	Z	33.1	31.5	28.2	31.1	31.8	32.0	34.9	34.3	34.9	35.6	35.4	35.0	34.4	31.3	27.6	15.2	19.5	26.7	32.0	31.7	32.2	31.1	35.6
7-Feb	33.3	32.4	32.0	Z	32.7	27.3	9.7	12.2	13.5	10.7	17.8	31.6	32.7	32.7	34.6	36.0	33.9	6.1	19.6	23.3	24.7	18.1	21.1	12.4	23.8	36.0
8-Feb	9.6	11.2	17.1	15.5	Z	20.3	13.8	9.9	14.6	17.9	20.6	20.7	22.6	22.8	25.1	22.0	12.4	5.4	5.7	4.7	3.0	30.9	33.0	31.4	17.0	33.0
9-Feb	30.6	31.4	30.1	28.1	25.7	Z	14.7	16.2	13.6	19.0	17.0	21.7	27.2	28.6	27.7	24.8	18.7	8.0	9.8	12.3	14.8	15.2	13.4	12.1	20.0	31.4
10-Feb	Z	5.4	3.2	2.5	3.1	2.5	2.2	2.7	12.4	26.9	31.8	32.4	33.3	33.9	33.0	30.6	23.5	22.6	17.8	4.6	2.7	9.6	21.9	18.9	16.4	33.9
11-Feb	20.0	Z	17.4	18.9	17.7	15.7	15.6	13.6	17.9	17.0	18.0	19.4	26.2	26.2	25.6	26.4	24.5	16.7	9.4	6.5	10.1	8.6	7.5	9.1	16.9	26.4
12-Feb	7.0	8.1	Z	13.2	13.2	13.4	11.4	10.5	14.7	16.9	14.7	17.3	19.9	21.3	21.5	20.7	22.4	24.6	19.8	9.7	16.8	16.7	17.6	15.3	15.9	24.6
13-Feb	15.2	14.6	14.7	Z	20.0	22.6	21.0	12.2	8.2	14.8	19.4	21.7	24.1	27.2	27.0	23.4	18.0	10.3	5.3	9.8	4.8	9.9	6.3	8.9	15.6	27.2
14-Feb	10.0	7.5	6.7	6.6	Z	7.3	4.7	4.3	7.7	10.1	13.0	14.2	14.4	17.4	18.9	17.4	9.8	3.2	2.3	4.0	4.2	6.2	5.6	7.6	8.8	18.9
15-Feb	12.2	9.9	8.4	7.9	4.3	Z	6.2	4.7	6.7	10.4	13.1	15.9	18.7	19.6	26.6	29.3	30.4	21.4	16.9	18.3	2.9	1.4	11.4	6.7	13.2	30.4
16-Feb	Z	15.1	13.6	14.4	15.8	16.5	13.4	11.1	14.0	22.7	24.1	25.1	26.4	27.5	29.0	30.4	30.5	26.6	23.1	21.1	16.1	15.0	14.2	14.9	20.0	30.5
17-Feb	15.4	Z	16.2	17.4	20.4	21.9	22.3	21.9	22.7	23.3	23.3	24.4	25.8	26.9	28.8	28.7	25.3	15.5	15.4	22.3	20.3	18.4	23.3	21.7	21.8	28.8
18-Feb	21.6	20.4	Z	21.3	20.2	16.9	14.3	14.3	14.2	17.7	20.8	23.4	24.7	25.3	26.0	27.9	25.4	19.5	21.9	23.4	25.4	27.3	28.9	29.0	22.2	29.0
19-Feb	27.9	25.4	24.6	Z	24.9	23.8	23.2	22.3	24.7	26.4	27.3	29.0	30.9	32.1	32.9	33.8	31.7	28.9	30.4	29.6	29.6	30.4	33.3	34.3	28.6	34.3
20-Feb	34.0	33.0	32.9	31.4	Z	28.8	24.1	26.0	25.4	25.3	25.2	25.7	26.6	29.0	31.3	30.2	15.2	10.9	11.1	14.7	14.1	15.5	13.4	11.8	23.3	34.0
21-Feb	16.3	15.5	18.5	21.0	19.1	Z	12.3	16.5	11.3	11.0	10.5	12.0	14.0	14.2	11.6	8.6	14.4	19.9	28.1	27.5	24.6	25.0	28.1	25.2	17.6	28.1
22-Feb	Z	26.2	22.4	17.9	15.8	8.3	4.0	5.1	7.3	8.9	13.3	16.7	24.1	25.8	26.3	26.8	20.3	9.4	18.2	25.3	23.6	19.8	20.2	22.4	17.7	26.8
23-Feb	21.1	Z	23.6	21.7	21.3	18.3	8.4	9.5	9.3	24.7	33.0	21.0	28.6	32.0	33.8	34.2	33.2	33.1	30.8	27.5	29.3	26.1	21.4	19.2	24.4	34.2
24-Feb	19.3	17.3	Z	6.9	10.4	17.4	20.7	20.8	19.4	18.3	18.6	20.9	21.8	21.8	27.8	27.7	27.9	21.7	9.3	4.1	8.5	7.9	3.0	9.1	16.5	27.9
25-Feb	2.5	7.9	22.3	Z	27.9	29.1	25.3	26.2	27.2	26.5	27.0	27.0	27.7	27.7	27.4	25.6	19.7	16.5	12.2	12.8	12.4	4.6	8.9	11.3	19.8	29.1
26-Feb	6.4	2.6	1.8	1.9	Z	3.1	3.9	4.0	6.7	10.3	13.6	15.4	16.4	22.1	24.8	23.3	17.9	18.8	14.6	7.8	6.3	6.9	9.5	8.9	10.7	24.8
27-Feb	9.2	6.6	5.3	3.3	2.5	Z	1.7	2.1	4.1	10.0	C	C	C	C	38.4	29.2	28.7	30.0	30.6	30.4	30.6	30.0	29.5	28.5	18.5	38.4
28-Feb	Z	30.3	24.3	25.3	23.8	22.2	22.4	20.6	18.0	18.5	27.0	29.3	30.3	32.2	31.1	32.0	29.9	29.6	25.9	24.7	19.8	26.6	29.0	30.5	26.2	32.2
	19.3	17.9	18.7	17.2	18.7	18.8	14.9	14.9	16.2	19.3	21.7	23.9	26.2	27.3	28.4	27.6	24.3	19.3	17.6	17.4	16.6	17.9	19.7	19.5	Diurnal Average	
	34.0	33.2	33.9	33.8	32.7	30.6	31.1	31.8	33.1	34.9	34.4	34.9	35.6	35.4	38.4	36.0	35.4	33.1	32.6	32.7	32.4	32.0	33.3	34.3	Diurnal Maximum	

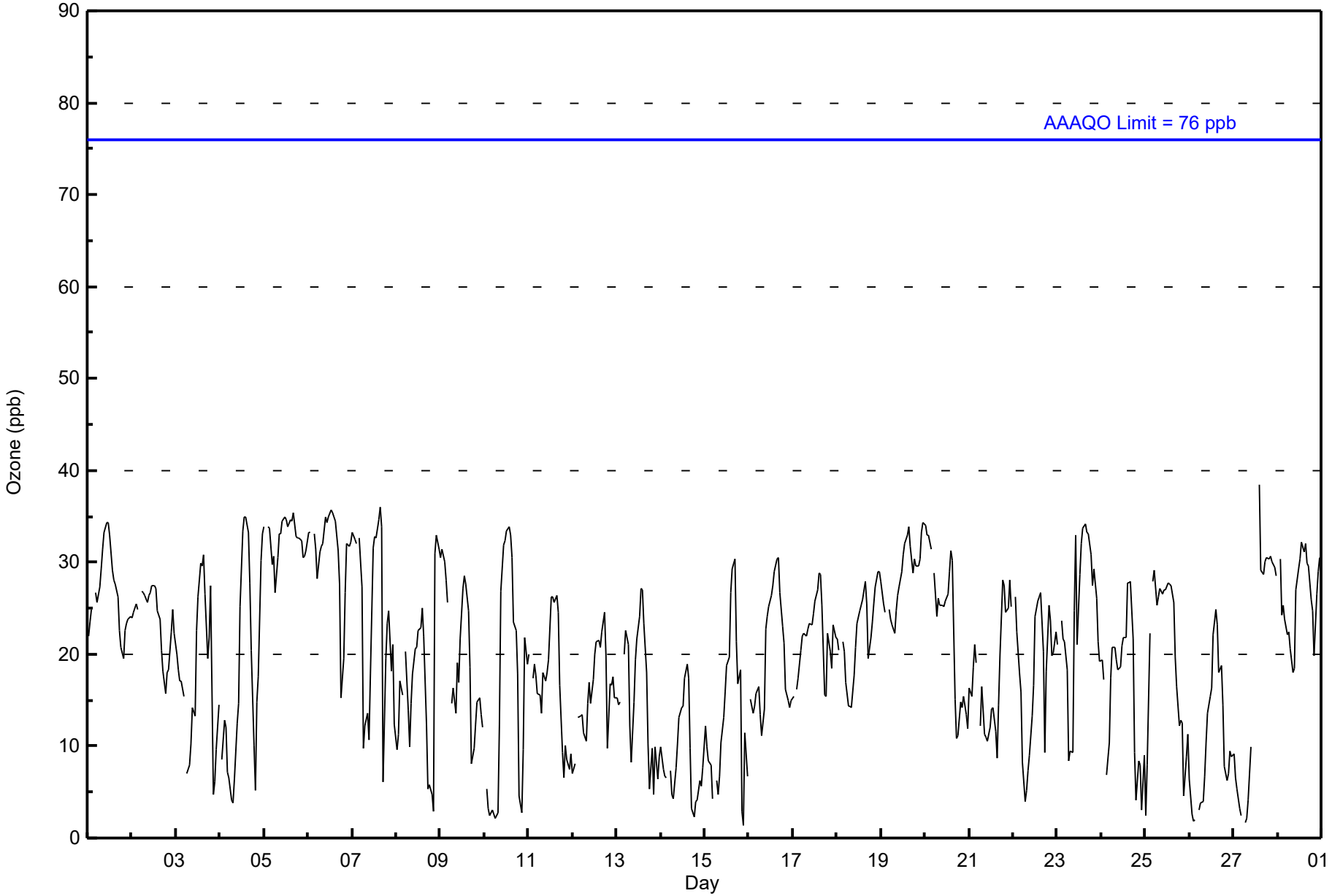
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Athabasca Valley - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	308	48.13	48.13
21 - 50	332	51.88	100.00
51 - 82	0	0.00	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 640

Total Number of Hours: 672

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	13	7	6	15	14	34	28	9	15	11	18	12	6	11	37	72	308
21 - 50	4	0	1	2	4	70	29	9	14	39	12	3	5	8	56	76	332
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	7	7	17	18	104	57	18	29	50	30	15	11	19	93	148	640

Total Number of Valid Hours: 640

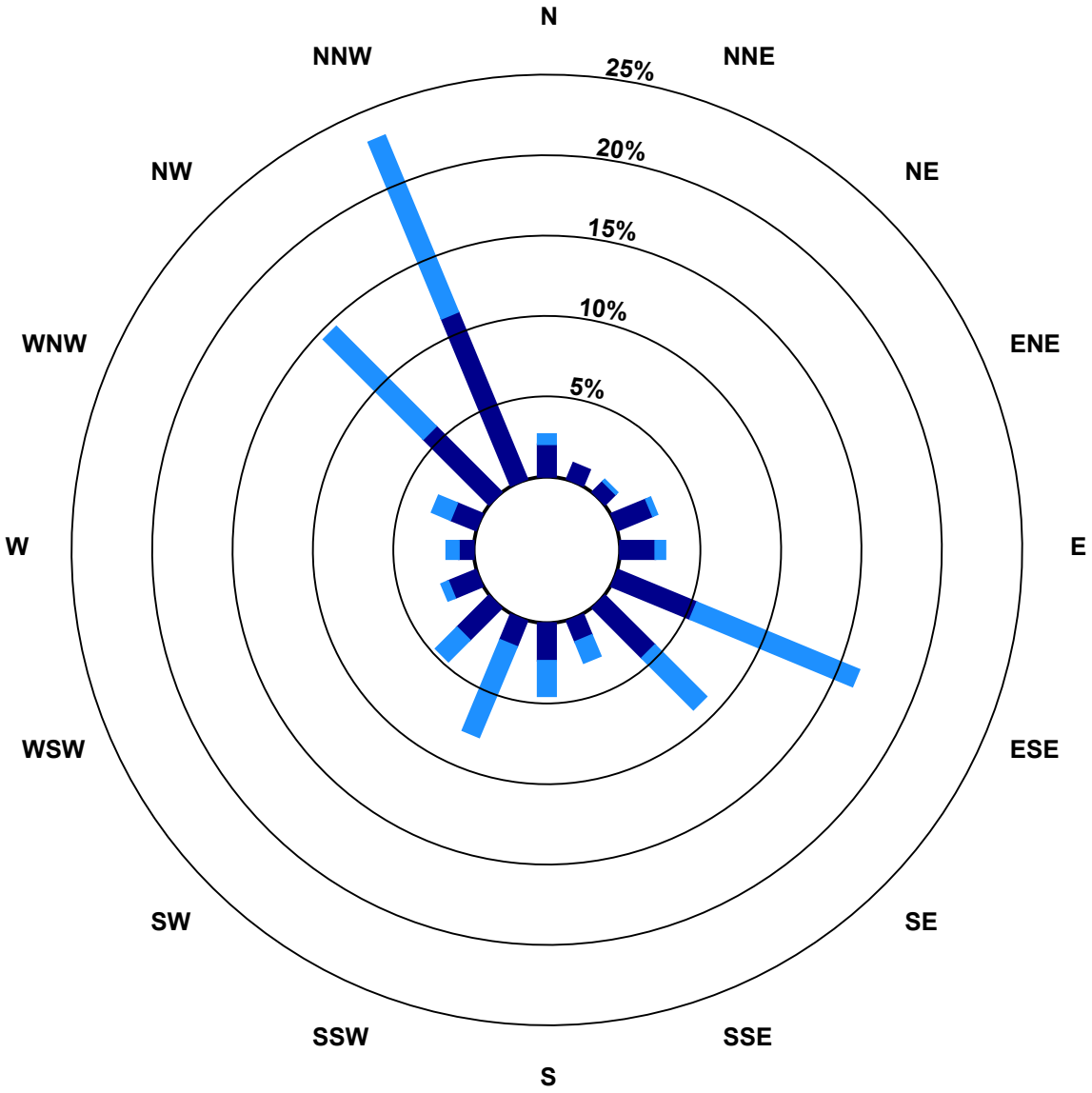
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Ozone (O_3) - ppb

Athabasca Valley



Classes (ppb)

0 - 20

21 - 50

51 - 82

> 83

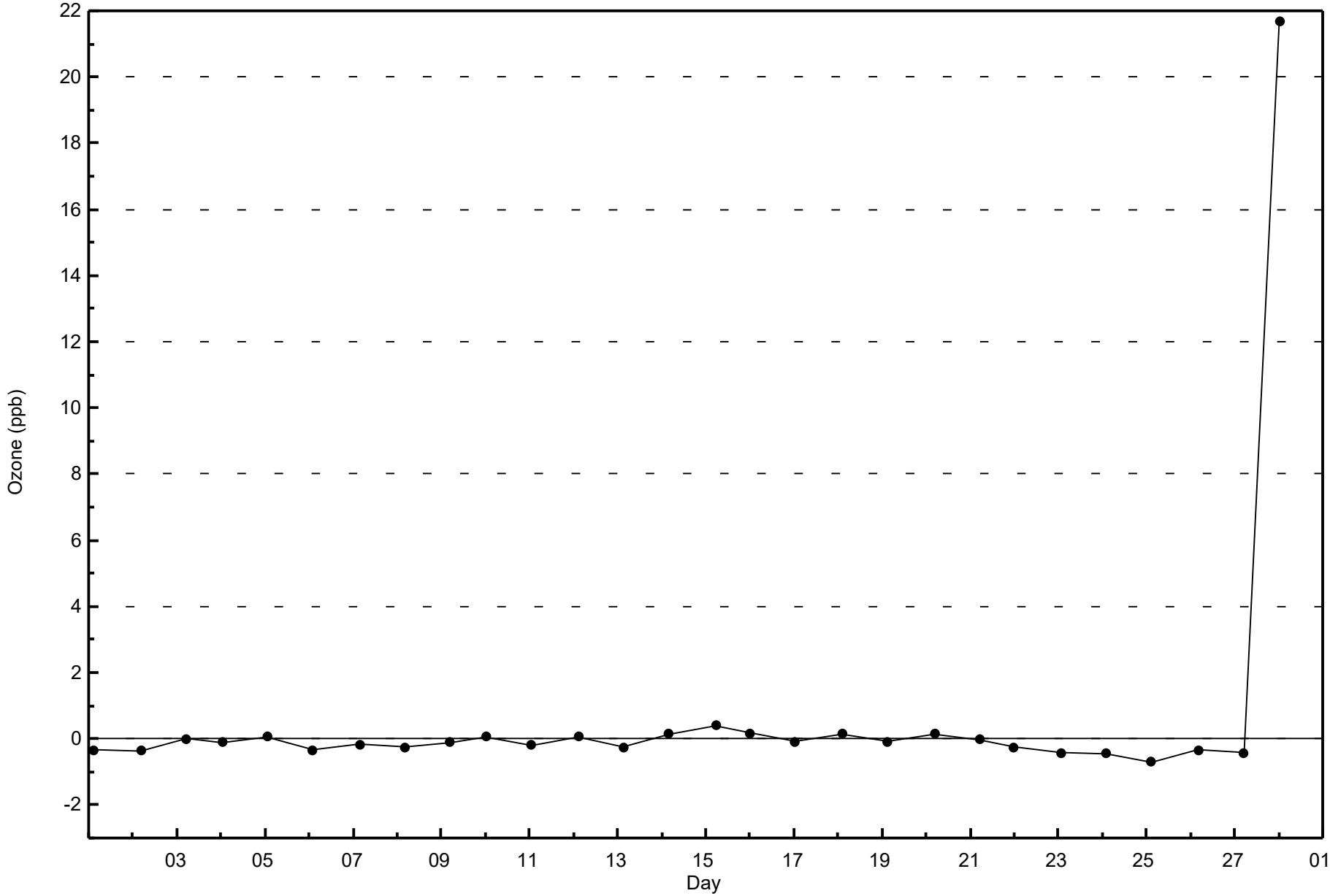
Total Number of Valid Hours: 640

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Athabasca Valley - February 2025

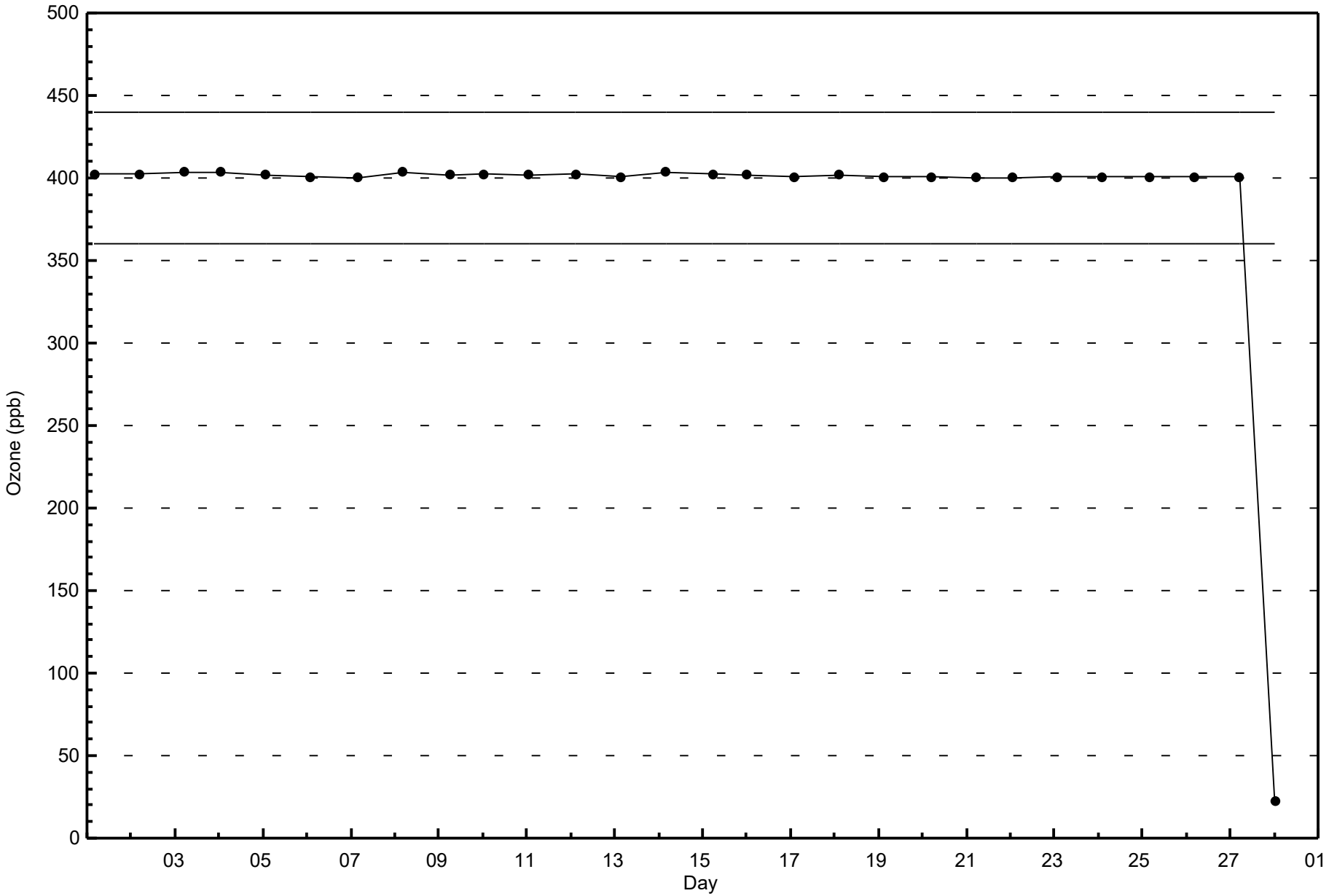


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Athabasca Valley - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Athabasca Valley - February 2025

Maximum Value: 35.0 ppb on Feb 4 20:00

Maximum Daily Average: 11.1 ppb on Feb 4

Minimum Value: 0.0 ppb on Feb 2 03:00

Minimum Daily Average: 0.5 ppb on Feb 1

Maximum Diurnal Average: 11.7 ppb at hour 11

Minimum Diurnal Average: 0.7 ppb at hour 1

Monthly Average: 4.77 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.6 Median = 2.3 Q_3 = 6.2 P_{90} = 12.9 P_{99} = 30.3

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.0	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.2	0.5	0.5	0.4	0.9	2.3	2.2	1.7	0.8	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.5	2.3
2-Feb	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.9	0.9	1.0	1.1	3.0	2.2	1.3	0.3	0.2	0.1	0.1	0.1	0.0	0.1	0.5	3.0
3-Feb	0.3	Z	0.4	0.6	0.6	2.7	6.9	7.0	9.2	11.8	25.2	8.7	6.5	3.7	5.7	4.4	5.8	6.2	4.9	2.4	31.3	7.3	6.4	1.0	6.9	31.3
4-Feb	2.9	5.9	Z	2.9	14.9	5.7	25.2	22.2	11.5	16.3	28.5	9.6	2.9	2.0	2.3	2.3	3.0	9.3	30.2	35.0	12.7	8.2	0.7	0.6	11.1	35.0
5-Feb	0.2	0.3	0.2	Z	1.0	0.8	3.3	2.1	2.0	2.1	1.6	1.5	1.7	2.0	1.5	1.8	0.4	0.5	0.6	0.4	0.5	0.8	0.7	0.4	1.1	3.3
6-Feb	0.2	0.2	0.2	0.1	Z	2.0	1.8	1.2	0.5	0.7	0.6	0.4	0.5	0.7	0.7	0.5	0.5	0.2	1.6	3.2	1.7	1.0	0.6	0.3	0.8	3.2
7-Feb	0.2	0.2	0.2	0.2	0.6	Z	18.6	7.1	7.3	29.5	30.6	3.2	3.0	4.3	2.8	1.4	1.1	10.3	2.9	2.1	1.9	2.6	1.7	4.9	5.9	30.6
8-Feb	Z	2.1	1.5	1.0	1.3	0.7	3.1	9.1	7.9	9.5	10.2	13.3	11.6	12.5	7.6	7.9	14.4	6.9	5.0	8.0	22.3	0.2	0.1	0.1	6.8	22.3
9-Feb	0.0	Z	0.0	0.0	0.1	0.6	4.1	3.8	5.8	4.8	15.8	10.1	3.4	1.8	2.0	3.3	3.9	6.6	4.1	2.3	3.0	2.2	1.9	0.6	3.5	15.8
10-Feb	1.6	5.4	Z	8.4	6.1	10.8	11.7	13.7	9.0	6.5	2.8	3.3	2.7	2.5	3.3	3.2	7.5	3.9	9.5	18.3	8.5	0.9	0.1	0.3	6.1	18.3
11-Feb	0.1	0.4	0.6	Z	0.6	2.0	3.6	5.0	6.1	7.7	12.8	17.7	8.6	9.5	8.2	4.6	3.3	4.3	7.7	13.2	4.3	3.5	3.9	1.5	5.6	17.7
12-Feb	0.4	1.5	0.2	0.2	Z	0.6	1.4	2.4	2.2	5.5	12.1	9.8	7.5	5.6	5.0	4.3	1.5	0.9	0.7	1.0	1.0	0.3	0.2	0.1	2.8	12.1
13-Feb	0.1	0.1	0.1	0.0	0.0	Z	0.1	1.4	18.0	18.7	17.4	17.7	12.6	6.5	5.4	7.0	5.4	2.8	4.4	1.3	4.8	1.7	2.1	1.6	5.6	18.7
14-Feb	Z	0.2	0.6	1.4	1.2	2.5	7.6	11.1	10.9	18.5	17.9	23.3	30.6	22.6	13.7	12.3	17.0	22.2	12.7	6.9	7.4	3.6	5.1	4.9	11.1	30.6
15-Feb	0.6	Z	1.4	0.9	4.1	2.6	1.5	7.8	13.6	22.0	24.4	19.7	14.1	12.3	3.6	1.6	0.9	2.6	3.9	1.1	18.4	22.3	5.2	2.7	8.1	24.4
16-Feb	0.5	0.2	Z	0.3	0.3	0.1	1.5	2.8	8.2	6.0	5.4	5.8	5.0	5.0	4.8	3.5	2.5	1.9	2.0	2.1	3.0	2.6	2.9	2.5	3.0	8.2
17-Feb	2.6	2.3	2.4	Z	1.5	1.7	1.8	3.0	2.6	3.0	3.6	3.4	3.8	3.0	2.4	2.4	4.0	6.3	7.9	2.5	3.4	3.3	2.1	2.9	3.1	7.9
18-Feb	0.3	0.8	0.4	0.4	Z	3.4	8.1	6.3	9.5	8.3	7.7	7.5	6.7	6.5	6.7	3.8	4.3	4.5	3.6	3.2	3.0	2.7	1.9	1.8	4.4	9.5
19-Feb	1.8	2.2	2.3	2.0	2.2	Z	2.7	3.6	3.3	4.3	C	C	C	C	C	3.2	3.6	2.6	1.9	2.0	1.9	2.0	1.5	1.3	2.5	4.3
20-Feb	Z	1.5	1.4	1.5	0.8	1.6	2.5	2.3	2.9	3.9	4.9	5.2	5.3	6.2	3.5	2.8	20.5	9.8	7.6	2.7	3.0	1.8	1.8	1.8	4.1	20.5
21-Feb	0.4	Z	0.7	1.1	0.9	1.1	3.3	0.4	6.8	14.2	23.1	30.4	22.6	25.1	30.5	30.9	9.4	0.9	0.0	0.0	0.0	0.1	0.0	0.1	8.8	30.9
22-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.4	0.9	6.6	19.3	23.2	19.7	7.7	5.2	7.0	4.7	10.9	17.7	4.1	1.3	1.6	2.5	1.8	1.0	5.9	23.2
23-Feb	0.7	0.9	1.0	Z	0.6	1.7	12.0	7.0	16.3	3.8	1.7	4.3	1.1	0.6	0.6	0.6	0.4	0.0	0.0	0.6	0.0	0.7	0.0	0.0	2.4	16.3
24-Feb	0.0	0.0	0.1	0.3	Z	0.0	0.0	0.2	2.2	7.3	8.9	7.5	8.4	11.1	3.1	2.0	1.2	1.5	5.8	13.5	2.7	1.3	3.6	0.1	3.5	13.5
25-Feb	3.4	0.5	0.0	0.0	0.0	Z	0.1	0.2	1.0	2.2	2.8	3.5	4.0	4.7	6.2	6.9	6.8	2.6	1.1	0.4	0.6	0.8	0.4	0.1	2.1	6.9
26-Feb	Z	1.6	6.2	11.0	20.2	14.7	8.1	18.2	30.0	28.2	23.7	24.6	23.5	10.7	6.3	7.1	8.4	2.5	0.3	0.9	1.0	0.6	0.3	0.1	10.8	30.0
27-Feb	0.1	Z	0.9	0.9	1.8	2.8	17.7	11.4	24.9	20.9	4.2	4.0	2.2	0.4	0.2	1.1	1.8	1.7	0.1	0.1	0.0	0.1	0.1	0.0	4.2	24.9
28-Feb	0.0	0.0	Z	0.0	0.1	0.1	0.1	0.4	4.3	6.3	4.3	3.3	2.7	1.7	2.1	1.1	1.8	1.1	1.5	1.2	2.3	1.2	1.0	0.8	1.6	6.3
	0.7	1.1	0.9	1.4	2.5	2.5	5.3	5.4	8.0	10.1	11.7	9.6	7.4	6.3	5.2	4.6	5.1	4.7	4.4	4.5	5.0	2.7	1.6	1.1	Diurnal Average	
	3.4	5.9	6.2	11.0	20.2	14.7	25.2	22.2	30.0	29.5	30.6	30.4	30.6	25.1	30.5	30.9	20.5	22.2	30.2	35.0	31.3	22.3	6.4	4.9	Diurnal Maximum	

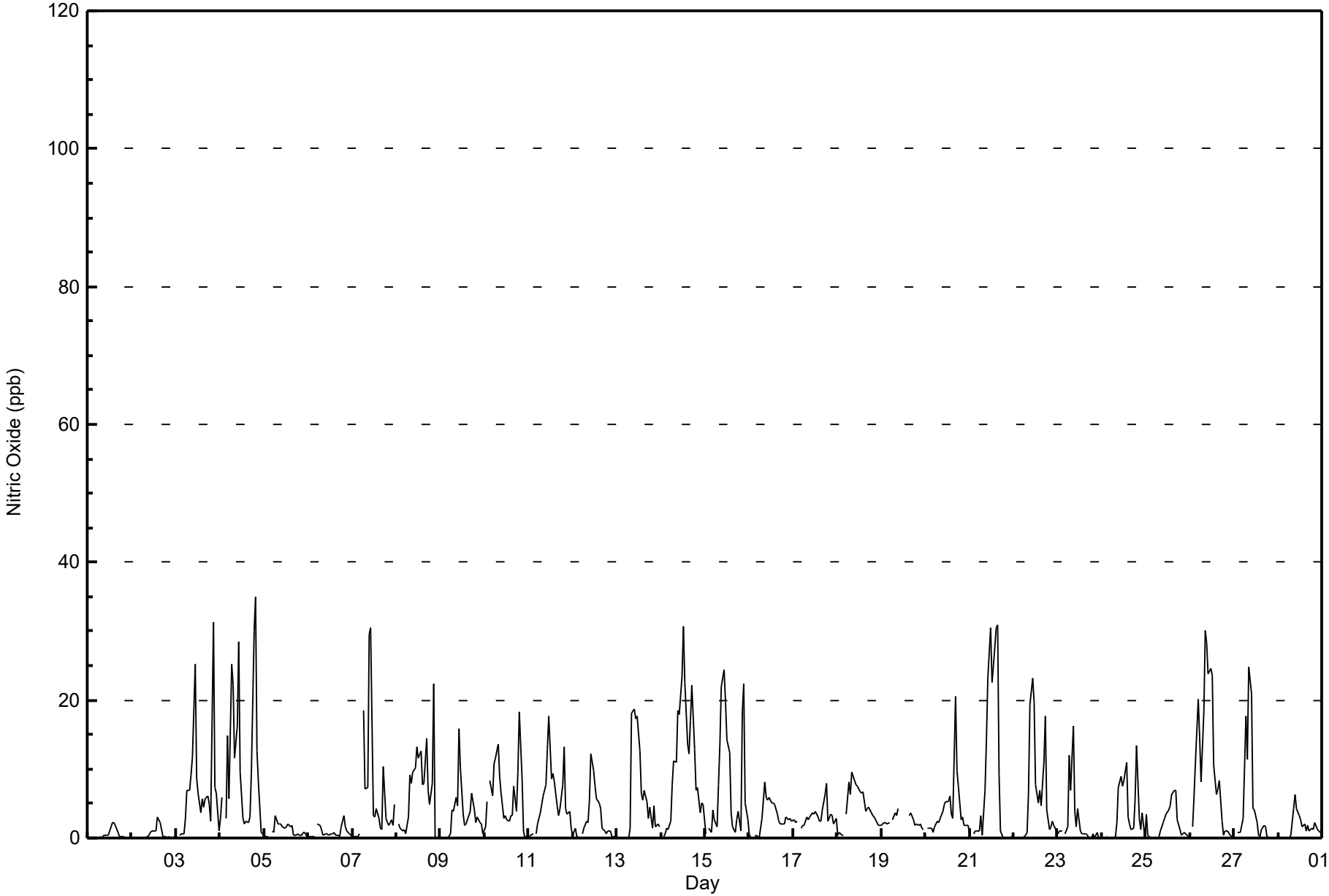
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Athabasca Valley - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	607	94.99	94.99
21 - 40	32	5.01	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: 639

Total Number of Hours: 672

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	8	8	13	16	98	52	16	28	52	29	15	11	21	89	136	607
21 - 40	2	0	0	2	1	3	4	2	1	0	1	0	1	0	5	10	32
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	8	8	15	17	101	56	18	29	52	30	15	12	21	94	146	639

Total Number of Valid Hours: 639

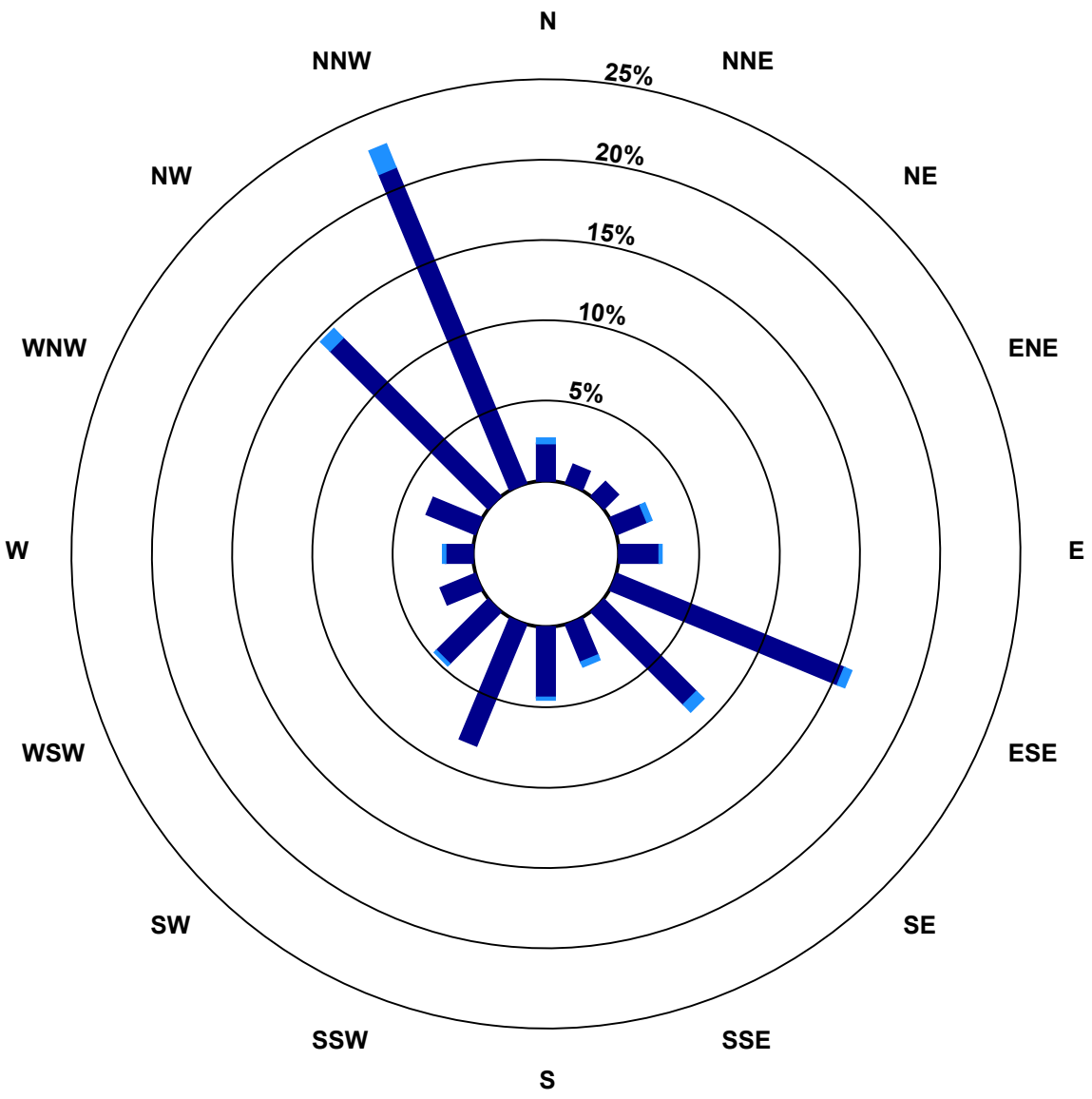
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitric Oxide (NO) - ppb

Athabasca Valley



Classes (ppb)

- 0 - 20
- 21 - 40
- 11 - 80
- 81 - 159
- > 159

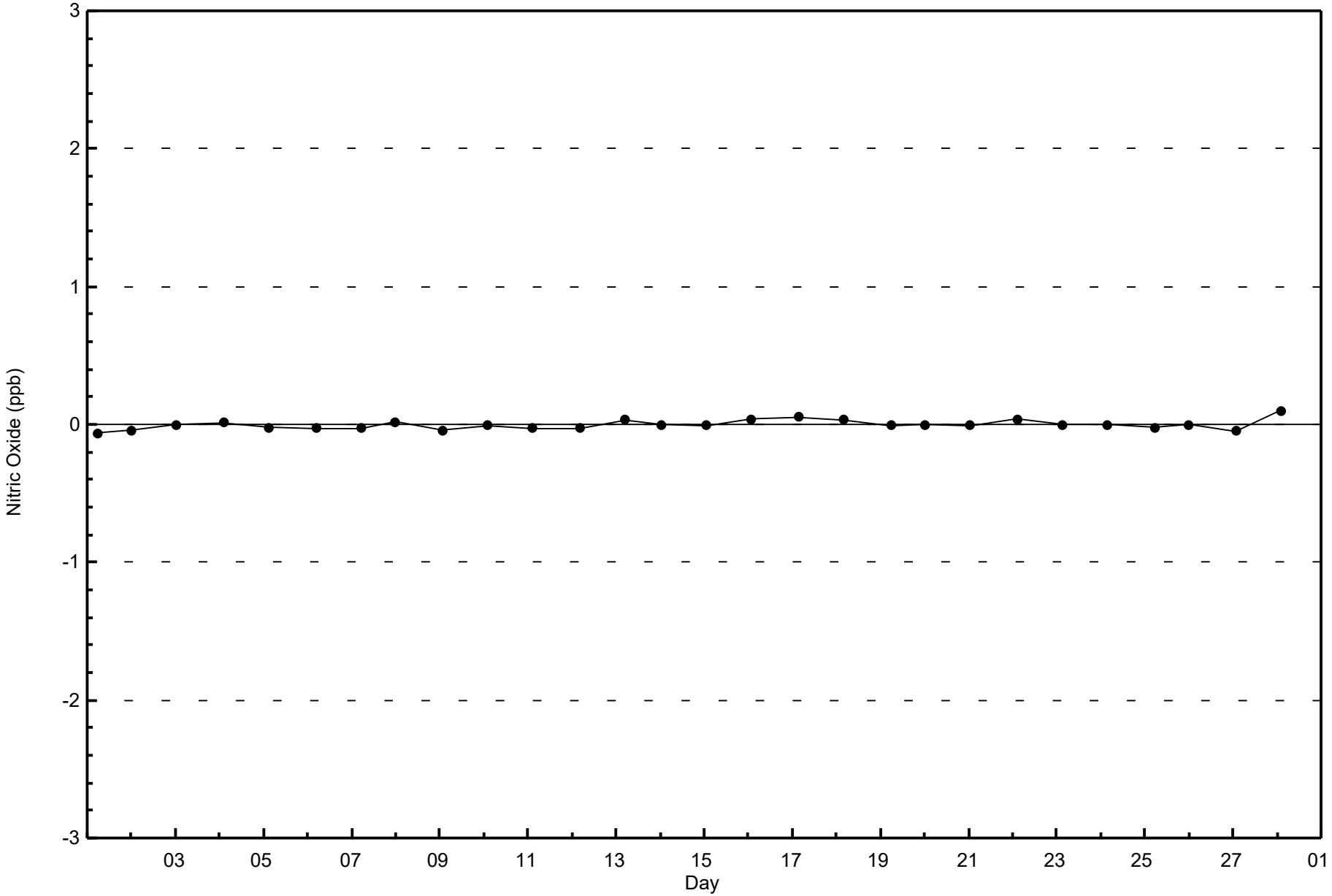
Total Number of Valid Hours: 639

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Athabasca Valley - February 2025

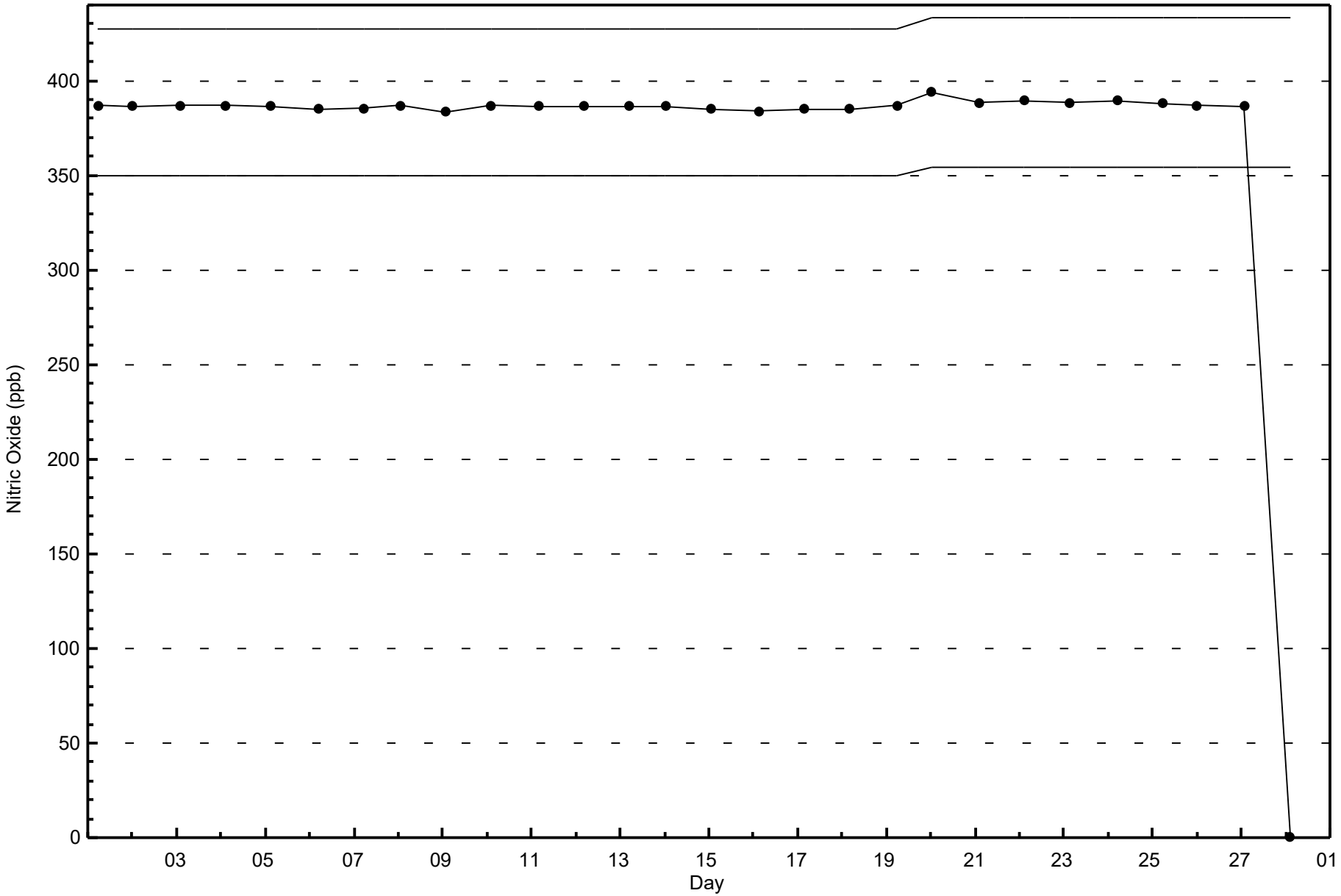


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Athabasca Valley - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Athabasca Valley - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 39.5 ppb on Feb 4 20:00 Maximum Daily Average: 21.8 ppb on Feb 26

Minimum Value: 1.0 ppb on Feb 2 03:00 Minimum Daily Average: 4.3 ppb on Feb 5
Maximum Diurnal Average: 18.4 ppb at hour 19 Minimum Diurnal Average: 7.1 ppb at hour 15
Monthly Average: 12.86 ppb Percentiles: P_1 = 1.7 P_{10} = 3.3 Q_1 = 6.4 Median = 11.3 Q_3 = 18.0 P_{90} = 25.1 P_{99} = 35.0

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	8.6	7.0	5.8	5.6	4.8	Z	6.0	5.1	4.5	3.5	2.1	1.6	2.8	5.5	6.1	6.9	7.8	9.4	8.3	7.5	3.3	2.8	1.9	1.2	5.1	9.4
2-Feb	Z	1.1	1.0	2.8	3.1	2.9	2.9	3.4	4.1	3.0	2.8	2.2	1.9	2.1	5.7	7.5	10.0	12.0	14.4	11.7	12.2	7.8	5.1	7.7	5.5	14.4
3-Feb	9.6	Z	8.6	8.2	9.1	11.6	19.3	17.5	15.0	12.3	17.4	8.9	6.8	3.7	5.6	6.3	12.1	19.7	16.3	10.3	38.5	33.3	27.8	18.8	14.6	38.5
4-Feb	21.5	23.0	Z	19.5	25.6	23.9	28.3	28.8	23.5	16.4	19.5	9.3	3.4	2.8	3.2	4.4	10.9	19.1	33.9	39.5	26.0	22.3	7.4	3.2	18.1	39.5
5-Feb	1.9	1.8	1.7	Z	6.8	6.4	10.7	6.3	3.9	3.8	2.5	2.4	3.0	3.6	3.0	4.2	3.5	5.6	5.1	4.4	3.9	5.5	4.8	4.1	4.3	10.7
6-Feb	2.3	2.7	2.6	2.8	Z	9.2	6.8	6.9	7.2	4.2	4.1	2.0	1.7	2.1	2.4	2.8	5.7	9.1	22.1	16.7	8.6	4.0	4.0	3.3	5.8	22.1
7-Feb	2.1	2.6	3.1	1.6	1.8	Z	29.5	23.3	19.9	24.8	26.4	4.0	3.2	4.5	4.1	3.3	7.4	35.5	23.5	13.7	12.8	18.5	13.8	22.5	13.1	35.5
8-Feb	Z	21.0	13.2	15.5	10.9	8.6	16.5	21.5	15.7	12.3	10.5	11.7	10.7	12.2	10.1	14.1	26.1	32.3	30.3	31.5	38.6	5.6	2.2	3.0	16.3	38.6
9-Feb	3.4	Z	2.4	3.2	4.8	8.0	14.9	12.0	14.5	7.0	12.5	9.0	3.7	2.1	2.9	6.0	13.3	24.7	20.1	15.3	12.4	10.9	12.0	13.0	9.9	24.7
10-Feb	15.8	20.4	Z	24.6	22.2	25.2	26.1	25.7	20.4	8.4	3.0	2.8	2.5	2.8	4.6	7.1	15.1	16.6	22.0	36.6	36.3	26.2	13.2	16.5	17.1	36.6
11-Feb	15.0	14.9	14.1	Z	10.6	12.9	13.4	15.3	12.6	14.1	15.9	18.9	11.5	11.9	12.4	10.9	12.9	20.4	26.9	28.3	21.8	22.4	22.2	18.0	16.4	28.3
12-Feb	20.9	21.2	17.1	14.2	Z	13.7	16.4	16.5	12.1	10.6	14.5	12.1	9.7	8.5	8.5	10.0	8.4	6.8	12.8	24.5	15.3	14.6	14.4	16.7	13.9	24.5
13-Feb	16.5	17.5	19.2	15.6	15.0	Z	13.6	23.6	31.0	21.5	16.8	15.4	11.8	7.3	7.1	11.4	16.6	24.4	29.7	23.7	29.3	21.2	24.1	19.3	18.8	31.0
14-Feb	Z	17.8	17.4	17.1	14.9	14.0	16.7	17.0	12.8	12.6	9.7	11.4	14.8	14.1	12.1	14.0	23.0	31.7	30.6	25.3	24.0	19.9	20.8	18.4	17.8	31.7
15-Feb	9.2	Z	12.7	12.2	17.4	16.0	13.6	16.5	16.8	15.7	15.4	15.5	13.9	14.1	7.2	5.1	4.4	13.8	18.3	14.9	34.1	35.8	23.7	26.3	16.2	35.8
16-Feb	20.2	13.9	Z	11.9	9.7	8.1	11.7	14.0	12.5	6.7	5.7	4.9	5.2	5.5	6.6	6.1	5.8	7.7	8.4	6.1	6.6	5.2	5.1	4.5	8.4	20.2
17-Feb	5.1	5.5	6.9	Z	6.2	6.9	7.1	7.3	5.9	5.4	4.9	3.9	3.9	3.3	3.1	3.8	8.5	21.0	20.7	9.2	10.4	12.8	7.9	10.1	7.8	21.0
18-Feb	6.9	6.5	5.4	4.3	Z	9.3	11.3	11.7	12.4	7.3	6.7	6.3	5.9	6.7	7.5	6.4	11.0	18.3	16.4	15.4	13.8	12.0	10.1	8.8	9.6	18.3
19-Feb	8.5	9.4	8.9	8.1	8.4	Z	10.0	11.1	8.2	6.1	C	C	C	C	C	6.9	10.9	14.8	10.6	9.2	8.4	8.4	6.5	5.8	8.9	14.8
20-Feb	Z	7.6	7.4	8.4	10.6	9.9	14.8	11.9	12.2	11.9	12.1	11.3	10.8	7.9	5.2	6.5	25.8	29.7	28.4	22.8	23.7	19.3	18.3	19.8	14.6	29.7
21-Feb	13.7	Z	10.4	8.8	10.5	11.7	19.2	13.1	19.1	21.5	23.7	23.6	22.6	25.1	30.2	33.1	22.8	17.1	8.3	8.7	11.2	10.4	7.6	10.1	16.6	33.1
22-Feb	6.5	8.4	Z	15.8	17.9	26.3	31.6	29.7	27.7	27.6	23.5	21.1	13.8	12.1	11.1	11.0	18.3	30.8	20.6	12.0	13.3	14.8	12.9	8.2	18.0	31.6
23-Feb	8.6	7.4	7.8	Z	9.1	12.4	20.9	20.3	18.5	8.0	3.9	7.5	3.1	2.3	2.1	2.5	2.9	2.7	4.7	7.7	5.7	8.3	12.1	13.4	8.3	20.9
24-Feb	12.0	15.1	18.2	26.1	Z	13.2	9.9	9.8	11.7	13.6	13.7	11.2	10.6	12.9	7.1	6.9	6.3	12.6	23.8	28.3	23.2	22.3	26.7	18.0	15.4	28.3
25-Feb	29.1	22.2	9.0	7.0	5.7	Z	10.4	9.1	7.8	7.9	7.5	7.7	7.4	8.0	9.0	11.3	16.4	20.1	25.0	23.4	22.3	30.4	24.8	22.0	14.9	30.4
26-Feb	Z	31.9	33.6	33.4	32.8	27.1	22.2	23.9	23.7	18.9	15.5	15.4	15.3	10.2	8.3	10.5	17.1	16.8	20.0	26.8	27.9	26.1	22.0	21.3	21.8	33.6
27-Feb	19.9	Z	23.2	26.2	27.3	27.8	29.4	27.9	27.3	21.9	8.3	7.2	5.4	2.0	1.7	4.9	4.4	3.7	3.6	3.8	4.3	5.3	6.4	7.8	13.0	29.4
28-Feb	6.0	6.0	Z	10.7	11.3	13.0	11.5	11.7	15.0	15.3	8.8	5.9	4.3	2.5	4.1	2.9	5.8	6.4	10.5	11.6	16.5	9.7	7.2	5.7	8.8	16.5
	11.4	12.4	10.9	12.7	12.4	13.8	15.9	15.7	14.9	12.2	11.4	9.4	7.8	7.3	7.1	8.1	11.9	17.2	18.4	17.5	18.0	15.6	13.0	12.4	Diurnal Average	
	29.1	31.9	33.6	33.4	32.8	27.8	31.6	29.7	31.0	27.6	26.4	23.6	22.6	25.1	30.2	33.1	26.1	35.5	33.9	39.5	38.6	35.8	27.8	26.3	Diurnal Maximum	

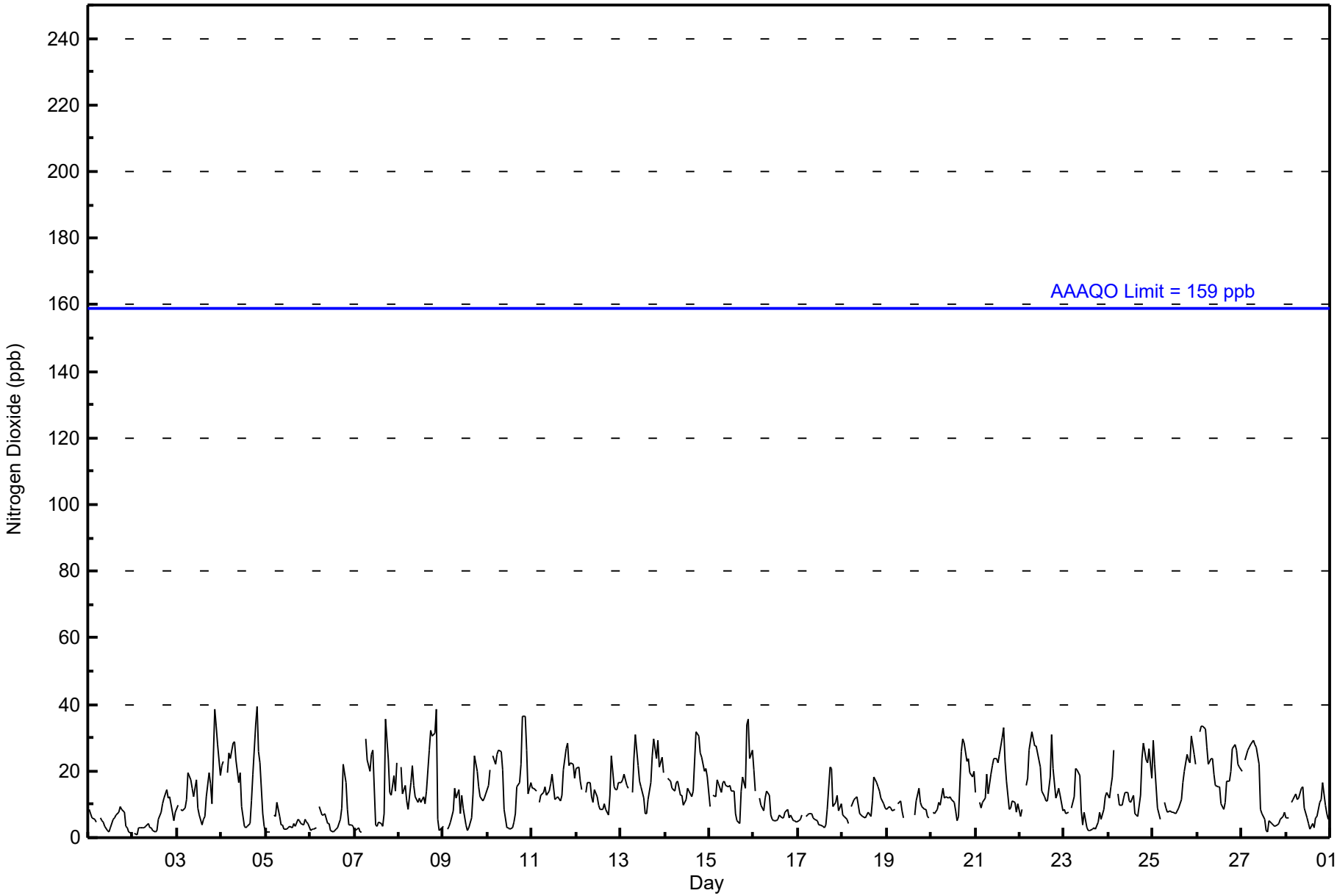
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Athabasca Valley - February 2025



Nitrogen Dioxide (NO_2) - ppb
Athabasca Valley - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	513	80.28	80.28
21 - 40	126	19.72	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: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Athabasca Valley - February 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	13	7	6	13	12	87	42	14	21	51	26	10	10	20	77	104	513
21 - 40	4	1	2	2	5	14	14	4	8	1	4	5	2	1	17	42	126
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	8	8	15	17	101	56	18	29	52	30	15	12	21	94	146	639

Total Number of Valid Hours: 639

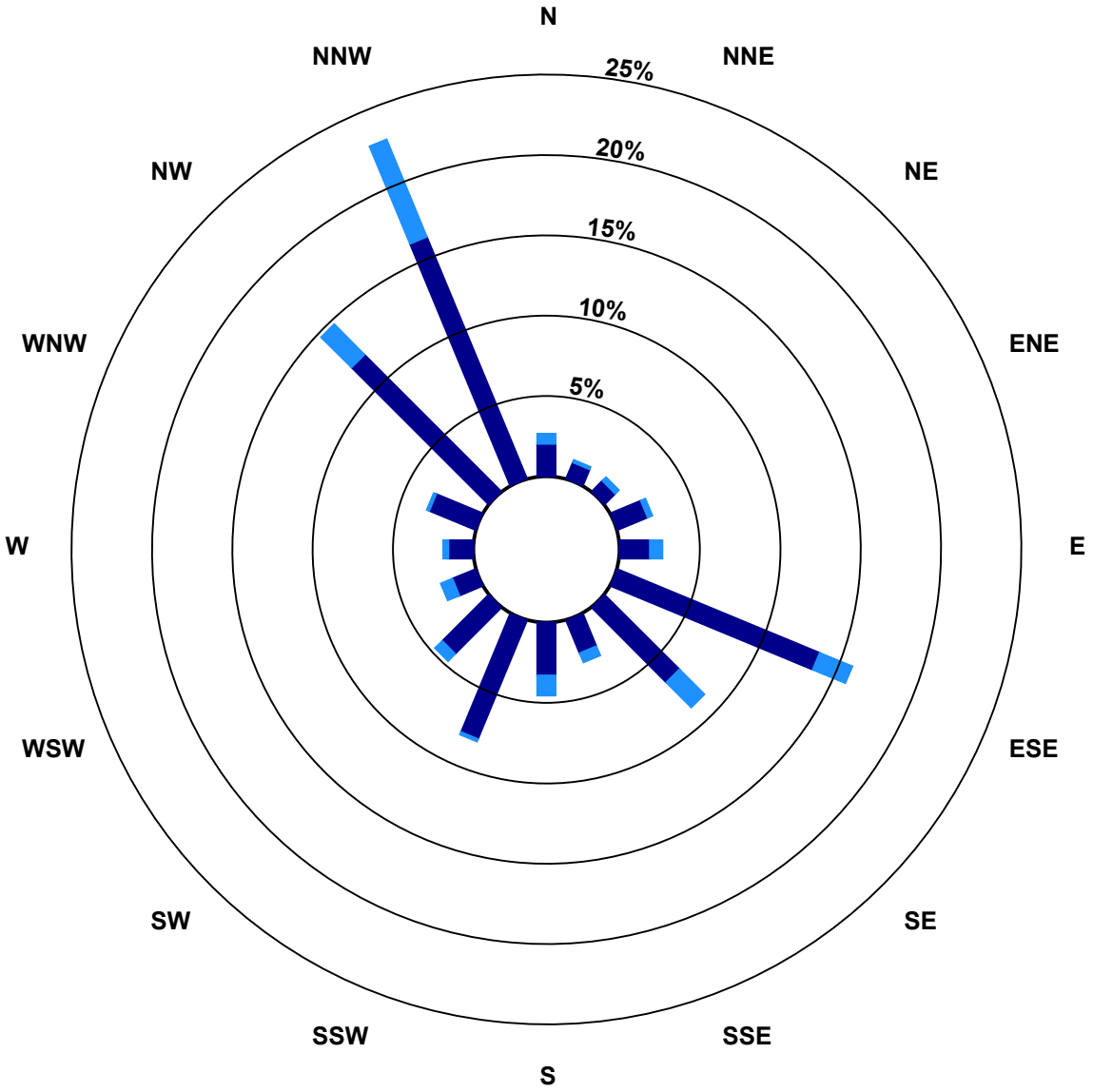
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Dioxide (NO_2) - ppb

Athabasca Valley



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

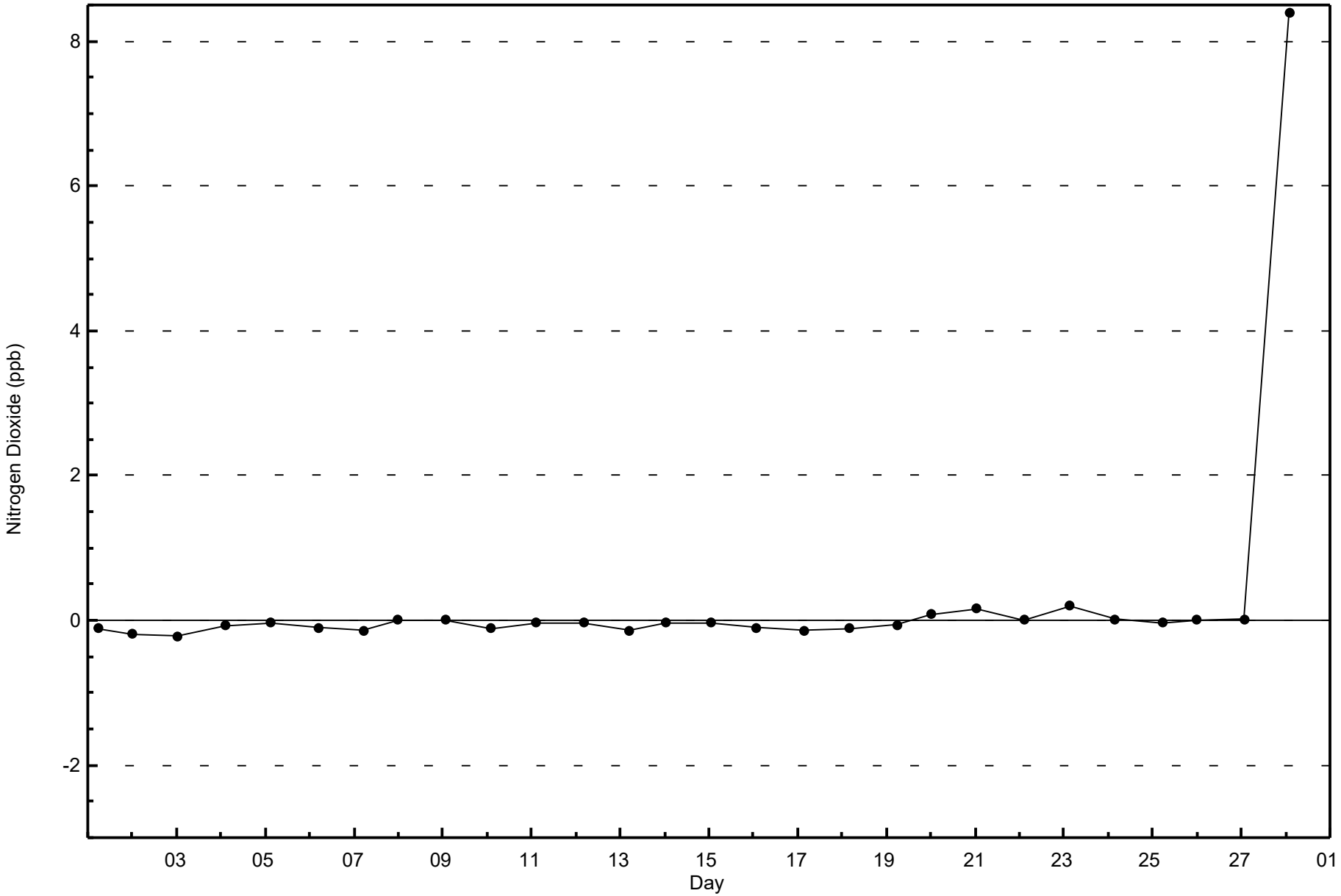
Total Number of Valid Hours: 639

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Athabasca Valley - February 2025

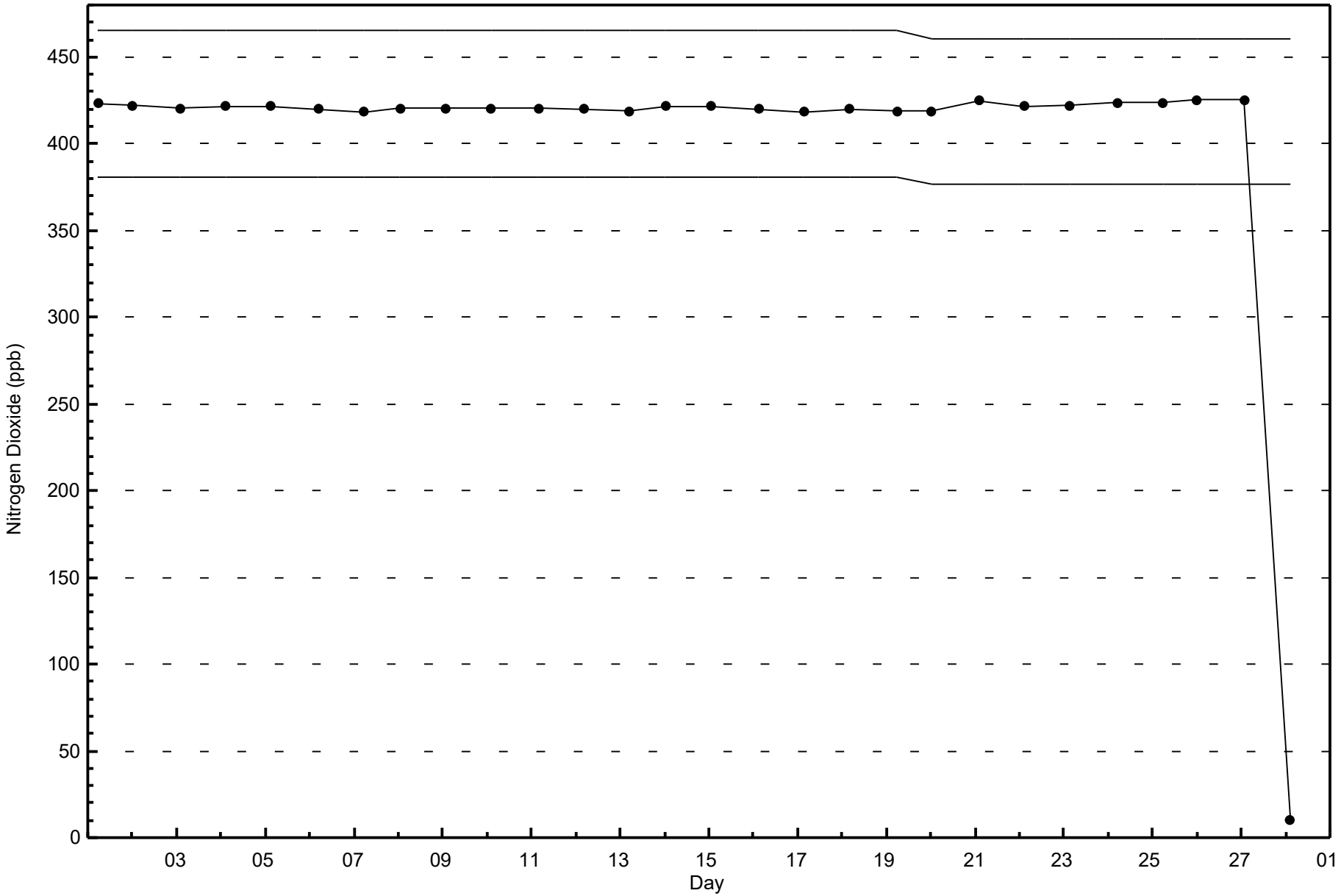


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Athabasca Valley - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Athabasca Valley - February 2025

Maximum Value: 74.5 ppb on Feb 4 20:00

Maximum Daily Average: 32.6 ppb on Feb 26

Minimum Value: 1.0 ppb on Feb 2 03:00

Minimum Daily Average: 5.5 ppb on Feb 5

Maximum Diurnal Average: 23.0 ppb at hour 11

Minimum Diurnal Average: 11.8 ppb at hour 3

Monthly Average: 17.63 ppb

Percentiles: P_1 = 2.0 P_{10} = 4.5 Q_1 = 8.2 Median = 14.1 Q_3 = 24.1 P_{90} = 35.8 P_{99} = 57.7

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	8.6	7.1	5.9	5.7	4.9	Z	6.1	5.2	4.7	4.0	2.6	2.0	3.7	7.8	8.3	8.6	8.6	9.6	8.5	7.7	3.4	2.9	1.9	1.2	5.6	9.6
2-Feb	Z	1.1	1.0	2.8	3.1	2.9	2.9	3.4	4.2	3.5	3.7	3.1	2.9	3.2	8.7	9.7	11.3	12.3	14.6	11.8	12.3	7.9	5.1	7.8	6.1	14.6
3-Feb	9.9	Z	9.0	8.8	9.7	14.3	26.2	24.5	24.2	24.1	42.6	17.6	13.3	7.4	11.3	10.7	17.9	25.9	21.2	12.7	69.8	40.6	34.2	19.8	21.6	69.8
4-Feb	24.4	28.9	Z	22.4	40.5	29.6	53.5	51.0	35.0	32.7	48.0	18.9	6.3	4.8	5.5	6.7	13.9	28.4	64.1	74.5	38.7	30.5	8.1	3.8	29.1	74.5
5-Feb	2.1	2.1	1.9	Z	7.8	7.2	14.0	8.4	5.9	5.9	4.1	3.9	4.7	5.6	4.5	6.0	3.9	6.1	5.7	4.8	4.4	6.3	5.5	4.5	5.5	14.0
6-Feb	2.5	2.9	2.8	2.9	Z	11.2	8.6	8.1	7.7	4.9	4.7	2.4	2.2	2.8	3.1	3.3	6.2	9.3	23.7	19.9	10.3	5.0	4.6	3.6	6.6	23.7
7-Feb	2.3	2.8	3.3	1.8	2.4	Z	48.1	30.4	27.2	54.3	57.0	7.2	6.2	8.8	6.9	4.7	8.5	45.8	26.4	15.8	14.7	21.1	15.5	27.4	19.1	57.0
8-Feb	Z	23.1	14.7	16.5	12.2	9.3	19.6	30.6	23.6	21.8	20.7	25.0	22.3	24.7	17.7	22.0	40.5	39.2	35.3	39.5	60.9	5.8	2.3	3.1	23.1	60.9
9-Feb	3.4	Z	2.4	3.2	4.9	8.6	19.0	15.8	20.3	11.8	28.3	19.1	7.1	3.9	4.9	9.3	17.2	31.3	24.2	17.6	15.4	13.1	13.9	13.6	13.4	31.3
10-Feb	17.4	25.8	Z	33.0	28.3	36.0	37.8	39.4	29.4	14.9	5.8	6.1	5.2	5.3	7.9	10.3	22.6	20.5	31.5	54.9	44.8	27.1	13.3	16.8	23.2	54.9
11-Feb	15.1	15.3	14.7	Z	11.2	14.9	17.0	20.3	18.7	21.8	28.7	36.6	20.1	21.4	20.6	15.5	16.2	24.7	34.6	41.5	26.1	25.9	26.1	19.5	22.0	41.5
12-Feb	21.3	22.7	17.3	14.4	Z	14.3	17.8	18.9	14.3	16.1	26.6	21.9	17.2	14.1	13.5	14.3	9.9	7.7	13.5	25.5	16.3	14.9	14.6	16.8	16.7	26.6
13-Feb	16.6	17.6	19.3	15.6	15.0	Z	13.7	25.0	49.0	40.2	34.2	33.1	24.4	13.8	12.5	18.4	22.0	27.2	34.1	25.0	34.1	22.9	26.2	20.9	24.4	49.0
14-Feb	Z	18.0	18.0	18.5	16.1	16.5	24.3	28.1	23.7	31.1	27.6	34.7	45.4	36.7	25.8	26.3	40.0	53.9	43.3	32.2	31.4	23.5	25.9	23.3	28.9	53.9
15-Feb	9.8	Z	14.1	13.1	21.5	18.6	15.1	24.3	30.4	37.7	39.8	35.2	28.0	26.4	10.8	6.7	5.3	16.4	22.2	16.0	52.5	58.1	28.9	29.0	24.3	58.1
16-Feb	20.7	14.1	Z	12.2	10.0	8.2	13.2	16.8	20.7	12.7	11.1	10.7	10.2	10.5	11.4	9.6	8.3	9.6	10.4	8.2	9.6	7.8	8.0	7.0	11.3	20.7
17-Feb	7.7	7.8	9.3	Z	7.7	8.6	8.9	10.3	8.5	8.4	8.5	7.3	7.7	6.3	5.5	6.2	12.5	27.3	28.6	11.7	13.8	16.1	10.0	13.0	11.0	28.6
18-Feb	7.2	7.3	5.8	4.7	Z	12.7	19.4	18.0	21.9	15.6	14.4	13.8	12.6	13.2	14.2	10.2	15.3	22.8	20.0	18.6	16.8	14.7	12.0	10.6	14.0	22.8
19-Feb	10.3	11.6	11.2	10.1	10.6	Z	12.7	14.7	11.5	10.4	C	C	C	C	C	10.1	14.5	17.4	12.5	11.2	10.3	10.4	8.0	7.1	11.4	17.4
20-Feb	Z	9.1	8.8	9.9	11.4	11.5	17.3	14.2	15.1	15.8	17.0	16.5	16.1	14.1	8.7	9.3	46.3	39.5	36.0	25.5	26.7	21.1	20.1	21.6	18.8	46.3
21-Feb	14.1	Z	11.1	9.9	11.4	12.8	22.5	13.5	25.9	35.7	46.8	54.0	45.2	50.2	60.7	64.0	32.2	18.0	8.3	8.7	11.2	10.5	7.6	10.2	25.4	64.0
22-Feb	6.5	8.4	Z	15.8	17.9	26.3	32.0	30.6	34.3	46.9	46.7	40.8	21.5	17.3	18.1	15.7	29.2	48.5	24.7	13.3	14.9	17.3	14.7	9.2	23.9	48.5
23-Feb	9.3	8.3	8.8	Z	9.7	14.1	32.9	27.3	34.8	11.8	5.6	11.8	4.2	2.9	2.7	3.1	3.3	2.7	4.7	8.3	5.7	9.0	12.1	13.4	10.7	34.8
24-Feb	12.0	15.1	18.3	26.4	Z	13.2	9.9	10.0	13.9	20.9	22.6	18.7	19.0	24.0	10.2	8.9	7.5	14.1	29.6	41.8	25.9	23.6	30.3	18.1	18.9	41.8
25-Feb	32.5	22.7	9.0	7.0	5.7	Z	10.5	9.3	8.8	10.1	10.3	11.2	11.4	12.7	15.2	18.2	23.2	22.7	26.1	23.8	22.9	31.2	25.2	22.1	17.0	32.5
26-Feb	Z	33.5	39.8	44.4	53.0	41.8	30.3	42.1	53.7	47.1	39.2	40.0	38.8	20.9	14.6	17.6	25.5	19.3	20.3	27.7	28.9	26.7	22.3	21.4	32.6	53.7
27-Feb	20.0	Z	24.1	27.1	29.1	30.6	47.1	39.3	52.2	42.8	12.5	11.2	7.6	2.4	1.9	6.0	6.2	5.4	3.7	3.9	4.3	5.4	6.5	7.8	17.3	52.2
28-Feb	6.0	6.0	Z	10.7	11.4	13.1	11.6	12.1	19.3	21.6	13.1	9.2	7.0	4.2	6.2	4.0	7.6	7.5	12.0	12.8	18.8	10.9	8.2	6.5	10.4	21.6
	12.1	13.5	11.8	14.0	14.8	16.4	21.1	21.1	22.8	22.3	23.0	19.0	15.2	13.5	12.3	12.7	17.0	21.9	22.8	22.0	23.0	18.2	14.7	13.5	Diurnal Average	
	32.5	33.5	39.8	44.4	53.0	41.8	53.5	51.0	53.7	54.3	57.0	54.0	45.4	50.2	60.7	64.0	46.3	53.9	64.1	74.5	69.8	58.1	34.2	29.0	Diurnal Maximum	

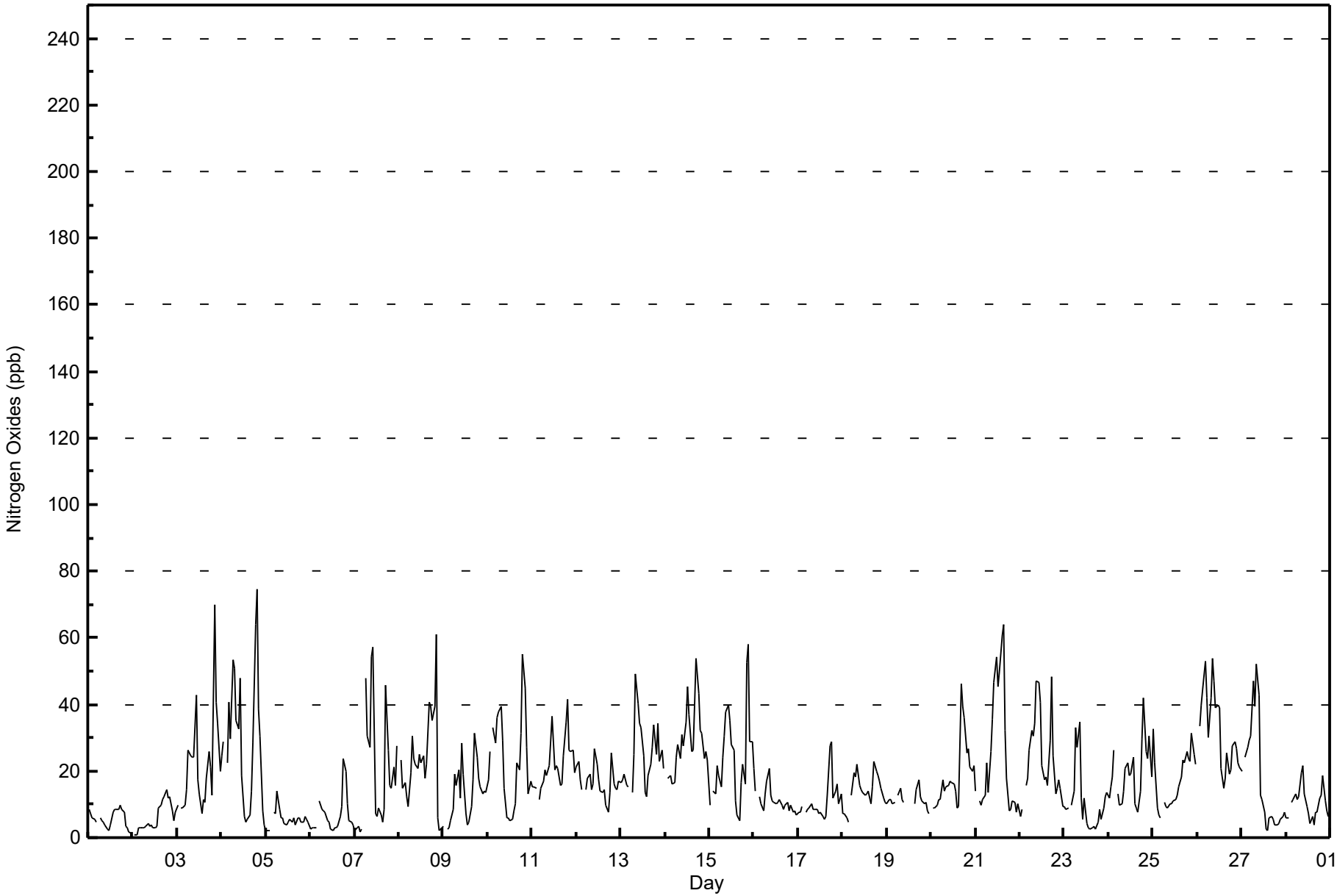
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Athabasca Valley - February 2025



Nitrogen Oxides (NO_X) - ppb
Athabasca Valley - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	429	67.14	67.14
21 - 40	166	25.98	93.11
11 - 80	44	6.89	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Athabasca Valley - February 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	6	3	3	6	9	75	38	9	19	49	25	6	8	13	67	93	429
21 - 40	8	5	5	9	6	22	9	7	9	3	3	7	4	7	24	38	166
11 - 80	3	0	0	0	2	4	9	2	1	0	2	2	0	1	3	15	44
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	8	8	15	17	101	56	18	29	52	30	15	12	21	94	146	639

Total Number of Valid Hours: 639

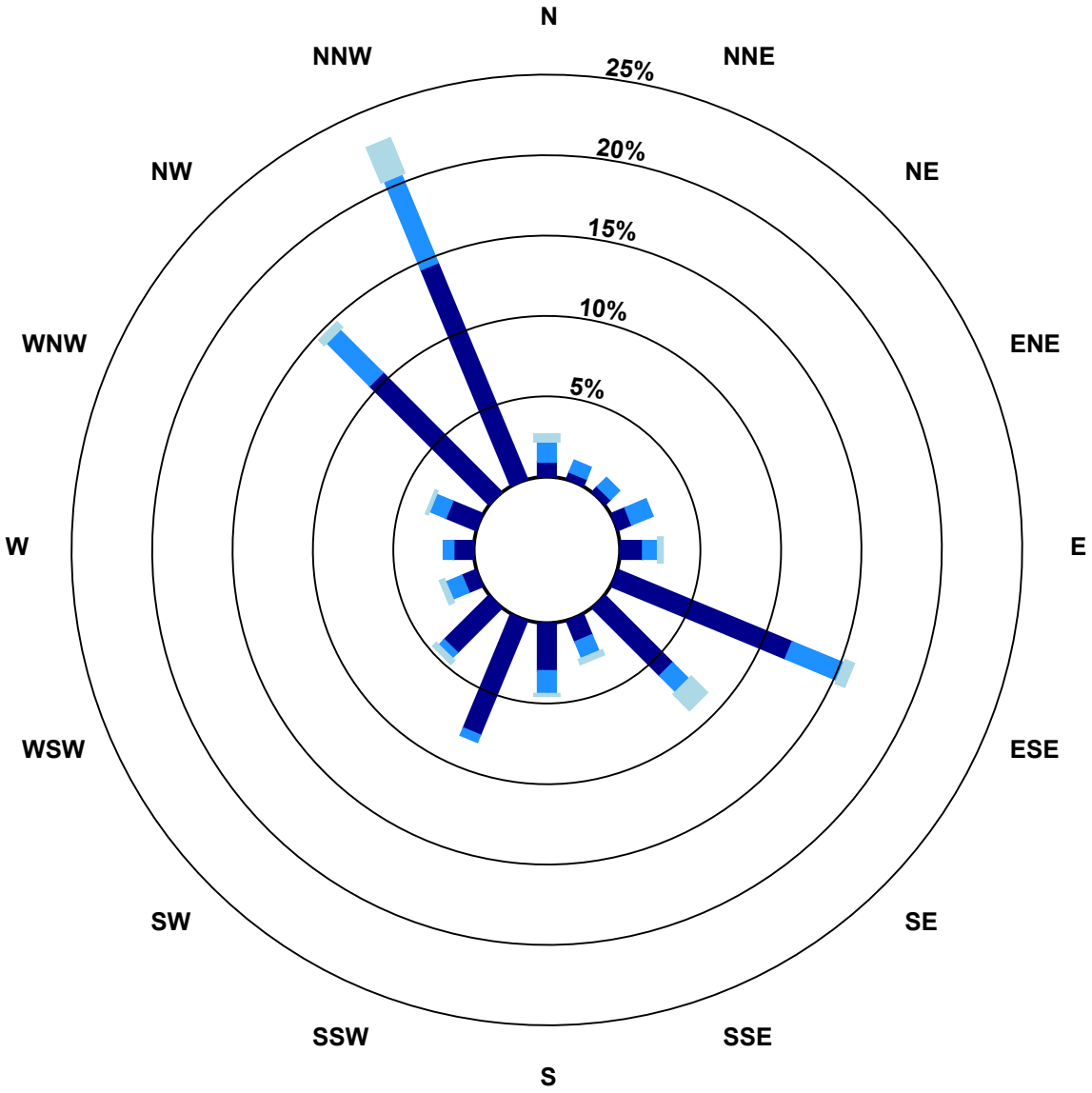
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Oxides (NO_X) - ppb

Athabasca Valley



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

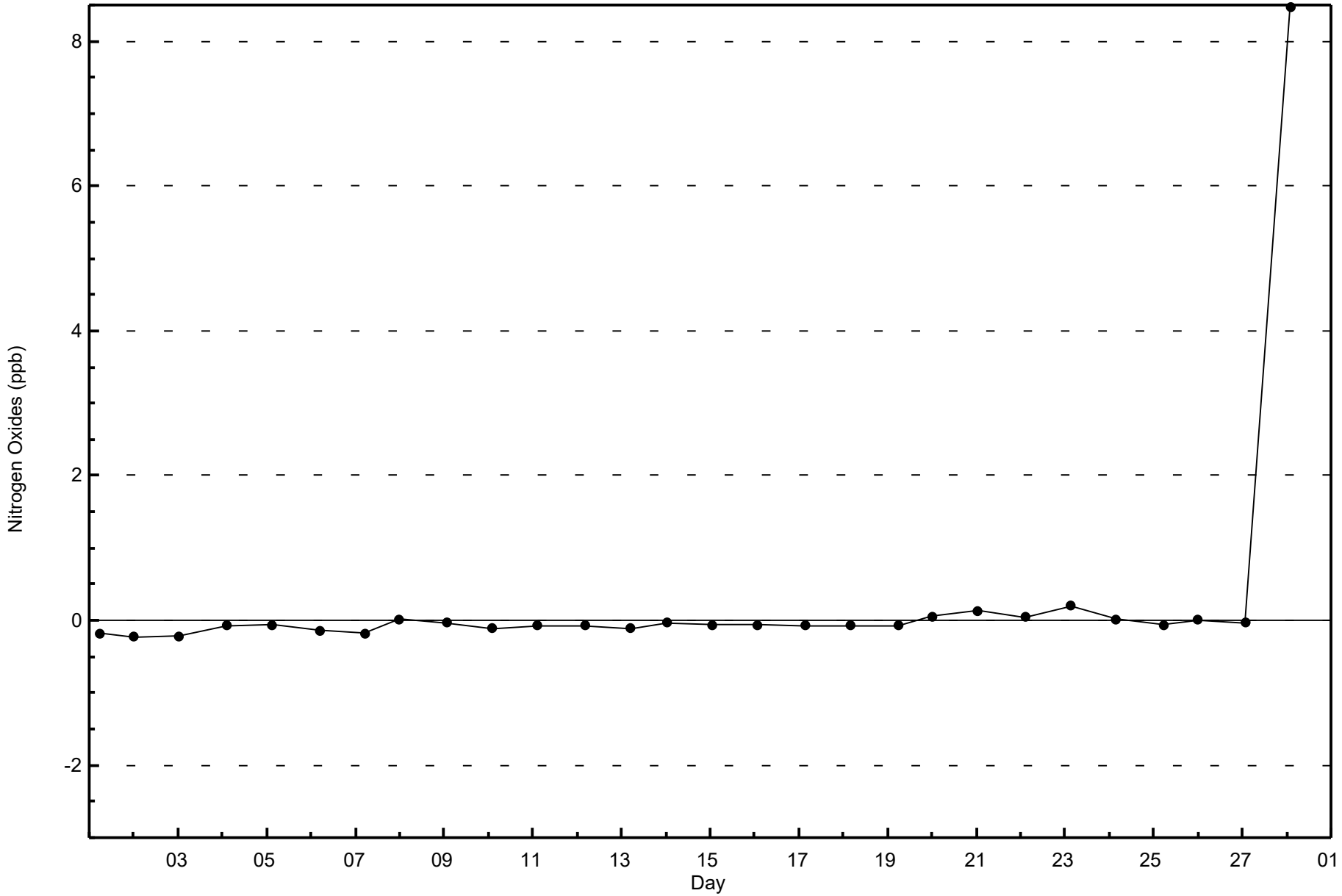
Total Number of Valid Hours: 639

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Athabasca Valley - February 2025

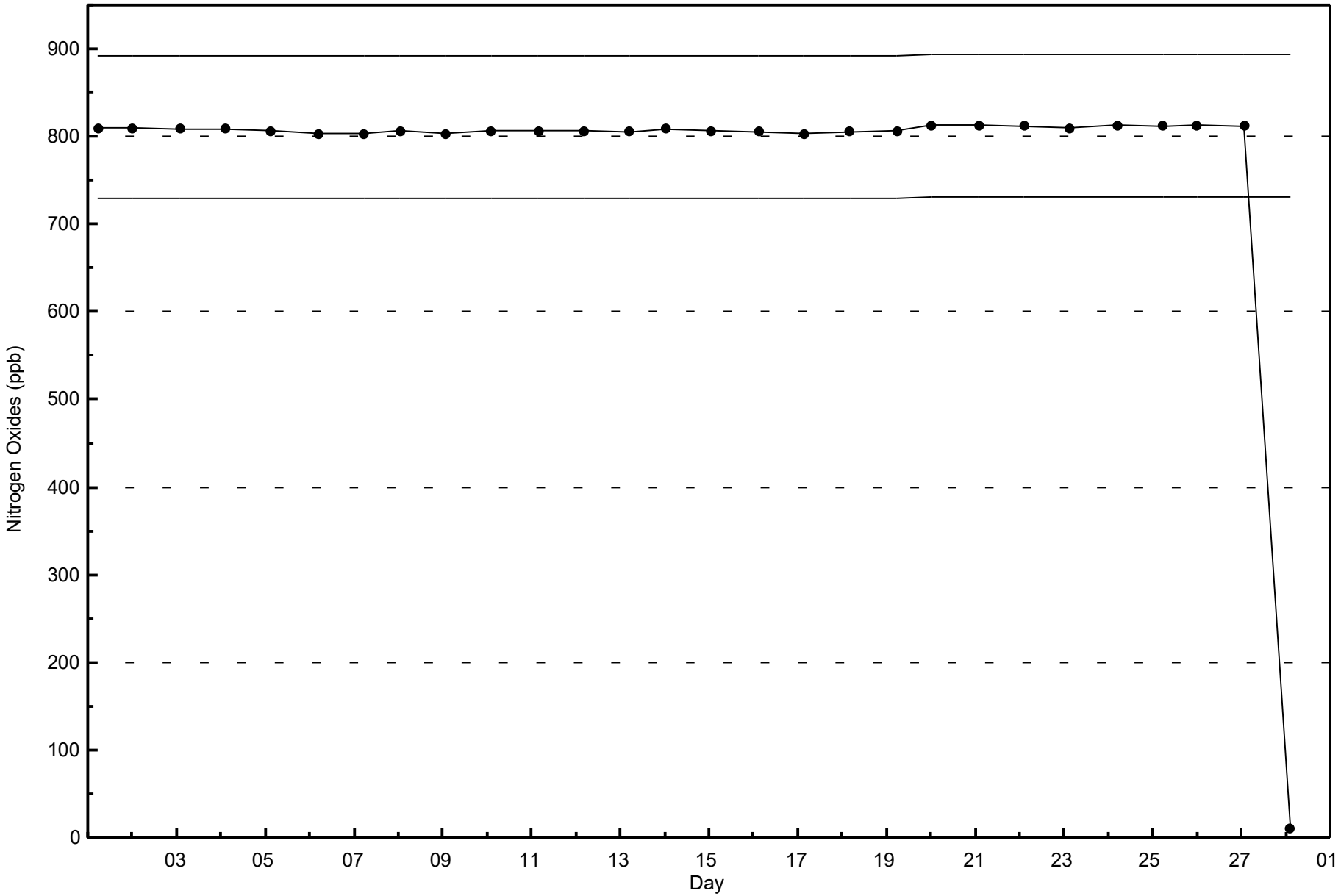


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Athabasca Valley - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Athabasca Valley - February 2025

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

Maximum Value: 25.2 $\mu g/m^3$ on Feb 20 22:00

Maximum Daily Average: 12.2 $\mu g/m^3$ on Feb 26

Minimum Value: 1.7 $\mu g/m^3$ on Feb 4 15:00

Minimum Daily Average: 2.5 $\mu g/m^3$ on Feb 5

Maximum Diurnal Average: 6.6 $\mu g/m^3$ at hour 21

Minimum Diurnal Average: 5.3 $\mu g/m^3$ at hour 14

Monthly Average: 5.82 $\mu g/m^3$

Percentiles: P_1 = 2.2 P_{10} = 3.0 Q_1 = 3.7 Median = 4.9 Q_3 = 7.1 P_{90} = 9.9 P_{99} = 16.6

Hours in Service:	672
Hours of Data:	670
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-Feb	4.1	4.0	3.8	3.7	3.6	3.7	3.4	3.1	2.9	2.7	2.7	3.0	3.3	4.0	4.2	4.0	4.3	5.5	6.3	5.7	5.6	5.3	5.4	5.3	4.2	6.3
2-Feb	5.4	5.2	5.1	4.8	4.7	4.6	4.4	4.5	4.6	4.6	4.7	4.5	4.6	4.6	9.2	4.9	6.6	6.0	5.3	5.0	4.8	4.5	4.5	4.5	5.1	9.2
3-Feb	4.7	5.2	6.4	6.2	5.6	4.8	5.2	5.5	4.3	3.9	6.3	4.1	3.6	2.7	2.7	2.4	2.5	2.6	2.8	2.5	5.8	6.7	4.5	4.3	4.4	6.7
4-Feb	5.0	5.9	5.4	4.1	4.2	4.5	6.5	6.7	5.0	5.0	5.2	3.7	2.0	1.8	1.7	1.8	2.2	3.1	4.5	6.2	4.9	4.0	2.5	2.2	4.1	6.7
5-Feb	2.3	2.3	2.4	2.4	2.4	2.4	2.5	2.6	2.3	2.5	2.2	2.2	2.0	2.1	2.4	2.3	2.5	2.7	2.7	2.8	2.7	2.8	2.8	2.7	2.5	2.8
6-Feb	2.5	2.5	2.8	3.0	3.2	3.2	2.7	2.3	2.5	2.6	2.2	2.6	3.0	3.9	5.2	7.5	10.4	10.8	10.1	8.7	7.9	7.1	7.2	6.8	5.0	10.8
7-Feb	5.6	4.8	4.1	3.7	3.5	3.4	4.6	5.0	4.8	6.3	5.5	3.2	3.1	3.2	3.3	3.3	7.1	5.3	12.6	5.1	3.8	4.4	6.1	6.6	4.9	12.6
8-Feb	7.2	8.5	6.3	4.4	3.3	2.9	3.2	3.6	3.3	3.7	4.0	4.5	4.9	5.2	4.4	4.8	5.4	5.1	5.3	6.6	9.4	4.0	3.6	4.5	4.9	9.4
9-Feb	4.0	4.5	5.5	5.7	6.1	5.9	6.2	5.6	6.0	5.4	6.6	7.1	6.7	6.4	6.4	9.9	18.2	15.2	12.8	10.5	8.3	7.7	7.2	8.3	7.8	18.2
10-Feb	7.9	9.6	9.7	12.4	14.7	12.5	10.8	11.1	7.0	3.9	3.0	2.8	2.6	2.4	2.2	2.2	2.7	3.8	3.4	4.0	5.2	4.9	4.7	4.6	6.2	14.7
11-Feb	4.6	4.8	4.6	4.8	4.1	4.1	3.6	3.6	3.4	4.0	5.3	5.6	4.8	4.6	5.2	7.0	7.3	7.6	7.9	9.5	8.5	7.9	8.1	6.9	5.7	9.5
12-Feb	8.1	7.1	7.5	6.1	5.2	4.6	4.5	4.2	4.1	4.5	4.6	4.8	5.0	4.8	4.5	4.1	4.2	3.6	4.1	6.6	4.9	5.5	4.6	4.8	5.1	8.1
13-Feb	4.7	4.7	4.2	3.6	4.3	4.0	3.9	4.4	5.4	5.6	5.4	5.8	5.2	3.5	3.4	4.5	4.8	5.1	5.2	4.3	4.4	4.3	4.2	4.0	4.5	5.8
14-Feb	3.9	3.9	4.0	4.1	4.3	5.1	5.2	5.6	5.7	7.6	5.5	6.8	8.3	8.6	7.6	7.9	8.2	9.0	7.7	6.3	6.3	5.4	5.6	6.2	6.2	9.0
15-Feb	4.0	4.0	4.3	4.0	5.1	5.9	5.9	6.1	6.4	6.8	5.9	5.6	5.2	4.9	3.7	3.3	2.9	3.5	3.7	3.6	4.5	6.2	5.7	5.2	4.9	6.8
16-Feb	4.7	3.8	4.0	3.3	3.0	2.9	3.2	3.0	3.6	3.0	3.2	3.3	3.3	3.3	3.4	3.1	3.1	3.1	3.4	3.8	4.4	4.4	4.3	4.2	3.5	4.7
17-Feb	4.0	4.0	3.8	3.5	3.3	3.3	3.3	3.3	3.5	3.7	3.8	3.8	3.7	3.5	3.1	3.0	3.2	5.7	5.5	3.6	3.9	3.7	3.5	3.3	3.7	5.7
18-Feb	3.1	3.1	3.0	3.1	3.4	4.1	4.9	5.0	5.2	4.7	4.3	5.1	5.3	4.4	4.9	3.5	4.0	5.1	4.9	4.5	3.8	3.7	4.2	3.7	4.2	5.3
19-Feb	3.5	3.6	3.3	3.0	3.0	3.0	3.2	3.5	3.9	3.9	4.5	4.5	4.6	4.5	4.2	3.9	4.2	4.6	3.6	3.4	3.5	3.6	3.2	3.2	3.7	4.6
20-Feb	3.1	3.0	3.1	3.6	4.3	4.8	5.7	6.0	6.1	6.4	6.8	7.5	7.5	7.3	7.2	7.2	9.1	10.6	10.3	9.2	21.9	25.2	10.6	8.9	8.1	25.2
21-Feb	7.4	6.7	6.3	6.5	6.2	6.4	6.8	6.8	7.5	9.3	12.4	15.5	16.8	16.0	16.5	16.0	12.1	9.8	8.5	8.7	8.3	7.6	7.7	8.5	9.8	16.8
22-Feb	6.7	6.7	7.2	7.9	8.4	9.3	10.3	10.6	10.9	11.0	11.6	11.9	9.1	8.7	9.8	9.7	10.6	11.4	10.0	8.0	14.6	10.3	7.9	8.8	9.6	14.6
23-Feb	10.8	6.2	6.4	6.8	6.0	6.1	7.8	7.1	9.3	6.3	4.4	7.3	6.7	5.8	5.5	4.7	4.4	4.1	4.5	5.0	5.0	6.0	6.5	6.7	6.2	10.8
24-Feb	6.9	7.1	7.2	7.8	7.7	6.9	6.6	5.9	6.5	7.6	8.0	7.4	7.6	9.6	7.9	8.2	7.6	8.7	12.4	10.1	7.8	7.7	9.0	12.0	8.1	12.4
25-Feb	15.1	16.0	7.9	5.9	4.8	4.4	4.7	4.8	3.7	4.6	4.6	4.6	5.0	5.7	6.0	6.0	6.7	6.8	7.1	7.1	7.1	7.8	11.6	13.6	7.2	16.0
26-Feb	14.2	12.5	12.8	14.5	14.2	13.5	11.4	11.3	13.5	15.3	20.8	20.4	16.6	10.3	8.1	7.4	7.6	7.3	7.6	7.8	10.1	14.4	11.5	9.9	12.2	20.8
27-Feb	8.8	9.9	10.4	9.9	9.8	10.1	11.0	9.7	10.1	9.7	7.7	8.4	6.6	3.3	C	C	3.1	3.4	3.1	3.0	3.1	3.3	3.7	3.8	6.9	11.0
28-Feb	3.7	3.7	4.8	5.0	5.2	6.2	5.9	5.7	6.0	6.1	4.1	3.9	4.2	4.2	4.6	4.3	4.1	3.8	3.6	3.7	3.9	3.3	3.0	2.8	4.4	6.2
	5.9	5.8	5.6	5.5	5.5	5.4	5.6	5.6	5.6	5.7	5.9	6.1	5.8	5.3	5.5	5.4	6.0	6.2	6.4	5.9	6.6	6.5	5.8	5.9	Diurnal Average	
	15.1	16.0	12.8	14.5	14.7	13.5	11.4	11.3	13.5	15.3	20.8	20.4	16.8	16.0	16.5	16.0	18.2	15.2	12.8	10.5	21.9	25.2	11.6	13.6	Diurnal Maximum	

C - Calibration

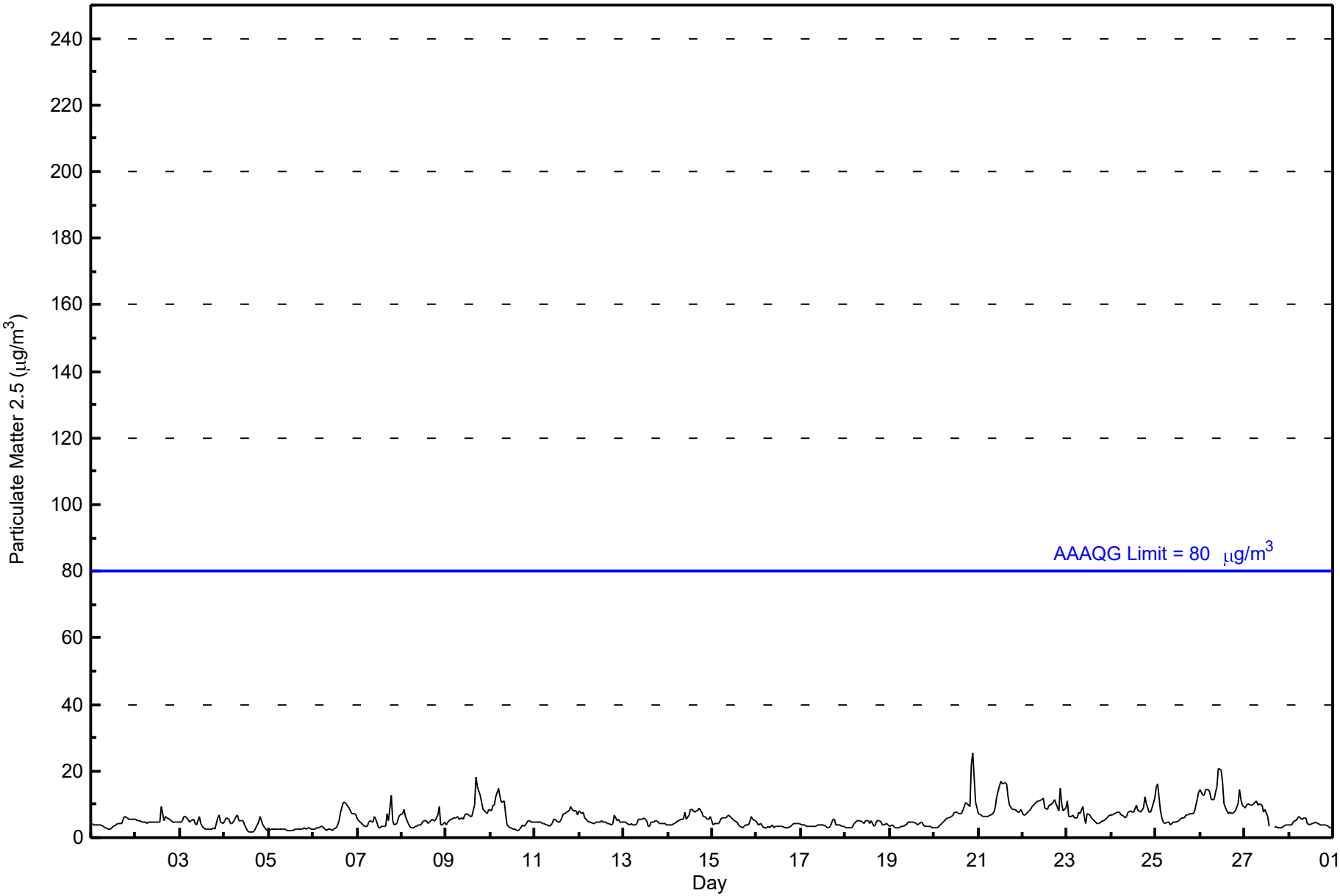
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Athabasca Valley - February 2025



Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	397	59.25	59.25
6 - 15	261	38.96	98.21
16 - 25	12	1.79	100.00
26 - 80	0	0.00	100.00
> 81.0	0	0.00	100.00

Total Number of Valid Hours: 670

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

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

Athabasca Valley - February 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	9	4	3	9	8	82	30	9	24	44	20	4	7	15	51	78	397
6 - 15	8	4	4	9	9	25	30	10	8	11	11	11	5	6	40	70	261
16 - 25	0	0	1	0	1	0	0	0	0	0	0	0	0	0	6	4	12
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	17	8	8	18	18	107	60	19	32	55	31	15	12	21	97	152	670

Total Number of Valid Hours: 670

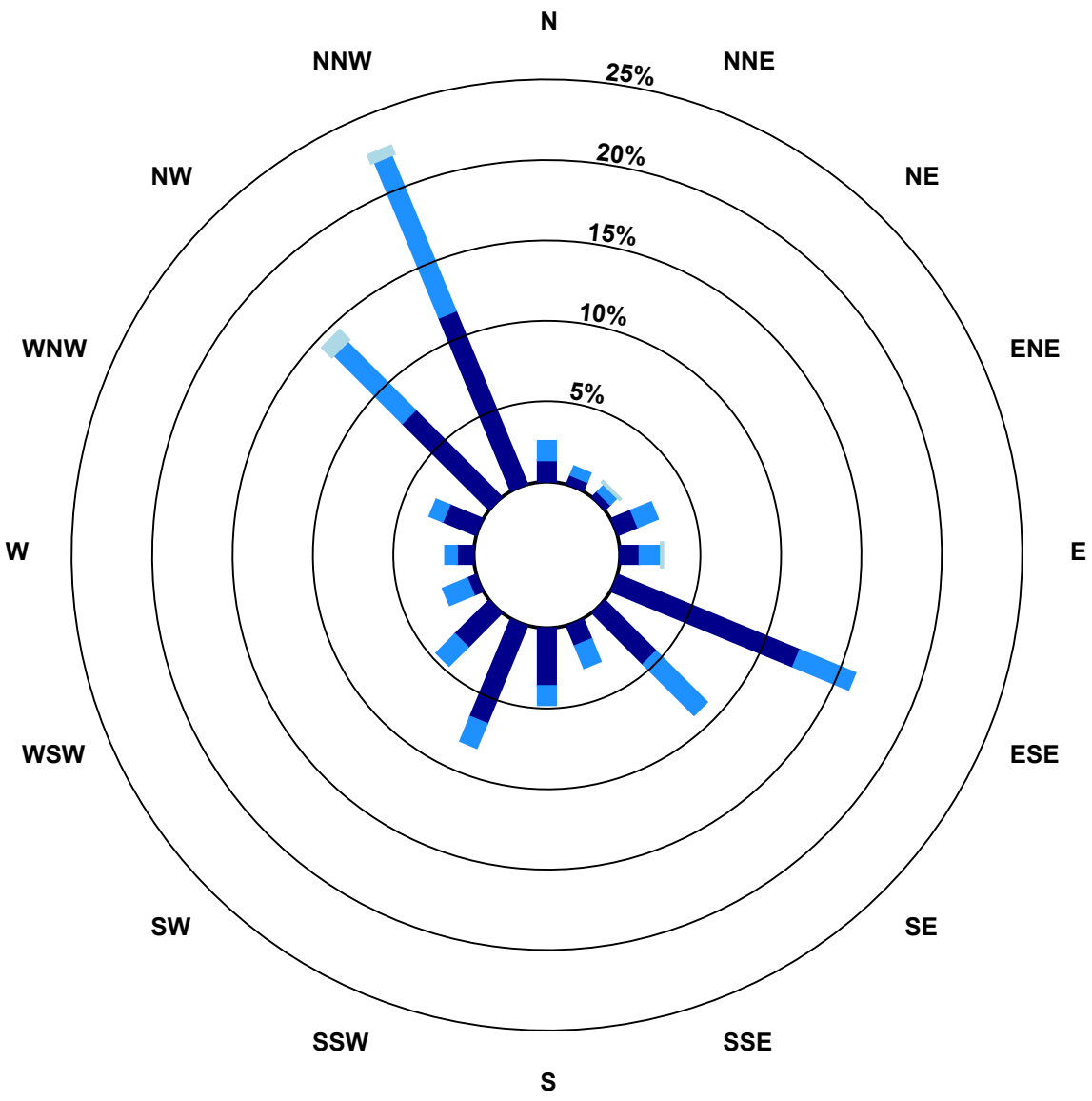
Total Number of Hours: 672

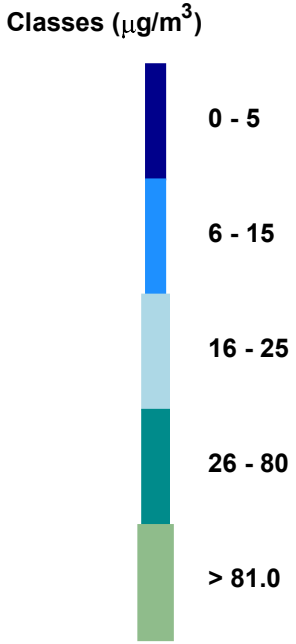
Wood Buffalo Environmental Association

Wind Rose Feb 2025

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

Athabasca Valley





Total Number of Valid Hours: 670

Wood Buffalo Environmental Association

Summary of Hour Averages

Carbon Monoxide (CO) - ppm

Athabasca Valley - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 0.5 ppm on Feb 10 07:00 Maximum Daily Average: 0.3 ppm on Feb 4

Minimum Value: 0.1 ppm on Feb 5 13:00 Minimum Daily Average: 0.1 ppm on Feb 2
Maximum Diurnal Average: 0.2 ppm at hour 19 Minimum Diurnal Average: 0.1 ppm at hour 4
Monthly Average: 0.18 ppm 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} = 0.4

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	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
2-Feb	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
3-Feb	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.4	0.4	0.3	0.3	0.2	0.4
4-Feb	0.3	0.2	0.3	Z	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.3	0.2	0.1	0.1	0.3	0.4
5-Feb	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	C	C	C	C	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2
6-Feb	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2
7-Feb	Z	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.2	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.2	0.2	0.2	0.2	0.3	0.2	0.4
8-Feb	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	0.3	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.3
9-Feb	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.2
10-Feb	0.2	0.2	0.3	Z	0.4	0.4	0.5	0.5	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.5
11-Feb	0.1	0.1	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	0.3	0.2	0.2	0.2	0.2	0.2	0.3
12-Feb	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	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2
13-Feb	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
14-Feb	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3
15-Feb	0.2	0.2	Z	0.2	0.3	0.3	0.2	0.2	0.3	0.4	0.4	0.4	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4
16-Feb	0.2	0.1	0.2	Z	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2
17-Feb	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	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3
18-Feb	0.1	0.1	0.1	0.1	0.1	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	0.1	0.2	0.2
19-Feb	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2
20-Feb	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	0.4	0.3	0.3	0.3	0.5	0.4	0.3	0.2	0.2	0.5
21-Feb	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
22-Feb	0.1	0.1	0.1	Z	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.4
23-Feb	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.3
24-Feb	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3
25-Feb	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	0.2	0.1	0.2	0.1	0.2	0.1	0.2
26-Feb	0.1	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.3
27-Feb	0.1	0.1	Z	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
28-Feb	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	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2
	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Diurnal Average	
	0.3	0.2	0.3	0.2	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.4	0.4	0.4	0.4	0.5	0.4	0.3	0.3	Diurnal Maximum	

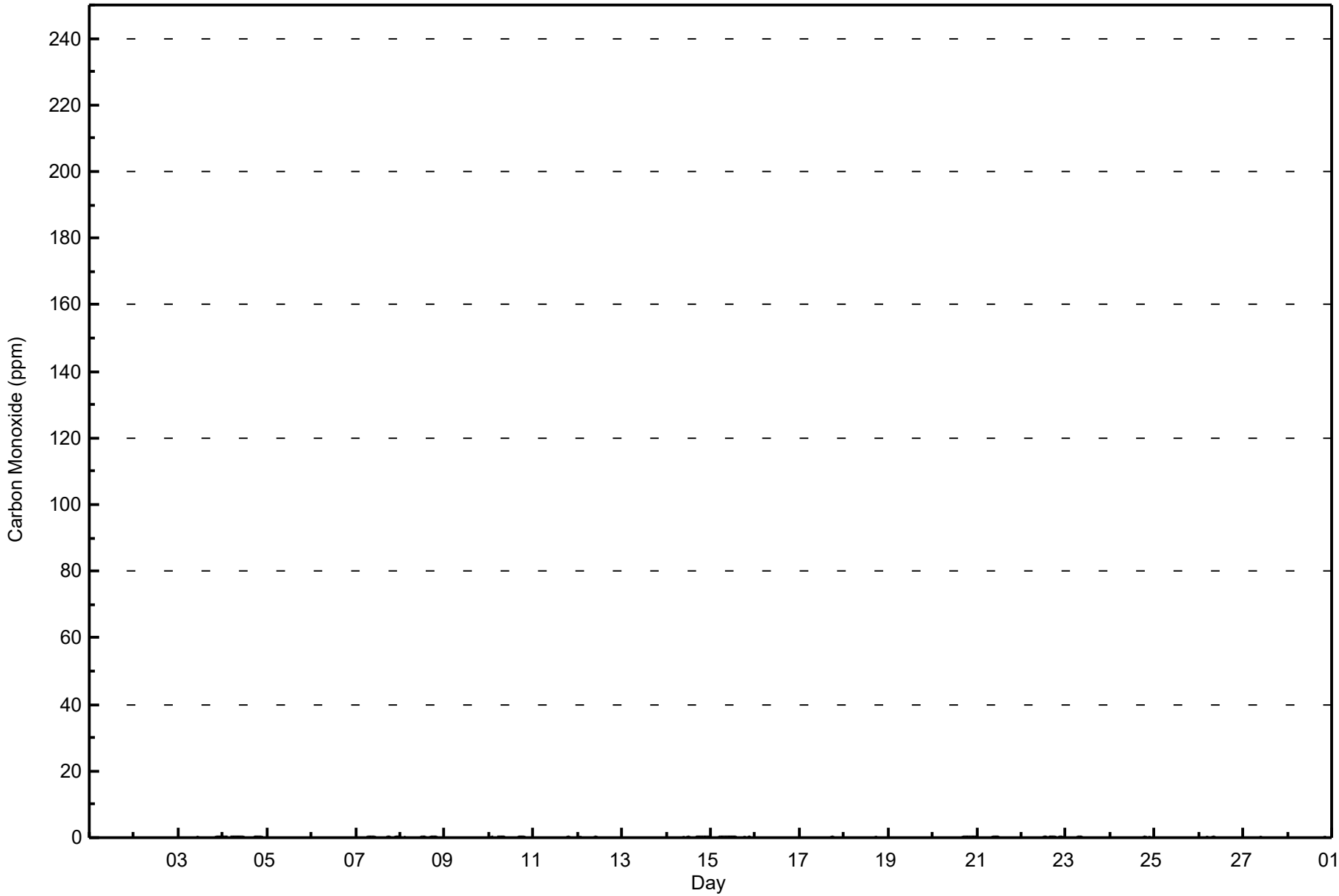
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm

Wood Buffalo Environmental Association

Hourly Averages

Carbon Monoxide (CO) - ppm

Athabasca Valley - February 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.3	622	97.19	97.19
0.4 - 0.5	18	2.81	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: 640

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Carbon Monoxide (CO) - ppm

Athabasca Valley - February 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	17	7	5	15	14	99	54	18	27	53	26	14	12	21	95	145	622
0.4 - 0.5	0	0	1	3	3	5	4	0	1	0	1	0	0	0	0	0	18
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	17	7	6	18	17	104	58	18	28	53	27	14	12	21	95	145	640

Total Number of Valid Hours: 640

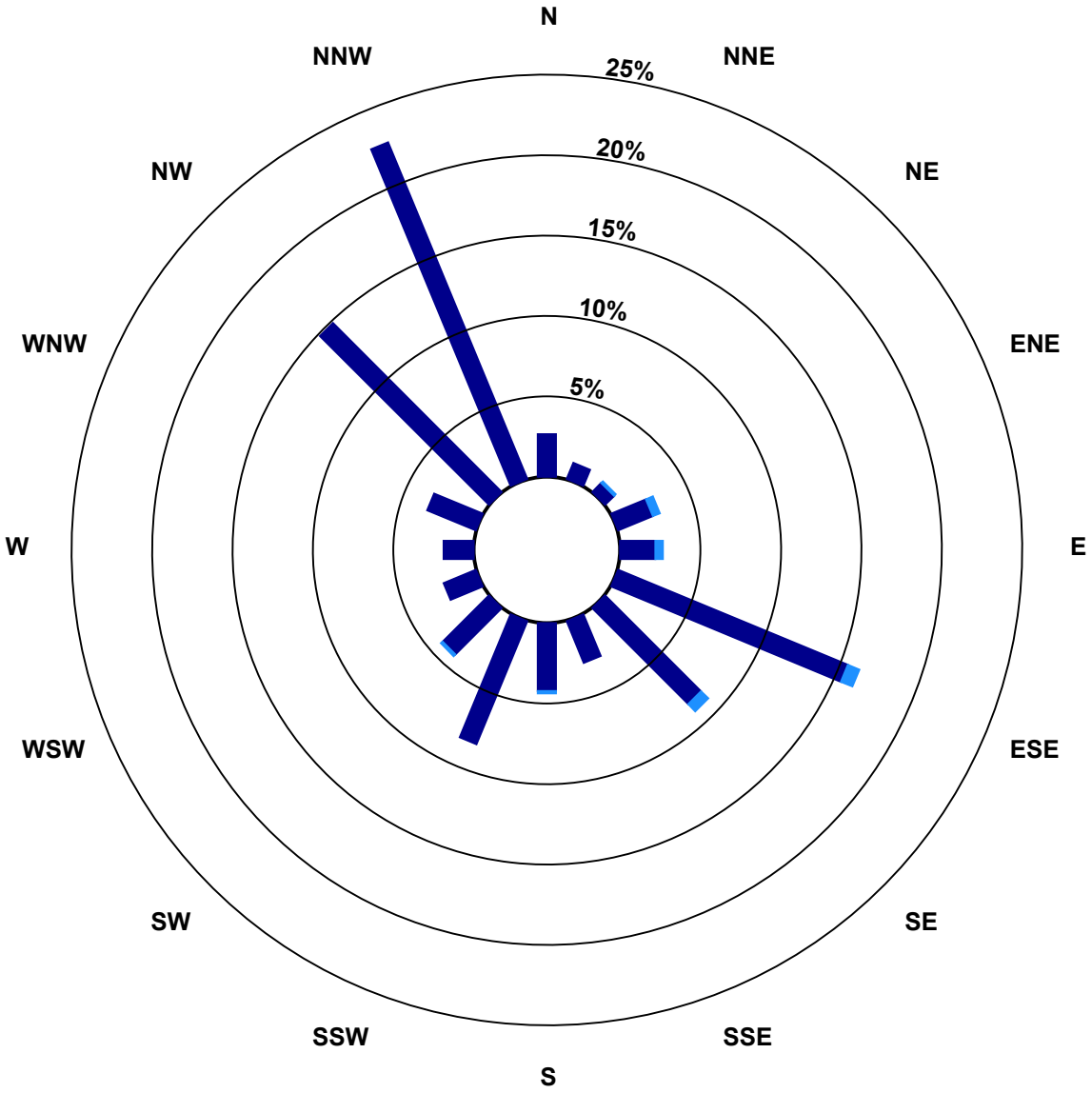
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 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

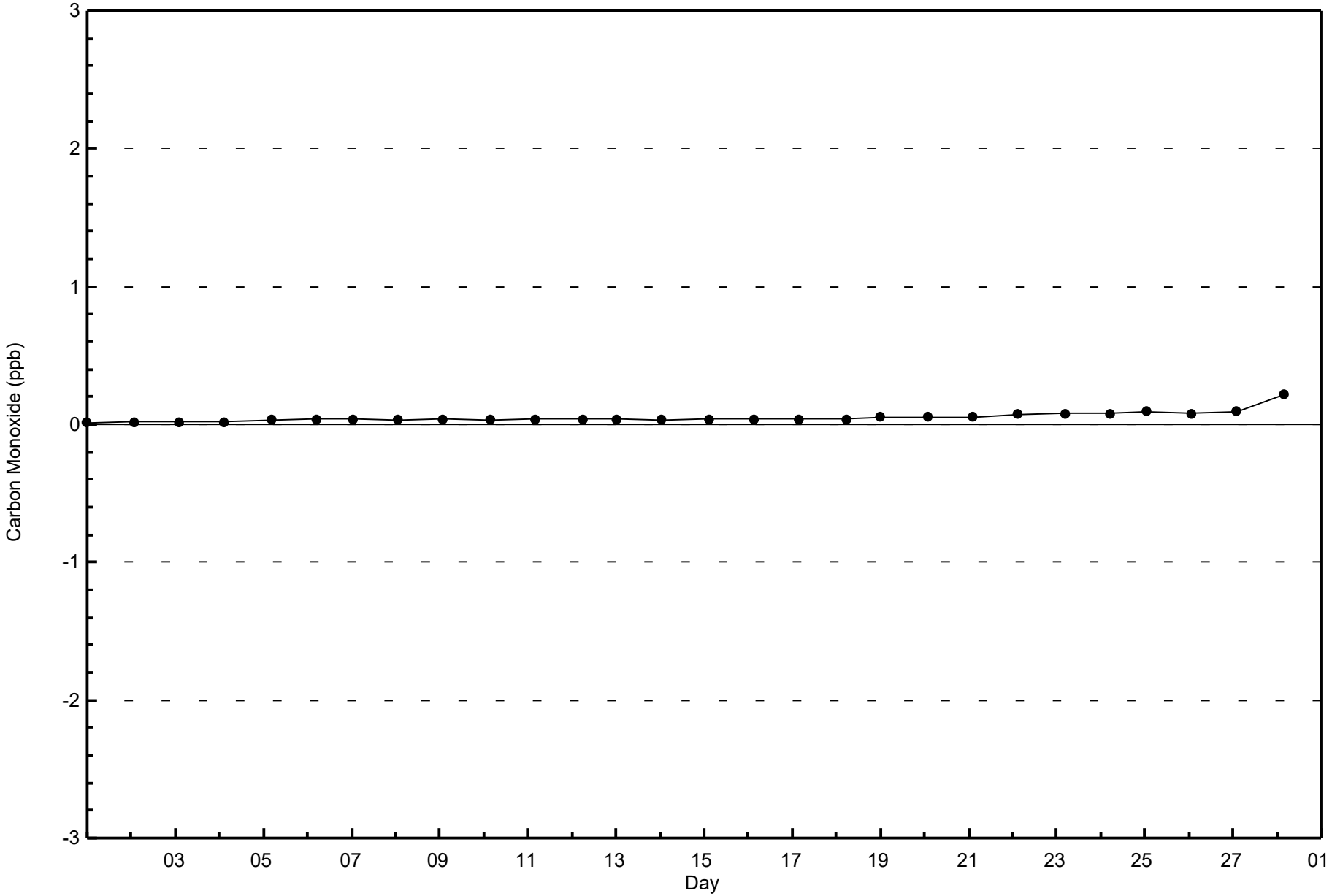
Total Number of Valid Hours: 640

Wood Buffalo Environmental Association

Zero Responses

Carbon Monoxide (CO) - ppb

Athabasca Valley - February 2025

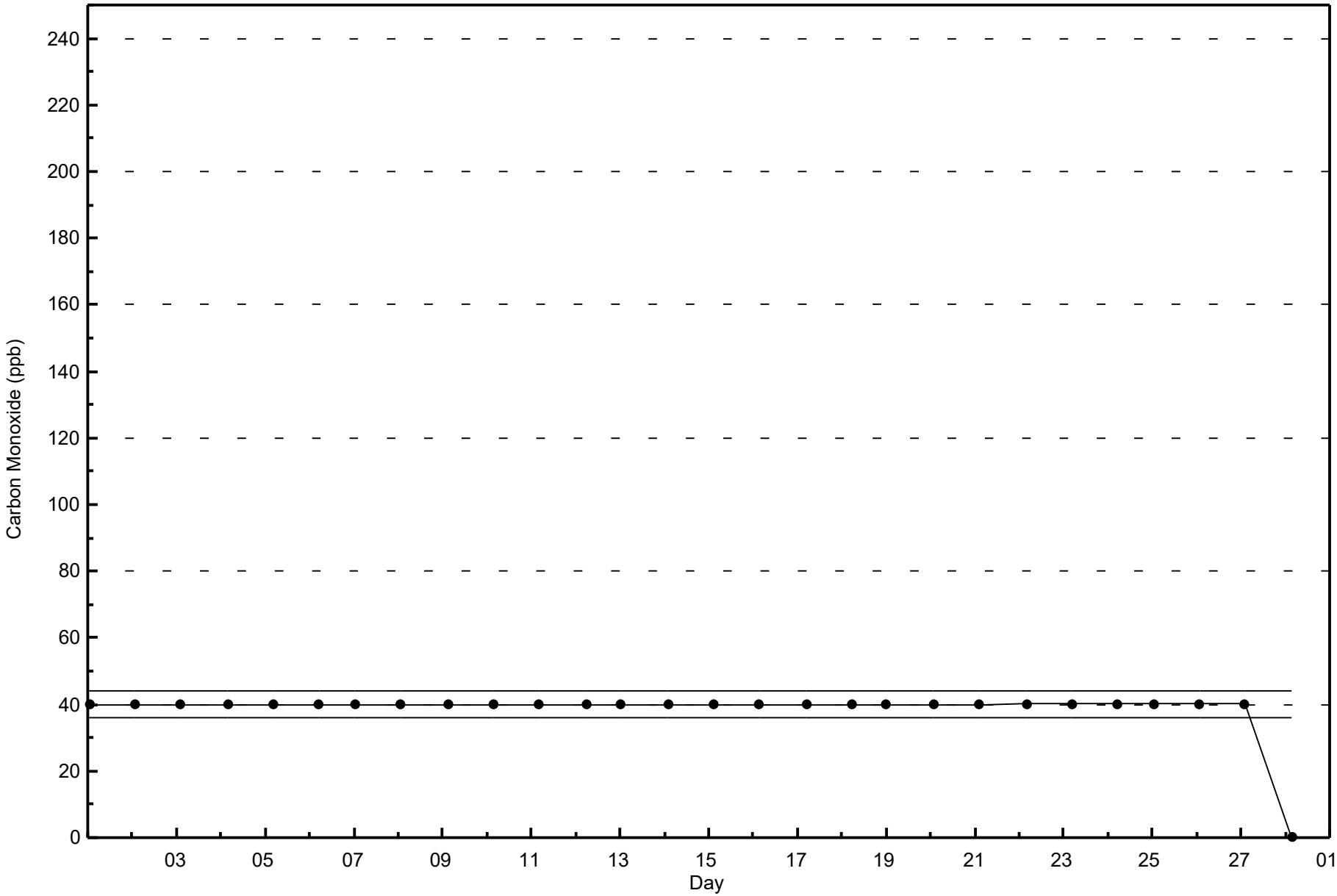


Wood Buffalo Environmental Association

Span Responses

Carbon Monoxide (CO) - ppb

Athabasca Valley - February 2025



Maximum Value: 5.1 C on Feb 27 14:00

Maximum Daily Average: -3.5 C on Feb 23

Minimum Value: -37.8 C on Feb 14 09:00

Minimum Daily Average: -31.1 C on Feb 14

Maximum Diurnal Average: -12.5 C at hour 16

Minimum Diurnal Average: -21.8 C at hour 8

Monthly Average: -17.71 C

Percentiles: P_1 = -36.2 P_{10} = -30.5 Q_1 = -24.0 Median = -18.7 Q_3 = -9.1 P_{90} = -4.8 P_{99} = 0.7

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

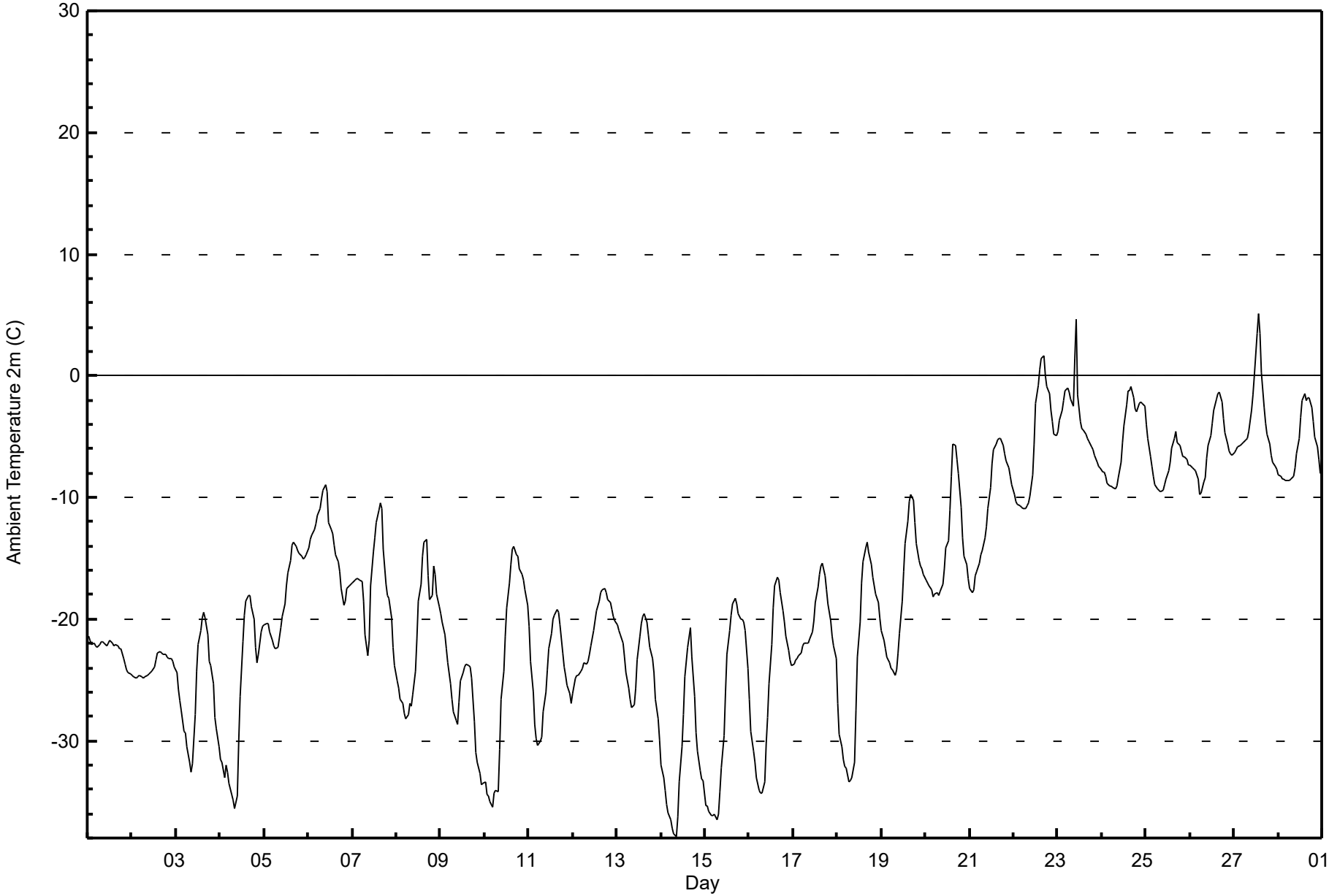
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-21.4	-21.8	-22.1	-22.0	-22.2	-22.3	-22.1	-21.9	-21.8	-22.0	-22.2	-21.9	-21.7	-22.0	-22.2	-22.1	-22.2	-22.4	-22.5	-23.2	-23.7	-24.2	-24.4	-24.5	-22.5	-21.4
2-Feb	-24.7	-24.7	-24.8	-24.8	-24.7	-24.7	-24.8	-24.7	-24.7	-24.6	-24.5	-24.3	-23.9	-23.4	-22.7	-22.6	-22.8	-22.9	-22.9	-23.1	-23.2	-23.2	-23.4	-23.9	-23.9	-22.6
3-Feb	-24.4	-25.7	-26.7	-27.5	-29.3	-29.4	-30.6	-31.7	-32.6	-31.9	-27.9	-24.3	-22.0	-20.9	-19.9	-19.5	-20.0	-21.3	-23.5	-23.9	-25.4	-28.1	-29.0	-30.5	-26.1	-19.5
4-Feb	-31.6	-31.7	-33.0	-32.1	-32.6	-33.5	-34.5	-34.9	-35.6	-34.5	-30.1	-26.3	-21.8	-19.7	-18.5	-18.1	-18.1	-19.0	-20.0	-22.3	-23.6	-22.9	-21.0	-20.6	-26.5	-18.1
5-Feb	-20.4	-20.3	-20.4	-21.0	-21.7	-22.2	-22.5	-22.3	-21.5	-20.7	-19.8	-18.7	-17.3	-16.2	-15.1	-13.9	-13.7	-14.1	-14.4	-14.6	-14.8	-15.0	-15.0	-14.7	-17.9	-13.7
6-Feb	-14.1	-13.5	-13.1	-12.7	-12.2	-11.5	-10.9	-10.1	-9.5	-9.0	-9.5	-12.1	-12.7	-13.0	-13.9	-14.7	-15.3	-16.1	-17.5	-18.9	-18.5	-17.5	-17.2	-17.2	-13.8	-9.0
7-Feb	-17.0	-16.8	-16.6	-16.7	-16.8	-16.9	-18.5	-21.3	-23.1	-21.7	-17.3	-14.5	-13.4	-12.1	-11.0	-10.4	-11.0	-14.3	-17.2	-18.1	-18.3	-19.9	-22.4	-23.8	-17.0	-10.4
8-Feb	-25.1	-25.6	-26.6	-26.9	-27.7	-28.2	-27.8	-26.9	-27.2	-26.3	-24.3	-21.7	-18.5	-17.1	-14.8	-13.7	-13.5	-16.4	-18.4	-18.1	-15.6	-16.4	-17.9	-19.0	-21.4	-13.5
9-Feb	-19.5	-20.3	-21.3	-22.5	-23.6	-25.3	-26.6	-27.7	-28.4	-28.7	-26.9	-25.1	-24.4	-24.0	-23.7	-23.8	-23.9	-24.9	-28.4	-31.0	-31.7	-32.7	-33.6	-33.5	-26.3	-19.5
10-Feb	-33.4	-34.4	-34.6	-35.0	-35.5	-34.3	-34.0	-34.2	-30.8	-26.6	-24.2	-21.4	-19.1	-17.0	-15.5	-14.3	-14.1	-14.7	-14.8	-15.8	-16.3	-16.8	-17.6	-18.9	-23.9	-14.1
11-Feb	-20.6	-23.5	-26.0	-28.7	-29.8	-30.4	-30.0	-29.7	-27.6	-26.0	-24.2	-22.5	-21.1	-20.0	-19.7	-19.2	-19.4	-20.4	-22.7	-23.9	-24.7	-25.5	-26.1	-26.9	-24.5	-19.2
12-Feb	-26.1	-24.9	-24.7	-24.6	-24.3	-24.0	-23.6	-23.7	-23.5	-23.0	-22.2	-20.9	-20.1	-19.3	-18.5	-17.9	-17.6	-17.5	-17.8	-18.4	-18.6	-19.2	-19.8	-20.1	-21.3	-17.5
13-Feb	-20.5	-20.9	-21.3	-22.0	-23.2	-24.4	-25.6	-26.6	-27.3	-27.1	-25.7	-23.3	-21.4	-20.4	-19.8	-19.6	-20.3	-21.3	-22.4	-23.3	-24.5	-26.6	-28.2	-29.9	-23.6	-19.6
14-Feb	-32.0	-33.0	-34.1	-35.2	-36.0	-36.5	-37.2	-37.6	-37.8	-36.3	-33.3	-30.5	-27.9	-24.8	-22.4	-21.5	-20.7	-23.1	-26.4	-29.4	-30.9	-32.4	-33.1	-33.3	-31.1	-20.7
15-Feb	-35.3	-35.3	-35.9	-36.2	-36.2	-36.1	-36.5	-36.0	-34.2	-32.3	-29.5	-26.0	-22.9	-21.0	-19.7	-18.8	-18.3	-18.8	-19.6	-20.1	-20.1	-20.3	-21.0	-24.0	-27.3	-18.3
16-Feb	-26.6	-29.2	-30.9	-31.8	-33.0	-34.0	-34.3	-34.4	-33.4	-30.3	-28.1	-25.3	-22.1	-19.1	-17.2	-16.6	-16.7	-17.8	-19.3	-20.2	-21.4	-22.6	-23.3	-23.9	-25.5	-16.6
17-Feb	-23.8	-23.4	-23.2	-23.0	-22.8	-22.2	-22.0	-22.0	-22.0	-21.6	-21.1	-20.2	-18.7	-17.4	-16.3	-15.7	-15.4	-16.4	-17.6	-18.8	-20.1	-21.4	-22.2	-23.3	-20.4	-15.4
18-Feb	-26.9	-29.4	-30.5	-31.5	-32.1	-32.2	-33.4	-33.2	-33.0	-31.8	-27.5	-23.1	-20.2	-17.0	-15.3	-14.2	-13.7	-14.4	-15.5	-16.5	-17.3	-17.9	-18.6	-19.9	-23.5	-13.7
19-Feb	-20.9	-21.7	-22.5	-23.1	-23.6	-24.0	-24.2	-24.6	-24.2	-22.8	-21.2	-18.5	-16.1	-13.8	-11.9	-10.4	-9.8	-10.3	-12.0	-13.8	-15.1	-15.7	-15.8	-16.4	-18.0	-9.8
20-Feb	-16.8	-17.0	-17.3	-17.6	-18.2	-18.0	-17.9	-18.0	-17.7	-17.1	-15.9	-14.1	-13.6	-11.0	-8.2	-5.6	-5.7	-6.9	-8.1	-10.8	-13.4	-14.8	-15.5	-16.7	-14.0	-5.6
21-Feb	-17.5	-17.9	-17.6	-16.4	-16.1	-15.4	-14.8	-14.4	-13.4	-12.4	-10.9	-9.2	-7.3	-6.1	-5.6	-5.3	-5.1	-5.2	-5.7	-6.4	-7.0	-7.5	-8.2	-8.9	-10.6	-5.1
22-Feb	-9.8	-10.3	-10.6	-10.7	-10.8	-10.9	-10.9	-10.7	-10.4	-9.9	-8.2	-5.7	-2.3	-0.8	0.5	1.4	1.6	0.1	-0.8	-1.5	-2.8	-3.8	-4.8	-5.0	-5.7	1.6
23-Feb	-4.5	-3.7	-2.9	-2.0	-1.2	-1.0	-1.4	-1.9	-2.5	1.5	4.6	-1.6	-3.7	-4.3	-4.5	-4.8	-5.1	-5.4	-5.8	-6.1	-6.5	-7.1	-7.5	-7.6	-3.5	4.6
24-Feb	-7.9	-7.9	-8.3	-8.8	-9.1	-9.1	-9.2	-9.3	-9.1	-8.4	-7.1	-5.5	-4.1	-2.4	-1.2	-1.3	-0.9	-1.8	-2.7	-3.0	-2.3	-2.2	-2.3	-2.5	-5.3	-0.9
25-Feb	-4.0	-5.2	-6.7	-7.4	-8.2	-9.0	-9.4	-9.4	-9.5	-9.4	-9.0	-8.5	-7.9	-7.1	-6.0	-5.2	-4.6	-5.5	-5.7	-6.2	-6.6	-6.6	-6.9	-7.3	-7.1	-4.0
26-Feb	-7.4	-7.6	-7.7	-7.8	-8.5	-9.8	-9.6	-8.8	-8.3	-6.8	-5.8	-5.0	-3.9	-2.8	-1.9	-1.4	-1.3	-2.2	-3.5	-4.7	-5.6	-6.2	-6.4	-6.6	-5.8	-1.3
27-Feb	-6.3	-6.0	-5.9	-5.8	-5.6	-5.5	-5.3	-5.1	-4.5	-2.8	-1.6	0.0	3.5	5.1	3.5	0.3	-2.6	-3.8	-4.8	-5.7	-6.6	-7.1	-7.5	-7.7	-3.7	5.1
28-Feb	-8.1	-8.3	-8.4	-8.6	-8.6	-8.7	-8.6	-8.6	-8.3	-7.6	-6.4	-5.1	-3.5	-2.0	-1.5	-2.0	-1.8	-1.8	-2.6	-3.8	-5.0	-5.9	-6.9	-8.0	-5.8	-1.5
	-19.5	-20.0	-20.5	-20.8	-21.2	-21.4	-21.6	-21.8	-21.5	-20.4	-18.6	-17.0	-15.3	-13.9	-13.0	-12.5	-12.6	-13.5	-14.7	-15.8	-16.4	-17.1	-17.7	-18.4	Diurnal Average	
	-4.0	-3.7	-2.9	-2.0	-1.2	-1.0	-1.4	-1.9	-2.5	1.5	4.6	0.0	3.5	5.1	3.5	1.4	1.6	0.1	-0.8	-1.5	-2.3	-2.2	-2.3	-2.5	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Athabasca Valley - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	307	45.68	45.68
-20 - 0	355	52.83	98.51
0 - 10	10	1.49	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Maximum Value: 29.9 inHg on Feb 18 09:00

Maximum Daily Average: 29.8 inHg on Feb 18

Minimum Value: 28.2 inHg on Feb 23 11:00

Minimum Daily Average: 28.4 inHg on Feb 23

Maximum Diurnal Average: 29.3 inHg at hour 1

Minimum Diurnal Average: 29.2 inHg at hour 15

Monthly Average: 29.24 inHg

Percentiles: P_1 = 28.3 P_{10} = 28.7 Q_1 = 29.0 Median = 29.3 Q_3 = 29.6 P_{90} = 29.7 P_{99} = 29.8

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

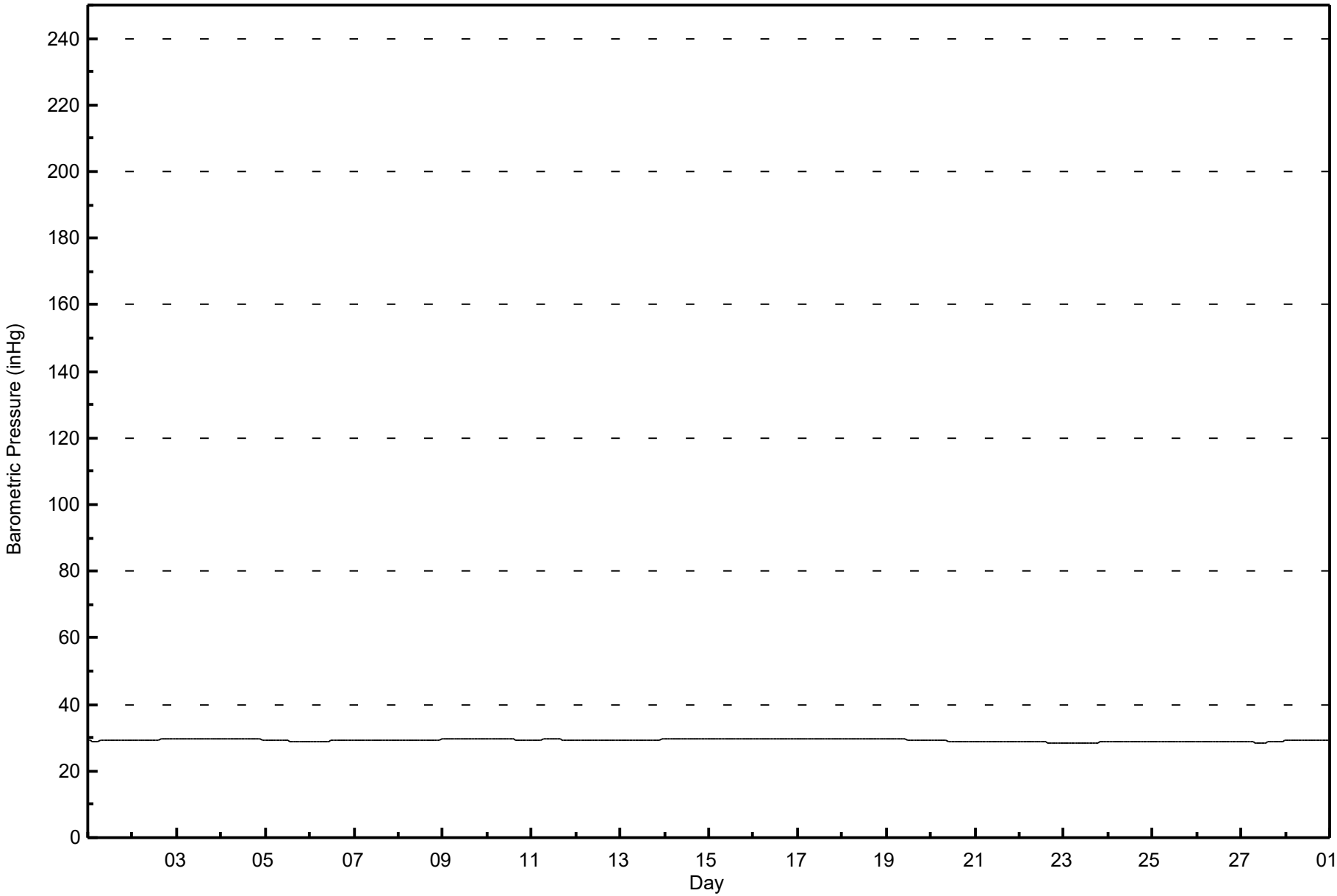
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.1	29.1	29.1	29.1	29.1	29.1	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.3	29.3	29.1	29.3
2-Feb	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.5	29.5	29.5	29.5	29.5	29.6	29.6	29.6	29.6	29.4	29.6
3-Feb	29.6	29.6	29.6	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.8	29.7	29.8
4-Feb	29.8	29.8	29.8	29.8	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.6	29.6	29.6	29.6	29.5	29.5	29.5	29.5	29.5	29.4	29.4	29.6	29.8
5-Feb	29.4	29.3	29.3	29.3	29.3	29.2	29.2	29.2	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.1	29.4
6-Feb	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	29.2	29.2	29.2	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.1	29.3
7-Feb	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3
8-Feb	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.4	29.4	29.5	29.3	29.5
9-Feb	29.5	29.5	29.5	29.5	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.7	29.7	29.7	29.7	29.7	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.7	29.8
10-Feb	29.8	29.8	29.8	29.8	29.8	29.8	29.7	29.7	29.7	29.7	29.6	29.6	29.6	29.5	29.5	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.6	29.8
11-Feb	29.4	29.4	29.4	29.4	29.4	29.4	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.5
12-Feb	29.3	29.3	29.3	29.3	29.3	29.2	29.2	29.2	29.2	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.2	29.3
13-Feb	29.1	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.4	29.4	29.4	29.4	29.4	29.5	29.5	29.3	29.5
14-Feb	29.5	29.5	29.5	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.7	29.7	29.7	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.7	29.6	29.7	29.6	29.6	29.7
15-Feb	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7
16-Feb	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.6	29.6	29.6	29.6	29.6	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.6	29.6	29.7
17-Feb	29.6	29.6	29.5	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.7	29.7	29.7	29.7	29.7	29.8	29.6	29.8
18-Feb	29.8	29.8	29.8	29.8	29.8	29.8	29.9	29.9	29.9	29.9	29.9	29.8	29.8	29.8	29.8	29.8	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.8	29.9
19-Feb	29.7	29.7	29.6	29.6	29.6	29.6	29.5	29.5	29.5	29.5	29.5	29.4	29.4	29.4	29.3	29.3	29.3	29.3	29.2	29.2	29.2	29.2	29.2	29.2	29.4	29.7
20-Feb	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.9	28.9	29.0	29.0	29.0	29.0	29.1
21-Feb	29.0	29.0	29.0	29.0	29.0	29.0	28.9	29.0	28.9	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0
22-Feb	29.0	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.7	28.7	28.7	28.6	28.6	28.6	28.6	28.6	28.5	28.5	28.5	28.4	28.4	28.4	28.7	29.0
23-Feb	28.4	28.4	28.3	28.3	28.3	28.2	28.2	28.2	28.2	28.2	28.2	28.2	28.3	28.4	28.4	28.5	28.5	28.6	28.6	28.6	28.6	28.6	28.6	28.7	28.4	28.7
24-Feb	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.7	28.7
25-Feb	28.6	28.7	28.7	28.7	28.7	28.7	28.7	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8
26-Feb	28.8	28.8	28.8	28.8	28.8	28.9	28.9	28.9	28.9	28.9	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	28.9	28.9	28.9	29.0
27-Feb	28.9	28.9	28.8	28.8	28.7	28.7	28.6	28.6	28.6	28.5	28.5	28.5	28.5	28.6	28.6	28.7	28.8	28.8	28.9	28.9	28.9	29.0	29.0	29.0	28.8	29.0
28-Feb	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	29.0	29.1	29.1
	29.3	29.3	29.3	29.3	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.3	Diurnal Average	
	29.8	29.8	29.8	29.8	29.8	29.8	29.9	29.9	29.9	29.9	29.9	29.8	29.8	29.8	29.8	29.8	29.7	29.8	29.8	29.8	29.8	29.8	29.8	29.8	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Barometric Pressure (BP) - inHg

Athabasca Valley - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Athabasca Valley - February 2025

Maximum Value: 93.4 % on Feb 23 09:00

Maximum Daily Average: 85.1 % on Feb 23

Minimum Value: 32.3 % on Feb 19 18:00

Minimum Daily Average: 43.5 % on Feb 19

Maximum Diurnal Average: 71.0 % at hour 8

Minimum Diurnal Average: 57.9 % at hour 16

Monthly Average: 67.04 %

Percentiles: P_1 = 37.2 P_{10} = 51.7 Q_1 = 62.5 Median = 68.5 Q_3 = 73.0 P_{90} = 80.2 P_{99} = 89.8

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

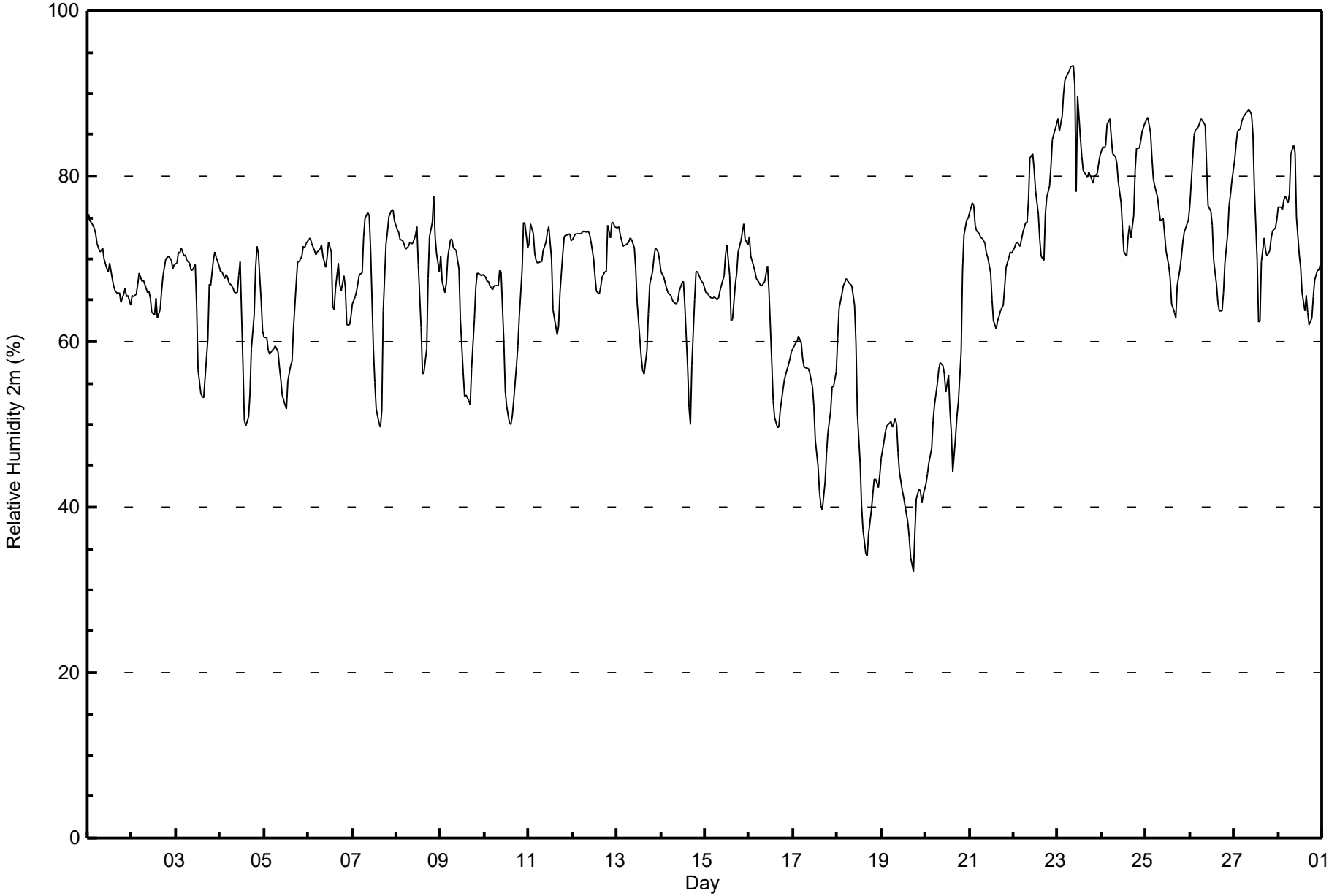
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	75.5	74.5	74.4	73.8	73.1	71.9	70.9	71.0	71.4	70.0	68.8	68.4	69.5	67.5	66.6	66.1	65.8	65.9	64.8	65.8	66.4	65.5	65.5	64.5	69.1	75.5
2-Feb	65.6	65.3	65.8	66.9	68.3	67.4	67.4	67.0	65.9	66.2	65.3	63.6	63.2	65.3	63.0	63.9	66.0	67.9	70.0	70.2	70.4	69.9	68.8	69.4	66.8	70.4
3-Feb	69.6	70.8	70.7	71.3	70.4	70.5	69.8	69.5	68.6	68.6	69.3	64.2	56.6	53.7	53.3	53.2	55.5	60.4	67.0	66.7	70.1	70.9	70.1	69.1	65.8	71.3
4-Feb	68.5	68.4	67.6	68.1	67.8	67.2	66.7	66.4	65.9	66.0	68.0	69.7	57.4	50.5	49.8	50.8	53.7	59.2	63.1	68.9	71.6	70.7	64.9	61.4	63.8	71.6
5-Feb	60.4	60.6	59.0	58.4	59.0	59.2	59.6	58.9	57.0	55.4	53.6	52.4	51.8	55.3	57.1	57.6	61.6	67.2	69.7	69.6	70.4	71.4	71.3	71.9	61.2	71.9
6-Feb	72.4	72.6	71.9	71.1	70.6	70.8	71.2	71.7	70.4	69.0	70.1	72.0	70.9	64.2	63.9	66.4	69.4	67.0	66.2	68.0	66.6	62.1	62.0	63.0	68.5	72.6
7-Feb	64.6	65.5	66.1	67.1	68.1	68.3	72.5	75.0	75.5	75.2	71.1	59.2	55.1	51.9	50.2	49.6	51.8	63.8	71.9	73.2	75.1	75.9	75.9	74.6	66.5	75.9
8-Feb	73.6	73.2	72.4	72.3	71.6	71.2	71.5	72.0	71.8	71.9	72.8	73.9	69.4	61.8	56.2	56.2	59.2	67.6	72.7	74.5	77.5	72.7	70.7	68.5	69.8	77.5
9-Feb	70.3	67.3	66.0	67.2	70.1	72.3	72.3	71.3	71.1	69.9	68.8	62.8	56.3	53.4	53.5	52.8	52.3	56.7	62.6	66.7	68.3	68.1	68.0	68.1	64.8	72.3
10-Feb	67.9	67.3	67.3	66.8	66.3	66.8	66.9	66.8	68.6	68.4	60.0	54.1	52.2	50.1	50.0	51.1	52.8	57.2	59.5	63.1	68.6	74.3	74.2	71.4	63.0	74.3
11-Feb	71.8	74.2	73.0	70.8	69.9	69.5	69.6	69.7	71.0	72.0	73.2	74.0	70.1	63.9	62.9	60.8	61.8	66.0	70.7	72.8	73.0	72.9	73.0	72.2	69.9	74.2
12-Feb	72.3	73.0	73.1	73.0	73.1	73.2	73.5	73.1	73.4	73.0	72.1	70.0	67.8	66.0	65.8	66.5	67.8	68.5	68.5	74.1	72.5	74.5	74.3	73.9	71.4	74.5
13-Feb	73.8	73.9	72.9	71.5	71.8	71.7	72.0	72.5	72.3	71.3	68.9	64.7	60.2	57.9	56.4	56.1	59.0	63.4	67.0	68.5	70.2	71.4	70.9	69.8	67.8	73.9
14-Feb	68.5	67.7	67.1	66.4	65.9	65.6	65.1	64.8	64.6	65.0	66.1	67.2	67.2	64.4	57.0	52.0	50.0	57.1	65.1	68.4	68.5	67.7	67.3	67.2	64.4	68.5
15-Feb	66.0	65.9	65.5	65.3	65.3	65.4	65.1	65.3	66.2	66.8	68.0	70.5	71.6	68.0	62.5	62.8	66.9	68.4	70.8	72.2	73.3	74.3	72.4	71.7	67.9	74.3
16-Feb	72.6	70.3	69.2	68.5	67.7	67.0	66.8	66.8	67.2	68.4	69.2	66.1	57.4	53.0	50.9	49.6	49.7	51.7	54.3	55.3	56.1	57.3	57.9	58.8	61.3	72.6
17-Feb	59.5	59.8	60.0	60.6	59.8	58.0	57.0	56.8	56.8	56.3	54.6	52.2	48.2	44.9	41.8	40.1	39.7	43.1	46.4	49.0	51.8	54.5	54.7	56.4	52.6	60.6
18-Feb	60.4	64.0	65.7	66.8	67.2	67.6	67.2	67.0	66.7	64.4	59.9	51.3	45.2	40.2	37.2	34.4	34.1	36.8	39.6	41.6	43.4	43.4	42.3	43.9	52.1	67.6
19-Feb	45.9	47.9	49.2	49.9	50.1	50.4	49.7	50.7	50.0	46.5	44.2	42.1	41.2	40.2	38.1	36.3	34.0	32.3	37.0	41.1	42.2	41.8	40.5	41.6	43.5	50.7
20-Feb	43.0	44.1	45.4	47.2	50.6	52.4	54.9	56.6	57.4	57.1	56.2	54.0	55.9	51.7	49.0	44.3	48.5	50.9	52.7	58.9	68.6	72.9	74.8	74.9	55.1	74.9
21-Feb	75.7	76.8	76.4	74.0	73.3	73.1	72.5	72.6	71.8	70.7	70.1	68.3	65.1	62.5	61.5	62.5	63.1	63.8	64.4	66.6	69.0	70.2	70.8	70.7	69.4	76.8
22-Feb	71.4	71.8	72.0	71.5	72.4	73.3	74.3	74.5	77.2	82.2	82.7	80.8	78.2	75.5	72.4	70.4	69.8	75.4	77.5	78.8	81.2	84.3	85.1	86.3	76.6	86.3
23-Feb	86.9	85.4	87.3	90.0	91.6	92.3	92.8	93.2	93.4	91.1	78.1	89.7	84.6	82.3	80.6	80.2	79.8	80.5	79.6	79.2	79.9	80.3	81.5	82.5	85.1	93.4
24-Feb	83.5	83.4	83.7	86.2	87.0	84.7	82.8	82.4	81.6	79.3	76.8	73.7	70.8	70.4	72.7	74.0	72.5	75.2	80.7	83.3	83.4	84.2	85.5	86.5	80.2	87.0
25-Feb	86.7	87.1	85.3	82.3	79.6	78.8	77.5	75.9	74.5	75.0	73.0	71.1	69.2	67.7	64.6	63.6	62.9	66.8	68.8	70.3	72.0	73.2	74.2	74.8	74.0	87.1
26-Feb	76.4	82.1	84.9	85.6	85.9	86.5	86.9	86.5	86.0	81.0	76.4	75.8	74.0	69.8	66.9	64.8	63.7	63.7	65.9	69.4	73.1	76.4	77.7	79.5	76.6	86.9
27-Feb	82.0	83.9	85.4	85.7	86.5	87.2	87.7	87.8	88.2	87.5	85.1	78.6	69.8	62.4	62.5	69.7	72.5	71.1	70.3	71.0	72.5	73.5	73.8	74.8	77.9	88.2
28-Feb	76.3	76.3	76.0	77.1	77.7	76.7	77.9	82.7	83.7	82.9	75.1	70.6	69.0	66.0	63.7	65.6	63.6	62.0	62.9	65.4	67.5	68.6	68.6	69.4	71.9	83.7
	70.0	70.5	70.5	70.5	70.7	70.7	70.8	71.0	71.0	70.4	68.5	66.4	63.1	60.0	58.2	57.9	58.8	61.8	64.6	66.9	68.7	69.4	69.2	69.2	Diurnal Average	
	86.9	87.1	87.3	90.0	91.6	92.3	92.8	93.2	93.4	91.1	85.1	89.7	84.6	82.3	80.6	80.2	79.8	80.5	80.7	83.3	83.4	84.3	85.5	86.5	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Athabasca Valley - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Athabasca Valley - February 2025

Maximum Speed: 33 km/h on Feb 27 15:00

Maximum Daily Speed Average: 19.7 km/h on Feb 1

Minimum Speed Value: 0 km/h on Feb 18 01:00

Minimum Daily Speed Average: 1.1 km/h on Feb 22

Maximum Diurnal Speed Average: 3.0 km/h at hour 15

Minimum Diurnal Speed Average: 0.0 km/h at hour 10

Monthly Average Velocity: 1.4 km/h 329.1 deg

Percentiles: P_1 = 0 P_{10} = 2 Q_1 = 4 Median = 7 Q_3 = 11 P_{90} = 16 P_{99} = 23

Hours in Service: 672

Hours of Data: 672

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-Feb	NNW19	NW21	NW20	NNW18	NNW20	NW23	NW21	NW21	NW22	NW25	NNW23	NNW20	NW18	NW21	NW20	WNW18	NW18	WNW17	NW18	NW18	NW17	NW20	NNW20	NW20	NW19.7	NW25
2-Feb	NNW21	NNW22	NNW22	NW20	NW22	NNW20	NNW17	NW19	NW18	NNW16	NNW17	NNW19	NNW16	NNW12	NW15	NNW12	NW9	NW10	NW7	NW10	NW9	NW9	WNW8	W5	NW14.5	NNW22
3-Feb	SW5	SSW3	SW5	SSW5	S2	SSW4	SSE2	N1	NNW1	N0	E2	ENE5	ESE3	SSW8	SSW10	SSW10	SSW8	SSW3	SSE3	S5	SE5	ESE2	S2	S1	S3.0	SSW10
4-Feb	S2	S4	S3	S4	S3	S3	S3	SE3	ESE3	ESE3	ESE6	S6	SSW11	SSW12	SSW14	SSW10	SSE5	SE5	SE6	SE5	ESE4	ESE4	SSE5	SSW9	S4.7	SSW14
5-Feb	SSW13	SSW18	SSW16	SSW12	S7	SSE7	SSE7	S11	SSW14	SSW16	SSW16	SW16	SW10	SSW11	SW13	SW10	WSW8	SW7	SW7	SW8	SW8	SSW7	SSW7	SSW8	SSW10.3	SSW18
6-Feb	SSW10	S8	S8	SSW7	S7	S7	SSW10	SW10	W10	WSW20	NW13	NNW17	NNW19	NNW16	NNW16	NNW15	NW14	NW10	NW4	SW4	SSW6	SSW9	SSW7	SSW6	W4.9	WSW20
7-Feb	SSW7	S6	S6	SSW7	SSW9	S3	SE4	E1	ESE1	ESE3	SSE4	SSW10	SSW12	SSW10	SSW10	SW11	WSW8	WNW6	SW6	SSE4	S4	S4	ESE0	S2	SSW4.8	SSW12
8-Feb	SSE2	SSE2	SE2	SE3	ESE4	E3	ESE3	ESE6	ESE7	ESE7	ESE7	ESE6	NE2	NNW2	WNW2	NNW4	NNW5	NW4	NNW5	NW5	NNW9	NNW21	NNW22	NNW15	N2.4	NNW22
9-Feb	NNW14	NNW14	NW14	NNW11	NW6	W4	WSW3	SW4	SSW3	WSW2	NNW6	NNW10	NNW12	NNW12	NNW10	NW9	NW7	W3	WSW5	SW4	SW6	SW4	S2	SSE2	NW5.1	NNW14
10-Feb	S3	SSE3	SE3	SE4	ESE4	ESE4	E5	E5	ENE7	S9	SSW13	SSW13	SW16	SSW13	SSW11	S6	SE3	ENE4	ESE2	N5	NNW9	NNW9	NNW9	NNW8	S2.1	SW16
11-Feb	NNW7	WNW3	W3	SW4	SW4	SW5	SSW4	SSW4	SW7	SW2	WNW4	NNW8	NNW5	NNW3	NW3	N4	N2	N2	SSW2	WSW0	WSW2	W1	WSW1	ESE0	W1.9	NNW8
12-Feb	NNW1	E2	ENE3	NE4	ENE2	NE2	E2	ENE3	ENE4	N2	WNW2	WNW2	WNW3	W3	NW3	NW7	NNW6	N7	NNW8	NNW8	N6	NNW7	NNW9	NNW8	NNW3.3	NNW9
13-Feb	NNW10	NW9	NW11	NNW11	NNW11	NNW10	NNW8	NNW5	NNW4	NE3	N4	NW7	NW8	NNW10	NNW12	NNW11	NW10	NNW10	NW11	NNW10	NW6	NNW6	NW4	W3	NNW7.9	NNW12
14-Feb	WNW3	NNW3	NW2	NW1	NNE1	W1	NNE1	WSW1	NNE1	NNE2	WSW1	W1	NW3	NW5	N6	NW4	SW1	SW2	SW0	WSW1	S1	N2	ESE1	WNW1	NW1.3	N6
15-Feb	SW2	ENE1	NE1	ESE1	ESE2	NE1	E1	NE1	ENE3	ENE6	ENE5	ENE4	N1	WNW1	NW3	NW2	NNW1	SSW1	ENE2	NNW2	NNW5	NNW7	NNW6	NNW3	NNE1.5	NNW7
16-Feb	WNW2	WSW4	ENE0	WNW1	NNE1	NNE1	E2	SSW2	E3	SE7	ESE8	SE8	ESE8	ESE9	ESE9	ESE11	ESE13	ESE13	ESE11	ESE15	ESE10	ESE11	SE10	SE11	ESE6.2	ESE15
17-Feb	SE10	SE10	SE7	SE7	ESE13	ESE13	ESE13	ESE15	ESE17	ESE15	ESE13	ESE14	ESE15	E11	E14	ESE13	ESE12	SE8	ESE9	ESE11	SE10	ESE8	SE11	ESE10	ESE11.5	ESE17
18-Feb	NW0	ESE2	SW1	SSW4	SSW5	S4	S5	SSW6	SSW5	SW4	ESE4	SE7	SE7	ESE7	ESE11	ESE14	ESE13	ESE12	ESE14	ESE13	ESE12	SE14	SE14	SE15	SE7.0	SE15
19-Feb	SE16	ESE15	ESE15	ESE15	ESE16	ESE15	ESE16	ESE15	ESE19	ESE20	ESE17	ESE16	ESE20	ESE22	ESE20	ESE16	ESE13	SE15	ESE14	ESE13	ESE16	SE16	SE18	SE18	ESE16.3	ESE22
20-Feb	SE16	ESE15	SE15	SE13	SSE7	SE13	SE11	ESE12	ESE12	ESE11	ESE9	SSE5	ESE7	S6	SSW10	ESE2	ESE5	SE10	ESE11	ESE5	NE1	E2	ESE2	ESE3	SE7.9	SE16
21-Feb	E3	E3	E6	ESE7	ESE4	ESE5	SE4	NNW3	NE2	ENE3	NNW0	NW5	NW9	NNW10	NNW8	NNW9	NW9	NW9	NNW10	NNW10	NW11	NNW8	NNW9	NNW8	NNW4.2	NW11
22-Feb	NNW10	NNW9	NNW8	NNW9	NNW8	NNW6	NW7	NNW8	NNW6	NNW7	NNW5	WSW3	SSE5	SE8	SE7	SE7	ESE4	SE5	SE6	SE9	SE7	SE6	SE7	SE7	NE1.1	NNW10
23-Feb	SE5	SE9	SE7	SE5	ESE5	SE5	SE5	SE6	ESE3	SW7	W21	NNW30	NNW28	NNW21	NNW19	NW18	NW16	NNW13	NW11	NNW6	NW6	NNW4	NW4	WNW3	NW5.9	NNW30
24-Feb	NNW4	NNW10	NW10	NNW8	NNW10	NNW7	NNW7	NNW9	NNW5	NNW3	WNW2	WNW1	WNW2	SSE1	WNW1	NW5	NNW5	W1	NW2	NNW4	NNW6	NNW6	NW7	NNW10	NNW5.1	NNW10
25-Feb	NNW15	NW15	NW19	NW18	NW20	NW18	NW14	NW9	NW12	NW11	NNW9	NNW10	NW10	NW8	NW8	NW7	WSW3	NNW5	NNW7	NNW8	NNW7	NNW8	NNW14	NW14	NW11.0	NW20
26-Feb	NNW5	NNE2	ENE3	SE3	SE4	E1	SE1	SE2	N3	NNW10	NNW15	NW15	NW10	NW9	NW8	NW9	NW9	NNW8	NW9	NW10	NNW8	NNW9	NNW7	NNW9	NNW6.0	NW15
27-Feb	NNW8	NW5	NW7	NW7	NNW5	NNW6	NNW7	N3	N4	SSE6	SSW8	SSW3	NW14	WNW30	WNW33	NNW17	NNW16	NNW13	NNW12	NNW12	NNW15	NNW12	NW11	NNW10	NW9.2	WNW33
28-Feb	NNW9	NNW7	NNW6	NNW5	NW5	NNW4	N4	NNW5	NNW5	NNE3	SE8	ESE9	ESE10	E10	E8	E9	ESE11	ESE11	ESE8	ESE6	SSE4	ESE7	ESE9	ESE11	E3.7	ESE11
	NW2.1	NW1.5	NW1.7	NW1.1	NNW1.1	N1.0	NNE0.6	N0.3	NNE1.1	WSW0.0	WNW0.7	NNW2.1	NW2.5	NW2.7	WNW3.0	NW2.6	NNW2.0	N1.5	N1.1	N1.2	NNW1.5	NNW2.0	NNW1.7	NNW0.9	Diurnal Average	
	NNW21	NNW22	NNW22	NW20	NW22	NW23	NW21	NW21	NW22	NW25	NNW23	NNW30	NNW28	WNW30	WNW33	WNW18	NW18	WNW17	NW18	NW18	NW17	NNW21	NNW22	NW20	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: 11 km/h on Feb 27 13:00

Minimum Value: 1 km/h on Feb 11 17:00

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

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

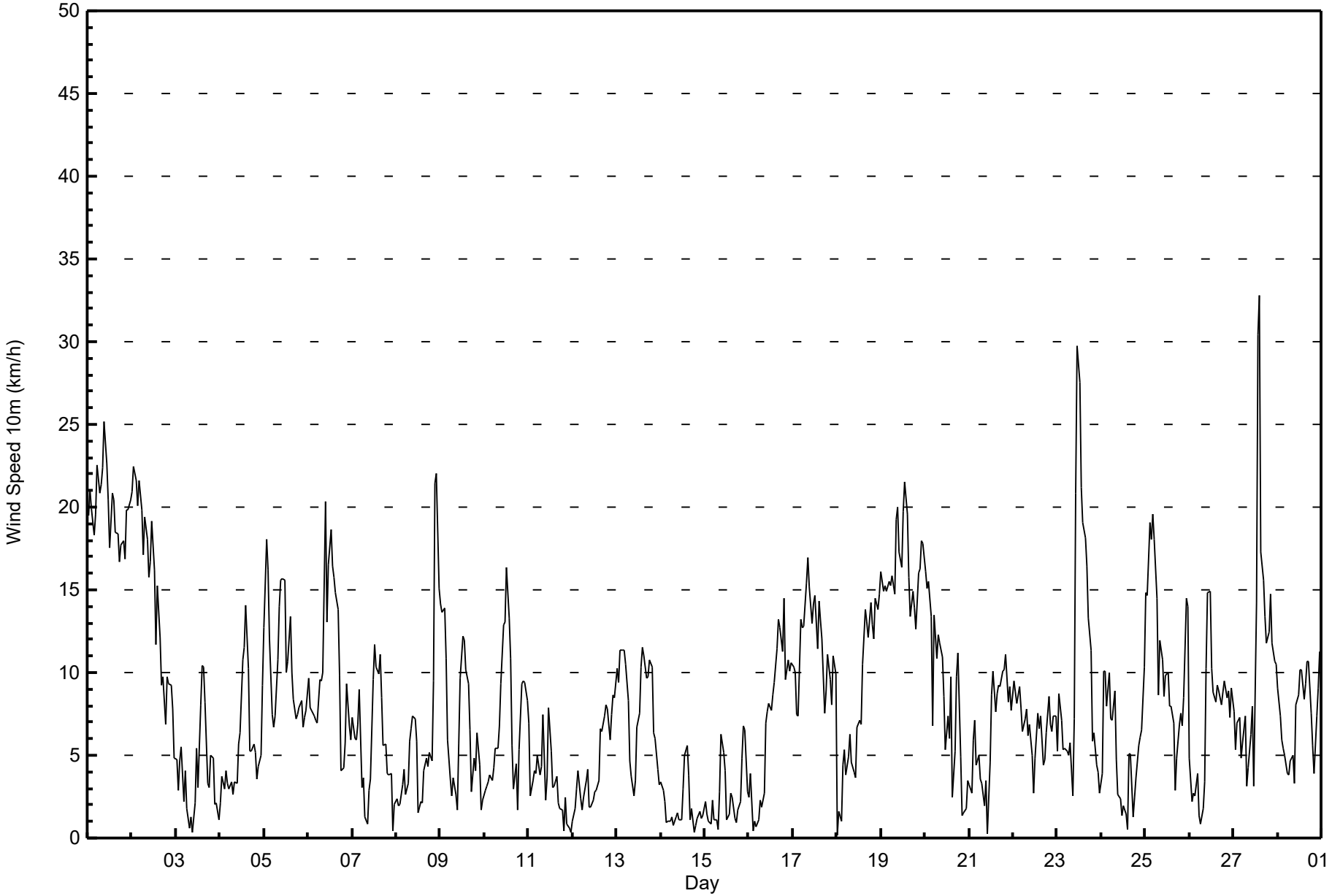
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Feb	3	3	3	4	4	3	4	3	4	5	5	5	3	4	4	3	3	3	3	3	4	3	5	4	5
2-Feb	5	5	5	4	4	5	4	3	3	4	4	4	3	3	3	3	2	2	2	3	2	1	1	2	5
3-Feb	2	2	2	3	2	2	1	1	1	1	2	1	2	2	3	2	1	2	2	3	2	1	1	1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

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Athabasca Valley - February 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	262	38.99	38.99
6 - 11	252	37.50	76.49
12 - 19	123	18.30	94.79
20 - 28	32	4.76	99.55
29 - 38	3	0.45	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672



Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Athabasca Valley - February 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	8	8	16	13	30	19	15	20	14	16	12	10	16	19	32	262
6 - 11	3	0	0	2	4	35	29	4	12	28	12	2	1	2	42	76	252
12 - 19	0	0	0	0	1	38	12	0	0	13	3	0	0	2	22	32	123
20 - 28	0	0	0	0	0	4	0	0	0	0	0	1	1	0	14	12	32
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	3
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	17	8	8	18	18	107	60	19	32	55	31	15	12	22	97	153	672

Total Number of Valid Hours: 672

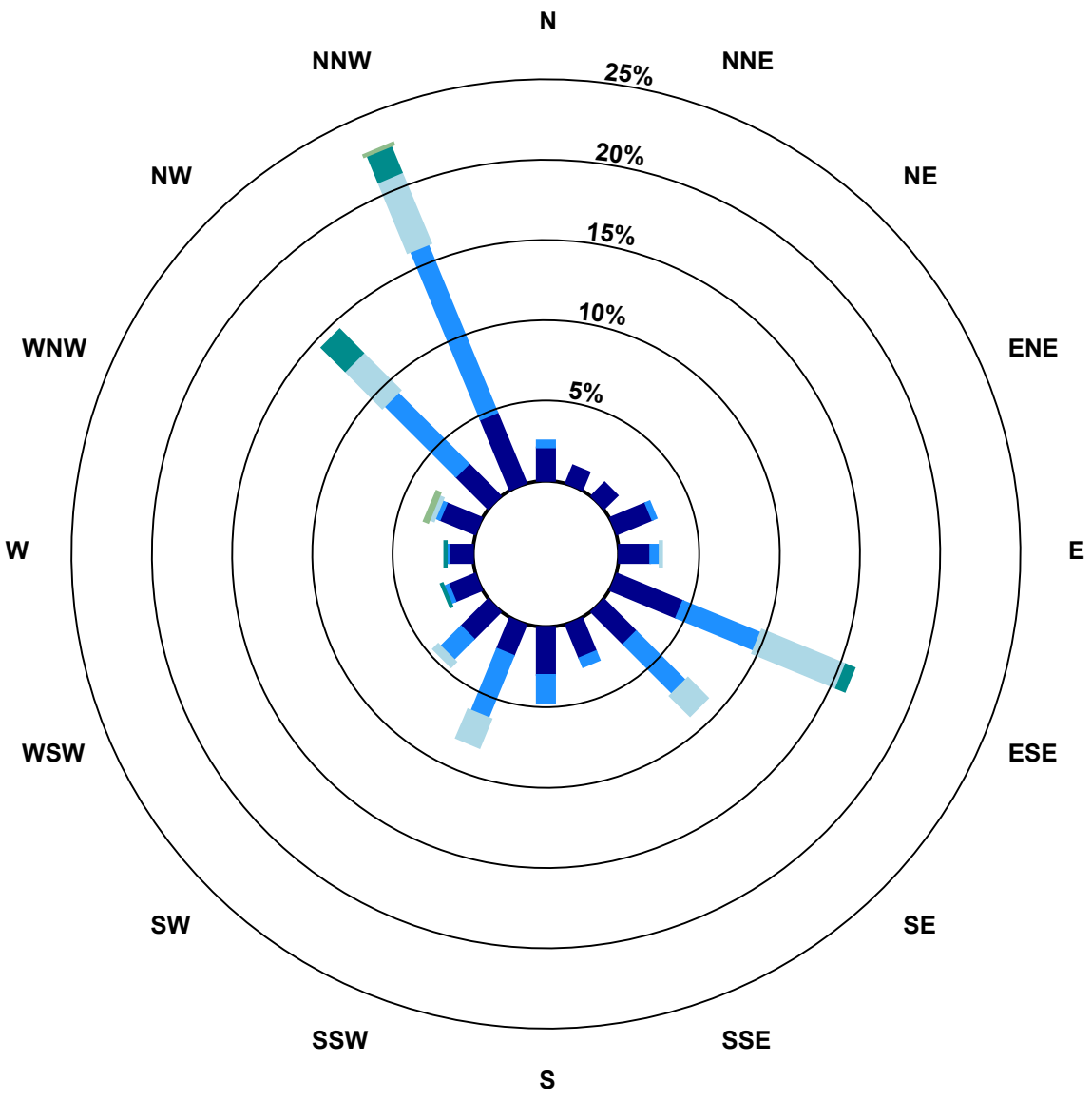
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 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: 672



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Athabasca Valley - February 2025

Direction of Maximum Speed: 288 deg on Feb 27 15:00
Direction of Maximum Daily Speed Average: 320.6 deg on Feb 1

Direction of Minimum Speed: 323 deg on Feb 18 01:00

Direction of Minimum Daily Speed Average: 1.1 deg on Feb 22

Monthly Average Direction: 329.1 deg

Hours in Service:	672
Hours of Data:	672
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-Feb	329	326	326	328	327	323	326	325	325	325	327	328	324	312	309	303	309	301	305	304	323	323	331	326	320.6
2-Feb	330	328	327	324	325	330	329	323	323	332	330	329	332	333	308	333	322	326	314	320	314	305	298	266	324.3
3-Feb	235	202	215	206	173	193	160	351	337	4	85	68	119	195	199	210	212	208	151	189	136	123	177	174	189.0
4-Feb	169	178	180	177	186	176	175	142	109	123	121	173	201	206	208	203	161	139	139	128	115	122	162	199	173.4
5-Feb	208	208	212	199	171	159	165	189	213	206	211	216	220	212	225	220	241	231	230	224	222	210	208	204	209.8
6-Feb	201	190	178	194	174	183	211	222	269	258	313	345	330	343	348	334	322	324	324	228	211	207	207	201	277.1
7-Feb	201	186	183	204	213	173	132	94	120	120	147	196	204	196	209	227	246	286	226	165	174	171	103	172	199.9
8-Feb	164	153	130	141	113	96	115	119	122	121	120	111	56	328	296	329	338	323	328	315	329	336	331	335	358.2
9-Feb	329	346	326	333	321	266	255	226	211	249	328	329	331	330	331	312	323	274	242	218	215	224	183	160	312.4
10-Feb	191	151	132	130	114	122	98	83	62	182	192	203	214	210	207	183	127	75	110	352	338	329	330	334	190.2
11-Feb	332	287	268	236	230	226	206	193	217	221	287	328	331	341	318	355	357	358	213	254	242	263	251	110	276.4
12-Feb	333	94	57	56	58	36	79	78	61	351	290	284	294	264	309	326	337	350	345	340	350	348	332	330	348.7
13-Feb	328	324	326	330	331	333	328	335	346	38	353	323	326	329	331	333	323	328	326	330	326	335	323	275	329.1
14-Feb	294	338	307	307	22	276	29	253	15	12	237	279	307	326	353	316	233	234	219	249	169	355	123	301	318.0
15-Feb	222	67	48	122	117	49	81	36	65	75	70	58	4	287	326	318	343	196	69	344	341	332	336	330	15.9
16-Feb	298	258	67	285	18	31	82	200	97	125	122	131	120	111	120	105	103	108	106	103	121	111	136	137	115.7
17-Feb	129	124	133	125	107	109	111	109	108	109	114	114	107	94	98	104	115	130	117	115	130	122	125	122	113.7
18-Feb	323	122	226	194	197	180	190	204	203	216	112	138	135	118	121	110	114	121	120	123	123	126	127	127	133.3
19-Feb	124	122	121	116	116	112	112	115	110	108	107	107	109	106	107	113	122	124	116	114	116	127	125	126	115.3
20-Feb	125	123	124	127	164	124	130	123	115	123	115	148	116	172	206	105	110	124	121	111	49	91	121	105	127.3
21-Feb	80	83	85	111	109	106	125	348	49	65	337	322	325	331	330	331	307	313	331	335	325	336	335	338	344.7
22-Feb	331	333	338	335	334	327	326	333	346	327	335	255	155	142	140	129	121	131	127	125	127	131	130	142	39.5
23-Feb	140	131	127	133	105	127	146	135	115	221	266	327	329	333	327	324	322	328	325	329	325	337	325	290	322.5
24-Feb	335	329	325	329	327	327	337	329	335	346	301	289	287	163	293	321	336	276	323	337	338	333	321	328	327.5
25-Feb	333	318	321	320	323	324	321	310	320	325	338	338	325	317	317	312	253	337	336	336	329	327	327	317	323.4
26-Feb	332	16	74	131	135	87	146	135	7	329	329	324	321	322	316	310	319	336	322	323	327	329	340	337	329.2
27-Feb	329	320	313	315	339	346	332	352	354	157	198	196	311	297	288	328	337	347	346	338	329	330	319	330	318.7
28-Feb	328	331	338	336	318	331	350	329	342	18	136	122	113	88	101	81	106	107	113	118	151	114	112	117	86.0
	314.6	319.6	321.5	311.4	335.4	0.8	21.0	6.2	18.6	254.9	300.8	327.8	318.4	309.5	291.6	323.0	331.1	354.2	3.0	358.9	335.1	344.8	341.1	330.6	
	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: 106 deg on Feb 18 01:00

Minimum Value: 8 deg on Feb 13 01:00

Percentiles: P_1 = 9 P_{10} = 11 Q_1 = 14 Median = 19 Q_3 = 39 P_{90} = 64 P_{99} = 96

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

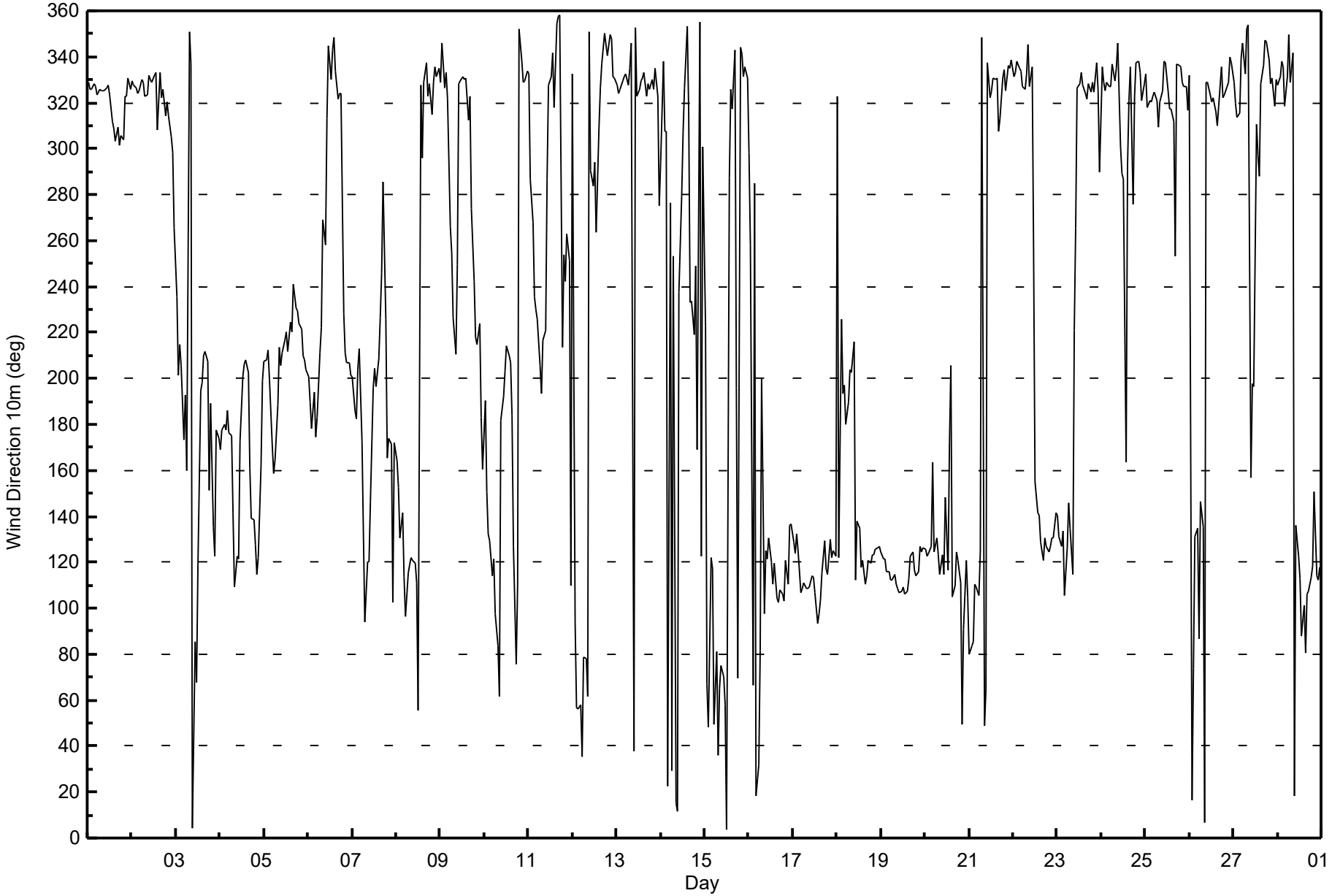
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Feb	10	8	9	12	11	9	9	9	9	9	11	11	13	10	10	11	11	11	10	10	11	10	15	11	15
2-Feb	14	12	12	10	11	14	14	9	9	15	13	11	14	15	16	16	17	14	19	10	11	8	10	31	31
3-Feb	13	44	34	28	69	35	56	89	76	94	63	12	58	11	11	11	13	48	45	59	28	74	66	69	94
4-Feb	48	20	54	20	22	34	23	38	31	35	24	51	17	17	13	17	39	23	17	21	28	40	50	15	54
5-Feb	16	16	15	24	28	41	27	22	16	14	12	11	18	19	17	20	29	20	19	17	15	15	15	19	41
6-Feb	17	28	27	22	39	28	9	11	44	9	39	18	15	20	18	17	14	16	32	35	31	10	27	24	44
7-Feb	13	17	20	20	14	64	43	90	87	52	61	12	12	11	14	15	17	25	35	59	49	41	105	60	105
8-Feb	53	54	69	32	35	48	58	21	20	17	23	29	61	41	45	18	15	20	15	25	17	18	15	17	69
9-Feb	14	18	11	17	18	38	39	57	28	67	9	11	13	12	12	13	15	36	15	57	45	42	70	76	76
10-Feb	32	35	33	37	40	28	16	30	39	40	12	15	14	12	14	27	46	27	71	36	15	12	13	16	71
11-Feb	14	38	24	20	30	20	35	33	18	99	34	15	21	38	31	31	37	43	79	88	28	93	72	98	99
12-Feb	71	89	22	60	74	69	82	43	16	46	63	44	26	28	28	14	16	15	16	16	16	17	13	11	89
13-Feb	8	8	9	15	14	16	19	26	32	45	42	10	13	12	11	12	9	14	10	12	10	15	61	22	61
14-Feb	27	35	38	59	46	58	60	76	57	62	86	56	26	15	21	24	81	64	96	82	74	51	61	71	96
15-Feb	72	69	78	68	48	83	86	90	40	14	18	47	71	64	38	34	74	83	63	39	16	9	15	53	90
16-Feb	31	28	93	62	63	70	36	73	88	27	22	17	16	18	20	18	17	14	14	14	24	17	22	20	93
17-Feb	20	19	21	26	11	14	15	14	12	16	18	16	17	20	19	18	19	19	20	14	16	19	18	33	33
18-Feb	106	90	89	24	17	55	20	16	63	55	72	31	21	25	18	15	14	13	12	13	14	11	12	12	106
19-Feb	11	11	12	12	13	11	12	13	11	12	16	16	13	12	14	16	15	12	14	15	13	12	12	13	16
20-Feb	11	11	12	13	29	13	15	13	12	17	18	49	18	42	17	63	22	16	11	48	80	79	80	45	80
21-Feb	61	62	31	19	40	32	61	45	46	23	102	20	13	13	13	14	11	14	15	15	13	18	17	16	102
22-Feb	16	17	17	17	17	18	17	18	25	17	28	59	56	22	32	18	35	24	21	18	26	27	25	37	59
23-Feb	45	16	20	43	44	25	24	17	65	30	31	12	12	16	12	13	9	13	11	22	17	19	18	43	65
24-Feb	41	11	12	15	10	14	15	15	20	61	39	67	58	97	93	14	19	57	33	34	20	21	16	13	97
25-Feb	15	13	9	9	10	11	9	14	13	12	16	16	13	13	19	42	40	21	19	20	23	18	11	8	42
26-Feb	30	45	63	61	38	96	101	71	71	19	11	12	13	10	14	10	10	18	11	8	13	17	31	24	101
27-Feb	20	21	25	15	36	43	32	74	80	53	36	60	57	12	10	26	18	19	18	16	11	15	10	13	80
28-Feb	15	16	22	27	27	18	15	15	25	37	37	18	18	24	24	17	15	15	15	21	43	17	17	15	43
	106	90	93	68	74	96	101	90	88	99	102	67	71	97	93	63	81	83	96	88	80	93	105	98	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Athabasca Valley - February 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS08
FORT CHIPEWYAN
FEBRUARY 2025

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

March 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT CHIPEWYAN (AMS08)
FEBRUARY 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	641	31	31	100	-	-	3.6	0	1.3	0
TRS (ppb) Average	236	13	436	37.05	0.2	0	0.2	0	0.2	0
O3(ppb) Average	641	31	31	100	-	-	41.5	0	37.5	-
NO2(ppb) Average	639	32	33	99.85	-	-	8.9	0	3.9	-
NO(ppb) Average	639	32	33	99.85	-	-	2.7	-	0.7	-
NOX(ppb) Average	639	32	33	99.85	-	-	9.1	-	4.5	-
PM2.5(ug/m3) Average	672	0	0	100	-	-	22.4	0	8	0
CO(ppm) Average	641	31	31	100	-	-	0.2	0	0.2	-
CO2(ppm) Average	639	32	33	99.85	-	-	444.2	-	438.8	-
Temperature 2 m (C) Average	672	0	0	100	-	-	-7.6	-	-10.9	-
Relative Humidity (%) Average	672	0	0	100	-	-	92.5	-	83.5	-
Wind Speed 10 m (km/h) Average	672	0	0	100	-	-	37	-	24	-
Wind Direction 10 m (deg) Average	672	0	0	100	-	-	-	-	-	-
PC(mm) Total	672	0	0	100	-	-	0.7	-	2.5	-
Leaf Wetness (% of range) Average	672	0	0	100	-	-	6.8	-	4.5	-
Global Solar Radiation (W/m2) Average	672	0	0	100	-	-	452.9	-	112.3	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT CHIPEWYAN (AMS08)
FEBRUARY 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	641	0.16	0.4	-	0	0	0	0	0.1	0.3	3.6
TRS (ppb) Average	236	0.16	0	-	0.1	0.1	0.1	0.2	0.2	0.2	0.2
O3(ppb) Average	641	31.12	4.9	-	17.4	23.9	27.3	31.9	34.8	37.1	41.5
NO2(ppb) Average	639	0.96	1.2	-	0.1	0.3	0.3	0.5	1	2.2	8.9
NO(ppb) Average	639	0.15	0.3	-	0	0	0	0.1	0.1	0.2	2.7
NOX(ppb) Average	639	1.1	1.4	-	0.1	0.3	0.4	0.6	1.1	2.5	9.1
PM2.5(ug/m3) Average	672	3.82	2.5	-	0.8	2	2.4	2.9	4.3	6.8	22.4
CO(ppm) Average	641	0.12	0	-	0	0.1	0.1	0.1	0.1	0.1	0.2
CO2(ppm) Average	639	423.12	8.7	-	411.5	414	415.7	419	432.6	435.2	444.2
Temperature 2 m (C) Average	672	-21.78	7	-	-38.5	-30.7	-28	-22.5	-15.4	-13.1	-7.6
Relative Humidity (%) Average	672	70.88	9.8	-	42.5	58.1	65.8	71.6	77.2	82.2	92.5
Wind Speed 10 m (km/h) Average	672	13.6	7	-	1	5	8	13	18	22	37
Wind Direction 10 m (deg) Average	672	-	-	-	-	-	-	-	-	-	-
Precipitation (mm) Total	672	-	-	12.42	-	-	-	-	-	-	-
Leaf Wetness (% of range) Average	672	2.25	0.8	-	1.5	1.8	1.9	2	2.3	2.7	6.8
Global Solar Radiation (W/m2) Average	672	64.65	107	-	0	0	0	0	104.9	245.8	452.9

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

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
CO2	16 Feb 2025 15:00	16 Feb 2025 15:00	1	Unstable Operation - flatline in analyzer output signal
NO2	16 Feb 2025 15:00	16 Feb 2025 15:00	1	Unstable Operation - flatline in analyzer output signal
TRS	01 Feb 2025 01:00	03 Feb 2025 13:00	61	Analyzer Failure - converter failure
TRS	06 Feb 2025 03:00	21 Feb 2025 04:00	362	Unstable Operation - AMD noncompliance

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Fort Chipewyan - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.6 ppb on Feb 18 15:00 Maximum Daily Average: 1.3 ppb on Feb 18

Minimum Value: 0.0 ppb on Feb 1 01:00 Minimum Daily Average: 0.0 ppb on Feb 3
Maximum Diurnal Average: 0.3 ppb at hour 5 Minimum Diurnal Average: 0.1 ppb at hour 24
Monthly Average: 0.16 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} = 2.4

Hours in Service:	672
Hours of Data:	641
Hours of Missing Data:	31
Hours of Calibration:	31
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4-Feb	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
5-Feb	0.0	0.1	0.1	0.1	0.2	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2
6-Feb	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
7-Feb	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.1
8-Feb	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
9-Feb	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
10-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11-Feb	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
12-Feb	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	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	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
14-Feb	0.0	0.0	Z	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
15-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.2
16-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
17-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
18-Feb	Z	0.1	0.0	0.1	0.3	0.5	0.8	1.1	1.9	2.4	2.5	2.6	2.1	2.1	3.6	3.2	1.9	1.2	0.8	0.5	0.4	0.4	0.3	0.3	1.3	3.6
19-Feb	0.3	Z	1.2	1.6	2.1	1.8	1.9	0.6	0.6	0.9	0.6	0.4	0.4	0.4	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.7	2.1
20-Feb	0.2	0.5	Z	0.9	1.5	2.0	2.4	2.9	2.7	1.8	1.2	1.3	1.2	1.2	1.1	1.0	0.8	0.8	0.7	0.4	0.3	0.2	0.2	0.2	1.1	2.9
21-Feb	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.4
22-Feb	0.2	0.3	0.2	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.2	0.4
23-Feb	0.4	0.4	0.5	0.7	1.0	Z	0.3	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.2	1.0
24-Feb	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.2
25-Feb	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
26-Feb	0.0	0.1	Z	0.0	0.0	0.0	0.0	0.0	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	0.2	0.1	0.1	0.3
27-Feb	0.1	0.1	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	0.1	0.1	0.1	0.1	0.1
28-Feb	0.1	0.0	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	0.1	0.1	0.1	0.2	0.1	0.0	0.1	0.0	0.1	0.1	0.2
	0.1	0.1	0.1	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	0.1	0.1	0.1	0.1	0.1	0.1	Diurnal Average	
	0.4	0.5	1.2	1.6	2.1	2.0	2.4	2.9	2.7	2.4	2.5	2.6	2.1	2.1	3.6	3.2	1.9	1.2	0.8	0.5	0.4	0.4	0.3	0.4	Diurnal Maximum	

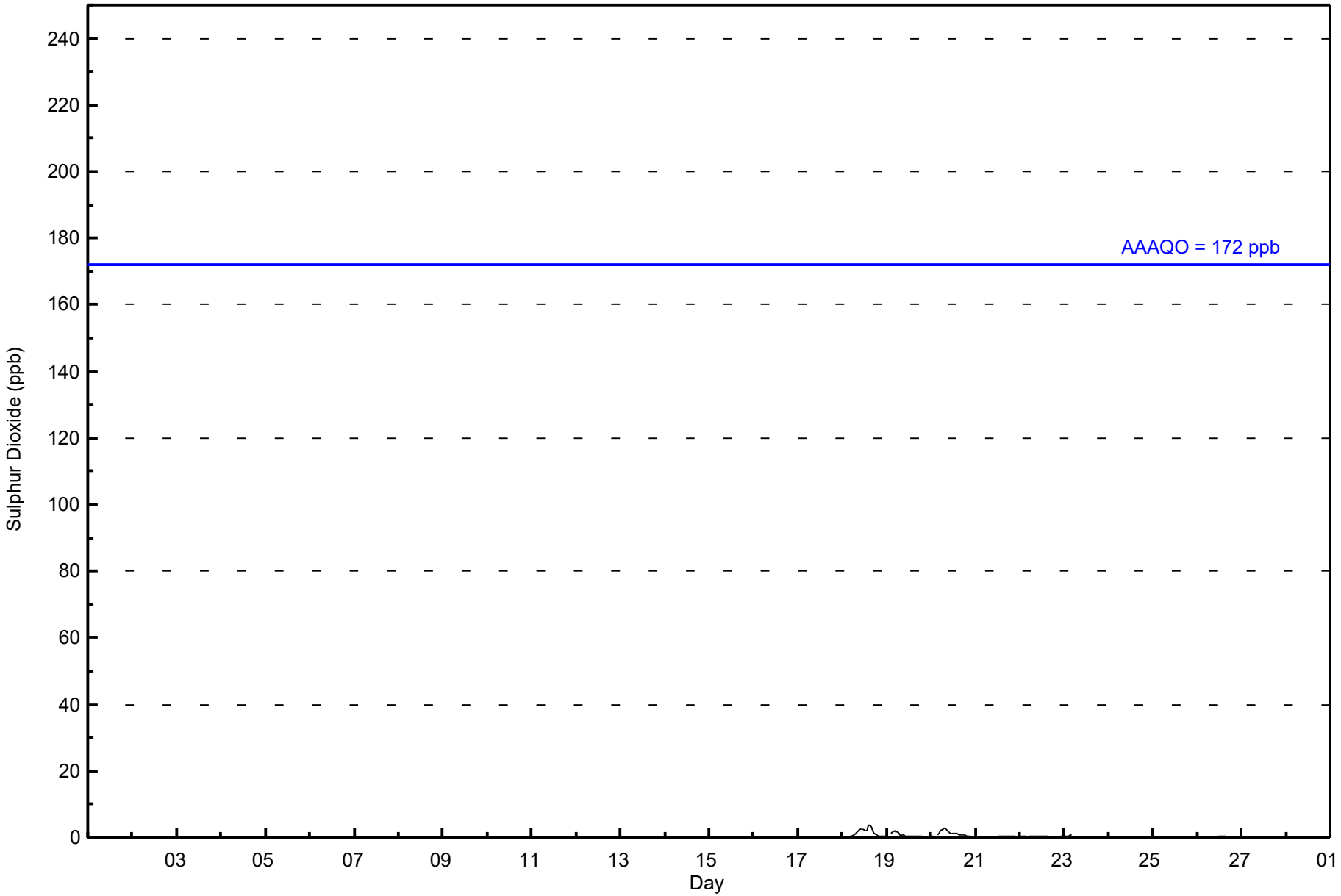
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Fort Chipewyan - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	641	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: 641

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Fort Chipewyan - February 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	14	24	11	81	106	19	23	17	12	5	14	45	101	46	78	45	641
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	14	24	11	81	106	19	23	17	12	5	14	45	101	46	78	45	641

Total Number of Valid Hours: 641

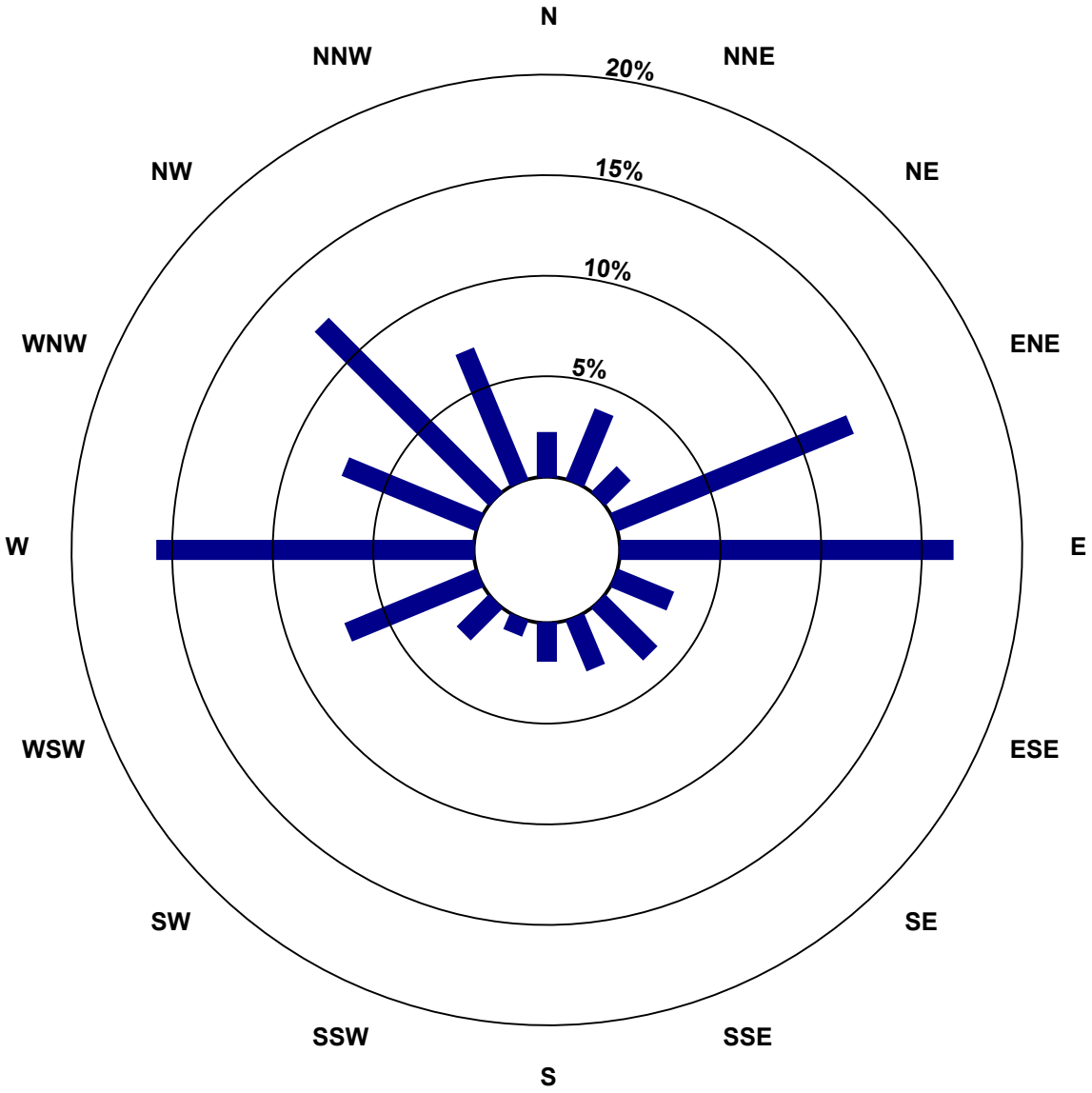
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Sulphur Dioxide (SO_2) - ppb

Fort Chipewyan



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

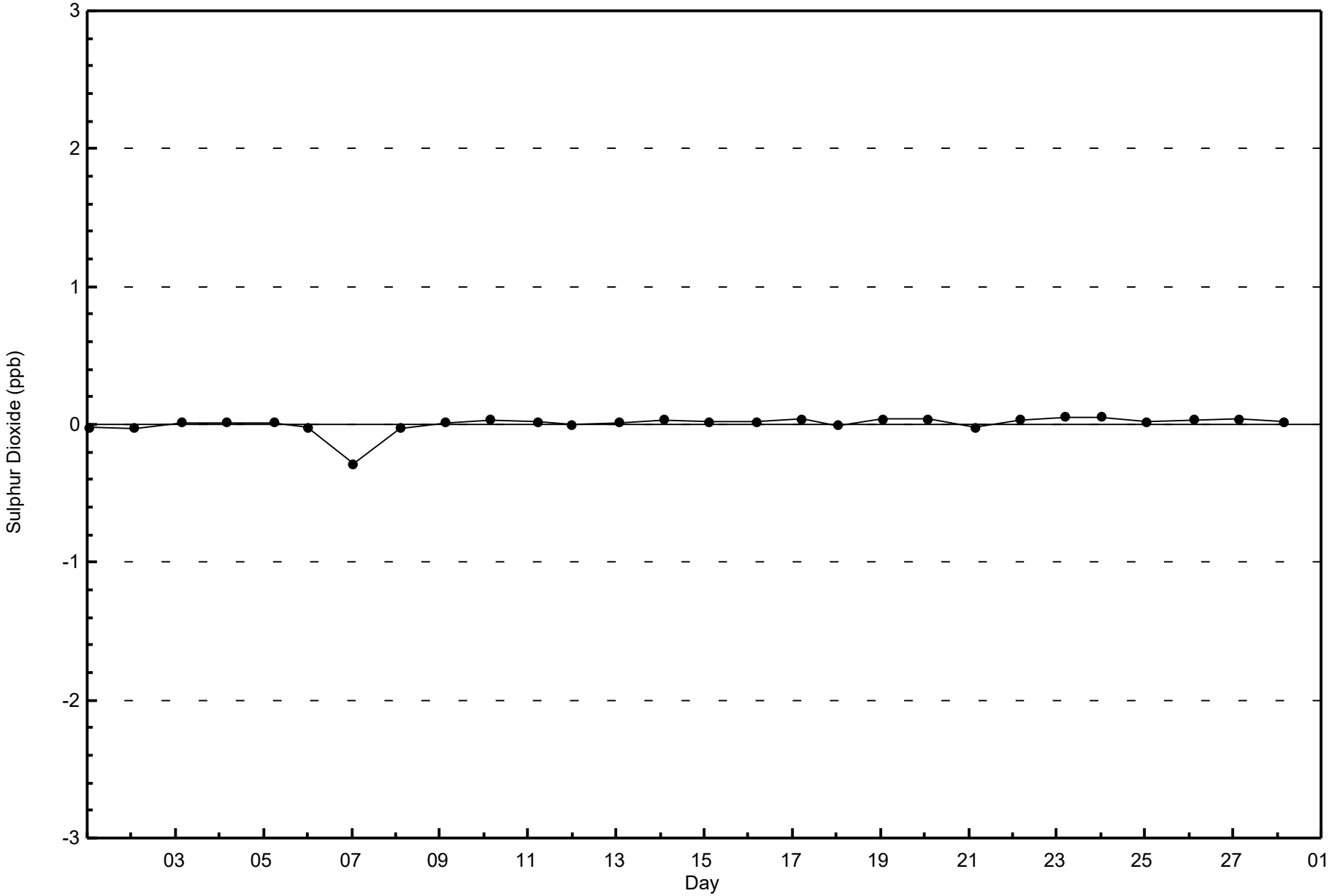
Total Number of Valid Hours: 641

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Fort Chipewyan - February 2025

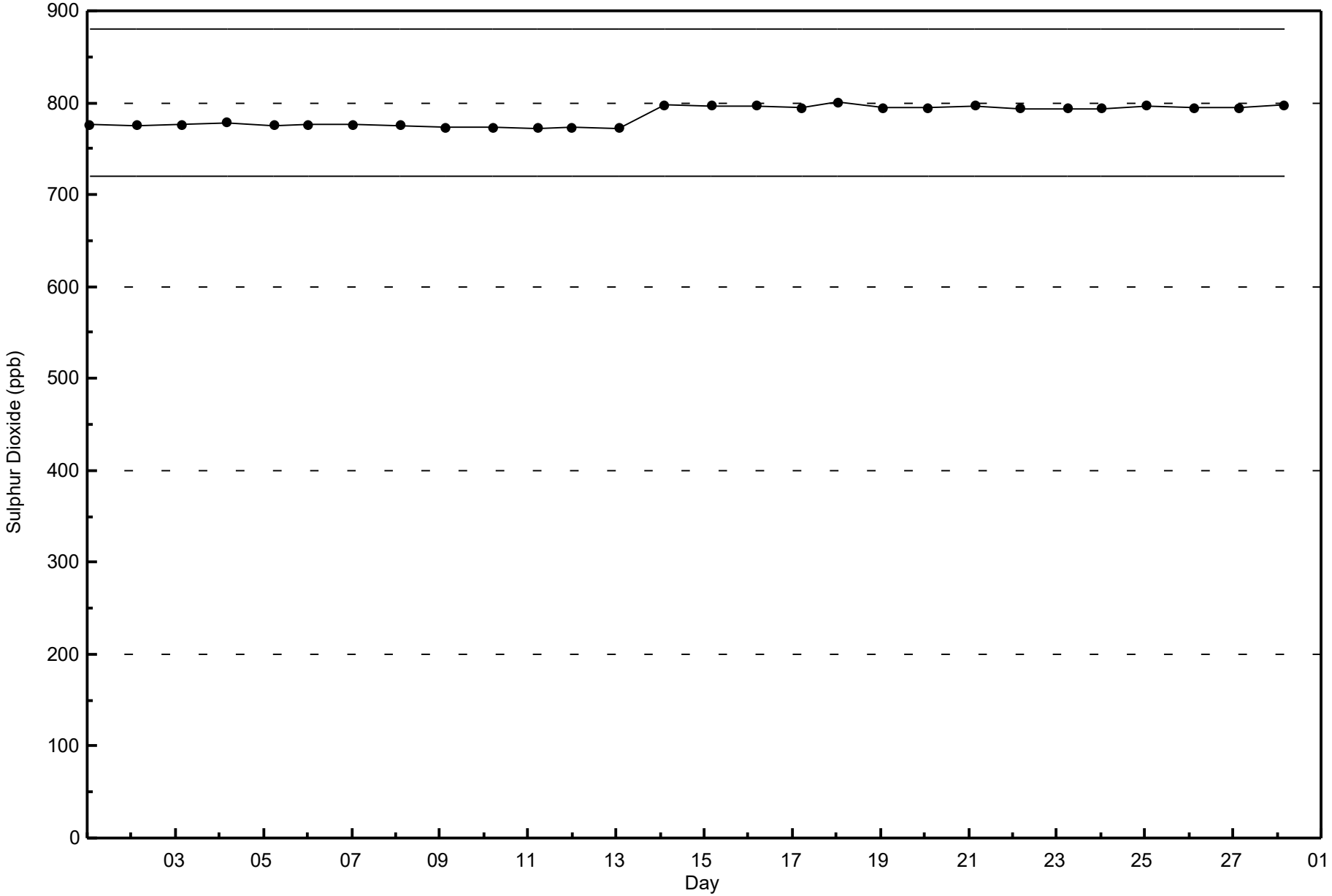


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Fort Chipewyan - February 2025



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort Chipewyan - February 2025

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

Maximum Value: 0.2 ppb on Feb 21 18:00

Maximum Daily Average: 0.2 ppb on Feb 21

Minimum Value: 0.1 ppb on Feb 3 23:00

Minimum Daily Average: 0.1 ppb on Feb 4

Maximum Diurnal Average: 0.2 ppb at hour 6

Minimum Diurnal Average: 0.2 ppb at hour 22

Monthly Average: 0.16 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} = 0.2

Periods in Service:	1344
Periods of Valid Data:	471
Periods of Invalid Data:	873
Periods of Calibration:	28
Percent Operational Time:	37.1

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-Feb	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
2-Feb	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	--	--
3-Feb	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF AF	AF C	C C	C C	C 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	--	0.2
4-Feb	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	Z SP	0.2 0.1	0.1 0.1	0.1 0.1	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1	0.2
5-Feb	Z SP	0.2 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.2	0.2 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
6-Feb	0.2 0.1	Z SP	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	--	0.2
7-Feb	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	--	--
8-Feb	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	--	--
9-Feb	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	--	--
10-Feb	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	--	--
11-Feb	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	--	--
12-Feb	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	--	--
13-Feb	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	--	--
14-Feb	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	--	--
15-Feb	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	--	--

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort Chipewyan - February 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-Feb	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	--	--
17-Feb	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	--	--
18-Feb	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	--	--
19-Feb	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	--	--
20-Feb	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	UO UO	--	--
21-Feb	UO UO	UO UO	UO UO	UO UO	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.2
22-Feb	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.2
23-Feb	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.1 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
24-Feb	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.1	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.2
25-Feb	0.1 0.2	0.2 0.2	Z SP	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 0.2	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 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.2
26-Feb	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2	0.2
27-Feb	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	Z SP	0.2 0.2	0.2 0.2	0.1 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.1 0.1	0.1 0.2	0.2 0.2	0.1 0.1	0.2 0.2	0.1 0.2	0.2 0.2	0.2 0.1	0.1 0.2	0.1 0.1	0.2 0.2	0.1 0.2	0.1 0.1	0.2	0.2
28-Feb	0.1 0.2	0.2 0.1	0.1 0.1	0.1 0.2	0.1 0.2	Z SP	0.2 0.2	0.2 0.2	0.1 0.1	0.1 0.1	0.2 0.1	0.2 0.2	0.2 0.1	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 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	0.2 0.2	Diurnal Average Diurnal Maximum	

Z - zerospan C - Calibration 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 Chipewyan - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 0.2 ppb on Feb 23 05:00 Maximum Daily Average: 0.2 ppb on Feb 21

Minimum Value: 0.1 ppb on Feb 3 23:00 Minimum Daily Average: 0.1 ppb on Feb 4
Maximum Diurnal Average: 0.2 ppb at hour 6 Minimum Diurnal Average: 0.2 ppb at hour 22
Monthly Average: 0.16 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} = 0.2

Hours in Service:	672
Hours of Data:	236
Hours of Missing Data:	436
Hours of Calibration:	13
Percent Operational Time:	37.1

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-Feb	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--
2-Feb	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	--
3-Feb	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	C	C	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	--	0.2
4-Feb	0.1	0.1	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
5-Feb	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2
6-Feb	0.2	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	0.2
7-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
8-Feb	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-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
10-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
11-Feb	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-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
13-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
14-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
15-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
16-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
17-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
18-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
19-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
20-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
21-Feb	UO	UO	UO	UO	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
22-Feb	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
23-Feb	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-Feb	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-Feb	0.2	0.2	Z	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
26-Feb	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
27-Feb	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	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2
28-Feb	0.2	0.2	0.1	0.2	0.1	Z	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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	

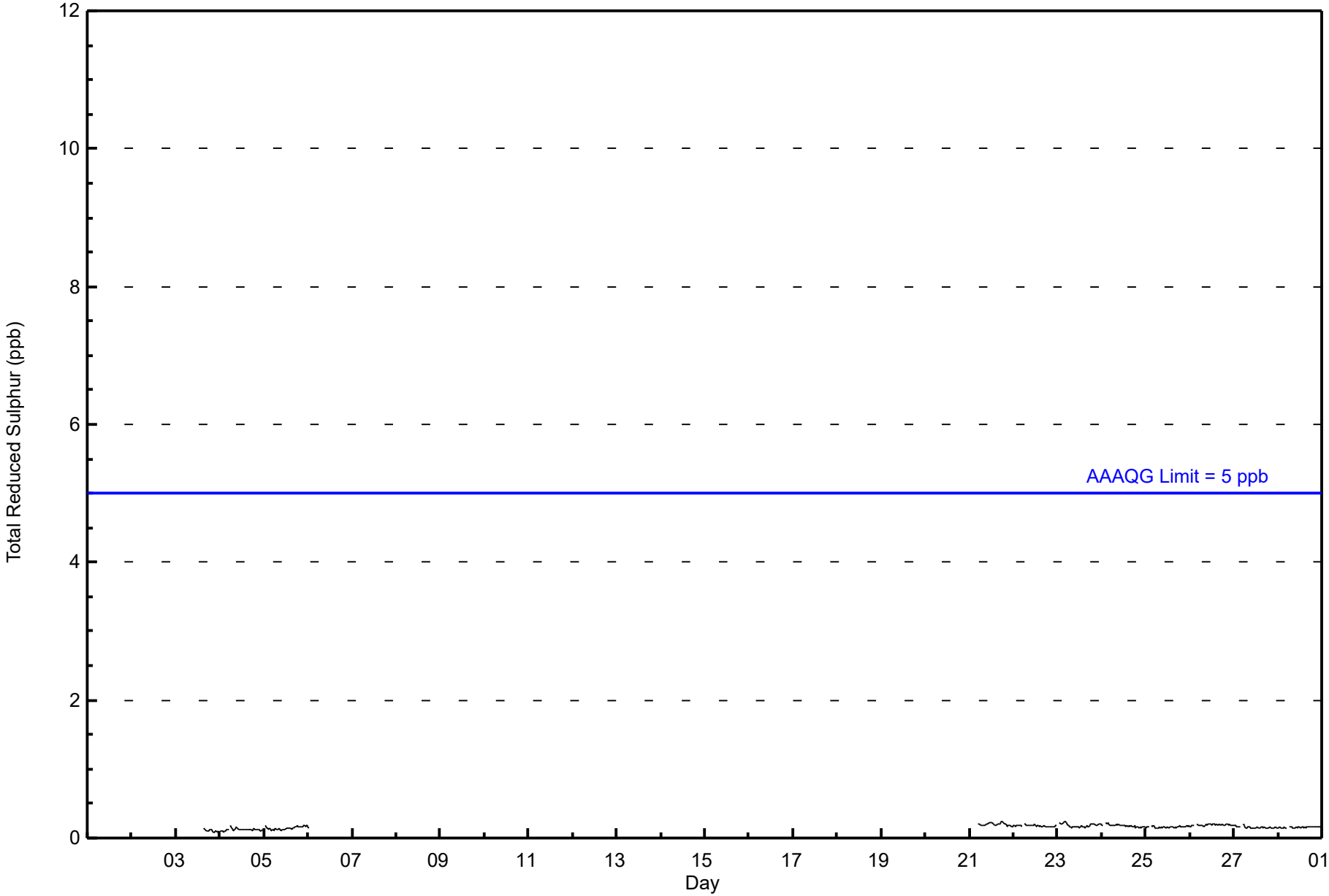
Z - zerospan C - Calibration AF - Analyzer Failure UO - Unstable Operation
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Fort Chipewyan - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	236	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: 236

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Fort Chipewyan - February 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	4	15	6	59	44	3	3	0	0	1	3	26	27	4	22	19	236
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	4	15	6	59	44	3	3	0	0	1	3	26	27	4	22	19	236

Total Number of Valid Hours: 236

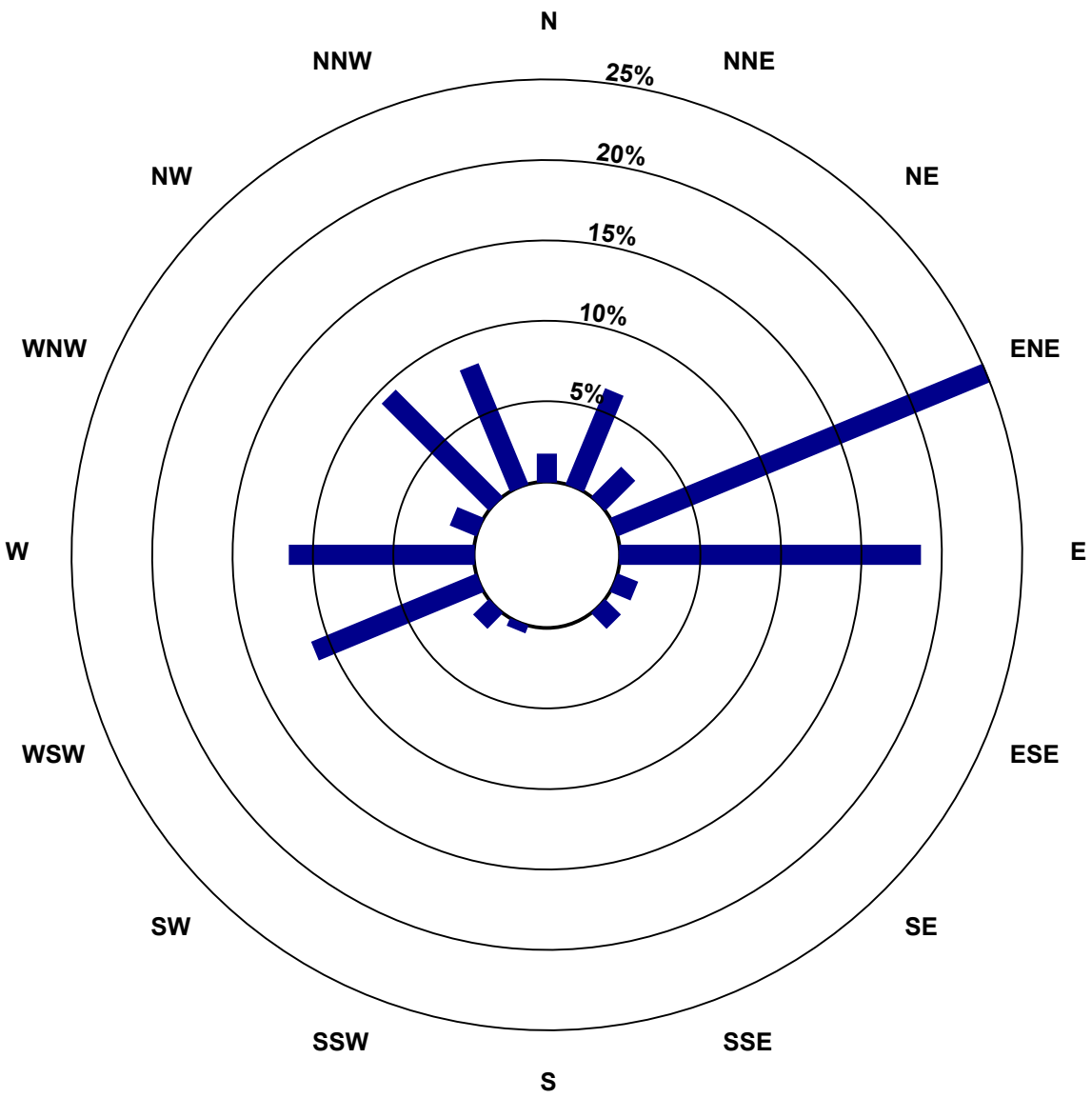
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Total Reduced Sulphur (TRS) - ppb

Fort Chipewyan



Classes (ppb)

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

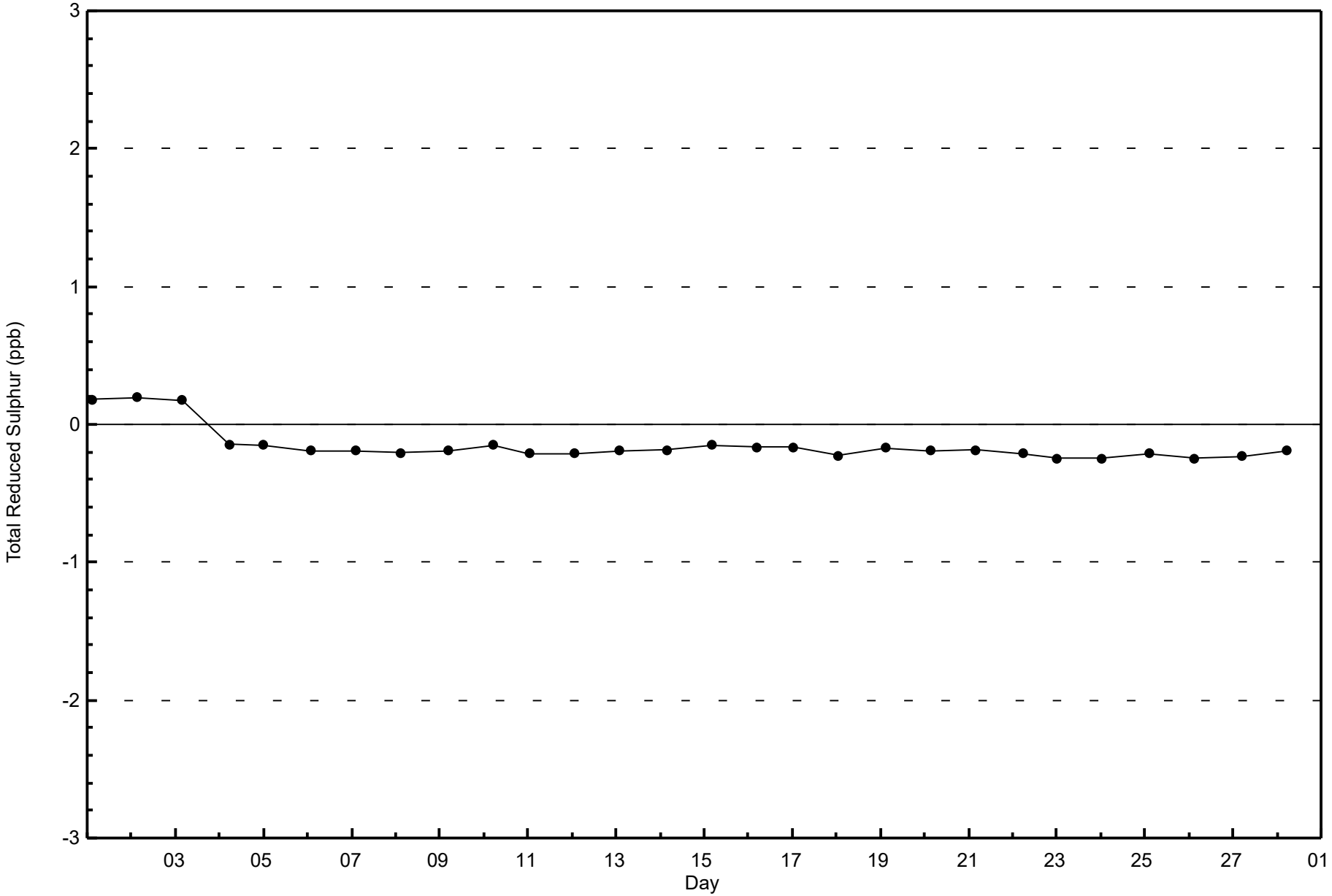
Total Number of Valid Hours: 236

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Fort Chipewyan - February 2025

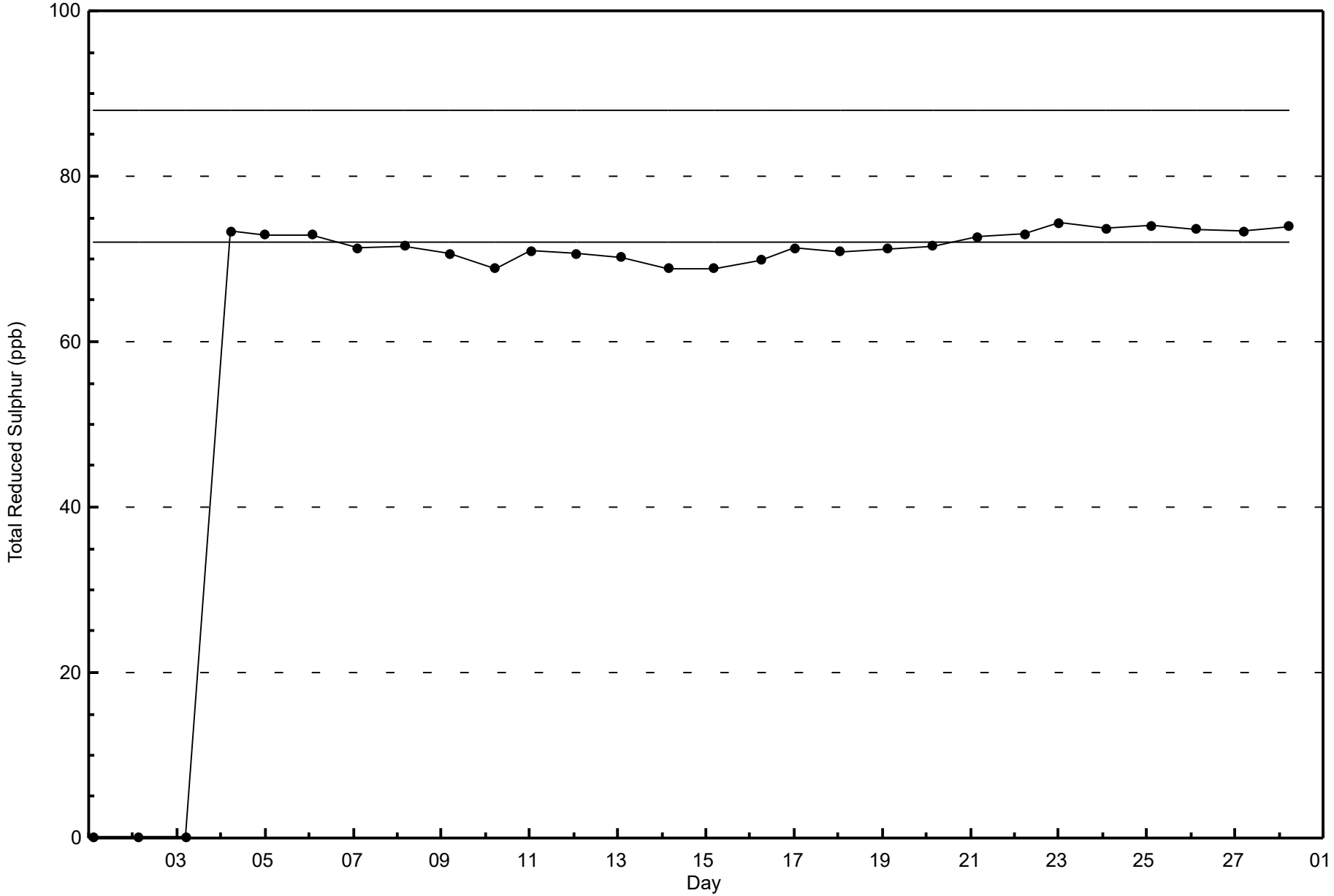


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Fort Chipewyan - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Fort Chipewyan - February 2025

Maximum Value: 2.7 ppb on Feb 12 13:00

Maximum Daily Average: 0.7 ppb on Feb 20

Minimum Value: 0.0 ppb on Feb 1 02:00

Minimum Daily Average: 0.0 ppb on Feb 1

Maximum Diurnal Average: 0.4 ppb at hour 12

Minimum Diurnal Average: 0.0 ppb at hour 2

Monthly Average: 0.15 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} = 2.0

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	32
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-Feb	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
2-Feb	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	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	0.0	0.1	0.2
3-Feb	0.0	Z	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.2	0.2	0.1	0.4	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.4
4-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.5	1.8	0.8	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.8
5-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.3
6-Feb	0.0	0.0	0.0	0.0	Z	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	0.0	0.0	0.0	0.0	0.0	0.1	0.1
7-Feb	0.1	0.1	0.0	0.0	0.1	Z	0.1	0.1	0.7	0.5	0.5	1.7	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.2	1.7
8-Feb	Z	0.0	0.0	0.0	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	0.0	0.1	0.1	0.1	0.1	0.0	0.2
9-Feb	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.2
10-Feb	0.1	0.0	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.2
11-Feb	0.2	0.0	0.1	Z	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.2
12-Feb	0.1	0.0	0.0	0.1	Z	0.0	0.0	0.0	0.0	0.1	0.3	1.4	2.7	2.3	2.0	1.2	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.5	2.7
13-Feb	0.0	0.0	0.1	0.0	0.0	Z	0.2	0.1	0.3	2.2	1.8	0.5	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.3	2.2
14-Feb	Z	0.0	0.1	0.1	0.1	0.2	0.3	0.4	0.2	0.4	0.7	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.1	0.1	0.2	0.7
15-Feb	0.1	Z	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.1
16-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.4	0.3	UO	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.1	0.4
17-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2
18-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.6	1.5	1.9	1.6	1.2	1.3	1.7	1.0	0.6	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.5	1.9
19-Feb	0.1	0.0	0.1	0.1	0.1	Z	0.0	0.1	0.3	0.6	0.6	0.7	0.5	0.4	0.7	0.4	0.2	0.1	0.2	0.0	0.2	0.0	0.1	0.0	0.2	0.7
20-Feb	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.6	1.2	1.9	2.0	1.8	2.1	2.4	1.4	0.6	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.7	2.4
21-Feb	0.0	Z	0.0	0.0	0.0	0.2	0.0	0.1	0.2	0.3	0.3	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.6	0.0	0.0	0.0	0.0	0.0	0.1	0.6
22-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.3	0.4	0.2	0.4	0.5	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
23-Feb	0.1	0.0	0.1	Z	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	0.0	0.0	0.0	0.0	0.0	0.1	0.1
24-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.2
25-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.1	0.2	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
26-Feb	Z	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
27-Feb	0.0	Z	0.0	0.0	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
28-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	Diurnal Average	
	0.2	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.7	2.2	1.9	2.0	2.7	2.3	2.4	1.4	0.6	0.2	0.6	0.2	0.3	0.2	0.1	0.1	Diurnal Maximum	

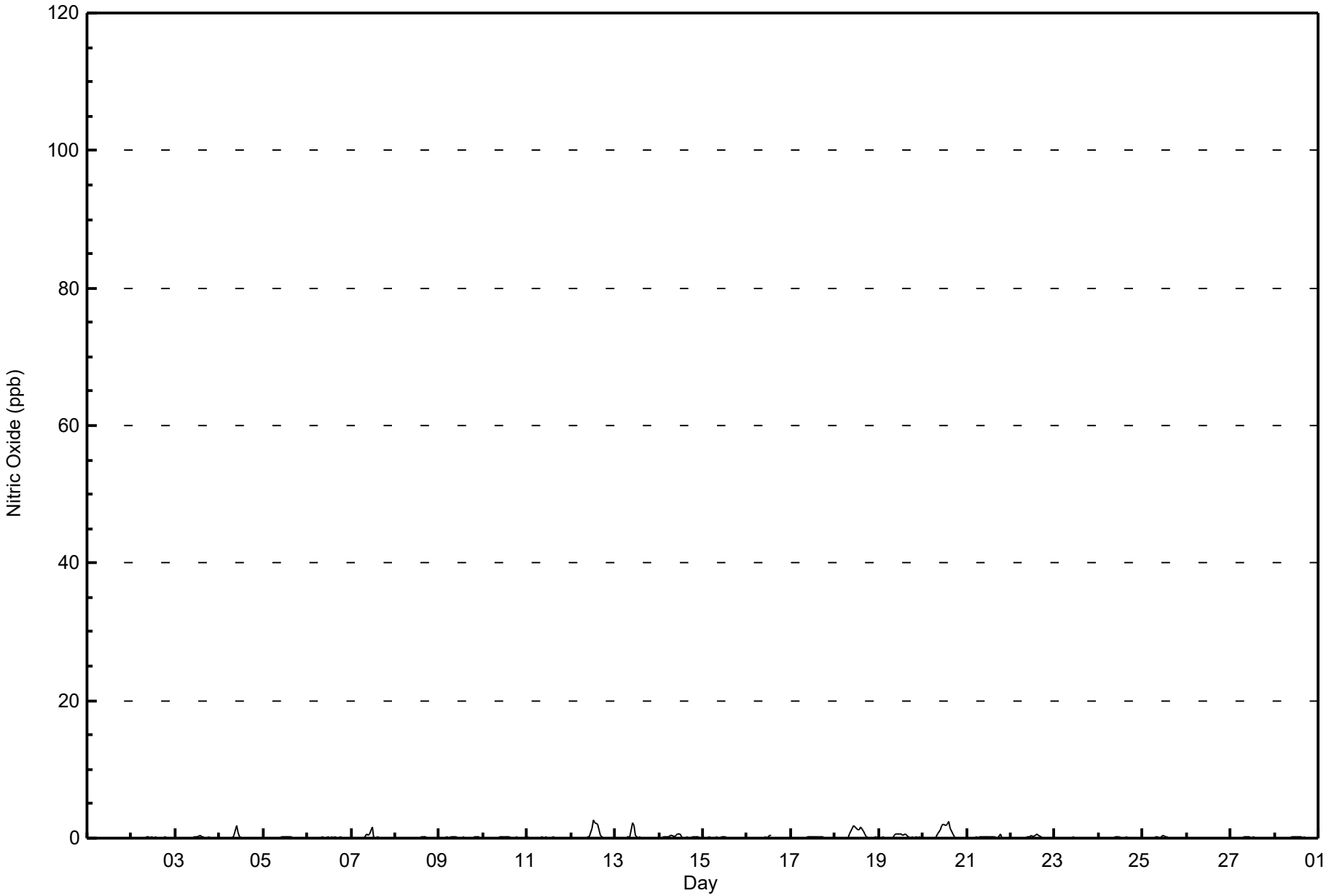
Z - zerospan C - Calibration UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Fort Chipewyan - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	639	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: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Fort Chipewyan - February 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	22	11	80	102	22	21	17	13	5	14	45	103	47	76	46	639
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	15	22	11	80	102	22	21	17	13	5	14	45	103	47	76	46	639

Total Number of Valid Hours: 639

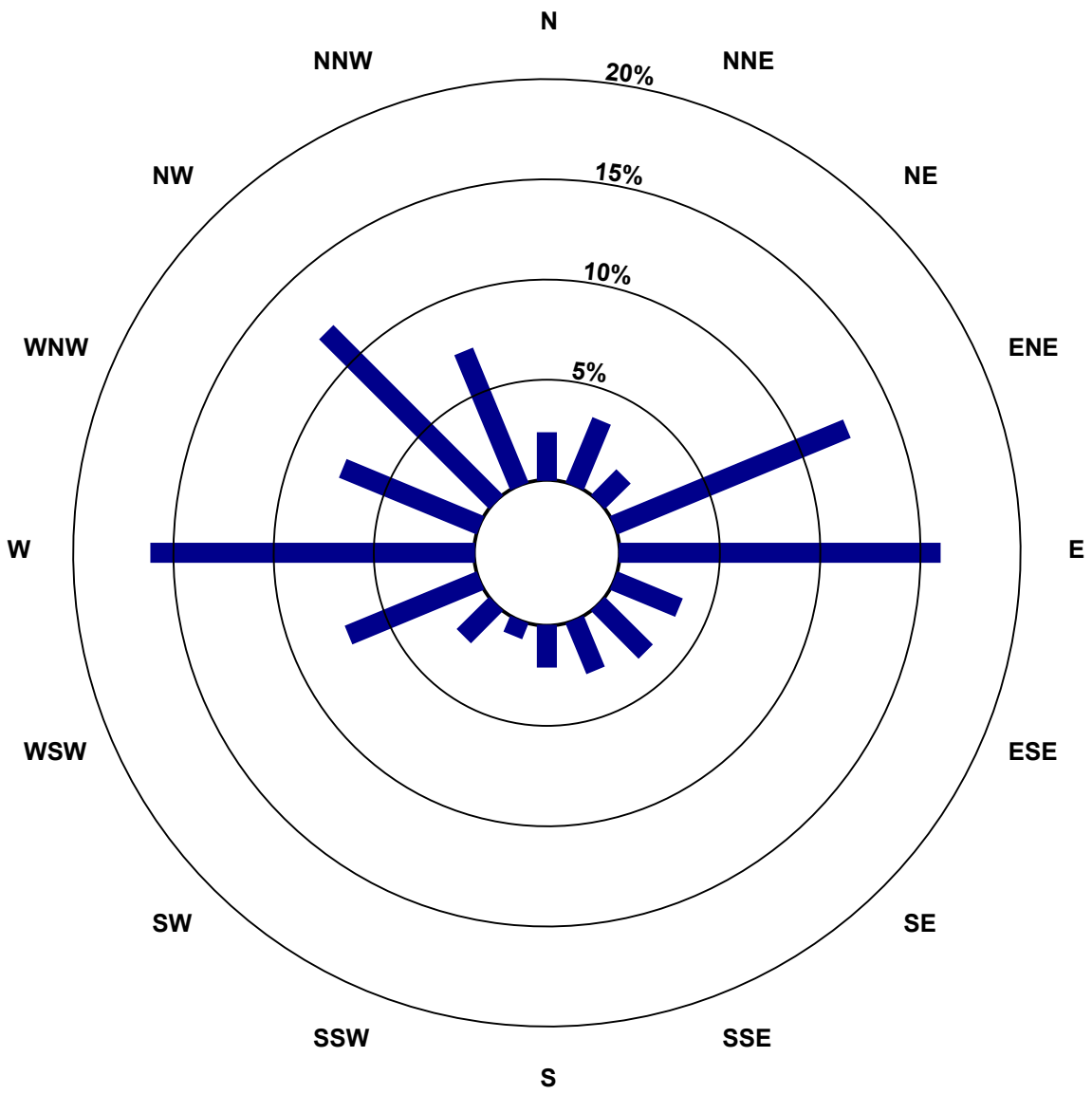
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitric Oxide (NO) - ppb

Fort Chipewyan



Classes (ppb)

- 0 - 20
- 21 - 40
- 11 - 80
- 81 - 159
- > 159

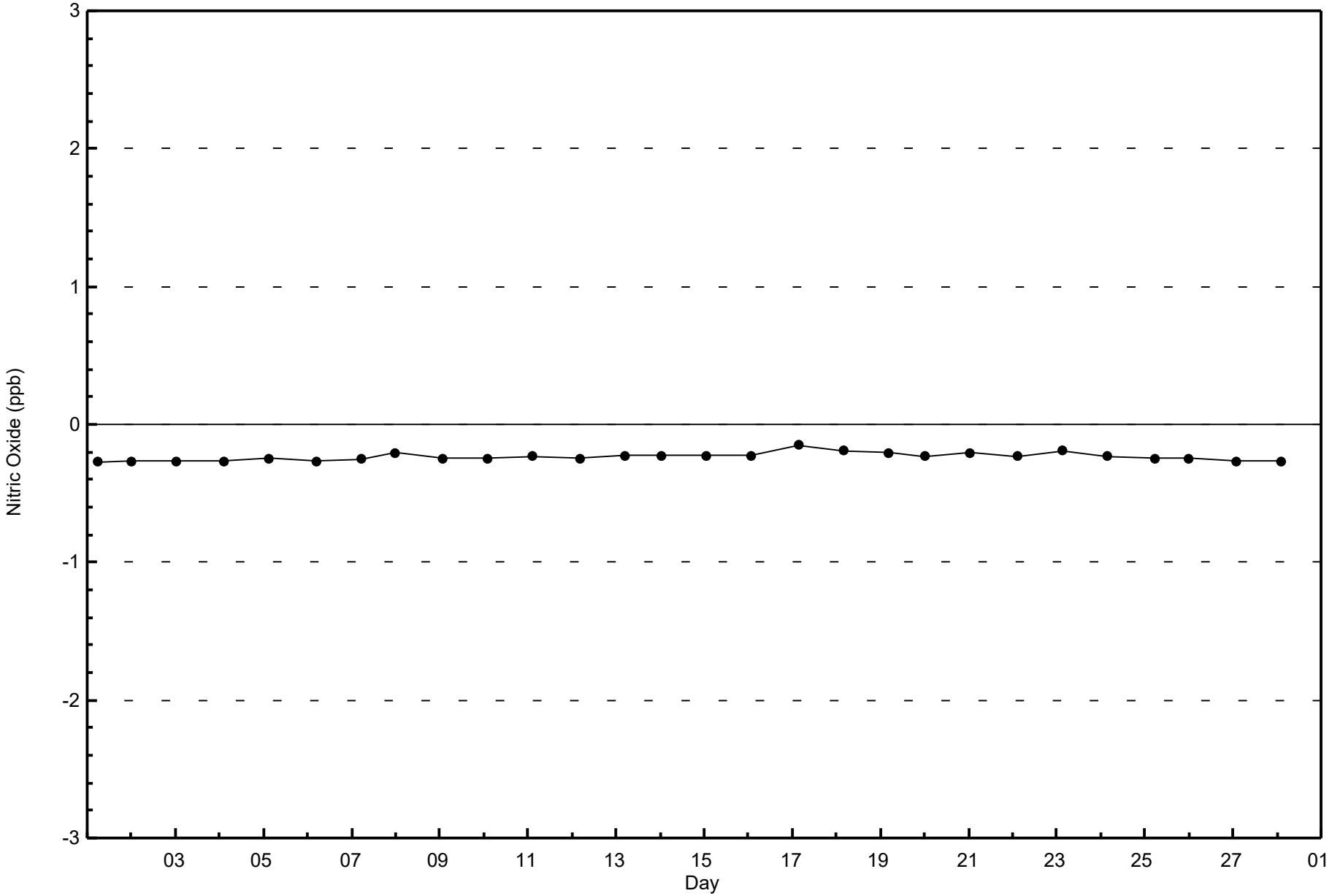
Total Number of Valid Hours: 639

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Fort Chipewyan - February 2025

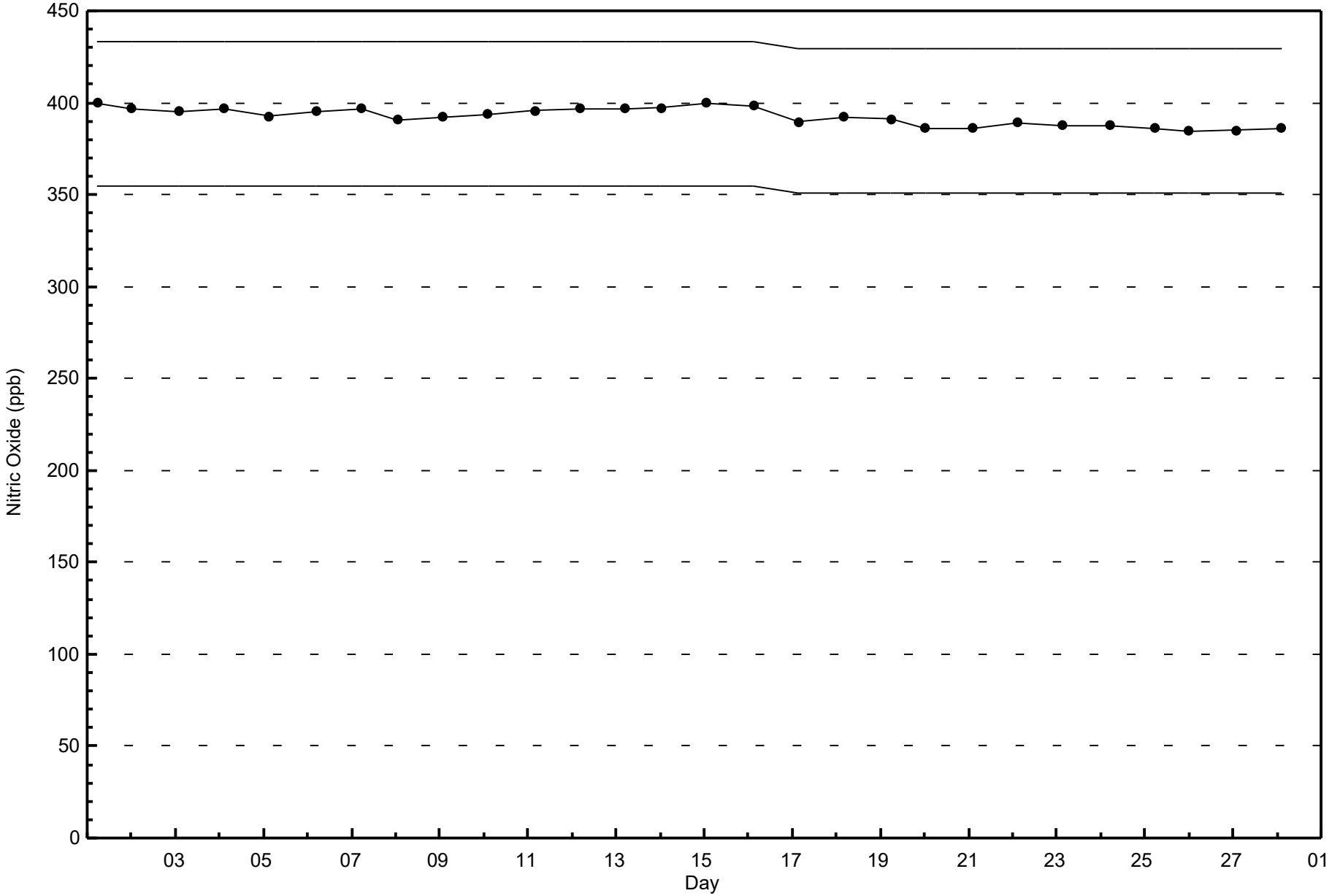


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Fort Chipewyan - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Fort Chipewyan - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8.9 ppb on Feb 13 07:00 Maximum Daily Average: 3.9 ppb on Feb 20

Minimum Value: 0.1 ppb on Feb 16 20:00 Minimum Daily Average: 0.3 ppb on Feb 2
Maximum Diurnal Average: 1.4 ppb at hour 7 Minimum Diurnal Average: 0.7 ppb at hour 24
Monthly Average: 0.96 ppb Percentiles: P_1 = 0.2 P_{10} = 0.3 Q_1 = 0.3 Median = 0.5 Q_3 = 1.0 P_{90} = 2.2 P_{99} = 6.2

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	32
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-Feb	0.2	0.2	0.2	0.2	1.4	Z	1.3	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.5	0.3	0.2	0.5	0.4	0.4	1.4
2-Feb	Z	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.4	0.6	0.3	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.4	0.3	0.3	0.2	0.3	0.3	0.3	0.6
3-Feb	0.3	Z	0.3	0.3	0.2	0.3	0.4	0.3	0.4	0.4	0.4	0.2	0.4	0.3	0.4	0.5	0.3	0.4	0.6	0.4	0.4	0.3	0.4	0.3	0.4	0.6
4-Feb	0.4	0.4	Z	0.6	0.5	0.5	0.5	1.7	6.2	6.7	2.2	0.7	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	1.1	6.7
5-Feb	0.6	0.8	0.9	Z	0.8	0.8	0.7	0.7	0.7	0.7	0.6	0.8	0.7	0.8	0.8	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.8	1.0
6-Feb	0.9	1.1	1.1	1.1	Z	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.4	0.3	0.4	0.4	0.3	0.5	0.2	0.2	0.3	0.2	0.4	0.4	1.1
7-Feb	0.3	0.2	0.3	0.2	0.4	Z	0.6	1.3	4.8	2.3	1.4	0.9	0.3	0.3	0.4	0.2	0.4	1.1	0.8	0.9	7.1	7.8	4.2	1.8	1.7	7.8
8-Feb	Z	3.2	5.1	1.8	0.5	1.1	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	1.1	0.9	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.8	5.1
9-Feb	0.4	Z	0.4	0.4	0.5	0.4	0.5	0.6	0.5	0.4	0.3	0.3	0.3	0.4	0.3	0.2	0.3	0.4	0.4	0.4	0.5	0.5	0.4	0.3	0.4	0.6
10-Feb	0.3	0.4	Z	0.3	0.4	0.4	0.4	0.2	0.2	0.5	0.5	0.4	0.3	0.5	0.4	0.2	0.3	0.5	1.0	1.1	0.6	0.8	0.4	1.3	0.5	1.3
11-Feb	1.8	0.5	0.3	Z	0.4	0.3	0.4	0.4	0.5	0.3	0.5	0.3	0.3	0.2	0.4	0.3	0.4	0.3	0.6	0.3	0.5	0.4	0.3	0.5	0.4	1.8
12-Feb	0.9	0.6	0.9	0.7	Z	0.3	0.3	0.2	0.2	0.6	0.8	2.4	3.7	3.1	3.0	2.8	1.8	3.0	4.9	4.6	2.2	2.0	1.3	0.4	1.8	4.9
13-Feb	0.5	0.5	1.2	0.7	0.8	Z	8.9	3.2	1.8	4.1	2.4	0.7	0.2	0.4	0.2	0.2	0.3	0.3	0.4	0.9	0.8	2.0	1.9	0.9	1.4	8.9
14-Feb	Z	1.3	2.5	1.2	1.4	1.4	2.0	1.9	0.8	0.9	0.6	0.7	0.3	0.3	0.2	0.3	0.3	0.6	0.9	0.9	1.1	0.5	0.4	0.4	0.9	2.5
15-Feb	0.4	Z	0.4	0.4	0.3	0.3	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.4	0.4	0.6	2.8	2.8	6.2	4.7	2.3	0.5	1.1	6.2
16-Feb	0.4	0.4	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.5	0.4	0.7	0.7	UO	C	C	C	C	0.1	0.1	0.1	0.2	0.2	0.3	0.7
17-Feb	0.2	0.2	0.3	Z	0.5	0.4	0.4	0.6	0.6	0.5	0.4	0.3	0.3	0.3	0.4	0.4	0.5	1.0	0.5	0.5	0.3	0.2	0.2	0.2	0.4	1.0
18-Feb	0.3	0.3	0.3	0.7	Z	1.8	2.7	3.0	3.1	2.8	2.4	1.8	1.5	1.5	2.2	2.1	2.5	2.2	1.6	1.3	2.0	2.4	1.4	1.3	1.8	3.1
19-Feb	1.8	2.0	2.4	2.6	3.2	Z	2.8	2.0	2.1	1.6	1.2	1.1	0.9	0.8	1.5	1.2	1.1	1.0	0.9	0.7	0.7	0.5	0.6	0.8	1.5	3.2
20-Feb	Z	1.7	2.0	2.3	3.2	5.4	6.0	6.4	5.7	5.6	5.5	5.1	4.3	4.3	4.4	4.4	4.1	4.8	4.6	3.3	2.1	1.5	1.2	1.0	3.9	6.4
21-Feb	0.9	Z	0.8	1.1	1.0	2.2	1.2	2.0	1.7	1.2	0.8	0.7	0.7	0.7	0.8	0.8	0.9	1.2	2.8	0.7	0.7	0.6	0.6	0.6	1.1	2.8
22-Feb	0.6	0.7	Z	0.7	0.7	0.6	0.7	0.7	0.8	0.9	1.0	1.3	0.9	1.1	1.7	1.9	1.6	0.8	0.7	0.8	0.9	1.2	1.6	2.0	1.0	2.0
23-Feb	3.3	2.2	3.3	Z	7.4	3.0	1.3	0.7	0.6	0.5	0.8	0.5	0.5	0.5	0.4	0.4	0.5	0.4	0.5	0.5	0.4	0.4	0.5	0.6	1.3	7.4
24-Feb	0.5	0.5	0.4	0.4	Z	0.7	2.9	1.5	0.5	0.7	0.6	0.6	0.4	0.4	0.4	0.7	0.4	1.0	0.6	1.9	0.9	0.8	0.4	0.3	0.8	2.9
25-Feb	0.4	0.5	0.5	0.5	0.5	Z	0.6	0.6	0.7	0.4	0.4	0.7	0.4	0.5	0.4	0.3	0.4	0.5	0.6	0.7	1.2	0.8	0.5	0.6	0.6	1.2
26-Feb	Z	2.2	0.6	1.1	0.2	0.2	0.4	0.8	0.5	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.4	0.9	1.0	1.1	0.5	0.5	0.6	2.2
27-Feb	0.5	Z	0.4	0.4	0.5	0.4	0.6	0.7	0.9	0.7	0.6	0.4	0.8	0.3	0.3	0.3	0.4	1.2	0.7	0.6	1.3	1.5	0.7	0.6	0.6	1.5
28-Feb	0.8	0.6	Z	0.7	0.7	0.7	1.0	0.8	0.7	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.7	0.8	0.8	0.5	0.4	0.5	0.3	0.4	0.6	1.0
	0.7	0.9	1.1	0.8	1.1	1.0	1.4	1.1	1.3	1.3	0.9	0.8	0.7	0.7	0.8	0.8	0.8	0.9	1.1	1.0	1.2	1.2	0.8	0.7	Diurnal Average	
	3.3	3.2	5.1	2.6	7.4	5.4	8.9	6.4	6.2	6.7	5.5	5.1	4.3	4.3	4.4	4.4	4.1	4.8	4.9	4.6	7.1	7.8	4.2	2.0	Diurnal Maximum	

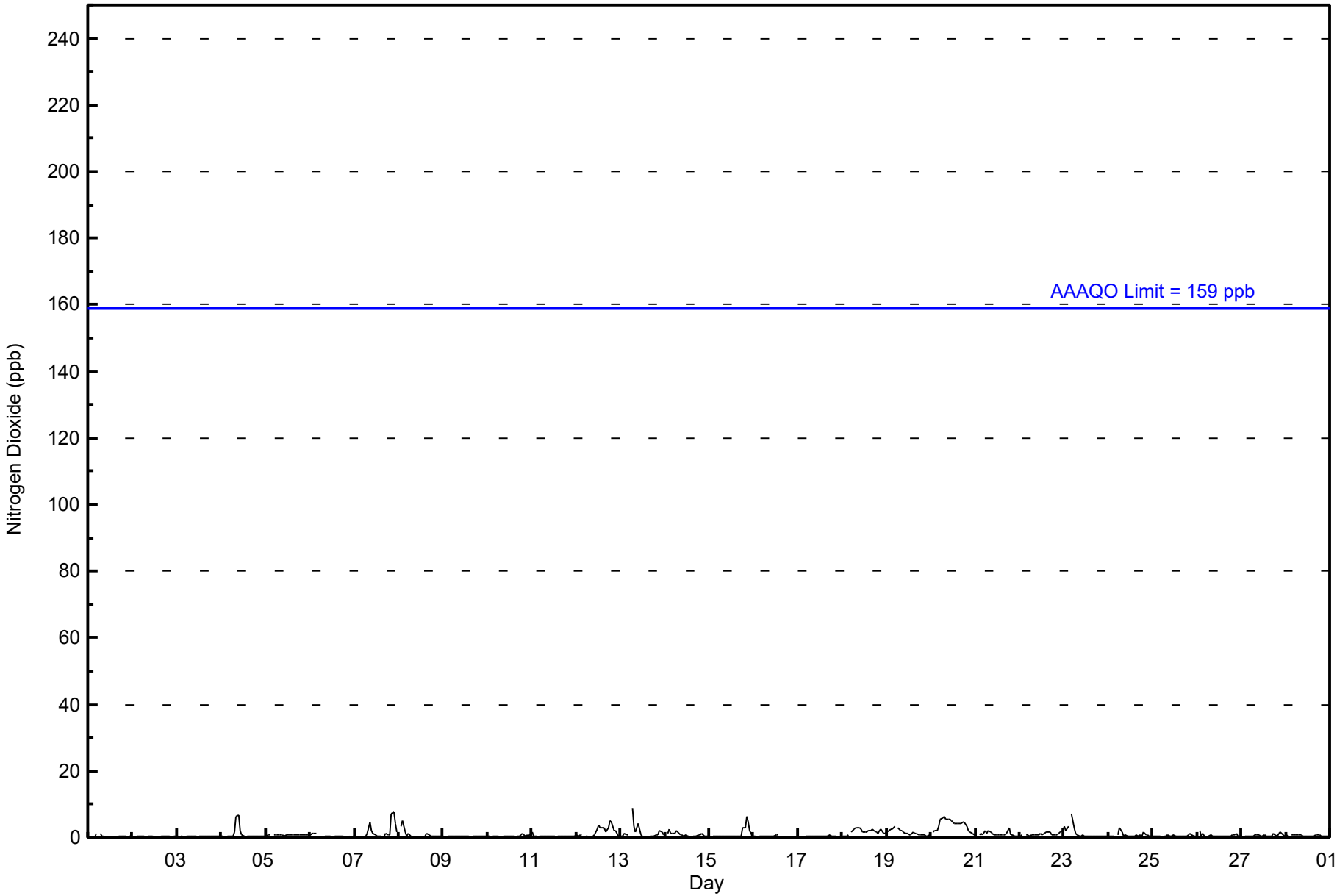
Z - zerospan C - Calibration UO - Unstable Operation
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Fort Chipewyan - February 2025



Nitrogen Dioxide (NO_2) - ppb
Fort Chipewyan - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	639	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: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Fort Chipewyan - February 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	22	11	80	102	22	21	17	13	5	14	45	103	47	76	46	639
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	15	22	11	80	102	22	21	17	13	5	14	45	103	47	76	46	639

Total Number of Valid Hours: 639

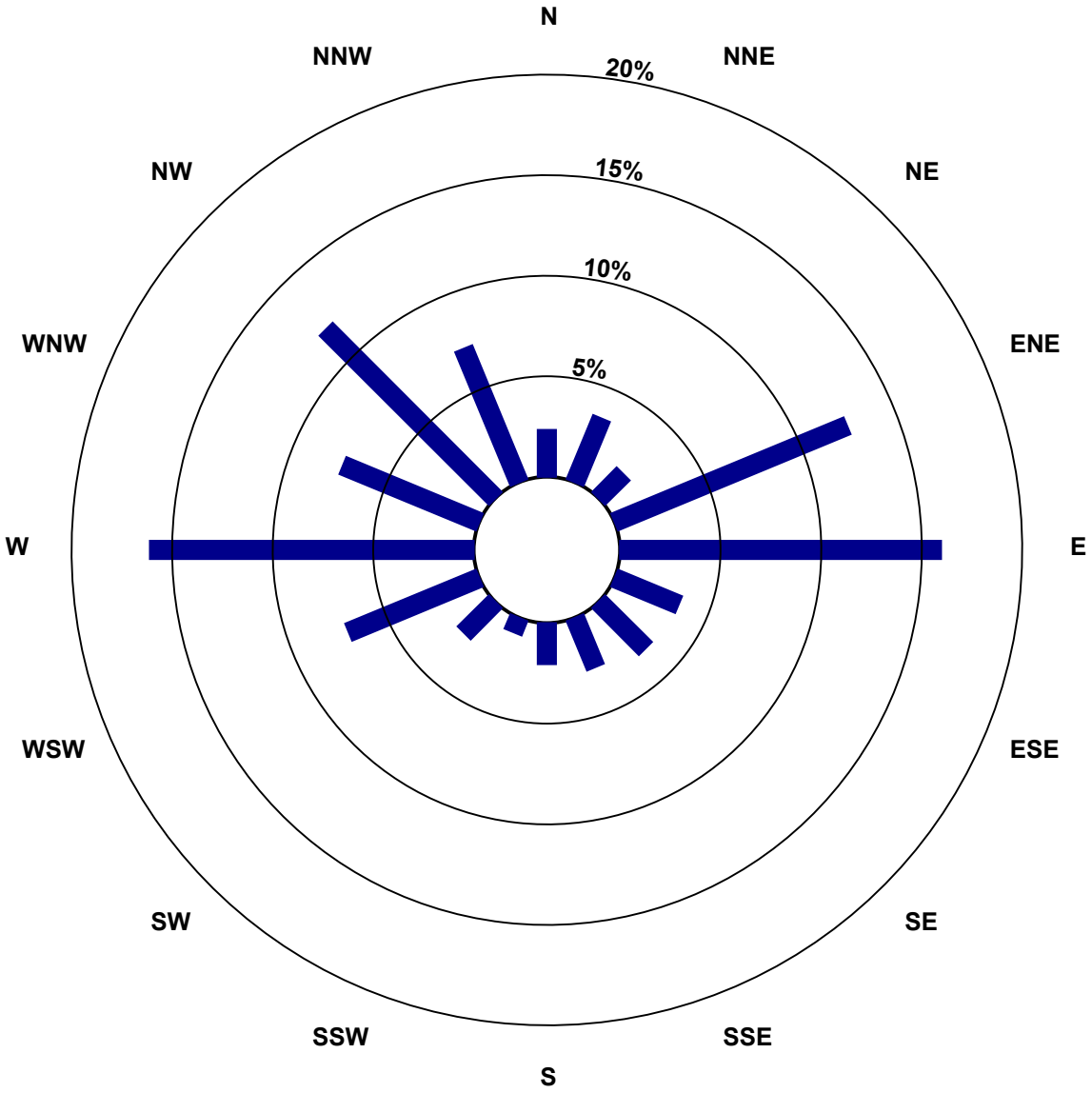
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Dioxide (NO_2) - ppb

Fort Chipewyan



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

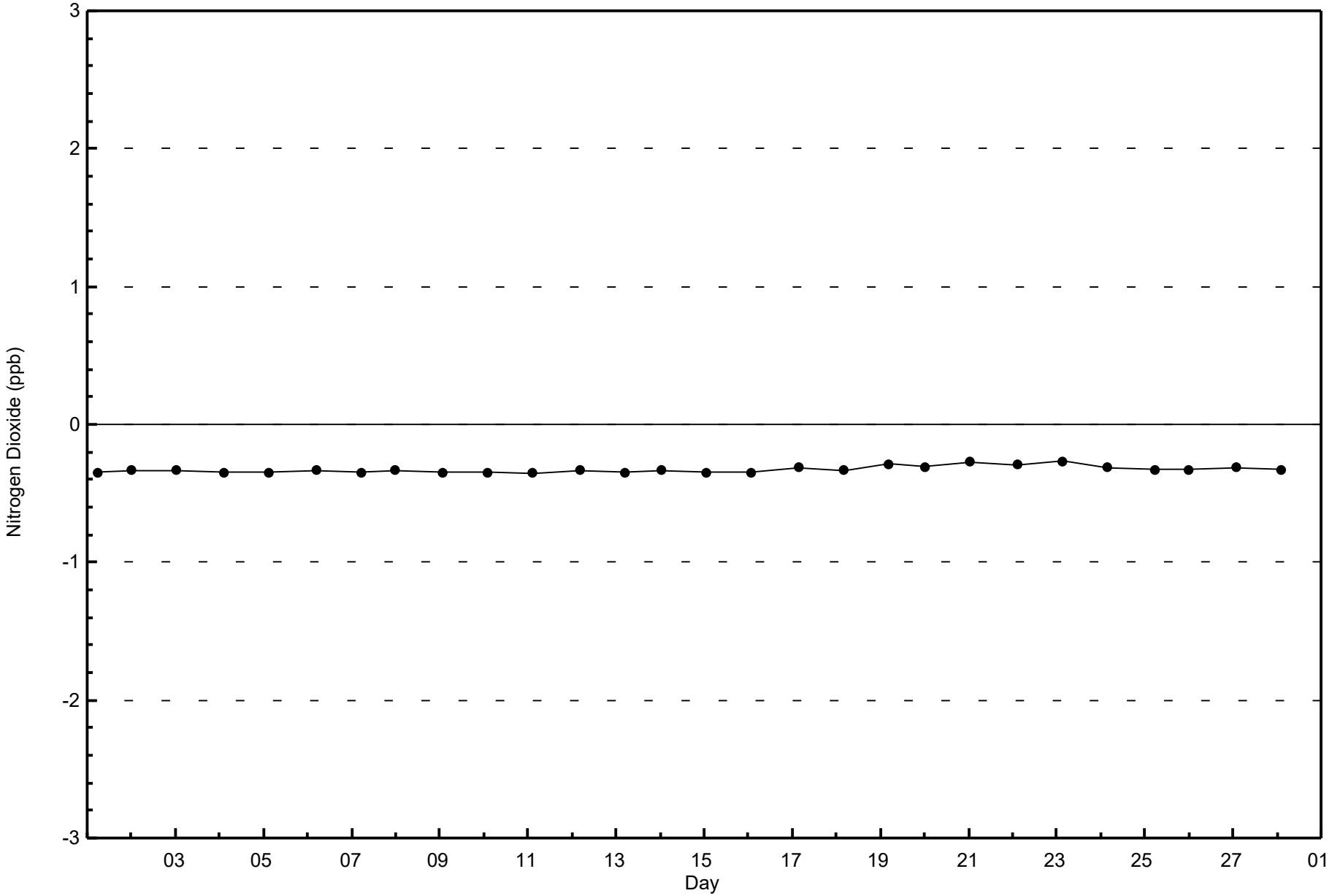
Total Number of Valid Hours: 639

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Fort Chipewyan - February 2025

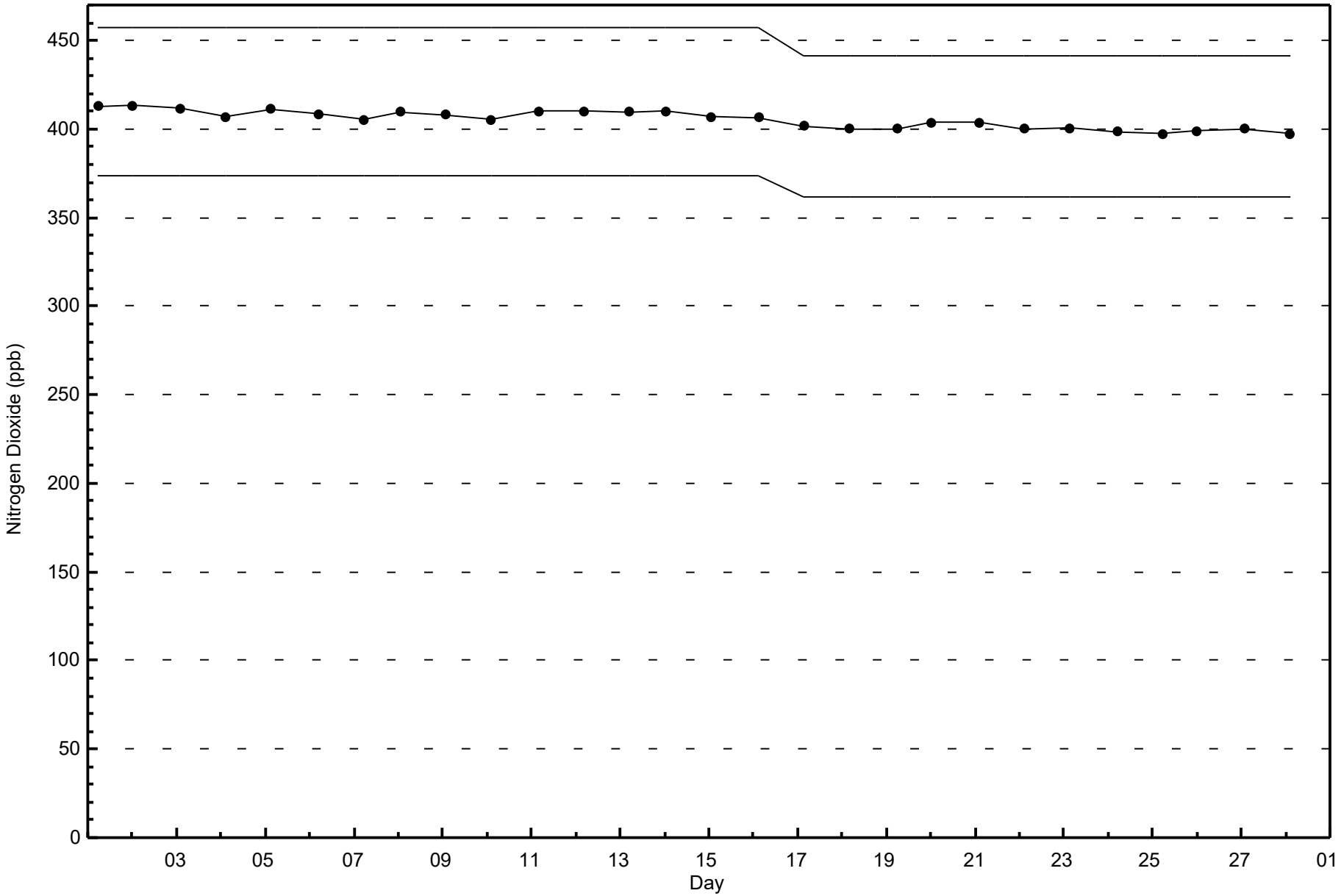


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Fort Chipewyan - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Fort Chipewyan - February 2025

Maximum Value: 9.1 ppb on Feb 13 07:00

Maximum Daily Average: 4.5 ppb on Feb 20

Minimum Value: 0.1 ppb on Feb 16 21:00

Minimum Daily Average: 0.4 ppb on Feb 2

Maximum Diurnal Average: 1.6 ppb at hour 10

Minimum Diurnal Average: 0.7 ppb at hour 24

Monthly Average: 1.10 ppb

Percentiles: P_1 = 0.2 P_{10} = 0.3 Q_1 = 0.4 Median = 0.6 Q_3 = 1.1 P_{90} = 2.5 P_{99} = 7.0

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	32
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-Feb	0.2	0.2	0.2	0.2	1.4	Z	1.3	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.5	0.3	0.2	0.5	0.4	0.4	1.4
2-Feb	Z	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.8	0.3	0.4	0.3	0.4	0.3	0.3	0.4	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.4	0.8
3-Feb	0.3	Z	0.4	0.3	0.2	0.4	0.5	0.4	0.4	0.4	0.6	0.4	0.5	0.7	0.6	0.6	0.4	0.4	0.7	0.4	0.4	0.4	0.4	0.3	0.4	0.7
4-Feb	0.4	0.4	Z	0.6	0.5	0.5	0.5	1.7	6.7	8.5	3.0	0.9	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	1.2	8.5
5-Feb	0.6	0.8	0.9	Z	0.8	0.8	0.7	0.7	0.7	0.8	0.8	1.1	0.9	1.0	1.0	1.1	1.0	1.0	1.0	1.0	1.0	1.1	1.0	1.0	0.9	1.1
6-Feb	0.9	1.1	1.1	1.1	Z	0.2	0.3	0.2	0.4	0.4	0.3	0.4	0.3	0.5	0.4	0.5	0.5	0.4	0.6	0.2	0.2	0.3	0.2	0.4	0.5	1.1
7-Feb	0.4	0.3	0.3	0.2	0.5	Z	0.7	1.4	5.5	2.8	1.9	2.6	0.4	0.4	0.5	0.2	0.4	1.1	0.8	0.9	7.1	7.9	4.3	1.8	1.8	7.9
8-Feb	Z	3.2	5.1	1.8	0.5	1.1	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	1.3	1.0	0.6	0.3	0.3	0.4	0.4	0.4	0.4	0.8	5.1
9-Feb	0.5	Z	0.5	0.5	0.6	0.5	0.7	0.7	0.6	0.5	0.4	0.4	0.4	0.5	0.4	0.3	0.4	0.5	0.5	0.5	0.6	0.6	0.4	0.3	0.5	0.7
10-Feb	0.4	0.4	Z	0.4	0.5	0.4	0.4	0.2	0.2	0.6	0.6	0.6	0.4	0.7	0.5	0.3	0.4	0.6	1.1	1.2	0.6	0.8	0.4	1.4	0.6	1.4
11-Feb	2.0	0.5	0.4	Z	0.5	0.4	0.5	0.4	0.6	0.4	0.7	0.4	0.4	0.3	0.5	0.4	0.5	0.3	0.7	0.4	0.6	0.4	0.3	0.6	0.5	2.0
12-Feb	1.0	0.6	0.9	0.8	Z	0.3	0.3	0.2	0.2	0.7	1.1	3.8	6.4	5.4	5.0	4.0	2.2	3.1	5.0	4.7	2.3	2.1	1.4	0.4	2.2	6.4
13-Feb	0.5	0.5	1.3	0.7	0.8	Z	9.1	3.3	2.1	6.3	4.2	1.2	0.3	0.6	0.3	0.3	0.3	0.3	0.4	1.0	0.8	2.0	1.9	1.0	1.7	9.1
14-Feb	Z	1.3	2.6	1.3	1.5	1.6	2.3	2.3	1.0	1.3	1.3	1.2	0.4	0.4	0.3	0.4	0.4	0.7	1.1	1.1	1.4	0.7	0.5	0.5	1.1	2.6
15-Feb	0.5	Z	0.4	0.5	0.4	0.4	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.5	0.6	2.9	2.8	6.3	4.8	2.4	0.5	1.2	6.3
16-Feb	0.4	0.4	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.6	0.6	0.5	1.1	1.0	UO	C	C	C	C	0.1	0.1	0.1	0.2	0.2	0.4	1.1
17-Feb	0.2	0.2	0.3	Z	0.5	0.4	0.4	0.6	0.7	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.6	1.1	0.6	0.5	0.3	0.2	0.2	0.2	0.5	1.1
18-Feb	0.3	0.3	0.3	0.7	Z	1.8	2.7	3.1	3.7	4.3	4.3	3.4	2.7	2.8	3.9	3.1	3.1	2.3	1.6	1.3	2.0	2.4	1.5	1.3	2.3	4.3
19-Feb	1.9	2.0	2.5	2.7	3.3	Z	2.8	2.1	2.4	2.2	1.8	1.8	1.4	1.2	2.2	1.6	1.3	1.1	1.1	0.7	0.9	0.5	0.7	0.8	1.7	3.3
20-Feb	Z	1.7	2.0	2.3	3.3	5.5	6.1	6.5	6.3	6.8	7.4	7.1	6.1	6.4	6.8	5.8	4.7	5.0	4.7	3.4	2.2	1.6	1.3	1.0	4.5	7.4
21-Feb	0.9	Z	0.8	1.1	1.0	2.4	1.2	2.1	1.9	1.5	1.1	0.9	0.8	0.9	1.0	0.9	1.0	1.3	3.4	0.7	0.7	0.6	0.6	0.6	1.2	3.4
22-Feb	0.6	0.7	Z	0.7	0.7	0.6	0.7	0.8	0.9	1.0	1.3	1.7	1.1	1.5	2.2	2.2	1.8	0.8	0.7	0.8	0.9	1.2	1.6	2.0	1.1	2.2
23-Feb	3.4	2.2	3.4	Z	7.5	3.1	1.4	0.7	0.6	0.6	0.9	0.6	0.6	0.6	0.5	0.5	0.6	0.5	0.6	0.5	0.4	0.4	0.5	0.6	1.3	7.5
24-Feb	0.5	0.5	0.4	0.4	Z	0.7	3.0	1.5	0.5	0.8	0.8	0.7	0.5	0.5	0.5	0.9	0.4	1.0	0.6	1.9	0.9	0.9	0.4	0.3	0.8	3.0
25-Feb	0.4	0.5	0.5	0.5	0.5	Z	0.6	0.7	0.8	0.5	0.6	1.0	0.6	0.6	0.4	0.3	0.4	0.5	0.6	0.7	1.2	0.8	0.5	0.6	0.6	1.2
26-Feb	Z	2.2	0.7	1.1	0.2	0.2	0.4	0.8	0.5	0.3	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.4	0.9	1.0	1.1	0.5	0.5	0.6	2.2
27-Feb	0.5	Z	0.4	0.4	0.6	0.4	0.7	0.8	1.1	0.9	0.8	0.5	1.0	0.4	0.4	0.3	0.5	1.3	0.7	0.6	1.3	1.5	0.7	0.6	0.7	1.5
28-Feb	0.8	0.6	Z	0.7	0.7	0.7	1.0	0.8	0.8	0.7	0.6	0.5	0.6	0.5	0.5	0.5	0.8	0.9	0.8	0.5	0.4	0.5	0.3	0.4	0.6	1.0
	0.8	0.9	1.1	0.8	1.1	1.0	1.4	1.2	1.4	1.6	1.3	1.2	1.1	1.0	1.1	1.0	0.9	1.0	1.2	1.0	1.2	1.2	0.8	0.7	Diurnal Average	
	3.4	3.2	5.1	2.7	7.5	5.5	9.1	6.5	6.7	8.5	7.4	7.1	6.4	6.4	6.8	5.8	4.7	5.0	5.0	4.7	7.1	7.9	4.3	2.0	Diurnal Maximum	

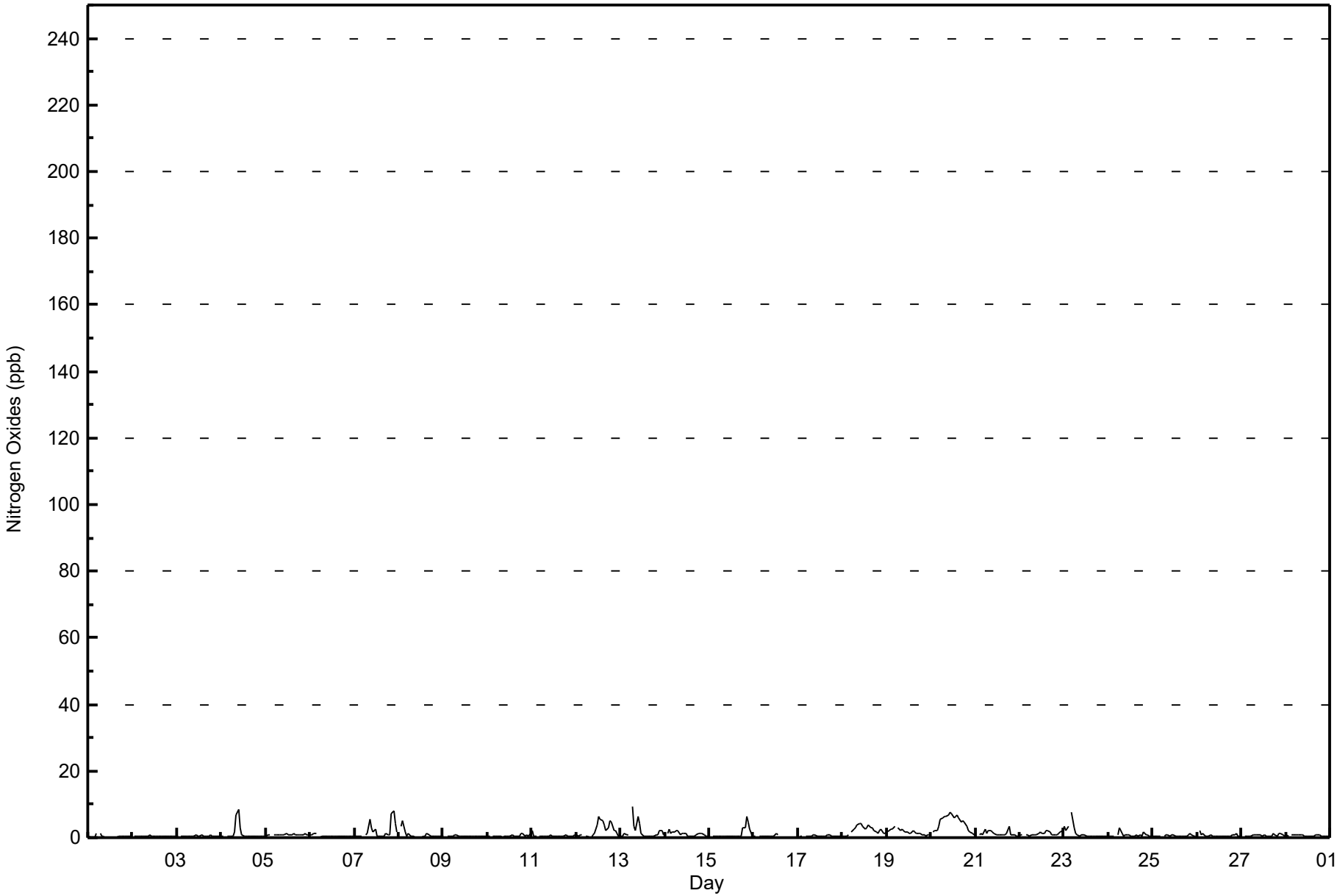
Z - zerospan C - Calibration UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Fort Chipewyan - February 2025



Nitrogen Oxides (NO_X) - ppb
Fort Chipewyan - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	639	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: 639

Total Number of Hours: 672



Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Fort Chipewyan - February 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	22	11	80	102	22	21	17	13	5	14	45	103	47	76	46	639
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	15	22	11	80	102	22	21	17	13	5	14	45	103	47	76	46	639

Total Number of Valid Hours: 639

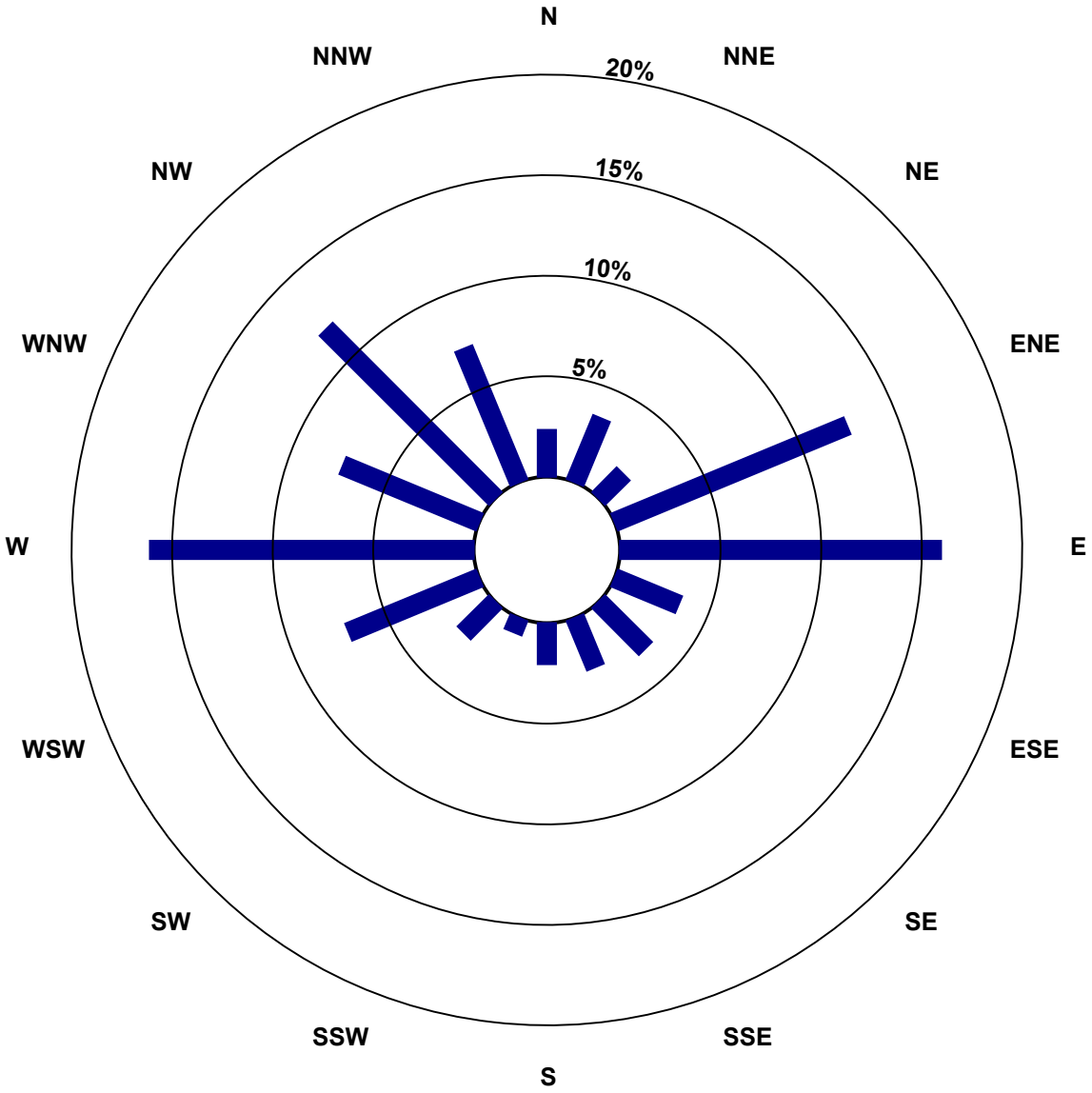
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Oxides (NO_X) - ppb

Fort Chipewyan



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

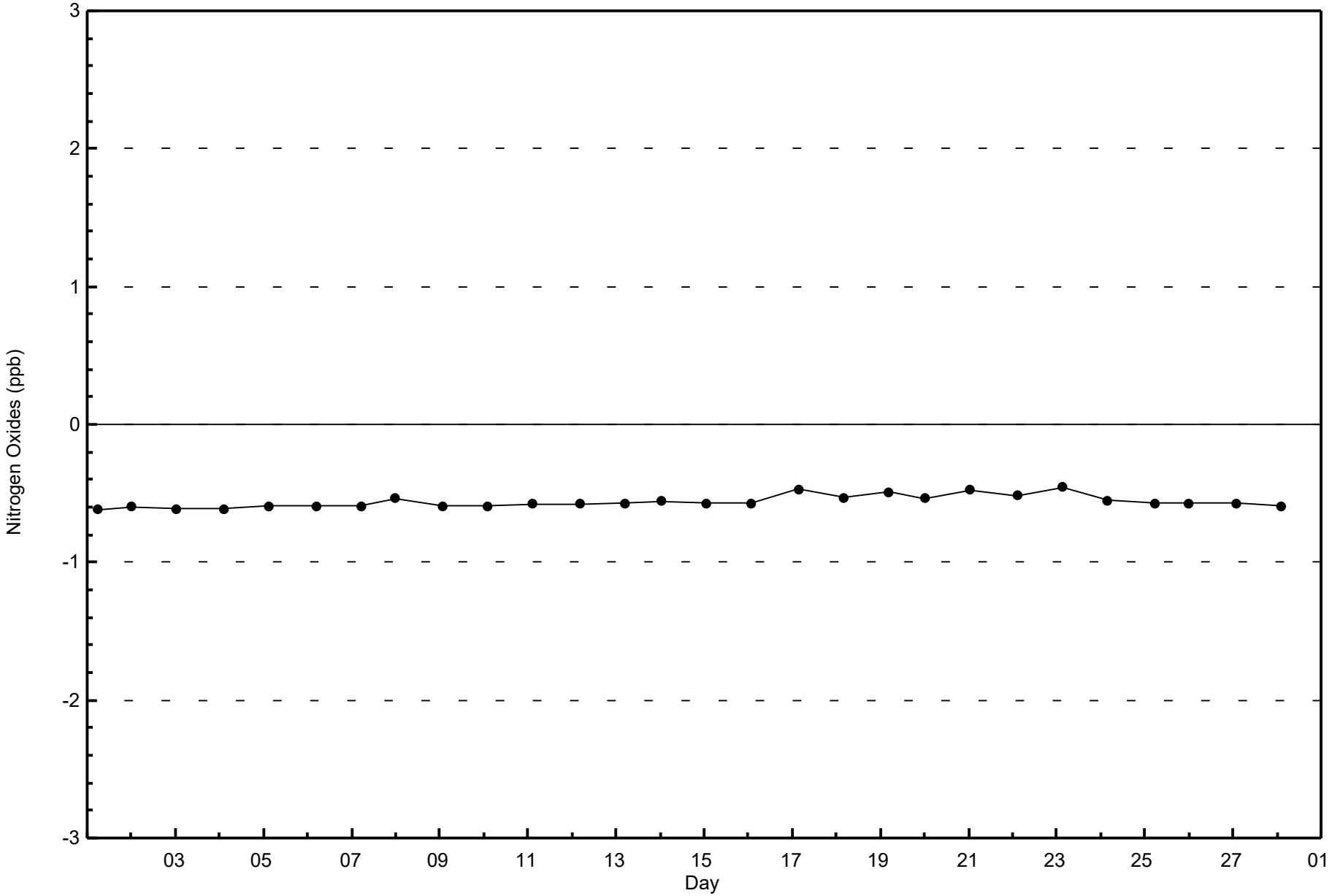
Total Number of Valid Hours: 639

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Fort Chipewyan - February 2025

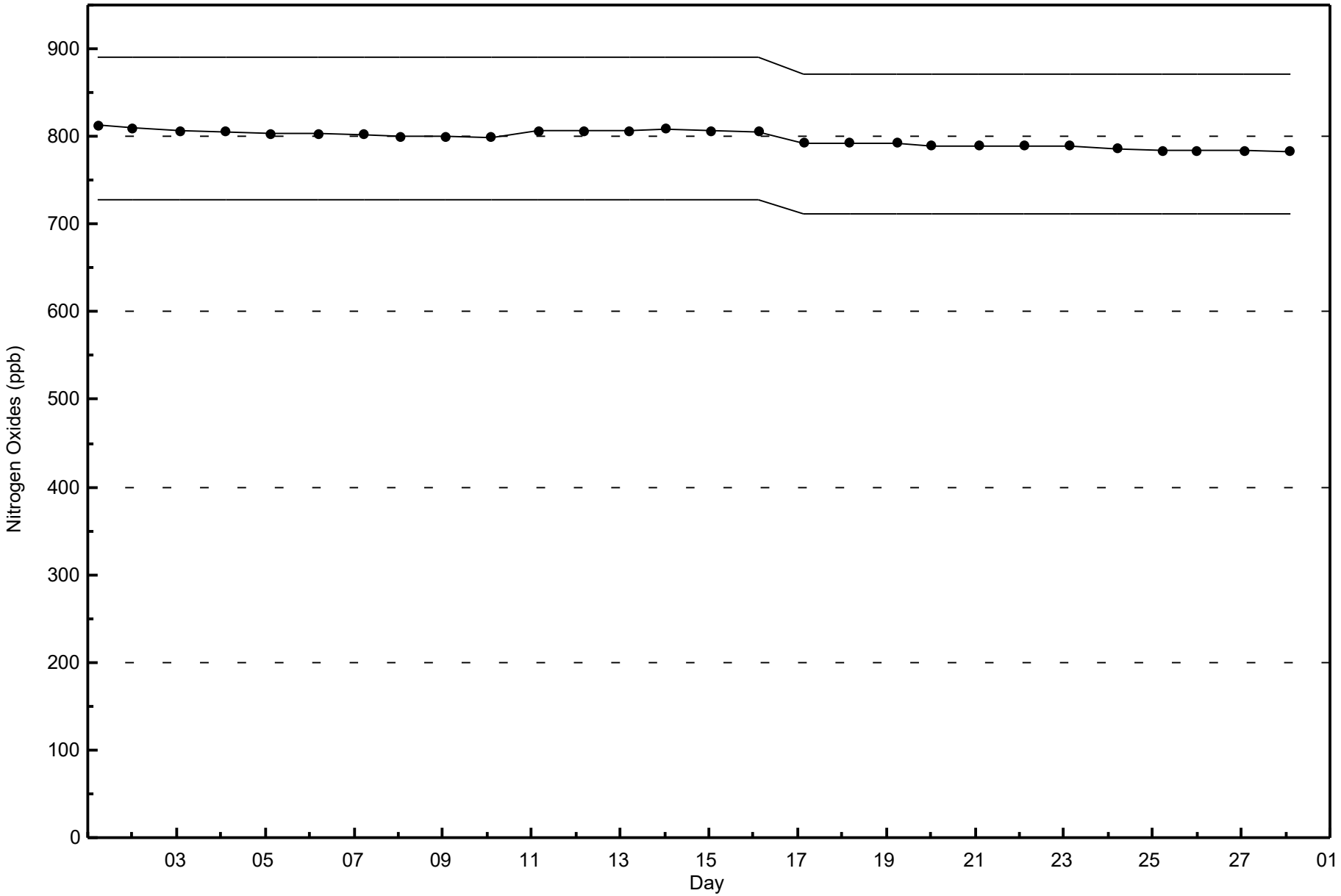


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Fort Chipewyan - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Fort Chipewyan - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 41.5 ppb on Feb 4 18:00 Maximum Daily Average: 37.5 ppb on Feb 28

Minimum Value: 17.4 ppb on Feb 15 01:00 Minimum Daily Average: 22.5 ppb on Feb 14
Maximum Diurnal Average: 32.1 ppb at hour 16 Minimum Diurnal Average: 30.3 ppb at hour 8
Monthly Average: 31.12 ppb Percentiles: P_1 = 19.9 P_{10} = 23.9 Q_1 = 27.3 Median = 31.9 Q_3 = 34.8 P_{90} = 37.1 P_{99} = 39.3

Hours in Service:	672
Hours of Data:	641
Hours of Missing Data:	31
Hours of Calibration:	31
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	34.8	35.4	36.8	Z	32.2	30.0	31.6	32.0	31.1	31.6	33.1	28.4	22.0	19.3	22.8	27.5	26.8	23.6	22.6	22.1	21.7	21.7	21.4	22.7	27.4	36.8
2-Feb	24.3	25.7	26.0	25.8	Z	25.8	25.5	25.5	25.4	25.5	26.3	26.3	26.6	26.8	26.9	26.4	25.8	25.6	26.6	27.3	27.3	26.8	26.0	25.8	26.1	27.3
3-Feb	25.7	25.8	26.8	27.9	28.5	Z	27.5	28.4	28.5	29.4	29.9	30.5	30.9	31.6	32.6	33.4	34.4	34.6	34.9	35.7	36.2	36.6	36.8	36.9	31.5	36.9
4-Feb	Z	36.7	35.9	35.7	35.8	36.0	35.5	31.6	26.6	27.7	34.4	36.8	37.8	38.5	39.0	40.3	41.0	41.5	41.4	40.5	39.8	38.8	38.0	37.4	36.8	41.5
5-Feb	37.6	Z	37.3	37.2	36.9	36.8	36.6	36.6	36.5	36.4	36.1	35.6	35.4	35.0	34.9	34.6	34.6	34.4	34.3	34.4	34.4	34.4	34.3	34.2	35.6	37.6
6-Feb	34.1	33.1	Z	33.2	36.5	37.1	36.2	36.5	35.8	35.2	35.1	34.0	33.1	32.1	31.3	31.5	30.9	31.1	31.2	31.7	32.0	33.1	34.4	33.9	33.6	37.1
7-Feb	33.0	33.2	33.1	Z	32.6	32.7	32.9	32.1	29.3	30.5	31.8	31.8	32.7	33.2	33.0	33.1	32.6	31.6	32.0	31.9	26.1	26.1	27.7	29.6	31.4	33.2
8-Feb	29.6	28.8	26.4	29.5	Z	30.9	31.8	31.8	31.3	30.4	30.0	30.0	30.1	30.2	30.4	30.0	29.1	30.4	31.6	31.5	31.4	31.2	27.5	24.5	29.9	31.8
9-Feb	24.1	26.2	24.7	23.7	23.8	Z	23.9	24.1	24.0	23.5	22.8	22.0	21.3	21.4	21.3	21.2	21.7	21.5	21.7	22.0	22.8	23.8	24.6	25.3	23.1	26.2
10-Feb	Z	27.5	28.6	29.0	28.6	29.4	29.1	27.0	26.7	C	C	C	33.6	33.2	33.4	33.3	33.2	32.8	31.9	32.2	33.7	33.9	34.9	34.0	31.3	34.9
11-Feb	31.9	Z	33.2	32.6	32.2	32.2	32.6	33.6	35.0	36.4	35.8	35.3	34.3	33.5	33.0	32.8	33.2	33.2	32.7	33.6	33.1	33.4	33.7	32.4	33.5	36.4
12-Feb	31.1	31.2	Z	32.6	32.6	32.0	31.7	31.1	31.3	30.5	30.6	29.5	28.5	29.6	29.9	30.3	31.4	30.4	28.5	28.4	29.2	29.2	30.1	31.8	30.5	32.6
13-Feb	31.0	29.9	26.5	Z	28.2	22.4	20.0	23.0	25.3	23.1	24.8	26.6	27.3	27.4	26.9	26.8	26.5	26.2	26.0	25.4	25.4	23.9	23.9	25.2	25.7	31.0
14-Feb	23.4	24.2	21.5	22.7	Z	22.9	18.5	19.3	21.1	21.6	22.5	23.6	23.4	24.2	24.8	26.6	26.3	25.0	23.4	21.4	21.1	20.0	21.5	19.3	22.5	26.6
15-Feb	17.4	19.7	21.8	23.4	25.3	Z	27.1	27.4	27.3	27.6	27.9	28.3	28.7	28.9	29.4	29.8	30.2	30.0	27.7	27.3	24.1	25.6	26.7	26.9	26.5	30.2
16-Feb	Z	28.1	27.9	27.6	27.7	27.4	27.1	27.2	27.1	26.7	26.5	26.1	26.6	26.5	26.4	26.7	27.1	29.6	28.5	22.1	19.9	21.1	22.7	22.4	26.0	29.6
17-Feb	20.2	Z	21.6	22.6	22.7	23.5	23.9	23.7	23.7	24.3	24.9	25.1	26.0	26.8	27.5	28.9	28.4	27.1	27.2	27.9	28.0	28.0	27.5	26.8	25.5	28.9
18-Feb	26.6	26.2	Z	27.8	27.6	27.3	26.8	26.4	26.3	26.9	27.9	28.9	29.9	30.9	31.3	31.6	31.0	32.0	32.1	33.0	32.5	31.8	33.7	34.1	29.7	34.1
19-Feb	33.9	33.9	33.9	Z	33.4	32.9	32.6	33.0	33.3	34.3	35.6	36.5	37.4	38.3	38.3	38.0	37.9	37.6	37.1	36.8	37.2	37.6	37.1	37.0	35.8	38.3
20-Feb	37.1	37.1	37.1	36.7	Z	32.3	31.1	30.0	30.4	30.2	29.8	30.2	30.5	30.4	30.3	30.6	30.9	29.3	28.7	29.6	31.6	33.7	34.3	35.6	32.1	37.1
21-Feb	36.2	35.7	35.4	34.3	34.0	Z	33.7	32.4	32.7	32.9	33.5	33.8	34.4	35.7	36.8	38.0	37.0	35.4	34.0	36.6	37.0	36.8	36.6	36.1	35.2	38.0
22-Feb	Z	35.8	36.0	35.7	35.7	35.8	35.6	35.4	35.2	35.0	34.9	34.9	35.6	35.9	35.8	35.5	35.6	35.9	35.6	35.4	35.1	34.0	33.5	32.8	35.2	36.0
23-Feb	30.5	Z	29.4	22.5	21.9	27.5	29.9	32.0	32.9	32.6	32.9	33.2	34.2	34.7	34.3	33.9	33.5	33.7	33.9	34.2	34.2	34.8	34.5	34.1	32.0	34.8
24-Feb	33.7	33.4	Z	34.1	33.5	33.0	30.7	31.9	33.4	32.7	32.9	33.0	33.5	33.8	34.0	33.9	33.9	33.0	33.0	31.3	32.0	32.6	32.8	32.7	33.0	34.1
25-Feb	33.3	33.0	31.8	Z	31.5	30.6	29.5	29.1	28.9	29.4	29.2	30.4	30.9	31.3	31.3	31.4	31.1	31.1	31.5	32.6	32.0	31.6	31.9	32.1	31.1	33.3
26-Feb	31.9	30.2	32.4	32.3	Z	36.1	34.7	34.1	36.4	37.1	37.4	37.8	38.0	37.7	37.8	37.8	38.2	38.3	37.6	36.8	36.6	36.7	37.9	38.3	36.2	38.3
27-Feb	36.7	35.4	34.4	33.8	33.3	Z	34.5	34.5	34.5	34.3	34.5	35.8	38.0	39.5	39.1	38.9	39.0	38.7	38.6	38.5	37.8	37.8	38.9	39.1	36.8	39.5
28-Feb	Z	38.9	39.2	39.1	38.8	38.9	38.4	38.7	38.6	38.5	38.3	38.2	37.9	37.7	37.3	36.9	36.7	36.2	35.9	35.7	35.9	35.9	35.8	35.2	37.5	39.2
	30.4	31.0	30.7	30.4	31.0	31.0	30.3	30.3	30.3	30.5	31.1	31.2	31.4	31.6	31.8	32.1	32.1	31.8	31.4	31.3	31.0	31.1	31.4	31.3	Diurnal Average	
	37.6	38.9	39.2	39.1	38.8	38.9	38.4	38.7	38.6	38.5	38.3	38.2	38.0	39.5	39.1	40.3	41.0	41.5	41.4	40.5	39.8	38.8	38.9	39.1	Diurnal Maximum	

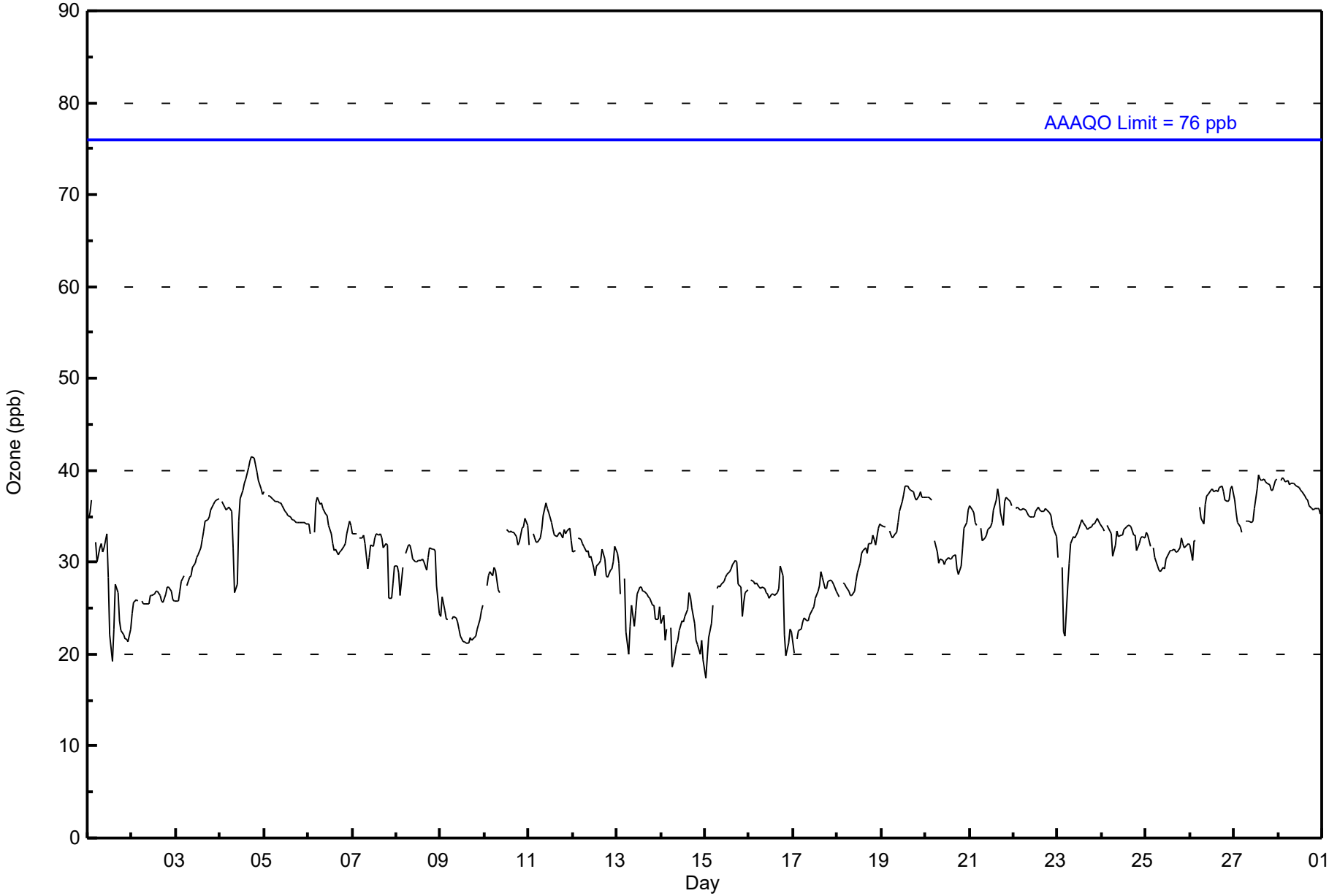
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Fort Chipewyan - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	10	1.56	1.56
21 - 50	631	98.44	100.00
51 - 82	0	0.00	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 641

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Ozone (O_3) - ppb

Fort Chipewyan - February 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	1	0	1	0	0	2	0	0	0	0	0	0	3	1	2	0	10
21 - 50	14	25	10	82	105	20	22	17	12	5	13	45	95	46	78	42	631
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	15	25	11	82	105	22	22	17	12	5	13	45	98	47	80	42	641

Total Number of Valid Hours: 641

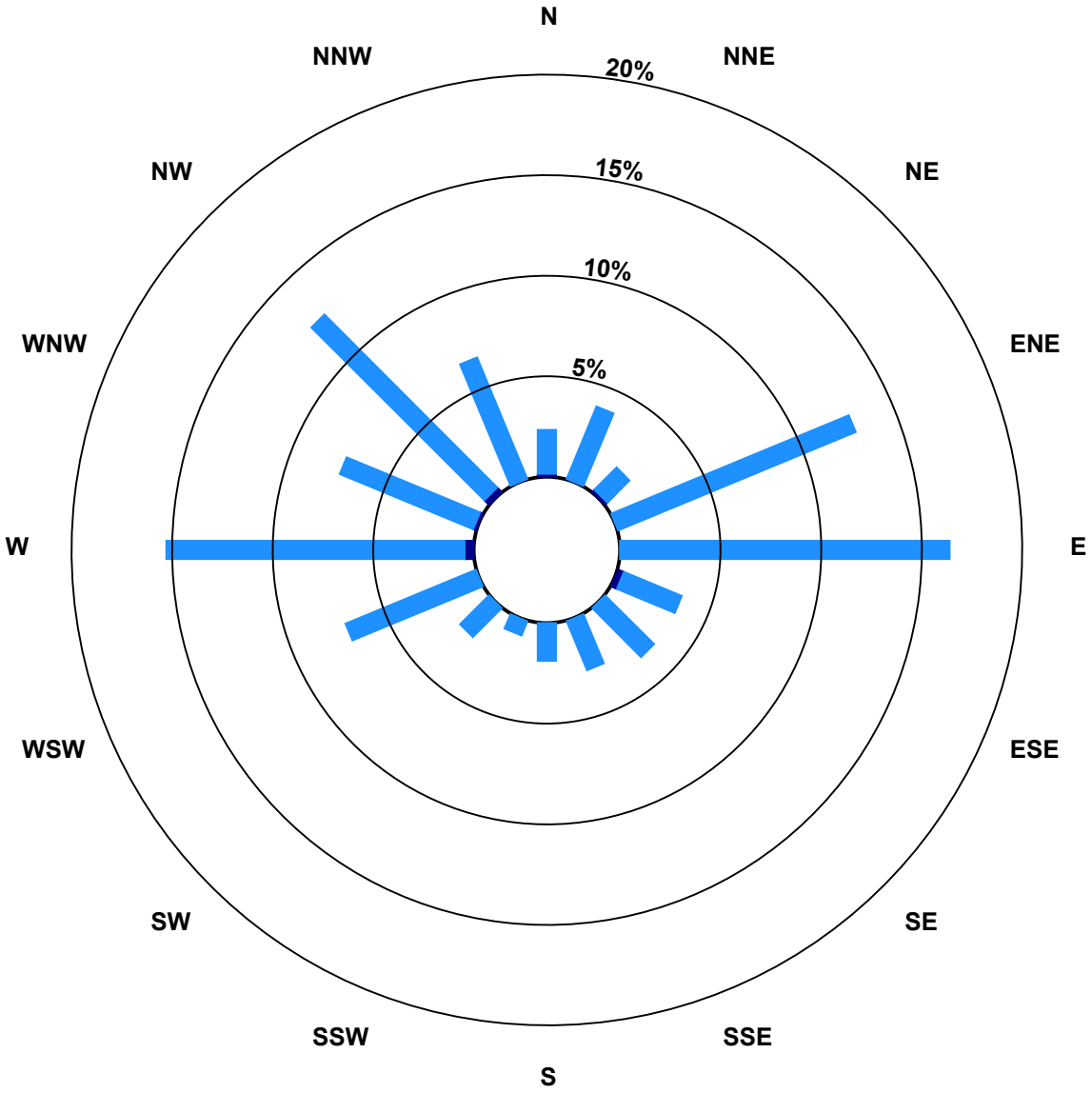
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Ozone (O_3) - ppb

Fort Chipewyan



Classes (ppb)

0 - 20

21 - 50

51 - 82

> 83

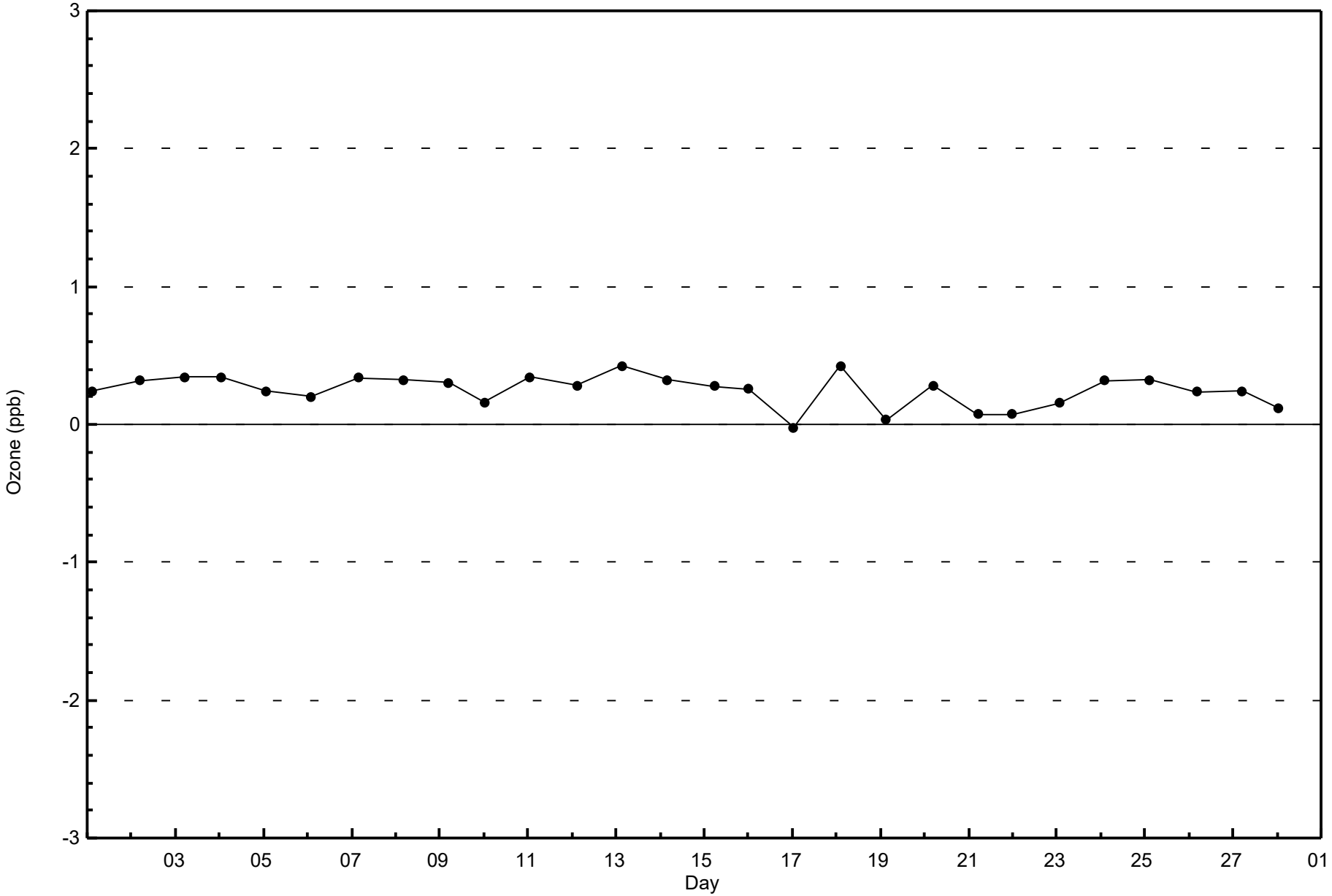
Total Number of Valid Hours: 641

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Fort Chipewyan - February 2025

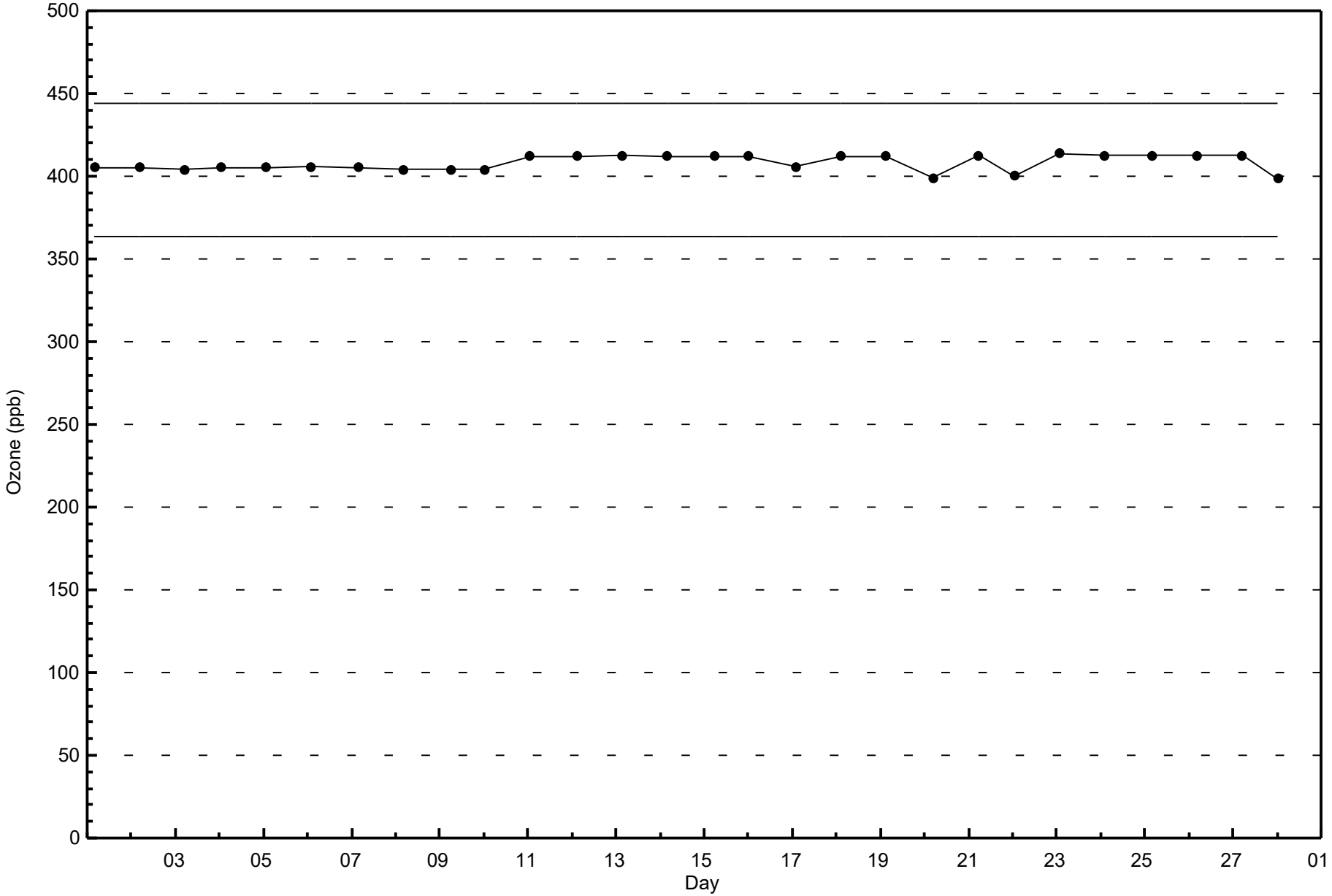


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Fort Chipewyan - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Fort Chipewyan - February 2025

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

Maximum Value: 22.4 $\mu g/m^3$ on Feb 12 23:00

Maximum Daily Average: 8.0 $\mu g/m^3$ on Feb 7

Minimum Value: 0.8 $\mu g/m^3$ on Feb 4 18:00

Minimum Daily Average: 1.5 $\mu g/m^3$ on Feb 4

Maximum Diurnal Average: 5.0 $\mu g/m^3$ at hour 22

Minimum Diurnal Average: 3.3 $\mu g/m^3$ at hour 6

Monthly Average: 3.82 $\mu g/m^3$

Percentiles: P_1 = 1.2 P_{10} = 2.0 Q_1 = 2.4 Median = 2.9 Q_3 = 4.3 P_{90} = 6.8 P_{99} = 12.7

Hours in Service:	672
Hours of Data:	672
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-Feb	2.6	2.5	2.3	2.5	2.9	3.1	3.2	3.4	3.6	3.6	3.3	4.1	5.7	6.2	5.5	4.1	4.0	4.6	4.9	4.9	4.9	4.9	4.8	4.7	4.0	6.2
2-Feb	4.3	4.1	4.2	4.1	4.1	4.2	4.1	4.2	5.3	4.3	4.0	4.1	4.0	4.0	4.0	4.1	4.3	4.3	4.2	3.9	3.9	3.9	4.2	4.2	4.2	5.3
3-Feb	4.1	4.1	3.6	3.4	3.0	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.8	2.7	2.4	2.3	2.5	2.7	2.1	2.0	1.9	1.7	1.7	2.8	4.1
4-Feb	1.8	1.7	1.9	2.2	2.6	2.4	2.0	1.4	1.8	2.1	1.7	1.6	1.5	1.3	1.2	1.2	1.1	0.8	0.9	0.9	1.1	1.1	1.4	1.3	1.5	2.6
5-Feb	1.6	2.2	2.4	2.4	2.1	1.8	1.9	2.0	2.1	2.1	2.0	2.1	2.3	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.4	2.5	2.4	2.4	2.3	2.5
6-Feb	2.1	2.5	2.6	2.5	1.8	1.3	1.4	2.1	4.3	7.4	7.1	8.4	10.0	11.3	11.9	12.7	14.9	14.4	12.8	10.7	10.3	8.2	6.0	7.5	7.3	14.9
7-Feb	9.4	8.7	8.0	8.0	9.6	8.8	6.7	6.9	6.9	6.0	4.7	4.5	4.3	4.7	4.9	4.3	4.6	6.0	8.0	5.7	9.2	22.2	20.0	9.5	8.0	22.2
8-Feb	8.8	7.7	8.5	7.5	7.2	7.3	8.3	9.1	9.7	10.1	9.5	7.9	7.0	8.4	8.1	8.3	6.4	5.6	4.0	3.8	3.7	4.3	5.5	6.3	7.2	10.1
9-Feb	6.4	6.1	6.2	6.7	7.1	6.1	5.9	6.1	5.8	5.7	5.7	5.8	5.7	5.6	5.4	5.3	5.2	5.5	5.4	5.0	5.2	5.3	5.0	4.5	5.7	7.1
10-Feb	4.3	4.3	4.1	4.0	4.0	3.9	3.7	3.6	3.4	3.4	3.1	3.0	3.0	3.0	2.9	3.1	2.8	2.8	3.2	5.3	2.4	2.3	2.4	11.4	3.7	11.4
11-Feb	11.3	3.2	2.2	4.7	2.6	2.1	2.2	1.6	1.5	1.4	1.6	1.5	1.6	1.9	2.2	2.1	1.9	1.7	2.7	2.4	1.7	1.6	2.6	3.1	2.6	11.3
12-Feb	10.0	1.7	1.6	1.7	1.9	1.5	1.5	1.4	1.4	1.5	1.6	2.3	2.4	2.4	2.4	2.2	2.1	2.6	4.6	3.9	4.0	9.9	22.4	5.2	3.8	22.4
13-Feb	3.2	2.8	3.1	2.7	2.5	3.2	6.0	3.4	3.2	3.5	3.8	3.2	2.4	10.5	2.3	2.6	2.6	2.7	2.7	4.6	2.9	3.9	4.3	3.0	3.6	10.5
14-Feb	3.1	3.0	2.9	7.8	10.5	3.0	3.3	5.6	2.8	2.9	3.0	2.7	2.4	2.2	2.4	2.1	2.2	2.8	3.1	2.9	3.2	3.2	2.8	2.9	3.5	10.5
15-Feb	3.1	2.9	2.8	2.7	2.3	2.1	2.1	2.0	2.2	2.3	2.5	2.6	2.6	2.7	2.5	2.4	2.6	2.6	5.1	4.5	6.8	6.5	4.9	2.5	3.1	6.8
16-Feb	2.4	2.3	2.3	2.2	2.3	2.4	2.3	2.4	2.5	2.4	2.5	2.6	2.9	2.7	2.8	2.8	2.6	2.4	2.5	3.1	3.4	3.3	3.3	3.3	2.7	3.4
17-Feb	3.4	3.4	3.3	3.1	3.0	2.9	2.9	2.8	2.8	2.8	2.8	3.0	2.8	2.9	2.9	2.8	2.9	3.2	3.0	2.8	2.5	2.5	2.5	2.6	2.9	3.4
18-Feb	3.0	2.7	2.6	2.6	2.6	2.7	2.8	2.9	3.2	3.5	3.7	3.5	3.5	3.5	4.0	3.8	2.9	2.6	2.3	2.1	2.2	2.5	2.0	2.0	2.9	4.0
19-Feb	2.2	2.4	2.7	2.6	2.7	2.6	2.4	2.1	2.2	2.4	2.6	2.6	2.8	2.8	3.1	3.0	2.8	2.7	2.7	2.5	2.3	2.3	2.4	2.8	2.6	3.1
20-Feb	3.0	3.2	3.1	3.1	3.9	5.1	5.9	7.4	7.3	6.9	7.2	7.7	7.2	7.3	7.9	7.2	6.5	6.9	6.6	6.1	5.5	5.0	5.2	6.0	5.9	7.9
21-Feb	5.3	5.0	4.4	4.3	4.3	4.3	5.0	4.8	5.2	4.9	4.1	4.0	4.0	3.7	3.6	3.5	3.6	4.4	4.2	3.5	3.3	3.0	2.9	2.9	4.1	5.3
22-Feb	3.0	3.0	2.8	2.8	2.9	2.8	2.8	2.9	3.0	3.1	3.5	3.8	4.0	4.3	4.5	4.6	4.7	4.1	4.1	4.0	4.0	4.2	4.2	4.2	3.6	4.7
23-Feb	5.4	4.5	4.9	10.5	6.9	5.4	5.1	4.7	4.8	5.3	5.0	4.2	3.5	3.7	4.4	3.8	3.8	4.6	4.9	3.8	3.0	2.7	4.5	5.8	4.8	10.5
24-Feb	4.0	2.7	2.4	2.6	2.4	2.8	2.4	2.3	2.4	2.3	2.4	2.4	2.5	2.5	2.5	2.8	2.6	2.3	2.6	4.4	2.6	19.7	2.7	2.3	3.4	19.7
25-Feb	2.7	2.3	2.3	2.2	2.1	1.9	2.0	1.8	1.7	1.8	2.1	2.9	3.3	2.9	2.5	2.0	1.9	2.0	2.1	2.4	2.8	2.1	2.3	1.9	2.3	3.3
26-Feb	1.9	7.0	12.1	2.9	1.7	1.6	1.8	1.7	2.8	3.3	3.4	3.4	3.2	3.2	3.1	3.0	2.9	2.9	2.9	3.1	3.2	3.3	3.0	2.9	3.4	12.1
27-Feb	2.8	2.7	2.6	2.4	2.2	2.2	2.4	2.6	2.6	2.5	2.5	2.7	5.3	2.5	2.4	2.3	2.3	3.6	2.2	2.3	2.7	4.2	3.0	2.2	2.7	5.3
28-Feb	2.3	2.0	2.2	2.5	2.4	2.6	2.6	2.7	2.7	2.9	2.7	2.5	2.4	2.5	2.3	2.4	2.8	2.8	3.1	3.0	2.5	2.5	2.4	2.6	2.6	3.1
	4.2	3.6	3.7	3.8	3.7	3.3	3.4	3.5	3.6	3.7	3.6	3.6	3.8	4.1	3.8	3.7	3.6	3.8	3.9	3.8	3.7	5.0	4.7	4.0	Diurnal Average	
	11.3	8.7	12.1	10.5	10.5	8.8	8.3	9.1	9.7	10.1	9.5	8.4	10.0	11.3	11.9	12.7	14.9	14.4	12.8	10.7	10.3	22.2	22.4	11.4	Diurnal Maximum	

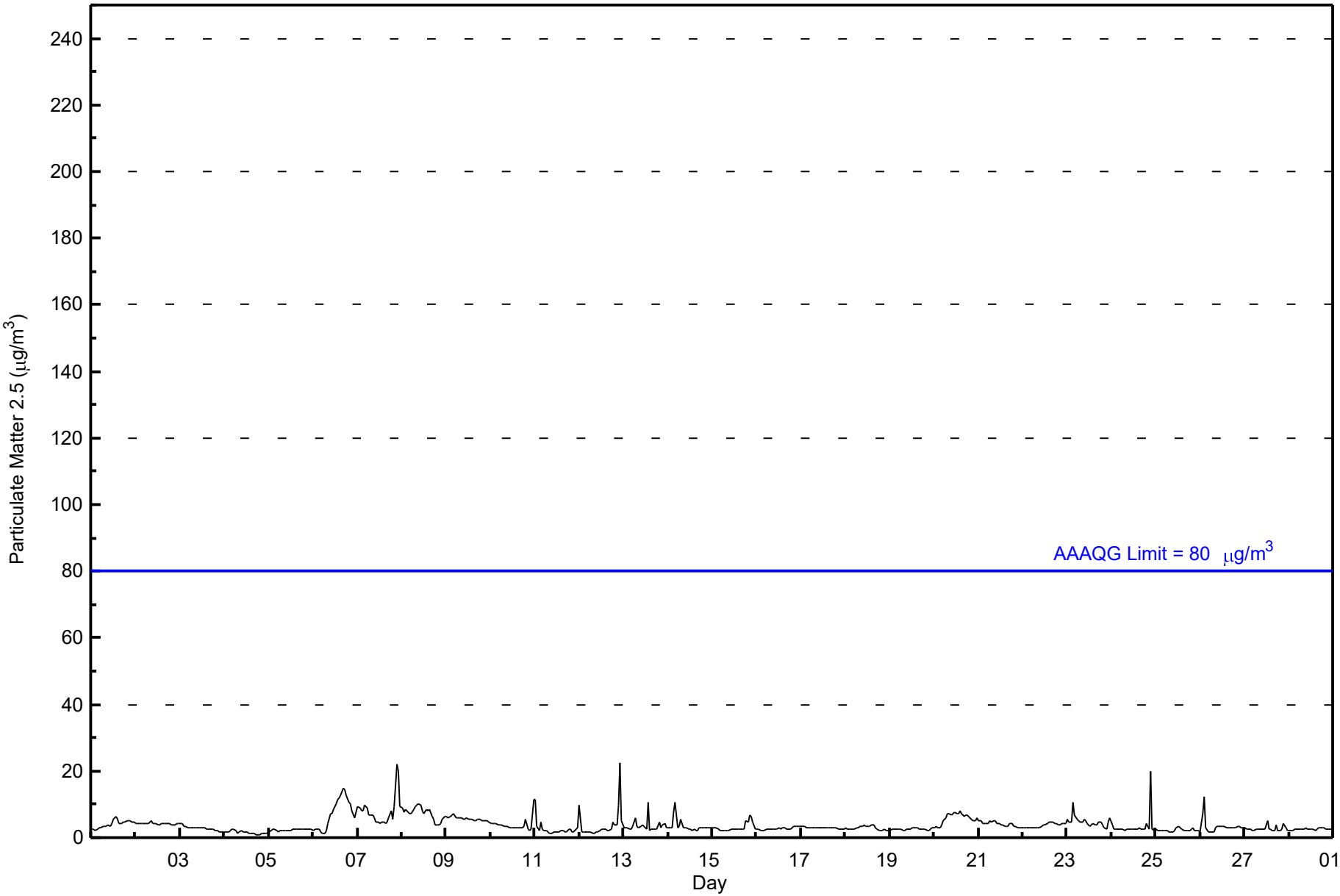
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Fort Chipewyan - February 2025





Wood Buffalo Environmental Association

Cumulative Frequency Distribution

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

Fort Chipewyan - February 2025

Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	571	84.97	84.97
6 - 15	97	14.43	99.40
16 - 25	4	0.60	100.00
26 - 80	0	0.00	100.00
> 81.0	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672



Wood Buffalo Environmental Association

Frequency Distribution

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

Fort Chipewyan - February 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	12	21	11	79	94	21	23	18	5	2	11	47	90	32	61	44	571
6 - 15	2	4	1	4	14	1	0	0	8	3	3	1	15	17	21	3	97
16 - 25	1	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	4
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	15	25	12	85	109	22	23	18	13	5	14	48	105	49	82	47	672

Total Number of Valid Hours: 672

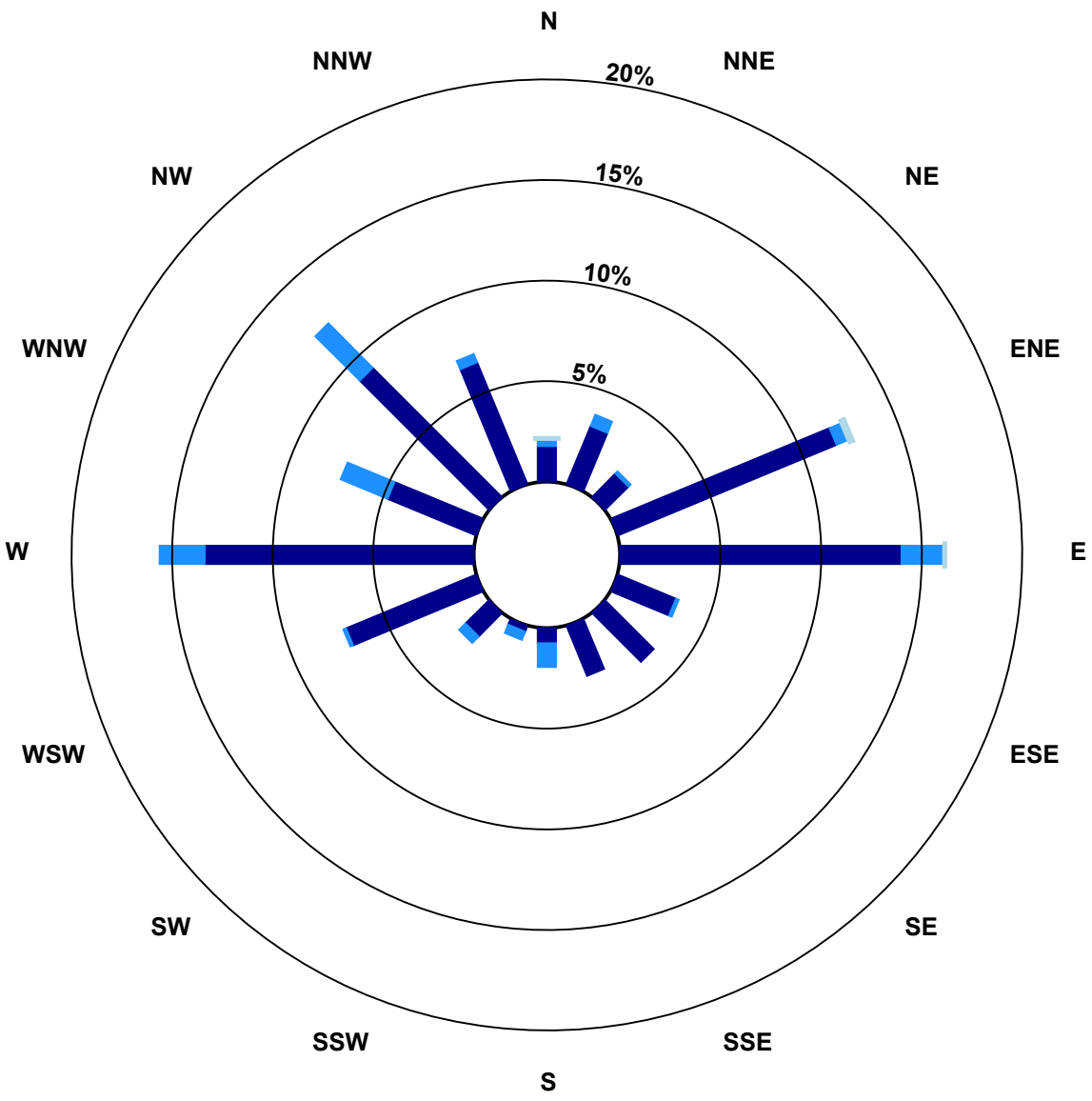
Total Number of Hours: 672

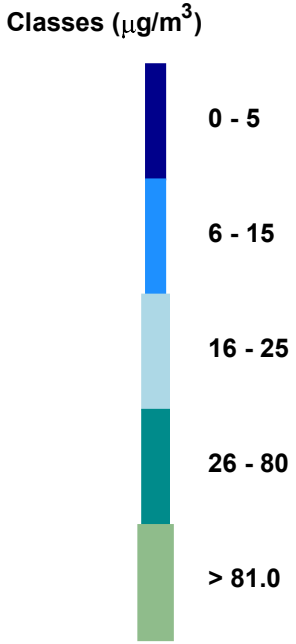
Wood Buffalo Environmental Association

Wind Rose Feb 2025

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

Fort Chipewyan





Total Number of Valid Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Carbon Monoxide (CO) - ppm

Fort Chipewyan - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 0.2 ppm on Feb 7 22:00 Maximum Daily Average: 0.2 ppm on Feb 13

Minimum Value: 0.0 ppm on Feb 22 20:00 Minimum Daily Average: 0.1 ppm on Feb 23
Maximum Diurnal Average: 0.1 ppm at hour 5 Minimum Diurnal Average: 0.1 ppm at hour 14
Monthly Average: 0.12 ppm Percentiles: P_1 = 0.1 P_{10} = 0.1 Q_1 = 0.1 Median = 0.1 Q_3 = 0.1 P_{90} = 0.1 P_{99} = 0.2

Hours in Service:	672
Hours of Data:	641
Hours of Missing Data:	31
Hours of Calibration:	31
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	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
2-Feb	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
3-Feb	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
4-Feb	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
5-Feb	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
6-Feb	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
7-Feb	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.2
8-Feb	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
9-Feb	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
10-Feb	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
11-Feb	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-Feb	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2
13-Feb	Z	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
14-Feb	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	0.1	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-Feb	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2
16-Feb	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
17-Feb	0.1	0.1	0.1	0.1	Z	0.1	0.2	0.2	0.1	0.1	0.1	0.1	C	C	C	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
18-Feb	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
19-Feb	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
20-Feb	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
21-Feb	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
22-Feb	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	0.0	0.1	0.0	0.0	0.1	0.1	0.1
23-Feb	0.1	0.1	0.1	0.1	Z	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
24-Feb	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-Feb	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
26-Feb	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
27-Feb	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
28-Feb	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	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	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	Diurnal Maximum	

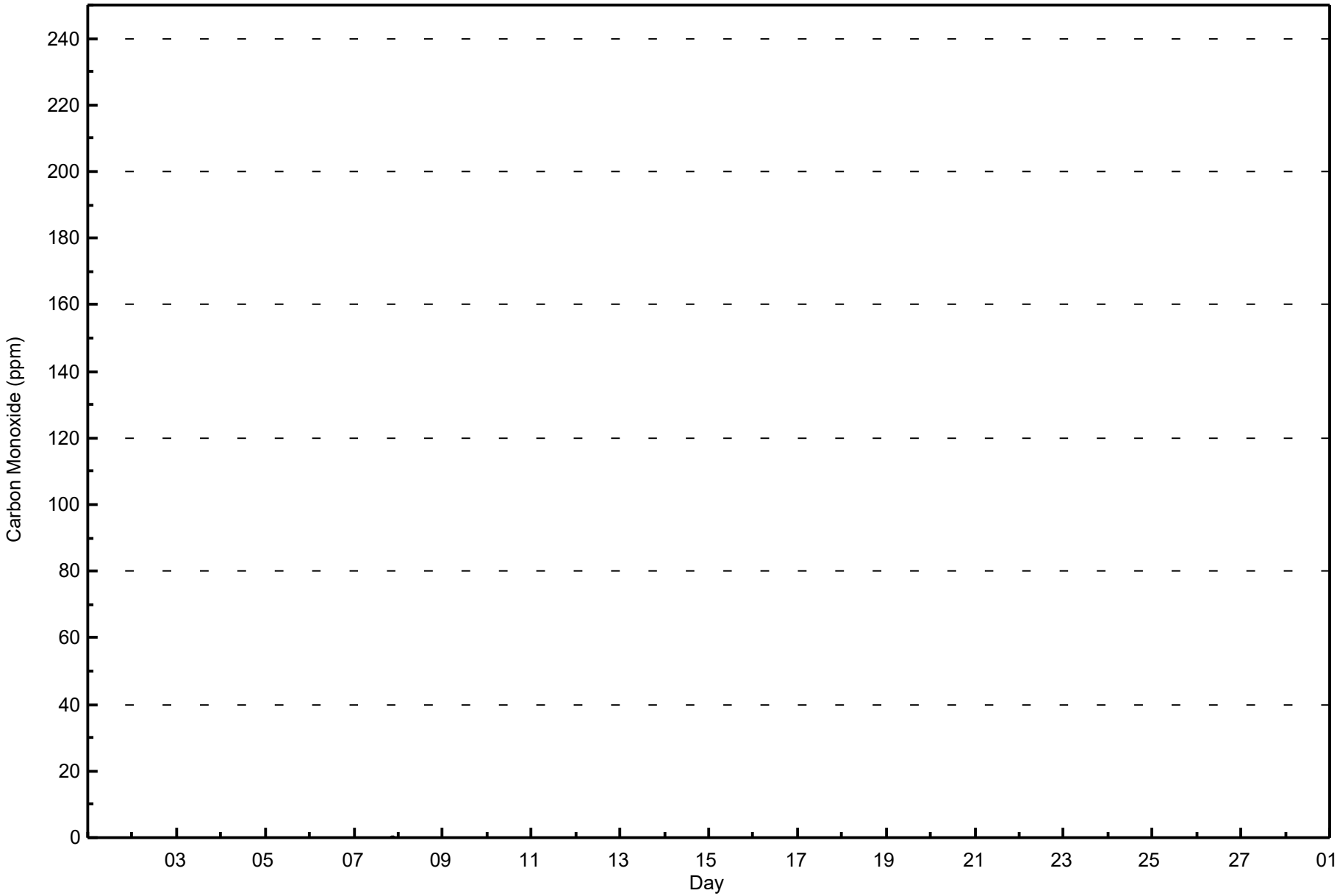
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm

Wood Buffalo Environmental Association

Hourly Averages

Carbon Monoxide (CO) - ppm

Fort Chipewyan - February 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.3	641	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: 641

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Carbon Monoxide (CO) - ppm

Fort Chipewyan - February 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	14	22	11	80	106	20	23	17	12	5	13	46	101	49	78	44	641
0.4 - 0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.6 - 0.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.8 - 1.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5 - 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	14	22	11	80	106	20	23	17	12	5	13	46	101	49	78	44	641

Total Number of Valid Hours: 641

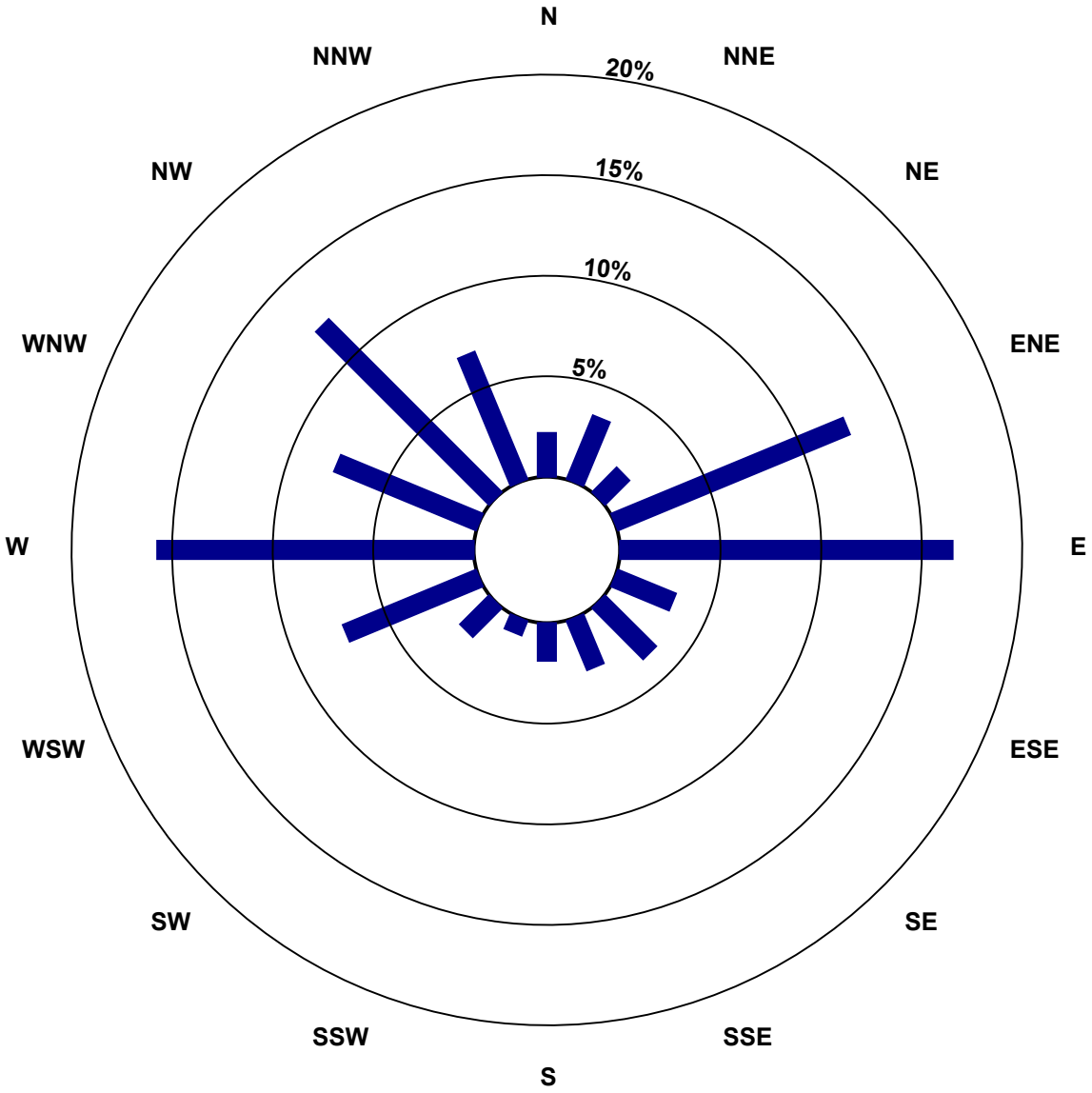
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Carbon Monoxide (CO) - ppm

Fort Chipewyan



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: 641

Wood Buffalo Environmental Association

Summary of Hour Averages

Carbon Dioxide (CO_2) - ppm

Fort Chipewyan - February 2025

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

Maximum Value: 444.2 ppm on Feb 23 04:00

Maximum Daily Average: 438.8 ppm on Feb 23

Minimum Value: 411.5 ppm on Feb 4 00:00

Minimum Daily Average: 413.1 ppm on Feb 9

Maximum Diurnal Average: 423.7 ppm at hour 10

Minimum Diurnal Average: 422.3 ppm at hour 2

Monthly Average: 423.12 ppm

Percentiles: P_1 = 412.2 P_{10} = 414.0 Q_1 = 415.7 Median = 419.0 Q_3 = 432.6 P_{90} = 435.2 P_{99} = 440.7

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	32
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-Feb	Z	415.4	415.1	415.7	416.3	416.6	416.5	416.4	416.6	416.5	416.1	416.1	416.1	416.1	416.1	416.4	416.8	417.0	416.9	416.6	416.5	416.3	416.3	416.0	416.3	417.0
2-Feb	415.7	Z	415.2	415.1	415.1	415.0	415.0	415.0	415.0	414.8	414.4	414.5	414.3	414.2	414.1	413.9	414.0	414.1	413.9	413.6	413.5	413.6	413.6	413.6	414.4	415.7
3-Feb	413.7	413.8	Z	413.4	413.4	414.1	414.0	413.7	413.7	413.6	413.6	413.4	418.8	417.6	417.3	415.6	413.7	412.9	412.9	412.2	412.0	411.7	411.6	411.5	413.8	418.8
4-Feb	411.7	412.0	412.3	Z	412.4	412.4	412.7	414.2	415.1	415.8	414.2	413.5	413.4	413.3	413.3	413.2	413.2	413.4	413.8	414.2	414.6	415.0	415.5	415.9	413.7	415.9
5-Feb	416.3	416.7	417.2	417.4	Z	417.8	418.1	418.3	418.6	418.7	419.0	419.3	419.6	419.9	420.2	421.8	421.1	420.7	420.8	420.9	420.9	421.1	421.2	421.2	419.4	421.8
6-Feb	421.3	421.8	422.1	422.0	420.0	Z	417.9	417.7	417.8	417.8	417.3	418.4	418.5	418.2	417.6	417.3	417.1	416.7	416.2	415.9	415.9	415.9	415.8	416.0	418.0	422.1
7-Feb	Z	416.3	416.4	417.0	417.3	417.5	417.3	417.7	418.6	418.4	417.9	417.8	417.6	417.3	417.3	417.1	417.3	418.0	418.0	417.8	425.8	425.2	421.6	419.2	418.5	425.8
8-Feb	420.5	Z	423.3	419.5	418.1	418.7	417.6	417.3	417.1	417.3	417.6	418.1	418.3	417.5	417.5	418.6	418.9	418.5	415.9	415.1	414.7	414.5	414.4	414.2	417.5	423.3
9-Feb	414.2	414.1	Z	413.8	413.8	413.7	414.2	414.0	413.8	413.5	413.3	412.9	412.7	412.7	412.7	412.6	412.4	412.3	412.3	412.3	412.3	412.5	412.3	412.3	413.1	414.2
10-Feb	412.6	412.6	412.7	Z	413.3	413.6	414.2	415.1	415.7	420.0	418.7	417.2	417.1	418.0	417.1	420.3	420.3	417.0	417.2	417.2	416.2	416.2	415.5	416.7	416.3	420.3
11-Feb	417.8	416.5	416.2	416.3	Z	415.7	415.6	415.8	416.3	415.1	414.9	415.0	415.2	415.3	415.4	415.6	415.7	415.6	416.1	415.9	416.4	416.5	416.7	417.7	416.0	417.8
12-Feb	418.8	418.7	419.1	419.0	419.0	Z	419.6	419.8	419.8	420.1	420.1	420.4	420.8	420.3	420.3	420.1	419.4	420.2	422.3	420.2	420.0	419.0	418.6	417.8	419.7	422.3
13-Feb	Z	418.3	419.4	418.6	418.6	421.4	423.6	421.2	420.2	426.6	422.3	420.0	418.7	419.7	420.5	420.1	419.0	416.9	416.0	416.5	415.8	416.0	416.3	415.2	419.2	426.6
14-Feb	416.1	Z	416.0	416.1	416.2	416.4	419.1	419.2	417.3	417.3	417.0	416.1	416.6	416.0	415.2	414.8	414.7	414.8	414.9	414.9	415.1	414.7	414.8	414.8	416.0	419.2
15-Feb	414.6	414.5	Z	414.7	415.4	415.6	415.9	416.0	416.1	415.9	415.9	415.6	415.6	415.4	415.2	415.0	415.1	415.2	417.5	417.3	420.5	420.2	417.7	416.0	416.1	420.5
16-Feb	415.5	415.5	415.5	Z	414.9	414.6	414.6	414.7	414.8	415.1	415.3	415.3	415.9	418.5	UO	419.4	419.1	417.7	417.3	416.6	414.7	414.6	414.7	414.8	415.9	419.4
17-Feb	414.9	414.9	414.7	414.7	Z	414.6	414.6	414.8	415.0	415.0	414.7	414.9	416.4	416.1	415.6	C	C	C	C	423.9	422.9	422.8	422.9	422.8	417.2	423.9
18-Feb	422.9	423.0	423.1	423.5	424.0	Z	424.7	425.5	426.6	427.0	426.5	426.0	425.3	424.8	425.3	425.2	425.4	425.2	425.3	425.5	425.9	426.0	426.0	426.1	425.2	427.0
19-Feb	Z	426.7	426.9	427.3	428.0	428.2	428.3	428.0	428.4	428.4	428.5	428.7	428.6	428.6	429.2	429.4	429.2	429.5	429.6	429.1	429.2	429.0	429.5	429.8	428.6	429.8
20-Feb	430.4	Z	431.4	431.9	432.8	434.1	434.8	435.6	435.8	435.9	435.8	435.7	435.9	436.2	436.2	435.9	435.5	435.8	435.9	435.5	434.9	434.6	434.4	433.6	434.7	436.2
21-Feb	433.2	433.2	Z	433.6	433.8	435.3	434.9	434.8	434.3	434.0	433.6	433.3	433.0	433.2	433.6	432.1	432.2	433.2	432.9	431.9	431.6	431.5	431.4	431.6	433.1	435.3
22-Feb	432.0	432.5	432.5	Z	433.1	433.3	433.9	434.4	435.0	435.5	436.1	436.7	437.1	437.7	437.9	438.3	438.4	437.3	437.6	437.9	438.3	439.1	439.4	440.0	436.3	440.0
23-Feb	442.4	441.0	442.7	444.2	Z	443.3	441.9	440.9	440.5	440.3	440.0	439.6	438.8	438.1	437.5	437.0	436.6	436.1	435.9	435.5	435.2	435.0	435.0	435.2	438.8	444.2
24-Feb	435.0	434.9	434.7	434.7	434.8	Z	435.5	434.7	434.8	435.1	435.3	435.6	435.1	434.9	435.0	435.3	435.0	435.2	434.7	435.6	435.0	435.0	434.8	434.8	435.0	435.6
25-Feb	Z	434.9	434.9	434.9	434.8	434.8	435.0	434.8	434.8	434.5	437.2	434.9	433.9	433.9	433.6	433.2	433.2	433.3	433.4	433.2	434.3	434.2	434.0	434.3	434.3	437.2
26-Feb	434.3	Z	434.0	433.4	432.9	432.6	432.7	432.8	432.5	432.6	432.3	432.4	432.1	431.9	431.8	431.7	431.3	431.4	431.7	432.6	432.9	433.1	432.4	432.3	432.5	434.3
27-Feb	433.1	434.1	Z	435.3	435.8	436.0	436.5	437.0	437.4	437.6	437.4	436.5	435.5	434.8	435.2	433.6	433.1	432.9	432.3	432.0	431.9	432.2	432.1	431.6	434.5	437.6
28-Feb	431.7	431.5	431.3	Z	431.5	431.4	431.8	431.6	431.5	431.3	431.3	431.4	431.5	431.6	431.6	431.6	432.1	432.6	432.6	432.6	432.7	433.1	433.3	433.7	432.0	433.7
	422.5	422.3	422.9	423.1	422.7	422.8	423.2	423.3	423.3	423.7	423.4	423.2	423.3	423.3	423.4	423.5	423.3	423.1	423.1	422.9	423.2	423.2	422.9	422.8	Diurnal Average	
	442.4	441.0	442.7	444.2	435.8	443.3	441.9	440.9	440.5	440.3	440.0	439.6	438.8	438.1	437.9	438.3	438.4	437.3	437.6	437.9	438.3	439.1	439.4	440.0	Diurnal Maximum	

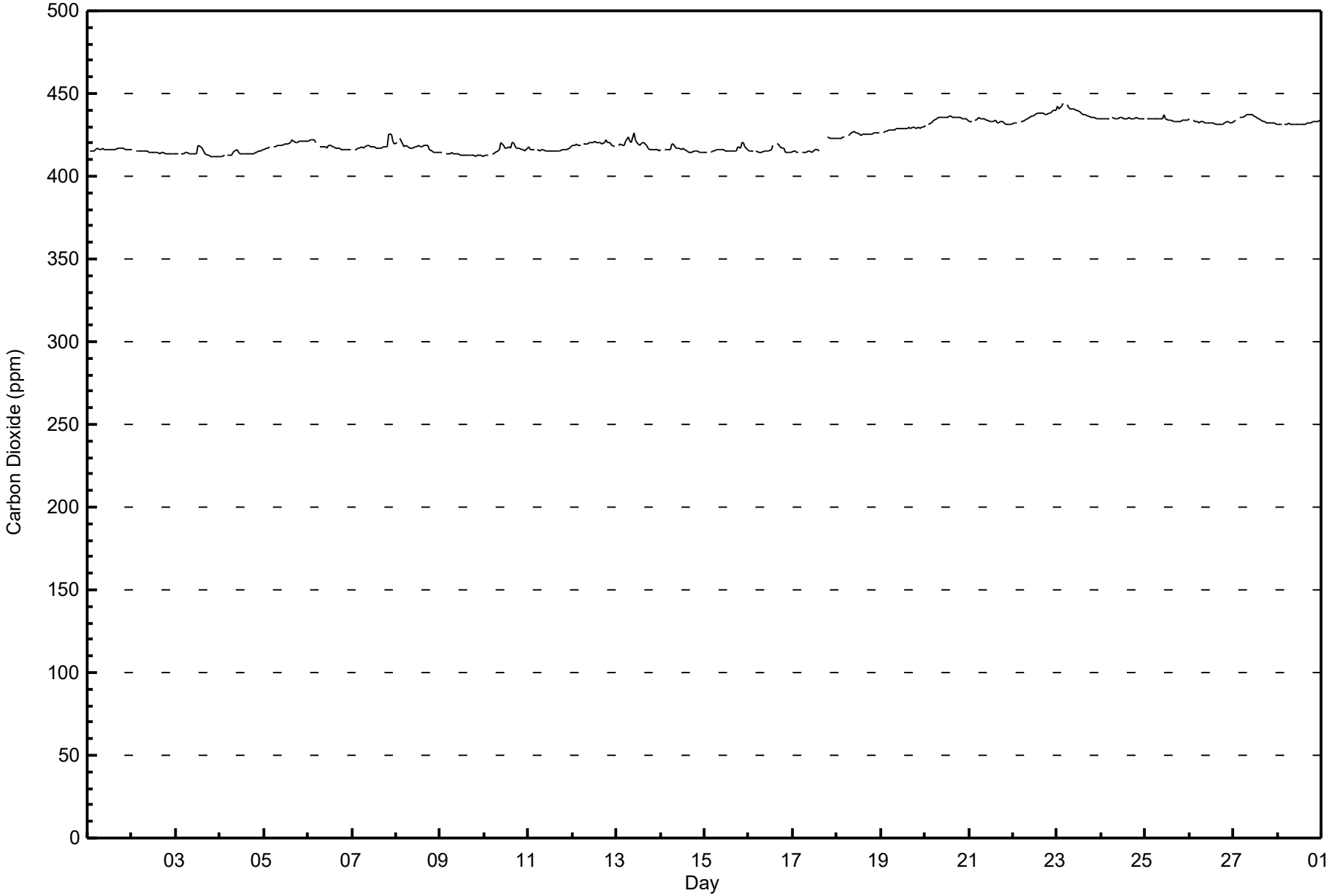
Z - zerospan C - Calibration UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Carbon Dioxide (CO_2) - ppm

Fort Chipewyan - February 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
400 - 420	356	55.71	55.71
420 - 440	275	43.04	98.75
440 - 460	8	1.25	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: 639

Total Number of Hours: 672

Carbon Dioxide (CO_2) - ppm
Fort Chipewyan - February 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	10	10	4	14	43	9	6	0	0	2	10	45	85	42	52	24	356
420 - 440	3	11	6	64	61	11	17	17	12	3	3	1	16	7	26	17	275
440 - 460	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	3	8
460 - 480	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
480 - 500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	14	22	11	79	105	20	23	17	12	5	13	46	101	49	78	44	639

Total Number of Valid Hours: 639

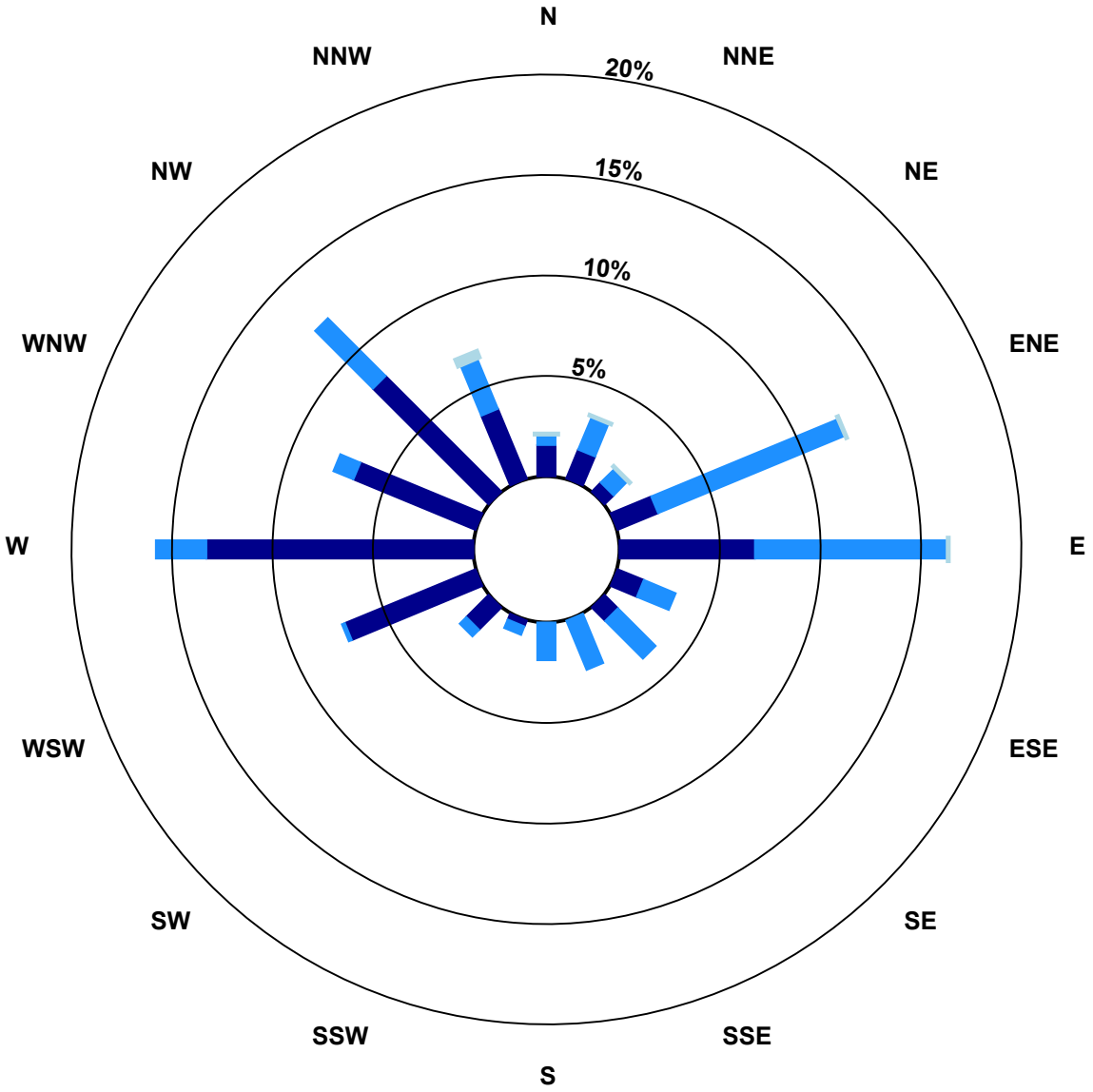
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Carbon Dioxide (CO_2) - ppm

Fort Chipewyan



Classes (ppm)

400 - 420

420 - 440

440 - 460

460 - 480

480 - 500

> 500

Total Number of Valid Hours: 639

Maximum Value: -7.6 C on Feb 22 17:00

Maximum Daily Average: -10.9 C on Feb 23

Minimum Value: -38.5 C on Feb 14 08:00

Minimum Daily Average: -32.7 C on Feb 14

Maximum Diurnal Average: -19.6 C at hour 16

Minimum Diurnal Average: -24.0 C at hour 9

Monthly Average: -21.78 C

Percentiles: P_1 = -34.9 P_{10} = -30.7 Q_1 = -28.0 Median = -22.5 Q_3 = -15.4 P_{90} = -13.1 P_{99} = -8.3

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

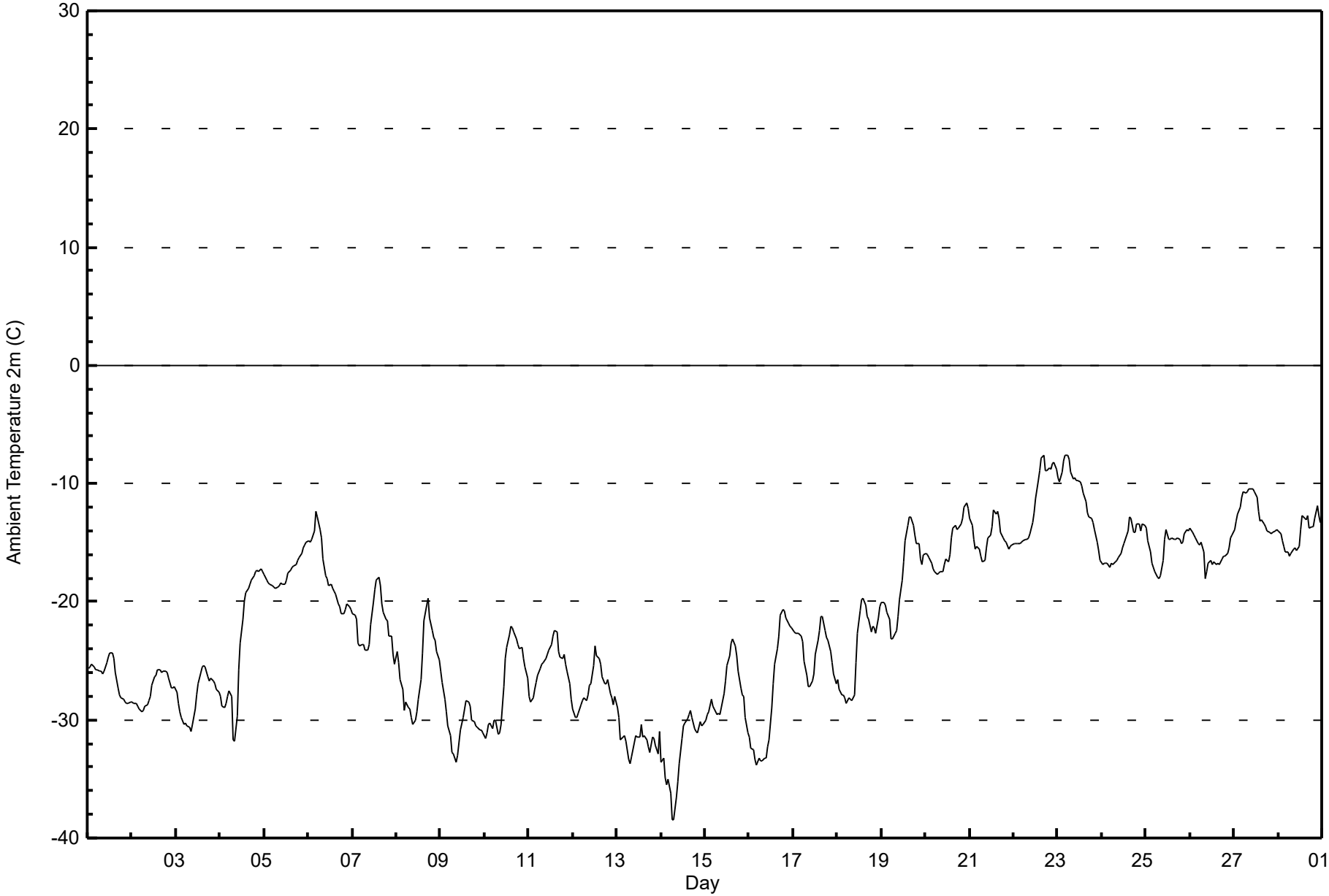
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-25.6	-25.5	-25.3	-25.5	-25.7	-25.8	-25.9	-25.9	-26.2	-25.8	-25.1	-24.7	-24.4	-24.4	-24.8	-26.0	-27.4	-27.9	-28.1	-28.3	-28.5	-28.7	-28.7	-28.5	-26.4	-24.4
2-Feb	-28.5	-28.6	-28.7	-28.9	-29.1	-29.3	-29.2	-28.9	-28.7	-28.4	-28.1	-27.1	-26.3	-26.2	-25.8	-25.7	-25.9	-25.8	-25.9	-26.0	-26.4	-27.3	-27.3	-27.1	-27.5	-25.7
3-Feb	-27.7	-28.6	-29.3	-29.8	-30.4	-30.3	-30.5	-30.7	-31.0	-30.4	-29.1	-27.9	-27.0	-26.0	-25.5	-25.4	-25.5	-26.3	-26.7	-26.4	-26.7	-26.9	-27.4	-27.6	-28.0	-25.4
4-Feb	-28.0	-28.8	-29.0	-28.6	-28.1	-27.6	-28.0	-31.7	-31.8	-29.7	-25.7	-23.5	-21.5	-20.0	-19.3	-18.8	-18.5	-18.2	-17.8	-17.4	-17.4	-17.4	-17.2	-17.4	-23.4	-17.2
5-Feb	-17.7	-18.2	-18.4	-18.6	-18.7	-18.8	-18.8	-18.7	-18.6	-18.4	-18.6	-18.5	-18.1	-17.6	-17.3	-17.1	-16.9	-16.8	-16.5	-16.3	-15.9	-15.5	-15.2	-14.9	-17.5	-14.9
6-Feb	-14.8	-14.9	-14.7	-14.1	-12.4	-12.8	-13.9	-14.6	-16.4	-17.8	-18.0	-18.6	-18.6	-18.9	-19.1	-19.3	-20.2	-20.5	-21.0	-21.0	-20.7	-20.1	-20.4	-20.7	-17.6	-12.4
7-Feb	-21.1	-21.1	-21.5	-23.5	-23.7	-23.6	-23.6	-24.1	-24.1	-23.6	-22.0	-20.1	-18.9	-18.1	-17.9	-18.7	-20.2	-21.0	-21.5	-21.6	-22.9	-22.9	-24.5	-25.2	-21.9	-17.9
8-Feb	-24.2	-25.2	-26.6	-27.5	-29.1	-28.5	-28.9	-29.1	-29.8	-30.4	-30.0	-29.3	-28.3	-26.5	-24.4	-21.6	-20.3	-19.7	-21.4	-22.5	-23.1	-23.3	-24.2	-24.9	-25.8	-19.7
9-Feb	-25.9	-26.9	-28.2	-29.3	-30.5	-31.4	-32.7	-32.9	-33.5	-33.0	-32.0	-30.8	-29.8	-29.1	-28.4	-28.5	-28.8	-30.0	-30.2	-30.5	-30.6	-30.9	-30.9	-31.1	-30.3	-25.9
10-Feb	-31.5	-31.1	-30.4	-30.3	-30.7	-30.0	-30.0	-31.3	-31.1	-30.4	-27.2	-24.8	-23.8	-22.8	-22.1	-22.2	-22.6	-23.1	-23.6	-23.9	-23.9	-24.8	-25.5	-26.5	-26.8	-22.1
11-Feb	-28.0	-28.5	-28.2	-27.5	-26.8	-26.2	-25.7	-25.3	-25.1	-24.8	-24.4	-24.1	-23.6	-22.9	-22.5	-22.5	-24.2	-24.7	-24.8	-24.5	-25.3	-25.9	-27.0	-28.2	-25.4	-22.5
12-Feb	-29.0	-29.8	-29.8	-29.5	-28.7	-28.4	-28.1	-28.3	-27.9	-27.1	-26.9	-25.4	-23.8	-24.5	-24.8	-25.2	-26.4	-27.0	-26.9	-26.6	-27.8	-28.2	-28.8	-28.1	-27.4	-23.8
13-Feb	-29.0	-29.8	-31.7	-31.4	-31.3	-31.9	-33.4	-33.7	-33.2	-32.0	-31.3	-31.4	-31.5	-30.4	-31.4	-31.4	-31.6	-32.3	-32.8	-31.4	-31.6	-32.1	-32.9	-31.0	-31.7	-29.0
14-Feb	-33.6	-33.2	-34.9	-35.5	-35.0	-36.2	-38.5	-38.5	-36.6	-35.2	-33.7	-31.6	-30.5	-30.2	-29.9	-29.5	-29.2	-29.7	-30.7	-31.0	-31.1	-30.2	-30.5	-30.4	-32.7	-29.2
15-Feb	-30.0	-29.6	-29.3	-28.3	-28.8	-29.1	-29.6	-29.4	-29.6	-29.0	-27.8	-26.7	-25.4	-24.5	-23.5	-23.2	-23.7	-24.6	-25.8	-27.3	-27.8	-28.1	-29.8	-31.1	-27.6	-23.2
16-Feb	-31.4	-32.5	-32.6	-33.4	-33.8	-33.2	-33.5	-33.5	-33.3	-33.2	-32.3	-31.6	-28.9	-26.9	-25.3	-24.0	-23.0	-21.1	-20.7	-20.7	-21.3	-21.8	-22.1	-22.2	-28.0	-20.7
17-Feb	-22.6	-22.6	-22.7	-22.7	-22.9	-23.4	-25.0	-26.2	-27.2	-27.1	-26.7	-26.1	-24.5	-23.2	-22.4	-21.3	-21.3	-22.5	-23.1	-23.3	-24.3	-25.2	-26.1	-26.9	-24.1	-21.3
18-Feb	-26.6	-27.4	-27.9	-27.9	-28.2	-28.6	-28.1	-28.3	-28.4	-27.9	-25.1	-22.7	-20.8	-19.9	-19.7	-20.3	-21.3	-21.5	-22.6	-22.1	-22.2	-22.7	-21.4	-20.4	-24.2	-19.7
19-Feb	-20.1	-20.1	-20.3	-20.8	-21.5	-23.1	-23.2	-22.7	-22.5	-21.2	-19.9	-18.2	-16.6	-14.8	-13.5	-12.8	-12.9	-13.6	-14.4	-15.0	-15.1	-16.4	-16.8	-16.0	-18.0	-12.8
20-Feb	-15.9	-16.0	-16.2	-16.8	-17.2	-17.5	-17.6	-17.6	-17.5	-17.4	-16.9	-16.3	-16.7	-16.0	-14.6	-13.8	-13.6	-13.9	-13.8	-13.5	-12.9	-12.0	-11.6	-12.1	-15.3	-11.6
21-Feb	-12.9	-13.6	-14.7	-15.5	-15.3	-15.6	-16.1	-16.6	-16.5	-15.4	-14.6	-14.4	-13.7	-12.2	-12.6	-12.4	-13.0	-14.1	-14.6	-14.9	-14.9	-15.5	-15.4	-15.2	-14.6	-12.2
22-Feb	-15.1	-15.1	-15.1	-15.1	-15.0	-14.8	-14.7	-14.7	-14.7	-14.2	-13.3	-12.5	-11.2	-9.7	-8.9	-7.9	-7.6	-8.9	-9.0	-8.7	-8.8	-8.3	-8.2	-8.8	-11.7	-7.6
23-Feb	-9.5	-9.8	-9.1	-8.1	-7.6	-7.6	-7.9	-9.1	-9.6	-9.6	-9.7	-9.7	-9.9	-10.2	-10.8	-11.6	-12.5	-12.8	-13.0	-13.3	-13.9	-15.0	-15.7	-16.5	-10.9	-7.6
24-Feb	-16.9	-16.7	-16.7	-16.7	-17.1	-16.8	-16.8	-16.7	-16.5	-16.3	-15.9	-15.4	-15.0	-14.3	-14.0	-12.9	-13.0	-14.1	-14.1	-13.5	-13.4	-14.0	-13.4	-13.5	-15.2	-12.9
25-Feb	-13.8	-14.9	-15.8	-16.8	-17.1	-17.4	-17.9	-18.1	-17.8	-16.5	-14.7	-13.9	-14.7	-14.7	-14.6	-14.7	-14.7	-14.6	-14.8	-15.0	-15.0	-14.2	-13.9	-14.0	-15.4	-13.8
26-Feb	-13.8	-14.1	-14.4	-14.6	-15.1	-15.1	-15.0	-15.8	-18.1	-17.4	-16.7	-16.5	-16.8	-16.6	-16.8	-16.7	-16.9	-16.4	-16.2	-16.1	-15.9	-15.4	-14.7	-14.4	-15.8	-13.8
27-Feb	-13.9	-13.1	-12.6	-12.0	-11.2	-10.6	-10.8	-10.8	-10.5	-10.4	-10.5	-10.6	-11.2	-12.3	-13.1	-13.1	-13.4	-13.7	-14.0	-14.1	-14.3	-14.2	-14.0	-13.9	-12.4	-10.4
28-Feb	-14.0	-14.3	-14.8	-15.4	-15.7	-15.8	-16.1	-16.0	-15.6	-15.5	-15.7	-15.4	-13.8	-12.7	-13.0	-13.0	-12.7	-13.8	-13.7	-13.7	-13.0	-11.9	-12.7	-13.3	-14.2	-11.9
	-22.2	-22.5	-22.8	-23.0	-23.1	-23.2	-23.6	-23.9	-24.0	-23.5	-22.6	-21.7	-20.9	-20.2	-19.9	-19.6	-19.9	-20.3	-20.6	-20.7	-20.9	-21.0	-21.3	-21.4	Diurnal Average	
	-9.5	-9.8	-9.1	-8.1	-7.6	-7.6	-7.9	-9.1	-9.6	-9.6	-9.7	-9.7	-9.9	-9.7	-8.9	-7.9	-7.6	-8.9	-9.0	-8.7	-8.8	-8.3	-8.2	-8.8	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Fort Chipewyan - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	384	57.14	57.14
-20 - 0	288	42.86	100.00
0 - 10	0	0.00	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Fort Chipewyan - February 2025

Maximum Value: 92.5 % on Feb 22 19:00

Maximum Daily Average: 83.5 % on Feb 22

Minimum Value: 42.5 % on Feb 19 21:00

Minimum Daily Average: 45.5 % on Feb 19

Maximum Diurnal Average: 72.8 % at hour 8

Minimum Diurnal Average: 66.9 % at hour 15

Monthly Average: 70.88 %

Percentiles: P_1 = 44.8 P_{10} = 58.1 Q_1 = 65.8 Median = 71.6 Q_3 = 77.2 P_{90} = 82.2 P_{99} = 91.5

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

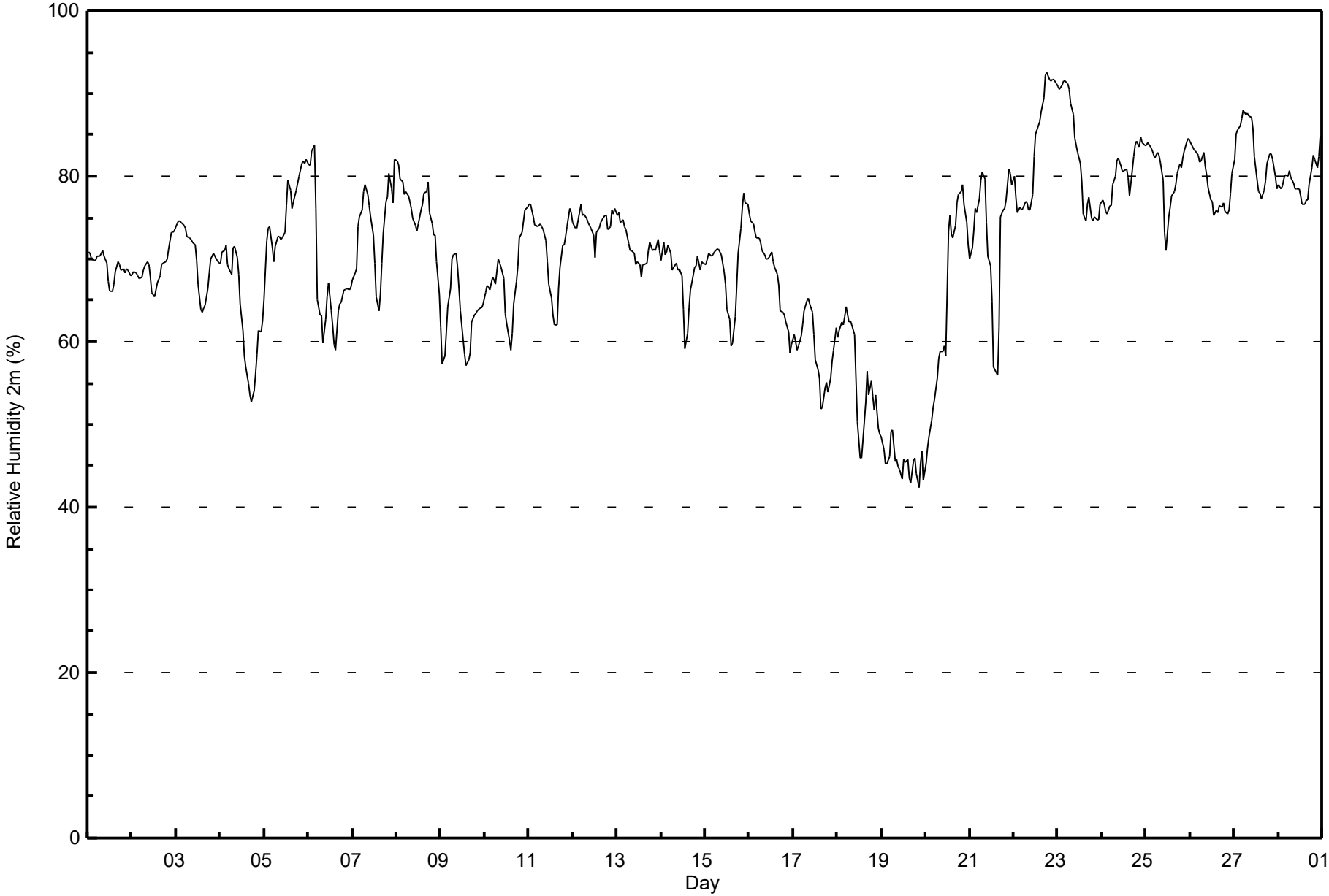
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	70.9	70.8	70.0	69.8	69.9	70.4	70.4	70.7	71.0	70.3	69.6	67.3	66.1	66.1	67.0	68.4	69.6	69.3	68.6	68.8	68.3	68.8	68.6	68.0	69.1	71.0
2-Feb	68.1	68.4	68.3	68.0	67.6	67.8	68.6	69.2	69.6	69.3	67.7	66.0	65.3	66.3	67.1	68.0	69.3	69.6	69.7	70.1	71.2	73.3	73.2	73.4	69.0	73.4
3-Feb	74.2	74.6	74.6	74.4	74.1	73.7	72.7	72.6	72.3	72.1	71.6	69.8	66.9	63.9	63.6	64.1	64.4	66.5	68.3	70.0	70.6	70.3	70.1	69.5	70.2	74.6
4-Feb	69.5	70.9	71.0	71.7	69.3	68.7	68.1	71.4	71.5	70.2	68.1	64.6	61.4	58.3	56.9	55.0	53.6	52.7	54.2	56.1	58.5	61.3	61.2	62.6	63.6	71.7
5-Feb	65.1	72.2	73.7	73.8	71.4	69.6	71.4	72.7	72.7	72.4	72.5	73.2	76.4	79.4	78.3	76.1	76.9	78.3	79.2	80.0	81.6	81.9	81.6	82.0	75.5	82.0
6-Feb	81.4	81.4	83.1	83.8	76.1	65.0	63.2	63.2	59.9	62.7	65.4	67.2	63.7	61.9	59.6	58.9	63.7	64.5	64.7	66.2	66.3	66.4	66.3	66.6	67.6	83.8
7-Feb	67.4	68.3	68.8	73.9	75.2	75.9	78.1	79.0	77.9	76.5	75.0	72.9	69.5	65.5	63.7	65.8	69.5	73.1	77.0	77.5	80.4	78.5	76.8	82.1	73.7	82.1
8-Feb	81.8	81.3	79.7	79.3	77.9	78.1	77.6	77.0	76.2	74.8	74.1	73.4	74.2	75.9	76.7	77.9	78.2	79.2	75.7	74.3	72.9	72.8	69.7	65.8	76.0	81.8
9-Feb	61.7	57.2	58.4	61.2	64.3	66.4	69.9	70.6	70.6	69.0	66.5	63.7	60.2	58.5	57.2	57.8	58.7	62.4	63.2	63.4	63.8	64.1	64.1	64.3	63.2	70.6
10-Feb	65.9	66.9	66.6	66.2	67.8	67.4	67.0	70.0	69.4	68.9	67.6	63.4	62.2	60.2	59.0	61.0	64.6	67.2	69.2	72.5	73.2	74.5	76.0	76.2	67.6	76.2
11-Feb	76.6	76.6	75.1	74.1	74.0	73.8	74.2	73.9	73.5	72.2	69.6	66.9	65.3	63.2	62.0	62.1	66.4	69.0	71.6	71.6	72.7	74.0	76.1	75.6	71.3	76.6
12-Feb	74.4	73.8	73.7	74.8	76.7	75.3	75.4	74.9	74.4	74.0	73.7	72.9	70.1	73.3	73.7	74.3	74.7	75.2	75.3	73.6	73.9	75.9	75.4	76.1	74.4	76.7
13-Feb	75.2	75.6	74.4	74.8	74.0	73.6	71.9	71.1	71.0	70.7	69.3	69.7	69.3	67.8	69.3	69.4	69.5	71.0	72.0	71.1	71.2	71.1	72.4	71.0	71.5	75.6
14-Feb	69.9	72.0	70.5	70.9	71.7	70.7	68.7	68.9	69.5	68.7	68.8	67.9	63.9	59.2	61.0	64.0	66.3	67.1	69.0	69.2	70.4	68.6	69.6	69.5	68.2	72.0
15-Feb	69.3	70.0	70.6	70.3	70.5	70.9	71.1	71.1	70.9	70.5	68.4	66.9	63.9	62.8	59.4	59.8	63.0	66.7	70.7	73.7	76.3	77.9	76.7	76.6	69.5	77.9
16-Feb	75.5	74.6	74.3	73.2	72.6	72.6	72.0	71.0	70.5	70.0	70.0	70.1	70.8	69.6	69.1	68.2	66.8	63.8	63.6	63.2	62.3	61.2	58.7	59.7	68.5	75.5
17-Feb	60.8	60.1	58.9	59.6	60.6	62.0	63.7	64.9	65.2	64.5	63.6	60.9	57.7	56.6	55.5	51.9	52.0	54.5	55.0	53.9	55.6	57.7	59.0	61.6	59.0	65.2
18-Feb	60.5	61.4	62.4	62.0	63.1	64.3	62.3	62.5	62.0	60.8	55.6	50.3	45.9	45.9	48.1	52.8	56.5	53.6	55.3	53.4	51.8	53.6	49.5	48.8	55.9	64.3
19-Feb	48.4	46.9	45.3	45.2	46.1	49.2	49.3	45.6	45.8	44.9	44.5	43.3	45.8	45.4	45.7	43.5	42.9	45.7	45.9	44.1	42.5	45.2	46.7	43.2	45.5	49.3
20-Feb	45.2	47.1	48.4	50.5	52.1	53.1	55.7	58.0	58.8	58.8	59.5	58.3	73.3	75.3	73.1	72.5	74.0	76.8	77.7	78.2	78.9	76.6	74.4	71.7	64.5	78.9
21-Feb	70.0	71.4	73.4	76.1	75.6	77.3	79.5	80.6	79.7	74.3	70.3	69.2	65.0	57.0	56.2	56.0	61.7	75.1	76.0	76.1	77.2	80.8	80.4	78.9	72.4	80.8
22-Feb	79.9	77.5	75.6	76.3	75.9	76.2	76.9	76.7	76.0	75.9	77.7	82.4	85.0	86.1	86.6	87.8	89.5	92.1	92.5	91.7	91.5	91.7	91.8	91.2	83.5	92.5
23-Feb	90.9	90.5	91.0	91.5	91.6	91.2	90.6	88.9	87.4	84.6	83.7	82.9	81.5	79.3	75.5	74.6	76.6	77.5	74.9	74.5	75.2	74.8	74.8	76.5	82.5	91.6
24-Feb	77.2	76.7	75.7	75.5	76.4	76.4	79.0	80.1	81.9	82.2	81.2	80.5	80.6	80.8	79.9	77.6	79.1	82.3	83.7	84.3	83.5	84.7	84.0	83.7	80.3	84.7
25-Feb	83.8	84.1	83.5	83.1	82.7	82.2	82.9	82.5	81.7	79.4	73.2	71.0	75.2	76.3	77.7	78.2	78.9	80.4	81.6	81.1	82.2	83.1	84.3	84.6	80.6	84.6
26-Feb	84.3	83.6	83.3	83.0	82.5	81.7	81.8	82.9	81.2	80.3	78.7	77.1	77.0	75.3	76.0	75.5	76.4	76.3	76.8	75.8	75.5	75.9	78.0	80.3	79.1	84.3
27-Feb	82.0	85.0	85.6	86.1	87.0	88.0	87.4	87.6	87.3	87.2	85.7	82.4	79.5	78.2	78.0	77.2	78.2	79.4	81.5	82.7	82.7	82.0	80.0	78.4	82.9	88.0
28-Feb	79.0	78.6	78.8	79.7	80.1	79.9	80.7	79.8	79.2	78.6	78.5	78.5	77.6	76.7	76.5	77.1	77.1	79.0	81.0	82.5	82.1	81.0	82.4	84.9	79.6	84.9
	71.7	72.0	72.0	72.5	72.4	72.2	72.5	72.8	72.4	71.6	70.4	69.0	68.3	67.3	66.9	67.0	68.5	70.3	71.2	71.4	71.9	72.4	72.2	72.3	Diurnal Average	
	90.9	90.5	91.0	91.5	91.6	91.2	90.6	88.9	87.4	87.2	85.7	82.9	85.0	86.1	86.6	87.8	89.5	92.1	92.5	91.7	91.5	91.7	91.8	91.2	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Fort Chipewyan - February 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	0	0.00	0.00
40 - 60	89	13.24	13.24
60 - 80	476	70.83	84.08
80 - 100	107	15.92	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Maximum Value: 6.8 % on Feb 22 20:00

Maximum Daily Average: 4.5 % on Feb 23

Minimum Value: 1.5 % on Feb 21 13:00

Minimum Daily Average: 1.8 % on Feb 19

Maximum Diurnal Average: 2.5 % at hour 8

Minimum Diurnal Average: 2.0 % at hour 16

Monthly Average: 2.25 %

Percentiles: P_1 = 1.6 P_{10} = 1.8 Q_1 = 1.9 Median = 2.0 Q_3 = 2.3 P_{90} = 2.7 P_{99} = 6.7

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

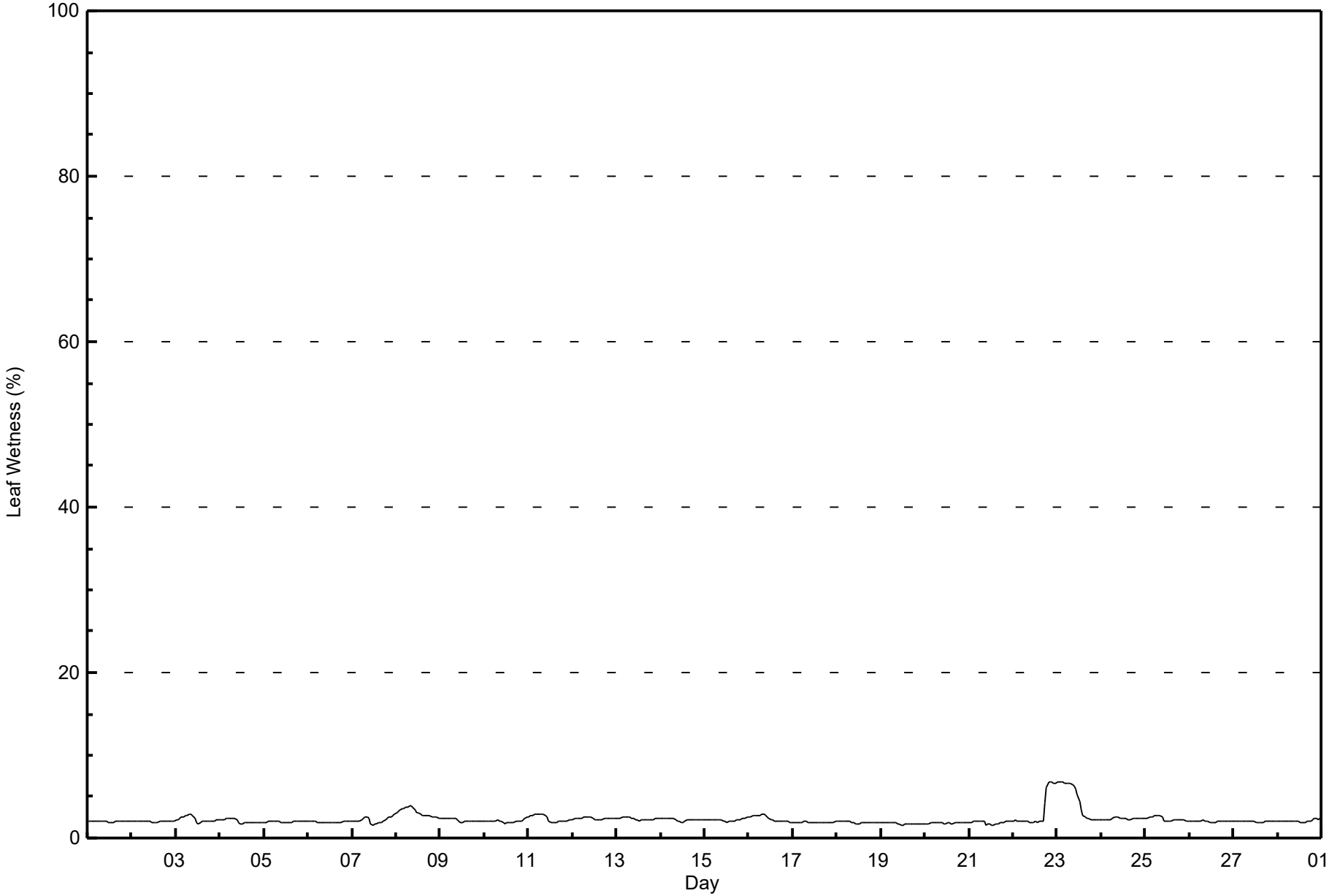
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
2-Feb	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.1
3-Feb	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.8	2.9	2.7	2.3	1.9	1.8	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.9
4-Feb	2.1	2.2	2.2	2.3	2.3	2.4	2.4	2.4	2.4	2.2	1.8	1.7	1.7	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.4
5-Feb	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
6-Feb	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	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
7-Feb	2.0	2.0	2.0	2.0	2.1	2.2	2.3	2.5	2.6	2.3	1.8	1.5	1.7	1.8	1.8	1.9	1.9	2.0	2.1	2.3	2.5	2.6	2.7	2.9	2.1	2.9
8-Feb	3.1	3.3	3.4	3.5	3.6	3.7	3.8	3.8	3.9	3.7	3.4	3.1	3.0	2.9	2.8	2.7	2.7	2.7	2.7	2.6	2.5	2.5	2.5	2.4	3.1	3.9
9-Feb	2.4	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.2	2.0	1.9	1.9	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.4
10-Feb	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	1.9	1.7	1.8	1.8	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.3	2.4	2.5	2.1	2.5
11-Feb	2.6	2.7	2.8	2.8	2.8	2.8	2.8	2.8	2.9	2.8	2.5	2.1	1.8	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.3	2.9
12-Feb	2.3	2.3	2.4	2.4	2.4	2.5	2.5	2.5	2.6	2.6	2.5	2.3	2.2	2.2	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.6
13-Feb	2.4	2.4	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.4	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.5
14-Feb	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.3	2.1	2.0	1.9	1.9	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.4
15-Feb	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.0	2.0	1.9	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.4	2.4	2.5	2.2	2.5
16-Feb	2.6	2.6	2.7	2.7	2.7	2.7	2.8	2.8	2.8	2.7	2.6	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	1.9	1.9	2.4	2.8
17-Feb	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0
18-Feb	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.8	1.7	1.7	1.7	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0
19-Feb	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.7	1.7	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9
20-Feb	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.8	1.8	1.7	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9
21-Feb	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.6	1.6	1.7	1.5	1.6	1.7	1.7	1.8	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	2.0
22-Feb	2.1	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.1	4.3	6.1	6.8	6.8	6.7	6.6	6.6	3.2	6.8
23-Feb	6.7	6.8	6.8	6.7	6.7	6.6	6.7	6.6	6.5	6.3	5.9	5.2	4.4	3.5	2.7	2.5	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.2	4.5	6.8
24-Feb	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.5	2.6	2.6	2.4	2.3	2.3	2.3	2.3	2.2	2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.3	2.6
25-Feb	2.4	2.4	2.5	2.5	2.6	2.6	2.7	2.7	2.7	2.5	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.2	2.1	2.1	2.3	2.7
26-Feb	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
27-Feb	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.1
28-Feb	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.2	2.3	2.3	2.3	2.4	2.1	2.4
	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.5	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.3	2.3	2.3	2.3	2.3	Diurnal Average	
	6.7	6.8	6.8	6.7	6.7	6.6	6.7	6.6	6.5	6.3	5.9	5.2	4.4	3.5	2.8	2.7	2.7	4.3	6.1	6.8	6.8	6.7	6.6	6.6	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Leaf Wetness (LW) - %

Fort Chipewyan - February 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	0	0.00	0.00
1.5 - 10	671	99.85	99.85
> 10	0	0.00	99.85

Total Number of Valid Hours: 672

Total Number of Hours: 672

Maximum Value: 0.7 mm on Feb 23 09:00

Maximum Daily Total: 2.5 mm on Feb 1

Minimum Value: 0.0 mm on Feb 1 04:00

Minimum Daily Total: 0.0 mm on Feb 3

Maximum Diurnal Total: 1.2 mm at hour 8

Minimum Diurnal Total: 0.1 mm at hour 12

Monthly Total: 12.42 mm

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

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

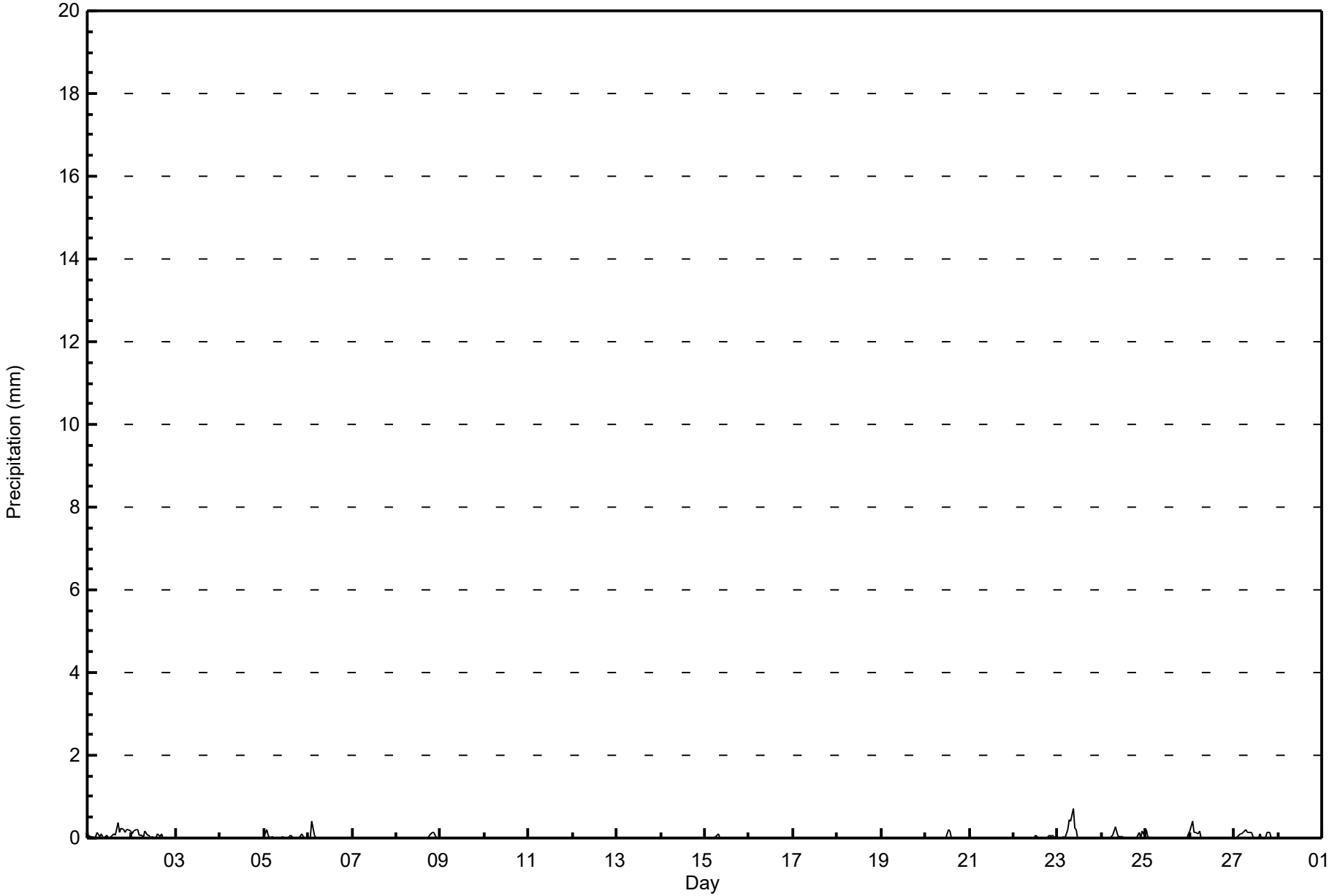
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.4	0.1	0.2	0.2	0.1	0.2	0.2	0.2	2.5	0.4
2-Feb	0.1	0.2	0.2	0.2	0.1	0.1	0.0	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.2
3-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.1	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.7	0.2
6-Feb	0.0	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4
7-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.4	0.1
9-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	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
16-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	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	0.0	0.0	0.0	0.4	0.2
21-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.3	0.1
23-Feb	0.0	0.0	0.0	0.1	0.0	0.2	0.4	0.4	0.7	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	2.2	0.7
24-Feb	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.1	1.0	0.3
25-Feb	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.2
26-Feb	0.2	0.4	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.4
27-Feb	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	1.4	0.2
28-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.6	0.9	0.9	0.5	0.4	0.7	0.8	1.2	1.1	0.5	0.4	0.1	0.3	0.2	0.4	0.2	0.5	0.1	0.4	0.5	0.6	0.4	0.4	0.3	Diurnal Average	
	0.2	0.4	0.4	0.2	0.1	0.2	0.4	0.4	0.7	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.4	0.1	0.2	0.2	0.1	0.2	0.2	0.2	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Precipitation (PC) - mm

Fort Chipewyan - February 2025



Concentration Ranges (mm)	Number of Hours	%	Cumulative %
0 - 0.3	666	99.11	99.11
0.4 - 0.5	5	0.74	99.85
0.6 - 0.7	1	0.15	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: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Global Radiation (GR) - W/m2

Fort Chipewyan - February 2025

Maximum Value: 452.9 W/m2 on Feb 14 13:00

Maximum Daily Average: 112.3 W/m2 on Feb 14

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

Minimum Daily Average: 29.1 W/m2 on Feb 5

Maximum Diurnal Average: 275.9 W/m2 at hour 14

Minimum Diurnal Average: 0.0 W/m2 at hour 6

Monthly Average: 64.65 W/m2

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 104.9 P_{90} = 245.8 P_{99} = 378.7

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

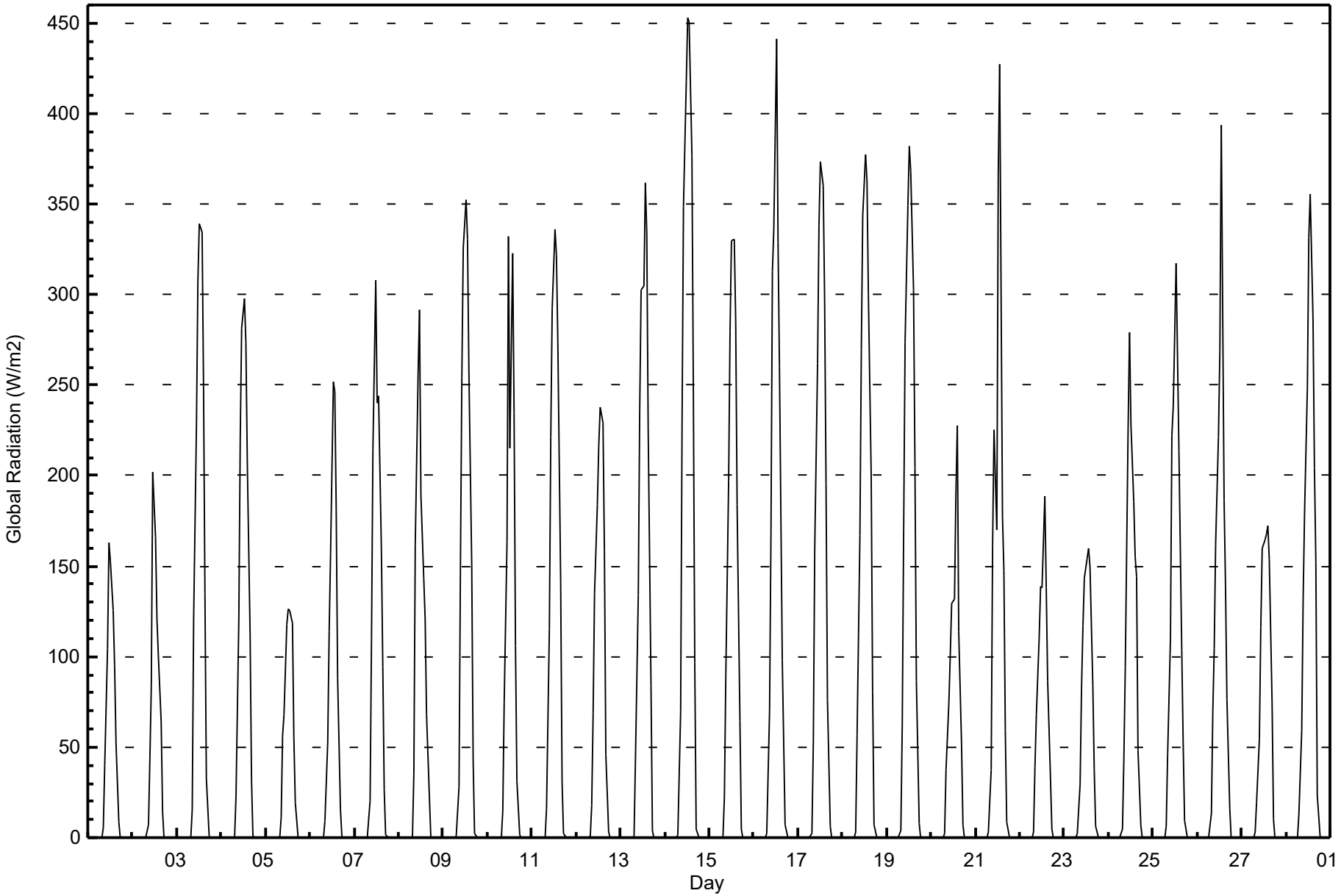
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	39.7	104.3	162.6	152.9	125.7	95.0	52.4	8.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	31.1	162.6
2-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	43.4	83.6	201.6	165.9	120.5	100.3	64.1	14.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	33.4	201.6
3-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.8	120.5	228.4	306.9	339.2	334.4	249.5	135.2	32.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	73.5	339.2
4-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	22.7	119.8	219.8	281.7	297.5	273.8	208.5	111.9	31.9	0.7	0.0	0.0	0.0	0.0	0.0	0.0	65.3	297.5
5-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.0	56.1	67.7	118.1	126.2	125.1	118.4	55.6	19.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	29.1	126.2
6-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	9.7	53.1	114.1	156.9	252.2	246.0	180.5	88.3	15.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0	46.5	252.2
7-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	19.9	109.8	214.6	307.7	239.8	244.1	158.9	94.1	26.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	59.1	307.7
8-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	35.3	162.3	255.6	291.7	189.3	143.2	121.1	67.8	22.8	1.1	0.0	0.0	0.0	0.0	0.0	0.0	53.8	291.7
9-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	28.2	149.6	254.5	325.9	352.4	330.8	257.6	150.5	42.7	2.1	0.0	0.0	0.0	0.0	0.0	0.0	78.9	352.4
10-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	14.7	75.1	163.6	332.0	215.5	323.1	234.6	106.2	31.4	1.8	0.0	0.0	0.0	0.0	0.0	0.0	62.4	332.0
11-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	16.3	115.8	221.5	292.6	335.8	322.3	274.0	141.7	30.8	2.4	0.0	0.0	0.0	0.0	0.0	0.0	73.1	335.8
12-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	18.2	68.2	134.6	183.8	216.5	237.5	229.0	158.3	46.2	3.3	0.0	0.0	0.0	0.1	0.1	0.1	54.0	237.5
13-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	44.0	134.1	235.9	302.2	305.2	361.9	334.3	226.0	84.4	3.9	0.0	0.0	0.1	0.1	0.0	0.0	84.7	361.9
14-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	69.6	228.1	348.4	418.2	452.9	450.7	376.6	248.0	96.6	4.9	0.0	0.0	0.0	0.0	0.0	0.0	112.3	452.9
15-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	23.0	89.8	197.0	280.0	330.2	330.6	285.1	183.7	64.9	4.5	0.0	0.0	0.0	0.0	0.0	0.0	74.6	330.6
16-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	70.4	169.5	312.8	335.7	441.1	329.1	260.6	98.3	52.1	7.2	0.0	0.0	0.0	0.0	0.0	0.0	86.6	441.1
17-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	52.3	159.5	262.1	338.3	373.1	360.2	297.1	196.0	76.2	6.6	0.0	0.0	0.0	0.0	0.0	0.0	88.5	373.1
18-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	57.2	167.2	269.7	343.8	377.3	363.7	299.9	199.4	80.2	7.0	0.0	0.0	0.0	0.0	0.0	0.0	90.3	377.3
19-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	62.0	170.9	273.7	349.1	382.1	367.7	302.7	204.0	86.7	7.4	0.0	0.0	0.0	0.0	0.0	0.0	92.1	382.1
20-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	37.1	74.0	100.6	129.1	132.2	189.5	227.9	114.2	51.3	6.9	0.0	0.0	0.0	0.0	0.0	0.0	44.4	227.9
21-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	37.6	161.5	225.6	169.9	366.0	427.5	177.8	147.1	59.6	8.2	0.0	0.0	0.0	0.0	0.0	0.0	74.3	427.5
22-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	38.8	67.8	110.4	138.9	138.4	188.4	137.8	86.6	33.1	4.5	0.0	0.0	0.0	0.0	0.0	0.0	39.5	188.4
23-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	29.5	82.7	116.9	143.4	154.2	160.1	150.0	84.5	37.8	6.1	0.0	0.0	0.0	0.0	0.0	0.0	40.3	160.1
24-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	43.4	94.7	225.9	279.1	228.3	185.4	155.5	144.3	48.4	7.3	0.0	0.0	0.0	0.0	0.0	0.0	59.0	279.1
25-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.2	46.0	109.5	222.5	238.4	317.5	265.8	213.8	103.5	51.9	9.1	0.0	0.0	0.0	0.0	0.0	0.0	66.0	317.5
26-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.9	69.5	104.4	162.4	221.1	268.9	393.9	186.3	138.4	76.3	16.0	0.1	0.0	0.0	0.0	0.0	0.0	68.8	393.9
27-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	19.5	54.7	115.8	159.8	164.5	167.4	172.4	153.5	74.2	10.0	0.2	0.0	0.0	0.0	0.0	0.0	45.6	172.4
28-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.0	59.3	131.8	179.0	248.9	331.5	355.6	286.2	204.3	152.4	23.7	0.5	0.0	0.0	0.0	0.0	0.0	82.8	355.6
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	34.4	111.2	193.6	252.0	273.1	275.9	217.5	134.2	51.8	5.3	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	13.0	70.4	228.1	348.4	418.2	452.9	450.7	376.6	248.0	152.4	23.7	0.5	0.0	0.1	0.1	0.1	0.1	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Global Radiation (GR) - W/m2

Fort Chipewyan - February 2025



Concentration Ranges (W/m2)	Number of Hours	%	Cumulative %
0 - 20	433	64.43	64.43
21 - 100	67	9.97	74.40
101 - 300	130	19.35	93.75
301 - 600	42	6.25	100.00
601 - 900	0	0.00	100.00
> 900	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Fort Chipewyan - February 2025

Maximum Speed: 37 km/h on Feb 27 06:00

Maximum Daily Speed Average: 23.8 km/h on Feb 19

Minimum Speed Value: 1 km/h on Feb 14 02:00

Minimum Daily Speed Average: 2.0 km/h on Feb 12

Maximum Diurnal Speed Average: 2.8 km/h at hour 10

Minimum Diurnal Speed Average: 0.7 km/h at hour 24

Monthly Average Velocity: 1.4 km/h 21.5 deg

Percentiles: P_1 = 1 P_{10} = 5 Q_1 = 8 Median = 13 Q_3 = 18 P_{90} = 22 P_{99} = 34

Hours in Service: 672

Hours of Data: 672

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-Feb	NE21	NE21	NE22	NE21	NNE19	NNE17	NNE16	NNE14	NNE16	N17	NNE17	NNE16	N13	N13	N14	NNW17	NNW18	NNW20	NNW19	NNW16	NNW17	NNW18	NNW17	NW13	N15.3	NE22
2-Feb	NNW15	NNW16	NW14	NW16	NNW16	NNW16	NNW14	NW11	NW12	NW12	NW12	NW13	NW12	NW12	NW11	NW12	WNW12	WNW13	WNW13	WNW12	WNW11	W13	WNW14	WNW13	NW12.6	NNW16
3-Feb	WNW13	WNW13	W13	W12	W12	W13	W12	W14	W14	W16	W19	W16	W14	WSW14	WSW15	WSW16	W15	W14	W13	W14	W15	W17	W15	W15	W14.3	W19
4-Feb	W18	W13	WSW12	WSW12	WSW14	WSW14	WSW14	SW14	SW14	SW12	WSW16	WSW17	WSW18	WSW19	WSW17	WSW21	WSW18	WSW19	WSW20	WSW20	WSW20	WSW18	WSW21	WSW20	WSW16.4	WSW21
5-Feb	WSW21	WSW20	WSW23	WSW21	WSW21	WSW19	W21	W20	WSW23	W22	W25	W24	W24	W21	W19	W16	W17	W17	W17	W20	W19	W18	W18	W17	W20.1	W25
6-Feb	W20	W18	W18	WNW17	NW18	NW19	NW19	NW19	NW22	NW18	NNW13	NW12	NW17	NW17	NW18	WNW15	WNW18	W15	W14	W13	W13	W15	W16	W17	WNW15.6	NW22
7-Feb	W14	WNW14	WNW10	W9	W11	WNW11	WNW10	W10	WNW8	W7	W7	W6	W5	SW8	WSW8	WSW10	W9	W6	WNW7	NNW4	E5	ENE6	E7	ENE9	W6.0	WNW14
8-Feb	E6	E7	ENE7	E6	E9	E9	E9	E9	E9	E8	E7	E5	E5	E6	SSW1	WNW4	WNW6	NW11	NNW16	NW17	NW14	NW14	NW18	NW17	NNE3.7	NW18
9-Feb	NW18	NW17	NW16	NW15	WNW12	WNW10	WNW9	WNW9	NW8	NW9	NW9	NW11	WNW11	WNW13	WNW12	W15	W15	W14	WNW15	W15	WNW14	W11	W12	W11	WNW12.3	NW18
10-Feb	WSW11	W13	W16	W14	WSW12	WSW15	SW12	SW12	SW10	SW8	W12	W15	W11	W12	WSW11	WSW10	W9	W8	W7	NW5	NNW6	NNE5	NNE5	NW4	W8.8	W16
11-Feb	WNW6	NNW5	NW7	NW5	NW11	NW11	NW10	NW8	NW7	NW8	NW11	WNW11	WNW11	NW9	WNW11	WNW9	WSW10	W10	WNW8	WNW10	W7	W7	W7	W5	WNW8.2	NW11
12-Feb	W5	WSW4	WSW5	WSW6	WSW6	SW3	E4	E7	ESE4	SSW1	ENE4	SE1	SE2	E6	E9	E12	E11	ENE8	ENE8	NE7	NNW3	NNW4	N2	NNW4	ENE2.0	E12
13-Feb	NNW4	NNW4	NNW4	NNW7	N4	ENE4	NE1	W3	NNW2	ENE2	ESE3	ESE4	E4	ESE4	E8	ESE8	E10	E11	E3	N2	N2	N4	N1	NNE4	NE2.5	E11
14-Feb	NW2	N1	WNW6	NW7	NW6	WNW7	NW5	NW6	NW7	NW6	WNW8	W7	WSW10	WSW13	W13	WSW15	W15	W12	WNW13	W14	WNW16	W15	W14	W15	W9.1	WNW16
15-Feb	WNW16	W13	W12	W14	W12	W15	W15	WNW15	W13	W14	W12	W10	W12	WSW9	SW9	SW7	W8	WSW5	ESE2	E5	ENE6	ENE6	E9	E11	W6.9	WNW16
16-Feb	ENE8	E11	E10	E11	E13	E14	E18	E14	E16	E20	ENE19	E22	ENE23	ENE27	ENE26	ENE22	E21	E20	E21	E26	ESE27	ESE25	SE21	SE24	E18.2	ESE27
17-Feb	ESE24	SE21	SE21	SE22	ESE22	ESE22	E23	E23	E21	E25	E25	ENE26	ENE24	ENE21	ENE20	ENE21	ENE21	ENE21	E21	E20	E22	E19	E16	E11	E20.3	ENE26
18-Feb	E16	E16	E17	ESE14	E16	ESE15	E17	E20	ESE18	ESE14	SE13	SE17	SE18	SE16	ESE17	E17	E17	E20	E22	ESE20	ESE17	ESE14	SE18	SSE22	ESE16.2	E22
19-Feb	SSE25	SSE25	SSE27	SSE26	SE24	SE21	SE23	SE22	SE23	SSE27	SE23	SSE24	SSE26	SSE28	SSE32	SSE26	SSE25	SSE24	SSE23	SSE22	SSE20	SE17	SE20	SSE25	SSE23.8	SSE32
20-Feb	SSE27	S27	S26	S19	S15	S17	S19	S20	S20	S16	S15	SSW15	S15	S14	S11	SSW11	SW11	SW10	SW7	WSW7	W9	W11	WNW11	NW11	S12.3	SSE27
21-Feb	NW9	NW7	NW7	WNW6	W5	WNW6	W7	WNW8	WNW6	NW4	NNW7	NNW8	NNW7	NNW7	NNW8	NNW7	NNE6	ENE9	E10	ESE11	E12	E13	E13	E17	N3.2	E17
22-Feb	E20	E22	E22	E19	ENE24	E28	ENE28	ENE29	ENE27	ENE28	ENE28	ENE29	ENE31	ENE32	ENE27	ENE14	ENE11	E11	E11	E8	E8	E2	E9	E11	ENE19.8	ENE32
23-Feb	ENE8	E6	NE4	NNE5	NNE4	N5	NNW8	NNW13	NNW12	NNW11	NW14	NW16	NW17	NW17	NW20	NW18	NW18	NW15	NW13	NW10	NW9	NW9	NW7	NW8	NNW10.0	NW20
24-Feb	NW9	NW8	NW7	NW3	NNE2	NNE1	SE3	SE3	E8	E11	E9	E12	E14	E13	E13	ENE10	E14	E11	E5	NE3	NNE3	ENE3	N5	N5	ENE5.0	E14
25-Feb	NNW5	NNW6	NNW6	NNW9	NW8	NW5	NNW7	NW8	NW4	N3	S3	SE4	ESE8	ESE9	E11	E11	ENE12	ENE15	ENE17	ENE14	ENE13	ENE15	ENE19	ENE16	NE6.1	ENE19
26-Feb	NE11	NNE6	NNE4	NNW5	NNW5	NNW4	NNW3	ENE3	E9	E13	E12	E16	E17	E19	E21	E21	E19	ENE14	ENE13	ENE11	ENE9	ENE10	ENE17	ENE19	ENE10.5	E21
27-Feb	ENE23	ENE25	ENE28	ENE35	ENE35	ENE37	ENE36	ENE37	ENE37	ENE34	ENE34	NE26	NNE16	NNE15	NNE14	NNE11	NNE12	NNE10	N6	NNW6	NNE6	NE10	NE15	ENE13	ENE20.2	ENE37
28-Feb	ENE10	ENE15	ENE17	ENE15	ENE16	ENE14	ENE15	ENE17	ENE15	ENE18	ENE19	ENE21	ENE18	ENE19	E18	E17	ENE19	ENE18	E14	E16	E17	ENE20	E18	E14	ENE16.5	ENE21
	NNW1.1	N0.8	N0.8	NNW1.1	NNE1.8	NNE1.7	NE2.1	NE2.2	NE2.2	NE2.8	NE2.4	NE2.1	NNE1.6	NE1.4	NE1.5	N0.9	N1.2	N1.5	N2.0	NNW1.5	NNW1.3	N1.4	NNE1.1	NNE0.7	Diurnal Average	
	SSE27	S27	ENE28	ENE35	ENE35	ENE37	ENE36	ENE37	ENE37	ENE34	ENE34	ENE29	ENE31	ENE32	SSE32	SSE26	SSE25	SSE24	SSE23	E26	ESE27	ESE25	WSW21	SSE25	Diurnal Maximum	

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

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Fort Chipewyan - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7 km/h on Feb 6 06:00

Minimum Value: 0 km/h on Feb 12 08:00

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

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

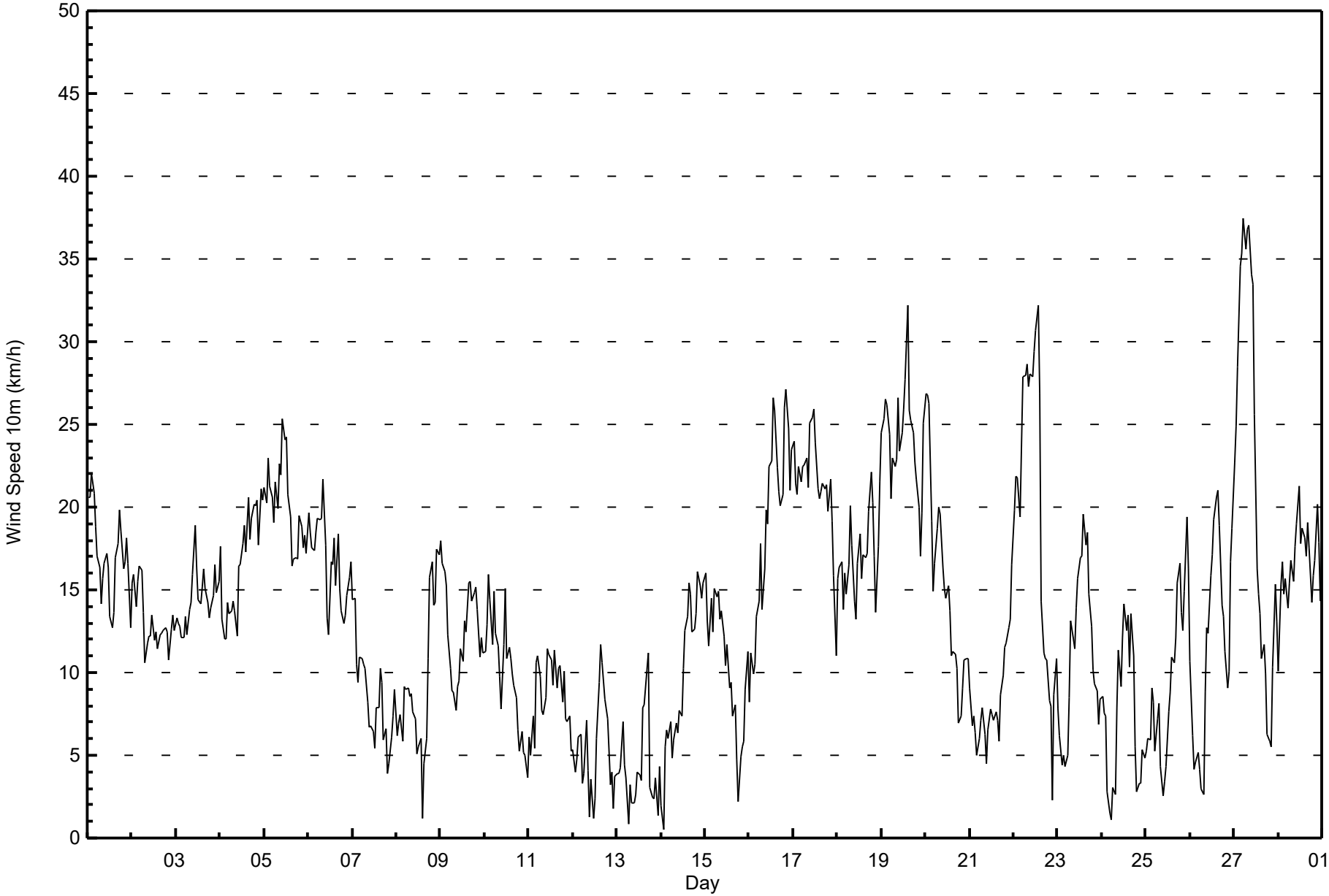
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Feb	4	4	4	4	5	4	4	4	5	5	5	5	5	4	5	6	6	6	7	6	6	6	6	5	7
2-Feb	5	5	5	5	5	5	4	3	3	4	4	5	4	4	3	4	3	3	3	3	2	3	3	2	5
3-Feb	3	3	2	2	2	3	3	3	3	4	5	4	3	3	4	3	4	3	2	3	3	3	3	3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

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Fort Chipewyan - February 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	83	12.35	12.35
6 - 11	190	28.27	40.63
12 - 19	273	40.63	81.25
20 - 28	113	16.82	98.07
29 - 38	13	1.93	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672



Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Fort Chipewyan - February 2025

Wind Speed	Wind Direction																
Ranges (km/h)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	10	9	3	5	9	5	5	0	0	3	1	3	5	1	9	15	83
6 - 11	1	5	3	16	40	4	0	0	1	1	8	11	23	27	35	15	190
12 - 19	4	11	1	30	37	7	6	0	8	1	5	21	69	21	36	16	273
20 - 28	0	0	5	22	23	6	12	17	4	0	0	13	8	0	2	1	113
29 - 38	0	0	0	12	0	0	0	1	0	0	0	0	0	0	0	0	13
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	15	25	12	85	109	22	23	18	13	5	14	48	105	49	82	47	672

Total Number of Valid Hours: 672

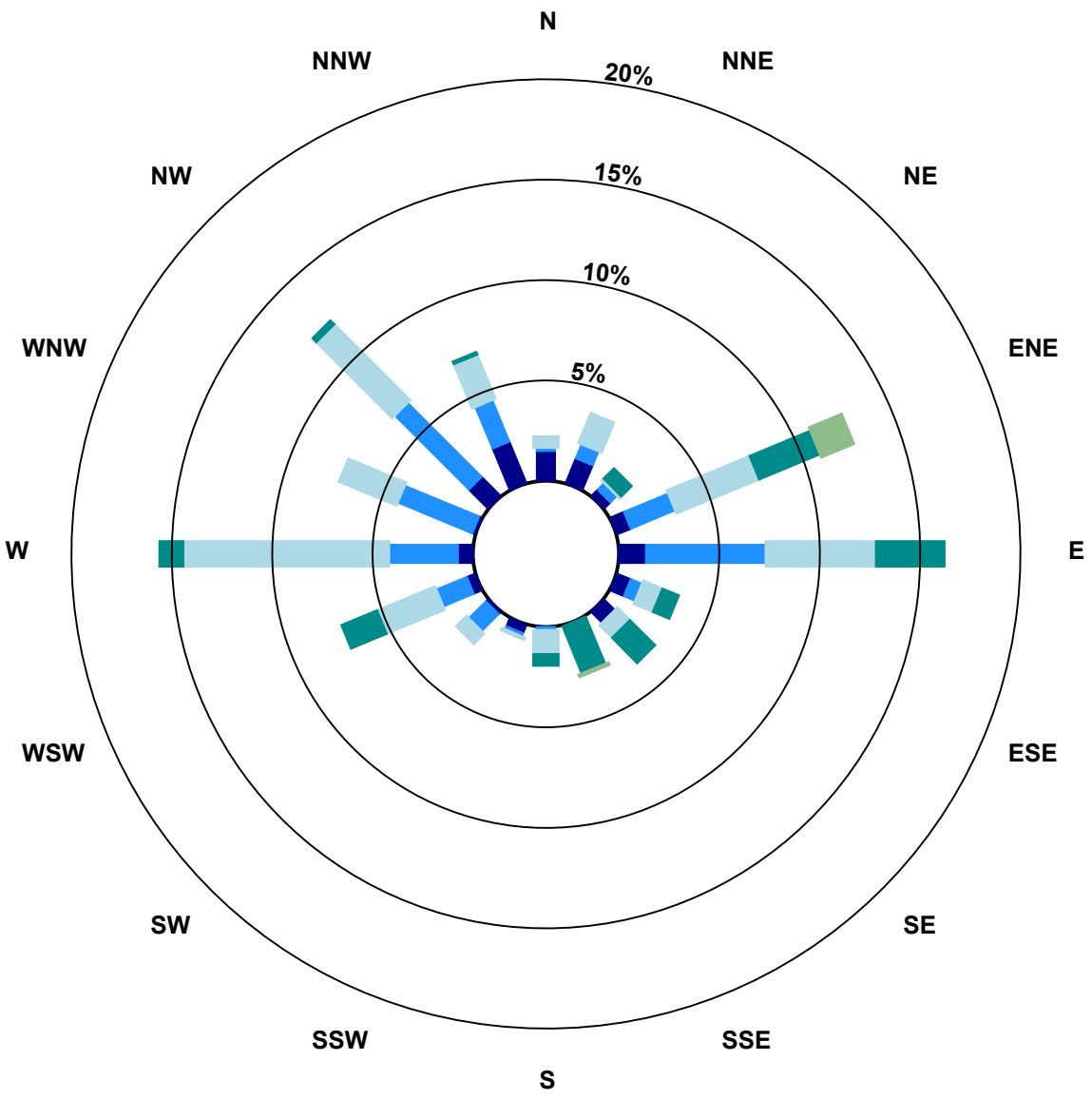
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Wind Speed 10m (WS10) - km/h

Fort Chipewyan



Classes (km/h)

0 - 5

6 - 11

12 - 19

20 - 28

29 - 38

> 38

Total Number of Valid Hours: 672

Direction of Maximum Speed: 75 deg on Feb 27 06:00
Direction of Maximum Daily Speed Average: 150.4 deg on Feb 19

Direction of Minimum Speed: 8 deg on Feb 14 02:00

Direction of Minimum Daily Speed Average: 2.0 deg on Feb 12

Monthly Average Direction: 21.5 deg

Hours in Service:	672
Hours of Data:	672
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-Feb	41	36	41	38	29	28	25	19	14	9	12	16	4	355	351	337	338	338	337	333	331	334	335	324	4.3
2-Feb	328	333	324	325	329	330	328	313	308	312	314	312	318	313	307	306	292	293	300	301	289	275	282	284	310.3
3-Feb	285	285	280	280	277	267	274	273	275	272	274	264	262	252	251	256	269	274	277	263	263	268	264	262	269.1
4-Feb	267	261	257	245	247	248	239	218	215	229	244	247	258	256	254	244	247	246	249	250	248	251	248	248	247.2
5-Feb	255	257	254	252	254	253	259	260	258	259	261	261	264	267	266	269	263	264	267	268	265	271	269	265	261.3
6-Feb	264	262	267	284	312	320	316	318	314	317	327	320	308	305	308	303	283	280	278	273	273	276	273	279	294.6
7-Feb	274	283	286	264	279	284	282	279	282	280	269	276	276	226	252	252	272	280	297	337	83	75	84	75	278.2
8-Feb	82	79	77	87	88	84	88	89	95	93	88	100	90	94	210	294	303	308	331	322	319	314	311	313	13.6
9-Feb	311	307	308	309	299	287	288	302	311	309	309	312	302	294	291	272	270	280	287	281	283	279	280	278	293.2
10-Feb	258	265	269	265	254	250	236	227	227	231	264	277	271	270	255	249	262	274	277	313	338	15	12	305	263.5
11-Feb	303	332	326	307	319	314	314	320	307	320	308	298	299	304	290	288	257	274	286	299	274	273	273	263	298.0
12-Feb	268	239	238	250	251	227	81	88	121	199	71	135	138	85	86	84	86	74	57	55	330	328	0	344	77.6
13-Feb	348	334	335	347	352	63	53	278	337	63	114	120	97	109	97	103	87	85	86	359	354	350	9	19	53.5
14-Feb	305	8	286	311	310	301	315	326	325	314	282	276	247	248	263	257	263	272	282	277	285	279	274	280	279.2
15-Feb	282	276	274	274	268	270	274	283	278	274	278	274	271	252	220	228	260	239	103	85	69	76	83	83	270.9
16-Feb	78	90	84	83	85	92	86	92	83	83	76	80	75	72	73	77	80	96	96	97	108	123	132	124	91.1
17-Feb	122	127	129	125	117	105	94	84	91	84	81	75	77	77	76	76	75	73	79	84	85	88	90	84	91.3
18-Feb	97	92	98	109	101	102	100	96	105	110	127	138	139	130	115	101	91	84	89	111	113	120	143	148	110.5
19-Feb	153	155	155	152	146	129	131	138	142	150	145	155	159	162	157	149	152	151	153	162	161	138	142	161	150.4
20-Feb	165	169	174	173	172	178	174	172	182	172	177	194	189	188	174	202	220	230	235	252	270	267	297	311	189.6
21-Feb	314	323	321	297	278	283	281	286	299	323	334	337	347	335	331	334	28	74	86	103	98	93	89	89	10.8
22-Feb	89	87	88	80	76	79	77	76	73	75	72	74	72	74	74	74	75	92	88	92	88	95	88	85	78.4
23-Feb	63	81	43	22	20	349	336	338	337	333	326	323	320	320	317	316	311	310	310	317	321	320	313	306	327.0
24-Feb	319	314	321	319	17	30	142	131	101	95	85	82	82	84	86	75	84	83	90	55	21	64	350	349	68.5
25-Feb	330	329	333	328	324	321	327	325	319	2	191	131	109	102	86	85	77	75	71	73	63	70	73	63	55.3
26-Feb	48	30	21	330	340	342	338	70	91	90	91	88	87	85	85	81	81	76	78	58	57	66	68	73	72.3
27-Feb	71	72	71	73	72	75	69	70	68	62	61	45	23	14	20	13	23	19	9	347	14	43	55	61	58.1
28-Feb	58	61	60	58	58	59	61	68	69	74	72	74	74	76	79	79	77	74	79	82	84	75	82	80	71.8
	332.0	9.3	349.6	343.9	15.0	26.0	39.5	46.0	52.6	56.1	36.4	35.1	29.1	41.0	49.8	355.9	350.8	5.6	5.0	347.7	340.8	353.7	13.9	16.0	
	Diurnal Average																								

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

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Fort Chipewyan - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 94 deg on Feb 22 22:00

Minimum Value: 3 deg on Feb 17 06:00

Percentiles: P_1 = 4 P_{10} = 6 Q_1 = 8 Median = 14 Q_3 = 19 P_{90} = 26 P_{99} = 79

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

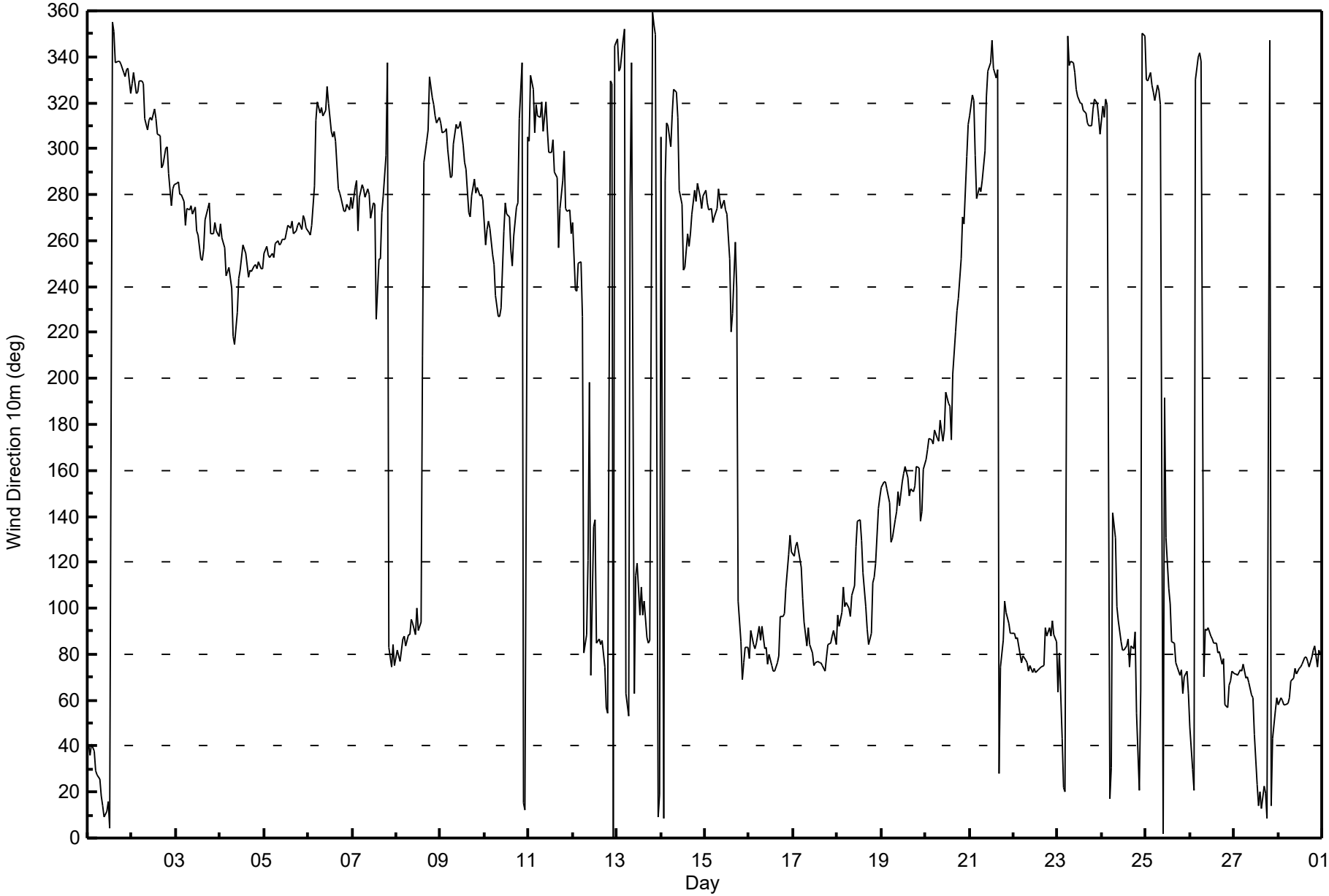
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Feb	11	11	11	12	14	15	14	19	21	23	21	21	23	24	23	21	20	21	21	22	20	21	25	24	25
2-Feb	21	20	22	21	19	20	19	18	15	16	19	20	20	18	18	17	14	14	15	15	17	12	13	13	22
3-Feb	12	13	12	13	12	14	14	12	12	12	14	16	15	16	14	15	13	12	12	13	13	12	13	14	16
4-Feb	14	16	18	12	14	13	18	6	5	10	14	14	16	15	15	13	14	14	14	14	14	15	14	14	18
5-Feb	16	14	13	14	15	15	14	14	13	14	13	13	13	13	14	15	15	13	14	14	14	14	14	14	16
6-Feb	13	13	14	13	23	23	21	22	20	19	24	24	17	17	16	20	13	14	13	13	13	13	11	11	24
7-Feb	11	12	27	15	10	9	10	10	12	16	20	21	21	23	20	16	12	16	15	54	13	8	10	11	54
8-Feb	14	6	12	10	6	12	5	5	12	13	8	9	8	19	80	13	13	13	24	24	24	20	18	19	80
9-Feb	17	15	16	16	15	16	13	16	16	16	17	20	24	18	21	14	14	13	12	13	12	13	12	14	24
10-Feb	14	15	13	14	14	13	15	9	9	13	17	15	17	15	16	18	14	12	15	14	20	39	24	34	39
11-Feb	20	55	35	48	15	15	19	26	20	25	16	22	25	23	18	25	14	12	14	16	16	15	14	22	55
12-Feb	15	19	17	14	30	16	44	9	48	73	9	71	35	5	8	5	7	8	7	7	58	57	57	66	73
13-Feb	44	39	29	19	37	21	90	36	55	40	40	23	15	32	8	9	7	5	41	58	25	31	79	13	90
14-Feb	74	86	17	26	15	9	26	18	18	26	20	25	18	17	15	14	14	14	12	11	12	13	11	13	86
15-Feb	12	14	14	14	15	13	15	14	14	13	15	17	17	26	9	19	14	23	72	15	6	10	9	5	72
16-Feb	8	6	6	8	5	7	8	8	6	6	5	5	5	6	6	7	6	10	8	6	6	6	7	6	10
17-Feb	5	6	6	7	8	3	7	5	5	6	5	6	5	6	7	5	5	6	6	10	5	8	11	11	11
18-Feb	12	8	7	8	7	6	8	4	5	8	16	12	9	17	6	15	6	4	6	7	6	12	11	10	17
19-Feb	9	10	10	9	8	10	9	7	8	9	10	12	10	10	9	11	9	8	10	10	9	12	13	9	13
20-Feb	7	6	7	6	8	7	7	8	8	10	9	10	7	11	10	14	10	12	12	15	12	14	17	17	17
21-Feb	18	20	24	14	20	9	9	12	13	30	32	24	32	36	29	27	41	13	12	6	8	5	6	5	41
22-Feb	6	6	8	10	6	6	5	5	6	7	6	6	6	6	6	14	13	9	6	7	8	94	8	9	94
23-Feb	14	15	33	28	28	43	29	20	21	23	25	22	21	21	20	23	17	17	19	23	25	21	23	14	43
24-Feb	21	17	18	83	79	85	28	53	5	4	8	5	4	5	5	12	7	9	9	27	27	39	24	26	85
25-Feb	26	17	21	14	23	49	20	26	60	58	36	22	27	9	7	6	8	6	7	6	8	6	6	8	60
26-Feb	16	22	40	24	35	34	35	40	14	4	6	5	6	5	6	5	5	6	8	9	11	9	7	6	40
27-Feb	6	5	6	6	7	5	7	6	7	8	8	11	22	22	20	26	20	21	24	28	25	21	9	9	28
28-Feb	8	8	8	9	9	11	7	9	6	6	6	5	5	5	5	5	4	7	6	6	10	6	7	6	11
	74	86	40	83	79	85	90	53	60	73	40	71	35	36	80	27	41	23	72	58	58	94	79	66	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Fort Chipewyan - February 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS09
BARGE LANDING
FEBRUARY 2025

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

March 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BARGE LANDING (AMS09)
FEBRUARY 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	640	32	32	100	-	-	18.8	0	2.4	0
TRS(ppb) Average	639	33	33	100	1.7	0	1.6	0	0.8	0
THC(ppm) Average	639	33	33	100	-	-	5	-	2.7	-
NMHC(ppm) Average	639	33	33	100	-	-	0.8	-	0.101	-
CH4(ppm) Average	639	33	33	100	-	-	4.8	-	2.6	-
NO2 (ppb) Average	639	33	33	100	-	-	50.1	0	31.9	-
NO (ppb) Average	639	33	33	100	-	-	182.6	-	39	-
NOX (ppb) Average	639	33	33	100	-	-	232.7	-	64.1	-
PM2.5(ug/m3) Average	671	1	1	100	-	-	56.6	0	16.2	0
Temperature (C) Average	672	0	0	100	-	-	0.3	-	-5.1	-
Relative Humidity (%) Average	672	0	0	100	-	-	99	-	90.9	-
Barometric Pressure (inHg) Average	672	0	0	100	-	-	29.7	-	29.7	-
Wind Speed 10 m (km/h) Average	669	0	3	99.55	-	-	14	-	10	-
Wind Direction 10 m (deg) Average	669	0	3	99.55	-	-	-	-	-	-
Wind Speed 20 m (km/h) Average	671	0	1	99.85	-	-	26	-	18	-
Wind Direction 20 m (deg) Average	671	0	1	99.85	-	-	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BARGE LANDING (AMS09)
FEBRUARY 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	640	0.65	1.7	-	0	0	0.1	0.2	0.4	1.1	18.8
TRS(ppb) Average	639	0.49	0.2	-	0.3	0.3	0.3	0.4	0.6	0.8	1.6
THC(ppm) Average	639	2.11	0.3	-	1.8	1.9	1.9	2	2.2	2.4	5
NMHC(ppm) Average	639	0.025	0.074	-	0	0	0	0	0	0.1	0.8
CH4(ppm) Average	639	2.08	0.3	-	1.8	1.9	1.9	2	2.2	2.3	4.8
NO2 (ppb) Average	639	18.1	11.2	-	0.6	4.7	8.4	16.2	27.1	32.7	50.1
NO (ppb) Average	639	12.16	21.7	-	0	0.1	0.6	3.9	12.2	33.9	182.6
NOX (ppb) Average	639	30.26	30.5	-	0.6	5.5	10.3	21	37.3	67.1	232.7
PM2.5(ug/m3) Average	671	7.82	5.4	-	1.6	3.4	4.6	6.2	9.6	13.6	56.6
Temperature (C) Average	672	-18.17	8.4	-	-37.3	-29	-24.1	-19.2	-10.9	-6.7	0.3
Relative Humidity (%) Average	672	72.79	10.4	-	37.2	60	67.6	73.2	78.3	84.7	99
Barometric Pressure (inHg) Average	672	29.14	0.4	-	28.1	28.6	28.9	29.2	29.5	29.6	29.7
Wind Speed 10 m (km/h) Average	669	5	3	-	0	2	3	5	7	9	14
Wind Direction 10 m (deg) Average	669	98.4	-	-	-	-	-	-	-	-	-
Wind Speed 20 m (km/h) Average	671	9.1	5	-	0	3	5	8	12	16	26
Wind Direction 20 m (deg) Average	671	102.6	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BARGE LANDING (AMS09)
FEBRUARY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
Wind Speed, Wind Direction 10m	03 Feb 2025 06:00	03 Feb 2025 06:00	1	Flat line in sensor output signal - Sensor frozen
Wind Speed, Wind Direction 10m	09 Feb 2025 19:00	09 Feb 2025 19:00	1	Flat line in sensor output signal - Sensor frozen
Wind Speed, Wind Direction 10m	26 Feb 2025 00:00	26 Feb 2025 00:00	1	Flat line in sensor output signal - Sensor frozen
Wind Speed, Wind Direction 20m	02 Feb 2025 23:00	02 Feb 2025 23:00	1	Flat line in sensor output signal - Sensor frozen

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Barge Landing - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 18.8 ppb on Feb 18 12:00 Maximum Daily Average: 2.4 ppb on Feb 20

Minimum Value: 0.0 ppb on Feb 1 01:00 Minimum Daily Average: 0.0 ppb on Feb 1
Maximum Diurnal Average: 1.8 ppb at hour 14 Minimum Diurnal Average: 0.2 ppb at hour 4
Monthly Average: 0.65 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.2 Q_3 = 0.4 P_{90} = 1.1 P_{99} = 9.2

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.0	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	0.0	0.2	0.2	0.2	0.1	0.2
3-Feb	0.3	0.3	0.4	Z	0.2	0.4	0.6	0.5	0.4	0.3	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6
4-Feb	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
5-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.2
6-Feb	Z	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2
7-Feb	0.0	Z	0.1	0.2	0.1	0.1	0.3	0.5	0.5	0.3	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.1	0.1	0.2	0.1	0.2	0.5
8-Feb	0.1	0.1	Z	0.2	0.3	0.3	0.4	0.6	0.6	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.6	0.3	0.2	0.2	0.3	0.2	0.3	0.6
9-Feb	0.2	0.2	0.3	Z	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.4	1.3	0.6	0.4	0.5	0.5	0.4	0.4	0.3	0.2	0.4	1.3
10-Feb	0.2	0.3	0.2	0.2	Z	0.1	0.1	0.1	0.2	0.1	C	C	C	C	0.0	1.5	2.2	3.1	3.1	2.8	0.8	0.3	0.2	0.1	0.8	3.1
11-Feb	0.0	0.0	0.0	0.1	0.1	Z	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.5	0.3	0.2	0.2	0.2	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.5
12-Feb	Z	0.1	0.2	0.1	0.2	0.2	0.4	0.3	0.3	0.3	0.4	1.0	3.2	3.4	1.6	1.9	1.8	2.0	1.6	1.3	1.0	0.7	0.3	0.2	1.0	3.4
13-Feb	0.1	Z	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.4	0.4	0.3	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.0	0.2	0.2	0.4
14-Feb	0.2	0.0	Z	0.0	0.0	0.0	0.1	0.4	0.7	0.2	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.2	0.0	0.1	0.3	0.3	0.1	0.7
15-Feb	0.2	0.3	0.6	Z	0.5	0.6	0.7	0.7	0.7	0.5	0.4	0.4	0.2	0.4	0.3	0.1	0.3	0.5	0.5	0.3	0.2	0.1	0.2	0.2	0.4	0.7
16-Feb	0.2	0.3	0.3	0.2	Z	0.4	0.2	0.3	0.3	0.3	0.6	3.3	12.8	13.6	8.1	8.5	2.6	0.9	0.5	0.3	0.2	0.1	0.2	0.1	2.4	13.6
17-Feb	0.1	0.1	0.5	0.2	0.2	Z	0.2	0.2	0.3	0.3	1.0	4.9	5.1	4.3	2.1	0.3	0.4	0.2	0.2	0.2	0.0	0.1	0.1	0.0	0.9	5.1
18-Feb	Z	0.2	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.5	1.3	18.8	4.4	5.1	6.5	11.9	0.6	0.5	0.5	0.5	0.4	0.3	0.4	0.3	2.3	18.8
19-Feb	0.4	Z	0.3	0.4	0.3	0.2	0.2	0.4	0.3	0.4	0.4	4.2	7.8	7.3	3.3	4.6	1.3	0.5	0.3	0.2	0.2	0.2	0.8	2.2	1.6	7.8
20-Feb	5.4	1.8	Z	0.9	1.2	9.4	11.1	6.4	3.4	5.1	0.7	0.7	0.6	0.6	0.7	0.7	0.8	1.3	1.0	0.7	0.5	0.4	0.6	0.6	2.4	11.1
21-Feb	0.5	0.6	0.4	Z	0.5	0.4	0.4	0.5	0.6	0.8	1.1	0.8	0.5	0.5	0.5	0.4	0.3	0.3	0.2	0.1	0.2	0.1	0.1	0.1	0.4	1.1
22-Feb	0.0	0.1	0.1	0.1	Z	0.1	0.1	0.2	0.2	0.3	0.3	0.6	3.6	3.5	2.2	2.0	1.2	0.7	0.5	0.4	0.4	0.4	0.4	0.3	0.8	3.6
23-Feb	0.4	0.4	0.5	0.4	0.4	Z	0.3	0.4	0.4	0.3	0.4	0.4	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.2	0.5
24-Feb	Z	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	2.6	3.5	4.2	2.5	0.9	0.7	0.5	0.3	0.3	0.3	1.4	2.7	1.4	1.0	4.2
25-Feb	0.6	Z	0.3	0.2	0.1	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.6
26-Feb	0.1	0.3	Z	0.3	0.3	0.4	0.2	0.3	0.2	0.1	0.2	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.4
27-Feb	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.3	0.8	0.3	0.4	0.6	0.4	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8
28-Feb	0.0	0.0	0.0	0.1	Z	0.1	0.0	0.1	0.1	0.2	0.2	0.3	0.9	2.3	8.3	9.0	10.9	5.9	1.8	0.5	0.4	0.2	0.2	0.1	1.8	10.9
	0.4	0.2	0.2	0.2	0.2	0.6	0.6	0.5	0.4	0.4	0.3	1.5	1.7	1.8	1.4	1.6	0.9	0.6	0.5	0.3	0.2	0.2	0.3	0.3	Diurnal Average	
	5.4	1.8	0.6	0.9	1.2	9.4	11.1	6.4	3.4	5.1	1.3	18.8	12.8	13.6	8.3	11.9	10.9	5.9	3.1	2.8	1.0	1.4	2.7	2.2	Diurnal Maximum	

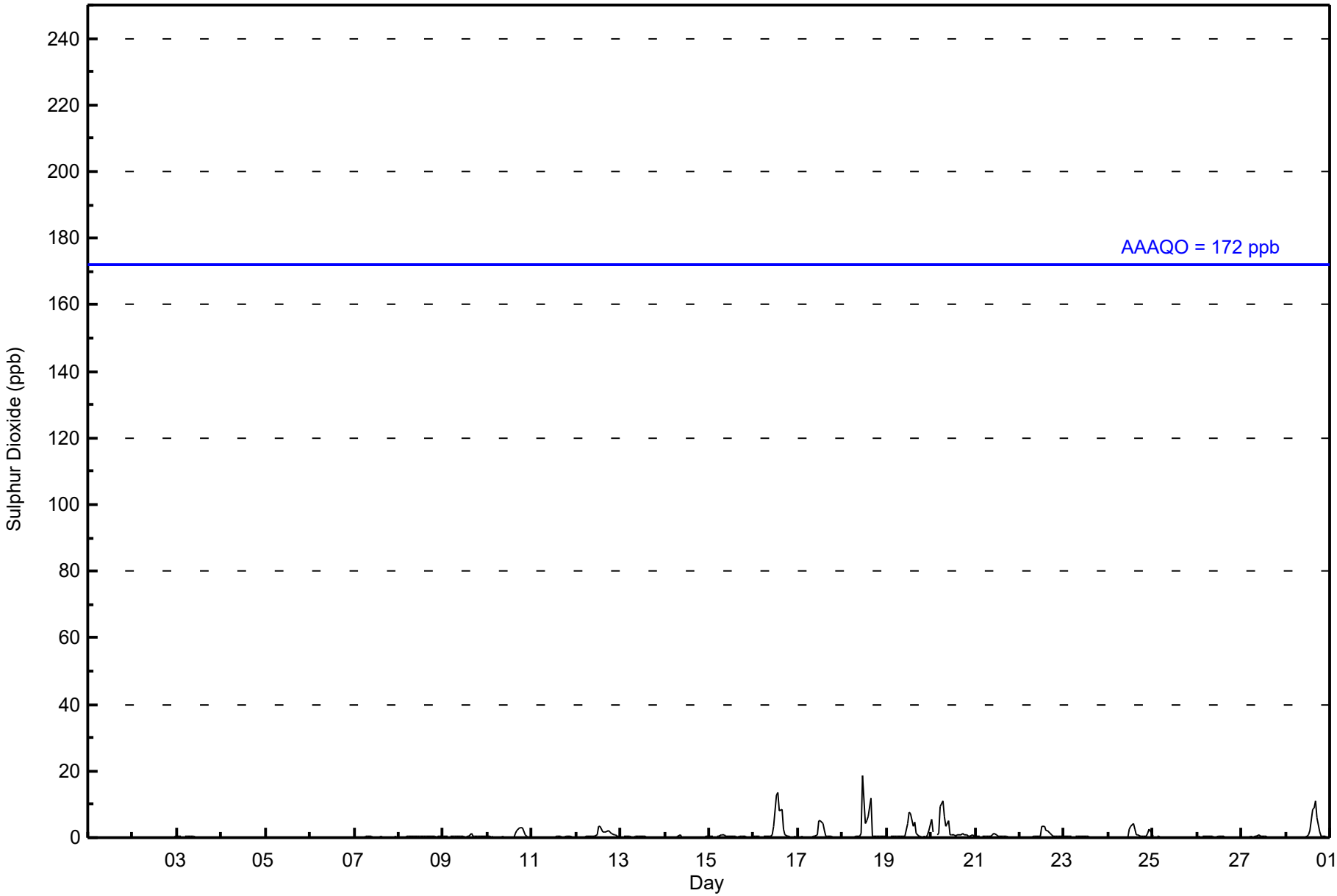
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Barge Landing - February 2025



Sulphur Dioxide (SO_2) - ppb
Barge Landing - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	634	99.06	99.06
11 - 20	6	0.94	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: 640

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Barge Landing - February 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	85	90	32	18	13	16	31	84	67	61	43	17	10	7	12	47	633
11 - 20	0	0	0	0	0	0	0	0	5	1	0	0	0	0	0	0	6
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	85	90	32	18	13	16	31	84	72	62	43	17	10	7	12	47	639

Total Number of Valid Hours: 639

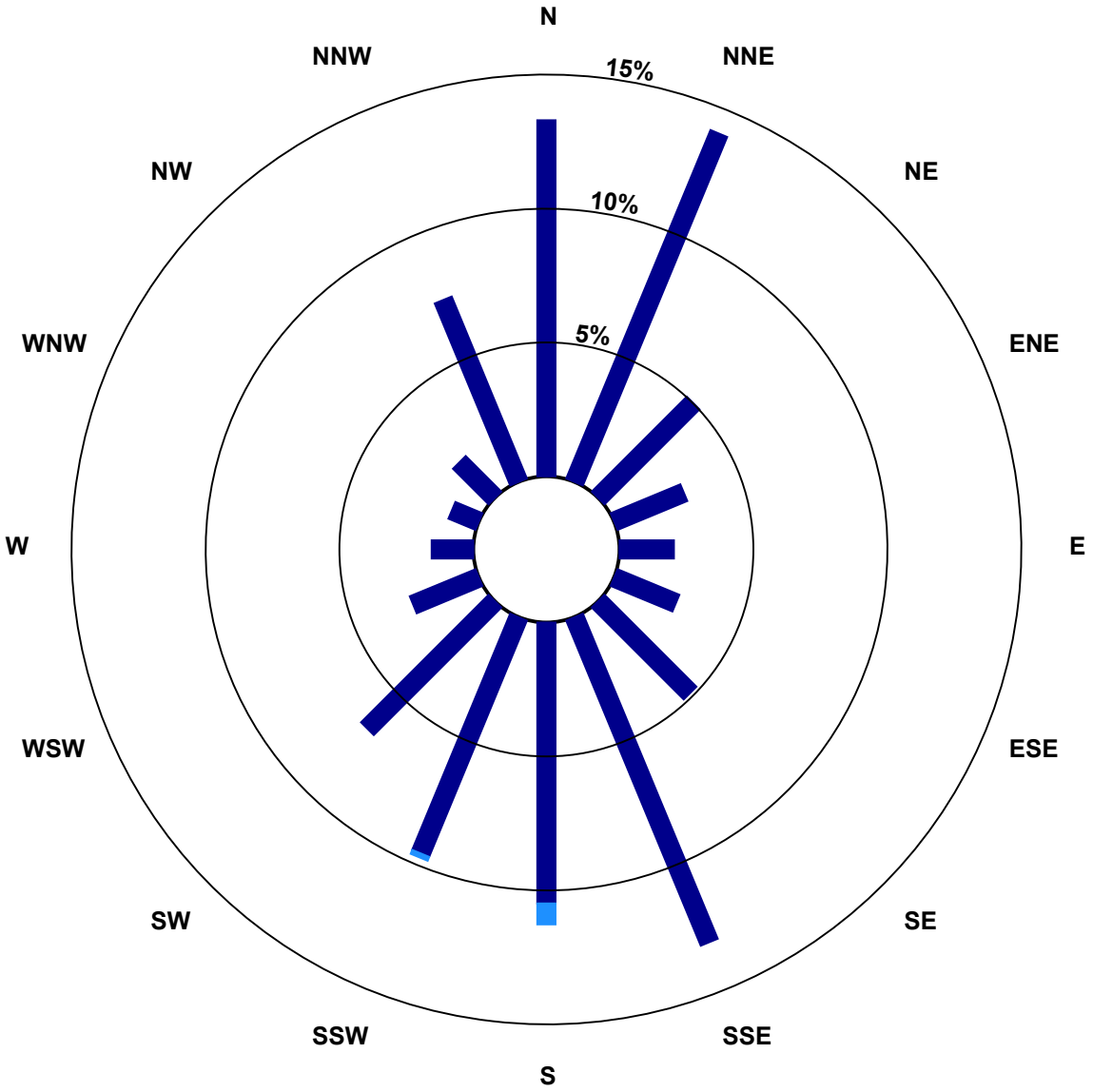
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Sulphur Dioxide (SO_2) - ppb

Barge Landing



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

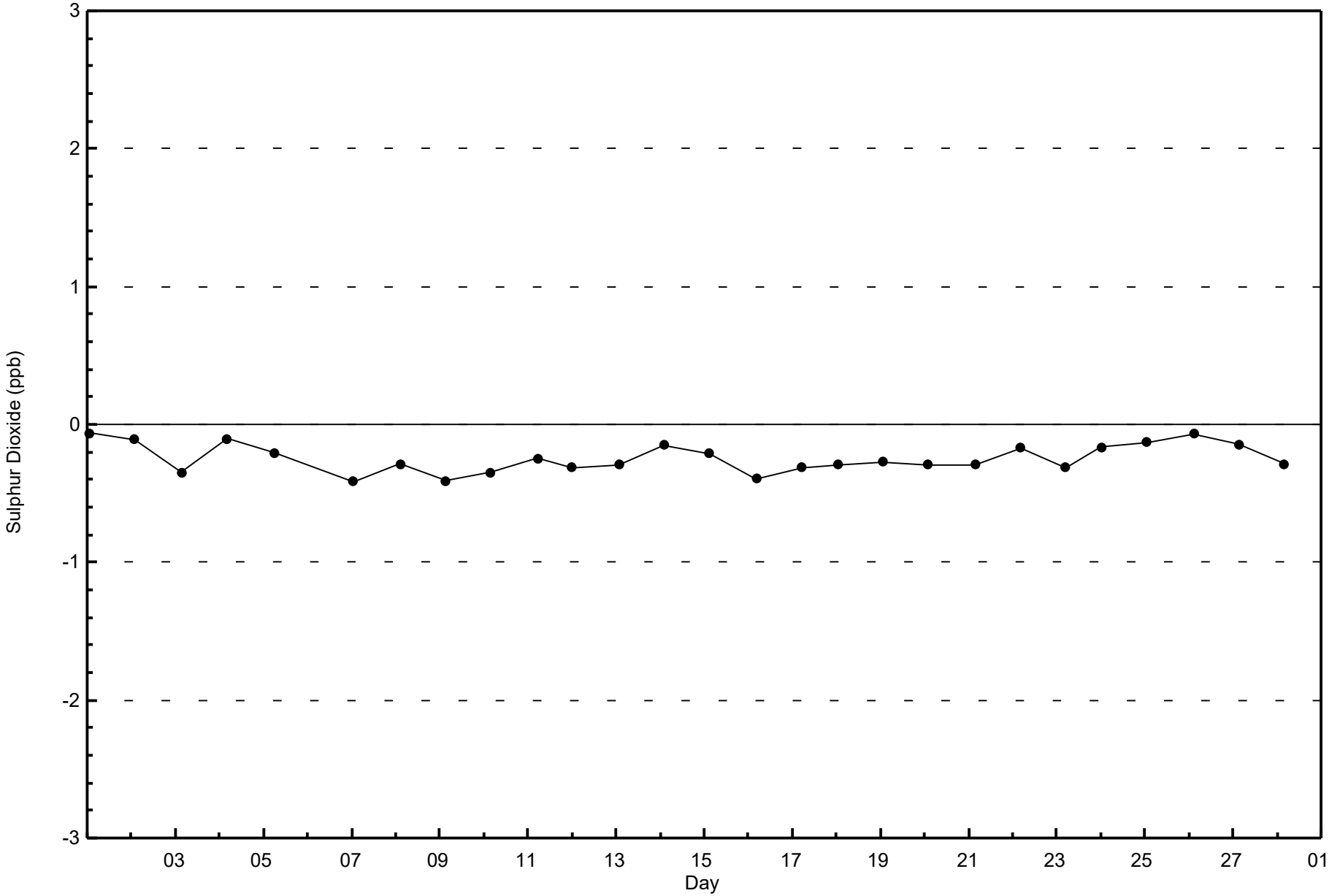
Total Number of Valid Hours: 639

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Barge Landing - February 2025

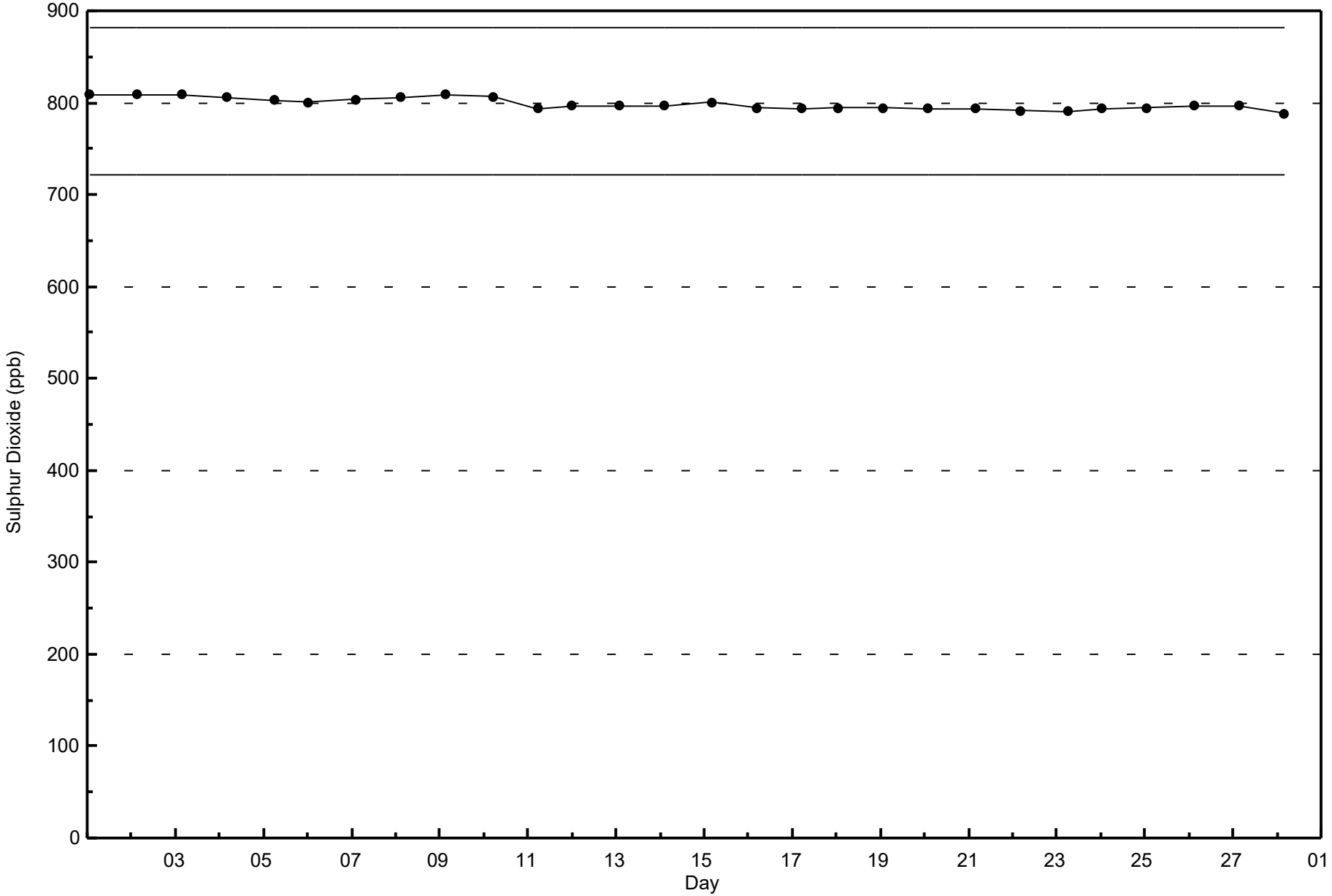


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Barge Landing - February 2025



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Barge Landing - February 2025

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

Maximum Value: 1.7 ppb on Feb 16 12:30 Maximum Daily Average: 0.8 ppb on Feb 15

Minimum Value: 0.2 ppb on Feb 3 21:30 Minimum Daily Average: 0.3 ppb on Feb 1

Maximum Diurnal Average: 0.6 ppb at hour 8 Minimum Diurnal Average: 0.4 ppb at hour 17

Monthly Average: 0.49 ppb Percentiles: P_1 = 0.3 P_{10} = 0.3 Q_1 = 0.3 Median = 0.4 Q_3 = 0.6 P_{90} = 0.8 P_{99} = 1.4

Periods in Service:	1344
Periods of Valid Data:	1279
Periods of Invalid Data:	65
Periods of Calibration:	65
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-Feb	0.3	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.4
	0.3	0.3	SP	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4		
2-Feb	0.4	0.4	0.4	Z	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	0.4	0.4	0.3	0.4
	0.4	0.4	0.4	SP	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4		
3-Feb	0.5	0.5	0.5	0.6	Z	0.5	0.7	0.8	0.7	0.6	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.6	0.4	0.3	0.2	0.3	0.3	0.4	0.8
	0.4	0.4	0.5	0.4	SP	0.7	0.8	0.5	0.6	0.5	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.6	0.7	0.3	0.3	0.3	0.3	0.3		
4-Feb	0.4	0.3	0.3	0.4	0.4	Z	0.7	0.6	0.5	0.6	0.5	0.4	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.7
	0.3	0.3	0.3	0.4	0.5	SP	0.6	0.6	0.5	0.5	0.4	0.4	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3		
5-Feb	Z	0.4	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	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	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3		
6-Feb	0.3	Z	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.4
	0.3	SP	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3		
7-Feb	0.3	0.3	Z	0.3	0.3	0.3	0.4	0.7	0.7	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	0.4	0.3	0.3	0.7
	0.3	0.3	SP	0.3	0.3	0.3	0.6	0.7	0.7	0.3	0.3	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		
8-Feb	0.3	0.4	0.5	Z	0.7	0.7	0.8	0.9	0.9	0.8	1.1	0.9	0.7	0.7	0.6	0.5	0.7	0.7	1.0	0.5	0.4	0.5	0.4	0.3	0.7	1.1
	0.3	0.5	0.5	SP	0.6	0.8	1.0	1.0	0.8	0.9	0.9	0.8	0.8	0.7	0.6	0.6	0.8	0.7	1.0	0.4	0.4	0.4	0.3	0.3		
9-Feb	0.3	0.3	0.3	0.3	Z	0.4	0.4	0.5	0.7	0.6	0.4	0.5	0.3	0.3	0.4	0.4	0.4	0.5	0.6	0.7	0.7	0.7	0.6	0.5	0.5	0.8
	0.3	0.3	0.3	0.3	SP	0.4	0.4	0.6	0.6	0.6	0.5	0.4	0.3	0.3	0.4	0.6	0.4	0.5	0.6	0.8	0.6	0.7	0.6	0.5		
10-Feb	0.5	0.5	0.5	0.5	0.5	Z	0.5	0.6	0.6	0.6	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.5	0.6	0.7	0.4	0.5	0.5	0.5	0.8
	0.5	0.5	0.6	0.6	0.5	SP	0.5	0.7	0.7	0.4	0.3	0.4	0.4	0.3	0.5	0.5	0.5	0.8	0.5	0.7	0.4	0.5	0.5	0.5		
11-Feb	Z	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.4	0.3	0.4	0.3	0.4	0.4	0.5	0.4	0.5	0.5	0.8	0.7	0.5	0.4	0.5	0.5	0.8
	SP	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.6	0.4	0.3	0.4	0.4	0.4	0.5	0.4	0.5	0.5	0.7	0.7	0.7	0.5	0.5	0.4		
12-Feb	0.4	Z	0.5	0.4	0.4	0.4	0.6	0.6	0.5	0.5	0.4	C	C	C	C	0.7	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.8
	0.4	SP	0.5	0.5	0.4	0.6	0.8	0.5	0.4	0.5	C	C	C	C	C	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4		
13-Feb	0.4	0.5	Z	0.5	0.7	0.6	0.4	0.5	0.5	0.5	0.6	0.7	0.6	0.4	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.7
	0.4	0.4	SP	0.6	0.7	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5		
14-Feb	0.5	0.5	0.5	Z	0.5	0.5	0.5	0.7	1.0	0.6	0.4	0.4	0.4	0.4	0.5	0.4	0.3	0.5	0.6	0.7	0.5	0.6	0.6	0.7	0.5	1.0
	0.5	0.6	0.5	SP	0.5	0.5	0.5	0.9	1.0	0.4	0.4	0.4	0.3	0.5	0.4	0.3	0.4	0.6	0.6	0.7	0.5	0.6	0.7	0.6		
15-Feb	0.8	0.7	1.4	1.4	Z	1.6	1.5	1.5	1.4	1.2	1.0	0.6	0.6	0.5	0.4	0.3	0.4	0.5	0.5	0.6	0.3	0.3	0.3	0.7	0.8	1.6
	0.7	0.9	1.3	1.5	SP	1.6	1.6	1.4	1.3	1.1	0.9	0.6	0.5	0.4	0.3	0.4	0.4	0.5	0.5	0.4	0.3	0.3	0.4	0.9		

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Barge Landing - February 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-Feb	0.9	1.0	0.8	0.6	0.6	Z	0.6	0.5	0.6	0.6	0.8	0.7	1.7	1.6	0.6	0.7	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.6	1.7
	0.9	0.9	0.6	0.6	0.6	SP	0.5	0.6	0.5	0.7	0.5	1.4	1.2	0.5	0.7	0.6	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3		
17-Feb	Z	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.7	0.6	0.6	0.5	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.8
	SP	0.4	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.8	0.6	0.5	0.4	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.4		
18-Feb	0.4	Z	0.5	0.3	0.3	0.4	0.5	0.6	0.6	0.5	0.4	0.7	0.4	0.5	0.3	0.4	0.3	0.3	0.5	0.3	0.3	0.4	0.5	0.5	0.5	0.9
	0.4	SP	0.4	0.4	0.4	0.5	0.5	0.7	0.6	0.5	0.4	0.9	0.7	0.4	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.4	0.6	0.5		
19-Feb	0.4	0.4	Z	0.4	0.3	0.3	0.3	0.3	0.5	0.3	0.4	0.4	0.9	0.6	0.5	0.7	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.9
	0.4	0.4	SP	0.3	0.3	0.3	0.3	0.5	0.3	0.3	0.4	0.7	0.6	0.6	0.6	0.6	0.4	0.3	0.3	0.3	0.3	0.3	0.5	0.5		
20-Feb	0.6	0.9	0.3	Z	0.4	0.4	0.7	0.4	0.4	0.6	0.5	0.3	0.4	0.4	0.4	0.4	0.6	0.9	0.7	0.7	0.5	0.6	0.9	1.0	0.6	1.1
	0.9	0.4	0.3	SP	0.3	0.6	0.4	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.5	0.9	0.8	0.7	0.6	0.6	0.8	1.1	0.9		
21-Feb	1.0	1.0	0.9	0.8	Z	0.9	0.8	0.9	1.1	1.1	1.3	0.7	0.5	0.5	0.4	0.5	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.7	1.3
	1.0	1.0	0.8	0.8	SP	0.9	0.8	0.9	0.9	1.1	1.3	0.6	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4		
22-Feb	0.5	0.4	0.4	0.4	0.4	Z	0.5	0.4	0.5	0.6	0.7	0.7	1.0	1.1	1.1	0.8	0.6	0.5	0.6	0.6	0.7	0.7	0.7	0.8	0.6	1.1
	0.4	0.4	0.4	0.4	0.4	SP	0.4	0.5	0.5	0.7	0.8	0.8	1.0	1.1	0.9	0.8	0.5	0.6	0.6	0.6	0.8	0.7	0.7	0.8		
23-Feb	Z	1.1	1.4	1.2	1.3	1.2	1.3	1.3	1.4	0.8	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.7	1.4
	SP	1.1	1.4	1.2	1.4	1.2	1.2	1.4	1.4	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.3		
24-Feb	0.3	Z	0.4	0.4	0.5	0.5	0.4	0.4	0.6	0.5	0.5	0.5	0.9	1.3	0.9	0.6	0.6	0.6	0.6	0.5	0.6	0.9	0.8	0.5	0.6	1.3
	0.3	SP	0.4	0.4	0.6	0.4	0.4	0.6	0.6	0.5	0.5	0.7	1.2	1.0	0.7	0.6	0.6	0.6	0.6	0.5	0.8	0.8	0.7	0.5		
25-Feb	0.4	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	0.4	0.4	0.4	0.5	0.4	0.7	0.5	0.4	0.4	0.4	0.4	0.7
	0.4	0.3	SP	0.3	0.3	0.4	0.4	0.4	0.3	0.4	0.4	0.3	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.5	0.4	0.4	0.5		
26-Feb	0.5	0.6	1.0	Z	0.9	0.9	0.9	0.9	0.8	0.5	0.5	0.5	0.4	0.5	0.8	0.5	0.5	0.5	0.6	0.5	0.5	0.6	0.4	0.4	0.6	1.0
	0.5	0.6	1.0	SP	1.0	0.9	0.9	1.0	0.5	0.5	0.5	0.4	0.4	0.6	0.7	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.4	0.4		
27-Feb	0.5	0.4	0.4	0.4	Z	0.4	0.5	0.5	0.6	0.8	0.7	0.4	0.4	0.6	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.4	0.3	0.3	0.4	0.8
	0.4	0.4	0.4	0.4	SP	0.4	0.6	0.5	0.6	0.8	0.5	0.4	0.5	0.4	0.3	0.4	0.3	0.4	0.3	0.3	0.3	0.4	0.4	0.3		
28-Feb	0.4	0.3	0.3	0.3	0.3	Z	0.3	0.4	0.5	0.4	0.5	0.5	0.5	0.6	0.5	0.5	0.5	1.0	0.9	0.6	0.3	0.3	0.4	0.3	0.5	1.1
	0.3	0.4	0.3	0.3	0.3	SP	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.6	1.1	0.6	0.4	0.3	0.3	0.3	0.3		
	0.5	0.5	0.6	0.5	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	Diurnal Average	
	1.0	1.1	1.4	1.5	1.4	1.6	1.6	1.5	1.4	1.2	1.3	1.4	1.7	1.6	1.1	0.8	0.9	1.1	1.0	0.8	0.8	0.9	1.1	1.0	Diurnal Maximum	

Z - zerospan C - Calibration SP - Span

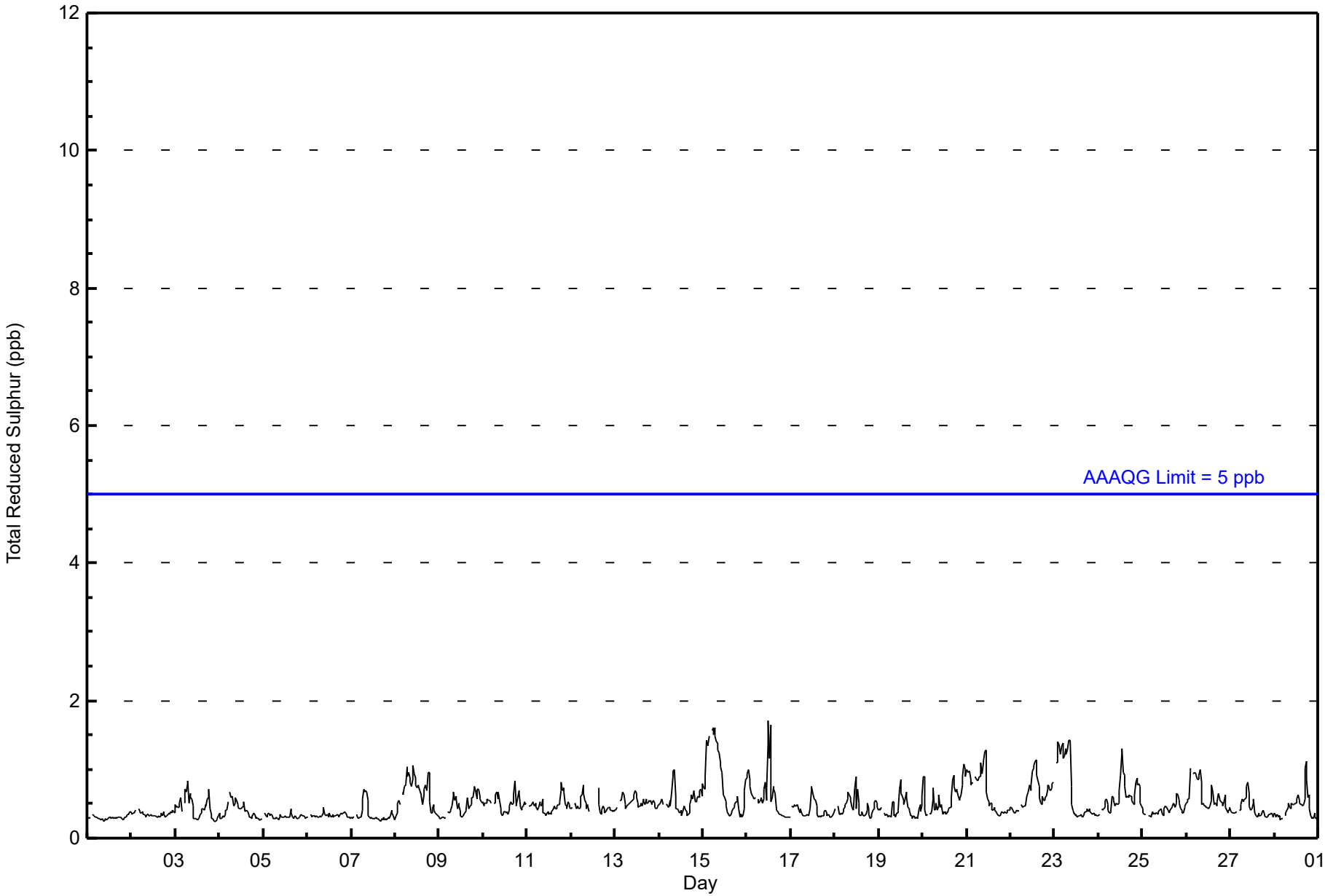
Alberta Ambient Air Quality Guideline (AAAQG): 30-Min: 5 ppb

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Barge Landing - February 2025

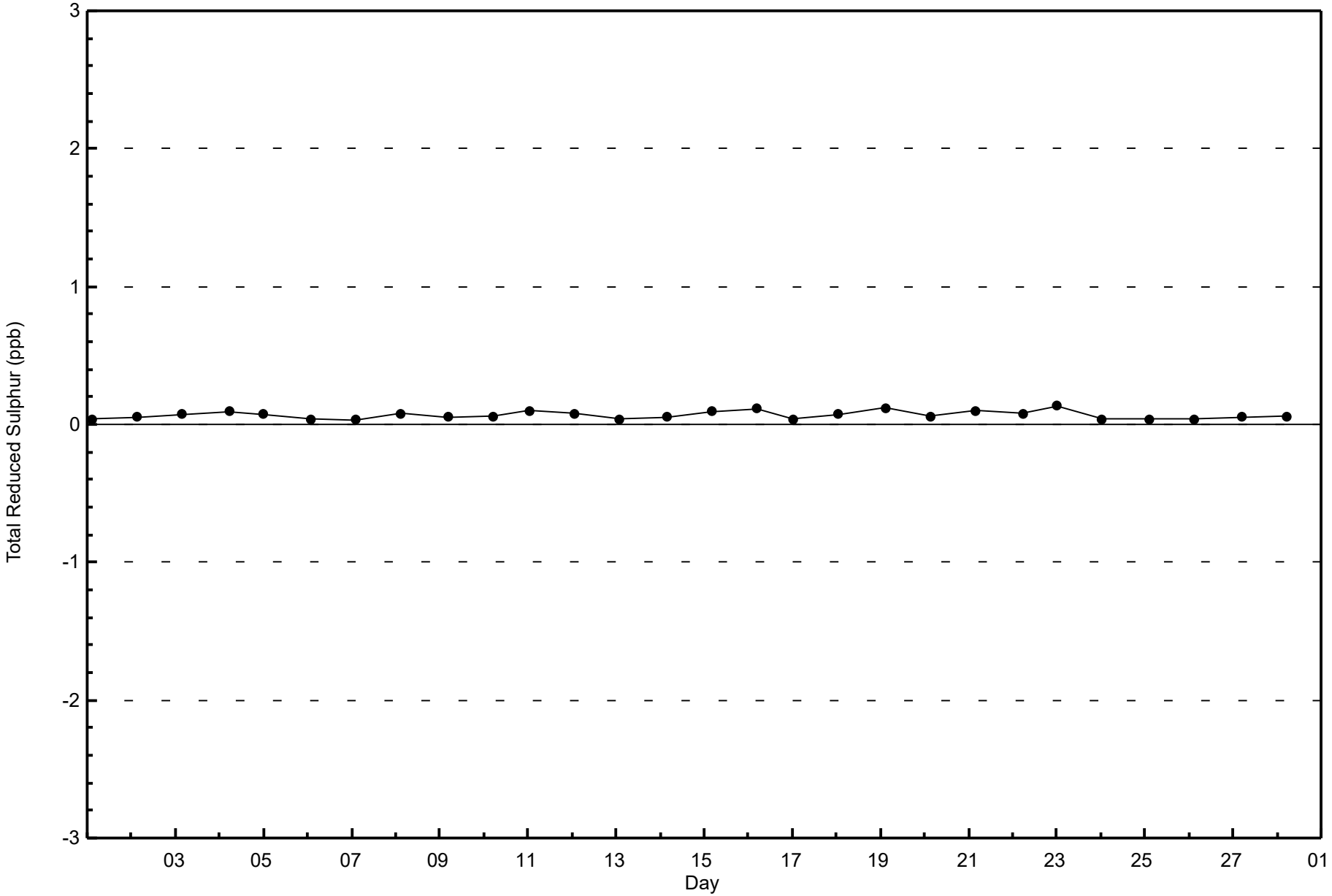


Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Barge Landing - February 2025

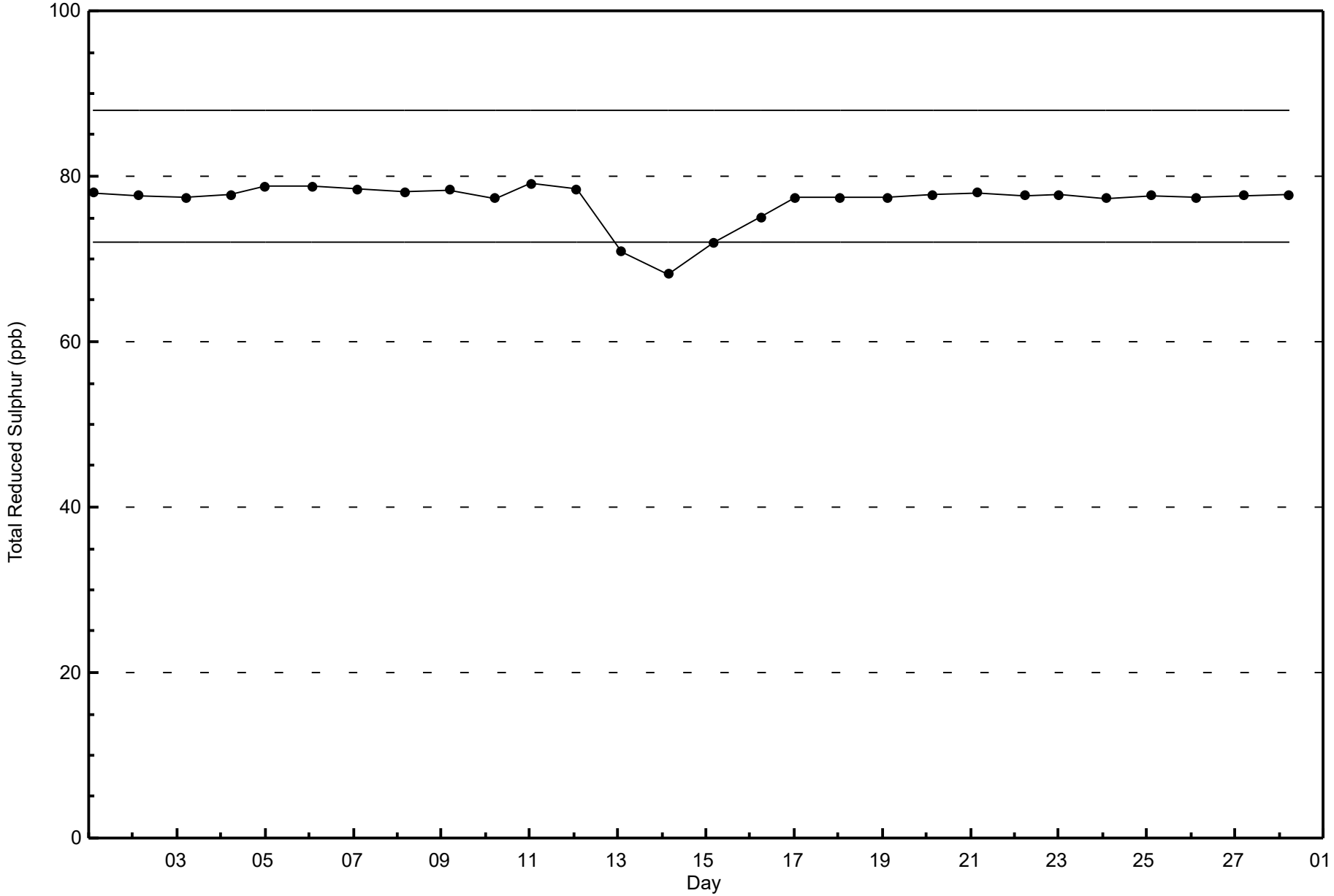


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Barge Landing - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Barge Landing - February 2025

Maximum Value: 5.0 ppm on Feb 21 11:00

Maximum Daily Average: 2.7 ppm on Feb 21

Minimum Value: 1.8 ppm on Feb 6 02:00

Minimum Daily Average: 1.9 ppm on Feb 5

Maximum Diurnal Average: 2.2 ppm at hour 10

Minimum Diurnal Average: 2.0 ppm at hour 16

Monthly Average: 2.11 ppm

Percentiles: P_1 = 1.8 P_{10} = 1.9 Q_1 = 1.9 Median = 2.0 Q_3 = 2.2 P_{90} = 2.4 P_{99} = 3.2

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	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	1.9	2.0
2-Feb	1.9	1.9	Z	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.1	2.1	1.9	1.9	1.9	2.1
3-Feb	1.9	1.9	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.8	1.8	1.8	1.8	1.9	2.0
4-Feb	1.8	1.9	1.9	2.0	Z	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.9	2.0
5-Feb	1.9	1.9	1.9	1.9	1.9	Z	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9
6-Feb	Z	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	C	C	C	C	C	2.0	2.0	2.1	2.3	2.2	2.2	2.0	2.0	2.0	2.0	2.3
7-Feb	2.0	Z	2.0	2.0	2.0	2.0	2.0	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	2.1
8-Feb	2.0	2.1	Z	2.1	2.2	2.2	2.2	2.2	2.3	2.4	2.4	2.4	2.3	2.2	2.2	2.2	2.7	3.2	3.3	2.2	2.0	2.1	2.0	2.0	2.3	3.3
9-Feb	2.0	2.0	2.0	Z	2.1	2.1	2.0	2.3	2.3	2.2	2.2	2.2	2.0	2.0	2.2	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.0	2.2	2.3
10-Feb	2.0	2.1	2.1	2.1	Z	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.3	2.0	2.2	2.3	2.2	2.3	2.2	2.1	2.3
11-Feb	2.2	2.3	2.5	2.4	2.3	Z	2.2	2.2	2.2	2.0	2.0	2.1	2.1	2.2	2.5	2.3	2.4	2.3	2.4	2.5	2.7	2.3	2.2	2.2	2.3	2.7
12-Feb	Z	2.2	2.2	2.1	2.1	2.2	2.2	2.1	2.0	2.1	2.0	2.0	2.0	2.1	2.2	2.1	2.1	2.4	2.3	2.1	2.1	2.1	2.1	2.0	2.1	2.4
13-Feb	2.1	Z	2.2	2.4	2.5	2.3	2.1	2.2	2.3	2.3	2.4	2.5	2.3	2.1	2.2	2.2	2.2	2.2	2.4	2.5	2.2	2.4	2.1	2.1	2.3	2.5
14-Feb	2.2	2.3	Z	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.2	2.2	2.3	2.1	2.4	2.5	2.3	2.2	2.5
15-Feb	2.2	2.2	2.3	Z	2.4	2.4	2.5	2.5	2.4	2.4	2.3	2.1	2.1	2.0	1.9	1.9	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.3	2.2	2.5
16-Feb	2.4	2.5	2.3	2.3	Z	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.5
17-Feb	1.9	2.0	2.0	2.0	2.0	Z	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0
18-Feb	Z	2.0	1.9	1.9	1.9	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.1
19-Feb	2.0	Z	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	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	2.0
20-Feb	1.9	2.0	Z	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.1	2.1	2.1	2.7	3.7	3.8	2.2	3.8
21-Feb	3.3	3.1	2.8	Z	2.9	2.8	2.9	3.0	3.5	4.5	5.0	2.6	2.3	2.2	2.1	2.3	2.2	2.0	2.0	2.2	2.1	2.2	2.2	2.2	2.7	5.0
22-Feb	2.2	2.1	2.0	2.0	Z	2.1	2.3	2.2	2.3	2.5	2.6	2.7	2.6	2.6	2.5	2.3	2.2	2.2	2.2	2.2	2.6	2.7	2.8	2.6	2.4	2.8
23-Feb	2.6	2.9	2.9	2.8	2.6	Z	2.6	2.8	3.1	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.0	1.9	1.9	1.9	1.9	2.3	3.1
24-Feb	Z	1.9	1.9	1.9	2.2	2.2	2.0	2.0	2.0	2.0	2.1	2.1	2.3	2.3	2.1	2.0	2.0	2.0	2.1	2.1	2.5	2.5	2.9	2.1	2.2	2.9
25-Feb	2.0	Z	2.0	1.9	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.6	2.2	2.1	2.0	2.7	2.4	2.2	2.0	2.1	2.0	2.0	2.3	2.1	2.7
26-Feb	2.4	2.3	Z	2.4	2.4	2.4	2.4	2.7	2.4	2.2	2.1	2.2	2.0	2.1	2.4	2.4	2.3	2.1	2.4	2.5	2.2	2.3	2.2	2.1	2.3	2.7
27-Feb	2.2	2.1	2.2	Z	2.1	2.0	2.2	2.2	2.3	2.4	2.1	2.0	2.0	2.1	2.0	2.1	2.0	2.0	1.9	2.0	2.0	1.9	1.9	2.0	2.1	2.4
28-Feb	2.0	1.9	1.9	1.9	Z	1.9	1.9	2.1	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1
	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	Diurnal Average	
	3.3	3.1	2.9	2.8	2.9	2.8	2.9	3.0	3.5	4.5	5.0	2.7	2.6	2.6	2.5	2.4	2.7	3.2	3.3	2.5	2.7	2.7	3.7	3.8	Diurnal Maximum	

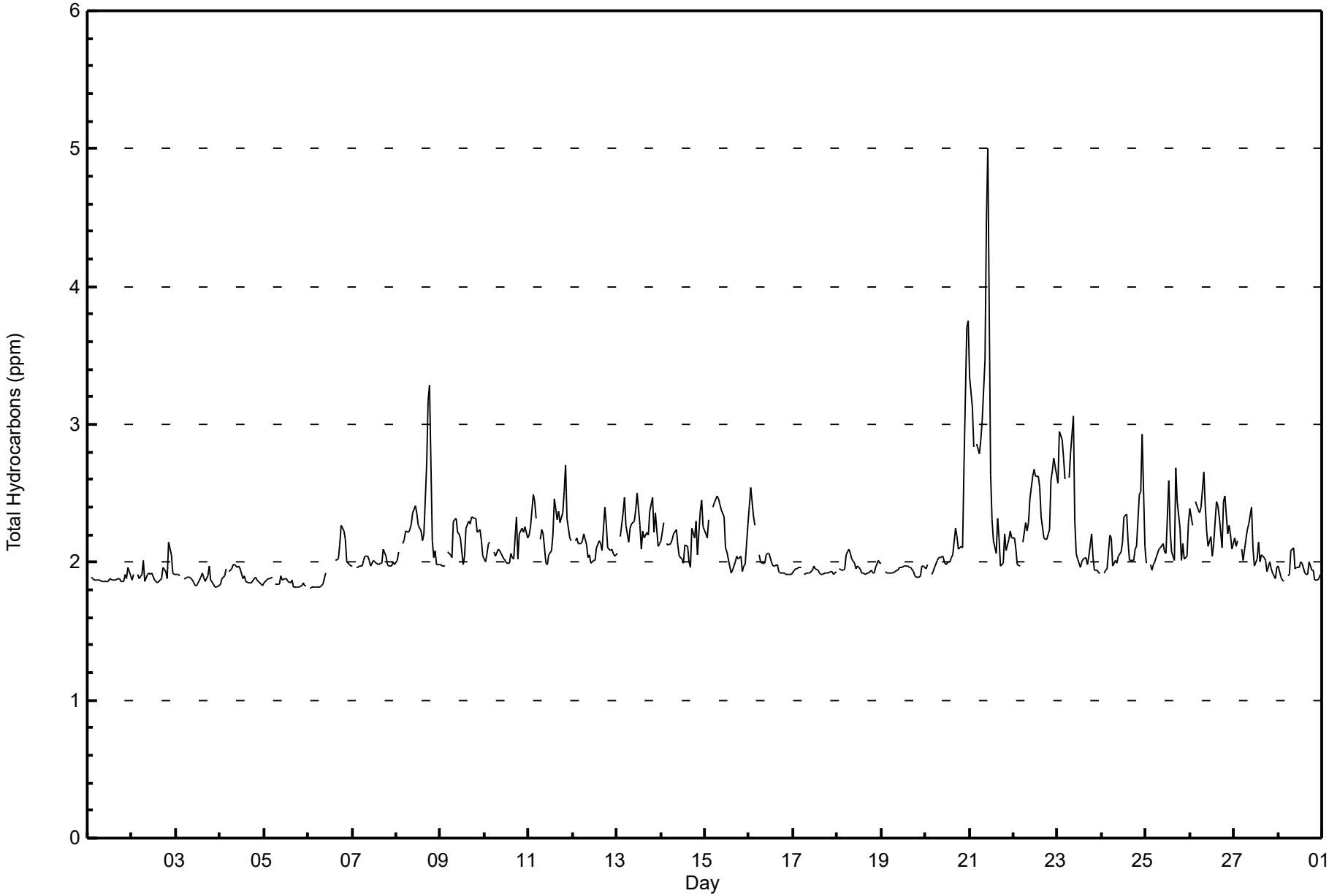
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Barge Landing - February 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	355	55.56	55.56
2.1 - 3.0	274	42.88	98.44
3.1 - 10.0	10	1.56	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Barge Landing - February 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	35	39	14	9	7	7	24	52	58	45	33	11	4	2	4	10	354
2.1 - 3.0	45	48	17	9	6	8	7	33	15	17	10	5	6	5	8	35	274
3.1 - 10.0	2	1	1	0	0	1	0	1	1	0	0	1	0	0	0	2	10
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	82	88	32	18	13	16	31	86	74	62	43	17	10	7	12	47	638

Total Number of Valid Hours: 638

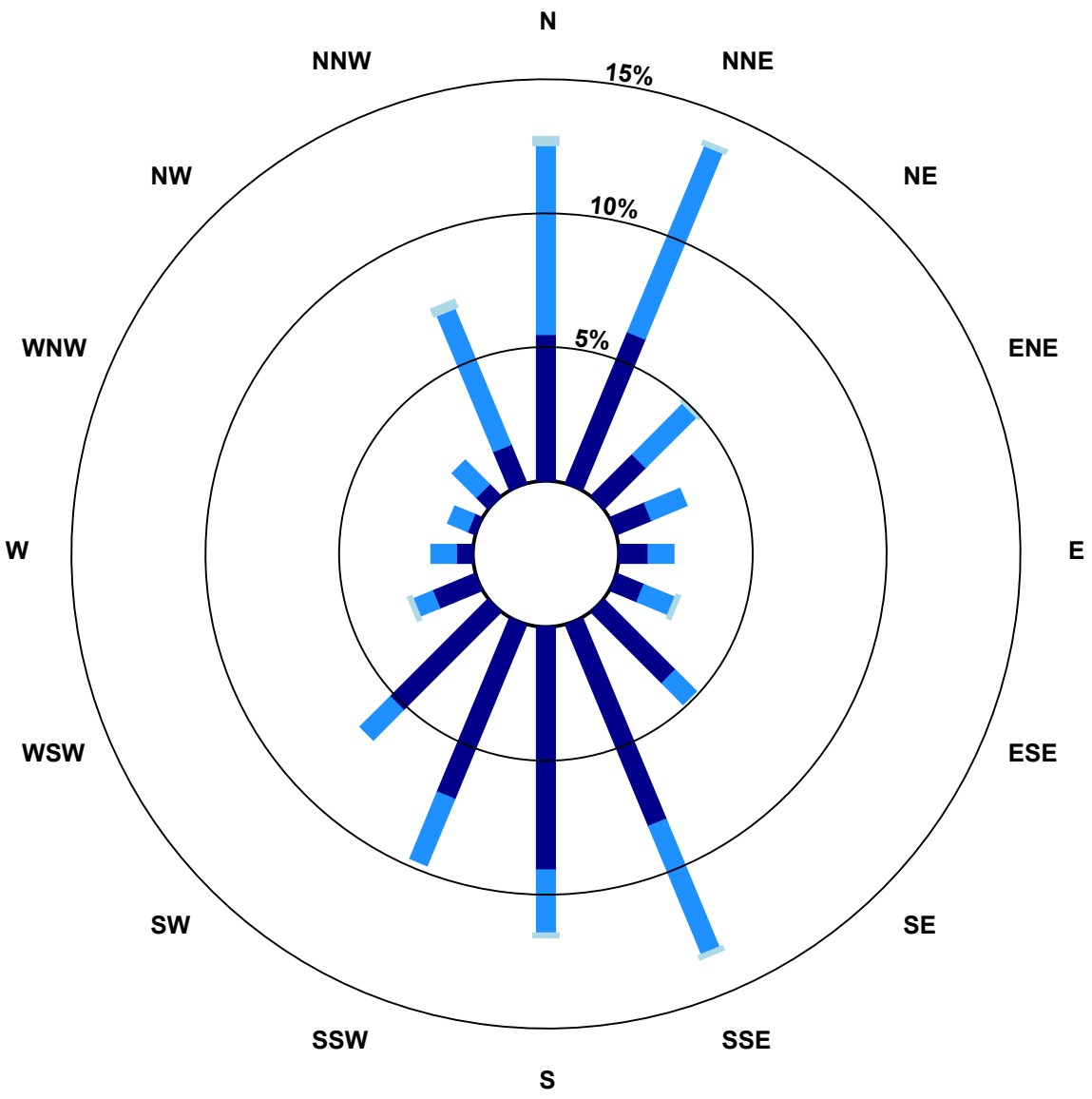
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Total Hydrocarbons (THC) - ppm

Barge Landing



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

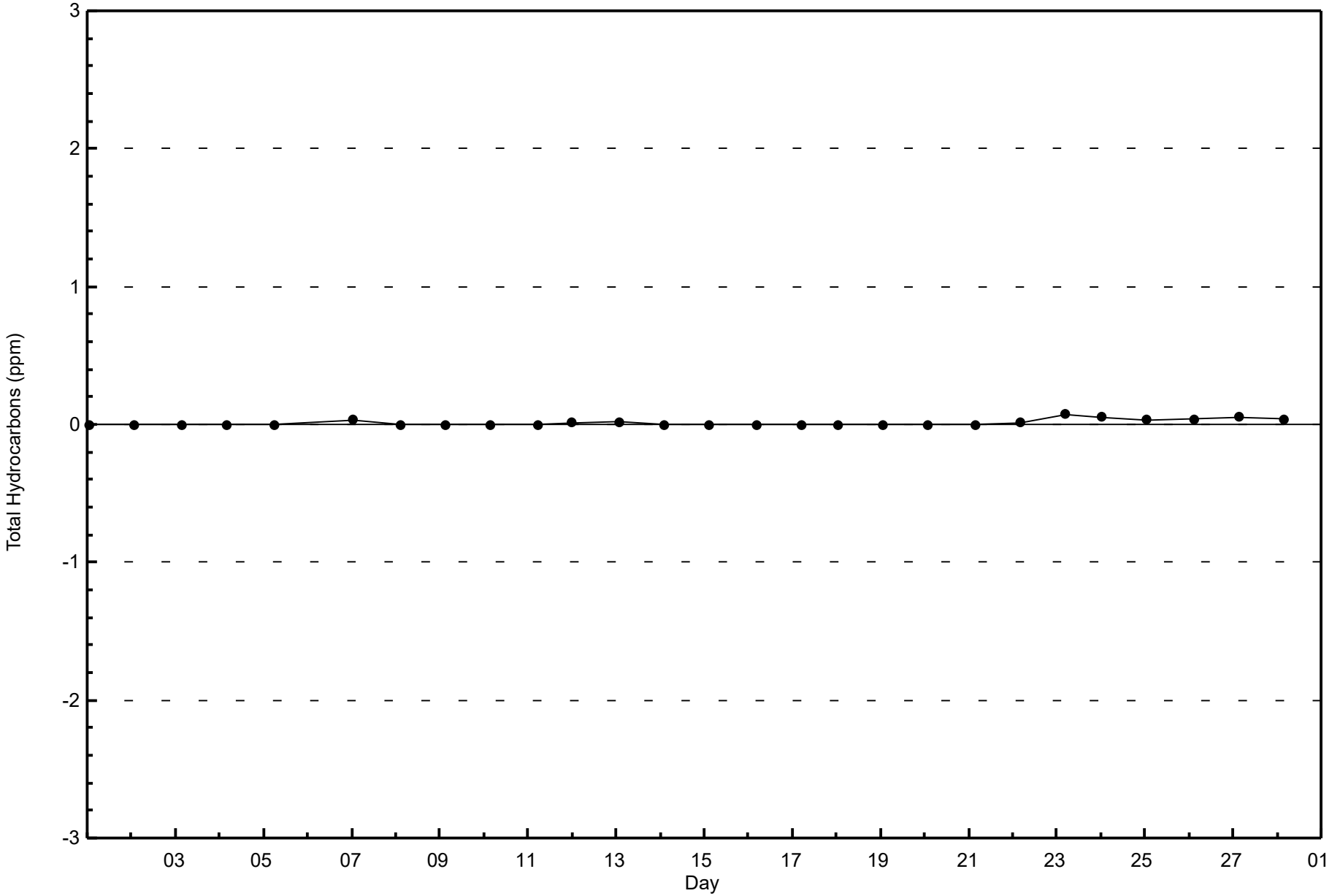
Total Number of Valid Hours: 638

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Barge Landing - February 2025

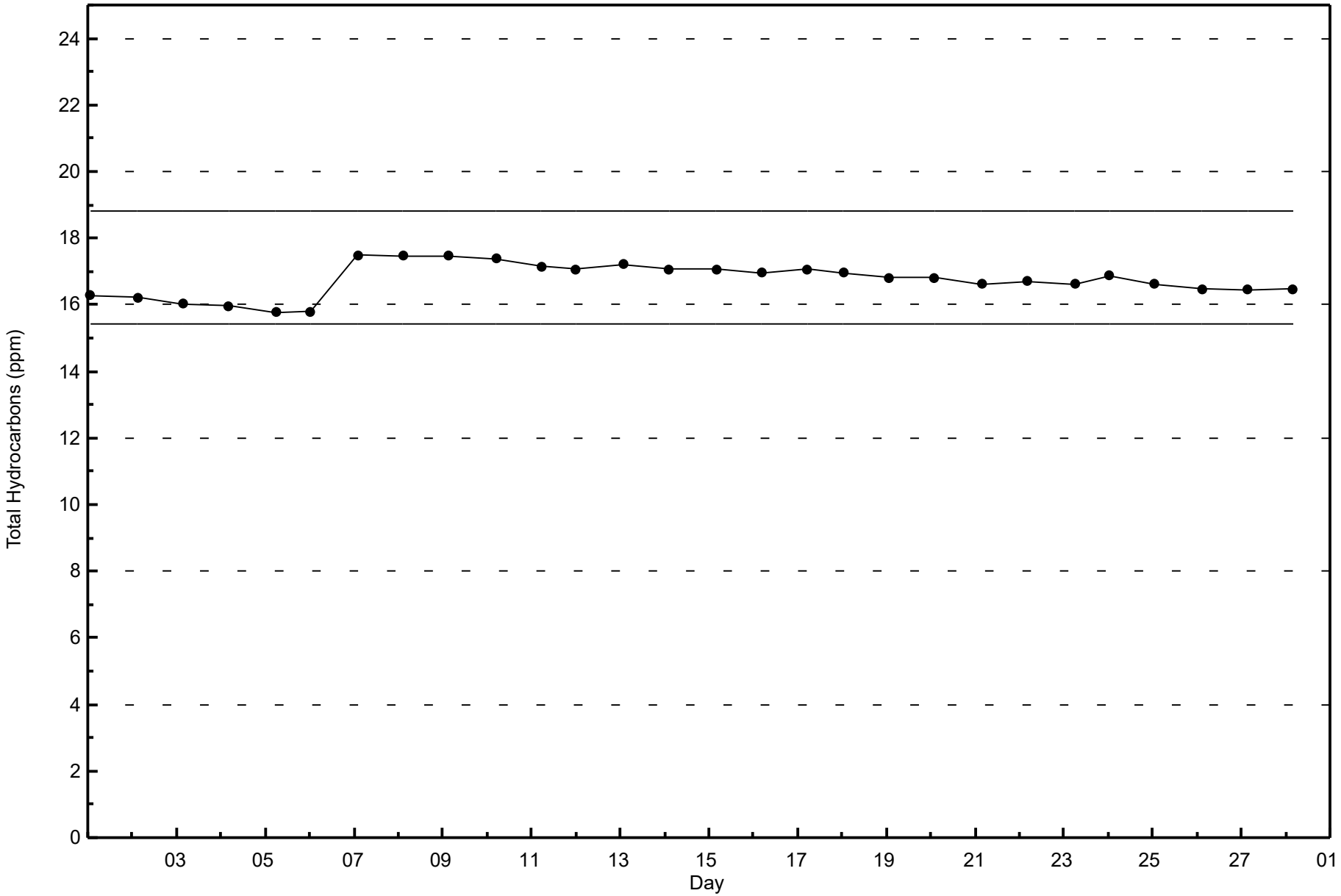


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Barge Landing - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Barge Landing - February 2025

Maximum Value: 0.800 ppm on Feb 8 18:00

Maximum Daily Average: 0.101 ppm on Feb 26

Minimum Value: 0.000 ppm on Feb 1 01:00

Minimum Daily Average: 0.000 ppm on Feb 3

Maximum Diurnal Average: 0.063 ppm at hour 18

Minimum Diurnal Average: 0.003 ppm at hour 1

Monthly Average: 0.025 ppm

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

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.000	Z	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.028	0.000	0.055	0.019	0.005	0.055
2-Feb	0.000	0.038	Z	0.023	0.000	0.021	0.106	0.000	0.045	0.035	0.048	0.043	0.010	0.000	0.000	0.000	0.002	0.069	0.026	0.007	0.234	0.139	0.014	0.000	0.037	0.234
3-Feb	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	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-Feb	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-Feb	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012	C	C	C	C	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.012
7-Feb	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.284	0.800	0.349	0.006	0.031	0.058	0.003	0.000	0.067	0.800
9-Feb	0.010	0.000	0.000	Z	0.000	0.000	0.000	0.030	0.046	0.000	0.000	0.010	0.005	0.044	0.176	0.210	0.169	0.194	0.183	0.172	0.116	0.135	0.081	0.008	0.069	0.210
10-Feb	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	0.011	0.000	0.001	0.001	0.000	0.000	0.000	0.001	0.011
11-Feb	0.001	0.014	0.128	0.126	0.008	Z	0.045	0.038	0.000	0.000	0.000	0.000	0.082	0.187	0.365	0.174	0.219	0.127	0.134	0.179	0.175	0.019	0.000	0.000	0.088	0.365
12-Feb	Z	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.030	0.254	0.199	0.000	0.010	0.011	0.000	0.000	0.022	0.254
13-Feb	0.000	Z	0.001	0.014	0.002	0.009	0.062	0.009	0.000	0.000	0.000	0.054	0.050	0.006	0.140	0.016	0.000	0.000	0.001	0.066	0.116	0.190	0.016	0.000	0.033	0.190
14-Feb	0.000	0.017	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.012	0.000	0.000	0.000	0.000	0.024	0.007	0.077	0.080	0.010	0.011	0.080
15-Feb	0.000	0.000	0.000	Z	0.002	0.006	0.008	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.002	0.018
16-Feb	0.000	0.005	0.006	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006
17-Feb	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
18-Feb	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.123	0.122	0.120	0.016	0.123
21-Feb	0.065	0.061	0.015	Z	0.117	0.119	0.132	0.162	0.163	0.179	0.212	0.039	0.176	0.106	0.031	0.265	0.162	0.000	0.000	0.191	0.001	0.000	0.025	0.000	0.097	0.265
22-Feb	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.073	0.093	0.013	0.040	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.093
23-Feb	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.004	0.020	0.015	0.000	0.010	0.040	0.000	0.000	0.039	0.000	0.000	0.000	0.000	0.000	0.006	0.040
24-Feb	Z	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.107	0.148	0.747	0.106	0.048	0.747
25-Feb	0.000	Z	0.000	0.005	0.004	0.000	0.000	0.048	0.000	0.000	0.002	0.059	0.494	0.015	0.000	0.000	0.553	0.250	0.126	0.025	0.019	0.016	0.000	0.000	0.070	0.553
26-Feb	0.000	0.034	Z	0.190	0.175	0.156	0.172	0.145	0.062	0.000	0.002	0.022	0.000	0.000	0.078	0.324	0.270	0.058	0.197	0.216	0.035	0.091	0.097	0.000	0.101	0.324
27-Feb	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.044	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.044
28-Feb	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
	0.003	0.007	0.007	0.016	0.013	0.013	0.019	0.016	0.011	0.008	0.013	0.013	0.031	0.017	0.030	0.037	0.060	0.063	0.045	0.032	0.031	0.036	0.044	0.009	Diurnal Average	
	0.065	0.061	0.128	0.190	0.175	0.156	0.172	0.162	0.163	0.179	0.212	0.093	0.494	0.187	0.365	0.324	0.553	0.800	0.349	0.216	0.234	0.190	0.747	0.120	Diurnal Maximum	

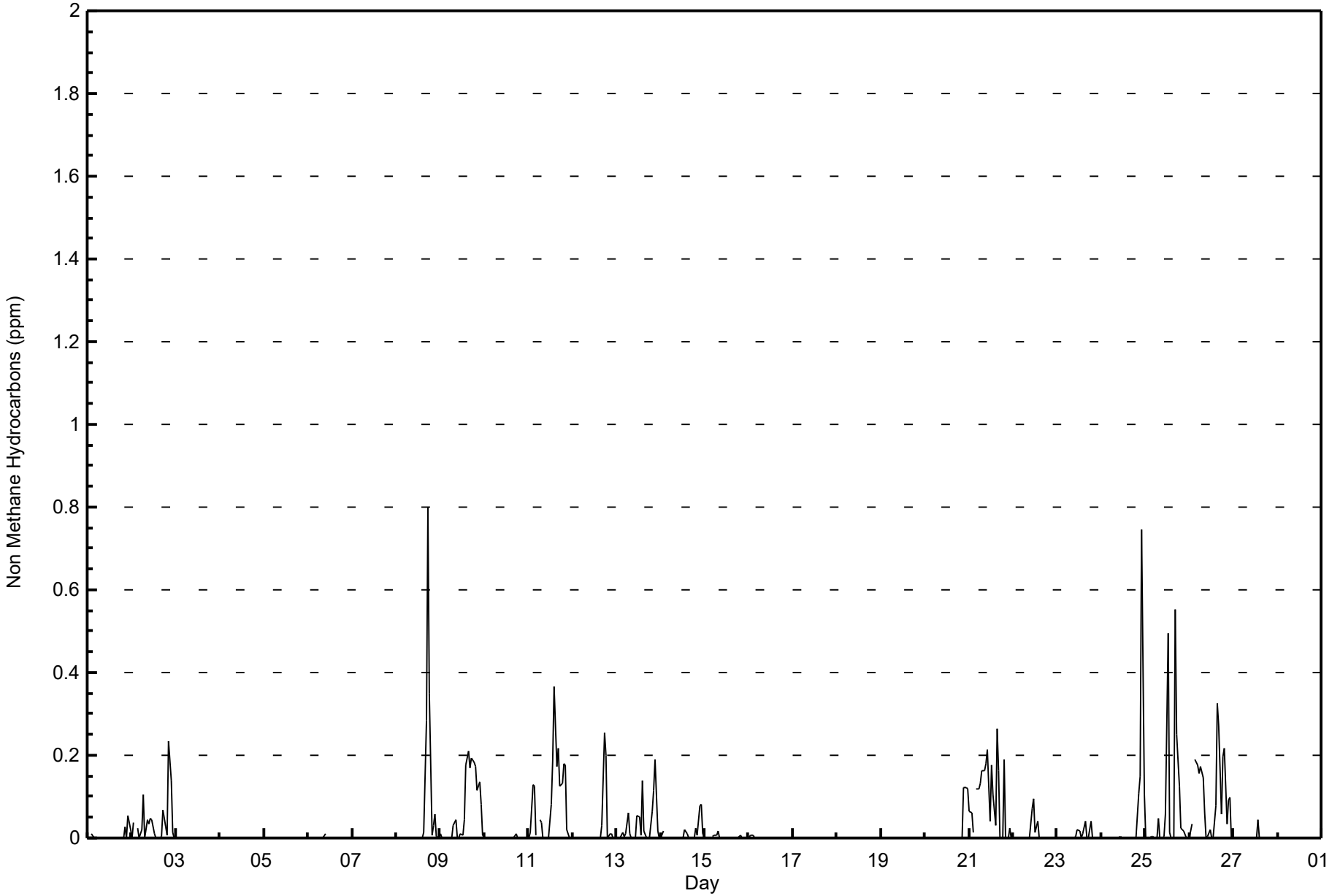
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Barge Landing - February 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Barge Landing - February 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	488	76.37	76.37
0.006 - 0.05	72	11.27	87.64
0.06 - 0.1	40	6.26	93.90
> 0.1	39	6.10	100.00

Total Number of Valid Hours: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Barge Landing - February 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	40	46	18	15	10	13	30	80	71	60	39	16	7	6	8	29	488
0.006 - 0.05	16	30	6	1	1	1	1	3	1	2	1	0	0	0	1	7	71
0.06 - 0.1	10	8	3	1	1	1	0	1	2	0	2	1	2	0	1	7	40
> 0.1	16	4	5	1	1	1	0	2	0	0	1	0	1	1	2	4	39
Totals	82	88	32	18	13	16	31	86	74	62	43	17	10	7	12	47	638

Total Number of Valid Hours: 638

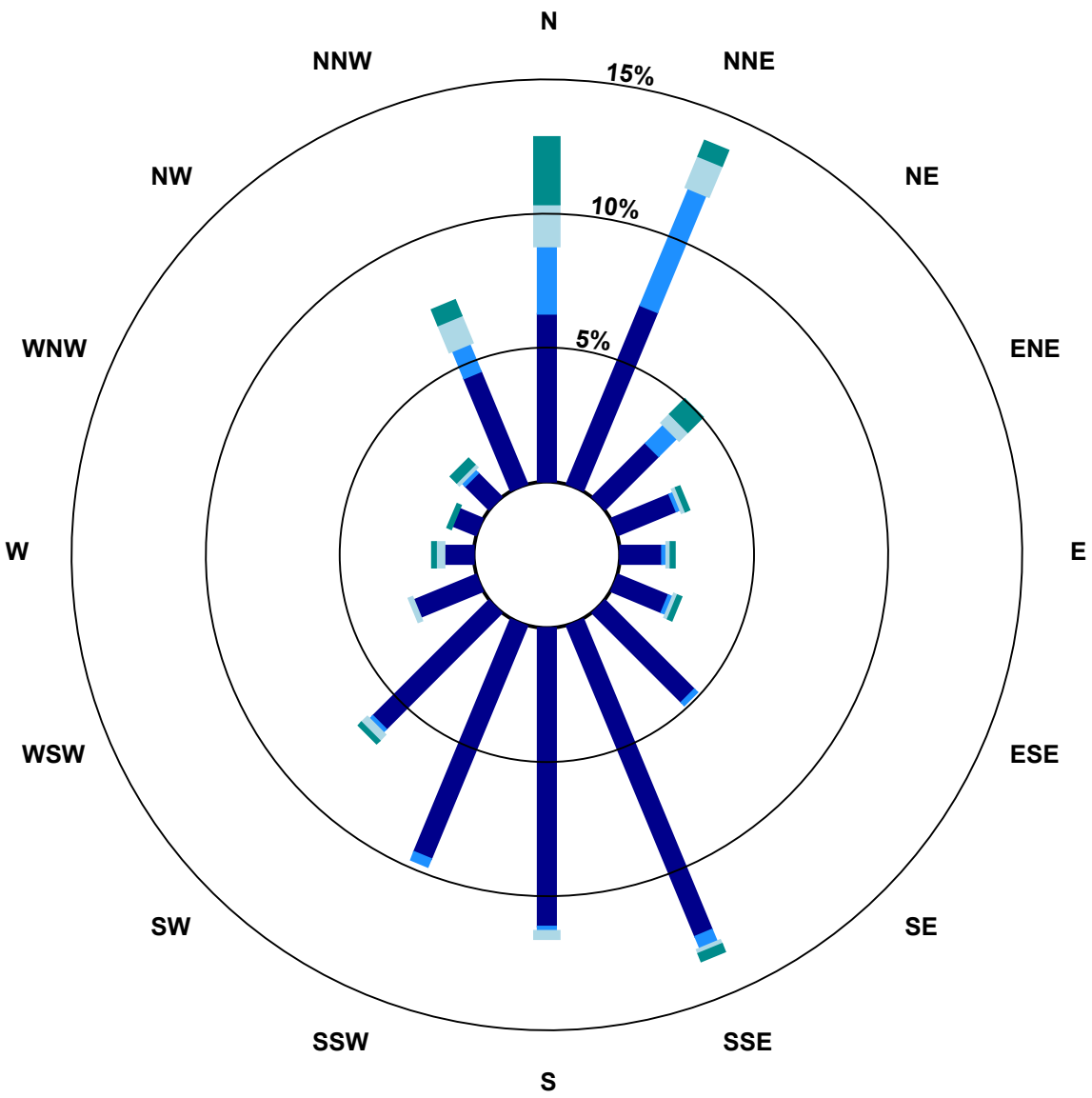
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Non Methane Hydrocarbons (NMHC) - ppm

Barge Landing



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

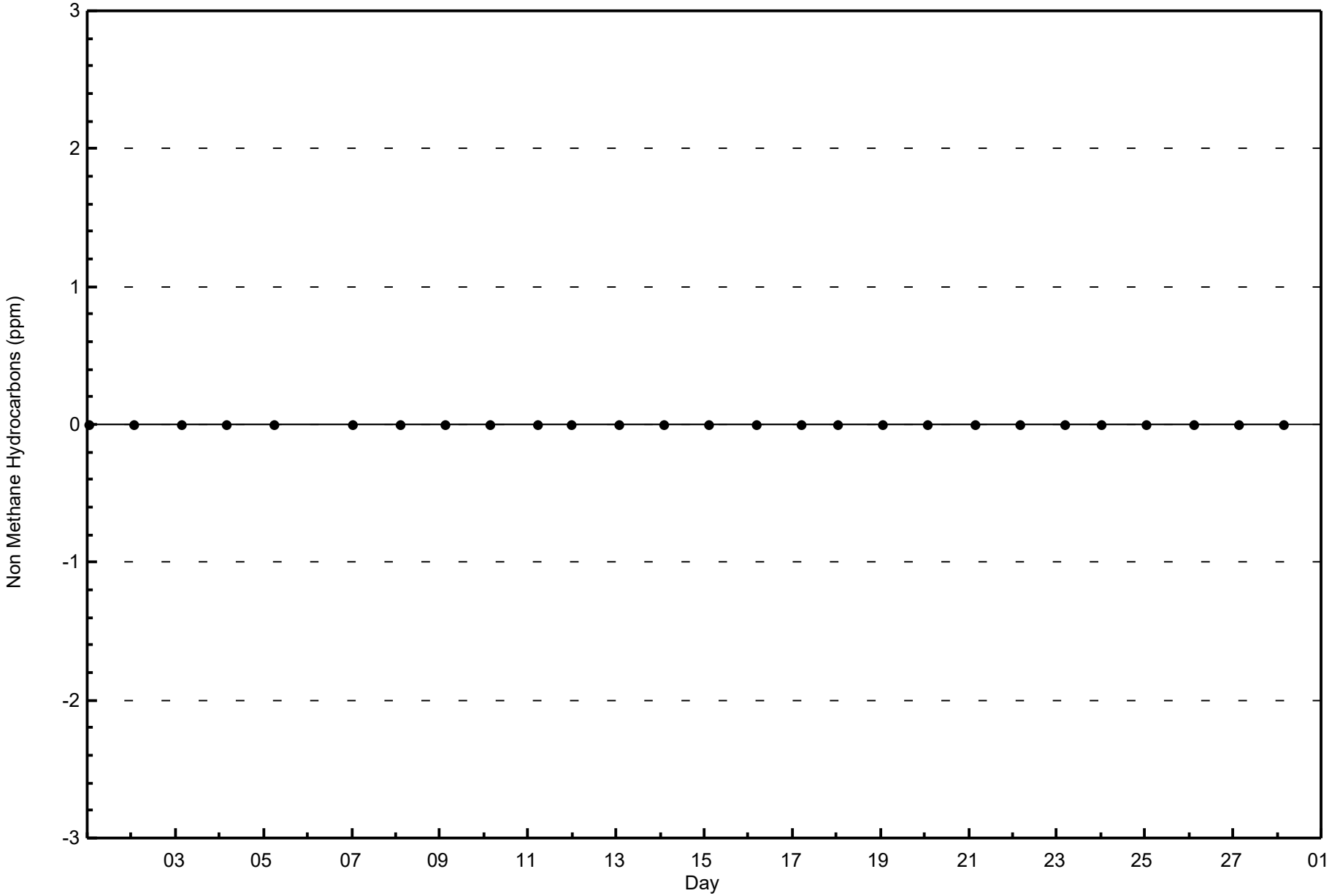
Total Number of Valid Hours: 638

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Barge Landing - February 2025

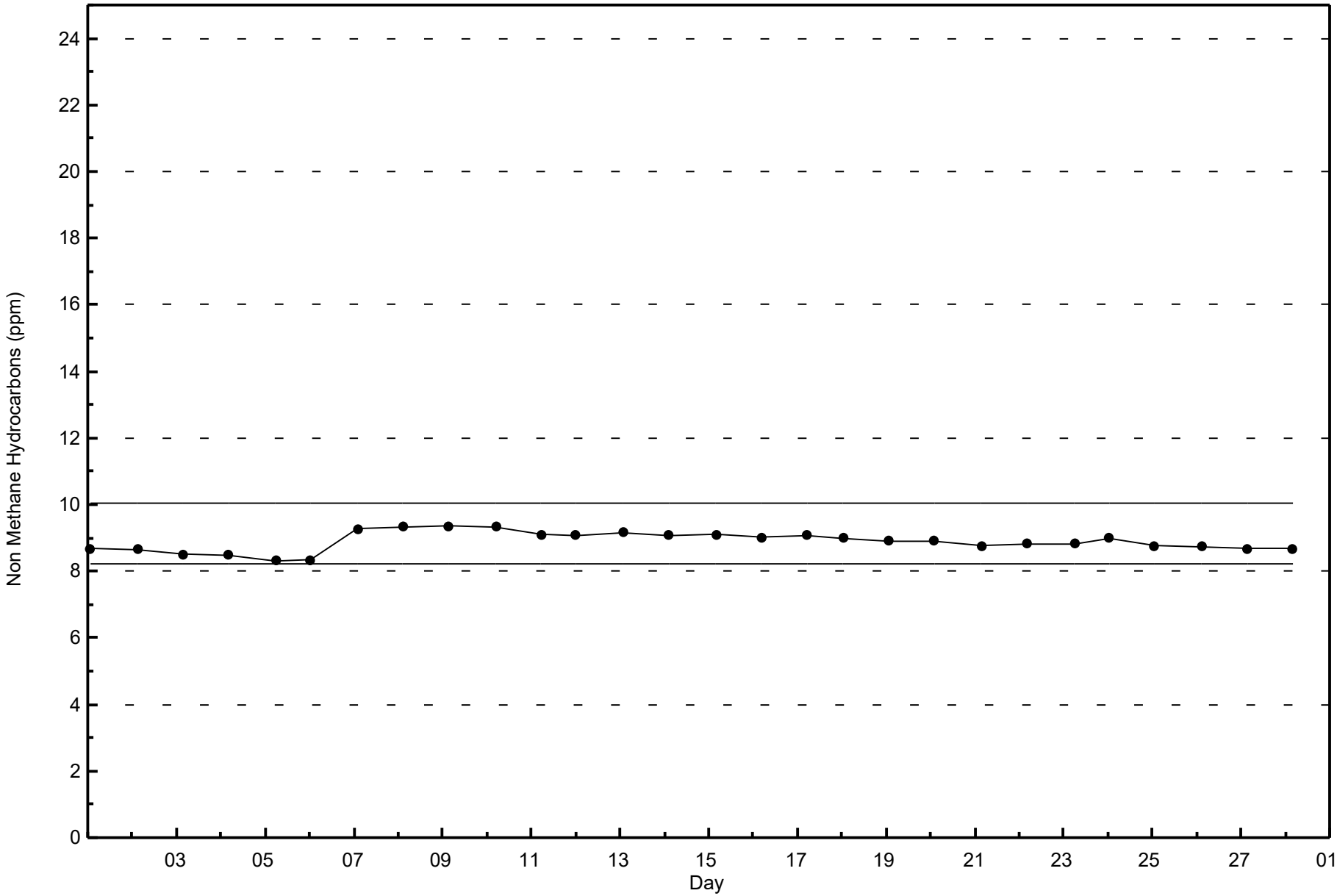


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Barge Landing - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Barge Landing - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 4.8 ppm on Feb 21 11:00 Maximum Daily Average: 2.6 ppm on Feb 21

Minimum Value: 1.8 ppm on Feb 6 02:00 Minimum Daily Average: 1.9 ppm on Feb 5
Maximum Diurnal Average: 2.2 ppm at hour 10 Minimum Diurnal Average: 2.0 ppm at hour 16
Monthly Average: 2.08 ppm Percentiles: P_1 = 1.8 P_{10} = 1.9 Q_1 = 1.9 Median = 2.0 Q_3 = 2.2 P_{90} = 2.3 P_{99} = 3.1

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
2-Feb	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
3-Feb	1.9	1.9	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.8	1.8	1.8	1.8	1.9	2.0
4-Feb	1.8	1.9	1.9	2.0	Z	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.9	2.0
5-Feb	1.9	1.9	1.9	1.9	1.9	Z	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9
6-Feb	Z	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	C	C	C	C	C	2.0	2.0	2.1	2.3	2.2	2.2	2.0	2.0	2.0	2.0	2.3
7-Feb	2.0	Z	2.0	2.0	2.0	2.0	2.0	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	2.1
8-Feb	2.0	2.1	Z	2.1	2.2	2.2	2.2	2.2	2.3	2.4	2.4	2.4	2.3	2.2	2.2	2.2	2.4	2.4	2.9	2.2	2.0	2.0	2.0	2.0	2.2	2.9
9-Feb	2.0	2.0	2.0	Z	2.1	2.1	2.0	2.3	2.3	2.2	2.2	2.2	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.3
10-Feb	2.0	2.1	2.1	2.1	Z	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.3	2.0	2.2	2.2	2.2	2.3	2.2	2.1	2.3
11-Feb	2.2	2.2	2.4	2.3	2.3	Z	2.1	2.2	2.2	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.2	2.2	2.2	2.3	2.5	2.3	2.2	2.2	2.2	2.5
12-Feb	Z	2.2	2.2	2.1	2.1	2.2	2.2	2.1	2.0	2.1	2.0	2.0	2.0	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.2
13-Feb	2.1	Z	2.2	2.3	2.5	2.3	2.1	2.2	2.3	2.3	2.4	2.5	2.2	2.1	2.1	2.2	2.2	2.2	2.4	2.4	2.1	2.2	2.1	2.1	2.2	2.5
14-Feb	2.2	2.3	Z	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.2	2.2	2.3	2.0	2.3	2.4	2.2	2.1	2.4
15-Feb	2.2	2.2	2.3	Z	2.4	2.4	2.5	2.4	2.4	2.4	2.3	2.1	2.1	2.0	1.9	1.9	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.3	2.2	2.5
16-Feb	2.4	2.5	2.3	2.3	Z	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.5
17-Feb	1.9	2.0	2.0	2.0	2.0	Z	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0
18-Feb	Z	2.0	1.9	1.9	1.9	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.1
19-Feb	2.0	Z	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	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	2.0
20-Feb	1.9	2.0	Z	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.1	2.1	2.1	2.6	3.6	3.6	2.2	3.6
21-Feb	3.3	3.1	2.8	Z	2.7	2.7	2.8	2.9	3.3	4.3	4.8	2.6	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.2	2.6	4.8
22-Feb	2.2	2.1	2.0	2.0	Z	2.1	2.3	2.2	2.3	2.5	2.6	2.6	2.6	2.6	2.5	2.3	2.2	2.2	2.2	2.2	2.6	2.7	2.8	2.6	2.4	2.8
23-Feb	2.6	2.9	2.9	2.8	2.6	Z	2.6	2.8	3.1	2.3	2.1	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.2	2.0	1.9	1.9	1.9	1.9	2.3	3.1
24-Feb	Z	1.9	1.9	1.9	2.2	2.2	2.0	2.0	2.0	2.0	2.1	2.1	2.3	2.3	2.1	2.0	2.0	2.0	2.1	2.1	2.4	2.4	2.2	2.0	2.1	2.4
25-Feb	2.0	Z	2.0	1.9	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.0	2.1	2.2	2.1	2.0	2.1	2.2	2.1	2.0	2.1	2.0	2.0	2.3	2.1	2.3
26-Feb	2.4	2.2	Z	2.3	2.2	2.2	2.2	2.5	2.3	2.2	2.1	2.2	2.0	2.1	2.4	2.1	2.1	2.0	2.2	2.3	2.2	2.2	2.1	2.1	2.2	2.5
27-Feb	2.2	2.1	2.2	Z	2.1	2.0	2.2	2.2	2.3	2.4	2.1	2.0	2.0	2.1	2.0	2.1	2.0	2.0	1.9	2.0	2.0	1.9	1.9	2.0	2.1	2.4
28-Feb	2.0	1.9	1.9	1.9	Z	1.9	1.9	2.1	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1
	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.1	2.1	2.1	Diurnal Average	
	3.3	3.1	2.9	2.8	2.7	2.7	2.8	2.9	3.3	4.3	4.8	2.6	2.6	2.6	2.5	2.3	2.4	2.4	2.9	2.4	2.6	2.7	3.6	3.6	Diurnal Maximum	

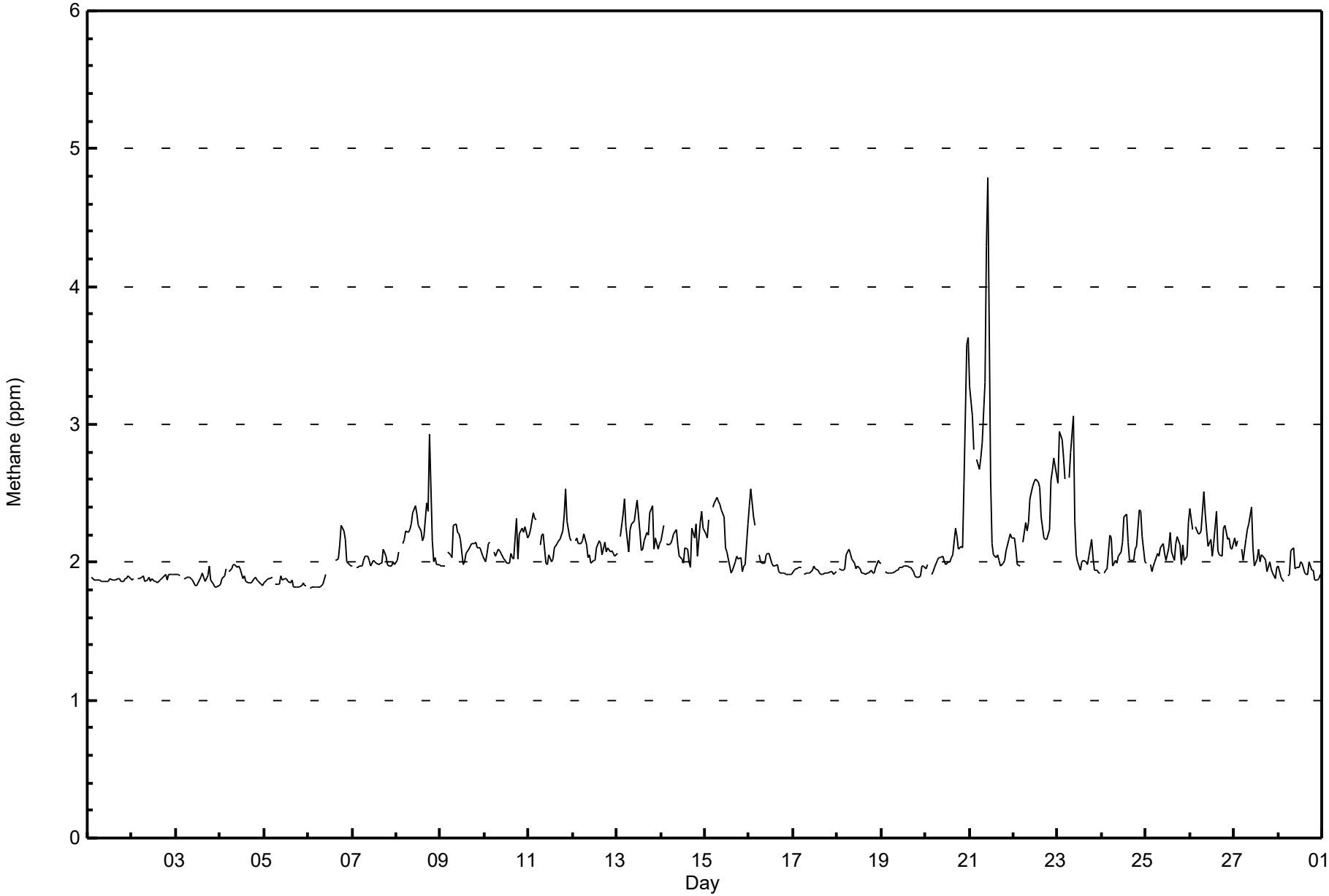
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Barge Landing - February 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	368	57.59	57.59
2.1 - 3.0	263	41.16	98.75
3.1 - 10.0	8	1.25	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Barge Landing - February 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	44	16	9	8	7	24	52	58	45	34	11	4	2	5	10	367
2.1 - 3.0	43	44	15	9	5	8	7	33	15	17	9	5	6	5	7	35	263
3.1 - 10.0	1	0	1	0	0	1	0	1	1	0	0	1	0	0	0	2	8
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	82	88	32	18	13	16	31	86	74	62	43	17	10	7	12	47	638

Total Number of Valid Hours: 638

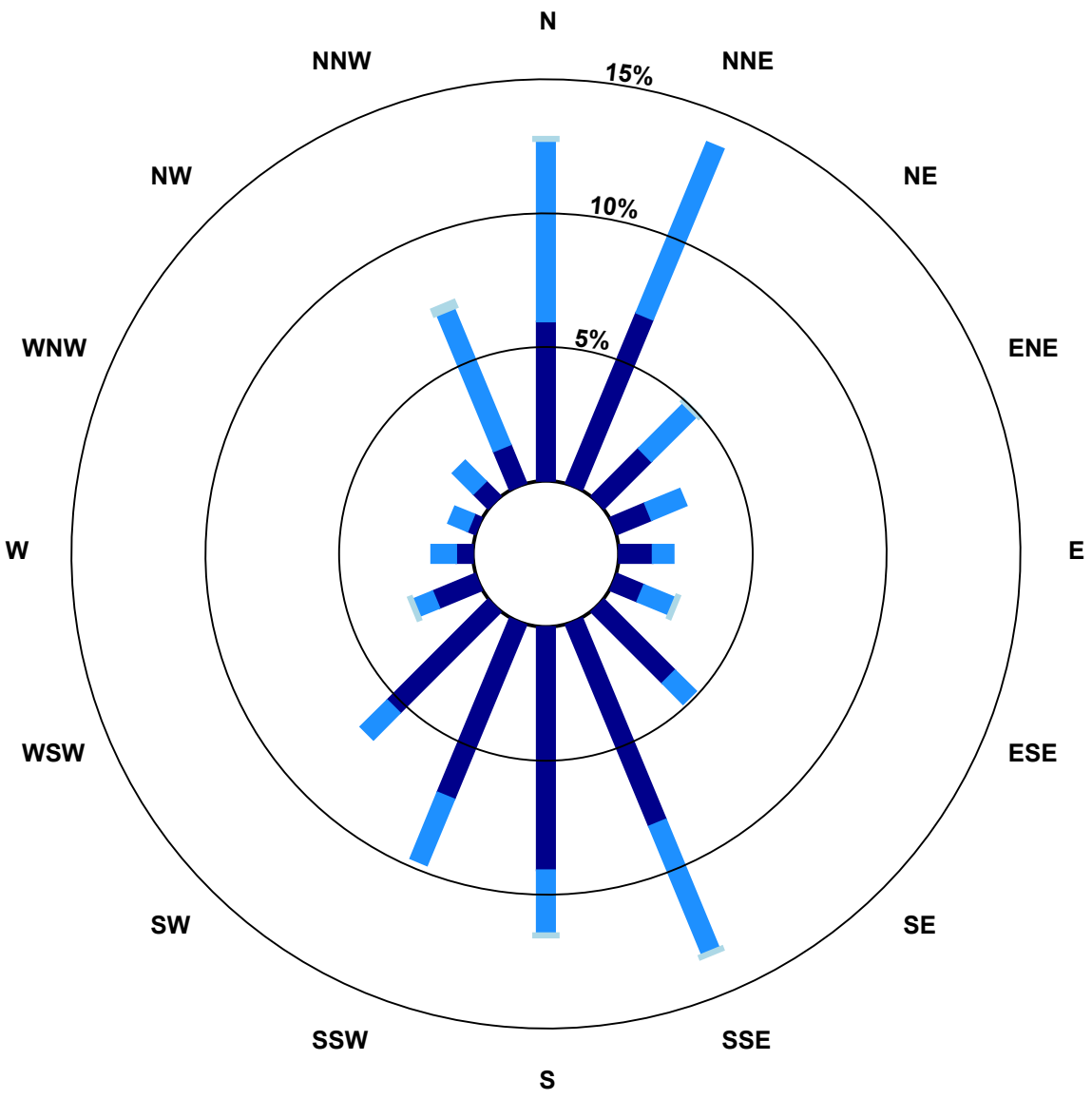
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Methane (CH_4) - ppm

Barge Landing



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

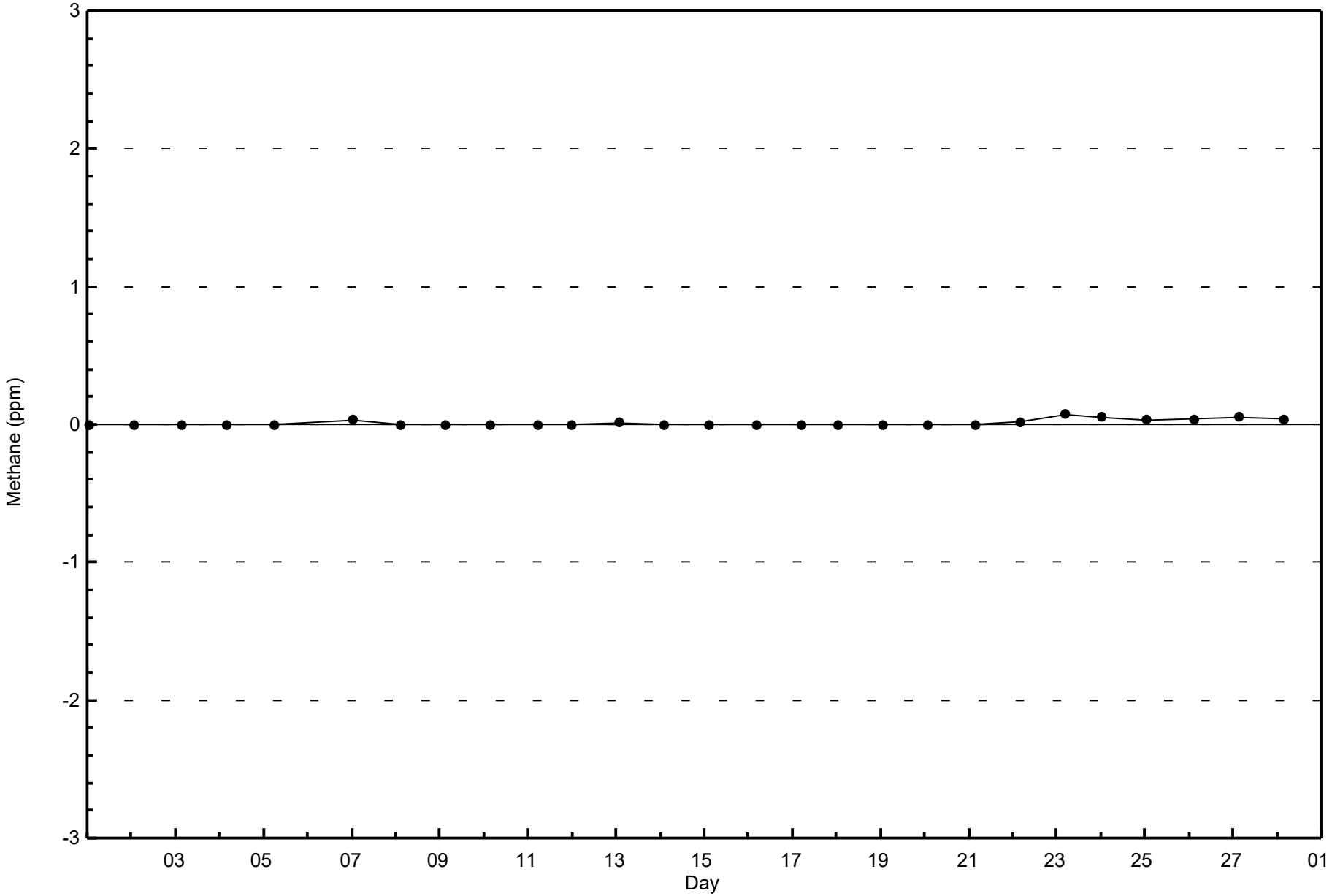
Total Number of Valid Hours: 638

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Barge Landing - February 2025

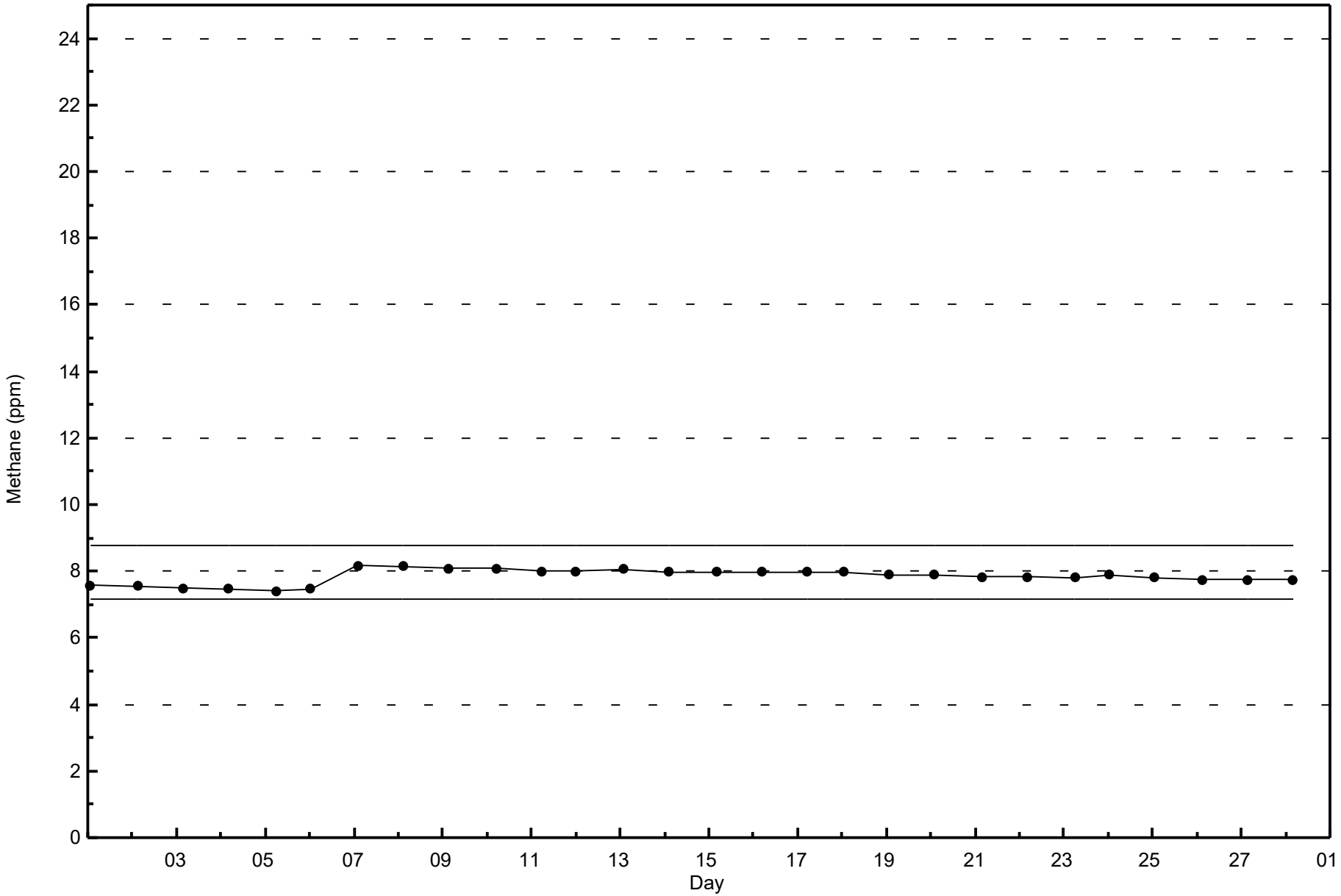


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Barge Landing - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Barge Landing - February 2025

Maximum Value: 182.6 ppb on Feb 21 11:00

Maximum Daily Average: 39.0 ppb on Feb 21

Minimum Value: 0.0 ppb on Feb 5 00:00

Minimum Daily Average: 0.4 ppb on Feb 1

Maximum Diurnal Average: 30.6 ppb at hour 9

Minimum Diurnal Average: 4.3 ppb at hour 17

Monthly Average: 12.16 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.6 Median = 3.9 Q_3 = 12.2 P_{90} = 33.9 P_{99} = 98.2

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.1	0.0	0.1	0.0	0.0	Z	0.1	0.1	0.3	0.5	0.7	1.5	1.4	1.4	0.9	0.9	0.7	0.2	0.2	0.2	0.2	0.3	0.3	0.1	0.4	1.5
2-Feb	Z	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.9	2.3	3.2	2.5	2.0	3.2	3.3	2.6	1.2	2.1	1.7	0.2	0.1	4.1	10.1	12.5	2.3	12.5
3-Feb	33.7	Z	43.0	48.3	26.9	67.5	109.5	92.3	80.4	58.6	1.6	1.9	1.7	5.4	6.7	3.3	4.8	15.1	33.5	13.3	1.0	0.1	0.7	5.1	28.5	109.5
4-Feb	12.3	1.2	Z	3.1	2.3	12.1	5.0	4.2	3.9	4.9	5.2	3.6	2.0	2.4	1.6	1.1	0.5	0.0	0.1	0.1	0.1	0.0	0.0	0.0	2.9	12.3
5-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.2	1.3	2.0	3.0	3.5	2.0	1.2	2.4	0.2	0.0	0.0	0.0	2.4	0.9	0.1	0.0	0.8	3.5
6-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	4.4	3.1	1.8	2.4	3.6	2.9	3.0	2.8	0.5	0.1	0.3	0.2	3.1	0.1	0.0	0.0	1.2	4.4
7-Feb	0.0	0.0	0.9	0.0	0.0	Z	35.1	73.0	86.2	30.1	1.9	2.6	2.0	1.6	1.3	0.4	0.1	0.0	0.1	1.2	1.9	7.5	16.3	2.7	11.5	86.2
8-Feb	Z	11.2	10.1	9.2	29.6	36.9	75.4	84.0	77.9	40.6	28.5	25.8	19.5	16.5	13.3	10.8	27.6	18.1	90.5	10.4	1.6	0.2	0.2	0.2	27.7	90.5
9-Feb	0.2	Z	0.2	0.1	3.3	0.1	4.7	28.0	37.9	46.2	16.1	14.3	5.0	5.7	10.5	10.8	14.7	27.8	63.2	88.8	58.2	67.3	43.2	10.3	24.2	88.8
10-Feb	6.7	20.8	Z	8.9	4.6	4.5	5.6	12.9	9.8	9.2	6.4	7.1	5.5	3.3	2.1	1.3	1.8	22.0	0.4	5.5	4.4	6.8	4.0	0.2	6.7	22.0
11-Feb	5.6	8.1	9.1	Z	12.9	5.0	1.5	4.9	21.0	4.1	C	C	C	C	C	10.7	5.4	13.3	32.8	61.4	56.9	20.5	5.0	3.5	15.6	61.4
12-Feb	3.8	4.3	11.7	8.0	Z	11.8	20.8	24.8	13.3	12.6	9.3	10.0	7.3	11.1	10.8	15.4	3.7	6.1	1.3	0.1	0.5	0.1	0.1	0.1	8.1	24.8
13-Feb	0.1	1.0	3.1	3.5	8.5	Z	0.4	4.0	12.2	23.1	40.9	47.3	26.8	12.6	13.8	5.8	8.0	11.0	4.7	22.1	9.8	15.3	9.2	21.1	13.2	47.3
14-Feb	Z	32.2	13.2	7.1	7.9	10.1	22.9	105.5	155.8	35.9	5.9	8.0	5.9	15.4	15.0	6.1	3.0	31.4	45.5	49.0	3.0	24.8	48.7	52.6	30.6	155.8
15-Feb	78.9	Z	61.9	61.8	67.3	95.4	107.4	92.2	82.7	56.9	47.2	17.9	15.8	4.2	0.3	1.2	2.7	1.4	1.1	4.0	0.1	0.0	0.2	10.1	35.2	107.4
16-Feb	25.6	37.5	Z	31.9	33.8	45.9	26.6	43.4	45.5	33.2	19.0	23.3	17.3	12.3	6.9	5.5	1.1	0.7	1.5	0.6	0.3	0.3	0.2	0.2	17.9	45.9
17-Feb	0.6	1.4	1.8	Z	2.4	0.6	1.5	0.6	1.4	1.0	2.4	7.0	5.8	4.3	2.3	0.8	0.5	1.0	5.7	10.5	2.2	1.4	0.6	1.9	2.5	10.5
18-Feb	5.9	6.1	8.5	3.5	Z	3.3	6.0	7.4	10.6	8.3	5.6	12.9	6.9	3.4	2.8	4.0	1.7	7.5	30.3	2.2	2.8	1.1	3.0	1.0	6.3	30.3
19-Feb	1.1	2.5	1.0	1.5	6.8	Z	0.4	24.3	34.3	4.9	5.0	5.5	7.8	7.0	3.6	3.3	1.6	1.1	0.5	0.3	0.2	0.1	0.1	0.1	4.9	34.3
20-Feb	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.5	0.6	1.4	1.9	3.2	3.4	4.0	5.2	8.6	13.7	2.7	19.3	96.3	99.3	11.3	99.3
21-Feb	90.1	Z	73.0	57.3	51.5	43.1	39.3	63.3	84.7	126.6	182.6	50.8	9.3	6.2	3.3	4.2	3.1	0.9	0.3	0.6	0.4	0.7	2.1	2.9	39.0	182.6
22-Feb	0.7	0.1	Z	0.0	0.3	0.5	7.4	15.4	15.2	22.6	24.4	28.0	26.5	23.5	23.2	16.2	6.0	18.7	16.9	25.6	27.3	24.4	31.8	20.0	16.3	31.8
23-Feb	7.6	2.6	5.7	Z	0.7	3.6	18.2	25.4	35.5	6.0	2.2	1.4	0.8	2.5	5.9	2.5	1.4	0.5	0.2	0.1	0.1	0.0	0.0	0.0	5.3	35.5
24-Feb	0.0	0.0	0.0	0.1	Z	0.9	0.1	1.8	1.6	5.4	8.9	10.3	16.2	17.0	8.2	1.9	1.3	1.2	0.7	0.4	11.5	16.6	5.7	0.2	4.8	17.0
25-Feb	0.0	0.1	0.1	0.1	0.1	Z	2.1	5.3	6.2	10.2	11.4	5.4	12.0	18.5	4.9	5.1	11.1	13.4	6.1	0.1	0.3	0.1	0.1	0.5	4.9	18.5
26-Feb	Z	10.6	8.0	7.9	9.3	14.4	8.6	25.3	18.2	8.3	9.3	18.1	8.7	14.2	39.3	14.0	9.0	4.1	5.9	7.8	1.5	1.6	4.7	5.8	11.1	39.3
27-Feb	9.4	Z	0.4	0.6	2.0	0.5	11.1	14.9	10.9	9.4	6.5	2.4	6.2	11.0	3.9	2.2	1.8	0.8	0.1	0.3	0.2	0.2	0.0	0.1	4.1	14.9
28-Feb	0.1	0.0	Z	0.0	0.1	0.0	0.3	7.3	6.1	4.6	7.2	6.6	11.3	8.9	5.7	4.5	3.6	2.8	0.4	3.4	0.7	0.9	5.6	1.3	3.5	11.3
	12.3	6.1	11.0	10.5	11.3	15.5	18.2	27.2	30.6	20.4	16.9	11.9	8.6	8.1	7.3	5.1	4.3	7.4	12.6	11.5	6.9	7.7	10.3	9.0	Diurnal Average	
	90.1	37.5	73.0	61.8	67.3	95.4	109.5	105.5	155.8	126.6	182.6	50.8	26.8	23.5	39.3	16.2	27.6	31.4	90.5	88.8	58.2	67.3	96.3	99.3	Diurnal Maximum	

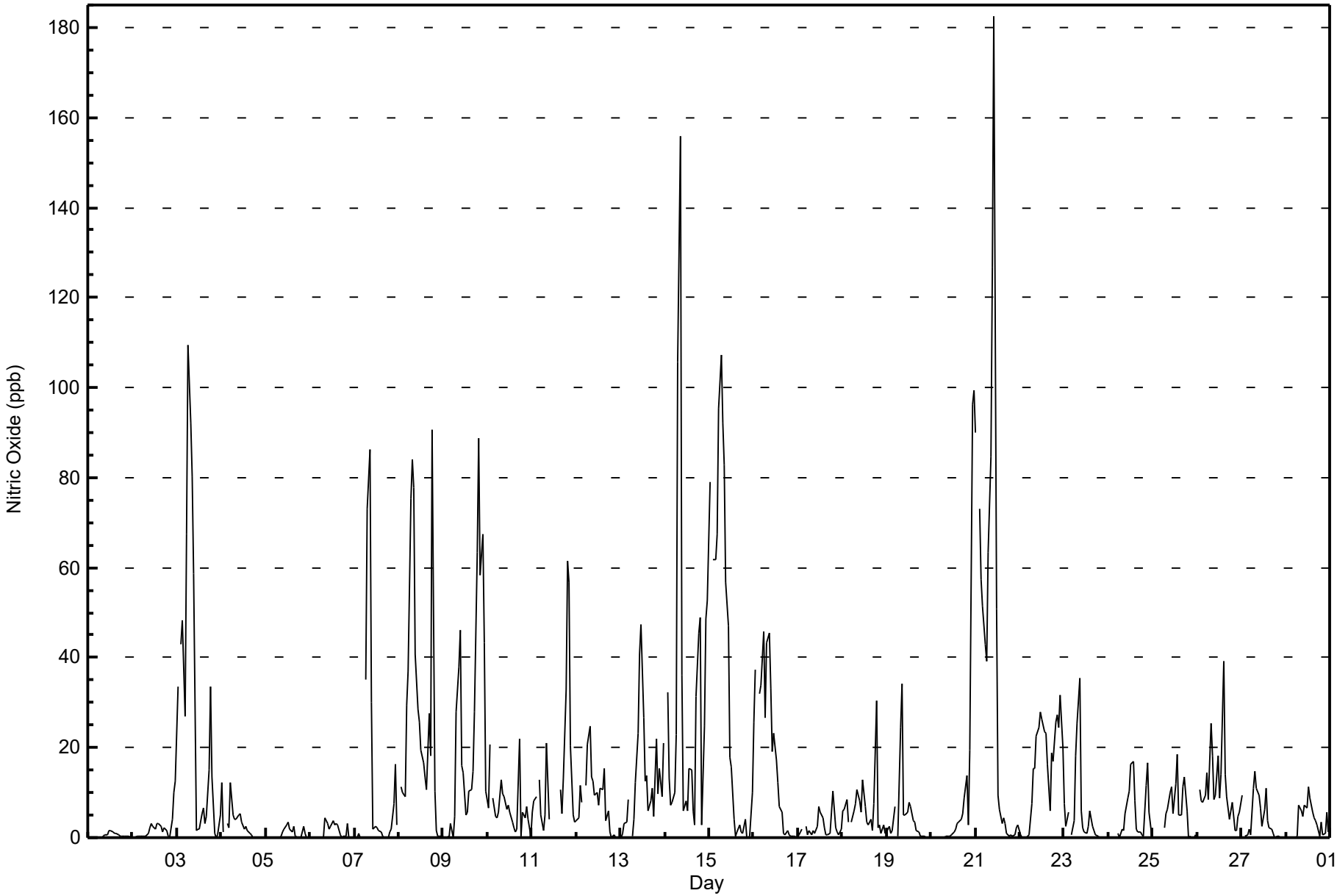
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Barge Landing - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	531	83.10	83.10
21 - 40	53	8.29	91.39
11 - 80	37	5.79	97.18
81 - 159	17	2.66	99.84
> 159	1	0.16	100.00

Total Number of Valid Hours: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Barge Landing - February 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	77	85	26	13	8	10	24	66	67	53	32	15	4	5	9	36	530
21 - 40	5	3	3	2	1	2	4	7	5	5	6	1	1	1	1	6	53
11 - 80	0	2	1	2	2	0	3	8	2	4	3	2	2	1	1	4	37
81 - 159	2	0	1	0	0	1	0	5	1	0	2	1	2	1	0	1	17
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Totals	84	90	31	17	11	13	31	86	75	62	43	19	9	8	11	48	638

Total Number of Valid Hours: 638

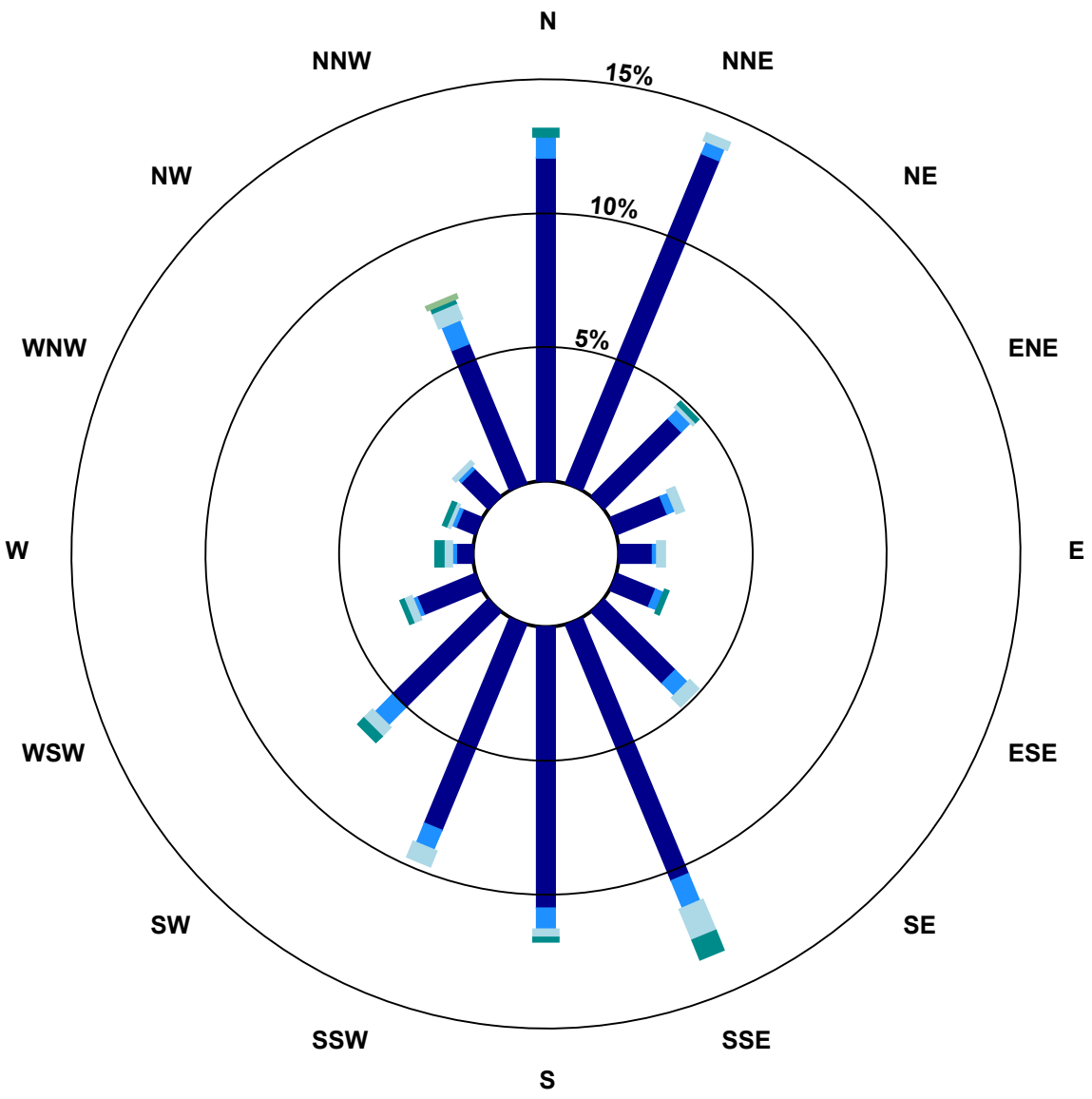
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitric Oxide (NO) - ppb

Barge Landing



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

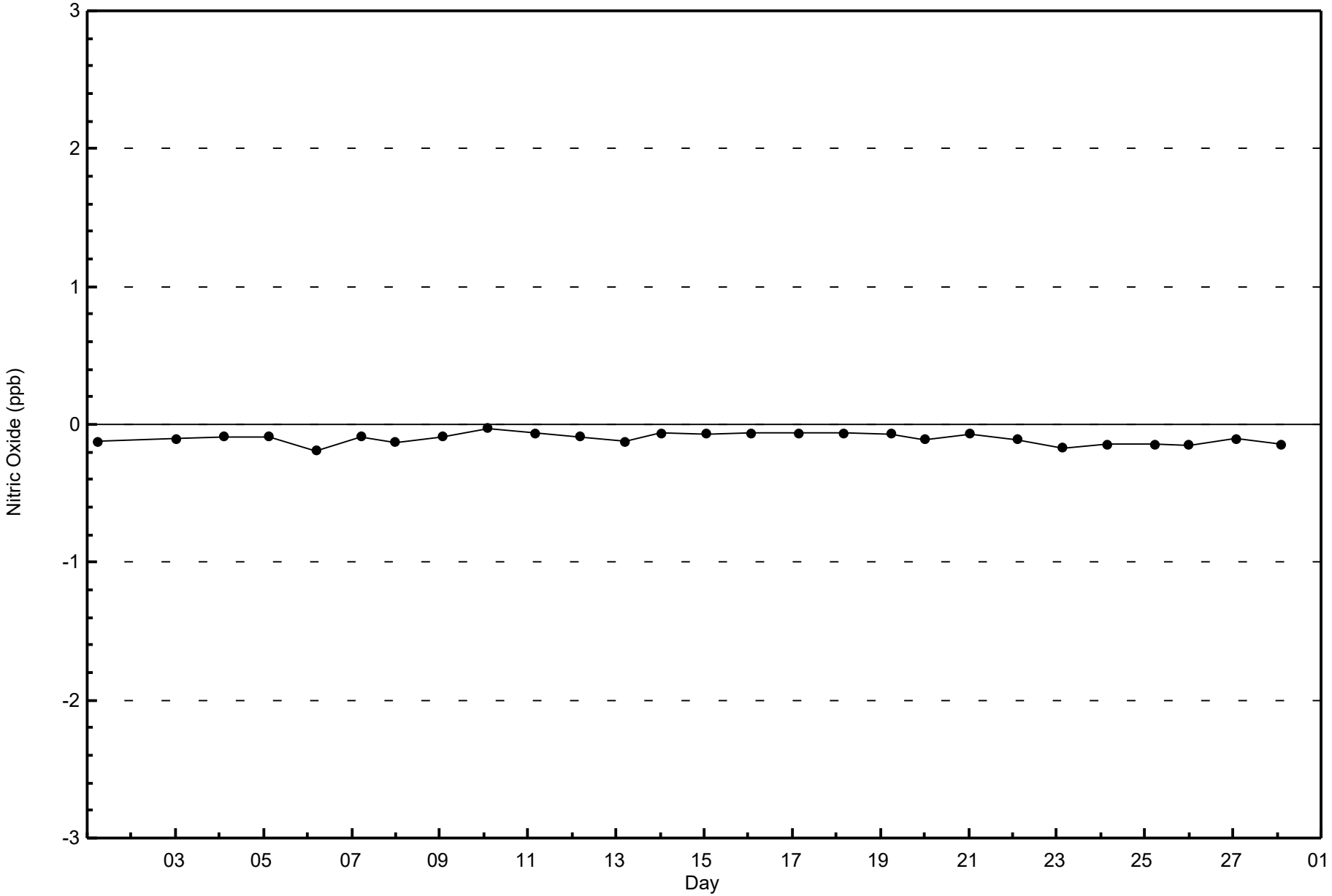
Total Number of Valid Hours: 638

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Barge Landing - February 2025

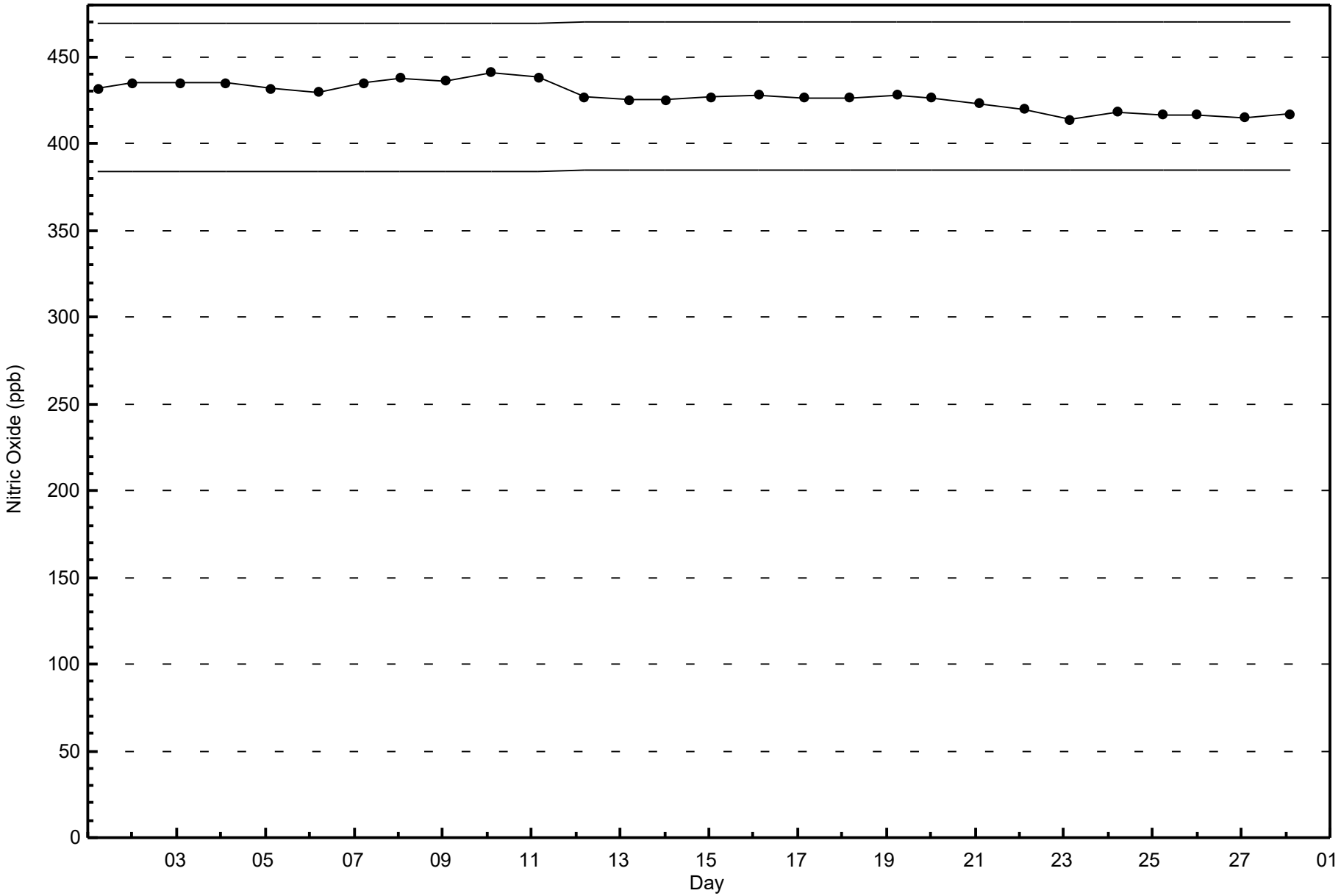


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Barge Landing - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Barge Landing - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 50.1 ppb on Feb 21 11:00
Maximum Daily Average: 31.9 ppb on Feb 11

Minimum Value: 0.6 ppb on Feb 6 07:00
Maximum Diurnal Average: 25.7 ppb at hour 8
Monthly Average: 18.10 ppb
Minimum Daily Average: 6.2 ppb on Feb 1
Minimum Diurnal Average: 10.4 ppb at hour 15
Percentiles: P_1 = 1.3 P_{10} = 4.7 Q_1 = 8.4 Median = 16.2 Q_3 = 27.1 P_{90} = 32.7 P_{99} = 45.8

Hours in Service: 672
Hours of Data: 639
Hours of Missing Data: 33
Hours of Calibration: 33
Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	7.9	6.6	9.0	7.4	8.6	Z	7.3	5.5	4.7	4.1	3.9	4.3	4.5	5.1	4.6	5.9	7.1	7.2	6.6	6.8	5.9	7.9	7.7	4.6	6.2	9.0
2-Feb	Z	6.4	12.0	12.0	10.6	10.7	9.8	6.1	6.2	9.9	7.5	5.0	4.1	5.9	6.9	9.1	12.3	18.9	15.4	12.3	17.4	22.0	26.1	25.4	11.8	26.1
3-Feb	28.7	Z	32.4	32.5	31.6	39.7	47.4	47.7	39.8	30.7	3.8	3.7	3.3	8.8	12.5	11.5	22.7	36.2	39.5	23.5	13.0	2.6	6.8	23.0	23.5	47.7
4-Feb	22.6	19.5	Z	26.6	23.4	28.7	25.6	25.7	23.6	16.1	11.5	7.1	4.2	5.4	4.7	5.4	7.1	8.3	13.1	13.1	11.3	9.3	4.7	1.9	13.9	28.7
5-Feb	6.8	10.3	8.9	Z	10.4	9.8	4.6	5.6	6.6	10.6	9.4	9.2	8.8	5.5	4.7	10.3	2.9	3.0	2.9	3.1	12.1	14.5	5.3	1.5	7.3	14.5
6-Feb	0.8	0.9	0.9	1.8	Z	0.7	0.6	1.2	18.6	15.4	6.6	7.1	8.0	6.1	7.0	8.7	6.1	10.9	22.4	24.8	24.2	4.4	5.7	6.6	8.2	24.8
7-Feb	4.9	4.1	14.2	5.1	2.7	Z	37.1	42.0	39.5	20.4	5.1	5.2	3.8	3.1	3.5	2.4	1.8	6.8	9.7	14.2	12.9	15.5	36.0	15.5	13.3	42.0
8-Feb	Z	32.4	30.9	32.1	44.0	42.9	46.9	45.6	46.0	34.3	27.8	23.3	19.2	18.9	19.8	23.6	39.4	42.4	47.2	21.0	11.5	10.7	7.2	8.0	29.4	47.2
9-Feb	5.6	Z	7.0	11.5	20.1	11.6	18.6	35.1	36.5	31.3	16.9	13.5	5.7	6.8	12.0	15.7	23.2	32.0	38.6	42.0	35.3	36.2	31.9	28.1	22.4	42.0
10-Feb	27.6	33.5	Z	28.7	25.5	21.1	25.5	30.2	27.1	20.2	12.3	12.2	10.4	7.1	6.3	5.6	12.2	32.0	15.8	29.6	23.8	31.5	28.8	21.3	21.2	33.5
11-Feb	32.7	34.0	34.1	Z	35.3	28.9	26.0	32.3	33.6	15.2	C	C	C	C	C	19.9	23.2	36.0	39.5	43.9	41.6	33.9	31.6	31.9	31.9	43.9
12-Feb	31.8	30.6	29.2	25.9	Z	26.8	28.5	29.5	24.7	20.1	13.9	11.2	8.7	13.6	16.2	21.9	18.1	29.7	23.3	17.8	19.1	21.6	23.3	20.3	22.0	31.8
13-Feb	15.6	27.5	30.1	31.8	32.5	Z	19.0	27.4	28.9	25.9	27.2	26.2	20.4	13.8	16.3	12.1	19.7	29.3	26.4	31.6	29.9	30.5	29.1	30.5	25.3	32.5
14-Feb	Z	30.0	28.7	27.0	26.7	25.5	26.9	41.3	49.4	18.2	6.1	7.3	6.4	12.5	14.5	10.1	12.3	31.4	35.6	37.4	22.6	31.9	34.6	32.6	24.7	49.4
15-Feb	37.0	Z	38.7	35.0	34.2	39.8	41.9	38.3	35.9	31.3	25.6	16.7	16.9	6.4	1.1	5.2	13.9	21.5	27.3	25.3	3.2	8.3	12.8	32.7	23.9	41.9
16-Feb	36.7	37.0	Z	35.5	33.4	36.5	34.2	36.5	35.8	27.4	18.5	19.2	16.0	13.1	11.1	12.1	6.8	7.9	9.9	7.2	3.5	2.2	1.7	3.1	19.4	37.0
17-Feb	10.1	18.7	20.4	Z	17.5	14.3	8.4	5.1	5.4	3.1	4.2	8.8	7.4	6.5	4.3	1.9	2.4	9.0	22.9	23.7	13.5	8.6	8.3	14.2	10.4	23.7
18-Feb	24.3	23.5	22.0	16.8	Z	23.3	24.7	26.4	22.7	14.3	8.1	13.0	8.7	5.5	5.3	8.5	8.6	21.9	31.4	13.2	16.7	16.2	28.3	26.9	17.8	31.4
19-Feb	26.3	29.2	17.6	15.0	21.2	Z	12.9	29.2	29.8	10.7	8.2	8.2	10.7	11.2	8.1	10.8	11.1	12.6	6.1	3.2	2.7	3.2	10.4	16.5	13.7	29.8
20-Feb	Z	9.9	4.1	3.9	4.9	4.9	3.7	4.1	4.1	4.5	4.6	4.3	5.3	4.3	6.9	9.4	15.6	22.7	28.6	31.8	27.6	32.1	39.5	38.7	13.7	39.5
21-Feb	37.4	Z	31.3	30.6	31.0	29.7	26.5	30.3	33.4	42.2	50.1	26.4	16.8	13.8	10.5	15.0	14.1	11.3	15.9	22.3	17.5	20.3	21.8	30.1	25.1	50.1
22-Feb	29.2	18.3	Z	3.5	15.1	19.6	30.5	33.8	32.0	31.2	28.9	26.1	24.9	25.9	25.0	22.6	17.9	24.0	29.4	31.5	32.1	30.0	28.8	28.4	25.6	33.8
23-Feb	24.7	24.5	24.2	Z	22.5	21.6	21.4	19.8	19.5	13.8	8.0	5.6	3.8	6.8	10.6	9.3	9.4	11.5	17.8	10.1	5.3	4.7	4.7	5.7	13.3	24.7
24-Feb	5.4	5.1	7.5	12.8	Z	25.6	15.4	21.2	13.9	15.0	16.0	15.1	18.5	18.7	12.4	7.8	9.1	14.4	19.6	17.1	20.0	30.8	27.8	10.9	15.7	30.8
25-Feb	8.7	7.6	12.7	8.4	8.6	Z	16.6	17.6	19.3	19.9	16.8	11.8	19.1	21.2	11.3	12.0	23.8	31.5	29.4	13.1	24.1	14.0	16.5	25.0	16.9	31.5
26-Feb	Z	29.7	28.7	28.3	28.1	26.7	24.6	26.6	21.0	16.0	13.0	16.4	10.0	14.4	26.8	18.3	19.1	20.0	28.3	29.2	23.6	23.8	29.6	30.0	23.1	30.0
27-Feb	30.4	Z	27.0	26.5	28.3	17.5	28.6	28.4	23.3	18.4	12.6	6.7	7.2	13.3	8.9	8.6	10.7	11.3	7.3	10.7	11.7	11.2	6.5	12.7	16.0	30.4
28-Feb	12.4	5.1	Z	2.9	10.4	9.7	13.8	26.9	25.5	16.6	15.9	13.6	16.4	13.7	9.7	10.3	12.7	21.3	16.2	16.9	10.6	9.9	19.1	14.3	14.1	26.9
	20.3	19.3	20.5	19.2	21.9	22.4	22.4	25.7	25.2	19.2	14.2	12.1	10.7	10.6	10.4	11.2	13.7	20.2	22.4	20.6	17.6	17.4	19.1	19.3	Diurnal Average	
	37.4	37.0	38.7	35.5	44.0	42.9	47.4	47.7	49.4	42.2	50.1	26.4	24.9	25.9	26.8	23.6	39.4	42.4	47.2	43.9	41.6	36.2	39.5	38.7	Diurnal Maximum	

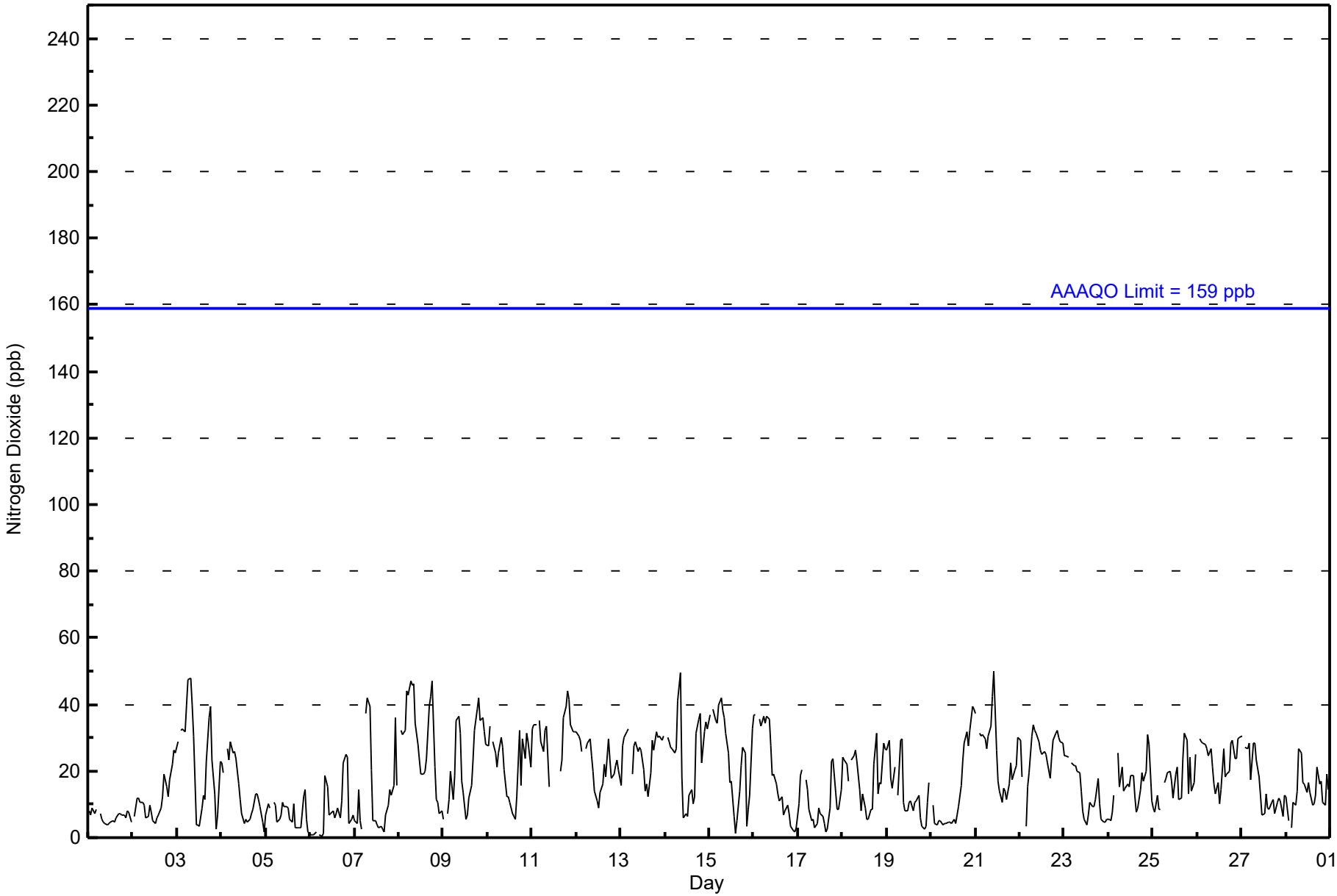
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Barge Landing - February 2025



Nitrogen Dioxide (NO_2) - ppb
Barge Landing - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	386	60.41	60.41
21 - 40	235	36.78	97.18
11 - 80	18	2.82	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Barge Landing - February 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	52	70	18	7	7	5	19	45	54	41	30	11	2	2	6	17	386
21 - 40	31	18	12	10	4	8	12	36	20	20	12	7	5	5	5	29	234
11 - 80	1	2	1	0	0	0	0	5	1	1	1	1	2	1	0	2	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	84	90	31	17	11	13	31	86	75	62	43	19	9	8	11	48	638

Total Number of Valid Hours: 638

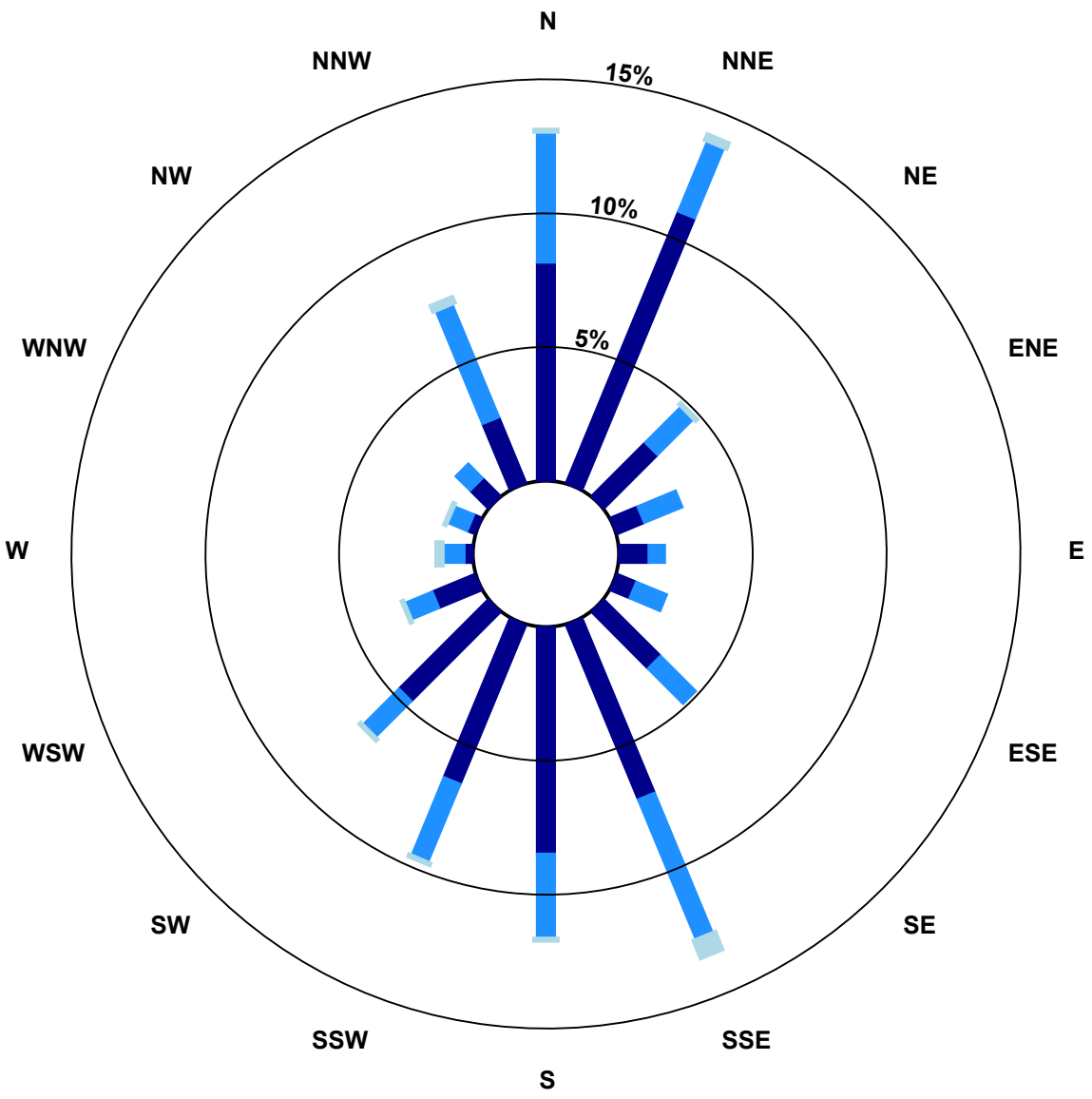
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Dioxide (NO_2) - ppb

Barge Landing



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

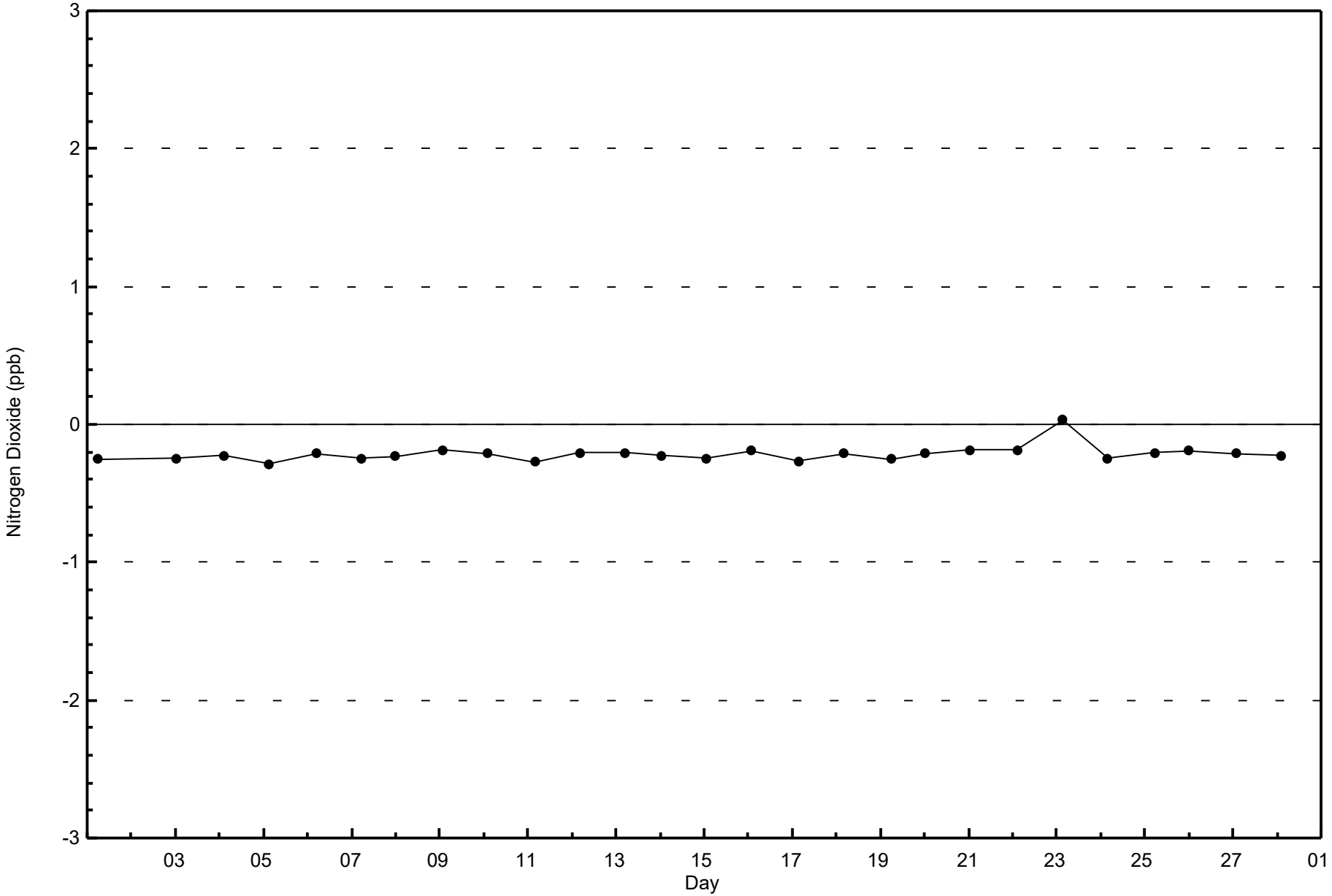
Total Number of Valid Hours: 638

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Barge Landing - February 2025

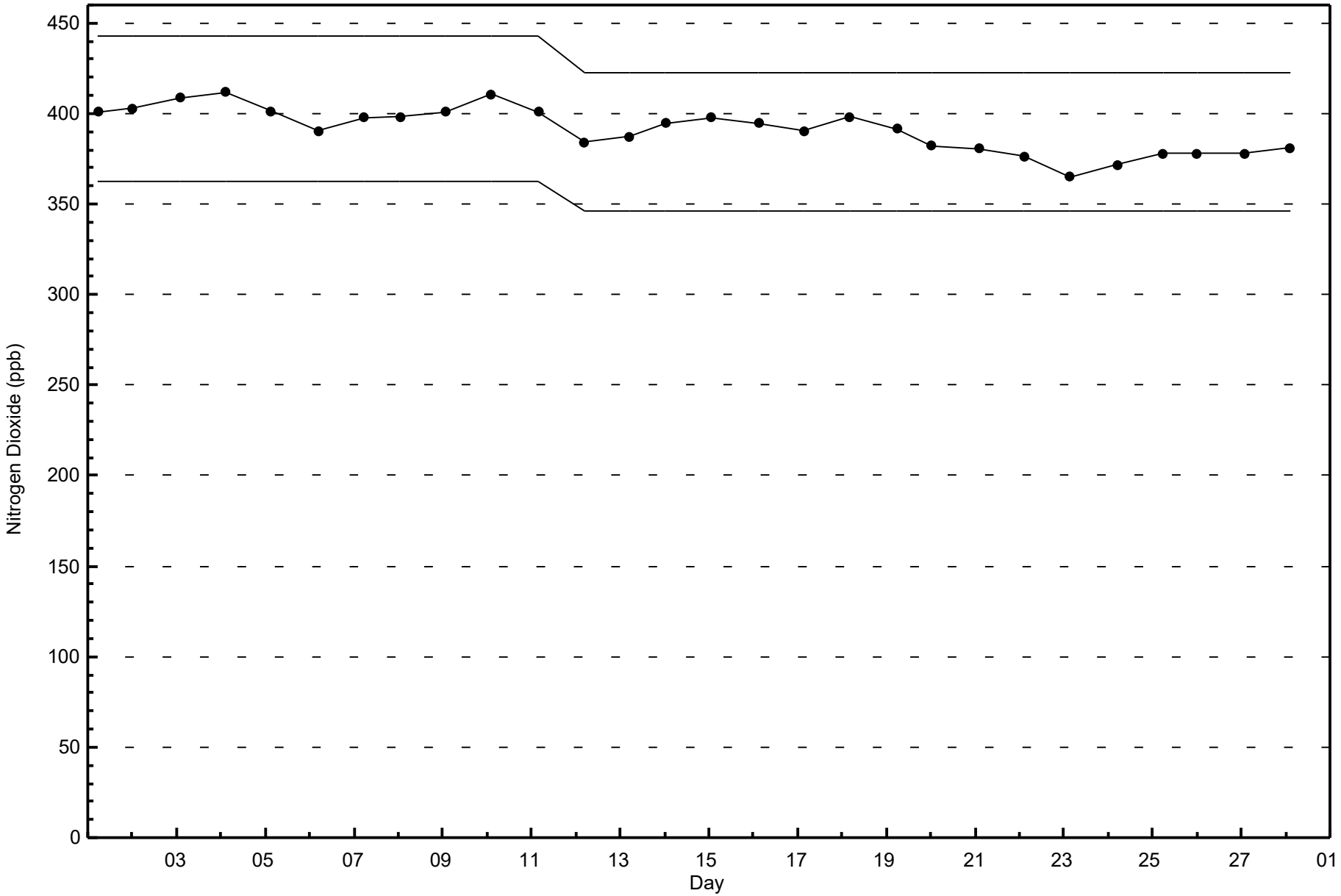


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Barge Landing - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Barge Landing - February 2025

Maximum Value: 232.7 ppb on Feb 21 11:00

Maximum Daily Average: 64.1 ppb on Feb 21

Minimum Value: 0.6 ppb on Feb 6 07:00

Minimum Daily Average: 6.7 ppb on Feb 1

Maximum Diurnal Average: 55.9 ppb at hour 9

Minimum Diurnal Average: 16.3 ppb at hour 16

Monthly Average: 30.26 ppb

Percentiles: P_1 = 1.4 P_{10} = 5.5 Q_1 = 10.3 Median = 21.0 Q_3 = 37.3 P_{90} = 67.1 P_{99} = 139.2

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	8.0	6.6	9.1	7.4	8.6	Z	7.4	5.6	5.0	4.6	4.6	5.8	5.9	6.5	5.5	6.8	7.8	7.4	6.8	7.0	6.1	8.2	8.0	4.7	6.7	9.1
2-Feb	Z	6.5	12.2	12.2	10.8	11.0	10.1	6.4	7.1	12.2	10.7	7.5	6.1	9.1	10.2	11.7	13.5	21.0	17.1	12.5	17.5	26.1	36.2	37.9	14.2	37.9
3-Feb	62.4	Z	75.4	80.8	58.5	107.2	156.9	140.0	120.2	89.3	5.4	5.6	5.0	14.2	19.2	14.8	27.5	51.3	73.0	36.8	14.0	2.7	7.5	28.1	52.0	156.9
4-Feb	34.9	20.7	Z	29.7	25.7	40.8	30.6	29.9	27.5	21.0	16.7	10.7	6.2	7.8	6.3	6.5	7.6	8.3	13.2	13.2	11.4	9.3	4.7	1.9	16.7	40.8
5-Feb	6.8	10.3	8.9	Z	10.4	9.8	4.6	5.6	6.8	11.9	11.4	12.2	12.3	7.5	5.9	12.7	3.1	3.0	2.9	3.1	14.5	15.4	5.4	1.5	8.1	15.4
6-Feb	0.8	0.9	0.9	1.8	Z	0.7	0.6	1.2	23.0	18.5	8.4	9.5	11.6	9.0	10.0	11.5	6.6	11.0	22.7	25.0	27.3	4.5	5.7	6.6	9.5	27.3
7-Feb	4.9	4.1	15.1	5.1	2.7	Z	72.2	115.0	125.7	50.5	7.0	7.8	5.8	4.7	4.8	2.8	1.9	6.8	9.8	15.4	14.8	23.0	52.3	18.2	24.8	125.7
8-Feb	Z	43.6	41.0	41.3	73.6	79.8	122.3	129.6	123.9	74.9	56.3	49.1	38.7	35.4	33.1	34.4	67.0	60.5	137.7	31.4	13.1	10.9	7.4	8.2	57.1	137.7
9-Feb	5.8	Z	7.2	11.6	23.4	11.7	23.3	63.1	74.4	77.5	33.0	27.8	10.7	12.5	22.5	26.5	37.9	59.8	101.8	130.8	93.5	103.5	75.1	38.4	46.6	130.8
10-Feb	34.3	54.3	Z	37.6	30.1	25.6	31.1	43.1	36.9	29.4	18.7	19.3	15.9	10.4	8.4	6.9	14.0	54.0	16.2	35.1	28.2	38.3	32.8	21.5	27.9	54.3
11-Feb	38.3	42.1	43.2	Z	48.2	33.9	27.5	37.2	54.6	19.3	C	C	C	C	C	30.6	28.6	49.3	72.3	105.3	98.5	54.4	36.6	35.4	47.5	105.3
12-Feb	35.6	34.9	40.9	33.9	Z	38.6	49.3	54.3	38.0	32.7	23.2	21.2	16.0	24.7	27.0	37.3	21.8	35.8	24.6	17.9	19.6	21.7	23.4	20.4	30.1	54.3
13-Feb	15.7	28.5	33.2	35.3	41.0	Z	19.4	31.4	41.1	49.0	68.1	73.5	47.2	26.4	30.1	17.9	27.7	40.3	31.1	53.7	39.7	45.8	38.3	51.6	38.5	73.5
14-Feb	Z	62.2	41.9	34.1	34.6	35.6	49.8	146.8	205.2	54.1	12.0	15.3	12.3	27.9	29.5	16.2	15.3	62.8	81.1	86.4	25.6	56.7	83.3	85.2	55.4	205.2
15-Feb	115.9	Z	100.6	96.8	101.5	135.2	149.3	130.5	118.6	88.2	72.8	34.6	32.7	10.6	1.4	6.4	16.6	22.9	28.4	29.3	3.3	8.3	13.0	42.8	59.1	149.3
16-Feb	62.3	74.5	Z	67.4	67.2	82.4	60.8	79.9	81.3	60.6	37.5	42.5	33.3	25.4	18.0	17.6	7.9	8.6	11.4	7.8	3.8	2.5	1.9	3.3	37.3	82.4
17-Feb	10.7	20.1	22.2	Z	19.9	14.9	9.9	5.7	6.8	4.1	6.6	15.8	13.2	10.8	6.6	2.7	2.9	10.0	28.6	34.2	15.7	10.0	8.9	16.1	12.9	34.2
18-Feb	30.2	29.6	30.5	20.3	Z	26.6	30.7	33.8	33.3	22.6	13.7	25.9	15.6	8.9	8.1	12.5	10.3	29.4	61.7	15.4	19.5	17.3	31.3	27.9	24.1	61.7
19-Feb	27.4	31.7	18.6	16.5	28.0	Z	13.3	53.5	64.1	15.6	13.2	13.7	18.5	18.2	11.7	14.1	12.7	13.7	6.6	3.5	2.9	3.3	10.5	16.6	18.6	64.1
20-Feb	Z	10.0	4.1	3.9	4.9	4.9	3.7	4.1	4.3	4.8	5.1	4.9	6.7	6.2	10.1	12.8	19.6	27.9	37.2	45.5	30.3	51.4	135.8	138.0	25.1	138.0
21-Feb	127.5	Z	104.3	87.9	82.5	72.8	65.8	93.6	118.1	168.8	232.7	77.2	26.1	20.0	13.8	19.2	17.2	12.2	16.2	22.9	17.9	21.0	23.9	33.0	64.1	232.7
22-Feb	29.9	18.4	Z	3.5	15.4	20.1	37.9	49.2	47.2	53.8	53.3	54.1	51.4	49.4	48.2	38.8	23.9	42.7	46.3	57.1	59.4	54.4	60.6	48.4	41.9	60.6
23-Feb	32.3	27.1	29.9	Z	23.2	25.2	39.6	45.2	55.0	19.8	10.2	7.0	4.6	9.3	16.5	11.8	10.8	12.0	18.0	10.2	5.4	4.7	4.7	5.7	18.6	55.0
24-Feb	5.4	5.1	7.5	12.9	Z	26.5	15.5	23.0	15.5	20.4	24.9	25.4	34.7	35.7	20.6	9.7	10.4	15.6	20.3	17.5	31.5	47.4	33.5	11.1	20.4	47.4
25-Feb	8.7	7.7	12.8	8.5	8.7	Z	18.7	22.9	25.5	30.1	28.2	17.2	31.1	39.7	16.2	17.1	34.9	44.9	35.5	13.2	24.4	14.1	16.6	25.5	21.8	44.9
26-Feb	Z	40.3	36.7	36.2	37.4	41.1	33.2	51.9	39.2	24.3	22.3	34.5	18.7	28.6	66.1	32.3	28.1	24.1	34.2	37.0	25.1	25.4	34.3	35.8	34.2	66.1
27-Feb	39.8	Z	27.4	27.1	30.3	18.0	39.7	43.3	34.2	27.8	19.1	9.1	13.4	24.3	12.8	10.8	12.5	12.1	7.4	11.0	11.9	11.4	6.5	12.8	20.1	43.3
28-Feb	12.5	5.1	Z	2.9	10.5	9.7	14.1	34.2	31.6	21.2	23.1	20.2	27.7	22.6	15.4	14.8	16.3	24.1	16.6	20.3	11.3	10.8	24.7	15.6	17.6	34.2
	32.6	25.4	31.5	29.8	33.2	37.9	40.6	52.9	55.9	39.5	31.0	24.0	19.3	18.7	17.7	16.3	18.0	27.6	35.0	32.1	24.5	25.1	29.4	28.3	Diurnal Average	
	127.5	74.5	104.3	96.8	101.5	135.2	156.9	146.8	205.2	168.8	232.7	77.2	51.4	49.4	66.1	38.8	67.0	62.8	137.7	130.8	98.5	103.5	135.8	138.0	Diurnal Maximum	

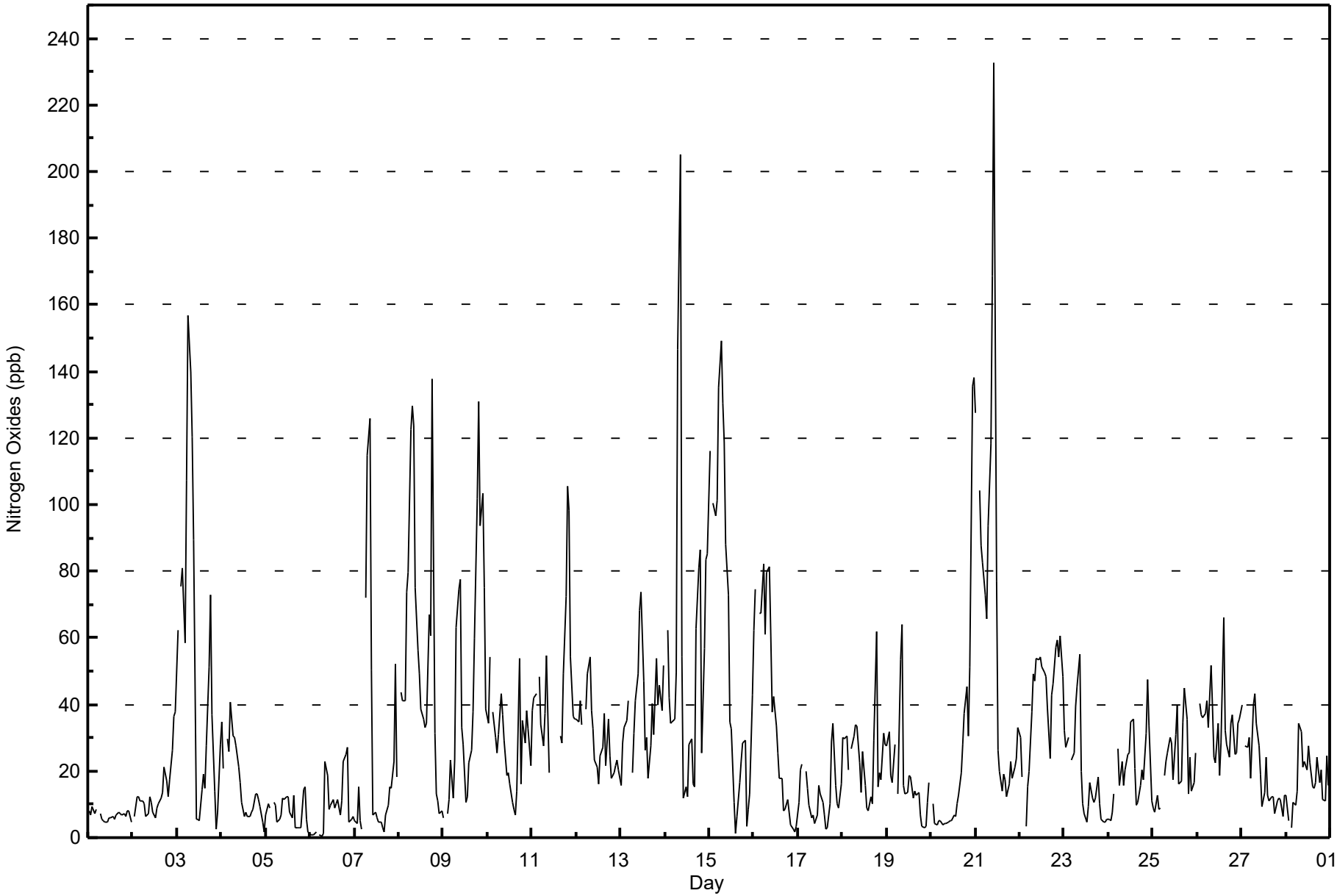
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Barge Landing - February 2025



Nitrogen Oxides (NO_X) - ppb
Barge Landing - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	317	49.61	49.61
21 - 40	184	28.79	78.40
11 - 80	93	14.55	92.96
81 - 159	39	6.10	99.06
> 159	3	0.47	99.53

Total Number of Valid Hours: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Barge Landing - February 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	44	52	15	6	4	4	19	38	46	35	22	9	1	2	6	14	317
21 - 40	27	32	8	6	3	5	5	26	18	14	8	5	3	2	3	18	183
11 - 80	11	4	6	4	3	3	4	12	8	9	10	2	1	2	1	13	93
81 - 159	2	2	2	0	1	1	3	9	3	3	2	3	4	2	1	1	39
> 159	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	3
Totals	84	90	31	16	11	13	31	85	75	61	43	19	9	8	11	48	635

Total Number of Valid Hours: 638

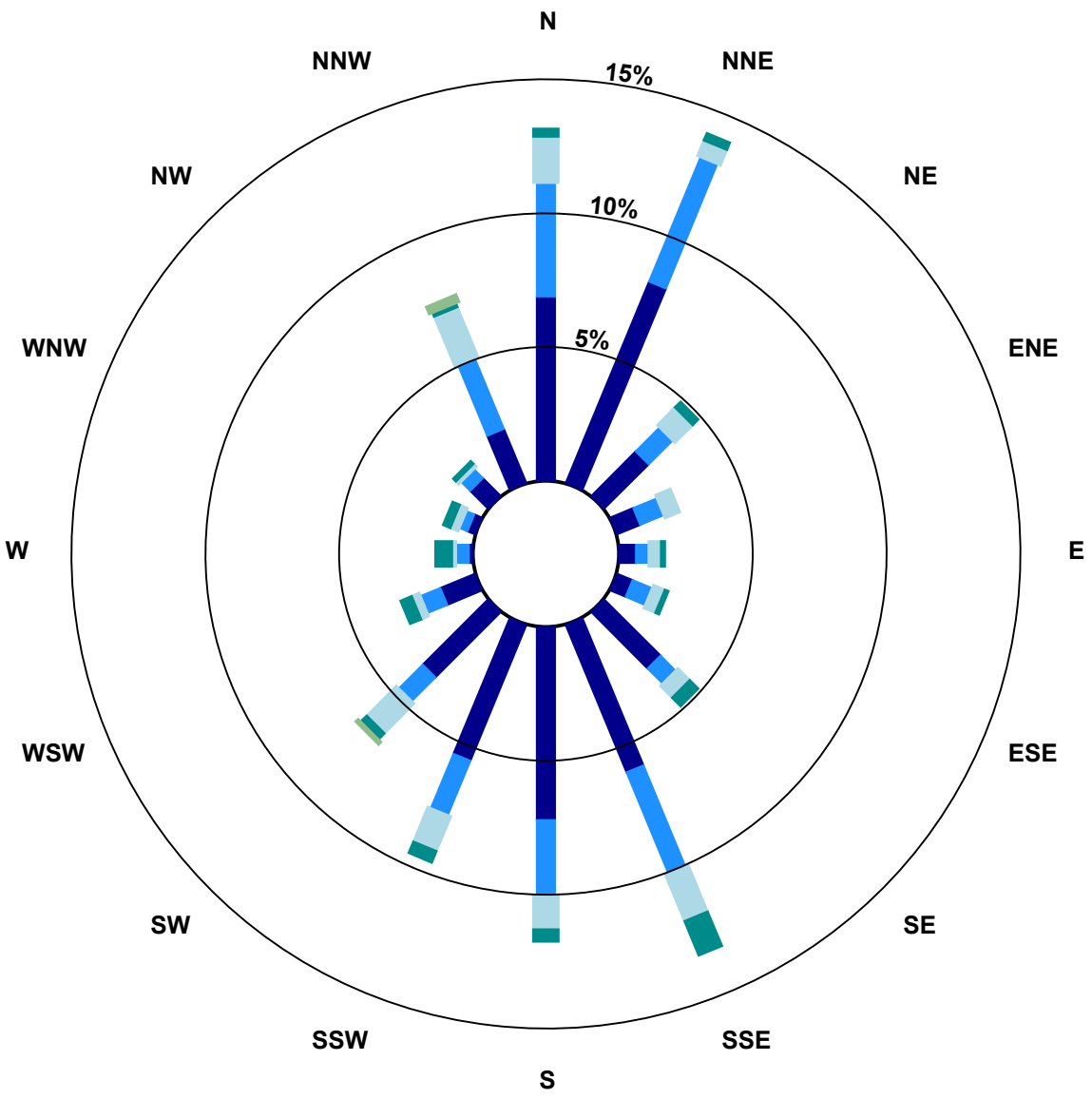
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Oxides (NO_X) - ppb

Barge Landing



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

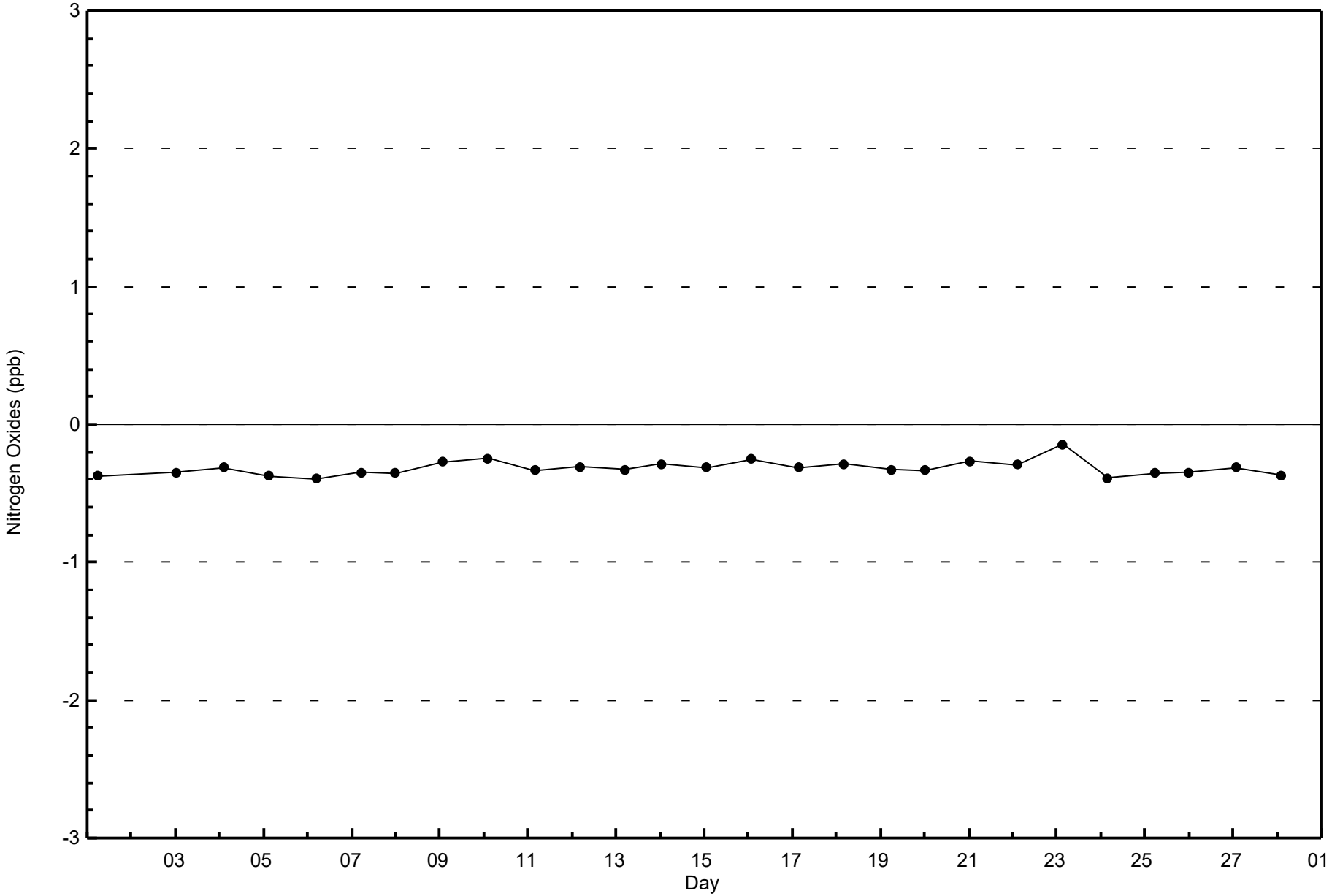
Total Number of Valid Hours: 638

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Barge Landing - February 2025

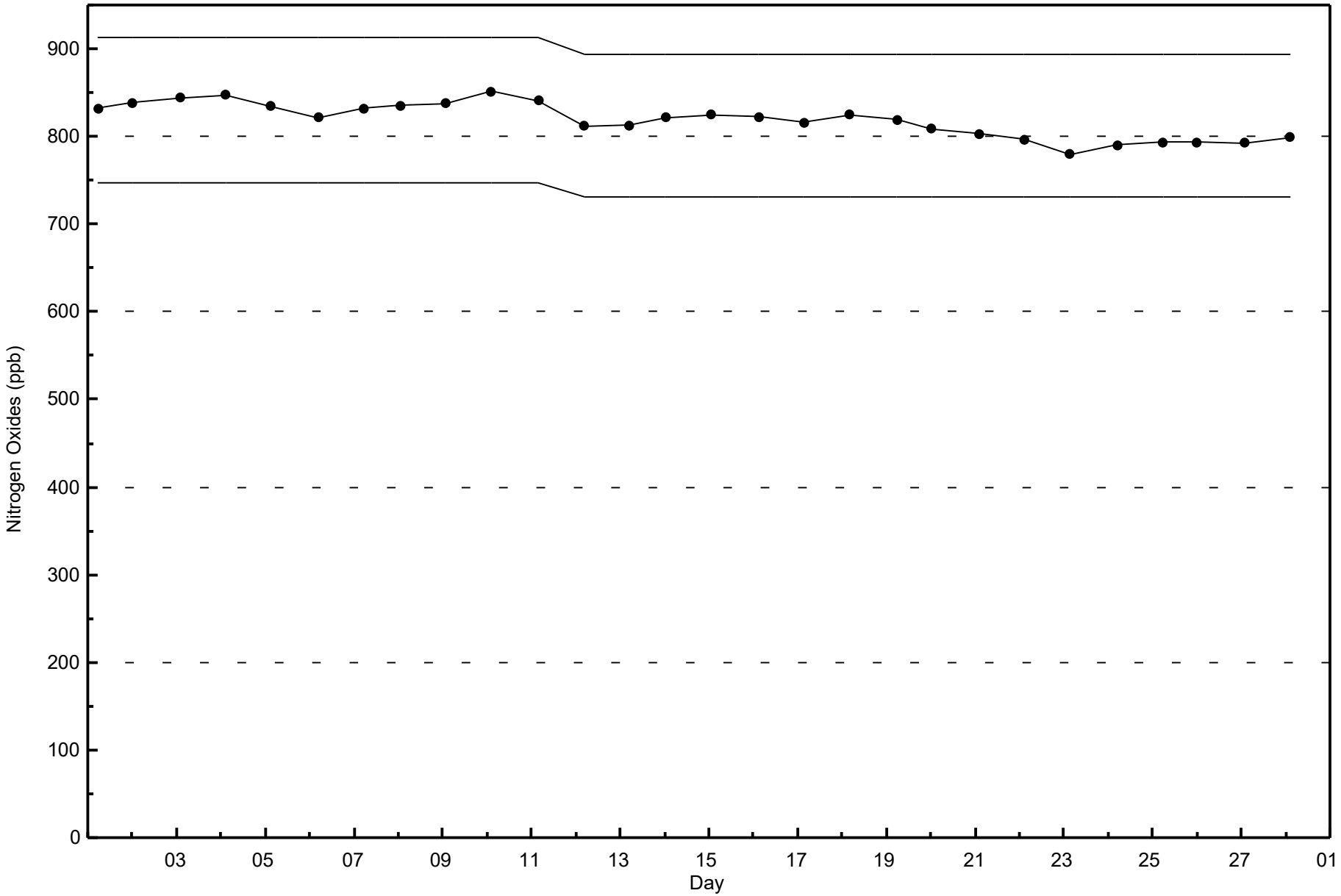


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Barge Landing - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Barge Landing - February 2025

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

Maximum Value: 56.6 $\mu g/m^3$ on Feb 10 01:00

Maximum Daily Average: 16.2 $\mu g/m^3$ on Feb 21

Minimum Value: 1.6 $\mu g/m^3$ on Feb 6 01:00

Minimum Daily Average: 2.6 $\mu g/m^3$ on Feb 5

Maximum Diurnal Average: 9.3 $\mu g/m^3$ at hour 1

Minimum Diurnal Average: 6.9 $\mu g/m^3$ at hour 17

Monthly Average: 7.82 $\mu g/m^3$

Percentiles: P_1 = 2.0 P_{10} = 3.4 Q_1 = 4.6 Median = 6.2 Q_3 = 9.6 P_{90} = 13.6 P_{99} = 28.1

Hours in Service:	672
Hours of Data:	671
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-Feb	5.5	5.5	5.9	5.7	5.6	5.3	5.0	4.4	4.7	4.9	4.7	4.7	4.9	4.9	4.6	5.1	6.0	6.3	6.2	6.0	6.4	7.6	7.4	6.4	5.6	7.6
2-Feb	6.1	6.0	6.1	5.3	5.0	4.9	4.8	4.5	4.7	5.2	5.1	5.1	5.1	5.2	5.1	5.0	5.3	5.3	5.3	4.8	5.0	5.0	4.9	5.0	5.2	6.1
3-Feb	5.0	6.1	6.1	6.2	5.2	5.4	6.1	8.7	6.3	7.8	3.4	3.0	2.9	3.3	3.9	3.5	3.7	4.4	4.8	3.4	2.7	2.2	2.1	2.8	4.5	8.7
4-Feb	3.1	2.6	3.0	3.4	5.6	4.9	4.6	4.5	4.0	4.2	3.6	3.3	2.9	3.5	2.8	2.8	2.7	2.7	3.0	3.0	3.0	2.9	2.9	3.1	3.4	5.6
5-Feb	2.8	2.8	2.9	2.9	2.8	2.8	2.5	2.5	2.5	2.9	3.1	3.1	2.9	2.6	2.6	3.1	2.3	2.2	2.1	2.0	2.2	2.4	2.1	1.9	2.6	3.1
6-Feb	1.6	1.8	1.9	1.9	2.0	2.0	2.0	2.1	2.7	4.0	4.1	4.4	5.2	9.1	10.2	11.6	10.3	11.4	12.7	12.7	32.1	41.8	14.1	9.3	8.8	41.8
7-Feb	8.1	6.4	6.2	4.5	4.2	4.1	5.7	7.5	6.3	4.9	3.7	3.9	3.7	3.6	3.6	3.4	3.3	3.4	3.6	4.1	10.0	7.8	6.5	4.3	5.1	10.0
8-Feb	3.5	4.6	5.9	5.5	11.7	10.2	9.0	8.9	8.8	8.4	10.2	7.6	7.7	8.0	8.4	7.4	9.9	12.8	20.2	9.5	6.7	9.1	5.7	5.1	8.5	20.2
9-Feb	7.5	6.8	7.0	6.9	7.4	7.5	7.5	9.4	10.2	9.9	10.6	9.1	8.2	8.3	10.1	11.8	12.4	13.4	13.9	13.6	12.2	11.7	12.4	48.8	11.5	48.8
10-Feb	56.6	32.9	16.4	11.3	14.0	15.0	11.5	10.4	7.0	6.0	5.2	4.4	4.2	4.0	3.8	4.7	5.5	13.8	7.7	10.2	9.4	7.7	7.2	5.5	11.4	56.6
11-Feb	6.0	6.3	6.4	5.9	5.3	4.4	3.7	4.0	4.9	3.5	3.1	3.5	C	3.9	4.3	4.7	4.6	5.4	5.8	5.9	7.1	6.5	4.9	4.8	5.0	7.1
12-Feb	5.4	5.8	5.1	4.7	4.7	5.6	7.1	6.0	4.7	4.8	4.2	4.8	4.5	5.6	4.8	7.5	6.1	8.8	8.0	7.3	6.4	5.9	5.8	6.1	5.8	8.8
13-Feb	5.6	5.8	6.8	5.1	5.2	4.4	3.8	4.1	4.6	5.1	6.8	6.6	6.1	5.5	5.8	5.1	5.9	8.7	7.1	8.8	6.6	7.7	7.0	7.1	6.1	8.8
14-Feb	7.1	7.4	6.1	5.1	4.7	4.6	5.2	8.8	12.3	8.7	4.1	4.5	4.9	5.8	6.6	5.0	4.5	12.7	12.3	11.2	7.0	11.8	13.1	12.0	7.7	13.1
15-Feb	10.8	13.0	21.2	17.4	18.1	20.2	21.0	19.7	17.4	14.3	10.2	6.0	5.6	4.0	3.1	3.4	5.2	6.3	5.5	5.8	3.2	3.3	3.9	5.6	10.2	21.2
16-Feb	7.7	8.5	6.3	6.7	6.2	10.7	11.6	6.7	9.1	8.5	6.9	7.3	6.5	5.6	5.3	5.8	3.9	3.9	3.9	3.6	3.4	4.1	4.2	4.4	6.3	11.6
17-Feb	6.2	7.9	7.3	6.7	6.0	5.1	3.8	3.7	3.8	3.9	4.2	5.4	5.3	5.0	4.3	3.5	3.9	5.0	9.6	8.1	5.3	4.2	3.9	4.7	5.3	9.6
18-Feb	7.2	5.5	6.0	5.6	5.1	6.7	7.3	8.5	9.3	7.8	6.8	18.0	11.0	7.0	6.2	14.9	5.0	6.9	14.0	5.0	4.8	6.1	7.9	10.1	8.0	18.0
19-Feb	9.6	9.2	5.2	4.7	4.6	4.3	3.8	5.7	7.0	5.6	6.0	9.8	14.7	12.4	9.1	12.9	9.6	6.7	3.7	3.8	4.1	5.2	9.3	12.2	7.5	14.7
20-Feb	11.0	7.2	5.1	5.9	7.5	8.1	8.3	8.6	8.5	8.9	8.4	10.0	9.5	8.6	9.3	9.9	11.2	13.9	14.8	14.3	13.1	15.1	27.8	28.7	11.4	28.7
21-Feb	24.3	24.1	21.2	18.8	19.3	17.6	15.8	17.5	19.5	24.8	32.1	17.7	12.8	11.7	11.0	11.8	11.0	9.4	11.4	11.7	11.8	10.7	11.3	11.6	16.2	32.1
22-Feb	10.9	8.7	6.3	6.1	7.8	9.3	12.2	14.1	13.3	12.5	12.9	13.1	14.3	15.9	17.3	15.9	12.6	12.8	13.5	14.3	16.0	16.5	16.4	17.7	12.9	17.7
23-Feb	17.6	18.0	18.4	15.9	16.8	17.1	17.5	18.6	19.2	10.8	7.9	7.5	6.5	6.0	6.2	5.2	5.2	5.6	5.9	5.5	5.1	5.0	4.8	4.4	10.4	19.2
24-Feb	4.5	4.4	4.4	4.8	5.8	5.6	5.4	6.1	7.0	7.2	8.3	12.6	19.4	20.4	14.9	8.7	8.9	10.6	10.6	9.4	10.0	13.0	12.7	7.5	9.3	20.4
25-Feb	5.4	4.6	4.9	4.1	4.3	4.6	4.7	6.6	5.6	5.9	6.1	6.5	8.0	9.7	7.8	6.9	11.6	12.1	10.6	9.6	12.2	8.2	7.7	8.1	7.3	12.2
26-Feb	9.8	11.5	12.4	13.4	14.9	16.2	14.4	13.2	8.9	4.9	4.8	6.2	5.2	5.8	8.7	7.0	7.1	7.3	8.1	7.3	8.4	9.2	7.2	7.3	9.1	16.2
27-Feb	7.6	6.4	5.9	5.9	6.8	6.5	10.1	10.0	9.9	11.1	9.6	7.6	8.2	8.3	4.2	4.2	4.4	4.4	3.7	4.1	4.1	3.9	3.7	4.4	6.5	11.1
28-Feb	4.4	3.5	3.4	3.4	3.9	3.9	4.4	5.9	6.4	8.1	10.4	11.0	11.7	10.7	11.3	11.0	10.7	7.8	9.8	8.0	5.1	5.0	6.0	6.2	7.2	11.7
	9.3	8.3	7.6	6.9	7.5	7.7	7.8	8.2	8.2	7.7	7.4	7.4	7.5	7.3	7.0	7.2	6.9	8.0	8.5	7.6	8.0	8.6	8.0	9.1	Diurnal Average	
	56.6	32.9	21.2	18.8	19.3	20.2	21.0	19.7	19.5	24.8	32.1	18.0	19.4	20.4	17.3	15.9	12.6	13.9	20.2	14.3	32.1	41.8	27.8	48.8	Diurnal Maximum	

C - Calibration

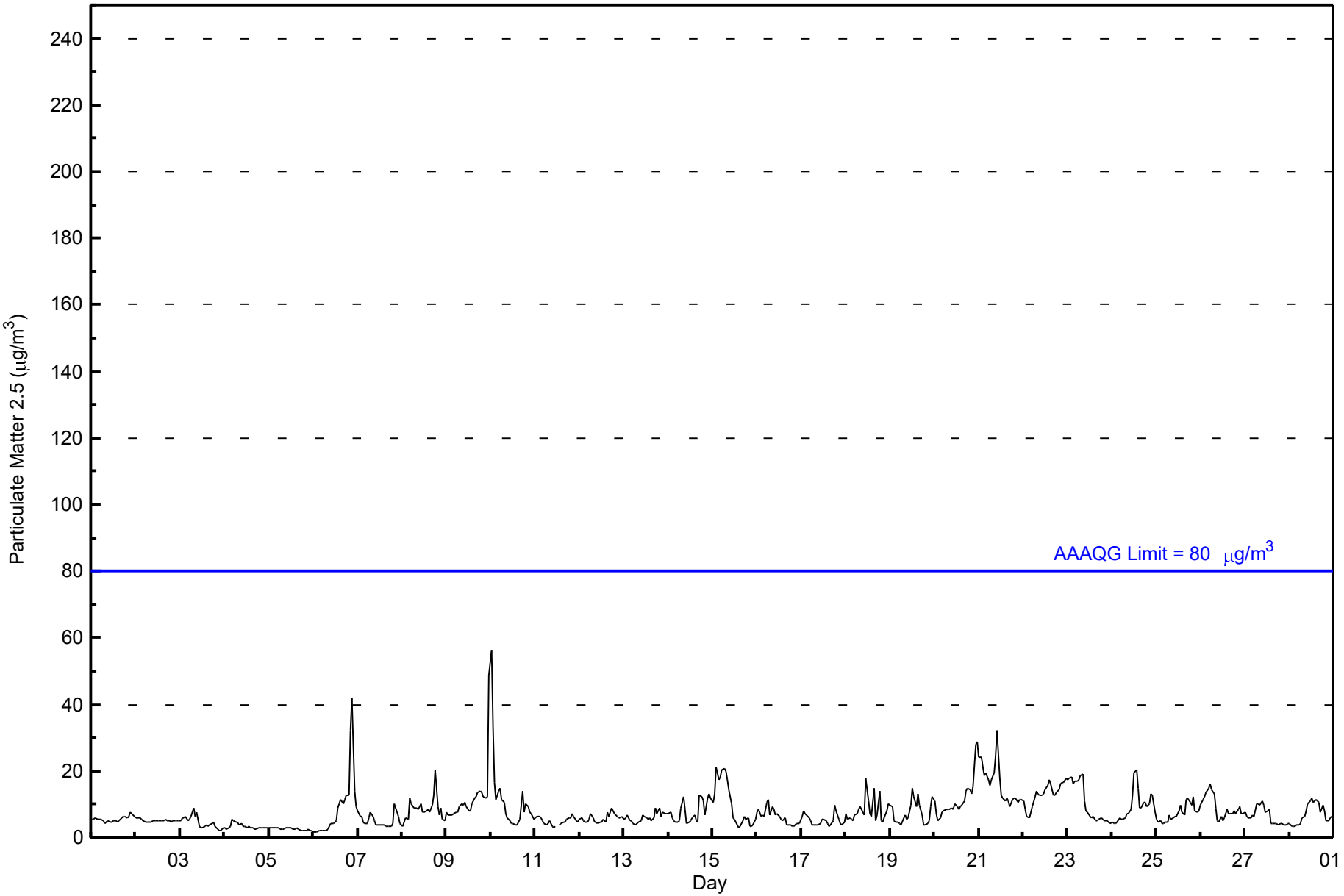
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Barge Landing - February 2025



Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	265	39.49	39.49
6 - 15	358	53.35	92.85
16 - 25	40	5.96	98.81
26 - 80	8	1.19	100.00
> 81.0	0	0.00	100.00

Total Number of Valid Hours: 671

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

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

Barge Landing - February 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	23	38	19	6	9	6	23	23	32	36	26	7	3	1	3	9	264
6 - 15	63	55	13	11	3	9	9	54	39	21	15	10	5	7	9	35	358
16 - 25	2	0	0	1	1	0	0	14	7	4	3	3	1	0	0	4	40
26 - 80	0	0	1	0	0	1	0	0	0	3	0	1	1	0	0	1	8
> 81.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	88	93	33	18	13	16	32	91	78	64	44	21	10	8	12	49	670

Total Number of Valid Hours: 670

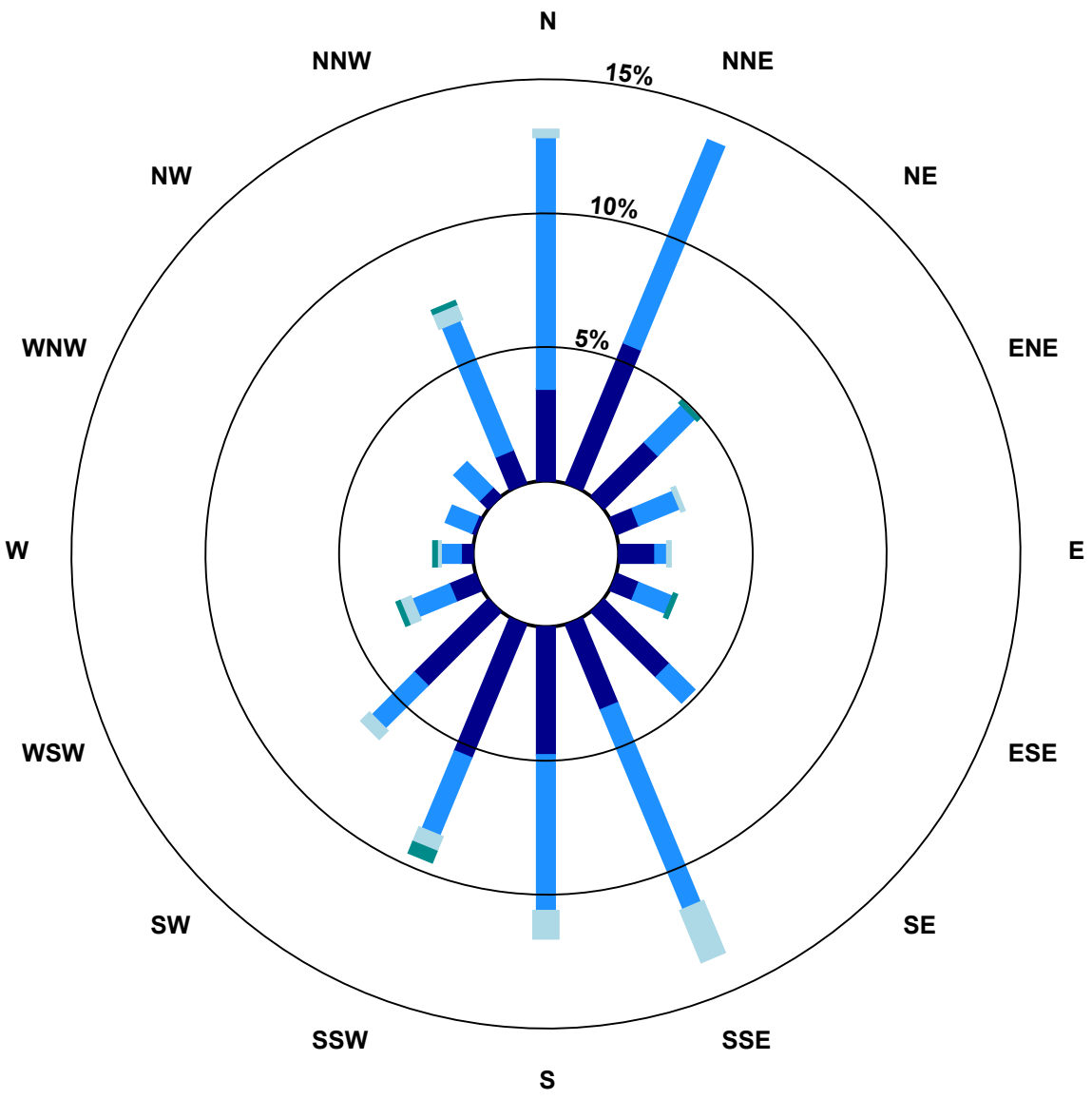
Total Number of Hours: 672

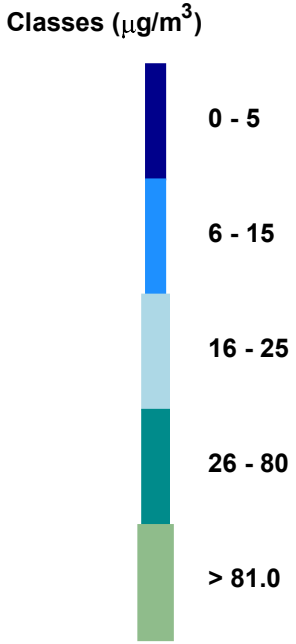
Wood Buffalo Environmental Association

Wind Rose Feb 2025

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

Barge Landing





Total Number of Valid Hours: 670

Maximum Value: 0.3 C on Feb 27 13:00

Maximum Daily Average: -5.1 C on Feb 23

Minimum Value: -37.3 C on Feb 14 08:00

Minimum Daily Average: -29.6 C on Feb 14

Maximum Diurnal Average: -13.5 C at hour 16

Minimum Diurnal Average: -21.6 C at hour 8

Monthly Average: -18.17 C

Percentiles: P_1 = -34.9 P_{10} = -29.0 Q_1 = -24.1 Median = -19.2 Q_3 = -10.9 P_{90} = -6.7 P_{99} = -1.3

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

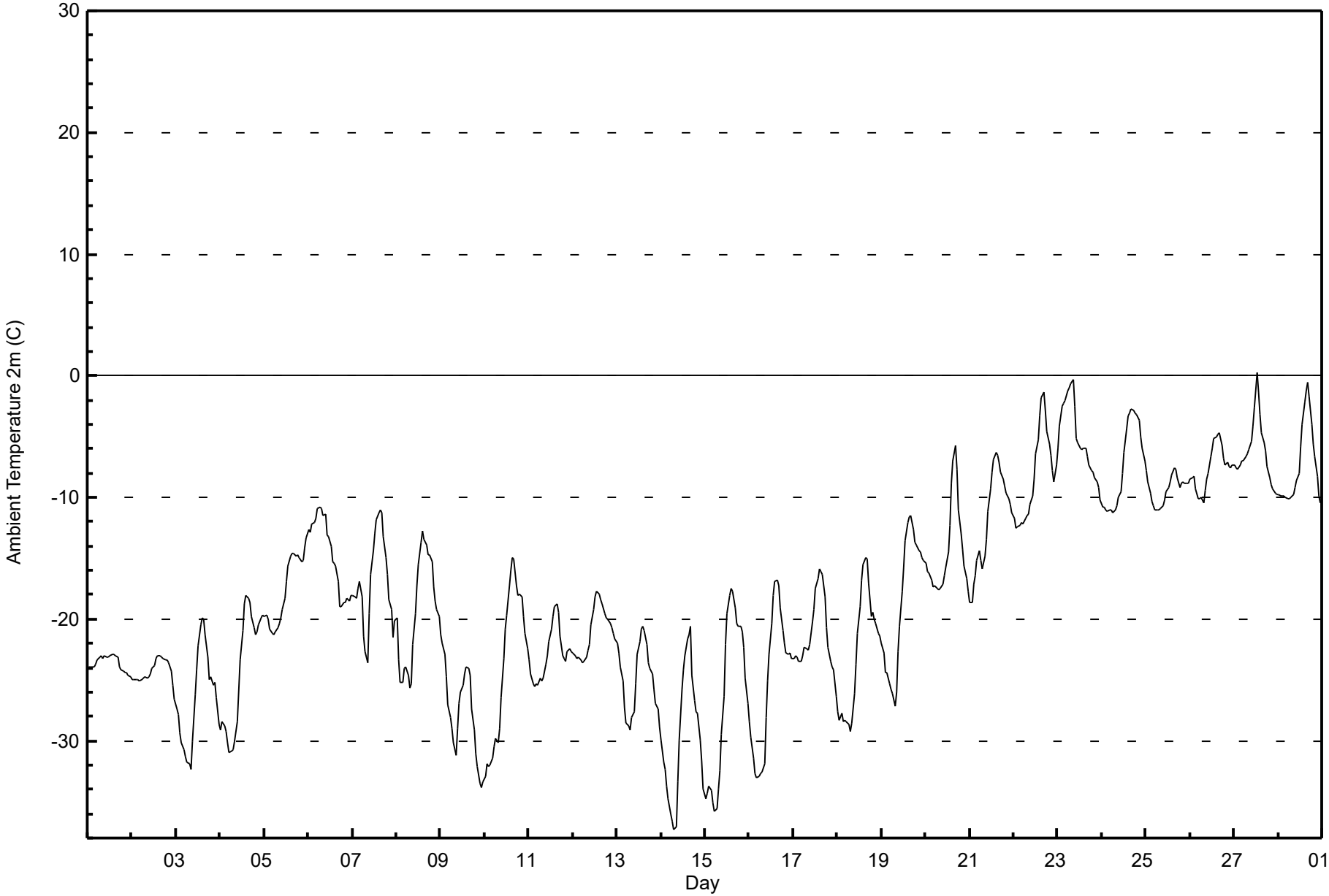
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-24.0	-24.0	-23.9	-23.9	-23.8	-23.4	-23.1	-23.0	-23.2	-23.1	-23.1	-23.1	-23.0	-23.0	-22.9	-23.0	-23.2	-23.9	-24.1	-24.3	-24.4	-24.4	-24.6	-24.8	-23.6	-22.9
2-Feb	-24.9	-25.0	-25.0	-25.0	-25.0	-25.0	-24.8	-24.8	-24.9	-24.8	-24.6	-24.1	-23.8	-23.3	-23.0	-23.0	-23.1	-23.3	-23.4	-23.4	-23.6	-24.3	-25.5	-26.6	-24.3	-23.0
3-Feb	-27.3	-27.9	-29.3	-30.1	-30.8	-31.3	-31.8	-31.9	-32.4	-30.0	-26.2	-24.2	-22.2	-20.5	-19.9	-20.0	-21.2	-23.1	-24.9	-24.8	-25.4	-25.2	-26.5	-28.7	-26.5	-19.9
4-Feb	-29.1	-28.4	-28.8	-29.3	-30.2	-31.0	-30.9	-30.7	-30.1	-28.4	-25.9	-23.4	-21.0	-18.8	-18.1	-18.2	-18.7	-19.8	-20.7	-21.3	-21.1	-20.5	-19.9	-19.7	-24.3	-18.1
5-Feb	-19.8	-19.7	-20.0	-20.8	-21.2	-21.3	-21.1	-20.8	-20.4	-19.9	-19.2	-18.3	-16.9	-15.6	-14.8	-14.6	-14.6	-14.8	-14.8	-14.9	-15.3	-15.1	-14.1	-13.3	-17.6	-13.3
6-Feb	-12.6	-12.9	-12.2	-12.0	-11.7	-10.9	-10.8	-10.9	-11.5	-11.4	-13.1	-13.2	-14.0	-15.3	-15.4	-15.6	-16.9	-19.0	-19.0	-18.7	-18.6	-18.3	-18.6	-18.1	-14.6	-10.8
7-Feb	-18.1	-18.1	-18.3	-17.5	-17.0	-18.1	-21.4	-22.7	-23.6	-19.6	-16.3	-14.4	-13.0	-11.8	-11.2	-11.0	-11.3	-13.2	-15.0	-16.4	-18.5	-19.2	-21.5	-20.1	-17.0	-11.0
8-Feb	-19.9	-23.4	-25.2	-25.2	-24.0	-24.0	-24.7	-25.7	-25.3	-22.1	-19.5	-17.3	-15.5	-13.6	-12.7	-13.5	-13.9	-14.7	-14.7	-15.3	-17.4	-18.6	-19.2	-19.8	-19.4	-12.7
9-Feb	-21.3	-22.0	-22.9	-24.7	-27.1	-28.1	-29.0	-30.2	-31.2	-29.0	-26.9	-26.0	-25.4	-24.6	-23.9	-24.1	-24.6	-27.4	-29.1	-31.0	-32.1	-33.5	-33.9	-33.3	-27.6	-21.3
10-Feb	-32.9	-31.9	-32.1	-32.0	-31.4	-30.5	-29.8	-30.1	-29.0	-26.4	-23.2	-20.8	-19.7	-17.2	-16.0	-15.0	-15.1	-17.2	-18.0	-17.9	-18.2	-19.8	-21.2	-22.4	-23.7	-15.0
11-Feb	-23.4	-24.5	-25.3	-25.6	-25.4	-25.5	-24.8	-25.1	-24.8	-23.7	-23.1	-21.8	-20.8	-19.8	-19.0	-18.8	-19.5	-21.4	-23.0	-23.3	-23.5	-22.7	-22.4	-22.6	-22.9	-18.8
12-Feb	-22.8	-23.0	-23.2	-23.1	-23.4	-23.6	-23.5	-23.1	-22.6	-22.0	-20.5	-19.2	-18.2	-17.8	-17.9	-18.4	-18.7	-19.6	-19.9	-20.0	-20.3	-20.7	-21.2	-21.6	-21.0	-17.8
13-Feb	-22.0	-22.8	-23.9	-25.1	-27.3	-28.6	-28.8	-29.1	-28.1	-27.6	-25.3	-22.9	-21.8	-20.9	-20.6	-21.0	-22.1	-23.6	-24.0	-24.6	-25.7	-27.0	-27.4	-28.9	-25.0	-20.6
14-Feb	-29.9	-31.7	-32.4	-33.7	-34.8	-36.1	-36.6	-37.3	-37.1	-33.4	-29.9	-25.7	-24.1	-23.1	-21.6	-21.3	-20.6	-24.6	-26.7	-27.6	-27.7	-29.9	-31.6	-33.9	-29.6	-20.6
15-Feb	-34.8	-34.3	-33.8	-34.1	-35.1	-35.8	-35.6	-33.9	-32.5	-29.5	-26.3	-22.1	-19.6	-18.1	-17.4	-17.7	-19.1	-20.4	-20.6	-20.7	-21.1	-22.3	-24.8	-26.9	-26.5	-17.4
16-Feb	-28.4	-29.7	-31.5	-32.7	-33.0	-32.9	-32.7	-32.6	-31.8	-28.1	-25.1	-22.9	-20.4	-18.1	-16.9	-16.8	-17.2	-19.1	-21.0	-22.0	-22.7	-22.9	-22.7	-23.2	-25.2	-16.8
17-Feb	-23.3	-23.0	-23.1	-23.5	-23.5	-23.1	-22.3	-22.5	-22.6	-22.1	-20.3	-19.2	-17.5	-16.7	-15.8	-16.1	-16.3	-18.2	-20.7	-22.3	-23.5	-23.9	-24.2	-26.4	-21.3	-15.8
18-Feb	-27.6	-28.3	-27.7	-28.5	-28.3	-28.4	-28.7	-29.2	-28.6	-26.1	-23.8	-21.2	-19.0	-16.8	-15.5	-14.9	-15.0	-17.0	-19.8	-19.4	-20.1	-20.4	-21.1	-21.5	-22.8	-14.9
19-Feb	-22.0	-22.8	-24.5	-24.4	-25.3	-25.8	-26.1	-27.1	-26.0	-22.6	-20.6	-17.7	-15.8	-13.5	-12.1	-11.6	-11.5	-12.7	-13.7	-13.9	-14.3	-14.5	-15.0	-15.2	-18.7	-11.5
20-Feb	-15.4	-16.1	-16.2	-16.7	-17.4	-17.2	-17.5	-17.6	-17.5	-17.1	-16.4	-15.7	-14.5	-12.3	-8.8	-7.0	-5.8	-7.7	-11.0	-13.0	-14.3	-15.6	-16.6	-17.7	-14.4	-5.8
21-Feb	-18.7	-18.6	-17.1	-16.4	-15.2	-14.4	-15.2	-15.8	-14.8	-13.5	-11.1	-9.3	-7.9	-6.9	-6.3	-6.6	-7.1	-7.9	-8.4	-9.1	-9.7	-10.1	-10.5	-11.3	-11.7	-6.3
22-Feb	-11.7	-12.6	-12.5	-12.3	-12.1	-12.1	-11.8	-11.5	-11.4	-10.6	-9.8	-8.5	-6.4	-5.2	-3.3	-1.8	-1.4	-2.9	-4.6	-5.6	-6.5	-7.8	-8.7	-7.3	-8.3	-1.4
23-Feb	-5.9	-4.2	-2.5	-2.3	-2.0	-1.3	-1.0	-0.7	-0.4	-2.5	-5.1	-5.5	-5.9	-6.0	-6.0	-6.0	-6.6	-7.3	-7.8	-8.0	-8.4	-8.8	-9.2	-10.2	-5.1	-0.4
24-Feb	-10.8	-10.8	-11.0	-11.1	-11.1	-11.0	-11.3	-11.1	-10.7	-10.0	-9.5	-8.0	-6.3	-4.3	-3.4	-3.0	-2.7	-2.8	-3.1	-3.2	-3.6	-5.1	-5.9	-7.0	-7.4	-2.7
25-Feb	-7.8	-8.8	-9.6	-10.4	-10.7	-11.1	-11.0	-11.0	-10.9	-10.6	-10.3	-9.5	-9.2	-8.7	-8.1	-7.6	-7.7	-8.4	-9.2	-8.8	-8.8	-8.9	-8.9	-8.9	-9.4	-7.6
26-Feb	-8.5	-8.3	-8.2	-9.3	-10.1	-10.1	-10.0	-10.5	-9.4	-8.5	-8.0	-6.7	-5.9	-5.1	-5.1	-4.8	-4.7	-5.8	-6.8	-7.4	-7.1	-7.4	-7.6	-7.3	-7.6	-4.7
27-Feb	-7.3	-7.6	-7.7	-7.4	-7.0	-7.0	-6.7	-6.5	-6.1	-5.3	-4.1	-2.6	0.3	-1.4	-3.2	-4.7	-5.4	-6.2	-7.4	-8.3	-8.9	-9.4	-9.7	-9.8	-6.2	0.3
28-Feb	-9.8	-9.8	-9.9	-9.9	-10.0	-10.2	-10.1	-10.0	-9.7	-9.2	-8.6	-8.0	-5.8	-4.0	-2.1	-1.3	-0.6	-1.7	-4.0	-5.6	-6.7	-8.2	-9.9	-10.5	-7.3	-0.6
	-20.0	-20.4	-20.6	-21.0	-21.2	-21.3	-21.5	-21.6	-21.3	-19.9	-18.4	-16.8	-15.5	-14.4	-13.6	-13.5	-13.7	-15.1	-16.3	-16.8	-17.4	-18.0	-18.7	-19.2	Diurnal Average	
	-5.9	-4.2	-2.5	-2.3	-2.0	-1.3	-1.0	-0.7	-0.4	-2.5	-4.1	-2.6	0.3	-1.4	-2.1	-1.3	-0.6	-1.7	-3.1	-3.2	-3.6	-5.1	-5.9	-7.0	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Barge Landing - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	313	46.58	46.58
-20 - 0	358	53.27	99.85
0 - 10	1	0.15	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Barge Landing - February 2025

Maximum Value: 99.0 % on Feb 23 08:00

Maximum Daily Average: 90.9 % on Feb 23

Minimum Value: 37.2 % on Feb 18 15:00

Minimum Daily Average: 52.9 % on Feb 19

Maximum Diurnal Average: 76.5 % at hour 6

Minimum Diurnal Average: 62.6 % at hour 15

Monthly Average: 72.79 %

Percentiles: P_1 = 44.9 P_{10} = 60.0 Q_1 = 67.6 Median = 73.2 Q_3 = 78.3 P_{90} = 84.7 P_{99} = 96.4

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

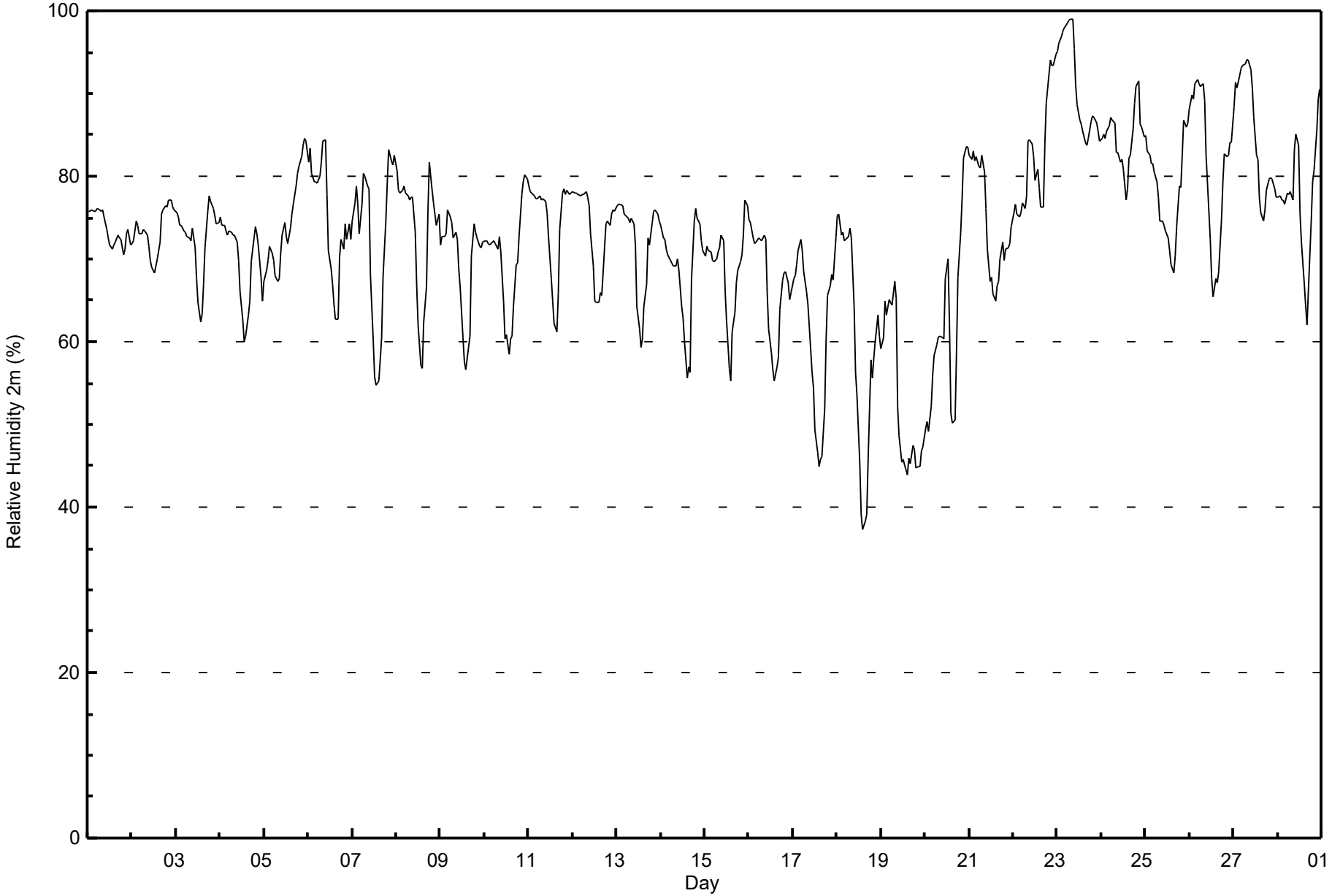
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	75.7	75.7	76.0	75.7	75.7	76.1	75.9	75.8	76.0	75.1	73.6	72.6	71.8	71.2	71.7	72.1	72.9	72.6	72.4	70.6	71.2	73.0	73.5	71.6	73.7	76.1
2-Feb	71.9	72.1	74.5	74.0	73.1	73.0	73.6	73.5	72.8	71.5	69.9	68.9	68.4	69.1	70.0	72.0	75.4	75.9	76.5	76.2	77.2	77.2	76.3	75.9	73.3	77.2
3-Feb	75.6	75.1	74.1	74.0	73.5	73.2	72.8	72.6	72.2	73.8	71.4	67.6	64.8	62.3	63.5	66.9	71.4	75.7	77.7	76.9	76.1	75.2	74.3	74.5	72.3	77.7
4-Feb	75.0	74.0	74.0	73.3	72.8	73.5	73.2	72.9	72.9	72.0	69.8	66.1	62.5	60.0	60.7	63.3	65.0	69.6	72.5	73.9	73.1	71.6	67.8	64.9	69.8	75.0
5-Feb	67.3	68.6	69.9	71.5	70.7	69.8	68.0	67.3	67.7	70.7	72.9	74.5	72.8	71.9	73.8	75.4	76.6	78.9	80.3	81.3	82.4	83.8	84.6	84.2	74.4	84.6
6-Feb	81.7	83.3	80.4	79.2	79.4	79.2	80.0	81.7	84.3	84.4	77.8	70.9	68.8	67.0	64.5	62.7	62.7	70.1	72.4	71.3	74.2	72.3	74.3	72.4	74.8	84.4
7-Feb	74.6	76.8	78.8	76.7	73.0	76.6	80.3	79.9	78.8	78.5	68.1	60.3	55.7	54.8	55.2	57.7	60.6	67.8	74.6	79.1	83.3	81.9	81.3	82.6	72.4	83.3
8-Feb	80.6	78.3	77.9	78.4	78.8	77.9	77.5	77.1	77.5	77.4	73.2	66.8	61.9	57.1	56.7	62.5	66.5	75.5	81.7	78.3	76.8	75.4	74.1	75.5	73.5	81.7
9-Feb	71.7	72.7	72.7	73.0	75.9	75.1	74.5	72.5	73.2	72.4	68.8	66.7	60.5	57.6	56.7	59.4	60.6	70.3	74.3	73.2	72.5	71.5	71.4	72.1	69.5	75.9
10-Feb	72.1	72.3	71.8	71.7	72.0	72.1	71.8	71.2	72.7	70.8	64.8	60.4	60.8	58.5	60.3	60.7	64.2	69.2	69.5	72.7	77.8	79.3	80.2	79.7	69.9	80.2
11-Feb	78.9	78.1	77.7	77.6	77.3	77.2	77.6	77.1	77.3	76.9	75.7	72.6	67.6	65.0	62.2	61.3	65.7	73.5	77.9	78.5	77.8	78.4	77.8	78.0	74.5	78.9
12-Feb	78.2	77.9	78.0	77.9	77.6	77.8	77.8	78.2	77.5	76.5	73.0	69.1	64.9	64.7	64.8	66.0	65.6	71.4	74.2	74.5	74.1	75.5	75.9	75.8	73.6	78.2
13-Feb	76.5	76.7	76.5	76.4	75.4	75.3	74.9	74.4	75.0	74.3	71.8	64.3	61.5	59.3	60.3	64.2	66.9	72.6	71.8	74.4	75.7	75.9	75.5	74.5	71.8	76.7
14-Feb	74.1	72.5	72.4	71.1	70.6	69.7	69.6	69.1	69.2	70.0	68.7	64.2	62.8	60.0	55.6	57.0	56.2	67.4	74.6	76.1	74.9	74.2	72.2	71.0	68.5	76.1
15-Feb	70.4	71.5	71.0	70.8	69.8	69.7	70.1	70.9	71.3	72.8	72.2	66.2	62.5	56.7	55.3	61.2	63.6	67.2	68.7	69.6	70.5	73.0	77.0	76.5	68.7	77.0
16-Feb	74.7	74.5	72.6	71.9	72.1	72.5	72.4	72.3	72.9	72.3	65.9	61.6	58.7	56.6	55.3	57.0	58.2	63.9	67.5	68.3	68.5	67.1	65.1	65.9	67.0	74.7
17-Feb	67.6	67.9	69.4	71.0	72.3	70.9	68.5	66.1	64.5	61.9	56.3	54.5	49.3	46.7	44.9	45.8	46.2	51.9	60.1	65.6	66.8	68.1	67.4	72.5	61.5	72.5
18-Feb	75.2	75.3	72.9	73.2	72.3	72.4	72.7	73.7	72.6	64.2	56.3	53.5	45.5	39.1	37.2	38.4	39.2	45.9	57.7	55.5	58.0	60.0	63.2	60.7	59.8	75.3
19-Feb	59.2	60.5	64.9	63.3	65.1	64.8	64.4	67.3	65.3	52.3	48.7	45.4	45.8	45.1	43.9	46.0	45.3	47.4	46.9	44.7	45.0	44.9	46.7	47.3	52.9	67.3
20-Feb	49.5	50.3	49.1	52.2	56.0	58.3	59.7	60.6	60.7	60.5	60.3	67.7	69.9	62.1	51.3	50.2	50.6	58.6	67.7	73.2	77.2	82.3	83.5	83.6	62.3	83.6
21-Feb	82.5	82.0	83.0	81.8	82.3	81.2	81.1	82.6	80.5	76.1	71.2	67.3	67.8	65.8	65.0	66.7	67.3	70.0	72.0	69.8	71.2	71.3	71.9	73.9	74.3	83.0
22-Feb	75.6	76.7	75.5	75.1	75.6	76.8	76.1	77.6	84.2	84.4	83.8	82.4	79.5	80.8	78.6	76.3	76.3	83.7	88.8	92.3	94.1	93.4	93.4	94.7	82.3	94.7
23-Feb	95.1	96.2	97.0	97.7	97.9	98.5	98.8	99.0	98.9	95.5	90.9	88.6	86.8	86.3	85.5	84.0	83.8	84.7	86.6	87.4	87.1	86.4	85.5	84.3	90.9	99.0
24-Feb	84.6	85.1	84.5	85.4	86.2	87.1	86.8	86.4	82.8	82.9	81.7	82.1	80.8	77.1	78.5	82.2	82.5	85.8	88.8	90.9	91.6	86.2	85.9	84.7	84.6	91.6
25-Feb	84.9	83.0	82.5	81.6	81.6	80.6	79.3	77.5	74.5	74.6	74.1	73.4	72.6	71.1	69.3	68.3	70.4	74.0	78.8	78.7	82.5	86.8	86.0	86.5	78.0	86.8
26-Feb	88.1	89.9	89.3	91.1	91.7	91.2	90.9	91.2	89.1	82.6	79.2	72.3	67.6	65.5	67.7	67.1	68.5	74.8	79.4	82.8	82.4	82.5	84.0	84.1	81.4	91.7
27-Feb	88.5	91.3	90.7	92.1	93.1	93.3	93.5	94.1	94.1	92.9	90.6	87.2	82.5	82.0	77.4	75.6	74.6	76.0	78.3	79.7	79.8	79.7	78.6	77.5	85.1	94.1
28-Feb	77.4	77.6	77.1	77.2	76.6	78.0	77.9	78.1	77.2	83.1	85.0	83.7	75.6	72.0	67.2	64.3	62.0	66.2	74.6	79.4	80.7	85.6	89.4	90.5	77.3	90.5
	76.0	76.3	76.2	76.2	76.4	76.5	76.4	76.4	76.3	75.0	72.0	69.0	66.1	63.8	62.6	63.7	65.0	70.0	73.8	74.8	75.8	76.2	76.3	76.3	Diurnal Average	
	95.1	96.2	97.0	97.7	97.9	98.5	98.8	99.0	98.9	95.5	90.9	88.6	86.8	86.3	85.5	84.0	83.8	85.8	88.8	92.3	94.1	93.4	93.4	94.7	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Barge Landing - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Barometric Pressure (BP) - inHg

Barge Landing - February 2025

Maximum Value: 29.7 inHg on Feb 18 10:00

Maximum Daily Average: 29.7 inHg on Feb 18

Minimum Value: 28.1 inHg on Feb 23 09:00

Minimum Daily Average: 28.3 inHg on Feb 23

Maximum Diurnal Average: 29.1 inHg at hour 1

Minimum Diurnal Average: 29.1 inHg at hour 15

Monthly Average: 29.14 inHg

Percentiles: P_1 = 28.2 P_{10} = 28.6 Q_1 = 28.9 Median = 29.2 Q_3 = 29.5 P_{90} = 29.6 P_{99} = 29.7

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

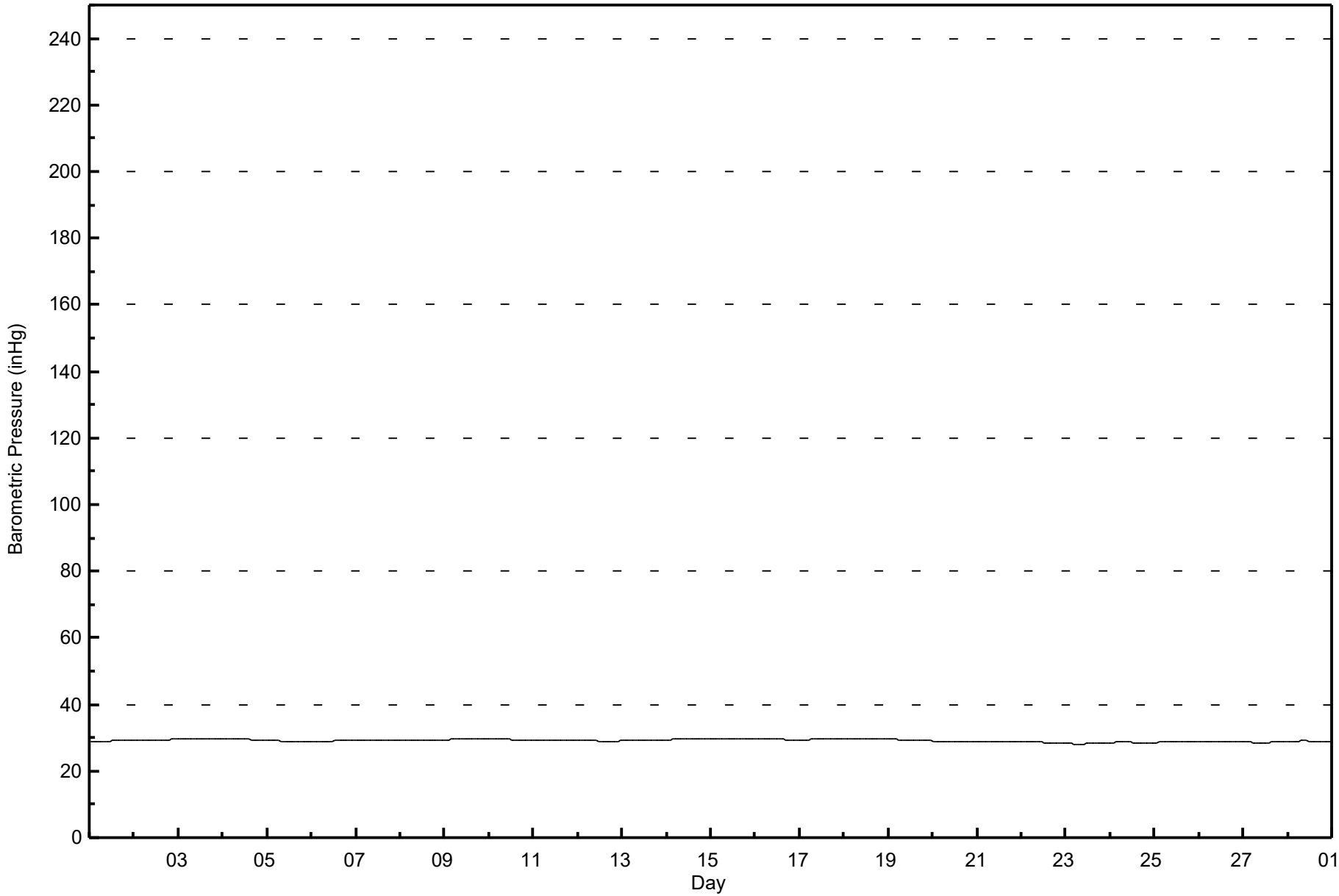
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.2	29.2	29.2	29.0	29.2
2-Feb	29.2	29.2	29.2	29.2	29.2	29.2	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.4	29.4	29.4	29.4	29.4	29.4	29.5	29.5	29.5	29.5	29.3	29.5
3-Feb	29.5	29.5	29.5	29.5	29.5	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6
4-Feb	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.5	29.5	29.5	29.5	29.4	29.4	29.4	29.4	29.4	29.3	29.3	29.3	29.3	29.5	29.6
5-Feb	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	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9	29.2
6-Feb	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	29.1	29.1	29.1	29.1	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.0	29.2
7-Feb	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
8-Feb	29.2	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	29.3	29.3	29.3	29.4	29.2	29.4
9-Feb	29.4	29.4	29.4	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.6	29.6	29.6	29.6	29.6	29.6	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.6	29.7
10-Feb	29.7	29.7	29.7	29.7	29.6	29.6	29.6	29.6	29.5	29.5	29.5	29.5	29.4	29.4	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.4	29.7
11-Feb	29.3	29.3	29.3	29.3	29.3	29.3	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.2	29.3	29.4
12-Feb	29.2	29.2	29.2	29.2	29.1	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.1	29.2
13-Feb	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.3	29.3	29.3	29.3	29.3	29.3	29.4	29.4	29.2	29.4
14-Feb	29.4	29.4	29.4	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5
15-Feb	29.5	29.5	29.5	29.5	29.5	29.6	29.6	29.5	29.6	29.6	29.6	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6
16-Feb	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	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	29.5	29.6
17-Feb	29.4	29.4	29.4	29.4	29.4	29.4	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.6	29.6	29.6	29.6	29.6	29.6	29.5	29.6
18-Feb	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.7	29.7
19-Feb	29.5	29.5	29.5	29.5	29.5	29.4	29.4	29.4	29.4	29.4	29.3	29.3	29.3	29.2	29.2	29.2	29.2	29.1	29.1	29.1	29.1	29.1	29.1	29.0	29.3	29.5
20-Feb	29.0	29.0	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9	28.9	28.9	28.9	29.0
21-Feb	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
22-Feb	28.9	28.9	28.8	28.8	28.8	28.8	28.7	28.7	28.7	28.7	28.6	28.6	28.6	28.5	28.5	28.5	28.5	28.5	28.4	28.4	28.4	28.3	28.3	28.3	28.6	28.9
23-Feb	28.3	28.3	28.2	28.2	28.2	28.1	28.1	28.1	28.1	28.1	28.2	28.2	28.3	28.3	28.4	28.4	28.4	28.5	28.5	28.5	28.5	28.6	28.6	28.6	28.3	28.6
24-Feb	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.5	28.5	28.5	28.5	28.5	28.5	28.5	28.5	28.6	28.6	28.6
25-Feb	28.6	28.6	28.6	28.6	28.6	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7
26-Feb	28.7	28.7	28.7	28.7	28.7	28.8	28.8	28.8	28.8	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.8	28.8	28.9
27-Feb	28.8	28.8	28.7	28.7	28.6	28.6	28.6	28.5	28.5	28.4	28.4	28.4	28.5	28.5	28.6	28.7	28.7	28.8	28.8	28.8	28.9	28.9	28.9	29.0	28.7	29.0
28-Feb	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	28.9	28.9	28.9	29.0	29.0
	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	Diurnal Average	
	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.6	29.6	29.7	29.7	29.7	29.7	29.7	29.7	29.7	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Barometric Pressure (BP) - inHg

Barge Landing - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Barge Landing - February 2025

Maximum Speed: 14 km/h on Feb 2 00:00

Maximum Daily Speed Average: 10.3 km/h on Feb 1

Minimum Speed Value: 0 km/h on Feb 27 08:00

Minimum Daily Speed Average: 0.3 km/h on Feb 14

Maximum Diurnal Speed Average: 1.7 km/h at hour 21

Minimum Diurnal Speed Average: 0.4 km/h at hour 13

Monthly Average Velocity: 0.7 km/h 111.2 deg

Percentiles: $P_1 = 0$ $P_{10} = 2$ $Q_1 = 3$ Median = 5 $Q_3 = 7$ $P_{90} = 9$ $P_{99} = 12$

Hours in Service:	672
Hours of Data:	669
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-Feb	N10	N10	N10	N9	N9	N9	N9	N9	N10	N10	N11	N11	N11	N12	N11	N10	NNW9	N11	N9	N11	NNE12	NNE12	N13	NNE14	N10.3	NNE14
2-Feb	NNE12	NNE11	NNE9	NNE8	NNE9	NNE9	NNE7	N7	NNE9	NNE10	NNE10	NNE10	N10	N8	N7	N5	NNW3	N4	NE2	N2	NW1	S1	SE1	S1	NNE6.2	NNE12
3-Feb	S2	SSW1	SSE2	ESE3	SE3	UO	NNE0	S1	SSE2	S2	SSW4	SW6	SSW7	SSW7	S6	S5	SSE5	SSE4	SE4	SSW5	SW3	WSW6	SW4	S2	SSW3.1	SSW7
4-Feb	S4	SSW4	SSW6	S5	SSE5	SE6	SSE6	SSE6	S7	S8	S9	S9	S9	S9	S10	S9	SSW8	SSW7	S7	S7	S7	S8	SSW9	SW11	S7.0	SW11
5-Feb	SSW8	S7	S7	S7	S8	SSW8	SSW10	SSW9	SSW9	SSW7	SSW8	SSW7	SSW8	SSW8	SSW8	SSW6	SW7	SW6	SW5	SSW4	S3	SSE3	S3	SW4	SSW6.5	SSW10
6-Feb	WSW5	SW3	WSW8	SW6	WSW7	W5	WNW4	NW3	E2	NNE8	NNE11	N11	NNE11	N11	N9	N7	NW5	NNW4	NW2	WNW2	SW1	WSW4	SW3	SW3	NW2.9	N11
7-Feb	S1	S2	SSE2	SW6	SW7	W2	ESE3	SE4	SSE3	S3	SW5	SW6	SW9	SW10	SW9	SSW7	SSW5	SSW4	SW4	SW3	W1	SW3	SE3	SW4	SSW3.9	SW10
8-Feb	SW3	SSE3	ESE4	SSE4	SSE4	SE4	SE3	SE3	SE4	SE4	SSE5	S3	WSW3	W3	NNE3	NNE4	NNE2	NNE4	N4	NNE9	NNE10	NNE10	N10	N9	NE1.6	NNE10
9-Feb	NNE10	NNE9	N8	NNW4	N3	N3	N3	ENE1	E2	E1	NNE4	N6	NNE8	NNE6	ENE5	ENE4	NE2	NNW0	UO	SE2	SE1	SW2	SE2	SE4	NNE2.9	NNE10
10-Feb	SSE4	SSE4	SSE4	SSE5	SSE5	S5	SSE5	SE5	SSE5	SSE6	S7	S7	SSE7	SSE9	SSE8	ESE6	ESE2	NE5	NNE4	N3	NNE4	NW2	N2	NNE2	SSE3.2	SSE9
11-Feb	N2	NNW3	NNW2	N3	NNW3	N4	NNW3	NNW2	SSE2	E4	E4	ENE4	ESE3	ENE1	ESE3	E2	NE2	NNE1	E1	SE0	E2	ESE3	E2	SW2	NE1.3	N4
12-Feb	W0	SE0	ESE3	SE2	S0	WSW1	S1	ESE2	SE2	E1	ESE3	SW2	NE5	NE5	NNE6	NNE6	NNE5	N5	N6	NNW6	N6	NNW4	NNW6	NNW5	NNE2.1	NNE6
13-Feb	NNW4	NNE5	NNE4	NNE4	E3	NE3	NNE1	NNW2	NNW3	NNW3	NW3	NNW3	NE5	NNE5	NNE6	NNE5	NNE4	N4	NE6	NNE5	N5	N4	NNE3	N3	NNE3.7	NE6
14-Feb	N2	WNW0	NNW2	WNW1	N2	W1	NW1	SSE1	SSW1	SW3	SW3	WSW2	NNE4	NE4	NW1	S3	SSE4	ENE3	NE2	NNE2	N1	NNW2	WNW1	ESE3	N0.3	NE4
15-Feb	SE4	SE3	SE5	SE5	ESE3	SSW1	SE3	SE4	ESE2	SE4	SSW2	SSE2	SE3	SW4	SW4	E4	ENE4	ENE3	NE1	NE4	NE5	NNE3	N2	ESE2	ESE1.9	NE5
16-Feb	ENE1	SE2	ESE4	ENE2	ESE4	ESE4	SE2	ESE3	ESE4	S5	S5	S6	S8	S8	S8	S7	SSE7	SE5	SE7	SE6	SE8	SE8	SE9	SSE7	SSE4.8	SE9
17-Feb	SSE7	SSE6	SSE4	S4	SSE3	SSE2	SE6	SE7	SE7	SE8	SSE8	S8	S8	S9	SE9	SE12	SE9	SE6	ESE4	ESE5	ESE5	SE7	SE4	S2	SSE5.8	SE12
18-Feb	ESE3	SE5	SE4	SE6	SE7	SE6	SE6	SSE6	SSE6	S7	S7	S8	S8	S10	S10	S8	SSE7	SSE4	ESE6	SE7	SE6	SSE5	SSE5	SSE6	SSE6.0	S10
19-Feb	SSE6	SSE5	SE4	SE4	SE4	SE6	SSE4	S3	SSE4	SSE5	SSW5	S9	S10	S11	S9	SSE10	SSE8	SE7	SE10	SE12	SSE12	SSE12	SSE10	S11	SSE7.3	SE12
20-Feb	S9	S8	S12	S11	S9	S10	SSW9	SSW10	SSW11	SSW11	SSW10	SSW11	SSW10	SSW11	S8	S7	SSE5	SE5	ESE5	E2	N3	N2	ESE3	NE1	S6.5	S12
21-Feb	WSW1	SE2	E1	WSW1	SE1	E0	NW2	NE1	N2	NNW3	NW4	NNW6	NNW6	N7	NNE7	N7	N7	N6	N5	N7	NNE6	NNE4	N5	NNW5	N3.5	N7
22-Feb	NNW6	NNW5	NNW5	NNW4	NNW2	NW1	NW2	NNW2	WNW2	E1	NW1	W2	S2	SW5	SSW5	SW6	SW4	S3	S3	S3	ESE3	ESE3	ESE5	SE5	WSW0.7	SW6
23-Feb	SE5	SSE4	SSE2	W1	SW1	NW1	W0	SSE2	NNE0	N10	NNE8	NNE9	N11	NNE9	NNE9	NNE7	NNE7	NNE5	NNE4	E2	ENE3	ENE3	ENE5	ENE6	NNE3.5	N11
24-Feb	NE5	NE4	NE4	NNE2	N3	NNW3	NNW3	ENE2	ESE1	W2	WSW4	SW4	SSW4	SSE4	SSW5	SW5	S2	ENE2	NNE2	NNE1	NNW5	N8	N8	NNE8	N1.2	NNE8
25-Feb	NNE8	NNE7	NNE7	NNE8	NNE7	NNE6	NNE4	NNE5	NNE6	NNE6	NNE5	NE5	NNE5	NNE5	NNE3	NNE4	NNE4	N4	NNE2	NNW1	NNW3	NNW4	NNW3	UO	NNE4.7	NNE8
26-Feb	SSE4	SSE5	SSE6	SE5	SE3	ENE0	NW1	NNW4	N4	NNE6	NNE6	NNE5	NNE5	NNE5	NNE7	N7	N6	N5	NNW5	N5	N5	N4	NNW5	NNW4	NNE3.0	N7
27-Feb	NNW3	NW4	NNW3	WNW2	NW2	NW2	NE2	N0	WSW3	SW3	S7	SW6	NNW6	NNE9	NNE8	NE9	NNE7	NE7	NE7	NE7	NNE6	NE6	NE5	NNE2	NNE2.9	NNE9
28-Feb	ENE3	E2	ESE3	ESE3	E3	WSW0	ENE3	ENE2	ESE1	SE3	SW3	WSW3	SW3	S3	SSE6	SSE6	S5	S5	S4	SE5	SSE4	SE4	SE4	SE6	SSE2.7	SE6
	E0.7	E0.8	ESE1.1	SE0.9	SE1.0	SE0.5	SE0.6	SE1.0	SE1.2	SE0.9	S0.9	SSW1.1	S0.4	S0.6	SE1.0	ESE1.3	ESE0.7	ENE1.2	ENE1.5	ENE1.3	NE1.7	ENE0.9	ENE1.0	ESE0.6	Diurnal Average	
	NNE12	NNE11	S12	S11	NNE9	S10	SSW10	SSW10	SSW11	SSW11	N11	N11	N11	N12	N11	SE12	NNW9	N11	SE10	SE12	NNE12	SSE12	N13	NNE14	Diurnal Maximum	

UO - Unstable Operation

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

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Barge Landing - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 4 km/h on Feb 20 14:00

Minimum Value: 0 km/h on Feb 14 19:00

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

Hours in Service:	672
Hours of Data:	669
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-Feb	3	4	3	3	3	3	3	3	3	3	3	4	3	4	4	3	3	3	3	4	4	4	4	4	4
2-Feb	3	4	3	3	3	3	2	2	2	3	3	3	3	2	2	1	1	1	1	1	1	1	1	1	4
3-Feb	1	1	1	1	1	UO	1	1	1	2	1	2	2	3	2	2	1	1	1	1	2	2	1	1	3
4-Feb	1	1	2	2	1	1	2	2	2	2	3	3	3	4	4	3	3	2	2	2	2	3	4	4	4
5-Feb	3	2	2	2	2	3	3	3	3	2	3	2	3	3	3	2	2	2	2	2	1	1	1	2	3
6-Feb	1	1	3	3	2	2	2	2	2	3	3	4	3	3	3	3	2	1	2	1	1	1	1	1	4
7-Feb	1	1	1	3	3	2	1	1	1	1	1	2	3	3	3	3	2	1	1	1	1	2	1	1	3
8-Feb	2	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	3	3	3	4	3	4
9-Feb	3	3	3	2	1	1	1	1	1	1	1	2	2	2	2	1	1	1	UO	1	1	1	1	1	3
10-Feb	1	1	1	1	1	1	1	1	1	2	2	3	3	3	3	2	1	2	2	1	1	2	1	1	3
11-Feb	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
12-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	2	2	2	1	2	2	2
13-Feb	1	2	2	2	1	1	1	1	1	1	1	2	1	2	1	1	1	2	1	1	1	1	1	1	2
14-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	0	1	1	1	1	1	2
15-Feb	1	1	1	1	2	1	1	1	2	1	1	1	1	2	2	1	1	1	1	3	2	1	1	1	3
16-Feb	1	1	1	2	1	1	1	1	1	2	2	2	2	3	3	2	2	2	1	1	2	2	2	2	3
17-Feb	2	2	2	1	1	1	2	2	2	3	3	3	3	3	3	4	3	2	1	1	2	1	2	1	4
18-Feb	1	1	1	1	1	2	2	2	2	2	3	3	3	4	4	3	2	1	2	1	1	1	1	1	4
19-Feb	1	1	1	1	1	1	1	1	1	2	2	4	4	4	4	4	3	2	3	3	3	4	4	4	4
20-Feb	3	3	4	4	3	4	3	3	4	4	4	4	4	4	3	3	2	1	1	1	1	1	1	1	4
21-Feb	1	1	1	2	1	1	1	1	1	1	2	2	2	2	2	2	2	1	2	2	2	1	2	1	2
22-Feb	2	1	1	1	1	1	1	1	1	1	1	1	2	1	2	2	2	1	1	1	2	1	1	1	2
23-Feb	1	1	1	1	1	1	1	1	2	3	2	3	3	3	3	2	2	2	1	1	1	1	2	2	3
24-Feb	2	1	1	1	1	1	1	1	1	1	1	2	2	1	2	2	1	1	1	1	2	2	2	3	3
25-Feb	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	UO	2
26-Feb	1	2	2	1	2	1	1	1	1	1	2	1	1	1	2	2	2	1	1	1	1	1	1	1	2
27-Feb	1	1	1	1	2	1	2	2	3	2	2	2	4	2	3	3	2	2	2	2	2	2	2	1	4
28-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	2
	3	4	4	4	3	4	3	3	4	4	4	4	4	4	4	4	3	3	3	4	4	4	4	4	
	Diurnal Maximum																								

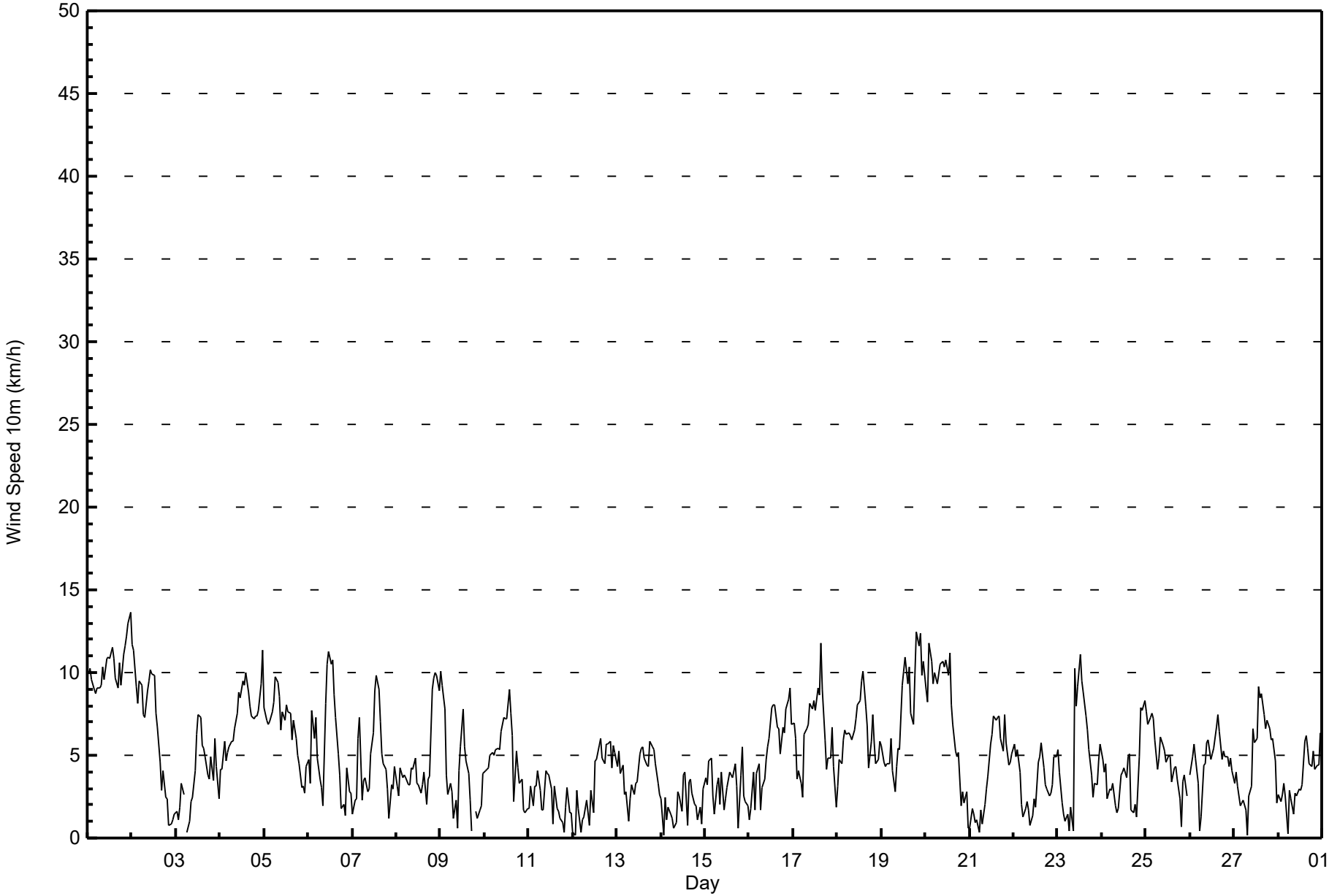
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Barge Landing - February 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	416	62.18	62.18
6 - 11	242	36.17	98.36
12 - 19	11	1.64	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: 669

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Barge Landing - February 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	34	43	21	19	19	34	44	42	33	15	28	11	9	8	18	38	416
6 - 11	43	47	6	1	0	2	23	24	46	27	13	3	0	0	0	7	242
12 - 19	2	4	0	0	0	0	2	2	1	0	0	0	0	0	0	0	11
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	79	94	27	20	19	36	69	68	80	42	41	14	9	8	18	45	669

Total Number of Valid Hours: 669

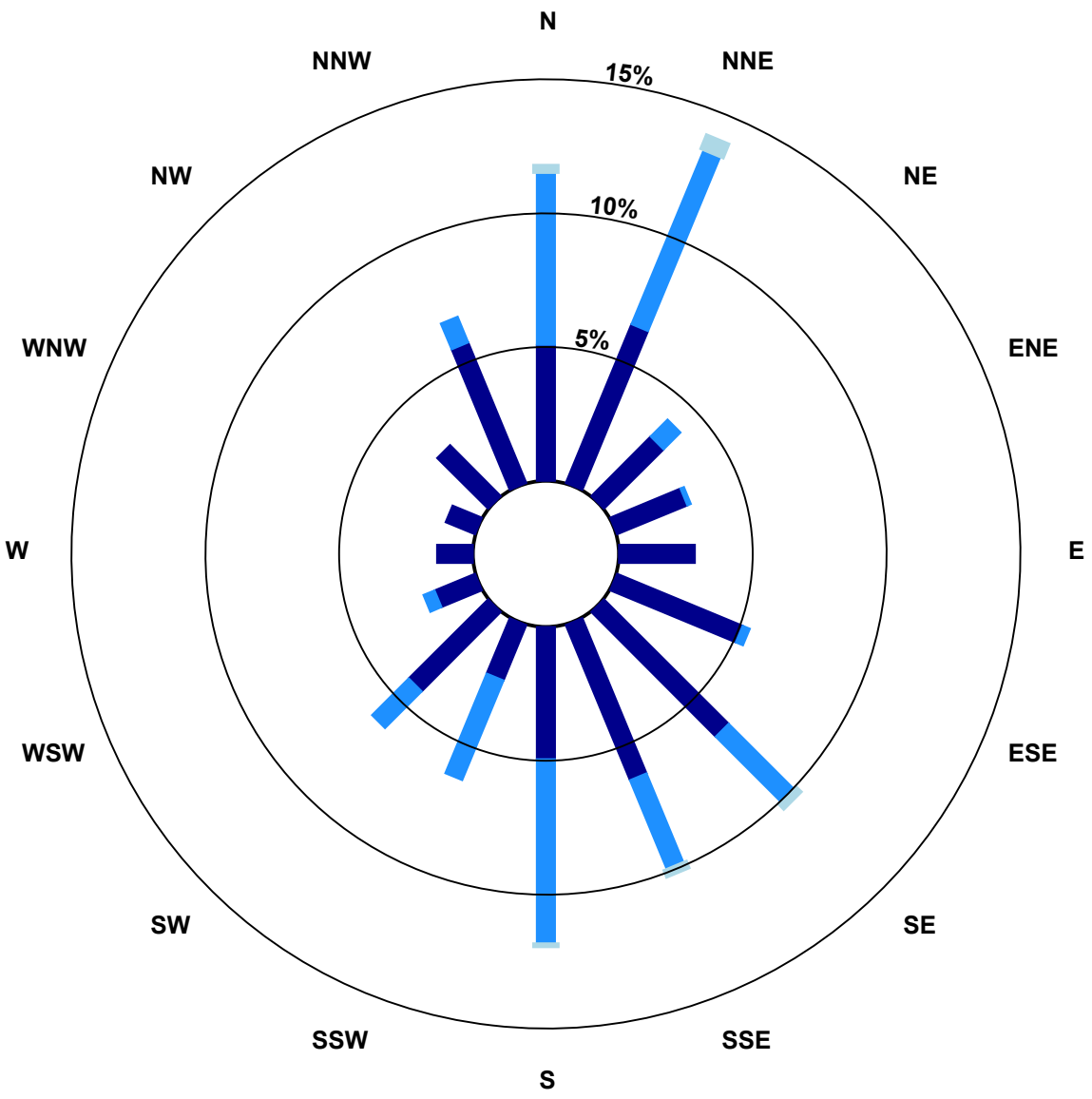
Total Number of Hours: 672

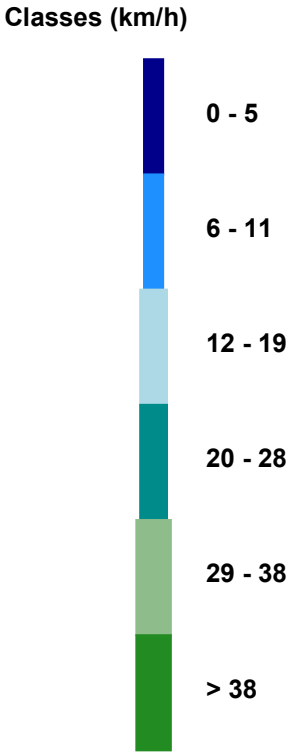
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Wind Speed 10m (WS10) - km/h

Barge Landing





Total Number of Valid Hours: 669

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Barge Landing - February 2025

Direction of Maximum Speed: 13 deg on Feb 2 00:00
Direction of Maximum Daily Speed Average: 360.0 deg on Feb 1

Direction of Minimum Speed: 11 deg on Feb 27 08:00

Direction of Minimum Daily Speed Average: 0.3 deg on Feb 14

Monthly Average Direction: 111.2 deg

Hours in Service:	672
Hours of Data:	669
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-Feb	0	357	359	357	355	355	359	2	1	358	357	359	351	351	353	349	347	358	3	359	17	15	11	13	360.0
2-Feb	15	17	19	20	29	29	12	7	14	20	20	15	7	3	7	8	342	9	44	357	318	169	133	179	15.5
3-Feb	170	196	153	121	128	UO	13	175	161	191	207	223	209	200	190	178	165	156	141	213	222	246	231	185	192.7
4-Feb	181	197	194	179	158	143	166	159	169	175	177	184	185	184	185	187	201	195	183	178	180	183	211	218	184.3
5-Feb	203	191	183	182	187	199	209	210	206	195	195	199	196	201	202	201	220	217	216	211	177	159	189	217	200.1
6-Feb	244	217	240	227	248	271	290	313	98	20	14	4	16	11	5	356	322	331	324	297	215	244	233	234	326.0
7-Feb	189	191	152	229	236	266	110	134	167	189	220	230	230	232	223	200	206	202	218	223	278	223	133	221	212.8
8-Feb	219	151	122	158	162	137	132	138	133	143	159	172	238	269	26	24	16	20	351	22	19	16	7	7	51.3
9-Feb	14	13	5	342	1	355	9	64	83	84	12	0	16	32	62	62	41	343	UO	124	138	216	146	124	25.0
10-Feb	155	164	153	164	151	169	166	143	151	163	187	180	166	168	161	122	111	36	29	1	17	322	352	13	151.8
11-Feb	356	339	340	356	338	7	344	337	153	87	90	75	110	66	115	93	36	17	87	125	89	115	97	217	53.0
12-Feb	281	138	116	130	174	244	169	115	137	97	103	214	38	42	27	18	14	355	353	343	359	342	335	341	13.9
13-Feb	343	16	13	29	89	54	23	333	336	336	324	348	35	16	25	28	14	11	35	21	360	1	17	359	12.9
14-Feb	356	292	341	299	349	270	305	158	202	226	233	242	30	39	312	172	150	73	39	20	1	331	291	123	7.1
15-Feb	140	136	137	126	120	199	139	132	114	130	201	166	140	222	222	83	59	77	38	43	51	32	6	108	116.4
16-Feb	59	129	119	63	113	115	145	121	123	173	169	175	183	187	183	171	160	136	134	137	132	141	142	151	150.1
17-Feb	155	161	166	169	152	165	135	140	141	145	158	176	173	183	144	128	131	135	107	113	112	140	143	179	147.4
18-Feb	119	133	124	141	144	146	146	157	156	175	187	181	175	183	185	178	167	157	120	135	143	158	167	158	159.4
19-Feb	163	159	126	140	143	141	164	183	148	164	196	189	173	169	182	167	163	137	138	143	148	155	159	169	159.5
20-Feb	171	172	175	177	178	183	197	194	193	199	202	203	203	202	173	186	159	125	104	99	355	352	116	42	182.9
21-Feb	243	138	100	257	139	101	318	51	349	333	323	344	344	1	18	10	9	11	6	5	12	12	6	335	1.4
22-Feb	337	330	338	333	346	321	322	344	301	99	320	262	190	224	211	216	225	186	187	174	120	116	115	130	242.2
23-Feb	137	155	166	281	229	315	275	151	24	351	19	17	10	18	13	18	21	18	16	86	70	74	60	66	28.1
24-Feb	50	44	53	20	351	336	335	65	117	263	240	218	211	154	204	214	181	66	21	21	347	2	10	14	6.1
25-Feb	27	22	26	15	21	28	32	15	18	27	29	44	22	33	28	19	28	9	18	332	338	328	333	UO	19.8
26-Feb	148	159	166	131	128	69	326	347	355	16	19	22	17	21	20	9	4	2	347	355	360	349	342	348	14.4
27-Feb	329	322	330	298	325	326	44	11	243	219	188	215	347	23	26	35	23	35	45	39	32	45	55	26	18.3
28-Feb	78	99	103	112	94	254	57	70	106	142	219	249	219	181	160	165	178	174	170	146	152	135	125	133	147.0
	79.3	98.5	109.7	137.3	135.9	126.4	136.9	131.1	136.6	138.0	183.9	212.8	187.5	180.6	145.9	117.8	103.6	62.7	69.2	68.6	55.8	67.6	71.5	108.7	
	Diurnal Average																								

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

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Barge Landing - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 108 deg on Feb 27 08:00

Minimum Value: 6 deg on Mar 1 00:00

Percentiles: P_1 = 9 P_{10} = 17 Q_1 = 19 Median = 25 Q_3 = 36 P_{90} = 56 P_{99} = 92

Hours in Service:	672
Hours of Data:	669
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-Feb	20	20	20	21	21	21	20	18	20	20	20	20	20	21	20	21	21	19	20	20	20	20	18	19	21
2-Feb	19	20	20	20	17	17	18	18	18	18	18	19	20	23	21	21	21	17	30	30	47	21	69	42	69
3-Feb	34	50	50	14	23	UO	86	57	65	47	32	24	26	28	34	27	18	24	28	19	70	18	29	54	86
4-Feb	40	25	19	28	25	12	18	19	23	24	22	28	27	29	29	27	25	22	23	23	25	26	28	26	40
5-Feb	26	28	26	23	22	22	23	24	24	30	26	28	28	25	32	36	22	22	23	23	23	19	29	30	36
6-Feb	23	35	19	34	20	37	37	41	83	24	22	20	18	20	21	22	21	17	31	23	70	15	17	21	83
7-Feb	52	38	46	18	23	56	23	25	37	44	26	22	21	21	24	28	24	20	18	24	46	34	26	28	56
8-Feb	47	38	10	19	18	17	16	25	13	24	27	51	22	45	56	19	32	15	20	18	19	18	19	19	56
9-Feb	18	18	19	19	23	11	25	67	48	91	24	27	21	28	29	22	20	52	UO	49	73	25	52	22	91
10-Feb	29	24	27	21	18	27	23	18	21	23	25	32	28	29	28	17	48	20	31	18	28	69	67	32	69
11-Feb	29	26	46	21	25	45	50	73	40	26	26	26	44	85	40	60	28	16	59	92	43	36	42	35	92
12-Feb	76	91	14	17	100	73	51	34	52	83	25	72	27	26	21	18	18	22	20	19	18	16	17	15	100
13-Feb	17	20	43	27	41	60	83	45	18	22	33	43	28	27	22	21	15	15	13	14	11	14	25	17	83
14-Feb	24	74	13	44	30	49	38	75	33	45	46	69	31	35	87	54	36	14	31	20	67	22	72	25	87
15-Feb	18	32	16	8	41	40	40	19	48	23	45	58	43	39	55	37	17	19	65	29	27	58	37	39	65
16-Feb	62	29	9	54	14	8	64	44	16	28	37	35	32	31	30	35	27	26	11	15	11	16	17	21	64
17-Feb	21	24	28	21	16	40	16	21	20	23	32	33	38	31	33	18	19	12	15	17	22	12	26	70	70
18-Feb	23	23	34	12	12	17	14	18	25	32	35	30	31	33	27	34	25	20	13	9	9	22	17	14	35
19-Feb	15	26	12	17	10	11	20	35	19	34	44	33	32	31	29	27	26	15	14	18	20	22	24	26	44
20-Feb	24	24	24	27	26	25	29	25	27	29	27	26	28	28	32	33	27	16	18	42	30	48	32	64	64
21-Feb	94	59	70	78	56	100	47	77	45	25	44	23	25	21	21	20	19	17	19	17	19	19	19	19	100
22-Feb	16	16	17	18	34	67	42	37	37	77	79	49	74	30	32	27	33	19	31	43	51	17	12	14	79
23-Feb	15	32	67	45	70	40	81	40	87	20	19	24	21	22	20	20	19	23	32	38	23	22	23	23	87
24-Feb	25	21	23	50	34	21	21	56	71	77	29	38	42	46	40	33	54	59	40	39	22	19	18	19	77
25-Feb	17	19	18	17	21	18	25	25	19	21	21	25	31	36	39	30	20	19	26	50	15	16	27	UO	50
26-Feb	17	23	26	18	23	100	68	23	21	17	19	28	21	23	17	18	19	17	15	16	19	18	19	22	100
27-Feb	25	21	27	40	44	84	100	108	100	60	30	32	55	20	20	21	20	23	19	19	24	18	24	38	108
28-Feb	26	24	34	20	32	88	26	28	64	45	52	56	62	61	43	30	35	22	20	14	18	11	9	6	88
	94	91	70	78	100	100	100	108	100	91	79	72	74	85	87	60	54	59	65	92	73	69	72	70	
	Diurnal Maximum																								

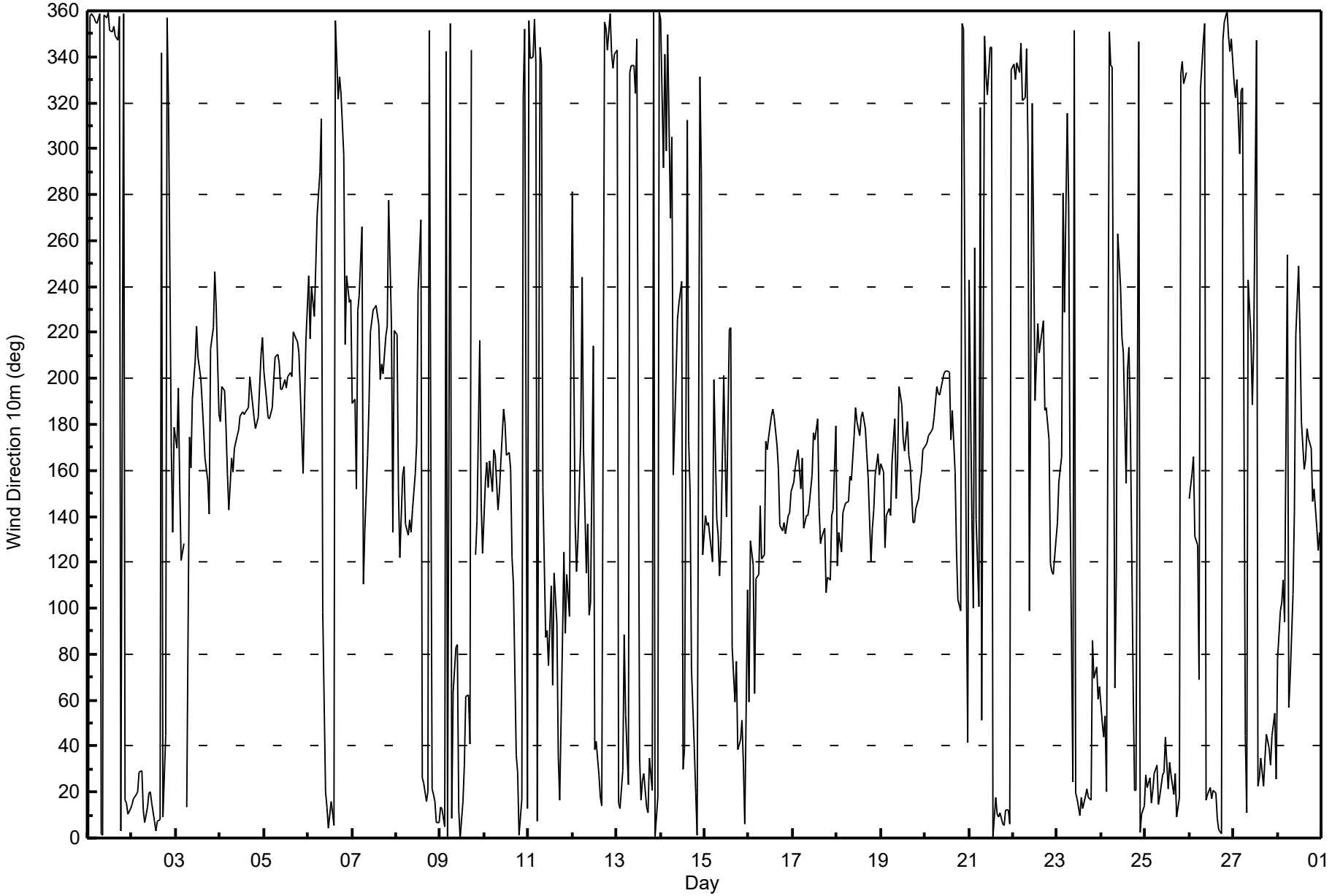
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Barge Landing - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 20m (WS20) - km/h

Barge Landing - February 2025

Maximum Speed: 26 km/h on Feb 2 00:00

Maximum Daily Speed Average: 17.9 km/h on Feb 1

Minimum Speed Value: 0 km/h on Feb 12 02:00

Minimum Daily Speed Average: 1.9 km/h on Feb 22

Maximum Diurnal Speed Average: 2.8 km/h at hour 21

Minimum Diurnal Speed Average: 0.2 km/h at hour 2

Monthly Average Velocity: 0.8 km/h 100.7 deg

Percentiles: P_1 = 1 P_{10} = 3 Q_1 = 5 Median = 8 Q_3 = 12 P_{90} = 16 P_{99} = 21

Hours in Service: 672

Hours of Data: 671

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-Feb	N17	N18	N16	N15	N15	N15	N15	N16	N18	N16	N18	N19	N19	NNW19	N19	NNW17	NNW16	N18	N15	N19	NNE22	NNE23	N23	N26	N17.9	N26
2-Feb	NNE22	NNE23	NNE19	NNE17	NNE21	NNE21	N14	N12	NNE17	NNE20	NNE20	NNE18	N17	N13	N11	N7	NNW5	N7	NE5	N5	NW2	SW2	UO	SSW3	NNE12.6	NNE23
3-Feb	SW4	WSW4	SW5	SSW4	SW3	W2	W3	WSW4	SW4	SSW5	SSW6	SSW8	SSW10	S11	S9	S9	S9	S8	SSW6	SW10	SW8	WSW10	WSW9	SW6	SSW5.9	SSW11
4-Feb	SSW9	SSW9	SSW11	SSW10	S10	SSE10	S12	S12	S13	S13	S14	S14	S15	S15	S17	S14	SSW13	SSW13	S13	S13	S13	S13	SSW14	SSW17	S12.5	SSW17
5-Feb	SSW13	S12	S12	S12	S13	SSW14	SSW16	SSW15	SSW13	SSW10	SSW11	SSW11	SSW12	SSW10	SSW11	SSW9	SW11	SW9	SW9	SW8	SSW6	S6	SSW6	SW8	SSW10.5	SSW16
6-Feb	WSW8	SW7	WSW12	SW10	WSW11	W9	WNW7	NW6	E3	NNE17	NNE21	N19	NNE20	N20	N15	N12	NW10	NW8	NW6	WNW6	W4	WSW7	SW6	WSW6	NW5.8	NNE21
7-Feb	SW4	SW6	SSW5	SW12	SW12	W6	ESE4	SSW5	SW7	SW6	SSW7	SW8	SW12	SW13	SW12	SSW11	SSW8	SSW9	SW10	WSW8	WNW5	SW7	SW4	SW8	SW7.3	SW13
8-Feb	SW7	SSW5	S6	SSW7	S8	SSE8	SSE7	SSE8	SSE9	SSE7	SSE7	SSE4	SW3	W3	NNE4	NNE6	N4	NNE9	N7	NNE19	NNE19	NNE19	N17	N16	NE1.9	NNE19
9-Feb	N19	N17	N14	NNW8	N7	N8	N8	NE4	NE4	E2	NNE5	N9	NNE14	NNE9	NE8	NE6	NE5	N3	WNW4	W2	W3	WSW6	SW6	SSW6	N5.4	N19
10-Feb	SSW8	SSW9	S9	S11	S11	S11	S11	S10	SSE10	S11	S11	S12	SSE12	SSE15	SSE12	SE8	ESE4	NE12	NNE9	N6	NNE8	N5	NNE4	N4	SSE5.2	SSE15
11-Feb	NNW5	NNW6	N6	N7	N7	NNE10	N7	NNE4	SE3	E6	E6	ENE6	E4	NE1	ESE4	E3	NE3	NE4	NNW3	NNE2	NE4	ENE6	ENE4	SSW2	NE3.5	NNE10
12-Feb	WSW2	NE0	ESE6	SE4	ESE2	S1	SE3	ESE5	SE3	ESE2	E3	SW1	NE7	NE7	NNE10	NNE11	NNE9	N8	N10	NNW11	N10	NNW8	NNW11	NNW10	NNE3.7	NNW11
13-Feb	NNW8	N9	NNE6	NNE11	NE7	NE9	NNE5	NNW7	NNW7	NW4	NNW4	NNW5	NNE7	NNE8	NNE9	NNE9	NNE9	NNE10	NNE17	NNE14	N12	N10	N7	N7	NNE7.9	NNE17
14-Feb	N7	N5	NNW8	NNW7	N8	NNW4	NNW5	WNW4	SW6	SW4	SW2	S1	NE5	NE5	NNW1	S5	SSE6	ENE7	ENE6	NNE6	NNE4	NNW4	NW3	SE1	N2.2	N8
15-Feb	SSW7	SSW6	S9	SSE8	SSE6	S6	SSE8	SSE8	SSE5	SE5	SSE2	SSE3	SSE4	SSW5	SW4	E6	NE9	ENE8	ENE4	NE8	NE11	NE6	N8	NE6	SE2.9	NE11
16-Feb	N5	WNW1	ESE3	ENE4	SE8	SE9	SSE6	SSE8	SSE8	S7	SSE9	S9	S12	S12	S12	SSE10	SSE12	SE9	SE11	SE12	SE13	SE14	SE15	SSE13	SSE8.3	SE15
17-Feb	SSE13	SSE11	SSE7	SSE8	SSE7	SSE6	SE10	SE10	SE11	SSE13	SSE12	S13	SSE12	S14	SSE13	SE17	SE13	SE11	ESE10	ESE11	ESE10	SSE13	SSE10	S8	SSE10.4	SE17
18-Feb	SSE8	SSE10	SE9	SSE12	SSE14	SSE12	SSE13	SSE13	SSE11	S11	S11	S12	S13	S15	S15	S13	SSE12	SSE9	SE11	SE13	SE12	SSE10	SSE11	SSE13	SSE11.5	S15
19-Feb	SSE13	SSE10	SE8	SSE8	SE9	SE12	SSE10	S8	SSE9	SSE8	S8	S14	S16	SSE19	S14	SSE18	SSE14	SE12	SE16	SE20	SSE20	SSE22	SSE18	SSE19	SSE13.3	SSE22
20-Feb	SSE16	S15	S20	S19	S16	S16	SSW15	S15	S16	SSW16	SSW16	SSW16	SSW15	SSW16	S13	S11	SSE9	SE9	ESE11	E7	N6	N6	ESE4	NE2	S10.5	S20
21-Feb	SSE1	S3	E2	WSW3	S1	ENE2	NNW3	NNW4	N5	NNW4	NW6	NNW8	NNW11	N12	NNE13	N13	N13	NNE11	N10	N13	N10	N8	N9	NNW9	N6.2	NNE13
22-Feb	NNW11	NNW10	NNW10	NNW7	N3	NNW3	NNW3	NNW3	WNW2	E1	NNW2	W3	SSW3	SW6	SSW6	SSW8	SW6	SSW7	SSW8	SSW7	SSE8	S5	SSE7	SSE11	SW1.9	SSE11
23-Feb	SSE12	SSE10	SSE6	SSE2	SSW2	WSW2	W3	SW4	WSW3	N19	NNE16	NNE19	N21	NNE19	NNE17	NNE15	NNE14	NNE11	NNE8	ENE4	ENE7	ENE6	NE9	ENE11	NNE6.3	N21
24-Feb	NE9	NE8	NE8	NNE4	N6	NNW5	NNW6	ENE4	ESE2	WSW3	WSW4	SSW5	SSW6	SSE5	SSW7	SSW7	S3	ENE3	NNE4	N4	NNW9	N13	N14	NNE15	N2.8	NNE15
25-Feb	NNE16	NNE14	NNE15	NNE14	NNE14	NNE12	NNE8	NNE9	NNE11	NNE10	NNE9	NE7	NNE8	NNE8	NNE4	NNE6	NNE7	N6	NNE6	N3	NNW6	NW6	NNW5	WSW2	NNE8.3	NNE16
26-Feb	SSE7	SSE10	SSE10	SSE9	SSE8	SW2	NW3	NNW10	N8	NNE10	NNE10	NNE6	NNE7	NNE8	NNE11	N12	N10	N8	N10	N10	N9	N8	NNW9	NNW7	N4.7	N12
27-Feb	NNW6	NW7	NW5	WNW2	NNW3	NW3	NE3	WSW1	WSW4	SW5	S10	SW9	NNW11	NNE18	NNE17	NNE17	NNE15	NNE13	NE13	NNE13	NNE11	NE11	NE9	NNE4	NNE5.6	NNE18
28-Feb	ENE5	E4	E5	ESE5	E4	SSE0	NE5	ENE4	ESE2	SSE3	SSW3	WSW3	SSW3	S5	SSE8	SSE9	S9	S8	S9	SSE11	SSE9	SSE9	SE9	SSE11	SSE4.7	SSE11
	NE0.3	SE0.2	ESE1.1	SSE1.4	SSE1.5	SE0.8	SSE0.9	S1.3	SSE1.9	SE1.0	SSE0.8	SSW0.9	E0.3	SE0.8	ESE1.4	ESE2.0	E1.2	NE2.3	ENE2.4	NE2.3	NE2.8	NE1.4	NE1.2	SE0.4	Diurnal Average	
	NNE22	NNE23	S20	S19	NNE21	NNE21	SSW16	N16	N18	NNE20	NNE21	N19	N21	N20	N19	SSE18	NNW16	N18	NNE17	SE20	NNE22	NNE23	N23	N26	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 Feb 23 13:00

Minimum Value: 0 km/h on Feb 2 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:	672
Hours of Data:	671
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-Feb	5	5	4	5	5	4	4	4	5	4	5	6	5	5	5	5	4	5	5	6	6	6	6	6	6
2-Feb	5	5	5	6	5	5	4	3	4	5	5	5	5	4	3	2	2	2	2	2	1	0	UO	1	6
3-Feb	1	1	1	1	2	1	3	1	1	2	2	2	3	3	3	2	2	2	1	2	4	2	2	2	4
4-Feb	3	2	2	2	2	1	2	2	2	3	3	4	4	4	4	4	3	3	2	3	3	3	5	5	5
5-Feb	3	3	2	2	3	4	4	4	3	3	3	3	3	3	3	3	3	2	2	2	1	1	1	2	4
6-Feb	2	2	3	5	2	3	3	2	2	6	6	6	5	5	4	4	3	2	2	1	2	1	1	1	6
7-Feb	1	1	2	3	4	2	2	2	2	2	2	2	3	3	3	3	2	1	1	2	1	2	1	2	4
8-Feb	2	2	1	1	1	1	1	1	1	2	1	2	1	1	1	1	2	2	2	5	5	5	5	6	6
9-Feb	5	4	4	3	2	1	1	2	2	2	2	3	3	2	2	2	2	1	1	1	1	1	1	1	5
10-Feb	2	2	2	2	2	2	2	1	2	2	3	3	3	3	3	2	1	4	3	1	3	3	2	1	4
11-Feb	1	2	2	1	2	3	3	3	2	2	2	1	2	1	1	1	1	1	1	1	3	2	2	1	3
12-Feb	1	1	2	1	1	1	1	1	1	1	1	1	2	2	2	2	3	2	3	2	3	2	2	3	3
13-Feb	2	3	3	4	2	3	3	1	1	2	2	2	2	2	2	2	1	3	2	2	2	2	2	1	4
14-Feb	1	2	1	1	1	1	1	1	1	1	1	1	1	2	1	2	2	1	1	2	2	1	1	1	2
15-Feb	1	2	2	1	2	1	1	2	1	1	1	1	1	2	2	2	1	2	2	5	3	3	2	2	5
16-Feb	1	1	1	1	1	1	2	1	2	2	2	2	3	3	3	3	3	2	2	1	2	2	3	3	3
17-Feb	2	2	3	1	1	1	2	2	3	4	3	3	4	3	4	4	4	2	1	1	2	2	4	1	4
18-Feb	1	2	2	2	1	2	2	2	3	3	3	3	4	4	4	4	3	1	2	1	1	1	2	1	4
19-Feb	1	2	1	1	1	1	2	1	2	2	3	4	5	4	4	4	4	2	4	4	4	4	4	4	5
20-Feb	3	3	4	4	4	4	4	4	5	5	4	4	4	5	4	3	2	1	1	1	2	2	2	1	5
21-Feb	1	1	2	1	1	1	2	2	1	1	3	2	3	3	3	3	3	2	3	3	3	2	2	2	3
22-Feb	2	2	2	1	1	1	1	1	1	1	2	1	1	2	2	2	2	1	2	1	2	1	3	1	3
23-Feb	1	2	2	1	2	1	1	1	3	5	4	5	6	6	4	4	3	4	2	2	1	2	2	2	6
24-Feb	2	2	2	2	2	1	1	2	1	2	1	2	2	2	3	2	2	2	1	2	2	4	4	4	4
25-Feb	4	3	4	3	4	3	2	2	2	3	2	2	2	2	2	2	2	1	2	2	1	1	2	1	4
26-Feb	1	2	2	1	2	2	2	2	2	2	3	1	1	2	2	3	3	2	2	2	2	2	2	2	3
27-Feb	1	2	1	2	3	2	2	3	4	3	3	2	6	4	4	4	4	3	3	3	3	3	2	2	6
28-Feb	2	1	2	1	2	1	1	1	1	1	1	2	1	3	2	2	2	1	1	2	1	1	2	1	3
	5	5	5	6	5	5	4	4	5	6	6	6	6	6	5	5	4	5	5	6	6	6	6	6	
	Diurnal Maximum																								

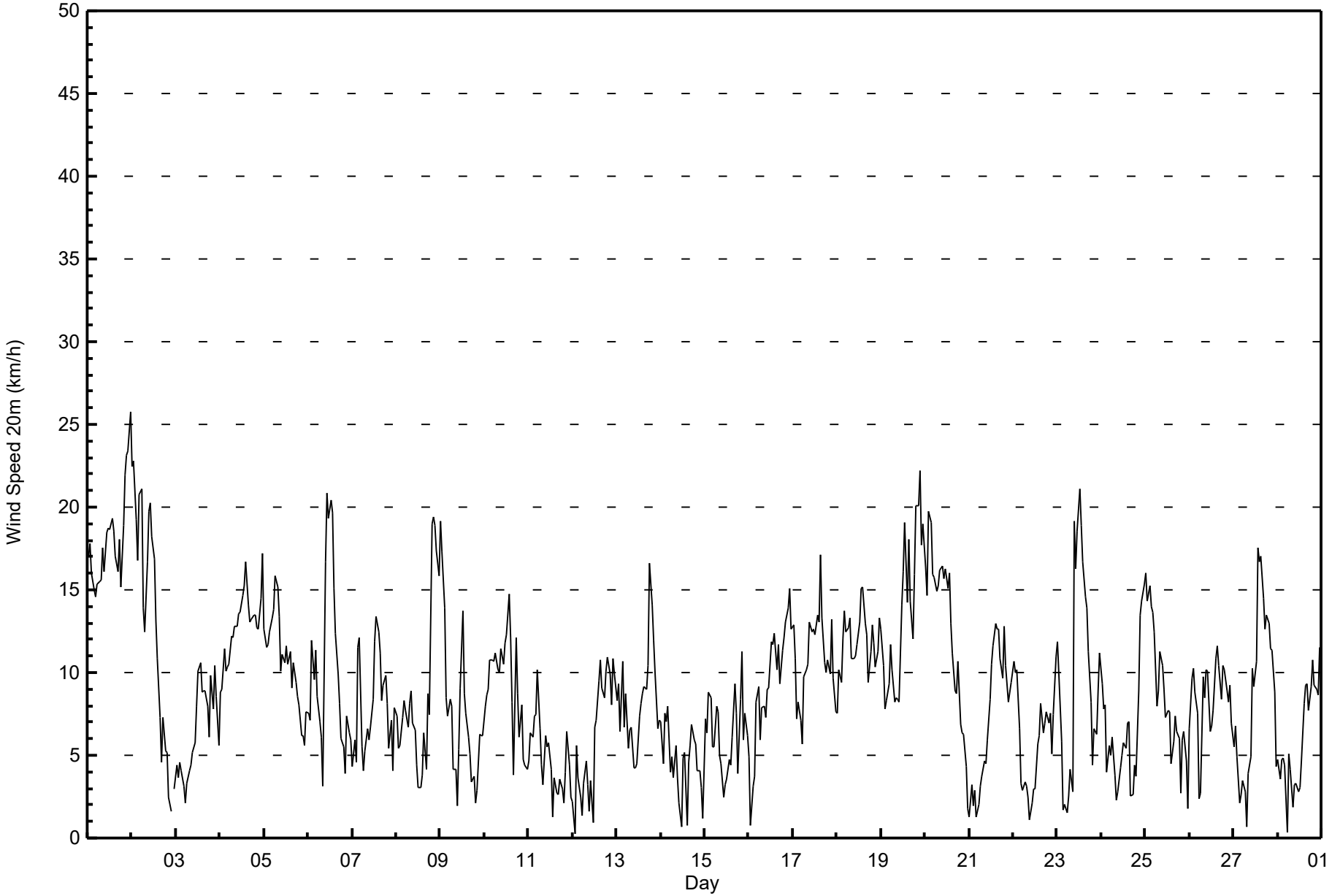
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 20m (WS20) - km/h

Barge Landing - February 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	169	25.19	25.19
6 - 11	312	46.50	71.68
12 - 19	172	25.63	97.32
20 - 28	18	2.68	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 671

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 20m (WS20) - km/h

Barge Landing - February 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	11	14	9	10	11	6	10	8	13	15	12	8	6	6	19	169
6 - 11	37	39	17	9	4	5	14	53	30	35	24	8	2	2	6	27	312
12 - 19	36	33	2	0	0	0	11	26	39	16	5	1	0	0	0	3	172
20 - 28	4	10	0	0	0	0	1	2	1	0	0	0	0	0	0	0	18
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	93	33	18	14	16	32	91	78	64	44	21	10	8	12	49	671

Total Number of Valid Hours: 671

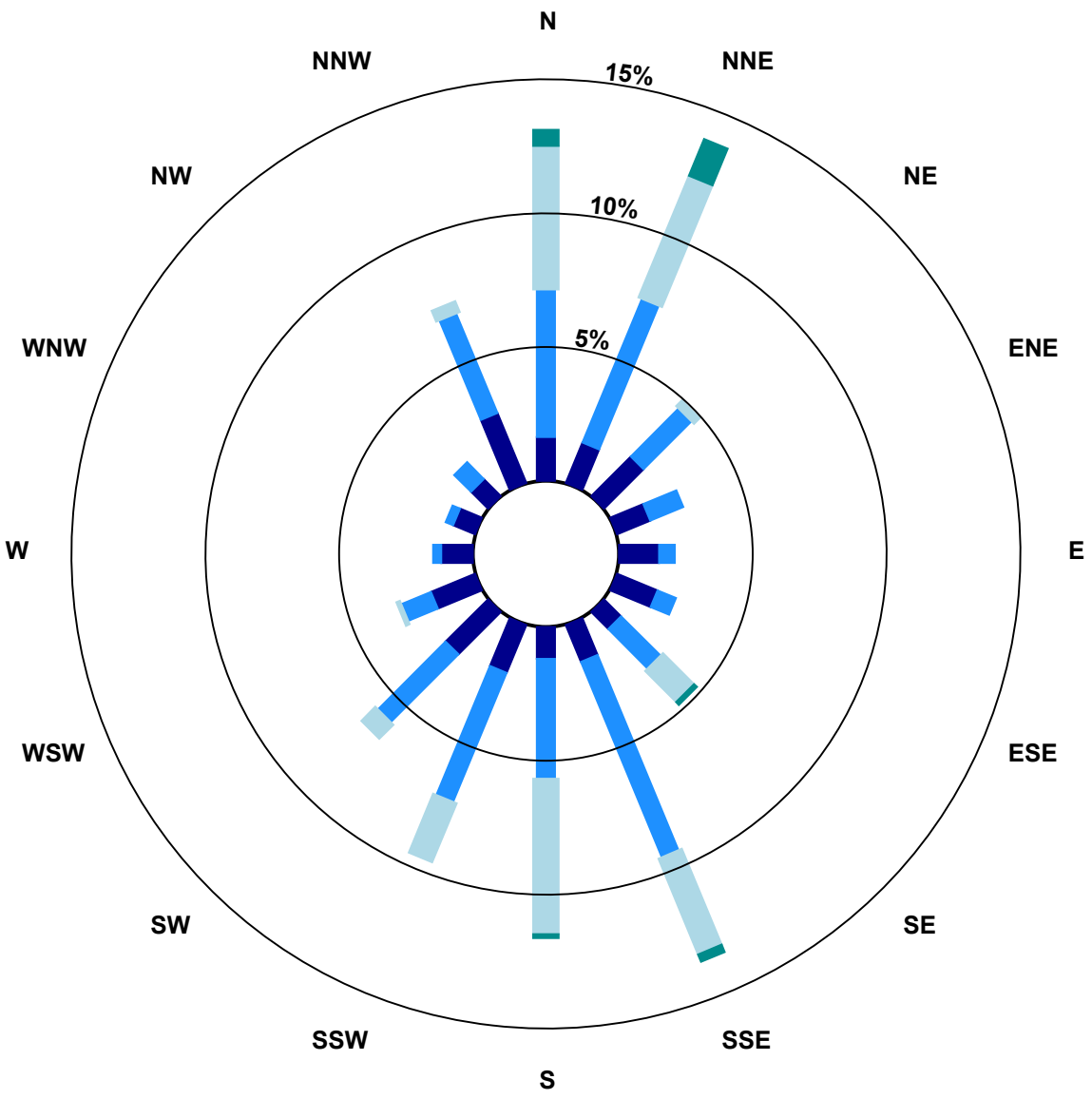
Total Number of Hours: 672

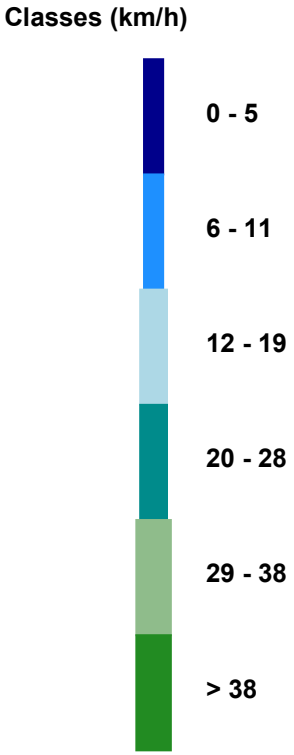
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Wind Speed 20m (WS20) - km/h

Barge Landing





Total Number of Valid Hours: 671

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 20m (WD20) - deg

Barge Landing - February 2025

Direction of Maximum Speed: 11 deg on Feb 2 00:00
Direction of Maximum Daily Speed Average: 358.6 deg on Feb 1

Direction of Minimum Speed: 52 deg on Feb 12 02:00

Direction of Minimum Daily Speed Average: 1.9 deg on Feb 22

Monthly Average Direction: 100.7 deg

Hours in Service:	672
Hours of Data:	671
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-Feb	359	357	358	355	354	354	358	0	359	357	356	358	349	348	351	348	347	357	1	357	13	13	9	11	358.6
2-Feb	12	15	16	17	23	23	11	6	12	17	16	12	5	1	5	5	344	10	37	5	313	225	UO	212	12.4
3-Feb	220	238	235	208	223	265	268	255	222	213	201	211	201	191	184	177	174	183	200	224	234	248	240	222	212.5
4-Feb	200	207	201	197	178	160	171	169	174	175	177	179	183	180	181	185	200	197	185	182	182	185	210	213	186.3
5-Feb	202	191	185	185	189	199	206	208	205	194	194	195	192	195	197	196	218	217	217	214	199	189	210	222	200.2
6-Feb	245	224	241	225	246	273	288	310	86	18	12	2	13	9	4	352	312	322	317	298	264	245	236	240	324.4
7-Feb	233	232	203	228	232	265	115	203	221	217	212	226	226	227	217	195	205	208	228	238	287	235	218	228	222.7
8-Feb	217	207	183	193	183	160	158	162	159	157	161	166	225	278	26	18	9	18	355	19	17	13	6	4	36.5
9-Feb	11	11	7	344	356	349	357	38	54	85	15	1	15	27	51	56	37	354	286	274	266	254	236	212	5.1
10-Feb	207	193	187	185	173	186	183	171	168	169	189	176	167	166	163	126	114	36	32	10	20	350	17	5	164.5
11-Feb	346	348	357	1	357	20	360	13	130	79	83	68	93	45	105	80	35	43	342	18	55	73	70	195	35.9
12-Feb	244	52	117	136	120	179	134	111	129	107	100	215	40	44	24	18	12	355	356	341	357	344	333	336	15.0
13-Feb	341	9	12	24	53	45	28	338	330	326	333	345	31	15	18	23	15	17	30	20	1	5	9	2	12.3
14-Feb	4	351	347	346	349	327	336	302	235	220	216	188	36	44	340	171	152	68	57	13	24	330	314	133	359.8
15-Feb	203	196	174	165	162	175	162	161	166	145	161	148	153	207	221	82	55	62	68	41	49	50	11	43	124.3
16-Feb	355	290	118	64	125	136	164	158	149	173	167	171	173	178	178	165	159	139	137	142	137	144	145	154	152.3
17-Feb	157	160	161	167	156	156	137	146	145	148	161	172	168	176	147	132	134	137	117	119	119	148	155	178	149.3
18-Feb	150	148	135	149	154	155	157	164	162	170	180	177	170	179	179	175	166	162	133	137	143	158	168	161	160.5
19-Feb	164	167	145	151	146	142	161	183	158	162	181	183	169	165	174	163	161	142	141	145	151	155	159	165	159.3
20-Feb	166	169	170	172	174	180	193	190	189	195	198	200	201	200	175	182	167	138	108	94	356	352	106	53	177.6
21-Feb	163	186	83	240	175	71	343	336	5	335	326	343	341	0	15	9	9	12	8	6	11	11	11	336	0.7
22-Feb	335	328	336	333	351	328	331	341	301	80	333	261	193	214	200	205	222	199	203	195	162	182	154	154	234.0
23-Feb	150	166	161	158	209	247	269	220	252	350	16	13	9	18	13	16	19	18	12	77	64	69	55	59	25.5
24-Feb	45	40	48	20	352	334	334	60	117	252	245	208	199	160	194	207	180	70	20	3	345	1	8	12	10.7
25-Feb	22	19	23	14	18	26	28	15	17	24	25	37	20	28	28	15	24	9	24	4	335	326	335	251	17.1
26-Feb	154	160	168	147	160	217	310	348	2	15	19	20	14	20	17	8	3	1	349	356	3	352	340	346	10.4
27-Feb	330	320	326	299	327	323	49	256	240	219	189	217	343	19	23	29	22	32	40	33	28	40	47	25	16.5
28-Feb	72	89	95	112	90	158	54	61	103	151	204	253	211	178	161	162	174	172	169	152	161	150	146	147	147.8
	47.2	129.8	123.4	164.0	150.6	132.0	154.9	171.7	162.8	131.4	147.9	201.2	90.9	131.3	120.2	103.3	86.5	54.4	58.8	50.6	42.3	44.8	43.8	130.8	
	Diurnal Average																								

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

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 20m (WD20) - deg

Barge Landing - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 102 deg on Feb 14 12:00

Minimum Value: 4 deg on Feb 18 21:00

Percentiles: P_1 = 5 P_{10} = 10 Q_1 = 13 Median = 16 Q_3 = 22 P_{90} = 37 P_{99} = 85

Hours in Service:	672
Hours of Data:	671
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-Feb	17	18	17	19	17	16	16	18	17	18	17	17	17	16	17	16	16	18	16	18	15	16	15	14	19
2-Feb	14	14	13	15	11	10	15	16	13	11	13	13	16	18	16	16	18	14	26	22	40	33	UO	15	40
3-Feb	10	21	17	13	18	24	34	12	23	15	22	20	19	19	22	16	10	13	18	9	29	11	13	17	34
4-Feb	16	11	11	13	15	7	8	9	11	13	14	17	17	17	16	16	15	13	11	12	13	14	20	19	20
5-Feb	16	17	14	12	12	14	14	13	15	17	17	18	18	19	19	29	16	15	14	13	12	11	18	22	29
6-Feb	15	17	13	23	17	20	22	20	89	19	16	17	15	16	17	19	17	13	13	16	19	9	7	10	89
7-Feb	21	14	38	9	16	23	26	24	11	15	19	18	17	16	18	18	13	9	9	13	21	16	28	11	38
8-Feb	14	24	12	13	12	11	13	11	6	11	15	36	31	41	53	13	27	11	16	12	14	15	15	16	53
9-Feb	14	14	15	13	13	8	12	30	52	67	23	22	14	20	18	18	14	26	22	19	30	17	19	15	67
10-Feb	13	15	13	11	9	14	11	10	13	12	18	17	14	15	15	15	35	14	20	17	17	24	34	30	35
11-Feb	19	23	17	15	17	19	33	61	30	20	22	17	33	73	32	41	23	14	25	26	54	21	23	41	73
12-Feb	38	87	8	10	20	42	26	13	33	56	21	80	20	18	15	12	14	17	16	14	16	15	10	9	87
13-Feb	13	15	33	13	22	16	34	29	8	16	20	32	21	18	16	15	10	9	8	8	11	13	15	12	34
14-Feb	18	12	9	5	5	12	9	34	9	23	51	102	23	27	89	43	29	9	19	24	16	13	34	73	102
15-Feb	10	28	9	11	15	18	18	10	16	15	31	43	31	35	46	35	10	12	26	18	16	46	17	7	46
16-Feb	25	74	31	30	8	7	32	19	13	14	18	21	19	19	17	23	15	19	7	10	7	10	10	11	74
17-Feb	11	12	16	10	8	18	10	13	13	14	20	19	23	16	23	15	15	7	8	13	14	7	9	10	23
18-Feb	9	14	29	11	5	12	8	8	12	16	21	18	19	18	18	18	11	9	8	5	4	13	7	6	29
19-Feb	6	10	9	11	5	6	10	15	9	20	31	19	19	15	17	14	13	11	9	10	11	11	12	12	31
20-Feb	11	12	12	13	14	16	17	17	17	18	19	17	19	19	21	20	15	15	7	10	33	17	32	62	62
21-Feb	69	31	71	47	63	43	70	37	34	17	34	21	20	17	15	14	14	13	15	14	14	13	15	15	71
22-Feb	12	12	11	13	27	48	36	32	26	65	67	46	59	26	28	19	24	9	10	16	8	20	21	9	67
23-Feb	8	12	20	62	45	68	35	20	58	16	15	18	18	16	15	14	12	16	27	34	16	17	14	13	68
24-Feb	18	13	15	38	26	15	16	48	43	63	31	33	40	29	34	27	50	57	26	23	18	15	15	14	63
25-Feb	12	13	11	14	14	13	15	17	13	14	12	17	23	27	35	24	14	13	23	30	10	12	16	56	56
26-Feb	8	10	14	14	16	66	45	14	16	13	13	22	16	17	13	15	16	16	13	13	15	15	13	18	66
27-Feb	22	17	25	63	43	72	84	96	86	47	21	22	44	14	14	14	13	17	13	14	17	12	15	26	96
28-Feb	18	18	25	16	24	87	23	23	56	37	44	69	57	57	29	16	18	11	10	8	9	7	6	5	87
	69	87	71	63	63	87	84	96	89	67	67	102	59	73	89	43	50	57	27	34	54	46	34	73	
	Diurnal Maximum																								

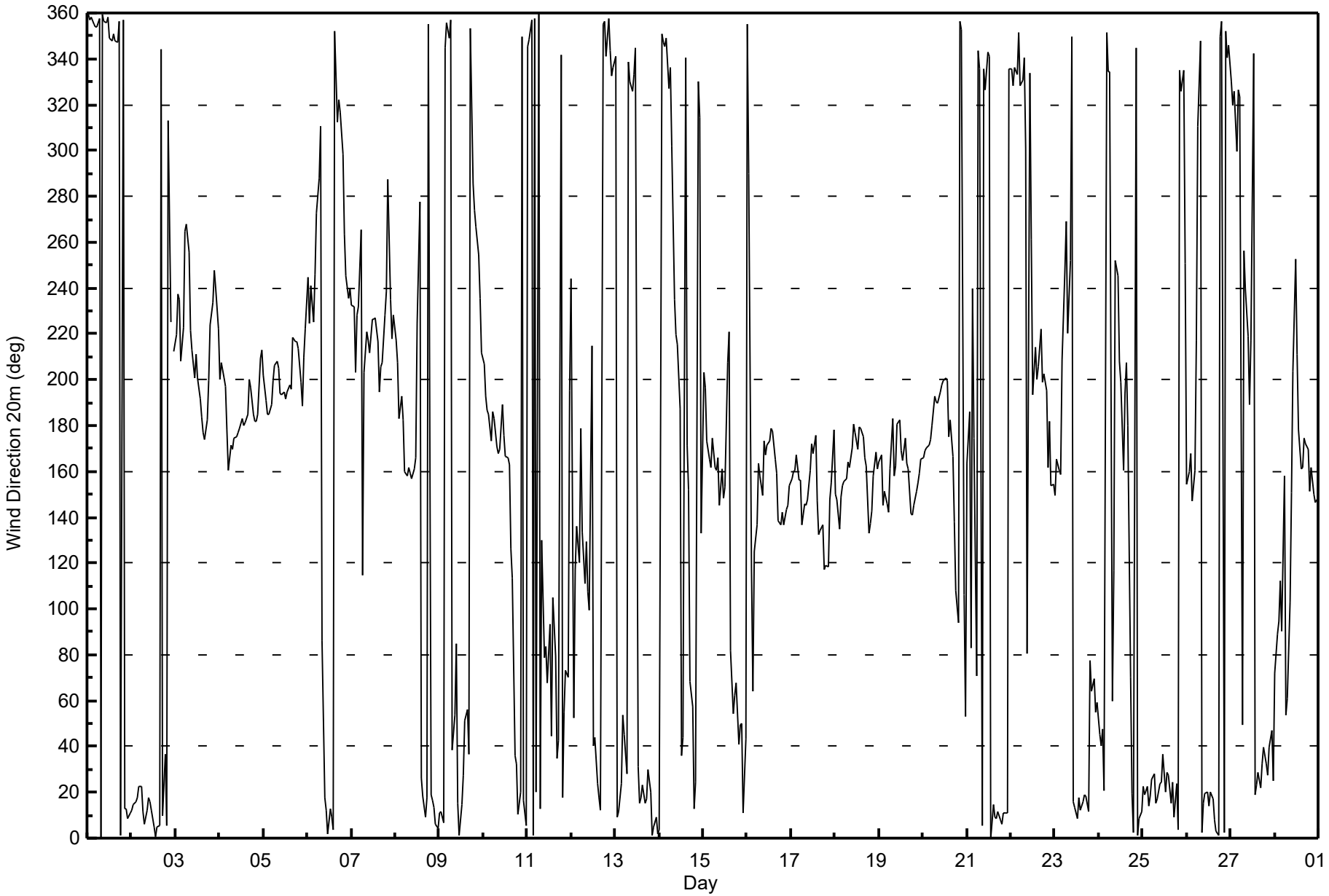
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 20m (WD20) - deg

Barge Landing - February 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS11
LOWER CAMP
FEBRUARY 2025

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

March 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - LOWER CAMP (AMS11)
FEBRUARY 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	639	33	33	100	27.9	0	2.6	0
H2S (ppb) Average	639	33	33	100	2.4	0	1	0
THC (ppm) Average	637	33	35	99.7	3.7	-	2.8	-
CH4(ppm) Average	637	33	35	99.7	3.5	-	2.7	-
NMHC(ppm) Average	637	33	35	99.7	0.705	-	0.139	-
Temperature (C) Average	672	0	0	100	1.5	-	-4.5	-
Relative Humidity (%) Average	672	0	0	100	98.1	-	89.6	-
Barometric Pressure (inHg) Average	672	0	0	100	30	-	29.9	-
Wind Speed 10 m (km/h) Average	669	0	3	99.55	32	-	19	-
Wind Direction 10 m (deg) Average	669	0	3	99.55	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - LOWER CAMP (AMS11)
FEBRUARY 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	639	33	33	-	27.9	0	2.6	0	1	3.5	72
H2S (ppb) Average	639	33	33	-	2.4	0	1	0	0.6	1.2	10.4
THC (ppm) Average	637	33	35	-	3.7	0	2.8	0	2.1	2.2	3.2
CH4(ppm) Average	637	33	35	-	3.5	0	2.7	0	2	2.2	3
NMHC(ppm) Average	637	33	35	-	0.705	0	0.139	0	0	0.1	0.173
Temperature 2 m (C) Average	672	0	0	-	1.5	0	-4.5	0	-3	1.7	7.6
Relative Humidity (%) Average	672	0	0	-	98.1	0	89.6	27	82.8	87.5	96.2
Barometric Pressure (inHg) Average	672	0	0	-	30	0	29.9	0	29.6	29.8	30.1
Wind Speed 10 m (km/h) Average	669	0	3	-	32	0	19	0	15	20	31
Wind Direction 10 m (deg) Average	669	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - LOWER CAMP (AMS11)
FEBRUARY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
THC/NMHC/CH4	27 Feb 2025 13:00	27 Feb 2025 14:00	2	Maintenance - replaced support gas cylinder
Wind Speed, Wind Direction	12 Feb 2025 02:00	12 Feb 2025 02:00	1	Unstable Operation - excessive baseline drift
Wind Speed, Wind Direction	15 Feb 2025 18:00	15 Feb 2025 18:00	1	Unstable Operation - excessive baseline drift
Wind Speed, Wind Direction	28 Feb 2025 07:00	28 Feb 2025 07:00	1	Unstable Operation - excessive baseline drift

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Lower Camp - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 27.9 ppb on Feb 22 17:00 Maximum Daily Average: 2.6 ppb on Feb 14

Minimum Value: 0.0 ppb on Feb 1 01:00 Minimum Daily Average: 0.0 ppb on Feb 1
Maximum Diurnal Average: 2.6 ppb at hour 17 Minimum Diurnal Average: 0.2 ppb at hour 8
Monthly Average: 0.73 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} = 7.0

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.0	0.0	Z	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.1
2-Feb	0.1	0.0	0.1	Z	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1
3-Feb	0.0	0.0	0.0	0.0	Z	0.2	0.1	0.1	0.2	0.4	0.2	0.2	0.2	0.2	0.2	1.1	5.9	7.3	1.0	1.1	0.2	0.6	0.5	1.6	0.9	7.3
4-Feb	0.6	0.3	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.3	C	C	C	C	C	0.1	0.0	0.0	0.1	0.2	0.5	2.3	0.3	2.3
5-Feb	Z	1.5	1.0	0.1	0.0	0.0	0.1	0.0	0.2	0.0	0.1	0.4	0.9	3.6	6.6	1.4	0.7	3.7	5.9	2.7	3.7	3.5	4.7	2.4	1.9	6.6
6-Feb	1.9	Z	1.1	1.3	1.4	0.3	1.8	0.5	0.3	0.3	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	0.3	0.5	1.9
7-Feb	1.0	0.5	Z	3.7	2.1	1.3	0.5	1.0	1.3	0.7	0.9	0.9	0.6	1.0	1.4	2.0	2.0	1.4	1.5	0.2	0.2	0.3	0.2	0.2	1.1	3.7
8-Feb	0.2	0.2	0.2	Z	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.9	5.9	4.9	2.0	0.7	0.4	0.1	0.0	0.0	0.0	0.7	5.9
9-Feb	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	0.3	1.4	1.6	0.8	0.2	0.0	0.0	0.0	0.0	0.0	0.2	1.6
10-Feb	0.2	0.6	0.5	0.3	0.2	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.4	0.5	0.5	0.3	0.4	0.3	1.0	2.4	1.7	0.8	0.4	0.5	2.4
11-Feb	Z	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	1.4	0.9	0.9	1.4	1.1	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.3	1.4
12-Feb	0.1	Z	0.7	1.6	1.0	0.9	1.0	1.0	0.8	0.7	0.6	0.5	0.8	5.4	2.0	2.1	1.9	1.6	1.3	1.2	1.0	0.9	0.8	0.5	1.2	5.4
13-Feb	0.4	0.3	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.4
14-Feb	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.8	0.7	1.1	9.3	17.8	14.0	5.0	3.7	3.2	1.6	0.9	0.5	0.4	2.6	17.8
15-Feb	0.4	0.5	0.7	0.6	Z	0.7	0.6	0.6	0.5	0.4	0.5	0.4	0.5	1.1	0.9	1.5	1.9	1.0	0.5	0.3	0.3	0.1	0.1	0.0	0.6	1.9
16-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.2	0.1	0.2	0.6	0.5	0.5	0.5	0.3	0.2	0.1	0.2	0.2	0.3	12.8	0.7	12.8
17-Feb	Z	2.5	1.0	0.5	0.4	0.4	0.3	0.4	0.3	0.5	0.5	0.6	0.5	0.5	0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.6	0.7	0.5	2.5
18-Feb	0.6	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.5	1.1	1.2	0.8	0.9	0.7	0.4	0.5	0.5	0.6	0.9	0.5	0.4	1.2
19-Feb	0.4	0.4	Z	0.5	0.4	0.3	0.2	0.3	0.3	0.5	0.9	1.5	5.3	5.4	5.4	3.0	1.4	0.7	2.1	1.2	0.2	1.9	5.3	7.9	2.0	7.9
20-Feb	2.9	3.6	1.0	Z	0.7	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.8	0.7	0.6	0.7	0.6	0.5	0.5	0.3	0.3	0.3	0.1	0.8	3.6
21-Feb	0.1	0.2	0.2	0.3	Z	0.5	0.5	0.5	0.7	1.0	1.2	1.1	0.9	0.8	0.7	1.1	0.9	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.6	1.2
22-Feb	0.3	0.2	0.2	0.2	0.2	Z	0.3	0.2	0.2	0.2	0.4	0.6	1.2	1.4	1.9	2.3	27.9	4.6	2.4	3.4	1.4	0.8	0.4	0.4	2.2	27.9
23-Feb	Z	0.5	0.5	0.5	0.3	0.3	0.2	0.4	0.5	0.5	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.5
24-Feb	0.2	Z	0.3	0.2	0.2	0.2	0.2	0.1	0.2	1.7	1.7	1.6	1.1	0.8	0.7	0.3	0.3	0.4	0.4	0.3	0.3	0.4	1.2	2.3	0.7	2.3
25-Feb	1.5	0.4	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	2.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.2	2.2
26-Feb	0.1	0.1	0.2	Z	0.5	0.6	0.7	0.3	0.4	0.6	0.3	0.3	0.2	0.9	2.1	0.5	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.4	2.1
27-Feb	0.1	0.0	0.1	0.3	Z	0.2	0.2	0.2	0.3	0.8	0.7	0.9	0.7	0.7	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.9
28-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.3	0.2	0.1	0.3	0.2	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.3
	0.5	0.5	0.3	0.5	0.4	0.3	0.3	0.2	0.3	0.3	0.4	0.5	0.7	1.1	1.4	1.7	2.6	1.2	0.8	0.6	0.5	0.5	0.6	1.2	Diurnal Average	
	2.9	3.6	1.1	3.7	2.1	1.3	1.8	1.0	1.3	1.7	1.7	1.6	5.3	5.4	9.3	17.8	27.9	7.3	5.9	3.4	3.7	3.5	5.3	12.8	Diurnal Maximum	

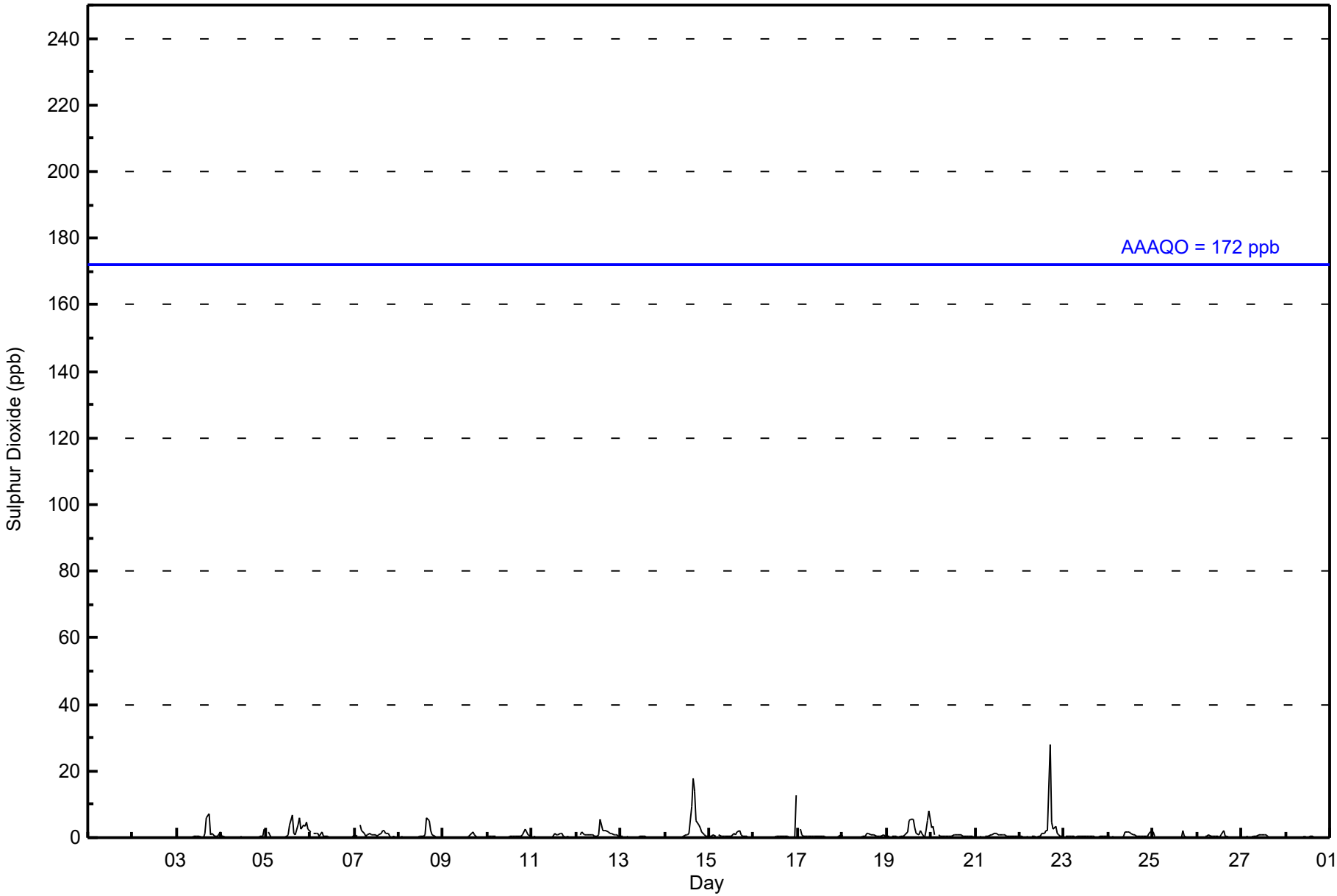
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Lower Camp - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	635	99.37	99.37
11 - 20	3	0.47	99.84
21 - 60	1	0.16	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: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Lower Camp - February 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	52	11	6	3	7	40	163	30	4	1	15	15	18	64	116	88	633
11 - 20	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	3
21 - 60	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	52	11	6	3	7	40	164	30	4	2	15	16	19	64	116	88	637

Total Number of Valid Hours: 637

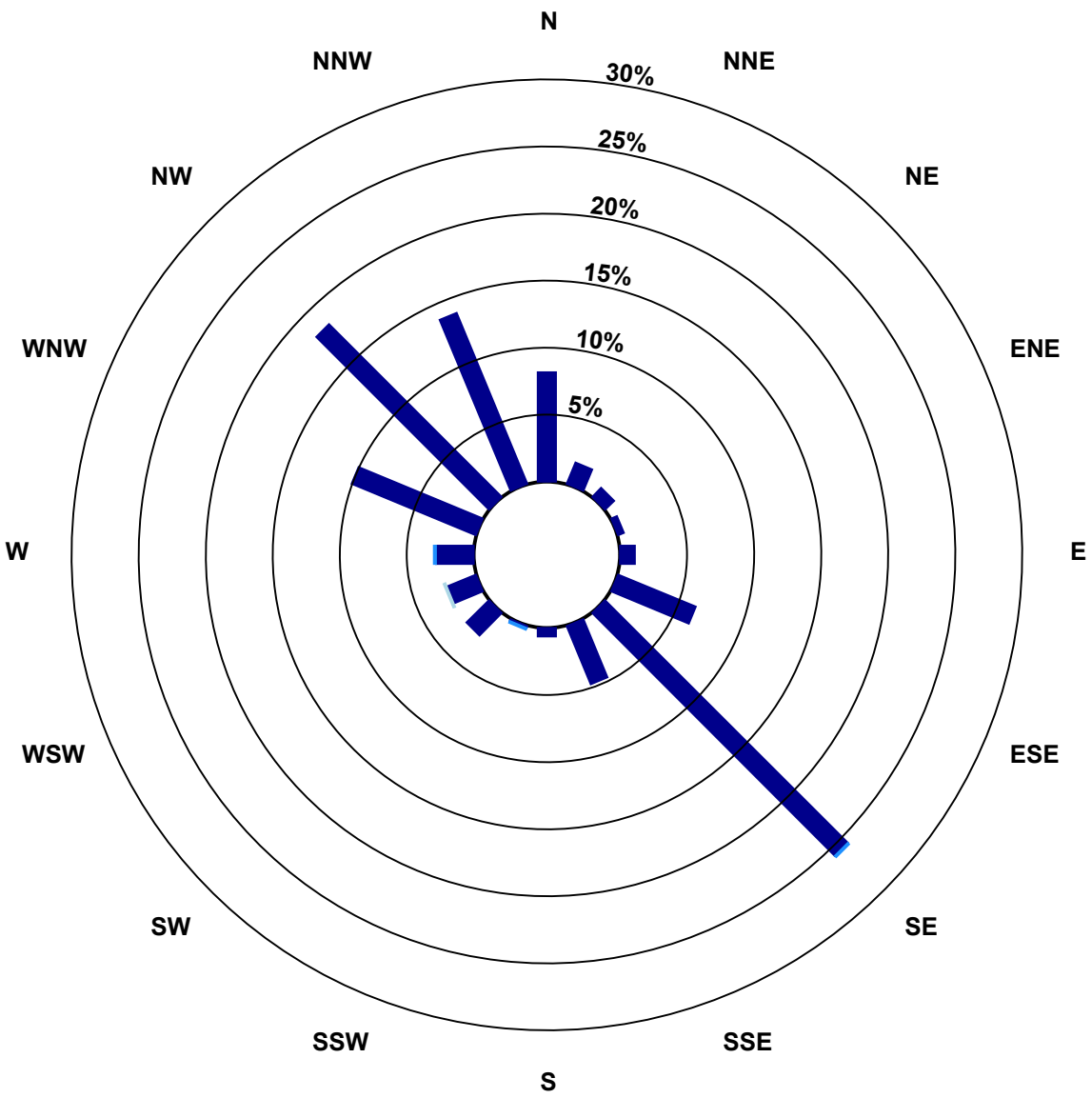
Total Number of Hours: 672

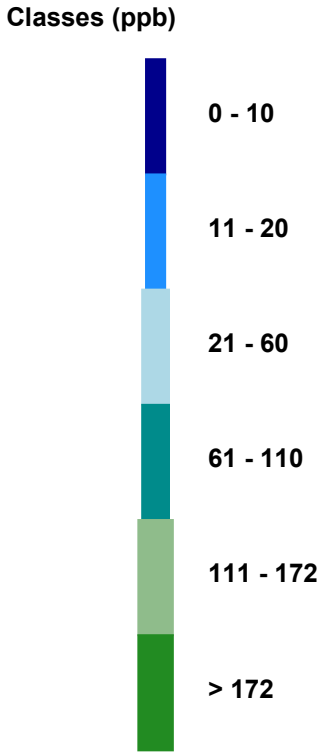
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Sulphur Dioxide (SO_2) - ppb

Lower Camp





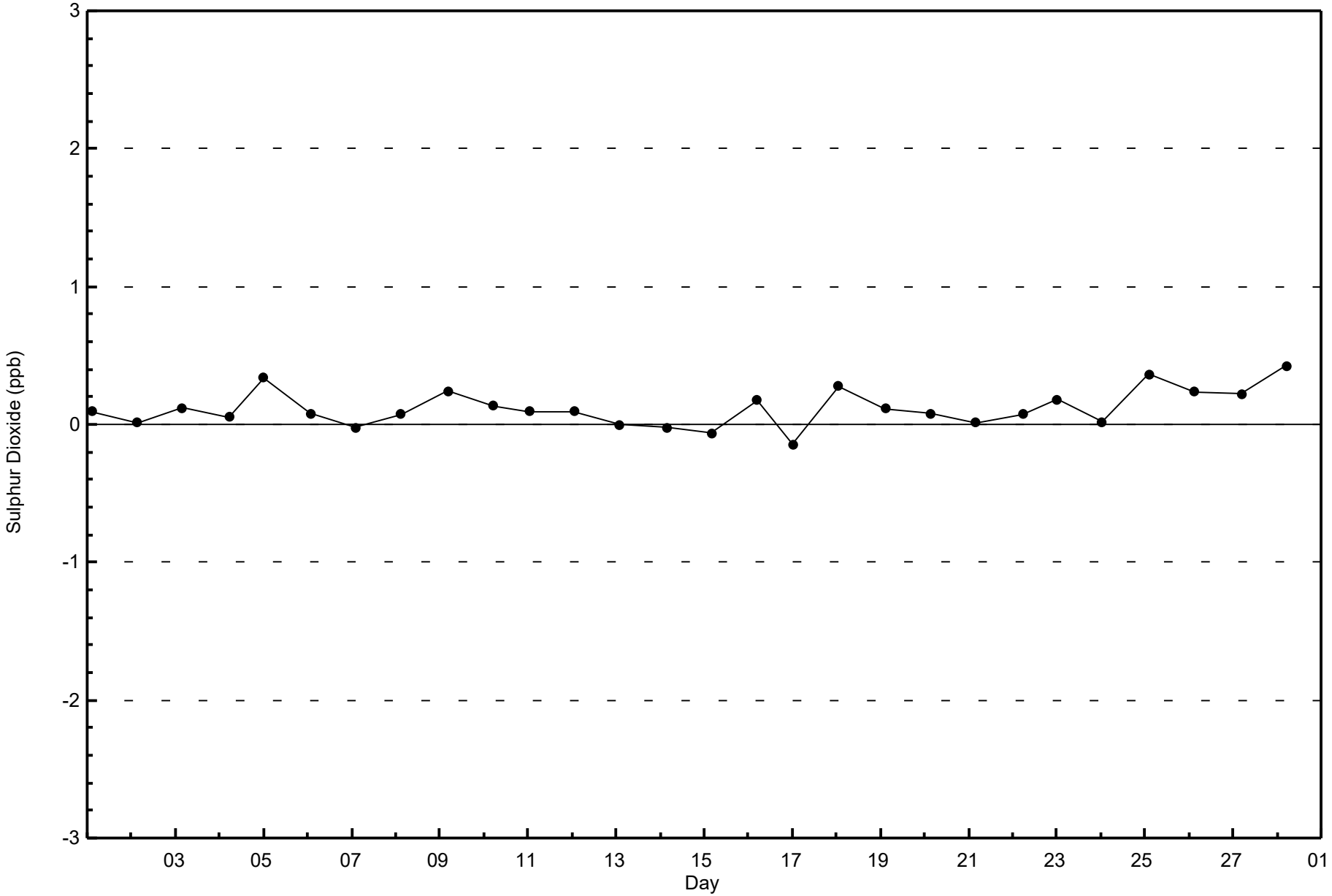
Total Number of Valid Hours: 637

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Lower Camp - February 2025

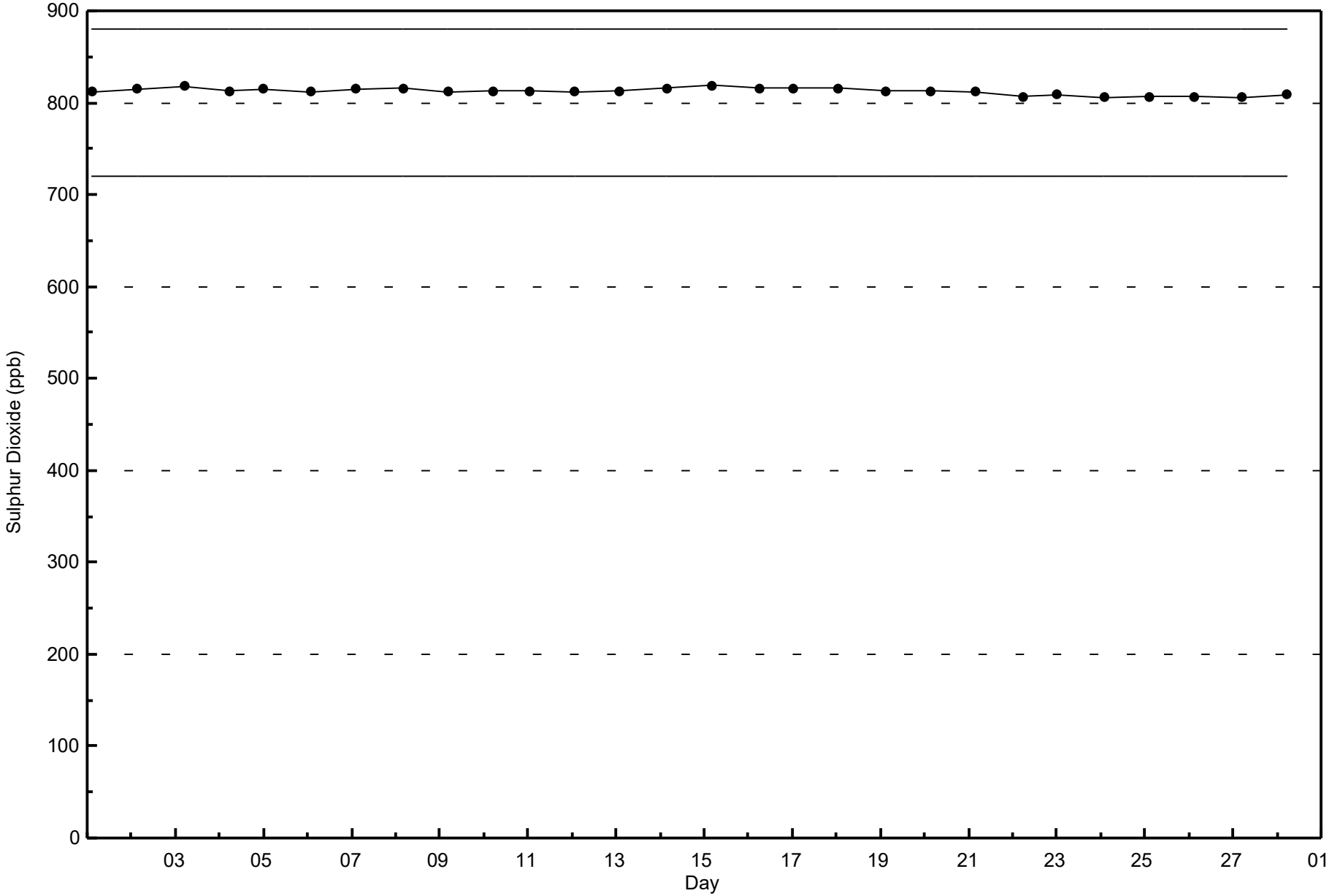


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Lower Camp - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Lower Camp - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 2.4 ppb on Feb 22 20:00 Maximum Daily Average: 1.0 ppb on Feb 22

Minimum Value: 0.0 ppb on Feb 9 13:00 Minimum Daily Average: 0.1 ppb on Feb 2
Maximum Diurnal Average: 0.5 ppb at hour 11 Minimum Diurnal Average: 0.3 ppb at hour 6
Monthly Average: 0.39 ppb Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.1 Median = 0.3 Q_3 = 0.5 P_{90} = 0.9 P_{99} = 1.6

Hours in Service: 672
Hours of Data: 639
Hours of Missing Data: 33
Hours of Calibration: 33
Percent Operational Time: 100.0

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

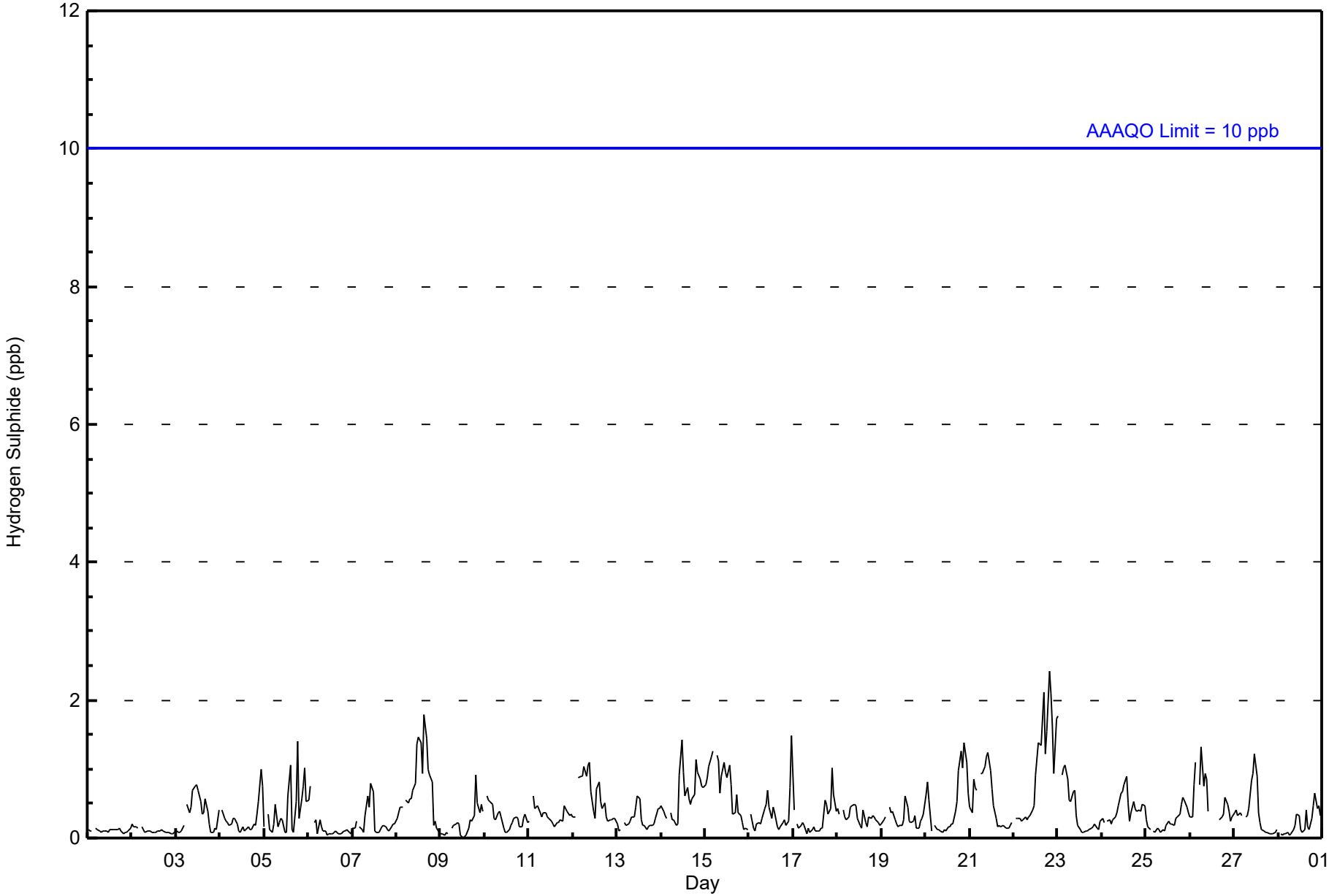
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Lower Camp - February 2025



Hydrogen Sulphide (H_2S) - ppb
Lower Camp - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	639	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: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Lower Camp - February 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	52	11	6	2	8	40	165	31	4	2	15	16	18	65	114	87	636
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	52	11	6	2	8	40	165	31	4	2	15	16	18	65	114	87	636

Total Number of Valid Hours: 636

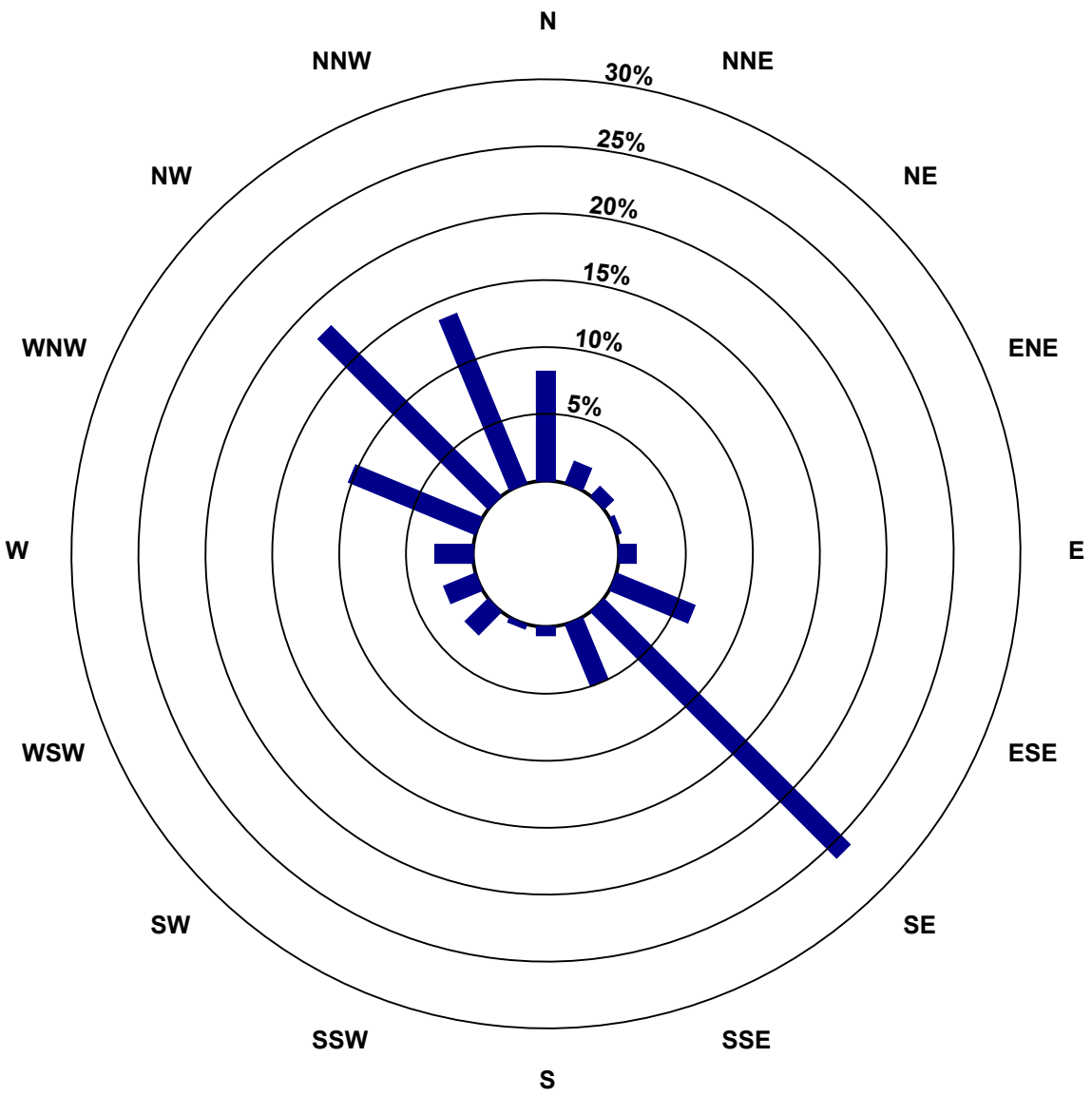
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Hydrogen Sulphide (H_2S) - ppb

Lower Camp



Classes (ppb)

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

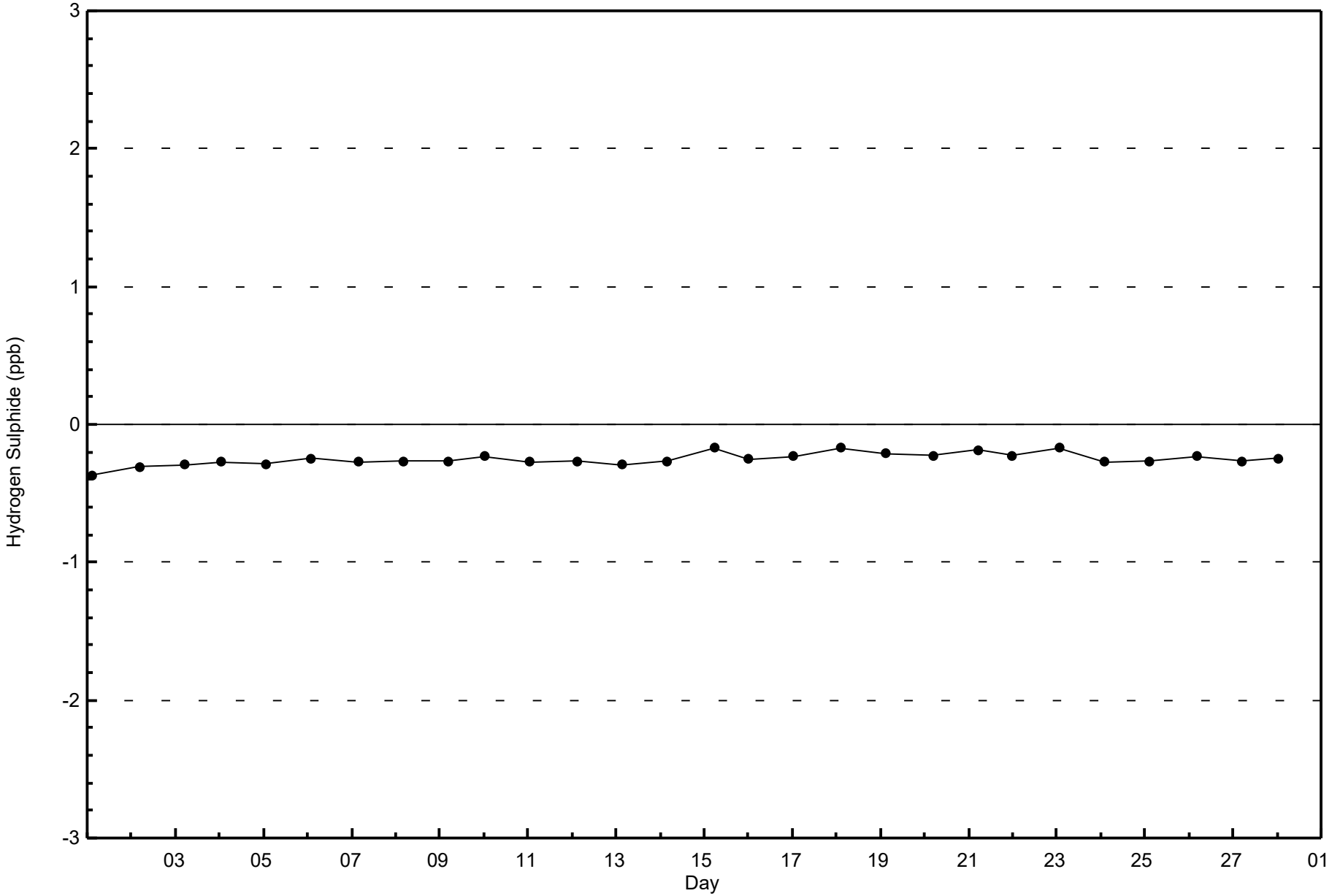
Total Number of Valid Hours: 636

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Lower Camp - February 2025

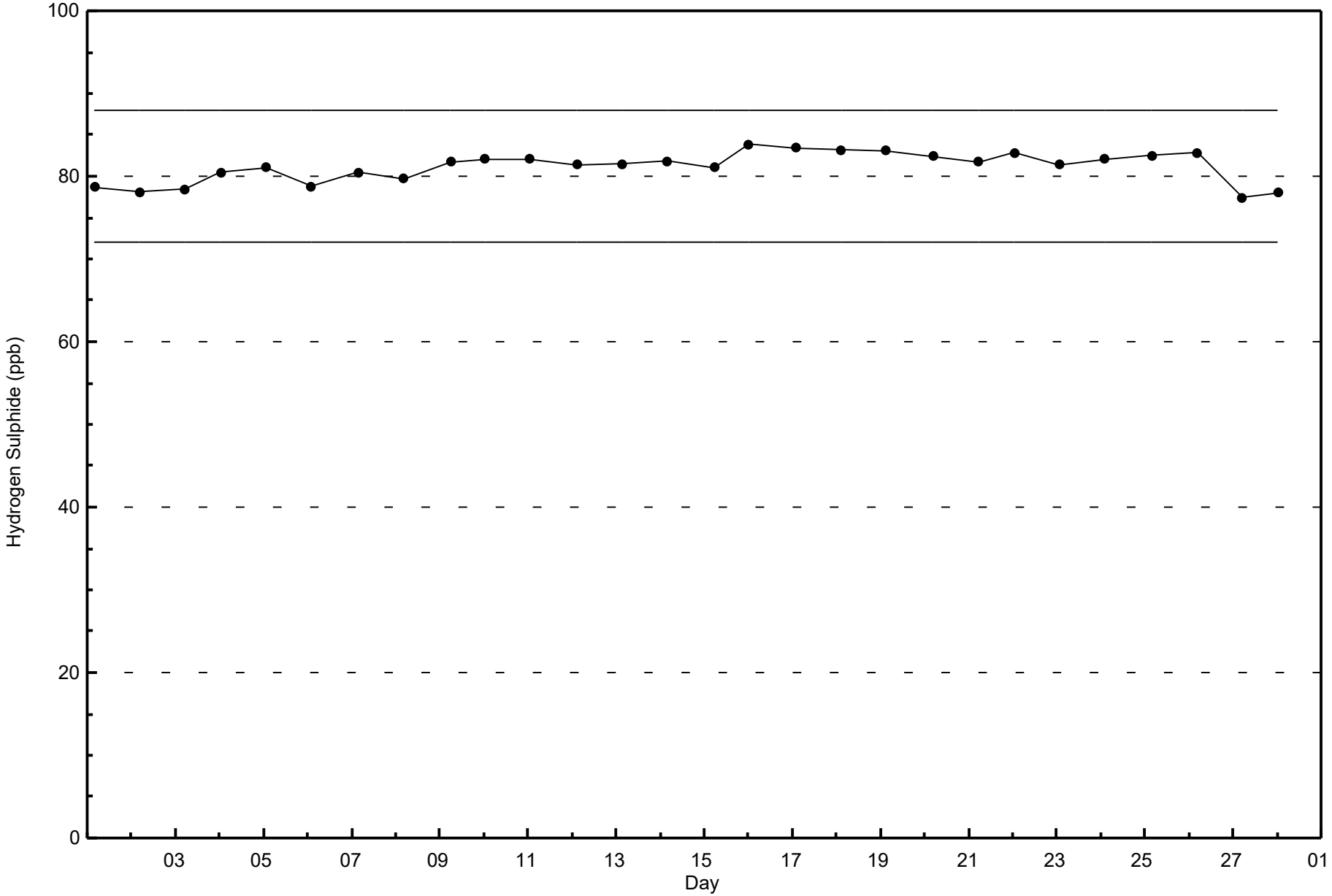


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Lower Camp - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Lower Camp - February 2025

Maximum Value: 3.7 ppm on Feb 23 00:00

Maximum Daily Average: 2.8 ppm on Feb 22

Minimum Value: 1.8 ppm on Feb 2 13:00

Minimum Daily Average: 1.9 ppm on Feb 2

Maximum Diurnal Average: 2.3 ppm at hour 11

Minimum Diurnal Average: 2.1 ppm at hour 1

Monthly Average: 2.20 ppm

Percentiles: P_1 = 1.8 P_{10} = 1.9 Q_1 = 2.0 Median = 2.1 Q_3 = 2.3 P_{90} = 2.6 P_{99} = 3.4

Hours in Service:	672
Hours of Data:	637
Hours of Missing Data:	35
Hours of Calibration:	33
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-Feb	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	1.8	1.9	1.9	1.9
2-Feb	1.9	1.9	1.8	Z	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
3-Feb	1.9	1.9	1.8	1.9	Z	2.0	2.0	2.0	2.1	2.2	2.3	2.3	2.2	2.1	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.8	1.9	2.0	2.3
4-Feb	2.0	1.9	1.9	1.9	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.8	C	C	C	C	C	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.1
5-Feb	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.0	2.1	2.1	2.1	2.3	2.1	2.3
6-Feb	2.3	Z	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3
7-Feb	2.0	2.0	Z	2.1	2.0	2.0	2.0	2.0	2.1	2.2	2.4	2.4	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.4
8-Feb	2.2	2.3	2.2	Z	2.2	2.3	2.3	2.2	2.2	2.4	2.4	2.8	2.7	2.7	2.4	2.6	2.5	2.5	2.4	2.4	2.1	2.0	1.9	2.0	2.3	2.8
9-Feb	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1
10-Feb	2.2	2.2	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.3	2.3	2.2	2.1	2.1	2.2	2.1	2.1	2.1	2.3
11-Feb	Z	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.4	2.3	2.2	2.1	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.3	2.2	2.4
12-Feb	2.2	Z	2.3	2.4	2.5	2.5	2.6	2.6	2.7	2.7	2.5	2.3	2.2	2.3	2.6	2.4	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.4	2.7
13-Feb	2.2	2.1	Z	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.4	2.5	2.5	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.5
14-Feb	2.1	2.2	2.2	Z	2.3	2.3	2.3	2.3	2.2	2.2	2.6	2.9	2.7	2.4	2.5	2.4	2.3	2.3	2.4	2.6	2.5	2.5	2.4	2.4	2.4	2.9
15-Feb	2.4	2.6	2.7	2.8	Z	2.9	2.9	2.8	2.3	2.3	2.5	2.4	2.5	2.5	2.4	2.2	2.1	2.2	2.2	2.2	2.1	2.0	2.0	2.0	2.4	2.9
16-Feb	2.0	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.2	2.3	2.2	2.1	2.1	2.1	2.1	2.0	2.1	2.2	2.3	2.1	2.0	2.0	2.1	2.1	2.3
17-Feb	Z	2.0	2.1	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	2.3	2.3	2.2	2.3	2.4	2.1	2.1	2.1	2.4
18-Feb	2.1	Z	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.0	2.0	2.1	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.2
19-Feb	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	2.1	2.1	2.1	2.1	2.1	2.2
20-Feb	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.4	2.3	2.2	2.3	3.1	3.5	3.3	2.9	3.0	2.9	2.6	2.4	3.5
21-Feb	2.5	2.4	2.7	2.8	Z	2.8	2.8	2.9	3.1	3.5	3.5	3.0	2.9	2.7	2.5	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.6	3.5
22-Feb	2.2	2.3	2.4	2.4	2.4	Z	2.6	2.5	2.4	2.5	2.5	2.6	2.9	3.1	3.1	3.0	3.2	2.8	2.7	3.0	3.3	3.6	3.5	3.7	2.8	3.7
23-Feb	Z	3.5	2.8	2.8	2.7	2.5	2.4	2.4	2.5	2.6	2.4	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.3	3.5
24-Feb	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.4	2.4	2.5	2.5	2.3	2.1	2.2	2.2	2.2	2.2	2.2	2.3	2.5	2.3	2.3	2.5
25-Feb	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.3	2.2	2.2	2.4	2.5	2.1	2.5
26-Feb	2.5	2.5	2.7	Z	2.7	2.6	2.8	2.5	3.3	3.3	2.3	2.1	2.1	2.1	2.2	2.1	2.1	2.3	2.3	2.3	2.4	2.3	2.2	2.2	2.4	3.3
27-Feb	2.3	2.4	2.4	2.5	Z	2.4	2.4	2.4	2.5	2.7	2.7	2.8	M	M	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.3	2.8
28-Feb	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.2	2.1	2.0	2.0	2.0	2.1	2.2	2.1	2.2	2.5	2.5	2.2	2.3	2.1	2.1	2.5
	2.1	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	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	Diurnal Average	
	2.5	3.5	2.8	2.8	2.7	2.9	2.9	2.9	3.3	3.5	3.5	3.0	2.9	3.1	3.1	3.0	3.2	3.1	3.5	3.3	3.3	3.6	3.5	3.7	Diurnal Maximum	

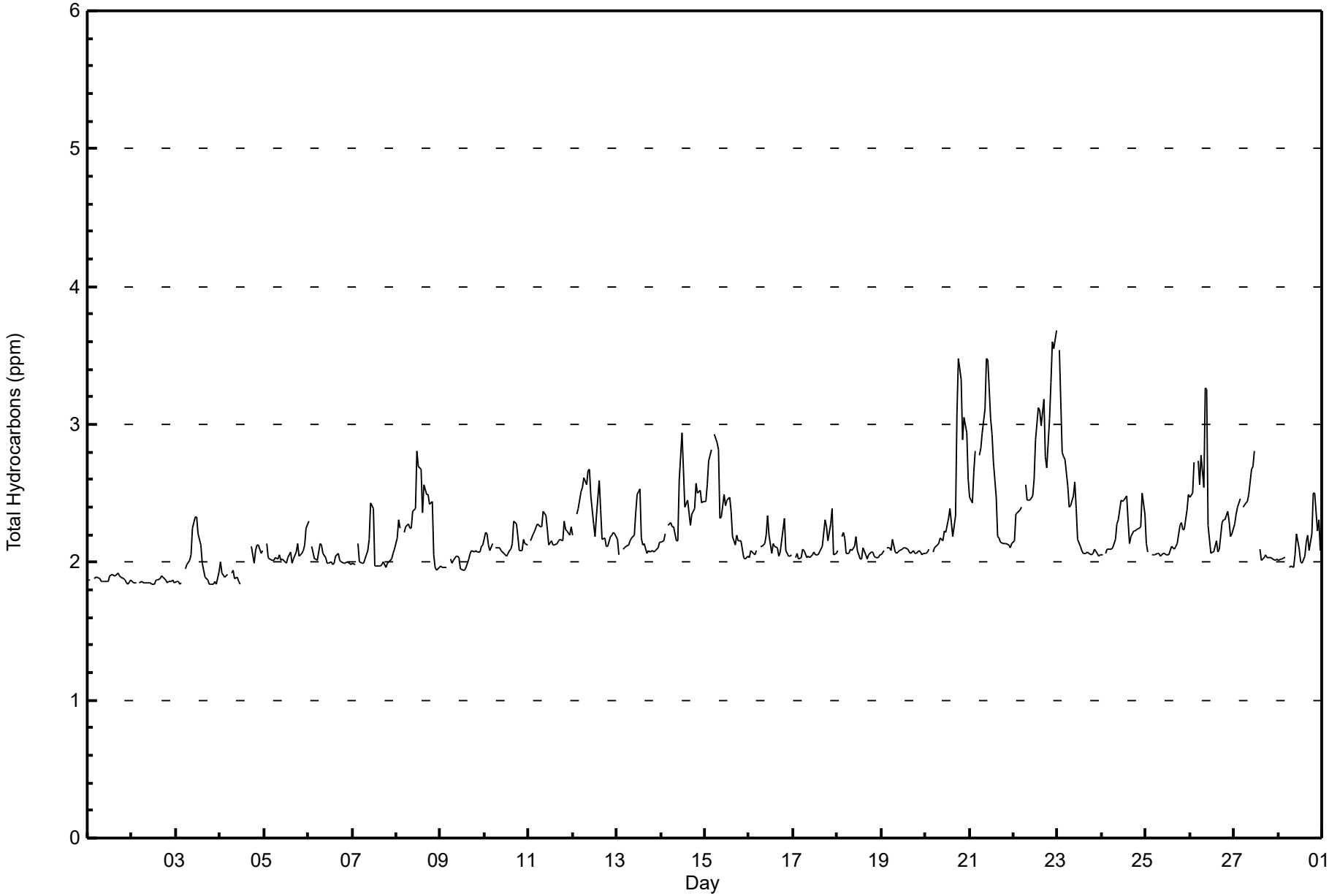
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Lower Camp - February 2025





Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm

Lower Camp - February 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	184	28.89	28.89
2.1 - 3.0	437	68.60	97.49
3.1 - 10.0	16	2.51	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 637

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Lower Camp - February 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	33	7	3	0	0	8	37	2	2	0	9	13	6	10	16	37	183
2.1 - 3.0	19	4	3	3	7	30	126	28	2	2	6	2	13	49	94	48	436
3.1 - 10.0	0	0	0	0	0	2	1	0	0	0	0	1	0	5	6	1	16
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	52	11	6	3	7	40	164	30	4	2	15	16	19	64	116	86	635

Total Number of Valid Hours: 635

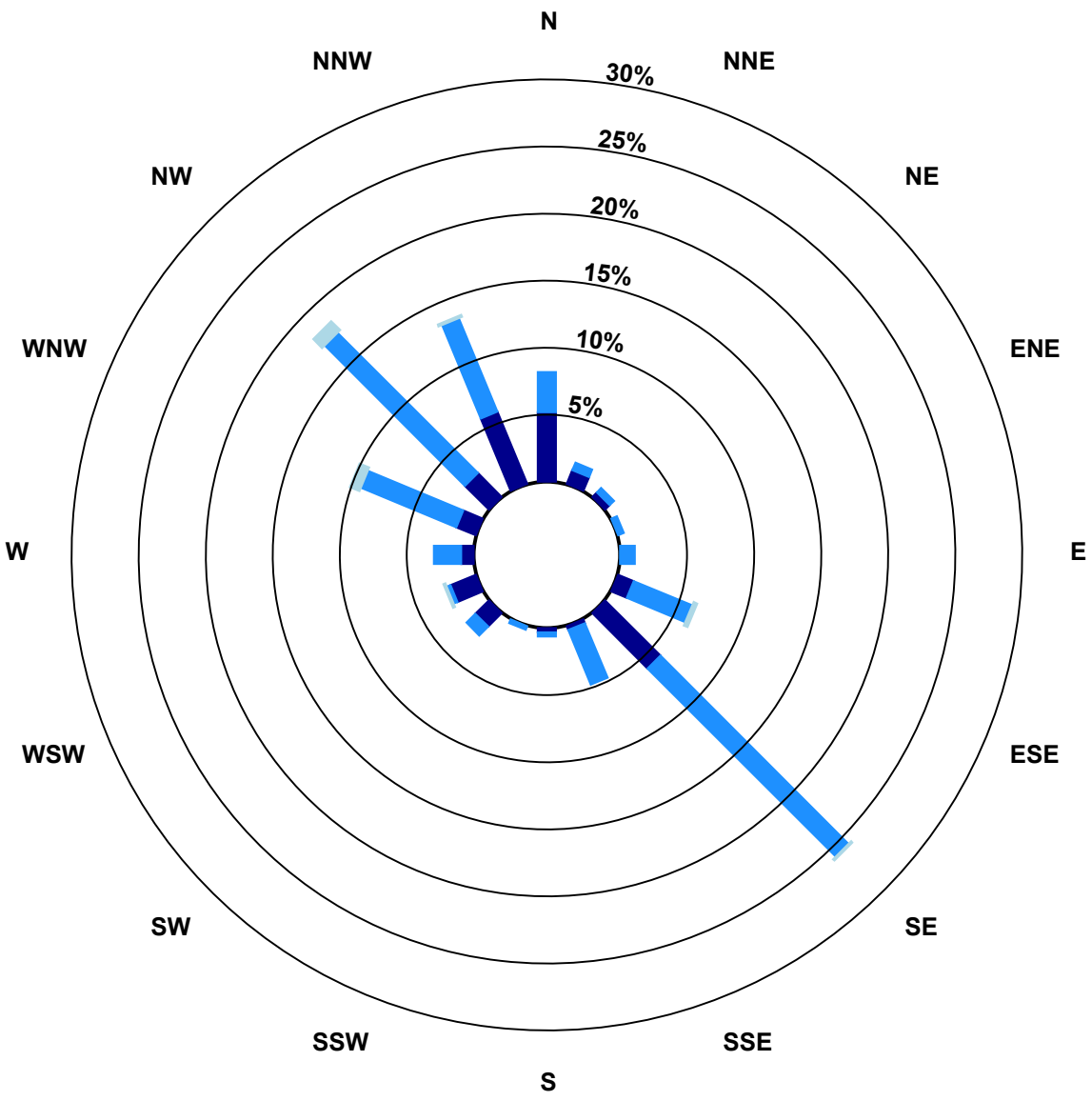
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Total Hydrocarbons (THC) - ppm

Lower Camp



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

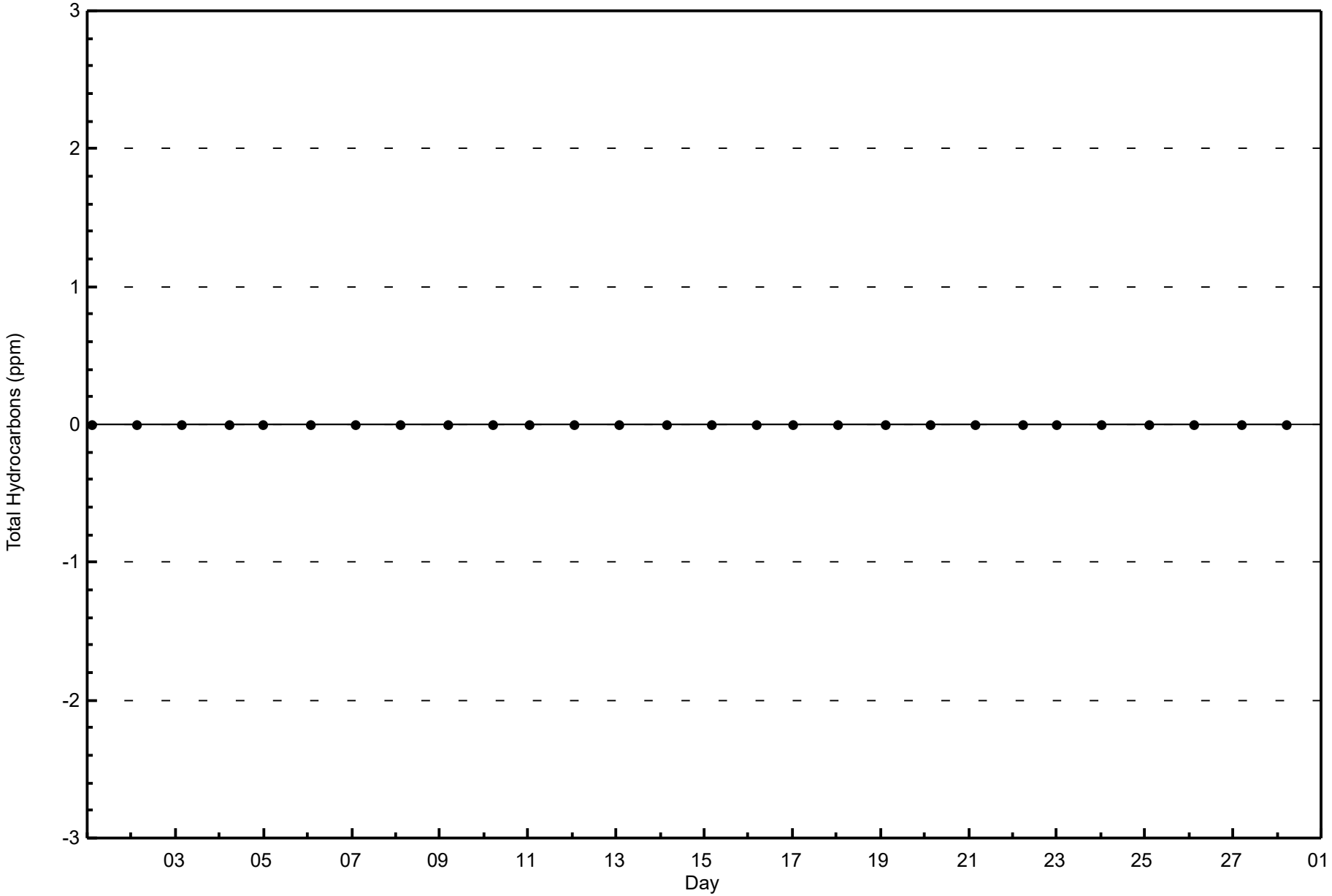
Total Number of Valid Hours: 635

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Lower Camp - February 2025

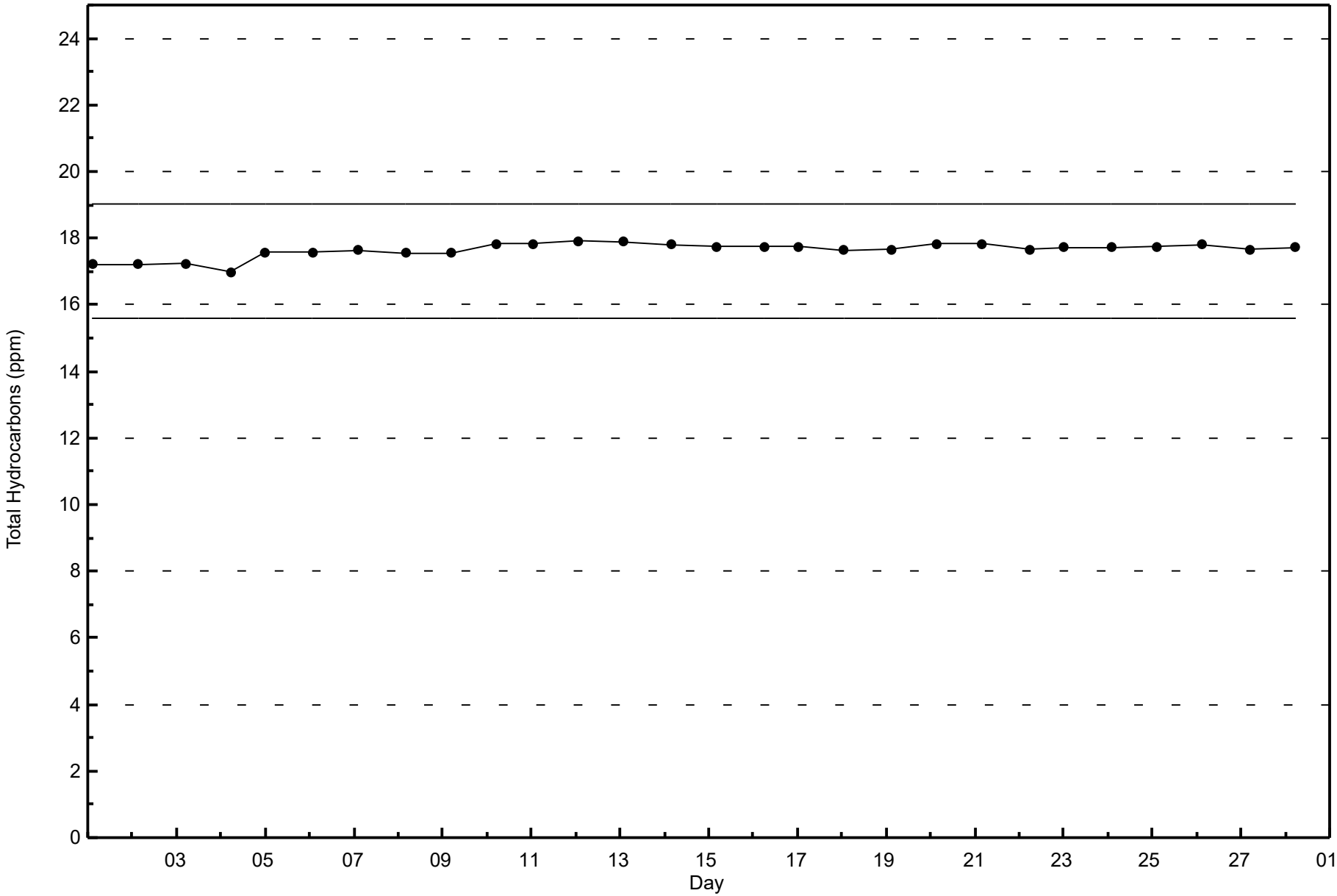


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Lower Camp - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Lower Camp - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.5 ppm on Feb 23 00:00 Maximum Daily Average: 2.7 ppm on Feb 22

Minimum Value: 1.8 ppm on Feb 2 13:00 Minimum Daily Average: 1.9 ppm on Feb 2
Maximum Diurnal Average: 2.2 ppm at hour 11 Minimum Diurnal Average: 2.1 ppm at hour 1
Monthly Average: 2.16 ppm Percentiles: P_1 = 1.8 P_{10} = 1.9 Q_1 = 2.0 Median = 2.1 Q_3 = 2.2 P_{90} = 2.4 P_{99} = 3.2

Hours in Service:	672
Hours of Data:	637
Hours of Missing Data:	35
Hours of Calibration:	33
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-Feb	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	1.8	1.9	1.9	1.9
2-Feb	1.9	1.9	1.8	Z	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
3-Feb	1.9	1.9	1.8	1.9	Z	2.0	2.0	2.0	2.1	2.2	2.3	2.3	2.1	2.1	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.8	1.9	2.0	2.3
4-Feb	2.0	1.9	1.9	1.9	1.9	Z	1.9	1.9	1.9	1.9	1.9	1.8	C	C	C	C	C	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.1
5-Feb	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	2.0	2.0	2.1	2.1	2.0	2.1	2.1	2.1	2.2	2.1	2.2
6-Feb	2.2	Z	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
7-Feb	2.0	2.0	Z	2.1	2.0	2.0	2.0	2.0	2.1	2.2	2.4	2.3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.4
8-Feb	2.2	2.3	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.6	2.6	2.6	2.3	2.4	2.3	2.3	2.3	2.3	2.0	2.0	1.9	2.0	2.3	2.6
9-Feb	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1
10-Feb	2.2	2.1	2.1	2.0	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	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
11-Feb	Z	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.2	2.2	2.2	2.2	2.2	2.3
12-Feb	2.2	Z	2.3	2.3	2.4	2.5	2.5	2.5	2.6	2.6	2.4	2.3	2.2	2.3	2.5	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.3	2.6
13-Feb	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.4	2.5	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.5
14-Feb	2.1	2.1	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.1	2.5	2.8	2.6	2.3	2.3	2.2	2.2	2.2	2.3	2.4	2.3	2.3	2.3	2.3	2.3	2.8
15-Feb	2.3	2.5	2.6	2.7	Z	2.8	2.7	2.7	2.2	2.2	2.4	2.3	2.4	2.4	2.3	2.2	2.1	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.3	2.8
16-Feb	2.0	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.2	2.3	2.2	2.1	2.1	2.1	2.1	2.0	2.1	2.2	2.3	2.1	2.0	2.0	2.0	2.1	2.3
17-Feb	Z	2.0	2.1	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	2.2	2.2	2.1	2.2	2.2	2.0	2.1	2.1	2.2
18-Feb	2.1	Z	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.0	2.0	2.1	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.2
19-Feb	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
20-Feb	2.1	2.1	2.1	Z	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.2	2.1	2.3	3.0	3.3	3.2	2.7	2.9	2.8	2.5	2.4	3.3
21-Feb	2.4	2.3	2.6	2.7	Z	2.7	2.7	2.8	2.9	3.2	3.2	2.9	2.7	2.5	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.5	3.2
22-Feb	2.1	2.3	2.3	2.3	2.3	Z	2.4	2.4	2.4	2.4	2.4	2.5	2.7	2.9	2.9	2.8	3.0	2.7	2.6	2.9	3.2	3.5	3.4	3.5	2.7	3.5
23-Feb	Z	3.4	2.7	2.6	2.6	2.4	2.3	2.3	2.4	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	2.0	2.1	2.3	3.4
24-Feb	2.0	Z	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.4	2.4	2.4	2.4	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.4	2.3	2.2	2.4
25-Feb	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.4	2.1	2.4
26-Feb	2.3	2.3	2.5	Z	2.6	2.4	2.6	2.4	2.6	2.7	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.2	2.1	2.2	2.3	2.7
27-Feb	2.2	2.3	2.3	2.4	Z	2.3	2.3	2.4	2.4	2.6	2.6	2.7	M	M	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.7
28-Feb	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.2	2.1	2.0	2.0	2.0	2.1	2.2	2.1	2.2	2.4	2.4	2.2	2.2	2.0	2.1	2.4
	2.1	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	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	Diurnal Average	
	2.4	3.4	2.7	2.7	2.6	2.8	2.7	2.8	2.9	3.2	3.2	2.9	2.7	2.9	2.9	2.8	3.0	3.0	3.3	3.2	3.2	3.5	3.4	3.5	Diurnal Maximum	

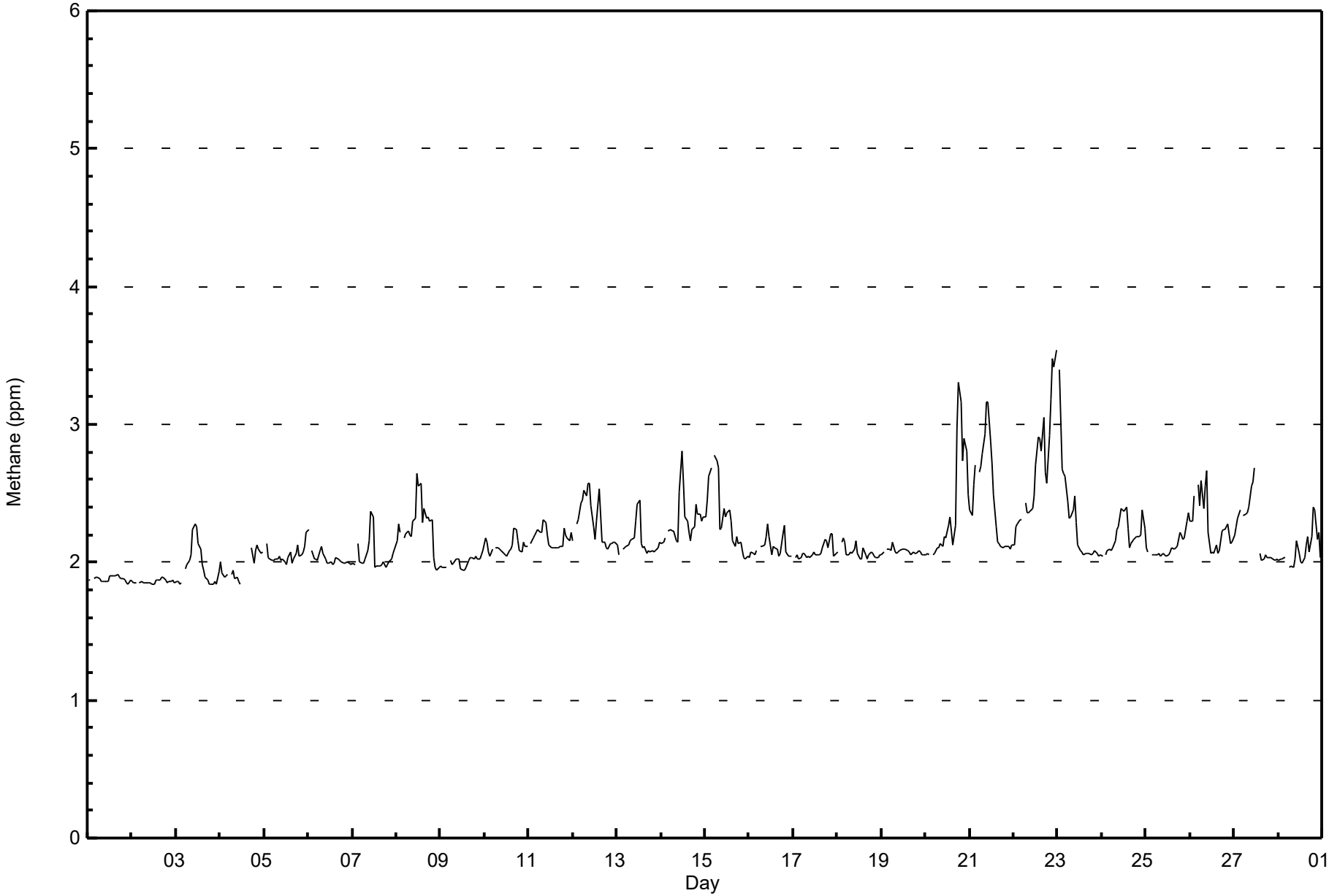
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Lower Camp - February 2025



Methane (CH_4) - ppm
Lower Camp - February 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	198	31.08	31.08
2.1 - 3.0	430	67.50	98.59
3.1 - 10.0	9	1.41	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 637

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Lower Camp - February 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	33	7	3	0	1	8	42	3	2	0	9	13	7	11	19	39	197
2.1 - 3.0	19	4	3	3	6	30	122	27	2	2	6	3	12	48	96	46	429
3.1 - 10.0	0	0	0	0	0	2	0	0	0	0	0	0	0	5	1	1	9
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	52	11	6	3	7	40	164	30	4	2	15	16	19	64	116	86	635

Total Number of Valid Hours: 635

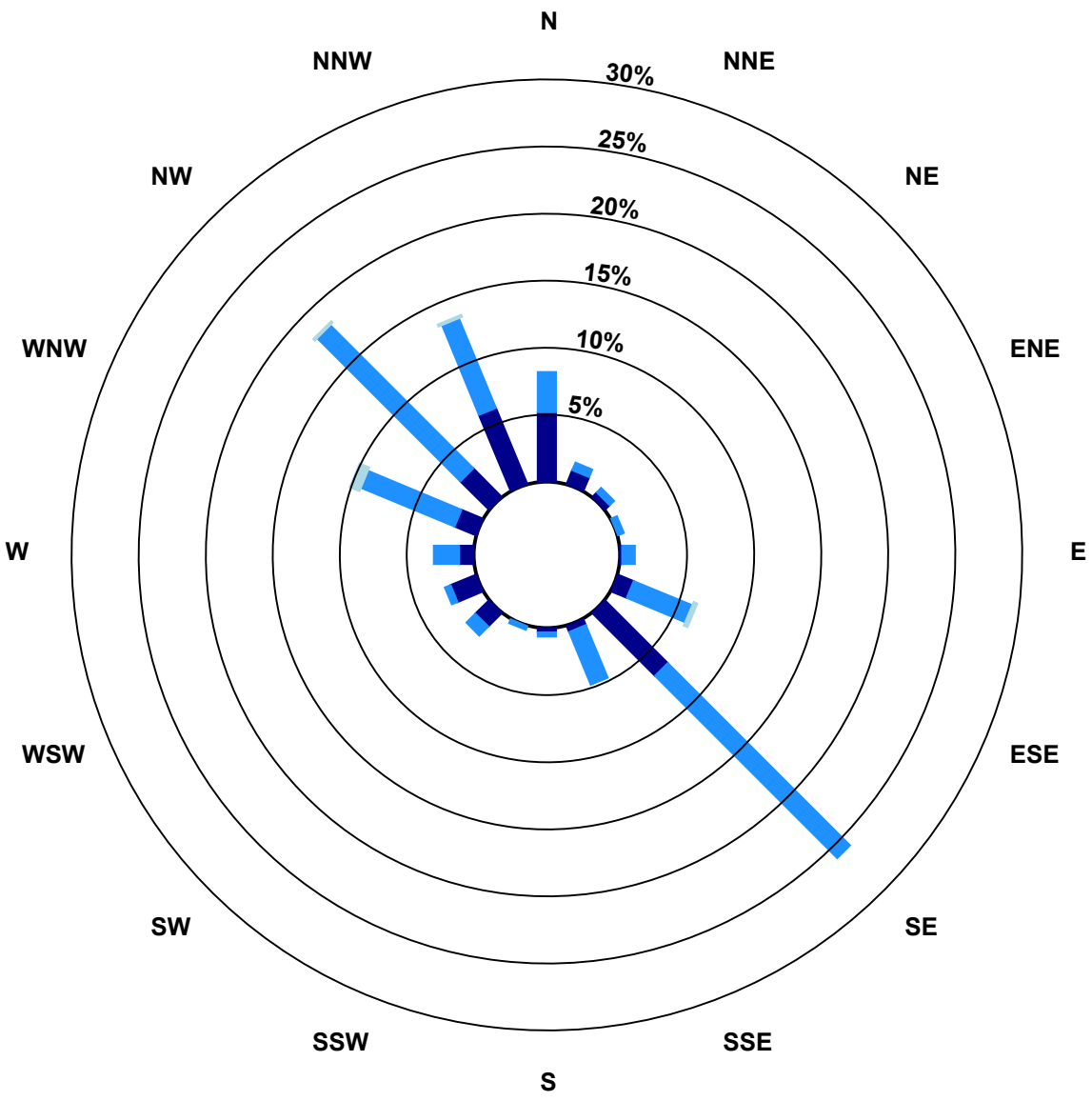
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Methane (CH_4) - ppm

Lower Camp



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

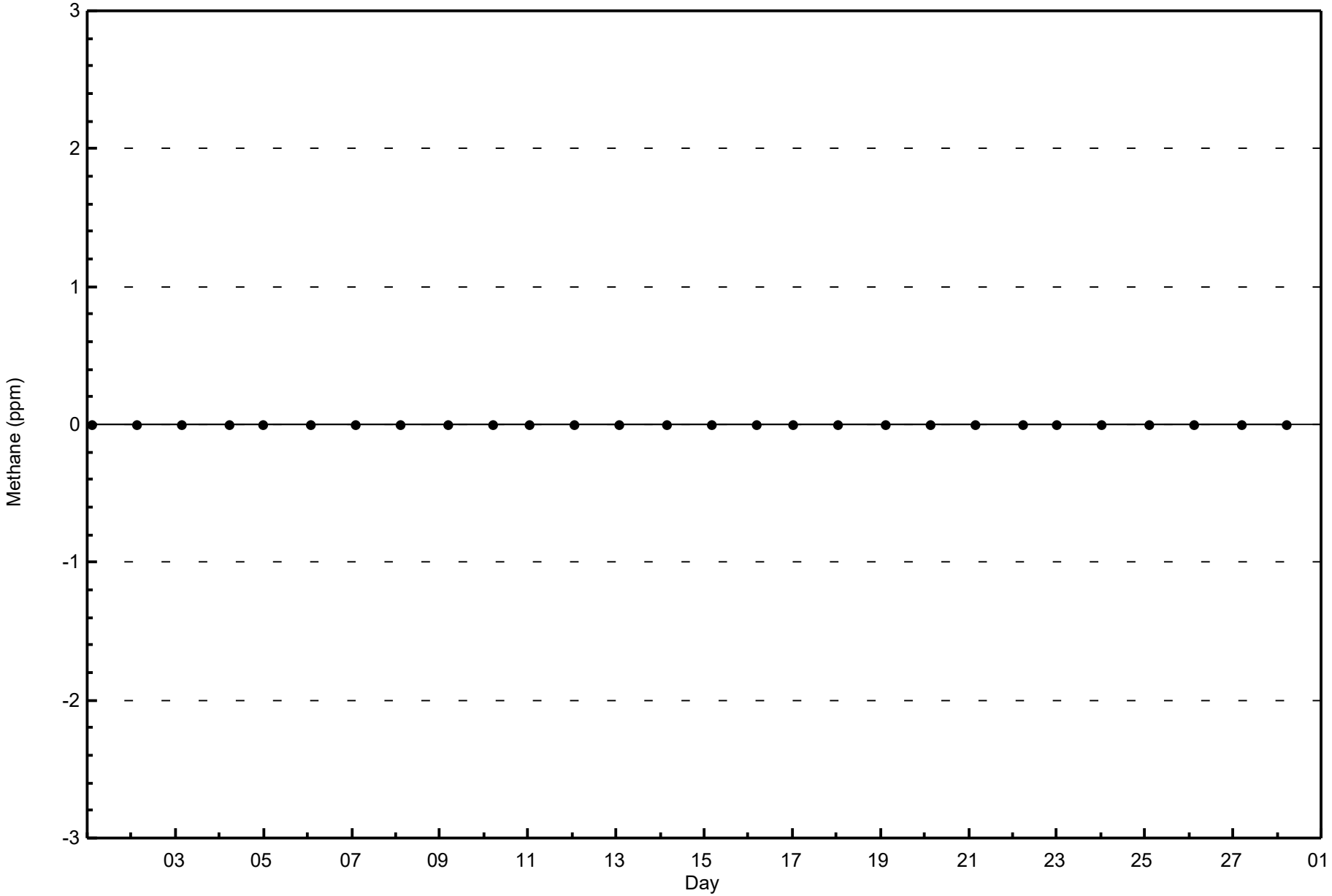
Total Number of Valid Hours: 635

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Lower Camp - February 2025

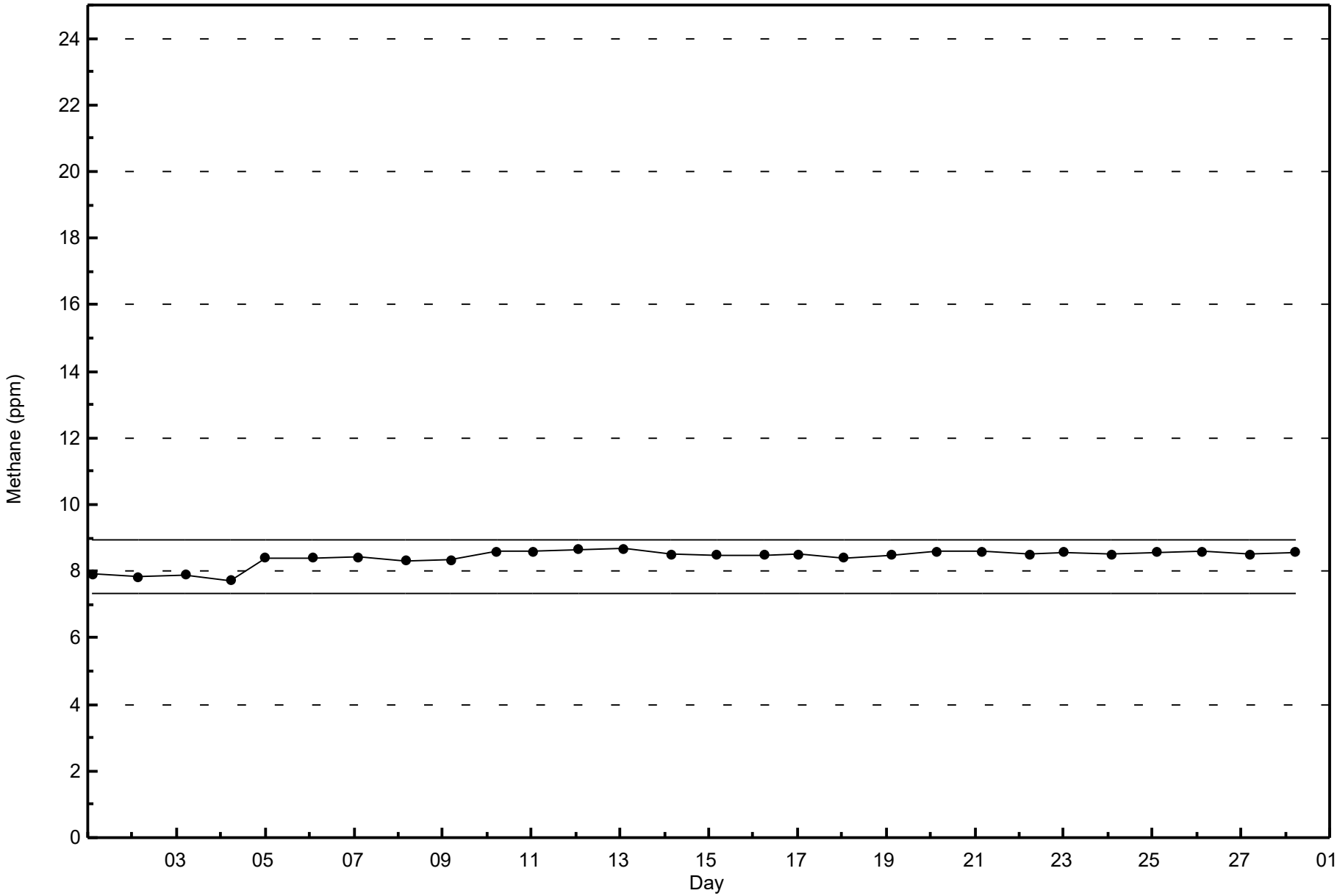


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Lower Camp - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Lower Camp - February 2025

Maximum Value: 0.705 ppm on Feb 26 09:00

Maximum Daily Average: 0.139 ppm on Feb 26

Minimum Value: 0.000 ppm on Feb 1 01:00

Minimum Daily Average: 0.001 ppm on Feb 2

Maximum Diurnal Average: 0.062 ppm at hour 10

Minimum Diurnal Average: 0.030 ppm at hour 1

Monthly Average: 0.040 ppm

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

Hours in Service:	672
Hours of Data:	637
Hours of Missing Data:	35
Hours of Calibration:	33
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-Feb	0.000	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	0.006	0.017	0.006	0.012	0.000	0.000	0.000	0.000	0.000	0.002	0.017
2-Feb	0.000	0.000	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	0.003	0.007	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.007
3-Feb	0.000	0.000	0.000	0.000	Z	0.001	0.002	0.000	0.001	0.009	0.049	0.072	0.070	0.035	0.009	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.011	0.072
4-Feb	0.001	0.001	0.001	0.000	0.001	Z	0.004	0.004	0.000	0.002	0.000	0.000	C	C	C	C	C	0.002	0.000	0.002	0.005	0.025	0.007	0.001	0.003	0.025
5-Feb	Z	0.002	0.000	0.001	0.000	0.001	0.013	0.004	0.003	0.001	0.004	0.000	0.001	0.000	0.001	0.000	0.002	0.003	0.003	0.005	0.007	0.005	0.010	0.037	0.004	0.037
6-Feb	0.053	Z	0.032	0.004	0.002	0.001	0.049	0.013	0.002	0.004	0.000	0.000	0.001	0.000	0.001	0.018	0.042	0.000	0.000	0.001	0.000	0.002	0.000	0.000	0.010	0.053
7-Feb	0.000	0.000	Z	0.004	0.000	0.000	0.000	0.000	0.004	0.013	0.057	0.062	0.003	0.000	0.000	0.000	0.002	0.001	0.001	0.000	0.000	0.001	0.002	0.003	0.007	0.062
8-Feb	0.015	0.031	0.030	Z	0.041	0.053	0.055	0.047	0.056	0.072	0.072	0.157	0.144	0.107	0.070	0.181	0.172	0.160	0.127	0.125	0.019	0.000	0.000	0.000	0.075	0.181
9-Feb	0.000	0.000	0.000	0.000	Z	0.012	0.010	0.014	0.021	0.026	0.014	0.000	0.000	0.000	0.000	0.006	0.039	0.047	0.047	0.048	0.047	0.049	0.055	0.036	0.020	0.055
10-Feb	0.036	0.056	0.051	0.044	0.039	Z	0.002	0.003	0.006	0.003	0.000	0.001	0.000	0.006	0.003	0.011	0.049	0.039	0.029	0.005	0.009	0.027	0.020	0.010	0.020	0.056
11-Feb	Z	0.028	0.024	0.033	0.042	0.044	0.042	0.039	0.059	0.055	0.032	0.004	0.044	0.023	0.020	0.037	0.044	0.049	0.041	0.043	0.043	0.042	0.044	0.042	0.038	0.059
12-Feb	0.041	Z	0.066	0.077	0.082	0.085	0.093	0.085	0.093	0.094	0.062	0.021	0.017	0.046	0.055	0.044	0.022	0.031	0.013	0.020	0.057	0.063	0.066	0.058	0.056	0.094
13-Feb	0.038	0.003	Z	0.001	0.001	0.001	0.000	0.000	0.006	0.016	0.057	0.077	0.081	0.037	0.015	0.014	0.000	0.000	0.000	0.001	0.000	0.001	0.000	0.002	0.015	0.081
14-Feb	0.006	0.011	0.036	Z	0.045	0.044	0.038	0.033	0.004	0.007	0.089	0.136	0.095	0.066	0.153	0.141	0.111	0.113	0.125	0.149	0.159	0.180	0.128	0.116	0.086	0.180
15-Feb	0.112	0.112	0.120	0.127	Z	0.148	0.138	0.129	0.081	0.081	0.098	0.091	0.093	0.094	0.067	0.037	0.013	0.016	0.017	0.012	0.006	0.000	0.000	0.000	0.069	0.148
16-Feb	0.001	0.001	0.001	0.001	0.000	Z	0.000	0.000	0.008	0.016	0.064	0.017	0.011	0.021	0.014	0.004	0.001	0.005	0.032	0.054	0.011	0.000	0.000	0.003	0.011	0.064
17-Feb	Z	0.001	0.005	0.000	0.000	0.025	0.019	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.017	0.031	0.011	0.147	0.102	0.042	0.072	0.182	0.009	0.004	0.029	0.182
18-Feb	0.009	Z	0.044	0.042	0.033	0.004	0.010	0.017	0.017	0.019	0.029	0.017	0.006	0.002	0.002	0.000	0.003	0.001	0.002	0.003	0.001	0.000	0.001	0.002	0.011	0.044
19-Feb	0.006	0.005	Z	0.007	0.002	0.005	0.022	0.001	0.001	0.000	0.001	0.001	0.005	0.010	0.009	0.005	0.006	0.005	0.001	0.001	0.003	0.005	0.003	0.004	0.005	0.022
20-Feb	0.003	0.017	0.041	Z	0.030	0.037	0.025	0.031	0.037	0.035	0.043	0.046	0.055	0.060	0.061	0.062	0.080	0.112	0.178	0.163	0.156	0.152	0.136	0.102	0.072	0.178
21-Feb	0.087	0.084	0.097	0.104	Z	0.121	0.133	0.145	0.186	0.313	0.299	0.168	0.217	0.234	0.206	0.039	0.041	0.029	0.025	0.019	0.011	0.014	0.013	0.010	0.113	0.313
22-Feb	0.031	0.092	0.086	0.073	0.095	Z	0.125	0.098	0.090	0.084	0.091	0.123	0.188	0.217	0.202	0.182	0.137	0.110	0.109	0.125	0.125	0.127	0.132	0.135	0.121	0.217
23-Feb	Z	0.140	0.120	0.127	0.128	0.106	0.080	0.090	0.104	0.102	0.094	0.042	0.026	0.010	0.009	0.005	0.007	0.002	0.003	0.001	0.002	0.001	0.000	0.001	0.052	0.140
24-Feb	0.005	Z	0.012	0.008	0.004	0.001	0.003	0.014	0.045	0.045	0.059	0.065	0.081	0.081	0.059	0.032	0.052	0.056	0.053	0.057	0.058	0.059	0.131	0.093	0.047	0.131
25-Feb	0.025	0.007	Z	0.003	0.002	0.000	0.001	0.000	0.003	0.003	0.003	0.002	0.003	0.005	0.007	0.003	0.006	0.015	0.052	0.087	0.069	0.063	0.082	0.129	0.025	0.129
26-Feb	0.169	0.204	0.246	Z	0.178	0.153	0.183	0.152	0.705	0.586	0.057	0.003	0.002	0.007	0.033	0.006	0.008	0.062	0.070	0.071	0.090	0.093	0.053	0.058	0.139	0.705
27-Feb	0.085	0.090	0.080	0.087	Z	0.070	0.077	0.077	0.093	0.117	0.106	0.118	M	M	0.024	0.004	0.003	0.001	0.000	0.000	0.001	0.001	0.000	0.001	0.049	0.118
28-Feb	0.001	0.000	0.001	0.000	0.000	Z	0.001	0.002	0.002	0.024	0.050	0.025	0.006	0.003	0.010	0.023	0.018	0.006	0.025	0.103	0.125	0.061	0.095	0.048	0.027	0.125
	0.030	0.037	0.048	0.032	0.032	0.040	0.040	0.036	0.058	0.062	0.051	0.045	0.044	0.041	0.039	0.033	0.033	0.036	0.038	0.041	0.038	0.041	0.035	0.032	Diurnal Average	
	0.169	0.204	0.246	0.127	0.178	0.153	0.183	0.152	0.705	0.586	0.299	0.168	0.217	0.234	0.206	0.182	0.172	0.160	0.178	0.163	0.159	0.182	0.136	0.135	Diurnal Maximum	

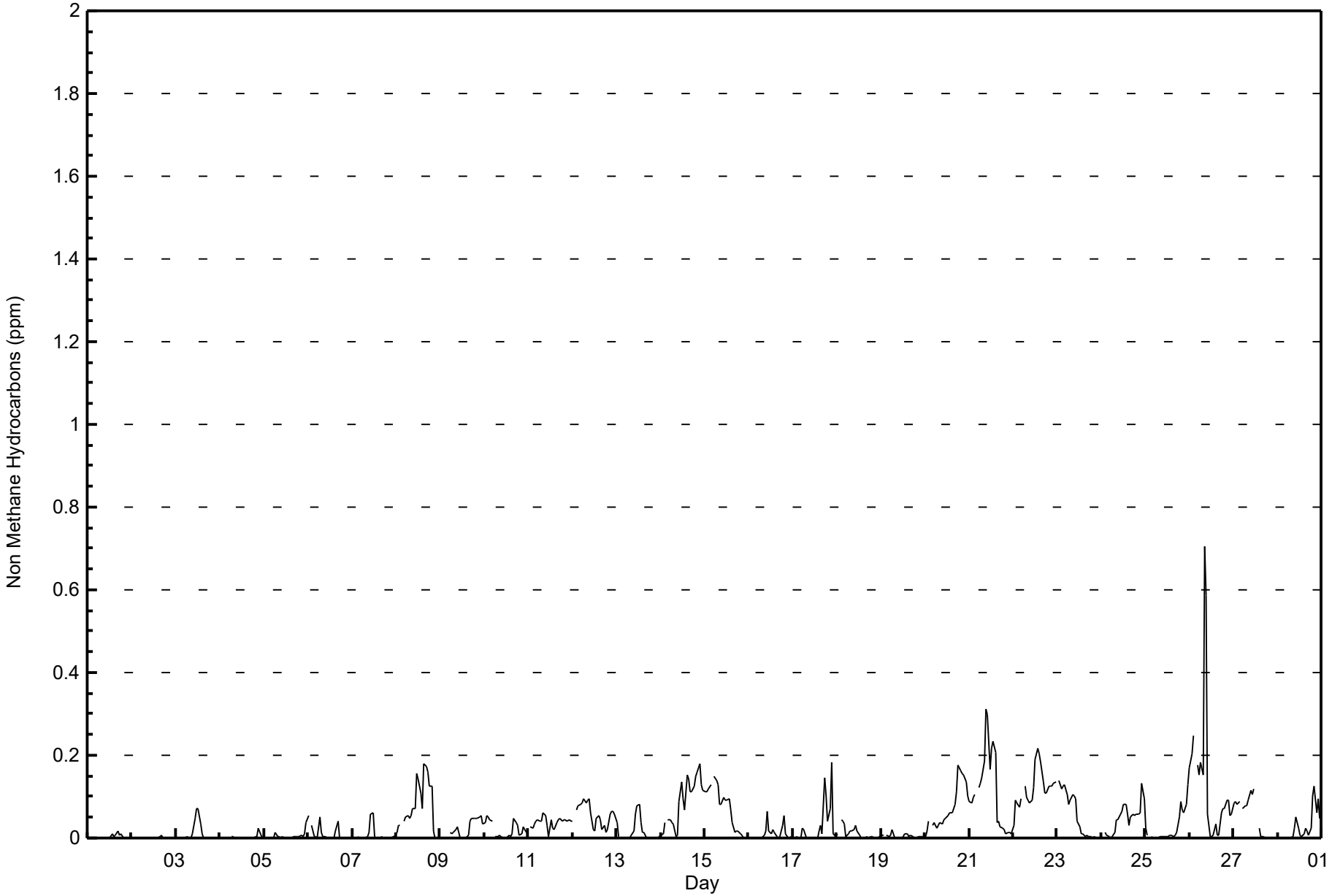
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Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Lower Camp - February 2025



Non Methane Hydrocarbons (NMHC) - ppm
Lower Camp - February 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	269	42.23	42.23
0.006 - 0.05	195	30.61	72.84
0.06 - 0.1	141	22.14	94.98
> 0.1	32	5.02	100.00

Total Number of Valid Hours: 637

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Lower Camp - February 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	8	4	0	1	17	69	9	4	0	11	13	3	14	35	43	268
0.006 - 0.05	10	0	0	1	1	12	53	16	0	0	4	0	10	22	39	26	194
0.06 - 0.1	5	3	1	2	5	7	38	4	0	2	0	2	4	24	29	15	141
> 0.1	0	0	1	0	0	4	4	1	0	0	0	1	2	4	13	2	32
Totals	52	11	6	3	7	40	164	30	4	2	15	16	19	64	116	86	635

Total Number of Valid Hours: 635

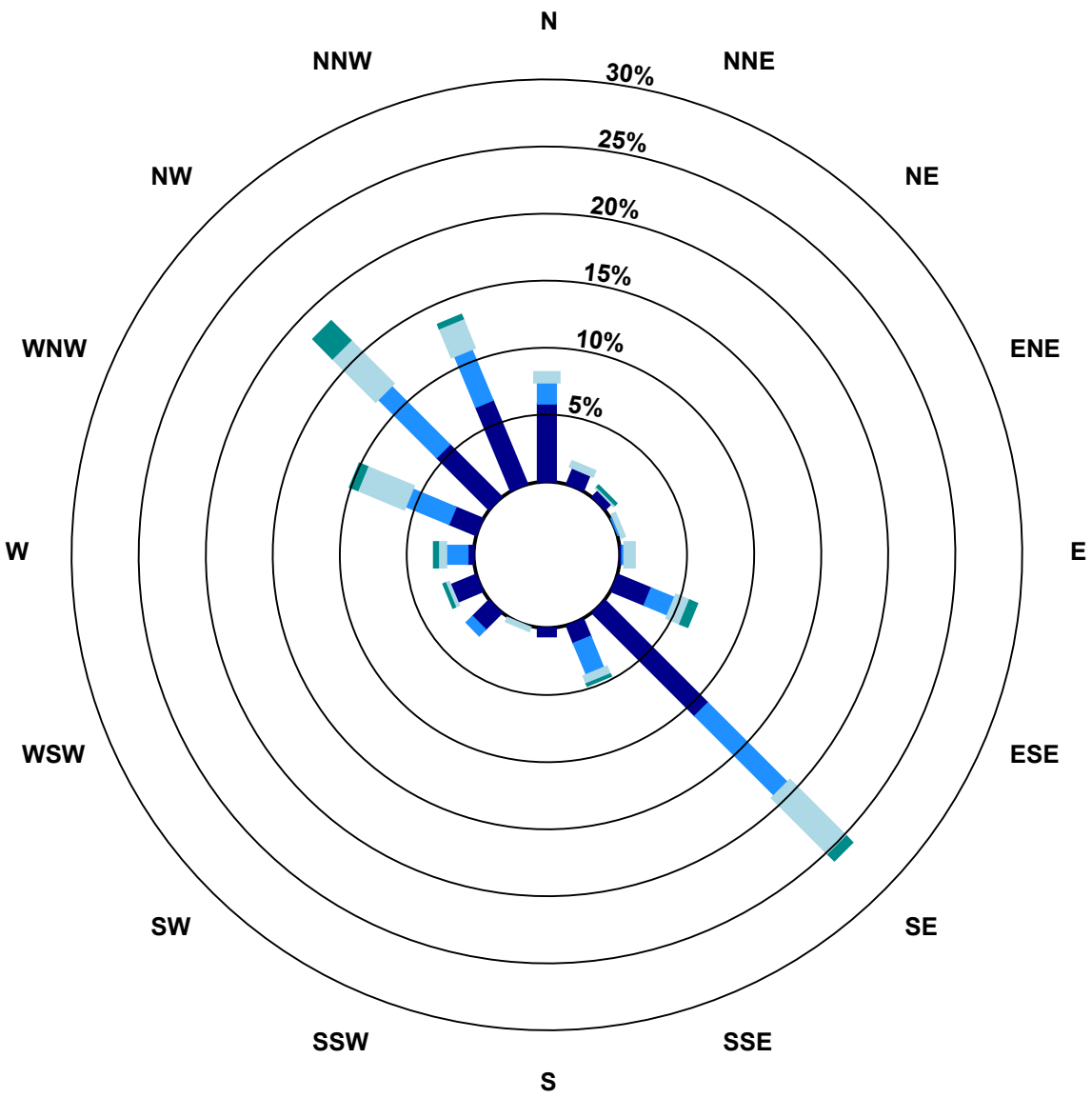
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Non Methane Hydrocarbons (NMHC) - ppm

Lower Camp



Classes (ppm)

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

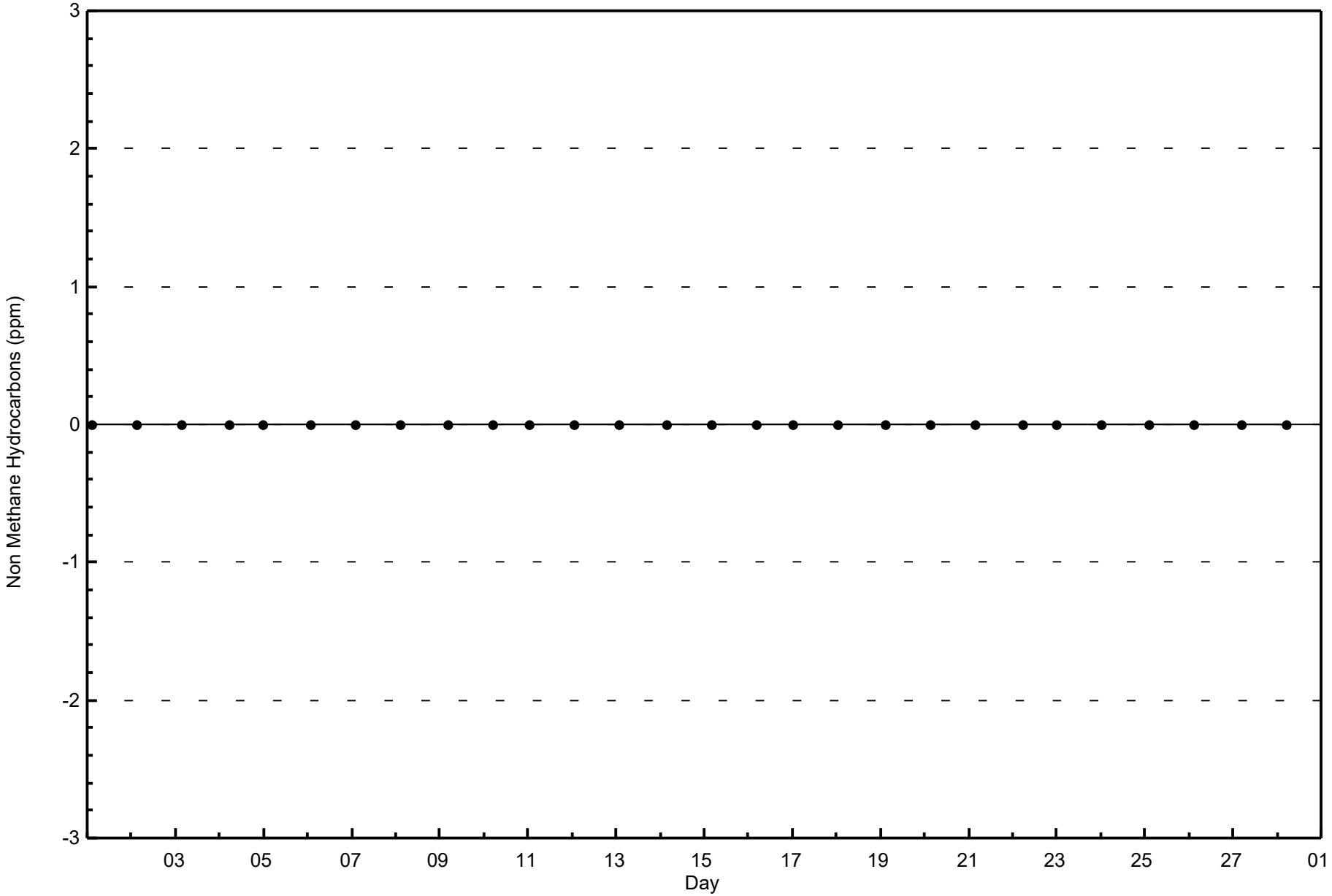
Total Number of Valid Hours: 635

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Lower Camp - February 2025

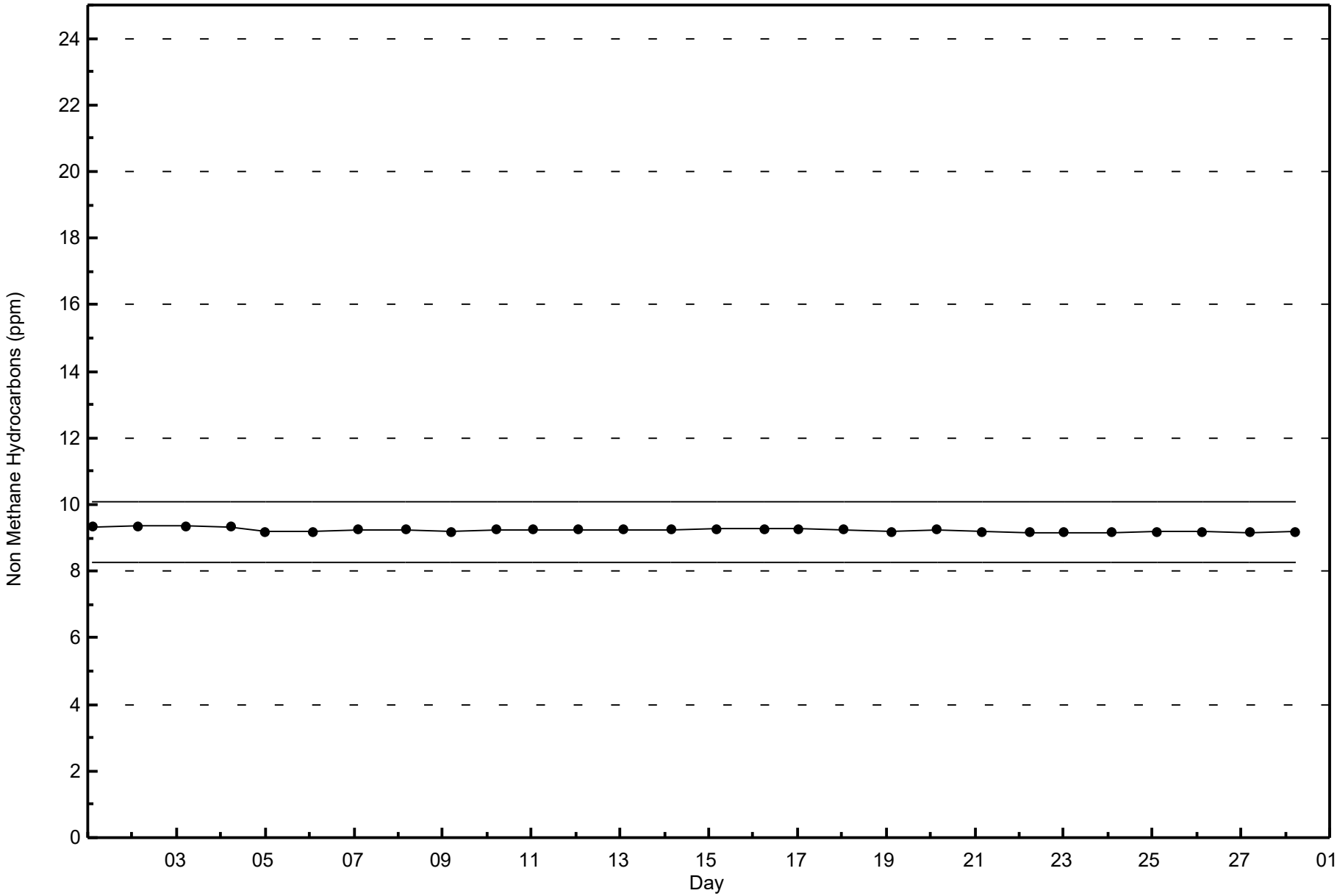


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Lower Camp - February 2025



Maximum Value: 1.5 C on Feb 27 14:00

Maximum Daily Average: -4.5 C on Feb 23

Minimum Value: -39.5 C on Feb 14 08:00

Minimum Daily Average: -31.9 C on Feb 14

Maximum Diurnal Average: -13.2 C at hour 16

Minimum Diurnal Average: -21.9 C at hour 8

Monthly Average: -18.36 C

Percentiles: P_1 = -36.7 P_{10} = -30.7 Q_1 = -24.5 Median = -19.6 Q_3 = -10.3 P_{90} = -6.3 P_{99} = -0.7

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

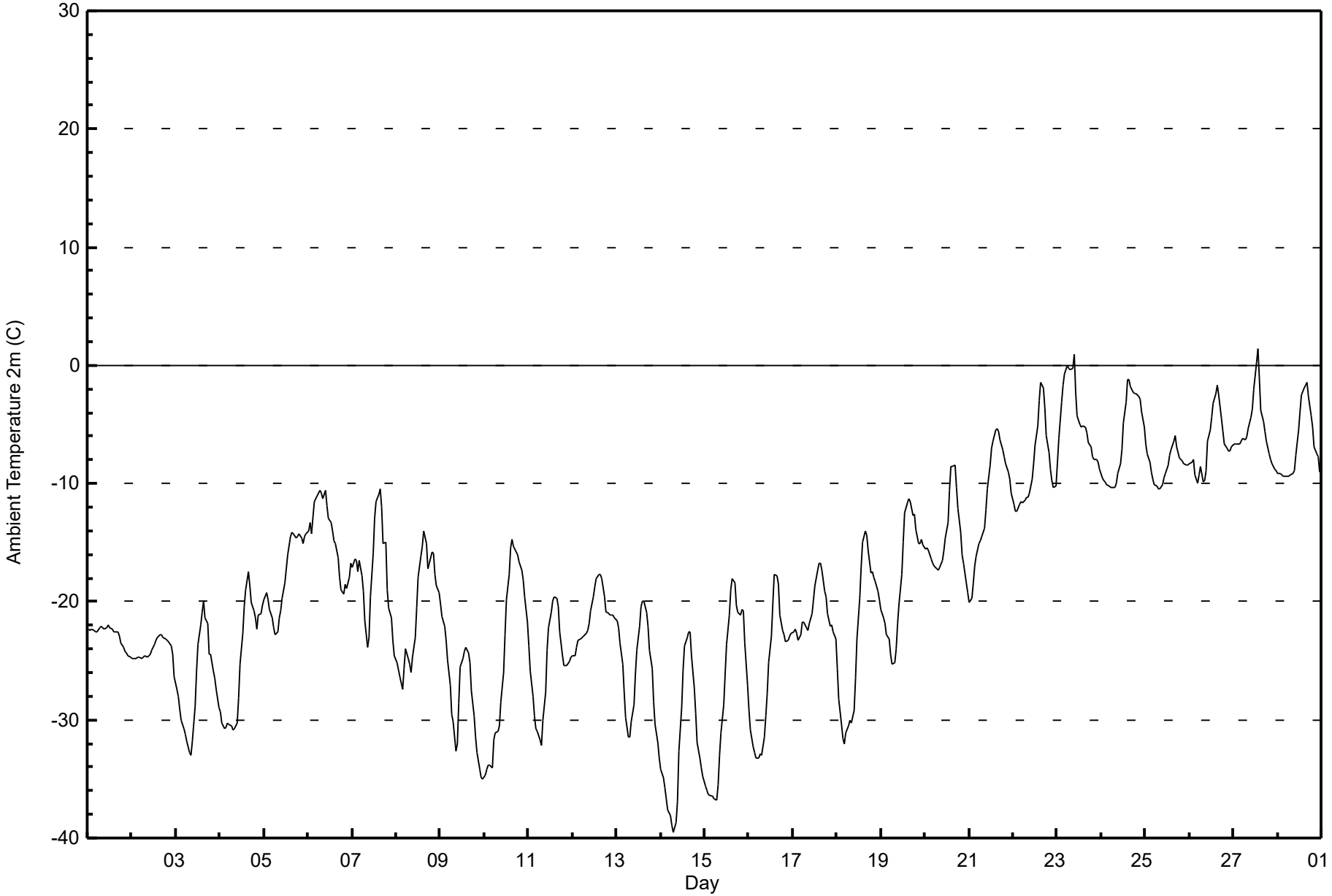
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-22.3	-22.4	-22.4	-22.5	-22.6	-22.5	-22.2	-22.1	-22.3	-22.4	-22.2	-22.0	-22.2	-22.3	-22.5	-22.5	-22.5	-23.0	-23.6	-23.9	-24.2	-24.4	-24.5	-24.7	-22.8	-22.0
2-Feb	-24.8	-24.8	-24.8	-24.7	-24.7	-24.8	-24.7	-24.6	-24.6	-24.6	-24.5	-24.1	-23.6	-23.3	-23.0	-22.9	-22.8	-23.0	-23.2	-23.3	-23.4	-23.7	-24.4	-26.3	-24.1	-22.8
3-Feb	-27.4	-28.1	-29.0	-30.1	-30.8	-31.2	-31.9	-32.7	-33.0	-31.9	-28.8	-25.8	-23.6	-21.9	-20.8	-20.0	-21.4	-21.9	-24.5	-24.4	-25.9	-26.4	-27.4	-28.9	-27.0	-20.0
4-Feb	-29.3	-30.3	-30.7	-30.7	-30.2	-30.3	-30.5	-30.9	-30.8	-30.2	-28.1	-25.3	-22.6	-20.4	-19.0	-17.5	-18.6	-20.0	-20.8	-21.4	-22.4	-21.1	-21.0	-20.3	-25.1	-17.5
5-Feb	-19.9	-19.3	-19.8	-20.6	-21.4	-22.2	-22.8	-22.5	-21.4	-20.8	-19.7	-18.4	-17.3	-16.1	-14.5	-14.1	-14.3	-14.6	-14.5	-14.2	-14.6	-15.0	-14.5	-14.3	-17.8	-14.1
6-Feb	-14.0	-13.3	-14.2	-11.5	-11.3	-11.0	-10.6	-10.9	-11.3	-10.6	-11.9	-12.9	-13.3	-14.0	-14.9	-15.1	-16.3	-17.9	-19.0	-19.4	-18.5	-18.9	-18.0	-16.8	-14.4	-10.6
7-Feb	-17.1	-16.4	-16.5	-17.5	-16.5	-17.8	-19.1	-21.6	-23.8	-23.0	-19.6	-15.9	-13.0	-11.5	-10.9	-10.5	-12.0	-15.0	-14.9	-19.0	-20.5	-21.4	-23.3	-24.5	-17.6	-10.5
8-Feb	-25.1	-25.8	-26.3	-27.5	-25.6	-24.0	-24.8	-25.3	-26.0	-24.7	-23.1	-20.5	-17.9	-16.2	-15.4	-14.1	-15.1	-17.2	-16.7	-15.8	-15.9	-17.7	-18.7	-19.3	-20.8	-14.1
9-Feb	-20.2	-21.3	-22.1	-23.3	-24.9	-27.1	-29.6	-30.2	-32.6	-32.1	-28.6	-25.5	-24.8	-24.3	-23.8	-24.3	-25.2	-27.6	-29.6	-31.5	-32.8	-34.1	-34.9	-35.1	-27.7	-20.2
10-Feb	-34.7	-34.2	-33.9	-33.9	-34.1	-31.7	-31.1	-31.0	-30.5	-28.5	-25.9	-22.8	-19.8	-17.7	-15.5	-14.8	-15.3	-15.8	-16.0	-16.6	-17.3	-18.2	-19.6	-21.7	-24.2	-14.8
11-Feb	-23.7	-25.9	-28.0	-29.7	-30.7	-31.0	-31.7	-32.1	-30.0	-27.6	-24.1	-22.2	-20.9	-20.0	-19.6	-19.7	-20.5	-22.6	-24.6	-25.4	-25.4	-25.4	-25.1	-24.7	-25.4	-19.6
12-Feb	-24.6	-24.5	-23.8	-23.3	-23.2	-23.1	-22.9	-22.7	-22.5	-21.9	-20.7	-19.6	-18.8	-18.1	-17.7	-17.7	-18.1	-19.6	-20.9	-20.9	-21.1	-21.1	-21.1	-21.4	-21.2	-17.7
13-Feb	-21.6	-22.2	-23.5	-25.3	-27.7	-29.8	-31.5	-31.4	-30.1	-28.8	-26.1	-24.1	-22.1	-20.5	-19.9	-20.0	-20.9	-22.1	-24.0	-25.6	-28.5	-30.4	-32.0	-33.2	-25.9	-19.9
14-Feb	-34.2	-34.9	-35.7	-36.7	-37.7	-38.1	-38.9	-39.5	-38.7	-36.9	-32.7	-28.9	-25.8	-23.8	-23.0	-22.6	-22.5	-24.6	-27.3	-29.5	-31.9	-33.2	-34.0	-34.8	-31.9	-22.5
15-Feb	-35.6	-36.0	-36.3	-36.5	-36.4	-36.7	-36.8	-35.5	-33.0	-31.0	-28.8	-26.1	-23.6	-21.1	-19.0	-18.1	-18.4	-20.2	-20.9	-21.1	-20.7	-20.8	-23.5	-27.1	-27.6	-18.1
16-Feb	-29.2	-30.9	-32.2	-32.8	-33.3	-33.2	-32.8	-33.0	-31.5	-29.7	-27.8	-25.2	-23.0	-20.1	-17.7	-17.8	-18.5	-21.1	-22.4	-22.8	-23.4	-23.2	-22.9	-22.7	-26.1	-17.7
17-Feb	-22.5	-22.3	-22.7	-23.3	-22.8	-21.7	-21.7	-22.2	-22.4	-21.8	-21.0	-19.9	-18.7	-17.4	-16.7	-16.7	-17.3	-19.1	-19.7	-21.1	-22.1	-22.0	-22.5	-23.2	-20.9	-16.7
18-Feb	-25.6	-28.3	-30.4	-31.6	-32.0	-31.1	-30.5	-30.0	-30.2	-29.2	-26.4	-23.1	-19.7	-17.1	-14.9	-14.0	-14.4	-15.6	-17.5	-17.5	-17.9	-18.3	-19.1	-19.8	-23.1	-14.0
19-Feb	-20.7	-21.4	-21.9	-22.8	-23.1	-24.5	-25.3	-25.2	-24.0	-21.9	-20.2	-17.6	-15.0	-12.5	-11.6	-11.3	-11.5	-12.7	-12.6	-14.0	-15.1	-15.1	-14.7	-15.2	-17.9	-11.3
20-Feb	-15.5	-15.4	-15.7	-16.4	-16.8	-17.0	-17.2	-17.3	-17.1	-16.5	-15.7	-14.6	-13.3	-10.6	-8.6	-8.5	-8.5	-10.4	-12.1	-14.1	-16.0	-16.8	-18.4	-19.3	-14.7	-8.5
21-Feb	-20.1	-19.7	-18.4	-17.0	-16.2	-15.1	-14.8	-14.5	-13.7	-12.3	-10.5	-8.4	-7.0	-6.5	-5.5	-5.3	-5.6	-6.3	-7.1	-7.7	-8.4	-9.1	-9.6	-10.8	-11.2	-5.3
22-Feb	-11.8	-12.4	-12.3	-11.7	-11.6	-11.6	-11.4	-11.2	-11.2	-10.8	-9.7	-8.4	-6.8	-5.1	-3.0	-1.5	-1.9	-3.6	-5.9	-7.3	-8.8	-9.7	-10.4	-10.2	-8.7	-1.5
23-Feb	-8.2	-6.2	-3.1	-1.7	-0.8	-0.1	-0.3	-0.4	-0.2	0.9	-2.3	-4.3	-5.0	-5.3	-5.1	-5.2	-5.8	-6.5	-6.9	-7.7	-8.0	-8.0	-8.3	-8.8	-4.5	0.9
24-Feb	-9.5	-9.7	-9.9	-10.1	-10.3	-10.3	-10.3	-10.4	-10.0	-9.2	-8.3	-7.1	-4.9	-3.2	-1.2	-1.2	-1.7	-2.3	-2.4	-2.4	-2.6	-2.8	-3.9	-5.3	-6.2	-1.2
25-Feb	-6.6	-7.5	-8.2	-9.1	-9.6	-10.1	-10.2	-10.4	-10.5	-10.1	-9.6	-9.1	-8.4	-7.6	-7.1	-6.4	-6.0	-6.9	-7.9	-7.9	-8.1	-8.3	-8.4	-8.4	-8.4	-6.0
26-Feb	-8.3	-8.2	-8.0	-9.2	-10.0	-9.3	-8.6	-9.9	-9.8	-8.9	-6.4	-5.4	-4.4	-3.3	-2.3	-1.7	-2.5	-4.6	-5.6	-6.7	-7.0	-7.3	-7.2	-6.9	-6.7	-1.7
27-Feb	-6.7	-6.7	-6.7	-6.6	-6.4	-6.2	-6.3	-6.0	-5.4	-4.4	-3.7	-2.0	0.2	1.5	-1.1	-3.8	-4.7	-5.6	-6.4	-7.5	-8.0	-8.3	-8.8	-8.9	-5.4	1.5
28-Feb	-9.1	-9.2	-9.3	-9.4	-9.4	-9.4	-9.4	-9.3	-9.2	-8.9	-7.6	-5.4	-3.9	-2.5	-1.9	-1.7	-1.4	-2.6	-4.3	-5.3	-6.9	-7.5	-7.8	-9.0	-6.7	-1.4
	-20.3	-20.6	-20.9	-21.3	-21.4	-21.5	-21.7	-21.9	-21.6	-20.6	-19.1	-17.3	-15.7	-14.3	-13.4	-13.2	-13.7	-15.1	-16.1	-16.9	-17.7	-18.2	-18.7	-19.3	Diurnal Average	
	-6.6	-6.2	-3.1	-1.7	-0.8	-0.1	-0.3	-0.4	-0.2	0.9	-2.3	-2.0	0.2	1.5	-1.1	-1.2	-1.4	-2.3	-2.4	-2.4	-2.6	-2.8	-3.9	-5.3	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Lower Camp - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	321	47.77	47.77
-20 - 0	348	51.79	99.55
0 - 10	3	0.45	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Lower Camp - February 2025

Maximum Value: 98.1 % on Feb 23 06:00

Maximum Daily Average: 89.6 % on Feb 23

Minimum Value: 38.1 % on Feb 18 16:00

Minimum Daily Average: 54.3 % on Feb 19

Maximum Diurnal Average: 76.0 % at hour 9

Minimum Diurnal Average: 64.0 % at hour 16

Monthly Average: 73.06 %

Percentiles: P_1 = 48.6 P_{10} = 59.7 Q_1 = 68.6 Median = 73.7 Q_3 = 78.6 P_{90} = 83.9 P_{99} = 95.9

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

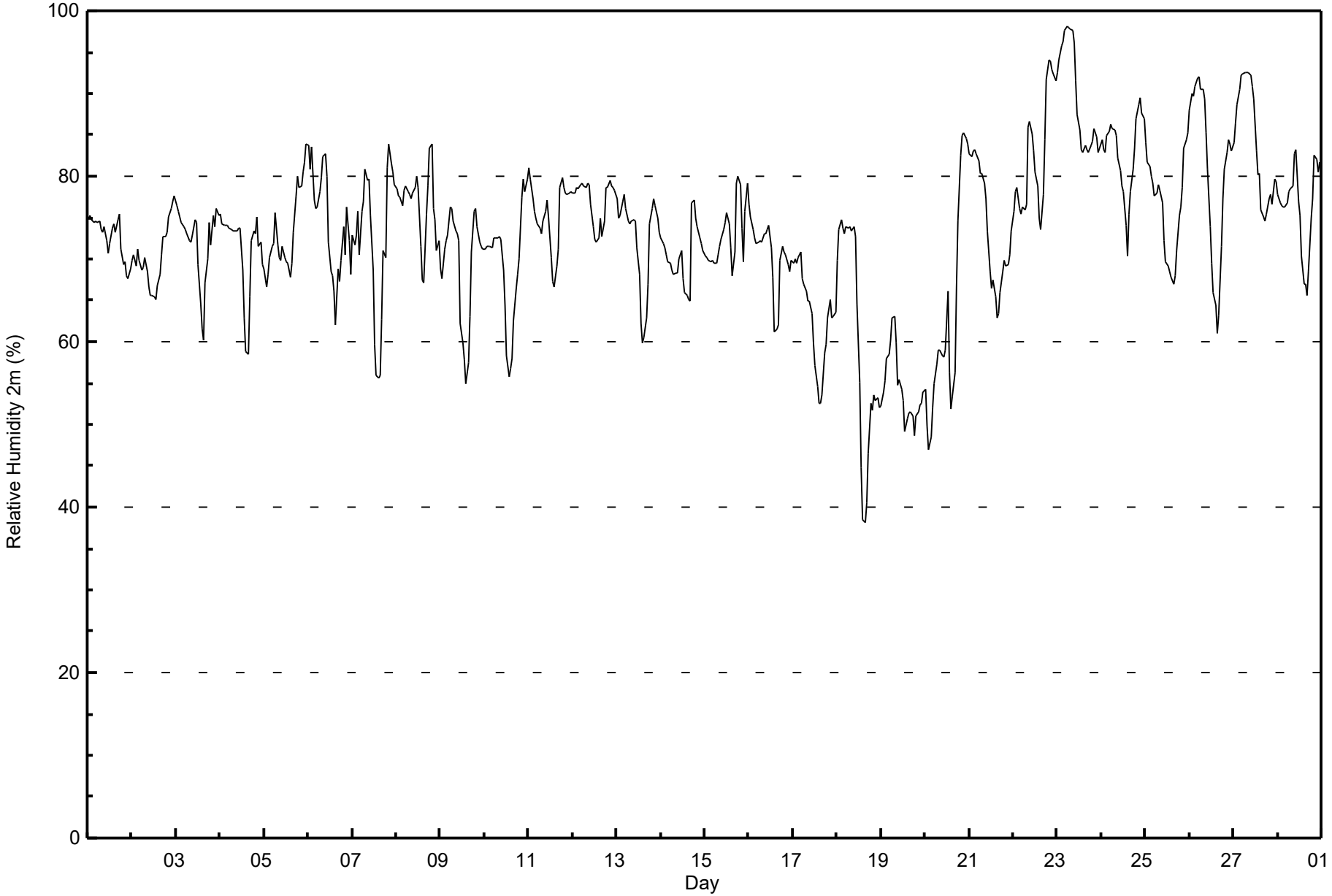
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	74.9	75.2	74.8	74.4	74.6	74.4	74.6	73.6	73.2	73.8	72.2	70.7	71.9	73.7	74.2	73.2	74.7	75.4	71.1	69.3	69.7	67.9	67.6	68.8	72.7	75.4
2-Feb	69.8	70.4	69.1	71.2	69.9	68.6	69.0	70.2	68.5	66.6	65.6	65.6	65.4	65.1	66.9	68.2	70.6	72.7	72.8	73.3	75.0	76.2	76.9	77.6	70.2	77.6
3-Feb	76.5	75.8	75.1	74.5	73.9	73.6	73.0	72.2	72.0	72.9	74.8	74.4	69.4	64.6	61.5	60.1	67.0	70.0	74.4	71.8	75.3	73.9	76.1	75.3	72.0	76.5
4-Feb	75.4	74.3	74.1	74.0	74.0	73.8	73.5	73.4	73.4	73.4	73.7	73.7	68.7	62.9	58.8	58.5	65.4	72.2	73.5	73.0	75.1	71.5	72.0	69.2	71.2	75.4
5-Feb	68.9	66.6	68.1	70.2	71.5	71.9	75.6	71.7	70.2	69.8	71.6	70.1	69.6	69.5	67.9	69.5	73.2	77.6	79.9	78.6	78.8	80.4	81.7	83.9	73.2	83.9
6-Feb	83.7	80.9	83.5	77.0	76.1	76.2	78.2	79.8	82.4	82.8	79.9	72.1	68.5	68.0	66.1	62.1	68.7	67.3	69.8	74.0	70.5	76.3	72.2	68.1	74.3	83.7
7-Feb	72.9	71.7	72.8	75.7	70.6	75.8	77.0	80.9	79.5	79.6	75.3	68.6	59.7	56.0	55.5	55.9	62.8	71.1	70.2	81.0	83.9	81.6	80.6	78.9	72.4	83.9
8-Feb	78.5	77.6	77.4	76.4	78.3	78.8	78.1	77.8	77.2	78.0	78.7	79.9	78.6	71.4	67.4	67.2	75.3	78.8	83.4	83.8	76.1	74.7	71.1	72.2	76.5	83.8
9-Feb	68.9	67.7	71.1	72.2	72.9	76.3	76.0	74.6	73.3	73.1	72.2	62.2	59.9	57.7	54.9	57.5	63.0	70.8	75.7	76.2	74.0	72.0	71.5	71.2	69.4	76.3
10-Feb	71.2	71.5	71.5	71.5	71.3	72.6	72.6	72.5	72.7	72.4	68.6	64.4	58.2	55.8	56.9	58.0	62.5	66.5	68.1	70.1	77.4	79.6	78.1	79.7	69.3	79.7
11-Feb	81.0	79.6	77.3	75.8	74.9	74.3	73.7	73.1	74.6	75.8	77.2	75.2	70.2	67.3	66.5	69.2	71.1	78.7	79.8	78.7	78.0	77.8	77.9	78.1	75.2	81.0
12-Feb	77.9	78.0	78.6	78.5	78.9	79.1	78.8	78.6	79.2	79.0	76.6	73.9	72.3	72.1	72.5	74.9	72.8	74.5	78.6	78.6	79.5	78.9	78.6	78.3	77.0	79.5
13-Feb	77.3	75.0	75.3	76.9	77.8	76.2	74.7	74.2	74.6	74.7	74.5	71.4	68.1	62.1	59.8	60.5	62.9	66.9	74.2	76.0	77.3	76.5	75.0	73.2	72.3	77.8
14-Feb	72.6	71.9	71.4	70.6	69.7	69.4	68.6	68.1	68.2	68.3	70.0	71.0	67.6	65.9	65.6	65.0	64.9	76.8	77.1	74.9	74.0	72.5	71.9	70.9	70.3	77.1
15-Feb	70.4	70.1	69.9	69.7	69.9	69.6	69.4	70.6	71.5	72.4	73.5	74.4	75.5	74.2	71.3	68.0	70.8	79.1	79.9	78.9	73.7	69.7	75.7	79.2	72.8	79.9
16-Feb	76.6	75.1	73.6	72.5	71.8	72.0	72.2	72.0	73.1	73.0	73.6	74.0	71.4	67.8	61.2	61.5	62.0	69.8	71.6	70.8	70.6	69.3	68.4	69.9	70.6	76.6
17-Feb	69.6	70.0	69.5	70.2	70.9	67.6	67.0	66.1	64.9	64.9	63.3	59.9	57.1	54.5	52.6	52.6	53.5	58.6	59.6	62.9	65.1	62.9	63.1	63.5	62.9	70.9
18-Feb	69.9	73.6	74.7	73.7	73.1	74.0	73.7	73.9	73.4	74.0	72.6	64.5	55.0	44.7	38.5	38.1	40.5	46.4	52.5	51.7	53.6	53.0	53.2	52.1	60.4	74.7
19-Feb	52.2	53.9	55.2	58.0	58.5	60.1	62.8	63.1	59.9	54.7	55.4	54.2	52.9	49.1	50.6	51.3	51.5	51.0	48.6	51.0	51.6	52.4	52.5	53.8	54.3	63.1
20-Feb	54.2	49.8	46.9	48.5	52.0	54.9	57.3	59.0	58.9	58.3	58.1	59.0	66.1	56.2	51.9	53.4	56.3	66.6	74.6	82.5	84.9	85.2	84.5	83.8	62.6	85.2
21-Feb	82.6	82.4	83.1	83.2	82.8	81.9	80.3	80.4	79.2	77.2	73.4	68.5	66.5	67.5	65.5	62.9	63.4	65.9	68.5	69.8	69.2	69.3	70.5	73.4	73.6	83.2
22-Feb	75.7	78.1	78.7	76.1	75.5	76.3	76.0	76.6	85.9	86.6	85.2	83.0	80.6	78.8	75.0	73.5	77.7	84.5	91.7	94.0	93.8	92.9	92.4	91.5	82.5	94.0
23-Feb	92.6	94.1	95.8	96.3	97.6	98.1	98.0	97.9	97.7	96.1	91.6	87.5	85.6	83.2	82.9	83.8	83.3	82.9	83.8	84.2	85.8	84.8	83.0	83.4	89.6	98.1
24-Feb	84.5	83.2	82.9	84.9	85.5	86.3	85.8	85.7	84.9	82.2	80.6	78.9	78.2	74.1	70.3	75.4	78.2	80.8	83.4	87.0	88.7	89.6	87.7	87.0	82.7	89.6
25-Feb	84.1	81.7	81.3	79.9	79.1	77.6	77.9	79.0	78.3	76.8	72.1	69.6	69.2	68.5	67.8	67.0	68.0	71.0	75.2	76.3	78.6	83.3	84.3	85.3	76.3	85.3
26-Feb	88.0	90.0	89.6	90.8	91.9	92.0	90.5	90.5	89.4	85.2	80.9	73.9	69.5	65.9	64.4	60.9	63.3	71.6	77.2	80.9	82.9	84.4	83.9	83.0	80.9	92.0
27-Feb	84.1	86.5	88.6	90.5	92.2	92.3	92.5	92.5	92.6	92.2	90.8	89.2	83.1	80.1	80.3	75.9	75.0	74.6	75.5	77.2	77.8	76.7	79.7	79.4	84.1	92.6
28-Feb	77.8	76.7	76.4	76.2	76.2	76.7	78.1	78.5	78.9	82.7	83.2	76.9	75.3	70.4	67.0	67.0	65.5	68.5	74.9	77.4	82.5	82.0	80.4	81.6	76.3	83.2
	75.4	75.0	75.2	75.3	75.4	75.7	75.9	75.9	76.0	75.6	74.5	71.7	69.1	66.0	64.1	64.0	66.6	71.1	73.8	75.1	75.8	75.5	75.4	75.4	Diurnal Average	
	92.6	94.1	95.8	96.3	97.6	98.1	98.0	97.9	97.7	96.1	91.6	89.2	85.6	83.2	82.9	83.8	83.3	84.5	91.7	94.0	93.8	92.9	92.4	91.5	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Lower Camp - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Barometric Pressure (BP) - inHg

Lower Camp - February 2025

Maximum Value: 30.0 inHg on Feb 18 10:00

Maximum Daily Average: 29.9 inHg on Feb 18

Minimum Value: 28.3 inHg on Feb 23 09:00

Minimum Daily Average: 28.5 inHg on Feb 23

Maximum Diurnal Average: 29.4 inHg at hour 1

Minimum Diurnal Average: 29.3 inHg at hour 15

Monthly Average: 29.34 inHg

Percentiles: P_1 = 28.4 P_{10} = 28.8 Q_1 = 29.1 Median = 29.4 Q_3 = 29.7 P_{90} = 29.8 P_{99} = 29.9

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

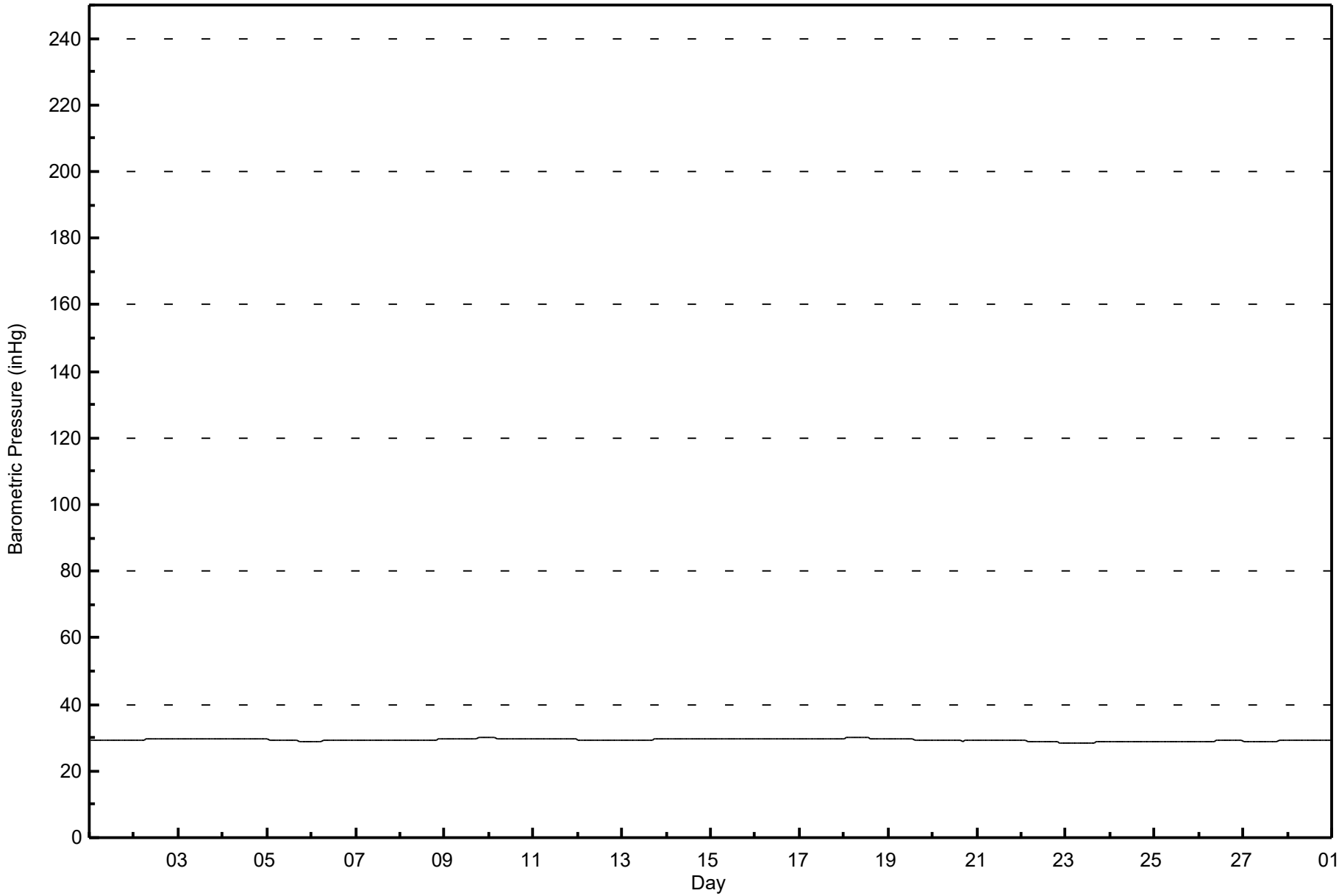
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	29.2	29.2	29.2	29.2	29.2	29.1	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.4	29.4	29.4	29.2	29.4
2-Feb	29.4	29.4	29.4	29.4	29.4	29.4	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.6	29.6	29.6	29.6	29.6	29.6	29.7	29.7	29.7	29.7	29.5	29.7
3-Feb	29.7	29.7	29.7	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8
4-Feb	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.7	29.7	29.7	29.7	29.6	29.6	29.6	29.6	29.6	29.5	29.5	29.5	29.7	29.8
5-Feb	29.5	29.4	29.4	29.4	29.3	29.3	29.3	29.2	29.2	29.2	29.2	29.1	29.1	29.1	29.1	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.2	29.5
6-Feb	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	29.3	29.3	29.3	29.3	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.2	29.4
7-Feb	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4
8-Feb	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.5	29.5	29.5	29.6	29.4	29.6
9-Feb	29.6	29.6	29.6	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.8	29.8	29.8	29.8	29.8	29.8	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.8	29.9
10-Feb	29.9	29.9	29.9	29.9	29.9	29.8	29.8	29.8	29.8	29.7	29.7	29.7	29.6	29.6	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.7	29.9
11-Feb	29.5	29.5	29.5	29.5	29.5	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.6
12-Feb	29.4	29.4	29.4	29.4	29.4	29.3	29.3	29.3	29.3	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.3	29.4
13-Feb	29.2	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.5	29.5	29.5	29.5	29.5	29.6	29.6	29.4	29.6
14-Feb	29.6	29.6	29.6	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.8	29.8	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.8	29.7	29.8
15-Feb	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.7	29.7	29.7	29.7	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8
16-Feb	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.7	29.7	29.7	29.7	29.7	29.7	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.7	29.8
17-Feb	29.6	29.6	29.6	29.6	29.6	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.8	29.8	29.8	29.8	29.8	29.9	29.7	29.9
18-Feb	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	30.0	29.9	29.9	29.9	29.9	29.9	29.9	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.9	30.0
19-Feb	29.8	29.7	29.7	29.7	29.7	29.7	29.6	29.6	29.6	29.6	29.5	29.5	29.5	29.5	29.4	29.4	29.4	29.3	29.3	29.3	29.3	29.3	29.3	29.2	29.5	29.8
20-Feb	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	29.0	29.0	29.1	29.1	29.1	29.1	29.2
21-Feb	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
22-Feb	29.1	29.1	29.0	29.0	29.0	29.0	28.9	28.9	28.9	28.9	28.8	28.8	28.8	28.7	28.7	28.7	28.7	28.7	28.6	28.6	28.6	28.5	28.5	28.5	28.8	29.1
23-Feb	28.5	28.5	28.4	28.4	28.4	28.3	28.3	28.3	28.3	28.3	28.3	28.4	28.4	28.5	28.5	28.6	28.6	28.7	28.7	28.7	28.7	28.7	28.8	28.8	28.5	28.8
24-Feb	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.8	28.8
25-Feb	28.8	28.8	28.8	28.8	28.8	28.8	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9
26-Feb	28.9	28.9	28.9	28.9	28.9	29.0	29.0	29.0	29.0	29.0	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.0	29.0	29.1
27-Feb	29.0	29.0	28.9	28.9	28.8	28.8	28.7	28.7	28.7	28.6	28.6	28.6	28.6	28.7	28.8	28.8	28.9	28.9	29.0	29.0	29.1	29.1	29.1	29.2	28.9	29.2
28-Feb	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	29.1	29.1	29.1	29.2	29.2
	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	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.4	Diurnal Average	
	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	30.0	29.9	29.9	29.9	29.9	29.9	29.9	29.8	29.9	29.9	29.9	29.9	29.9	29.9	29.9	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Barometric Pressure (BP) - inHg

Lower Camp - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Lower Camp - February 2025

Maximum Speed: 32 km/h on Feb 19 20:00

Maximum Daily Speed Average: 19.3 km/h on Feb 19

Minimum Speed Value: 0 km/h on Feb 10 18:00

Minimum Daily Speed Average: 1.4 km/h on Feb 12

Maximum Diurnal Speed Average: 3.1 km/h at hour 9

Minimum Diurnal Speed Average: 0.5 km/h at hour 4

Monthly Average Velocity: 1.2 km/h 76.3 deg

Percentiles: P_1 = 1 P_{10} = 2 Q_1 = 4 Median = 7 Q_3 = 11 P_{90} = 17 P_{99} = 26

Hours in Service:	672
Hours of Data:	669
Hours of Missing Data:	3
Percent Operational Time:	99.6

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Feb	NNW10	NNW9	NNW11	NNW12	NNW11	NNW10	NNW12	N14	N18	N15	N16	NNW15	NNW15	NNW15	NNW16	NNW15	NW14	NW17	NNW17	NNW15	N17	N21	N19	NNW17	NNW14.4	N21
2-Feb	NNW18	N19	N20	N21	N21	N15	NNW12	N14	N15	N16	N19	N16	N14	NNW16	NNW14	NNW10	NNW8	NW6	N5	NNW5	NW4	NW5	WNW5	NW3	N12.0	N21
3-Feb	NW2	NW1	NNW2	ESE1	ESE2	SE2	ESE3	ESE1	SE4	SE6	SE7	SE8	SE8	SE6	ESE2	S3	SW8	SW9	WNW4	W4	NNW1	WSW2	NNE2	SE6	SSE2.0	SW9
4-Feb	SE7	SE9	SE8	SE11	SE11	SE13	SE16	SE13	SE16	SE18	SE20	SE20	SE17	SE16	SE11	SSE6	SSE7	SSE6	SSE7	SE8	SE10	SE10	SE10	SSE6	SE11.3	SE20
5-Feb	SE9	SSE7	SSE8	SE9	SE11	SE12	SE11	SE12	SE10	SE12	SE8	S5	SW10	SW8	SW5	SW6	WSW7	SW5	S3	SW6	SW4	NW1	SE5	SE7	SSE5.7	SE12
6-Feb	SSE6	SSE6	SSE6	SW8	WSW6	W10	NW6	NNW4	NNW2	N7	N19	N22	N22	N18	N16	NNW14	NNW10	WNW8	WNW5	WNW4	WNW5	NW1	W6	WSW6	NNW5.8	N22
7-Feb	WSW2	WSW6	S2	S3	WSW9	WSW5	NNW3	ESE2	ESE4	SE8	SE7	SE5	WSW10	WSW9	WSW8	SW6	SW7	WSW4	WSW6	NNW3	NNE2	ESE3	SE7	SE7	SSW2.6	WSW10
8-Feb	SE3	SE6	SE6	ESE5	SE9	SE12	SE10	SE10	SE11	SE10	SE11	SE11	SE10	SE9	SE9	SSE4	W3	WNW4	WNW3	NW5	N18	N16	N18	NNW14	ESE3.5	N18
9-Feb	NNW19	N18	NNW10	NW9	WNW6	WNW5	W1	W3	NW2	WNW3	WNW5	N15	N11	NNW9	NW8	W8	W6	WNW2	NW2	NW2	NW2	E1	ESE4	ESE5	NNW5.0	NNW19
10-Feb	SE8	SE10	SE10	SE9	SE8	SE12	SE13	SE14	SE13	SE13	SE14	SE14	SE12	SE10	SE5	SSE7	ESE9	SW0	NNW6	NW6	NW7	NNW6	NW7	NW7	SE6.0	SE14
11-Feb	NW4	WNW3	NW3	NW3	NW2	NW3	WNW2	NW3	WNW3	WNW3	WNW5	WNW4	WNW4	W4	W4	W4	NNW0	W1	NW2	WNW2	NW2	WNW2	WNW2	WNW3	WNW2.8	WNW5
12-Feb	NW1	UO	SE3	SE4	NNW2	WNW2	SE4	SE3	NW2	NNW1	SSE1	SW0	SSE1	SW3	NNW0	NNW4	NNW9	NW5	WNW5	NW4	NW3	NW4	NW5	NW5	NW1.4	NNW9
13-Feb	NNW5	NNW7	NNW7	NW5	NW3	WNW1	NW2	NW4	WNW4	WNW4	WNW5	WNW6	W8	NW9	NW9	N9	N11	NW7	NW6	WNW5	WNW3	WNW3	WNW3	NW2	NW4.9	N11
14-Feb	NW3	NW3	NW3	NW3	NW3	NW3	NW2	NW2	E1	SE3	SE5	NNE0	W7	WSW10	WSW11	W6	SSW1	SSW1	NNW1	WNW2	NW3	NW2	ESE1	NNW1	W2.0	WSW11
15-Feb	NNE1	E1	E2	E3	NE2	ENE2	E2	SE7	SE11	SE11	SE12	SE12	SE11	SE2	ESE3	ENE0	ESE2	UO	W3	NNW1	NW4	NNW2	NW2	NW2	ESE2.9	SE12
16-Feb	NW2	NW2	NW1	NW1	NW3	WNW2	NNW1	NNW2	SE6	SE6	SE2	SE6	SE6	SE6	SE11	SE19	SE17	ESE17	ESE16	ESE20	SE21	SE23	SE25	SE28	SE9.0	SE28
17-Feb	SE24	SE15	SE12	SE10	SE16	SE22	SE25	SE28	ESE24	SE26	SE25	SE20	ESE25	ESE24	ESE25	SE24	ESE23	ESE10	SE7	SE11	ESE11	SE9	SE15	SSE6	SE18.1	SE28
18-Feb	SE5	E2	SE1	W1	SE6	ESE7	ESE12	SE9	SE14	SSE8	SE8	SE8	SE13	SE9	SSE4	SE6	SE6	SE9	SE10	SE11	SE9	SE12	SE11	SE11	SE7.8	SE14
19-Feb	SE8	SSE6	SSE7	SSE8	SSE8	SE10	ESE16	SE18	SE21	ESE24	SE29	ESE23	SE24	SE18	SE25	SE26	SE19	ESE19	SE29	SE32	ESE25	SE24	SE27	SE23	SE19.3	SE32
20-Feb	SE18	SE11	SSE10	SSE10	SSE12	SE13	SSE10	SSE10	SSE10	SSE10	SSE8	SSE8	SSE7	SSE7	SE12	SE14	SE12	SE10	ESE0	WNW1	NW1	WNW4	NW1	NW2	SSE7.5	SE18
21-Feb	NNW1	NW1	WNW2	NW2	WNW1	NW3	WNW5	WNW4	NW4	NW5	NNW8	NNW8	NW12	NW9	NW11	N13	NNW12	N12	NNW11	NNW11	NNW11	NNW8	NW8	WNW7	NNW6.6	N13
22-Feb	WNW5	WNW5	WNW4	NW5	NNW5	NW5	NW6	NW5	NNW5	NNW4	WNW5	NNW6	NW5	NW4	NW3	W6	WSW8	W5	WNW3	WNW2	WNW3	WNW4	WNW3	WNW2	WNW4.0	WSW8
23-Feb	WNW2	ESE2	SE6	E2	SE7	SE6	SE12	SE11	SE10	NW11	NNW18	N21	NNW18	N18	NNW14	N16	N15	N12	N8	NW3	NW3	NNE3	NNE5	NE7	N5.4	N21
24-Feb	NNW6	NNW7	NNW5	NW6	NW5	NW6	NW7	NW4	WNW4	WNW2	WNW4	N3	SE8	ENE2	SE4	SE7	N4	WNW4	WNW5	NW7	WNW5	NW7	N14	N14	NNW3.7	N14
25-Feb	N13	NNW12	NNW13	NNW12	NNW11	NNW11	NW7	NW8	NNW8	NNW9	NNW8	NNW9	NNW7	NW9	NW7	WNW7	NNW8	NW9	NW5	NW5	NNW6	NW9	NW9	WNW6	NNW8.4	N13
26-Feb	NE2	ESE4	SE7	SE6	ESE2	SE4	ESE3	WNW4	NW6	NW5	NNW9	NNW9	NW10	NW7	W9	NNW10	NW10	NW9	WNW8	NW4	NW5	NW5	NW5	NW7	NW3.8	NNW10
27-Feb	NW6	NW7	N6	NW5	NW4	NNW6	NW6	NNW3	NE1	N7	ESE1	NNE3	NNW9	NNW13	N17	NNE20	NNE16	N13	N13	N14	N12	N8	NE8	NW6	N7.7	NNE20
28-Feb	NE5	NE3	NNE2	NNW3	NNE3	NNW3	UO	N2	WNW4	NNW3	WNW1	ESE9	ESE16	SE14	SE15	SE16	SE13	SE9	SE9	SE6	ESE2	SSE2	SSE4	SE7	ESE4.5	ESE16
	NE1.2	NNE1.1	ENE1.1	NE0.5	E0.8	ESE1.3	ESE2.6	ESE2.5	ESE3.1	ESE3.0	E2.8	ENE3.1	E1.5	NNE0.8	ENE0.7	ENE1.4	NE1.2	NNW0.9	N0.9	NNE0.7	NNE1.8	NNE1.4	ENE1.7	ENE0.8	Diurnal Average	
	SE24	N19	N20	N21	N21	SE22	SE25	SE28	ESE24	SE26	SE29	ESE23	ESE25	ESE24	SE25	SE26	ESE23	ESE19	SE29	SE32	ESE25	SE24	SE27	SE28	Diurnal Maximum	

UO - Unstable Operation

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

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Lower Camp - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 6 km/h on Feb 23 10:00

Minimum Value: 1 km/h on Feb 14 06:00

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

Hours in Service:	672
Hours of Data:	669
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-Feb	2	2	3	3	3	2	3	3	4	3	4	4	4	4	4	4	3	4	4	4	4	6	4	5	6
2-Feb	4	4	4	4	4	5	3	3	3	4	4	3	3	4	3	2	2	2	1	1	1	1	1	2	5
3-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	3	2	2	1	2	1	2	3
4-Feb	2	2	1	2	2	2	2	3	2	1	2	2	2	2	3	2	1	1	1	2	2	2	2	2	3
5-Feb	2	2	3	3	2	2	3	2	3	2	2	3	3	3	2	3	3	2	2	2	1	1	1	2	3
6-Feb	3	4	2	4	4	3	1	1	1	3	4	4	4	4	4	4	3	1	1	2	1	1	3	2	4
7-Feb	1	2	2	2	4	4	2	1	2	2	2	2	2	3	2	2	1	2	2	1	1	2	1	2	4
8-Feb	2	2	2	1	2	2	2	2	2	2	3	1	1	1	1	2	2	1	1	2	5	4	4	3	5
9-Feb	6	4	4	2	1	2	1	3	2	1	2	4	2	2	2	2	1	2	1	1	1	1	2	1	6
10-Feb	2	2	2	2	2	2	2	2	2	1	1	2	2	2	2	2	1	2	2	1	1	1	2	2	2
11-Feb	1	1	1	2	1	1	1	1	1	2	1	1	1	1	1	2	1	1	1	1	1	1	1	2	2
12-Feb	1	UO	3	2	1	2	2	3	1	1	1	1	1	2	1	2	2	2	1	2	2	2	1	1	3
13-Feb	1	2	1	1	1	1	1	1	1	1	1	1	1	2	2	3	3	2	1	1	1	1	1	1	3
14-Feb	1	1	1	1	1	1	1	1	1	2	1	1	2	2	2	2	1	1	1	1	2	1	1	1	2
15-Feb	1	1	1	1	1	1	1	3	2	1	1	1	2	2	1	1	1	UO	2	1	2	2	1	1	3
16-Feb	1	1	1	1	2	1	1	1	3	2	1	2	1	2	4	2	2	2	2	2	3	2	2	4	4
17-Feb	4	4	3	3	3	2	3	3	3	3	3	3	3	3	3	3	5	2	1	2	4	3	3	4	5
18-Feb	2	1	1	1	3	2	3	3	3	2	4	1	2	2	2	2	2	2	2	2	2	2	2	3	4
19-Feb	3	2	2	2	2	4	3	2	3	4	3	3	4	6	5	4	4	4	5	4	4	4	4	4	6
20-Feb	3	3	3	4	3	4	3	3	4	3	3	3	3	3	3	2	1	3	1	1	1	2	1	1	4
21-Feb	1	1	1	1	2	2	1	1	2	1	2	2	2	3	2	3	2	3	3	3	3	3	1	1	3
22-Feb	1	1	2	1	1	1	1	1	1	1	1	1	1	2	1	1	2	2	2	1	1	2	2	1	2
23-Feb	2	2	3	1	3	2	2	2	2	6	4	4	4	5	4	3	3	3	2	2	1	1	1	2	6
24-Feb	1	2	1	1	2	1	1	2	1	2	2	1	4	1	2	3	2	1	1	1	1	2	3	3	4
25-Feb	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	1	2	2	1	2	1	2	2	1	3
26-Feb	1	1	2	2	1	3	2	2	1	2	2	3	2	2	2	2	2	3	2	2	1	1	1	2	3
27-Feb	1	1	1	1	1	3	2	3	3	3	2	2	4	4	4	4	4	3	3	3	2	3	2	1	4
28-Feb	1	1	2	1	1	1	UO	1	1	1	1	3	3	2	2	2	3	2	3	2	2	2	1	2	3
	6	4	4	4	4	5	3	3	4	6	4	4	4	6	5	4	5	4	5	4	5	6	4	5	
	Diurnal Maximum																								

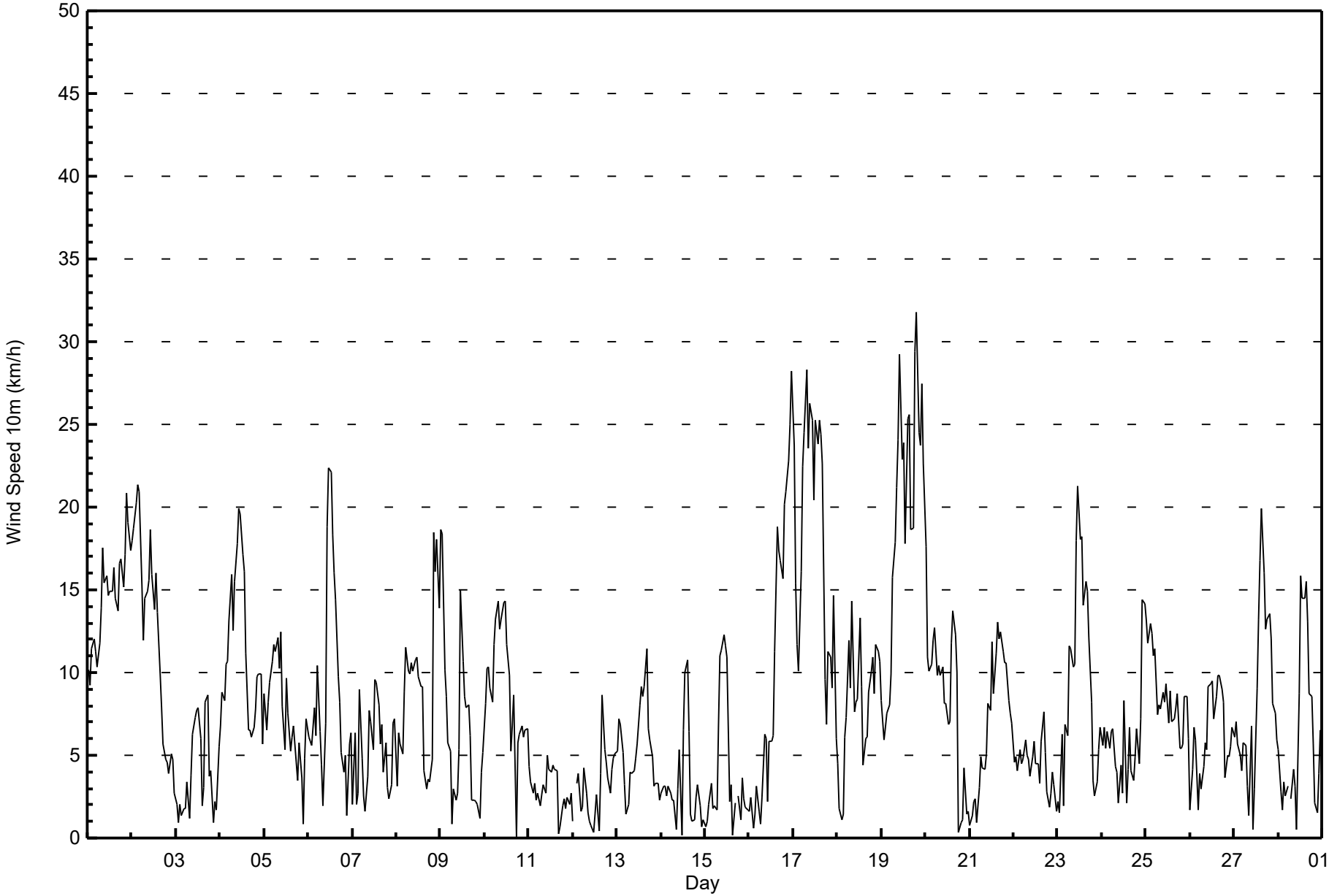
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Lower Camp - February 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	268	40.06	40.06
6 - 11	245	36.62	76.68
12 - 19	115	17.19	93.87
20 - 28	38	5.68	99.55
29 - 38	3	0.45	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 669

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Lower Camp - February 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	9	5	3	8	21	18	6	5	2	6	4	10	61	78	28	268
6 - 11	8	0	2	0	0	5	89	27	0	0	9	12	9	7	39	38	245
12 - 19	34	1	0	0	0	6	42	2	0	0	0	0	0	0	3	27	115
20 - 28	7	1	0	0	0	10	20	0	0	0	0	0	0	0	0	0	38
29 - 38	0	0	0	0	0	0	3	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	53	11	7	3	8	42	172	35	5	2	15	16	19	68	120	93	669

Total Number of Valid Hours: 669

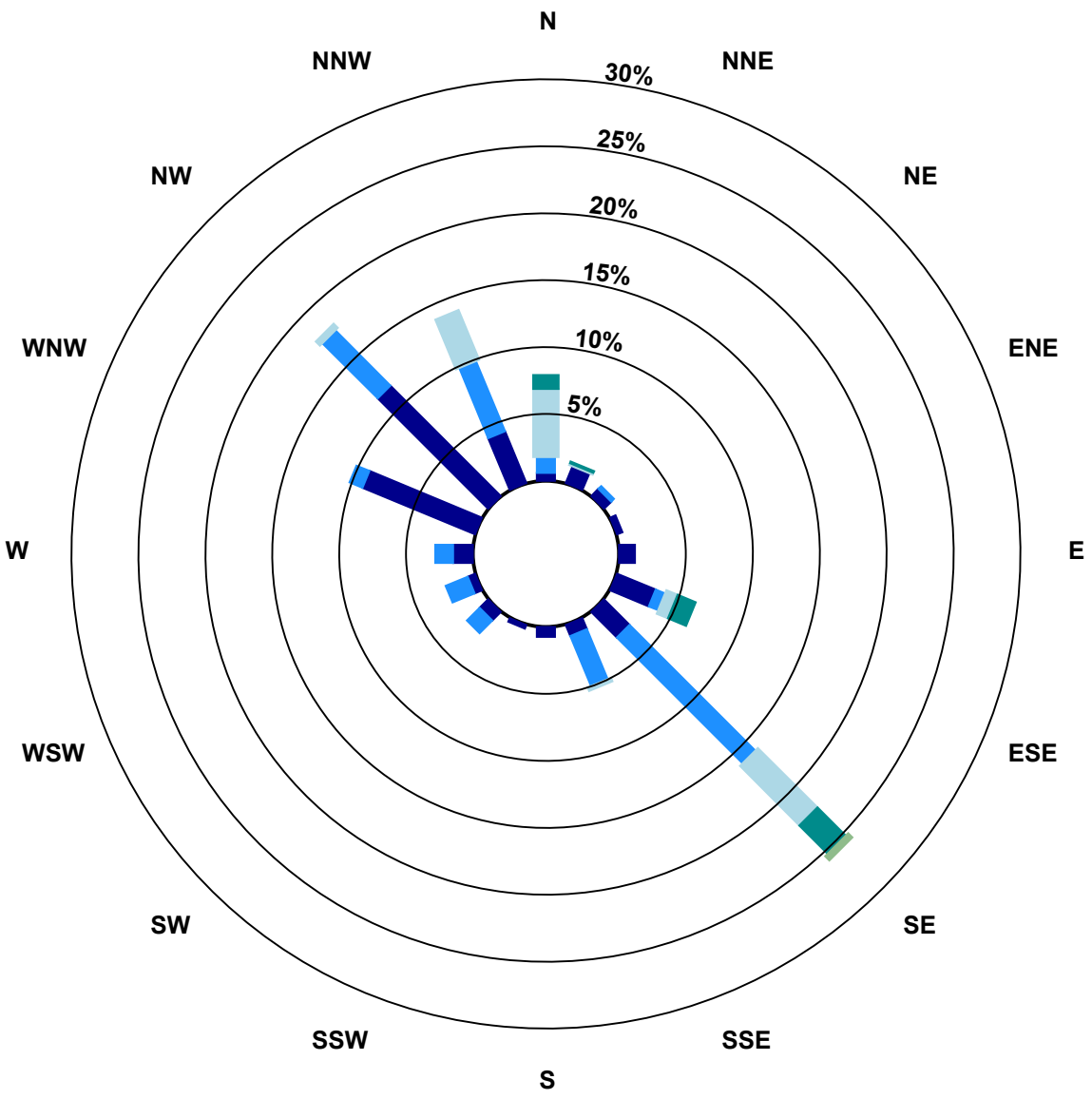
Total Number of Hours: 672

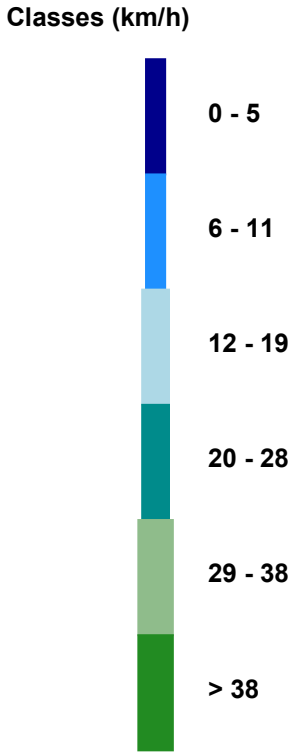
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Wind Speed 10m (WS10) - km/h

Lower Camp





Total Number of Valid Hours: 669

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Lower Camp - February 2025

Direction of Maximum Speed: 127 deg on Feb 19 20:00
Direction of Maximum Daily Speed Average: 128.9 deg on Feb 19

Direction of Minimum Speed: 232 deg on Feb 10 18:00

Direction of Minimum Daily Speed Average: 1.4 deg on Feb 12

Monthly Average Direction: 76.3 deg

Hours in Service:	672
Hours of Data:	669
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-Feb	335	331	343	345	342	334	342	349	353	353	349	346	329	327	329	330	324	323	336	343	352	359	359	343	341.5
2-Feb	347	353	0	6	6	355	348	354	354	360	0	1	350	340	341	334	332	320	353	334	310	309	299	305	350.4
3-Feb	319	321	339	103	112	134	123	120	131	133	129	132	130	127	119	180	218	225	284	278	333	239	17	139	155.5
4-Feb	140	136	138	138	139	138	136	136	135	133	129	129	132	131	134	158	150	149	147	144	140	142	139	164	137.3
5-Feb	144	156	150	144	140	136	135	138	138	130	137	185	233	234	225	235	245	217	188	214	219	313	140	141	163.4
6-Feb	153	149	151	228	247	262	305	329	329	351	6	3	359	356	349	345	332	300	302	295	296	307	275	257	331.8
7-Feb	242	255	173	188	246	241	343	123	117	129	128	144	248	247	245	228	225	257	247	329	31	110	128	131	209.8
8-Feb	127	131	125	123	131	140	142	143	141	140	136	133	130	130	134	152	264	287	288	318	9	1	358	347	107.0
9-Feb	343	359	343	322	302	302	279	277	305	303	297	0	350	345	314	278	265	300	316	321	318	95	121	120	331.4
10-Feb	130	133	133	133	129	136	137	138	140	136	134	131	130	134	145	147	121	232	331	322	326	328	308	307	133.0
11-Feb	306	297	304	310	309	313	298	310	300	289	292	285	295	274	269	261	335	271	320	303	320	298	299	303	295.2
12-Feb	324	UO	135	146	335	301	138	143	315	346	152	230	148	227	345	327	347	325	299	306	314	311	323	318	317.5
13-Feb	327	329	330	319	309	292	324	307	302	302	291	283	263	311	320	349	2	323	317	291	288	299	300	326	315.4
14-Feb	308	306	309	315	310	312	323	318	79	128	128	27	263	252	251	269	195	193	345	289	305	314	118	336	276.9
15-Feb	12	97	95	101	49	76	91	125	139	132	129	129	124	130	123	72	105	UO	270	331	318	338	314	323	121.1
16-Feb	319	321	319	325	305	297	334	341	130	137	140	141	137	142	135	124	132	123	123	122	125	124	128	131	127.5
17-Feb	130	129	130	138	124	126	127	127	119	126	124	125	123	123	122	125	121	118	133	126	116	146	138	150	126.1
18-Feb	128	100	124	281	124	116	115	136	137	147	139	126	131	133	153	144	144	141	135	139	139	139	138	139	134.8
19-Feb	142	158	158	152	151	135	122	126	125	121	125	123	126	136	132	129	126	122	130	127	120	126	133	132	128.9
20-Feb	133	145	163	159	149	146	156	147	153	158	166	160	166	158	134	134	133	132	123	289	320	285	326	319	148.7
21-Feb	334	312	297	308	302	311	294	301	312	304	339	329	309	315	316	0	348	353	346	348	343	339	323	301	330.1
22-Feb	295	292	303	306	327	313	320	317	328	339	295	341	324	325	308	267	252	272	284	290	284	303	298	295	303.1
23-Feb	283	113	135	89	128	136	131	136	135	312	336	358	347	358	347	359	5	8	10	326	326	24	21	42	10.8
24-Feb	347	341	339	305	315	304	316	307	282	300	283	1	128	76	141	134	353	296	284	306	294	318	353	351	326.9
25-Feb	351	335	343	341	335	348	323	324	336	346	337	333	331	321	308	298	339	325	319	311	327	307	318	303	330.2
26-Feb	49	121	139	140	104	135	121	295	317	317	337	331	305	311	275	330	326	310	302	305	310	305	325	310	315.6
27-Feb	305	313	351	319	312	339	319	341	50	356	114	24	334	340	7	17	14	6	5	10	4	1	37	325	356.4
28-Feb	55	43	12	339	15	340	UO	3	299	341	300	115	123	124	124	126	135	144	139	142	122	150	149	139	120.4
	45.3	23.8	62.5	34.6	91.6	121.3	117.8	117.5	117.9	107.2	90.6	70.9	91.1	31.6	67.4	70.3	47.8	346.3	356.8	30.8	22.0	23.7	60.3	74.7	
	Diurnal Average																								

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

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Lower Camp - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 100 deg on Feb 15 16:00

Minimum Value: 4 deg on Feb 8 15:00

Percentiles: P_1 = 5 P_{10} = 8 Q_1 = 14 Median = 20 Q_3 = 32 P_{90} = 63 P_{99} = 97

Hours in Service:	672
Hours of Data:	669
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-Feb	17	17	20	19	20	17	20	18	17	17	19	21	16	15	16	17	13	13	19	20	18	21	18	20	21
2-Feb	18	20	16	13	15	19	19	16	17	18	15	16	17	19	18	17	17	16	32	24	19	10	12	47	47
3-Feb	30	46	35	74	67	63	28	98	22	9	10	5	5	10	63	50	20	28	48	63	99	91	76	31	99
4-Feb	16	9	9	9	12	9	7	10	6	5	5	5	6	6	12	24	15	13	12	12	9	12	14	40	40
5-Feb	15	27	32	21	12	9	10	11	20	9	29	58	22	25	29	31	26	36	48	30	43	97	25	22	97
6-Feb	45	62	45	45	56	26	16	19	63	36	17	16	15	21	17	20	25	7	12	16	21	80	33	21	80
7-Feb	66	31	83	65	48	72	68	84	67	16	22	48	15	18	18	20	15	40	54	22	68	59	14	16	84
8-Feb	65	12	20	21	12	10	13	14	13	12	10	6	5	5	4	38	17	28	13	23	16	16	17	18	65
9-Feb	19	15	20	14	11	29	96	51	49	42	14	16	19	26	22	23	15	36	26	24	32	81	32	17	96
10-Feb	9	8	11	10	11	8	7	7	9	5	5	6	6	8	45	42	14	82	22	20	16	16	17	14	82
11-Feb	18	33	34	32	29	49	34	45	30	29	12	16	18	28	29	13	70	80	22	17	26	31	37	27	80
12-Feb	30	UO	91	29	67	50	29	85	23	80	84	94	78	48	97	33	15	28	21	34	27	19	10	15	97
13-Feb	19	17	14	17	36	59	35	26	16	21	14	26	26	22	18	28	18	17	13	17	21	24	22	26	59
14-Feb	24	16	10	23	17	11	25	20	96	54	8	89	18	12	11	20	67	65	63	36	41	53	93	60	96
15-Feb	64	87	80	31	77	57	57	19	9	7	5	6	5	62	24	100	59	UO	49	36	40	70	41	36	100
16-Feb	27	37	83	27	16	10	46	34	39	13	43	14	10	17	15	7	7	6	6	5	6	5	5	7	83
17-Feb	8	11	16	18	9	6	6	6	7	6	6	8	7	9	7	8	7	12	16	8	18	23	11	43	43
18-Feb	49	81	93	67	32	14	12	11	8	16	24	8	7	10	52	33	24	13	10	13	15	13	12	13	93
19-Feb	21	24	22	22	19	19	9	7	5	6	5	9	11	20	11	7	10	10	7	6	7	9	8	8	24
20-Feb	10	21	29	27	20	20	27	21	31	28	34	34	39	45	21	5	5	14	96	53	71	33	54	44	96
21-Feb	58	47	39	32	78	54	23	23	27	21	20	26	13	18	18	17	16	17	17	18	19	18	14	13	78
22-Feb	16	18	20	19	22	27	15	25	26	28	31	22	30	31	39	17	15	25	40	30	24	21	22	31	40
23-Feb	86	93	34	66	32	51	10	8	11	39	18	14	19	21	19	14	16	12	25	38	29	37	15	19	93
24-Feb	20	22	20	12	14	9	11	26	28	76	25	45	20	67	57	27	59	27	20	15	24	18	18	18	76
25-Feb	18	18	19	18	18	18	15	15	17	18	19	17	25	14	20	15	22	21	17	26	16	10	11	13	26
26-Feb	61	12	28	27	84	69	75	27	19	18	22	23	14	20	21	16	17	12	11	17	17	17	23	16	84
27-Feb	20	17	22	18	29	52	40	82	97	50	97	43	25	20	28	19	16	17	17	13	14	20	37	18	97
28-Feb	23	49	66	39	38	26	UO	36	12	36	88	17	8	9	10	7	12	17	30	24	97	95	32	20	97
	86	93	93	74	84	72	96	98	97	80	97	94	78	67	97	100	70	82	96	63	99	97	93	60	
	Diurnal Maximum																								

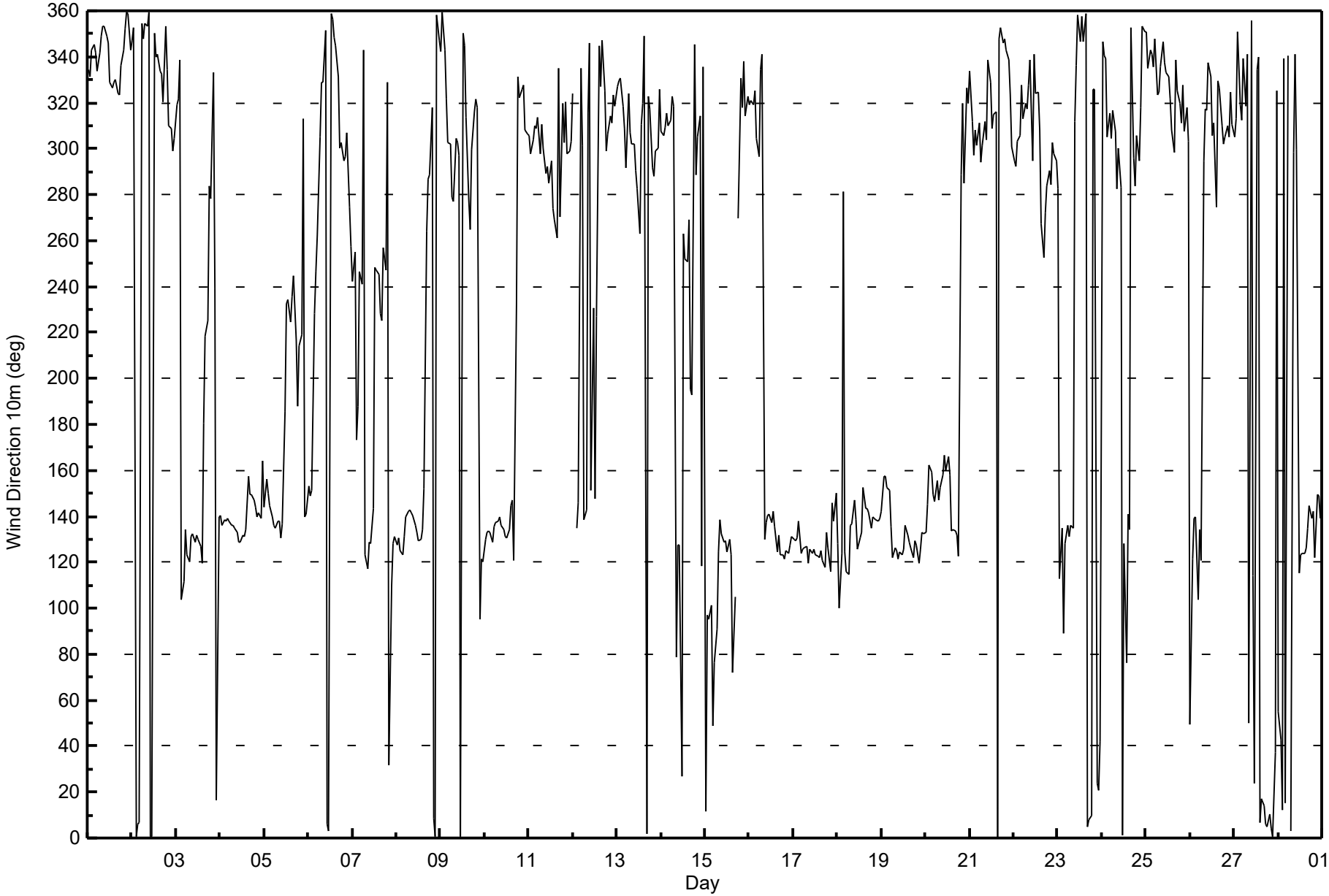
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Lower Camp - February 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS13
FORT MCKAY SOUTH
FEBRUARY 2025

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

March 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT McKAY SOUTH (AMS13)
FEBRUARY 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	641	31	31	100	-	-	27.8	0	5.6	0
TRS(ppb) Average	639	33	33	100	2.4	0	2.2	0	1	0
THC(ppm) Average	641	31	31	100	-	-	4.4	-	3	-
NMHC(ppm) Average	641	31	31	100	-	-	1.627	-	0.178	-
CH4(ppm) Average	641	31	31	100	-	-	4	-	2.8	-
O3(ppb) Average	641	31	31	100	-	-	34	0	30.2	-
NO2(ppb) Average	638	34	34	100	-	-	39.5	0	23.7	-
NO(ppb) Average	638	34	34	100	-	-	107.6	-	25.9	-
NOX(ppb) Average	638	34	34	100	-	-	147.1	-	45.4	-
PM2.5(ug/m3) Average	671	1	1	100	-	-	78.6	0	11	0
ET(C) Average	672	0	0	100	-	-	1.2	-	-5.3	-
RH(%) Average	672	0	0	100	-	-	99	-	90.6	-
WS(km/h) Average	662	0	10	98.51	-	-	22	-	18	-
WD(deg) Average	662	0	10	98.51	-	-	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT McKAY SOUTH (AMS13)
FEBRUARY 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	641	1.02	2.4	-	0	0.1	0.2	0.4	0.9	1.8	27.8
TRS(ppb) Average	639	0.61	0.3	-	0.3	0.4	0.4	0.5	0.7	1	2.2
THC(ppm) Average	641	2.33	0.3	-	2.1	2.1	2.1	2.2	2.4	2.7	4.4
NMHC(ppm) Average	641	0.036	0.098	-	0	0	0	0	0	0.1	1.627
CH4(ppm) Average	641	2.29	0.3	-	2.1	2.1	2.1	2.2	2.3	2.6	4
O3(ppb) Average	641	16.85	9.7	-	0.5	2.2	8.4	18.4	25	29.1	34
NO2(ppb) Average	638	13.81	8.4	-	0.6	4.2	6.8	12.3	19.9	26.3	39.5
NO(ppb) Average	638	6.01	12	-	0	0	0.1	1.2	6.1	17.6	107.6
NOX(ppb) Average	638	19.83	17.9	-	0.7	4.9	7.6	14.8	25.1	40.8	147.1
PM2.5(ug/m3) Average	671	4.98	4.7	-	1.2	2.3	2.9	4.1	6	7.9	78.6
Temperature 2 m (C) Average	672	-18.93	9.1	-	-39.2	-31.6	-24.8	-19.7	-11	-7	1.2
Relative Humidity (%) Average	672	72.52	9.7	-	41.7	60.3	68	72.8	77.8	84.6	99
Wind Speed 10 m (km/h) Average	662	6.9	5	-	0	2	3	6	10	14	22
Wind Direction 10 m (deg) Average	662	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT McKAY SOUTH (AMS13)
FEBRUARY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
WS/WD	02 Feb 2025 20:00	02 Feb 2025 20:00	1	Unstable Operation - flatline in analyzer output signal
WS/WD	11 Feb 2025 21:00	11 Feb 2025 21:00	1	Unstable Operation - flatline in analyzer output signal
WS/WD	14 Feb 2025 02:00	14 Feb 2025 03:00	2	Unstable Operation - flatline in analyzer output signal
WS/WD	15 Feb 2025 07:00	15 Feb 2025 07:00	1	Unstable Operation - flatline in analyzer output signal
WS/WD	16 Feb 2025 07:00	16 Feb 2025 08:00	2	Unstable Operation - flatline in analyzer output signal
WS/WD	21 Feb 2025 04:00	21 Feb 2025 04:00	1	Unstable Operation - flatline in analyzer output signal
WS/WD	23 Feb 2025 04:00	23 Feb 2025 05:00	2	Unstable Operation - flatline in analyzer output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Fort McKay South - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 27.8 ppb on Feb 18 16:00 Maximum Daily Average: 5.6 ppb on Feb 18

Minimum Value: 0.0 ppb on Feb 2 06:00 Minimum Daily Average: 0.1 ppb on Feb 2
Maximum Diurnal Average: 2.3 ppb at hour 14 Minimum Diurnal Average: 0.4 ppb at hour 6
Monthly Average: 1.02 ppb Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.2 Median = 0.4 Q_3 = 0.9 P_{90} = 1.8 P_{99} = 12.3

Hours in Service:	672
Hours of Data:	641
Hours of Missing Data:	31
Hours of Calibration:	31
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.2	0.2	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	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2
2-Feb	0.1	0.1	0.1	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
3-Feb	0.1	0.1	0.1	0.1	0.2	Z	0.3	0.4	0.3	0.3	0.1	0.2	0.2	0.7	0.5	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.7
4-Feb	Z	0.0	0.0	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.2	C	C	C	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.2
5-Feb	0.3	Z	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.3	0.3	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.5
6-Feb	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.2
7-Feb	0.2	0.2	0.2	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.4
8-Feb	0.3	0.3	0.2	0.1	Z	0.3	0.2	0.4	0.9	1.2	0.9	0.9	1.0	1.0	0.8	0.7	0.6	0.5	0.7	1.0	0.4	0.4	0.3	0.3	0.6	1.2
9-Feb	0.3	0.2	0.3	0.2	0.2	Z	0.3	0.3	0.3	0.4	0.5	0.4	0.3	0.8	3.4	4.0	5.6	0.6	0.2	0.2	0.3	0.2	0.2	0.3	0.9	5.6
10-Feb	Z	0.2	0.3	0.4	0.4	0.4	0.3	0.3	0.4	0.5	0.6	0.5	0.5	0.5	0.4	0.7	0.9	2.0	3.7	4.3	3.0	1.0	0.6	0.5	1.0	4.3
11-Feb	0.5	Z	0.5	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.3	0.3	0.5	1.3	0.7	0.5	0.5	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.4	1.3
12-Feb	0.2	0.2	Z	0.4	0.7	0.9	0.8	0.8	0.9	1.0	0.8	3.7	3.4	2.0	1.9	2.1	2.4	2.6	2.7	2.2	1.7	1.2	0.7	0.6	1.5	3.7
13-Feb	0.4	0.4	0.4	Z	0.2	0.2	0.2	0.2	0.3	0.6	0.6	0.8	0.7	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.1	0.2	0.4	0.8
14-Feb	0.1	0.1	0.2	0.2	Z	0.6	0.9	0.8	0.8	1.2	0.8	0.7	0.4	0.2	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.4	0.4	1.2
15-Feb	1.0	1.0	1.0	1.2	1.2	Z	1.1	1.1	1.4	1.5	1.2	0.8	0.6	0.3	0.4	0.4	0.3	0.5	0.2	0.2	0.3	0.2	0.2	0.2	0.7	1.5
16-Feb	Z	0.2	0.1	0.2	0.2	0.2	0.4	0.5	0.6	0.7	0.8	0.8	2.8	11.7	8.8	6.4	5.5	1.7	0.5	0.3	0.3	0.5	2.7	1.7	2.1	11.7
17-Feb	0.6	Z	0.4	0.4	0.5	0.6	0.5	1.9	4.7	2.9	8.2	3.1	5.4	5.9	5.0	1.7	1.4	0.6	0.5	0.4	0.3	0.3	0.3	0.2	2.0	8.2
18-Feb	0.3	0.3	Z	0.2	0.2	0.5	0.3	0.3	0.3	0.6	3.8	23.2	4.4	15.6	14.5	27.8	25.2	5.7	1.8	1.0	0.8	0.7	0.7	0.7	5.6	27.8
19-Feb	0.8	1.2	1.5	Z	0.7	0.6	0.3	0.3	0.9	3.6	7.0	4.1	4.0	1.4	1.1	1.3	1.4	1.0	2.0	5.8	9.5	1.4	1.0	0.6	2.2	9.5
20-Feb	0.6	1.3	12.6	17.4	Z	1.4	0.8	0.8	0.8	0.9	1.0	1.1	1.1	1.0	1.2	1.2	1.2	1.5	0.9	0.7	0.6	0.5	0.5	0.6	2.2	17.4
21-Feb	0.7	0.7	0.9	1.0	1.1	Z	1.3	1.3	1.6	2.5	3.0	2.3	1.1	0.8	0.8	0.8	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	1.0	3.0
22-Feb	Z	0.3	0.4	0.4	0.5	0.4	0.7	0.9	1.0	1.0	0.9	1.6	5.4	4.4	2.0	1.7	1.2	0.9	0.6	0.6	0.6	0.6	0.7	1.2	1.2	5.4
23-Feb	1.6	Z	1.1	1.2	1.1	1.0	1.0	1.1	1.3	1.2	1.1	1.1	0.7	0.5	0.5	0.4	0.5	0.4	0.4	0.3	0.3	0.4	0.3	0.3	0.8	1.6
24-Feb	0.3	0.3	Z	0.2	0.1	0.1	0.1	0.2	0.2	0.3	1.0	1.8	2.2	6.5	3.1	1.2	1.0	1.0	0.7	0.6	0.6	2.0	2.7	2.4	1.2	6.5
25-Feb	1.0	0.5	0.5	Z	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.3	0.3	0.4	0.4	0.3	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.3	0.3	1.0
26-Feb	0.6	1.3	1.0	0.6	Z	0.4	0.4	0.6	1.1	0.3	0.2	0.2	0.3	0.2	0.3	0.4	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.2	0.4	1.3
27-Feb	0.3	0.2	0.2	0.3	0.5	Z	0.7	0.8	1.4	1.5	1.1	1.3	1.3	1.7	0.8	0.7	0.6	0.5	0.4	0.4	0.4	0.3	0.3	0.4	0.7	1.7
28-Feb	Z	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.3	0.4	0.5	0.5	1.0	2.8	9.1	6.7	4.1	6.6	1.0	0.7	0.5	0.3	0.3	0.3	1.6	9.1
	0.5	0.4	1.0	1.1	0.4	0.4	0.4	0.5	0.7	0.9	1.3	1.9	1.4	2.3	2.1	2.2	2.0	1.0	0.7	0.8	0.8	0.4	0.5	0.5	Diurnal Average	
	1.6	1.3	12.6	17.4	1.2	1.4	1.3	1.9	4.7	3.6	8.2	23.2	5.4	15.6	14.5	27.8	25.2	6.6	3.7	5.8	9.5	2.0	2.7	2.4	Diurnal Maximum	

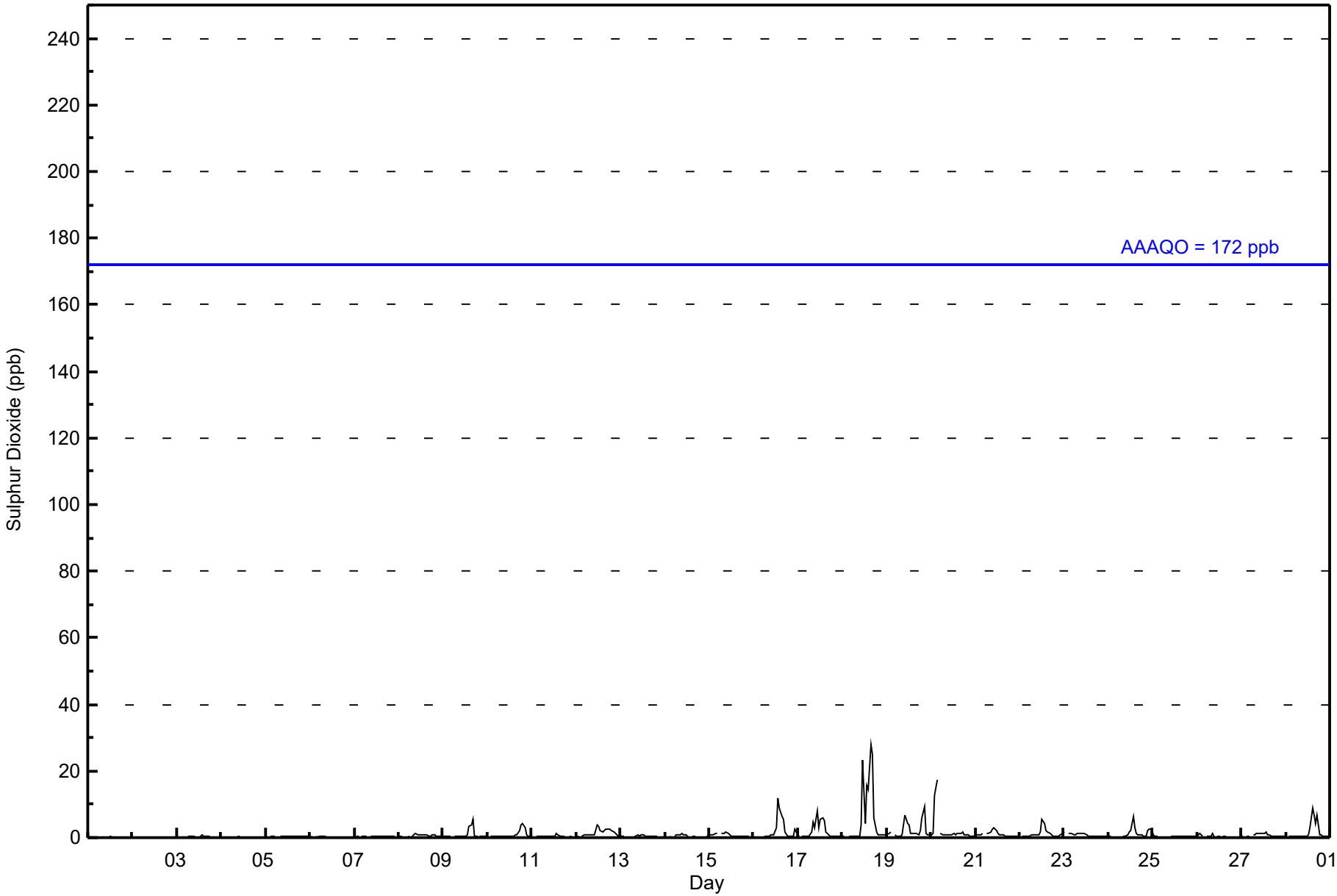
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Fort McKay South - February 2025



Sulphur Dioxide (SO_2) - ppb
Fort McKay South - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	633	98.75	98.75
11 - 20	5	0.78	99.53
21 - 60	3	0.47	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: 641

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Fort McKay South - February 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	113	86	10	7	4	9	13	52	95	62	26	47	34	18	15	32	623
11 - 20	0	0	0	0	0	0	0	1	4	0	0	0	0	0	0	0	5
21 - 60	0	0	0	0	0	0	0	0	3	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	113	86	10	7	4	9	13	53	102	62	26	47	34	18	15	32	631

Total Number of Valid Hours: 631

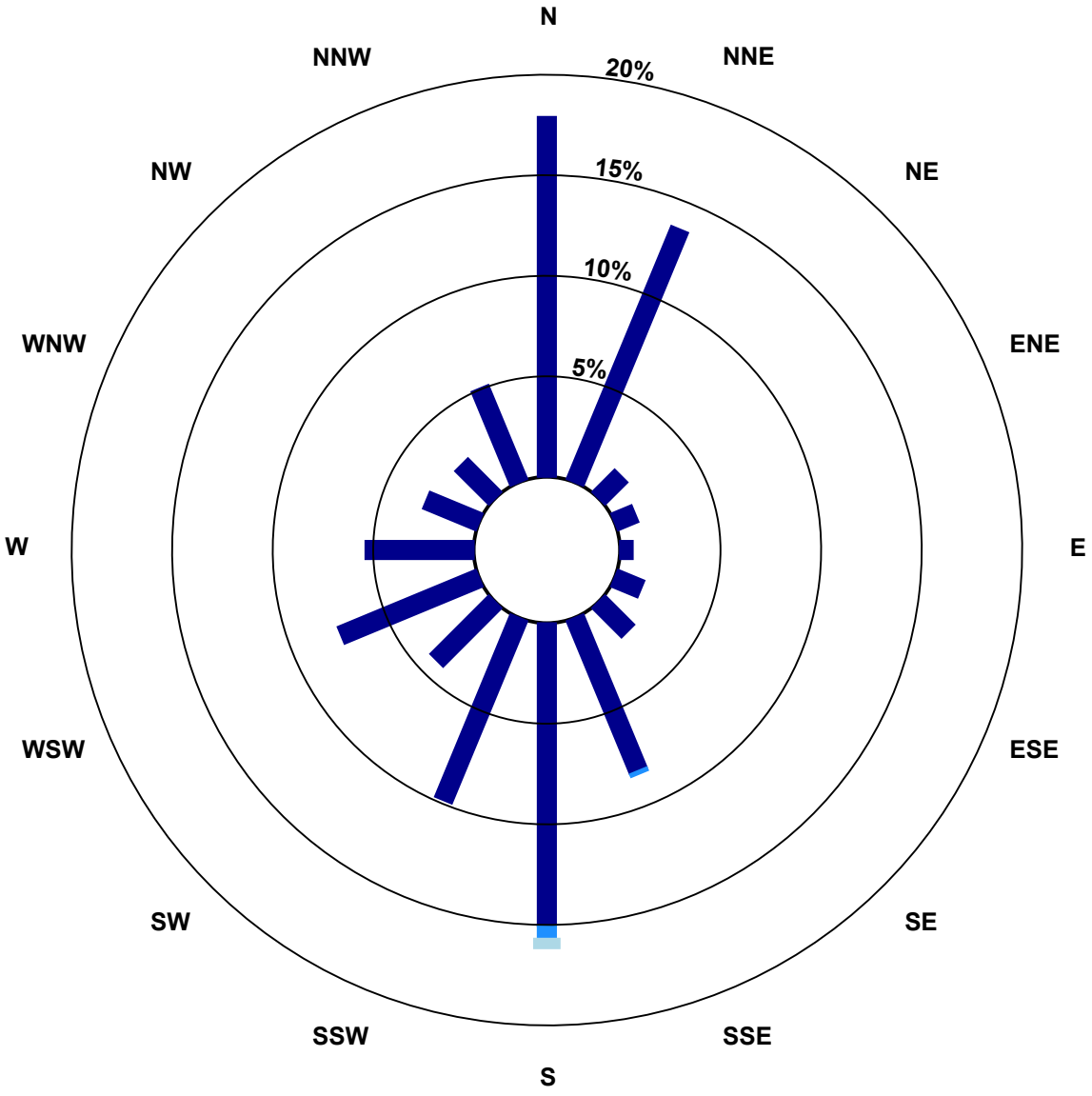
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Sulphur Dioxide (SO_2) - ppb

Fort McKay South



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

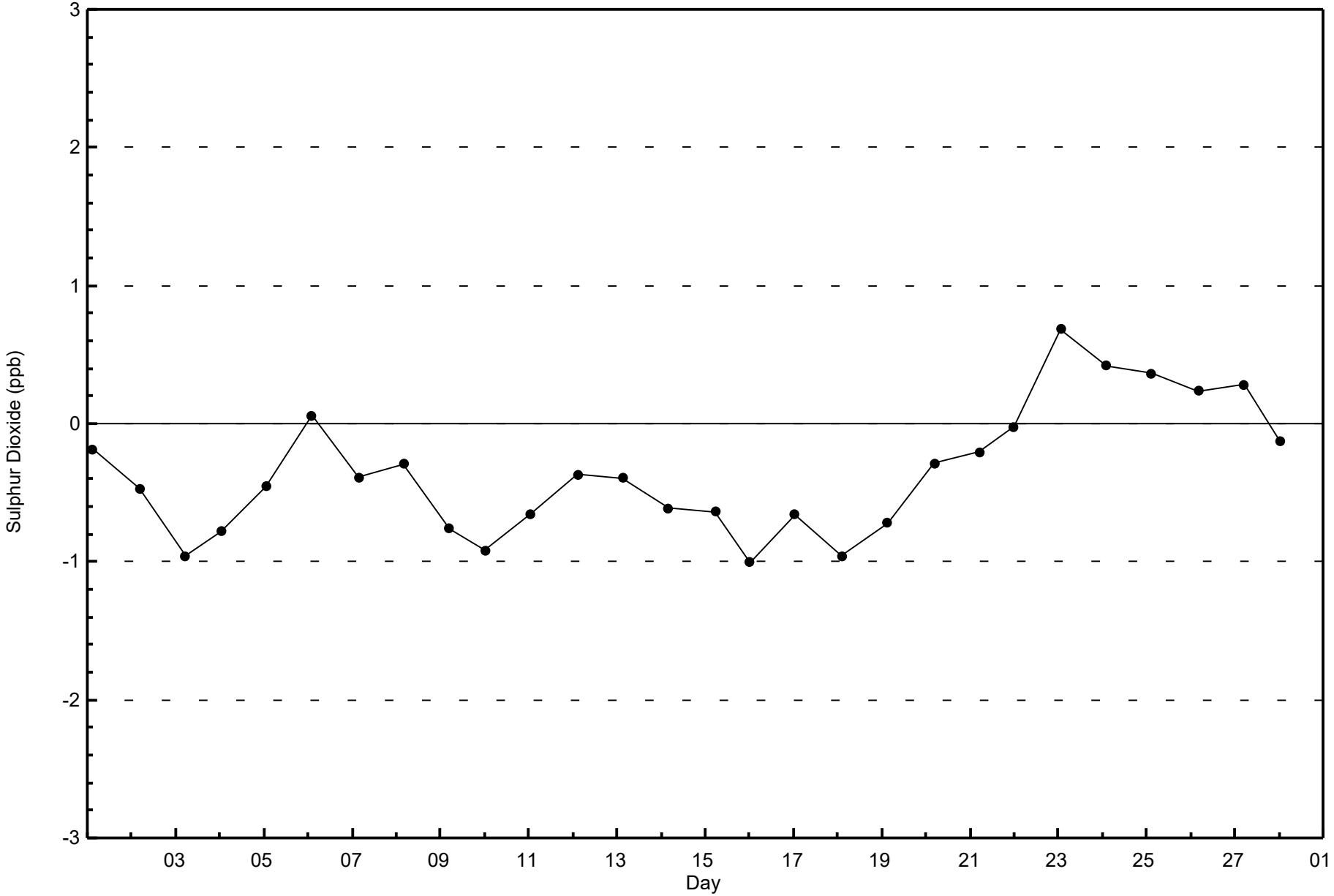
Total Number of Valid Hours: 631

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Fort McKay South - February 2025

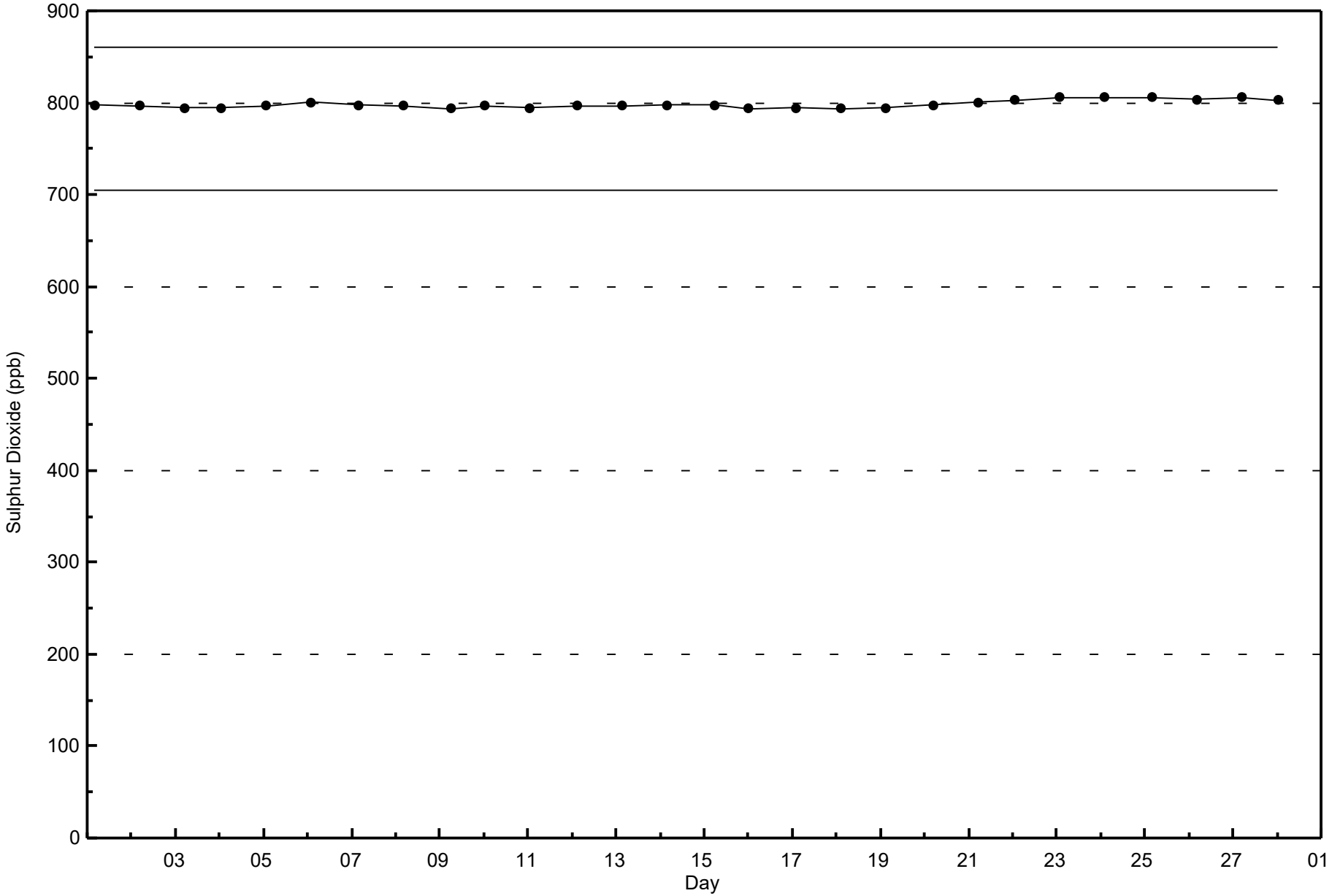


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Fort McKay South - February 2025



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort McKay South - February 2025

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

Maximum Value: 2.4 ppb on Feb 26 03:00 Maximum Daily Average: 0.9 ppb on Feb 21

Minimum Value: 0.3 ppb on Feb 20 01:00 Minimum Daily Average: 0.4 ppb on Feb 7

Maximum Diurnal Average: 0.7 ppb at hour 5 Minimum Diurnal Average: 0.5 ppb at hour 1

Monthly Average: 0.61 ppb Percentiles: P_1 = 0.4 P_{10} = 0.4 Q_1 = 0.4 Median = 0.5 Q_3 = 0.7 P_{90} = 1.0 P_{99} = 1.6

Periods in Service:	1344
Periods of Valid Data:	1277
Periods of Invalid Data:	67
Periods of Calibration:	67
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-Feb	0.4	0.4	0.4	0.4	Z	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.5
	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	0.5	0.4	0.4		
2-Feb	0.5	0.5	0.5	0.5	0.5	Z	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5
	0.5	0.4	0.5	0.5	0.5	SP	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	0.4		
3-Feb	Z	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.6
	SP	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.3		
4-Feb	0.4	Z	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.5	0.6
	0.5	SP	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.4	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4		
5-Feb	0.4	0.4	Z	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
	0.5	0.4	SP	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	0.4	0.4	0.4	0.4	0.4	0.4		
6-Feb	0.4	0.4	0.4	Z	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	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5
	0.4	0.4	0.4	SP	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	0.5	0.4	0.4	0.4	0.4	0.4		
7-Feb	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	0.4	0.4	0.5
	0.4	0.4	0.4	0.4	SP	0.5	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.5		
8-Feb	0.5	0.5	0.7	0.6	0.7	Z	0.6	0.5	0.7	0.8	1.1	1.0	1.2	1.2	0.9	0.8	0.6	0.7	0.9	1.2	0.5	0.6	0.5	0.5	0.7	1.3
	0.6	0.6	0.6	0.6	0.8	SP	0.5	0.6	0.7	1.1	1.0	1.1	1.3	1.0	0.8	0.7	0.7	0.8	0.9	0.6	0.5	0.5	0.5	0.5		
9-Feb	Z	0.5	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.5	0.6	0.4	0.4	0.5	0.5	0.6	0.8	0.7	0.7	0.6	0.6	0.5	0.7	0.5	0.8
	SP	0.5	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	0.6	0.8	0.8	0.8	0.7	0.6	0.5	0.6	0.7		
10-Feb	0.7	Z	0.6	0.5	0.6	0.6	0.6	0.5	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.8	0.5	0.8	0.7	0.6	0.6	0.5	0.8
	0.6	SP	0.5	0.5	0.6	0.6	0.5	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.7	0.8	0.6	0.6	0.6		
11-Feb	0.6	0.6	Z	0.8	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.8
	0.6	0.6	SP	0.8	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.6		
12-Feb	0.6	0.6	0.6	Z	0.9	1.0	1.0	1.0	1.1	1.1	0.8	0.9	0.6	0.5	0.4	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.7	1.1
	0.6	0.6	0.6	SP	0.9	1.0	1.0	1.1	1.1	1.0	0.7	1.1	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.5		
13-Feb	0.5	0.5	0.6	0.5	Z	0.6	0.5	0.5	0.5	0.8	0.7	0.8	0.7	0.6	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.6	0.8
	0.5	0.5	0.6	0.5	SP	0.6	0.5	0.5	0.5	0.8	0.7	0.7	0.6	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5		
14-Feb	0.5	0.5	0.5	0.5	0.5	Z	0.8	0.7	0.7	0.8	0.7	0.7	0.6	0.4	0.4	0.4	0.4	0.6	0.7	1.0	1.0	1.0	0.9	0.9	0.7	1.0
	0.5	0.5	0.5	0.5	0.5	SP	0.8	0.7	0.7	0.8	0.7	0.8	0.5	0.4	0.4	0.4	0.5	0.7	0.8	1.0	1.0	1.0	0.9	0.9		
15-Feb	Z	1.0	0.8	1.0	1.4	1.4	1.6	1.4	1.5	1.5	1.4	1.1	0.9	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.8	1.6
	SP	0.9	0.8	1.2	1.4	1.5	1.5	1.4	1.5	1.4	1.3	1.0	0.7	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4		

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort McKay South - February 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-Feb	0.4	Z	0.5	0.4	0.4	0.4	0.5	0.6	0.6	0.7	0.7	0.6	0.6	0.9	0.8	0.6	0.5	0.5	0.4	0.4	0.5	0.6	1.0	0.8	0.6	1.5
	0.4	SP	0.4	0.4	0.4	0.4	0.6	0.6	0.6	0.7	0.8	0.7	0.6	0.7	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.5	1.5	0.5		
17-Feb	0.4	0.4	Z	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.7	0.5	0.5	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.7
	0.4	0.4	SP	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.7	0.5	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5		
18-Feb	0.5	0.6	0.5	Z	0.7	0.6	0.6	0.5	0.5	0.5	0.6	1.0	0.9	0.5	0.5	0.8	1.0	1.1	0.9	0.6	0.7	0.6	0.5	0.4	0.6	1.2
	0.5	0.5	0.5	SP	0.7	0.5	0.6	0.5	0.5	0.7	0.6	1.2	0.5	0.5	0.6	1.1	0.9	1.0	0.7	0.7	0.6	0.5	0.5	0.4		
19-Feb	0.4	0.5	0.7	0.6	Z	0.5	0.5	0.5	0.7	0.7	0.8	0.6	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.5	0.5	0.4	0.5	0.8
	0.5	0.6	0.6	0.6	SP	0.4	0.5	0.6	0.7	0.8	0.8	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.7	0.4	0.5	0.3		
20-Feb	0.3	0.3	0.5	1.3	1.3	Z	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.9	0.9	0.9	0.8	1.1	1.1	1.2	1.4	0.7	1.6
	0.3	0.4	1.2	1.6	0.8	SP	0.6	0.4	0.5	0.6	0.4	0.4	0.4	0.4	0.4	0.7	0.9	0.9	0.8	0.9	1.1	1.1	1.3	1.3		
21-Feb	Z	1.2	1.1	1.1	1.1	1.2	1.3	1.2	1.2	1.4	1.9	1.6	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.6	0.5	0.6	0.6	0.9	1.9
	SP	1.1	1.1	1.1	1.2	1.2	1.3	1.2	1.2	1.7	1.7	0.8	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.6	0.6		
22-Feb	0.6	Z	0.6	0.8	0.6	0.6	0.6	0.8	0.8	0.8	0.7	0.8	1.2	1.4	1.3	0.9	0.7	0.7	0.6	0.6	0.7	0.7	0.7	0.7	0.8	1.4
	0.6	SP	0.7	0.8	0.6	0.6	0.8	0.8	0.8	0.8	0.8	0.9	1.1	1.3	1.1	0.7	0.7	0.6	0.6	0.7	0.7	0.7	0.7	0.8		
23-Feb	0.9	1.6	Z	1.6	1.6	1.5	1.4	1.1	1.0	1.2	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.8	1.6
	1.3	1.6	SP	1.6	1.5	1.4	1.1	1.0	1.2	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.4		
24-Feb	0.4	0.4	0.4	Z	0.6	0.7	0.6	0.6	0.6	0.6	0.6	1.0	1.8	2.1	0.8	0.8	0.9	0.9	0.8	0.8	0.6	1.0	0.8	0.8	0.8	2.1
	0.4	0.5	0.5	SP	0.6	0.7	0.6	0.5	0.6	0.6	0.7	1.4	2.1	1.4	0.8	0.8	1.0	0.8	0.8	0.7	0.8	0.9	0.8	0.6		
25-Feb	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	0.6	0.6	0.6	0.5	0.6	0.7	0.6	0.6	0.7	0.6	0.6	0.6	0.7
	0.5	0.5	0.5	0.5	SP	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.7	0.6	0.6	0.7	0.7	0.6	0.7		
26-Feb	0.7	0.8	2.0	2.0	1.6	Z	1.2	1.1	1.3	0.7	C	C	C	C	C	C	0.8	0.8	0.8	0.7	0.7	0.7	0.6	0.6	--	2.4
	0.7	1.1	2.4	2.0	1.5	SP	1.1	1.1	0.9	0.7	C	C	C	C	C	0.7	0.8	0.8	0.8	0.7	0.7	0.7	0.6	0.6		
27-Feb	Z	0.5	0.5	0.4	0.4	0.5	0.6	0.5	1.0	1.2	0.6	0.6	0.5	0.8	0.5	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	1.2
	SP	0.5	0.5	0.4	0.5	0.5	0.5	0.7	1.2	0.8	0.5	0.5	0.5	0.6	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4		
28-Feb	0.5	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.9	0.6	0.6	0.6	0.5	0.7	0.7	0.6	1.0
	0.5	SP	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.7	0.7	0.7	0.6	0.6	0.6	1.0	0.8	0.6	0.6	0.5	0.5	0.7	0.6		
	0.5	0.6	0.6	0.7	0.7	0.6	0.7	0.6	0.7	0.7	0.7	0.7	0.6	0.6	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	Diurnal Average	
	1.3	1.6	2.4	2.0	1.6	1.5	1.6	1.4	1.5	1.7	1.9	1.6	2.1	2.1	1.3	1.1	1.0	1.1	0.9	1.2	1.1	1.1	1.5	1.4	Diurnal Maximum	

Z - zerospan C - Calibration SP - Span

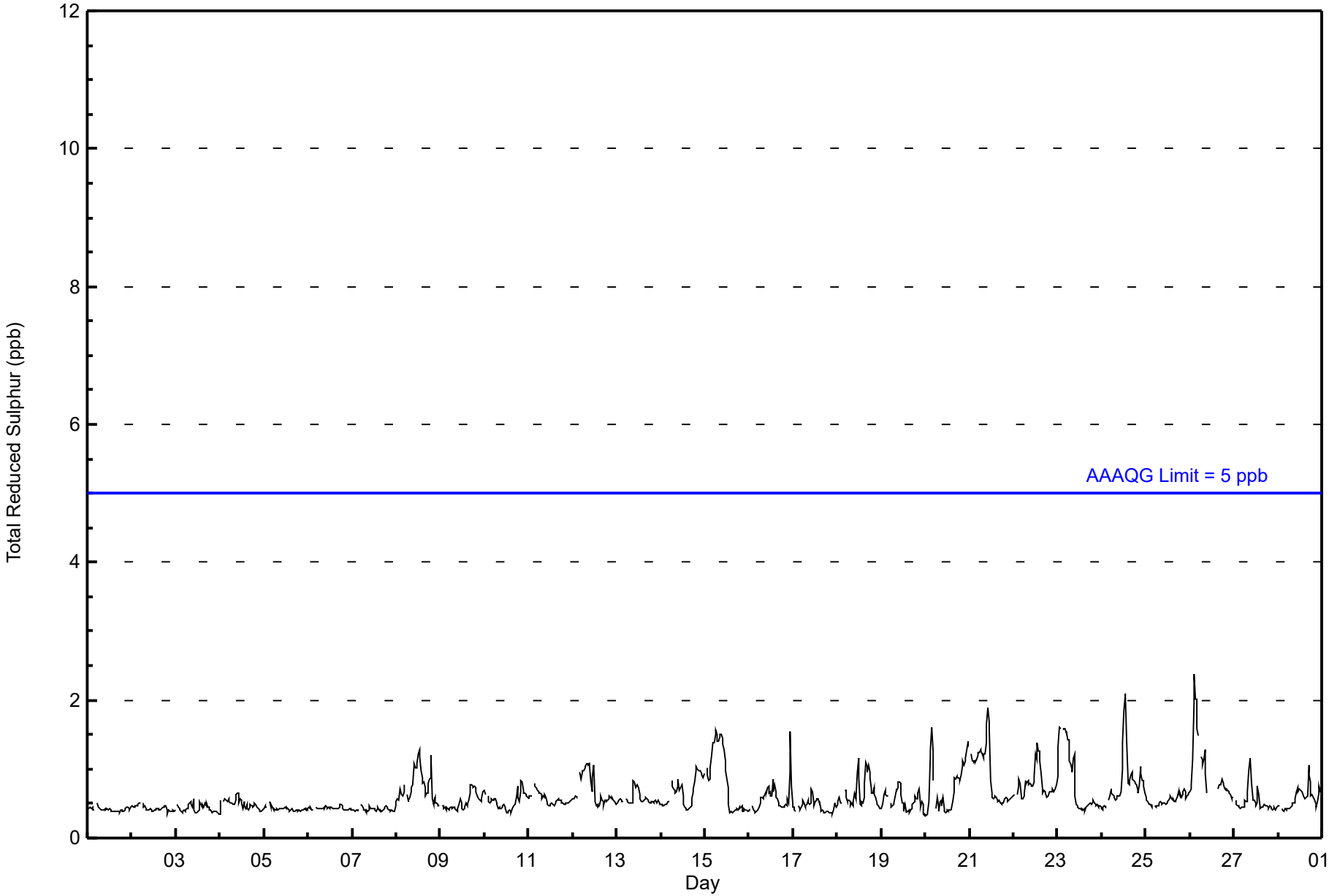
Alberta Ambient Air Quality Guideline (AAAQG): 30-Min: 5 ppb

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Fort McKay South - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Reduced Sulphur (TRS) - ppb

Fort McKay South - February 2025

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

Maximum Value: 2.2 ppb on Feb 26 03:00 Maximum Daily Average: 1.0 ppb on Feb 26

Minimum Value: 0.3 ppb on Feb 20 01:00 Minimum Daily Average: 0.4 ppb on Feb 7

Maximum Diurnal Average: 0.7 ppb at hour 5 Minimum Diurnal Average: 0.5 ppb at hour 1

Monthly Average: 0.61 ppb Percentiles: P_1 = 0.4 P_{10} = 0.4 Q_1 = 0.4 Median = 0.5 Q_3 = 0.7 P_{90} = 1.0 P_{99} = 1.6

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	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	0.5	0.4	0.4	0.4	0.5
2-Feb	0.5	0.5	0.5	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	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5
3-Feb	Z	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	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
4-Feb	0.4	Z	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.6
5-Feb	0.4	0.4	Z	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
6-Feb	0.4	0.4	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	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5
7-Feb	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	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5
8-Feb	0.5	0.5	0.7	0.6	0.7	Z	0.6	0.6	0.7	0.9	1.0	1.0	1.3	1.1	0.8	0.8	0.6	0.7	0.9	0.9	0.5	0.6	0.5	0.5	0.7	1.3
9-Feb	Z	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	0.5	0.7	0.8	0.7	0.7	0.6	0.6	0.5	0.7	0.5	0.8
10-Feb	0.7	Z	0.6	0.5	0.6	0.6	0.5	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.7	0.6	0.8	0.7	0.6	0.6	0.5	0.8
11-Feb	0.6	0.6	Z	0.8	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.8
12-Feb	0.6	0.6	0.6	Z	0.9	1.0	1.0	1.1	1.1	1.1	0.7	1.0	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.7	1.1
13-Feb	0.5	0.5	0.6	0.5	Z	0.6	0.5	0.5	0.5	0.8	0.7	0.8	0.7	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.8
14-Feb	0.5	0.5	0.5	0.5	0.5	Z	0.8	0.7	0.7	0.8	0.7	0.7	0.5	0.4	0.4	0.4	0.5	0.6	0.8	1.0	1.0	1.0	0.9	0.9	0.7	1.0
15-Feb	Z	1.0	0.8	1.1	1.4	1.4	1.5	1.4	1.5	1.5	1.3	1.0	0.8	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.8	1.5
16-Feb	0.4	Z	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.7	0.7	0.7	0.6	0.8	0.7	0.6	0.5	0.5	0.5	0.4	0.5	0.5	1.2	0.6	0.6	1.2
17-Feb	0.4	0.4	Z	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.7	0.5	0.5	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.7
18-Feb	0.5	0.5	0.5	Z	0.7	0.6	0.6	0.5	0.5	0.6	0.6	1.1	0.7	0.5	0.6	0.9	1.0	1.0	0.8	0.7	0.7	0.5	0.5	0.4	0.6	1.1
19-Feb	0.5	0.6	0.7	0.6	Z	0.5	0.5	0.6	0.7	0.8	0.8	0.6	0.5	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.7	0.5	0.5	0.3	0.5	0.8
20-Feb	0.3	0.4	0.9	1.4	1.1	Z	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.6	0.9	0.9	0.9	0.9	1.1	1.1	1.2	1.4	0.7	1.4
21-Feb	Z	1.2	1.1	1.1	1.2	1.2	1.3	1.2	1.2	1.5	1.8	1.2	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.6	0.6	0.9	1.8
22-Feb	0.6	Z	0.7	0.8	0.6	0.6	0.7	0.8	0.8	0.8	0.8	0.9	1.2	1.3	1.2	0.8	0.7	0.7	0.6	0.6	0.7	0.7	0.7	0.7	0.8	1.3
23-Feb	1.1	1.6	Z	1.6	1.6	1.5	1.3	1.0	1.1	0.9	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.8	1.6
24-Feb	0.4	0.5	0.4	Z	0.6	0.7	0.6	0.6	0.6	0.6	0.6	1.2	2.0	1.7	0.8	0.8	0.9	0.9	0.8	0.7	0.7	1.0	0.8	0.7	0.8	2.0
25-Feb	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	0.6	0.6	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.7
26-Feb	0.7	1.0	2.2	2.0	1.5	Z	1.2	1.1	1.1	0.7	C	C	C	C	C	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.6	0.6	1.0	2.2
27-Feb	Z	0.5	0.5	0.4	0.5	0.5	0.5	0.6	1.1	1.0	0.6	0.5	0.5	0.7	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	1.1
28-Feb	0.5	Z	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.7	0.7	0.7	0.6	0.6	0.6	0.8	0.9	0.6	0.6	0.5	0.5	0.7	0.7	0.6	0.9
	0.5	0.6	0.6	0.7	0.7	0.6	0.7	0.6	0.7	0.7	0.7	0.7	0.6	0.6	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	Diurnal Average	
	1.1	1.6	2.2	2.0	1.6	1.5	1.5	1.4	1.5	1.5	1.8	1.2	2.0	1.7	1.2	0.9	1.0	1.0	0.9	1.0	1.1	1.1	1.2	1.4	Diurnal Maximum	

Z - zerospan C - Calibration

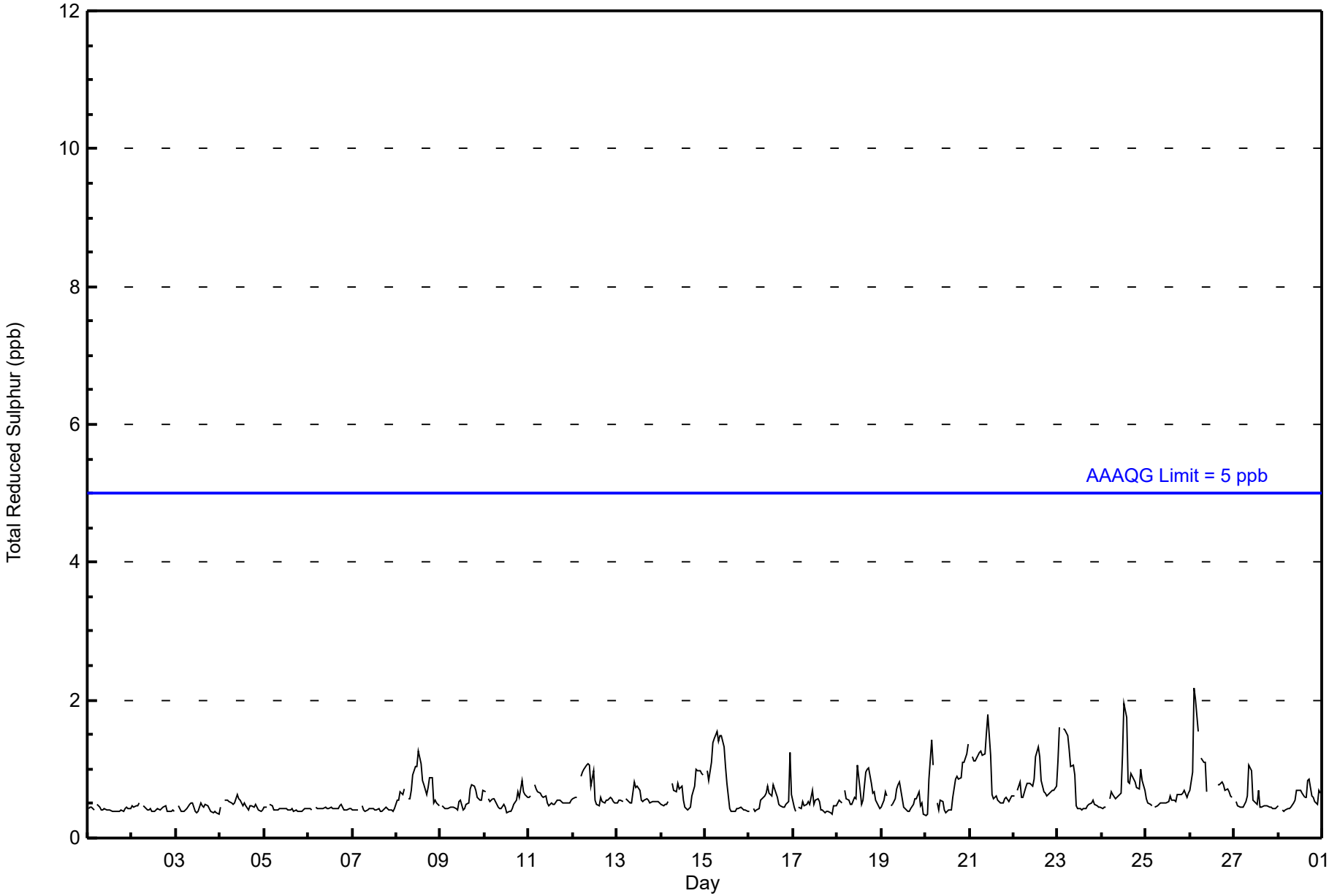
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Fort McKay South - February 2025



Total Reduced Sulphur (TRS) - ppb
Fort McKay South - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	639	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: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Fort McKay South - February 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	109	85	12	6	4	9	13	53	106	61	24	50	32	16	14	35	629
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	109	85	12	6	4	9	13	53	106	61	24	50	32	16	14	35	629

Total Number of Valid Hours: 629

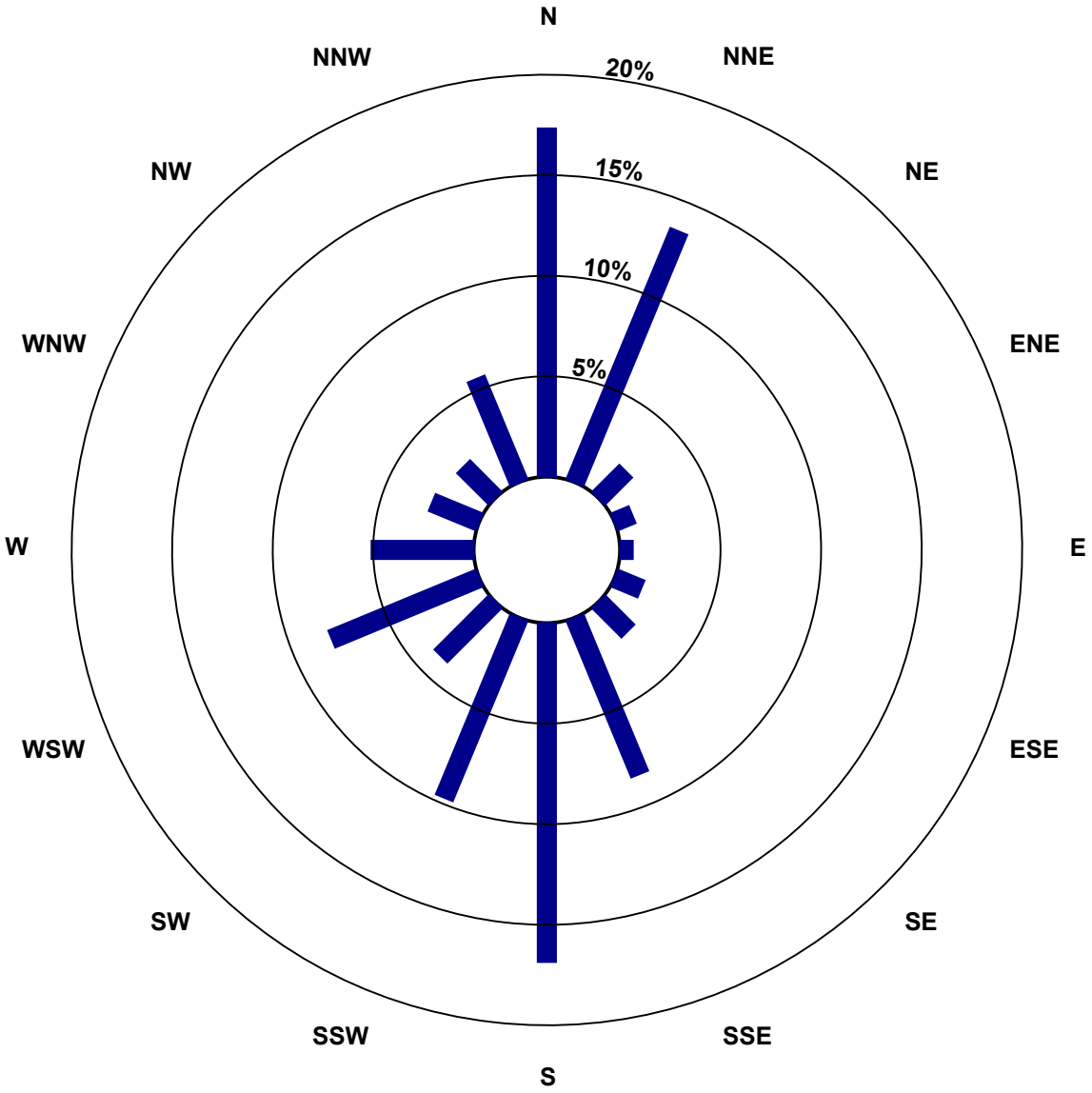
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Total Reduced Sulphur (TRS) - ppb

Fort McKay South



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

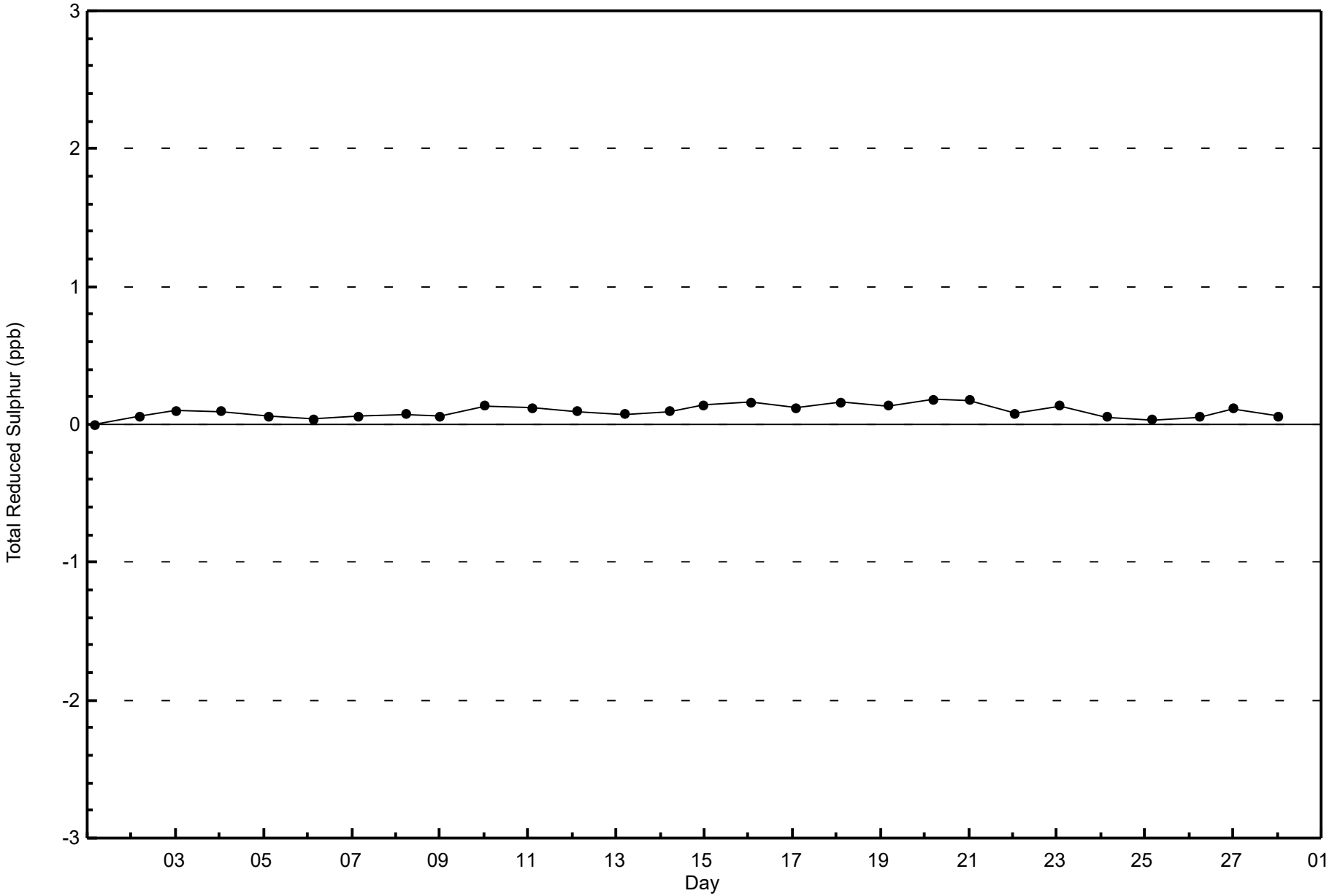
Total Number of Valid Hours: 629

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Fort McKay South - February 2025

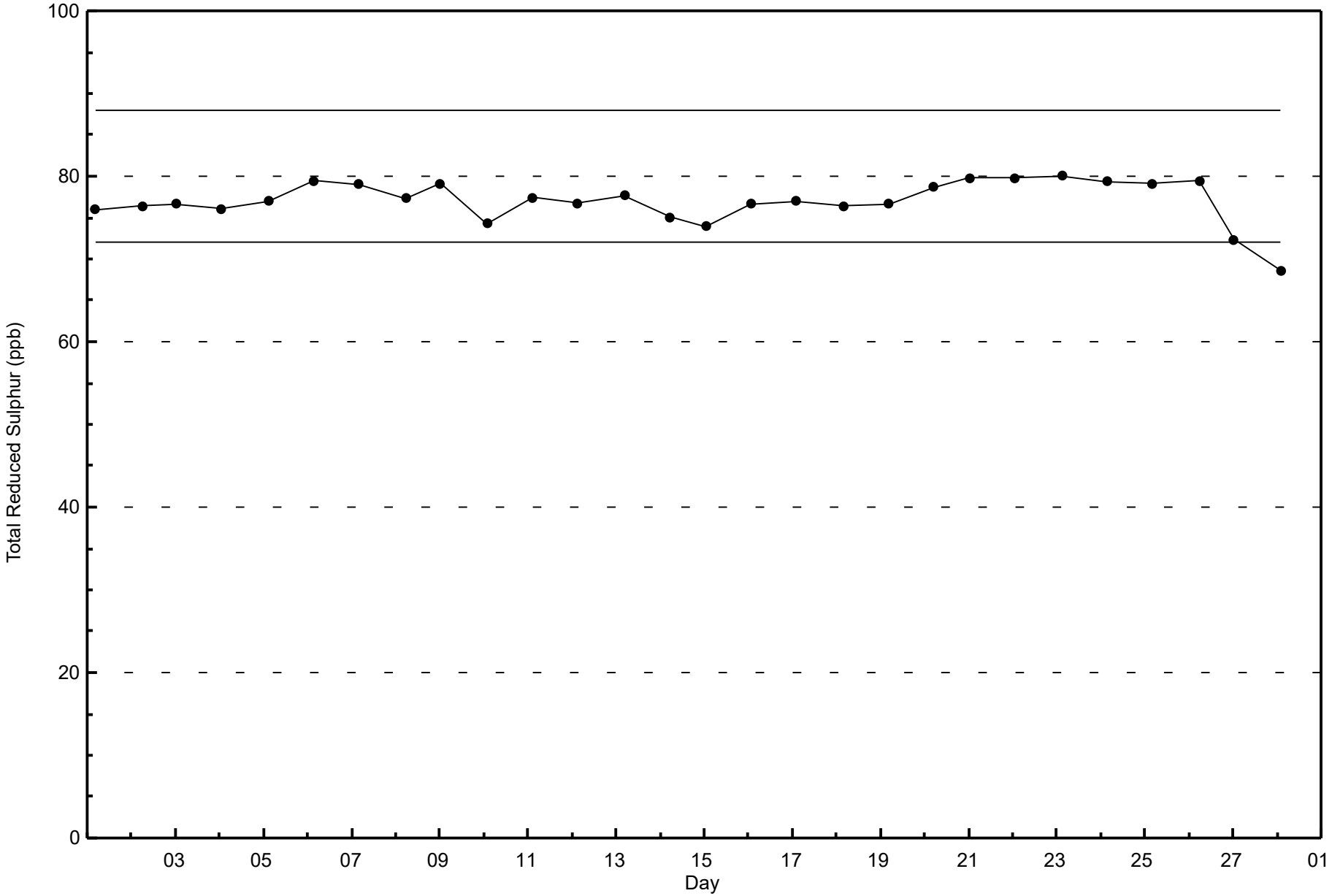


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Fort McKay South - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Fort McKay South - February 2025

Maximum Value: 4.4 ppm on Feb 21 11:00

Maximum Daily Average: 3.0 ppm on Feb 21

Minimum Value: 2.1 ppm on Feb 28 04:00

Minimum Daily Average: 2.1 ppm on Feb 6

Maximum Diurnal Average: 2.5 ppm at hour 10

Minimum Diurnal Average: 2.2 ppm at hour 16

Monthly Average: 2.33 ppm

Percentiles: P_1 = 2.1 P_{10} = 2.1 Q_1 = 2.1 Median = 2.2 Q_3 = 2.4 P_{90} = 2.7 P_{99} = 3.7

Hours in Service:	672
Hours of Data:	641
Hours of Missing Data:	31
Hours of Calibration:	31
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	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	2.2	2.1	2.1	2.1	2.2
2-Feb	2.1	2.1	2.1	2.1	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.1	2.1	2.1	2.1	2.2	2.1	2.3
3-Feb	2.2	2.2	2.2	2.2	2.1	Z	2.2	2.2	2.2	2.2	2.1	2.2	2.1	2.2	2.1	2.1	2.2	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.2
4-Feb	Z	2.2	2.2	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.1	C	C	C	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.3
5-Feb	2.1	Z	2.2	2.1	2.1	2.1	2.2	2.1	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	2.2
6-Feb	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.2
7-Feb	2.1	2.1	2.1	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.2	2.3	2.3	2.3	2.3	2.1	2.1	2.1	2.1	2.1	2.3
8-Feb	2.3	2.3	2.3	2.3	Z	2.4	2.3	2.4	2.5	4.2	2.5	2.6	2.7	2.6	2.3	2.3	2.2	2.7	3.0	2.6	2.1	2.1	2.1	2.1	2.5	4.2
9-Feb	2.1	2.1	2.2	2.1	2.1	Z	2.3	2.4	2.3	2.4	2.3	2.3	2.2	2.2	2.1	2.2	2.3	2.4	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.4
10-Feb	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	2.1	2.1	2.2	2.3	2.3	2.3	2.2	2.5	2.4	2.4	2.4	2.3	2.5
11-Feb	2.4	Z	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.4	2.2	2.1	2.2	2.2	2.3	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.4	2.6
12-Feb	2.3	2.3	Z	2.3	2.4	2.4	2.5	2.5	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	2.2	2.2	2.3	2.5
13-Feb	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.3	2.7	2.6	2.7	2.5	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.3	2.7
14-Feb	2.2	2.2	2.3	2.3	Z	2.6	2.5	2.4	2.3	2.4	2.4	2.4	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.4	2.4	2.5	2.3	2.6
15-Feb	2.7	2.7	2.7	2.8	2.9	Z	3.1	2.9	2.9	2.8	2.6	2.5	2.4	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.4	3.1
16-Feb	Z	2.1	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.3
17-Feb	2.1	Z	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.2
18-Feb	2.2	2.2	Z	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.4	2.2	2.1	2.1	2.2	2.4	2.8	2.5	2.3	2.2	2.3	2.3	2.2	2.3	2.8
19-Feb	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	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.2	2.3	2.2	2.3
20-Feb	2.1	2.1	2.4	2.7	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.4	2.4	2.4	2.5	2.6	3.0	3.5	3.7	2.4	3.7
21-Feb	3.7	3.7	3.7	3.7	3.6	Z	3.4	3.5	3.6	4.2	4.4	3.5	2.4	2.2	2.4	2.2	2.3	2.2	2.3	2.5	2.5	2.4	2.5	2.5	3.0	4.4
22-Feb	Z	2.3	2.4	2.5	2.4	2.5	2.8	2.9	2.9	2.8	2.7	2.8	2.9	3.0	2.8	2.5	2.4	2.4	2.4	2.6	2.6	2.6	2.8	3.1	2.6	3.1
23-Feb	3.7	Z	4.1	3.9	3.7	3.3	3.3	3.6	3.8	2.9	2.2	2.2	2.2	2.2	2.3	2.2	2.3	2.2	2.3	2.4	2.2	2.1	2.1	2.1	2.8	4.1
24-Feb	2.1	2.2	Z	2.1	2.2	2.4	2.5	2.4	2.3	2.2	2.3	2.6	2.7	2.9	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.7	2.4	2.4	2.4	2.9
25-Feb	2.3	2.2	2.2	Z	2.4	2.2	2.2	2.4	2.6	2.3	2.2	2.4	2.5	2.7	2.4	2.3	2.3	3.0	2.9	2.8	2.6	2.4	2.4	2.6	2.4	3.0
26-Feb	2.6	2.7	2.8	2.8	Z	2.6	2.6	2.8	3.2	2.4	2.3	2.3	2.2	2.2	2.4	2.5	2.5	2.7	2.5	2.4	2.5	2.6	2.4	2.3	2.5	3.2
27-Feb	2.4	2.3	2.3	2.3	2.3	Z	2.3	2.4	2.7	2.6	2.3	2.3	2.2	2.5	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.1	2.1	2.1	2.3	2.7
28-Feb	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.3	2.4	3.0	2.6	2.2	3.0
	2.4	2.3	2.4	2.4	2.4	2.3	2.4	2.4	2.5	2.5	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	Diurnal Average	
	3.7	3.7	4.1	3.9	3.7	3.3	3.4	3.6	3.8	4.2	4.4	3.5	2.9	3.0	2.8	2.5	2.5	3.0	3.0	2.8	2.6	3.0	3.5	3.7	Diurnal Maximum	

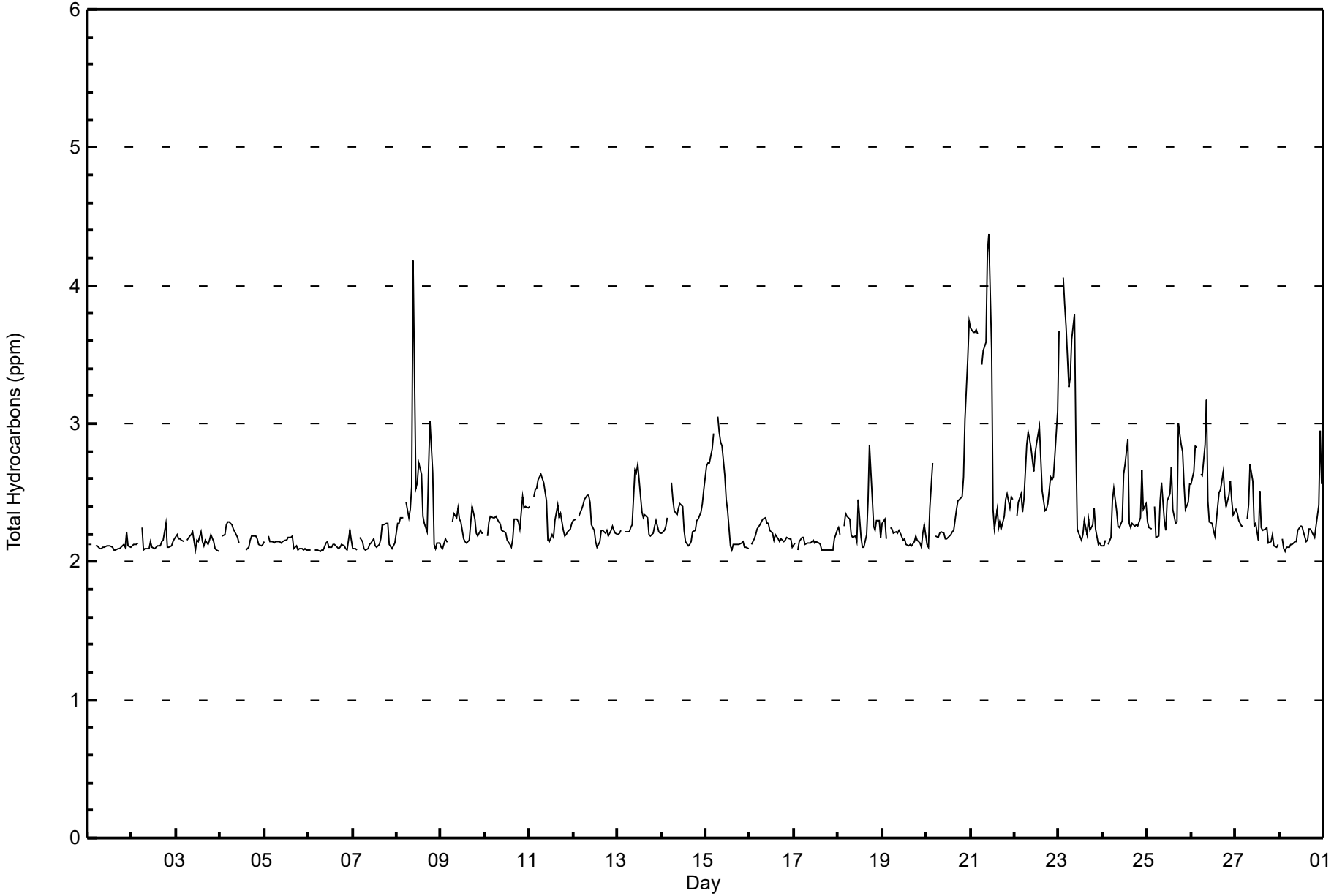
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Fort McKay South - February 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	0	0.00	0.00
2.1 - 3.0	616	96.10	96.10
3.1 - 10.0	25	3.90	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 641

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Fort McKay South - February 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	110	83	10	7	4	8	13	52	99	61	24	46	33	16	15	29	610
3.1 - 10.0	3	3	0	0	0	1	0	1	3	1	2	1	1	2	0	3	21
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	113	86	10	7	4	9	13	53	102	62	26	47	34	18	15	32	631

Total Number of Valid Hours: 631

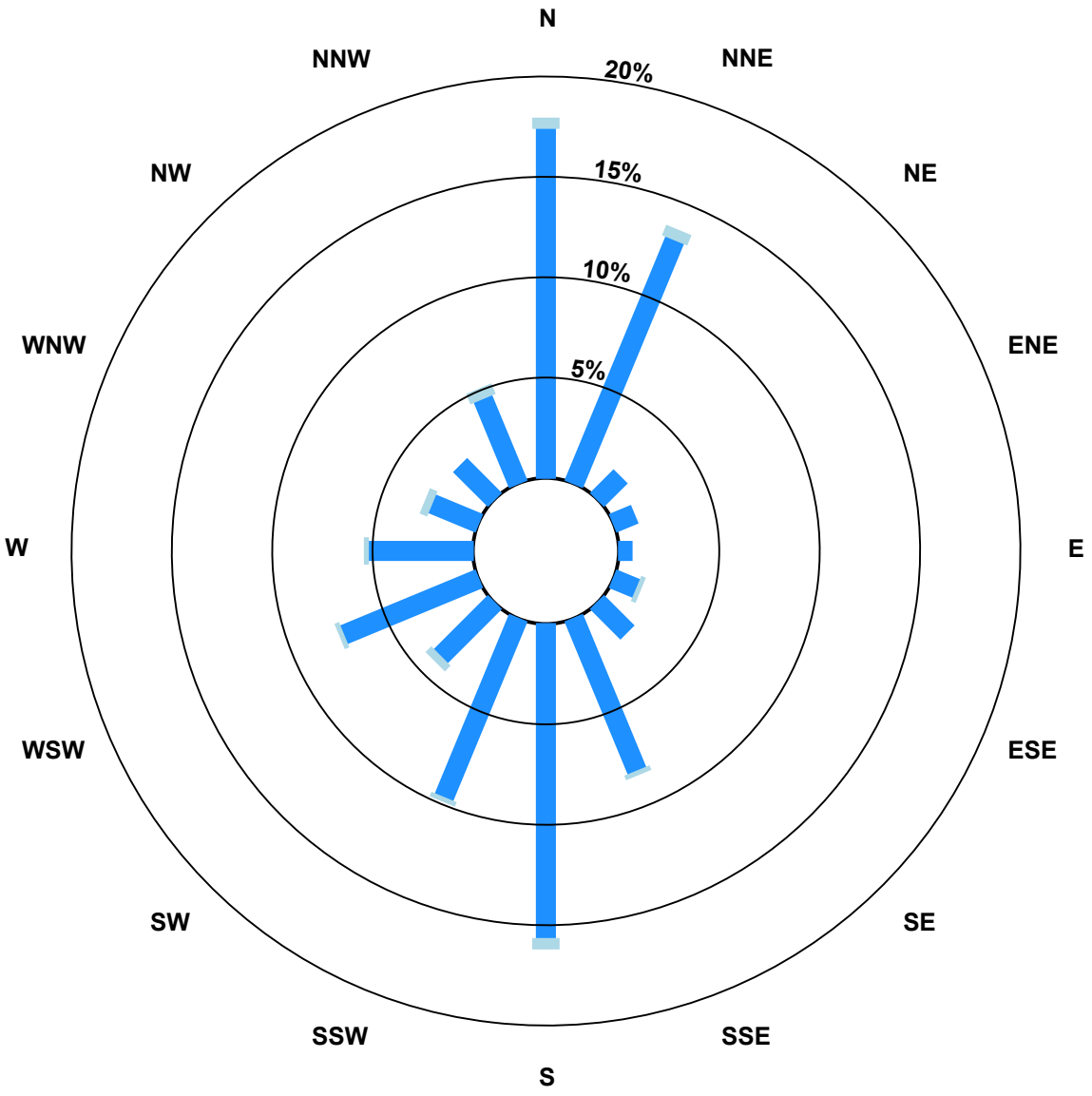
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Total Hydrocarbons (THC) - ppm

Fort McKay South



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

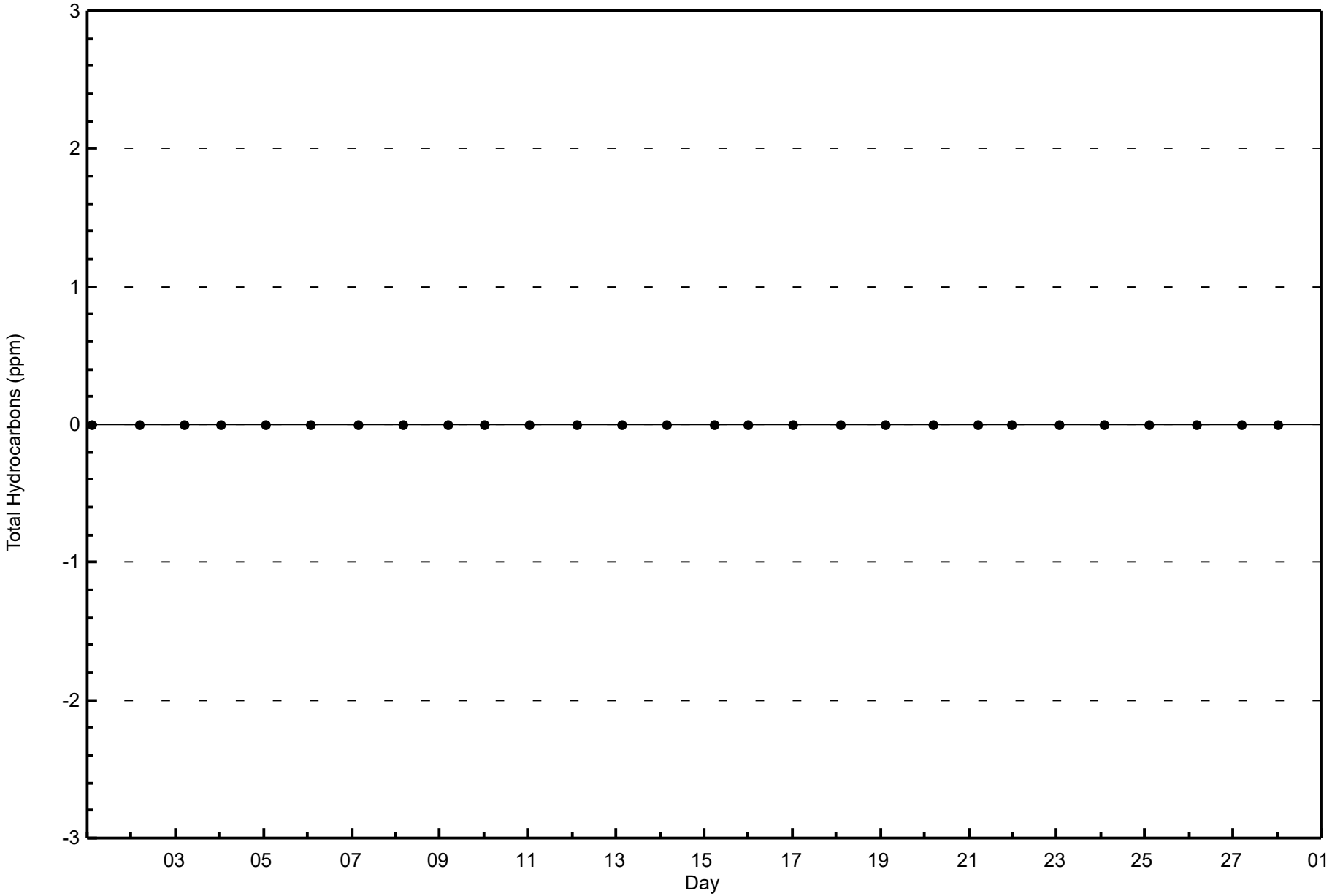
Total Number of Valid Hours: 631

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Fort McKay South - February 2025

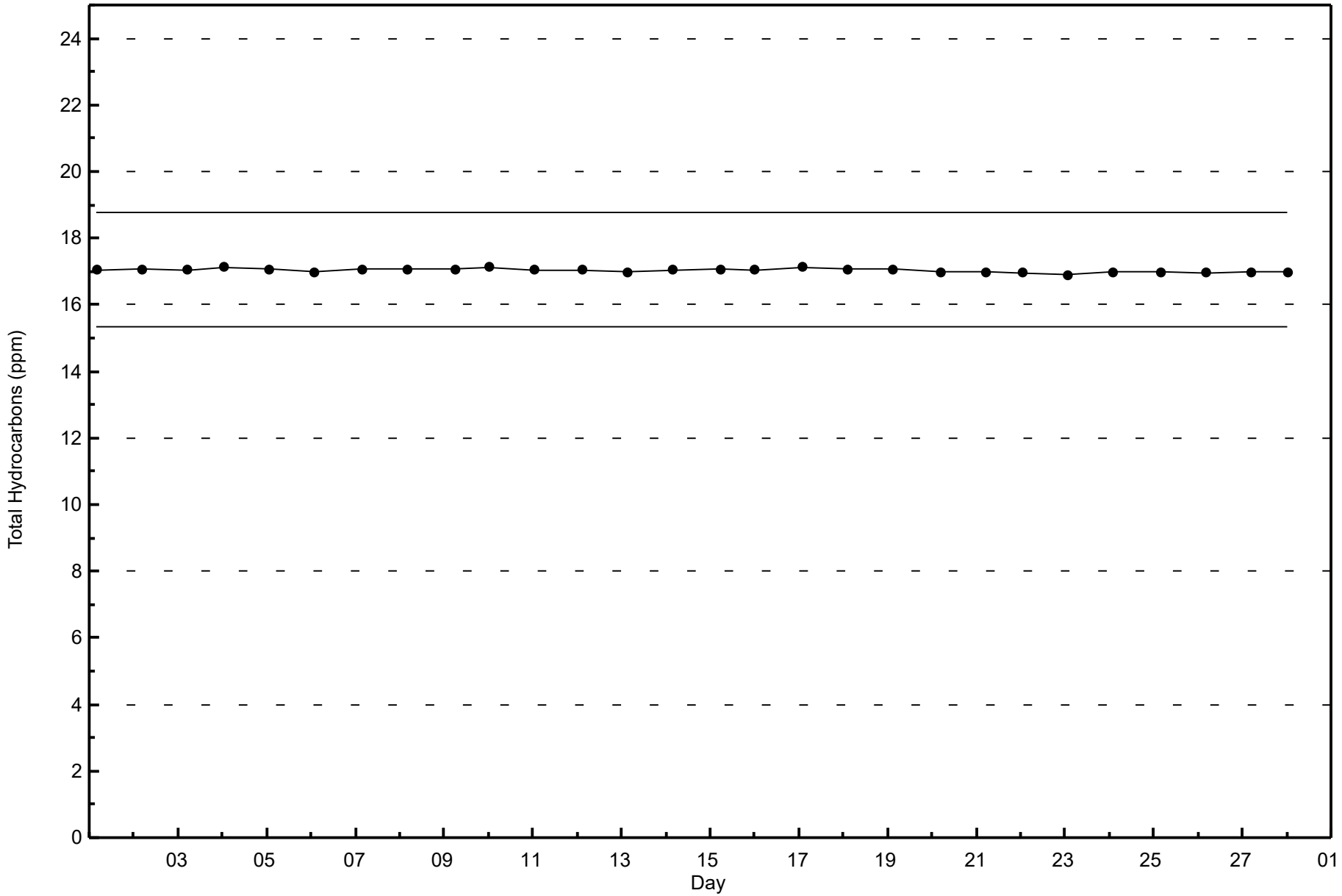


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Fort McKay South - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay South - February 2025

Maximum Value: 1.627 ppm on Feb 8 10:00

Maximum Daily Average: 0.178 ppm on Feb 21

Minimum Value: 0.000 ppm on Feb 1 01:00

Minimum Daily Average: 0.000 ppm on Feb 3

Maximum Diurnal Average: 0.091 ppm at hour 10

Minimum Diurnal Average: 0.017 ppm at hour 16

Monthly Average: 0.036 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} = 0.4

Hours in Service:	672
Hours of Data:	641
Hours of Missing Data:	31
Hours of Calibration:	31
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	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	0.002	0.050
2-Feb	0.000	0.010	0.000	0.017	Z	0.089	0.000	0.000	0.000	0.000	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.122	0.000	0.000	0.000	0.000	0.000	0.011	0.122
3-Feb	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4-Feb	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	C	C	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5-Feb	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.038	0.000	0.000	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.038
7-Feb	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	1.627	0.079	0.133	0.239	0.194	0.017	0.000	0.000	0.322	0.511	0.103	0.008	0.000	0.000	0.000	0.141	1.627
9-Feb	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.140	0.000	0.004	0.022	0.018	0.000	0.000	0.104	0.236	0.140	0.036	0.000	0.000	0.000	0.000	0.030	0.236
10-Feb	Z	0.000	0.000	0.000	0.000	0.000	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	0.000	0.014	0.000	0.000	0.000	0.001	0.014
11-Feb	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.010	0.000	0.132	0.176	0.060	0.106	0.032	0.000	0.000	0.000	0.000	0.000	0.023	0.176
12-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.015	0.041	0.053	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.053
13-Feb	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.006	0.138	0.183	0.092	0.130	0.124	0.085	0.000	0.000	0.000	0.002	0.052	0.094	0.019	0.000	0.040	0.183
14-Feb	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.052	0.002	0.052
15-Feb	0.122	0.131	0.130	0.128	0.134	Z	0.134	0.122	0.110	0.116	0.029	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050	0.134
16-Feb	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	Z	0.000	0.010	0.006	0.000	0.000	0.000	0.000	0.000	0.146	0.024	0.000	0.000	0.045	0.065	0.106	0.028	0.000	0.000	0.000	0.000	0.000	0.019	0.146
19-Feb	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
20-Feb	0.000	0.000	0.067	0.186	Z	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	0.069	0.171	0.264	0.033	0.264
21-Feb	0.259	0.251	0.274	0.295	0.281	Z	0.238	0.254	0.264	0.342	0.400	0.183	0.049	0.014	0.127	0.018	0.056	0.053	0.090	0.180	0.188	0.082	0.117	0.088	0.178	0.400
22-Feb	Z	0.000	0.000	0.000	0.000	0.049	0.191	0.197	0.186	0.152	0.094	0.192	0.152	0.136	0.085	0.009	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.063	0.197
23-Feb	0.058	Z	0.121	0.121	0.120	0.109	0.112	0.119	0.125	0.044	0.000	0.000	0.000	0.019	0.103	0.018	0.082	0.010	0.055	0.002	0.000	0.000	0.000	0.000	0.053	0.125
24-Feb	0.000	0.000	Z	0.000	0.000	0.035	0.125	0.019	0.000	0.000	0.005	0.070	0.097	0.133	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.123	0.052	0.153	0.035	0.153
25-Feb	0.092	0.030	0.020	Z	0.225	0.021	0.000	0.214	0.348	0.000	0.000	0.234	0.268	0.354	0.053	0.000	0.043	0.583	0.397	0.365	0.195	0.025	0.125	0.119	0.161	0.583
26-Feb	0.066	0.138	0.225	0.231	Z	0.182	0.176	0.171	0.155	0.094	0.000	0.000	0.000	0.000	0.033	0.121	0.237	0.319	0.211	0.110	0.136	0.269	0.083	0.000	0.129	0.319
27-Feb	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.049	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.049
28-Feb	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.102	0.121	0.010	0.121
	0.026	0.023	0.035	0.042	0.033	0.022	0.035	0.041	0.044	0.091	0.029	0.043	0.035	0.040	0.025	0.017	0.024	0.062	0.057	0.029	0.021	0.025	0.024	0.028	Diurnal Average	
	0.259	0.251	0.274	0.295	0.281	0.182	0.238	0.254	0.348	1.627	0.400	0.234	0.268	0.354	0.132	0.176	0.237	0.583	0.511	0.365	0.195	0.269	0.171	0.264	Diurnal Maximum	

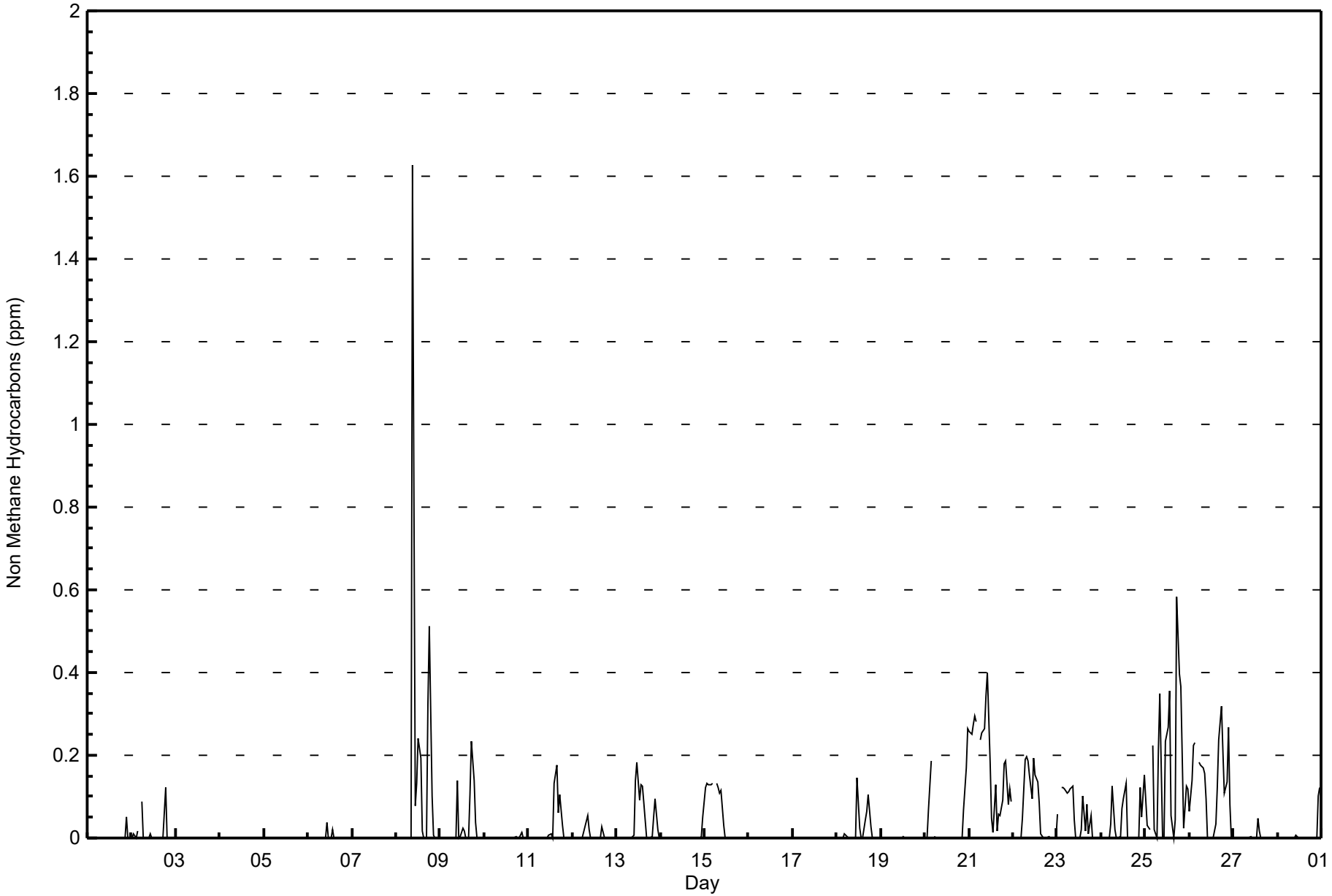
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay South - February 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay South - February 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	470	73.32	73.32
0.006 - 0.05	52	8.11	81.44
0.06 - 0.1	68	10.61	92.04
> 0.1	51	7.96	100.00

Total Number of Valid Hours: 641

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay South - February 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	73	40	9	4	3	8	6	45	84	55	21	42	31	12	15	16	464
0.006 - 0.05	14	21	0	1	0	0	3	2	2	3	0	2	0	1	0	3	52
0.06 - 0.1	12	14	0	0	0	0	2	5	14	4	2	2	2	2	0	6	65
> 0.1	14	11	1	2	1	1	2	1	2	0	3	1	1	3	0	7	50
Totals	113	86	10	7	4	9	13	53	102	62	26	47	34	18	15	32	631

Total Number of Valid Hours: 631

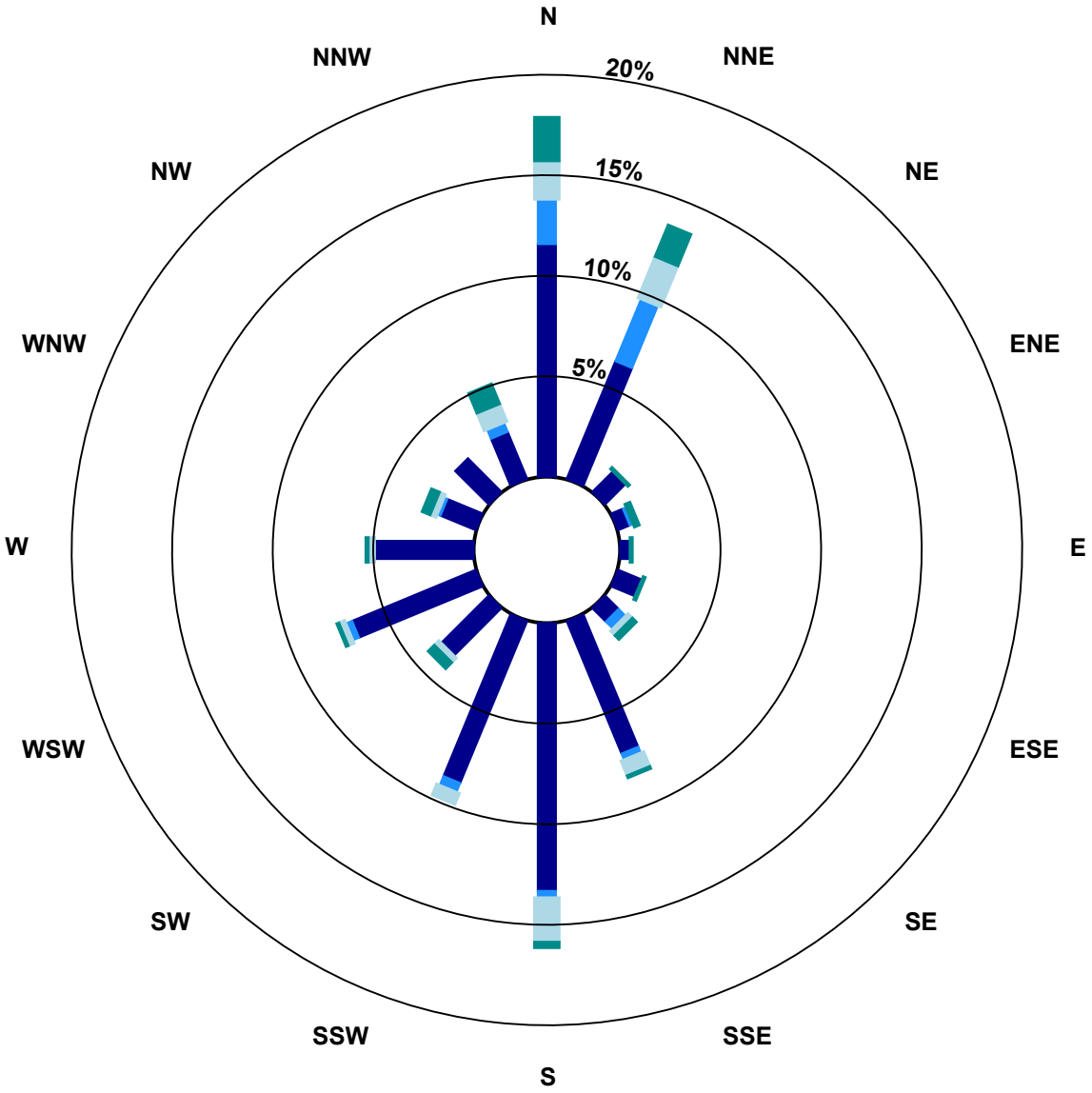
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay South



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

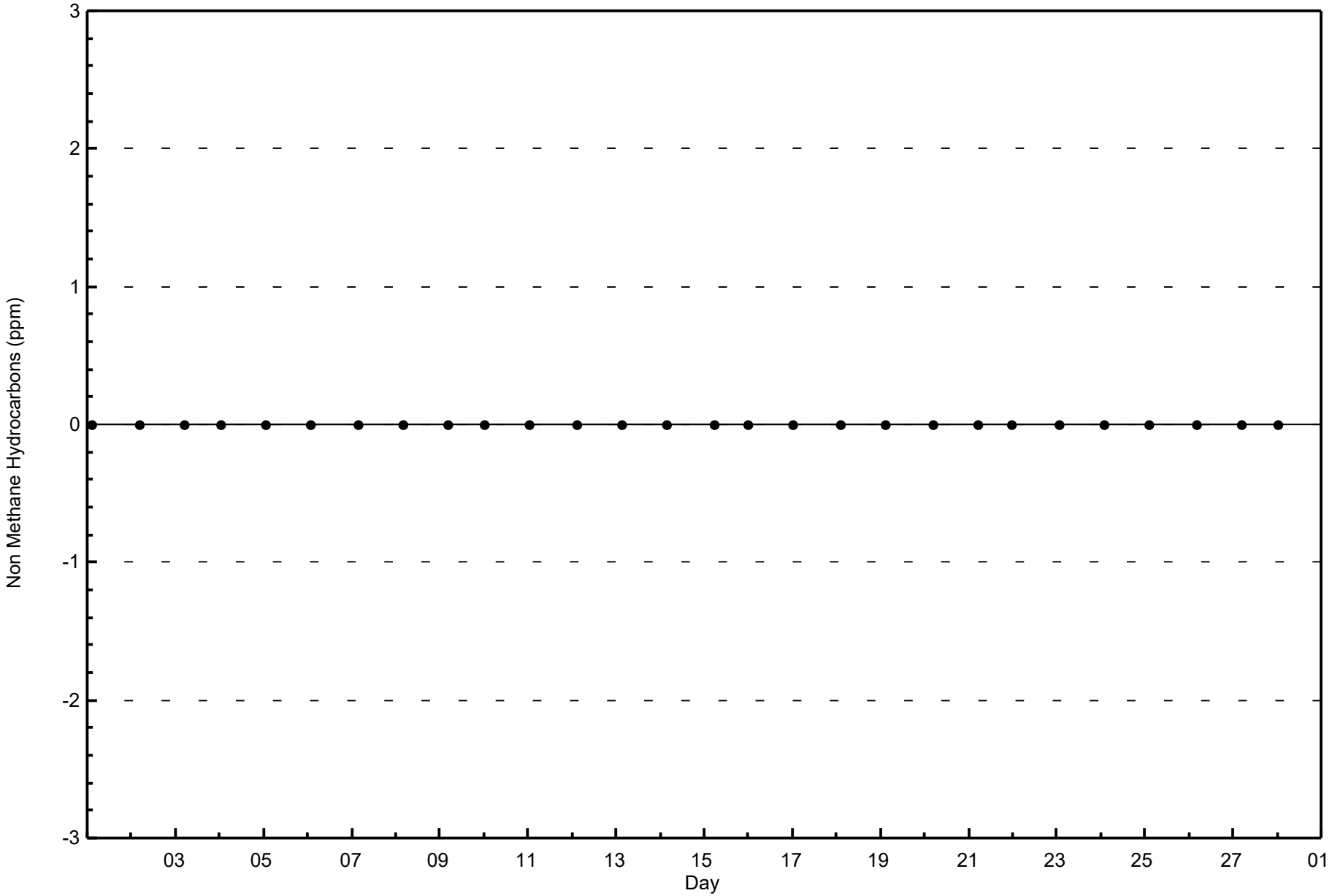
Total Number of Valid Hours: 631

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay South - February 2025

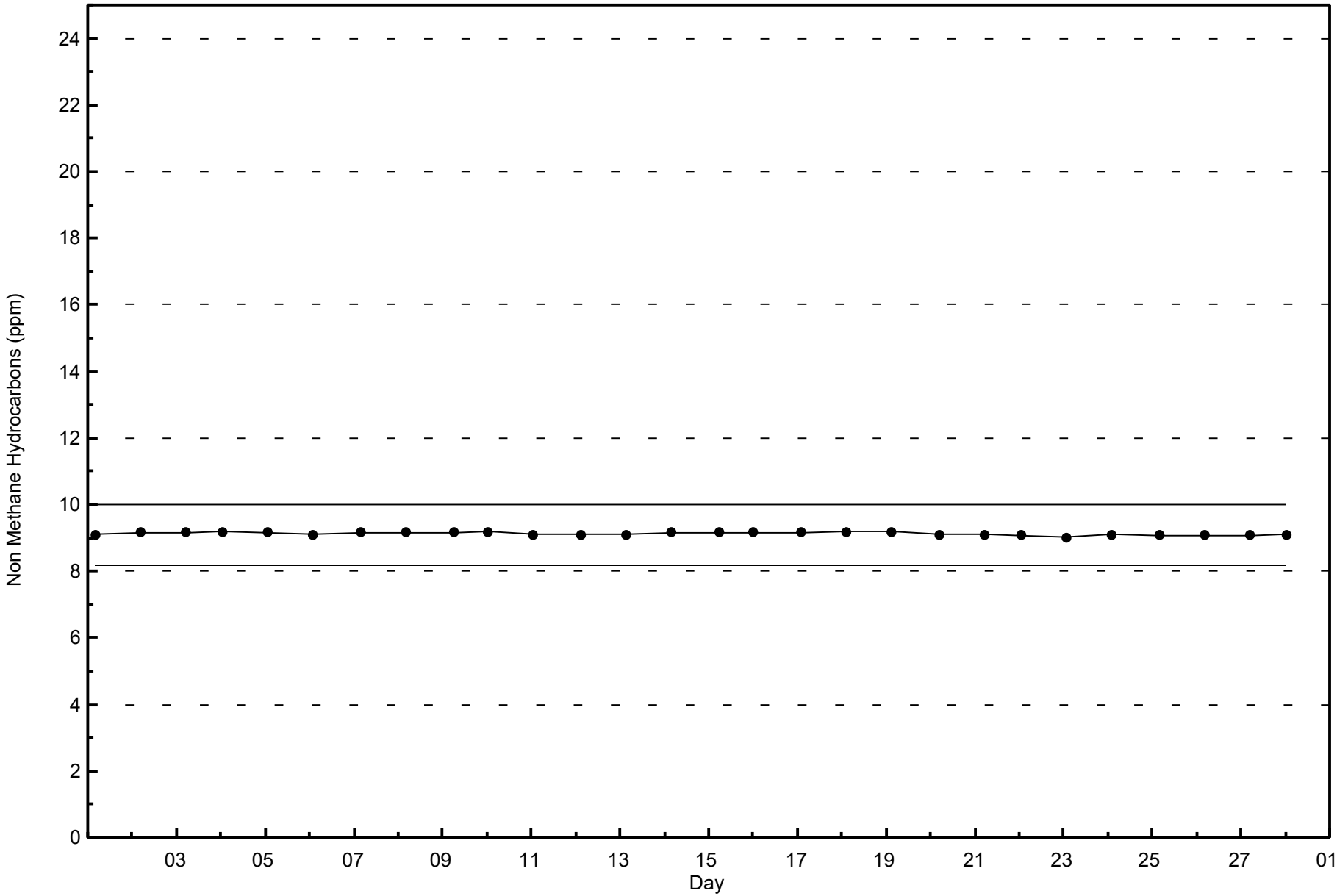


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay South - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Fort McKay South - February 2025

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

Maximum Value: 4.0 ppm on Feb 21 11:00

Maximum Daily Average: 2.8 ppm on Feb 21

Minimum Value: 2.1 ppm on Feb 28 04:00

Minimum Daily Average: 2.1 ppm on Feb 6

Maximum Diurnal Average: 2.4 ppm at hour 9

Minimum Diurnal Average: 2.2 ppm at hour 15

Monthly Average: 2.29 ppm

Percentiles: P_1 = 2.1 P_{10} = 2.1 Q_1 = 2.1 Median = 2.2 Q_3 = 2.3 P_{90} = 2.6 P_{99} = 3.5

Hours in Service:	672
Hours of Data:	641
Hours of Missing Data:	31
Hours of Calibration:	31
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	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	2.2	2.1	2.1	2.1	2.2
2-Feb	2.1	2.1	2.1	2.1	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.2
3-Feb	2.2	2.2	2.2	2.2	2.1	Z	2.2	2.2	2.2	2.2	2.1	2.2	2.1	2.2	2.1	2.1	2.2	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.2
4-Feb	Z	2.2	2.2	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.1	C	C	C	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.3
5-Feb	2.1	Z	2.2	2.1	2.1	2.1	2.2	2.1	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	2.2
6-Feb	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	2.2	2.2	2.1	2.2
7-Feb	2.1	2.1	2.1	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.2	2.3	2.3	2.3	2.3	2.1	2.1	2.1	2.1	2.1	2.3
8-Feb	2.3	2.3	2.3	2.3	Z	2.4	2.3	2.4	2.5	2.6	2.5	2.4	2.5	2.4	2.3	2.3	2.2	2.3	2.5	2.5	2.1	2.1	2.1	2.1	2.3	2.6
9-Feb	2.1	2.1	2.2	2.1	2.1	Z	2.3	2.4	2.3	2.3	2.3	2.3	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.4
10-Feb	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	2.1	2.1	2.2	2.3	2.3	2.3	2.2	2.5	2.4	2.4	2.4	2.3	2.5
11-Feb	2.4	Z	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.4	2.2	2.1	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	2.6
12-Feb	2.3	2.3	Z	2.3	2.4	2.4	2.4	2.4	2.4	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	2.2	2.2	2.3	2.4
13-Feb	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.3	2.7	2.5	2.5	2.4	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.7
14-Feb	2.2	2.2	2.3	2.3	Z	2.6	2.5	2.4	2.3	2.4	2.4	2.4	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.4	2.4	2.5	2.3	2.6
15-Feb	2.6	2.6	2.6	2.7	2.8	Z	2.9	2.8	2.8	2.7	2.6	2.5	2.4	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.4	2.9
16-Feb	Z	2.1	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.3
17-Feb	2.1	Z	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.2
18-Feb	2.2	2.2	Z	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.3	2.1	2.1	2.1	2.1	2.4	2.7	2.4	2.3	2.2	2.3	2.3	2.2	2.3	2.7
19-Feb	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	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.2	2.3	2.2	2.3
20-Feb	2.1	2.1	2.3	2.5	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.4	2.4	2.4	2.5	2.6	3.0	3.3	3.5	2.4	3.5
21-Feb	3.4	3.4	3.4	3.4	3.4	Z	3.2	3.3	3.3	3.9	4.0	3.4	2.3	2.2	2.3	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.4	2.4	2.8	4.0
22-Feb	Z	2.3	2.4	2.5	2.4	2.4	2.7	2.7	2.7	2.7	2.6	2.6	2.7	2.8	2.7	2.5	2.4	2.4	2.4	2.6	2.6	2.6	2.8	3.1	2.6	3.1
23-Feb	3.6	Z	3.9	3.7	3.6	3.2	3.2	3.5	3.7	2.8	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.4	2.2	2.1	2.1	2.1	2.7	3.9
24-Feb	2.1	2.2	Z	2.1	2.2	2.4	2.4	2.3	2.3	2.2	2.3	2.6	2.6	2.8	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.5	2.3	2.3	2.3	2.8
25-Feb	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.4	2.5	2.4	2.4	2.4	2.3	2.4	2.3	2.5
26-Feb	2.5	2.5	2.6	2.6	Z	2.5	2.5	2.7	3.0	2.3	2.3	2.3	2.2	2.2	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.4	3.0
27-Feb	2.4	2.3	2.3	2.3	2.3	Z	2.3	2.4	2.7	2.6	2.3	2.3	2.2	2.5	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.1	2.1	2.1	2.3	2.7
28-Feb	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.3	2.4	2.9	2.4	2.2	2.9
	2.3	2.3	2.4	2.4	2.4	2.3	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	2.2	2.2	2.3	2.3	2.3	Diurnal Average	
	3.6	3.4	3.9	3.7	3.6	3.2	3.2	3.5	3.7	3.9	4.0	3.4	2.7	2.8	2.7	2.5	2.4	2.7	2.5	2.6	2.6	3.0	3.3	3.5	Diurnal Maximum	

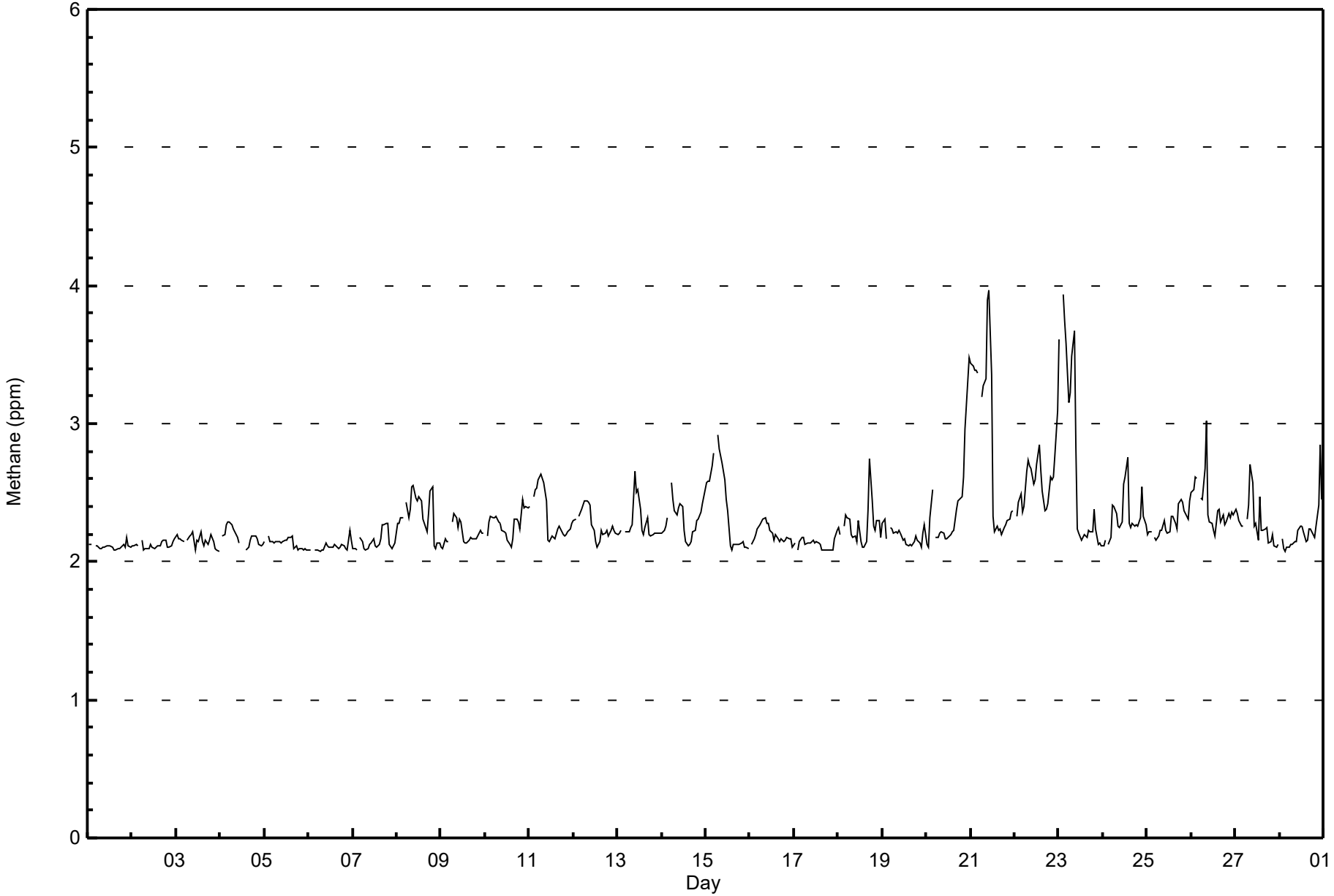
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Fort McKay South - February 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	0	0.00	0.00
2.1 - 3.0	619	96.57	96.57
3.1 - 10.0	22	3.43	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 641

Total Number of Hours: 672



Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Fort McKay South - February 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	111	83	10	7	4	8	13	53	99	61	24	46	33	16	15	29	612
3.1 - 10.0	2	3	0	0	0	1	0	0	3	1	2	1	1	2	0	3	19
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	113	86	10	7	4	9	13	53	102	62	26	47	34	18	15	32	631

Total Number of Valid Hours: 631

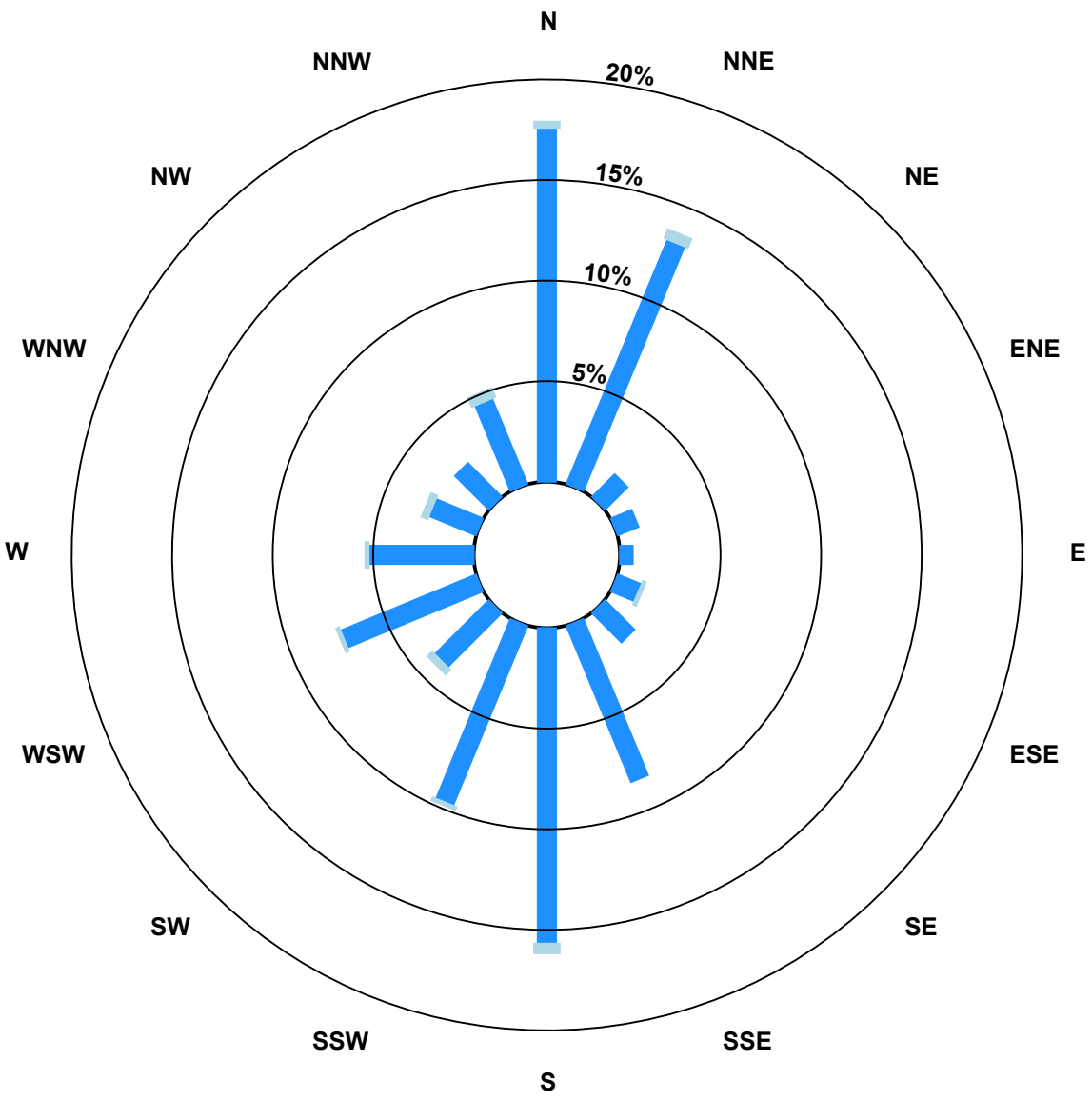
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Methane (CH_4) - ppm

Fort McKay South



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

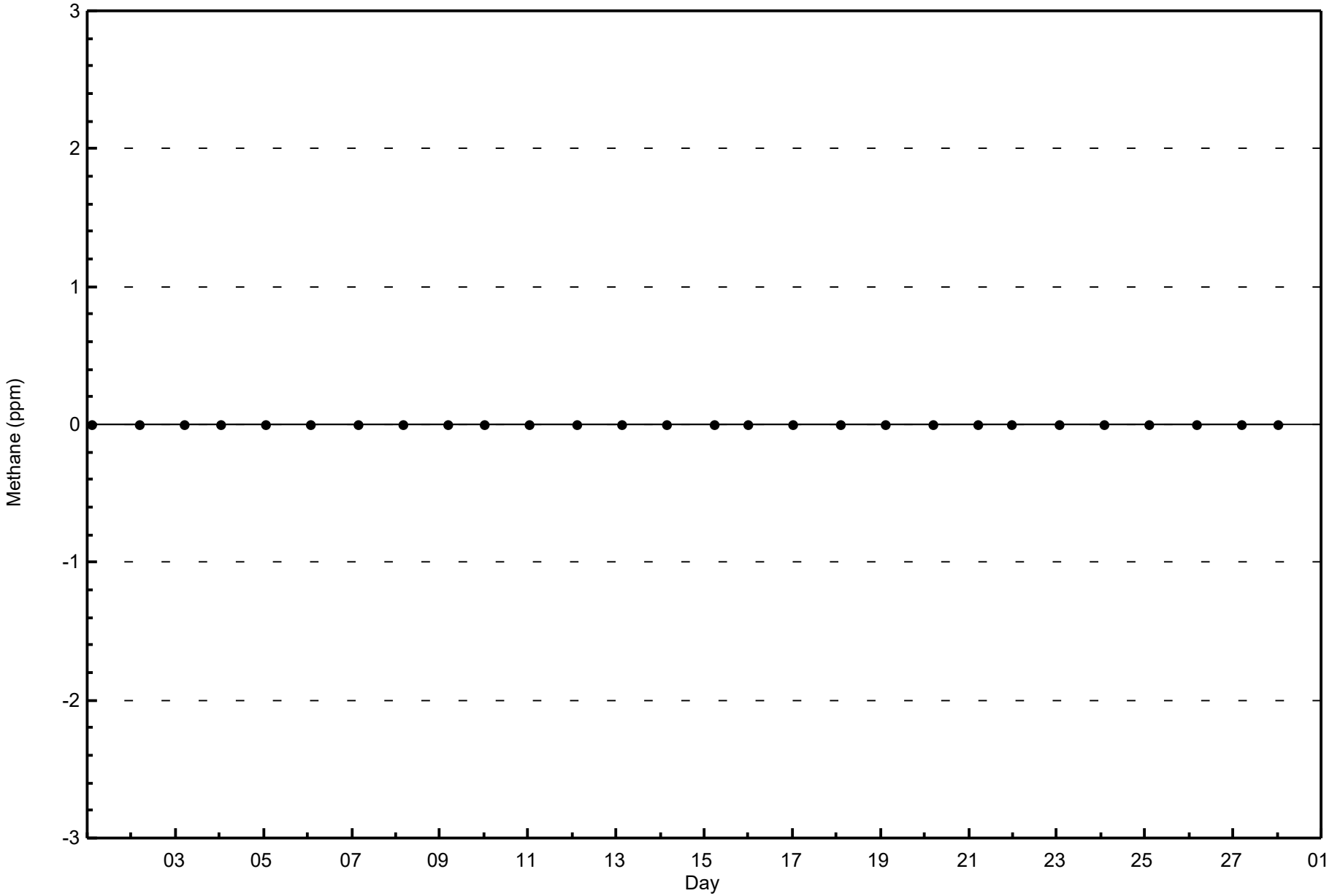
Total Number of Valid Hours: 631

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Fort McKay South - February 2025

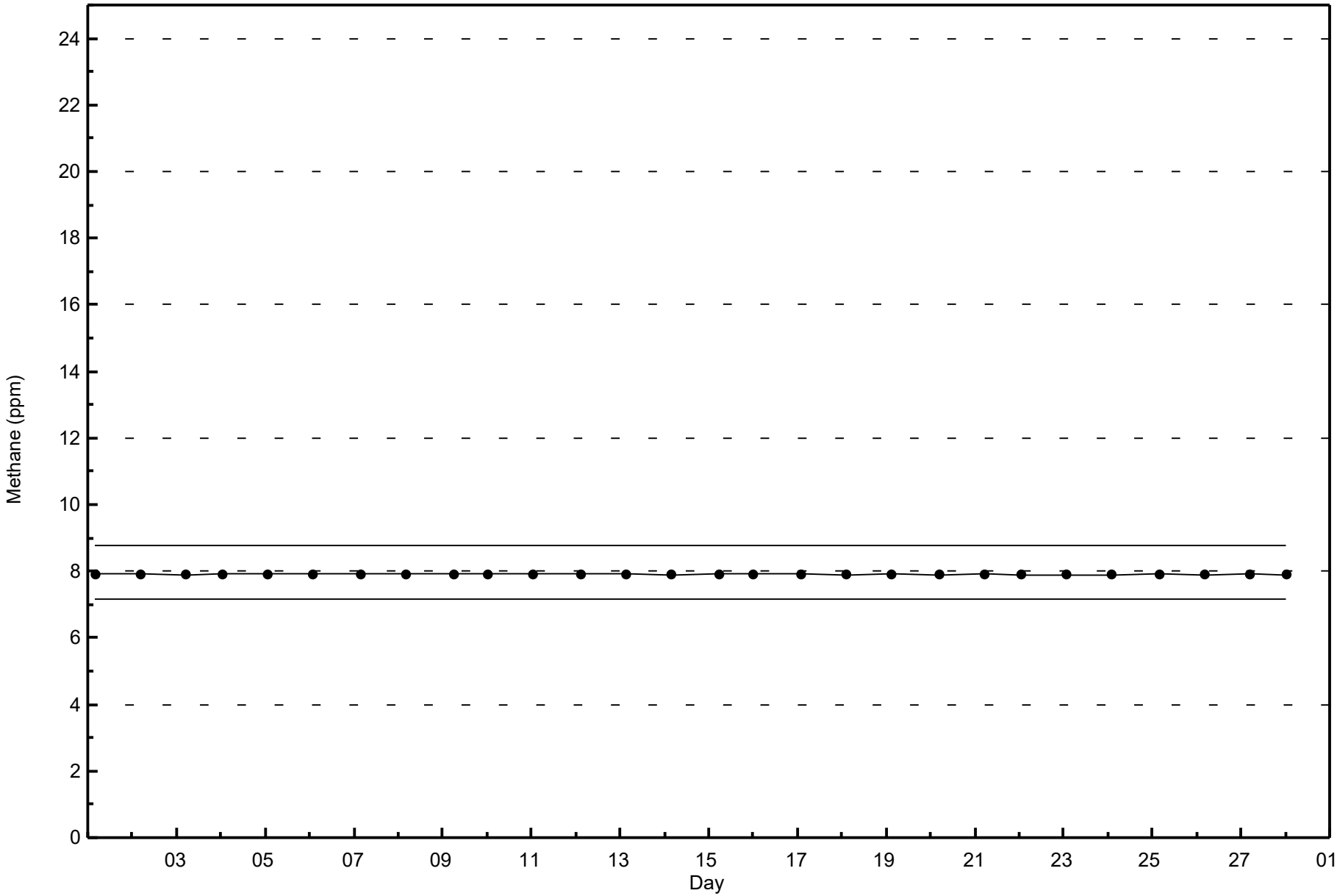


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Fort McKay South - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Fort McKay South - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 34.0 ppb on Feb 20 00:00 Maximum Daily Average: 30.2 ppb on Feb 6

Minimum Value: 0.5 ppb on Feb 15 07:00 Minimum Daily Average: 7.8 ppb on Feb 14
Maximum Diurnal Average: 25.4 ppb at hour 15 Minimum Diurnal Average: 10.1 ppb at hour 6
Monthly Average: 16.85 ppb Percentiles: P_1 = 0.6 P_{10} = 2.2 Q_1 = 8.4 Median = 18.4 Q_3 = 25.0 P_{90} = 29.1 P_{99} = 33.4

Hours in Service:	672
Hours of Data:	641
Hours of Missing Data:	31
Hours of Calibration:	31
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	21.5	22.5	23.3	23.9	23.3	Z	28.6	31.0	30.0	29.7	28.2	27.5	27.1	29.6	30.6	28.1	24.0	20.9	21.3	20.3	20.8	15.9	19.3	19.7	24.7	31.0
2-Feb	Z	20.7	21.2	21.2	17.7	19.3	23.1	20.7	22.0	22.4	22.1	23.9	24.1	22.7	21.8	20.1	17.0	13.5	13.2	21.3	17.7	14.1	10.0	8.4	19.1	24.1
3-Feb	8.2	Z	6.3	15.8	12.2	6.9	3.6	0.9	7.8	13.9	26.3	C	C	C	23.9	20.3	10.1	9.3	18.2	24.4	27.1	26.1	27.8	32.4	16.1	32.4
4-Feb	19.1	6.8	Z	1.1	1.7	2.7	3.9	10.1	12.1	20.5	27.5	30.0	31.8	31.3	31.4	28.4	22.7	16.5	15.2	13.8	16.1	24.4	28.0	27.4	18.4	31.8
5-Feb	23.0	19.0	20.4	Z	21.4	23.1	27.3	25.1	23.7	25.0	24.8	26.0	27.1	29.9	30.0	27.3	32.6	31.9	33.3	33.6	33.4	32.9	29.4	29.4	27.4	33.6
6-Feb	32.3	28.5	33.1	33.0	Z	33.4	33.9	33.8	31.8	28.4	30.5	32.0	30.8	30.4	30.2	32.0	32.1	31.4	28.7	27.2	27.4	26.6	23.0	24.5	30.2	33.9
7-Feb	26.2	27.2	32.0	32.0	18.8	Z	22.1	20.7	29.2	25.7	26.0	26.0	28.2	30.6	31.7	32.8	28.4	21.6	15.4	18.9	24.0	27.1	23.5	12.8	25.3	32.8
8-Feb	Z	9.2	3.5	6.9	3.5	2.3	6.1	1.6	2.5	8.2	13.6	17.4	20.5	22.2	24.6	21.0	19.4	8.4	2.2	9.1	27.2	28.3	26.1	24.9	13.4	28.3
9-Feb	25.0	Z	22.2	19.9	15.0	12.4	8.8	7.2	11.7	14.7	13.9	18.5	22.5	22.5	22.2	19.2	13.2	7.8	6.9	6.9	7.4	3.7	3.7	1.7	13.4	25.0
10-Feb	2.5	4.3	Z	1.3	1.9	1.8	2.0	3.6	6.7	15.5	18.4	22.0	27.4	28.5	29.6	26.4	25.9	18.6	7.3	11.7	1.5	2.2	1.0	0.9	11.3	29.6
11-Feb	0.6	0.8	0.8	Z	0.6	0.7	0.8	1.4	5.8	12.0	23.0	25.1	24.7	26.2	25.8	20.7	15.3	9.3	8.9	9.4	8.8	7.8	5.2	2.4	10.3	26.2
12-Feb	1.4	1.3	1.3	1.2	Z	1.2	1.1	1.2	2.6	5.7	13.0	17.4	23.3	31.1	27.8	24.1	22.6	20.5	17.2	18.4	12.0	12.6	14.4	16.5	12.5	31.1
13-Feb	17.6	14.5	11.9	9.6	9.6	Z	9.0	8.1	10.8	8.6	13.2	15.3	16.6	21.9	21.7	19.9	18.4	12.9	10.4	10.0	7.7	7.7	6.0	5.1	12.5	21.9
14-Feb	Z	3.2	1.6	1.1	1.0	1.0	1.0	0.9	3.2	6.2	11.2	13.0	18.8	21.8	24.3	22.1	18.2	12.2	7.5	5.1	3.4	1.2	0.7	0.6	7.8	24.3
15-Feb	0.5	Z	0.6	0.6	0.6	0.7	0.5	0.9	2.4	4.0	6.9	11.0	14.6	27.8	30.2	28.7	26.3	20.1	15.4	11.6	24.0	27.4	22.8	21.5	13.0	30.2
16-Feb	20.3	17.7	Z	15.2	14.0	6.6	1.0	1.1	4.3	8.1	12.1	18.0	21.9	22.2	19.8	22.4	26.4	25.1	19.3	17.2	16.0	11.3	3.9	8.5	14.4	26.4
17-Feb	16.8	17.0	19.0	Z	17.2	8.9	11.0	17.6	18.5	20.7	19.5	22.9	21.9	23.0	24.5	27.3	27.0	23.6	19.8	17.8	16.6	16.3	13.8	12.1	18.8	27.3
18-Feb	12.2	12.9	11.2	10.3	Z	12.0	11.8	13.8	14.9	16.2	19.4	21.8	23.8	25.4	25.1	18.5	20.0	13.4	11.3	10.3	16.5	22.0	26.4	28.2	17.3	28.2
19-Feb	29.1	27.7	25.7	23.9	25.3	Z	20.1	11.2	10.5	17.0	20.0	25.3	28.5	30.3	32.1	32.3	31.3	27.1	22.2	26.5	22.6	30.3	33.4	34.0	25.5	34.0
20-Feb	Z	33.1	28.6	32.3	29.6	30.2	30.2	30.6	29.4	29.2	28.7	27.8	26.9	28.1	26.4	24.3	18.0	11.6	6.7	2.5	2.0	3.0	2.7	1.7	21.0	33.1
21-Feb	1.2	Z	1.4	1.5	1.5	1.6	1.6	1.7	2.5	3.3	5.1	8.0	17.2	22.9	22.0	25.6	23.9	24.4	20.6	15.5	12.6	18.8	13.3	7.0	11.0	25.6
22-Feb	5.6	13.3	Z	14.6	21.7	10.2	2.6	2.0	3.0	5.3	10.3	13.3	12.6	9.7	12.3	14.8	15.1	7.1	2.6	2.2	2.1	2.1	2.0	2.1	8.1	21.7
23-Feb	2.3	2.2	2.2	Z	2.0	2.2	2.2	2.1	2.7	9.1	24.0	26.0	29.1	29.3	27.4	28.3	23.7	22.5	20.9	18.7	23.5	27.9	28.2	28.7	16.8	29.3
24-Feb	27.2	25.5	25.1	24.2	Z	12.9	8.9	12.8	14.1	15.7	17.3	14.5	13.1	16.7	21.4	22.1	19.0	16.6	12.4	8.7	5.4	1.9	6.3	13.0	15.4	27.2
25-Feb	20.3	21.3	20.9	25.1	23.0	Z	25.5	21.2	19.8	23.8	25.2	25.8	24.6	21.6	21.2	23.9	23.4	13.0	3.3	2.5	5.6	8.8	11.9	4.8	18.1	25.8
26-Feb	Z	2.5	2.3	2.3	2.2	2.3	2.2	2.6	5.3	17.2	22.0	22.7	24.7	27.1	21.6	20.6	19.8	14.2	12.4	9.0	7.8	7.9	3.6	2.5	11.1	27.1
27-Feb	2.6	Z	11.5	15.9	14.1	15.5	15.6	13.4	6.6	7.6	15.2	14.5	23.0	14.7	25.0	25.2	24.4	22.2	26.7	28.7	27.1	30.5	31.0	28.5	19.1	31.0
28-Feb	25.1	24.9	Z	32.6	28.5	25.1	25.5	21.0	21.3	23.1	19.0	17.5	19.3	21.3	25.5	25.9	23.1	20.0	9.6	10.0	12.2	12.7	7.6	6.2	19.9	32.6
	14.8	15.5	14.2	15.2	12.8	10.1	11.8	11.4	12.7	15.6	19.2	20.9	23.1	24.8	25.4	24.4	22.2	17.7	14.6	14.7	15.3	16.1	15.2	14.5	Diurnal Average	
	32.3	33.1	33.1	33.0	29.6	33.4	33.9	33.8	31.8	29.7	30.5	32.0	31.8	31.3	32.1	32.8	32.6	31.9	33.3	33.6	33.4	32.9	33.4	34.0	Diurnal Maximum	

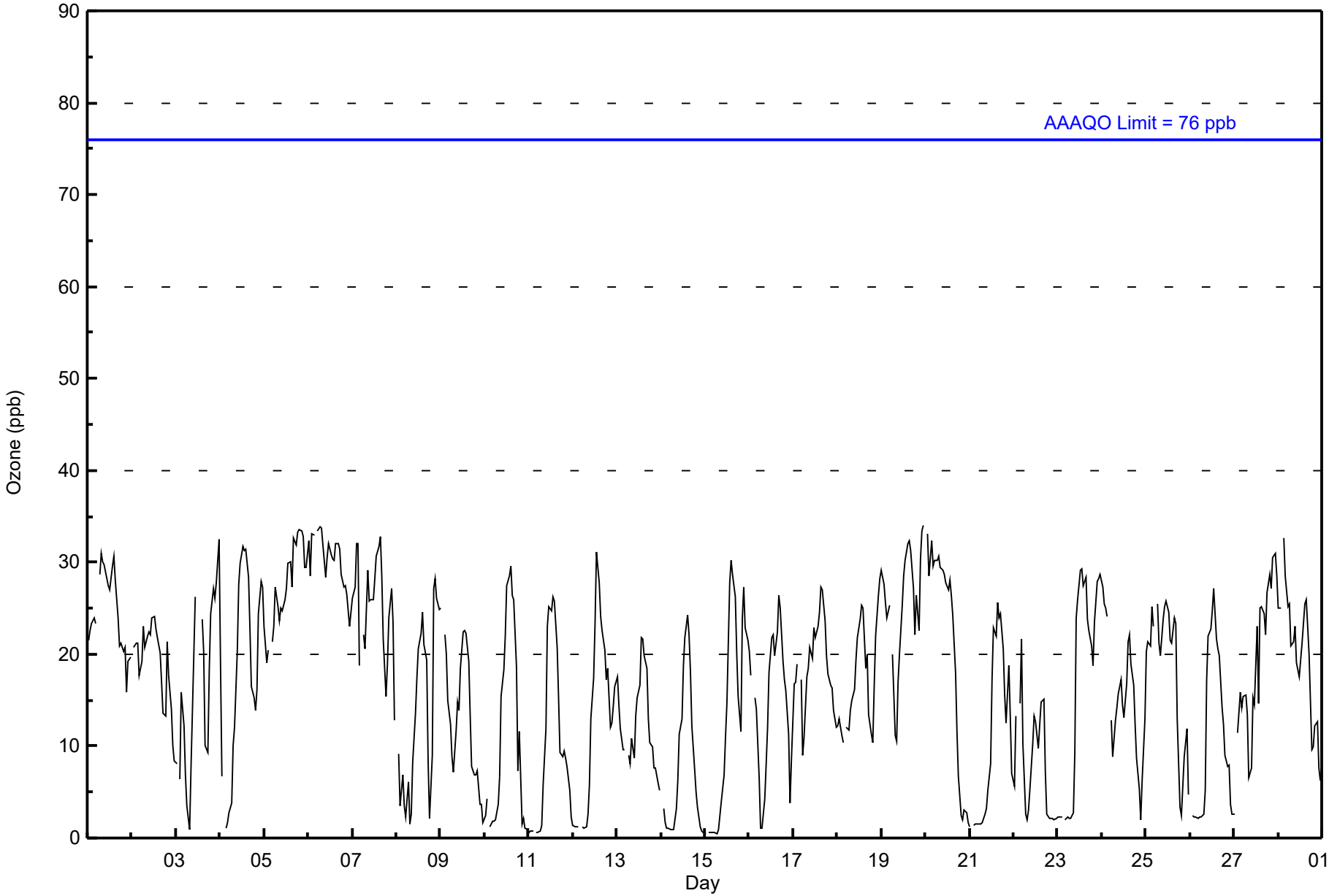
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Fort McKay South - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	363	56.63	56.63
21 - 50	278	43.37	100.00
51 - 82	0	0.00	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 641

Total Number of Hours: 672

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	54	34	3	4	3	6	8	28	57	37	17	31	18	13	9	33	355
21 - 50	59	52	9	3	1	2	4	24	47	24	9	20	11	5	5	2	277
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	113	86	12	7	4	8	12	52	104	61	26	51	29	18	14	35	632

Total Number of Valid Hours: 632

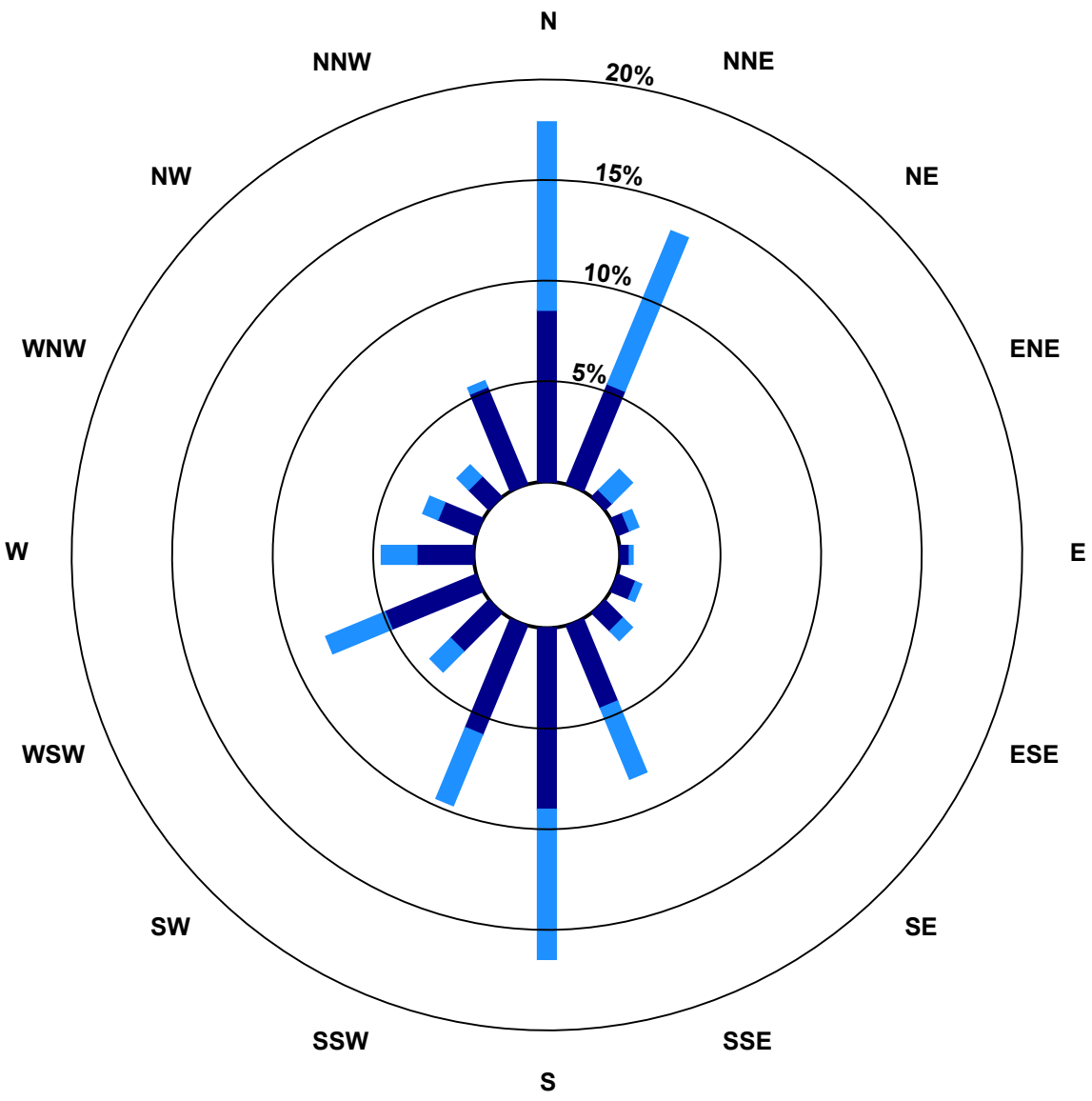
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Ozone (O_3) - ppb

Fort McKay South



Classes (ppb)

0 - 20

21 - 50

51 - 82

> 83

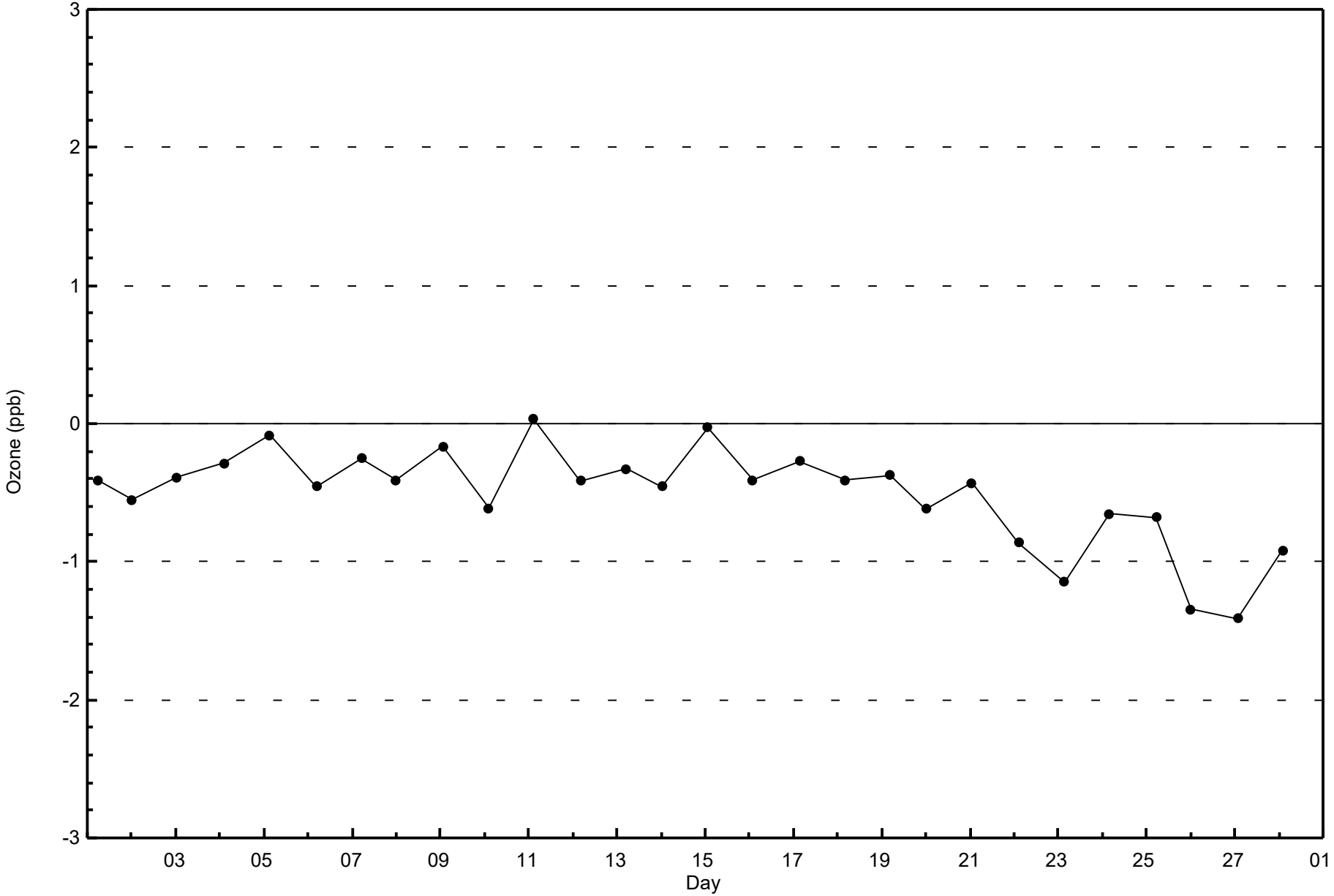
Total Number of Valid Hours: 632

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Fort McKay South - February 2025

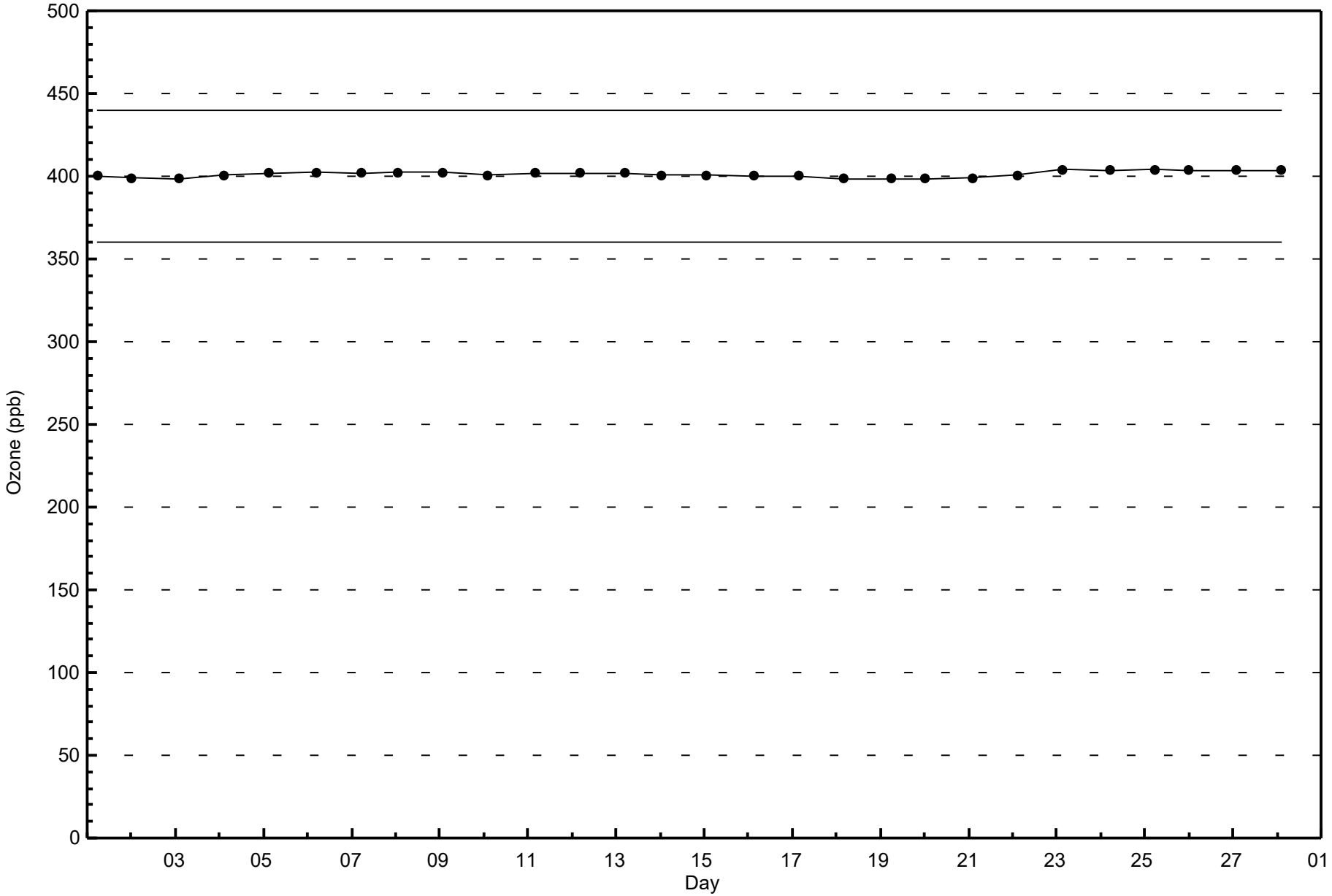


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Fort McKay South - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Fort McKay South - February 2025

Maximum Value: 107.6 ppb on Feb 21 11:00

Maximum Daily Average: 25.9 ppb on Feb 15

Minimum Value: 0.0 ppb on Feb 1 20:00

Minimum Daily Average: 0.3 ppb on Feb 1

Maximum Diurnal Average: 16.4 ppb at hour 10

Minimum Diurnal Average: 0.7 ppb at hour 21

Monthly Average: 6.01 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 1.2 Q_3 = 6.1 P_{90} = 17.6 P_{99} = 57.5

Hours in Service:	672
Hours of Data:	638
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-Feb	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.9	1.3	1.5	0.6	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.5
2-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.2	0.9	1.8	1.6	1.7	2.6	2.5	2.2	1.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.7	2.6
3-Feb	0.0	0.9	0.2	Z	0.2	0.3	1.3	8.5	5.1	8.0	1.9	1.8	4.4	17.4	6.7	5.8	6.8	1.5	0.0	0.0	0.0	0.0	0.0	0.0	3.1	17.4
4-Feb	1.6	1.7	2.9	6.0	Z	3.2	1.1	0.1	1.7	4.4	3.4	2.8	2.0	2.5	3.6	2.3	1.6	0.2	0.1	0.1	0.1	0.1	0.1	0.1	1.8	6.0
5-Feb	0.1	0.1	0.1	0.2	0.2	Z	0.2	0.1	0.6	1.2	C	C	C	C	C	C	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.0	--	1.2
6-Feb	Z	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.7	0.8	1.4	1.4	1.3	0.7	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.4	1.4
7-Feb	0.1	Z	0.2	0.1	0.2	0.2	0.1	0.0	0.1	2.1	3.4	5.2	4.3	2.9	2.3	1.2	0.9	0.4	0.3	0.3	0.2	0.1	0.1	0.5	1.1	5.2
8-Feb	6.5	6.1	Z	0.5	2.5	3.9	0.5	7.5	30.3	33.1	27.6	22.8	16.9	13.0	8.4	7.3	2.8	2.3	13.9	32.2	0.2	0.2	0.1	0.1	10.4	33.1
9-Feb	0.1	0.0	0.1	Z	0.0	0.0	0.0	0.1	1.3	3.0	15.9	11.7	5.3	4.7	4.0	4.7	4.1	0.8	0.1	0.1	0.1	0.8	2.0	6.8	2.9	15.9
10-Feb	2.6	1.6	5.8	11.9	Z	6.6	2.4	0.7	4.2	8.8	12.2	8.5	4.1	2.6	1.5	2.9	1.0	1.5	3.4	0.4	9.3	5.0	4.8	4.5	4.6	12.2
11-Feb	5.6	6.6	6.6	7.2	7.0	Z	6.5	3.0	5.0	10.1	5.0	4.9	6.9	5.2	5.1	7.9	5.1	1.2	0.2	0.2	0.2	0.2	0.4	1.1	4.4	10.1
12-Feb	Z	1.6	3.3	7.6	15.5	18.2	19.1	20.4	23.8	27.3	13.8	10.2	5.2	2.9	3.6	4.4	2.4	0.5	0.2	0.1	0.2	0.1	0.1	0.1	7.8	27.3
13-Feb	0.0	Z	0.0	0.1	0.0	0.0	0.0	0.1	2.7	20.1	22.2	29.7	24.1	12.9	10.4	7.6	3.4	0.9	0.2	0.1	0.1	0.0	0.1	0.0	5.9	29.7
14-Feb	0.1	0.1	Z	2.7	7.7	24.7	37.2	35.2	34.5	56.2	33.7	31.1	13.7	6.7	3.4	4.5	3.4	0.7	0.1	0.1	0.3	1.4	2.4	18.9	13.9	56.2
15-Feb	46.5	49.1	44.2	Z	55.8	59.1	58.2	50.4	52.2	63.2	53.8	35.5	20.9	2.4	0.4	0.9	1.0	0.4	0.1	0.2	0.1	0.1	0.1	0.1	25.9	63.2
16-Feb	0.1	0.0	0.0	0.1	Z	0.9	11.8	15.4	19.8	25.4	19.6	13.0	8.2	10.8	11.6	7.1	1.8	0.5	0.3	0.3	0.3	0.2	2.4	1.5	6.6	25.4
17-Feb	0.2	0.2	0.2	0.2	0.2	Z	1.0	0.6	1.2	2.0	5.7	4.6	7.4	6.3	5.0	1.9	0.8	0.5	0.3	0.3	0.2	0.1	0.1	0.1	1.7	7.4
18-Feb	Z	0.1	0.2	0.1	0.2	0.2	0.4	0.4	2.8	9.2	10.6	9.2	7.8	6.7	6.1	11.6	3.9	1.5	0.5	0.4	0.3	0.2	0.2	0.2	3.2	11.6
19-Feb	0.2	Z	0.2	0.1	0.1	0.1	0.0	0.7	8.3	10.8	11.6	5.4	3.3	2.5	1.6	1.2	0.9	0.4	0.2	0.2	0.1	0.0	0.0	0.0	2.1	11.6
20-Feb	0.0	0.0	Z	0.2	0.1	0.0	0.0	0.0	0.2	0.3	0.4	0.8	1.6	2.6	4.2	4.4	4.7	2.0	0.6	2.4	2.2	0.6	0.7	4.5	1.4	4.7
21-Feb	11.3	13.8	21.3	Z	29.1	33.5	35.7	38.8	51.0	95.6	107.6	76.3	9.0	5.1	4.4	1.9	1.8	0.5	0.2	0.2	0.3	0.2	0.2	0.5	23.4	107.6
22-Feb	0.6	0.2	0.2	0.1	Z	1.1	15.1	26.8	30.6	28.9	18.9	19.9	24.9	31.4	30.5	15.8	7.0	4.0	2.3	4.0	2.5	6.5	16.3	39.2	14.2	39.2
23-Feb	60.6	41.8	15.8	12.6	11.7	Z	8.0	14.0	23.8	15.6	1.2	1.4	1.0	1.9	2.3	1.5	1.7	0.5	0.1	0.1	0.0	0.0	0.0	0.0	9.4	60.6
24-Feb	Z	0.0	0.0	0.0	0.0	0.0	0.4	0.8	2.9	5.3	5.4	18.9	25.3	19.8	5.5	1.8	1.3	0.8	0.1	0.1	2.6	11.2	0.7	0.1	4.5	25.3
25-Feb	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.2	1.4	2.6	3.3	4.4	6.2	11.6	8.4	5.1	2.8	2.9	2.6	2.4	0.5	0.1	0.2	1.0	2.4	11.6
26-Feb	7.7	21.8	Z	9.4	8.8	10.6	11.7	25.0	46.6	7.4	5.7	7.7	8.0	4.6	12.6	13.1	6.1	3.3	0.3	0.3	0.4	0.3	1.6	5.5	9.5	46.6
27-Feb	6.7	0.9	0.1	Z	0.0	0.0	0.0	0.3	7.5	14.1	4.8	7.2	2.3	14.8	2.5	2.0	1.5	0.7	0.1	0.1	0.1	0.1	0.1	0.1	2.9	14.8
28-Feb	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.2	1.1	2.3	6.0	9.4	10.4	9.4	6.1	4.5	4.8	1.8	0.5	0.3	0.3	0.3	0.4	0.3	2.6	10.4
	6.3	6.4	4.4	2.6	6.1	6.8	7.5	8.9	12.8	16.4	14.7	12.8	8.4	7.6	5.7	4.6	2.6	1.1	1.0	1.6	0.7	1.0	1.2	3.1	Diurnal Average	
	60.6	49.1	44.2	12.6	55.8	59.1	58.2	50.4	52.2	95.6	107.6	76.3	25.3	31.4	30.5	15.8	7.0	4.0	13.9	32.2	9.3	11.2	16.3	39.2	Diurnal Maximum	

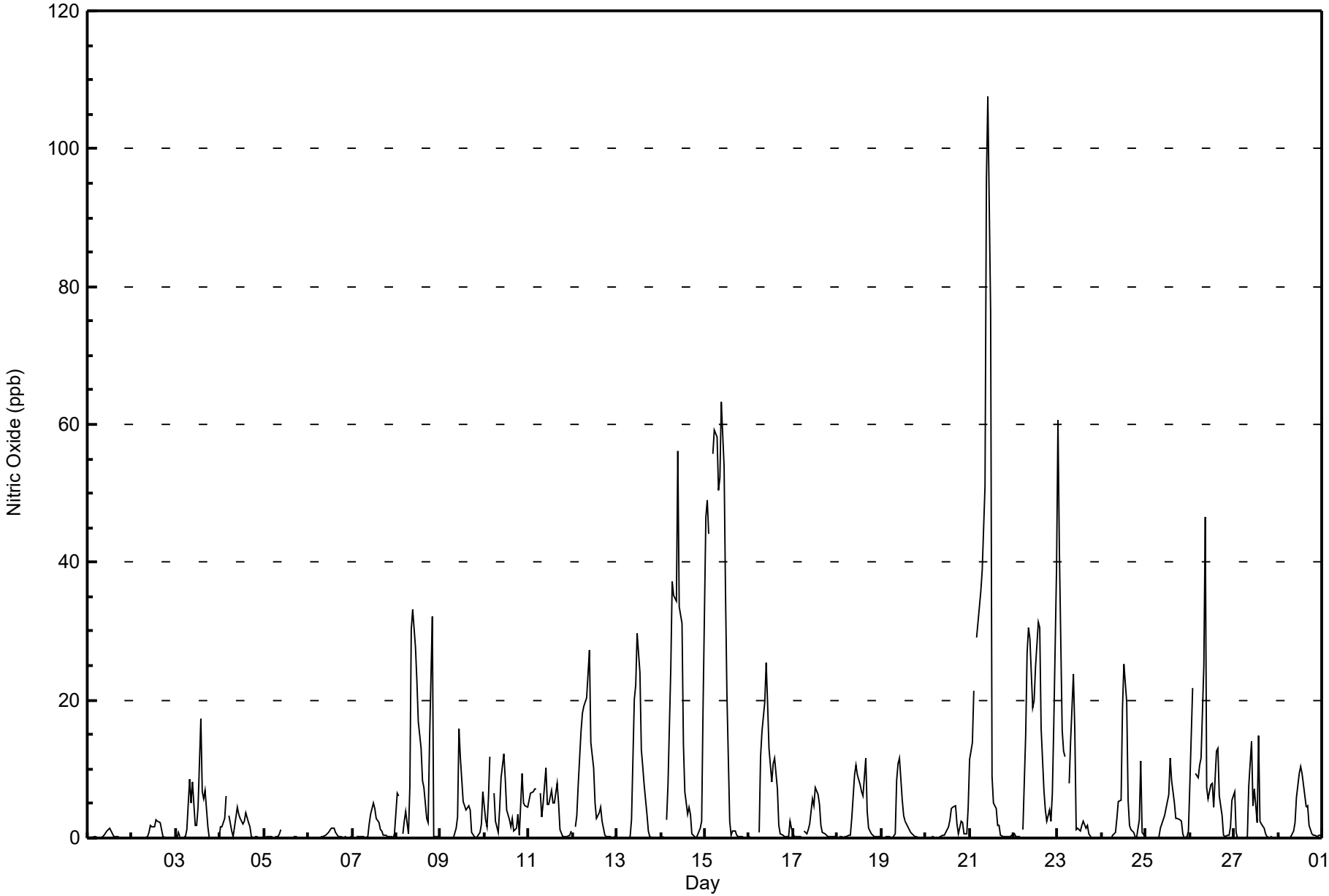
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Fort McKay South - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	585	91.69	91.69
21 - 40	35	5.49	97.18
11 - 80	16	2.51	99.69
81 - 159	2	0.31	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 638

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Fort McKay South - February 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	76	11	5	3	3	10	46	99	55	23	47	30	16	15	31	578
21 - 40	3	5	1	2	1	4	2	4	1	3	2	0	2	1	0	4	35
11 - 80	2	1	0	0	0	1	1	1	6	0	1	1	0	1	0	0	15
81 - 159	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	114	83	12	7	4	8	13	51	106	58	26	48	32	18	15	35	630

Total Number of Valid Hours: 630

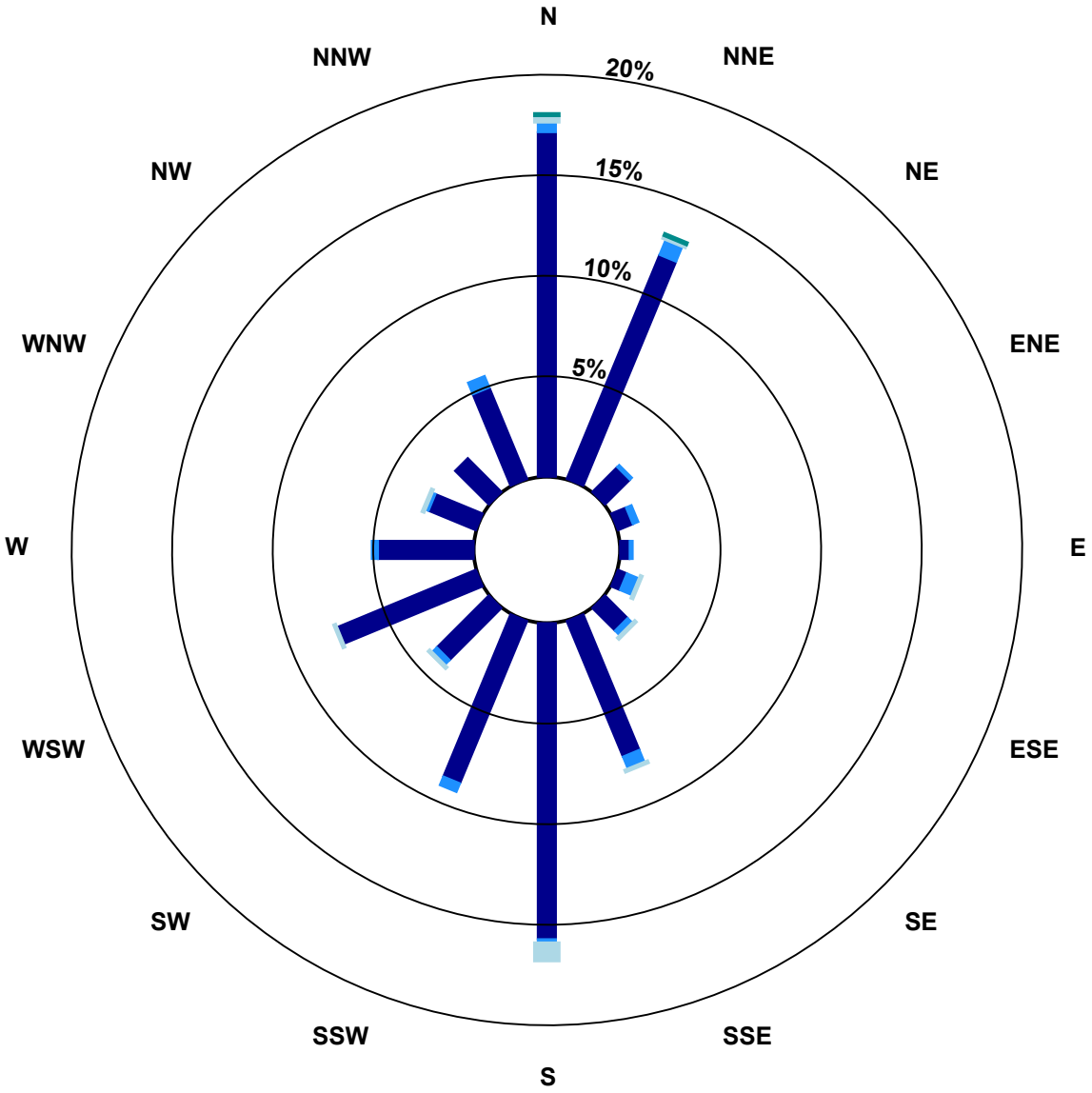
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitric Oxide (NO) - ppb

Fort McKay South



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

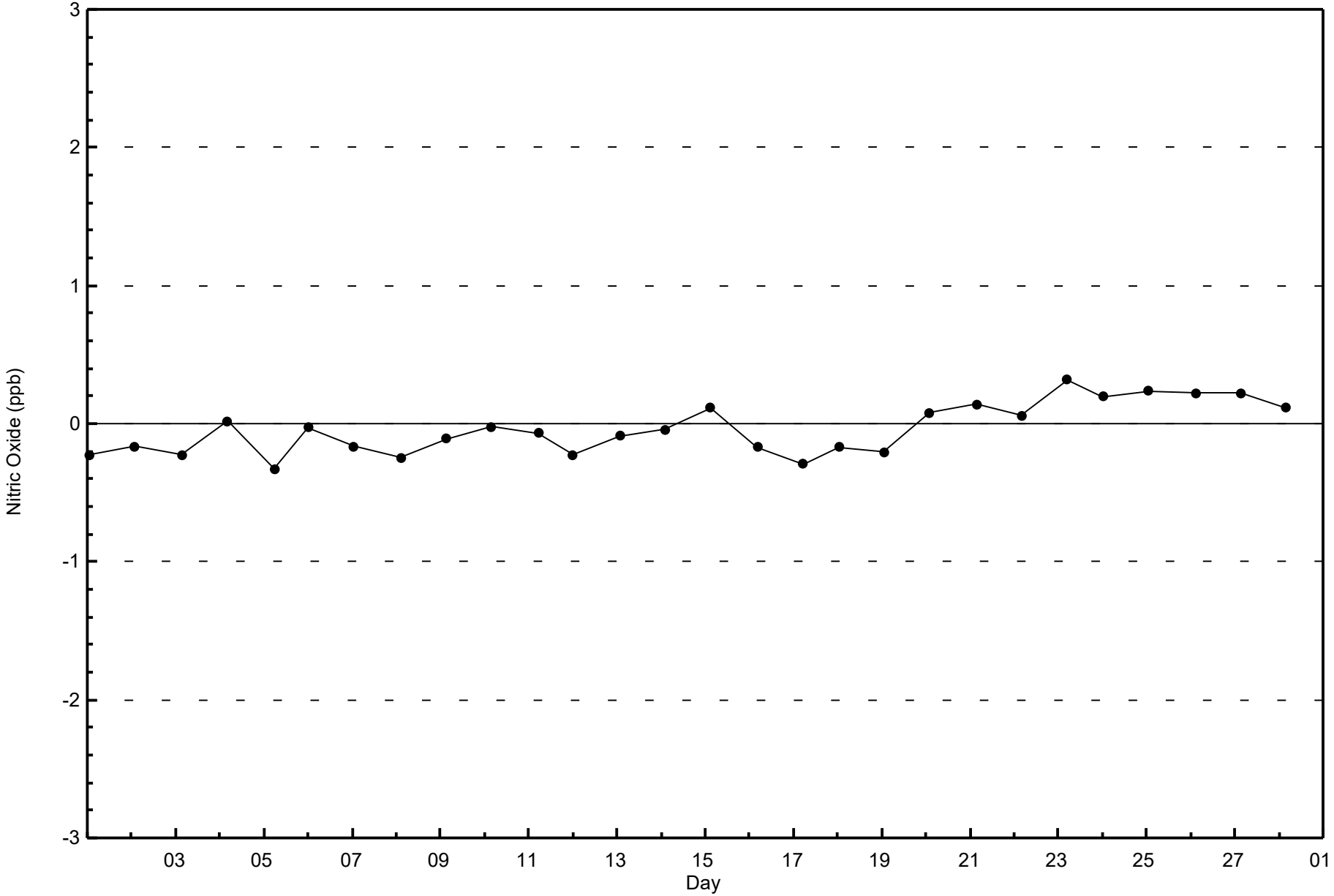
Total Number of Valid Hours: 630

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Fort McKay South - February 2025

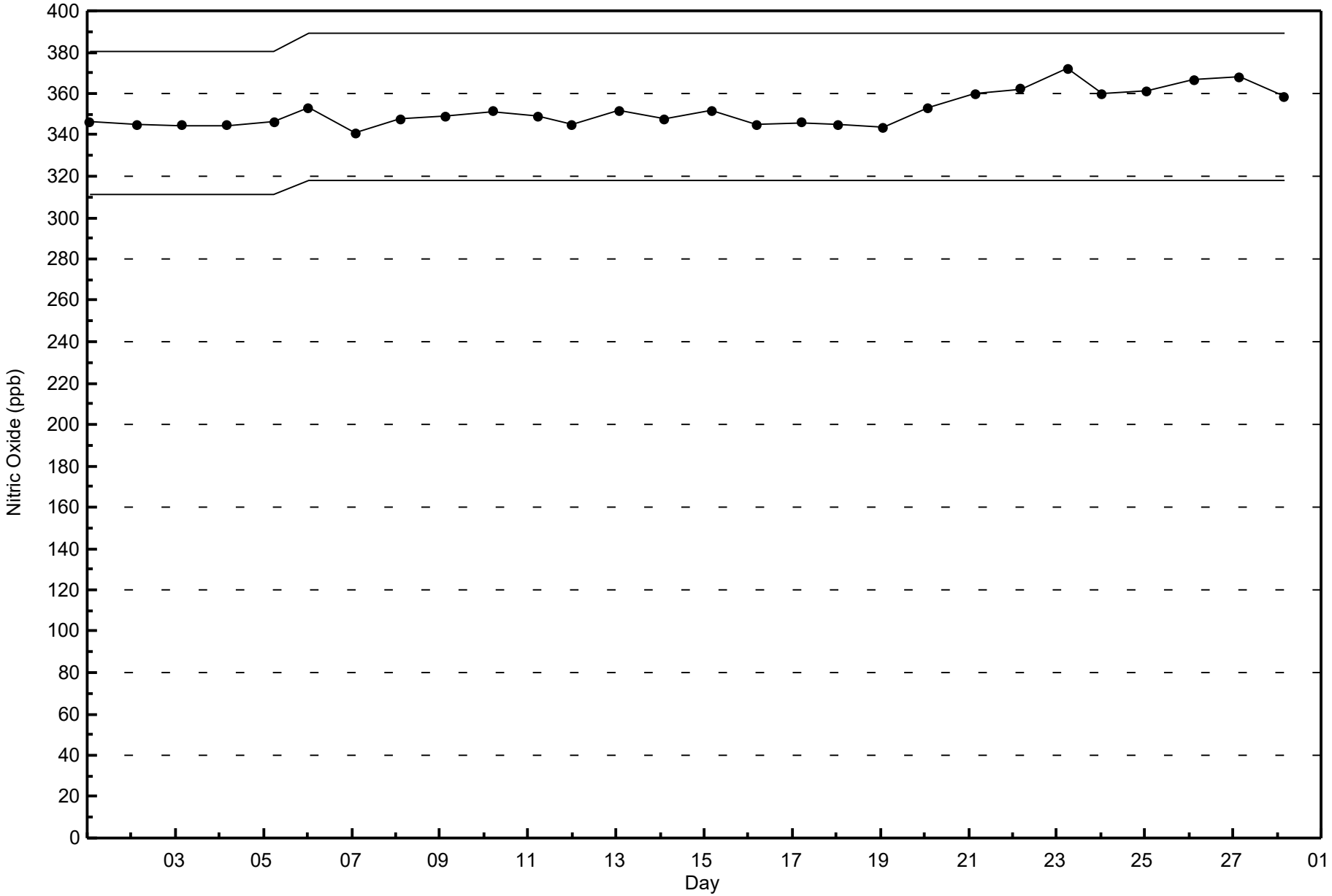


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Fort McKay South - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Fort McKay South - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 39.5 ppb on Feb 21 11:00 Maximum Daily Average: 23.7 ppb on Feb 22

Minimum Value: 0.6 ppb on Feb 6 08:00 Minimum Daily Average: 3.7 ppb on Feb 6
Maximum Diurnal Average: 17.0 ppb at hour 2 Minimum Diurnal Average: 8.8 ppb at hour 15
Monthly Average: 13.81 ppb Percentiles: P_1 = 1.3 P_{10} = 4.2 Q_1 = 6.8 Median = 12.3 Q_3 = 19.9 P_{90} = 26.3 P_{99} = 34.0

Hours in Service:	672
Hours of Data:	638
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-Feb	7.9	Z	6.3	5.8	6.8	7.1	5.1	3.8	4.5	4.2	4.6	4.4	4.7	2.4	0.9	1.8	3.3	4.8	4.4	5.2	4.2	9.4	5.7	4.9	4.9	9.4
2-Feb	7.3	6.1	Z	7.0	10.9	9.4	5.3	7.6	6.4	5.7	6.0	3.9	3.5	5.4	6.8	8.4	11.4	14.4	15.1	5.6	5.6	6.4	9.8	10.4	7.8	15.1
3-Feb	10.7	13.6	13.2	Z	10.1	12.6	15.8	19.5	14.7	10.6	4.1	3.2	6.8	17.9	10.0	14.2	24.0	23.6	16.3	10.1	7.1	8.1	5.8	1.5	11.9	24.0
4-Feb	16.9	26.7	28.9	32.8	Z	30.1	28.6	22.2	20.0	11.9	6.6	4.6	3.4	4.5	5.5	8.2	13.8	19.1	16.6	17.2	16.5	9.4	5.7	6.8	15.5	32.8
5-Feb	11.4	15.8	14.5	13.7	13.7	Z	7.8	10.3	11.9	10.5	C	C	C	C	C	C	2.9	3.3	1.5	1.0	1.2	2.1	6.2	6.7	--	15.8
6-Feb	Z	8.0	2.4	1.9	3.3	1.6	0.7	0.6	2.4	6.7	4.5	3.4	5.1	5.1	5.1	3.3	2.2	2.0	3.6	1.4	0.8	5.5	7.9	7.3	3.7	8.0
7-Feb	5.8	Z	1.1	1.4	13.4	10.3	7.1	6.1	2.6	6.5	7.9	9.0	7.0	5.5	5.2	4.2	7.1	11.0	19.6	16.7	8.5	6.8	8.3	14.7	8.1	19.6
8-Feb	28.1	22.0	Z	21.7	24.9	25.2	17.4	24.6	26.3	24.2	22.8	19.7	17.4	16.1	14.0	17.2	17.1	29.2	37.5	32.2	6.8	4.9	6.7	7.5	20.2	37.5
9-Feb	6.1	7.3	7.1	Z	9.5	11.7	13.9	15.2	10.7	5.5	13.8	11.1	5.7	5.2	5.6	8.7	14.2	15.7	14.9	14.1	13.8	17.6	18.9	21.9	11.7	21.9
10-Feb	20.8	19.8	24.9	27.0	Z	24.7	25.1	22.6	19.9	16.0	16.1	12.3	6.0	4.9	4.5	8.5	9.0	14.3	29.0	22.8	35.2	31.4	30.2	28.5	19.7	35.2
11-Feb	27.8	27.1	27.5	26.9	26.0	Z	27.0	26.2	21.3	18.8	11.4	9.8	10.8	8.9	10.3	16.6	20.0	21.5	18.0	15.3	14.1	13.9	16.7	21.3	19.0	27.8
12-Feb	Z	23.2	24.1	26.6	29.2	29.0	28.2	28.1	28.2	25.9	16.5	12.0	6.6	5.0	8.4	12.6	14.2	15.1	15.1	13.9	21.7	22.1	20.2	18.6	19.3	29.2
13-Feb	17.5	Z	23.3	20.1	17.2	16.7	17.1	17.5	14.6	21.7	18.4	21.5	18.9	13.0	12.6	13.4	13.1	15.6	14.5	15.6	17.3	16.8	17.8	18.5	17.1	23.3
14-Feb	18.7	20.1	Z	21.8	22.3	23.9	24.8	23.3	20.9	25.5	17.9	16.5	9.9	6.9	4.7	7.9	11.5	13.7	16.4	18.7	19.9	22.8	22.6	24.7	18.1	25.5
15-Feb	27.9	27.6	26.5	Z	28.4	28.0	27.7	26.8	28.1	29.2	27.2	21.3	17.9	4.3	1.8	4.1	5.7	8.8	8.8	10.6	9.3	5.1	4.5	4.1	16.7	29.2
16-Feb	4.1	5.4	6.0	5.4	Z	14.6	25.1	25.2	21.6	18.7	18.9	13.4	9.4	10.9	14.8	12.3	7.2	7.0	7.5	7.0	7.2	10.9	16.9	11.5	12.2	25.2
17-Feb	2.3	2.8	2.0	3.1	5.1	Z	15.5	8.8	7.7	5.1	8.0	5.4	7.0	6.8	6.5	3.5	2.7	4.0	3.2	3.4	3.2	3.8	9.8	11.2	5.7	15.5
18-Feb	Z	9.2	8.7	10.2	12.4	10.7	9.6	9.6	9.5	12.2	10.5	9.3	7.4	7.7	8.5	15.7	12.9	15.9	15.1	17.4	12.5	8.8	6.8	6.6	10.7	17.4
19-Feb	5.4	Z	6.7	6.9	5.1	6.5	9.1	17.1	22.9	16.0	13.2	7.1	4.5	4.0	3.3	3.9	5.2	7.2	11.3	9.9	14.2	6.8	4.0	3.7	8.4	22.9
20-Feb	3.4	4.5	Z	3.9	6.3	5.3	4.4	3.5	4.4	4.5	4.4	5.2	5.8	4.9	7.3	9.7	15.6	19.5	20.3	24.1	25.1	21.8	20.4	21.7	10.7	25.1
21-Feb	22.1	21.2	22.0	Z	24.3	29.6	27.2	22.4	25.3	34.1	39.5	33.8	16.0	11.5	13.4	8.8	11.7	11.6	15.3	21.3	24.8	17.4	23.2	30.2	22.0	39.5
22-Feb	32.1	20.8	15.2	20.0	Z	23.6	34.4	36.0	35.1	32.6	26.8	23.9	25.6	30.3	26.7	22.0	18.3	18.2	18.0	17.8	17.1	17.5	16.5	15.6	23.7	36.0
23-Feb	23.2	30.1	27.3	26.0	22.5	Z	17.6	9.1	8.0	15.3	5.5	5.5	5.0	6.2	8.0	6.5	12.0	13.4	12.9	14.1	7.1	3.8	3.9	3.4	12.5	30.1
24-Feb	Z	8.3	8.4	8.5	11.5	21.7	25.6	20.8	19.0	16.6	15.0	21.0	22.6	19.1	9.6	7.7	10.1	11.9	10.6	11.9	14.1	32.7	25.1	18.4	16.1	32.7
25-Feb	11.3	Z	13.1	9.1	10.9	7.0	8.6	13.6	15.8	12.2	10.3	10.7	13.1	18.7	16.0	12.1	12.8	27.3	30.8	30.3	28.5	24.1	19.1	26.3	16.6	30.8
26-Feb	31.7	33.6	Z	25.2	21.6	19.5	17.0	18.5	25.7	15.0	10.5	10.2	8.7	6.0	13.9	16.4	16.7	22.0	20.2	21.7	23.1	24.0	29.4	32.6	20.1	33.6
27-Feb	32.4	26.5	19.2	Z	15.9	11.7	10.4	12.0	22.3	21.4	9.9	11.6	4.1	16.4	7.1	8.5	9.6	12.0	7.3	6.3	9.9	6.2	6.1	8.9	12.9	32.4
28-Feb	12.0	10.3	3.5	1.9	Z	5.8	6.8	11.9	13.0	10.3	15.2	16.9	15.1	13.3	8.3	8.5	13.1	14.5	23.6	23.1	19.2	12.4	13.4	9.3	12.2	23.6
	16.1	17.0	14.4	14.2	15.3	16.1	16.5	16.5	16.5	15.6	13.5	12.1	9.9	9.7	8.8	9.8	11.3	14.2	15.3	14.6	13.9	13.3	13.6	14.2	Diurnal Average	
	32.4	33.6	28.9	32.8	29.2	30.1	34.4	36.0	35.1	34.1	39.5	33.8	25.6	30.3	26.7	22.0	24.0	29.2	37.5	32.2	35.2	32.7	30.2	32.6	Diurnal Maximum	

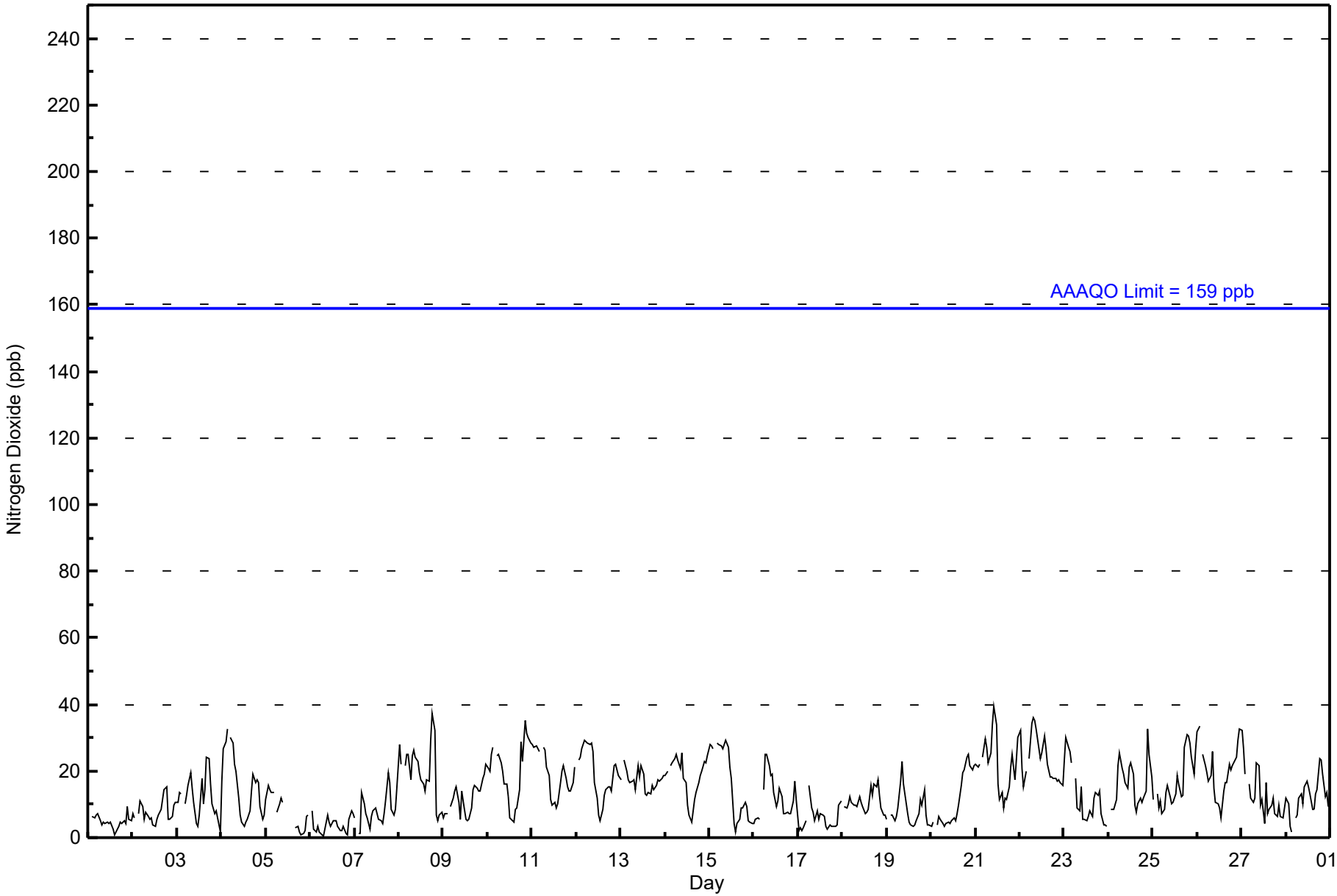
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Fort McKay South - February 2025



Nitrogen Dioxide (NO_2) - ppb
Fort McKay South - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	489	76.65	76.65
21 - 40	149	23.35	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: 638

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Fort McKay South - February 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	86	74	11	4	4	5	10	44	80	43	18	40	25	13	10	19	486
21 - 40	28	9	1	3	0	3	3	7	26	15	8	8	7	5	5	16	144
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	114	83	12	7	4	8	13	51	106	58	26	48	32	18	15	35	630

Total Number of Valid Hours: 630

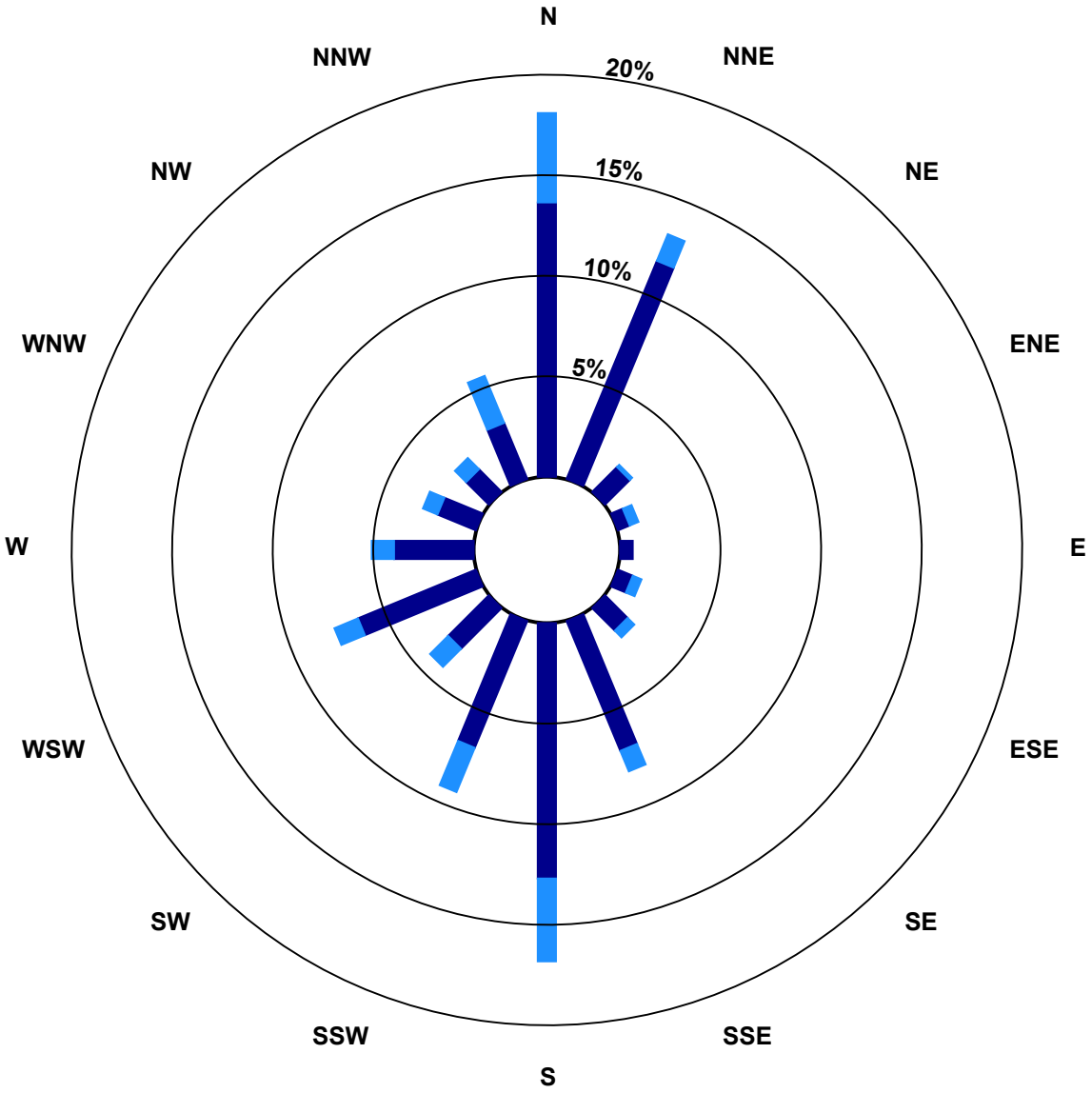
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Dioxide (NO_2) - ppb

Fort McKay South



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

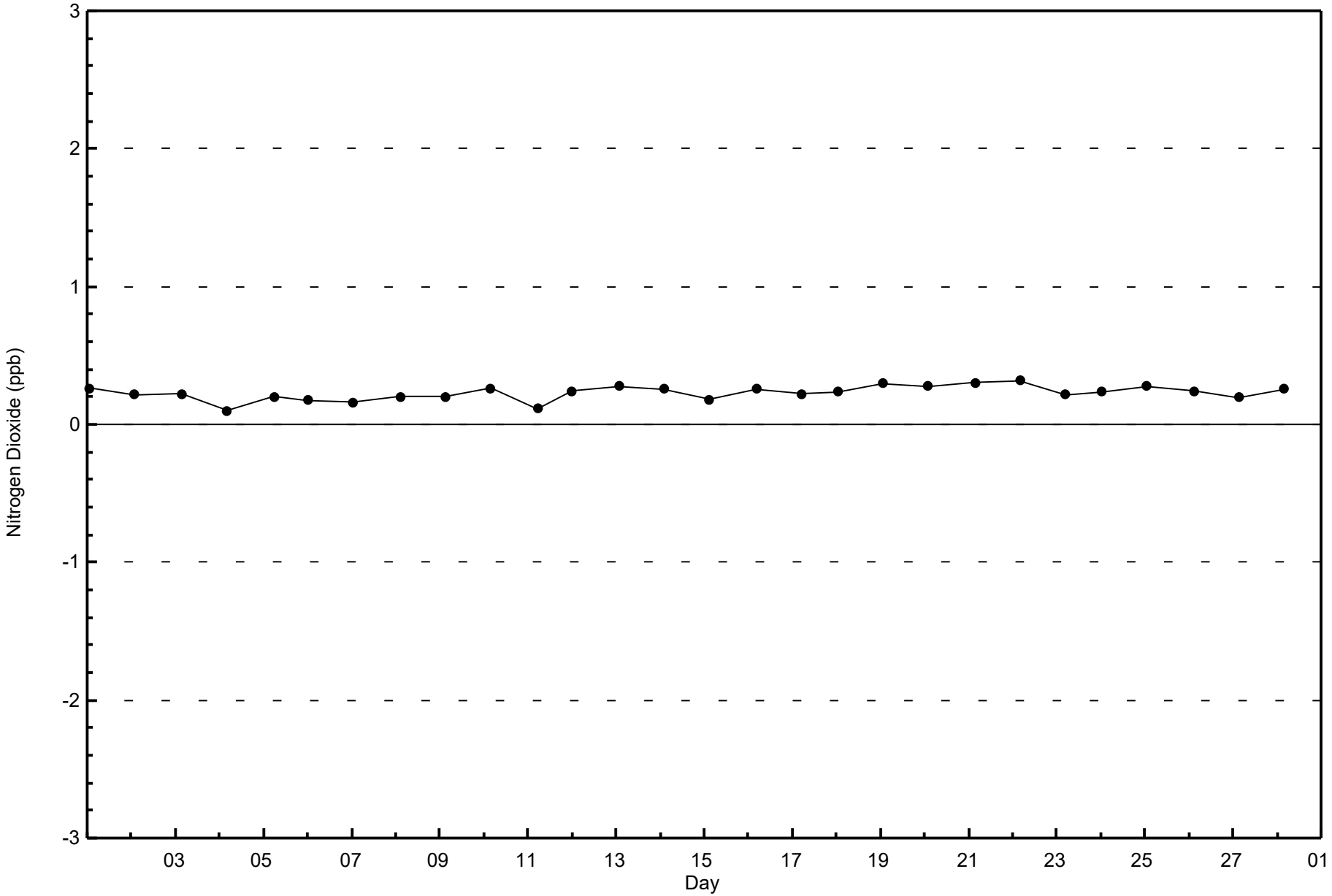
Total Number of Valid Hours: 630

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Fort McKay South - February 2025

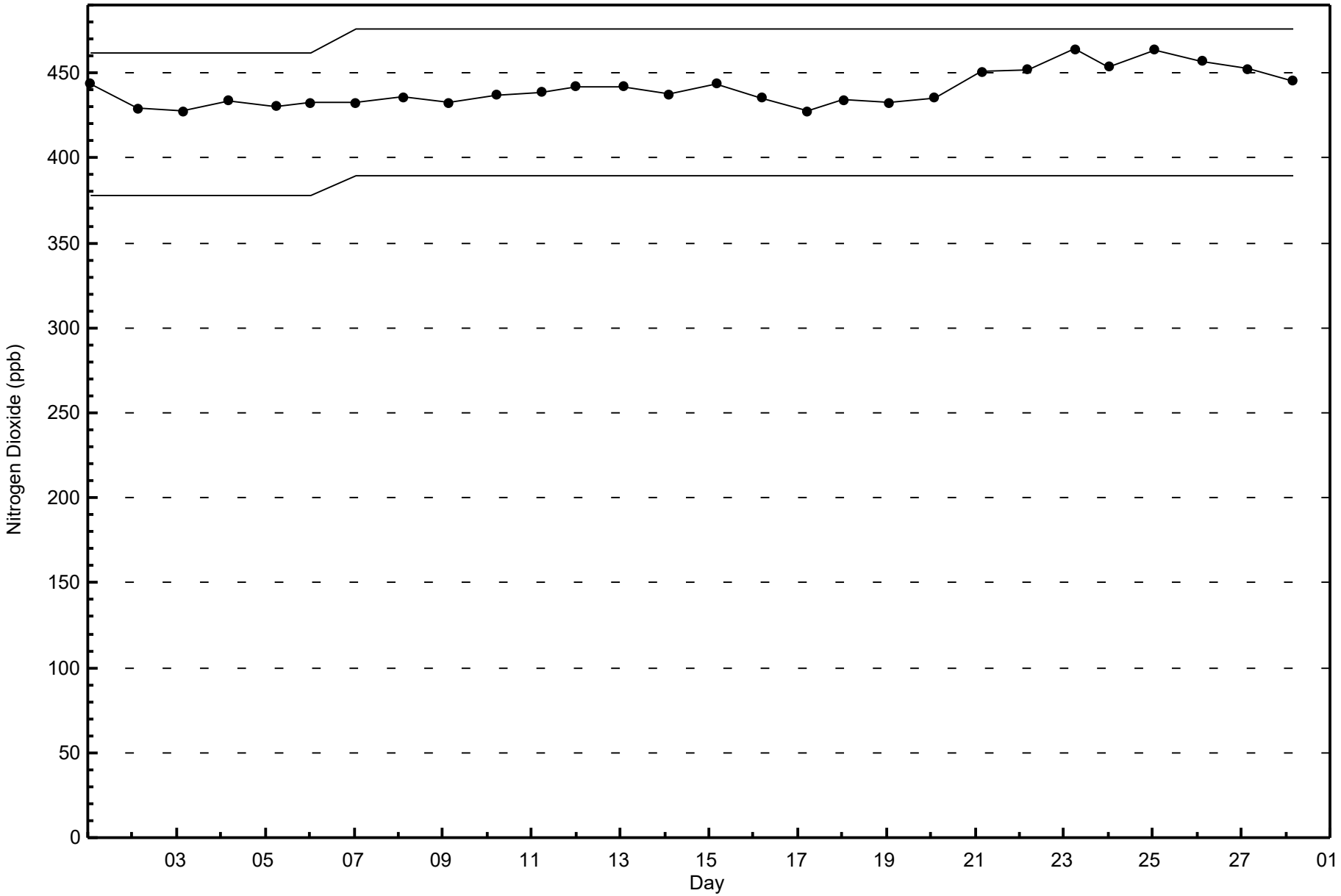


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Fort McKay South - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Fort McKay South - February 2025

Maximum Value: 147.1 ppb on Feb 21 11:00

Maximum Daily Average: 45.4 ppb on Feb 21

Minimum Value: 0.7 ppb on Feb 6 08:00

Minimum Daily Average: 4.1 ppb on Feb 6

Maximum Diurnal Average: 32.0 ppb at hour 10

Minimum Diurnal Average: 14.0 ppb at hour 17

Monthly Average: 19.83 ppb

Percentiles: P_1 = 1.4 P_{10} = 4.9 Q_1 = 7.6 Median = 14.8 Q_3 = 25.1 P_{90} = 40.8 P_{99} = 84.1

Hours in Service:	672
Hours of Data:	638
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-Feb	8.0	Z	6.4	5.9	6.9	7.2	5.2	3.9	4.6	4.6	5.5	5.7	6.2	3.0	1.1	2.0	3.4	4.8	4.4	5.2	4.2	9.4	5.7	4.9	5.1	9.4
2-Feb	7.3	6.1	Z	7.0	10.9	9.4	5.3	7.6	6.6	6.6	7.8	5.5	5.2	8.0	9.3	10.6	12.6	14.6	15.2	5.6	5.6	6.4	9.8	10.4	8.4	15.2
3-Feb	10.7	14.5	13.4	Z	10.3	12.9	17.1	28.0	19.8	18.6	6.0	5.0	11.2	35.3	16.7	20.0	30.8	25.1	16.3	10.1	7.1	8.1	5.8	1.5	15.0	35.3
4-Feb	18.5	28.4	31.8	38.8	Z	33.3	29.7	22.3	21.7	16.3	10.0	7.4	5.4	7.0	9.1	10.5	15.4	19.3	16.7	17.3	16.6	9.5	5.8	6.9	17.3	38.8
5-Feb	11.5	15.9	14.6	13.9	13.9	Z	8.0	10.4	12.5	11.7	C	C	C	C	C	C	3.2	3.4	1.6	1.1	1.3	2.1	6.2	6.7	--	15.9
6-Feb	Z	8.0	2.5	2.0	3.4	1.7	0.8	0.7	2.6	7.1	5.2	4.2	6.5	6.5	6.4	4.0	2.4	2.2	3.8	1.5	0.9	5.6	8.0	7.4	4.1	8.0
7-Feb	5.9	Z	1.3	1.5	13.6	10.5	7.2	6.1	2.7	8.6	11.3	14.2	11.3	8.4	7.5	5.4	8.0	11.4	19.9	17.0	8.7	6.9	8.4	15.2	9.2	19.9
8-Feb	34.6	28.1	Z	22.2	27.4	29.1	17.9	32.1	56.6	57.3	50.4	42.5	34.3	29.1	22.4	24.5	19.9	31.5	51.4	64.4	7.0	5.1	6.8	7.6	30.5	64.4
9-Feb	6.2	7.3	7.2	Z	9.5	11.7	13.9	15.3	12.0	8.5	29.7	22.8	11.0	9.9	9.6	13.4	18.3	16.5	15.0	14.2	13.9	18.4	20.9	28.7	14.5	29.7
10-Feb	23.4	21.4	30.7	38.9	Z	31.3	27.5	23.3	24.1	24.8	28.3	20.8	10.1	7.5	6.0	11.4	10.0	15.8	32.4	23.2	44.5	36.4	35.0	33.0	24.3	44.5
11-Feb	33.4	33.7	34.1	34.1	33.0	Z	33.5	29.2	26.3	28.9	16.4	14.7	17.7	14.1	15.4	24.5	25.1	22.7	18.2	15.5	14.3	14.1	17.1	22.4	23.4	34.1
12-Feb	Z	24.8	27.4	34.2	44.7	47.2	47.3	48.5	52.0	53.2	30.3	22.2	11.8	7.9	12.0	17.0	16.6	15.6	15.3	14.0	21.9	22.2	20.3	18.7	27.2	53.2
13-Feb	17.5	Z	23.3	20.2	17.2	16.7	17.1	17.6	17.3	41.8	40.6	51.2	43.0	25.9	23.0	21.0	16.5	16.5	14.7	15.7	17.4	16.8	17.9	18.5	22.9	51.2
14-Feb	18.8	20.2	Z	24.5	30.0	48.6	62.0	58.5	55.4	81.7	51.6	47.6	23.6	13.6	8.1	12.4	14.9	14.4	16.5	18.8	20.2	24.2	25.0	43.6	31.9	81.7
15-Feb	74.4	76.7	70.7	Z	84.2	87.1	85.9	77.2	80.3	92.4	81.0	56.8	38.8	6.7	2.2	5.0	6.7	9.2	8.9	10.8	9.4	5.2	4.6	4.2	42.5	92.4
16-Feb	4.2	5.4	6.0	5.5	Z	15.5	36.9	40.6	41.4	44.1	38.5	26.4	17.6	21.7	26.4	19.4	9.0	7.5	7.8	7.3	7.5	11.1	19.3	13.0	18.8	44.1
17-Feb	2.5	3.0	2.2	3.3	5.3	Z	16.5	9.4	8.9	7.1	13.7	10.0	14.4	13.1	11.5	5.4	3.5	4.5	3.5	3.7	3.4	3.9	9.9	11.3	7.4	16.5
18-Feb	Z	9.3	8.9	10.3	12.6	10.9	10.0	10.0	12.3	21.4	21.1	18.5	15.2	14.4	14.6	27.3	16.8	17.4	15.6	17.8	12.8	9.0	7.0	6.8	13.9	27.3
19-Feb	5.6	Z	6.9	7.0	5.2	6.6	9.1	17.8	31.2	26.8	24.8	12.5	7.8	6.5	4.9	5.1	6.1	7.6	11.5	10.1	14.3	6.8	4.0	3.7	10.5	31.2
20-Feb	3.4	4.5	Z	4.1	6.4	5.3	4.4	3.5	4.6	4.8	4.8	6.0	7.4	7.5	11.5	14.1	20.3	21.5	20.9	26.5	27.3	22.4	21.1	26.2	12.1	27.3
21-Feb	33.4	35.0	43.3	Z	53.4	63.1	62.9	61.2	76.3	129.7	147.1	110.1	25.0	16.6	17.8	10.7	13.5	12.1	15.5	21.5	25.1	17.6	23.4	30.7	45.4	147.1
22-Feb	32.7	21.0	15.4	20.1	Z	24.7	49.5	62.8	65.7	61.5	45.7	43.8	50.5	61.7	57.2	37.8	25.3	22.2	20.3	21.8	19.6	24.0	32.8	54.8	37.9	65.7
23-Feb	83.8	71.9	43.1	38.6	34.2	Z	25.6	23.1	31.8	30.9	6.7	6.9	6.0	8.1	10.3	8.0	13.7	13.9	13.0	14.2	7.1	3.8	3.9	3.4	21.8	83.8
24-Feb	Z	8.3	8.4	8.5	11.5	21.7	26.0	21.6	21.9	21.9	20.4	39.9	47.9	38.9	15.1	9.5	11.4	12.7	10.7	12.0	16.7	43.9	25.8	18.5	20.6	47.9
25-Feb	11.3	Z	13.1	9.1	10.9	7.0	8.6	13.8	17.2	14.8	13.6	15.1	19.3	30.3	24.4	17.2	15.6	30.2	33.4	32.7	29.0	24.2	19.3	27.3	19.0	33.4
26-Feb	39.4	55.4	Z	34.6	30.4	30.1	28.7	43.5	72.3	22.4	16.2	17.9	16.7	10.6	26.5	29.5	22.8	25.3	20.5	22.0	23.5	24.3	31.0	38.1	29.6	72.3
27-Feb	39.1	27.4	19.3	Z	15.9	11.7	10.4	12.3	29.8	35.5	14.7	18.8	6.4	31.2	9.6	10.5	11.1	12.7	7.4	6.4	10.0	6.3	6.2	9.0	15.7	39.1
28-Feb	12.1	10.4	3.6	2.0	Z	5.9	6.9	12.1	14.1	12.6	21.2	26.3	25.5	22.7	14.4	13.0	17.9	16.3	24.1	23.4	19.5	12.7	13.8	9.6	14.8	26.3
	22.4	23.3	18.9	16.8	21.3	22.9	24.1	25.4	29.4	32.0	28.2	24.9	18.4	17.3	14.5	14.4	14.0	15.2	16.2	16.2	14.6	14.3	14.8	17.2	Diurnal Average	
	83.8	76.7	70.7	38.9	84.2	87.1	85.9	77.2	80.3	129.7	147.1	110.1	50.5	61.7	57.2	37.8	30.8	31.5	51.4	64.4	44.5	43.9	35.0	54.8	Diurnal Maximum	

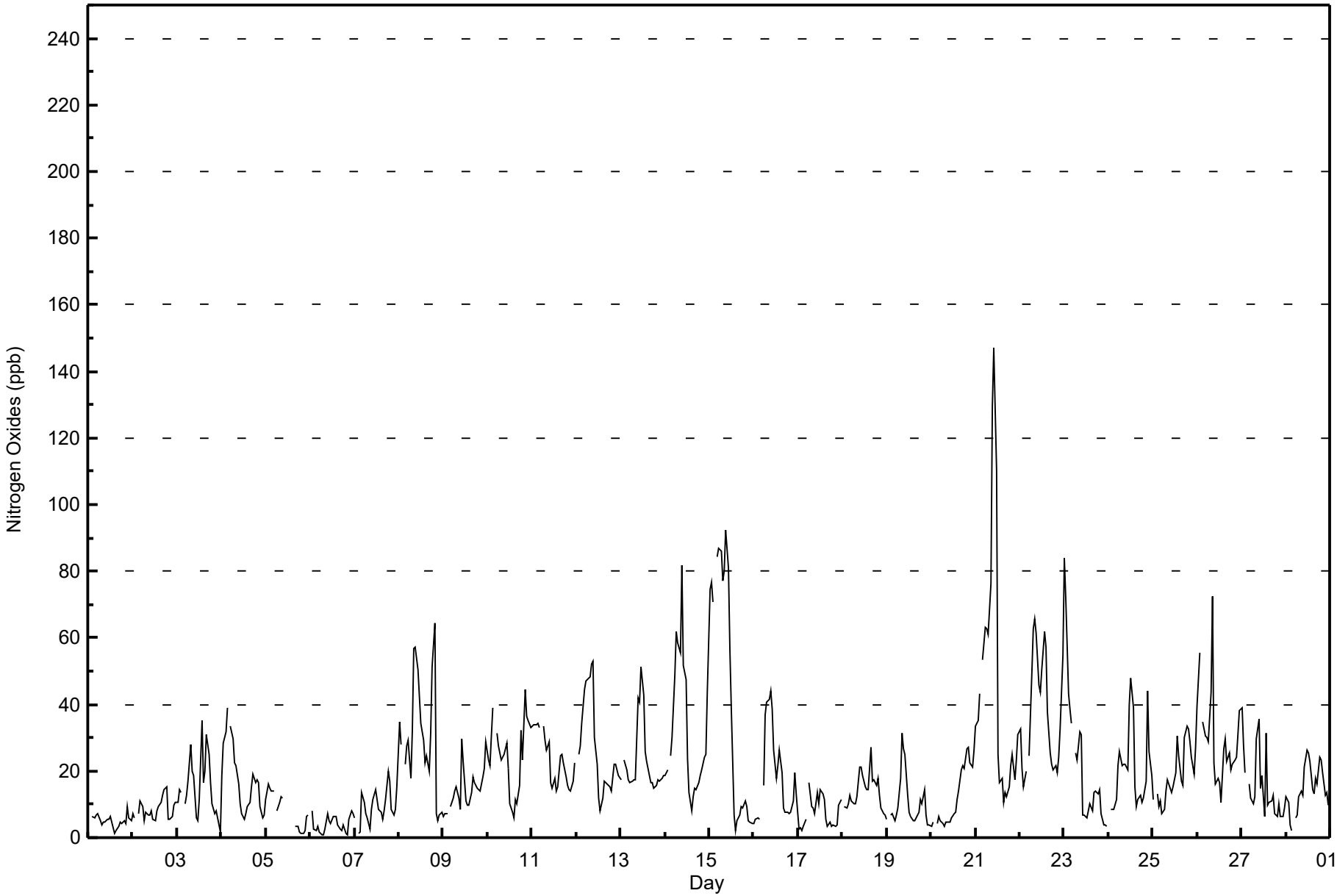
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Fort McKay South - February 2025



Nitrogen Oxides (NO_X) - ppb
Fort McKay South - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	417	65.36	65.36
21 - 40	155	24.29	89.66
11 - 80	56	8.78	98.43
81 - 159	9	1.41	99.84
> 159	0	0.00	99.84

Total Number of Valid Hours: 638

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Fort McKay South - February 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	74	63	11	4	0	3	4	31	70	38	18	37	24	11	10	16	414
21 - 40	29	12	0	0	4	0	5	15	26	15	5	10	6	4	5	16	152
11 - 80	10	6	1	3	0	4	3	4	9	5	3	0	2	2	0	3	55
81 - 159	1	2	0	0	0	1	0	1	1	0	0	1	0	1	0	0	8
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	114	83	12	7	4	8	12	51	106	58	26	48	32	18	15	35	629

Total Number of Valid Hours: 630

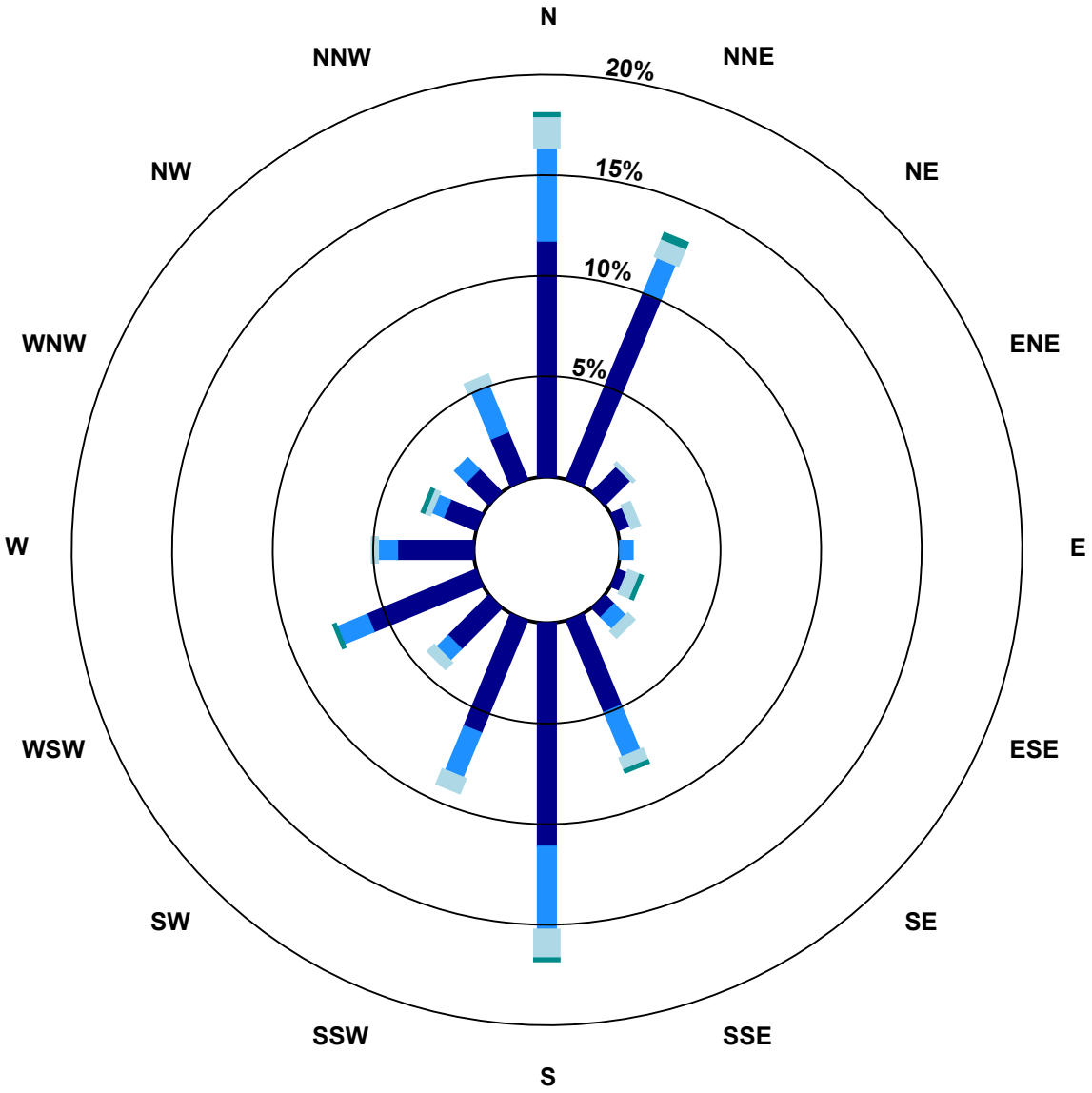
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Oxides (NO_X) - ppb

Fort McKay South



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

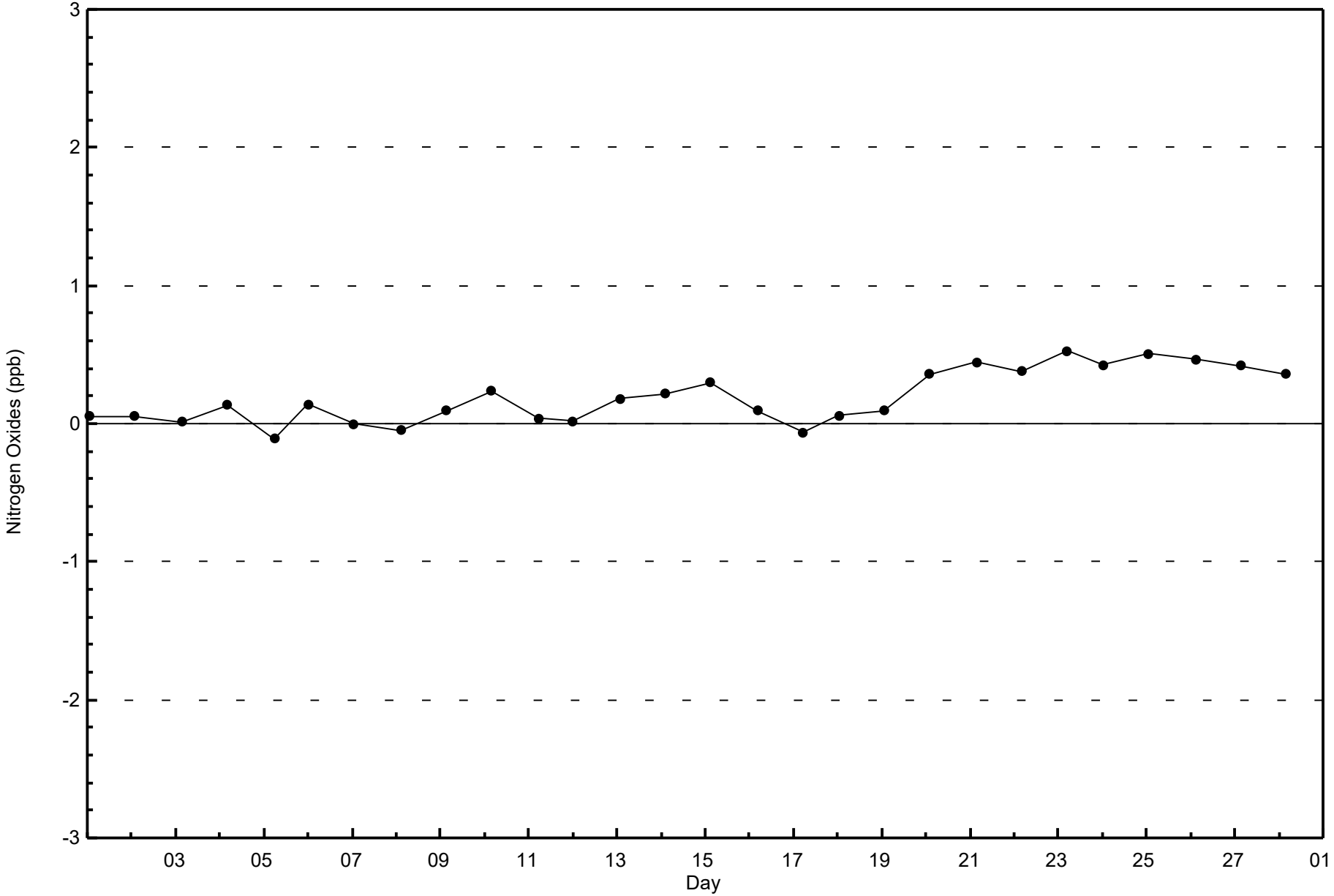
Total Number of Valid Hours: 630

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Fort McKay South - February 2025

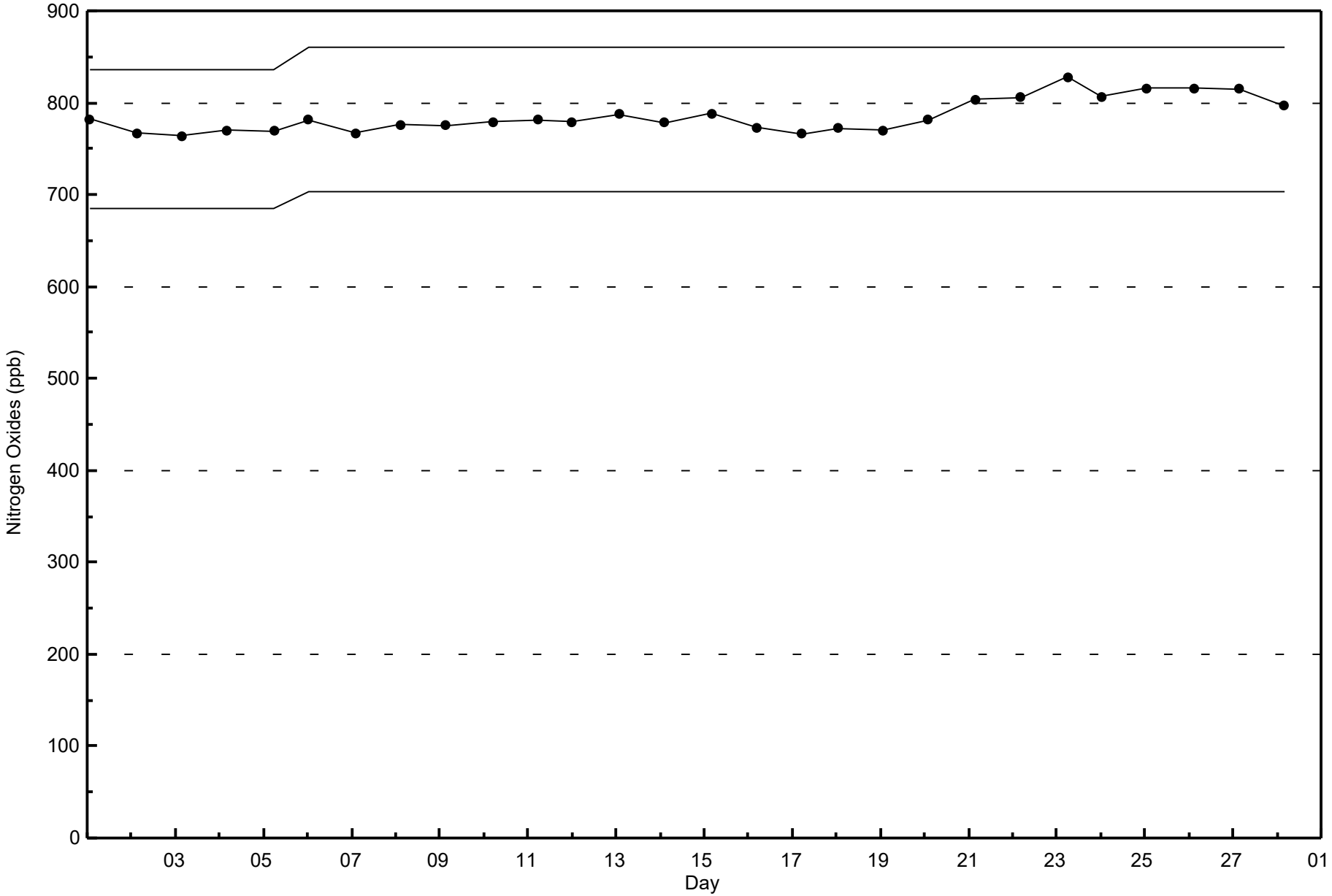


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Fort McKay South - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Fort McKay South - February 2025

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

Maximum Value: 78.6 $\mu g/m^3$ on Feb 6 19:00

Maximum Daily Average: 11.0 $\mu g/m^3$ on Feb 6

Minimum Value: 1.2 $\mu g/m^3$ on Feb 6 01:00

Maximum Diurnal Average: 7.2 $\mu g/m^3$ at hour 19

Monthly Average: 4.98 $\mu g/m^3$

Minimum Daily Average: 1.9 $\mu g/m^3$ on Feb 5

Minimum Diurnal Average: 4.1 $\mu g/m^3$ at hour 1

Percentiles: P_1 = 1.4 P_{10} = 2.3 Q_1 = 2.9 Median = 4.1 Q_3 = 6.0 P_{90} = 7.9 P_{99} = 16.2

Hours in Service:	672
Hours of Data:	671
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-Feb	4.4	4.2	4.2	4.0	4.1	4.0	3.6	3.2	3.3	3.6	3.8	4.0	4.0	3.6	3.4	3.8	4.4	5.2	5.0	5.1	5.3	5.8	5.9	5.5	4.3	5.9
2-Feb	5.5	5.1	4.8	4.2	4.1	4.1	3.9	4.0	4.2	4.2	4.2	4.1	4.1	4.2	4.2	4.1	4.2	4.4	4.2	3.8	3.5	3.2	3.1	2.8	4.1	5.5
3-Feb	2.8	3.0	2.7	2.6	2.7	2.7	2.7	2.7	2.7	2.7	2.9	2.4	2.5	3.1	2.9	3.1	3.0	2.7	2.5	2.1	1.9	1.8	1.6	1.3	2.5	3.1
4-Feb	1.7	2.2	2.0	2.3	2.2	2.1	2.0	1.9	2.1	2.2	2.5	2.2	2.1	2.3	2.3	2.4	2.3	2.3	2.3	2.4	2.5	2.3	2.4	2.4	2.2	2.5
5-Feb	2.3	2.4	2.3	2.2	2.1	2.0	1.8	2.0	2.0	2.2	2.2	2.2	2.1	2.0	2.1	2.1	1.5	1.5	1.4	1.4	1.2	1.3	1.4	1.4	1.9	2.4
6-Feb	1.2	1.4	1.4	1.5	1.5	1.5	1.4	1.3	1.3	2.0	3.0	3.7	4.5	6.2	7.5	15.5	16.8	67.6	78.6	17.4	9.1	6.6	6.6	6.4	11.0	78.6
7-Feb	5.0	3.8	3.5	3.4	3.6	3.6	3.1	2.8	2.8	3.0	3.0	3.1	3.1	3.0	2.9	2.8	2.7	2.7	3.0	2.9	2.7	2.7	2.6	2.4	3.1	5.0
8-Feb	2.7	2.5	2.7	3.0	3.9	3.7	2.4	2.5	2.7	28.9	6.8	9.7	9.0	7.0	6.5	5.8	4.4	5.6	7.7	8.1	4.5	4.9	4.6	3.9	6.0	28.9
9-Feb	5.7	5.5	5.5	5.8	4.8	4.8	4.4	4.2	4.1	11.6	5.8	6.8	6.2	6.3	6.3	6.6	7.1	5.9	5.2	5.0	5.4	5.8	7.9	5.8	5.9	11.6
10-Feb	5.2	4.0	3.9	4.0	4.3	4.7	4.9	4.1	3.7	3.6	3.6	3.3	3.1	3.2	3.1	3.0	3.1	3.8	7.0	6.5	8.8	6.3	5.5	4.4	4.5	8.8
11-Feb	4.3	9.3	8.7	7.4	6.6	4.6	3.8	2.9	2.5	2.7	2.7	2.8	2.9	2.8	2.8	3.1	3.1	2.8	2.5	2.4	2.3	2.4	2.6	2.8	3.8	9.3
12-Feb	2.8	2.9	3.0	3.3	4.7	5.5	5.5	5.4	5.7	5.7	4.3	4.2	3.3	2.4	2.6	3.6	4.3	4.0	4.6	4.5	4.5	4.2	3.8	3.5	4.1	5.7
13-Feb	4.0	4.0	4.2	3.4	2.7	2.6	2.5	2.3	2.2	3.8	3.9	4.4	3.8	3.7	3.5	3.8	3.8	3.8	3.5	3.4	3.0	3.1	3.3	2.8	3.4	4.4
14-Feb	2.7	2.6	2.7	2.6	2.6	3.1	3.6	3.5	3.2	7.2	4.5	4.5	3.9	3.4	3.1	3.1	3.4	4.3	4.4	5.2	5.0	5.3	4.8	5.1	3.9	7.2
15-Feb	5.4	4.9	4.5	6.6	7.7	7.2	7.4	7.1	9.1	9.5	9.0	7.4	5.9	2.8	2.3	2.3	2.5	2.7	2.6	2.6	2.8	2.1	1.8	1.7	4.9	9.5
16-Feb	1.7	1.9	1.8	1.8	1.9	2.1	2.7	2.8	2.8	3.4	4.8	4.3	3.9	4.1	4.8	4.8	4.2	3.9	3.4	3.1	3.1	4.5	8.4	8.2	3.7	8.4
17-Feb	3.8	3.3	3.2	3.3	3.3	4.0	4.2	4.2	4.4	3.9	4.9	4.1	4.6	4.6	4.4	3.2	3.1	3.0	2.6	2.5	2.3	2.2	3.3	2.9	3.6	4.9
18-Feb	2.7	2.6	2.5	2.8	4.5	4.1	4.4	3.9	4.0	5.1	5.4	12.9	7.8	11.5	13.9	26.1	15.2	11.9	5.9	4.7	3.6	2.9	2.6	2.9	6.8	26.1
19-Feb	3.1	3.4	3.4	3.1	2.8	2.7	3.1	4.4	7.1	6.9	9.1	7.6	5.7	4.5	4.0	4.5	4.3	3.6	5.4	10.0	9.7	5.5	3.8	2.9	5.0	10.0
20-Feb	2.8	3.4	6.4	6.2	5.5	5.1	5.8	5.9	6.2	6.1	6.2	6.6	6.6	6.1	6.4	7.3	8.0	8.0	7.5	7.5	8.1	7.9	8.1	8.8	6.5	8.8
21-Feb	7.6	7.2	7.5	7.8	8.2	10.7	9.7	7.7	9.1	12.8	15.9	13.5	7.9	7.1	7.6	7.0	7.1	7.1	6.8	7.5	8.1	7.2	7.7	7.6	8.6	15.9
22-Feb	7.5	6.2	5.2	5.7	5.0	6.4	9.6	11.0	10.0	9.1	7.9	8.0	9.3	10.8	10.2	8.7	7.2	6.6	6.0	5.9	6.0	5.9	6.0	6.2	7.5	11.0
23-Feb	7.5	10.1	10.0	9.7	9.5	9.3	9.0	8.3	8.3	7.5	5.5	5.8	4.8	4.4	4.1	3.7	3.8	4.0	4.0	4.3	3.9	3.6	3.6	3.5	6.2	10.1
24-Feb	3.4	3.5	3.5	3.6	3.7	4.3	4.3	4.1	4.6	5.2	6.5	11.4	12.1	17.2	7.5	6.1	6.4	7.2	6.5	6.9	6.5	7.8	7.6	6.3	6.5	17.2
25-Feb	4.4	3.8	3.7	3.2	3.2	3.2	3.1	3.8	3.9	3.8	3.7	4.3	4.4	5.5	5.5	5.1	5.4	7.5	6.8	6.5	7.0	6.9	5.9	5.9	4.9	7.5
26-Feb	6.1	6.9	8.5	8.0	8.0	7.8	7.2	7.7	7.6	3.8	3.4	3.5	3.7	3.6	C	4.4	4.4	5.2	4.3	4.1	4.7	5.2	4.7	5.2	5.6	8.5
27-Feb	5.7	4.9	4.2	3.9	4.2	4.2	4.2	4.5	6.0	6.9	5.6	5.4	4.8	6.4	3.1	2.9	3.2	3.2	2.8	2.7	3.0	2.7	2.7	2.7	4.2	6.9
28-Feb	3.3	3.3	2.7	2.5	2.7	2.8	2.8	3.1	3.6	6.1	10.2	8.9	7.8	7.0	7.5	6.0	5.8	5.6	5.2	5.2	4.8	3.8	4.6	3.8	5.0	10.2
	4.1	4.2	4.2	4.2	4.3	4.4	4.4	4.3	4.6	6.2	5.4	5.8	5.1	5.3	5.0	5.5	5.2	7.0	7.2	5.1	4.8	4.4	4.5	4.3	Diurnal Average	
	7.6	10.1	10.0	9.7	9.5	10.7	9.7	11.0	10.0	28.9	15.9	13.5	12.1	17.2	13.9	26.1	16.8	67.6	78.6	17.4	9.7	7.9	8.4	8.8	Diurnal Maximum	

C - Calibration

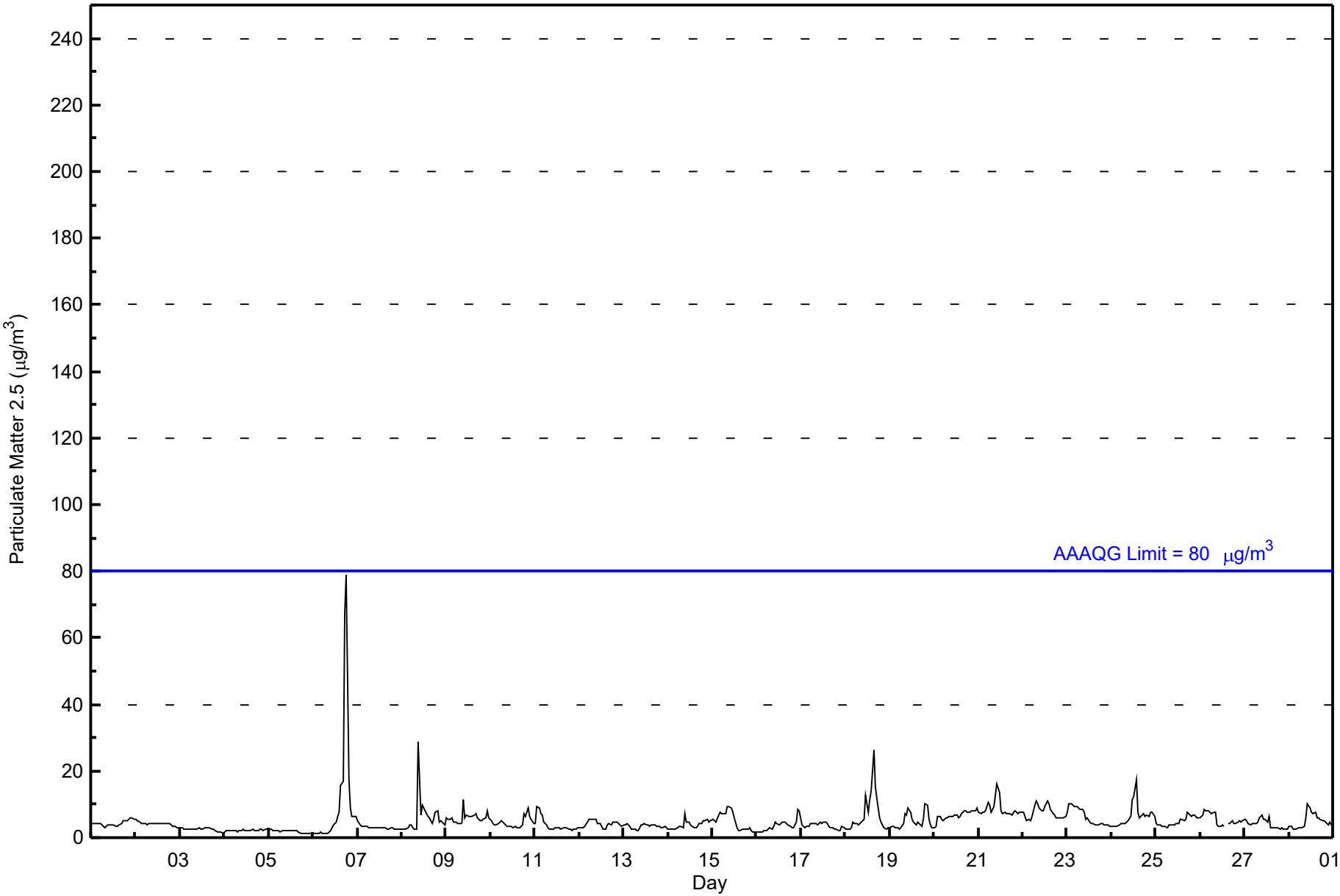
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Fort McKay South - February 2025



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

Fort McKay South - February 2025

Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	468	69.75	69.75
6 - 15	194	28.91	98.66
16 - 25	5	0.75	99.40
26 - 80	4	0.60	100.00
> 81.0	0	0.00	100.00

Total Number of Valid Hours: 671

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

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

Fort McKay South - February 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	66	9	4	2	5	9	31	79	48	22	42	27	10	9	18	462
6 - 15	35	21	3	3	2	4	3	22	31	17	5	10	7	6	4	17	190
16 - 25	0	1	0	0	0	0	1	0	0	0	0	0	0	1	1	1	5
26 - 80	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	4
> 81.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	116	88	12	7	4	9	13	54	111	65	27	52	34	18	15	36	661

Total Number of Valid Hours: 661

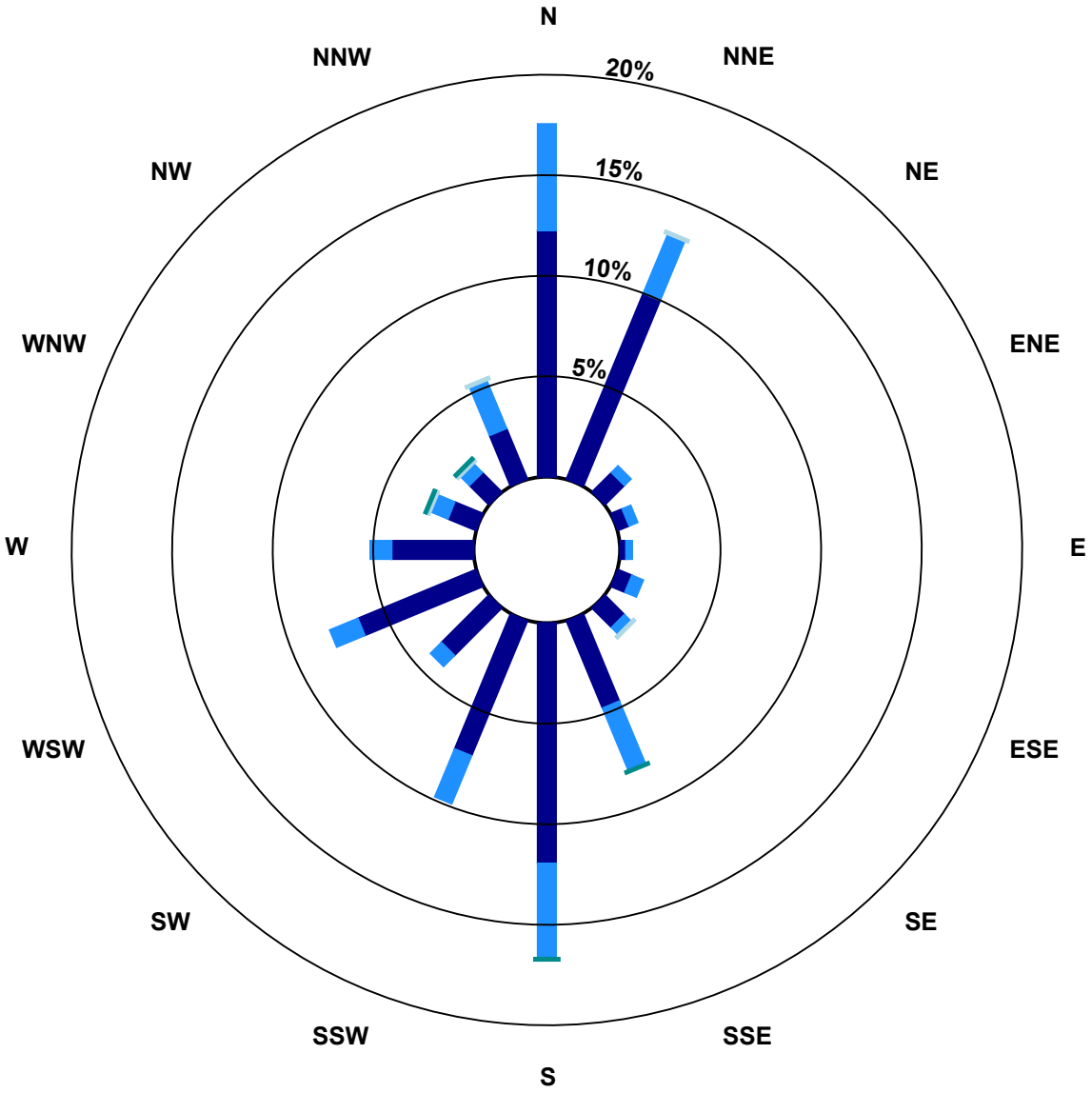
Total Number of Hours: 672

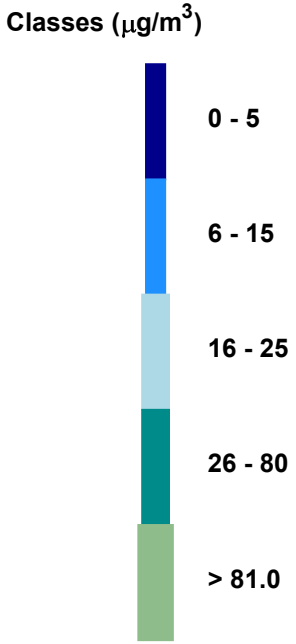
Wood Buffalo Environmental Association

Wind Rose Feb 2025

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

Fort McKay South





Total Number of Valid Hours: 661

Maximum Value: 1.2 C on Feb 27 13:00

Maximum Daily Average: -5.3 C on Feb 23

Minimum Value: -39.2 C on Feb 14 08:00

Minimum Daily Average: -31.7 C on Feb 14

Maximum Diurnal Average: -13.6 C at hour 16

Minimum Diurnal Average: -23.0 C at hour 8

Monthly Average: -18.93 C

Percentiles: P_1 = -37.4 P_{10} = -31.6 Q_1 = -24.8 Median = -19.7 Q_3 = -11.0 P_{90} = -7.0 P_{99} = -1.5

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

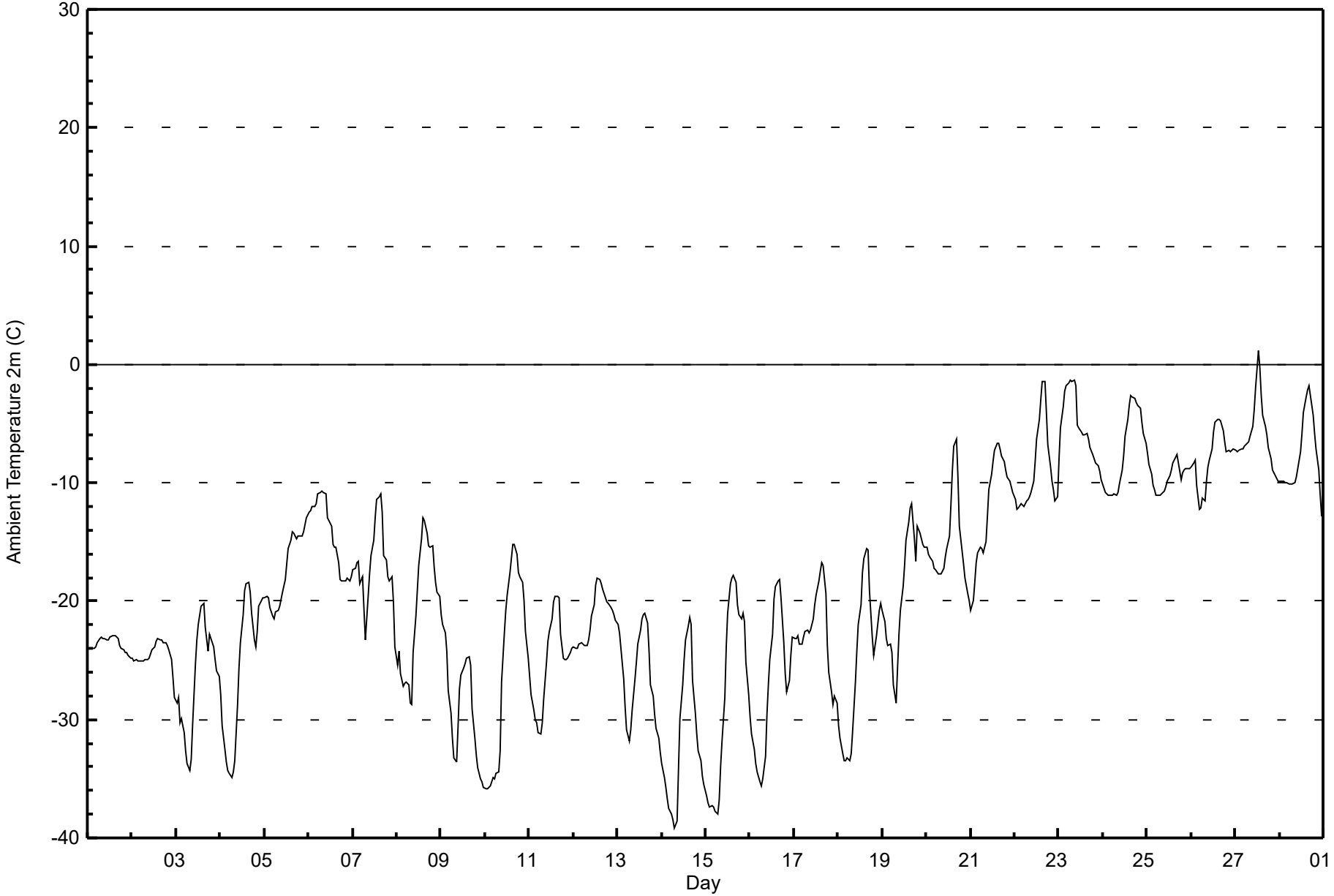
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-24.0	-24.0	-24.0	-24.0	-23.8	-23.5	-23.1	-23.0	-23.2	-23.1	-23.2	-23.3	-23.1	-22.9	-22.9	-22.9	-23.1	-23.8	-24.0	-24.1	-24.4	-24.4	-24.6	-24.8	-23.6	-22.9
2-Feb	-24.8	-25.0	-25.0	-25.0	-25.1	-25.1	-25.0	-24.9	-24.9	-24.8	-24.5	-24.1	-23.8	-23.4	-23.2	-23.2	-23.3	-23.5	-23.5	-23.7	-24.1	-24.9	-26.5	-28.2	-24.6	-23.2
3-Feb	-28.6	-28.2	-30.2	-29.9	-31.2	-32.6	-33.7	-34.3	-33.4	-30.4	-25.3	-23.2	-21.9	-20.5	-20.3	-20.2	-22.2	-24.3	-22.8	-23.2	-23.8	-24.9	-25.9	-26.4	-26.6	-20.2
4-Feb	-27.9	-30.5	-32.5	-33.6	-34.2	-34.6	-34.9	-34.4	-33.4	-28.7	-25.7	-23.6	-21.1	-19.1	-18.6	-18.4	-19.3	-21.0	-23.3	-23.9	-22.5	-20.4	-19.9	-19.7	-25.9	-18.4
5-Feb	-19.8	-19.6	-19.7	-20.5	-21.3	-21.4	-21.0	-20.8	-20.4	-19.9	-19.2	-18.1	-16.9	-15.6	-14.8	-14.2	-14.3	-14.8	-14.5	-14.5	-14.5	-14.1	-13.5	-13.0	-17.3	-13.0
6-Feb	-12.4	-12.4	-12.0	-12.0	-11.7	-11.0	-10.8	-10.7	-10.8	-10.9	-12.9	-13.2	-13.7	-15.2	-15.5	-15.5	-16.8	-18.2	-18.3	-18.3	-18.3	-18.0	-18.3	-18.0	-14.4	-10.7
7-Feb	-17.4	-17.2	-16.7	-16.6	-18.5	-17.9	-20.7	-23.3	-19.6	-17.7	-16.2	-14.8	-13.0	-11.4	-11.1	-11.0	-12.5	-16.1	-16.5	-17.9	-18.3	-17.9	-20.0	-23.9	-16.9	-11.0
8-Feb	-25.4	-24.2	-26.1	-27.2	-27.0	-26.8	-27.1	-28.7	-28.8	-24.4	-21.3	-19.1	-17.0	-14.7	-13.0	-13.2	-14.3	-15.4	-15.5	-15.3	-17.1	-18.4	-19.2	-19.6	-20.8	-13.0
9-Feb	-21.1	-21.9	-22.7	-24.3	-27.5	-29.4	-31.6	-33.2	-33.6	-30.6	-27.4	-26.3	-25.6	-25.3	-24.8	-24.7	-25.4	-29.1	-31.6	-33.0	-34.1	-35.0	-35.2	-35.7	-28.7	-21.1
10-Feb	-35.9	-35.8	-35.7	-35.6	-34.9	-35.0	-34.6	-34.5	-32.7	-26.8	-22.7	-20.8	-19.5	-17.6	-16.4	-15.2	-15.2	-16.0	-17.6	-17.9	-18.4	-20.0	-22.6	-24.8	-25.2	-15.2
11-Feb	-26.3	-27.8	-29.2	-30.1	-30.3	-31.1	-31.2	-30.2	-28.3	-25.2	-23.4	-22.6	-21.5	-20.0	-19.6	-19.5	-19.7	-22.8	-24.8	-25.0	-24.9	-24.8	-24.3	-24.0	-25.3	-19.5
12-Feb	-23.8	-23.9	-24.0	-23.6	-23.5	-23.6	-23.8	-23.7	-23.3	-22.5	-21.2	-20.3	-18.6	-18.1	-18.2	-18.5	-18.9	-19.8	-20.1	-20.2	-20.5	-20.8	-21.1	-21.6	-21.4	-18.1
13-Feb	-22.0	-22.7	-23.9	-26.6	-28.9	-30.8	-31.8	-30.9	-29.2	-26.6	-25.2	-23.7	-22.4	-21.5	-21.1	-21.1	-21.9	-24.1	-27.1	-28.0	-29.6	-30.7	-31.6	-32.7	-26.4	-21.1
14-Feb	-33.7	-34.9	-35.7	-36.7	-37.5	-38.0	-38.5	-39.2	-38.6	-34.1	-30.0	-27.1	-24.9	-23.3	-22.1	-21.3	-21.9	-26.7	-29.4	-31.2	-32.6	-33.5	-34.8	-35.5	-31.7	-21.3
15-Feb	-36.5	-37.0	-37.3	-37.2	-37.4	-37.8	-38.0	-36.8	-34.0	-31.8	-28.1	-23.9	-21.0	-18.5	-18.0	-17.8	-18.4	-20.3	-21.1	-21.4	-21.0	-21.8	-25.2	-27.9	-27.8	-17.8
16-Feb	-29.8	-31.2	-32.6	-33.7	-34.5	-35.3	-35.6	-35.0	-33.2	-29.6	-27.1	-24.9	-22.8	-19.9	-18.7	-18.3	-18.1	-19.7	-23.5	-26.2	-27.6	-26.8	-24.5	-23.1	-27.1	-18.1
17-Feb	-23.1	-23.2	-22.9	-23.6	-23.6	-23.1	-22.6	-22.4	-22.7	-22.4	-21.5	-20.3	-19.4	-18.2	-17.5	-16.8	-17.0	-19.3	-23.7	-26.1	-27.7	-28.7	-28.0	-28.6	-22.6	-16.8
18-Feb	-30.5	-31.6	-32.9	-33.5	-33.5	-33.3	-33.5	-32.9	-31.0	-26.8	-24.2	-22.0	-20.3	-17.5	-16.4	-15.6	-15.7	-19.1	-23.0	-24.5	-23.8	-23.0	-20.8	-20.1	-25.2	-15.6
19-Feb	-20.8	-21.8	-23.1	-23.7	-23.6	-24.4	-27.0	-28.6	-25.6	-22.8	-20.7	-18.8	-17.0	-14.8	-13.3	-12.1	-11.8	-14.8	-16.6	-13.7	-14.3	-14.8	-15.2	-15.4	-18.9	-11.8
20-Feb	-15.4	-16.1	-16.3	-16.6	-17.3	-17.3	-17.6	-17.7	-17.7	-17.2	-16.3	-15.6	-14.5	-11.8	-9.0	-6.9	-6.3	-9.5	-13.7	-15.8	-16.9	-18.1	-19.3	-20.0	-15.1	-6.3
21-Feb	-20.7	-19.9	-18.4	-16.8	-15.9	-15.4	-15.6	-15.9	-14.9	-12.8	-10.6	-9.3	-8.1	-7.2	-6.6	-6.7	-7.1	-7.7	-8.2	-8.9	-9.5	-9.9	-10.4	-10.8	-12.0	-6.6
22-Feb	-11.4	-12.3	-12.2	-11.8	-11.9	-12.0	-11.6	-11.5	-11.2	-10.8	-9.9	-8.2	-6.3	-4.6	-2.9	-1.5	-1.5	-4.0	-6.7	-8.7	-9.9	-10.6	-11.5	-11.1	-8.9	-1.5
23-Feb	-8.0	-5.4	-3.5	-2.3	-1.8	-1.5	-1.4	-1.4	-1.4	-1.8	-5.1	-5.4	-5.8	-5.9	-5.9	-5.8	-6.3	-7.1	-7.6	-8.0	-8.3	-8.6	-9.0	-9.8	-5.3	-1.4
24-Feb	-10.5	-10.8	-10.9	-11.1	-11.1	-11.0	-11.0	-11.1	-10.8	-10.1	-8.9	-7.7	-6.0	-4.7	-3.5	-2.7	-2.7	-2.9	-3.2	-3.5	-3.7	-4.9	-5.8	-6.6	-7.3	-2.7
25-Feb	-7.5	-8.4	-9.3	-10.2	-10.6	-11.0	-11.1	-11.1	-11.0	-10.7	-10.4	-9.8	-9.4	-8.9	-8.3	-7.8	-7.6	-8.3	-9.7	-9.2	-8.9	-8.8	-8.8	-8.8	-9.4	-7.5
26-Feb	-8.7	-8.3	-8.1	-10.2	-12.2	-12.2	-11.3	-11.5	-9.9	-8.7	-8.0	-7.1	-5.7	-4.9	-4.6	-4.6	-4.7	-5.6	-6.6	-7.3	-7.3	-7.4	-7.3	-7.1	-7.9	-4.6
27-Feb	-7.3	-7.3	-7.3	-7.2	-7.1	-6.9	-6.7	-6.5	-6.1	-5.2	-3.8	-2.0	1.2	-0.2	-2.7	-4.3	-5.2	-5.9	-7.0	-8.0	-8.9	-9.2	-9.7	-9.8	-6.0	1.2
28-Feb	-9.9	-9.9	-9.9	-9.9	-10.0	-10.1	-10.1	-10.1	-10.0	-9.5	-8.8	-7.4	-5.8	-4.0	-2.7	-2.1	-1.8	-2.6	-4.3	-5.9	-7.1	-9.0	-11.0	-12.8	-7.7	-1.8
	-20.8	-21.1	-21.5	-21.9	-22.4	-22.6	-22.9	-23.0	-22.1	-20.2	-18.6	-17.2	-15.9	-14.6	-14.0	-13.6	-14.0	-15.8	-17.3	-18.0	-18.5	-18.9	-19.4	-20.0	Diurnal Average	
	-7.3	-5.4	-3.5	-2.3	-1.8	-1.5	-1.4	-1.4	-1.4	-1.8	-3.8	-2.0	1.2	-0.2	-2.7	-1.5	-1.5	-2.6	-3.2	-3.5	-3.7	-4.9	-5.8	-6.6	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Fort McKay South - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	324	48.21	48.21
-20 - 0	347	51.64	99.85
0 - 10	1	0.15	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Fort McKay South - February 2025

Maximum Value: 99.0 % on Feb 23 09:00

Maximum Daily Average: 90.6 % on Feb 23

Minimum Value: 41.7 % on Feb 18 15:00

Minimum Daily Average: 52.6 % on Feb 19

Maximum Diurnal Average: 76.3 % at hour 21

Minimum Diurnal Average: 63.6 % at hour 16

Monthly Average: 72.52 %

Percentiles: P_1 = 45.3 P_{10} = 60.3 Q_1 = 68.0 Median = 72.8 Q_3 = 77.8 P_{90} = 84.6 P_{99} = 94.9

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

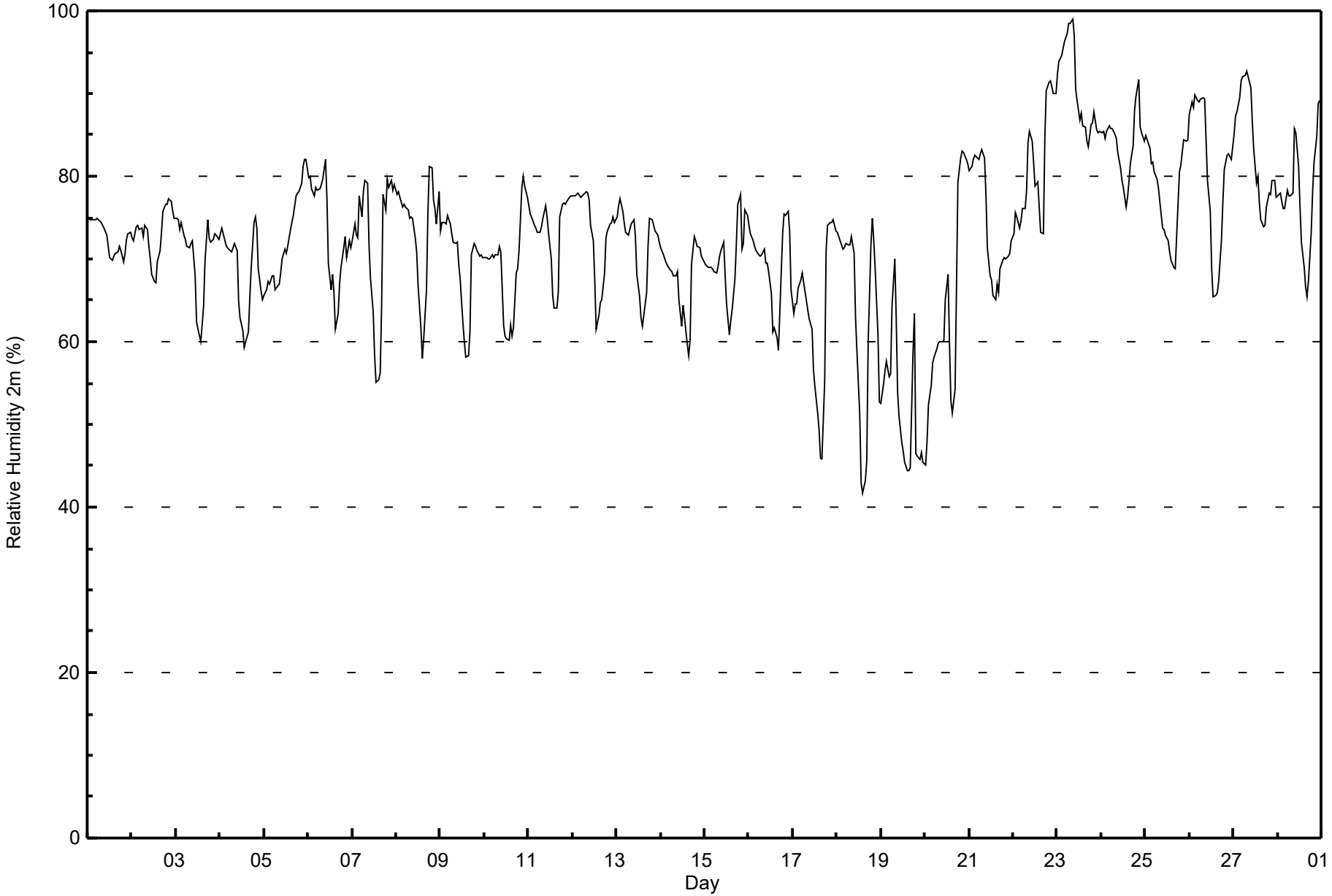
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	75.1	74.8	74.7	74.7	74.7	74.9	74.6	74.3	74.1	73.7	72.9	71.5	70.2	69.9	70.3	70.6	70.9	71.5	71.1	69.7	70.6	72.5	73.0	73.2	72.6	75.1
2-Feb	72.6	72.3	73.9	74.1	73.6	73.7	72.7	74.1	73.6	71.4	70.0	68.1	67.3	67.1	69.7	71.0	73.3	75.8	76.6	76.6	77.3	76.9	75.7	74.9	73.0	77.3
3-Feb	75.0	74.7	73.6	74.4	72.9	72.3	71.6	71.3	71.8	72.3	68.0	62.4	61.5	60.0	62.1	64.2	69.6	74.8	72.5	72.1	72.4	73.0	72.9	72.4	70.3	75.0
4-Feb	73.1	73.7	72.4	71.8	71.4	71.1	70.8	71.4	71.9	71.1	64.8	63.0	61.3	59.3	60.0	61.3	65.4	68.9	74.4	75.1	73.7	68.7	66.1	65.0	68.6	75.1
5-Feb	65.6	66.3	67.2	67.0	68.0	68.0	66.2	66.7	66.9	68.4	70.0	71.3	70.6	71.4	73.5	74.3	75.3	77.7	77.9	78.2	79.2	81.2	82.0	82.1	72.3	82.1
6-Feb	79.8	79.9	78.4	77.6	78.6	78.2	78.5	79.0	79.6	82.0	77.2	69.5	66.3	68.1	65.9	61.5	63.4	66.9	69.0	71.3	72.6	70.2	72.1	71.4	73.2	82.0
7-Feb	72.2	74.2	73.0	72.5	77.6	75.0	78.2	79.4	79.2	71.7	67.8	63.5	58.3	55.0	55.5	56.4	64.4	77.8	75.9	79.6	78.7	79.5	78.2	79.0	71.8	79.6
8-Feb	77.7	78.2	77.4	76.3	76.7	76.3	76.0	75.0	75.0	75.0	72.6	70.8	66.7	61.7	58.0	60.3	66.3	75.6	81.3	81.0	77.1	76.1	74.2	78.1	73.5	81.3
9-Feb	73.4	74.5	74.3	74.3	75.3	74.2	73.1	72.1	71.9	72.0	69.3	67.7	62.3	60.0	58.2	58.2	61.3	70.6	71.9	71.5	71.0	70.4	70.5	70.2	69.5	75.3
10-Feb	70.1	70.1	70.1	70.1	70.5	70.1	70.5	70.5	71.6	70.8	62.0	60.6	60.3	60.2	62.0	60.8	61.7	68.3	68.7	71.0	78.7	79.9	78.9	77.5	69.0	79.9
11-Feb	76.5	75.4	74.6	74.0	73.7	73.2	73.2	73.9	74.9	76.5	75.1	73.3	70.0	65.7	64.0	64.1	66.0	75.1	76.6	76.8	76.6	77.0	77.4	77.7	73.4	77.7
12-Feb	77.6	77.7	77.8	77.9	77.5	77.7	77.7	78.1	78.0	77.1	74.0	72.1	67.4	61.5	63.2	64.8	65.0	68.2	72.6	73.5	74.3	74.4	75.1	74.4	73.2	78.1
13-Feb	75.1	76.4	77.3	75.7	74.4	73.3	72.9	73.5	74.3	74.8	72.7	68.1	65.3	62.9	61.9	63.2	66.0	71.4	74.9	74.8	74.1	73.4	72.8	72.0	71.7	77.3
14-Feb	71.3	70.6	70.1	69.4	69.1	68.7	68.5	67.9	68.0	68.5	65.1	61.8	64.3	62.9	59.6	58.3	60.1	69.2	72.7	72.1	71.4	71.3	70.3	70.0	67.6	72.7
15-Feb	69.4	69.1	68.9	69.0	68.7	68.5	68.4	69.2	70.4	70.9	72.0	67.9	64.6	60.9	62.6	63.9	67.7	71.9	76.6	77.8	71.2	71.9	76.0	75.3	69.7	77.8
16-Feb	74.1	73.1	72.1	71.5	71.0	70.5	70.4	70.6	71.1	69.5	69.4	68.5	65.8	61.2	61.7	60.5	59.0	63.6	73.1	75.5	75.3	75.8	73.4	66.2	69.3	75.8
17-Feb	63.5	64.6	64.6	66.4	67.5	68.2	67.2	64.9	63.8	62.7	61.5	56.7	54.5	51.4	49.3	45.9	45.7	55.2	70.9	74.1	74.4	74.4	74.7	73.4	63.2	74.7
18-Feb	73.3	72.6	71.7	71.2	71.4	71.8	71.6	71.7	72.7	70.7	62.8	58.8	51.2	42.9	41.7	43.2	45.5	59.8	71.9	75.0	72.1	68.7	60.9	52.7	63.6	75.0
19-Feb	52.6	55.0	56.4	57.7	55.8	56.1	64.2	70.0	62.9	53.9	51.0	47.9	46.8	45.4	44.4	44.3	44.8	58.8	63.4	46.5	45.9	45.8	46.6	45.5	52.6	70.0
20-Feb	45.1	48.0	52.3	54.7	57.4	58.2	59.1	59.8	60.1	60.0	60.2	65.1	68.1	59.8	52.9	51.4	54.2	66.6	79.4	82.3	83.1	82.9	82.1	81.5	63.5	83.1
21-Feb	80.6	81.2	82.1	82.6	82.4	82.1	82.7	83.1	82.3	77.7	71.4	68.0	67.4	65.6	65.0	66.9	66.0	68.9	69.8	70.2	69.9	70.4	70.6	72.1	74.1	83.1
22-Feb	73.1	75.6	75.0	73.7	74.6	76.1	76.1	78.4	84.0	85.4	84.3	81.8	78.9	79.3	76.3	73.2	73.0	84.6	90.3	91.4	91.6	90.9	90.0	89.9	81.1	91.6
23-Feb	92.4	93.8	94.6	95.5	96.3	97.2	98.4	98.6	99.0	96.9	90.5	89.2	86.8	87.6	86.1	86.0	84.2	83.6	86.3	86.4	87.8	85.6	85.2	85.4	90.6	99.0
24-Feb	85.3	85.5	84.5	85.5	86.2	85.8	85.8	85.0	84.6	82.9	81.1	79.5	78.6	76.2	77.5	79.3	81.5	83.7	87.9	89.6	91.8	86.0	85.3	84.2	83.9	91.8
25-Feb	85.0	84.3	83.4	81.6	81.6	80.5	79.7	78.6	76.9	73.8	73.5	72.8	72.1	70.8	69.9	69.0	68.9	72.7	80.6	81.4	83.0	84.5	84.2	84.5	78.0	85.0
26-Feb	87.4	89.0	88.4	89.8	89.2	89.0	89.3	89.5	89.4	84.5	79.6	75.7	68.8	65.5	65.6	66.0	67.3	72.3	76.9	80.8	82.5	82.7	82.4	82.0	80.6	89.8
27-Feb	85.0	87.3	87.8	89.5	91.6	92.0	92.3	92.7	92.1	90.7	86.5	83.2	79.2	80.0	76.8	74.7	73.8	74.1	76.3	78.0	77.8	79.5	79.5	77.5	83.2	92.7
28-Feb	77.6	78.0	77.0	76.1	76.0	78.3	77.6	77.6	77.9	85.7	85.3	81.2	76.3	72.0	69.0	66.6	65.5	67.3	73.2	78.2	81.7	84.9	88.9	89.2	77.5	89.2
	74.3	74.8	74.8	74.8	75.1	75.0	75.3	75.6	75.6	74.7	71.8	69.3	66.8	64.4	63.7	63.6	65.2	71.3	75.5	76.1	76.3	76.0	75.7	74.9	Diurnal Average	
	92.4	93.8	94.6	95.5	96.3	97.2	98.4	98.6	99.0	96.9	90.5	89.2	86.8	87.6	86.1	86.0	84.2	84.6	90.3	91.4	91.8	90.9	90.0	89.9	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Fort McKay South - February 2025



Maximum Speed: 22 km/h on Feb 1 09:00

Maximum Daily Speed Average: 17.7 km/h on Feb 1

Minimum Speed Value: 0 km/h on Feb 12 08:00

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

Maximum Diurnal Speed Average: 1.8 km/h at hour 22

Minimum Diurnal Speed Average: 0.2 km/h at hour 3

Monthly Average Velocity: 0.4 km/h 344.1 deg

Percentiles: $P_1 = 0$ $P_{10} = 2$ $Q_1 = 3$ Median = 6 $Q_3 = 10$ $P_{90} = 14$ $P_{99} = 20$

Hours in Service:	672
Hours of Data:	662
Hours of Missing Data:	10
Percent Operational Time:	98.5

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-Feb	N19	N20	N20	N18	N17	N17	N17	N21	N22	NNE21	N20	N19	N19	N16	N17	N14	N14	N16	N15	N17	NNE15	NNE16	NNE18	NNE16	N17.7	N22
2-Feb	N17	N17	N14	N14	NNE15	NNE13	N14	N12	NNE14	N14	NNE14	N16	N15	NNE12	NNE10	NNE8	NNE6	N4	NNE3	UO	SW2	SSW1	WSW2	SW3	N9.7	N17
3-Feb	WSW3	W3	WSW1	WSW5	WNW2	N2	NNE2	N2	NNW1	WSW1	SW6	SSW7	SW8	SSW8	S8	S8	S7	SSW5	WSW9	WSW10	WSW10	W9	WSW11	WSW10	SW4.4	WSW11
4-Feb	SSW4	SSW5	S5	S3	SSE5	S5	S4	S6	S7	S9	S12	S15	S14	S15	S15	S12	SSW8	S8	S8	S9	S10	S11	SSW11	SSW13	S8.8	S15
5-Feb	S10	S10	S10	S10	S10	S9	SSW9	S9	S9	S11	SSW10	SSW10	SSW11	SSW9	SSW10	SSW6	SSW6	SSW5	SW6	SW6	WSW5	WSW7	W8	W9	SSW7.7	S11
6-Feb	W8	WSW8	WSW13	W8	W6	NW5	NW6	WNW8	W8	NNE13	NNE17	N17	NNE16	N16	N12	NNW11	NW10	NW8	WNW6	WNW4	W2	WSW7	WSW5	WSW5	NW6.1	NNE17
7-Feb	W8	WSW8	WSW6	SW6	SSW4	W4	W1	W1	WSW8	WSW6	WSW11	WSW12	SW9	SW10	SW9	SSW8	SSW6	SW5	WSW6	WSW8	W8	WSW10	WSW5	S2	WSW6.3	WSW12
8-Feb	SSW3	SW4	SSE2	S3	S3	SSW2	SSW2	SSW3	SW3	SSE5	SSE6	SSE6	SE5	E4	N2	N5	NNE5	NNE5	N5	NNE12	NNE18	N18	N16	N13	NNE2.6	N18
9-Feb	NNE15	NNE11	N10	NNW6	NW3	NNW2	WNW1	WSW4	SW2	W2	NNE5	NNE11	NNE12	N9	NE6	NE4	NNE4	WNW2	WSW4	WSW2	WSW1	W2	W6	WSW1	N3.7	NNE15
10-Feb	SSE4	SSE4	S3	S4	S5	S3	S3	S4	S3	S7	S9	S11	S12	S13	SSE10	SE6	SE4	NNE7	N8	N6	N5	N5	NNW5	NW4	S2.7	S13
11-Feb	NNW4	NNW2	NW2	NW2	W1	W2	W2	WSW2	SSW2	E1	NNE3	NNE5	NNE4	WNW0	SE1	NNE2	N2	W1	WSW2	WSW2	UO	NNW2	NW2	W2	NNW1.1	NNE5
12-Feb	WSW1	S0	S2	SSW2	S1	SSW1	SE0	SSW0	ENE0	NNE1	SSE3	SSE4	NNE4	NE8	NNE8	N11	N9	N9	NNW8	N9	NNW9	N9	NNW8	N9	N3.5	N11
13-Feb	N9	N8	N6	NNW1	W2	W2	NW3	W2	WNW2	N2	NNE4	NNE7	NNE8	NNE10	N10	NNE9	N7	N5	N5	NNW5	NNW4	NNW4	NNW4	WNW3	N4.7	N10
14-Feb	W1	UO	UO	WSW1	WSW2	W1	W1	SW1	N0	ESE1	SE2	ESE3	N4	N5	SW0	S6	S5	SSW2	NW2	W2	W2	WSW2	WNW1	WNW1	WSW0.6	S6
15-Feb	SW3	S2	S3	S3	WNW1	WSW2	UO	S4	S3	SSE4	SE3	ESE2	E4	WSW4	SW7	SE4	ENE3	N4	NW2	N3	N7	N5	NNW3	WNW2	S0.5	N7
16-Feb	WSW2	WSW3	WSW1	SW1	SW2	WSW2	UO	UO	S1	ESE1	SE4	SE7	SSE7	SSE10	S10	SSE12	SSE12	S8	SSW2	W1	S3	SSE6	S10	S15	S4.9	S15
17-Feb	S14	SSW10	S12	S9	S7	SSE3	SSE8	SSE12	SSE14	SSE13	SSE14	SSE14	SSE13	SSE13	SSE16	SSE17	SSE13	SSE4	SW1	W2	NNW2	SSW4	SSW6	SW2	SSE8.6	SSE17
18-Feb	WSW0	W2	WSW1	SW3	SE3	S4	S7	SSW5	S4	E2	SSE10	S11	SSE11	S14	S13	S12	S9	S4	SSW3	SSE3	S7	S6	S12	S13	S6.3	S14
19-Feb	SSW11	SSW10	S7	S8	S12	SSE11	S2	SSW3	SSE4	SSE7	SSE13	S15	S16	S20	SSE18	S17	S11	SSW5	S7	SSE16	SSE18	S16	S16	S17	S11.5	S20
20-Feb	S13	S12	S14	S17	S14	S13	S15	S14	S16	S16	SSW14	SSW15	SSW15	S13	S11	S10	S8	SSE6	SSW3	NW1	NW1	SW2	WSW2	W1	S9.8	S17
21-Feb	SW2	SW1	NNW1	UO	ESE1	N1	WNW1	NNW1	N2	N4	NNE6	NNE9	N10	NNE11	N13	N13	N12	N11	N10	N11	N10	NNE8	N9	NNW8	N6.3	N13
22-Feb	NNW9	NNW5	N5	N4	NNE4	N3	N2	NE2	NNW1	ENE2	NNE3	ENE3	SE2	SSW4	S3	SSW5	SSW3	S3	SSW3	WSW3	SSW2	WSW2	SSW2	SSW3	NW0.6	NNW9
23-Feb	S5	S5	S3	UO	UO	N2	WNW1	S2	NNW1	N16	N18	NNE16	NNE18	NNE15	NNE13	NNE11	NNE9	NNE10	N5	NE2	NE3	ENE3	NE5	NE6	NNE6.2	NNE18
24-Feb	NNE6	N6	NE5	N5	N5	N4	N5	NNE3	S1	SE1	SW3	S4	SSW4	SE4	SSE7	SSW5	W2	ESE1	NNW4	NNW2	N5	N13	N12	NNE12	NNE2.4	N13
25-Feb	NNE10	NNE10	NNE11	NNE13	NNE12	NNE11	NNE7	N8	N8	NNE9	NNE8	NNE7	NNE7	NNE7	NNE4	NNE6	NNE7	NNE5	N3	NNW3	NNW5	NNW4	NNW3	WSW2	NNE6.9	NNE13
26-Feb	SSE5	SSE7	S7	SW1	SSW3	WNW1	NNW1	N5	N8	N11	N12	N7	N6	N8	N12	N11	N11	N8	NNW8	NNW6	N6	N7	NNW7	N7	N5.0	N12
27-Feb	N6	NNW5	N3	NNE3	N4	N3	ENE3	NNE2	WNW2	WSW2	SSW8	SW5	NW9	NNE15	NNE15	NNE15	NNE13	NNE11	NNE10	NNE10	NNE11	NNE8	NE6	NNE4	NNE5.5	NNE15
28-Feb	NE3	ENE1	ESE3	ESE3	ESE1	N1	NE3	N3	N1	SSE2	SSE3	SSE3	SSE5	SSE5	SSE9	SSE10	SSE10	SSE8	S8	SSW7	SSW6	SSW4	SSW2	S5	SSE3.2	SSE10
	NW1.0	WNW0.9	W0.2	WSW0.6	SSW0.3	NW0.5	NNW0.4	W0.4	SW0.5	ENE1.1	ESE0.7	ESE1.0	ENE0.9	E1.1	ESE1.6	ESE1.2	ENE0.8	N1.3	NW1.8	NNW1.7	NNW1.8	NW1.8	WNW1.7	W1.3	Diurnal Average	
	N19	N20	N20	N18	N17	N17	N17	N21	N22	NNE21	N20	N19	N19	S20	SSE18	S17	N14	N16	N15	N17	NNE18	N18	NNE18	S17	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 Feb 23 10:00

Minimum Value: 0 km/h on Feb 18 19:00

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

Hours in Service:	672
Hours of Data:	662
Hours of Missing Data:	10
Hours of Calibration:	0
Percent Operational Time:	98.5

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

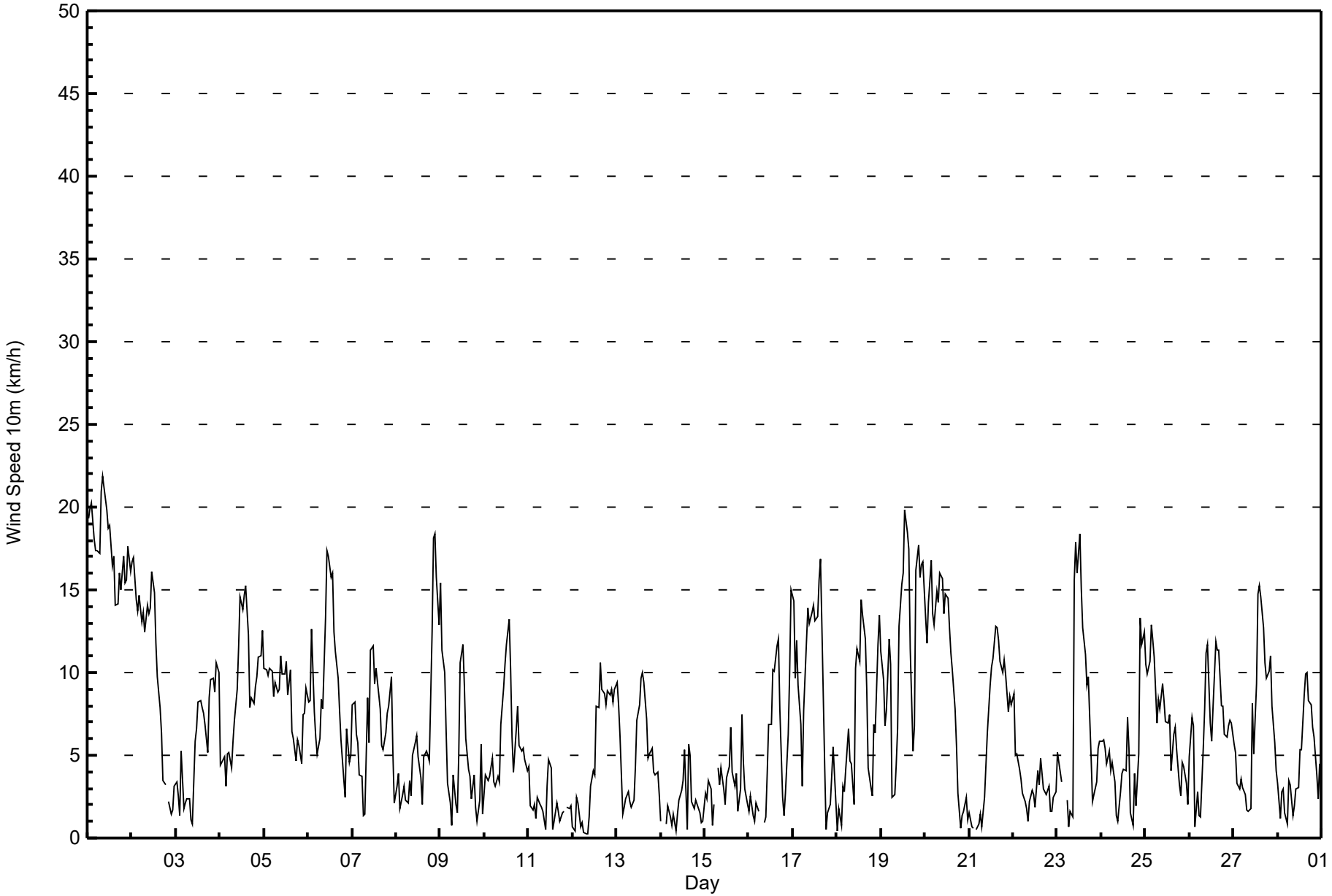
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Fort McKay South - February 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	322	48.64	48.64
6 - 11	212	32.02	80.66
12 - 19	121	18.28	98.94
20 - 28	7	1.06	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 662

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Fort McKay South - February 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	38	23	8	7	4	9	11	19	36	36	20	34	24	16	11	26	322
6 - 11	37	36	4	0	0	0	2	19	40	25	7	16	10	2	4	10	212
12 - 19	37	28	0	0	0	0	0	16	34	4	0	2	0	0	0	0	121
20 - 28	5	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	7
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	117	88	12	7	4	9	13	54	111	65	27	52	34	18	15	36	662

Total Number of Valid Hours: 662

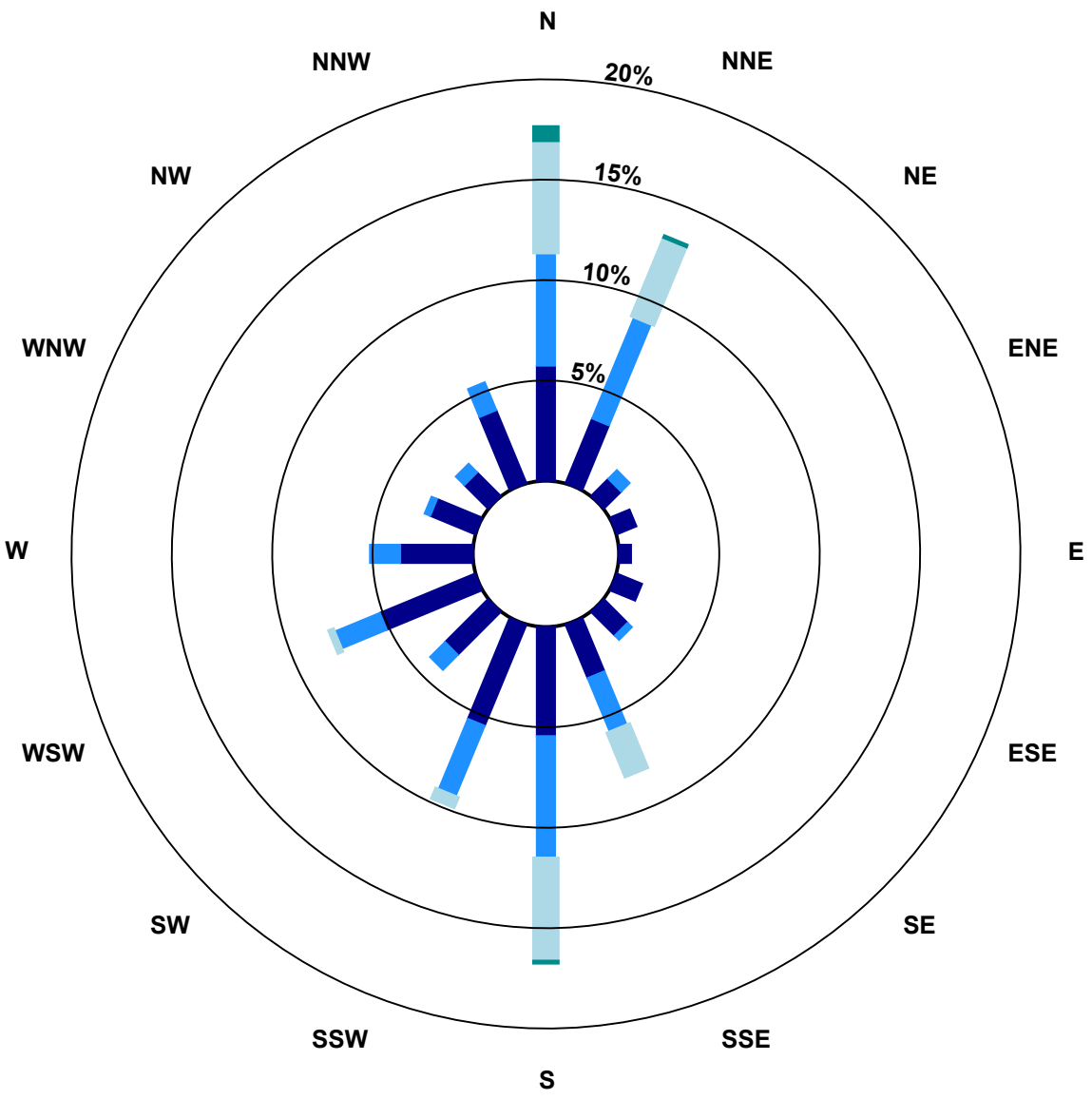
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 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: 662

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Fort McKay South - February 2025

Direction of Maximum Speed: 9 deg on Feb 1 09:00
Direction of Maximum Daily Speed Average: 6.4 deg on Feb 1

Direction of Minimum Speed: 212 deg on Feb 12 08:00
Direction of Minimum Daily Speed Average: 0.5 deg on Feb 15

Monthly Average Direction: 344.1 deg

Hours in Service:	672
Hours of Data:	662
Hours of Missing Data:	10
Percent Operational Time:	98.5

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-Feb	10	8	7	5	4	4	5	6	9	12	3	7	359	358	4	358	356	6	6	8	15	13	12	14	6.4
2-Feb	5	9	5	11	18	14	4	9	13	10	13	10	11	13	18	18	12	9	26	UO	235	200	256	236	9.7
3-Feb	240	279	240	253	290	360	19	11	337	240	229	209	214	202	174	185	181	210	237	243	251	263	256	255	232.6
4-Feb	202	205	178	178	166	175	175	173	175	170	175	177	180	178	183	185	192	175	169	172	171	191	197	200	181.2
5-Feb	191	183	182	182	185	186	194	187	183	190	192	196	203	200	193	205	209	201	232	235	238	253	266	259	201.7
6-Feb	265	257	257	263	273	305	306	283	276	16	13	10	14	10	9	340	324	310	295	292	276	257	247	258	322.3
7-Feb	260	253	247	229	205	267	272	268	257	249	246	246	220	218	216	204	212	223	239	256	269	257	243	179	239.5
8-Feb	209	229	156	180	181	192	201	204	219	157	147	149	124	87	356	8	12	16	355	14	14	11	7	6	22.9
9-Feb	12	12	4	342	324	337	295	253	226	276	13	14	18	9	37	36	13	286	256	241	253	267	261	237	355.0
10-Feb	167	165	183	184	184	185	179	185	171	178	184	186	178	172	166	141	145	14	4	6	8	0	348	325	170.8
11-Feb	348	341	318	311	274	266	262	250	198	86	19	31	29	294	129	23	353	268	240	242	UO	329	306	267	327.8
12-Feb	256	191	172	204	181	196	135	212	70	32	167	149	25	37	30	9	10	356	347	349	345	351	345	350	3.0
13-Feb	352	356	3	331	281	269	311	280	296	353	26	18	14	12	7	12	9	352	360	345	336	343	339	299	355.7
14-Feb	259	UO	UO	240	258	268	261	233	358	109	126	102	9	1	215	181	182	207	306	273	270	255	282	284	236.7
15-Feb	233	188	181	185	288	242	UO	182	178	159	132	105	82	238	214	146	66	357	305	351	11	7	333	282	188.6
16-Feb	255	248	258	217	231	238	UO	UO	187	122	140	145	157	160	169	161	164	171	196	270	184	166	177	177	171.8
17-Feb	178	193	180	179	173	154	152	155	155	151	159	159	149	150	150	156	152	157	225	271	334	197	205	215	163.2
18-Feb	249	272	239	219	145	174	179	193	186	96	162	173	156	171	177	172	184	186	195	165	189	188	188	186	178.0
19-Feb	194	192	179	179	172	167	177	203	154	154	166	182	177	170	166	170	175	195	179	168	168	173	180	174	174.0
20-Feb	176	174	175	181	185	187	189	189	185	190	194	195	195	191	184	179	177	167	198	308	312	233	243	262	186.7
21-Feb	236	227	328	UO	110	352	300	344	359	8	19	22	359	13	8	3	7	9	4	9	11	16	6	341	6.0
22-Feb	345	329	353	5	29	353	360	49	333	58	18	71	140	213	174	213	203	190	204	239	205	256	202	208	309.1
23-Feb	184	182	185	UO	UO	11	299	191	336	6	7	15	12	15	12	12	18	22	350	45	51	61	36	42	16.6
24-Feb	25	10	35	350	4	4	7	28	187	126	226	176	192	136	168	192	281	117	344	343	1	5	0	20	12.6
25-Feb	23	20	22	14	12	18	14	1	6	23	15	19	12	12	13	12	14	19	4	329	348	330	333	247	11.4
26-Feb	165	167	174	217	195	282	327	355	356	8	2	7	8	359	4	4	2	0	343	347	2	350	346	358	359.3
27-Feb	349	334	356	14	8	8	76	24	293	255	194	231	324	16	20	22	19	25	24	32	22	31	43	18	14.3
28-Feb	42	73	103	104	108	3	39	6	355	159	156	160	156	148	152	152	153	162	177	197	196	193	200	191	156.8
	314.4	298.1	261.8	250.9	205.4	313.4	326.3	265.8	231.7	58.5	105.7	119.0	72.8	95.8	121.0	113.4	59.5	4.5	322.6	327.8	342.5	323.9	299.6	271.2	
	Diurnal Average																								

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

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Fort McKay South - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 101 deg on Feb 11 14:00

Minimum Value: 8 deg on Feb 4 09:00

Percentiles: P_1 = 9 P_{10} = 12 Q_1 = 15 Median = 19 Q_3 = 36 P_{90} = 61 P_{99} = 90

Hours in Service:	672
Hours of Data:	662
Hours of Missing Data:	10
Hours of Calibration:	0
Percent Operational Time:	98.5

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-Feb	16	15	16	16	16	14	16	16	15	15	17	16	17	17	16	17	17	17	16	18	16	17	17	16	18
2-Feb	17	15	15	16	15	16	16	17	14	15	15	16	16	18	15	14	12	18	33	UO	27	27	31	16	33
3-Feb	29	33	68	24	71	23	34	33	97	89	42	26	24	25	15	14	9	31	17	17	17	21	18	19	97
4-Feb	32	27	19	25	11	10	13	9	8	9	10	10	13	11	10	10	15	14	9	8	10	16	19	18	32
5-Feb	15	13	10	10	9	11	16	13	10	12	14	18	18	24	15	26	28	31	33	33	48	26	31	25	48
6-Feb	33	29	24	45	44	57	34	23	22	33	17	17	16	17	16	23	18	14	20	24	56	16	19	21	57
7-Feb	19	18	24	35	56	75	57	71	18	42	17	18	23	22	23	19	13	12	10	11	13	11	49	32	75
8-Feb	49	84	80	26	34	65	18	16	28	10	8	13	30	34	76	27	14	13	12	16	16	15	15	15	84
9-Feb	16	15	17	20	29	40	74	17	53	67	17	14	19	21	28	34	28	29	10	49	58	51	18	79	79
10-Feb	23	27	24	13	15	16	16	23	28	17	16	16	19	12	11	23	52	19	13	14	13	13	11	14	52
11-Feb	9	70	57	39	66	32	69	41	55	88	30	19	32	101	86	73	55	42	46	37	UO	46	44	26	101
12-Feb	63	86	17	19	92	56	88	94	96	63	38	21	66	24	24	16	18	14	15	17	15	12	13	14	96
13-Feb	13	15	18	57	45	25	27	30	47	46	22	15	12	15	16	18	12	18	17	12	12	13	11	24	57
14-Feb	45	UO	UO	44	32	50	49	51	78	46	34	37	40	30	99	24	25	50	15	39	28	53	64	69	99
15-Feb	23	53	21	24	69	41	UO	23	49	16	28	44	29	75	26	43	38	20	23	35	15	27	22	26	75
16-Feb	37	16	45	73	36	42	UO	UO	60	61	29	12	20	13	17	9	11	14	49	67	52	10	9	11	73
17-Feb	13	17	14	10	11	17	11	11	11	11	13	14	15	15	13	12	13	55	72	48	57	22	14	66	72
18-Feb	85	55	86	43	45	24	15	12	13	66	12	18	16	15	16	16	11	15	14	19	9	12	11	9	86
19-Feb	10	11	13	14	9	8	59	40	27	29	15	15	15	12	13	11	12	14	16	10	9	10	9	10	59
20-Feb	11	8	10	11	12	13	13	14	12	14	16	14	16	18	16	11	8	14	49	68	30	57	31	66	68
21-Feb	53	82	48	UO	74	86	56	81	55	15	18	15	19	15	17	16	16	14	14	16	14	14	14	14	86
22-Feb	14	17	19	25	25	41	42	57	33	40	57	35	69	38	39	43	46	21	29	24	52	45	28	30	69
23-Feb	15	25	26	UO	UO	61	51	81	74	26	16	17	17	17	15	16	16	16	22	23	25	28	18	18	81
24-Feb	25	14	18	22	21	22	15	44	65	76	61	38	56	44	20	19	75	76	19	44	59	15	14	16	76
25-Feb	17	15	16	15	16	15	16	16	19	19	19	21	25	28	42	18	18	16	24	28	13	17	32	47	47
26-Feb	12	9	21	71	58	78	70	15	15	14	14	19	28	17	15	15	14	14	14	13	14	13	14	20	78
27-Feb	20	22	32	35	36	65	66	91	88	85	22	45	43	18	17	17	16	17	19	18	18	18	27	25	91
28-Feb	25	66	40	30	68	69	25	35	81	33	31	29	20	34	26	15	13	12	11	12	12	23	60	18	81
	85	86	86	73	92	86	88	94	97	89	61	45	69	101	99	73	75	76	72	68	59	57	64	79	
	Diurnal Maximum																								

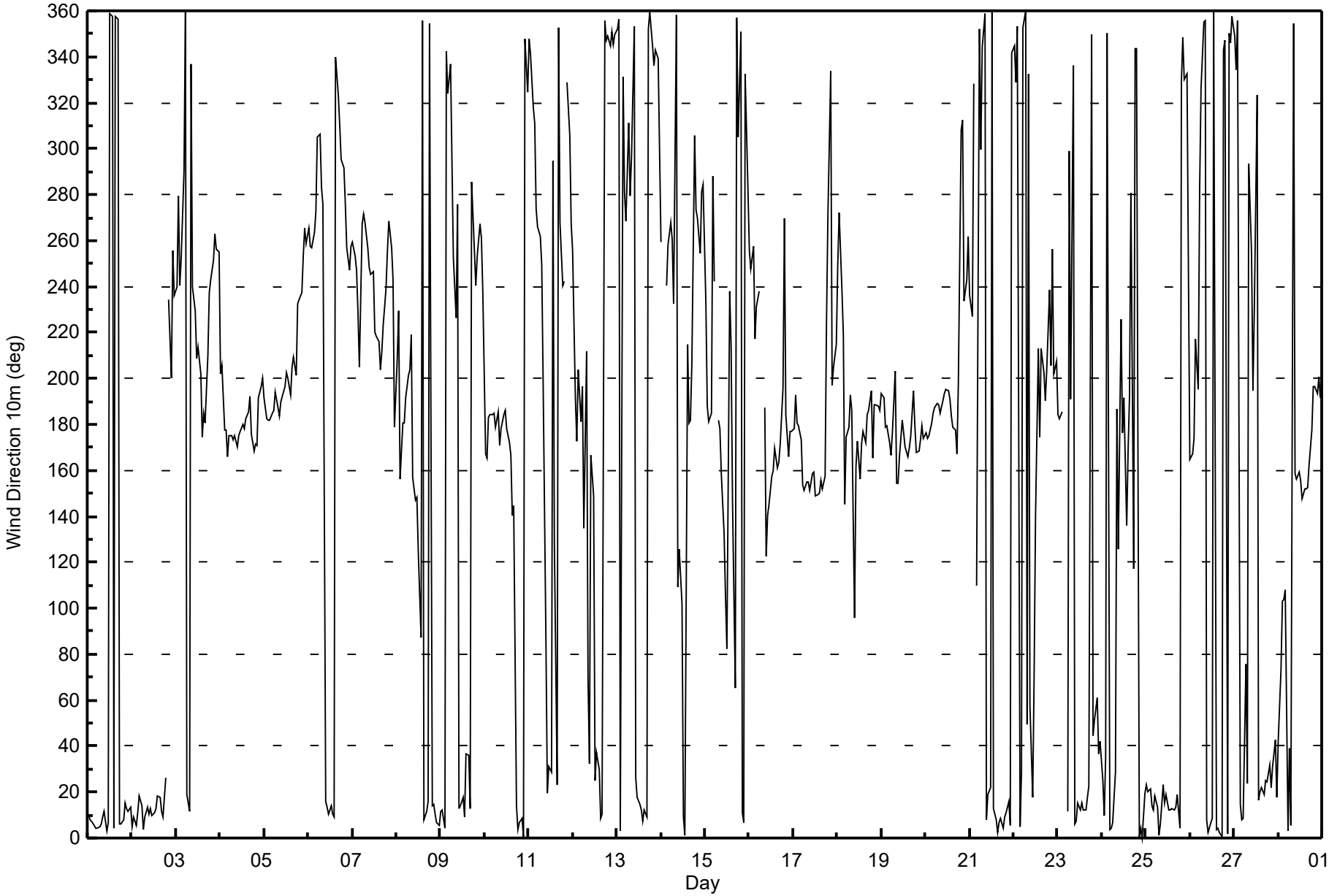
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Fort McKay South - February 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS14
ANZAC
FEBRUARY 2025

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

March 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ANZAC (AMS14)
FEBRUARY 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	640	32	32	100	-	-	10.2	0	2.4	0
TRS(ppb) Average	634	34	38	99.4	1.5	0	1.4	-	0.4	-
THC(ppm) Average	640	32	32	100	-	-	2.5	-	2.2	-
NMHC(ppm) Average	640	32	32	100	-	-	0.093	-	0.006	-
CH4(ppm) Average	640	32	32	100	-	-	2.5	-	2.2	-
NO2(ppb) Average	637	34	35	99.85	-	-	73.4	0	17	-
NO(ppb) Average	637	34	35	99.85	-	-	70	-	10	-
NOX(ppb) Average	637	34	35	99.85	-	-	143.4	-	27	-
O3(ppb) Average	639	32	33	99.85	-	-	44.3	0	35.8	-
PM2.5(ug/m3) Average	671	1	1	100	-	-	126.9	1	11.2	0
AT 2m(C) Average	672	0	0	100	-	-	6	-	-1.3	-
RH(%) Average	672	0	0	100	-	-	98.4	-	90.3	-
WS(km/h) Average	672	0	0	100	-	-	33	-	18	-
WD(deg) Average	672	0	0	100	-	-	-	-	-	-
Leaf Wetness (% of range) Average	672	0	0	100	-	-	42	-	7.7	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ANZAC (AMS14)
FEBRUARY 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	640	0.93	1.3	-	0	0	0.2	0.5	1.1	2.3	10.2
TRS(ppb) Average	634	0.23	0.1	-	0.1	0.1	0.2	0.2	0.2	0.3	1.4
THC(ppm) Average	640	2.04	0.1	-	2	2	2	2	2.1	2.1	2.5
NMHC (ppm) Average	640	0	0.004	-	0	0	0	0	0	0	0.093
CH4(ppm) Average	640	2.04	0.1	-	2	2	2	2	2.1	2.1	2.5
NO2(ppb) Average	637	4.96	6.1	-	0.1	1.1	1.7	3	6	9.5	73.4
NO(ppb) Average	637	1.32	3.6	-	0	0	0.1	0.4	1.2	3	70
NOX(ppb) Average	637	6.28	9.1	-	0.1	1.2	2	3.7	7.2	11.9	143.4
O3(ppb) Average	639	27.16	7.8	-	0	17.6	23.2	28.3	32.7	35.7	44.3
PM2.5(ug/m3) Average	671	4.02	5.2	-	0.4	1.9	2.5	3.3	4.7	6.3	126.9
Temperature 2 m (C) Average	672	-17.12	9.8	-	-37.6	-27.7	-25	-19.4	-8.2	-3.1	6
Relative Humidity (%) Average	672	72.94	12.1	-	29.7	57.4	68.3	74.5	79.6	88.5	98.4
Wind Speed 20 m (km/h) Average	672	11.4	5	-	1	5	7	11	14	19	33
Wind Direction 20 m (deg) Average	672	247	-	-	-	-	-	-	-	-	-
Leaf Wetness (% of range) Average	672	0.54	2.9	-	0	0	0	0	0	0.7	42

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ANZAC (AMS14)
FEBRUARY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
NO2, O3, TRS	10 Feb 2025 16:00	10 Feb 2025 16:00	1	Maintenance - sample manifold cleaned
TRS	19 Feb 2025 11:00	19 Feb 2025 13:00	3	Maintenance - reinitiated daily QA check

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Anzac - February 2025

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

Maximum Value: 10.2 ppb on Feb 9 19:00

Maximum Daily Average: 2.4 ppb on Feb 11

Minimum Value: 0.0 ppb on Feb 1 04:00

Minimum Daily Average: 0.1 ppb on Feb 7

Maximum Diurnal Average: 1.6 ppb at hour 19

Minimum Diurnal Average: 0.5 ppb at hour 9

Monthly Average: 0.93 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.2 Median = 0.5 Q_3 = 1.1 P_{90} = 2.3 P_{99} = 6.3

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	1.7	1.9	1.4	3.9	6.0	5.0	5.8	6.2	3.8	3.1	1.2	0.4	0.0	1.8	6.2
2-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	2.4	5.5	6.7	8.1	5.4	3.4	1.4	0.4	0.2	0.1	1.5	8.1
3-Feb	0.2	0.7	1.9	Z	0.8	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.6	0.6	0.4	0.4	0.4	1.9
4-Feb	0.4	0.4	0.5	1.1	Z	1.2	1.2	1.1	0.8	0.9	0.9	0.3	0.1	0.4	0.5	1.2	0.3	2.0	1.0	0.4	0.3	0.7	0.8	1.4	0.8	2.0
5-Feb	1.5	1.7	1.5	0.4	0.2	Z	0.6	0.5	0.9	1.5	1.0	0.5	0.5	0.3	0.2	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.6	1.7
6-Feb	Z	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.5	0.2	0.3	0.7	0.7	0.2	0.1	0.1	0.6	0.2	0.7
7-Feb	0.6	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.6
8-Feb	0.0	0.1	Z	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.3	0.1	0.0	0.1	0.0	0.1	0.0	0.0	3.8	6.3	1.6	0.1	0.0	0.6	6.3
9-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	3.1	1.0	0.5	0.5	1.6	6.7	10.2	6.3	3.3	1.3	0.6	0.3	1.6	10.2
10-Feb	0.1	0.1	0.1	0.2	Z	0.2	0.1	0.2	0.2	0.2	0.3	0.3	C	C	C	C	0.4	0.1	0.0	0.0	0.0	0.0	0.2	0.3	0.2	0.4
11-Feb	0.1	0.3	0.2	0.2	0.0	Z	0.2	0.3	0.3	0.6	2.3	3.0	3.9	5.5	7.0	7.2	6.0	5.1	3.9	2.7	2.5	1.8	1.6	1.4	2.4	7.2
12-Feb	Z	1.5	1.2	0.9	0.9	0.9	0.8	0.9	1.1	1.4	2.1	3.4	2.9	3.1	2.3	1.4	1.5	1.0	0.6	0.4	0.5	0.5	0.7	0.9	1.3	3.4
13-Feb	0.8	Z	0.6	0.7	0.4	0.5	0.4	0.4	0.5	0.7	0.7	0.7	0.5	0.2	0.3	0.2	0.3	0.3	0.4	0.5	1.0	1.2	1.1	1.1	0.6	1.2
14-Feb	0.8	0.5	Z	0.3	0.2	0.6	0.3	0.4	0.3	0.7	0.8	0.7	1.0	1.5	1.4	1.1	0.6	0.7	0.7	0.5	0.4	0.6	0.4	0.4	0.6	1.5
15-Feb	0.4	2.1	1.4	Z	1.1	0.7	0.6	0.7	0.7	0.6	0.5	0.4	0.4	0.6	1.8	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.8	1.4	0.7	2.1
16-Feb	1.1	1.1	1.0	0.8	Z	0.7	0.4	0.3	0.2	0.6	1.6	2.4	2.7	1.6	1.6	1.3	1.3	0.4	0.4	0.2	0.7	2.1	1.7	0.3	1.1	2.7
17-Feb	0.2	0.3	0.6	1.1	1.5	Z	1.0	1.2	0.8	1.2	1.1	1.3	1.0	0.8	0.6	0.6	0.5	1.2	1.2	0.1	0.2	0.3	0.4	0.3	0.8	1.5
18-Feb	Z	0.7	0.8	0.8	0.7	0.7	0.6	0.6	0.8	0.6	1.8	1.6	2.2	2.1	0.7	0.6	0.9	0.4	0.7	0.6	0.9	1.0	1.2	1.1	1.0	2.2
19-Feb	1.6	Z	2.1	2.8	3.3	3.0	3.3	1.7	1.6	2.3	1.7	1.5	1.4	1.1	1.1	0.7	0.6	0.4	0.3	2.1	0.4	0.2	0.2	0.4	1.5	3.3
20-Feb	0.7	0.9	Z	0.8	0.7	0.6	0.6	0.6	0.6	0.8	0.8	0.8	0.8	0.9	0.6	0.4	0.3	0.3	0.5	0.7	0.3	0.2	0.2	0.4	0.6	0.9
21-Feb	0.2	0.4	0.3	Z	0.3	0.3	0.4	0.3	0.3	0.5	0.4	0.4	0.5	0.6	0.5	0.6	0.6	1.6	2.5	1.5	1.4	1.7	1.2	1.1	0.8	2.5
22-Feb	1.1	1.2	1.0	4.3	Z	5.7	3.3	4.6	2.3	3.2	1.4	0.5	0.8	1.0	2.2	3.4	3.0	1.3	0.9	0.6	0.5	0.5	0.5	0.5	1.9	5.7
23-Feb	0.5	0.5	0.2	0.3	0.3	Z	0.2	0.1	0.2	0.1	0.0	0.1	1.4	0.9	0.3	0.2	0.1	0.1	0.1	0.1	0.4	3.6	4.2	3.5	0.8	4.2
24-Feb	Z	2.3	1.0	1.0	0.4	0.1	0.2	0.3	0.2	0.3	0.7	0.9	0.8	1.8	2.0	0.3	1.4	0.6	0.2	0.1	0.1	0.1	0.1	0.1	0.6	2.3
25-Feb	0.9	Z	2.5	1.2	2.6	1.2	0.2	0.2	0.5	0.6	0.3	0.5	0.5	0.5	0.4	1.6	1.0	1.2	1.8	1.5	1.1	0.9	0.5	0.4	1.0	2.6
26-Feb	0.5	0.8	Z	0.7	0.4	0.5	0.4	0.3	0.2	0.1	0.2	0.1	0.4	1.8	5.0	3.8	2.8	1.4	2.5	2.2	2.1	1.3	1.9	2.1	1.4	5.0
27-Feb	2.6	2.4	3.4	Z	2.1	2.4	1.3	0.4	0.3	0.8	0.5	0.1	0.2	0.2	0.0	0.0	0.0	2.8	3.8	0.6	0.0	0.0	0.0	0.0	1.0	3.8
28-Feb	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.2	0.3	0.2	0.1	0.2	1.2	1.7	2.0	0.6	0.1	0.0	0.1	0.7	0.1	0.1	0.1	0.0	0.3	2.0
	0.6	0.8	0.9	0.8	0.7	0.8	0.6	0.6	0.5	0.7	0.7	0.8	1.1	1.1	1.4	1.4	1.3	1.5	1.6	1.2	1.0	0.8	0.7	0.7	Diurnal Average	
	2.6	2.4	3.4	4.3	3.3	5.7	3.3	4.6	2.3	3.2	2.3	3.4	3.9	5.5	7.0	7.2	6.7	8.1	10.2	6.3	6.3	3.6	4.2	3.5	Diurnal Maximum	

Z - zerospan C - Calibration

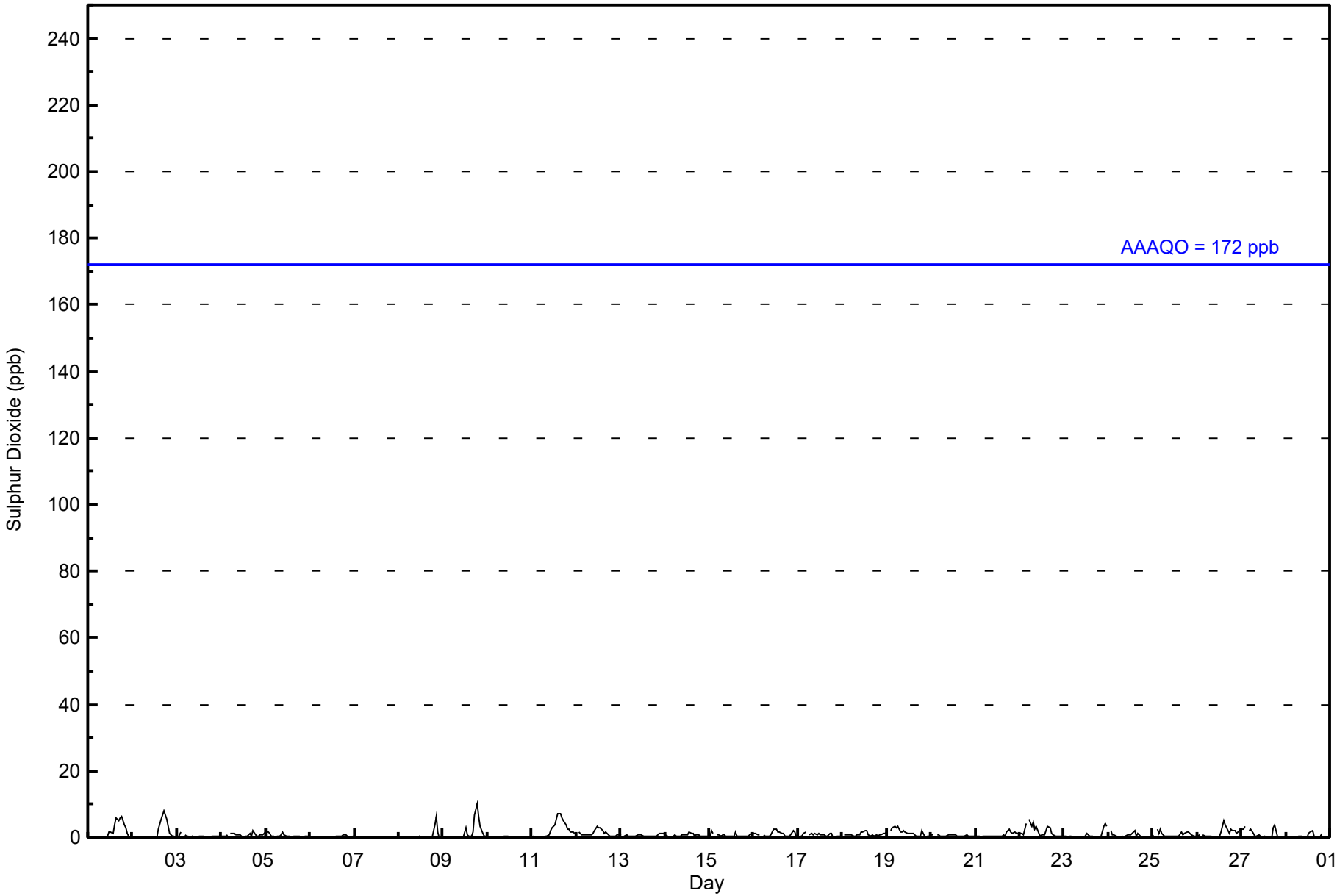
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Anzac - February 2025



Sulphur Dioxide (SO_2) - ppb
Anzac - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	640	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: 640

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Anzac - February 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	32	7	8	13	16	28	100	64	8	4	6	12	47	153	81	61	640
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	32	7	8	13	16	28	100	64	8	4	6	12	47	153	81	61	640

Total Number of Valid Hours: 640

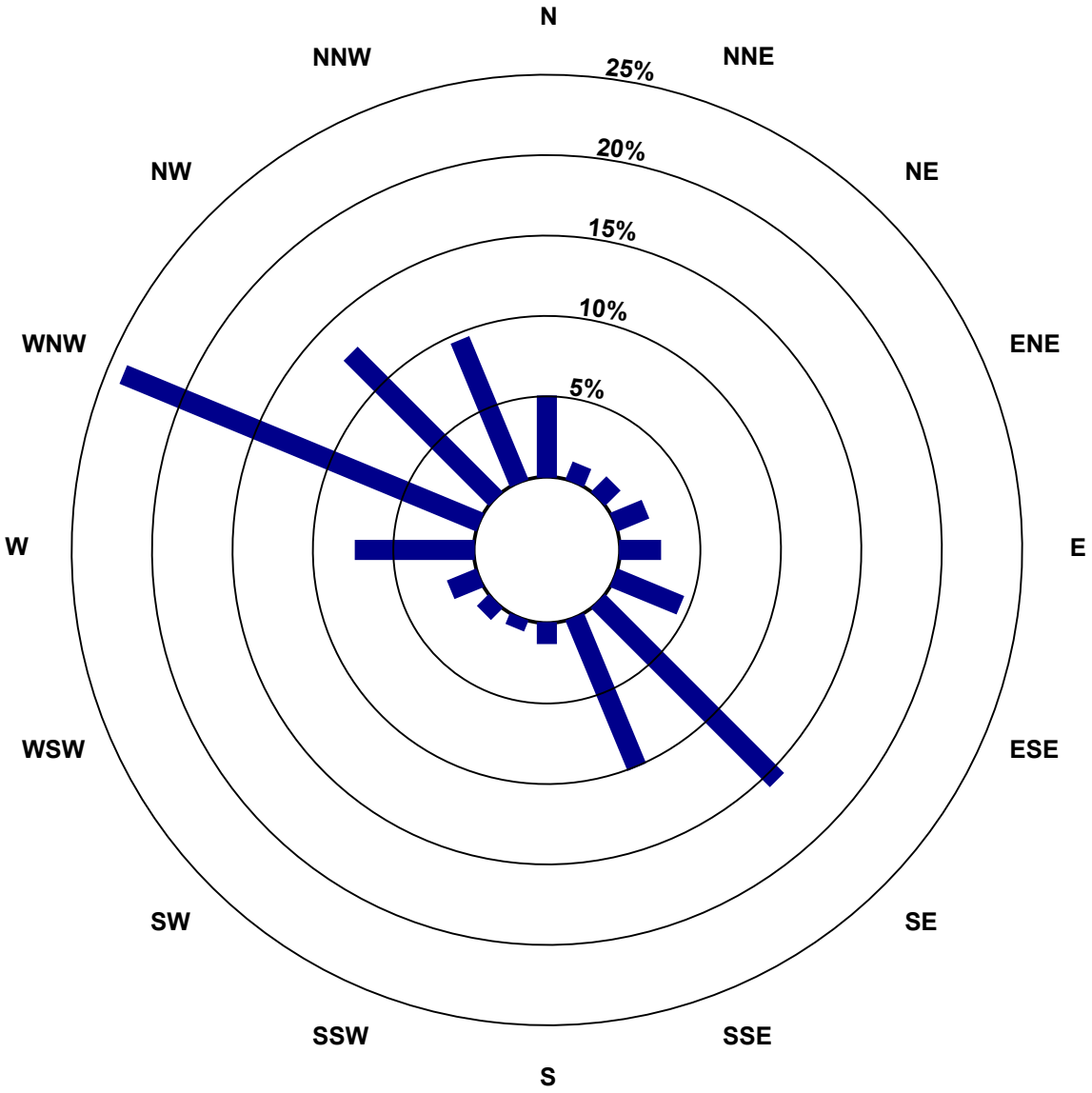
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Sulphur Dioxide (SO_2) - ppb

Anzac



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

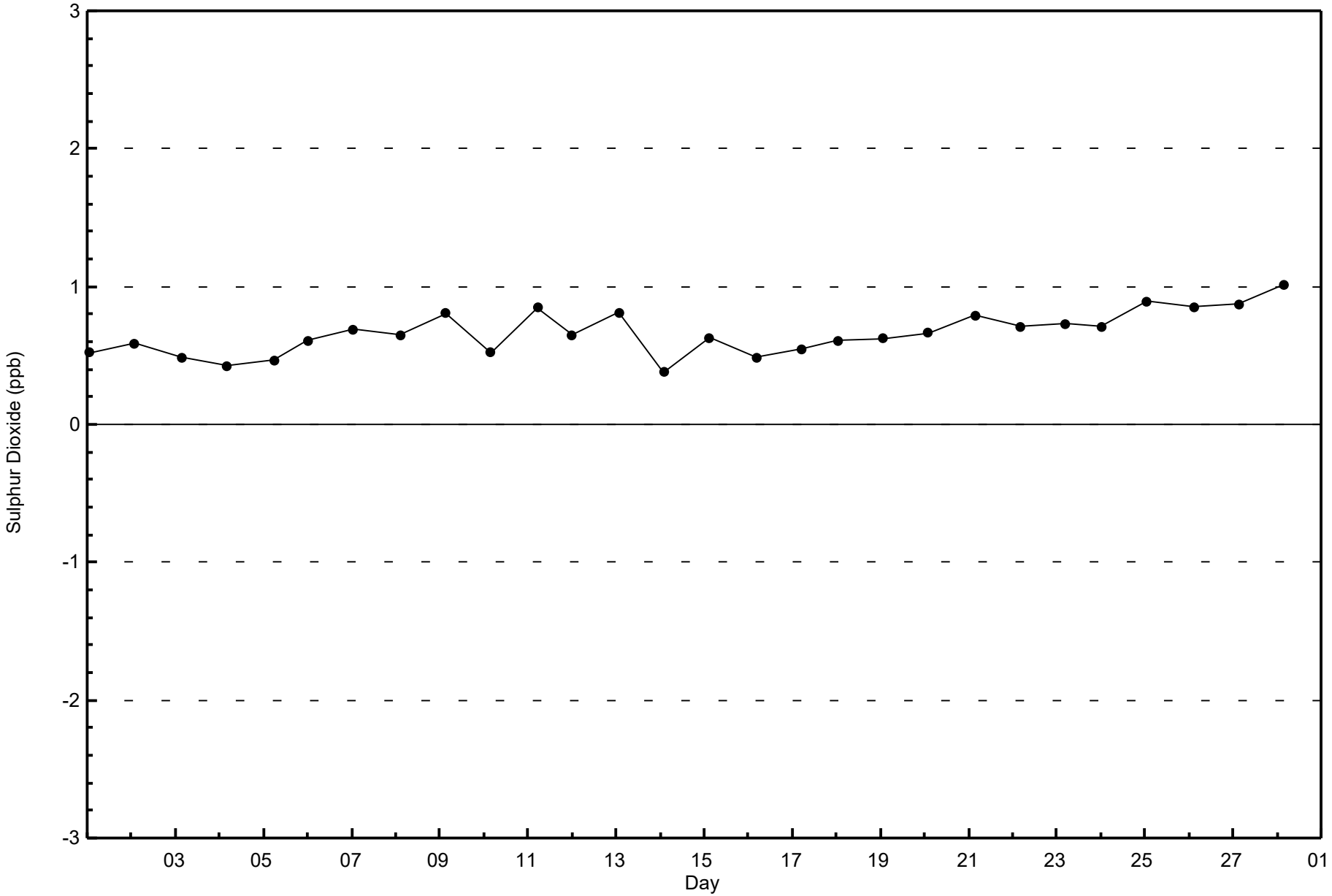
Total Number of Valid Hours: 640

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Anzac - February 2025

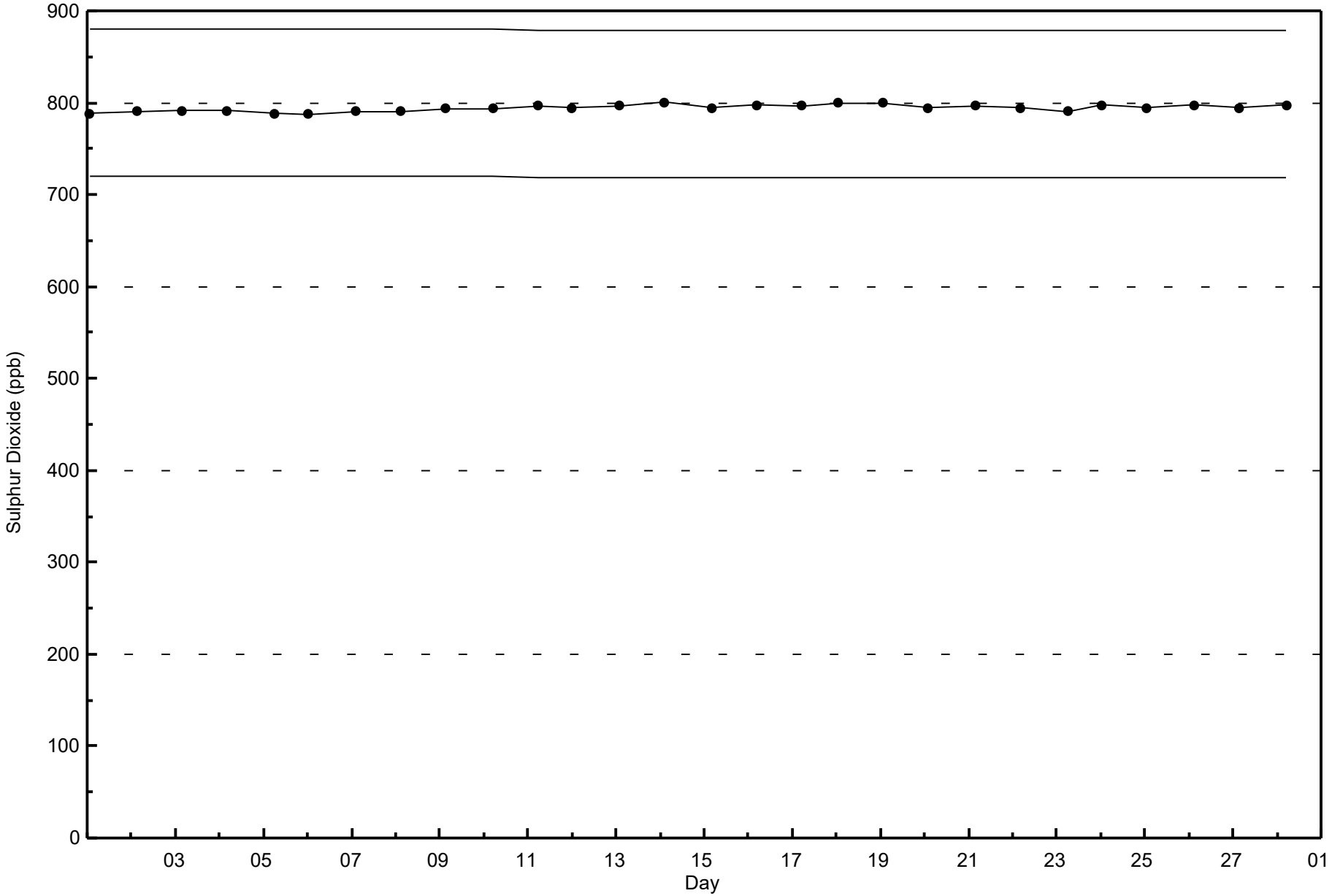


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Anzac - February 2025



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Anzac - February 2025

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

Maximum Value: 1.5 ppb on Feb 27 04:00 Maximum Daily Average: 0.5 ppb on Feb 21

Minimum Value: 0.1 ppb on Feb 7 01:30 Minimum Daily Average: 0.1 ppb on Feb 7

Maximum Diurnal Average: 0.3 ppb at hour 4 Minimum Diurnal Average: 0.2 ppb at hour 12

Monthly Average: 0.23 ppb Percentiles: P_1 = 0.1 P_{10} = 0.1 Q_1 = 0.2 Median = 0.2 Q_3 = 0.2 P_{90} = 0.3 P_{99} = 0.8

Periods in Service:	1344
Periods of Valid Data:	1271
Periods of Invalid Data:	73
Periods of Calibration:	66
Percent Operational Time:	99.5

Period Ending At (MST)

Day	00:30 01:00	01:30 02:00	02:30 03:00	03:30 04:00	04:30 05:00	05:30 06:00	06:30 07:00	07:30 08:00	08:30 09:00	09:30 10:00	10:30 11:00	11:30 12:00	12:30 13:00	13:30 14:00	14:30 15:00	15:30 16:00	16:30 17:00	17:30 18:00	18:30 19:00	19:30 20:00	20:30 21:00	21:30 22:00	22:30 23:00	23:30 24:00	Daily Average	Daily Maximum
1-Feb	0.1	0.1	Z	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	0.1	0.2	0.2
	0.1	0.1	SP	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1		
2-Feb	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	0.1	0.1	0.2	SP	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
3-Feb	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	0.3	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
4-Feb	0.2	0.3	0.3	0.2	0.2	Z	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4
	0.2	0.4	0.3	0.2	0.2	SP	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
5-Feb	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	0.1	0.2	0.2	0.2	0.5
	SP	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2		
6-Feb	0.2	Z	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2
	0.2	SP	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1		
7-Feb	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.1	0.1	0.2	0.1	0.3
	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	0.2	0.2	0.1	0.1	0.1	0.1	0.2		
8-Feb	0.1	0.2	0.2	Z	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	0.1	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.3
	0.1	0.3	0.3	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2		
9-Feb	0.2	0.2	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	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2
	0.2	0.2	0.1	0.1	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	0.1		
10-Feb	0.2	0.2	0.2	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	M	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	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	M	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
11-Feb	Z	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3
	SP	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.3		
12-Feb	0.3	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.4
	0.3	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.1		
13-Feb	0.1	0.1	Z	0.2	0.1	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3
	0.2	0.1	SP	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3		
14-Feb	0.3	0.3	0.3	Z	0.3	0.7	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.3	0.7
	0.3	0.3	0.2	SP	0.3	0.2	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	0.2	0.3	0.3	0.3		
15-Feb	0.4	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	0.4
	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		

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Anzac - February 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-Feb	0.2	0.2	0.2	0.2	0.2	Z	0.4	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.4
	0.3	0.2	0.2	0.2	0.2	SP	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2		
17-Feb	Z	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	SP	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
18-Feb	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
19-Feb	0.2	0.2	Z	0.3	0.3	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	0.2	0.2	0.1	0.1	0.2	0.3
	0.2	0.2	SP	0.3	0.2	0.2	0.3	0.2	0.2	0.2	M	M	M	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1		
20-Feb	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2
	0.1	0.2	0.1	SP	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	0.2	0.2	0.2	0.2	0.1	0.2	0.2	
21-Feb	0.2	0.3	0.3	0.2	Z	0.4	0.8	0.5	1.1	0.8	0.6	0.4	C	C	C	C	C	0.4	0.7	0.7	0.7	0.7	0.4	0.4	0.5	1.1
	0.2	0.3	0.2	0.4	SP	0.5	0.5	0.9	0.8	0.6	0.4	C	C	C	C	C	0.4	0.5	0.7	0.7	0.7	0.6	0.4	0.4		
22-Feb	0.4	0.6	0.7	0.8	0.6	Z	0.4	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.5	0.8	1.1	0.3	0.2	0.1	0.1	0.1	0.2	0.4	1.1
	0.5	0.7	0.7	0.8	0.6	SP	0.4	0.5	0.3	0.3	0.2	0.2	0.2	0.2	0.6	0.5	0.9	0.5	0.3	0.2	0.1	0.2	0.1	0.1		
23-Feb	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.3	0.2	0.4
	SP	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.4	0.4		
24-Feb	0.4	Z	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.5	0.4	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.3	0.5
	0.4	SP	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.4	0.5	0.2	0.4	0.3	0.2	0.2	0.3	0.2	0.2	0.2		
25-Feb	0.2	0.3	Z	0.7	0.7	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.6	0.3	0.7
	0.3	0.4	SP	0.7	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.7	0.3	0.3	0.3	0.4	0.3	0.3	0.4	0.3		
26-Feb	0.4	0.4	0.3	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.5	0.3	0.5	0.7	0.3	0.7
	0.4	0.4	0.3	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.4	0.3	0.2	0.2	0.3	0.3	0.3	0.4	0.6	0.6		
27-Feb	0.7	0.5	0.9	1.4	Z	0.7	0.4	0.2	0.2	0.6	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.3	1.5
	0.7	0.4	0.9	1.5	SP	0.8	0.3	0.2	0.2	0.4	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1		
28-Feb	0.2	0.1	0.1	0.1	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	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3
	0.1	0.1	0.1	0.1	0.1	SP	0.1	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.3	0.1	0.2	0.2	0.2		
	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Diurnal Average	
	0.7	0.7	0.9	1.5	0.7	0.8	0.8	0.9	1.1	0.8	0.6	0.4	0.5	0.5	0.6	0.7	0.9	1.1	0.7	0.7	0.7	0.7	0.6	0.7	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance SP - Span

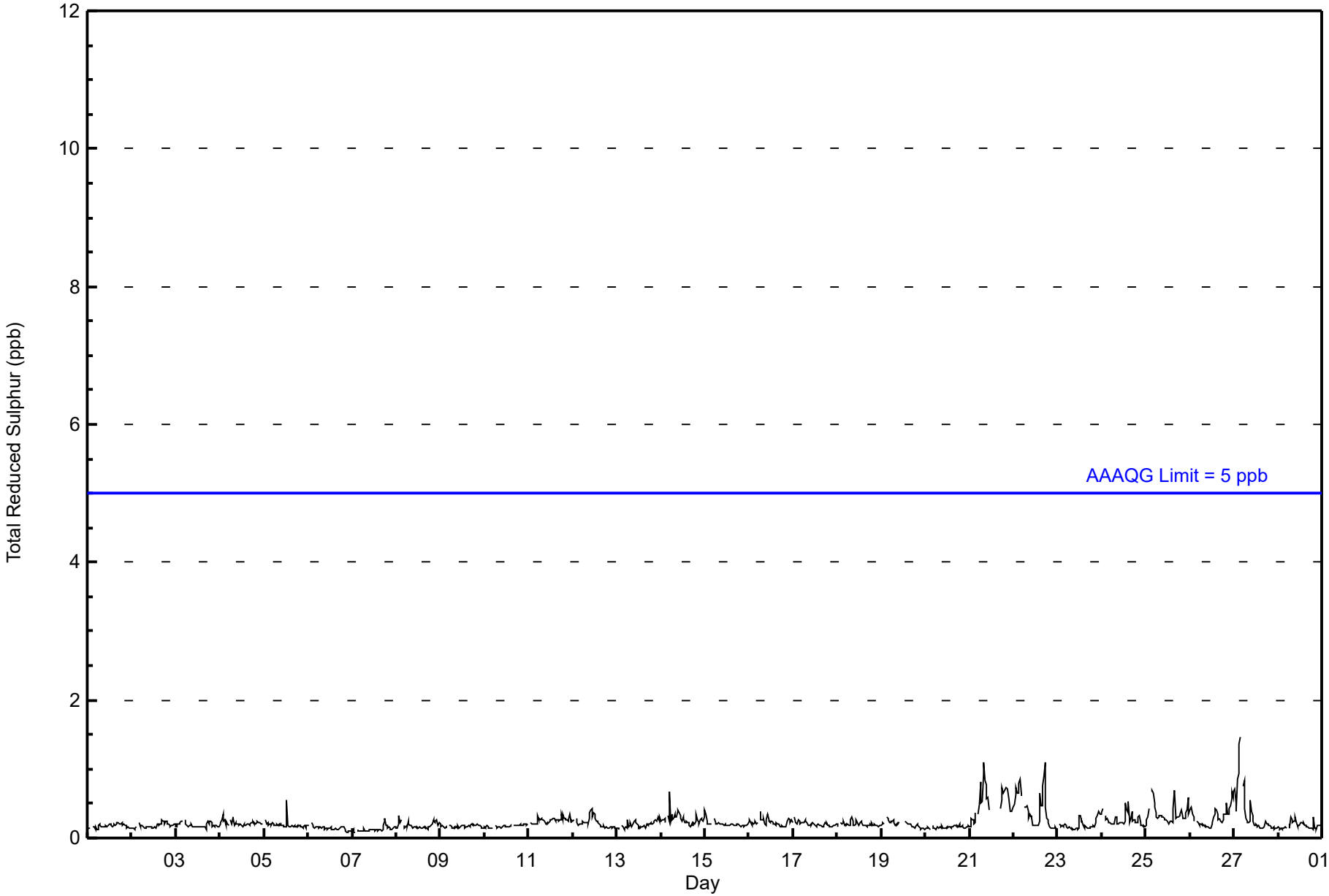
Alberta Ambient Air Quality Guideline (AAAQG): 30-Min: 5 ppb

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Anzac - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Reduced Sulphur (TRS) - ppb

Anzac - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.4 ppb on Feb 27 04:00 Maximum Daily Average: 0.4 ppb on Feb 22

Minimum Value: 0.1 ppb on Feb 7 02:00 Minimum Daily Average: 0.1 ppb on Feb 7
Maximum Diurnal Average: 0.3 ppb at hour 4 Minimum Diurnal Average: 0.2 ppb at hour 12
Monthly Average: 0.23 ppb Percentiles: P_1 = 0.1 P_{10} = 0.1 Q_1 = 0.2 Median = 0.2 Q_3 = 0.2 P_{90} = 0.3 P_{99} = 0.8

Hours in Service:	672
Hours of Data:	634
Hours of Missing Data:	38
Hours of Calibration:	34
Percent Operational Time:	99.4

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

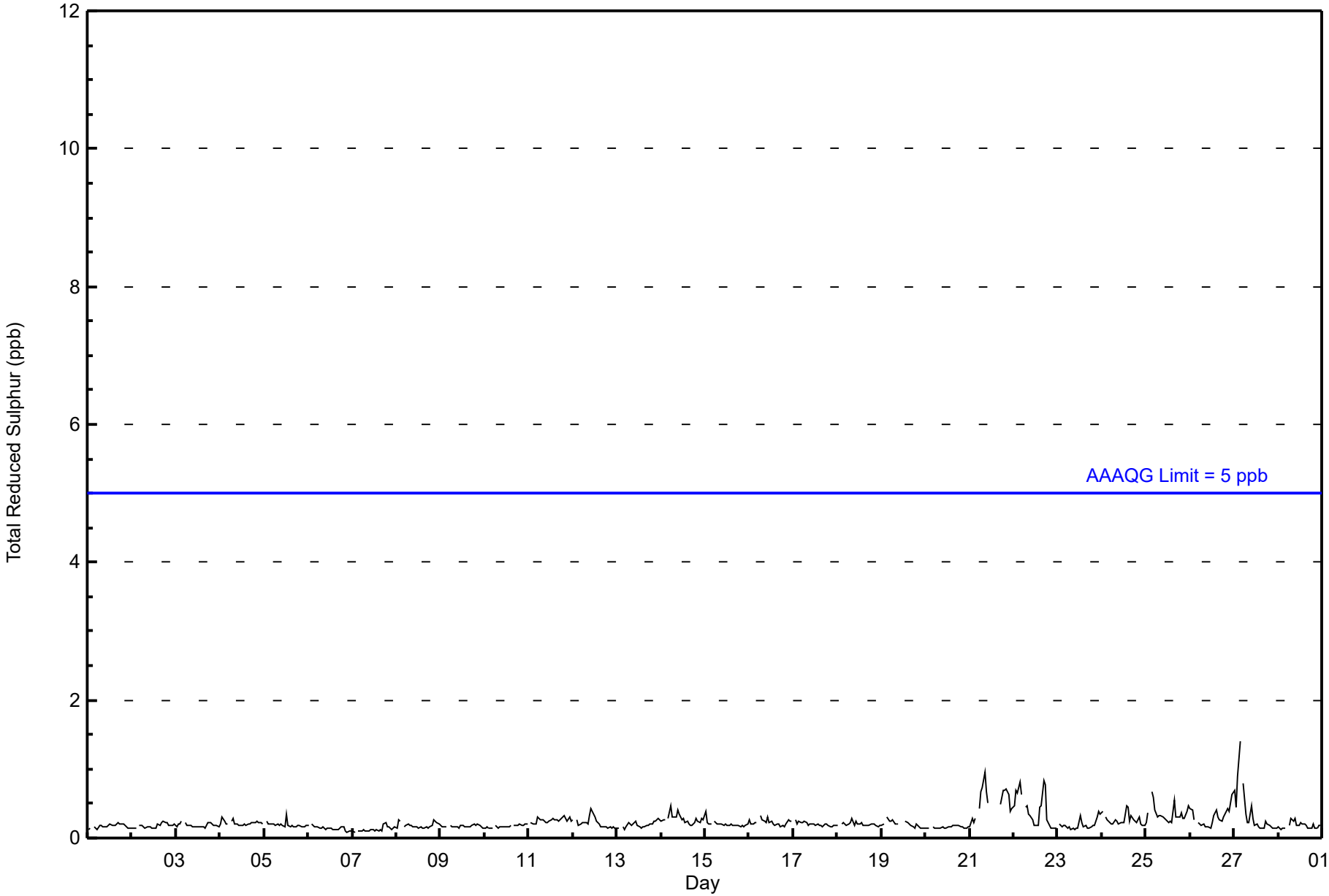
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Anzac - February 2025



Total Reduced Sulphur (TRS) - ppb

Anzac - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	634	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: 634

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Anzac - February 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	27	6	9	12	16	31	96	63	8	4	6	11	49	156	80	60	634
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	27	6	9	12	16	31	96	63	8	4	6	11	49	156	80	60	634

Total Number of Valid Hours: 634

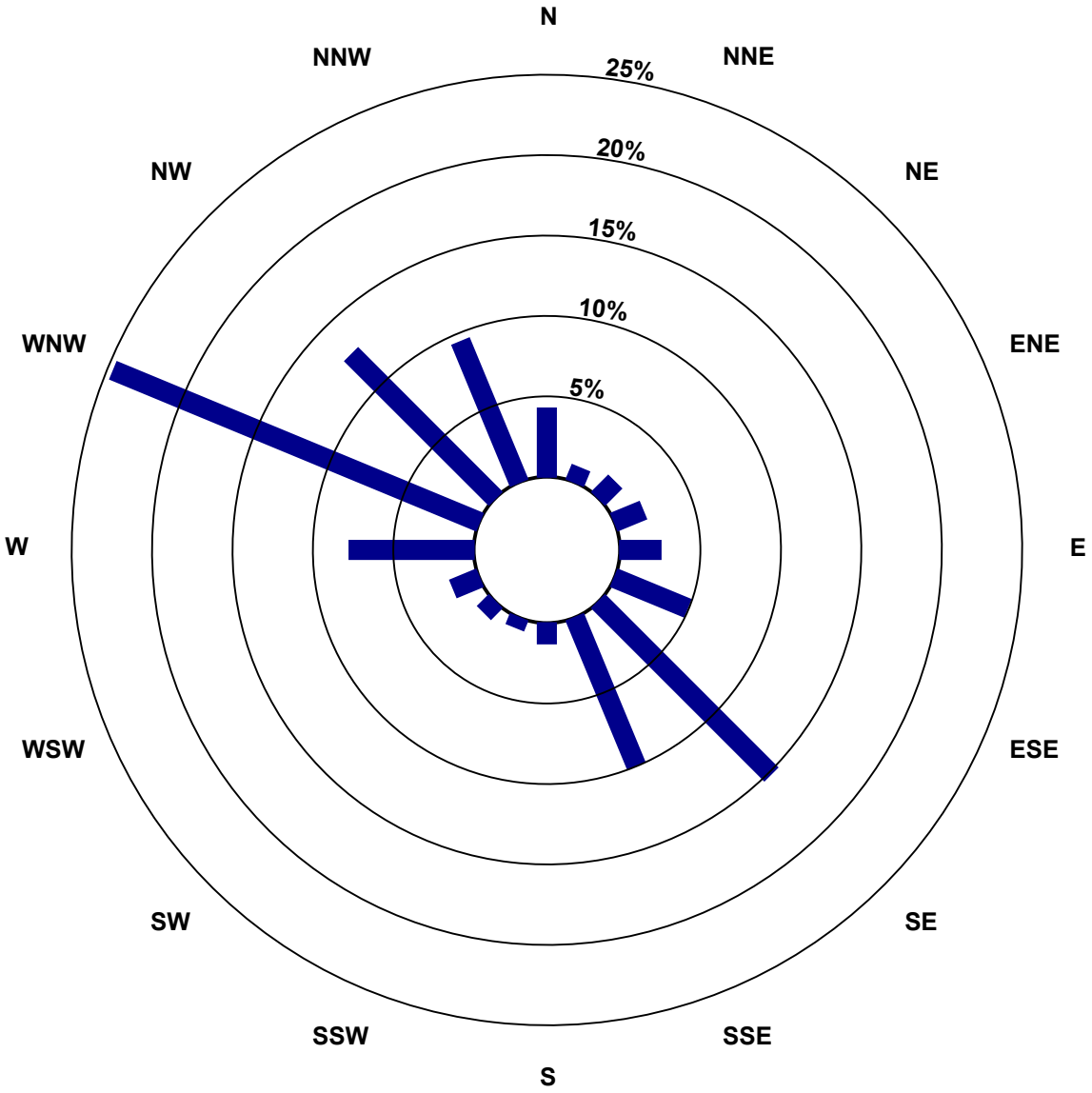
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Total Reduced Sulphur (TRS) - ppb

Anzac



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

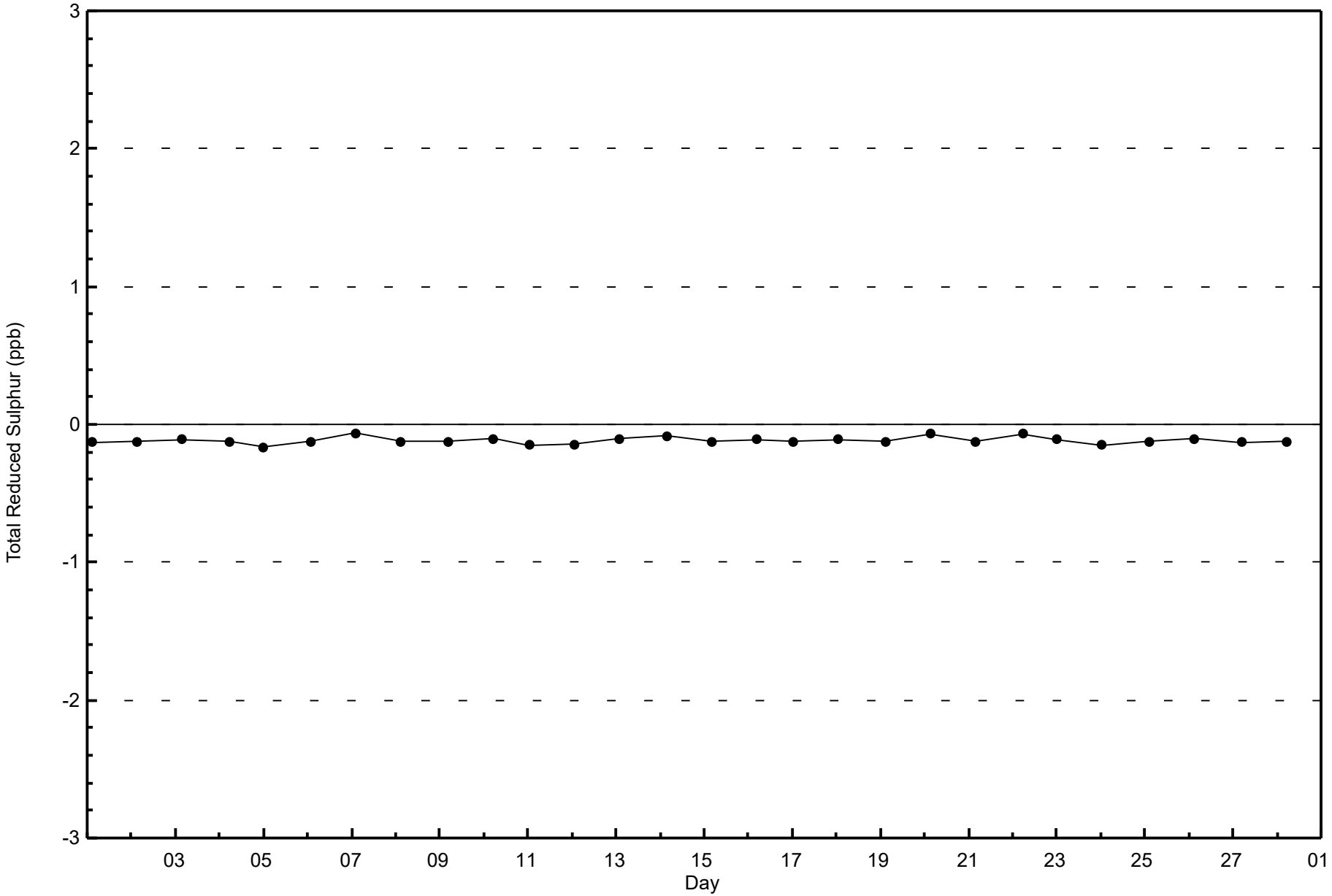
Total Number of Valid Hours: 634

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Anzac - February 2025

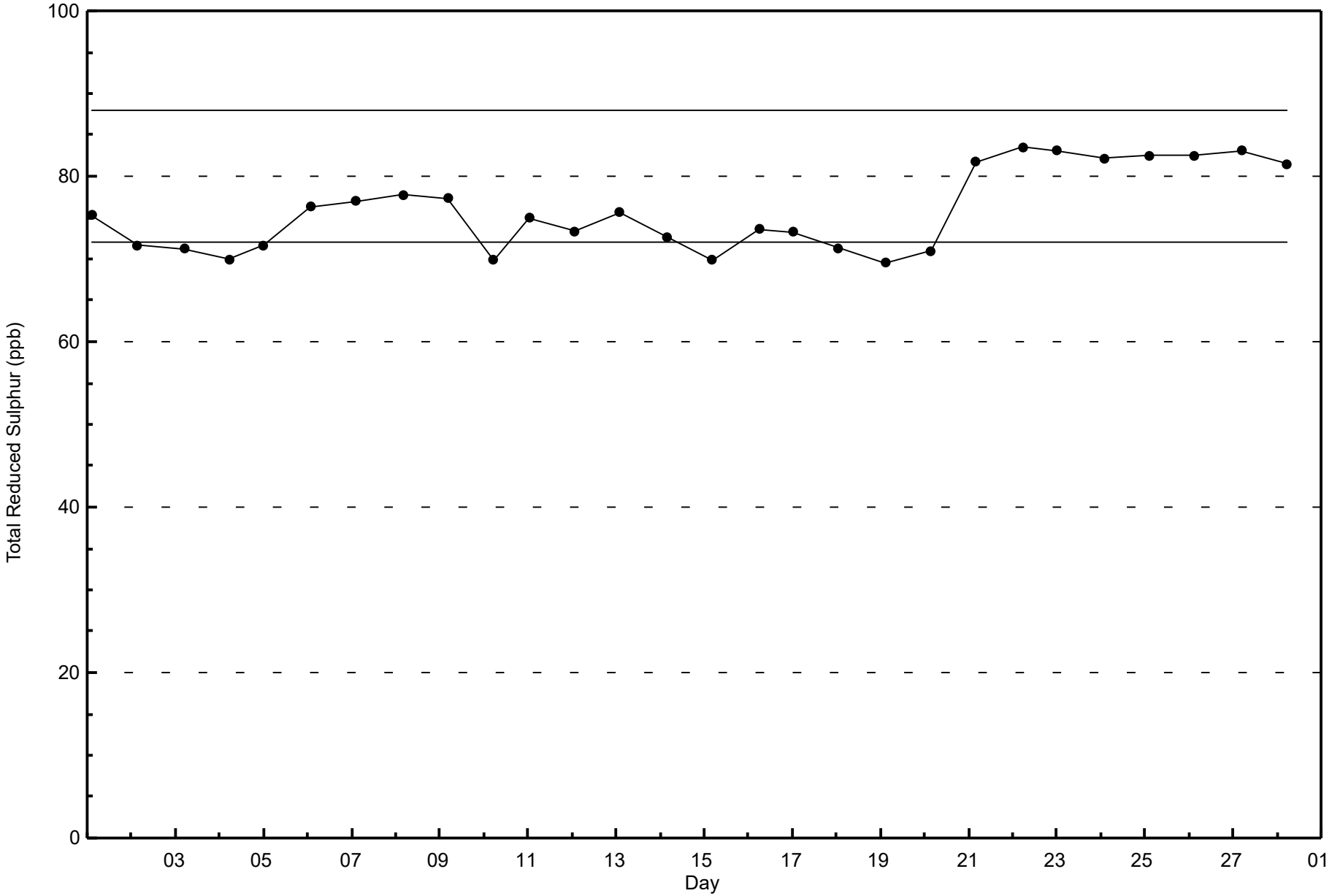


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Anzac - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Anzac - February 2025

Maximum Value: 2.5 ppm on Feb 21 21:00

Maximum Daily Average: 2.2 ppm on Feb 21

Minimum Value: 2.0 ppm on Feb 23 12:00

Minimum Daily Average: 2.0 ppm on Feb 10

Maximum Diurnal Average: 2.1 ppm at hour 6

Minimum Diurnal Average: 2.0 ppm at hour 12

Monthly Average: 2.04 ppm

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

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
2-Feb	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1
3-Feb	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
4-Feb	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
5-Feb	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
6-Feb	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Feb	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
8-Feb	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
9-Feb	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
10-Feb	2.0	2.0	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	2.0	2.0	2.0	2.0	2.0
11-Feb	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	2.1	2.1	2.0	2.0	2.0	2.0	2.1
12-Feb	Z	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
13-Feb	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1
14-Feb	2.1	2.1	Z	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	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.2
15-Feb	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
16-Feb	2.0	2.0	2.0	2.1	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
17-Feb	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
18-Feb	Z	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
19-Feb	2.0	Z	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
20-Feb	2.0	2.0	Z	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1
21-Feb	2.0	2.1	2.1	Z	2.1	2.2	2.2	2.2	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.4	2.5	2.5	2.5	2.2	2.3	2.2	2.5
22-Feb	2.3	2.5	2.4	2.3	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.5
23-Feb	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.2
24-Feb	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	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.0	2.0	2.0	2.0	2.2
25-Feb	2.0	Z	2.2	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.2	2.1	2.3
26-Feb	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	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
27-Feb	2.1	2.1	2.2	Z	2.1	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
28-Feb	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1
	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	Diurnal Average	
	2.3	2.5	2.4	2.3	2.2	2.2	2.2	2.2	2.3	2.2	2.1	2.1	2.2	2.1	2.2	2.1	2.1	2.2	2.4	2.5	2.5	2.5	2.2	2.3	Diurnal Maximum	

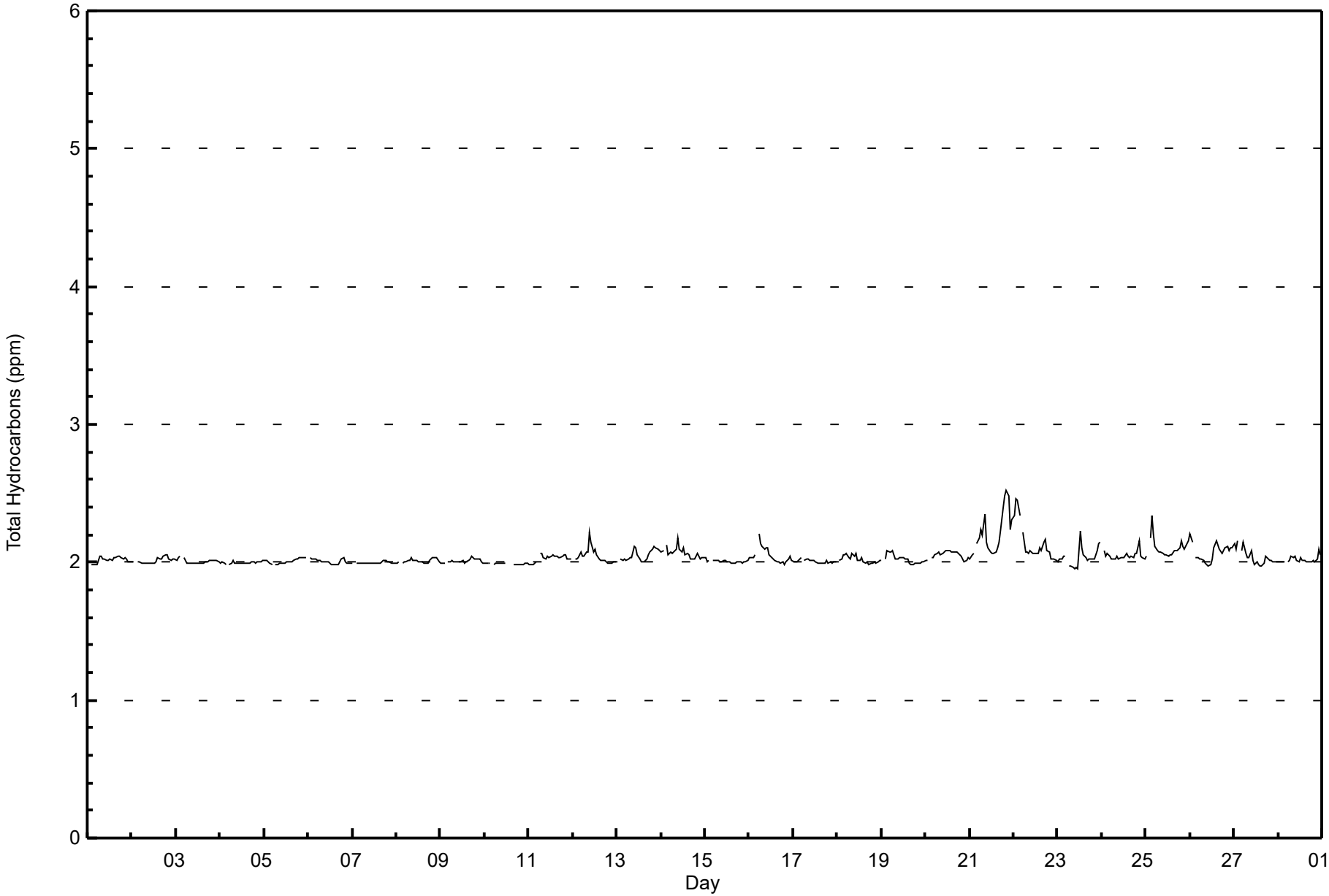
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Anzac - February 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	473	73.91	73.91
2.1 - 3.0	167	26.09	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 640

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Anzac - February 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	23	6	5	10	7	17	64	34	4	3	5	10	39	128	65	53	473
2.1 - 3.0	9	1	3	3	9	11	36	30	4	1	1	2	8	25	16	8	167
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	32	7	8	13	16	28	100	64	8	4	6	12	47	153	81	61	640

Total Number of Valid Hours: 640

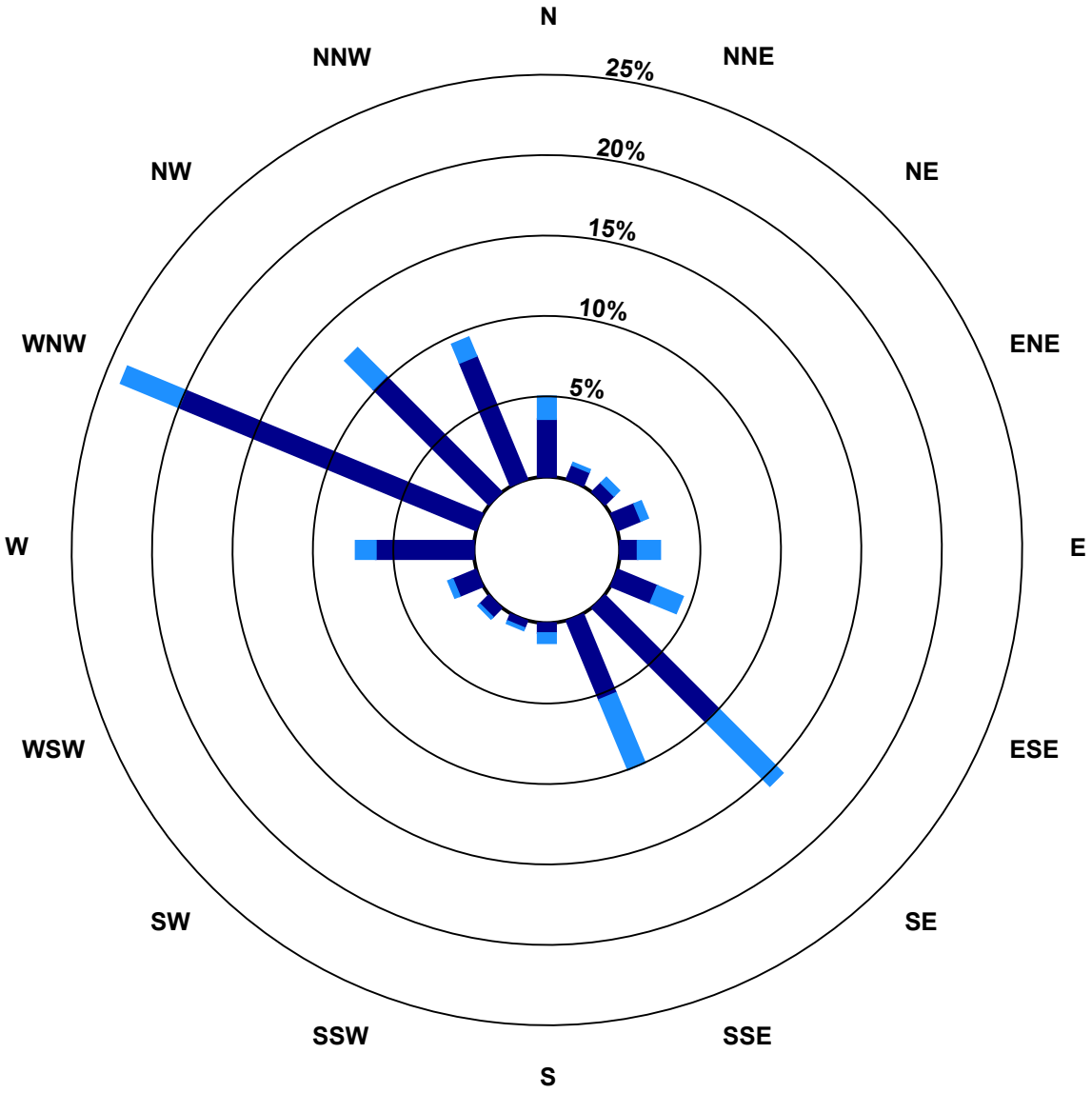
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Total Hydrocarbons (THC) - ppm

Anzac



Classes (ppm)

- 0 - 2.0
- 2.1 - 3.0
- 3.1 - 10.0
- > 10.0

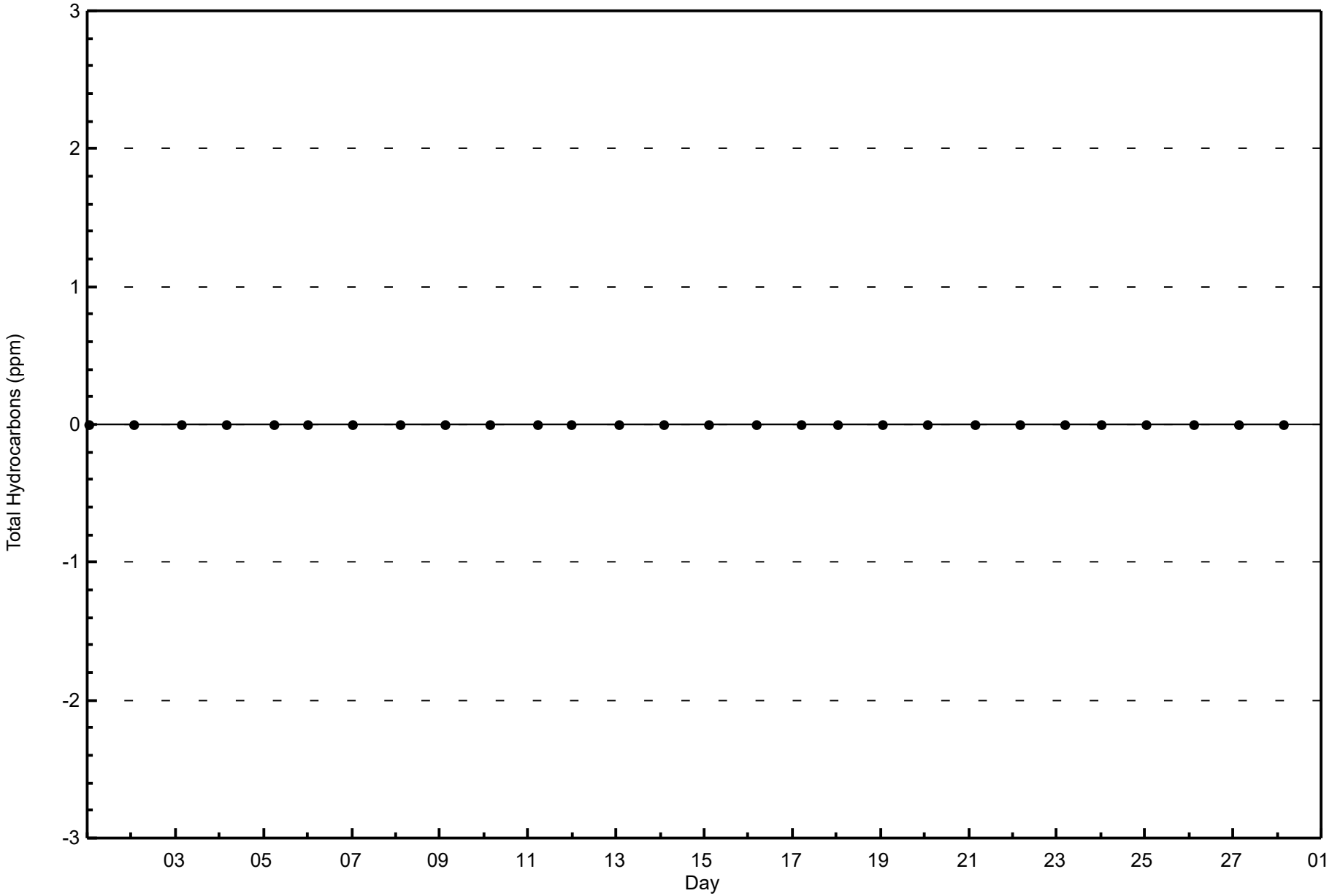
Total Number of Valid Hours: 640

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Anzac - February 2025

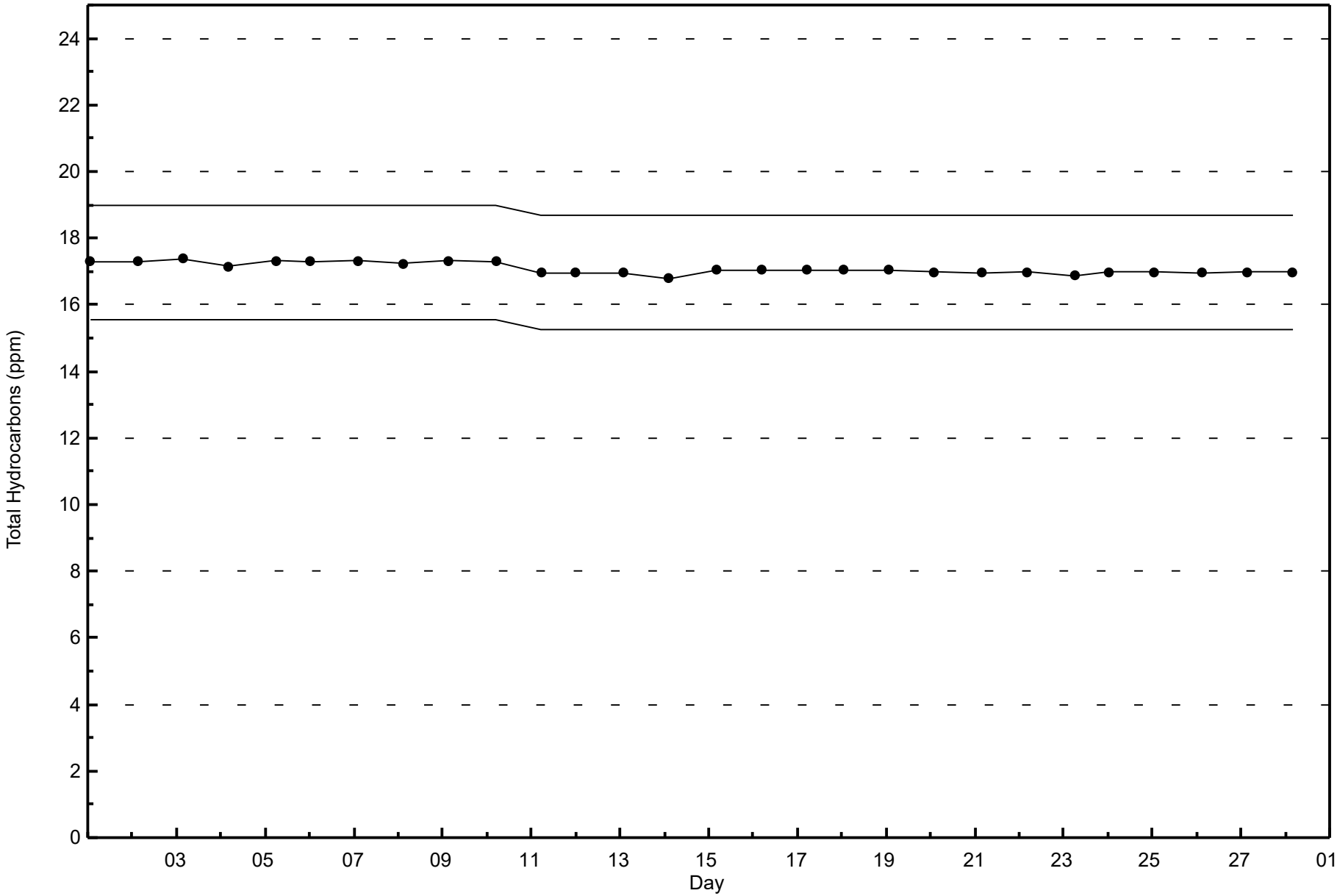


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Anzac - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Anzac - February 2025

Maximum Value: 0.093 ppm on Feb 21 09:00

Maximum Daily Average: 0.006 ppm on Feb 21

Minimum Value: 0.000 ppm on Feb 1 01:00

Minimum Daily Average: 0.000 ppm on Feb 1

Maximum Diurnal Average: 0.004 ppm at hour 9

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:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	0.000	Z	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
4-Feb	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.011
5-Feb	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-Feb	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010
9-Feb	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	C	C	C	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11-Feb	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-Feb	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.024
13-Feb	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	Z	0.007	0.000	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.001	0.019
15-Feb	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	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
17-Feb	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
18-Feb	Z	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
19-Feb	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	0.000	Z	0.000	0.000	0.033	0.022	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.093
22-Feb	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	0.003	0.000	0.000	0.000	0.000	0.000	0.003
23-Feb	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
24-Feb	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	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	0.001	0.001	0.002	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	Diurnal Average	
	0.000	0.000	0.000	0.007	0.000	0.019	0.033	0.024	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.003	0.000	0.000	0.000	Diurnal Maximum	

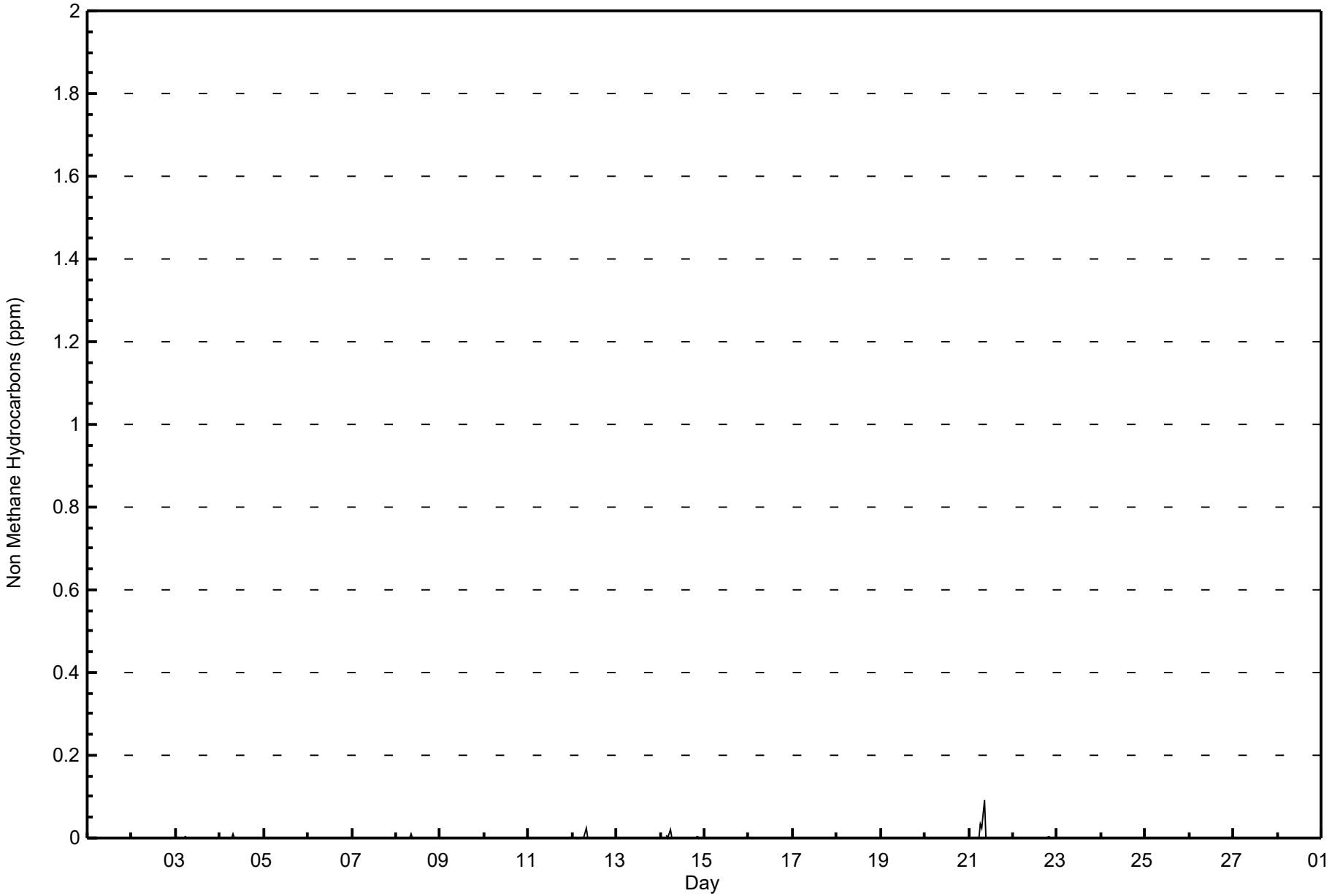
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Anzac - February 2025



Non Methane Hydrocarbons (NMHC) - ppm
Anzac - February 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	632	98.75	98.75
0.006 - 0.05	7	1.09	99.84
0.06 - 0.1	1	0.16	100.00
> 0.1	0	0.00	100.00

Total Number of Valid Hours: 640

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Anzac - February 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	32	7	8	13	15	27	100	62	8	4	6	12	46	150	81	61	632
0.006 - 0.05	0	0	0	0	0	1	0	2	0	0	0	0	1	3	0	0	7
0.06 - 0.1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
> 0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	32	7	8	13	16	28	100	64	8	4	6	12	47	153	81	61	640

Total Number of Valid Hours: 640

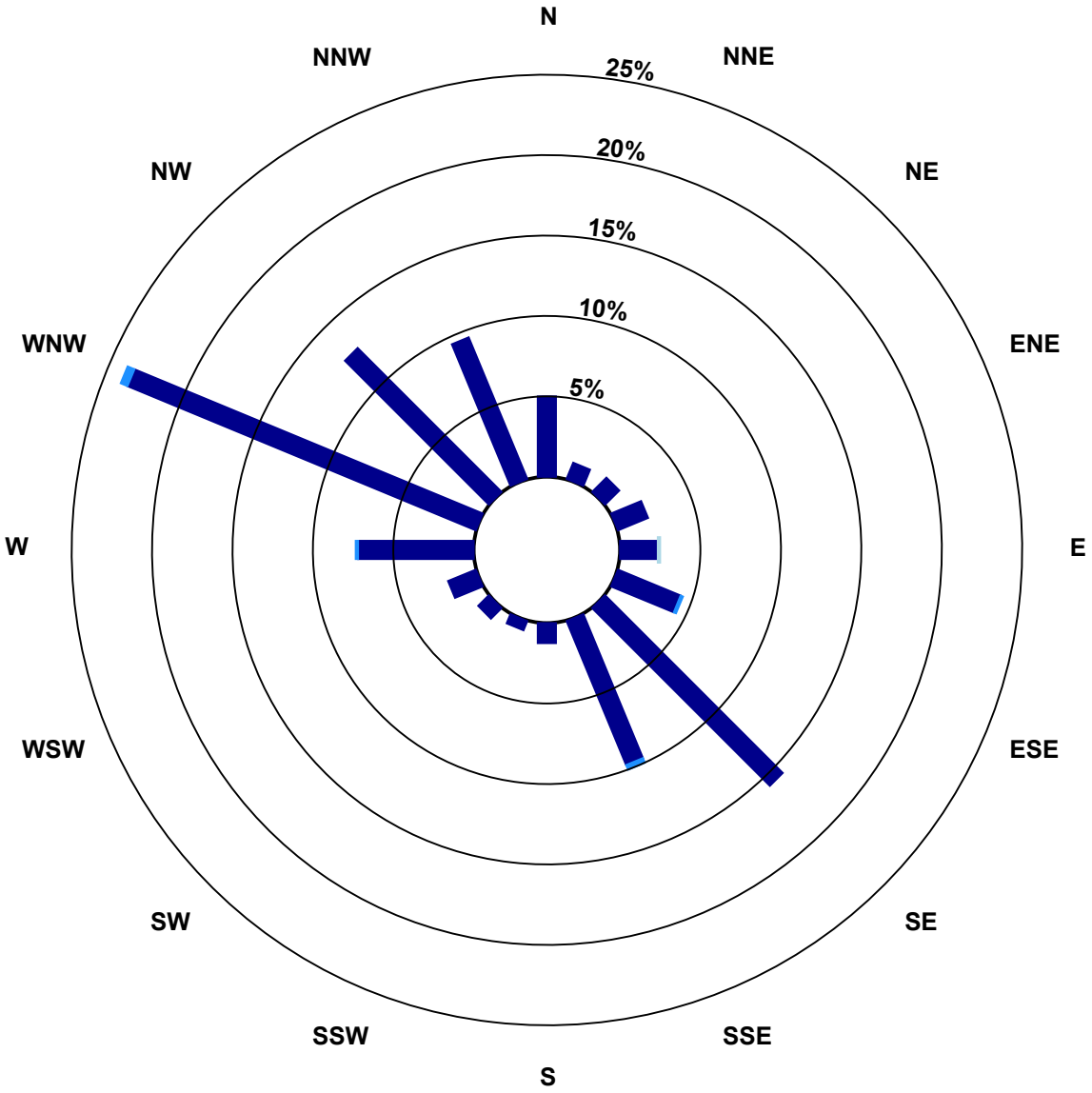
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Non Methane Hydrocarbons (NMHC) - ppm

Anzac



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

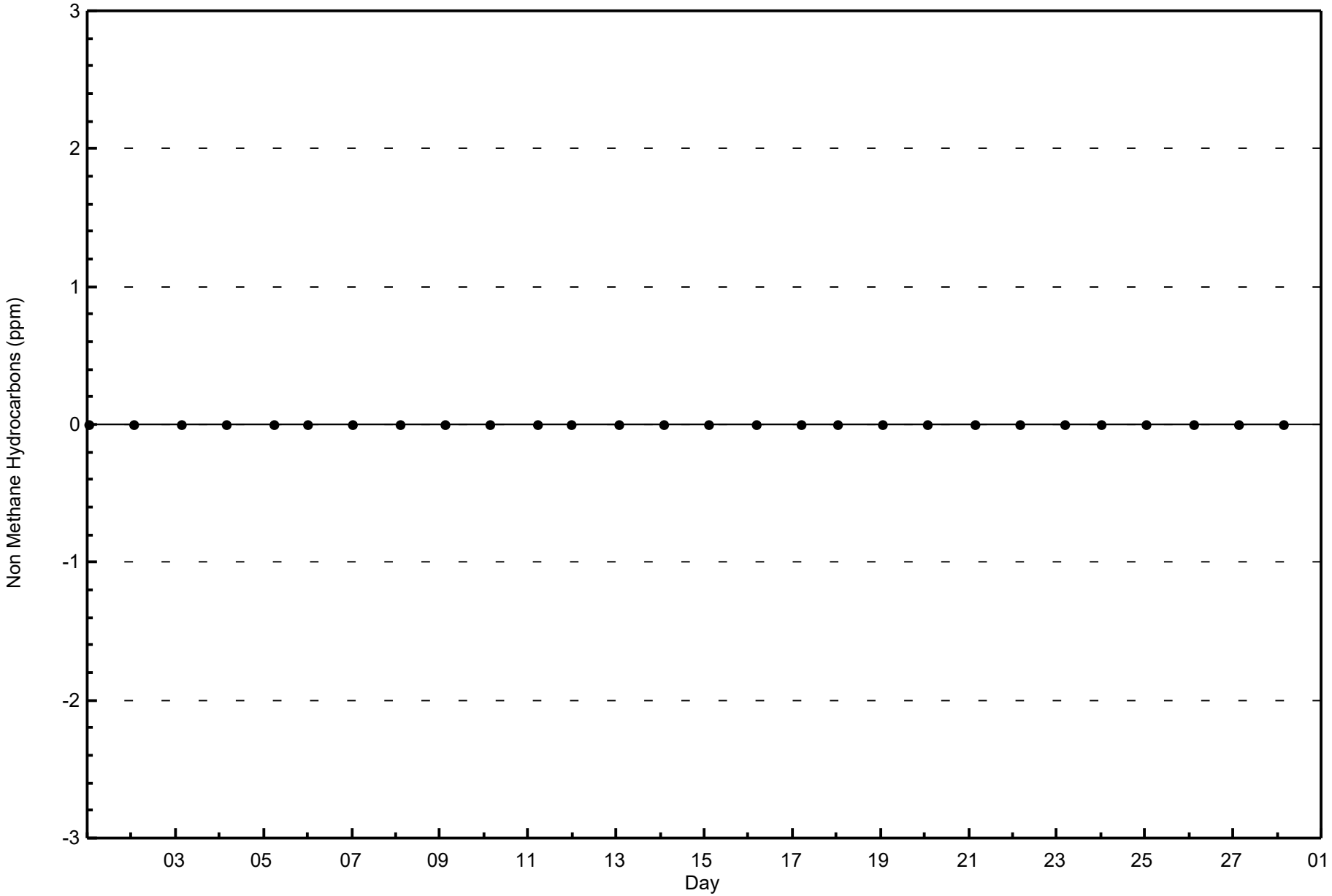
Total Number of Valid Hours: 640

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Anzac - February 2025

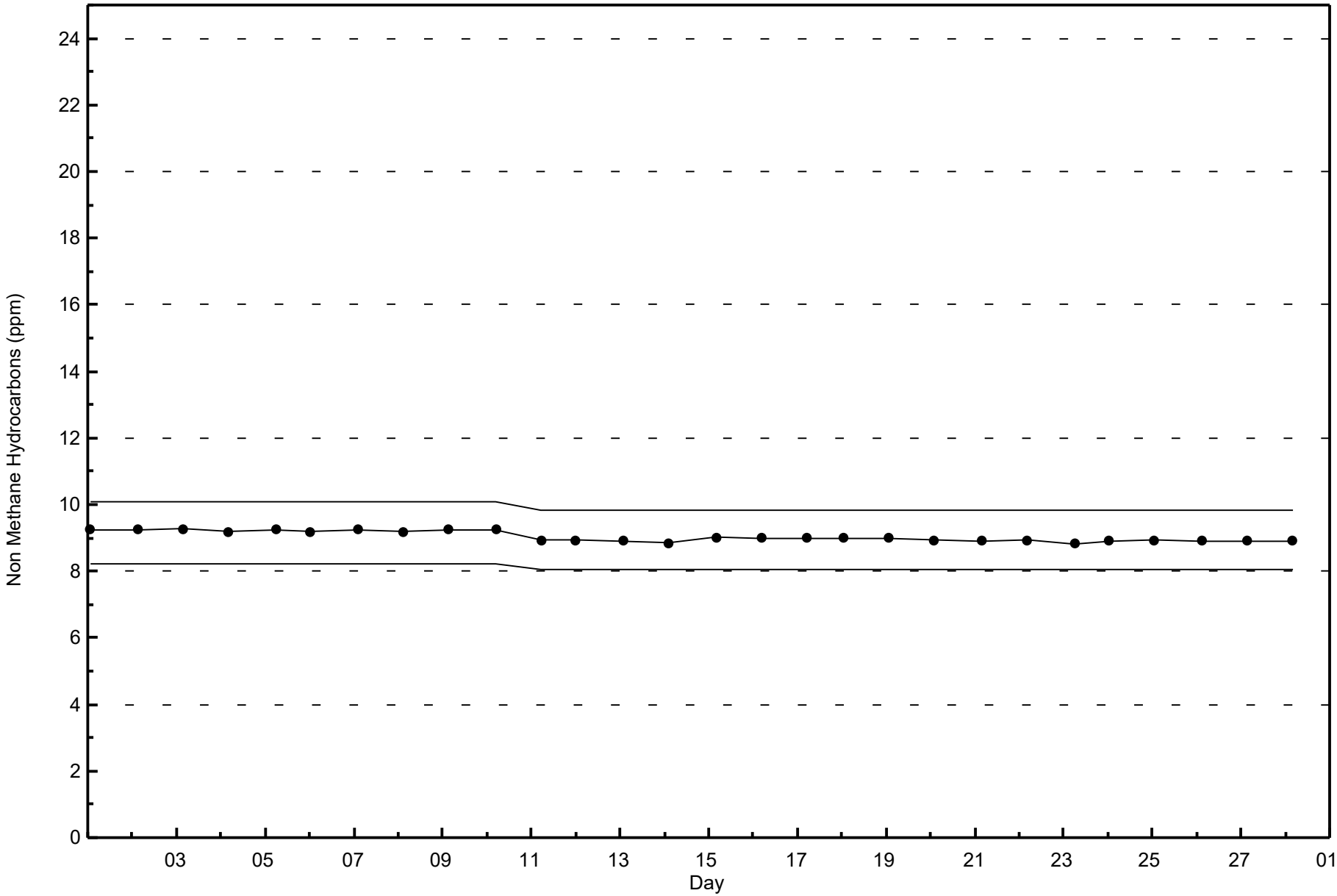


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Anzac - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Anzac - February 2025

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

Maximum Value: 2.5 ppm on Feb 21 21:00

Maximum Daily Average: 2.2 ppm on Feb 21

Minimum Value: 2.0 ppm on Feb 23 12:00

Minimum Daily Average: 2.0 ppm on Feb 10

Maximum Diurnal Average: 2.1 ppm at hour 6

Minimum Diurnal Average: 2.0 ppm at hour 12

Monthly Average: 2.04 ppm

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

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
2-Feb	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1
3-Feb	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
4-Feb	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
5-Feb	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
6-Feb	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Feb	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
8-Feb	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
9-Feb	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
10-Feb	2.0	2.0	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	2.0	2.0	2.0	2.0	2.0
11-Feb	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	2.1	2.1	2.0	2.0	2.0	2.0	2.1
12-Feb	Z	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
13-Feb	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1
14-Feb	2.1	2.1	Z	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	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.2
15-Feb	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
16-Feb	2.0	2.0	2.0	2.1	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
17-Feb	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
18-Feb	Z	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
19-Feb	2.0	Z	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
20-Feb	2.0	2.0	Z	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1
21-Feb	2.0	2.1	2.1	Z	2.1	2.2	2.2	2.2	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.4	2.5	2.5	2.5	2.2	2.3	2.2	2.5
22-Feb	2.3	2.5	2.4	2.3	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.5
23-Feb	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.2
24-Feb	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	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.0	2.0	2.0	2.0	2.2
25-Feb	2.0	Z	2.2	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.2	2.1	2.3
26-Feb	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	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
27-Feb	2.1	2.1	2.2	Z	2.1	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2
28-Feb	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1
	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	Diurnal Average	
	2.3	2.5	2.4	2.3	2.2	2.2	2.2	2.2	2.3	2.2	2.1	2.1	2.2	2.1	2.2	2.1	2.1	2.2	2.4	2.5	2.5	2.5	2.2	2.3	Diurnal Maximum	

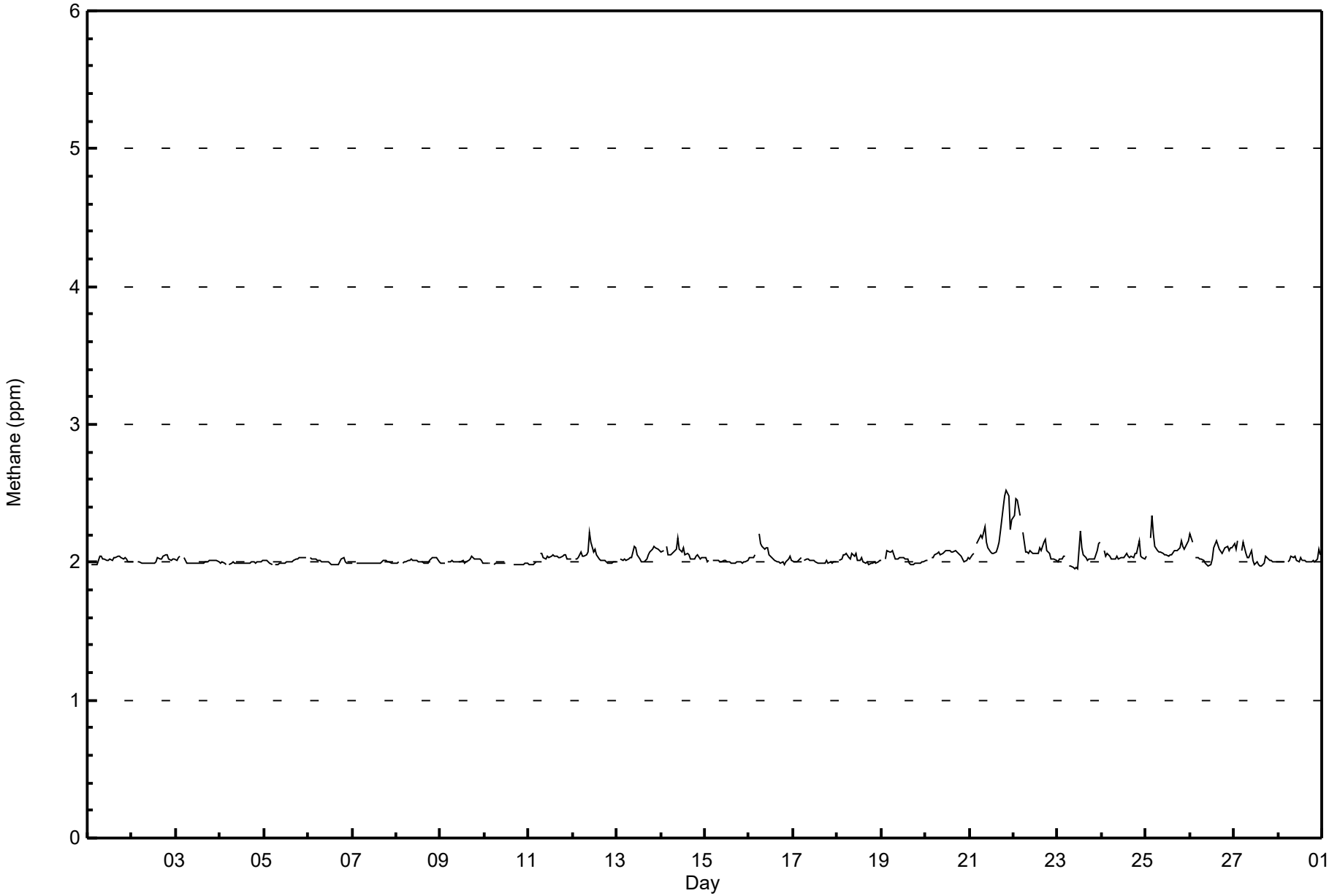
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Anzac - February 2025



Methane (CH_4) - ppm

Anzac - February 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	473	73.91	73.91
2.1 - 3.0	167	26.09	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 640

Total Number of Hours: 672



Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Anzac - February 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	23	6	5	10	7	17	64	34	4	3	5	10	39	128	65	53	473
2.1 - 3.0	9	1	3	3	9	11	36	30	4	1	1	2	8	25	16	8	167
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	32	7	8	13	16	28	100	64	8	4	6	12	47	153	81	61	640

Total Number of Valid Hours: 640

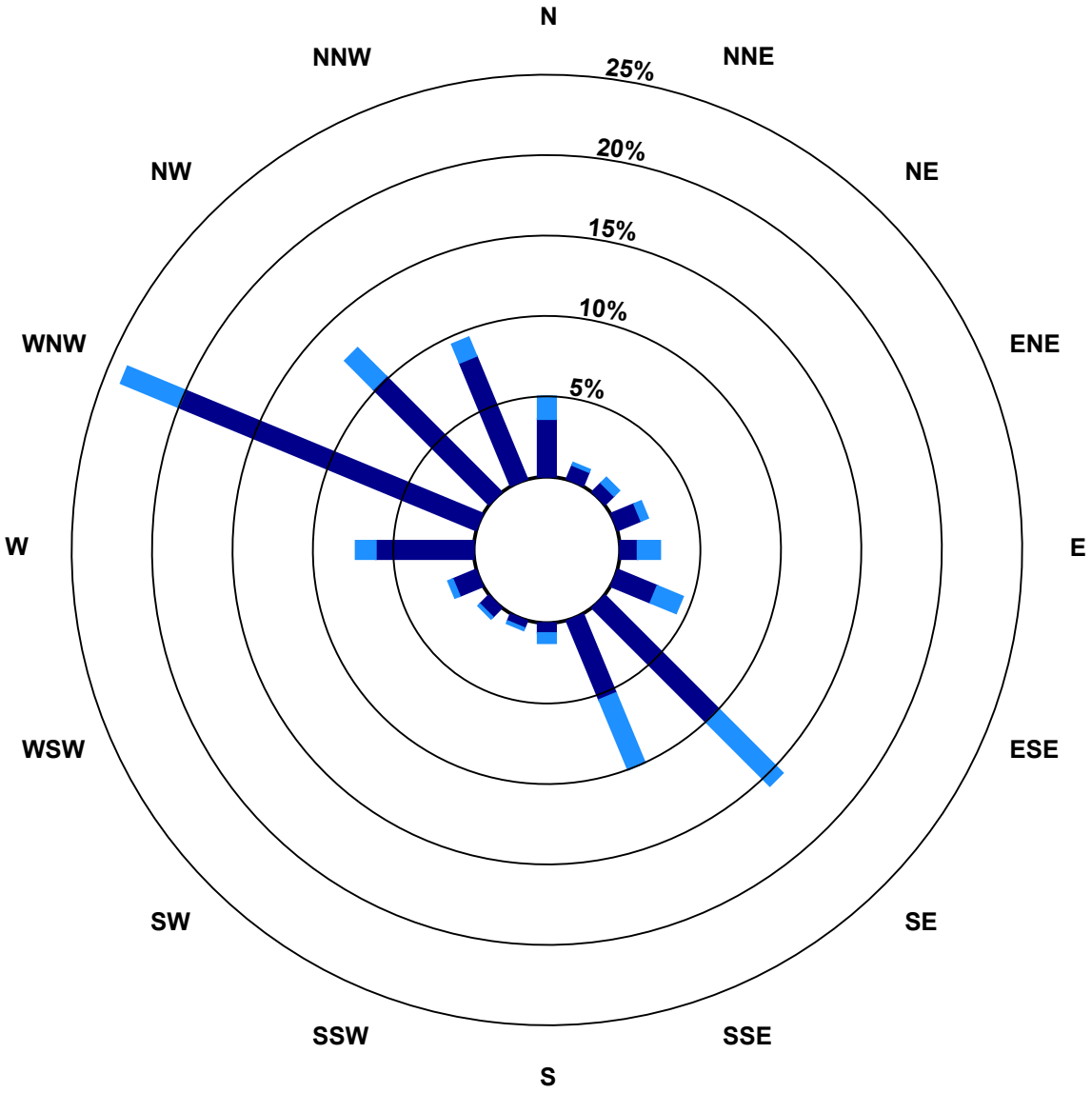
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Methane (CH_4) - ppm

Anzac



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

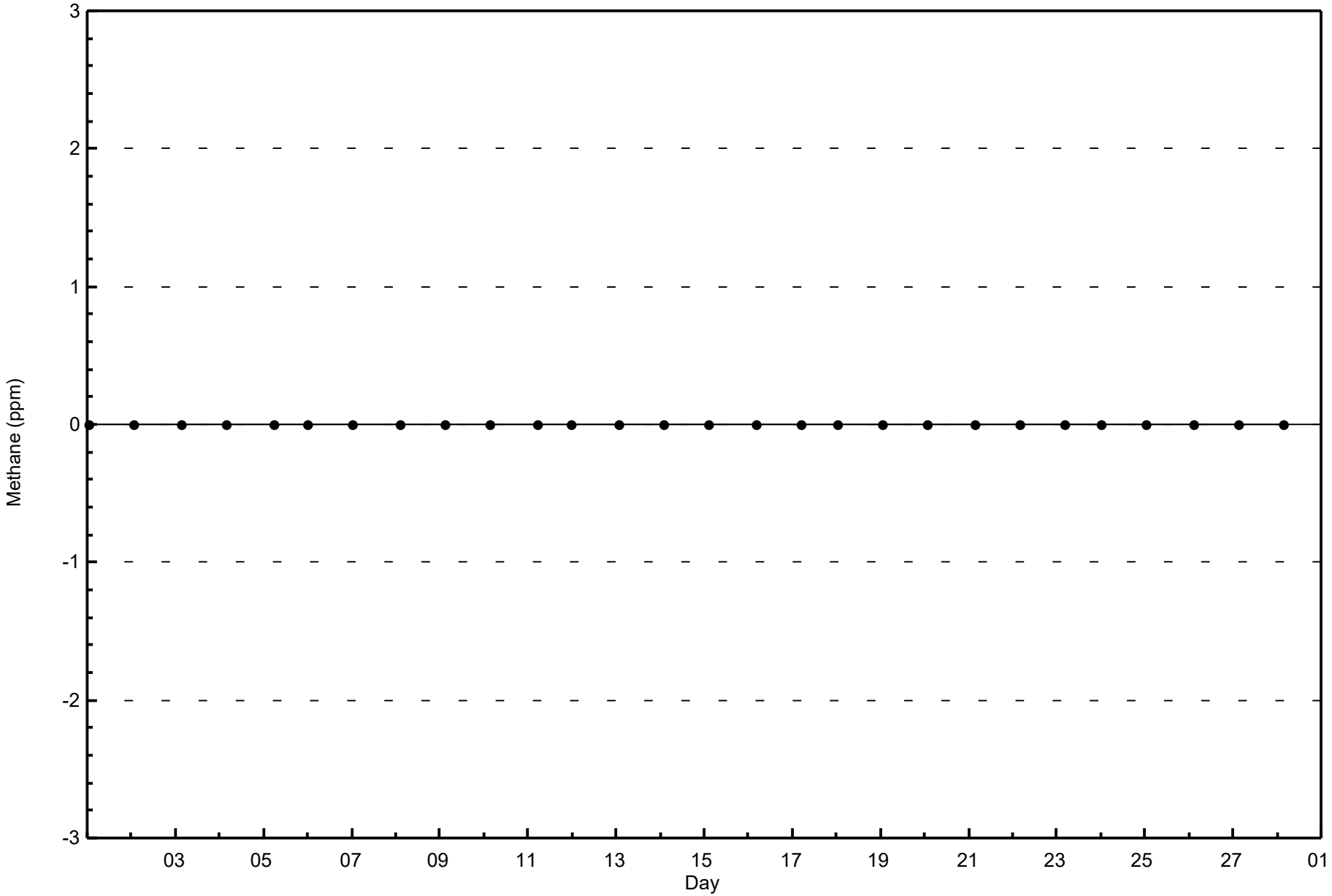
Total Number of Valid Hours: 640

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Anzac - February 2025

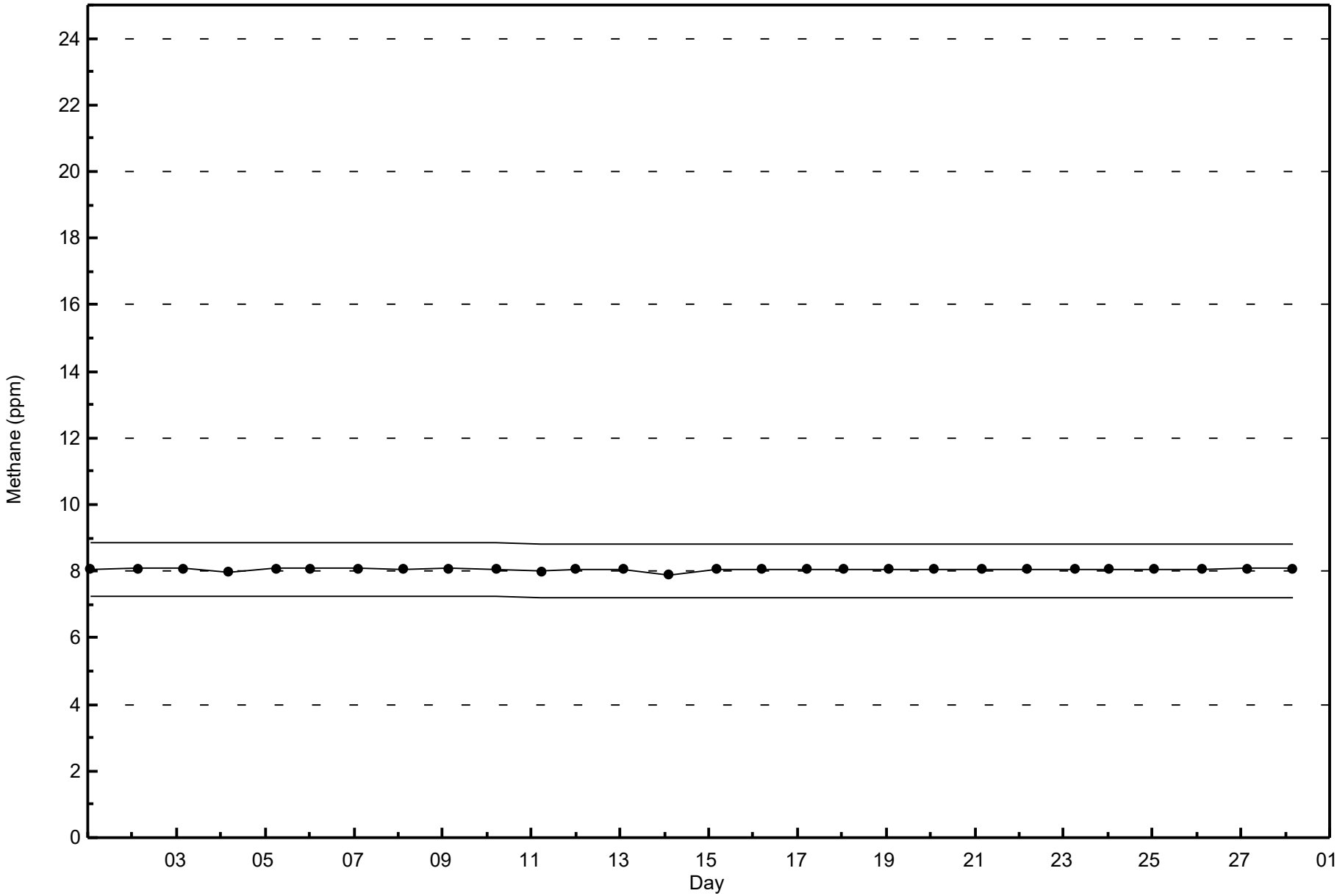


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Anzac - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Anzac - February 2025

Maximum Value: 70.0 ppb on Feb 14 06:00

Maximum Daily Average: 10.0 ppb on Feb 14

Minimum Value: 0.0 ppb on Feb 1 01:00

Minimum Daily Average: 0.1 ppb on Feb 27

Maximum Diurnal Average: 4.9 ppb at hour 6

Minimum Diurnal Average: 0.3 ppb at hour 3

Monthly Average: 1.32 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.4 Q_3 = 1.2 P_{90} = 3.0 P_{99} = 12.3

Hours in Service:	672
Hours of Data:	637
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-Feb	0.0	0.0	1.0	0.0	0.0	Z	0.1	0.1	0.4	0.9	1.1	1.1	1.2	0.9	1.5	1.6	0.8	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.5	1.6
2-Feb	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.7	0.9	1.0	1.1	2.8	2.5	5.7	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.7	5.7
3-Feb	0.2	Z	0.6	0.6	0.4	1.3	0.9	0.5	0.5	1.4	0.7	0.9	0.9	0.8	0.7	0.5	0.8	0.7	1.0	6.6	2.7	2.1	1.8	1.8	1.2	6.6
4-Feb	7.0	1.5	Z	0.4	2.6	3.2	1.6	10.1	2.7	5.5	1.5	1.4	0.6	0.6	0.8	0.5	1.4	2.9	3.0	4.6	2.3	1.0	0.4	0.3	2.4	10.1
5-Feb	0.5	0.3	0.4	Z	0.4	3.0	0.2	0.5	0.9	0.4	0.3	0.4	0.6	0.5	0.8	6.7	0.2	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.8	6.7
6-Feb	0.2	0.2	0.2	0.2	Z	1.2	0.2	0.2	0.6	0.2	0.2	C	C	C	C	C	C	3.1	0.0	0.0	0.2	0.2	0.2	0.3	--	3.1
7-Feb	0.3	0.2	0.3	0.3	0.3	Z	1.9	0.3	0.2	0.3	0.3	0.5	0.5	0.5	0.3	0.4	0.2	1.5	0.5	0.1	0.8	0.1	0.1	0.0	0.4	1.9
8-Feb	Z	1.0	0.5	0.8	0.4	1.2	1.0	2.4	1.6	0.3	0.4	0.5	0.5	0.4	0.2	0.1	0.0	0.0	4.4	1.4	0.1	0.1	0.0	0.0	0.8	4.4
9-Feb	0.0	Z	0.0	0.0	0.1	0.5	0.2	0.0	0.6	2.0	1.1	1.4	1.7	0.8	1.8	1.4	1.5	0.5	0.3	0.2	0.3	0.4	0.4	0.3	0.7	2.0
10-Feb	0.3	0.3	Z	0.3	0.3	1.4	0.3	0.2	0.2	0.3	0.4	0.4	0.6	0.9	0.6	M	0.3	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.3	1.4
11-Feb	0.0	0.0	0.1	Z	0.7	15.3	0.6	1.0	1.2	1.5	2.7	3.0	3.6	3.9	3.4	2.5	1.0	0.2	7.2	11.7	2.2	1.9	1.5	0.3	2.8	15.3
12-Feb	0.3	0.1	0.0	0.3	Z	0.3	0.3	0.6	0.6	1.8	1.9	3.1	1.9	2.0	1.3	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	3.1
13-Feb	0.0	0.0	0.1	0.1	0.1	Z	5.1	11.1	4.6	8.1	10.1	5.4	2.6	1.7	1.7	1.2	1.5	1.1	0.6	2.6	3.0	5.0	8.8	12.8	3.8	12.8
14-Feb	Z	3.0	2.0	3.3	0.4	70.0	23.0	7.6	6.4	19.0	12.5	8.6	10.4	6.1	6.6	4.0	1.4	0.7	0.5	6.7	7.1	9.1	10.6	11.4	10.0	70.0
15-Feb	13.0	Z	0.7	0.4	0.5	1.7	0.4	0.4	0.4	0.7	0.8	0.6	0.5	0.4	0.4	0.3	0.2	0.1	0.2	0.3	0.2	0.0	0.0	0.0	1.0	13.0
16-Feb	0.6	0.1	Z	5.9	1.1	9.6	5.3	0.5	1.0	1.2	3.1	3.1	2.6	1.3	3.8	1.0	0.5	0.1	0.0	0.1	0.1	0.2	0.1	0.0	1.8	9.6
17-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.2	0.5	0.7	1.1	1.1	0.8	1.9	0.3	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.9
18-Feb	0.1	0.1	0.2	2.4	Z	0.9	0.2	0.6	2.3	0.9	2.6	2.0	3.5	2.7	0.8	0.5	0.5	0.4	0.7	0.5	0.1	0.2	0.1	0.0	1.0	3.5
19-Feb	0.0	0.0	0.0	0.0	0.1	Z	0.1	0.1	1.2	1.8	2.2	1.7	2.8	1.3	0.8	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.8
20-Feb	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	0.7	0.9	1.0	1.4	1.2	0.8	0.8	1.7	0.0	0.4	0.4	0.0	0.0	0.0	0.4	1.7
21-Feb	0.1	Z	0.0	1.4	0.1	0.2	0.0	0.1	0.5	0.7	0.5	0.4	0.3	0.8	1.8	2.1	1.4	1.4	3.5	9.4	12.0	9.0	0.6	0.3	2.0	12.0
22-Feb	0.3	4.6	Z	1.1	0.2	0.1	0.0	0.1	0.1	0.8	0.4	0.3	0.6	0.7	1.7	2.1	1.5	0.6	0.0	0.0	0.0	0.2	0.0	0.0	0.7	4.6
23-Feb	0.0	0.1	0.0	Z	0.1	0.8	0.1	0.2	0.2	0.1	0.1	0.1	3.5	1.0	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	3.5
24-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.9	0.8	0.7	0.8	1.1	1.4	0.5	0.5	0.1	0.7	0.3	0.0	0.0	0.1	0.2	0.4	1.4
25-Feb	0.3	0.0	0.2	3.4	0.2	Z	0.2	0.4	1.4	1.3	1.7	1.8	2.1	3.2	2.1	2.6	1.3	0.7	0.3	0.0	0.0	0.0	0.0	0.2	1.0	3.4
26-Feb	Z	0.4	0.3	0.1	0.2	3.0	0.6	0.1	0.7	0.2	0.2	0.2	1.4	3.8	6.4	4.6	2.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0	1.1	6.4
27-Feb	0.0	Z	0.1	0.0	0.1	0.0	0.0	0.0	0.2	0.5	0.5	0.3	0.6	0.2	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6
28-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.2	0.3	1.1	1.8	1.9	0.3	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.9
	1.0	0.5	0.3	0.9	0.3	4.9	1.5	1.3	1.0	1.9	1.7	1.5	1.8	1.5	1.7	1.5	1.0	0.6	0.8	1.6	1.1	1.1	0.9	1.0	Diurnal Average	
	13.0	4.6	2.0	5.9	2.6	70.0	23.0	11.1	6.4	19.0	12.5	8.6	10.4	6.1	6.6	6.7	5.7	3.1	7.2	11.7	12.0	9.1	10.6	12.8	Diurnal Maximum	

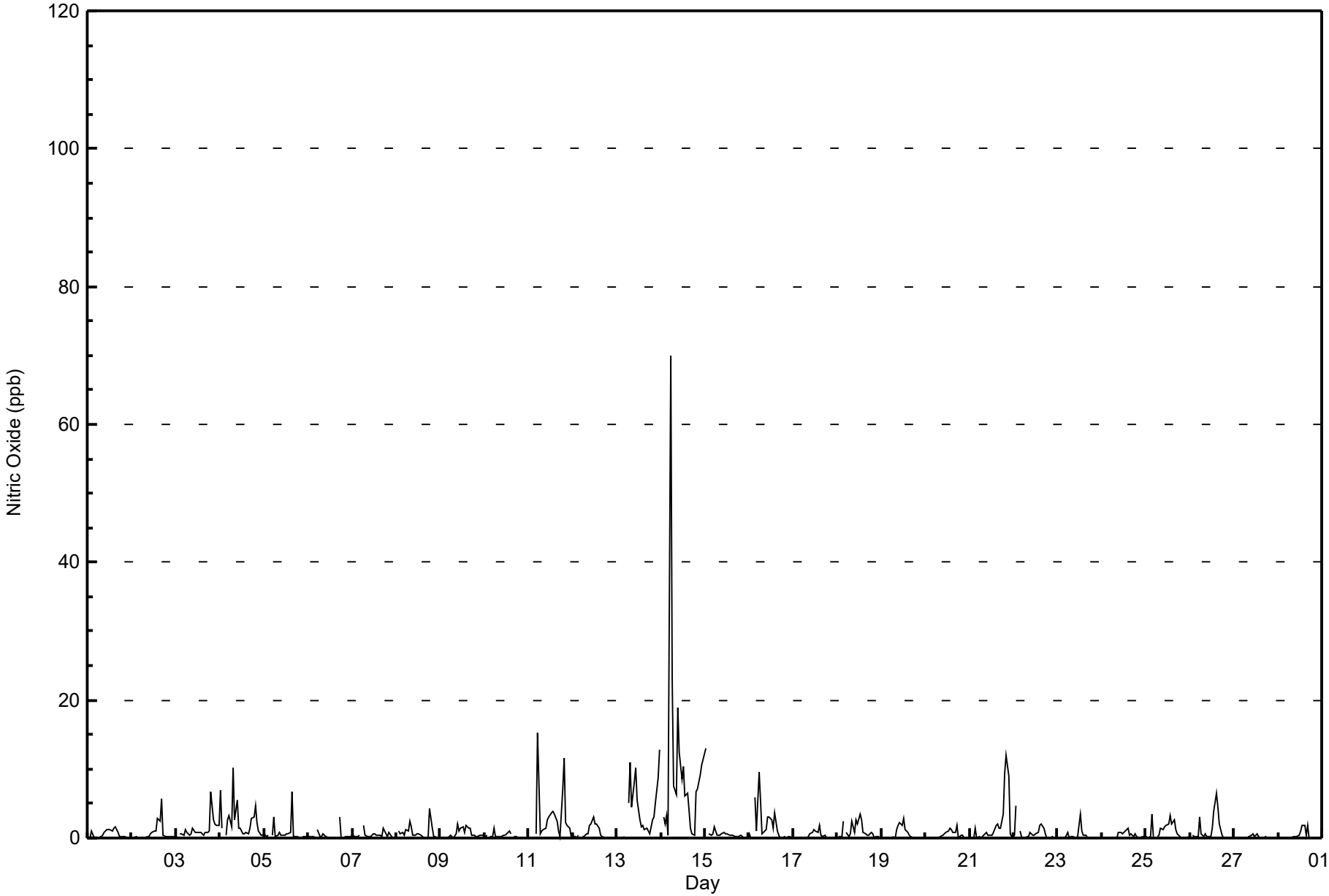
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Anzac - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	635	99.69	99.69
21 - 40	1	0.16	99.84
11 - 80	1	0.16	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 637

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Anzac - February 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	27	6	9	13	17	28	101	64	7	4	7	11	48	157	80	56	635
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	27	6	9	13	17	28	101	64	7	4	7	11	49	158	80	56	637

Total Number of Valid Hours: 637

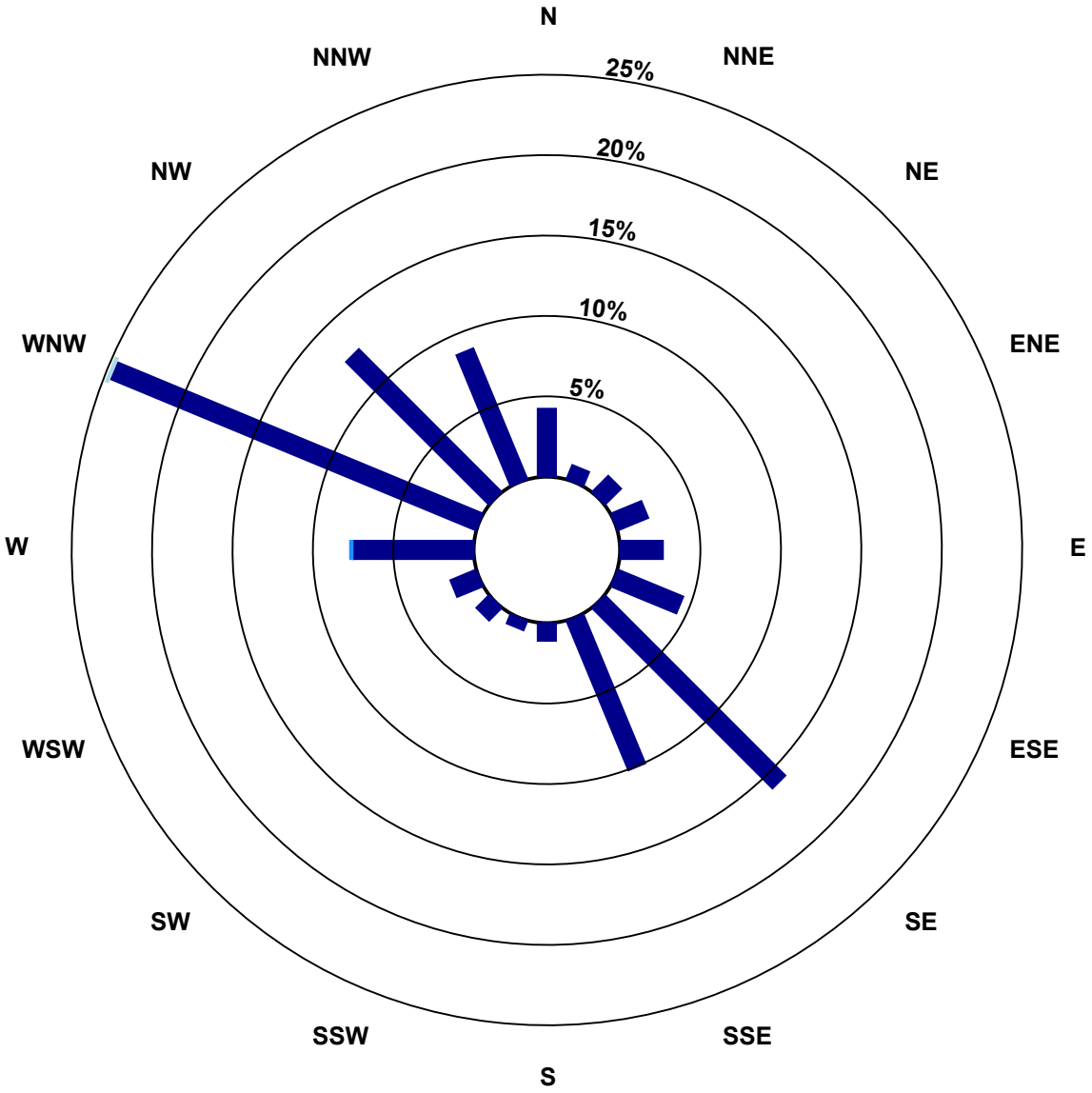
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitric Oxide (NO) - ppb

Anzac



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

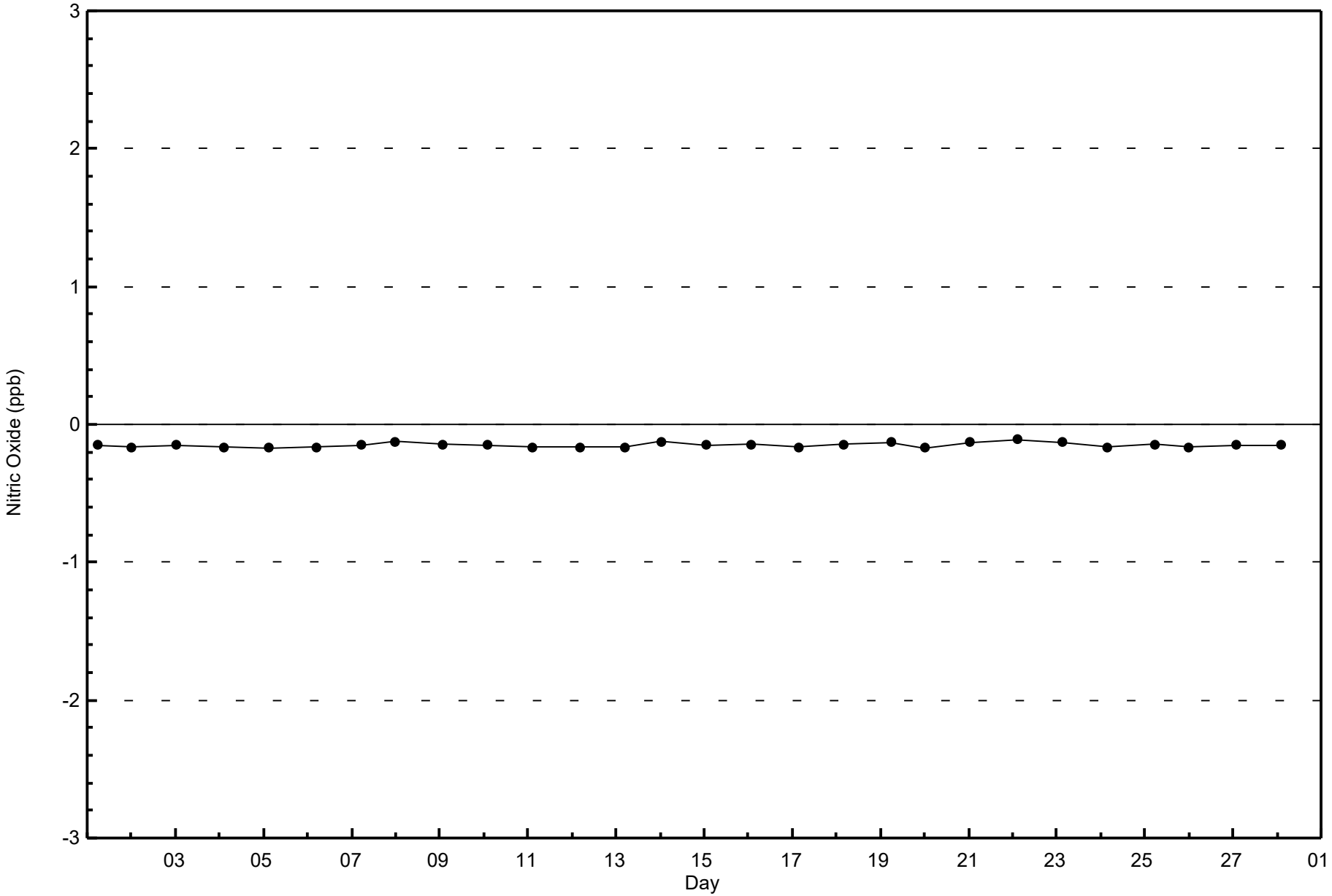
Total Number of Valid Hours: 637

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Anzac - February 2025

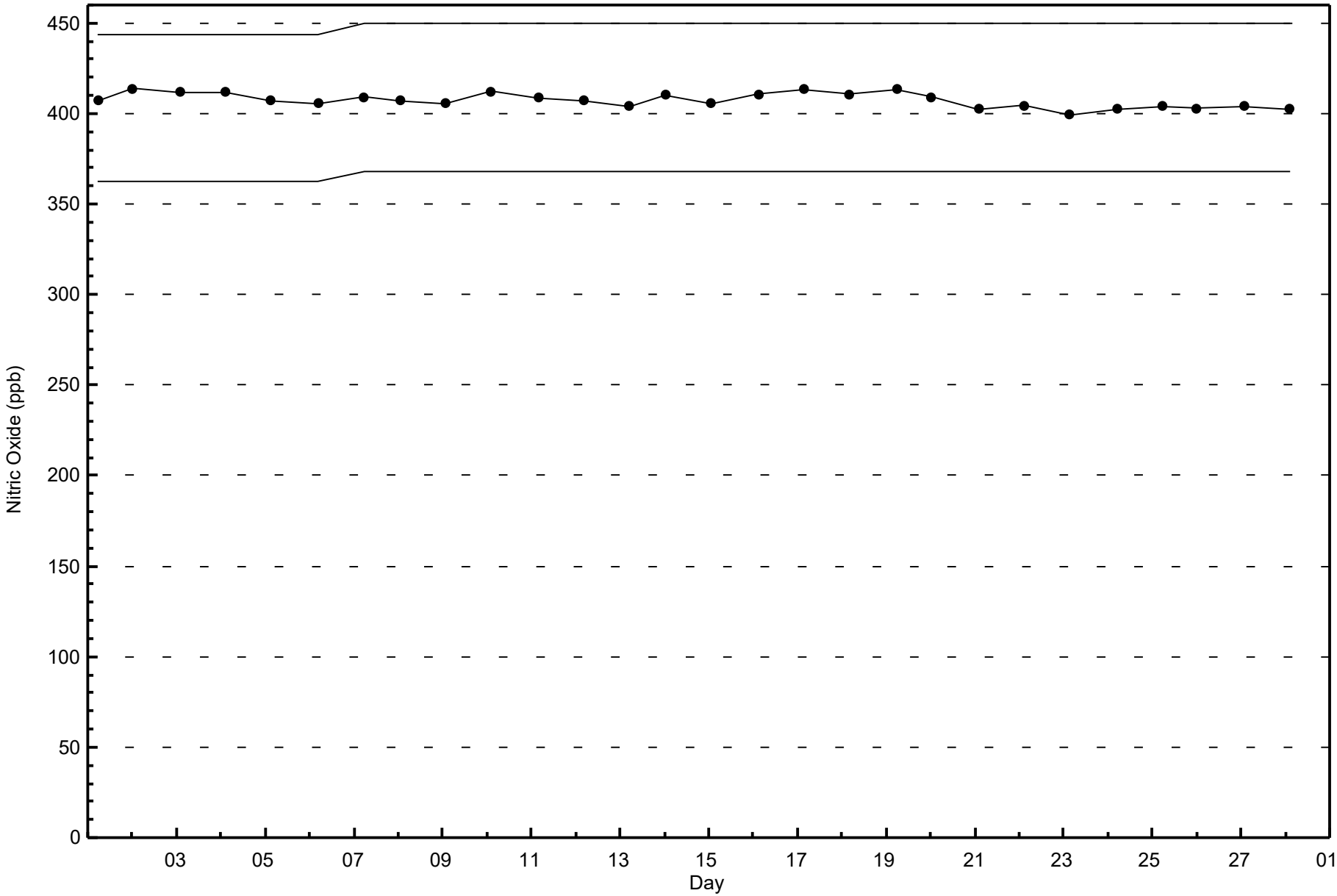


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Anzac - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Anzac - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 73.4 ppb on Feb 14 06:00
Maximum Daily Average: 17.0 ppb on Feb 14

Minimum Value: 0.1 ppb on Feb 1 01:00
Minimum Daily Average: 1.3 ppb on Feb 10
Maximum Diurnal Average: 8.9 ppb at hour 6
Minimum Diurnal Average: 2.7 ppb at hour 12
Monthly Average: 4.96 ppb
Percentiles: P_1 = 0.6 P_{10} = 1.1 Q_1 = 1.7 Median = 3.0 Q_3 = 6.0 P_{90} = 9.5 P_{99} = 32.1

Hours in Service:	672
Hours of Data:	637
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-Feb	0.1	0.1	0.4	0.2	0.1	Z	9.2	7.4	6.0	5.2	4.1	3.5	3.7	3.4	5.5	6.7	7.1	8.3	7.0	5.4	5.8	4.0	2.8	2.7	4.3	9.2
2-Feb	Z	2.5	2.8	2.6	2.9	2.7	2.3	2.2	2.1	1.7	2.1	2.1	2.2	1.9	4.5	6.6	9.9	11.1	10.8	9.4	7.7	6.4	7.2	6.6	4.8	11.1
3-Feb	5.1	Z	6.6	7.8	5.1	3.9	3.7	2.2	2.0	2.0	1.3	1.3	1.3	1.2	1.4	1.2	3.1	4.3	4.4	7.3	5.8	5.8	5.3	4.8	3.8	7.8
4-Feb	8.6	5.4	Z	2.7	4.9	6.0	3.9	10.1	8.4	10.9	2.6	2.4	1.1	1.2	1.6	1.7	4.3	6.3	4.1	6.3	7.6	2.9	2.2	1.9	4.7	10.9
5-Feb	2.5	1.8	1.4	Z	1.4	5.0	1.2	2.1	3.2	2.1	1.1	1.0	1.3	1.5	2.1	4.9	2.0	2.4	2.5	2.5	2.4	2.5	2.6	2.6	2.3	5.0
6-Feb	2.5	2.3	2.2	1.9	Z	2.4	1.7	1.7	1.7	1.1	1.0	C	C	C	C	C	C	5.5	5.8	5.9	3.5	1.3	1.2	1.6	--	5.9
7-Feb	1.7	0.9	0.9	0.8	1.3	Z	2.0	1.7	1.3	1.0	0.7	1.2	1.1	1.1	1.0	1.2	1.4	5.7	4.4	3.2	3.1	1.2	1.1	1.2	1.7	5.7
8-Feb	Z	3.5	3.3	4.5	3.0	3.9	4.6	7.7	5.7	2.1	1.4	1.4	1.4	1.1	0.8	0.5	0.6	0.7	5.6	7.7	9.5	10.0	8.0	2.1	3.9	10.0
9-Feb	0.7	Z	2.6	2.6	3.3	4.9	6.6	6.9	5.1	5.1	2.0	2.1	2.2	1.3	2.9	3.2	4.7	9.2	11.9	9.2	6.5	5.5	2.8	1.6	4.5	11.9
10-Feb	1.0	1.2	Z	0.9	0.8	2.6	0.8	1.0	0.8	0.7	0.9	0.9	1.2	1.8	1.2	M	1.8	2.1	1.3	1.2	0.9	1.3	1.6	2.0	1.3	2.6
11-Feb	1.5	2.6	2.4	Z	5.4	26.2	11.2	10.5	7.5	5.2	6.4	5.7	5.7	5.9	6.2	6.9	6.4	7.0	12.9	17.8	13.7	9.7	7.8	6.1	8.3	26.2
12-Feb	5.1	5.3	5.1	5.1	Z	5.9	5.7	6.2	5.7	7.6	5.4	4.7	4.0	4.3	3.8	2.2	2.3	2.1	1.6	1.1	0.9	0.8	0.9	1.1	3.8	7.6
13-Feb	1.0	1.1	1.2	1.1	1.6	Z	11.9	11.6	7.8	12.4	12.0	6.8	3.9	2.8	3.3	3.3	8.2	17.2	15.9	18.5	20.5	22.6	21.9	27.1	10.2	27.1
14-Feb	Z	19.0	20.5	19.5	16.5	73.4	43.0	23.1	15.5	17.8	11.4	7.9	8.3	5.9	7.0	6.4	4.4	6.4	7.9	10.2	13.2	19.8	16.6	17.7	17.0	73.4
15-Feb	15.7	Z	5.0	4.0	3.4	3.6	2.5	2.6	2.3	1.8	1.6	1.2	1.2	1.1	1.3	1.0	1.4	2.9	2.6	2.8	1.9	2.1	2.2	3.8	3.0	15.7
16-Feb	7.2	7.9	Z	11.7	5.8	12.0	9.2	5.2	4.4	3.0	4.6	4.2	3.6	2.3	3.2	2.2	2.7	1.9	2.2	1.5	2.8	3.9	6.3	1.2	4.7	12.0
17-Feb	0.8	1.3	1.7	Z	4.4	5.5	2.8	2.9	2.1	2.0	1.6	2.0	1.7	1.5	1.7	1.0	0.9	2.0	2.2	0.7	0.8	1.2	1.6	1.2	1.9	5.5
18-Feb	1.8	2.1	3.9	6.5	Z	3.0	5.3	4.3	7.6	2.0	3.7	2.6	3.5	3.3	1.6	1.5	2.6	2.8	4.1	3.1	2.5	3.2	4.0	3.4	3.4	7.6
19-Feb	3.7	3.8	4.4	7.6	9.6	Z	11.1	4.3	4.2	4.0	3.6	3.1	3.3	2.6	2.1	1.6	1.7	1.6	1.2	3.3	1.0	0.7	0.9	1.4	3.5	11.1
20-Feb	Z	2.4	2.6	2.5	2.6	2.2	2.2	2.3	2.6	3.1	3.2	3.2	3.6	3.4	3.3	3.2	4.0	7.8	4.4	4.3	3.8	2.2	2.0	2.0	3.2	7.8
21-Feb	1.9	Z	3.4	9.1	6.8	7.2	5.4	6.2	6.2	3.9	2.4	2.0	1.7	2.8	5.0	7.8	10.3	19.9	34.7	36.5	37.2	34.8	19.2	25.1	12.6	37.2
22-Feb	28.5	34.1	Z	28.5	22.2	16.5	6.3	9.2	5.0	6.8	2.6	1.8	2.5	2.9	4.4	6.5	7.4	6.3	5.0	4.0	2.4	2.4	2.1	1.8	9.1	34.1
23-Feb	1.5	2.1	1.9	Z	2.7	2.5	1.0	1.0	0.8	0.7	0.7	0.7	6.8	3.4	1.9	1.8	1.0	2.2	2.7	2.1	2.5	5.2	6.0	5.4	2.5	6.8
24-Feb	5.6	3.7	2.1	2.7	Z	2.0	1.6	2.0	1.6	1.7	2.2	2.0	2.1	2.8	3.1	1.5	3.4	3.0	4.0	2.8	1.6	0.9	1.2	1.8	2.4	5.6
25-Feb	3.3	5.6	16.8	28.2	16.2	Z	9.0	8.0	8.1	5.8	5.4	4.8	5.2	6.5	4.6	5.5	6.0	7.0	9.3	9.5	7.0	4.8	4.1	8.8	8.2	28.2
26-Feb	Z	17.1	6.8	3.4	3.0	4.3	3.2	2.4	2.2	1.2	0.9	1.0	2.7	6.0	9.8	9.0	8.0	6.9	7.9	9.1	9.0	5.8	6.5	7.2	5.8	17.1
27-Feb	8.3	Z	10.3	8.4	6.5	7.3	4.9	2.0	2.2	3.7	2.6	1.9	2.3	1.4	0.8	0.7	1.1	5.3	5.0	1.8	1.8	1.6	0.9	0.7	3.5	10.3
28-Feb	0.8	0.8	Z	0.6	0.6	0.7	1.1	2.4	2.1	2.0	1.1	1.1	2.1	2.8	3.8	1.6	1.0	0.7	0.6	1.9	0.8	1.3	1.4	1.7	1.4	3.8
	4.7	5.5	4.7	6.8	5.4	8.9	6.2	5.3	4.4	4.2	3.2	2.7	3.0	2.8	3.3	3.5	4.0	5.7	6.5	6.8	6.3	5.9	5.0	5.2	Diurnal Average	
	28.5	34.1	20.5	28.5	22.2	73.4	43.0	23.1	15.5	17.8	12.0	7.9	8.3	6.5	9.8	9.0	10.3	19.9	34.7	36.5	37.2	34.8	21.9	27.1	Diurnal Maximum	

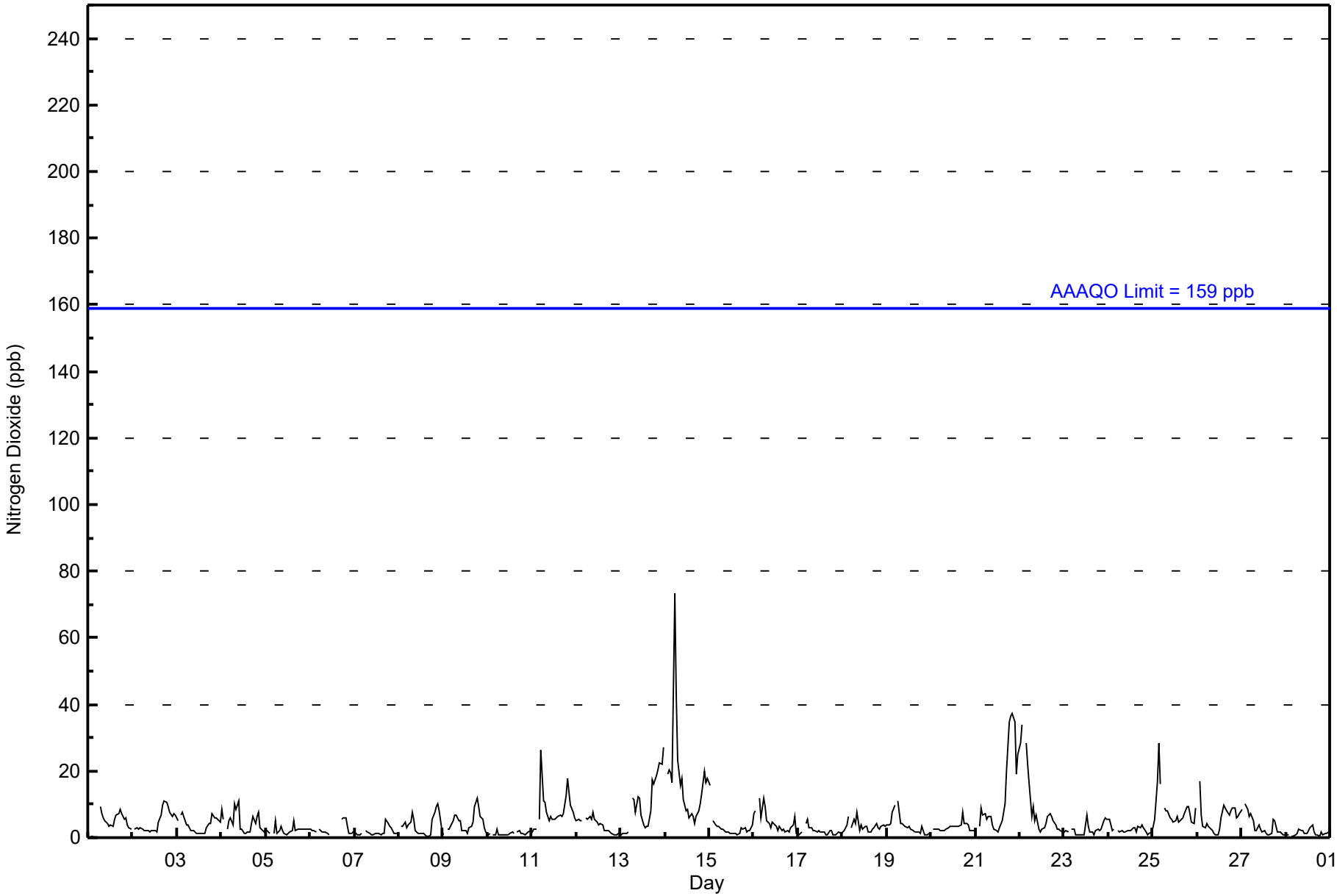
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Anzac - February 2025



Nitrogen Dioxide (NO_2) - ppb
Anzac - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	618	97.02	97.02
21 - 40	17	2.67	99.69
11 - 80	2	0.31	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 637

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Anzac - February 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	6	9	13	16	27	98	64	7	4	7	11	47	149	79	55	618
21 - 40	1	0	0	0	1	1	3	0	0	0	0	0	1	8	1	1	17
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	27	6	9	13	17	28	101	64	7	4	7	11	49	158	80	56	637

Total Number of Valid Hours: 637

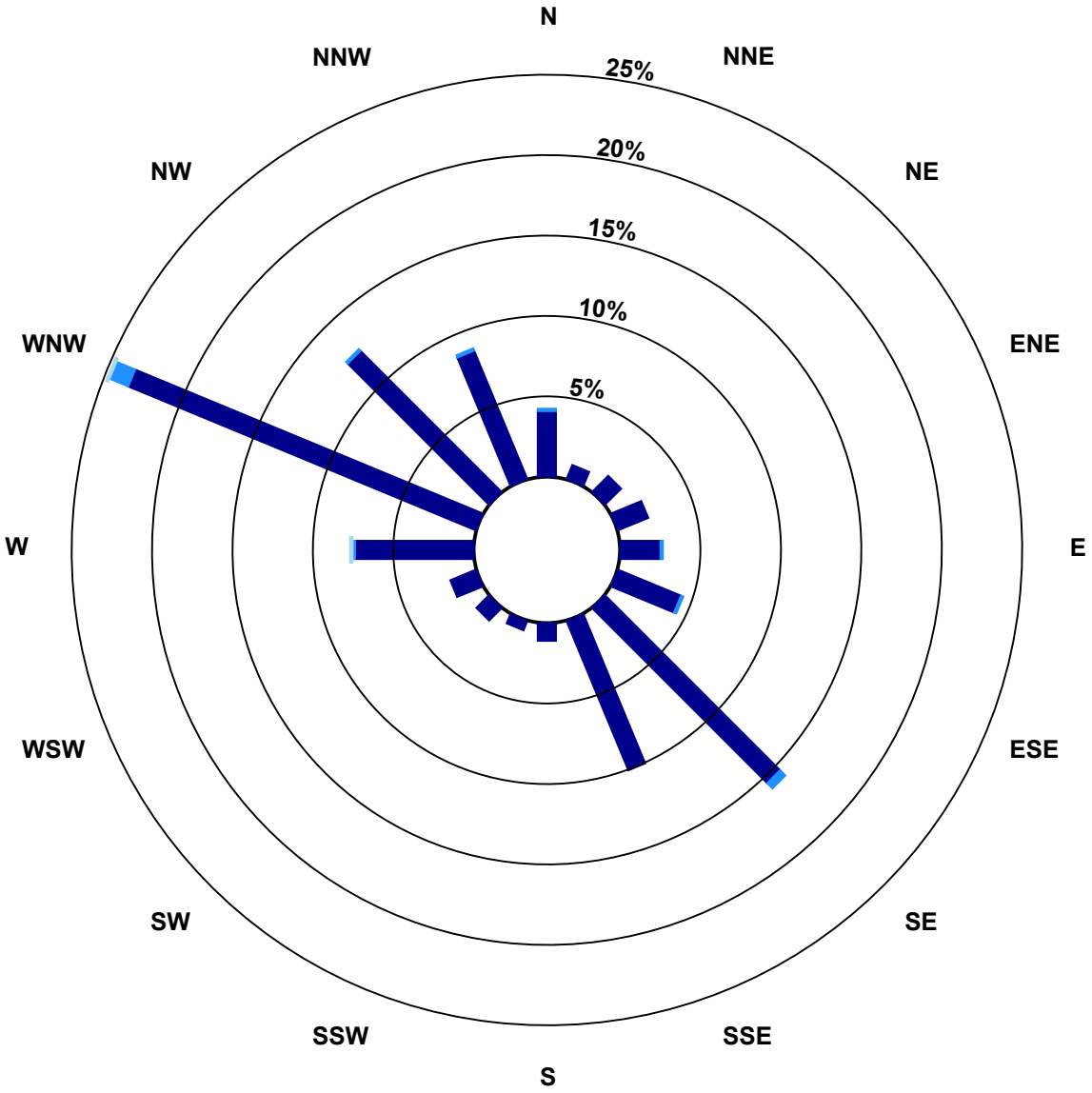
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Dioxide (NO_2) - ppb

Anzac



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

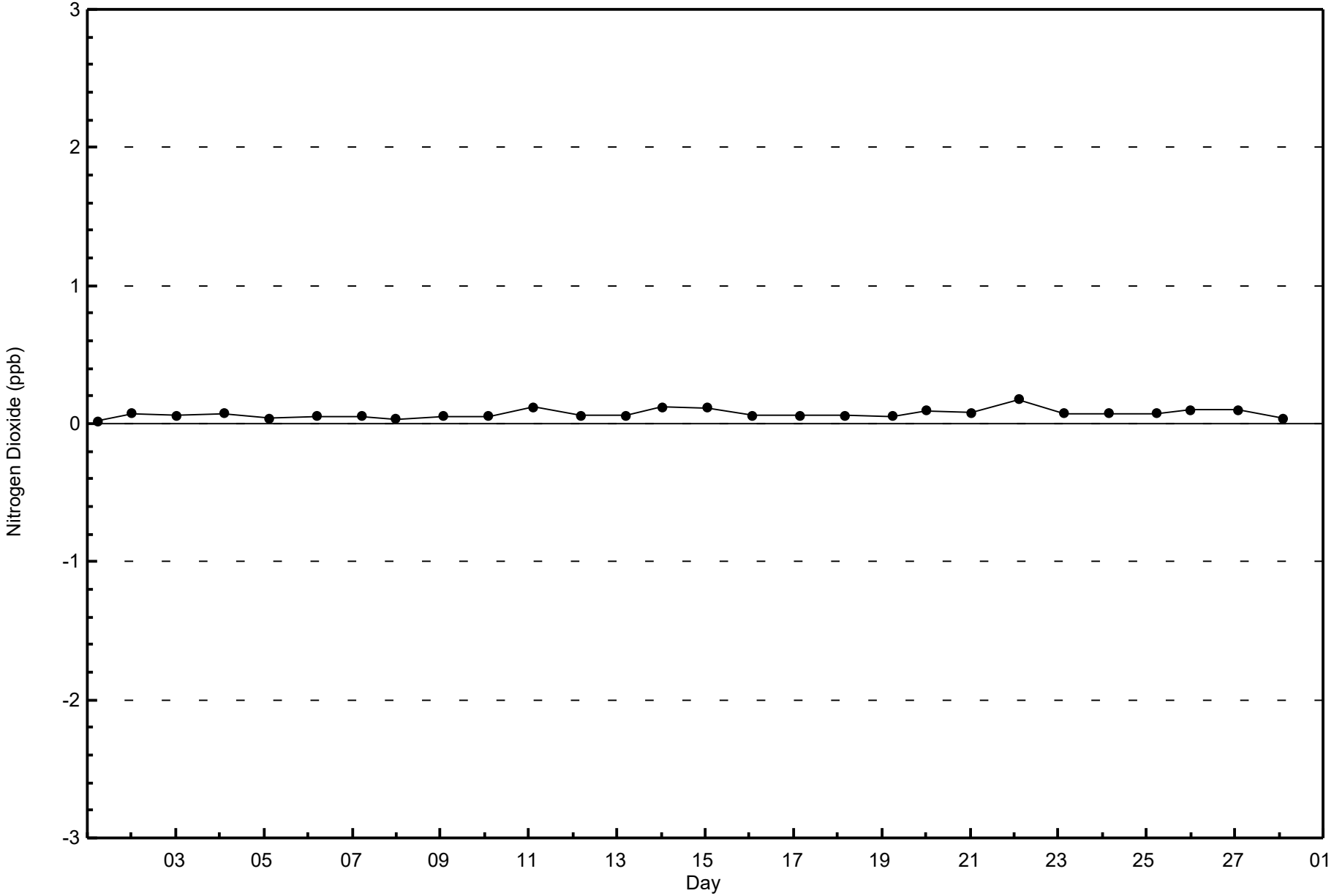
Total Number of Valid Hours: 637

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Anzac - February 2025

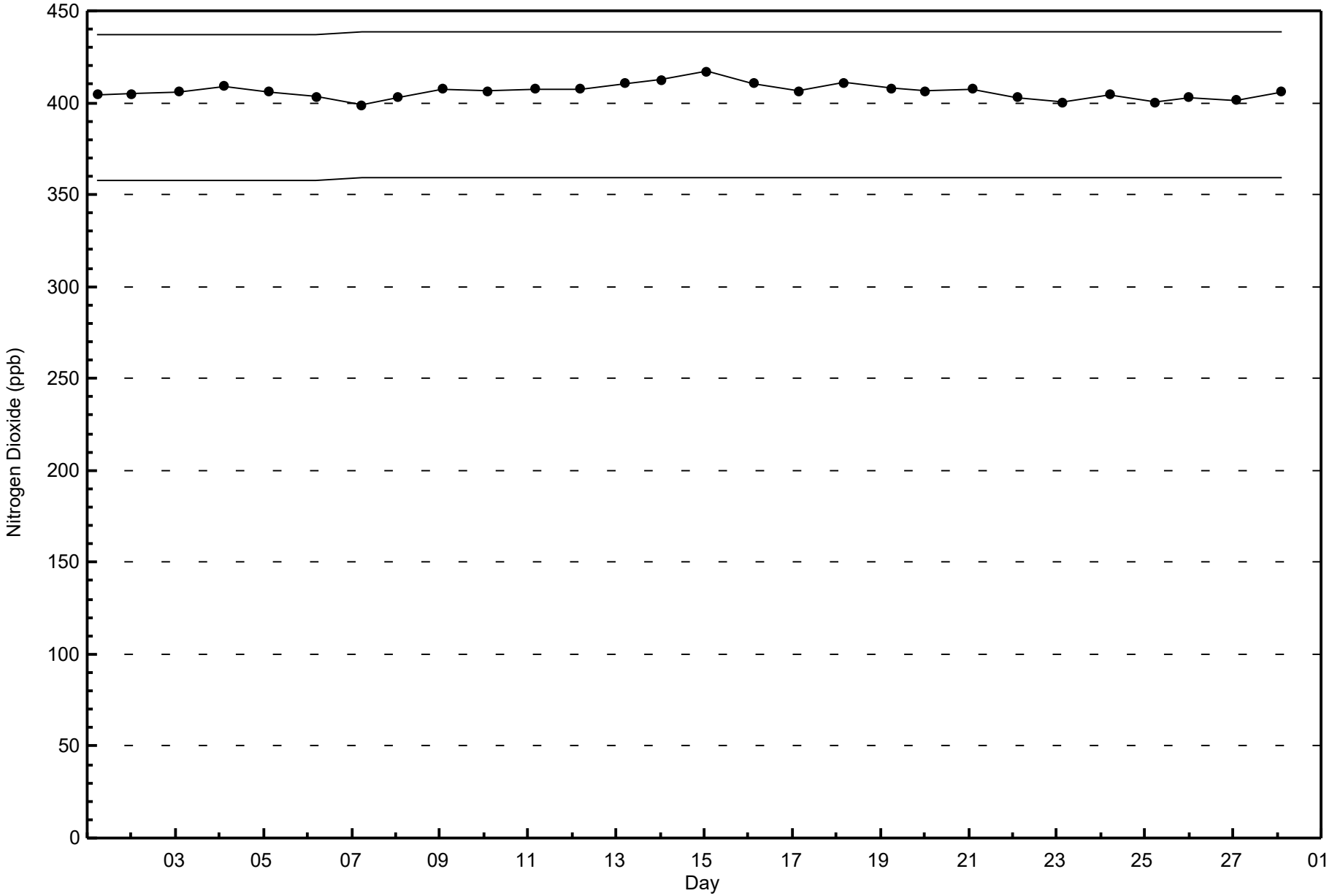


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Anzac - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Anzac - February 2025

Maximum Value: 143.4 ppb on Feb 14 06:00

Maximum Daily Average: 27.0 ppb on Feb 14

Minimum Value: 0.1 ppb on Feb 1 05:00

Minimum Daily Average: 1.6 ppb on Feb 10

Maximum Diurnal Average: 13.8 ppb at hour 6

Minimum Diurnal Average: 4.2 ppb at hour 12

Monthly Average: 6.28 ppb

Percentiles: P_1 = 0.6 P_{10} = 1.2 Q_1 = 2.0 Median = 3.7 Q_3 = 7.2 P_{90} = 11.9 P_{99} = 39.5

Hours in Service:	672
Hours of Data:	637
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-Feb	0.1	0.1	1.4	0.2	0.1	Z	9.3	7.5	6.4	6.1	5.2	4.6	4.9	4.3	7.0	8.3	7.9	8.5	7.2	5.6	5.9	4.1	2.9	2.8	4.8	9.3
2-Feb	Z	2.6	2.9	2.7	3.0	2.8	2.4	2.3	2.3	2.0	2.8	3.0	3.2	3.0	7.3	9.1	15.6	11.4	11.0	9.6	7.9	6.6	7.4	6.8	5.6	15.6
3-Feb	5.3	Z	7.2	8.4	5.5	5.2	4.6	2.7	2.5	3.4	2.0	2.2	2.2	2.0	2.1	1.7	3.9	5.0	5.4	13.9	8.5	7.9	7.1	6.6	5.0	13.9
4-Feb	15.6	6.9	Z	3.1	7.5	9.2	5.5	20.2	11.1	16.4	4.1	3.8	1.7	1.8	2.4	2.2	5.7	9.2	7.1	10.9	9.9	3.9	2.6	2.2	7.1	20.2
5-Feb	3.0	2.1	1.8	Z	1.8	8.0	1.4	2.6	4.1	2.5	1.4	1.4	1.9	2.0	2.9	11.6	2.2	2.5	2.6	2.6	2.5	2.7	2.9	2.8	3.0	11.6
6-Feb	2.7	2.5	2.4	2.1	Z	3.6	1.9	1.9	2.3	1.3	1.2	C	C	C	C	C	C	8.6	5.8	5.9	3.7	1.5	1.4	1.9	--	8.6
7-Feb	2.0	1.1	1.2	1.1	1.6	Z	3.9	2.0	1.5	1.3	1.0	1.7	1.6	1.6	1.3	1.6	1.6	7.2	4.9	3.3	3.9	1.3	1.2	1.2	2.1	7.2
8-Feb	Z	4.5	3.8	5.3	3.4	5.1	5.6	10.1	7.3	2.4	1.8	1.9	1.9	1.5	1.0	0.6	0.6	0.7	10.0	9.1	9.6	10.1	8.0	2.1	4.6	10.1
9-Feb	0.7	Z	2.6	2.6	3.4	5.4	6.8	6.9	5.7	7.1	3.1	3.5	3.9	2.1	4.7	4.6	6.2	9.7	12.2	9.4	6.8	5.9	3.2	1.9	5.1	12.2
10-Feb	1.3	1.5	Z	1.2	1.1	4.0	1.1	1.2	1.0	1.0	1.3	1.3	1.8	2.7	1.8	M	2.1	2.3	1.4	1.3	0.9	1.4	1.6	2.0	1.6	4.0
11-Feb	1.5	2.6	2.5	Z	6.1	41.5	11.8	11.5	8.7	6.7	9.1	8.7	9.3	9.8	9.6	9.4	7.4	7.2	20.1	29.5	15.9	11.6	9.3	6.4	11.1	41.5
12-Feb	5.4	5.4	5.1	5.4	Z	6.2	6.0	6.8	6.3	9.4	7.3	7.8	5.9	6.3	5.1	2.6	2.5	2.1	1.6	1.1	0.9	0.8	0.9	1.1	4.4	9.4
13-Feb	1.0	1.1	1.3	1.2	1.7	Z	17.0	22.7	12.4	20.5	22.1	12.2	6.5	4.5	5.0	4.5	9.7	18.3	16.5	21.1	23.5	27.6	30.7	39.9	14.0	39.9
14-Feb	Z	22.0	22.5	22.8	16.9	143.4	66.0	30.7	21.9	36.8	23.9	16.5	18.7	12.0	13.6	10.4	5.8	7.1	8.4	16.9	20.3	28.9	27.2	29.1	27.0	143.4
15-Feb	28.7	Z	5.7	4.4	3.9	5.3	2.9	3.0	2.7	2.5	2.4	1.8	1.7	1.5	1.7	1.3	1.6	3.0	2.8	3.1	2.1	2.1	2.2	3.8	3.9	28.7
16-Feb	7.8	8.0	Z	17.6	6.9	21.6	14.5	5.7	5.4	4.2	7.7	7.3	6.2	3.6	7.0	3.2	3.2	2.0	2.2	1.6	2.9	4.1	6.4	1.2	6.5	21.6
17-Feb	0.8	1.3	1.7	Z	4.4	5.5	2.8	2.9	2.3	2.5	2.3	3.1	2.8	2.3	3.6	1.3	1.1	2.3	2.2	0.7	0.8	1.2	1.6	1.2	2.2	5.5
18-Feb	1.9	2.2	4.1	8.9	Z	3.9	5.5	4.9	9.9	2.9	6.3	4.6	7.0	6.0	2.4	2.0	3.1	3.2	4.8	3.6	2.6	3.4	4.1	3.4	4.4	9.9
19-Feb	3.7	3.8	4.4	7.6	9.7	Z	11.2	4.4	5.4	5.8	5.8	4.8	6.1	3.9	2.9	2.0	1.9	1.6	1.2	3.3	1.0	0.7	0.9	1.4	4.1	11.2
20-Feb	Z	2.4	2.6	2.5	2.6	2.2	2.2	2.3	2.8	3.6	3.9	4.1	4.6	4.8	4.5	4.0	4.8	9.5	4.4	4.7	4.2	2.2	2.0	2.0	3.6	9.5
21-Feb	2.0	Z	3.4	10.5	6.9	7.4	5.4	6.3	6.7	4.6	2.9	2.4	2.0	3.6	6.8	9.9	11.7	21.3	38.2	45.9	49.2	43.8	19.8	25.4	14.6	49.2
22-Feb	28.8	38.7	Z	29.6	22.4	16.6	6.3	9.3	5.1	7.6	3.0	2.1	3.1	3.6	6.1	8.6	8.9	6.9	5.0	4.0	2.4	2.6	2.1	1.8	9.8	38.7
23-Feb	1.5	2.2	1.9	Z	2.8	3.3	1.1	1.2	1.0	0.8	0.8	0.8	10.3	4.4	2.3	2.1	1.1	2.2	2.7	2.1	2.5	5.2	6.1	5.5	2.8	10.3
24-Feb	5.6	3.7	2.1	2.7	Z	2.0	1.6	2.0	1.7	2.6	3.0	2.7	2.9	3.9	4.5	2.0	3.9	3.1	4.7	3.1	1.6	0.9	1.3	2.0	2.8	5.6
25-Feb	3.6	5.6	17.0	31.6	16.4	Z	9.2	8.4	9.5	7.1	7.1	6.6	7.3	9.7	6.7	8.1	7.3	7.7	9.6	9.5	7.0	4.8	4.1	9.0	9.3	31.6
26-Feb	Z	17.5	7.1	3.5	3.2	7.3	3.8	2.5	2.9	1.4	1.1	1.2	4.1	9.8	16.2	13.6	10.0	7.3	8.0	9.1	9.0	5.8	6.5	7.2	6.9	17.5
27-Feb	8.3	Z	10.4	8.4	6.6	7.3	4.9	2.0	2.4	4.2	3.1	2.2	2.9	1.6	0.9	0.7	1.2	5.5	5.0	1.8	1.8	1.6	0.9	0.7	3.7	10.4
28-Feb	0.8	0.8	Z	0.6	0.6	0.7	1.1	2.5	2.3	2.3	1.3	1.4	3.2	4.6	5.7	1.9	2.7	0.7	0.6	1.9	0.8	1.3	1.4	1.7	1.8	5.7
	5.7	6.0	5.0	7.7	5.8	13.8	7.7	6.7	5.5	6.0	4.9	4.2	4.7	4.3	5.0	4.9	4.9	6.3	7.3	8.4	7.4	6.9	5.9	6.2	Diurnal Average	
	28.8	38.7	22.5	31.6	22.4	143.4	66.0	30.7	21.9	36.8	23.9	16.5	18.7	12.0	16.2	13.6	15.6	21.3	38.2	45.9	49.2	43.8	30.7	39.9	Diurnal Maximum	

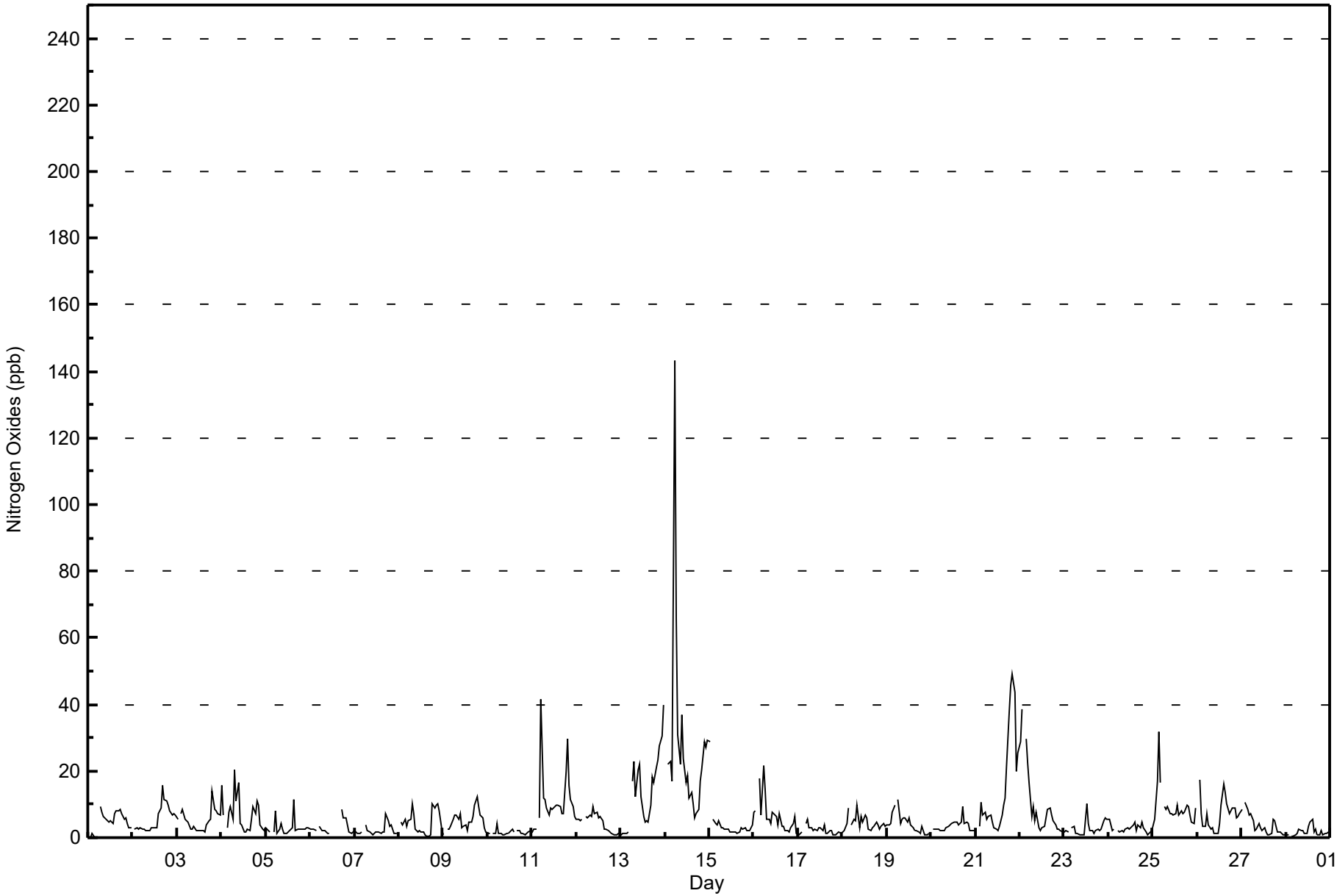
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Anzac - February 2025



Nitrogen Oxides (NO_X) - ppb
Anzac - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	602	94.51	94.51
21 - 40	29	4.55	99.06
11 - 80	5	0.78	99.84
81 - 159	1	0.16	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 637

Total Number of Hours: 672



Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Anzac - February 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	6	9	13	16	27	97	64	7	4	7	11	43	141	77	54	602
21 - 40	0	0	0	0	1	1	4	0	0	0	0	0	4	14	3	2	29
11 - 80	1	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	5
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	27	6	9	13	17	28	101	64	7	4	7	11	49	158	80	56	637

Total Number of Valid Hours: 637

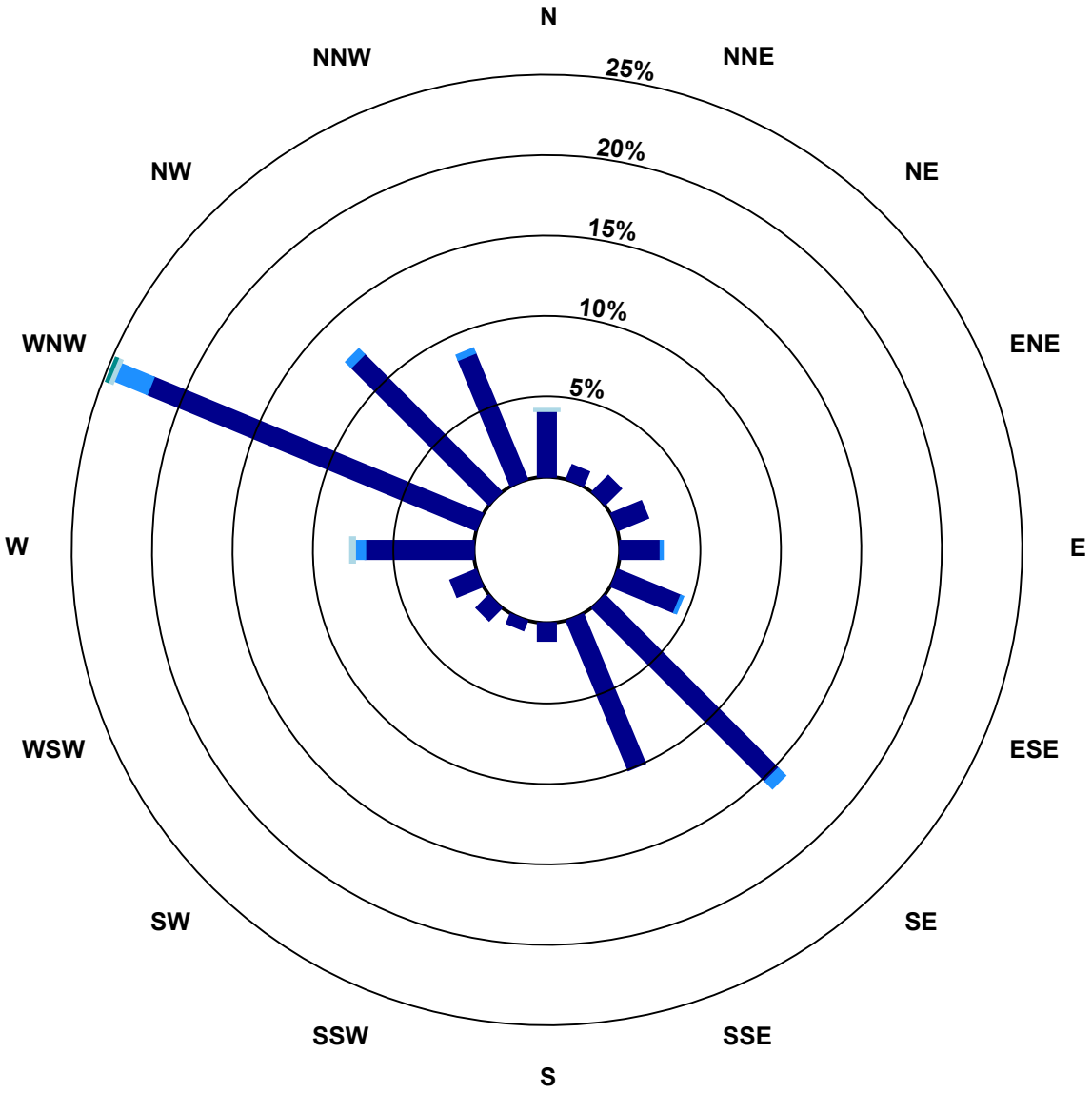
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Oxides (NO_X) - ppb

Anzac



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

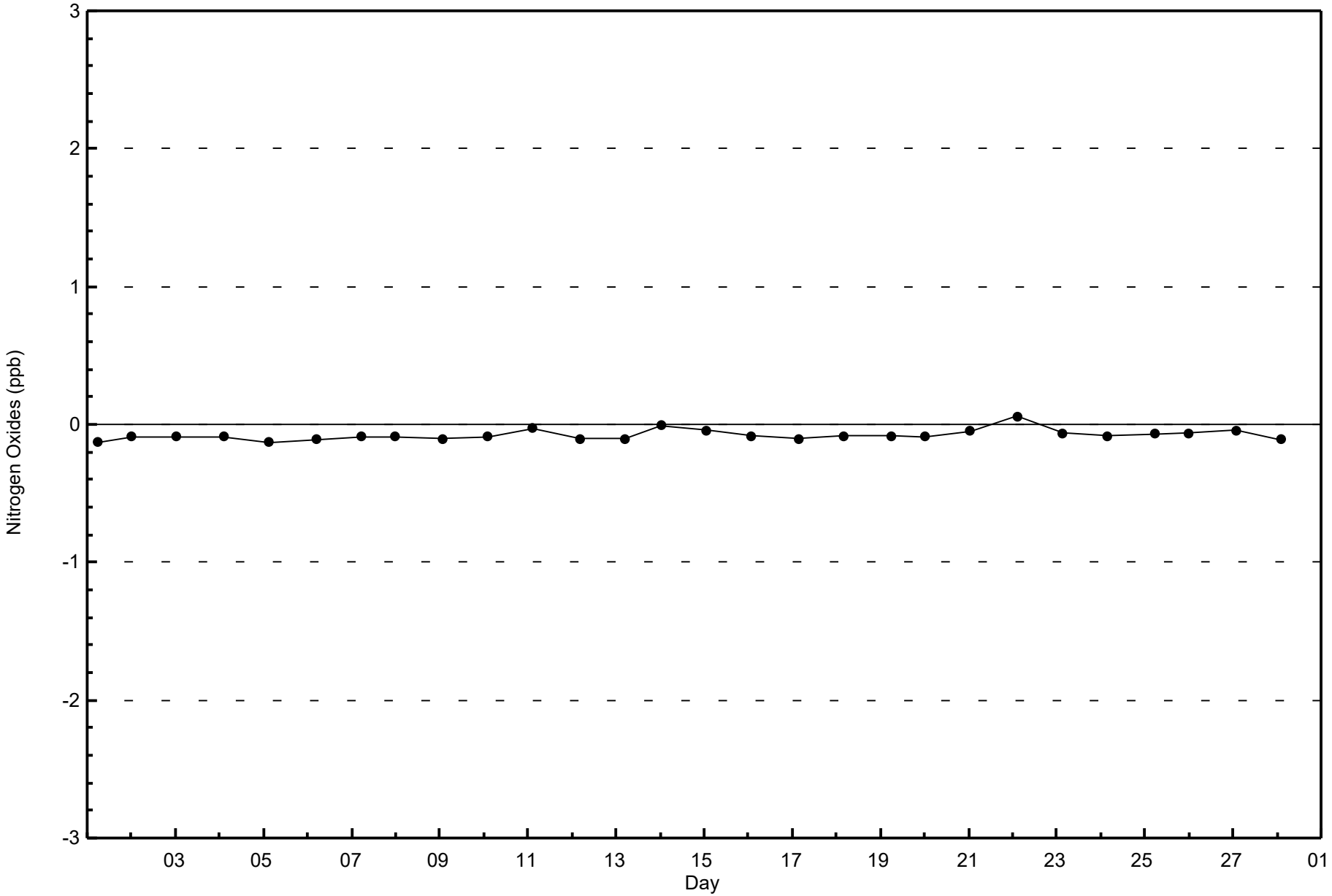
Total Number of Valid Hours: 637

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Anzac - February 2025

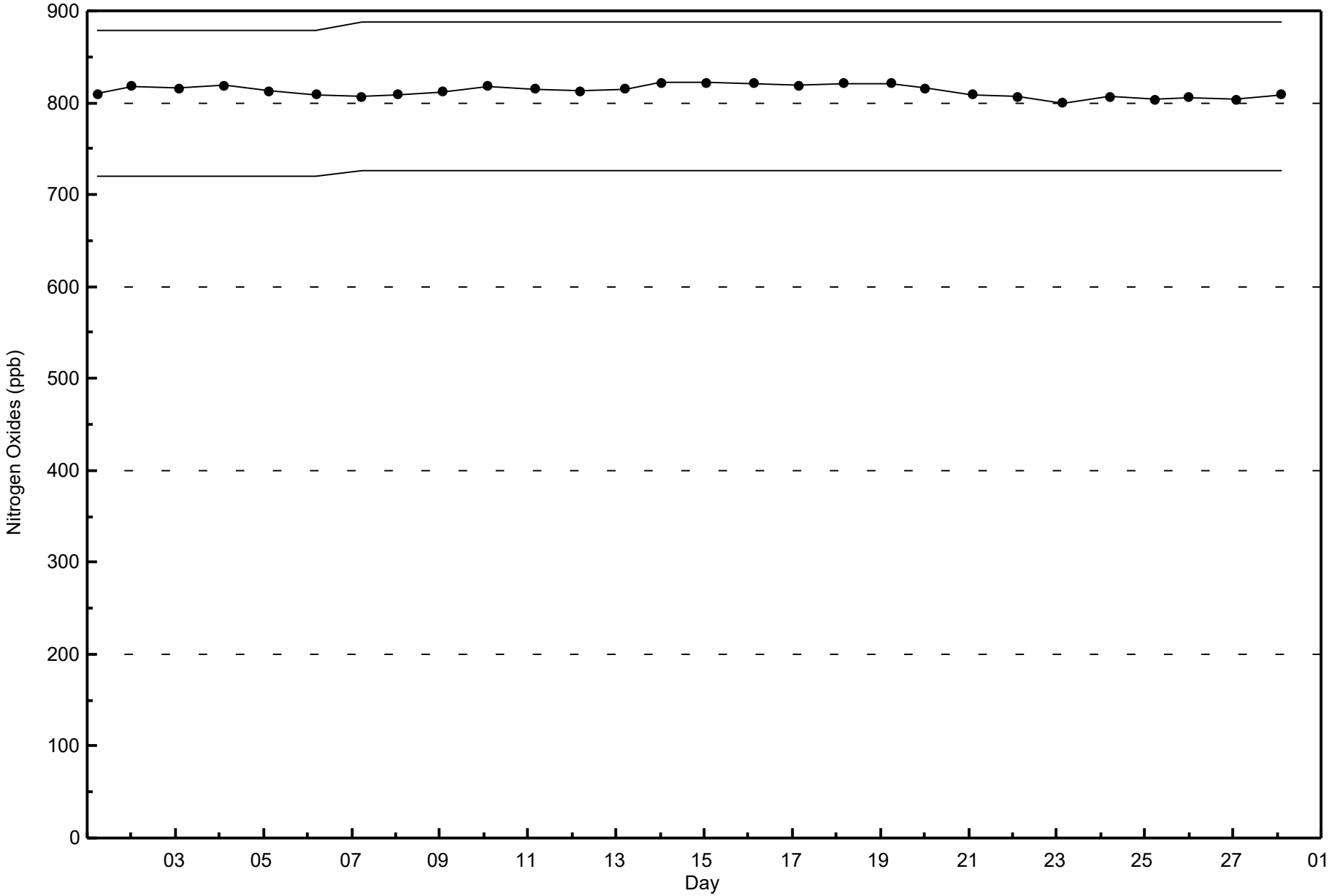


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Anzac - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Anzac - February 2025

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

Maximum Value: 44.3 ppb on Feb 23 01:00

Maximum Daily Average: 35.8 ppb on Feb 5

Minimum Value: 0.0 ppb on Feb 21 19:00

Minimum Daily Average: 13.3 ppb on Feb 14

Maximum Diurnal Average: 30.7 ppb at hour 16

Minimum Diurnal Average: 24.0 ppb at hour 2

Monthly Average: 27.16 ppb

Percentiles: P_1 = 3.3 P_{10} = 17.6 Q_1 = 23.2 Median = 28.3 Q_3 = 32.7 P_{90} = 35.7 P_{99} = 40.7

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	32
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-Feb	34.4	35.2	34.9	Z	34.3	33.6	18.9	21.4	23.9	26.5	29.5	30.8	30.7	30.5	27.4	25.5	25.2	23.9	23.9	24.5	20.3	19.7	20.7	20.5	26.8	35.2
2-Feb	20.4	20.1	19.8	21.3	Z	23.0	24.0	24.6	25.0	25.2	24.8	24.9	25.4	26.0	23.8	22.1	21.2	17.9	17.2	18.3	20.2	22.2	20.8	21.4	22.2	26.0
3-Feb	23.1	21.5	20.3	18.8	22.3	Z	25.9	27.8	28.3	27.8	28.0	28.8	30.1	32.2	33.5	33.6	30.5	28.7	26.8	21.4	23.2	25.2	26.0	27.0	26.5	33.6
4-Feb	Z	24.4	26.6	28.1	29.0	30.4	30.5	26.4	27.8	31.3	34.7	35.6	36.3	36.8	36.1	35.5	33.4	32.0	33.3	30.1	29.2	35.5	35.9	35.5	31.9	36.8
5-Feb	34.8	Z	37.0	37.9	38.3	37.9	39.0	38.2	37.3	37.8	39.7	39.9	C	C	C	C	35.3	34.0	33.4	32.8	32.6	32.2	31.3	31.0	35.8	39.9
6-Feb	30.8	31.5	Z	32.9	33.7	34.8	33.7	34.1	34.8	34.9	35.2	34.0	33.7	34.4	33.5	34.3	33.7	29.3	28.2	27.6	30.8	33.5	33.1	32.8	32.9	35.2
7-Feb	32.6	33.5	33.6	Z	33.7	34.4	34.2	33.5	33.2	34.0	34.8	34.9	35.6	36.2	36.9	36.8	36.2	31.6	31.4	32.9	34.0	36.3	36.4	36.1	34.5	36.9
8-Feb	35.9	33.1	31.4	31.7	Z	33.2	32.2	29.5	30.8	33.9	35.2	35.9	36.4	37.4	38.1	39.6	39.0	37.8	32.7	28.7	26.7	25.5	26.8	31.0	33.2	39.6
9-Feb	31.5	30.2	29.4	28.4	26.4	Z	21.3	20.6	21.5	22.1	26.6	26.6	26.9	28.1	26.9	26.4	25.3	20.3	16.7	18.7	22.2	23.6	26.7	28.2	25.0	31.5
10-Feb	Z	29.3	30.2	31.4	32.0	32.6	33.3	33.5	33.9	34.1	34.4	34.5	34.5	35.0	35.1	M	34.4	34.4	35.9	35.2	35.0	34.2	32.1	31.6	33.5	35.9
11-Feb	32.3	Z	32.3	30.4	26.1	14.2	19.5	21.9	26.2	29.4	28.1	28.7	28.9	28.5	28.3	27.5	27.2	25.5	18.5	12.7	15.5	18.1	19.0	20.7	24.3	32.3
12-Feb	23.2	22.5	Z	21.5	22.0	21.4	21.3	22.7	22.9	21.5	23.4	24.5	27.3	27.1	27.9	29.4	28.7	28.1	28.8	30.1	29.3	28.7	28.1	28.0	25.6	30.1
13-Feb	27.4	26.5	24.9	Z	23.7	23.9	19.4	16.6	17.9	16.2	20.0	25.6	30.3	32.3	32.0	31.5	25.5	14.7	13.5	12.1	8.3	6.6	6.4	5.2	20.0	32.3
14-Feb	7.0	5.3	4.8	4.9	Z	7.4	6.1	5.6	7.9	11.0	17.0	20.3	19.2	20.8	20.0	22.1	25.7	23.9	20.5	16.5	12.8	10.3	9.2	7.5	13.3	25.7
15-Feb	7.7	19.8	22.8	24.2	25.9	Z	29.0	29.3	30.1	31.1	30.7	31.0	32.5	32.9	33.3	33.6	32.9	30.7	31.1	31.6	32.2	29.7	27.5	25.8	28.5	33.6
16-Feb	Z	21.7	21.9	19.1	24.5	20.1	20.3	23.6	25.0	27.8	27.2	28.2	29.6	31.4	31.2	33.0	32.5	31.6	28.5	18.3	14.6	14.6	11.8	17.8	24.1	33.0
17-Feb	20.6	Z	25.2	25.5	24.7	22.9	24.0	23.3	24.0	24.2	25.0	27.4	29.6	30.4	31.3	32.9	33.1	30.8	30.4	31.6	31.3	30.7	30.2	29.8	27.8	33.1
18-Feb	28.7	27.7	Z	22.5	25.3	24.8	21.4	20.6	20.6	26.3	26.2	26.5	26.7	28.1	31.9	34.7	33.9	35.6	34.3	34.3	34.8	33.9	31.9	30.8	28.8	35.6
19-Feb	28.5	27.5	26.9	Z	22.0	21.2	19.8	24.9	25.0	26.0	28.5	31.1	32.2	34.5	37.3	39.6	40.4	40.8	40.9	36.9	38.6	38.8	38.8	38.3	32.1	40.9
20-Feb	37.3	36.0	35.0	34.4	Z	33.1	32.5	31.9	31.4	30.8	30.8	30.8	30.8	31.8	32.7	33.1	32.4	29.2	30.9	31.4	34.2	36.8	35.8	33.5	32.9	37.3
21-Feb	33.2	29.7	28.3	22.4	22.6	Z	26.2	23.8	23.3	25.6	27.3	28.2	28.9	28.6	26.7	24.3	21.8	12.9	0.0	0.0	0.0	0.0	11.6	5.4	19.6	33.2
22-Feb	Z	0.0	0.0	3.1	8.8	14.9	26.0	23.7	27.8	25.7	29.2	29.4	29.1	29.0	28.5	26.3	24.8	25.0	24.7	28.0	37.0	38.0	40.2	42.9	24.4	42.9
23-Feb	44.3	Z	38.2	35.2	34.0	35.3	39.6	38.4	39.6	41.0	40.8	39.5	21.1	24.9	29.9	32.3	33.7	31.4	30.5	31.3	31.3	27.2	25.1	24.9	33.5	44.3
24-Feb	23.9	27.0	Z	26.1	26.6	27.5	27.3	28.0	29.1	27.5	26.9	27.6	27.2	27.1	27.1	28.4	26.3	23.6	16.8	17.2	18.5	24.5	26.1	25.3	25.5	29.1
25-Feb	21.9	18.4	5.6	Z	8.3	15.3	18.8	21.0	20.7	22.1	23.5	24.8	24.9	23.7	25.6	23.9	21.3	17.5	13.2	12.3	15.1	16.9	17.5	12.7	18.5	25.6
26-Feb	3.5	8.9	20.0	25.6	Z	24.8	26.0	29.3	33.3	35.9	36.5	35.5	29.6	25.5	21.9	23.0	24.3	26.0	21.6	17.9	18.1	20.7	19.2	17.7	23.7	36.5
27-Feb	16.0	15.8	13.0	14.7	16.4	Z	19.6	24.5	24.6	23.9	31.2	41.0	38.0	38.2	38.8	39.2	36.5	26.1	26.2	30.0	29.6	29.8	31.0	31.3	27.6	41.0
28-Feb	Z	31.2	31.3	31.4	31.3	30.9	30.1	29.3	28.8	28.6	29.7	29.6	28.7	28.7	28.4	30.5	30.8	31.1	31.2	30.5	31.9	30.6	29.6	25.9	30.0	31.9
	26.0	24.0	24.7	24.8	25.7	26.0	25.7	26.0	27.0	27.9	29.5	30.6	29.8	30.4	30.5	30.7	30.2	27.7	25.8	24.7	25.3	25.8	26.0	25.7	Diurnal Average	
	44.3	36.0	38.2	37.9	38.3	37.9	39.6	38.4	39.6	41.0	40.8	41.0	38.0	38.2	38.8	39.6	40.4	40.8	40.9	36.9	38.6	38.8	40.2	42.9	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

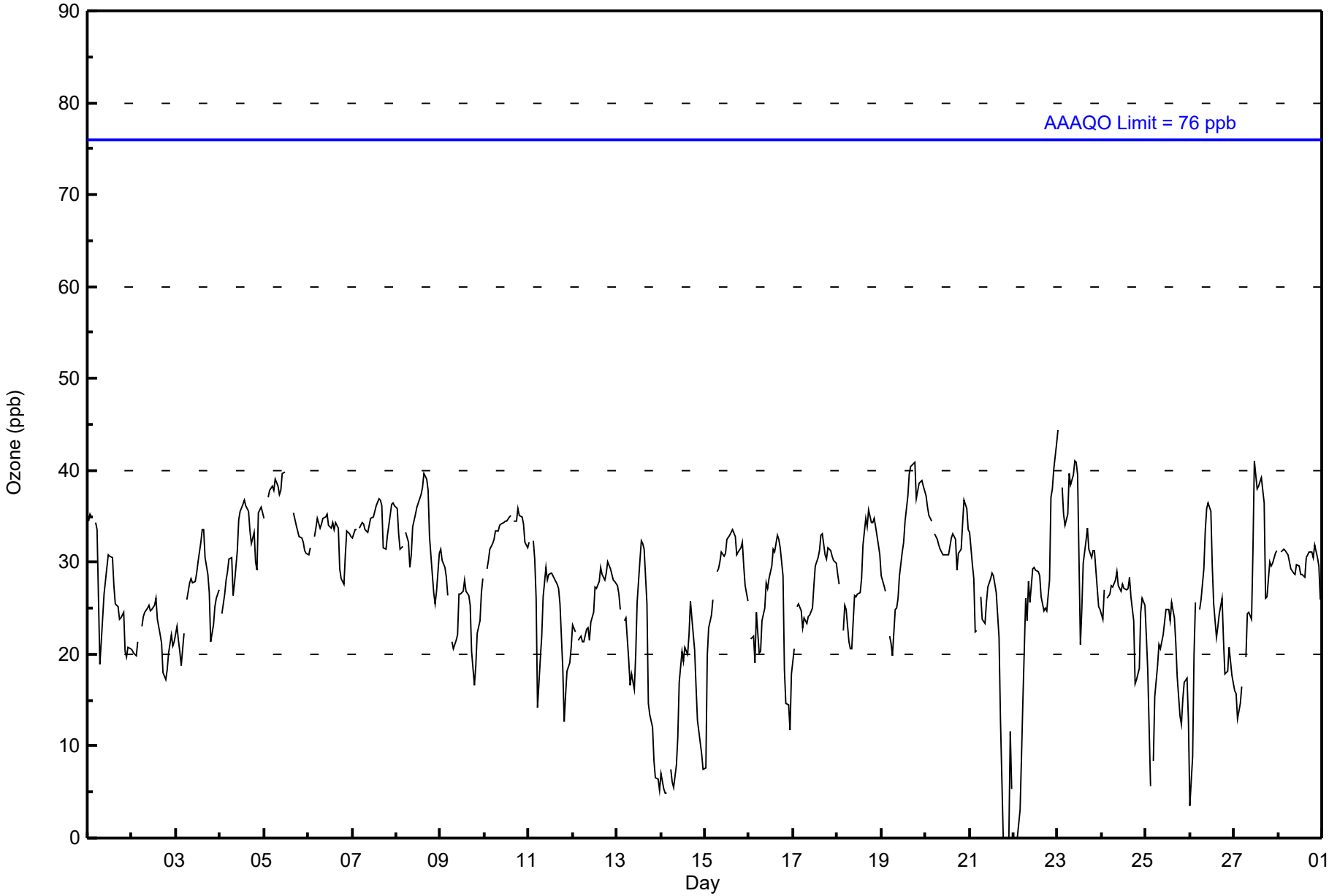
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Anzac - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	104	16.28	16.28
21 - 50	535	83.72	100.00
51 - 82	0	0.00	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Ozone (O_3) - ppb

Anzac - February 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	2	0	1	0	3	1	23	7	2	0	1	2	8	27	24	3	104
21 - 50	28	6	8	11	14	29	76	57	7	4	5	9	40	126	56	59	535
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	30	6	9	11	17	30	99	64	9	4	6	11	48	153	80	62	639

Total Number of Valid Hours: 639

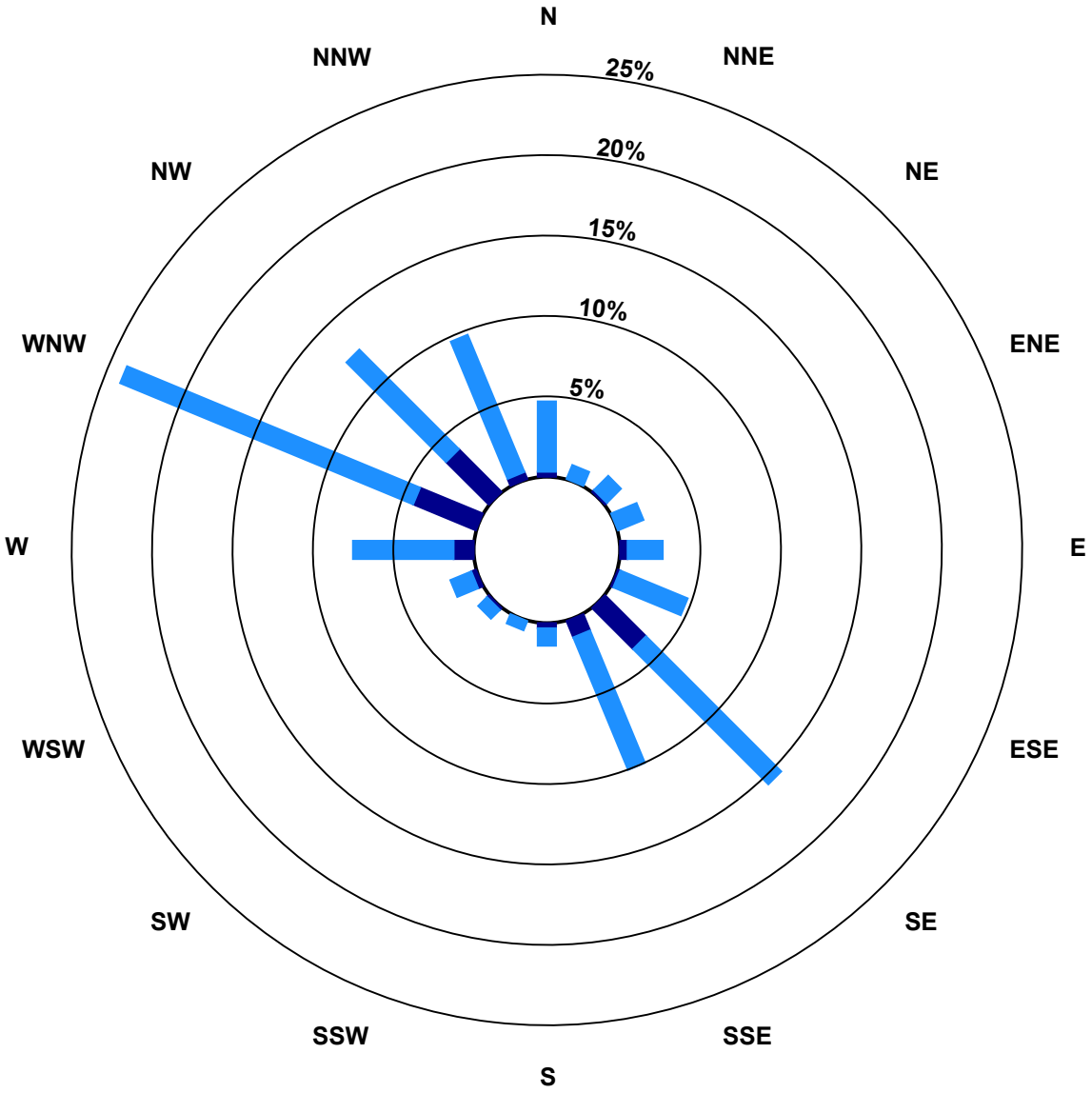
Total Number of Hours: 672

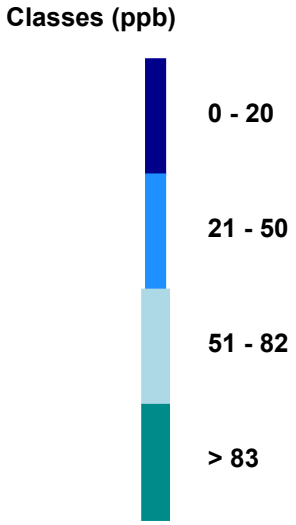
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Ozone (O_3) - ppb

Anzac





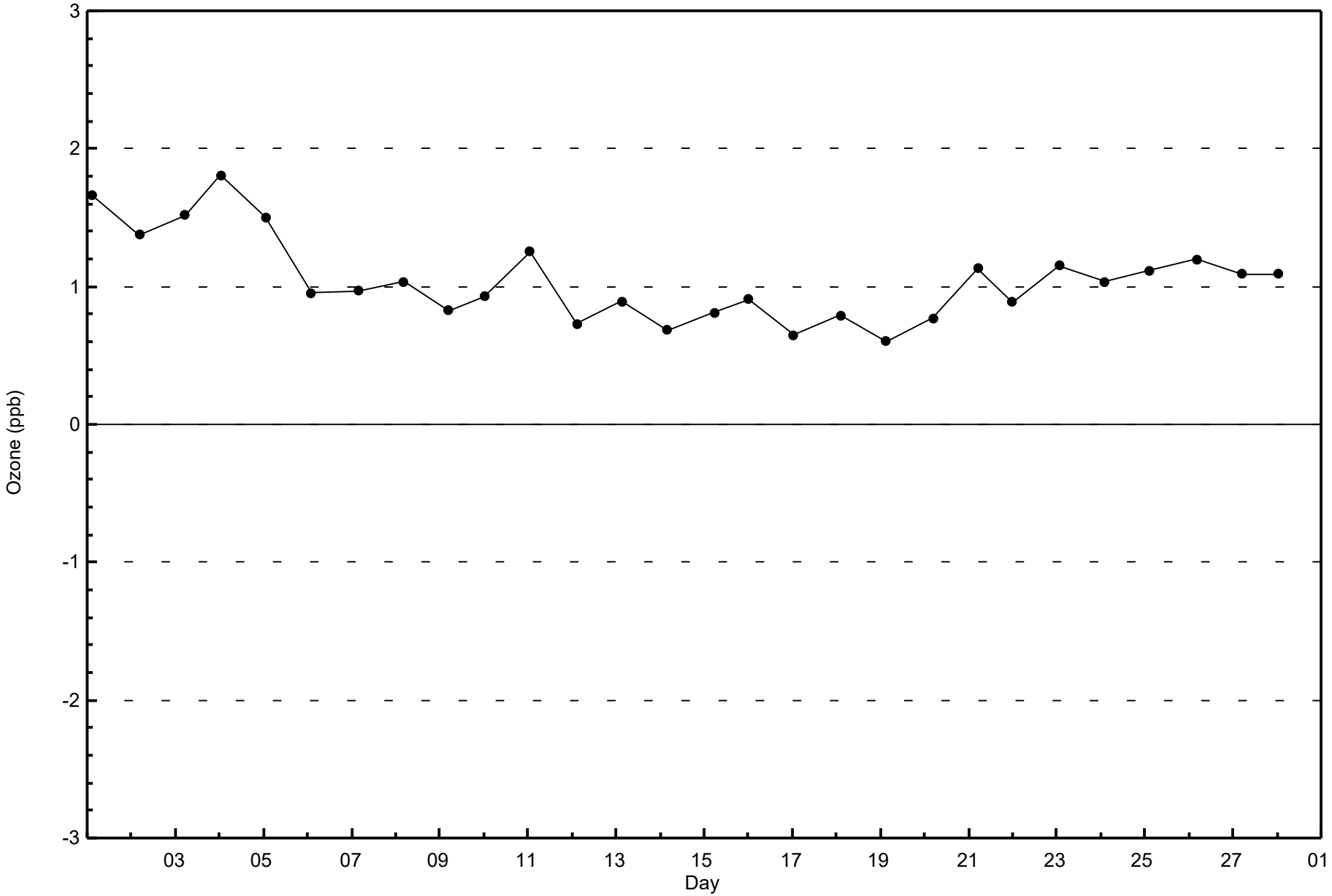
Total Number of Valid Hours: 639

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Anzac - February 2025

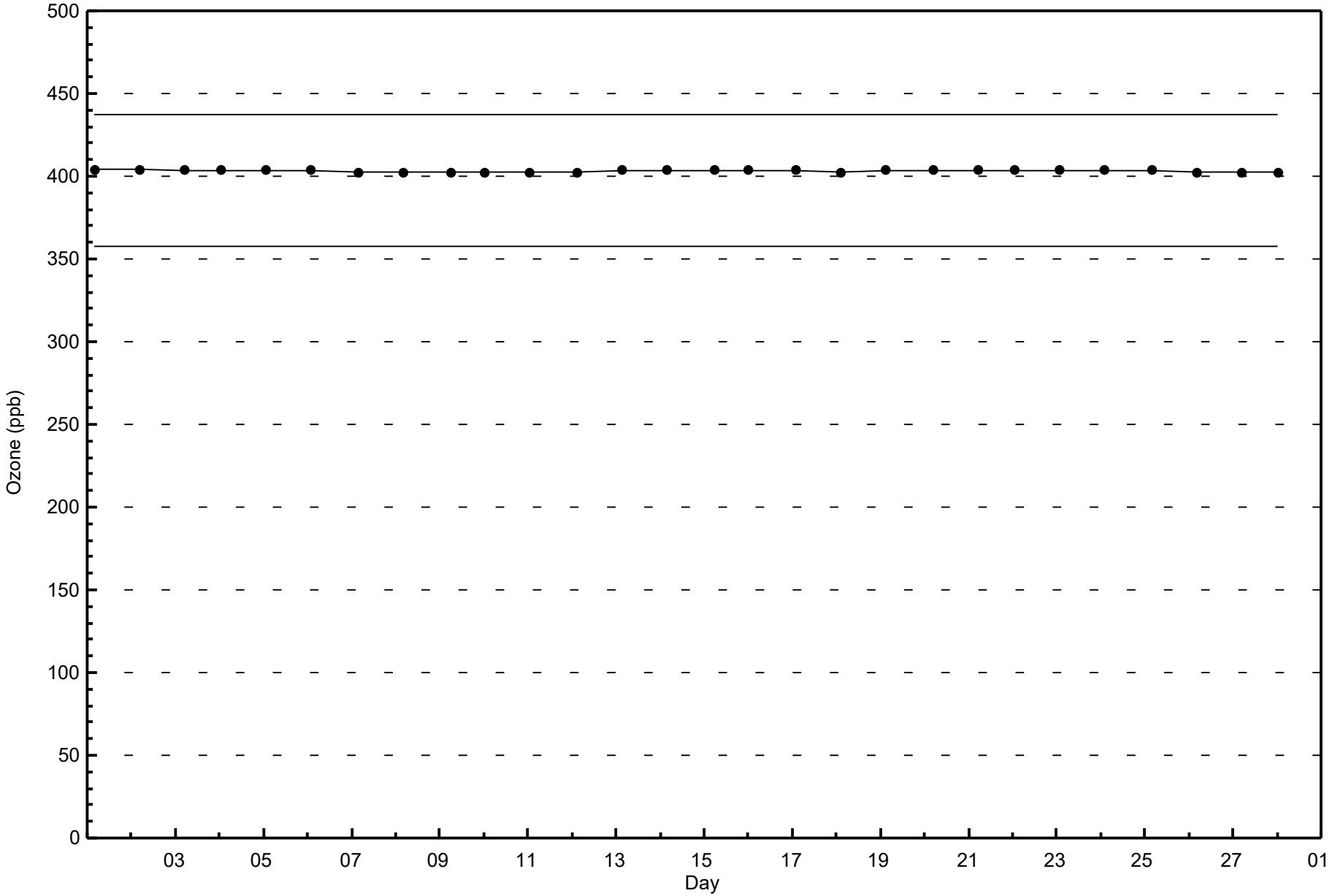


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Anzac - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Anzac - February 2025

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

Maximum Value: 126.9 $\mu g/m^3$ on Feb 14 07:00

Maximum Daily Average: 11.2 $\mu g/m^3$ on Feb 14

Minimum Value: 0.4 $\mu g/m^3$ on Feb 23 12:00

Minimum Daily Average: 2.2 $\mu g/m^3$ on Feb 5

Maximum Diurnal Average: 7.9 $\mu g/m^3$ at hour 7

Minimum Diurnal Average: 3.2 $\mu g/m^3$ at hour 12

Monthly Average: 4.02 $\mu g/m^3$

Percentiles: P_1 = 1.0 P_{10} = 1.9 Q_1 = 2.5 Median = 3.3 Q_3 = 4.7 P_{90} = 6.3 P_{99} = 11.4

Hours in Service:	672
Hours of Data:	671
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-Feb	1.9	1.7	1.7	1.6	1.5	1.6	2.8	3.0	2.9	2.7	2.5	2.3	2.5	2.6	4.1	6.1	5.3	5.1	5.3	5.1	5.0	4.7	4.4	4.4	3.4	6.1
2-Feb	4.5	4.4	4.5	4.2	3.9	3.7	3.6	3.5	3.5	3.6	3.6	3.7	3.7	3.7	3.9	6.9	6.7	10.5	6.6	4.6	3.8	3.5	4.1	3.7	4.5	10.5
3-Feb	3.5	3.7	3.7	4.8	4.4	3.1	2.9	3.1	2.7	2.4	2.4	2.4	2.2	2.0	1.7	1.8	2.8	3.0	3.4	3.7	4.7	3.7	3.2	2.6	3.1	4.8
4-Feb	2.4	2.3	2.6	1.9	1.6	1.3	2.6	5.3	4.0	2.1	1.7	1.6	1.5	1.5	1.5	2.4	2.3	1.5	2.4	3.1	2.3	1.4	1.5	2.1	2.2	5.3
5-Feb	2.2	1.9	1.6	1.0	0.9	1.1	1.1	1.1	1.1	1.5	1.0	1.1	6.7	3.2	2.0	2.7	2.5	2.8	2.9	2.8	2.8	2.7	2.8	2.7	2.2	6.7
6-Feb	2.6	2.5	2.5	2.2	2.0	1.7	1.8	1.8	1.6	2.0	2.0	1.5	1.7	2.0	3.0	4.3	5.3	7.7	8.2	8.5	7.1	6.6	6.2	6.3	3.8	8.5
7-Feb	6.1	5.3	3.8	3.1	3.1	3.1	3.1	3.0	3.3	2.8	2.6	2.5	2.6	2.5	2.3	2.3	2.2	2.9	3.9	5.6	3.2	1.8	2.2	2.7	3.2	6.1
8-Feb	2.2	1.6	1.5	1.2	1.1	1.0	1.1	2.8	2.3	1.6	2.1	2.3	2.1	1.8	2.0	1.6	2.1	2.3	3.1	4.7	4.8	3.7	3.4	2.6	2.3	4.8
9-Feb	3.1	3.2	3.9	4.2	4.3	4.7	5.1	5.1	4.8	5.0	4.9	5.0	6.3	5.1	5.0	5.1	5.1	6.8	8.6	6.9	5.3	4.7	4.2	3.6	5.0	8.6
10-Feb	3.6	4.1	4.0	3.5	3.1	3.1	2.8	2.7	2.5	2.4	2.2	1.9	1.9	2.0	1.6	1.7	2.3	2.2	2.2	1.4	1.4	1.5	2.0	2.3	2.4	4.1
11-Feb	2.1	1.9	1.8	1.7	2.0	3.5	3.5	3.2	2.6	2.2	2.7	2.9	3.2	3.9	4.8	4.9	4.3	4.4	4.4	7.4	23.3	6.8	4.9	3.6	4.4	23.3
12-Feb	6.3	4.9	3.9	3.5	3.3	3.6	3.4	3.3	3.3	4.3	6.6	6.0	4.5	3.7	3.0	2.7	2.8	2.7	2.6	2.2	2.3	2.4	2.5	2.7	3.6	6.6
13-Feb	2.6	2.5	2.5	2.6	2.6	2.8	3.6	3.0	3.0	4.3	3.8	2.9	2.3	1.7	1.9	1.9	2.3	3.3	4.2	10.6	4.9	5.1	6.9	7.4	3.7	10.6
14-Feb	9.7	6.2	5.4	3.9	3.4	5.0	126.9	12.8	4.9	5.7	4.4	3.5	3.8	3.6	3.6	3.8	3.7	6.2	3.6	3.9	7.1	8.3	19.0	10.0	11.2	126.9
15-Feb	8.3	4.2	3.4	3.0	2.8	2.9	2.6	2.4	2.3	2.2	2.2	2.0	2.2	1.9	1.8	2.2	2.1	2.2	2.1	3.0	2.4	2.1	2.4	2.7	2.7	8.3
16-Feb	3.0	2.9	2.8	2.8	2.6	3.2	2.6	2.6	2.5	3.0	3.0	2.9	2.7	2.6	2.6	2.4	2.4	2.1	2.2	3.2	3.6	3.5	3.5	3.3	2.8	3.6
17-Feb	3.0	3.0	2.8	2.8	2.9	2.9	2.9	2.8	3.0	3.1	3.2	2.9	2.8	2.6	2.3	1.9	1.7	2.0	1.9	1.7	1.6	2.4	3.3	2.7	2.6	3.3
18-Feb	2.9	3.6	4.1	4.4	4.7	4.9	4.4	4.5	4.9	3.7	4.0	4.1	3.1	3.1	2.4	1.7	2.8	2.8	2.5	2.1	3.3	3.1	2.8	2.8	3.5	4.9
19-Feb	2.7	2.7	2.6	2.7	2.6	2.8	3.0	3.1	3.3	3.7	4.0	3.8	3.7	3.4	3.1	2.5	1.7	1.7	1.9	2.1	2.2	2.4	2.4	2.7	2.8	4.0
20-Feb	2.9	3.1	3.3	4.0	4.5	4.6	4.7	4.9	5.0	5.2	5.4	5.6	6.1	6.0	5.6	5.2	5.1	5.5	5.0	4.4	3.3	2.7	3.2	3.3	4.5	6.1
21-Feb	3.1	3.5	3.6	3.8	3.7	3.6	4.0	3.9	4.4	4.1	4.1	3.9	4.0	4.3	5.0	5.4	C	7.4	9.8	10.8	11.4	11.3	9.1	9.4	5.8	11.4
22-Feb	9.6	10.4	10.0	7.9	6.8	5.9	5.4	5.6	5.8	5.9	5.8	5.8	5.4	5.0	4.7	5.1	5.3	4.6	4.2	3.6	3.5	3.6	4.0	3.8	5.7	10.4
23-Feb	2.7	3.0	3.0	3.2	3.1	2.2	1.1	0.9	0.6	0.5	0.5	0.4	3.4	5.2	4.5	3.9	2.9	3.2	3.2	3.0	3.0	3.4	3.7	3.6	2.7	5.2
24-Feb	3.4	3.0	2.8	3.1	3.1	3.0	3.0	3.3	3.7	3.8	3.7	4.2	4.6	4.6	4.7	4.9	4.6	4.5	4.3	4.2	4.2	3.9	4.1	4.5	3.9	4.9
25-Feb	5.0	8.5	10.8	12.5	11.6	9.8	7.4	5.4	7.0	6.6	5.5	5.8	5.5	5.0	4.9	4.9	4.8	5.3	6.0	5.8	5.1	5.5	7.2	6.6	6.8	12.5
26-Feb	6.2	7.1	12.7	5.8	5.0	6.0	6.1	5.1	4.0	4.3	2.6	2.7	4.7	8.6	10.4	9.0	7.7	5.9	8.1	8.3	8.1	6.7	6.5	6.8	6.6	12.7
27-Feb	6.7	6.4	6.6	6.9	6.3	6.5	6.0	5.1	4.0	4.0	4.0	2.0	2.6	2.5	2.1	1.5	1.8	3.3	3.1	2.7	2.7	2.7	3.2	3.4	4.0	6.9
28-Feb	3.7	3.6	3.6	3.3	3.5	3.6	4.1	4.6	4.3	4.6	4.2	4.2	4.4	3.9	3.4	3.0	2.8	2.8	2.7	2.6	2.4	2.5	2.7	2.7	3.5	4.6
	4.1	4.0	4.1	3.8	3.6	3.6	7.9	3.9	3.5	3.5	3.4	3.2	3.6	3.5	3.5	3.6	3.5	4.1	4.2	4.6	4.8	4.0	4.5	4.1	Diurnal Average	
	9.7	10.4	12.7	12.5	11.6	9.8	126.9	12.8	7.0	6.6	6.6	6.0	6.7	8.6	10.4	9.0	7.7	10.5	9.8	10.8	23.3	11.3	19.0	10.0	Diurnal Maximum	

C - Calibration

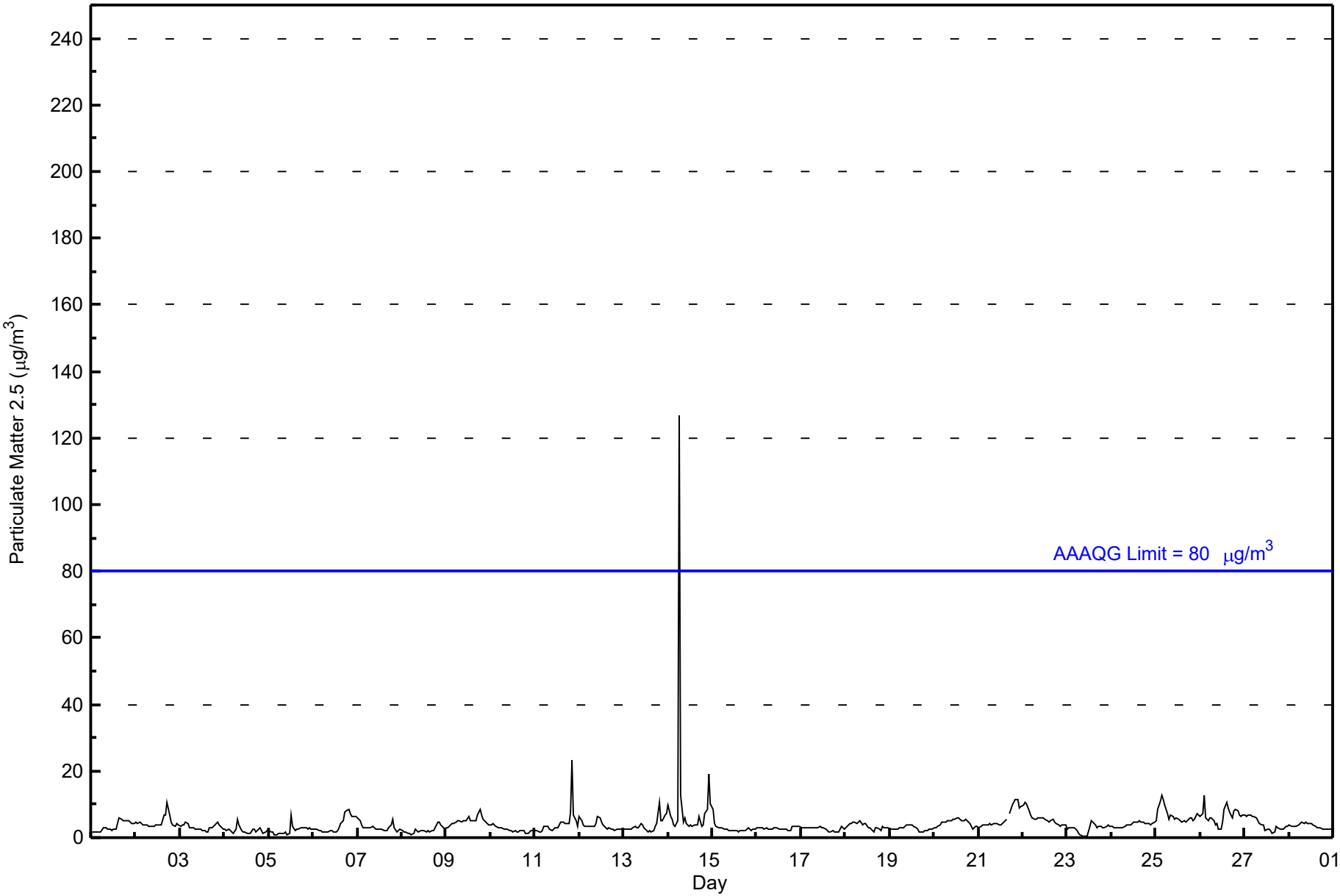
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Anzac - February 2025



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

Anzac - February 2025

Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	570	84.95	84.95
6 - 15	98	14.61	99.55
16 - 25	2	0.30	99.85
26 - 80	0	0.00	99.85
> 81.0	1	0.15	100.00

Total Number of Valid Hours: 671

Total Number of Hours: 672



Wood Buffalo Environmental Association

Frequency Distribution

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

Anzac - February 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	7	9	10	15	28	82	60	7	4	6	10	45	141	65	55	570
6 - 15	5	0	0	3	2	3	24	5	2	0	0	2	2	25	18	7	98
16 - 25	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2
26 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 81.0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Totals	31	7	9	13	17	31	106	65	9	4	7	12	49	166	83	62	671

Total Number of Valid Hours: 671

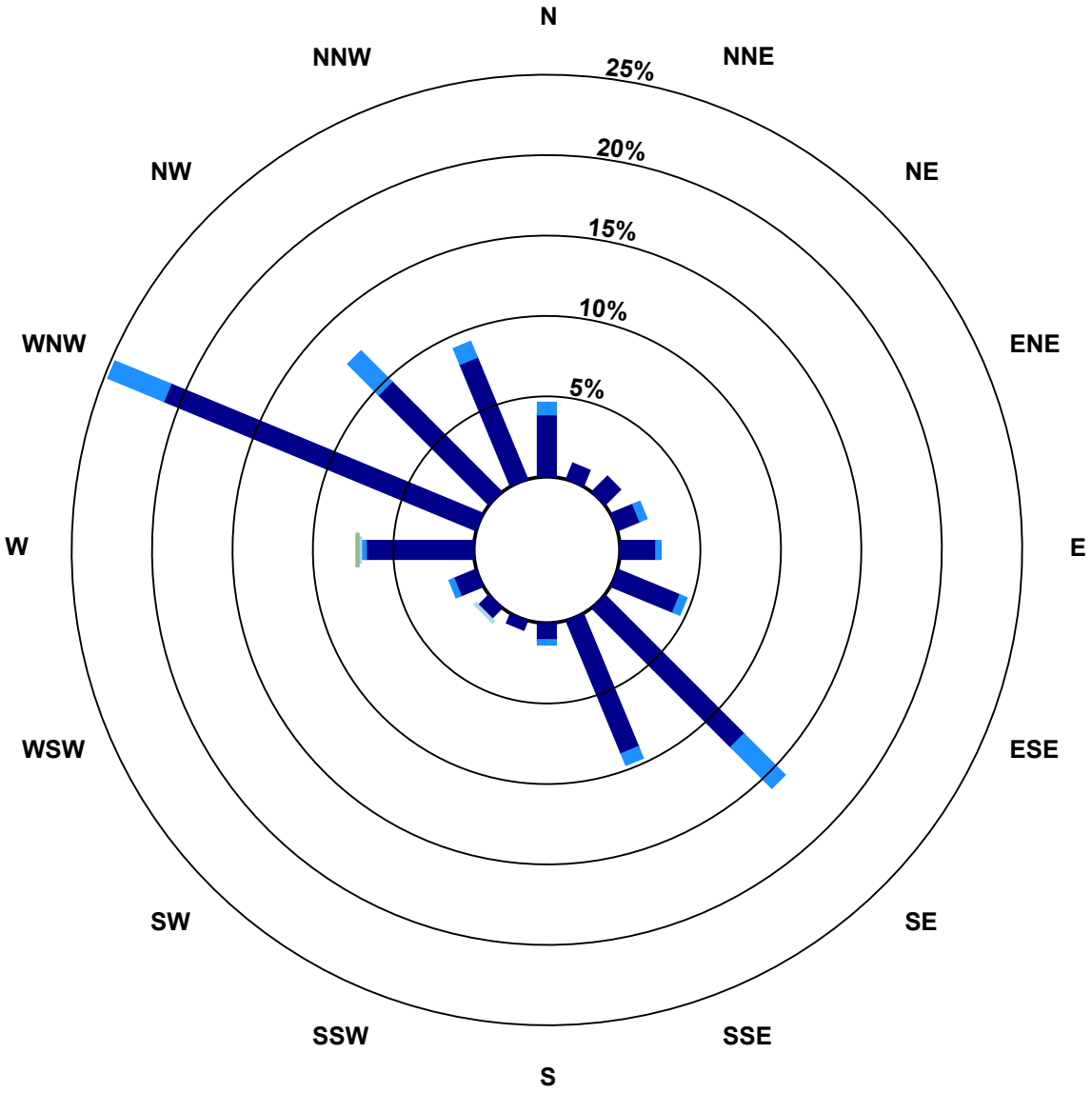
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 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: 671

Maximum Value: 6.0 C on Feb 27 12:00

Maximum Daily Average: -1.3 C on Feb 23

Minimum Value: -37.6 C on Feb 14 07:00

Minimum Daily Average: -30.7 C on Feb 14

Maximum Diurnal Average: -13.1 C at hour 16

Minimum Diurnal Average: -20.0 C at hour 8

Monthly Average: -17.12 C

Percentiles: P_1 = -34.8 P_{10} = -27.7 Q_1 = -25.0 Median = -19.4 Q_3 = -8.2 P_{90} = -3.1 P_{99} = 4.5

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

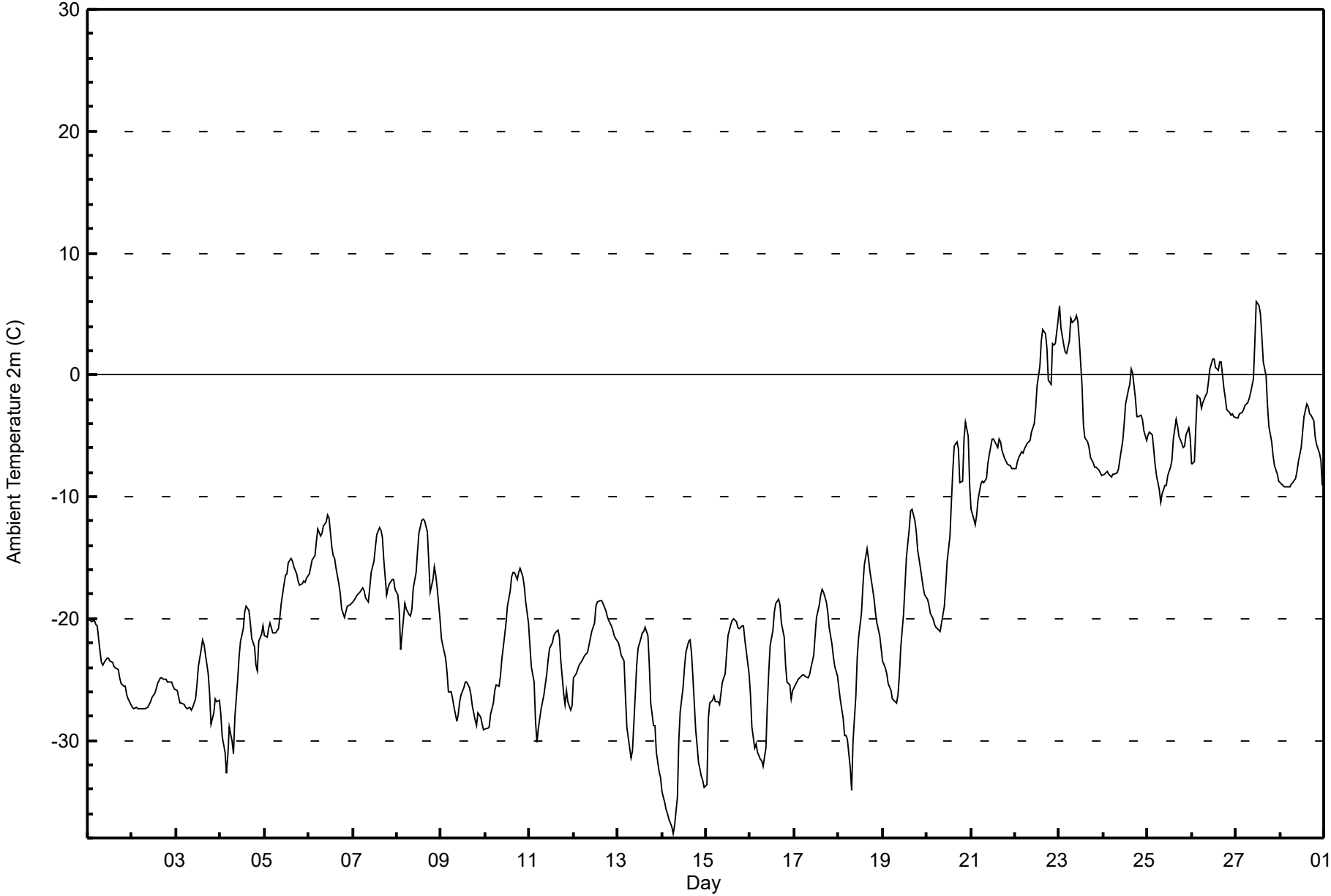
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-20.2	-20.1	-20.2	-20.2	-20.5	-20.5	-22.7	-23.6	-23.8	-23.6	-23.3	-23.3	-23.4	-23.6	-23.9	-24.0	-24.2	-24.9	-25.3	-25.5	-25.5	-26.3	-26.6	-27.0	-23.4	-20.1
2-Feb	-27.3	-27.4	-27.3	-27.4	-27.4	-27.4	-27.4	-27.4	-27.3	-27.1	-26.8	-26.5	-26.2	-25.8	-25.3	-24.9	-24.9	-25.0	-25.0	-25.2	-25.2	-25.2	-25.5	-25.7	-26.3	-24.9
3-Feb	-25.9	-26.5	-26.9	-26.9	-27.1	-27.3	-27.4	-27.3	-27.5	-27.3	-26.6	-25.4	-23.9	-22.5	-21.8	-22.1	-22.9	-24.5	-26.2	-28.7	-27.8	-26.6	-26.8	-26.8	-25.9	-21.8
4-Feb	-27.9	-29.7	-30.9	-32.7	-31.2	-28.8	-30.0	-31.1	-28.1	-25.0	-23.1	-21.9	-20.9	-19.5	-19.0	-19.3	-20.3	-21.6	-22.3	-23.9	-24.3	-21.9	-21.3	-20.7	-24.8	-19.0
5-Feb	-21.4	-21.6	-20.8	-20.4	-21.2	-21.2	-21.1	-20.8	-19.9	-18.8	-17.9	-16.5	-16.4	-15.4	-15.0	-15.3	-15.7	-16.4	-16.9	-17.2	-17.1	-16.9	-17.0	-16.7	-18.2	-15.0
6-Feb	-16.3	-15.7	-15.2	-14.9	-13.7	-12.6	-13.2	-12.9	-12.4	-12.0	-11.5	-11.7	-14.1	-14.8	-15.1	-15.9	-17.1	-17.9	-19.2	-19.9	-19.4	-19.0	-18.9	-18.7	-15.5	-11.5
7-Feb	-18.6	-18.3	-18.1	-18.0	-17.8	-17.5	-17.8	-18.2	-18.6	-17.5	-16.3	-15.3	-14.1	-13.1	-12.6	-12.7	-13.4	-15.2	-18.0	-17.4	-17.1	-16.8	-16.8	-17.6	-16.5	-12.6
8-Feb	-18.0	-19.3	-22.6	-20.1	-18.7	-19.2	-19.6	-19.8	-19.2	-17.5	-16.3	-14.5	-13.0	-11.9	-11.8	-12.0	-12.8	-15.3	-17.9	-16.8	-15.8	-16.5	-17.5	-20.0	-16.9	-11.8
9-Feb	-21.7	-22.2	-23.2	-24.4	-26.0	-26.0	-26.5	-27.3	-28.5	-27.8	-26.8	-26.2	-25.6	-25.2	-25.2	-25.6	-26.3	-27.2	-28.4	-28.7	-27.8	-28.0	-28.6	-29.1	-26.3	-21.7
10-Feb	-29.0	-29.0	-28.9	-27.8	-26.9	-25.9	-25.5	-25.5	-24.7	-23.3	-21.5	-20.4	-19.0	-17.7	-16.6	-16.2	-16.2	-16.8	-16.2	-15.8	-16.6	-17.4	-18.6	-20.3	-21.5	-15.8
11-Feb	-22.2	-23.9	-25.2	-28.5	-30.2	-29.0	-27.4	-26.8	-26.3	-24.6	-23.4	-22.5	-21.9	-21.4	-21.1	-20.9	-21.5	-23.4	-26.1	-27.0	-25.9	-26.8	-27.5	-27.2	-25.0	-20.9
12-Feb	-24.9	-24.5	-24.2	-23.8	-23.5	-23.3	-23.0	-22.8	-22.2	-21.6	-21.0	-20.4	-19.0	-18.6	-18.6	-18.5	-18.7	-19.3	-19.8	-20.2	-20.6	-21.0	-21.4	-21.6	-21.3	-18.5
13-Feb	-22.0	-22.4	-23.0	-23.5	-26.4	-28.9	-30.6	-31.4	-30.8	-26.3	-23.9	-22.5	-21.6	-21.1	-21.0	-20.7	-21.4	-23.9	-27.0	-28.8	-28.8	-31.0	-32.6	-33.1	-26.0	-20.7
14-Feb	-34.2	-35.1	-35.6	-36.1	-36.6	-37.1	-37.6	-36.9	-34.7	-30.0	-27.6	-25.6	-24.1	-22.8	-21.8	-21.7	-22.8	-24.8	-29.1	-30.4	-31.8	-33.0	-33.3	-33.9	-30.7	-21.7
15-Feb	-33.6	-28.2	-26.9	-26.7	-26.4	-26.8	-26.9	-27.1	-26.2	-25.2	-24.6	-22.9	-21.4	-20.5	-20.2	-20.0	-20.2	-20.7	-20.8	-20.6	-20.6	-21.7	-22.7	-24.5	-24.0	-20.0
16-Feb	-26.3	-28.9	-30.7	-30.3	-31.0	-31.6	-31.6	-32.1	-30.7	-27.0	-24.4	-22.2	-20.9	-19.4	-18.8	-18.4	-18.9	-20.4	-21.5	-23.9	-25.2	-25.5	-26.6	-25.9	-25.5	-18.4
17-Feb	-25.4	-25.2	-24.9	-24.8	-24.6	-24.6	-24.8	-24.8	-24.6	-24.0	-23.0	-21.5	-19.9	-18.9	-18.1	-17.6	-17.8	-18.7	-19.5	-20.8	-22.1	-23.1	-24.0	-24.8	-22.4	-17.6
18-Feb	-25.8	-26.7	-28.2	-29.6	-29.5	-29.9	-32.2	-34.1	-30.0	-26.3	-23.2	-21.5	-19.6	-17.4	-15.7	-14.3	-15.1	-16.2	-17.6	-18.4	-19.6	-20.3	-21.5	-22.5	-23.1	-14.3
19-Feb	-23.4	-24.1	-24.5	-25.3	-25.9	-26.6	-26.7	-27.0	-26.3	-24.6	-22.3	-19.6	-17.2	-14.9	-12.7	-11.1	-11.0	-12.0	-12.9	-14.4	-15.9	-16.7	-17.4	-18.1	-19.6	-11.0
20-Feb	-18.4	-18.9	-19.5	-20.0	-20.4	-20.7	-20.9	-21.0	-20.4	-19.0	-17.2	-15.3	-13.3	-10.4	-7.9	-5.9	-5.5	-6.1	-8.8	-8.7	-5.3	-3.9	-5.0	-9.0	-13.4	-3.9
21-Feb	-11.0	-11.8	-12.3	-11.5	-10.2	-9.0	-8.7	-8.9	-8.4	-7.2	-6.5	-5.2	-5.3	-5.5	-6.0	-5.3	-5.5	-6.2	-6.9	-7.1	-7.3	-7.5	-7.7	-7.6	-7.9	-5.2
22-Feb	-7.7	-7.2	-6.8	-6.3	-6.5	-6.1	-5.7	-5.5	-5.3	-4.7	-4.0	-2.7	-0.9	0.7	2.8	3.8	3.3	2.2	-0.4	-0.8	2.6	2.5	2.6	4.5	-1.9	4.5
23-Feb	5.7	3.8	2.5	1.8	1.8	2.8	4.7	4.2	4.6	4.9	4.4	2.9	-0.9	-4.1	-5.1	-5.5	-6.0	-6.8	-7.2	-7.5	-7.6	-7.8	-8.0	-8.3	-1.3	5.7
24-Feb	-8.2	-8.1	-7.9	-8.1	-8.4	-8.2	-8.1	-8.0	-7.7	-6.9	-5.4	-4.0	-2.4	-1.3	-0.8	0.5	0.1	-2.0	-3.4	-3.4	-3.3	-3.7	-4.6	-5.4	-4.9	0.5
25-Feb	-5.0	-4.7	-4.9	-6.1	-7.4	-8.3	-9.5	-10.4	-9.8	-9.0	-9.1	-8.3	-7.6	-7.0	-5.3	-3.6	-4.2	-5.0	-5.6	-5.9	-5.8	-4.9	-4.3	-5.2	-6.5	-3.6
26-Feb	-7.4	-7.1	-4.2	-1.7	-2.0	-2.7	-2.2	-1.7	-1.4	-0.5	0.6	1.3	1.3	0.6	0.4	1.1	1.1	-1.1	-1.9	-2.9	-3.1	-3.4	-3.2	-3.4	-1.8	1.3
27-Feb	-3.5	-3.5	-3.1	-3.0	-2.9	-2.5	-2.3	-1.9	-1.4	-0.4	2.7	6.0	5.7	5.0	3.2	1.1	-0.1	-2.5	-4.2	-5.5	-6.6	-7.5	-8.2	-8.7	-1.8	6.0
28-Feb	-8.9	-9.0	-9.2	-9.2	-9.2	-9.2	-9.0	-8.8	-8.5	-7.9	-7.1	-6.0	-4.7	-3.4	-2.4	-2.6	-3.1	-3.3	-3.8	-5.1	-5.7	-6.4	-7.0	-9.0	-6.6	-2.4
	-18.9	-19.1	-19.4	-19.5	-19.6	-19.6	-19.8	-20.0	-19.3	-17.9	-16.6	-15.4	-14.7	-13.9	-13.4	-13.1	-13.6	-14.8	-16.1	-16.8	-16.8	-17.0	-17.5	-18.1	Diurnal Average	
	5.7	3.8	2.5	1.8	1.8	2.8	4.7	4.2	4.6	4.9	4.4	6.0	5.7	5.0	3.2	3.8	3.3	2.2	-0.4	-0.8	2.6	2.5	2.6	4.5	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Anzac - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	322	47.92	47.92
-20 - 0	314	46.73	94.64
0 - 10	36	5.36	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Anzac - February 2025

Maximum Value: 98.4 % on Feb 25 03:00

Maximum Daily Average: 90.3 % on Feb 25

Minimum Value: 29.7 % on Feb 19 17:00

Minimum Daily Average: 46.0 % on Feb 19

Maximum Diurnal Average: 78.2 % at hour 4

Minimum Diurnal Average: 62.7 % at hour 16

Monthly Average: 72.94 %

Percentiles: P_1 = 35.8 P_{10} = 57.4 Q_1 = 68.3 Median = 74.5 Q_3 = 79.6 P_{90} = 88.5 P_{99} = 95.2

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

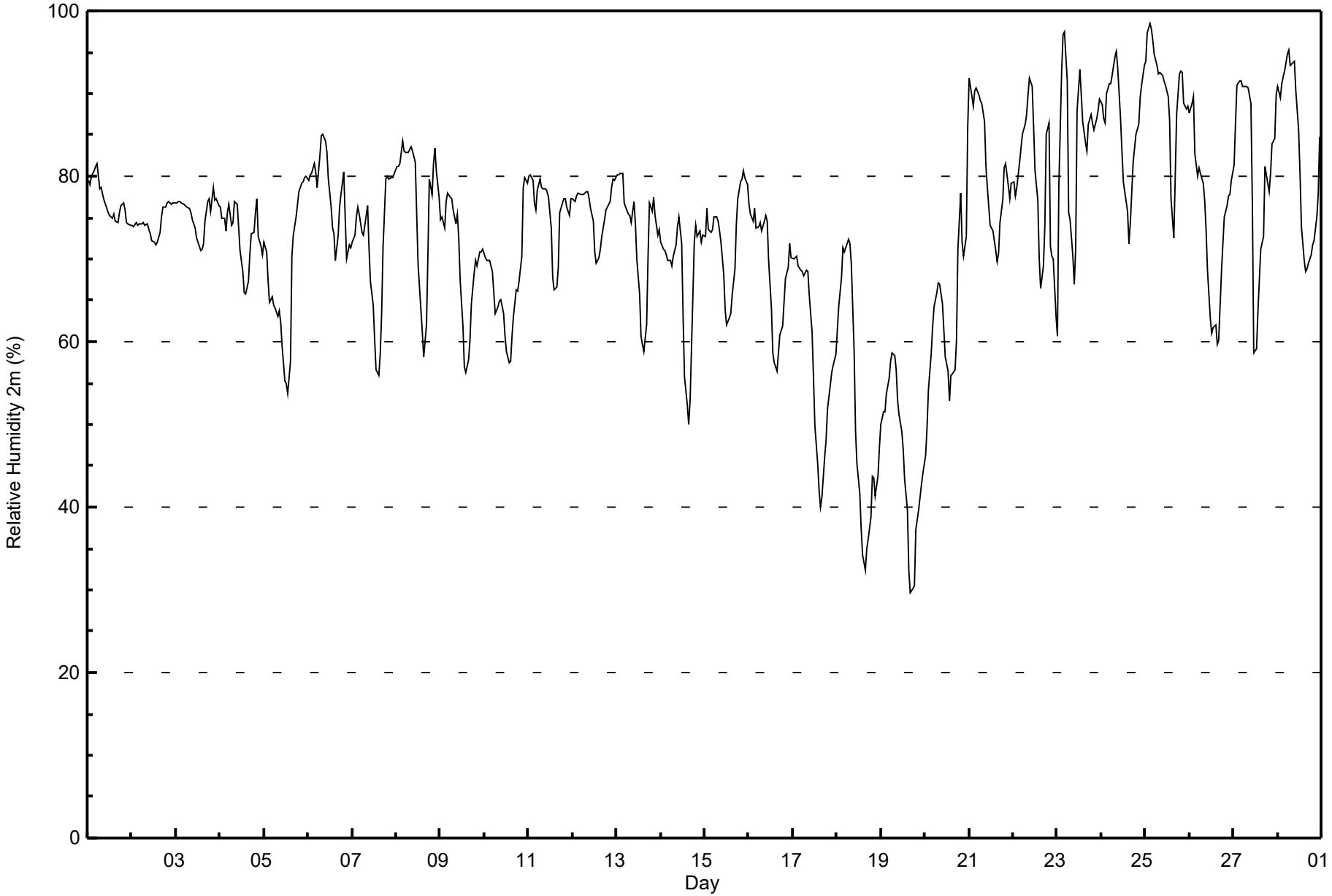
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	79.5	78.9	80.1	80.7	81.2	81.5	78.5	78.6	77.9	77.1	76.2	75.5	75.3	74.9	75.4	74.6	74.4	75.7	76.4	76.8	75.9	74.5	74.2	74.1	77.0	81.5
2-Feb	74.0	74.0	74.4	74.0	74.2	74.2	74.4	74.1	74.3	73.5	73.1	72.2	72.0	71.7	72.1	73.3	75.1	76.2	76.4	76.8	76.9	76.5	76.8	76.8	74.4	76.9
3-Feb	76.7	77.0	76.9	76.8	76.6	76.5	76.3	76.2	75.6	74.8	73.7	72.6	72.1	71.1	71.1	71.8	74.6	77.0	77.2	75.7	78.6	77.2	77.2	76.5	75.4	78.6
4-Feb	76.3	74.9	74.9	73.4	75.6	76.6	74.0	74.4	77.0	76.6	74.0	71.0	68.6	65.9	65.8	67.2	70.5	73.1	73.3	75.6	77.4	72.8	71.6	70.6	73.0	77.4
5-Feb	72.0	70.8	67.5	64.7	65.5	64.5	64.1	63.0	63.8	62.3	59.5	55.2	54.9	53.7	57.7	70.3	72.8	75.1	76.6	78.1	79.2	79.4	79.8	79.9	67.9	79.9
6-Feb	79.5	80.2	80.4	81.6	80.4	78.7	82.6	84.9	85.1	84.3	82.9	79.7	76.2	73.6	73.0	69.8	72.8	76.2	77.7	80.6	75.1	70.1	71.6	71.3	77.8	85.1
7-Feb	72.1	72.9	75.1	76.4	75.4	73.3	72.8	74.0	76.4	71.4	67.3	64.4	60.3	56.7	55.9	58.5	63.3	71.3	79.7	79.9	79.6	79.8	79.8	80.3	71.5	80.3
8-Feb	81.2	81.2	81.5	84.3	83.1	83.0	82.8	83.3	83.5	83.1	81.7	75.4	69.4	63.9	61.2	58.2	62.0	70.3	79.7	77.9	81.6	83.4	80.6	77.4	77.1	84.3
9-Feb	74.7	75.1	73.7	77.0	78.0	77.4	77.2	75.9	74.3	75.3	72.6	67.4	61.8	56.9	56.3	57.8	60.1	64.6	68.3	69.9	69.2	70.8	70.9	71.3	69.9	78.0
10-Feb	70.1	69.9	69.8	69.9	68.5	65.9	63.3	64.2	64.9	65.0	63.4	60.7	58.8	57.5	57.6	60.6	63.0	66.3	66.1	67.2	70.3	78.7	79.9	79.1	66.7	79.9
11-Feb	80.1	80.1	79.5	76.9	75.9	78.3	79.7	78.7	78.4	78.4	78.2	77.4	73.8	67.8	66.2	66.7	68.9	75.6	76.7	77.4	77.3	76.2	75.3	77.2	75.9	80.1
12-Feb	77.3	77.0	77.5	77.9	77.8	77.8	77.8	78.2	78.1	77.3	76.1	74.6	70.9	69.5	70.2	71.2	72.7	74.7	75.9	76.4	77.0	78.6	79.6	79.5	76.0	79.6
13-Feb	80.2	80.2	80.3	80.4	76.8	76.2	75.4	75.3	74.4	77.0	74.2	70.0	65.7	60.6	59.6	58.9	62.1	70.2	76.8	75.8	77.5	75.2	72.9	73.5	72.9	80.4
14-Feb	72.0	71.1	71.0	70.5	69.9	69.9	69.2	70.3	71.7	73.9	75.0	71.9	63.2	55.8	52.3	49.9	52.8	59.1	72.0	74.0	72.8	73.5	72.1	72.9	67.8	75.0
15-Feb	72.8	76.0	73.6	73.3	73.6	75.1	75.1	74.5	73.5	72.1	68.2	64.0	62.0	62.9	63.4	65.6	68.8	74.2	77.2	79.4	79.6	80.6	79.9	79.1	72.7	80.6
16-Feb	76.7	75.4	74.5	76.2	73.8	74.0	74.4	73.4	74.6	75.3	74.6	69.9	64.0	58.6	57.4	56.5	58.6	60.8	61.8	64.7	67.7	69.0	71.9	70.2	68.9	76.7
17-Feb	70.0	70.2	70.4	69.1	68.6	68.5	67.9	68.6	68.5	65.6	61.2	55.8	49.8	45.3	42.0	39.9	41.1	46.0	48.2	51.8	54.7	56.3	57.2	58.5	58.1	70.4
18-Feb	61.3	64.3	67.8	71.3	70.9	71.3	72.4	71.9	69.4	58.8	49.1	45.3	41.7	37.5	34.3	32.3	34.9	36.1	38.8	43.7	43.5	41.3	43.7	47.1	52.0	72.4
19-Feb	50.1	51.4	51.5	53.7	55.6	57.6	58.6	58.4	56.6	53.0	51.2	49.2	46.9	43.3	39.7	32.4	29.7	30.1	30.5	37.3	39.7	41.2	42.7	44.0	46.0	58.6
20-Feb	46.3	49.7	54.3	58.7	61.9	64.2	66.0	67.1	67.0	64.6	61.3	58.2	56.4	52.9	56.0	56.0	56.5	60.2	71.2	77.9	72.0	70.3	72.7	85.9	62.8	85.9
21-Feb	91.9	89.7	88.5	90.3	90.6	89.8	89.2	88.8	86.6	81.2	78.6	74.1	73.7	73.4	71.0	69.6	70.6	74.5	77.2	81.1	81.6	78.8	77.2	79.2	81.1	91.9
22-Feb	79.4	77.6	78.6	81.6	83.4	85.1	86.3	87.5	89.9	91.8	90.9	86.0	80.6	77.1	70.1	66.5	69.1	73.9	85.0	86.5	71.6	70.4	70.0	63.0	79.2	91.8
23-Feb	60.7	78.7	92.7	97.1	97.5	91.5	75.6	74.7	70.4	67.0	71.2	87.9	92.9	89.8	86.7	84.0	83.1	86.3	87.5	86.5	85.6	87.0	88.0	89.3	83.8	97.5
24-Feb	88.7	87.0	86.4	90.1	91.2	91.1	92.1	94.3	95.1	93.0	87.0	83.1	79.3	76.9	75.8	71.8	74.4	81.6	83.3	85.1	86.3	89.5	91.0	93.3	86.1	95.1
25-Feb	93.9	97.3	98.4	97.8	96.5	94.8	93.3	92.3	92.5	92.3	91.5	91.1	89.7	86.8	77.2	72.5	79.8	87.4	92.4	92.6	92.6	88.8	88.2	88.5	90.3	98.4
26-Feb	87.7	88.8	89.6	82.7	80.1	81.0	80.3	79.2	77.1	73.6	68.6	63.0	60.9	61.7	62.0	59.7	60.2	68.4	71.8	75.0	76.4	77.6	77.9	79.5	74.3	89.6
27-Feb	81.3	86.4	90.9	91.6	91.5	90.9	90.8	90.9	90.7	88.8	77.0	58.6	59.1	63.8	67.4	71.2	72.8	81.2	80.2	78.1	80.3	84.0	84.6	89.8	80.9	91.6
28-Feb	90.9	89.5	91.3	92.0	92.8	94.7	95.2	93.4	93.8	94.0	90.3	85.6	80.3	74.0	69.8	68.5	68.8	69.4	70.6	71.7	72.2	75.1	77.8	84.7	82.8	95.2
	75.6	76.6	77.5	78.2	78.1	78.0	77.3	77.4	77.2	75.8	73.2	70.0	67.2	64.4	63.1	62.7	64.8	69.1	72.4	74.0	74.0	74.2	74.5	75.5	Diurnal Average	
	93.9	97.3	98.4	97.8	97.5	94.8	95.2	94.3	95.1	94.0	91.5	91.1	92.9	89.8	86.7	84.0	83.1	87.4	92.4	92.6	92.6	89.5	91.0	93.3	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Anzac - February 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	14	2.08	2.08
40 - 60	77	11.46	13.54
60 - 80	426	63.39	76.93
80 - 100	155	23.07	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Leaf Wetness (LW) - %

Anzac - February 2025

Maximum Value: 42.0 % on Feb 23 12:00

Maximum Daily Average: 7.7 % on Feb 23

Minimum Value: 0.0 % on Feb 1 01:00

Minimum Daily Average: 0.0 % on Feb 1

Maximum Diurnal Average: 1.8 % at hour 12

Minimum Diurnal Average: 0.0 % at hour 16

Monthly Average: 0.54 %

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.0 P_{90} = 0.7 P_{99} = 12.1

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

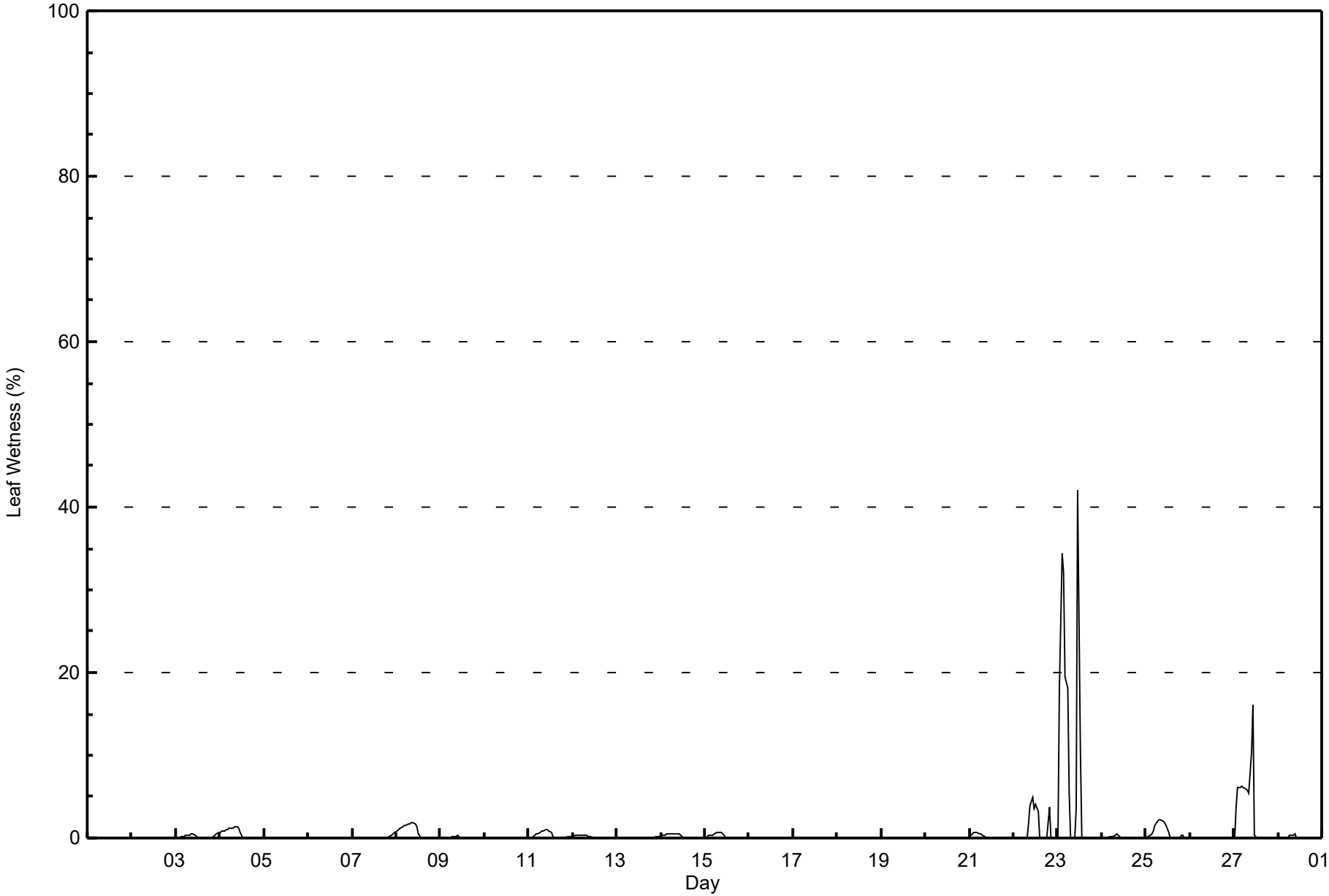
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.1	0.2	0.3	0.4	0.4	0.5	0.5	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.4	0.5	0.6	0.2	0.6
4-Feb	0.7	0.8	0.9	1.0	1.0	1.1	1.2	1.3	1.3	1.3	1.2	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	0.5	1.3
5-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.6	0.7	0.1	0.7
8-Feb	0.9	1.0	1.2	1.3	1.4	1.6	1.7	1.7	1.8	1.8	1.7	1.4	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.8
9-Feb	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.3	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
10-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.2	0.3	0.4	0.5	0.7	0.8	0.9	1.0	0.9	0.8	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.3	1.0
12-Feb	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
13-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.2
14-Feb	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6
15-Feb	0.1	0.2	0.3	0.3	0.4	0.5	0.6	0.7	0.7	0.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
16-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.1	0.5	0.6	0.7	0.7	0.6	0.5	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
22-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	4.0	4.8	3.5	4.0	3.2	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0	0.0	0.0	1.0	4.8
23-Feb	0.0	18.0	34.4	32.0	19.5	18.1	5.5	0.0	0.0	0.0	3.5	42.0	10.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.7	42.0
24-Feb	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.4	0.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6
25-Feb	0.1	0.1	0.4	0.6	0.9	1.5	2.0	2.2	2.2	2.1	1.9	1.5	0.7	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.4	0.0	0.0	0.0	0.7	2.2
26-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	3.7	6.2	6.1	6.3	6.1	5.9	5.7	5.5	10.4	16.1	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	3.0	16.1
28-Feb	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.4	0.4	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
	0.1	0.9	1.6	1.5	1.1	1.1	0.7	0.5	0.6	0.8	1.1	1.8	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	Diurnal Average	
	0.9	18.0	34.4	32.0	19.5	18.1	5.9	5.7	5.5	10.4	16.1	42.0	10.4	3.2	0.1	0.0	0.0	0.0	0.1	3.7	0.4	0.4	0.6	0.7	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Leaf Wetness (LW) - %

Anzac - February 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 0.3	559	83.18	83.18
0.4 - 0.5	30	4.46	87.65
0.6 - 0.7	22	3.27	90.92
0.8 - 1.4	22	3.27	94.20
1.5 - 10	28	4.17	98.36
> 10	9	1.34	99.70

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 20m (WS20) - km/h

Anzac - February 2025

Maximum Speed: 33 km/h on Feb 27 15:00

Maximum Daily Speed Average: 18.3 km/h on Feb 2

Minimum Speed Value: 1 km/h on Feb 21 10:00

Minimum Daily Speed Average: 1.2 km/h on Feb 25

Maximum Diurnal Speed Average: 5.6 km/h at hour 14

Minimum Diurnal Speed Average: 2.2 km/h at hour 3

Monthly Average Velocity: 3.5 km/h 289.6 deg

Percentiles: P_1 = 3 P_{10} = 5 Q_1 = 7 Median = 11 Q_3 = 14 P_{90} = 19 P_{99} = 25

Hours in Service: 672

Hours of Data: 672

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-Feb	E12	E10	ENE10	ENE6	NNE7	N7	WNW12	WNW13	WNW13	WNW15	WNW17	WNW19	WNW17	NW19	NW19	NW20	NW20	NW18	NW16	NW15	NW19	NW20	NW19	NW20	NW12.0	NW20
2-Feb	NW20	NW19	NW18	NW22	NW22	NW22	NW21	NW20	NW18	NNW20	NNW18	NW20	NW19	NW21	NW21	NW19	NW17	NW15	NW17	NW15	NW15	NW14	NW14	NW14	NW18.3	NNW22
3-Feb	NW12	WNW11	WNW10	WNW11	WNW13	WNW11	WNW12	WNW11	WNW12	WNW12	WNW13	WNW13	WNW12	WNW13	WNW13	WNW13	W10	WSW8	WSW7	WSW7	W8	W9	W9	W9	WNW10.5	WNW13
4-Feb	WSW6	W6	SW6	W5	W8	WNW10	W5	W9	WNW10	W13	W17	W19	W15	W13	W13	W13	W9	WSW9	SW10	SW8	WSW9	W13	W13	W13	W10.2	W19
5-Feb	WSW6	WNW11	W16	WNW16	WNW13	WNW13	WNW13	WNW15	W11	WNW13	WNW15	WNW18	WNW20	WNW18	WNW17	WNW17	WNW17	WNW18	WNW17	WNW17	WNW19	WNW20	WNW20	WNW20	WNW15.8	WNW20
6-Feb	WNW20	WNW20	W18	WNW16	WNW17	WNW18	WNW22	WNW20	WNW18	WNW17	WNW17	NNW20	N23	N21	NNW18	N19	N18	NNW14	NNW15	NNW14	NW10	NW12	WNW12	WNW12	NW15.1	N23
7-Feb	WNW11	WNW11	WNW11	WNW11	WNW11	WNW13	WNW16	WNW12	WNW11	WNW12	WNW14	WNW14	WNW12	WNW11	WNW12	W13	W10	WSW8	W6	WNW9	W10	WNW11	WNW13	WNW11	WNW11.3	WNW16
8-Feb	WNW10	W7	W7	WNW8	WNW9	W9	WNW8	WNW8	WNW8	NW9	NW11	WNW12	WNW12	NW9	NNW10	NNW11	NNW10	N9	NNW9	NNW9	NNW9	NNW12	NNW18	NNW20	NW9.0	NNW20
9-Feb	NNW20	NNW16	NNW17	NNW10	NNW9	NW10	NNW13	NNW10	NNW4	NNW5	N6	N8	NNW9	NNW12	NNW15	NNW16	NW13	NW10	NW8	NW10	NW13	NW12	WNW14	WNW14	NNW10.9	NNW20
10-Feb	WNW15	WNW13	WNW14	WNW17	WNW16	WNW19	W19	WNW18	WNW20	WNW19	WNW20	WNW20	WNW17	WNW16	WNW14	WNW15	W13	W12	WNW12	WNW12	NNW12	NNW12	NNE11	N10	WNW14.3	WNW20
11-Feb	N11	N13	N9	NNW7	NW8	WNW9	WNW11	WNW9	WNW9	WNW9	WNW11	NW11	NW13	NW14	NNW12	NW10	NNW9	NNW8	NW5	W4	SW5	S2	S5	SSE7	NW6.9	NW14
12-Feb	S8	S9	SSE10	SSE7	S9	S8	SSE7	SSE9	SSE5	SE5	ESE6	SE8	SE9	ESE9	ESE9	ESE9	E8	ENE9	ENE8	ENE8	ENE7	ENE6	ENE7	ENE6	ESE6.0	SSE10
13-Feb	NE6	NE4	NNE4	NNE4	NNW5	NNW6	NW5	NW5	NW5	W4	WNW4	NW4	NNW7	N10	N9	NNW8	NNW7	NW6	WNW7	WNW8	WNW9	WNW6	WNW6	WNW4	NNW4.9	N10
14-Feb	NNW5	WNW4	WNW5	WNW4	WNW4	WNW4	W5	W6	W5	WNW4	NW3	N3	NW4	NNW5	W5	WNW6	WNW7	WNW6	WNW7	W6	WSW6	WNW6	W8	WNW10	WNW4.9	WNW10
15-Feb	WNW10	WNW13	WNW12	WNW12	WNW13	WNW13	WNW13	WNW13	WNW14	WNW14	WNW15	WNW15	WNW14	NW13	NW14	NW12	NNW10	NNW8	NW8	WNW7	NNW6	NE6	NE5	NE6	WNW9.8	WNW15
16-Feb	SE2	SE3	ESE5	SSE6	SE6	SE6	SSE7	SE6	SSE7	SSE6	SE7	SE11	SE14	SE13	ESE15	SE15	SE13	ESE12	SE13	SE13	SE14	SE13	SE12	SE12	SE9.6	SE15
17-Feb	SE12	SE12	SE12	SE13	SE11	SE13	SE13	SE14	SE13	SE14	SE15	SSE16	SE17	SE17	SE18	SSE18	SSE15	SE11	SE13	SE12	SSE13	SE11	SE12	SSE13	SE13.6	SE18
18-Feb	SSE14	SSE12	SE10	SSE9	SE10	SSE10	SSE7	SE8	SSE8	SSE8	ESE9	E9	ESE11	ESE13	SE14	SSE15	SSE11	SSE12	SE12	SE14	SSE17	SSE19	SSE14	SE13	SE11.0	SSE19
19-Feb	SE12	SE13	SE14	SE13	ESE12	ESE12	SE15	SE16	SE16	SE16	SE19	SE21	SE19	SSE19	SE20	SSE19	SE15	SE17	SE18	SE18	SE16	SE15	SE13	SE13	SE15.7	SE21
20-Feb	SE16	SSE16	SE13	SE11	SE12	SSE13	SSE10	SSE11	SSE11	SSE11	SSE9	SE7	SE5	WNW5	W12	W16	WNW13	W7	WNW7	WNW9	WNW11	WNW13	NW10	N8	S3.4	SSE16
21-Feb	NNW6	S6	SSE6	ESE7	SE5	SE7	ESE6	SSE6	E3	NE1	NNE3	N4	N8	NNW9	N7	NW5	N8	NNW9	NNW6	W4	WNW4	N5	SE1	E3	NNE1.6	NNW9
22-Feb	ESE7	SE6	SE7	SE8	SE12	SE13	SE17	SE17	SE16	SE15	SE19	SSE18	SSE14	SSE11	SE8	ESE7	SSE8	S9	S8	SSW12	SSW14	SSW14	SSW13	SW14	SSE10.4	SE19
23-Feb	SW16	SW10	SSE7	SSE7	SSE8	SW10	W24	W24	W28	W26	W25	W22	NNW23	NW23	NW21	NW23	NNW21	NNW16	NNW16	NNW13	NW10	NNW7	NE4	E2	WNW11.7	W28
24-Feb	ESE4	E3	ENE3	E5	ESE6	ESE7	ESE7	SE7	SSE10	SSE10	SSE9	SSE7	ESE7	ESE9	SE11	SE6	NE5	E5	E6	ESE5	NE5	NNE7	NNW7	NW7	ESE4.3	SE11
25-Feb	NW5	NW7	NW8	NW9	NW9	NW9	WNW11	WNW9	WNW4	NW5	NW7	N3	N5	NNW4	E3	SSE7	SSE6	SSE8	SSE11	SSE8	SE12	SE16	SSE12	WSW6	WSW1.2	SE16
26-Feb	NW10	WNW11	WNW14	WNW18	WNW18	WNW17	WNW15	WNW14	WNW18	WNW17	WNW18	NW18	NNW12	N12	N10	ENE5	ENE6	ENE6	ESE9	SE9	SE13	SE17	SE14	SSE12	WNW5.2	WNW18
27-Feb	SE8	SE8	SE7	SE8	SE9	SE9	E9	E9	SE7	E3	W11	WNW28	NW29	NW31	NW33	NW28	NW25	NNW19	N20	N18	N12	N11	N10	NNW7	NNW7.9	NW33
28-Feb	N6	N6	NNE4	E4	E4	SE4	SE7	SE7	ESE6	SE7	SSE9	SE10	SE13	ESE13	ESE12	ESE9	E10	ESE10	ESE10	SE11	SSE11	SSE12	SSE11	SSE9	SE7.2	ESE13
	WNW2.5	W2.6	W2.2	W2.4	W2.7	W3.7	W4.7	W4.2	W4.6	W4.6	W5.3	WNW5.6	NW5.0	NW5.6	NW5.2	WNW5.3	NW4.7	NW3.1	NW2.4	WNW2.4	W2.7	WNW2.3	WNW2.4	WNW3.0	Diurnal Average	
	WNW20	WNW20	NW18	NW22	NW22	NNW22	W24	W24	W28	W26	W25	WNW28	NW29	NW31	NW33	NW28	NW25	NNW19	N20	N18	WNW19	WNW20	WNW20	NW20	Diurnal Maximum	

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

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 20m (WS20) - km/h

Anzac - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8 km/h on Feb 27 15:00

Minimum Value: 0 km/h on Feb 14 04:00

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

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

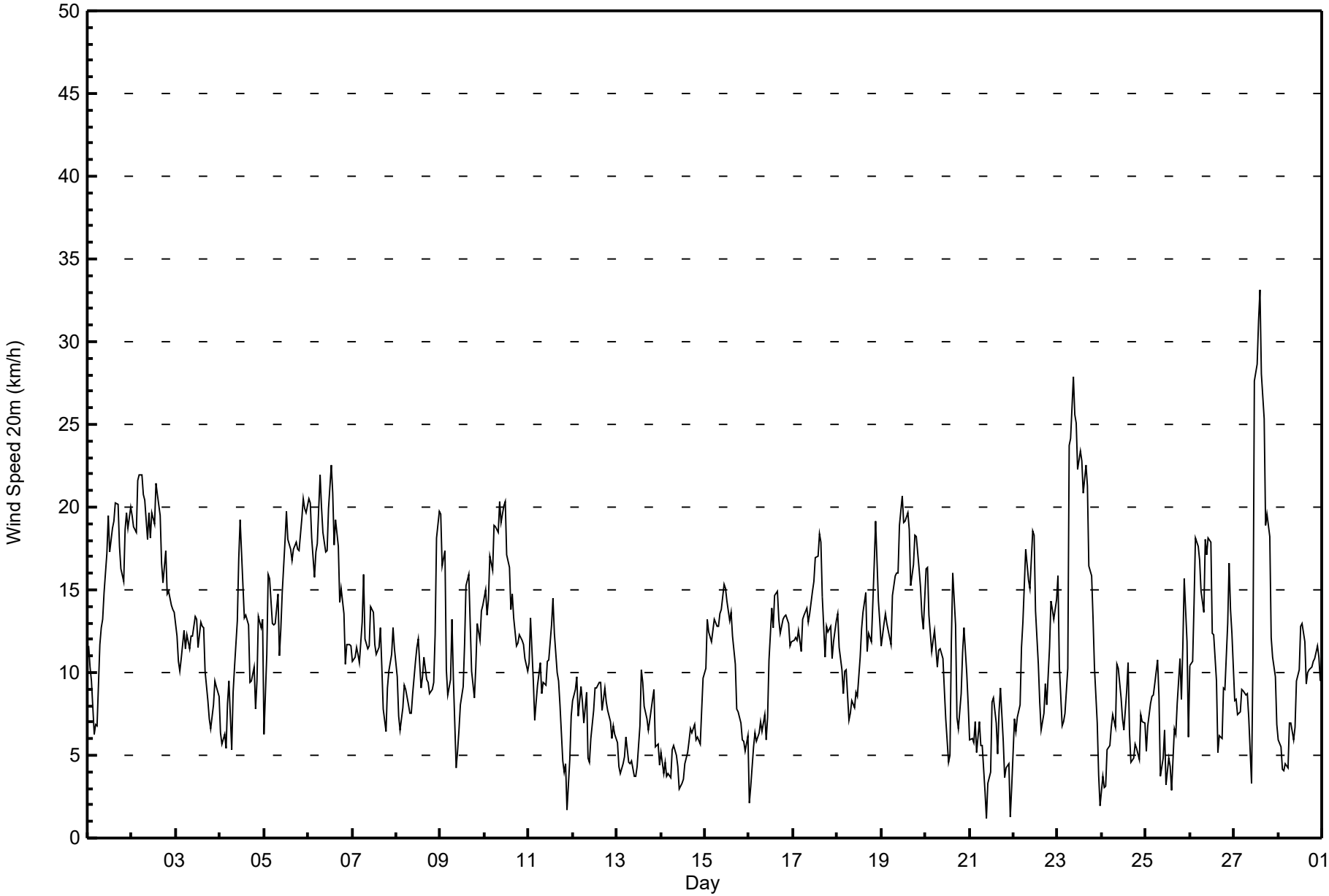
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Feb	3	3	2	1	2	2	2	3	3	3	4	4	4	4	4	5	5	4	4	3	4	5	4	4	5
2-Feb	4	5	4	4	4	4	4	4	4	4	4	4	4	5	5	5	4	3	3	3	3	4	3	3	5
3-Feb	3	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	1	1	1	2	2	2	2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

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 20m (WS20) - km/h

Anzac - February 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	76	11.31	11.31
6 - 11	280	41.67	52.98
12 - 19	266	39.58	92.56
20 - 28	47	6.99	99.55
29 - 38	3	0.45	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672



Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 20m (WS20) - km/h

Anzac - February 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	4	6	2	9	4	7	1	2	0	1	0	8	11	10	6	76
6 - 11	18	3	3	11	7	20	35	41	7	0	4	11	20	50	23	27	280
12 - 19	6	0	0	0	1	7	62	23	0	4	2	1	15	93	30	22	266
20 - 28	3	0	0	0	0	0	2	0	0	0	0	0	6	12	17	7	47
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	32	7	9	13	17	31	106	65	9	4	7	12	49	166	83	62	672

Total Number of Valid Hours: 672

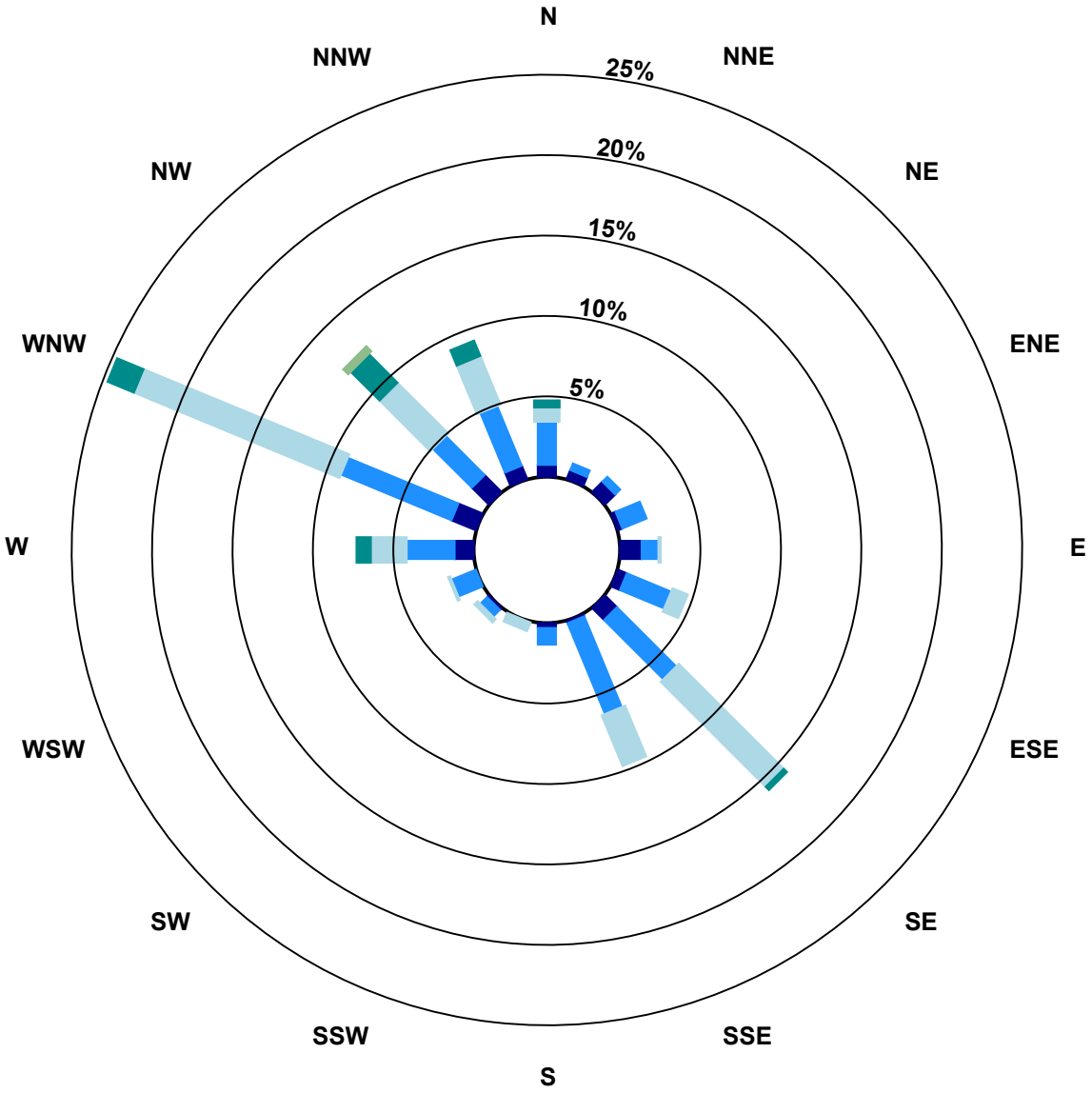
Total Number of Hours: 672

Wood Buffalo Environmental Association

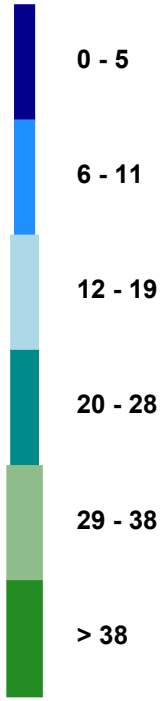
Wind Rose Feb 2025

Wind Speed 20m (WS20) - km/h

Anzac



Classes (km/h)



Total Number of Valid Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 20m (WD20) - deg

Anzac - February 2025

Direction of Maximum Speed: 317 deg on Feb 27 15:00
Direction of Maximum Daily Speed Average: 320.8 deg on Feb 2

Direction of Minimum Speed: 52 deg on Feb 21 10:00

Direction of Minimum Daily Speed Average: 1.2 deg on Feb 25

Monthly Average Direction: 289.6 deg

Hours in Service:	672
Hours of Data:	672
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-Feb	93	88	78	61	28	3	288	297	299	294	294	297	300	305	308	306	317	313	313	306	320	324	325	326	316.3
2-Feb	324	323	321	323	324	326	320	321	326	330	328	324	319	324	318	315	311	313	322	320	318	312	309	313	320.8
3-Feb	311	294	296	293	292	288	289	298	295	293	287	289	296	288	282	284	273	251	251	250	265	276	274	280	285.5
4-Feb	254	272	236	262	277	287	265	261	285	278	281	275	277	279	281	279	265	237	230	236	245	259	264	273	267.6
5-Feb	254	283	272	284	285	283	288	285	277	282	286	289	288	284	282	292	287	283	283	285	284	286	284	285	284.0
6-Feb	286	283	279	283	282	288	287	289	288	291	292	338	360	349	336	350	352	341	340	330	305	306	298	292	310.2
7-Feb	289	287	286	283	286	292	285	284	294	283	289	282	285	288	285	278	273	252	272	295	279	286	284	286	284.1
8-Feb	289	276	271	283	285	281	286	285	288	307	304	296	295	312	336	341	346	353	348	348	340	334	337	342	315.6
9-Feb	343	338	339	345	335	313	329	346	327	342	6	5	343	333	332	327	321	314	313	305	304	306	301	299	327.4
10-Feb	296	295	289	287	288	283	281	284	282	285	283	287	291	289	283	286	279	280	283	293	336	346	16	351	292.7
11-Feb	349	355	360	334	314	282	283	288	292	301	303	308	316	317	327	306	331	348	326	275	219	176	170	161	313.1
12-Feb	170	173	166	161	171	175	168	168	147	135	109	126	136	117	104	102	85	75	78	77	75	72	64	66	123.6
13-Feb	54	37	15	21	335	346	311	305	318	280	285	316	347	356	350	339	342	326	300	288	286	288	286	296	326.9
14-Feb	340	291	284	299	288	286	272	281	277	287	325	353	311	337	277	294	288	303	300	277	250	286	272	286	291.0
15-Feb	283	288	287	288	286	282	290	292	292	290	291	289	296	313	319	304	328	327	318	303	329	52	40	50	301.4
16-Feb	129	146	123	149	139	144	149	146	158	147	136	125	136	128	123	135	130	123	130	124	130	133	127	133	133.0
17-Feb	145	144	143	141	128	135	138	138	137	138	140	147	138	144	140	150	154	139	135	143	152	144	146	150	142.2
18-Feb	155	154	125	157	146	164	164	137	152	155	122	92	108	121	138	162	153	167	146	142	151	157	152	140	145.5
19-Feb	141	135	134	126	123	120	125	136	138	135	140	144	146	148	142	150	143	141	146	140	142	142	142	145	139.4
20-Feb	146	148	144	139	142	152	148	147	158	155	153	134	141	288	281	281	285	275	298	292	288	293	325	353	190.8
21-Feb	337	184	148	123	132	143	122	159	92	52	19	5	357	348	353	319	349	344	336	277	295	357	124	81	15.1
22-Feb	108	144	137	132	126	138	138	135	140	132	144	150	147	151	130	121	152	176	177	193	205	203	209	218	155.3
23-Feb	225	227	168	168	162	227	272	274	265	271	271	281	328	323	320	326	337	330	329	331	318	338	37	81	292.7
24-Feb	111	99	65	85	118	114	110	130	156	164	165	159	117	114	131	146	55	87	86	102	47	18	340	324	113.4
25-Feb	309	317	317	317	319	306	294	298	282	326	326	357	357	343	81	162	155	158	159	149	143	145	150	250	254.8
26-Feb	305	300	292	293	288	291	285	298	286	290	296	312	342	358	5	61	63	74	111	125	145	142	139	149	300.3
27-Feb	136	127	134	137	132	137	100	94	135	101	273	298	306	318	317	305	316	339	352	351	7	358	1	345	330.1
28-Feb	352	4	33	89	101	133	145	127	121	127	149	146	125	117	113	105	101	114	119	137	149	155	158	157	125.6
	289.7	278.8	278.0	280.6	277.4	268.0	270.5	271.0	264.1	273.3	276.5	290.6	311.9	318.8	315.5	301.0	314.6	310.4	308.2	288.0	272.0	282.1	286.7	289.8	
	Diurnal Average																								

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

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 20m (WD20) - deg

Anzac - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 90 deg on Feb 21 10:00

Minimum Value: 4 deg on Feb 14 21:00

Percentiles: P_1 = 8 P_{10} = 11 Q_1 = 12 Median = 14 Q_3 = 17 P_{90} = 22 P_{99} = 55

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

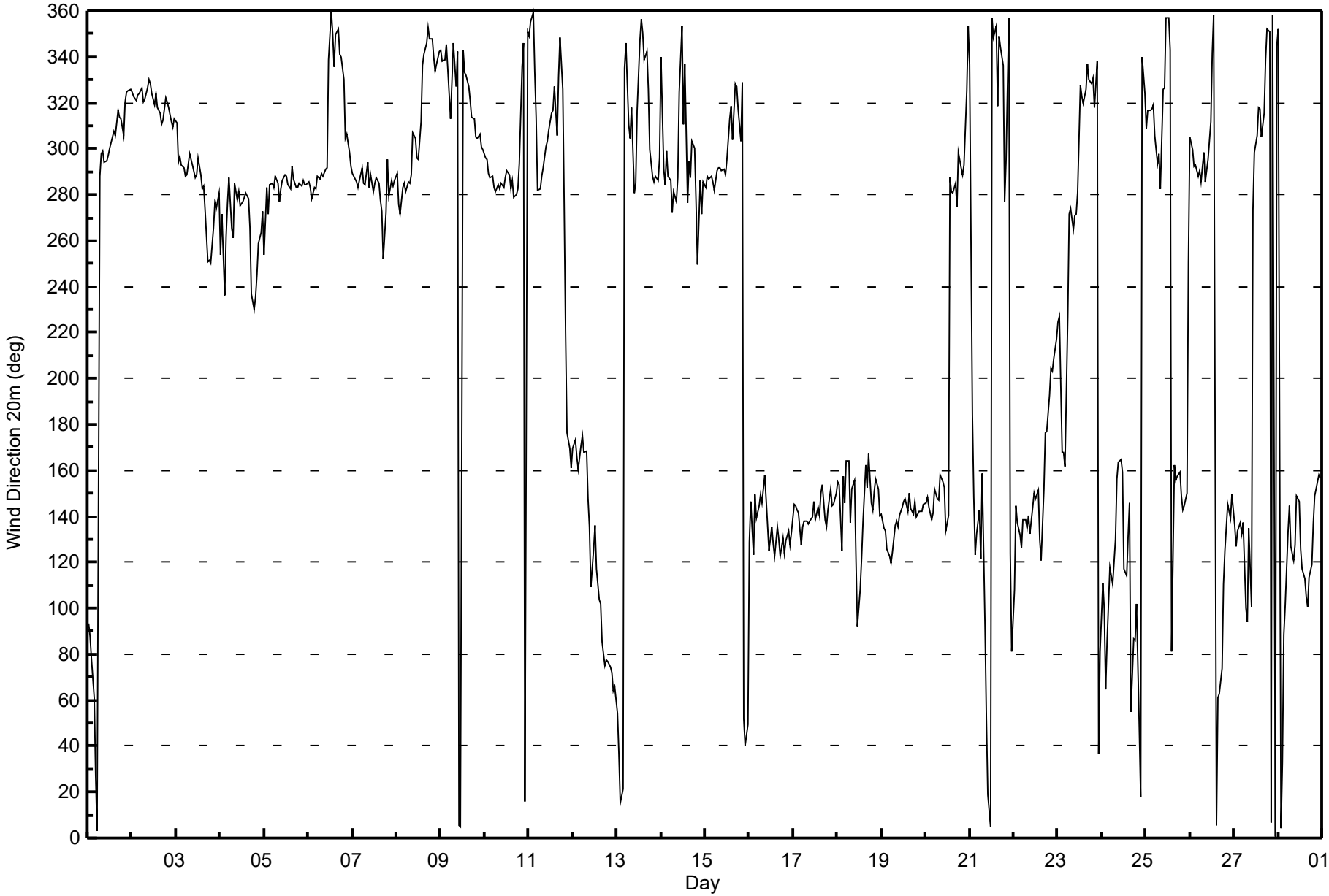
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Feb	14	15	14	19	13	31	13	13	13	14	13	13	15	13	14	14	13	12	13	12	13	13	12	12	31
2-Feb	12	12	12	12	11	11	11	12	13	12	13	13	13	12	12	13	13	13	12	11	12	13	13	12	13
3-Feb	13	11	11	11	11	11	11	12	12	13	13	14	15	14	14	14	15	12	9	17	15	11	13	12	17
4-Feb	17	8	19	24	22	13	18	9	11	13	15	13	14	16	15	16	16	13	9	11	14	12	15	17	24
5-Feb	26	20	19	15	16	14	14	14	15	18	15	15	15	15	14	14	15	14	15	14	13	13	13	13	26
6-Feb	13	13	15	14	16	16	15	14	15	14	15	27	16	18	12	14	13	12	10	11	13	13	14	13	27
7-Feb	13	15	14	14	13	18	14	15	15	16	15	16	17	17	16	17	16	10	22	12	12	14	12	11	22
8-Feb	11	11	16	11	12	12	10	11	11	13	15	15	14	35	19	17	11	10	11	10	16	14	14	13	35
9-Feb	13	13	12	11	11	12	15	12	16	18	19	23	19	18	14	13	13	10	10	9	11	12	13	13	23
10-Feb	12	12	12	12	13	13	14	14	13	14	14	15	15	15	16	15	14	14	16	16	17	19	13	16	19
11-Feb	9	7	10	22	20	9	11	12	12	14	13	17	16	14	17	17	11	12	20	25	10	39	14	8	39
12-Feb	7	9	7	13	7	9	13	14	21	34	27	24	19	18	17	18	17	14	12	16	18	20	13	16	34
13-Feb	10	12	16	21	20	12	21	14	26	17	20	25	28	15	17	20	16	14	12	11	9	14	13	10	28
14-Feb	18	21	8	14	12	11	8	10	10	18	30	31	45	45	29	30	14	13	12	18	4	12	17	10	45
15-Feb	9	9	9	10	12	11	11	11	12	13	13	14	16	17	15	16	19	10	12	13	35	15	13	13	35
16-Feb	40	17	10	12	10	12	10	10	9	19	15	15	16	19	16	15	15	12	13	12	11	14	13	13	40
17-Feb	13	13	14	13	15	17	15	14	15	14	15	14	15	15	15	15	14	14	15	13	12	20	13	10	20
18-Feb	9	12	19	10	14	13	14	10	11	15	19	20	18	18	16	16	14	12	13	12	13	10	11	13	20
19-Feb	15	14	14	14	13	12	14	14	14	16	15	14	14	15	15	13	13	12	12	13	13	13	14	12	16
20-Feb	12	11	12	15	13	11	13	13	12	12	17	19	31	73	21	17	16	16	12	13	14	13	34	12	73
21-Feb	23	26	17	12	14	24	20	9	55	90	42	36	14	19	20	25	15	11	17	24	23	19	82	53	90
22-Feb	20	19	20	16	12	12	13	14	14	14	12	12	14	16	18	32	15	8	5	13	12	13	12	16	32
23-Feb	14	15	20	12	11	32	16	17	16	18	16	17	20	13	13	12	13	13	12	12	14	27	55	55	55
24-Feb	26	34	18	14	17	15	15	25	11	13	14	14	24	13	18	38	31	15	12	14	21	12	21	20	38
25-Feb	24	18	16	17	20	13	14	17	20	23	17	34	25	41	61	31	26	10	12	14	13	12	13	54	61
26-Feb	15	16	15	15	15	15	18	17	15	15	17	16	18	15	14	31	16	7	14	14	11	12	13	12	31
27-Feb	15	16	16	19	27	22	25	24	35	67	38	17	15	15	14	15	15	14	14	14	15	16	15	15	67
28-Feb	17	20	22	27	31	21	16	16	18	18	20	18	16	16	16	19	14	17	13	15	12	10	8	8	31
	40	34	22	27	31	32	25	25	55	90	42	36	45	73	61	38	31	17	22	25	35	39	82	55	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 20m (WD20) - deg

Anzac - February 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS17
WAPASU
FEBRUARY 2025

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

March 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - WAPASU (AMS17)
FEBRUARY 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	640	32	32	100	13.5	0	6.1	0
H2S (ppb) Average	639	33	33	100	1.6	0	0.3	0
THC (ppm) Average	632	32	40	98.81	2.9	-	2.4	-
O3 (ppb) Average	640	32	32	100	41.3	0	37.6	-
NO2 (ppb) Average	639	33	33	100	35.9	0	12.7	-
NO (ppb) Average	639	33	33	100	24	-	4.3	-
NOX (ppb) Average	639	33	33	100	50.5	-	15.6	-
PM2.5 (ug/m3) Average	671	1	1	100	19.5	0	6.8	0
Temperature 2 m (C) Average	672	0	0	100	2.2	-	-4.1	-
Relative Humidity (%) Average	672	0	0	100	100	-	93	-
Wind Speed 10 m (km/h) Average	570	0	102	84.82	23	-	18	-
Wind Direction 10 m (deg) Average	570	0	102	84.82	-	-	-	-
Precipitation (mm) Total	672	0	0	100	1.4	-	7.6	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - WAPASU (AMS17)
FEBRUARY 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	640	1.05	2.2	-	0	0	0	0.1	0.6	4.1	13.5
H2S (ppb) Average	639	0.1	0.1	-	0	0	0	0	0.1	0.3	1.6
THC (ppm) Average	632	2.33	0.1	-	2.2	2.2	2.3	2.3	2.4	2.4	2.9
O3 (ppb) Average	640	28.27	8	-	2.4	18.4	24.5	30	34.1	36.3	41.3
NO2 (ppb) Average	639	6.11	6.3	-	0.2	0.7	1.5	3.6	9	14.2	35.9
NO (ppb) Average	639	0.94	2.3	-	0	0	0	0.1	0.6	2.8	24
NOX (ppb) Average	639	7.04	7.9	-	0.2	0.8	1.6	4.1	10.1	15.5	50.5
PM2.5 (ug/m3) Average	671	3.84	2.2	-	0.9	1.9	2.4	3.3	4.6	6.2	19.5
Temperature 2 m (C) Average	672	-19.09	9.3	-	-39.3	-30	-25.9	-20.6	-11.8	-6.3	2.2
Relative Humidity (%) Average	672	75.68	12.1	-	33.9	61.7	69.9	76.5	84.1	90.2	100
Wind Speed 10 m (km/h) Average	570	8.7	5	-	0	4	5	8	12	15	23
Wind Direction 10 m (deg) Average	570	-	-	-	-	-	-	-	-	-	-
Precipitation (mm) Total	672	-	-	25.37	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - WAPASU (AMS17)
FEBRUARY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
THC	01 Feb 2025 23:00	01 Feb 2025 23:00	1	Unstable Operation - excessive baseline drift
THC	02 Feb 2025 01:00	02 Feb 2025 01:00	1	Unstable Operation - excessive baseline drift
THC	02 Feb 2025 04:00	02 Feb 2025 05:00	2	Unstable Operation - excessive baseline drift
THC	02 Feb 2025 23:00	02 Feb 2025 23:00	1	Unstable Operation - excessive baseline drift
THC	03 Feb 2025 02:00	03 Feb 2025 02:00	1	Unstable Operation - excessive baseline drift
THC	03 Feb 2025 05:00	03 Feb 2025 06:00	2	Unstable Operation - excessive baseline drift
Wind Speed, Wind Direction	23 Feb 2025 10:00	26 Feb 2025 14:00	77	Flat line in sensor output signal - Sensor frozen
Wind Speed, Wind Direction	26 Feb 2025 15:00	26 Feb 2025 16:00	2	Maintenance - de-ice sensor
Wind Speed, Wind Direction	26 Feb 2025 23:00	27 Feb 2025 05:00	7	Flat line in sensor output signal - Sensor frozen
Wind Speed, Wind Direction	27 Feb 2025 21:00	28 Feb 2025 12:00	16	Flat line in sensor output signal - Sensor frozen

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Wapasu - February 2025

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

Maximum Value: 13.5 ppb on Feb 4 13:00

Maximum Daily Average: 6.1 ppb on Feb 4

Minimum Value: 0.0 ppb on Feb 2 05:00

Minimum Daily Average: 0.0 ppb on Feb 13

Maximum Diurnal Average: 1.6 ppb at hour 13

Minimum Diurnal Average: 0.5 ppb at hour 24

Monthly Average: 1.05 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.6 P_{90} = 4.1 P_{99} = 9.8

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.0	Z	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.2
2-Feb	0.1	0.1	Z	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
3-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.2	0.4	2.3	C	C	C	C	6.5	2.1	1.7	1.5	1.9	1.5	1.3	0.7	1.1	6.5
4-Feb	0.6	1.4	3.2	5.7	Z	7.8	8.0	8.8	6.5	6.2	7.7	8.7	13.5	12.3	7.3	4.4	2.2	0.5	0.2	2.6	6.6	10.5	9.5	7.0	6.1	13.5
5-Feb	7.8	5.5	3.9	4.1	3.2	Z	4.8	6.0	6.9	8.7	8.8	8.0	6.2	4.3	4.2	6.2	5.0	3.3	4.5	4.3	3.8	3.7	2.0	1.3	5.1	8.8
6-Feb	1.0	Z	1.9	1.0	0.5	0.6	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.9
7-Feb	0.0	Z	0.0	0.0	0.4	0.4	0.1	0.0	0.2	0.2	0.0	0.3	0.3	0.1	1.1	2.7	5.0	3.4	2.5	0.7	0.4	0.2	0.1	0.3	0.8	5.0
8-Feb	0.2	0.4	Z	1.2	1.1	2.1	1.5	4.4	9.2	8.5	6.6	4.4	5.8	3.8	2.7	1.4	0.4	0.6	0.9	0.0	0.0	0.0	0.0	0.0	2.4	9.2
9-Feb	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-Feb	0.0	0.1	1.7	5.2	Z	10.4	10.1	12.4	7.0	7.7	8.2	7.6	8.9	8.0	7.8	7.8	5.7	3.8	2.9	1.8	0.3	0.5	0.2	0.2	5.1	12.4
11-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.0	0.2
12-Feb	Z	0.3	0.4	0.8	1.1	0.8	0.5	0.8	0.7	0.6	0.6	1.2	1.7	2.3	0.8	0.6	0.8	0.4	0.6	0.5	0.5	0.3	0.3	0.2	0.7	2.3
13-Feb	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
14-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1
15-Feb	0.1	0.1	0.3	Z	0.5	0.3	0.2	0.4	0.6	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6
16-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.7	0.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8
17-Feb	0.1	0.2	0.2	0.4	0.4	Z	0.5	0.5	0.7	0.6	0.5	0.4	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.3	0.7
18-Feb	Z	0.3	0.3	0.4	0.5	0.5	0.6	0.6	0.5	1.1	1.1	0.5	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.2	0.3	0.2	0.2	0.4	0.4	1.1
19-Feb	0.5	Z	0.4	0.4	0.3	0.4	0.5	0.3	0.4	0.5	0.2	0.4	0.3	0.3	0.3	0.4	0.4	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.3	0.5
20-Feb	0.2	0.2	Z	0.3	0.4	0.5	0.5	0.6	0.6	0.8	0.7	0.7	1.1	3.6	4.2	5.7	9.0	6.3	3.3	1.3	0.5	0.4	0.5	0.7	1.8	9.0
21-Feb	0.6	0.5	0.6	Z	0.3	0.3	0.4	0.2	0.4	1.4	1.1	0.5	2.5	0.9	0.7	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	2.5
22-Feb	0.2	0.1	0.0	0.0	Z	0.1	0.1	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.2	0.2	0.4	0.2	0.1	0.0	0.0	0.0	0.1	0.6	0.2	0.6
23-Feb	0.3	2.1	1.7	0.0	0.4	Z	0.2	0.6	0.9	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.3	2.1
24-Feb	Z	0.1	0.1	0.1	0.0	0.0	0.1	0.0	1.5	6.1	4.0	0.9	0.3	0.2	0.1	0.0	0.3	0.2	3.7	4.1	4.4	5.1	1.2	1.5	1.5	6.1
25-Feb	1.9	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	0.1	1.9
26-Feb	0.2	4.5	Z	10.8	5.4	4.5	3.3	2.2	0.4	0.0	0.0	0.2	0.1	0.2	0.2	0.2	0.1	0.3	1.3	0.2	0.2	0.2	0.2	0.2	1.5	10.8
27-Feb	0.3	0.5	0.5	Z	0.3	0.2	0.1	0.2	0.1	0.1	3.5	4.3	1.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	4.3
28-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
	0.6	0.7	0.7	1.3	0.6	1.2	1.1	1.4	1.3	1.5	1.6	1.5	1.6	1.4	1.1	1.2	1.3	0.8	0.8	0.6	0.7	0.8	0.6	0.5	Diurnal Average	
	7.8	5.5	3.9	10.8	5.4	10.4	10.1	12.4	9.2	8.7	8.8	8.7	13.5	12.3	7.8	7.8	9.0	6.3	4.5	4.3	6.6	10.5	9.5	7.0	Diurnal Maximum	

Z - zerospan C - Calibration

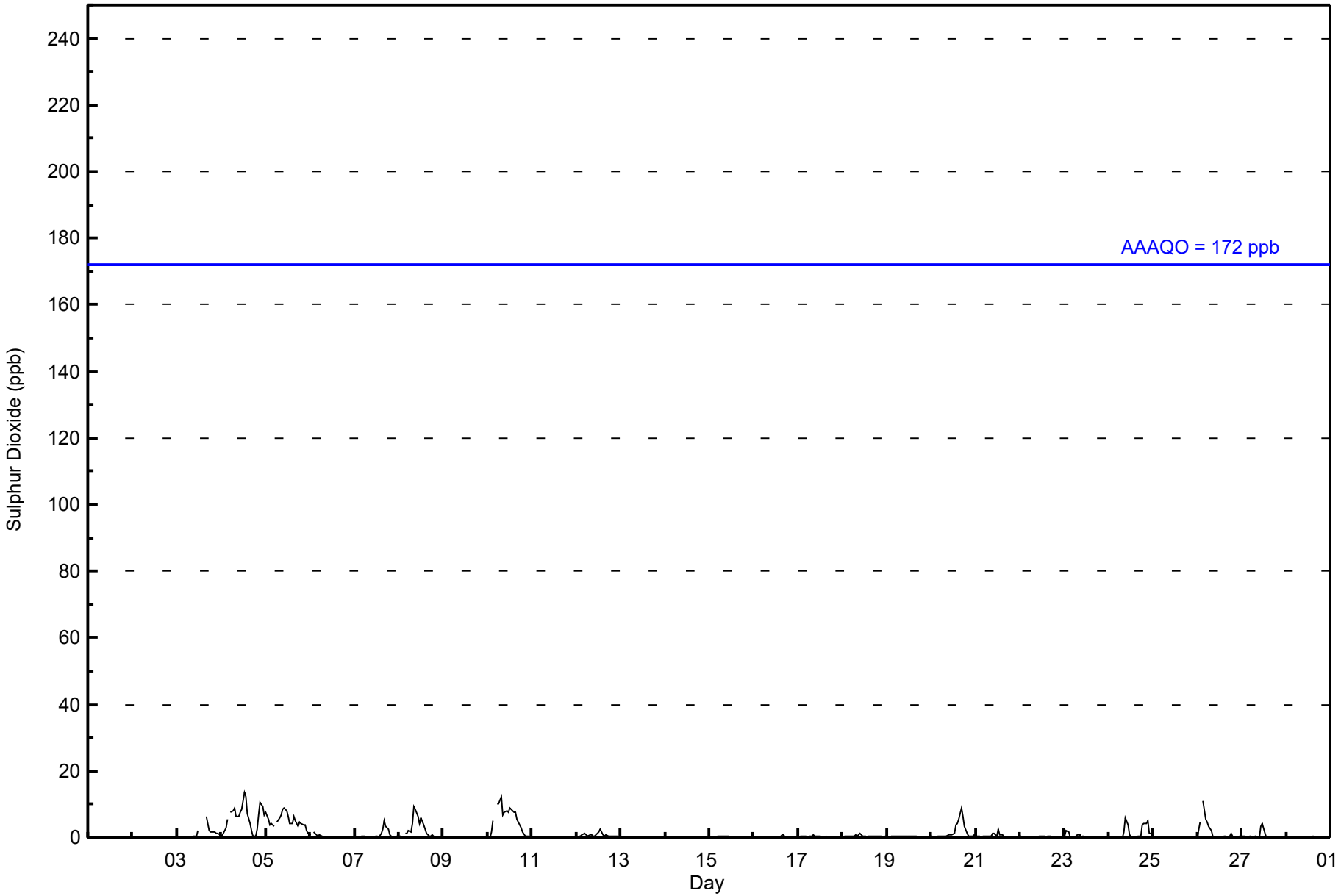
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Wapasu - February 2025



Sulphur Dioxide (SO_2) - ppb
Wapasu - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	636	99.38	99.38
11 - 20	4	0.63	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: 640

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Wapasu - February 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	86	20	29	19	14	16	30	125	55	66	26	8	1	2	4	39	540
11 - 20	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	3
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	86	20	29	19	14	16	30	125	56	67	27	8	1	2	4	39	543

Total Number of Valid Hours: 543

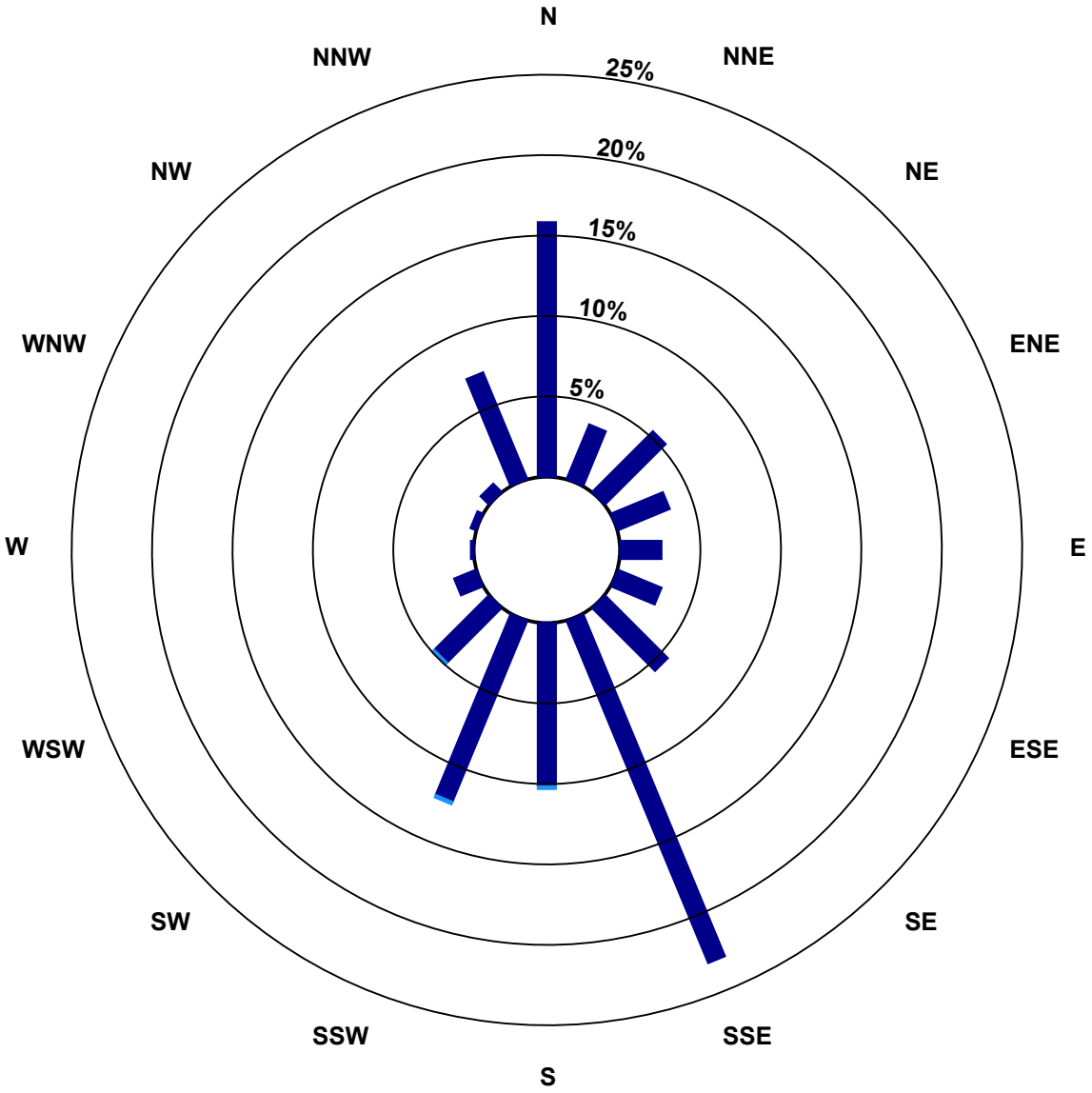
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Sulphur Dioxide (SO_2) - ppb

Wapasu



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

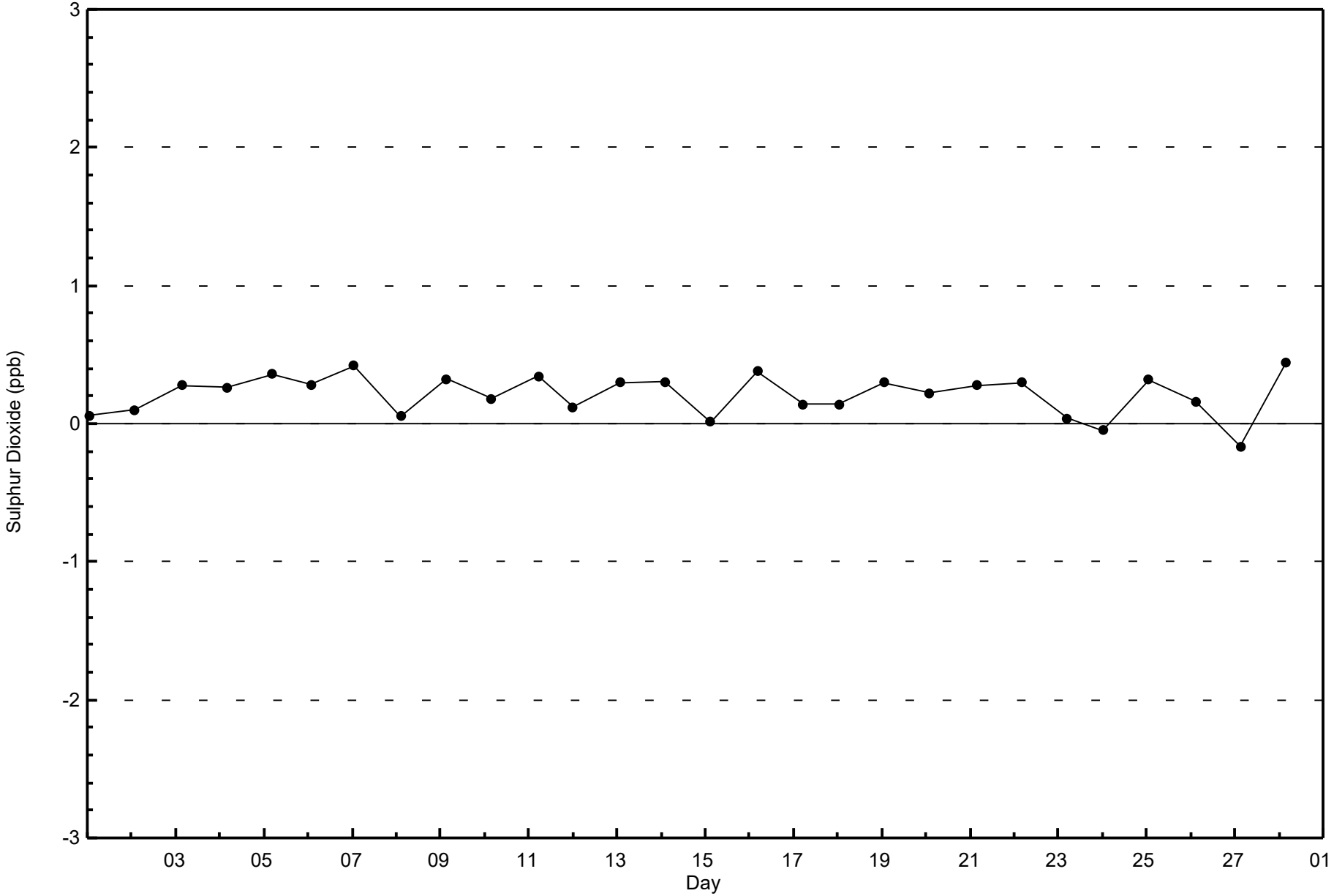
Total Number of Valid Hours: 543

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Wapasu - February 2025

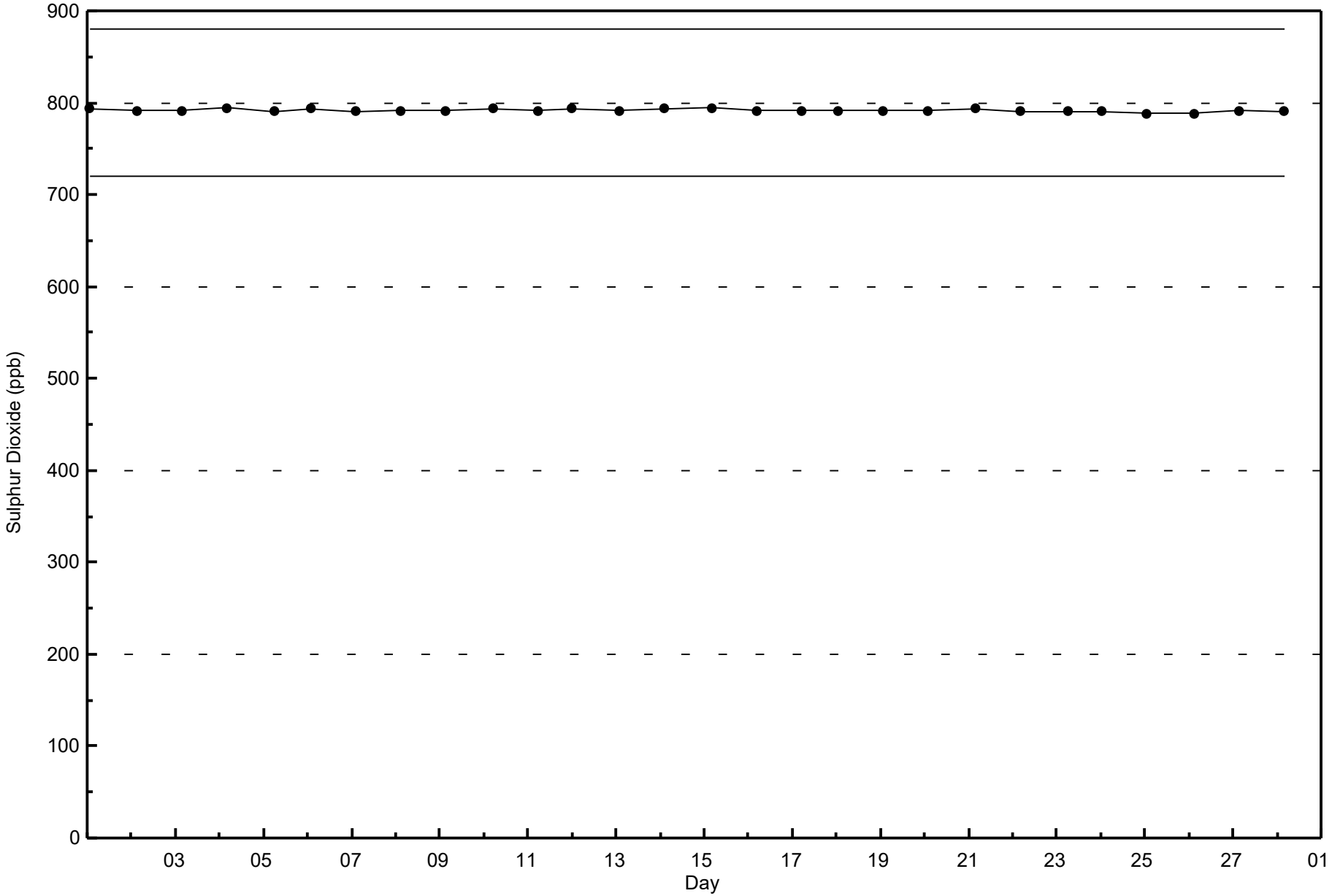


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Wapasu - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Wapasu - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.6 ppb on Feb 24 08:00 Maximum Daily Average: 0.3 ppb on Feb 26

Minimum Value: 0.0 ppb on Feb 1 01:00 Minimum Daily Average: 0.0 ppb on Feb 2
Maximum Diurnal Average: 0.2 ppb at hour 8 Minimum Diurnal Average: 0.0 ppb at hour 15
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} = 0.3 P_{99} = 0.6

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.0	0.0	Z	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
2-Feb	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
3-Feb	0.0	0.0	0.1	0.1	Z	0.4	0.3	0.2	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.4
4-Feb	0.0	0.1	0.1	0.1	0.1	Z	0.3	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.2	0.2	0.1	0.0	0.1	0.3
5-Feb	Z	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.3	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.3	0.3	0.4	0.1	0.4
6-Feb	0.3	0.3	Z	0.5	0.4	0.3	0.3	0.3	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.0	0.1	0.4	0.5	0.1	0.0	0.0	0.0	0.2	0.5
7-Feb	0.0	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2
8-Feb	0.1	0.2	0.1	Z	0.3	0.2	0.2	0.4	0.5	0.3	0.2	0.2	0.1	0.0	0.1	0.1	0.0	0.4	0.8	0.2	0.1	0.2	0.0	0.1	0.2	0.8
9-Feb	0.1	0.1	0.1	0.1	Z	0.3	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.2	0.3	0.3	0.2	0.3	0.4	0.1	0.4
10-Feb	0.2	0.1	0.1	0.1	0.1	Z	0.3	0.2	0.2	0.3	0.2	0.1	0.3	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
11-Feb	Z	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.6	0.4	0.1	0.0	0.1	0.6
12-Feb	0.1	Z	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
13-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1
14-Feb	0.1	0.1	0.0	Z	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.3	0.4	0.4	0.4	0.4	0.2	0.1	0.1	0.4
15-Feb	0.0	0.0	0.1	0.3	Z	0.6	0.4	0.4	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.6
16-Feb	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
17-Feb	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	Z	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	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2
19-Feb	0.0	0.0	Z	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
20-Feb	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	0.2	0.2	0.2	0.4	0.5	0.4	0.5	0.4	0.1	0.5
21-Feb	0.2	0.3	0.4	0.2	Z	0.2	0.1	0.1	0.3	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.4
22-Feb	0.2	0.1	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2
23-Feb	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.1	0.2	0.0	0.2	0.1	0.4
24-Feb	0.1	Z	0.2	0.0	0.0	0.1	0.1	1.6	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.4	0.5	0.4	0.6	0.5	0.3	0.3	1.6
25-Feb	0.2	0.2	Z	0.2	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2
26-Feb	0.0	0.6	0.7	Z	0.7	0.6	0.5	0.6	0.0	0.0	0.0	C	C	C	C	C	0.4	0.2	0.5	0.0	0.0	0.1	0.1	0.0	0.3	0.7
27-Feb	0.1	0.0	0.1	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.1	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
28-Feb	0.1	0.0	0.0	0.0	0.0	Z	0.2	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
	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	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	Diurnal Average	
	0.3	0.6	0.7	0.5	0.7	0.6	0.5	1.6	0.5	0.4	0.3	0.4	0.3	0.2	0.2	0.2	0.4	0.4	0.8	0.5	0.6	0.6	0.5	0.4	Diurnal Maximum	

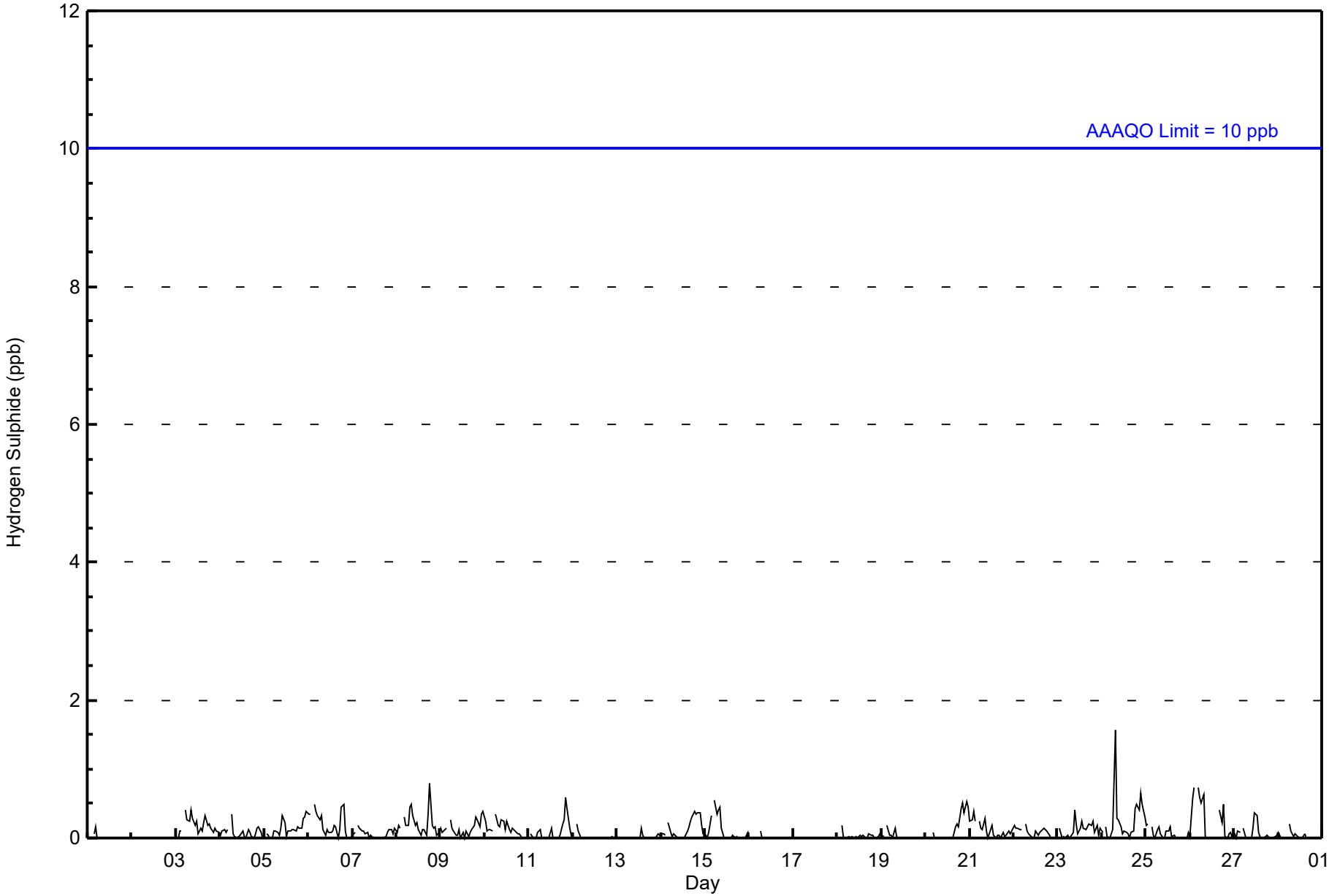
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Wapasu - February 2025



Hydrogen Sulphide (H_2S) - ppb

Wapasu - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	639	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: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Wapasu - February 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	85	21	28	18	15	17	28	127	55	67	31	8	1	2	4	40	547
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	85	21	28	18	15	17	28	127	55	67	31	8	1	2	4	40	547

Total Number of Valid Hours: 547

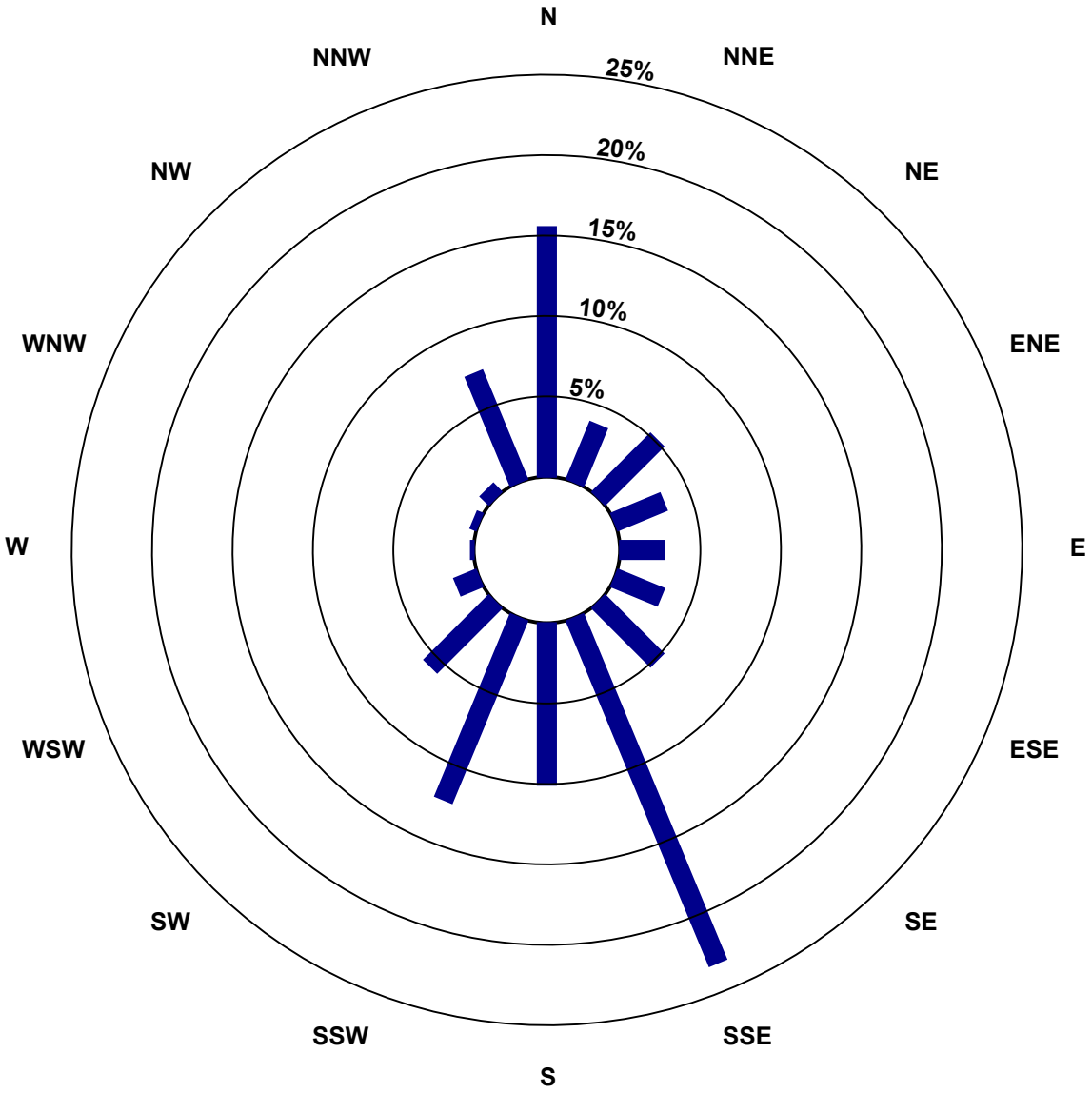
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Hydrogen Sulphide (H_2S) - ppb

Wapasu



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

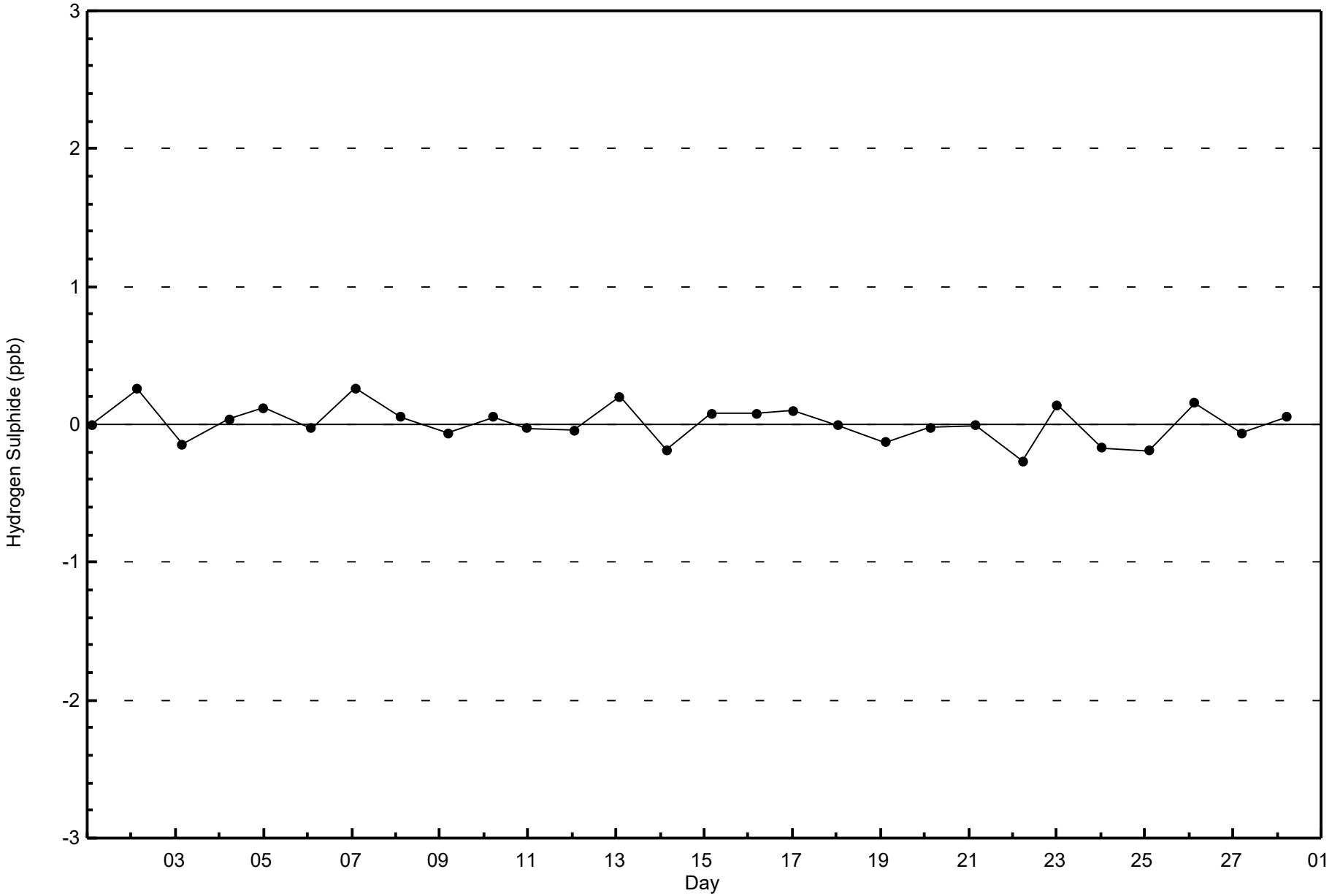
Total Number of Valid Hours: 547

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Wapasu - February 2025

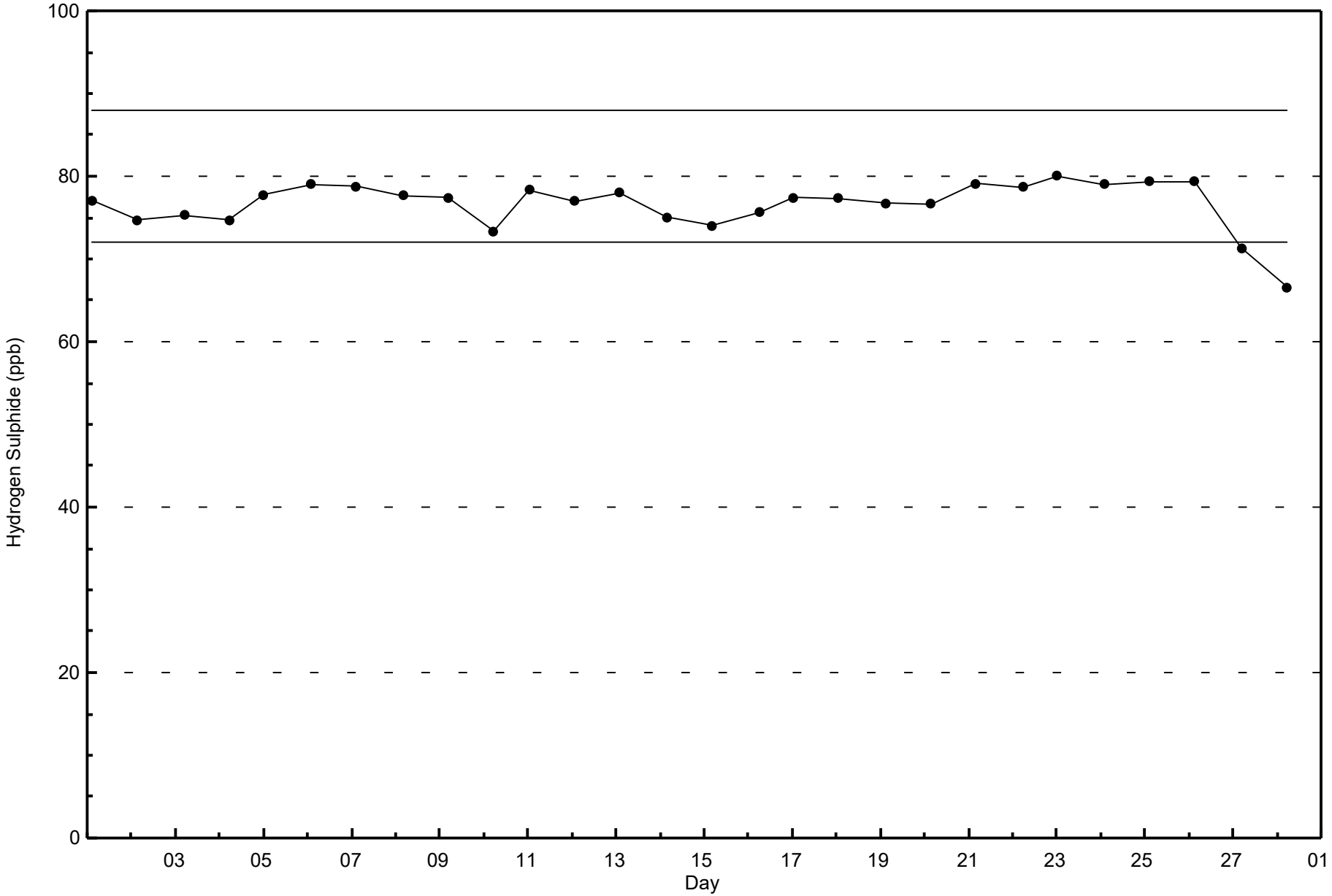


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Wapasu - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Wapasu - February 2025

Maximum Value: 2.9 ppm on Feb 24 08:00

Maximum Daily Average: 2.4 ppm on Feb 15

Minimum Value: 2.2 ppm on Feb 14 08:00

Minimum Daily Average: 2.2 ppm on Feb 2

Maximum Diurnal Average: 2.4 ppm at hour 8

Minimum Diurnal Average: 2.3 ppm at hour 16

Monthly Average: 2.33 ppm

Percentiles: P_1 = 2.2 P_{10} = 2.2 Q_1 = 2.3 Median = 2.3 Q_3 = 2.4 P_{90} = 2.4 P_{99} = 2.7

Hours in Service:	672
Hours of Data:	632
Hours of Missing Data:	40
Hours of Calibration:	32
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-Feb	2.2	Z	2.2	2.2	2.3	2.3	2.2	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	2.2	2.2	UO	2.2	2.3	2.3
2-Feb	UO	2.2	Z	UO	UO	2.2	2.2	2.2	2.2	2.2	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	2.2	2.2	2.2
3-Feb	2.3	UO	2.3	Z	UO	UO	2.3	2.4	2.4	2.4	2.4	2.4	C	C	C	C	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	--	2.4
4-Feb	2.4	2.5	2.5	2.5	Z	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.3	2.5
5-Feb	2.3	2.3	2.3	2.3	2.3	Z	2.3	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	2.5	2.5	2.4	2.4	2.4	2.5
6-Feb	2.5	Z	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	2.3	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.5
7-Feb	2.4	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	2.4	2.4	2.4	2.3	2.4	2.4	2.4
8-Feb	2.4	2.5	Z	2.4	2.4	2.4	2.4	2.4	2.5	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.4	2.6	2.3	2.3	2.3	2.2	2.2	2.4	2.6
9-Feb	2.3	2.2	2.3	Z	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
10-Feb	2.3	2.2	2.4	2.4	Z	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.4
11-Feb	2.2	2.2	2.3	2.2	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.2	2.3	2.3	2.4
12-Feb	Z	2.3	2.3	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4
13-Feb	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.3	2.4	2.3	2.4	2.3	2.3	2.3	2.4
14-Feb	2.3	2.3	Z	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.4	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.4	2.4	2.5
15-Feb	2.4	2.4	2.4	Z	2.6	2.6	2.7	2.8	2.7	2.6	2.5	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	2.4	2.8
16-Feb	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	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.3
17-Feb	2.2	2.2	2.2	2.2	2.3	Z	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	2.3
18-Feb	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
19-Feb	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	2.2	2.3	2.3	2.3
20-Feb	2.2	2.3	Z	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.4	2.4	2.5	2.5	2.5	2.5	2.6	2.4	2.6
21-Feb	2.5	2.4	2.5	Z	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	2.4	2.3	2.3	2.4	2.4	2.3	2.3	2.4	2.5
22-Feb	2.3	2.4	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	2.4
23-Feb	2.3	2.3	2.4	2.3	2.3	Z	2.3	2.3	2.4	2.7	2.5	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.3	2.3	2.3	2.4	2.7
24-Feb	Z	2.3	2.2	2.3	2.3	2.3	2.3	2.9	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.6	2.6	2.6	2.7	2.7	2.4	2.4	2.9
25-Feb	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	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.3	2.4
26-Feb	2.3	2.5	Z	2.7	2.7	2.8	2.8	2.9	2.5	2.3	2.3	2.2	2.2	2.2	2.3	2.2	2.3	2.3	2.4	2.4	2.4	2.4	2.3	2.3	2.4	2.9
27-Feb	2.3	2.3	2.3	Z	2.3	2.2	2.3	2.2	2.2	2.2	2.3	2.6	2.7	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.7
28-Feb	2.3	2.3	2.2	2.3	Z	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.3
	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	Diurnal Average	
	2.5	2.5	2.5	2.7	2.7	2.8	2.8	2.9	2.7	2.7	2.5	2.6	2.7	2.4	2.4	2.5	2.5	2.5	2.6	2.6	2.6	2.7	2.7	2.6	Diurnal Maximum	

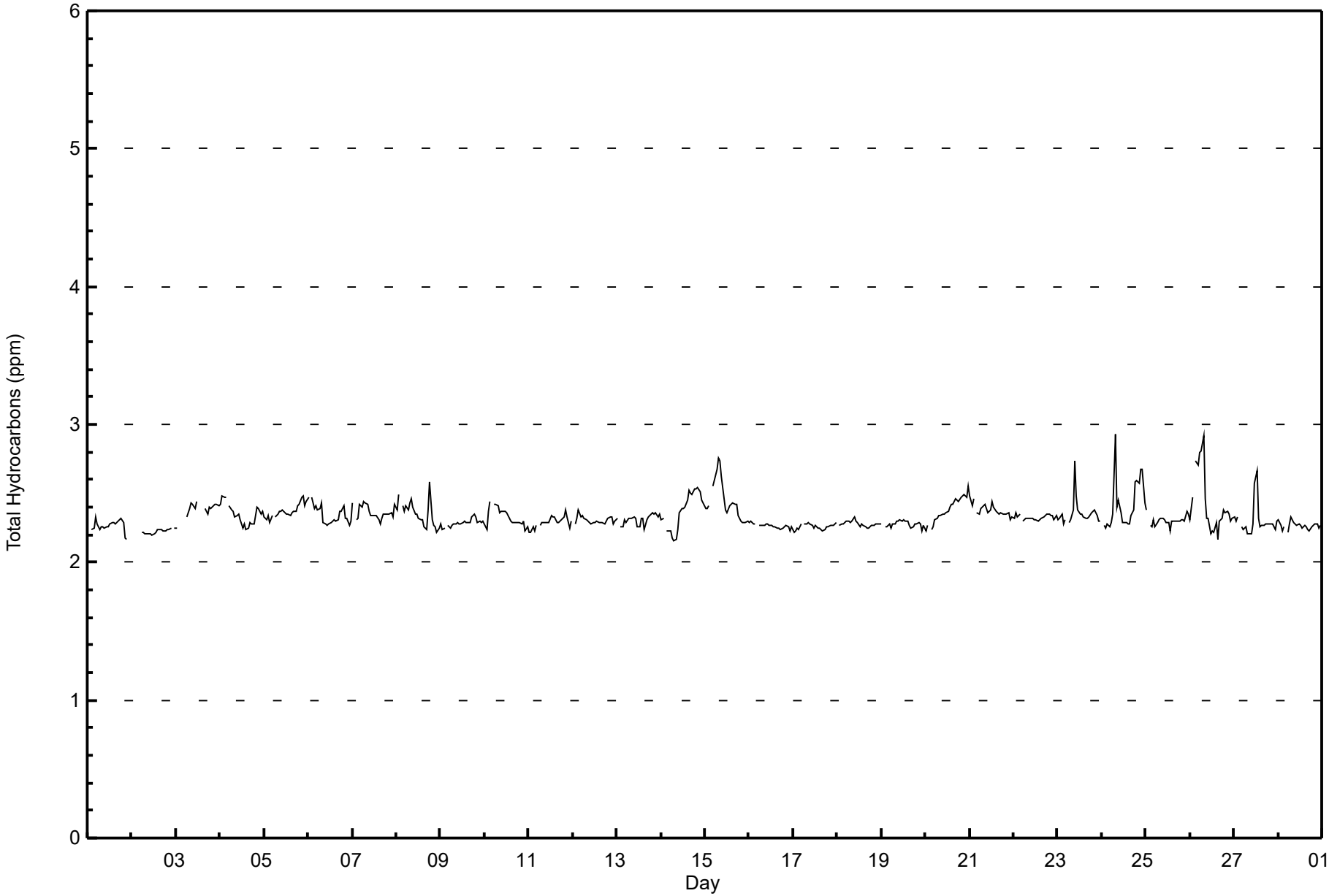
Z - zerospan C - Calibration UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Wapasu - February 2025



Total Hydrocarbons (THC) - ppm
Wapasu - February 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	0	0.00	0.00
2.1 - 3.0	632	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: 632

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Wapasu - February 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	80	20	29	19	14	16	28	125	56	67	27	8	1	2	4	39	535
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	80	20	29	19	14	16	28	125	56	67	27	8	1	2	4	39	535

Total Number of Valid Hours: 535

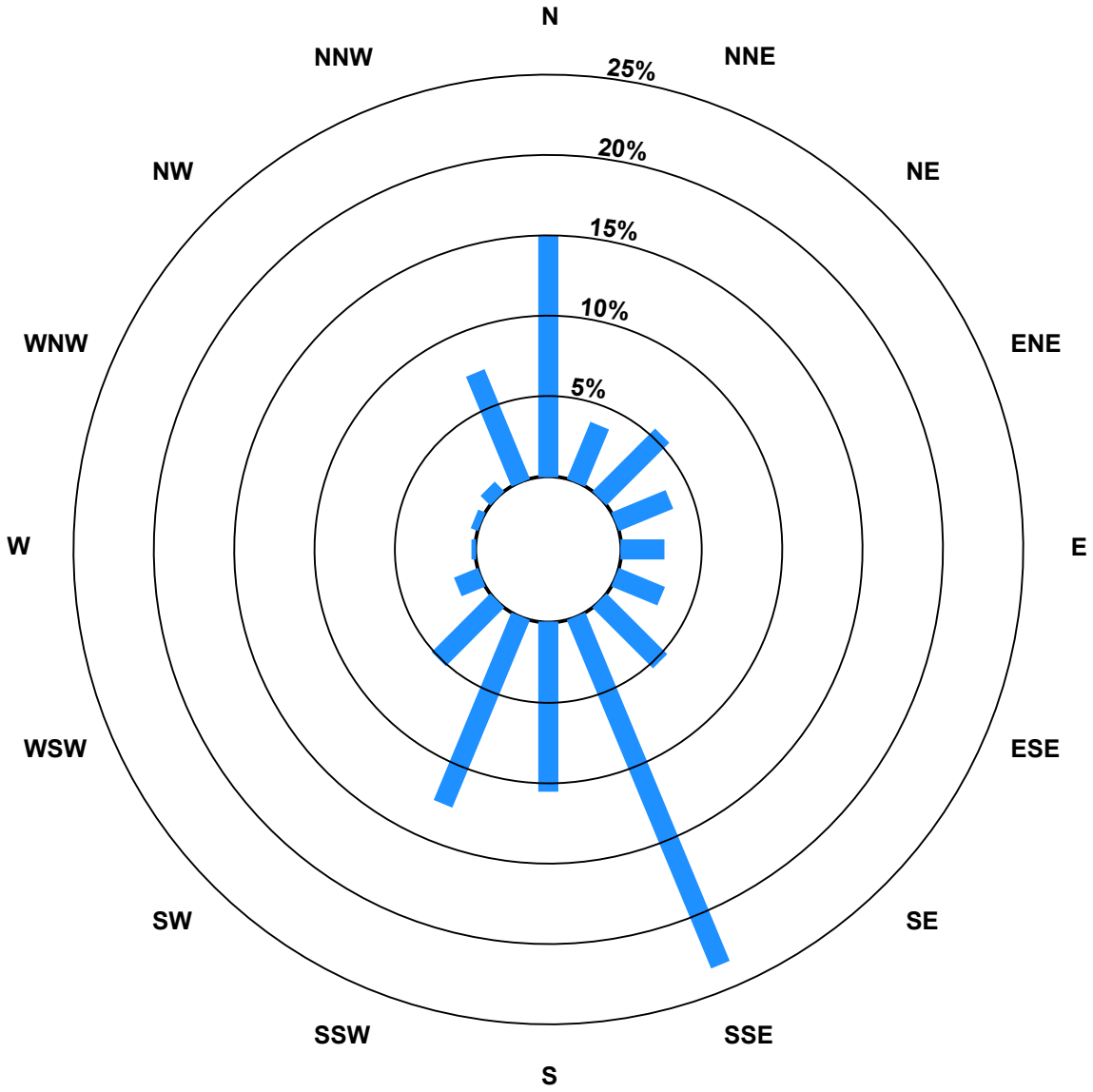
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Total Hydrocarbons (THC) - ppm

Wapasu



Classes (ppm)

- 0 - 2.0
- 2.1 - 3.0
- 3.1 - 10.0
- > 10.0

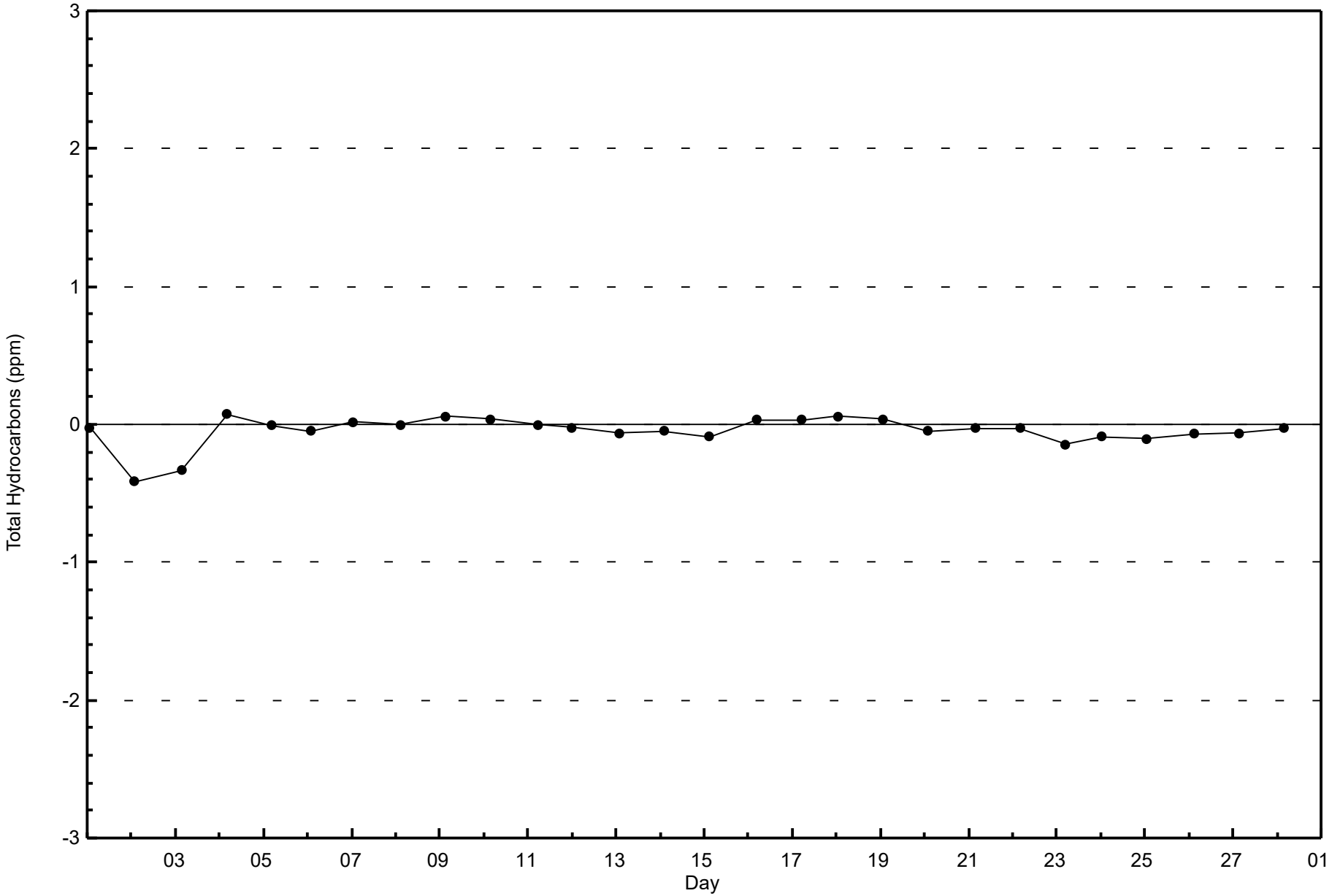
Total Number of Valid Hours: 535

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Wapasu - February 2025

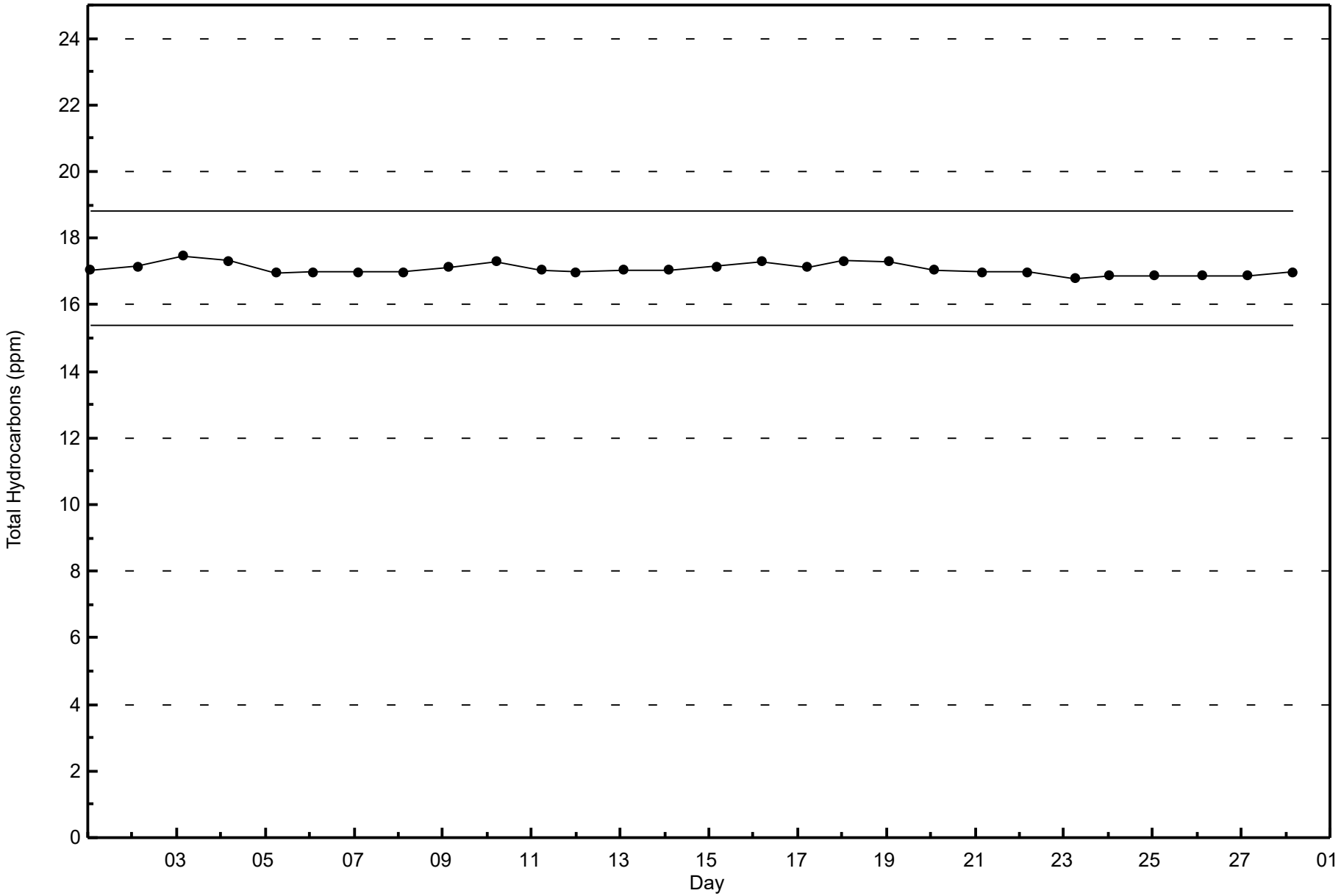


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Wapasu - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Wapasu - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 41.3 ppb on Feb 20 00:00 Maximum Daily Average: 37.6 ppb on Feb 19

Minimum Value: 2.4 ppb on Feb 10 00:00 Minimum Daily Average: 16.9 ppb on Feb 14
Maximum Diurnal Average: 32.7 ppb at hour 14 Minimum Diurnal Average: 25.6 ppb at hour 8
Monthly Average: 28.27 ppb Percentiles: P_1 = 2.9 P_{10} = 18.4 Q_1 = 24.5 Median = 30.0 Q_3 = 34.1 P_{90} = 36.3 P_{99} = 40.1

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	36.5	36.7	36.7	Z	11.7	24.8	33.1	34.0	32.9	35.2	35.8	35.5	32.9	32.4	32.2	32.0	26.3	22.3	21.0	21.9	21.2	22.2	23.7	22.7	28.9	36.7
2-Feb	24.0	24.5	24.8	26.3	Z	26.9	27.7	27.1	27.2	27.5	27.8	28.9	28.1	26.5	25.2	23.5	25.4	25.1	27.3	28.8	27.5	26.4	27.4	28.6	26.6	28.9
3-Feb	27.0	26.4	23.3	20.4	16.9	Z	12.4	11.3	14.4	21.7	26.4	28.5	33.2	34.9	34.3	29.2	23.6	23.6	23.6	25.4	26.5	25.2	26.9	27.3	24.5	34.9
4-Feb	Z	23.4	21.9	21.6	21.3	23.5	24.1	25.5	27.5	29.3	31.8	C	C	C	C	35.8	34.5	34.4	31.8	29.9	26.1	24.5	25.4	28.1	27.4	35.8
5-Feb	26.6	Z	30.6	30.0	30.0	29.0	28.9	29.0	27.6	28.4	28.9	29.7	31.2	31.0	29.8	28.3	27.0	27.5	27.3	26.2	26.2	25.0	28.5	28.9	28.5	31.2
6-Feb	27.5	27.1	22.8	Z	27.5	29.6	30.0	23.8	33.8	34.2	35.5	36.1	36.0	35.2	30.5	30.7	30.6	18.1	18.4	17.1	23.8	22.5	24.4	27.1	27.9	36.1
7-Feb	21.7	25.6	22.6	Z	25.4	20.5	18.0	14.9	19.4	26.3	32.1	33.6	34.6	37.1	38.4	38.6	32.8	26.2	24.4	24.7	19.0	15.8	18.9	23.6	25.8	38.6
8-Feb	20.6	21.5	19.9	22.5	Z	17.2	19.4	22.2	21.4	24.9	31.5	34.4	35.4	35.8	36.3	36.5	33.9	18.9	6.1	29.7	34.4	33.6	33.3	32.2	27.0	36.5
9-Feb	29.7	27.2	28.2	28.8	26.9	Z	22.6	21.3	22.1	24.5	27.3	27.0	25.7	26.4	26.0	25.0	21.4	16.6	12.5	3.9	3.2	3.8	2.5	2.4	19.8	29.7
10-Feb	Z	18.1	19.4	21.7	19.2	20.5	20.3	21.3	24.0	27.1	28.8	30.1	31.1	31.4	30.6	29.0	26.4	23.8	23.1	29.5	32.8	30.2	33.5	33.7	26.3	33.7
11-Feb	28.4	Z	35.0	35.7	29.7	22.7	30.7	34.9	36.9	35.8	36.2	33.6	30.2	33.4	33.6	33.9	32.7	29.0	24.0	18.4	11.7	19.2	28.0	25.5	29.5	36.9
12-Feb	22.9	23.7	Z	22.7	24.2	26.3	28.5	27.3	27.0	28.0	29.8	31.4	30.7	29.5	30.1	35.1	33.9	33.4	32.6	31.4	31.6	30.7	32.2	32.5	29.4	35.1
13-Feb	28.0	26.5	23.5	Z	30.0	27.7	24.3	28.4	29.9	31.6	32.7	32.8	29.6	24.2	25.5	29.9	28.4	26.8	28.9	30.0	30.7	29.7	25.9	22.0	28.1	32.8
14-Feb	21.4	19.1	20.5	18.6	Z	18.6	21.2	21.2	20.2	22.7	28.5	28.1	27.3	27.9	25.7	19.9	13.9	7.3	2.8	2.5	2.5	2.9	5.7	10.3	16.9	28.5
15-Feb	10.7	9.2	6.9	4.1	2.7	Z	2.8	3.9	11.9	21.6	29.5	35.6	36.2	32.1	32.1	31.5	30.8	28.6	31.8	35.2	30.5	27.2	24.2	22.9	21.8	36.2
16-Feb	Z	21.6	31.7	33.2	32.4	32.4	31.5	31.5	31.3	32.7	33.9	34.5	33.9	35.2	34.8	34.5	32.6	30.7	29.0	24.5	22.9	23.7	23.7	25.2	30.3	35.2
17-Feb	25.5	Z	26.0	26.7	27.2	27.1	27.6	28.7	28.5	30.0	33.0	35.1	36.4	36.3	34.6	33.2	32.1	30.7	31.1	31.5	30.4	31.4	32.7	33.1	30.8	36.4
18-Feb	32.8	32.3	Z	31.9	31.2	31.1	30.2	30.1	30.4	31.7	34.3	37.3	37.7	38.2	38.0	37.2	36.5	34.2	34.7	37.3	37.6	37.8	37.7	36.2	34.6	38.2
19-Feb	35.3	34.5	34.4	Z	35.2	34.5	35.0	35.0	35.2	35.2	36.9	37.6	37.8	38.6	39.0	40.0	40.2	39.3	38.3	39.4	39.6	40.5	41.0	41.3	37.6	41.3
20-Feb	41.1	40.7	40.3	39.8	Z	38.2	36.7	35.5	34.8	34.6	34.0	33.9	32.8	30.6	30.5	29.4	25.3	23.7	22.5	4.1	6.0	8.1	6.6	9.9	27.8	41.1
21-Feb	16.7	17.4	18.4	18.6	23.6	Z	20.6	15.8	9.5	24.1	33.0	30.5	31.2	30.7	33.0	37.0	37.6	37.2	37.0	37.0	37.0	36.5	35.2	34.2	28.3	37.6
22-Feb	Z	34.3	36.0	36.1	36.4	36.1	36.6	37.2	37.5	36.0	34.9	35.2	36.1	36.7	36.2	35.0	34.4	33.0	33.0	33.7	34.2	34.8	34.5	33.6	35.3	37.5
23-Feb	34.2	Z	33.6	34.1	31.2	31.0	31.9	30.5	29.7	16.3	26.3	31.0	33.0	34.2	35.5	35.3	35.6	35.4	33.0	31.4	30.9	33.6	34.7	31.4	31.9	35.6
24-Feb	34.0	36.3	Z	34.6	32.5	29.7	28.2	26.2	27.7	25.9	30.3	34.1	33.2	32.8	32.8	31.8	27.1	24.0	10.6	7.7	8.5	5.3	6.0	18.2	25.1	36.3
25-Feb	26.1	28.4	30.8	Z	34.1	35.7	35.4	32.6	32.4	33.6	36.8	36.9	36.5	36.2	36.0	33.6	33.4	34.6	30.3	32.7	33.1	29.7	16.7	17.4	31.9	36.9
26-Feb	19.0	14.7	10.7	8.8	Z	5.7	4.4	4.0	22.9	31.7	33.9	34.0	33.0	32.4	31.9	31.3	29.7	26.3	26.3	28.4	28.5	28.7	29.6	28.1	23.6	34.0
27-Feb	29.9	28.3	27.4	28.5	30.1	Z	27.5	33.0	34.6	32.4	25.1	17.8	15.1	28.5	32.4	34.5	35.0	35.3	35.7	36.4	38.5	37.3	36.4	28.7	30.8	38.5
28-Feb	Z	35.4	37.1	36.8	38.5	38.6	34.8	31.6	31.7	33.9	34.6	34.6	34.8	35.0	34.7	34.7	34.6	34.0	33.4	33.8	33.7	33.7	34.3	33.7	34.7	38.6
	26.9	26.4	26.5	26.4	26.9	27.3	25.9	25.6	27.2	29.2	31.8	32.5	32.4	32.7	32.6	32.4	30.6	27.9	26.1	26.2	26.0	25.7	26.1	26.4	Diurnal Average	
	41.1	40.7	40.3	39.8	38.5	38.6	36.7	37.2	37.5	36.0	36.9	37.6	37.8	38.6	39.0	40.0	40.2	39.3	38.3	39.4	39.6	40.5	41.0	41.3	Diurnal Maximum	

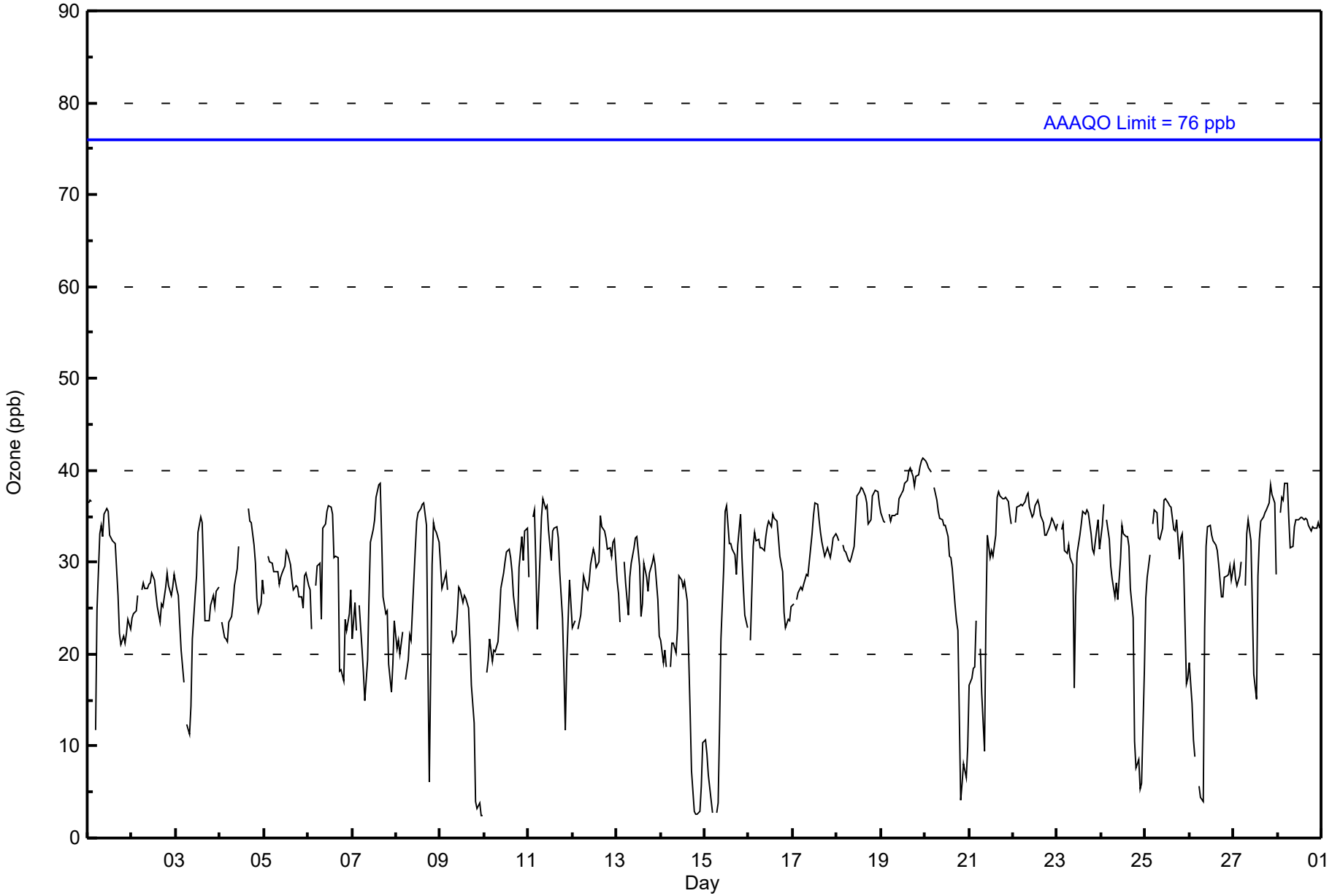
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Wapasu - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	84	13.13	13.13
21 - 50	556	86.88	100.00
51 - 82	0	0.00	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 640

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Ozone (O_3) - ppb

Wapasu - February 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	4	1	1	3	6	8	11	20	4	2	0	1	0	0	3	4	68
21 - 50	81	20	27	15	8	8	18	106	53	61	30	7	1	2	1	36	474
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	85	21	28	18	14	16	29	126	57	63	30	8	1	2	4	40	542

Total Number of Valid Hours: 542

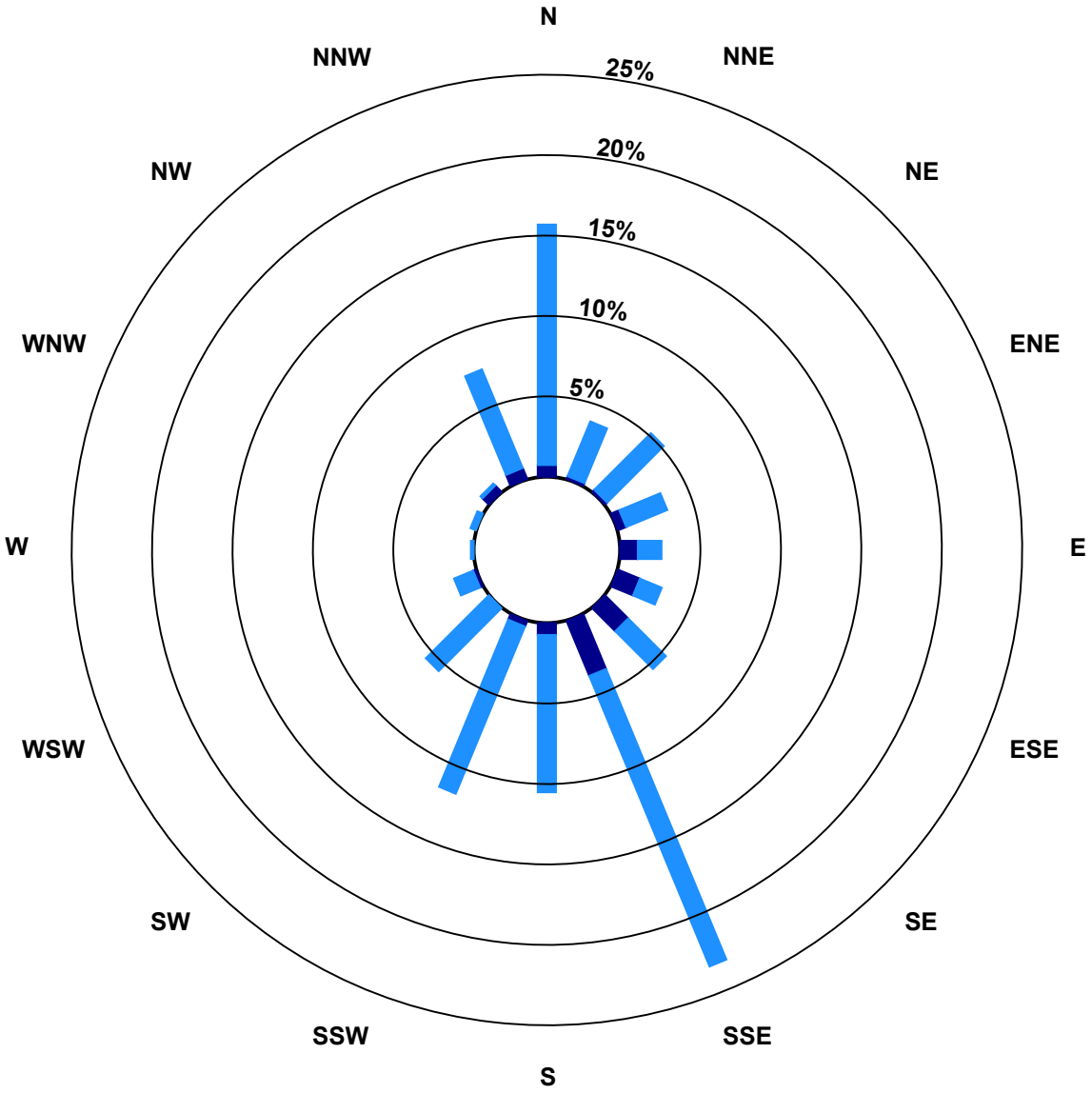
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Ozone (O_3) - ppb

Wapasu



Classes (ppb)

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

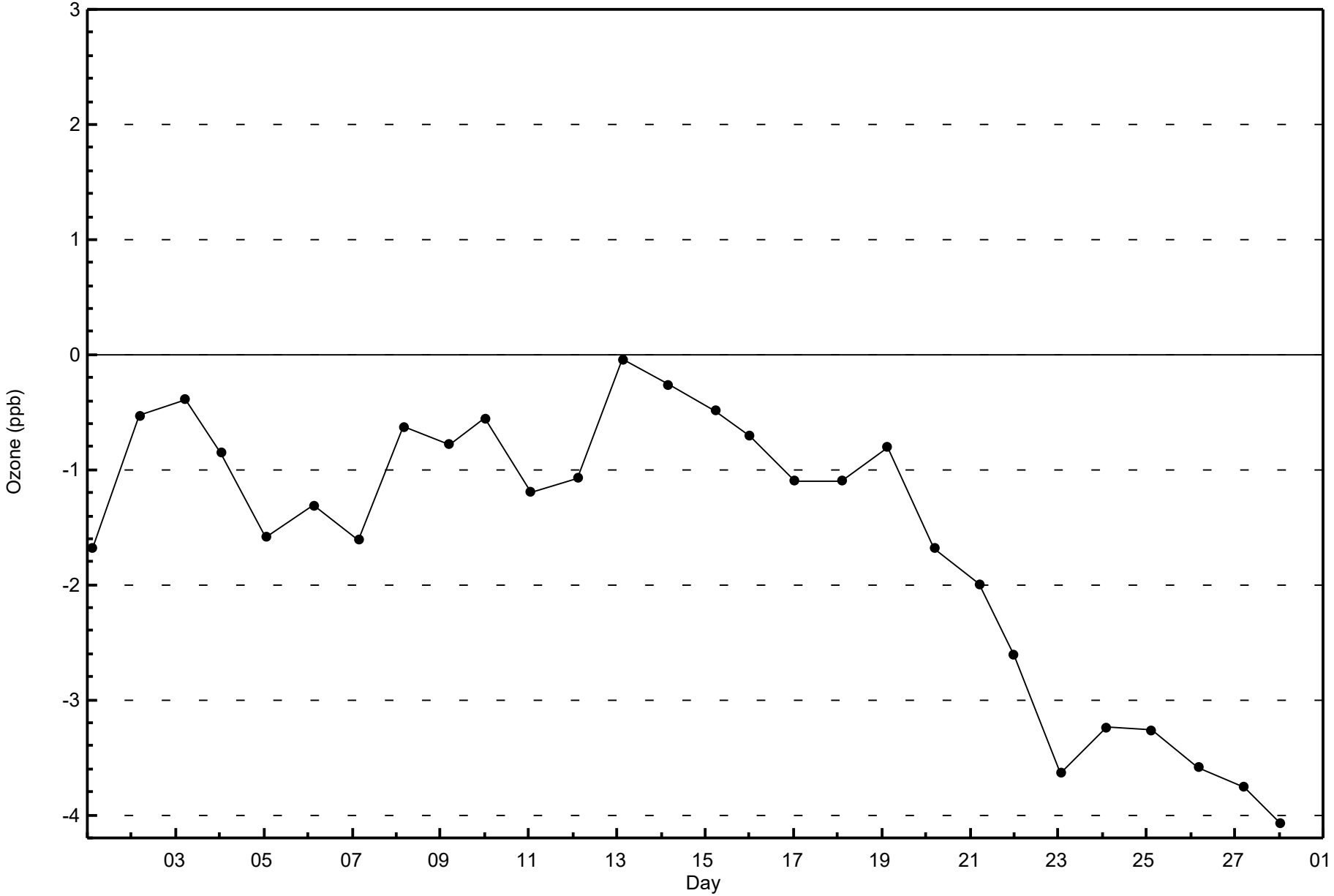
Total Number of Valid Hours: 542

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Wapasu - February 2025

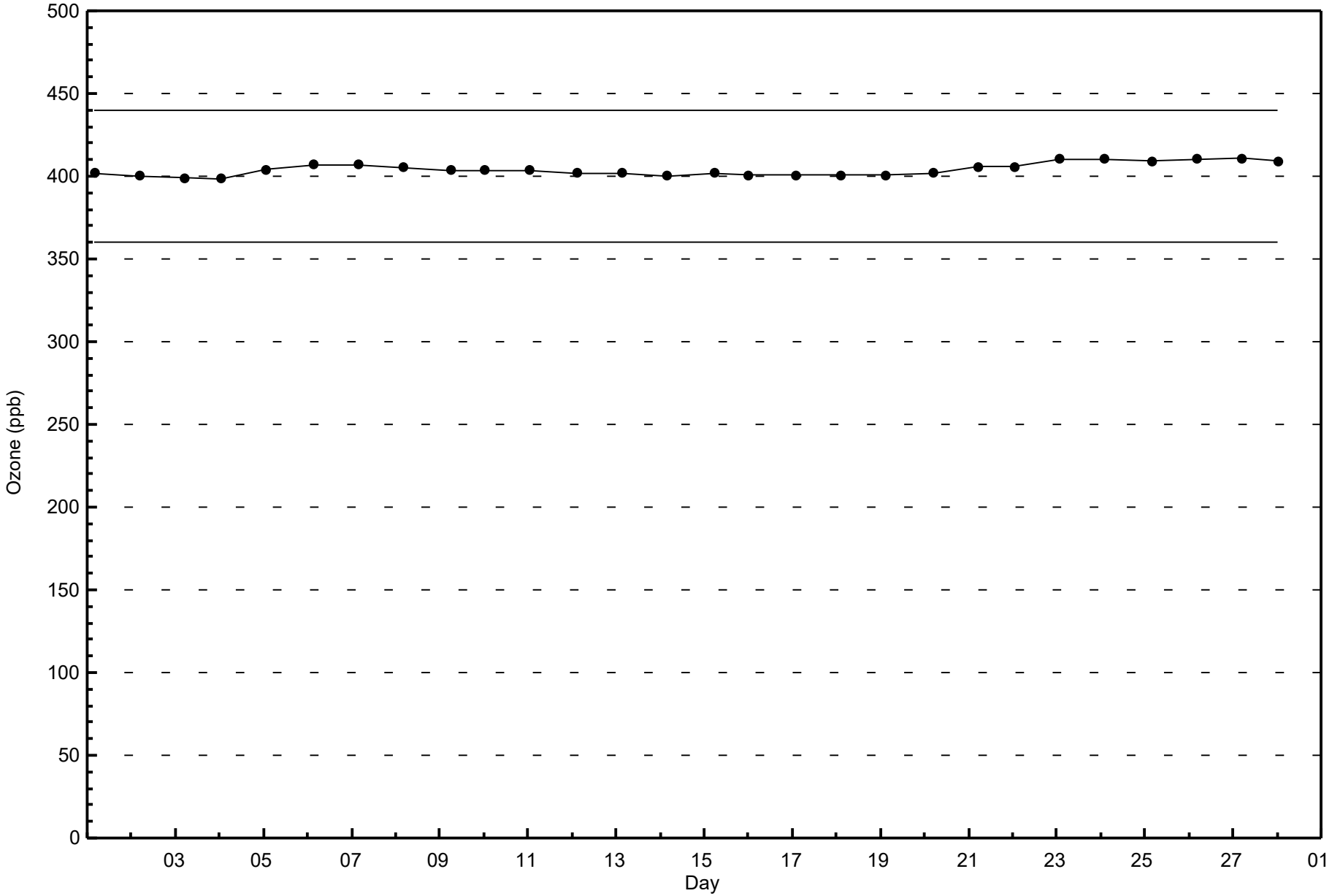


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Wapasu - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Wapasu - February 2025

Maximum Value: 24.0 ppb on Feb 20 23:00

Maximum Daily Average: 4.3 ppb on Feb 20

Minimum Value: 0.0 ppb on Feb 1 01:00

Minimum Daily Average: 0.1 ppb on Feb 17

Maximum Diurnal Average: 1.8 ppb at hour 13

Minimum Diurnal Average: 0.0 ppb at hour 2

Monthly Average: 0.94 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.6 P_{90} = 2.8 P_{99} = 11.7

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.0	0.0	0.0	0.0	0.2	Z	0.0	0.0	0.1	0.3	0.2	0.3	1.3	1.3	0.9	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.3
2-Feb	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.2	0.5	1.2	1.2	1.3	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.3
3-Feb	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.1	1.0	2.7	3.4	5.5	2.9	2.0	2.6	3.4	1.9	0.2	0.1	0.1	0.0	0.0	0.0	0.0	1.1	5.5
4-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.5	2.0	3.2	4.1	5.6	4.9	2.7	1.4	0.4	0.0	0.0	0.2	0.8	1.0	0.8	0.4	1.2	5.6
5-Feb	0.5	0.2	0.1	Z	0.1	0.1	0.1	0.1	0.5	1.3	2.6	2.8	3.0	2.4	2.6	2.3	1.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.9	3.0
6-Feb	0.0	0.1	0.2	0.0	0.1	Z	0.0	4.1	0.1	0.3	0.3	0.4	0.7	1.2	7.5	4.4	0.6	1.3	0.9	2.5	2.8	1.0	0.1	0.0	1.2	7.5
7-Feb	0.0	0.0	0.0	0.0	0.1	Z	0.1	0.1	1.2	2.6	2.1	2.2	2.1	1.1	0.6	0.4	0.6	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.6	2.6
8-Feb	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.1	1.2	3.4	3.6	3.5	3.2	4.0	2.5	1.7	0.7	0.6	13.5	0.1	0.0	0.0	0.0	0.0	1.7	13.5
9-Feb	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.7	2.5	2.1	2.0	3.3	2.4	2.6	2.0	1.5	0.3	1.0	7.7	9.2	2.3	9.2	12.0	2.7	12.0
10-Feb	5.4	0.1	Z	0.1	0.1	0.1	0.1	0.1	1.0	2.5	3.4	4.0	4.3	4.1	2.9	2.3	1.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	1.4	5.4
11-Feb	0.2	0.0	0.0	Z	0.1	2.2	0.0	0.0	0.0	0.2	0.3	1.7	4.4	2.1	0.6	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.5	4.4
12-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.2	0.5	0.6	0.9	1.2	1.0	0.5	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.2
13-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.5	0.4	0.1	C	C	C	C	C	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.7
14-Feb	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.8	0.4	1.4	3.3	3.1	7.6	12.4	10.7	4.3	4.0	4.8	5.1	5.7	1.9	0.2	2.9	12.4
15-Feb	0.2	Z	0.6	2.7	6.1	6.9	8.1	5.4	6.2	5.8	2.5	0.9	1.0	3.8	2.7	2.3	1.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	2.5	8.1
16-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
17-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.3	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
18-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.3	0.5	0.7	0.4	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	0.7
19-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.3	0.3	0.4	0.4	0.3	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
20-Feb	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.4	0.5	1.0	2.6	3.4	3.2	2.9	0.7	0.7	17.1	22.7	5.0	24.0	14.3	4.3	24.0
21-Feb	2.4	Z	1.0	3.8	0.6	0.4	0.1	0.3	11.3	2.9	1.0	1.5	3.1	1.8	1.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	11.3
22-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.4	0.3	0.3	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
23-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	3.3	1.3	0.6	0.7	0.9	0.5	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.4	3.3
24-Feb	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.3	1.1	0.9	0.4	0.3	0.3	0.4	0.3	0.5	0.2	0.2	0.2	0.3	1.7	1.5	0.1	0.4	1.7
25-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.3	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.4
26-Feb	Z	0.1	0.4	1.0	0.2	0.4	0.4	10.6	1.0	0.1	0.1	0.1	0.3	0.1	0.3	0.2	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.7	10.6
27-Feb	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	1.7	3.6	5.0	1.4	0.4	0.4	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.3	0.6	5.0
28-Feb	0.1	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.2	0.2	0.3	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
	0.4	0.0	0.1	0.3	0.3	0.5	0.3	0.8	1.0	1.2	1.2	1.4	1.8	1.6	1.7	1.5	1.0	0.3	0.8	1.2	1.5	0.6	1.4	1.0	Diurnal Average	
	5.4	0.2	1.0	3.8	6.1	6.9	8.1	10.6	11.3	5.8	3.6	5.5	5.6	4.9	7.6	12.4	10.7	4.3	13.5	17.1	22.7	5.7	24.0	14.3	Diurnal Maximum	

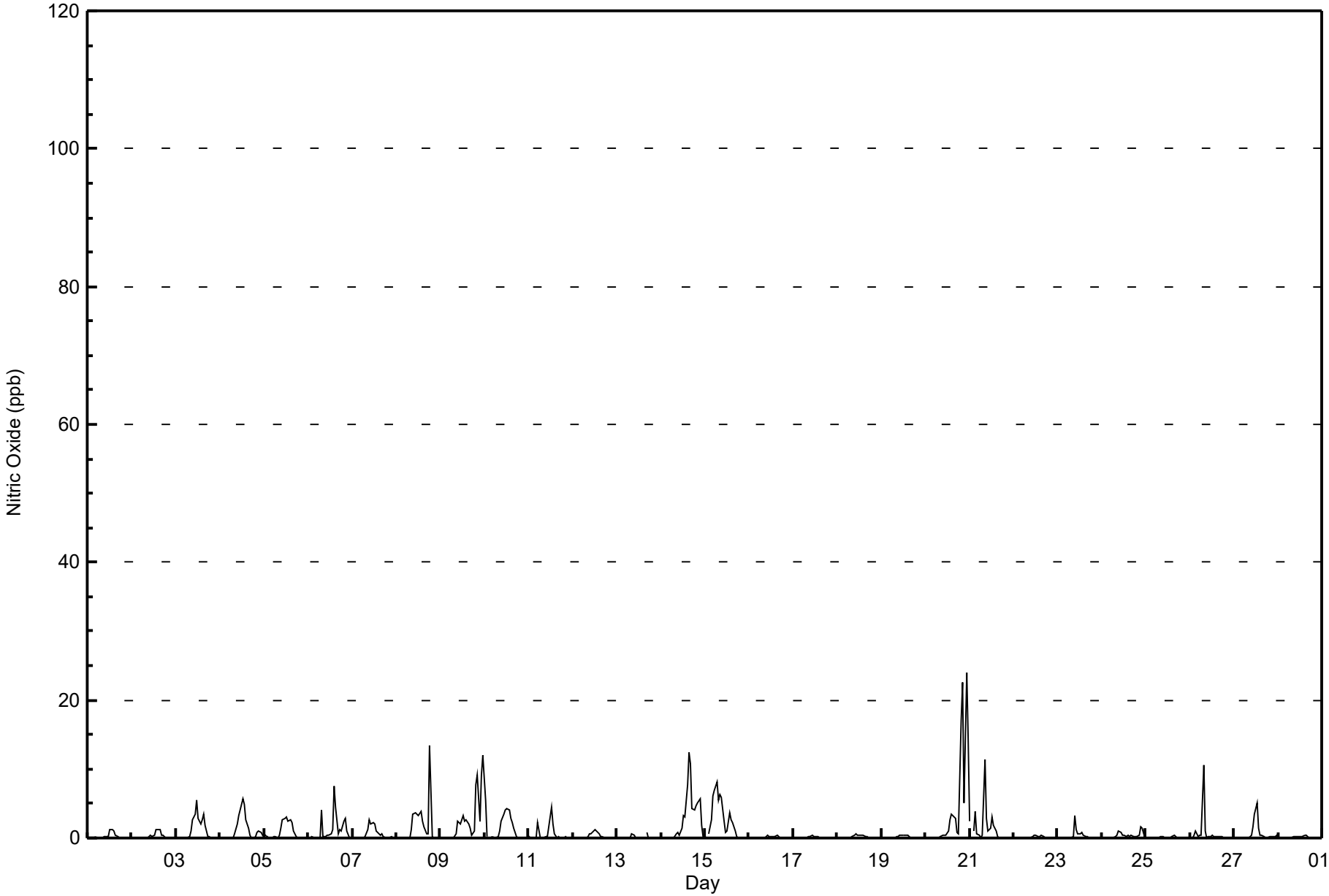
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Wapasu - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	637	99.69	99.69
21 - 40	2	0.31	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: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Wapasu - February 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	79	21	29	18	13	17	30	125	56	66	33	7	1	2	4	39	540
21 - 40	1	0	0	0	1	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	80	21	29	18	14	17	30	125	56	66	33	7	1	2	4	39	542

Total Number of Valid Hours: 542

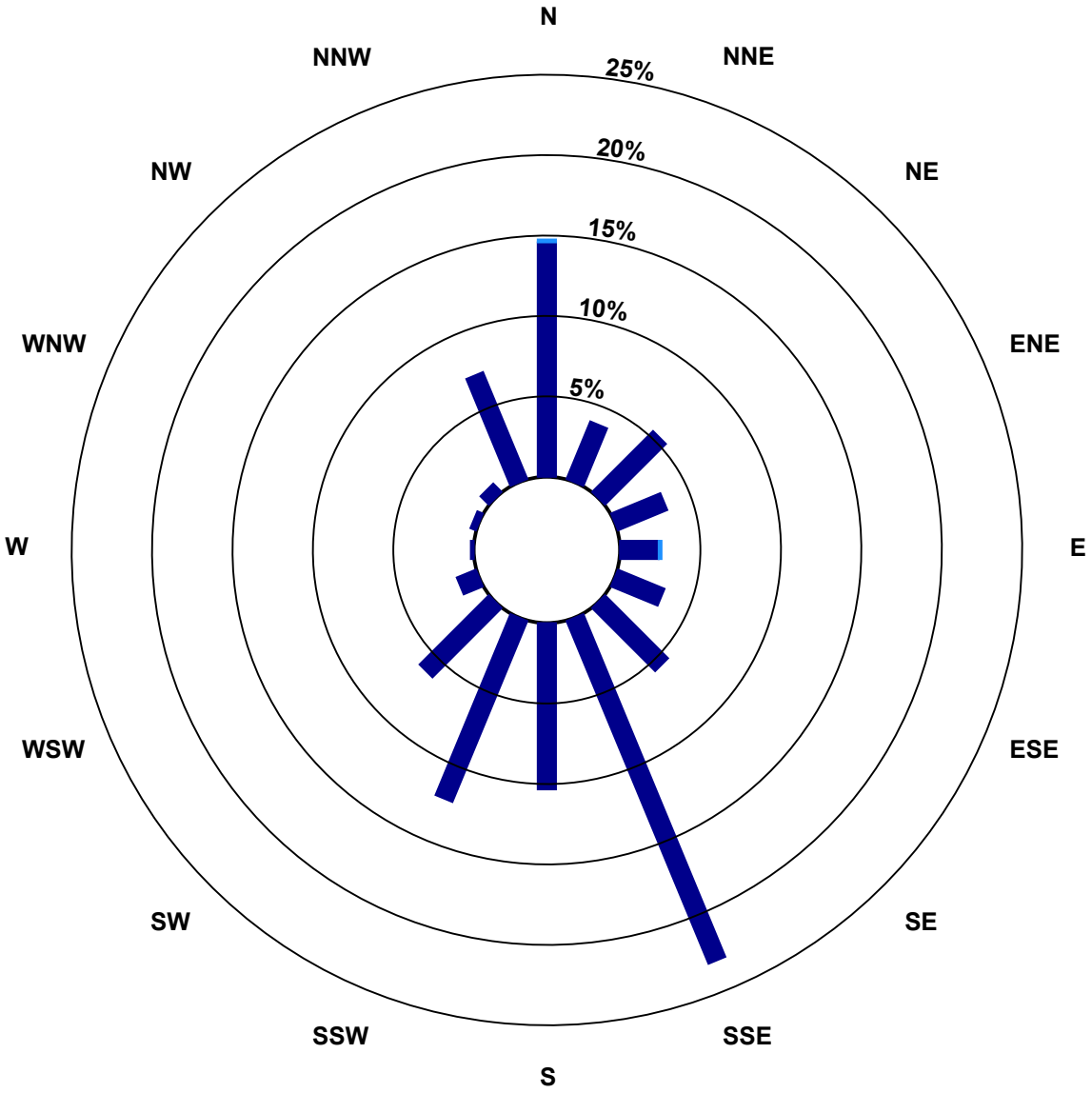
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitric Oxide (NO) - ppb

Wapasu



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

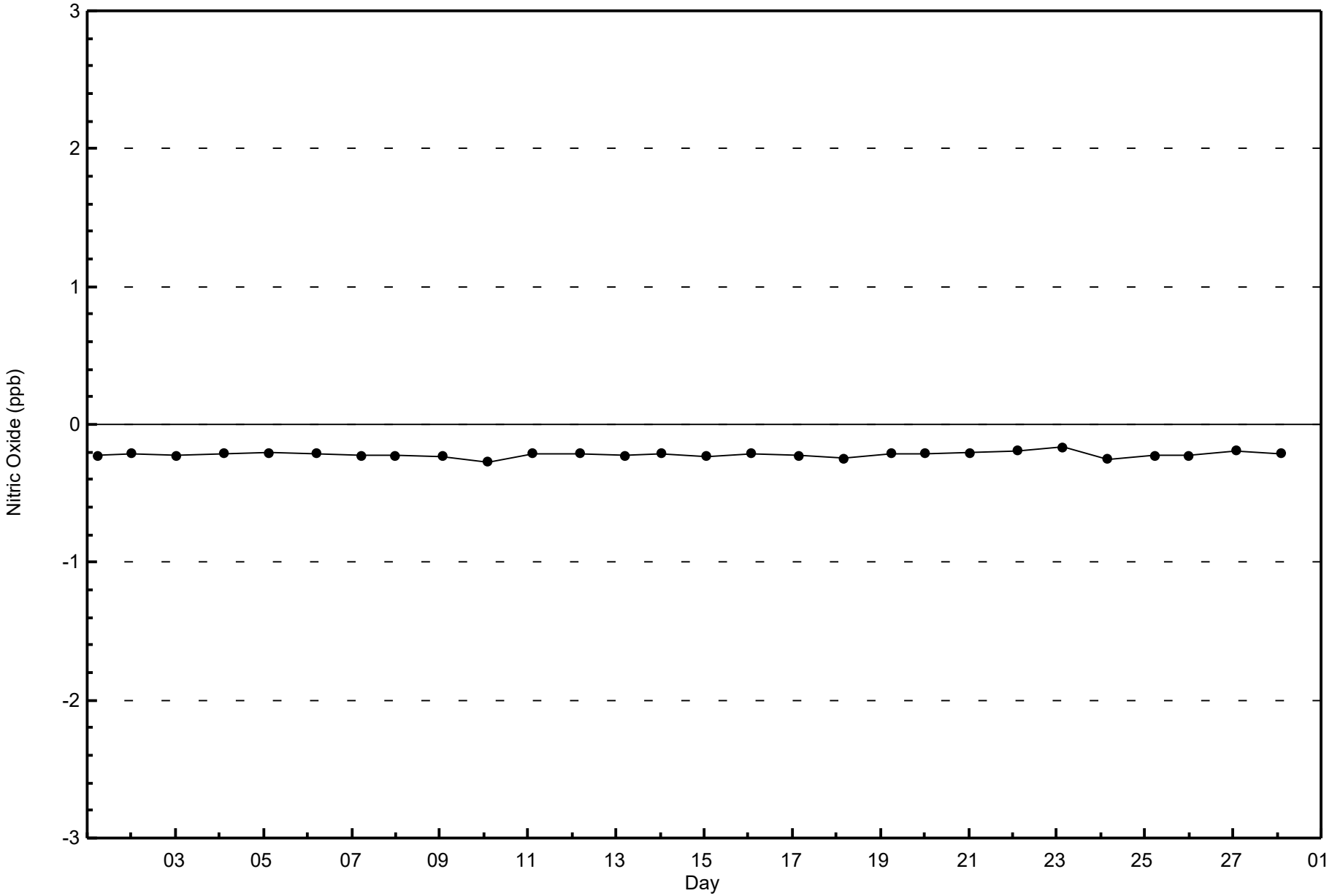
Total Number of Valid Hours: 542

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Wapasu - February 2025

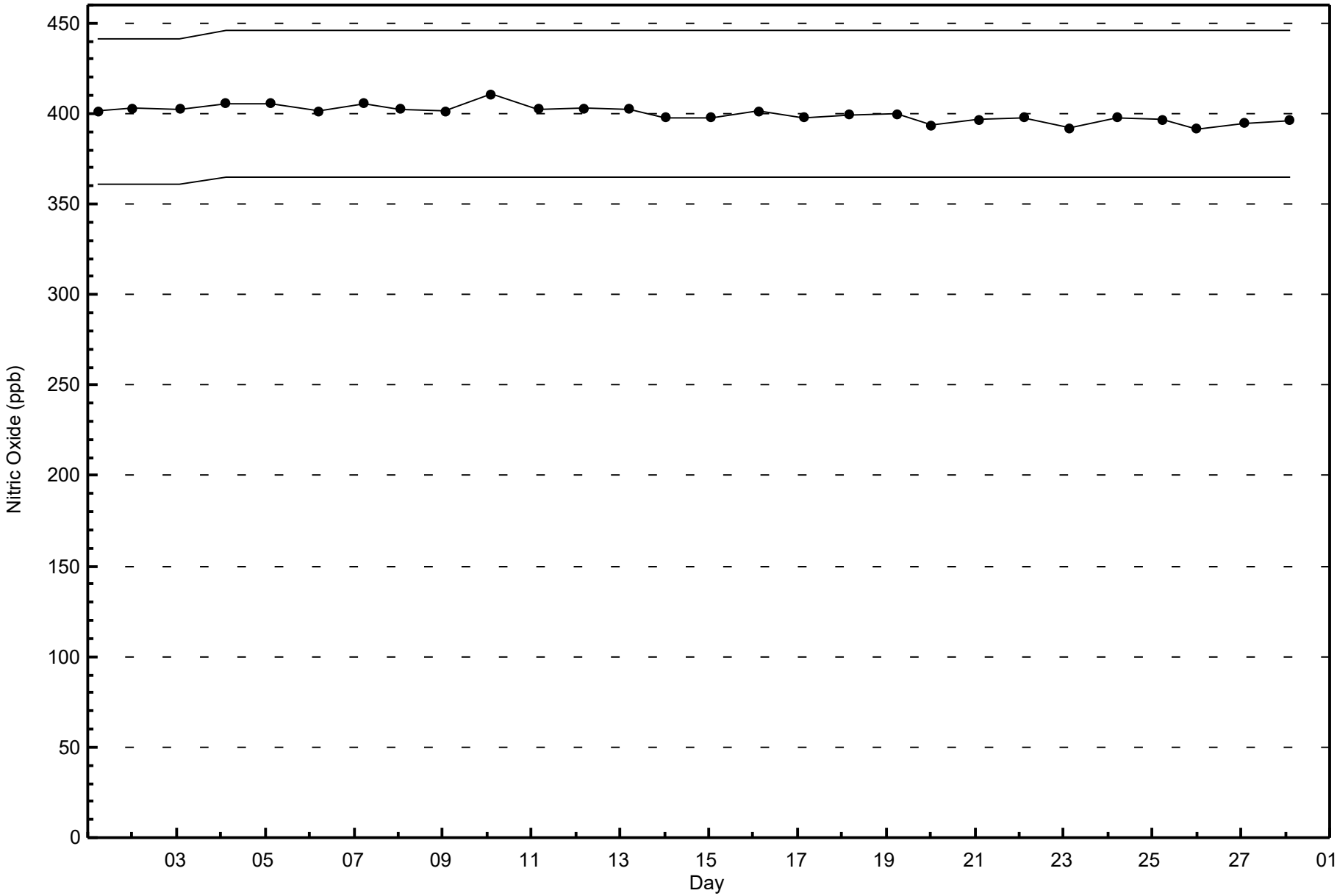


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Wapasu - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Wapasu - February 2025

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

Maximum Value: 35.9 ppb on Feb 8 19:00

Maximum Daily Average: 12.7 ppb on Feb 14

Minimum Value: 0.2 ppb on Feb 1 01:00

Minimum Daily Average: 0.7 ppb on Feb 17

Maximum Diurnal Average: 8.1 ppb at hour 5

Minimum Diurnal Average: 3.4 ppb at hour 12

Monthly Average: 6.11 ppb

Percentiles: P_1 = 0.3 P_{10} = 0.7 Q_1 = 1.5 Median = 3.6 Q_3 = 9.0 P_{90} = 14.2 P_{99} = 28.2

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.2	0.2	0.2	3.3	23.9	Z	4.6	3.8	5.3	3.1	1.5	1.4	4.3	4.8	4.8	3.8	6.6	5.0	6.3	5.2	6.0	4.1	1.9	2.4	4.5	23.9
2-Feb	Z	2.1	3.6	2.8	2.6	2.5	1.7	1.8	1.6	1.6	1.3	0.5	1.3	2.8	3.9	5.4	4.2	5.0	2.5	0.6	2.0	3.5	3.6	3.4	2.6	5.4
3-Feb	4.5	Z	5.8	5.7	9.4	11.9	14.1	15.5	13.5	8.9	7.2	8.4	5.2	4.7	7.2	12.2	16.5	15.3	13.7	11.0	9.9	11.0	9.0	7.6	9.9	16.5
4-Feb	7.6	12.3	Z	14.4	15.2	12.6	12.2	11.3	9.3	8.1	7.4	7.8	9.7	9.1	6.9	6.1	5.3	3.8	5.9	8.4	12.3	13.9	13.1	9.8	9.7	15.2
5-Feb	11.4	8.8	7.3	Z	8.0	9.2	9.5	9.3	11.2	10.8	10.4	9.6	8.3	8.4	9.7	11.4	12.2	11.5	10.7	11.0	10.9	11.9	8.5	8.3	9.9	12.2
6-Feb	9.6	10.0	15.1	9.1	9.9	Z	6.5	15.1	5.1	3.8	2.5	2.3	2.3	2.7	8.6	7.4	5.9	18.5	18.0	19.0	12.6	13.2	8.3	4.2	9.1	19.0
7-Feb	10.9	8.1	12.4	8.5	10.3	Z	11.8	14.9	13.4	9.5	4.9	4.2	3.9	2.5	1.9	1.8	7.2	11.4	10.5	10.8	11.7	15.1	9.3	10.0	8.9	15.1
8-Feb	Z	10.8	12.1	12.3	14.9	18.6	15.8	13.6	15.0	12.5	8.1	6.6	5.8	5.8	6.1	6.5	7.8	20.0	35.9	9.6	2.2	2.5	2.2	3.1	10.8	35.9
9-Feb	4.3	Z	3.3	4.6	6.5	6.3	8.5	7.9	6.0	5.9	3.6	2.5	3.8	2.9	3.6	4.2	6.8	9.3	11.6	21.1	20.0	16.2	20.2	21.9	8.7	21.9
10-Feb	18.0	9.5	Z	9.5	13.1	12.4	12.7	12.4	10.3	8.4	8.2	7.7	7.0	7.3	8.0	9.0	11.5	11.0	9.2	5.5	3.4	5.0	2.6	2.1	8.9	18.0
11-Feb	7.8	0.9	0.7	Z	6.3	12.4	2.8	2.2	0.5	1.2	0.9	3.6	7.7	3.8	1.7	0.5	1.2	2.4	5.0	9.6	19.5	14.1	5.1	7.6	5.1	19.5
12-Feb	10.1	9.6	10.6	9.5	Z	6.3	4.0	3.8	3.6	3.6	2.4	2.7	3.0	3.1	2.0	1.7	1.9	1.2	1.7	2.7	2.4	3.0	1.9	1.3	4.0	10.6
13-Feb	1.7	1.3	6.7	3.2	1.7	Z	6.7	2.3	5.3	2.0	0.4	C	C	C	C	C	4.9	5.2	1.7	0.7	0.9	1.3	5.7	9.4	3.4	9.4
14-Feb	Z	7.8	3.9	7.3	7.9	7.4	3.7	4.4	5.6	2.0	0.9	1.6	3.4	3.4	8.6	16.1	22.1	26.2	31.6	28.4	29.1	28.6	23.9	17.7	12.7	31.6
15-Feb	17.0	Z	21.6	27.1	28.4	27.4	26.4	27.9	22.7	13.7	6.3	2.0	2.0	7.0	6.7	7.1	7.3	7.9	4.4	0.6	3.0	5.2	6.3	8.0	12.4	28.4
16-Feb	6.0	9.3	Z	0.7	0.5	0.3	0.3	0.3	0.5	0.7	0.9	0.5	0.5	0.5	0.7	1.1	1.3	0.6	0.3	0.3	0.3	0.2	0.2	0.2	1.1	9.3
17-Feb	0.4	0.7	1.0	Z	1.3	1.5	1.6	1.6	1.4	1.0	0.8	0.6	0.5	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.8	0.4	0.3	0.5	0.7	1.6
18-Feb	0.5	0.7	1.2	1.3	Z	1.6	1.8	2.1	2.0	1.4	1.5	0.8	0.7	0.8	0.9	0.9	0.9	1.7	1.7	1.4	1.3	1.2	1.3	1.6	1.3	2.1
19-Feb	1.9	1.8	1.4	1.3	1.2	Z	1.5	1.7	1.4	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.8	0.6	0.5	0.5	0.5	0.5	0.6	0.9	1.1	1.9
20-Feb	Z	1.0	1.1	1.4	1.7	1.9	2.2	2.6	2.6	2.9	3.4	3.2	4.4	6.6	7.0	8.3	12.7	13.8	12.6	30.3	25.3	20.8	26.5	24.2	9.4	30.3
21-Feb	16.8	Z	15.5	16.7	11.7	11.9	6.6	9.4	18.2	8.3	3.9	3.2	5.1	7.6	5.4	1.8	1.2	1.1	1.0	1.1	0.8	0.9	1.0	1.6	6.6	18.2
22-Feb	3.6	2.9	Z	1.3	1.3	1.5	1.2	1.3	1.5	1.8	2.1	2.3	2.2	1.9	2.0	2.4	2.7	3.0	2.6	2.0	1.8	1.8	2.1	3.2	2.1	3.6
23-Feb	3.3	5.2	5.0	Z	3.1	3.1	2.6	4.7	4.1	11.6	5.4	2.9	3.4	3.6	2.4	2.5	2.3	2.7	4.9	5.9	6.1	3.9	3.2	6.4	4.3	11.6
24-Feb	3.1	0.6	0.6	1.4	Z	3.0	3.1	4.4	3.4	5.5	3.5	1.5	1.5	1.6	1.5	1.6	5.8	8.1	19.8	21.2	20.3	24.7	24.7	11.6	7.5	24.7
25-Feb	5.3	5.9	4.8	3.7	1.9	Z	0.5	1.9	1.9	1.2	0.5	0.5	0.5	0.5	1.1	3.0	2.0	0.4	0.6	1.4	0.8	0.9	8.8	8.9	2.5	8.9
26-Feb	Z	13.3	18.4	20.5	19.9	22.2	22.3	24.8	7.9	0.8	0.9	0.8	1.0	0.9	1.0	1.0	1.8	3.0	4.0	2.2	2.0	1.6	1.2	1.0	7.5	24.8
27-Feb	1.4	Z	2.3	1.7	1.5	1.8	2.7	1.7	1.6	3.0	8.9	14.0	14.5	5.1	2.5	2.2	2.2	2.4	2.4	3.1	1.5	2.9	3.7	11.1	4.1	14.5
28-Feb	11.3	4.7	Z	1.4	0.6	0.8	2.7	2.7	1.9	1.3	0.8	0.8	0.8	0.9	1.1	1.2	1.4	0.9	0.8	0.6	0.5	0.6	0.6	0.8	1.7	11.3
	6.8	5.5	6.7	7.0	8.1	8.0	6.8	7.3	6.3	4.8	3.6	3.4	3.8	3.7	4.0	4.5	5.6	6.9	7.9	7.7	7.4	7.5	7.0	6.7	Diurnal Average	
	18.0	13.3	21.6	27.1	28.4	27.4	26.4	27.9	22.7	13.7	10.4	14.0	14.5	9.1	9.7	16.1	22.1	26.2	35.9	30.3	29.1	28.6	26.5	24.2	Diurnal Maximum	

Z - zerospan C - Calibration

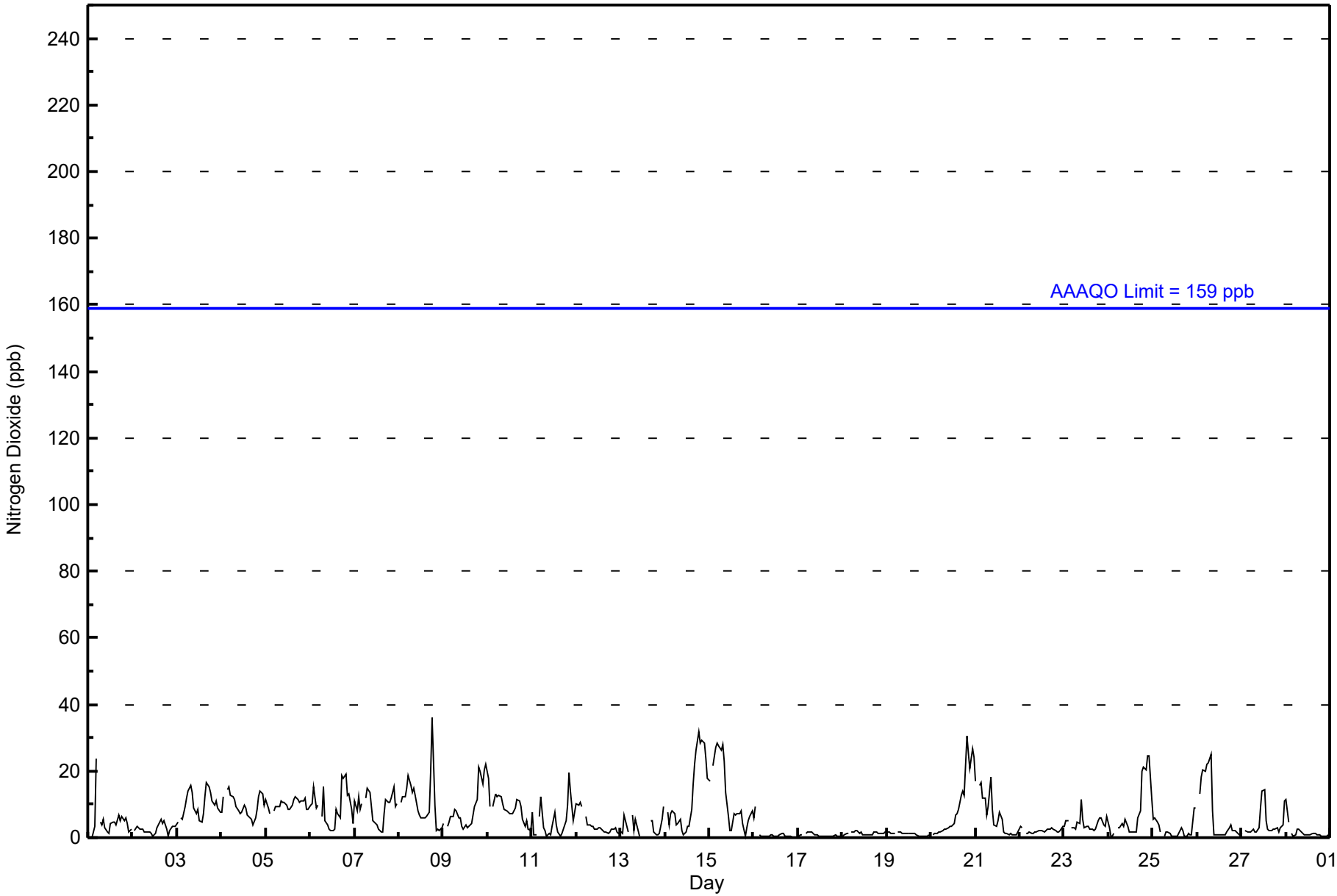
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Wapasu - February 2025



Nitrogen Dioxide (NO_2) - ppb
Wapasu - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	609	95.31	95.31
21 - 40	30	4.69	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: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Wapasu - February 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	76	21	28	17	12	14	25	120	56	65	33	7	1	2	4	38	519
21 - 40	4	0	1	1	2	3	5	5	0	1	0	0	0	0	0	1	23
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	80	21	29	18	14	17	30	125	56	66	33	7	1	2	4	39	542

Total Number of Valid Hours: 542

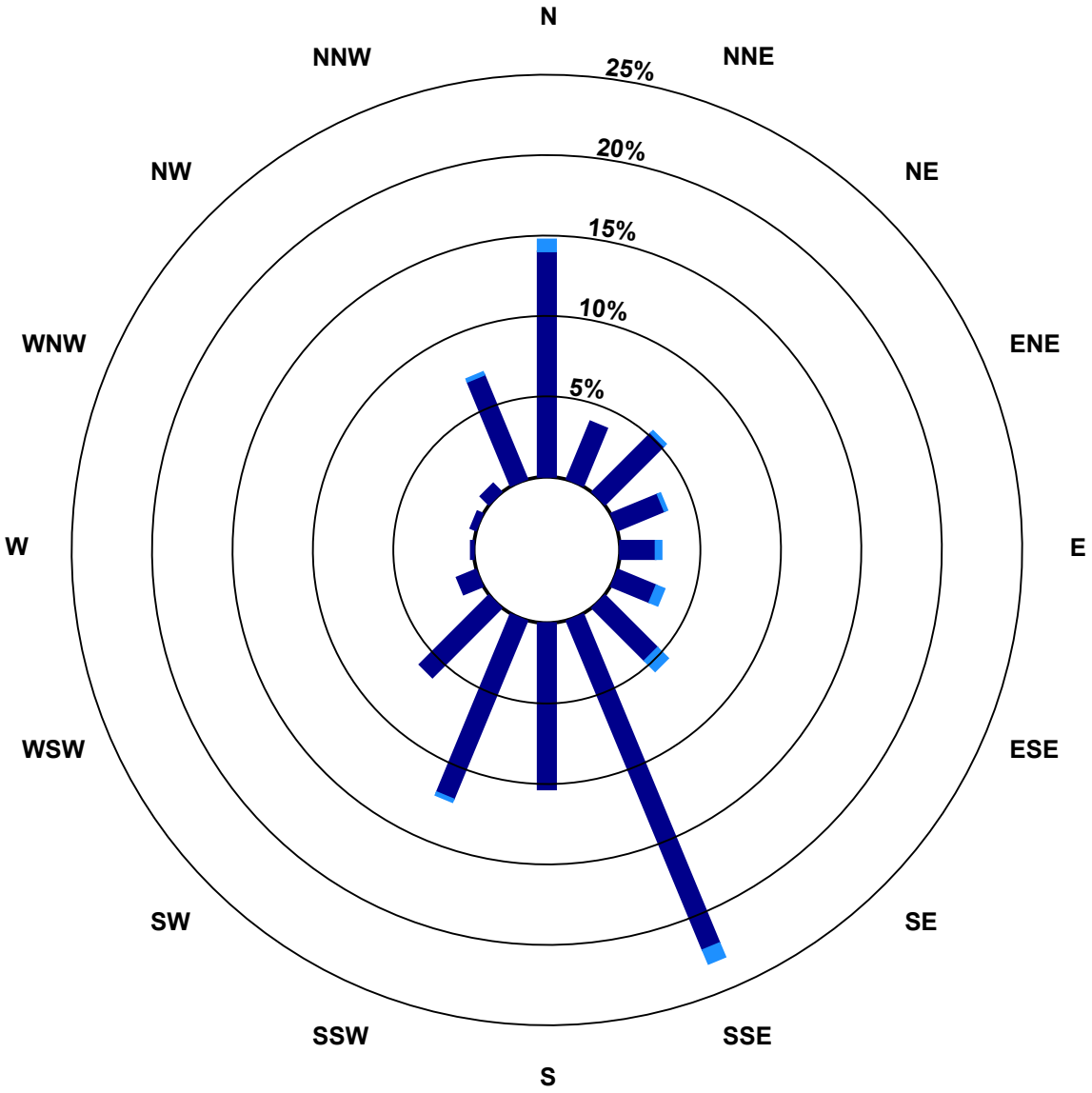
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Dioxide (NO_2) - ppb

Wapasu



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

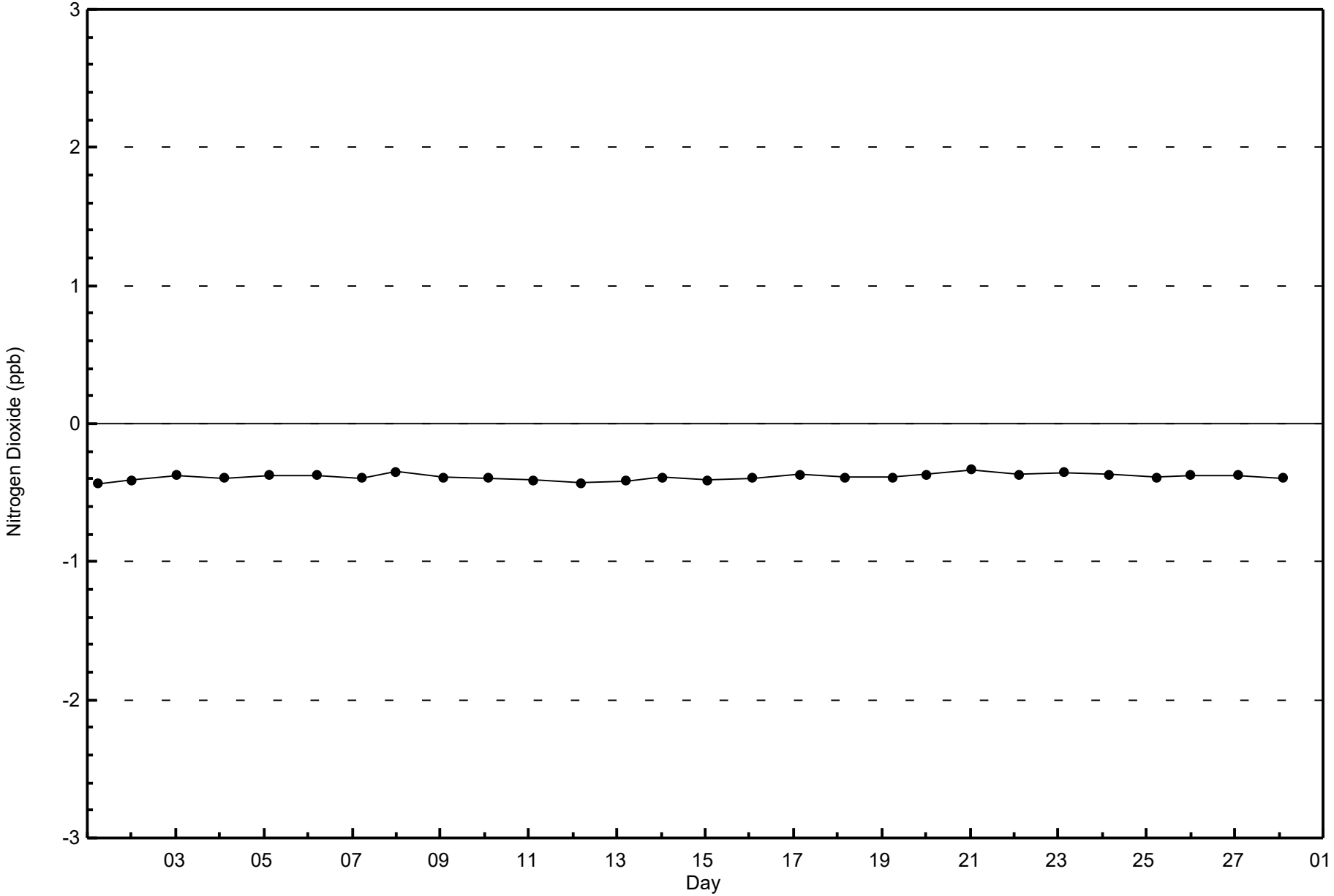
Total Number of Valid Hours: 542

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Wapasu - February 2025

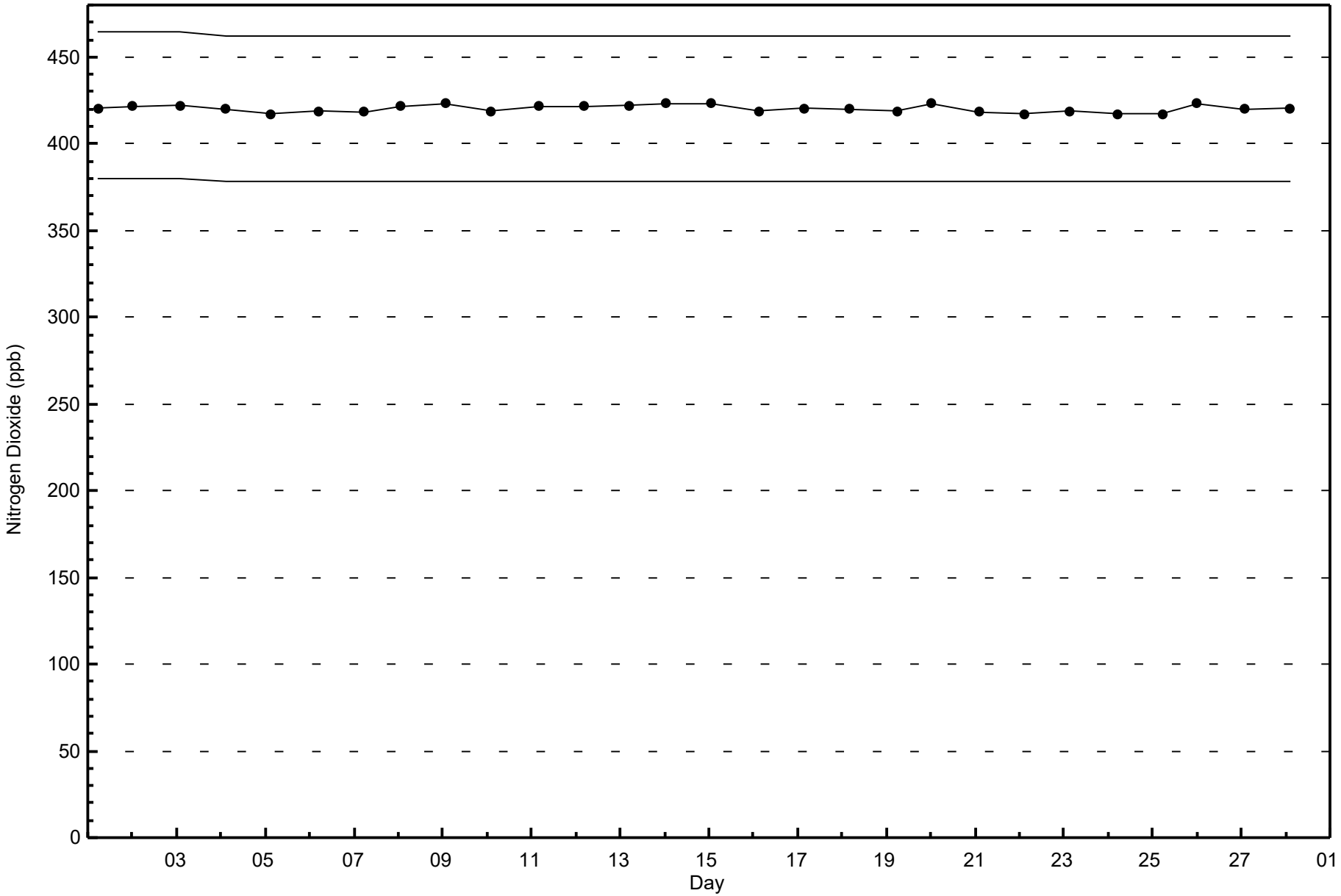


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Wapasu - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Wapasu - February 2025

Maximum Value: 50.5 ppb on Feb 20 23:00

Maximum Daily Average: 15.6 ppb on Feb 14

Minimum Value: 0.2 ppb on Feb 17 00:00

Minimum Daily Average: 0.8 ppb on Feb 17

Maximum Diurnal Average: 8.9 ppb at hour 21

Minimum Diurnal Average: 4.7 ppb at hour 11

Monthly Average: 7.04 ppb

Percentiles: P_1 = 0.3 P_{10} = 0.8 Q_1 = 1.6 Median = 4.1 Q_3 = 10.1 P_{90} = 15.5 P_{99} = 35.1

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.2	0.2	0.2	3.3	24.1	Z	4.6	3.8	5.4	3.4	1.7	1.7	5.6	6.1	5.7	4.2	6.8	5.0	6.3	5.2	6.0	4.1	1.9	2.4	4.7	24.1
2-Feb	Z	2.1	3.6	2.8	2.6	2.5	1.7	1.8	1.7	1.8	1.6	0.7	1.8	4.0	5.1	6.7	4.6	5.3	2.5	0.6	2.0	3.5	3.6	3.4	2.9	6.7
3-Feb	4.5	Z	5.8	5.7	9.4	12.0	14.2	15.6	14.5	11.6	10.6	13.9	8.1	6.7	9.8	15.6	18.4	15.5	13.8	11.1	9.9	11.0	9.0	7.6	11.1	18.4
4-Feb	7.6	12.3	Z	14.4	15.2	12.6	12.2	11.3	9.8	10.1	10.6	11.9	15.3	14.0	9.6	7.5	5.7	3.8	5.9	8.6	13.1	14.9	13.9	10.2	10.9	15.3
5-Feb	11.9	9.0	7.4	Z	8.1	9.3	9.6	9.4	11.7	12.1	13.0	12.4	11.3	10.8	12.3	13.7	13.2	11.6	10.8	11.1	11.0	11.9	8.5	8.3	10.8	13.7
6-Feb	9.6	10.1	15.3	9.1	10.0	Z	6.5	19.2	5.2	4.1	2.8	2.7	3.0	3.9	16.1	11.8	6.5	19.8	18.9	21.5	15.4	14.2	8.4	4.2	10.4	21.5
7-Feb	10.9	8.1	12.4	8.5	10.4	Z	11.9	15.0	14.6	12.1	7.0	6.4	6.0	3.6	2.5	2.2	7.8	11.5	10.5	10.9	11.8	15.2	9.3	10.0	9.5	15.2
8-Feb	Z	10.8	12.1	12.3	14.9	18.7	15.9	13.7	16.2	15.9	11.7	10.1	9.0	9.8	8.6	8.2	8.5	20.6	49.4	9.7	2.2	2.5	2.2	3.1	12.4	49.4
9-Feb	4.3	Z	3.3	4.6	6.5	6.3	8.6	8.0	6.7	8.4	5.7	4.5	7.1	5.3	6.2	6.2	8.3	9.6	12.6	28.8	29.2	18.5	29.4	33.9	11.4	33.9
10-Feb	23.4	9.6	Z	9.6	13.2	12.5	12.8	12.5	11.3	10.9	11.6	11.7	11.3	11.4	10.9	11.3	12.9	11.2	9.3	5.5	3.4	5.0	2.6	2.1	10.3	23.4
11-Feb	8.0	0.9	0.7	Z	6.4	14.6	2.8	2.2	0.5	1.4	1.2	5.3	12.1	5.9	2.3	0.6	1.3	2.4	5.0	9.6	19.6	14.1	5.1	7.6	5.6	19.6
12-Feb	10.1	9.6	10.6	9.5	Z	6.3	4.0	3.8	3.8	4.1	3.0	3.6	4.2	4.1	2.5	1.9	2.0	1.2	1.7	2.7	2.4	3.0	1.9	1.3	4.2	10.6
13-Feb	1.7	1.3	6.7	3.2	1.7	Z	6.7	2.3	5.8	2.4	0.5	C	C	C	C	C	5.6	5.2	1.7	0.7	0.9	1.3	5.7	9.4	3.5	9.4
14-Feb	Z	7.8	3.9	7.3	7.9	7.4	3.7	4.4	6.3	2.8	1.3	3.0	6.7	6.5	16.2	28.5	32.8	30.5	35.6	33.2	34.2	34.3	25.8	17.9	15.6	35.6
15-Feb	17.2	Z	22.2	29.8	34.5	34.3	34.5	33.3	28.9	19.5	8.8	2.9	3.0	10.8	9.4	9.4	8.4	8.1	4.4	0.6	3.0	5.2	6.3	8.0	14.9	34.5
16-Feb	6.0	9.3	Z	0.7	0.5	0.3	0.3	0.3	0.5	0.8	1.2	0.7	0.7	0.7	1.0	1.4	1.5	0.6	0.3	0.3	0.3	0.2	0.2	0.2	1.2	9.3
17-Feb	0.4	0.7	1.0	Z	1.3	1.5	1.6	1.6	1.5	1.3	1.2	0.8	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.8	0.4	0.3	0.5	0.8	1.6
18-Feb	0.5	0.7	1.2	1.3	Z	1.6	1.8	2.1	2.3	1.9	2.2	1.2	1.1	1.1	1.2	1.1	1.1	1.8	1.7	1.4	1.3	1.2	1.3	1.6	1.4	2.3
19-Feb	1.9	1.8	1.4	1.3	1.2	Z	1.5	1.7	1.5	1.4	1.4	1.5	1.5	1.4	1.4	1.3	0.9	0.6	0.5	0.5	0.5	0.5	0.6	0.9	1.2	1.9
20-Feb	Z	1.0	1.1	1.4	1.7	1.9	2.2	2.6	2.7	3.2	3.8	3.7	5.4	9.2	10.4	11.5	15.6	14.5	13.3	47.4	48.0	25.8	50.5	38.5	13.7	50.5
21-Feb	19.2	Z	16.5	20.5	12.3	12.3	6.7	9.7	29.5	11.2	4.9	4.7	8.2	9.4	6.4	1.9	1.2	1.1	1.0	1.1	0.8	0.9	1.0	1.6	7.9	29.5
22-Feb	3.6	2.9	Z	1.3	1.3	1.5	1.2	1.3	1.5	1.9	2.3	2.6	2.6	2.2	2.3	2.7	3.0	3.1	2.6	2.0	1.8	1.8	2.1	3.2	2.2	3.6
23-Feb	3.3	5.2	5.0	Z	3.1	3.1	2.6	4.8	4.2	14.9	6.7	3.5	4.1	4.5	2.9	2.8	2.4	2.8	5.0	6.0	6.1	3.9	3.2	6.5	4.6	14.9
24-Feb	3.2	0.7	0.7	1.5	Z	3.1	3.2	4.5	3.7	6.6	4.4	1.9	1.8	1.9	1.9	1.9	6.3	8.3	20.0	21.4	20.6	26.4	26.2	11.7	7.9	26.4
25-Feb	5.3	5.9	4.8	3.7	1.9	Z	0.5	2.0	2.1	1.3	0.5	0.5	0.5	0.5	1.4	3.4	2.3	0.4	0.6	1.4	0.8	0.9	8.9	9.0	2.6	9.0
26-Feb	Z	13.4	18.8	21.5	20.1	22.6	22.7	35.4	8.9	0.9	1.0	0.9	1.3	1.0	1.3	1.2	2.1	3.2	4.0	2.2	2.0	1.6	1.2	1.0	8.2	35.4
27-Feb	1.4	Z	2.3	1.7	1.5	1.8	2.7	1.7	1.7	3.3	10.6	17.6	19.5	6.5	2.9	2.6	2.4	2.5	2.5	3.3	1.7	3.1	3.8	11.4	4.7	19.5
28-Feb	11.4	4.7	Z	1.4	0.6	0.8	2.7	2.7	2.0	1.5	1.0	0.9	1.0	1.1	1.4	1.5	1.6	0.9	0.8	0.6	0.5	0.6	0.6	0.8	1.8	11.4
	7.2	5.6	6.8	7.4	8.4	8.5	7.1	8.1	7.3	6.1	4.7	4.9	5.7	5.3	5.6	6.0	6.6	7.2	8.6	8.8	8.9	8.1	8.3	7.7	Diurnal Average	
	23.4	13.4	22.2	29.8	34.5	34.3	34.5	35.4	29.5	19.5	13.0	17.6	19.5	14.0	16.2	28.5	32.8	30.5	49.4	47.4	48.0	34.3	50.5	38.5	Diurnal Maximum	

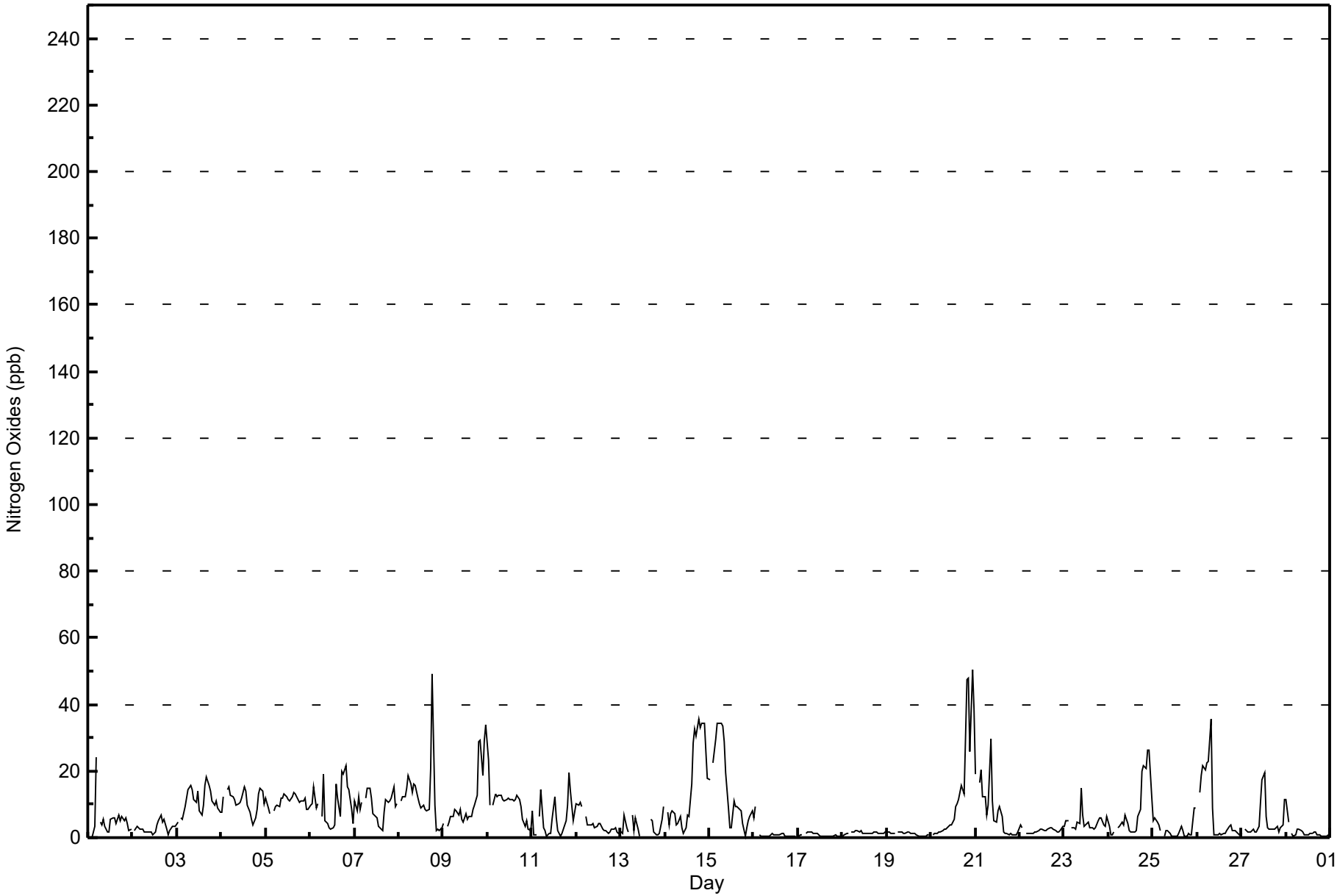
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Wapasu - February 2025



Nitrogen Oxides (NO_X) - ppb
Wapasu - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	600	93.90	93.90
21 - 40	35	5.48	99.37
11 - 80	4	0.63	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 639

Total Number of Hours: 672



Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Wapasu - February 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	76	20	28	17	11	13	24	118	56	65	33	7	1	2	2	38	511
21 - 40	2	1	1	1	2	4	5	7	0	1	0	0	0	0	2	1	27
11 - 80	2	0	0	0	1	0	1	0	0	0	0	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	80	21	29	18	14	17	30	125	56	66	33	7	1	2	4	39	542

Total Number of Valid Hours: 542

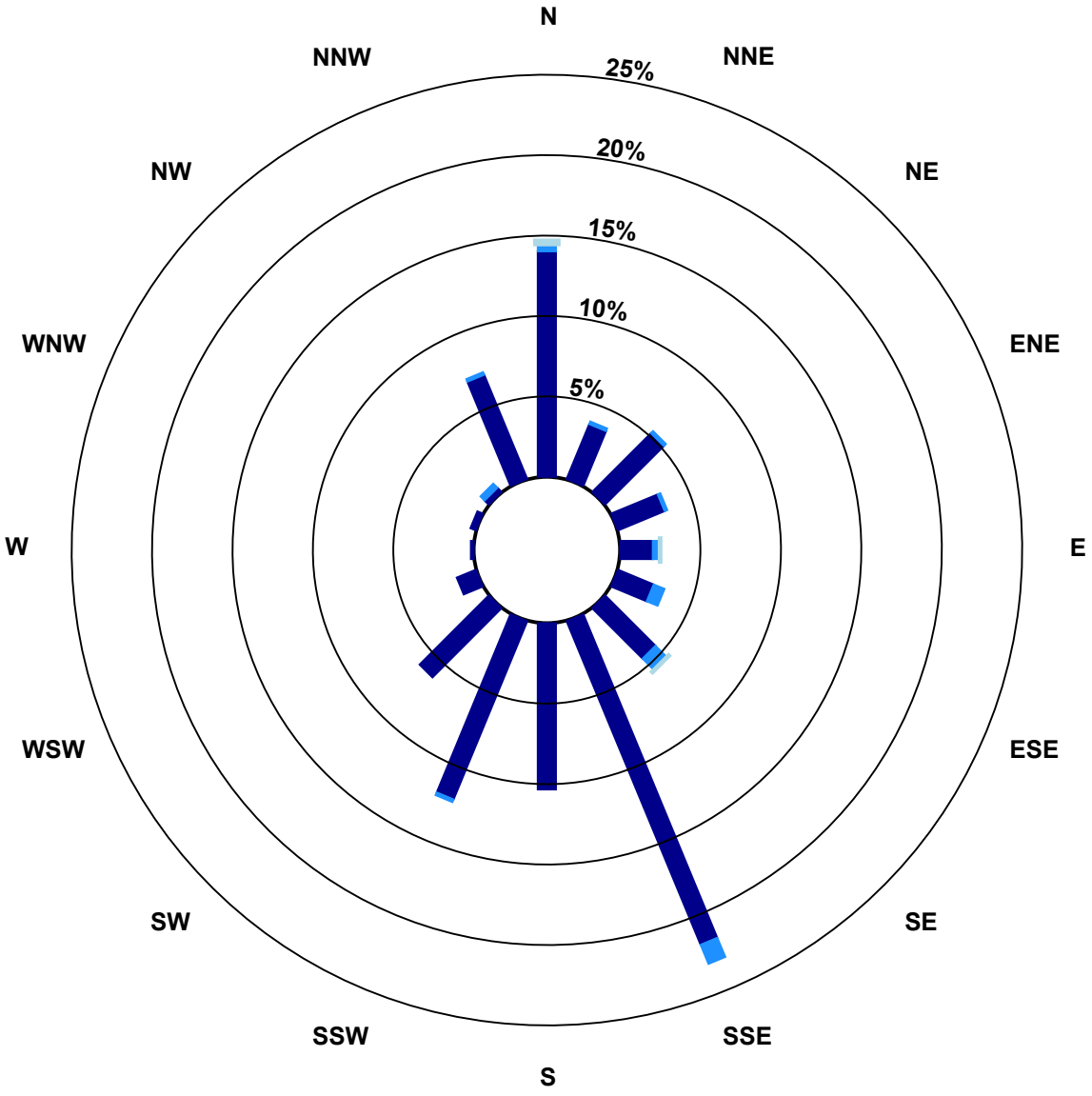
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Oxides (NO_X) - ppb

Wapasu



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

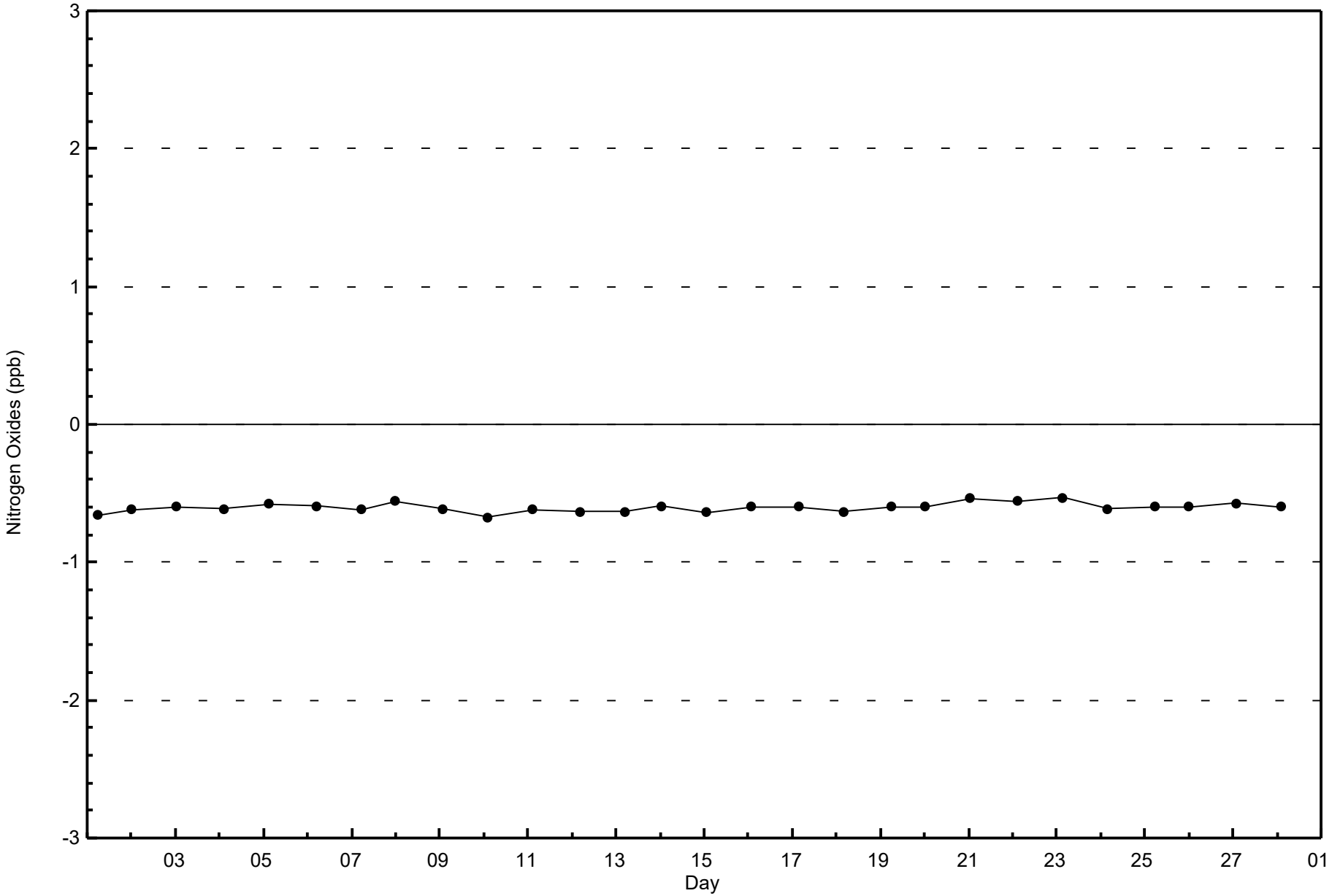
Total Number of Valid Hours: 542

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Wapasu - February 2025

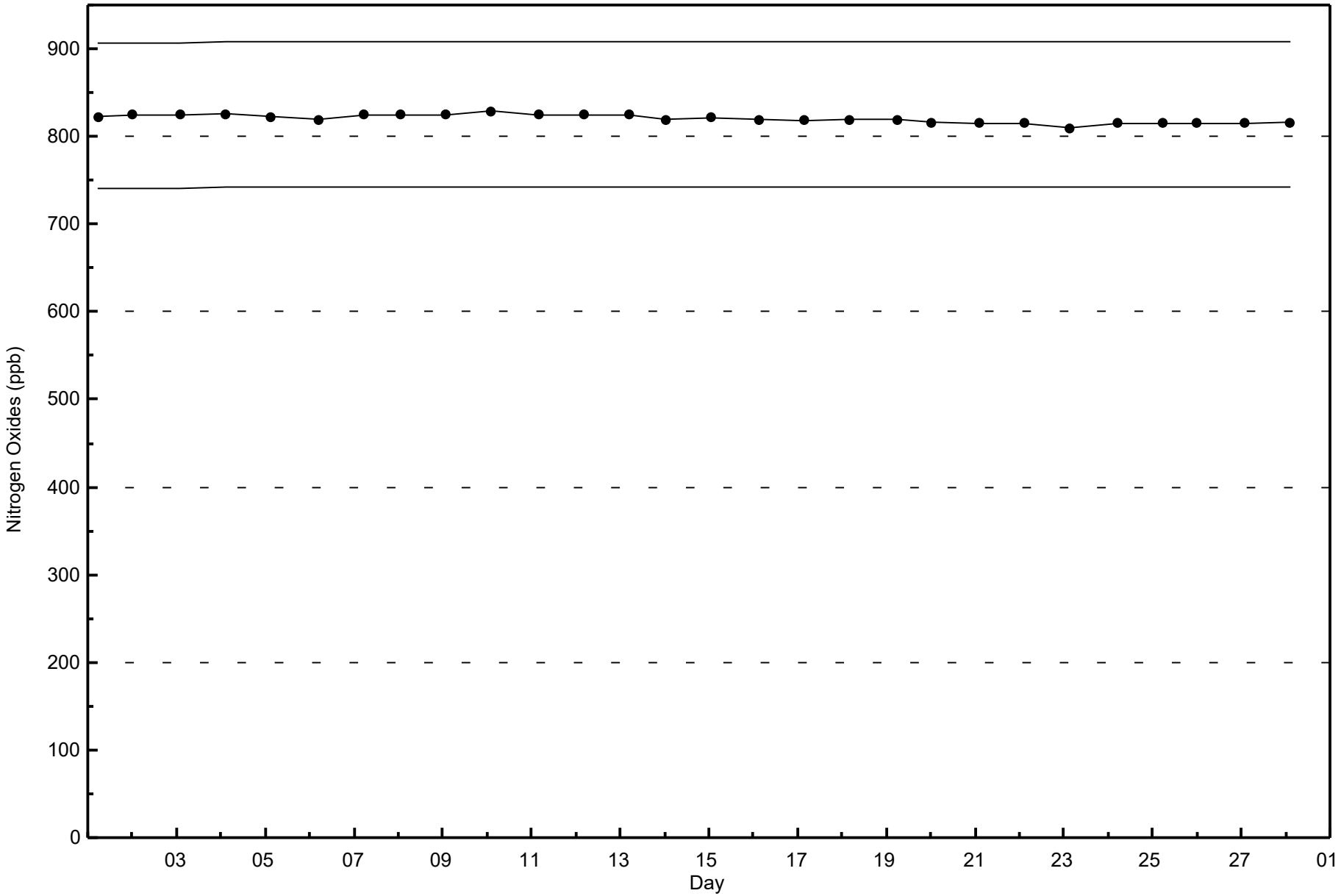


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Wapasu - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Wapasu - February 2025

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

Maximum Value: 19.5 $\mu g/m^3$ on Feb 24 23:00

Maximum Daily Average: 6.8 $\mu g/m^3$ on Feb 24

Minimum Value: 0.9 $\mu g/m^3$ on Feb 13 07:00

Minimum Daily Average: 1.9 $\mu g/m^3$ on Feb 11

Maximum Diurnal Average: 4.6 $\mu g/m^3$ at hour 22

Minimum Diurnal Average: 3.5 $\mu g/m^3$ at hour 7

Monthly Average: 3.84 $\mu g/m^3$

Percentiles: P_1 = 1.3 P_{10} = 1.9 Q_1 = 2.4 Median = 3.3 Q_3 = 4.6 P_{90} = 6.2 P_{99} = 12.2

Hours in Service:	672
Hours of Data:	671
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-Feb	2.1	1.9	1.7	2.0	3.5	3.4	2.3	1.9	2.9	2.8	2.5	2.8	2.8	2.8	2.9	3.2	3.8	4.7	4.7	4.6	4.7	4.7	4.7	4.7	3.2	4.7
2-Feb	4.5	4.4	4.0	3.8	3.7	3.6	3.8	3.8	3.9	4.0	4.0	3.9	4.3	4.0	3.9	4.0	3.6	3.6	3.8	3.6	3.8	3.9	3.6	3.5	3.9	4.5
3-Feb	3.9	3.7	3.5	3.3	2.8	2.6	2.6	2.6	3.0	3.1	3.0	3.9	5.7	7.3	17.1	12.1	6.4	4.0	3.4	3.3	3.3	3.5	2.9	2.7	4.6	17.1
4-Feb	2.8	3.2	3.4	4.8	6.5	5.3	4.8	5.4	4.3	6.6	7.0	5.0	4.4	2.9	2.5	1.6	1.6	1.5	1.7	1.8	2.5	3.2	3.8	3.7	3.8	7.0
5-Feb	3.3	2.6	2.5	2.6	2.2	2.5	2.6	2.5	2.8	3.3	3.3	3.3	3.2	3.1	3.5	3.8	4.1	3.5	3.7	3.3	2.8	2.8	2.7	2.3	3.0	4.1
6-Feb	2.3	2.1	2.3	2.4	2.1	2.3	2.2	2.0	1.3	1.6	1.9	3.3	5.3	7.0	7.2	8.5	9.0	9.7	10.0	10.5	9.2	8.4	8.3	7.4	5.3	10.5
7-Feb	11.2	8.4	6.2	5.1	4.4	4.5	4.0	3.6	3.9	3.6	3.4	3.5	3.5	3.5	3.5	3.3	4.3	5.1	5.2	3.6	3.3	2.9	3.4	5.3	4.5	11.2
8-Feb	5.0	4.5	4.2	3.5	3.3	3.3	3.0	3.3	4.6	4.7	3.5	3.1	5.1	8.8	7.0	5.0	3.4	5.9	8.6	4.1	3.1	3.5	3.4	3.1	4.5	8.8
9-Feb	4.7	5.2	5.2	4.9	5.7	5.3	5.5	6.6	5.6	5.4	6.0	5.4	5.7	5.4	5.3	5.3	5.5	5.9	5.1	4.4	4.0	3.7	3.8	3.7	5.1	6.6
10-Feb	6.9	13.7	5.5	5.8	6.6	8.3	8.2	7.0	5.4	5.3	5.7	6.3	5.7	5.5	4.5	4.6	3.8	3.7	4.1	3.5	2.7	2.9	2.6	2.3	5.4	13.7
11-Feb	2.2	2.0	2.0	1.5	1.5	1.5	1.7	1.9	1.5	1.6	1.6	2.0	3.0	2.4	2.3	2.0	2.0	1.9	1.8	1.6	2.9	2.5	1.6	1.6	1.9	3.0
12-Feb	1.6	1.7	2.1	2.3	2.3	2.1	2.1	2.5	2.5	2.4	2.4	2.6	2.7	3.0	2.4	2.2	2.3	2.1	2.2	2.5	2.6	2.6	2.4	2.3	2.3	3.0
13-Feb	2.0	1.8	1.6	1.6	1.3	1.2	0.9	1.1	2.0	1.7	1.8	1.8	2.5	4.4	3.7	2.4	2.3	2.1	1.8	1.7	1.9	2.0	2.0	1.7	2.0	4.4
14-Feb	1.5	1.4	1.4	1.3	1.5	1.3	1.4	1.6	1.5	1.8	2.6	2.8	3.3	3.5	4.2	5.9	6.4	5.7	5.1	4.8	4.3	3.7	2.8	2.3	3.0	6.4
15-Feb	1.9	1.9	2.5	3.5	4.2	3.9	4.0	4.3	4.6	3.9	2.8	2.1	1.9	2.7	2.6	2.4	2.4	2.5	2.0	1.5	1.3	1.3	1.1	1.0	2.6	4.6
16-Feb	1.2	1.7	1.8	1.7	1.7	1.9	2.0	2.0	2.1	2.1	1.9	2.0	2.2	2.1	2.0	2.3	2.4	2.5	2.6	2.9	3.1	3.1	3.1	2.9	2.2	3.1
17-Feb	2.8	2.8	2.7	2.8	2.6	2.7	2.7	2.6	2.7	2.7	2.3	1.9	1.6	1.6	1.9	2.1	2.3	2.4	2.3	2.1	2.2	2.2	2.1	2.0	2.3	2.8
18-Feb	2.1	2.7	3.0	3.1	3.2	3.2	3.4	3.4	3.1	2.9	3.2	2.4	2.1	1.8	1.9	1.9	1.8	2.0	1.9	1.7	1.5	1.5	1.6	2.1	2.4	3.4
19-Feb	1.9	1.9	2.0	1.9	1.9	2.1	2.1	2.3	2.5	2.6	2.7	3.0	3.0	2.8	2.8	2.6	2.2	2.0	2.3	2.3	2.3	2.3	2.1	2.1	2.3	3.0
20-Feb	2.2	2.3	2.6	2.9	3.3	3.8	4.3	4.6	5.0	5.4	5.8	6.2	6.3	6.7	7.1	6.7	7.7	8.2	7.2	6.4	5.9	5.5	5.8	6.8	5.4	8.2
21-Feb	6.7	6.3	6.5	5.9	5.7	5.5	5.0	4.9	5.1	5.4	4.7	5.2	6.9	6.1	5.3	5.0	4.7	4.8	5.1	4.9	4.6	4.5	4.4	4.6	5.3	6.9
22-Feb	5.1	4.6	4.4	4.4	4.9	4.8	4.6	4.6	4.5	4.5	4.5	4.2	4.4	4.4	4.6	4.8	4.6	4.6	4.4	4.3	4.1	4.0	3.9	3.9	4.5	5.1
23-Feb	4.1	4.7	4.3	3.5	3.4	3.3	2.8	3.0	4.6	4.2	4.5	4.6	4.4	4.2	3.5	3.6	3.6	3.5	3.5	3.9	3.6	14.2	10.6	4.0	4.6	14.2
24-Feb	10.6	4.7	3.3	3.4	3.5	3.1	3.2	3.6	4.9	6.0	5.0	3.9	4.3	4.7	4.4	4.1	4.1	5.7	9.2	11.1	13.6	17.1	19.5	9.5	6.8	19.5
25-Feb	8.6	8.7	3.6	5.6	4.6	2.6	2.4	3.6	7.5	8.3	2.3	2.5	2.4	2.5	2.5	2.9	2.8	2.3	2.3	2.4	2.5	2.6	3.2	3.3	3.8	8.7
26-Feb	3.5	5.5	8.9	9.1	8.6	9.1	9.3	9.2	4.1	3.0	4.3	3.8	3.4	4.2	4.2	C	4.2	4.3	4.5	3.8	3.9	4.1	3.9	4.0	5.3	9.3
27-Feb	4.3	4.9	4.9	4.4	4.1	3.7	3.8	3.2	2.9	2.9	3.4	6.0	6.3	3.6	2.5	2.7	2.5	3.1	2.7	5.5	8.3	12.5	2.5	2.6	4.3	12.5
28-Feb	2.7	4.1	5.2	4.2	3.0	2.3	2.7	3.3	3.6	2.8	2.8	3.0	3.1	3.0	3.1	3.1	3.0	2.8	3.0	3.0	2.9	2.8	2.7	2.7	3.1	5.2
	4.0	4.0	3.6	3.6	3.6	3.5	3.5	3.6	3.7	3.7	3.5	3.6	3.9	4.1	4.2	4.0	3.8	3.9	4.1	3.9	4.0	4.6	4.1	3.5	Diurnal Average	
	11.2	13.7	8.9	9.1	8.6	9.1	9.3	9.2	7.5	8.3	7.0	6.3	6.9	8.8	17.1	12.1	9.0	9.7	10.0	11.1	13.6	17.1	19.5	9.5	Diurnal Maximum	

C - Calibration

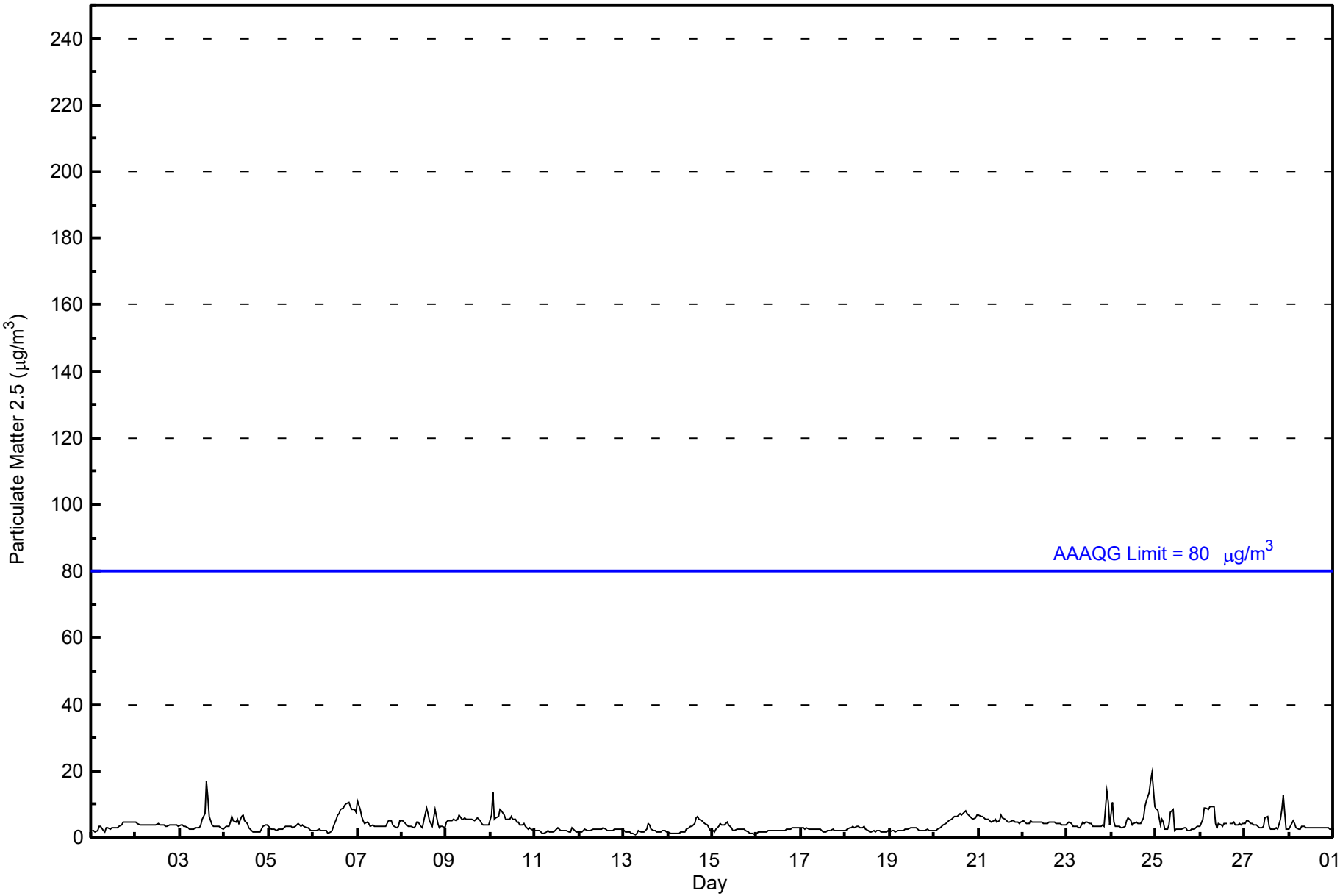
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Wapasu - February 2025



Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	577	85.99	85.99
6 - 15	91	13.56	99.55
16 - 25	3	0.45	100.00
26 - 80	0	0.00	100.00
> 81.0	0	0.00	100.00

Total Number of Valid Hours: 671

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

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

Wapasu - February 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	77	19	29	18	14	15	28	130	52	57	24	5	0	2	1	29	500
6 - 15	10	3	1	1	1	2	4	3	7	11	8	3	1	0	3	11	69
16 - 25	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
26 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 81.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	87	22	30	19	15	17	32	133	59	68	33	8	1	2	4	40	570

Total Number of Valid Hours: 570

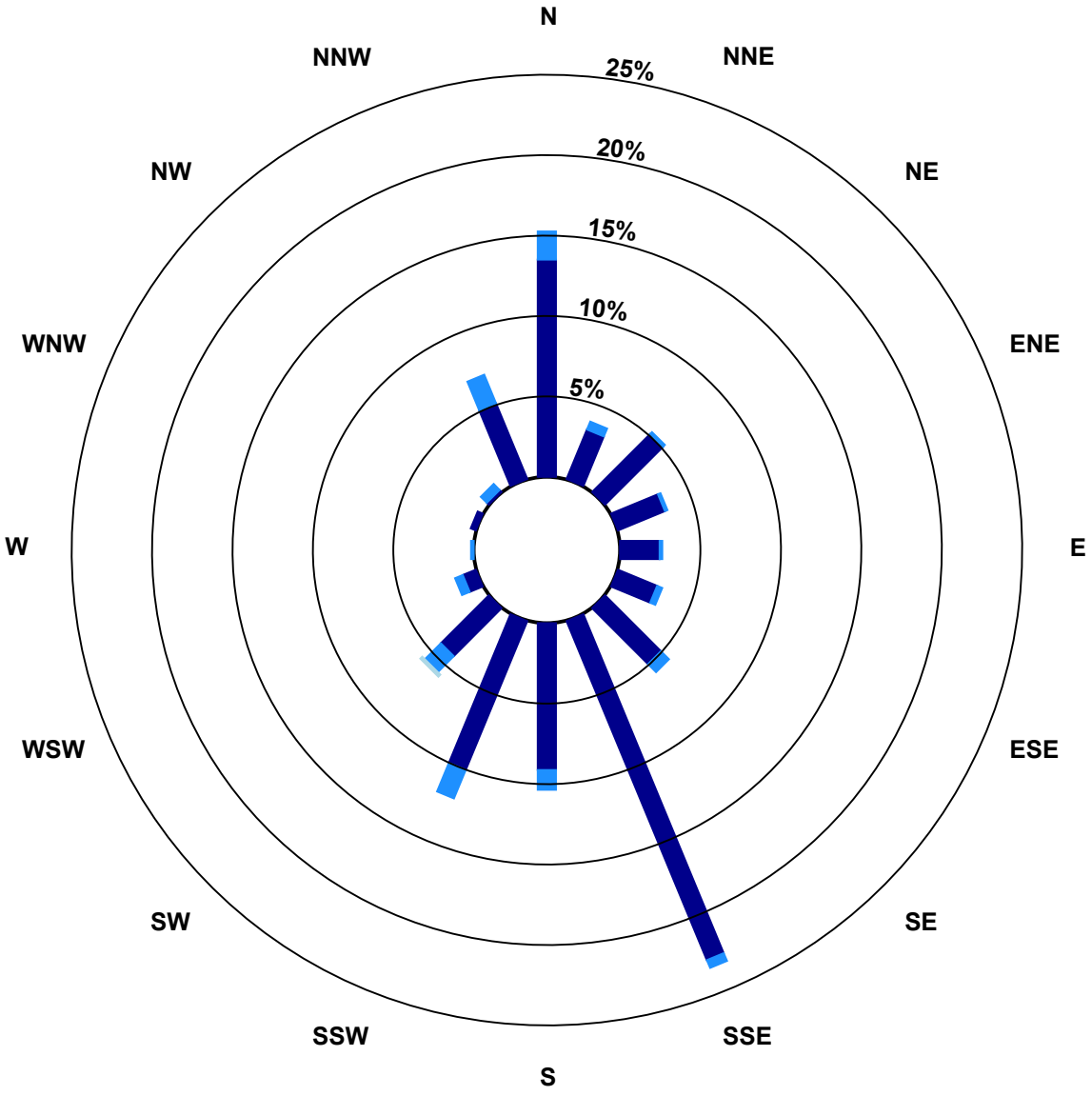
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 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: 570

Maximum Value: 2.2 C on Feb 23 02:00

Maximum Daily Average: -4.1 C on Feb 22

Minimum Value: -39.3 C on Feb 14 07:00

Minimum Daily Average: -32.4 C on Feb 14

Maximum Diurnal Average: -15.2 C at hour 16

Minimum Diurnal Average: -21.8 C at hour 7

Monthly Average: -19.09 C

Percentiles: P_1 = -38.4 P_{10} = -30.0 Q_1 = -25.9 Median = -20.6 Q_3 = -11.8 P_{90} = -6.3 P_{99} = 1.5

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

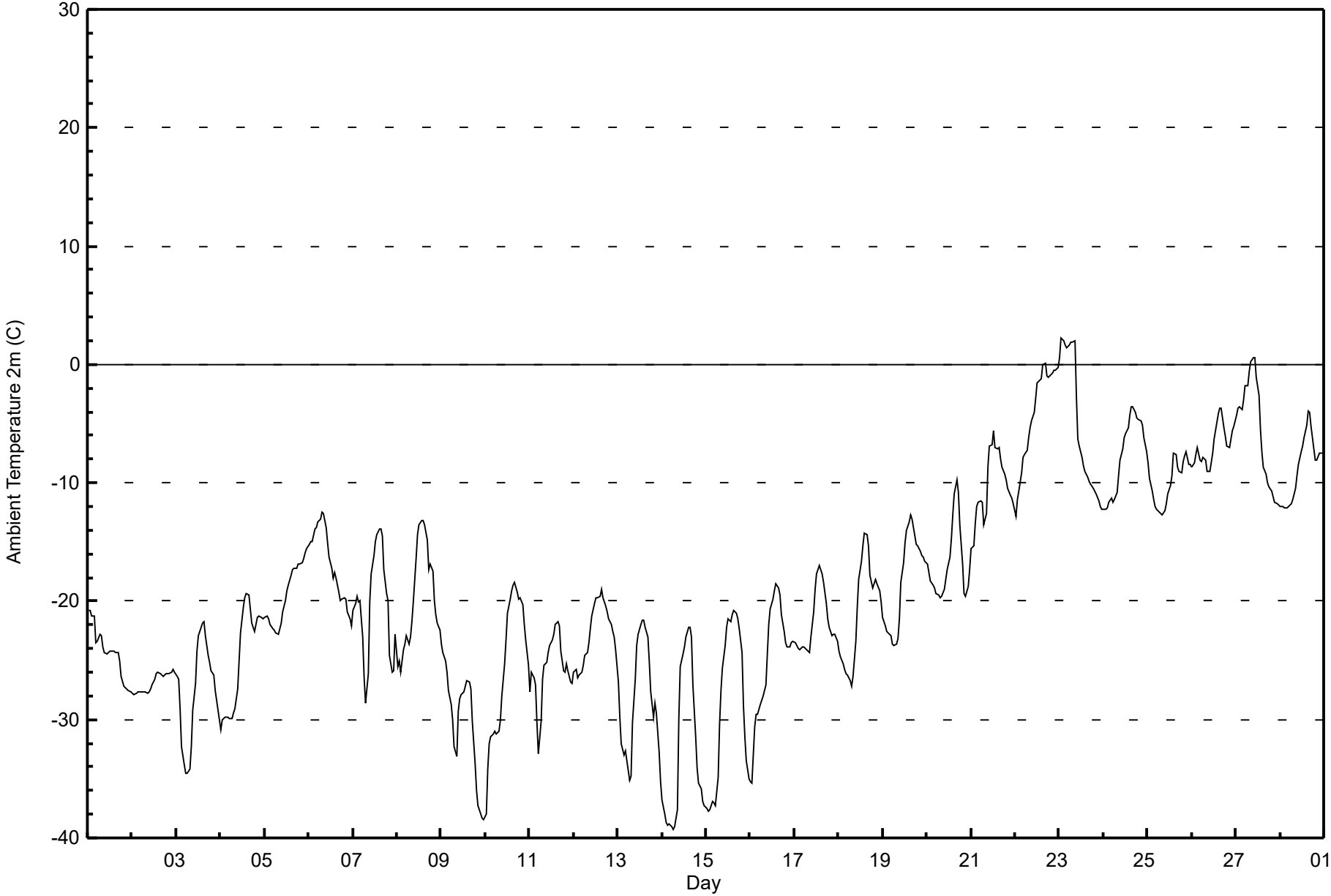
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-20.8	-20.7	-21.2	-21.3	-23.5	-23.4	-22.8	-23.0	-23.8	-24.3	-24.5	-24.3	-24.2	-24.2	-24.2	-24.3	-24.3	-25.1	-26.4	-27.2	-27.3	-27.4	-27.6	-27.7	-24.3	-20.7
2-Feb	-27.8	-27.9	-27.8	-27.7	-27.6	-27.6	-27.7	-27.7	-27.8	-27.7	-27.4	-27.1	-26.6	-26.1	-26.0	-26.1	-26.2	-26.3	-26.1	-26.1	-26.1	-26.0	-25.8	-26.0	-26.9	-25.8
3-Feb	-26.3	-26.6	-29.1	-32.3	-33.9	-34.5	-34.5	-34.1	-32.2	-29.2	-27.0	-24.2	-22.9	-22.2	-21.9	-21.7	-23.0	-24.6	-25.2	-25.9	-26.3	-27.6	-28.4	-30.1	-27.7	-21.7
4-Feb	-30.8	-30.0	-29.8	-29.8	-29.8	-29.9	-29.9	-29.5	-29.1	-27.4	-25.0	-22.6	-20.6	-19.7	-19.3	-19.5	-20.7	-21.9	-22.6	-22.0	-21.4	-21.3	-21.3	-21.4	-24.8	-19.3
5-Feb	-21.3	-21.2	-21.5	-22.0	-22.4	-22.4	-22.7	-22.8	-22.3	-21.8	-20.9	-20.0	-19.1	-18.6	-17.8	-17.4	-17.2	-17.2	-16.9	-16.9	-16.7	-16.4	-16.0	-15.5	-19.5	-15.5
6-Feb	-15.2	-15.0	-14.9	-14.0	-13.8	-13.3	-13.0	-12.5	-12.6	-13.8	-15.1	-16.2	-17.2	-18.0	-17.5	-18.0	-19.2	-20.0	-19.8	-19.8	-19.8	-20.9	-21.5	-22.1	-16.8	-12.5
7-Feb	-20.8	-20.1	-19.6	-20.1	-20.0	-23.1	-26.5	-28.6	-26.1	-20.1	-17.7	-16.1	-14.9	-14.3	-13.9	-13.8	-14.5	-17.4	-19.4	-20.0	-24.6	-26.0	-25.9	-22.8	-20.3	-13.8
8-Feb	-25.5	-25.0	-26.1	-24.1	-23.6	-22.9	-23.7	-23.0	-21.7	-20.1	-16.3	-14.3	-13.6	-13.2	-13.1	-13.5	-14.9	-17.3	-16.9	-17.5	-19.9	-21.1	-21.8	-22.4	-19.6	-13.1
9-Feb	-23.6	-24.4	-25.1	-26.0	-27.5	-28.8	-30.0	-32.3	-33.1	-29.3	-28.2	-27.8	-27.6	-27.2	-26.7	-26.8	-27.4	-30.2	-33.8	-35.9	-37.2	-38.0	-38.3	-38.5	-30.2	-23.6
10-Feb	-38.0	-34.2	-32.0	-31.4	-31.2	-31.0	-31.3	-31.0	-30.1	-28.0	-25.3	-23.3	-21.0	-19.8	-19.1	-18.6	-18.4	-19.2	-19.9	-19.7	-20.3	-22.0	-23.2	-25.4	-25.6	-18.4
11-Feb	-27.6	-26.0	-26.5	-27.1	-30.3	-32.9	-30.1	-26.6	-25.4	-25.2	-24.3	-23.7	-23.3	-22.8	-21.9	-21.7	-22.1	-24.3	-25.8	-26.0	-25.3	-25.9	-26.9	-27.0	-25.8	-21.7
12-Feb	-26.0	-25.7	-26.4	-26.2	-26.0	-25.4	-24.5	-24.3	-23.5	-22.4	-21.3	-20.2	-19.8	-19.8	-19.6	-19.0	-19.7	-20.4	-20.9	-21.4	-22.0	-22.6	-23.1	-24.1	-22.7	-19.0
13-Feb	-26.9	-29.8	-32.0	-33.0	-32.7	-33.5	-35.1	-34.7	-30.3	-26.6	-23.7	-22.8	-22.0	-21.6	-21.6	-22.2	-23.0	-25.2	-27.7	-29.8	-28.6	-29.4	-32.7	-35.2	-28.3	-21.6
14-Feb	-36.8	-38.0	-38.6	-39.0	-38.8	-39.1	-39.3	-39.1	-37.7	-29.9	-25.5	-24.5	-23.9	-23.1	-22.2	-22.2	-23.0	-27.1	-31.4	-34.0	-35.3	-35.9	-36.9	-37.3	-32.4	-22.2
15-Feb	-37.5	-37.8	-37.6	-37.0	-37.0	-37.2	-35.0	-30.4	-27.5	-25.7	-23.7	-22.2	-21.5	-21.7	-21.1	-20.8	-21.0	-21.5	-22.3	-24.4	-28.8	-31.5	-33.5	-35.0	-28.8	-20.8
16-Feb	-35.3	-35.4	-30.7	-29.6	-29.5	-28.7	-28.4	-28.1	-27.1	-24.5	-22.0	-20.7	-19.8	-19.1	-18.6	-18.8	-19.5	-21.1	-22.6	-23.5	-23.8	-23.9	-23.5	-23.4	-24.9	-18.6
17-Feb	-23.5	-23.8	-24.0	-24.1	-23.8	-23.8	-23.9	-24.2	-24.3	-23.1	-20.9	-19.0	-17.7	-17.0	-17.3	-17.7	-18.4	-20.2	-21.5	-22.2	-22.9	-22.8	-22.8	-23.4	-21.8	-17.0
18-Feb	-24.2	-24.7	-25.2	-25.7	-26.1	-26.3	-26.7	-27.2	-26.3	-23.4	-20.5	-18.1	-16.6	-15.3	-14.3	-14.4	-15.4	-17.9	-18.8	-18.5	-18.2	-18.5	-19.1	-20.1	-20.9	-14.3
19-Feb	-21.3	-22.1	-22.6	-22.7	-23.0	-23.6	-23.7	-23.6	-23.1	-21.5	-18.4	-16.7	-15.1	-14.0	-13.3	-12.7	-13.1	-14.5	-15.3	-15.3	-15.9	-16.1	-16.3	-16.6	-18.4	-12.7
20-Feb	-16.9	-17.6	-18.3	-18.6	-18.9	-19.3	-19.5	-19.7	-19.6	-18.9	-18.2	-17.4	-16.3	-14.7	-12.7	-10.9	-9.8	-10.8	-13.6	-16.8	-19.4	-19.6	-18.8	-17.4	-16.8	-9.8
21-Feb	-15.5	-15.3	-13.5	-12.0	-11.7	-11.5	-11.7	-13.5	-12.6	-8.6	-7.0	-6.8	-5.6	-7.1	-7.1	-7.0	-8.0	-8.7	-9.3	-9.8	-10.5	-11.0	-11.2	-11.8	-10.3	-5.6
22-Feb	-12.9	-11.4	-10.7	-9.2	-7.8	-7.6	-7.3	-6.1	-5.3	-4.7	-4.0	-2.8	-1.6	-1.4	-1.2	0.0	0.1	-1.0	-1.1	-0.9	-0.7	-0.5	-0.5	-0.3	-4.1	0.1
23-Feb	0.6	2.2	2.0	1.7	1.5	1.6	1.8	1.9	2.0	-2.8	-6.3	-6.9	-7.8	-8.5	-9.0	-9.6	-9.8	-10.1	-10.5	-10.7	-10.9	-11.5	-11.9	-12.2	-5.1	2.2
24-Feb	-12.3	-12.3	-12.2	-11.7	-11.3	-11.7	-11.4	-10.8	-9.4	-8.1	-7.1	-6.2	-5.8	-5.4	-4.3	-3.6	-3.6	-4.1	-4.6	-4.7	-4.7	-5.1	-6.2	-7.4	-7.7	-3.6
25-Feb	-8.4	-9.6	-10.7	-11.4	-12.0	-12.3	-12.5	-12.6	-12.8	-12.4	-11.7	-11.0	-10.2	-9.4	-7.5	-7.7	-8.7	-9.0	-9.1	-8.3	-7.7	-7.3	-8.4	-8.5	-10.0	-7.3
26-Feb	-8.7	-8.3	-7.6	-7.0	-8.1	-8.2	-7.8	-8.0	-9.0	-9.1	-9.0	-7.5	-6.3	-5.6	-4.2	-3.7	-3.7	-5.3	-6.1	-6.9	-7.0	-6.3	-5.6	-5.2	-6.8	-3.7
27-Feb	-4.3	-3.7	-3.6	-3.8	-2.9	-1.8	-1.8	-0.6	0.2	0.6	0.5	-1.1	-2.6	-5.5	-7.4	-8.6	-9.3	-9.9	-10.3	-10.6	-11.2	-11.6	-11.8	-11.9	-5.5	0.6
28-Feb	-12.0	-12.0	-12.1	-12.1	-12.1	-11.9	-11.7	-11.4	-10.5	-9.4	-8.4	-7.4	-6.9	-6.1	-5.1	-3.9	-4.0	-5.2	-7.1	-8.1	-8.1	-7.5	-7.4	-7.4	-8.7	-3.9
	-21.4	-21.3	-21.3	-21.3	-21.6	-21.8	-21.8	-21.6	-20.8	-19.2	-17.8	-16.8	-16.1	-15.8	-15.3	-15.2	-15.6	-17.0	-18.0	-18.7	-19.3	-19.8	-20.2	-20.6	Diurnal Average	
	0.6	2.2	2.0	1.7	1.5	1.6	1.8	1.9	2.0	0.6	0.5	-1.1	-1.6	-1.4	-1.2	0.0	0.1	-1.0	-1.1	-0.9	-0.7	-0.5	-0.5	-0.3	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Wapasu - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	348	51.79	51.79
-20 - 0	310	46.13	97.92
0 - 10	14	2.08	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Wapasu - February 2025

Maximum Value: 100.0 % on Feb 23 07:00

Maximum Daily Average: 93.0 % on Feb 23

Minimum Value: 33.9 % on Feb 18 15:00

Minimum Daily Average: 46.6 % on Feb 19

Maximum Diurnal Average: 78.7 % at hour 8

Minimum Diurnal Average: 69.3 % at hour 16

Monthly Average: 75.68 %

Percentiles: P_1 = 40.7 P_{10} = 61.7 Q_1 = 69.9 Median = 76.5 Q_3 = 84.1 P_{90} = 90.2 P_{99} = 98.5

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

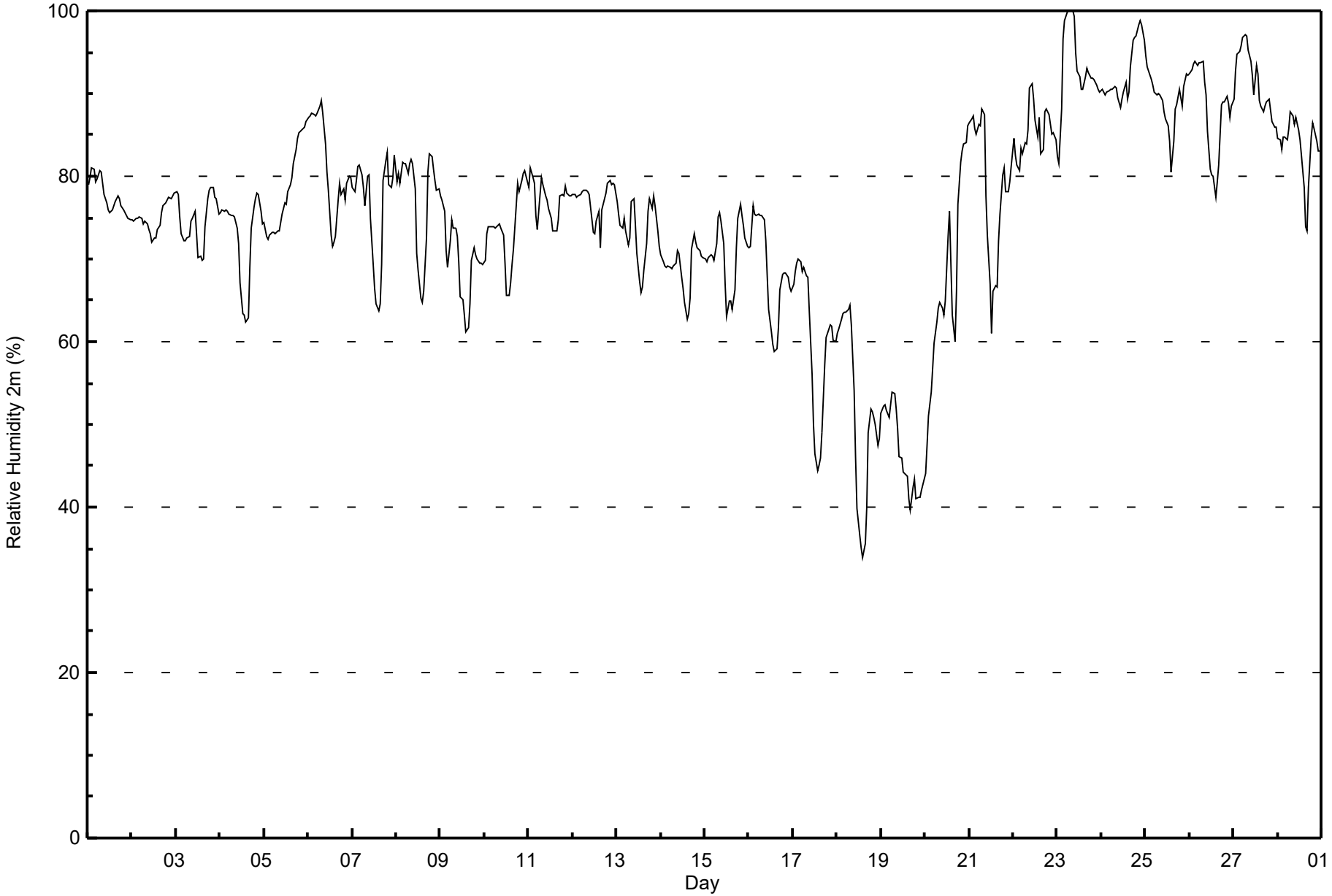
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	79.0	79.9	81.0	80.8	79.3	79.7	80.7	80.5	79.1	77.8	76.7	75.9	75.6	75.8	76.4	76.9	77.7	77.3	76.5	76.0	75.5	75.3	74.9	74.8	77.6	81.0
2-Feb	74.8	74.5	75.0	74.9	75.1	75.0	74.2	74.6	74.3	73.6	73.0	72.0	72.5	72.5	73.5	74.1	75.6	76.5	76.7	77.0	77.4	77.3	77.7	78.0	75.0	78.0
3-Feb	78.1	77.8	75.1	73.1	72.3	72.1	72.5	72.8	74.5	75.0	75.7	73.0	70.2	70.3	69.8	69.9	73.9	77.4	78.3	78.6	78.7	77.5	77.2	75.5	74.5	78.7
4-Feb	75.6	75.9	75.8	75.9	75.7	75.5	75.2	75.3	75.0	73.7	71.9	67.1	63.4	63.3	62.4	63.0	69.0	73.8	76.2	77.2	78.0	77.7	75.8	74.2	72.8	78.0
5-Feb	74.4	72.8	72.4	72.9	73.3	73.2	73.1	73.4	73.5	74.4	75.4	76.7	76.7	78.2	79.0	79.9	81.5	83.2	84.6	85.3	85.7	85.7	86.0	86.5	78.2	86.5
6-Feb	87.2	87.3	87.7	87.4	87.3	87.7	88.5	89.2	87.6	84.0	80.5	78.4	73.0	71.6	72.0	72.8	77.1	79.1	77.8	78.5	77.1	79.1	80.1	79.9	81.3	89.2
7-Feb	78.7	78.2	79.6	81.2	81.3	80.1	78.6	76.4	80.0	80.2	75.0	69.2	66.4	64.6	63.8	64.6	69.3	79.6	81.8	82.9	79.0	78.7	79.8	82.6	76.3	82.9
8-Feb	79.4	80.4	79.2	81.7	81.5	81.6	80.3	81.6	82.0	81.4	78.5	70.7	68.6	65.3	64.8	66.2	72.6	80.6	82.7	82.4	80.8	79.5	78.2	78.5	77.4	82.7
9-Feb	77.7	77.1	75.7	71.0	68.9	72.1	74.7	73.8	73.7	72.7	69.6	65.4	65.0	63.2	61.2	61.6	64.5	69.9	71.4	70.5	69.9	69.5	69.5	69.4	69.9	77.7
10-Feb	69.8	73.1	73.9	73.9	74.0	74.0	73.8	74.1	74.2	73.8	72.9	69.6	65.6	65.7	67.1	69.4	71.1	76.5	79.1	78.2	79.4	80.4	80.7	79.2	73.7	80.7
11-Feb	78.6	81.0	79.8	79.2	75.3	73.5	77.9	79.8	79.0	77.6	77.0	76.2	75.0	73.4	73.5	73.3	74.7	77.6	77.9	77.7	78.8	77.9	77.7	77.6	77.1	81.0
12-Feb	77.8	77.7	77.4	77.7	77.8	78.1	78.2	78.3	78.1	77.7	76.3	73.2	73.0	74.5	75.8	71.4	75.9	77.3	78.0	79.1	79.5	79.0	79.1	78.9	77.1	79.5
13-Feb	77.0	75.4	74.1	73.7	74.9	73.3	71.7	72.5	76.9	77.4	74.0	70.7	67.3	66.0	66.6	68.7	71.8	75.7	77.3	76.0	77.7	76.4	73.3	71.5	73.3	77.7
14-Feb	70.4	69.7	69.2	69.0	69.2	69.0	68.9	69.1	69.5	71.1	70.6	67.8	66.4	64.8	62.8	63.3	65.3	71.2	73.1	72.0	71.3	71.1	70.3	70.2	69.0	73.1
15-Feb	70.1	69.7	70.1	70.5	70.3	69.9	71.9	75.1	75.6	74.6	71.8	66.9	63.1	64.9	64.9	63.9	66.2	71.4	74.9	76.7	75.2	74.0	72.5	71.5	70.7	76.7
16-Feb	71.4	71.5	76.5	75.4	75.3	75.4	75.2	75.2	74.8	72.3	67.9	63.9	61.2	59.7	58.8	59.2	61.7	66.4	68.1	68.4	68.3	67.7	66.7	66.1	68.6	76.5
17-Feb	67.0	68.5	69.5	70.0	69.6	68.5	68.9	68.0	67.8	63.7	56.1	50.0	46.4	44.4	45.0	46.0	49.0	57.1	60.5	61.0	62.1	61.9	60.1	60.0	60.0	70.0
18-Feb	61.0	61.5	62.7	63.4	63.5	63.5	63.9	64.5	62.0	54.1	46.0	39.9	36.6	35.0	33.9	35.7	39.9	48.9	51.9	51.5	50.9	50.0	47.4	48.4	51.5	64.5
19-Feb	51.3	52.3	52.4	51.6	50.8	52.4	53.8	53.7	51.9	49.5	46.1	45.9	44.2	44.1	43.8	41.0	39.7	42.4	43.3	41.0	41.2	41.2	42.0	42.8	46.6	53.8
20-Feb	44.1	47.4	51.0	53.8	56.8	59.8	62.3	64.1	64.8	64.1	63.2	64.9	72.7	75.8	69.5	63.2	60.0	66.0	76.7	81.7	83.1	84.0	84.1	86.2	66.6	86.2
21-Feb	86.4	86.9	87.2	85.8	85.1	86.3	86.0	88.2	87.4	77.7	73.0	66.9	61.1	66.1	66.9	66.6	72.2	75.5	80.2	81.1	78.1	78.2	79.4	81.2	78.5	88.2
22-Feb	84.6	82.6	81.3	80.6	83.4	82.7	84.1	83.9	85.6	90.8	91.1	89.3	86.8	84.7	87.1	82.8	83.2	87.8	88.2	87.4	86.2	85.1	85.3	84.4	85.4	91.1
23-Feb	82.3	81.5	88.2	96.7	98.8	99.8	100.0	100.0	100.0	99.3	95.0	92.8	92.1	90.5	90.6	92.0	93.0	92.6	91.9	91.9	91.7	90.9	90.5	90.2	93.0	100.0
24-Feb	90.5	90.2	89.8	90.1	90.3	90.6	90.5	90.9	90.7	89.5	88.4	89.4	90.2	91.4	89.3	90.2	93.2	96.4	96.8	97.0	98.4	98.9	98.4	96.5	92.4	98.9
25-Feb	94.6	93.2	92.1	91.7	91.0	90.2	89.9	89.9	89.8	89.1	87.9	87.0	86.0	84.2	80.6	84.2	88.1	88.6	90.4	89.5	88.5	90.9	92.4	92.2	89.2	94.6
26-Feb	92.3	93.0	93.6	93.8	93.4	93.7	93.7	93.9	91.4	89.8	85.5	80.8	80.3	80.0	77.5	79.3	81.4	88.6	89.1	89.0	89.6	88.9	87.1	88.4	88.1	93.9
27-Feb	89.3	92.7	94.7	95.2	95.8	96.9	97.2	96.9	95.2	93.9	92.2	89.8	93.4	92.4	89.2	88.5	87.9	88.5	89.0	89.3	88.0	86.7	86.0	85.9	91.4	97.2
28-Feb	84.6	84.4	83.3	84.7	84.7	84.4	85.8	87.8	87.2	86.3	87.1	85.6	84.4	82.5	78.6	73.9	73.3	78.6	84.7	86.5	85.7	84.3	83.0	83.1	83.5	87.8
	76.7	77.0	77.4	77.7	77.7	77.8	78.3	78.7	78.6	77.3	74.9	72.1	70.6	70.2	69.4	69.3	71.7	75.9	77.8	78.0	77.7	77.4	77.0	76.9	Diurnal Average	
	94.6	93.2	94.7	96.7	98.8	99.8	100.0	100.0	100.0	99.3	95.0	92.8	93.4	92.4	90.6	92.0	93.2	96.4	96.8	97.0	98.4	98.9	98.4	96.5	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Wapasu - February 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	7	1.04	1.04
40 - 60	49	7.29	8.33
60 - 80	391	58.18	66.52
80 - 100	222	33.04	99.55

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Precipitation (PC) - mm

Wapasu - February 2025

Maximum Value: 1.4 mm on Feb 23 06:00

Maximum Daily Total: 7.6 mm on Feb 23

Minimum Value: 0.0 mm on Feb 2 10:00

Minimum Daily Total: 0.0 mm on Feb 3

Maximum Diurnal Total: 2.5 mm at hour 4

Minimum Diurnal Total: 0.3 mm at hour 24

Monthly Total: 25.37 mm

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

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

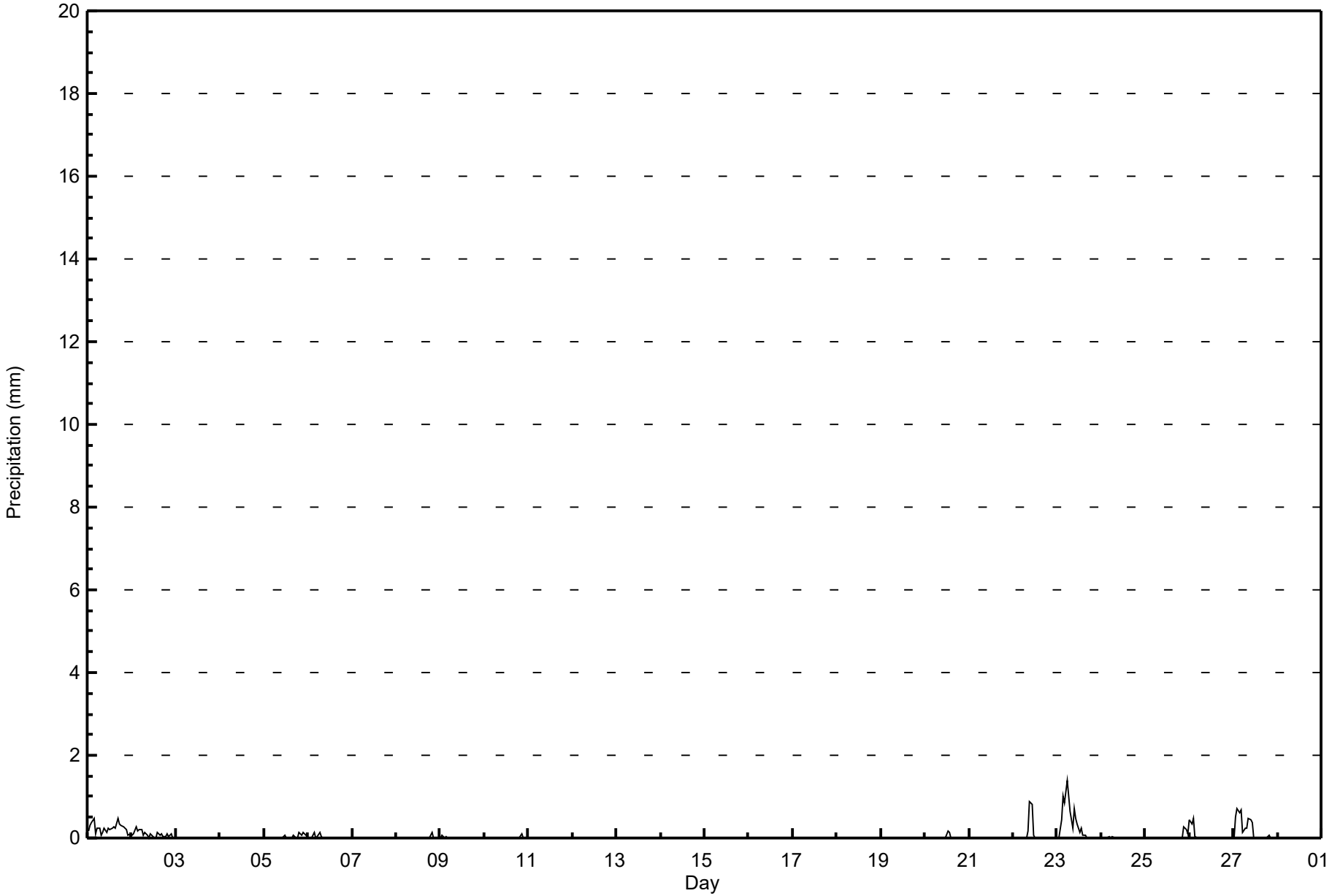
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.2	0.3	0.4	0.5	0.1	0.2	0.2	0.1	0.1	0.3	0.1	0.3	0.2	0.2	0.3	0.3	0.5	0.4	0.3	0.3	0.2	0.2	0.1	0.1	5.7	0.5
2-Feb	0.1	0.1	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	2.1	0.3
3-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.6	0.1
6-Feb	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1
7-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1
9-Feb	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
10-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1
11-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2
21-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.9	0.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.9
23-Feb	0.0	0.0	0.4	1.0	0.8	1.4	1.0	0.6	0.2	0.7	0.5	0.4	0.1	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.6	1.4
24-Feb	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	0.0	0.0	0.1	0.1
25-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.1	0.6	0.3
26-Feb	0.4	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.5
27-Feb	0.0	0.5	0.7	0.6	0.7	0.1	0.2	0.3	0.5	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	4.5	0.7
28-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.7	1.3	2.3	2.5	1.9	2.0	1.7	1.2	1.0	2.3	1.9	0.8	0.5	0.6	0.5	0.4	0.6	0.4	0.4	0.7	0.4	0.7	0.4	0.3	Diurnal Average	
	0.4	0.5	0.7	1.0	0.8	1.4	1.0	0.6	0.5	0.9	0.8	0.4	0.2	0.3	0.3	0.3	0.5	0.4	0.3	0.3	0.2	0.3	0.2	0.1	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Precipitation (PC) - mm

Wapasu - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Wapasu - February 2025

Maximum Speed: 23 km/h on Feb 19 20:00

Maximum Daily Speed Average: 17.8 km/h on Feb 19

Minimum Speed Value: 0 km/h on Feb 9 19:00

Minimum Daily Speed Average: 1.4 km/h on Feb 15

Maximum Diurnal Speed Average: 4.0 km/h at hour 6

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

Monthly Average Velocity: 2.3 km/h 164.1 deg

Percentiles: $P_1 = 2$ $P_{10} = 4$ $Q_1 = 5$ Median = 8 $Q_3 = 12$ $P_{90} = 15$ $P_{99} = 19$

Hours in Service: 672

Hours of Data: 570

Hours of Missing Data: 102

Percent Operational Time: 84.8

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-Feb	NE8	NNE7	NNE8	NNE8	N9	N9	N9	N10	N12	N12	N13	N12	N13	NNW14	NNW13	N15	NNW12	NNW15	NNW17	NNW15	N15	N15	N16	N17	N11.8	N17
2-Feb	N17	N17	N15	N15	N13	N13	N16	N13	N14	N15	N13	N14	N13	N13	NNW13	NNW12	N10	N9	N9	N8	N8	N8	N11	N9	N12.2	N17
3-Feb	N8	N5	NNW1	SSE3	SE4	SE4	SSE4	SSE4	SSE5	S5	SSW5	SW7	SW9	SW7	SW8	SW8	SSW7	SSW6	SSW6	S5	SSW5	SSW5	SSW5	S5	SSW3.9	SW9
4-Feb	S6	S6	S6	S6	S6	S7	S8	S8	S8	SSW10	SSW10	SSW12	SSW13	SW13	SSW13	SSW13	SSW12	SSW10	SSW9	SSW11	SW13	SW16	SW15	SSW16	SSW10.0	SW16
5-Feb	SSW16	SSW16	SSW14	SSW14	SSW12	SSW12	SSW13	SSW12	SSW12	SSW11	SSW12	SSW11	SSW11	SSW10	SSW10	SSW10	SSW8	SSW8	SSW7	SSW6	SW7	SSW6	SW6	SW6	SSW10.4	SSW16
6-Feb	SW8	SW7	SW7	SW9	SW8	WSW7	WNW3	NNW8	N10	N16	N16	N18	N19	NNW18	NNW15	NNW14	NNW11	NNW9	NNW9	NW4	NNW5	N3	W3	WSW3	NNW6.5	N19
7-Feb	WSW5	SW5	SW6	SW7	SW7	SSW4	SSW4	SSE4	S5	SW5	SW8	WSW8	WSW9	SW9	SW9	WSW9	SSW5	S4	S4	SW5	SSE4	SE5	SSE6	SSE5	SSW5.2	SW9
8-Feb	SSE5	SSE6	SSE5	SSE5	SSE6	SSE7	SSE6	SSE6	SSE5	SSE5	S3	SW3	WNW5	N5	NNW5	NNW6	NNW5	NNE3	N6	N15	N15	N16	N16	N14	N2.1	N16
9-Feb	NNW16	N17	N14	NNW14	N9	N8	N5	NNE4	NNE5	N6	N9	N11	N12	NNW12	NNW12	N10	NNW7	NNW2	ESE0	SE2	SE3	SSE4	SSE4	SSE4	N6.5	NNW17
10-Feb	SSE5	SSE5	S6	S7	S7	S7	S7	S7	S7	SSW9	SSW10	SSW10	SSW11	SSW11	SSW8	SW6	S1	NE3	NE3	NNE7	NNE5	NE5	NE6	ENE4	S3.8	SSW11
11-Feb	NE5	NE6	NE6	NE6	NE2	NNE4	NNE5	NE7	NNE8	NNE9	NNE9	N9	NNW9	NNW8	NNW6	NNW5	N4	NNE3	ESE2	E2	ENE4	E4	ESE4	SE4	NNE4.1	NNE9
12-Feb	SSE4	SSE5	SSE5	SSE5	SSE4	SSE5	SSE5	SSE5	SSE5	SSE5	SSE4	SSW2	N5	N7	NNE6	ESE5	E7	E6	ENE4	NNE3	NE4	ENE4	ENE4	ENE3	ESE2.6	N7
13-Feb	NE3	NE4	NE4	NE5	NE5	ENE2	ESE2	ENE5	ENE5	NE4	NNE5	NNE7	N7	N8	N9	N7	N6	N4	NE5	ENE5	NE7	NE5	E3	E3	NE4.4	N9
14-Feb	E2	ESE3	E3	ENE3	ENE3	E3	ENE4	ENE4	ESE2	NE2	N5	N6	N7	N6	N4	NW5	NNW4	NE2	ESE3	E4	ESE4	SSE4	ESE3	SE4	NE2.1	N7
15-Feb	SE4	SSE4	SSE5	SE5	SE4	SE5	SSE5	SSE4	SSW3	SW2	NW6	NNW10	NNW12	NNW11	NNW11	NNW8	NNW6	NNW3	NNE4	NE4	ENE3	E3	ESE3	ESE4	N1.4	NNW12
16-Feb	SE4	SSE5	SE7	SSE6	SSE7	SSE8	SSE8	SSE8	SSE8	SSE9	S9	S10	S10	S10	SSE11	SSE12	SSE11	SSE11	SSE13	SE14	SE14	SSE15	SSE15	SSE17	SSE10.0	SSE17
17-Feb	SSE16	SSE14	SSE13	SSE13	SSE13	SSE13	SSE14	SSE15	SSE15	SSE14	S13	S12	S12	SSE11	SSE13	SSE14	SSE13	SE10	SE12	SE13	SE13	SSE15	SSE14	SSE13	SSE13.1	SSE16
18-Feb	SSE13	SSE11	SSE9	S10	SSE9	S8	S10	SSE10	S9	S9	SSW11	SSW11	SSW11	S11	SSW11	SSW11	S10	SSE12	SSE14	SSE15	SSE16	SSE17	SSE19	SSE17	S11.3	SSE19
19-Feb	SSE15	SSE16	SSE16	SSE16	SSE14	SSE17	SSE17	SSE17	SSE16	SSE19	SSE18	SSE18	S15	SSE18	SSE17	SSE18	SSE16	SSE17	SSE20	SSE23	SSE21	SSE21	SSE23	SSE21	SSE17.8	SSE23
20-Feb	SSE19	SSE16	SSE15	S14	S13	S13	S12	S14	SSW15	SSW14	SSW13	SSW13	SSW14	SW14	SW15	SW12	SSW6	S4	SSE4	SE3	E2	N3	N5	ENE6	S9.1	SSE19
21-Feb	ESE6	SE5	SE5	ESE4	SE4	E3	ENE2	SSE4	E3	NE2	NNW3	N8	N7	N9	N9	NNE7	NE8	NE6	NE6	NE5	NNE5	ENE6	NE4	E6	NE3.6	N9
22-Feb	ESE3	SE9	SE9	SE8	SE9	SE12	SSE7	SSE10	SE13	SSE12	SE16	SSE14	S10	S11	S11	S10	S9	S7	S9	SSE9	SSE10	S9	S8	S8	SSE9.3	SE16
23-Feb	S9	SSW8	S7	S5	SSE5	S5	SSW5	SSW6	WSW10	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	----	WSW10
24-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	----	----
25-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	----	----
26-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	ENE6	E5	ESE7	SE7	SE8	SE9	UO	UO	----	SE9
27-Feb	UO	UO	UO	UO	UO	SSE5	SSE7	SSE6	SSE11	SSW8	SW12	WSW14	NW12	N19	N18	N17	N15	N11	NNE10	N10	UO	UO	UO	UO	----	N19
28-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	S9	S9	S9	SSW8	SSE8	SSE9	SSE10	SSE10	SSE10	SSE10	SSE10	SSE9	----	SSE10
	SSE3.1	SSE3.4	SSE3.6	SSE3.6	SSE3.7	SSE4.0	SSE3.7	SSE3.9	SSE3.7	SSE3.0	SSW2.3	SW2.1	W2.5	W2.3	W2.2	WSW1.7	S0.5	SE1.6	SE2.6	SE2.5	SE2.9	SE3.4	SSE3.2	SSE3.8		Diurnal Average
	SSE19	N17	SSE16	SSE16	SSE14	SSE17	SSE17	SSE17	SSE16	SSE19	SSE18	SSE18	N19	N19	N18	SSE18	SSE16	SSE17	SSE20	SSE23	SSE21	SSE21	SSE23	SSE21		Diurnal Maximum

M - Maintenance UO - Unstable Operation

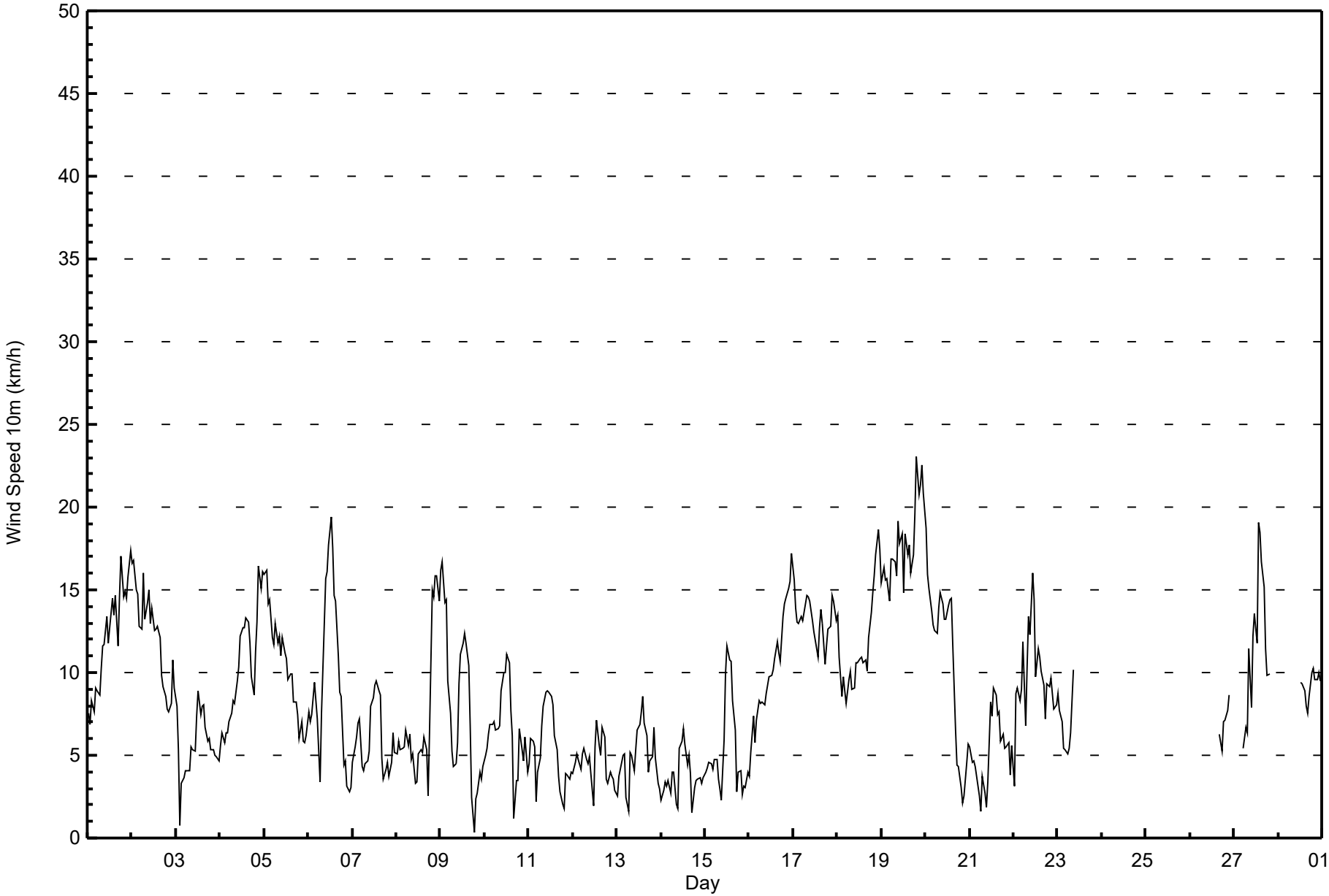
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Wapasu - February 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	181	31.75	31.75
6 - 11	228	40.00	71.75
12 - 19	155	27.19	98.95
20 - 28	6	1.05	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 570

Total Number of Hours: 672



Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Wapasu - February 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	11	20	16	12	15	16	38	9	12	5	2	1	2	2	9	181
6 - 11	37	11	10	3	3	2	8	38	41	35	20	5	0	0	1	14	228
12 - 19	39	0	0	0	0	0	8	51	9	21	8	1	0	0	1	17	155
20 - 28	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	6
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	87	22	30	19	15	17	32	133	59	68	33	8	1	2	4	40	570

Total Number of Valid Hours: 570

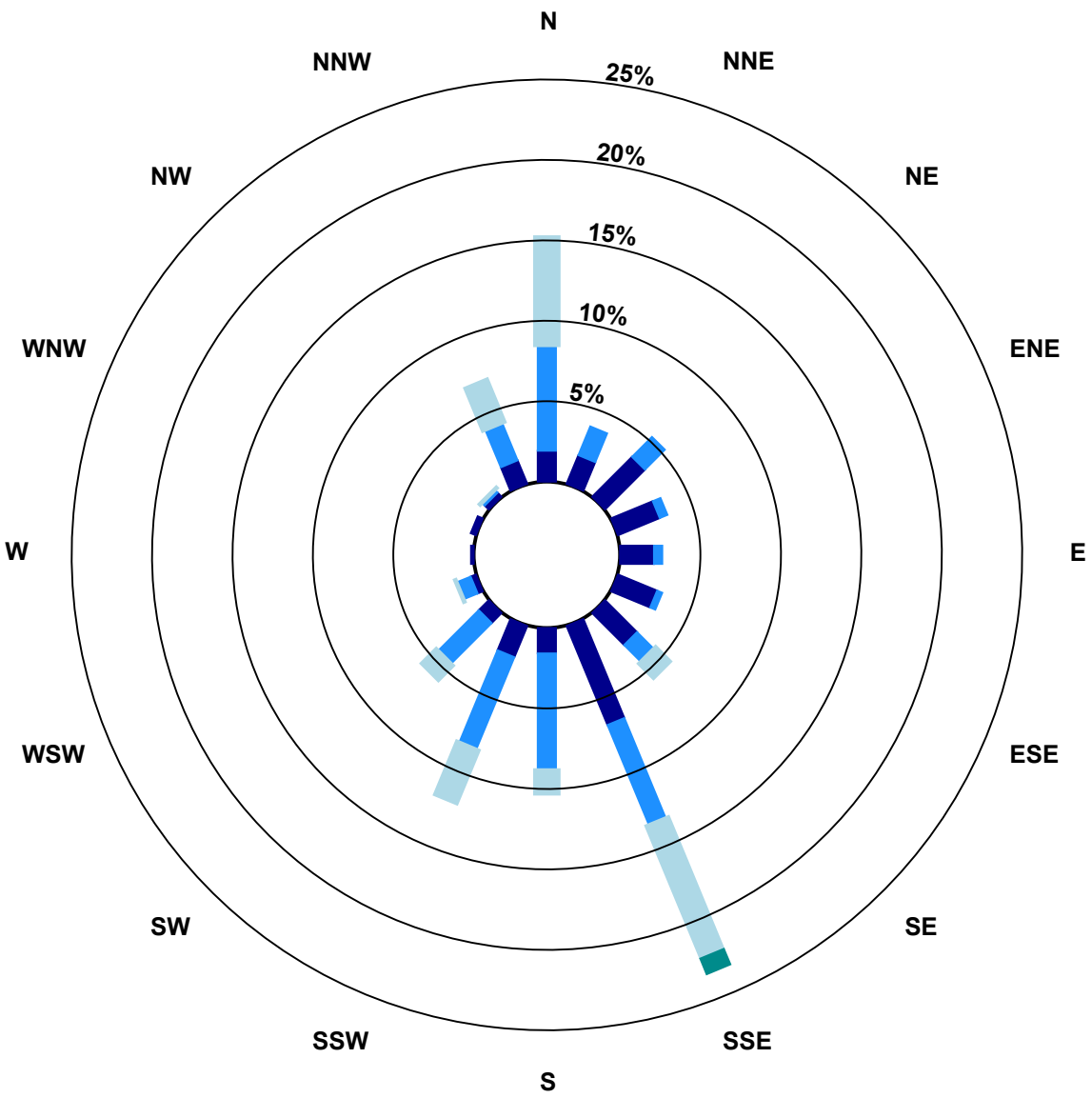
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Wind Speed 10m (WS10) - km/h

Wapasu



Classes (km/h)

0 - 5

6 - 11

12 - 19

20 - 28

29 - 38

> 38

Total Number of Valid Hours: 570

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

Maximum Value: 7 km/h on Feb 19 23:00

Minimum Value: 0 km/h on Feb 9 21:00

Percentiles: $P_1 = 0$ $P_{10} = 1$ $Q_1 = 1$ Median = 2 $Q_3 = 4$ $P_{90} = 4$ $P_{99} = 6$

Hours in Service:	672
Hours of Data:	570
Hours of Missing Data:	102
Hours of Calibration:	0
Percent Operational Time:	84.8

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

M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Wapasu - February 2025

Direction of Maximum Speed: 159 deg on Feb 19 20:00
Direction of Maximum Daily Speed Average: 160.2 deg on Feb 19

Direction of Minimum Speed: 120 deg on Feb 9 19:00

Direction of Minimum Daily Speed Average: 1.4 deg on Feb 15

Monthly Average Direction: 164.1 deg

Hours in Service:	672
Hours of Data:	570
Hours of Missing Data:	102
Percent Operational Time:	84.8

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-Feb	46	33	25	20	350	7	3	358	1	1	1	359	352	348	348	350	346	347	342	346	351	357	359	356	357.1
2-Feb	358	357	354	359	1	359	358	358	0	1	7	3	358	354	347	348	357	358	8	8	2	5	3	3	359.0
3-Feb	359	2	343	162	140	143	152	160	168	170	194	220	227	225	224	218	213	198	197	190	198	196	192	170	198.0
4-Feb	175	171	179	180	179	178	184	188	189	195	198	204	213	215	212	206	202	193	195	207	216	217	219	212	201.6
5-Feb	213	211	208	203	203	203	204	200	204	200	207	208	210	207	206	208	211	206	207	205	217	210	218	214	207.1
6-Feb	225	216	214	227	231	238	290	343	357	354	359	357	354	348	339	343	348	346	344	315	334	5	267	251	331.3
7-Feb	247	228	224	218	219	193	207	162	176	219	230	246	237	235	232	240	210	191	191	217	153	144	154	165	213.1
8-Feb	162	152	159	164	158	152	157	155	159	157	182	228	303	349	330	343	339	12	6	355	1	360	360	356	7.3
9-Feb	348	349	350	347	356	355	1	22	31	10	2	4	349	348	346	350	338	331	120	127	129	150	167	164	355.4
10-Feb	168	168	183	184	190	185	183	185	185	200	207	204	212	211	208	222	191	45	50	30	25	40	48	62	186.9
11-Feb	45	37	39	39	38	24	31	37	26	22	14	355	331	332	328	341	351	33	121	82	68	83	114	142	21.6
12-Feb	158	154	151	154	149	152	152	152	158	149	161	197	8	5	13	120	80	84	70	21	43	62	72	71	108.0
13-Feb	49	46	52	50	48	66	120	57	63	54	24	26	2	356	3	8	6	11	47	57	50	50	89	85	35.6
14-Feb	86	123	87	68	77	91	73	72	116	35	10	4	4	354	349	321	346	39	120	101	116	150	114	131	54.8
15-Feb	141	147	160	145	137	145	153	164	207	232	321	343	342	336	335	342	334	334	20	42	59	101	103	105	8.7
16-Feb	140	153	146	148	154	155	152	153	155	157	174	170	175	178	158	161	163	155	147	145	145	147	150	152	155.4
17-Feb	155	157	154	156	151	152	149	153	155	162	172	171	170	168	164	158	154	142	137	140	141	156	156	158	155.5
18-Feb	163	165	164	169	165	169	174	168	171	180	200	201	197	186	195	192	179	153	152	156	158	161	163	161	170.8
19-Feb	163	158	157	158	160	158	152	152	159	154	155	164	170	166	166	166	164	157	156	159	162	164	161	164	160.2
20-Feb	164	165	168	177	175	184	188	184	192	194	199	204	206	219	228	227	211	188	163	133	85	352	7	72	188.7
21-Feb	107	128	128	123	137	82	76	150	96	40	344	351	5	353	3	26	37	41	44	39	31	57	42	89	46.0
22-Feb	115	136	134	136	140	134	150	159	145	150	146	149	180	178	180	185	185	186	175	166	163	174	175	177	159.3
23-Feb	187	193	177	173	164	188	193	207	241	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--
24-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--
25-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--
26-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	75	87	111	131	137	137	UO	UO	--
27-Feb	UO	UO	UO	UO	UO	160	153	156	157	197	222	245	313	353	355	2	5	5	18	7	UO	UO	UO	UO	--
28-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	170	176	181	194	167	154	151	152	154	159	161	159	--
	157.5	157.7	157.0	161.6	161.5	158.9	160.3	156.2	161.3	166.2	195.1	230.1	263.1	276.3	268.6	251.8	175.9	127.2	126.4	127.3	132.1	142.2	146.8	149.7	
	Diurnal Average																								

M - Maintenance UO - Unstable Operation

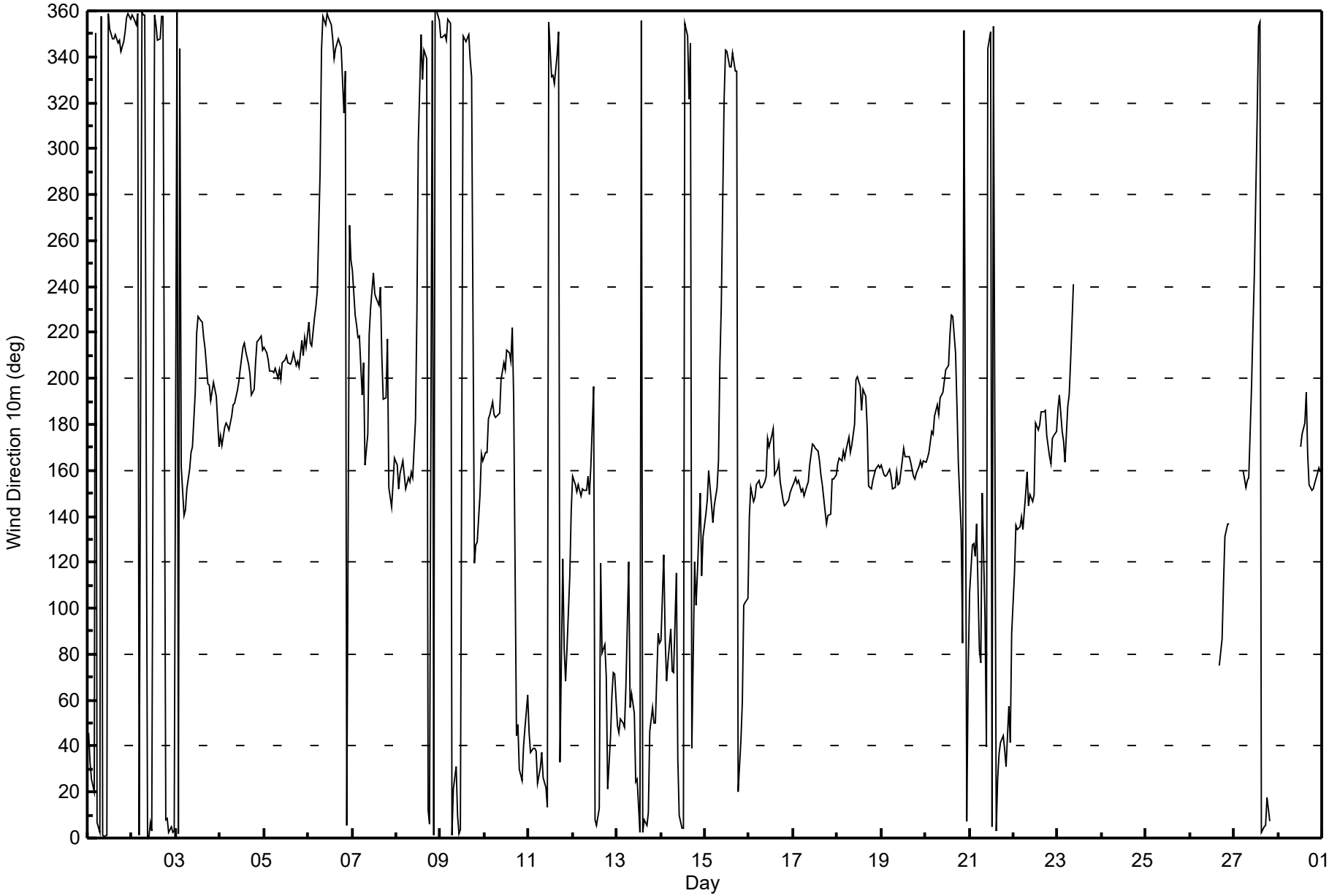
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Wapasu - February 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Wapasu - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 89 deg on Feb 10 17:00

Minimum Value: 6 deg on Feb 10 01:00

Percentiles: P_1 = 8 P_{10} = 14 Q_1 = 19 Median = 22 Q_3 = 26 P_{90} = 30 P_{99} = 59

Hours in Service:	672
Hours of Data:	570
Hours of Missing Data:	102
Hours of Calibration:	0
Percent Operational Time:	84.8

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-Feb	26	27	28	34	21	28	26	23	26	25	26	25	22	20	20	20	20	22	16	19	21	23	24	22	34
2-Feb	23	23	20	24	24	25	24	24	25	27	28	27	24	23	21	19	23	22	28	26	25	28	24	26	28
3-Feb	24	27	79	16	8	19	9	8	8	19	24	19	15	17	17	18	21	22	24	23	20	15	17	15	79
4-Feb	12	14	17	18	20	20	23	26	28	26	28	26	22	21	21	26	25	27	26	24	22	21	21	22	28
5-Feb	21	21	24	26	27	26	25	28	25	28	24	24	23	27	24	24	21	24	21	26	21	22	21	22	28
6-Feb	19	24	24	17	16	25	39	25	24	23	25	25	23	19	18	19	17	15	15	27	22	23	38	36	39
7-Feb	21	16	16	17	21	19	36	9	14	22	16	22	21	19	19	17	26	22	19	20	28	11	9	7	36
8-Feb	8	7	8	7	8	8	8	8	10	12	30	42	39	35	38	27	14	21	27	21	25	26	23	24	42
9-Feb	20	19	18	19	21	20	25	20	24	25	26	28	23	23	22	24	20	18	80	20	9	8	15	10	80
10-Feb	6	9	20	25	25	23	21	22	24	25	25	25	25	23	28	21	89	16	15	26	25	26	19	18	89
11-Feb	23	19	19	22	32	15	20	24	29	30	30	24	21	20	24	25	19	26	19	38	11	11	24	21	38
12-Feb	12	12	8	12	13	13	17	16	36	21	31	65	33	27	36	35	24	23	33	31	27	17	15	30	65
13-Feb	33	19	18	8	15	22	46	10	16	28	32	30	27	24	25	26	26	22	17	12	11	14	14	17	46
14-Feb	29	19	28	14	10	20	13	13	24	58	27	31	27	35	47	34	27	46	30	18	22	21	22	17	58
15-Feb	14	11	7	9	16	10	10	18	27	38	27	25	19	20	21	26	18	18	32	17	29	29	18	10	38
16-Feb	25	9	9	10	16	17	17	17	19	22	28	29	28	29	25	24	22	19	17	18	18	18	19	18	29
17-Feb	21	20	22	20	17	20	18	18	20	22	25	27	30	29	26	22	19	17	18	17	19	17	19	20	30
18-Feb	21	22	23	20	20	22	23	21	24	28	30	29	30	30	32	30	29	18	17	19	19	20	20	22	32
19-Feb	22	18	19	19	22	18	19	19	20	19	22	25	28	23	27	25	23	20	20	20	21	22	22	23	28
20-Feb	23	24	23	26	26	30	30	27	28	29	28	26	25	23	18	20	25	24	15	17	59	22	30	14	59
21-Feb	23	14	14	25	19	41	61	22	26	46	52	24	40	27	24	28	29	28	31	29	28	32	40	23	61
22-Feb	56	20	18	18	20	20	29	28	20	24	17	25	31	31	28	31	27	26	26	21	20	24	23	25	56
23-Feb	27	26	24	26	19	25	26	25	22	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	27
24-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--
25-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--
26-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	24	18	24	20	20	17	UO	UO	24
27-Feb	UO	UO	UO	UO	UO	39	50	49	25	36	23	17	30	19	22	22	24	21	17	21	UO	UO	UO	UO	50
28-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	26	24	24	27	17	17	16	17	16	17	18	15	27
	56	27	79	34	32	41	61	49	36	58	52	65	40	35	47	35	89	46	80	38	59	32	40	36	
	Diurnal Maximum																								

M - Maintenance UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS18
STONY MOUNTAIN
FEBRUARY 2025

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

March 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - STONY MOUNTAIN (AMS18)
FEBRUARY 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	641	31	31	100	-	-	4.5	0	1.6	0
TRS(ppb) Average	639	33	33	100	0.7	0	0.6	-	0.5	-
THC(ppm) Average	638	31	34	99.55	-	-	2.2	-	2.2	-
NMHC(ppm) Average	638	31	34	99.55	-	-	0.073	-	0.045	-
CH4(ppm) Average	638	31	34	99.55	-	-	2.2	-	2.1	-
O3 (ppb) Average	641	31	31	100	-	-	46.2	0	43.2	-
NO2 (ppb) Average	639	33	33	100	-	-	6.7	0	2.8	-
NO (ppb) Average	639	33	33	100	-	-	3.5	-	0.8	-
NOX (ppb) Average	639	33	33	100	-	-	6.8	-	3.5	-
PM2.5 (ug/m3) Average	671	1	1	100	-	-	11.4	0	5.3	0
CO(ppm) Average	638	32	34	99.7	-	-	0.2	0	0.2	0
CO2(ppm) Average	639	31	33	99.7	-	-	460	-	451.7	-
Temperature 2 m (C) Average	672	0	0	100	-	-	8	-	3.9	-
Relative Humidity (%) Average	672	0	0	100	-	-	96.1	-	82.2	-
Wind Speed 10 m (km/h) Average	653	0	19	97.17	-	-	19	-	12	-
Wind Speed 20 m (km/h) Average	672	0	0	100	-	-	26	-	18	-
Wind Direction 10 m (deg) Average	653	0	19	97.17	-	-	-	-	0	-
Wind Direction 20 m (deg) Average	672	0	0	100	-	-	-	-	0	-
Precipitation (mm) Total	438	0	234	65.18	-	-	0.9	-	4.6	-
Leaf Wetness (% of range) Average	672	0	0	100	-	-	35.3	-	11.9	-
Global Solar Radiation (W/m2) Average	672	0	0	100	-	-	509.6	-	116.2	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - STONY MOUNTAIN (AMS18)
FEBRUARY 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	641	0.5	0.6	-	0	0	0.1	0.3	0.6	1.1	4.5
TRS (ppb) Average	639	0.4	0.1	-	0.3	0.3	0.4	0.4	0.4	0.5	0.6
THC (ppm) Average	638	2.11	0	-	1.9	2	2.1	2.1	2.1	2.2	2.2
NMHC(ppm) Average	638	0.014	0.017	-	0	0	0	0	0	0	0.073
CH4(ppm) Average	638	2.1	0	-	1.9	2	2.1	2.1	2.1	2.1	2.2
O3 (ppb) Average	641	33.1	5.2	-	18	26.6	29.4	33	36	40.5	46.2
NO2 (ppb) Average	639	1.36	1.3	-	0	0	0.3	1.1	2.1	3.1	6.7
NO (ppb) Average	639	0.32	0.4	-	0	0	0	0.1	0.5	0.9	3.5
NOX (ppb) Average	639	1.68	1.4	-	0	0	0.6	1.4	2.4	3.7	6.8
PM2.5 (ug/m3) Average	671	2.82	1.5	-	0.1	1.3	1.9	2.5	3.5	4.8	11.4
CO(ppm) Average	638	0.19	0	-	0.1	0.2	0.2	0.2	0.2	0.2	0.2
CO2(ppm) Average	639	446.11	4.2	-	437.6	440.3	443.5	446.4	448.5	451.7	460
Temperature 2 m (C) Average	672	-15.28	11.2	-	-31.4	-27.2	-23.9	-19.1	-5	2.8	8
Relative Humidity (%) Average	672	68.61	12.3	-	24	51.2	61.7	71	76.6	81.7	96.1
Wind Speed 10 m (km/h) Average	653	7.6	3	-	1	4	5	7	10	12	19
Wind Speed 20 m (km/h) Average	672	11.5	5	-	2	6	8	11	15	17	26
Wind Direction 10 m (deg) Average	653	-	-	-	-	-	-	-	-	-	-
Wind Direction 20 m (deg) Average	672	-	-	-	-	-	-	-	-	-	-
Precipitation (mm) Total	438	-	-	16.18	-	-	-	-	-	-	-
Surface Wetness (% of range) Average	672	2.6	2.9	-	0.9	1.5	1.7	2.2	2.7	3.3	35.3
Global Solar Radiation (W/m2) Average	672	68.73	119.3	-	0	0	0	0.8	99.5	255.1	509.6

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - STONY MOUNTAIN (AMS18)
FEBRUARY 2025

MONTHLY SUMMARY

Parameter	Period Start	Period End	Duration (Hours)	Notes
THC/NMHC/CH4	04 Feb 2025 16:00	04 Feb 2025 17:00	2	Unstable Operations - excessive baseline noise
THC/NMHC/CH4	25 Feb 2025 13:00	25 Feb 2025 13:00	1	Maintenance - station operator activities
CO	04 Feb 2025 16:00	04 Feb 2025 17:00	2	Unstable Operations - excessive baseline drift
CO2	20 Feb 2025 14:00	20 Feb 2025 15:00	2	Maintenance - reinitiated daily QA check
Wind Speed, Wind Direction 10m	23 Feb 2025 17:00	24 Feb 2025 11:00	19	Flat line in sensor output signal - Sensor frozen
Precipitation Collector	09 Feb 2025 06:00	18 Feb 2025 23:00	234	Unstable Operations - excessive baseline noise

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Stony Mountain - February 2025

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

Maximum Value: 4.5 ppb on Feb 2 13:00 Maximum Daily Average: 1.6 ppb on Feb 2

Minimum Value: 0.0 ppb on Feb 1 01:00 Minimum Daily Average: 0.0 ppb on Feb 10

Maximum Diurnal Average: 0.6 ppb at hour 3 Minimum Diurnal Average: 0.4 ppb at hour 22

Monthly Average: 0.50 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.3 Q_3 = 0.6 P_{90} = 1.1 P_{99} = 3.4

Hours in Service:	672
Hours of Data:	641
Hours of Missing Data:	31
Hours of Calibration:	31
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.0	0.0	Z	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.5	3.1	2.7	3.8	2.6	2.1	1.4	0.3	0.1	0.2	0.1	0.2	0.1	0.2	0.8	3.8
2-Feb	0.6	0.2	0.1	Z	0.8	1.1	0.5	1.4	1.7	1.9	3.7	4.0	4.5	4.2	4.0	2.1	1.0	0.7	0.8	0.8	0.6	0.7	0.9	1.1	1.6	4.5
3-Feb	1.1	0.9	0.9	1.0	Z	0.7	2.0	0.8	0.6	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.4	2.0
4-Feb	0.0	0.0	0.0	0.1	0.2	Z	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.2	0.1	0.1	0.2	0.2	0.3	0.4	0.5	0.1	0.5
5-Feb	0.5	Z	1.5	0.9	0.3	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.5
6-Feb	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.9	1.1	1.3	1.1	0.7	0.5	0.3	0.3	0.3	1.3
7-Feb	0.6	Z	0.9	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.9
8-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.1	0.2	0.4	0.2	0.1	0.1	0.0	0.0	0.3	0.0	0.1	0.4
9-Feb	0.3	0.9	3.1	Z	3.5	0.7	0.1	0.0	0.0	0.1	0.3	0.2	0.1	0.2	0.2	0.1	0.5	1.3	1.2	2.2	2.0	0.5	0.0	0.0	0.8	3.5
10-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.4	0.0	0.4
11-Feb	0.5	0.5	0.6	0.5	0.3	Z	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.4	0.5	0.9	1.7	1.8	1.7	2.4	1.8	1.2	1.0	0.7	0.8	2.4
12-Feb	Z	0.9	0.8	0.8	0.6	0.3	0.1	0.0	0.0	0.1	0.5	0.7	1.1	0.8	0.9	1.3	1.0	0.5	0.6	0.6	0.5	0.6	0.5	0.3	0.6	1.3
13-Feb	0.2	Z	0.4	0.4	0.5	0.6	0.6	0.4	0.3	0.1	0.3	0.3	0.2	0.3	0.1	0.2	0.4	0.6	0.3	0.2	0.0	0.1	0.2	0.2	0.3	0.6
14-Feb	0.4	0.4	Z	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.1	0.1	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.3	0.4	0.3	0.5
15-Feb	0.4	3.3	1.6	Z	1.0	0.9	0.9	1.0	1.2	1.2	1.1	0.9	0.5	0.6	0.6	0.4	0.4	0.4	0.4	0.5	0.3	0.4	0.4	0.3	0.8	3.3
16-Feb	0.3	0.3	0.4	0.6	Z	0.8	0.8	0.8	0.8	0.9	0.6	0.7	0.9	1.0	1.5	1.2	0.9	1.0	0.9	0.9	0.8	0.6	0.4	0.4	0.8	1.5
17-Feb	0.6	0.6	0.4	0.6	1.3	Z	0.8	0.6	0.9	0.6	0.3	0.3	0.2	0.3	0.7	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.7	0.6	0.5	1.3
18-Feb	Z	0.5	0.4	0.3	0.4	0.6	0.5	0.3	0.7	0.6	0.7	0.5	0.2	0.1	0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.5	0.3	0.3	0.7
19-Feb	0.4	Z	0.6	0.5	0.6	0.8	0.8	0.8	0.6	0.6	0.6	0.8	0.5	0.6	0.5	0.4	0.7	0.8	0.7	1.1	0.5	0.4	0.6	0.6	0.6	1.1
20-Feb	0.5	0.6	Z	1.3	0.5	0.3	0.3	0.3	0.5	0.7	0.8	0.7	0.6	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.4	1.3
21-Feb	0.2	0.3	0.1	Z	0.2	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.3	0.2	0.2	0.3	0.6	1.1	0.8	0.5	0.5	0.5	0.5	0.4	1.1
22-Feb	0.5	0.5	0.5	0.4	Z	0.4	0.4	0.3	0.3	0.5	0.8	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.9	0.5	0.9
23-Feb	0.7	0.4	0.5	0.8	0.4	Z	0.4	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	1.4	0.8	1.4	1.8	1.1	0.8	0.6	0.9	0.6	1.8
24-Feb	Z	1.1	0.9	0.9	0.7	0.5	0.4	0.3	0.3	0.1	0.0	0.1	0.0	C	C	C	C	0.4	0.3	0.2	0.3	0.2	0.2	0.2	0.4	1.1
25-Feb	0.2	Z	0.1	0.4	0.5	0.6	0.4	1.6	3.1	2.7	2.1	1.4	1.0	0.8	1.5	2.7	2.6	2.3	2.1	0.9	0.4	0.5	0.2	0.2	1.2	3.1
26-Feb	0.2	0.1	Z	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
27-Feb	0.3	0.2	0.2	Z	0.2	0.2	0.3	1.7	2.0	0.7	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.4	0.3	0.7	1.7	0.5	2.0
28-Feb	1.4	0.6	0.4	0.6	Z	0.4	0.4	0.5	0.6	0.8	1.0	0.8	0.6	0.5	0.4	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.5	1.4
	0.4	0.5	0.6	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.5	0.6	0.6	0.5	0.6	0.5	0.5	0.6	0.4	0.4	0.4	0.4	Diurnal Average	
	1.4	3.3	3.1	1.3	3.5	1.1	2.0	1.7	3.1	2.7	3.7	4.0	4.5	4.2	4.0	2.7	2.6	2.3	2.1	2.4	2.0	1.2	1.0	1.7	Diurnal Maximum	

Z - zerospan C - Calibration

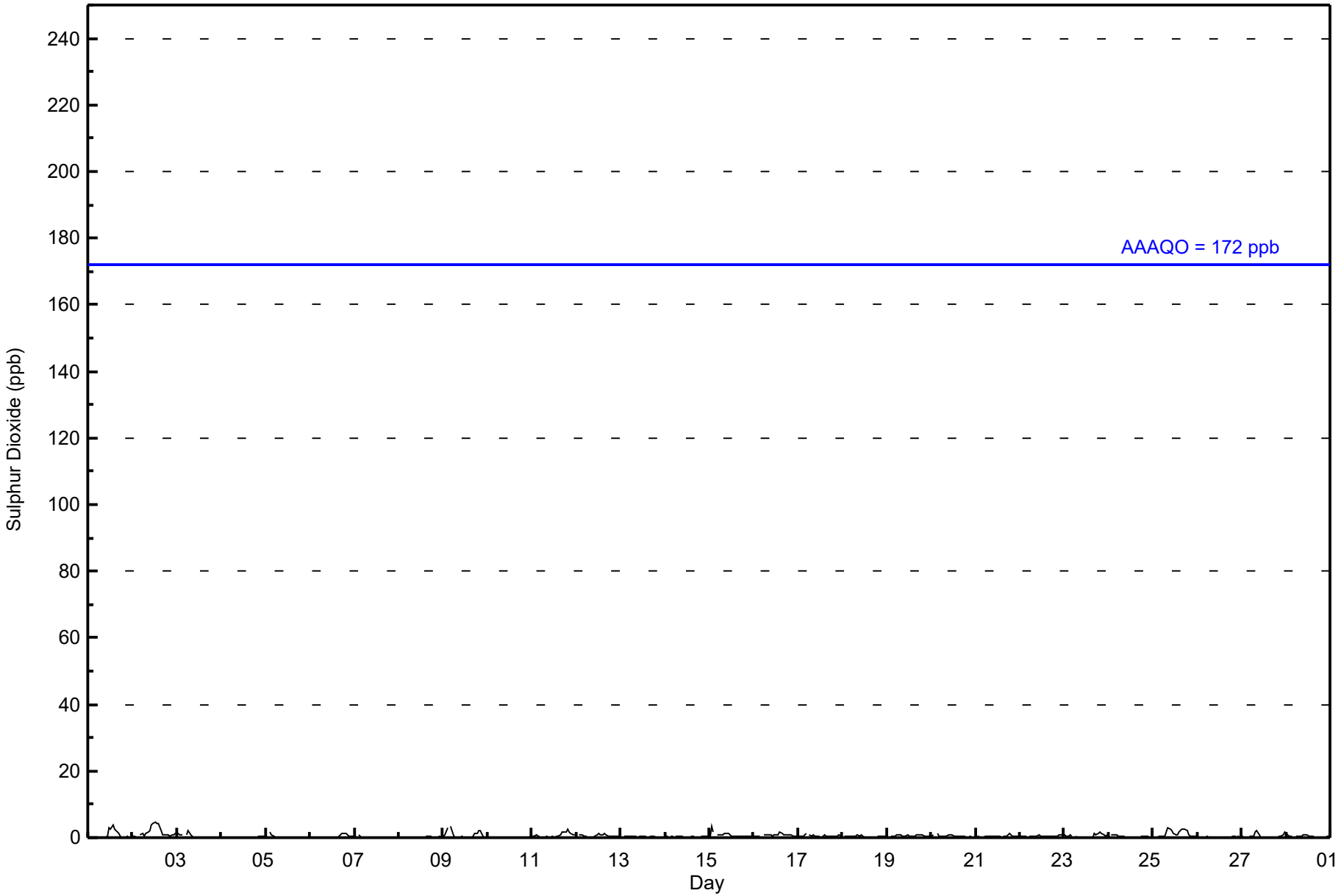
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Stony Mountain - February 2025



Sulphur Dioxide (SO_2) - ppb
Stony Mountain - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	641	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: 641

Total Number of Hours: 672



Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Stony Mountain - February 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	15	22	28	21	7	17	21	40	54	40	35	55	90	75	75	46	641
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	15	22	28	21	7	17	21	40	54	40	35	55	90	75	75	46	641

Total Number of Valid Hours: 641

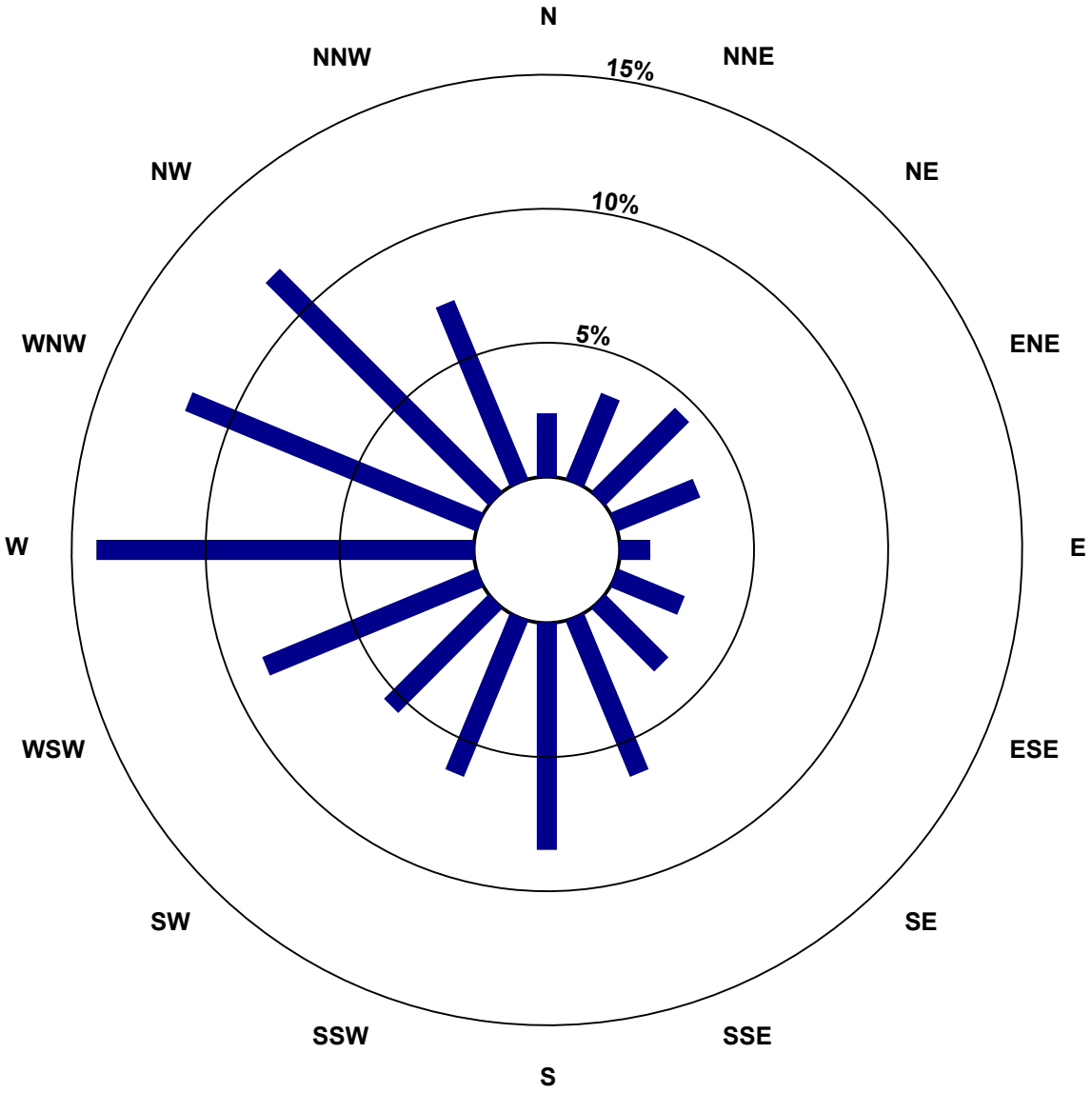
Total Number of Hours: 672

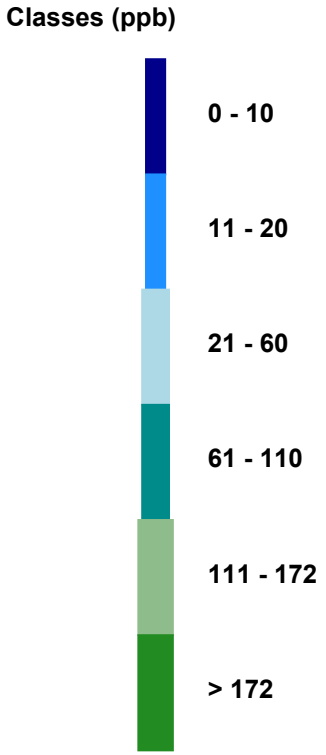
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Sulphur Dioxide (SO_2) - ppb

Stony Mountain





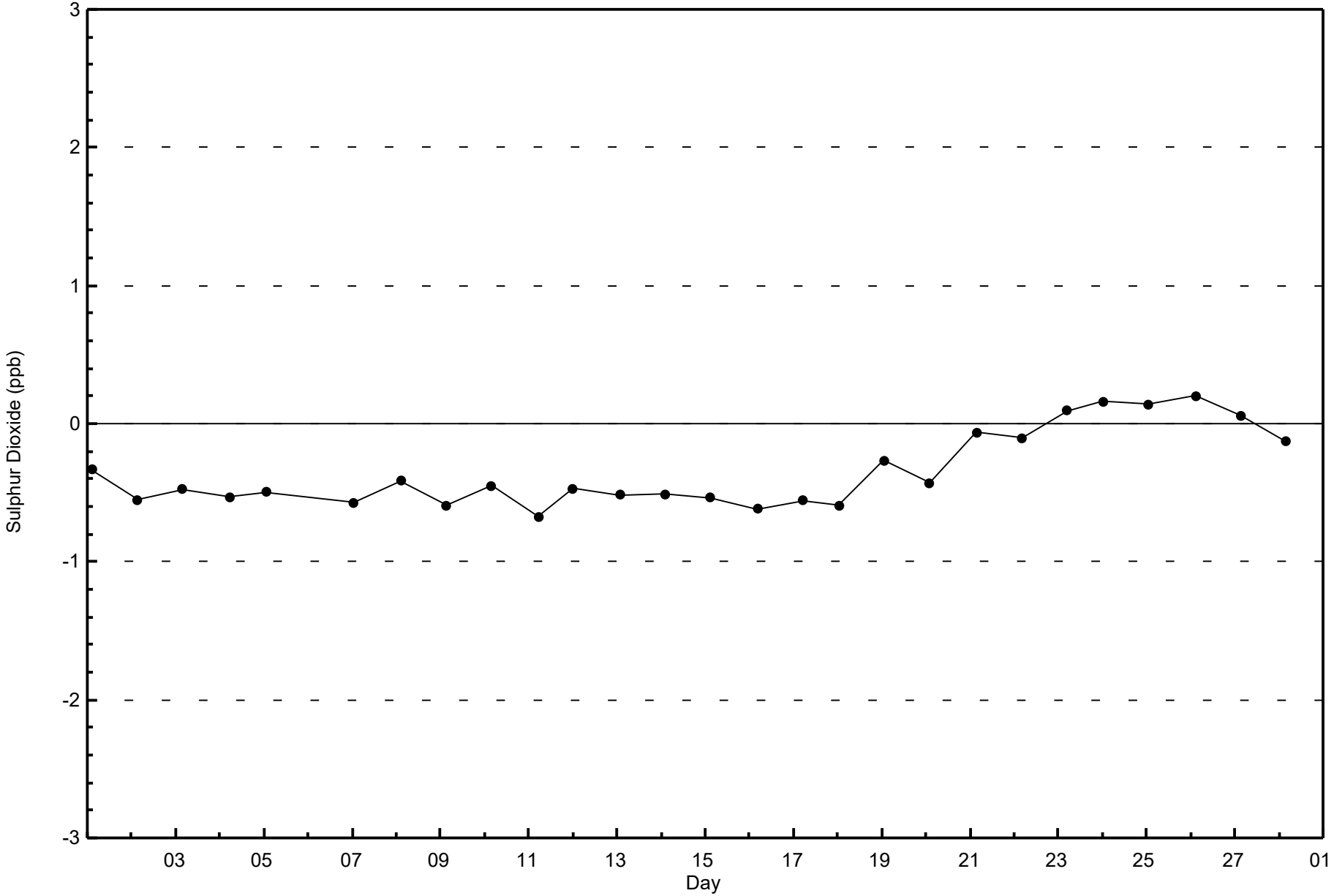
Total Number of Valid Hours: 641

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Stony Mountain - February 2025

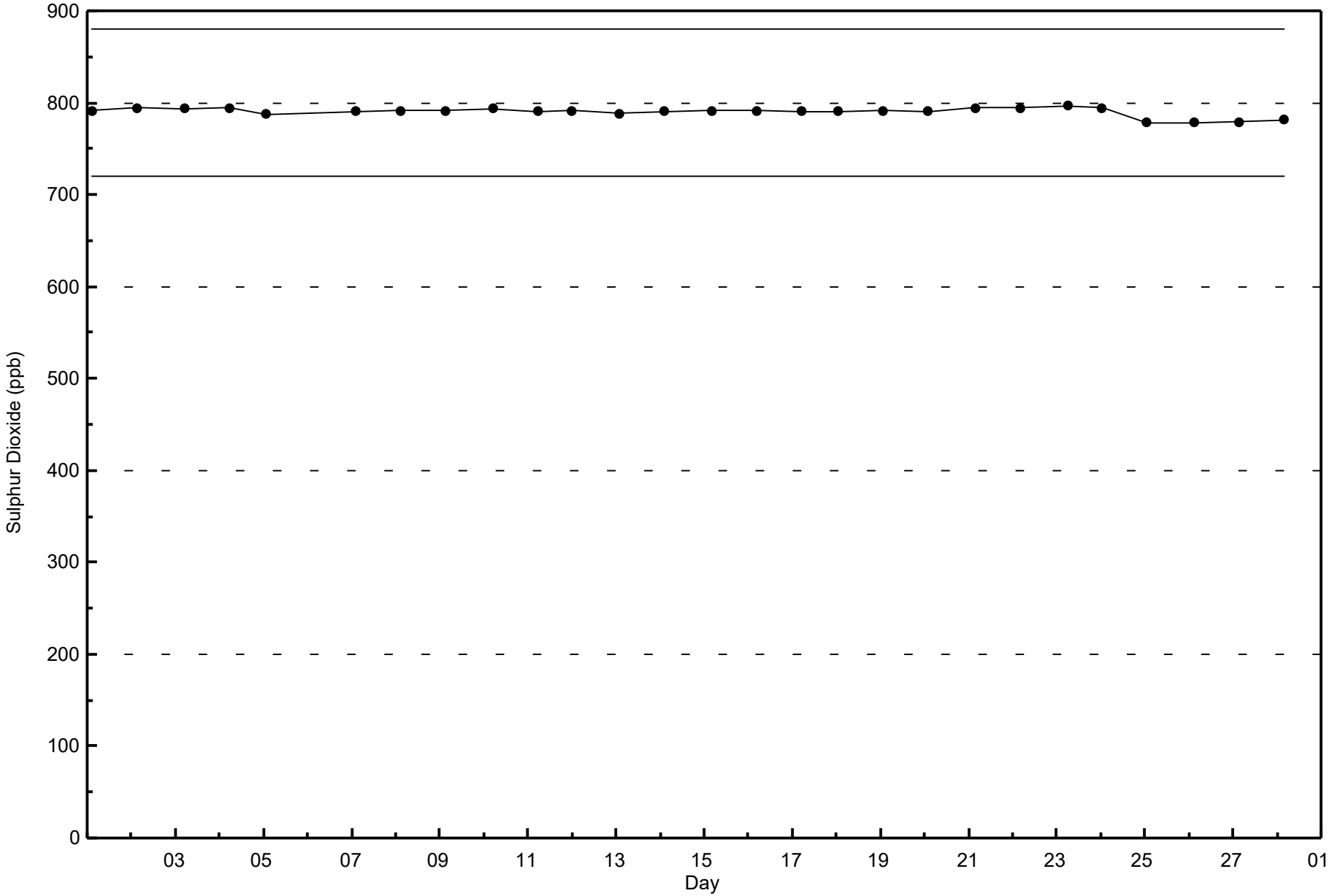


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Stony Mountain - February 2025



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Stony Mountain - February 2025

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

Maximum Value: 0.7 ppb on Feb 25 09:30 Maximum Daily Average: 0.5 ppb on Feb 24

Minimum Value: 0.3 ppb on Feb 20 01:00 Minimum Daily Average: 0.3 ppb on Feb 4

Maximum Diurnal Average: 0.4 ppb at hour 4 Minimum Diurnal Average: 0.4 ppb at hour 24

Monthly Average: 0.40 ppb Percentiles: P_1 = 0.3 P_{10} = 0.3 Q_1 = 0.4 Median = 0.4 Q_3 = 0.4 P_{90} = 0.5 P_{99} = 0.6

Periods in Service:	1344
Periods of Valid Data:	1277
Periods of Invalid Data:	67
Periods of Calibration:	67
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-Feb	0.3	0.4	0.4	Z	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.5
	0.3	0.4	0.4	SP	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3		
2-Feb	0.3	0.4	0.3	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.5
	0.4	0.3	0.3	0.4	SP	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4		
3-Feb	0.4	0.4	0.4	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	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	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.4	0.3	0.4	0.3		
4-Feb	Z	0.4	0.3	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.4
	SP	0.3	0.4	0.4	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3		
5-Feb	0.3	0.4	Z	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.4
	0.3	0.4	SP	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.4		
6-Feb	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.5
	0.4	0.4	0.4	0.4	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	0.5	0.4	0.4	0.4	0.4	0.4		
7-Feb	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.4	0.4	0.3	0.4	0.4	0.4	0.3	0.4	0.4	0.3	0.4	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	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.3		
8-Feb	0.3	0.3	0.3	Z	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4
	0.3	0.3	0.4	SP	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.4	0.3	0.3	0.4	0.4	0.4	0.3	0.4	0.4	0.3	0.4	0.3		
9-Feb	0.4	0.4	0.5	0.5	Z	0.5	0.4	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.6
	0.4	0.4	0.5	0.6	SP	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4		
10-Feb	0.4	0.4	0.4	0.3	0.4	Z	0.4	0.3	0.4	0.3	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
	0.4	0.4	0.4	0.4	0.5	SP	0.3	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4		
11-Feb	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	0.4	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	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4		
12-Feb	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.5
	0.5	SP	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.3	0.4	0.3		
13-Feb	0.3	0.3	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.4	0.4	0.4
	0.3	0.4	SP	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4		
14-Feb	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	0.3	0.4	0.3	0.4	0.5
	0.4	0.4	0.5	SP	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	0.3	0.4	0.3	0.3	0.4	0.4		
15-Feb	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	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.5
	0.4	0.4	0.4	0.5	SP	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.3		

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Stony Mountain - February 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-Feb	0.3	0.3	0.4	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
	0.4	0.4	0.4	0.4	0.4	SP	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4		
17-Feb	Z	0.4	0.4	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
	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	0.4	0.4		
18-Feb	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
	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	0.4	0.4		
19-Feb	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	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.5
	0.4	0.5	SP	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3		
20-Feb	0.3	0.3	0.3	Z	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	0.3	0.3	0.4	SP	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4		
21-Feb	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	0.3	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	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4		
22-Feb	0.4	0.4	0.4	0.4	0.4	Z	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.5
	0.4	0.4	0.4	0.4	0.5	SP	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4		
23-Feb	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	0.5	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	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5		
24-Feb	0.5	Z	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6
	0.6	SP	0.5	0.6	0.5	0.5	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5		
25-Feb	0.5	0.5	Z	0.5	0.5	0.5	0.5	0.5	0.6	0.7	0.6	C	C	C	C	C	C	C	0.5	0.6	0.6	0.6	0.5	0.4	--	0.7
	0.5	0.5	SP	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	C	C	C	C	C	C	0.6	0.6	0.6	0.6	0.5	0.4	0.4		
26-Feb	0.5	0.5	0.5	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.5	0.6
	0.4	0.4	0.6	SP	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.5		
27-Feb	0.4	0.5	0.5	0.5	Z	0.5	0.4	0.5	0.6	0.5	0.5	0.4	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	0.6
	0.5	0.5	0.5	0.5	SP	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5		
28-Feb	0.5	0.5	0.4	0.4	0.5	Z	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.6
	0.5	0.5	0.5	0.4	0.5	SP	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5		
	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	Diurnal Average	
	0.6	0.5	0.6	0.6	0.5	0.5	0.5	0.6	0.6	0.7	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	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

Stony Mountain - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 0.6 ppb on Feb 25 10:00 Maximum Daily Average: 0.5 ppb on Feb 24

Minimum Value: 0.3 ppb on Feb 20 01:00 Minimum Daily Average: 0.3 ppb on Feb 4
Maximum Diurnal Average: 0.4 ppb at hour 4 Minimum Diurnal Average: 0.4 ppb at hour 24
Monthly Average: 0.40 ppb Percentiles: P_1 = 0.3 P_{10} = 0.3 Q_1 = 0.4 Median = 0.4 Q_3 = 0.4 P_{90} = 0.5 P_{99} = 0.6

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.3	0.4	0.4	Z	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.5
2-Feb	0.3	0.4	0.3	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
3-Feb	0.4	0.4	0.4	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.3	0.4	0.4
4-Feb	Z	0.3	0.3	0.4	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4
5-Feb	0.3	0.4	Z	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	0.4	0.3	0.4
6-Feb	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
7-Feb	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	0.3	0.4	0.3	0.4	0.4	0.3	0.4	0.3	0.4	0.4
8-Feb	0.3	0.3	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4
9-Feb	0.4	0.4	0.5	0.5	Z	0.4	0.4	0.3	0.3	0.3	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
10-Feb	0.4	0.4	0.4	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
11-Feb	Z	0.5	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5
12-Feb	0.4	Z	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.3	0.4	0.4
13-Feb	0.3	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
14-Feb	0.4	0.4	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	0.3	0.4	0.4	0.4	0.4	0.5
15-Feb	0.4	0.4	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.4
16-Feb	0.4	0.3	0.4	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
17-Feb	Z	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
18-Feb	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
19-Feb	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	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.5
20-Feb	0.3	0.3	0.4	Z	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
21-Feb	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	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
22-Feb	0.4	0.4	0.4	0.4	0.5	Z	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5
23-Feb	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	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
24-Feb	0.5	Z	0.5	0.6	0.5	0.5	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6
25-Feb	0.5	0.5	Z	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	C	C	C	C	C	C	0.6	0.6	0.6	0.6	0.5	0.5	0.4	--	0.6
26-Feb	0.5	0.4	0.5	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.5	0.5
27-Feb	0.5	0.5	0.5	0.5	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.5
28-Feb	0.5	0.5	0.5	0.4	0.5	Z	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6
	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	Diurnal Average	
	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	Diurnal Maximum	

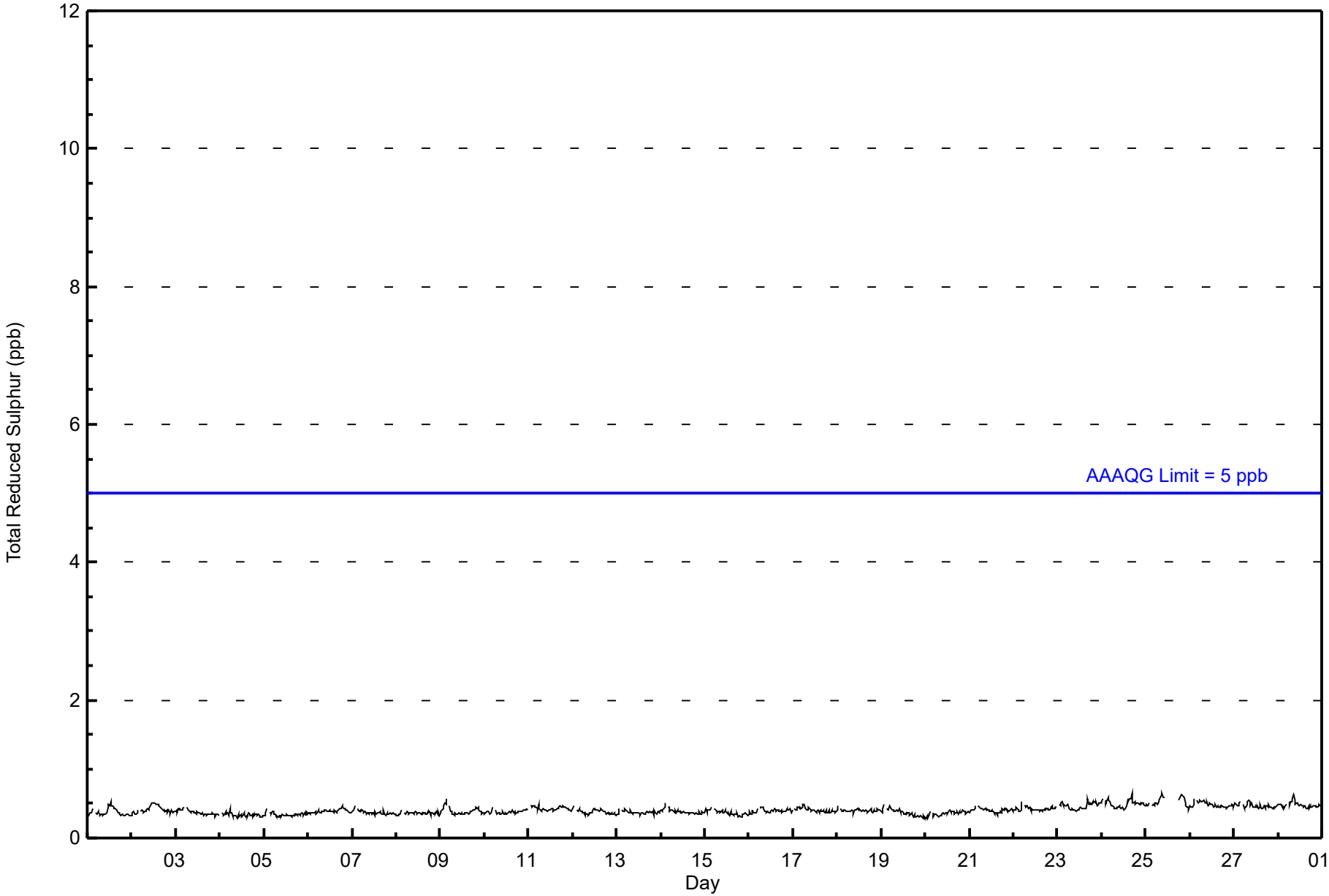
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Stony Mountain - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	639	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: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Stony Mountain - February 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	15	23	27	21	7	15	20	40	52	39	36	57	93	72	76	46	639
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	15	23	27	21	7	15	20	40	52	39	36	57	93	72	76	46	639

Total Number of Valid Hours: 639

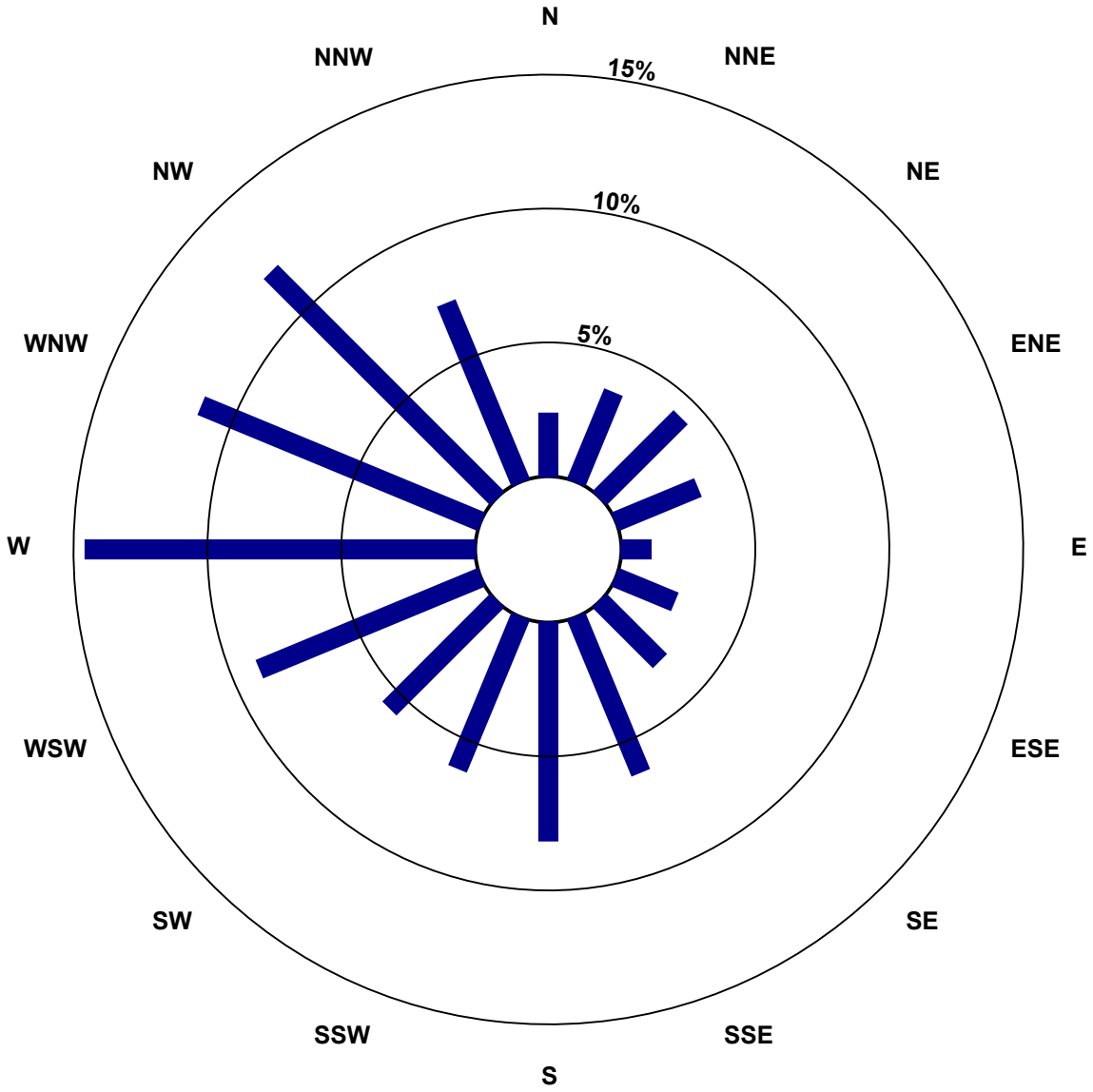
Total Number of Hours: 672

Wood Buffalo Environmental Association

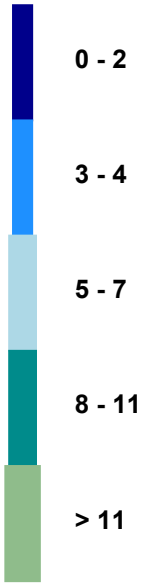
Wind Rose Feb 2025

Total Reduced Sulphur (TRS) - ppb

Stony Mountain



Classes (ppb)



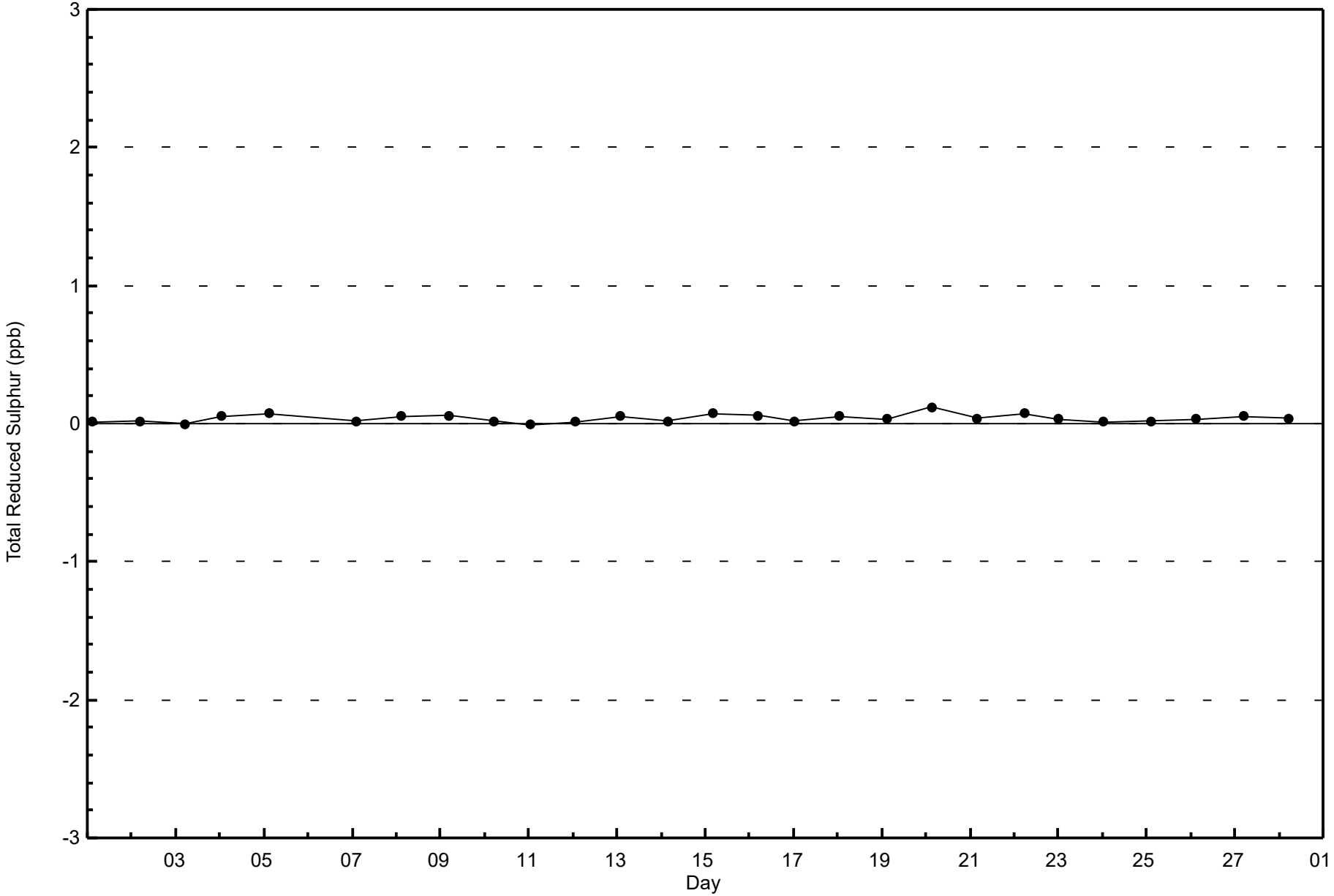
Total Number of Valid Hours: 639

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Stony Mountain - February 2025

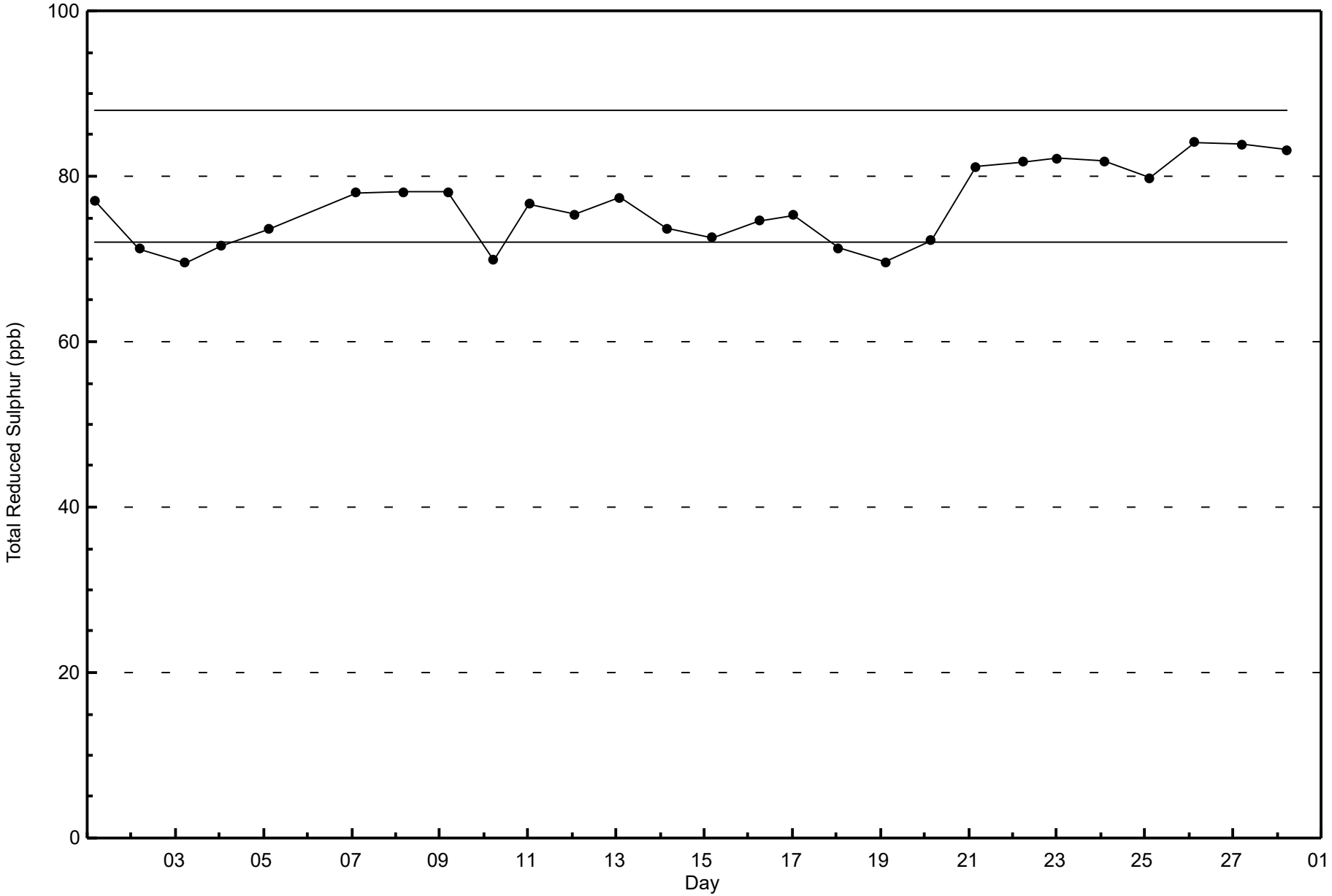


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Stony Mountain - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Stony Mountain - February 2025

Maximum Value: 2.2 ppm on Feb 16 08:00

Maximum Daily Average: 2.2 ppm on Feb 20

Minimum Value: 1.9 ppm on Feb 23 12:00

Minimum Daily Average: 2.0 ppm on Feb 26

Maximum Diurnal Average: 2.1 ppm at hour 6

Minimum Diurnal Average: 2.1 ppm at hour 15

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} = 2.2

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	31
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-Feb	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
2-Feb	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.1	2.1	2.2	2.2
3-Feb	2.1	2.1	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
4-Feb	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	UO	UO	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
5-Feb	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.2
6-Feb	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	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2
7-Feb	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
8-Feb	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
9-Feb	2.1	2.1	2.2	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.2
10-Feb	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
11-Feb	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	2.2	2.2	2.2	2.1	2.1	2.1	2.2
12-Feb	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
13-Feb	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
14-Feb	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.2
15-Feb	2.1	2.1	2.1	Z	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	2.1	2.1	2.1	2.2	2.2	2.1	2.2
16-Feb	2.2	2.1	2.1	2.1	Z	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
17-Feb	2.1	2.1	2.1	2.1	2.2	Z	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
18-Feb	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
19-Feb	2.1	Z	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
20-Feb	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	2.1	2.1	2.2	2.2
21-Feb	2.1	2.1	2.2	Z	2.2	2.2	2.2	2.1	2.1	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
22-Feb	2.1	2.1	2.1	2.1	Z	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.2
23-Feb	2.2	2.2	2.2	2.1	2.2	Z	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
24-Feb	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.0	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
25-Feb	2.0	Z	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	M	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.0	2.0	2.1	2.2
26-Feb	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Feb	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	2.1	2.1	2.0	2.1
28-Feb	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2
	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	Diurnal Average	
	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	Diurnal Maximum	

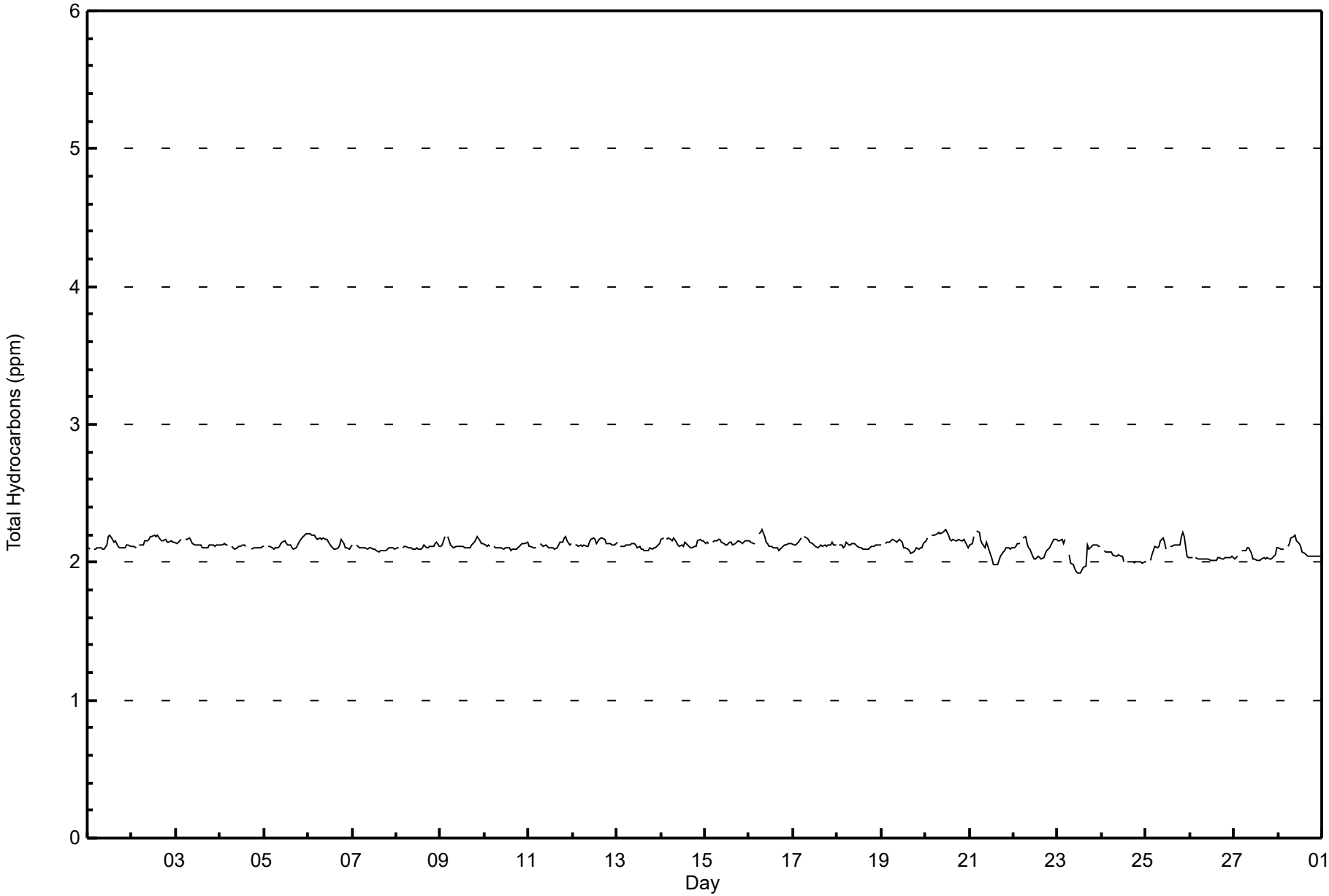
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Stony Mountain - February 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm

Stony Mountain - February 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	85	13.32	13.32
2.1 - 3.0	553	86.68	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 638

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Stony Mountain - February 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	1	0	1	0	1	1	0	1	9	10	11	21	20	6	3	85
2.1 - 3.0	15	21	28	20	6	16	20	40	53	31	24	43	69	55	69	43	553
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	15	22	28	21	6	17	21	40	54	40	34	54	90	75	75	46	638

Total Number of Valid Hours: 638

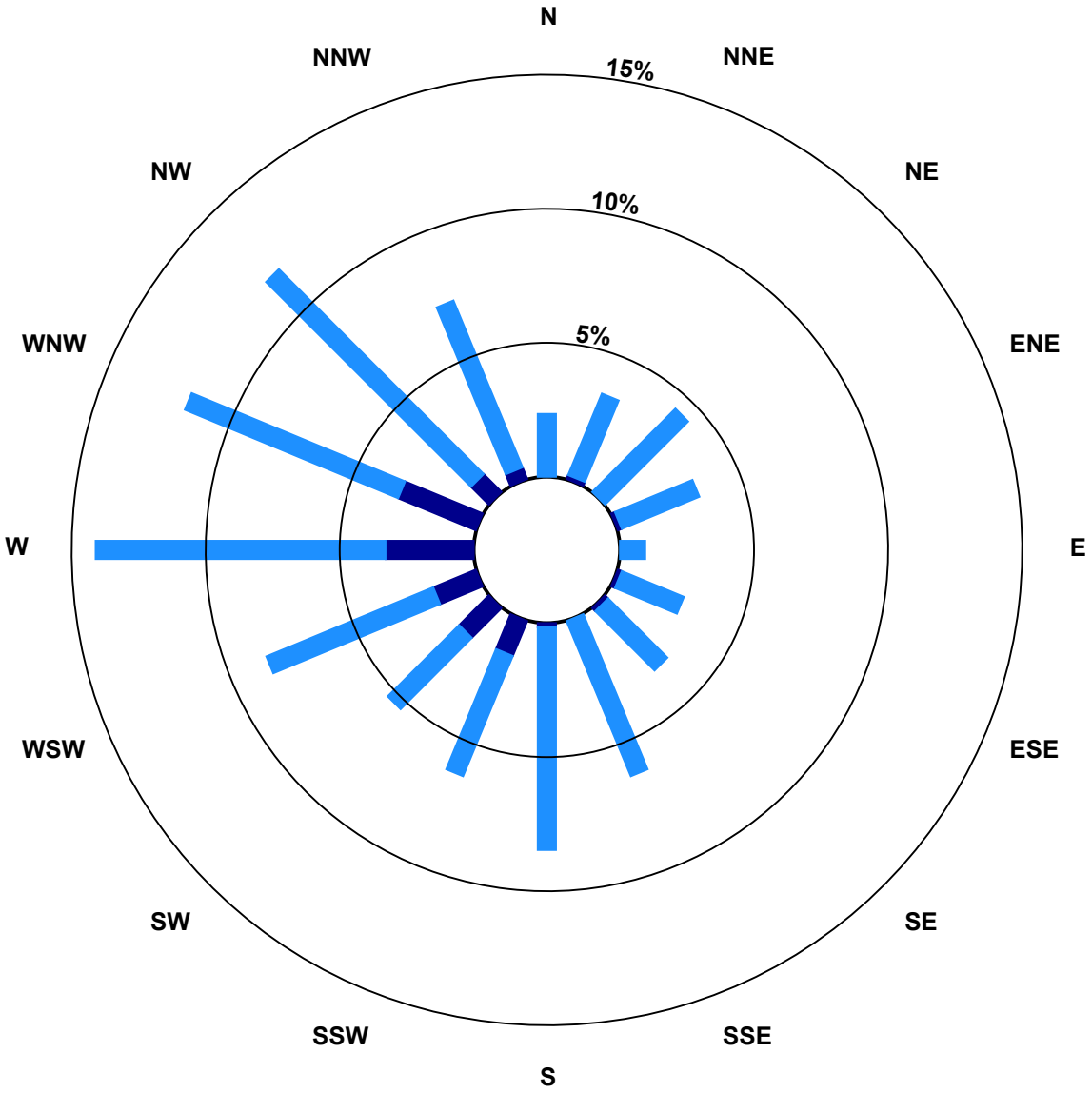
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Total Hydrocarbons (THC) - ppm

Stony Mountain



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

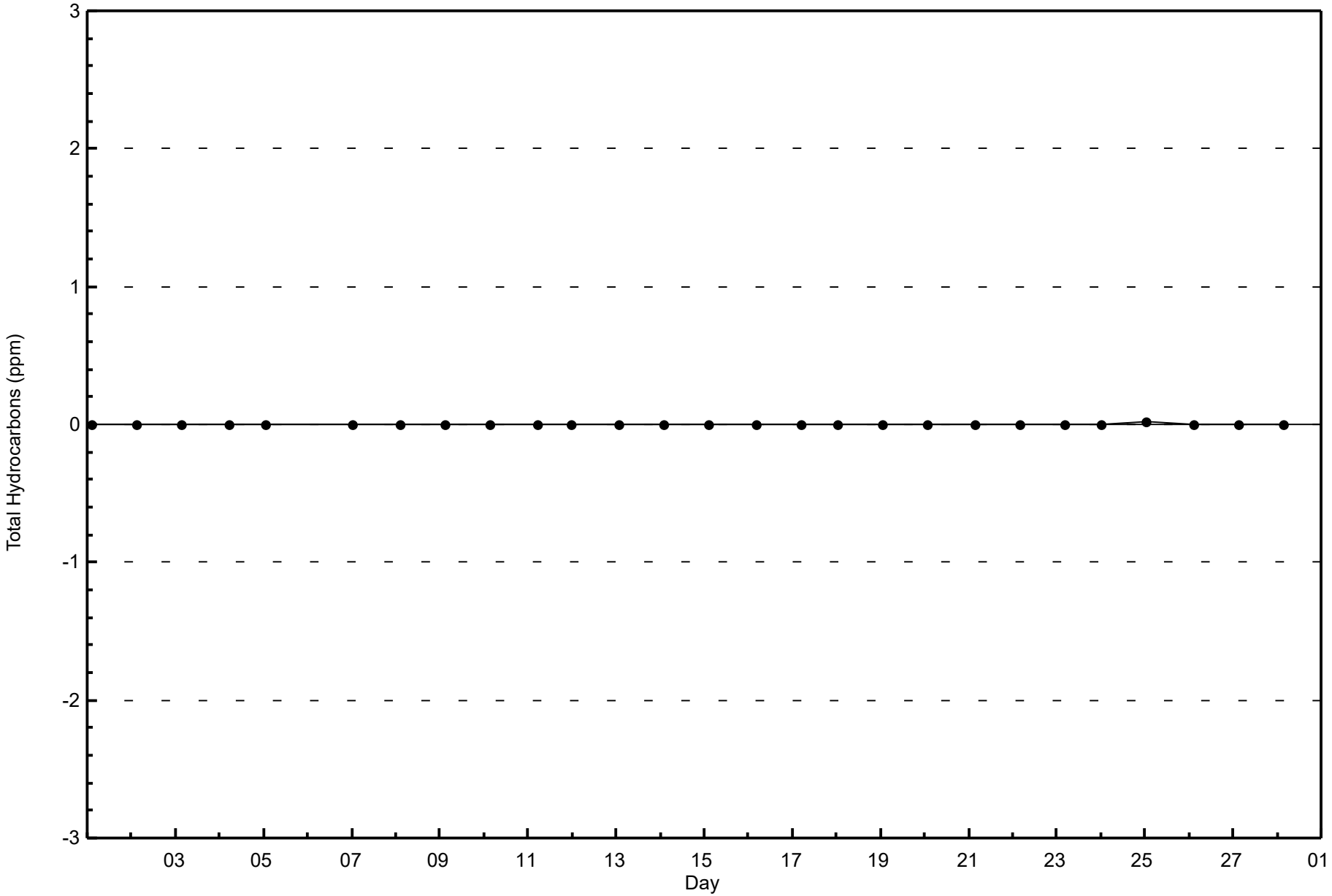
Total Number of Valid Hours: 638

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Stony Mountain - February 2025

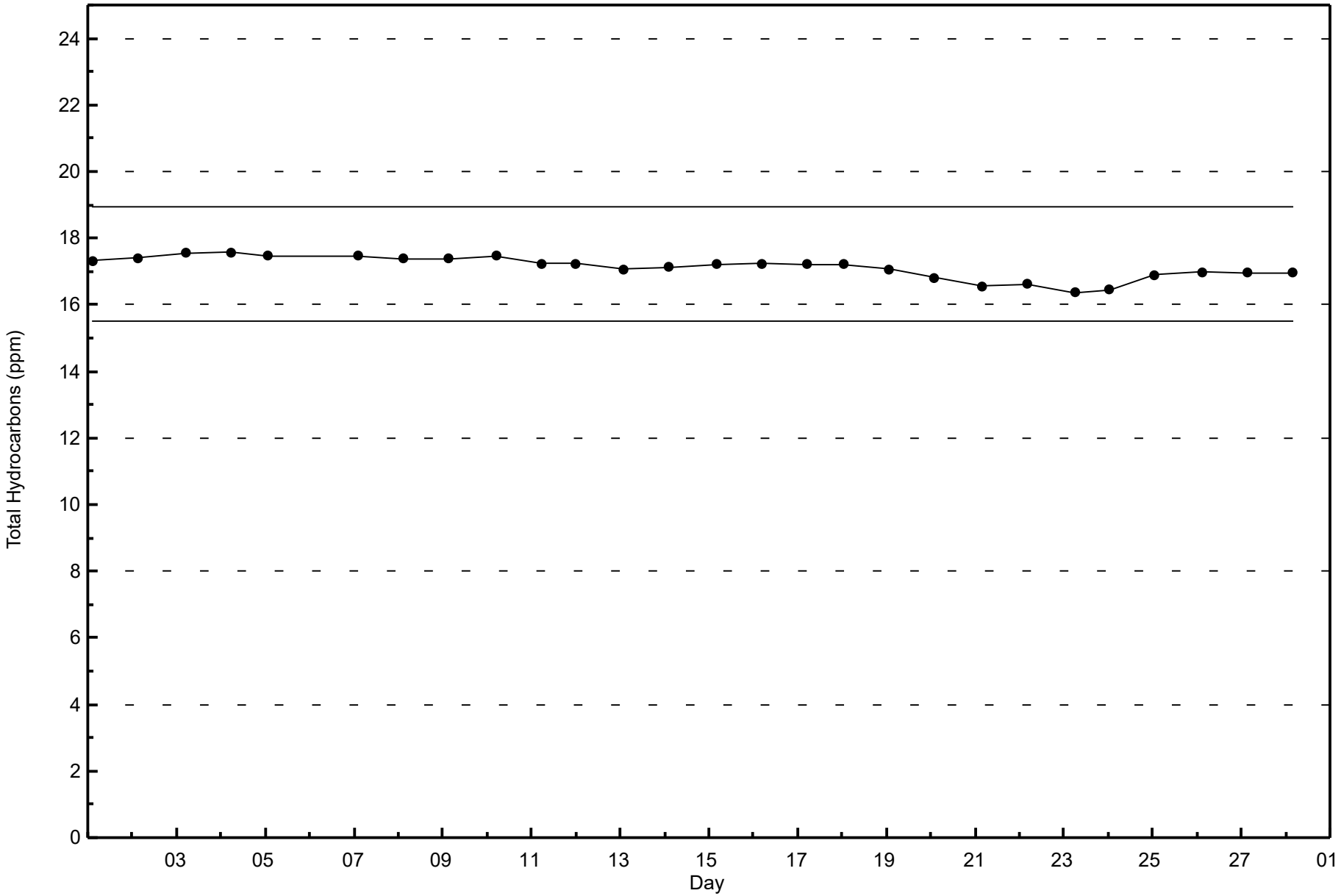


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Stony Mountain - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Stony Mountain - February 2025

Maximum Value: 0.073 ppm on Feb 21 06:00

Maximum Daily Average: 0.045 ppm on Feb 20

Minimum Value: 0.000 ppm on Feb 1 01:00

Minimum Daily Average: 0.000 ppm on Feb 17

Maximum Diurnal Average: 0.018 ppm at hour 8

Minimum Diurnal Average: 0.008 ppm at hour 15

Monthly Average: 0.014 ppm

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

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	31
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-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.001	0.003	0.010	0.023	0.042	0.035	0.011	0.012	0.003	0.001	0.001	0.003	0.001	0.002	0.004	0.002	0.007	0.042
2-Feb	0.003	0.007	0.003	Z	0.006	0.006	0.004	0.012	0.016	0.021	0.038	0.044	0.051	0.043	0.045	0.017	0.011	0.017	0.042	0.030	0.031	0.039	0.022	0.018	0.023	0.051
3-Feb	0.013	0.017	0.023	0.032	Z	0.030	0.041	0.056	0.030	0.010	0.007	0.004	0.005	0.002	0.001	0.005	0.005	0.002	0.011	0.011	0.009	0.001	0.010	0.005	0.014	0.056
4-Feb	0.001	0.002	0.001	0.008	0.000	Z	0.000	0.001	0.000	0.000	0.001	0.002	0.000	0.001	0.001	UO	UO	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.008
5-Feb	0.000	Z	0.000	0.001	0.000	0.000	0.000	0.001	0.002	0.016	0.022	0.028	0.018	0.012	0.012	0.002	0.002	0.002	0.010	0.018	0.032	0.037	0.045	0.049	0.013	0.049
6-Feb	0.048	0.048	0.049	0.046	0.042	0.037	0.033	0.033	0.037	0.036	0.032	0.025	0.012	0.006	0.002	0.003	0.002	0.009	0.033	0.019	0.008	0.002	0.004	0.006	0.024	0.049
7-Feb	0.013	Z	0.006	0.000	0.003	0.001	0.000	0.000	0.000	0.000	0.004	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.013
8-Feb	0.000	0.000	Z	0.001	0.005	0.003	0.001	0.002	0.001	0.001	0.004	0.004	0.003	0.001	0.003	0.013	0.011	0.013	0.003	0.003	0.006	0.020	0.021	0.006	0.005	0.021
9-Feb	0.005	0.009	0.038	Z	0.042	0.010	0.006	0.002	0.010	0.008	0.001	0.002	0.001	0.000	0.000	0.002	0.001	0.004	0.012	0.035	0.043	0.020	0.006	0.007	0.011	0.043
10-Feb	0.008	0.001	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.000	0.000	0.002	0.006	0.011	0.014	0.016	0.023	0.004	0.023
11-Feb	0.003	0.004	0.006	0.004	0.001	Z	0.039	0.029	0.014	0.019	0.009	0.007	0.005	0.005	0.003	0.006	0.025	0.033	0.023	0.058	0.065	0.032	0.016	0.020	0.019	0.065
12-Feb	Z	0.010	0.011	0.004	0.006	0.003	0.002	0.003	0.002	0.010	0.023	0.031	0.033	0.021	0.029	0.030	0.030	0.024	0.017	0.017	0.011	0.011	0.008	0.011	0.015	0.033
13-Feb	0.025	Z	0.004	0.002	0.005	0.007	0.004	0.004	0.001	0.002	0.000	0.002	0.007	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.006	0.003	0.025
14-Feb	0.025	0.027	Z	0.023	0.028	0.024	0.015	0.030	0.019	0.004	0.002	0.006	0.002	0.025	0.004	0.002	0.002	0.003	0.001	0.002	0.021	0.024	0.024	0.014	0.014	0.030
15-Feb	0.005	0.016	0.002	Z	0.012	0.014	0.021	0.030	0.023	0.011	0.006	0.004	0.005	0.004	0.006	0.003	0.004	0.011	0.017	0.010	0.005	0.011	0.024	0.020	0.011	0.030
16-Feb	0.031	0.004	0.001	0.001	Z	0.020	0.017	0.023	0.008	0.002	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.001	0.001	0.000	0.002	0.002	0.003	0.005	0.031
17-Feb	0.001	0.000	0.001	0.001	0.001	Z	0.002	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.002
18-Feb	Z	0.000	0.000	0.000	0.000	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.014
19-Feb	0.000	Z	0.000	0.001	0.003	0.013	0.016	0.012	0.012	0.017	0.020	0.019	0.002	0.002	0.001	0.001	0.002	0.003	0.002	0.004	0.002	0.003	0.006	0.020	0.007	0.020
20-Feb	0.028	0.034	Z	0.038	0.041	0.043	0.042	0.045	0.047	0.051	0.055	0.060	0.055	0.050	0.052	0.048	0.050	0.049	0.051	0.047	0.047	0.049	0.035	0.028	0.045	0.060
21-Feb	0.038	0.041	0.057	Z	0.071	0.073	0.055	0.047	0.045	0.057	0.045	0.023	0.010	0.002	0.001	0.002	0.004	0.013	0.020	0.024	0.032	0.031	0.029	0.031	0.033	0.073
22-Feb	0.030	0.035	0.041	0.036	Z	0.052	0.063	0.049	0.036	0.035	0.016	0.013	0.010	0.017	0.017	0.012	0.018	0.029	0.032	0.038	0.045	0.048	0.051	0.057	0.034	0.063
23-Feb	0.062	0.065	0.063	0.056	0.059	Z	0.034	0.012	0.009	0.004	0.001	0.001	0.001	0.002	0.002	0.011	0.062	0.044	0.053	0.054	0.051	0.052	0.046	0.043	0.034	0.065
24-Feb	Z	0.028	0.022	0.027	0.031	0.024	0.019	0.014	0.013	0.016	0.018	0.014	0.002	C	C	C	C	0.002	0.000	0.000	0.000	0.001	0.001	0.000	0.012	0.031
25-Feb	0.001	Z	0.009	0.011	0.017	0.029	0.023	0.029	0.049	0.051	0.047	0.029	M	0.015	0.020	0.028	0.028	0.032	0.033	0.058	0.058	0.059	0.003	0.001	0.029	0.059
26-Feb	0.002	0.001	Z	0.001	0.002	0.003	0.003	0.001	0.001	0.002	0.000	0.000	0.001	0.001	0.000	0.002	0.001	0.000	0.000	0.001	0.000	0.001	0.001	0.000	0.001	0.003
27-Feb	0.000	0.001	0.001	Z	0.006	0.005	0.010	0.037	0.038	0.012	0.000	0.000	0.000	0.000	0.001	0.002	0.008	0.002	0.005	0.004	0.001	0.002	0.001	0.015	0.006	0.038
28-Feb	0.012	0.002	0.003	0.006	Z	0.012	0.014	0.036	0.035	0.043	0.026	0.011	0.004	0.000	0.002	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.043
	0.014	0.015	0.015	0.013	0.017	0.018	0.017	0.018	0.016	0.015	0.014	0.013	0.010	0.009	0.008	0.008	0.010	0.010	0.013	0.016	0.017	0.016	0.014	0.014	Diurnal Average	
	0.062	0.065	0.063	0.056	0.071	0.073	0.063	0.056	0.049	0.057	0.055	0.060	0.055	0.050	0.052	0.048	0.062	0.049	0.053	0.058	0.065	0.059	0.051	0.057	Diurnal Maximum	

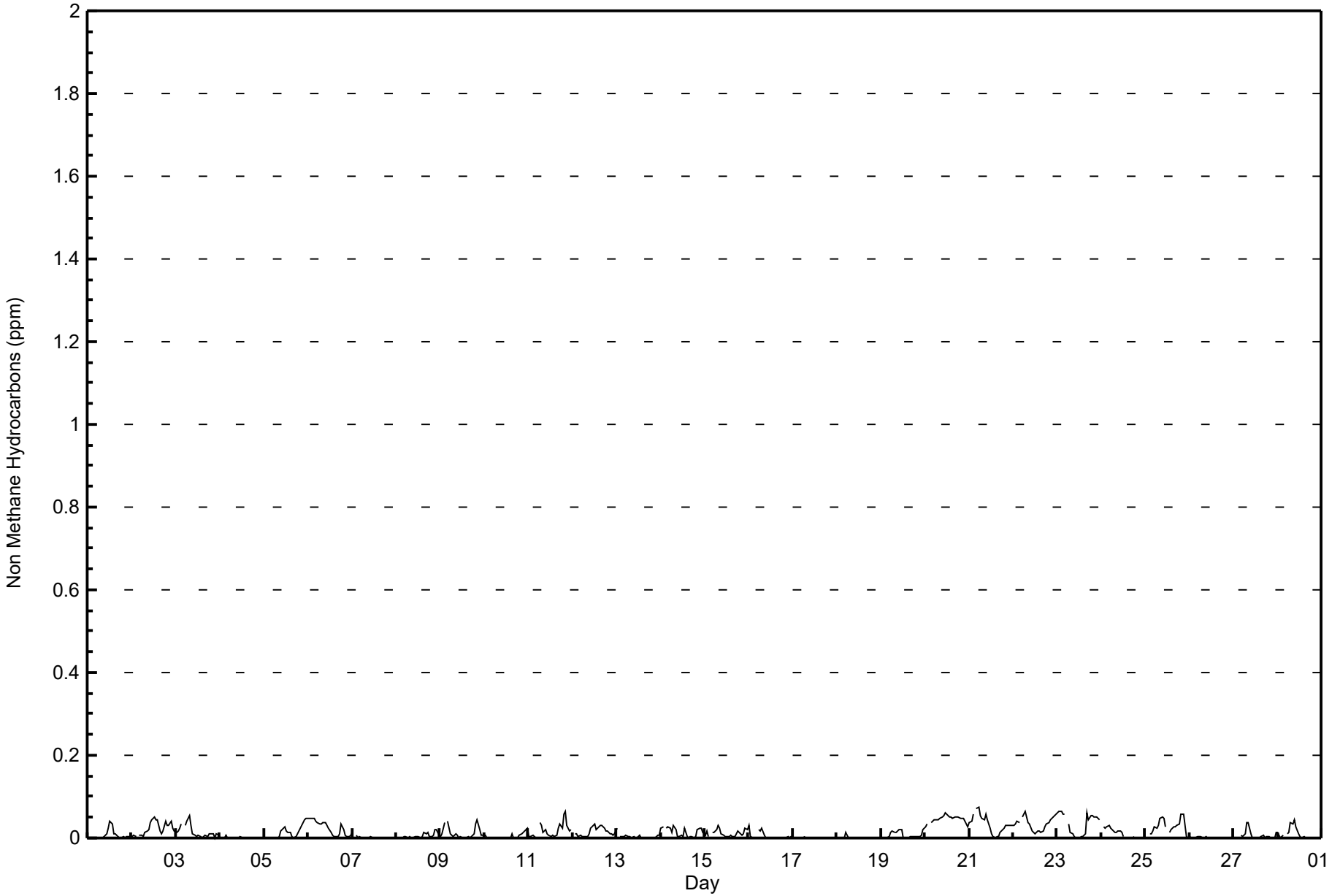
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Stony Mountain - February 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Stony Mountain - February 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	328	51.41	51.41
0.006 - 0.05	289	45.30	96.71
0.06 - 0.1	21	3.29	100.00
> 0.1	0	0.00	100.00

Total Number of Valid Hours: 638

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Stony Mountain - February 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	7	7	16	9	2	1	10	32	33	14	12	36	73	36	23	17	328
0.006 - 0.05	8	15	12	11	4	16	10	7	19	23	15	16	17	36	52	28	289
0.06 - 0.1	0	0	0	1	0	0	1	1	2	3	7	2	0	3	0	1	21
> 0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	15	22	28	21	6	17	21	40	54	40	34	54	90	75	75	46	638

Total Number of Valid Hours: 638

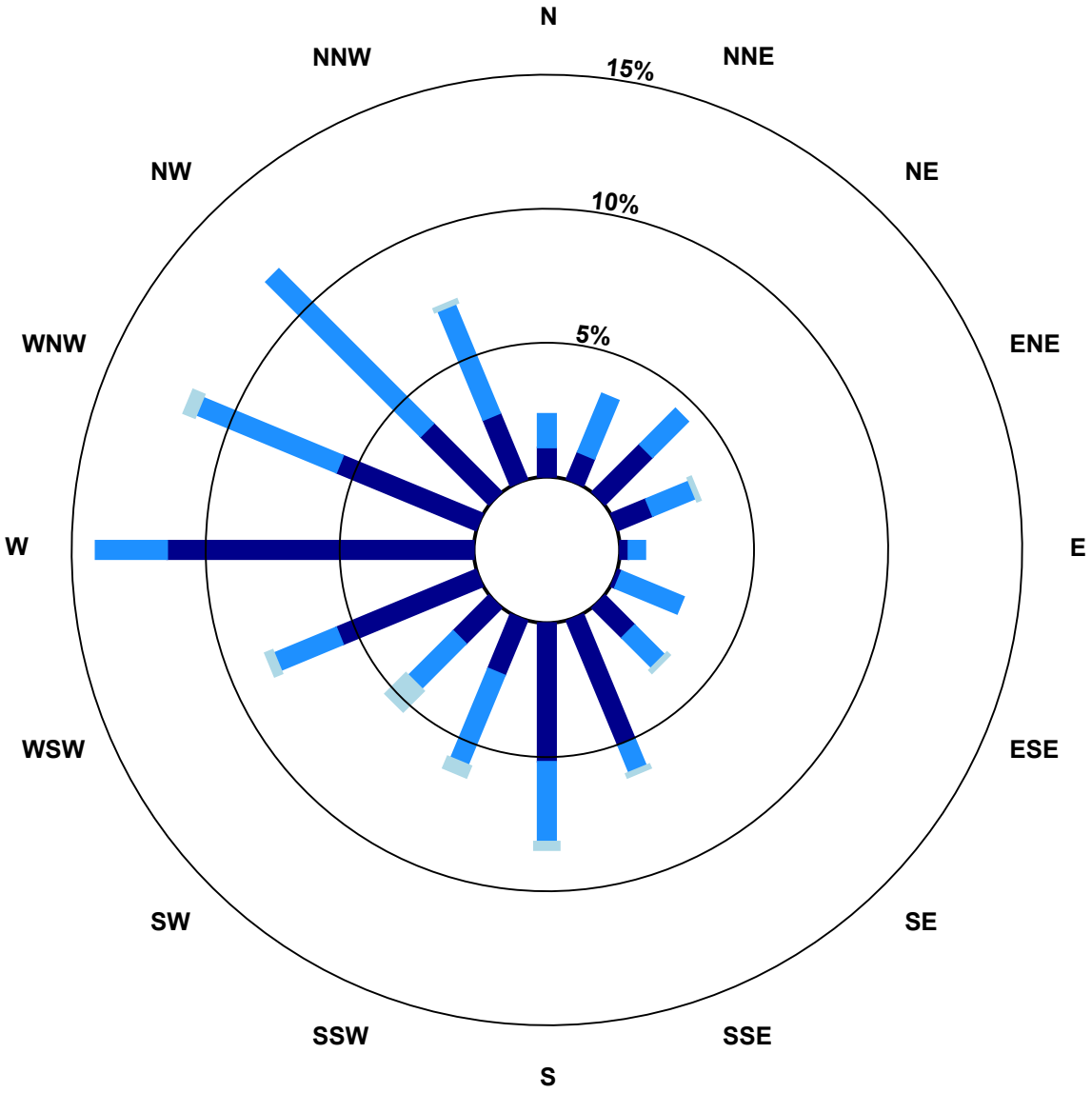
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Non Methane Hydrocarbons (NMHC) - ppm

Stony Mountain



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

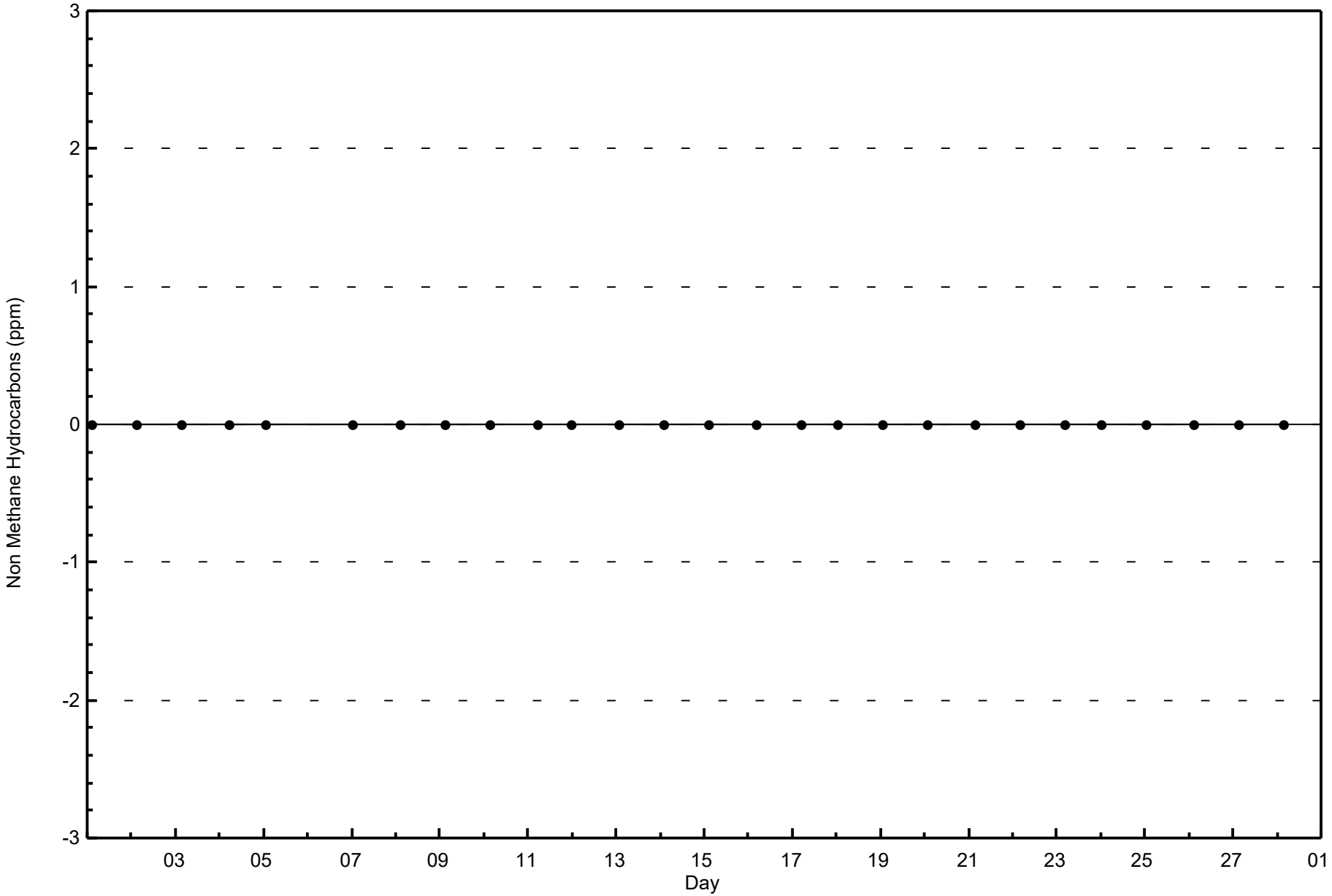
Total Number of Valid Hours: 638

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Stony Mountain - February 2025

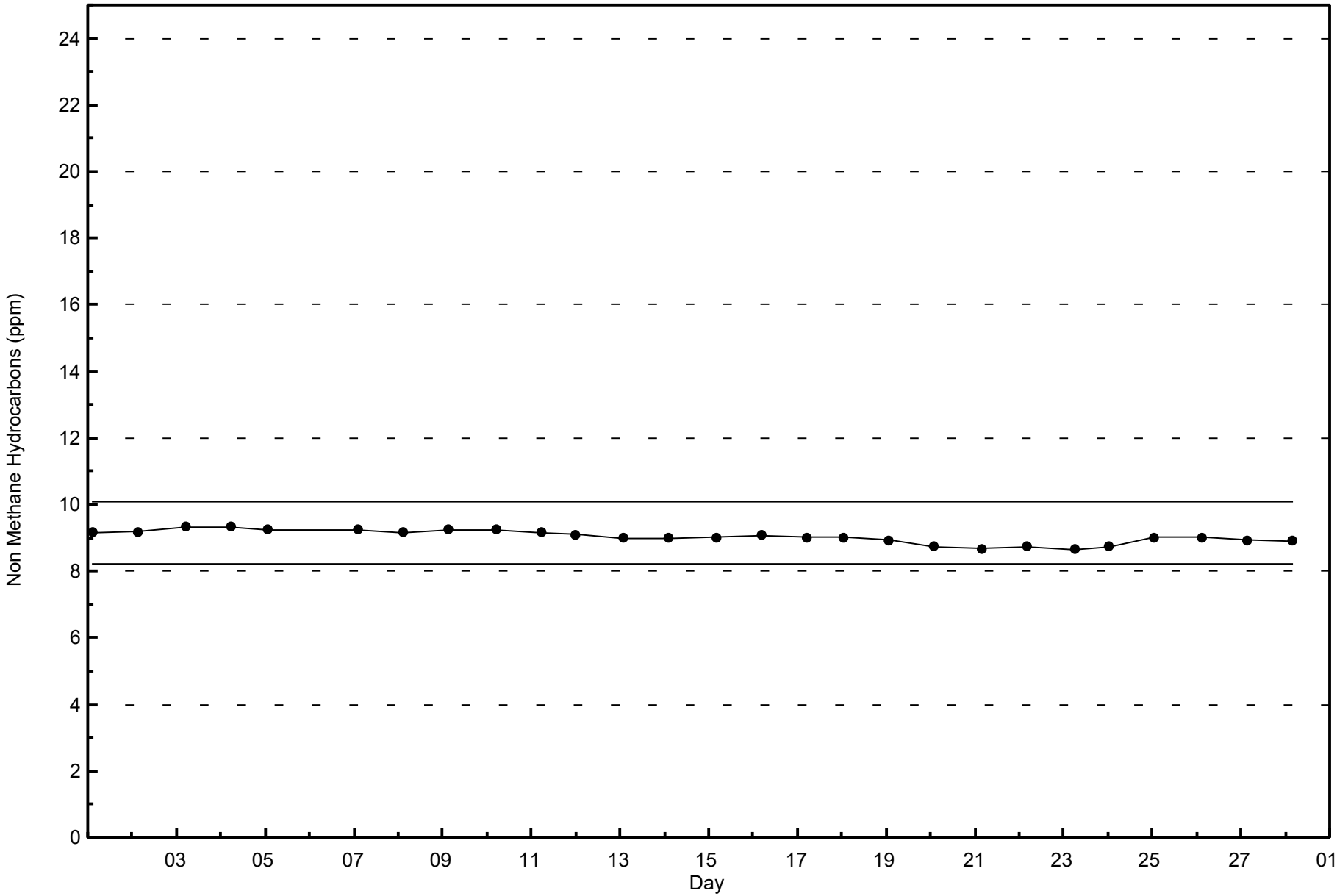


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Stony Mountain - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Stony Mountain - February 2025

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

Maximum Value: 2.2 ppm on Feb 16 08:00

Maximum Daily Average: 2.1 ppm on Feb 17

Minimum Value: 1.9 ppm on Feb 23 12:00

Minimum Daily Average: 2.0 ppm on Feb 24

Maximum Diurnal Average: 2.1 ppm at hour 6

Minimum Diurnal Average: 2.1 ppm at hour 16

Monthly Average: 2.10 ppm

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

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	31
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-Feb	2.1	2.1	Z	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
2-Feb	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
3-Feb	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
4-Feb	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	UO	UO	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
5-Feb	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
6-Feb	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
7-Feb	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
8-Feb	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
9-Feb	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-Feb	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
11-Feb	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
12-Feb	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
13-Feb	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
14-Feb	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
15-Feb	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
16-Feb	2.1	2.1	2.1	2.1	Z	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
17-Feb	2.1	2.1	2.1	2.1	2.2	Z	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
18-Feb	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
19-Feb	2.1	Z	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
20-Feb	2.1	2.1	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	2.1	2.1	2.1	2.1	2.1	2.2
21-Feb	2.1	2.1	2.1	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
22-Feb	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
23-Feb	2.1	2.1	2.1	2.1	2.1	Z	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1
24-Feb	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	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
25-Feb	2.0	Z	2.0	2.0	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	2.2	2.1	2.0	2.0	2.1	2.2
26-Feb	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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-Feb	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	2.1	2.0	2.1
28-Feb	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2
	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	Diurnal Average	
	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.2	Diurnal Maximum	

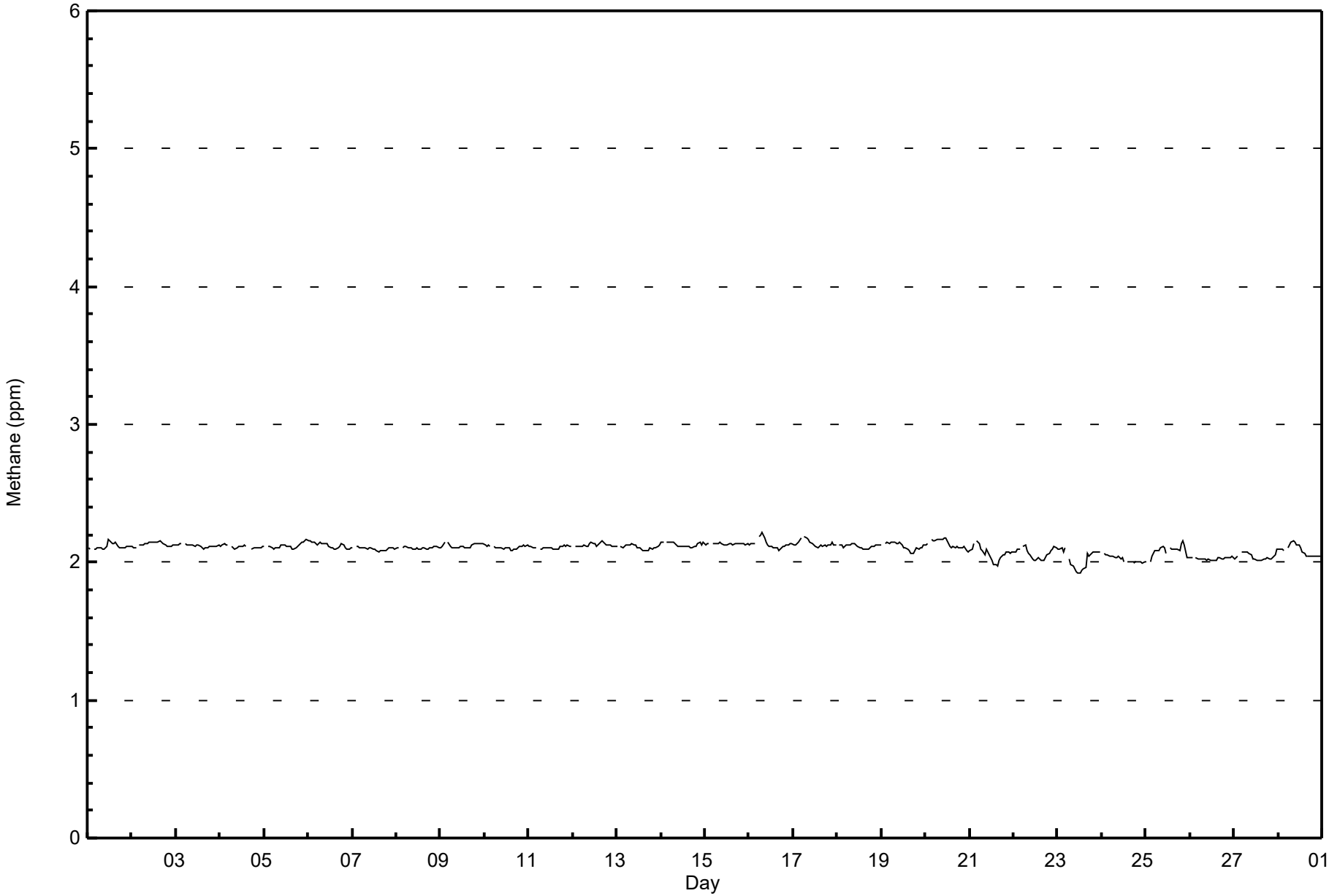
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Stony Mountain - February 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	96	15.05	15.05
2.1 - 3.0	542	84.95	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 638

Total Number of Hours: 672



Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Stony Mountain - February 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	1	1	0	3	0	4	2	0	1	10	10	12	21	20	7	4	96
2.1 - 3.0	14	21	28	18	6	13	19	40	53	30	24	42	69	55	68	42	542
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	15	22	28	21	6	17	21	40	54	40	34	54	90	75	75	46	638

Total Number of Valid Hours: 638

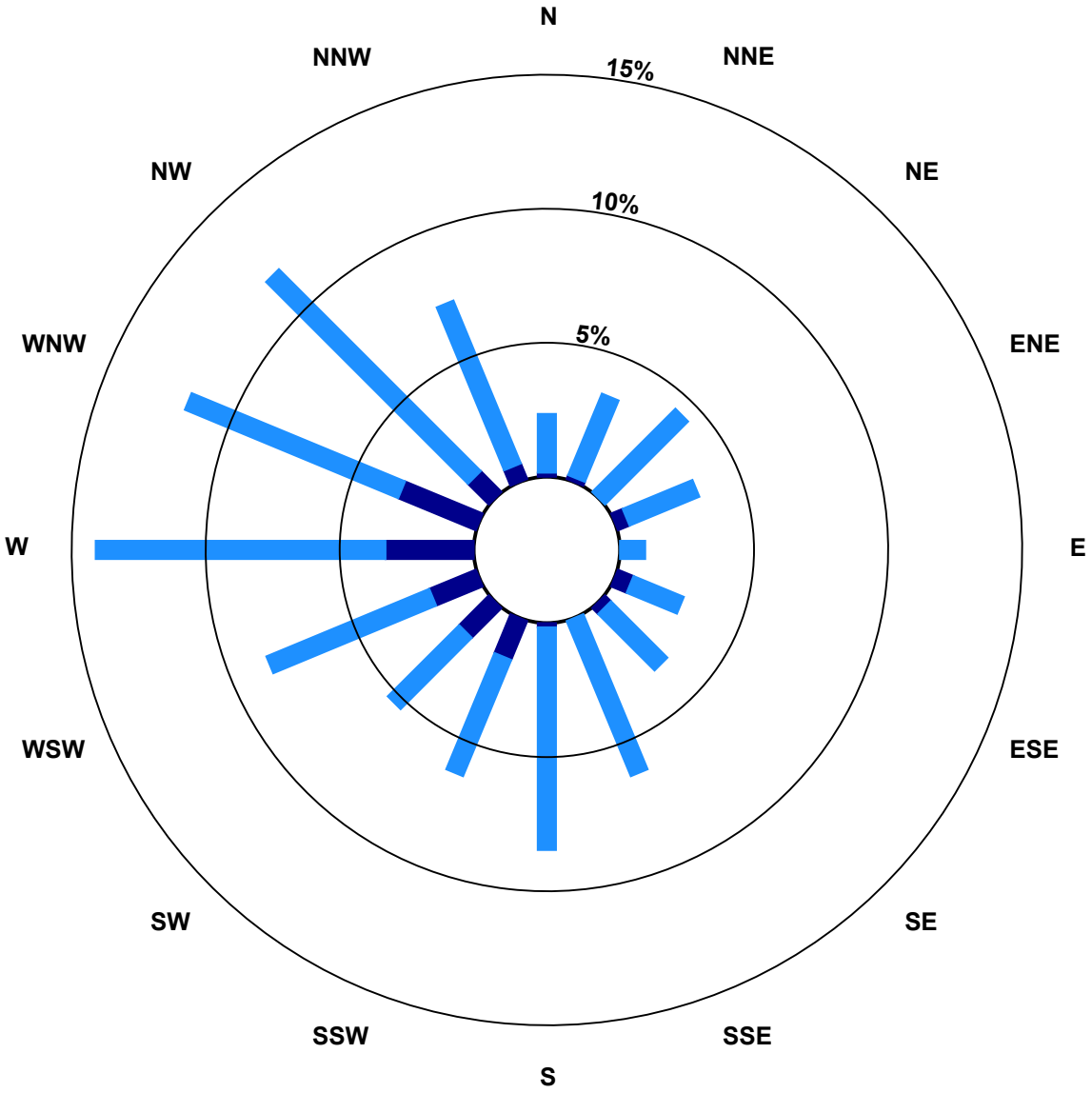
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Methane (CH_4) - ppm

Stony Mountain



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

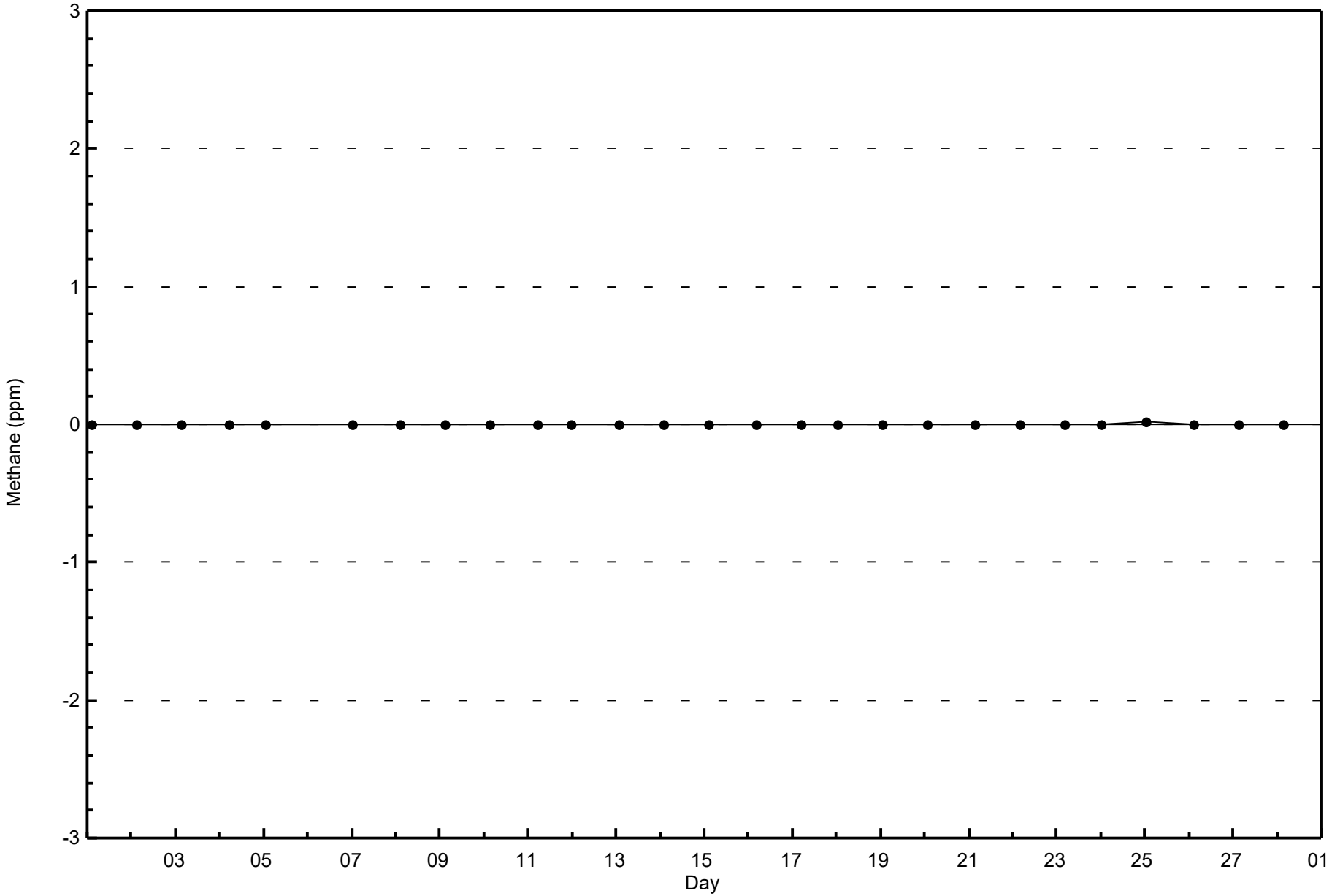
Total Number of Valid Hours: 638

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Stony Mountain - February 2025

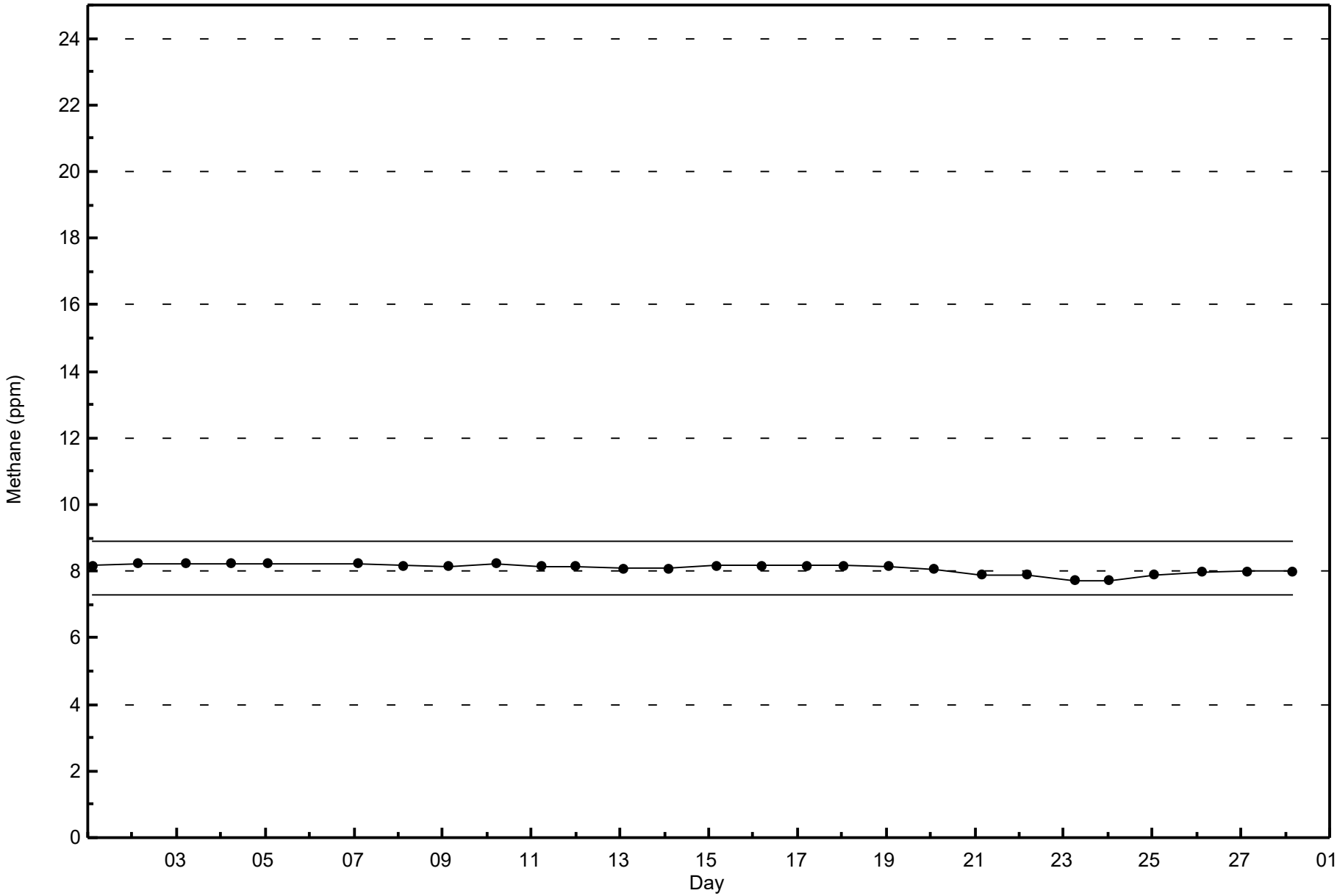


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Stony Mountain - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Stony Mountain - February 2025

Maximum Value: 3.5 ppb on Feb 6 15:00

Maximum Daily Average: 0.8 ppb on Feb 16

Minimum Value: 0.0 ppb on Feb 1 02:00

Minimum Daily Average: 0.0 ppb on Feb 23

Maximum Diurnal Average: 0.6 ppb at hour 12

Minimum Diurnal Average: 0.1 ppb at hour 24

Monthly Average: 0.32 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.5 P_{90} = 0.9 P_{99} = 2.0

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.4	0.0	0.0	0.0	0.3	Z	0.8	0.0	0.1	0.1	0.3	0.5	0.5	2.0	1.6	0.8	0.2	0.0	0.0	0.0	0.3	0.1	0.3	0.0	0.4	2.0
2-Feb	Z	0.1	0.3	0.3	0.0	0.2	0.1	0.3	0.2	2.0	2.4	2.6	2.6	2.1	1.3	1.2	0.4	0.7	0.1	0.0	0.0	0.1	0.0	0.0	0.7	2.6
3-Feb	0.1	Z	0.1	0.3	0.6	0.3	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	0.1	0.6
4-Feb	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	0.2	1.3	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.1	1.3
5-Feb	0.7	0.4	0.2	0.0	Z	0.6	0.1	0.0	0.3	0.0	0.2	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.7
6-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	3.5
7-Feb	0.5	0.3	0.1	0.0	Z	0.2	0.3	0.5	0.3	0.0	0.7	0.0	0.1	0.1	0.0	0.0	0.1	0.5	0.2	0.4	0.7	0.8	0.4	0.3	0.3	0.8
8-Feb	0.5	0.6	0.8	0.6	0.4	Z	0.8	0.5	0.7	0.0	0.4	0.2	0.5	0.2	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.8
9-Feb	Z	0.9	0.9	1.1	0.7	0.6	0.4	1.1	0.6	0.8	1.0	0.4	0.6	0.7	0.2	0.9	0.9	0.0	0.6	0.4	0.8	0.4	0.2	0.2	0.6	1.1
10-Feb	0.6	Z	0.4	0.0	0.7	0.3	0.0	0.3	0.2	0.7	1.0	0.4	0.2	0.1	0.0	0.4	0.0	0.2	0.2	0.3	0.2	0.0	0.2	0.0	0.3	1.0
11-Feb	0.1	0.3	Z	1.2	0.7	1.0	0.9	0.9	1.1	1.4	1.4	1.1	0.9	0.6	0.5	0.7	0.0	0.0	0.5	0.5	0.4	0.0	0.0	0.0	0.6	1.4
12-Feb	0.1	0.1	0.0	Z	0.0	0.1	0.0	0.0	0.0	0.2	0.2	0.2	0.8	0.3	0.3	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.8
13-Feb	0.1	0.3	0.1	0.0	Z	1.1	0.8	0.2	0.3	0.8	0.6	1.0	0.4	0.7	1.4	0.0	0.0	0.7	0.0	0.0	0.4	0.1	0.1	0.1	0.4	1.4
14-Feb	0.0	0.0	0.3	0.3	0.4	Z	0.8	0.6	0.9	1.1	1.0	2.0	1.8	0.7	0.5	1.2	1.0	0.1	0.6	0.0	0.0	0.1	0.2	0.5	0.6	2.0
15-Feb	Z	0.7	0.1	0.1	0.0	0.4	0.4	0.2	0.9	2.5	0.6	1.9	0.3	0.8	1.4	0.5	0.4	0.7	0.5	0.6	0.5	0.3	0.8	0.6	0.7	2.5
16-Feb	0.2	Z	1.0	1.1	0.5	0.5	0.5	1.2	1.6	1.1	1.0	0.6	0.4	0.6	1.2	0.6	0.8	0.8	1.1	0.3	0.7	0.9	0.6	0.5	0.8	1.6
17-Feb	1.3	1.0	Z	1.3	0.8	1.4	1.0	0.5	0.9	1.1	0.4	0.8	0.3	1.0	0.6	0.5	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.6	1.4
18-Feb	0.0	0.0	0.0	Z	0.1	0.0	0.1	0.3	0.5	0.4	0.4	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.1	0.2	0.7	0.5	0.2	0.7
19-Feb	0.2	0.4	0.3	0.7	Z	1.0	0.4	1.0	1.2	0.8	0.6	0.8	0.6	0.3	0.3	0.6	0.6	0.4	0.6	0.0	0.4	0.4	0.4	0.0	0.5	1.2
20-Feb	0.2	0.4	0.2	0.8	0.4	Z	1.1	0.6	0.4	0.5	1.0	0.9	0.6	0.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.1
21-Feb	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	0.2	0.3	0.0	0.5	0.3	0.1	0.5
22-Feb	0.6	Z	1.4	0.5	0.1	0.4	0.0	0.1	0.1	0.5	0.6	0.2	0.3	0.5	0.1	0.0	0.1	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.3	1.4
23-Feb	0.0	0.0	Z	0.7	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	0.7
24-Feb	0.0	0.0	0.0	Z	0.4	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.4	0.1	0.0	0.0	0.1	0.5
25-Feb	0.0	0.0	0.0	0.0	Z	0.2	0.0	0.0	0.0	0.2	0.2	C	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.2
26-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.6	0.1	0.1	0.0	0.3	0.3	0.3	0.5	1.2	0.2	0.7	0.2	0.5	0.6	0.5	0.5	0.7	0.0	0.3	1.2
27-Feb	Z	1.5	0.3	0.1	0.3	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	0.1	1.5
28-Feb	0.0	Z	0.6	0.2	0.0	0.2	0.2	0.0	0.2	0.4	0.9	0.6	0.5	0.3	0.0	0.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.9
	0.2	0.3	0.3	0.4	0.3	0.4	0.3	0.3	0.4	0.6	0.5	0.6	0.4	0.5	0.5	0.3	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.1	Diurnal Average	
	1.3	1.5	1.4	1.3	0.8	1.4	1.1	1.2	1.6	2.5	2.4	2.6	2.6	2.1	3.5	1.2	1.3	0.8	1.1	0.6	0.8	0.9	0.8	0.6	Diurnal Maximum	

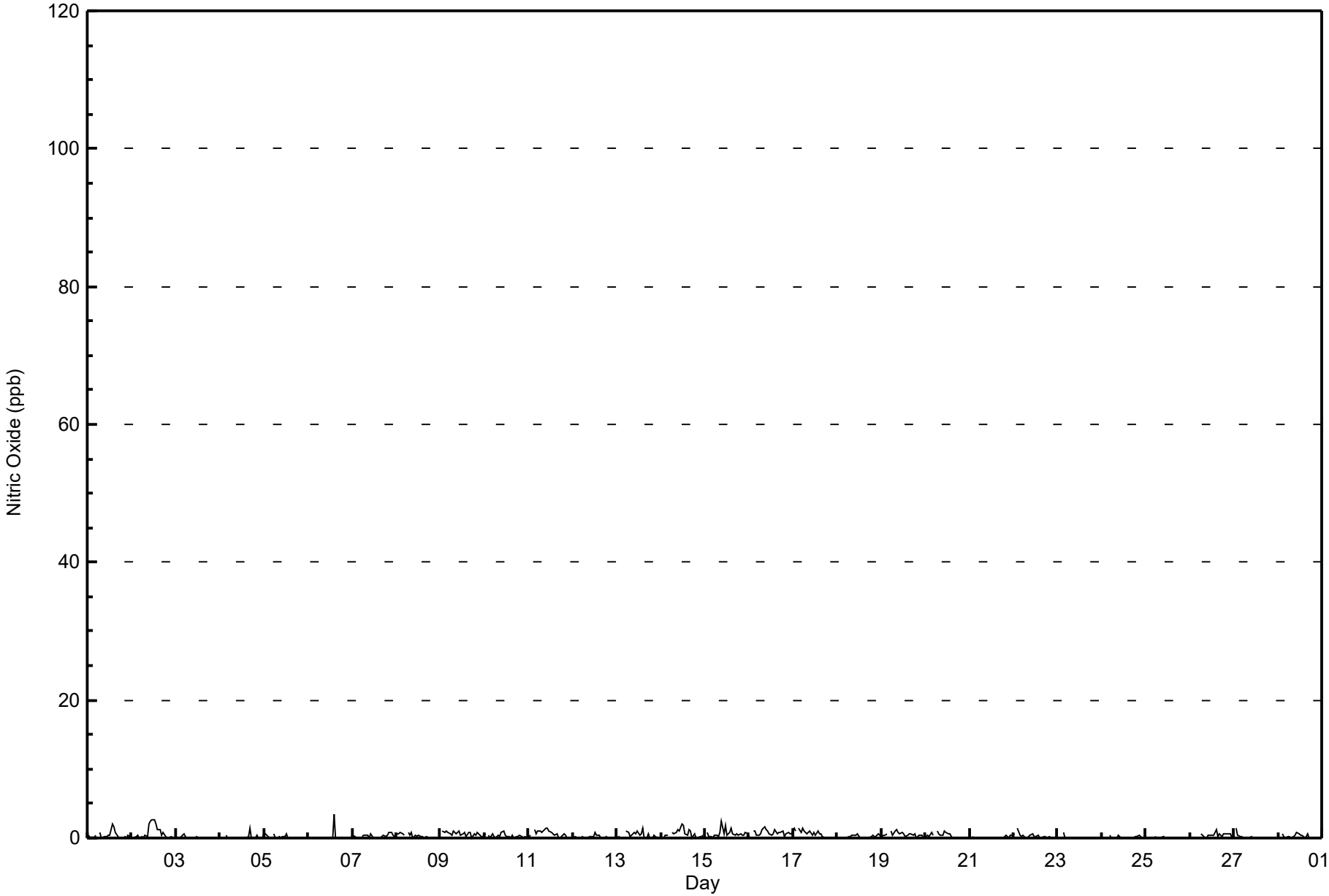
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Stony Mountain - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	639	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: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Stony Mountain - February 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	21	28	20	6	15	19	42	54	37	38	55	96	71	75	47	639
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	15	21	28	20	6	15	19	42	54	37	38	55	96	71	75	47	639

Total Number of Valid Hours: 639

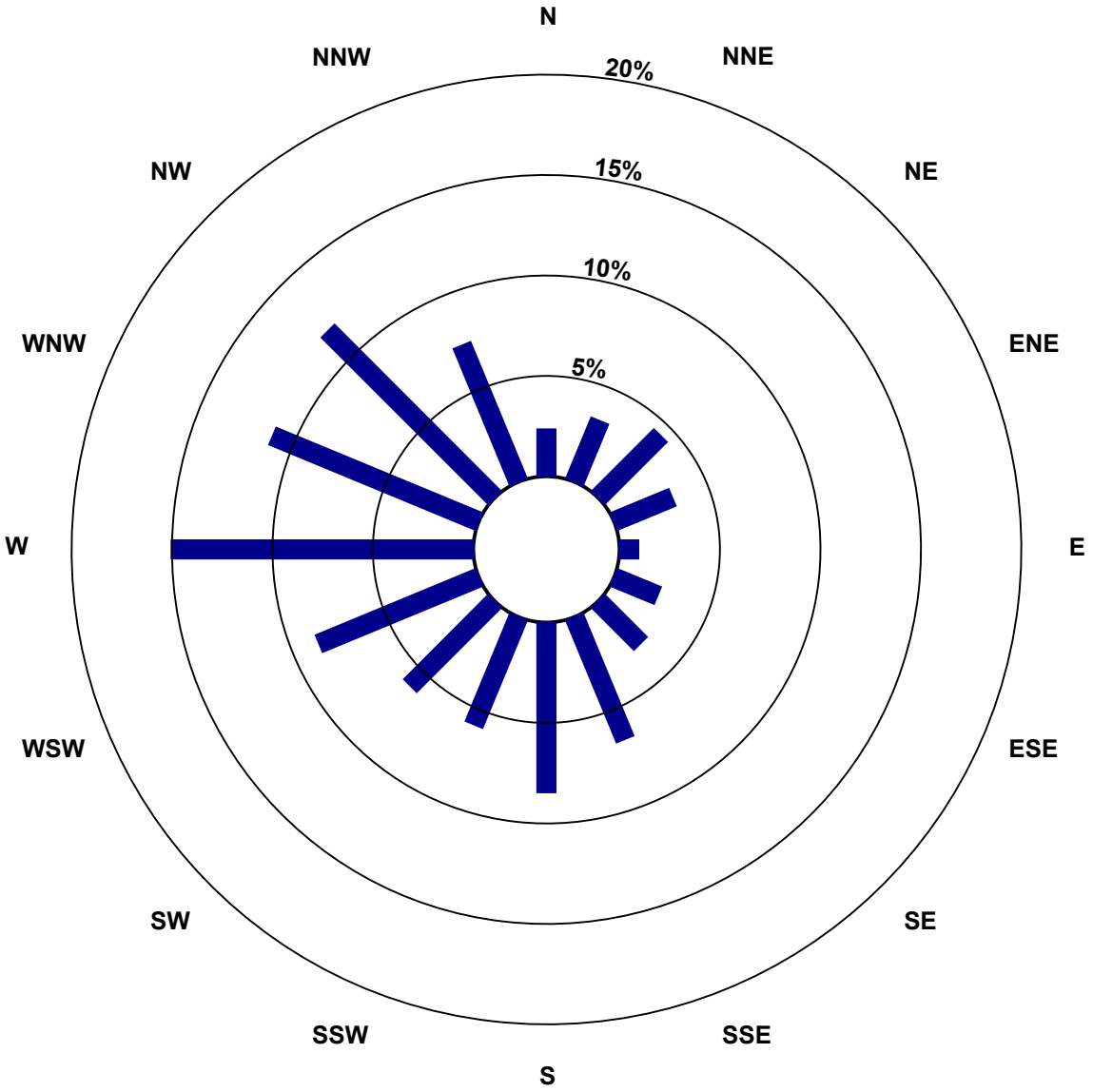
Total Number of Hours: 672

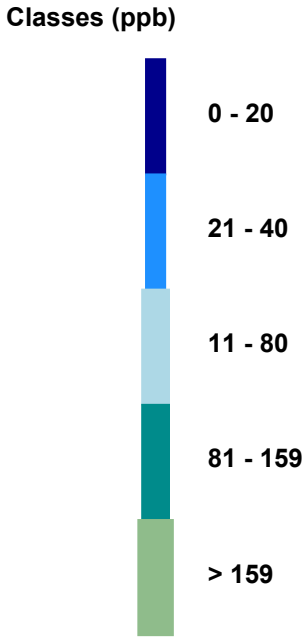
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitric Oxide (NO) - ppb

Stony Mountain





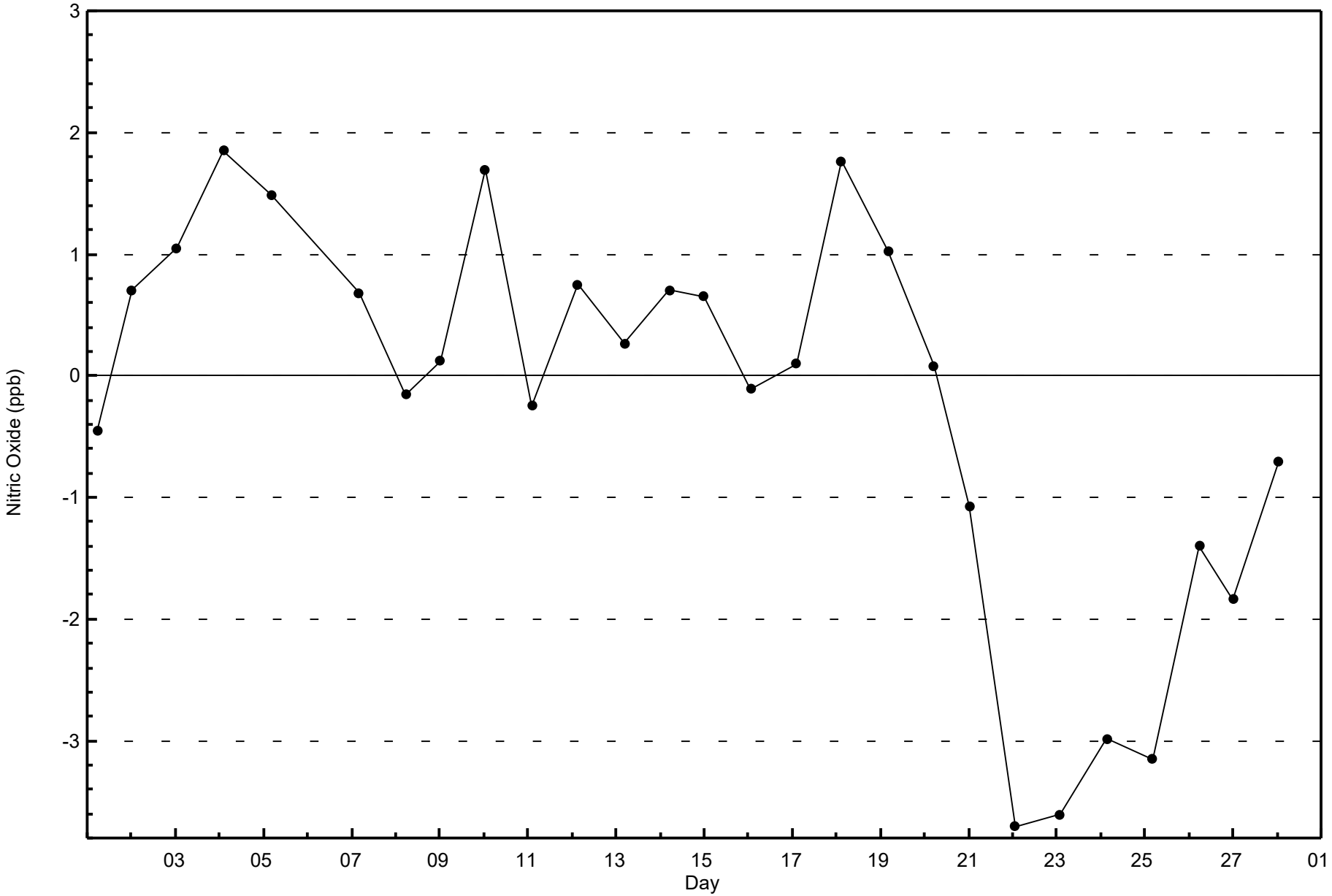
Total Number of Valid Hours: 639

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Stony Mountain - February 2025

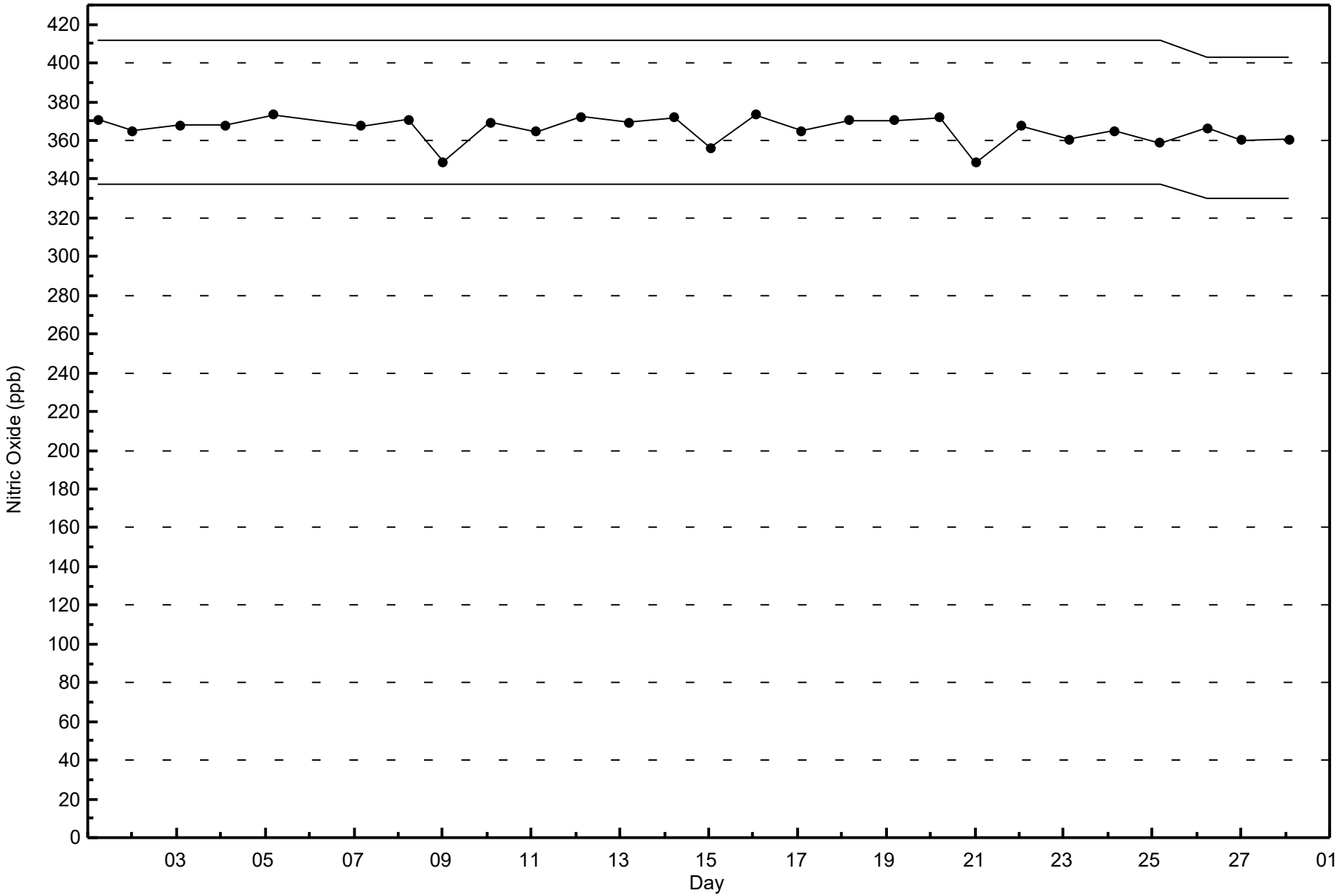


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Stony Mountain - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Stony Mountain - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 6.7 ppb on Feb 14 02:00 Maximum Daily Average: 2.8 ppb on Feb 14

Minimum Value: 0.0 ppb on Feb 1 21:00 Minimum Daily Average: 0.2 ppb on Feb 7
Maximum Diurnal Average: 1.8 ppb at hour 5 Minimum Diurnal Average: 0.9 ppb at hour 16
Monthly Average: 1.36 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.3 Median = 1.1 Q_3 = 2.1 P_{90} = 3.1 P_{99} = 5.7

Hours in Service: 672
Hours of Data: 639
Hours of Missing Data: 33
Hours of Calibration: 33
Percent Operational Time: 100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.7	0.6	1.0	0.8	0.9	Z	0.4	0.3	0.1	0.3	1.2	3.9	4.3	4.8	3.3	3.1	1.8	0.3	0.1	0.1	0.0	0.1	0.2	0.0	1.2	4.8
2-Feb	Z	0.6	0.2	0.6	1.2	1.3	0.8	1.6	2.4	2.6	3.6	3.3	3.2	3.0	2.9	3.4	3.6	2.9	2.1	0.7	0.5	0.9	0.4	0.7	1.8	3.6
3-Feb	0.5	Z	1.0	1.2	0.7	0.5	1.3	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	0.0	0.3	1.3
4-Feb	0.0	0.0	Z	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.2	0.4	0.4	1.1	1.0	0.7	0.7	0.2	1.1
5-Feb	0.7	0.7	0.7	0.3	Z	0.3	0.3	0.3	0.6	1.1	1.2	1.4	1.0	0.8	0.7	0.0	0.5	1.0	1.1	1.4	1.5	1.4	1.4	2.0	0.9	2.0
6-Feb	1.6	1.7	1.7	1.4	1.5	0.7	0.5	0.2	0.6	0.1	0.0	0.0	0.0	0.0	3.1	0.0	0.8	1.6	3.0	2.6	0.4	0.0	0.0	0.2	0.9	3.1
7-Feb	0.5	0.5	0.8	0.2	Z	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.3	0.7	0.6	0.4	0.4	0.2	0.8
8-Feb	0.7	0.3	0.1	0.2	0.5	Z	0.2	0.1	0.0	0.2	0.1	0.2	0.2	0.2	0.3	0.6	0.7	0.1	0.2	0.3	0.4	0.6	0.1	0.2	0.3	0.7
9-Feb	Z	1.3	3.6	3.2	3.8	1.0	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.4	2.3	2.6	3.7	4.3	3.2	0.9	0.3	1.3	4.3
10-Feb	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.1	0.1	0.0	0.0	0.3	0.0	0.2	0.5	0.6	0.5	1.0	1.2	0.7	0.7	0.6	0.3	1.2
11-Feb	0.7	1.0	Z	2.5	1.5	1.4	0.9	1.4	2.1	1.6	1.4	1.0	0.9	1.1	0.8	0.5	2.1	3.2	3.2	3.3	2.5	2.3	1.8	1.4	1.7	3.3
12-Feb	1.9	1.8	1.4	Z	1.4	2.4	1.4	1.6	1.5	1.3	2.1	2.9	3.5	2.4	3.8	4.0	4.8	4.2	4.4	3.0	1.9	1.7	2.0	1.5	2.5	4.8
13-Feb	1.6	1.8	2.1	2.2	Z	1.5	2.4	4.0	1.6	1.2	1.2	1.2	0.4	0.5	0.8	0.3	0.1	1.1	0.9	1.0	1.0	1.5	2.8	2.7	1.5	4.0
14-Feb	6.0	6.7	6.2	5.3	5.7	Z	3.8	3.8	2.7	1.4	1.2	2.5	1.6	1.1	0.9	1.2	1.0	0.9	3.6	1.2	2.0	3.2	1.8	1.7	2.8	6.7
15-Feb	Z	5.6	3.5	2.7	2.0	1.9	2.1	2.3	2.4	3.4	1.1	2.0	0.4	0.6	0.8	0.6	0.3	0.3	0.5	0.7	0.6	0.8	0.9	1.2	1.6	5.6
16-Feb	0.6	Z	1.9	1.8	2.4	2.8	2.7	2.7	2.4	1.7	0.9	0.6	1.0	1.1	1.8	1.6	1.1	2.1	2.4	2.6	3.5	5.2	5.7	2.9	2.2	5.7
17-Feb	3.5	3.8	Z	3.3	3.2	3.6	3.1	3.1	3.3	2.0	1.3	1.2	1.0	0.7	1.1	1.4	1.4	1.4	1.3	0.9	0.9	0.7	1.1	1.6	2.0	3.8
18-Feb	1.8	1.2	1.4	Z	1.8	2.5	1.8	1.4	1.8	1.2	1.0	0.9	0.5	0.8	0.1	0.0	0.6	1.4	1.0	1.2	1.2	1.6	2.1	1.4	1.2	2.5
19-Feb	1.7	1.3	1.7	1.8	Z	2.3	2.7	3.1	2.9	2.4	2.0	1.4	1.0	0.9	0.9	0.9	1.6	2.1	2.0	2.3	1.2	1.2	1.7	1.6	1.8	3.1
20-Feb	1.8	1.6	2.2	2.3	1.6	Z	2.0	2.2	1.9	2.3	2.4	2.5	2.0	1.9	2.2	2.5	2.2	2.6	2.1	2.1	1.3	2.1	1.3	1.0	2.0	2.6
21-Feb	Z	2.4	1.9	3.0	3.6	2.9	2.0	1.4	0.6	1.6	1.7	0.1	0.1	0.0	0.0	0.0	0.0	1.0	1.5	1.7	1.4	1.4	1.1	1.4	1.3	3.6
22-Feb	1.6	Z	1.8	1.6	1.9	2.1	2.9	5.7	3.3	2.4	2.9	1.8	2.3	2.7	2.0	1.7	1.8	2.1	2.3	2.6	2.7	2.2	2.6	2.7	2.4	5.7
23-Feb	2.5	1.6	Z	3.5	2.1	2.3	1.3	0.2	0.7	0.0	0.3	0.0	0.0	0.0	0.0	0.0	3.3	2.2	2.9	3.8	2.8	2.4	2.4	3.2	1.6	3.8
24-Feb	2.8	2.4	1.9	Z	3.1	2.2	1.4	1.8	1.9	1.7	1.5	0.9	0.0	0.1	0.0	0.5	0.1	0.7	0.4	0.6	0.4	0.8	0.3	0.1	1.1	3.1
25-Feb	0.2	0.8	0.0	1.1	Z	2.9	1.8	2.9	4.5	4.3	3.5	C	C	C	C	C	C	6.1	5.0	5.9	5.2	4.1	0.0	0.0	--	6.1
26-Feb	0.2	0.0	0.0	0.1	0.3	Z	1.2	1.0	0.7	0.8	0.6	0.5	0.6	0.3	0.4	0.3	0.4	0.3	0.4	0.2	0.1	0.2	0.3	0.0	0.4	1.2
27-Feb	Z	0.3	0.4	0.8	1.1	0.9	1.2	2.9	2.9	1.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.1	2.7	0.7	2.9
28-Feb	2.7	Z	1.6	1.3	1.2	1.7	1.8	1.7	2.3	2.6	2.0	1.3	1.3	0.8	0.6	0.4	0.4	0.3	0.4	0.0	0.0	0.8	1.4	1.4	1.2	2.7
	1.5	1.7	1.5	1.7	1.8	1.6	1.4	1.6	1.6	1.4	1.2	1.1	0.9	0.9	1.0	0.9	1.1	1.5	1.6	1.6	1.4	1.5	1.2	1.2	Diurnal Average	
	6.0	6.7	6.2	5.3	5.7	3.6	3.8	5.7	4.5	4.3	3.6	3.9	4.3	4.8	3.8	4.0	4.8	6.1	5.0	5.9	5.2	5.2	5.7	3.2	Diurnal Maximum	

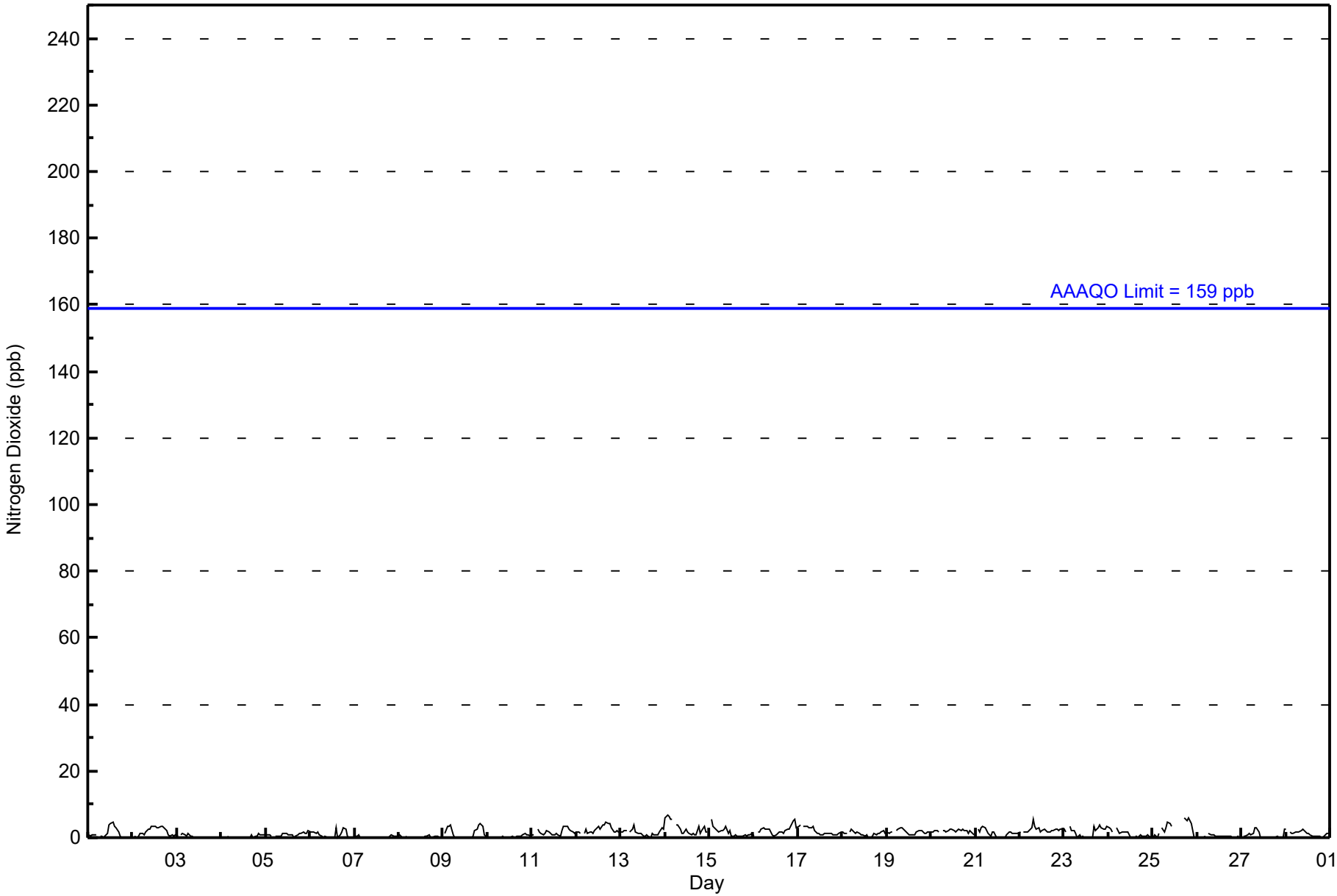
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Stony Mountain - February 2025



Nitrogen Dioxide (NO_2) - ppb
Stony Mountain - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	639	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: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Stony Mountain - February 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	21	28	20	6	15	19	42	54	37	38	55	96	71	75	47	639
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	15	21	28	20	6	15	19	42	54	37	38	55	96	71	75	47	639

Total Number of Valid Hours: 639

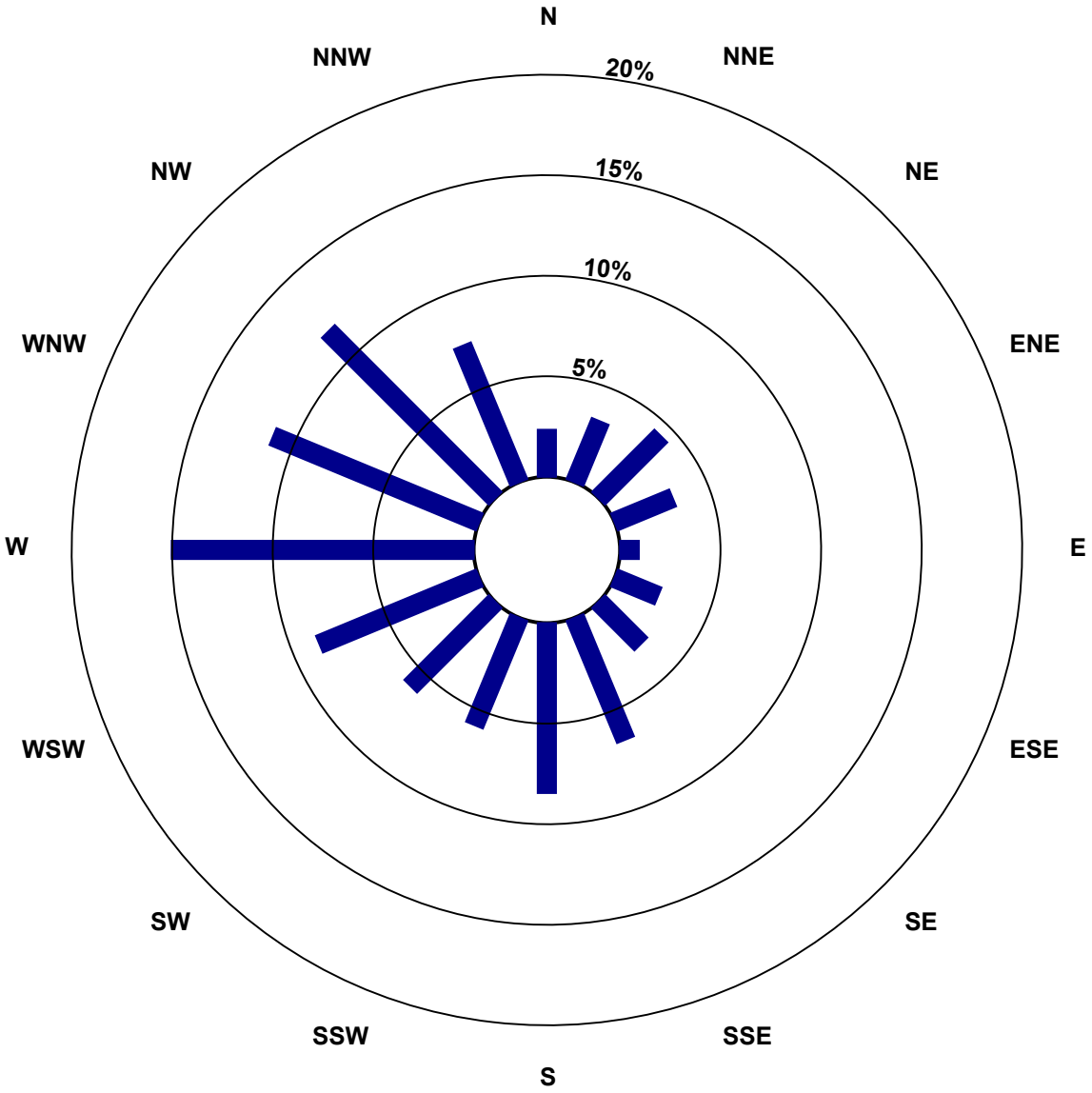
Total Number of Hours: 672

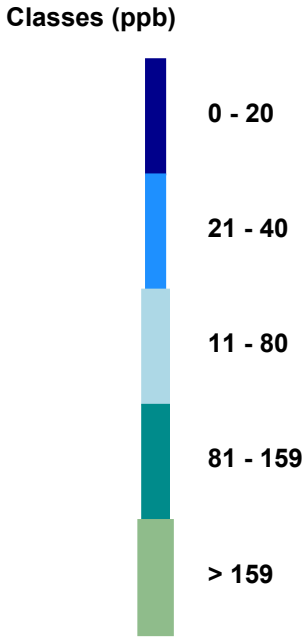
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Dioxide (NO_2) - ppb

Stony Mountain





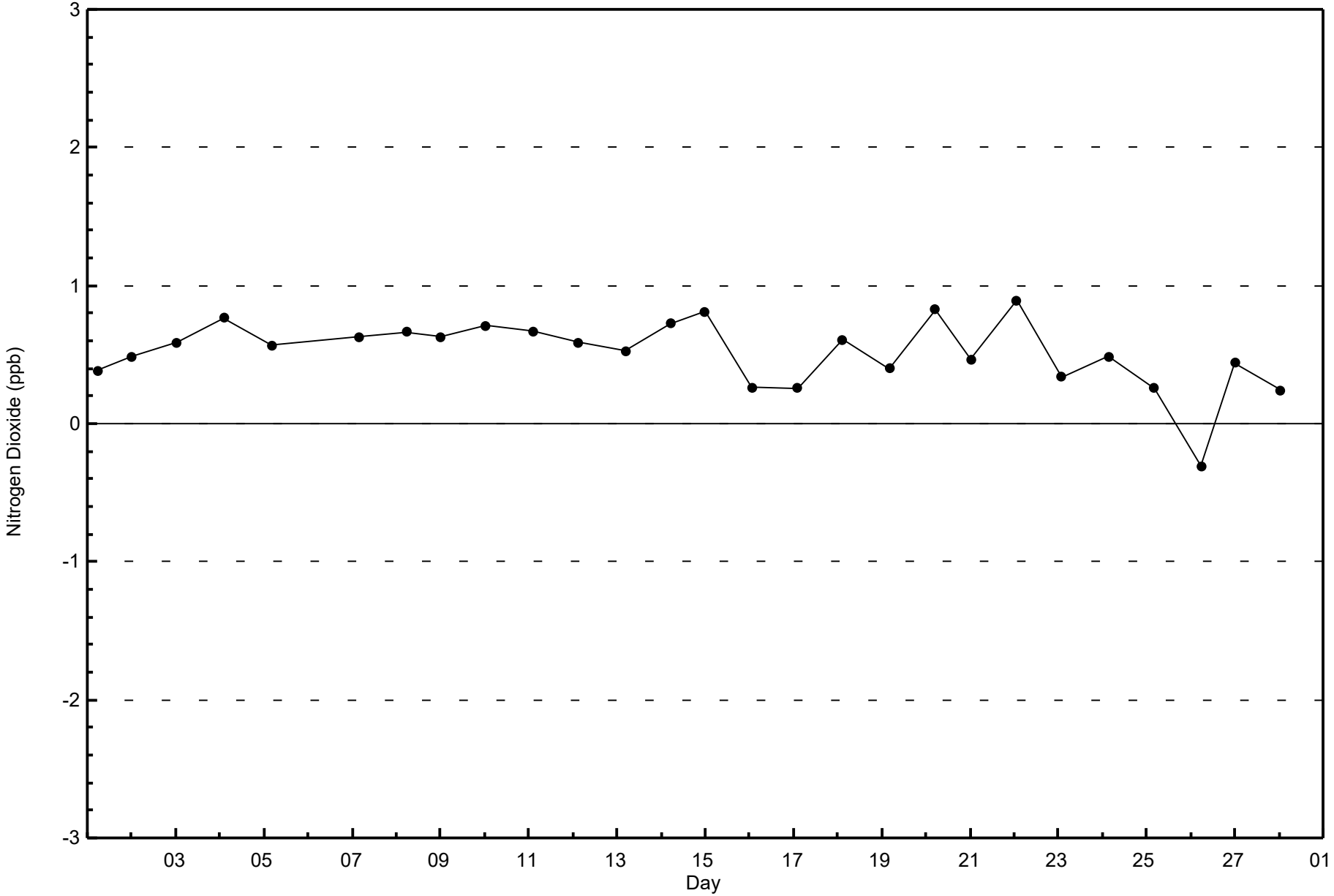
Total Number of Valid Hours: 639

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Stony Mountain - February 2025

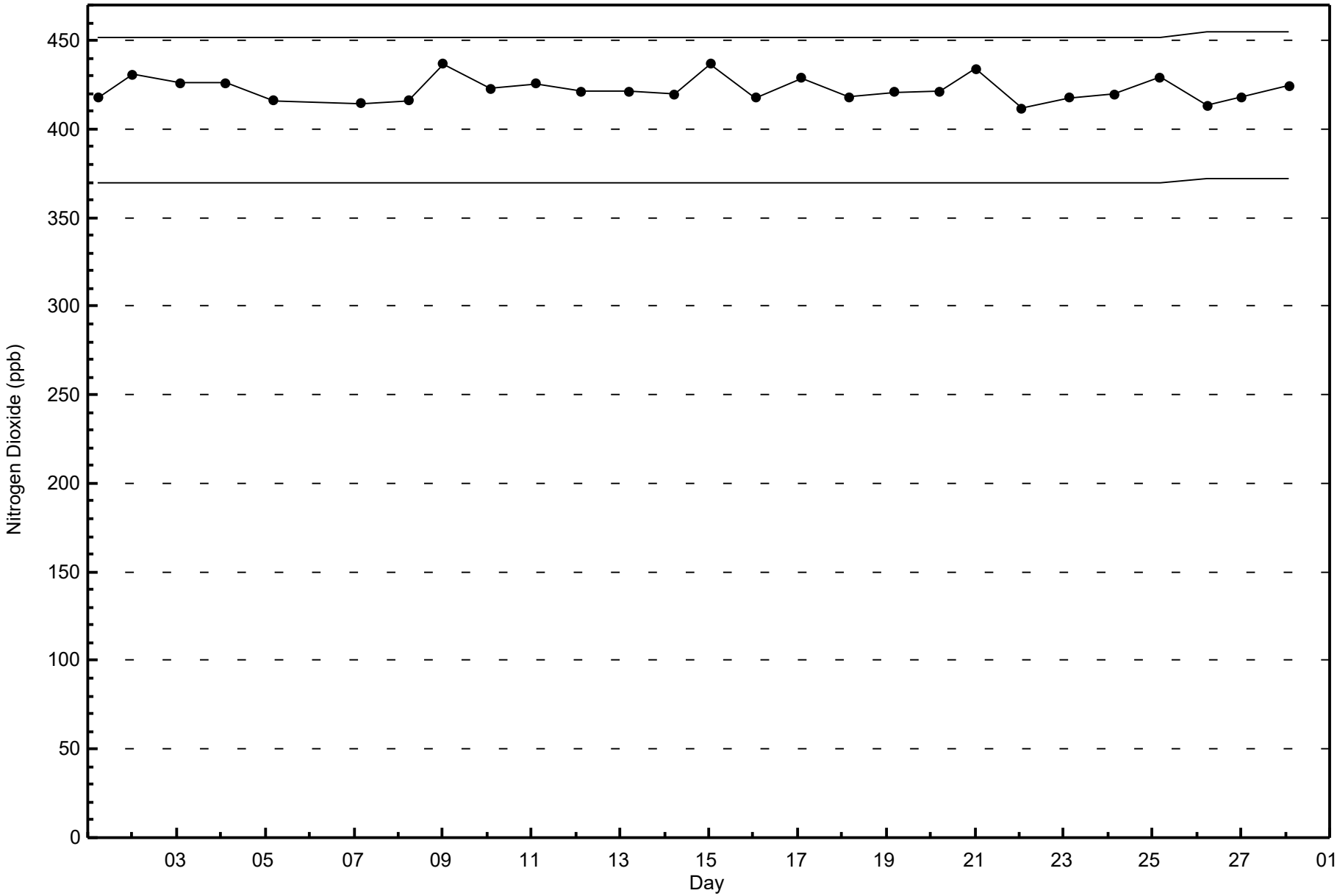


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Stony Mountain - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Stony Mountain - February 2025

Maximum Value: 6.8 ppb on Feb 1 14:00

Maximum Daily Average: 3.5 ppb on Feb 14

Minimum Value: 0.0 ppb on Feb 2 00:00

Minimum Daily Average: 0.3 ppb on Feb 3

Maximum Diurnal Average: 2.1 ppb at hour 5

Minimum Diurnal Average: 1.2 ppb at hour 16

Monthly Average: 1.68 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.6 Median = 1.4 Q_3 = 2.4 P_{90} = 3.7 P_{99} = 6.1

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	1.1	0.6	1.0	0.8	1.2	Z	1.2	0.3	0.2	0.4	1.5	4.4	4.8	6.8	4.9	3.9	2.0	0.3	0.1	0.1	0.3	0.2	0.5	0.0	1.6	6.8
2-Feb	Z	0.7	0.5	0.9	1.2	1.5	0.9	1.9	2.6	4.6	6.0	5.9	5.8	5.1	4.2	4.6	4.0	3.6	2.2	0.7	0.5	1.0	0.4	0.7	2.6	6.0
3-Feb	0.6	Z	1.1	1.5	1.3	0.8	1.3	0.3	0.3	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	0.3	1.5
4-Feb	0.0	0.0	Z	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	2.1	0.2	0.4	0.4	1.5	1.0	0.7	0.7	0.3	2.1
5-Feb	1.4	1.1	0.9	0.3	Z	0.9	0.4	0.3	0.9	1.1	1.4	1.7	1.5	0.8	0.7	0.0	0.5	1.0	1.1	1.4	1.5	1.4	1.4	2.0	1.0	2.0
6-Feb	1.6	1.7	1.7	1.4	1.5	0.7	0.5	0.2	0.6	0.1	0.0	0.0	0.0	0.0	6.6	0.0	0.8	1.6	3.0	2.6	0.4	0.0	0.0	0.2	1.1	6.6
7-Feb	1.0	0.8	0.9	0.2	Z	0.4	0.4	0.5	0.4	0.0	0.7	0.0	0.1	0.3	0.0	0.0	0.1	0.5	0.2	0.7	1.4	1.4	0.8	0.7	0.5	1.4
8-Feb	1.2	0.9	0.9	0.8	0.9	Z	1.0	0.6	0.7	0.2	0.5	0.4	0.7	0.4	0.5	0.6	0.8	0.1	0.2	0.3	0.4	0.6	0.1	0.2	0.6	1.2
9-Feb	Z	2.2	4.5	4.3	4.5	1.6	0.4	1.1	0.6	0.9	1.0	0.6	0.6	0.7	0.2	0.9	1.3	2.3	3.2	4.1	5.1	3.6	1.1	0.5	2.0	5.1
10-Feb	0.7	Z	0.4	0.0	0.7	0.3	0.0	0.4	0.5	0.8	1.1	0.4	0.2	0.4	0.0	0.6	0.5	0.8	0.7	1.3	1.4	0.7	0.9	0.6	0.6	1.4
11-Feb	0.8	1.3	Z	3.7	2.2	2.4	1.8	2.3	3.2	3.0	2.8	2.1	1.8	1.7	1.3	1.2	2.1	3.2	3.7	3.8	2.9	2.3	1.8	1.4	2.3	3.8
12-Feb	2.0	1.9	1.4	Z	1.4	2.5	1.4	1.6	1.5	1.5	2.3	3.1	4.3	2.7	4.1	4.0	4.8	4.2	4.5	3.0	1.9	1.7	2.0	1.5	2.6	4.8
13-Feb	1.7	2.1	2.2	2.2	Z	2.6	3.2	4.2	1.9	2.0	1.8	2.2	0.8	1.2	2.2	0.3	0.1	1.8	0.9	1.0	1.4	1.6	2.9	2.8	1.9	4.2
14-Feb	6.0	6.7	6.5	5.6	6.1	Z	4.6	4.4	3.6	2.5	2.2	4.5	3.4	1.8	1.4	2.4	2.0	1.0	4.2	1.2	2.0	3.3	2.0	2.2	3.5	6.7
15-Feb	Z	6.3	3.6	2.8	2.0	2.3	2.5	2.5	3.3	5.9	1.7	3.9	0.7	1.4	2.2	1.1	0.7	1.0	1.0	1.3	1.1	1.1	1.7	1.8	2.3	6.3
16-Feb	0.8	Z	2.9	2.9	2.9	3.3	3.2	3.9	4.0	2.8	1.9	1.2	1.4	1.7	3.0	2.2	1.9	2.9	3.5	2.9	4.2	6.1	6.3	3.4	3.0	6.3
17-Feb	4.8	4.8	Z	4.6	4.0	5.0	4.1	3.6	4.2	3.1	1.7	2.0	1.3	1.7	1.7	1.9	1.6	1.4	1.4	0.9	0.9	0.7	1.1	1.6	2.5	5.0
18-Feb	1.8	1.2	1.4	Z	1.9	2.5	1.9	1.7	2.3	1.6	1.4	1.4	0.5	0.8	0.1	0.0	0.6	1.4	1.2	1.6	1.3	1.8	2.8	1.9	1.4	2.8
19-Feb	1.9	1.7	2.0	2.5	Z	3.3	3.1	4.1	4.1	3.2	2.6	2.2	1.6	1.2	1.2	1.5	2.2	2.5	2.6	2.3	1.6	1.6	2.1	1.6	2.3	4.1
20-Feb	2.0	2.0	2.4	3.1	2.0	Z	3.1	2.8	2.3	2.8	3.4	3.4	2.6	2.6	2.4	2.5	2.2	2.6	2.1	2.1	1.3	2.1	1.3	1.0	2.3	3.4
21-Feb	Z	2.6	1.9	3.0	3.6	2.9	2.0	1.4	0.6	1.6	1.7	0.1	0.1	0.0	0.0	0.0	0.0	1.0	1.5	1.9	1.7	1.4	1.6	1.7	1.4	3.6
22-Feb	2.2	Z	3.2	2.1	2.0	2.5	2.9	5.8	3.4	2.9	3.5	2.0	2.6	3.2	2.1	1.7	1.9	2.3	2.3	2.8	2.7	2.2	2.6	2.7	2.7	5.8
23-Feb	2.5	1.6	Z	4.2	2.1	2.4	1.3	0.2	0.7	0.0	0.3	0.0	0.0	0.0	0.0	0.0	3.3	2.2	2.9	3.8	2.8	2.4	2.4	3.2	1.7	4.2
24-Feb	2.8	2.4	1.9	Z	3.5	2.2	1.4	1.8	1.9	2.2	1.5	0.9	0.0	0.1	0.0	0.5	0.1	0.7	0.5	0.8	0.8	0.9	0.3	0.1	1.2	3.5
25-Feb	0.2	0.8	0.0	1.1	Z	3.1	1.8	2.9	4.5	4.5	3.7	C	C	C	C	C	C	6.1	5.0	5.9	5.2	4.1	0.0	0.0	--	6.1
26-Feb	0.2	0.0	0.0	0.1	0.3	Z	1.8	1.1	0.8	0.8	0.9	0.8	0.9	0.8	1.6	0.5	1.1	0.5	0.9	0.8	0.6	0.7	1.0	0.0	0.7	1.8
27-Feb	Z	1.8	0.7	0.9	1.4	0.9	1.2	2.9	2.9	1.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.1	2.7	0.8	2.9
28-Feb	2.7	Z	2.2	1.5	1.2	1.9	2.0	1.7	2.5	3.0	2.9	1.9	1.8	1.1	0.6	0.6	1.0	0.3	0.4	0.0	0.0	0.8	1.4	1.4	1.4	3.0
	1.7	2.0	1.8	2.1	2.1	2.0	1.8	1.9	1.9	1.9	1.7	1.7	1.4	1.3	1.5	1.2	1.4	1.6	1.8	1.7	1.6	1.6	1.4	1.3	Diurnal Average	
	6.0	6.7	6.5	5.6	6.1	5.0	4.6	5.8	4.5	5.9	6.0	5.9	5.8	6.8	6.6	4.6	4.8	6.1	5.0	5.9	5.2	6.1	6.3	3.4	Diurnal Maximum	

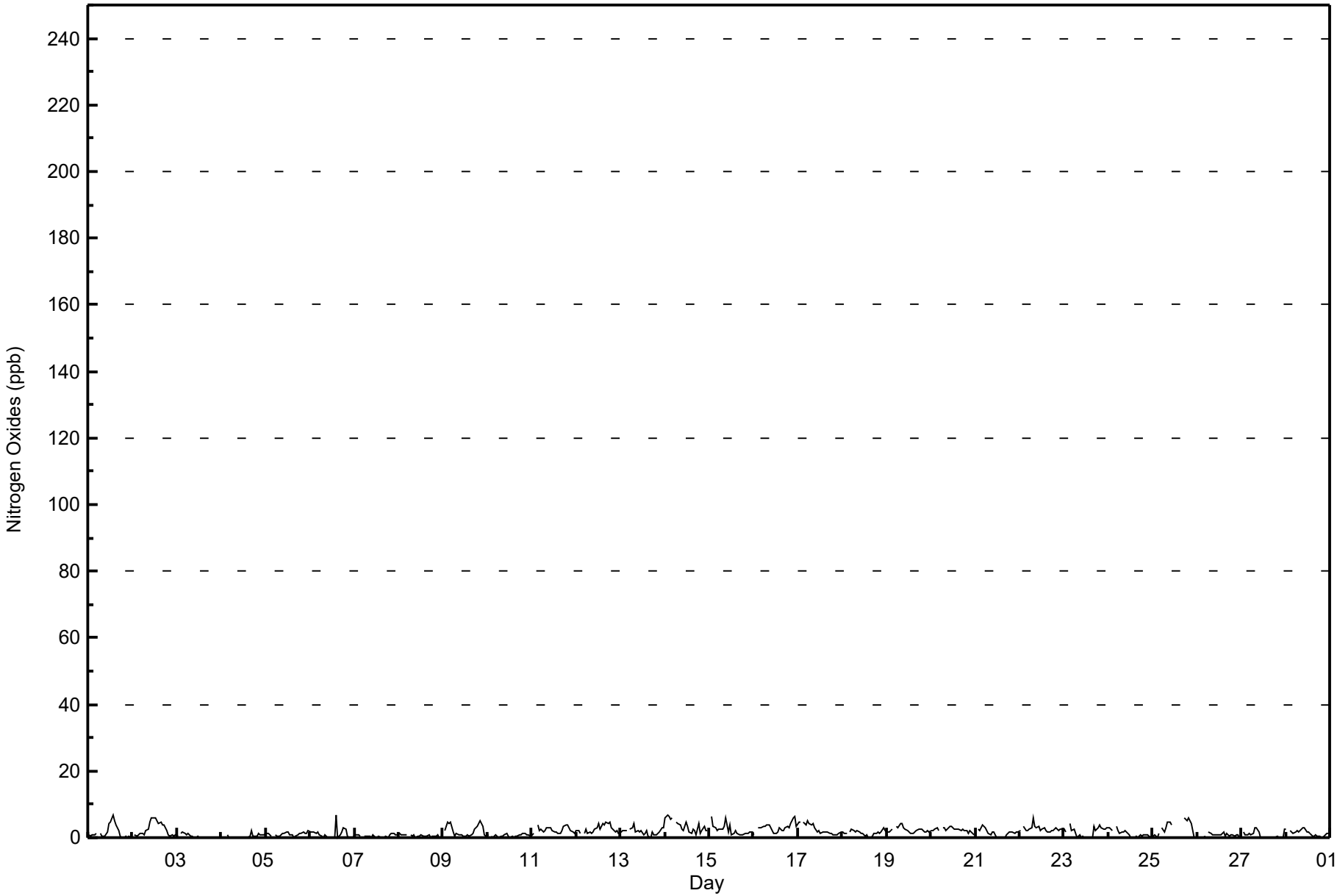
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Stony Mountain - February 2025



Nitrogen Oxides (NO_X) - ppb
Stony Mountain - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	639	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: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Stony Mountain - February 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	21	28	20	6	15	19	42	54	37	38	55	96	71	75	47	639
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	15	21	28	20	6	15	19	42	54	37	38	55	96	71	75	47	639

Total Number of Valid Hours: 639

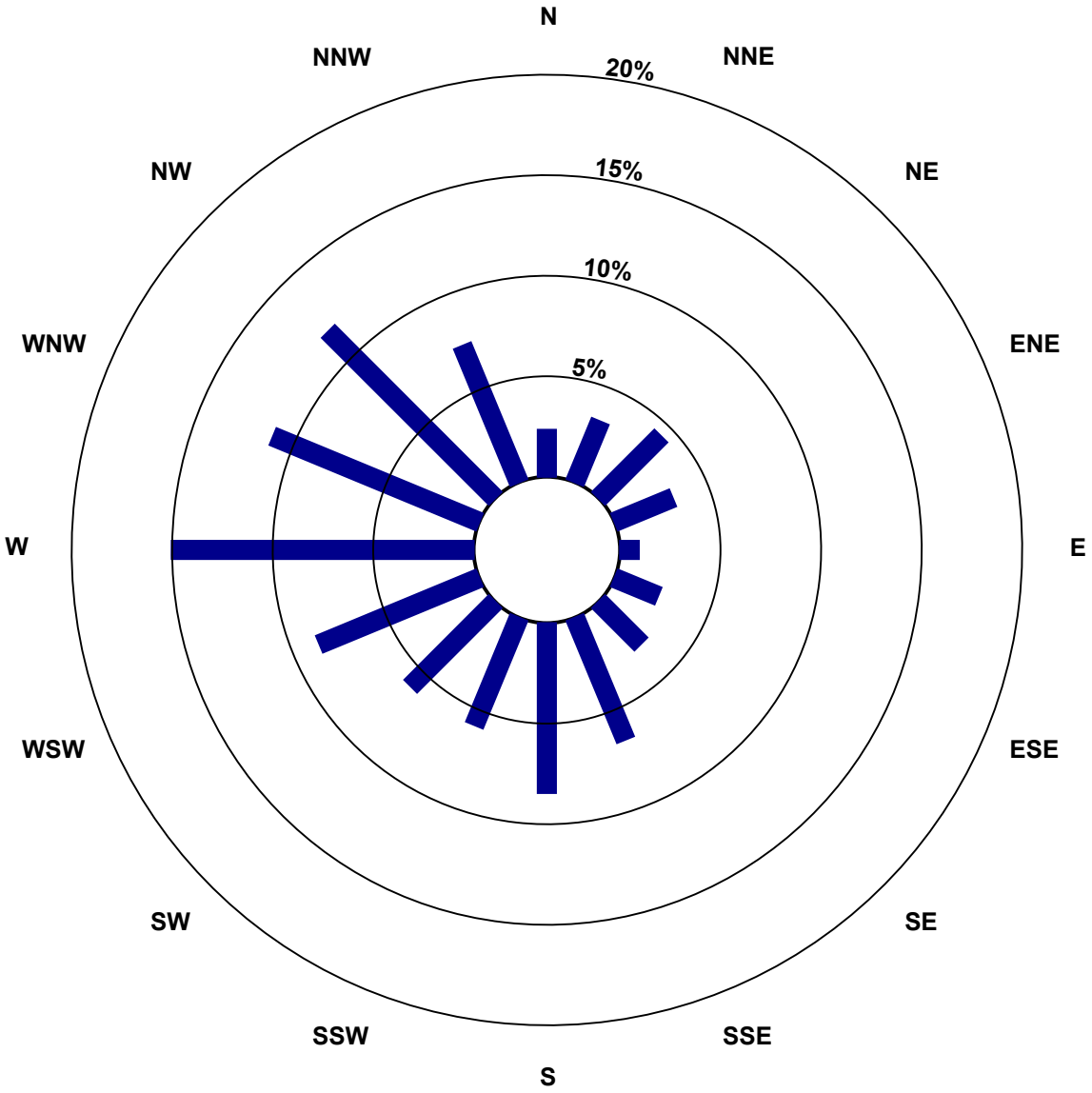
Total Number of Hours: 672

Wood Buffalo Environmental Association

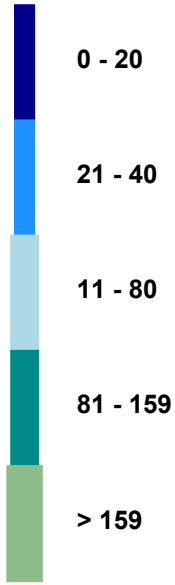
Wind Rose Feb 2025

Nitrogen Oxides (NO_X) - ppb

Stony Mountain



Classes (ppb)



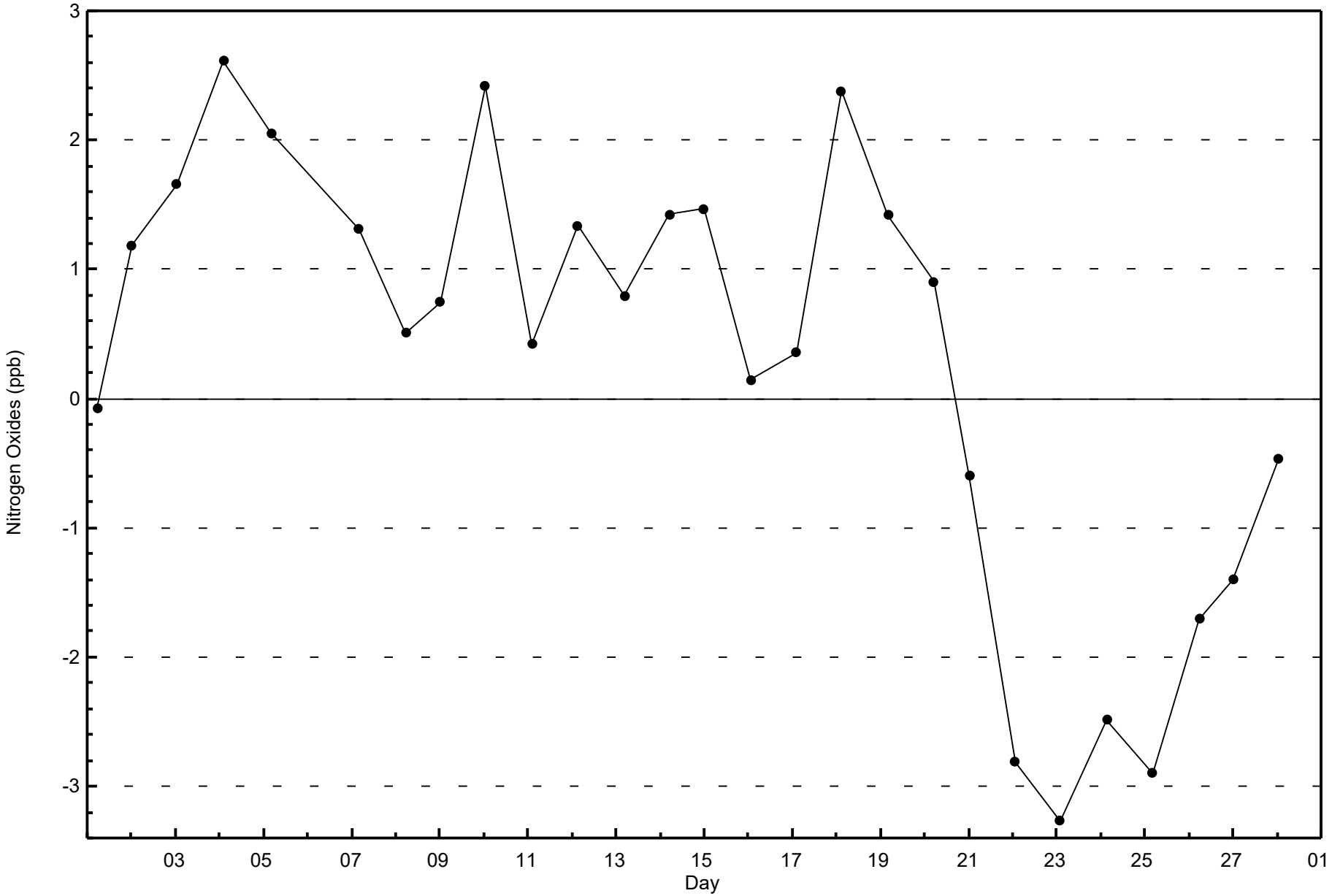
Total Number of Valid Hours: 639

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Stony Mountain - February 2025

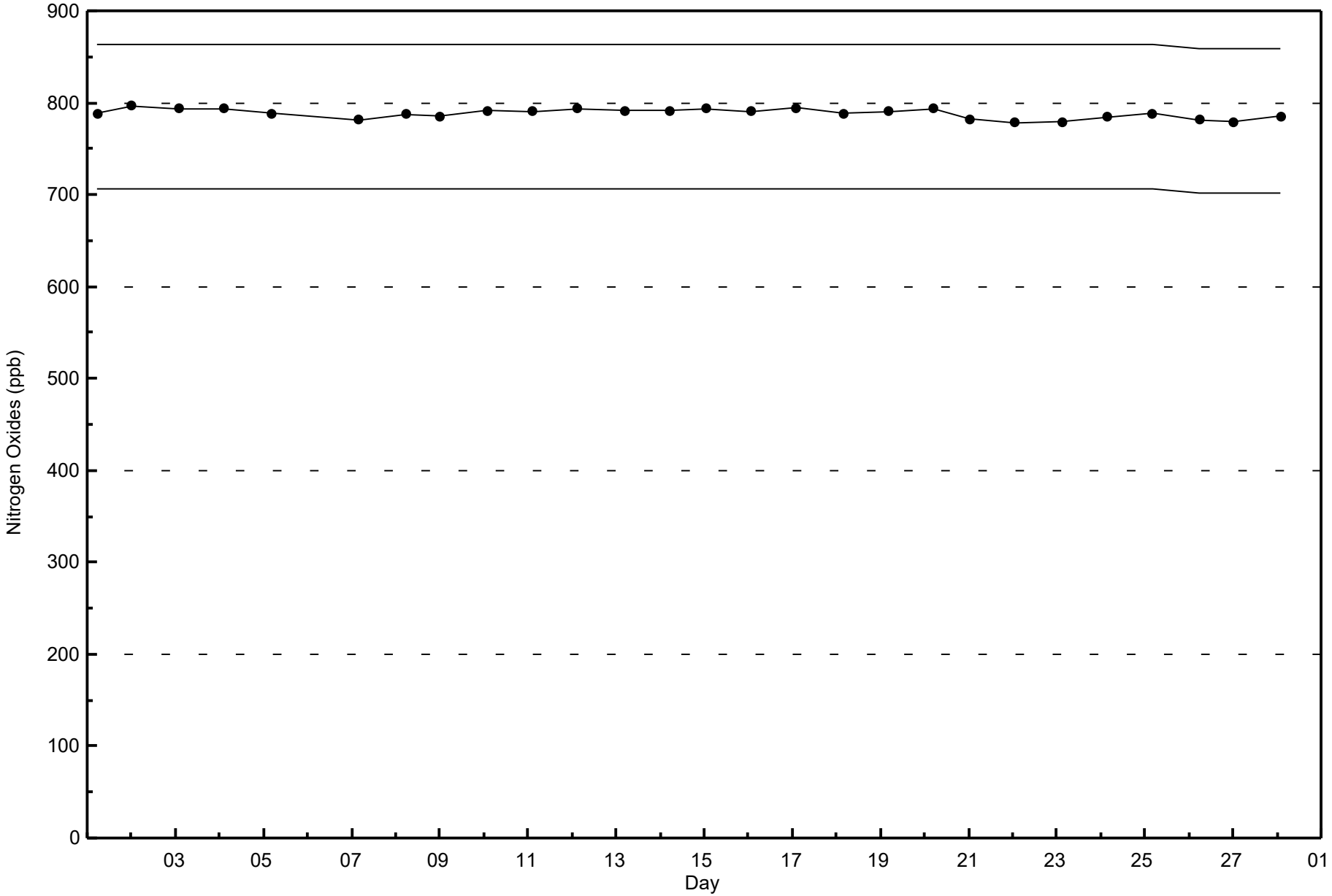


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Stony Mountain - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Stony Mountain - February 2025

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

Maximum Value: 46.2 ppb on Feb 27 11:00

Maximum Daily Average: 43.2 ppb on Feb 26

Minimum Value: 18.0 ppb on Feb 25 21:00

Minimum Daily Average: 26.7 ppb on Feb 2

Maximum Diurnal Average: 36.2 ppb at hour 16

Minimum Diurnal Average: 30.3 ppb at hour 5

Monthly Average: 33.10 ppb

Percentiles: P_1 = 22.8 P_{10} = 26.6 Q_1 = 29.4 Median = 33.0 Q_3 = 36.0 P_{90} = 40.5 P_{99} = 45.3

Hours in Service:	672
Hours of Data:	641
Hours of Missing Data:	31
Hours of Calibration:	31
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	32.7	32.7	33.3	34.1	Z	34.6	34.7	34.8	35.0	35.3	32.4	25.9	25.5	25.5	28.6	30.2	33.2	32.5	32.8	33.3	32.0	31.2	30.7	29.6	31.8	35.3
2-Feb	27.9	27.3	26.4	25.5	24.3	Z	23.8	23.0	23.0	22.8	23.3	24.9	26.6	27.4	27.5	26.7	27.2	27.9	28.7	29.8	30.2	30.1	30.3	30.4	26.7	30.4
3-Feb	Z	29.7	28.6	27.9	28.2	28.5	27.7	29.1	29.1	29.8	31.4	31.7	32.4	32.3	33.3	34.0	33.1	32.5	33.3	33.0	33.1	32.0	31.5	32.8	31.1	34.0
4-Feb	33.0	Z	34.6	35.4	36.0	36.3	36.3	36.7	36.5	34.4	32.5	32.8	34.0	34.9	36.5	36.5	37.0	37.1	36.7	35.7	34.6	34.4	35.0	34.5	35.3	37.1
5-Feb	33.7	35.0	36.0	Z	40.2	40.5	38.3	37.1	35.4	32.9	31.9	32.3	33.8	35.0	35.5	37.9	36.2	35.0	34.4	34.2	33.9	32.9	31.9	31.2	35.0	40.5
6-Feb	30.9	30.9	31.1	31.5	31.8	32.6	32.4	32.6	31.8	32.0	32.7	33.8	35.9	36.5	36.8	37.0	33.6	31.7	30.2	31.0	32.9	34.4	34.3	34.3	33.0	37.0
7-Feb	33.6	33.1	33.3	Z	34.2	34.5	34.2	33.6	34.0	34.8	35.2	36.1	37.6	38.7	39.4	40.2	40.1	37.4	37.7	36.8	35.8	35.9	36.0	36.1	36.0	40.2
8-Feb	35.0	36.9	37.2	36.5	Z	37.1	37.8	37.9	38.3	38.2	37.8	37.7	38.0	38.2	38.4	38.5	37.7	37.2	36.6	35.3	34.6	34.1	34.6	35.0	36.9	38.5
9-Feb	33.2	32.1	28.9	28.9	27.8	Z	33.9	34.4	34.4	34.3	34.0	33.9	33.6	33.4	32.9	32.6	32.2	29.8	28.6	27.2	25.6	26.6	29.9	31.3	31.3	34.4
10-Feb	Z	31.6	31.9	32.2	32.9	33.1	33.5	33.6	33.7	34.0	33.9	33.8	C	C	C	C	33.9	34.2	34.5	33.7	33.2	33.3	33.9	33.7	33.4	34.5
11-Feb	33.6	Z	33.0	32.1	33.3	33.9	35.0	34.2	32.3	31.9	32.0	32.7	33.2	33.8	35.0	35.4	33.6	32.9	32.5	31.4	31.7	31.6	31.5	30.6	32.9	35.4
12-Feb	30.2	29.4	Z	31.6	30.8	29.6	29.2	29.1	29.7	30.7	30.3	29.8	30.2	32.3	30.8	30.3	27.9	25.1	26.2	27.3	29.0	29.3	28.9	28.3	29.4	32.3
13-Feb	27.7	27.3	27.0	Z	27.2	28.2	27.6	26.2	29.7	30.5	31.1	32.2	34.9	34.7	34.9	35.5	35.4	34.6	34.1	34.2	33.9	33.7	31.0	31.0	31.4	35.5
14-Feb	25.4	23.5	24.0	24.9	Z	24.8	25.8	25.7	27.3	29.0	29.1	28.5	29.9	30.8	31.0	31.1	32.1	32.3	29.0	30.6	29.5	29.0	30.3	29.9	28.4	32.3
15-Feb	29.5	25.4	28.7	28.8	30.0	Z	28.0	27.2	27.0	28.7	32.5	32.8	34.4	35.2	35.8	35.6	34.7	34.1	34.2	34.8	34.5	33.8	33.3	33.4	31.8	35.8
16-Feb	Z	33.4	32.2	31.7	30.7	30.5	30.2	29.9	30.6	33.5	35.9	37.4	37.5	37.0	35.9	35.8	35.5	33.5	32.9	32.7	30.8	28.6	28.3	30.1	32.8	37.5
17-Feb	27.5	Z	26.8	27.8	27.9	27.7	27.5	26.0	24.5	25.3	28.2	30.7	32.8	33.4	32.1	31.9	31.2	30.7	31.1	30.4	30.6	30.2	28.7	27.6	29.2	33.4
18-Feb	26.6	26.3	Z	26.7	26.2	25.8	26.9	26.5	26.3	27.3	30.8	33.6	33.6	34.9	37.0	37.6	36.5	35.2	34.5	34.0	33.5	31.5	30.4	30.8	31.0	37.6
19-Feb	29.3	29.4	29.1	Z	29.1	28.7	27.9	27.6	30.1	32.5	34.4	36.2	38.4	39.6	40.1	40.5	38.8	37.3	37.4	36.4	37.1	37.2	36.4	35.9	34.3	40.5
20-Feb	34.6	33.8	32.8	31.8	Z	32.6	32.4	32.3	32.1	31.6	31.8	32.1	33.0	34.0	33.9	33.7	33.5	33.2	32.7	32.9	33.2	32.9	35.2	35.9	33.1	35.9
21-Feb	34.8	33.9	31.7	30.3	29.3	Z	32.4	32.7	35.1	30.2	32.8	37.5	39.4	41.1	41.4	41.5	39.3	35.2	33.5	33.2	32.5	31.7	31.6	31.0	34.4	41.5
22-Feb	Z	28.9	28.4	26.9	25.6	24.4	22.9	21.1	23.2	27.6	36.7	39.9	41.2	41.1	42.2	43.7	43.7	42.8	42.8	42.0	40.8	40.2	39.8	39.5	35.0	43.7
23-Feb	37.1	Z	31.2	34.2	32.1	35.5	38.2	39.4	39.2	40.3	42.0	44.6	43.0	42.1	40.5	33.8	26.3	29.3	27.4	26.4	26.9	26.1	25.9	26.6	34.3	44.6
24-Feb	26.9	26.7	Z	25.3	25.0	25.9	27.0	26.9	26.6	25.6	25.4	26.6	33.5	38.6	41.2	42.5	44.0	45.2	45.0	44.4	43.9	44.3	44.0	43.3	34.7	45.2
25-Feb	42.7	41.7	41.5	Z	26.1	24.6	24.8	23.6	20.3	20.1	21.4	24.0	25.3	28.1	27.6	28.2	29.9	24.3	23.8	20.2	18.0	23.2	39.1	44.3	28.0	44.3
26-Feb	44.2	43.9	44.2	43.5	Z	40.3	40.6	41.2	41.4	41.3	42.0	42.4	43.3	44.2	45.0	45.4	45.1	46.0	45.6	44.3	43.6	42.8	42.2	41.6	43.2	46.0
27-Feb	45.8	46.1	40.8	39.9	40.5	Z	40.0	38.2	40.1	43.6	46.2	45.7	44.7	43.9	43.7	42.9	40.9	39.2	38.0	37.6	36.7	35.5	34.1	27.0	40.5	46.2
28-Feb	Z	28.7	29.3	28.7	27.9	26.7	25.5	25.5	25.1	24.6	26.9	28.7	31.0	34.0	36.2	37.9	38.6	39.4	39.7	38.9	36.6	35.8	35.0	35.4	32.0	39.7
	32.9	32.0	32.1	31.1	30.3	31.2	31.2	30.9	31.1	31.5	32.7	33.5	34.7	35.6	36.0	36.2	35.4	34.5	34.1	33.6	33.2	32.9	33.3	33.2	Diurnal Average	
	45.8	46.1	44.2	43.5	40.5	40.5	40.6	41.2	41.4	43.6	46.2	45.7	44.7	44.2	45.0	45.4	45.1	46.0	45.6	44.4	43.9	44.3	44.0	44.3	Diurnal Maximum	

Z - zerospan C - Calibration

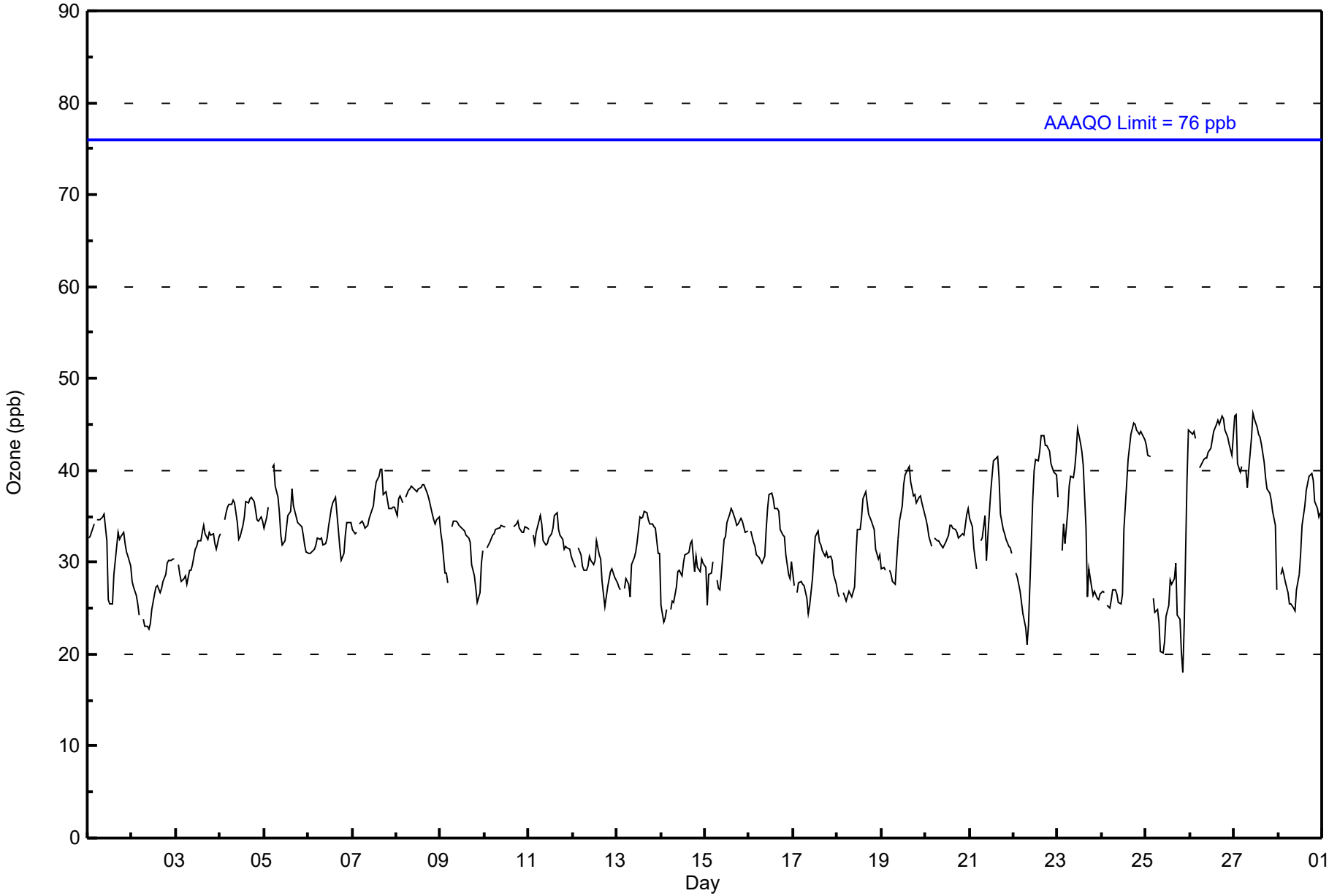
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Stony Mountain - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	4	0.62	0.62
21 - 50	637	99.38	100.00
51 - 82	0	0.00	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 641

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Ozone (O_3) - ppb

Stony Mountain - February 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	2	0	1	1	0	0	0	0	0	0	0	0	0	4
21 - 50	16	22	25	19	8	15	20	43	53	39	36	57	92	71	74	47	637
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	16	22	25	21	8	16	21	43	53	39	36	57	92	71	74	47	641

Total Number of Valid Hours: 641

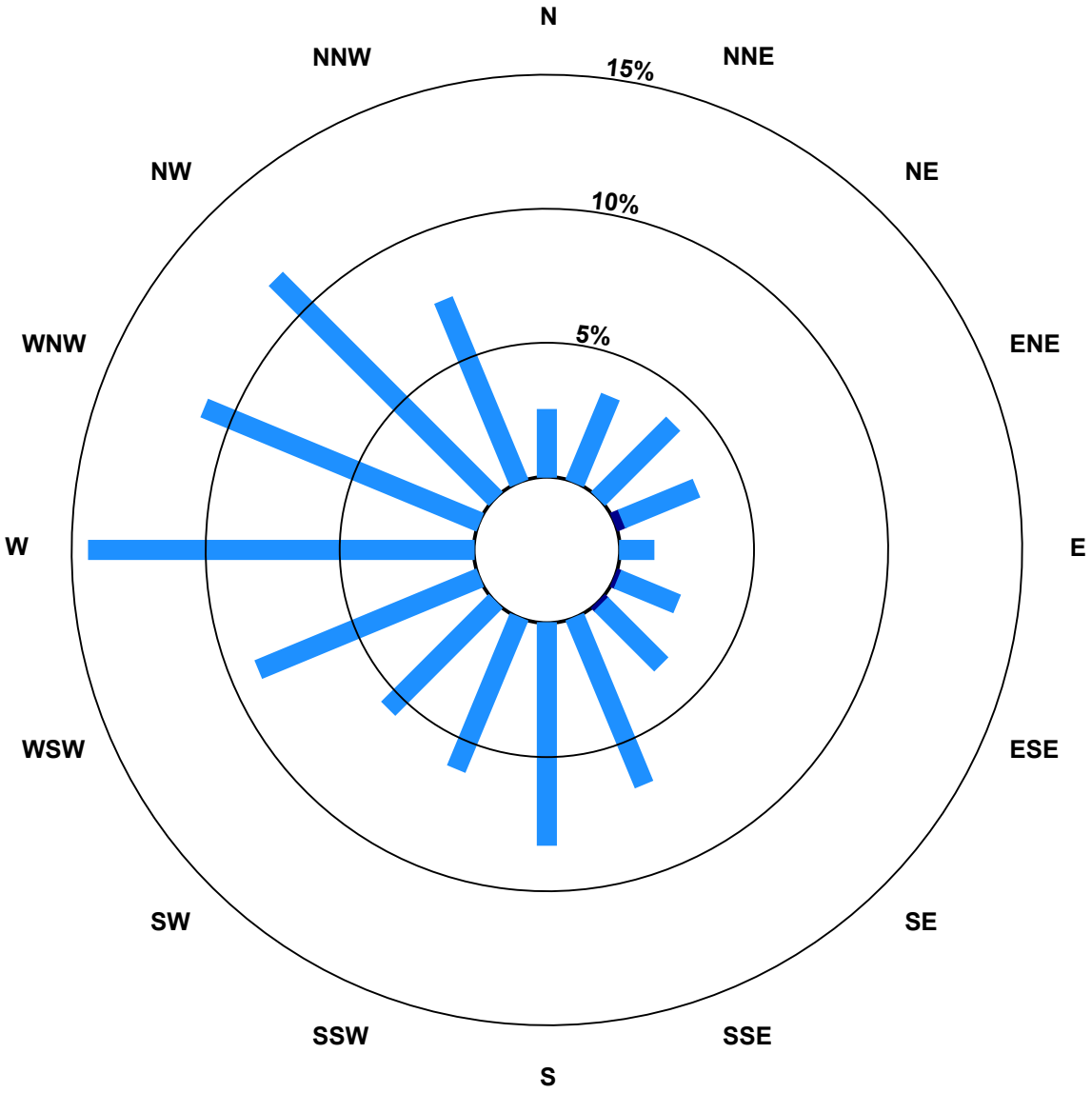
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Ozone (O_3) - ppb

Stony Mountain



Classes (ppb)

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

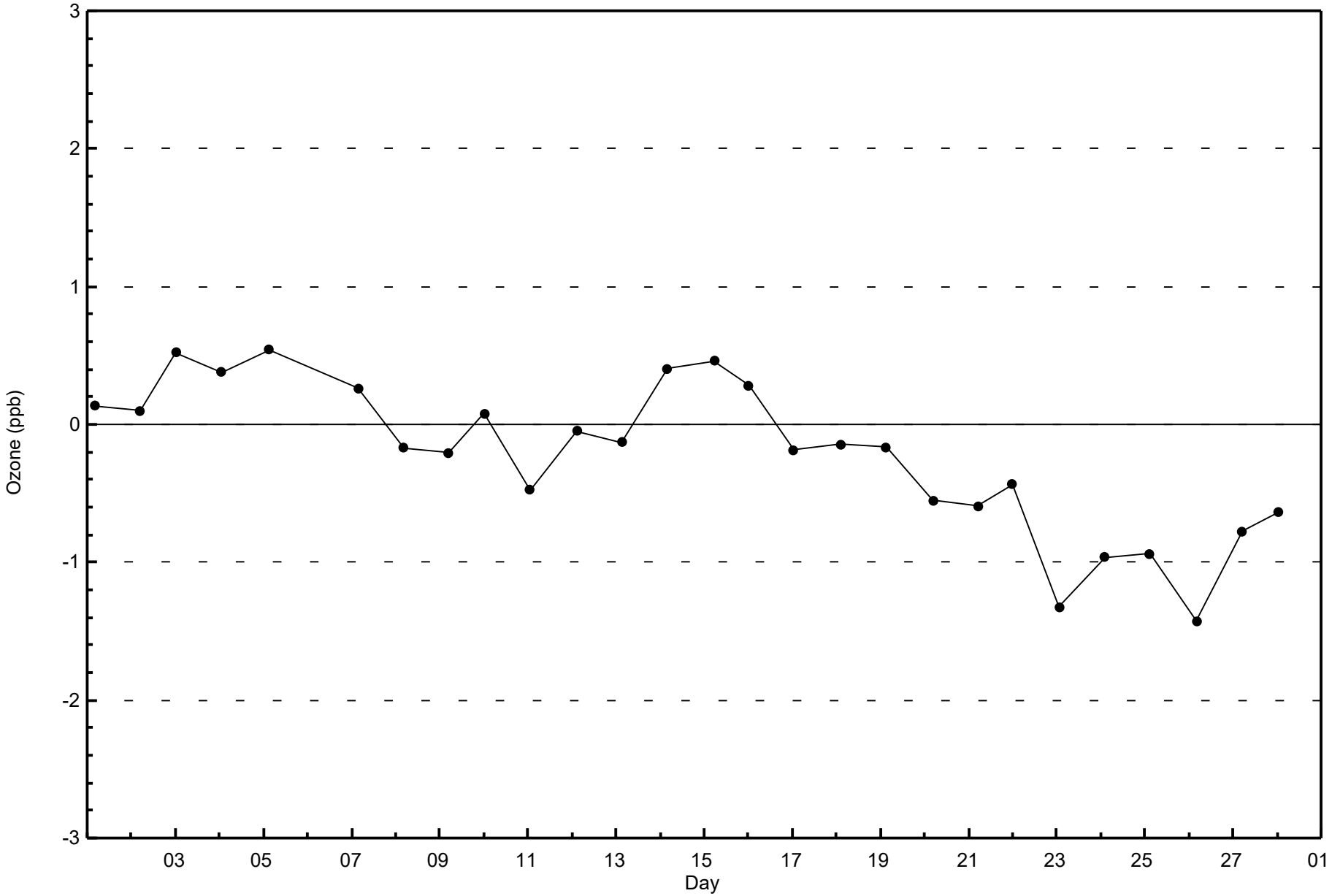
Total Number of Valid Hours: 641

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Stony Mountain - February 2025

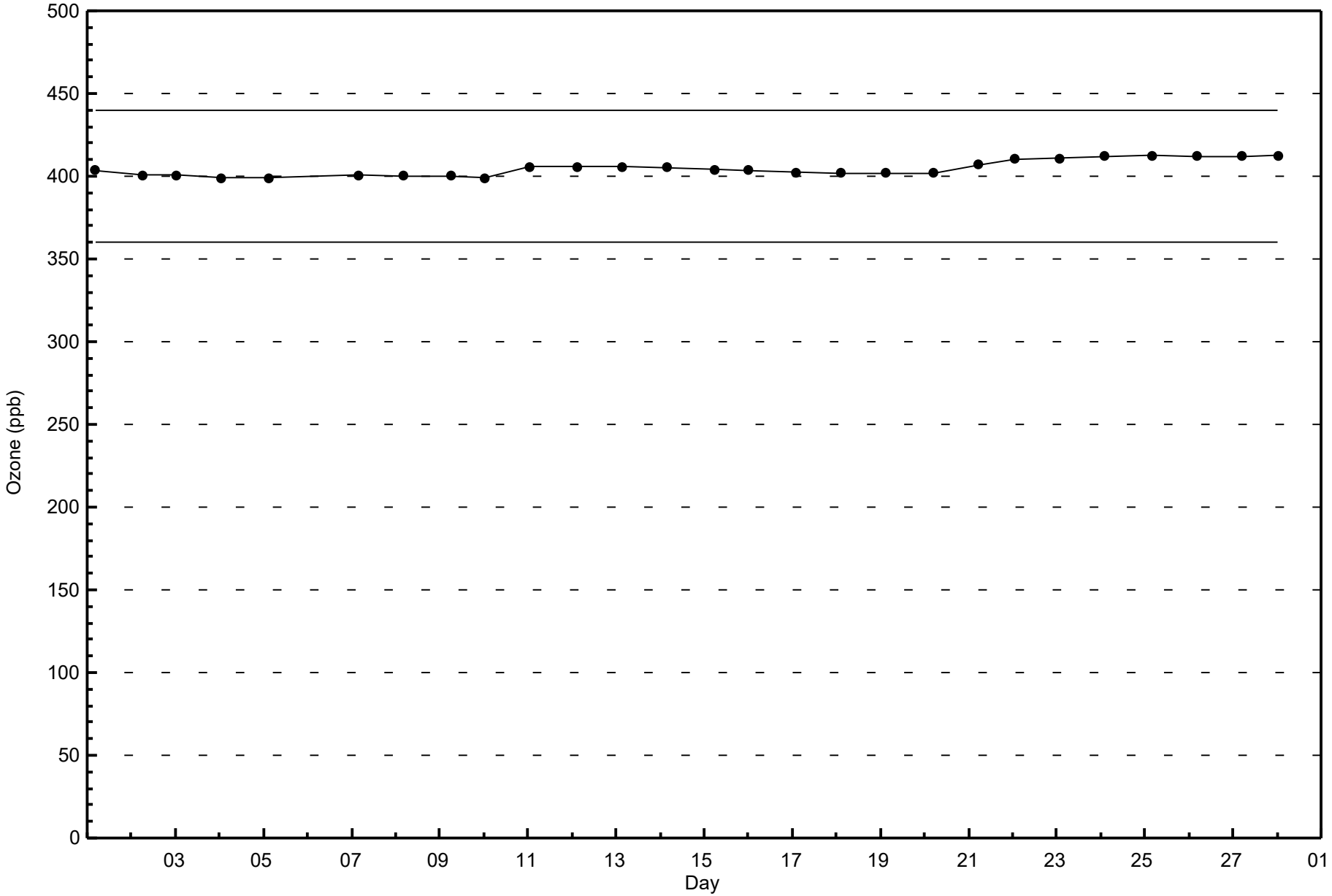


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Stony Mountain - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Stony Mountain - February 2025

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

Maximum Value: 11.4 $\mu g/m^3$ on Feb 21 04:00

Maximum Daily Average: 5.3 $\mu g/m^3$ on Feb 20

Minimum Value: 0.1 $\mu g/m^3$ on Feb 23 15:00

Minimum Daily Average: 1.0 $\mu g/m^3$ on Feb 26

Maximum Diurnal Average: 3.3 $\mu g/m^3$ at hour 5

Minimum Diurnal Average: 2.1 $\mu g/m^3$ at hour 16

Monthly Average: 2.82 $\mu g/m^3$

Percentiles: P_1 = 0.5 P_{10} = 1.3 Q_1 = 1.9 Median = 2.5 Q_3 = 3.5 P_{90} = 4.8 P_{99} = 7.3

Hours in Service:	672
Hours of Data:	671
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-Feb	1.7	1.7	1.7	1.5	1.5	1.4	1.3	1.2	1.1	1.1	1.3	2.5	3.1	3.8	3.0	2.5	2.0	1.8	1.7	1.8	2.8	2.9	3.0	3.0	2.0	3.8
2-Feb	3.2	3.3	3.3	3.4	3.7	3.7	3.6	3.7	3.6	3.6	4.6	4.6	4.4	4.5	3.8	3.1	2.9	2.8	2.7	2.5	2.5	2.5	2.4	2.5	3.4	4.6
3-Feb	2.5	2.4	2.5	2.6	2.4	2.3	2.3	2.4	2.4	2.4	2.3	2.1	1.9	2.0	1.9	1.9	2.1	2.3	2.0	2.0	2.0	2.2	2.4	2.3	2.2	2.6
4-Feb	2.2	1.9	1.7	1.6	1.5	1.5	1.4	1.4	1.3	1.7	2.5	2.4	2.1	1.8	1.4	1.2	1.6	1.6	1.8	2.0	2.4	2.5	2.5	2.6	1.9	2.6
5-Feb	2.9	3.8	3.7	2.7	1.3	0.7	1.1	1.4	1.8	2.4	2.9	3.0	3.0	2.6	2.4	1.8	1.7	2.3	3.2	3.9	4.2	4.5	4.4	3.9	2.7	4.5
6-Feb	3.4	3.0	2.8	2.6	2.5	2.3	2.4	2.3	2.4	2.5	2.4	2.2	1.5	1.3	1.0	1.1	2.1	3.3	4.4	4.2	3.3	3.8	4.4	4.7	2.7	4.7
7-Feb	5.0	4.7	5.1	4.6	3.8	3.4	3.2	3.0	3.4	3.5	3.0	2.2	1.8	1.5	1.8	2.1	1.8	1.8	1.6	1.9	2.2	2.3	1.9	1.4	2.8	5.1
8-Feb	2.0	1.4	1.2	1.9	2.3	1.4	0.9	0.9	1.0	1.4	2.5	2.6	2.2	1.7	1.7	2.6	2.4	2.0	2.0	2.0	2.7	3.3	2.7	2.6	2.0	3.3
9-Feb	2.6	2.8	3.7	3.5	3.9	3.2	3.1	3.0	3.1	3.0	3.1	3.3	3.4	3.5	3.5	3.6	3.6	3.9	4.1	4.5	4.5	4.4	4.5	4.0	3.6	4.5
10-Feb	4.0	3.9	3.3	3.0	3.0	2.9	2.8	2.6	2.5	2.2	2.0	2.1	2.0	1.7	1.3	1.5	1.8	1.9	1.9	2.2	2.4	2.3	1.9	1.9	2.4	4.0
11-Feb	2.0	2.0	2.0	2.2	2.0	1.8	1.6	1.6	1.9	2.0	2.3	2.4	2.4	1.9	1.4	1.3	2.2	2.8	2.9	3.3	3.0	2.9	2.9	2.9	2.2	3.3
12-Feb	2.9	2.8	2.8	2.9	4.4	3.4	3.3	3.6	3.2	4.4	7.1	11.3	9.7	5.5	7.6	5.9	4.7	3.2	2.8	2.7	3.3	2.9	2.7	2.6	4.4	11.3
13-Feb	2.6	2.6	2.7	2.7	2.8	2.7	2.8	2.7	2.3	2.2	2.1	2.1	2.1	2.1	1.9	1.7	1.7	1.8	2.0	1.9	1.6	1.5	1.8	1.9	2.2	2.8
14-Feb	2.5	2.7	2.7	2.7	2.6	2.6	2.6	2.6	2.5	2.4	2.3	2.5	2.6	2.6	2.7	2.5	2.4	2.3	2.5	2.5	2.7	2.8	2.6	2.5	2.6	2.8
15-Feb	4.2	3.6	2.6	2.8	2.7	2.6	2.7	2.8	3.0	2.5	2.3	2.3	2.1	2.0	1.9	1.7	1.9	1.9	1.9	1.7	1.6	1.6	1.6	1.6	2.3	4.2
16-Feb	1.6	1.7	2.1	2.2	2.3	2.4	2.5	2.5	2.3	2.2	2.0	2.1	2.2	2.1	2.2	2.2	2.1	2.2	2.5	2.4	2.4	2.3	2.4	2.4	2.2	2.5
17-Feb	2.5	2.6	2.7	2.6	2.6	2.7	2.8	2.8	2.9	2.9	2.6	2.3	2.0	1.8	1.9	1.8	2.1	2.7	2.7	2.6	2.4	3.1	5.4	5.0	2.7	5.4
18-Feb	4.3	3.3	3.2	3.1	3.0	3.0	3.0	2.9	2.9	2.8	2.5	2.0	2.0	1.8	1.4	1.3	1.4	1.5	1.8	1.9	1.9	2.1	2.3	2.3	2.4	4.3
19-Feb	2.6	2.7	2.6	2.8	3.0	3.2	3.5	3.8	3.9	3.7	3.5	3.2	2.3	1.7	1.8	1.7	2.1	2.5	2.5	2.7	2.6	2.6	2.8	3.4	2.8	3.9
20-Feb	4.1	4.4	4.6	4.7	4.7	4.8	4.9	5.1	5.3	5.7	6.9	7.1	6.7	5.8	5.7	5.6	5.2	5.2	5.2	5.2	5.3	6.2	5.2	4.3	5.3	7.1
21-Feb	5.8	6.2	9.6	11.4	11.3	10.2	7.2	6.0	4.9	6.0	4.9	2.9	2.1	1.2	0.9	0.9	1.7	3.1	3.6	3.7	4.2	4.3	4.1	4.1	5.0	11.4
22-Feb	4.1	4.5	4.9	5.1	4.7	4.8	4.7	4.4	3.9	4.2	3.5	2.8	2.8	2.8	2.2	2.2	2.8	3.3	3.5	3.9	4.7	5.4	5.6	5.5	4.0	5.6
23-Feb	5.2	5.0	4.8	5.0	5.2	4.6	2.7	1.6	1.6	1.0	0.8	0.4	0.3	0.2	0.1	0.1	3.1	3.5	3.7	4.2	4.2	4.3	4.9	5.3	3.0	5.3
24-Feb	5.1	4.8	5.0	5.3	5.3	5.1	5.2	5.2	5.2	5.5	5.2	3.9	2.3	1.3	1.1	1.0	0.6	0.5	0.5	0.6	0.7	0.7	0.7	0.7	3.0	5.5
25-Feb	0.7	0.7	0.7	2.4	4.2	4.1	4.1	4.6	5.8	6.5	6.6	5.9	5.7	4.5	4.4	4.4	3.8	3.9	3.8	5.5	6.6	5.4	2.3	1.6	4.1	6.6
26-Feb	1.4	1.5	1.6	1.6	1.7	1.9	1.6	1.2	1.0	0.9	0.8	0.7	0.7	0.5	0.4	0.5	0.6	0.5	0.6	0.6	0.6	0.7	0.6	0.7	1.0	1.9
27-Feb	0.8	0.9	1.5	1.9	2.0	2.2	2.3	2.4	2.3	1.8	1.0	0.7	0.7	0.9	C	0.9	1.2	1.5	1.4	1.5	1.7	1.6	1.8	2.9	1.6	2.9
28-Feb	3.0	2.9	3.1	3.2	3.3	3.3	3.3	3.7	3.9	3.8	3.5	3.2	2.7	2.2	1.8	1.3	1.2	1.0	1.0	1.1	1.3	1.2	1.3	1.4	2.4	3.9
	3.0	3.0	3.2	3.3	3.3	3.2	3.0	2.9	2.9	3.0	3.1	3.0	2.7	2.3	2.3	2.1	2.2	2.4	2.5	2.7	2.8	2.9	2.9	2.9	Diurnal Average	
	5.8	6.2	9.6	11.4	11.3	10.2	7.2	6.0	5.8	6.5	7.1	11.3	9.7	5.8	7.6	5.9	5.2	5.2	5.2	5.5	6.6	6.2	5.6	5.5	Diurnal Maximum	

C - Calibration

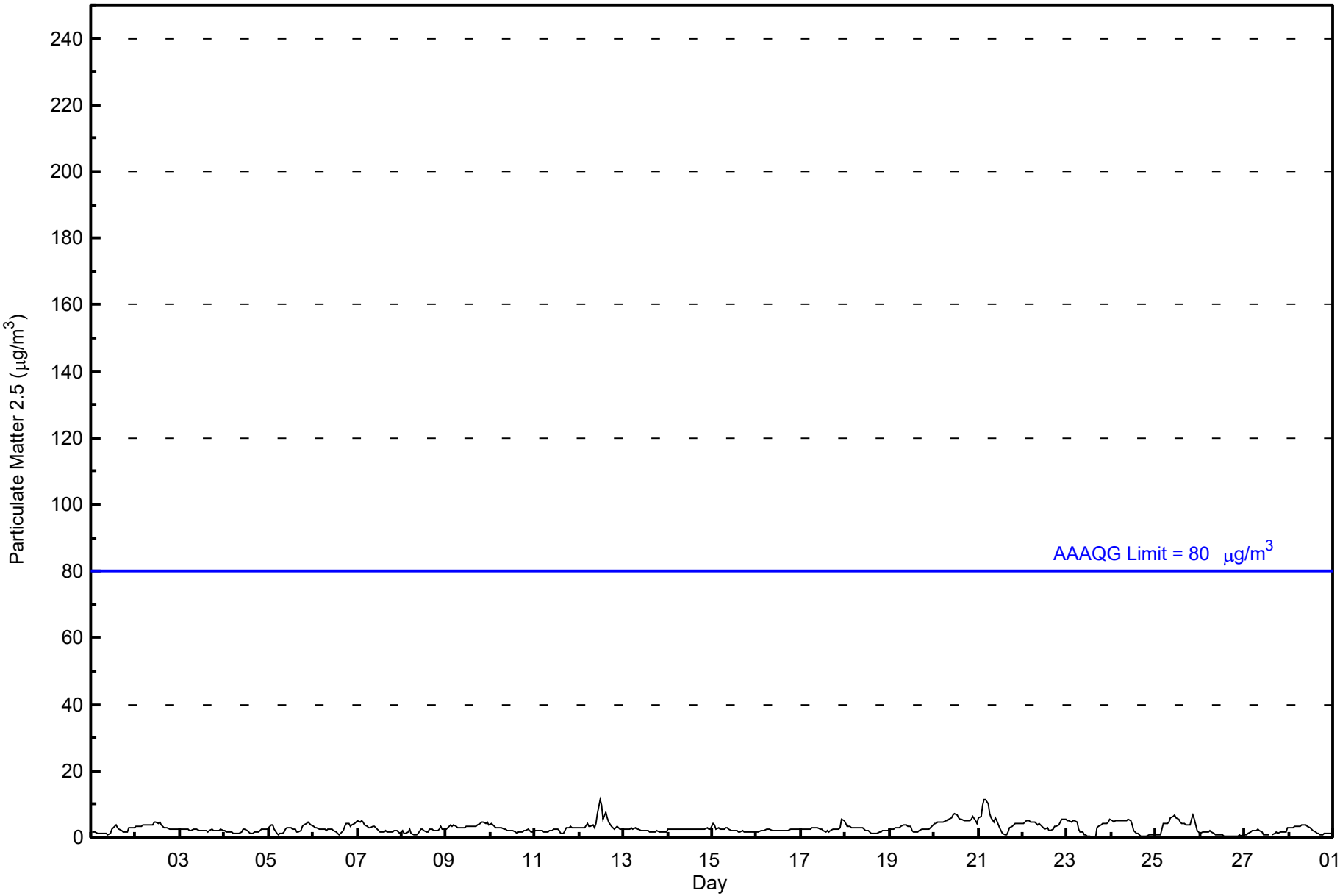
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Stony Mountain - February 2025



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

Stony Mountain - February 2025

Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	639	95.23	95.23
6 - 15	32	4.77	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: 671

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

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

Stony Mountain - February 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	16	22	28	20	6	15	20	42	56	36	30	52	97	74	78	47	639
6 - 15	0	1	1	2	2	2	2	1	1	5	8	7	0	0	0	0	32
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	16	23	29	22	8	17	22	43	57	41	38	59	97	74	78	47	671

Total Number of Valid Hours: 671

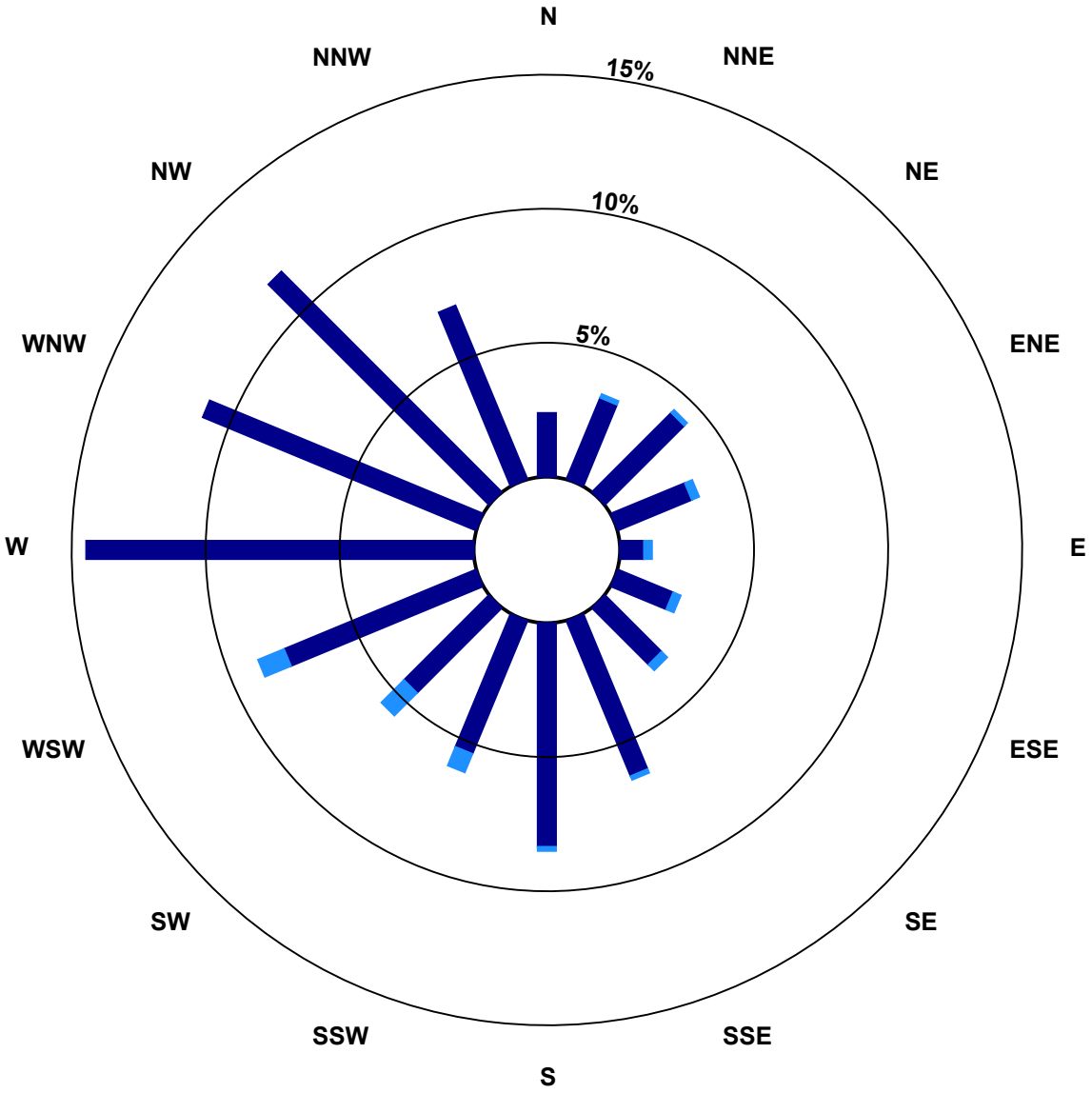
Total Number of Hours: 672

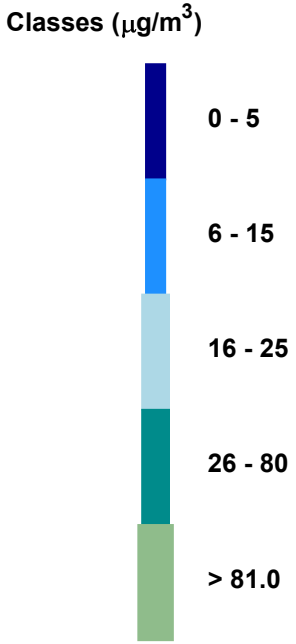
Wood Buffalo Environmental Association

Wind Rose Feb 2025

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

Stony Mountain





Total Number of Valid Hours: 671

Wood Buffalo Environmental Association

Summary of Hour Averages

Carbon Monoxide (CO) - ppm

Stony Mountain - February 2025

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

Maximum Value: 0.2 ppm on Feb 21 05:00

Maximum Daily Average: 0.2 ppm on Feb 25

Minimum Value: 0.1 ppm on Feb 10 08:00

Minimum Daily Average: 0.2 ppm on Feb 2

Maximum Diurnal Average: 0.2 ppm at hour 6

Minimum Diurnal Average: 0.2 ppm at hour 9

Monthly Average: 0.19 ppm

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

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	32
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-Feb	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
2-Feb	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
3-Feb	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-Feb	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	UO	UO	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
5-Feb	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
6-Feb	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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
7-Feb	0.1	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
8-Feb	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-Feb	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
10-Feb	0.2	0.2	Z	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
11-Feb	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-Feb	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
13-Feb	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-Feb	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-Feb	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-Feb	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
17-Feb	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
18-Feb	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-Feb	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
20-Feb	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-Feb	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
22-Feb	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
23-Feb	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
24-Feb	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
25-Feb	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
26-Feb	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
27-Feb	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	C	C	C	C	C	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
28-Feb	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	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 UO - Unstable Operation

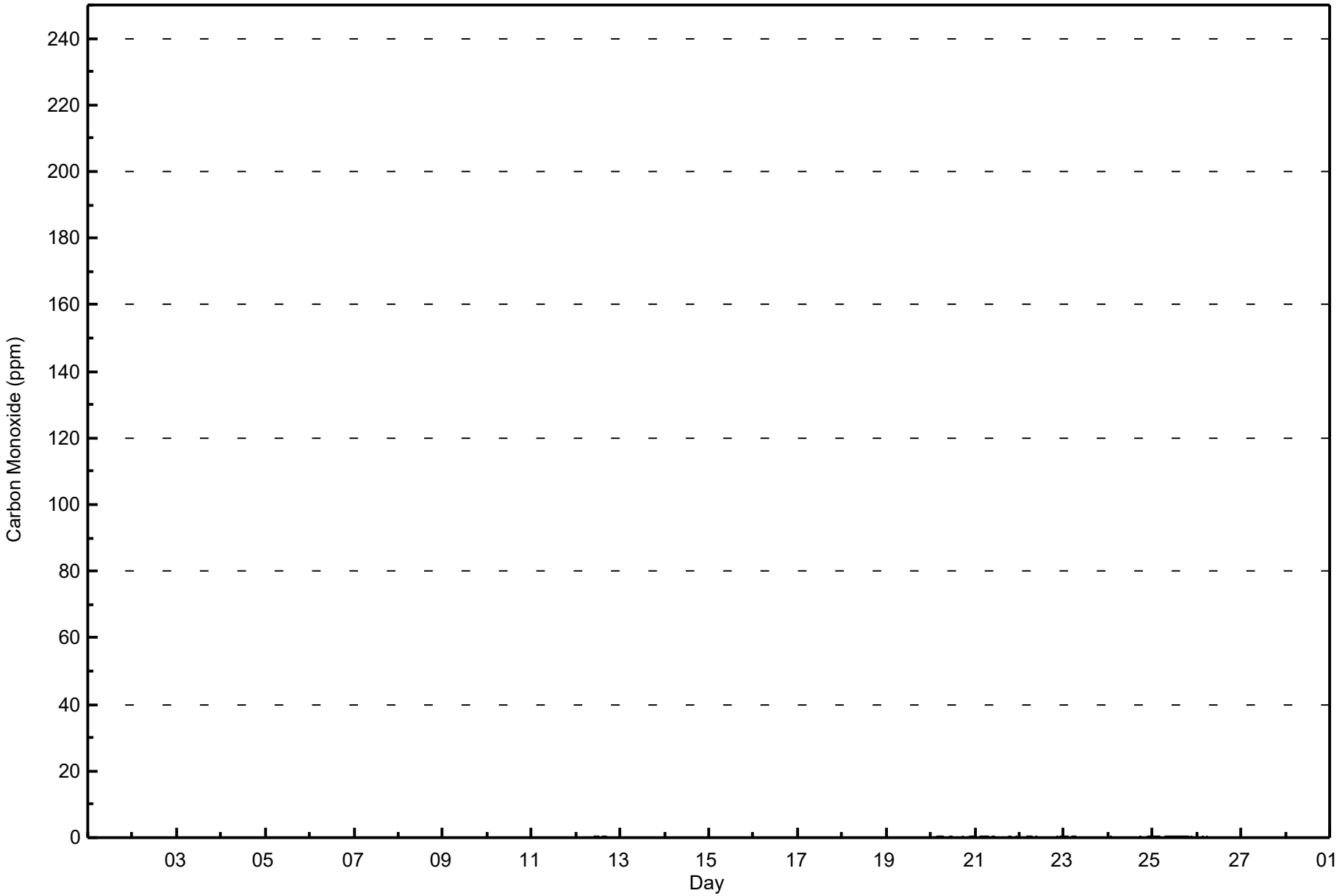
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 13 ppm

Wood Buffalo Environmental Association

Hourly Averages

Carbon Monoxide (CO) - ppm

Stony Mountain - February 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.3	638	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: 638

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Carbon Monoxide (CO) - ppm

Stony Mountain - February 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	15	21	27	22	7	15	21	43	53	40	33	57	94	69	75	46	638
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	15	21	27	22	7	15	21	43	53	40	33	57	94	69	75	46	638

Total Number of Valid Hours: 638

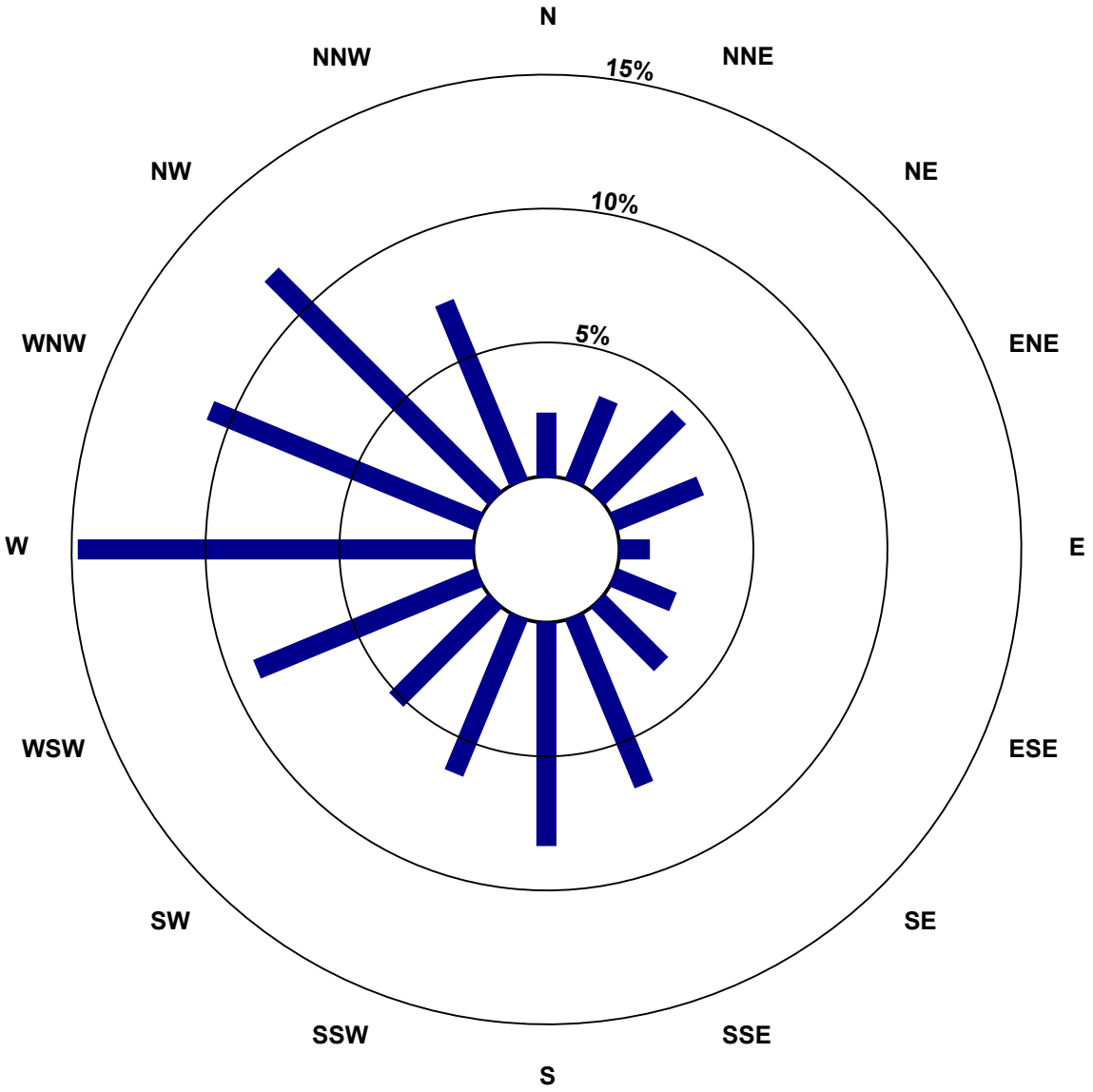
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Carbon Monoxide (CO) - ppm

Stony Mountain



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: 638

Wood Buffalo Environmental Association

Summary of Hour Averages

Carbon Dioxide (CO_2) - ppm

Stony Mountain - February 2025

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

Maximum Value: 460.0 ppm on Feb 25 18:00

Maximum Daily Average: 451.7 ppm on Feb 25

Minimum Value: 437.6 ppm on Feb 3 21:00

Minimum Daily Average: 438.8 ppm on Feb 3

Maximum Diurnal Average: 447.1 ppm at hour 4

Minimum Diurnal Average: 445.3 ppm at hour 15

Monthly Average: 446.11 ppm

Percentiles: P_1 = 437.7 P_{10} = 440.3 Q_1 = 443.5 Median = 446.4 Q_3 = 448.5 P_{90} = 451.7 P_{99} = 455.6

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	31
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-Feb	443.1	Z	445.1	444.4	443.0	442.4	442.3	442.4	442.2	442.0	443.6	447.7	447.8	446.7	444.7	444.7	442.8	442.1	441.7	441.8	442.3	442.5	442.6	442.5	443.5	447.8
2-Feb	442.7	442.6	Z	443.4	443.4	443.4	443.0	443.6	444.1	444.7	445.6	445.6	445.0	444.5	443.4	442.4	441.5	441.1	441.6	440.9	440.5	440.7	440.5	440.4	442.8	445.6
3-Feb	440.2	440.1	440.3	Z	440.5	440.4	441.8	440.1	439.7	439.0	438.4	438.2	438.0	437.9	437.6	437.6	437.9	437.9	437.6	437.8	437.6	437.7	437.9	437.8	438.8	441.8
4-Feb	437.8	437.9	437.8	437.7	Z	437.7	437.9	437.6	438.0	438.5	438.6	438.5	438.3	438.3	438.8	440.6	441.3	439.4	439.3	439.8	440.6	440.8	440.8	441.0	439.0	441.3
5-Feb	441.5	441.9	441.8	441.1	440.3	440.2	Z	441.6	442.1	443.0	443.5	443.6	443.5	443.1	443.0	442.1	443.0	443.6	443.9	443.8	444.0	444.4	444.8	444.9	442.8	444.9
6-Feb	445.0	444.9	444.8	444.5	444.4	444.1	444.2	444.1	444.5	444.6	444.6	445.7	446.6	447.4	448.9	447.3	447.7	447.8	448.3	447.8	446.8	446.1	445.7	445.9	445.9	448.9
7-Feb	Z	446.6	446.2	445.6	445.4	445.3	445.5	445.8	445.6	445.6	445.5	445.4	445.3	445.5	445.5	444.9	445.3	445.6	445.4	443.7	443.7	444.7	445.0	445.0	445.3	446.6
8-Feb	445.7	Z	444.5	445.4	445.9	445.8	445.9	446.2	446.2	446.4	446.5	446.7	446.7	446.7	446.8	447.3	447.4	447.3	447.2	447.8	447.9	448.0	447.9	447.1	446.7	448.0
9-Feb	447.4	447.7	Z	449.5	449.9	446.6	445.0	445.0	445.0	445.2	445.1	444.9	444.7	444.6	444.4	444.2	444.6	445.3	445.6	446.4	447.2	445.8	445.1	444.6	445.8	449.9
10-Feb	444.3	444.1	443.8	Z	443.6	442.9	442.7	442.6	442.7	442.3	443.3	443.0	444.3	445.4	449.8	451.8	451.2	447.6	443.8	443.9	444.3	444.9	445.8	446.6	445.0	451.8
11-Feb	447.4	448.0	449.8	449.9	Z	449.0	448.1	448.8	448.8	448.4	447.9	447.8	447.6	447.5	447.0	447.3	448.8	449.1	448.5	447.9	446.9	447.0	446.9	447.5	448.1	449.9
12-Feb	448.5	449.0	448.2	447.3	447.5	Z	448.6	448.7	448.4	448.8	450.4	451.6	452.9	451.8	453.1	453.9	454.8	455.4	455.3	455.1	453.6	453.0	452.9	452.3	451.4	455.4
13-Feb	Z	452.0	451.9	451.8	451.7	451.5	451.5	451.8	450.4	449.8	449.6	449.3	449.2	448.8	448.2	447.8	447.6	447.8	448.3	448.0	447.8	447.8	448.6	448.5	449.6	452.0
14-Feb	450.6	Z	450.7	450.2	450.0	449.6	448.9	449.4	449.0	448.1	447.7	447.8	447.4	447.3	447.3	447.1	447.4	446.7	447.0	446.9	447.6	449.0	447.4	447.7	448.3	450.7
15-Feb	447.8	459.9	Z	450.7	449.5	448.6	449.4	449.9	450.3	449.6	447.8	447.6	446.3	446.0	446.0	445.9	446.4	446.4	446.6	446.4	446.3	446.6	446.7	446.1	448.1	459.9
16-Feb	446.2	446.2	446.9	Z	447.5	447.5	447.5	448.2	448.4	447.3	445.3	444.2	444.5	445.4	446.8	446.4	447.5	448.7	448.0	446.5	447.9	448.5	447.9	447.9	447.0	448.7
17-Feb	449.7	449.8	449.0	448.8	Z	449.4	448.9	449.2	450.3	448.3	446.8	446.1	445.7	445.8	446.4	446.1	446.8	447.3	446.8	446.8	446.4	446.1	447.7	447.7	447.6	450.3
18-Feb	448.0	447.9	447.6	447.4	447.7	Z	447.5	447.4	448.5	447.6	447.3	446.3	446.2	445.4	444.2	443.6	444.4	444.8	443.9	442.6	442.5	443.7	444.6	443.9	445.8	448.5
19-Feb	Z	443.8	443.4	444.0	444.7	445.9	446.6	448.2	447.7	447.2	447.3	446.4	444.8	443.9	444.6	444.9	448.1	449.0	447.9	446.4	445.5	445.8	446.9	446.7	446.1	449.0
20-Feb	447.8	Z	450.5	450.9	449.3	449.6	450.4	450.5	451.2	452.2	452.5	452.1	453.2	M	M	448.5	448.2	448.5	448.6	448.6	448.7	449.1	447.2	446.7	449.7	453.2
21-Feb	447.4	447.8	Z	451.1	451.2	450.8	448.8	448.3	446.7	449.8	448.4	445.3	444.1	442.9	442.8	442.8	444.5	446.9	448.7	449.6	449.8	450.3	449.9	450.4	447.8	451.2
22-Feb	451.4	451.8	452.2	Z	453.6	454.7	455.7	455.4	455.2	453.8	449.0	446.6	446.3	446.5	445.8	445.8	446.9	447.9	448.5	449.1	450.2	450.9	451.2	451.7	450.4	455.7
23-Feb	452.2	453.2	454.1	454.0	Z	453.0	450.3	448.2	448.0	447.3	446.6	445.4	445.1	445.0	445.0	446.4	453.1	452.0	452.8	453.4	452.7	452.7	452.6	452.9	450.3	454.1
24-Feb	453.0	453.0	453.5	454.8	455.1	Z	452.5	452.0	451.7	451.7	451.6	451.0	447.9	C	C	C	C	441.0	440.7	440.8	441.9	441.8	441.7	442.1	448.3	455.1
25-Feb	Z	442.6	442.4	447.5	449.9	449.9	449.9	451.2	452.7	452.7	451.6	451.6	453.4	454.4	455.3	459.0	456.1	460.0	459.7	456.9	454.2	452.8	444.4	440.6	451.7	460.0
26-Feb	440.1	Z	440.2	440.0	440.5	440.7	440.5	440.2	439.9	439.8	439.5	439.4	439.1	438.7	438.6	438.6	438.6	438.4	438.4	438.7	438.9	439.3	440.1	440.6	439.5	440.7
27-Feb	438.8	438.9	Z	443.7	443.6	443.8	444.5	446.5	445.9	442.9	439.9	440.6	445.7	448.1	442.4	441.4	440.9	441.0	441.1	441.1	441.4	441.7	442.0	445.4	442.7	448.1
28-Feb	445.5	444.7	444.6	Z	445.7	446.4	448.4	447.7	447.2	447.5	445.9	444.8	443.5	442.4	441.2	440.2	439.9	439.4	439.1	439.9	441.5	442.6	444.2	445.3	443.8	448.4
	445.9	446.7	446.5	447.1	446.8	446.4	446.9	446.8	446.8	446.6	446.1	445.8	445.8	445.4	445.3	445.5	446.0	446.0	445.9	445.6	445.7	445.9	445.7	445.7	Diurnal Average	
	453.0	459.9	454.1	454.8	455.1	454.7	455.7	455.4	455.2	453.8	452.5	452.1	453.4	454.4	455.3	459.0	456.1	460.0	459.7	456.9	454.2	453.0	452.9	452.9	Diurnal Maximum	

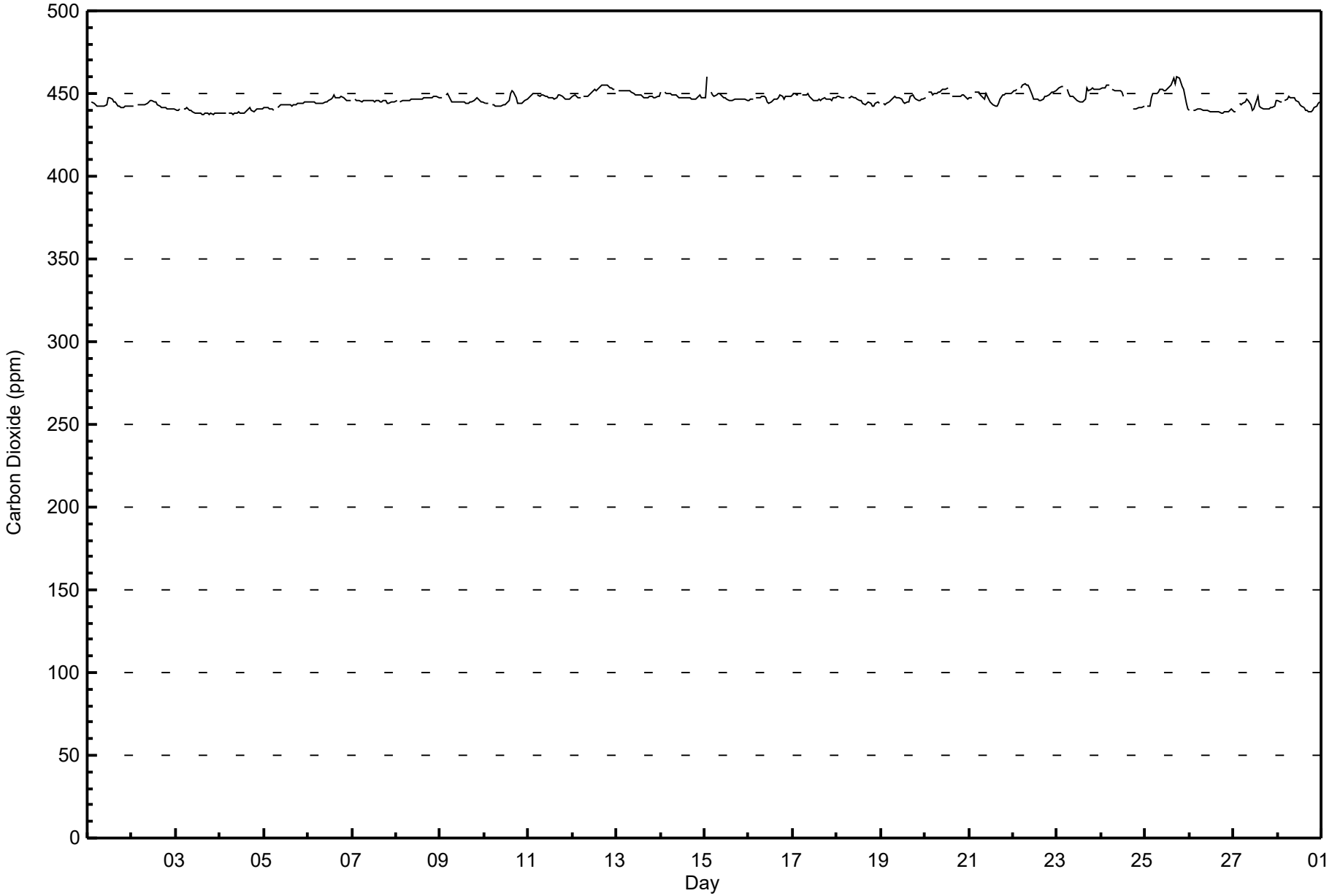
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Carbon Dioxide (CO_2) - ppm

Stony Mountain - February 2025



Carbon Dioxide (CO_2) - ppm
Stony Mountain - February 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
400 - 420	0	0.00	0.00
420 - 440	73	11.42	11.42
440 - 460	566	88.58	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: 639

Total Number of Hours: 672



Wood Buffalo Environmental Association

Frequency Distribution

Carbon Dioxide (CO_2) - ppm

Stony Mountain - February 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	0	0	0	0	0	0	0	0	1	1	6	12	26	19	8	0	73
440 - 460	14	23	28	21	8	15	20	42	54	37	29	44	63	55	68	45	566
460 - 480	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
480 - 500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	14	23	28	21	8	15	20	42	55	38	35	56	89	74	76	45	639

Total Number of Valid Hours: 639

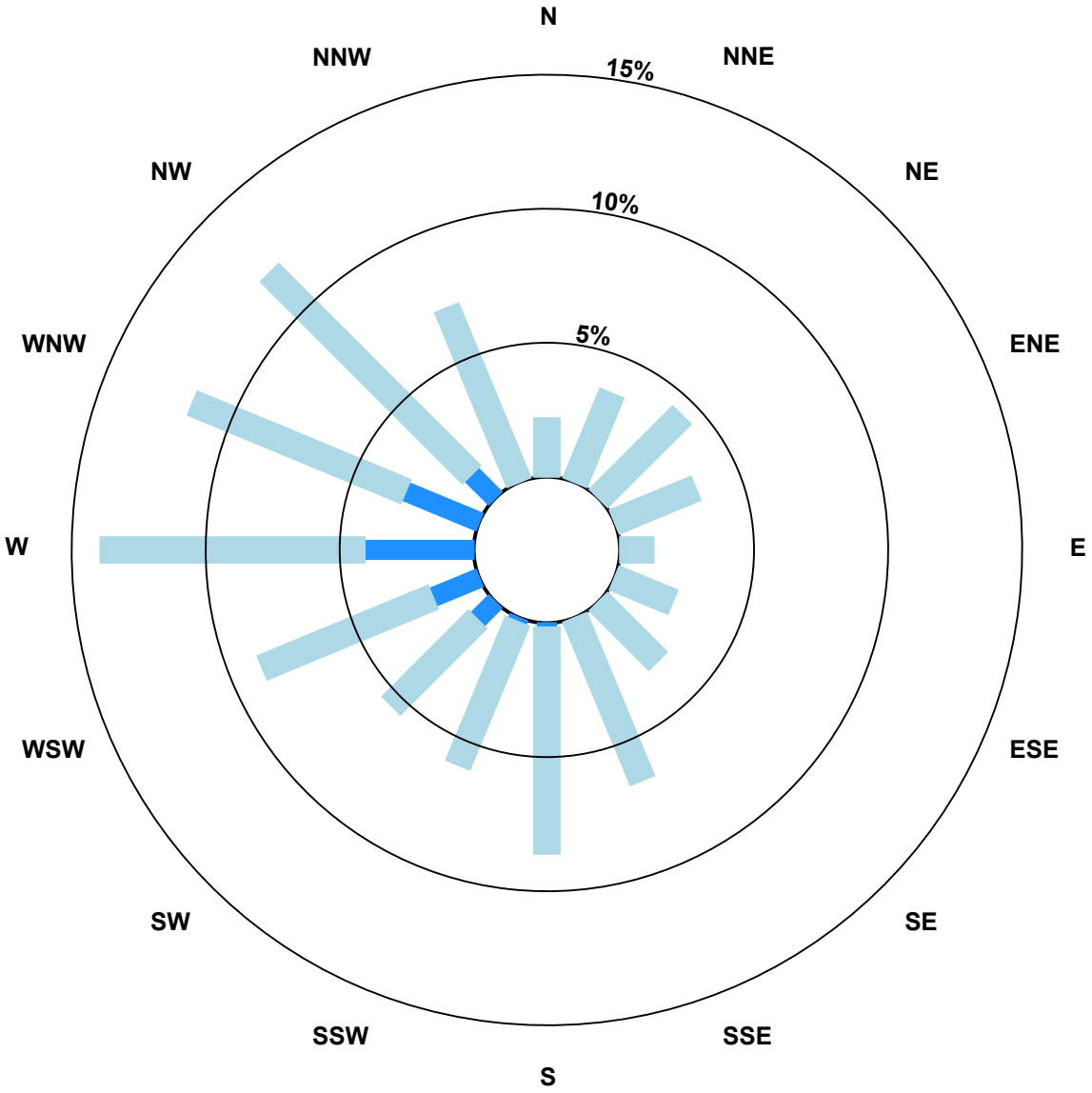
Total Number of Hours: 672

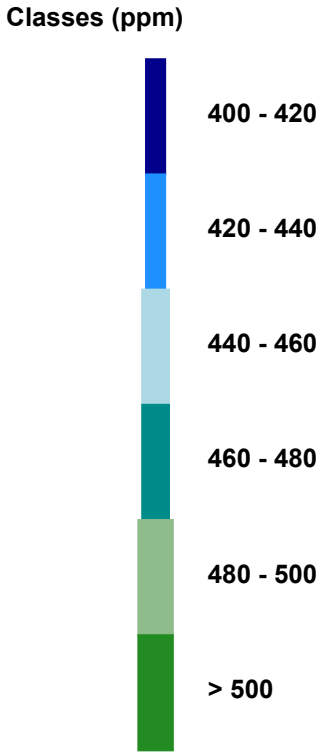
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Carbon Dioxide (CO_2) - ppm

Stony Mountain





Total Number of Valid Hours: 639

Maximum Value: 8.0 C on Feb 27 12:00

Maximum Daily Average: 3.9 C on Feb 27

Minimum Value: -31.4 C on Feb 2 08:00

Minimum Daily Average: -27.9 C on Feb 2

Maximum Diurnal Average: -10.3 C at hour 15

Minimum Diurnal Average: -18.4 C at hour 7

Monthly Average: -15.28 C

Percentiles: P_1 = -30.9 P_{10} = -27.2 Q_1 = -23.9 Median = -19.1 Q_3 = -5.0 P_{90} = 2.8 P_{99} = 7.7

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

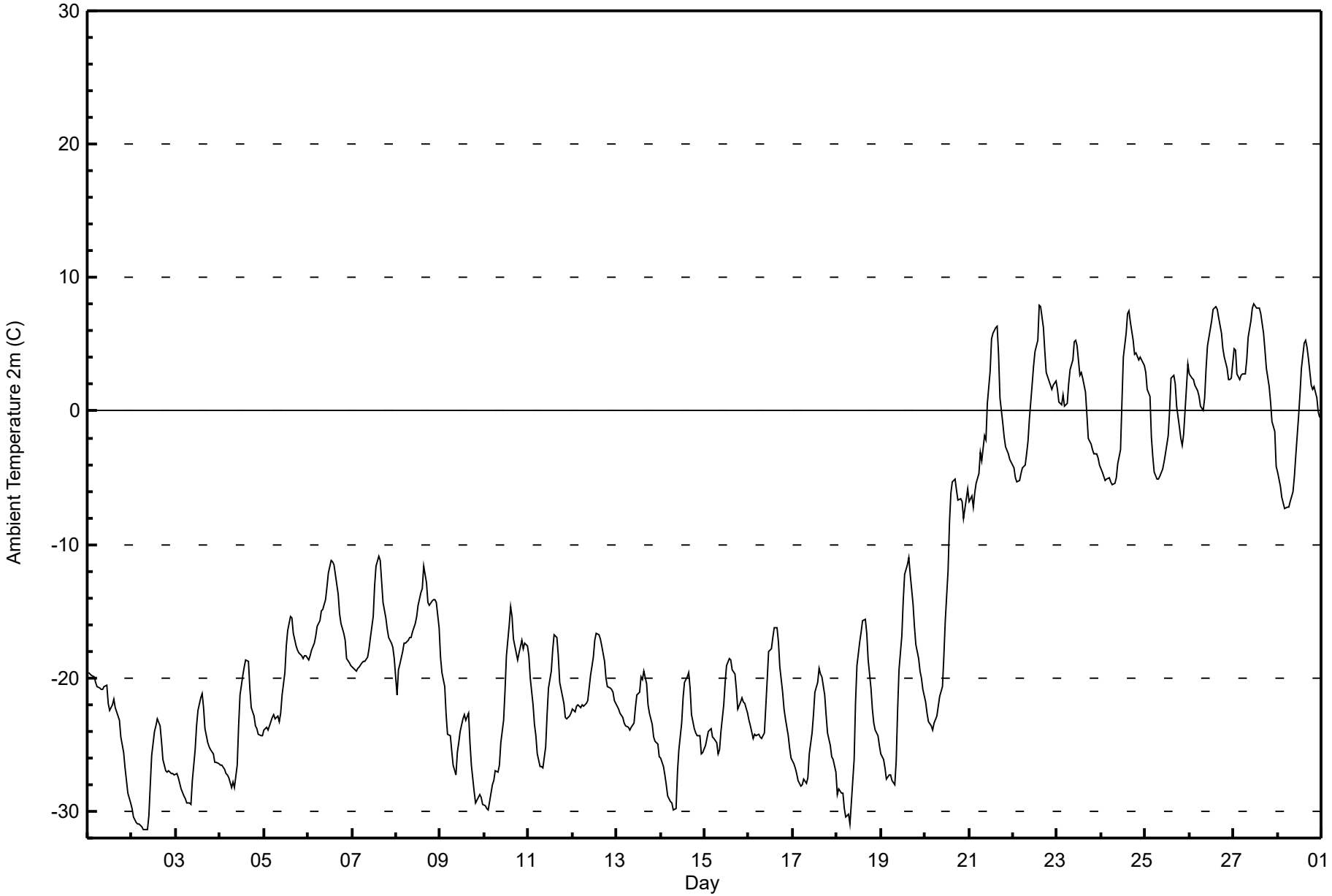
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-19.6	-19.7	-19.8	-19.9	-20.3	-20.6	-20.8	-20.9	-20.9	-20.7	-20.5	-21.9	-22.4	-22.0	-21.6	-22.3	-22.8	-23.1	-24.4	-25.5	-26.7	-27.7	-28.6	-29.3	-22.6	-19.6
2-Feb	-29.7	-30.4	-30.8	-30.9	-30.9	-31.2	-31.3	-31.4	-31.3	-30.3	-28.1	-25.8	-24.0	-23.5	-23.0	-23.6	-24.8	-26.1	-27.0	-27.0	-27.0	-27.1	-27.2	-27.3	-27.9	-23.0
3-Feb	-27.2	-27.4	-27.9	-28.4	-28.8	-29.1	-29.4	-29.4	-29.5	-27.7	-25.4	-23.6	-22.4	-21.5	-21.1	-22.2	-23.8	-24.9	-25.2	-25.4	-25.7	-26.3	-26.3	-26.4	-26.0	-21.1
4-Feb	-26.6	-26.5	-26.8	-27.1	-27.2	-27.5	-28.2	-27.8	-28.2	-26.6	-23.6	-21.3	-19.8	-19.1	-18.7	-18.8	-20.8	-22.2	-22.9	-23.6	-23.8	-24.2	-24.3	-24.3	-24.2	-18.7
5-Feb	-23.9	-23.7	-24.0	-23.6	-23.0	-22.8	-23.1	-22.9	-23.3	-22.6	-21.2	-19.6	-17.6	-16.5	-15.4	-15.5	-16.6	-17.6	-18.0	-18.1	-18.3	-18.5	-18.4	-18.3	-20.1	-15.4
6-Feb	-18.6	-18.3	-17.9	-17.4	-16.9	-16.1	-15.7	-15.0	-14.8	-14.2	-13.2	-12.1	-11.2	-11.3	-11.6	-12.2	-13.7	-15.1	-16.0	-16.7	-17.2	-18.6	-18.9	-19.1	-15.5	-11.2
7-Feb	-19.2	-19.4	-19.5	-19.3	-19.1	-18.9	-18.7	-18.8	-18.5	-17.8	-16.9	-15.4	-13.1	-11.6	-10.9	-11.2	-12.7	-14.3	-15.5	-16.3	-17.0	-17.4	-17.7	-18.5	-16.6	-10.9
8-Feb	-21.2	-19.4	-18.9	-18.0	-17.4	-17.4	-17.2	-16.9	-17.0	-16.6	-15.9	-15.4	-14.6	-13.6	-13.3	-11.6	-12.9	-14.3	-14.5	-14.2	-14.1	-14.1	-14.4	-16.3	-15.8	-11.6
9-Feb	-18.5	-19.6	-20.7	-22.7	-24.2	-24.4	-25.5	-26.6	-27.3	-25.6	-24.9	-24.1	-23.1	-22.8	-23.1	-22.6	-24.8	-26.6	-28.5	-29.3	-29.1	-28.8	-29.0	-29.5	-25.0	-18.5
10-Feb	-29.6	-29.8	-29.9	-29.3	-28.0	-27.7	-27.0	-27.0	-26.5	-24.9	-23.2	-21.0	-18.4	-16.1	-14.6	-15.3	-17.1	-18.2	-18.7	-18.2	-17.2	-17.8	-17.4	-17.6	-22.1	-14.6
11-Feb	-18.3	-20.1	-22.0	-23.4	-24.3	-25.7	-26.6	-26.6	-26.8	-25.2	-22.8	-20.8	-19.5	-18.0	-16.8	-17.0	-18.3	-20.3	-21.4	-21.9	-22.9	-23.1	-22.9	-22.7	-22.0	-16.8
12-Feb	-22.4	-22.5	-22.1	-22.0	-22.2	-22.0	-22.1	-22.0	-21.7	-20.7	-19.8	-18.5	-17.2	-16.7	-16.8	-17.0	-17.6	-18.8	-20.0	-20.6	-20.7	-20.9	-21.1	-21.7	-20.3	-16.7
13-Feb	-22.1	-22.3	-22.7	-23.0	-23.3	-23.6	-23.7	-23.9	-23.7	-23.4	-22.2	-21.2	-21.0	-19.9	-20.1	-19.5	-20.5	-22.0	-22.7	-23.4	-24.5	-24.8	-24.9	-25.9	-22.7	-19.5
14-Feb	-26.1	-26.6	-27.3	-28.0	-28.8	-29.3	-29.4	-29.9	-29.8	-27.1	-25.4	-23.4	-21.5	-20.3	-19.9	-19.6	-20.8	-22.8	-23.8	-24.1	-24.4	-24.3	-25.7	-25.5	-25.2	-19.6
15-Feb	-25.0	-24.5	-24.0	-23.8	-24.5	-24.5	-24.9	-25.6	-25.4	-24.0	-22.0	-20.3	-19.1	-18.5	-18.6	-19.4	-19.7	-20.9	-22.4	-21.8	-21.5	-21.8	-21.9	-22.6	-22.4	-18.5
16-Feb	-23.1	-23.6	-24.5	-24.2	-24.4	-24.3	-24.5	-24.6	-24.1	-22.2	-20.1	-18.0	-17.8	-17.0	-16.2	-16.2	-17.3	-19.2	-21.1	-22.4	-23.1	-24.3	-25.3	-26.0	-21.8	-16.2
17-Feb	-26.4	-26.7	-27.1	-27.6	-28.1	-28.0	-27.6	-27.9	-27.5	-25.7	-24.2	-22.8	-21.1	-20.4	-19.3	-19.7	-19.9	-21.3	-22.7	-24.1	-25.0	-25.9	-26.1	-27.1	-24.7	-19.3
18-Feb	-28.8	-28.3	-28.6	-28.6	-29.8	-30.4	-30.2	-31.0	-29.4	-26.1	-21.8	-19.1	-17.3	-16.6	-15.7	-15.6	-16.7	-18.6	-20.7	-22.3	-23.4	-23.9	-24.3	-25.1	-23.8	-15.6
19-Feb	-25.7	-26.1	-26.8	-27.6	-27.2	-27.3	-27.7	-28.0	-26.3	-22.5	-19.4	-16.8	-14.3	-12.3	-11.5	-11.0	-12.2	-14.4	-16.2	-17.5	-18.5	-19.4	-20.0	-20.8	-20.4	-11.0
20-Feb	-21.8	-22.7	-23.3	-23.6	-23.9	-23.4	-22.9	-22.2	-21.4	-20.6	-18.3	-15.7	-12.0	-8.4	-6.2	-5.3	-5.1	-5.9	-6.7	-6.6	-6.8	-8.1	-6.6	-5.9	-14.3	-5.1
21-Feb	-6.8	-6.4	-7.2	-6.2	-5.4	-4.7	-3.1	-3.7	-1.9	-2.1	0.6	3.0	5.4	5.9	6.3	6.4	4.3	1.0	-0.9	-1.9	-2.7	-3.2	-3.6	-3.8	-1.3	6.4
22-Feb	-4.3	-5.0	-5.3	-5.3	-4.6	-4.3	-4.1	-3.2	-2.2	-0.6	2.1	3.4	4.5	5.3	7.9	7.8	6.3	4.4	2.9	2.3	1.9	1.6	1.9	2.3	0.7	7.9
23-Feb	1.6	0.7	0.5	1.2	0.4	0.6	2.0	3.0	3.8	5.2	5.3	4.8	2.7	2.8	2.5	1.4	-0.3	-2.1	-2.5	-2.9	-3.2	-3.2	-3.5	-4.0	0.7	5.3
24-Feb	-4.6	-4.9	-5.2	-5.1	-5.0	-5.3	-5.5	-5.4	-4.9	-3.9	-2.9	0.7	4.0	5.8	7.3	7.5	6.7	5.3	4.3	4.3	3.9	4.1	3.9	3.5	0.4	7.5
25-Feb	2.8	1.7	1.1	-1.9	-3.5	-4.5	-5.1	-5.1	-4.9	-4.4	-3.8	-3.2	-1.9	0.1	2.4	2.7	2.0	0.4	-1.3	-2.1	-2.6	-1.8	1.7	3.5	-1.1	3.5
26-Feb	2.8	2.4	2.4	2.0	1.5	1.1	0.3	0.1	1.0	3.2	4.9	6.2	6.8	7.6	7.8	7.6	7.0	5.8	4.7	4.0	3.2	2.4	2.4	2.4	3.7	7.8
27-Feb	4.7	4.5	2.8	2.3	2.7	2.8	2.7	3.8	5.5	6.8	7.7	8.0	7.7	7.7	7.7	7.3	5.9	4.6	3.2	1.8	0.7	-0.8	-1.5	-4.1	3.9	8.0
28-Feb	-4.6	-5.6	-6.5	-6.9	-7.3	-7.2	-7.2	-6.8	-6.1	-4.9	-3.4	-0.4	1.3	3.2	5.1	5.3	4.8	3.9	1.9	1.6	1.8	1.0	-0.1	-0.5	-1.5	5.3
	-17.2	-17.5	-17.9	-18.2	-18.3	-18.4	-18.4	-18.4	-18.0	-16.6	-14.9	-13.4	-12.0	-11.0	-10.3	-10.3	-11.5	-13.0	-14.1	-14.7	-15.1	-15.6	-15.7	-16.1	Diurnal Average	
	4.7	4.5	2.8	2.3	2.7	2.8	2.7	3.8	5.5	6.8	7.7	8.0	7.7	7.7	7.9	7.8	7.0	5.8	4.7	4.3	3.9	4.1	3.9	3.5	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Stony Mountain - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	308	45.83	45.83
-20 - 0	248	36.90	82.74
0 - 10	116	17.26	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Stony Mountain - February 2025

Maximum Value: 96.1 % on Feb 25 09:00

Maximum Daily Average: 82.2 % on Feb 23

Minimum Value: 24.0 % on Feb 19 15:00

Minimum Daily Average: 45.4 % on Feb 19

Maximum Diurnal Average: 75.7 % at hour 8

Minimum Diurnal Average: 54.8 % at hour 15

Monthly Average: 68.61 %

Percentiles: P_1 = 32.6 P_{10} = 51.2 Q_1 = 61.7 Median = 71.0 Q_3 = 76.6 P_{90} = 81.7 P_{99} = 91.9

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

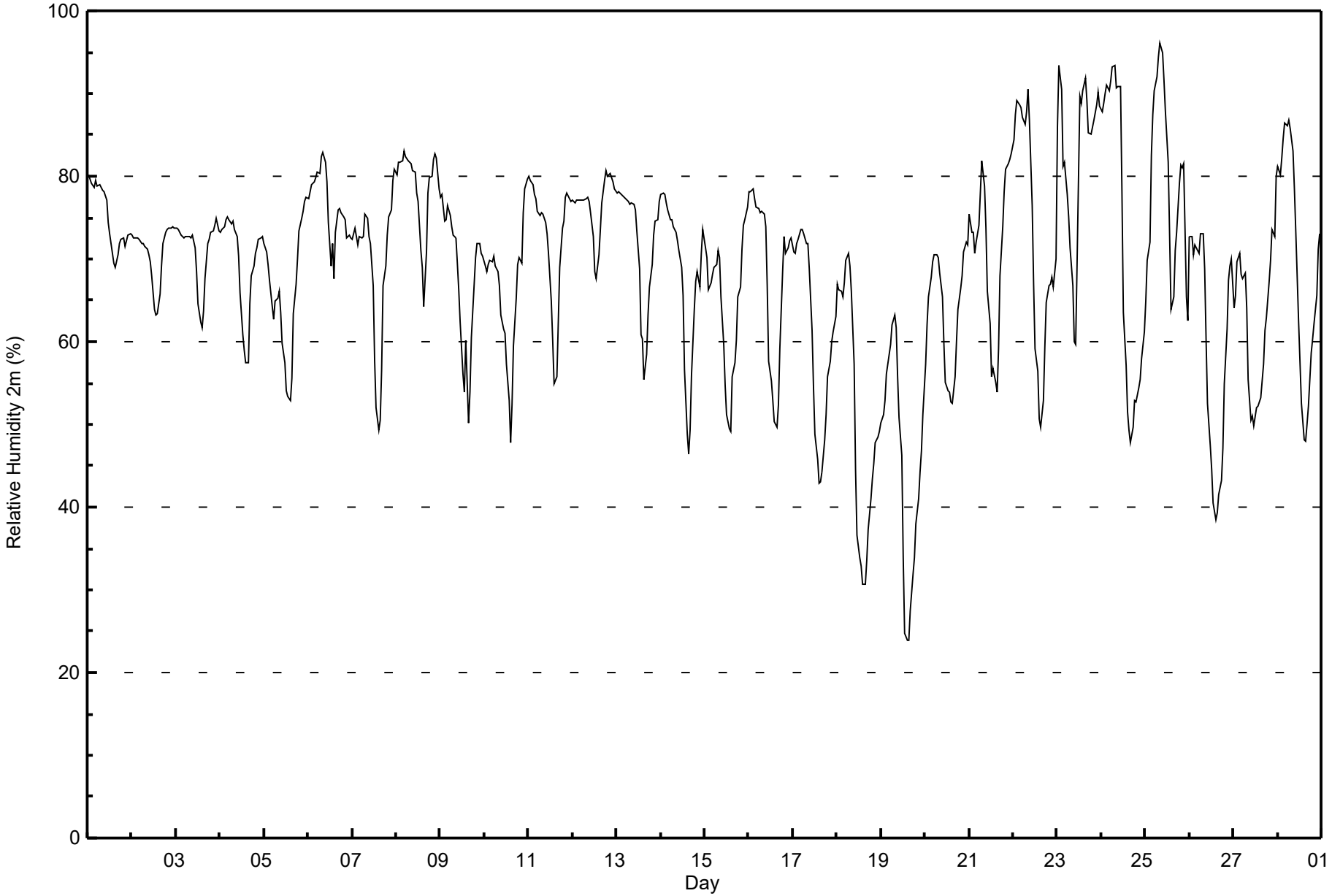
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	80.1	79.6	79.2	78.7	79.4	78.9	79.0	78.7	78.3	78.1	77.0	74.4	73.1	70.6	69.4	69.0	70.5	71.9	72.4	72.5	71.5	72.3	72.8	73.0	75.0	80.1
2-Feb	72.9	72.6	72.5	72.5	72.3	71.9	71.8	71.5	71.3	70.5	69.7	68.0	64.0	63.2	63.4	65.8	69.2	71.8	73.3	73.6	73.7	73.7	73.8	73.7	70.7	73.8
3-Feb	73.7	73.5	73.3	72.8	72.6	72.8	72.7	72.7	72.6	72.8	71.3	68.5	64.6	62.4	61.7	63.8	67.6	71.9	72.4	73.2	73.4	74.0	74.9	73.3	70.9	74.9
4-Feb	73.3	73.6	73.9	74.7	75.1	74.8	74.3	74.5	73.6	72.7	70.3	66.0	60.8	59.0	57.5	57.4	64.5	67.9	69.1	70.6	71.4	72.4	72.6	72.6	69.7	75.1
5-Feb	71.9	70.9	69.3	67.5	64.2	62.7	64.9	65.2	66.0	63.6	59.8	57.4	54.0	53.4	52.9	55.6	63.4	66.9	69.9	73.4	74.9	75.8	77.0	77.4	65.8	77.4
6-Feb	77.2	78.1	78.9	79.3	79.9	80.5	80.3	82.4	82.8	81.6	79.3	74.4	69.1	71.9	67.6	73.3	76.0	76.1	75.6	75.1	74.7	72.6	72.9	72.5	76.3	82.8
7-Feb	72.4	73.7	72.7	71.7	72.8	72.5	72.7	75.5	74.9	72.7	71.9	66.8	57.7	52.0	49.3	50.6	56.7	66.8	69.1	72.9	75.0	75.9	79.5	80.9	69.0	80.9
8-Feb	80.1	81.7	81.7	81.8	83.1	82.4	81.8	81.7	81.5	80.6	80.5	78.0	76.9	71.0	69.0	64.2	70.8	78.0	79.8	79.9	82.1	82.8	82.2	78.5	78.8	83.1
9-Feb	77.5	77.8	74.5	74.8	76.5	75.2	73.9	72.9	72.6	69.5	66.2	62.3	56.1	53.9	60.1	50.2	53.9	60.4	66.9	70.2	71.9	71.9	70.7	70.3	67.9	77.8
10-Feb	69.1	68.5	69.3	69.9	69.7	70.3	69.1	68.4	66.7	63.2	61.5	61.0	57.3	52.8	47.9	52.3	59.5	65.3	69.4	70.3	69.5	75.6	78.5	79.6	66.0	79.6
11-Feb	79.9	79.5	78.9	77.8	77.3	75.7	75.3	75.6	75.5	74.3	73.0	70.7	64.8	60.2	54.9	55.7	62.4	69.0	73.8	74.6	77.5	77.9	77.3	77.0	72.4	79.9
12-Feb	77.0	76.8	77.0	77.1	77.1	77.2	77.2	77.3	77.4	76.9	75.6	72.6	68.5	67.6	70.4	73.6	76.7	79.4	80.6	80.0	80.3	79.8	79.3	78.4	76.4	80.6
13-Feb	78.0	78.1	77.9	77.6	77.4	77.3	76.9	76.6	76.7	76.7	75.9	73.4	68.8	60.9	60.3	55.4	58.4	63.2	66.7	69.3	72.9	74.6	74.8	76.9	71.9	78.1
14-Feb	77.8	78.0	77.7	76.8	76.0	74.8	74.7	73.9	73.2	72.3	70.9	69.0	65.7	56.7	48.9	46.5	49.3	55.9	64.0	67.2	68.5	66.6	70.6	73.6	67.9	78.0
15-Feb	71.4	70.1	66.3	67.1	68.1	68.9	69.4	70.9	70.1	65.4	59.7	54.8	51.2	49.4	49.2	55.8	57.5	60.1	65.5	66.6	71.1	74.0	74.8	76.2	64.7	76.2
16-Feb	78.2	78.1	78.4	77.3	76.2	76.0	75.7	75.8	75.4	73.9	66.8	57.7	55.2	52.8	50.3	49.7	52.3	59.1	68.4	72.8	70.6	71.4	72.3	72.5	68.2	78.4
17-Feb	70.8	70.7	71.9	72.4	73.5	73.6	73.0	71.8	71.9	68.8	61.4	54.6	48.8	45.8	42.9	43.1	44.2	48.1	51.1	55.7	57.6	60.0	61.2	63.0	60.7	73.6
18-Feb	66.9	66.3	66.1	65.4	67.2	69.8	70.6	69.1	66.1	57.3	44.6	36.6	33.9	32.9	30.7	30.6	33.5	37.3	41.0	43.4	45.3	47.9	48.5	49.2	50.8	70.6
19-Feb	50.2	51.1	52.8	56.1	58.5	59.7	62.0	63.2	61.7	55.8	50.8	46.2	33.9	24.8	24.0	24.0	27.5	31.8	33.9	38.0	41.0	44.2	46.7	51.2	45.4	63.2
20-Feb	57.3	62.1	65.5	67.8	69.6	70.5	70.5	70.1	68.3	65.5	59.9	55.1	54.1	53.9	52.7	52.6	55.7	59.9	63.9	66.4	68.0	70.8	72.0	71.7	63.5	72.0
21-Feb	75.5	73.2	73.1	70.7	72.1	74.1	78.0	81.9	78.9	73.7	66.1	62.1	55.8	56.9	55.1	53.9	59.1	68.0	73.9	78.2	80.9	81.5	82.1	82.6	71.1	82.6
22-Feb	84.5	87.5	89.2	88.7	88.3	87.1	86.2	87.9	90.5	86.8	76.4	67.0	59.2	56.5	50.6	49.7	52.9	59.3	64.7	66.8	66.9	67.9	66.6	69.9	73.0	90.5
23-Feb	85.9	93.4	90.5	81.2	81.7	77.8	75.2	71.3	66.8	59.9	59.7	69.5	89.7	88.8	90.4	91.9	89.2	85.3	85.1	85.9	86.7	88.7	90.2	88.4	82.2	93.4
24-Feb	87.8	88.8	90.0	90.9	90.4	91.5	93.2	93.4	90.7	90.8	90.9	78.2	63.5	57.1	51.5	49.3	47.8	49.7	52.8	52.7	54.4	55.3	57.9	61.2	72.1	93.4
25-Feb	64.9	69.8	72.1	82.6	87.4	90.4	92.1	94.4	96.1	94.9	91.5	87.9	81.7	72.9	63.9	65.4	71.0	73.2	79.2	81.4	81.1	81.5	65.4	62.6	79.3	96.1
26-Feb	72.8	72.6	70.4	71.7	71.1	70.6	73.0	73.0	68.8	60.3	52.5	47.4	44.5	40.5	38.5	39.2	41.6	43.1	47.1	54.9	61.6	67.4	69.2	70.0	59.2	73.0
27-Feb	64.1	65.6	69.6	70.7	68.1	67.6	68.4	64.0	55.3	50.5	51.0	49.9	52.0	52.3	52.7	53.2	57.4	61.4	63.0	67.3	69.9	73.6	72.8	80.1	62.5	80.1
28-Feb	81.1	80.1	82.1	84.6	86.4	86.0	86.8	85.7	83.0	78.5	73.1	62.3	57.5	52.6	48.1	47.9	50.0	52.3	58.6	60.3	62.2	65.6	71.1	73.0	69.5	86.8
	74.0	74.7	74.8	75.0	75.4	75.4	75.7	75.7	74.5	71.7	68.1	64.0	60.1	56.9	54.8	55.0	58.5	62.6	66.1	68.3	69.8	71.3	71.7	72.5	Diurnal Average	
	87.8	93.4	90.5	90.9	90.4	91.5	93.2	94.4	96.1	94.9	91.5	87.9	89.7	88.8	90.4	91.9	89.2	85.3	85.1	85.9	86.7	88.7	90.2	88.4	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Stony Mountain - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Precipitation (PC) - mm

Stony Mountain - February 2025

Maximum Value: 0.9 mm on Feb 1 10:00

Maximum Daily Total: 4.6 mm on Feb 1

Minimum Value: 0.0 mm on Feb 1 03:00

Minimum Daily Total: 0.0 mm on Feb 19

Maximum Diurnal Total: 2.7 mm at hour 13

Minimum Diurnal Total: 0.1 mm at hour 20

Monthly Total: 16.18 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} = 0.6

Hours in Service:	672
Hours of Data:	438
Hours of Missing Data:	234
Hours of Calibration:	0
Percent Operational Time:	65.2

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-Feb	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.4	0.6	0.9	0.6	0.5	0.3	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.3	0.0	0.0	0.0	4.6	0.9
2-Feb	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
3-Feb	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	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3
4-Feb	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.4	0.3	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.4
5-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.4	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.2	1.8	0.8
6-Feb	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	1.2	0.5
7-Feb	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.3	1.7	0.7
8-Feb	0.0	0.0	0.0	0.0	0.3	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.3	0.8	0.0	0.1	0.1	0.0	0.0	0.0	0.3	0.2	0.3	0.5	3.2	0.8
9-Feb	0.0	0.0	0.4	0.2	0.0	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	0.4
10-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
11-Feb	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-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
13-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
14-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
15-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
16-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
17-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
18-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	0.0	--	0.0
19-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	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
21-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
23-Feb	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.6
24-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	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
26-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.4	0.4	0.5	0.3	0.3	0.2	0.2	0.4	0.7	0.9	1.0	2.2	2.7	1.8	0.5	0.4	0.2	0.2	0.2	0.1	0.8	0.6	0.4	1.0	Diurnal Average	
	0.3	0.1	0.4	0.2	0.3	0.1	0.1	0.4	0.6	0.9	0.6	0.8	0.7	0.8	0.2	0.2	0.2	0.2	0.2	0.1	0.3	0.2	0.3	0.5	Diurnal Maximum	

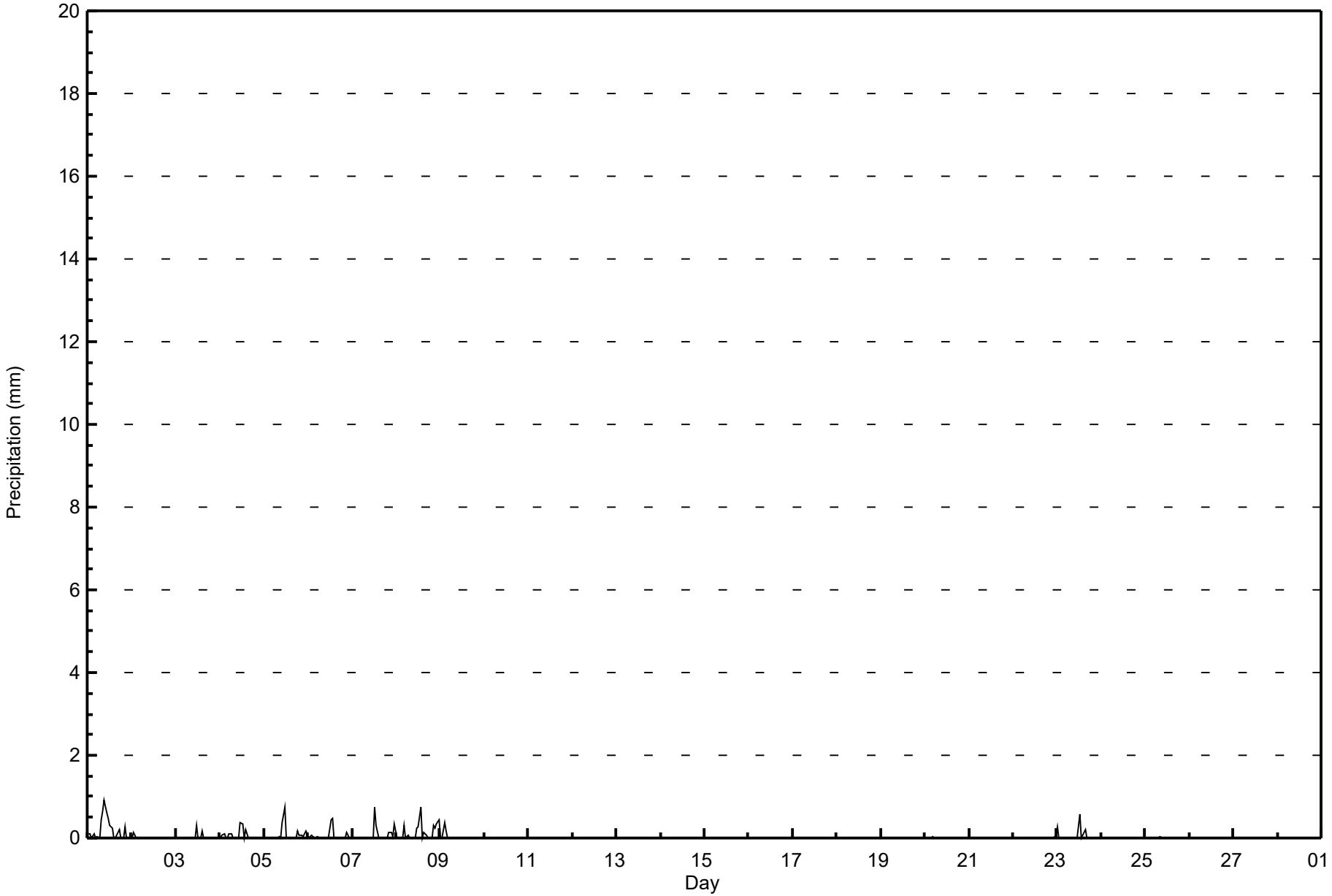
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Precipitation (PC) - mm

Stony Mountain - February 2025



Concentration Ranges (mm)	Number of Hours	%	Cumulative %
0 - 0.3	423	96.58	96.58
0.4 - 0.5	8	1.83	98.40
0.6 - 0.7	4	0.91	99.32
0.8 - 1.4	3	0.68	100.00
1.5 - 10	0	0.00	100.00
> 10	0	0.00	100.00

Total Number of Valid Hours: 438

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Leaf Wetness (LW) - %

Stony Mountain - February 2025

Maximum Value: 35.3 % on Feb 23 13:00

Maximum Daily Average: 11.9 % on Feb 23

Minimum Value: 0.9 % on Feb 28 15:00

Minimum Daily Average: 1.6 % on Feb 19

Maximum Diurnal Average: 3.6 % at hour 1

Minimum Diurnal Average: 1.8 % at hour 18

Monthly Average: 2.60 %

Percentiles: P_1 = 1.1 P_{10} = 1.5 Q_1 = 1.7 Median = 2.2 Q_3 = 2.7 P_{90} = 3.3 P_{99} = 20.0

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

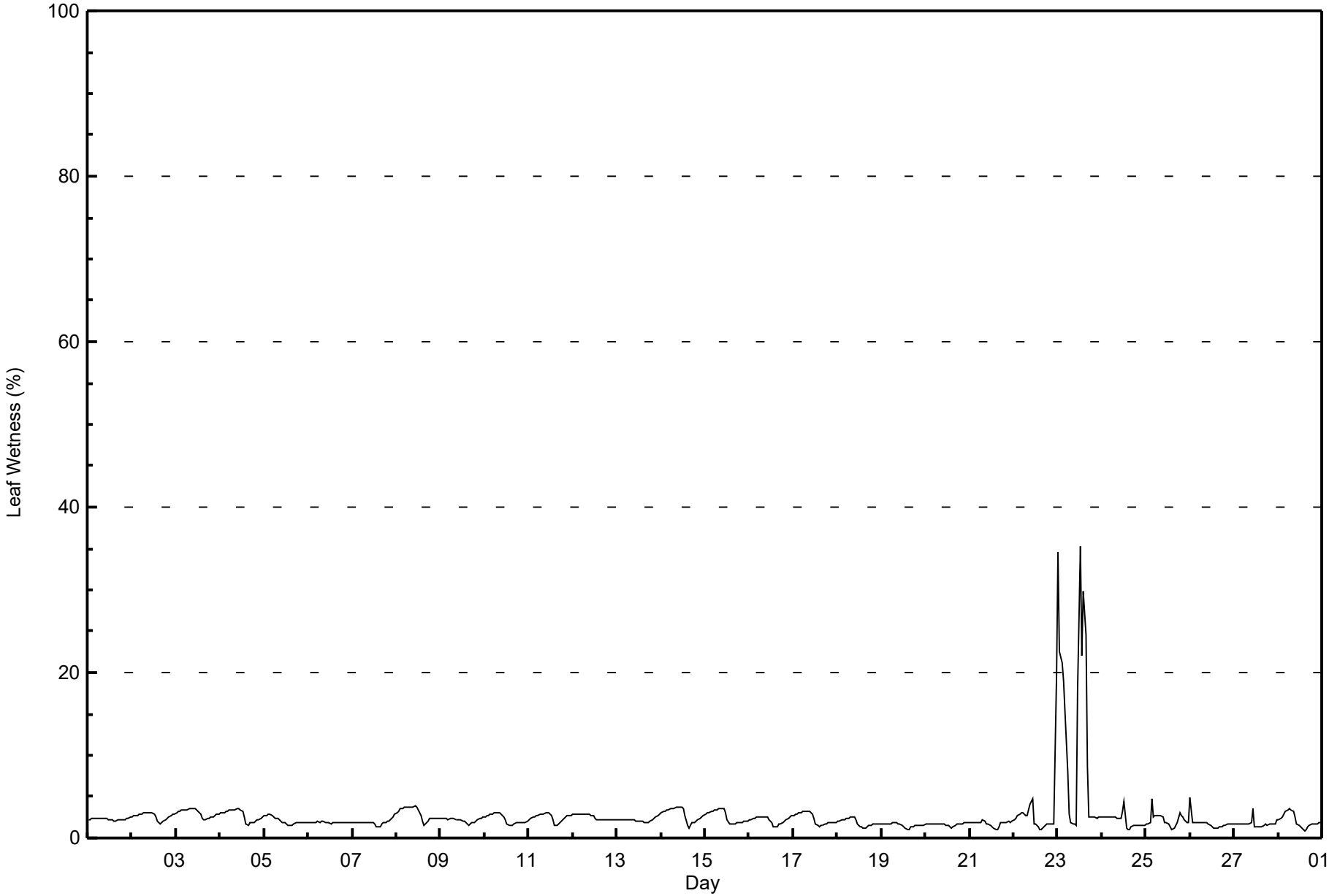
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.3	2.2	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.4	2.5	2.3	2.5
2-Feb	2.6	2.6	2.7	2.8	2.8	2.9	3.0	3.0	3.1	3.1	3.1	3.1	3.0	2.6	2.1	1.7	1.9	2.0	2.2	2.4	2.6	2.7	2.8	3.0	2.7	3.1
3-Feb	3.1	3.2	3.3	3.3	3.4	3.4	3.5	3.5	3.5	3.6	3.5	3.5	3.3	2.9	2.3	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.6
4-Feb	3.0	3.1	3.1	3.2	3.3	3.3	3.4	3.4	3.5	3.5	3.5	3.5	3.2	2.6	1.8	1.6	1.8	1.9	1.9	2.0	2.2	2.3	2.4	2.6	2.7	3.5
5-Feb	2.7	2.8	2.8	2.8	2.7	2.6	2.4	2.3	2.2	2.1	1.9	1.8	1.7	1.6	1.5	1.6	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	2.1	2.8
6-Feb	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0
7-Feb	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.7	1.4	1.3	1.4	1.7	1.8	1.9	2.0	2.1	2.3	2.6	2.9	1.9	2.9
8-Feb	3.1	3.3	3.5	3.6	3.7	3.7	3.7	3.7	3.8	3.8	3.8	3.7	3.4	2.7	2.1	1.5	1.9	2.1	2.3	2.3	2.4	2.5	2.5	2.4	3.0	3.8
9-Feb	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.1	2.0	1.8	1.5	1.7	1.8	1.9	2.0	2.2	2.3	2.4	2.5	2.2	2.5
10-Feb	2.6	2.7	2.7	2.8	2.9	3.0	3.0	3.1	3.1	2.9	2.6	2.2	1.7	1.6	1.5	1.5	1.7	1.8	1.9	1.9	1.8	1.9	1.9	2.0	2.3	3.1
11-Feb	2.2	2.3	2.5	2.6	2.7	2.7	2.8	2.9	2.9	3.0	3.0	3.0	2.7	2.2	1.5	1.5	1.8	1.9	2.2	2.4	2.5	2.7	2.7	2.8	2.5	3.0
12-Feb	2.8	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.8	2.6	2.4	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.5	2.9
13-Feb	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	2.0	2.0	1.8	1.8	1.9	2.1	2.2	2.4	2.5	2.7	2.8	2.2	2.8
14-Feb	3.0	3.1	3.3	3.4	3.5	3.5	3.6	3.6	3.7	3.7	3.7	3.8	3.5	2.7	1.6	1.2	1.6	1.8	1.9	2.1	2.2	2.4	2.6	2.7	2.8	3.8
15-Feb	2.9	3.0	3.1	3.2	3.3	3.3	3.4	3.5	3.6	3.6	3.5	3.1	2.2	1.6	1.6	1.7	1.7	1.8	1.9	1.9	1.9	2.0	2.0	2.1	2.6	3.6
16-Feb	2.2	2.2	2.4	2.4	2.5	2.5	2.6	2.6	2.6	2.5	2.5	2.3	1.8	1.3	1.3	1.3	1.6	1.8	1.9	2.1	2.3	2.4	2.6	2.7	2.2	2.7
17-Feb	2.8	2.9	2.9	3.0	3.1	3.1	3.2	3.2	3.2	3.2	2.9	2.4	1.7	1.6	1.4	1.4	1.6	1.7	1.7	1.8	1.8	1.9	1.9	1.9	2.3	3.2
18-Feb	2.0	2.0	2.1	2.2	2.3	2.3	2.4	2.5	2.6	2.5	2.2	1.6	1.4	1.3	1.2	1.2	1.4	1.5	1.6	1.6	1.7	1.7	1.7	1.7	1.9	2.6
19-Feb	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.6	1.4	1.1	1.1	1.0	1.3	1.4	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.8
20-Feb	1.7	1.7	1.7	1.7	1.8	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.5	1.3	1.3	1.3	1.5	1.6	1.7	1.7	1.7	1.8	1.9	1.9	1.7	1.9
21-Feb	1.9	1.8	1.8	1.8	1.8	1.8	1.9	2.3	2.1	1.8	1.7	1.6	1.3	1.2	1.1	1.0	1.3	1.9	1.9	1.8	1.9	2.0	1.9	2.0	1.7	2.3
22-Feb	2.2	2.4	2.7	2.9	3.0	3.0	2.8	2.6	3.4	4.1	4.8	1.6	1.6	1.4	1.1	1.1	1.4	1.5	1.6	1.7	1.7	1.7	1.7	19.6	3.0	19.6
23-Feb	34.6	22.5	21.1	18.9	15.2	7.9	2.8	1.9	1.8	1.7	1.6	18.0	35.3	22.0	29.8	24.6	8.7	2.6	2.5	2.5	2.5	2.5	2.5	2.5	11.9	35.3
24-Feb	2.5	2.5	2.5	2.6	2.6	2.5	2.5	2.5	2.4	2.3	2.3	3.1	4.4	1.2	1.1	1.0	1.3	1.5	1.6	1.5	1.5	1.5	1.5	1.6	2.1	4.4
25-Feb	1.6	1.7	1.8	4.7	2.6	2.7	2.7	2.7	2.8	2.5	1.9	1.8	1.6	1.4	1.1	1.2	1.6	1.9	3.0	2.6	2.5	2.1	1.8	1.9	2.2	4.7
26-Feb	4.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.7	1.5	1.3	1.1	1.1	1.1	1.3	1.4	1.5	1.5	1.6	1.7	1.7	1.7	1.7	4.9
27-Feb	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.7	1.6	1.9	3.5	1.4	1.4	1.4	1.4	1.4	1.5	1.6	1.6	1.7	1.7	1.8	1.7	2.2	1.7	3.5
28-Feb	2.2	2.4	2.6	2.9	3.2	3.4	3.5	3.5	3.2	2.6	1.7	1.5	1.3	1.1	0.9	1.0	1.3	1.5	1.6	1.7	1.7	1.7	1.8	1.8	2.1	3.5
	3.6	3.1	3.1	3.2	3.0	2.8	2.6	2.6	2.6	2.6	2.6	2.9	3.3	2.5	2.5	2.3	1.9	1.8	1.9	2.0	2.0	2.1	2.1	2.9	Diurnal Average	
	34.6	22.5	21.1	18.9	15.2	7.9	3.7	3.7	3.8	4.1	4.8	18.0	35.3	22.0	29.8	24.6	8.7	2.6	3.0	2.6	2.6	2.7	2.8	19.6	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Leaf Wetness (LW) - %

Stony Mountain - February 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	55	8.18	8.18
1.5 - 10	597	88.84	97.02
> 10	11	1.64	98.66

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Global Radiation (GR) - W/m2

Stony Mountain - February 2025

Maximum Value: 509.6 W/m2 on Feb 14 13:00

Maximum Daily Average: 116.2 W/m2 on Feb 26

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

Minimum Daily Average: 12.5 W/m2 on Feb 1

Maximum Diurnal Average: 298.8 W/m2 at hour 13

Minimum Diurnal Average: 0.1 W/m2 at hour 7

Monthly Average: 68.73 W/m2

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.8 Q_3 = 99.5 P_{90} = 255.1 P_{99} = 477.6

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

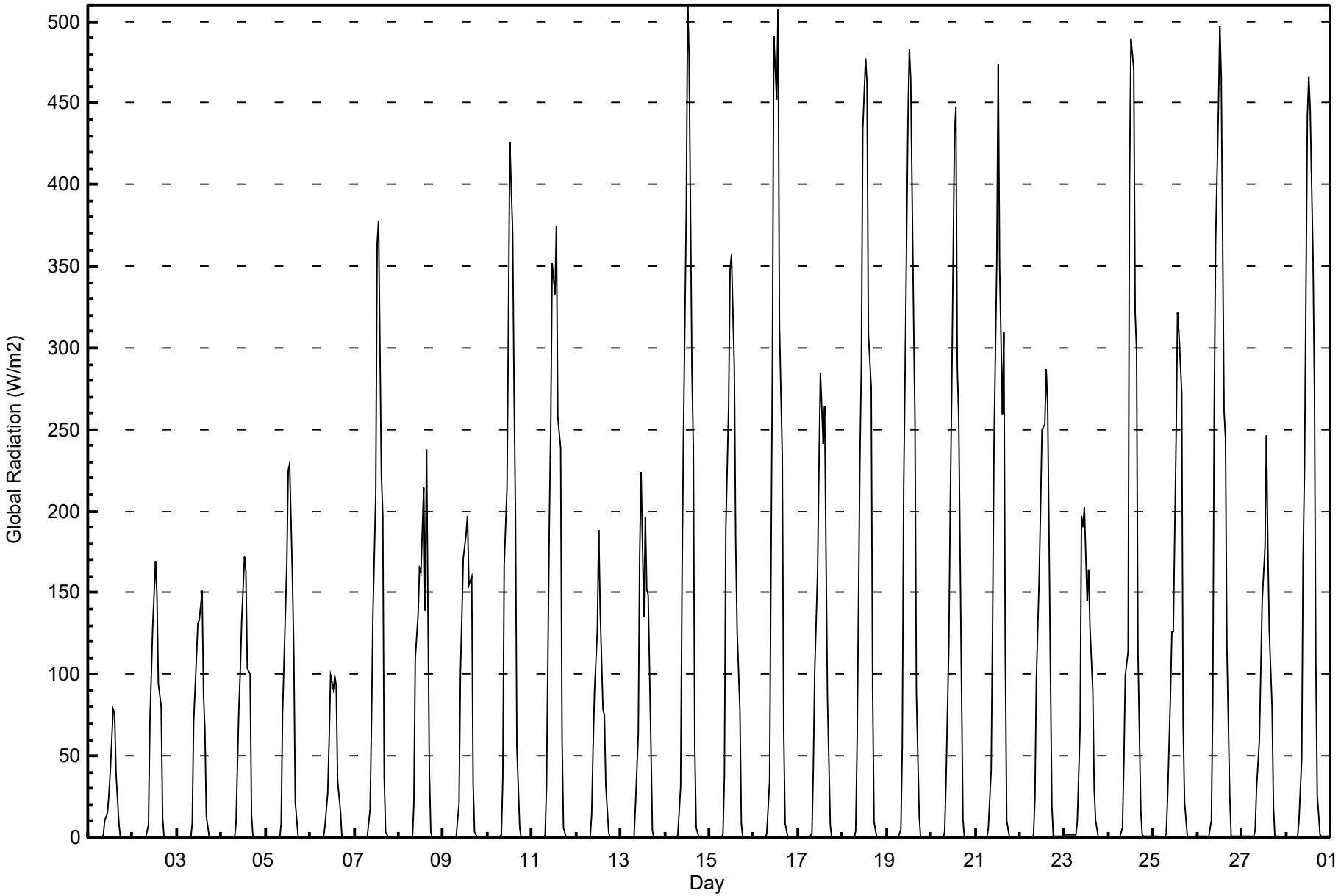
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	10.1	15.6	26.5	41.1	78.3	76.3	40.0	9.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	12.5	78.3
2-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	8.0	70.1	99.4	130.1	169.6	148.5	94.6	80.5	12.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	33.9	169.6
3-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	8.9	70.5	110.2	131.2	133.0	151.1	87.0	65.9	12.8	0.6	0.0	0.0	0.0	0.0	0.0	0.0	32.1	151.1
4-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	8.9	77.7	101.0	131.9	172.2	163.2	103.6	100.3	14.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0	36.4	172.2
5-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	9.0	76.7	107.1	167.6	224.7	228.9	158.6	110.7	21.6	1.0	0.0	0.0	0.0	0.0	0.0	0.0	46.1	228.9
6-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	6.9	27.4	60.2	99.8	91.0	98.2	93.8	34.2	16.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	22.0	99.8
7-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	17.0	71.9	136.3	209.8	363.7	377.8	222.2	197.9	36.9	3.1	0.1	0.1	0.2	0.1	0.0	0.1	68.2	377.8
8-Feb	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.4	20.4	109.4	136.6	165.3	162.5	214.6	139.0	237.5	41.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0	51.3	237.5
9-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	20.4	101.1	135.1	171.2	185.7	197.1	154.7	159.8	33.2	3.5	0.0	0.0	0.0	0.1	0.0	0.0	48.4	197.1
10-Feb	0.0	0.0	0.0	0.0	0.0	0.1	0.0	1.4	35.2	166.5	214.3	315.8	426.0	370.9	274.0	197.6	55.6	5.6	0.0	0.0	0.0	0.0	0.0	0.0	86.0	426.0
11-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	31.7	194.2	254.1	351.8	333.2	374.3	257.4	238.9	60.1	5.8	0.0	0.0	0.0	0.0	0.0	0.0	87.6	374.3
12-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	15.1	56.0	89.9	126.8	188.5	139.8	78.6	75.0	32.3	3.2	0.0	0.0	0.0	0.0	0.0	0.0	33.6	188.5
13-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	20.2	63.2	173.3	223.7	134.8	196.3	152.3	148.4	55.4	4.6	0.0	0.0	0.0	0.0	0.0	0.0	48.9	223.7
14-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	31.0	159.8	247.1	383.7	509.6	478.5	287.4	239.0	55.7	5.7	0.4	0.5	0.6	0.2	0.0	0.0	100.0	509.6
15-Feb	0.4	0.3	0.1	0.0	0.0	0.0	0.0	2.6	38.4	189.5	264.9	347.4	357.4	288.8	181.3	127.1	78.1	8.8	0.0	0.0	0.0	0.0	0.0	0.0	78.6	357.4
16-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	34.2	167.2	292.4	490.9	452.3	507.7	312.7	233.3	64.8	8.3	0.3	0.2	0.1	0.1	0.1	0.1	107.0	507.7
17-Feb	0.0	0.0	0.0	0.1	0.0	0.0	0.0	2.8	43.0	103.3	162.8	228.3	284.1	240.8	264.8	172.4	85.2	7.7	0.0	0.0	0.0	0.0	0.0	0.0	66.5	284.1
18-Feb	0.0	0.1	0.1	0.1	0.1	0.1	0.1	4.5	57.6	232.6	289.1	434.2	477.2	462.2	308.9	276.0	90.2	9.3	0.0	0.0	0.0	0.0	0.0	0.0	110.1	477.2
19-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	56.2	214.9	286.5	438.5	483.3	464.3	320.0	255.2	89.4	13.1	0.0	0.0	0.0	0.0	0.0	0.0	109.4	483.3
20-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	34.7	118.7	203.6	270.5	430.1	447.4	287.7	257.9	91.0	11.4	0.1	0.0	0.0	0.0	0.0	0.0	89.8	447.4
21-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	41.1	131.4	239.9	354.3	474.0	349.5	259.0	309.8	113.1	10.8	0.0	0.0	0.0	0.0	0.0	0.0	95.4	474.0
22-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	23.9	96.4	158.8	202.6	249.9	253.3	287.3	265.5	100.6	19.5	0.9	0.9	0.8	0.9	0.8	0.9	69.4	287.3
23-Feb	1.7	1.7	1.6	1.7	1.7	1.7	1.7	9.1	67.8	196.9	190.0	202.0	145.6	164.1	128.9	89.8	29.7	10.0	0.3	0.0	0.0	0.0	0.0	0.0	51.9	202.0
24-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.4	46.2	99.3	114.5	401.1	489.6	471.5	321.2	298.5	112.9	16.7	1.4	0.9	0.9	0.9	0.9	0.8	99.3	489.6
25-Feb	0.9	0.9	0.8	0.2	0.0	0.0	0.0	2.6	25.1	87.2	126.3	126.5	245.0	321.5	309.8	272.4	70.4	21.5	0.5	0.0	0.3	0.3	0.7	0.8	67.2	321.5
26-Feb	0.9	0.9	0.9	0.9	0.9	0.5	0.1	10.6	83.4	262.0	364.5	447.3	497.3	465.5	260.6	244.5	116.9	25.9	1.1	0.8	0.9	0.9	0.8	0.8	116.2	497.3
27-Feb	0.8	0.8	0.8	0.8	0.8	0.8	0.8	4.5	30.0	59.3	102.0	144.9	178.3	246.7	177.6	127.0	79.8	18.3	1.2	0.8	0.7	0.1	0.1	0.0	49.0	246.7
28-Feb	0.1	0.1	0.3	0.2	0.5	0.2	0.2	9.8	48.5	173.9	227.3	443.0	466.0	446.1	355.7	275.3	106.9	25.7	1.3	0.7	0.7	0.6	0.8	0.6	107.7	466.0
	0.2	0.2	0.2	0.1	0.1	0.1	0.1	2.8	30.9	121.0	175.1	255.9	298.8	298.1	212.7	183.2	60.2	8.8	0.3	0.2	0.2	0.1	0.2	0.2	Diurnal Average	
	1.7	1.7	1.6	1.7	1.7	1.7	1.7	10.6	83.4	262.0	364.5	490.9	509.6	507.7	355.7	309.8	116.9	25.9	1.4	0.9	0.9	0.9	0.9	0.9	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Global Radiation (GR) - W/m2

Stony Mountain - February 2025



Concentration Ranges (W/m2)	Number of Hours	%	Cumulative %
0 - 20	435	64.73	64.73
21 - 100	71	10.57	75.30
101 - 300	121	18.01	93.30
301 - 600	45	6.70	100.00
601 - 900	0	0.00	100.00
> 900	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Stony Mountain - February 2025

Maximum Speed: 19 km/h on Feb 27 14:00

Maximum Daily Speed Average: 10.5 km/h on Feb 10

Minimum Speed Value: 1 km/h on Feb 11 22:00

Minimum Daily Speed Average: 0.7 km/h on Feb 25

Maximum Diurnal Speed Average: 5.2 km/h at hour 14

Minimum Diurnal Speed Average: 2.4 km/h at hour 18

Monthly Average Velocity: 3.6 km/h 256.6 deg

Percentiles: $P_1 = 2$ $P_{10} = 4$ $Q_1 = 5$ Median = 7 $Q_3 = 10$ $P_{90} = 12$ $P_{99} = 16$

Hours in Service:	672
Hours of Data:	653
Hours of Missing Data:	19
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-Feb	NE7	ENE7	ENE7	NE8	NE7	NNE6	N5	N5	NNW4	NNW5	NW7	NW9	NW11	NW11	NW10	NW11	NW10	WNW9	WNW10	WNW10	WNW10	WNW9	WNW9	WNW10	NW6.1	NW11
2-Feb	WNW9	WNW9	NW10	NW9	NW9	NW10	NW10	NW10	NW10	NW9	NW9	NW9	NW9	NW10	NW9	NW10	NW8	NW7	NW6	NW8	NW7	NW7	NW7	NW7	NW8.6	NW10
3-Feb	NW7	NW7	NW6	NW6	NW5	NW6	WNW5	WNW6	WNW7	WNW7	WNW7	WNW7	W7	W7	W7	WNW6	W5	W5	W5	WNW6	W6	WSW5	W6	W8	WNW6.1	W8
4-Feb	W8	W8	W7	W7	W7	W7	WSW6	W6	SW6	SW8	WSW8	W9	WSW9	WSW9	WSW10	WSW8	SW8	SW9	SW9	SW9	SW9	SW9	SW10	SW11	WSW7.6	SW11
5-Feb	WSW9	WSW10	WSW10	WSW11	WSW11	W11	W10	W12	W11	W12	W13	WSW11	WSW11	W10	WSW9	WSW8	WSW7	WSW9	W10	W10	W10	W11	WNW11	WNW11	W10.1	W13
6-Feb	WNW11	WNW11	NW10	WNW11	WNW10	W9	W12	W13	WNW12	WNW10	WNW11	WNW11	WNW10	WNW13	WNW13	NW8	NNW7	NNW6	NNW5	NNW5	NNW6	NNW6	NW6	NW5	WNW8.6	WNW13
7-Feb	NW4	WNW4	WNW6	W6	WNW7	W6	WSW7	W8	W8	W10	WNW10	W8	WSW8	W8	W8	WSW8	WSW6	SW6	WSW8	WSW8	SW7	WSW7	W7	WSW6	W6.9	W10
8-Feb	SW5	WSW6	WSW6	W6	W6	WNW6	W4	W5	W5	WSW7	W8	W8	W9	W9	W8	W7	WNW7	W5	WSW5	SW4	WSW5	WNW7	NW10	NW14	W6.3	NW14
9-Feb	NW13	NW9	NW9	NNW6	NW5	NW9	WNW8	NW7	NW5	NW5	NNW6	NNW5	NNW6	N7	NNW7	NW8	NW7	NNW5	NW4	NW5	NW6	WNW8	NW9	WNW7	NW6.7	NW13
10-Feb	WNW8	WNW10	W11	W12	W12	W12	W15	W16	W13	W13	W14	W12	WSW12	W12	W11	WSW9	WSW10	SW10	SW10	WSW10	W12	WNW9	NW8	NW6	W10.5	W16
11-Feb	N6	NNE6	N4	NNW4	N5	NNW3	NW5	NW5	NW5	NW6	NW5	NW6	NW5	WNW5	NW5	NW6	NW6	WNW4	W5	WNW5	WNW5	W1	SSW3	SW3	NW4.1	NW6
12-Feb	SSW4	SSW5	SSW5	SSW6	SSW6	SSW5	SSW6	SSW6	S5	S5	S5	SSE3	SSW3	SE3	NE3	NE6	NNE5	NNE5	N5	N4	N5	NNE5	NNE6	N4	S0.7	NE6
13-Feb	N3	NNE5	NE5	NE4	NNE4	NNE4	NNE3	NNE3	NNE4	NE5	ENE5	NNE4	NNE3	NNE2	NNE4	ENE5	NE6	ENE4	NE6	NE7	NE5	NE5	NNE5	N5	NE4.2	NE7
14-Feb	NNE6	NNE7	NNE7	NNE7	NNE6	NE4	NE5	NE3	NE3	NE3	NE2	NE2	NE4	NNE4	NE5	NE5	NE5	E2	SSE2	S2	SSW4	SW3	NW3	W3	NE2.9	NNE7
15-Feb	WSW4	SW6	WSW6	W7	WNW7	WNW8	WNW8	WNW7	WNW9	WNW8	NW8	NW9	WNW9	NW8	NW8	NW10	NW7	NW4	NW5	NW5	NNW3	NNW2	NNW2	WNW2	WNW5.9	NW10
16-Feb	NW2	NE3	ESE3	SE3	SSE3	SSE3	SE3	S3	SSE3	SE4	SE5	SE4	SE6	SE5	SSE5	SSE5	SE6	ESE3	ESE3	SE3	S6	S7	S7	S7	SSE3.8	S7
17-Feb	SSE7	SSE8	S10	SSE8	SSE8	SSE8	SSE7	SSE5	SE6	SSE9	SSE9	SSE10	SSE10	SSE10	SE10	SE10	SE9	SE9	SE7	SE8	SE7	SSE8	SSE8	SE6	SSE8.0	SSE10
18-Feb	SSE6	SSE8	S7	S9	SSE6	SSW2	SSW4	S8	S10	S8	S9	SSE10	SSE10	SSE11	S12	S11	SSE8	SSE8	SSE9	SSE9	SSE8	SSE9	SSE10	SSE9	SSE8.1	S12
19-Feb	SSE10	SSE10	SSE7	SSE6	S9	SSE8	SSE8	SSE8	SSE10	SSE12	SSE13	SSE12	SSE15	SSE14	SSE13	SSE11	SE11	SSE11	SE9	SSE10	SSE8	SSE9	SSE11	S12	SSE10.2	SSE15
20-Feb	S11	S10	S9	S8	S10	S10	SSW10	SSW10	SSW10	SSW13	SSW10	SSW12	SSW13	SW11	WSW13	WSW12	SW11	SW11	SW13	SW12	SW11	SW10	WSW10	WSW9	SSW10.0	SSW13
21-Feb	SW10	SW8	SSW10	SSW12	SSW10	SSW9	WSW7	SW6	W6	SSW3	W4	WNW7	W7	W9	WNW9	NW8	NNE6	NE6	NE6	NE8	ENE5	NE6	NE5	NE4	WSW2.4	SSW12
22-Feb	E5	E3	E4	SE4	SE3	SE4	SSE4	S5	SSE5	SSE6	S11	SSW11	SSW9	SSW9	SSW9	SSW11	SSW10	SSW10	SSW10	SSW12	SSW11	SSW11	SSW11	SSW11	S6.9	SSW12
23-Feb	SW5	SSE3	S4	SSW5	SSW11	SW12	SW11	WSW12	WSW13	WSW15	WSW16	W17	W15	W16	WNW14	NW13	UO	UO	UO	UO	UO	UO	UO	UO	----	W17
24-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	NW3	WSW6	W9	W9	WSW9	WSW8	WSW4	SW4	SW6	WSW7	W9	W8	W9	----	W9
25-Feb	W8	W7	WNW6	ENE3	NE5	NE7	E4	E4	E4	ENE5	E5	SE4	ENE3	E4	SE4	SSW4	SE3	ESE4	E3	NE2	SSE3	SW6	WSW10	WSW13	SE0.7	WSW13
26-Feb	WNW14	W10	WSW9	W12	WNW13	WNW14	WNW12	W11	W12	W13	W11	W10	WNW12	W11	W10	W9	W8	W8	WSW6	SW8	SW8	SSW9	SW9	SSW8	W9.4	WNW14
27-Feb	WSW11	SW7	SSW8	S9	SSW11	SSW11	SSW12	SSW14	SW15	W15	WNW16	WNW18	WNW16	WNW19	WNW16	NW16	NW13	NW12	NW11	NW7	NNW7	NNW5	N7	NE6	W7.7	WNW19
28-Feb	NE3	ENE5	SE4	ESE5	SSE4	SSE3	SE3	ESE5	SE4	ESE4	SE3	ENE3	SSW5	W4	W4	WNW6	W5	SW2	S2	S4	SSW7	SSW5	SSW6	SSW8	S2.0	SSW8
	W3.3	WSW2.5	WSW2.6	WSW2.7	WSW3.1	WSW3.5	WSW3.9	WSW4.2	WSW4.2	WSW4.0	W4.4	W4.7	WSW5.0	W5.2	W4.9	W4.3	W2.8	WSW2.4	WSW2.7	WSW2.7	WSW3.2	WSW3.2	WSW3.5	WSW3.9	Diurnal Average	
	WNW14	WNW11	W11	SSW12	WNW13	WNW14	W15	W16	SW15	W15	WNW16	WNW18	WNW16	WNW19	WNW16	NW16	NW13	NW12	SW13	SW12	W12	W11	WNW11	NW14	Diurnal Maximum	

UO - Unstable Operation

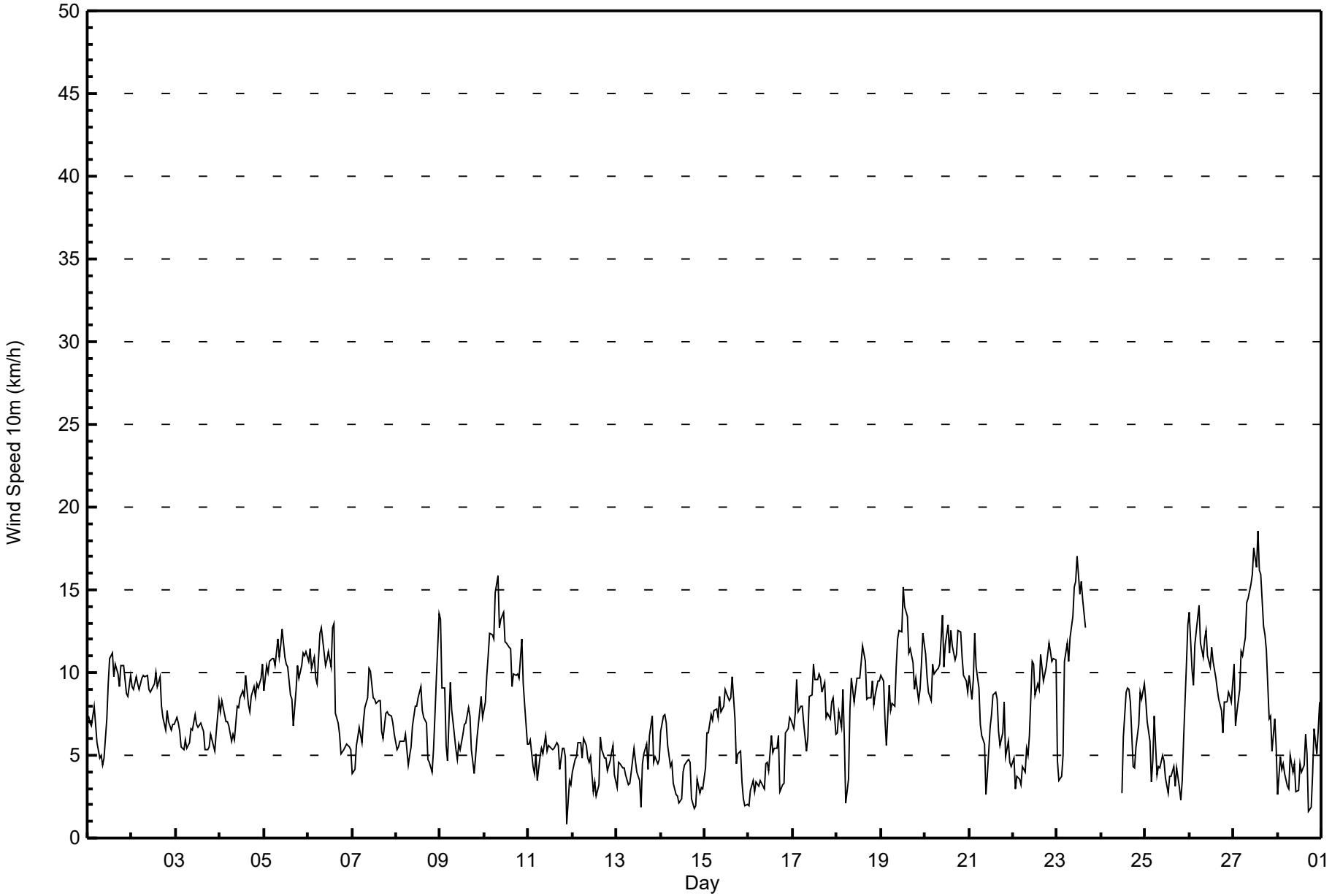
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Stony Mountain - February 2025



Wind Speed 10m (WS10) - km/h
Stony Mountain - February 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	194	29.71	29.71
6 - 11	389	59.57	89.28
12 - 19	70	10.72	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: 653

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Stony Mountain - February 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	16	21	10	10	7	18	14	9	14	7	5	14	7	20	12	194
6 - 11	3	9	13	2	0	0	13	42	21	32	29	45	61	51	59	9	389
12 - 19	0	0	0	0	0	0	0	6	2	7	4	9	22	14	6	0	70
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	13	25	34	12	10	7	31	62	32	53	40	59	97	72	85	21	653

Total Number of Valid Hours: 653

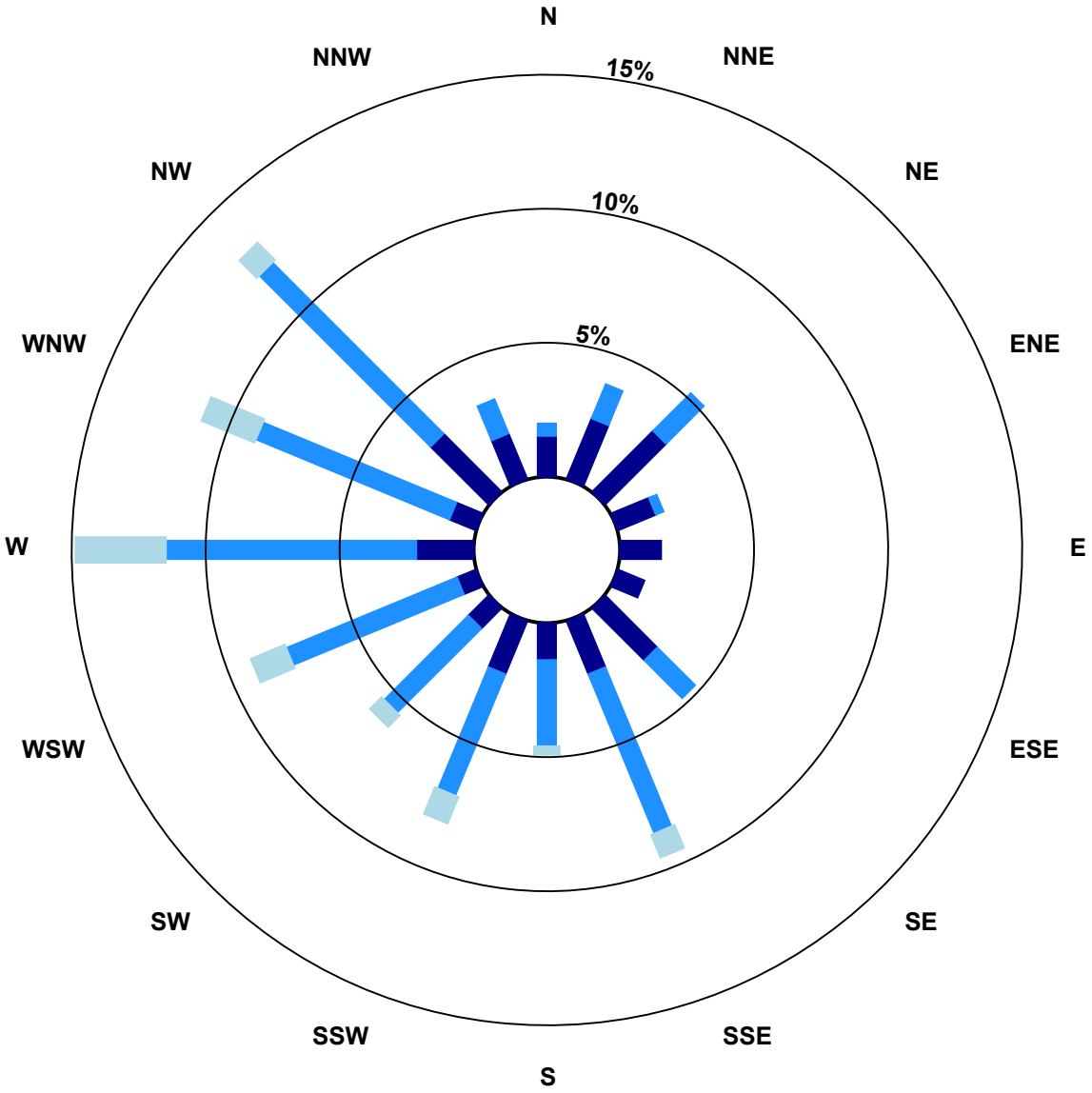
Total Number of Hours: 672

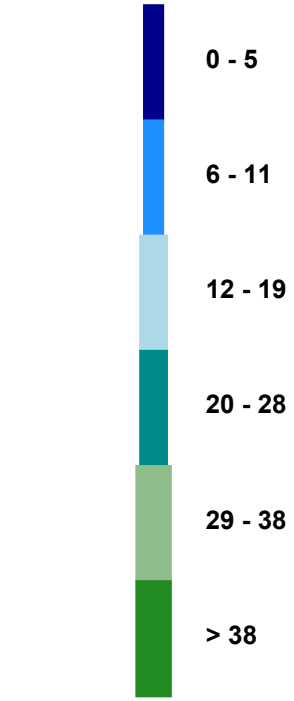
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Wind Speed 10m (WS10) - km/h

Stony Mountain





Total Number of Valid Hours: 653

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Stony Mountain - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8 km/h on Feb 27 12:00

Minimum Value: 1 km/h on Feb 15 23:00

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

Hours in Service:	672
Hours of Data:	653
Hours of Missing Data:	19
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-Feb	2	3	2	2	3	2	2	2	2	2	3	3	3	4	3	4	4	3	4	4	3	3	3	4	4
2-Feb	3	3	3	3	3	3	3	3	2	2	3	3	4	4	3	3	3	2	2	2	2	1	2	1	4
3-Feb	2	2	1	1	1	1	1	1	2	2	2	3	3	3	2	2	2	2	2	2	2	2	2	3	3
4-Feb	3	3	2	2	2	2	2	2	2	3	3	3	3	3	4	3	3	3	3	3	3	3	3	4	4
5-Feb	4	4	3	4	4	4	4	5	4	5	5	4	4	4	4	4	3	3	4	4	4	4	4	4	5
6-Feb	4	3	3	3	3	3	5	5	4	4	4	4	4	5	5	3	3	3	2	2	3	2	2	2	5
7-Feb	1	1	2	2	2	2	3	3	3	4	3	3	3	3	3	3	3	2	2	3	2	2	2	3	4
8-Feb	2	2	2	2	2	3	2	2	2	3	3	4	3	4	3	3	2	2	1	1	2	3	4	5	5
9-Feb	4	4	4	2	2	3	3	2	2	2	2	2	2	3	3	3	3	2	1	1	2	3	3	2	4
10-Feb	3	3	4	4	5	5	6	6	5	5	5	4	4	5	4	3	4	3	3	4	4	3	3	2	6
11-Feb	2	3	1	1	2	1	1	1	1	2	1	2	2	2	2	2	2	1	2	2	1	1	1	1	3
12-Feb	1	1	1	2	1	2	2	2	1	1	1	1	2	1	1	1	2	1	1	1	1	2	2	1	2
13-Feb	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	1	2	2	2	2	1	1	2
14-Feb	2	2	2	2	2	1	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	2
15-Feb	1	1	2	2	2	3	2	2	3	2	3	4	3	3	3	3	3	2	2	2	1	1	1	1	4
16-Feb	1	1	1	1	1	1	1	1	1	2	2	2	3	2	3	2	2	1	1	1	2	2	2	2	3
17-Feb	3	3	3	2	2	3	2	2	2	3	3	4	4	4	4	4	3	3	3	2	2	3	3	2	4
18-Feb	2	3	3	3	2	1	2	3	3	3	3	4	4	4	4	4	3	3	3	3	3	4	3	4	4
19-Feb	3	3	3	2	3	3	3	3	3	4	4	5	5	6	5	4	4	4	3	3	3	3	4	4	6
20-Feb	4	4	3	3	4	4	4	4	4	4	4	4	5	4	5	4	4	4	4	4	3	3	3	3	5
21-Feb	3	2	3	3	3	3	2	2	2	1	3	2	3	4	3	3	3	2	2	3	2	2	2	1	4
22-Feb	2	1	1	1	1	1	1	2	1	3	5	4	3	3	3	4	3	3	3	3	3	3	3	3	5
23-Feb	2	1	2	2	3	3	4	4	5	6	6	7	6	6	6	5	UO	UO	UO	UO	UO	UO	UO	UO	7
24-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	2	3	4	4	3	3	2	1	1	3	3	3	3	4
25-Feb	3	2	3	1	2	2	2	2	2	2	2	1	2	2	2	2	1	1	1	1	1	3	4	5	5
26-Feb	5	4	4	5	5	5	4	4	4	5	5	4	4	4	4	3	3	3	2	3	2	2	2	2	5
27-Feb	4	2	3	2	3	3	4	4	5	6	7	8	6	7	7	6	5	5	4	4	4	2	3	3	8
28-Feb	2	2	1	1	1	1	1	2	1	1	2	1	2	2	3	2	2	2	1	1	2	1	2	2	3
	5	4	4	5	5	5	6	6	5	6	7	8	6	7	7	6	5	5	4	4	4	4	4	5	
	Diurnal Maximum																								

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Stony Mountain - February 2025

Direction of Maximum Speed: 288 deg on Feb 27 14:00
Direction of Maximum Daily Speed Average: 266.1 deg on Feb 10

Direction of Minimum Speed: 268 deg on Feb 11 22:00

Direction of Minimum Daily Speed Average: 0.7 deg on Feb 25

Monthly Average Direction: 256.6 deg

Hours in Service:	672
Hours of Data:	653
Hours of Missing Data:	19
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-Feb	37	58	60	52	39	27	10	356	341	327	309	306	306	305	307	307	313	301	295	299	296	299	294	287	322.9
2-Feb	300	300	307	309	306	304	304	304	312	316	309	313	316	321	318	315	319	313	308	312	316	313	310	310	310.5
3-Feb	314	316	314	308	306	310	301	295	291	292	298	285	277	274	272	288	274	275	279	282	275	256	277	281	289.4
4-Feb	269	278	273	277	266	270	253	269	235	220	248	264	255	255	242	246	224	219	222	228	225	230	228	232	245.5
5-Feb	242	250	243	251	251	260	259	267	263	260	265	258	248	261	258	256	250	253	267	272	281	277	289	297	262.1
6-Feb	298	298	304	296	290	272	273	280	290	295	296	298	301	300	301	325	348	345	346	342	340	345	326	322	303.2
7-Feb	319	296	293	272	282	260	253	266	259	272	288	268	258	259	264	255	254	232	249	241	229	245	269	249	262.3
8-Feb	232	247	246	264	271	285	260	270	266	258	280	270	269	280	269	280	283	264	250	235	256	292	317	306	273.2
9-Feb	306	325	323	328	320	310	299	304	308	321	340	333	331	350	345	325	325	332	324	316	307	297	305	299	318.3
10-Feb	295	282	279	279	275	259	262	261	262	266	263	263	253	264	260	246	240	234	236	255	274	296	308	319	266.1
11-Feb	360	14	354	339	2	332	318	319	323	318	316	325	310	303	315	324	309	299	279	295	301	268	201	217	318.2
12-Feb	202	202	206	199	194	202	196	196	186	182	184	161	197	145	37	38	22	12	3	355	6	24	22	9	178.2
13-Feb	359	30	43	34	24	24	33	22	33	39	57	18	14	28	31	66	56	62	52	40	49	40	20	9	36.2
14-Feb	22	29	27	28	29	40	38	36	46	47	44	56	44	23	35	55	44	81	153	170	194	227	319	278	34.9
15-Feb	237	221	253	270	282	290	302	299	301	301	309	310	297	304	320	311	313	312	317	321	329	333	327	290	298.2
16-Feb	305	53	115	125	159	154	135	181	168	132	136	136	130	136	152	148	145	115	120	138	178	181	179	170	149.0
17-Feb	164	166	171	163	154	160	162	147	135	153	156	153	147	150	136	135	136	139	143	139	139	149	165	143	150.1
18-Feb	153	168	187	182	168	193	200	177	186	176	180	168	165	164	170	169	167	159	152	153	156	165	159	167	168.7
19-Feb	166	164	165	165	171	167	164	157	155	153	159	165	161	162	157	155	146	149	146	151	154	153	165	171	159.1
20-Feb	169	173	174	171	178	190	195	199	205	199	200	203	213	220	239	242	226	221	227	230	225	223	239	239	209.6
21-Feb	226	214	203	204	208	212	244	236	280	208	263	298	279	278	296	307	23	50	41	53	74	45	56	54	255.2
22-Feb	99	96	100	131	134	140	155	179	156	166	184	211	199	197	208	209	203	203	201	201	196	198	196	208	189.4
23-Feb	221	161	173	200	204	218	233	243	243	253	253	263	265	277	289	308	UO	UO	UO	UO	UO	UO	UO	UO	--
24-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	311	258	259	266	251	250	255	225	219	238	263	262	264	--
25-Feb	275	273	289	61	52	43	98	99	91	70	86	138	78	88	144	199	128	110	98	42	148	215	241	257	144.8
26-Feb	287	264	247	265	287	293	285	276	269	276	279	274	282	273	274	274	270	272	250	236	224	212	214	211	266.5
27-Feb	248	220	193	185	202	200	194	195	229	273	284	282	288	288	286	306	308	309	312	322	330	332	8	47	270.7
28-Feb	49	78	130	112	163	157	128	115	126	105	127	70	207	280	278	293	269	217	183	176	206	208	203	199	176.2
	267.3	256.8	248.5	246.4	245.2	253.2	249.3	249.8	251.0	253.2	259.1	262.7	258.1	265.8	269.2	274.6	267.3	251.2	251.1	250.5	244.6	248.5	256.2	254.8	
	Diurnal Average																								

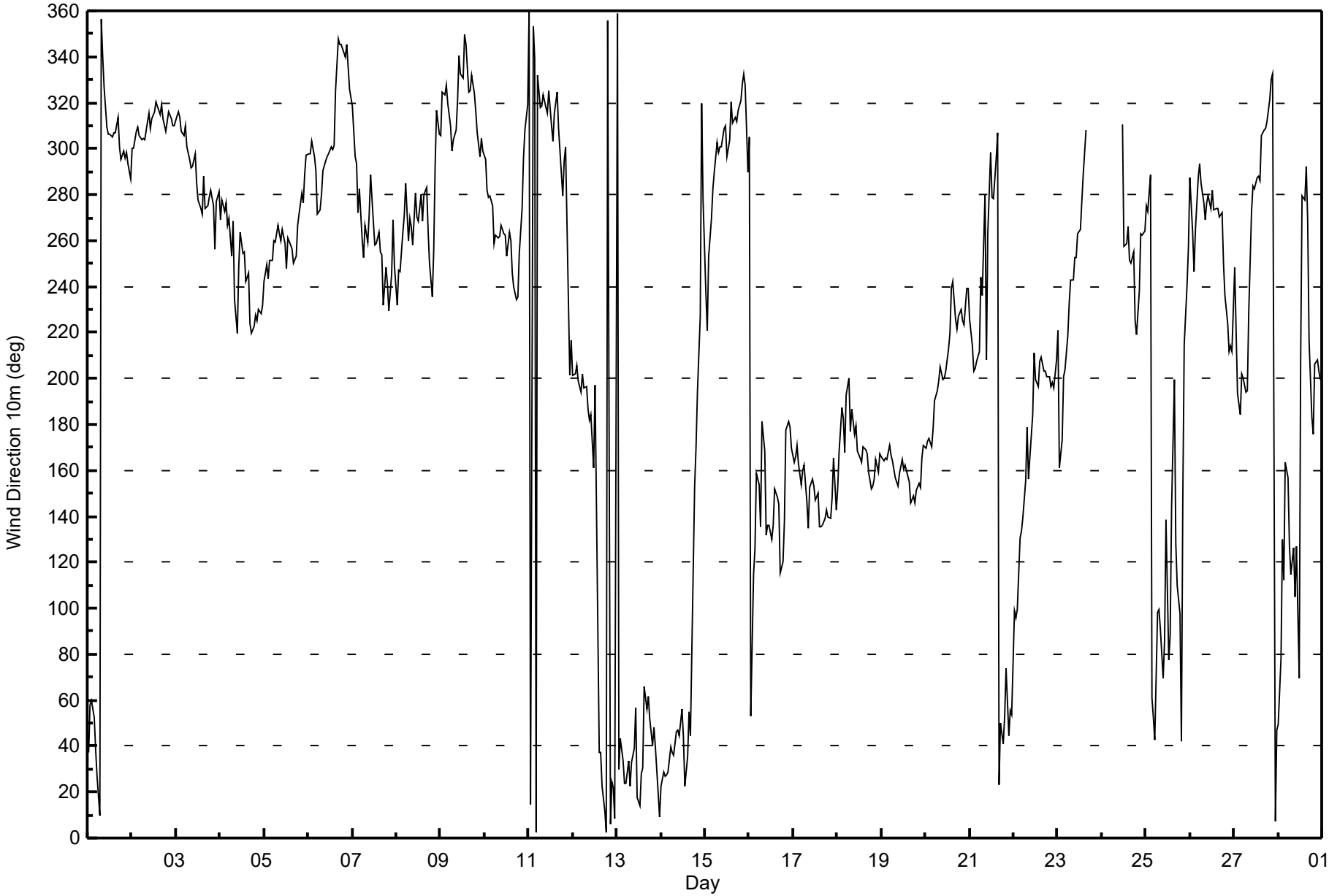
UO - Unstable Operation
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Stony Mountain - February 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Stony Mountain - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 93 deg on Feb 13 14:00

Minimum Value: 11 deg on Feb 11 07:00

Percentiles: P_1 = 13 P_{10} = 18 Q_1 = 22 Median = 26 Q_3 = 30 P_{90} = 36 P_{99} = 65

Hours in Service:	672
Hours of Data:	653
Hours of Missing Data:	19
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-Feb	17	23	18	19	20	22	26	25	31	26	26	23	22	22	25	23	23	29	26	22	23	22	23	22	31
2-Feb	23	21	21	19	18	19	18	18	15	16	19	22	25	24	25	21	22	16	14	13	13	12	13	13	25
3-Feb	14	13	13	15	15	14	14	15	16	20	21	31	39	32	33	27	23	19	18	20	24	28	22	21	39
4-Feb	22	22	22	21	25	24	26	25	25	24	34	33	35	35	32	35	26	24	25	23	23	26	24	25	35
5-Feb	31	28	29	29	29	30	29	25	34	32	28	30	34	30	35	37	30	29	27	30	24	28	26	22	37
6-Feb	21	20	18	20	22	27	25	25	23	25	26	27	23	26	25	32	32	31	33	30	28	29	23	22	33
7-Feb	21	20	22	24	22	28	29	29	31	27	24	31	32	32	31	33	30	21	27	28	24	29	26	35	35
8-Feb	24	24	29	30	37	26	35	29	36	33	31	34	33	32	31	33	26	28	23	26	29	26	21	23	37
9-Feb	21	29	24	28	20	21	22	20	19	23	36	36	39	38	38	31	28	24	16	14	16	20	20	18	39
10-Feb	19	23	24	26	26	32	30	28	30	30	32	30	31	29	31	32	30	29	27	30	27	25	21	23	32
11-Feb	28	23	21	16	26	17	11	13	12	15	23	30	35	41	41	32	22	16	17	20	16	77	14	22	77
12-Feb	19	20	23	19	19	23	19	18	21	22	26	58	63	73	56	18	21	19	16	17	19	21	23	24	73
13-Feb	24	23	19	20	26	23	20	19	24	20	30	45	54	93	34	36	23	16	16	17	17	17	17	14	93
14-Feb	17	15	17	17	18	14	15	15	18	25	44	54	41	44	37	34	23	22	47	50	14	57	21	24	57
15-Feb	27	16	25	20	20	23	21	21	22	21	25	27	30	33	30	24	24	19	14	18	22	21	22	28	33
16-Feb	25	36	15	27	25	33	18	21	24	23	55	63	45	55	51	45	32	30	17	22	25	24	24	26	63
17-Feb	27	24	23	23	21	26	23	19	19	27	29	28	32	32	33	30	31	25	24	24	21	22	26	22	33
18-Feb	22	25	22	22	24	66	47	21	21	25	30	34	38	35	32	32	33	29	27	26	28	31	27	28	66
19-Feb	28	27	27	31	27	29	28	27	24	26	29	30	30	31	31	32	27	27	26	25	27	27	27	28	32
20-Feb	31	29	27	28	30	31	32	26	27	24	29	25	30	29	33	31	27	25	25	25	25	24	29	31	33
21-Feb	22	20	18	19	20	20	27	28	27	53	61	28	31	33	31	32	36	17	16	18	21	24	24	26	61
22-Feb	24	26	28	25	22	17	17	22	24	26	29	33	29	25	27	26	23	20	19	21	21	21	21	24	33
23-Feb	29	21	45	39	21	24	27	30	31	32	33	30	32	28	27	25	UO	UO	UO	UO	UO	UO	UO	UO	45
24-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	65	43	36	33	35	32	26	17	19	28	28	28	29	65
25-Feb	24	23	37	44	37	17	40	24	25	26	38	45	62	66	60	43	36	19	43	55	25	31	29	33	66
26-Feb	26	29	31	29	26	25	25	25	29	26	31	34	31	31	30	28	28	26	27	25	22	21	21	22	34
27-Feb	32	30	21	20	22	23	23	21	29	28	29	31	29	28	28	25	24	25	24	29	30	29	33	24	33
28-Feb	54	38	26	21	24	25	39	22	27	28	66	63	60	60	72	36	29	55	34	21	17	18	18	19	72
	54	38	45	44	37	66	47	30	36	53	66	65	63	93	72	45	36	55	47	55	30	77	33	35	
	Diurnal Maximum																								

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 20m (WS20) - km/h

Stony Mountain - February 2025

Maximum Speed: 26 km/h on Feb 27 14:00

Maximum Daily Speed Average: 16.9 km/h on Feb 19

Minimum Speed Value: 2 km/h on Feb 14 12:00

Minimum Daily Speed Average: 1.0 km/h on Feb 12

Maximum Diurnal Speed Average: 7.3 km/h at hour 14

Minimum Diurnal Speed Average: 3.8 km/h at hour 18

Monthly Average Velocity: 5.4 km/h 264.9 deg

Percentiles: $P_1 = 3$ $P_{10} = 6$ $Q_1 = 8$ Median = 11 $Q_3 = 15$ $P_{90} = 17$ $P_{99} = 22$

Hours in Service:	672
Hours of Data:	672
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-Feb	NE9	ENE10	ENE10	ENE11	NE8	NNE8	N7	N8	N9	NNW9	NW12	NW14	NW17	NW18	NW15	NW17	NW17	NW15	NW16	NW16	WNW15	WNW14	WNW14	WNW15	NNW9.8	NW18
2-Feb	NW15	NW15	NW16	NW16	NW16	NW16	NW17	NW16	NW17	NW15	NW14	NW14	NW15	NNW17	NNW16	NW16	NNW14	NW13	NW12	NW14	NW13	NW12	NW12	NW12	NW14.6	NNW17
3-Feb	NW13	NW13	NW11	NW10	NW10	NW10	WNW10	WNW10	WNW11	WNW10	WNW10	WNW9	WNW9	WNW9	W9	WNW9	W8	W9	WNW9	WNW10	W9	W9	W10	WNW13	WNW9.6	NW13
4-Feb	W12	W12	W11	W11	W11	W10	W10	W10	WSW9	SW11	WSW11	W12	W12	WSW11	WSW13	WSW11	SW10	SW12	SW13	WSW13	SW14	WSW13	WSW14	WSW16	WSW11.2	WSW16
5-Feb	WSW13	WSW15	WSW15	WSW16	WSW16	W16	W15	W17	W16	W16	W17	W15	WSW14	W14	W12	W12	WSW10	W13	W15	W13	WNW14	WNW15	WNW16	WNW16	W14.3	W17
6-Feb	WNW16	WNW17	NW16	WNW16	WNW15	W14	W17	WNW18	WNW17	WNW15	NW16	NW17	NW15	NW19	NW20	NNW13	N13	N11	N10	NNW11	NNW11	N11	NNW10	NNW10	NW13.4	NW20
7-Feb	NNW7	NW7	WNW9	W9	WNW9	W8	W10	W11	W12	W14	WNW14	W11	W11	W11	W11	W11	WSW9	WSW9	WSW12	WSW12	WSW12	WSW11	W11	W10	W9.9	W14
8-Feb	WSW9	W9	WSW10	W8	WNW8	WNW9	W6	W7	W7	W9	WNW10	W10	W11	WNW12	W10	WNW10	WNW10	W8	W7	WSW6	W8	WNW11	NW17	NW21	WNW9.2	NW21
9-Feb	NW20	NNW17	NNW16	NNW12	NNW10	NW16	NW13	NW12	NW10	NNW8	NNW9	NNW8	NNW10	NNW12	NNW11	NNW14	NNW14	NNW12	NNW10	NW10	NW11	WNW13	NW15	NW13	NW11.9	NW20
10-Feb	WNW13	WNW15	WNW16	WNW19	W18	W18	W21	W22	W18	W18	W19	W16	W16	W16	W15	WSW12	WSW14	WSW14	WSW14	W15	WNW17	WNW15	NW13	NNW11	W15.3	W22
11-Feb	N10	NNE9	N9	N9	N9	N8	NNW10	NNW10	NNW10	NNW9	NNW7	NNW8	NW8	NW7	NW8	NNW9	NW9	NW8	WNW9	WNW9	WNW9	WNW2	SW5	WSW5	NNW7.1	NNW10
12-Feb	SW6	SW8	SW8	SSW9	SSW8	SW7	SSW9	SSW8	SSW7	S6	S6	SSE4	S4	SSE3	NNE4	NE7	NNE7	NNE7	NNE8	N8	NNE7	NNE7	NNE7	NNE6	SW1.0	SSW9
13-Feb	N5	NNE6	NE6	NE5	NNE6	NNE5	NE4	NNE5	NE5	NE6	ENE6	NNE5	NNE4	NE2	NNE6	ENE6	ENE8	ENE7	ENE10	NE11	NE8	NE8	NNE8	NNE8	NE5.9	NE11
14-Feb	NNE10	NE10	NE10	NE9	NE8	NE6	NE7	NE5	ENE4	NE3	NE3	ENE2	NE4	NNE5	NE6	ENE6	NE6	E5	SSE5	SSE5	S6	SW5	NNW5	W6	NE3.8	NE10
15-Feb	WSW8	SW11	W10	W11	WNW11	WNW12	NW13	WNW12	WNW13	NW12	NW11	NW13	NW12	NW12	NW13	NW15	NW11	NW8	NW11	NNW10	NNW7	NNW6	N5	NW5	NW9.6	NW15
16-Feb	NW5	ENE5	ESE7	SE5	SSE7	SSE6	SE6	S6	SSE6	SE6	SE6	SE6	SE8	SE7	SSE7	SSE7	SSE9	SE5	SE6	SSE8	S12	S12	S13	S13	SSE6.3	S13
17-Feb	S12	S13	S17	S14	SSE15	S15	S12	SSE10	SE10	SSE13	S13	SSE15	SSE14	SSE14	SSE14	SSE14	SSE13	SSE14	SSE12	SSE13	SSE13	SSE15	S16	SSE12	SSE13.2	S17
18-Feb	SSE13	S15	SSW12	SSW15	S12	SSW6	SW7	S15	SSW15	S12	S13	S13	S13	S15	S16	S16	S13	S14	SSE15	SSE16	SSE15	S16	S17	S17	S13.4	S17
19-Feb	S17	S17	S13	S12	S16	S14	S15	S16	S18	SSE19	S19	S18	S22	S20	SSE20	SSE17	SSE17	SSE17	SSE15	SSE17	SSE14	SSE16	S18	S20	S16.9	S22
20-Feb	S18	S15	S13	S13	S16	SSW14	SSW14	SSW14	SSW14	SSW18	SSW13	SSW15	SW16	SW14	WSW16	WSW16	SW14	SW16	SW18	WSW18	WSW17	WSW15	WSW15	WSW14	SW13.9	WSW18
21-Feb	WSW15	SW13	SW14	SW17	SW15	SW14	WSW12	WSW10	WNW9	WSW5	W7	NW9	WNW10	WNW12	WNW13	NW13	NNE9	ENE8	NE9	ENE11	E7	NE8	ENE6	ENE6	W4.3	SW17
22-Feb	ESE7	ESE5	E6	SE6	SE7	SSE7	SSE9	SSW10	S10	S12	SSW15	SW14	SSW12	SSW12	SW11	SW14	SSW13	SSW14	SSW15	SSW17	SSW17	SSW16	SSW16	SW15	SSW10.2	SSW17
23-Feb	WSW8	S7	S7	SW9	SSW15	SW17	WSW16	WSW18	WSW19	WSW21	W21	W24	W20	WNW22	WNW20	NW21	NNW13	NNW12	NNW11	N10	N7	N5	NNE5	ENE6	W9.3	W24
24-Feb	E6	ESE6	SE6	SE3	ESE4	ESE5	ENE4	ESE3	SE4	ESE2	SW4	WNW4	W8	W11	W12	WSW12	W12	W8	WSW8	SW9	WSW11	W13	W13	W13	WSW4.2	W13
25-Feb	W12	W11	WNW9	ENE5	ENE6	NE9	ESE5	ESE6	ESE6	ENE7	E6	SE5	E4	ESE5	SSE5	SSW5	SE4	ESE7	ESE6	ENE4	SE8	SW10	WSW16	W19	SSE1.1	W19
26-Feb	WNW19	W15	WSW14	W17	WNW20	WNW21	WNW17	W16	W17	W17	WNW15	W14	WNW16	W14	W13	W13	W11	W11	WSW10	WSW12	WSW12	SW13	SW12	SW12	W13.6	WNW21
27-Feb	WSW15	SW10	SSW11	SSW14	SSW16	SSW16	SSW18	SSW21	SW20	W22	WNW23	WNW25	WNW23	WNW26	WNW24	NW25	NW21	NW20	NW19	NNW13	NNW14	NNW11	N11	NE7	W11.8	WNW26
28-Feb	NE3	E7	SE6	ESE7	SSE7	S6	SE5	ESE7	SE5	ESE6	SE4	E3	SSW5	WNW5	W6	WNW9	W7	WSW2	SSW3	S8	SSW10	SW9	SSW11	SSW13	S3.2	SSW13
	W5.1	W4.0	WSW4.1	WSW4.4	WSW4.8	WSW5.2	WSW5.8	WSW6.3	WSW6.1	W5.9	W6.3	W6.7	W6.9	W7.3	W7.1	WNW6.6	WNW4.6	W3.8	W4.3	W4.2	WSW5.0	W5.2	W5.4	W6.0	Diurnal Average	
	NW20	WNW17	S17	WNW19	WNW20	WNW21	W21	W22	SW20	W22	WNW23	WNW25	WNW23	WNW26	WNW24	NW25	NW21	NW20	NW19	WSW18	WNW17	SSW16	S18	NW21	Diurnal Maximum	

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

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 20m (WS20) - km/h

Stony Mountain - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 9 km/h on Feb 27 12:00

Minimum Value: 1 km/h on Feb 16 01:00

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

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

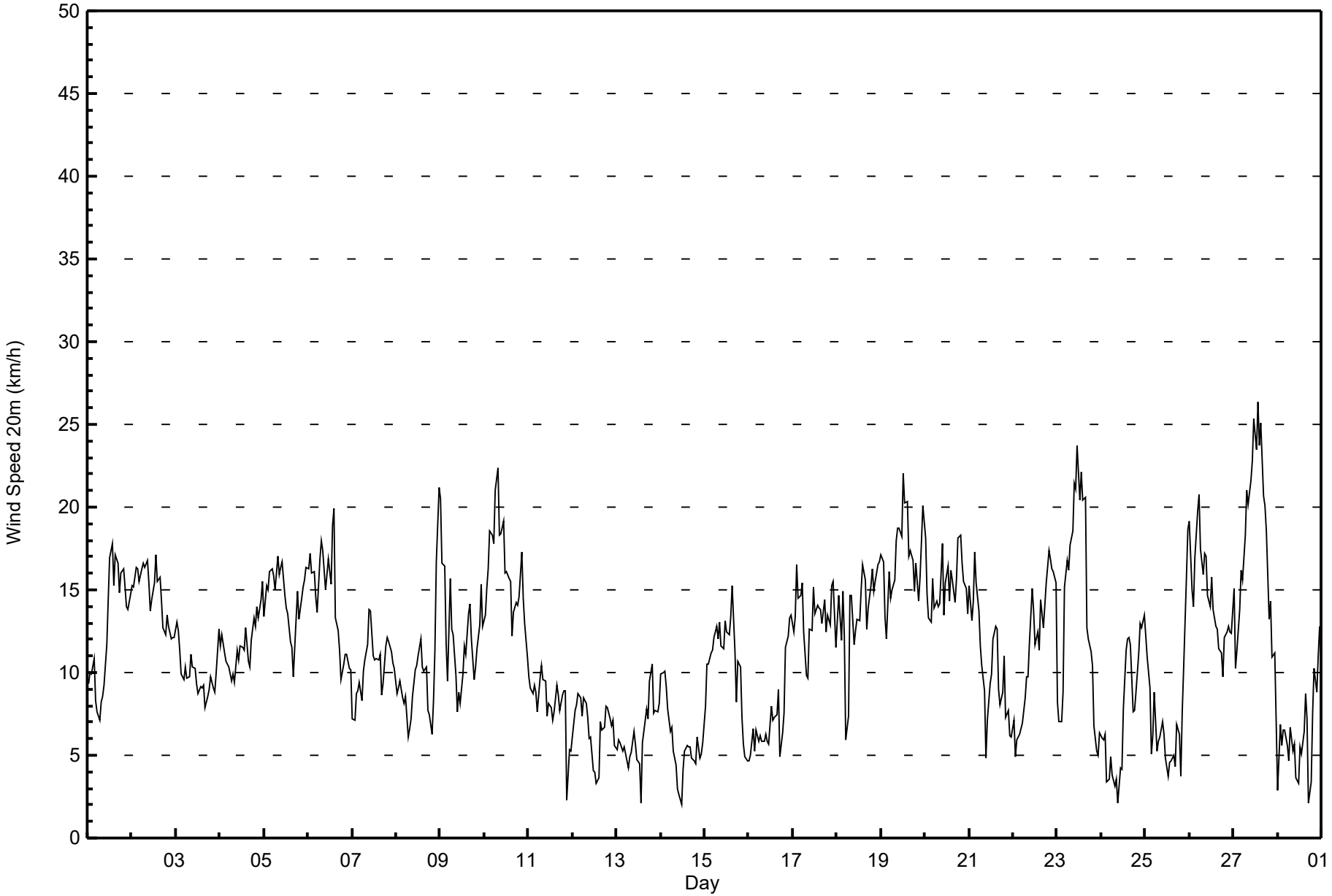
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Feb	2	3	2	3	3	2	2	2	3	2	4	4	4	5	5	5	5	4	5	5	4	4	3	4	5
2-Feb	4	4	4	4	4	4	4	4	3	3	3	5	5	5	4	4	4	3	2	2	2	2	2	2	5
3-Feb	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	2	2	2	2	2	2	2	3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

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 20m (WS20) - km/h

Stony Mountain - February 2025





Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Wind Speed 20m (WS20) - km/h

Stony Mountain - February 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	65	9.67	9.67
6 - 11	274	40.77	50.45
12 - 19	304	45.24	95.68
20 - 28	29	4.32	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 20m (WS20) - km/h

Stony Mountain - February 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	3	7	9	6	3	7	9	5	1	3	3	3	0	3	2	1	65
6 - 11	13	16	20	16	5	10	13	11	8	11	14	19	45	27	18	28	274
12 - 19	0	0	0	0	0	0	0	26	45	26	20	36	46	36	51	18	304
20 - 28	0	0	0	0	0	0	0	1	3	1	1	1	6	9	7	0	29
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	16	23	29	22	8	17	22	43	57	41	38	59	97	75	78	47	672

Total Number of Valid Hours: 672

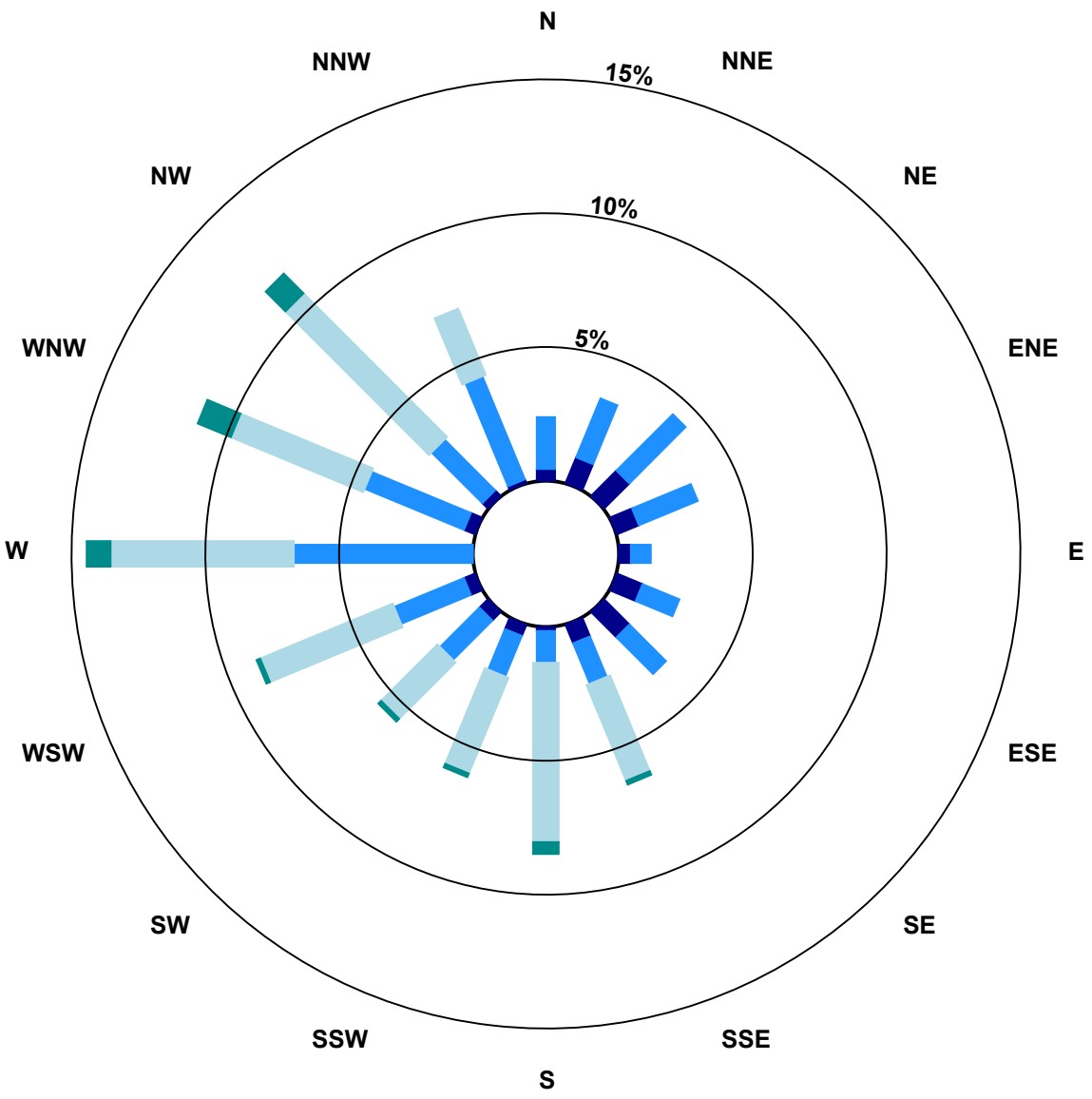
Total Number of Hours: 672

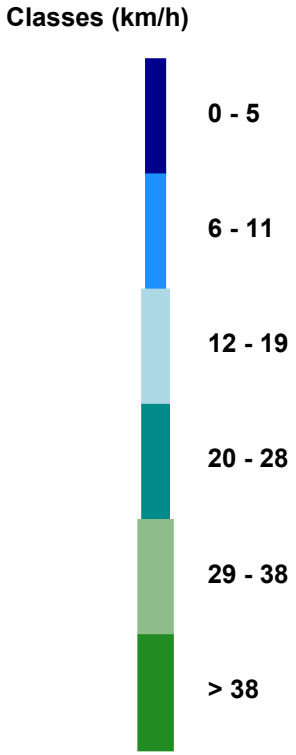
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Wind Speed 20m (WS20) - km/h

Stony Mountain





Total Number of Valid Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 20m (WD20) - deg

Stony Mountain - February 2025

Direction of Maximum Speed: 296 deg on Feb 27 14:00
Direction of Maximum Daily Speed Average: 170.4 deg on Feb 19

Direction of Minimum Speed: 62 deg on Feb 14 12:00

Direction of Minimum Daily Speed Average: 1.0 deg on Feb 12

Monthly Average Direction: 264.9 deg

Hours in Service:	672
Hours of Data:	672
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-Feb	44	65	68	60	43	29	7	359	349	336	320	314	313	312	315	316	323	312	304	306	303	302	301	292	328.1
2-Feb	306	306	313	314	313	309	311	309	318	322	316	322	324	329	328	325	329	325	316	318	323	317	314	312	317.3
3-Feb	319	321	318	309	307	311	301	295	293	295	301	294	285	284	278	294	277	276	282	286	281	264	281	285	294.4
4-Feb	273	279	278	280	272	275	262	274	251	235	258	266	260	258	249	249	232	231	231	237	235	241	240	240	253.4
5-Feb	249	254	252	256	258	265	265	270	268	266	269	264	254	264	262	263	258	260	273	278	286	283	291	301	267.3
6-Feb	303	301	307	300	297	277	277	285	297	298	304	304	308	309	311	334	349	351	349	348	344	350	334	330	311.3
7-Feb	329	305	297	278	287	265	260	271	264	275	293	272	265	267	266	261	258	239	255	250	240	258	274	263	268.8
8-Feb	257	259	255	266	282	294	272	278	273	263	287	280	277	284	277	287	290	269	259	250	264	299	326	313	281.8
9-Feb	313	332	331	336	329	318	305	311	314	328	343	338	338	348	348	335	335	340	336	325	313	303	309	305	325.3
10-Feb	298	285	284	285	279	265	268	267	268	271	269	268	261	269	266	254	249	243	247	261	282	302	315	328	273.2
11-Feb	359	17	2	349	6	349	328	328	334	327	327	335	322	308	320	331	319	308	285	297	302	296	222	257	326.9
12-Feb	224	221	222	213	208	219	207	210	197	189	191	163	191	153	30	36	26	19	12	5	16	27	28	17	217.3
13-Feb	8	32	45	36	25	29	42	33	40	45	64	24	12	43	29	75	63	70	59	48	56	51	33	25	43.1
14-Feb	33	35	37	36	38	50	47	45	57	49	44	62	38	20	39	60	49	91	149	168	190	222	341	280	44.7
15-Feb	248	234	260	272	288	294	306	300	303	305	316	317	305	314	326	319	322	324	325	332	338	344	349	317	306.1
16-Feb	321	61	115	129	161	160	142	181	168	145	146	141	142	143	166	159	156	125	137	156	189	190	185	181	158.9
17-Feb	175	175	178	174	167	171	175	162	146	166	169	165	160	162	150	149	148	152	156	153	151	160	176	156	162.9
18-Feb	161	181	199	194	181	193	215	189	196	188	188	177	172	171	177	176	173	171	166	165	168	175	171	178	178.8
19-Feb	176	175	173	176	180	177	172	171	169	167	171	173	169	171	167	166	159	162	160	165	168	168	176	180	170.4
20-Feb	178	181	182	178	188	195	204	206	212	208	210	209	218	229	245	251	235	233	236	241	239	243	256	253	218.6
21-Feb	241	235	220	217	221	227	257	253	284	249	281	305	285	285	303	316	20	60	49	58	82	55	64	64	268.4
22-Feb	107	102	101	134	144	147	165	192	171	179	193	220	205	206	215	217	211	210	209	210	207	207	204	216	195.9
23-Feb	238	170	175	215	213	230	247	254	252	257	259	269	270	283	296	315	343	347	344	355	354	1	32	75	274.2
24-Feb	100	114	124	142	109	107	65	118	145	121	216	301	264	265	271	257	259	264	239	230	248	269	268	272	247.6
25-Feb	281	279	295	62	61	49	105	109	102	77	93	145	87	103	153	209	142	113	105	64	144	222	250	266	160.7
26-Feb	293	270	253	271	296	299	292	281	272	281	288	279	287	279	281	281	278	280	258	247	237	224	228	228	273.2
27-Feb	255	234	205	195	210	209	202	203	236	281	290	289	295	296	295	314	316	318	320	330	336	340	8	51	281.1
28-Feb	48	85	139	119	166	170	134	123	133	114	135	91	208	287	279	298	279	246	197	179	213	220	213	208	187.3
	272.9	260.6	254.2	251.0	249.9	257.4	256.4	254.4	256.7	259.9	266.4	269.6	266.6	273.8	277.5	285.2	285.5	272.2	265.8	264.1	256.9	258.9	266.3	264.1	
	Diurnal Average																								

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

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 20m (WD20) - deg

Stony Mountain - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 93 deg on Feb 13 14:00

Minimum Value: 9 deg on Feb 16 03:00

Percentiles: P_1 = 12 P_{10} = 14 Q_1 = 16 Median = 19 Q_3 = 23 P_{90} = 28 P_{99} = 56

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

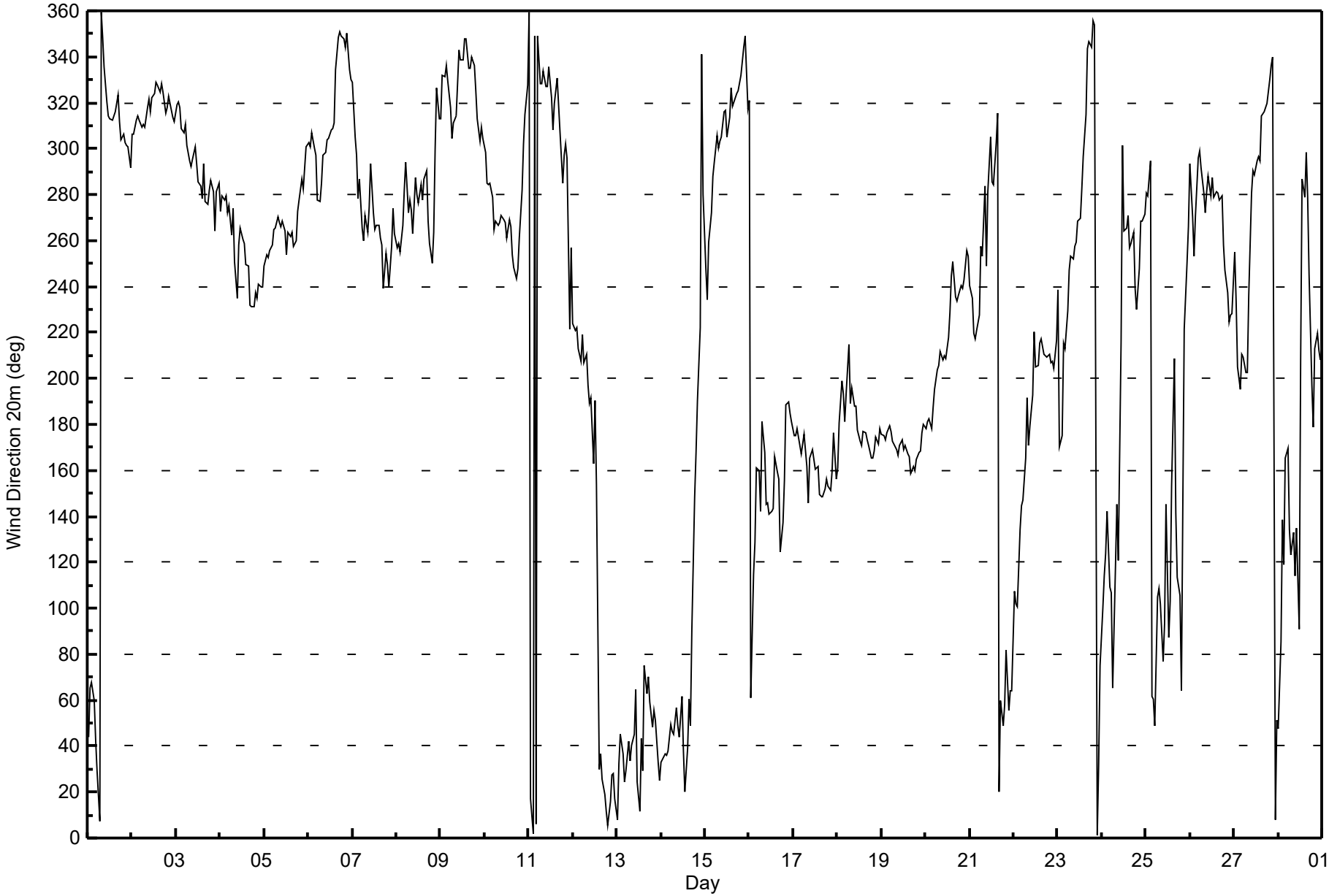
Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Feb	17	20	17	18	20	21	19	17	20	18	19	19	17	17	19	18	18	21	20	18	18	18	17	18	21
2-Feb	17	16	17	16	15	16	15	16	13	14	15	18	20	17	20	18	16	15	13	13	12	12	12	13	20
3-Feb	12	12	12	14	13	12	12	12	13	16	18	23	29	26	25	19	19	14	14	15	18	19	17	18	29
4-Feb	17	18	17	17	18	17	18	17	19	19	24	25	29	28	26	27	19	18	19	17	17	20	19	18	29
5-Feb	22	20	20	20	22	22	21	19	23	25	21	23	27	23	27	26	20	22	21	24	19	21	20	18	27
6-Feb	16	16	16	16	18	21	19	19	19	20	21	20	20	21	20	22	22	21	23	20	21	20	16	15	23
7-Feb	15	16	17	19	19	22	22	22	22	21	19	27	24	24	25	25	25	14	19	19	16	21	18	22	27
8-Feb	17	17	19	22	26	20	25	21	29	25	24	27	27	24	23	24	19	22	16	18	21	23	17	19	29
9-Feb	17	21	18	18	16	16	17	16	16	20	25	27	28	27	28	21	18	18	15	13	14	16	16	15	28
10-Feb	15	17	19	19	21	22	21	21	24	24	23	23	22	23	23	26	23	20	20	22	20	20	17	18	26
11-Feb	23	19	17	15	19	16	11	12	13	13	18	21	23	33	36	23	17	14	14	15	13	65	22	21	65
12-Feb	16	15	15	14	14	21	15	13	14	19	20	44	51	66	62	17	20	17	13	15	17	20	20	20	66
13-Feb	17	20	20	21	22	19	18	15	21	17	22	38	49	93	33	34	21	13	15	15	14	14	14	11	93
14-Feb	14	14	15	15	15	12	14	13	13	26	41	42	39	31	33	31	21	21	29	18	11	52	25	15	52
15-Feb	18	11	17	15	17	17	17	17	17	18	20	22	25	25	21	18	20	15	12	15	16	16	15	16	25
16-Feb	19	36	9	18	16	24	10	13	15	18	45	52	33	42	40	37	22	30	16	15	14	15	14	15	52
17-Feb	15	16	15	13	12	15	15	12	14	18	22	20	24	23	24	22	20	19	15	14	12	15	15	16	24
18-Feb	17	14	14	15	15	54	33	14	16	18	23	25	27	24	23	23	23	19	16	15	15	17	16	17	54
19-Feb	17	16	16	15	17	17	15	15	15	17	20	22	21	23	21	22	19	17	16	16	16	15	17	19	23
20-Feb	20	20	20	19	20	23	26	22	23	20	25	20	23	24	24	23	22	20	18	18	17	18	20	23	26
21-Feb	16	16	15	14	15	16	19	19	20	37	28	23	25	26	25	27	35	15	15	16	18	21	21	23	37
22-Feb	20	22	25	18	13	13	10	13	20	15	22	26	23	19	22	20	18	17	15	16	15	15	16	19	26
23-Feb	21	22	37	26	17	19	20	21	25	24	23	22	24	22	21	19	22	22	20	21	26	30	32	19	37
24-Feb	24	20	21	35	37	34	32	46	43	58	54	50	32	28	25	28	24	18	12	15	19	22	21	21	58
25-Feb	20	17	34	44	28	15	31	21	19	23	32	35	46	53	48	40	28	13	24	35	17	19	21	25	53
26-Feb	21	23	22	20	21	19	20	19	22	21	25	28	25	27	24	23	22	20	20	18	16	16	17	16	28
27-Feb	22	25	17	15	17	18	17	16	22	22	23	24	21	22	22	21	19	19	20	19	20	19	27	21	27
28-Feb	65	36	20	16	23	18	26	17	23	22	57	51	52	52	56	26	25	40	39	19	12	12	12	15	65
	65	36	37	44	37	54	33	46	43	58	57	52	52	93	62	40	35	40	39	35	26	65	32	25	
	Diurnal Maximum																								

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 20m (WD20) - deg

Stony Mountain - February 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS19
FIREBAG
FEBRUARY 2025

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

March 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FIREBAG (AMS19)
FEBRUARY 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	640	32	32	100	15.2	0	5.8	0
H2S (ppb) Average	637	35	35	100	1.5	0	0.4	0
THC (ppm) Average	632	31	40	98.66	2.8	-	2.4	-
NO2 (ppb) Average	639	33	33	100	42	0	16.6	-
NO (ppb) Average	639	33	33	100	71.7	-	14.4	-
NOX (ppb) Average	639	33	33	100	113.3	-	31	-
Temperature 2 m (C) Average	672	0	0	100	2.4	-	-5.1	-
Relative Humidity (%) Average	672	0	0	100	97.5	-	90.3	-
Wind Speed 10 m (km/h) Average	615	0	57	91.52	34	-	28	-
Wind Direction 10 m (deg) Average	615	0	57	91.52	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FIREBAG (AMS19)
FEBRUARY 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	640	1.18	2.3	-	0	0	0.1	0.3	0.9	4.3	15.2
H2S (ppb) Average	637	0.16	0.2	-	0	0	0	0.1	0.2	0.4	1.5
THC (ppm) Average	632	2.31	0.1	-	2.2	2.2	2.2	2.3	2.3	2.4	2.8
NO2 (ppb) Average	639	6.94	7.6	-	0.1	0.3	1.3	4.7	9.1	17.3	42
NO (ppb) Average	639	2.84	6.2	-	0	0	0	0.6	2.7	7.9	71.7
NOX (ppb) Average	639	9.78	12.9	-	0.1	0.3	1.4	6.2	11.3	23.6	113.3
Temperature 2 m (C) Average	672	-19.02	8.6	-	-34.8	-28.8	-25.9	-21	-11.9	-6.9	2.4
Relative Humidity (%) Average	672	74.2	11.5	-	36	60.7	70.6	74.2	81.8	88	97.5
Wind Speed 10 m (km/h) Average	615	13.2	7	-	0	5	8	12	17	23	34
Wind Direction 10 m (deg) Average	615	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FIREBAG (AMS19)
FEBRUARY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
THC	07 Feb 2025 02:00	07 Feb 2025 09:00	8	Unstable Operation - flatline in analyzer output signal
THC	07 Feb 2025 10:00	07 Feb 2025 10:00	1	Maintenance - analyzer rebooted
Wind Speed, Wind Direction	23 Feb 2025 10:00	25 Feb 2025 15:00	54	Flat line in sensor output signal
Wind Speed, Wind Direction	25 Feb 2025 16:00	25 Feb 2025 17:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction	27 Feb 2025 10:00	27 Feb 2025 10:00	1	Flat line in sensor output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Firebag - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 15.2 ppb on Feb 26 03:00 Maximum Daily Average: 5.8 ppb on Feb 10

Minimum Value: 0.0 ppb on Feb 2 08:00 Minimum Daily Average: 0.0 ppb on Feb 2
Maximum Diurnal Average: 2.1 ppb at hour 17 Minimum Diurnal Average: 0.4 ppb at hour 1
Monthly Average: 1.18 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.3 Q_3 = 0.9 P_{90} = 4.3 P_{99} = 10.3

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.1	0.1	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	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2
2-Feb	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
3-Feb	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.1	0.2	0.3	0.3	0.3	0.2	0.5	2.8	13.4	13.9	4.1	1.1	1.5	3.0	2.6	1.8	1.1	2.1	13.9
4-Feb	1.4	2.5	5.3	6.3	8.4	Z	12.6	8.3	7.4	6.5	6.7	7.5	8.2	6.6	3.7	2.2	1.2	0.1	0.0	0.2	0.8	2.7	4.6	5.2	4.7	12.6
5-Feb	Z	4.4	3.1	3.1	2.0	2.0	3.0	3.5	4.5	5.7	5.0	6.2	6.9	6.1	5.4	6.0	6.5	5.3	4.4	5.1	3.9	4.6	2.7	1.5	4.4	6.9
6-Feb	1.0	0.6	Z	1.1	0.6	0.9	1.4	0.3	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.3	1.4
7-Feb	0.3	0.2	Z	0.1	0.1	2.5	2.1	1.3	0.8	0.3	0.3	1.0	1.1	0.7	1.2	4.5	7.1	8.1	5.7	1.5	1.0	0.5	0.3	0.3	1.8	8.1
8-Feb	0.3	0.7	2.1	Z	1.4	3.7	3.6	2.7	3.3	8.7	5.4	2.5	1.4	2.5	2.4	2.3	1.7	1.1	1.1	0.2	0.0	0.0	0.0	0.0	2.0	8.7
9-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.3	0.0	0.3
10-Feb	0.3	0.1	1.5	7.2	13.3	Z	10.9	13.0	8.4	7.4	6.4	6.4	9.3	8.6	6.7	9.1	7.5	6.3	6.2	2.2	0.8	0.6	0.4	0.3	5.8	13.3
11-Feb	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	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2
12-Feb	0.0	Z	0.3	0.7	1.1	0.6	0.3	0.5	0.6	0.4	0.6	0.6	0.8	1.4	1.5	2.8	6.3	1.3	0.8	0.9	1.3	1.1	0.9	0.6	1.1	6.3
13-Feb	0.4	0.3	Z	0.3	0.1	0.1	0.1	0.0	0.0	0.0	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	0.0	0.1	0.4
14-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.5	0.3	0.4	0.1	0.5
15-Feb	0.4	0.7	1.6	4.8	Z	1.3	1.0	0.7	0.8	0.4	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	0.6	4.8
16-Feb	0.3	0.1	0.1	0.2	0.2	Z	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.4	0.8	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8
17-Feb	Z	0.2	0.3	0.3	0.5	0.8	0.4	0.3	0.6	0.7	0.4	0.2	0.1	0.1	0.0	0.1	0.1	0.2	0.1	0.0	0.1	0.0	0.2	0.1	0.3	0.8
18-Feb	0.1	Z	0.2	0.3	0.5	0.5	0.3	0.8	0.7	1.1	1.2	0.3	0.3	0.3	0.3	0.4	0.4	0.6	0.4	0.3	0.4	0.4	0.4	0.5	0.5	1.2
19-Feb	0.7	0.6	Z	0.6	0.6	0.7	0.6	0.6	0.6	0.7	0.5	0.5	0.4	0.5	0.5	0.5	0.4	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.5	0.7
20-Feb	0.3	0.4	0.4	Z	0.6	0.6	0.6	0.7	0.8	0.9	0.8	0.8	0.6	1.9	3.3	4.3	8.5	8.0	4.4	1.8	1.9	1.5	1.1	1.5	2.0	8.5
21-Feb	1.2	1.0	1.0	0.7	Z	0.6	0.7	0.5	0.6	1.3	4.8	4.6	4.3	6.9	2.9	1.1	0.3	0.2	0.2	0.1	0.0	0.1	0.5	0.2	1.5	6.9
22-Feb	1.3	0.0	0.0	0.1	0.1	Z	0.2	0.2	0.1	0.2	0.3	0.4	0.5	0.5	0.4	0.4	0.5	0.3	0.3	0.3	0.3	0.4	0.5	0.8	0.3	1.3
23-Feb	Z	1.4	0.9	0.3	0.3	0.5	0.3	0.5	1.5	0.5	0.3	0.4	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.3	1.5
24-Feb	0.0	Z	0.0	0.0	0.4	0.3	0.3	0.4	1.1	2.9	1.8	0.8	0.6	0.3	0.3	0.3	0.1	0.1	0.1	3.1	5.9	5.8	3.4	1.1	1.3	5.9
25-Feb	1.8	2.1	Z	0.5	0.3	0.2	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1	C	C	C	C	0.3	0.2	0.2	0.1	0.1	0.2	0.3	2.1
26-Feb	0.2	0.4	15.2	Z	6.5	5.5	4.8	2.7	0.6	0.3	0.2	0.2	0.2	0.3	0.4	0.4	0.6	2.2	4.0	0.3	0.2	0.2	0.2	0.2	2.0	15.2
27-Feb	0.3	0.3	0.4	0.3	Z	0.3	0.2	0.3	0.3	0.2	0.9	4.0	1.7	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.4	4.0
28-Feb	0.1	0.1	0.0	0.0	0.0	Z	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.3
	0.4	0.7	1.5	1.2	1.6	0.9	1.6	1.4	1.2	1.4	1.3	1.3	1.3	1.4	1.2	1.8	2.1	1.4	1.1	0.7	0.7	0.8	0.6	0.5	Diurnal Average	
	1.8	4.4	15.2	7.2	13.3	5.5	12.6	13.0	8.4	8.7	6.7	7.5	9.3	8.6	6.7	13.4	13.9	8.1	6.2	5.1	5.9	5.8	4.6	5.2	Diurnal Maximum	

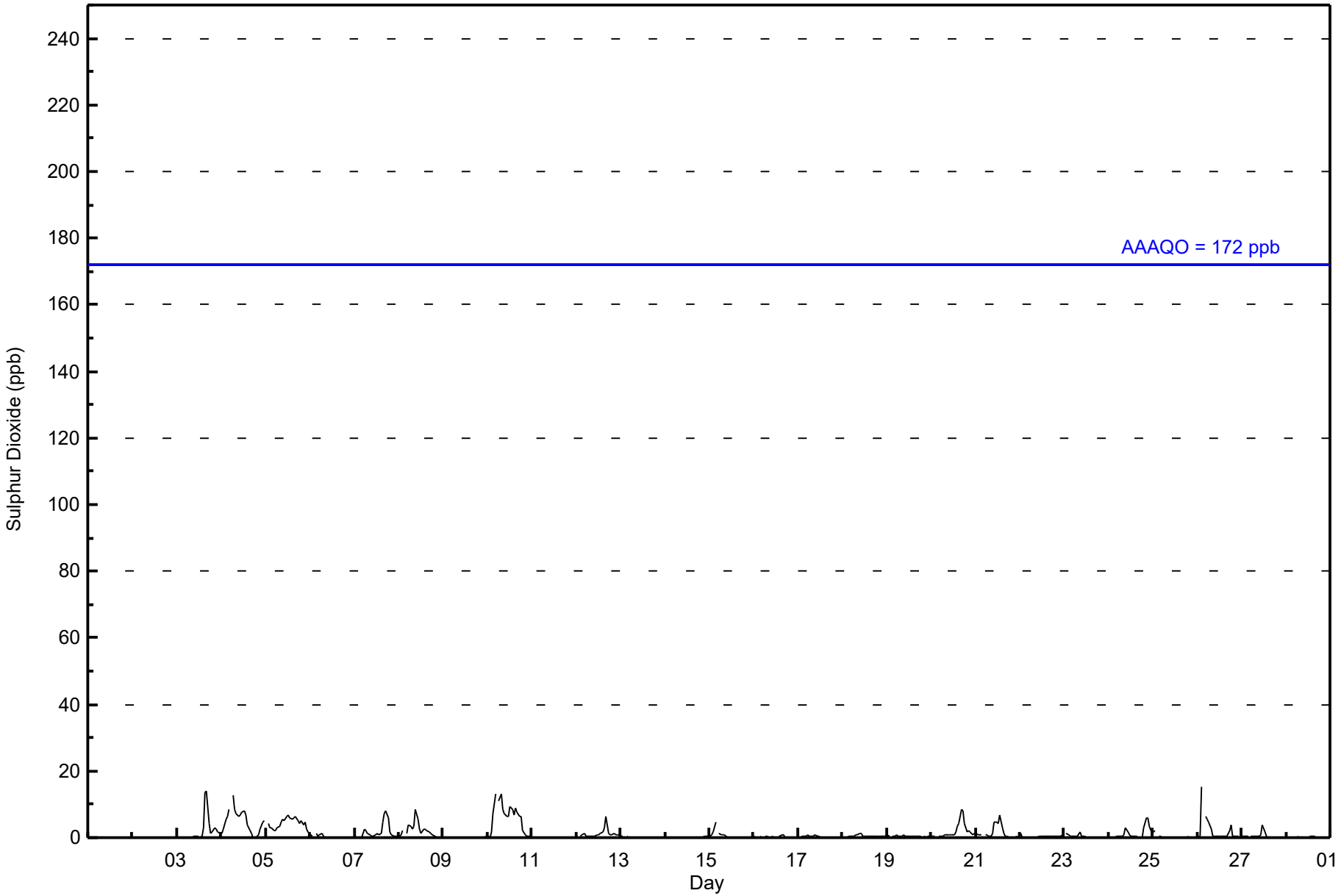
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Firebag - February 2025



Sulphur Dioxide (SO_2) - ppb

Firebag - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	633	98.91	98.91
11 - 20	7	1.09	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: 640

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Firebag - February 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	99	42	20	13	7	9	27	69	60	24	52	59	30	9	22	39	581
11 - 20	0	0	0	0	0	0	0	0	0	0	2	5	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	99	42	20	13	7	9	27	69	60	24	54	64	30	9	22	39	588

Total Number of Valid Hours: 588

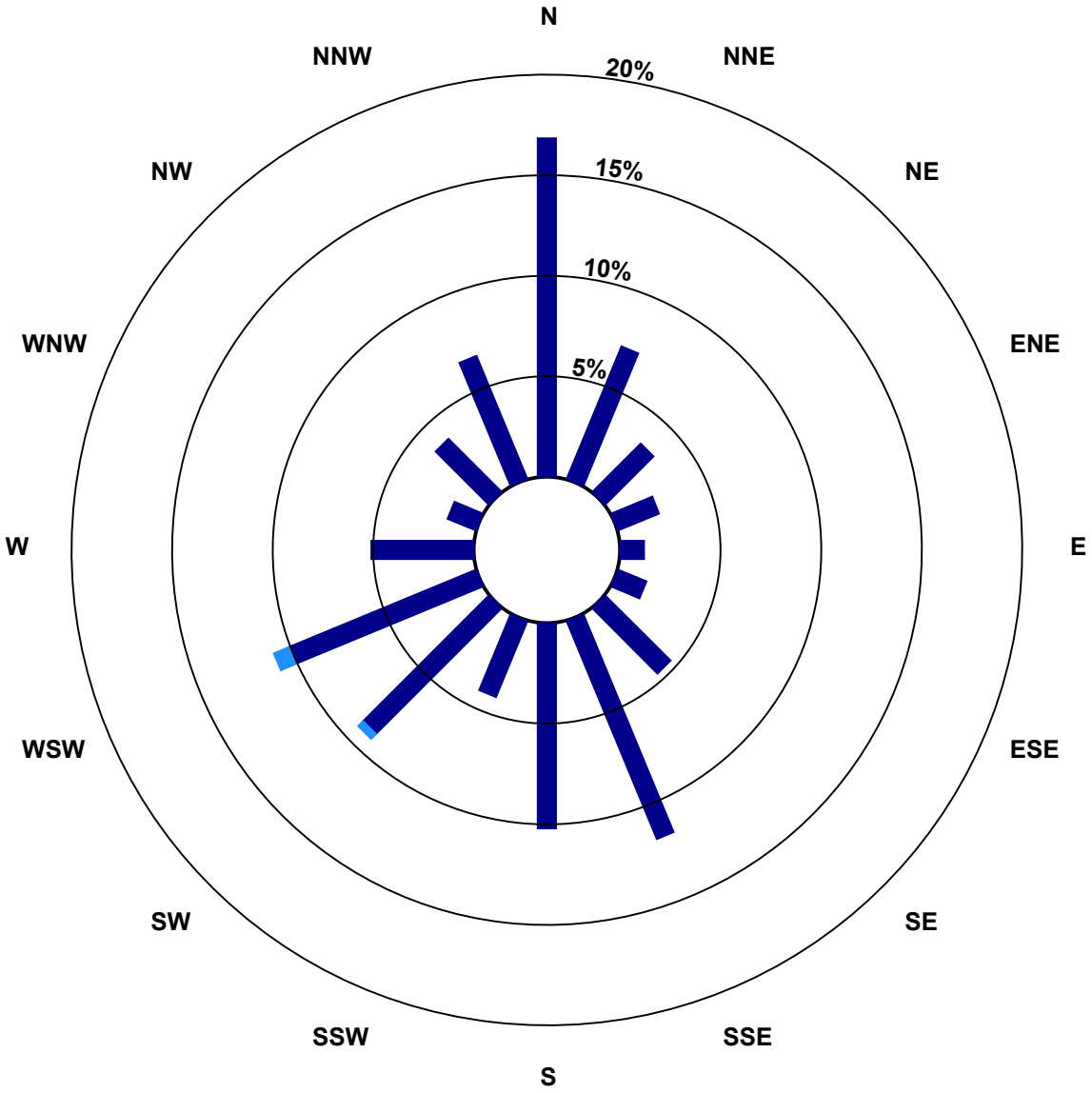
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Sulphur Dioxide (SO_2) - ppb

Firebag



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

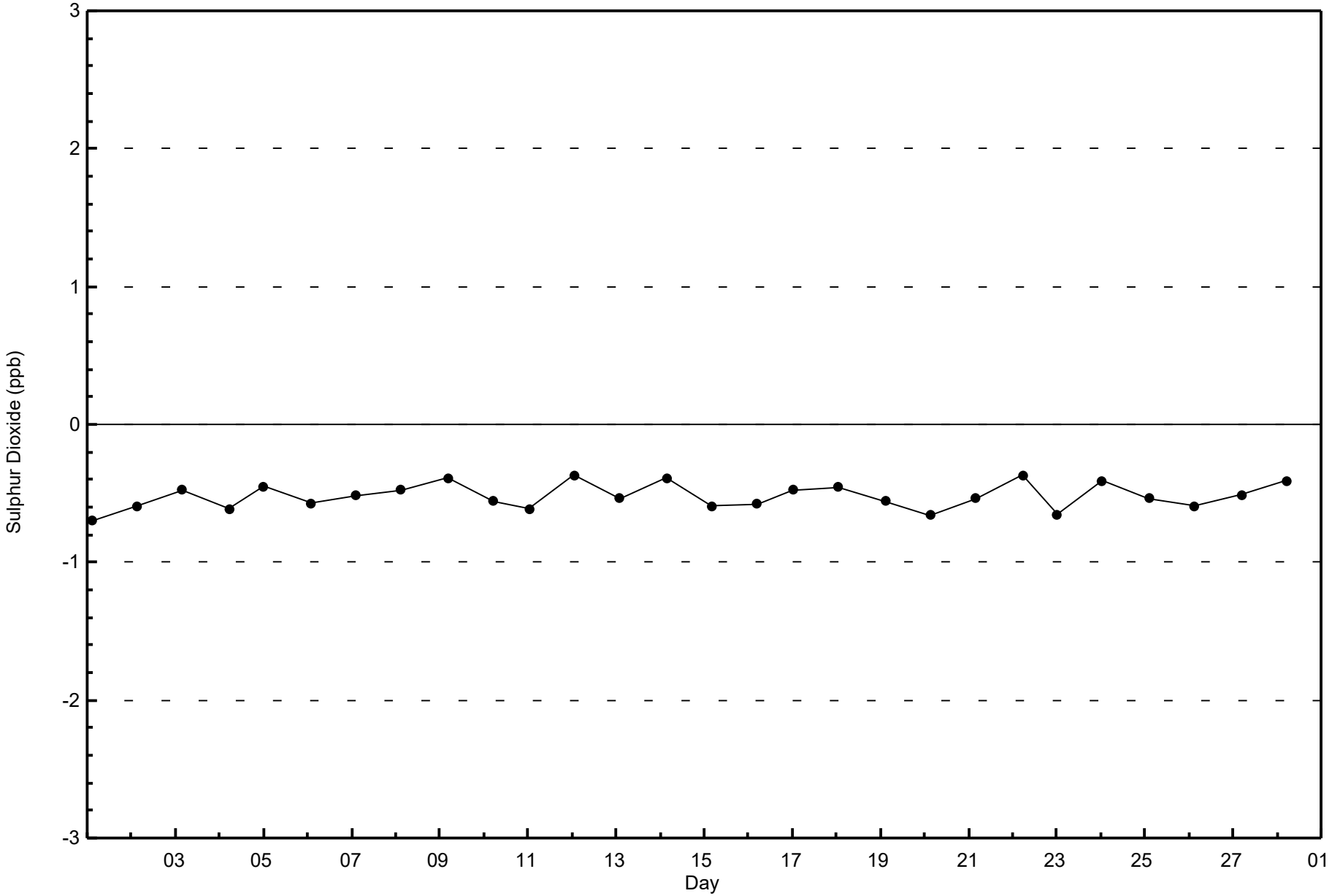
Total Number of Valid Hours: 588

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Firebag - February 2025

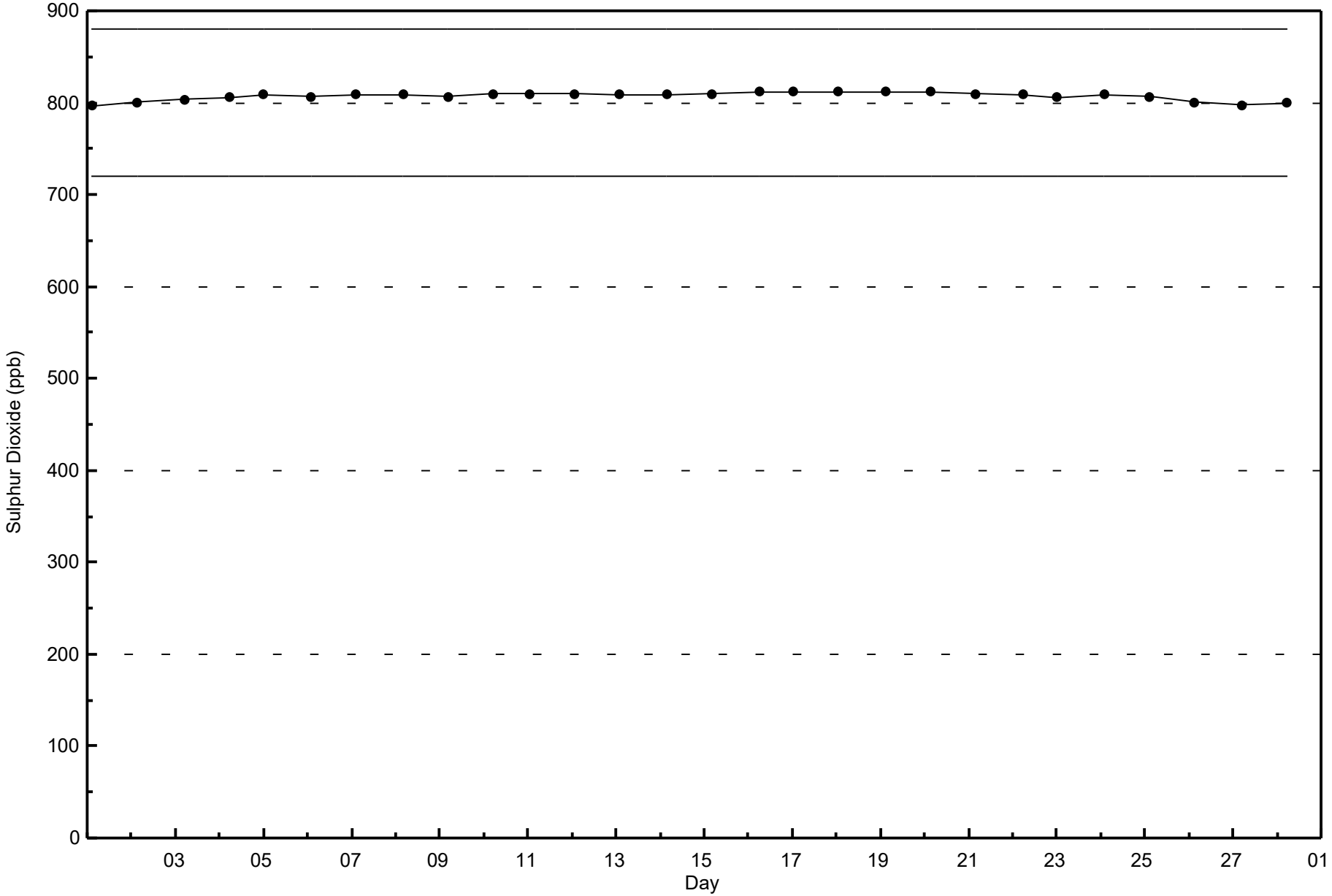


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Firebag - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Firebag - February 2025

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

Maximum Value: 1.5 ppb on Feb 26 19:00

Maximum Daily Average: 0.4 ppb on Feb 26

Minimum Value: 0.0 ppb on Feb 1 10:00

Minimum Daily Average: 0.0 ppb on Feb 13

Maximum Diurnal Average: 0.3 ppb at hour 4

Minimum Diurnal Average: 0.1 ppb at hour 14

Monthly Average: 0.16 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.2 P_{90} = 0.4 P_{99} = 0.8

Hours in Service:	672
Hours of Data:	637
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-Feb	0.1	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
2-Feb	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
3-Feb	0.0	0.0	0.0	0.1	0.1	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.4	0.3	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.4
4-Feb	Z	0.3	0.3	0.2	0.3	0.3	0.4	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.4
5-Feb	0.1	Z	0.1	0.1	0.0	0.0	0.1	0.1	0.0	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	0.2	0.2	0.1	0.3
6-Feb	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1	0.2	0.1	0.3
7-Feb	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	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.4	0.3	0.2	0.4
8-Feb	0.2	0.5	0.6	0.5	Z	0.4	0.5	1.0	0.8	0.8	0.4	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.6	0.2	0.1	0.2	0.1	0.1	0.4	1.0
9-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.3	0.1	0.2	0.1	0.3
10-Feb	Z	0.2	0.1	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3
11-Feb	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	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.1	0.0	0.2	0.1	0.2
12-Feb	0.3	0.3	Z	0.9	0.7	0.5	0.6	0.6	0.4	0.6	0.4	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.3	0.9
13-Feb	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
14-Feb	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	0.1	0.1	0.1	0.2	0.2	0.5	0.6	1.2	0.5	0.2	0.2	1.2
15-Feb	0.1	0.1	0.3	0.6	0.4	Z	0.5	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6
16-Feb	Z	0.1	0.2	0.5	0.8	0.7	0.5	0.5	0.4	0.2	0.3	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	0.8
17-Feb	0.3	Z	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.5	0.6	0.4	0.2	0.6
18-Feb	0.5	0.6	Z	0.8	0.5	0.7	0.3	0.4	0.5	0.2	0.1	C	C	C	C	C	C	C	0.1	0.0	0.2	0.2	0.2	0.2	--	0.8
19-Feb	0.2	0.2	0.3	Z	0.4	0.3	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.4
20-Feb	0.2	0.2	0.2	0.3	Z	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.4	0.4	0.3	0.1	0.2	0.4	0.2	0.4
21-Feb	0.7	1.1	0.5	0.3	0.4	Z	0.3	0.3	0.5	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	0.1	0.5	0.2	1.1
22-Feb	Z	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	0.1	0.0	0.2	0.0	0.0	0.1	0.0	0.1	0.0	0.4
23-Feb	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.4
24-Feb	0.1	0.0	Z	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.5	0.6	0.4	0.4	0.2	0.6
25-Feb	0.2	0.2	0.1	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.4	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.4
26-Feb	0.1	0.1	0.5	0.8	Z	0.6	0.7	0.7	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5	1.2	1.5	0.2	0.2	0.1	0.1	0.1	0.4	1.5
27-Feb	0.1	0.1	0.2	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.3	0.4	0.2	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.4
28-Feb	Z	0.1	0.1	0.1	0.1	0.5	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.3	0.3	0.3	0.1	0.2	0.5
	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.2	Diurnal Average	
	0.7	1.1	0.6	0.9	0.8	0.7	0.7	1.0	0.8	0.8	0.4	0.4	0.4	0.2	0.3	0.5	0.5	1.2	1.5	0.5	0.6	1.2	0.6	0.5	Diurnal Maximum	

Z - zerospan C - Calibration

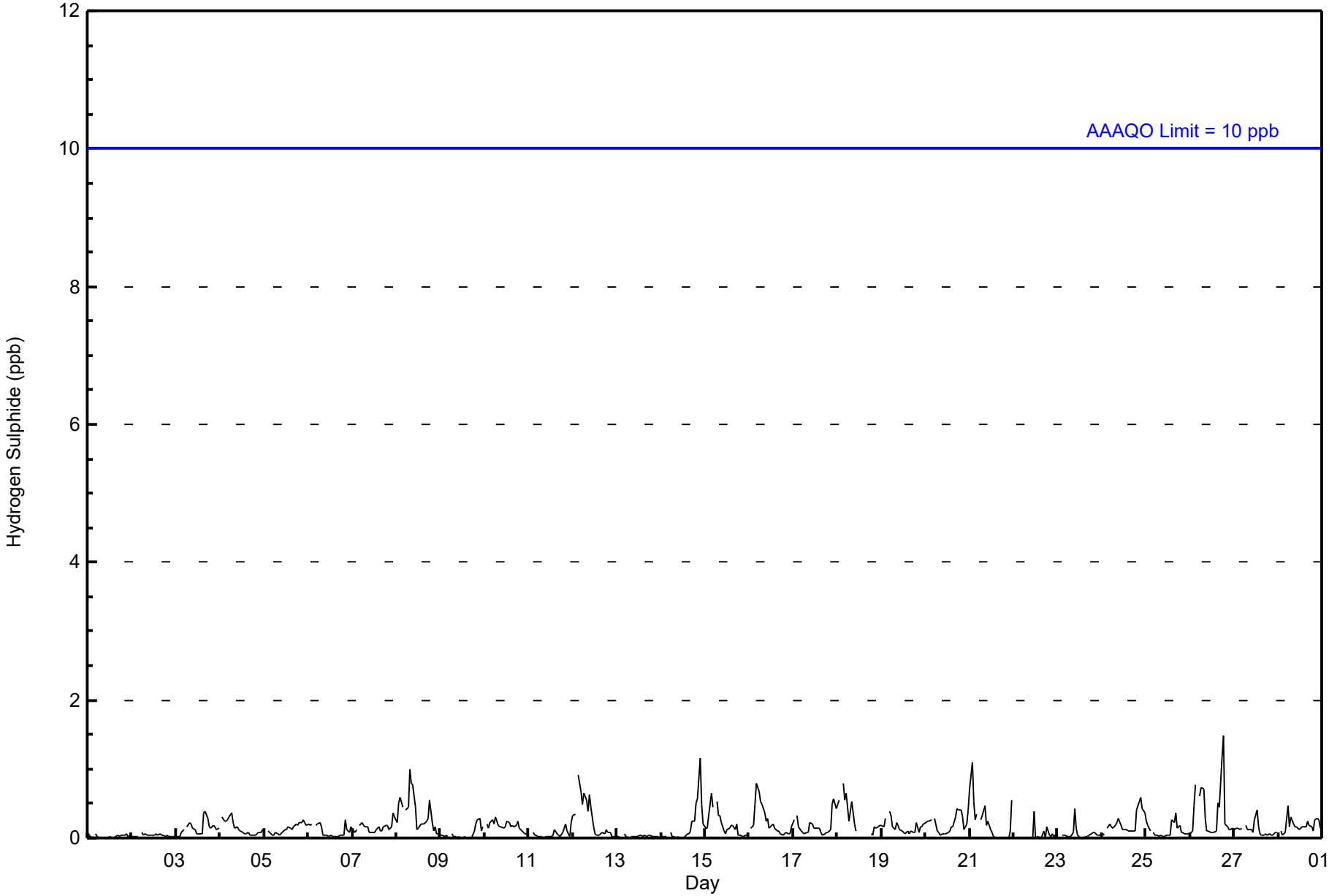
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Firebag - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	637	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: 637

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Firebag - February 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	98	43	20	14	7	7	28	68	57	23	55	63	29	10	22	38	582
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	98	43	20	14	7	7	28	68	57	23	55	63	29	10	22	38	582

Total Number of Valid Hours: 582

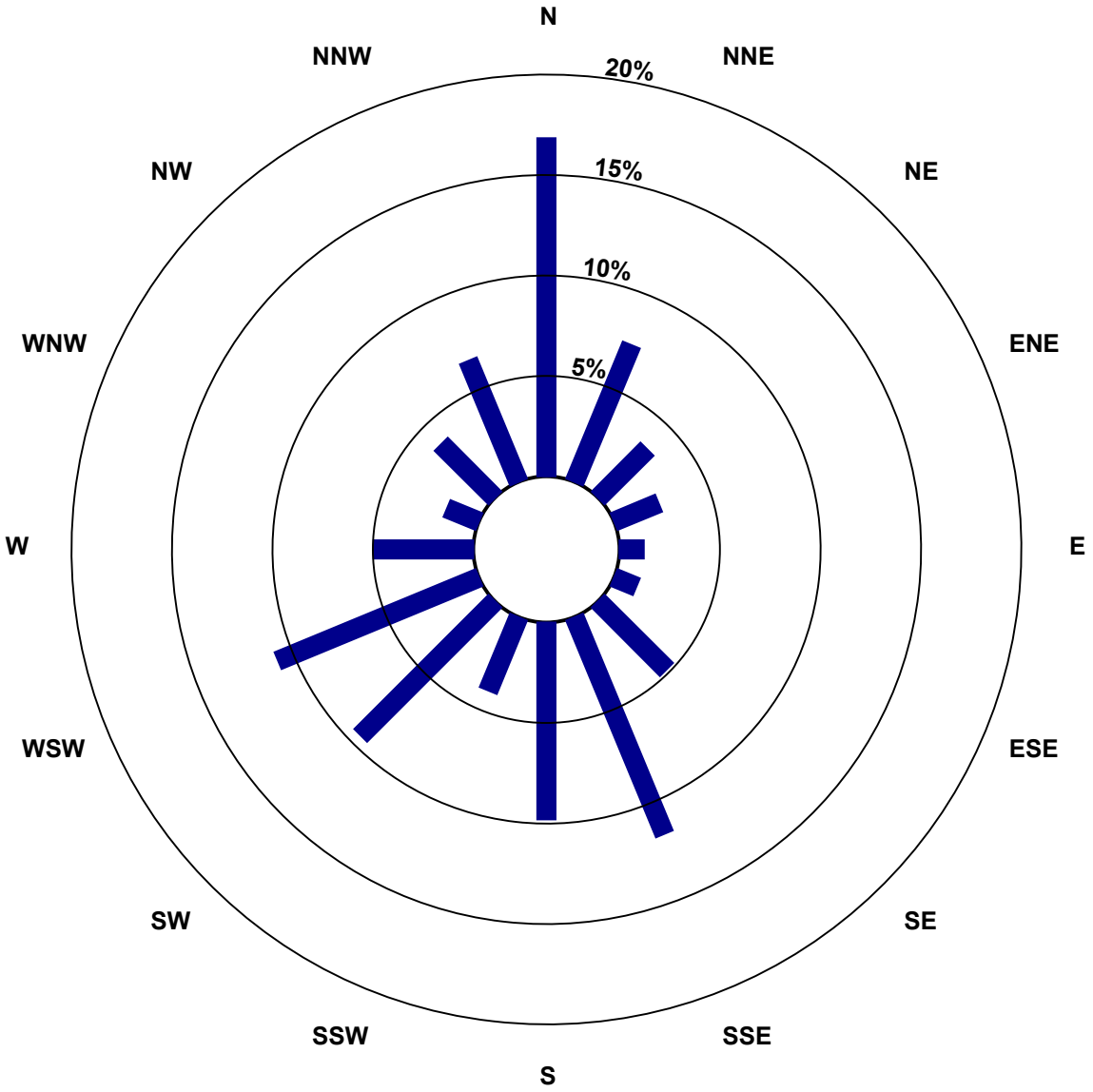
Total Number of Hours: 672

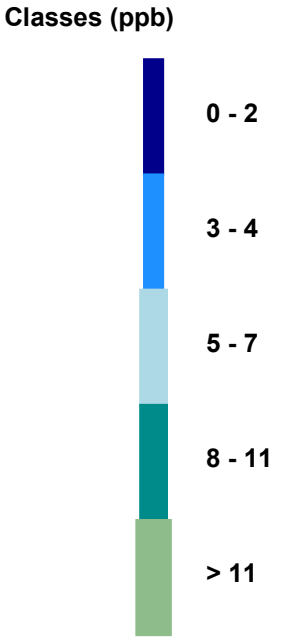
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Hydrogen Sulphide (H_2S) - ppb

Firebag





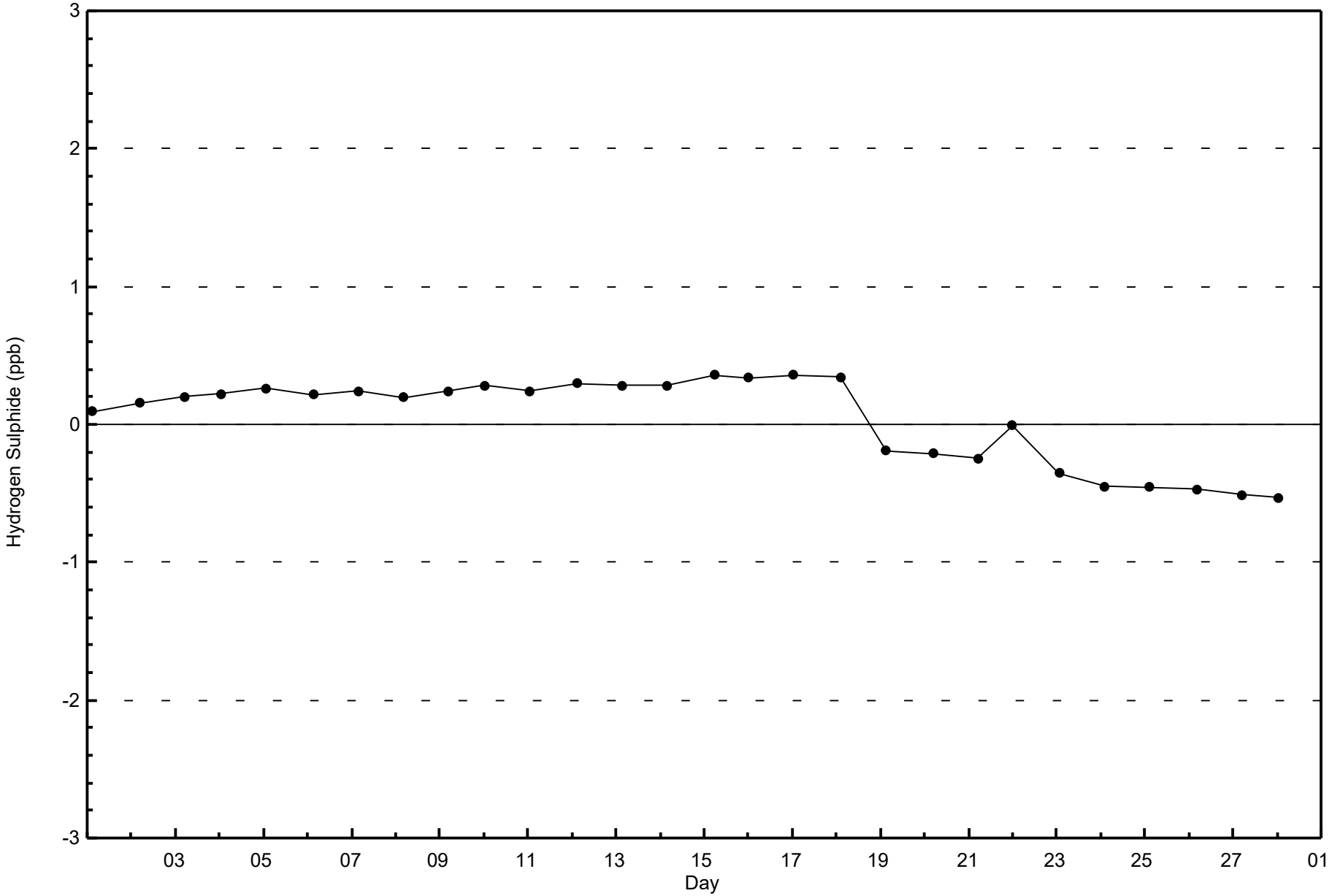
Total Number of Valid Hours: 582

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Firebag - February 2025

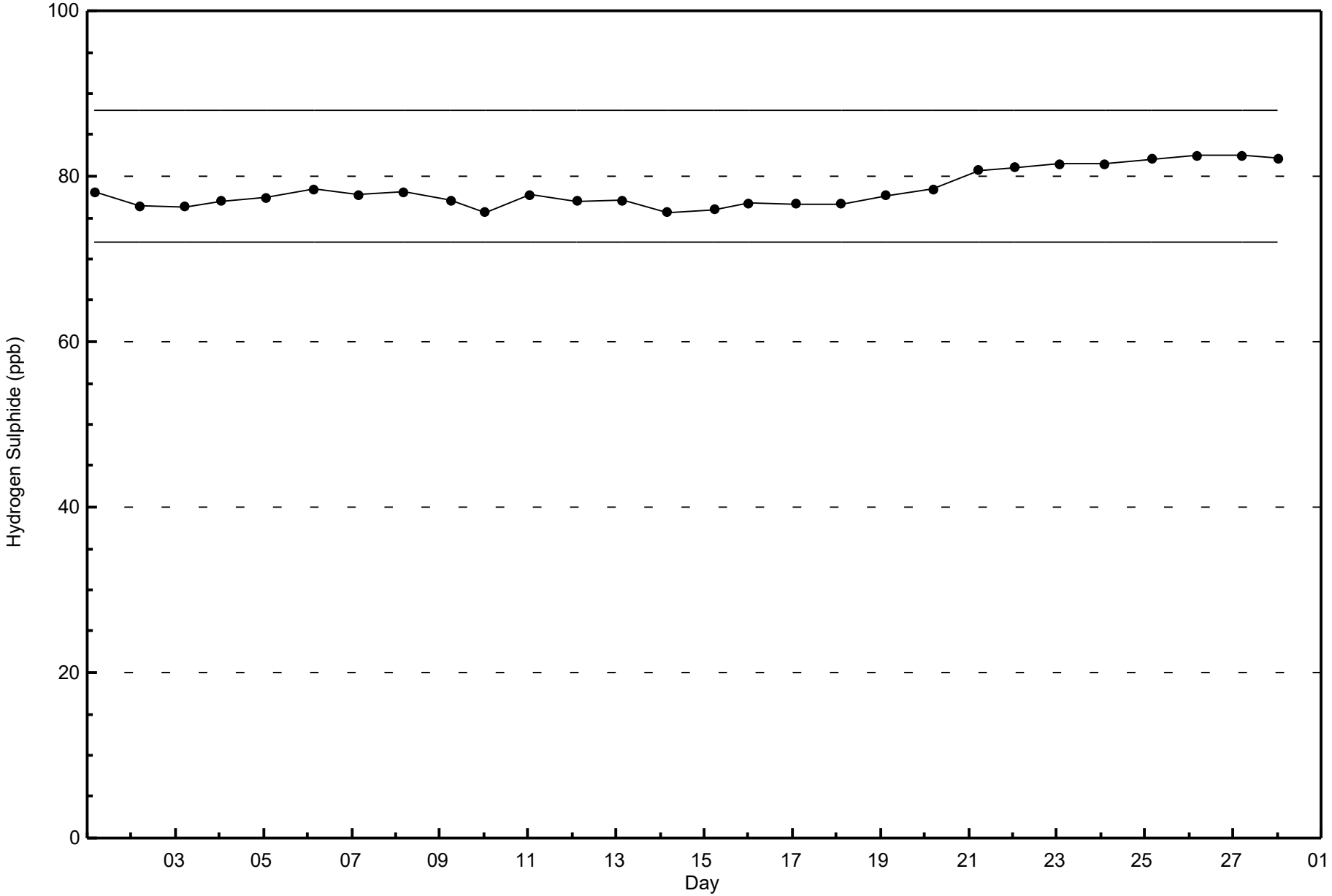


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Firebag - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Firebag - February 2025

Maximum Value: 2.8 ppm on Feb 26 08:00

Maximum Daily Average: 2.4 ppm on Feb 15

Minimum Value: 2.2 ppm on Feb 2 11:00

Minimum Daily Average: 2.2 ppm on Feb 1

Maximum Diurnal Average: 2.3 ppm at hour 6

Minimum Diurnal Average: 2.3 ppm at hour 14

Monthly Average: 2.31 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:	672
Hours of Data:	632
Hours of Missing Data:	40
Hours of Calibration:	31
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-Feb	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	2.3	2.2	2.2	2.2	2.2	2.2	2.3
2-Feb	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	2.3	2.2	2.3	2.3	2.2	2.2	2.2	2.3	2.3	2.2	2.3
3-Feb	2.3	2.3	2.3	2.3	Z	2.4	2.4	2.5	2.4	2.4	2.4	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	2.5
4-Feb	2.4	2.5	2.4	2.4	2.4	Z	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.5
5-Feb	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	2.4	2.4	2.4	2.4	2.4	2.3	2.4
6-Feb	2.4	2.4	Z	2.4	2.3	2.3	2.4	2.3	2.2	2.3	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.3	2.3	2.3	2.4
7-Feb	2.5	UO	UO	UO	UO	UO	UO	UO	UO	M	2.5	2.5	2.4	2.4	2.5	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5	--	2.5
8-Feb	2.5	2.6	2.6	Z	2.5	2.4	2.4	2.5	2.5	2.5	2.4	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.5	2.3	2.2	2.2	2.2	2.2	2.4	2.6
9-Feb	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	2.4	2.4	2.4	2.3	2.4	2.3	2.4
10-Feb	2.4	2.4	2.4	2.5	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	2.5
11-Feb	Z	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	2.3	2.3	2.2	2.3	2.3	2.3
12-Feb	2.3	Z	2.4	2.5	2.5	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	2.2	2.3	2.3	2.3	2.3	2.3	2.5
13-Feb	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.2	2.3	2.2	2.3	2.3	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3
14-Feb	2.3	2.3	2.3	Z	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	2.5	2.4	2.3	2.5
15-Feb	2.4	2.4	2.5	2.7	Z	2.6	2.7	2.6	2.5	2.4	2.4	2.3	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.7
16-Feb	2.4	2.4	2.3	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	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4
17-Feb	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	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
18-Feb	2.3	Z	2.3	2.4	2.3	2.4	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	2.2	2.2	2.3	2.3	2.3	2.4
19-Feb	2.3	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.3	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3
20-Feb	2.2	2.2	2.2	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.3	2.5
21-Feb	2.5	2.6	2.6	2.4	Z	2.5	2.5	2.5	2.6	2.5	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.4	2.6
22-Feb	2.4	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	2.4
23-Feb	Z	2.3	2.3	2.2	2.2	2.3	2.2	2.2	2.3	2.7	2.5	2.3	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	2.7
24-Feb	2.2	Z	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.2	2.2	2.3	2.5	2.5	2.6	2.5	2.4	2.3	2.6
25-Feb	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	C	C	C	C	2.2	2.2	2.3	2.2	2.2	2.2	2.3	2.4
26-Feb	2.2	2.3	2.3	Z	2.6	2.6	2.7	2.8	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.5	2.4	2.3	2.4	2.4	2.4	2.4	2.4	2.8
27-Feb	2.4	2.4	2.3	2.3	Z	2.4	2.3	2.3	2.2	2.2	2.2	2.4	2.5	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.5
28-Feb	2.3	2.2	2.2	2.2	2.2	Z	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.3
	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	Diurnal Average	
	2.5	2.6	2.6	2.7	2.6	2.6	2.7	2.8	2.6	2.7	2.5	2.5	2.5	2.4	2.5	2.4	2.4	2.5	2.5	2.5	2.5	2.6	2.5	2.5	Diurnal Maximum	

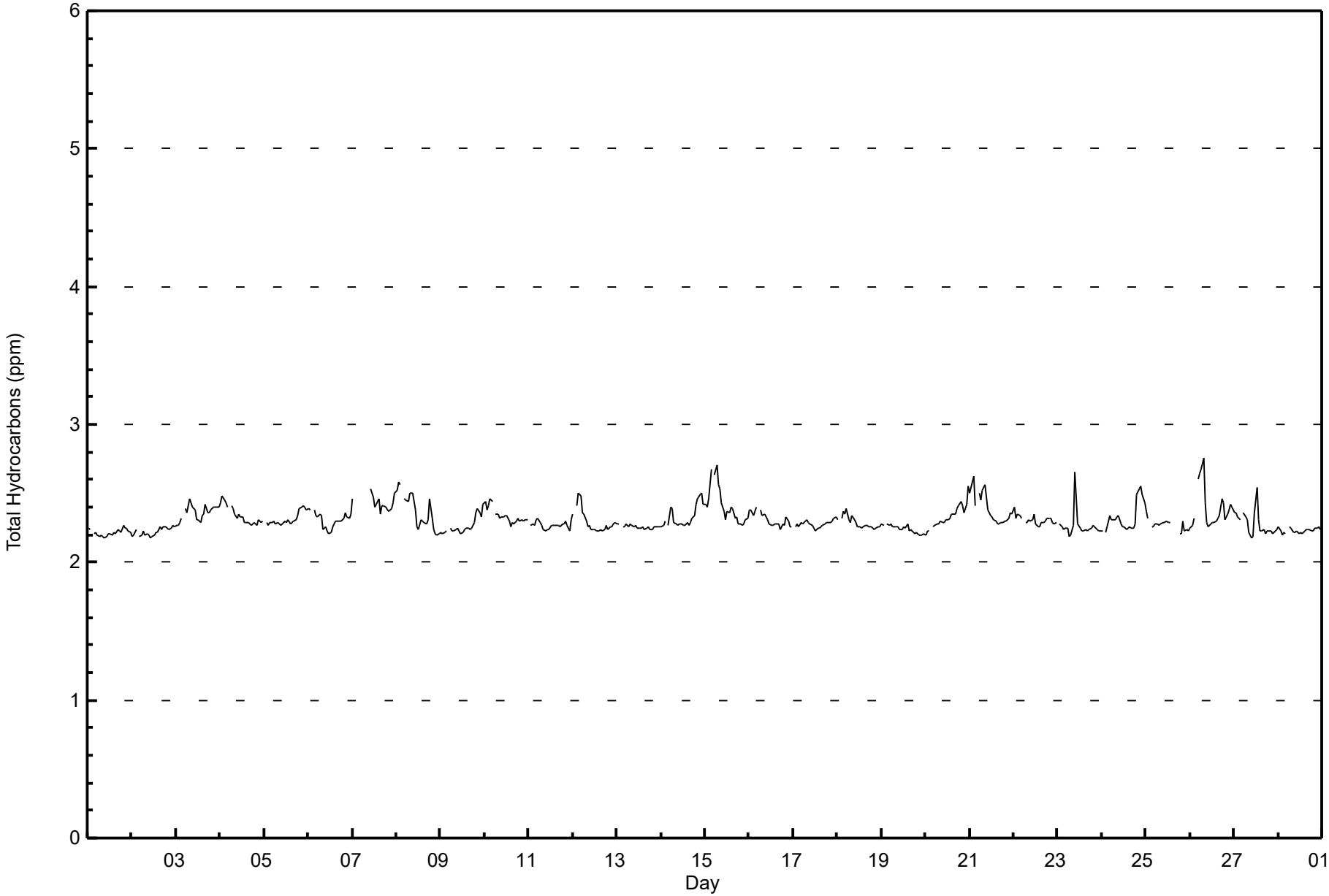
Z - zerospan C - Calibration M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Firebag - February 2025



Total Hydrocarbons (THC) - ppm

Firebag - February 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	0	0.00	0.00
2.1 - 3.0	632	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: 632

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Firebag - February 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	99	42	20	13	7	9	27	69	60	24	54	58	28	9	22	39	580
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	99	42	20	13	7	9	27	69	60	24	54	58	28	9	22	39	580

Total Number of Valid Hours: 580

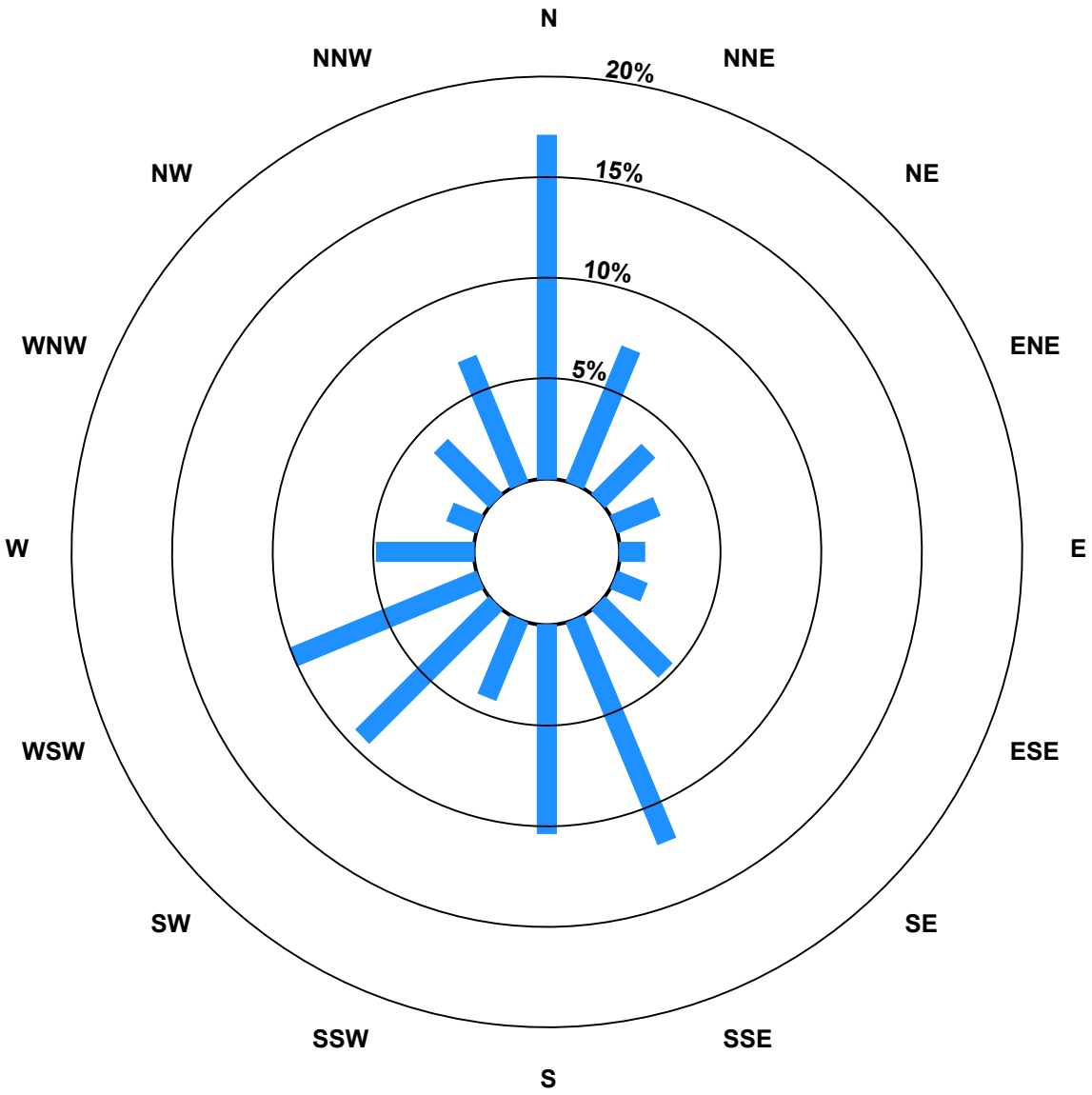
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Total Hydrocarbons (THC) - ppm

Firebag



Classes (ppm)

- 0 - 2.0
- 2.1 - 3.0
- 3.1 - 10.0
- > 10.0

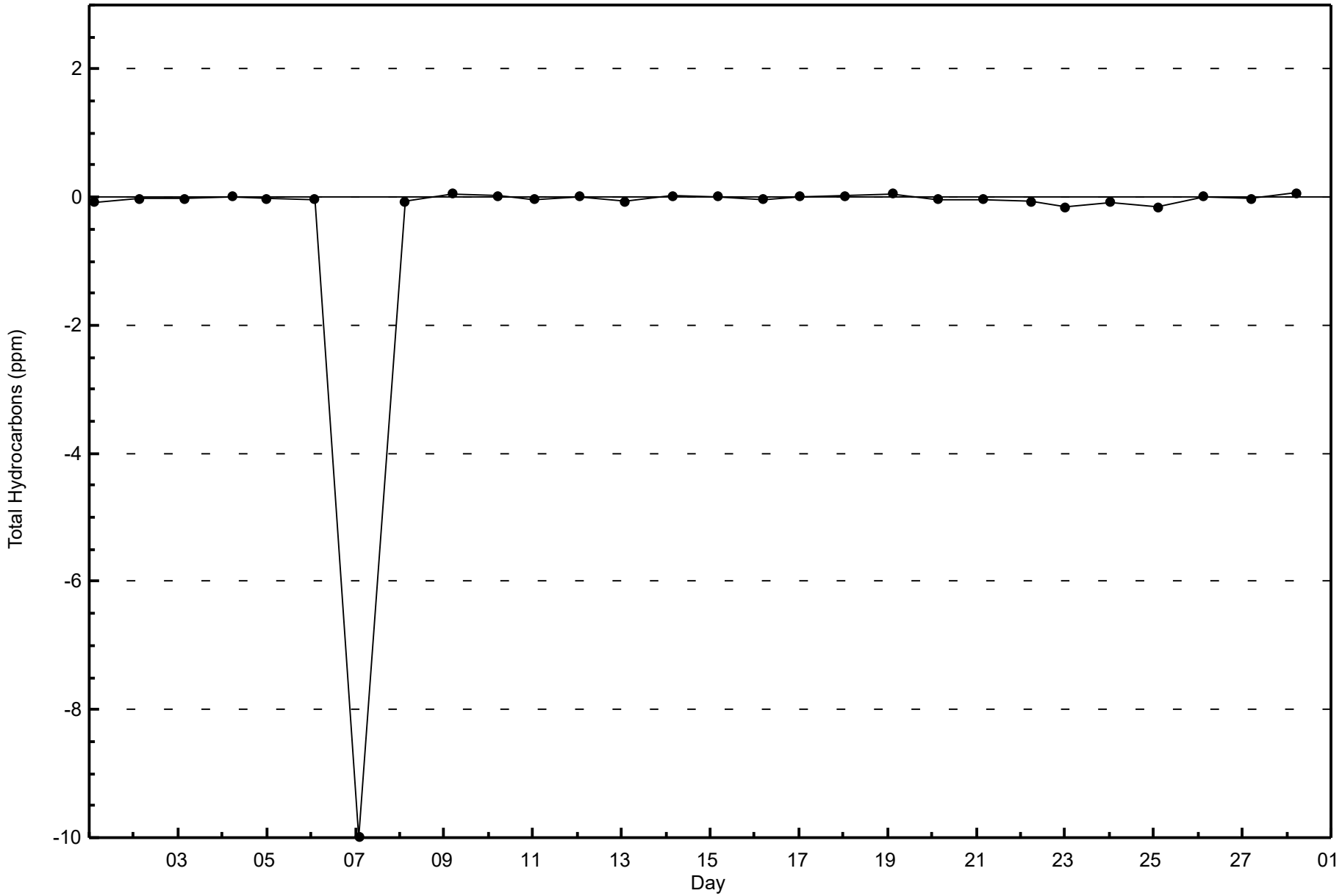
Total Number of Valid Hours: 580

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Firebag - February 2025

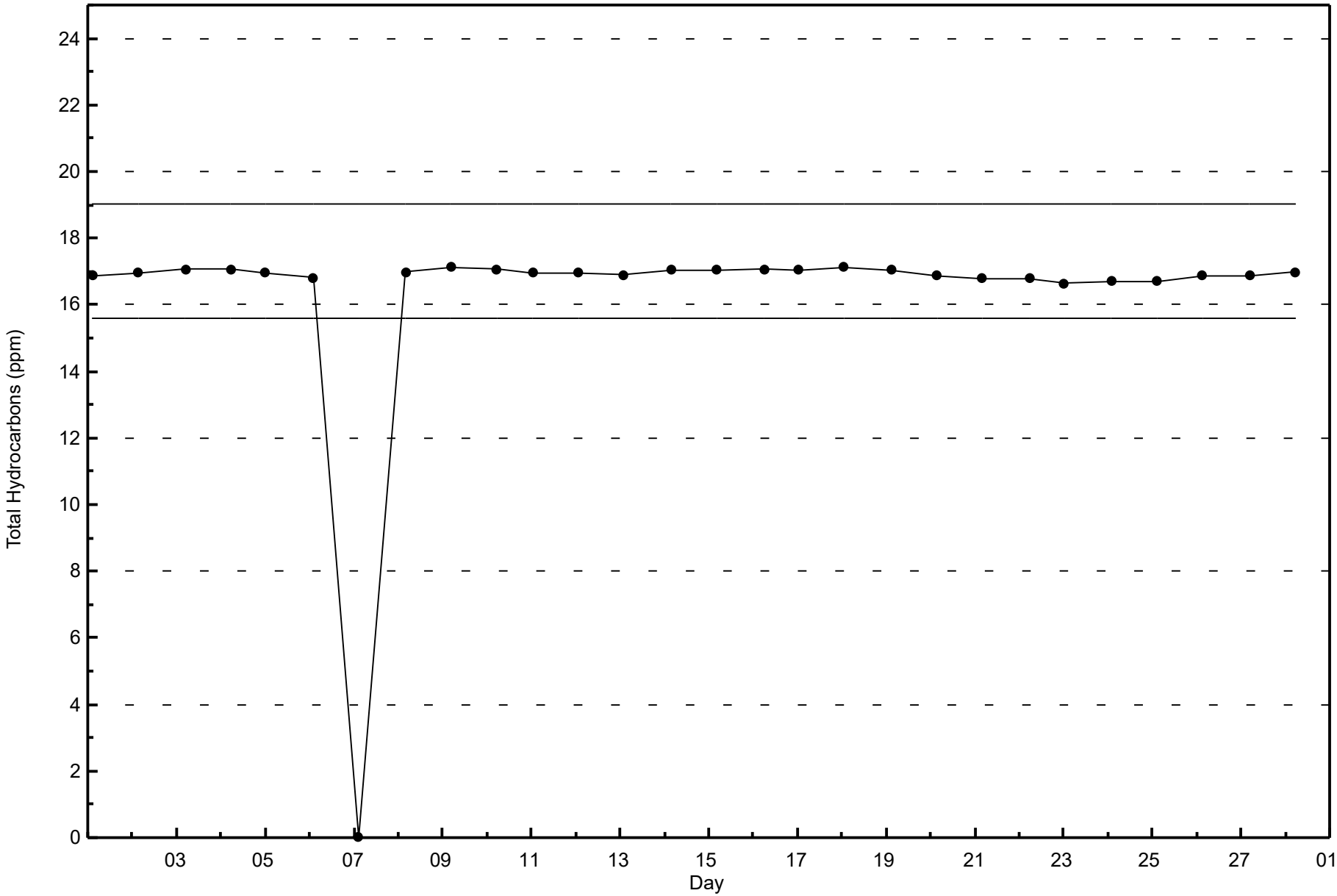


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Firebag - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Firebag - February 2025

Maximum Value: 71.7 ppb on Feb 14 22:00

Maximum Daily Average: 14.4 ppb on Feb 18

Minimum Value: 0.0 ppb on Feb 1 03:00

Minimum Daily Average: 0.0 ppb on Feb 13

Maximum Diurnal Average: 5.1 ppb at hour 4

Minimum Diurnal Average: 1.0 ppb at hour 18

Monthly Average: 2.84 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.6 Q_3 = 2.7 P_{90} = 7.9 P_{99} = 28.1

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	Z	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	0.2	0.3	0.7	0.0	0.6	0.3	0.3	0.0	0.0	0.0	0.1	0.7
2-Feb	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	0.5	0.8	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8
3-Feb	0.0	0.0	Z	0.0	0.1	0.1	0.0	0.1	1.3	2.7	3.1	1.8	1.2	1.0	1.2	2.6	1.6	0.4	0.2	0.3	0.1	0.1	0.2	0.1	0.8	3.1
4-Feb	0.1	2.2	0.1	Z	0.1	0.3	0.8	0.7	1.0	2.2	3.0	3.8	3.3	1.8	1.5	1.7	1.5	1.4	0.7	0.5	0.5	0.2	0.1	0.3	1.2	3.8
5-Feb	0.2	0.4	0.6	1.1	Z	0.6	0.4	0.4	0.5	0.8	1.2	2.2	2.8	2.4	2.3	2.0	0.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.8
6-Feb	0.0	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.0	0.0	0.1	0.5	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
7-Feb	Z	0.0	0.1	0.2	0.4	0.0	0.0	0.0	0.4	1.3	2.4	2.2	1.8	1.6	1.4	0.7	0.3	1.7	1.2	0.0	0.0	0.2	8.4	4.9	1.3	8.4
8-Feb	0.3	Z	15.0	4.2	2.7	3.1	3.7	27.6	11.2	8.3	10.0	1.2	0.8	1.7	1.6	1.6	0.8	0.1	0.1	0.0	0.0	0.0	0.0	0.0	4.1	27.6
9-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.9	1.0	0.3	0.1	0.1	0.0	0.0	0.4	0.6	0.0	0.1	0.2	1.0
10-Feb	0.0	0.5	0.4	Z	0.2	0.3	0.0	0.1	0.8	1.9	2.5	3.2	4.2	3.9	2.9	2.1	1.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	1.1	4.2
11-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	C	C	C	C	C	0.2	0.0	0.0	0.0	0.0	0.0	0.0	6.6	0.4	6.6
12-Feb	7.6	8.5	24.6	45.3	25.2	Z	17.2	14.3	19.4	6.1	6.0	4.2	2.4	2.7	1.4	1.5	0.8	0.3	0.1	0.0	0.0	0.0	0.0	0.0	8.2	45.3
13-Feb	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
14-Feb	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.7	3.7	2.6	2.0	0.9	0.7	11.1	17.1	71.7	14.7	0.6	5.5	71.7
15-Feb	0.3	0.2	Z	1.4	0.3	0.4	0.6	0.3	3.0	3.3	2.5	2.4	4.9	3.9	5.0	3.0	1.1	0.3	0.0	0.0	0.0	0.0	0.1	0.2	1.4	5.0
16-Feb	2.8	2.4	7.0	Z	21.6	37.2	27.9	25.7	20.3	13.2	15.9	7.5	8.4	11.1	6.1	4.1	3.6	2.6	2.6	3.1	2.4	2.5	3.9	2.5	10.2	37.2
17-Feb	3.3	9.0	10.3	3.7	Z	3.2	1.9	2.4	2.2	4.1	10.4	7.6	6.3	8.3	6.6	2.3	1.9	1.2	1.9	2.4	4.4	6.7	32.4	21.3	6.7	32.4
18-Feb	26.6	30.9	27.6	41.4	26.7	Z	7.4	16.3	28.2	5.9	1.6	1.5	3.9	9.7	16.1	16.8	20.2	6.1	3.5	3.9	8.1	9.1	9.9	10.2	14.4	41.4
19-Feb	Z	7.8	5.4	3.5	3.8	7.2	5.9	3.7	3.1	4.6	3.6	3.0	4.2	3.5	3.2	2.4	1.8	4.6	3.6	1.9	4.2	8.9	10.1	11.9	4.9	11.9
20-Feb	12.3	Z	12.7	13.2	18.2	11.8	2.8	1.3	0.8	1.0	1.3	1.7	2.4	2.1	2.9	2.2	2.3	2.1	4.6	5.4	2.4	0.0	0.0	0.1	4.5	18.2
21-Feb	3.6	17.0	Z	2.4	3.7	2.4	2.8	6.5	12.2	2.3	5.1	1.9	1.5	1.2	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	2.8	17.0
22-Feb	0.8	0.9	0.7	Z	1.0	1.3	1.0	0.6	0.5	0.7	0.8	0.9	1.6	5.8	4.0	1.1	8.4	0.7	11.0	1.1	0.6	3.3	1.9	2.1	2.2	11.0
23-Feb	1.4	0.8	1.1	0.6	Z	1.1	0.8	0.7	0.2	6.7	2.4	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	0.7	6.7
24-Feb	0.0	0.0	0.0	0.2	0.8	Z	0.0	1.8	1.6	4.3	2.6	2.0	1.7	1.9	1.5	1.2	1.7	0.7	0.1	0.1	0.1	0.3	0.1	0.0	1.0	4.3
25-Feb	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	1.6	1.3	0.8	0.2	0.6	0.9	0.6	1.3	0.4	0.1	0.4	1.6
26-Feb	0.0	Z	0.2	0.4	0.1	0.1	0.1	5.1	1.5	0.0	0.0	0.0	0.0	0.1	0.3	2.0	1.5	0.9	0.5	1.5	1.1	0.7	0.9	0.8	0.8	5.1
27-Feb	0.5	0.8	Z	0.6	1.6	1.0	5.6	0.9	3.1	3.0	0.5	2.0	5.0	2.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	5.6
28-Feb	0.0	0.0	0.0	Z	0.0	0.2	1.5	8.7	5.7	3.8	3.3	2.8	2.8	3.9	4.2	4.5	9.0	3.5	1.9	0.8	11.2	11.8	10.7	3.0	4.1	11.8
	2.6	3.5	4.6	5.1	4.4	2.8	3.0	4.2	4.2	2.7	2.8	1.9	2.2	2.7	2.6	2.1	2.2	1.0	1.2	1.2	1.9	4.2	3.4	2.3	Diurnal Average	
	26.6	30.9	27.6	45.3	26.7	37.2	27.9	27.6	28.2	13.2	15.9	7.6	8.4	11.1	16.1	16.8	20.2	6.1	11.0	11.1	17.1	71.7	32.4	21.3	Diurnal Maximum	

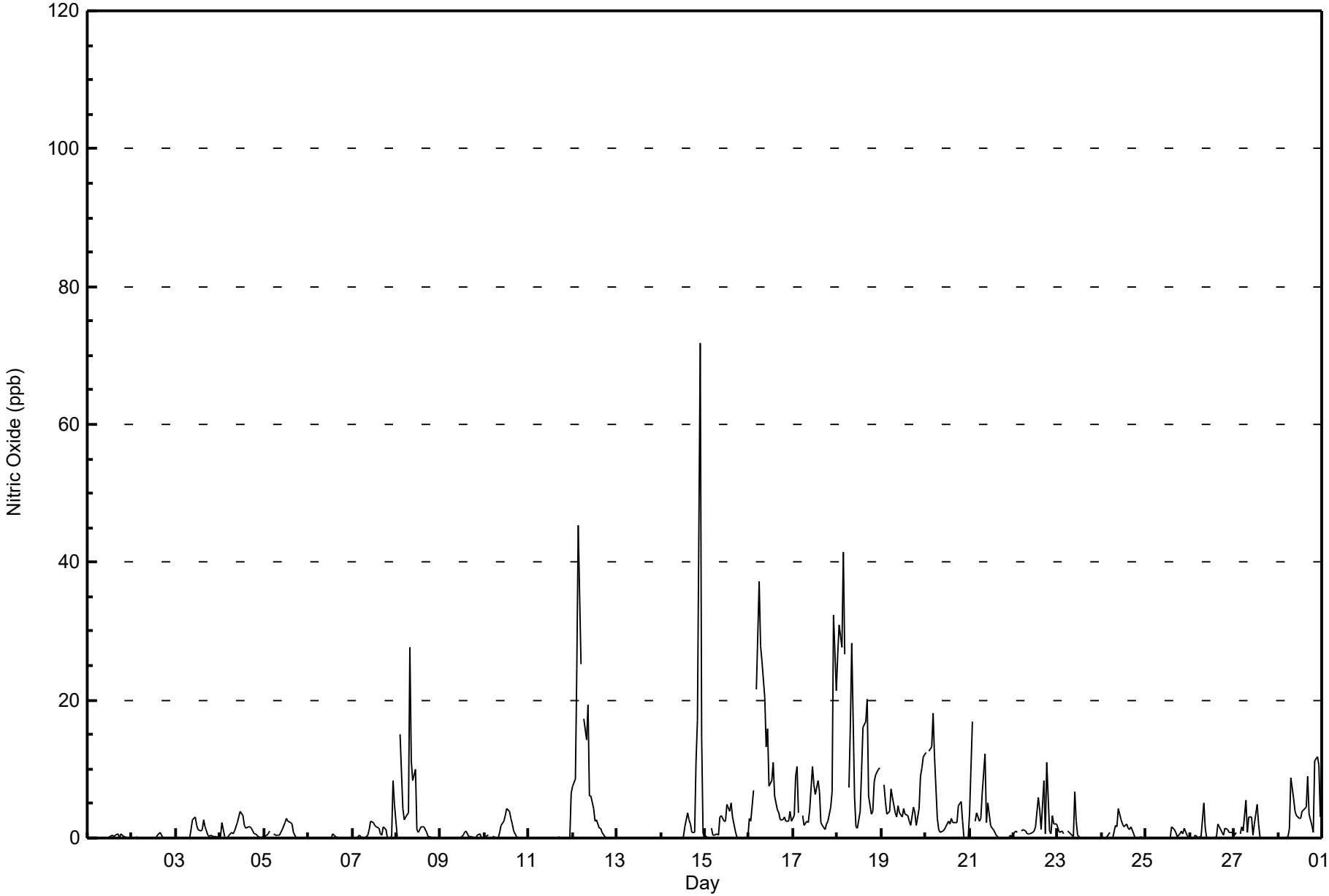
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Firebag - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	622	97.34	97.34
21 - 40	14	2.19	99.53
11 - 80	3	0.47	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Firebag - February 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	43	20	13	7	10	27	66	47	23	55	65	29	9	20	36	567
21 - 40	0	0	0	0	0	0	0	2	11	1	0	0	0	0	0	0	14
11 - 80	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	3
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	97	43	20	13	7	10	27	68	60	24	55	65	30	9	20	36	584

Total Number of Valid Hours: 584

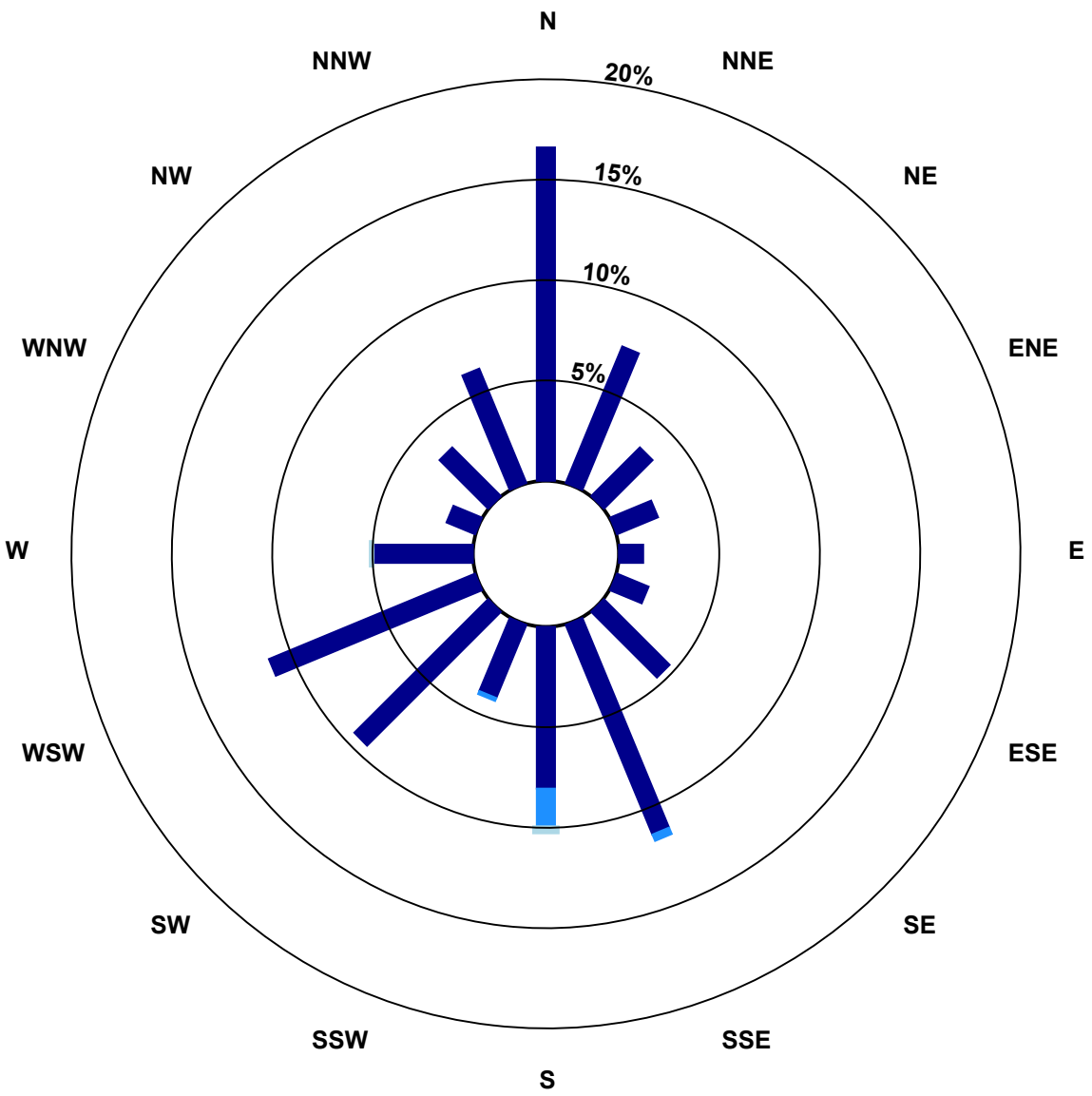
Total Number of Hours: 672

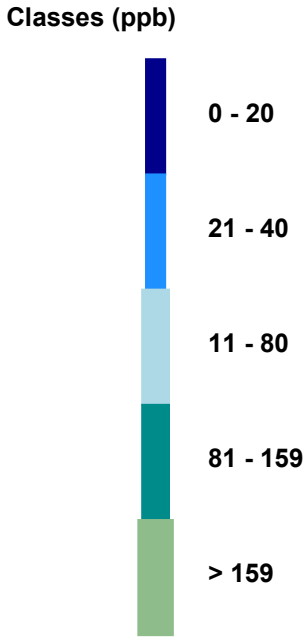
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitric Oxide (NO) - ppb

Firebag





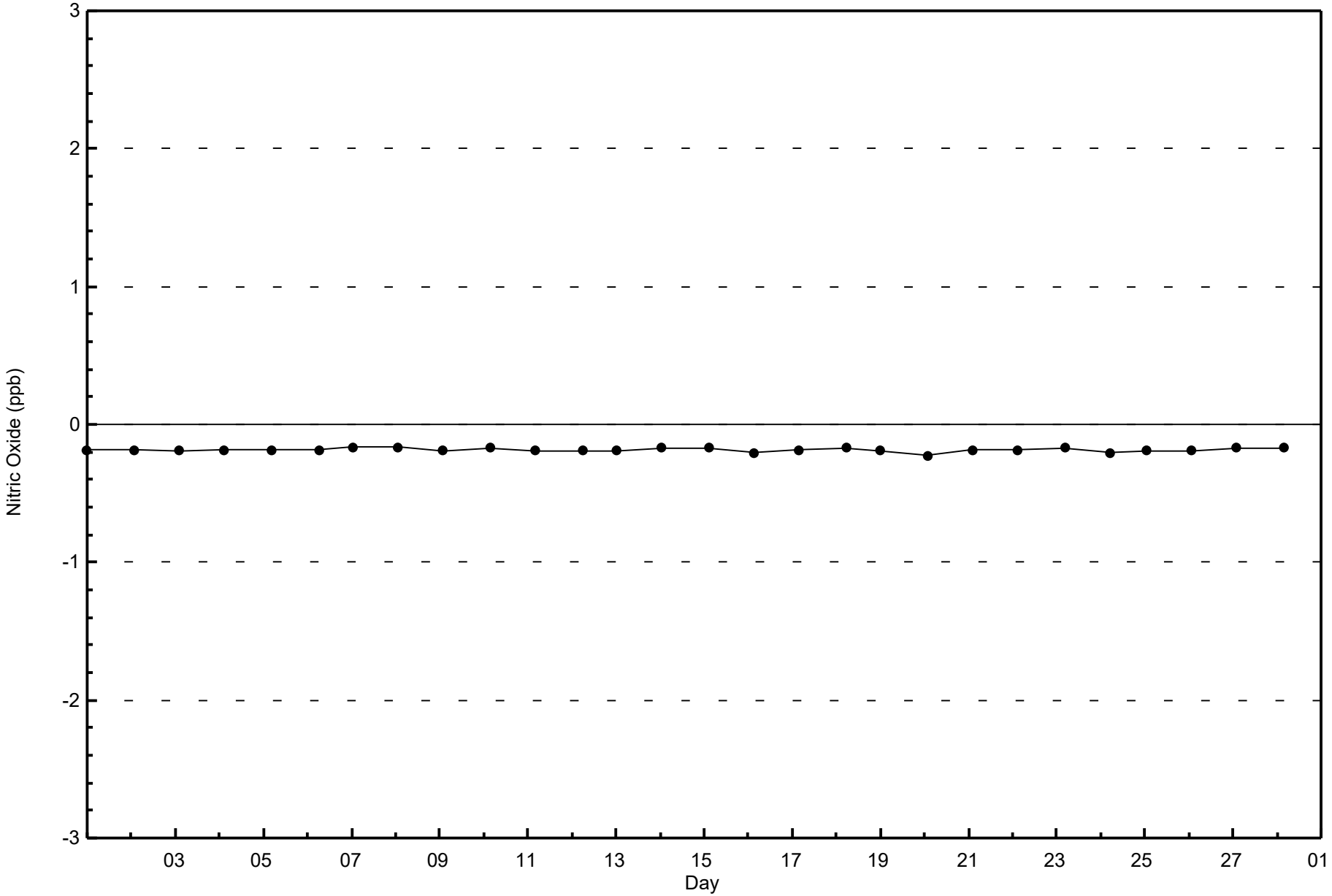
Total Number of Valid Hours: 584

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Firebag - February 2025

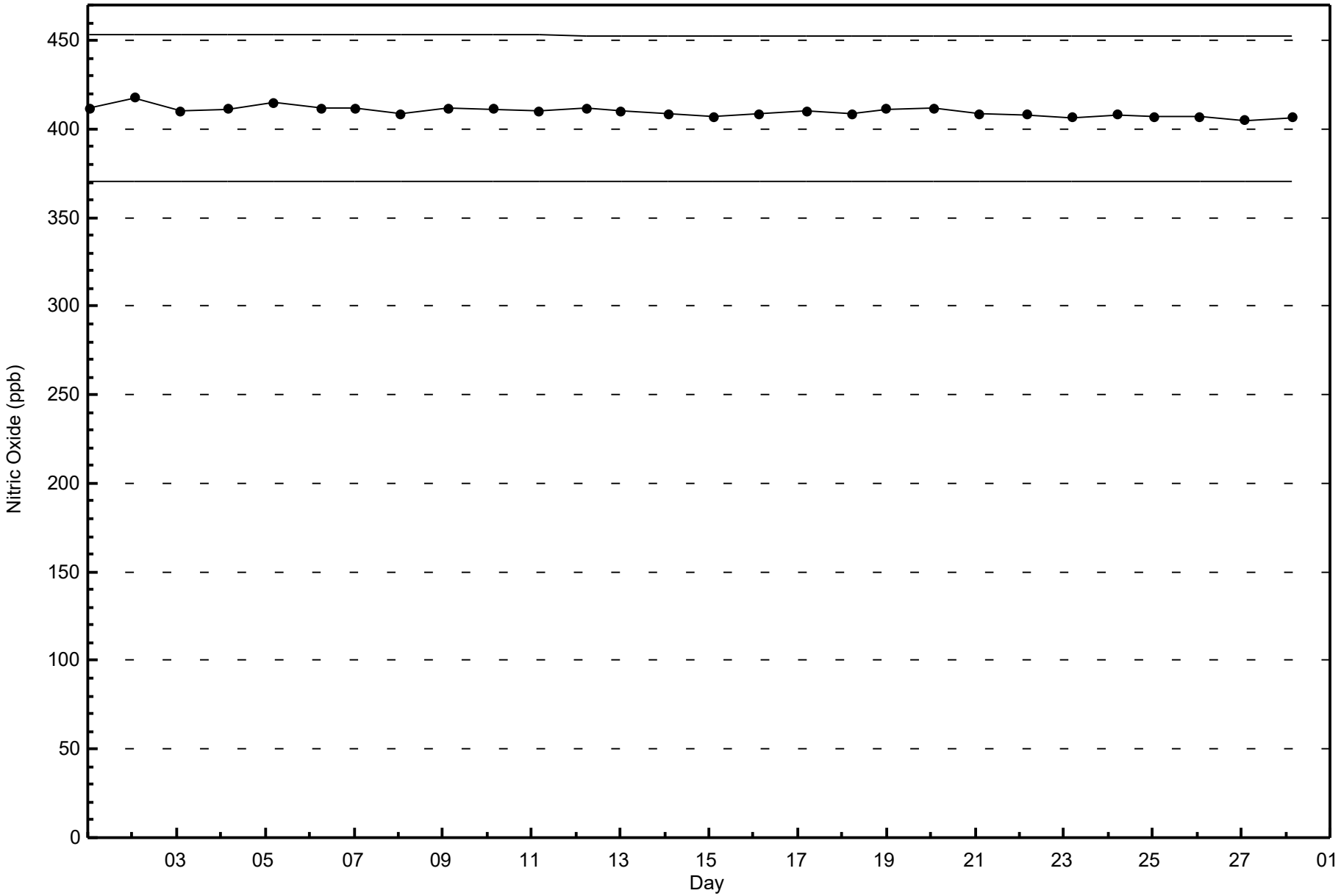


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Firebag - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Firebag - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 42.0 ppb on Feb 8 08:00 Maximum Daily Average: 16.6 ppb on Feb 18

Minimum Value: 0.1 ppb on Feb 1 03:00 Minimum Daily Average: 0.3 ppb on Feb 2
Maximum Diurnal Average: 11.1 ppb at hour 5 Minimum Diurnal Average: 3.1 ppb at hour 12
Monthly Average: 6.94 ppb Percentiles: P_1 = 0.1 P_{10} = 0.3 Q_1 = 1.3 Median = 4.7 Q_3 = 9.1 P_{90} = 17.3 P_{99} = 31.9

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	Z	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.6	1.2	0.7	1.5	3.3	0.2	2.1	2.1	1.0	0.4	0.2	0.2	0.6	3.3
2-Feb	0.1	Z	0.5	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	1.0	2.2	1.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	2.2
3-Feb	0.1	0.1	Z	7.6	8.8	11.0	9.8	17.3	14.4	7.2	5.0	2.8	2.1	2.0	3.2	8.7	13.2	9.3	9.1	7.4	6.9	7.3	6.8	8.4	7.3	17.3
4-Feb	9.2	15.8	12.3	Z	12.1	11.2	13.4	9.5	8.2	6.5	5.1	5.5	5.2	3.3	3.4	4.1	4.2	5.4	5.1	4.9	4.8	5.1	6.0	7.0	7.3	15.8
5-Feb	7.1	6.1	5.2	5.2	Z	4.5	5.1	5.7	6.2	5.6	4.8	6.2	6.4	6.7	6.5	7.5	9.5	8.2	7.6	8.2	7.8	7.1	6.6	6.6	6.5	9.5
6-Feb	7.4	7.2	9.2	8.3	7.4	6.5	Z	8.4	0.9	0.6	0.3	0.2	0.4	1.4	1.1	0.7	0.5	5.7	3.3	3.8	8.7	4.7	3.8	9.7	4.4	9.7
7-Feb	Z	7.2	13.8	13.6	10.5	9.7	6.8	6.7	6.2	4.5	4.6	3.7	3.0	3.1	3.4	2.4	4.0	9.7	11.8	13.4	5.6	9.1	26.0	18.2	8.6	26.0
8-Feb	12.7	Z	26.7	17.3	19.0	22.3	26.0	42.0	29.1	17.6	14.3	2.7	2.0	3.6	3.9	5.9	8.3	13.4	23.4	7.7	0.6	0.2	0.2	0.2	13.0	42.0
9-Feb	0.4	0.9	Z	1.9	1.1	1.8	1.4	0.4	0.2	0.2	0.2	0.2	0.7	1.0	1.4	0.6	1.0	5.0	7.8	10.8	14.0	15.7	8.7	14.2	3.9	15.7
10-Feb	10.1	14.1	9.1	Z	13.4	11.6	10.7	9.0	7.7	5.9	5.0	5.2	5.7	5.6	6.3	7.7	8.3	10.0	10.1	5.1	3.9	3.4	2.4	1.4	7.5	14.1
11-Feb	0.8	0.5	0.4	0.3	Z	0.3	0.3	0.3	0.3	0.2	0.2	C	C	C	C	C	2.2	1.5	2.4	6.4	8.6	5.0	1.9	20.4	2.9	20.4
12-Feb	27.4	24.8	31.5	41.4	32.1	Z	23.3	21.1	22.6	10.1	8.5	5.7	3.3	4.2	2.4	3.6	2.9	2.0	2.5	2.2	2.0	1.7	1.5	1.2	12.1	41.4
13-Feb	Z	1.0	0.8	0.9	1.0	0.3	0.4	0.4	0.5	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.8	0.4	1.0
14-Feb	0.5	Z	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.3	0.5	2.0	4.7	5.2	7.9	16.7	17.3	30.6	33.2	41.6	28.5	14.0	8.9	41.6
15-Feb	11.0	11.5	Z	27.4	22.5	25.6	26.5	19.6	15.4	9.3	5.5	3.6	6.2	5.9	8.2	7.9	6.7	9.3	1.4	0.2	0.5	1.3	3.4	1.4	10.0	27.4
16-Feb	11.3	9.1	14.4	Z	28.7	38.3	30.6	27.9	20.2	12.5	13.1	5.9	6.5	9.0	5.8	4.9	5.1	4.1	3.8	3.6	3.4	2.7	4.1	3.5	11.7	38.3
17-Feb	5.3	11.2	11.5	5.7	Z	5.8	4.3	4.5	3.7	5.1	8.5	6.7	5.5	6.3	5.6	2.5	2.6	3.1	4.6	5.2	8.1	11.8	30.5	25.3	8.0	30.5
18-Feb	26.5	31.0	29.8	40.5	29.4	Z	13.3	20.9	26.4	6.9	2.3	1.9	3.9	8.9	13.7	15.3	21.2	11.3	8.5	9.7	15.3	16.1	14.0	14.7	16.6	40.5
19-Feb	Z	13.4	10.4	7.6	7.9	11.6	8.7	6.4	5.8	6.0	3.9	3.4	4.7	4.1	3.9	3.8	3.7	6.6	6.3	4.3	7.0	11.3	13.1	15.3	7.4	15.3
20-Feb	16.3	Z	19.5	19.0	23.2	16.6	7.2	4.9	3.7	3.6	3.6	4.0	4.4	4.1	5.4	6.0	9.2	16.7	20.0	30.2	22.4	5.7	9.5	19.6	11.9	30.2
21-Feb	14.7	29.2	Z	12.1	16.1	19.0	13.2	18.1	19.3	6.9	9.7	4.1	3.1	3.9	2.4	1.7	1.3	1.2	1.2	1.2	1.0	0.9	4.0	4.4	8.2	29.2
22-Feb	6.9	4.7	4.8	Z	4.6	4.4	4.1	3.5	2.9	2.9	2.8	2.9	3.9	8.2	6.8	3.4	11.3	4.6	14.5	8.4	5.7	8.6	6.2	7.0	5.8	14.5
23-Feb	5.0	4.3	6.3	5.4	Z	5.6	3.1	2.6	3.6	11.4	5.5	1.7	0.7	0.7	0.7	0.8	0.6	1.5	1.7	3.3	2.4	0.6	0.7	0.5	3.0	11.4
24-Feb	0.4	0.4	0.5	9.6	7.4	Z	3.5	13.3	6.0	7.9	4.8	3.2	2.5	2.4	2.5	2.0	3.3	3.1	4.6	17.8	21.6	23.1	12.9	9.1	7.0	23.1
25-Feb	Z	3.0	1.4	0.7	0.5	0.4	0.4	0.4	0.3	0.3	0.4	0.5	0.5	0.4	3.2	5.0	5.6	1.9	4.2	4.5	3.2	5.3	2.7	1.6	2.0	5.6
26-Feb	2.0	Z	10.8	19.6	16.4	18.8	20.9	21.5	8.0	0.6	0.5	0.5	0.5	0.6	0.9	3.3	4.5	7.1	8.0	5.7	4.9	3.8	4.1	3.8	7.3	21.5
27-Feb	2.7	3.4	Z	2.8	4.4	3.9	7.9	4.0	7.2	7.8	3.1	8.6	10.8	3.6	0.8	0.5	0.4	0.3	0.3	0.3	0.2	0.3	1.0	2.9	3.4	10.8
28-Feb	4.5	2.1	0.7	Z	0.6	4.5	7.6	20.1	12.2	6.4	5.4	3.7	3.7	4.7	5.0	5.4	13.7	10.4	7.7	3.3	15.1	16.5	13.8	7.5	7.6	20.1
	7.9	8.7	9.6	10.8	11.1	9.4	9.2	10.3	8.3	5.2	4.2	3.1	3.2	3.6	3.8	4.2	5.6	6.0	6.8	7.2	7.4	7.5	7.6	7.8	Diurnal Average	
	27.4	31.0	31.5	41.4	32.1	38.3	30.6	42.0	29.1	17.6	14.3	8.6	10.8	9.0	13.7	15.3	21.2	16.7	23.4	30.6	33.2	41.6	30.5	25.3	Diurnal Maximum	

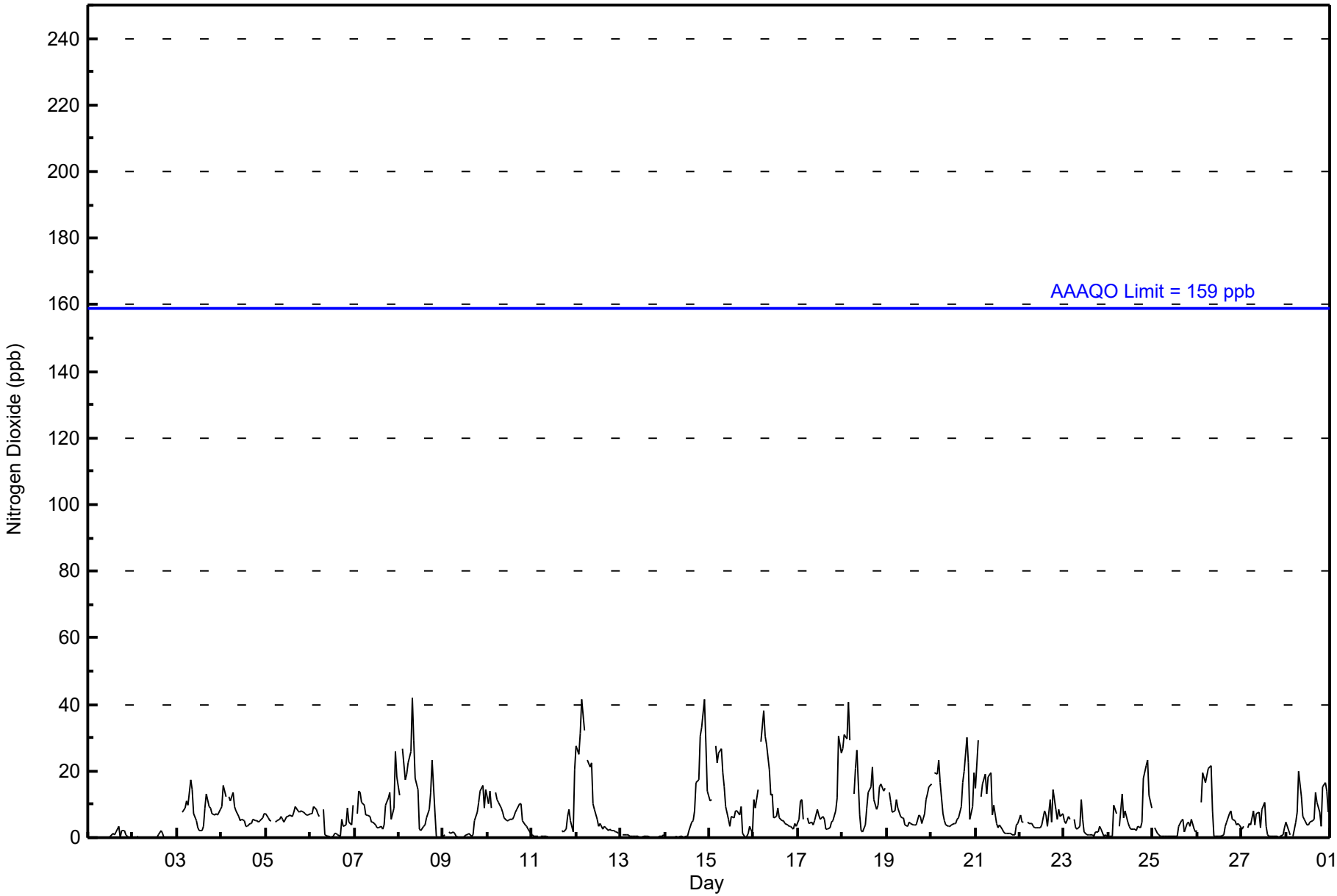
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Firebag - February 2025



Nitrogen Dioxide (NO_2) - ppb
Firebag - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	594	92.96	92.96
21 - 40	41	6.42	99.37
11 - 80	4	0.63	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Firebag - February 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	96	42	19	13	7	10	26	64	42	21	51	64	25	7	19	35	541
21 - 40	1	1	1	0	0	0	1	4	16	2	4	1	4	2	1	1	39
11 - 80	0	0	0	0	0	0	0	0	2	1	0	0	1	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	97	43	20	13	7	10	27	68	60	24	55	65	30	9	20	36	584

Total Number of Valid Hours: 584

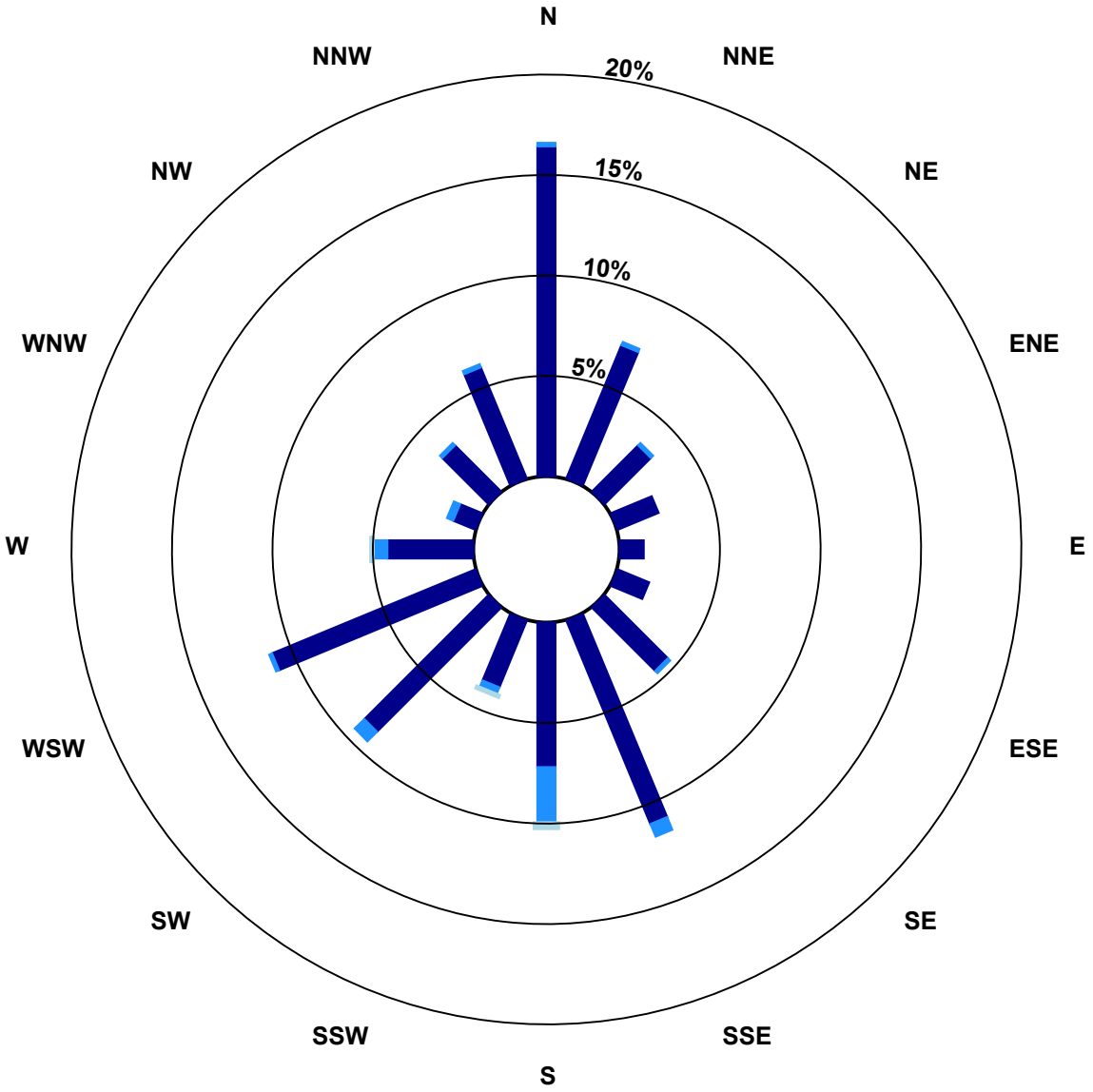
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Dioxide (NO_2) - ppb

Firebag



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

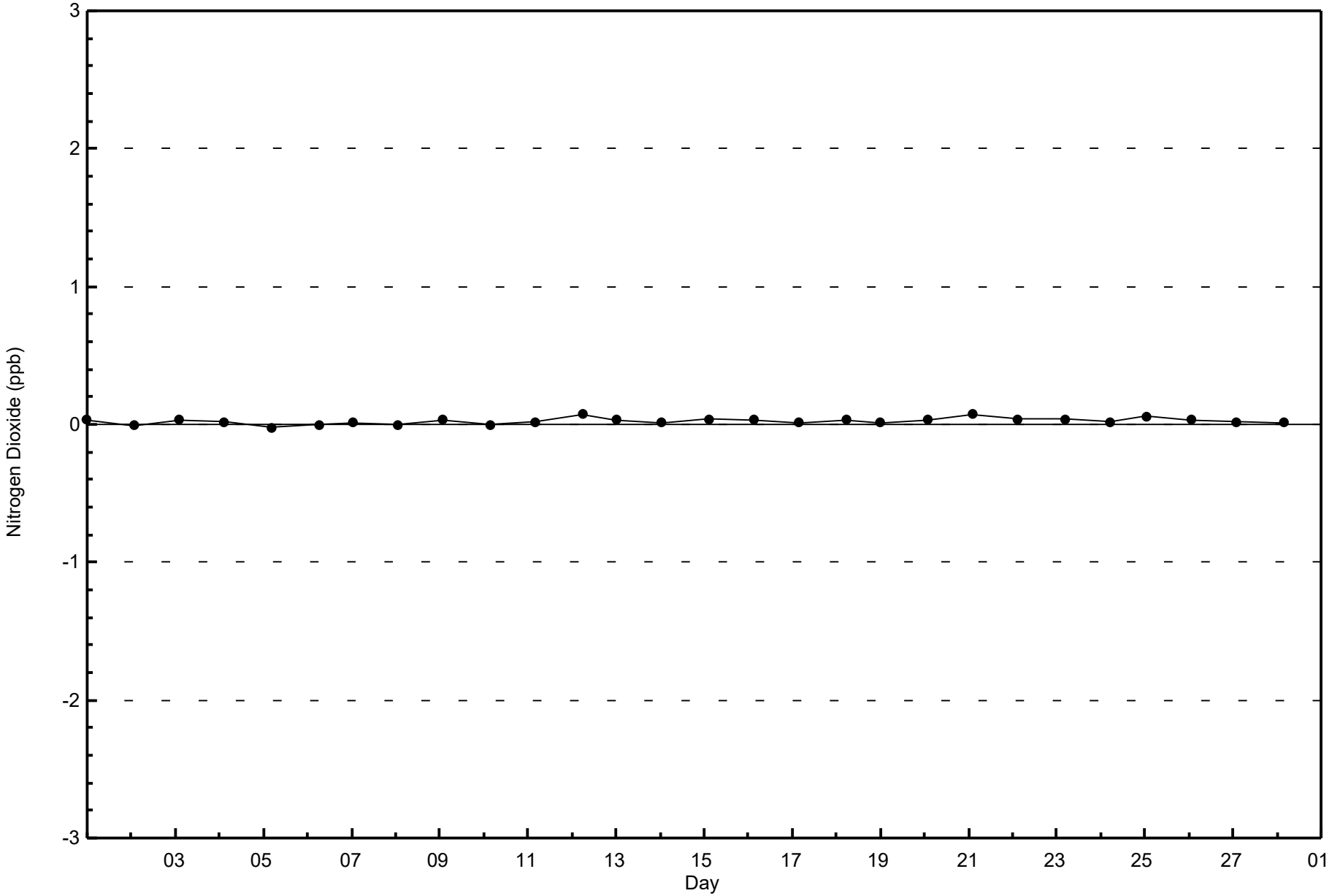
Total Number of Valid Hours: 584

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Firebag - February 2025

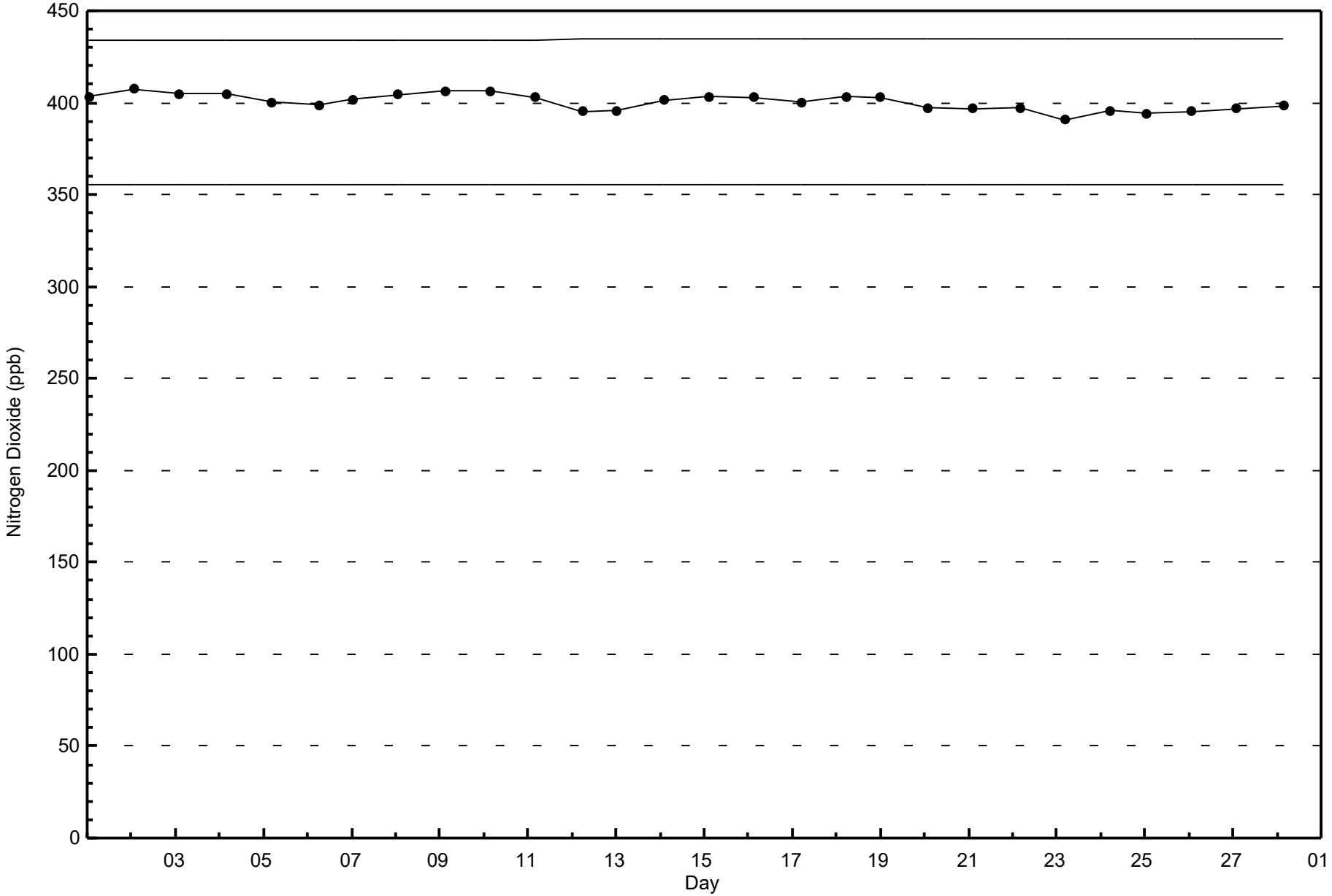


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Firebag - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Firebag - February 2025

Maximum Value: 113.3 ppb on Feb 14 22:00

Maximum Daily Average: 31.0 ppb on Feb 18

Minimum Value: 0.1 ppb on Feb 1 09:00

Minimum Daily Average: 0.4 ppb on Feb 2

Maximum Diurnal Average: 15.9 ppb at hour 4

Minimum Diurnal Average: 5.0 ppb at hour 12

Monthly Average: 9.78 ppb

Percentiles: P_1 = 0.1 P_{10} = 0.3 Q_1 = 1.4 Median = 6.2 Q_3 = 11.3 P_{90} = 23.6 P_{99} = 60.6

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	Z	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.8	1.6	0.9	1.8	4.0	0.2	2.7	2.4	1.3	0.4	0.2	0.2	0.8	4.0
2-Feb	0.1	Z	0.6	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	1.5	3.0	1.6	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	3.0
3-Feb	0.1	0.1	Z	7.6	8.9	11.1	9.8	17.4	15.7	9.9	8.1	4.6	3.3	3.0	4.4	11.3	14.8	9.7	9.3	7.7	7.0	7.4	7.0	8.5	8.1	17.4
4-Feb	9.3	18.0	12.4	Z	12.2	11.5	14.2	10.2	9.2	8.7	8.1	9.3	8.5	5.1	4.9	5.8	5.7	6.8	5.8	5.4	5.3	5.3	6.1	7.3	8.5	18.0
5-Feb	7.3	6.5	5.8	6.3	Z	5.1	5.5	6.1	6.7	6.4	6.0	8.4	9.2	9.1	8.8	9.5	10.3	8.3	7.6	8.2	7.8	7.1	6.6	6.6	7.4	10.3
6-Feb	7.4	7.2	9.2	8.3	7.4	6.5	Z	8.4	0.9	0.7	0.3	0.2	0.5	1.9	1.4	0.8	0.5	5.7	3.3	3.8	8.7	4.7	3.8	9.7	4.4	9.7
7-Feb	Z	7.2	13.9	13.8	10.9	9.7	6.8	6.7	6.6	5.8	7.0	5.9	4.8	4.7	4.8	3.1	4.3	11.4	13.0	13.4	5.6	9.3	34.4	23.1	9.8	34.4
8-Feb	13.0	Z	41.7	21.5	21.7	25.4	29.7	69.6	40.3	25.9	24.3	3.9	2.8	5.3	5.5	7.5	9.1	13.5	23.5	7.7	0.6	0.2	0.2	0.2	17.1	69.6
9-Feb	0.4	0.9	Z	1.9	1.1	1.8	1.4	0.4	0.2	0.2	0.2	0.2	1.2	1.9	2.4	0.9	1.1	5.1	7.8	10.8	14.4	16.3	8.7	14.3	4.1	16.3
10-Feb	10.1	14.6	9.5	Z	13.6	11.9	10.7	9.1	8.5	7.8	7.5	8.4	9.9	9.5	9.2	9.8	9.3	10.2	10.1	5.1	3.9	3.4	2.4	1.4	8.5	14.6
11-Feb	0.8	0.5	0.4	0.3	Z	0.3	0.3	0.3	0.3	0.2	0.2	C	C	C	C	C	2.4	1.5	2.4	6.4	8.6	5.0	1.9	27.0	3.3	27.0
12-Feb	35.0	33.3	56.1	86.7	57.3	Z	40.5	35.4	42.0	16.2	14.5	9.9	5.7	6.9	3.8	5.1	3.7	2.3	2.6	2.2	2.0	1.7	1.5	1.2	20.2	86.7
13-Feb	Z	1.0	0.8	0.9	1.0	0.3	0.4	0.4	0.5	0.4	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.8	0.4	1.0
14-Feb	0.5	Z	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.3	0.7	3.7	8.4	7.8	9.9	17.6	18.0	41.7	50.3	113.3	43.2	14.6	14.4	113.3
15-Feb	11.3	11.7	Z	28.8	22.8	26.0	27.1	19.9	18.4	12.6	8.0	6.0	11.1	9.8	13.2	10.9	7.8	9.6	1.4	0.2	0.5	1.3	3.5	1.6	11.5	28.8
16-Feb	14.1	11.5	21.4	Z	50.3	75.5	58.5	53.6	40.5	25.7	29.0	13.4	14.9	20.1	11.9	9.0	8.7	6.7	6.4	6.7	5.8	5.2	8.0	6.0	21.9	75.5
17-Feb	8.6	20.2	21.8	9.4	Z	9.0	6.2	6.9	5.9	9.2	18.9	14.3	11.8	14.6	12.2	4.8	4.5	4.3	6.5	7.6	12.5	18.5	62.9	46.6	14.7	62.9
18-Feb	53.1	61.9	57.4	81.9	56.1	Z	20.7	37.2	54.6	12.8	3.9	3.4	7.8	18.6	29.8	32.1	41.4	17.4	12.0	13.6	23.4	25.2	23.9	24.9	31.0	81.9
19-Feb	Z	21.2	15.8	11.1	11.7	18.8	14.6	10.1	8.9	10.6	7.5	6.4	8.9	7.6	7.1	6.2	5.5	11.2	9.9	6.2	11.2	20.2	23.2	27.2	12.2	27.2
20-Feb	28.6	Z	32.2	32.2	41.4	28.4	10.0	6.2	4.5	4.6	4.9	5.7	6.8	6.2	8.3	8.2	11.5	18.8	24.6	35.6	24.8	5.7	9.5	19.7	16.4	41.4
21-Feb	18.3	46.2	Z	14.5	19.8	21.4	16.0	24.6	31.5	9.2	14.8	6.0	4.6	5.1	2.8	1.9	1.3	1.2	1.2	1.2	1.0	0.9	4.3	4.6	11.0	46.2
22-Feb	7.7	5.6	5.5	Z	5.6	5.7	5.1	4.1	3.4	3.6	3.6	3.8	5.5	14.0	10.8	4.5	19.7	5.3	25.5	9.5	6.3	11.9	8.1	9.1	8.0	25.5
23-Feb	6.4	5.1	7.4	6.0	Z	6.7	3.9	3.3	3.8	18.1	7.9	2.1	0.8	0.8	0.7	0.8	0.6	1.5	1.7	3.3	2.4	0.6	0.7	0.5	3.7	18.1
24-Feb	0.4	0.4	0.5	9.8	8.2	Z	3.5	15.1	7.6	12.2	7.4	5.2	4.2	4.3	4.0	3.2	5.0	3.8	4.7	17.9	21.7	23.4	13.0	9.1	8.0	23.4
25-Feb	Z	3.0	1.4	0.7	0.5	0.4	0.4	0.4	0.3	0.3	0.4	0.5	0.6	0.4	4.8	6.3	6.4	2.1	4.8	5.4	3.8	6.6	3.1	1.7	2.4	6.6
26-Feb	2.0	Z	11.0	20.0	16.5	18.9	21.0	26.6	9.5	0.6	0.5	0.5	0.5	0.7	1.2	5.3	6.0	8.0	8.5	7.2	6.0	4.5	5.0	4.6	8.0	26.6
27-Feb	3.2	4.2	Z	3.4	6.0	4.9	13.5	4.9	10.3	10.8	3.6	10.6	15.8	5.6	0.9	0.6	0.4	0.3	0.3	0.3	0.2	0.3	1.0	2.9	4.5	15.8
28-Feb	4.5	2.1	0.7	Z	0.6	4.7	9.1	28.8	17.9	10.2	8.7	6.5	6.5	8.6	9.2	9.9	22.7	13.9	9.6	4.1	26.3	28.3	24.5	10.5	11.7	28.8
	10.5	12.3	14.2	15.9	15.6	12.2	12.2	14.5	12.5	8.0	7.0	5.0	5.5	6.3	6.4	6.3	7.8	7.0	8.0	8.4	9.3	11.7	11.0	10.1	Diurnal Average	
	53.1	61.9	57.4	86.7	57.3	75.5	58.5	69.6	54.6	25.9	29.0	14.3	15.8	20.1	29.8	32.1	41.4	18.8	25.5	41.7	50.3	113.3	62.9	46.6	Diurnal Maximum	

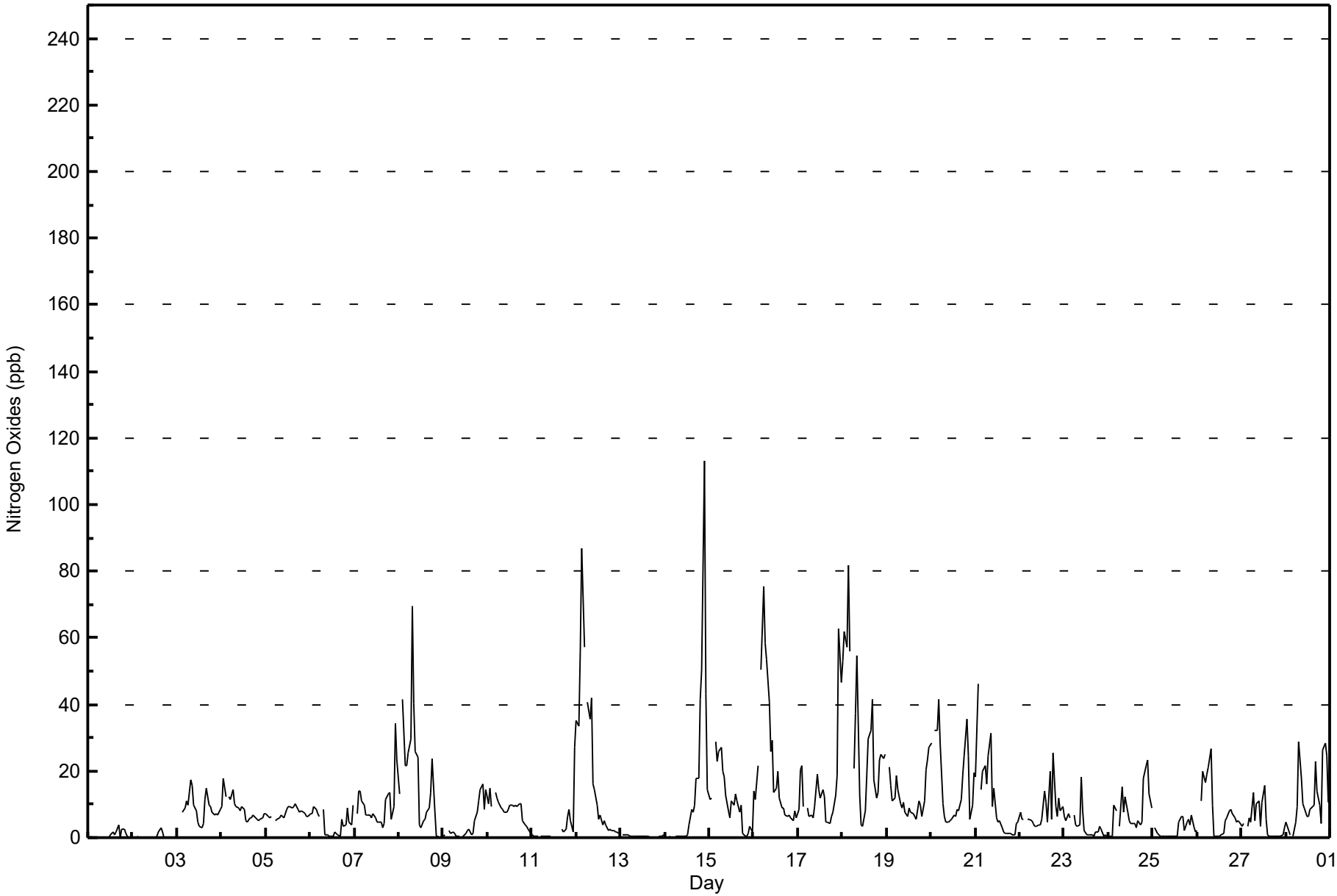
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Firebag - February 2025



Nitrogen Oxides (NO_X) - ppb
Firebag - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	559	87.48	87.48
21 - 40	53	8.29	95.77
11 - 80	24	3.76	99.53
81 - 159	3	0.47	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Firebag - February 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	96	42	19	13	7	9	24	61	21	18	46	64	25	7	19	35	506
21 - 40	1	1	0	0	0	1	2	4	22	5	8	1	4	2	0	0	51
11 - 80	0	0	1	0	0	0	1	3	15	1	1	0	0	0	1	1	24
81 - 159	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	3
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	97	43	20	13	7	10	27	68	60	24	55	65	30	9	20	36	584

Total Number of Valid Hours: 584

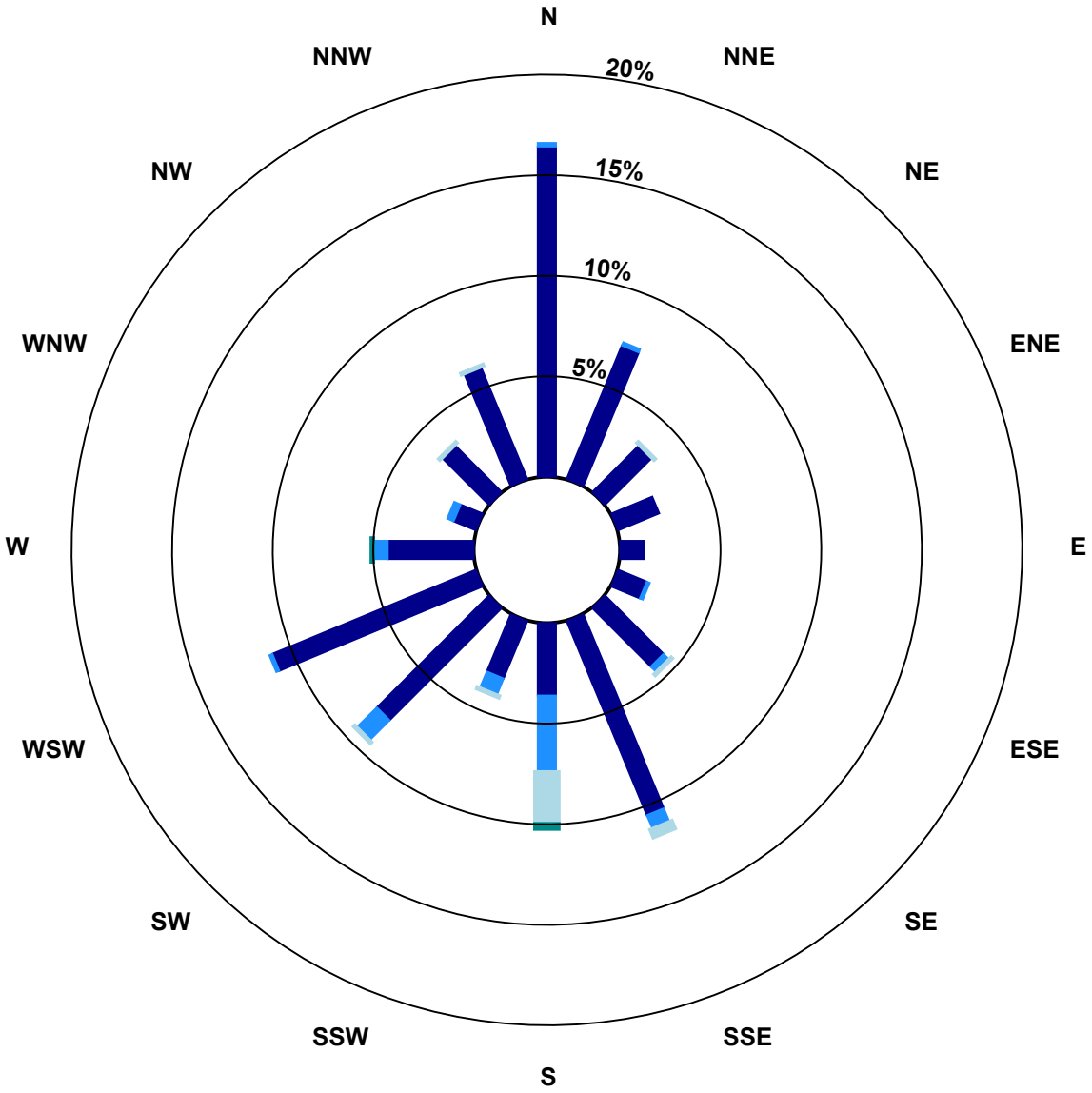
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Oxides (NO_X) - ppb

Firebag



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

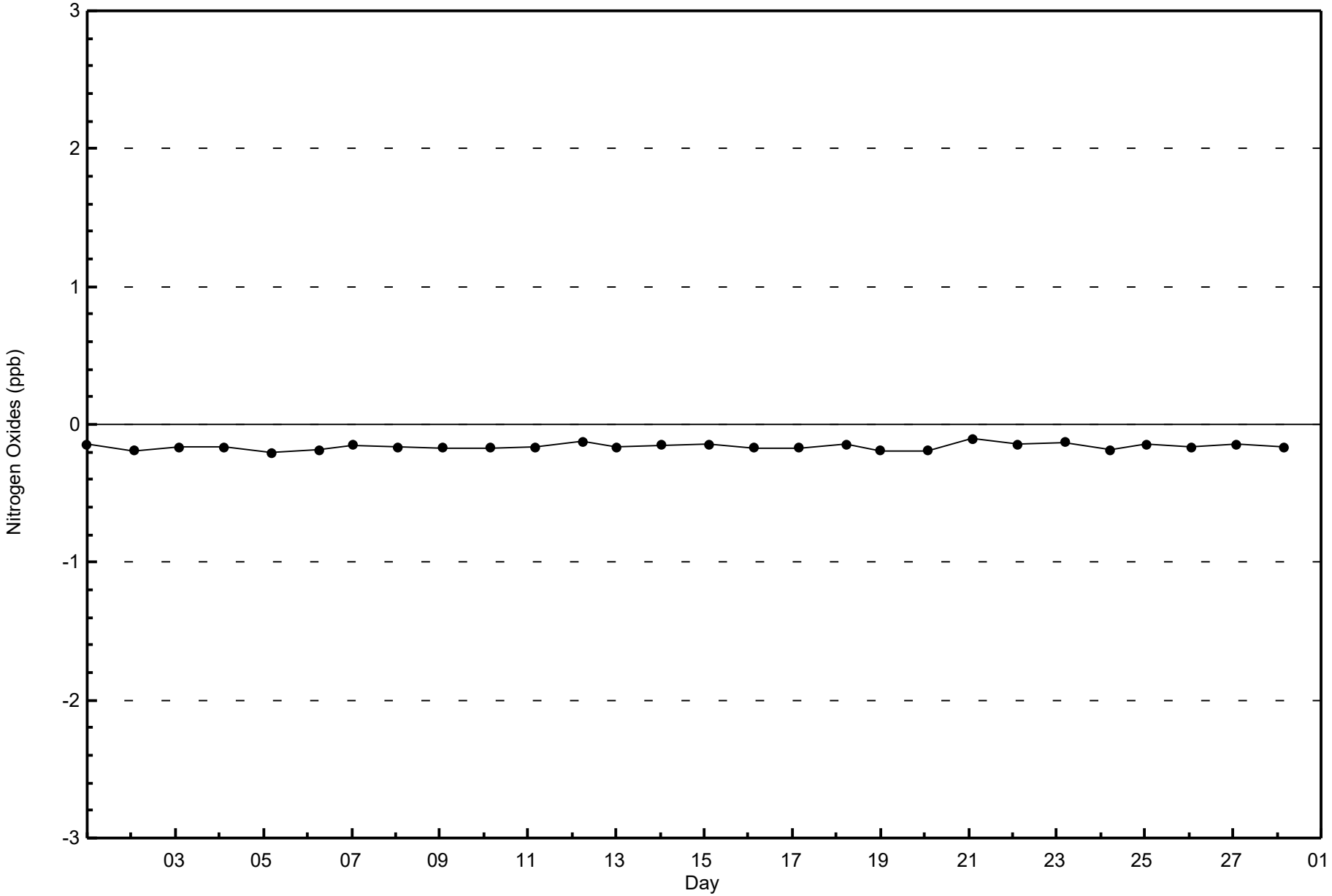
Total Number of Valid Hours: 584

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Firebag - February 2025

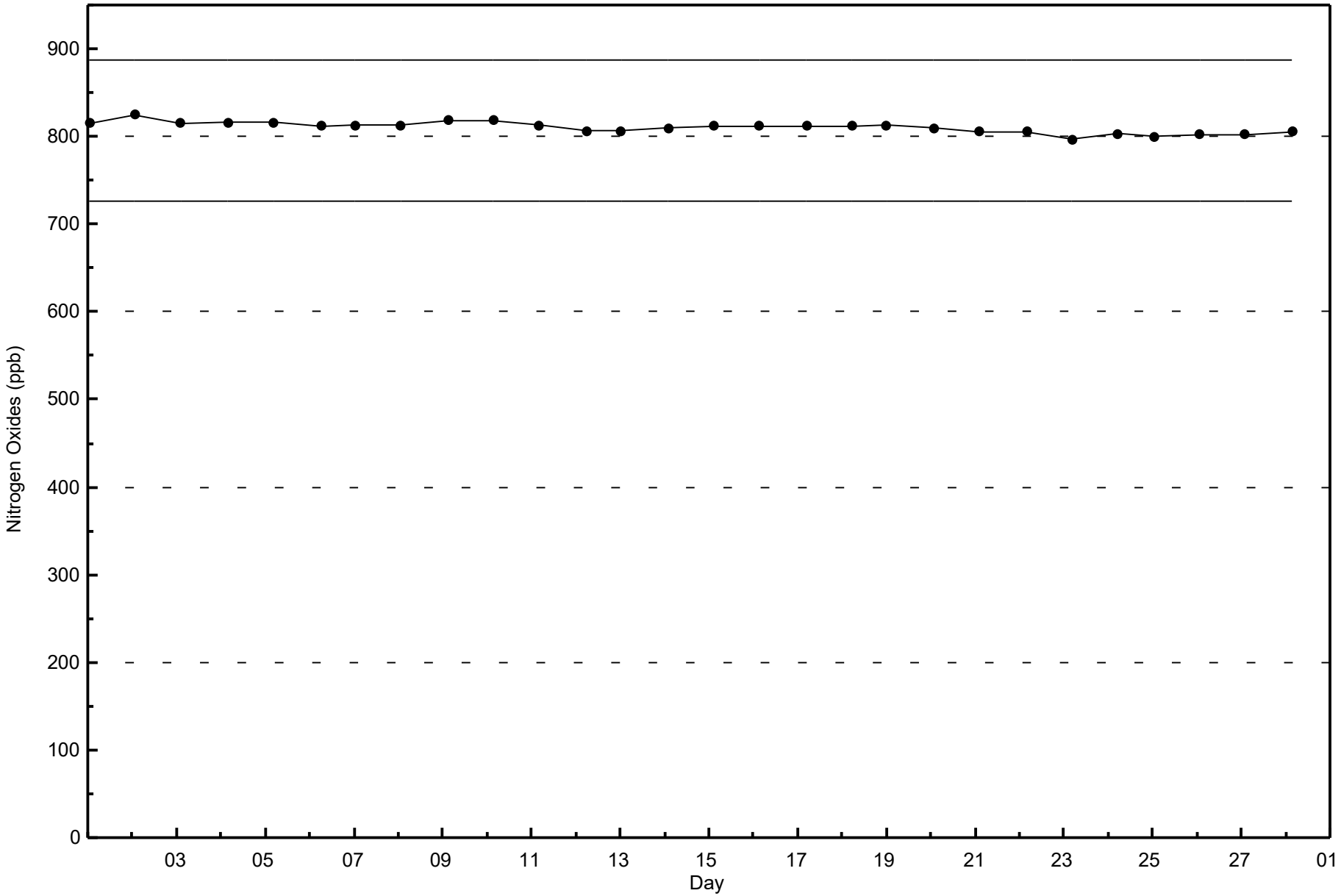


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Firebag - February 2025



Maximum Value: 2.4 C on Feb 23 03:00

Maximum Daily Average: -5.1 C on Feb 23

Minimum Value: -34.8 C on Feb 14 07:00

Minimum Daily Average: -29.5 C on Feb 14

Maximum Diurnal Average: -16.1 C at hour 16

Minimum Diurnal Average: -20.9 C at hour 7

Monthly Average: -19.02 C

Percentiles: P_1 = -32.5 P_{10} = -28.8 Q_1 = -25.9 Median = -21.0 Q_3 = -11.9 P_{90} = -6.9 P_{99} = 1.5

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

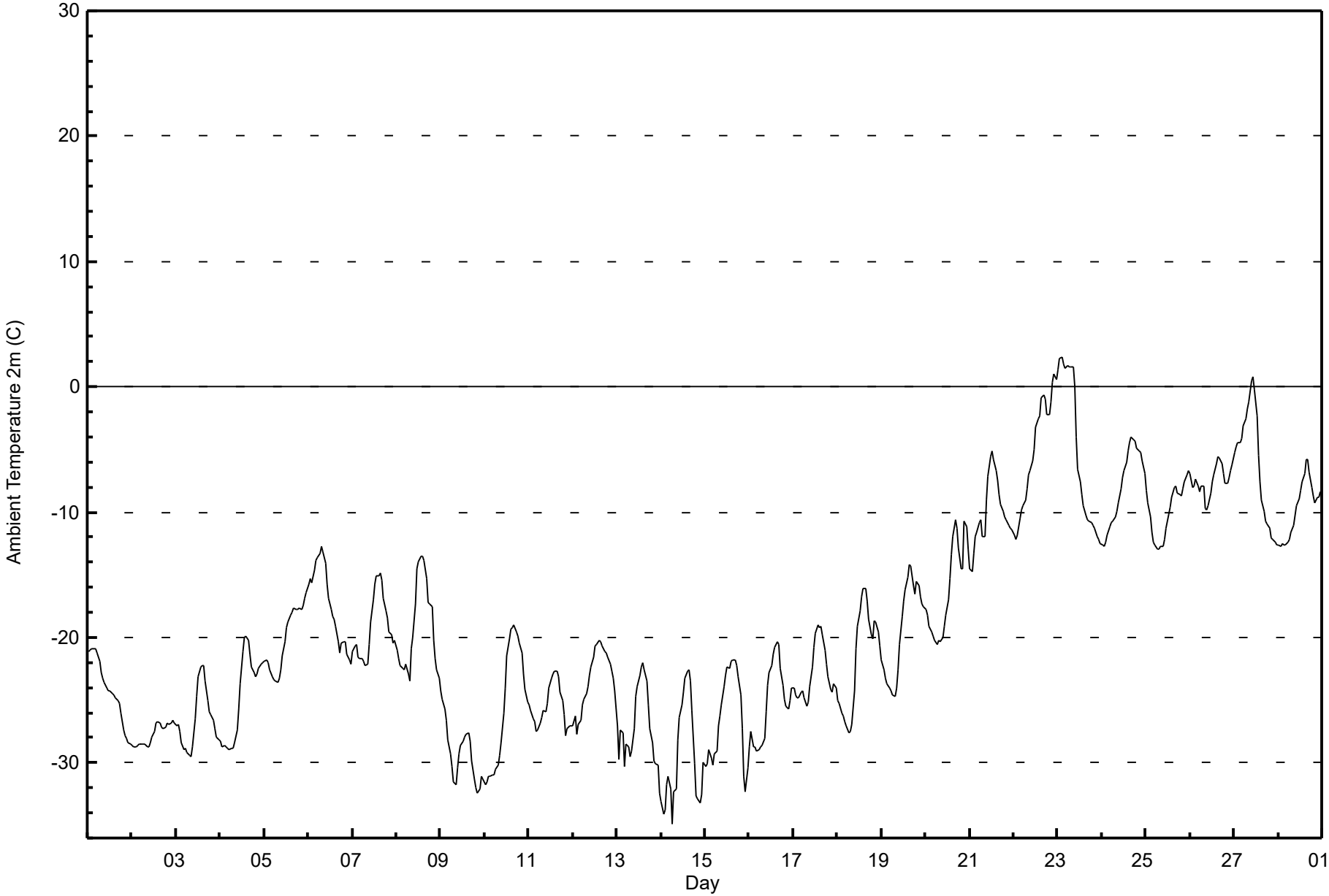
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-21.2	-21.1	-21.0	-21.0	-20.9	-21.3	-21.9	-22.8	-23.3	-23.6	-24.1	-24.2	-24.3	-24.4	-24.6	-24.9	-25.0	-25.3	-26.1	-27.3	-27.8	-28.1	-28.4	-28.5	-24.2	-20.9
2-Feb	-28.6	-28.7	-28.8	-28.6	-28.5	-28.5	-28.5	-28.6	-28.7	-28.7	-28.4	-28.0	-27.5	-26.8	-26.7	-26.9	-27.1	-27.2	-27.2	-26.9	-26.9	-26.8	-26.6	-26.8	-27.8	-26.6
3-Feb	-27.1	-26.9	-27.5	-28.4	-29.0	-28.8	-29.2	-29.4	-29.5	-28.7	-26.5	-24.7	-23.2	-22.4	-22.3	-22.3	-23.4	-25.0	-25.9	-26.2	-26.6	-27.3	-28.0	-28.2	-26.5	-22.3
4-Feb	-28.3	-28.8	-28.6	-28.7	-28.9	-28.9	-28.9	-28.9	-28.4	-27.4	-25.7	-23.7	-21.2	-20.0	-19.9	-20.2	-21.3	-22.4	-22.8	-23.1	-22.9	-22.4	-22.1	-22.0	-24.8	-19.9
5-Feb	-21.9	-21.8	-22.0	-22.6	-23.1	-23.3	-23.5	-23.6	-23.3	-22.6	-21.4	-20.3	-19.3	-18.7	-18.2	-18.0	-17.7	-17.8	-17.7	-17.7	-17.8	-17.4	-16.8	-16.4	-20.1	-16.4
6-Feb	-15.8	-15.3	-15.6	-14.6	-13.9	-13.6	-13.3	-12.7	-13.2	-14.1	-15.7	-16.9	-17.8	-18.3	-18.6	-19.1	-20.4	-21.2	-20.4	-20.3	-20.3	-21.3	-21.7	-22.2	-17.3	-12.7
7-Feb	-21.1	-20.7	-20.6	-21.6	-21.7	-21.7	-21.9	-22.2	-22.2	-20.6	-18.8	-16.9	-15.7	-15.0	-15.0	-14.9	-15.5	-16.9	-17.8	-18.5	-19.5	-19.8	-20.5	-20.2	-19.1	-14.9
8-Feb	-21.0	-21.7	-22.3	-22.4	-22.5	-22.2	-23.0	-23.5	-20.9	-20.0	-17.3	-14.5	-13.9	-13.5	-13.5	-13.8	-15.4	-17.2	-17.4	-17.6	-20.2	-21.7	-22.6	-23.2	-19.2	-13.5
9-Feb	-24.3	-24.9	-25.7	-26.6	-28.2	-29.2	-30.3	-31.5	-31.8	-30.4	-29.3	-28.6	-28.3	-28.0	-27.8	-27.6	-28.3	-29.9	-31.3	-31.9	-32.4	-32.1	-31.1	-31.3	-29.2	-24.3
10-Feb	-31.7	-31.5	-31.1	-31.0	-30.9	-31.0	-30.5	-30.2	-29.4	-28.4	-26.0	-24.0	-21.4	-20.1	-19.3	-19.2	-19.0	-19.5	-19.9	-20.5	-21.2	-22.9	-24.1	-25.1	-25.3	-19.0
11-Feb	-25.4	-25.8	-26.4	-26.7	-27.6	-27.3	-26.9	-26.3	-25.8	-26.0	-25.2	-24.1	-23.2	-22.9	-22.7	-22.6	-23.1	-24.3	-25.1	-26.2	-27.8	-27.2	-27.0	-27.1	-25.5	-22.6
12-Feb	-27.1	-26.2	-27.7	-27.0	-26.6	-25.4	-24.9	-24.4	-23.9	-23.0	-22.4	-21.5	-20.7	-20.5	-20.3	-20.3	-20.7	-21.1	-21.3	-21.6	-22.2	-22.7	-23.3	-24.2	-23.3	-20.3
13-Feb	-27.1	-29.7	-27.4	-27.6	-30.3	-28.5	-28.8	-29.5	-29.1	-27.3	-24.7	-23.9	-23.0	-22.4	-22.0	-22.6	-23.4	-25.3	-27.3	-28.4	-29.9	-30.1	-30.2	-32.4	-27.1	-22.0
14-Feb	-33.1	-34.1	-33.8	-31.8	-31.1	-32.1	-34.8	-32.3	-32.1	-28.2	-26.4	-25.3	-24.3	-23.3	-22.6	-22.6	-23.5	-25.8	-30.1	-32.6	-32.9	-33.2	-32.5	-30.0	-29.5	-22.6
15-Feb	-30.3	-30.0	-29.0	-29.6	-30.2	-29.3	-29.1	-27.0	-26.2	-25.4	-23.9	-23.1	-22.4	-22.5	-21.9	-21.8	-21.8	-22.2	-23.1	-24.5	-27.3	-31.1	-32.4	-30.4	-26.4	-21.8
16-Feb	-28.7	-27.5	-28.8	-28.8	-29.1	-29.0	-28.8	-28.6	-28.1	-25.9	-23.9	-22.8	-22.2	-21.4	-20.8	-20.3	-20.6	-22.4	-23.8	-24.9	-25.5	-25.7	-25.1	-24.1	-25.3	-20.3
17-Feb	-24.0	-24.6	-24.8	-24.8	-24.4	-24.3	-24.8	-25.5	-25.2	-23.9	-22.4	-20.8	-19.6	-19.0	-19.2	-19.2	-19.7	-21.0	-22.1	-23.1	-24.1	-24.4	-23.7	-24.1	-22.9	-19.0
18-Feb	-25.0	-25.3	-26.0	-26.3	-26.7	-27.1	-27.6	-27.4	-27.0	-24.2	-20.9	-19.1	-17.9	-16.7	-16.1	-16.0	-17.1	-18.6	-19.8	-20.1	-18.7	-18.8	-19.6	-20.7	-21.8	-16.0
19-Feb	-21.8	-22.6	-23.2	-23.7	-24.0	-24.2	-24.6	-24.7	-24.0	-22.5	-20.5	-18.3	-17.1	-16.2	-15.2	-14.2	-14.3	-15.9	-16.5	-15.6	-15.9	-16.7	-17.3	-17.6	-19.4	-14.2
20-Feb	-17.8	-18.3	-19.1	-19.5	-19.9	-20.2	-20.6	-20.3	-20.3	-20.0	-19.1	-18.2	-17.0	-15.3	-13.4	-11.9	-10.6	-11.3	-12.8	-14.5	-14.5	-10.7	-11.2	-13.0	-16.2	-10.6
21-Feb	-14.5	-14.7	-13.3	-11.9	-11.6	-10.8	-10.7	-11.9	-11.9	-9.0	-7.1	-5.6	-5.2	-5.8	-6.7	-7.5	-8.6	-9.4	-9.9	-10.3	-10.6	-11.1	-11.3	-11.3	-10.0	-5.2
22-Feb	-11.8	-12.1	-11.9	-10.5	-9.8	-9.5	-9.1	-8.1	-7.1	-6.7	-5.9	-5.1	-3.2	-2.6	-2.3	-0.9	-0.6	-1.0	-2.2	-2.2	-1.2	0.4	1.0	0.5	-5.1	1.0
23-Feb	1.3	2.2	2.4	1.8	1.5	1.7	1.6	1.6	1.6	0.0	-4.0	-6.6	-7.6	-8.6	-9.5	-10.2	-10.6	-10.7	-10.8	-11.1	-11.3	-11.9	-12.1	-12.5	-5.1	2.4
24-Feb	-12.7	-12.8	-12.4	-11.9	-11.2	-10.9	-10.7	-10.4	-9.9	-9.3	-8.2	-7.2	-6.6	-6.0	-5.2	-4.4	-4.0	-4.2	-4.4	-4.9	-5.1	-5.2	-5.9	-6.9	-7.9	-4.0
25-Feb	-8.2	-9.2	-10.3	-11.6	-12.4	-12.6	-12.9	-12.9	-12.8	-12.8	-12.2	-11.3	-10.1	-9.6	-8.9	-8.0	-7.9	-8.4	-8.5	-8.8	-8.2	-7.6	-7.0	-6.7	-10.0	-6.7
26-Feb	-6.9	-8.0	-7.9	-7.3	-7.9	-8.4	-7.9	-7.9	-9.7	-9.8	-9.4	-8.4	-7.6	-7.0	-6.2	-5.6	-5.6	-6.2	-6.9	-7.7	-7.7	-7.3	-6.7	-6.2	-7.5	-5.6
27-Feb	-5.2	-4.7	-4.5	-4.5	-4.1	-3.2	-2.6	-1.8	-1.2	0.5	0.8	-0.2	-2.3	-5.5	-7.6	-9.1	-9.9	-10.8	-10.9	-11.3	-12.1	-12.2	-12.4	-12.6	-6.1	0.8
28-Feb	-12.7	-12.7	-12.5	-12.6	-12.7	-12.4	-12.2	-11.6	-11.1	-10.3	-9.5	-9.0	-8.3	-7.6	-6.9	-5.8	-5.8	-6.8	-8.1	-8.8	-9.3	-8.9	-8.8	-8.4	-9.7	-5.8
	-20.4	-20.6	-20.7	-20.7	-20.9	-20.8	-20.9	-20.8	-20.5	-19.6	-18.5	-17.6	-16.8	-16.4	-16.2	-16.1	-16.5	-17.4	-18.2	-18.8	-19.3	-19.4	-19.6	-19.7	Diurnal Average	
	1.3	2.2	2.4	1.8	1.5	1.7	1.6	1.6	1.6	0.5	0.8	-0.2	-2.3	-2.6	-2.3	-0.9	-0.6	-1.0	-2.2	-2.2	-1.2	0.4	1.0	0.5	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Firebag - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	374	55.65	55.65
-20 - 0	283	42.11	97.77
0 - 10	15	2.23	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Firebag - February 2025

Maximum Value: 97.5 % on Feb 23 09:00

Maximum Daily Average: 90.3 % on Feb 24

Minimum Value: 36.0 % on Feb 18 15:00

Minimum Daily Average: 45.8 % on Feb 19

Maximum Diurnal Average: 76.6 % at hour 8

Minimum Diurnal Average: 69.8 % at hour 16

Monthly Average: 74.20 %

Percentiles: P_1 = 38.6 P_{10} = 60.7 Q_1 = 70.6 Median = 74.2 Q_3 = 81.8 P_{90} = 88.0 P_{99} = 94.2

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

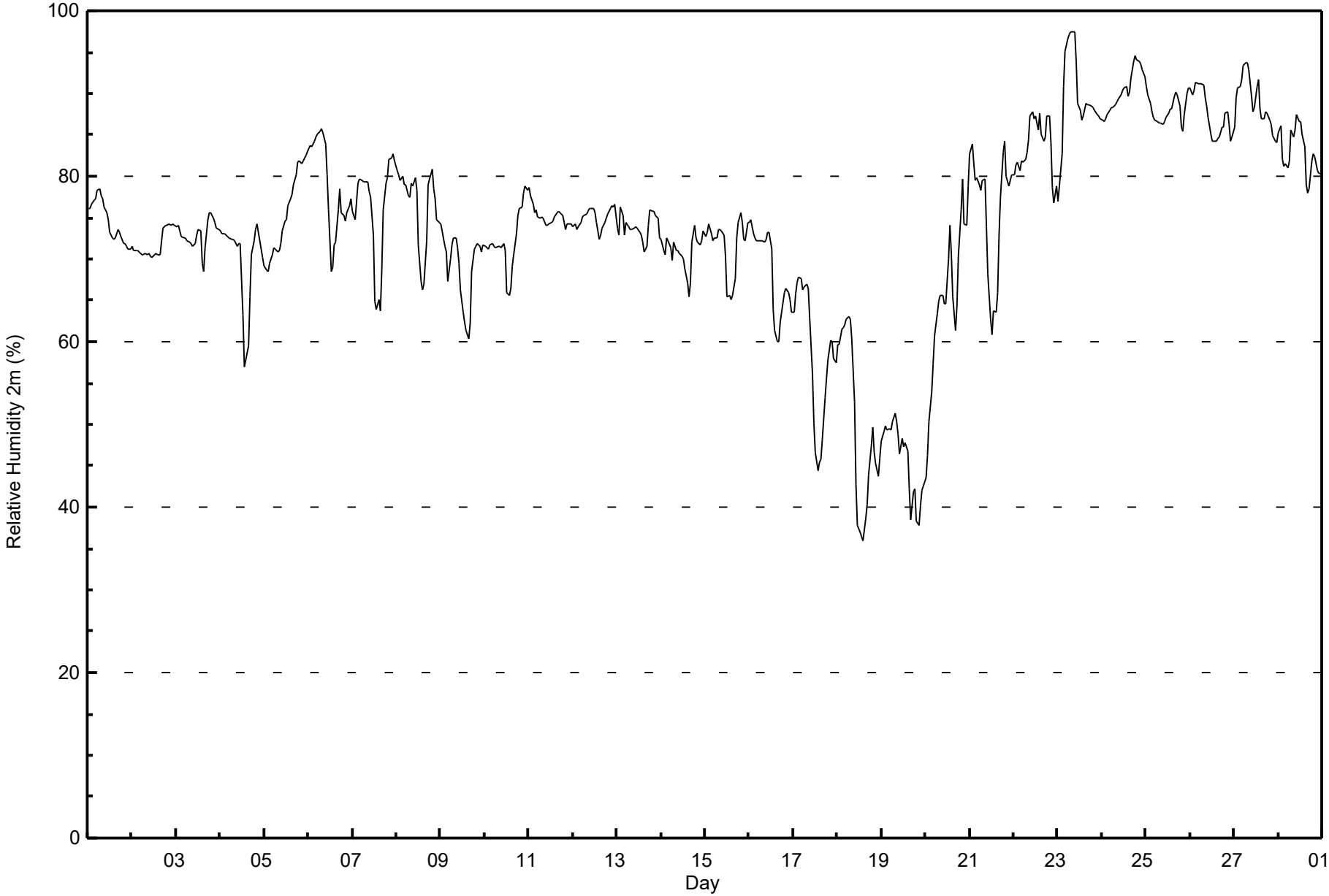
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	76.1	76.0	76.6	77.1	77.2	78.3	78.4	77.6	77.3	76.2	75.5	74.8	73.3	72.5	72.3	72.5	73.5	73.3	72.8	71.8	71.8	71.5	71.1	71.2	74.5	78.4
2-Feb	71.6	71.1	71.0	71.0	70.8	70.6	70.5	70.6	70.5	70.8	70.3	70.2	70.6	70.7	70.6	70.6	72.2	73.8	74.1	74.0	74.2	74.1	74.2	74.1	71.8	74.2
3-Feb	73.9	74.0	73.5	72.8	72.5	72.5	72.2	72.0	71.9	71.5	71.9	72.8	73.6	73.5	69.6	68.5	71.4	74.7	75.7	75.6	75.0	74.4	73.7	73.5	72.9	75.7
4-Feb	73.4	73.0	73.1	72.9	72.6	72.6	72.4	72.3	72.2	71.6	71.8	71.9	63.3	57.0	57.8	59.4	65.5	70.4	72.1	73.6	74.2	73.3	71.2	70.1	69.9	74.2
5-Feb	69.2	68.6	68.5	69.6	70.6	71.3	71.2	70.9	71.1	71.9	73.3	74.6	74.7	76.5	77.2	77.8	79.0	80.2	81.8	81.8	81.5	81.8	82.2	82.6	75.3	82.6
6-Feb	83.3	83.7	83.5	84.2	84.7	85.0	85.3	85.8	85.2	84.0	80.1	76.0	68.5	68.9	71.7	72.0	75.9	78.4	75.5	75.3	74.6	75.7	76.5	77.3	78.8	85.8
7-Feb	75.7	74.7	76.9	79.2	79.7	79.5	79.3	79.3	79.3	78.2	77.5	72.9	64.9	63.9	65.1	63.8	68.9	75.9	79.2	79.8	82.0	82.2	82.7	81.8	75.9	82.7
8-Feb	80.7	80.1	79.5	80.0	79.1	79.0	77.6	77.5	79.1	78.8	79.8	78.4	71.7	67.3	66.2	66.9	72.2	79.0	79.7	80.8	78.5	77.2	74.8	74.4	76.6	80.8
9-Feb	74.3	73.3	71.5	70.8	67.3	69.9	71.7	72.6	72.6	71.4	69.5	66.3	63.6	62.3	61.3	60.3	62.3	68.5	71.1	71.5	71.8	71.6	70.9	71.7	69.1	74.3
10-Feb	71.5	71.4	71.1	71.7	71.8	71.4	71.4	71.5	71.6	71.4	71.9	71.1	65.9	65.5	66.5	69.2	70.5	73.1	75.3	76.1	76.3	78.0	78.8	78.2	72.1	78.8
11-Feb	78.6	77.6	76.7	75.7	76.0	75.1	75.0	75.1	75.0	74.1	74.1	74.3	74.4	74.7	75.1	75.6	75.8	75.6	75.3	74.5	73.6	74.2	74.3	74.2	75.2	78.6
12-Feb	73.9	74.2	73.5	73.9	74.4	75.1	75.3	75.5	75.8	76.1	76.2	76.1	75.6	74.4	72.4	72.9	73.7	74.5	75.0	75.4	76.1	76.5	76.3	76.5	75.0	76.5
13-Feb	73.8	72.9	76.3	75.3	72.9	74.5	74.0	73.6	73.5	73.7	73.9	73.7	73.2	72.9	72.0	70.9	71.5	74.1	75.9	75.8	75.8	75.2	75.0	72.6	73.9	76.3
14-Feb	72.3	71.0	70.6	72.6	72.2	71.3	69.8	72.0	71.0	71.1	70.8	70.3	70.0	68.8	67.1	65.3	67.1	72.1	74.1	72.6	72.1	71.7	72.2	73.4	70.9	74.1
15-Feb	72.7	73.3	74.3	73.0	72.1	72.5	72.5	73.5	73.5	73.5	72.9	70.4	65.4	65.6	65.1	65.6	67.7	72.5	74.3	75.6	74.4	72.4	72.2	74.4	71.6	75.6
16-Feb	74.5	74.7	73.1	72.5	72.2	72.2	72.3	72.3	71.9	72.4	73.2	73.2	71.3	63.8	61.4	60.0	60.0	62.4	64.8	66.0	66.5	66.0	65.1	63.5	68.6	74.7
17-Feb	63.6	65.8	67.2	67.7	67.5	66.3	66.7	67.0	66.4	62.9	56.1	50.1	46.7	44.4	45.4	45.7	48.1	53.2	55.5	57.8	60.2	60.0	58.0	57.5	58.3	67.7
18-Feb	59.7	59.7	61.6	61.6	62.0	62.8	63.1	62.8	60.4	52.8	42.8	37.9	37.0	36.4	36.0	38.7	40.3	43.8	47.4	49.7	46.6	45.3	43.7	45.9	49.9	63.1
19-Feb	48.0	49.1	49.8	49.3	49.4	49.4	50.4	51.4	50.4	48.8	46.4	48.2	47.3	47.8	46.8	42.1	38.4	41.8	42.2	38.2	37.8	40.2	42.0	42.5	45.8	51.4
20-Feb	43.6	46.3	50.4	53.9	57.4	60.7	63.5	65.0	65.7	65.7	64.6	64.5	70.1	74.1	70.5	65.4	61.4	64.4	70.3	75.9	79.6	74.2	74.0	78.7	65.0	79.6
21-Feb	82.7	84.0	81.5	79.5	79.8	79.0	78.3	79.5	79.7	73.9	68.1	62.7	60.8	63.7	63.6	66.0	72.9	77.5	82.9	84.2	80.0	78.8	79.5	80.2	75.8	84.2
22-Feb	80.2	81.4	81.7	80.7	81.8	81.7	82.0	83.0	84.4	87.3	87.8	87.0	87.3	85.7	87.6	85.1	84.3	84.7	87.3	87.3	84.1	78.6	76.8	78.8	83.6	87.8
23-Feb	77.0	78.9	82.8	90.9	95.1	96.6	97.2	97.4	97.5	97.4	93.9	88.8	88.0	86.8	87.4	88.8	88.6	88.6	88.5	88.2	88.0	87.4	87.2	86.9	89.5	97.5
24-Feb	86.7	86.6	86.9	87.4	88.0	88.3	88.4	88.7	88.9	89.3	89.8	90.3	90.6	90.9	89.7	90.1	91.9	94.0	94.6	94.1	93.9	93.6	92.9	92.0	90.3	94.6
25-Feb	90.8	89.9	88.9	87.8	87.1	86.8	86.6	86.5	86.4	86.2	86.6	87.1	87.7	88.1	88.2	89.6	90.1	89.9	88.4	86.0	85.5	87.5	90.0	90.6	88.0	90.8
26-Feb	90.6	89.9	90.3	91.3	91.2	91.1	91.3	91.0	89.4	88.5	87.2	85.1	84.2	84.3	84.3	84.7	84.8	86.0	86.0	87.6	87.9	86.3	84.3	84.7	87.6	91.3
27-Feb	85.9	89.5	90.7	90.9	91.6	93.5	93.8	93.8	92.9	89.6	87.8	88.4	90.9	91.7	88.1	86.9	86.9	87.8	87.6	86.8	86.3	84.9	84.2	84.1	88.9	93.8
28-Feb	85.3	86.2	82.1	81.3	81.5	81.0	81.9	85.7	84.8	85.7	87.4	86.7	86.7	85.0	83.6	79.0	77.9	78.5	81.9	82.6	82.5	80.8	80.3	80.4	82.9	87.4
	74.6	74.9	75.1	75.5	75.7	76.0	76.1	76.6	76.4	75.5	74.3	73.0	71.3	70.6	70.1	69.8	71.2	73.9	75.3	75.7	75.4	74.8	74.4	74.7	Diurnal Average	
	90.8	89.9	90.7	91.3	95.1	96.6	97.2	97.4	97.5	97.4	93.9	90.3	90.9	91.7	89.7	90.1	91.9	94.0	94.6	94.1	93.9	93.6	92.9	92.0	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Firebag - February 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	8	1.19	1.19
40 - 60	54	8.04	9.23
60 - 80	417	62.05	71.28
80 - 100	193	28.72	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Firebag - February 2025

Maximum Speed: 34 km/h on Feb 19 22:00

Maximum Daily Speed Average: 27.9 km/h on Feb 19

Minimum Speed Value: 0 km/h on Feb 21 11:00

Minimum Daily Speed Average: 1.7 km/h on Feb 26

Maximum Diurnal Speed Average: 4.2 km/h at hour 4

Minimum Diurnal Speed Average: 0.4 km/h at hour 18

Monthly Average Velocity: 2.4 km/h 219.1 deg

Percentiles: $P_1 = 3$ $P_{10} = 5$ $Q_1 = 8$ Median = 12 $Q_3 = 17$ $P_{90} = 23$ $P_{99} = 30$

Hours in Service:	672
Hours of Data:	615
Hours of Missing Data:	57
Percent Operational Time:	91.5

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-Feb	ENE15	ENE14	NE16	NE15	NE14	NNE13	NNE14	NNE15	N18	NNE18	N18	N17	N16	N17	N20	N20	N17	N20	N19	NNW19	N18	N20	N24	N26	N16.4	N26
2-Feb	N24	N25	N23	N24	N24	N25	N23	N23	N23	N25	N24	N22	N21	N19	N19	NNW17	N17	N14	N16	N17	N15	N15	N18	N16	N20.4	N25
3-Feb	N15	N16	NNW11	NW6	W7	W7	W6	W6	WSW6	WSW5	WSW8	WSW11	WSW12	WSW13	WSW14	WSW13	WSW11	SW10	SW11	SW11	WSW11	WSW10	WSW9	WSW9	W7.6	N16
4-Feb	SW9	SW10	WSW11	SW12	SW13	SW13	SW14	SW16	SW16	SW17	SW17	SW19	WSW21	WSW22	WSW22	SW21	SW20	SW20	SW22	SW20	SW20	WSW22	WSW22	SW24	SW17.6	SW24
5-Feb	SW24	SW24	SW23	SW23	SW21	SW21	SW21	SW21	SW21	SW20	WSW19	WSW17	WSW16	WSW16	SW15	WSW14	WSW14	WSW14	WSW14	WSW12	W10	W9	W10	W9	WSW16.8	SW24
6-Feb	W10	WSW11	WSW13	WSW13	W13	WNW12	WNW9	NNW13	N17	N20	N26	N26	N28	NNW22	NNW20	N18	N13	NNW10	NNW13	NNW12	NNW14	NNW8	NW8	W8	NNW12.1	N28
7-Feb	W9	W9	WSW10	WSW8	WSW10	WSW10	W9	WSW8	WSW10	WSW10	WSW11	W12	W13	W11	WSW12	WSW12	WSW8	SW7	WSW8	WSW9	W7	W5	SW7	SW8	WSW9.0	W13
8-Feb	WSW6	SW5	SW5	SW6	SW5	SW4	SSW3	SSW3	SW3	SW3	SSW3	WNW3	NW8	NW8	NNW8	NW8	NNW7	N8	N10	N15	N23	N23	N24	N23	NNW5.7	N24
9-Feb	N23	N22	N21	NNW19	N15	N13	N11	N9	N10	N11	N14	N16	NNW17	NNW16	NNW16	N16	NNW11	NW7	NNW7	NW7	NW6	NW7	WNW8	W9	NNW12.3	N23
10-Feb	WSW10	WSW11	SW11	SW13	SW13	SW13	WSW14	WSW14	WSW15	WSW16	WSW16	WSW17	WSW19	WSW16	WSW13	WSW9	W4	NNE5	NNW5	N10	N12	N12	NNE10	NNE8	WSW7.8	WSW19
11-Feb	NNE9	N9	NNE9	N5	N9	N9	N10	N10	N15	N15	N16	N14	NNW10	NNW9	NW9	NW8	NW7	NNW6	NNW7	NNW4	N4	NE5	ENE4	SE3	N7.7	N16
12-Feb	S3	SSW3	SSE4	S4	SSE5	SSE8	SSE8	SSE7	S8	SSE7	S7	S6	SE5	ESE9	ESE10	ESE10	ESE11	E10	ENE8	ENE5	NE7	ENE6	NE5	NE6	SE4.9	ESE11
13-Feb	NNE4	NNE7	NNE7	NNE3	NNE8	NNE6	N4	NNE5	NE3	NNE3	NNE6	NNE7	N7	N8	NNE10	NNE11	NNE9	NNE8	NNE8	NE5	NE9	NE7	NNE4	NE4	NNE6.3	NNE11
14-Feb	ENE5	NE5	NNE5	NNE6	NNE4	N3	NNE4	NNE4	NNE5	NNE3	N7	N7	N6	NNW7	NW7	NW7	NNW7	NW4	NW3	NNW3	NE3	W5	NW6	NW6	N4.2	N7
15-Feb	WNW5	W7	WSW7	W5	WNW5	W4	W4	WNW4	WNW6	NW7	NNW11	N19	NNW19	NNW19	NNW15	NNW14	NW11	NNW7	NNE8	N6	N4	NNE4	NE5	ENE7	NNW6.9	N19
16-Feb	ESE6	SE9	SSE10	SSE9	S9	S10	S12	S11	S12	S9	S12	SSE15	S16	S16	SSE17	SSE17	SSE17	SSE15	SSE17	SSE16	SE16	SE19	SSE20	SSE20	SSE13.4	SSE20
17-Feb	SSE22	S21	SSE19	SSE20	SSE17	SSE17	SSE17	SSE15	SSE18	SSE21	S22	S22	SSE20	SSE19	SSE20	SSE20	SSE19	SE15	SE15	SE14	SE13	SSE17	S17	S17	SSE17.9	S22
18-Feb	S15	S16	S14	S14	S15	S13	SSW13	S14	S13	SSW18	SSW19	SSW18	SSW17	S16	S16	S17	S18	SSE17	SSE17	SSE16	S23	S25	S27	S27	S17.1	S27
19-Feb	S26	S25	SSE24	SSE23	SSE25	SSE24	SSE24	SSE27	SSE25	SSE27	SSE30	SSE33	S28	S29	SSE30	SSE32	SSE28	SSE24	SSE27	SSE30	S34	S34	S33	S30	SSE27.9	S34
20-Feb	S30	S27	S25	S23	S22	S23	S21	SSW23	SSW26	SSW27	SSW23	SSW22	SW22	WSW19	WSW19	WSW17	WSW12	SW6	SW7	WSW4	WNW6	NW9	NNW8	NE5	SSW14.5	S30
21-Feb	E6	SE5	SE7	SE8	SSE4	SE3	SE6	SSE5	SE2	E2	ENE0	N5	NNE7	N9	NNE12	NNE11	NNE11	NE9	NE10	ENE9	NE8	NE7	E8	E10	ENE4.7	NNE12
22-Feb	ESE10	SE11	SE13	SE12	SE13	SE16	SE16	SE17	SE19	SE21	SE21	SE23	SSE22	S22	S19	SSW17	SSW16	SSW15	SSW13	SSW12	SSW13	SSW14	SW16	SW15	SSE13.7	SE23
23-Feb	SW18	SW17	SSW14	SW8	SSW8	SW10	SW9	SW10	W15	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	----	SW18
24-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	----	----
25-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	ENE7	ESE10	SE11	SSE11	SSE10	SW7	SW5	----	SSE11
26-Feb	W7	W7	WSW10	W12	W7	WNW8	W4	NNE9	NNE10	N12	N10	NNE9	NNE8	NE4	ENE5	ENE9	E9	E8	ESE10	SE10	SE12	SE12	SSE12	SSE11	ENE1.7	N12
27-Feb	SE16	SSE16	SSE16	SSE16	SSE17	SSE16	SSE14	SSE14	SSE15	UO	WSW15	W19	NW21	N26	N28	N26	N20	N18	N15	N15	NNE16	N14	NNW9	NNW8	N3.3	N28
28-Feb	NNW9	N7	NW4	NNE4	ENE6	ESE7	S6	S9	S11	S12	S12	S14	S15	S16	S13	S12	S11	S12	SSE14	SSE15	S13	S13	S15	SSW13	S8.5	S16
	SSW2.6	SSW3.1	SSW3.7	SSW4.2	SSW3.5	SSW3.7	SSW3.9	SSW3.4	SSW3.3	SW3.1	SW2.8	WSW2.9	W4.0	W4.1	W3.5	W2.9	WSW1.6	SSE0.4	SSE1.0	SSE1.0	SSE0.5	SSW1.2	SW2.4	SSW2.7	Diurnal Average	
	S30	S27	S25	N24	SSE25	N25	SSE24	SSE27	SSW26	SSE27	SSE30	SSE33	N28	SSE29	SSE30	SSE32	SSE28	SSE24	SSE27	SSE30	S34	S34	S33	S30	Diurnal Maximum	

M - Maintenance UO - Unstable Operation

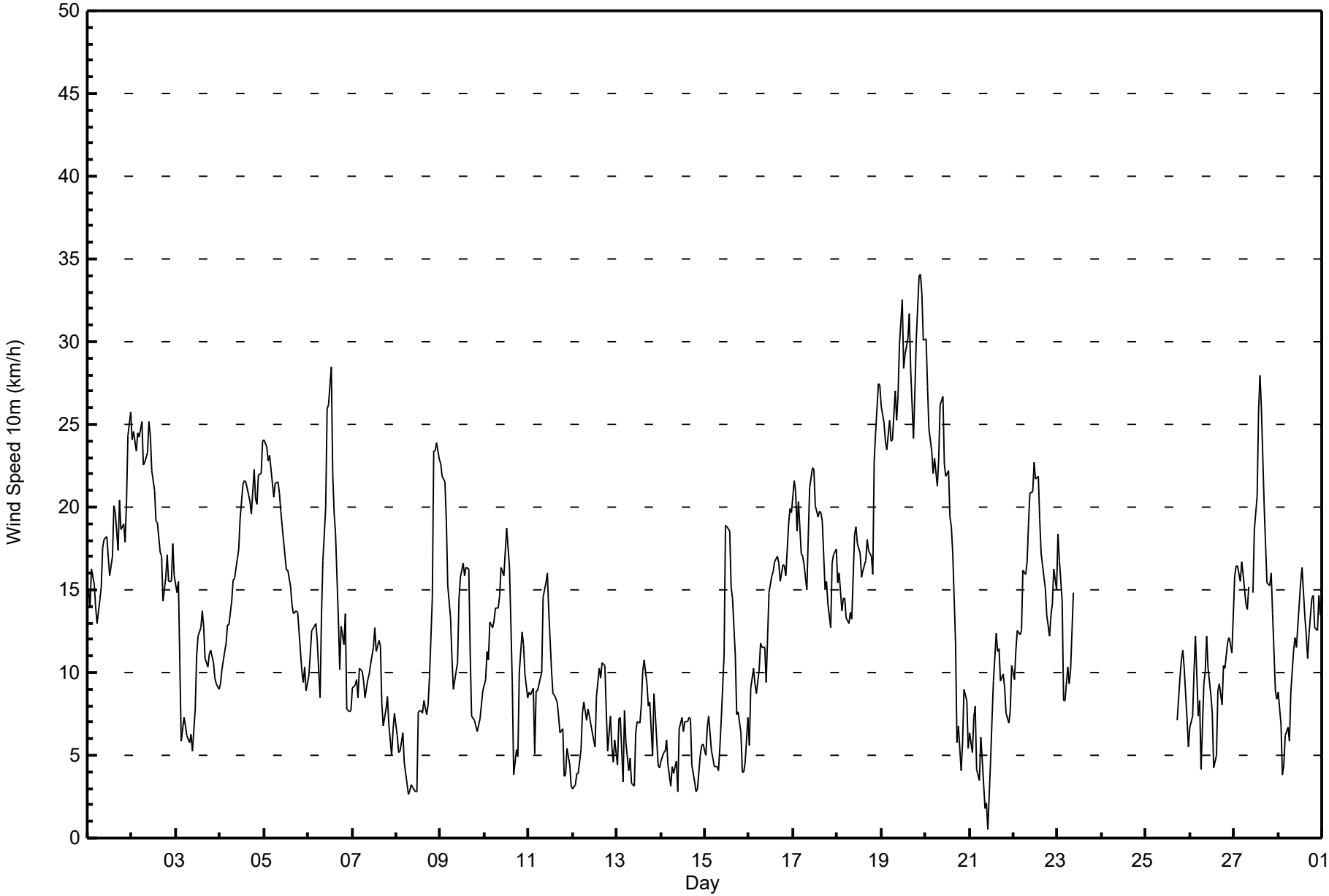
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Firebag - February 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	77	12.52	12.52
6 - 11	210	34.15	46.67
12 - 19	212	34.47	81.14
20 - 28	105	17.07	98.21
29 - 38	11	1.79	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 615

Total Number of Hours: 672



Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Firebag - February 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	14	10	5	1	1	4	4	2	4	7	2	7	4	3	3	77
6 - 11	21	24	8	7	6	9	6	10	11	1	17	28	19	5	18	20	210
12 - 19	40	7	3	2	0	0	15	32	29	15	17	31	6	1	0	14	212
20 - 28	34	0	0	0	0	0	3	21	16	5	18	5	0	0	1	2	105
29 - 38	0	0	0	0	0	0	0	6	5	0	0	0	0	0	0	0	11
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	101	45	21	14	7	10	28	73	63	25	59	66	32	10	22	39	615

Total Number of Valid Hours: 615

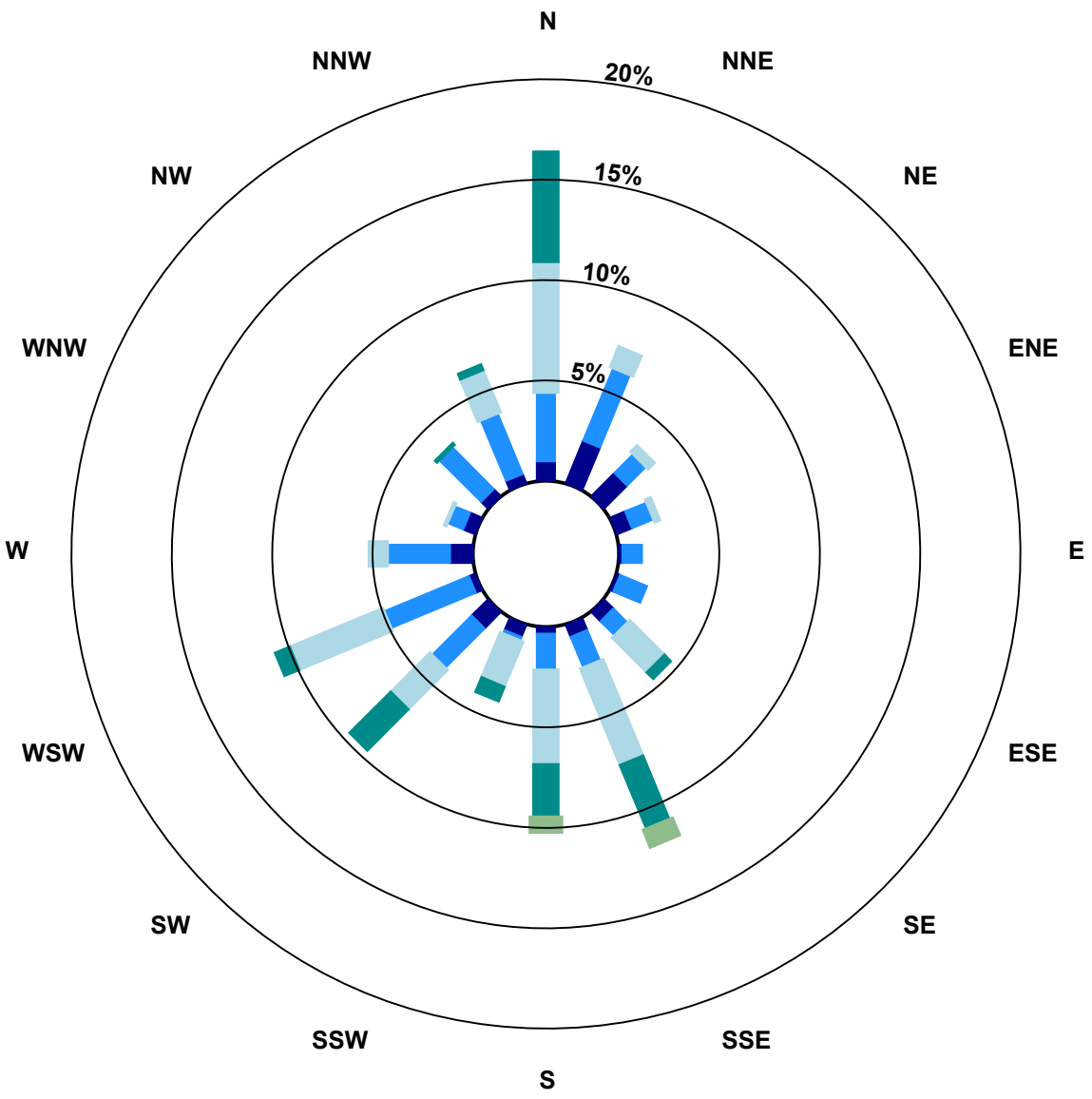
Total Number of Hours: 672

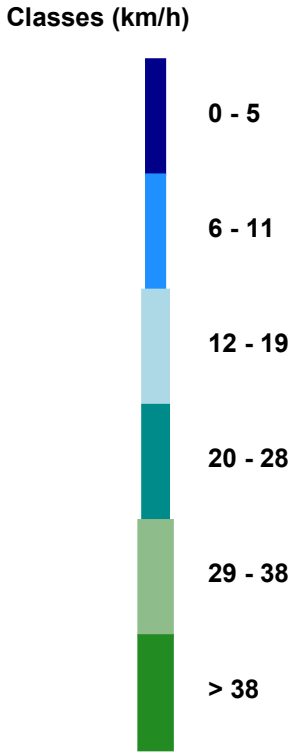
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Wind Speed 10m (WS10) - km/h

Firebag





Total Number of Valid Hours: 615

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Firebag - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8 km/h on Feb 27 11:00

Minimum Value: 0 km/h on Feb 14 06:00

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

Hours in Service:	672
Hours of Data:	615
Hours of Missing Data:	57
Hours of Calibration:	0
Percent Operational Time:	91.5

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

M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Firebag - February 2025

Direction of Maximum Speed: 176 deg on Feb 19 22:00
Direction of Maximum Daily Speed Average: 166.6 deg on Feb 19

Direction of Minimum Speed: 75 deg on Feb 21 11:00
Direction of Minimum Daily Speed Average: 1.7 deg on Feb 26

Monthly Average Direction: 219.1 deg

Hours in Service:	672
Hours of Data:	615
Hours of Missing Data:	57
Percent Operational Time:	91.5

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-Feb	67	62	47	43	42	27	18	12	11	12	9	5	354	353	354	353	350	358	349	346	354	357	1	1	9.0
2-Feb	3	359	355	359	2	3	2	1	1	3	7	8	1	355	354	347	352	359	2	4	2	360	1	358	0.2
3-Feb	359	357	348	306	272	272	262	259	248	241	244	250	258	258	255	253	243	234	235	234	240	241	237	247	262.3
4-Feb	236	227	237	234	236	231	228	228	230	231	230	232	241	244	238	230	223	223	229	229	231	237	239	233	232.5
5-Feb	234	232	232	225	227	229	232	231	233	236	238	242	248	245	235	238	247	250	250	252	259	260	262	262	238.7
6-Feb	260	257	246	257	268	286	300	336	357	354	360	358	352	344	341	350	349	340	341	334	342	345	309	281	331.1
7-Feb	277	263	253	239	240	255	264	257	246	255	254	266	267	269	255	255	247	232	238	250	267	260	227	229	253.9
8-Feb	241	223	226	229	224	222	208	213	220	222	209	286	323	313	331	323	339	357	8	1	2	360	2	358	336.6
9-Feb	354	351	352	342	351	352	354	4	2	356	4	1	345	342	347	351	338	325	328	323	326	315	285	262	345.2
10-Feb	255	244	236	233	235	233	241	240	237	239	237	241	241	243	242	258	280	13	344	7	10	10	20	28	255.4
11-Feb	22	11	16	353	6	3	6	7	8	10	7	359	346	327	316	321	323	333	339	329	7	42	65	142	359.1
12-Feb	186	194	158	175	166	166	163	165	174	162	170	170	132	112	113	116	109	84	77	71	55	59	52	56	125.7
13-Feb	15	18	19	16	20	19	11	24	47	27	23	17	7	358	16	12	18	24	30	37	39	42	33	42	21.8
14-Feb	58	38	15	18	18	6	23	24	27	16	5	5	3	337	326	319	330	316	306	332	37	261	306	307	351.6
15-Feb	298	272	255	261	295	280	273	295	291	316	343	353	344	340	333	332	324	333	18	10	356	25	39	67	332.4
16-Feb	115	133	151	165	172	178	171	174	175	186	175	167	170	175	163	160	157	151	149	150	144	146	154	162	160.2
17-Feb	165	169	167	162	158	157	151	148	149	165	173	169	168	167	165	155	148	141	141	139	146	166	178	173	160.2
18-Feb	180	181	182	177	175	176	195	188	176	195	197	201	194	179	178	180	176	164	152	153	169	173	177	176	178.7
19-Feb	173	169	166	164	163	165	158	161	164	166	159	165	170	169	167	168	166	154	155	165	171	176	175	178	166.6
20-Feb	177	173	174	177	178	185	190	195	201	202	209	211	220	237	247	251	245	226	229	237	298	320	333	49	204.1
21-Feb	93	145	146	146	147	124	136	150	125	93	75	355	17	1	22	26	28	44	47	61	47	45	101	85	64.4
22-Feb	118	128	139	134	126	127	129	139	141	140	141	142	162	177	187	196	195	203	193	197	202	205	216	217	164.6
23-Feb	221	227	213	217	207	218	224	232	265	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--
24-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--
25-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	71	117	133	150	157	226	236	--
26-Feb	268	263	253	269	273	285	270	12	31	7	10	17	22	49	62	78	89	100	109	130	141	141	147	147	73.5
27-Feb	142	147	158	166	157	150	154	149	160	UO	244	271	315	352	354	358	3	5	5	10	15	6	343	331	9.9
28-Feb	343	5	307	22	73	106	184	184	179	191	170	169	172	181	187	189	180	171	168	166	175	177	188	193	176.2
	202.7	203.4	204.5	205.0	198.1	200.2	200.2	199.3	203.1	217.1	225.8	244.0	265.3	268.1	269.8	270.4	249.1	160.8	150.5	167.1	157.6	199.8	218.3	208.1	
	Diurnal Average																								

M - Maintenance UO - Unstable Operation

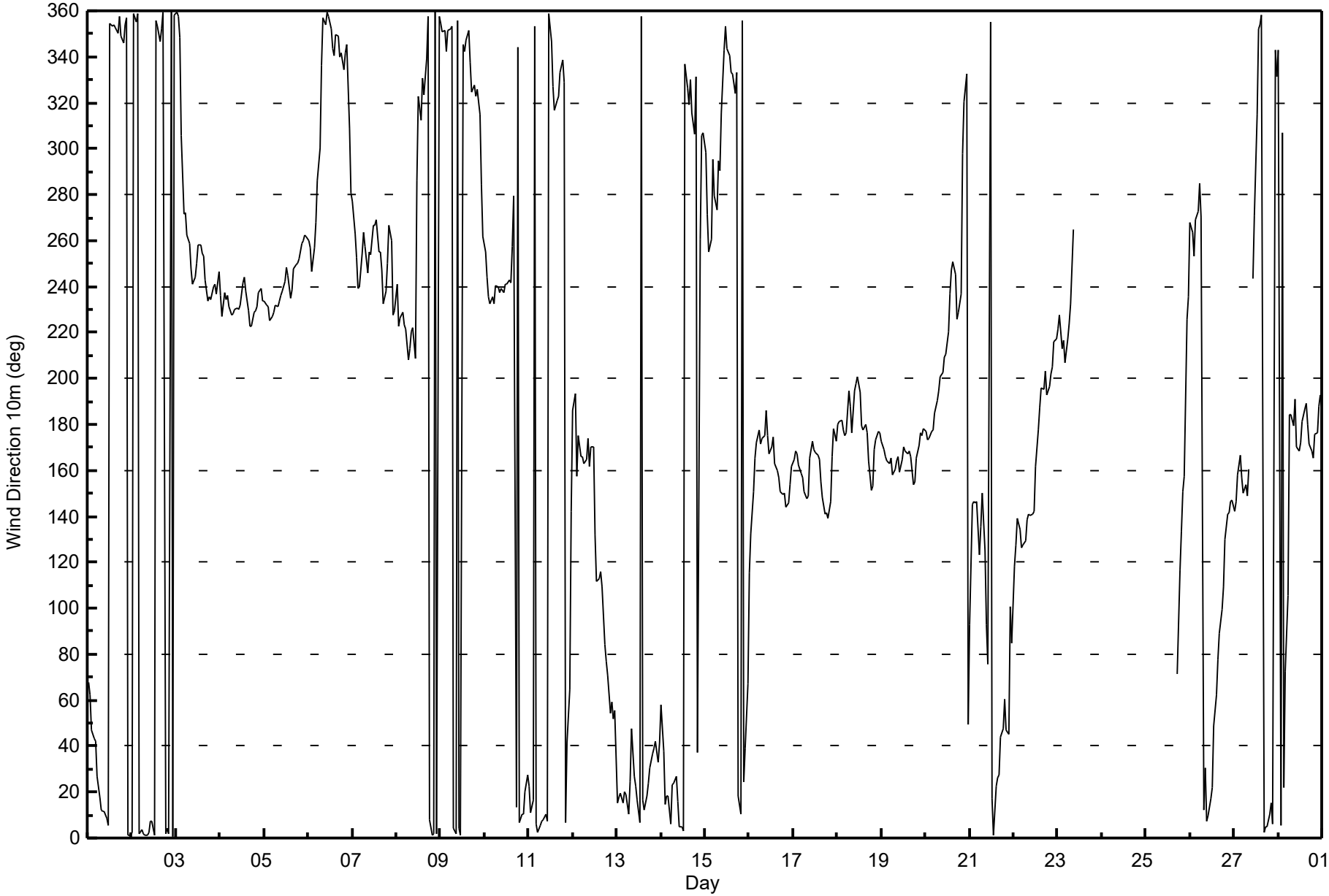
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Firebag - February 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Firebag - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 79 deg on Feb 21 11:00

Minimum Value: 4 deg on Feb 13 21:00

Percentiles: P_1 = 5 P_{10} = 8 Q_1 = 9 Median = 11 Q_3 = 14 P_{90} = 17 P_{99} = 42

Hours in Service:	672
Hours of Data:	615
Hours of Missing Data:	57
Hours of Calibration:	0
Percent Operational Time:	91.5

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-Feb	12	10	10	10	11	11	11	12	13	12	13	14	13	13	12	11	12	15	13	13	12	12	15	14	15
2-Feb	15	13	12	13	14	15	15	15	14	15	15	13	14	13	13	12	12	12	12	13	13	12	12	12	15
3-Feb	13	12	12	16	10	9	9	9	10	12	11	10	13	14	11	11	9	7	8	7	10	8	8	9	16
4-Feb	10	10	9	9	8	8	9	9	9	9	10	10	11	11	11	10	9	9	9	10	10	10	11	11	11
5-Feb	10	11	11	9	10	9	9	9	9	10	10	11	11	10	11	11	10	10	10	10	12	12	11	12	12
6-Feb	12	15	11	11	13	17	16	18	13	15	15	13	14	12	12	14	13	11	11	11	16	13	22	15	22
7-Feb	14	12	9	9	10	15	8	8	8	10	10	16	17	19	14	12	11	8	9	9	10	8	8	12	19
8-Feb	6	8	8	7	8	11	13	8	11	10	18	50	20	21	18	16	8	6	10	13	16	14	13	12	50
9-Feb	13	12	14	13	11	12	10	12	13	12	12	14	16	14	14	13	12	6	6	5	5	9	7	8	16
10-Feb	6	8	8	9	9	9	9	9	9	10	10	11	12	12	17	15	39	12	20	13	11	11	12	8	39
11-Feb	6	8	7	9	10	10	12	13	13	14	14	14	18	18	15	15	10	7	10	13	15	13	25	27	27
12-Feb	22	22	14	14	9	8	8	13	13	10	13	14	24	12	11	10	9	11	15	26	16	20	15	9	26
13-Feb	6	5	5	13	11	12	26	14	23	47	15	17	16	16	16	11	11	7	6	6	4	4	9	4	47
14-Feb	7	9	9	5	6	10	12	12	6	19	14	16	17	17	25	21	12	14	24	35	13	11	16	7	35
15-Feb	19	11	6	7	17	11	10	16	16	17	14	14	12	13	14	14	13	15	13	11	12	11	10	12	19
16-Feb	22	10	9	12	9	10	8	8	10	9	9	9	11	11	11	10	9	8	9	9	9	9	9	8	22
17-Feb	8	9	9	9	10	8	10	9	10	9	10	11	11	13	13	11	9	11	10	12	14	8	8	8	14
18-Feb	10	8	9	8	9	9	6	13	10	8	9	11	13	14	10	10	9	9	8	8	9	9	9	8	14
19-Feb	8	8	8	9	9	9	9	9	9	9	9	9	9	10	9	9	10	10	9	9	9	9	8	9	10
20-Feb	9	8	9	9	9	9	8	9	9	10	12	12	11	15	13	12	12	9	9	18	33	12	19	16	33
21-Feb	22	21	13	17	24	41	32	20	49	48	79	47	24	17	15	12	12	11	12	12	15	20	19	13	79
22-Feb	16	13	10	12	13	11	11	10	10	9	9	10	11	10	9	9	16	9	11	8	9	12	9	9	16
23-Feb	10	10	9	13	10	10	10	14	15	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	15
24-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--
25-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	13	14	16	10	11	19	18	19
26-Feb	15	14	10	15	22	25	28	23	12	16	14	14	20	30	27	15	16	9	12	12	12	10	11	10	30
27-Feb	9	10	11	9	10	9	10	13	20	UO	14	16	21	14	14	16	15	15	14	13	11	14	12	10	21
28-Feb	13	17	28	19	13	15	42	10	10	11	13	11	10	11	12	11	9	7	9	11	9	8	8	6	42
	22	22	28	19	24	41	42	23	49	48	79	50	24	30	27	21	39	15	24	35	33	20	25	27	
	Diurnal Maximum																								

M - Maintenance UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS20
MACKAY RIVER
FEBRUARY 2025

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

March 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MACKAY RIVER (AMS20)
FEBRUARY 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	639	31	33	99.7	35.7	0	6	0
H2S (ppb) Average	637	33	35	99.7	1.6	0	0.5	0
THC (ppm) Average	639	28	33	99.26	3.6	-	2.8	-
NO2 (ppb) Average	638	33	34	99.85	33	0	16.4	-
NO (ppb) Average	638	33	34	99.85	35.1	-	7.5	-
NOX (ppb) Average	638	33	34	99.85	66.4	-	23.9	-
Temperature 2 m (C) Average	672	0	0	100	5.8	-	-1.7	-
Relative Humidity (%) Average	672	0	0	100	97.8	-	91.7	-
Wind Speed 10 m (km/h) Average	644	0	28	95.83	22	-	9	-
Wind Direction 10 m (deg) Average	644	0	28	95.83	-	-	-	-
Precipitation (mm) Total	672	0	0	100	1.2	-	6.4	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MACKAY RIVER (AMS20)
FEBRUARY 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	639	1.25	3.1	-	0	0	0.1	0.3	0.9	3.1	35.7
H2S (ppb) Average	637	0.16	0.2	-	0	0	0	0.1	0.2	0.4	1.6
THC (ppm) Average	639	2.43	0.2	-	1.9	2.3	2.3	2.4	2.5	2.6	3.6
NO2 (ppb) Average	638	4.85	6.8	-	0.2	0.3	0.7	1.9	5.1	16.1	33
NO (ppb) Average	638	0.78	2.9	-	0	0	0	0	0.3	1.5	35.1
NOX (ppb) Average	638	5.63	8.5	-	0.2	0.3	0.8	2	5.9	18	66.4
Temperature 2 m (C) Average	672	-17.68	9.5	-	-38.1	-29.1	-24.7	-19.7	-9.4	-4.1	5.8
Relative Humidity (%) Average	672	73.97	11.2	-	36.1	58.6	68.8	74.5	80.7	88.8	97.8
Wind Speed 10 m (km/h) Average	644	6	3	-	0	2	4	6	8	10	22
Wind Direction 10 m (deg) Average	644	-	-	-	-	-	-	-	-	-	-
Precipitation (mm) Total	672	-	-	24.48	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION -MACKAY RIVER (AMS20)
FEBRUARY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL GASEOUS ANALYZERS	05 Feb 2025 09:00	05 Feb 2025 09:00	1	Maintenance - sample manifold cleaned
H2S	01 Feb 2025 10:00	01 Feb 2025 10:00	1	Maintenance - verify daily QA response
SO2	08 Feb 2025 10:00	08 Feb 2025 10:00	1	Maintenance - verify daily QA response
THC	03 Feb 2025 09:00	03 Feb 2025 09:00	1	Maintenance - verify daily QA response
THC	06 Feb 2025 09:00	06 Feb 2025 11:00	3	Maintenance - recalibration to adjust span
Wind Speed, Wind Direction	14 Feb 2025 06:00	14 Feb 2025 07:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction	22 Feb 2025 06:00	22 Feb 2025 06:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	23 Feb 2025 14:00	24 Feb 2025 14:00	25	Flat line in sensor output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Mackay River - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 35.7 ppb on Feb 13 10:00 Maximum Daily Average: 6.0 ppb on Feb 21

Minimum Value: 0.0 ppb on Feb 1 07:00 Minimum Daily Average: 0.0 ppb on Feb 4
Maximum Diurnal Average: 2.4 ppb at hour 10 Minimum Diurnal Average: 0.5 ppb at hour 6
Monthly Average: 1.25 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.3 Q_3 = 0.9 P_{90} = 3.1 P_{99} = 14.8

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	31
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-Feb	4.6	3.4	Z	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.3	1.5	0.8	0.4	0.1	0.1	0.1	0.1	0.1	0.9	0.9	1.6	0.2	0.1	0.7	4.6
2-Feb	0.2	0.1	0.1	Z	0.3	0.1	0.6	0.8	0.5	0.1	0.3	0.3	0.2	0.3	0.6	1.7	0.8	0.3	0.1	0.2	0.1	0.1	0.1	0.1	0.3	1.7
3-Feb	0.3	0.1	0.2	0.1	Z	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.3
4-Feb	0.1	0.1	0.1	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
5-Feb	Z	0.1	0.0	0.0	0.0	0.1	0.0	0.1	M	C	C	C	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.3
6-Feb	0.2	0.2	Z	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.1	2.8	0.6	0.7	0.1	0.1	0.1	0.2	0.2	0.3	0.1	0.1	0.1	0.1	0.3	2.8
7-Feb	0.1	0.2	Z	0.2	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2
8-Feb	0.1	0.0	0.1	Z	0.1	0.0	0.0	0.1	0.0	M	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.7	0.6	1.8	0.1	0.0	0.2	1.8
9-Feb	0.0	0.0	0.4	0.4	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.2	9.5	0.2	0.5	0.3	0.1	0.1	0.4	0.0	0.0	0.0	0.0	0.6	9.5
10-Feb	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	0.5	0.0	1.7	1.4	0.6	0.2	1.7
11-Feb	Z	0.1	0.0	0.1	0.0	0.2	0.8	1.0	2.3	2.6	3.3	1.4	1.3	1.5	0.9	0.6	0.4	0.2	0.3	1.7	1.8	1.5	1.0	0.8	1.0	3.3
12-Feb	0.6	Z	0.7	0.6	0.6	0.6	0.9	1.0	1.1	1.7	1.3	0.7	0.5	0.3	0.4	1.6	1.8	2.9	1.5	1.7	2.1	2.5	3.0	3.1	1.4	3.1
13-Feb	3.5	3.1	Z	0.6	0.9	2.3	2.1	7.6	8.7	35.7	23.6	12.3	18.9	15.2	0.5	0.6	0.7	0.2	0.2	0.2	0.2	0.2	0.1	0.1	6.0	35.7
14-Feb	0.2	0.4	0.3	Z	0.5	0.3	0.2	0.1	0.2	0.2	1.5	0.5	0.9	3.4	3.6	6.6	3.9	1.2	0.6	0.3	0.2	0.2	0.3	0.1	1.1	6.6
15-Feb	0.1	0.2	0.1	0.1	Z	0.2	0.1	0.1	0.2	0.1	0.2	0.3	0.4	0.3	2.4	0.4	0.3	0.3	0.2	0.3	0.5	0.4	0.3	0.5	0.3	2.4
16-Feb	0.4	0.6	0.4	0.2	0.1	Z	0.0	0.0	0.1	0.4	0.8	1.0	1.1	1.4	1.3	1.4	1.8	1.2	0.9	0.5	0.5	0.4	0.3	0.3	0.7	1.8
17-Feb	Z	0.4	0.6	0.7	0.6	0.6	0.9	1.2	1.2	1.3	1.3	1.5	1.1	0.9	1.2	0.9	0.8	0.6	0.6	0.7	0.5	0.8	0.8	0.8	0.9	1.5
18-Feb	0.8	Z	0.4	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.8
19-Feb	0.4	0.5	Z	0.6	0.7	0.6	0.9	1.0	1.2	1.1	1.0	0.7	0.5	0.3	0.3	0.2	0.3	0.4	0.4	0.6	0.5	0.4	0.4	0.4	0.6	1.2
20-Feb	0.3	0.3	0.3	Z	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.3	0.4	0.5	0.4	0.4	0.4	0.3	0.4	0.6
21-Feb	0.3	0.3	0.4	0.5	Z	0.9	0.9	0.8	0.8	1.4	3.7	9.2	12.9	10.7	9.7	5.9	16.5	28.1	11.6	3.7	1.3	3.6	9.0	6.2	6.0	28.1
22-Feb	3.1	3.4	4.8	5.3	4.0	Z	5.2	4.2	2.9	0.9	0.7	0.5	0.6	0.9	0.7	0.6	0.6	0.4	0.3	0.4	0.3	0.3	0.3	0.3	1.8	5.3
23-Feb	Z	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.4	1.1	0.5	1.2	0.6	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.2	1.2
24-Feb	0.1	Z	2.0	1.4	1.1	1.7	1.3	1.0	1.0	0.9	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.6	0.3	0.0	0.0	0.0	0.1	0.2	0.5	2.0
25-Feb	1.0	2.2	Z	0.8	0.4	0.1	3.0	7.7	12.5	14.1	21.3	11.2	7.4	5.1	3.9	3.9	5.2	3.8	5.2	2.6	1.2	4.8	3.2	5.0	5.5	21.3
26-Feb	5.1	3.7	2.3	Z	1.0	0.7	0.4	0.3	0.4	0.4	0.3	1.4	2.4	2.8	1.8	3.7	5.7	11.0	5.5	1.9	2.1	2.1	3.2	2.8	2.6	11.0
27-Feb	1.3	1.1	0.9	0.9	Z	0.7	0.5	0.4	0.5	0.4	0.6	0.5	2.3	7.3	5.3	4.9	1.8	0.1	0.1	0.2	0.3	1.0	7.3	2.5	1.8	7.3
28-Feb	5.2	4.9	3.5	2.1	0.4	Z	0.1	0.0	0.4	0.9	1.0	1.0	0.9	0.6	0.5	0.4	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.4	1.1	5.2
	1.2	1.0	0.8	0.7	0.5	0.5	0.7	1.0	1.3	2.4	2.3	1.8	2.0	2.3	1.3	1.3	1.5	1.9	1.1	0.7	0.5	0.9	1.2	0.9	Diurnal Average	
	5.2	4.9	4.8	5.3	4.0	2.3	5.2	7.7	12.5	35.7	23.6	12.3	18.9	15.2	9.7	6.6	16.5	28.1	11.6	3.7	2.1	4.8	9.0	6.2	Diurnal Maximum	

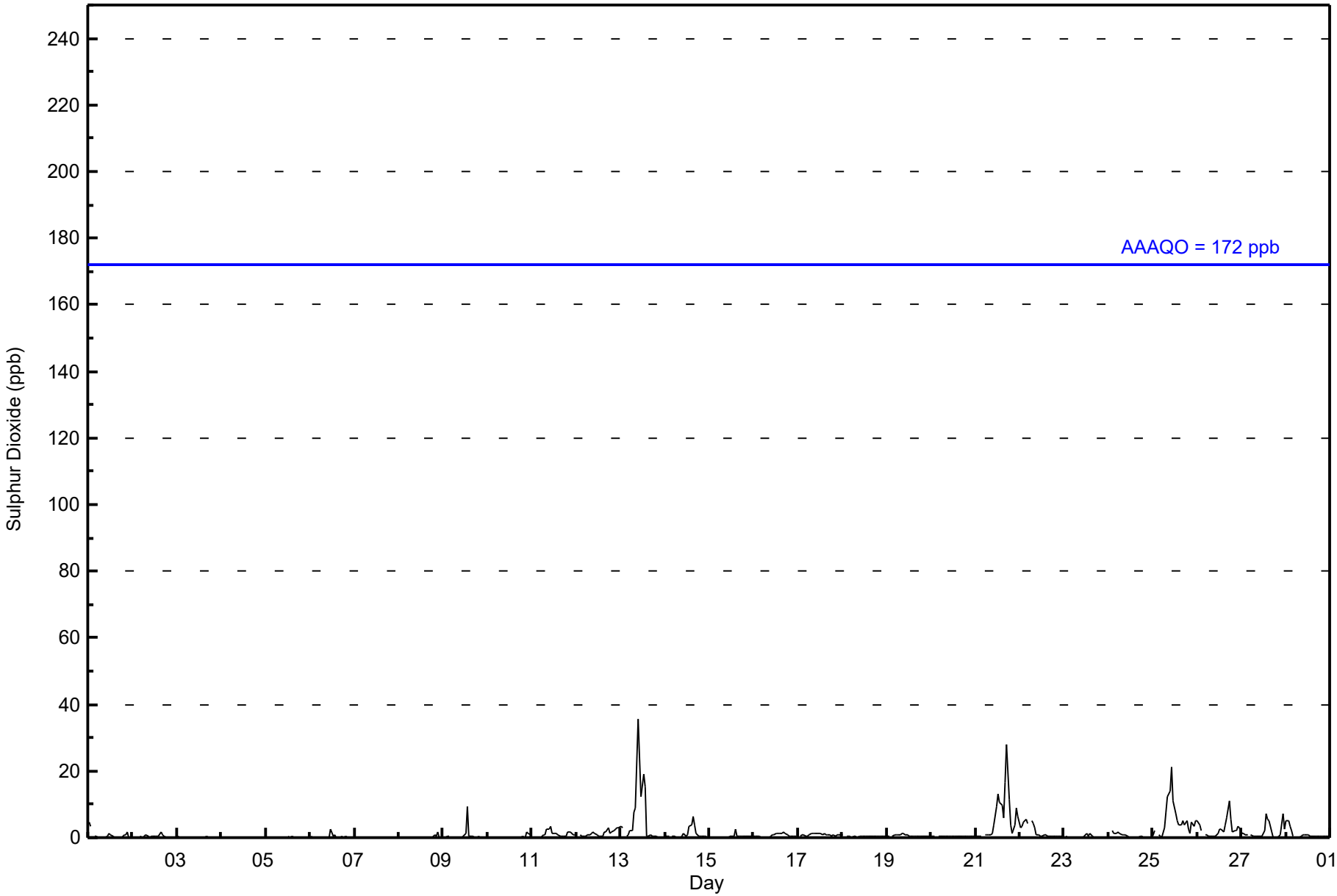
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Mackay River - February 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Mackay River - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	624	97.65	97.65
11 - 20	11	1.72	99.37
21 - 60	4	0.63	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: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Mackay River - February 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	33	63	33	6	7	36	62	48	20	24	42	78	55	26	31	34	598
11 - 20	2	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	11
21 - 60	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	35	68	41	6	7	36	62	48	20	24	42	78	55	26	31	34	613

Total Number of Valid Hours: 613

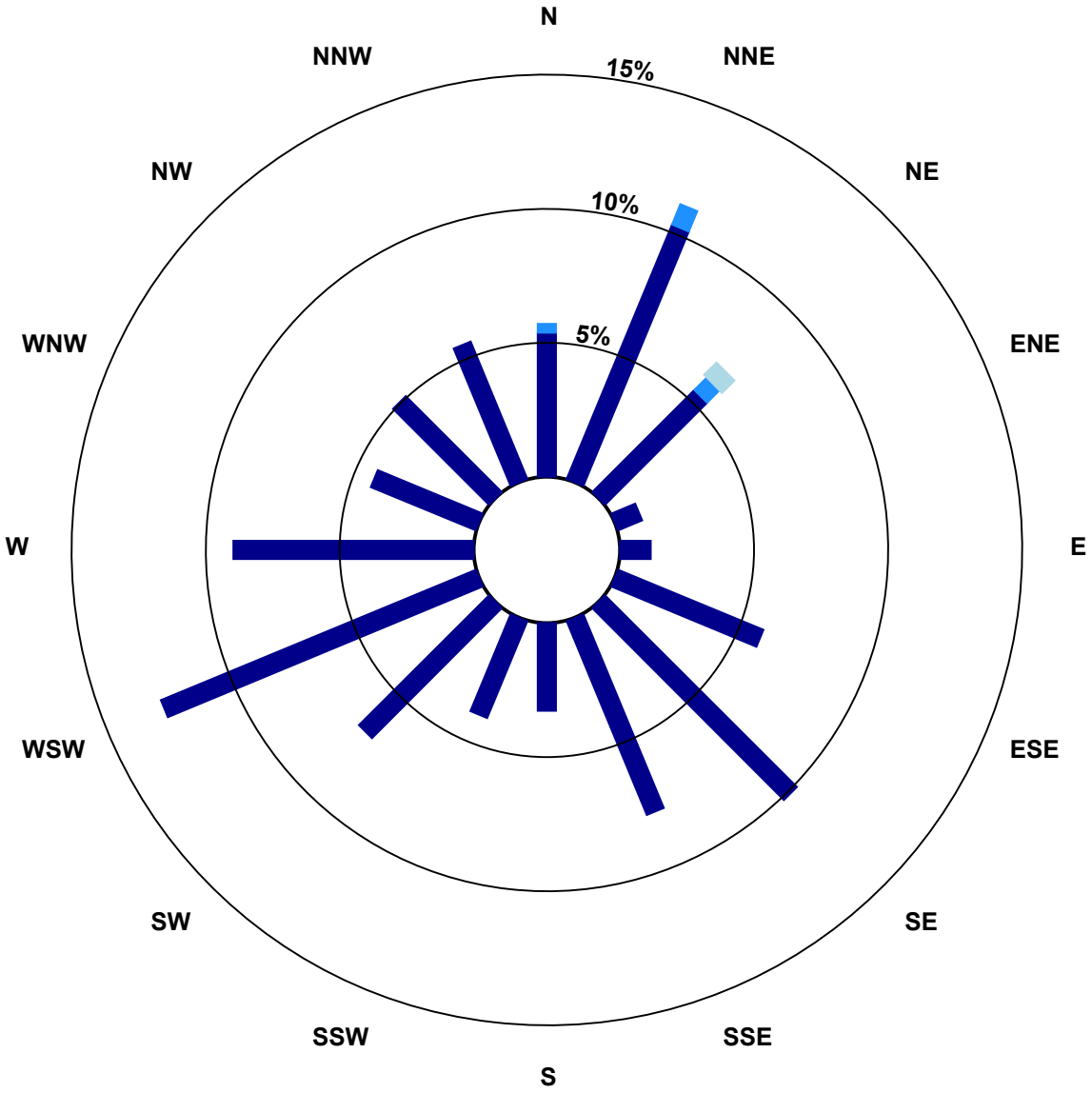
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Sulphur Dioxide (SO_2) - ppb

Mackay River



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

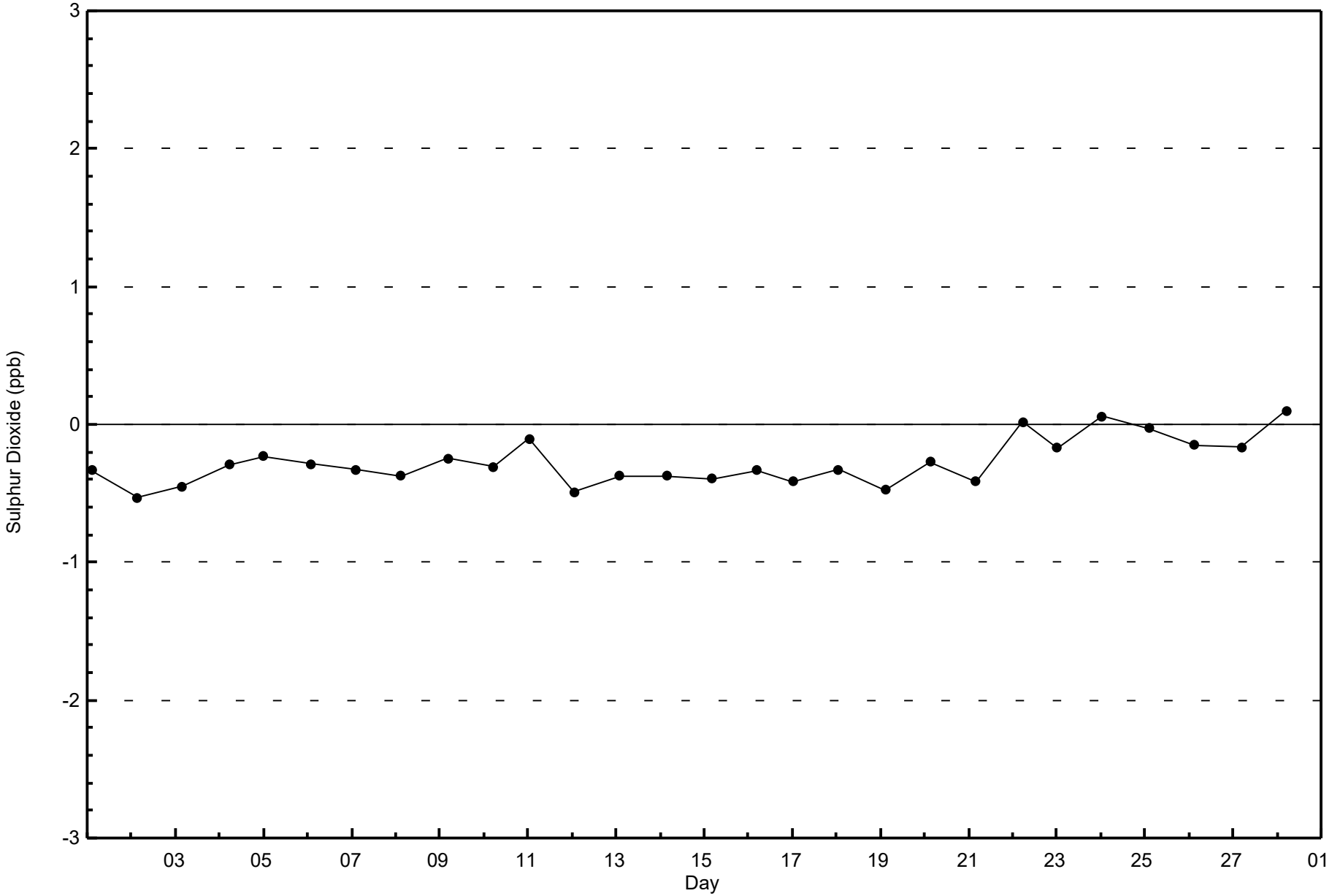
Total Number of Valid Hours: 613

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Mackay River - February 2025

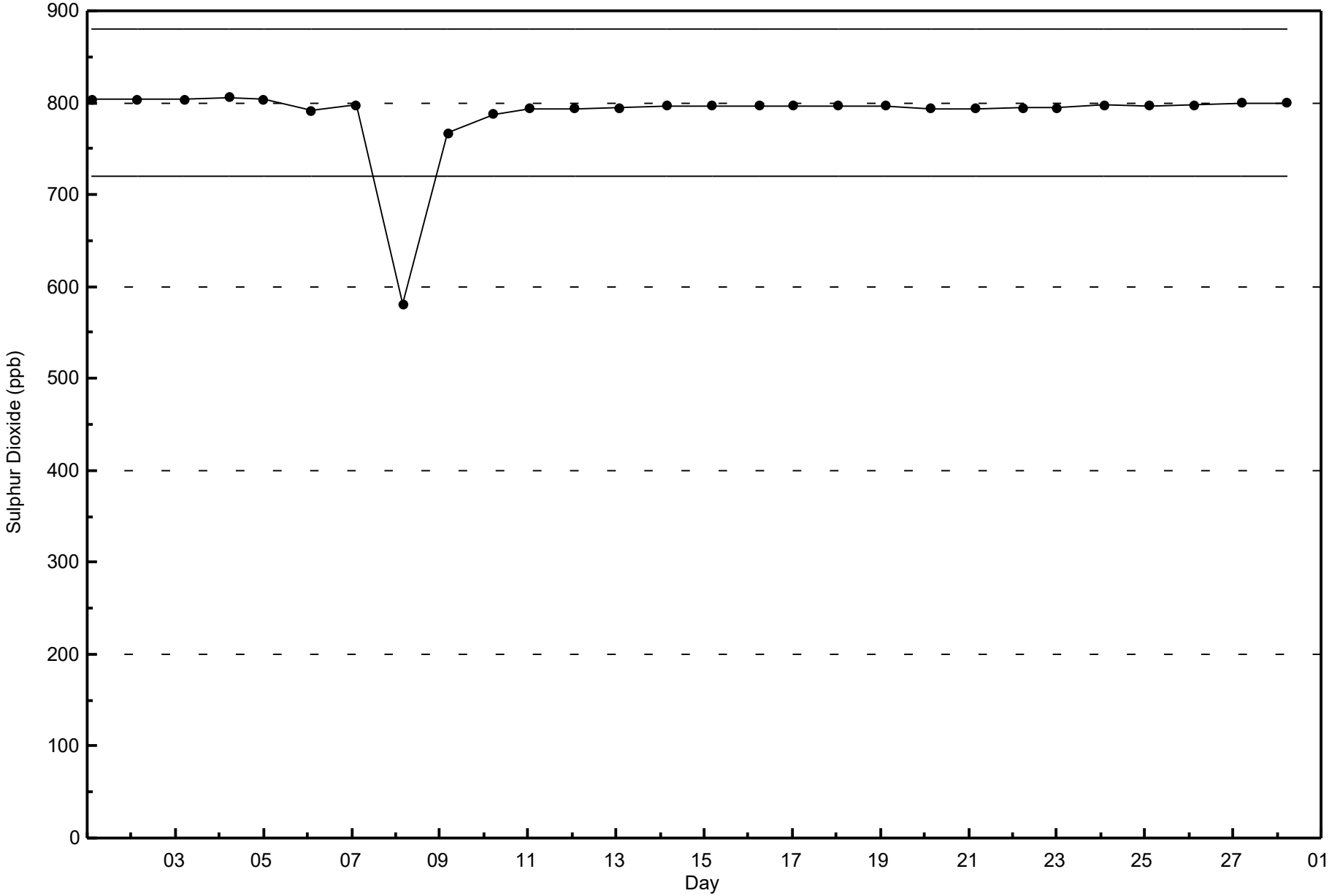


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Mackay River - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Mackay River - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.6 ppb on Feb 27 09:00 Maximum Daily Average: 0.5 ppb on Feb 25

Minimum Value: 0.0 ppb on Feb 3 05:00 Minimum Daily Average: 0.0 ppb on Feb 3
Maximum Diurnal Average: 0.2 ppb at hour 9 Minimum Diurnal Average: 0.1 ppb at hour 6
Monthly Average: 0.16 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.2 P_{90} = 0.4 P_{99} = 1.0

Hours in Service:	672
Hours of Data:	637
Hours of Missing Data:	35
Hours of Calibration:	33
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-Feb	0.1	0.1	0.1	Z	0.1	0.1	0.0	0.1	0.1	M	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2
2-Feb	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.4	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.4
3-Feb	0.2	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
4-Feb	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
5-Feb	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	M	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
6-Feb	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.5	0.3	0.1	0.0	0.0	0.1	0.5
7-Feb	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
8-Feb	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	0.1	0.1	0.4	0.5	0.1	0.1	0.1	0.5
9-Feb	0.1	0.1	0.6	0.1	0.0	Z	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.2	0.1	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.1	0.6
10-Feb	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	0.2	0.1	0.2	0.3	0.3	0.1	0.3
11-Feb	0.3	Z	0.3	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3
12-Feb	0.1	0.2	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.3
13-Feb	0.3	0.4	0.3	Z	0.2	0.2	0.2	0.3	0.4	0.7	0.6	0.4	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.7
14-Feb	0.2	0.2	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.2	1.1	0.1	0.1	0.0	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.2	1.1
15-Feb	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	0.2	0.1	0.0	0.1	0.0	0.0	0.5	0.1	0.2	0.3	0.1	0.5
16-Feb	Z	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.3
17-Feb	0.0	Z	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1
18-Feb	0.1	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	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1
19-Feb	0.0	0.0	0.0	Z	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
20-Feb	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
21-Feb	0.1	0.1	0.1	0.1	0.1	Z	0.2	0.4	0.5	0.9	1.0	1.3	1.0	0.6	0.5	0.4	0.3	0.3	0.3	0.2	0.1	0.1	0.2	0.2	0.4	1.3
22-Feb	Z	0.2	0.2	0.3	0.4	0.5	0.6	0.9	1.1	0.4	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.3	1.1
23-Feb	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2
24-Feb	0.2	0.2	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.3	0.4	0.2	0.4
25-Feb	0.5	0.4	0.4	Z	0.2	0.2	0.2	0.4	0.4	0.2	0.2	0.3	0.3	0.3	0.4	0.6	0.6	0.4	1.1	0.8	0.4	0.8	1.0	1.1	0.5	1.1
26-Feb	0.7	0.8	0.7	0.4	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.4	0.4	0.4	0.7	0.8	0.6	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.8
27-Feb	0.4	0.4	0.4	0.4	0.4	Z	0.3	0.4	1.6	0.3	0.3	0.2	0.3	0.6	0.4	0.5	0.3	0.1	0.1	0.4	0.5	0.4	0.6	0.2	0.4	1.6
28-Feb	Z	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3
	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	Diurnal Average	
	0.7	0.8	0.7	0.4	0.4	0.5	0.6	0.9	1.6	0.9	1.1	1.3	1.0	0.6	0.5	0.7	0.8	0.6	1.1	0.8	0.5	0.8	1.0	1.1	Diurnal Maximum	

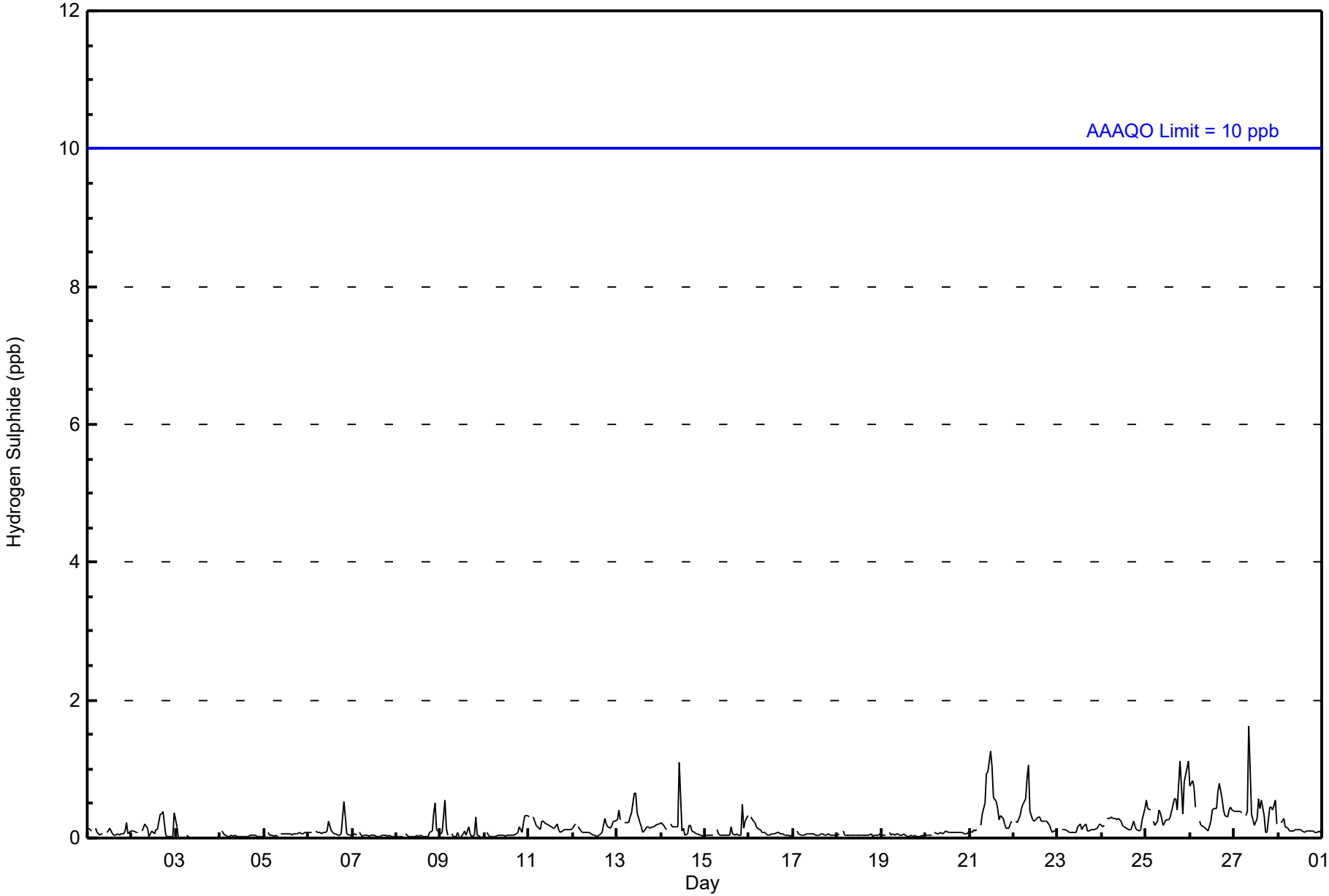
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Mackay River - February 2025



Hydrogen Sulphide (H_2S) - ppb
Mackay River - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	637	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: 637

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Mackay River - February 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	35	64	43	6	7	34	62	49	19	26	43	78	52	26	31	35	610
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	35	64	43	6	7	34	62	49	19	26	43	78	52	26	31	35	610

Total Number of Valid Hours: 610

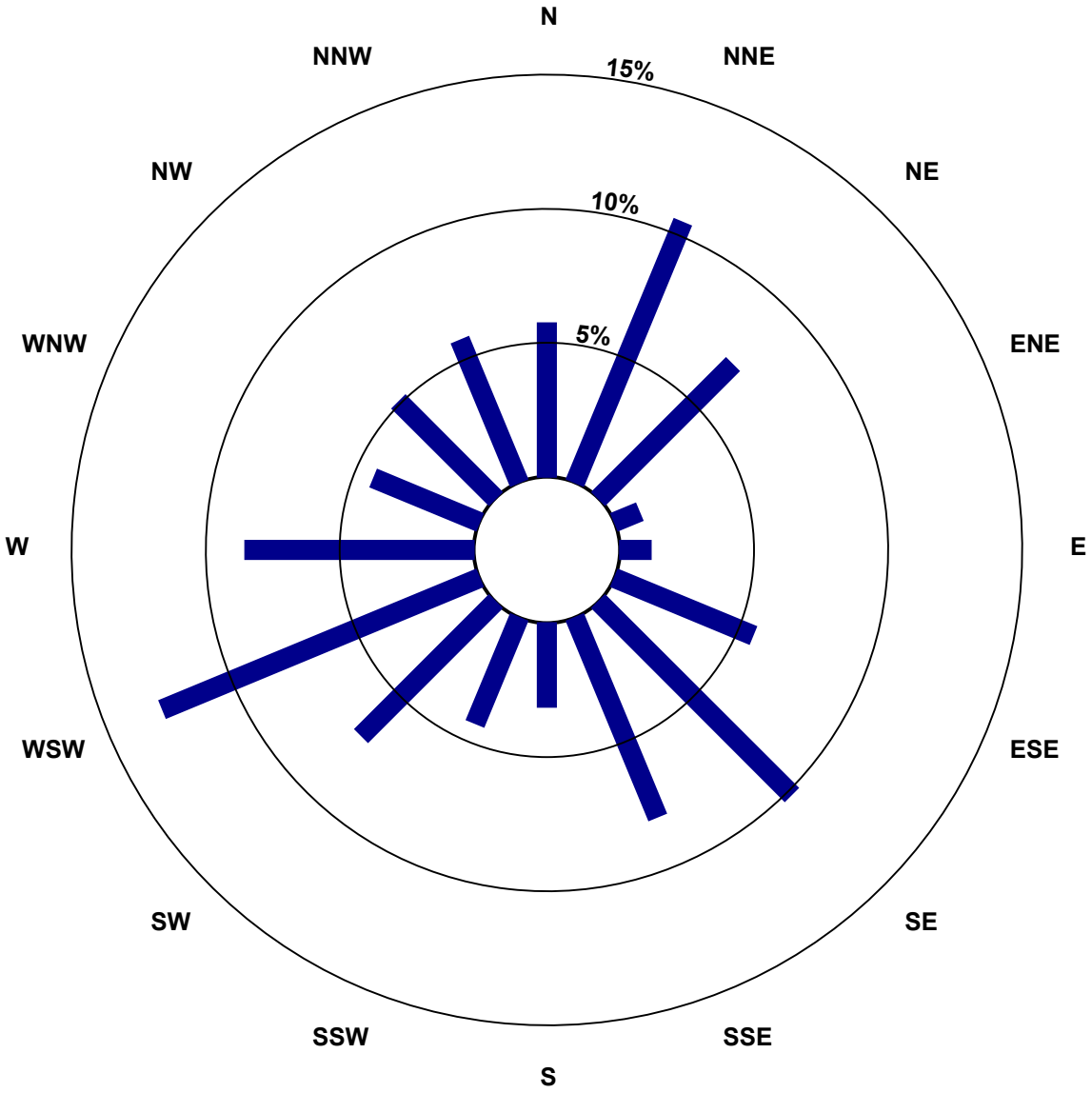
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Hydrogen Sulphide (H_2S) - ppb

Mackay River



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

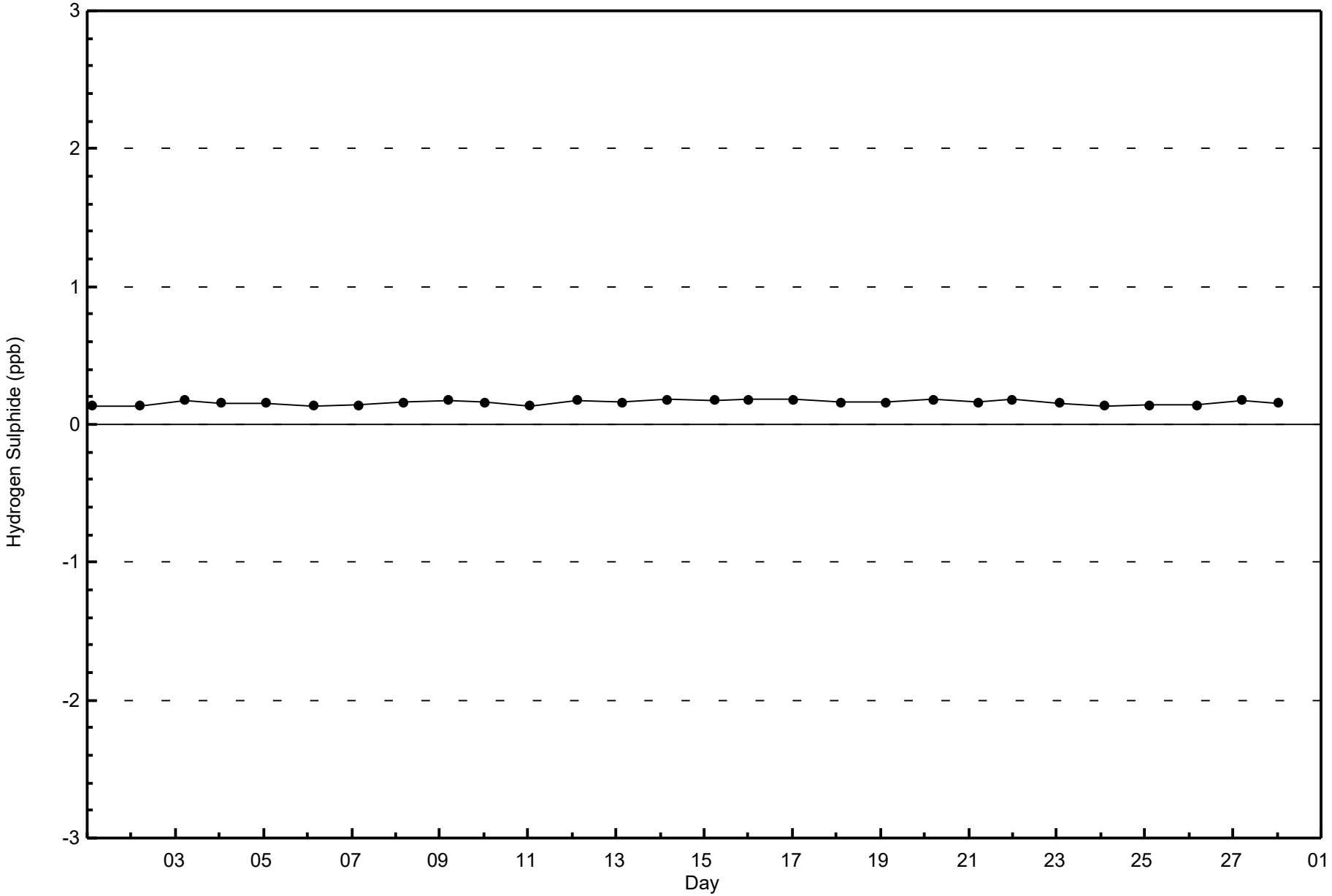
Total Number of Valid Hours: 610

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Mackay River - February 2025

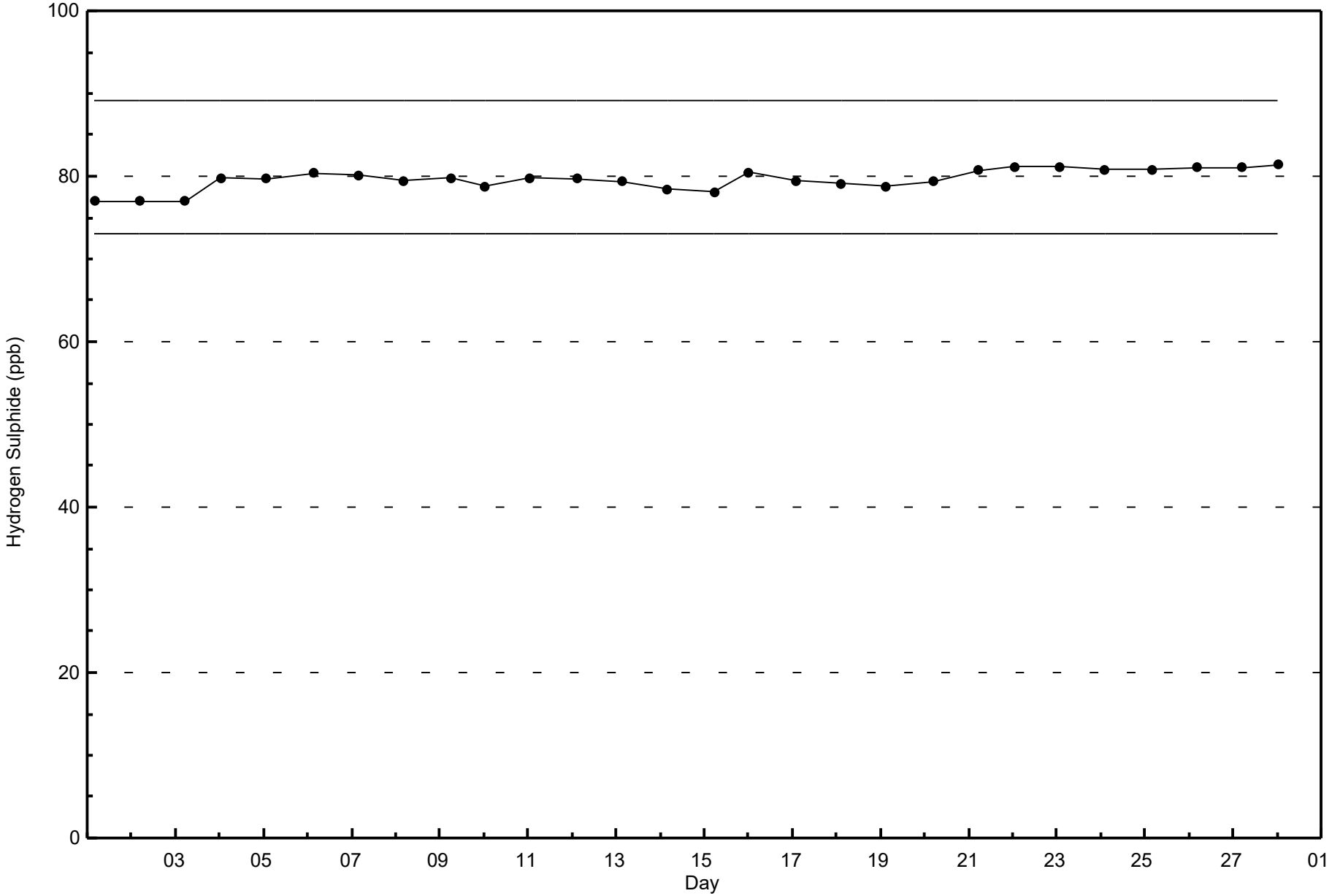


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Mackay River - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Mackay River - February 2025

Maximum Value: 3.6 ppm on Feb 21 12:00

Maximum Daily Average: 2.8 ppm on Feb 21

Minimum Value: 1.9 ppm on Feb 5 17:00

Minimum Daily Average: 2.1 ppm on Feb 5

Maximum Diurnal Average: 2.5 ppm at hour 1

Minimum Diurnal Average: 2.4 ppm at hour 6

Monthly Average: 2.43 ppm

Percentiles: P_1 = 2.0 P_{10} = 2.3 Q_1 = 2.3 Median = 2.4 Q_3 = 2.5 P_{90} = 2.6 P_{99} = 3.2

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	28
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-Feb	2.6	2.5	2.5	2.5	2.5	2.5	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.4	2.4	2.4	2.6
2-Feb	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.6	2.6	2.4	2.5	2.6	2.5	2.5	2.5	2.6	2.6	2.6	2.5	2.5	2.5	2.5	2.5	2.6	2.5	2.6
3-Feb	2.5	2.5	2.5	2.5	2.4	2.4	2.4	2.4	M	2.4	2.5	2.5	2.6	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.5	2.4	2.4	2.4	2.5	2.7
4-Feb	2.4	2.4	2.4	2.4	2.4	Z	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	2.4	2.3	2.4	2.4	2.4	2.4
5-Feb	Z	2.4	2.3	2.3	2.3	2.3	2.3	2.3	M	C	C	C	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.1	2.1	2.4
6-Feb	2.2	2.3	Z	2.4	2.3	2.3	2.3	2.3	M	M	M	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.4	2.5	2.4	2.3	2.3	2.3	2.3	2.5
7-Feb	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
8-Feb	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	2.4	2.9	2.7	2.4	2.3	2.4	2.9
9-Feb	2.3	2.4	2.5	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.5	2.4	2.5	2.3	2.3	2.3	2.4	2.3	2.3	2.3	2.3	2.3	2.5
10-Feb	2.3	2.3	2.3	2.3	2.3	Z	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	2.7	2.8	2.7	2.4	2.8
11-Feb	Z	2.6	2.6	2.6	2.5	2.5	2.4	2.5	2.5	2.5	2.4	2.5	2.4	2.4	2.5	2.5	2.5	2.4	2.4	2.4	2.4	2.5	2.4	2.4	2.5	2.6
12-Feb	2.4	Z	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.5	2.6	2.5	2.4	2.5	2.6	2.6	2.4	2.6
13-Feb	2.6	2.5	Z	2.5	2.5	2.6	2.6	2.6	2.7	3.1	3.0	2.6	2.5	2.4	2.4	2.4	2.6	2.5	2.5	2.6	2.6	2.5	2.6	2.6	2.6	3.1
14-Feb	2.6	2.6	2.5	Z	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.4	2.4	2.4	2.4	2.3	2.4	2.6
15-Feb	2.3	2.3	2.4	2.3	Z	2.3	2.3	2.3	2.3	2.4	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.6	2.6	2.4	2.6
16-Feb	2.5	2.5	2.4	2.5	2.4	Z	2.4	2.3	2.3	2.3	2.4	2.3	2.4	2.3	2.3	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.5
17-Feb	Z	2.3	2.3	2.4	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4
18-Feb	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
19-Feb	2.3	2.3	Z	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	2.3	2.3	2.4
20-Feb	2.3	2.4	2.4	Z	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5
21-Feb	2.4	2.4	2.4	2.4	Z	2.4	2.5	2.7	3.0	3.5	3.4	3.6	3.3	3.4	3.2	3.0	2.7	2.8	2.8	2.7	2.7	2.7	2.7	2.7	2.8	3.6
22-Feb	2.7	2.7	2.7	2.8	2.9	Z	2.9	2.9	2.9	2.5	2.5	2.5	2.5	2.6	2.5	2.5	2.5	2.5	2.5	2.5	2.4	2.4	2.4	2.4	2.6	2.9
23-Feb	Z	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.6	2.4	2.4	2.5	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.3	2.4	2.6
24-Feb	2.3	Z	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.5	2.9	2.4	2.9
25-Feb	3.2	2.8	Z	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.4	2.5	2.5	2.4	2.4	2.4	2.4	2.6	2.5	2.4	2.7	2.8	2.9	2.6	3.2
26-Feb	2.8	2.7	2.6	Z	2.5	2.5	2.4	2.4	2.4	2.4	2.4	2.7	3.0	2.9	2.8	2.8	2.7	2.7	2.7	2.7	2.7	2.8	2.9	2.9	2.7	3.0
27-Feb	2.9	2.9	2.9	2.9	Z	2.5	2.8	2.9	3.3	2.5	2.6	2.4	2.3	2.4	2.4	2.4	2.4	2.3	2.4	2.5	2.5	2.5	2.5	2.4	2.6	3.3
28-Feb	2.4	2.4	2.4	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	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.4
	2.5	2.5	2.5	2.4	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.5	Diurnal Average	
	3.2	2.9	2.9	2.9	2.9	2.6	2.9	2.9	3.3	3.5	3.4	3.6	3.3	3.4	3.2	3.0	2.7	2.8	2.8	2.7	2.9	2.8	2.9	2.9	Diurnal Maximum	

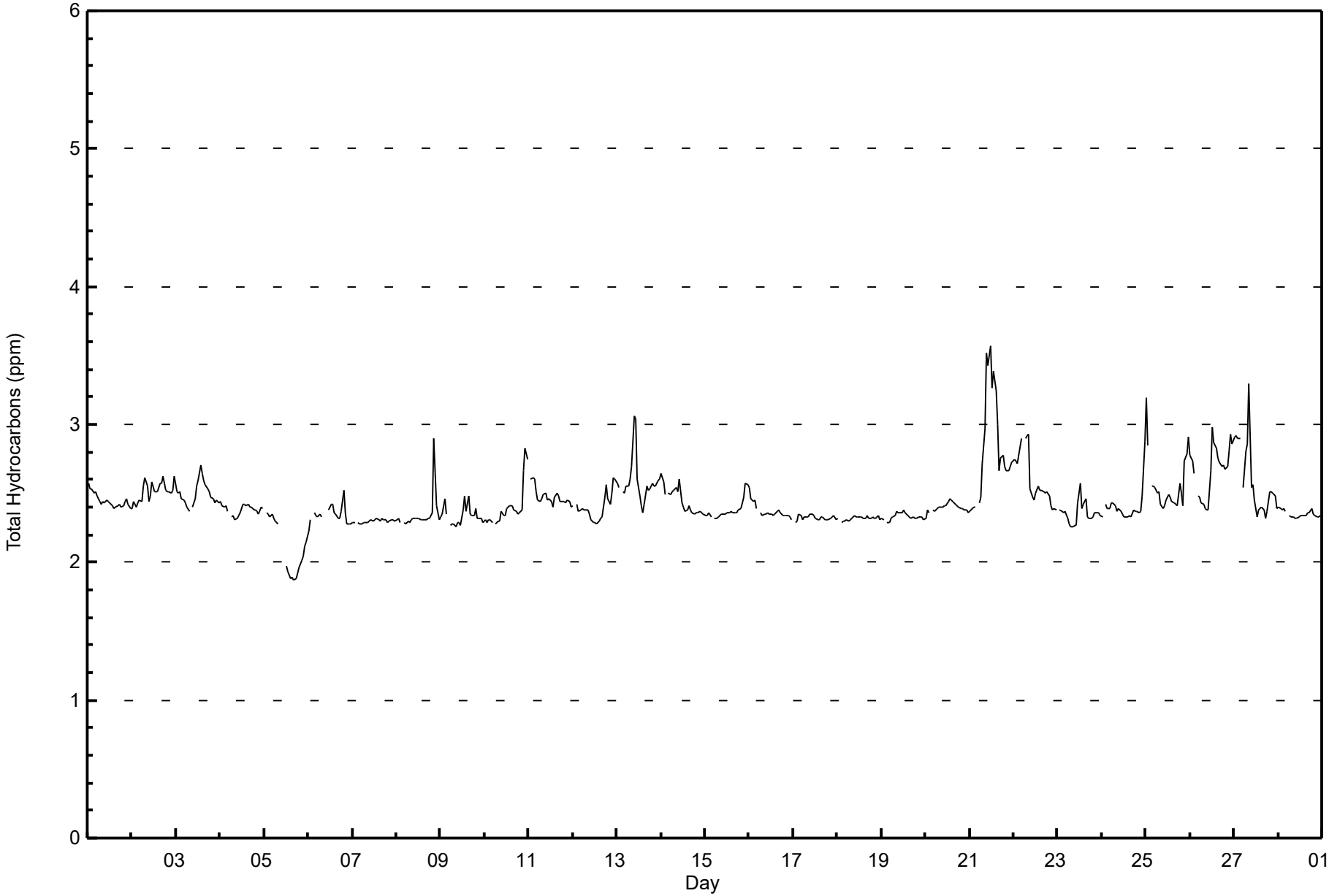
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Mackay River - February 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm

Mackay River - February 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	10	1.56	1.56
2.1 - 3.0	620	97.03	98.59
3.1 - 10.0	9	1.41	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Mackay River - February 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	9	1	0	0	0	10
2.1 - 3.0	33	66	39	6	7	36	62	48	20	23	42	69	55	23	31	34	594
3.1 - 10.0	2	3	2	0	0	0	0	0	0	1	0	0	0	0	0	1	9
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	35	69	41	6	7	36	62	48	20	24	42	78	56	23	31	35	613

Total Number of Valid Hours: 613

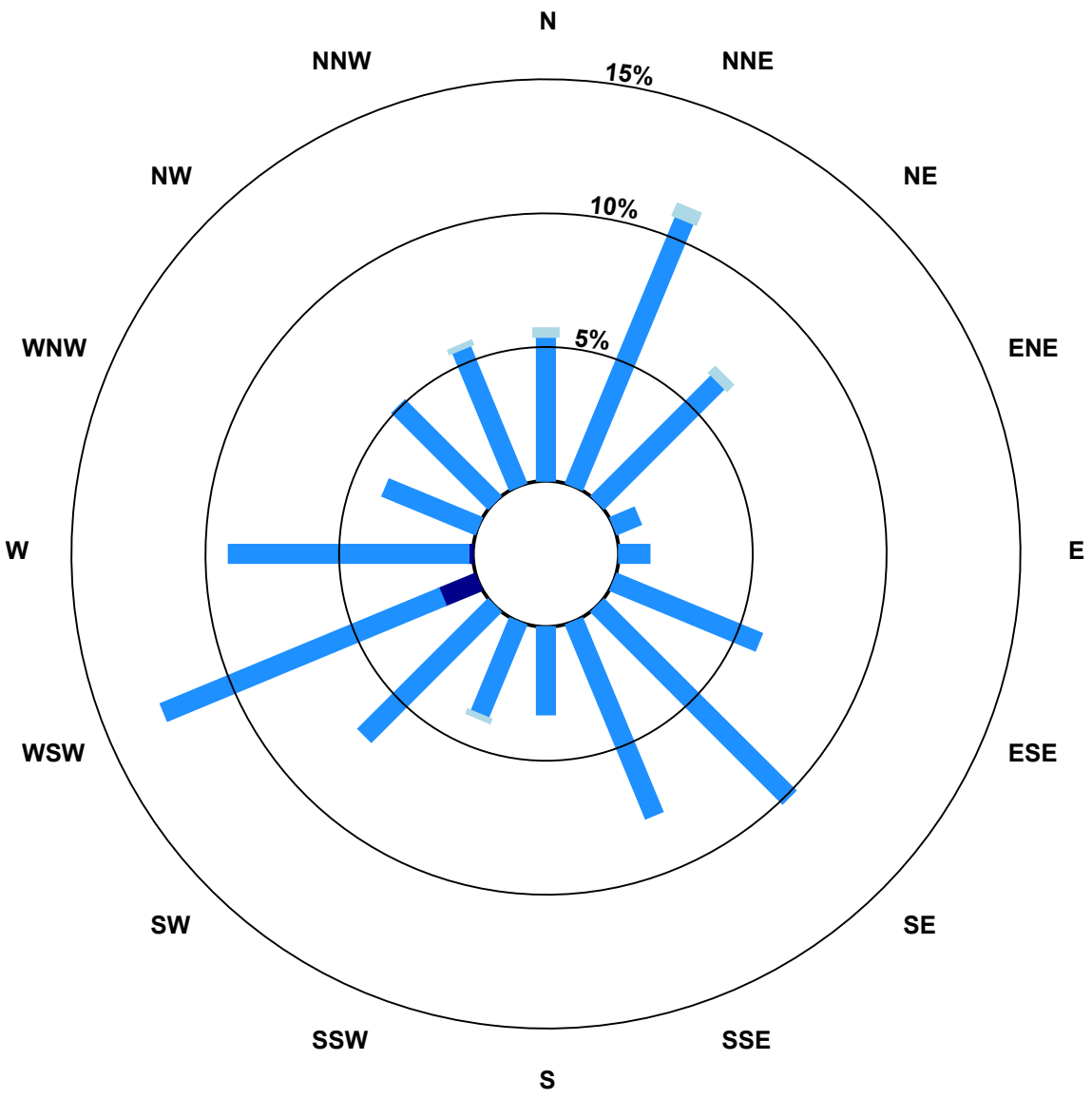
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Total Hydrocarbons (THC) - ppm

Mackay River



Classes (ppm)

- 0 - 2.0
- 2.1 - 3.0
- 3.1 - 10.0
- > 10.0

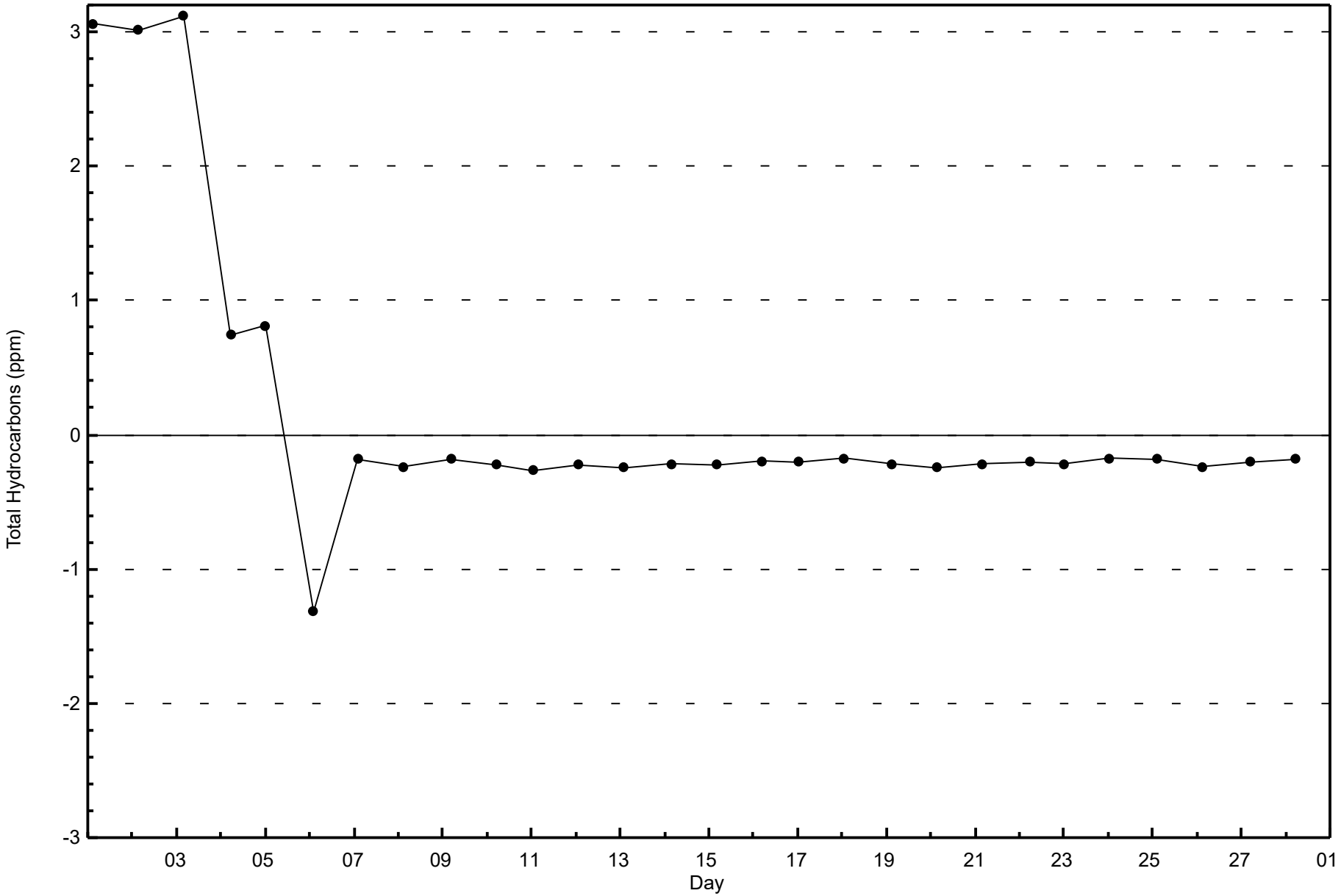
Total Number of Valid Hours: 613

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Mackay River - February 2025

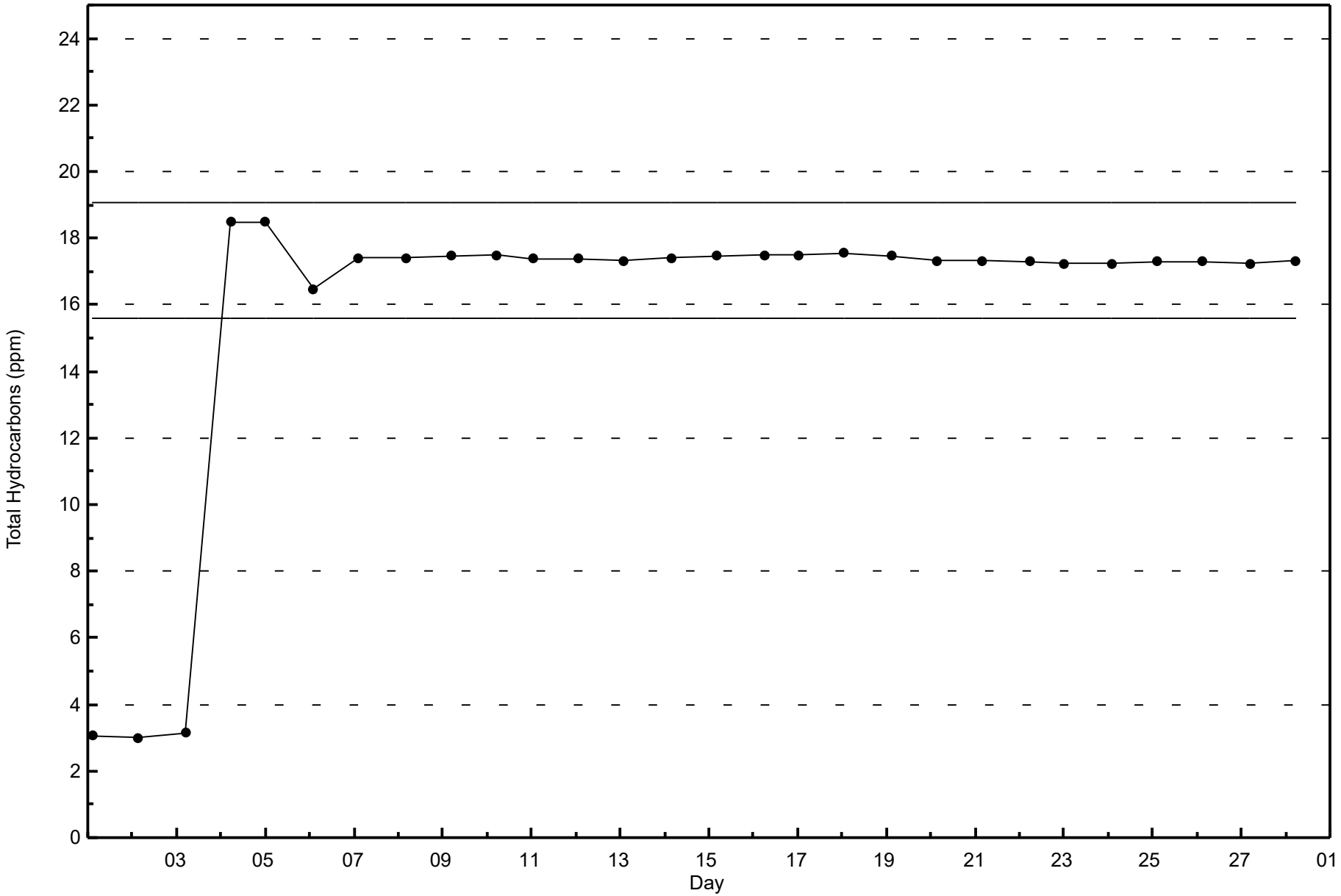


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Mackay River - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Mackay River - February 2025

Maximum Value: 35.1 ppb on Feb 21 10:00

Maximum Daily Average: 7.5 ppb on Feb 21

Minimum Value: 0.0 ppb on Feb 1 08:00

Minimum Daily Average: 0.0 ppb on Feb 10

Maximum Diurnal Average: 2.6 ppb at hour 10

Minimum Diurnal Average: 0.0 ppb at hour 20

Monthly Average: 0.78 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.3 P_{90} = 1.5 P_{99} = 15.1

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	33
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-Feb	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	0.8	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	0.8
2-Feb	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.7	2.0	0.7	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	2.0
3-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	3.5	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	0.2	3.5
4-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
5-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	M	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
6-Feb	0.0	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.3	0.8	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8
7-Feb	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
8-Feb	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.2	0.0	0.0	0.1	1.1
9-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.5	3.3	3.0	2.1	3.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	3.3
10-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
11-Feb	0.0	0.1	0.1	0.1	Z	0.1	0.1	0.0	0.4	1.2	1.3	1.8	1.6	1.2	1.6	1.5	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.8
12-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.2	0.5	0.4	0.3	0.2	0.2	0.2	0.4	0.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6
13-Feb	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.2	4.3	13.3	15.9	6.6	4.8	3.0	1.6	2.5	3.0	1.0	0.0	0.1	0.0	0.1	0.1	0.2	2.5	15.9
14-Feb	1.3	Z	0.1	0.0	0.1	0.1	0.5	0.5	4.9	6.3	5.0	3.1	1.3	1.6	1.4	1.2	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.2	6.3
15-Feb	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	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
16-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.4	0.8	1.0	0.9	0.8	0.7	0.6	0.7	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.0
17-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.2	0.4	0.5	0.4	0.4	0.4	0.5	0.7	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
18-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.3	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
19-Feb	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.7	0.8	0.7	0.5	0.3	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8
20-Feb	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.4	0.8	0.9	0.8	0.6	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.9
21-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.4	8.8	35.1	27.0	28.4	18.1	18.6	19.2	12.0	3.1	1.5	0.1	0.0	0.0	0.0	0.0	0.1	7.5	35.1
22-Feb	0.1	0.1	0.0	Z	0.4	1.2	1.3	2.0	5.1	1.8	1.4	1.6	1.8	2.3	2.5	1.1	0.6	0.3	0.1	0.1	0.1	0.0	0.0	0.0	1.0	5.1
23-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.7	1.7	0.9	1.0	1.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.7
24-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.4	0.8	1.0	0.6	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	6.9	0.5	6.9
25-Feb	Z	2.1	0.3	0.2	0.1	0.1	0.0	0.2	0.8	1.8	5.2	3.5	4.0	3.6	3.1	1.9	1.0	0.3	0.1	0.1	0.1	0.1	0.1	0.2	1.3	5.2
26-Feb	0.1	Z	0.2	0.1	0.1	0.1	0.0	0.1	0.3	0.3	0.3	6.5	13.9	11.6	11.1	7.6	4.1	1.4	0.3	0.2	0.2	0.2	0.2	1.2	2.6	13.9
27-Feb	4.1	4.2	Z	5.4	0.8	0.1	3.2	3.3	6.9	1.7	3.3	1.9	0.7	1.2	0.9	0.6	0.2	0.0	0.0	0.1	0.1	0.1	0.1	0.0	1.7	6.9
28-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.2	0.5	0.5	0.7	0.7	0.6	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
	0.3	0.3	0.0	0.3	0.1	0.1	0.2	0.3	1.3	2.6	2.4	2.3	2.1	1.8	1.7	1.3	0.6	0.2	0.0	0.0	0.1	0.0	0.0	0.3	Diurnal Average	
	4.1	4.2	0.3	5.4	0.8	1.2	3.2	3.3	8.8	35.1	27.0	28.4	18.1	18.6	19.2	12.0	4.1	1.5	0.3	0.2	1.1	0.2	0.2	6.9	Diurnal Maximum	

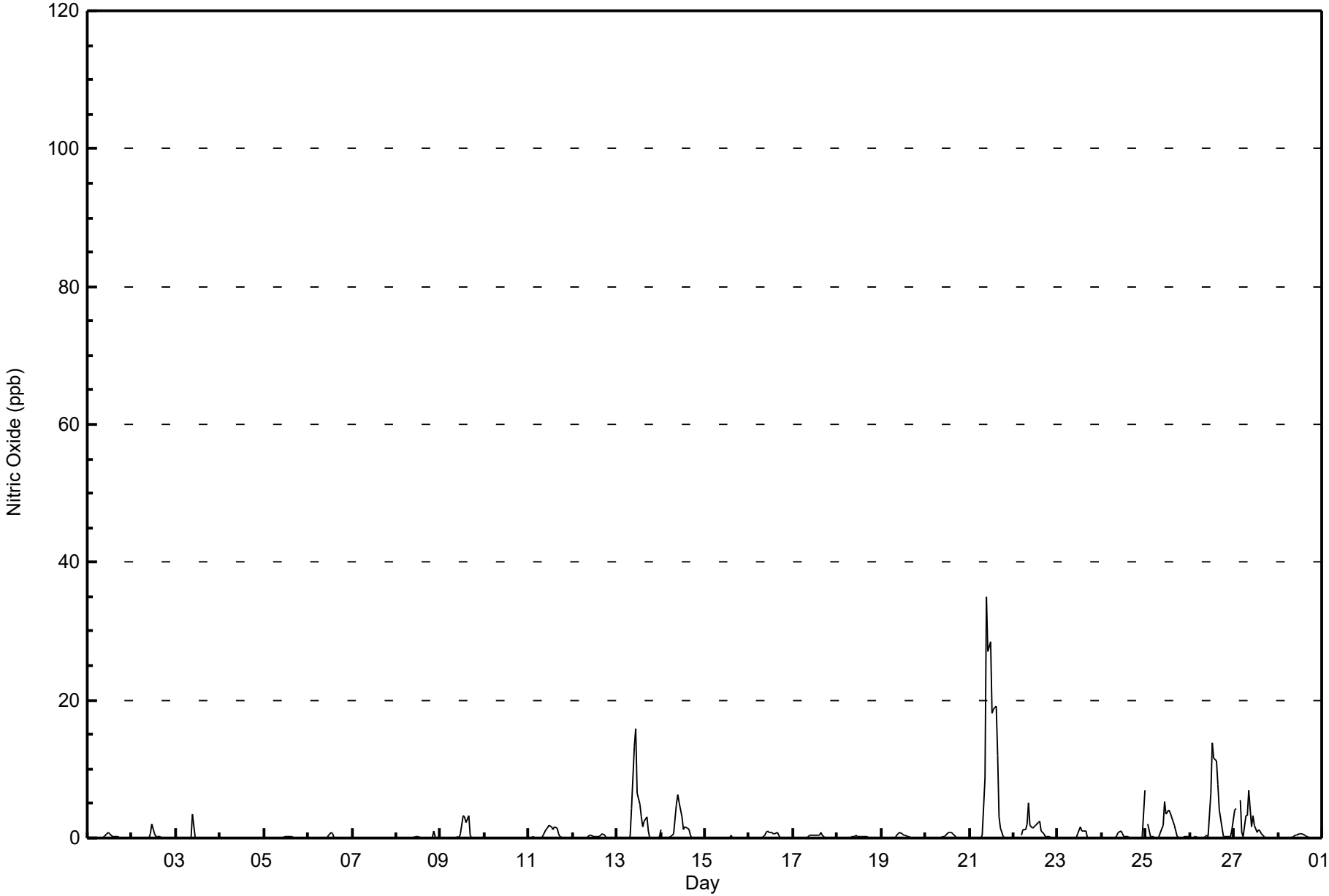
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Mackay River - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	635	99.53	99.53
21 - 40	3	0.47	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: 638

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Mackay River - February 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	33	65	41	6	8	36	61	48	19	26	42	76	56	27	30	34	608
21 - 40	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	34	66	41	6	8	36	61	48	19	26	42	76	56	27	30	35	611

Total Number of Valid Hours: 611

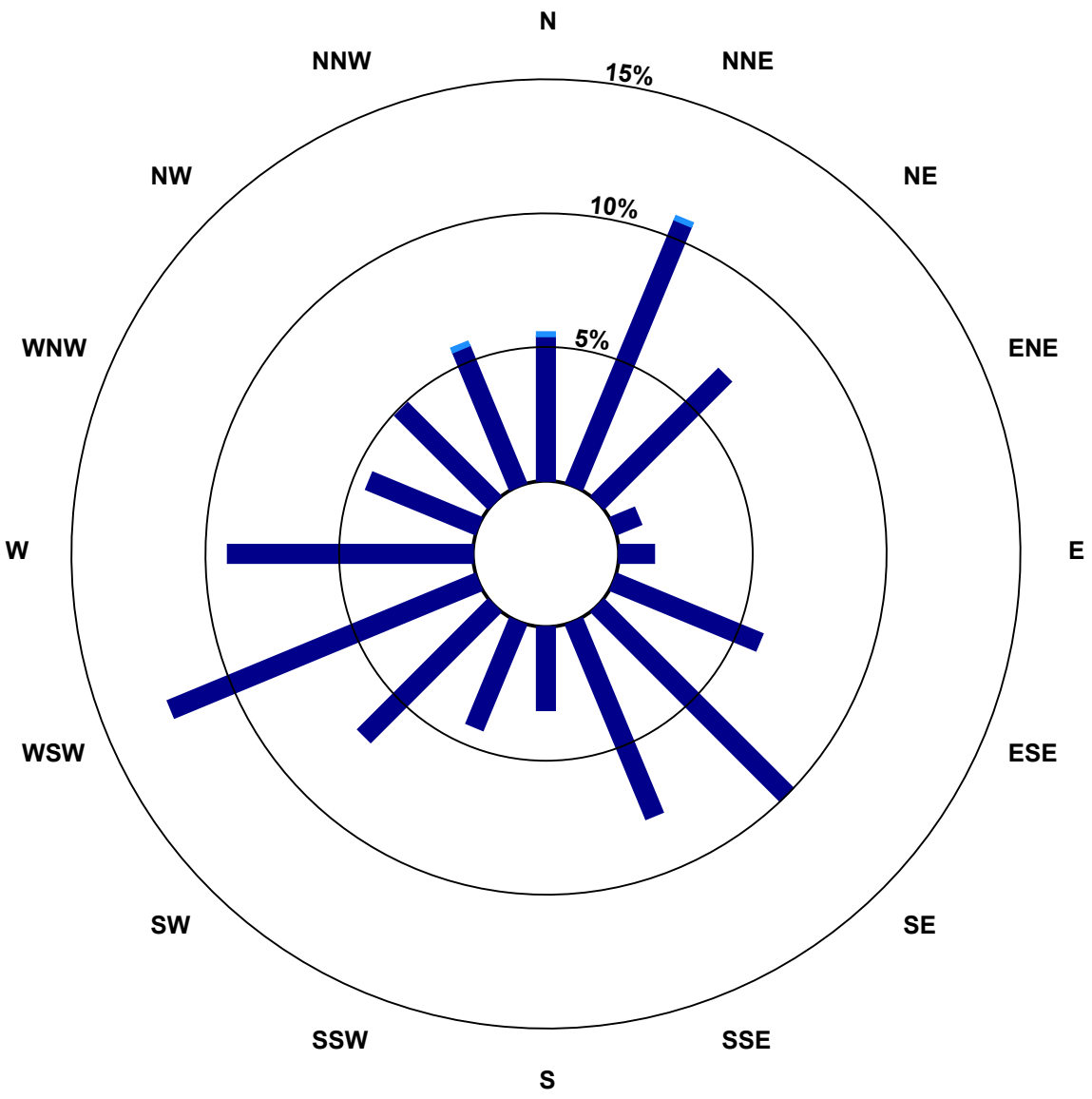
Total Number of Hours: 672

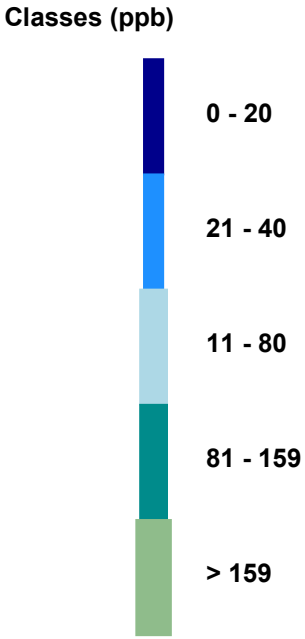
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitric Oxide (NO) - ppb

Mackay River





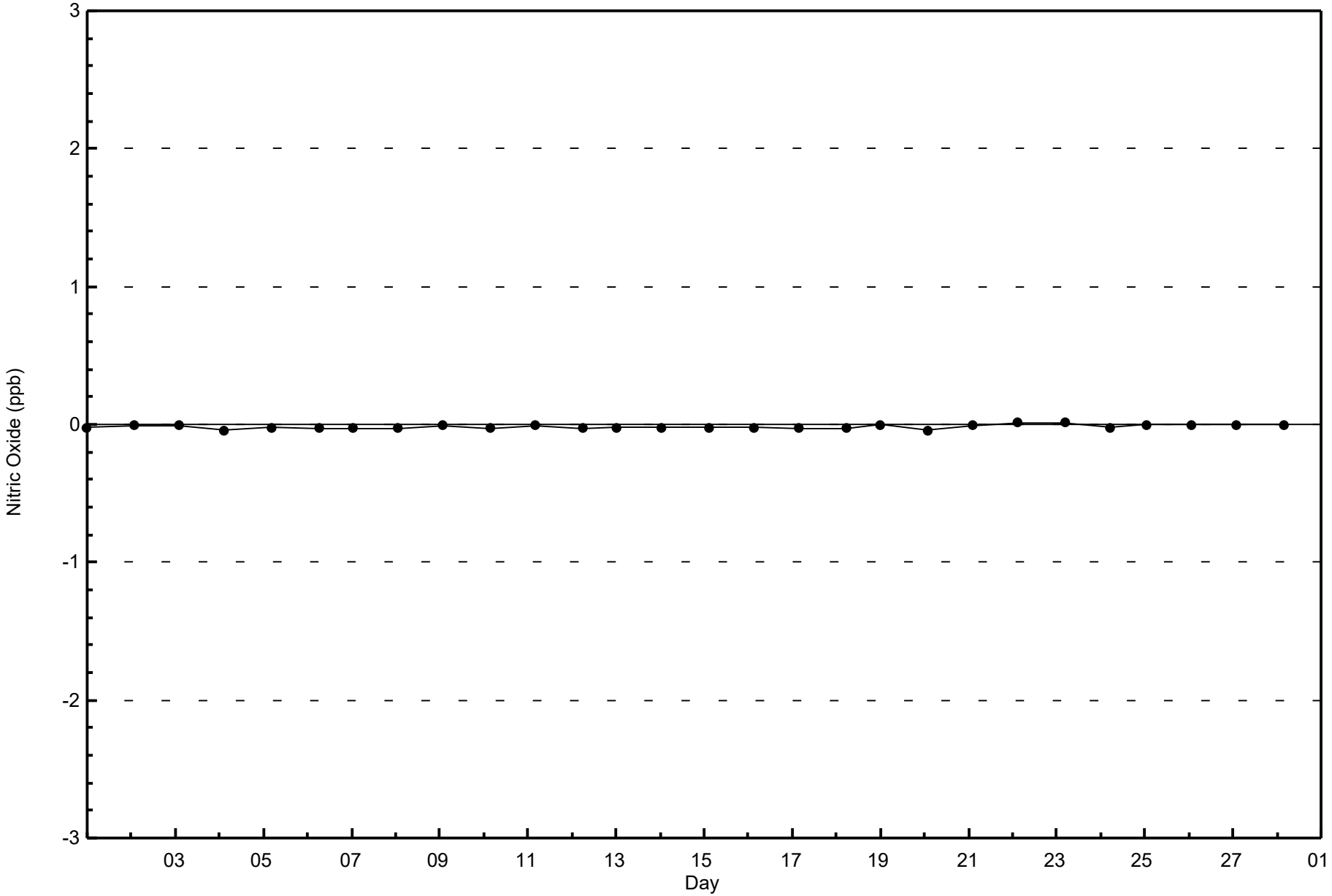
Total Number of Valid Hours: 611

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Mackay River - February 2025

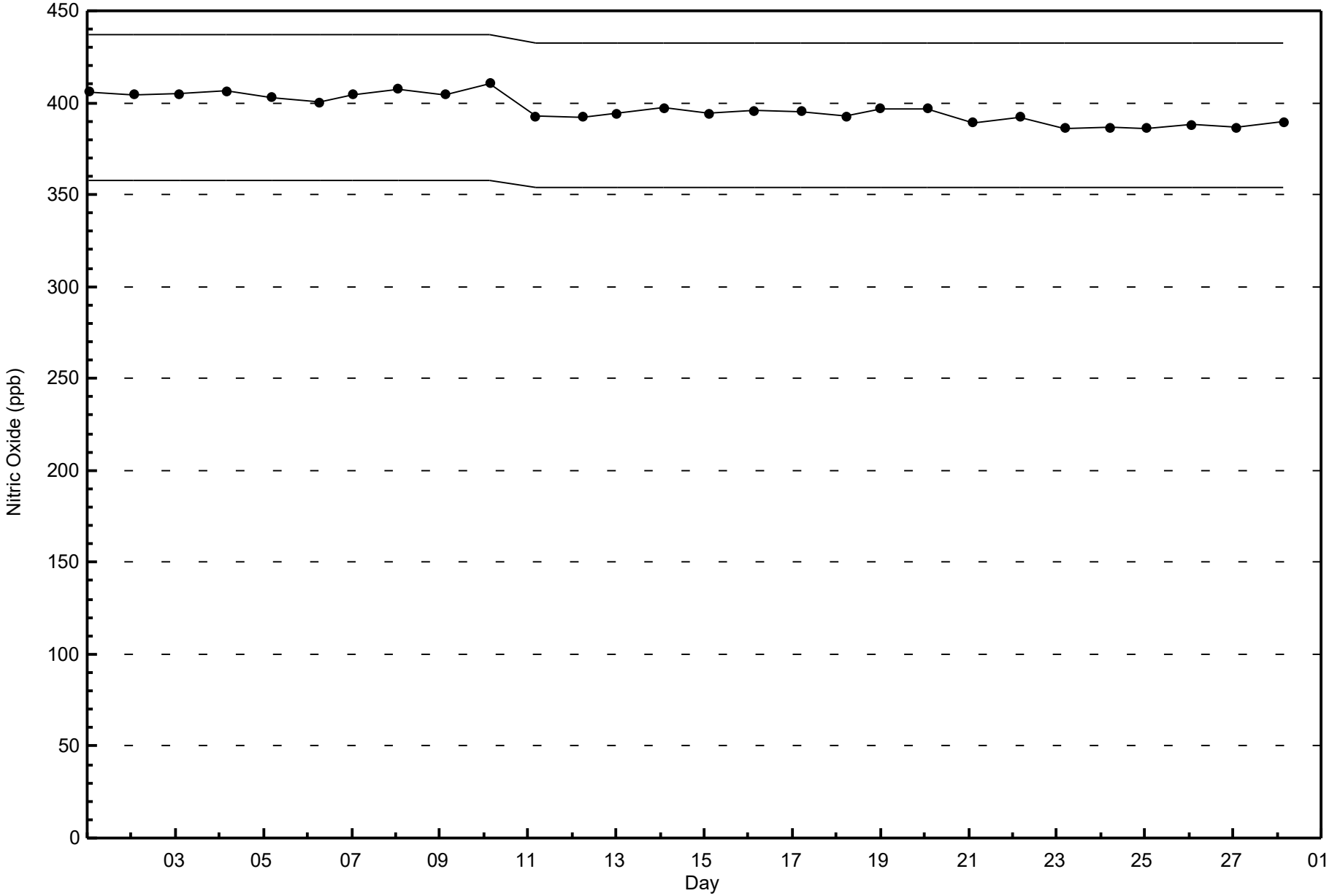


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Mackay River - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Mackay River - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 33.0 ppb on Feb 22 06:00 Maximum Daily Average: 16.4 ppb on Feb 21

Minimum Value: 0.2 ppb on Feb 7 11:00 Minimum Daily Average: 0.3 ppb on Feb 7
Maximum Diurnal Average: 6.8 ppb at hour 2 Minimum Diurnal Average: 3.0 ppb at hour 15
Monthly Average: 4.85 ppb Percentiles: P_1 = 0.2 P_{10} = 0.3 Q_1 = 0.7 Median = 1.9 Q_3 = 5.1 P_{90} = 16.1 P_{99} = 29.0

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	33
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-Feb	Z	11.6	10.5	7.8	7.7	6.8	4.4	3.5	3.3	2.7	3.2	3.5	2.6	1.4	0.9	1.2	2.2	2.2	1.5	2.4	2.7	4.6	0.5	0.2	3.8	11.6
2-Feb	0.2	Z	0.2	0.2	0.2	0.4	7.5	9.2	4.9	0.2	2.2	4.3	1.9	0.5	0.7	1.3	1.1	1.2	0.3	0.3	0.2	0.2	0.2	0.8	1.7	9.2
3-Feb	0.5	0.6	Z	0.2	0.2	0.2	0.2	0.2	0.2	1.5	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	1.5
4-Feb	0.3	0.4	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.6	0.4	0.6
5-Feb	0.6	0.7	0.7	0.7	Z	0.7	0.7	0.7	M	0.8	0.9	0.9	0.7	0.8	1.0	1.2	1.4	1.6	1.8	1.9	1.8	1.7	1.5	1.4	1.1	1.9
6-Feb	1.6	1.7	1.9	1.7	1.4	1.2	Z	1.0	0.8	0.7	0.6	1.7	3.6	2.6	0.3	0.3	0.5	0.5	1.7	2.3	0.6	0.2	0.2	0.2	1.2	3.6
7-Feb	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.3	0.4	0.4	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4
8-Feb	0.3	Z	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.5	0.6	0.7	0.7	0.6	0.5	0.5	0.5	0.4	0.6	3.1	29.7	21.8	5.6	0.3	3.0	29.7
9-Feb	0.3	0.6	Z	0.8	1.1	1.8	2.1	0.5	0.3	0.7	0.2	1.0	3.8	3.8	3.4	6.8	2.2	1.9	1.6	1.8	0.8	0.9	1.0	0.3	1.6	6.8
10-Feb	0.2	0.2	0.2	Z	0.3	0.3	0.3	0.3	C	C	C	C	C	0.4	0.3	0.3	0.3	0.3	0.5	0.8	2.9	17.4	23.5	22.7	4.0	23.5
11-Feb	19.5	20.0	22.9	20.2	Z	12.9	8.0	6.7	6.3	5.6	4.2	4.1	3.2	2.7	4.0	4.5	4.5	3.9	3.8	4.5	4.6	4.7	4.7	4.6	7.8	22.9
12-Feb	4.9	5.3	4.4	3.5	3.0	Z	3.2	3.9	3.9	2.7	1.6	1.1	0.9	0.8	1.2	2.3	6.1	11.3	18.2	14.1	13.1	15.0	15.3	15.3	6.6	18.2
13-Feb	Z	14.3	11.7	12.7	13.9	15.3	16.7	19.7	19.6	20.0	18.5	9.3	6.7	4.7	3.1	6.6	13.4	16.1	15.8	18.9	17.2	19.1	22.4	23.6	14.8	23.6
14-Feb	26.5	Z	14.4	13.5	14.2	15.1	19.0	18.8	15.0	7.8	5.6	3.4	1.8	2.2	2.3	3.1	2.4	2.0	1.8	1.5	1.4	1.4	1.4	1.4	7.7	26.5
15-Feb	1.4	1.1	Z	0.8	0.6	0.6	0.6	0.7	0.6	0.5	0.4	0.4	0.5	0.5	1.2	0.4	0.5	0.5	0.9	1.0	1.1	4.8	7.9	9.5	1.6	9.5
16-Feb	9.0	7.3	6.4	Z	4.7	4.2	3.9	3.5	2.9	2.4	2.0	1.7	1.6	1.5	1.5	2.2	2.7	2.7	2.5	1.8	1.7	1.5	1.3	1.6	3.1	9.0
17-Feb	1.3	1.6	2.3	2.5	Z	1.9	2.0	2.6	2.8	2.3	1.7	1.3	1.2	1.0	1.3	2.1	2.0	2.2	2.2	2.1	1.9	1.7	1.8	1.7	1.9	2.8
18-Feb	1.7	1.5	1.2	1.1	1.1	Z	1.0	1.0	1.1	1.0	0.9	0.7	0.7	0.6	0.6	0.7	1.1	0.7	0.7	0.9	1.2	1.3	1.3	1.3	1.0	1.7
19-Feb	Z	1.3	1.2	1.2	1.2	1.5	2.2	2.5	3.0	2.3	1.9	1.6	1.5	1.4	1.2	1.1	1.0	1.1	1.1	1.2	1.2	1.2	1.2	1.5	1.5	3.0
20-Feb	1.6	Z	2.0	2.0	2.4	2.5	2.6	2.7	2.6	2.6	2.6	2.6	2.5	2.8	2.9	2.9	2.8	2.7	2.4	2.0	1.7	1.5	1.4	2.0	2.3	2.9
21-Feb	1.5	1.2	Z	2.4	3.7	3.2	5.5	17.6	21.3	31.3	26.4	27.6	23.1	23.9	25.4	23.3	16.2	22.6	20.8	15.4	12.3	12.0	18.4	21.4	16.4	31.3
22-Feb	21.5	20.3	20.9	Z	31.9	33.0	32.6	31.4	26.3	8.9	5.8	5.5	5.8	6.9	5.1	4.5	3.9	3.7	4.0	3.6	2.7	2.3	2.1	2.1	12.4	33.0
23-Feb	1.7	1.9	1.9	1.7	Z	1.4	1.0	0.8	0.9	0.7	0.6	4.0	6.3	3.3	3.9	3.7	0.7	0.7	0.9	1.3	4.1	3.6	3.2	2.9	2.2	6.3
24-Feb	2.3	2.4	4.1	3.9	4.3	Z	6.4	5.5	4.0	3.9	3.8	2.4	1.2	1.0	0.9	0.9	0.8	1.3	1.2	0.8	0.8	1.4	5.2	18.6	3.4	18.6
25-Feb	Z	26.4	18.7	12.3	11.3	10.5	10.7	12.4	8.9	7.8	13.6	9.3	9.1	7.3	6.3	4.5	5.8	6.0	13.1	9.6	5.8	18.5	18.7	20.6	11.6	26.4
26-Feb	20.0	Z	11.7	7.7	5.1	4.0	3.3	2.7	1.9	1.5	1.2	6.6	12.0	12.0	12.3	11.5	12.2	15.1	17.7	17.2	17.7	22.0	24.5	27.3	11.6	27.3
27-Feb	29.3	28.5	Z	24.9	13.6	7.4	18.0	19.6	19.5	6.3	8.4	4.9	2.7	3.3	2.4	2.4	1.5	0.7	2.3	9.0	9.0	7.1	5.4	3.9	10.0	29.3
28-Feb	4.4	6.3	5.1	Z	4.1	3.1	2.2	2.0	2.1	2.0	1.9	1.8	1.8	1.7	1.5	1.5	1.4	1.6	1.9	1.9	1.5	1.5	1.4	1.4	2.4	6.3
	6.5	6.8	6.2	5.3	5.3	5.2	5.7	6.1	5.9	4.3	4.1	3.8	3.6	3.2	3.0	3.2	3.2	3.7	4.3	4.3	5.0	6.0	6.1	6.7	Diurnal Average	
	29.3	28.5	22.9	24.9	31.9	33.0	32.6	31.4	26.3	31.3	26.4	27.6	23.1	23.9	25.4	23.3	16.2	22.6	20.8	18.9	29.7	22.0	24.5	27.3	Diurnal Maximum	

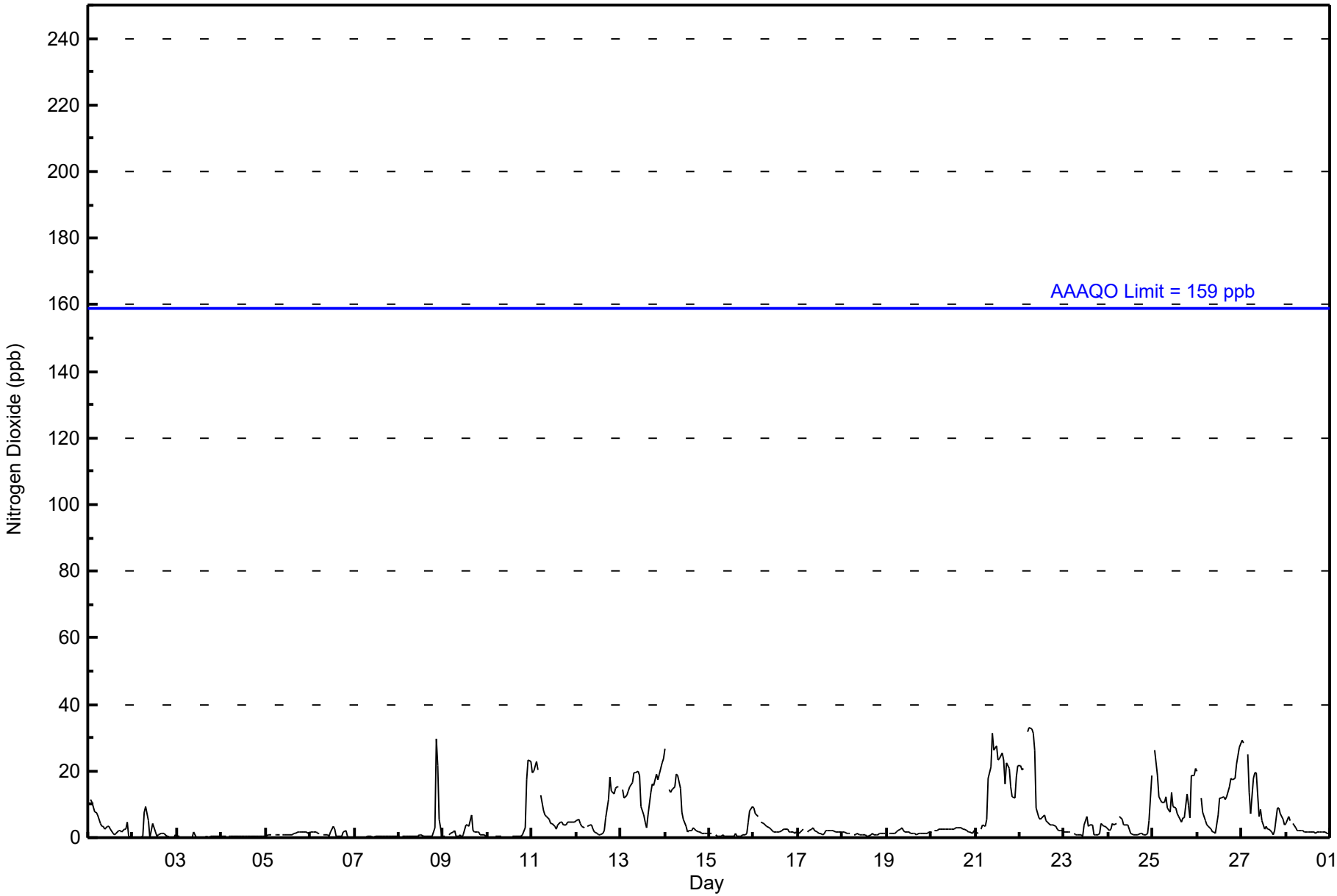
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Mackay River - February 2025



Nitrogen Dioxide (NO_2) - ppb
Mackay River - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	604	94.67	94.67
21 - 40	34	5.33	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: 638

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Mackay River - February 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	29	54	30	5	8	36	61	48	19	26	42	76	56	27	29	32	578
21 - 40	5	12	11	1	0	0	0	0	0	0	0	0	0	0	1	3	33
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	34	66	41	6	8	36	61	48	19	26	42	76	56	27	30	35	611

Total Number of Valid Hours: 611

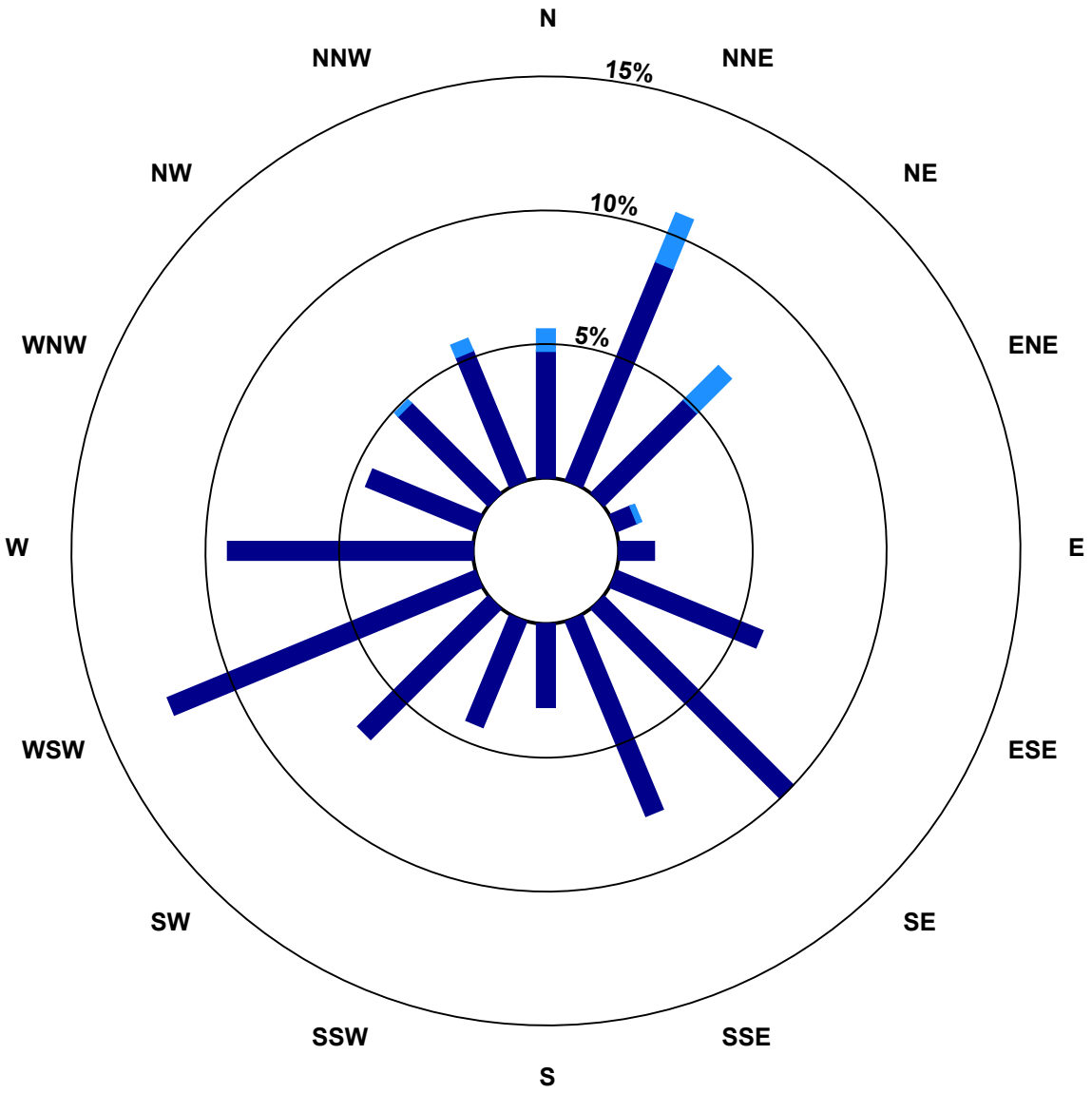
Total Number of Hours: 672

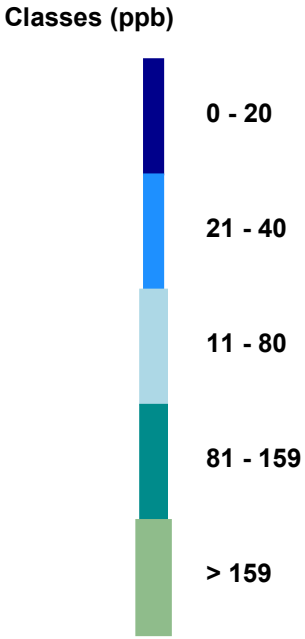
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Wind Rose Feb 2025

Nitrogen Dioxide (NO_2) - ppb

Mackay River





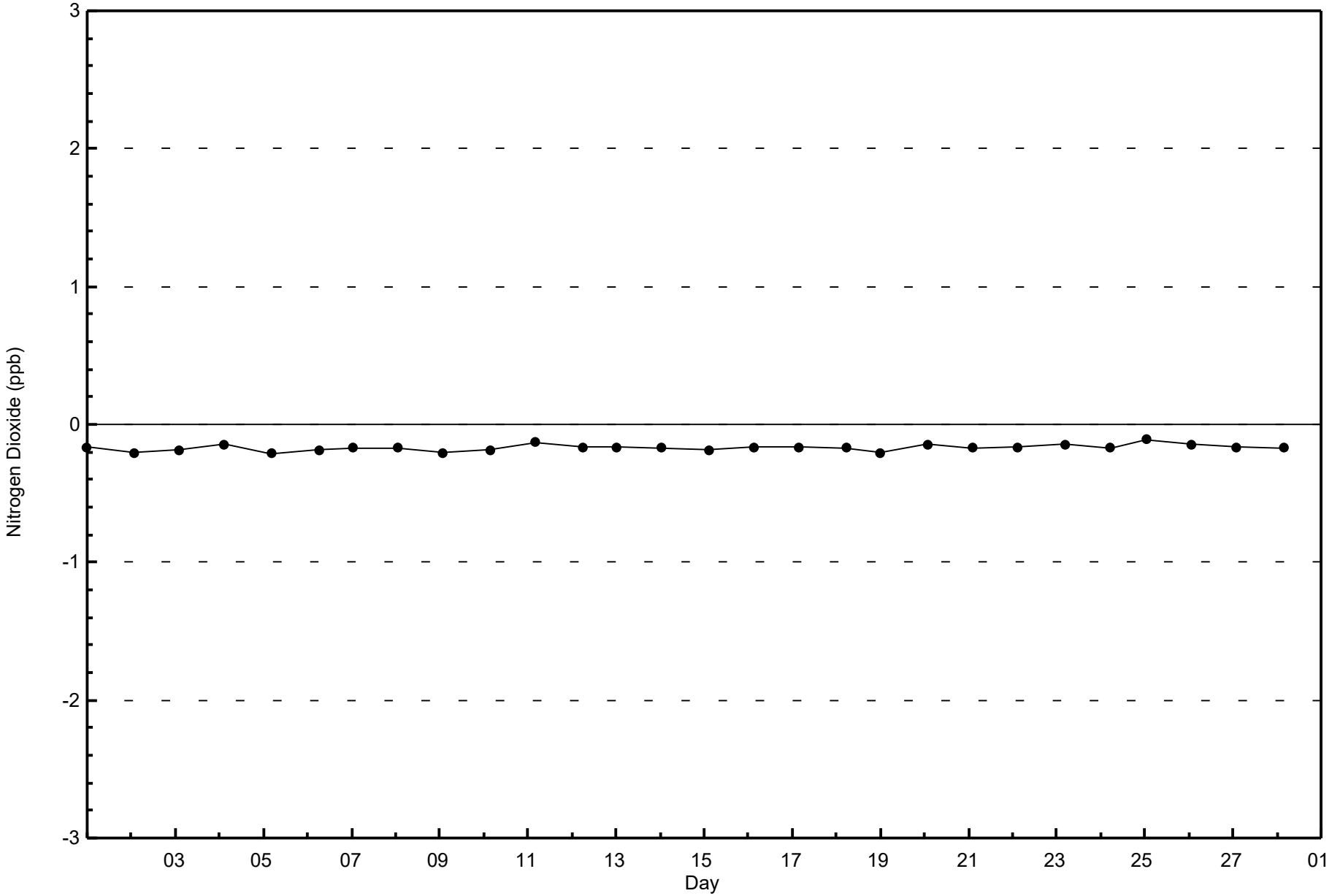
Total Number of Valid Hours: 611

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Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Mackay River - February 2025

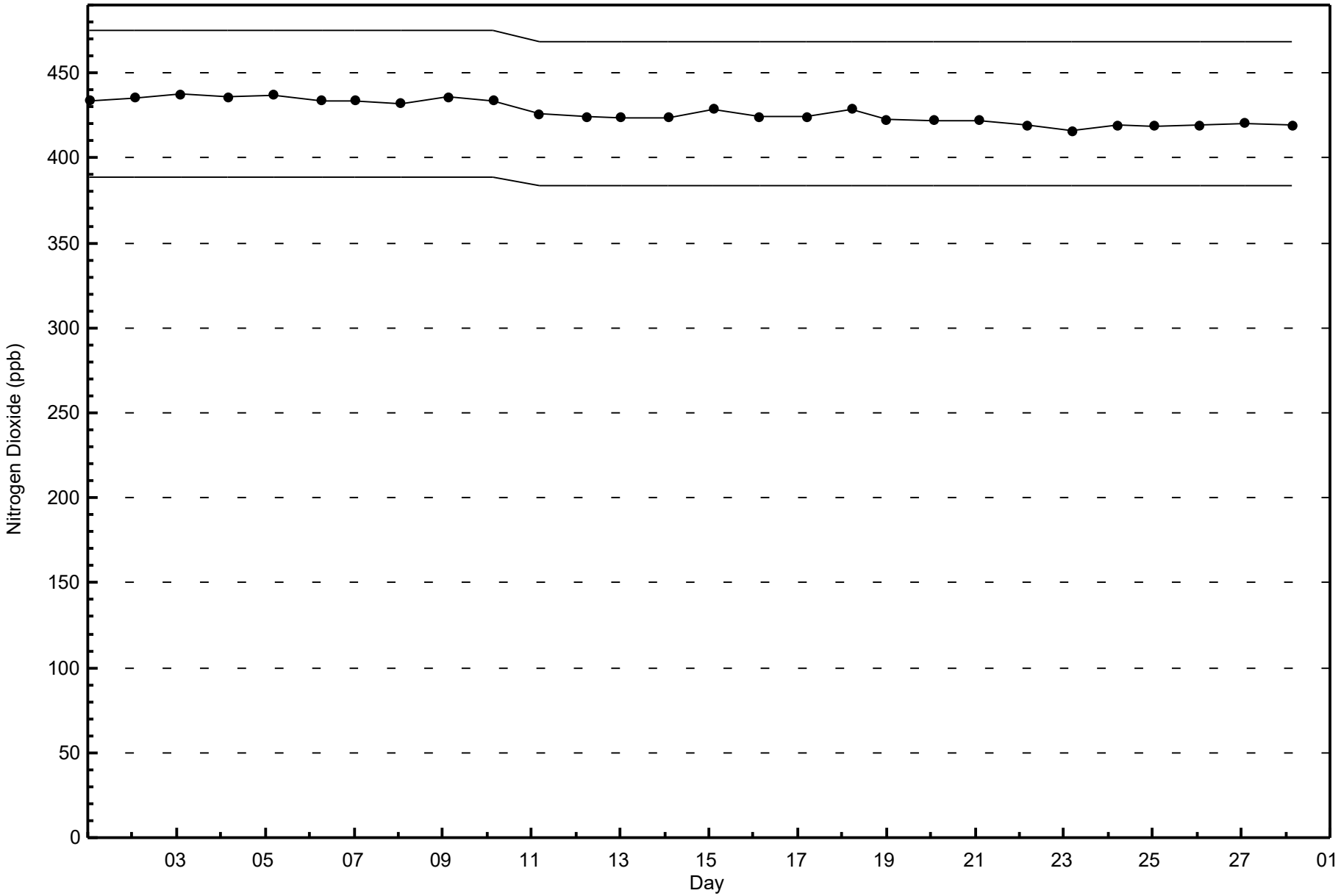


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Mackay River - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Mackay River - February 2025

Maximum Value: 66.4 ppb on Feb 21 10:00

Maximum Daily Average: 23.9 ppb on Feb 21

Minimum Value: 0.2 ppb on Feb 3 09:00

Minimum Daily Average: 0.3 ppb on Feb 7

Maximum Diurnal Average: 7.2 ppb at hour 9

Minimum Diurnal Average: 3.7 ppb at hour 17

Monthly Average: 5.63 ppb

Percentiles: P_1 = 0.2 P_{10} = 0.3 Q_1 = 0.8 Median = 2.0 Q_3 = 5.9 P_{90} = 18.0 P_{99} = 35.0

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	33
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-Feb	Z	11.6	10.5	7.8	7.7	6.8	4.4	3.5	3.3	2.9	3.7	4.3	3.2	1.6	1.0	1.3	2.3	2.2	1.5	2.4	2.7	4.6	0.5	0.2	3.9	11.6
2-Feb	0.2	Z	0.2	0.2	0.2	0.4	7.5	9.2	5.0	0.2	2.9	6.3	2.6	0.6	0.8	1.5	1.2	1.2	0.3	0.3	0.2	0.2	0.2	0.8	1.8	9.2
3-Feb	0.5	0.6	Z	0.2	0.2	0.2	0.2	0.2	0.2	5.0	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.5	5.0
4-Feb	0.3	0.4	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.6	0.4	0.6
5-Feb	0.6	0.7	0.7	0.7	Z	0.7	0.7	0.7	M	0.8	1.0	1.0	0.9	1.0	1.2	1.4	1.5	1.6	1.8	1.9	1.8	1.7	1.5	1.4	1.2	1.9
6-Feb	1.6	1.7	1.9	1.7	1.4	1.2	Z	1.0	0.8	0.8	0.7	2.0	4.4	3.1	0.3	0.3	0.5	0.5	1.7	2.3	0.6	0.2	0.2	0.2	1.3	4.4
7-Feb	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4
8-Feb	0.3	Z	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.7	0.8	0.8	0.7	0.5	0.5	0.5	0.4	0.6	3.1	30.8	22.0	5.6	0.3	3.1	30.8
9-Feb	0.3	0.6	Z	0.8	1.1	1.8	2.1	0.5	0.3	0.8	0.2	1.5	7.1	6.8	5.5	10.1	2.5	1.9	1.6	1.8	0.8	0.9	1.0	0.3	2.2	10.1
10-Feb	0.2	0.2	0.2	Z	0.3	0.3	0.3	0.3	C	C	C	C	C	0.4	0.3	0.3	0.3	0.3	0.5	0.8	2.9	17.4	23.5	22.8	4.0	23.5
11-Feb	19.5	20.1	23.0	20.3	Z	13.0	8.1	6.7	6.7	6.8	5.5	5.9	4.8	3.9	5.6	6.0	5.1	4.0	3.8	4.5	4.6	4.7	4.7	4.6	8.4	23.0
12-Feb	4.9	5.3	4.4	3.5	3.0	Z	3.2	3.9	4.1	3.2	2.0	1.4	1.1	1.0	1.4	2.7	6.7	11.7	18.2	14.1	13.1	15.0	15.3	15.3	6.7	18.2
13-Feb	Z	14.3	11.7	12.7	13.9	15.3	16.8	19.9	23.9	33.3	34.4	15.9	11.5	7.7	4.7	9.1	16.4	17.1	15.8	19.0	17.2	19.2	22.5	23.8	17.2	34.4
14-Feb	27.8	Z	14.5	13.5	14.3	15.2	19.5	19.3	19.9	14.1	10.6	6.5	3.1	3.8	3.7	4.3	2.9	2.1	1.8	1.5	1.4	1.4	1.4	1.4	8.9	27.8
15-Feb	1.4	1.1	Z	0.8	0.6	0.6	0.6	0.7	0.6	0.6	0.5	0.5	0.6	0.6	1.6	0.5	0.5	0.5	0.9	1.0	1.1	4.8	7.9	9.5	1.6	9.5
16-Feb	9.0	7.3	6.4	Z	4.7	4.2	3.9	3.5	3.3	3.2	3.0	2.6	2.4	2.2	2.1	2.9	3.1	2.8	2.5	1.8	1.7	1.5	1.3	1.6	3.3	9.0
17-Feb	1.3	1.6	2.3	2.5	Z	1.9	2.0	2.6	3.0	2.7	2.2	1.7	1.6	1.4	1.8	2.8	2.4	2.3	2.2	2.1	1.9	1.7	1.8	1.7	2.1	3.0
18-Feb	1.7	1.5	1.2	1.1	1.1	Z	1.0	1.0	1.2	1.3	1.2	1.0	1.0	0.8	0.7	0.8	1.2	0.7	0.7	0.9	1.2	1.3	1.3	1.3	1.1	1.7
19-Feb	Z	1.3	1.2	1.2	1.2	1.5	2.2	2.5	3.3	3.0	2.7	2.3	2.0	1.7	1.5	1.3	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.5	1.7	3.3
20-Feb	1.6	Z	2.0	2.0	2.4	2.5	2.6	2.7	2.7	2.8	2.9	3.0	3.3	3.7	3.7	3.5	3.1	2.8	2.4	2.0	1.7	1.5	1.4	2.0	2.5	3.7
21-Feb	1.5	1.2	Z	2.4	3.7	3.2	5.5	18.0	30.1	66.4	53.4	56.0	41.2	42.5	44.6	35.3	19.3	24.1	20.9	15.4	12.3	12.0	18.4	21.5	23.9	66.4
22-Feb	21.6	20.4	20.9	Z	32.3	34.2	33.9	33.4	31.4	10.7	7.2	7.1	7.6	9.2	7.6	5.6	4.5	4.0	4.1	3.7	2.8	2.3	2.1	2.1	13.4	34.2
23-Feb	1.7	1.9	1.9	1.7	Z	1.4	1.0	0.8	1.0	0.8	0.7	4.7	8.0	4.2	4.9	4.7	0.8	0.7	0.9	1.3	4.1	3.6	3.2	2.9	2.5	8.0
24-Feb	2.3	2.4	4.1	3.9	4.3	Z	6.4	5.6	4.4	4.7	4.8	3.0	1.5	1.2	1.0	1.0	0.9	1.4	1.2	0.9	0.9	1.5	5.3	25.5	3.8	25.5
25-Feb	Z	28.5	19.0	12.5	11.4	10.6	10.7	12.6	9.7	9.6	18.8	12.8	13.1	10.9	9.4	6.4	6.8	6.3	13.2	9.7	5.9	18.6	18.8	20.8	12.9	28.5
26-Feb	20.1	Z	11.9	7.8	5.2	4.1	3.3	2.8	2.2	1.8	1.5	13.1	25.9	23.6	23.4	19.1	16.3	16.5	18.0	17.4	17.9	22.2	24.7	28.5	14.2	28.5
27-Feb	33.4	32.7	Z	30.3	14.4	7.5	21.2	22.9	26.4	8.0	11.7	6.8	3.4	4.5	3.3	3.0	1.7	0.7	2.3	9.1	9.1	7.2	5.5	3.9	11.7	33.4
28-Feb	4.4	6.3	5.1	Z	4.1	3.1	2.2	2.0	2.3	2.5	2.4	2.5	2.5	2.3	1.9	1.8	1.6	1.7	1.9	1.9	1.5	1.5	1.4	1.4	2.5	6.3
	6.8	7.0	6.3	5.6	5.4	5.2	5.9	6.3	7.2	6.9	6.5	6.1	5.7	5.0	4.8	4.5	3.7	3.9	4.3	4.3	5.0	6.0	6.1	7.0	Diurnal Average	
	33.4	32.7	23.0	30.3	32.3	34.2	33.9	33.4	31.4	66.4	53.4	56.0	41.2	42.5	44.6	35.3	19.3	24.1	20.9	19.0	30.8	22.2	24.7	28.5	Diurnal Maximum	

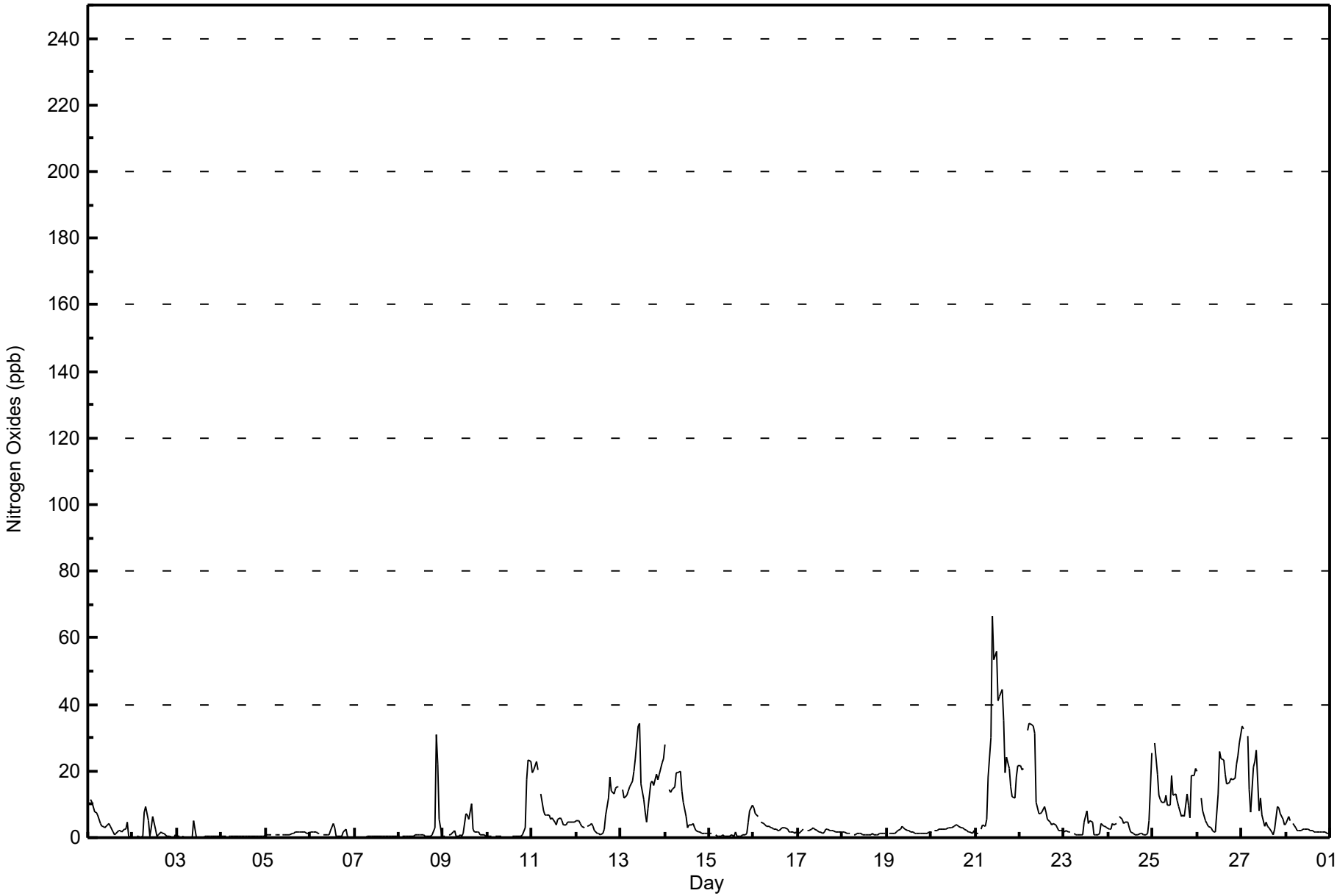
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Mackay River - February 2025



Nitrogen Oxides (NO_X) - ppb
Mackay River - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	594	93.10	93.10
21 - 40	38	5.96	99.06
11 - 80	6	0.94	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 638

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Mackay River - February 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	28	51	28	4	8	36	61	48	19	25	42	76	56	27	28	31	568
21 - 40	4	13	12	2	0	0	0	0	0	1	0	0	0	0	2	3	37
11 - 80	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	1	6
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	34	66	41	6	8	36	61	48	19	26	42	76	56	27	30	35	611

Total Number of Valid Hours: 611

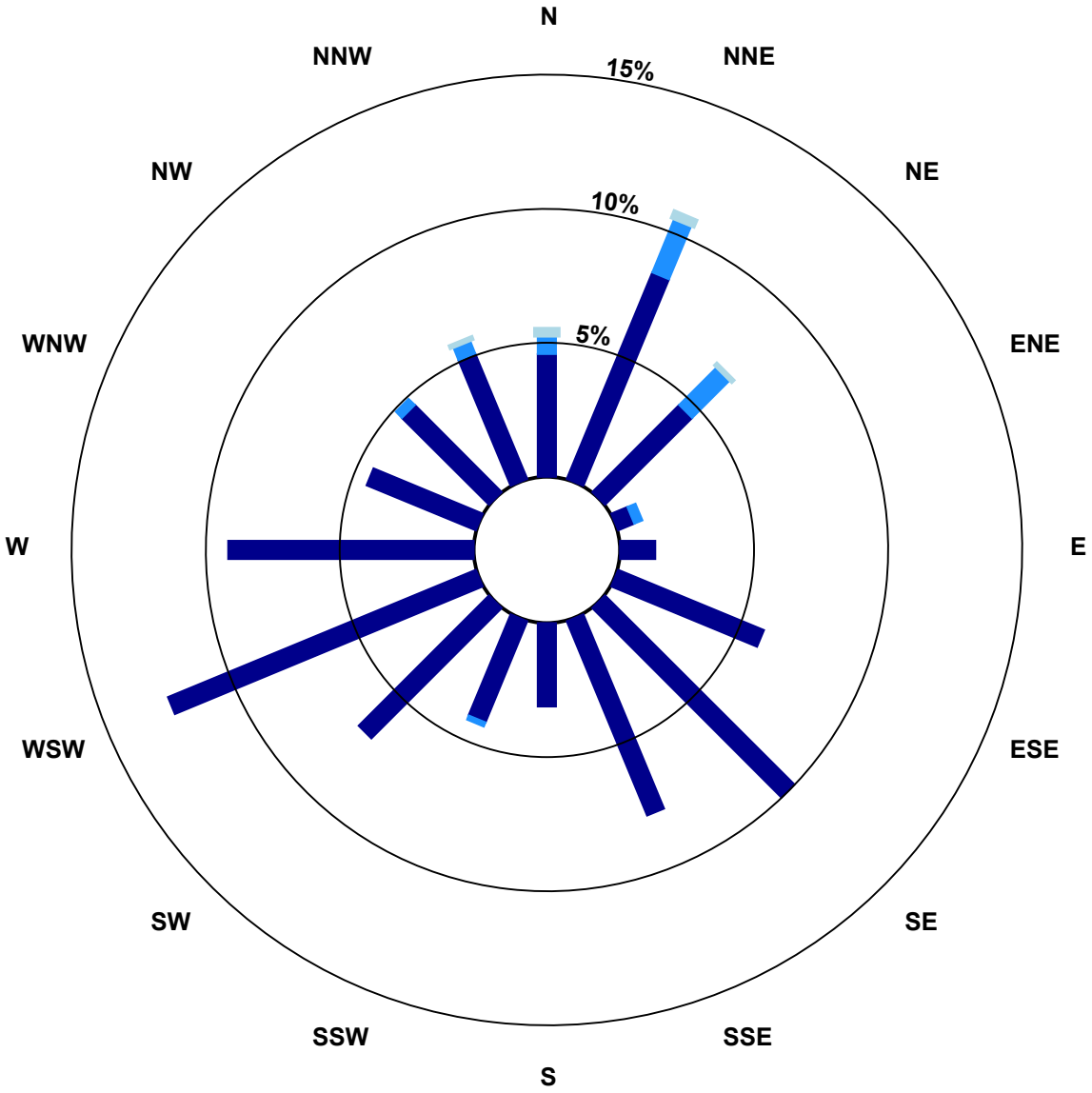
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Oxides (NO_X) - ppb

Mackay River



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

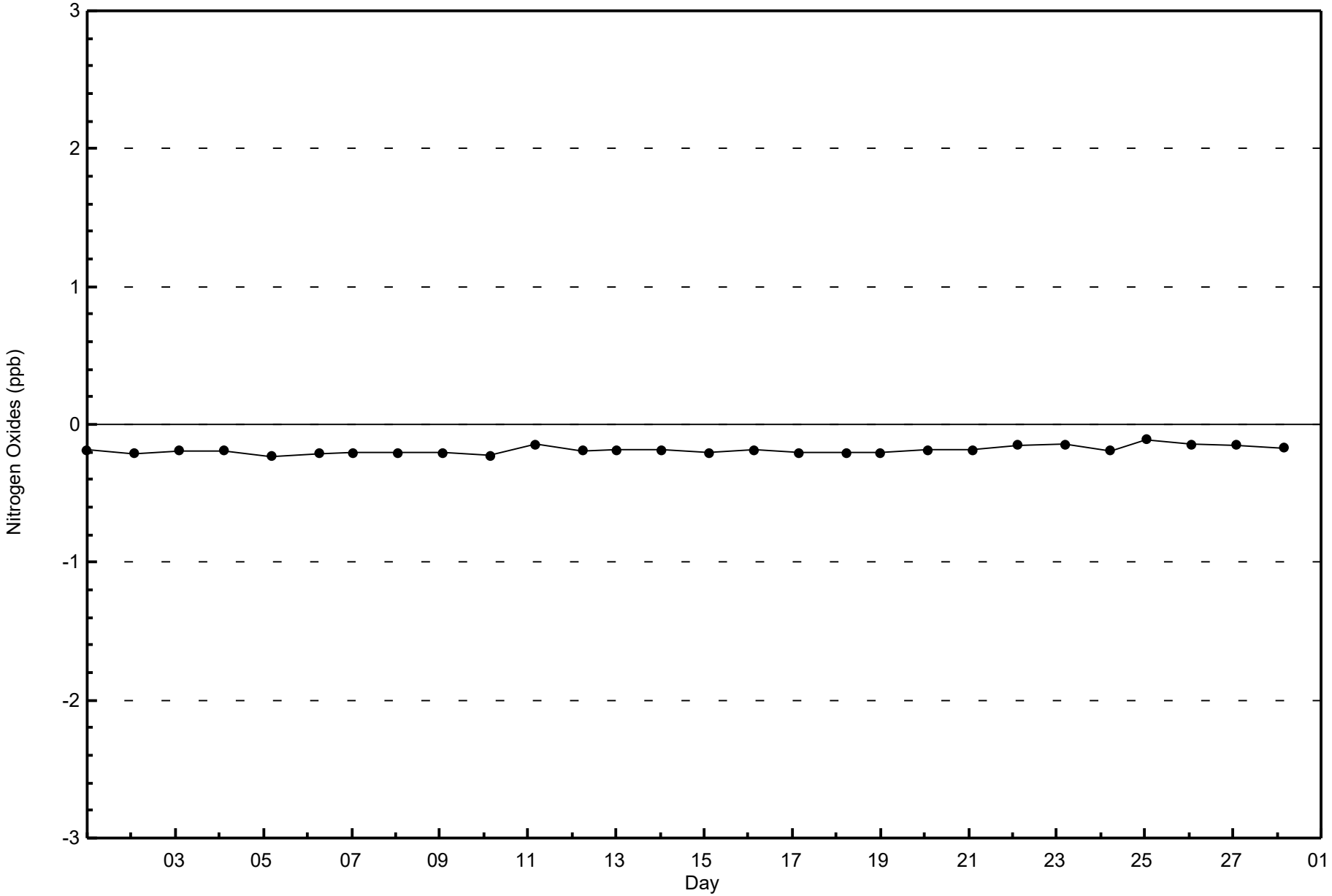
Total Number of Valid Hours: 611

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Mackay River - February 2025

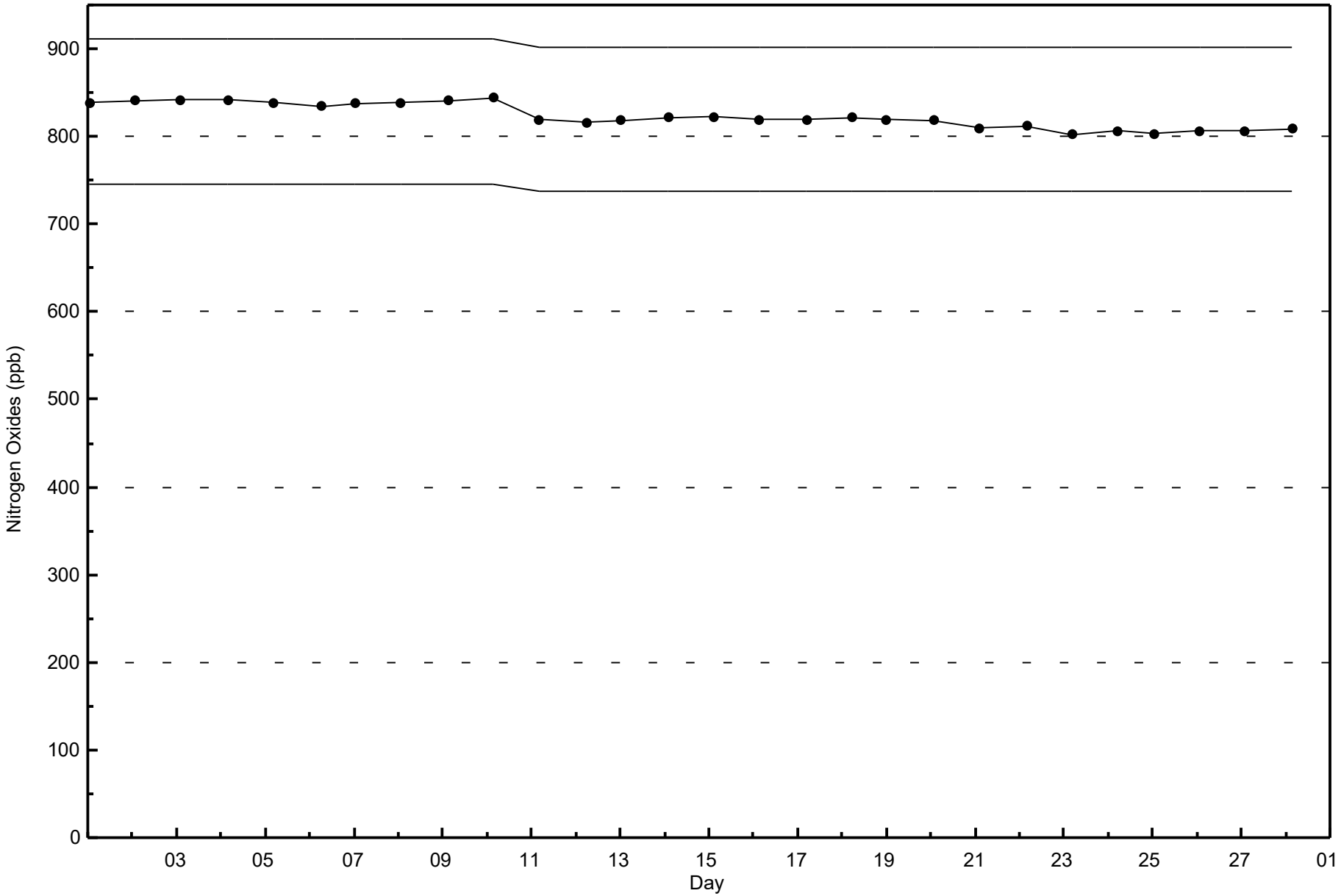


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Mackay River - February 2025



Maximum Value: 5.8 C on Feb 27 13:00

Maximum Daily Average: -1.7 C on Feb 23

Minimum Value: -38.1 C on Feb 14 09:00

Minimum Daily Average: -30.4 C on Feb 14

Maximum Diurnal Average: -12.6 C at hour 16

Minimum Diurnal Average: -21.3 C at hour 8

Monthly Average: -17.68 C

Percentiles: P_1 = -35.0 P_{10} = -29.1 Q_1 = -24.7 Median = -19.7 Q_3 = -9.4 P_{90} = -4.1 P_{99} = 2.7

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

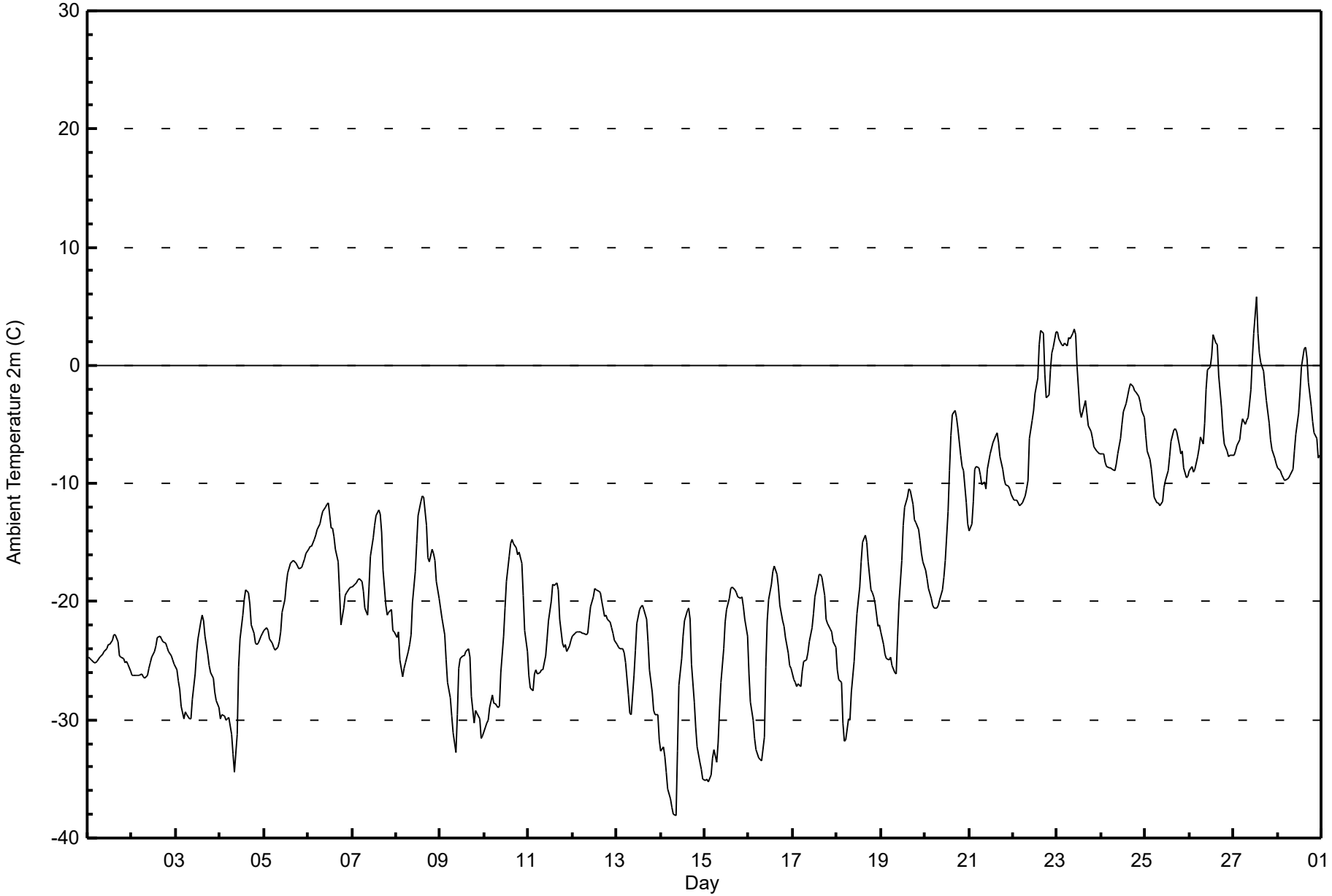
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-24.7	-24.8	-25.0	-25.1	-25.1	-25.0	-24.7	-24.6	-24.5	-24.2	-23.9	-23.7	-23.7	-23.3	-22.8	-22.8	-23.4	-24.6	-24.7	-24.9	-25.2	-25.0	-25.3	-25.9	-24.5	-22.8
2-Feb	-26.2	-26.3	-26.2	-26.2	-26.2	-26.1	-26.4	-26.5	-26.2	-25.6	-25.2	-24.7	-24.2	-23.8	-23.1	-22.9	-23.2	-23.4	-23.5	-23.9	-24.3	-24.5	-24.9	-25.3	-24.9	-22.9
3-Feb	-25.8	-26.7	-27.4	-28.8	-29.9	-29.4	-29.6	-29.9	-30.0	-28.3	-26.2	-24.4	-23.2	-21.7	-21.1	-21.6	-23.0	-24.4	-25.4	-26.0	-26.4	-27.6	-28.3	-29.0	-26.4	-21.1
4-Feb	-30.0	-29.6	-29.7	-30.0	-30.0	-29.8	-31.2	-32.9	-34.4	-31.2	-25.5	-23.1	-21.2	-19.8	-19.0	-19.2	-20.2	-21.9	-22.7	-23.5	-23.6	-23.5	-22.9	-22.6	-25.7	-19.0
5-Feb	-22.5	-22.2	-22.4	-23.1	-23.5	-23.9	-24.1	-23.8	-23.4	-22.6	-20.9	-19.8	-18.5	-17.6	-16.7	-16.7	-16.5	-16.7	-17.0	-17.2	-17.1	-16.8	-16.4	-15.9	-19.8	-15.9
6-Feb	-15.6	-15.3	-15.3	-14.7	-14.4	-13.9	-13.4	-12.8	-12.4	-12.1	-11.8	-11.6	-13.8	-13.8	-14.5	-15.6	-16.6	-19.2	-22.0	-20.6	-19.4	-19.2	-18.9	-18.8	-15.6	-11.6
7-Feb	-18.7	-18.6	-18.4	-18.2	-18.1	-18.3	-19.1	-20.5	-21.1	-18.7	-16.2	-14.6	-13.5	-12.8	-12.3	-12.6	-14.1	-17.3	-20.2	-21.1	-21.0	-20.7	-22.5	-22.6	-18.0	-12.3
8-Feb	-23.1	-22.5	-24.9	-26.4	-25.7	-25.2	-24.3	-23.6	-22.8	-20.1	-17.5	-15.0	-12.7	-11.5	-11.0	-11.2	-13.5	-16.3	-16.7	-15.6	-15.9	-16.5	-18.3	-19.7	-18.7	-11.0
9-Feb	-20.6	-21.4	-22.8	-24.9	-26.8	-28.1	-29.7	-31.1	-32.8	-29.6	-25.7	-24.8	-24.5	-24.6	-24.3	-24.0	-24.7	-28.0	-30.3	-29.1	-29.4	-29.9	-31.6	-31.4	-27.1	-20.6
10-Feb	-30.6	-30.3	-30.0	-28.9	-27.9	-28.7	-28.6	-29.0	-28.8	-26.0	-22.9	-20.5	-18.3	-16.2	-15.1	-14.8	-15.1	-15.4	-16.0	-15.8	-16.7	-19.5	-22.4	-24.2	-22.6	-14.8
11-Feb	-26.2	-27.2	-27.6	-26.1	-25.8	-26.2	-26.0	-25.7	-25.8	-24.6	-23.2	-21.6	-20.0	-18.6	-18.7	-18.5	-19.1	-21.5	-23.5	-23.9	-23.7	-24.2	-23.7	-23.2	-23.5	-18.5
12-Feb	-22.9	-22.7	-22.5	-22.6	-22.6	-22.7	-22.7	-22.8	-22.6	-21.6	-20.5	-19.6	-18.9	-19.0	-19.1	-19.2	-20.0	-21.2	-21.2	-21.5	-21.8	-22.2	-22.7	-23.3	-21.5	-18.9
13-Feb	-23.6	-23.9	-24.0	-24.0	-24.3	-25.2	-27.9	-29.4	-29.6	-26.3	-24.1	-21.9	-20.6	-20.4	-20.3	-20.6	-21.5	-23.4	-25.8	-27.7	-29.1	-29.5	-29.6	-31.7	-25.2	-20.3
14-Feb	-32.7	-32.3	-33.2	-34.5	-35.8	-36.6	-37.4	-38.0	-38.1	-32.6	-27.1	-24.8	-22.9	-21.7	-20.7	-20.5	-21.5	-25.3	-28.5	-30.6	-32.3	-33.6	-34.2	-35.0	-30.4	-20.5
15-Feb	-35.1	-35.0	-35.3	-34.7	-33.2	-32.5	-33.6	-31.9	-29.1	-26.8	-23.9	-21.7	-20.7	-19.7	-18.8	-18.7	-19.1	-19.2	-19.6	-19.7	-19.6	-20.4	-21.5	-23.0	-25.5	-18.7
16-Feb	-26.2	-28.5	-30.0	-31.5	-32.6	-33.2	-33.4	-33.5	-31.4	-25.5	-21.6	-19.8	-18.5	-17.5	-16.9	-17.7	-18.8	-20.3	-21.6	-22.0	-23.0	-24.3	-25.4	-25.7	-25.0	-16.9
17-Feb	-26.6	-26.8	-27.1	-26.9	-27.2	-25.9	-25.1	-24.9	-24.4	-23.4	-22.2	-21.0	-19.6	-18.4	-17.7	-17.7	-17.9	-19.5	-21.4	-21.8	-22.3	-22.6	-23.4	-23.9	-22.8	-17.7
18-Feb	-25.8	-26.6	-26.8	-30.2	-31.8	-31.7	-30.0	-30.1	-27.6	-25.1	-22.9	-21.0	-18.8	-16.6	-14.9	-14.3	-15.0	-16.6	-19.0	-19.2	-19.6	-20.2	-22.1	-22.0	-22.8	-14.3
19-Feb	-22.6	-23.6	-24.5	-24.9	-24.9	-24.7	-25.4	-26.0	-26.1	-23.0	-20.0	-16.5	-13.6	-12.0	-11.2	-10.5	-10.6	-11.8	-13.0	-13.3	-13.8	-14.8	-15.9	-16.6	-18.3	-10.5
20-Feb	-17.3	-18.1	-18.8	-19.7	-20.2	-20.5	-20.6	-20.3	-19.8	-18.9	-17.9	-16.5	-12.4	-8.9	-6.0	-4.1	-3.8	-4.4	-5.3	-7.6	-8.5	-8.9	-11.6	-13.4	-13.5	-3.8
21-Feb	-14.1	-13.4	-11.5	-8.8	-8.5	-8.7	-9.2	-10.1	-9.8	-10.4	-8.7	-7.4	-7.0	-6.5	-6.0	-5.7	-6.6	-7.8	-8.7	-9.6	-10.1	-10.2	-10.5	-11.0	-9.2	-5.7
22-Feb	-11.4	-11.4	-11.4	-11.8	-11.7	-11.6	-11.0	-10.5	-9.7	-6.2	-4.6	-3.8	-2.3	-1.1	1.7	2.9	2.7	-0.8	-2.7	-2.5	-0.4	1.1	1.5	2.8	-4.7	2.9
23-Feb	2.9	2.2	1.8	1.7	1.8	1.6	2.3	2.2	2.7	3.1	2.6	-0.2	-3.9	-4.4	-4.0	-3.0	-4.0	-5.1	-5.7	-6.2	-6.8	-7.2	-7.3	-7.5	-1.7	3.1
24-Feb	-7.5	-7.5	-8.2	-8.5	-8.6	-8.7	-8.8	-8.9	-8.4	-7.5	-6.2	-5.1	-4.0	-3.3	-2.6	-2.0	-1.6	-1.8	-2.1	-2.3	-2.7	-3.2	-3.8	-4.4	-5.3	-1.6
25-Feb	-5.9	-7.2	-8.0	-8.8	-10.0	-11.2	-11.7	-11.7	-11.9	-11.5	-10.3	-9.7	-8.9	-7.7	-6.4	-5.4	-5.4	-5.6	-6.8	-7.5	-7.3	-8.7	-9.5	-9.4	-8.6	-5.4
26-Feb	-8.9	-8.6	-9.0	-8.8	-7.7	-7.0	-6.1	-6.6	-4.9	-2.0	-0.4	-0.1	0.8	2.6	1.8	1.7	-0.9	-3.6	-5.4	-6.7	-7.3	-7.7	-7.6	-7.6	-4.6	2.6
27-Feb	-7.6	-7.2	-6.8	-6.3	-5.2	-4.5	-5.0	-4.7	-4.4	-2.1	0.6	2.7	5.8	2.7	1.0	0.3	-0.4	-1.8	-3.0	-4.9	-6.3	-7.1	-7.9	-8.4	-3.3	5.8
28-Feb	-8.6	-8.9	-9.3	-9.5	-9.7	-9.6	-9.5	-9.3	-8.8	-7.2	-5.8	-4.1	-2.2	-0.2	1.4	1.5	0.6	-1.4	-3.4	-4.7	-5.8	-6.2	-7.9	-7.6	-5.7	1.5
	-19.9	-20.2	-20.5	-20.8	-20.9	-21.0	-21.2	-21.3	-20.9	-18.9	-16.9	-15.5	-14.3	-13.4	-12.8	-12.6	-13.3	-14.9	-16.3	-16.8	-17.1	-17.6	-18.4	-18.8	Diurnal Average	
	2.9	2.2	1.8	1.7	1.8	1.6	2.3	2.2	2.7	3.1	2.6	2.7	5.8	2.7	1.8	2.9	2.7	-0.8	-2.1	-2.3	-0.4	1.1	1.5	2.8	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Mackay River - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	330	49.11	49.11
-20 - 0	312	46.43	95.54
0 - 10	30	4.46	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Mackay River - February 2025

Maximum Value: 97.8 % on Feb 23 05:00

Maximum Daily Average: 91.7 % on Feb 24

Minimum Value: 36.1 % on Feb 18 15:00

Minimum Daily Average: 50.2 % on Feb 19

Maximum Diurnal Average: 78.1 % at hour 4

Minimum Diurnal Average: 63.4 % at hour 15

Monthly Average: 73.97 %

Percentiles: P_1 = 41.6 P_{10} = 58.6 Q_1 = 68.8 Median = 74.5 Q_3 = 80.7 P_{90} = 88.8 P_{99} = 96.0

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

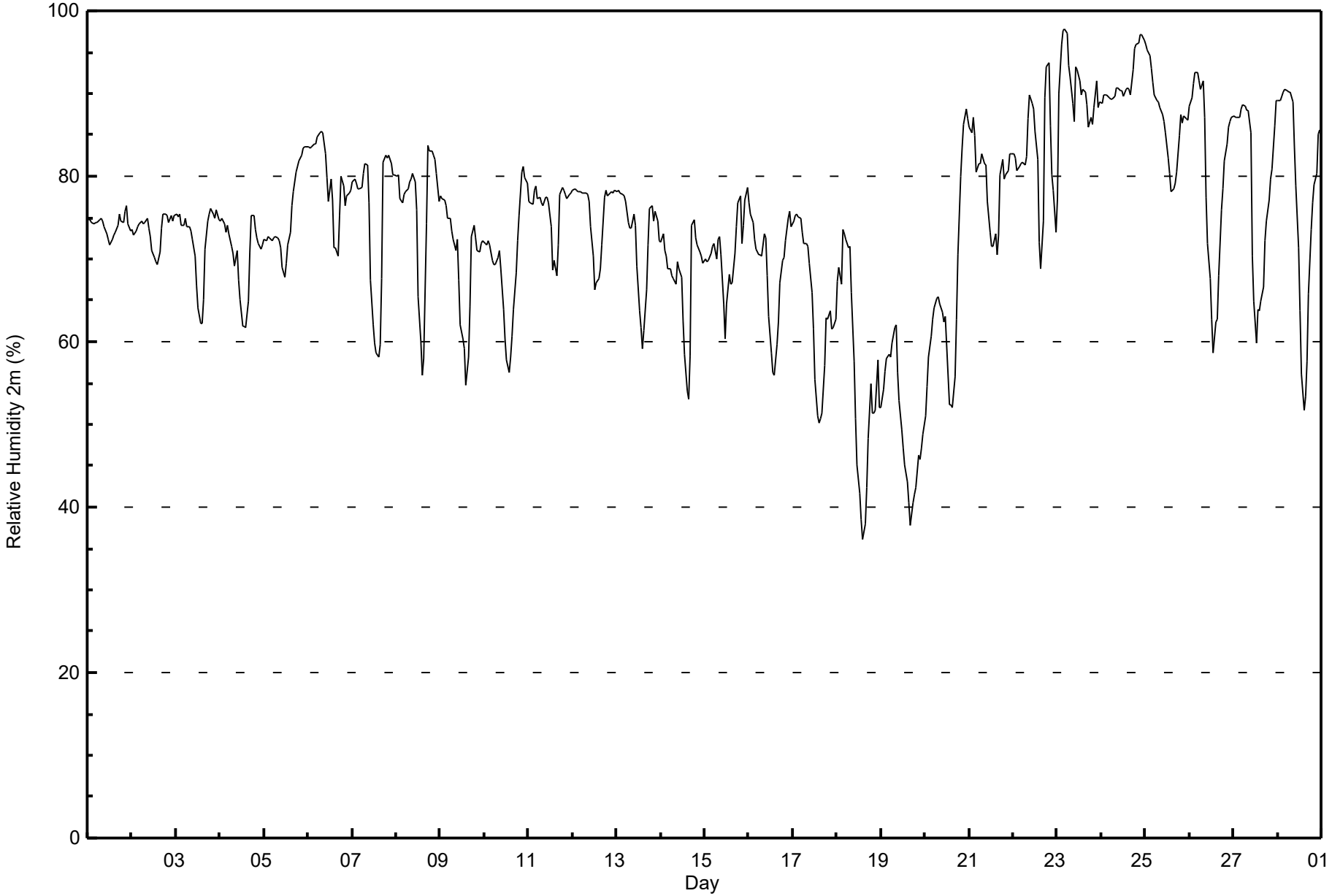
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	74.8	74.7	74.5	74.3	74.4	74.4	74.8	75.0	74.6	74.0	73.1	72.3	71.7	72.3	72.9	73.2	74.1	75.4	74.6	74.3	75.8	76.4	74.2	73.3	74.1	76.4
2-Feb	73.5	73.0	73.5	74.0	74.2	74.5	74.2	74.5	75.0	73.8	72.7	70.9	70.2	69.6	69.3	70.8	73.8	75.4	75.5	75.3	74.4	75.2	74.6	75.2	73.5	75.5
3-Feb	75.4	75.1	75.4	74.1	74.1	74.9	73.9	73.9	73.4	72.4	70.3	66.8	64.1	62.2	62.2	65.0	71.3	74.5	75.5	76.1	75.5	74.9	75.9	74.7	72.1	76.1
4-Feb	74.6	74.9	74.2	73.3	74.0	73.0	71.6	70.7	69.2	71.0	67.5	65.1	61.9	61.9	61.7	64.9	70.9	75.3	75.2	73.6	72.5	71.8	71.2	71.8	70.5	75.3
5-Feb	72.3	72.2	72.6	72.5	72.2	72.6	72.6	72.6	72.2	71.4	68.9	67.9	69.5	71.7	73.2	76.5	78.2	80.5	81.2	81.8	82.6	83.4	83.6	83.5	75.2	83.6
6-Feb	83.6	83.4	83.6	83.8	84.0	84.8	85.3	85.4	85.2	82.6	79.8	76.9	79.6	77.2	71.3	71.4	70.4	75.2	80.1	78.9	76.5	77.7	77.9	78.2	79.7	85.4
7-Feb	79.3	79.7	79.1	78.5	78.5	78.7	80.4	81.5	81.4	76.8	67.5	62.0	59.8	58.6	58.2	59.7	67.5	81.7	82.6	82.2	82.6	81.5	80.1	80.1	74.9	82.6
8-Feb	79.9	80.1	77.3	76.7	77.8	78.2	78.5	79.3	79.7	80.3	79.4	75.9	65.4	59.9	55.9	58.0	74.2	83.7	83.0	83.1	82.6	82.0	80.4	77.0	76.2	83.7
9-Feb	77.7	77.4	77.1	76.4	74.9	74.9	73.5	72.4	71.1	72.3	67.5	62.0	60.3	59.1	54.7	58.1	64.2	72.7	74.1	72.5	71.0	70.8	71.9	72.2	69.9	77.7
10-Feb	71.8	71.7	72.2	71.7	69.8	69.4	69.4	70.2	71.1	68.8	63.9	60.4	57.7	56.2	58.1	60.6	63.9	68.2	72.3	75.2	80.5	81.1	79.8	79.1	69.3	81.1
11-Feb	76.9	76.8	76.5	78.4	78.9	77.3	77.5	76.9	76.4	77.5	77.5	76.7	73.9	68.7	69.8	68.0	71.6	77.8	78.7	78.3	77.7	77.3	77.8	77.9	76.0	78.9
12-Feb	78.3	78.4	78.2	78.1	78.1	78.0	78.0	78.0	77.8	77.0	73.9	70.3	66.4	67.2	67.6	68.8	71.7	77.4	78.3	77.6	78.0	78.1	78.0	78.2	75.5	78.4
13-Feb	78.2	78.3	78.0	77.8	77.7	76.9	74.3	73.7	73.8	75.5	74.0	69.1	63.8	61.7	59.2	61.4	66.3	71.6	76.1	76.5	74.6	75.7	74.6	72.3	72.6	78.3
14-Feb	71.9	73.1	71.0	70.3	68.8	68.8	68.0	67.6	67.0	69.6	68.8	67.7	62.6	58.4	54.0	53.1	58.3	74.1	74.7	72.6	71.7	70.8	70.4	69.6	67.6	74.7
15-Feb	70.1	69.7	69.9	70.7	71.5	71.8	70.0	72.4	72.7	70.5	64.5	60.3	64.6	68.1	66.9	67.2	70.7	73.8	76.8	77.6	71.9	74.1	77.2	78.7	70.9	78.7
16-Feb	76.8	75.4	74.5	72.3	71.2	70.5	70.6	70.4	73.0	72.5	68.0	63.1	58.6	56.3	56.0	59.6	62.4	67.1	69.8	70.2	72.2	74.9	75.8	73.9	69.0	76.8
17-Feb	74.6	75.2	75.4	75.1	74.9	73.3	71.9	71.9	71.5	69.5	65.9	61.6	55.5	51.1	50.2	50.7	51.4	57.1	62.9	62.7	63.8	61.6	61.7	62.7	64.7	75.4
18-Feb	67.4	69.0	66.9	73.6	73.0	72.5	71.3	71.6	65.9	57.6	50.6	45.0	41.6	38.4	36.1	37.9	42.3	48.3	55.0	51.4	51.4	51.6	57.8	52.0	56.2	73.6
19-Feb	52.0	54.3	56.4	57.9	58.6	58.1	59.8	61.7	62.0	56.3	52.8	49.3	47.1	45.1	43.0	40.6	37.7	40.4	41.6	42.3	46.3	45.8	47.1	48.9	50.2	62.0
20-Feb	50.9	54.6	58.1	60.8	62.8	64.1	65.2	65.3	64.6	63.6	62.4	63.0	55.9	52.4	52.4	52.1	55.8	62.7	70.5	80.0	83.4	86.2	88.1	87.0	65.1	88.1
21-Feb	85.9	85.2	87.1	84.9	80.6	81.5	81.4	82.7	81.6	81.3	76.9	73.2	71.5	71.5	73.1	70.5	73.0	80.1	82.0	79.6	80.1	80.7	82.8	82.7	79.6	87.1
22-Feb	82.7	82.2	80.6	81.2	81.5	81.7	81.4	82.4	86.9	89.9	88.9	88.1	85.3	82.0	72.0	68.8	74.6	89.6	93.2	93.8	86.2	80.2	78.3	73.3	82.7	93.8
23-Feb	77.3	89.9	96.0	97.7	97.8	97.3	93.4	92.1	88.8	86.6	93.3	92.9	91.5	89.8	90.4	90.2	88.6	86.0	87.2	86.3	88.3	91.5	88.3	88.9	90.4	97.8
24-Feb	88.7	89.8	89.8	89.8	89.4	89.3	89.3	89.6	90.6	90.8	90.3	90.4	89.7	90.5	90.6	90.5	89.8	92.8	95.4	95.9	96.1	97.1	97.2	96.4	91.7	97.2
25-Feb	95.9	95.2	94.6	93.0	91.3	89.9	89.1	89.0	88.3	87.4	86.6	85.3	82.1	80.4	78.2	78.4	79.2	80.5	84.9	87.5	86.4	87.3	87.0	86.9	86.9	95.9
26-Feb	88.4	89.5	91.3	92.5	92.5	91.6	90.6	91.5	87.1	77.5	71.9	67.6	62.7	58.7	62.4	62.6	68.0	75.9	78.5	81.8	83.9	86.0	86.5	87.1	80.3	92.5
27-Feb	87.3	87.2	87.0	87.0	88.1	88.7	88.5	88.0	88.0	85.3	70.4	64.9	59.9	63.9	63.7	65.0	66.5	72.2	74.5	77.1	79.6	80.8	86.1	89.1	78.7	89.1
28-Feb	89.1	89.1	89.6	90.2	90.5	90.4	90.1	90.2	88.9	83.5	78.8	71.4	63.7	56.0	51.7	53.4	57.5	65.8	73.5	76.8	79.0	80.3	85.1	85.5	77.9	90.5
	77.0	77.7	77.9	78.1	77.9	77.8	77.3	77.5	77.1	75.5	72.4	69.3	66.3	64.6	63.4	64.2	67.6	73.4	76.0	76.5	76.6	77.0	77.5	77.0	Diurnal Average	
	95.9	95.2	96.0	97.7	97.8	97.3	93.4	92.1	90.6	90.8	93.3	92.9	91.5	90.5	90.6	90.5	89.8	92.8	95.4	95.9	96.1	97.1	97.2	96.4	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Mackay River - February 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	4	0.60	0.60
40 - 60	75	11.16	11.76
60 - 80	407	60.57	72.32
80 - 100	186	27.68	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Precipitation (PC) - mm

Mackay River - February 2025

Maximum Value: 1.2 mm on Feb 2 12:00

Maximum Daily Total: 6.4 mm on Feb 23

Minimum Value: 0.0 mm on Feb 1 18:00

Minimum Daily Total: 0.0 mm on Feb 7

Maximum Diurnal Total: 2.6 mm at hour 2

Minimum Diurnal Total: 0.0 mm at hour 19

Monthly Total: 24.48 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} = 0.7

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

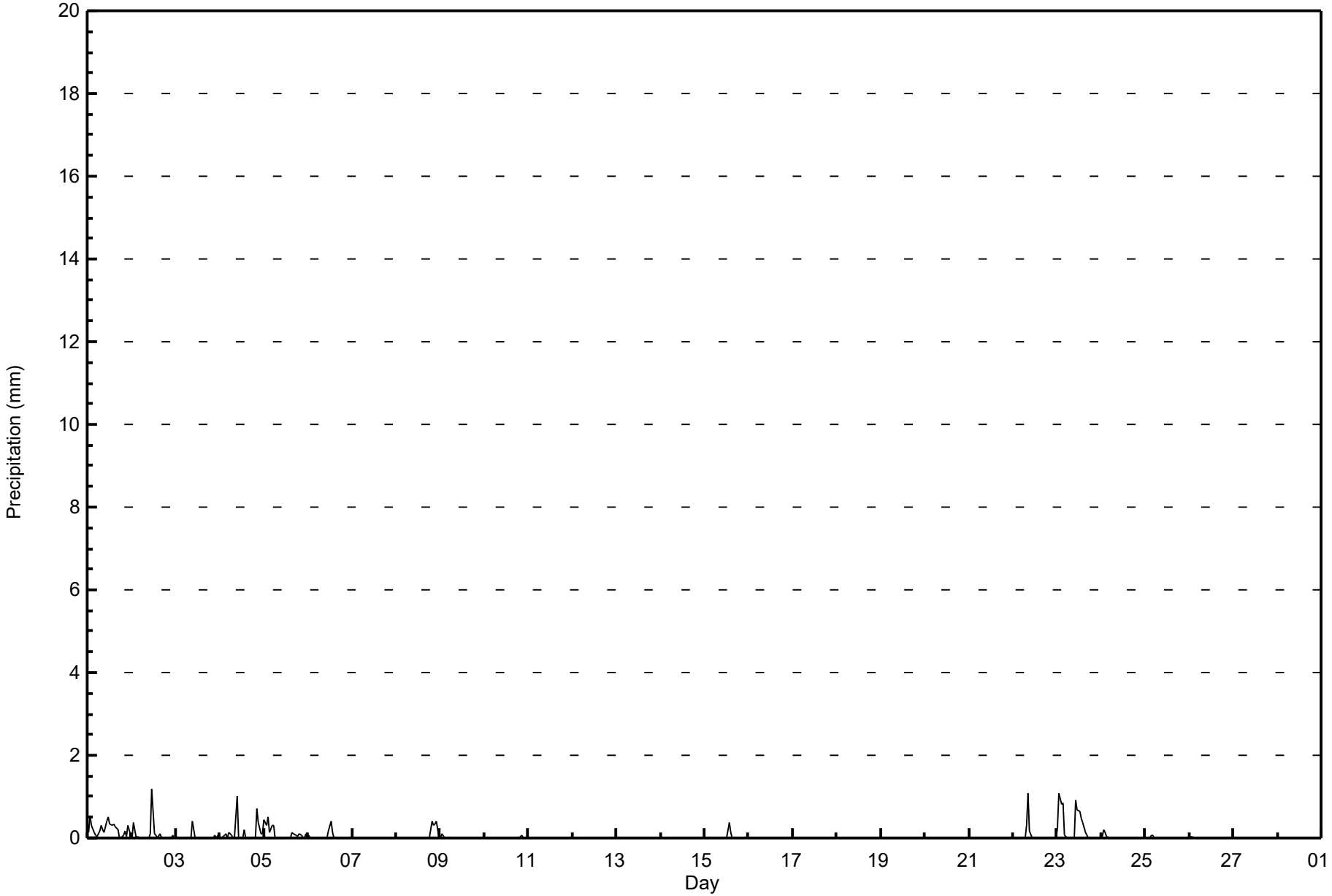
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.1	0.5	0.3	0.1	0.1	0.1	0.2	0.3	0.2	0.1	0.4	0.5	0.3	0.3	0.3	0.3	0.2	0.0	0.0	0.1	0.2	0.1	0.3	0.1	5.0	0.5
2-Feb	0.0	0.4	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.2	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	2.0	1.2
3-Feb	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	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.6	0.4
4-Feb	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	1.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.4	0.1	0.1	2.9	1.0
5-Feb	0.4	0.3	0.5	0.1	0.3	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	0.0	0.1	0.1	0.0	0.0	0.1	2.5	0.5
6-Feb	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.4
7-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.3	0.4	0.0	1.5	0.4
9-Feb	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
10-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1
11-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4
16-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.1
23-Feb	0.2	1.1	0.8	0.9	0.1	0.0	0.0	0.0	0.0	0.0	0.9	0.7	0.6	0.5	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.4	1.1
24-Feb	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	0.0	0.0	0.4	0.2
25-Feb	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
26-Feb	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
27-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.9	2.6	1.8	1.3	0.5	0.5	0.2	0.6	1.3	1.7	1.4	2.6	1.5	1.6	0.8	0.6	0.4	0.1	0.0	0.6	1.3	0.8	0.9	0.4	Diurnal Average	
	0.4	1.1	0.8	0.9	0.3	0.3	0.2	0.3	1.1	1.0	0.9	1.2	0.6	0.5	0.4	0.3	0.2	0.1	0.0	0.4	0.7	0.4	0.4	0.1	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Precipitation (PC) - mm

Mackay River - February 2025



Concentration Ranges (mm)	Number of Hours	%	Cumulative %
0 - 0.3	648	96.43	96.43
0.4 - 0.5	14	2.08	98.51
0.6 - 0.7	3	0.45	98.96
0.8 - 1.4	7	1.04	100.00
1.5 - 10	0	0.00	100.00
> 10	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Mackay River - February 2025

Maximum Speed: 22 km/h on Feb 27 14:00

Maximum Daily Speed Average: 8.7 km/h on Feb 19

Minimum Speed Value: 0 km/h on Feb 24 17:00

Minimum Daily Speed Average: 0.8 km/h on Feb 14

Maximum Diurnal Speed Average: 2.3 km/h at hour 14

Minimum Diurnal Speed Average: 0.1 km/h at hour 23

Monthly Average Velocity: 0.8 km/h 256.6 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: 672

Hours of Data: 644

Hours of Missing Data: 28

Percent Operational Time: 95.8

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-Feb	NE12	NE11	NNE12	NNE12	NNE11	NNE11	NNE9	NNE10	NNE10	NNE11	N11	N10	NNW10	N8	N8	N7	NNE6	N5	NNW7	N5	N3	NNW4	NW10	NNW11	N8.3	NNE12
2-Feb	NNW10	NNW10	NNW9	NNW9	NNW8	NNW6	NNE4	N5	NNW6	NNW9	N8	N7	NNW8	NW9	NW8	NW8	NW6	NW7	NW7	NW7	NW8	NW7	NNW6	NW6	NNW7.3	NNW10
3-Feb	WNW4	W2	W3	W3	W3	W4	W4	W4	W4	W5	W6	W5	W6	WSW6	WSW7	WSW7	WSW5	WSW4	SW5	SW5	WSW5	WSW4	WSW5	WSW4	WSW4.3	WSW7
4-Feb	WSW4	SW5	WSW5	SW5	SW5	SW6	SSW5	SSW5	SSW4	SW5	SW7	SW7	SW8	SW9	SW10	SW9	SW7	SW5	SW7	SW8	SW8	SW10	SW9	SW8	SW6.5	SW10
5-Feb	WSW9	SW9	SW8	SW8	SW8	SW7	SW7	SW7	SW8	SW8	SW9	WSW9	WSW8	WSW8	WSW10	WSW8	WSW8	WSW7	WSW7	WSW6	WSW6	W6	W6	W8	WSW7.5	WSW10
6-Feb	W7	W7	WSW7	WSW8	W7	W8	W7	W6	WNW8	WNW9	WNW10	NW13	NE8	NNW9	NNW14	NNW15	NNW13	NNW5	NW6	NW4	W2	WSW3	WSW4	WSW4	WNW6.1	NNW15
7-Feb	WSW4	WSW5	WSW5	WSW7	WSW6	WSW6	W4	WSW4	WSW4	WSW5	WSW6	W8	W6	WSW8	WSW8	WSW7	WSW5	SW3	SW4	SW4	SW5	SW4	SW5	SW5	WSW5.2	WSW8
8-Feb	SW5	WSW4	WSW3	WSW3	WSW3	WSW3	W3	W3	W3	W3	W4	W5	W4	WNW5	WNW5	WNW5	W2	SE2	N1	NNE5	N9	NNW9	N8	NNW12	WNW3.1	NNW12
9-Feb	NW9	NW9	NW8	WNW5	WNW4	WNW4	W3	W2	SW1	E2	NNE6	NNE8	N9	N7	NNW5	NW4	WNW6	WNW2	WNW3	WNW5	WNW6	W4	WSW3	WSW4	NW3.9	NW9
10-Feb	WSW5	WSW6	WSW6	WSW8	WSW8	W8	WSW8	WSW8	WSW6	WSW7	WSW9	WSW10	WSW9	WSW9	SW9	WSW8	WSW6	WSW5	W5	NW9	N6	NNE4	ENE2	NE4	WSW5.5	WSW10
11-Feb	NE2	NNE2	NNE3	NNE4	N5	N4	NNW4	WNW3	W2	W2	WSW4	W4	W3	W3	WNW4	NNW3	NNW3	SE1	SSE4	SSE5	SE3	N1	SSE1	SSE1	NW0.9	SSE5
12-Feb	WSW1	SSW0	E2	SSE2	SE2	SE3	SE3	SSE2	ESE2	ESE3	ESE5	E4	ESE4	ESE6	E3	ENE6	NNE7	NNE5	NNE6	NNE7	NNE6	NNE7	NNE6	NNE5	ENE2.7	NNE7
13-Feb	NNE5	NNE6	NNE6	NNE6	NNE5	NNE4	N3	N2	NNE1	NE3	NE4	NE6	NNE7	N7	N7	NNE6	NNE6	NE6	NNE4	NNE4	ENE3	NE4	NE3	NNE2	NNE4.5	N7
14-Feb	NNE2	NNE4	NNE3	NNW0	SW0	UO	UO	SSW1	SSE1	NW2	NNW3	NW4	NW5	NW6	NNW6	NNW4	SSW2	S2	SSE3	SE3	SSE2	SE2	S2	SSE2	NNW0.8	NW6
15-Feb	W2	WSW3	WSW2	W3	WSW3	W3	W3	W4	WNW4	W5	W6	WNW7	WNW8	WNW8	NW8	WNW8	WNW7	WNW4	W2	NW3	NNW7	NNE5	NE2	E3	WNW3.8	WNW8
16-Feb	ESE3	SE1	SSE2	SSE2	SE3	SSE4	SSE4	SE5	SE5	SE5	SSE7	SE7	SE7	ESE7	ESE8	ESE10	ESE10	ESE8	ESE8	ESE9	ESE8	ESE6	ESE6	ESE8	SE5.7	ESE10
17-Feb	ESE6	SE6	SE6	SE6	SE6	ESE8	SE9	SE9	ESE10	ESE9	SE10	SE9	SE10	SE12	ESE12	ESE11	ESE10	ESE7	ESE6	SE7	SE7	SE8	SSE6	SSE7	SE8.1	ESE12
18-Feb	SE3	SSE6	ESE3	SSE2	SSE2	SSE4	SSE4	SSE4	SSE5	S8	S10	S9	SSE10	SSE8	SSE10	SSE8	SE8	SE6	SE6	SE7	SE8	SSE6	SE5	SSE7	SSE6.1	SSE10
19-Feb	SE7	SE6	SE7	SE6	SE6	SE7	SE7	SE8	SE8	SE8	SE10	SSE9	SSE13	SSE14	SSE15	SSE12	SSE10	SE7	SE7	SSE9	SSE9	SSE10	SSE9	S11	SSE8.7	SSE15
20-Feb	S10	S11	SSW11	SSW10	S11	S11	S11	SSW10	SSW10	SSW10	SSW11	SSW10	SW8	WSW10	WSW11	WSW8	WSW7	WSW6	WSW5	SW4	WSW4	W3	WNW2	S1	SSW7.1	SSW11
21-Feb	SE2	SE4	SE5	SE6	E3	SSE3	NE1	NE4	NNW3	N5	NNE6	NNW6	N7	NNE7	NE6	NNE7	NE7	NE7	NE6	NE6	NE7	NE6	NE4	NE6	NE3.9	NE7
22-Feb	NNE6	NNE6	NE6	NNE5	NE4	UO	N3	N2	NNE1	ESE6	SE6	SSE4	S5	SSW7	S7	SSW6	SSW4	N0	SSE4	SSE6	S8	SSW9	S8	SSW10	SSE2.4	SSW10
23-Feb	SSW7	S7	S6	S7	SSW7	SSW8	WSW10	WSW10	WSW9	W10	W9	N8	NNE6	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	----	W10
24-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	SSW6	SW5	SSE0	ENE1	NE2	NE3	NNE5	NNE5	NE6	NNE6	----	NNE6
25-Feb	NNE8	NNE7	NE7	NE7	NNE9	NNE9	NE6	NE4	NNE7	NE5	NE3	NNE5	NE6	NE5	NNE4	SE5	ESE3	ESE3	N1	E2	NNE2	NNW4	NNW4	NW3	NE4.1	NNE9
26-Feb	SSW3	SW5	WSW4	WSW5	WSW5	W6	W5	WSW5	W5	WSW6	WNW8	N6	NNE5	NNW4	N7	N6	N6	NE6	NNE4	NE5	NNE4	NE5	NNE4	NNE5	NW2.5	WNW8
27-Feb	NNE3	NE1	NE3	NE3	SE2	ESE3	ENE2	NW2	SSW2	SSW7	W9	W11	WNW18	NW22	NW21	NW17	NW15	NNW11	N11	NE8	NE7	NE6	E5	ENE4	NNW5.0	NW22
28-Feb	SE4	ESE5	ESE7	ESE6	ESE5	SE5	SE5	SE5	ESE4	SE6	SSE6	S8	S7	S4	SSE4	SE6	SE7	ESE7	SE7	SE7	SSE7	SSE7	SE4	SSE6	SE5.5	S8
	W0.5	SW0.7	SW0.3	SW0.8	SW0.9	SW1.3	SW1.2	SW1.4	SW1.3	SW1.5	WSW1.9	W2.2	WNW1.5	W2.3	W2.1	WNW1.6	WNW1.0	NNE0.3	NNE0.2	E0.6	E0.2	NNE0.3	WNW0.1	SW0.4	Diurnal Average	
	NE12	NE11	NNE12	NNE12	SSW11	NNE11	S11	NNE10	NNE10	NNE11	SSW11	NW13	WNW18	NW22	NW21	NW17	NW15	NNW11	N11	SSE9	SSE9	SSE10	NW10	NNW12	Diurnal Maximum	

UO - Unstable Operation

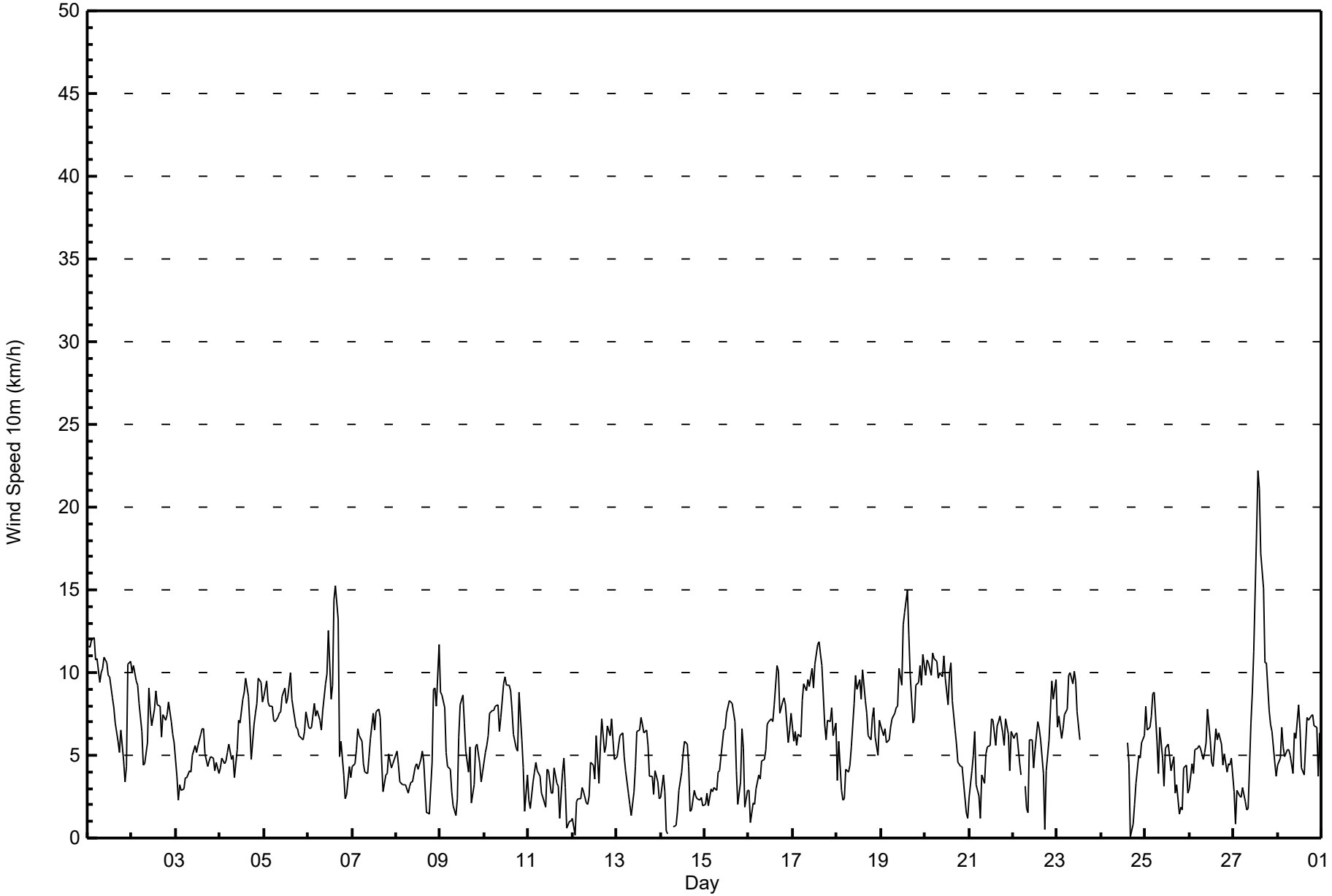
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Mackay River - February 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	291	45.19	45.19
6 - 11	334	51.86	97.05
12 - 19	17	2.64	99.69
20 - 28	2	0.31	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 644

Total Number of Hours: 672

Wind Speed 10m (WS10) - km/h
Mackay River - February 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	32	22	5	8	12	25	25	4	10	20	38	39	15	8	13	291
6 - 11	20	36	20	1	0	24	39	21	16	17	26	47	19	11	18	19	334
12 - 19	0	2	1	0	0	1	1	4	0	0	0	0	0	1	3	4	17
20 - 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	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	35	70	43	6	8	37	65	50	20	27	46	85	58	27	31	36	644

Total Number of Valid Hours: 644

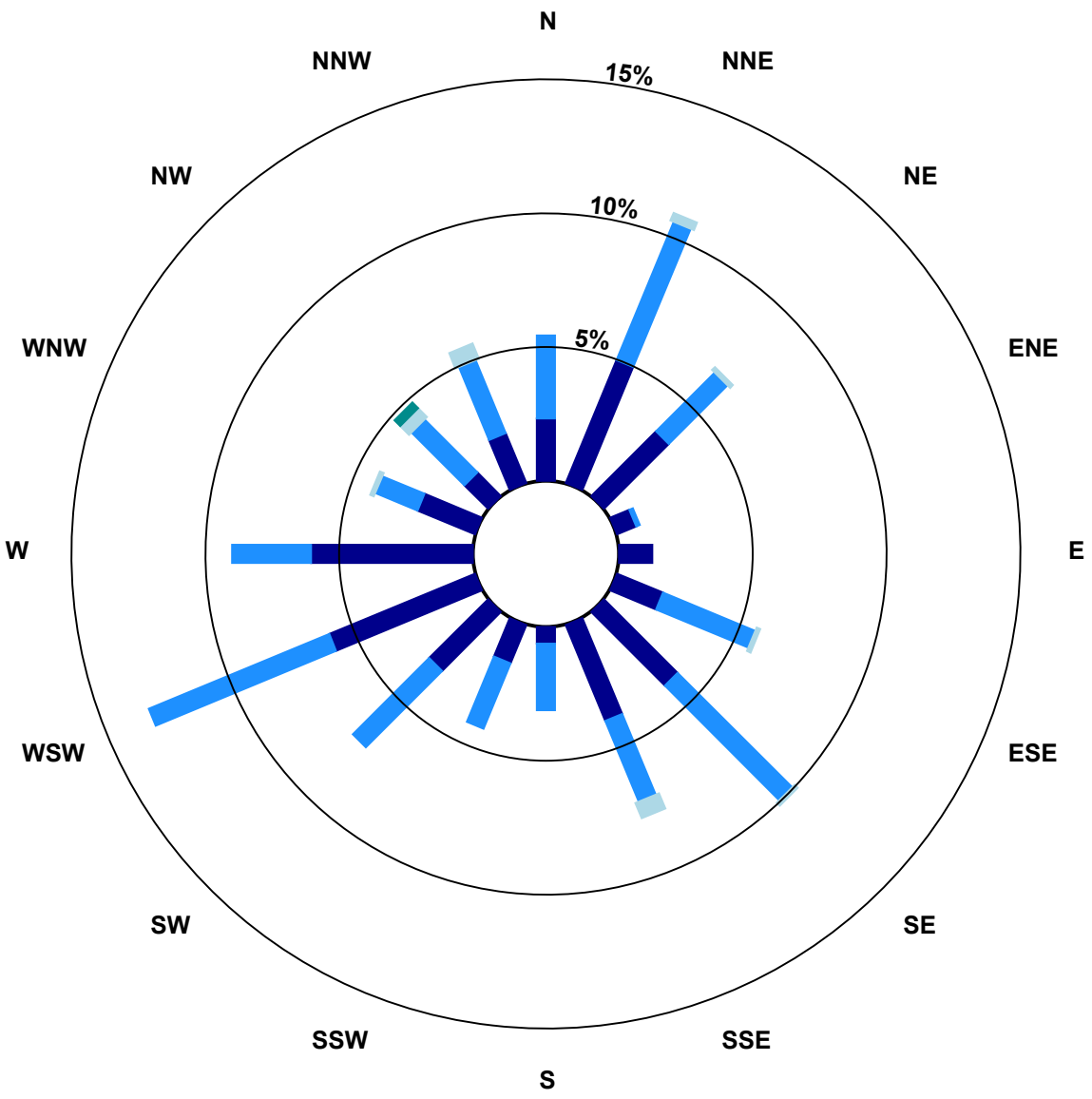
Total Number of Hours: 672

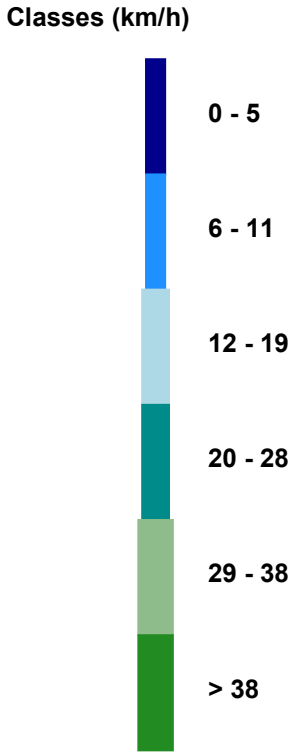
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Wind Speed 10m (WS10) - km/h

Mackay River





Total Number of Valid Hours: 644

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Mackay River - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7 km/h on Feb 27 15:00

Minimum Value: 0 km/h on Feb 14 22:00

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

Hours in Service:	672
Hours of Data:	644
Hours of Missing Data:	28
Hours of Calibration:	0
Percent Operational Time:	95.8

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

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Mackay River - February 2025

Direction of Maximum Speed: 316 deg on Feb 27 14:00
Direction of Maximum Daily Speed Average: 150.9 deg on Feb 19

Direction of Minimum Speed: 164 deg on Feb 24 17:00

Direction of Minimum Daily Speed Average: 0.8 deg on Feb 14

Monthly Average Direction: 256.6 deg

Hours in Service:	672
Hours of Data:	644
Hours of Missing Data:	28
Percent Operational Time:	95.8

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-Feb	35	34	29	28	26	23	22	15	16	13	359	351	345	352	352	3	13	353	348	7	352	338	324	328	7.1
2-Feb	328	332	334	329	337	335	14	357	342	338	359	350	337	320	321	316	309	322	321	319	324	324	331	318	331.2
3-Feb	286	268	268	268	264	265	272	272	271	277	273	269	261	243	252	254	244	241	236	236	237	244	253	237	256.7
4-Feb	238	230	238	227	233	224	213	193	197	217	233	225	228	226	231	228	228	226	217	218	225	225	232	231	225.3
5-Feb	238	231	226	231	230	221	226	221	225	231	235	237	245	241	240	247	249	255	246	246	253	270	271	274	240.2
6-Feb	275	263	257	254	261	273	272	279	284	288	292	309	39	347	348	333	330	336	326	320	279	247	244	245	301.4
7-Feb	252	245	241	249	251	239	264	247	244	250	251	264	264	253	245	257	249	217	221	231	227	233	227	225	245.6
8-Feb	226	237	240	247	253	252	264	264	276	272	267	261	260	288	284	292	268	143	349	30	359	339	1	327	294.7
9-Feb	323	319	320	302	287	284	278	268	223	86	24	12	5	352	339	305	299	284	287	298	287	279	257	258	316.3
10-Feb	247	250	246	249	257	264	251	239	238	241	248	251	256	241	235	244	246	246	280	317	3	30	57	47	256.2
11-Feb	36	20	26	21	9	355	337	302	263	263	256	260	267	265	288	342	327	134	151	152	145	6	149	158	316.5
12-Feb	239	195	83	161	142	131	129	149	118	117	106	92	112	121	85	76	28	15	24	25	21	24	20	22	63.9
13-Feb	32	26	25	27	22	15	4	10	19	34	36	34	25	4	11	32	31	44	30	32	66	36	39	19	26.8
14-Feb	25	33	19	339	216	UO	UO	198	154	307	336	312	326	320	330	331	212	189	156	146	157	145	174	151	330.6
15-Feb	278	239	251	269	253	265	264	271	284	274	279	282	294	297	309	297	298	283	259	315	329	18	43	79	292.9
16-Feb	107	128	166	157	139	154	157	135	135	139	151	145	128	123	112	113	114	118	116	119	122	121	120	119	126.4
17-Feb	123	134	128	131	125	120	128	129	122	120	129	139	133	124	120	113	114	120	115	134	136	132	152	159	127.4
18-Feb	143	163	120	155	165	153	163	165	167	173	181	181	168	163	158	153	139	140	129	138	139	151	143	149	156.1
19-Feb	146	142	135	139	131	134	134	131	131	131	141	160	164	164	163	162	160	144	141	149	156	162	159	171	150.9
20-Feb	184	191	193	195	191	190	187	196	193	198	199	211	232	244	254	258	251	244	252	227	239	265	289	170	211.7
21-Feb	131	134	129	130	98	147	36	38	346	351	28	335	353	25	47	16	35	39	40	44	43	35	41	34	39.9
22-Feb	32	32	39	31	37	UO	3	5	33	120	129	156	177	207	188	209	194	359	150	157	180	192	187	197	160.4
23-Feb	200	187	189	184	193	210	241	247	257	262	276	351	32	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--
24-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	202	219	164	78	53	39	25	32	45	33	--
25-Feb	20	29	34	34	29	33	44	45	23	51	37	22	36	45	31	137	123	116	1	88	13	348	345	308	34.1
26-Feb	205	220	237	257	257	259	263	257	264	257	289	353	15	337	353	10	11	36	29	37	32	35	23	16	324.2
27-Feb	20	42	36	47	128	116	59	309	210	205	270	275	302	316	317	320	322	343	349	39	45	45	82	70	329.1
28-Feb	132	109	115	114	117	129	129	132	121	126	151	175	171	191	163	129	135	119	125	135	150	148	135	148	137.4
	271.2	230.3	235.9	235.4	233.3	219.5	225.8	224.1	231.4	226.7	246.8	270.0	285.0	278.0	279.1	285.8	302.9	27.8	26.0	96.2	80.6	18.9	285.4	232.3	
	Diurnal Average																								

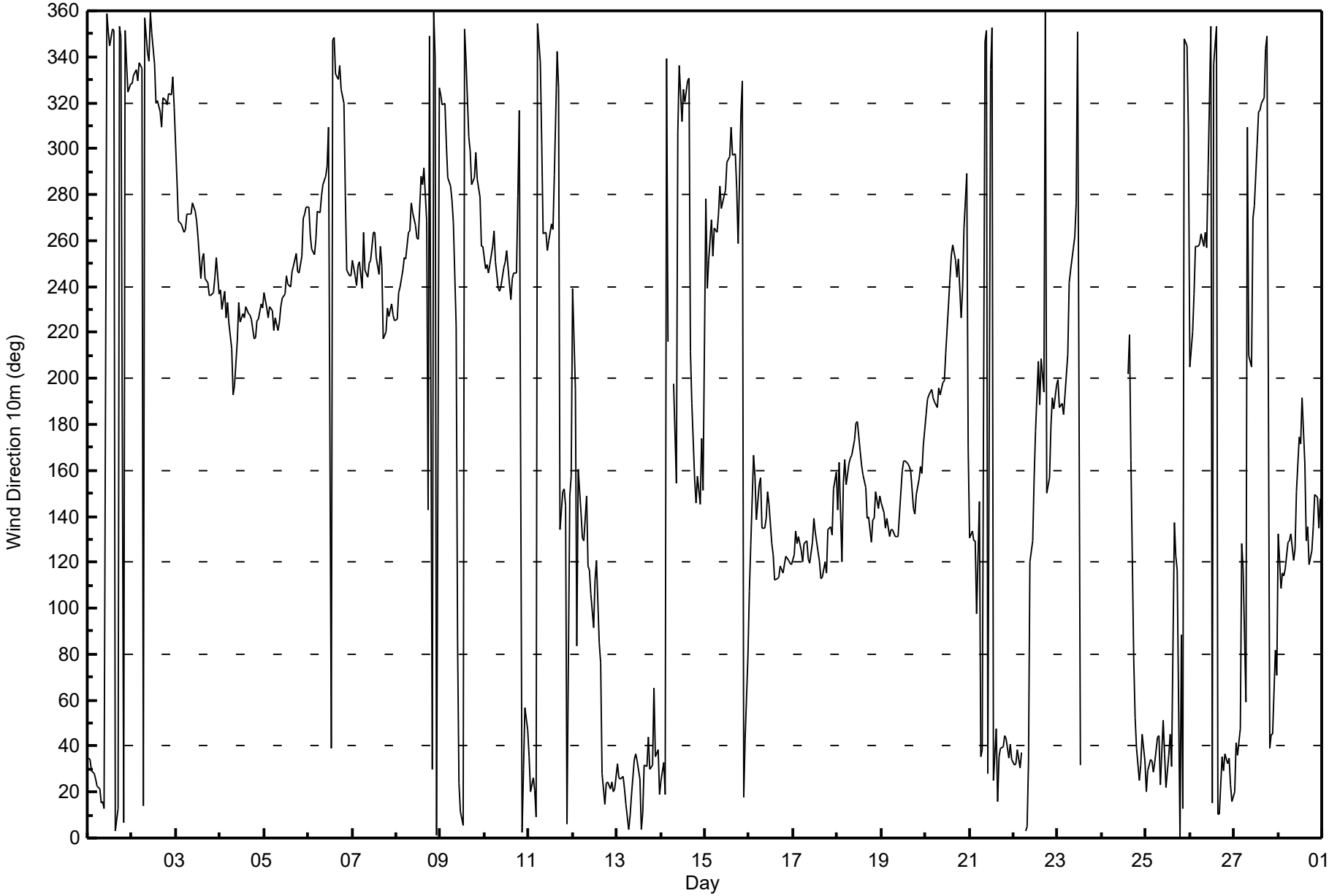
UO - Unstable Operation
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Mackay River - February 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Mackay River - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 99 deg on Feb 12 02:00

Minimum Value: 10 deg on Feb 16 06:00

Percentiles: P_1 = 13 P_{10} = 19 Q_1 = 22 Median = 27 Q_3 = 40 P_{90} = 49 P_{99} = 83

Hours in Service:	672
Hours of Data:	644
Hours of Missing Data:	28
Hours of Calibration:	0
Percent Operational Time:	95.8

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-Feb	22	24	23	23	24	23	27	25	26	25	26	23	25	25	24	26	26	20	23	30	23	21	19	19	30
2-Feb	19	21	20	20	21	22	21	19	21	22	26	26	24	21	23	22	21	19	17	17	19	17	19	17	26
3-Feb	25	64	41	30	32	41	41	43	42	47	42	55	48	46	47	49	46	41	31	32	34	36	43	38	64
4-Feb	33	30	28	23	33	25	21	16	21	27	31	34	33	34	33	33	31	26	20	24	28	27	33	35	35
5-Feb	39	38	30	33	30	28	30	27	27	32	37	35	44	51	35	42	52	54	42	43	45	46	40	40	54
6-Feb	48	49	49	46	52	44	47	40	33	30	27	24	25	31	25	21	21	20	13	32	51	49	34	38	52
7-Feb	42	42	35	42	44	44	41	33	33	52	47	43	53	56	45	56	49	27	21	18	19	24	18	19	56
8-Feb	18	26	22	32	31	28	36	37	43	55	50	48	52	48	47	32	59	54	84	23	23	27	28	19	84
9-Feb	19	19	17	21	23	21	25	36	74	42	26	24	25	32	42	41	24	27	18	24	23	27	37	39	74
10-Feb	42	42	41	44	44	45	47	39	40	34	40	44	49	41	36	42	51	44	45	24	33	23	39	18	51
11-Feb	27	42	20	21	20	24	26	18	30	39	45	50	61	59	40	48	39	56	19	11	42	69	66	87	87
12-Feb	61	99	43	37	27	21	28	49	46	24	28	38	55	33	73	33	24	22	26	24	28	26	26	28	99
13-Feb	31	24	27	23	22	20	25	17	27	32	30	33	32	31	34	26	24	23	19	24	35	17	19	19	35
14-Feb	21	16	15	67	79	UO	UO	74	65	31	34	39	43	25	26	50	65	38	11	33	25	19	19	45	79
15-Feb	54	22	38	26	33	30	28	40	34	41	40	38	31	31	33	28	27	27	26	24	22	29	38	22	54
16-Feb	14	83	25	32	12	10	12	16	13	20	22	26	28	34	28	18	16	14	14	16	16	13	14	17	83
17-Feb	16	19	19	18	18	17	18	19	18	19	22	27	26	23	20	21	18	15	17	20	18	19	26	25	27
18-Feb	33	24	52	30	44	21	26	21	28	27	24	27	28	30	29	28	20	19	16	21	21	23	22	24	52
19-Feb	23	23	20	22	19	19	19	19	19	23	25	27	27	28	28	26	28	24	21	24	25	26	25	25	28
20-Feb	22	22	22	23	23	23	23	23	23	24	24	29	39	41	45	48	53	51	38	24	26	25	61	67	67
21-Feb	33	16	18	17	36	35	91	24	44	27	31	35	31	29	31	27	24	22	27	22	22	28	33	24	91
22-Feb	23	23	22	21	23	UO	27	58	42	31	29	38	41	28	30	29	22	70	20	12	17	17	16	22	70
23-Feb	22	20	20	21	19	26	41	46	46	45	42	57	21	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	57
24-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	30	32	93	45	31	24	23	26	25	26	93
25-Feb	22	23	25	26	24	25	32	34	25	36	48	28	30	36	53	37	33	21	53	31	48	28	26	51	53
26-Feb	30	25	32	41	45	49	52	42	44	44	30	42	43	38	26	29	23	23	23	21	22	22	26	26	52
27-Feb	37	83	30	45	50	58	80	90	81	29	45	41	29	21	21	21	20	22	28	26	24	26	32	29	90
28-Feb	32	28	24	20	23	21	23	24	27	26	32	31	43	69	71	24	24	16	17	23	19	14	35	11	71
	61	99	52	67	79	58	91	90	81	55	50	57	61	69	73	56	93	70	84	43	51	69	66	87	
	Diurnal Maximum																								

UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS21
CONKLIN
FEBRUARY 2025

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

March 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - CONKLIN (AMS21)
FEBRUARY 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	639	32	33	99.85	-	-	4.6	0	1.5	0
TRS(ppb) Average	639	33	33	100	0.5	0	0.4	0	0.3	0
THC(ppm) Average	640	32	32	100	-	-	2.4	-	2.2	-
NMHC(ppm) Average	640	32	32	100	-	-	0.288	-	0.02	-
CH4(ppm) Average	640	32	32	100	-	-	2.3	-	2.2	-
O3 (ppb) Average	618	34	54	97.02	-	-	50.6	0	44.7	-
NO2 (ppb) Average	639	33	33	100	-	-	22.6	0	7	-
NO (ppb) Average	639	33	33	100	-	-	12.2	-	2.1	-
NOX (ppb) Average	639	33	33	100	-	-	26.3	-	9.1	-
PM2.5 (ug/m3) Average	670	2	2	100	-	-	33.9	0	7.5	0
Temperature 2 m (C) Average	672	0	0	100	-	-	8.6	-	4.4	-
Relative Humidity (%) Average	672	0	0	100	-	-	97	-	81.5	-
Wind Speed 10 m (km/h) Average	669	0	3	99.55	-	-	18	-	11	-
Wind Direction 10 m (deg) Average	669	0	3	99.55	-	-	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - CONKLIN (AMS21)
FEBRUARY 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	639	0.47	0.6	-	0	0	0.1	0.3	0.5	1.1	4.6
TRS (ppb) Average	639	0.25	0.1	-	0.1	0.2	0.2	0.3	0.3	0.3	0.4
THC (ppm) Average	640	2.1	0	-	2	2.1	2.1	2.1	2.1	2.2	2.4
NMHC(ppm) Average	640	0.001	0.013	-	0	0	0	0	0	0	0.288
CH4(ppm) Average	640	2.1	0	-	2	2.1	2.1	2.1	2.1	2.2	2.3
O3 (ppb) Average	618	31.31	9.4	-	1.1	16.9	26.2	32.9	37.5	42.7	50.6
NO2 (ppb) Average	639	3.13	2.9	-	0	0.9	1.4	2.4	3.8	5.9	22.6
NO (ppb) Average	639	0.53	1.1	-	0	0	0	0.2	0.6	1.3	12.2
NOX (ppb) Average	639	3.66	3.4	-	0.1	1.1	1.6	2.7	4.5	7.1	26.3
PM2.5 (ug/m3) Average	670	4.4	3.7	-	0.5	1.7	2.4	3.4	5.2	7.9	33.9
Temperature 2 m (C) Average	672	-16.7	12.7	-	-40	-32.8	-26.4	-18.7	-5	2.7	8.6
Relative Humidity (%) Average	672	69.47	12	-	25.1	52.4	63.8	72.2	77.1	81.2	97
Wind Speed 10 m (km/h) Average	669	5.8	4	-	0	1	3	5	8	11	18
Wind Direction 10 m (deg) Average	669	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - CONKLIN (AMS 21)
FEBRUARY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
SO2	12 Feb 2025 14:00	12 Feb 2025 14:00	1	Maintenance - reinitiated daily QA check
O3	11 Feb 2025 17:00	12 Feb 2025 12:00	20	Maintenance - field troubleshooting
Wind Speed, Wind Direction	14 Feb 2025 05:00	14 Feb 2025 05:00	1	Flat line in sensor output signal - Sensor frozen
Wind Speed, Wind Direction	14 Feb 2025 07:00	14 Feb 2025 07:00	1	Flat line in sensor output signal - Sensor frozen
Wind Speed, Wind Direction	22 Feb 2025 06:00	22 Feb 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

Conklin - February 2025

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

Maximum Value: 4.6 ppb on Feb 2 15:00 Maximum Daily Average: 1.5 ppb on Feb 2

Minimum Value: 0.0 ppb on Feb 3 21:00 Minimum Daily Average: 0.0 ppb on Feb 4

Maximum Diurnal Average: 0.8 ppb at hour 17 Minimum Diurnal Average: 0.2 ppb at hour 7

Monthly Average: 0.47 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.3 Q_3 = 0.5 P_{90} = 1.1 P_{99} = 3.2

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	32
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-Feb	0.0	0.1	0.2	Z	0.1	0.1	0.0	0.1	0.1	0.1	0.1	1.9	2.9	4.2	3.0	2.5	2.0	0.7	0.2	0.2	0.1	0.2	0.2	0.2	0.8	4.2
2-Feb	0.2	0.4	0.3	0.6	Z	1.2	0.8	1.0	1.3	1.5	2.6	3.9	3.6	3.9	4.6	3.2	2.1	0.8	0.4	0.5	0.7	0.5	0.5	0.8	1.5	4.6
3-Feb	0.8	0.7	0.5	0.6	0.3	Z	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8
4-Feb	Z	0.0	0.0	0.0	0.0	0.0	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	0.0	0.2
5-Feb	0.2	Z	0.6	1.1	0.8	0.5	0.3	0.3	0.3	0.4	0.5	C	C	C	C	0.0	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.4	1.1
6-Feb	0.4	0.5	Z	0.5	0.5	0.5	0.5	0.3	0.4	0.4	0.4	0.3	0.4	0.3	0.3	0.4	0.9	1.0	1.2	0.9	0.9	1.5	1.4	0.8	0.6	1.5
7-Feb	0.5	0.6	0.9	Z	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.3	0.2	0.2	0.1	0.1	0.0	0.1	0.0	0.2	0.9
8-Feb	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	0.1	0.1	0.2	0.4	0.2	0.1	0.1	0.1	0.1	0.3	0.3	0.1	0.4
9-Feb	0.5	1.7	1.7	2.5	2.3	Z	0.3	0.1	0.1	0.2	0.4	0.5	0.5	0.3	0.2	0.1	0.6	0.6	0.8	0.4	0.2	0.1	0.1	0.1	0.6	2.5
10-Feb	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.2	0.2	0.2	0.2	0.3	0.1	0.3
11-Feb	0.4	Z	0.3	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.6	1.0	2.3	1.6	0.5	0.2	0.2	0.1	0.2	0.4	0.4	2.3
12-Feb	0.4	0.3	Z	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.7	1.3	M	1.5	1.9	1.1	0.7	0.4	0.3	0.4	0.5	0.5	0.4	0.6	1.9
13-Feb	0.4	0.4	0.5	Z	0.7	0.7	0.5	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.5	0.6	0.9	0.8	0.3	0.3	0.1	0.2	0.1	0.2	0.4	0.9
14-Feb	0.1	0.1	0.1	0.1	Z	0.1	0.0	0.1	0.1	0.1	0.3	0.2	0.2	0.3	0.5	0.4	0.4	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.2	0.5
15-Feb	0.0	0.0	0.0	0.0	0.1	Z	0.0	0.0	0.1	0.4	1.6	1.1	0.7	0.6	0.7	0.7	0.8	0.4	0.3	0.2	0.3	0.3	0.2	0.2	0.4	1.6
16-Feb	Z	0.2	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.4	2.6	4.5	3.0	2.3	2.2	1.4	0.7	0.3	0.1	0.1	0.1	0.1	0.0	0.8	4.5
17-Feb	0.0	Z	0.0	0.0	0.1	0.0	0.1	0.2	0.5	0.9	0.6	0.8	0.6	0.6	1.1	1.4	1.3	0.9	0.9	1.2	0.7	0.3	0.1	0.1	0.5	1.4
18-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.5	1.0	0.3	0.4	0.2	1.0
19-Feb	0.2	0.2	0.1	Z	0.1	0.0	0.1	0.0	0.3	2.1	1.0	0.6	0.8	0.5	0.7	0.7	0.8	0.5	2.8	1.9	0.6	0.6	0.8	0.8	0.7	2.8
20-Feb	0.7	0.8	1.1	0.4	Z	0.4	0.5	0.5	0.5	0.6	0.7	0.8	0.7	0.6	0.5	0.4	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.5	1.1
21-Feb	0.4	0.5	0.4	0.4	0.5	Z	0.5	0.4	0.4	0.5	0.5	0.5	0.6	0.5	0.4	0.4	0.5	0.7	0.6	0.7	0.6	0.5	0.5	0.5	0.5	0.7
22-Feb	Z	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.6	0.5	0.6	0.6	0.5	0.4	0.5	0.6	0.5	0.7	1.1	0.7	0.8	1.0	0.5	1.1
23-Feb	0.7	Z	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.0	0.2	1.2	0.4	0.9	1.6	1.5	0.7	0.8	1.0	0.5	1.6
24-Feb	1.0	0.8	Z	0.6	0.5	0.3	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.2	1.0
25-Feb	0.0	0.1	0.0	Z	0.0	0.2	0.3	0.3	1.0	1.9	1.2	0.9	0.9	1.2	2.2	3.1	3.0	1.9	0.7	0.3	0.3	0.2	0.3	0.4	0.9	3.1
26-Feb	0.3	0.3	0.3	0.2	Z	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.3
27-Feb	0.1	0.0	0.0	0.3	0.2	Z	0.1	1.7	1.8	0.7	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.6	0.4	0.7	0.4	0.3	1.3	1.4	0.5	1.8
28-Feb	Z	0.4	0.3	0.1	0.2	0.2	0.2	0.3	0.5	0.7	1.4	1.6	1.2	0.7	0.7	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.3	0.5	1.6
	0.3	0.4	0.3	0.4	0.3	0.2	0.2	0.3	0.3	0.5	0.5	0.7	0.8	0.7	0.8	0.8	0.8	0.5	0.5	0.4	0.4	0.3	0.4	0.4	Diurnal Average	
	1.0	1.7	1.7	2.5	2.3	1.2	0.8	1.7	1.8	2.1	2.6	3.9	4.5	4.2	4.6	3.2	3.0	1.9	2.8	1.9	1.5	1.5	1.4	1.4	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

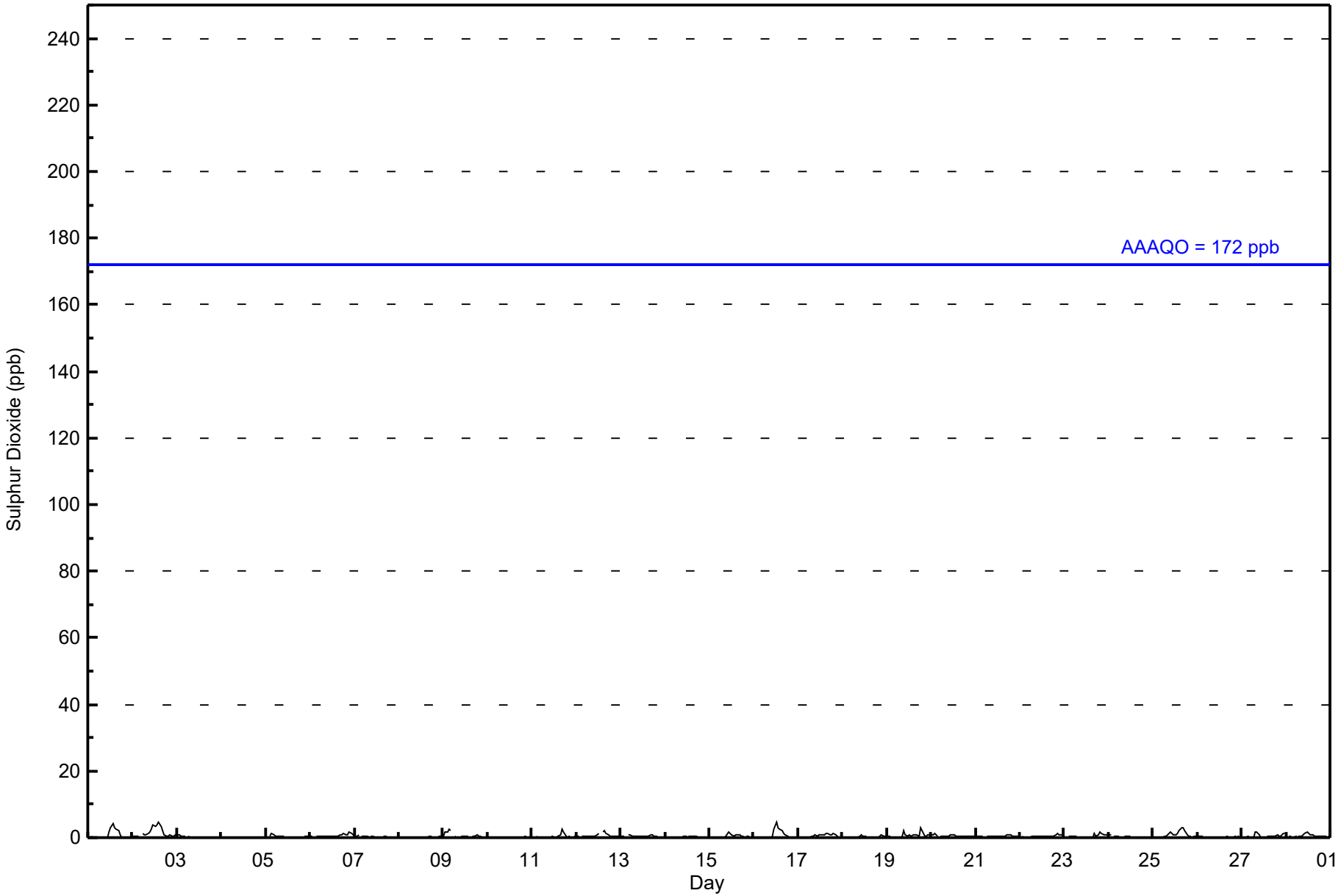
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Conklin - February 2025



Sulphur Dioxide (SO_2) - ppb

Conklin - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	639	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: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Conklin - February 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	9	7	13	14	18	46	71	58	60	52	28	34	67	79	52	637
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	9	7	13	14	18	46	71	58	60	52	28	34	67	79	52	637

Total Number of Valid Hours: 637

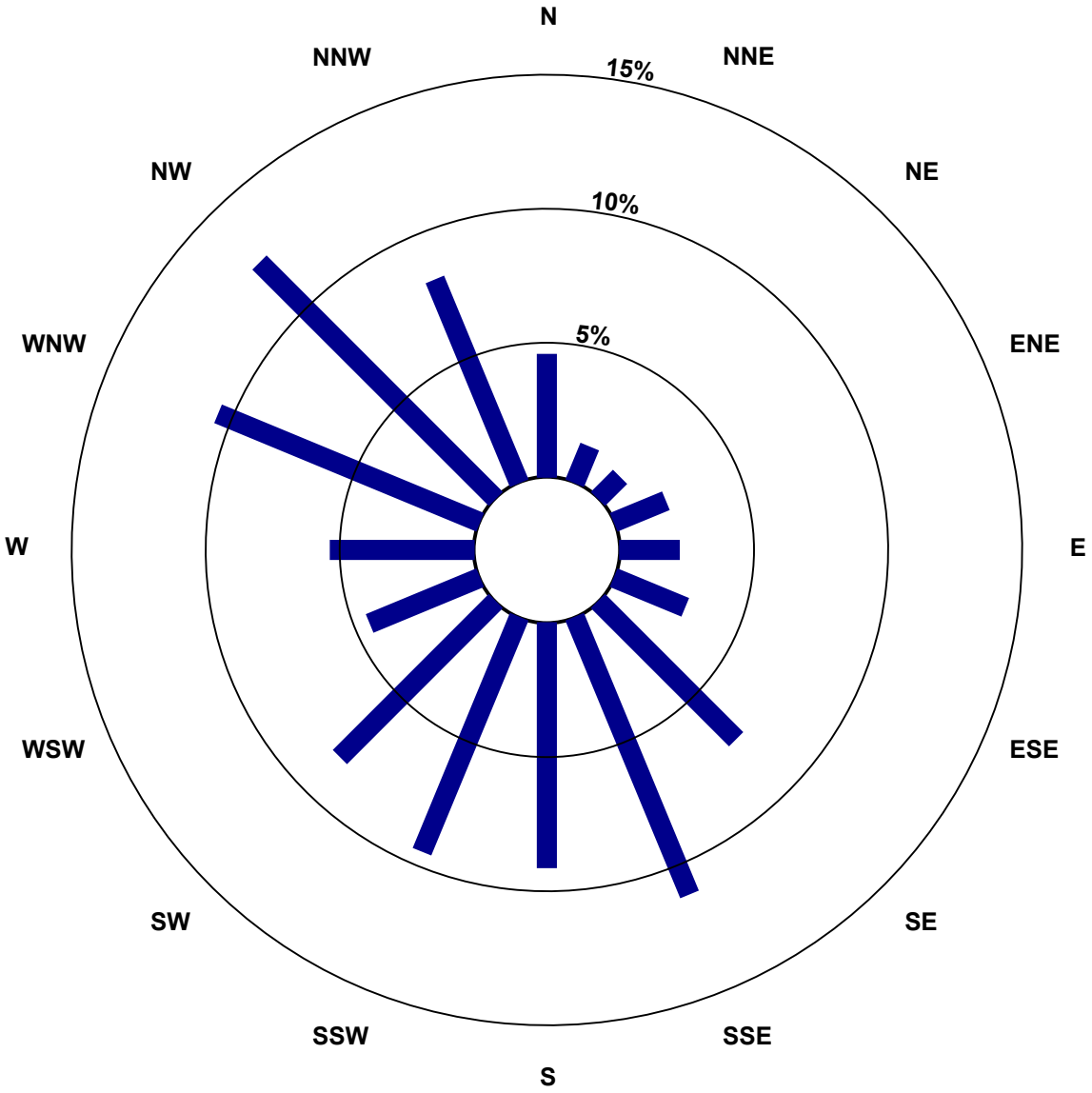
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Sulphur Dioxide (SO_2) - ppb

Conklin



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

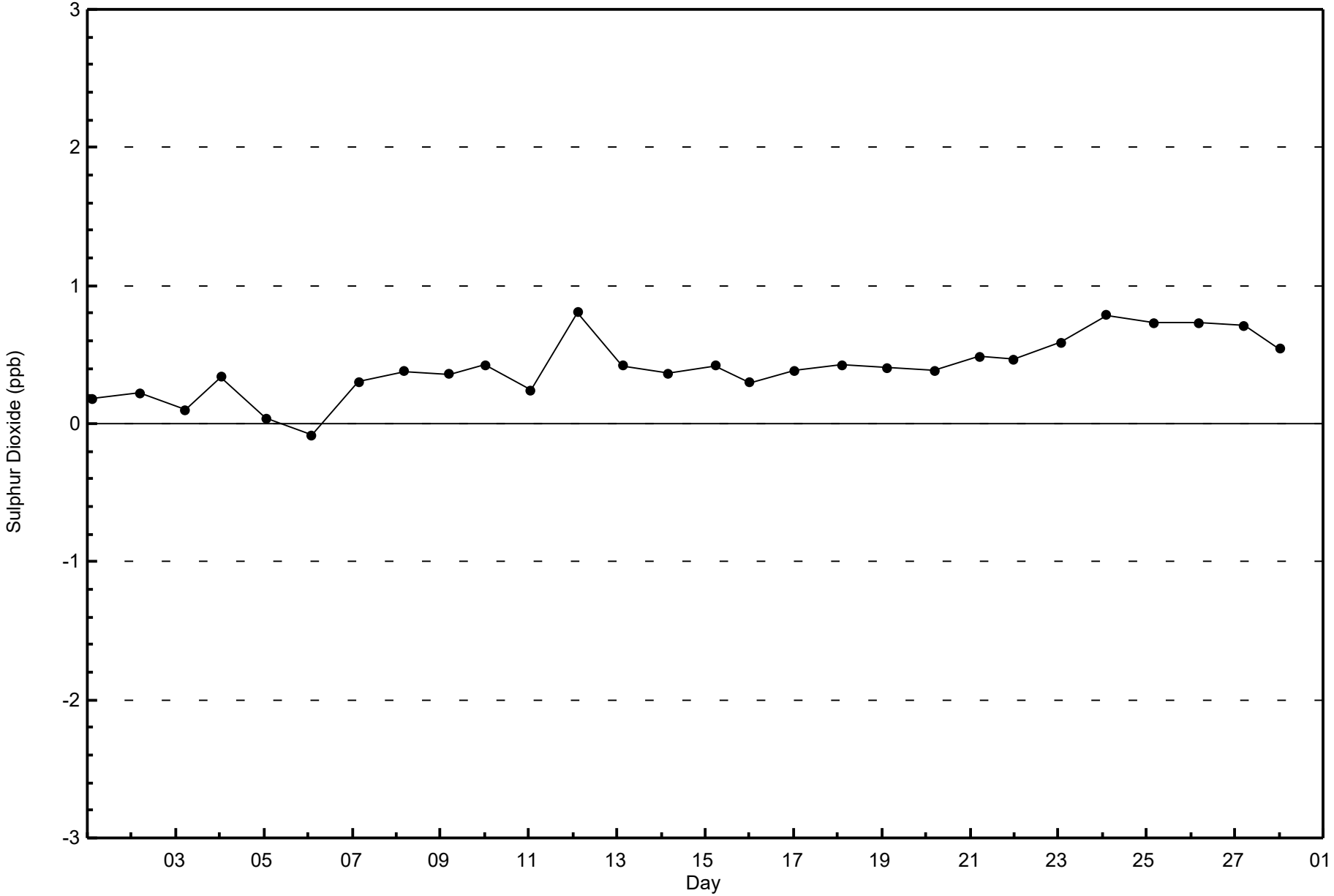
Total Number of Valid Hours: 637

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Conklin - February 2025

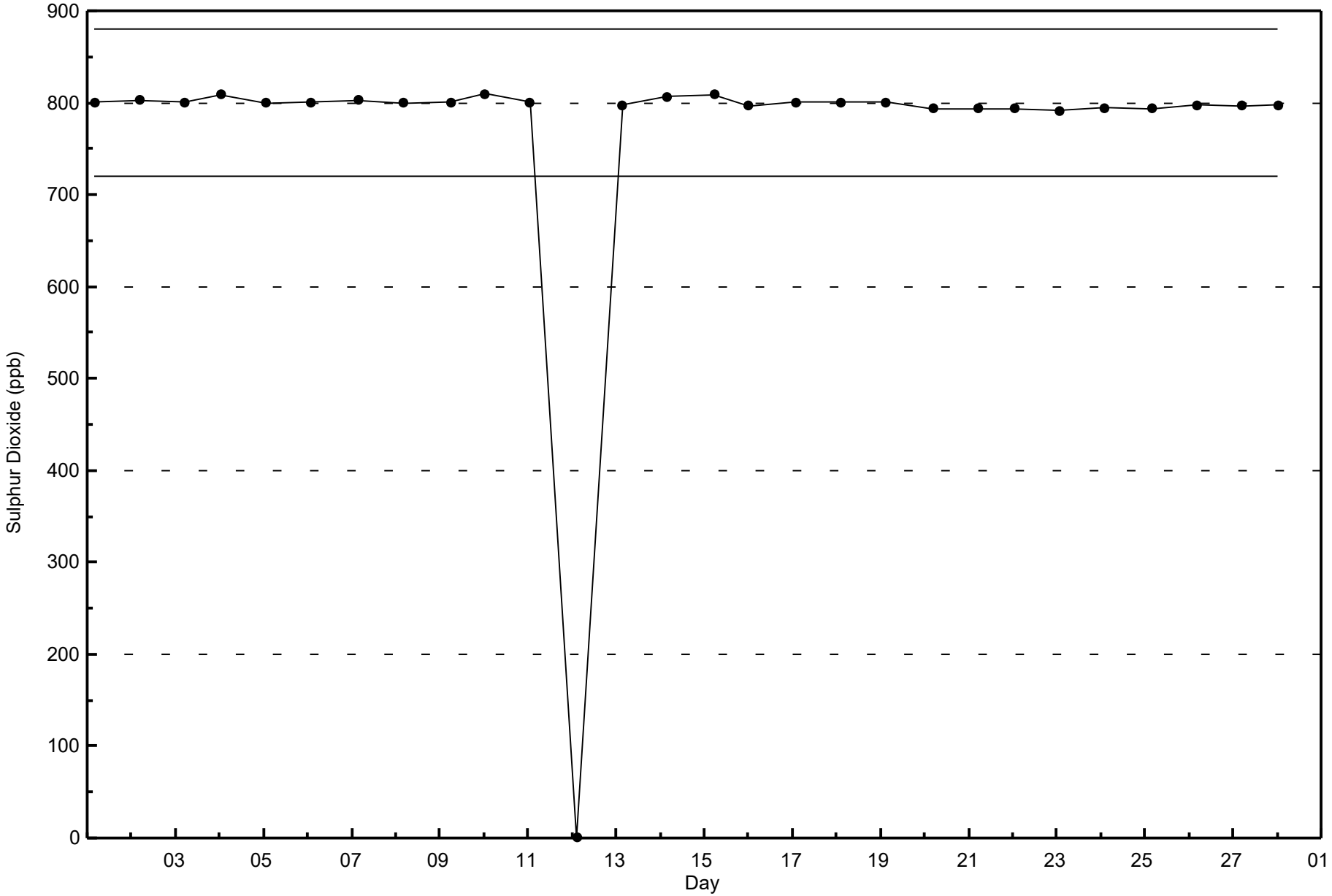


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Conklin - February 2025



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Conklin - February 2025

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

Maximum Value: 0.5 ppb on Feb 1 12:00 Maximum Daily Average: 0.3 ppb on Feb 2

Minimum Value: 0.1 ppb on Feb 23 11:30 Minimum Daily Average: 0.2 ppb on Feb 27

Maximum Diurnal Average: 0.3 ppb at hour 11 Minimum Diurnal Average: 0.2 ppb at hour 24

Monthly Average: 0.25 ppb Percentiles: P_1 = 0.2 P_{10} = 0.2 Q_1 = 0.2 Median = 0.3 Q_3 = 0.3 P_{90} = 0.3 P_{99} = 0.4

Periods in Service:	1344
Periods of Valid Data:	1278
Periods of Invalid Data:	66
Periods of Calibration:	66
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-Feb	0.2	0.2	0.3	0.2	Z	0.3	0.2	0.3	0.2	0.2	0.3	0.4	0.4	0.5	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.5
	0.2	0.2	0.2	0.2	SP	0.3	0.2	0.2	0.2	0.2	0.2	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3		
2-Feb	0.3	0.3	0.3	0.3	0.3	Z	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	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	SP	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.2		
3-Feb	Z	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3
	SP	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.3	0.3		
4-Feb	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	0.3	0.3	0.3	0.3	0.3	0.4
	0.2	SP	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3		
5-Feb	0.3	0.3	Z	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.4
	0.3	0.3	SP	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2		
6-Feb	0.2	0.2	0.3	Z	0.3	0.2	0.3	0.3	0.2	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3
	0.2	0.2	0.2	SP	0.3	0.3	0.3	0.2	0.3	0.2	0.3	0.3	0.2	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2		
7-Feb	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	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	0.2	0.2	0.2	0.2	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2		
8-Feb	0.2	0.2	0.2	0.2	0.2	Z	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.3
	0.2	0.2	0.2	0.2	0.2	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.3	0.3		
9-Feb	Z	0.4	0.4	0.4	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.4
	SP	0.4	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2		
10-Feb	0.2	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.3
	0.2	SP	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3		
11-Feb	0.3	0.3	Z	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3
	0.3	0.3	SP	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.2		
12-Feb	0.2	0.3	0.3	Z	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4
	0.2	0.3	0.3	SP	0.4	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
13-Feb	0.2	0.2	0.2	0.2	Z	0.3	0.3	0.3	0.3	0.3	0.3	C	C	C	C	C	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	0.2	0.2	0.2	0.2	SP	0.3	0.3	0.3	0.3	0.3	C	C	C	C	C	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
14-Feb	0.2	0.2	0.2	0.2	0.2	Z	0.4	0.3	0.3	0.3	0.4	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4
	0.2	0.2	0.2	0.2	0.2	SP	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.2	0.3	0.3		
15-Feb	Z	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4
	SP	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3		

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Conklin - February 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-Feb	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5
	0.3	SP	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	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		
17-Feb	0.3	0.3	Z	0.4	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	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.4
	0.3	0.3	SP	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2		
18-Feb	0.2	0.2	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.3
	0.2	0.2	0.3	SP	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		
19-Feb	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	0.3	0.2	0.2	0.2	0.3	0.3
	0.2	0.2	0.2	0.2	SP	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3		
20-Feb	0.3	0.2	0.2	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	0.3	0.4
	0.3	0.3	0.2	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	0.3	0.3	0.4		
21-Feb	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	0.3
	SP	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		
22-Feb	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		
23-Feb	0.2	0.2	Z	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.4
	0.2	0.2	SP	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3		
24-Feb	0.3	0.3	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	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	SP	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2		
25-Feb	0.2	0.2	0.2	0.2	Z	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.2	0.3	0.5
	0.2	0.2	0.2	0.2	SP	0.3	0.3	0.3	0.4	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.2		
26-Feb	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	0.3	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
27-Feb	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	0.3
	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
28-Feb	0.3	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	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	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1		
	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	Diurnal Average	
	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.5	0.5	0.5	0.4	0.5	0.4	0.3	0.4	0.3	0.4	0.3	0.4	0.4	0.4	0.4	Diurnal Maximum	

Z - zerospan C - Calibration SP - Span

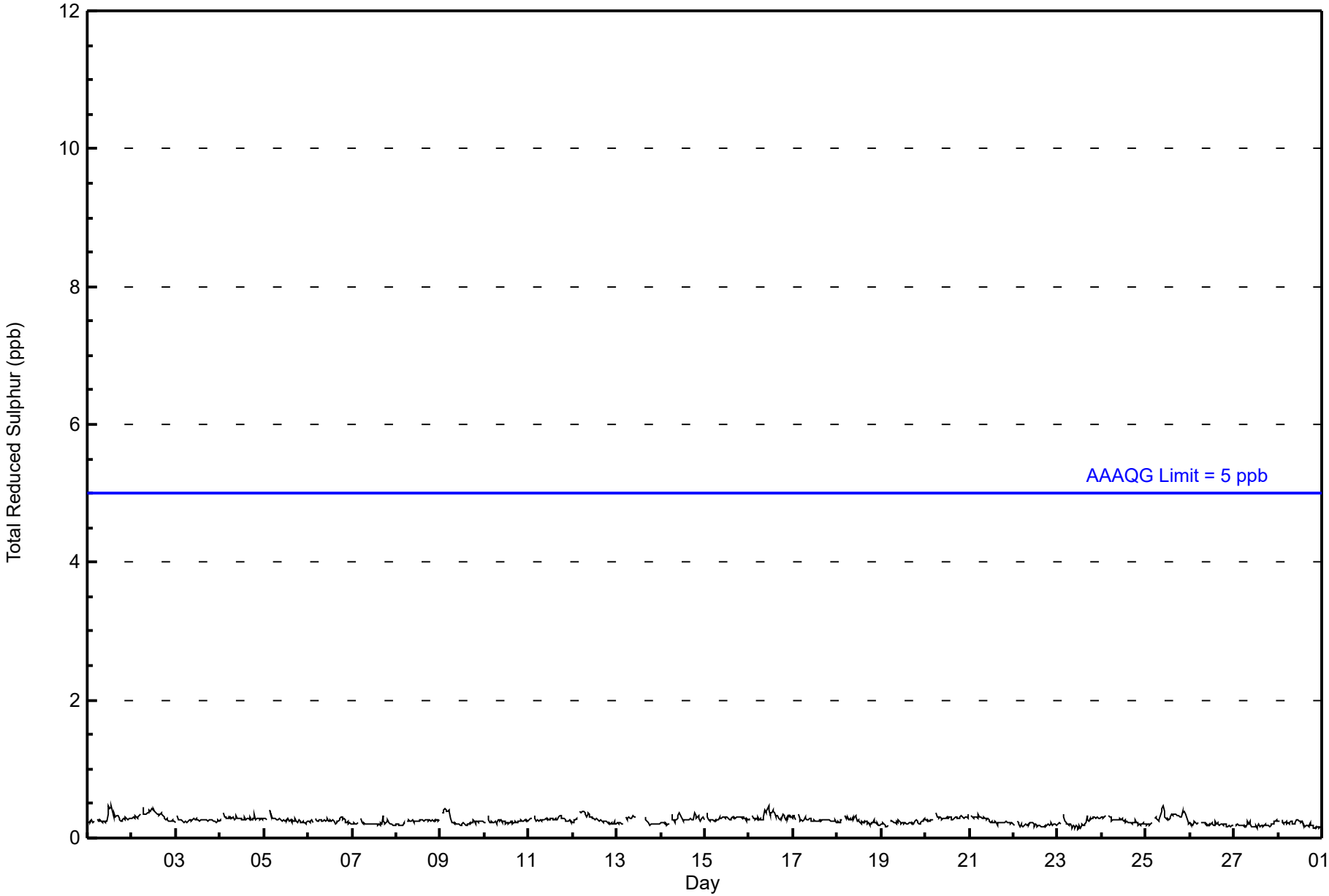
Alberta Ambient Air Quality Guideline (AAAQG): 30-Min: 5 ppb

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Conklin - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Reduced Sulphur (TRS) - ppb

Conklin - February 2025

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

Maximum Value: 0.4 ppb on Feb 16 11:00

Maximum Daily Average: 0.3 ppb on Feb 2

Minimum Value: 0.1 ppb on Feb 23 12:00

Minimum Daily Average: 0.2 ppb on Feb 27

Maximum Diurnal Average: 0.3 ppb at hour 11

Minimum Diurnal Average: 0.2 ppb at hour 24

Monthly Average: 0.25 ppb

Percentiles: P_1 = 0.2 P_{10} = 0.2 Q_1 = 0.2 Median = 0.3 Q_3 = 0.3 P_{90} = 0.3 P_{99} = 0.4

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

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

Z - zerospan C - Calibration

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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	639	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: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Conklin - February 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	27	7	10	11	15	17	46	72	54	60	54	29	39	65	79	51	636
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	27	7	10	11	15	17	46	72	54	60	54	29	39	65	79	51	636

Total Number of Valid Hours: 636

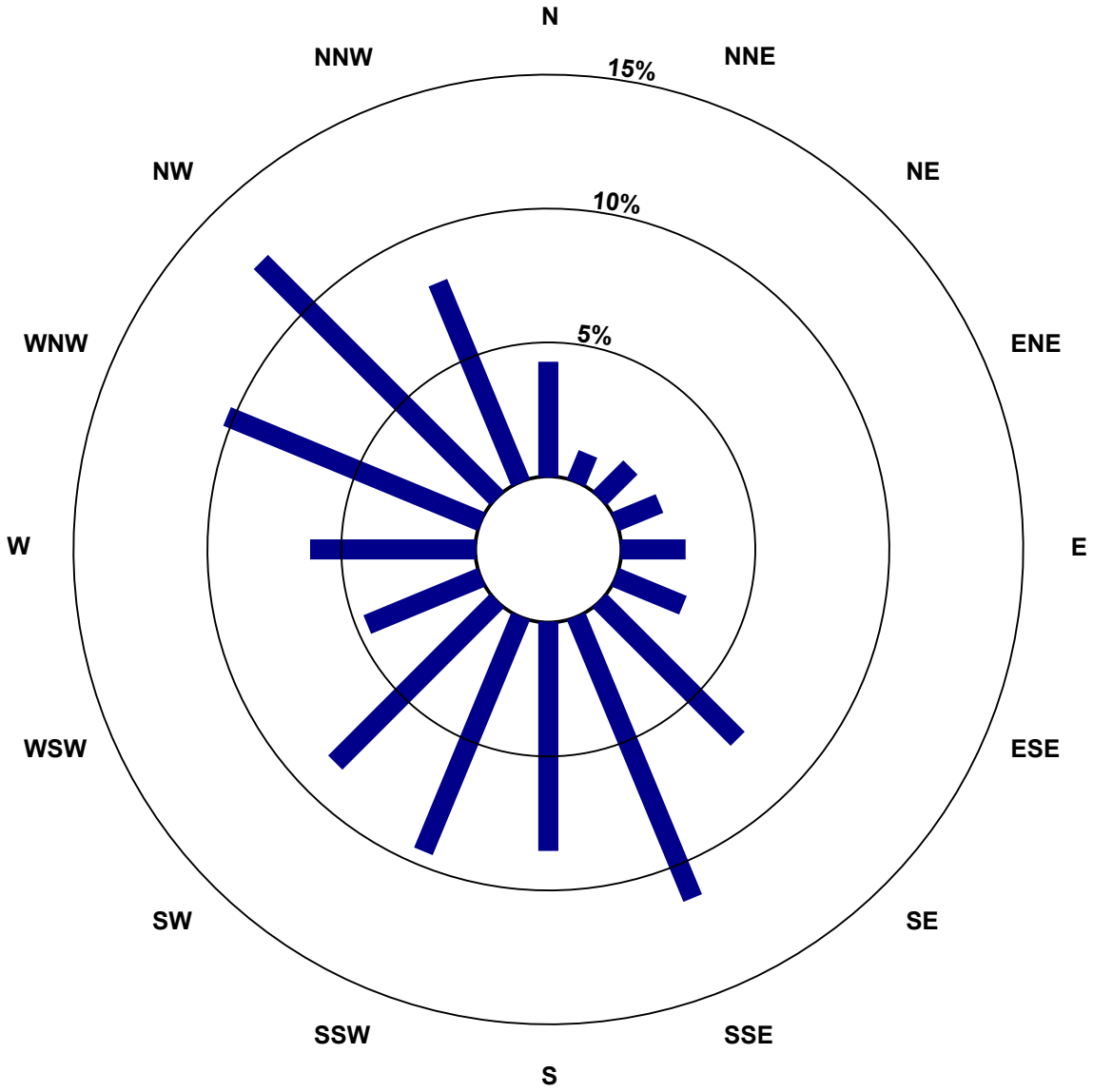
Total Number of Hours: 672

Wood Buffalo Environmental Association

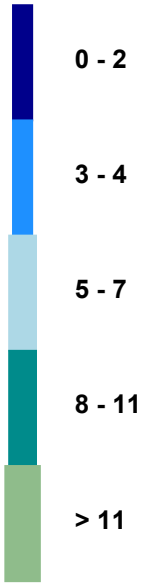
Wind Rose Feb 2025

Total Reduced Sulphur (TRS) - ppb

Conklin



Classes (ppb)



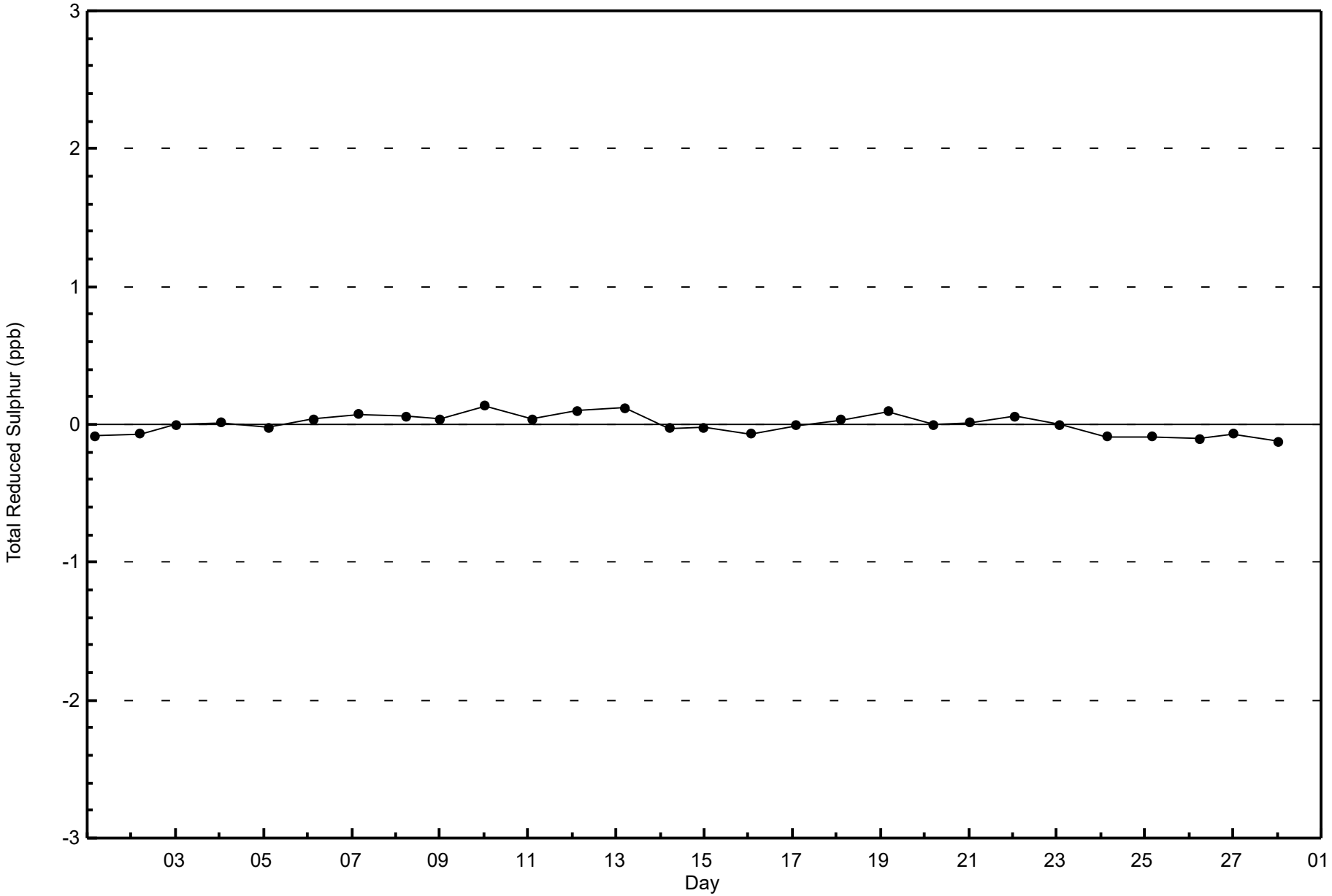
Total Number of Valid Hours: 636

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Conklin - February 2025

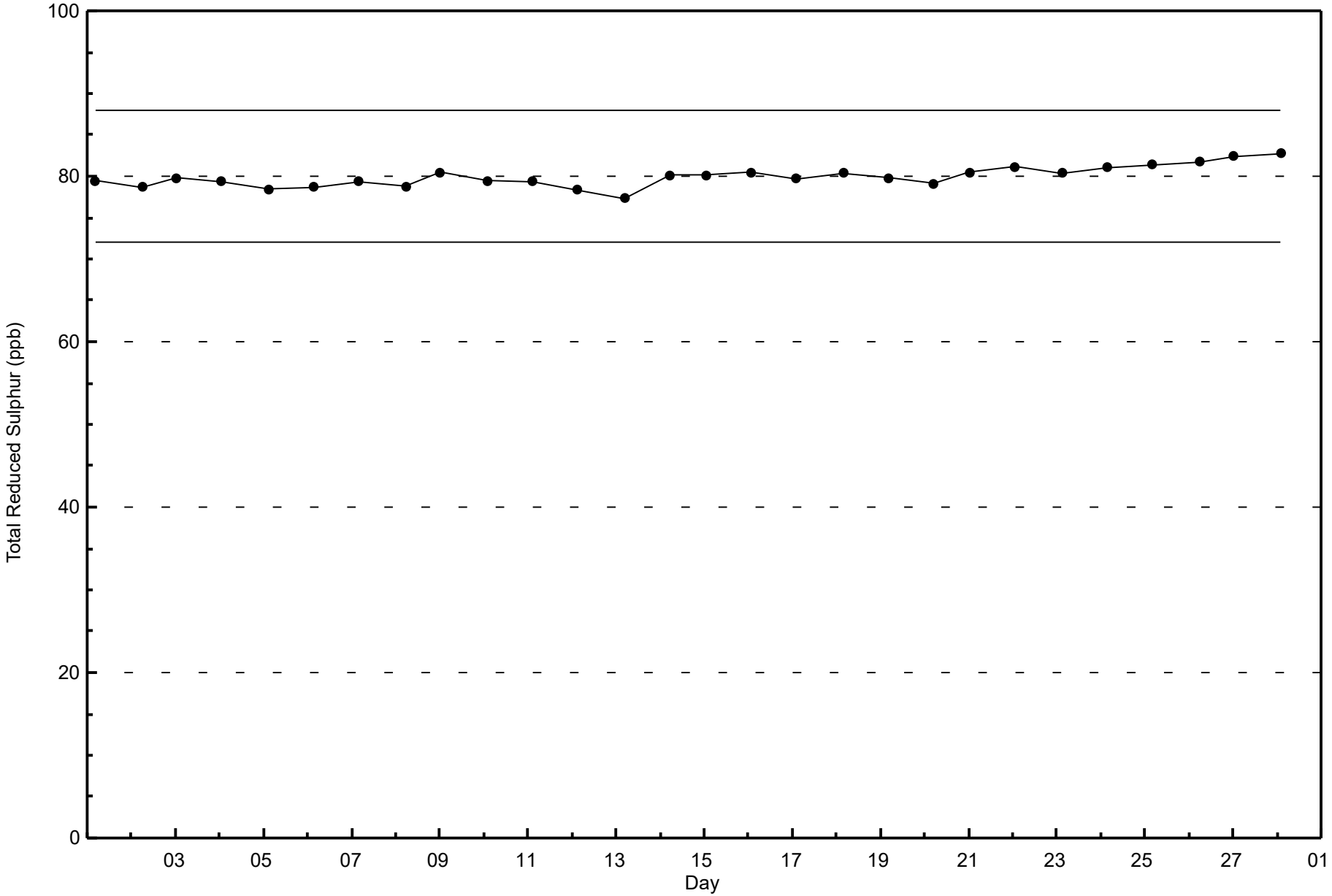


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Conklin - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Conklin - February 2025

Maximum Value: 2.4 ppm on Feb 7 20:00

Maximum Daily Average: 2.2 ppm on Feb 12

Minimum Value: 2.0 ppm on Feb 23 13:00

Minimum Daily Average: 2.0 ppm on Feb 26

Maximum Diurnal Average: 2.1 ppm at hour 5

Minimum Diurnal Average: 2.1 ppm at hour 15

Monthly Average: 2.10 ppm

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

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
2-Feb	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
3-Feb	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
4-Feb	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
5-Feb	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	C	C	C	C	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
6-Feb	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
7-Feb	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	2.4	2.2	2.1	2.1	2.2	2.1	2.4
8-Feb	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	2.2	2.1	2.1	2.1	2.1	2.1	2.2
9-Feb	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
10-Feb	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
11-Feb	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	2.1	2.1	2.2
12-Feb	2.1	2.1	Z	2.2	2.2	2.2	2.3	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	2.2	2.3
13-Feb	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
14-Feb	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
15-Feb	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
16-Feb	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3
17-Feb	2.2	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.2
18-Feb	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	2.1	2.1	2.2	2.2	2.1	2.2
19-Feb	2.2	2.2	2.3	Z	2.2	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3
20-Feb	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.2
21-Feb	2.2	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
22-Feb	Z	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.2
23-Feb	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.2
24-Feb	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	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1
25-Feb	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.0	2.1	2.2
26-Feb	2.0	2.0	2.0	2.0	Z	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1
27-Feb	2.0	2.0	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1
28-Feb	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.2	2.1	2.2
	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	Diurnal Average	
	2.2	2.2	2.3	2.2	2.2	2.3	2.3	2.2	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.4	2.2	2.2	2.2	2.2	Diurnal Maximum	

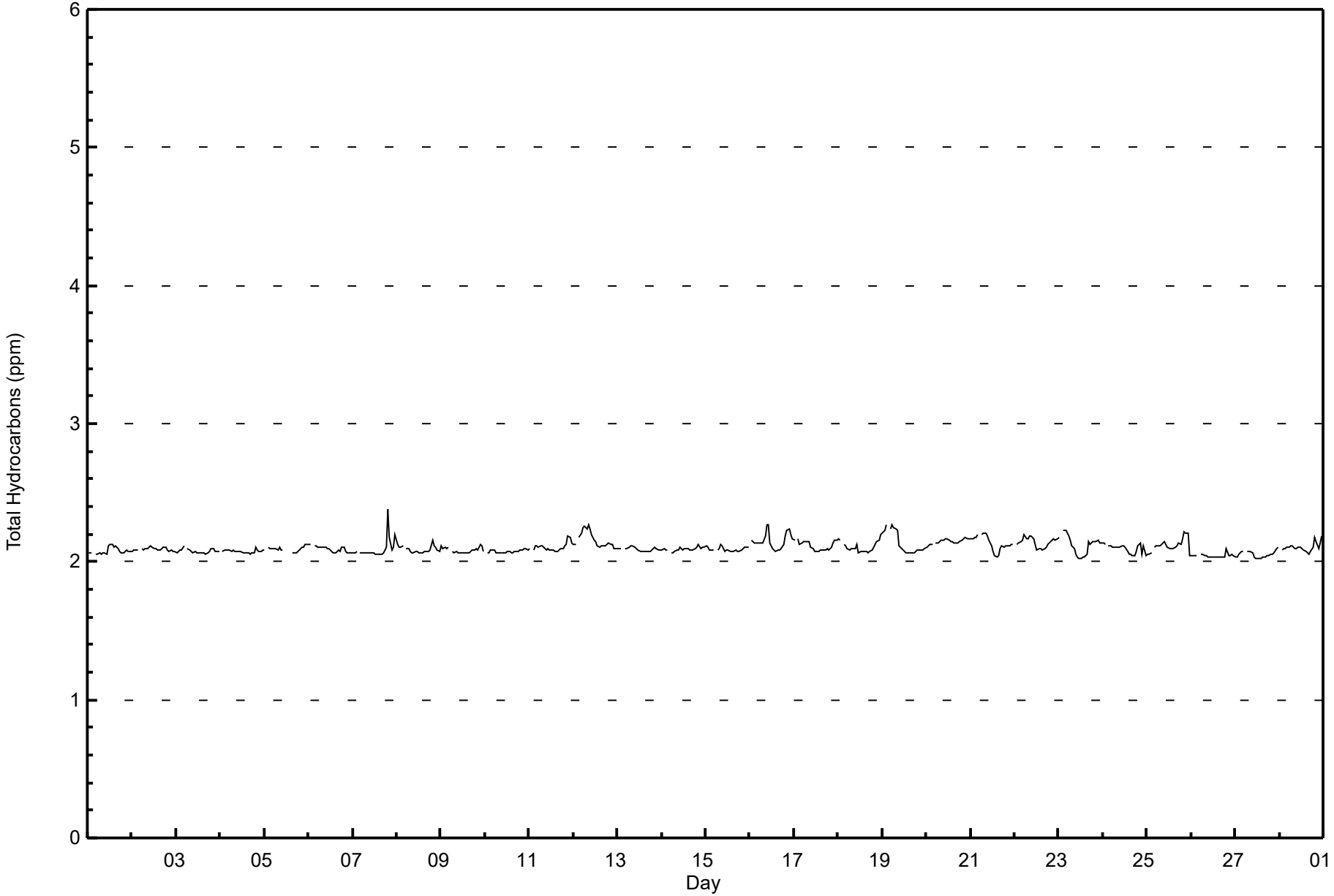
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Conklin - February 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	45	7.03	7.03
2.1 - 3.0	595	92.97	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 640

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Conklin - February 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	1	1	5	5	8	20	5	0	45
2.1 - 3.0	29	9	7	13	14	18	46	71	57	59	48	23	26	47	74	52	593
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	9	7	13	14	18	46	71	58	60	53	28	34	67	79	52	638

Total Number of Valid Hours: 638

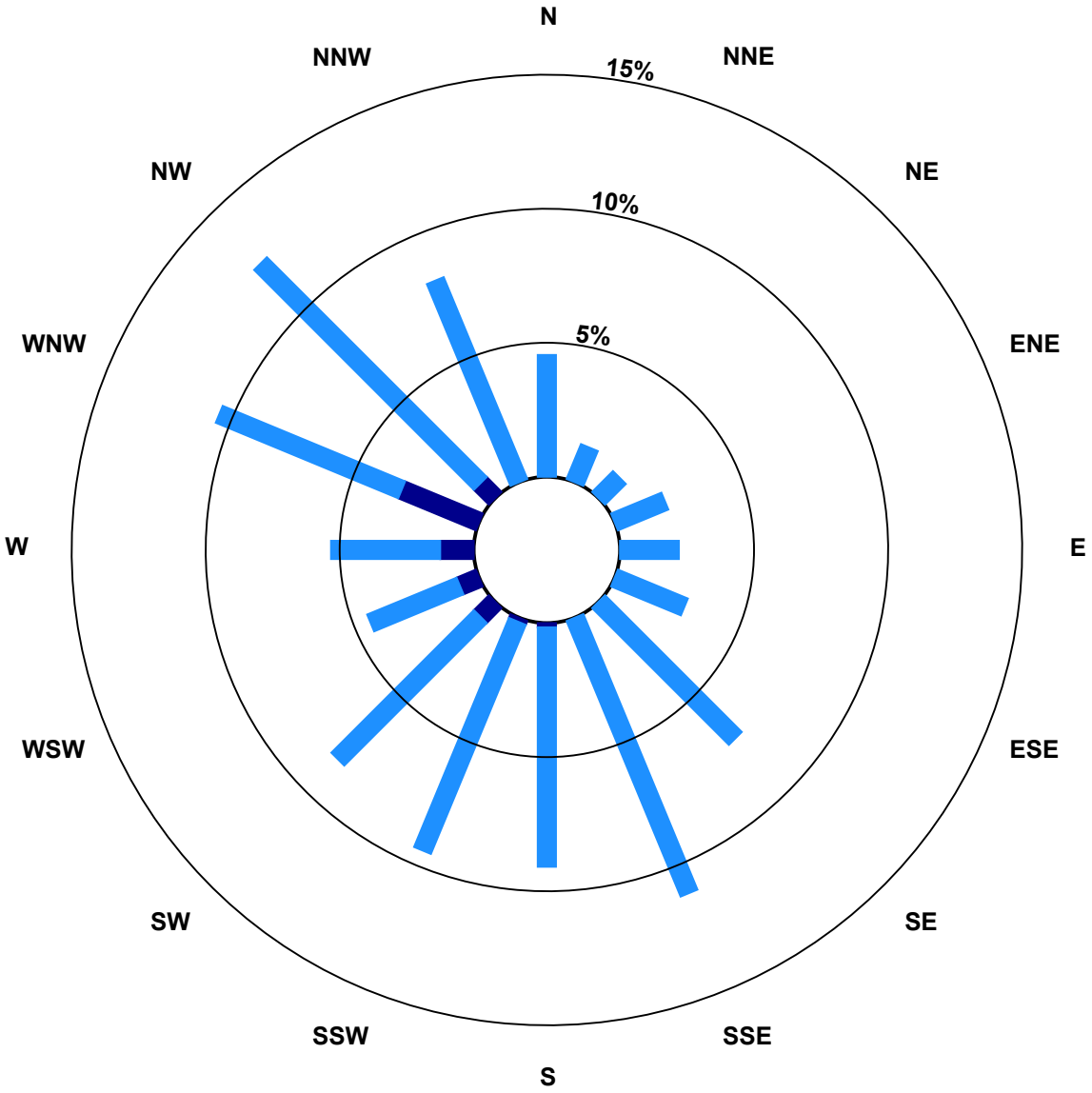
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Total Hydrocarbons (THC) - ppm

Conklin



Classes (ppm)

- 0 - 2.0
- 2.1 - 3.0
- 3.1 - 10.0
- > 10.0

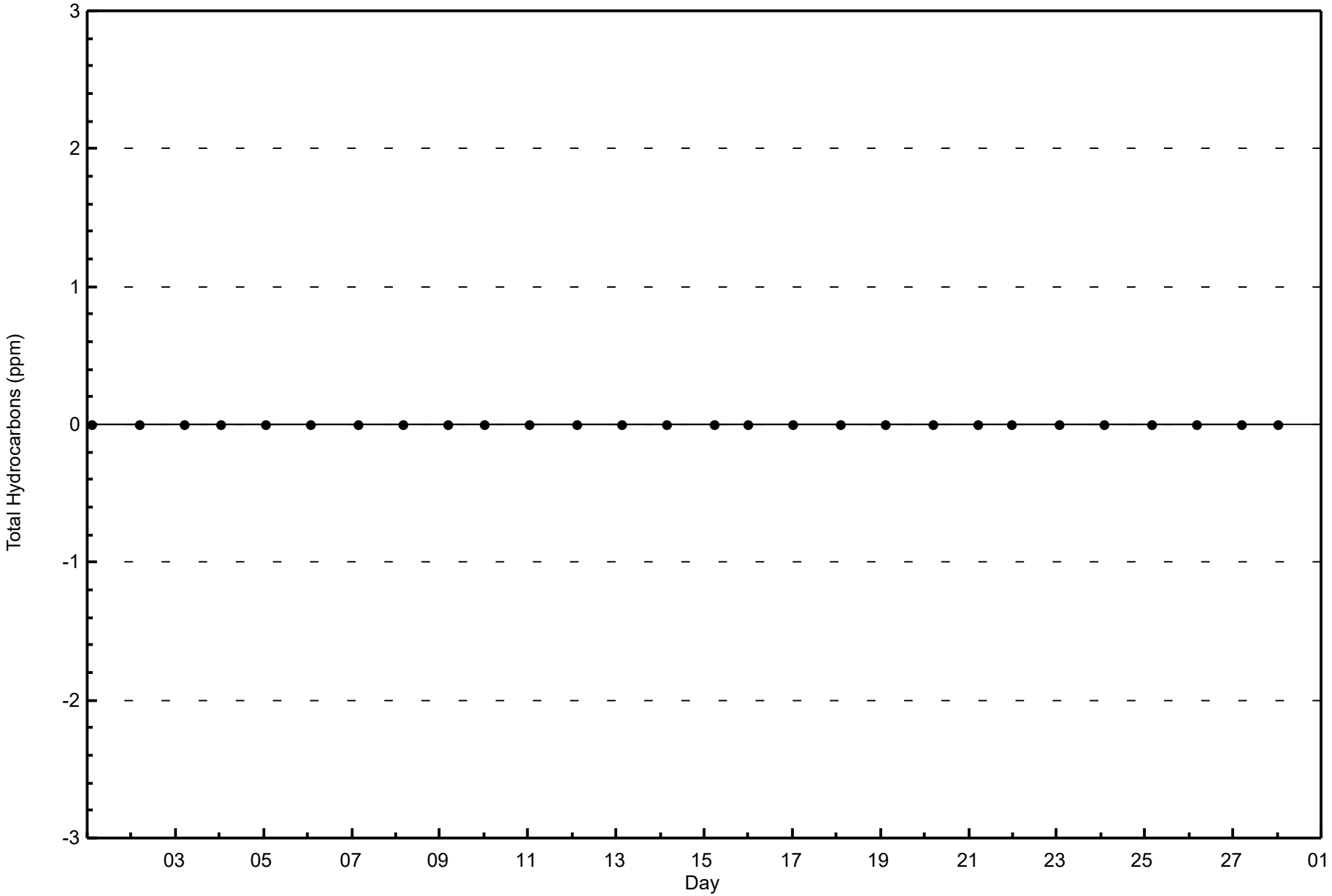
Total Number of Valid Hours: 638

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Conklin - February 2025

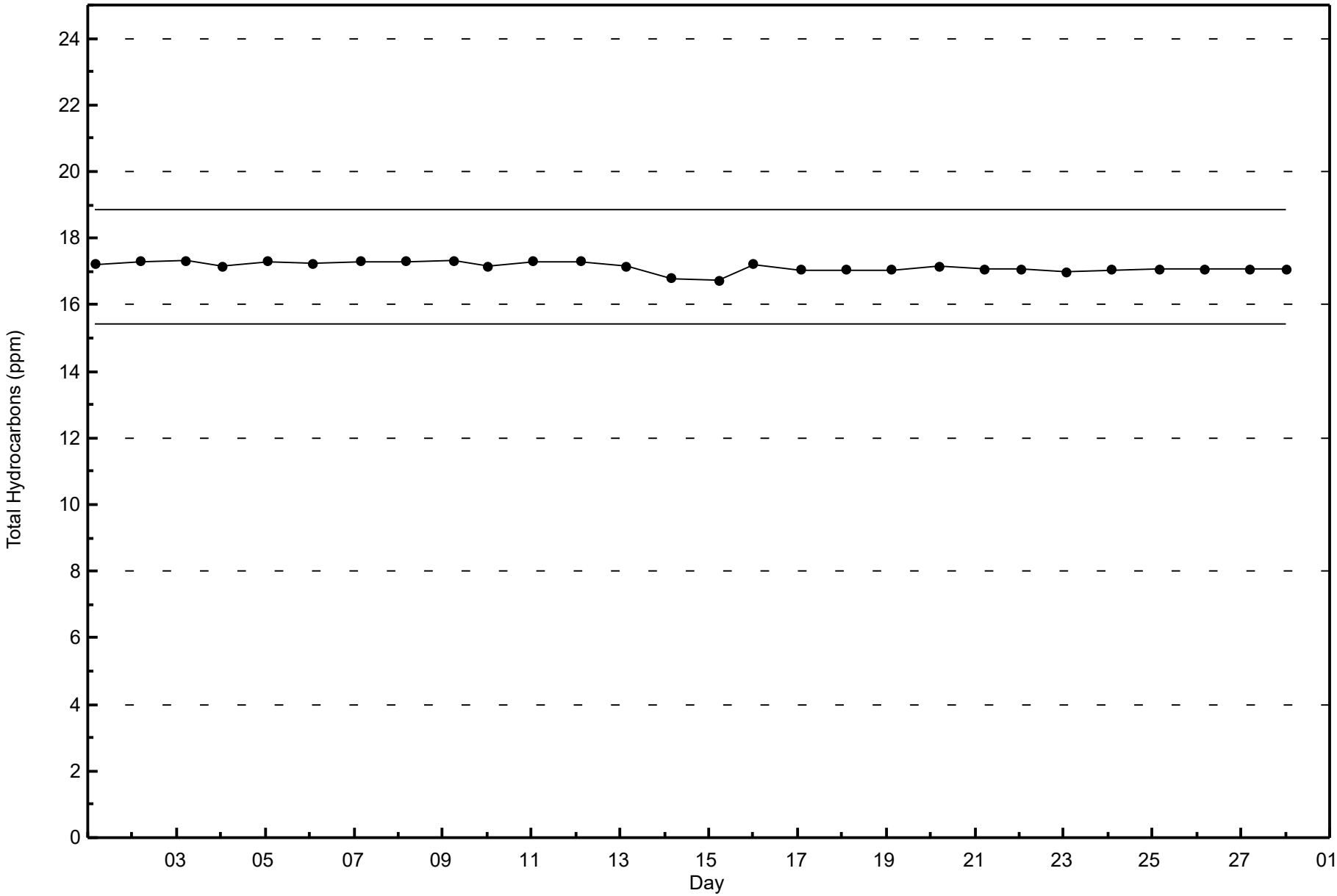


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Conklin - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Conklin - February 2025

Maximum Value: 0.288 ppm on Feb 7 20:00

Maximum Daily Average: 0.020 ppm on Feb 7

Minimum Value: 0.000 ppm on Feb 1 01:00

Minimum Daily Average: 0.000 ppm on Feb 1

Maximum Diurnal Average: 0.014 ppm at hour 20

Minimum Diurnal Average: 0.000 ppm at hour 2

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:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3-Feb	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4-Feb	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.005	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	0.005
6-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.033	0.288	0.074	0.000	0.006	0.070	0.020	0.288
8-Feb	0.002	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.000	0.000	0.000	0.000	0.000	0.010
9-Feb	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	0.011	0.000	0.000	0.000	0.011
10-Feb	Z	0.000	0.000	0.002	0.000	0.004	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004
11-Feb	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	Z	0.000	0.002	0.000	0.000	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	0.006
13-Feb	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15-Feb	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16-Feb	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.031	0.051	0.045	0.068	0.025	0.000	0.010	0.068
17-Feb	0.000	Z	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
18-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.003
19-Feb	0.000	0.000	0.000	Z	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
20-Feb	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21-Feb	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.019
22-Feb	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.006	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006
24-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.021	0.000	0.001	0.021
25-Feb	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.002	0.000	0.000	0.003
26-Feb	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	0.050	0.000	0.000	0.002	0.000	0.002	0.050
27-Feb	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28-Feb	Z	0.000	0.000	0.000	0.000	0.000	0.000	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	0.009	0.003	0.004	0.000	0.001	0.009
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.014	0.005	0.003	0.002	0.003	Diurnal Average	
	0.006	0.000	0.000	0.002	0.002	0.004	0.003	0.019	0.005	0.000	0.000	0.000	0.006	0.000	0.002	0.000	0.000	0.019	0.033	0.288	0.074	0.068	0.025	0.070	Diurnal Maximum	

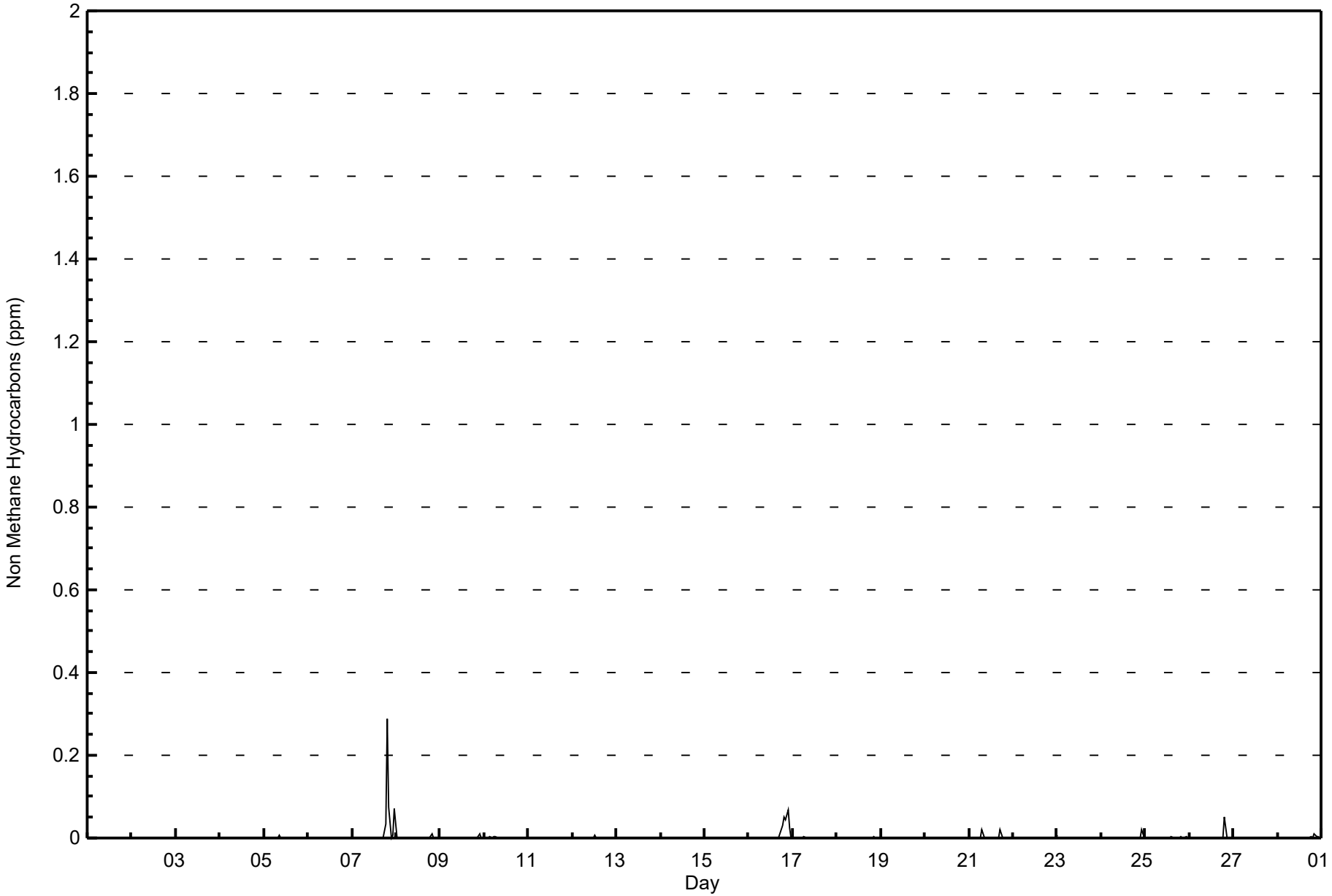
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Conklin - February 2025



Non Methane Hydrocarbons (NMHC) - ppm

Conklin - February 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	620	96.88	96.88
0.006 - 0.05	16	2.50	99.38
0.06 - 0.1	3	0.47	99.84
> 0.1	1	0.16	100.00

Total Number of Valid Hours: 640

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Conklin - February 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	29	8	7	12	13	18	44	66	52	58	52	28	34	67	78	52	618
0.006 - 0.05	0	1	0	1	1	0	2	3	4	2	1	0	0	0	1	0	16
0.06 - 0.1	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	3
> 0.1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Totals	29	9	7	13	14	18	46	71	58	60	53	28	34	67	79	52	638

Total Number of Valid Hours: 638

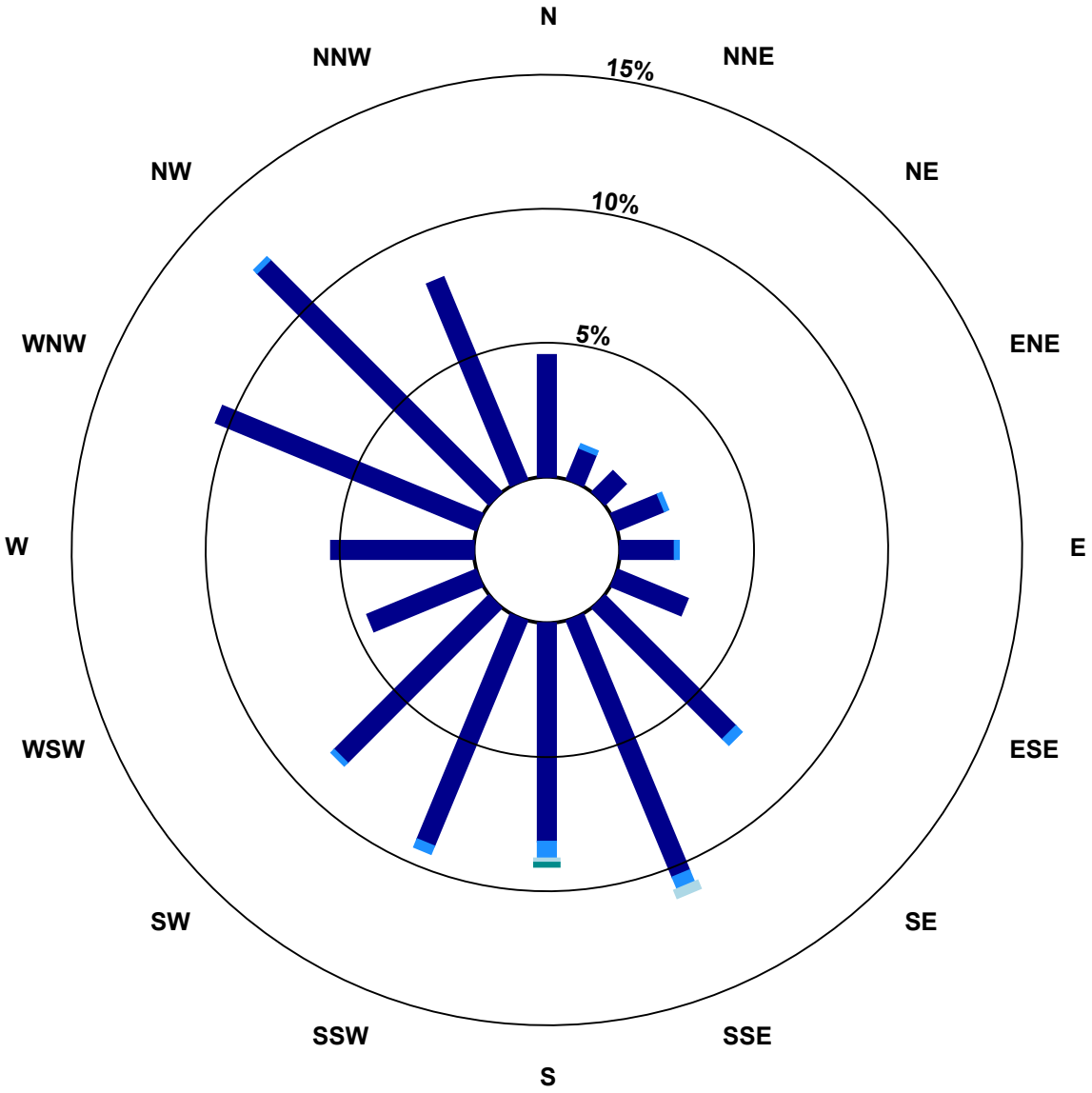
Total Number of Hours: 672

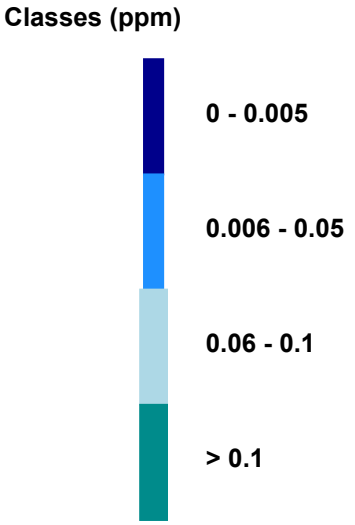
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Non Methane Hydrocarbons (NMHC) - ppm

Conklin





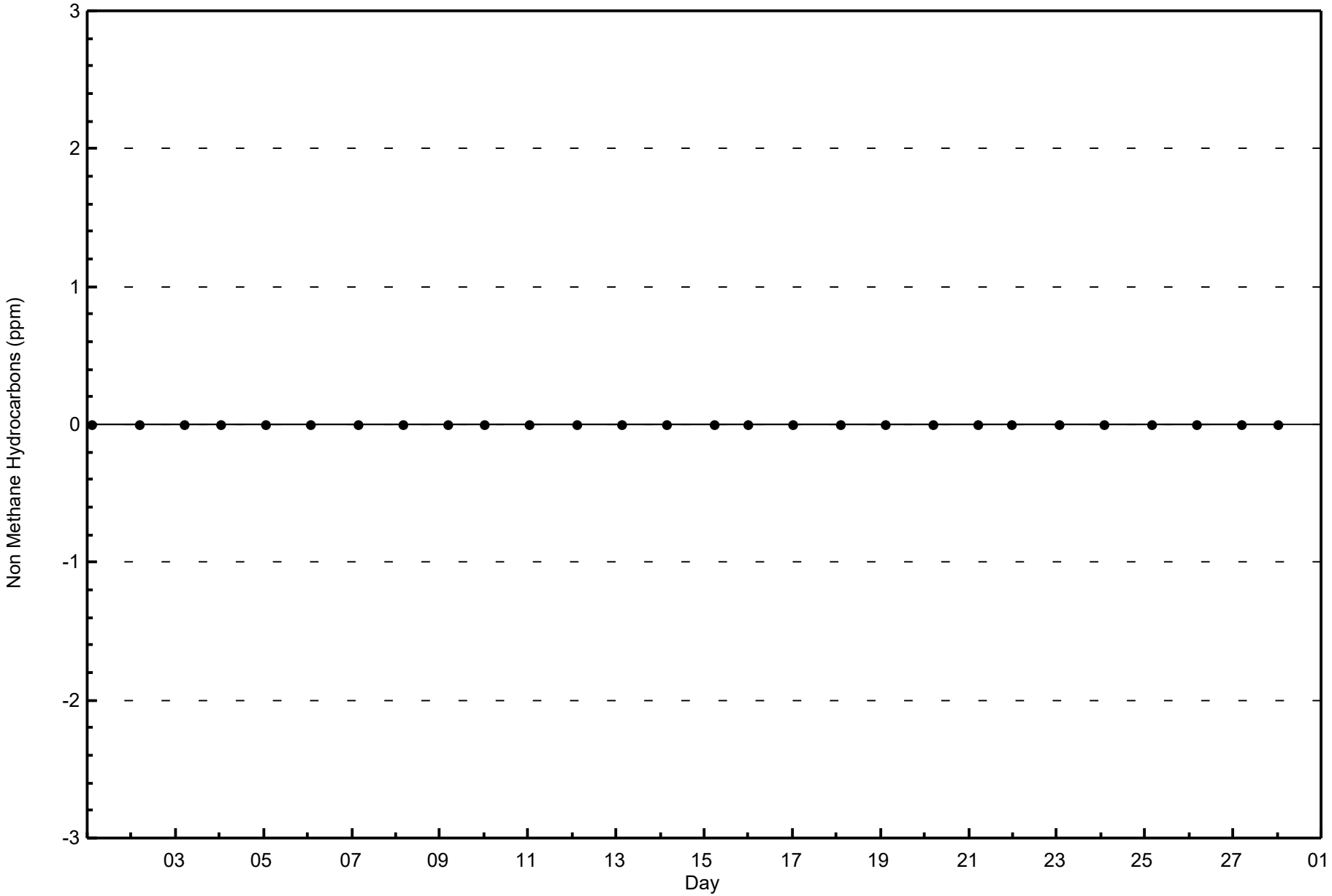
Total Number of Valid Hours: 638

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Conklin - February 2025

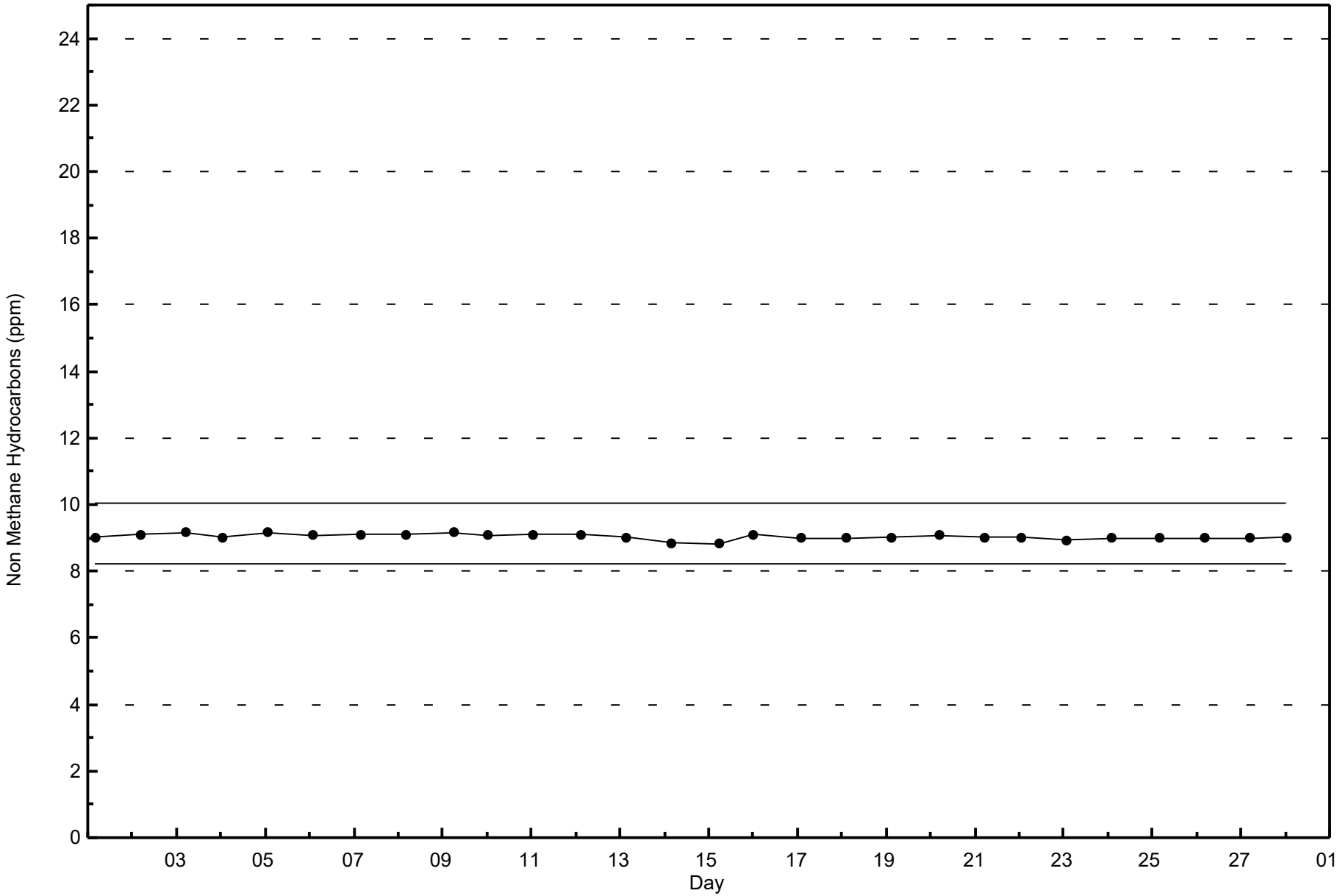


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Conklin - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Conklin - February 2025

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

Maximum Value: 2.3 ppm on Feb 16 11:00

Maximum Daily Average: 2.2 ppm on Feb 12

Minimum Value: 2.0 ppm on Feb 23 13:00

Minimum Daily Average: 2.0 ppm on Feb 26

Maximum Diurnal Average: 2.1 ppm at hour 5

Minimum Diurnal Average: 2.1 ppm at hour 15

Monthly Average: 2.10 ppm

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

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
2-Feb	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
3-Feb	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
4-Feb	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
5-Feb	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	C	C	C	C	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
6-Feb	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
7-Feb	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
8-Feb	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
9-Feb	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
10-Feb	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
11-Feb	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	2.1	2.1	2.2
12-Feb	2.1	2.1	Z	2.2	2.2	2.2	2.3	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	2.2	2.3
13-Feb	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
14-Feb	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
15-Feb	2.1	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
16-Feb	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.3
17-Feb	2.2	Z	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.2
18-Feb	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	2.1	2.1	2.2	2.2	2.1	2.2
19-Feb	2.2	2.2	2.3	Z	2.2	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3
20-Feb	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.2
21-Feb	2.2	2.2	2.2	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
22-Feb	Z	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.2
23-Feb	2.2	Z	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.2
24-Feb	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	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1
25-Feb	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.0	2.1	2.2
26-Feb	2.0	2.0	2.0	2.0	Z	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
27-Feb	2.0	2.0	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1
28-Feb	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.2	2.1	2.2
	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	Diurnal Average	
	2.2	2.2	2.3	2.2	2.2	2.3	2.3	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	2.2	2.2	2.2	Diurnal Maximum	

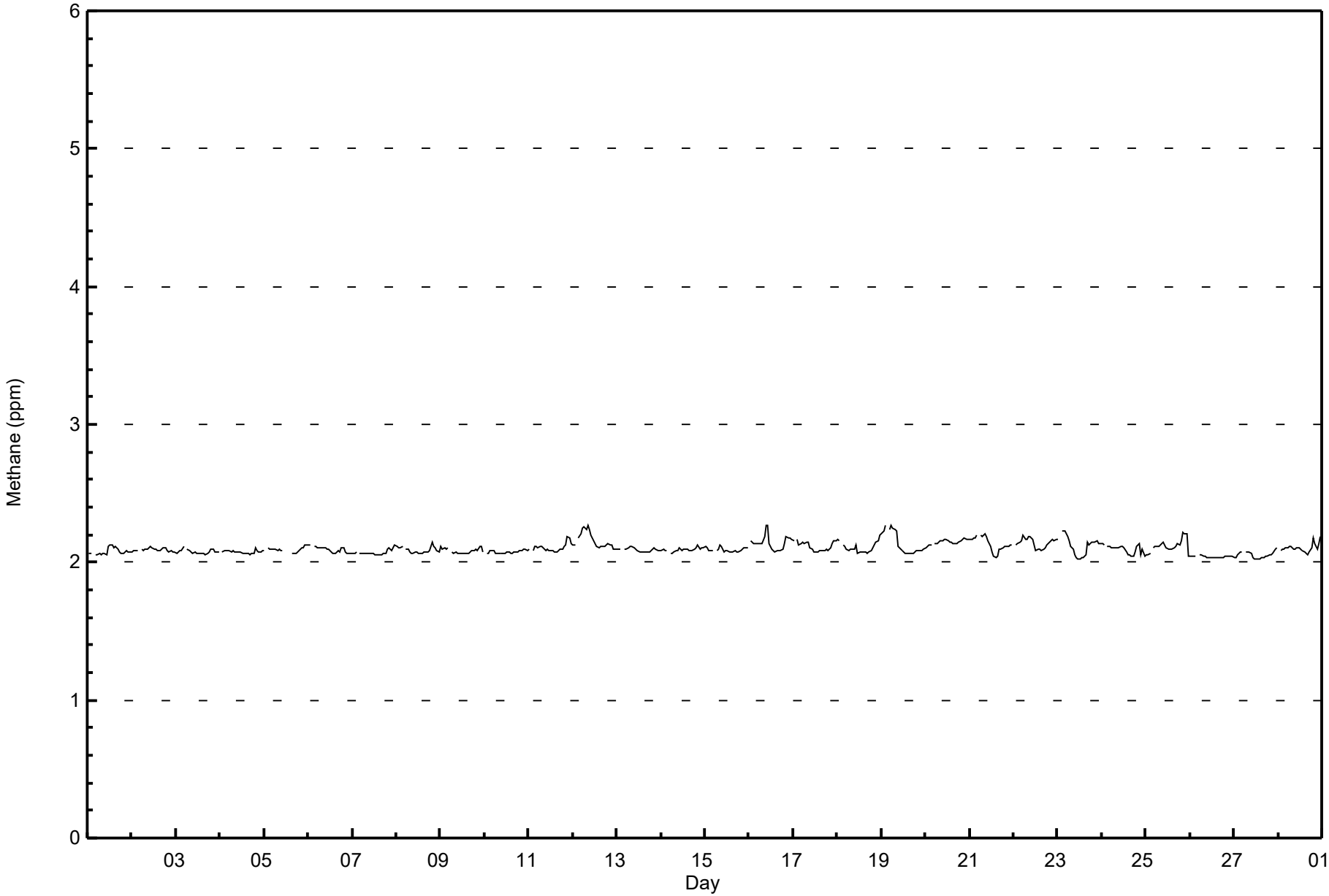
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Conklin - February 2025



Methane (CH_4) - ppm
Conklin - February 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	46	7.19	7.19
2.1 - 3.0	594	92.81	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 640

Total Number of Hours: 672



Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Conklin - February 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	1	1	6	5	8	20	5	0	46
2.1 - 3.0	29	9	7	13	14	18	46	71	57	59	47	23	26	47	74	52	592
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	9	7	13	14	18	46	71	58	60	53	28	34	67	79	52	638

Total Number of Valid Hours: 638

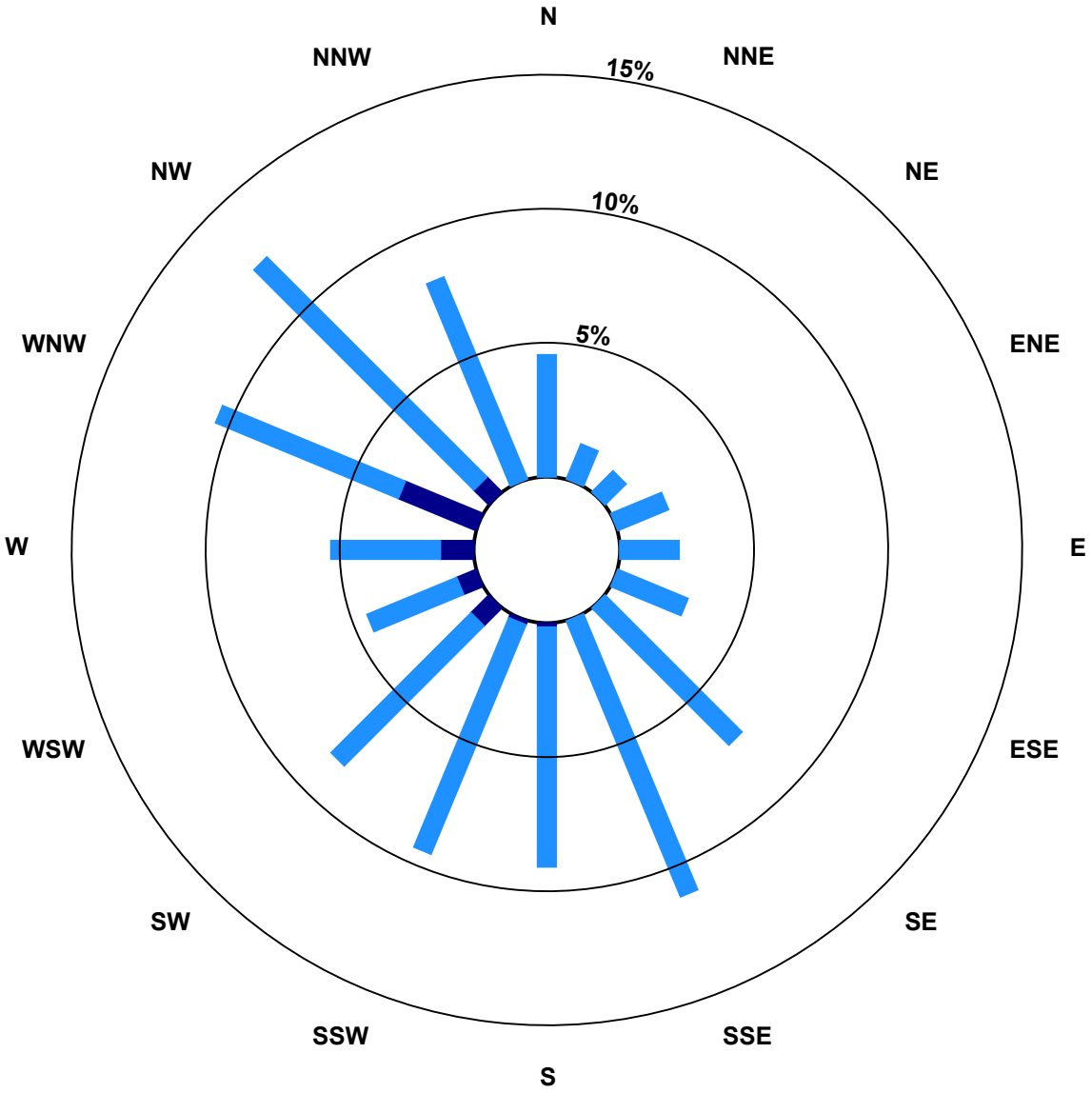
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Methane (CH_4) - ppm

Conklin



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

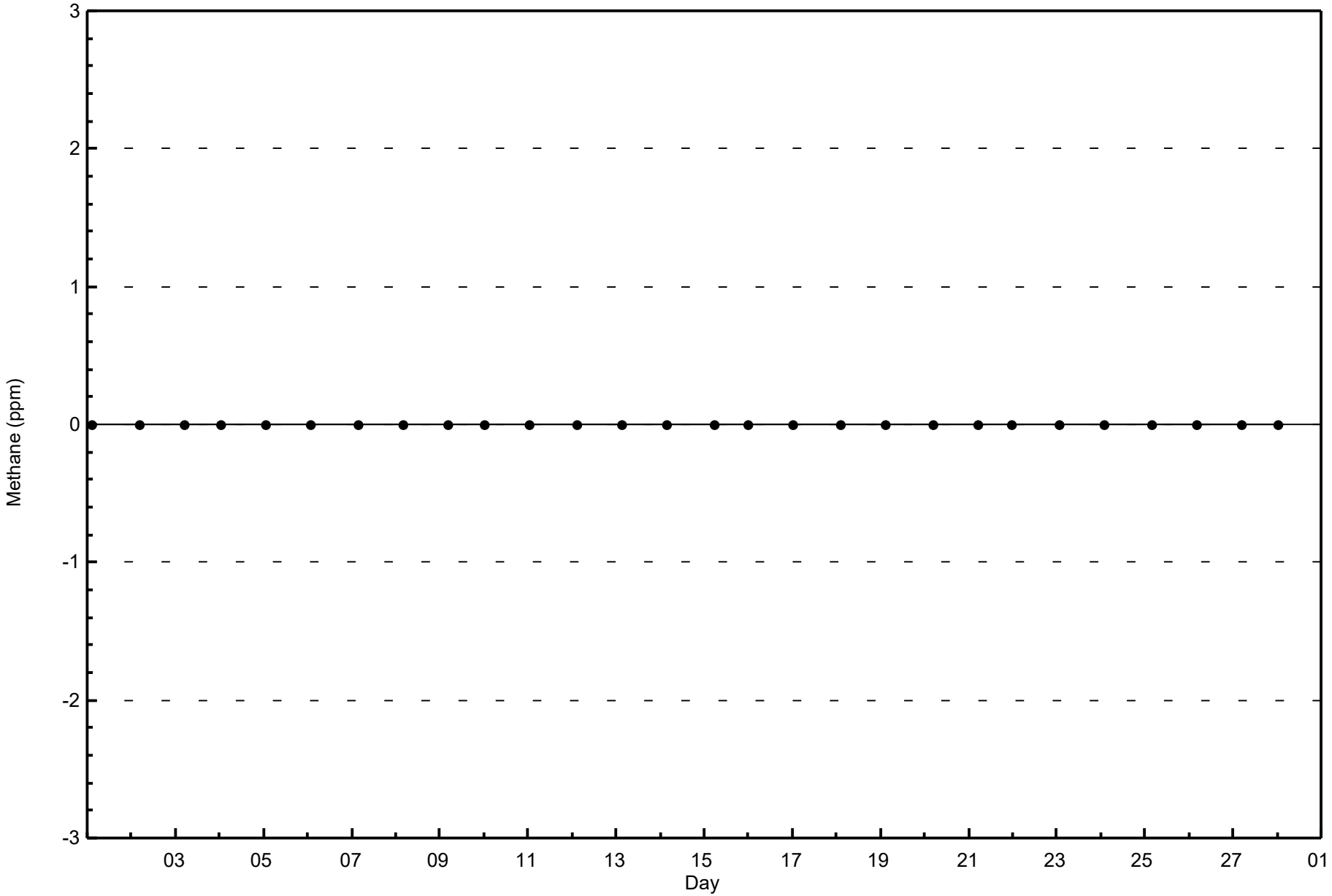
Total Number of Valid Hours: 638

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Conklin - February 2025

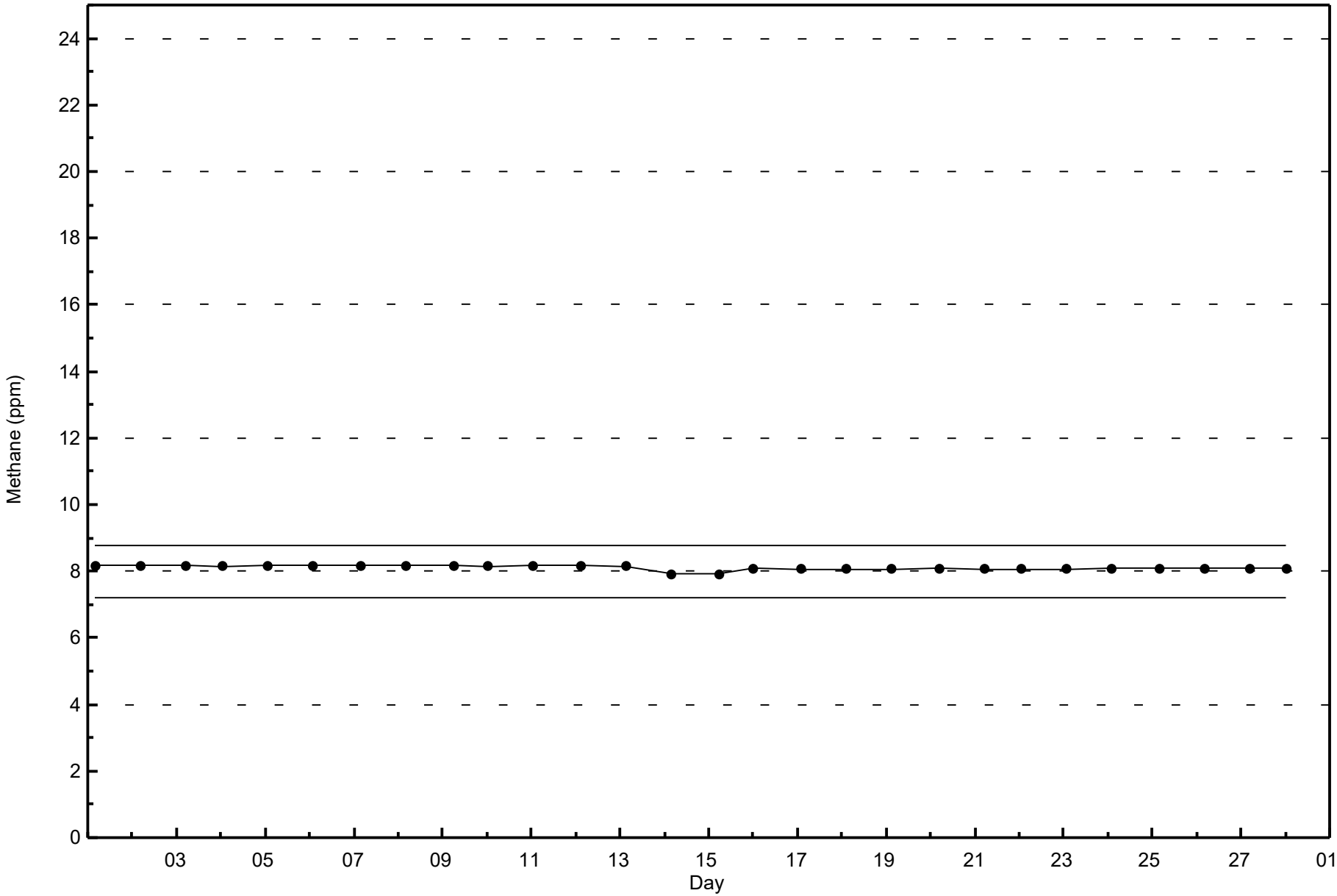


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Conklin - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Conklin - February 2025

Maximum Value: 12.2 ppb on Feb 7 17:00

Maximum Daily Average: 2.1 ppb on Feb 16

Minimum Value: 0.0 ppb on Feb 1 01:00

Minimum Daily Average: 0.1 ppb on Feb 27

Maximum Diurnal Average: 1.4 ppb at hour 11

Minimum Diurnal Average: 0.1 ppb at hour 2

Monthly Average: 0.53 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.2 Q_3 = 0.6 P_{90} = 1.3 P_{99} = 4.8

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	2.0	2.6	4.3	0.8	0.1	0.0	0.0	0.0	0.0	0.0	1.1	0.1	0.7	5.9
2-Feb	0.0	0.0	Z	0.0	0.0	0.1	0.0	0.1	0.2	1.3	3.4	2.6	2.1	2.0	1.7	1.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	3.4
3-Feb	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.2	0.7	1.0	0.7	0.7	0.6	0.5	0.3	0.3	0.2	0.1	0.7	0.7	0.2	0.1	0.3	0.3	0.4	1.0
4-Feb	0.1	0.3	0.2	0.0	Z	0.1	0.1	0.4	0.4	0.9	1.1	1.2	0.7	0.8	0.3	0.2	3.7	0.1	0.7	1.3	0.4	0.2	0.3	0.1	0.6	3.7
5-Feb	0.2	0.1	0.1	0.3	0.4	Z	0.3	0.5	0.8	0.4	0.6	1.0	0.8	0.7	0.6	0.3	0.2	3.7	0.2	0.2	0.3	0.5	0.3	0.2	0.5	3.7
6-Feb	Z	0.2	0.1	0.2	0.1	0.2	0.1	0.1	0.2	0.3	0.4	0.5	0.5	0.1	0.3	0.1	0.1	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.2	1.5
7-Feb	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.3	0.7	0.5	0.4	0.4	0.6	0.2	12.2	0.9	0.2	1.0	0.1	0.0	0.0	0.0	0.8	12.2
8-Feb	0.6	0.0	Z	0.0	0.2	0.1	0.1	0.0	0.2	0.2	0.4	0.5	0.3	2.1	0.5	0.4	0.2	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.3	2.1
9-Feb	0.0	0.0	0.0	Z	0.1	0.1	0.0	0.1	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.5	0.1	0.1	0.1	0.0	0.0	0.1	0.5
10-Feb	0.1	0.1	0.1	0.4	Z	1.4	0.5	1.6	0.2	0.6	0.3	0.4	0.6	0.4	0.4	0.3	0.3	0.2	0.2	0.8	1.0	0.1	0.1	0.1	0.4	1.6
11-Feb	0.0	0.0	0.1	0.1	0.1	Z	0.1	0.1	0.5	0.8	2.0	1.0	2.6	1.0	1.2	1.3	0.5	0.1	0.0	0.1	0.1	0.6	0.2	0.3	0.6	2.6
12-Feb	Z	0.0	0.0	0.2	0.1	0.1	0.2	0.2	0.9	1.9	1.9	1.6	1.8	1.4	0.9	0.9	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.9
13-Feb	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.3
14-Feb	0.1	0.1	Z	0.0	0.0	0.0	0.0	0.0	1.7	5.1	4.3	2.2	1.1	1.3	0.7	0.5	0.3	0.4	8.8	2.7	3.7	0.3	0.4	0.3	1.5	8.8
15-Feb	0.2	0.1	0.1	Z	0.2	0.0	0.0	0.0	1.1	1.9	1.0	1.0	0.4	0.4	1.5	0.6	0.3	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.4	1.9
16-Feb	0.0	0.0	0.0	0.1	Z	0.2	0.0	0.8	10.2	8.3	9.9	3.4	1.9	1.3	1.2	0.8	0.4	0.1	1.4	0.8	1.1	3.6	1.6	1.6	2.1	10.2
17-Feb	0.6	0.3	0.9	0.7	0.6	Z	0.7	1.3	1.1	0.9	0.9	0.9	0.7	0.8	0.7	0.7	0.5	0.4	0.1	0.2	0.1	1.1	0.7	0.4	0.7	1.3
18-Feb	Z	0.2	0.6	0.1	1.1	3.2	1.2	0.5	2.5	3.0	3.1	0.9	0.7	0.6	0.6	0.4	0.4	0.3	0.4	0.1	0.8	0.1	1.4	0.1	1.0	3.2
19-Feb	1.0	Z	0.6	0.1	0.1	0.6	0.2	0.8	0.9	1.4	1.0	0.8	0.9	0.6	0.5	0.5	0.3	0.3	0.0	0.1	0.0	0.0	0.2	0.1	0.5	1.4
20-Feb	0.2	0.3	Z	0.3	0.1	0.2	0.2	0.4	0.3	0.6	0.9	1.0	1.2	1.1	1.3	1.0	0.9	0.1	0.0	0.1	0.0	0.0	0.0	4.0	0.6	4.0
21-Feb	0.1	0.1	0.2	Z	0.1	1.9	0.0	0.1	0.4	1.2	1.4	1.7	0.6	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.9
22-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.2	1.3	1.9	1.6	0.7	0.6	0.7	0.4	0.4	0.1	0.3	0.1	0.6	0.2	0.1	0.1	0.4	1.9
23-Feb	0.0	0.0	0.1	0.0	0.3	Z	0.0	0.0	0.1	0.1	0.1	0.1	0.2	1.4	0.2	0.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.4
24-Feb	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.4	0.6	0.7	1.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.1
25-Feb	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.7	C	C	C	C	C	2.0	1.4	0.5	0.0	0.0	1.0	0.1	0.0	0.0	0.3	2.0
26-Feb	0.0	0.0	Z	0.0	0.0	4.0	0.0	0.1	0.2	0.2	0.2	0.3	0.5	0.3	2.9	0.4	0.1	0.1	0.1	0.1	0.1	0.2	0.0	0.0	0.4	4.0
27-Feb	0.0	0.0	0.0	Z	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.3	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
28-Feb	0.0	0.0	0.2	0.0	Z	0.0	0.1	0.2	0.2	0.5	0.9	1.1	0.8	0.4	0.3	0.2	0.2	0.3	1.2	0.1	0.0	0.0	0.0	0.5	0.3	1.2
	0.1	0.1	0.1	0.1	0.2	0.5	0.1	0.3	0.8	1.2	1.4	1.2	0.9	0.8	0.8	0.5	0.9	0.3	0.5	0.3	0.4	0.3	0.2	0.3	Diurnal Average	
	1.0	0.3	0.9	0.7	1.1	4.0	1.2	1.6	10.2	8.3	9.9	5.9	2.6	2.6	4.3	2.0	12.2	3.7	8.8	2.7	3.7	3.6	1.6	4.0	Diurnal Maximum	

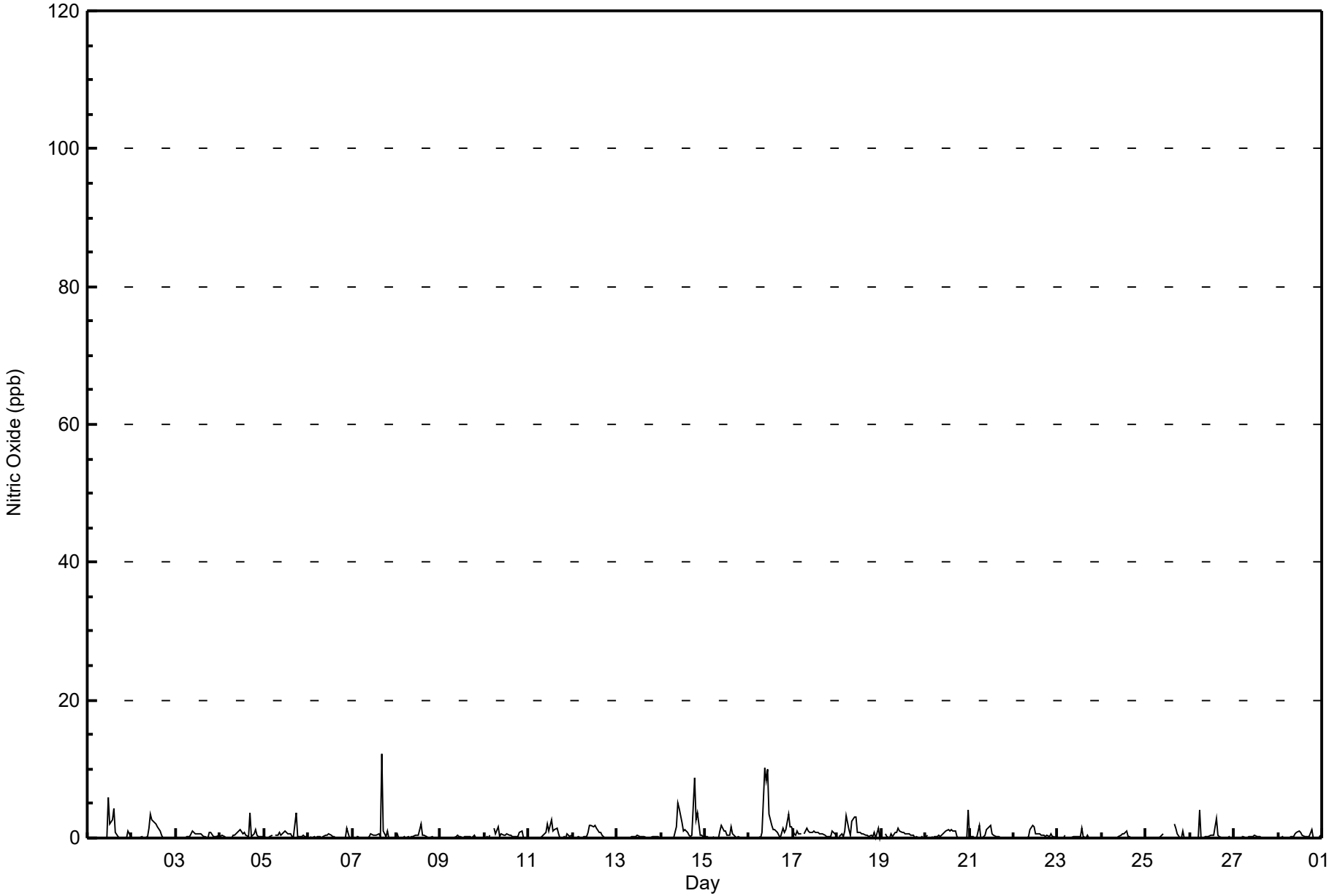
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Conklin - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	639	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: 639

Total Number of Hours: 672

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	30	9	10	12	14	16	43	71	57	61	52	28	39	66	80	48	636
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	30	9	10	12	14	16	43	71	57	61	52	28	39	66	80	48	636

Total Number of Valid Hours: 636

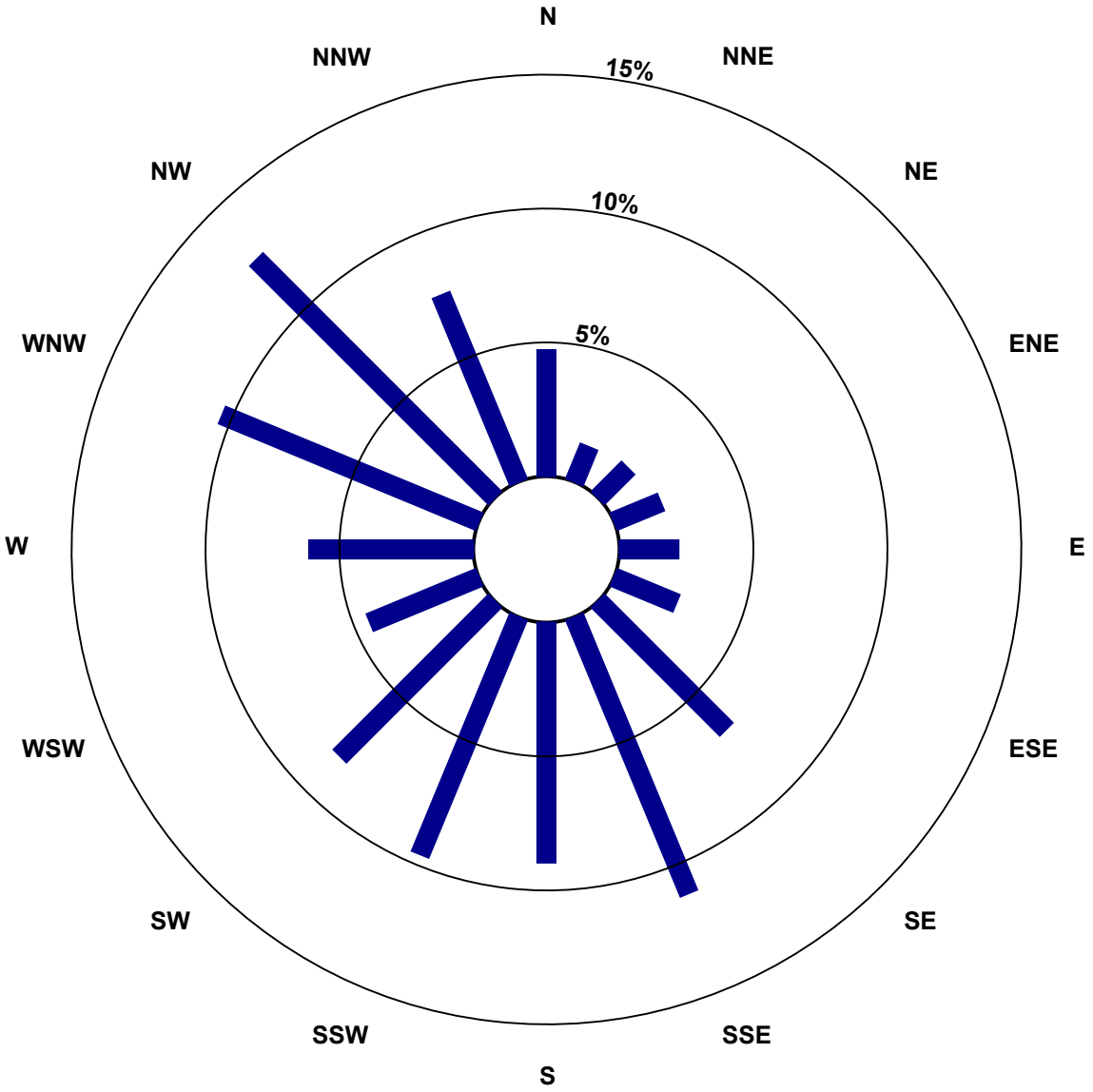
Total Number of Hours: 672

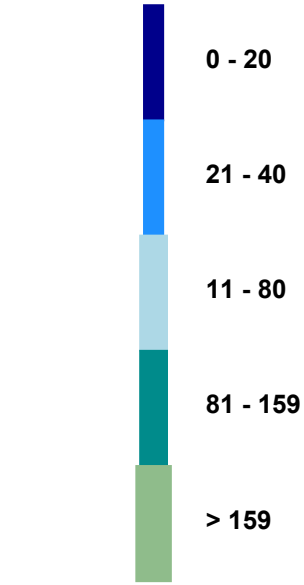
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitric Oxide (NO) - ppb

Conklin





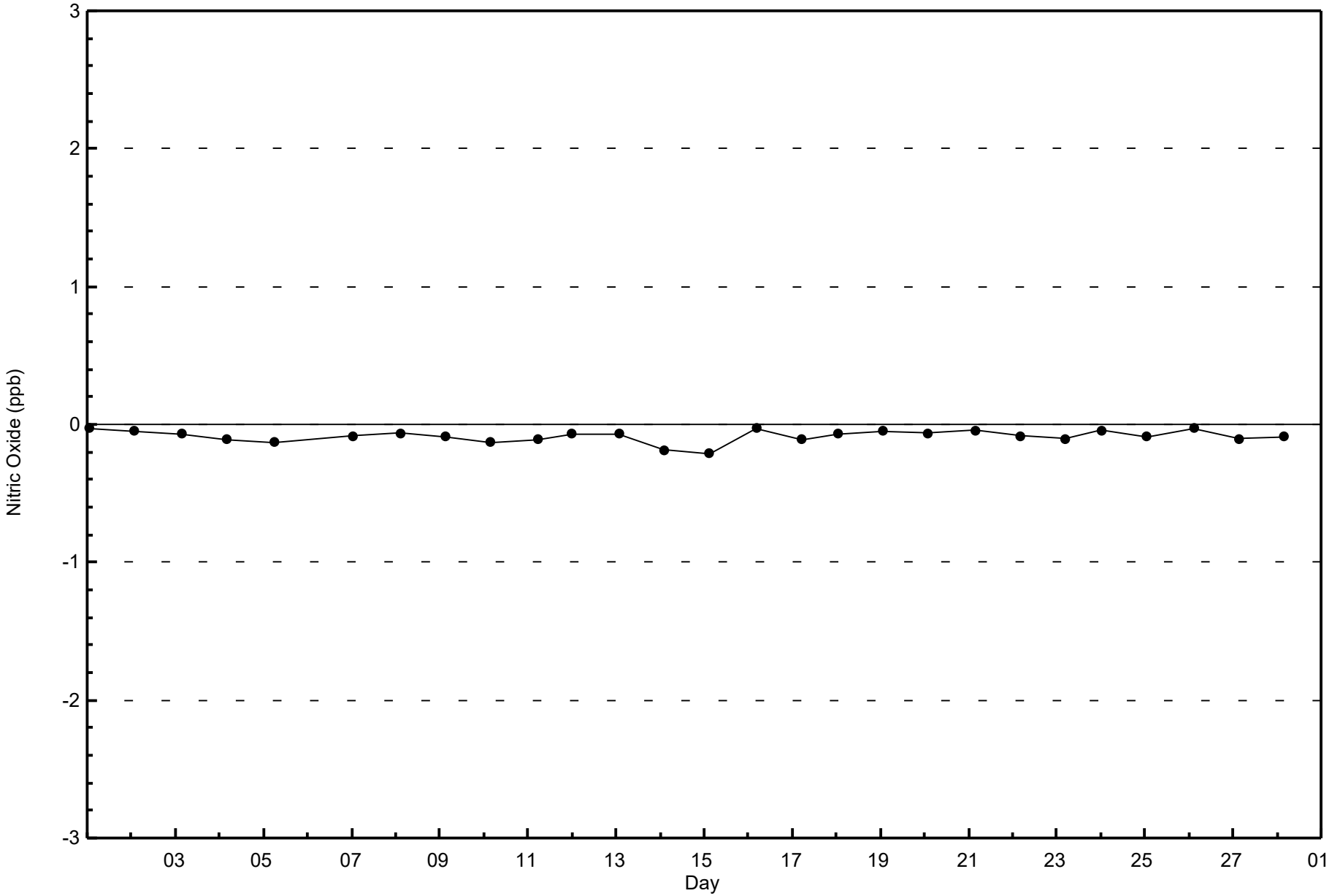
Total Number of Valid Hours: 636

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Conklin - February 2025

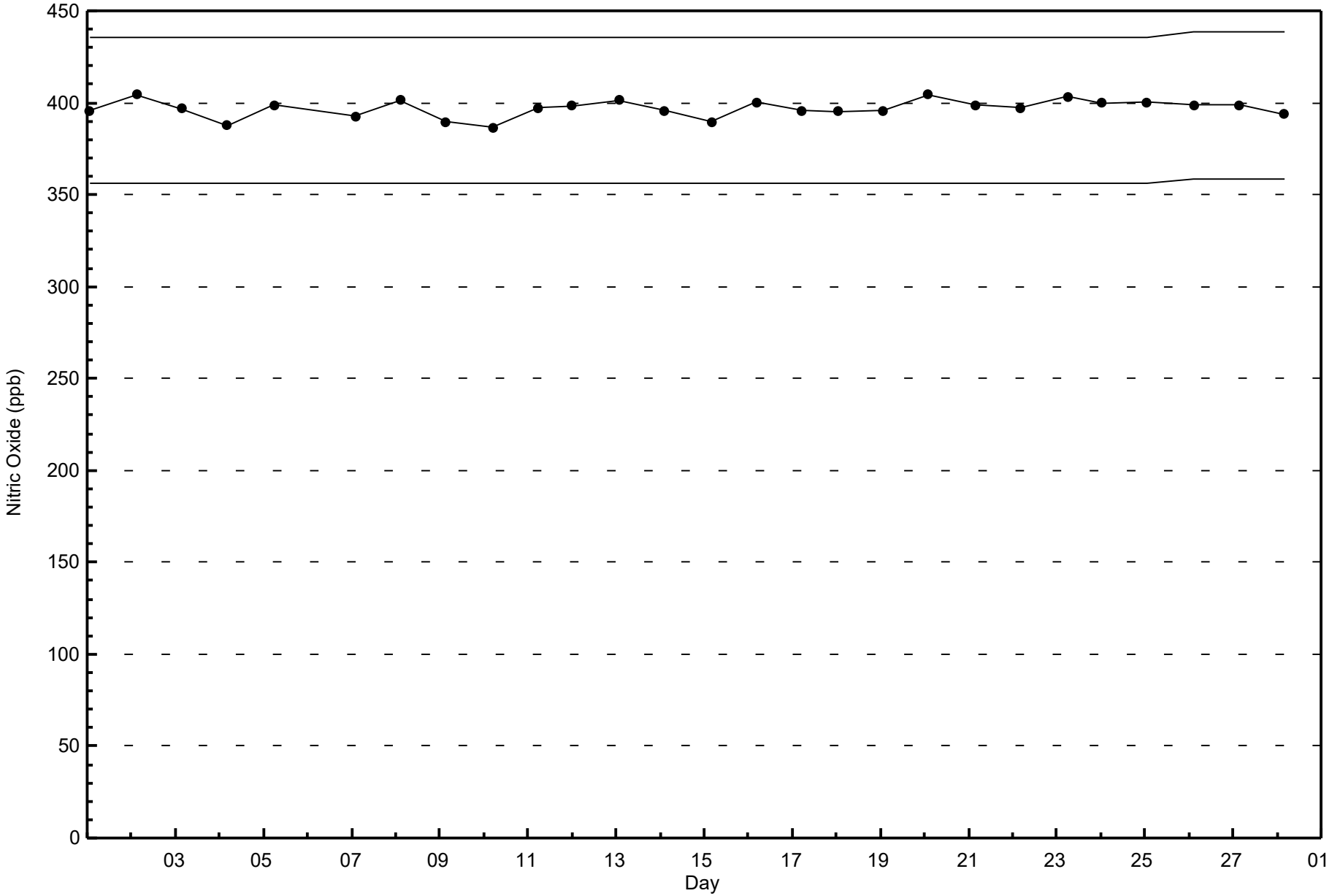


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Conklin - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Conklin - February 2025

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

Maximum Value: 22.6 ppb on Feb 14 21:00

Maximum Daily Average: 7.0 ppb on Feb 16

Minimum Value: 0.0 ppb on Feb 7 17:00

Minimum Daily Average: 1.5 ppb on Feb 26

Maximum Diurnal Average: 5.9 ppb at hour 20

Minimum Diurnal Average: 1.6 ppb at hour 14

Monthly Average: 3.13 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.9$ $Q_1 = 1.4$ Median = 2.4 $Q_3 = 3.8$ $P_{90} = 5.9$ $P_{99} = 15.1$

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.2	Z	1.1	0.4	0.1	0.1	0.1	0.2	0.9	0.4	0.5	5.3	5.0	5.5	5.7	3.5	3.0	1.2	0.8	0.7	1.1	2.0	2.3	1.7	1.8	5.7
2-Feb	2.2	1.6	Z	1.7	2.1	3.3	2.3	2.9	3.5	3.6	5.0	3.4	3.0	3.2	3.5	3.7	4.8	4.8	3.4	3.8	1.9	3.0	1.6	2.4	3.1	5.0
3-Feb	1.6	1.9	1.6	Z	2.5	2.7	2.7	2.8	4.1	2.2	1.3	1.2	1.1	0.8	0.8	0.9	1.7	3.8	12.3	12.5	8.2	5.8	4.8	4.5	3.6	12.5
4-Feb	1.8	1.8	1.3	1.0	Z	1.4	1.7	1.9	1.8	2.0	1.7	1.5	1.1	1.4	0.7	0.6	3.4	2.5	4.1	11.6	2.2	1.4	1.6	1.5	2.2	11.6
5-Feb	1.5	1.6	1.5	1.8	1.9	Z	1.8	2.0	2.3	1.2	1.1	1.9	1.5	1.4	1.2	1.3	1.6	2.7	2.3	2.8	3.2	3.3	3.5	3.5	2.0	3.5
6-Feb	Z	4.3	3.4	3.1	2.4	2.6	2.5	2.7	2.6	2.4	1.9	2.0	1.6	1.0	1.0	0.8	2.5	2.4	3.6	3.4	1.1	1.7	0.4	0.3	2.2	4.3
7-Feb	0.2	Z	2.5	1.7	0.9	1.0	0.8	0.9	0.9	1.1	1.8	1.0	0.8	0.9	1.2	0.8	0.0	6.0	9.1	13.2	6.9	2.8	2.8	3.8	2.7	13.2
8-Feb	3.1	1.5	Z	1.5	1.5	1.5	1.8	1.5	1.4	0.9	1.5	1.3	1.1	0.6	1.3	1.5	1.9	2.6	2.4	5.4	2.8	2.0	1.3	1.1	1.8	5.4
9-Feb	7.0	3.8	3.4	Z	3.6	3.3	1.7	2.9	2.9	1.3	0.4	0.3	0.3	0.3	0.4	0.4	1.2	2.3	7.3	7.0	5.8	6.6	4.4	2.7	3.0	7.3
10-Feb	2.1	2.0	1.9	3.0	Z	3.0	1.5	2.6	1.1	1.2	0.8	0.8	0.9	0.8	0.7	0.8	1.0	1.2	1.8	2.6	5.6	1.7	2.0	2.0	1.8	5.6
11-Feb	1.4	1.4	1.3	1.8	1.5	Z	1.8	3.5	3.0	2.4	3.3	1.8	1.8	1.8	2.3	3.2	3.3	5.7	6.5	6.6	8.6	10.2	8.0	5.7	3.8	10.2
12-Feb	Z	5.4	7.4	8.3	8.1	9.7	10.7	8.8	9.5	6.9	5.2	4.0	4.0	3.7	3.7	4.5	3.7	3.5	4.6	4.4	3.4	2.7	1.7	1.4	5.4	10.7
13-Feb	1.4	Z	1.3	1.2	1.2	1.1	1.2	1.0	1.5	0.9	0.6	0.8	0.5	0.5	0.6	0.5	0.6	0.6	1.1	10.1	9.5	5.4	6.0	6.1	2.3	10.1
14-Feb	6.1	5.6	Z	5.6	5.0	4.2	4.5	4.7	4.7	5.3	4.4	2.4	1.3	1.4	1.1	1.0	1.0	5.9	10.9	18.3	22.6	12.7	11.6	7.6	6.4	22.6
15-Feb	4.1	3.2	5.1	Z	4.3	4.1	3.8	4.4	3.9	2.8	2.3	1.9	1.0	0.8	0.7	1.4	1.5	0.7	7.3	4.1	1.0	0.8	0.9	1.1	2.7	7.3
16-Feb	1.3	1.7	2.2	3.8	Z	3.2	2.4	2.5	12.1	10.3	8.7	4.1	2.9	2.2	2.3	2.2	2.3	2.1	15.5	15.8	10.5	15.0	18.8	18.9	7.0	18.9
17-Feb	14.6	9.2	6.4	6.2	4.3	Z	5.1	5.8	4.1	2.6	1.7	1.6	1.4	1.4	1.3	1.6	2.1	2.4	2.6	2.9	5.6	5.8	4.8	4.6	4.3	14.6
18-Feb	Z	4.5	5.7	3.5	5.0	11.2	15.1	8.9	5.9	3.8	3.6	1.4	1.2	1.1	1.0	0.9	1.4	1.6	1.9	2.5	4.0	3.4	7.7	3.1	4.3	15.1
19-Feb	4.9	Z	3.2	3.4	2.5	2.5	2.4	2.9	2.5	3.3	2.4	1.7	1.7	1.2	1.4	1.7	2.0	2.3	2.8	2.8	2.0	1.7	2.7	2.7	2.5	4.9
20-Feb	2.4	2.5	Z	2.6	2.3	2.8	2.8	3.3	2.7	2.9	2.9	2.9	2.7	2.5	2.7	3.4	4.6	4.2	4.2	4.3	4.5	4.7	4.5	6.2	3.4	6.2
21-Feb	4.3	3.8	4.2	Z	5.5	7.0	5.7	5.4	4.6	5.1	4.3	4.6	2.5	2.0	1.6	1.4	1.7	2.2	2.4	1.9	1.6	1.5	1.6	1.6	3.3	7.0
22-Feb	2.0	2.5	2.5	2.8	Z	2.8	3.6	4.0	3.3	4.1	4.6	3.7	2.7	2.8	2.4	2.1	2.4	3.0	4.8	3.9	5.1	4.0	3.6	3.6	3.3	5.1
23-Feb	3.5	3.1	3.6	3.9	3.7	Z	2.4	1.9	1.6	1.0	0.9	0.9	0.9	1.9	1.2	1.1	3.9	2.8	3.6	4.2	4.1	3.8	2.9	3.1	2.6	4.2
24-Feb	Z	3.0	2.9	2.7	2.3	1.9	1.7	1.6	1.6	1.7	1.9	1.7	1.4	1.9	1.1	1.1	1.0	2.1	2.4	4.9	2.3	1.2	1.2	1.3	2.0	4.9
25-Feb	1.5	Z	1.3	1.5	1.7	1.7	1.4	1.7	2.6	3.6	C	C	C	C	C	4.9	6.6	7.7	7.4	8.1	13.4	10.2	7.5	1.1	4.7	13.4
26-Feb	1.0	1.3	Z	1.1	1.3	2.5	1.4	1.4	1.1	0.9	0.9	1.1	1.2	1.1	3.6	1.6	1.4	1.7	2.1	2.6	1.3	1.4	0.8	0.7	1.5	3.6
27-Feb	0.7	0.9	1.1	Z	5.1	3.1	2.0	3.3	3.4	2.6	1.1	1.3	0.9	0.9	1.0	0.5	0.5	0.8	0.7	0.8	0.6	0.6	3.0	3.2	1.7	5.1
28-Feb	2.2	1.4	1.8	1.0	Z	2.3	2.8	3.5	1.8	2.0	2.2	1.9	1.7	1.1	0.9	0.9	1.8	5.2	9.4	4.5	4.4	4.9	5.2	3.6	2.9	9.4
	3.0	3.0	2.9	2.8	3.0	3.3	3.1	3.2	3.3	2.8	2.5	2.1	1.7	1.6	1.7	1.7	2.2	3.0	4.9	5.9	5.1	4.3	4.2	3.5	Diurnal Average	
	14.6	9.2	7.4	8.3	8.1	11.2	15.1	8.9	12.1	10.3	8.7	5.3	5.0	5.5	5.7	4.9	6.6	7.7	15.5	18.3	22.6	15.0	18.8	18.9	Diurnal Maximum	

Z - zerospan C - Calibration

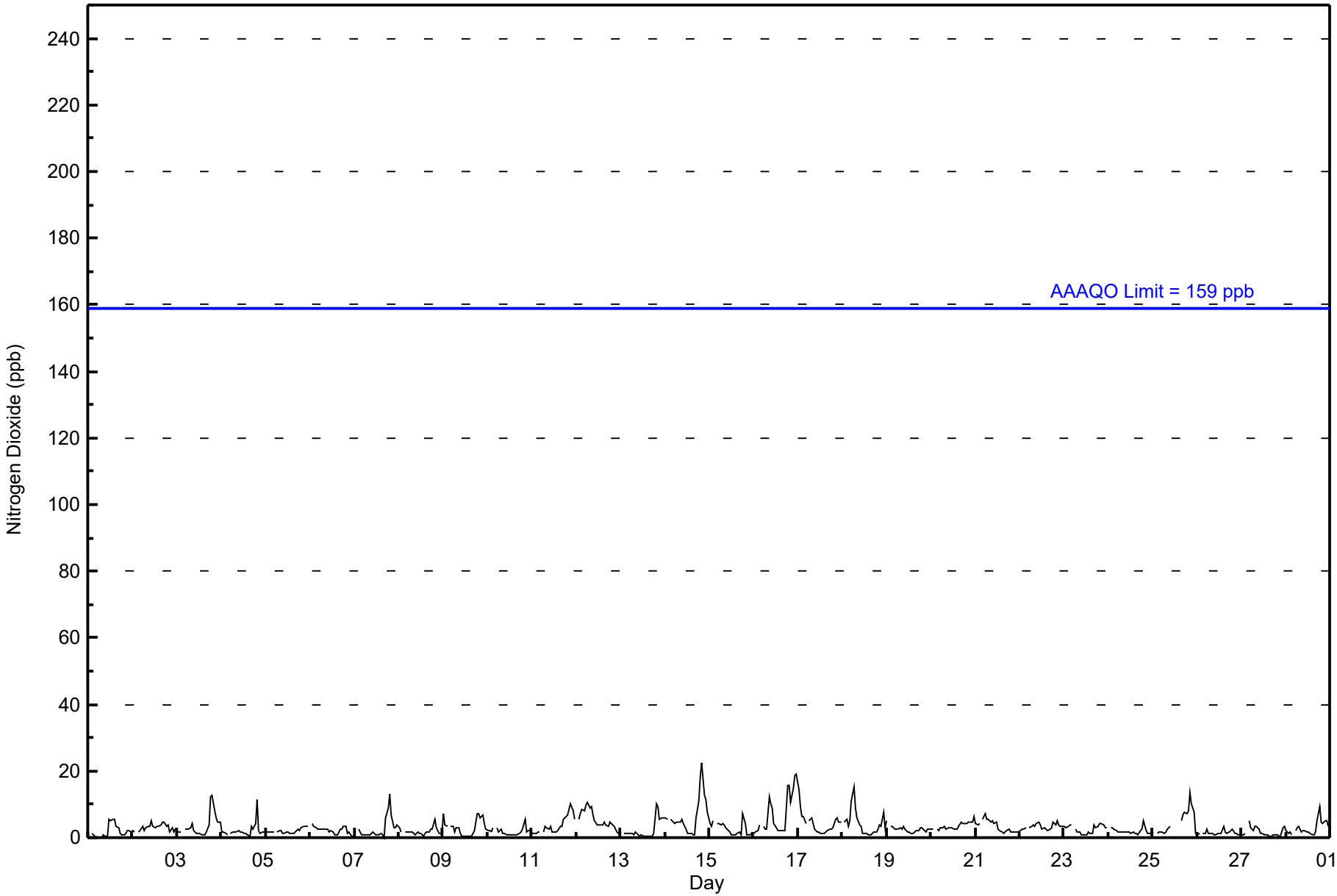
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Conklin - February 2025



Nitrogen Dioxide (NO_2) - ppb

Conklin - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	638	99.84	99.84
21 - 40	1	0.16	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: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Conklin - February 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	30	9	10	12	14	16	43	71	56	61	52	28	39	66	80	48	635
21 - 40	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	30	9	10	12	14	16	43	71	57	61	52	28	39	66	80	48	636

Total Number of Valid Hours: 636

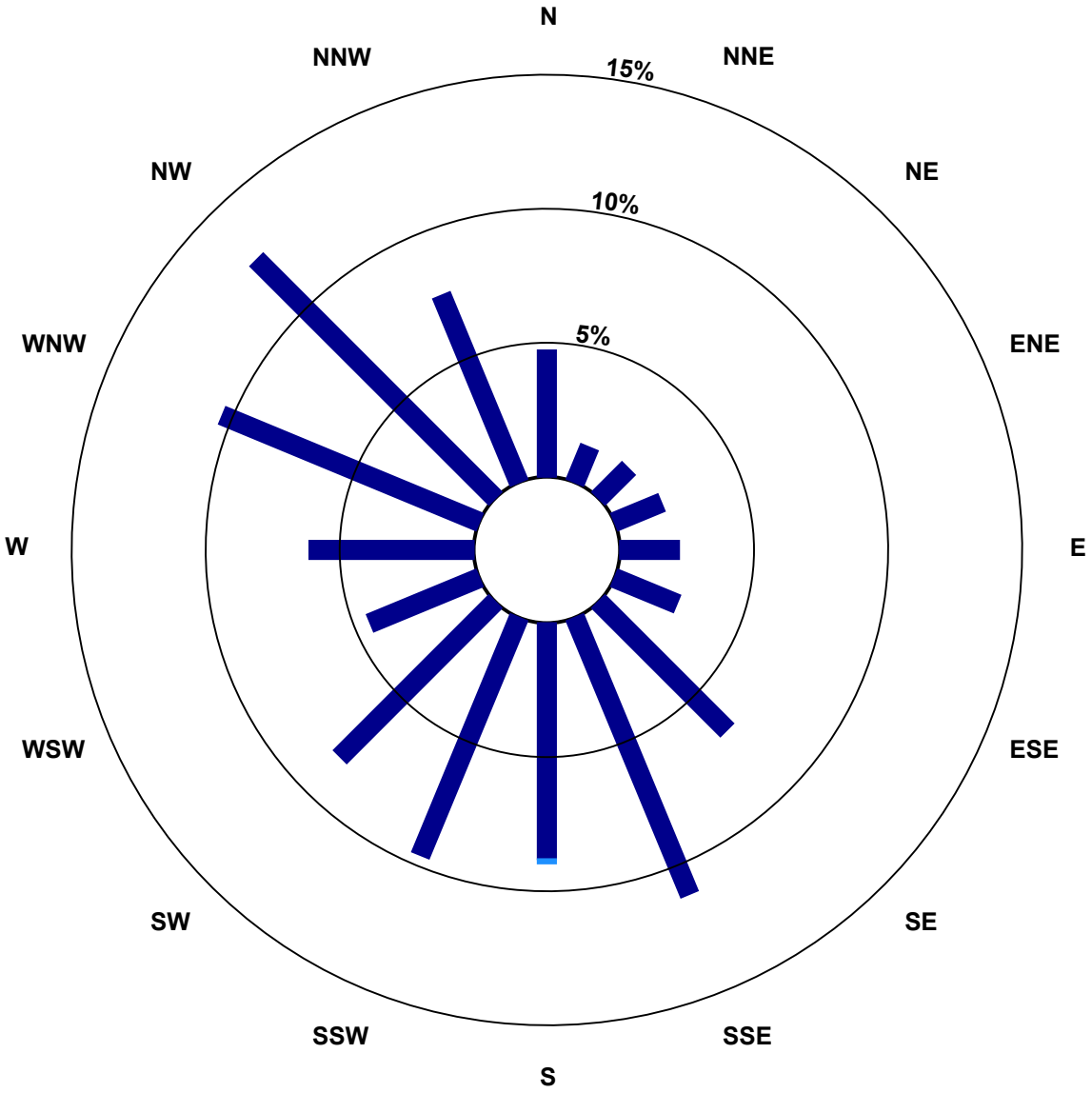
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Dioxide (NO_2) - ppb

Conklin



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

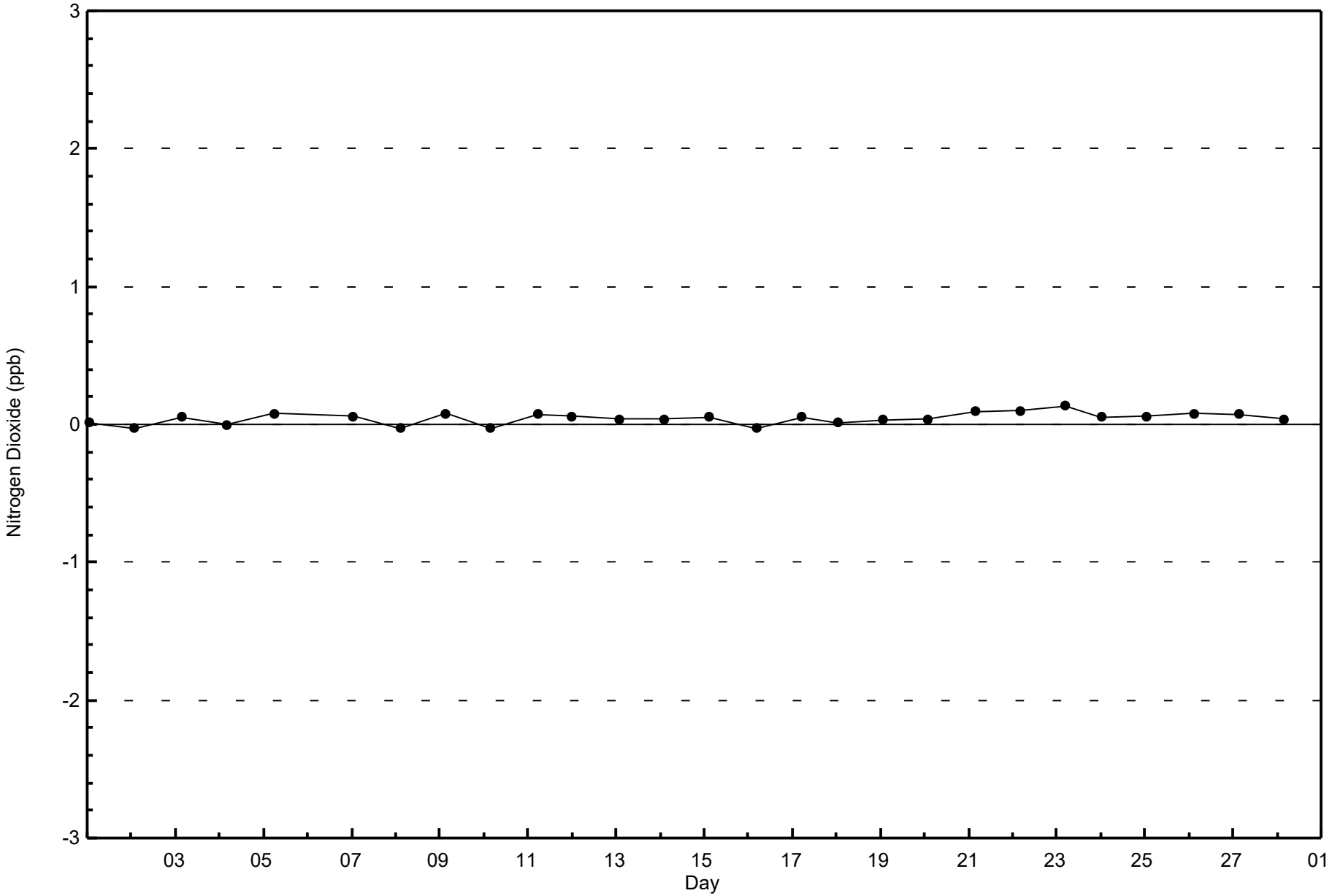
Total Number of Valid Hours: 636

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Conklin - February 2025

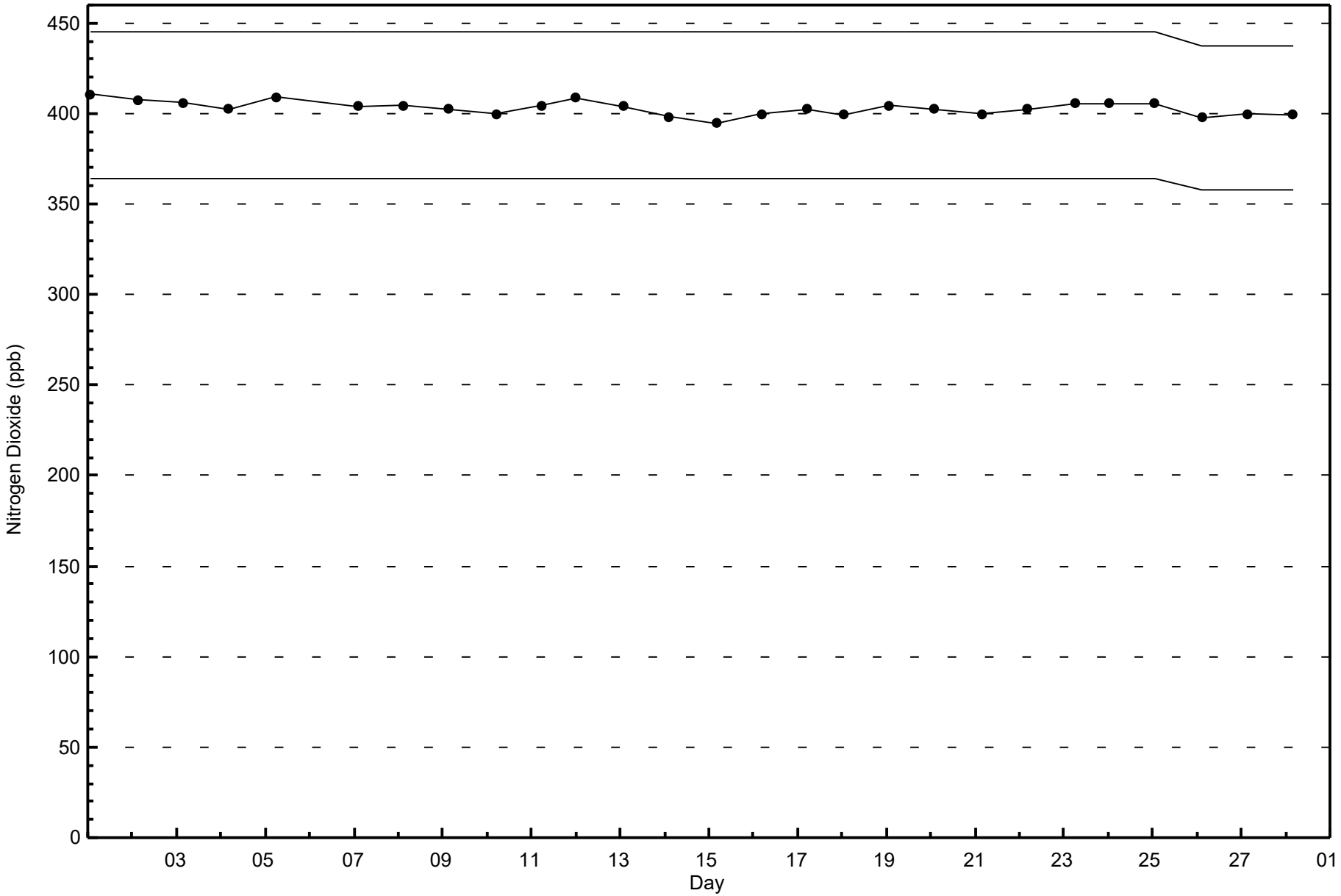


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Conklin - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Conklin - February 2025

Maximum Value: 26.3 ppb on Feb 14 21:00

Maximum Daily Average: 9.1 ppb on Feb 16

Minimum Value: 0.1 ppb on Feb 1 07:00

Minimum Daily Average: 1.7 ppb on Feb 27

Maximum Diurnal Average: 6.2 ppb at hour 20

Minimum Diurnal Average: 2.2 ppb at hour 16

Monthly Average: 3.66 ppb

Percentiles: P_1 = 0.3 P_{10} = 1.1 Q_1 = 1.6 Median = 2.7 Q_3 = 4.5 P_{90} = 7.1 P_{99} = 18.6

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.2	Z	1.1	0.4	0.1	0.1	0.1	0.2	0.9	0.4	0.5	11.2	7.0	8.1	10.0	4.3	3.1	1.2	0.8	0.7	1.1	2.0	3.4	1.8	2.6	11.2
2-Feb	2.2	1.6	Z	1.7	2.1	3.4	2.3	3.0	3.7	4.9	8.4	6.0	5.1	5.2	5.2	4.7	5.3	4.8	3.4	3.8	1.9	3.0	1.6	2.4	3.7	8.4
3-Feb	1.6	1.9	1.6	Z	2.6	2.8	2.8	3.0	4.8	3.2	2.0	1.9	1.7	1.3	1.1	1.2	1.9	3.9	13.0	13.2	8.4	5.9	5.1	4.8	3.9	13.2
4-Feb	1.9	2.1	1.5	1.0	Z	1.5	1.8	2.3	2.2	2.9	2.8	2.7	1.8	2.2	1.0	0.8	7.1	2.6	4.8	12.9	2.6	1.6	1.9	1.6	2.8	12.9
5-Feb	1.7	1.7	1.6	2.1	2.3	Z	2.1	2.5	3.1	1.6	1.7	2.9	2.3	2.1	1.8	1.6	1.8	6.4	2.5	3.0	3.5	3.8	3.8	3.7	2.6	6.4
6-Feb	Z	4.5	3.5	3.3	2.5	2.8	2.6	2.8	2.8	2.7	2.3	2.5	2.1	1.1	1.3	0.9	2.6	2.4	3.6	3.4	1.1	3.2	0.4	0.3	2.4	4.5
7-Feb	0.2	Z	2.6	1.8	1.0	1.1	0.9	0.9	1.0	1.4	2.5	1.5	1.2	1.3	1.8	1.0	12.2	6.9	9.3	14.2	7.0	2.8	2.8	3.8	3.4	14.2
8-Feb	3.7	1.5	Z	1.5	1.7	1.6	1.9	1.5	1.6	1.1	1.9	1.8	1.4	2.7	1.8	1.9	2.1	2.7	2.4	5.6	2.9	2.0	1.3	1.1	2.1	5.6
9-Feb	7.0	3.8	3.4	Z	3.7	3.4	1.7	3.0	3.2	1.6	0.5	0.4	0.4	0.4	0.5	0.5	1.4	2.4	7.8	7.1	5.9	6.7	4.4	2.7	3.1	7.8
10-Feb	2.2	2.1	2.0	3.4	Z	4.4	2.0	4.2	1.3	1.8	1.1	1.2	1.5	1.2	1.1	1.1	1.3	1.4	2.0	3.4	6.6	1.8	2.1	2.1	2.2	6.6
11-Feb	1.4	1.4	1.4	1.9	1.6	Z	1.9	3.6	3.5	3.2	5.3	2.8	4.4	2.8	3.5	4.5	3.8	5.8	6.5	6.7	8.7	10.8	8.2	6.0	4.3	10.8
12-Feb	Z	5.4	7.4	8.5	8.2	9.8	10.9	9.0	10.4	8.8	7.1	5.6	5.8	5.1	4.6	5.4	4.1	3.6	4.6	4.4	3.4	2.7	1.7	1.4	6.0	10.9
13-Feb	1.4	Z	1.3	1.2	1.2	1.1	1.2	1.0	1.7	1.1	0.8	1.1	0.7	0.7	0.8	0.6	0.7	0.7	1.2	10.3	9.7	5.5	6.1	6.2	2.5	10.3
14-Feb	6.2	5.7	Z	5.6	5.0	4.2	4.5	4.7	6.4	10.4	8.7	4.6	2.4	2.7	1.8	1.5	1.3	6.3	19.7	21.0	26.3	13.0	12.0	7.9	7.9	26.3
15-Feb	4.3	3.3	5.2	Z	4.5	4.1	3.8	4.4	5.0	4.7	3.3	2.9	1.4	1.2	2.2	2.0	1.8	0.8	7.5	4.2	1.0	0.8	0.9	1.1	3.1	7.5
16-Feb	1.3	1.7	2.2	3.9	Z	3.4	2.4	3.3	22.3	18.6	18.6	7.5	4.8	3.5	3.5	3.0	2.7	2.2	16.9	16.6	11.6	18.6	20.4	20.5	9.1	22.3
17-Feb	15.2	9.5	7.3	6.9	4.9	Z	5.8	7.1	5.2	3.5	2.6	2.5	2.1	2.2	2.0	2.3	2.6	2.8	2.7	3.1	5.7	6.9	5.5	5.0	4.9	15.2
18-Feb	Z	4.7	6.3	3.6	6.1	14.4	16.3	9.4	8.4	6.8	6.7	2.3	1.9	1.7	1.6	1.3	1.8	1.9	2.3	2.6	4.8	3.5	9.1	3.2	5.2	16.3
19-Feb	5.9	Z	3.8	3.5	2.6	3.1	2.6	3.7	3.4	4.7	3.4	2.5	2.6	1.8	1.9	2.2	2.3	2.6	2.8	2.9	2.0	1.7	2.9	2.8	2.9	5.9
20-Feb	2.6	2.8	Z	2.9	2.4	3.0	3.0	3.7	3.0	3.5	3.8	3.9	3.9	3.6	4.0	4.4	5.5	4.3	4.2	4.4	4.5	4.7	4.5	10.2	4.0	10.2
21-Feb	4.4	3.9	4.4	Z	5.6	8.9	5.7	5.5	5.0	6.3	5.7	6.3	3.1	2.3	1.8	1.5	1.8	2.3	2.4	1.9	1.6	1.5	1.6	1.6	3.7	8.9
22-Feb	2.0	2.5	2.5	2.8	Z	2.8	3.7	4.1	3.5	5.4	6.5	5.3	3.4	3.4	3.1	2.5	2.8	3.1	5.1	4.0	5.7	4.2	3.7	3.7	3.7	6.5
23-Feb	3.5	3.1	3.7	3.9	4.0	Z	2.4	1.9	1.7	1.1	1.0	1.0	1.1	3.3	1.4	1.2	4.3	2.8	3.6	4.2	4.1	3.8	2.9	3.1	2.7	4.3
24-Feb	Z	3.0	2.9	2.7	2.3	1.9	1.7	1.6	1.7	1.9	2.3	2.3	2.1	3.0	1.3	1.3	1.1	2.1	2.4	4.9	2.3	1.2	1.2	1.3	2.1	4.9
25-Feb	1.5	Z	1.3	1.5	1.7	1.7	1.4	1.7	2.7	4.3	C	C	C	C	C	6.9	8.0	8.2	7.4	8.1	14.4	10.3	7.5	1.1	5.0	14.4
26-Feb	1.0	1.3	Z	1.1	1.3	6.5	1.4	1.5	1.3	1.1	1.1	1.4	1.7	1.4	6.5	2.0	1.5	1.8	2.2	2.7	1.4	1.6	0.8	0.7	1.9	6.5
27-Feb	0.7	0.9	1.1	Z	5.2	3.3	2.1	3.4	3.5	2.8	1.2	1.6	1.1	1.1	1.2	0.6	0.5	0.8	0.7	0.8	0.6	0.6	3.0	3.2	1.7	5.2
28-Feb	2.2	1.4	2.0	1.0	Z	2.3	2.9	3.7	2.0	2.5	3.1	3.0	2.5	1.5	1.2	1.1	2.0	5.5	10.6	4.6	4.4	4.9	5.2	4.1	3.2	10.6
	3.1	3.0	3.1	2.9	3.2	3.8	3.3	3.5	4.1	4.0	3.9	3.3	2.6	2.5	2.5	2.2	3.1	3.3	5.4	6.2	5.5	4.6	4.4	3.8	Diurnal Average	
	15.2	9.5	7.4	8.5	8.2	14.4	16.3	9.4	22.3	18.6	18.6	11.2	7.0	8.1	10.0	6.9	12.2	8.2	19.7	21.0	26.3	18.6	20.4	20.5	Diurnal Maximum	

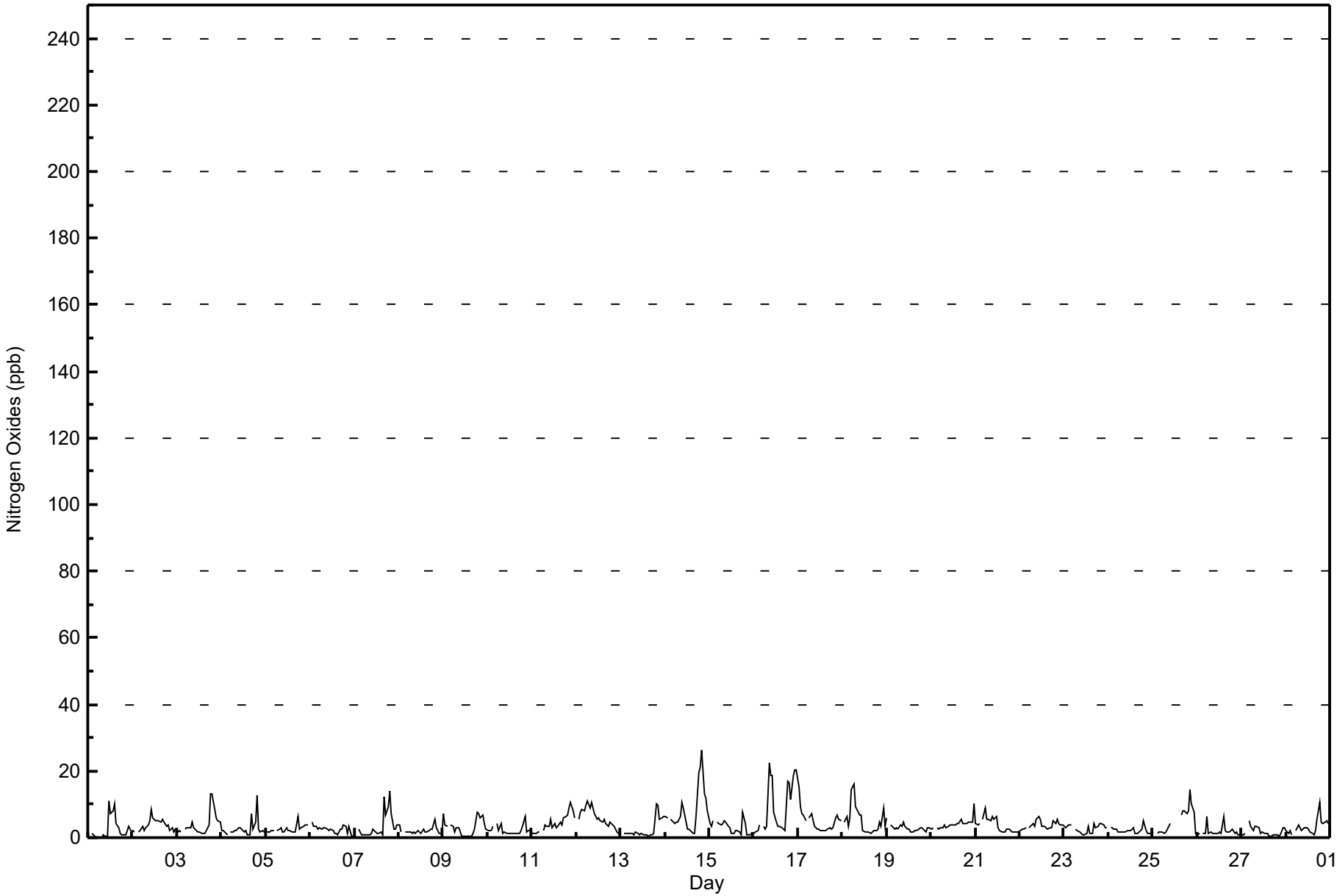
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Conklin - February 2025



Nitrogen Oxides (NO_X) - ppb

Conklin - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	636	99.53	99.53
21 - 40	3	0.47	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: 639

Total Number of Hours: 672

Nitrogen Oxides (NO_X) - ppb

Conklin - February 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	30	9	10	12	14	16	42	71	55	61	52	28	39	66	80	48	633
21 - 40	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	3
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	30	9	10	12	14	16	43	71	57	61	52	28	39	66	80	48	636

Total Number of Valid Hours: 636

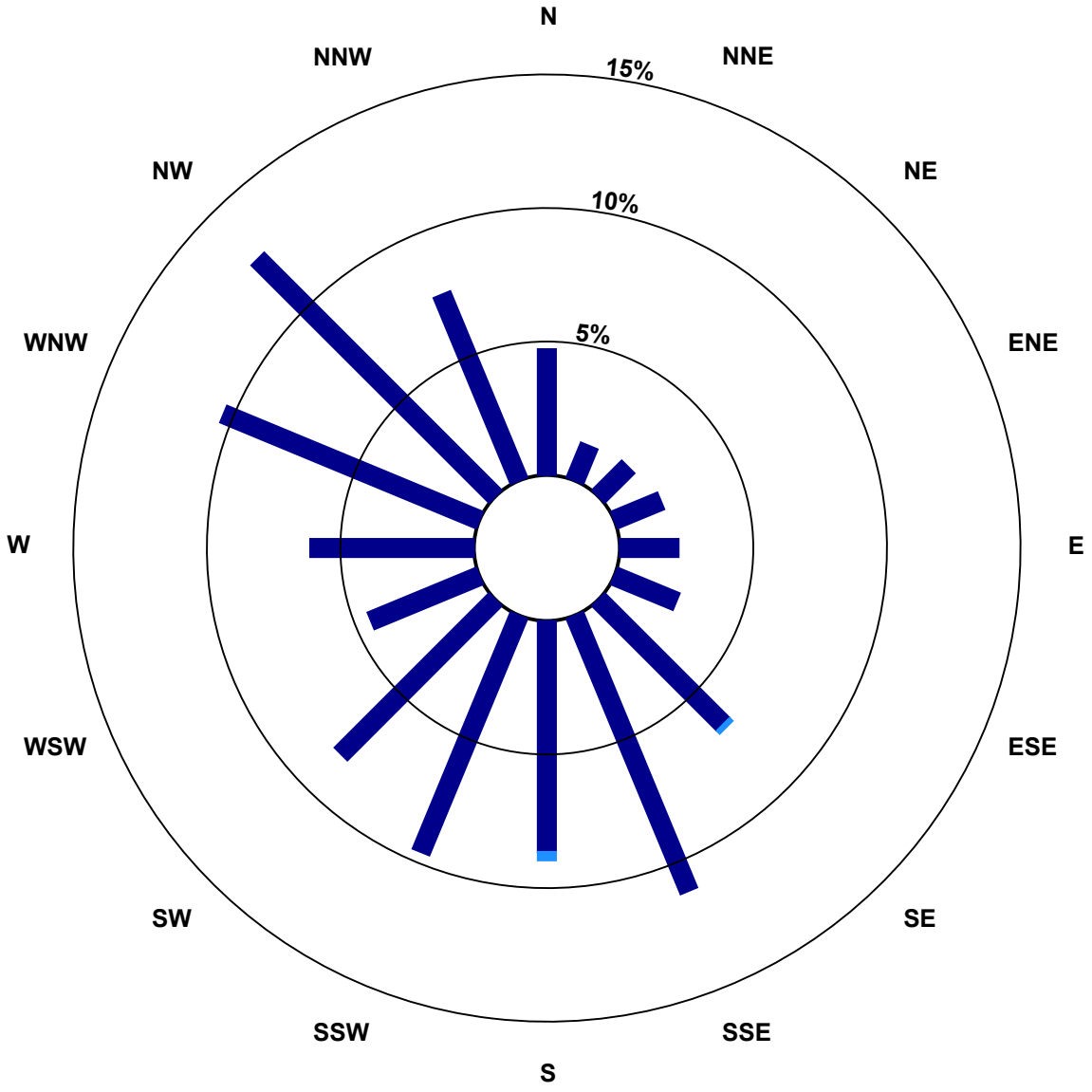
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Oxides (NO_X) - ppb

Conklin



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

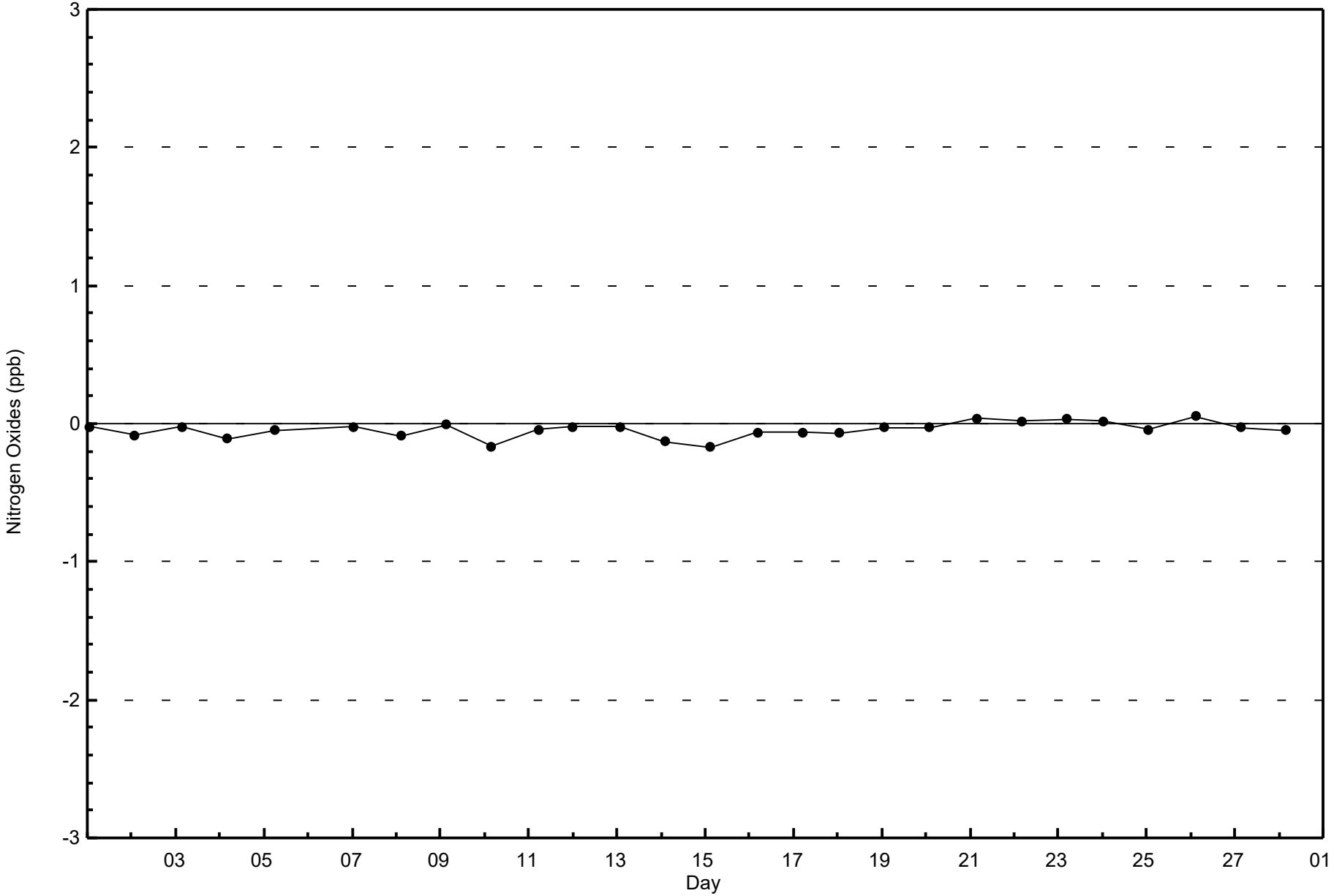
Total Number of Valid Hours: 636

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Conklin - February 2025

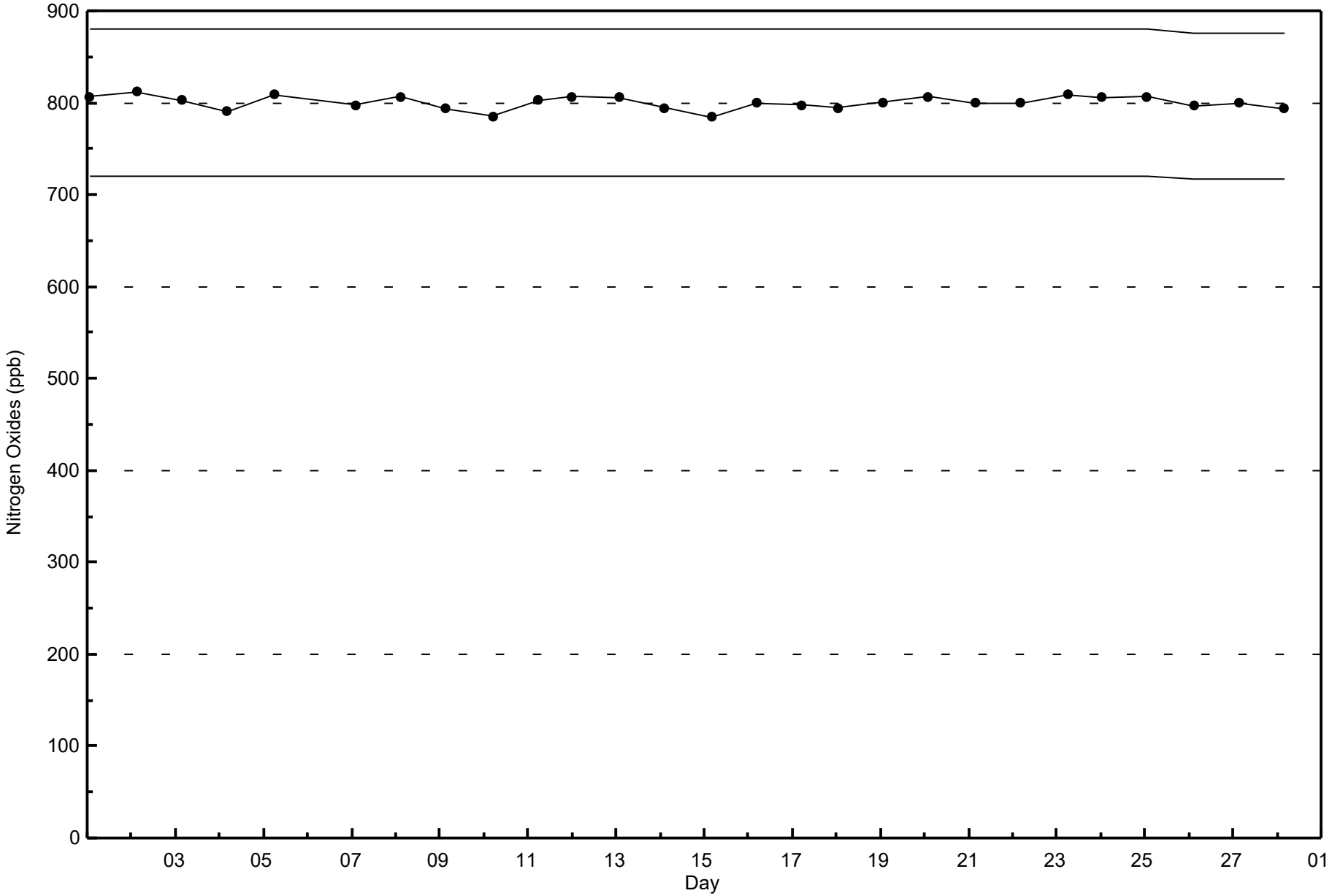


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Conklin - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Conklin - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 50.6 ppb on Feb 27 11:00 Maximum Daily Average: 44.7 ppb on Feb 26

Minimum Value: 1.1 ppb on Feb 14 21:00 Minimum Daily Average: 18.2 ppb on Feb 14
Maximum Diurnal Average: 38.9 ppb at hour 16 Minimum Diurnal Average: 26.5 ppb at hour 6
Monthly Average: 31.31 ppb Percentiles: P_1 = 6.6 P_{10} = 16.9 Q_1 = 26.2 Median = 32.9 Q_3 = 37.5 P_{90} = 42.7 P_{99} = 47.7

Hours in Service:	672
Hours of Data:	618
Hours of Missing Data:	54
Hours of Calibration:	34
Percent Operational Time:	97.0

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
1-Feb	37.0	36.6	36.6	37.7	38.0	Z	38.1	38.3	38.4	39.1	38.2	27.0	27.6	26.7	29.1	32.0	34.2	35.5	35.1	35.8	34.4	32.1	31.2	31.0	34.3	39.1
2-Feb	Z	28.3	27.2	26.4	25.3	23.7	24.1	23.6	23.2	23.7	24.2	27.3	28.8	29.5	30.5	31.1	29.7	28.1	28.9	28.9	30.6	28.2	29.5	30.3	27.4	31.1
3-Feb	31.3	Z	29.3	27.8	22.4	22.9	21.8	21.9	21.0	24.4	31.3	34.0	35.1	35.6	37.0	37.2	36.1	31.8	19.9	16.7	18.9	20.2	20.3	21.3	26.9	37.2
4-Feb	25.1	26.8	Z	25.7	25.5	26.0	27.4	24.9	26.8	30.3	30.3	31.9	35.1	38.6	39.4	40.0	37.8	38.6	35.7	26.8	35.5	36.5	35.6	35.3	32.0	40.0
5-Feb	35.3	35.0	33.8	Z	36.1	36.2	36.6	37.2	37.5	37.0	35.9	35.9	37.6	38.7	39.9	41.8	41.1	37.3	38.4	38.1	37.2	36.2	34.9	34.1	37.0	41.8
6-Feb	33.4	32.9	33.4	33.9	Z	35.3	35.3	34.8	34.9	35.1	36.1	37.0	39.1	40.8	41.7	41.3	36.8	35.7	34.1	34.7	37.2	36.8	38.5	37.7	36.4	41.7
7-Feb	37.0	35.8	35.1	36.7	37.2	Z	37.1	36.5	35.8	37.4	37.6	39.4	41.2	42.8	43.6	44.7	43.3	36.7	28.6	21.0	23.5	28.6	23.9	23.7	35.1	44.7
8-Feb	Z	32.7	30.4	29.9	31.9	32.0	33.5	39.2	41.4	41.6	41.5	41.5	42.2	42.3	42.3	42.2	41.2	39.2	33.5	26.8	31.3	31.0	36.8	38.3	36.6	42.3
9-Feb	30.6	Z	32.4	31.0	29.9	30.9	34.7	34.5	34.7	36.1	37.1	36.6	36.5	36.4	35.6	35.4	34.5	33.4	26.3	24.5	21.3	18.7	22.4	30.1	31.5	37.1
10-Feb	28.7	28.7	Z	27.9	28.0	30.0	32.3	33.0	34.5	34.6	37.1	37.8	38.4	38.0	41.2	39.7	37.1	37.0	36.4	35.8	32.0	35.9	35.4	35.3	34.6	41.2
11-Feb	36.0	36.3	33.8	Z	27.6	25.5	24.0	22.4	21.5	29.6	32.7	C	C	C	C	C	M	M	M	M	M	M	M	M	--	36.3
12-Feb	M	M	M	M	M	M	M	M	M	M	M	M	C	C	33.8	32.2	31.2	28.3	24.4	22.7	24.8	26.1	30.5	29.3	--	33.8
13-Feb	29.0	29.0	29.3	28.7	29.6	Z	27.6	24.9	24.0	30.7	33.6	34.4	37.1	37.6	37.5	37.7	37.5	36.1	30.7	19.5	16.8	18.0	16.5	15.1	28.7	37.7
14-Feb	Z	13.6	13.2	12.9	11.9	13.1	10.7	9.9	13.2	15.9	24.1	29.5	31.3	31.0	32.8	33.7	34.0	26.6	18.4	7.6	1.1	7.9	10.4	15.4	18.2	34.0
15-Feb	18.3	Z	12.8	15.6	16.3	13.2	11.8	12.1	15.7	20.2	32.6	34.0	37.3	38.3	38.7	38.3	36.2	37.3	29.6	27.7	31.6	29.4	27.2	25.1	26.0	38.7
16-Feb	22.9	19.8	Z	17.8	18.7	21.0	21.2	20.9	16.5	15.8	19.2	32.9	36.0	36.3	37.2	36.9	35.8	34.4	21.4	14.5	15.9	9.5	5.1	2.7	22.3	37.2
17-Feb	7.4	12.0	13.3	Z	16.2	16.1	17.8	16.3	16.9	24.8	29.3	32.4	34.5	35.1	34.7	33.9	32.7	32.2	31.6	30.9	25.0	20.8	18.4	17.3	23.9	35.1
18-Feb	16.3	15.2	14.8	16.1	Z	6.4	3.6	9.4	12.8	19.9	24.6	34.9	36.5	38.0	38.9	39.8	39.5	38.4	36.5	34.1	30.2	28.1	22.5	22.0	25.2	39.8
19-Feb	18.2	17.6	16.7	17.8	16.5	Z	15.4	14.8	16.5	29.5	36.9	39.6	40.6	42.5	42.8	42.7	42.1	41.6	39.5	39.1	39.1	39.3	38.3	37.8	31.5	42.8
20-Feb	Z	36.1	35.0	34.5	34.3	34.2	34.2	33.7	34.4	33.8	33.9	34.6	36.0	36.2	36.3	36.2	35.2	35.3	34.7	33.6	33.3	33.1	33.7	32.1	34.5	36.3
21-Feb	33.7	Z	32.8	31.8	30.3	28.4	29.2	26.9	23.3	28.0	30.9	35.0	41.5	44.4	45.5	45.7	40.3	36.1	31.6	34.9	34.5	34.0	32.8	32.5	34.1	45.7
22-Feb	30.5	27.3	Z	18.6	18.8	17.3	19.4	18.7	18.2	18.5	20.2	31.3	45.0	45.5	46.5	47.8	47.8	46.6	45.7	45.3	42.3	40.0	41.1	41.6	33.7	47.8
23-Feb	38.2	26.9	24.7	Z	27.3	35.0	37.3	37.8	37.8	42.9	45.9	48.8	47.3	46.0	43.4	34.9	28.8	31.0	28.5	28.5	28.1	26.7	28.0	28.3	34.9	48.8
24-Feb	28.1	28.4	28.5	28.3	Z	29.6	29.9	29.7	29.4	28.7	27.7	27.3	30.2	39.4	44.0	46.1	47.0	44.4	31.8	24.1	29.9	40.9	38.8	45.3	33.8	47.0
25-Feb	46.1	44.0	36.8	27.7	22.4	Z	26.6	26.4	23.9	20.6	24.5	27.1	28.3	28.0	27.1	26.1	24.0	20.7	15.7	12.7	4.4	5.7	12.8	43.8	25.0	46.1
26-Feb	Z	46.4	47.0	46.4	44.2	40.3	42.2	42.7	43.7	44.0	44.5	44.7	45.4	46.9	46.2	47.6	47.3	47.7	46.6	42.4	44.1	42.9	42.0	43.9	44.7	47.7
27-Feb	45.1	Z	44.5	41.5	38.6	42.2	44.4	42.8	42.8	46.5	50.6	49.9	48.9	48.0	47.5	46.7	44.8	42.4	40.9	40.3	39.3	38.2	30.0	28.5	42.8	50.6
28-Feb	29.3	30.9	Z	29.1	24.6	22.8	20.2	21.1	28.3	28.2	28.2	30.1	32.3	35.5	37.1	39.2	37.4	28.4	15.1	16.5	14.3	12.9	10.0	9.3	25.2	39.2
	29.9	29.1	29.2	28.0	27.2	26.5	27.3	27.2	27.7	30.2	32.9	35.2	37.3	38.4	38.9	38.9	37.5	35.6	31.1	28.3	28.0	28.1	27.7	29.1	Diurnal Average	
	46.1	46.4	47.0	46.4	44.2	42.2	44.4	42.8	43.7	46.5	50.6	49.9	48.9	48.0	47.5	47.8	47.8	47.7	46.6	45.3	44.1	42.9	42.0	45.3	Diurnal Maximum	

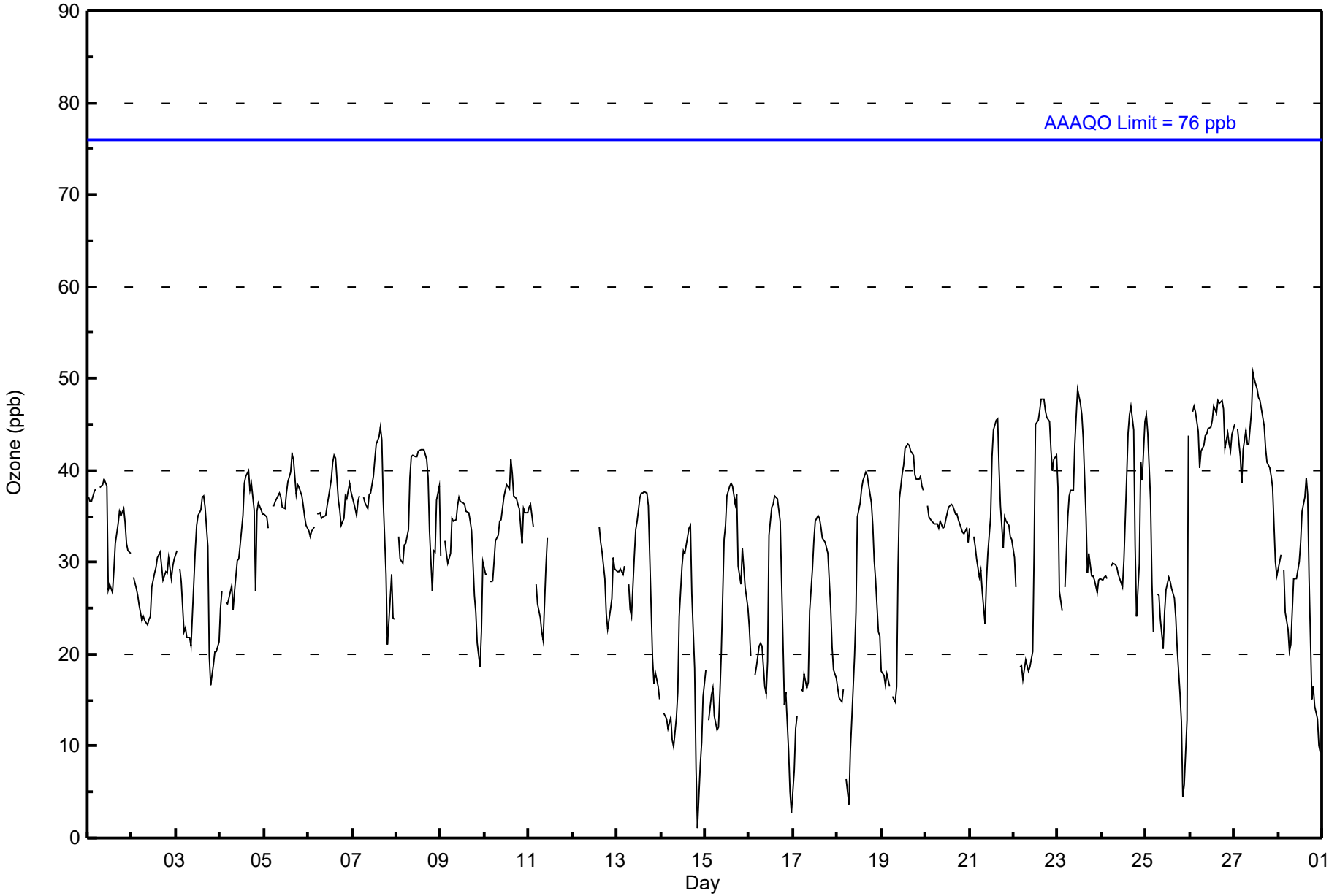
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Conklin - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	93	15.05	15.05
21 - 50	524	84.79	99.84
51 - 82	1	0.16	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 618

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Ozone (O_3) - ppb

Conklin - February 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	1	0	0	1	0	1	12	28	17	12	4	1	3	2	4	4	90
21 - 50	28	9	9	11	16	11	26	39	39	49	48	27	36	60	74	42	524
51 - 82	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	29	9	9	12	16	12	38	67	56	61	52	28	39	63	78	46	615

Total Number of Valid Hours: 615

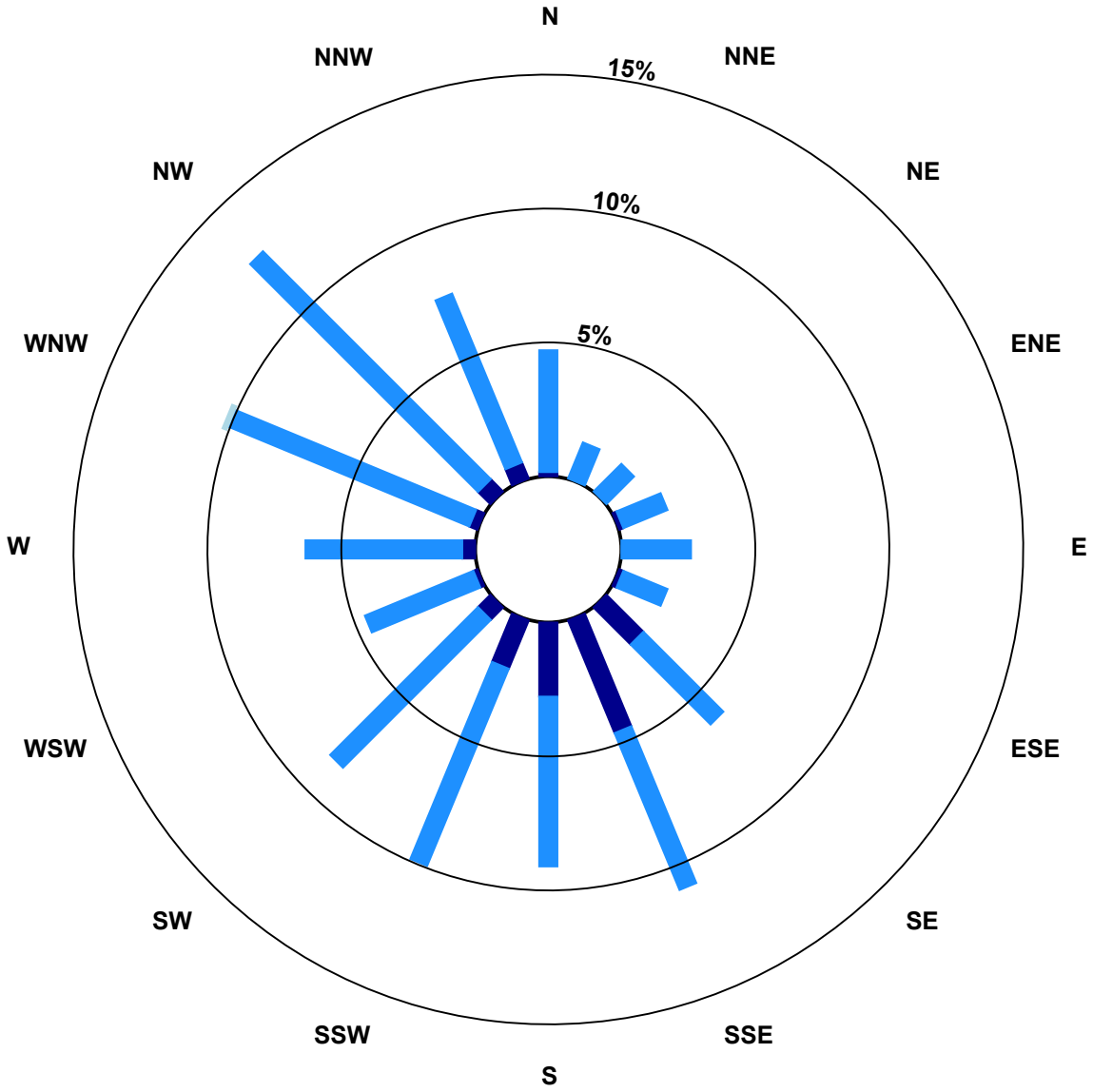
Total Number of Hours: 672

Wood Buffalo Environmental Association

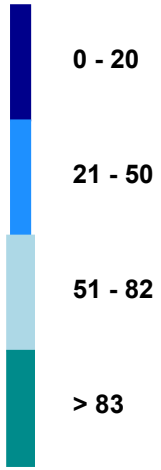
Wind Rose Feb 2025

Ozone (O_3) - ppb

Conklin



Classes (ppb)



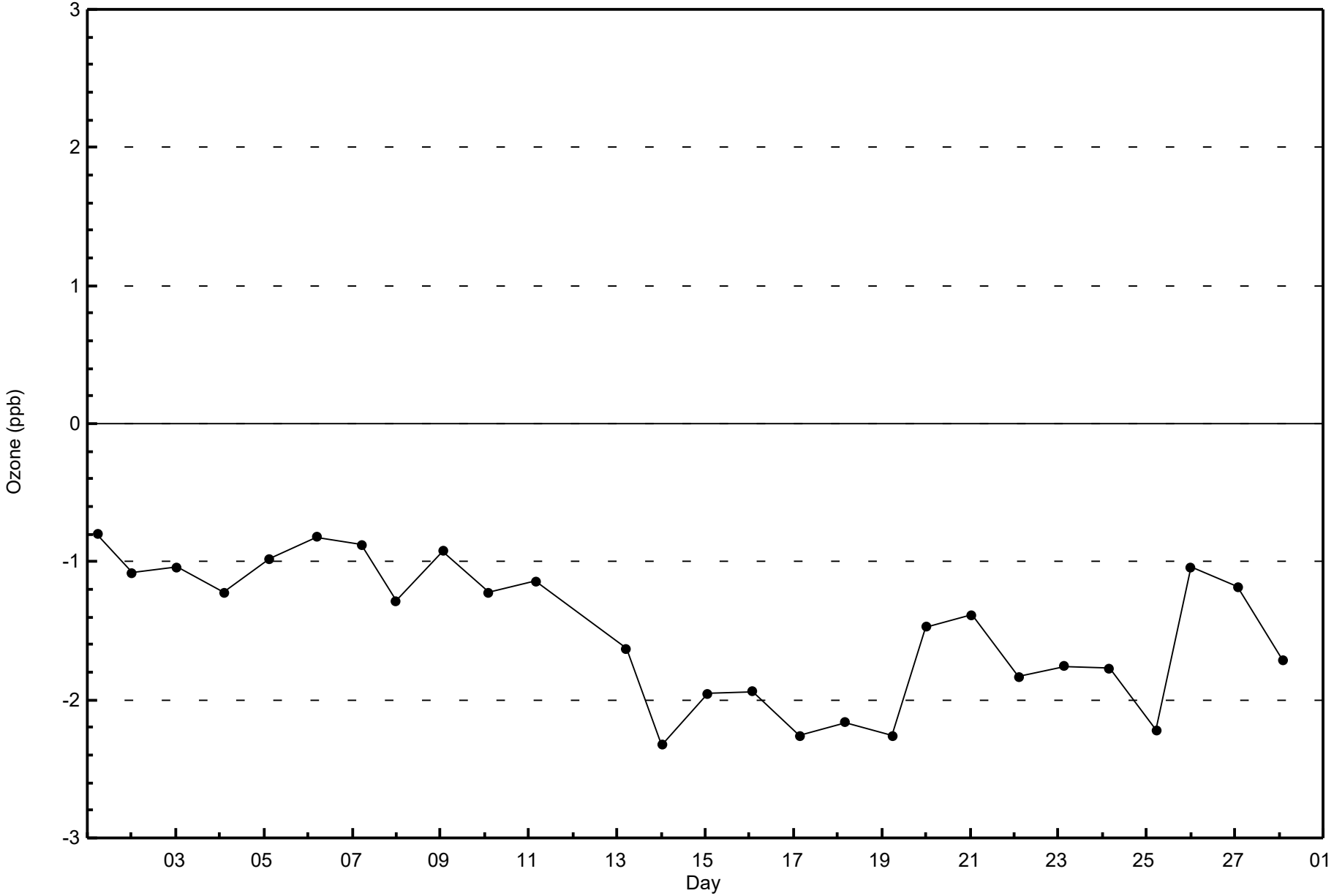
Total Number of Valid Hours: 615

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Conklin - February 2025

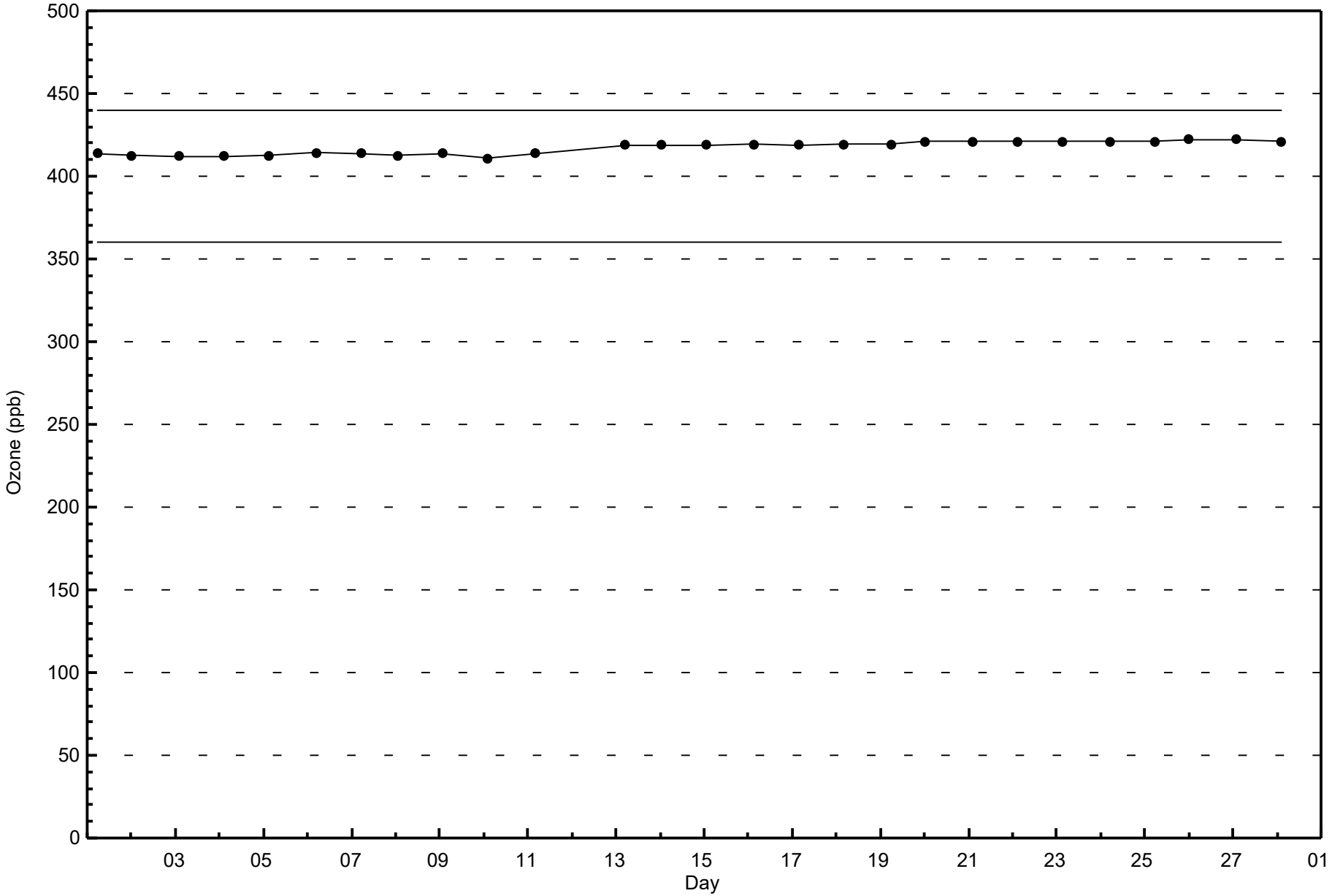


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Conklin - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Conklin - February 2025

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

Maximum Value: 33.9 $\mu g/m^3$ on Feb 10 04:00

Maximum Daily Average: 7.5 $\mu g/m^3$ on Feb 21

Minimum Value: 0.5 $\mu g/m^3$ on Feb 23 13:00

Minimum Daily Average: 1.4 $\mu g/m^3$ on Feb 26

Maximum Diurnal Average: 6.3 $\mu g/m^3$ at hour 4

Minimum Diurnal Average: 2.5 $\mu g/m^3$ at hour 15

Monthly Average: 4.40 $\mu g/m^3$

Percentiles: P_1 = 0.7 P_{10} = 1.7 Q_1 = 2.4 Median = 3.4 Q_3 = 5.2 P_{90} = 7.9 P_{99} = 20.4

Hours in Service:	672
Hours of Data:	670
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-Feb	2.2	1.9	1.7	1.5	1.6	2.3	1.8	1.8	3.4	4.0	2.0	2.5	2.7	3.8	3.3	2.6	2.1	1.7	1.7	1.9	2.5	3.0	3.1	3.0	2.4	4.0
2-Feb	3.2	3.4	3.3	3.3	3.6	3.8	3.8	3.9	3.7	3.7	4.1	4.6	4.2	4.4	4.3	3.6	5.9	4.0	2.9	2.7	2.6	3.3	2.4	2.4	3.6	5.9
3-Feb	2.5	2.3	2.3	2.2	2.6	6.1	1.9	5.5	7.2	2.4	2.6	2.2	2.0	1.9	1.9	1.8	2.1	2.6	6.8	3.6	2.5	2.1	3.1	2.0	3.0	7.2
4-Feb	15.6	5.5	2.2	1.4	2.1	1.8	2.9	2.4	2.7	18.5	3.1	2.8	2.5	1.8	1.6	1.8	1.9	1.8	2.7	3.6	3.3	2.4	2.7	2.8	3.7	18.5
5-Feb	4.4	3.6	4.2	4.8	5.5	3.8	2.6	3.2	19.9	2.9	2.8	3.0	3.1	2.8	2.5	2.1	2.0	2.4	3.0	3.6	4.2	4.5	4.5	4.1	4.1	19.9
6-Feb	3.8	3.2	3.0	2.7	2.6	2.5	2.3	2.2	2.4	2.6	2.5	2.3	1.6	1.4	1.6	3.1	3.0	3.1	3.9	5.5	5.2	4.7	9.7	5.2	3.3	9.7
7-Feb	4.9	5.3	5.2	4.9	4.1	3.6	3.8	3.3	3.2	3.5	3.2	2.3	1.8	1.4	1.5	1.8	1.9	7.8	3.8	8.8	6.1	3.6	3.4	9.9	4.1	9.9
8-Feb	14.2	3.6	3.1	10.0	4.6	9.2	6.5	3.4	1.0	1.3	2.3	2.8	2.4	1.8	1.7	2.4	2.7	2.4	3.6	3.0	3.3	9.9	4.4	3.1	4.3	14.2
9-Feb	3.6	5.3	4.3	3.9	4.0	3.8	3.1	3.1	3.2	3.2	3.3	3.5	3.6	4.3	3.6	4.2	4.3	8.1	5.9	6.2	6.1	5.2	7.5	9.4	4.7	9.4
10-Feb	5.2	4.0	6.7	33.9	19.1	30.0	3.7	7.3	4.5	9.8	2.3	2.1	1.9	2.0	1.4	1.6	1.9	2.0	2.7	2.5	3.2	2.4	2.9	2.3	6.5	33.9
11-Feb	2.1	1.9	3.0	15.7	11.6	1.5	1.5	4.7	6.1	2.0	2.6	2.6	2.5	2.4	1.7	1.8	2.1	3.0	4.2	5.8	5.2	3.9	2.8	5.4	4.0	15.7
12-Feb	2.6	2.7	3.0	3.5	3.0	3.7	4.4	3.9	3.4	3.2	3.6	5.0	6.3	6.6	5.4	5.4	5.2	5.6	3.4	2.9	4.9	2.7	2.7	2.6	4.0	6.6
13-Feb	5.5	2.9	3.0	2.7	2.8	2.7	3.3	4.0	5.4	2.7	2.0	2.9	3.3	2.2	1.9	1.8	2.7	5.5	5.2	2.5	3.7	11.0	10.4	6.4	4.0	11.0
14-Feb	5.2	7.4	5.6	6.8	4.2	3.9	3.9	5.6	8.3	5.7	3.7	2.9	2.8	2.8	2.9	2.8	2.7	3.0	4.4	6.5	4.7	4.6	4.4	7.0	4.7	8.3
15-Feb	2.3	2.0	3.6	6.6	4.0	5.3	3.6	5.7	5.4	2.8	2.4	2.4	2.2	2.1	1.9	2.3	2.0	1.9	2.3	1.9	1.9	1.7	1.6	2.7	2.9	6.6
16-Feb	4.6	7.0	11.5	6.6	4.2	4.8	2.1	1.7	1.9	2.5	2.8	2.6	2.5	2.6	2.7	2.5	2.9	5.7	4.9	4.0	4.2	4.1	16.2	4.6	4.6	16.2
17-Feb	9.9	6.2	1.7	3.6	2.8	6.1	24.8	22.3	3.5	4.8	2.9	2.4	4.5	1.9	1.9	1.9	2.8	2.8	2.7	3.7	4.3	3.6	2.6	5.3	5.4	24.8
18-Feb	3.0	3.4	5.1	4.2	21.6	5.9	9.8	16.1	8.4	7.9	4.1	3.6	2.4	1.7	2.8	3.1	2.0	2.2	1.9	1.7	2.0	3.9	9.6	3.6	5.4	21.6
19-Feb	3.4	19.9	9.7	11.4	6.7	3.7	1.9	2.3	2.4	3.8	3.8	3.8	4.6	1.9	2.2	2.1	2.4	2.5	2.9	3.0	3.1	2.7	3.0	3.5	4.4	19.9
20-Feb	4.6	5.0	5.0	5.6	6.1	6.7	5.8	7.1	6.1	6.4	7.2	8.0	7.0	6.1	6.1	5.6	5.4	5.6	5.7	6.6	7.5	9.2	9.3	10.6	6.6	10.6
21-Feb	10.8	10.7	11.2	11.4	12.3	12.8	11.8	10.7	11.4	13.4	7.9	5.5	3.0	1.6	1.0	2.0	2.9	3.4	3.4	3.8	5.0	4.9	11.8	8.5	7.5	13.4
22-Feb	5.6	8.3	11.2	8.6	5.4	4.7	6.3	9.4	11.1	7.5	5.5	3.8	3.3	3.4	2.6	2.4	2.9	5.4	9.8	13.5	10.9	6.0	6.2	6.6	6.7	13.5
23-Feb	7.1	6.9	5.3	4.7	12.5	7.1	4.0	3.1	2.4	1.4	0.9	0.6	0.5	1.0	1.9	2.7	3.9	4.1	4.2	5.4	4.5	5.4	5.1	5.1	4.2	12.5
24-Feb	5.6	5.1	5.5	5.1	5.0	4.3	4.2	4.4	4.7	5.0	5.8	5.3	4.1	3.0	1.9	1.4	0.7	0.8	1.5	3.1	4.4	1.4	2.8	1.3	3.6	5.8
25-Feb	0.7	4.5	1.9	3.8	4.1	4.0	4.5	5.5	6.8	7.1	5.8	5.3	C	C	4.7	4.4	4.1	4.0	11.0	31.8	10.1	11.3	26.1	2.0	7.4	31.8
26-Feb	1.5	1.4	1.5	1.6	1.6	2.1	1.7	1.3	1.0	0.9	0.9	0.9	0.7	0.6	0.8	0.5	0.7	0.7	1.1	4.9	2.5	0.6	2.4	1.8	1.4	4.9
27-Feb	0.9	1.2	2.6	3.1	5.5	5.3	3.1	3.1	2.5	1.9	1.1	0.8	0.9	1.0	1.0	1.1	1.2	2.0	2.3	1.5	1.8	2.2	2.9	3.2	2.2	5.5
28-Feb	3.0	3.1	4.8	3.5	6.7	7.5	11.5	6.8	4.3	3.7	4.0	3.7	3.8	2.5	2.2	1.8	1.8	3.7	4.4	2.5	5.5	5.2	12.5	4.1	4.7	12.5
	4.9	4.9	4.7	6.3	6.1	5.7	5.0	5.5	5.2	4.8	3.4	3.2	3.0	2.6	2.5	2.5	2.7	3.5	4.0	5.2	4.5	4.5	6.3	4.6	Diurnal Average	
	15.6	19.9	11.5	33.9	21.6	30.0	24.8	22.3	19.9	18.5	7.9	8.0	7.0	6.6	6.1	5.6	5.9	8.1	11.0	31.8	10.9	11.3	26.1	10.6	Diurnal Maximum	

C - Calibration

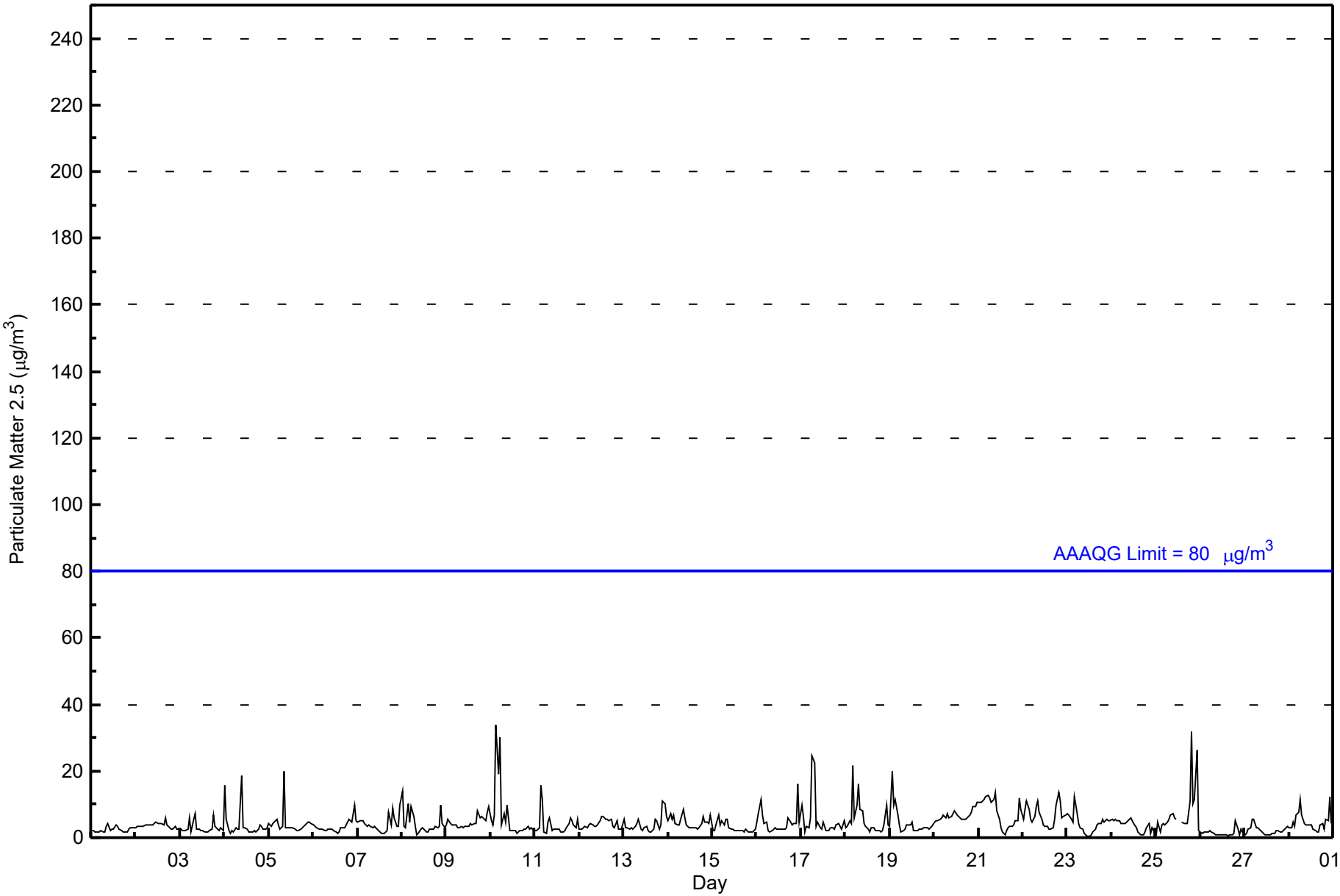
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Conklin - February 2025





Wood Buffalo Environmental Association

Cumulative Frequency Distribution

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

Conklin - February 2025

Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	527	78.66	78.66
6 - 15	128	19.10	97.76
16 - 25	11	1.64	99.40
26 - 80	4	0.60	100.00
> 81.0	0	0.00	100.00

Total Number of Valid Hours: 670

Total Number of Hours: 672



Wood Buffalo Environmental Association

Frequency Distribution

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

Conklin - February 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	9	9	13	11	17	36	55	38	32	34	24	37	66	76	41	524
6 - 15	5	0	1	0	4	1	9	16	21	28	19	5	2	2	5	10	128
16 - 25	0	0	0	0	0	0	2	4	0	3	1	0	0	0	0	1	11
26 - 80	0	0	0	0	0	0	0	0	1	1	1	0	0	0	1	0	4
> 81.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	31	9	10	13	15	18	47	75	60	64	55	29	39	68	82	52	667

Total Number of Valid Hours: 667

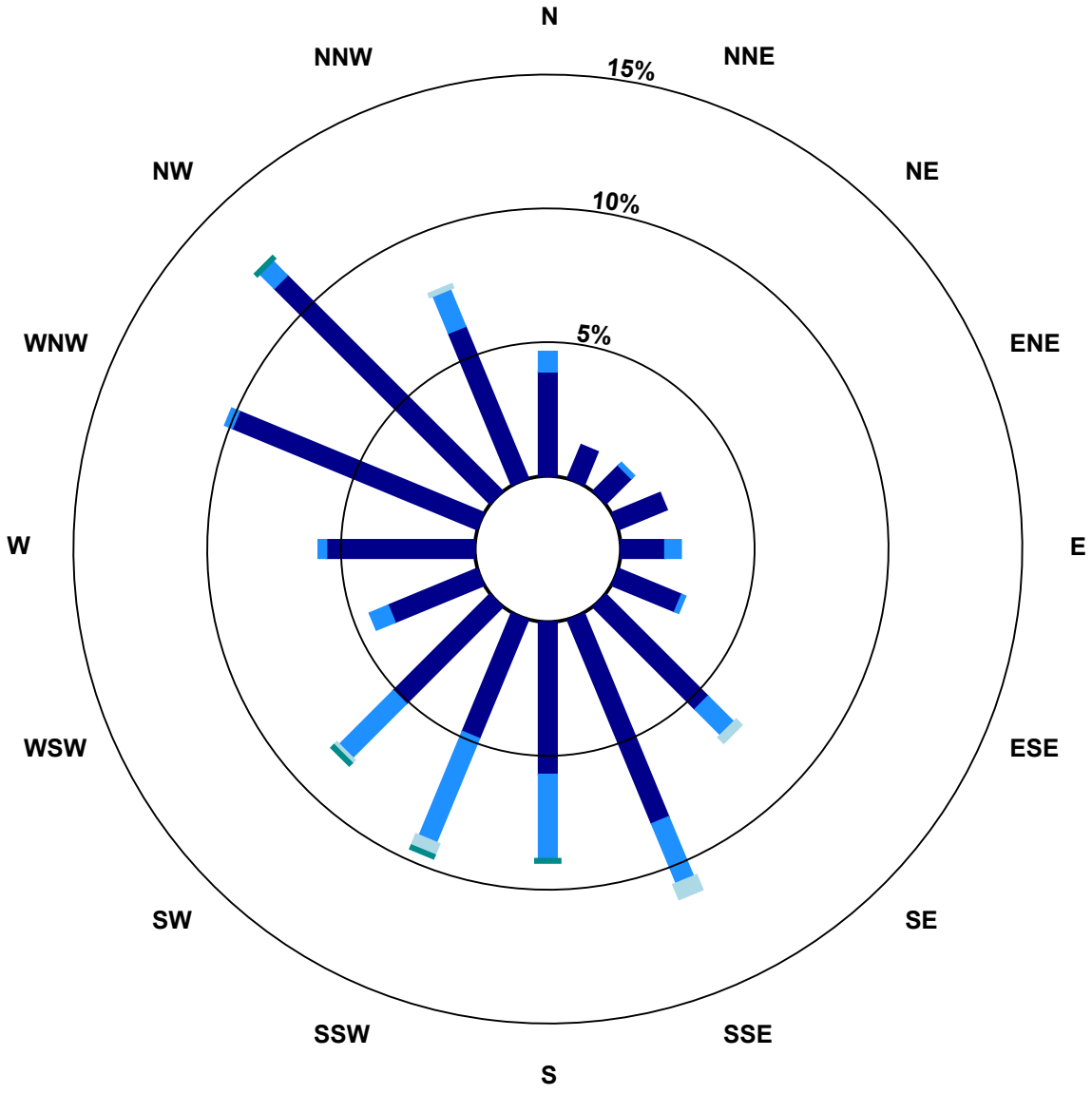
Total Number of Hours: 672

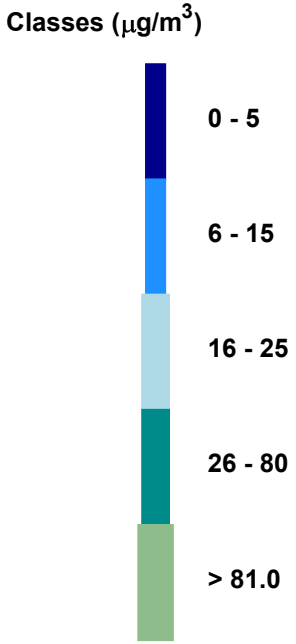
Wood Buffalo Environmental Association

Wind Rose Feb 2025

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

Conklin





Total Number of Valid Hours: 667

Maximum Value: 8.6 C on Feb 27 12:00

Maximum Daily Average: 4.4 C on Feb 27

Minimum Value: -40.0 C on Feb 14 08:00

Minimum Daily Average: -31.3 C on Feb 14

Maximum Diurnal Average: -9.8 C at hour 16

Minimum Diurnal Average: -21.0 C at hour 7

Monthly Average: -16.70 C

Percentiles: P_1 = -39.1 P_{10} = -32.8 Q_1 = -26.4 Median = -18.7 Q_3 = -5.0 P_{90} = 2.7 P_{99} = 8.0

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

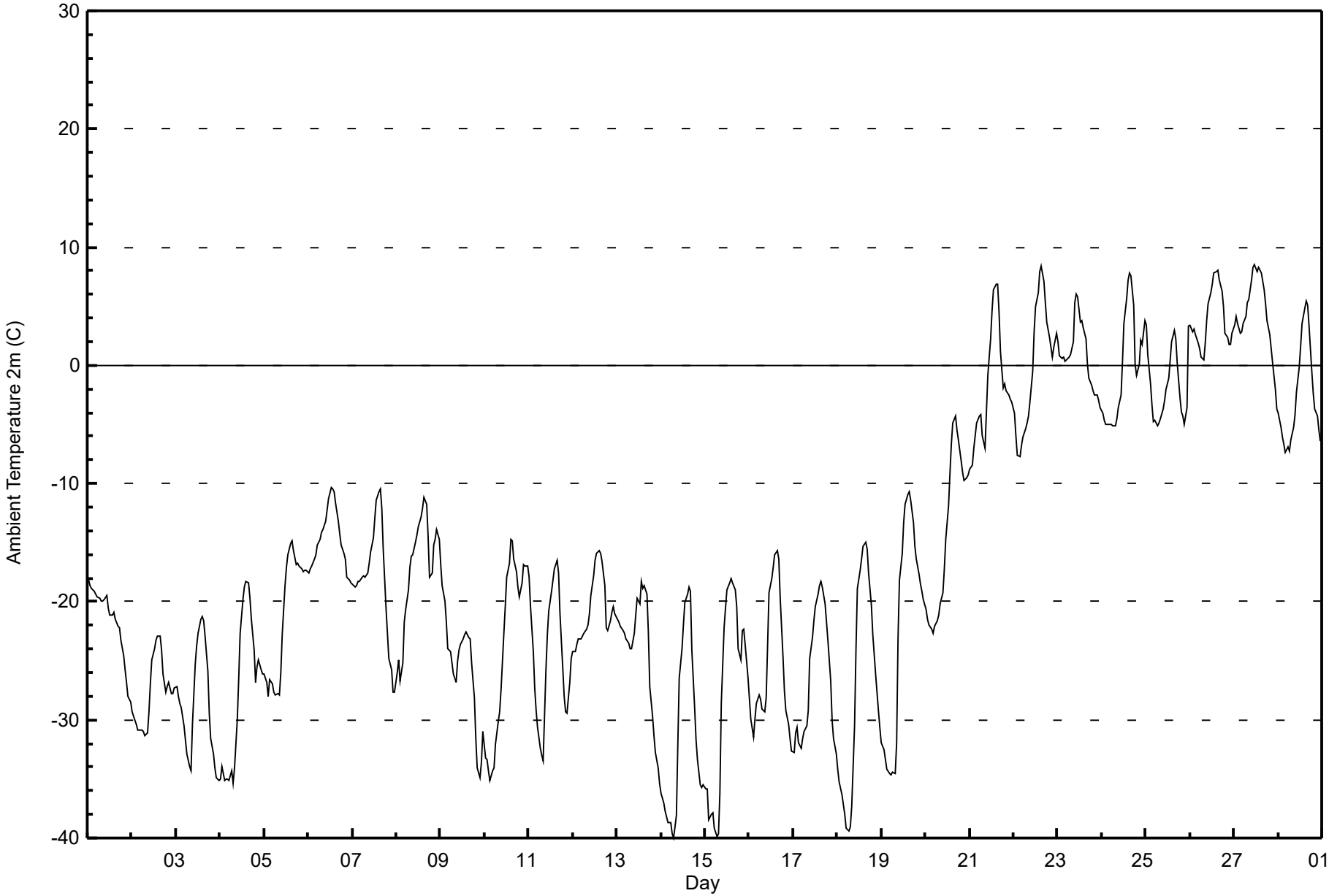
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-18.2	-18.6	-18.9	-19.1	-19.3	-19.5	-19.7	-20.0	-20.0	-19.8	-19.5	-20.6	-21.1	-21.1	-20.9	-21.5	-22.0	-22.2	-23.3	-24.6	-25.7	-26.8	-28.0	-28.5	-21.6	-18.2
2-Feb	-29.4	-29.7	-30.4	-30.8	-30.9	-30.9	-30.9	-31.4	-31.1	-29.3	-27.0	-24.9	-24.0	-23.2	-22.9	-22.9	-24.1	-26.1	-27.6	-27.2	-26.8	-27.8	-27.8	-27.4	-27.7	-22.9
3-Feb	-27.1	-28.1	-28.6	-28.9	-30.5	-31.7	-32.8	-33.9	-34.3	-30.3	-25.3	-23.8	-22.7	-21.5	-21.3	-21.7	-22.9	-25.9	-29.4	-31.6	-32.9	-34.1	-34.9	-35.2	-28.7	-21.3
4-Feb	-35.0	-33.9	-35.1	-35.0	-35.1	-35.1	-34.3	-35.4	-34.1	-30.0	-26.4	-22.7	-19.9	-18.8	-18.2	-18.4	-19.7	-21.5	-24.1	-26.8	-25.5	-25.0	-25.8	-26.1	-27.6	-18.2
5-Feb	-26.1	-26.8	-28.0	-26.6	-27.0	-27.6	-27.9	-27.7	-27.9	-26.0	-22.8	-18.7	-17.2	-16.0	-15.1	-14.9	-15.7	-16.8	-16.8	-16.9	-17.2	-17.4	-17.3	-17.3	-21.3	-14.9
6-Feb	-17.5	-17.3	-17.0	-16.4	-16.0	-15.3	-14.8	-14.2	-13.9	-13.2	-12.3	-11.3	-10.3	-10.4	-10.6	-11.6	-13.2	-14.2	-15.2	-16.0	-16.4	-17.9	-18.2	-18.4	-14.6	-10.3
7-Feb	-18.5	-18.7	-18.6	-18.3	-18.3	-17.9	-17.9	-17.9	-17.6	-16.8	-15.8	-14.6	-13.0	-11.4	-10.7	-10.5	-12.2	-15.6	-20.5	-22.7	-24.8	-25.8	-27.7	-27.6	-18.1	-10.5
8-Feb	-26.0	-24.9	-26.7	-25.2	-21.8	-20.6	-18.9	-17.1	-16.1	-16.0	-15.0	-14.3	-13.7	-12.8	-12.1	-11.1	-11.8	-14.5	-18.0	-17.6	-15.1	-14.7	-13.9	-14.8	-17.2	-11.1
9-Feb	-16.9	-18.6	-19.9	-21.8	-24.0	-24.2	-25.1	-26.1	-26.9	-25.0	-24.1	-23.6	-23.2	-22.8	-22.6	-23.0	-23.1	-25.1	-28.1	-31.6	-34.1	-34.9	-33.6	-31.0	-25.4	-16.9
10-Feb	-33.3	-33.4	-34.3	-35.1	-34.3	-34.1	-32.0	-30.2	-29.4	-27.4	-22.7	-20.4	-17.9	-16.7	-14.7	-14.8	-16.4	-17.5	-18.8	-19.6	-18.4	-16.9	-17.0	-17.0	-23.8	-14.7
11-Feb	-17.9	-20.4	-24.2	-27.3	-29.2	-30.6	-32.5	-33.0	-33.4	-25.8	-22.8	-20.8	-19.1	-18.1	-17.3	-16.6	-17.5	-21.0	-25.7	-28.0	-29.3	-29.5	-26.9	-24.8	-24.7	-16.6
12-Feb	-24.3	-24.2	-23.6	-23.2	-23.1	-22.9	-22.7	-22.3	-22.0	-21.0	-19.5	-17.8	-16.5	-15.9	-15.7	-15.9	-16.7	-18.7	-22.3	-22.4	-21.6	-20.9	-20.4	-21.0	-20.6	-15.7
13-Feb	-21.5	-21.7	-22.1	-22.5	-22.7	-23.1	-23.5	-24.0	-23.9	-22.7	-21.1	-19.7	-20.1	-18.3	-18.9	-18.6	-19.4	-22.6	-27.1	-29.7	-31.4	-32.7	-34.0	-35.4	-24.0	-18.3
14-Feb	-36.2	-37.0	-37.7	-38.2	-38.7	-38.7	-39.6	-40.0	-38.1	-32.2	-26.5	-24.0	-21.9	-20.0	-19.4	-18.8	-19.1	-24.0	-29.0	-31.7	-33.4	-35.5	-35.8	-35.4	-31.3	-18.8
15-Feb	-35.9	-35.8	-38.5	-38.0	-37.8	-39.1	-39.8	-39.7	-36.2	-28.7	-22.2	-20.5	-19.0	-18.4	-18.1	-18.4	-19.0	-20.4	-24.0	-24.9	-22.4	-22.3	-23.6	-26.4	-27.9	-18.1
16-Feb	-28.2	-29.9	-31.4	-30.0	-28.6	-27.9	-28.3	-29.1	-29.4	-28.2	-23.8	-19.3	-18.1	-17.1	-16.0	-15.7	-16.4	-19.7	-24.7	-27.6	-29.1	-30.4	-31.6	-32.7	-25.5	-15.7
17-Feb	-32.8	-31.1	-30.6	-31.9	-32.4	-31.5	-30.9	-30.5	-29.2	-24.8	-23.0	-21.7	-20.4	-19.3	-18.6	-18.3	-18.7	-20.2	-21.7	-23.2	-26.7	-30.0	-31.6	-32.9	-26.3	-18.3
18-Feb	-34.2	-35.2	-36.3	-37.1	-38.0	-39.1	-39.4	-39.1	-37.3	-30.5	-24.2	-18.9	-17.4	-16.4	-15.3	-15.0	-15.5	-17.5	-20.3	-22.8	-24.5	-26.1	-29.2	-30.6	-27.5	-15.0
19-Feb	-31.9	-32.6	-33.4	-34.2	-34.5	-34.6	-34.4	-34.6	-31.9	-23.0	-18.1	-15.9	-13.4	-11.8	-10.9	-10.7	-11.4	-13.3	-15.3	-16.4	-17.7	-18.5	-19.1	-19.8	-22.4	-10.7
20-Feb	-20.6	-21.5	-22.0	-22.3	-22.6	-22.0	-21.6	-21.1	-20.1	-19.2	-17.3	-14.8	-11.8	-9.1	-6.7	-4.9	-4.3	-5.4	-6.3	-8.1	-9.0	-9.8	-9.5	-9.2	-14.1	-4.3
21-Feb	-8.8	-8.4	-7.0	-5.9	-4.9	-4.3	-4.2	-5.9	-7.0	-3.9	-0.8	2.2	4.7	6.4	6.9	6.9	4.5	1.2	-1.9	-1.5	-2.1	-2.5	-2.8	-3.2	-1.8	6.9
22-Feb	-4.1	-5.9	-7.7	-7.7	-6.7	-6.1	-5.4	-4.9	-4.3	-3.2	-0.5	2.8	5.0	6.2	8.0	8.5	7.1	5.3	3.7	2.3	1.6	0.7	1.5	2.7	0.0	8.5
23-Feb	2.0	0.8	0.5	0.7	0.3	0.6	0.7	0.9	2.0	5.3	6.0	5.7	3.6	3.8	3.2	2.2	0.1	-1.1	-1.7	-2.2	-2.5	-2.5	-3.0	-3.6	0.9	6.0
24-Feb	-4.1	-4.6	-5.0	-5.0	-5.0	-5.0	-5.1	-5.1	-4.5	-3.6	-2.5	0.3	3.5	5.6	7.2	7.8	7.6	5.0	0.1	-0.8	0.1	2.2	1.8	3.7	-0.2	7.8
25-Feb	3.4	0.9	-1.6	-3.3	-4.8	-4.7	-5.2	-4.9	-4.5	-3.7	-3.0	-2.0	-1.1	0.4	2.0	2.9	2.2	0.2	-2.8	-3.9	-4.3	-5.0	-3.6	3.3	-1.8	3.4
26-Feb	3.4	2.8	3.1	2.6	1.8	1.4	0.7	0.4	1.9	3.8	5.2	6.2	6.8	7.8	8.0	8.1	7.2	6.3	4.9	2.7	2.4	1.8	1.7	2.7	3.9	8.1
27-Feb	3.5	4.1	3.5	2.7	2.8	3.6	4.1	5.3	5.6	7.2	8.2	8.6	8.0	8.3	8.0	7.8	6.4	5.2	3.8	2.6	1.4	0.2	-2.0	-3.7	4.4	8.6
28-Feb	-4.1	-5.2	-6.0	-6.7	-7.4	-6.9	-7.2	-6.3	-5.2	-4.2	-2.3	-0.2	1.7	3.5	4.9	5.5	5.0	3.3	-0.6	-2.4	-3.7	-4.3	-5.5	-6.4	-2.5	5.5
	-19.3	-19.8	-20.6	-20.9	-21.0	-21.0	-21.0	-21.0	-20.3	-17.6	-15.0	-13.0	-11.7	-10.6	-9.9	-9.8	-10.7	-12.7	-15.5	-16.9	-17.5	-18.1	-18.5	-18.4	Diurnal Average	
	3.5	4.1	3.5	2.7	2.8	3.6	4.1	5.3	5.6	7.2	8.2	8.6	8.0	8.3	8.0	8.5	7.6	6.3	4.9	2.7	2.4	2.2	1.8	3.7	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Conklin - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	302	44.94	44.94
-20 - 0	261	38.84	83.78
0 - 10	109	16.22	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Conklin - February 2025

Maximum Value: 97.0 % on Feb 25 08:00

Maximum Daily Average: 81.5 % on Feb 25

Minimum Value: 25.1 % on Feb 19 15:00

Minimum Daily Average: 50.5 % on Feb 19

Maximum Diurnal Average: 76.3 % at hour 5

Minimum Diurnal Average: 54.9 % at hour 15

Monthly Average: 69.47 %

Percentiles: P_1 = 32.3 P_{10} = 52.4 Q_1 = 63.8 Median = 72.2 Q_3 = 77.1 P_{90} = 81.2 P_{99} = 91.7

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

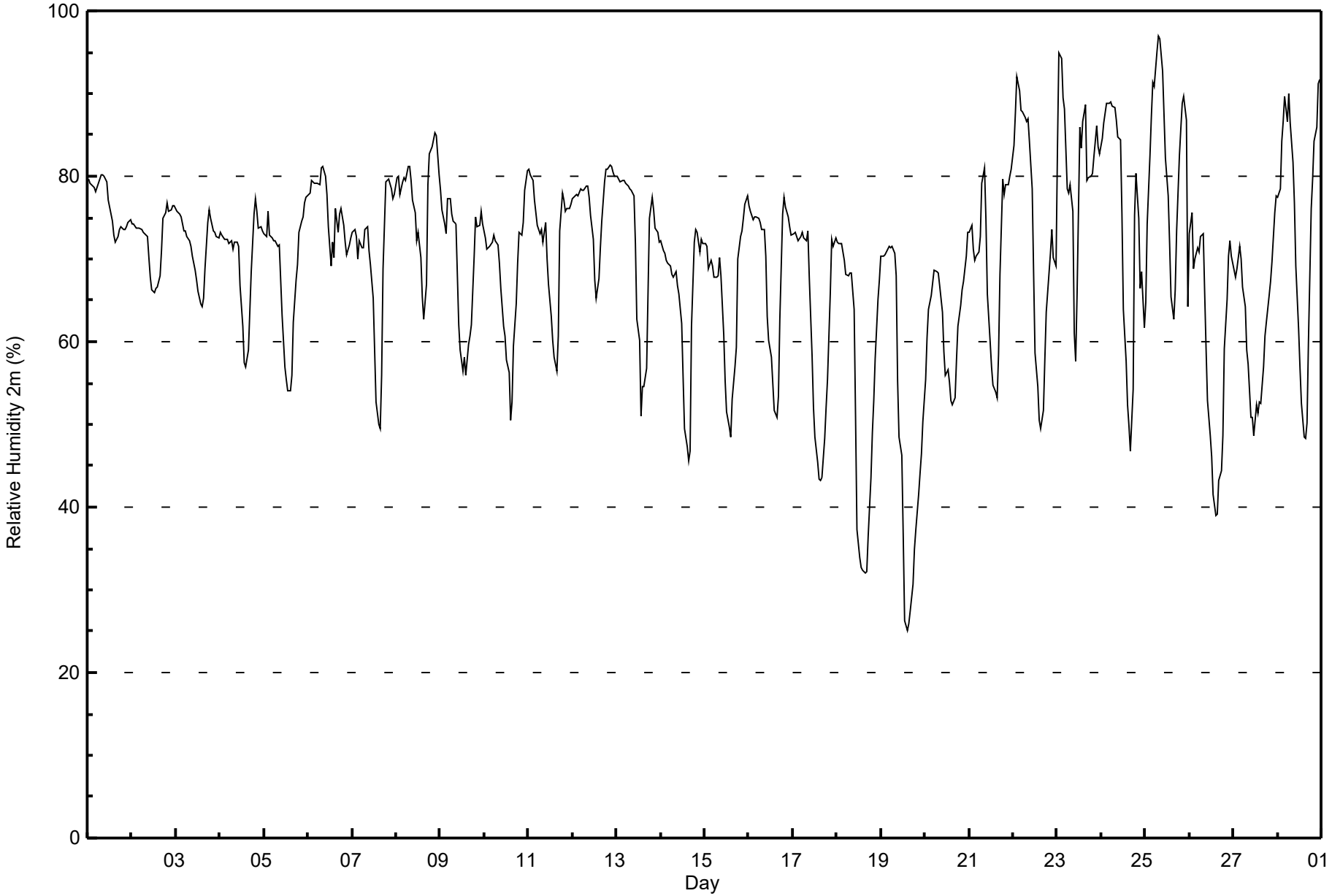
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	79.7	79.1	79.0	78.6	78.1	78.6	79.7	80.1	80.1	79.9	79.3	77.2	76.2	74.5	72.9	72.0	72.8	73.5	73.9	73.5	73.6	73.9	74.4	74.7	76.5	80.1
2-Feb	74.3	74.2	73.7	73.8	73.8	73.6	73.2	73.1	72.8	70.3	67.8	66.2	65.9	66.4	66.7	68.0	71.0	74.9	75.7	76.8	75.8	75.9	76.5	76.5	72.4	76.8
3-Feb	75.7	75.5	75.4	75.1	73.5	73.3	72.7	72.2	71.5	70.4	68.7	67.5	66.0	64.5	64.3	65.2	68.8	74.4	75.9	74.9	73.4	73.3	72.7	72.5	71.6	75.9
4-Feb	73.2	72.9	72.3	72.4	72.4	71.9	72.2	71.2	72.0	72.0	71.5	66.8	61.8	57.4	57.0	59.0	63.7	68.5	75.4	77.2	75.7	73.8	73.8	73.4	69.9	77.2
5-Feb	73.0	72.8	75.8	73.0	72.5	72.2	72.3	71.6	71.7	67.4	63.3	56.9	55.4	54.1	54.1	56.0	62.4	67.5	69.4	73.2	74.6	75.1	76.7	77.5	68.3	77.5
6-Feb	77.8	77.9	79.5	79.1	79.1	79.2	79.0	81.0	81.2	80.0	77.8	74.0	69.2	72.1	70.2	76.1	73.2	75.3	76.2	74.1	72.1	70.5	71.7	72.6	75.8	81.2
7-Feb	73.3	73.5	72.7	70.0	72.2	71.3	71.4	73.6	73.9	70.9	69.3	65.3	59.0	52.7	50.1	49.4	55.9	68.8	79.3	79.4	79.7	78.5	77.4	77.9	69.4	79.7
8-Feb	79.9	80.0	77.9	79.2	79.8	79.6	81.1	81.3	79.6	77.1	75.6	72.2	73.1	70.1	65.4	62.7	67.0	78.9	82.7	83.6	84.3	85.2	84.8	80.1	77.6	85.2
9-Feb	78.4	75.9	74.3	73.1	77.2	77.2	75.5	74.6	74.3	68.1	62.0	59.0	56.5	58.1	55.9	59.7	60.7	62.1	70.4	75.0	73.9	74.1	75.8	74.2	69.4	78.4
10-Feb	72.5	71.3	71.3	71.5	72.1	72.8	72.2	71.7	69.6	66.4	61.8	60.8	57.7	56.3	50.5	52.7	59.5	64.5	69.5	73.2	72.8	74.4	78.3	80.7	67.7	80.7
11-Feb	80.8	80.1	79.5	77.1	75.6	74.1	73.0	73.6	72.1	74.4	70.0	67.0	63.1	60.1	58.1	56.5	60.7	73.3	78.0	77.1	75.8	76.1	76.1	76.6	72.0	80.8
12-Feb	77.3	77.6	77.9	77.7	78.5	78.4	78.4	78.8	78.8	77.5	75.2	72.4	67.5	65.3	67.6	71.3	74.5	79.4	80.9	80.8	81.3	81.3	80.6	79.9	76.6	81.3
13-Feb	80.0	79.6	79.3	79.5	79.5	79.2	78.9	78.5	78.4	77.6	71.8	62.6	60.2	51.0	54.6	54.5	56.7	65.9	75.0	77.4	75.9	73.7	73.3	72.1	71.5	80.0
14-Feb	72.2	71.1	70.6	69.9	69.4	69.2	68.1	67.7	68.4	66.7	65.7	62.2	55.8	49.4	47.4	45.6	46.7	61.9	72.1	73.6	73.3	70.8	72.4	71.8	65.1	73.6
15-Feb	71.9	71.5	68.8	69.8	69.2	67.8	67.8	68.0	70.1	68.0	60.9	55.3	51.5	49.6	48.6	53.1	57.0	59.4	70.0	72.7	73.3	75.0	76.6	77.6	65.6	77.6
16-Feb	76.4	75.7	74.7	75.1	75.0	74.9	74.4	73.6	73.6	70.3	63.0	60.2	58.1	54.9	51.7	50.9	53.3	62.8	75.4	77.5	76.2	75.2	73.9	72.8	68.7	77.5
17-Feb	73.1	73.2	72.7	72.3	72.7	73.2	72.5	72.2	73.4	67.8	58.4	52.0	48.5	45.4	43.4	43.2	43.6	48.3	52.0	55.4	65.9	72.3	71.5	72.6	62.3	73.4
18-Feb	72.1	71.8	71.9	70.9	69.8	68.1	68.0	68.2	68.4	63.8	50.9	37.2	33.9	32.7	32.4	32.0	32.3	36.4	43.5	48.9	52.9	58.0	65.1	67.5	54.9	72.1
19-Feb	70.3	70.3	70.5	70.9	71.5	71.3	71.6	70.7	68.1	55.3	48.5	46.2	36.6	26.3	25.1	25.9	27.4	30.7	34.9	37.3	41.5	44.1	46.5	50.3	50.5	71.6
20-Feb	55.5	60.5	63.8	65.6	67.1	68.6	68.5	68.3	66.7	63.5	58.8	55.9	56.6	55.1	52.8	52.4	53.3	57.8	61.8	64.3	66.2	67.3	70.4	73.3	62.3	73.3
21-Feb	73.2	74.1	71.2	69.8	70.3	70.8	72.6	79.2	81.1	74.8	65.8	60.0	57.0	54.7	53.8	53.3	58.5	68.1	79.6	77.7	79.0	78.9	80.0	80.8	70.2	81.1
22-Feb	83.7	87.6	92.0	90.4	88.0	87.7	87.1	86.6	87.0	84.3	78.4	68.4	58.6	54.5	50.5	49.5	51.6	57.7	63.5	68.2	70.6	73.5	70.2	69.2	73.3	92.0
23-Feb	83.3	94.9	94.3	89.5	88.1	78.5	77.9	79.0	75.7	61.0	57.6	65.8	86.0	83.4	86.6	88.6	79.5	79.8	80.1	80.3	82.4	86.1	83.6	82.7	81.0	94.9
24-Feb	84.6	86.4	87.7	88.8	88.8	88.9	88.5	88.4	86.7	84.8	84.5	75.3	63.9	57.7	52.4	49.8	46.8	54.2	75.3	80.4	74.9	66.5	68.5	61.7	74.4	88.9
25-Feb	64.7	74.2	82.6	87.3	91.4	90.8	95.0	97.0	96.6	92.7	87.4	82.2	77.6	71.8	65.4	62.8	66.2	73.5	82.5	85.8	88.8	89.6	86.8	64.3	81.5	97.0
26-Feb	73.1	75.6	68.8	70.0	71.4	70.8	72.8	73.0	66.0	59.2	52.9	48.6	46.2	41.4	38.9	39.2	43.2	44.4	48.7	59.1	65.1	70.4	72.2	70.4	60.1	75.6
27-Feb	68.7	67.8	68.9	71.5	70.0	66.5	64.2	58.9	57.3	50.9	50.8	48.7	52.3	51.4	52.8	52.5	56.9	60.7	62.4	65.6	67.3	69.7	75.5	77.6	62.0	77.6
28-Feb	77.4	78.4	84.2	86.7	89.6	86.6	90.0	86.4	81.7	76.7	69.1	61.6	56.8	52.5	48.5	48.3	50.2	59.9	76.1	79.6	84.2	85.9	91.2	91.6	74.7	91.6
	74.9	75.8	76.1	76.0	76.3	75.5	75.7	75.7	74.9	71.1	66.7	62.4	59.7	56.6	54.9	55.4	57.6	63.7	70.0	72.2	73.2	73.9	74.9	74.0	Diurnal Average	
	84.6	94.9	94.3	90.4	91.4	90.8	95.0	97.0	96.6	92.7	87.4	82.2	86.0	83.4	86.6	88.6	79.5	79.8	82.7	85.8	88.8	89.6	91.2	91.6	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Conklin - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Conklin - February 2025

Maximum Speed: 18 km/h on Feb 19 14:00

Maximum Daily Speed Average: 9.4 km/h on Feb 20

Minimum Speed Value: 0 km/h on Feb 13 07:00

Minimum Daily Speed Average: 0.5 km/h on Feb 25

Maximum Diurnal Speed Average: 4.4 km/h at hour 14

Minimum Diurnal Speed Average: 0.6 km/h at hour 2

Monthly Average Velocity: 2.1 km/h 254.3 deg

Percentiles: $P_1 = 0$ $P_{10} = 1$ $Q_1 = 3$ Median = 5 $Q_3 = 8$ $P_{90} = 11$ $P_{99} = 15$

Hours in Service: 672

Hours of Data: 669

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-Feb	NE7	ENE6	ENE6	NE6	NNE7	N5	N5	N7	NNW8	NNW7	NW7	NW9	NW8	NW10	NW10	NW11	NW11	NW9	NW9	NW9	WNW7	WNW5	WNW5	WNW6	NNW6.0	NW11
2-Feb	NW6	NW7	NW6	NW6	NW6	NW5	NW6	NW5	NW6	NW5	WNW5	WNW7	NW11	NW11	NW13	NW12	NNW9	NW6	NW5	NW5	NW5	NNW4	NNW3	NW3	NW6.6	NW13
3-Feb	NW4	NNW4	NNW4	NNW3	E0	WSW1	SSW2	S2	SSW2	SSW3	WNW4	WNW5	WNW5	W6	WNW5	WNW5	W5	WSW2	S2	S2	SSW3	S3	SSW3	S4	W2.0	W6
4-Feb	SSW5	S4	S4	S4	S4	S4	S4	S4	S6	SSW5	SW7	SW6	W6	WSW8	WSW9	SW9	SW8	SW5	SW3	SSW4	SSW6	SW7	SW8	SW7	SW5.2	SW9
5-Feb	SW6	SW5	SSW3	SW5	SSW6	SSW6	SW7	SSW7	SSW9	SSW8	SSW8	W8	W11	W11	W13	WSW10	WSW7	WSW6	W8	WNW8	WNW7	W8	WNW7	WNW6	WSW6.5	W13
6-Feb	WNW5	WNW6	NW6	WNW5	NW6	W5	WNW6	NW7	NW8	NW9	NW9	WNW8	WNW8	NW10	NW12	NNW11	N13	NNW9	N9	NNW8	NNW11	NW9	NW6	NNW5	NW7.5	N13
7-Feb	NW4	WNW2	WNW3	W5	WNW4	WSW4	SW6	SW5	SSW5	W6	WNW6	WNW6	W7	W7	W8	W8	W5	SW4	SSW5	S3	S3	SE3	S3	S4	WSW3.7	W8
8-Feb	S5	S4	SSE5	S3	S3	S2	SSW4	WSW5	W7	SW5	WNW6	WNW7	W8	W8	WNW6	WNW6	W5	W4	SE1	SE3	SSE1	NW1	NNW9	NW11	W3.1	NW11
9-Feb	NW14	NNW15	NNW13	NNW9	NW5	NW6	NW5	NW4	WNW4	NW6	NNW10	NNW9	NNW8	NNW9	NNW9	NNW11	NNW12	NNW10	NNW4	SSW0	SE1	ENE1	NNW4	NW3	NNW6.9	NNW15
10-Feb	SSW3	SSW6	SSW4	SSW3	SW2	S6	SSW6	SSW7	SSW8	SSW7	WSW9	W10	W13	WSW8	W11	WSW11	SW9	SW8	SW6	SW6	WSW6	NW7	NW6	NW6	WSW5.7	W13
11-Feb	N7	N5	NNW4	NNW4	NNW5	NNW4	N0	SSE1	NNW3	NW5	WNW4	NNW6	NW6	WNW5	WNW5	WNW5	NW5	NW3	NNW3	SSW1	SSE1	SSE3	SSE3	SE3	NW2.5	N7
12-Feb	SE4	SE3	SE3	SE3	SE4	ESE3	SE2	ESE2	ESE3	SE3	ESE2	ESE3	SE2	SW1	ESE5	ENE4	NNE6	N5	NW4	NNW4	NW3	NNW4	N5	N4	ENE1.2	NNE6
13-Feb	N4	N4	N3	N3	N4	N1	E0	N2	NNW2	NNW4	NE2	N4	N6	SE3	ESE4	E4	ENE4	NE3	NW1	SSW1	S1	SW0	S1	SW0	NNE1.6	N6
14-Feb	SSW1	SSW0	SW0	SSW1	UO	S1	UO	SSW1	S1	WSW0	W2	SW3	SSE4	S3	N2	NW2	NE1	E0	SSW1	S1	S3	W0	S3	S3	SSW1.0	SSE4
15-Feb	S4	S3	W0	S3	SSW3	SSW1	SSW0	S1	SSE3	ESE1	NW5	WNW6	NW9	NW9	NNW10	NW9	NW6	NW5	WNW1	NW2	NNW3	N2	SW0	NNW0	WNW2.2	NNW10
16-Feb	SE1	SSW1	SSE1	SE1	SE2	SE3	SSE3	SE3	SE5	SE5	SE5	ESE6	E8	ESE9	SE7	ESE6	E6	E2	S1	S2	SSE2	SSE2	SSE3	SSE3	SE3.3	ESE9
17-Feb	SSE1	SSE3	SSE3	SSE2	SSE2	SSE3	SSE2	SSE3	SE4	SSE9	SSE10	SSE13	SSE13	SSE13	SSE12	SE12	SE11	SSE8	SSE8	SE6	SSE2	S2	SSE3	SSE3	SSE6.1	SSE13
18-Feb	SSE3	SSE2	S1	SSE1	SSE2	NNW0	SSE1	SE2	SSE2	SE2	SSE3	S12	S15	S14	SSE13	S12	S12	SSE10	SSE7	SSE7	SE6	SE6	SE5	SE6	SSE5.8	S15
19-Feb	SE6	SE5	SSE4	SSE3	SSE3	SSE4	SSE4	SSE4	SE5	SE6	S11	S14	SSE15	SSE18	SSE16	SSE15	SSE15	SSE12	SE9	SSE9	SSE7	SSE8	SSE8	SSE9	SSE8.6	SSE18
20-Feb	SSE10	S9	S9	SSE10	SSE8	S6	SSW11	SSW9	SSW12	SSW9	SW11	SW11	SW12	SW13	SW12	WSW11	WSW10	SW10	SW14	SW13	SW9	SW9	SW9	SSW9	SW9.4	SW14
21-Feb	SSW10	S6	S5	SSW10	SW11	SW6	WSW6	SSE2	SE1	SSW4	S3	W2	NW4	WNW7	WNW7	NW9	NNE9	NNE4	N5	NE4	ENE3	NNE4	N2	N3	W1.8	SW11
22-Feb	E2	N2	NNW1	NNW1	NNW2	UO	WNW0	S0	SE3	S1	N1	WSW5	SSW9	SW7	SW8	SW11	SW11	SSW11	SSW9	SSW9	SSW8	SSW8	SSW8	SW7	SSW4.4	SW11
23-Feb	SSW2	SSE3	S2	SE2	S6	SW13	SW12	SW11	SW11	WSW15	W17	W17	W15	WNW14	WNW12	NW12	NNW14	NNW11	NNW12	N11	N8	N7	NE5	E5	W5.9	W17
24-Feb	E4	E5	E4	ENE3	ENE3	ENE4	NNE4	ENE2	E2	ENE2	SSW1	NW2	W1	WNW6	WNW8	WNW6	WSW9	WSW3	SSE1	SSE1	S5	WSW6	S2	W8	W0.7	WSW9
25-Feb	WNW6	NW4	N4	NE1	NNE3	NE4	SE5	SE3	SE2	E4	ESE5	SE3	E2	SE5	ESE2	ESE3	ESE4	SE3	NNW3	NW3	W0	WNW1	SW3	WSW12	ESE0.5	WSW12
26-Feb	WNW11	W7	WSW7	W10	WNW9	WNW9	WNW8	WNW7	WNW9	WNW9	WNW8	WNW8	WNW9	WNW10	W9	WNW8	WNW5	W6	WSW6	SW6	SW7	SSW5	SW4	SW9	W6.9	WNW11
27-Feb	SW8	SW7	S6	SSE5	S9	SSW7	SSW9	SSW16	WSW14	WNW10	WNW13	WNW14	WNW14	WNW15	WNW14	NW16	NW12	NW11	NW9	NNW8	NNW12	NNW9	NNE9	NNE4	WNW6.3	NW16
28-Feb	NE4	ENE5	ESE2	ENE2	SSW2	SSE2	NW0	SE1	E3	ESE4	ESE3	S3	SSW4	WSW4	NW3	WNW4	NW2	S2	SSE2	SSE3	NW1	NW1	SSE1	SE3	SE0.7	ENE5
	WSW1.2	SW0.6	SW0.7	SW1.0	SW1.3	SW1.6	SW2.4	SW2.3	SW2.5	WSW2.2	W3.3	W3.9	W4.1	W4.4	W4.4	W4.0	WNW2.6	W2.3	W1.8	WSW1.5	WSW1.4	W1.4	WSW1.1	WSW2.0	Diurnal Average	
	NW14	NNW15	NNW13	SSW10	SW11	SW13	SW12	SSW16	WSW14	WSW15	W17	W17	SSE15	SSE18	SSE16	NW16	SSE15	SSE12	SW14	SW13	NNW12	NNW9	SW9	WSW12	Diurnal Maximum	

UO - Unstable Operation

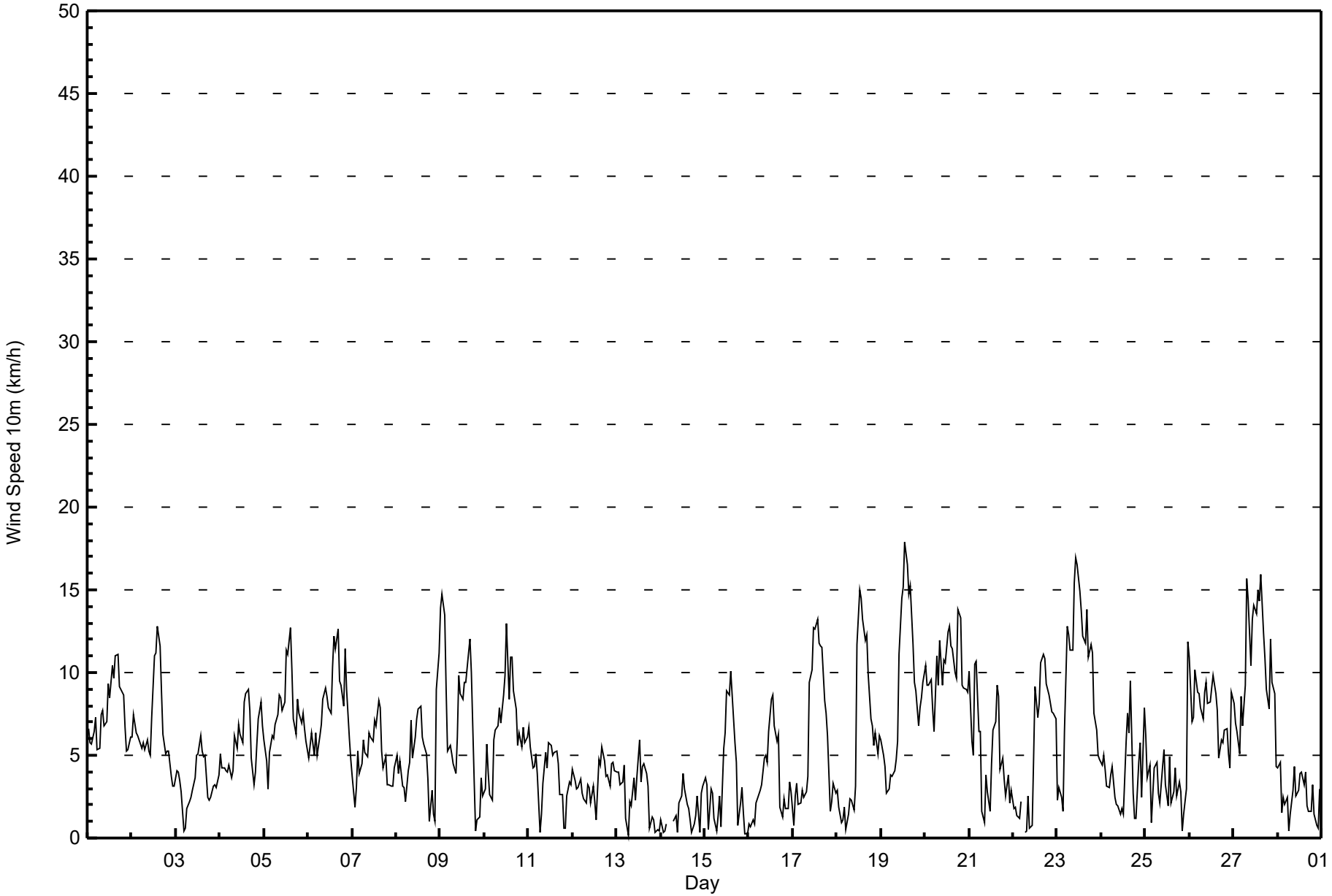
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Conklin - February 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	359	53.66	53.66
6 - 11	254	37.97	91.63
12 - 19	56	8.37	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: 669

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Conklin - February 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	5	8	11	14	15	38	49	44	35	15	9	12	23	33	25	359
6 - 11	7	4	2	2	2	3	9	15	10	27	33	17	22	38	42	21	254
12 - 19	1	0	0	0	0	0	1	11	6	2	7	3	5	7	7	6	56
20 - 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	31	9	10	13	16	18	48	75	60	64	55	29	39	68	82	52	669

Total Number of Valid Hours: 669

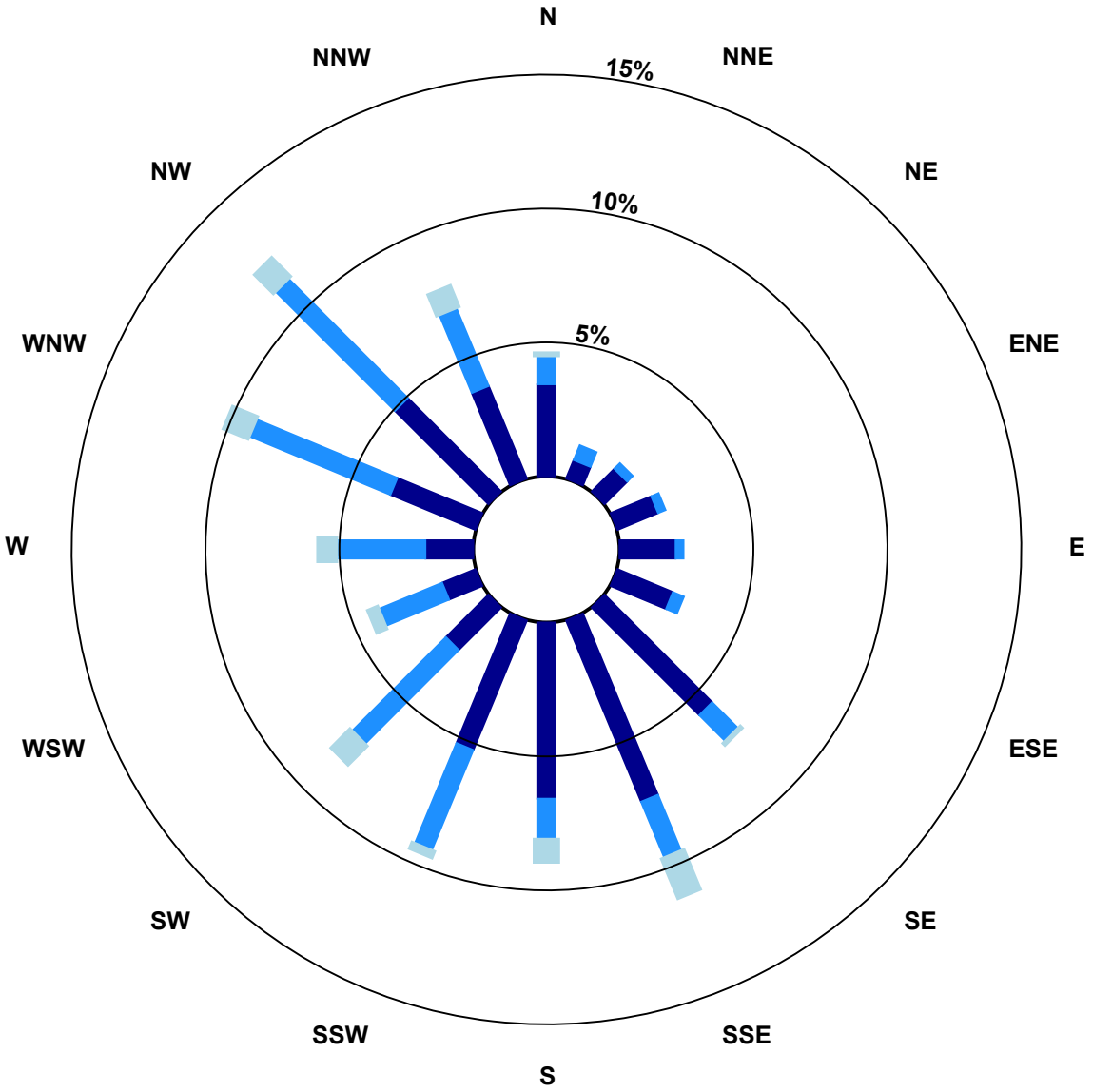
Total Number of Hours: 672

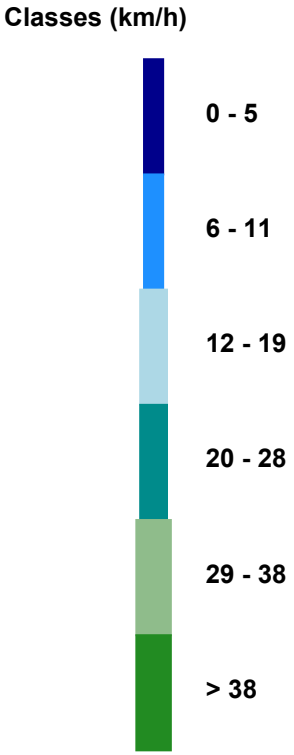
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Wind Speed 10m (WS10) - km/h

Conklin





Total Number of Valid Hours: 669

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7 km/h on Feb 23 12:00

Minimum Value: 0 km/h on Feb 17 06:00

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

Hours in Service:	672
Hours of Data:	669
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-Feb	3	2	2	2	3	1	1	2	2	2	3	3	4	4	4	4	4	3	4	4	3	2	2	2	4
2-Feb	2	3	2	3	3	2	2	2	2	2	2	3	4	4	5	4	3	2	1	2	1	1	1	1	5
3-Feb	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	1	1	1	2	2	1	2
4-Feb	2	2	1	1	1	1	2	1	3	2	2	2	2	4	3	3	2	1	1	1	2	2	2	2	4
5-Feb	2	2	2	2	2	2	2	2	2	2	2	4	4	4	4	4	2	2	3	3	3	3	3	3	4
6-Feb	2	2	2	2	2	2	3	3	3	3	3	4	3	4	6	4	3	3	3	3	5	3	2	1	6
7-Feb	1	1	1	2	1	1	1	1	1	3	3	2	3	3	3	3	3	1	1	1	1	1	1	1	3
8-Feb	1	1	1	1	1	1	1	1	3	1	3	3	4	3	2	3	2	2	1	1	1	2	3	5	5
9-Feb	4	4	4	3	2	3	3	2	1	3	3	3	3	3	3	3	4	4	2	1	1	1	2	1	4
10-Feb	2	1	1	1	2	1	2	2	2	2	3	4	4	3	4	3	3	2	2	2	3	3	2	2	4
11-Feb	2	1	1	1	1	1	1	1	2	2	1	2	2	2	2	2	2	1	1	1	1	1	1	1	2
12-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	2
13-Feb	1	1	1	1	1	1	1	1	1	1	1	3	2	2	2	3	2	1	1	1	1	1	1	1	3
14-Feb	1	1	1	1	UO	1	UO	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	2
15-Feb	1	1	1	2	2	1	1	1	1	1	2	4	4	3	4	4	2	3	1	1	1	1	1	1	4
16-Feb	1	1	1	1	1	1	1	1	1	1	1	2	2	2	3	2	2	2	1	1	1	1	1	1	3
17-Feb	1	1	0	1	1	0	0	1	2	3	3	3	3	4	3	3	3	2	2	2	1	1	1	0	4
18-Feb	1	1	1	1	1	1	1	1	2	1	3	3	4	4	4	3	3	3	2	1	1	1	1	1	4
19-Feb	1	1	1	1	1	1	1	1	1	2	7	5	4	5	4	4	4	4	3	3	1	2	2	2	7
20-Feb	3	3	2	3	2	3	4	3	3	3	3	3	4	4	4	4	3	3	4	4	3	3	3	3	4
21-Feb	3	2	2	3	4	3	2	1	1	2	2	2	2	3	3	5	3	2	1	1	1	2	1	1	5
22-Feb	1	1	1	1	1	UO	1	1	3	1	2	3	3	3	3	3	4	3	2	2	1	1	2	2	4
23-Feb	2	1	2	2	2	3	3	3	3	5	6	7	6	6	5	5	5	3	4	3	2	2	2	1	7
24-Feb	1	1	1	1	2	2	1	1	1	1	1	2	1	4	4	3	4	2	1	2	2	2	2	3	4
25-Feb	3	1	2	1	1	2	1	1	1	2	2	1	2	2	2	2	1	2	1	1	1	1	4	4	4
26-Feb	5	3	2	4	4	4	3	3	4	4	3	4	4	4	4	3	2	2	2	2	2	2	2	3	5
27-Feb	2	2	1	2	2	3	3	4	4	5	6	6	6	7	6	7	5	4	3	3	4	3	3	3	7
28-Feb	2	2	2	1	2	1	1	2	1	1	1	1	2	2	1	2	2	1	1	1	1	1	1	1	2
	5	4	4	4	4	4	4	4	4	5	7	7	6	7	6	7	5	4	4	4	5	3	4	5	
	Diurnal Maximum																								

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Conklin - February 2025

Direction of Maximum Speed: 154 deg on Feb 19 14:00
Direction of Maximum Daily Speed Average: 213.9 deg on Feb 20

Direction of Minimum Speed: 91 deg on Feb 13 07:00

Direction of Minimum Daily Speed Average: 0.5 deg on Feb 25

Monthly Average Direction: 254.3 deg

Hours in Service:	672
Hours of Data:	669
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-Feb	56	67	62	50	33	8	359	353	344	330	320	316	309	311	304	313	324	315	306	307	302	300	303	295	330.8
2-Feb	307	310	311	309	309	307	311	306	315	307	290	303	317	315	320	326	334	322	324	319	321	330	330	315	315.3
3-Feb	318	332	336	341	98	244	203	187	199	192	289	301	298	279	283	284	270	250	184	188	197	184	198	187	262.8
4-Feb	193	187	182	176	185	170	175	172	191	206	217	230	266	252	258	225	229	216	225	192	208	220	218	231	214.8
5-Feb	218	219	210	215	211	210	216	213	196	208	211	270	259	266	259	257	249	248	271	283	283	278	284	299	245.9
6-Feb	300	292	304	297	304	272	296	307	306	304	306	302	302	312	316	338	351	336	358	345	336	321	326	327	318.5
7-Feb	324	301	291	268	293	258	235	236	213	264	289	284	276	274	272	271	272	221	204	190	169	134	171	176	254.6
8-Feb	187	172	166	169	177	177	212	237	267	215	284	287	275	267	282	282	270	266	144	144	149	311	327	315	259.1
9-Feb	321	342	342	337	321	317	309	309	302	325	333	343	337	346	343	341	341	337	333	209	130	77	333	311	333.9
10-Feb	208	201	212	210	215	187	198	205	213	198	256	269	263	238	264	247	226	226	219	226	249	304	313	322	239.2
11-Feb	3	359	347	336	336	334	356	160	341	321	294	331	318	286	282	285	309	319	340	205	162	156	154	143	322.0
12-Feb	136	134	132	133	130	118	133	118	119	128	114	120	135	235	112	78	12	351	324	330	318	336	353	351	76.9
13-Feb	356	9	358	353	5	354	91	351	327	346	52	1	10	133	115	98	61	35	323	204	187	232	179	235	23.7
14-Feb	193	208	217	213	UO	183	UO	193	180	256	268	218	159	191	8	320	47	87	192	174	172	259	191	177	192.4
15-Feb	176	172	264	182	194	195	207	178	164	112	305	303	309	313	329	313	307	318	288	314	343	6	223	344	301.8
16-Feb	126	199	165	141	137	142	147	136	138	141	146	117	101	103	142	117	87	83	180	186	155	151	147	148	128.2
17-Feb	168	150	149	157	153	153	159	156	146	150	160	161	159	150	150	142	143	153	147	137	150	170	152	155	151.7
18-Feb	157	161	174	155	158	329	164	136	149	140	152	180	177	180	166	175	173	166	152	148	137	134	142	136	163.3
19-Feb	128	135	151	167	153	147	158	156	140	124	187	179	156	154	159	154	158	159	145	153	151	153	163	165	156.6
20-Feb	168	173	173	168	168	176	203	201	212	206	220	224	233	233	231	241	241	236	233	230	230	228	223	210	213.9
21-Feb	202	178	191	201	230	234	248	166	135	194	188	277	314	290	295	320	23	21	351	45	57	26	349	358	260.0
22-Feb	84	349	330	340	338	UO	283	185	131	169	351	256	207	215	229	233	214	206	202	197	198	200	193	223	212.7
23-Feb	211	167	176	140	187	226	231	229	231	248	263	271	272	284	303	317	333	328	338	352	358	358	51	98	280.2
24-Feb	88	92	99	62	65	71	27	57	101	68	198	307	279	286	285	283	256	255	157	166	187	245	182	259	261.3
25-Feb	293	308	356	46	21	56	124	142	139	86	102	127	84	136	119	118	119	131	330	323	275	301	230	253	105.8
26-Feb	293	275	247	270	293	300	296	290	286	293	294	293	283	282	281	283	293	275	254	227	219	205	215	227	274.5
27-Feb	229	220	190	161	191	195	202	204	238	283	291	291	301	295	297	312	314	316	322	328	342	341	31	21	284.3
28-Feb	50	74	120	67	203	154	314	135	96	103	103	173	211	237	313	302	305	179	162	164	323	305	150	144	138.2
	247.2	229.5	229.5	226.4	232.4	223.1	226.9	218.5	226.0	239.2	258.8	264.1	263.4	259.9	271.3	279.5	285.3	270.4	265.2	242.5	256.7	263.3	241.8	242.9	
	Diurnal Average																								

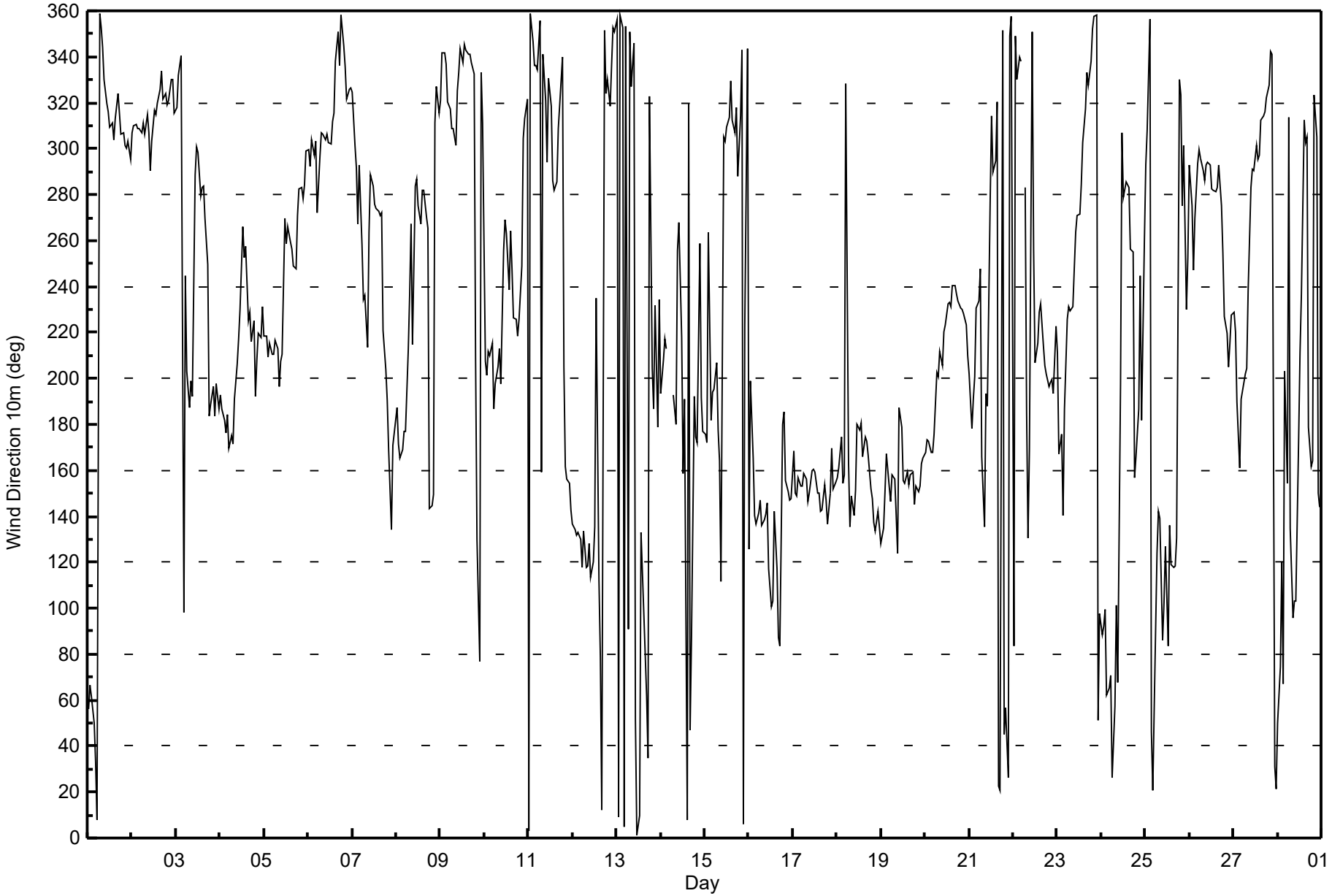
UO - Unstable Operation
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Conklin - February 2025



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

Maximum Value: 105 deg on Feb 22 11:00

Minimum Value: 10 deg on Feb 16 09:00

Percentiles: P_1 = 11 P_{10} = 16 Q_1 = 20 Median = 26 Q_3 = 36 P_{90} = 67 P_{99} = 91

Hours in Service:	672
Hours of Data:	669
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-Feb	33	32	35	28	26	22	20	17	15	19	19	21	28	24	28	26	18	22	26	26	30	32	27	29	35
2-Feb	24	24	24	28	27	29	24	24	18	31	34	31	23	24	20	19	17	14	12	18	13	13	22	33	34
3-Feb	18	15	18	23	76	73	20	18	33	21	57	30	34	34	36	32	21	44	46	56	26	29	35	16	76
4-Feb	15	20	20	18	17	18	28	18	25	27	24	26	39	34	27	21	19	21	24	21	26	23	20	23	39
5-Feb	23	28	62	24	24	19	18	16	13	15	15	37	25	29	23	23	18	22	28	33	31	30	35	33	62
6-Feb	29	33	31	36	31	43	33	30	26	27	27	32	32	25	29	20	18	18	19	20	18	18	17	18	43
7-Feb	17	39	36	25	29	24	20	17	15	32	33	37	33	36	28	32	28	26	14	34	49	25	24	13	49
8-Feb	12	20	13	27	29	30	26	22	29	25	33	35	33	32	34	35	27	35	43	19	48	84	16	26	84
9-Feb	20	17	17	18	15	24	25	24	24	21	22	24	25	25	32	21	20	16	28	83	57	54	34	33	83
10-Feb	36	11	27	36	67	15	18	21	18	22	31	32	24	31	26	28	20	20	27	21	45	27	22	16	67
11-Feb	22	17	17	14	16	16	85	34	71	24	35	38	41	42	36	35	28	22	46	89	76	21	14	23	89
12-Feb	14	14	25	32	18	47	36	26	23	20	27	25	67	84	26	37	32	22	13	19	19	13	21	20	84
13-Feb	21	25	22	15	18	66	74	16	27	26	81	90	36	70	52	61	35	21	72	28	58	71	83	54	90
14-Feb	52	66	78	30	UO	59	UO	12	59	86	56	40	41	54	96	98	99	77	82	37	22	84	21	17	99
15-Feb	17	19	81	28	43	59	74	21	19	82	31	35	28	31	25	27	27	20	59	19	15	19	87	86	87
16-Feb	39	76	76	68	70	42	18	19	10	11	12	24	24	23	34	40	30	55	33	22	46	48	13	17	76
17-Feb	81	15	12	17	17	14	14	15	16	17	22	19	22	19	22	20	18	15	13	14	30	29	15	23	81
18-Feb	24	68	75	84	67	90	19	68	60	72	84	20	22	21	20	21	17	18	15	10	11	10	16	10	90
19-Feb	10	13	18	18	14	14	14	11	19	23	43	21	20	19	19	20	18	19	14	15	13	11	14	16	43
20-Feb	17	17	15	16	16	26	24	23	21	27	23	23	23	22	27	20	17	21	21	18	24	27	26	21	27
21-Feb	22	26	33	20	28	47	20	68	83	24	35	95	34	36	36	36	21	33	15	42	49	32	37	32	95
22-Feb	71	68	46	61	47	UO	88	93	44	87	105	58	26	25	22	24	20	14	17	16	13	12	15	25	105
23-Feb	83	34	83	89	18	20	19	17	19	22	25	28	27	31	30	26	18	18	18	19	20	20	36	27	89
24-Feb	31	27	28	39	47	38	23	52	66	67	73	86	90	43	39	39	26	42	77	91	19	27	65	30	91
25-Feb	28	24	48	93	21	40	32	26	38	38	39	38	91	33	89	57	18	55	41	24	79	61	82	28	93
26-Feb	32	30	25	29	30	32	30	29	31	34	34	33	33	31	33	33	31	28	22	18	19	24	59	21	59
27-Feb	18	18	21	27	20	25	21	16	22	33	34	31	28	31	30	24	23	22	18	19	17	20	22	40	40
28-Feb	31	41	51	36	51	37	78	48	45	33	59	57	49	59	57	59	37	33	51	21	67	76	59	19	78
	83	76	83	93	76	90	88	93	83	87	105	95	91	84	96	98	99	77	82	91	79	84	87	86	
	Diurnal Maximum																								

UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS22
JANVIER
FEBRUARY 2025

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

March 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JANVIER (AMS22)
FEBRUARY 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	639	32	33	99.85	-	-	4.7	0	1.6	0
TRS(ppb) Average	638	33	34	99.85	0.7	0	0.7	-	0.4	-
THC(ppm) Average	636	32	36	99.4	-	-	2.3	-	2.1	-
NMHC(ppm) Average	636	32	36	99.4	-	-	0.031	-	0.002	-
CH4(ppm) Average	636	32	36	99.4	-	-	2.3	-	2.1	-
O3 (ppb) Average	639	32	33	99.85	-	-	51.4	0	39.2	-
NO2 (ppb) Average	638	34	34	100	-	-	16.8	0	6.4	-
NO (ppb) Average	638	34	34	100	-	-	6.5	-	1.7	-
NOX (ppb) Average	638	34	34	100	-	-	22.9	-	8.2	-
PM2.5 (ug/m3) Average	671	1	1	100	-	-	48.3	0	8.9	0
Temperature 2 m (C) Average	672	0	0	100	-	-	9	-	2	-
Relative Humidity (%) Average	672	0	0	100	-	-	99	-	90.9	-
Wind Speed 10 m (km/h) Average	671	0	1	99.85	-	-	17	-	10	-
Wind Speed 20 m (km/h) Average	670	0	2	99.7	-	-	25	-	12	-
Wind Direction 10 m (deg) Average	671	0	1	99.85	-	-	-	-	-	-
Wind Direction 20 m (deg) Average	670	0	2	99.7	-	-	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JANVIER (AMS22)
FEBRUARY 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	639	0.5	0.6	-	0	0	0.1	0.3	0.6	1.1	4.7
TRS (ppb) Average	638	0.2	0.1	-	0.1	0.1	0.2	0.2	0.2	0.3	0.7
THC (ppm) Average	636	2.05	0	-	1.9	2	2	2	2.1	2.1	2.3
NMHC(ppm) Average	636	0	0.001	-	0	0	0	0	0	0	0.031
CH4(ppm) Average	636	2.05	0	-	1.9	2	2	2	2.1	2.1	2.3
O3 (ppb) Average	639	33.11	6.5	-	11.3	24.3	29.1	33.8	37	40.4	51.4
NO2 (ppb) Average	638	2.52	2.1	-	0	0.5	1	2	3.3	5.3	16.8
NO (ppb) Average	638	0.58	0.8	-	0	0	0.1	0.4	0.7	1.3	6.5
NOX (ppb) Average	638	3.1	2.6	-	0	0.7	1.4	2.4	4	6.1	22.9
PM2.5 (ug/m3) Average	671	3.65	3	-	0.2	1.8	2.3	3	4.1	5.9	48.3
Temperature 2 m (C) Average	672	-16.22	11	-	-36.3	-29.3	-24.6	-18.8	-5.8	-0.1	9
Relative Humidity (%) Average	672	71.44	12.9	-	22.4	53.1	64.5	74	79.5	85.1	99
Wind Speed 10 m (km/h) Average	671	5.8	3	-	0	2	3	6	8	10	17
Wind Speed 20 m (km/h) Average	670	7.9	4	-	0	3	5	8	11	13	25
Wind Direction 10 m (deg) Average	671	-	-	-	-	-	-	-	-	-	-
Wind Direction 20 m (deg) Average	670	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JANVIER (AMS22)
FEBRUARY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
O3, SO2, THC/NMHC/CH4, TRS	28 Feb 2025 16:00	28 Feb 2025 16:00	1	Maintenance - sample manifold cleaned
THC/NMHC/CH4	24 Feb 2025 14:00	24 Feb 2025 16:00	3	Maintenance - replaced support gas cylinder
Wind Speed, Wind Direction 10m	14 Feb 2025 03:00	14 Feb 2025 03:00	1	Flat line in sensor output signal - Sensor frozen
Wind Speed, Wind Direction 20m	16 Feb 2025 02:00	16 Feb 2025 03:00	2	Flat line in sensor output signal - Sensor frozen

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Janvier - February 2025

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

Maximum Value: 4.7 ppb on Feb 25 05:00

Maximum Daily Average: 1.6 ppb on Feb 2

Minimum Value: 0.0 ppb on Feb 3 17:00

Minimum Daily Average: 0.1 ppb on Feb 4

Maximum Diurnal Average: 0.7 ppb at hour 16

Minimum Diurnal Average: 0.3 ppb at hour 3

Monthly Average: 0.50 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.3 Q_3 = 0.6 P_{90} = 1.1 P_{99} = 3.3

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	32
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-Feb	0.2	0.1	Z	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.3	0.6	0.8	1.0	2.7	4.5	4.6	3.2	1.2	0.9	0.7	0.4	0.4	1.1	1.0	4.6
2-Feb	2.8	2.7	1.4	Z	1.2	1.0	0.6	0.7	0.5	0.5	0.2	0.2	0.3	0.3	0.3	1.3	1.8	2.9	2.1	3.6	3.6	2.4	3.3	2.1	1.6	3.6
3-Feb	0.6	0.1	0.2	0.2	Z	0.7	0.7	0.8	0.4	0.1	0.1	0.0	0.3	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8
4-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.4
5-Feb	Z	0.3	0.3	0.6	0.5	0.6	0.5	0.4	0.5	0.5	0.4	0.6	C	C	C	C	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.3	0.6
6-Feb	0.6	0.5	Z	0.7	0.6	0.5	0.4	0.3	0.5	0.4	0.3	0.3	0.5	0.5	0.4	0.3	0.8	0.8	1.4	1.3	1.1	0.7	0.3	0.1	0.6	1.4
7-Feb	0.2	0.3	Z	1.2	0.7	0.3	0.2	0.2	0.4	0.2	0.1	0.0	0.0	0.2	0.3	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	1.2
8-Feb	0.0	0.0	0.0	Z	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.2	0.2	0.1	0.1	0.1	0.1	0.7	0.1	0.7
9-Feb	0.5	0.2	0.2	0.8	Z	0.3	0.1	0.2	0.4	0.7	0.5	1.0	2.0	2.1	2.1	2.4	2.3	0.7	0.5	0.3	0.5	0.4	0.4	0.4	0.8	2.4
10-Feb	0.2	0.1	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.1	0.0	0.0	0.0	0.2	0.1	0.4
11-Feb	Z	0.4	0.3	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.4	0.3	0.4	0.8	0.7	1.3	2.4	2.5	1.4	0.9	0.7	0.7	0.3	0.6	2.5
12-Feb	0.2	Z	0.1	0.0	0.1	0.2	0.3	0.3	0.3	0.3	0.4	0.5	0.7	0.5	0.7	0.9	0.7	0.8	0.8	0.5	0.5	0.3	0.5	0.6	0.4	0.9
13-Feb	0.7	0.8	Z	0.9	0.9	0.8	0.5	0.6	0.6	0.6	0.4	0.1	0.3	0.5	0.5	0.7	0.7	0.3	0.2	0.1	0.2	0.1	0.2	0.3	0.5	0.9
14-Feb	0.1	0.1	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8	0.4	0.2	0.3	0.3	0.3	0.1	0.2	0.2	0.1	0.1	0.0	0.0	0.1	0.8
15-Feb	0.1	0.0	0.0	0.0	Z	0.3	0.5	0.5	0.8	1.0	1.2	1.1	1.1	1.0	0.4	0.3	0.3	0.8	1.0	0.6	0.5	0.2	0.3	0.2	0.5	1.2
16-Feb	0.2	0.2	0.1	0.1	0.1	Z	0.1	0.0	0.0	0.1	0.1	0.6	0.9	1.0	0.8	0.8	0.8	0.6	0.3	0.1	0.1	0.1	0.2	0.2	0.3	1.0
17-Feb	Z	0.7	0.5	0.5	0.9	1.0	1.1	1.2	1.1	1.0	0.8	0.8	0.8	0.7	0.6	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1	0.6	1.2
18-Feb	0.0	Z	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6	1.3	1.4	0.7	0.4	0.4	0.6	0.3	0.1	0.2	0.5	0.6	0.7	0.6	0.4	1.4
19-Feb	0.7	0.8	Z	0.9	0.8	1.0	1.0	0.8	0.9	1.1	1.2	1.1	0.9	0.9	0.8	0.6	0.5	0.3	0.3	0.2	0.2	0.2	0.2	0.5	0.7	1.2
20-Feb	0.6	1.1	1.6	Z	2.0	1.9	1.9	1.6	1.0	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.8	2.0
21-Feb	0.2	0.2	0.1	0.0	Z	0.1	0.0	0.0	0.2	0.1	0.1	0.1	0.2	0.7	0.9	0.9	0.6	0.4	0.5	0.5	0.6	0.7	0.5	0.3	0.3	0.9
22-Feb	0.2	0.3	0.2	0.3	0.2	Z	0.3	0.2	0.3	0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.5	0.4	0.5	0.6	0.3	0.6
23-Feb	Z	0.4	0.3	0.3	0.2	0.6	0.2	0.2	0.2	0.3	0.4	0.2	0.2	0.2	0.5	1.1	0.7	0.7	1.5	2.1	1.9	2.3	1.8	1.8	0.8	2.3
24-Feb	1.2	Z	0.9	0.9	0.7	0.7	0.8	0.8	0.6	0.5	0.4	0.4	0.4	0.4	0.2	0.3	0.4	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.5	1.2
25-Feb	0.3	0.2	Z	0.8	4.7	4.5	3.3	2.6	1.9	1.3	1.1	1.1	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.2	0.4	0.4	0.3	0.3	1.2	4.7
26-Feb	0.4	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.2	0.4	0.2	0.1	0.2	0.2	0.2	0.3	0.3	0.5	0.6	0.5	0.3	0.6
27-Feb	0.5	0.4	0.3	0.3	Z	0.3	0.8	0.4	0.3	0.4	0.4	0.2	0.2	0.2	0.2	0.4	0.2	0.1	0.1	0.8	1.9	1.1	0.2	0.2	0.4	1.9
28-Feb	0.1	0.2	0.1	0.2	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.4	0.7	0.8	M	0.6	0.4	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.8
	0.5	0.4	0.3	0.4	0.6	0.7	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.7	0.7	0.6	0.5	0.5	0.5	0.5	0.4	0.4	Diurnal Average	
	2.8	2.7	1.6	1.2	4.7	4.5	3.3	2.6	1.9	1.3	1.2	1.3	2.0	2.1	2.7	4.5	4.6	3.2	2.5	3.6	3.6	2.4	3.3	2.1	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

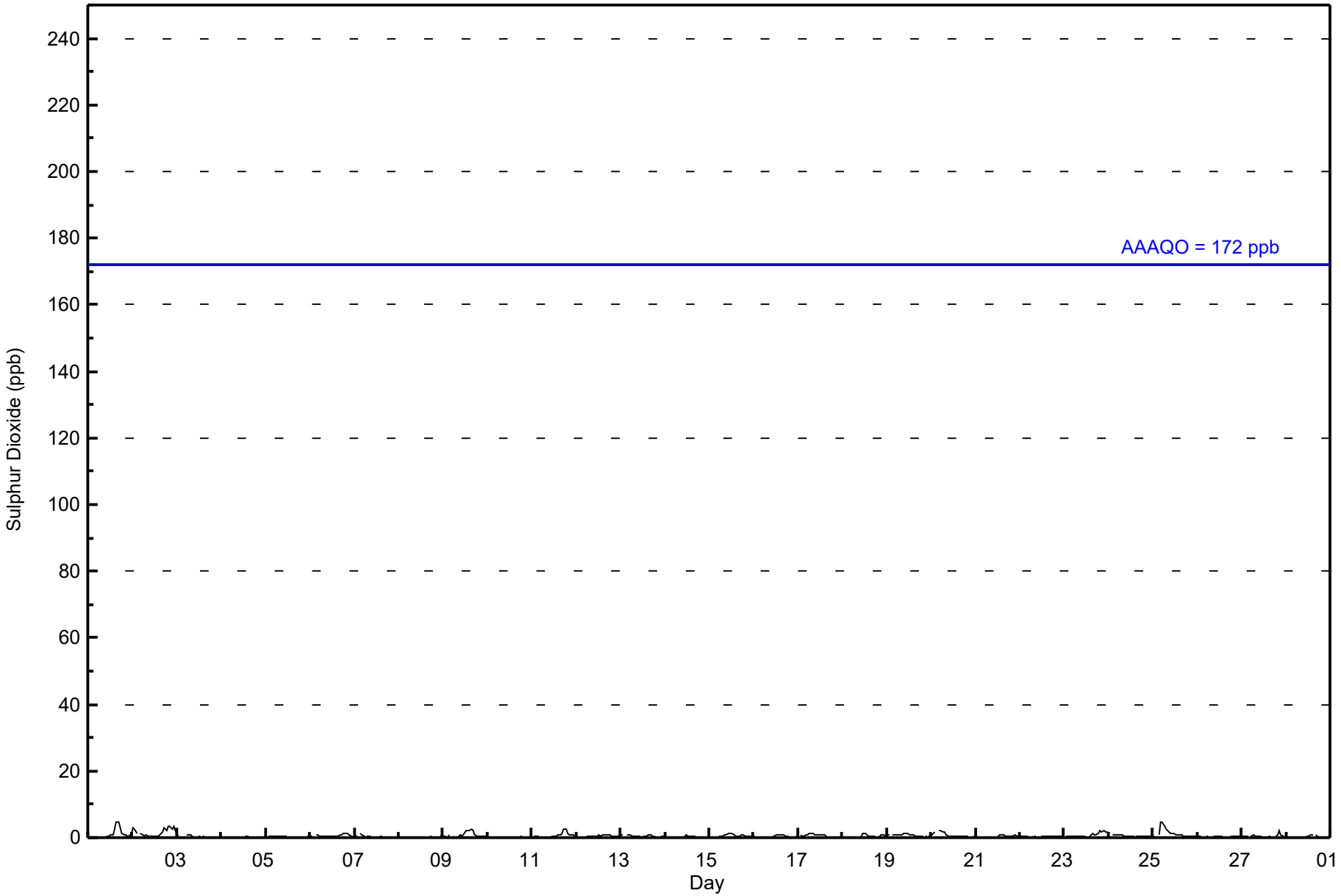
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Janvier - February 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Janvier - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	639	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: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Janvier - February 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	62	106	30	22	6	11	10	31	45	62	112	44	27	27	24	18	637
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	62	106	30	22	6	11	10	31	45	62	112	44	27	27	24	18	637

Total Number of Valid Hours: 637

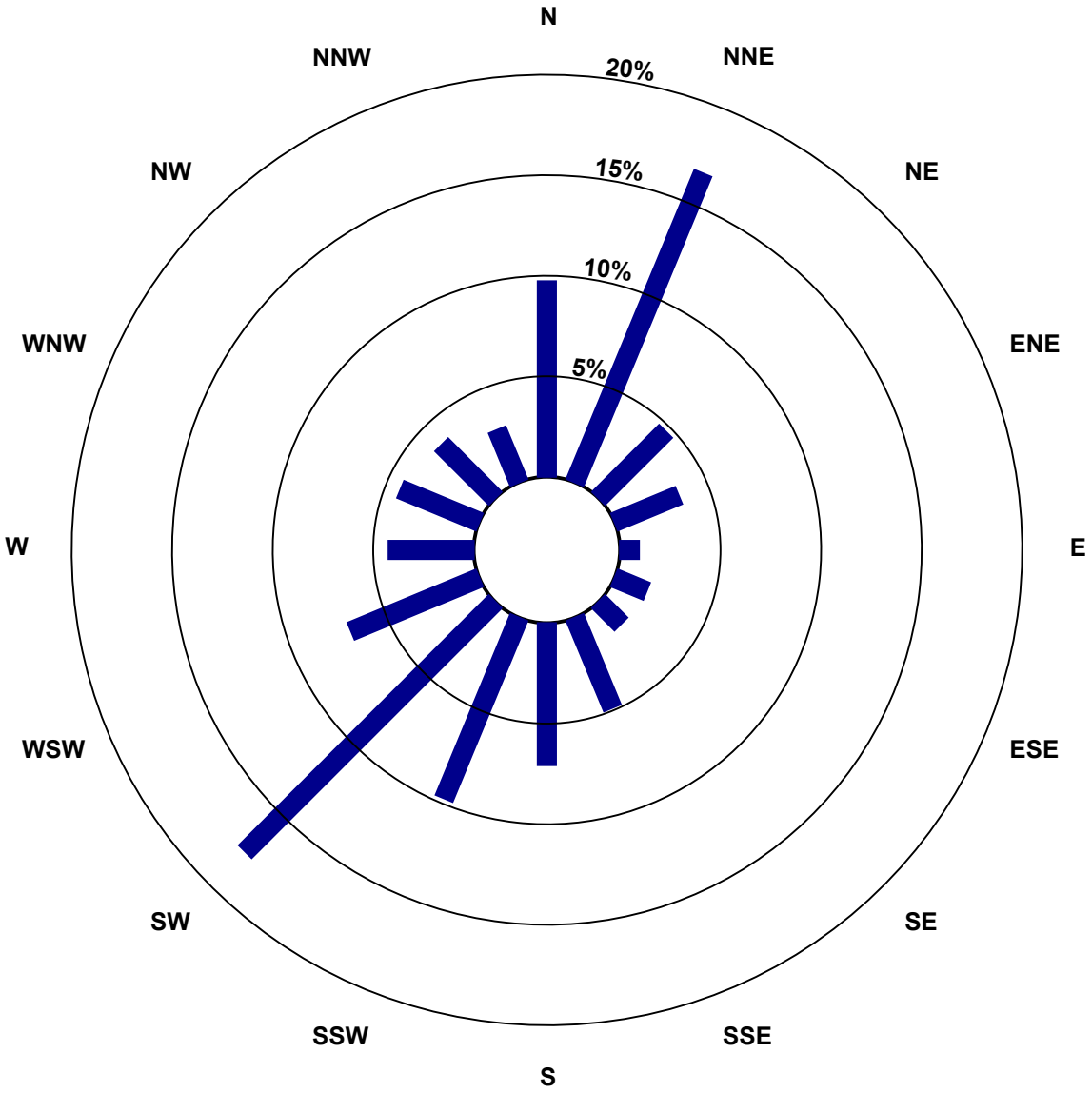
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Sulphur Dioxide (SO_2) - ppb

Janvier



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

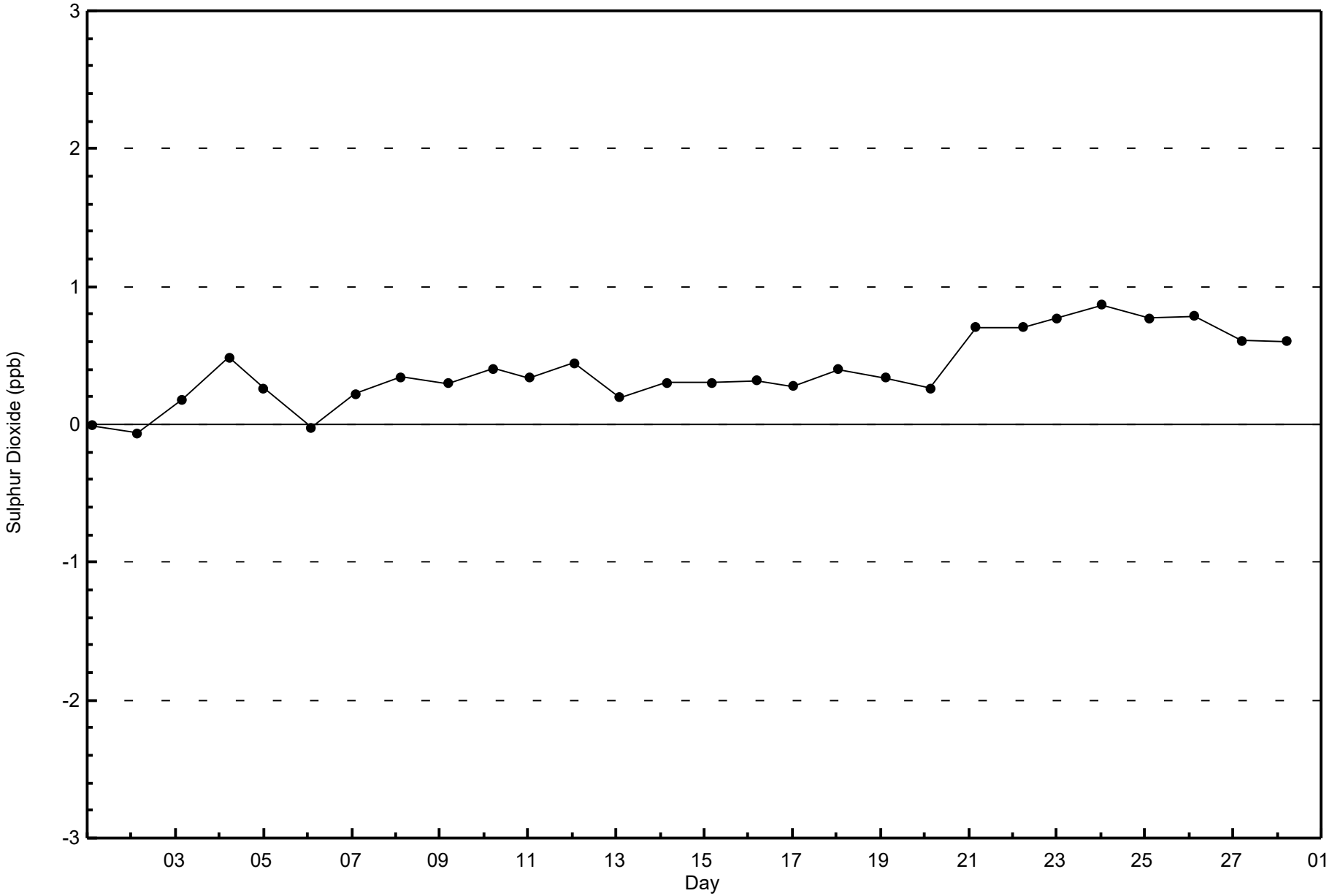
Total Number of Valid Hours: 637

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Janvier - February 2025

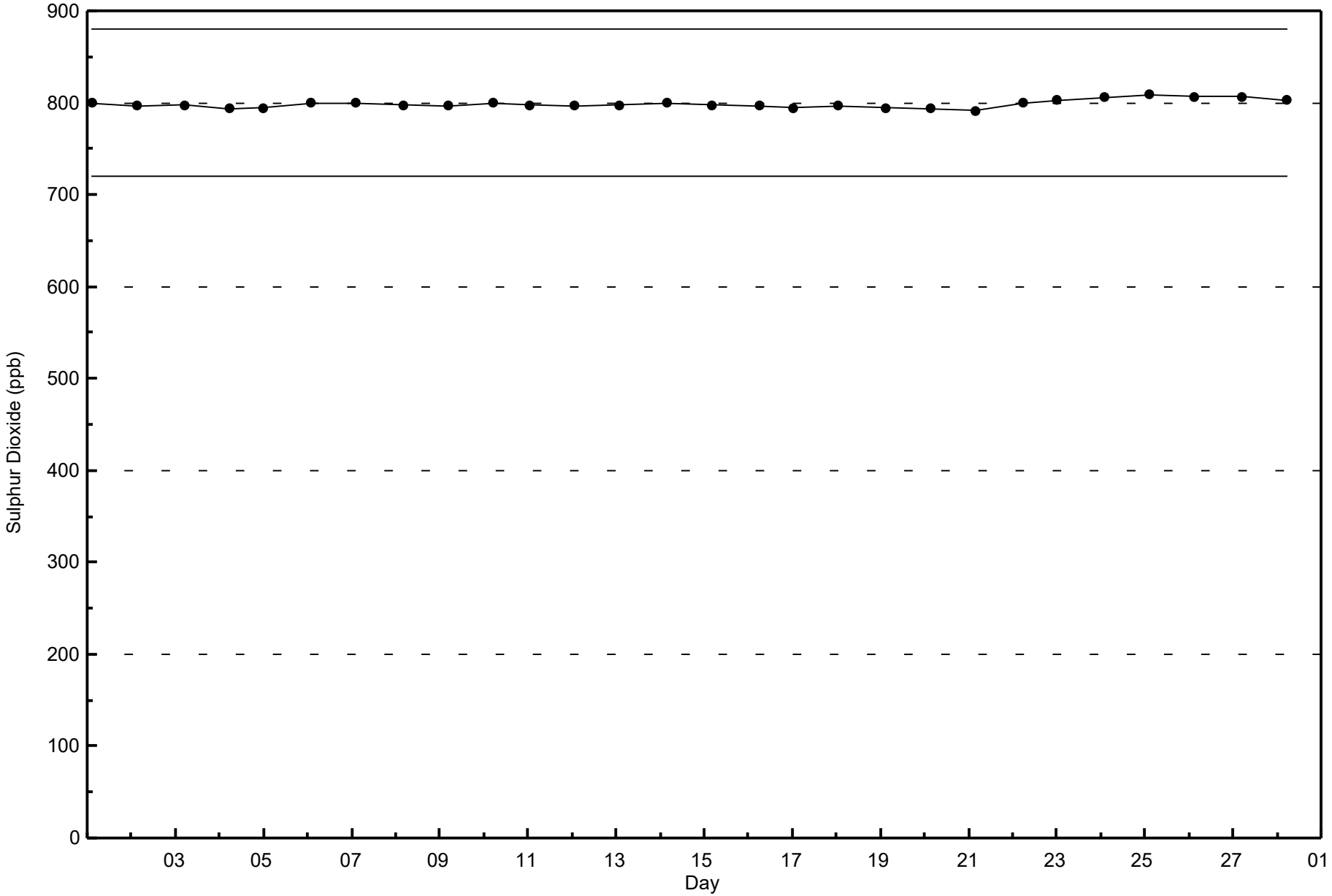


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Janvier - February 2025



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Janvier - February 2025

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

Maximum Value: 0.7 ppb on Feb 25 10:00 Maximum Daily Average: 0.4 ppb on Feb 25

Minimum Value: 0.1 ppb on Feb 28 00:00 Minimum Daily Average: 0.1 ppb on Feb 5

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

Monthly Average: 0.20 ppb Percentiles: P_1 = 0.1 P_{10} = 0.1 Q_1 = 0.2 Median = 0.2 Q_3 = 0.2 P_{90} = 0.3 P_{99} = 0.5

Periods in Service:	1344
Periods of Valid Data:	1277
Periods of Invalid Data:	67
Periods of Calibration:	66
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-Feb	0.2	0.2	0.2	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	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	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
2-Feb	0.2	0.2	0.2	0.3	Z	0.4	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.4
	0.2	0.2	0.2	0.2	SP	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2		
3-Feb	0.2	0.2	0.2	0.2	0.2	Z	0.6	0.4	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.6
	0.2	0.2	0.2	0.2	0.2	SP	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.1		
4-Feb	Z	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.3
	SP	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1		
5-Feb	0.1	Z	0.3	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	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.3
	0.1	SP	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		
6-Feb	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	0.2	0.1	0.1	SP	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2		
7-Feb	0.2	0.2	0.1	Z	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.3
	0.2	0.1	0.1	SP	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.1	0.1		
8-Feb	0.1	0.1	0.1	0.1	Z	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	0.1	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		
9-Feb	0.3	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
10-Feb	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	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		
11-Feb	0.2	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.2	0.4
	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	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3		
12-Feb	0.3	0.3	Z	0.4	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	0.4
	0.3	0.3	SP	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2		
13-Feb	0.2	0.2	0.2	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	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	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
14-Feb	0.2	0.2	0.2	0.2	Z	0.4	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4
	0.2	0.2	0.2	0.3	SP	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
15-Feb	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	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3
	0.2	0.2	0.2	0.2	0.2	SP	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.1		

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Janvier - February 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-Feb	Z	0.3	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	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	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
17-Feb	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	0.1	0.2	0.1	0.1	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	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1		
18-Feb	0.1	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	0.2	0.2	0.2	0.2	0.2	0.3
	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	0.2		
19-Feb	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	0.3	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		
20-Feb	0.2	0.2	0.2	0.2	Z	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	0.2	0.2	0.2	0.2	SP	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
21-Feb	0.2	0.2	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
22-Feb	Z	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3
	SP	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
23-Feb	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	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.3
	0.2	SP	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2		
24-Feb	0.2	0.2	Z	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3
	0.2	0.3	SP	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
25-Feb	0.2	0.2	0.2	Z	0.5	0.5	0.5	0.4	0.4	0.7	0.7	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.7
	0.2	0.2	0.2	SP	0.5	0.5	0.5	0.4	0.5	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3		
26-Feb	0.3	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.3
	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	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3		
27-Feb	0.3	0.3	0.2	0.2	0.2	Z	0.3	0.2	0.3	0.2	0.2	0.2	C	C	C	C	C	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.4
	0.3	0.2	0.2	0.2	0.4	SP	0.2	0.3	0.2	0.2	0.2	0.2	C	C	C	C	C	0.3	0.2	0.2	0.2	0.2	0.1	0.1		
28-Feb	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	M	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	0.2		
	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Diurnal Average	
	0.3	0.3	0.3	0.4	0.5	0.5	0.6	0.4	0.5	0.7	0.7	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.3	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance SP - Span

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

Wood Buffalo Environmental Association

Summary of Hour Averages

Total Reduced Sulphur (TRS) - ppb

Janvier - February 2025

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

Maximum Value: 0.7 ppb on Feb 25 10:00

Maximum Daily Average: 0.4 ppb on Feb 25

Minimum Value: 0.1 ppb on Feb 5 22:00

Minimum Daily Average: 0.1 ppb on Feb 5

Maximum Diurnal Average: 0.2 ppb at hour 6

Minimum Diurnal Average: 0.2 ppb at hour 17

Monthly Average: 0.20 ppb

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

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	33
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-Feb	0.2	0.2	0.2	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
2-Feb	0.2	0.2	0.2	0.2	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	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.3
3-Feb	0.2	0.2	0.2	0.2	0.2	Z	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.5
4-Feb	Z	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2
5-Feb	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	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
6-Feb	0.1	0.1	0.1	Z	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
7-Feb	0.2	0.2	0.1	Z	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2
8-Feb	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
9-Feb	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-Feb	Z	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
11-Feb	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	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3
12-Feb	0.3	0.3	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.3
13-Feb	0.2	0.2	0.2	Z	0.3	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	0.3
14-Feb	0.2	0.2	0.2	0.2	Z	0.4	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4
15-Feb	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	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.3
16-Feb	Z	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
17-Feb	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	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3
18-Feb	0.1	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	0.2	0.2	0.2	0.2	0.2	0.3
19-Feb	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
20-Feb	0.2	0.2	0.2	0.2	Z	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
21-Feb	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-Feb	Z	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3
23-Feb	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.3
24-Feb	0.2	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	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
25-Feb	0.2	0.2	0.2	Z	0.5	0.5	0.5	0.4	0.4	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.7
26-Feb	0.3	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.3
27-Feb	0.3	0.3	0.2	0.2	0.3	Z	0.2	0.3	0.2	0.2	0.2	0.2	C	C	C	C	C	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.3
28-Feb	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	M	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Diurnal Average	
	0.3	0.3	0.3	0.3	0.5	0.5	0.5	0.4	0.4	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

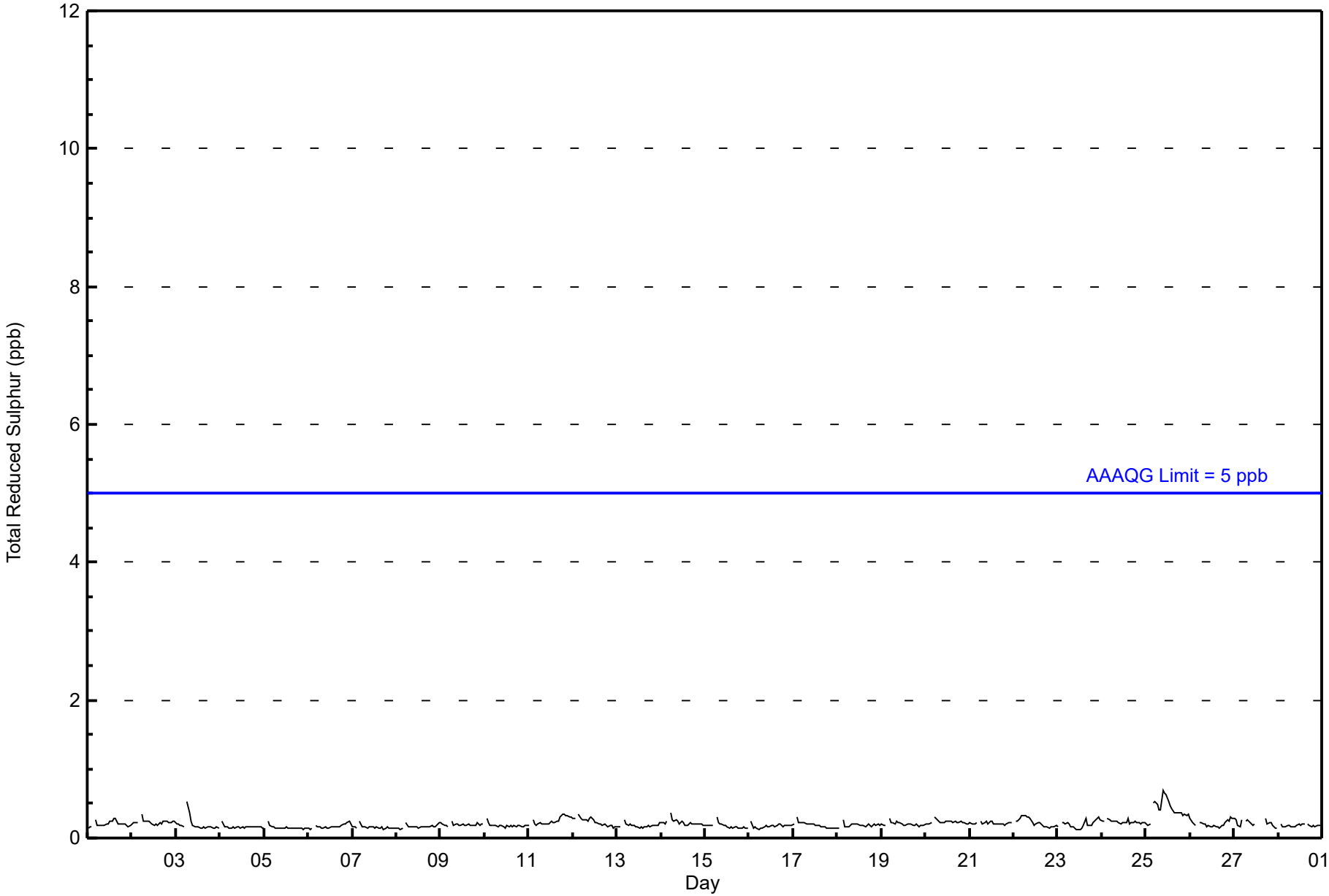
Alberta Ambient Air Quality Objective (AAAQO): 1-hour NA 24-hr NA

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Janvier - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	638	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: 638

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Janvier - February 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	60	107	30	23	6	11	10	28	48	65	110	46	29	24	23	16	636
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	60	107	30	23	6	11	10	28	48	65	110	46	29	24	23	16	636

Total Number of Valid Hours: 636

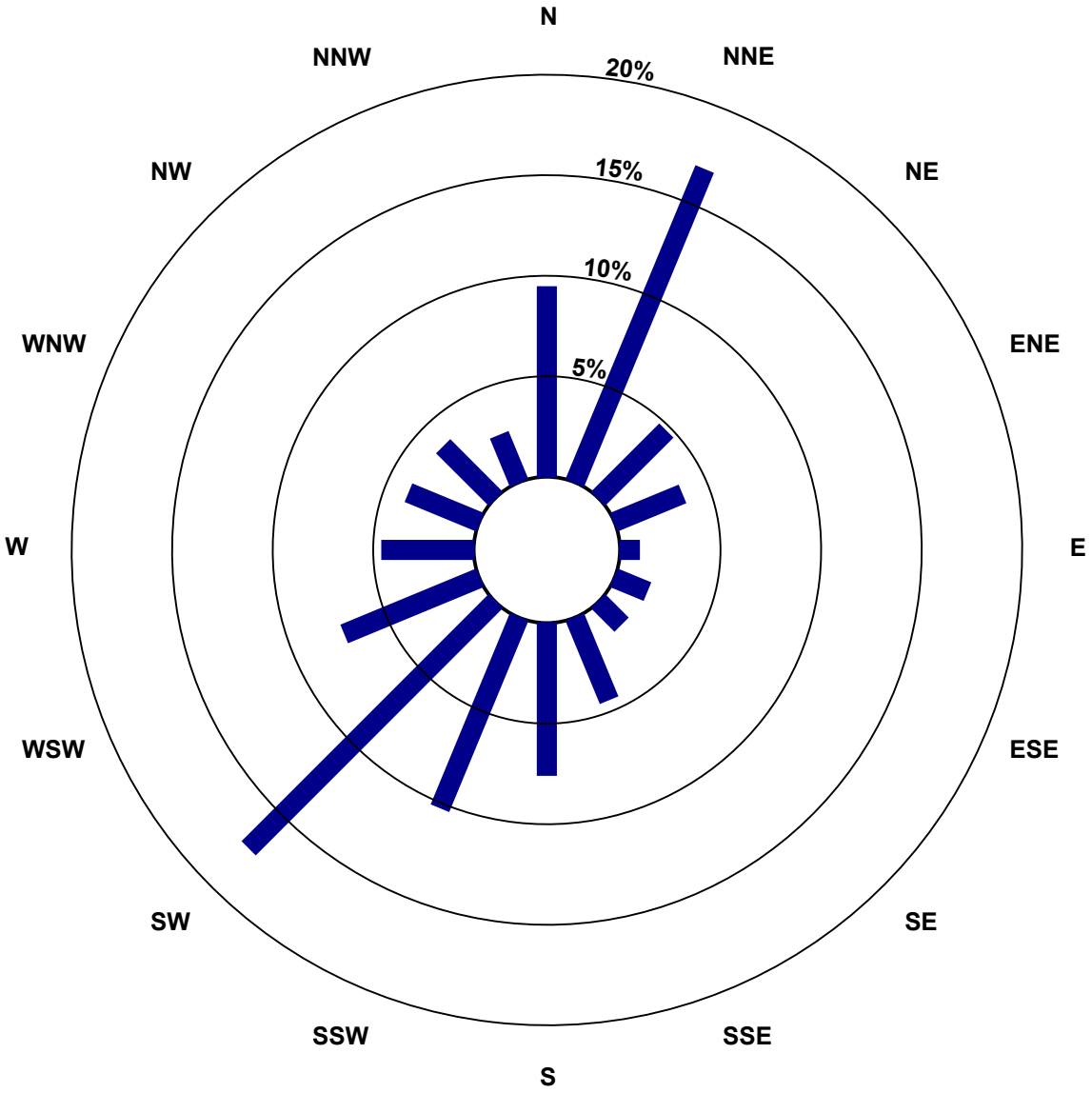
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Total Reduced Sulphur (TRS) - ppb

Janvier



Classes (ppb)

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

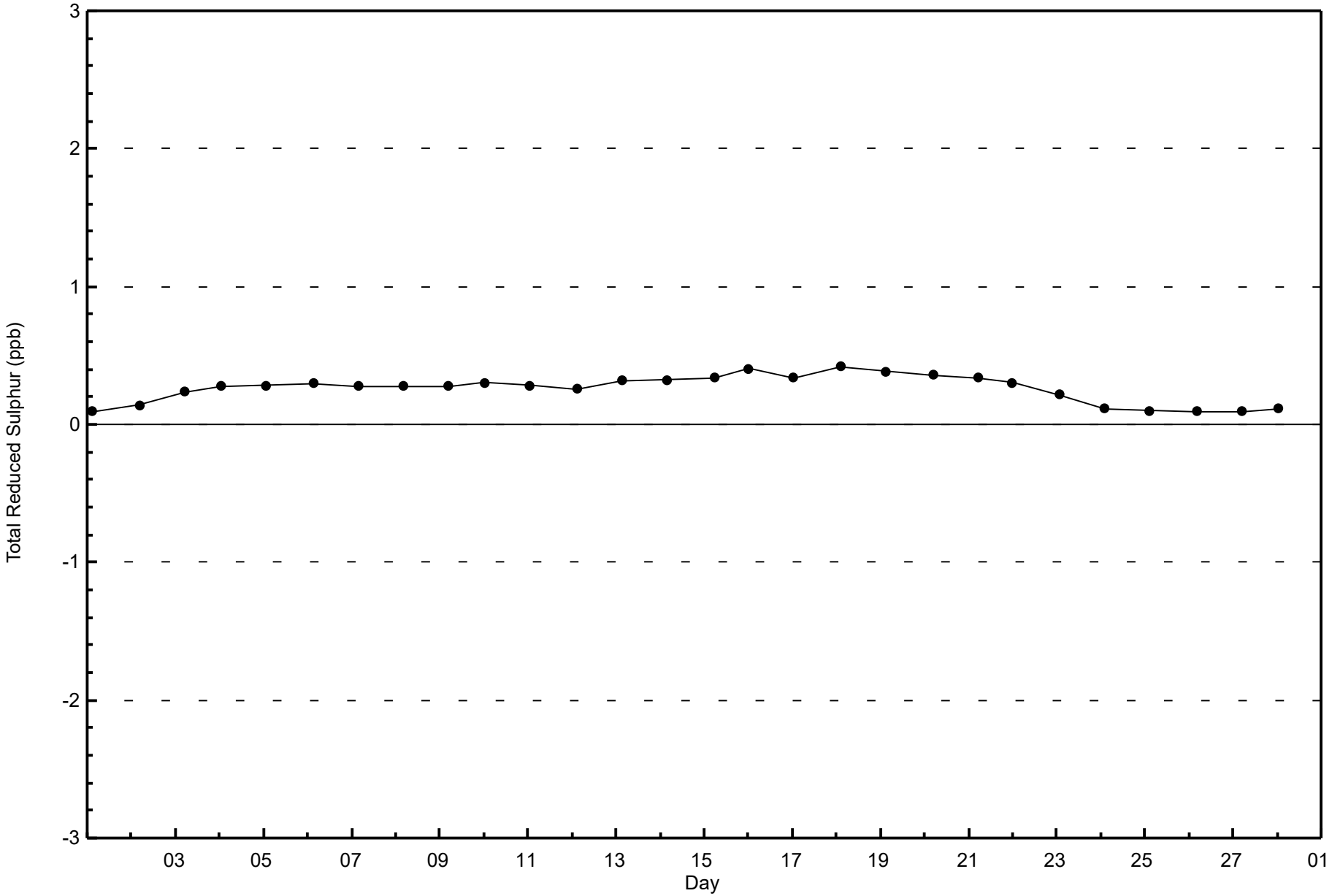
Total Number of Valid Hours: 636

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Janvier - February 2025

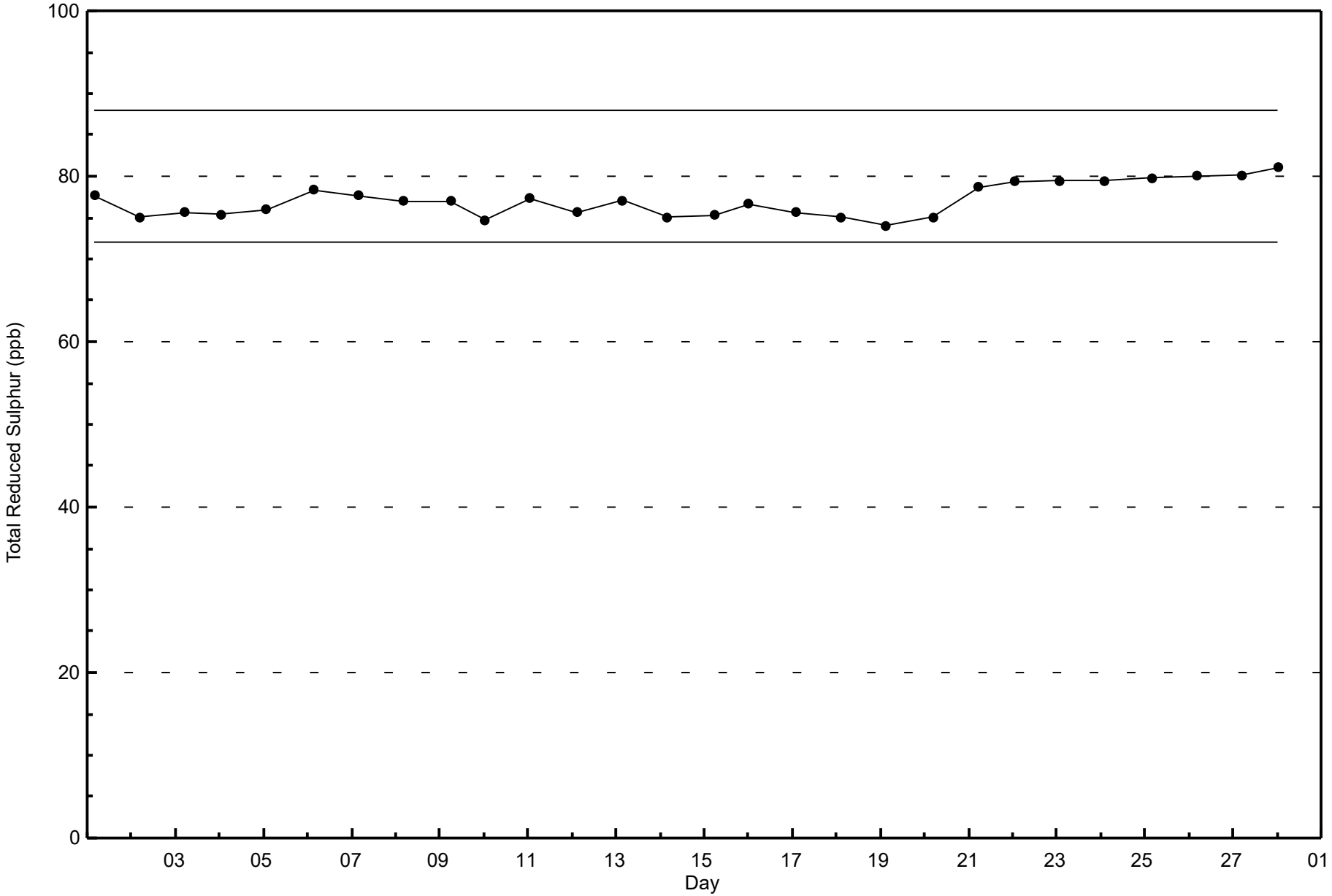


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Janvier - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Janvier - February 2025

Maximum Value: 2.3 ppm on Feb 25 10:00

Maximum Daily Average: 2.1 ppm on Feb 22

Minimum Value: 1.9 ppm on Feb 27 12:00

Minimum Daily Average: 2.0 ppm on Feb 26

Maximum Diurnal Average: 2.1 ppm at hour 8

Minimum Diurnal Average: 2.0 ppm at hour 17

Monthly Average: 2.05 ppm

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

Hours in Service:	672
Hours of Data:	636
Hours of Missing Data:	36
Hours of Calibration:	32
Percent Operational Time:	99.4

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
2-Feb	2.0	2.0	2.0	Z	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	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
3-Feb	2.0	2.0	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
4-Feb	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
5-Feb	Z	2.0	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	2.1	2.1	2.1	2.1	2.0	2.1
6-Feb	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	2.1	2.1	2.1	2.1	2.0	2.1
7-Feb	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
8-Feb	2.0	2.1	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.1
9-Feb	2.1	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1
10-Feb	2.1	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1
11-Feb	Z	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2
12-Feb	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1
13-Feb	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
14-Feb	2.1	2.1	2.1	Z	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.2
15-Feb	2.0	2.0	2.0	2.1	Z	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
16-Feb	2.1	2.1	2.1	2.1	2.1	Z	2.1	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	2.1
17-Feb	Z	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
18-Feb	2.0	Z	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
19-Feb	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
20-Feb	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
21-Feb	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
22-Feb	2.1	2.1	2.1	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
23-Feb	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
24-Feb	2.0	Z	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	M	M	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1
25-Feb	2.1	2.0	Z	2.0	2.1	2.1	2.1	2.1	2.1	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	2.3
26-Feb	2.1	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1
27-Feb	2.1	2.1	2.0	2.0	Z	2.0	2.0	2.1	2.1	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
28-Feb	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	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	Diurnal Average	
	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	Diurnal Maximum	

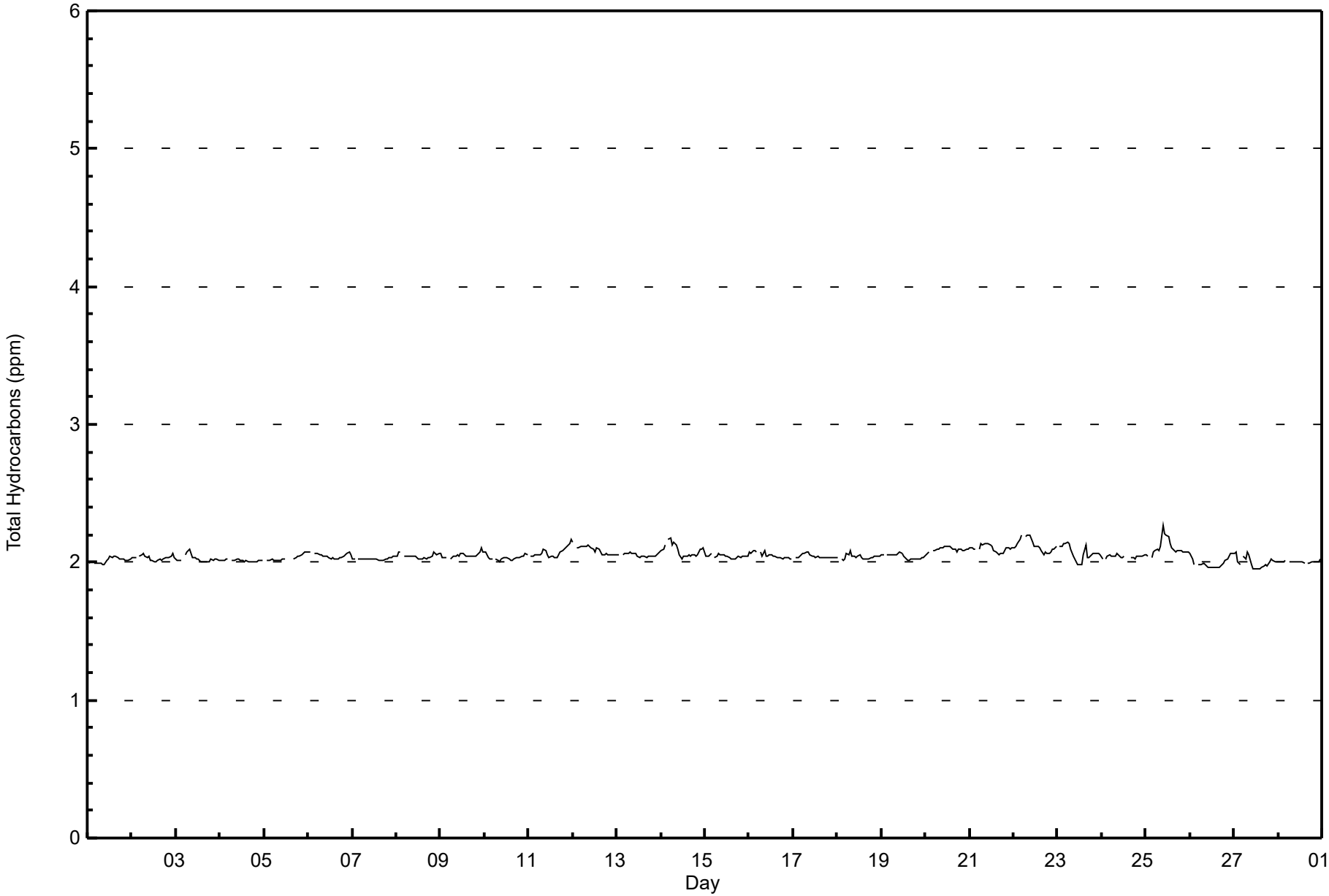
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Janvier - February 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Total Hydrocarbons (THC) - ppm

Janvier - February 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	381	59.91	59.91
2.1 - 3.0	255	40.09	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 636

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Janvier - February 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	41	40	16	14	5	6	7	15	28	28	67	32	24	23	19	16	381
2.1 - 3.0	21	66	14	7	1	4	3	16	17	34	45	11	3	4	5	2	253
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	62	106	30	21	6	10	10	31	45	62	112	43	27	27	24	18	634

Total Number of Valid Hours: 634

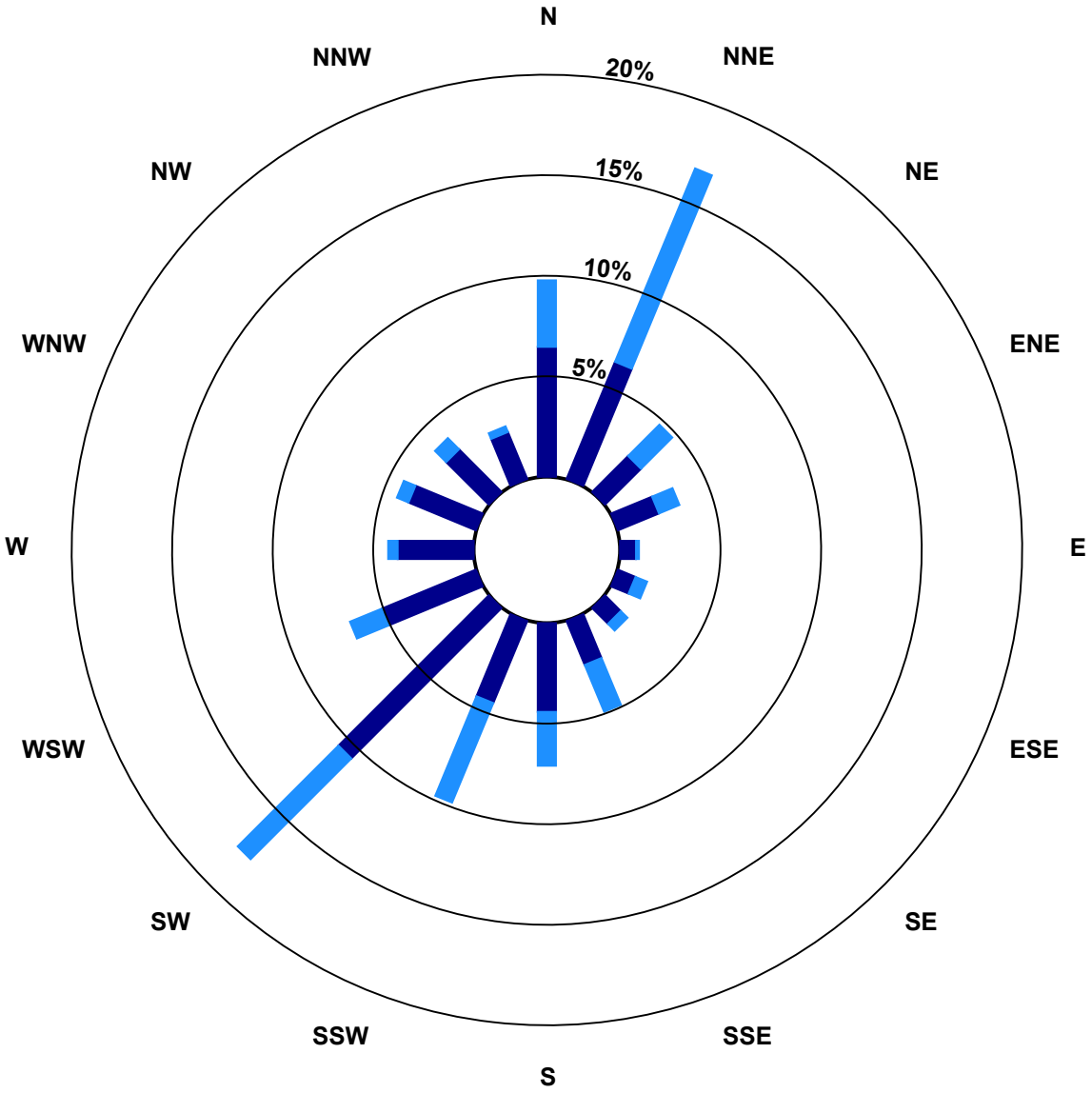
Total Number of Hours: 672

Wood Buffalo Environmental Association

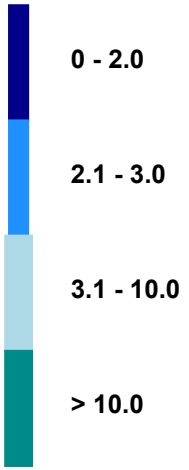
Wind Rose Feb 2025

Total Hydrocarbons (THC) - ppm

Janvier



Classes (ppm)



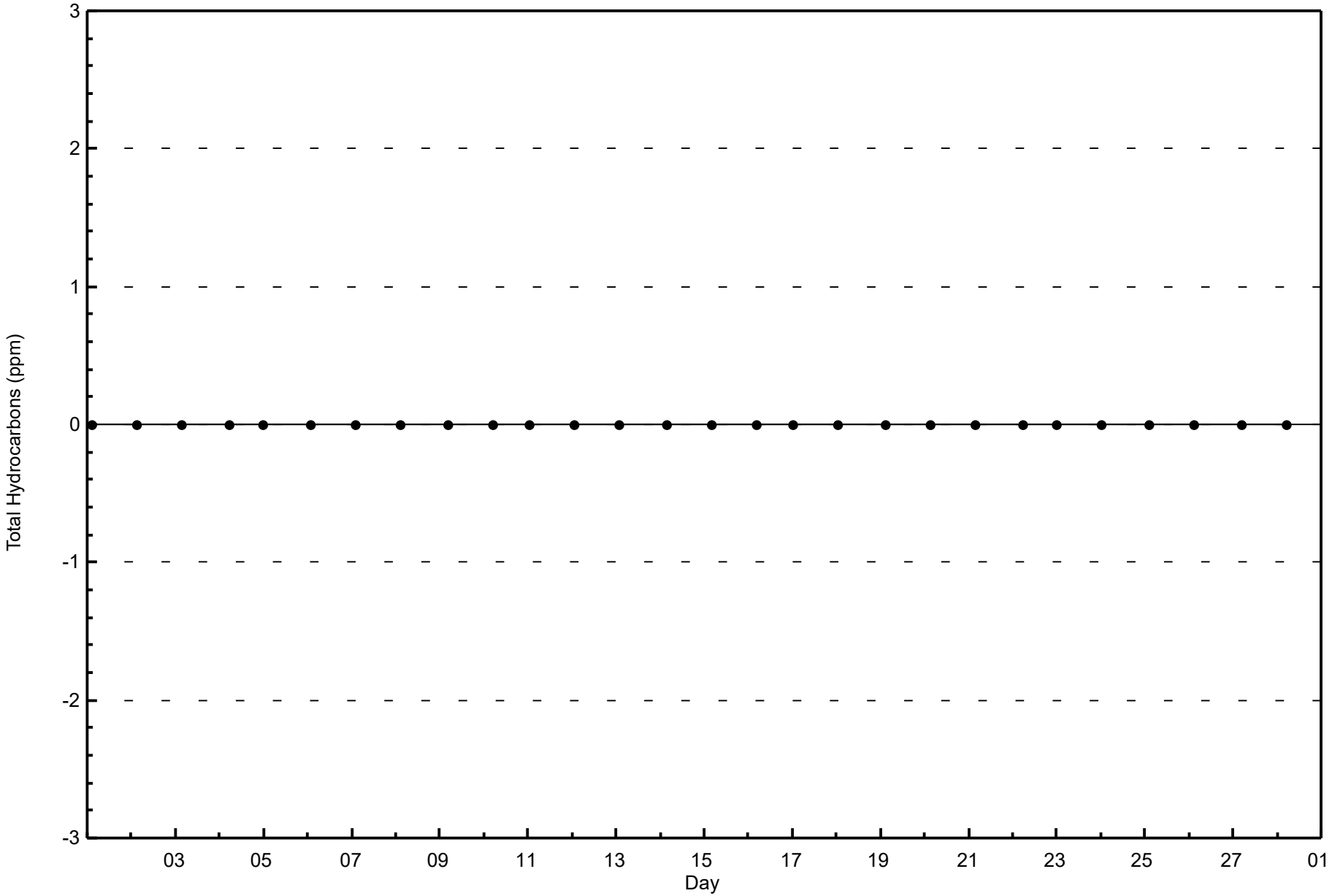
Total Number of Valid Hours: 634

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Janvier - February 2025

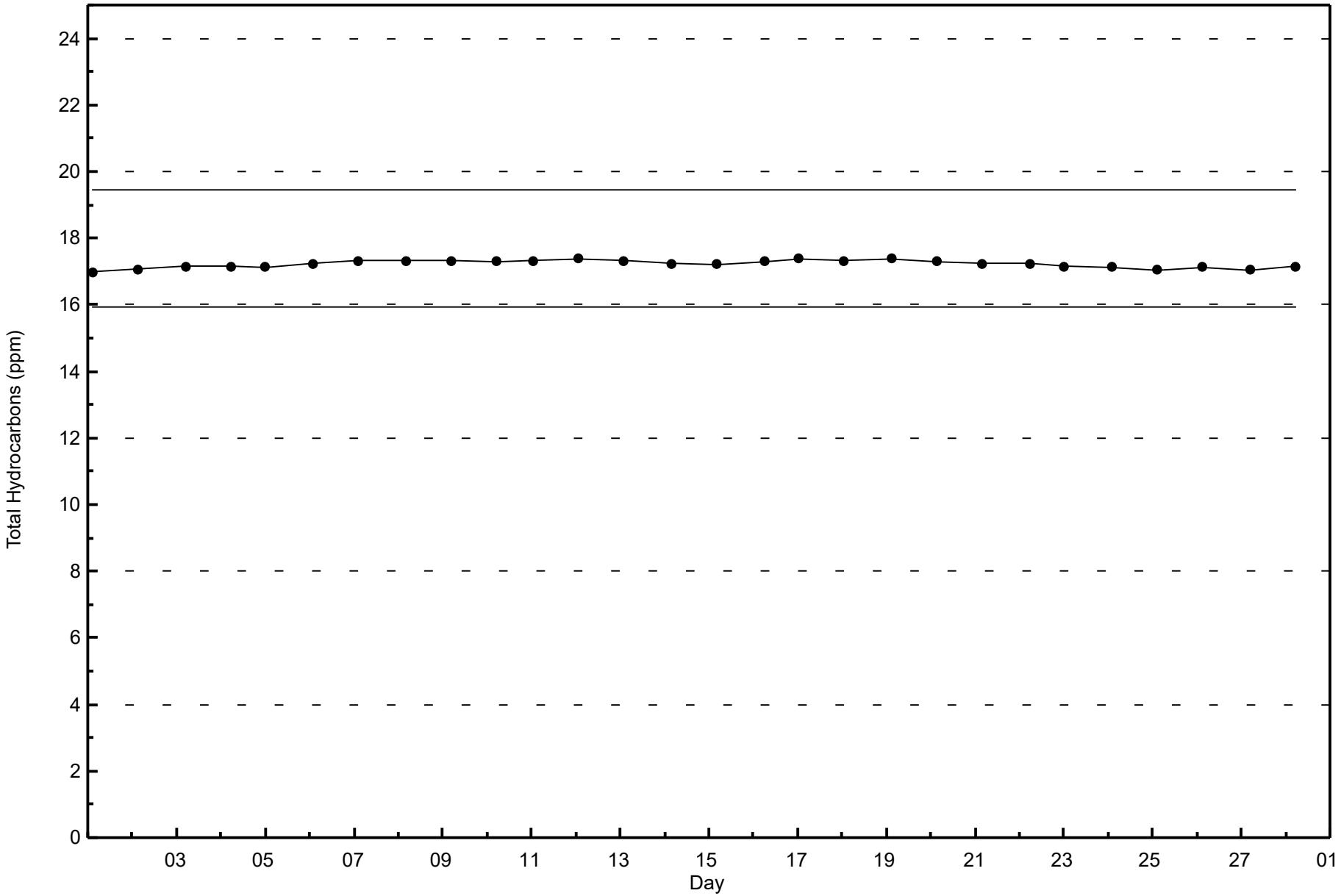


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Janvier - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Janvier - February 2025

Maximum Value: 0.031 ppm on Feb 25 13:00

Maximum Daily Average: 0.002 ppm on Feb 25

Minimum Value: 0.000 ppm on Feb 1 01:00

Minimum Daily Average: 0.000 ppm on Feb 1

Maximum Diurnal Average: 0.001 ppm at hour 13

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:	672
Hours of Data:	636
Hours of Missing Data:	36
Hours of Calibration:	32
Percent Operational Time:	99.4

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4-Feb	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5-Feb	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	C	C	C	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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	0.003
9-Feb	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-Feb	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	0.001	0.000	0.000	0.000	0.001
11-Feb	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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
15-Feb	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16-Feb	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17-Feb	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
21-Feb	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22-Feb	0.000	0.000	0.000	0.000	0.000	Z	0.001	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
23-Feb	Z	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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004
24-Feb	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	M	M	M	0.005	0.004	0.000	0.004	0.003	0.004	0.002	0.000	0.001	0.005
25-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.031	0.012	0.000	0.000	0.000	0.000	0.001	0.003	0.000	0.000	0.000	0.000	0.002	0.031
26-Feb	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.003	0.000	0.004
27-Feb	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-Feb	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	M	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Diurnal Average	
	0.000	0.004	0.001	0.000	0.000	0.000	0.001	0.000	0.002	0.000	0.000	0.005	0.031	0.012	0.000	0.000	0.005	0.004	0.001	0.004	0.003	0.004	0.004	0.003	Diurnal Maximum	

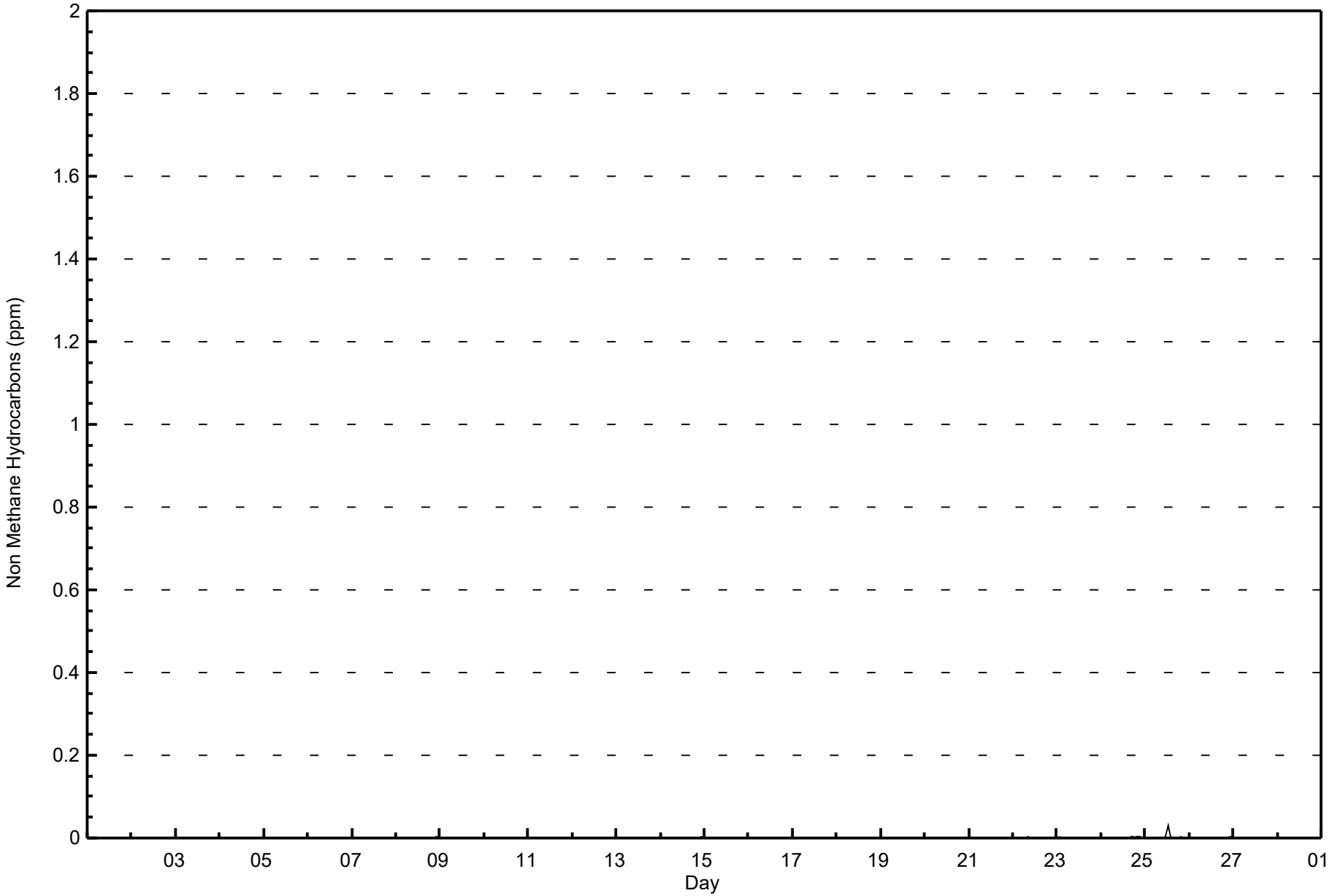
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Janvier - February 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Janvier - February 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	634	99.69	99.69
0.006 - 0.05	2	0.31	100.00
0.06 - 0.1	0	0.00	100.00
> 0.1	0	0.00	100.00

Total Number of Valid Hours: 636

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Janvier - February 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	106	29	21	6	10	10	31	45	62	112	43	27	27	24	18	632
0.006 - 0.05	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
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	62	106	30	21	6	10	10	31	45	62	112	43	27	27	24	18	634

Total Number of Valid Hours: 634

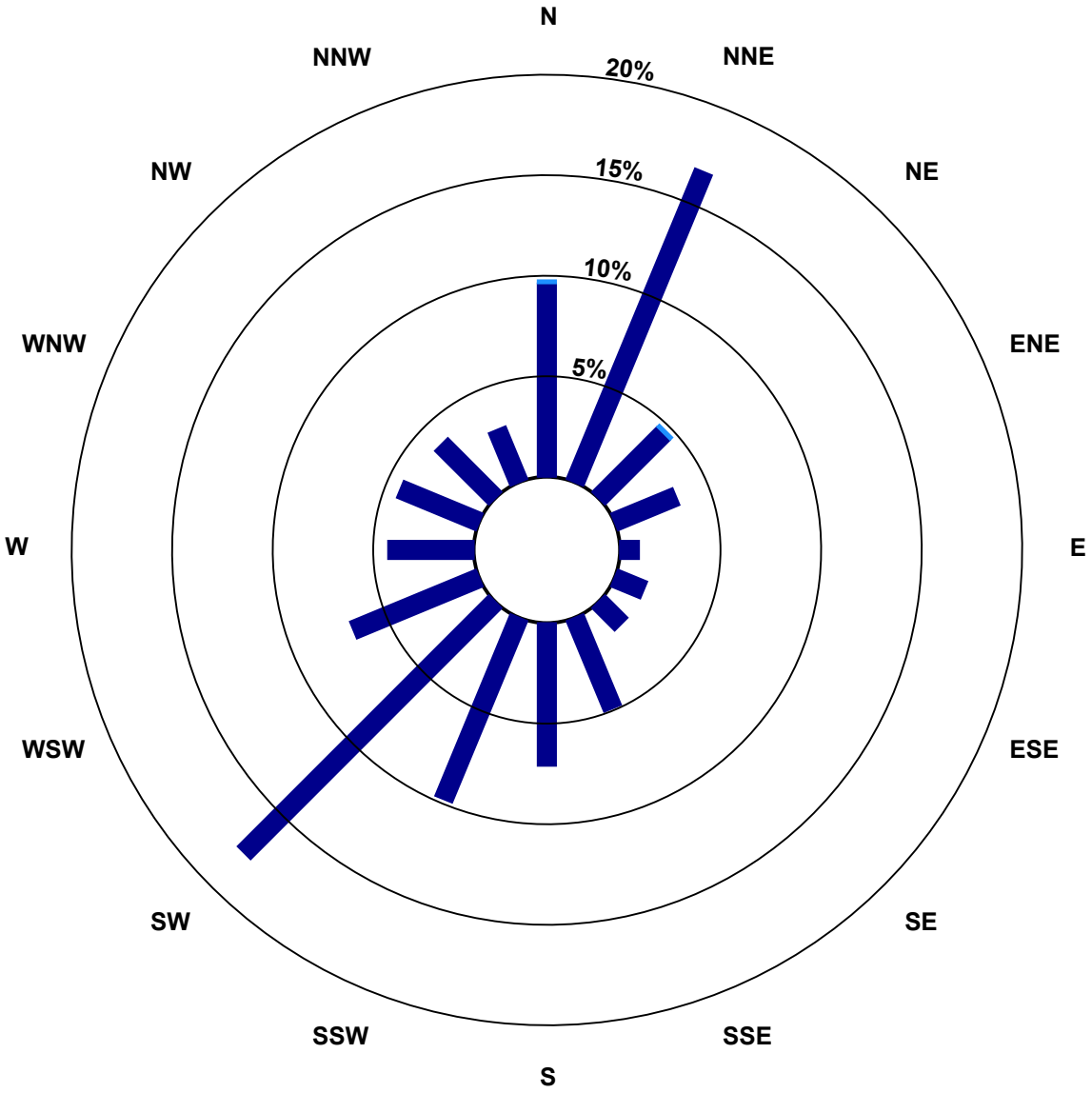
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Non Methane Hydrocarbons (NMHC) - ppm

Janvier



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

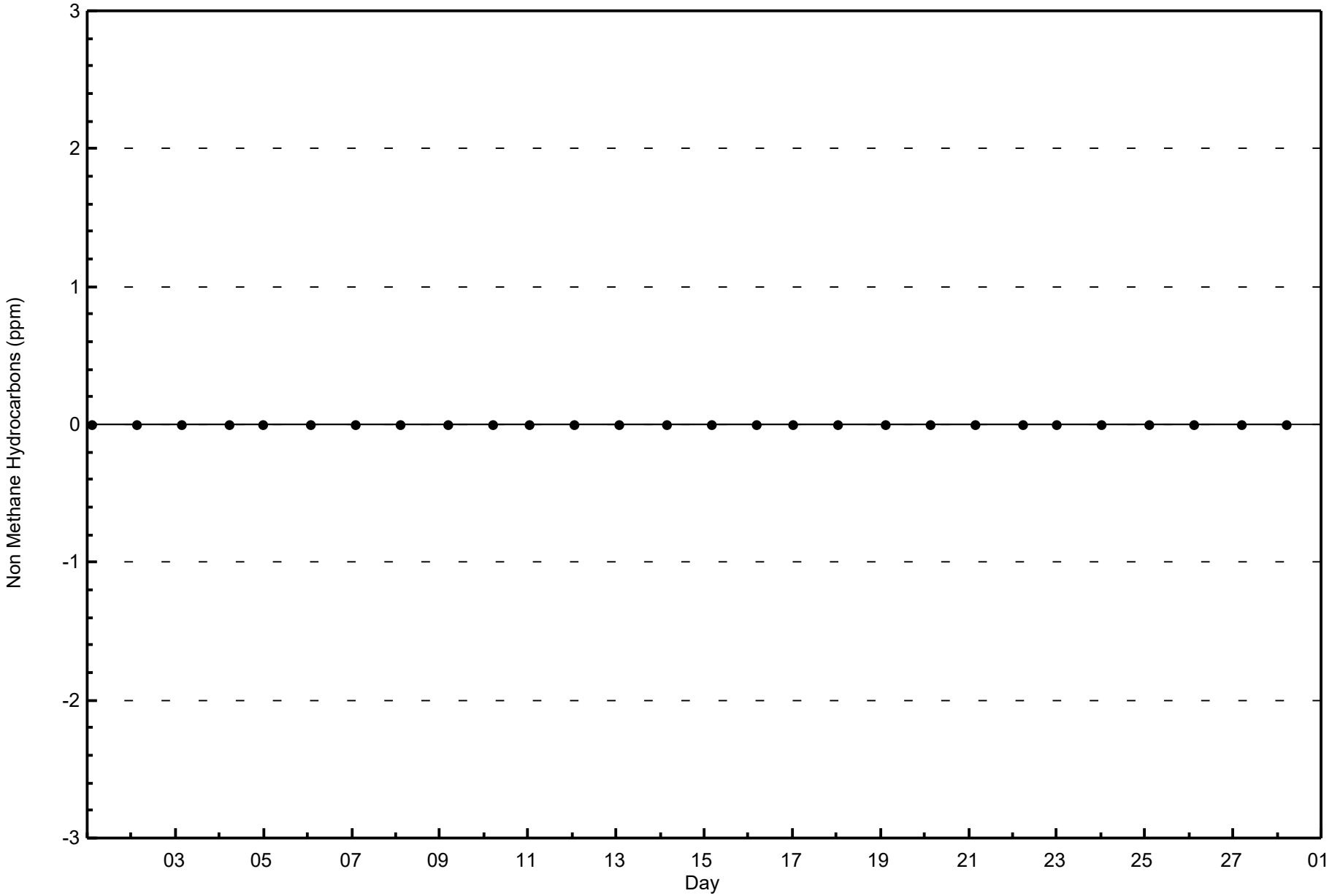
Total Number of Valid Hours: 634

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Janvier - February 2025

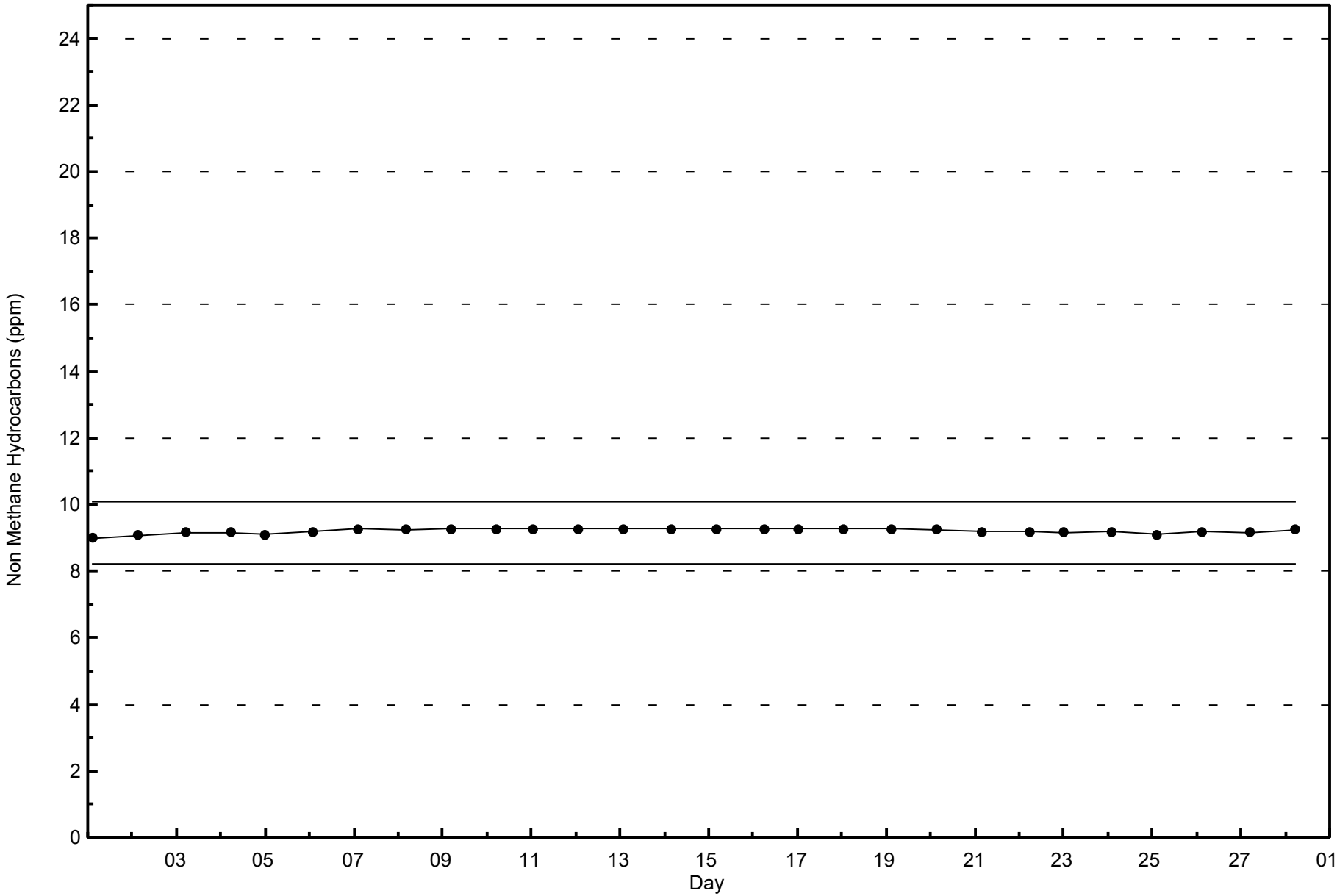


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Janvier - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Janvier - February 2025

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

Maximum Value: 2.3 ppm on Feb 25 10:00

Maximum Daily Average: 2.1 ppm on Feb 22

Minimum Value: 1.9 ppm on Feb 27 12:00

Minimum Daily Average: 2.0 ppm on Feb 26

Maximum Diurnal Average: 2.1 ppm at hour 8

Minimum Diurnal Average: 2.0 ppm at hour 17

Monthly Average: 2.05 ppm

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

Hours in Service:	672
Hours of Data:	636
Hours of Missing Data:	36
Hours of Calibration:	32
Percent Operational Time:	99.4

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
2-Feb	2.0	2.0	2.0	Z	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	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
3-Feb	2.0	2.0	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
4-Feb	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
5-Feb	Z	2.0	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	2.1	2.1	2.1	2.1	2.0	2.1
6-Feb	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	2.1	2.1	2.1	2.1	2.0	2.1
7-Feb	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
8-Feb	2.0	2.1	2.1	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.1
9-Feb	2.1	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1
10-Feb	2.1	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1
11-Feb	Z	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2
12-Feb	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1
13-Feb	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
14-Feb	2.1	2.1	2.1	Z	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.2
15-Feb	2.0	2.0	2.0	2.1	Z	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
16-Feb	2.1	2.1	2.1	2.1	2.1	Z	2.1	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	2.1
17-Feb	Z	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
18-Feb	2.0	Z	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
19-Feb	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
20-Feb	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	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
21-Feb	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
22-Feb	2.1	2.1	2.1	2.2	2.2	Z	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
23-Feb	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
24-Feb	2.0	Z	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	M	M	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1
25-Feb	2.1	2.0	Z	2.0	2.1	2.1	2.1	2.1	2.1	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	2.3
26-Feb	2.1	2.0	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1
27-Feb	2.1	2.1	2.0	2.0	Z	2.0	2.0	2.1	2.1	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
28-Feb	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	M	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	Diurnal Average	
	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	Diurnal Maximum	

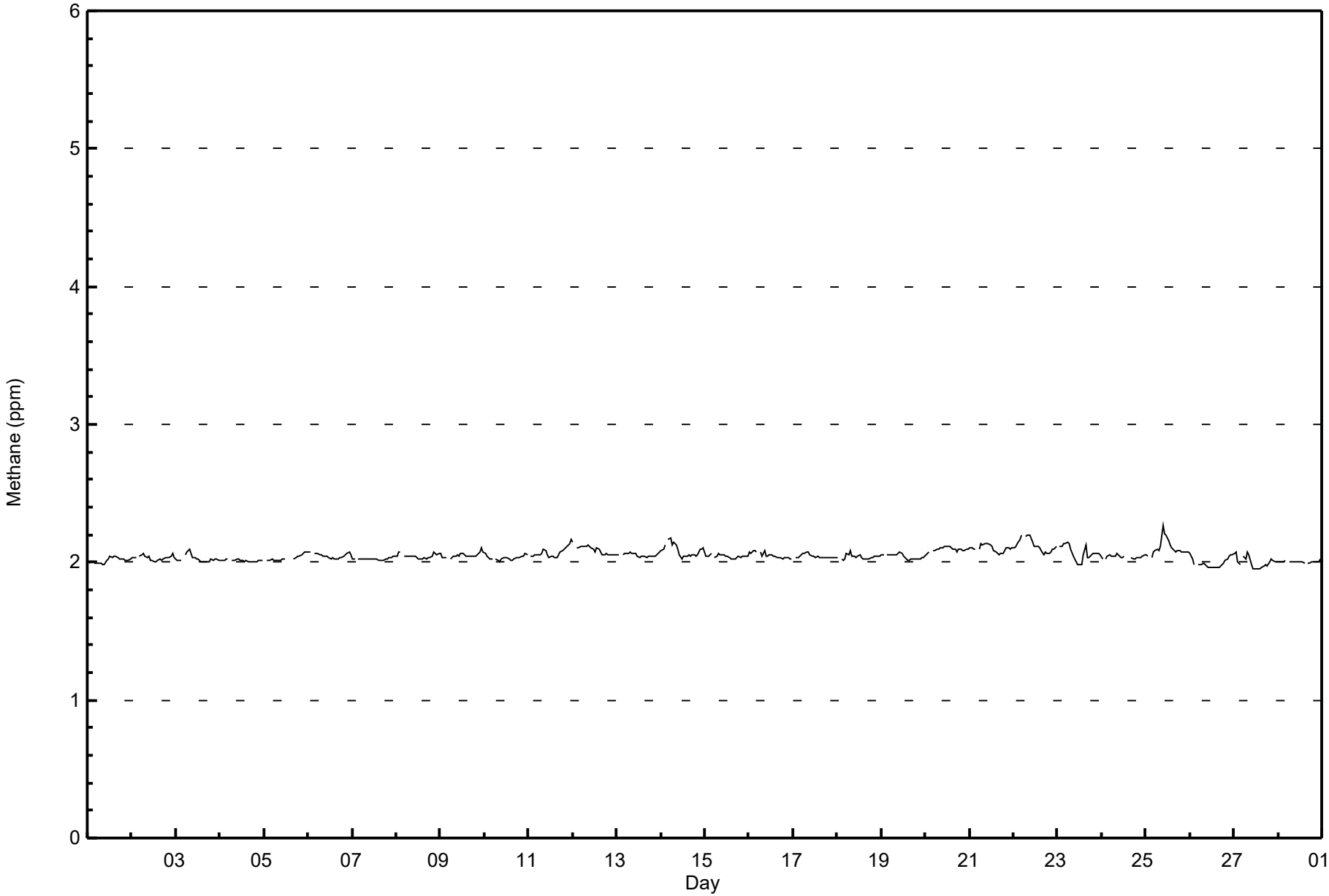
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Janvier - February 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Methane (CH_4) - ppm

Janvier - February 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	381	59.91	59.91
2.1 - 3.0	255	40.09	100.00
3.1 - 10.0	0	0.00	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 636

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Janvier - February 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	41	40	16	14	5	6	7	15	28	28	67	32	24	23	19	16	381
2.1 - 3.0	21	66	14	7	1	4	3	16	17	34	45	11	3	4	5	2	253
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	62	106	30	21	6	10	10	31	45	62	112	43	27	27	24	18	634

Total Number of Valid Hours: 634

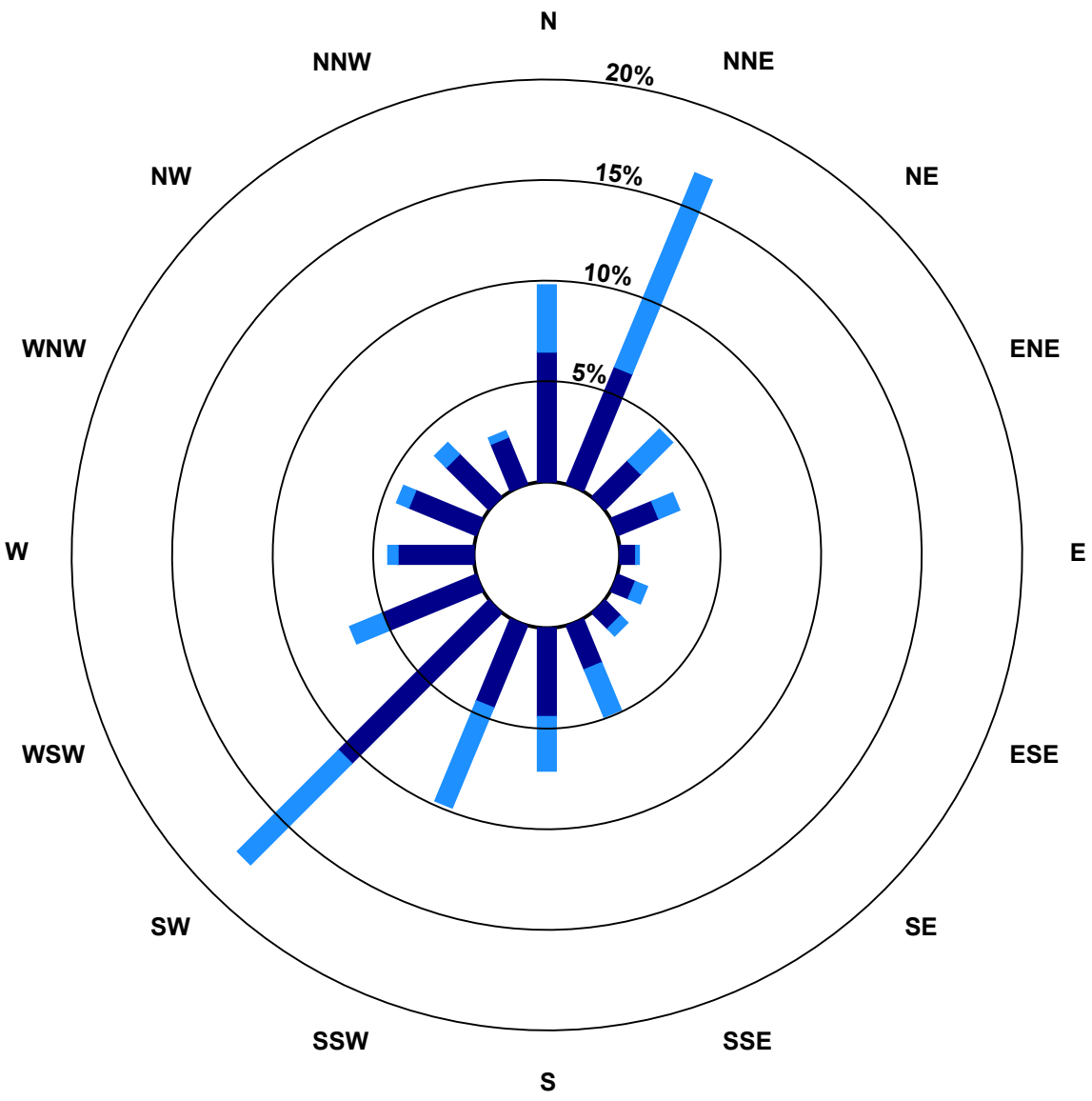
Total Number of Hours: 672

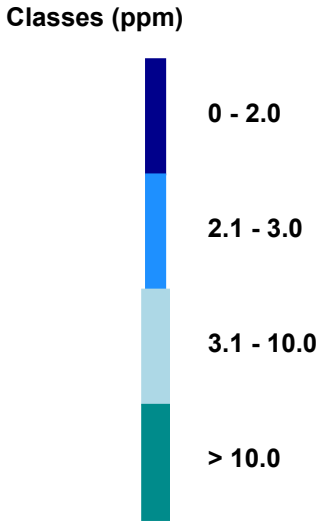
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Methane (CH_4) - ppm

Janvier





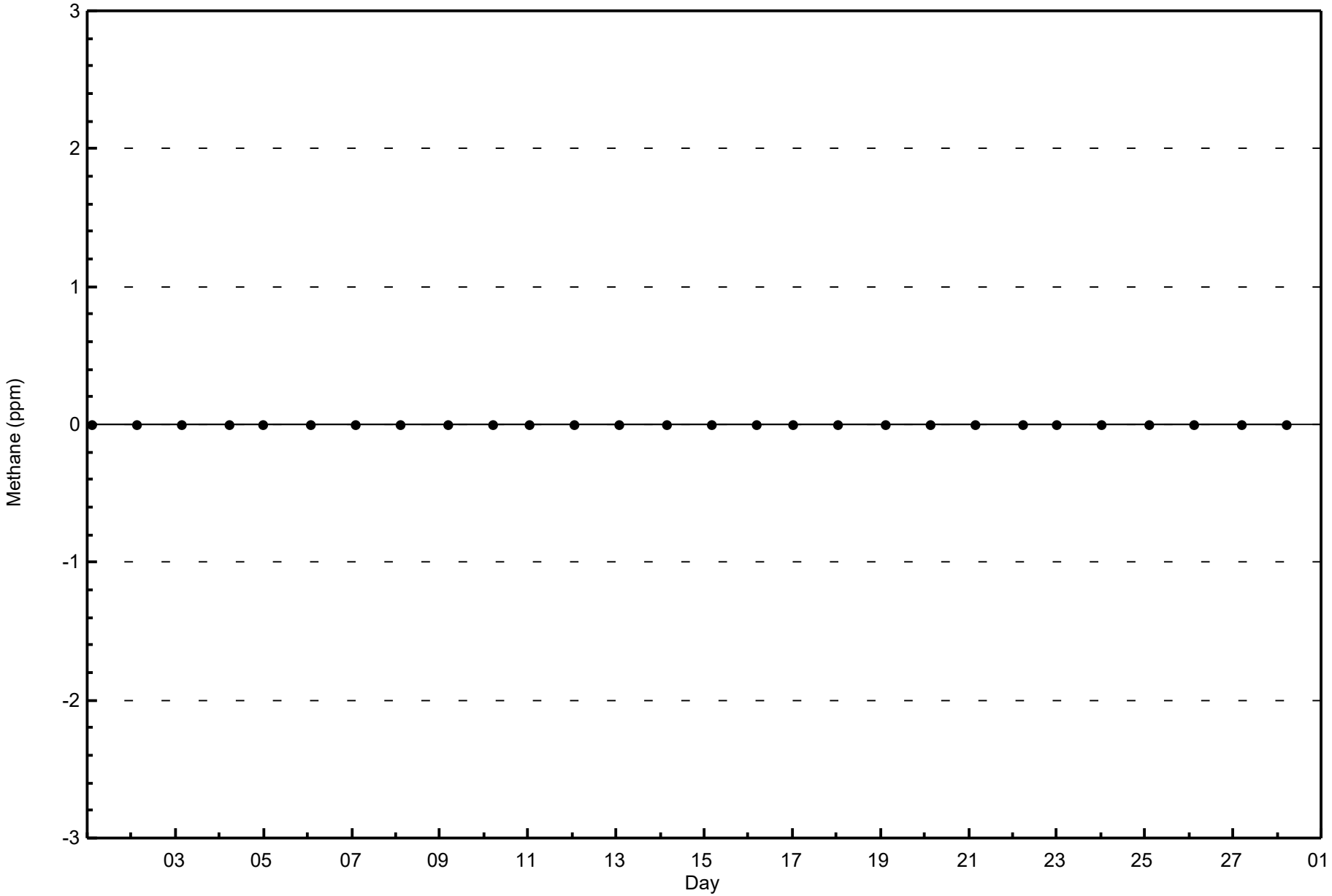
Total Number of Valid Hours: 634

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Janvier - February 2025

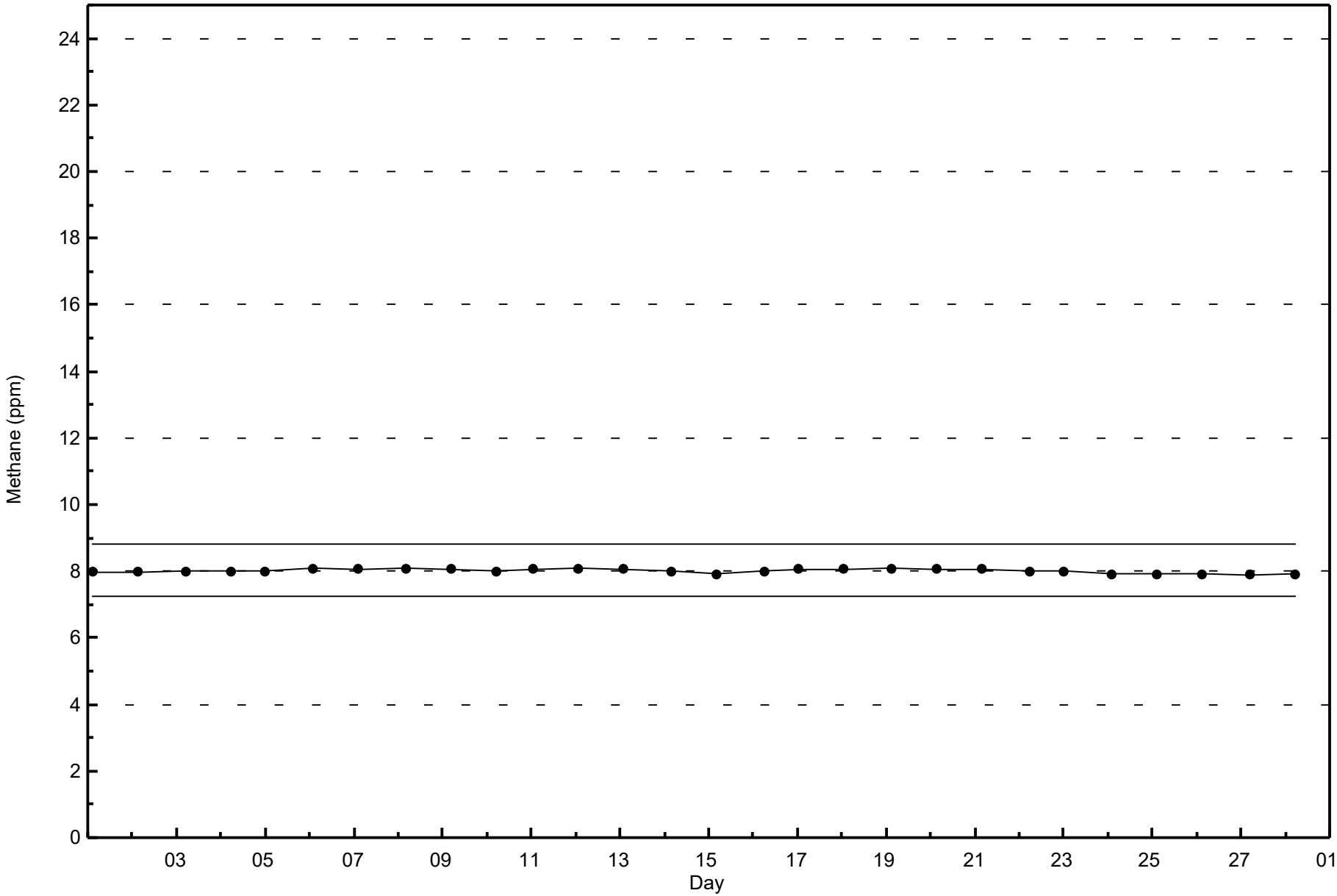


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Janvier - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Janvier - February 2025

Maximum Value: 6.5 ppb on Feb 25 12:00

Maximum Daily Average: 1.7 ppb on Feb 25

Minimum Value: 0.0 ppb on Feb 1 18:00

Minimum Daily Average: 0.1 ppb on Feb 6

Maximum Diurnal Average: 1.3 ppb at hour 10

Minimum Diurnal Average: 0.2 ppb at hour 3

Monthly Average: 0.58 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.4 Q_3 = 0.7 P_{90} = 1.3 P_{99} = 3.7

Hours in Service:	672
Hours of Data:	638
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-Feb	Z	0.2	0.4	0.2	0.2	0.1	0.1	0.3	0.2	0.2	0.4	0.6	0.8	0.8	1.3	1.7	0.9	0.0	0.3	0.2	0.5	0.8	0.5	0.8	0.5	1.7
2-Feb	0.5	Z	0.1	0.2	0.4	0.4	0.5	0.5	2.6	3.0	1.3	0.9	0.6	0.8	1.0	0.7	0.6	0.4	0.0	0.0	0.2	0.1	0.0	0.0	0.6	3.0
3-Feb	0.2	0.0	Z	0.6	0.1	0.5	0.2	0.9	1.1	0.1	0.4	0.2	0.6	0.7	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.7	0.4	0.0	0.3	1.1
4-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.3	0.3	0.2	0.4	0.1	0.2	0.2	0.3	1.2	0.3	0.2	0.2	0.0	0.4	0.0	0.2	1.2
5-Feb	0.4	0.4	0.6	0.5	Z	0.1	0.6	0.2	0.5	0.8	0.7	0.7	0.5	0.5	0.4	0.5	0.5	0.5	0.0	0.1	0.0	0.3	0.2	0.2	0.4	0.8
6-Feb	0.1	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.9
7-Feb	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.1	0.0	0.0	0.2	0.2	0.3	0.2	0.5	0.4	0.4	0.1	0.5
8-Feb	0.1	Z	0.4	0.4	0.4	0.4	0.2	0.4	0.8	1.3	0.3	0.2	0.0	0.2	0.3	0.0	0.3	0.7	0.2	0.7	0.5	0.8	0.0	0.0	0.4	1.3
9-Feb	0.0	0.0	Z	0.0	0.0	0.7	0.0	0.0	1.1	1.7	1.1	2.0	2.3	1.6	1.2	0.6	0.3	0.2	1.8	2.4	1.8	0.1	1.0	1.7	0.9	2.4
10-Feb	0.0	0.5	0.2	Z	0.2	0.3	0.2	0.4	0.6	0.4	0.7	0.4	0.3	0.2	0.3	0.1	0.2	0.0	0.1	0.4	0.5	1.3	0.5	0.2	0.4	1.3
11-Feb	0.2	0.7	0.0	0.0	Z	0.3	0.4	0.5	1.3	1.6	1.4	1.5	1.3	0.8	0.7	0.7	0.6	0.8	0.9	1.0	0.8	2.7	1.3	0.2	0.9	2.7
12-Feb	0.0	0.2	0.2	0.3	0.1	Z	0.7	0.0	0.6	1.2	1.5	1.6	0.6	1.1	0.9	0.3	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.4	1.6
13-Feb	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.2	1.1	0.8	0.2	0.1	0.2	0.2	0.5	0.3	0.6	1.0	0.5	0.4	0.6	1.2	2.9	0.5	2.9
14-Feb	2.1	Z	0.5	1.2	2.9	1.2	0.4	0.7	3.3	5.8	3.3	2.3	1.9	1.2	1.0	0.7	0.7	0.7	1.1	1.4	1.1	1.9	1.4	0.5	1.6	5.8
15-Feb	0.2	0.7	Z	0.6	1.0	0.6	0.5	0.4	1.0	1.4	1.0	0.9	0.5	0.3	0.5	0.3	0.2	0.5	0.2	1.0	2.4	1.9	1.3	0.4	0.8	2.4
16-Feb	1.2	4.3	0.3	Z	0.7	0.0	0.3	0.0	1.9	1.5	0.7	0.6	0.6	0.7	0.7	0.5	0.4	0.1	0.1	1.1	0.7	1.4	0.0	0.3	0.8	4.3
17-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.4	0.4	0.6	1.0	1.0	0.8	0.3	0.6	0.4	0.2	0.5	0.0	0.4	0.1	0.3	0.4	0.3	1.0
18-Feb	0.5	0.4	0.4	0.5	0.5	Z	0.4	2.1	1.1	2.4	2.5	3.1	2.7	1.2	0.9	0.7	0.8	0.4	0.3	0.4	0.2	0.3	0.2	0.0	1.0	3.1
19-Feb	Z	0.0	0.1	0.0	0.1	0.5	0.3	0.6	1.8	2.6	2.2	1.5	1.0	0.6	1.1	1.0	0.5	0.7	0.5	0.3	0.5	0.5	0.4	0.4	0.7	2.6
20-Feb	0.5	Z	0.4	0.5	0.6	0.5	0.3	0.3	0.4	0.4	0.4	1.1	1.1	1.3	0.9	0.6	1.2	0.4	0.5	0.1	0.1	0.2	0.1	1.0	0.6	1.3
21-Feb	0.6	0.0	Z	0.0	0.3	0.4	0.0	0.6	0.5	0.9	0.7	1.0	1.1	0.7	0.6	0.5	0.2	0.1	0.3	0.0	0.1	0.1	0.3	0.0	0.4	1.1
22-Feb	0.2	0.2	0.1	Z	0.3	0.6	0.5	0.0	0.6	1.2	0.6	0.1	0.5	0.9	1.4	0.9	0.1	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.4	1.4
23-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.5	0.1	0.0	0.0	0.1	0.3	1.0	0.4	0.0	0.1	0.0	0.1	0.3	0.3	0.3	0.2	1.0
24-Feb	0.0	0.1	0.4	0.3	0.5	Z	0.5	0.4	0.2	0.4	0.3	0.6	0.6	0.6	0.4	0.3	0.6	0.4	0.6	1.1	0.0	0.2	0.0	0.2	0.4	1.1
25-Feb	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	6.1	6.3	6.5	4.8	3.9	3.3	2.3	1.5	0.7	0.4	1.7	0.6	0.2	0.0	0.3	1.7	6.5
26-Feb	0.4	Z	0.5	0.4	0.3	0.7	1.0	0.5	2.4	0.4	0.4	0.6	0.4	0.9	0.5	0.8	0.8	1.1	0.8	1.1	1.2	0.8	1.4	1.8	0.8	2.4
27-Feb	1.0	0.7	Z	0.6	0.6	1.5	0.8	0.4	1.7	0.7	0.4	0.7	0.3	0.4	0.5	0.2	0.4	0.4	0.3	0.6	0.5	0.2	0.2	0.0	0.6	1.7
28-Feb	0.3	0.0	0.1	Z	0.4	0.3	0.2	0.2	0.0	0.3	0.1	0.1	C	C	C	C	C	C	0.1	0.0	0.0	0.7	1.4	0.0	--	1.4
	0.4	0.4	0.2	0.3	0.4	0.4	0.3	0.4	0.9	1.3	1.0	1.0	0.9	0.8	0.7	0.7	0.4	0.4	0.4	0.5	0.5	0.6	0.5	0.4	Diurnal Average	
	2.1	4.3	0.6	1.2	2.9	1.5	1.0	2.1	3.3	6.1	6.3	6.5	4.8	3.9	3.3	2.3	1.5	1.2	1.8	2.4	2.4	2.7	1.4	2.9	Diurnal Maximum	

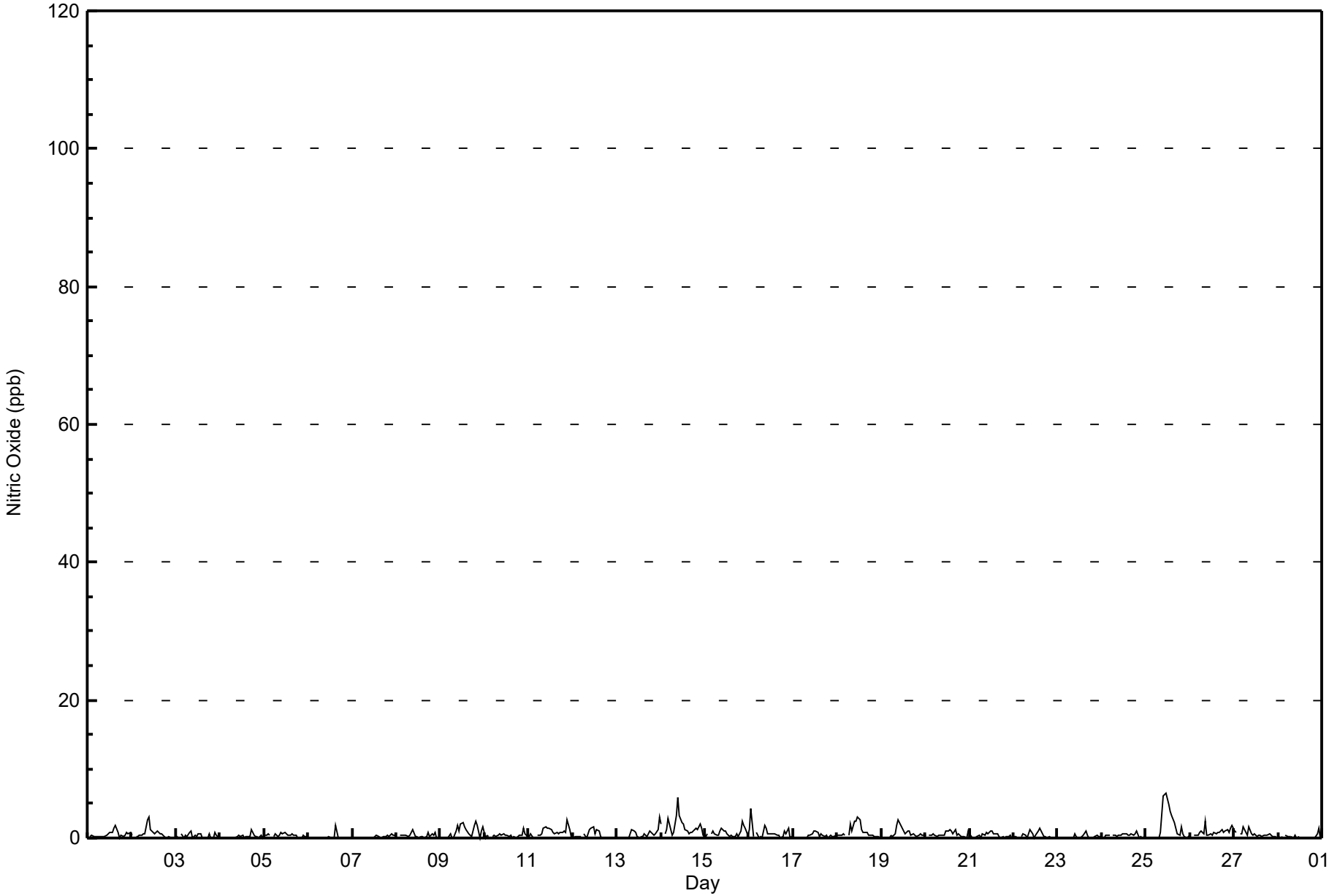
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Janvier - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	638	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: 638

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Janvier - February 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	62	106	30	17	6	10	11	30	46	64	110	48	29	26	24	17	636
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	62	106	30	17	6	10	11	30	46	64	110	48	29	26	24	17	636

Total Number of Valid Hours: 636

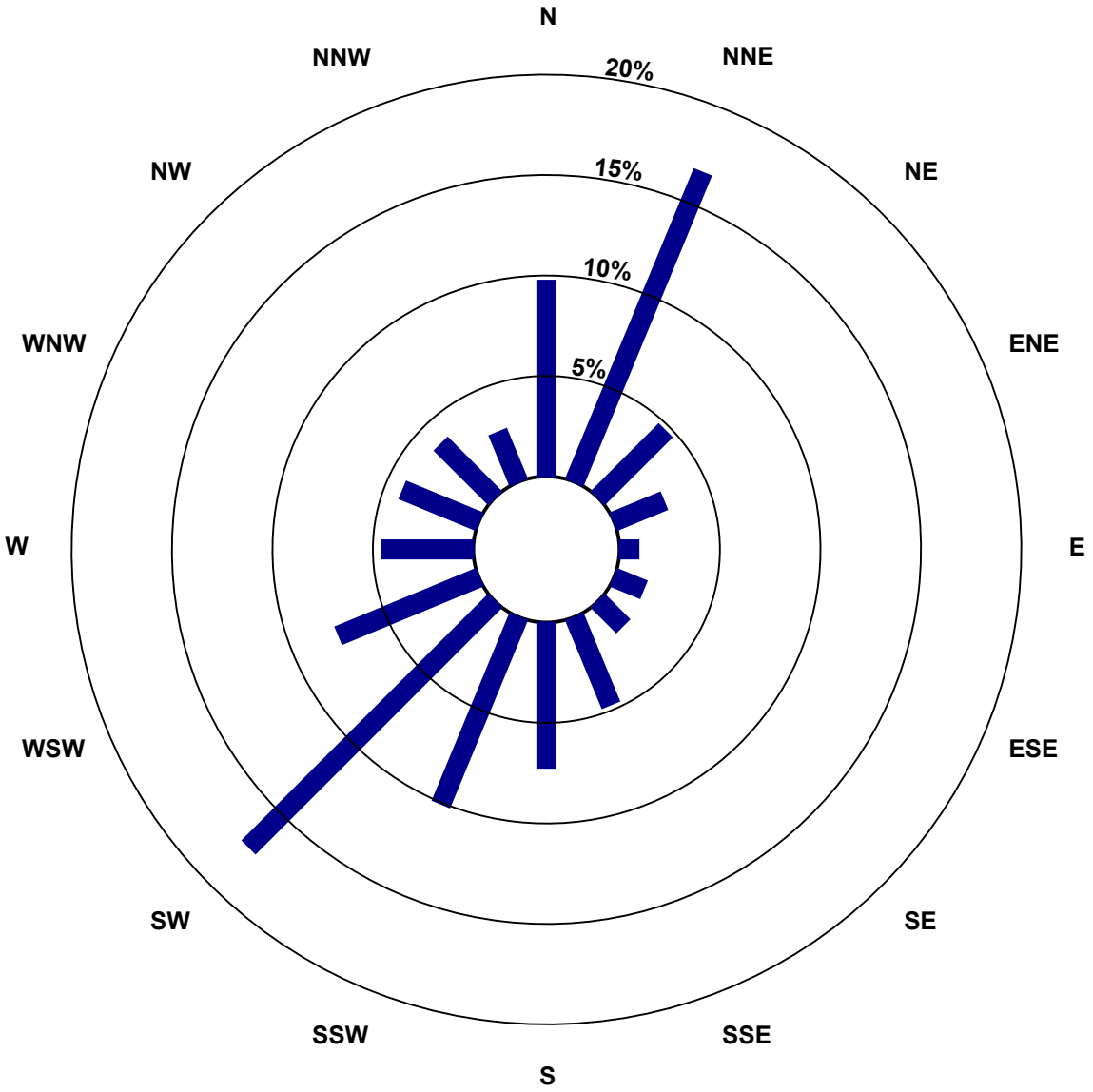
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitric Oxide (NO) - ppb

Janvier



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

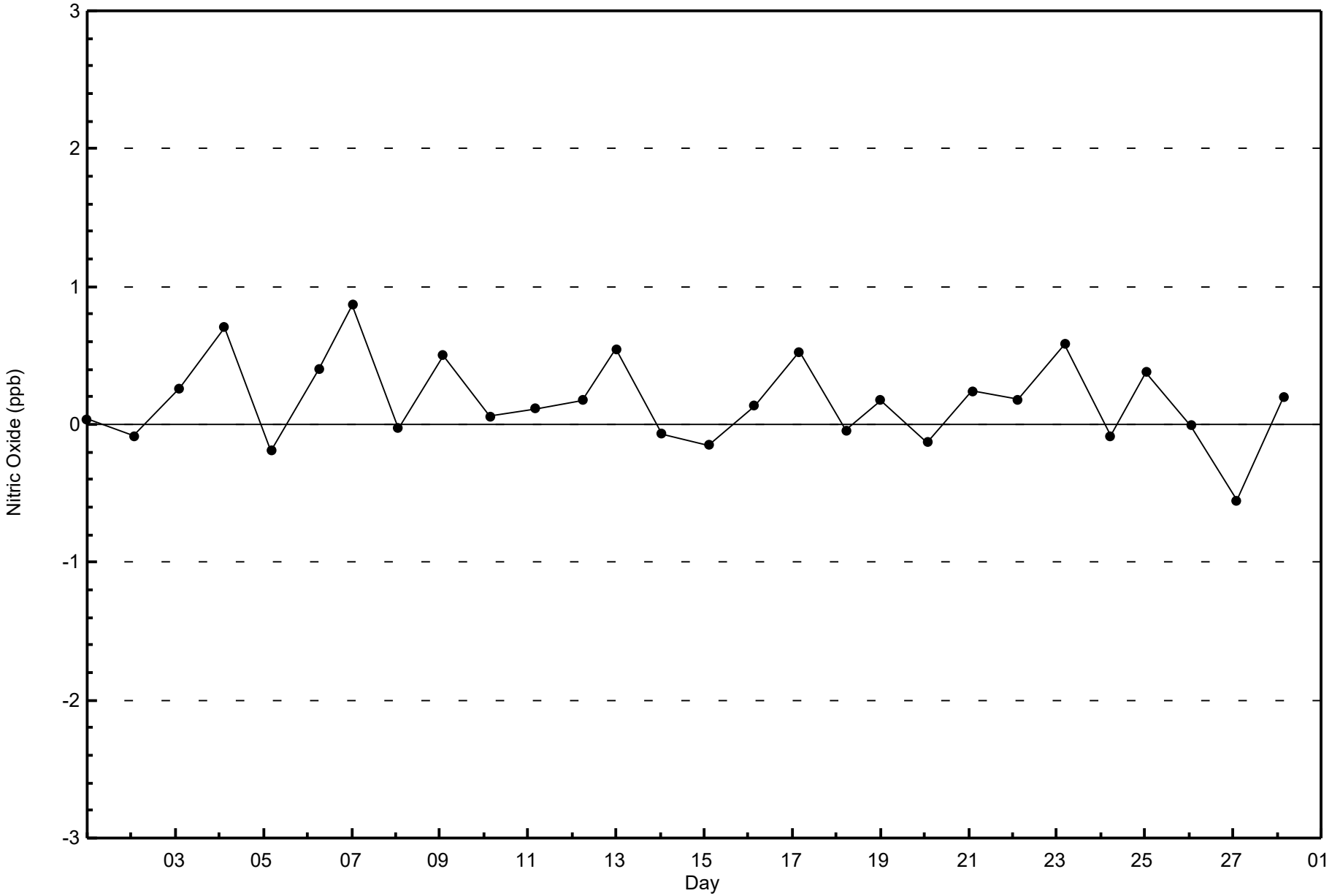
Total Number of Valid Hours: 636

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Janvier - February 2025

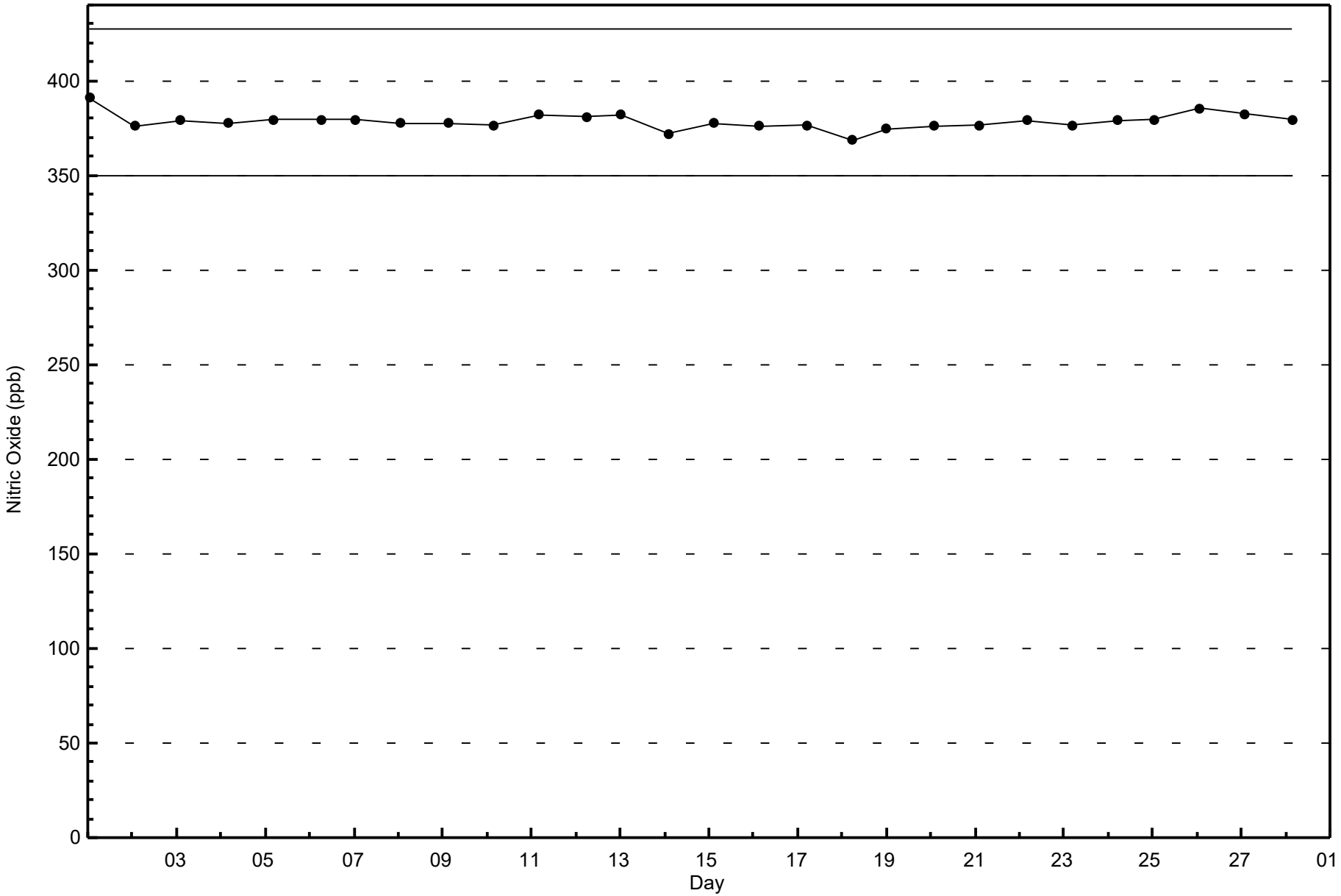


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Janvier - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Janvier - February 2025

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

Maximum Value: 16.8 ppb on Feb 25 10:00

Maximum Daily Average: 6.4 ppb on Feb 25

Minimum Value: 0.0 ppb on Feb 1 03:00

Minimum Daily Average: 1.0 ppb on Feb 4

Maximum Diurnal Average: 3.3 ppb at hour 9

Minimum Diurnal Average: 1.5 ppb at hour 14

Monthly Average: 2.52 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.5 Q_1 = 1.0 Median = 2.0 Q_3 = 3.3 P_{90} = 5.3 P_{99} = 9.6

Hours in Service:	672
Hours of Data:	638
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-Feb	Z	0.2	0.0	0.4	0.4	0.4	0.4	0.0	0.0	0.0	2.1	3.4	2.9	2.7	4.2	5.8	6.2	3.6	2.2	1.9	1.7	0.3	0.6	1.3	1.8	6.2
2-Feb	3.1	Z	2.7	3.2	3.1	3.5	3.1	3.2	5.2	4.5	2.1	1.5	1.3	1.7	1.7	2.5	2.4	4.1	4.9	5.6	4.8	4.2	6.2	5.0	3.5	6.2
3-Feb	3.1	2.3	Z	3.7	2.2	3.8	4.8	6.4	5.4	1.4	0.9	0.7	0.8	0.7	0.4	0.2	0.0	0.5	1.5	1.2	1.0	1.6	3.3	0.3	2.0	6.4
4-Feb	0.6	0.4	0.3	Z	0.8	0.7	0.8	1.1	1.4	1.5	1.0	0.8	0.8	0.8	0.8	0.5	0.6	2.5	1.4	1.4	0.9	1.2	1.0	1.0	1.0	2.5
5-Feb	1.0	1.0	1.1	1.2	Z	1.3	1.3	1.2	1.7	1.4	1.1	1.5	1.1	1.0	1.1	1.0	1.3	2.0	1.5	1.7	1.9	1.9	2.1	2.3	1.4	2.3
6-Feb	2.4	2.2	2.3	2.0	2.0	2.1	Z	1.1	1.9	1.3	1.0	0.8	0.6	2.6	1.3	3.7	2.0	2.2	3.1	3.8	4.6	4.9	2.8	1.2	2.3	4.9
7-Feb	Z	0.7	1.2	1.5	0.7	0.9	0.6	0.4	1.3	1.4	0.9	0.4	0.9	0.8	0.6	0.1	0.5	1.3	1.1	1.5	1.6	1.9	2.0	1.2	1.0	2.0
8-Feb	1.2	Z	1.8	1.8	1.5	1.7	1.2	1.3	2.5	2.4	0.9	0.6	0.5	0.6	0.7	0.8	0.9	4.6	4.1	3.4	5.7	5.7	5.5	5.0	2.4	5.7
9-Feb	6.5	2.0	Z	3.1	2.3	3.4	3.7	3.8	6.9	4.1	2.4	3.0	3.4	2.9	2.7	2.4	2.7	3.8	6.6	6.3	5.5	4.3	4.9	5.7	4.0	6.9
10-Feb	3.4	2.7	1.7	Z	0.6	0.4	0.5	0.4	0.4	1.0	0.5	0.4	0.5	0.2	0.2	0.2	0.4	1.0	1.2	1.4	1.6	2.9	3.0	1.6	1.1	3.4
11-Feb	1.3	3.0	1.6	2.1	Z	3.2	2.6	3.0	3.8	3.5	1.8	2.0	1.6	1.4	1.7	1.8	3.0	7.5	8.0	9.1	7.5	8.1	7.1	5.9	3.9	9.1
12-Feb	6.0	5.4	5.0	4.7	4.6	Z	4.4	4.7	4.7	4.3	3.2	3.1	2.1	2.3	2.3	2.0	1.3	1.5	3.3	2.0	1.7	1.8	1.5	1.4	3.2	6.0
13-Feb	Z	1.8	2.3	1.9	1.7	1.9	2.4	3.2	4.2	2.2	1.5	0.7	0.9	0.8	0.8	1.2	1.3	2.8	3.8	3.1	2.7	3.2	7.3	9.4	2.7	9.4
14-Feb	9.5	Z	8.7	9.6	13.8	10.1	7.4	6.4	6.3	6.5	3.0	2.2	2.1	1.1	0.9	1.4	1.9	3.2	2.8	3.6	3.5	4.2	2.5	1.7	4.9	13.8
15-Feb	1.9	1.9	Z	2.3	2.8	2.4	2.6	2.5	2.7	2.5	1.6	1.0	1.0	0.7	0.2	0.4	0.4	1.4	1.8	3.6	6.0	6.5	2.1	1.2	2.2	6.5
16-Feb	3.6	8.3	2.9	Z	2.4	1.2	1.9	0.9	5.3	2.0	1.0	1.0	1.1	1.4	1.3	1.2	1.7	1.6	0.5	0.8	0.8	3.0	0.4	1.7	2.0	8.3
17-Feb	2.2	2.8	2.2	2.0	Z	3.3	3.2	2.3	3.1	2.0	1.4	1.4	1.2	0.9	0.7	0.4	0.0	0.4	1.2	0.1	0.6	1.0	0.3	0.5	1.4	3.3
18-Feb	0.4	1.0	1.2	1.2	0.8	Z	2.9	4.3	3.0	3.0	2.4	2.6	2.6	1.2	0.8	1.0	1.6	1.2	1.1	1.7	2.0	2.3	2.3	2.0	1.9	4.3
19-Feb	Z	2.7	2.6	2.8	3.2	4.2	4.1	4.4	4.5	4.2	3.5	2.6	1.8	1.8	1.8	1.8	1.5	0.9	0.9	0.8	0.7	1.2	0.7	1.4	2.4	4.5
20-Feb	2.3	Z	4.9	5.3	5.5	5.4	5.2	4.8	3.2	2.6	2.9	3.4	3.2	2.9	2.8	2.8	4.0	4.0	4.3	3.7	3.5	3.2	3.2	3.9	3.8	5.5
21-Feb	3.3	3.0	Z	2.8	2.9	3.3	2.5	3.1	4.5	4.1	3.8	3.9	2.7	2.5	2.3	2.6	2.4	2.3	2.5	2.4	3.2	3.1	2.8	2.4	3.0	4.5
22-Feb	2.8	2.6	3.4	Z	8.8	8.9	8.3	7.4	6.9	5.9	2.6	1.5	1.6	2.6	3.3	3.9	3.6	3.9	2.4	2.7	2.3	2.7	2.3	2.1	4.0	8.9
23-Feb	2.7	2.1	2.3	2.7	Z	3.0	2.0	1.3	1.0	0.9	0.4	0.1	0.3	0.1	1.9	3.9	1.2	1.4	2.1	3.2	3.1	3.9	3.8	2.7	2.0	3.9
24-Feb	2.1	2.7	2.6	2.4	2.1	Z	1.5	1.4	1.3	0.8	0.8	1.0	1.1	0.7	1.0	1.2	1.4	2.9	2.6	6.2	3.7	4.1	2.6	2.9	2.1	6.2
25-Feb	Z	0.9	0.9	1.9	6.1	6.5	5.7	4.6	6.1	16.8	11.4	10.2	8.5	6.4	5.6	5.2	4.8	5.8	7.6	11.6	7.0	5.6	4.8	4.1	6.4	16.8
26-Feb	3.6	Z	1.5	0.6	0.8	1.2	1.3	1.0	1.8	0.3	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.9	1.2	3.8	6.8	3.3	4.0	5.2	1.6	6.8
27-Feb	4.3	2.8	Z	0.9	1.2	3.0	2.2	2.0	2.6	1.1	0.4	0.3	0.1	0.2	0.1	0.3	0.4	0.3	0.2	1.8	3.5	2.3	1.1	0.7	1.4	4.3
28-Feb	0.6	0.7	0.8	Z	1.3	0.6	0.6	0.5	0.4	0.3	0.3	0.5	C	C	C	C	C	C	0.5	0.4	0.4	2.6	3.4	1.1	--	3.4
	3.0	2.3	2.3	2.6	3.0	3.1	2.9	2.7	3.3	2.9	2.0	1.8	1.7	1.5	1.5	1.8	1.8	2.5	2.7	3.2	3.2	3.3	3.0	2.7	Diurnal Average	
	9.5	8.3	8.7	9.6	13.8	10.1	8.3	7.4	6.9	16.8	11.4	10.2	8.5	6.4	5.6	5.8	6.2	7.5	8.0	11.6	7.5	8.1	7.3	9.4	Diurnal Maximum	

Z - zerospan C - Calibration

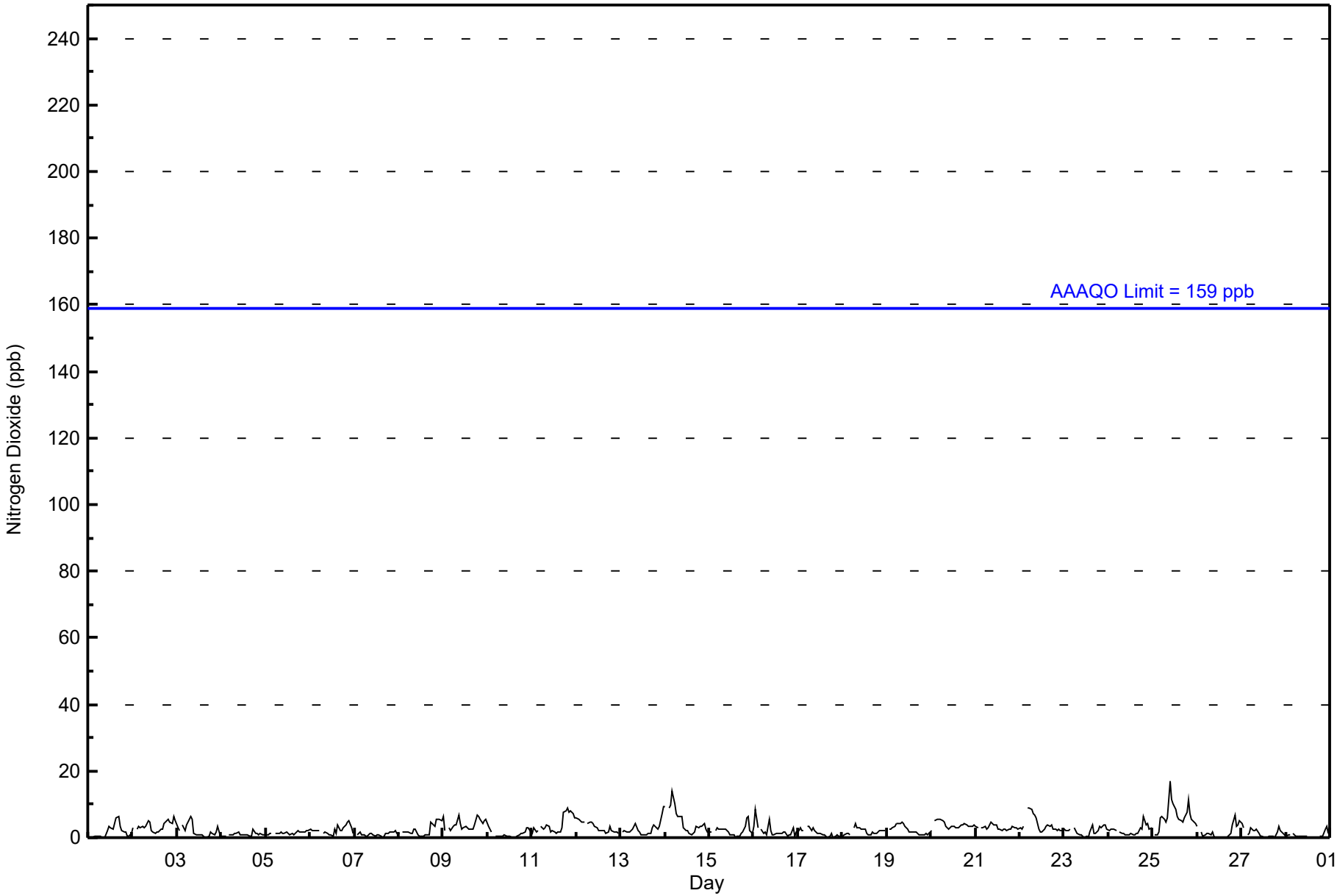
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Janvier - February 2025



Nitrogen Dioxide (NO_2) - ppb

Janvier - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	638	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: 638

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Janvier - February 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	62	106	30	17	6	10	11	30	46	64	110	48	29	26	24	17	636
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	62	106	30	17	6	10	11	30	46	64	110	48	29	26	24	17	636

Total Number of Valid Hours: 636

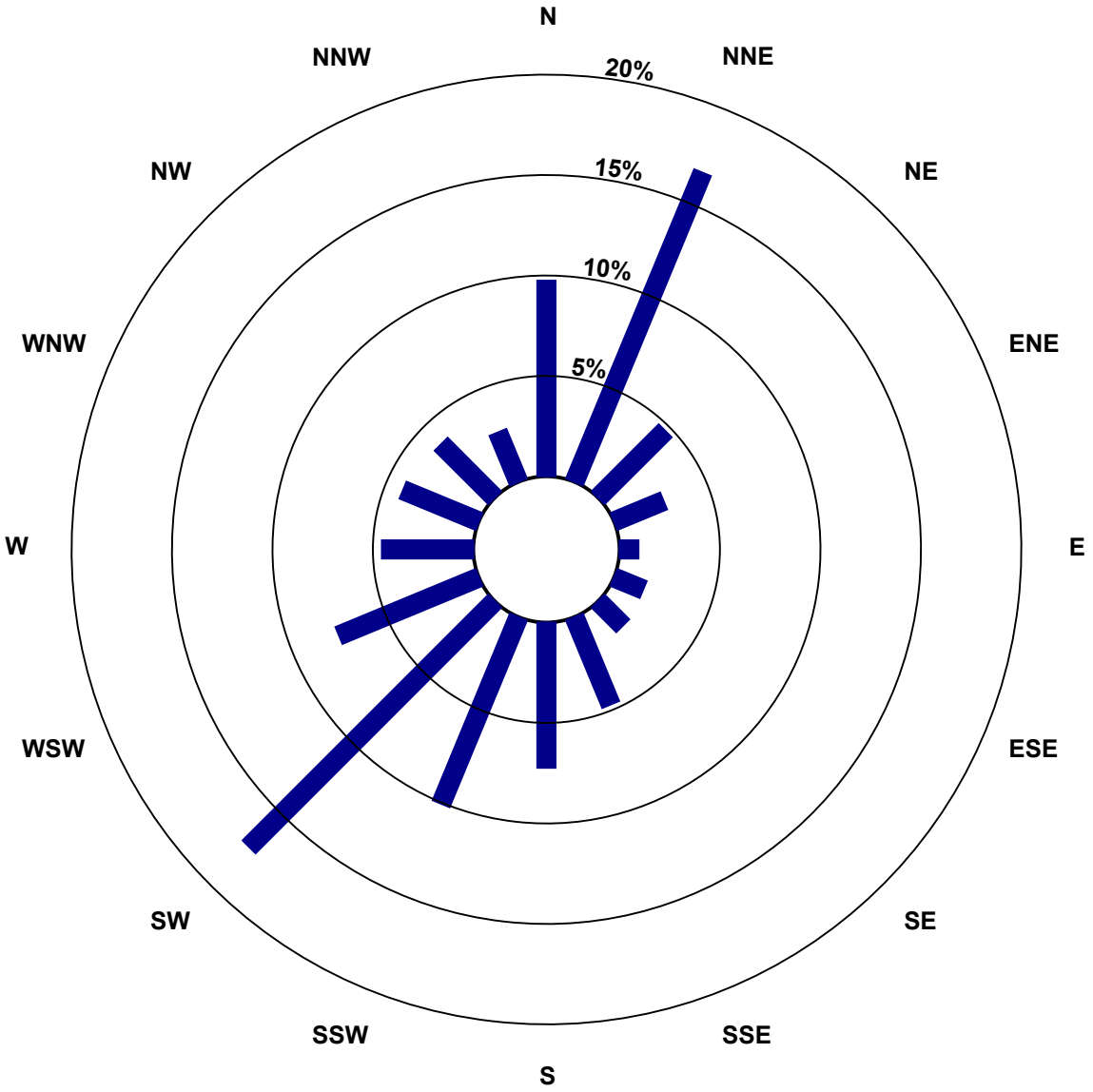
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Dioxide (NO_2) - ppb

Janvier



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

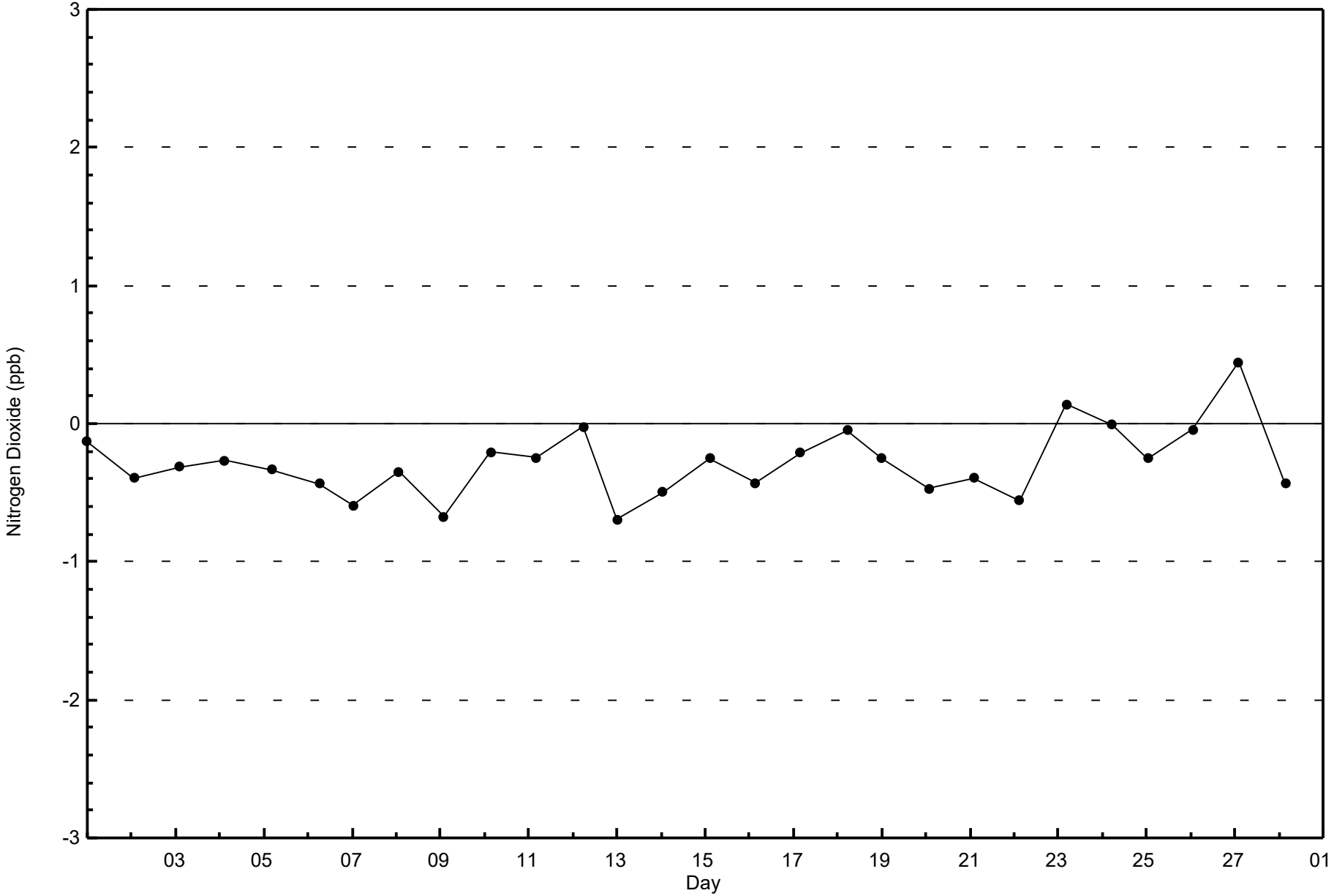
Total Number of Valid Hours: 636

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Janvier - February 2025

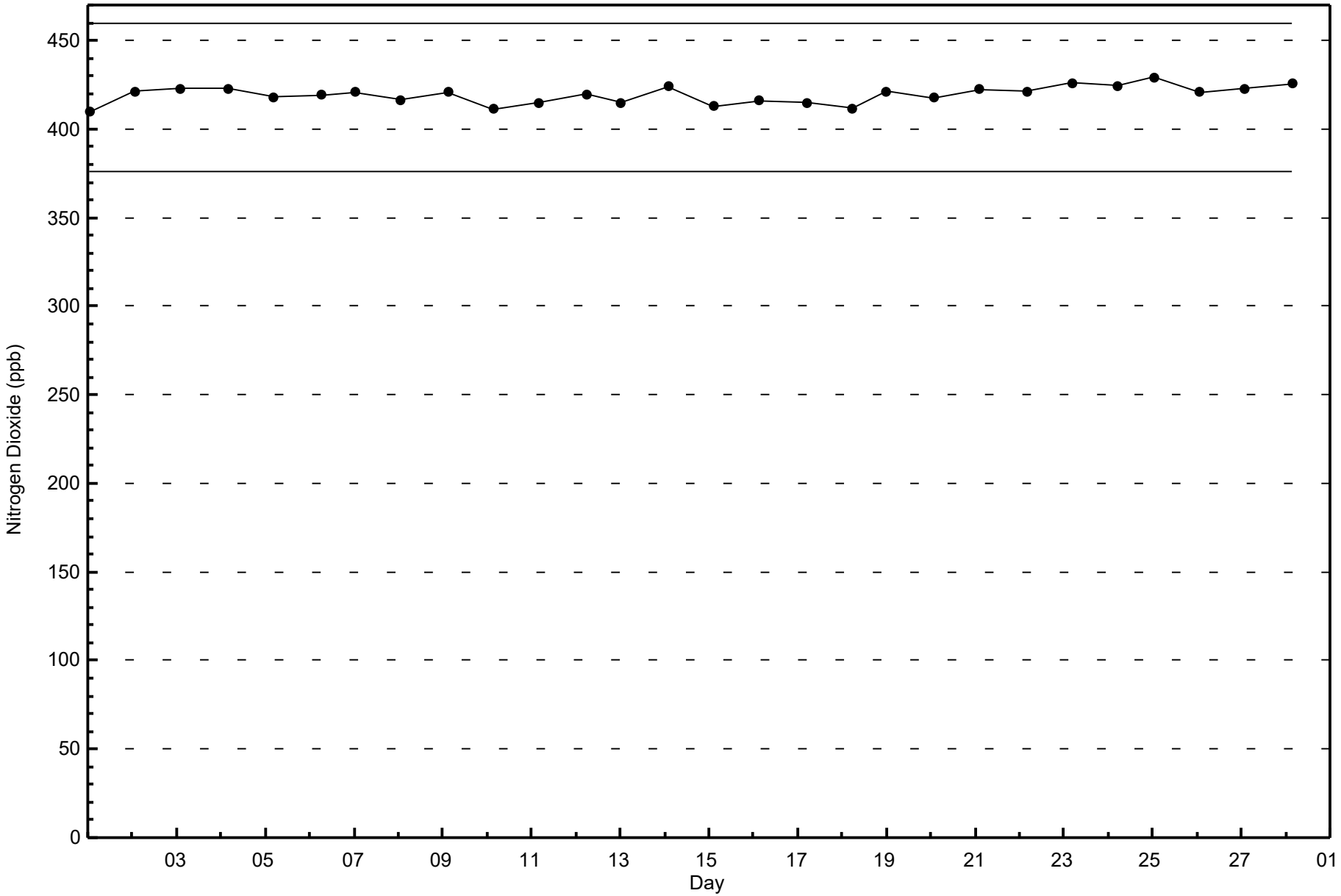


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Janvier - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Janvier - February 2025

Maximum Value: 22.9 ppb on Feb 25 10:00

Maximum Daily Average: 8.2 ppb on Feb 25

Minimum Value: 0.0 ppb on Feb 3 17:00

Minimum Daily Average: 1.2 ppb on Feb 7

Maximum Diurnal Average: 4.2 ppb at hour 10

Minimum Diurnal Average: 2.2 ppb at hour 17

Monthly Average: 3.10 ppb

Percentiles: P_1 = 0.2 P_{10} = 0.7 Q_1 = 1.4 Median = 2.4 Q_3 = 4.0 P_{90} = 6.1 P_{99} = 12.5

Hours in Service:	672
Hours of Data:	638
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-Feb	Z	0.4	0.4	0.6	0.6	0.5	0.5	0.3	0.2	0.2	2.5	4.0	3.7	3.5	5.5	7.5	7.1	3.6	2.5	2.1	2.2	1.1	1.1	2.1	2.3	7.5
2-Feb	3.6	Z	2.8	3.4	3.5	3.9	3.6	3.7	7.8	7.5	3.4	2.4	1.9	2.5	2.7	3.2	3.0	4.5	4.9	5.6	5.0	4.3	6.2	5.0	4.1	7.8
3-Feb	3.3	2.3	Z	4.3	2.3	4.3	5.0	7.3	6.5	1.5	1.3	0.9	1.4	1.4	0.4	0.2	0.0	0.5	2.1	1.2	1.0	2.3	3.7	0.3	2.3	7.3
4-Feb	0.6	0.4	0.3	Z	0.8	0.7	0.8	1.1	1.5	1.8	1.3	1.0	1.2	0.9	1.0	0.7	0.9	3.7	1.7	1.6	1.1	1.2	1.4	1.0	1.2	3.7
5-Feb	1.4	1.4	1.7	1.7	Z	1.4	1.9	1.4	2.2	2.2	1.8	2.2	1.6	1.5	1.5	1.5	1.8	2.5	1.5	1.8	1.9	2.2	2.3	2.5	1.8	2.5
6-Feb	2.5	2.2	2.3	2.0	2.0	2.1	Z	1.1	1.9	1.3	1.0	0.9	0.6	2.7	1.3	5.6	2.0	2.2	3.1	3.8	4.6	4.9	2.8	1.2	2.4	5.6
7-Feb	Z	0.7	1.2	1.5	0.7	0.9	0.6	0.4	1.3	1.4	1.0	0.5	1.1	1.1	0.7	0.1	0.5	1.5	1.3	1.8	1.8	2.4	2.4	1.6	1.2	2.4
8-Feb	1.3	Z	2.2	2.2	1.9	2.1	1.4	1.7	3.3	3.7	1.2	0.8	0.5	0.8	1.0	0.8	1.2	5.3	4.3	4.1	6.2	6.5	5.5	5.0	2.7	6.5
9-Feb	6.5	2.0	Z	3.1	2.3	4.1	3.7	3.8	8.0	5.8	3.5	5.0	5.7	4.5	3.9	3.0	3.0	4.0	8.4	8.7	7.3	4.4	5.9	7.4	5.0	8.7
10-Feb	3.4	3.2	1.9	Z	0.8	0.7	0.7	0.8	1.0	1.4	1.2	0.8	0.8	0.4	0.5	0.3	0.6	1.0	1.3	1.8	2.1	4.2	3.5	1.8	1.5	4.2
11-Feb	1.5	3.7	1.6	2.1	Z	3.5	3.0	3.5	5.1	5.1	3.2	3.5	2.9	2.2	2.4	2.5	3.6	8.3	8.9	10.1	8.3	10.8	8.4	6.1	4.8	10.8
12-Feb	6.0	5.6	5.2	5.0	4.7	Z	5.1	4.7	5.3	5.5	4.7	4.7	2.7	3.4	3.2	2.3	1.3	1.5	3.4	2.0	1.7	1.8	1.5	1.4	3.6	6.0
13-Feb	Z	1.8	2.3	1.9	1.7	1.9	2.4	3.7	5.4	3.3	2.3	0.9	1.0	1.0	1.0	1.7	1.6	3.4	4.8	3.6	3.1	3.8	8.5	12.3	3.2	12.3
14-Feb	11.6	Z	9.2	10.8	16.7	11.3	7.8	7.1	9.6	12.3	6.3	4.5	4.0	2.3	1.9	2.1	2.6	3.9	3.9	5.0	4.6	6.1	3.9	2.2	6.5	16.7
15-Feb	2.1	2.6	Z	2.9	3.8	3.0	3.1	2.9	3.7	3.9	2.6	1.9	1.5	1.0	0.7	0.7	0.6	1.9	2.0	4.6	8.4	8.4	3.4	1.6	2.9	8.4
16-Feb	4.8	12.6	3.2	Z	3.1	1.2	2.2	0.9	7.2	3.5	1.7	1.6	1.7	2.1	2.0	1.7	2.1	1.7	0.6	1.9	1.5	4.4	0.4	2.0	2.8	12.6
17-Feb	2.2	2.8	2.2	2.0	Z	3.3	3.2	2.3	3.5	2.4	2.0	2.4	2.2	1.7	1.0	1.0	0.4	0.6	1.7	0.1	1.0	1.1	0.6	0.9	1.8	3.5
18-Feb	0.9	1.4	1.6	1.7	1.3	Z	3.3	6.4	4.1	5.4	4.9	5.7	5.3	2.4	1.7	1.7	2.4	1.6	1.4	2.1	2.2	2.6	2.5	2.0	2.8	6.4
19-Feb	Z	2.7	2.7	2.8	3.3	4.7	4.4	5.0	6.3	6.8	5.7	4.1	2.8	2.4	2.9	2.8	2.0	1.6	1.4	1.1	1.2	1.7	1.1	1.8	3.1	6.8
20-Feb	2.8	Z	5.3	5.8	6.1	5.9	5.5	5.1	3.6	3.0	3.3	4.5	4.3	4.2	3.7	3.4	5.2	4.4	4.8	3.8	3.6	3.4	3.3	4.9	4.3	6.1
21-Feb	3.9	3.0	Z	2.8	3.2	3.7	2.5	3.7	5.0	5.0	4.5	4.9	3.8	3.1	2.9	3.1	2.6	2.4	2.8	2.4	3.3	3.2	3.1	2.4	3.4	5.0
22-Feb	3.0	2.8	3.5	Z	9.1	9.5	8.8	7.4	7.5	7.1	3.2	1.6	2.1	3.5	4.7	4.8	3.7	4.1	2.4	2.8	2.3	2.7	2.3	2.1	4.4	9.5
23-Feb	2.7	2.1	2.3	2.7	Z	3.0	2.0	1.3	1.0	1.4	0.5	0.1	0.3	0.2	2.2	4.9	1.6	1.4	2.2	3.2	3.2	4.2	4.1	3.0	2.2	4.9
24-Feb	2.1	2.8	3.0	2.7	2.6	Z	2.0	1.8	1.5	1.2	1.1	1.6	1.7	1.3	1.4	1.5	2.0	3.3	3.2	7.3	3.7	4.3	2.6	3.1	2.5	7.3
25-Feb	Z	0.9	0.9	1.9	6.1	6.5	5.7	4.6	7.0	22.9	17.7	16.7	13.3	10.3	8.9	7.5	6.3	6.5	8.0	13.3	7.6	5.8	4.8	4.4	8.2	22.9
26-Feb	4.0	Z	2.0	1.0	1.1	1.9	2.3	1.5	4.2	0.7	0.5	0.6	0.5	1.0	0.5	0.8	0.9	2.0	2.0	4.9	8.0	4.1	5.4	7.0	2.5	8.0
27-Feb	5.3	3.5	Z	1.5	1.8	4.5	3.0	2.4	4.3	1.8	0.8	1.0	0.4	0.6	0.6	0.5	0.8	0.7	0.5	2.4	4.0	2.5	1.3	0.7	1.9	5.3
28-Feb	0.9	0.7	0.9	Z	1.7	0.9	0.8	0.7	0.4	0.6	0.4	0.6	C	C	C	C	C	C	0.6	0.4	0.4	3.3	4.8	1.1	--	4.8
	3.3	2.7	2.6	2.9	3.4	3.4	3.2	3.1	4.2	4.2	3.0	2.8	2.5	2.3	2.2	2.4	2.2	2.9	3.1	3.7	3.6	3.8	3.5	3.1	Diurnal Average	
	11.6	12.6	9.2	10.8	16.7	11.3	8.8	7.4	9.6	22.9	17.7	16.7	13.3	10.3	8.9	7.5	7.1	8.3	8.9	13.3	8.4	10.8	8.5	12.3	Diurnal Maximum	

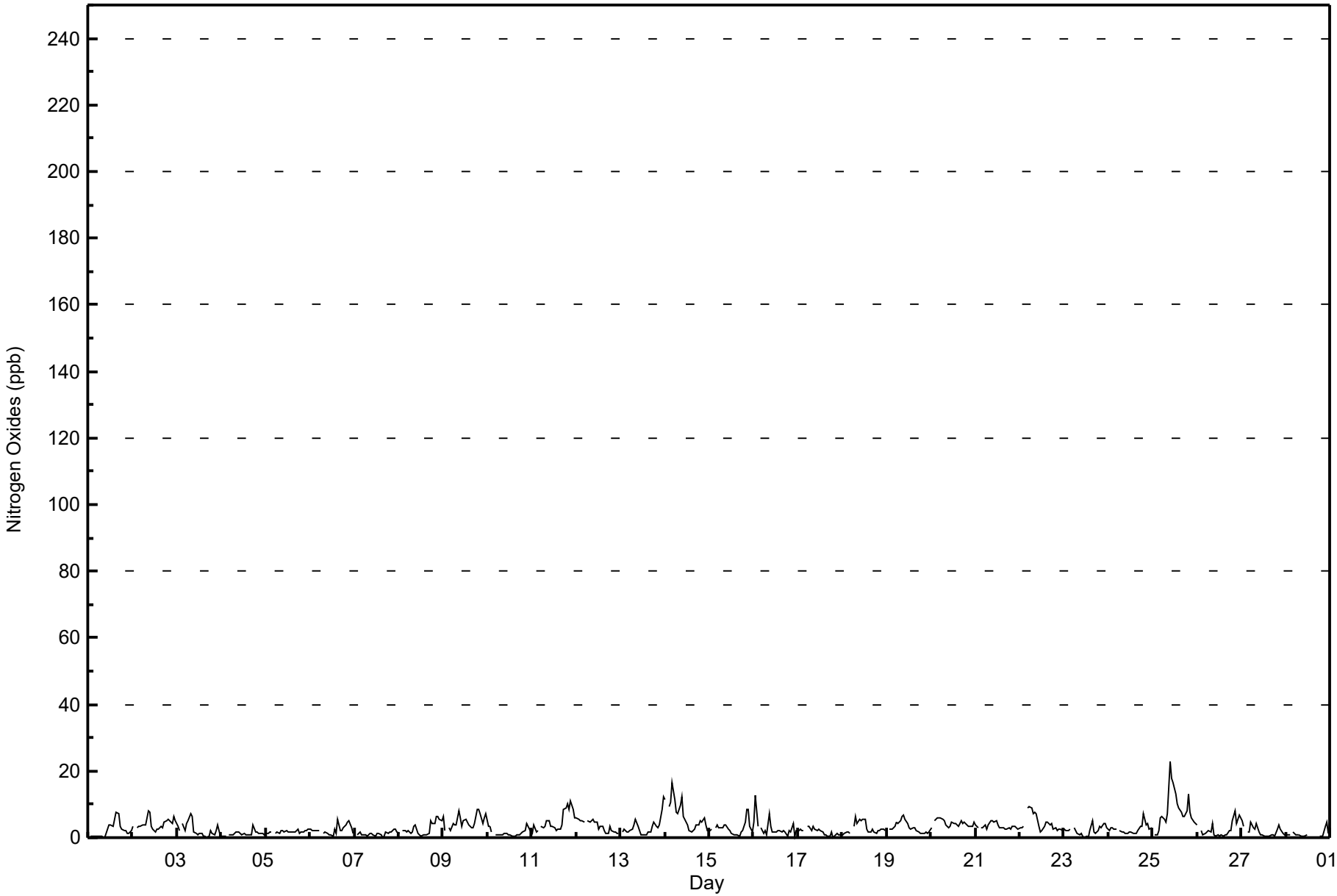
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Janvier - February 2025



Nitrogen Oxides (NO_X) - ppb

Janvier - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	637	99.84	99.84
21 - 40	1	0.16	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: 638

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Janvier - February 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	62	105	30	17	6	10	11	30	46	64	110	48	29	26	24	17	635
21 - 40	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	62	106	30	17	6	10	11	30	46	64	110	48	29	26	24	17	636

Total Number of Valid Hours: 636

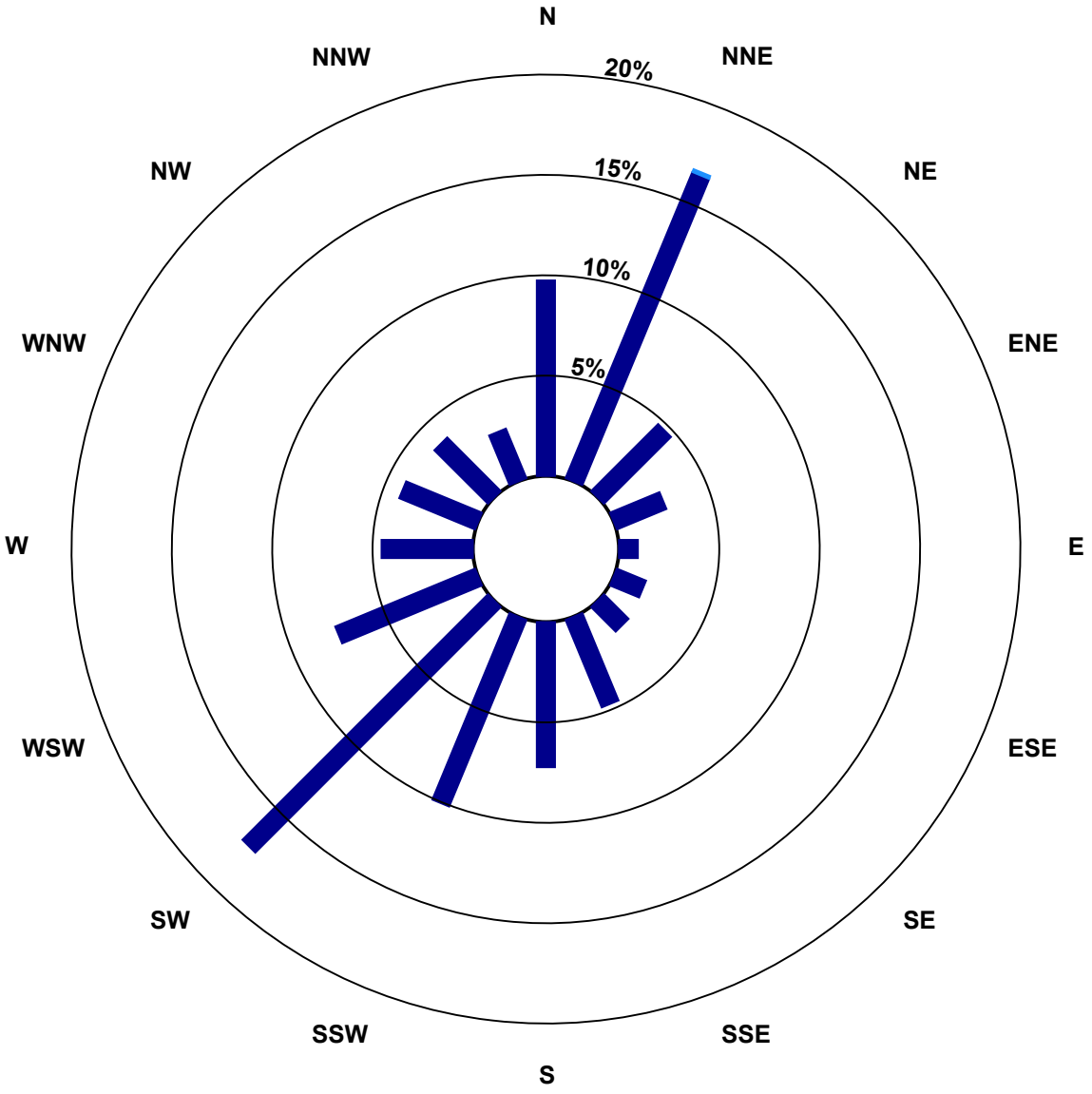
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Oxides (NO_X) - ppb

Janvier



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

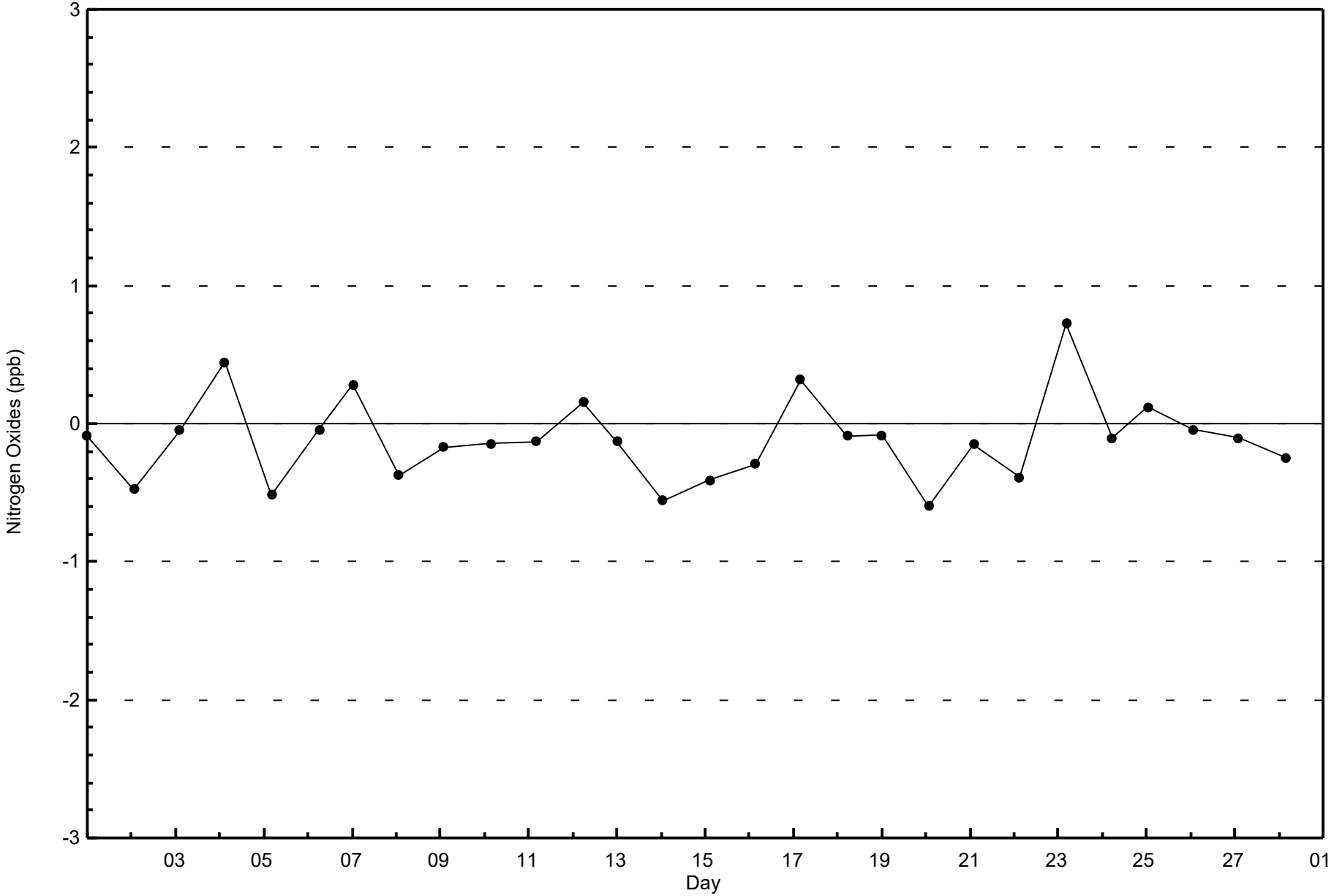
Total Number of Valid Hours: 636

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Janvier - February 2025

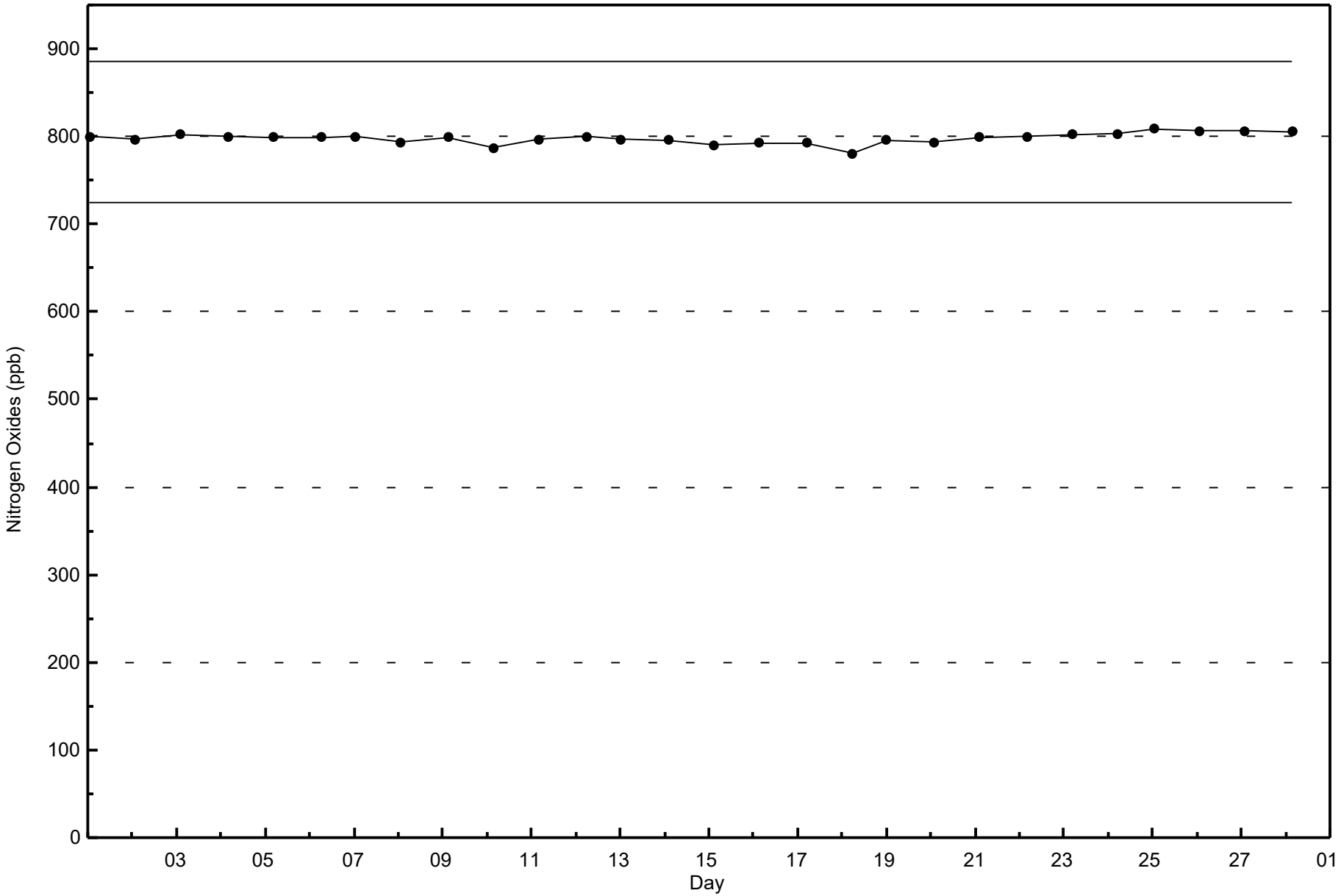


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Janvier - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ozone (O_3) - ppb

Janvier - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 51.4 ppb on Feb 27 12:00 Maximum Daily Average: 39.2 ppb on Feb 27

Minimum Value: 11.3 ppb on Feb 25 10:00 Minimum Daily Average: 21.3 ppb on Feb 25
Maximum Diurnal Average: 38.1 ppb at hour 17 Minimum Diurnal Average: 29.2 ppb at hour 5
Monthly Average: 33.11 ppb Percentiles: P_1 = 17.0 P_{10} = 24.3 Q_1 = 29.1 Median = 33.8 Q_3 = 37.0 P_{90} = 40.4 P_{99} = 49.4

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	32
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-Feb	36.8	38.4	38.8	38.3	Z	39.3	39.5	39.6	39.8	40.1	35.2	33.9	31.9	33.7	32.4	31.2	31.0	33.8	35.3	35.0	34.0	33.6	32.7	30.6	35.4	40.1
2-Feb	26.4	23.5	23.8	22.9	22.2	Z	21.4	22.1	21.2	21.7	28.3	30.2	31.0	31.1	32.4	32.0	32.9	30.7	28.9	29.0	29.9	29.6	26.3	28.7	27.2	32.9
3-Feb	Z	30.6	30.1	28.0	28.9	26.4	23.8	21.4	23.6	28.8	29.8	31.9	32.6	36.5	39.6	39.4	38.2	36.7	35.8	35.9	34.9	33.2	31.4	33.2	31.8	39.6
4-Feb	32.5	Z	32.4	32.1	31.9	31.7	32.0	32.5	32.8	32.9	35.2	36.7	37.5	37.7	37.9	39.8	39.8	38.2	39.7	39.2	38.9	37.0	36.3	36.2	35.7	39.8
5-Feb	36.5	36.1	Z	35.6	35.9	36.8	38.0	38.1	37.3	37.3	37.1	36.6	39.1	41.6	41.8	41.6	40.5	39.4	39.0	38.9	38.1	37.0	36.2	35.3	38.0	41.8
6-Feb	35.1	34.7	34.9	35.0	Z	35.7	36.7	38.4	38.5	38.8	38.6	40.4	41.5	40.4	37.2	37.2	36.6	36.2	35.4	34.0	32.7	32.3	35.8	36.3	36.6	41.5
7-Feb	36.0	36.3	36.0	35.5	Z	36.0	37.0	36.5	36.0	36.7	37.7	39.2	39.5	40.7	42.6	44.6	43.9	42.0	41.4	40.5	39.5	38.4	37.5	38.3	38.8	44.6
8-Feb	37.3	36.8	36.2	36.2	36.1	Z	36.0	36.0	35.7	36.8	39.4	41.3	41.9	42.5	42.6	42.2	42.7	38.4	37.8	37.8	33.1	30.3	31.0	31.4	37.4	42.7
9-Feb	Z	35.1	35.6	33.2	33.7	32.3	30.9	29.5	26.3	28.1	29.6	29.3	29.6	31.0	32.4	33.1	32.8	31.1	27.5	26.6	26.8	26.4	24.8	24.3	30.0	35.6
10-Feb	25.9	Z	29.9	31.0	32.3	33.5	34.2	34.9	34.9	35.3	36.1	37.1	38.4	39.3	40.4	40.6	40.4	39.4	38.9	37.5	36.0	33.8	33.1	35.4	35.6	40.6
11-Feb	36.2	33.8	Z	35.8	35.7	34.8	34.8	33.4	32.1	32.3	32.6	33.1	34.1	C	C	C	C	28.2	27.1	24.9	25.3	24.2	24.3	23.6	30.9	36.2
12-Feb	21.8	21.8	20.5	Z	19.8	20.3	20.6	20.2	20.3	20.6	23.0	24.7	29.9	27.1	28.2	30.7	33.8	33.7	32.2	31.4	30.7	30.4	30.5	30.6	26.2	33.8
13-Feb	30.7	30.8	29.9	30.0	Z	30.2	28.9	28.5	27.1	29.7	32.5	35.4	35.7	36.8	36.8	37.1	38.0	35.8	34.1	34.7	34.9	33.2	28.2	24.3	32.3	38.0
14-Feb	21.8	20.1	18.4	17.2	11.8	Z	16.5	17.3	16.8	18.5	23.7	29.0	29.0	31.5	33.7	31.8	32.1	30.1	30.1	29.1	28.5	27.1	27.3	26.9	24.7	33.7
15-Feb	Z	29.1	29.3	27.4	25.7	26.3	26.2	25.6	25.9	26.9	28.7	31.5	34.7	37.9	39.4	38.9	40.1	37.8	36.7	33.1	30.5	30.3	34.3	34.2	31.8	40.1
16-Feb	30.2	Z	29.2	25.2	28.8	28.0	25.9	24.5	22.9	27.0	27.8	30.5	34.2	35.8	36.9	37.5	37.8	36.6	30.0	24.9	25.6	26.6	32.6	31.5	30.0	37.8
17-Feb	31.6	30.2	Z	28.4	26.8	27.5	27.0	27.0	26.0	26.1	27.1	28.5	29.9	32.8	35.7	36.8	36.5	36.2	35.2	34.7	33.6	32.4	32.8	32.0	31.1	36.8
18-Feb	31.5	30.6	29.9	Z	25.4	22.9	22.1	21.5	23.0	25.4	25.4	27.0	29.4	36.7	39.0	39.5	39.7	39.5	39.2	37.8	35.9	32.9	31.0	31.1	31.1	39.7
19-Feb	31.3	30.8	30.2	29.5	Z	26.5	25.8	25.0	25.8	29.0	29.3	35.9	40.5	41.5	43.1	43.6	43.7	43.3	42.9	42.8	42.3	41.9	42.1	40.4	36.0	43.7
20-Feb	38.8	36.4	34.0	32.5	31.4	Z	31.6	32.1	34.1	35.2	35.0	34.6	35.4	36.9	37.5	37.6	36.6	37.4	35.9	36.0	36.2	36.2	35.2	34.9	35.3	38.8
21-Feb	Z	34.9	35.7	34.5	32.7	32.0	28.2	26.5	25.4	29.1	29.9	30.7	33.5	37.8	39.0	39.5	39.6	38.5	37.4	35.8	34.1	33.6	33.0	32.7	33.6	39.6
22-Feb	31.3	Z	29.3	24.9	21.0	19.7	18.5	20.5	22.3	23.1	29.8	32.3	31.7	30.0	31.6	36.5	43.3	43.1	46.0	46.1	45.6	43.8	44.0	43.5	33.0	46.1
23-Feb	41.8	37.4	Z	28.8	28.7	29.9	33.8	34.9	36.7	39.6	44.7	49.6	49.0	45.7	35.9	30.4	38.2	38.5	35.8	34.0	33.7	32.7	32.6	35.2	36.8	49.6
24-Feb	37.1	37.0	36.2	Z	36.6	37.6	37.2	35.8	33.4	33.1	36.6	35.9	33.8	34.8	35.9	36.7	37.3	34.4	33.7	29.0	30.1	26.9	26.6	27.3	34.0	37.6
25-Feb	28.2	28.6	30.5	30.1	Z	21.6	21.3	21.8	19.5	11.3	15.3	16.9	19.3	21.5	21.7	25.0	24.9	22.4	18.2	13.4	18.4	20.4	19.9	19.7	21.3	30.5
26-Feb	24.0	34.8	35.8	37.6	35.3	Z	35.0	35.3	36.0	44.5	45.8	46.6	47.5	48.9	49.5	49.8	49.5	43.1	38.5	32.8	27.9	28.5	26.6	23.5	38.1	49.8
27-Feb	Z	27.0	36.2	37.4	26.9	28.2	39.7	27.1	30.9	45.8	51.4	51.4	50.1	49.2	48.8	46.6	43.6	43.1	42.5	38.2	32.6	34.1	35.8	35.7	39.2	51.4
28-Feb	35.6	Z	35.7	35.6	35.5	35.9	35.8	35.8	35.2	35.0	34.8	34.5	34.8	35.0	35.5	M	36.4	35.1	35.2	35.0	34.6	31.7	31.1	31.6	34.8	36.4
	32.1	31.9	31.6	31.3	29.2	30.1	30.0	29.4	29.3	31.0	32.9	34.5	35.6	36.8	37.3	37.7	38.1	36.5	35.4	33.9	33.0	32.1	31.9	31.7	Diurnal Average	
	41.8	38.4	38.8	38.3	36.6	39.3	39.7	39.6	39.8	45.8	51.4	51.4	50.1	49.2	49.5	49.8	49.5	43.3	46.0	46.1	45.6	43.8	44.0	43.5	Diurnal Maximum	

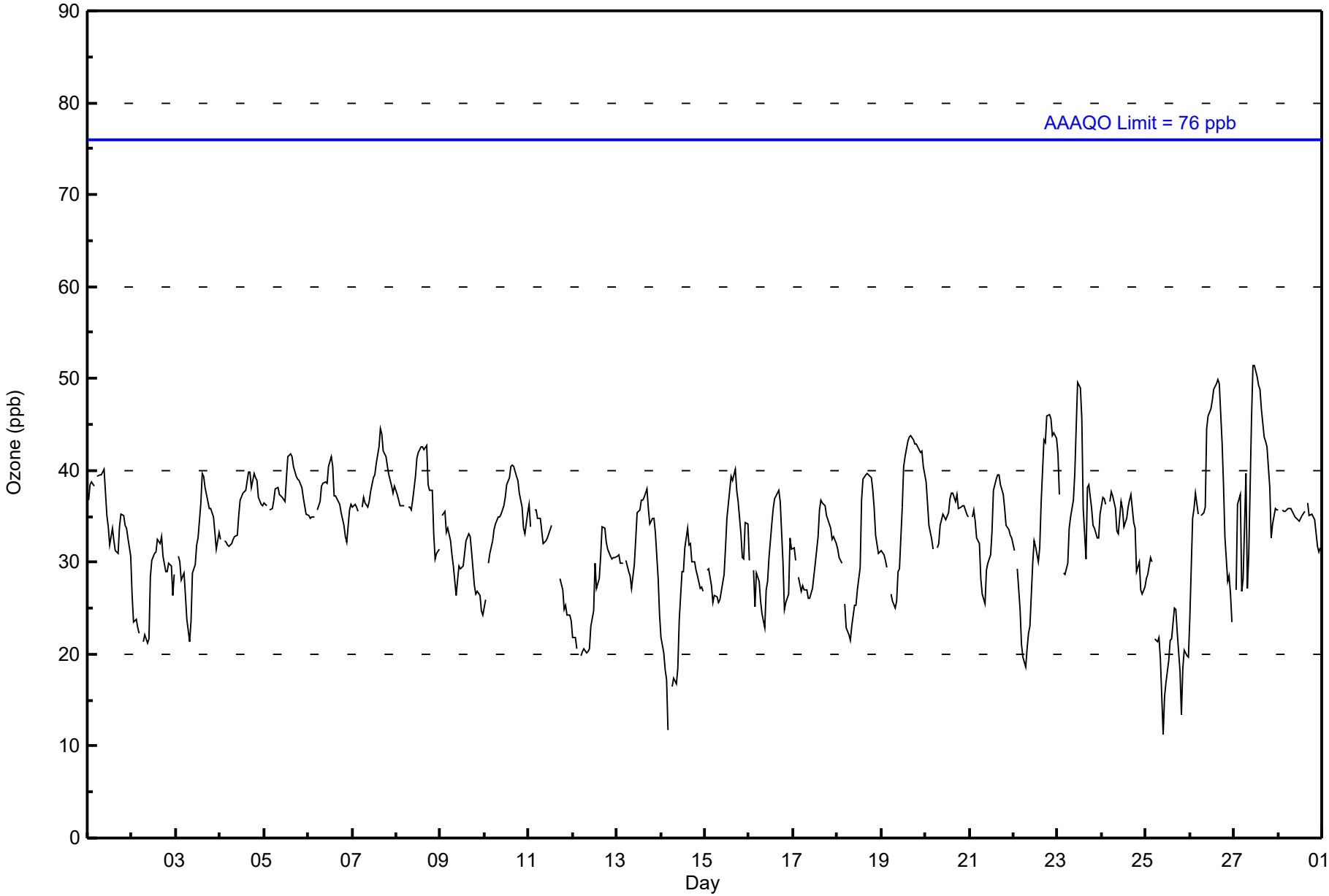
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 76 ppb

Wood Buffalo Environmental Association

Hourly Averages

Ozone (O_3) - ppb

Janvier - February 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Ozone (O_3) - ppb

Janvier - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	25	3.91	3.91
21 - 50	612	95.77	99.69
51 - 82	2	0.31	100.00
> 83	0	0.00	100.00

Total Number of Valid Hours: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Ozone (O_3) - ppb

Janvier - February 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	1	13	2	1	0	2	0	0	1	3	2	0	0	0	0	0	25
21 - 50	58	93	26	22	6	8	10	30	45	58	111	49	28	25	24	18	611
51 - 82	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2
> 83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	59	106	28	23	6	10	10	30	46	61	113	49	29	26	24	18	638

Total Number of Valid Hours: 638

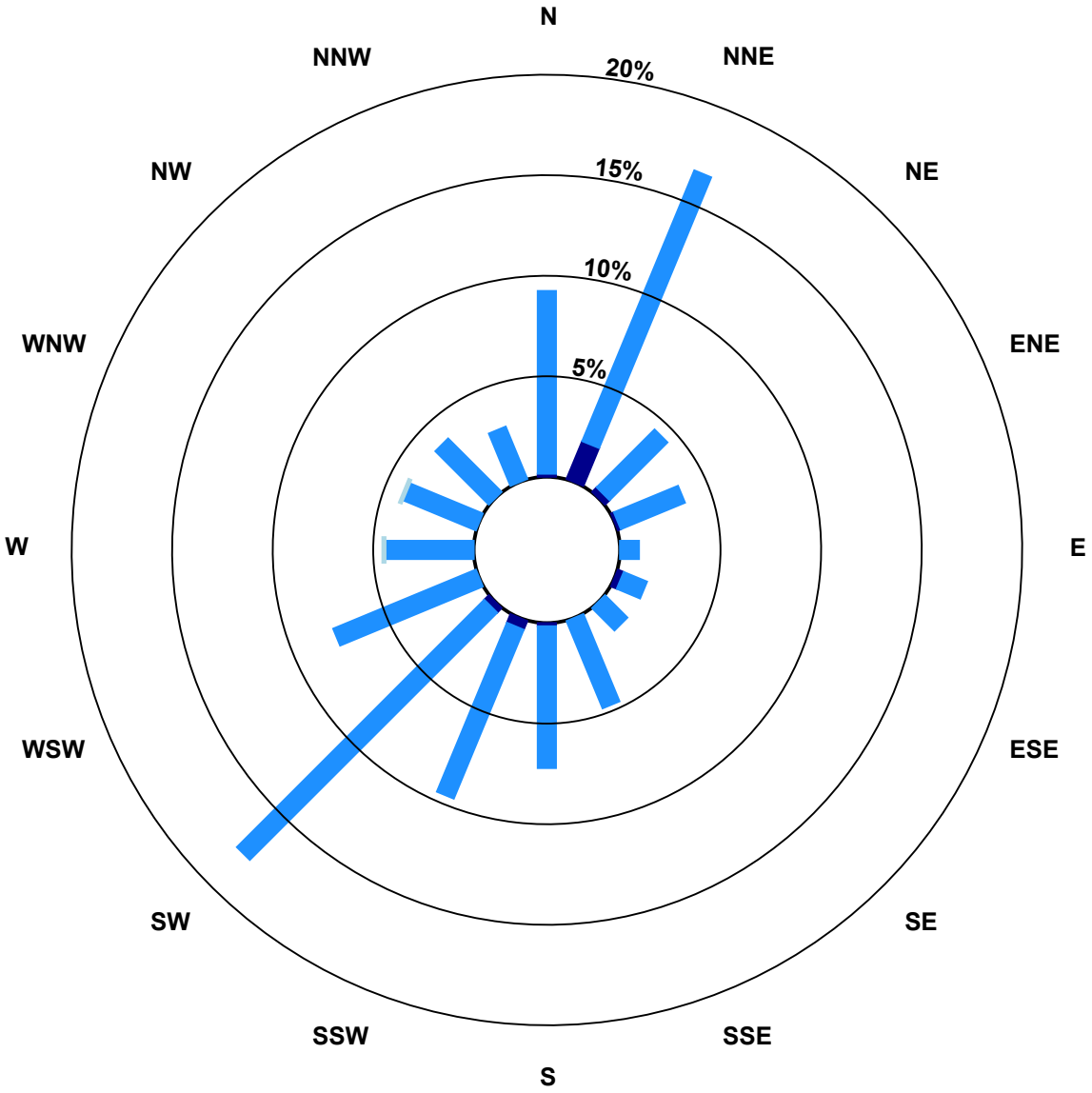
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Ozone (O_3) - ppb

Janvier



Classes (ppb)

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

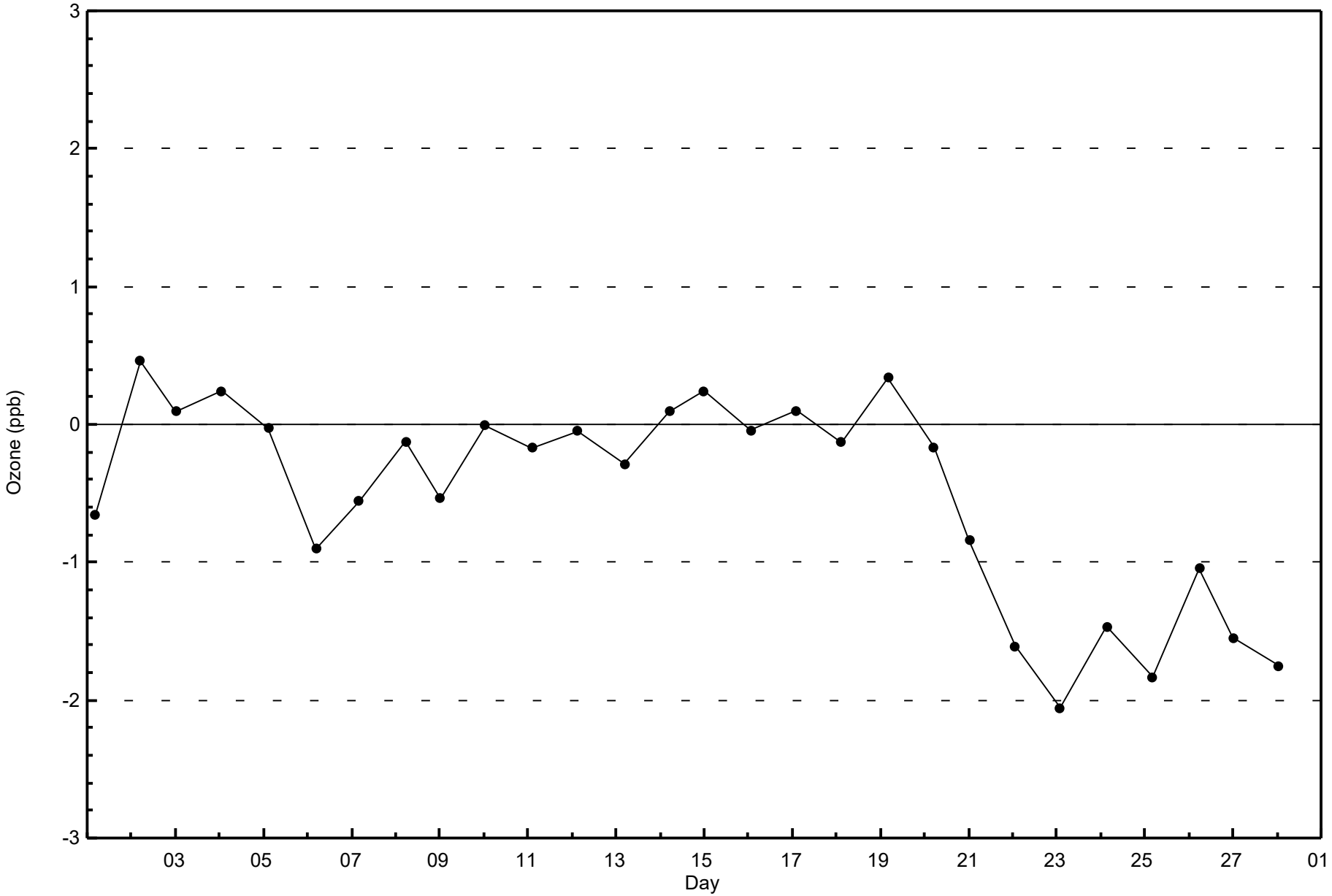
Total Number of Valid Hours: 638

Wood Buffalo Environmental Association

Zero Responses

Ozone (O_3) - ppb

Janvier - February 2025

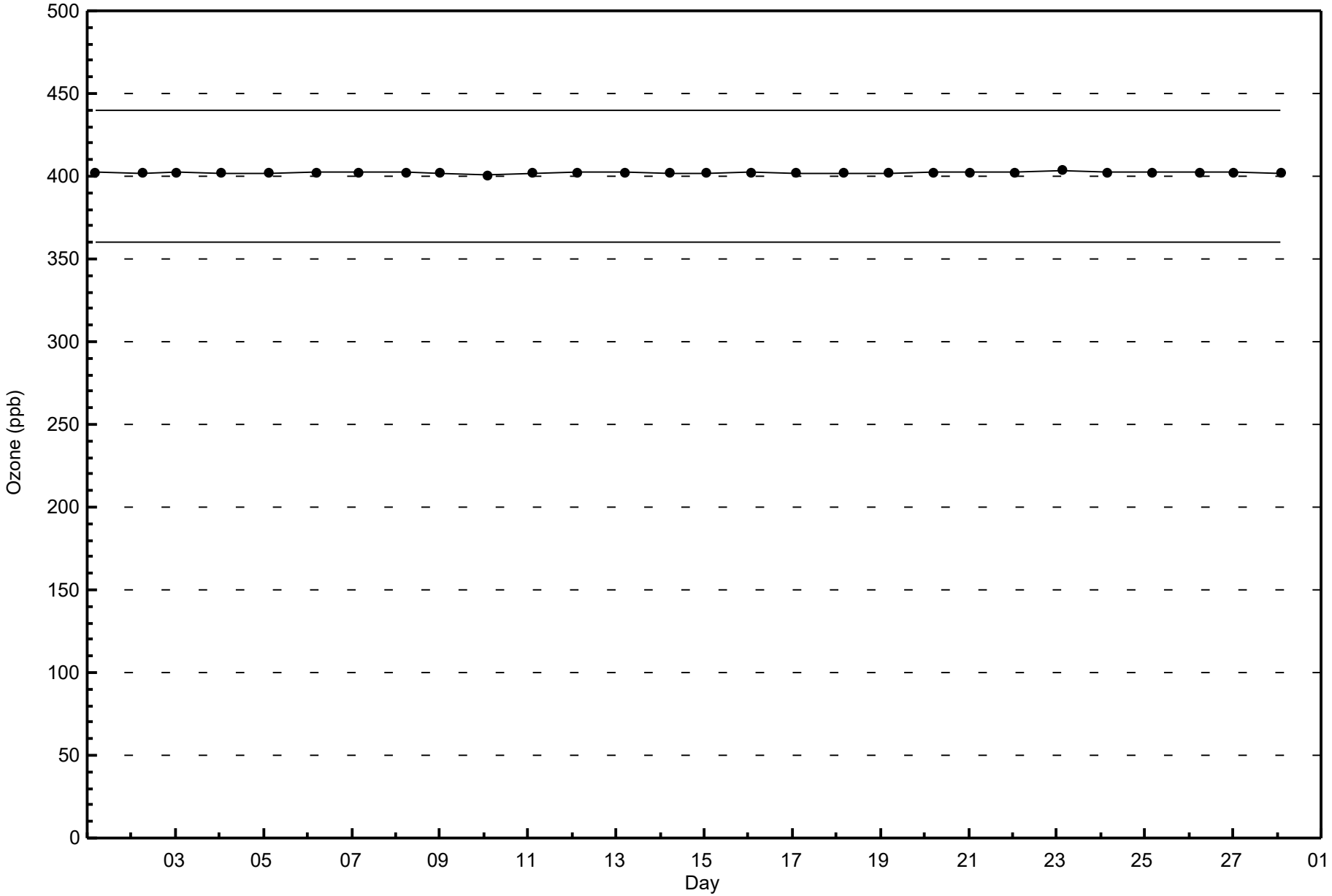


Wood Buffalo Environmental Association

Span Responses

Ozone (O_3) - ppb

Janvier - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Janvier - February 2025

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

Maximum Value: 48.3 $\mu g/m^3$ on Feb 6 23:00

Maximum Daily Average: 8.9 $\mu g/m^3$ on Feb 25

Minimum Value: 0.2 $\mu g/m^3$ on Feb 23 13:00

Minimum Daily Average: 2.0 $\mu g/m^3$ on Feb 4

Maximum Diurnal Average: 5.3 $\mu g/m^3$ at hour 23

Minimum Diurnal Average: 2.8 $\mu g/m^3$ at hour 16

Monthly Average: 3.65 $\mu g/m^3$

Percentiles: P_1 = 1.0 P_{10} = 1.8 Q_1 = 2.3 Median = 3.0 Q_3 = 4.1 P_{90} = 5.9 P_{99} = 13.2

Hours in Service:	672
Hours of Data:	671
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-Feb	2.2	1.8	1.6	1.7	1.3	1.2	1.2	1.1	1.0	1.0	1.5	1.8	2.6	2.4	3.8	4.0	3.7	3.5	7.6	4.0	3.3	3.4	4.3	4.9	2.7	7.6
2-Feb	5.4	5.5	4.4	4.1	4.1	4.0	3.8	3.8	4.0	3.9	4.0	3.4	3.8	4.4	3.5	3.1	3.4	4.0	3.6	4.8	5.1	4.4	4.6	3.7	4.1	5.5
3-Feb	3.0	2.9	3.2	5.6	3.5	3.2	3.6	3.8	3.6	2.6	2.4	2.1	1.9	1.6	1.4	1.4	1.6	2.2	2.2	4.2	2.2	3.8	2.4	1.9	2.8	5.6
4-Feb	1.9	2.0	2.0	2.0	2.0	1.8	1.8	1.8	2.7	2.2	2.6	1.7	1.5	1.9	2.0	1.6	1.5	1.6	1.2	1.8	2.2	2.2	2.7	2.7	2.0	2.7
5-Feb	2.8	2.6	2.8	3.0	3.2	3.0	2.6	2.2	2.0	2.5	2.6	3.0	2.1	1.8	2.3	1.9	2.4	2.7	3.1	3.0	2.7	3.0	3.3	3.1	2.7	3.3
6-Feb	2.8	2.8	2.6	2.5	2.3	2.1	2.0	1.9	1.9	2.3	2.1	2.1	1.5	4.9	1.6	2.1	3.5	4.4	5.5	7.1	7.4	16.5	48.3	37.4	7.0	48.3
7-Feb	7.8	6.0	6.1	6.2	5.5	4.5	4.0	3.3	3.2	3.0	2.8	2.5	2.5	2.1	1.4	1.4	1.6	2.4	2.4	2.0	2.8	3.6	2.3	2.4	3.4	7.8
8-Feb	2.2	2.6	1.8	1.8	2.1	1.7	1.5	1.5	1.5	1.6	1.9	3.1	2.6	2.6	2.1	2.2	2.8	2.4	3.7	5.3	6.6	5.6	4.2	5.2	2.9	6.6
9-Feb	3.7	2.9	3.4	3.3	3.7	4.0	4.3	4.1	4.2	4.9	5.6	7.0	8.2	6.0	5.1	6.1	6.5	19.2	10.2	7.8	6.0	5.0	4.9	4.5	5.8	19.2
10-Feb	4.0	3.9	4.2	3.8	3.6	3.1	4.2	3.0	2.8	3.3	2.6	2.1	2.0	1.8	1.5	1.2	1.3	1.4	1.4	1.4	1.7	2.0	1.7	2.4	2.5	4.2
11-Feb	2.0	2.5	3.3	2.6	2.2	2.8	2.3	2.6	2.7	2.6	2.0	2.3	2.5	2.7	2.6	2.8	2.7	3.4	3.9	4.0	4.3	4.2	4.0	4.0	3.0	4.3
12-Feb	3.7	4.7	3.8	2.9	2.8	3.1	3.2	3.4	3.3	3.3	3.5	3.3	2.8	3.0	2.8	2.6	2.8	2.8	4.0	3.5	3.1	2.9	2.8	3.0	3.2	4.7
13-Feb	3.1	3.2	3.1	3.2	3.1	3.4	2.8	3.3	3.0	2.8	2.4	1.6	1.9	1.9	2.1	2.4	2.3	2.1	2.0	2.0	2.1	2.4	2.3	2.5	2.5	3.4
14-Feb	2.7	2.9	2.8	3.1	3.0	2.9	2.8	2.8	2.7	3.0	3.4	2.7	2.6	2.6	2.7	2.6	2.6	2.7	2.5	2.5	4.3	2.4	2.5	2.2	2.8	4.3
15-Feb	2.3	2.3	2.3	2.1	2.1	2.3	2.4	2.5	2.6	2.6	2.6	2.8	2.1	1.8	1.5	1.5	1.4	1.8	2.4	2.3	2.9	2.2	2.0	2.0	2.2	2.9
16-Feb	2.2	2.0	2.8	2.1	2.0	1.7	1.7	1.5	1.7	1.8	2.1	2.3	2.5	2.4	2.4	2.3	2.0	2.3	2.4	2.8	2.6	2.5	2.0	2.0	2.2	2.8
17-Feb	2.3	2.5	2.6	2.7	2.8	2.9	3.0	3.4	3.5	3.4	3.2	3.1	2.9	2.6	2.1	1.8	1.9	1.9	1.8	2.1	3.8	2.6	3.3	4.0	2.8	4.0
18-Feb	4.2	4.6	4.3	4.0	3.6	4.3	3.7	3.4	3.8	5.9	6.7	4.5	3.1	2.4	1.8	1.8	1.6	4.1	3.8	4.5	3.7	3.6	2.8	2.6	3.7	6.7
19-Feb	2.5	2.6	2.7	2.8	3.0	3.1	3.2	3.6	4.0	4.4	3.9	3.7	3.5	2.5	1.8	1.9	2.3	2.2	2.2	2.2	2.1	1.9	2.0	2.6	2.8	4.4
20-Feb	3.3	4.3	5.0	5.4	5.0	5.2	5.3	5.5	5.3	5.4	5.9	6.2	7.0	6.1	5.8	5.3	4.8	4.3	4.8	4.8	4.3	4.5	4.6	4.8	5.1	7.0
21-Feb	4.5	4.6	5.0	5.3	5.0	5.9	7.5	8.2	7.6	13.5	9.9	7.2	6.5	5.2	3.9	4.1	3.9	3.9	3.9	3.9	3.9	4.1	4.2	4.2	5.7	13.5
22-Feb	4.3	4.3	4.9	5.1	5.6	5.8	5.9	6.7	5.9	5.9	5.7	6.2	5.7	5.2	4.1	3.3	2.4	2.0	2.6	3.2	3.5	4.0	4.1	4.7	4.6	6.7
23-Feb	4.5	4.2	3.8	4.2	4.5	4.6	4.4	3.4	2.5	1.6	1.2	0.4	0.2	0.4	1.8	3.9	3.0	2.7	3.3	3.7	3.6	3.9	4.0	3.9	3.1	4.6
24-Feb	3.4	3.1	3.1	3.1	3.1	2.9	3.1	3.0	3.4	3.3	4.0	4.3	4.5	3.8	3.8	3.6	3.2	3.4	3.6	4.4	4.2	5.6	6.3	7.5	3.9	7.5
25-Feb	5.9	4.6	4.7	4.4	6.9	10.4	14.1	11.0	9.9	12.0	13.1	13.7	11.8	9.6	8.0	7.2	7.6	8.0	8.1	9.0	10.2	7.8	7.5	7.3	8.9	14.1
26-Feb	6.4	4.0	2.5	1.8	1.8	2.8	3.1	2.9	2.2	1.3	1.1	1.1	2.4	7.3	3.2	0.9	1.0	2.0	3.6	4.7	6.2	6.9	8.8	7.8	3.6	8.8
27-Feb	8.0	6.7	4.1	2.8	3.7	3.5	2.2	4.4	3.9	2.4	2.0	1.3	1.5	1.7	2.7	2.3	3.1	4.8	3.1	2.2	2.9	2.9	3.0	3.4	3.3	8.0
28-Feb	3.1	3.1	3.0	3.0	3.2	3.2	3.6	3.7	3.6	3.9	3.9	3.7	3.6	3.5	3.3	C	3.2	3.0	2.9	2.7	2.6	2.8	2.8	2.8	3.2	3.9
	3.7	3.5	3.4	3.4	3.4	3.6	3.7	3.6	3.5	3.8	3.7	3.5	3.4	3.4	2.9	2.8	2.9	3.6	3.6	3.8	3.9	4.2	5.3	5.0	Diurnal Average	
	8.0	6.7	6.1	6.2	6.9	10.4	14.1	11.0	9.9	13.5	13.1	13.7	11.8	9.6	8.0	7.2	7.6	19.2	10.2	9.0	10.2	16.5	48.3	37.4	Diurnal Maximum	

C - Calibration

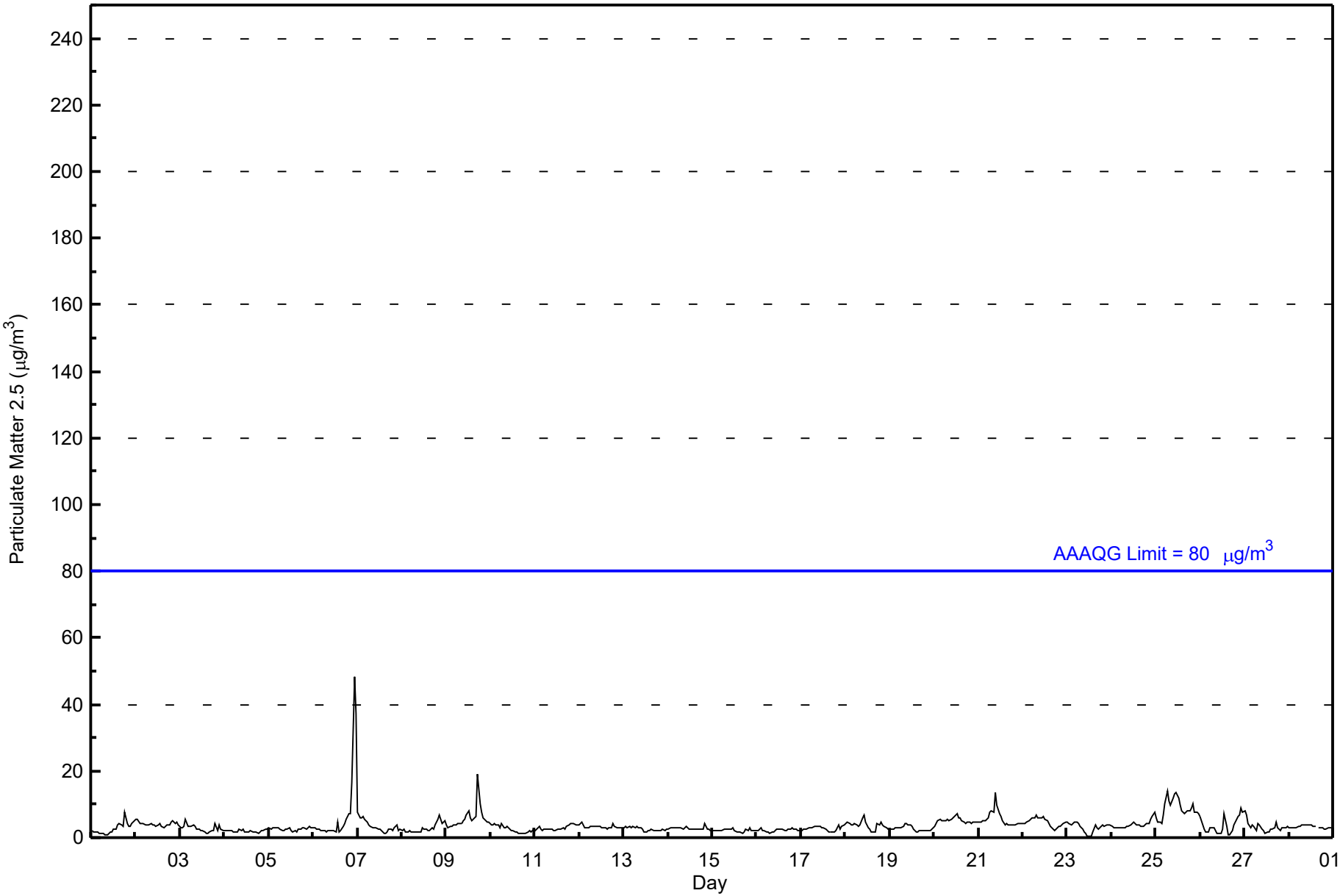
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Janvier - February 2025



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

Janvier - February 2025

Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	591	88.08	88.08
6 - 15	76	11.33	99.40
16 - 25	2	0.30	99.70
26 - 80	2	0.30	100.00
> 81.0	0	0.00	100.00

Total Number of Valid Hours: 671

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

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

Janvier - February 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	51	91	25	20	6	11	11	30	47	63	108	42	26	24	18	16	589
6 - 15	11	21	6	3	0	0	0	2	2	4	9	7	3	2	4	2	76
16 - 25	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2
26 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
> 81.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	63	112	31	23	6	11	11	32	49	67	117	49	29	27	24	18	669

Total Number of Valid Hours: 669

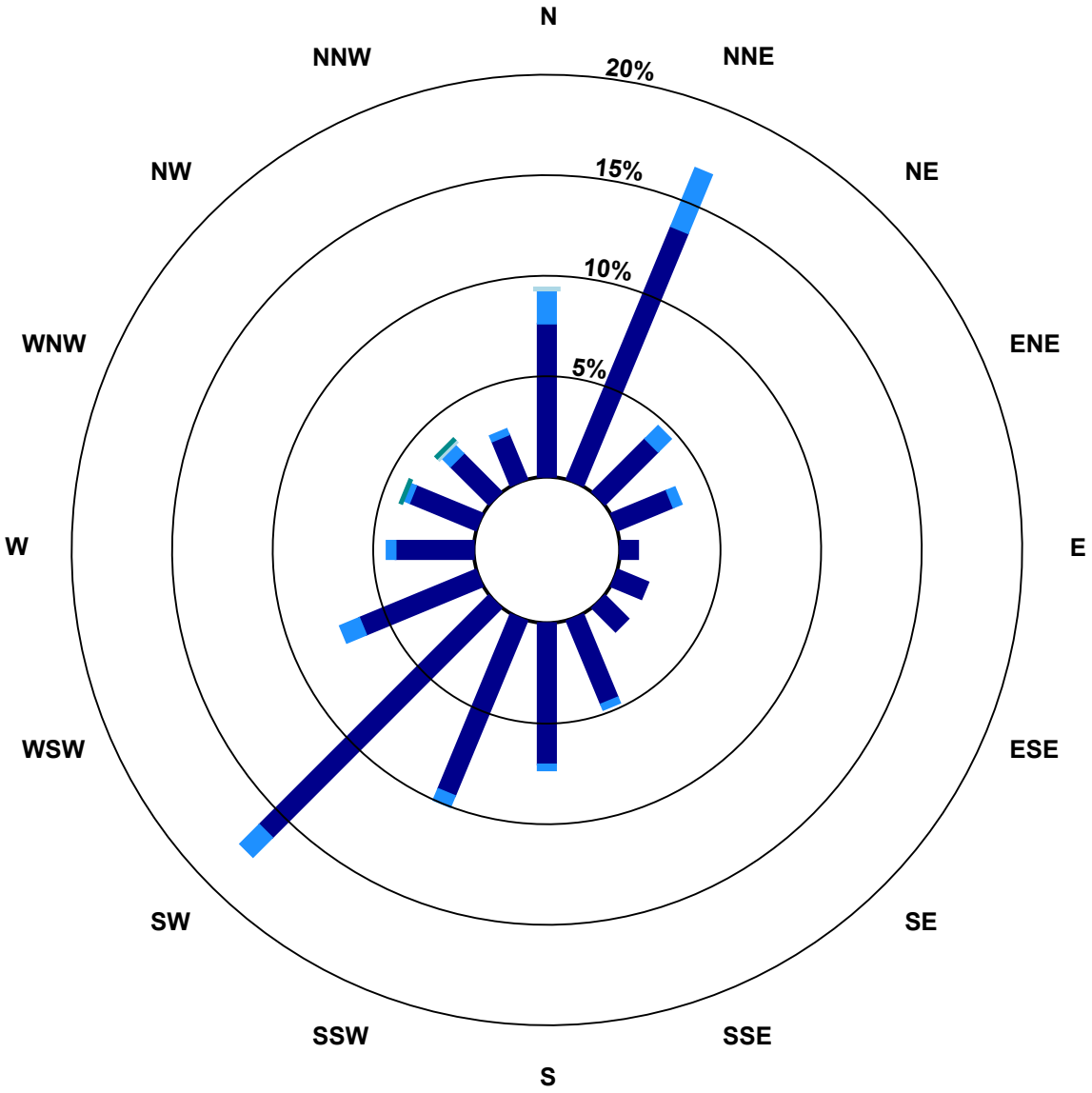
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 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: 669

Maximum Value: 9.0 C on Feb 26 16:00

Maximum Daily Average: 2.0 C on Feb 27

Minimum Value: -36.3 C on Feb 14 07:00

Minimum Daily Average: -29.2 C on Feb 14

Maximum Diurnal Average: -10.4 C at hour 16

Minimum Diurnal Average: -20.3 C at hour 8

Monthly Average: -16.22 C

Percentiles: P_1 = -34.9 P_{10} = -29.3 Q_1 = -24.6 Median = -18.8 Q_3 = -5.8 P_{90} = -0.1 P_{99} = 8.0

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

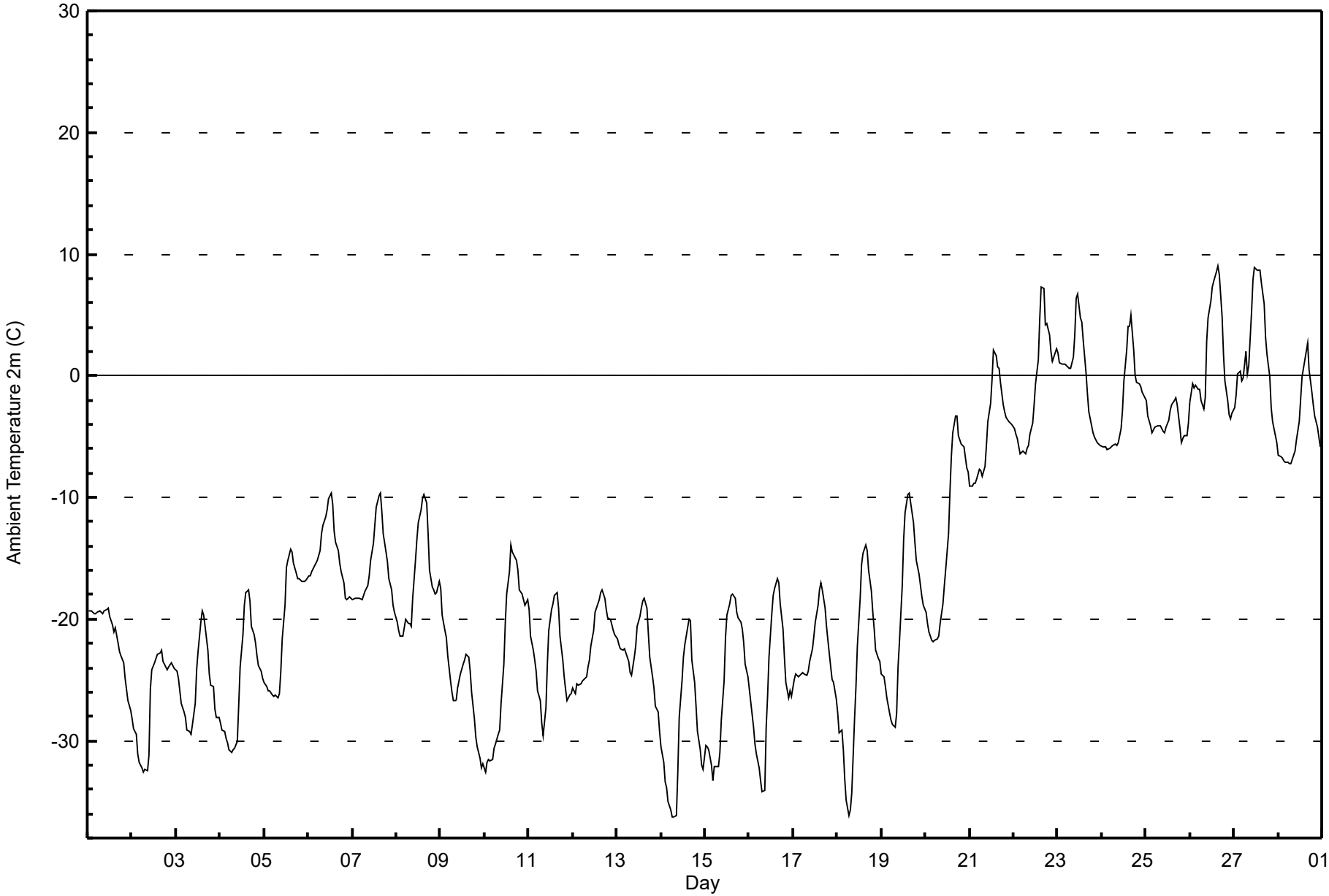
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-19.3	-19.3	-19.3	-19.6	-19.6	-19.4	-19.4	-19.5	-19.5	-19.3	-19.2	-19.1	-19.8	-20.5	-21.0	-20.7	-22.0	-22.6	-23.1	-23.6	-24.8	-25.8	-26.7	-27.5	-21.3	-19.1
2-Feb	-28.2	-29.1	-29.4	-31.1	-31.8	-32.2	-32.6	-32.3	-32.5	-31.2	-25.7	-24.1	-23.6	-23.3	-22.9	-22.8	-22.6	-23.4	-23.9	-24.1	-23.9	-23.6	-23.9	-24.1	-26.8	-22.6
3-Feb	-24.3	-24.9	-25.9	-26.9	-27.6	-28.1	-29.1	-29.3	-29.5	-28.6	-27.0	-24.2	-22.7	-20.2	-19.3	-19.7	-20.6	-22.5	-24.5	-25.4	-25.6	-27.4	-28.1	-28.1	-25.4	-19.3
4-Feb	-28.5	-29.1	-29.3	-29.8	-30.2	-30.7	-31.0	-30.7	-30.7	-30.0	-27.1	-23.9	-21.3	-18.9	-17.8	-17.6	-18.5	-20.6	-21.2	-22.0	-23.0	-23.8	-24.2	-24.8	-25.2	-17.6
5-Feb	-25.3	-25.5	-25.9	-25.9	-26.3	-26.4	-26.3	-26.4	-26.1	-24.3	-21.6	-18.8	-15.7	-15.2	-14.3	-14.5	-15.4	-16.2	-16.6	-16.7	-16.9	-16.9	-16.9	-16.8	-20.5	-14.3
6-Feb	-16.5	-16.5	-16.1	-15.6	-15.4	-15.2	-14.4	-13.0	-12.3	-11.7	-11.1	-10.2	-9.7	-10.6	-12.8	-13.7	-14.4	-15.4	-16.1	-17.0	-18.3	-18.4	-18.2	-18.3	-14.6	-9.7
7-Feb	-18.4	-18.3	-18.3	-18.3	-18.3	-18.4	-18.0	-17.7	-17.2	-16.4	-15.2	-13.9	-12.2	-10.9	-9.9	-9.7	-11.1	-13.0	-14.5	-15.3	-16.7	-17.7	-18.8	-19.5	-15.7	-9.7
8-Feb	-20.2	-21.0	-21.4	-21.5	-20.7	-20.0	-20.4	-20.4	-20.6	-18.2	-15.1	-13.4	-12.1	-11.0	-10.1	-9.8	-10.4	-13.0	-15.9	-17.3	-17.6	-18.0	-17.9	-16.9	-16.8	-9.8
9-Feb	-17.4	-19.7	-21.0	-21.5	-23.0	-25.0	-26.0	-26.8	-26.7	-25.7	-25.1	-24.5	-23.8	-23.3	-22.9	-23.1	-24.3	-26.0	-28.2	-29.7	-30.5	-31.4	-32.2	-31.9	-25.4	-17.4
10-Feb	-32.5	-31.8	-31.5	-31.6	-31.5	-30.6	-30.3	-29.4	-29.1	-27.0	-23.7	-20.3	-18.0	-16.1	-13.9	-14.5	-14.7	-15.2	-16.0	-17.6	-18.0	-18.4	-18.9	-18.4	-22.9	-13.9
11-Feb	-19.2	-21.4	-22.5	-23.3	-24.3	-25.8	-26.8	-28.5	-29.6	-27.3	-23.7	-21.0	-19.2	-18.7	-18.0	-17.8	-19.1	-21.4	-23.4	-24.7	-25.7	-26.7	-26.2	-26.2	-23.4	-17.8
12-Feb	-25.7	-26.1	-25.3	-25.5	-25.3	-25.1	-25.0	-24.8	-24.0	-23.4	-22.2	-20.9	-19.4	-19.1	-18.5	-17.9	-17.6	-18.3	-19.3	-19.9	-20.0	-20.4	-20.9	-21.3	-21.9	-17.6
13-Feb	-21.6	-22.1	-22.4	-22.6	-22.5	-22.7	-23.5	-24.4	-24.6	-23.2	-22.3	-20.6	-19.8	-19.0	-18.5	-18.3	-19.2	-21.2	-23.1	-24.8	-25.7	-27.1	-27.6	-29.3	-22.7	-18.3
14-Feb	-30.5	-31.8	-33.4	-33.8	-35.0	-35.7	-36.3	-36.3	-36.1	-32.6	-28.1	-25.1	-23.1	-22.2	-20.7	-20.0	-20.1	-23.3	-25.2	-27.1	-29.2	-30.7	-32.0	-32.3	-29.2	-20.0
15-Feb	-30.4	-30.5	-30.7	-32.0	-33.2	-32.1	-32.1	-32.2	-31.0	-28.3	-25.1	-21.5	-19.6	-18.7	-18.0	-18.0	-18.3	-19.4	-20.0	-20.3	-20.8	-21.9	-23.7	-24.8	-25.1	-18.0
16-Feb	-25.8	-26.9	-28.9	-30.3	-31.1	-32.3	-33.3	-34.1	-34.1	-28.9	-26.3	-23.1	-19.5	-18.1	-17.5	-16.7	-17.0	-18.8	-20.9	-23.1	-25.2	-26.4	-25.9	-26.4	-25.4	-16.7
17-Feb	-25.0	-24.5	-24.6	-24.8	-24.6	-24.4	-24.5	-24.7	-24.3	-23.5	-22.5	-21.4	-20.3	-18.9	-17.6	-17.0	-17.6	-19.1	-20.6	-21.7	-23.9	-25.0	-25.2	-26.5	-22.6	-17.0
18-Feb	-27.7	-29.3	-29.1	-30.7	-33.2	-34.8	-36.1	-35.8	-34.3	-28.2	-25.6	-22.2	-18.3	-15.5	-14.6	-13.9	-14.3	-16.0	-17.7	-19.5	-20.8	-22.5	-23.2	-23.5	-24.5	-13.9
19-Feb	-24.5	-24.8	-25.5	-26.5	-27.8	-28.3	-28.6	-28.9	-27.8	-24.0	-21.9	-17.2	-13.4	-11.2	-9.7	-9.6	-10.4	-12.1	-13.7	-15.2	-16.3	-17.2	-18.1	-18.8	-19.7	-9.6
20-Feb	-19.5	-20.4	-21.1	-21.7	-21.9	-21.7	-21.6	-21.4	-20.3	-18.8	-17.3	-15.8	-13.0	-9.5	-6.6	-4.7	-3.3	-3.3	-4.9	-5.7	-5.7	-5.8	-7.6	-8.0	-13.3	-3.3
21-Feb	-9.1	-9.1	-8.8	-8.8	-8.5	-7.7	-7.8	-8.2	-7.5	-5.7	-3.8	-2.3	-0.3	2.1	1.6	0.7	0.6	-0.5	-2.4	-3.0	-3.4	-3.7	-3.9	-4.1	-4.3	2.1
22-Feb	-4.4	-4.8	-5.2	-6.4	-6.3	-6.2	-6.4	-5.9	-5.7	-4.8	-3.8	-2.4	-0.6	1.3	4.7	7.3	7.2	4.2	4.3	3.3	2.0	1.2	1.6	2.2	-1.0	7.3
23-Feb	1.9	1.1	1.0	1.0	1.0	0.7	0.6	0.6	1.6	3.3	6.4	6.7	4.8	4.4	2.9	0.2	-1.4	-3.0	-4.1	-4.7	-5.0	-5.5	-5.6	-5.7	0.1	6.7
24-Feb	-5.9	-5.9	-5.9	-6.1	-6.0	-5.8	-5.7	-5.6	-5.7	-5.5	-4.3	-2.8	-0.4	2.1	4.0	4.1	5.0	2.1	0.0	-0.5	-0.6	-0.9	-1.4	-1.8	-2.2	5.0
25-Feb	-2.0	-3.3	-4.1	-4.7	-4.5	-4.3	-4.2	-4.1	-4.1	-4.6	-4.7	-4.2	-3.6	-2.9	-2.4	-2.1	-1.8	-2.4	-4.3	-5.5	-5.1	-4.9	-4.9	-3.9	-3.9	-1.8
26-Feb	-2.2	-0.6	-1.0	-0.8	-1.1	-1.1	-2.1	-2.7	-1.8	2.8	4.8	6.1	7.3	7.8	8.6	9.0	8.4	4.8	1.8	-0.4	-2.0	-3.2	-3.5	-3.1	1.5	9.0
27-Feb	-2.6	-1.6	0.2	0.3	-0.5	-0.2	2.0	0.1	0.9	5.2	7.9	8.9	8.7	8.7	8.7	7.6	5.9	3.2	1.7	-0.1	-2.6	-3.8	-5.0	-5.6	2.0	8.9
28-Feb	-6.5	-6.7	-6.8	-7.0	-7.2	-7.2	-7.3	-7.2	-6.6	-6.2	-5.3	-3.8	-1.9	0.0	1.3	2.0	2.7	0.4	-1.4	-2.4	-3.3	-4.2	-5.1	-5.8	-4.0	2.7
	-18.3	-18.7	-19.0	-19.5	-19.9	-20.0	-20.2	-20.3	-20.0	-18.1	-16.0	-14.1	-12.5	-11.3	-10.5	-10.4	-10.9	-12.6	-14.0	-15.1	-16.0	-16.8	-17.3	-17.5	Diurnal Average	
	1.9	1.1	1.0	1.0	1.0	0.7	2.0	0.6	1.6	5.2	7.9	8.9	8.7	8.7	8.7	9.0	8.4	4.8	4.3	3.3	2.0	1.2	1.6	2.2	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Janvier - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	296	44.05	44.05
-20 - 0	310	46.13	90.18
0 - 10	66	9.82	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Janvier - February 2025

Maximum Value: 99.0 % on Feb 25 06:00

Maximum Daily Average: 90.9 % on Feb 25

Minimum Value: 22.4 % on Feb 19 16:00

Minimum Daily Average: 44.1 % on Feb 19

Maximum Diurnal Average: 78.7 % at hour 5

Minimum Diurnal Average: 57.3 % at hour 16

Monthly Average: 71.44 %

Percentiles: P_1 = 31.8 P_{10} = 53.1 Q_1 = 64.5 Median = 74.0 Q_3 = 79.5 P_{90} = 85.1 P_{99} = 97.3

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

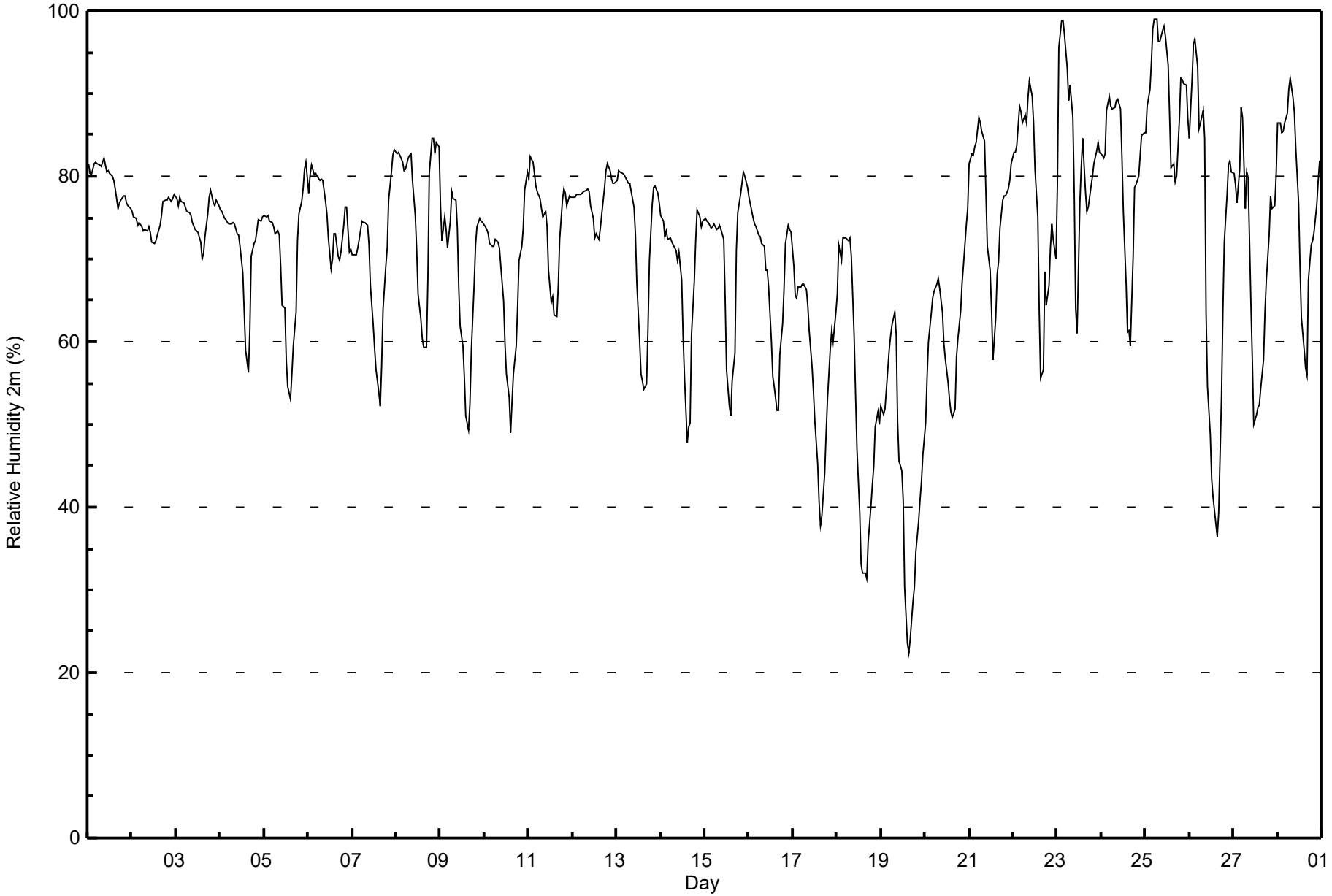
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	81.5	80.3	80.1	81.6	81.8	81.5	81.4	81.2	81.7	82.1	80.5	80.6	80.3	80.0	79.5	78.4	76.1	76.7	77.2	77.6	77.6	76.8	76.4	76.0	79.5	82.1
2-Feb	75.8	75.2	75.0	74.0	74.4	73.9	73.4	73.6	73.4	73.9	73.2	72.1	71.9	72.2	72.9	74.1	75.3	77.0	77.2	77.1	77.5	76.9	77.3	77.9	74.8	77.9
3-Feb	77.3	76.5	77.5	76.9	76.8	76.3	75.8	75.6	75.2	74.4	73.6	73.4	73.2	72.0	69.9	70.7	72.7	75.4	77.5	78.3	76.8	76.5	77.1	76.4	75.2	78.3
4-Feb	75.9	75.7	75.0	74.7	74.4	74.2	74.3	74.5	74.2	73.1	72.8	71.6	68.3	63.5	59.0	56.3	61.3	70.4	71.8	72.2	73.4	74.7	74.6	75.0	71.3	75.9
5-Feb	75.2	75.1	75.2	74.5	74.4	73.8	73.1	73.3	72.9	69.1	64.4	64.1	57.9	54.6	53.1	56.1	59.4	63.5	72.3	75.5	76.9	78.4	80.8	81.7	69.8	81.7
6-Feb	78.0	80.2	81.4	80.2	80.3	80.0	79.5	79.6	79.5	76.9	75.4	72.6	68.9	70.0	73.1	73.1	70.3	69.9	70.8	74.1	76.3	76.3	70.8	71.2	75.3	81.4
7-Feb	70.5	70.4	70.6	71.3	72.4	74.6	74.4	74.4	74.0	71.7	66.8	62.0	59.2	56.6	53.9	52.3	56.9	63.9	69.1	71.4	77.1	80.4	82.5	83.2	69.1	83.2
8-Feb	82.7	82.8	82.6	81.7	80.7	80.9	82.2	82.5	82.7	79.5	75.3	71.1	65.8	62.7	60.3	59.3	59.3	67.7	80.3	84.5	84.6	83.0	84.0	83.5	76.6	84.6
9-Feb	76.5	72.2	75.1	73.5	71.4	74.6	78.1	77.4	77.0	73.7	66.6	61.9	59.5	55.7	51.0	49.3	52.5	58.9	67.0	71.6	74.0	75.0	74.6	74.5	68.4	78.1
10-Feb	73.8	73.6	73.0	71.9	71.6	71.5	72.3	72.1	71.3	69.2	64.9	59.6	56.2	53.3	49.0	52.7	56.1	59.6	64.2	69.8	71.6	73.7	78.3	80.6	67.1	80.6
11-Feb	79.6	82.3	81.7	80.3	78.9	78.2	77.3	76.1	75.1	75.8	73.9	68.6	64.8	65.4	63.2	63.0	66.9	72.3	77.2	78.5	78.0	76.5	77.5	77.4	74.5	82.3
12-Feb	77.5	77.5	77.8	77.8	77.8	78.0	78.1	78.3	78.4	78.1	76.5	74.9	72.6	73.0	72.4	73.7	75.5	78.6	80.8	81.5	80.7	79.6	79.2	79.2	77.4	81.5
13-Feb	79.5	80.6	80.6	80.3	80.1	79.9	79.1	79.1	78.2	76.3	73.1	67.1	60.1	56.2	55.3	54.2	54.9	61.8	69.9	76.5	78.6	78.8	78.0	76.9	72.3	80.6
14-Feb	75.3	74.6	72.8	73.3	72.4	72.5	72.1	71.7	71.0	69.9	70.8	67.5	60.7	55.7	47.8	49.7	50.2	60.9	67.3	72.3	76.0	75.1	73.9	74.6	67.8	76.0
15-Feb	74.9	74.5	74.4	73.7	73.9	74.2	73.5	73.8	74.1	73.6	72.4	65.3	56.7	52.2	51.0	55.2	58.7	71.0	75.6	77.7	79.1	80.5	79.9	78.6	70.6	80.5
16-Feb	77.5	76.6	74.9	74.3	73.9	72.9	72.8	71.9	71.6	68.6	68.7	66.6	60.0	55.8	54.5	51.7	51.6	58.5	62.2	66.5	71.9	74.1	73.6	73.2	67.7	77.5
17-Feb	69.2	65.6	65.3	66.5	66.5	67.0	66.9	66.2	64.2	61.3	57.0	53.8	50.4	45.2	40.7	37.9	38.9	44.0	48.8	53.1	59.2	61.3	60.0	63.5	57.2	69.2
18-Feb	65.7	71.7	69.8	72.5	72.5	72.5	72.3	72.6	70.4	60.7	53.8	47.1	39.3	33.1	32.0	32.1	31.3	35.8	40.2	42.7	44.8	49.6	51.4	50.0	53.5	72.6
19-Feb	52.2	51.2	51.9	54.2	58.9	60.7	62.1	63.5	60.8	50.4	45.5	44.5	40.8	30.4	23.6	22.4	24.1	28.7	30.4	34.6	38.3	40.9	43.0	46.3	44.1	63.5
20-Feb	50.1	55.6	60.1	63.4	65.3	66.1	66.9	67.7	66.5	63.5	59.8	58.0	55.0	53.1	51.5	50.8	51.9	58.2	60.3	63.7	67.0	69.3	74.0	76.1	61.4	76.1
21-Feb	81.5	82.8	82.6	83.5	84.1	87.2	86.5	85.4	84.3	78.0	71.5	68.7	63.8	57.8	62.8	68.1	69.7	73.7	77.2	77.6	77.7	78.5	79.5	81.5	76.8	87.2
22-Feb	82.9	82.9	83.7	88.5	87.8	86.5	87.5	86.5	89.4	91.5	89.7	86.5	80.8	75.0	63.8	55.6	56.6	68.5	64.4	66.8	71.4	74.2	72.3	70.0	77.6	91.5
23-Feb	79.1	95.6	98.8	98.8	97.2	93.1	89.2	91.1	87.1	77.7	64.1	61.1	76.8	81.1	84.5	78.1	75.8	76.3	78.8	80.0	81.5	83.1	84.1	82.9	83.2	98.8
24-Feb	82.6	82.3	82.7	87.9	89.6	88.5	88.2	88.3	89.2	89.4	88.1	82.4	75.7	67.0	61.2	61.4	59.5	70.3	78.6	79.0	80.0	82.5	84.8	85.2	80.2	89.6
25-Feb	85.2	88.4	90.5	93.7	97.8	99.0	99.0	96.3	96.3	97.7	98.2	96.9	93.4	87.2	81.0	81.5	79.3	80.0	87.0	91.8	91.6	91.2	90.9	86.9	90.9	99.0
26-Feb	84.6	91.7	95.9	96.6	93.3	85.7	86.4	88.0	84.6	63.5	54.6	48.8	43.3	41.1	38.1	36.4	39.3	53.3	63.5	72.0	77.8	81.3	81.9	80.6	70.1	96.6
27-Feb	80.4	79.1	76.8	80.9	88.4	87.2	76.0	80.4	79.9	64.5	57.8	49.9	51.2	52.1	52.4	54.5	57.7	63.5	67.4	72.9	77.6	76.1	76.4	80.1	70.1	88.4
28-Feb	86.4	86.5	85.3	85.4	86.5	87.6	90.5	91.9	89.4	87.7	83.4	76.7	69.1	62.9	59.0	56.9	55.9	67.4	71.8	72.1	73.3	76.6	79.6	81.8	77.7	91.9
	76.1	77.2	77.5	78.3	78.7	78.5	78.2	78.3	77.6	74.0	70.5	66.9	63.4	60.2	57.7	57.3	58.5	64.5	68.9	71.8	73.9	75.0	75.6	75.9	Diurnal Average	
	86.4	95.6	98.8	98.8	97.8	99.0	99.0	96.3	96.3	97.7	98.2	96.9	93.4	87.2	84.5	81.5	79.3	80.0	87.0	91.8	91.6	91.2	90.9	86.9	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Janvier - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Janvier - February 2025

Maximum Speed: 17 km/h on Feb 27 16:00

Maximum Daily Speed Average: 9.5 km/h on Feb 20

Minimum Speed Value: 0 km/h on Feb 27 05:00

Minimum Daily Speed Average: 0.5 km/h on Feb 14

Maximum Diurnal Speed Average: 3.2 km/h at hour 7

Minimum Diurnal Speed Average: 0.4 km/h at hour 19

Monthly Average Velocity: 1.5 km/h 224.9 deg

Percentiles: $P_1 = 0$ $P_{10} = 2$ $Q_1 = 3$ Median = 6 $Q_3 = 8$ $P_{90} = 10$ $P_{99} = 14$

Hours in Service: 672

Hours of Data: 671

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-Feb	NNE7	NE7	NNE7	NNE7	NNE8	NNE6	NNE5	N6	N6	N5	N5	N4	WNW6	WNW7	WNW8	NW7	NW7	WNW6	WNW5	WNW5	W5	W7	WSW6	W6	NNW4.2	NNE8
2-Feb	W5	W4	W3	SSW3	SSW4	SSW3	S4	S4	S2	SSW1	N6	N8	N9	N9	N9	N8	N5	NNW5	N5	N4	N5	N8	N6	N5	N2.8	N9
3-Feb	N7	N5	NNW2	WSW2	SW4	SW4	SSW5	SSW7	SSW7	SSW7	SSW6	SW7	SSW8	WSW6	W6	WNW4	W5	WSW4	SW4	SW4	SW4	SW3	SSW6	SSW7	SW3.6	SSW8
4-Feb	SSW7	SSW8	SSW9	SSW9	SSW9	SSW9	SSW9	SSW8	SSW9	SSW9	SSW9	SSW9	SSW11	SW9	SW10	WSW10	WSW6	SSW6	SSW8	SSW10	SSW9	SSW9	SSW11	SSW10	SSW8.7	SSW11
5-Feb	SSW9	SSW10	SSW10	SSW10	SSW9	SSW11	SSW10	SSW10	SSW11	SSW12	SW12	SSW10	WSW10	WSW12	WSW11	WSW10	WSW9	WSW9	W8	WSW7	WSW8	SW8	SW7	SW5	SW8.8	SSW12
6-Feb	SW6	SW5	SW6	SW7	SW8	SW8	SW9	W7	W7	W7	W8	WNW11	WNW10	NNW10	N12	N8	N10	N9	N7	N6	N2	WNW2	WNW2	WSW2	WNW3.8	N12
7-Feb	SW4	WSW4	WSW4	SW4	SSW5	SSW5	SSW7	SSW9	SSW5	SSW5	SSW7	SW8	SSW9	SSW9	SW10	W9	W7	WSW5	SW4	WSW4	SW5	SW4	SSW6	SSW8	SW5.6	SW10
8-Feb	SSW8	SSW8	SSW9	SSW8	SSW6	SSW7	SSW8	SSW8	S6	SSW6	SW7	WSW8	WSW8	SW9	WSW9	WSW6	WNW4	NNW2	NNW1	SSE3	SSE1	S0	NNE3	N6	SW4.5	SSW9
9-Feb	N10	N11	N8	N6	N5	NNW2	W1	WSW2	NW1	NNE4	NNE8	NE8	NNE10	NNE10	NNE9	N9	N7	N4	WSW1	SW2	SW3	SW4	SSW5	SSW5	N3.7	N11
10-Feb	SSW7	SSW8	SSW7	SSW8	SSW9	SSW9	SSW10	SSW11	SSW10	SSW9	SSW10	SW11	WSW11	WSW9	WSW11	WSW9	WSW8	WSW7	SW6	SSW6	SSW6	SSW4	ESE0	N6	SW7.1	WSW11
11-Feb	NNE6	N3	N4	NNE4	N3	N2	ESE1	SSW1	SSW2	SSW4	SSW5	S1	NE4	NNE7	NNE8	NNE7	NNE7	NE5	NE1	SSE2	SSE2	S2	S4	S3	NE1.5	NNE8
12-Feb	SE0	SSW1	SE1	W1	N1	E1	WNW1	NNW0	WNW1	NNW2	NNW2	N3	ENE4	NNE5	NNE6	N6	N5	N4	NNE4	NNE6	NNE6	NNE7	NNE6	NNE6	NNE2.8	NNE7
13-Feb	NNE5	NNE4	N3	N3	N3	NE3	NNE1	NNE3	NNE4	NNE6	NE6	NNE4	NE7	NNE8	NNE8	NNE8	NNE7	NNE6	NNE3	N1	NNE2	NW1	NNE2	NNE1	NNE3.9	NNE8
14-Feb	SE1	E1	UO	E1	S2	S2	S3	SSE1	S2	WSW1	WSW1	NE3	NNE4	NNE4	NNE4	NNE5	NNE3	SE2	SSE1	S1	E1	SSW2	S5	SSW8	SE0.5	SSW8
15-Feb	SSW10	SSW9	SSW8	SSW6	SSW7	SSW8	SSW8	SSW8	SSW9	SSW7	SSW6	SSW3	N5	N6	NNW6	NNW5	NW6	NNE7	NNE3	NNE2	ENE2	SSE0	ESE3	SSE1	SSW2.4	SSW10
16-Feb	SSW1	ENE1	SSW1	S1	S1	S1	SE0	SE1	S1	SW1	NNW2	NNE4	E6	E6	E7	E6	SE6	ESE5	E9	E4	ESE3	E1	ESE3	SSE3	ESE2.4	E9
17-Feb	SSE4	SSE4	SE4	SE4	SSE4	SSE5	SE5	SSE6	SSE6	S7	SSE8	SSE8	SE9	SE10	SSE10	S11	S11	S8	SSE5	SE6	S3	SSE3	ESE3	S5	SSE6.0	S11
18-Feb	S2	SSW4	SSE3	ESE2	SE2	S1	S3	S3	SSW2	SW2	W4	WNW3	WNW4	S8	S12	S10	S12	SSE7	S7	S7	SSE5	SSE5	S6	S8	S4.4	S12
19-Feb	S8	S7	S6	SSE4	SSE5	SE6	SE6	SE5	SSE4	SSE4	NW3	SSW6	SSE11	SSE10	SSE11	S12	S12	SSE9	SSE9	SSE7	S8	S7	S6	S10	SSE6.8	S12
20-Feb	S10	S10	S10	S9	S7	S7	S8	S9	SSW10	SSW13	SSW12	SSW12	SSW10	SW11	SW11	SSW12	SSW7	SSW8	SSW12	SSW12	SSW10	SW8	S10	SSW7	SSW9.5	SSW13
21-Feb	SSW7	S5	SSE4	SE3	SSE2	SSE4	SW1	N1	SSE1	SSW2	W2	NE1	ENE2	NE4	N7	NNE7	NNE6	NNE7	NNE7	N5	N4	NNE5	NNE5	N2	NNE1.6	NNE7
22-Feb	N3	N4	NNE4	NNE2	NNE3	N2	N1	N3	N2	N4	NNE4	WNW2	SSW3	SW2	SSW4	SW5	SSW6	S7	SSW9	SSW9	SSW9	SSW7	SSW8	SSW7	SW1.9	SSW9
23-Feb	SSW6	SE4	ESE4	SSW6	SSW4	SSW9	SSW11	SSW12	SW12	SW12	WSW13	W17	W16	W14	NNW9	N11	NNE11	N10	N10	NNE8	NNE6	NNE7	NNE7	NE6	W3.1	W17
24-Feb	NNE7	NNE2	NNW2	NNW2	NE3	ENE3	ENE3	NE2	NNE4	N3	ESE2	WSW5	SSW4	SW4	ENE2	E6	NE3	NNE3	NNE3	N3	NNE3	SW1	SE0	NNE3	NNE1.5	NNE7
25-Feb	NNE5	NNE4	NNE6	NNE8	NNE5	N3	NE5	NE5	NNE6	NNE6	NNE4	NNE5	NNE5	N5	N3	NE4	NNE4	N3	N2	N1	N2	NNE1	SW3	SW5	NNE3.4	NNE8
26-Feb	SW6	SW6	SSW5	SW6	WSW5	W5	WNW2	S5	S6	W10	WNW9	W7	W9	WNW9	WNW8	W8	W8	NE4	NNE4	N4	N2	NNW2	ENE1	SW1	W3.7	W10
27-Feb	SE2	S5	SSW6	SSE3	SE0	S4	S6	NW0	S4	WSW7	W10	W16	WNW15	WNW16	WNW16	WNW17	NNW10	NNW9	N7	N10	NNE12	NNE11	NNE11	NNE9	NW4.3	WNW17
28-Feb	NNE8	NNE4	ENE4	ENE5	ENE4	NE5	ENE6	ENE5	NE3	NE7	E5	ENE3	NE6	NE6	ENE7	E7	ENE4	N5	N4	N4	N3	SE0	SE1	SSE1	NE3.8	NNE8
	SSW1.4	SSW1.8	S2.0	SSW1.8	SSW2.0	S2.7	S3.2	SSW2.9	SSW2.9	SW2.8	WSW2.8	WSW3.0	WSW2.3	W2.4	WNW2.1	WNW1.7	WNW1.8	NNW1.1	W0.4	SW0.7	SW0.9	SW1.0	SSW1.4	SSW1.9	Diurnal Average	
	N10	N11	SSW10	SSW10	SSW9	SSW11	SSW11	SSW12	SW12	SSW13	WSW13	W17	W16	WNW16	WNW16	WNW17	S12	N10	SSW12	SSW12	NNE12	NNE11	NNE11	SSW10	Diurnal Maximum	

UO - Unstable Operation

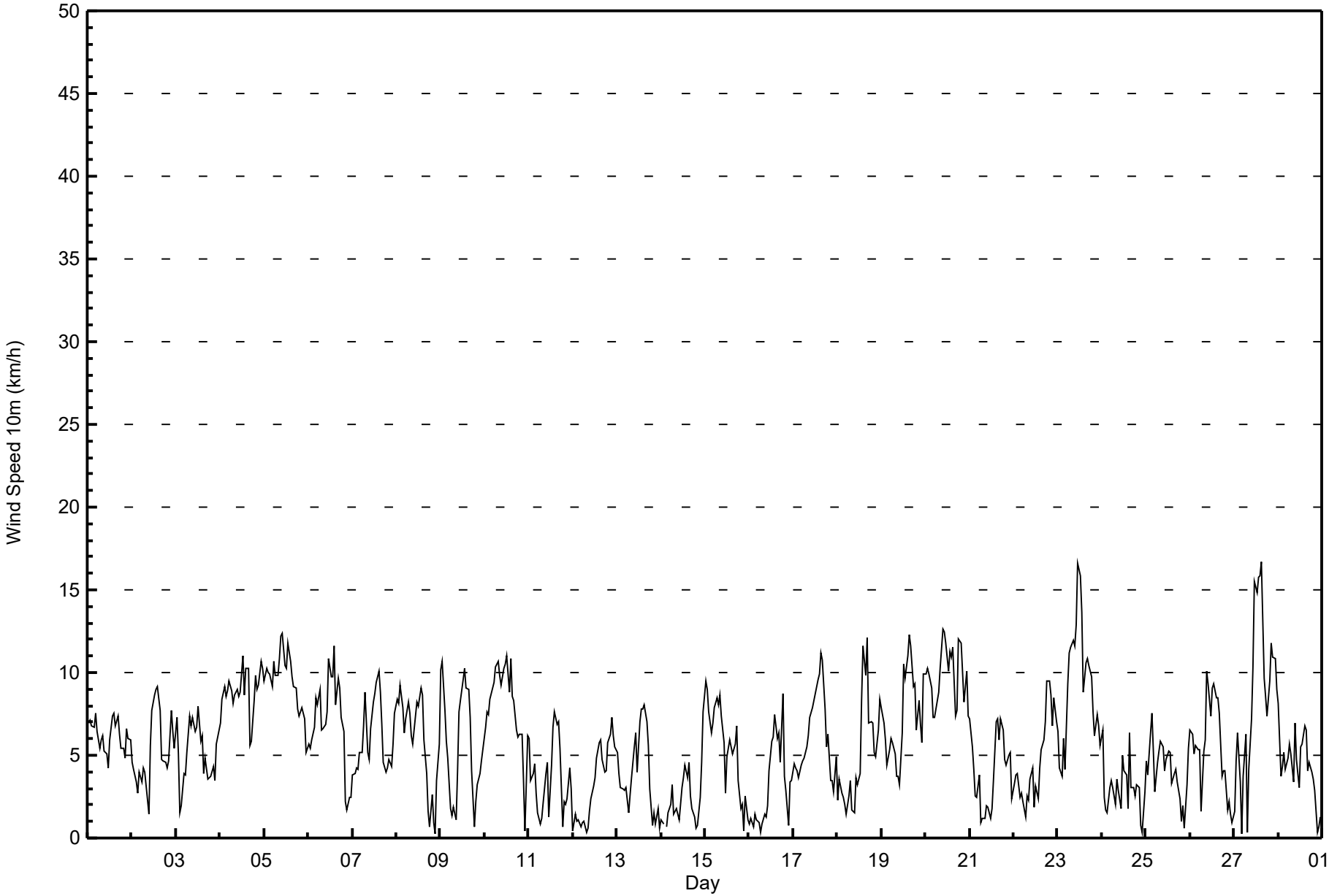
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Janvier - February 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	326	48.58	48.58
6 - 11	318	47.39	95.98
12 - 19	27	4.02	100.00
20 - 28	0	0.00	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 671

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Janvier - February 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	50	48	15	14	7	10	18	28	28	31	23	15	9	13	4	13	326
6 - 11	30	47	7	2	7	0	5	14	29	98	23	22	16	9	3	6	318
12 - 19	1	1	0	0	0	0	0	0	4	9	2	2	4	4	0	0	27
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	81	96	22	16	14	10	23	42	61	138	48	39	29	26	7	19	671

Total Number of Valid Hours: 671

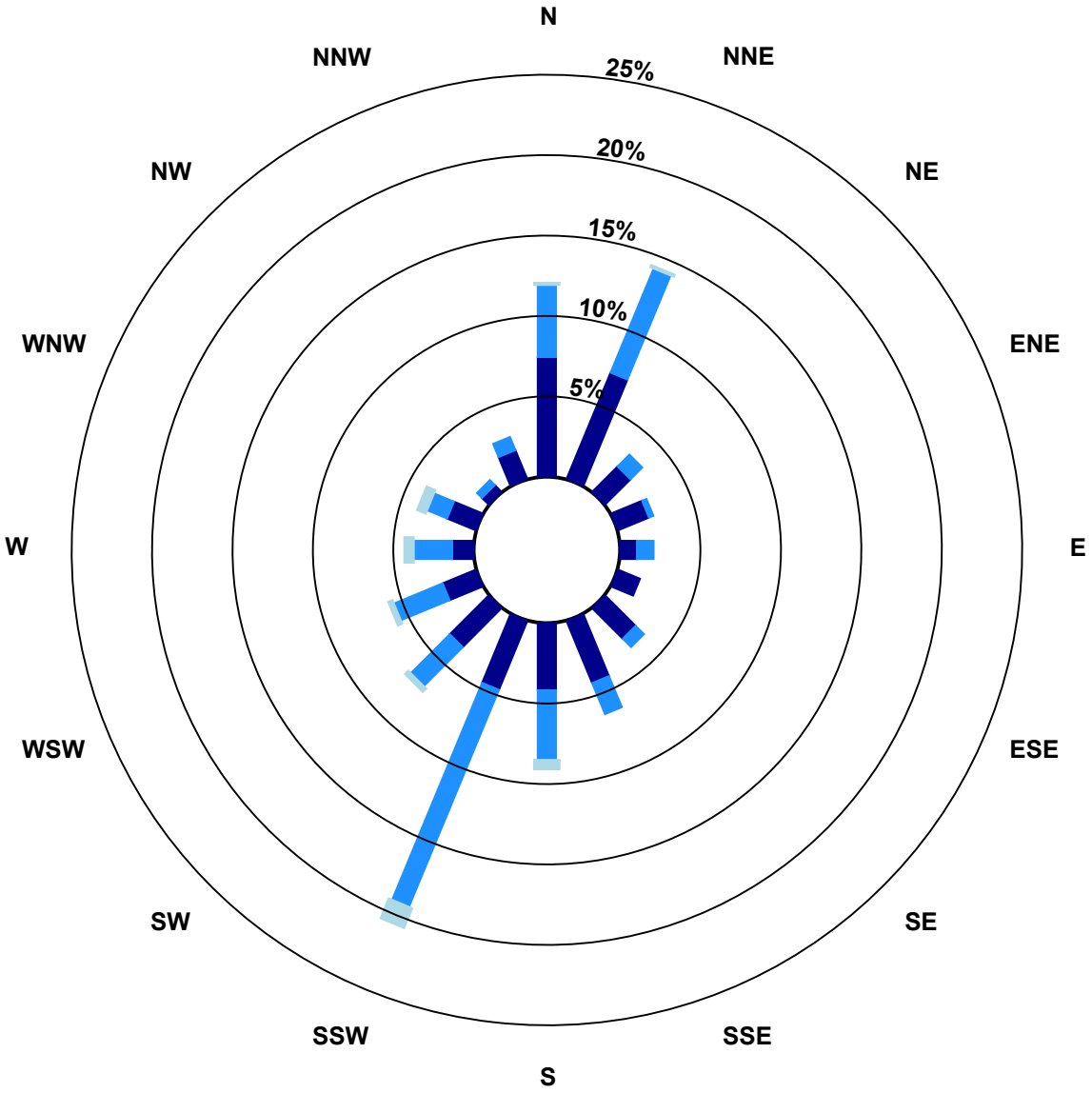
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 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: 671

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

Maximum Value: 8 km/h on Feb 27 16:00

Minimum Value: 0 km/h on Feb 14 08:00

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

Hours in Service:	672
Hours of Data:	671
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-Feb	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	2	2	2	2	2	2	3
2-Feb	2	1	1	1	1	1	1	1	1	1	3	3	3	3	3	3	2	2	2	2	2	3	3	2	3
3-Feb	3	2	1	1	1	1	1	1	1	1	2	2	2	3	2	2	1	1	1	1	1	1	1	1	3
4-Feb	2	2	2	2	2	2	2	2	3	2	3	2	3	3	3	4	2	1	2	3	2	3	3	2	4
5-Feb	2	3	2	3	2	3	2	2	3	3	4	4	4	5	4	3	3	3	3	2	2	2	2	2	5
6-Feb	2	2	2	2	2	2	3	3	2	3	2	4	4	5	4	3	4	4	3	3	2	1	1	1	5
7-Feb	1	1	1	1	1	1	2	2	2	1	2	2	3	3	3	3	3	2	2	1	1	2	1	2	3
8-Feb	2	2	2	2	2	2	2	2	1	1	2	3	3	3	3	2	1	1	1	1	1	1	1	3	3
9-Feb	4	5	4	3	2	1	1	1	1	1	2	2	2	3	3	3	3	2	1	1	1	1	1	1	5
10-Feb	1	1	1	2	2	3	3	3	3	3	3	3	4	3	4	3	3	2	2	2	2	1	1	2	4
11-Feb	2	1	1	2	1	1	1	1	1	1	1	1	2	2	2	2	2	1	1	0	1	1	1	1	2
12-Feb	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	2	2	1	1	2	2	2	2	2	2
13-Feb	2	1	1	1	1	1	1	1	2	1	2	2	1	2	2	3	2	2	1	1	1	1	1	1	3
14-Feb	1	1	UO	1	0	1	1	0	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	2
15-Feb	1	2	1	2	2	2	1	1	1	1	1	1	2	2	2	2	3	2	2	1	0	1	1	1	3
16-Feb	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	1	2	2	1	1	1	1	2
17-Feb	2	1	1	1	1	1	2	2	2	2	2	3	3	3	4	4	3	3	2	2	1	2	1	2	4
18-Feb	2	2	1	1	1	1	1	1	1	1	1	1	1	4	4	3	4	3	2	2	2	2	4	3	4
19-Feb	2	2	2	2	2	1	1	1	1	1	1	4	4	4	4	4	4	3	3	3	2	2	2	3	4
20-Feb	3	3	3	3	2	2	2	3	3	4	4	4	3	4	4	3	2	3	3	2	3	2	2	2	4
21-Feb	2	2	1	1	1	1	1	1	1	2	1	1	1	1	3	2	2	3	2	1	2	1	2	1	3
22-Feb	1	1	1	1	1	1	1	1	1	1	2	1	1	2	2	3	2	2	2	2	2	1	2	2	3
23-Feb	2	1	2	2	2	3	3	3	4	4	5	6	6	5	5	4	4	3	3	2	2	2	2	2	6
24-Feb	2	2	1	1	1	2	1	1	1	1	1	2	2	2	2	2	1	1	2	1	1	1	1	1	2
25-Feb	2	1	2	2	3	1	2	1	2	2	1	1	1	2	2	1	1	1	1	1	1	1	1	2	3
26-Feb	2	2	1	2	2	3	2	2	1	4	4	3	4	3	3	3	3	2	2	2	1	1	1	1	4
27-Feb	1	2	1	1	1	1	2	3	3	4	4	6	6	6	7	8	5	4	4	4	4	4	4	3	8
28-Feb	2	2	2	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2	1	1	1	1	1	1	2
	4	5	4	3	3	3	3	3	4	4	5	6	6	6	7	8	5	4	4	4	4	4	4	3	
	Diurnal Maximum																								

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Janvier - February 2025

Direction of Maximum Speed: 297 deg on Feb 27 16:00
Direction of Maximum Daily Speed Average: 199.0 deg on Feb 20

Direction of Minimum Speed: 133 deg on Feb 27 05:00

Direction of Minimum Daily Speed Average: 0.5 deg on Feb 14

Monthly Average Direction: 224.9 deg

Hours in Service:	672
Hours of Data:	671
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-Feb	23	36	30	18	21	21	12	10	9	4	358	353	293	291	295	305	309	303	290	289	263	261	247	262	331.2
2-Feb	266	260	261	197	195	194	185	179	170	209	1	2	5	9	11	10	349	329	354	0	2	5	359	360	349.1
3-Feb	2	360	334	252	225	215	198	192	197	196	196	222	202	250	272	294	274	254	221	223	226	222	211	203	226.6
4-Feb	200	199	199	198	203	199	201	206	207	208	212	209	197	224	233	237	242	205	204	205	205	201	209	203	208.2
5-Feb	205	202	198	205	204	199	202	200	198	207	214	209	241	256	249	239	250	256	262	252	253	235	229	234	223.1
6-Feb	235	231	218	219	214	214	220	268	267	267	261	285	284	336	9	7	360	2	0	5	354	289	292	256	289.0
7-Feb	236	238	242	233	209	201	193	203	200	210	206	216	207	211	220	273	280	256	231	238	224	231	213	208	222.1
8-Feb	206	206	197	199	203	199	194	194	190	198	224	239	246	235	244	250	298	332	348	165	160	183	16	5	217.7
9-Feb	1	358	1	359	2	348	260	258	315	24	32	34	31	26	15	10	7	6	239	223	223	219	212	208	5.7
10-Feb	196	195	196	199	202	206	205	207	208	203	213	229	247	246	248	244	250	237	233	208	212	195	116	8	219.2
11-Feb	14	4	8	12	8	354	116	207	200	196	203	178	47	33	32	28	19	34	37	155	153	176	191	185	36.1
12-Feb	136	202	133	281	9	99	302	344	291	327	346	5	69	23	19	11	359	7	17	15	15	20	20	14	14.5
13-Feb	16	13	11	8	10	40	20	20	19	25	36	17	39	31	27	14	16	17	26	7	29	305	26	21	22.2
14-Feb	142	96	UO	91	190	180	189	164	180	244	250	43	18	29	33	12	17	132	147	188	81	197	191	192	138.7
15-Feb	196	198	196	196	196	201	197	192	199	198	201	205	3	2	344	327	307	21	16	13	72	147	118	162	207.2
16-Feb	202	58	199	178	174	170	143	145	188	214	345	33	84	96	80	98	139	107	85	89	102	90	123	148	102.6
17-Feb	160	147	141	141	157	154	129	151	160	169	164	153	146	146	157	172	182	176	148	145	187	161	117	171	157.9
18-Feb	172	193	160	117	130	188	179	189	194	215	278	283	298	189	188	179	185	168	173	176	166	168	182	186	184.4
19-Feb	181	176	169	151	151	137	129	135	151	147	314	193	167	161	168	170	172	161	167	166	175	174	176	182	166.6
20-Feb	186	184	183	180	176	177	182	177	199	209	212	200	212	228	225	202	204	213	196	196	206	219	190	196	199.0
21-Feb	196	185	158	137	160	147	221	351	154	200	260	43	57	40	11	17	17	19	20	10	11	17	19	2	32.6
22-Feb	3	9	15	20	28	11	0	9	8	354	22	299	206	236	202	225	212	191	198	202	200	202	199	206	214.8
23-Feb	197	140	112	206	205	204	205	213	222	227	253	271	271	276	331	5	13	9	11	17	15	22	31	35	279.4
24-Feb	32	18	333	329	40	57	65	38	14	360	111	245	203	225	67	93	53	24	18	11	20	230	139	12	32.7
25-Feb	22	13	19	20	18	353	37	36	25	15	25	16	30	3	3	54	29	9	359	358	5	25	214	219	18.2
26-Feb	226	220	202	224	242	261	302	186	169	275	288	280	278	289	283	275	265	40	22	5	355	345	68	231	266.3
27-Feb	136	186	195	165	133	170	175	324	171	249	262	281	284	283	291	297	336	339	349	10	20	20	24	22	307.9
28-Feb	27	21	66	71	69	54	65	77	55	37	88	59	48	50	69	89	70	3	356	355	354	124	137	149	52.3
	207.9	200.3	188.1	192.0	192.8	190.2	188.3	192.3	198.0	221.9	239.3	254.1	257.2	278.6	291.2	297.3	300.9	332.9	274.6	228.3	226.9	227.7	197.1	206.8	
	Diurnal Average																								

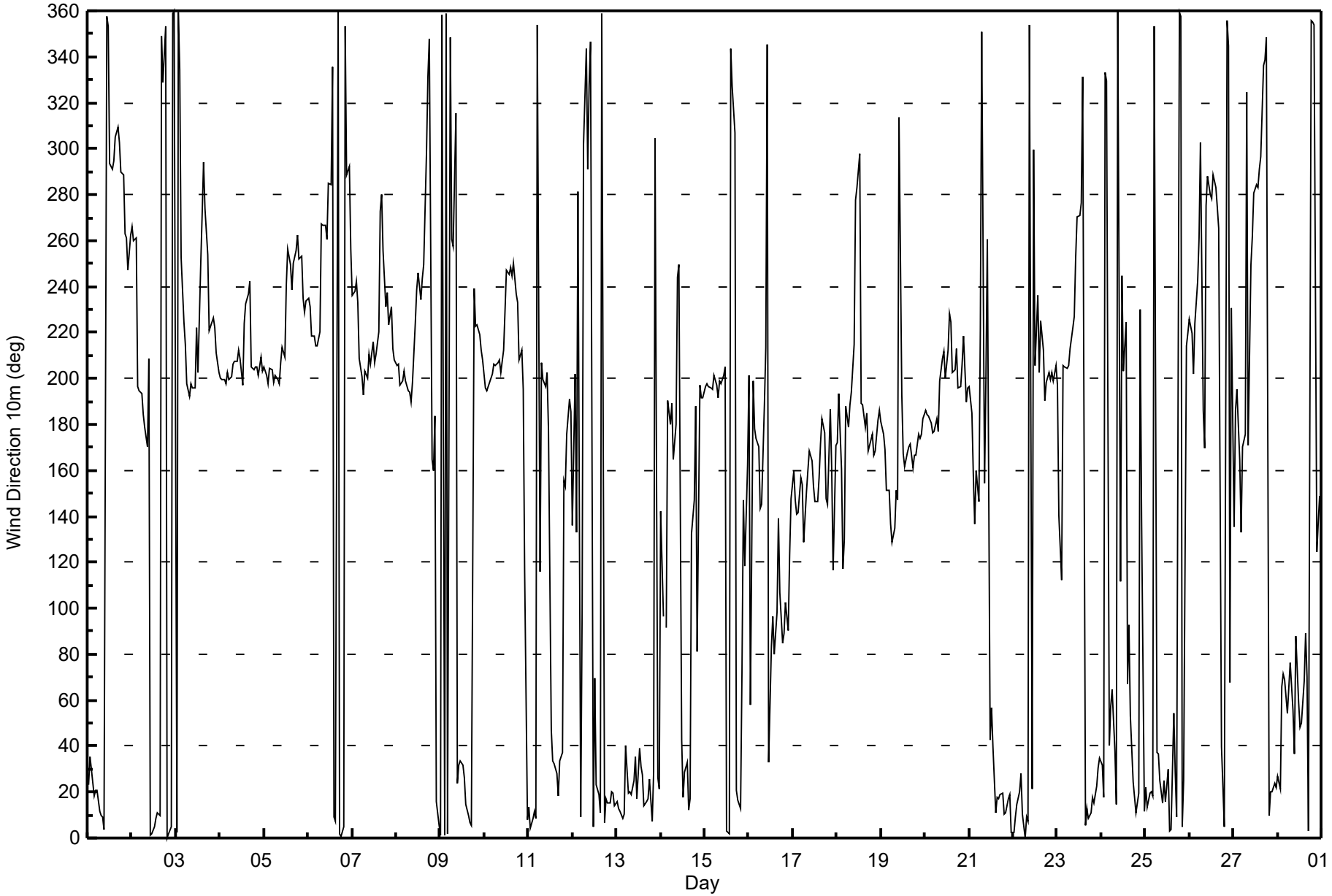
UO - Unstable Operation
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Janvier - February 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Janvier - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 105 deg on Feb 12 05:00

Minimum Value: 6 deg on Feb 15 00:00

Percentiles: P_1 = 9 P_{10} = 14 Q_1 = 18 Median = 25 Q_3 = 38 P_{90} = 61 P_{99} = 94

Hours in Service:	672
Hours of Data:	671
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-Feb	13	20	18	15	14	18	20	21	22	28	48	56	37	27	35	43	45	40	25	33	27	17	16	19	56
2-Feb	21	26	28	32	9	30	15	16	56	74	38	36	33	28	23	23	55	64	54	45	38	28	35	32	74
3-Feb	29	35	58	33	15	13	10	6	8	9	19	26	25	39	32	48	23	21	16	24	17	18	12	10	58
4-Feb	12	11	12	11	14	13	13	15	18	18	22	22	18	30	25	25	26	12	15	15	15	14	16	15	30
5-Feb	15	15	15	16	16	15	16	15	14	18	22	21	27	25	25	23	23	22	20	21	18	22	21	20	27
6-Feb	22	22	19	19	18	19	21	42	23	19	22	22	27	45	22	27	37	37	41	33	76	67	48	27	76
7-Feb	17	19	21	23	17	16	18	16	31	22	22	23	24	25	29	24	18	20	24	19	18	25	18	13	31
8-Feb	13	13	11	13	17	14	10	11	8	14	23	26	28	29	28	34	41	63	62	35	62	82	32	37	82
9-Feb	39	41	42	42	37	42	73	59	72	30	15	14	13	17	22	25	24	41	88	31	17	12	14	15	88
10-Feb	12	9	12	15	15	16	17	16	19	18	20	23	27	28	25	27	24	27	21	17	22	26	88	22	88
11-Feb	18	26	23	16	16	38	67	71	60	12	26	74	34	15	17	13	13	13	78	26	37	26	17	25	78
12-Feb	92	64	68	76	105	95	93	98	85	70	48	34	43	19	19	19	28	24	19	22	26	18	20	20	105
13-Feb	17	17	18	18	18	33	44	12	18	18	15	50	13	15	23	22	17	14	33	36	24	59	36	86	86
14-Feb	40	67	UO	69	23	31	11	25	29	41	79	37	38	36	63	43	30	32	41	85	79	22	11	6	85
15-Feb	8	9	10	10	14	12	9	7	11	12	21	45	43	41	48	52	45	18	19	23	23	87	35	48	87
16-Feb	82	59	91	38	54	79	77	61	46	37	35	39	36	36	27	35	33	19	19	27	38	73	19	25	91
17-Feb	25	26	16	23	28	27	23	25	28	26	26	28	30	31	33	28	19	20	24	23	31	46	44	30	46
18-Feb	56	56	49	47	74	58	30	20	72	64	20	34	40	60	25	25	18	20	19	18	25	25	25	15	74
19-Feb	18	20	22	21	21	15	13	15	24	36	38	69	32	32	29	23	24	25	24	21	17	17	18	16	69
20-Feb	17	17	14	18	18	19	15	18	21	21	23	20	24	25	25	18	22	28	13	13	17	21	11	12	28
21-Feb	11	19	24	50	39	23	81	69	65	84	61	82	66	24	20	19	16	16	16	23	26	20	25	59	84
22-Feb	34	24	21	20	24	37	56	47	51	31	29	66	43	59	29	27	24	14	13	14	12	11	12	18	66
23-Feb	12	20	46	39	54	22	16	18	20	21	27	23	21	24	52	35	23	24	23	22	19	17	15	18	54
24-Feb	16	64	47	44	38	45	43	44	18	43	76	32	49	65	90	23	51	45	64	38	38	94	90	39	94
25-Feb	22	31	14	16	52	60	30	15	28	21	24	35	19	36	70	43	19	18	22	29	42	94	30	27	94
26-Feb	21	20	13	20	19	68	97	27	27	27	31	32	29	29	29	27	25	49	34	27	40	31	49	80	97
27-Feb	33	17	10	44	97	22	22	101	46	34	22	25	25	25	27	36	54	53	52	34	19	18	17	19	101
28-Feb	18	39	42	32	29	31	23	25	30	17	42	61	30	36	31	26	43	24	25	27	32	94	79	64	94
	92	67	91	76	105	95	97	101	85	84	79	82	66	65	90	52	55	64	88	85	79	94	90	86	
	Diurnal Maximum																								

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 20m (WS20) - km/h

Janvier - February 2025

Maximum Speed: 25 km/h on Feb 27 16:00

Maximum Daily Speed Average: 11.9 km/h on Feb 20

Minimum Speed Value: 0 km/h on Feb 8 22:00

Minimum Daily Speed Average: 0.2 km/h on Feb 14

Maximum Diurnal Speed Average: 4.3 km/h at hour 12

Minimum Diurnal Speed Average: 1.1 km/h at hour 19

Monthly Average Velocity: 2.3 km/h 248.5 deg

Percentiles: P_1 = 1 P_{10} = 3 Q_1 = 5 Median = 8 Q_3 = 11 P_{90} = 13 P_{99} = 20

Hours in Service: 672

Hours of Data: 670

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-Feb	NE9	NE9	NE8	NNE8	NNE9	NNE8	NNE7	NNE8	NNE8	N7	NNW7	NNW7	NW9	NW11	NW11	NW10	NW12	NW10	NW9	NW9	W7	W9	WSW9	W9	NNW6.3	NW12
2-Feb	WNW7	WNW7	WNW6	W4	SW5	SW6	SSW7	SSW7	SW2	NW3	N8	N10	N11	N11	N11	N10	NNW8	NNW8	NNW8	NNW7	N7	N11	N10	N8	NNW5.1	N11
3-Feb	N10	N8	NNW4	NW4	WSW6	WSW6	SW7	SSW9	SW8	SSW8	SW7	SW8	SW9	W7	WNW8	NW6	W7	W6	WSW6	WSW6	WSW7	SW6	SW9	SW9	WSW5.1	N10
4-Feb	SW9	SSW11	SSW12	SSW11	SW12	SSW13	SW12	SW11	SW12	SW12	SW11	SW10	SSW12	SW11	WSW13	WSW13	WSW8	SW8	SW11	SW13	SW12	SW12	SW14	SW14	SW11.4	SW14
5-Feb	SW13	SW13	SSW13	SW13	SW12	SSW14	SW12	SSW13	SSW14	SW15	SW16	SW13	WSW13	W16	WSW13	WSW13	WSW12	W12	W10	W10	W10	WSW11	WSW10	WSW8	SW11.6	SW16
6-Feb	WSW8	WSW7	SW8	SW9	SW12	SW11	SW12	W9	W9	W9	W10	WNW16	WNW14	NNW15	N15	N11	N14	N13	N10	N9	N5	NW4	NW4	WNW4	WNW6.2	WNW16
7-Feb	WSW6	WSW6	WSW6	WSW6	SW7	SW7	SSW9	SW12	SW7	SW6	SW8	SW10	SW10	SW11	SW12	WNW12	WNW10	W7	WSW6	WSW7	WSW8	WSW7	SW9	SW11	WSW7.6	SW12
8-Feb	SW11	SW11	SW12	SSW10	SW8	SW9	SSW10	SSW10	SSW8	SW7	SW10	WSW11	WSW10	WSW11	WSW11	W7	NW6	NNW4	N2	W3	SSW2	NNW0	N5	N9	WSW6.1	SW12
9-Feb	N15	N16	N11	N9	N8	N4	NW4	WNW5	NW4	NNE5	NE8	NE9	NE11	NNE11	NNE11	N11	N10	N7	NW4	WNW5	W6	WSW7	SW8	SW8	N5.8	N16
10-Feb	SW9	SSW10	SW10	SW11	SW12	SW13	SW14	SW14	SW13	SW12	SW13	WSW14	WSW14	WSW11	WSW14	WSW11	WSW11	WSW9	WSW9	SW9	SW9	SW5	WNW2	NNE10	SW9.6	SW14
11-Feb	NNE9	N7	N7	NNE7	NNE5	N5	N3	N3	W2	SSW5	SW5	SSW1	NE5	NE7	NE9	NE8	NNE9	NE8	NNE3	NW1	SSW4	SSW4	SSW7	SSW6	NNE2.5	NNE9
12-Feb	S2	S3	SE2	S1	NE1	ESE1	WNW1	ENE1	ESE1	N2	N3	NNE3	ENE4	NNE5	NNE6	NNE7	N7	NNE7	NNE7	NNE8	NNE8	NNE9	NNE8	NNE7	NNE3.5	NNE9
13-Feb	NNE7	NNE6	NNE5	N5	NNE5	NE5	NNE3	NNE5	NNE6	NNE6	NE6	NNE4	NE7	NE9	NNE9	NNE9	NNE9	NNE8	NNE6	NNE4	NNE5	N4	NNE5	N4	NNE5.8	NNE9
14-Feb	N2	NNE3	NNE3	NNE3	NNE2	SSW3	SSW5	S3	SSW3	SSW3	SW2	NE3	NNE4	NNE5	NNE4	NNE5	NNE3	SSE3	SW2	S1	NE1	SSW3	SSW8	SSW10	SSW0.2	SSW10
15-Feb	SSW12	SSW12	SSW10	SW8	SSW10	SW11	SW11	SSW10	SW11	SW8	SW6	SW3	N6	N7	NNW8	NNW8	NW9	NNE8	NNE5	NNE3	ENE4	N1	ENE4	WSW1	SW3.0	SSW12
16-Feb	NE0	UO	UO	SW3	SSE1	SE1	ESE1	ESE2	SW3	SSW2	N2	ENE5	E7	ESE7	E9	ESE7	SE8	ESE7	E12	ESE6	ESE6	SE2	SE6	SSE6	ESE3.7	E12
17-Feb	SSE7	SSE6	SSE6	SSE6	SSE6	SSE6	SE6	SSE7	SSE8	S9	S9	SSE10	SSE10	SSE11	SSE12	S13	S13	S10	SSE8	SSE9	S6	S6	SE5	S8	SSE7.9	S13
18-Feb	S5	SSW8	SSW5	SE4	SE4	SSE3	SSW5	S6	SW4	SW2	W4	WNW4	WNW5	SSW10	SSW14	S12	S15	S10	S10	S10	S8	S7	S10	SSW12	S6.5	S15
19-Feb	S11	S10	S9	SSE7	S8	SSE9	SE8	SE8	SSE6	SSE5	NW3	SSW9	S12	SSE12	S13	S15	S14	SSE11	SSE12	SSE9	S11	S9	S8	S13	S9.2	S15
20-Feb	SSW13	S12	S12	S12	S10	S9	S10	S11	SSW12	SW15	SW16	SW13	SW12	SW14	SW14	SW13	SW9	SW11	SSW15	SSW15	SW14	SW12	SSW13	SSW10	SSW11.9	SW16
21-Feb	SSW10	SSW8	S6	SSE4	S4	SSE6	S2	N2	S2	SSW3	WSW2	ENE1	ENE2	NE3	NNE8	NNE9	NNE7	NNE9	NNE9	NNE7	NNE6	NNE7	NNE7	NNE3	NE1.6	SSW10
22-Feb	NNE4	NNE5	NNE6	NNE4	NNE4	NNE4	N3	NNE4	NNE3	NNE4	NNE4	NW3	SW4	WSW3	SW5	SW7	SW8	SSW10	SSW13	SW12	SW12	SW10	SSW11	SW10	SW2.6	SSW13
23-Feb	SSW9	SSE6	ESE6	SSW9	SW7	SW13	SW15	SW16	SW16	WSW16	W17	W22	W21	WNW19	NNW14	N14	NNE13	N14	NNE12	NNE9	NNE8	NNE9	NE8	NE7	WNW5.1	W22
24-Feb	NE8	NNE3	NNW2	N2	ENE4	ENE4	ENE4	NE3	NNE3	N3	SE2	WSW6	SW5	WSW5	ENE2	ESE7	E3	NNE4	NNE5	NNE5	NNE5	W2	NNW1	N5	NE1.9	NE8
25-Feb	NNE7	NNE6	NNE9	NNE9	NNE7	N4	NE6	NE6	NNE7	NNE7	NNE5	NNE5	NE6	N6	N4	ENE4	NE5	NNE4	NNE5	NNE3	NNE4	NNE1	SW5	SW8	NNE4.3	NNE9
26-Feb	WSW10	SW11	SW8	SW9	WSW9	WNW9	NW5	SSW7	S8	WNW14	NW13	WNW10	WNW12	WNW14	WNW12	WNW11	W10	NE4	NE6	NNE7	NNE4	N4	NNE2	WSW1	W5.7	WNW14
27-Feb	SSE2	SSW7	SSW9	S6	SW3	SSW7	S10	SW2	SSW6	W10	W14	WNW22	WNW22	WNW22	WNW23	NW25	NNW15	NNW13	NNW11	N12	NNE14	NNE13	NNE13	NNE11	NW6.8	NW25
28-Feb	NE9	NNE4	ENE5	ENE6	E5	ENE6	ENE7	E6	ENE4	NE8	E6	ENE3	ENE6	ENE7	ENE8	E8	ENE5	N6	N6	N5	N5	NNE1	NE1	SSE1	ENE4.7	NNE9
	SW2.1	SW2.7	SSW2.4	SW2.4	SW2.8	SSW3.6	SSW4.0	SSW3.8	SW4.0	WSW3.8	WSW3.9	W4.3	W3.4	WNW3.7	WNW3.4	NW3.0	NW3.0	NNW2.2	NW1.1	WNW1.3	WSW1.4	WSW1.8	SW2.1	SW2.7	Diurnal Average	
	N15	N16	SSW13	SW13	SW12	SSW14	SW15	SW16	SW16	WSW16	W17	W22	WNW22	WNW22	WNW23	NW25	NNW15	N14	SSW15	SSW15	NNE14	NNE13	SW14	SW14	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 - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 10 km/h on Feb 27 16:00

Minimum Value: 1 km/h on Feb 14 04:00

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

Hours in Service:	672
Hours of Data:	670
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-Feb	1	2	2	2	2	2	2	2	2	2	3	3	2	3	4	4	4	4	3	3	2	2	2	2	4
2-Feb	2	2	2	1	1	1	2	1	2	1	4	4	4	4	4	3	3	3	3	2	2	3	4	3	4
3-Feb	4	3	1	1	1	1	1	1	1	1	2	2	2	3	2	2	2	2	1	1	1	1	2	2	4
4-Feb	2	2	2	2	3	2	2	2	3	3	3	3	3	3	3	4	2	2	2	3	3	3	3	3	4
5-Feb	3	3	3	3	3	3	3	3	3	4	4	4	4	5	4	4	4	3	3	2	2	3	2	2	5
6-Feb	2	1	2	2	3	3	3	3	2	3	3	4	5	6	5	4	5	5	4	3	3	1	1	1	6
7-Feb	1	1	1	1	1	1	2	3	2	1	2	3	3	3	4	3	3	2	2	1	1	2	2	2	4
8-Feb	2	2	2	2	2	2	2	2	1	2	2	3	3	3	3	2	2	2	1	2	1	1	2	3	3
9-Feb	6	6	4	3	3	1	1	1	1	2	2	2	2	3	3	4	3	3	1	1	1	1	1	1	6
10-Feb	1	2	2	2	2	3	3	3	3	3	3	3	4	3	4	4	3	2	2	2	2	1	1	3	4
11-Feb	3	2	2	2	1	1	2	1	2	1	1	1	2	2	2	1	2	1	2	1	1	1	1	1	3
12-Feb	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	2	2	1	1	2	3	2	2	2	3
13-Feb	2	1	1	1	1	1	1	1	2	1	1	2	1	2	2	3	2	2	1	1	1	1	1	1	3
14-Feb	1	1	1	1	1	1	2	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	2	2
15-Feb	1	2	1	2	2	2	2	1	2	2	1	1	2	2	3	3	3	2	2	1	1	1	1	1	3
16-Feb	1	UO	UO	1	1	2	1	1	1	1	1	1	2	2	2	3	2	1	3	2	2	2	1	2	3
17-Feb	2	2	1	1	2	2	2	2	2	3	3	3	3	3	4	4	4	3	2	3	2	3	2	2	4
18-Feb	2	3	2	1	2	2	1	2	2	1	1	1	2	5	4	3	4	3	2	2	3	3	4	3	5
19-Feb	3	2	2	2	2	2	2	2	2	2	1	4	4	4	4	4	5	4	4	3	3	2	2	3	5
20-Feb	3	3	3	3	2	2	2	3	3	4	4	4	3	4	4	3	2	3	3	3	3	3	2	2	4
21-Feb	2	2	2	1	1	1	2	1	1	2	1	1	1	1	3	2	2	3	2	2	2	2	2	1	3
22-Feb	1	1	1	1	1	1	1	1	1	1	2	1	1	1	2	3	3	2	2	2	2	1	2	2	3
23-Feb	2	2	2	3	3	3	3	4	4	4	5	7	7	6	6	5	4	4	4	3	2	2	2	2	7
24-Feb	2	2	1	1	1	2	1	1	2	1	1	3	2	3	2	2	2	2	2	1	1	2	1	1	3
25-Feb	2	1	2	2	4	2	2	1	2	2	2	1	1	2	2	2	1	1	1	1	1	2	2	2	4
26-Feb	2	3	2	2	2	4	3	2	2	5	4	3	4	4	4	4	3	2	2	2	1	1	1	1	5
27-Feb	2	2	2	1	2	2	2	4	4	5	5	8	6	7	8	10	6	5	5	4	4	4	4	3	10
28-Feb	2	2	2	2	2	2	2	2	1	2	2	1	2	2	2	2	2	2	2	1	1	1	1	1	2
	6	6	4	3	4	4	3	4	4	5	5	8	7	7	8	10	6	5	5	4	4	4	4	3	
	Diurnal Maximum																								

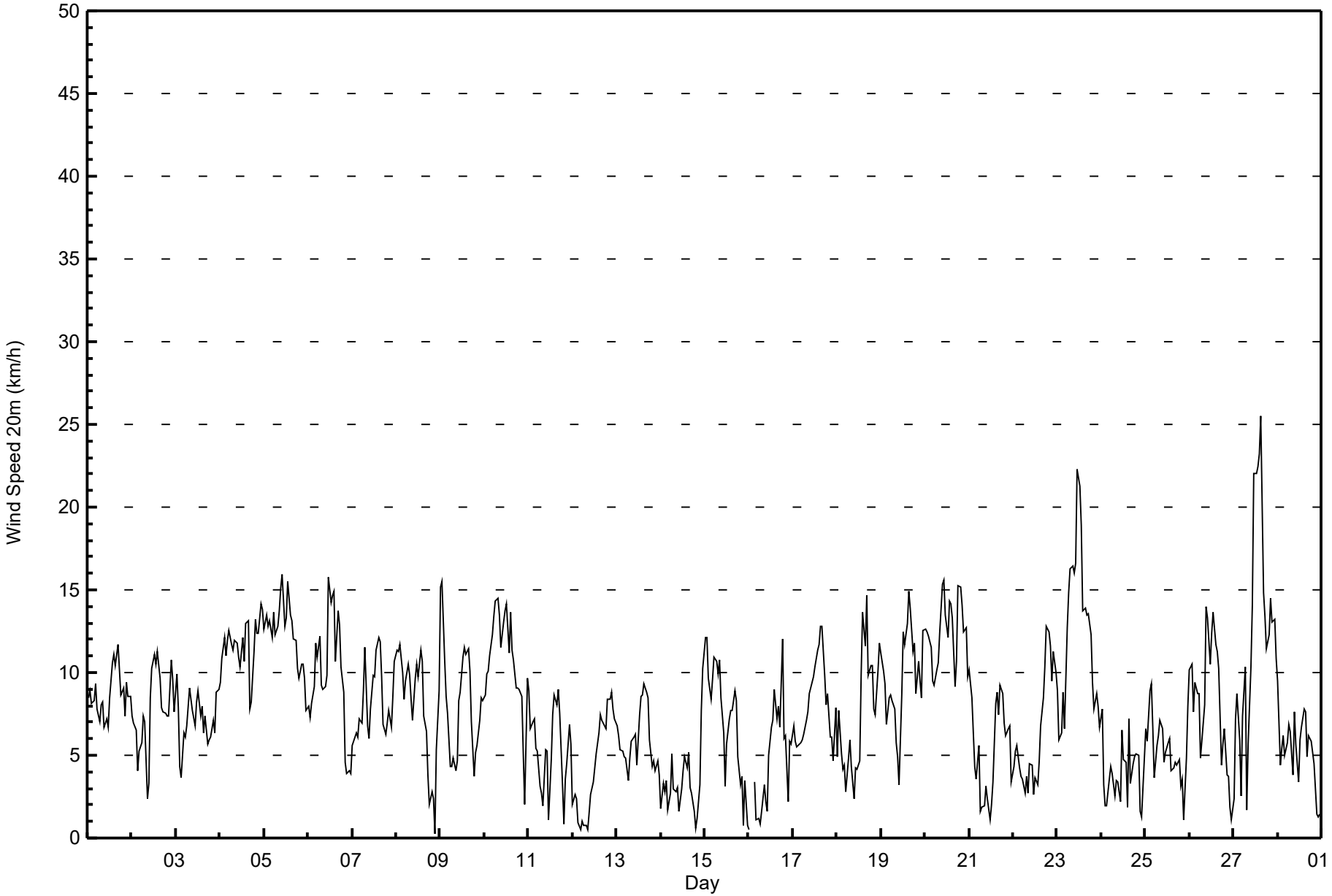
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 20m (WS20) - km/h

Janvier - February 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	196	29.25	29.25
6 - 11	349	52.09	81.34
12 - 19	118	17.61	98.96
20 - 28	7	1.04	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 670

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 20m (WS20) - km/h

Janvier - February 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	25	52	10	17	1	4	7	7	9	14	17	5	5	7	11	5	196
6 - 11	30	55	21	6	5	7	4	22	28	35	57	34	18	8	10	9	349
12 - 19	8	5	0	0	1	0	0	3	12	18	43	10	4	8	2	4	118
20 - 28	0	0	0	0	0	0	0	0	0	0	0	0	2	4	1	0	7
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	63	112	31	23	7	11	11	32	49	67	117	49	29	27	24	18	670

Total Number of Valid Hours: 670

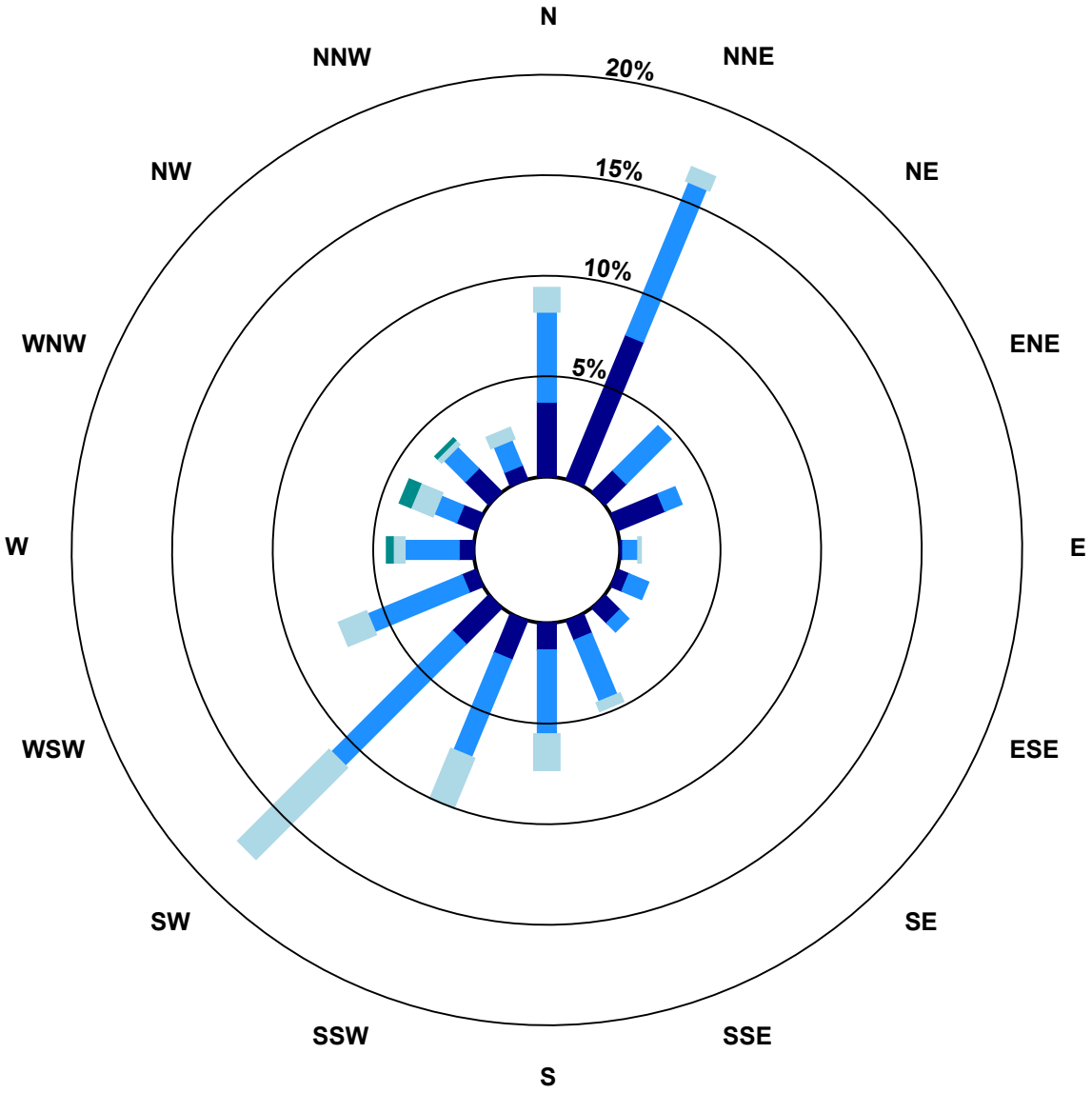
Total Number of Hours: 672

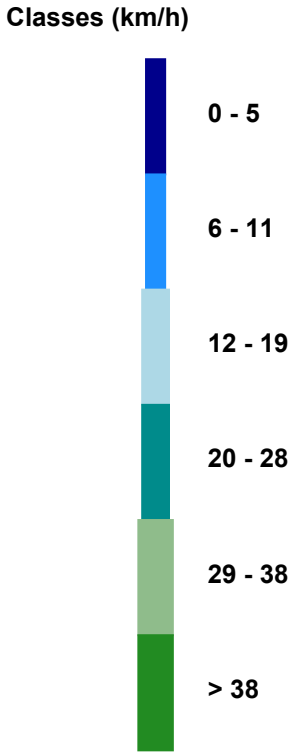
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Wind Speed 20m (WS20) - km/h

Janvier





Total Number of Valid Hours: 670

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 20m (WD20) - deg

Janvier - February 2025

Direction of Maximum Speed: 312 deg on Feb 27 16:00
Direction of Maximum Daily Speed Average: 209.0 deg on Feb 20

Direction of Minimum Speed: 344 deg on Feb 8 22:00

Direction of Minimum Daily Speed Average: 0.2 deg on Feb 14

Monthly Average Direction: 248.5 deg

Hours in Service:	672
Hours of Data:	670
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-Feb	35	51	39	27	30	28	18	15	14	8	347	344	310	307	308	316	319	319	307	307	281	272	257	278	336.5
2-Feb	291	293	302	274	234	230	202	195	217	313	359	358	6	6	11	11	339	331	348	348	356	6	358	355	338.8
3-Feb	1	360	347	308	245	237	222	208	215	213	217	232	214	264	282	307	281	272	251	243	242	232	224	217	248.6
4-Feb	216	213	211	210	215	212	215	219	219	219	222	221	210	236	241	245	250	223	218	217	217	216	221	217	220.5
5-Feb	217	214	210	216	216	211	214	213	212	219	224	221	247	263	258	247	256	264	272	260	260	244	240	246	233.8
6-Feb	244	241	231	231	227	227	233	277	280	279	271	300	300	338	11	4	356	356	355	7	355	319	310	282	299.7
7-Feb	251	251	255	253	228	222	206	216	219	225	219	227	220	221	232	282	289	272	250	247	237	251	229	223	237.1
8-Feb	220	221	214	213	217	214	212	211	210	223	235	246	253	245	252	260	305	341	10	259	203	344	6	356	236.3
9-Feb	351	354	355	350	358	349	316	297	320	16	35	37	38	30	16	10	4	354	320	299	271	251	232	233	351.5
10-Feb	219	212	215	214	216	217	218	218	220	215	223	238	255	250	254	251	258	247	244	225	224	216	292	14	231.6
11-Feb	17	10	1	13	14	6	10	352	261	213	218	203	53	41	39	36	26	42	28	321	211	201	205	198	19.6
12-Feb	174	179	144	185	49	118	293	77	109	350	357	19	77	21	22	12	9	15	29	28	26	27	27	24	27.1
13-Feb	23	18	12	2	13	45	31	20	19	22	35	12	47	37	32	17	21	24	33	15	12	355	13	0	22.3
14-Feb	4	15	22	26	29	205	206	185	201	212	234	41	22	30	24	13	17	151	214	182	40	202	203	207	196.3
15-Feb	210	209	211	214	212	216	214	210	215	215	220	218	4	355	343	332	322	26	26	22	60	355	75	251	235.2
16-Feb	48	UO	UO	225	162	146	106	113	230	208	1	57	94	106	91	106	145	119	93	105	121	136	145	159	116.6
17-Feb	168	161	157	152	162	160	139	153	163	171	171	159	153	153	162	177	184	180	155	148	185	172	139	178	163.8
18-Feb	182	206	192	133	142	154	205	182	217	228	275	285	298	192	195	185	191	176	180	183	173	178	189	193	190.7
19-Feb	190	184	182	165	172	151	139	146	159	150	317	195	174	167	170	172	174	163	166	166	178	178	182	189	172.1
20-Feb	192	190	190	188	183	182	190	183	208	218	222	214	224	235	233	214	218	225	204	207	219	232	203	211	209.0
21-Feb	207	196	179	150	187	158	191	0	179	204	244	72	76	54	16	23	26	25	27	18	20	18	26	17	43.0
22-Feb	13	15	24	20	28	22	7	15	28	15	20	318	215	253	226	236	224	206	208	216	215	218	213	218	232.7
23-Feb	213	167	122	211	215	216	220	226	234	237	261	279	279	289	333	1	12	9	12	20	19	28	38	42	283.8
24-Feb	40	23	341	352	59	70	75	52	14	7	129	244	215	237	66	104	79	28	22	12	21	260	329	10	34.6
25-Feb	25	20	24	25	23	359	45	46	33	16	26	14	34	7	359	62	34	18	23	16	14	12	230	230	21.5
26-Feb	242	234	223	234	254	282	308	213	190	290	304	295	292	300	298	285	274	53	35	16	12	1	32	255	281.0
27-Feb	151	203	211	184	226	195	187	224	201	260	271	293	296	297	303	312	337	337	343	9	25	27	30	27	309.4
28-Feb	34	30	73	78	79	65	77	88	71	49	98	76	65	64	78	92	77	11	9	11	4	19	37	163	59.8
	235.3	224.3	213.6	215.7	214.3	207.8	206.3	208.2	217.9	238.1	252.7	267.1	272.1	288.2	300.5	306.8	308.5	330.6	316.2	285.2	258.4	252.3	226.3	230.6	
	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: 106 deg on Feb 12 05:00

Minimum Value: 4 deg on Feb 14 23:00

Percentiles: P_1 = 8 P_{10} = 12 Q_1 = 15 Median = 19 Q_3 = 28 P_{90} = 46 P_{99} = 91

Hours in Service:	672
Hours of Data:	670
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-Feb	10	16	16	13	13	16	17	18	20	24	37	41	26	22	24	29	32	24	18	19	25	15	14	18	41
2-Feb	14	16	16	21	13	15	10	8	71	34	28	30	25	26	22	22	37	42	31	26	24	25	26	28	71
3-Feb	23	22	19	32	13	10	12	6	8	11	21	22	23	35	29	32	19	16	14	19	12	12	9	10	35
4-Feb	11	10	11	11	13	11	12	13	16	16	19	20	18	25	21	20	21	12	14	13	14	14	15	14	25
5-Feb	14	14	14	16	16	14	15	15	14	17	18	19	24	22	22	20	20	19	17	18	17	17	18	15	24
6-Feb	16	16	16	16	14	14	17	31	19	17	21	17	20	35	21	23	31	29	31	25	30	31	34	21	35
7-Feb	13	13	17	20	14	15	14	15	22	18	20	19	23	21	27	21	15	17	19	16	14	18	15	11	27
8-Feb	12	12	11	13	13	13	10	11	9	13	18	21	24	21	23	30	34	54	55	57	35	90	26	27	90
9-Feb	30	32	31	33	26	20	25	27	27	28	16	15	11	16	19	23	23	25	22	12	17	12	11	12	33
10-Feb	11	10	11	13	13	13	15	15	16	18	18	18	23	23	21	21	21	21	17	15	18	17	62	17	62
11-Feb	14	18	18	14	11	13	18	30	66	11	23	85	28	12	14	10	13	10	19	40	19	12	12	12	85
12-Feb	81	40	41	79	106	94	97	95	86	76	47	35	35	16	16	16	19	17	14	12	18	16	17	18	106
13-Feb	15	15	15	15	12	17	21	9	13	17	19	48	11	13	21	24	16	12	13	13	11	18	13	14	48
14-Feb	10	13	16	16	18	13	8	32	19	12	80	37	41	36	56	35	29	27	51	96	56	21	4	5	96
15-Feb	7	8	9	10	11	10	8	7	10	13	19	41	38	33	34	36	31	17	17	13	13	55	27	55	55
16-Feb	89	UO	UO	18	50	79	54	64	16	25	47	32	27	33	23	32	29	16	15	16	20	76	15	19	89
17-Feb	21	21	15	19	24	24	20	23	26	24	22	24	26	27	30	24	17	17	21	19	17	21	35	26	35
18-Feb	33	22	28	37	44	62	29	15	35	33	27	25	38	58	24	24	16	17	15	14	19	20	15	14	62
19-Feb	15	16	16	17	17	15	11	14	18	32	48	57	30	30	27	23	22	22	22	20	15	16	15	14	57
20-Feb	16	16	14	16	16	17	14	17	19	19	20	22	22	20	20	16	19	27	11	13	15	15	11	12	27
21-Feb	9	12	19	27	38	16	68	57	61	62	58	83	62	32	19	17	15	14	13	16	18	18	21	42	83
22-Feb	29	18	14	9	17	17	25	30	48	31	25	54	36	48	32	22	19	12	12	13	11	11	11	16	54
23-Feb	12	22	30	31	47	17	15	15	17	17	23	19	19	21	38	29	21	21	21	20	18	15	14	17	47
24-Feb	15	58	45	26	28	37	37	36	20	39	70	28	45	64	94	17	55	19	28	22	21	82	59	19	94
25-Feb	15	23	13	14	38	51	20	14	22	20	24	28	21	30	59	44	19	14	10	13	19	86	21	19	86
26-Feb	17	15	11	14	17	41	70	33	31	20	23	29	23	22	23	21	24	47	30	16	20	19	35	77	77
27-Feb	53	12	10	26	67	12	15	95	55	26	19	20	19	20	21	25	35	38	35	31	16	16	16	18	95
28-Feb	17	37	35	31	26	28	19	20	25	15	36	57	30	28	24	21	38	19	18	19	19	39	69	67	69
	89	58	45	79	106	94	97	95	86	76	80	85	62	64	94	44	55	54	55	96	56	90	69	77	
	Diurnal Maximum																								

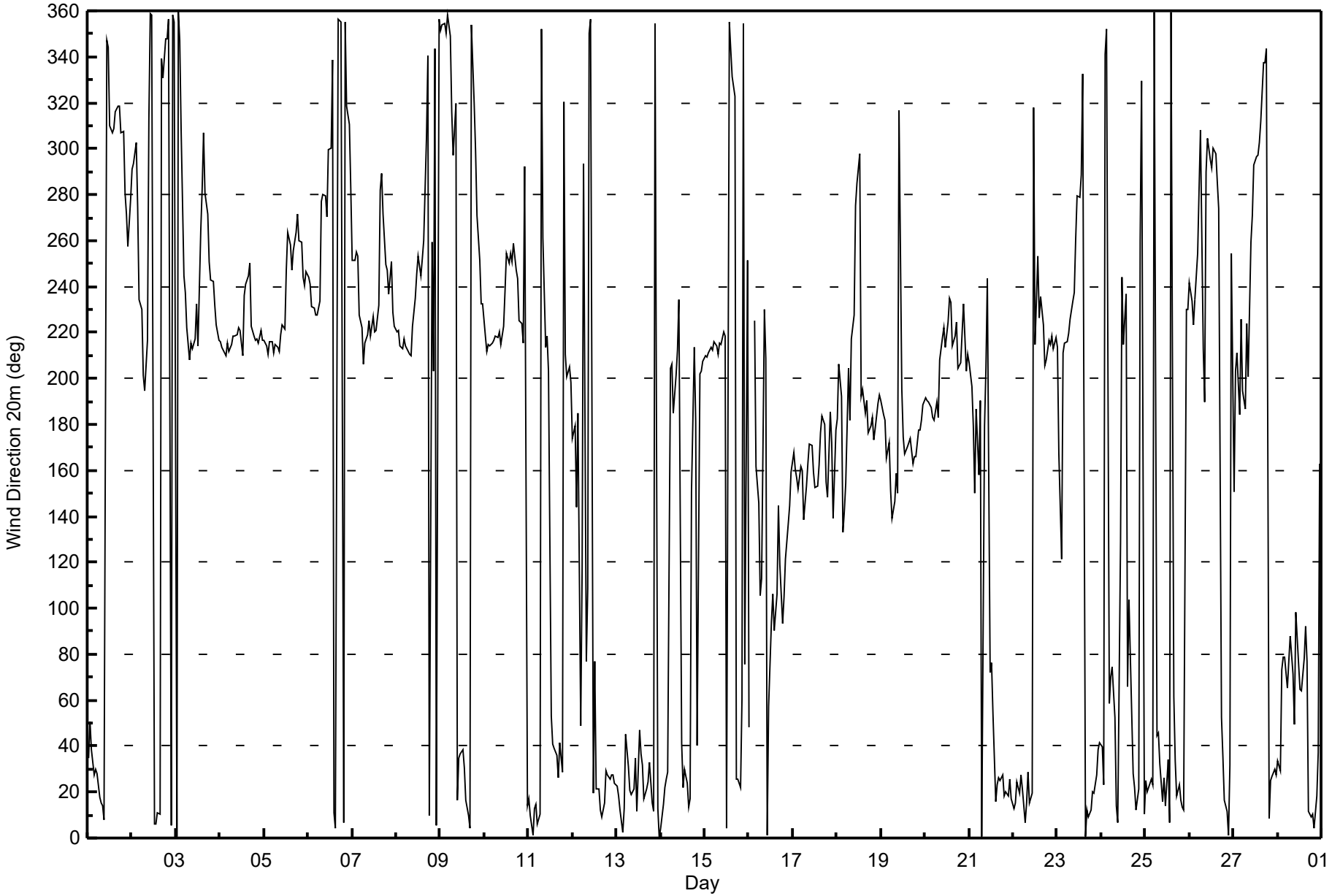
UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 20m (WD20) - deg

Janvier - February 2025



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS23
FORT HILLS
FEBRUARY 2025

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

March 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT HILLS (AMS23)
FEBRUARY 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	638	31	34	99.55	-	-	23.5	0	4	0
TRS(ppb) Average	638	32	34	99.7	3.1	0	2.4	0	0.9	0
THC(ppm) Average	525	30	147	82.59	-	-	5.6	-	2.8	-
NMHC(ppm) Average	525	30	147	82.59	-	-	0.892	-	0.224	-
CH4(ppm) Average	525	30	147	82.59	-	-	4.9	-	2.7	-
NO2 (ppb) Average	637	32	35	99.55	-	-	49.5	0	29.7	-
NO (ppb) Average	637	32	35	99.55	-	-	249.5	-	51.1	-
NOX (ppb) Average	637	32	35	99.55	-	-	299	-	80.8	-
PM2.5 (ug/m3) Average	669	1	3	99.7	-	-	52	0	10.1	0
Temperature 2 m (C) Average	670	0	2	99.7	-	-	0.2	-	-5.2	-
Relative Humidity (%) Average	670	0	2	99.7	-	-	97.6	-	86.9	-
Wind Speed 10 m (km/h) Average	639	0	33	95.09	-	-	35	-	28	-
Wind Direction 10 m (deg) Average	639	0	33	95.09	-	-	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT HILLS (AMS23)
FEBRUARY 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	638	0.81	2.1	-	0	0	0.1	0.2	0.6	1.6	23.5
TRS (ppb) Average	638	0.65	0.3	-	0.3	0.4	0.5	0.6	0.7	1	2.4
THC (ppm) Average	525	2.34	0.5	-	1.9	2	2.1	2.2	2.4	3	5.6
NMHC(ppm) Average	525	0.043	0.105	-	0	0	0	0	0	0.2	0.892
CH4(ppm) Average	525	2.3	0.4	-	1.9	2	2.1	2.1	2.4	2.8	4.9
NO2 (ppb) Average	637	19.27	11.6	-	0.6	4.2	9.9	17.4	29.6	35.3	49.5
NO (ppb) Average	637	16.59	28.5	-	0	0.1	1.1	4.7	20	48.6	249.5
NOX (ppb) Average	637	35.86	37.1	-	0.8	5.1	12.6	23	46.9	80.9	299
PM2.5 (ug/m3) Average	669	5.74	3.6	-	0.9	2.9	3.7	4.8	6.7	10.1	52
Temperature 2 m (C) Average	670	-18.43	8.1	-	-36.7	-28.5	-24.3	-19.9	-11.2	-7.2	0.2
Relative Humidity (%) Average	670	72.52	9.7	-	41	60.1	67.5	73.3	78.5	83.5	97.6
Wind Speed 10 m (km/h) Average	639	10.3	7	-	0	3	5	9	14	20	35
Wind Direction 10 m (deg) Average	639	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - FORT HILLS (AMS23)
FEBRUARY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL PARAMETERS	17 Feb 2025 17:00	17 Feb 2025 17:00	1	DAS Failure - data not recorded
ALL PARAMETERS	25 Feb 2025 10:00	25 Feb 2025 10:00	1	DAS Failure - data not recorded
ALL GASEOUS ANALYZERS	20 Feb 2025 10:00	20 Feb 2025 10:00	1	Maintenance - sample manifold cleaned
THC/NMHC/CH4	17 Feb 2025 10:00	17 Feb 2025 10:00	1	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	17 Feb 2025 13:00	17 Feb 2025 13:00	1	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	17 Feb 2025 16:00	17 Feb 2025 16:00	1	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	17 Feb 2025 21:00	17 Feb 2025 23:00	3	Unstable Operation - excessive baseline noise
THC/NMHC/CH4	18 Feb 2025 11:00	19 Feb 2025 10:00	24	Maintenance - analyzer replaced
THC/NMHC/CH4	22 Feb 2025 07:00	23 Feb 2025 09:00	27	Unstable Operation - AMD noncompliance
THC/NMHC/CH4	23 Feb 2025 10:00	23 Feb 2025 11:00	2	Maintenance - analyzer internal pump
THC/NMHC/CH4	24 Feb 2025 03:00	25 Feb 2025 08:00	30	Unstable Operation - AMD noncompliance
THC/NMHC/CH4	25 Feb 2025 09:00	25 Feb 2025 10:00	2	Maintenance - analyzer replaced
THC/NMHC/CH4	25 Feb 2025 13:00	26 Feb 2025 10:00	22	Unstable Operation - AMD noncompliance
THC/NMHC/CH4	26 Feb 2025 11:00	26 Feb 2025 12:00	2	Maintenance - analyzer recalibration
Wind Speed, Wind Direction	15 Feb 2025 18:00	15 Feb 2025 18:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	23 Feb 2025 09:00	24 Feb 2025 13:00	29	Flat line in sensor output signal
Wind Speed, Wind Direction	25 Feb 2025 23:00	25 Feb 2025 23:00	1	Flat line in sensor output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Fort Hills - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 23.5 ppb on Feb 16 12:00 Maximum Daily Average: 4.0 ppb on Feb 16

Minimum Value: 0.0 ppb on Feb 1 14:00 Minimum Daily Average: 0.0 ppb on Feb 1
Maximum Diurnal Average: 1.8 ppb at hour 17 Minimum Diurnal Average: 0.3 ppb at hour 8
Monthly Average: 0.81 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.2 Q_3 = 0.6 P_{90} = 1.6 P_{99} = 10.0

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Hours of Calibration:	31
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-Feb	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
2-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1
3-Feb	0.1	0.1	0.1	0.2	Z	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.3
4-Feb	0.1	0.0	0.1	0.1	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
5-Feb	0.1	Z	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.1
6-Feb	0.1	0.0	0.0	0.0	0.2	0.4	0.2	0.1	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.7	0.4	0.1	0.2	0.0	0.1	0.7
7-Feb	0.2	Z	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.2	0.1	0.1	0.1	0.2	0.4	0.3	0.2	0.3	0.2	0.1	0.4
8-Feb	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.5	0.5	0.7	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.7
9-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.3	0.3	0.6	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.1	0.1	0.6
10-Feb	0.1	0.0	0.0	0.1	Z	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.1	4.0	5.2	3.2	2.3	1.2	1.5	0.9	0.5	0.4	0.9	5.2
11-Feb	0.3	0.7	0.6	0.2	0.1	Z	0.0	0.1	0.1	0.1	0.2	0.2	0.4	0.3	0.2	0.4	0.5	0.5	0.5	1.5	0.3	0.1	0.1	0.2	0.3	1.5
12-Feb	Z	0.2	0.2	0.2	0.1	0.7	1.1	0.8	0.8	0.6	1.0	1.5	1.8	1.9	2.8	1.8	2.6	3.3	2.9	2.0	1.2	0.6	0.5	0.5	1.3	3.3
13-Feb	0.5	Z	0.3	0.5	0.5	0.5	0.4	0.6	0.5	0.5	0.5	0.5	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.3	0.6
14-Feb	0.0	0.0	Z	0.0	0.1	0.2	0.0	0.0	0.0	0.1	0.7	0.7	0.3	0.4	0.1	0.1	0.2	0.2	0.4	0.6	0.6	0.9	2.4	1.3	0.4	2.4
15-Feb	0.8	0.5	0.4	Z	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.2	0.4	0.9	1.1	0.9	0.9	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.4	1.1
16-Feb	0.4	0.5	0.4	0.3	Z	1.1	0.4	0.0	0.0	0.1	17.6	23.5	6.4	9.4	10.1	6.8	8.2	5.6	1.3	0.5	0.2	0.1	0.1	0.1	4.0	23.5
17-Feb	0.1	0.2	4.2	1.3	1.0	Z	0.4	0.5	0.4	0.5	1.0	2.6	3.5	3.4	2.0	0.9	DF	0.4	0.5	0.5	0.4	0.3	0.2	0.2	1.1	4.2
18-Feb	0.3	Z	0.4	0.3	0.2	0.3	0.8	C	C	C	C	0.7	3.3	13.5	14.1	14.8	19.0	3.1	0.5	0.5	0.3	0.3	0.4	1.1	3.9	19.0
19-Feb	0.9	0.9	Z	0.4	0.3	0.3	0.3	0.5	1.9	1.8	0.4	3.5	6.2	5.1	5.2	3.7	4.3	1.3	0.4	0.2	0.3	0.3	2.0	5.3	2.0	6.2
20-Feb	4.2	1.4	4.3	Z	1.5	0.6	0.6	0.5	0.7	M	0.7	0.5	0.5	0.5	0.6	0.6	0.8	1.7	2.5	1.8	1.7	1.4	1.1	0.8	1.3	4.3
21-Feb	0.7	0.7	0.7	0.7	Z	0.7	1.1	1.4	1.8	1.3	0.8	0.6	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.2	0.2	0.6	1.8
22-Feb	0.2	0.2	0.1	0.5	0.3	Z	0.2	0.3	0.2	0.1	0.2	1.0	9.2	9.8	6.5	1.3	1.0	0.9	0.9	0.8	1.0	1.4	1.3	1.2	1.7	9.8
23-Feb	Z	0.6	0.4	0.3	0.7	1.0	1.2	0.8	0.7	0.8	0.7	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.4	1.2
24-Feb	0.1	Z	0.1	0.1	0.1	0.2	0.2	0.5	0.3	0.3	0.4	0.9	1.0	1.2	1.2	2.0	0.4	0.3	0.3	1.0	2.6	3.1	1.4	0.4	0.8	3.1
25-Feb	0.3	0.2	Z	0.2	0.1	0.2	0.2	0.2	0.2	DF	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.6	0.2	0.6
26-Feb	0.7	1.1	Z	1.3	1.2	1.6	0.7	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.4	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.5	1.6
27-Feb	0.2	0.3	0.3	Z	0.7	0.6	0.7	0.6	1.2	1.8	0.7	0.6	1.2	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.4	1.8
28-Feb	0.0	0.0	0.1	0.1	Z	0.1	0.0	0.0	0.1	0.2	0.8	1.0	1.6	1.9	2.3	2.0	4.6	9.2	9.0	4.9	2.2	0.9	0.4	0.3	1.8	9.2
	0.4	0.3	0.6	0.3	0.3	0.4	0.3	0.3	0.4	0.4	1.0	1.4	1.4	1.8	1.7	1.5	1.8	1.1	0.8	0.6	0.5	0.4	0.4	0.5	Diurnal Average	
	4.2	1.4	4.3	1.3	1.5	1.6	1.2	1.4	1.9	1.8	17.6	23.5	9.2	13.5	14.1	14.8	19.0	9.2	9.0	4.9	2.6	3.1	2.4	5.3	Diurnal Maximum	

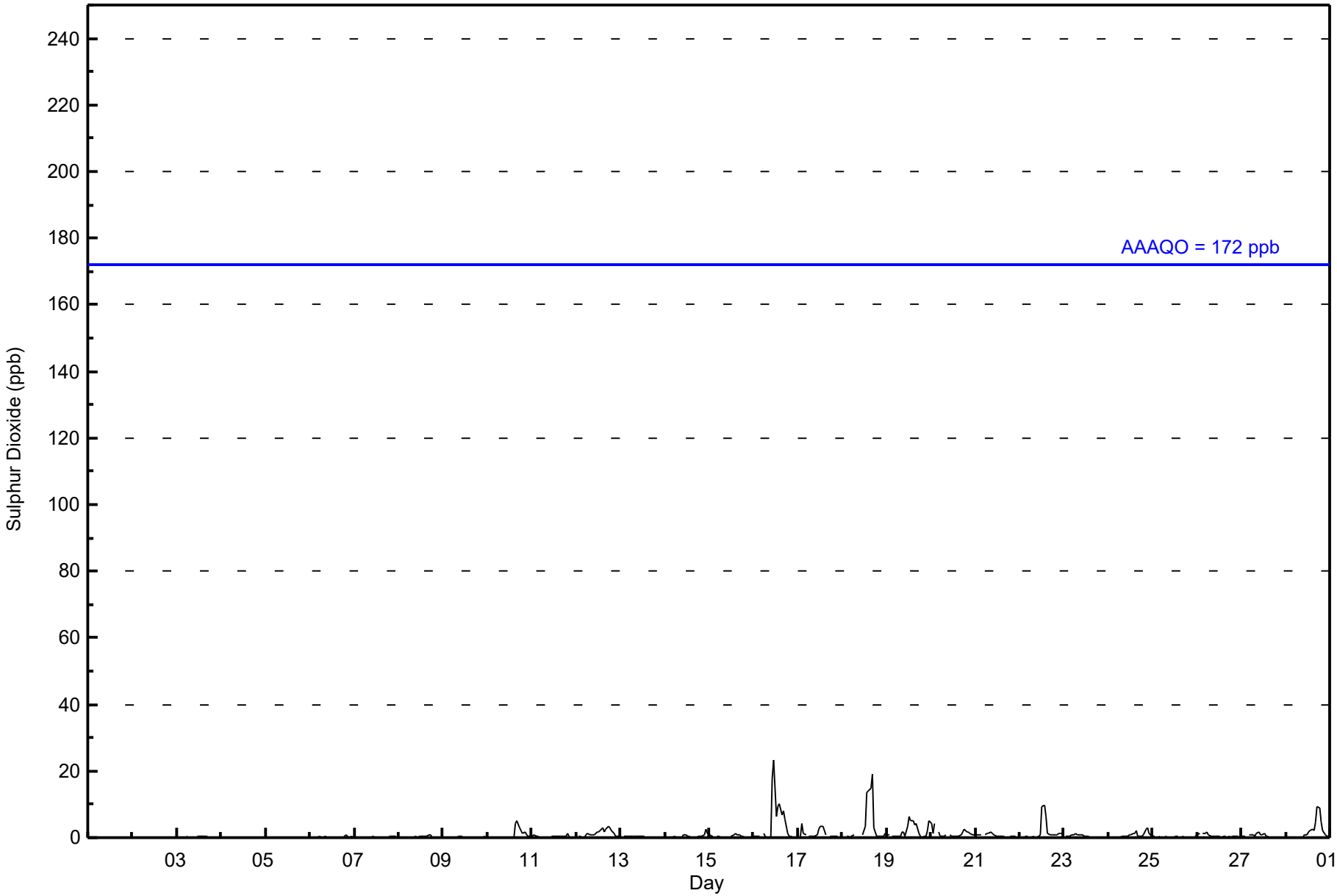
Z - zerospan C - Calibration M - Maintenance DF - DAS Failure
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Fort Hills - February 2025



Sulphur Dioxide (SO_2) - ppb
Fort Hills - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	632	99.06	99.06
11 - 20	5	0.78	99.84
21 - 60	1	0.16	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: 638

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Fort Hills - February 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	134	56	17	6	5	35	75	86	79	40	7	4	6	7	22	23	602
11 - 20	0	0	0	0	0	0	0	1	4	0	0	0	0	0	0	0	5
21 - 60	0	0	0	0	0	0	0	0	1	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	134	56	17	6	5	35	75	87	84	40	7	4	6	7	22	23	608

Total Number of Valid Hours: 608

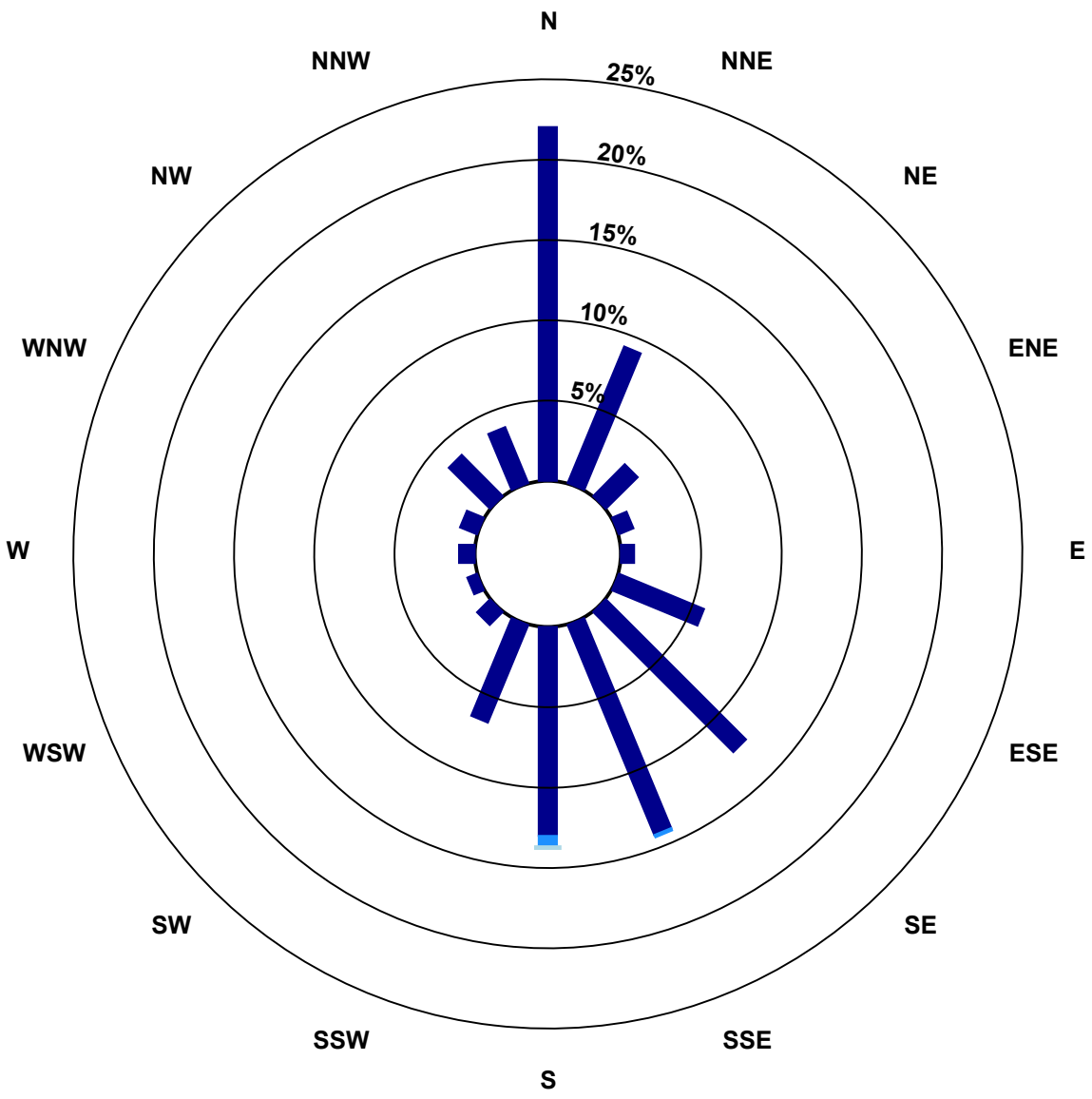
Total Number of Hours: 672

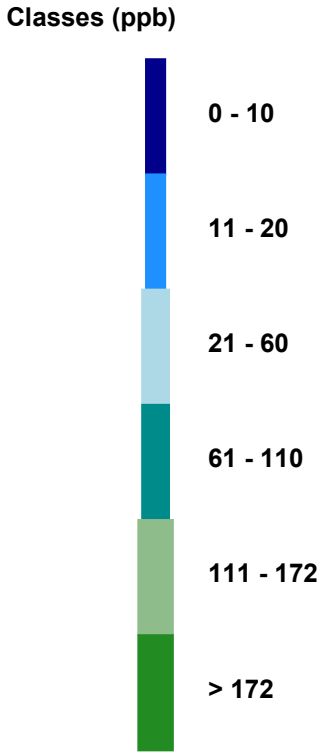
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Sulphur Dioxide (SO_2) - ppb

Fort Hills





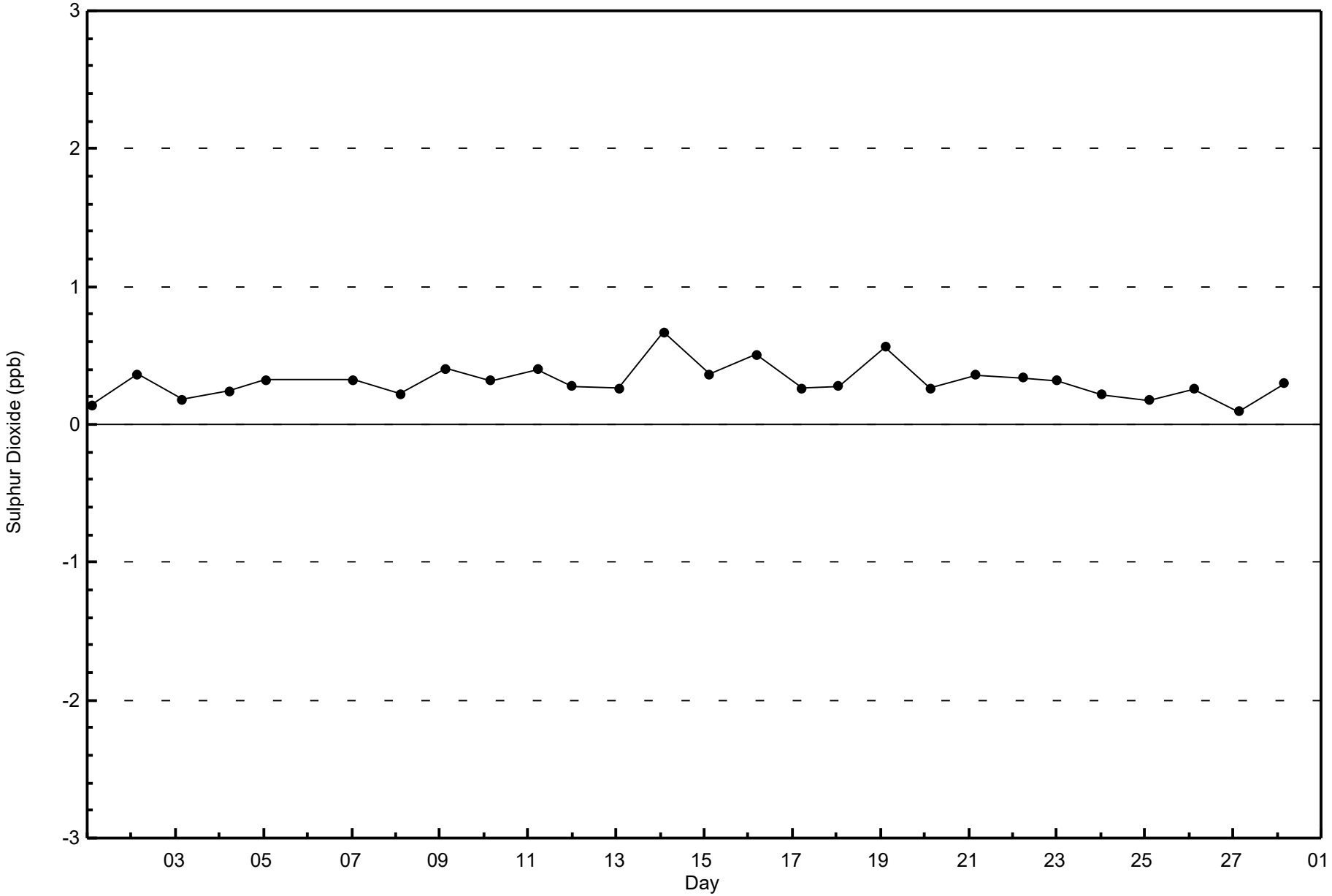
Total Number of Valid Hours: 608

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Fort Hills - February 2025

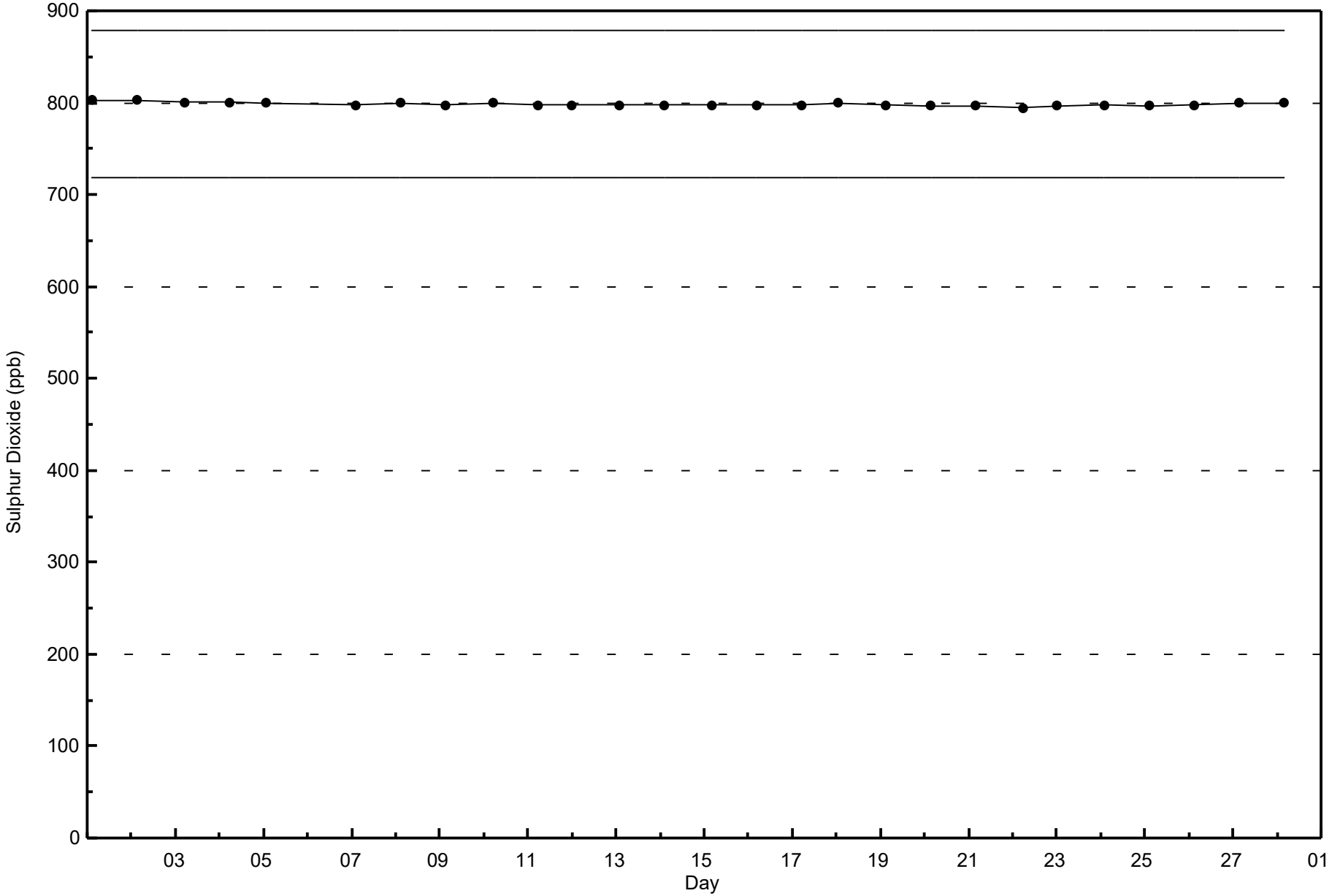


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Fort Hills - February 2025



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort Hills - February 2025

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

Maximum Value: 3.1 ppb on Feb 27 09:30

Maximum Daily Average: 0.9 ppb on Feb 15

Minimum Value: 0.3 ppb on Feb 4 12:00

Minimum Daily Average: 0.4 ppb on Feb 4

Maximum Diurnal Average: 0.7 ppb at hour 10

Minimum Diurnal Average: 0.6 ppb at hour 2

Monthly Average: 0.65 ppb

Percentiles: P_1 = 0.4 P_{10} = 0.4 Q_1 = 0.5 Median = 0.6 Q_3 = 0.8 P_{90} = 1.0 P_{99} = 1.7

Periods in Service:	1344
Periods of Valid Data:	1276
Periods of Invalid Data:	68
Periods of Calibration:	63
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-Feb	0.4	0.4	0.4	Z	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	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	0.5	0.5	0.5		
2-Feb	0.5	0.5	0.5	0.5	Z	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.6
	0.5	0.5	0.5	0.5	SP	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	0.6	0.5	0.5	0.5	0.5		
3-Feb	0.5	0.6	0.6	0.6	0.7	Z	0.7	0.6	0.5	0.5	0.5	0.5	0.7	0.6	0.6	0.8	0.9	0.6	0.5	0.9	0.9	0.6	0.6	1.0	0.7	1.5
	0.5	0.6	0.6	0.6	0.7	SP	0.6	0.5	0.5	0.6	0.5	0.5	0.8	0.7	0.8	0.9	0.6	0.6	0.5	1.5	0.9	0.5	0.6	1.5		
4-Feb	Z	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	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.6
	SP	0.4	0.4	0.6	0.4	0.4	0.4	0.5	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		
5-Feb	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	0.6	0.7	0.5	0.5	0.4	0.7
	0.4	0.4	SP	0.4	0.4	0.4	0.4	0.4	DF	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.7	0.6	0.5	0.5		
6-Feb	0.6	0.6	0.9	0.5	0.6	0.8	0.6	0.8	0.8	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	1.0	0.6	0.5	0.9	1.6	0.6	1.6
	0.9	0.6	0.9	0.8	0.6	0.8	0.8	0.7	0.6	0.5	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.5	0.4	0.6	0.5	0.9	1.2		
7-Feb	1.1	1.3	Z	0.5	0.6	0.7	0.5	1.0	1.6	1.2	1.4	0.5	0.4	0.5	0.5	0.6	1.0	0.6	0.7	0.8	0.9	0.7	1.0	0.6	0.8	1.6
	1.2	0.9	SP	0.6	0.7	0.6	0.7	1.2	1.3	1.0	0.6	0.5	0.5	0.5	0.6	0.7	0.6	0.6	0.7	0.8	0.6	0.8	1.0	0.9		
8-Feb	0.9	0.5	0.5	Z	0.6	0.5	0.5	0.8	0.8	0.8	0.6	0.7	0.8	0.9	1.1	1.0	1.1	1.3	0.7	0.5	0.5	0.5	0.5	0.4	0.7	1.3
	0.6	0.5	0.5	SP	0.6	0.5	0.7	0.8	0.8	0.8	0.7	0.8	0.8	0.9	1.0	1.0	1.3	1.0	0.6	0.5	0.6	0.5	0.5	0.4		
9-Feb	0.4	0.4	0.4	0.4	Z	0.4	0.4	0.4	0.5	0.7	0.8	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.6	0.5	0.7	0.6	0.5	0.8
	0.4	0.4	0.4	0.4	SP	0.4	0.4	0.4	0.8	0.5	0.8	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.5	0.6	0.6		
10-Feb	0.5	0.5	0.4	0.4	0.4	Z	1.1	0.9	0.6	0.6	0.4	0.4	0.4	0.5	0.6	0.9	0.7	0.9	0.8	0.8	0.8	0.9	0.7	0.7	0.6	1.1
	0.4	0.5	0.4	0.4	0.4	SP	0.7	0.7	0.5	0.5	0.5	0.4	0.4	0.6	0.6	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.7		
11-Feb	Z	0.9	0.9	0.7	0.6	0.6	0.5	0.5	0.6	0.5	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.8	0.9	1.1	0.6	0.5	0.5	0.5	0.7	1.1
	SP	0.9	0.8	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.8	1.0	0.9	1.1	0.6	0.6	0.5	0.5		
12-Feb	0.6	Z	0.7	0.8	0.7	0.6	1.0	0.9	1.0	0.8	1.1	1.3	1.5	1.1	0.6	0.5	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.8	1.5
	0.7	SP	0.6	0.6	0.6	1.0	0.9	0.9	0.9	1.0	1.2	1.4	1.3	0.8	0.6	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.5		
13-Feb	0.6	0.6	Z	0.7	0.7	0.7	0.6	0.8	0.9	1.0	0.8	0.9	0.7	0.6	0.5	0.5	0.5	0.6	0.5	0.6	0.8	0.7	0.7	0.6	0.7	1.0
	0.6	0.6	SP	0.7	0.8	0.7	0.7	0.8	0.9	0.8	0.9	0.9	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.7	0.7	0.7	0.8	0.7		
14-Feb	0.6	0.7	0.5	Z	0.7	0.8	0.6	0.7	0.5	0.6	1.0	1.0	0.8	1.1	0.8	0.7	0.9	0.6	0.8	1.0	0.9	0.9	1.2	1.0	0.8	1.2
	0.6	0.5	0.5	SP	0.8	0.7	0.6	0.6	0.6	0.6	1.1	1.1	0.9	1.0	0.7	0.6	0.7	0.8	0.9	0.9	0.9	0.9	1.1	1.0		
15-Feb	1.0	0.9	0.8	0.6	Z	1.0	0.7	0.7	0.8	0.9	1.1	0.9	0.8	1.6	1.2	0.9	1.2	1.0	1.2	0.5	0.5	0.6	0.6	0.6	0.9	1.6
	1.1	0.8	0.7	0.7	SP	0.9	0.7	0.7	1.0	1.0	0.9	0.7	1.1	1.3	1.2	0.9	1.4	1.3	0.8	0.5	0.6	0.6	0.6	0.6		

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Fort Hills - February 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-Feb	0.7	0.9	0.8	0.9	1.3	Z	2.4	0.6	0.6	0.5	0.9	0.9	0.8	1.3	1.2	0.7	0.8	0.8	0.6	0.5	0.5	0.5	0.5	0.5	0.8	2.4
	0.9	0.8	0.8	0.7	1.8	SP	0.8	0.6	0.5	0.7	1.1	1.0	0.8	1.3	0.9	0.8	0.8	0.7	0.5	0.5	0.5	0.5	0.5	0.4		
17-Feb	Z	0.5	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.5	DF	0.4	0.5	1.0	1.1	0.7	0.4	0.4	0.6	1.3
	SP	0.5	0.7	0.6	0.6	0.6	0.5	0.4	0.5	0.4	0.5	0.6	0.7	0.5	0.5	0.5	DF	0.5	1.1	1.3	0.8	0.4	0.5	0.4		
18-Feb	0.5	0.5	Z	0.5	0.4	0.5	0.6	0.5	0.6	0.7	0.8	0.6	0.6	0.6	0.7	0.7	0.6	0.5	0.5	0.8	0.5	0.5	0.5	0.7	0.6	0.8
	0.5	0.6	SP	0.5	0.5	0.5	0.5	0.5	0.6	0.8	0.7	0.6	0.6	0.7	0.7	0.7	0.8	0.5	0.5	0.7	0.5	0.4	0.6	0.7		
19-Feb	0.6	0.6	0.7	Z	0.5	0.5	0.5	0.5	0.9	0.7	0.5	0.5	0.8	0.7	0.7	0.7	0.7	0.6	0.5	0.5	0.4	0.4	0.5	0.6	0.6	0.9
	0.6	0.6	0.7	SP	0.5	0.5	0.5	0.7	0.8	0.5	0.5	0.8	0.8	0.6	0.6	0.8	0.7	0.5	0.4	0.4	0.4	0.4	0.7	0.7		
20-Feb	0.7	0.6	0.5	0.6	Z	0.5	0.5	0.4	C	C	C	C	1.0	0.8	0.6	0.6	0.4	0.9	0.6	0.8	1.0	1.0	0.8	0.7	0.7	1.1
	0.6	0.5	0.6	0.5	SP	0.5	0.4	C	C	C	C	C	0.8	0.6	0.5	0.4	0.7	0.7	0.7	0.9	1.1	0.9	0.8	0.7		
21-Feb	0.6	0.7	0.7	1.1	0.8	Z	0.8	1.1	1.5	1.0	0.8	0.6	0.6	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	1.5
	0.6	0.7	1.0	0.7	1.0	SP	1.2	1.2	1.2	0.9	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.5		
22-Feb	Z	0.5	0.4	0.7	0.6	0.7	0.5	0.6	0.5	0.5	0.5	1.3	2.0	1.1	1.0	0.7	0.6	0.6	0.6	0.7	0.7	1.2	1.8	1.4	0.9	2.0
	SP	0.4	0.5	0.7	0.6	0.5	0.5	0.6	0.5	0.4	0.8	1.4	1.7	1.0	1.4	0.7	0.6	0.6	0.6	0.6	0.9	1.6	1.8	1.7		
23-Feb	1.3	Z	0.7	0.7	0.9	1.7	1.7	1.9	1.2	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.7	1.9
	0.9	SP	0.7	0.9	1.5	1.8	1.9	1.8	0.6	0.5	0.3	0.4	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5		
24-Feb	0.4	0.4	Z	0.5	0.4	0.5	0.4	0.5	0.6	0.8	0.6	1.3	0.7	0.7	1.1	1.2	0.6	0.6	2.7	0.8	0.8	0.7	0.6	0.5	0.7	2.7
	0.4	0.4	SP	0.5	0.5	0.5	0.5	0.7	0.9	0.7	0.9	0.8	0.7	1.0	1.1	0.9	0.6	0.6	1.8	1.0	0.7	0.7	0.6	0.4		
25-Feb	0.4	0.4	0.5	Z	0.4	0.4	0.4	0.4	0.4	DF	0.5	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.7
	0.4	0.4	0.5	SP	0.4	0.4	0.5	0.4	0.4	DF	0.4	0.4	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.7		
26-Feb	0.7	0.8	0.7	Z	1.0	1.2	0.8	0.6	0.4	0.4	0.4	0.5	0.4	0.4	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.6	1.2
	0.7	0.8	0.7	SP	1.2	0.9	0.8	0.4	0.4	0.5	0.4	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4		
27-Feb	0.4	0.5	0.5	0.6	Z	0.6	0.7	0.6	0.7	3.1	0.7	0.6	0.7	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.6	3.1
	0.4	0.4	0.5	0.6	SP	0.6	0.6	0.6	1.6	1.7	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5		
28-Feb	0.5	0.5	0.5	0.6	0.5	Z	0.5	0.6	1.0	0.6	0.7	1.1	0.9	0.8	0.8	0.8	0.9	1.1	1.0	1.2	0.9	0.7	0.6	1.5	0.8	1.5
	0.5	0.4	0.5	0.6	0.7	SP	0.7	0.8	0.8	0.7	0.8	1.1	0.8	0.8	0.8	0.9	1.1	1.0	1.2	1.0	0.8	0.7	0.5	0.7		
	0.6	0.6	0.6	0.6	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.7	0.7	0.6	0.6	0.6	0.7	Diurnal Average	
	1.3	1.3	1.0	1.1	1.8	1.8	2.4	1.9	1.6	3.1	1.4	1.4	2.0	1.6	1.4	1.2	1.4	1.3	2.7	1.5	1.1	1.6	1.8	1.7	Diurnal Maximum	

Z - zerospan C - Calibration DF - DAS Failure SP - Span

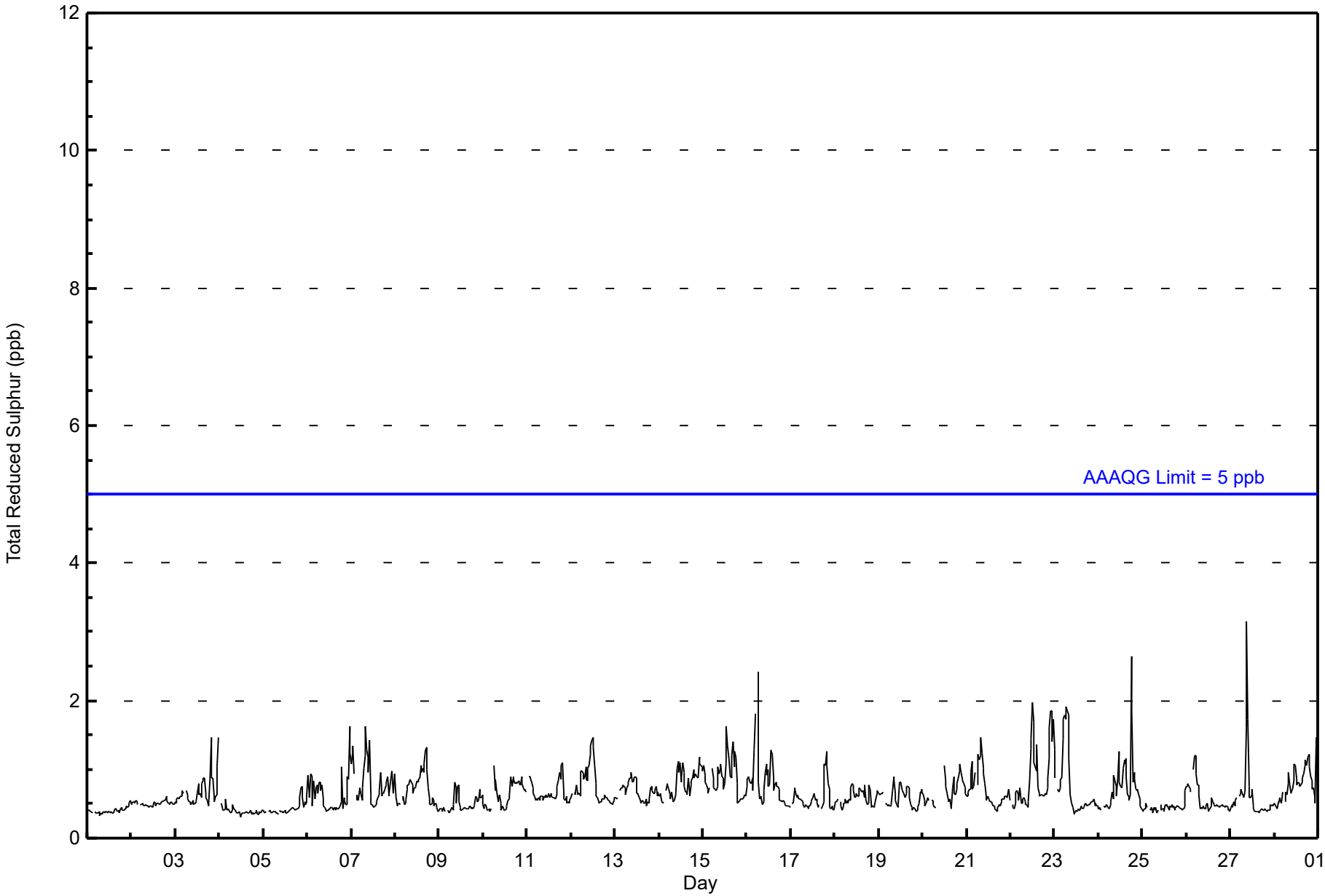
Alberta Ambient Air Quality Guideline (AAAQG): 30-Min: 5 ppb

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Fort Hills - February 2025

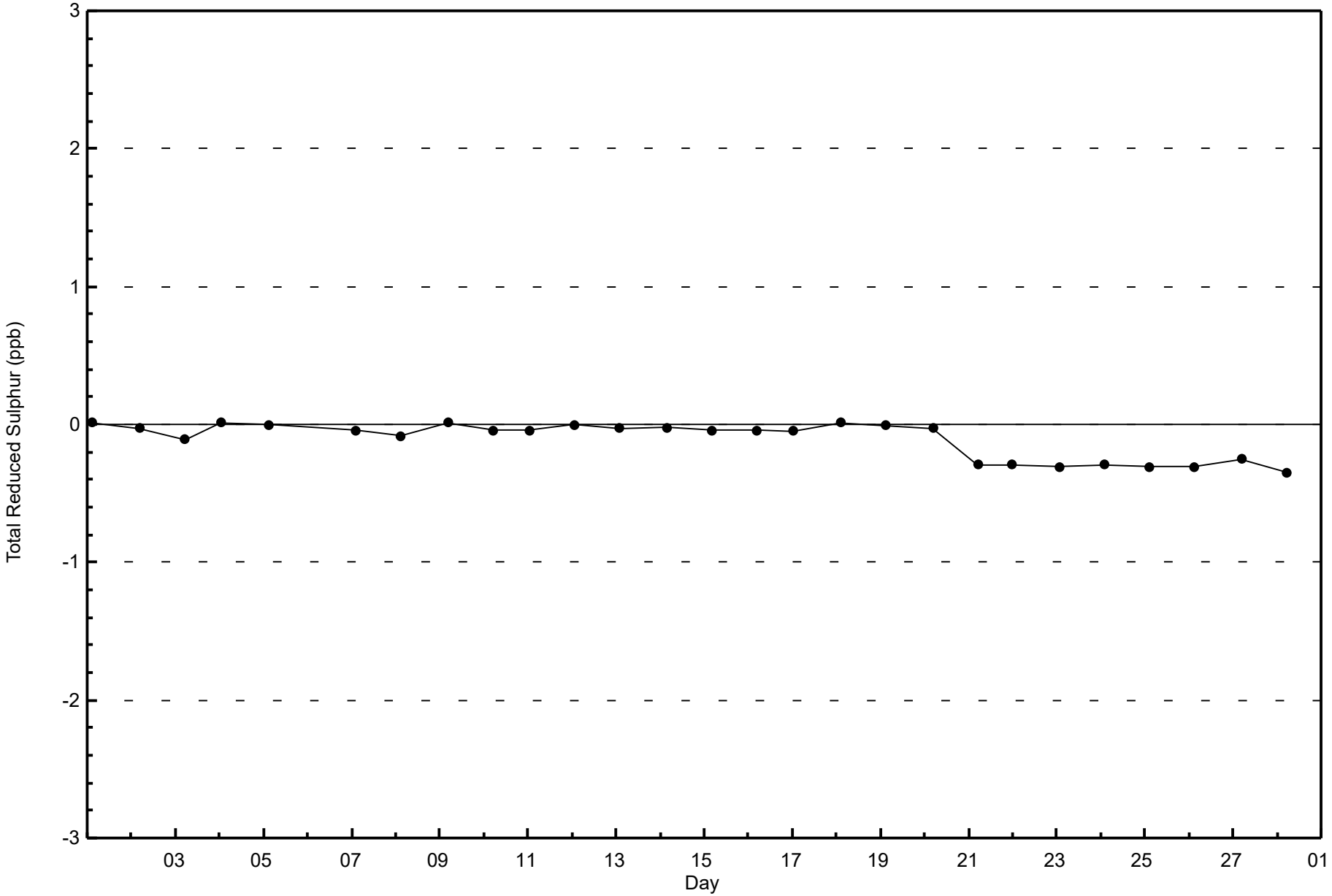


Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Fort Hills - February 2025

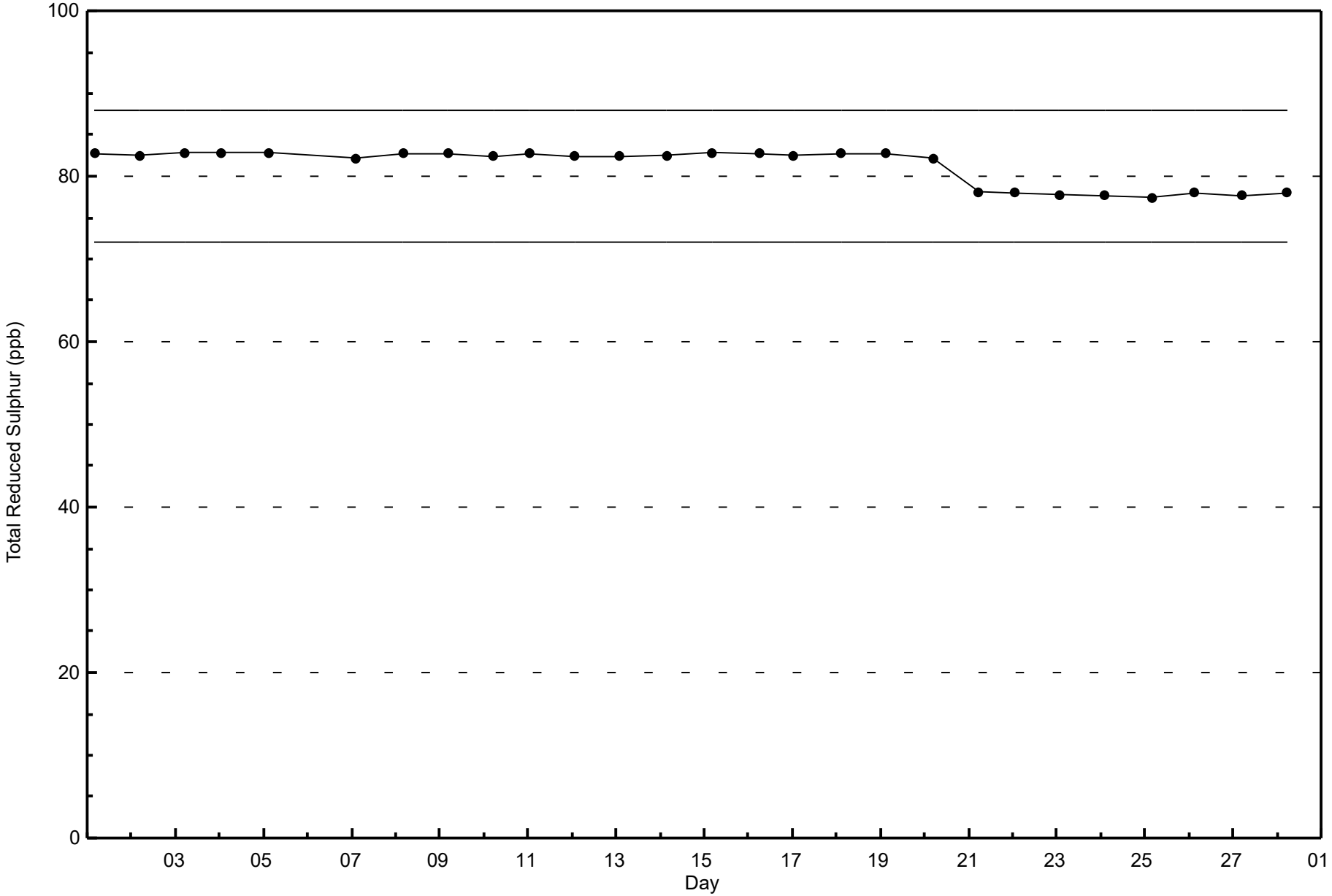


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Fort Hills - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Fort Hills - February 2025

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

Maximum Value: 5.6 ppm on Feb 27 10:00

Maximum Daily Average: 2.8 ppm on Feb 21

Minimum Value: 1.9 ppm on Feb 23 23:00

Minimum Daily Average: 2.0 ppm on Feb 5

Maximum Diurnal Average: 2.6 ppm at hour 10

Minimum Diurnal Average: 2.2 ppm at hour 15

Monthly Average: 2.34 ppm

Percentiles: P_1 = 2.0 P_{10} = 2.0 Q_1 = 2.1 Median = 2.2 Q_3 = 2.4 P_{90} = 3.0 P_{99} = 4.2

Hours in Service:	672
Hours of Data:	525
Hours of Missing Data:	147
Hours of Calibration:	30
Percent Operational Time:	82.6

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-Feb	2.1	2.0	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1
2-Feb	2.0	2.0	2.1	Z	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.2	2.1	2.1	2.2	2.1	2.0	2.1	2.1	2.1	2.2
3-Feb	2.1	2.1	2.1	2.2	Z	3.0	2.8	2.3	2.2	2.1	2.2	2.1	2.4	2.3	2.3	2.3	2.2	2.0	2.0	2.6	2.4	2.1	2.3	2.7	2.3	3.0
4-Feb	2.7	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	2.7
5-Feb	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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
6-Feb	2.5	2.3	2.6	2.1	2.1	2.2	2.3	2.4	2.4	2.1	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.9	2.9	2.2	2.9
7-Feb	3.1	Z	2.1	2.3	2.6	2.3	2.3	3.7	3.3	3.2	3.2	2.0	2.0	2.0	2.2	2.2	2.5	2.6	2.7	2.7	2.4	2.7	3.3	2.7	2.6	3.7
8-Feb	2.5	2.0	Z	2.0	2.0	2.0	2.1	2.2	2.3	2.2	2.2	2.3	2.4	2.5	2.6	2.7	3.1	3.2	2.5	2.1	2.1	2.1	2.2	2.1	2.3	3.2
9-Feb	2.1	2.1	2.2	Z	2.1	2.1	2.0	2.2	2.3	2.4	2.7	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.7	2.3	2.2	2.7
10-Feb	2.1	2.1	2.0	2.0	Z	2.0	2.1	2.5	2.1	2.2	2.0	2.0	2.0	2.1	2.2	2.4	2.3	2.4	2.4	3.0	2.6	2.8	2.2	2.3	2.2	3.0
11-Feb	2.4	3.1	3.7	2.4	2.3	Z	2.2	2.3	2.3	2.2	2.2	2.2	2.3	2.2	2.2	2.1	2.3	2.5	2.7	2.6	2.2	2.2	2.1	2.2	2.4	3.7
12-Feb	Z	2.2	2.2	2.2	2.2	2.2	2.5	2.6	2.8	3.0	3.6	3.6	3.5	2.6	2.0	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.5	3.6
13-Feb	2.2	Z	2.1	2.1	2.3	2.6	2.5	2.5	2.7	3.0	2.7	2.6	2.3	2.2	2.1	2.1	2.1	2.0	2.1	2.2	3.0	2.1	2.0	2.1	2.3	3.0
14-Feb	2.2	2.4	Z	2.4	3.2	3.1	2.4	2.2	2.3	2.8	4.3	3.6	3.0	3.1	2.4	2.4	2.7	2.4	2.4	2.3	2.5	2.4	2.4	2.4	2.7	4.3
15-Feb	2.7	2.9	2.7	Z	2.4	2.3	2.2	2.2	2.2	2.3	2.4	2.6	2.6	3.6	2.8	2.3	2.2	2.2	2.3	2.0	2.0	2.0	2.3	2.5	2.4	3.6
16-Feb	3.0	3.2	3.3	2.9	Z	4.3	3.2	2.1	2.2	2.1	2.3	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.2	2.4	2.2	2.2	2.1	2.0	2.4	4.3
17-Feb	2.1	2.0	2.0	2.0	2.1	Z	2.0	2.1	2.2	UO	2.0	2.0	UO	2.0	2.0	UO	DF	2.1	2.4	2.6	UO	UO	UO	2.0	--	2.6
18-Feb	2.1	Z	3.1	2.2	2.0	2.1	2.1	C	C	C	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	3.1
19-Feb	M	M	M	M	M	M	M	M	M	M	C	C	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.4	2.1	2.0	2.1	2.1	--	2.4
20-Feb	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	M	2.1	2.1	2.1	2.1	2.2	2.4	2.8	3.1	2.7	2.9	3.8	4.1	3.6	3.1	2.5	4.1
21-Feb	2.9	3.0	3.1	3.0	Z	3.5	4.2	4.8	4.8	3.5	2.6	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.3	2.0	2.6	2.8	4.8
22-Feb	2.4	2.2	2.1	2.7	2.1	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	2.7
23-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	2.1	2.1	2.1	2.2	2.1	2.1	2.0	2.1	2.1	2.1	2.0	1.9	2.0	--	2.2
24-Feb	2.0	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	2.0
25-Feb	UO	UO	UO	UO	UO	UO	UO	UO	M	M	C	C	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
26-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	2.1	2.1	2.7	2.3	2.1	2.6	2.4	2.6	2.5	2.5	2.8	2.3	--	2.8
27-Feb	2.4	2.3	2.8	Z	3.0	3.1	3.5	3.0	3.7	5.6	2.5	2.5	2.5	2.2	2.1	2.1	2.3	2.2	2.2	2.1	2.2	2.1	2.2	2.2	2.6	5.6
28-Feb	2.1	2.2	2.3	2.6	Z	2.1	2.1	2.3	2.3	2.4	2.7	2.8	2.5	2.3	2.2	2.6	3.5	3.3	3.5	3.6	2.7	2.4	2.3	2.4	2.6	3.6
	2.3	2.3	2.4	2.3	2.3	2.5	2.4	2.5	2.5	2.6	2.5	2.3	2.3	2.2	2.2	2.2	2.3	2.3	2.3	2.4	2.3	2.3	2.3	2.3	Diurnal Average	
	3.1	3.2	3.7	3.0	3.2	4.3	4.2	4.8	4.8	5.6	4.3	3.6	3.5	3.6	2.8	2.7	3.5	3.3	3.5	3.6	3.8	4.1	3.6	3.1	Diurnal Maximum	

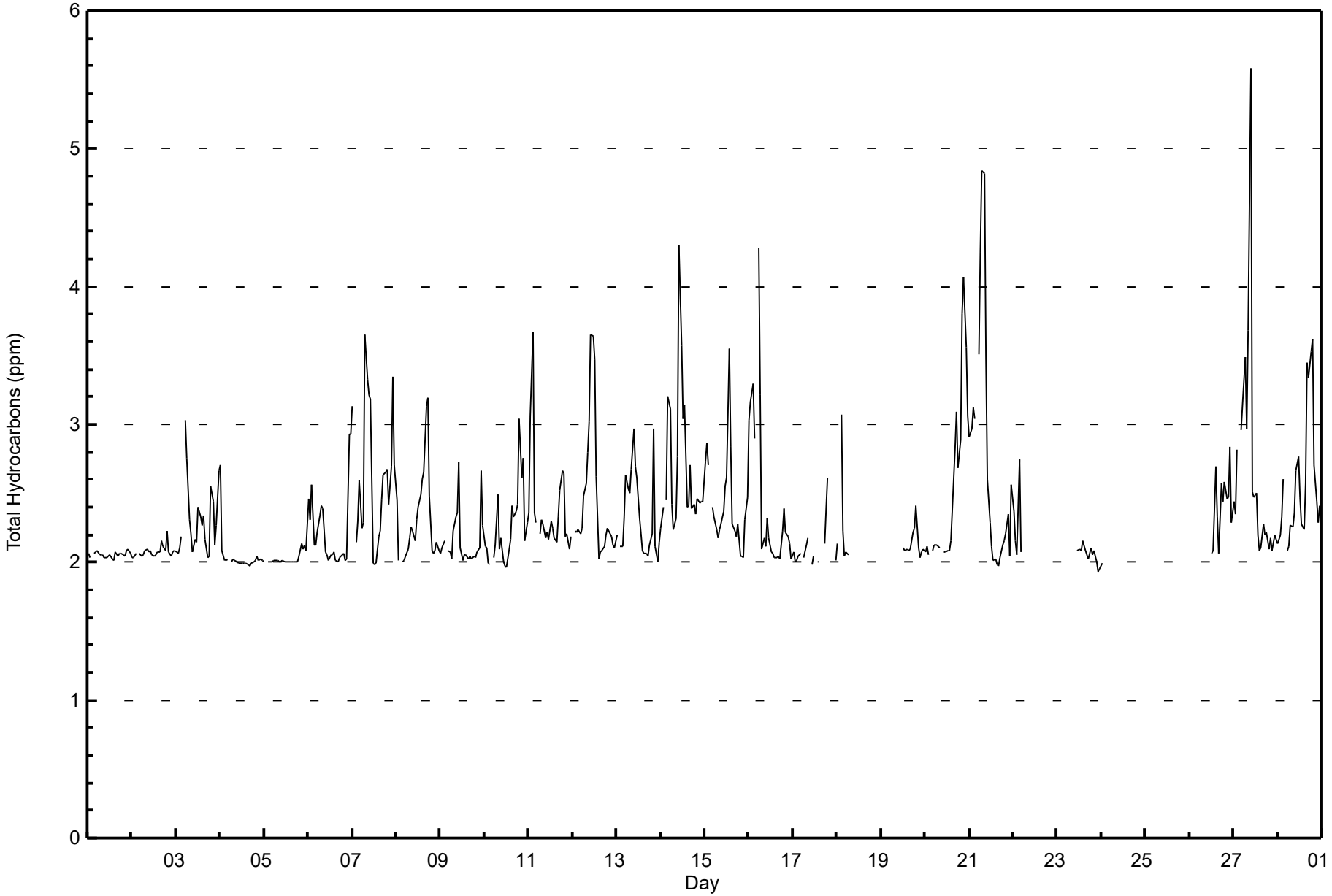
Z - zerospan C - Calibration M - Maintenance DF - DAS Failure UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Fort Hills - February 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	115	21.90	21.90
2.1 - 3.0	367	69.90	91.81
3.1 - 10.0	43	8.19	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 525

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Fort Hills - February 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	8	4	0	0	0	13	19	26	17	1	0	1	3	1	2	110
2.1 - 3.0	95	37	9	5	4	25	46	42	35	17	5	1	4	3	16	13	357
3.1 - 10.0	7	2	0	0	1	7	2	4	6	2	0	1	1	1	4	5	43
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	117	47	13	5	5	32	61	65	67	36	6	2	6	7	21	20	510

Total Number of Valid Hours: 510

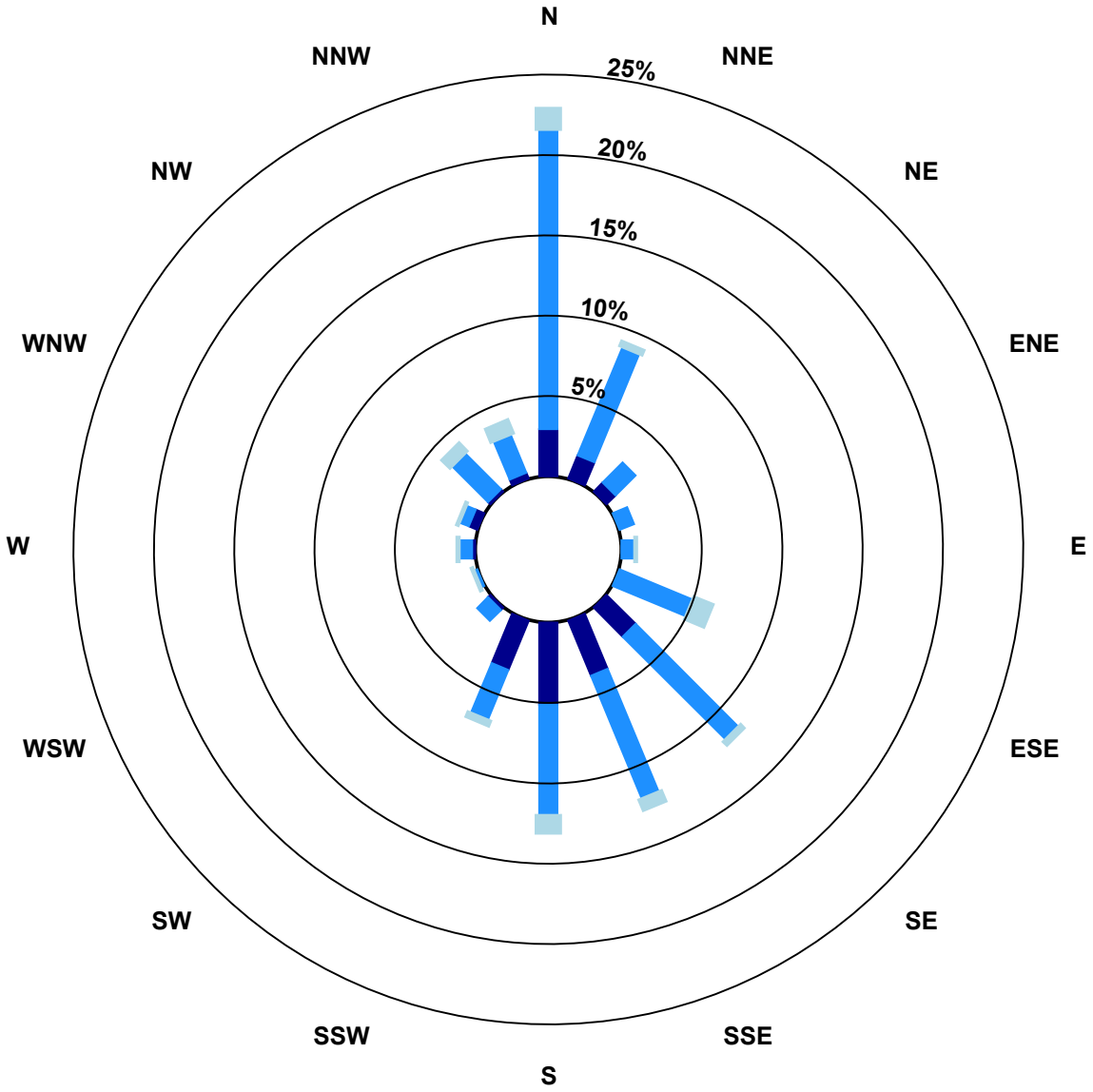
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Total Hydrocarbons (THC) - ppm

Fort Hills



Classes (ppm)

- 0 - 2.0
- 2.1 - 3.0
- 3.1 - 10.0
- > 10.0

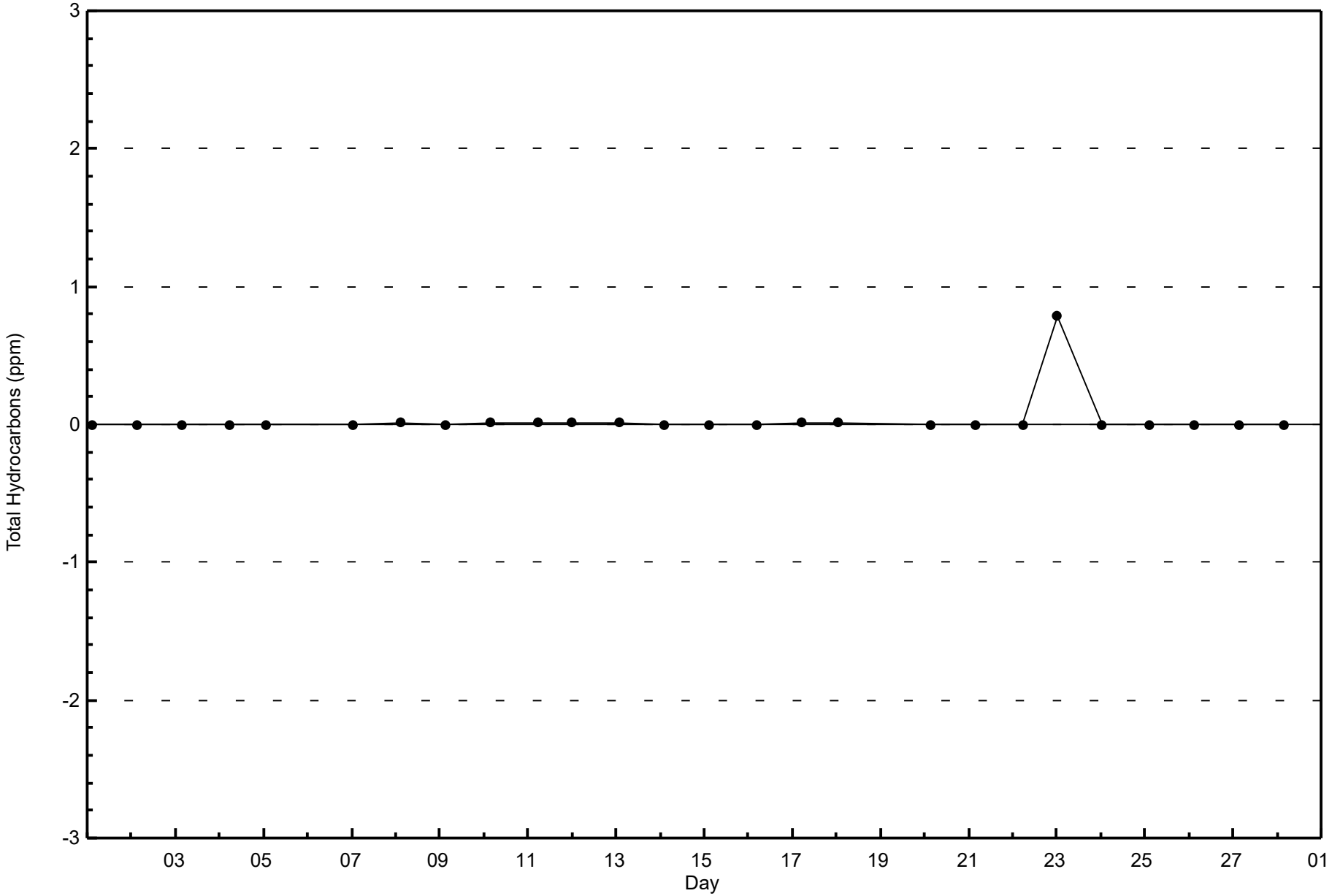
Total Number of Valid Hours: 510

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Fort Hills - February 2025

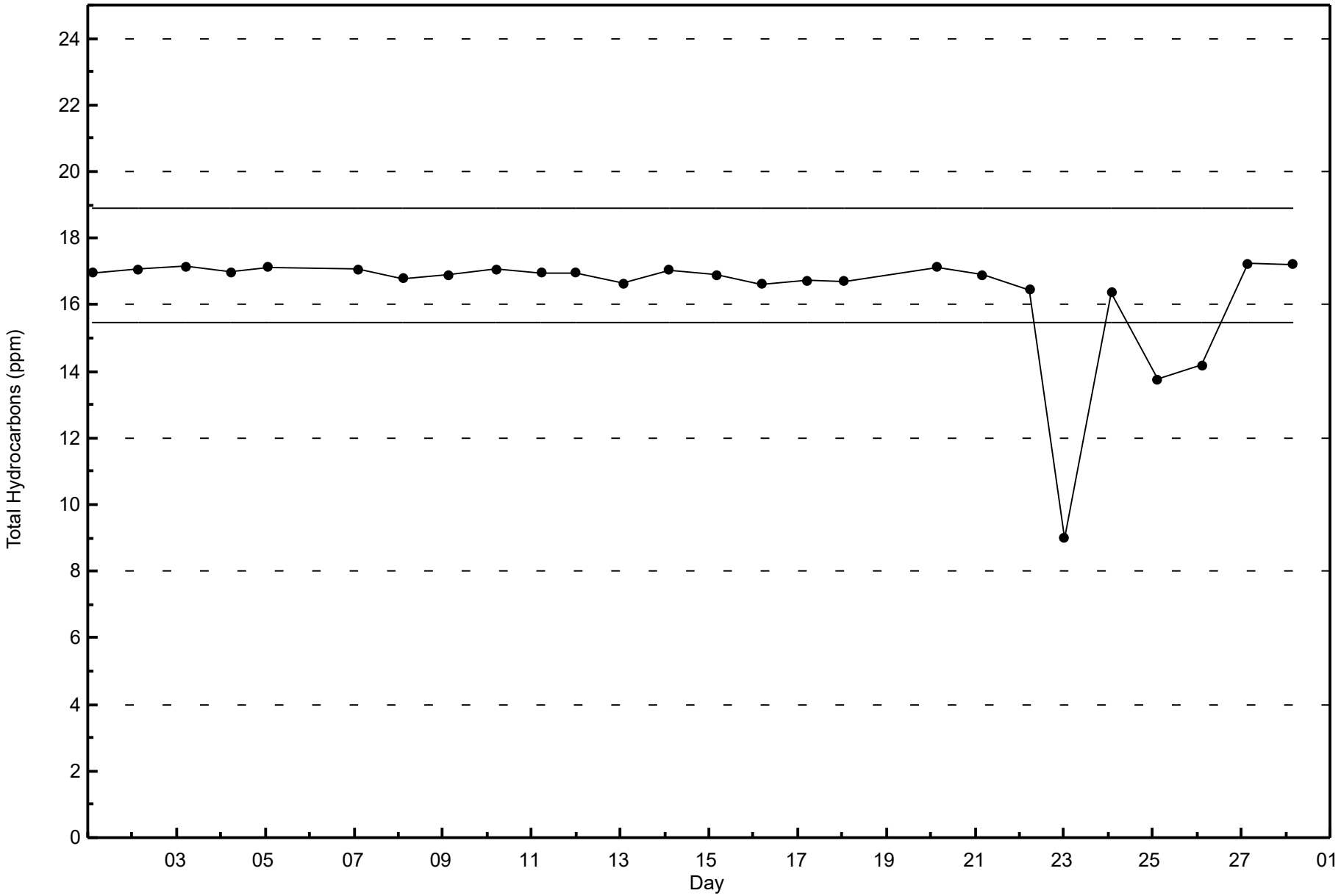


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Fort Hills - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Fort Hills - February 2025

Maximum Value: 0.892 ppm on Feb 28 17:00

Maximum Daily Average: 0.224 ppm on Feb 28

Minimum Value: 0.000 ppm on Feb 1 01:00

Minimum Daily Average: 0.000 ppm on Feb 1

Maximum Diurnal Average: 0.084 ppm at hour 17

Minimum Diurnal Average: 0.015 ppm at hour 1

Monthly Average: 0.043 ppm

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

Hours in Service:	672
Hours of Data:	525
Hours of Missing Data:	147
Hours of Calibration:	30
Percent Operational Time:	82.6

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-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.053	0.002	0.000	0.005	0.004	0.000	0.000	0.000	0.003	0.053
3-Feb	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.031	0.000	0.000	0.000	0.000	0.000	0.027	0.000	0.000	0.000	0.002	0.003	0.031
4-Feb	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5-Feb	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.010	0.000	0.000	0.000	0.058	0.017	0.004	0.058
7-Feb	0.043	Z	0.000	0.000	0.000	0.000	0.000	0.025	0.007	0.004	0.048	0.000	0.000	0.000	0.000	0.000	0.010	0.000	0.008	0.061	0.016	0.059	0.115	0.009	0.018	0.115
8-Feb	0.008	0.000	Z	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.009	0.091	0.188	0.221	0.292	0.220	0.120	0.014	0.000	0.000	0.000	0.000	0.051	0.292
9-Feb	0.000	0.000	0.000	Z	0.018	0.007	0.000	0.034	0.000	0.000	0.000	0.000	0.000	0.007	0.004	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.025	0.000	0.004	0.034
10-Feb	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	0.028	0.155	0.133	0.115	0.118	0.140	0.059	0.087	0.000	0.014	0.037	0.155
11-Feb	0.002	0.045	0.128	0.000	0.000	Z	0.000	0.000	0.000	0.079	0.067	0.000	0.107	0.020	0.000	0.000	0.045	0.154	0.168	0.135	0.007	0.029	0.000	0.000	0.043	0.168
12-Feb	Z	0.000	0.000	0.000	0.000	0.007	0.093	0.090	0.100	0.055	0.234	0.341	0.232	0.120	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.055	0.341
13-Feb	0.002	Z	0.000	0.000	0.004	0.013	0.007	0.000	0.000	0.022	0.005	0.013	0.005	0.000	0.011	0.003	0.000	0.000	0.035	0.025	0.021	0.000	0.000	0.000	0.007	0.035
14-Feb	0.000	0.000	Z	0.023	0.044	0.030	0.012	0.000	0.016	0.033	0.262	0.228	0.262	0.196	0.011	0.006	0.079	0.069	0.052	0.007	0.048	0.023	0.008	0.008	0.062	0.262
15-Feb	0.091	0.211	0.172	Z	0.017	0.004	0.000	0.000	0.000	0.000	0.000	0.002	0.062	0.268	0.172	0.010	0.000	0.001	0.019	0.000	0.000	0.000	0.000	0.000	0.045	0.268
16-Feb	0.004	0.013	0.002	0.000	Z	0.201	0.113	0.000	0.000	0.022	0.135	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.022	0.201
17-Feb	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	UO	0.000	0.000	UO	0.000	0.000	UO	DF	0.000	0.002	0.000	UO	UO	UO	0.000	--	0.002
18-Feb	0.000	Z	0.000	0.000	0.000	0.000	0.000	C	C	C	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	0.000
19-Feb	M	M	M	M	M	M	M	M	M	M	C	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	--	0.000
20-Feb	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	M	0.000	0.000	0.000	0.000	0.000	0.000	0.282	0.170	0.101	0.218	0.277	0.266	0.258	0.195	0.080	0.282
21-Feb	0.200	0.195	0.211	0.229	Z	0.264	0.312	0.350	0.319	0.189	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.023	0.000	0.000	0.000	0.000	0.000	0.100	0.350
22-Feb	0.000	0.000	0.000	0.000	0.000	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	0.000
23-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.000	0.000	0.000	--	0.026
24-Feb	0.000	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	0.000
25-Feb	UO	UO	UO	UO	UO	UO	UO	UO	M	M	C	C	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
26-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	0.000	0.033	0.417	0.166	0.007	0.319	0.229	0.323	0.217	0.077	0.205	0.000	--	0.417
27-Feb	0.000	0.000	0.012	Z	0.379	0.166	0.282	0.278	0.387	0.634	0.188	0.092	0.093	0.088	0.000	0.024	0.128	0.079	0.098	0.007	0.059	0.000	0.074	0.064	0.136	0.634
28-Feb	0.000	0.000	0.000	0.085	Z	0.000	0.000	0.006	0.000	0.100	0.264	0.295	0.229	0.095	0.060	0.294	0.892	0.658	0.695	0.799	0.380	0.184	0.003	0.119	0.224	0.892
	0.015	0.024	0.026	0.019	0.026	0.036	0.037	0.037	0.040	0.060	0.057	0.045	0.043	0.040	0.037	0.038	0.084	0.075	0.070	0.073	0.048	0.032	0.032	0.018	Diurnal Average	
	0.200	0.211	0.211	0.229	0.379	0.264	0.312	0.350	0.387	0.634	0.264	0.341	0.262	0.268	0.417	0.294	0.892	0.658	0.695	0.799	0.380	0.266	0.258	0.195	Diurnal Maximum	

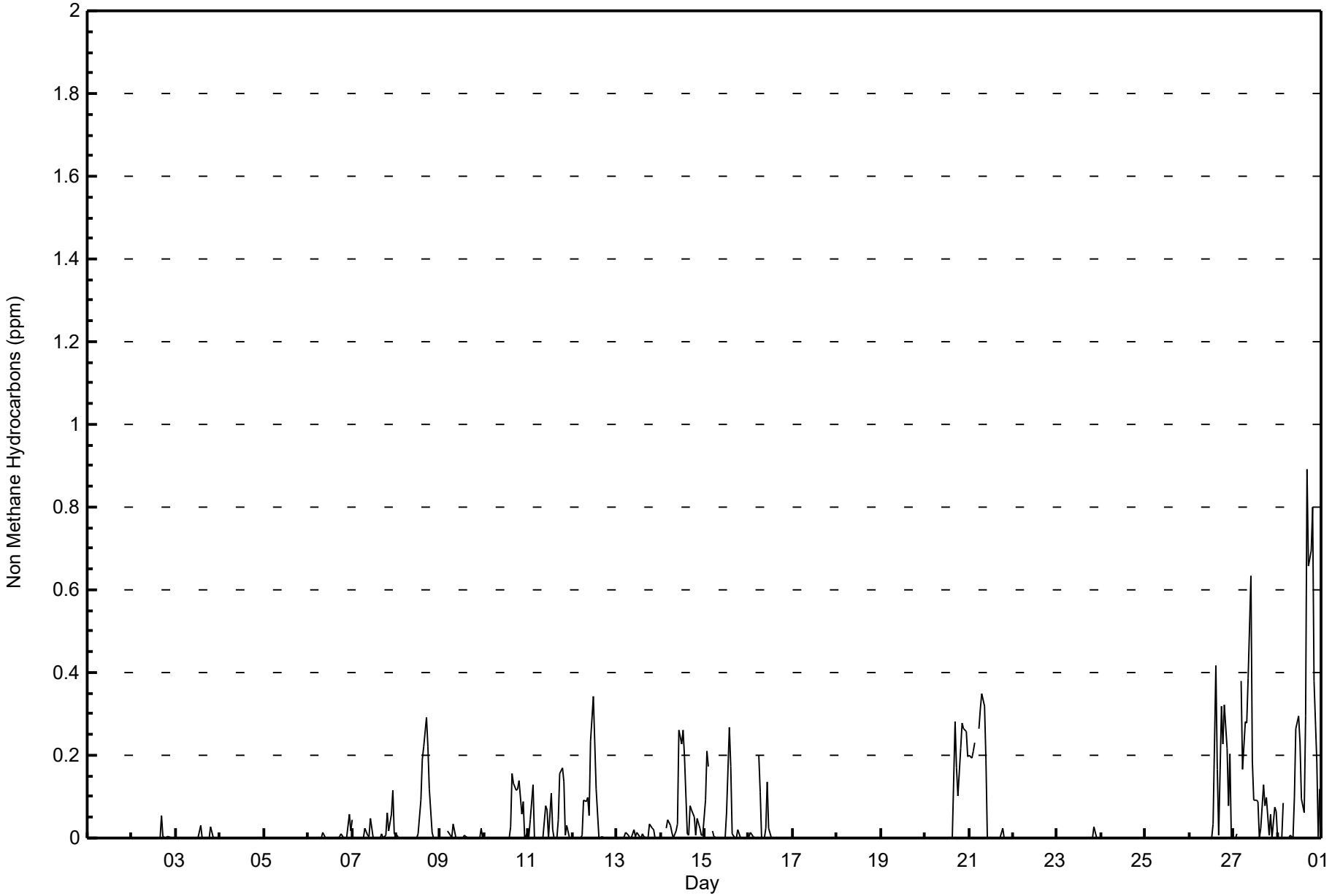
Z - zerospan C - Calibration M - Maintenance DF - DAS Failure UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Fort Hills - February 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Fort Hills - February 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	356	67.81	67.81
0.006 - 0.05	66	12.57	80.38
0.06 - 0.1	44	8.38	88.76
> 0.1	59	11.24	100.00

Total Number of Valid Hours: 525

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Fort Hills - February 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	86	20	7	4	0	12	46	55	53	27	4	1	2	3	9	13	342
0.006 - 0.05	11	10	2	0	1	7	3	2	8	4	1	0	3	3	8	2	65
0.06 - 0.1	9	10	2	0	2	3	5	5	2	3	0	0	0	0	1	2	44
> 0.1	11	7	2	1	2	10	7	3	4	2	1	1	1	1	3	3	59
Totals	117	47	13	5	5	32	61	65	67	36	6	2	6	7	21	20	510

Total Number of Valid Hours: 510

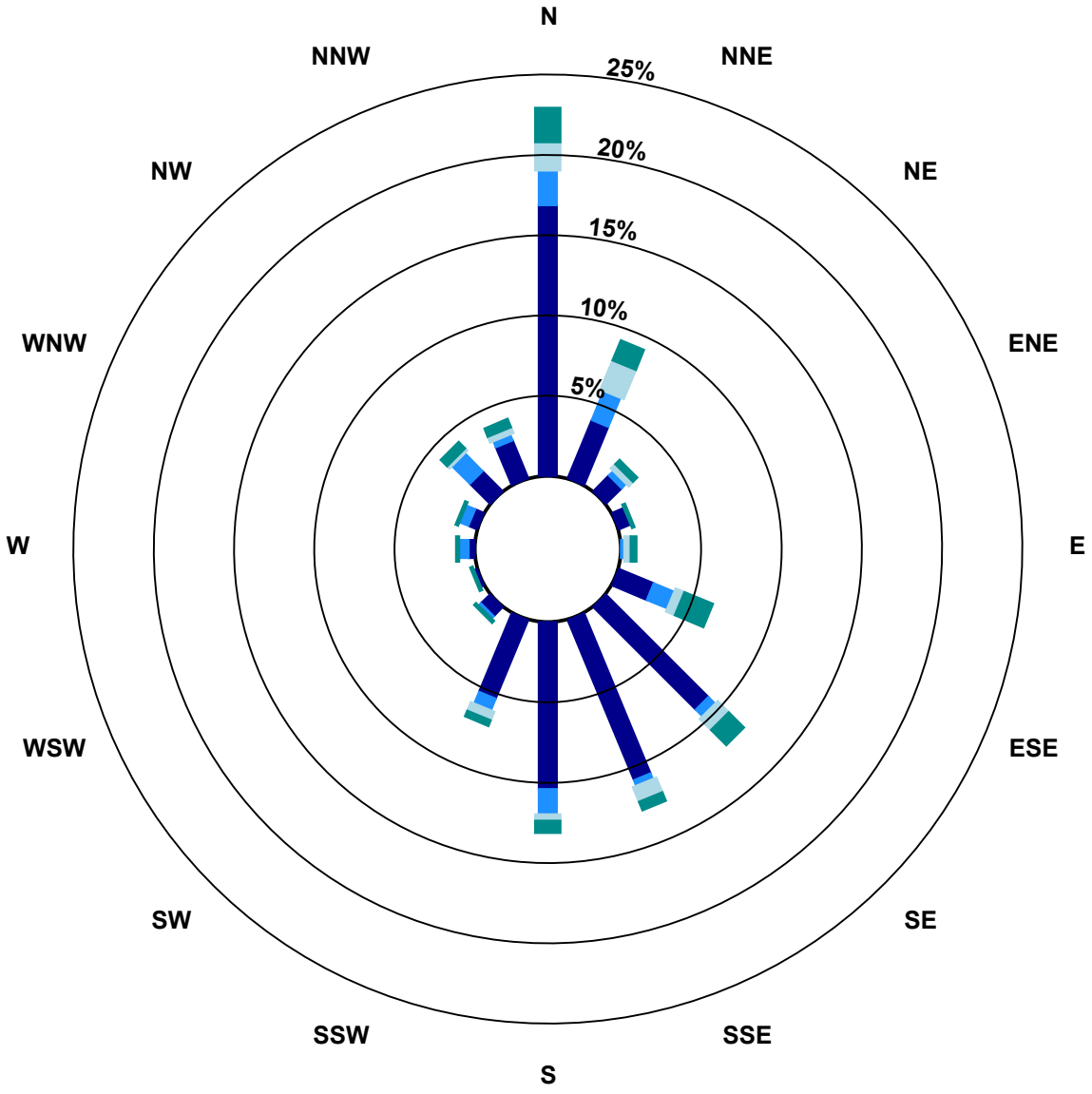
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Non Methane Hydrocarbons (NMHC) - ppm

Fort Hills



Classes (ppm)

0 - 0.005

0.006 - 0.05

0.06 - 0.1

> 0.1

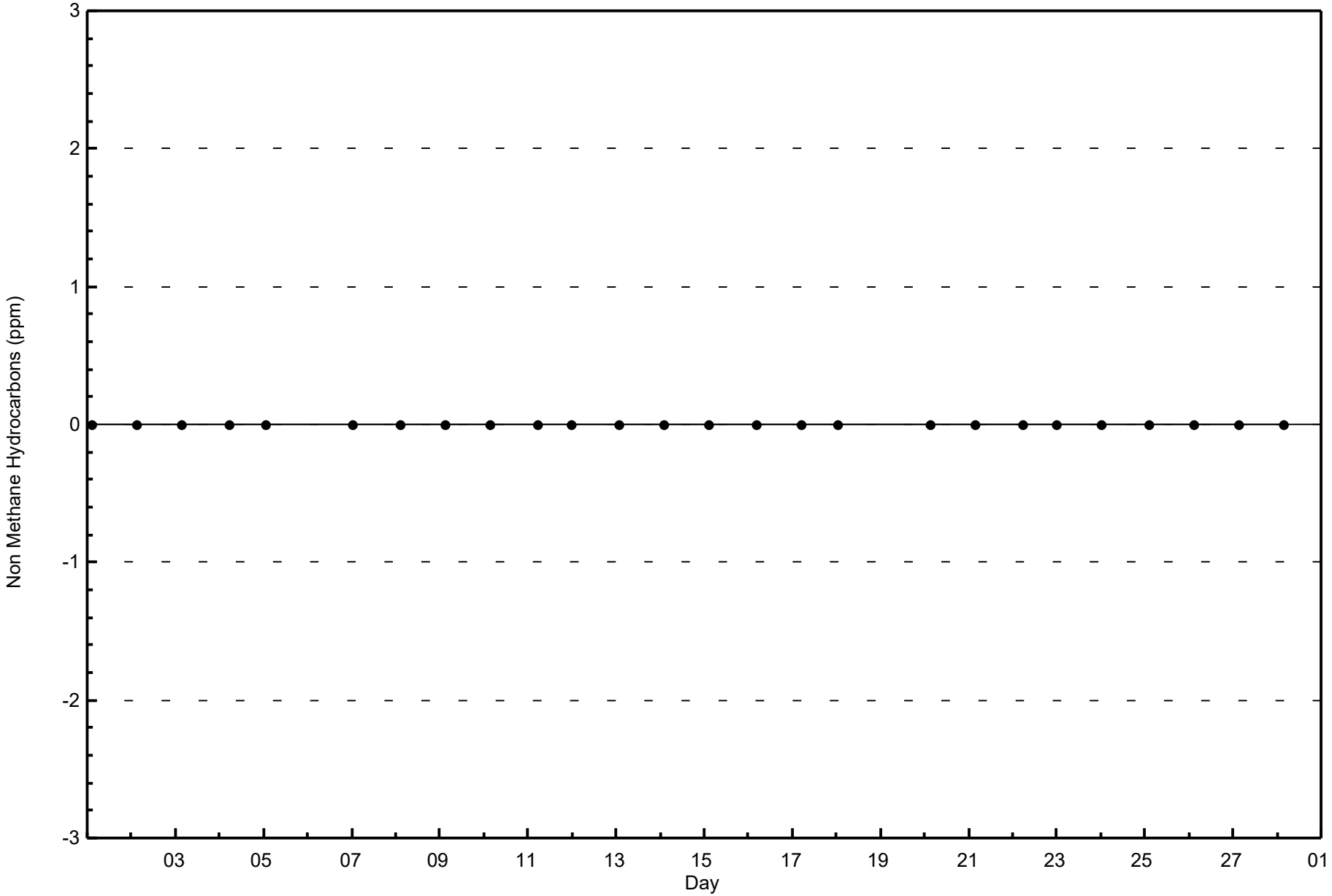
Total Number of Valid Hours: 510

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Fort Hills - February 2025

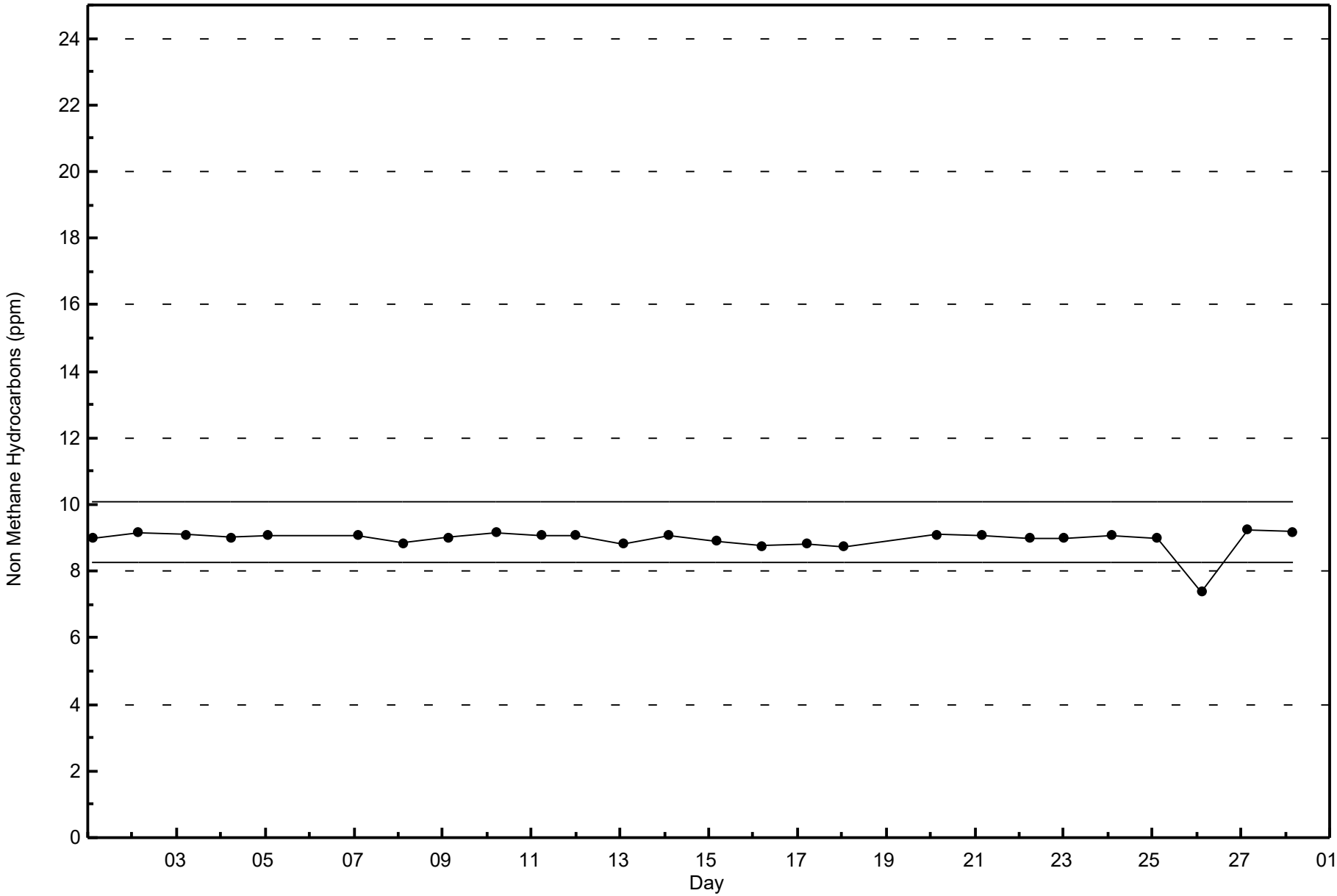


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Fort Hills - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Fort Hills - February 2025

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

Maximum Value: 4.9 ppm on Feb 27 10:00

Maximum Daily Average: 2.7 ppm on Feb 21

Minimum Value: 1.9 ppm on Feb 23 23:00

Minimum Daily Average: 2.0 ppm on Feb 5

Maximum Diurnal Average: 2.5 ppm at hour 10

Minimum Diurnal Average: 2.1 ppm at hour 15

Monthly Average: 2.30 ppm

Percentiles: P_1 = 2.0 P_{10} = 2.0 Q_1 = 2.1 Median = 2.1 Q_3 = 2.4 P_{90} = 2.8 P_{99} = 3.9

Hours in Service:	672
Hours of Data:	525
Hours of Missing Data:	147
Hours of Calibration:	30
Percent Operational Time:	82.6

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-Feb	2.1	2.0	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1
2-Feb	2.0	2.0	2.1	Z	2.1	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	2.1	2.0	2.1	2.1	2.1	2.2
3-Feb	2.1	2.1	2.1	2.2	Z	3.0	2.8	2.3	2.2	2.1	2.2	2.1	2.4	2.3	2.3	2.3	2.2	2.0	2.0	2.5	2.4	2.1	2.3	2.7	2.3	3.0
4-Feb	2.7	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	2.7
5-Feb	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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
6-Feb	2.5	2.3	2.6	2.1	2.1	2.2	2.3	2.4	2.4	2.1	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.9	2.9	2.2	2.9
7-Feb	3.1	Z	2.1	2.3	2.6	2.3	2.3	3.6	3.3	3.2	3.1	2.0	2.0	2.0	2.2	2.2	2.4	2.6	2.6	2.6	2.4	2.6	3.2	2.7	2.6	3.6
8-Feb	2.4	2.0	Z	2.0	2.0	2.0	2.1	2.2	2.3	2.2	2.2	2.3	2.4	2.4	2.4	2.4	2.8	3.0	2.4	2.1	2.1	2.1	2.2	2.1	2.3	3.0
9-Feb	2.1	2.1	2.2	Z	2.1	2.1	2.0	2.2	2.3	2.4	2.7	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.6	2.3	2.2	2.7
10-Feb	2.1	2.1	2.0	2.0	Z	2.0	2.1	2.5	2.1	2.2	2.0	2.0	2.0	2.1	2.1	2.3	2.2	2.3	2.3	2.9	2.6	2.7	2.2	2.3	2.2	2.9
11-Feb	2.4	3.0	3.5	2.4	2.3	Z	2.2	2.3	2.3	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.3	2.4	2.5	2.5	2.2	2.2	2.1	2.2	2.3	3.5
12-Feb	Z	2.2	2.2	2.2	2.2	2.2	2.4	2.5	2.7	3.0	3.4	3.3	3.2	2.5	2.0	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.4	3.4
13-Feb	2.2	Z	2.1	2.1	2.3	2.6	2.5	2.5	2.7	2.9	2.7	2.6	2.3	2.2	2.1	2.1	2.1	2.0	2.1	2.2	2.9	2.1	2.0	2.1	2.3	2.9
14-Feb	2.2	2.4	Z	2.4	3.2	3.1	2.4	2.2	2.3	2.7	4.0	3.3	2.8	2.9	2.4	2.4	2.6	2.3	2.4	2.3	2.4	2.4	2.4	2.4	2.6	4.0
15-Feb	2.6	2.7	2.5	Z	2.4	2.3	2.2	2.2	2.2	2.3	2.4	2.5	2.6	3.3	2.7	2.3	2.2	2.2	2.3	2.0	2.0	2.0	2.3	2.5	2.4	3.3
16-Feb	3.0	3.1	3.3	2.9	Z	4.1	3.1	2.1	2.2	2.1	2.2	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.2	2.4	2.2	2.2	2.1	2.0	2.4	4.1
17-Feb	2.1	2.0	2.0	2.0	2.1	Z	2.0	2.1	2.2	UO	2.0	2.0	UO	2.0	2.0	UO	DF	2.1	2.4	2.6	UO	UO	UO	2.0	--	2.6
18-Feb	2.1	Z	3.1	2.2	2.0	2.1	2.1	C	C	C	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	3.1
19-Feb	M	M	M	M	M	M	M	M	M	M	C	C	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.4	2.1	2.0	2.1	2.1	--	2.4
20-Feb	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	M	2.1	2.1	2.1	2.1	2.2	2.4	2.5	2.9	2.6	2.7	3.5	3.8	3.3	2.9	2.4	3.8
21-Feb	2.7	2.8	2.9	2.8	Z	3.2	3.9	4.5	4.5	3.3	2.6	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.3	2.0	2.6	2.7	4.5
22-Feb	2.4	2.2	2.1	2.7	2.1	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	2.7
23-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	2.1	2.1	2.1	2.2	2.1	2.1	2.0	2.1	2.1	2.1	2.0	1.9	2.0	--	2.2
24-Feb	2.0	Z	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	2.0
25-Feb	UO	UO	UO	UO	UO	UO	UO	UO	M	M	C	C	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--	--
26-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	M	2.1	2.1	2.3	2.2	2.1	2.3	2.2	2.3	2.2	2.4	2.6	2.3	--	2.6
27-Feb	2.4	2.3	2.8	Z	2.6	3.0	3.2	2.7	3.3	4.9	2.3	2.4	2.4	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.5	4.9
28-Feb	2.1	2.2	2.3	2.5	Z	2.1	2.1	2.3	2.3	2.3	2.4	2.5	2.2	2.2	2.2	2.3	2.6	2.7	2.8	2.8	2.3	2.3	2.3	2.3	2.3	2.8
	2.3	2.3	2.4	2.3	2.2	2.5	2.4	2.4	2.4	2.5	2.4	2.3	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	Diurnal Average	
	3.1	3.1	3.5	2.9	3.2	4.1	3.9	4.5	4.5	4.9	4.0	3.3	3.2	3.3	2.7	2.4	2.8	3.0	2.8	2.9	3.5	3.8	3.3	2.9	Diurnal Maximum	

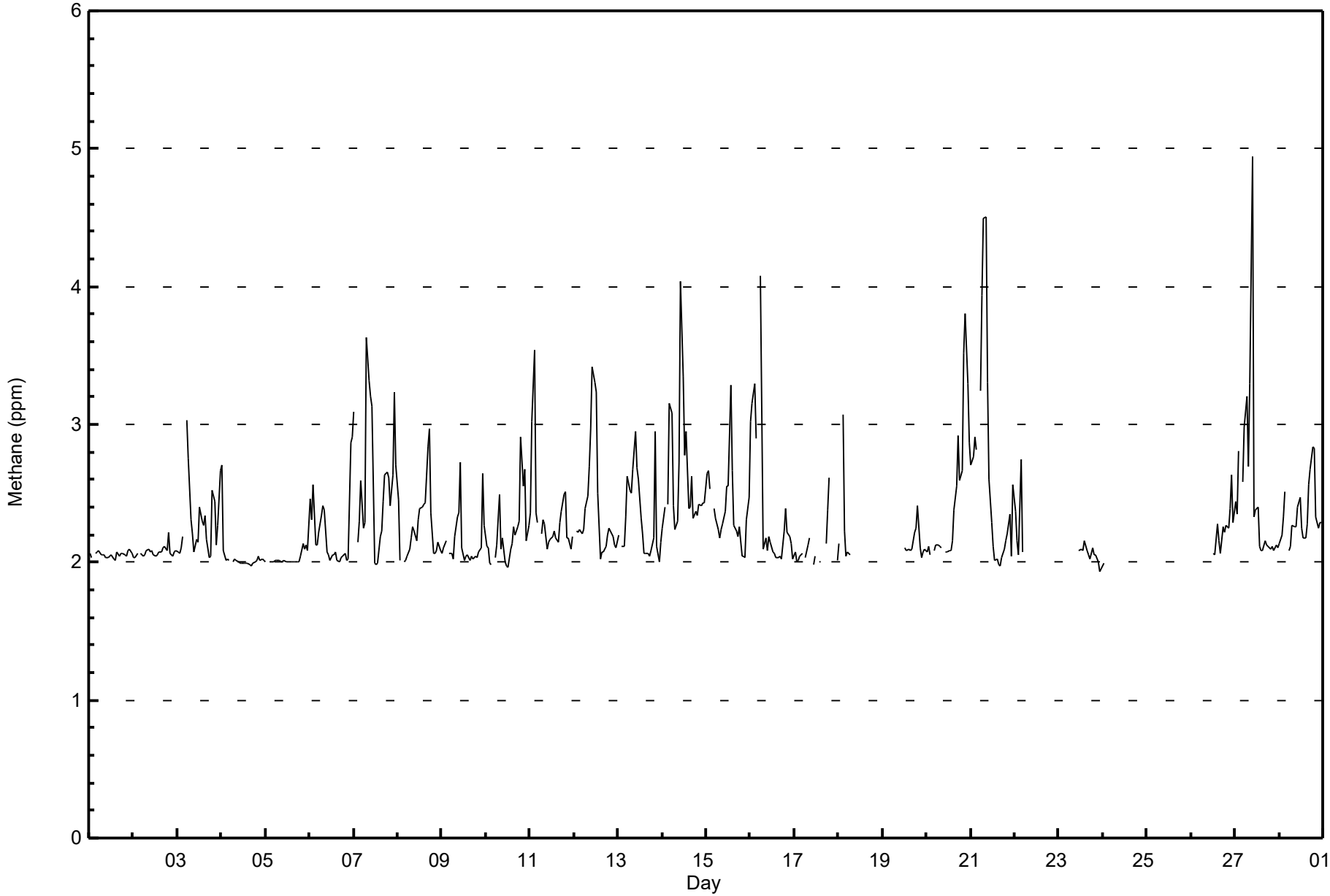
Z - zerospan C - Calibration M - Maintenance DF - DAS Failure UO - Unstable Operation

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Fort Hills - February 2025



Methane (CH_4) - ppm
Fort Hills - February 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	116	22.10	22.10
2.1 - 3.0	378	72.00	94.10
3.1 - 10.0	31	5.90	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 525

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Fort Hills - February 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	9	4	0	0	0	13	19	26	17	1	0	1	3	1	2	111
2.1 - 3.0	98	37	9	5	5	27	47	43	36	17	5	2	4	4	16	13	368
3.1 - 10.0	4	1	0	0	0	5	1	3	5	2	0	0	1	0	4	5	31
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	117	47	13	5	5	32	61	65	67	36	6	2	6	7	21	20	510

Total Number of Valid Hours: 510

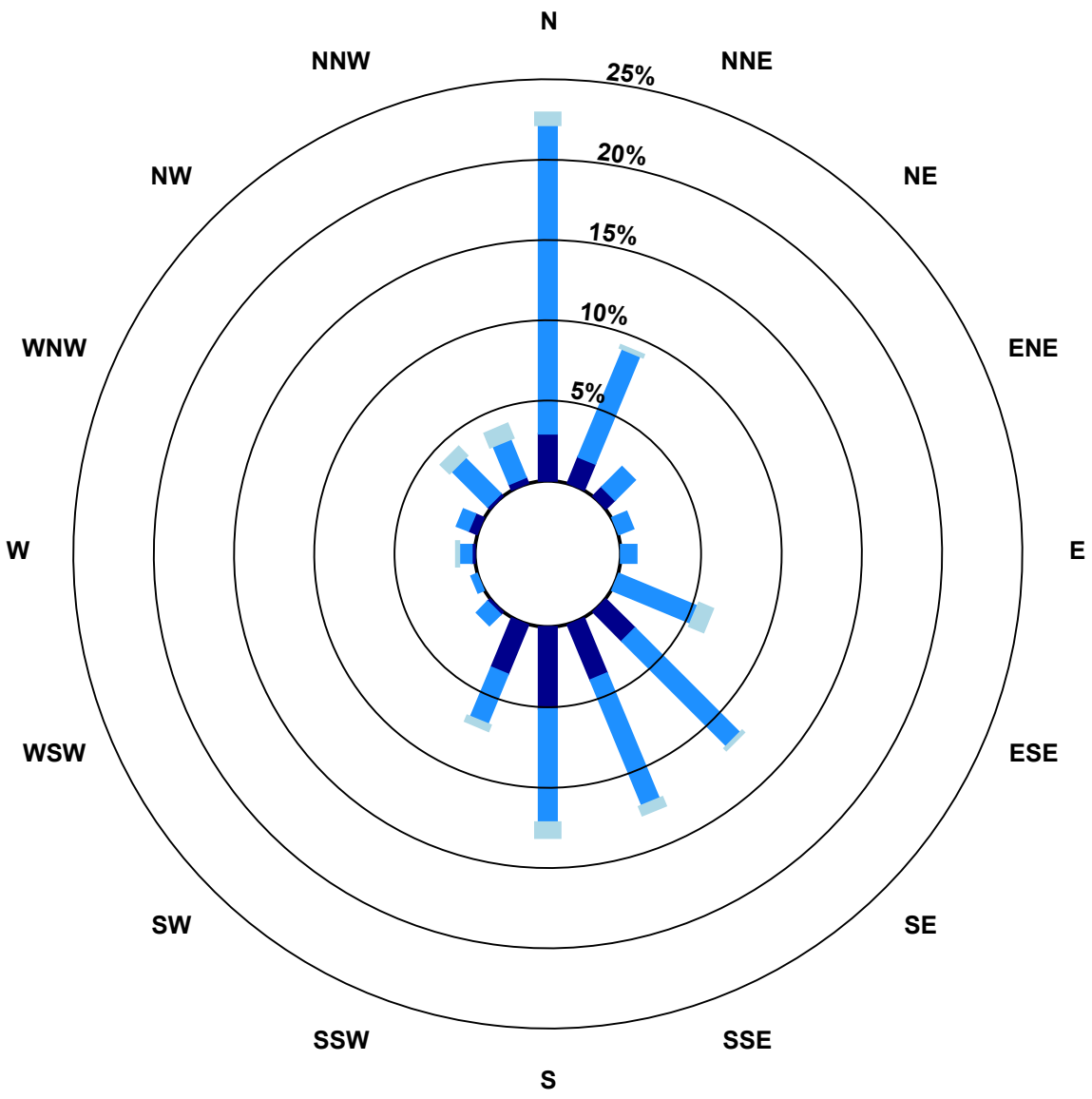
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Methane (CH_4) - ppm

Fort Hills



Classes (ppm)

- 0 - 2.0
- 2.1 - 3.0
- 3.1 - 10.0
- > 10.0

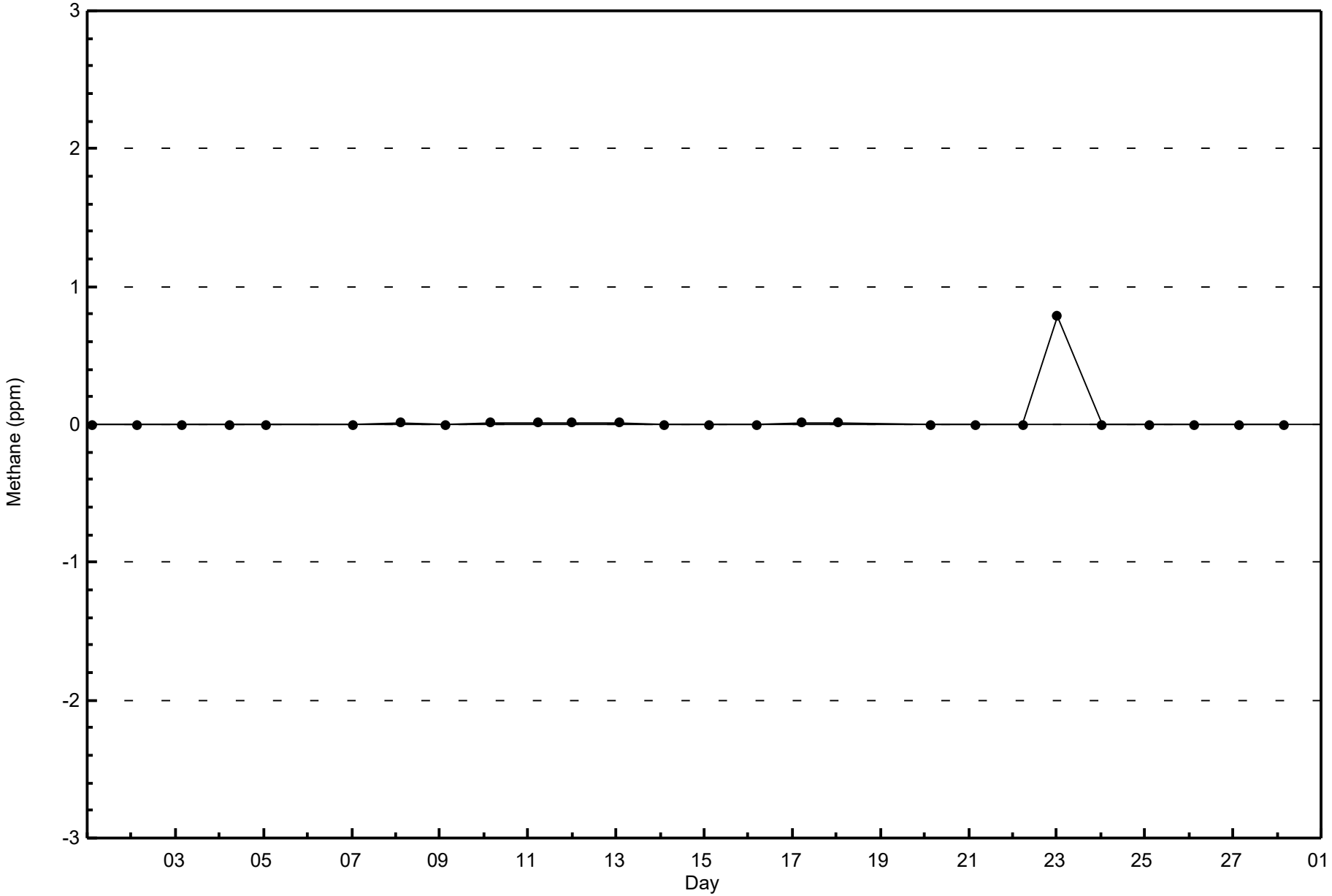
Total Number of Valid Hours: 510

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Fort Hills - February 2025

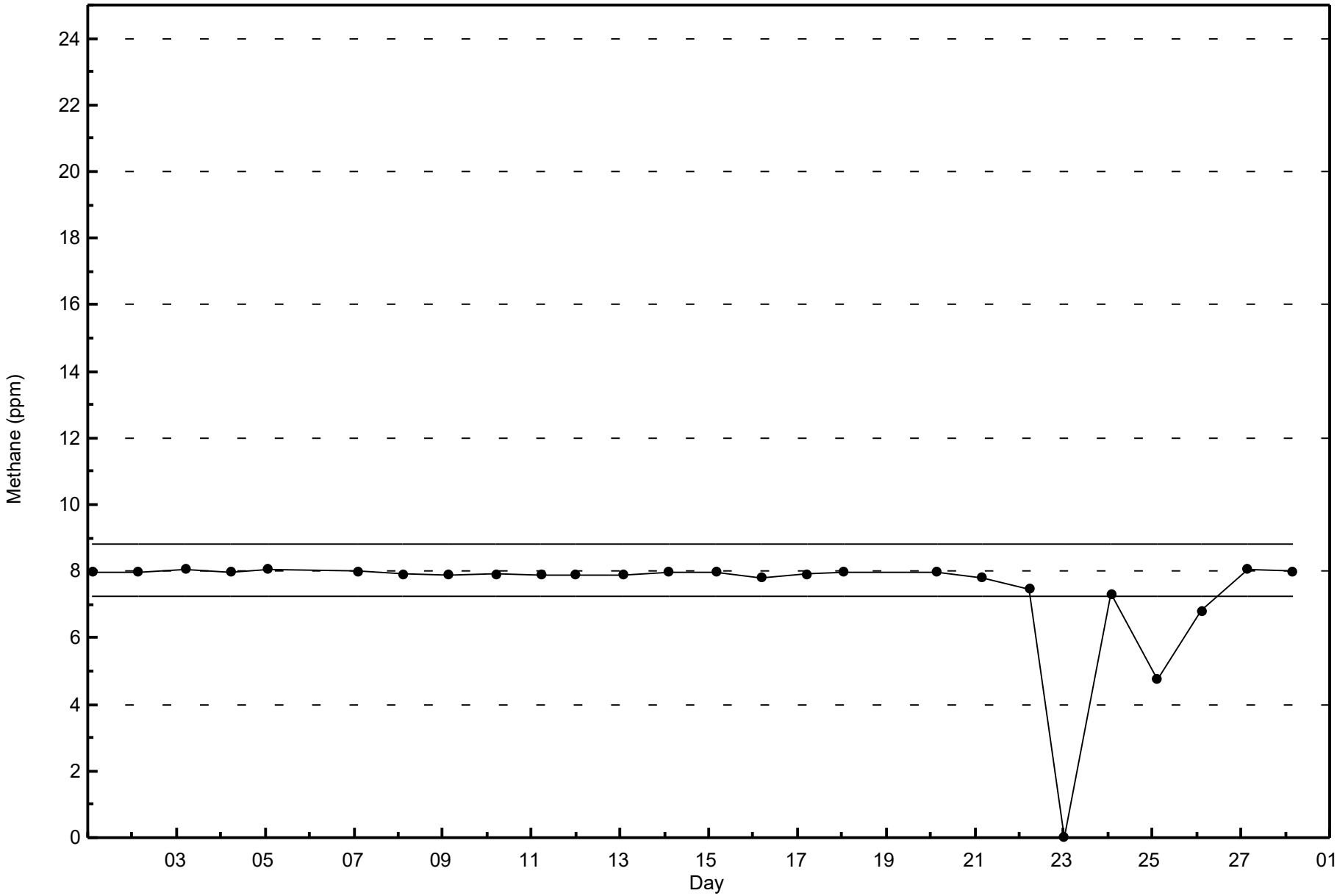


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Fort Hills - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Fort Hills - February 2025

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

Maximum Value: 249.5 ppb on Feb 21 09:00

Maximum Daily Average: 51.1 ppb on Feb 14

Minimum Value: 0.0 ppb on Feb 4 18:00

Minimum Daily Average: 0.1 ppb on Feb 5

Maximum Diurnal Average: 24.3 ppb at hour 6

Minimum Diurnal Average: 8.7 ppb at hour 3

Monthly Average: 16.59 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 1.1 Median = 4.7 Q_3 = 20.0 P_{90} = 48.6 P_{99} = 135.7

Hours in Service:	672
Hours of Data:	637
Hours of Missing Data:	35
Hours of Calibration:	32
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-Feb	Z	1.5	1.3	1.3	1.2	0.9	0.9	1.4	1.3	2.0	3.4	4.0	3.0	2.1	1.3	2.6	3.2	2.4	2.8	3.6	4.2	3.7	2.7	2.6	2.3	4.2
2-Feb	1.4	Z	2.7	2.4	2.9	2.0	1.7	1.8	2.0	2.6	4.8	4.7	4.8	6.0	5.3	7.1	4.7	3.4	3.5	15.5	0.9	0.5	0.1	0.1	3.5	15.5
3-Feb	0.1	3.4	Z	1.9	4.9	20.2	14.7	0.6	2.1	10.1	10.9	10.9	29.8	25.8	25.1	17.8	9.3	0.4	0.1	5.3	6.4	1.1	0.6	5.4	9.0	29.8
4-Feb	3.9	1.2	1.0	Z	3.5	0.2	0.0	0.8	1.8	1.6	0.8	0.4	0.3	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	3.9
5-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.2	0.4	0.3	0.3	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.4
6-Feb	0.4	0.1	0.8	0.0	0.1	0.1	0.4	3.9	23.3	2.8	1.8	1.1	3.9	4.7	5.0	0.7	0.4	0.2	1.7	0.7	0.0	0.0	18.6	8.8	3.3	23.3
7-Feb	29.1	9.7	0.0	0.3	1.6	Z	1.2	15.8	14.7	21.6	26.3	1.1	0.4	0.6	5.4	4.5	4.6	2.7	11.8	40.5	31.2	12.3	28.8	6.2	11.8	40.5
8-Feb	Z	0.0	0.0	0.1	1.1	0.0	3.6	13.0	15.4	18.0	16.1	23.2	28.3	35.8	65.8	42.6	93.6	100.9	13.0	1.5	0.9	1.1	1.5	1.1	20.7	100.9
9-Feb	1.1	Z	2.4	1.2	1.4	1.0	3.1	6.6	63.8	49.6	85.6	15.7	5.4	8.2	7.1	3.8	4.8	1.1	0.3	0.8	15.0	5.1	25.3	1.6	13.5	85.6
10-Feb	0.1	0.0	Z	0.1	0.0	1.5	4.1	4.9	3.6	7.8	1.4	0.2	0.2	7.1	8.1	10.3	26.2	37.1	38.1	51.8	46.9	77.7	33.8	26.2	16.8	77.7
11-Feb	31.7	82.2	85.8	Z	12.1	6.4	6.6	11.1	21.0	14.3	23.5	31.1	25.8	34.4	23.5	15.0	23.2	42.8	45.5	48.6	2.4	1.0	0.6	0.4	25.6	85.8
12-Feb	2.5	2.5	5.3	4.2	Z	9.2	18.4	22.4	37.7	53.3	93.7	132.3	145.8	65.8	6.0	7.0	4.9	7.6	5.6	5.0	3.7	4.1	2.5	3.4	28.0	145.8
13-Feb	9.7	14.0	22.8	41.0	48.5	Z	33.2	C	C	C	C	C	40.7	27.0	10.6	6.1	4.2	3.2	4.7	28.9	51.1	35.2	54.7	31.1	25.9	54.7
14-Feb	Z	22.6	5.6	9.3	63.2	72.7	31.6	29.9	19.5	37.4	108.2	67.0	58.2	88.4	34.1	27.1	43.9	37.0	68.6	96.8	88.4	50.4	61.2	54.0	51.1	108.2
15-Feb	69.8	Z	27.0	19.2	29.8	16.8	4.8	1.8	8.8	16.4	19.4	26.5	53.6	122.8	49.6	13.0	5.3	2.5	8.3	1.3	5.8	1.8	5.8	15.6	22.9	122.8
16-Feb	68.5	80.8	Z	62.2	146.9	169.0	57.0	1.4	4.9	10.3	23.4	20.7	13.2	16.3	10.2	5.7	4.5	0.8	0.6	2.1	0.8	0.8	0.8	0.2	30.5	169.0
17-Feb	0.1	0.0	0.0	Z	0.0	0.0	0.2	0.2	1.1	1.5	1.5	4.0	5.5	3.7	2.4	1.2	DF	1.1	15.0	37.8	25.7	3.3	0.6	0.0	4.8	37.8
18-Feb	0.1	1.2	6.3	0.2	0.1	Z	0.0	0.8	7.3	16.2	10.8	6.0	3.5	5.2	5.2	3.1	1.7	0.7	0.8	29.4	0.2	0.0	0.1	0.1	4.3	29.4
19-Feb	Z	0.1	0.7	0.2	0.1	0.0	0.0	11.5	48.6	14.2	4.7	6.5	7.1	5.2	5.2	2.8	1.9	0.4	0.0	0.0	0.0	0.0	0.0	0.0	4.7	48.6
20-Feb	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	M	0.5	0.4	0.5	0.8	2.4	6.9	27.2	21.7	21.2	31.8	129.2	137.0	105.0	57.9	24.7	137.0
21-Feb	38.3	37.9	Z	45.6	42.2	50.2	133.5	179.6	249.5	124.3	42.8	22.1	7.2	5.8	3.9	2.7	1.8	2.1	2.3	16.4	24.2	33.6	17.3	16.0	47.8	249.5
22-Feb	12.6	2.3	4.1	Z	29.6	34.7	3.8	20.0	3.8	2.7	11.4	20.6	66.5	22.0	20.0	7.5	3.1	0.8	0.0	3.9	32.9	141.9	132.2	115.1	30.1	141.9
23-Feb	33.3	2.3	0.7	0.9	Z	5.3	4.3	12.6	14.2	3.4	3.3	2.8	5.4	8.5	6.7	4.6	3.3	2.0	1.4	2.6	2.5	0.6	2.5	1.1	5.4	33.3
24-Feb	1.3	0.9	1.0	1.2	3.5	Z	9.2	47.2	30.5	30.4	27.6	49.0	11.6	13.0	17.5	10.9	2.2	1.4	10.6	42.2	13.9	6.7	2.5	1.0	14.6	49.0
25-Feb	Z	1.2	1.1	1.3	1.5	1.2	1.3	2.4	4.1	DF	4.3	6.5	19.6	16.1	3.5	10.3	10.8	3.2	1.5	5.4	2.2	1.6	0.0	4.8	4.7	19.6
26-Feb	Z	17.9	9.7	22.7	61.4	107.5	23.8	15.4	12.3	21.2	16.8	15.9	8.3	6.4	34.4	9.9	11.3	10.2	8.1	10.8	8.5	19.8	15.6	3.0	20.5	107.5
27-Feb	5.5	Z	21.0	44.4	56.0	59.2	76.6	40.1	37.0	78.6	7.7	9.4	18.4	7.2	4.5	3.7	2.7	1.8	0.8	1.4	0.5	0.4	0.1	0.2	20.7	78.6
28-Feb	0.3	0.5	Z	26.2	1.9	0.0	0.0	1.5	4.1	11.2	21.2	25.9	12.3	10.2	9.9	17.2	55.6	50.6	83.9	69.7	11.0	7.2	5.9	0.5	18.5	83.9
	14.1	12.3	8.7	11.9	19.7	24.3	15.5	16.5	23.4	22.1	21.2	18.8	20.7	19.6	13.3	8.7	13.1	12.1	12.5	19.8	18.2	19.5	18.5	12.7	Diurnal Average	
	69.8	82.2	85.8	62.2	146.9	169.0	133.5	179.6	249.5	124.3	108.2	132.3	145.8	122.8	65.8	42.6	93.6	100.9	83.9	96.8	129.2	141.9	132.2	115.1	Diurnal Maximum	

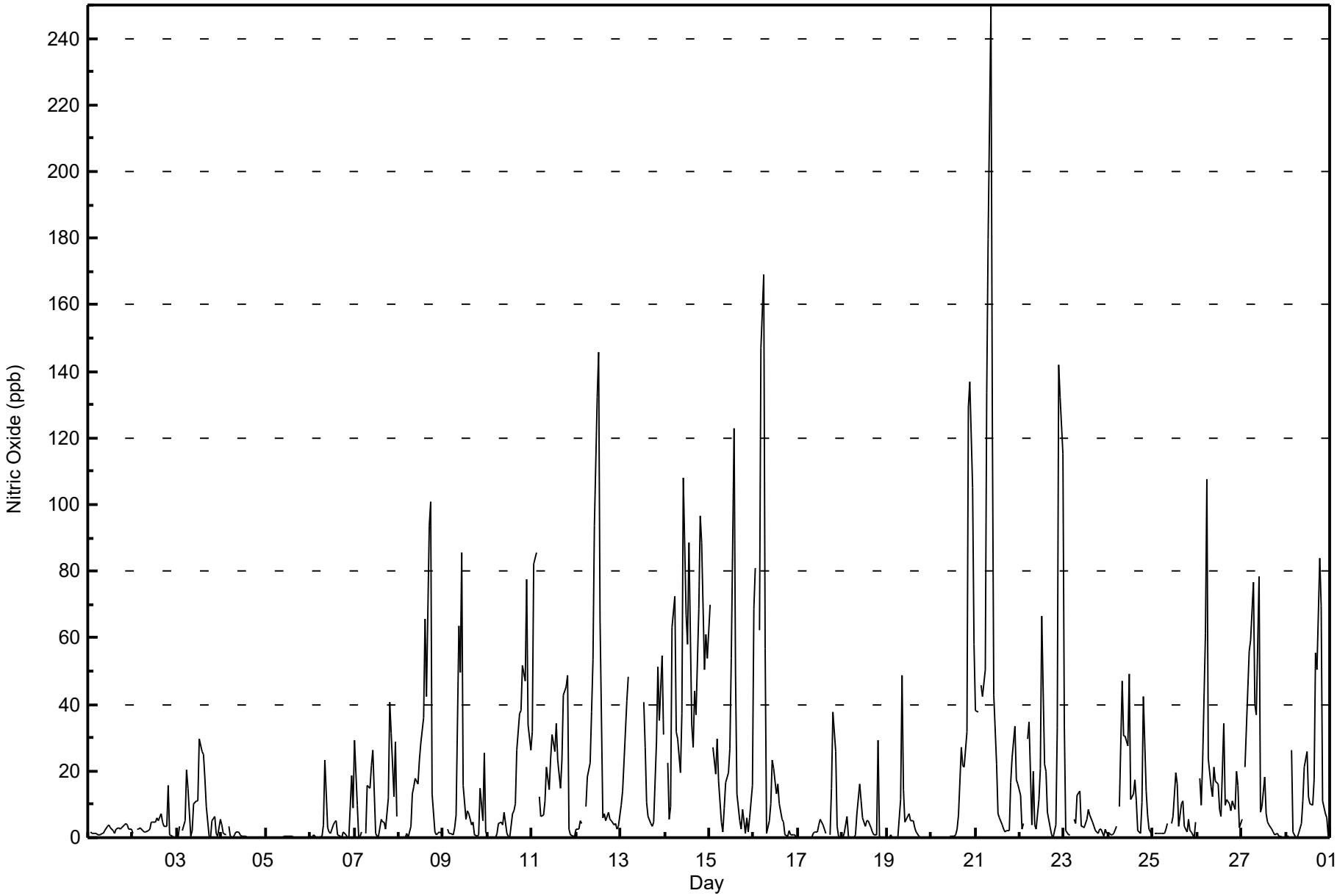
Z - zerospan C - Calibration M - Maintenance DF - DAS Failure

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Fort Hills - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	480	75.35	75.35
21 - 40	77	12.09	87.44
11 - 80	52	8.16	95.60
81 - 159	24	3.77	99.37
> 159	3	0.47	99.84

Total Number of Valid Hours: 637

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Fort Hills - February 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	86	43	13	3	1	16	59	79	75	36	6	3	4	4	12	15	455
21 - 40	16	6	2	2	0	12	14	3	6	5	1	0	0	1	2	4	74
11 - 80	16	5	2	1	4	4	1	1	4	2	0	1	2	1	4	2	50
81 - 159	8	3	0	0	0	4	4	1	0	0	0	0	0	0	2	2	24
> 159	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1	3
Totals	126	57	17	6	5	36	79	84	85	43	7	4	7	6	20	24	606

Total Number of Valid Hours: 607

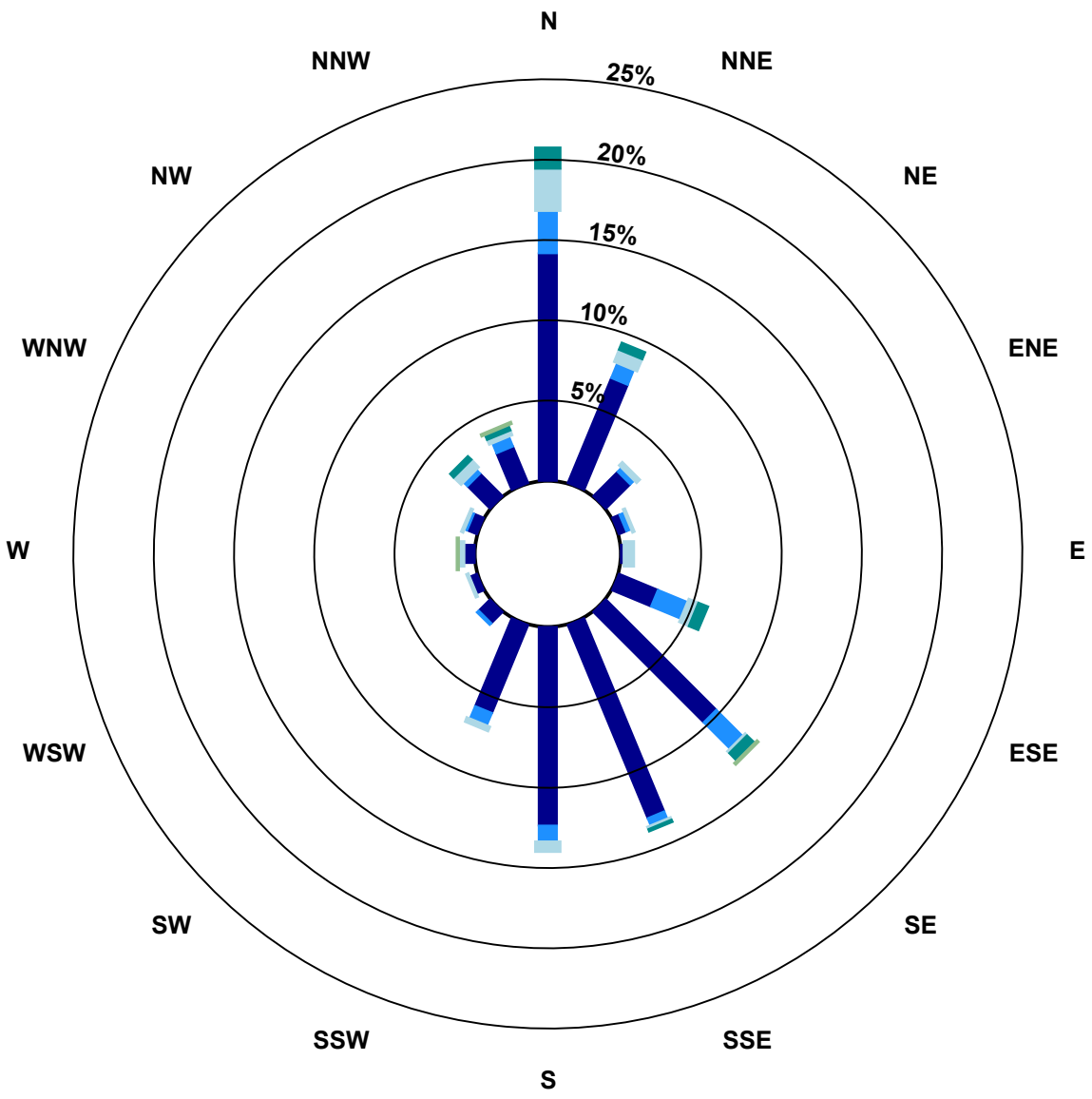
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitric Oxide (NO) - ppb

Fort Hills



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

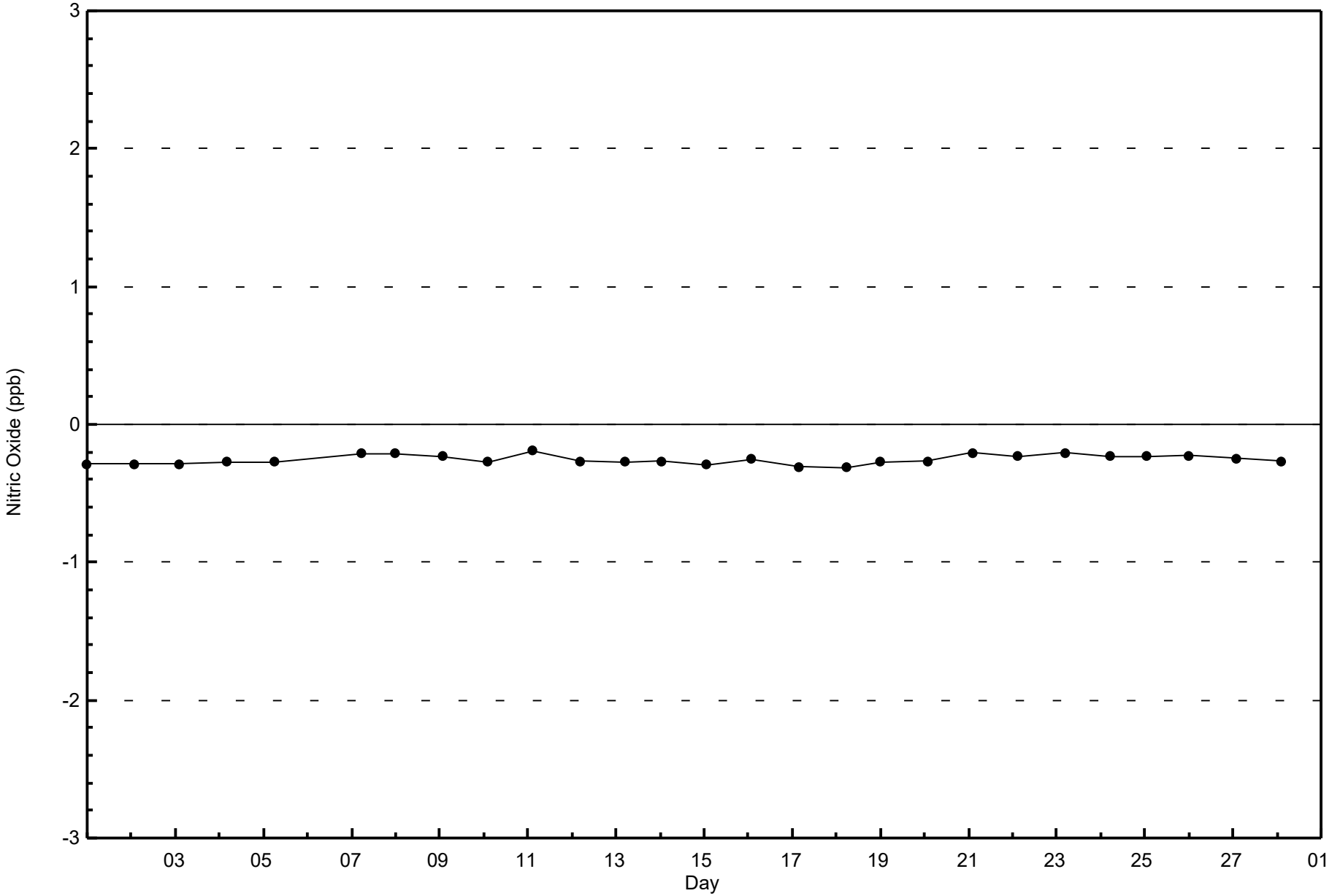
Total Number of Valid Hours: 607

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Fort Hills - February 2025

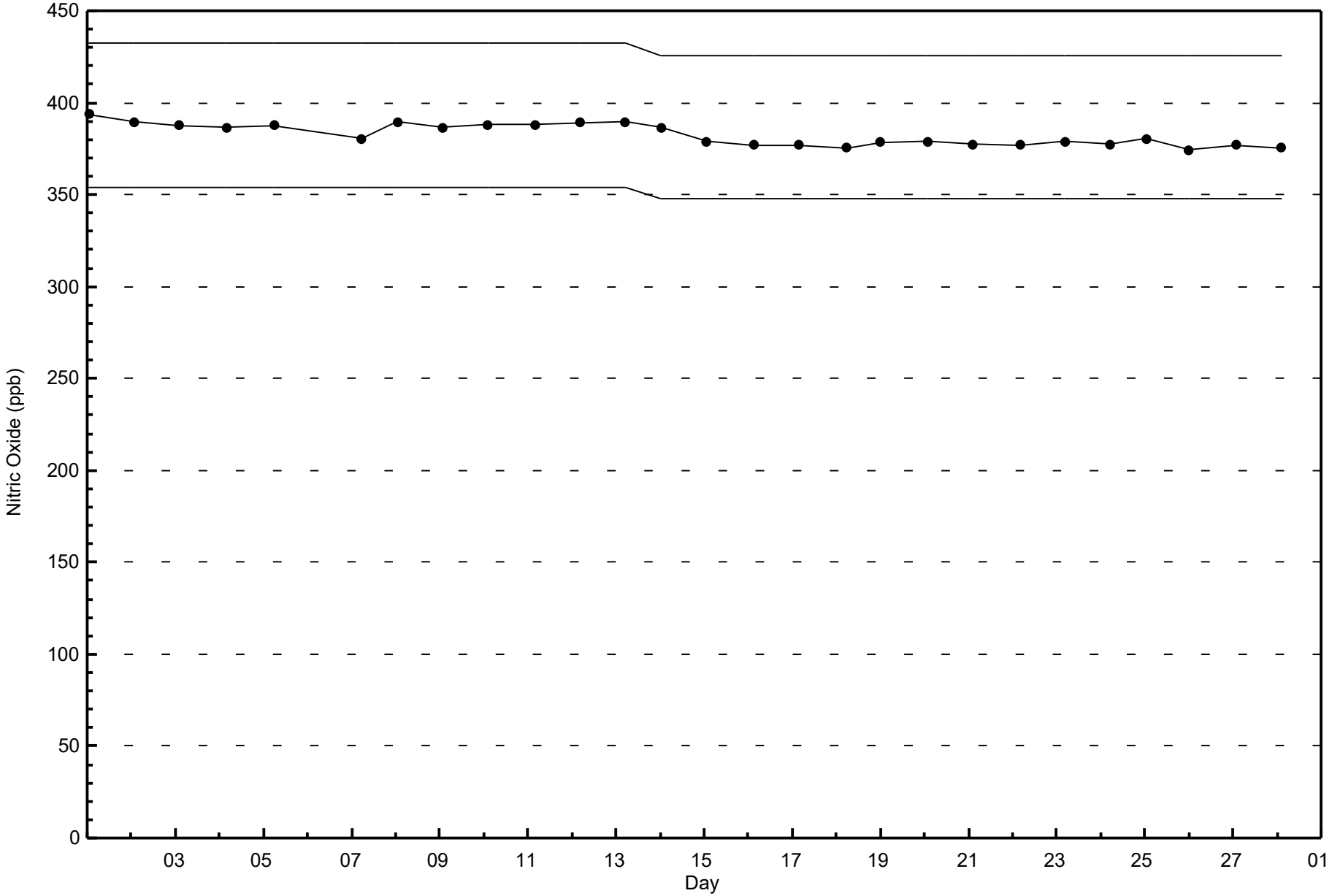


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Fort Hills - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Fort Hills - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 49.5 ppb on Feb 21 09:00 Maximum Daily Average: 29.7 ppb on Feb 11

Minimum Value: 0.6 ppb on Feb 10 13:00 Minimum Daily Average: 2.9 ppb on Feb 5
Maximum Diurnal Average: 24.7 ppb at hour 20 Minimum Diurnal Average: 12.1 ppb at hour 15
Monthly Average: 19.27 ppb Percentiles: P_1 = 0.8 P_{10} = 4.2 Q_1 = 9.9 Median = 17.4 Q_3 = 29.6 P_{90} = 35.3 P_{99} = 43.5

Hours in Service:	672
Hours of Data:	637
Hours of Missing Data:	35
Hours of Calibration:	32
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-Feb	Z	10.4	10.5	11.4	11.8	9.5	10.9	10.4	10.1	8.5	7.8	7.5	6.2	4.4	3.3	7.9	11.8	12.9	14.9	13.7	15.6	14.8	14.5	13.0	10.5	15.6
2-Feb	10.1	Z	14.7	17.1	15.4	11.1	12.1	11.9	13.1	8.2	7.9	6.6	6.4	8.3	8.3	13.0	14.8	22.6	22.3	31.4	9.9	16.4	19.4	16.8	13.8	31.4
3-Feb	15.1	24.6	Z	21.2	27.0	31.6	31.6	18.7	14.3	14.0	12.5	10.4	18.7	18.8	21.6	23.6	25.2	17.7	15.9	28.2	36.2	31.1	33.5	37.8	23.0	37.8
4-Feb	36.3	15.8	12.7	Z	16.9	10.5	5.0	9.9	8.6	4.2	1.8	0.9	0.7	0.7	0.7	0.9	0.9	1.5	1.3	1.1	3.2	1.8	2.2	1.5	6.0	36.3
5-Feb	1.3	1.0	0.9	0.8	0.9	Z	1.5	1.3	1.7	1.5	1.5	1.2	0.9	0.8	1.0	1.0	1.1	1.5	2.2	6.1	13.0	10.3	7.3	7.7	2.9	13.0
6-Feb	21.7	15.3	25.3	8.4	19.4	22.0	22.6	31.7	32.8	12.2	6.6	2.6	8.8	9.1	8.5	1.6	2.1	4.9	8.6	5.9	1.5	4.4	28.5	30.6	14.0	32.8
7-Feb	35.0	30.1	11.6	16.7	26.2	Z	25.4	35.9	31.1	25.6	17.8	1.9	0.8	1.2	8.7	11.8	20.9	24.0	31.0	39.3	36.8	34.7	37.7	31.1	23.3	39.3
8-Feb	Z	7.7	12.3	9.9	20.9	10.5	20.9	34.1	31.7	23.3	16.7	18.1	20.3	24.1	36.9	36.4	46.3	47.9	31.2	12.3	10.0	13.5	20.1	13.2	22.5	47.9
9-Feb	14.7	Z	20.7	5.5	3.4	2.9	10.8	18.8	30.8	26.5	30.4	10.7	4.5	6.8	6.8	6.0	13.0	14.9	16.5	18.1	25.5	24.6	29.5	23.1	15.8	30.8
10-Feb	11.8	7.9	Z	4.1	3.9	16.1	25.7	27.1	14.5	12.7	2.8	0.7	0.6	9.7	13.1	20.2	30.0	38.0	37.8	38.1	37.0	38.3	36.9	35.4	20.1	38.3
11-Feb	33.8	38.9	41.1	Z	35.2	32.5	28.1	31.6	34.1	24.6	24.3	24.3	20.1	24.4	22.6	21.6	31.5	38.6	37.7	38.5	28.3	23.3	18.4	29.4	29.7	41.1
12-Feb	33.6	33.3	33.4	33.0	Z	30.7	32.3	31.6	30.4	29.0	33.9	39.1	39.9	28.3	10.1	14.0	16.6	26.5	27.3	28.6	27.1	26.6	21.6	24.7	28.3	39.9
13-Feb	31.5	32.2	36.8	38.0	38.7	Z	35.9	C	C	C	C	C	21.1	17.4	9.9	8.7	10.3	14.6	20.9	28.9	34.9	32.0	33.4	32.3	26.5	38.7
14-Feb	Z	25.7	20.5	24.8	36.4	36.9	29.4	29.8	23.7	22.3	35.6	26.9	25.6	32.2	19.9	20.3	28.9	32.2	34.7	37.5	36.3	33.4	35.8	33.6	29.7	37.5
15-Feb	34.5	Z	30.3	30.0	31.6	30.9	27.8	24.4	23.8	19.9	16.7	18.0	24.6	39.1	30.6	20.2	16.5	22.0	29.1	13.9	25.8	23.4	31.0	33.0	26.0	39.1
16-Feb	38.4	39.2	Z	35.5	47.0	47.7	35.9	21.0	18.1	13.7	17.2	14.3	10.4	13.1	10.6	9.6	14.1	13.5	16.7	26.2	22.9	16.2	12.5	8.1	21.8	47.7
17-Feb	5.9	10.3	11.5	Z	8.0	10.1	11.4	10.9	8.0	4.1	2.2	4.2	5.4	4.2	3.3	2.6	DF	13.7	29.9	31.4	30.8	19.1	7.7	5.1	10.9	31.4
18-Feb	13.8	17.3	28.6	17.4	13.1	Z	14.9	16.2	17.4	15.2	9.5	5.6	3.7	5.6	6.6	6.1	7.4	9.0	11.9	34.5	13.5	10.0	13.2	19.1	13.5	34.5
19-Feb	Z	22.7	25.2	16.0	14.4	12.6	6.6	18.6	29.1	14.1	6.1	6.8	7.8	6.6	8.0	7.1	9.4	10.4	7.1	7.4	2.5	2.4	7.6	15.2	11.5	29.1
20-Feb	10.0	Z	5.1	4.0	3.5	7.1	5.8	4.5	4.6	M	4.0	2.4	2.2	1.9	4.0	11.1	24.4	32.7	35.3	36.4	43.8	43.1	39.8	34.9	16.4	43.8
21-Feb	32.9	32.4	Z	31.4	29.7	30.4	42.7	47.7	49.5	34.5	22.2	16.6	12.4	11.8	9.6	8.7	9.4	17.9	22.6	33.3	36.9	38.3	35.8	34.0	27.9	49.5
22-Feb	33.3	16.2	9.1	Z	37.1	35.3	24.6	35.0	19.1	10.6	16.5	21.2	31.5	21.7	20.6	11.6	9.5	9.9	9.3	16.3	28.5	39.3	40.6	38.2	23.3	40.6
23-Feb	27.5	23.2	21.2	22.7	Z	27.7	29.0	28.6	20.5	8.3	7.2	6.8	9.5	12.1	10.5	10.0	10.8	15.5	17.4	22.8	24.2	13.2	17.1	17.4	17.5	29.0
24-Feb	15.6	14.8	18.1	26.8	31.2	Z	31.8	38.1	32.4	27.3	25.0	27.6	13.6	14.1	15.7	16.4	9.0	12.6	27.0	30.6	30.6	27.3	19.5	15.1	22.6	38.1
25-Feb	Z	15.3	12.1	11.1	13.9	11.2	12.8	20.5	15.9	DF	9.4	10.4	19.6	17.0	7.8	17.7	22.1	18.5	18.9	29.6	22.8	15.4	8.1	17.6	15.8	29.6
26-Feb	Z	31.9	30.0	30.7	34.1	38.0	31.1	28.9	21.5	21.9	14.4	12.5	7.5	6.6	21.4	12.2	17.9	26.0	27.2	31.6	31.1	32.5	30.9	25.5	24.6	38.0
27-Feb	28.6	Z	32.2	33.8	35.8	35.2	36.5	32.3	29.1	31.3	11.1	9.7	12.6	8.5	5.9	8.4	9.5	11.7	10.2	11.4	8.4	13.4	13.5	15.3	19.3	36.5
28-Feb	24.2	25.5	Z	40.5	13.2	2.6	7.9	24.4	20.2	21.7	23.7	24.7	14.8	12.6	11.9	18.5	34.8	37.0	39.6	37.8	31.0	27.5	25.8	21.5	23.5	40.5
	23.2	21.4	20.2	20.5	21.9	21.9	21.8	23.8	21.7	17.4	14.3	12.3	12.5	12.9	12.1	12.4	16.6	19.6	21.6	24.7	23.9	22.4	22.9	22.5	Diurnal Average	
	38.4	39.2	41.1	40.5	47.0	47.7	42.7	47.7	49.5	34.5	35.6	39.1	39.9	39.1	36.9	36.4	46.3	47.9	39.6	39.3	43.8	43.1	40.6	38.2	Diurnal Maximum	

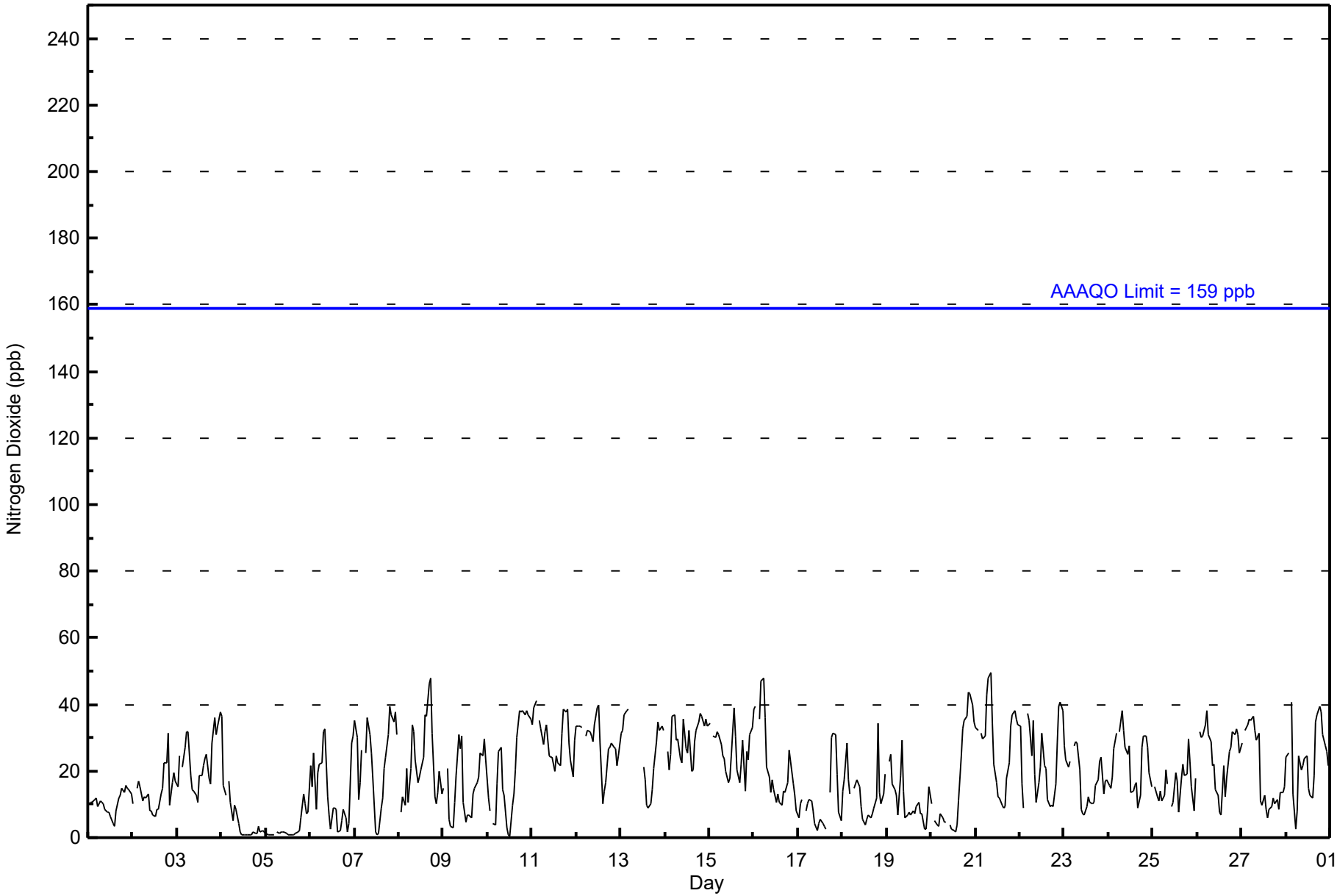
Z - zerospan C - Calibration M - Maintenance DF - DAS Failure
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Fort Hills - February 2025



Nitrogen Dioxide (NO_2) - ppb
Fort Hills - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	355	55.73	55.73
21 - 40	270	42.39	98.12
11 - 80	12	1.88	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 637

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Fort Hills - February 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	64	31	9	0	0	17	39	61	66	25	5	1	2	4	5	8	337
21 - 40	59	25	7	6	5	18	38	23	19	18	2	3	4	2	16	13	258
11 - 80	3	1	1	0	0	1	2	0	0	0	0	0	1	0	0	3	12
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	126	57	17	6	5	36	79	84	85	43	7	4	7	6	21	24	607

Total Number of Valid Hours: 607

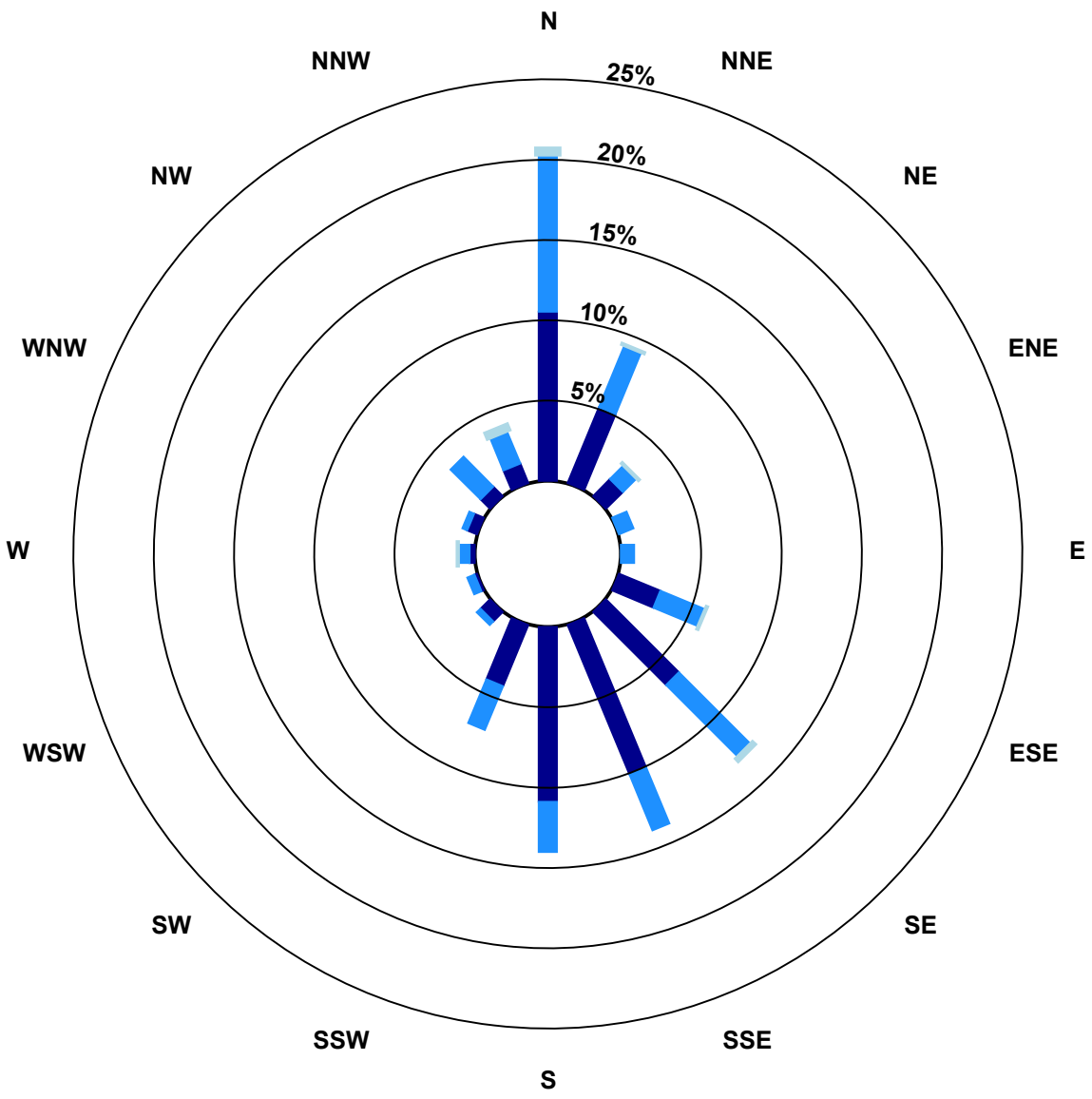
Total Number of Hours: 672

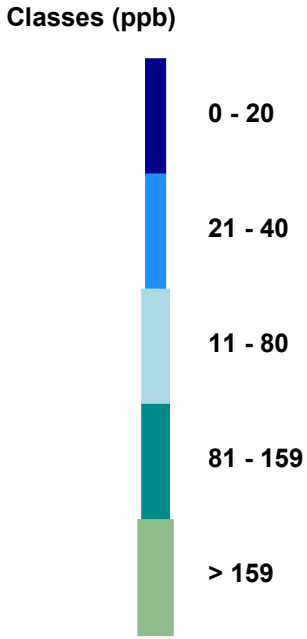
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Dioxide (NO_2) - ppb

Fort Hills





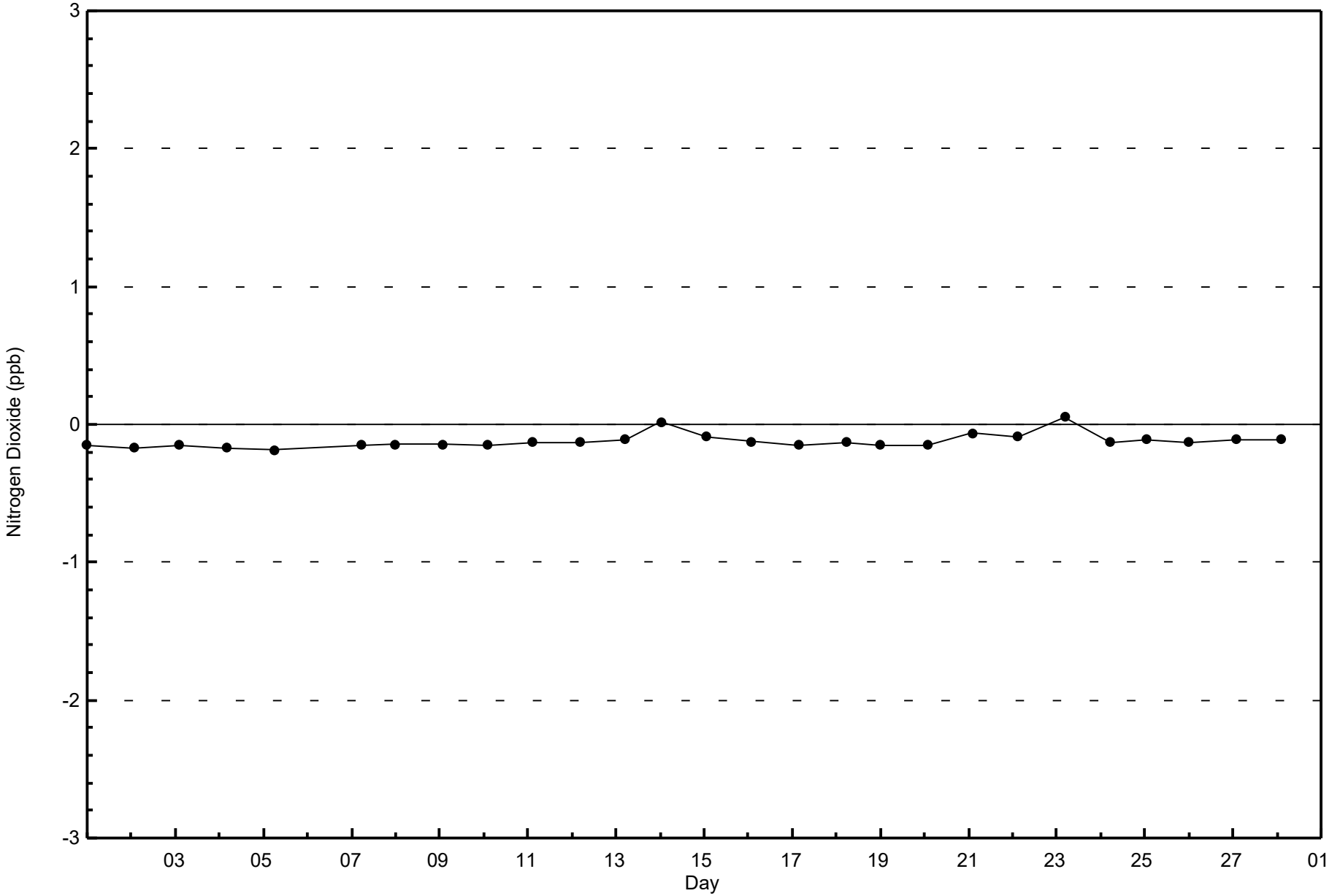
Total Number of Valid Hours: 607

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Fort Hills - February 2025

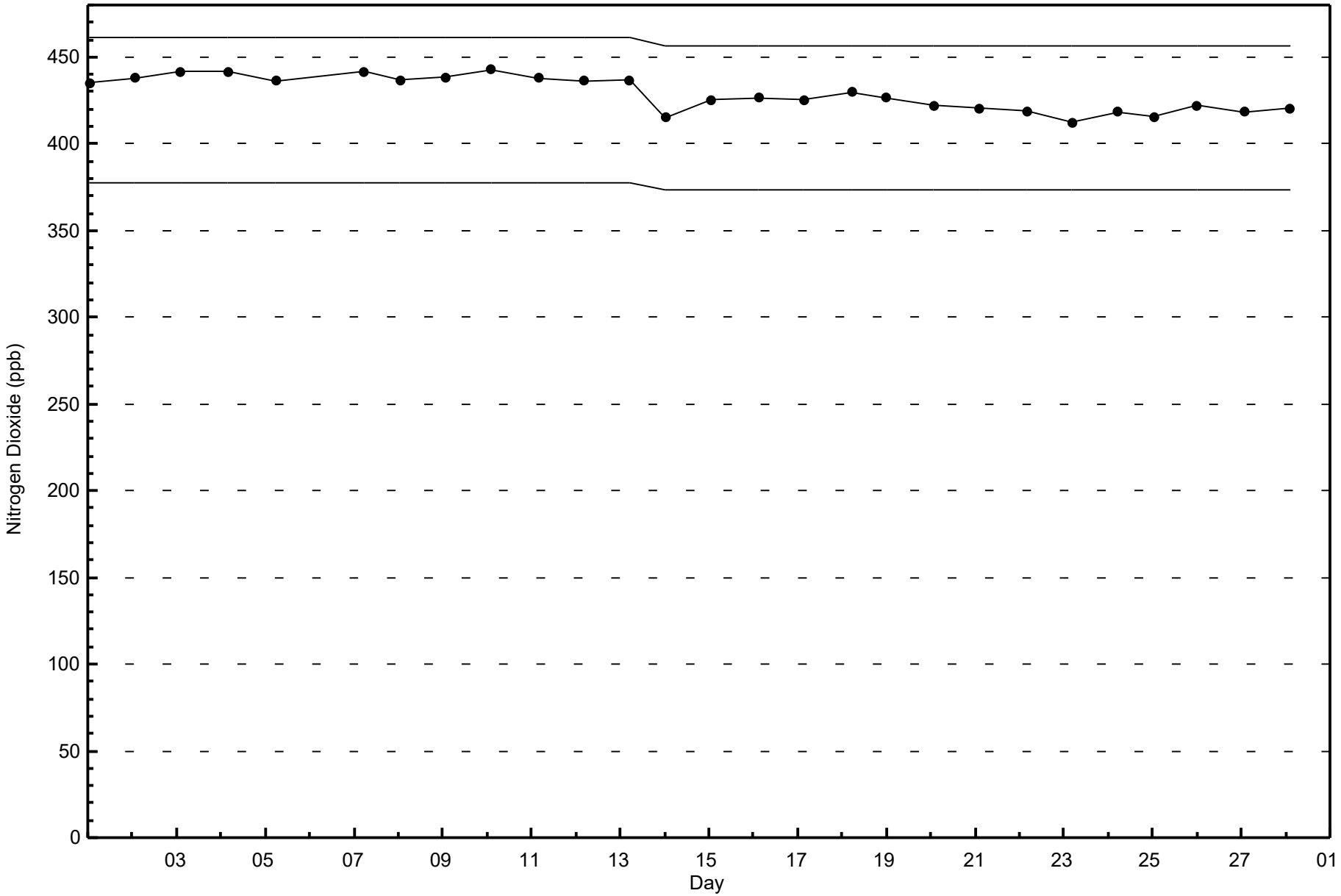


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Fort Hills - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Fort Hills - February 2025

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

Maximum Value: 299.0 ppb on Feb 21 09:00

Maximum Daily Average: 80.8 ppb on Feb 14

Minimum Value: 0.8 ppb on Feb 10 13:00

Minimum Daily Average: 3.0 ppb on Feb 5

Maximum Diurnal Average: 46.1 ppb at hour 6

Minimum Diurnal Average: 21.1 ppb at hour 16

Monthly Average: 35.86 ppb

Percentiles: P_1 = 1.0 P_{10} = 5.1 Q_1 = 12.6 Median = 23.0 Q_3 = 46.9 P_{90} = 80.9 P_{99} = 178.7

Hours in Service:	672
Hours of Data:	637
Hours of Missing Data:	35
Hours of Calibration:	32
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-Feb	Z	11.9	11.8	12.7	13.0	10.4	11.8	11.8	11.4	10.5	11.2	11.5	9.2	6.5	4.6	10.5	15.0	15.3	17.7	17.3	19.8	18.5	17.2	15.6	12.8	19.8
2-Feb	11.5	Z	17.4	19.5	18.3	13.1	13.8	13.7	15.1	10.8	12.7	11.3	11.2	14.3	13.6	20.1	19.5	26.0	25.8	46.9	10.8	16.9	19.5	16.9	17.3	46.9
3-Feb	15.2	28.0	Z	23.1	31.9	51.8	46.3	19.3	16.4	24.1	23.4	21.3	48.5	44.6	46.7	41.4	34.5	18.1	16.0	33.5	42.6	32.2	34.1	43.2	32.0	51.8
4-Feb	40.2	17.0	13.7	Z	20.4	10.7	5.0	10.7	10.4	5.8	2.6	1.3	1.0	1.0	0.9	1.1	1.0	1.5	1.3	1.1	3.2	1.8	2.2	1.5	6.7	40.2
5-Feb	1.3	1.0	0.9	0.8	0.9	Z	1.5	1.3	1.7	1.7	1.9	1.5	1.2	1.1	1.3	1.1	1.1	1.5	2.2	6.1	13.1	10.3	7.3	7.7	3.0	13.1
6-Feb	22.1	15.4	26.1	8.4	19.5	22.1	23.0	35.6	56.1	15.0	8.4	3.7	12.7	13.8	13.5	2.3	2.5	5.1	10.3	6.6	1.5	4.4	47.1	39.4	17.3	56.1
7-Feb	64.1	39.8	11.6	17.0	27.8	Z	26.6	51.7	45.8	47.2	44.1	3.0	1.2	1.8	14.1	16.3	25.5	26.7	42.8	79.8	68.0	47.0	66.5	37.3	35.0	79.8
8-Feb	Z	7.7	12.3	10.0	22.0	10.5	24.5	47.1	47.1	41.3	32.8	41.3	48.6	59.9	102.7	79.0	139.9	148.8	44.2	13.8	10.9	14.6	21.6	14.3	43.2	148.8
9-Feb	15.8	Z	23.1	6.7	4.8	3.9	13.9	25.4	94.6	76.1	116.0	26.4	9.9	15.0	13.9	9.8	17.8	16.0	16.8	18.9	40.5	29.7	54.8	24.7	29.3	116.0
10-Feb	11.9	7.9	Z	4.2	3.9	17.6	29.8	32.0	18.1	20.5	4.2	0.9	0.8	16.8	21.2	30.5	56.2	75.1	75.9	89.9	83.9	116.0	70.7	61.6	36.9	116.0
11-Feb	65.5	121.1	126.9	Z	47.3	38.9	34.7	42.7	55.1	38.9	47.8	55.4	45.9	58.8	46.1	36.6	54.7	81.4	83.2	87.1	30.7	24.3	19.0	29.8	55.3	126.9
12-Feb	36.1	35.8	38.7	37.2	Z	39.9	50.7	54.0	68.1	82.3	127.6	171.4	185.7	94.1	16.1	21.0	21.5	34.1	32.9	33.6	30.8	30.7	24.1	28.1	56.3	185.7
13-Feb	41.2	46.2	59.6	79.0	87.2	Z	69.1	C	C	C	C	C	61.8	44.4	20.5	14.8	14.5	17.8	25.6	57.8	86.0	67.2	88.1	63.4	52.4	88.1
14-Feb	Z	48.3	26.1	34.1	99.6	109.6	61.0	59.7	43.2	59.7	143.8	93.9	83.8	120.6	54.0	47.4	72.8	69.2	103.3	134.3	124.7	83.8	97.0	87.6	80.8	143.8
15-Feb	104.3	Z	57.3	49.2	61.4	47.7	32.6	26.2	32.6	36.3	36.1	44.5	78.2	161.9	80.2	33.2	21.8	24.5	37.4	15.2	31.6	25.2	36.8	48.6	48.8	161.9
16-Feb	106.9	120.0	Z	97.7	193.9	216.7	92.9	22.4	23.0	24.0	40.6	35.0	23.6	29.4	20.8	15.3	18.6	14.3	17.3	28.3	23.7	17.0	13.3	8.3	52.3	216.7
17-Feb	6.0	10.3	11.5	Z	8.0	10.1	11.6	11.1	9.1	5.6	3.7	8.2	10.9	7.9	5.7	3.8	DF	14.8	44.9	69.2	56.5	22.4	8.3	5.1	15.7	69.2
18-Feb	13.9	18.5	34.9	17.6	13.2	Z	14.9	17.0	24.7	31.4	20.3	11.6	7.2	10.8	11.8	9.2	9.1	9.7	12.7	63.9	13.7	10.0	13.3	19.2	17.8	63.9
19-Feb	Z	22.8	25.9	16.2	14.5	12.6	6.6	30.1	77.7	28.3	10.8	13.3	14.9	11.8	13.2	9.9	11.3	10.8	7.1	7.4	2.5	2.4	7.6	15.2	16.2	77.7
20-Feb	10.0	Z	5.1	4.0	3.5	7.1	5.8	4.5	4.8	M	4.5	2.8	2.7	2.7	6.4	18.0	51.6	54.4	56.5	68.2	173.0	180.1	144.8	92.8	41.1	180.1
21-Feb	71.2	70.3	Z	77.0	71.9	80.6	176.2	227.3	299.0	158.8	65.0	38.7	19.6	17.6	13.5	11.4	11.2	20.0	24.9	49.7	61.1	71.9	53.1	50.0	75.7	299.0
22-Feb	45.9	18.5	13.2	Z	66.7	70.0	28.4	55.0	22.9	13.3	27.9	41.8	98.0	43.7	40.6	19.1	12.6	10.7	9.3	20.2	61.4	181.2	172.8	153.3	53.3	181.2
23-Feb	60.8	25.5	21.9	23.6	Z	33.0	33.3	41.2	34.7	11.7	10.5	9.6	14.9	20.6	17.2	14.6	14.1	17.5	18.8	25.4	26.7	13.8	19.6	18.5	22.9	60.8
24-Feb	16.9	15.7	19.1	28.0	34.7	Z	41.0	85.3	62.9	57.7	52.6	76.6	25.2	27.1	33.2	27.3	11.2	14.0	37.6	72.8	44.5	34.0	22.0	16.1	37.2	85.3
25-Feb	Z	16.5	13.2	12.4	15.4	12.4	14.1	22.9	20.0	DF	13.7	16.9	39.2	33.1	11.3	28.0	32.9	21.7	20.4	35.0	25.0	17.0	8.1	22.4	20.5	39.2
26-Feb	Z	49.8	39.7	53.4	95.5	145.5	54.9	44.3	33.8	43.1	31.2	28.4	15.8	13.0	55.8	22.1	29.2	36.2	35.3	42.4	39.6	52.3	46.5	28.5	45.1	145.5
27-Feb	34.1	Z	53.2	78.2	91.8	94.4	113.1	72.4	66.1	109.9	18.8	19.1	31.0	15.7	10.4	12.1	12.2	13.5	11.0	12.8	8.9	13.8	13.6	15.5	40.1	113.1
28-Feb	24.5	26.0	Z	66.7	15.1	2.6	7.9	25.9	24.3	32.9	44.9	50.6	27.1	22.8	21.8	35.7	90.4	87.6	123.5	107.5	42.0	34.7	31.7	22.0	42.1	123.5
	37.3	33.7	28.8	32.4	41.6	46.1	37.3	40.4	45.1	39.5	35.4	31.1	33.2	32.5	25.4	21.1	29.7	31.7	34.1	44.5	42.0	41.9	41.4	35.2	Diurnal Average	
	106.9	121.1	126.9	97.7	193.9	216.7	176.2	227.3	299.0	158.8	143.8	171.4	185.7	161.9	102.7	79.0	139.9	148.8	123.5	134.3	173.0	181.2	172.8	153.3	Diurnal Maximum	

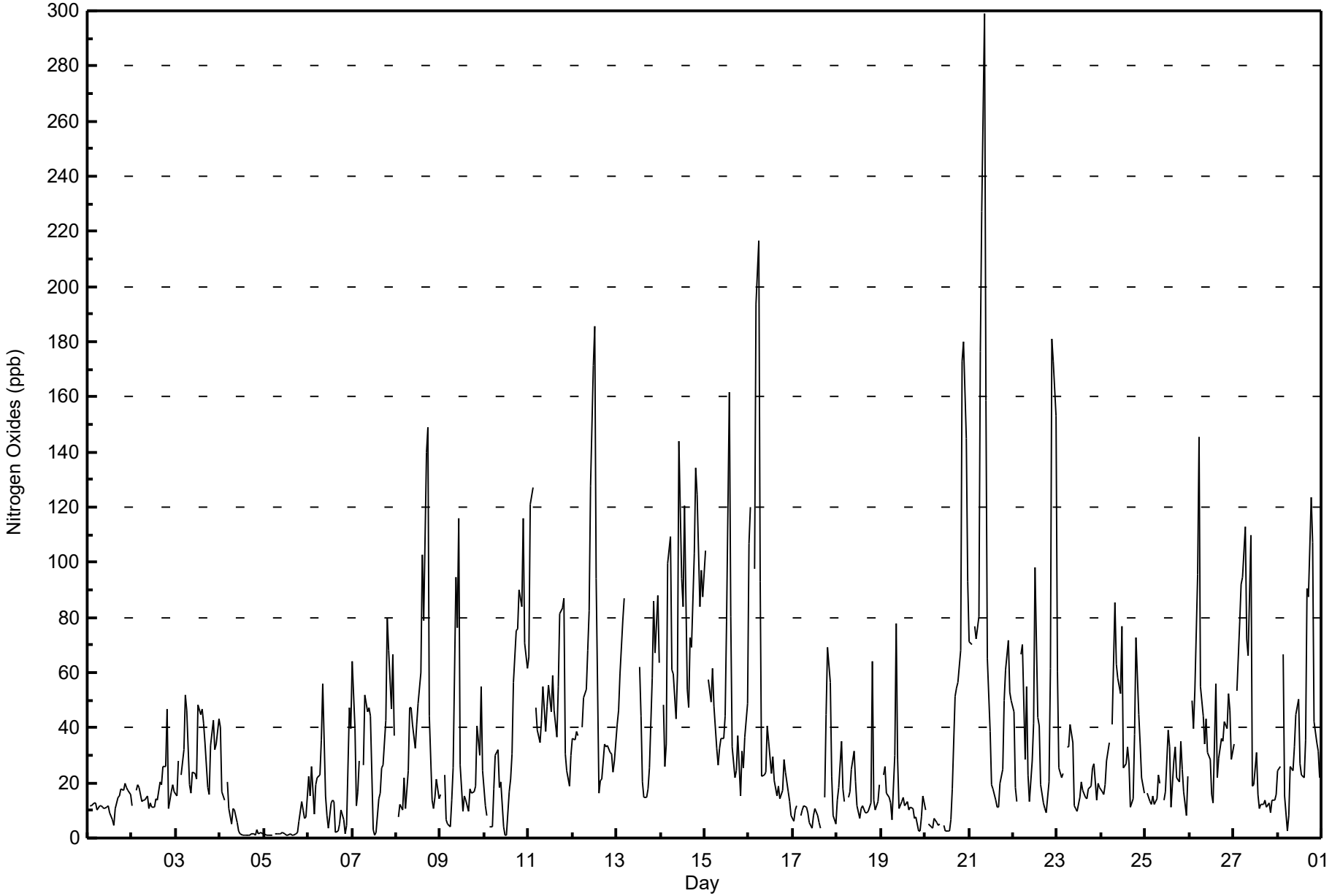
Z - zerospan C - Calibration M - Maintenance DF - DAS Failure

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Fort Hills - February 2025



Nitrogen Oxides (NO_X) - ppb
Fort Hills - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	293	46.00	46.00
21 - 40	148	23.23	69.23
11 - 80	131	20.57	89.80
81 - 159	51	8.01	97.80
> 159	12	1.88	99.69

Total Number of Valid Hours: 637

Total Number of Hours: 672



Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Fort Hills - February 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	27	7	0	0	6	26	54	58	25	4	0	1	4	4	8	277
21 - 40	25	14	6	3	1	8	27	21	13	7	2	2	2	0	4	5	140
11 - 80	29	9	2	2	2	15	20	7	11	10	1	1	1	1	9	6	126
81 - 159	17	6	2	0	2	5	3	2	3	1	0	1	2	1	3	2	50
> 159	2	1	0	0	0	2	3	0	0	0	0	0	1	0	0	3	12
Totals	126	57	17	5	5	36	79	84	85	43	7	4	7	6	20	24	605

Total Number of Valid Hours: 607

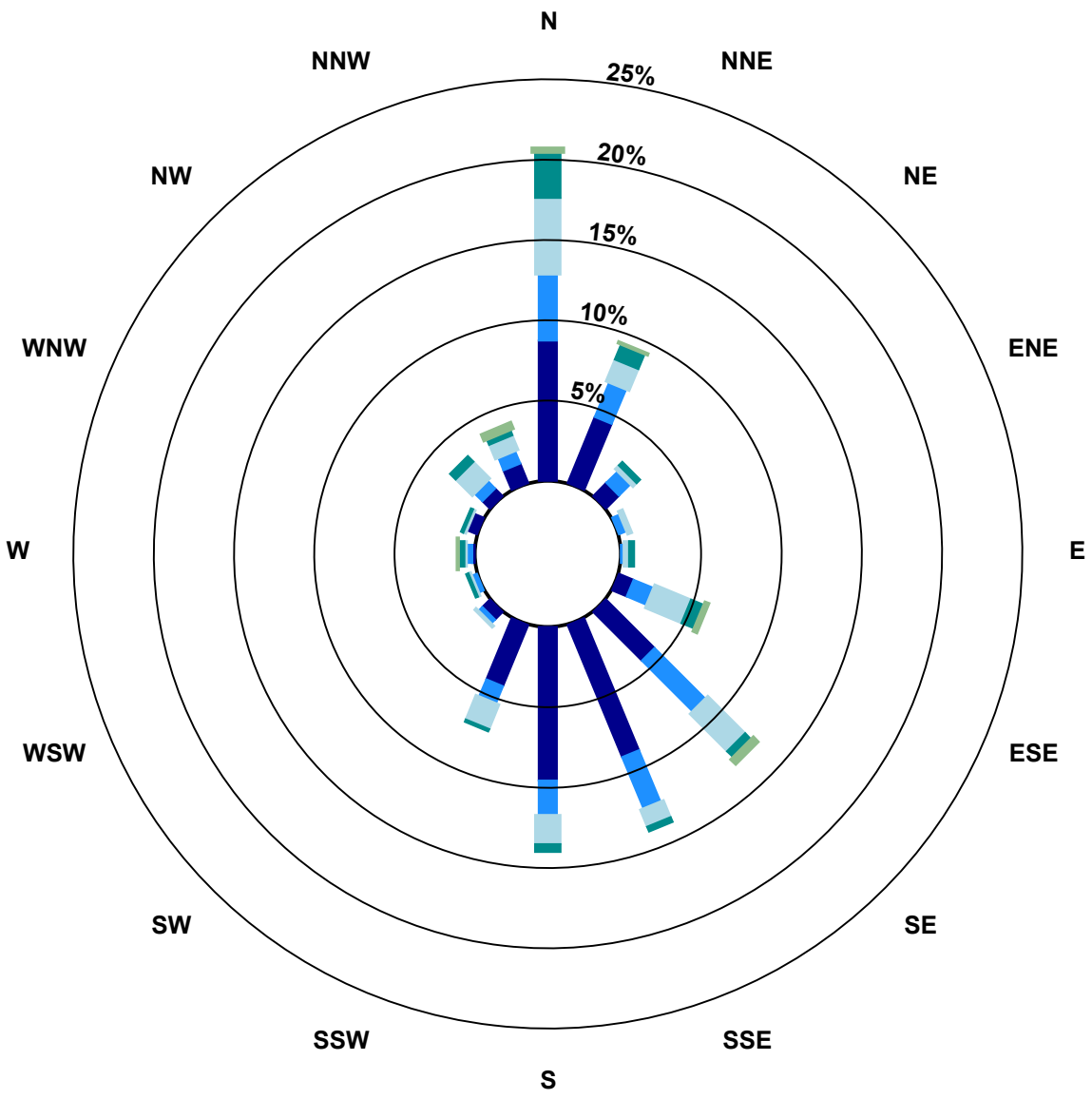
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Oxides (NO_X) - ppb

Fort Hills



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

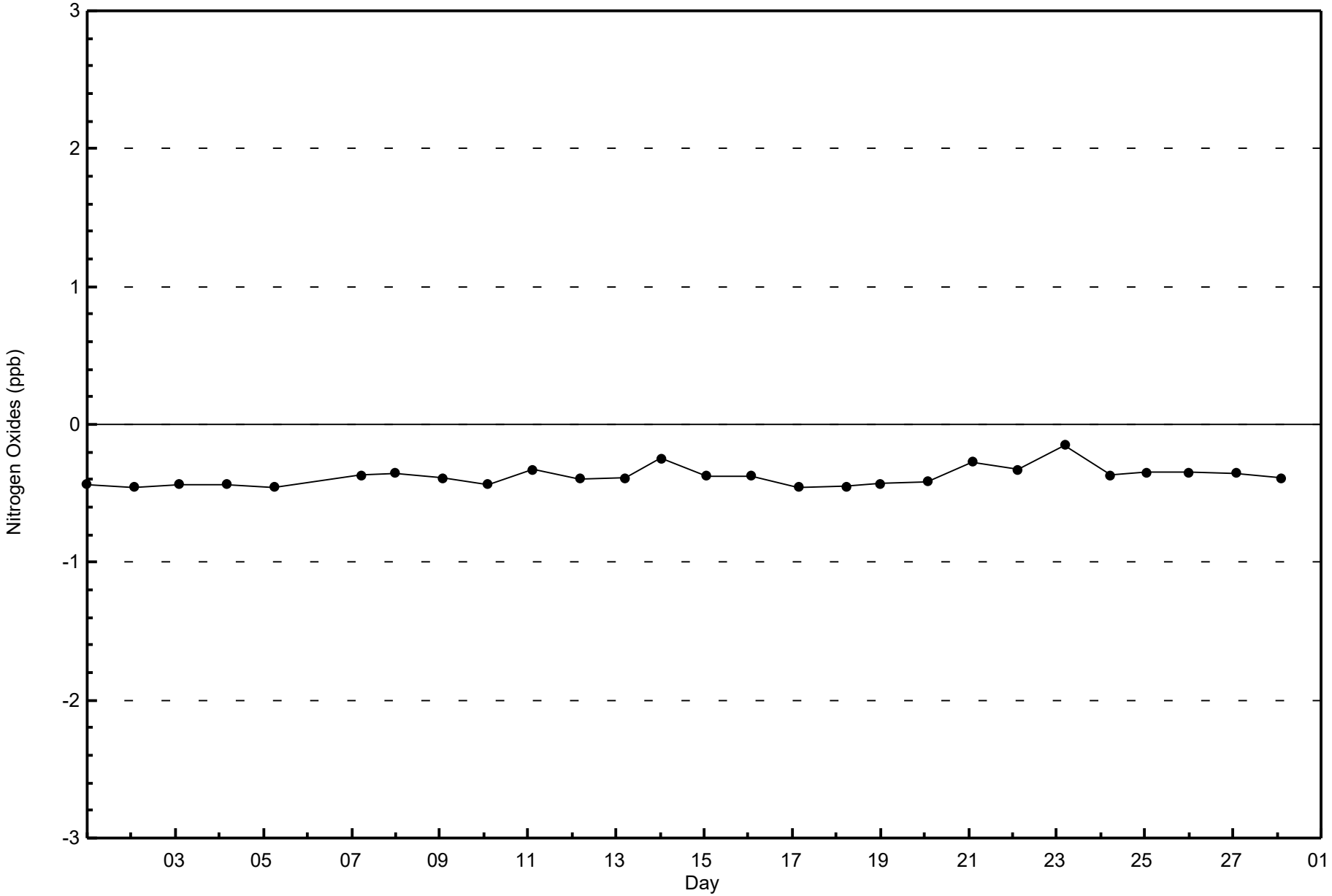
Total Number of Valid Hours: 607

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Fort Hills - February 2025

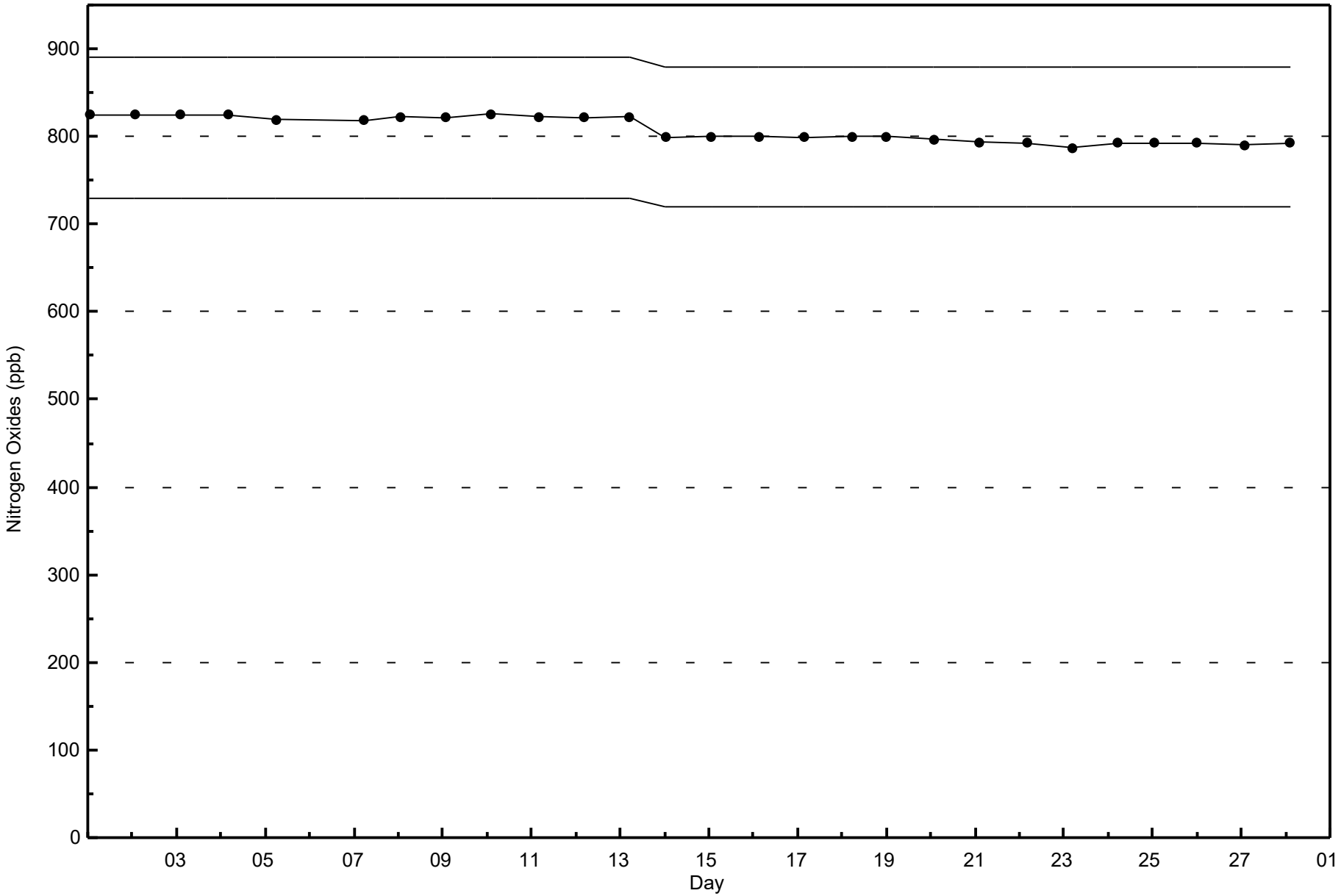


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Fort Hills - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Fort Hills - February 2025

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

Maximum Value: 52.0 $\mu g/m^3$ on Feb 16 12:00

Maximum Daily Average: 10.1 $\mu g/m^3$ on Feb 21

Minimum Value: 0.9 $\mu g/m^3$ on Feb 4 13:00

Minimum Daily Average: 1.8 $\mu g/m^3$ on Feb 4

Maximum Diurnal Average: 7.7 $\mu g/m^3$ at hour 20

Minimum Diurnal Average: 4.7 $\mu g/m^3$ at hour 7

Monthly Average: 5.74 $\mu g/m^3$

Percentiles: P_1 = 1.3 P_{10} = 2.9 Q_1 = 3.7 Median = 4.8 Q_3 = 6.7 P_{90} = 10.1 P_{99} = 16.5

Hours in Service:	672
Hours of Data:	669
Hours of Missing Data:	3
Hours of Calibration:	1
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-Feb	4.7	4.3	4.4	4.6	4.8	4.0	3.7	4.1	4.3	5.0	5.0	4.6	4.4	3.8	4.0	4.7	5.8	5.1	5.2	5.5	6.1	5.8	5.3	5.3	4.8	6.1
2-Feb	4.9	4.8	4.3	4.3	4.1	3.9	3.9	4.1	4.1	4.0	4.0	4.1	4.0	3.9	3.8	3.9	4.2	4.7	4.3	4.6	3.5	3.6	3.6	3.4	4.1	4.9
3-Feb	3.4	3.5	3.4	3.5	3.3	3.7	3.9	2.9	3.0	3.0	4.8	3.8	4.4	4.1	4.7	4.0	3.5	2.4	2.1	2.9	3.4	3.4	3.3	3.2	3.5	4.8
4-Feb	3.1	5.2	2.2	2.4	2.2	1.7	1.3	1.7	1.8	1.4	1.1	1.0	0.9	1.1	1.5	1.3	1.3	1.4	1.5	1.7	2.0	2.0	2.1	2.4	1.8	5.2
5-Feb	2.5	1.9	1.8	1.6	1.5	1.5	1.5	1.4	1.6	1.6	1.7	1.7	1.7	1.5	1.5	1.6	1.6	2.3	2.6	2.6	3.6	5.0	3.8	1.6	2.1	5.0
6-Feb	1.8	1.6	2.1	1.4	2.1	2.5	2.4	2.8	3.0	3.6	3.5	2.8	5.2	7.3	9.2	9.4	7.9	10.5	15.1	11.8	12.1	11.5	11.6	7.5	6.2	15.1
7-Feb	8.7	6.8	4.8	4.4	4.3	6.2	4.3	4.3	4.2	4.2	4.2	3.0	3.0	3.2	3.7	3.9	4.1	3.8	4.2	6.1	6.5	5.9	5.6	3.7	4.7	8.7
8-Feb	4.4	7.1	11.7	8.3	7.3	5.3	3.3	4.8	4.5	4.4	4.3	4.0	4.6	5.8	11.2	11.2	15.3	17.8	6.1	6.6	7.0	5.2	4.4	5.7	7.1	17.8
9-Feb	5.7	5.7	5.6	5.4	5.5	6.1	5.8	5.7	10.7	10.2	12.4	7.1	6.0	6.8	6.9	6.2	6.6	6.5	6.4	6.1	6.8	6.4	6.8	4.8	6.8	12.4
10-Feb	4.0	3.8	4.0	5.1	5.5	6.6	7.2	7.8	5.4	4.6	3.3	2.8	2.5	3.4	4.6	6.9	10.8	15.2	12.4	9.4	9.1	10.3	6.4	5.4	6.5	15.2
11-Feb	5.1	5.9	5.4	4.9	3.9	3.4	3.1	3.6	4.1	3.4	4.3	3.9	4.2	4.8	4.3	3.9	5.0	6.1	6.0	6.4	3.5	2.7	2.7	3.5	4.3	6.4
12-Feb	3.7	3.7	3.9	3.8	3.4	4.4	5.5	4.9	5.4	5.0	7.1	10.1	11.3	7.6	3.4	4.1	5.6	7.6	6.0	4.6	4.4	4.8	5.2	4.5	5.4	11.3
13-Feb	4.1	6.3	7.3	5.1	5.0	4.6	4.5	5.0	5.1	7.1	4.8	6.2	5.5	5.8	5.0	3.7	4.3	4.4	4.2	6.7	8.0	6.4	7.9	8.2	5.6	8.2
14-Feb	6.2	3.7	2.5	2.4	3.5	4.4	3.7	4.2	3.8	4.7	9.9	9.1	7.0	10.0	6.3	5.3	9.3	7.2	9.9	16.1	13.7	9.5	7.9	8.2	7.0	16.1
15-Feb	9.2	7.5	6.3	5.0	6.0	6.1	4.7	4.1	4.5	4.7	5.0	5.0	6.1	13.2	8.3	5.3	4.3	4.3	5.0	4.7	6.2	4.6	4.1	4.5	5.8	13.2
16-Feb	6.2	7.7	5.6	5.4	10.6	11.0	5.9	2.9	3.1	3.2	27.6	52.0	20.7	3.9	3.6	3.5	3.8	4.2	4.0	5.5	4.3	4.4	5.9	5.0	8.8	52.0
17-Feb	3.7	4.7	5.7	4.2	4.2	4.2	4.1	4.0	3.2	3.1	3.2	3.5	3.7	3.2	3.0	2.7	DF	4.8	10.8	16.0	10.2	6.3	2.8	2.6	5.0	16.0
18-Feb	3.6	4.1	5.7	4.0	3.4	4.0	4.2	4.2	4.5	4.9	4.7	4.2	4.6	7.1	8.1	7.1	5.9	5.2	3.7	19.6	4.5	3.1	4.4	5.4	5.4	19.6
19-Feb	6.1	6.2	6.3	4.3	3.3	3.3	2.7	6.8	14.5	5.5	4.2	5.6	9.4	7.2	6.9	5.9	7.6	5.9	4.0	4.8	4.5	4.1	5.5	8.4	6.0	14.5
20-Feb	5.8	5.6	5.7	4.2	3.9	5.6	6.0	6.7	7.4	C	5.5	6.4	6.0	5.3	5.4	6.5	8.7	10.7	10.9	10.5	13.8	16.5	12.2	9.3	7.8	16.5
21-Feb	8.2	8.4	9.7	9.2	8.3	9.1	11.2	14.8	18.0	13.4	8.9	7.7	6.8	7.5	7.2	7.4	7.7	8.7	8.5	15.5	15.0	11.9	10.7	9.3	10.1	18.0
22-Feb	7.4	5.4	4.1	12.6	16.6	15.8	6.9	6.3	5.5	5.2	6.3	7.0	11.8	10.3	8.9	7.0	6.4	6.1	6.1	6.4	7.4	10.9	12.7	12.4	8.6	16.6
23-Feb	11.6	12.7	15.5	15.1	11.0	10.9	10.4	11.1	8.6	5.1	5.3	4.6	4.7	4.1	3.6	3.5	3.6	3.9	3.7	3.8	3.9	3.6	3.5	3.5	7.0	15.5
24-Feb	3.6	3.5	3.4	3.7	3.9	4.1	3.9	5.1	5.1	5.8	6.0	7.1	6.6	7.1	8.3	8.7	5.1	4.8	6.5	7.6	8.3	7.0	5.3	3.9	5.6	8.7
25-Feb	3.5	3.3	3.5	3.6	3.6	3.4	3.3	3.7	3.7	DF	3.2	3.5	5.0	6.4	4.2	5.1	5.2	4.3	4.0	8.5	4.4	3.6	3.5	4.7	4.2	8.5
26-Feb	6.7	6.7	6.5	6.8	8.1	8.3	5.4	3.7	3.1	3.4	3.3	3.7	3.4	3.6	5.0	3.9	4.4	5.0	5.5	5.8	5.4	5.2	5.2	4.7	5.1	8.3
27-Feb	3.9	3.5	4.2	4.2	5.4	5.4	6.1	5.8	7.4	10.4	6.6	5.8	5.7	3.0	2.8	3.3	4.1	4.0	4.0	3.3	3.6	3.4	3.5	4.1	4.7	10.4
28-Feb	3.3	3.3	3.4	4.4	3.1	2.7	3.2	6.1	5.7	5.6	8.0	9.0	9.8	8.3	7.8	7.7	10.0	12.7	13.5	12.0	7.0	5.8	4.8	5.0	6.8	13.5
	5.2	5.3	5.3	5.1	5.3	5.4	4.7	5.1	5.6	5.1	6.0	6.8	6.0	5.7	5.5	5.3	6.0	6.4	6.3	7.7	6.7	6.2	5.7	5.4	Diurnal Average	
	11.6	12.7	15.5	15.1	16.6	15.8	11.2	14.8	18.0	13.4	27.6	52.0	20.7	13.2	11.2	11.2	15.3	17.8	15.1	19.6	15.0	16.5	12.7	12.4	Diurnal Maximum	

C - Calibration DF - DAS Failure

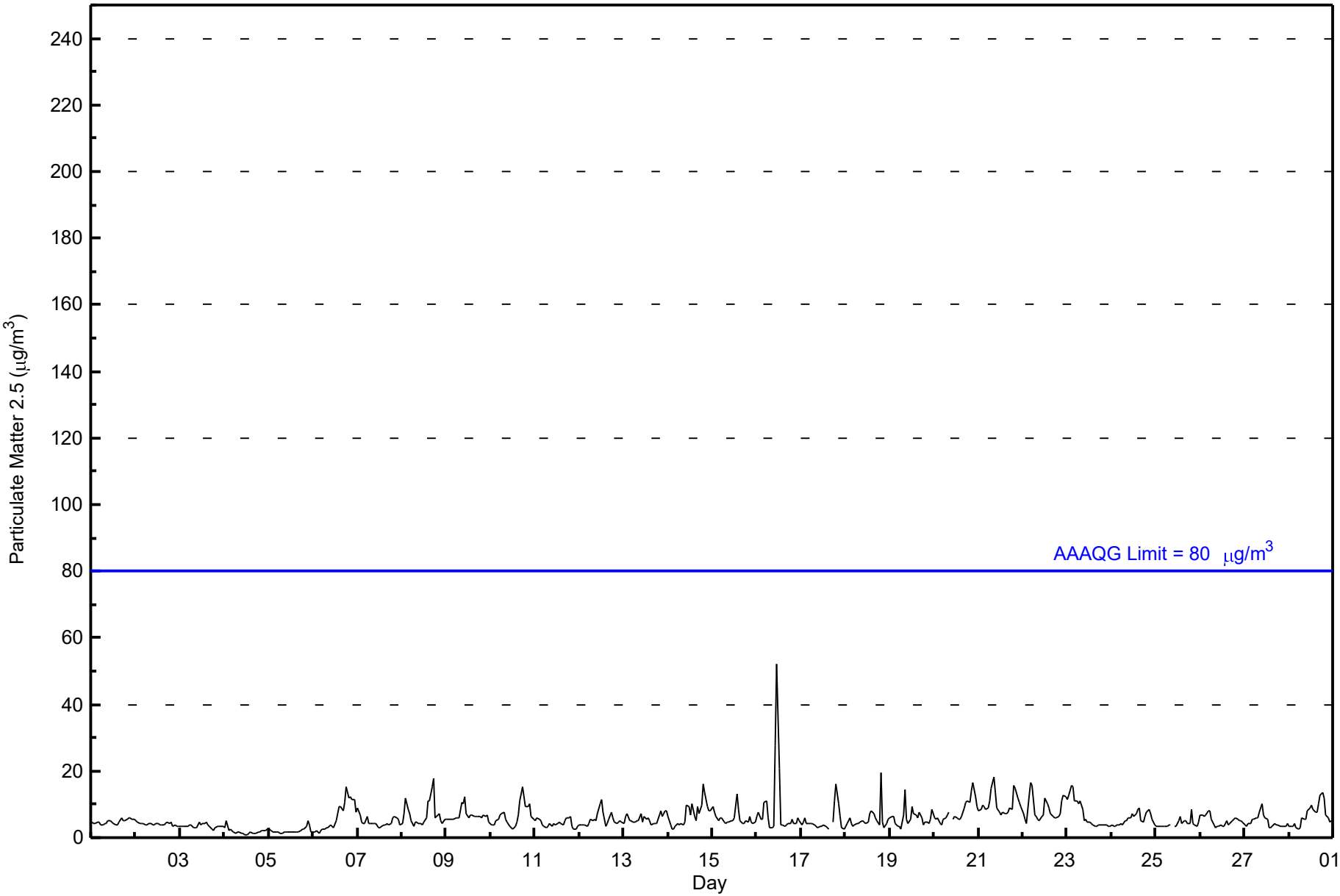
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Fort Hills - February 2025





Wood Buffalo Environmental Association

Cumulative Frequency Distribution

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

Fort Hills - February 2025

Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	408	60.99	60.99
6 - 15	248	37.07	98.06
16 - 25	11	1.64	99.70
26 - 80	2	0.30	100.00
> 81.0	0	0.00	100.00

Total Number of Valid Hours: 669

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

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

Fort Hills - February 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	84	30	12	4	1	19	44	65	60	24	4	1	3	2	10	19	382
6 - 15	50	27	5	2	4	18	34	24	27	20	3	3	4	5	13	4	243
16 - 25	4	0	0	0	0	0	3	1	0	0	0	0	0	0	0	3	11
26 - 80	0	0	0	0	0	0	0	0	2	0	0	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	138	57	17	6	5	37	81	90	89	44	7	4	7	7	23	26	638

Total Number of Valid Hours: 638

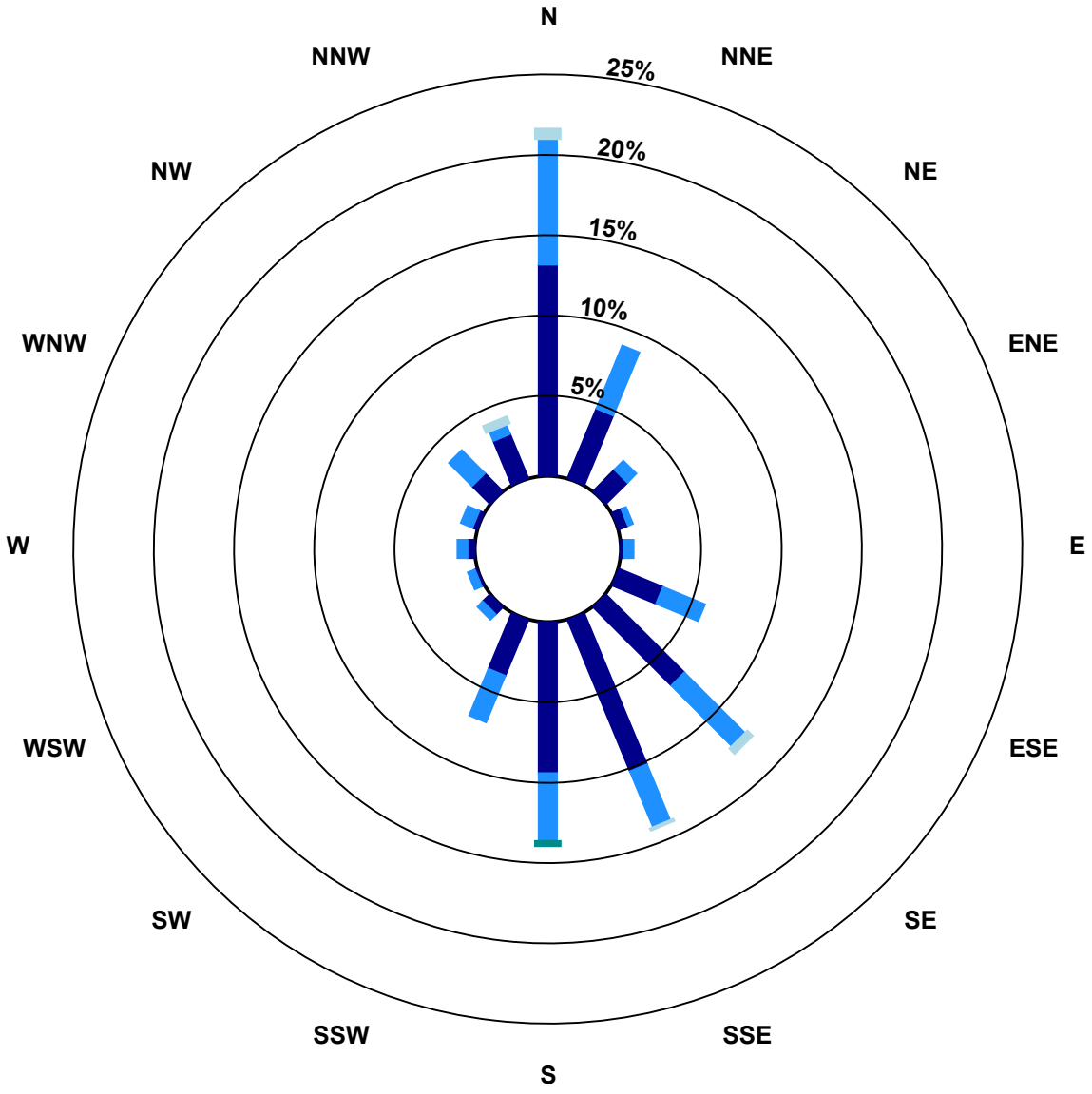
Total Number of Hours: 672

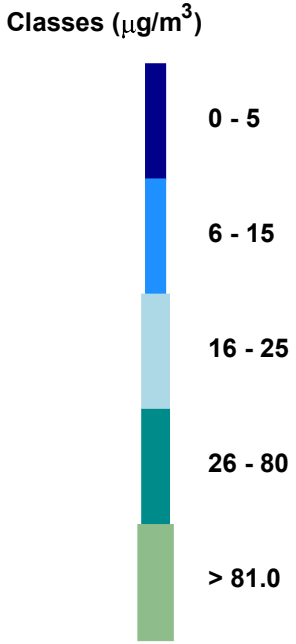
Wood Buffalo Environmental Association

Wind Rose Feb 2025

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

Fort Hills





Total Number of Valid Hours: 638

Maximum Value: 0.2 C on Feb 23 08:00

Maximum Daily Average: -5.2 C on Feb 23

Minimum Value: -36.7 C on Feb 14 09:00

Minimum Daily Average: -29.8 C on Feb 14

Maximum Diurnal Average: -14.3 C at hour 16

Minimum Diurnal Average: -21.2 C at hour 9

Monthly Average: -18.43 C

Percentiles: P_1 = -33.0 P_{10} = -28.5 Q_1 = -24.3 Median = -19.9 Q_3 = -11.2 P_{90} = -7.2 P_{99} = -2.1

Hours in Service:	672
Hours of Data:	670
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-Feb	-24.6	-24.5	-24.5	-24.3	-24.1	-23.7	-23.3	-23.3	-23.4	-23.7	-23.8	-23.6	-23.4	-23.2	-23.2	-23.2	-23.7	-24.1	-24.2	-24.5	-24.6	-24.6	-24.7	-24.8	-24.0	-23.2
2-Feb	-25.0	-25.1	-25.1	-25.1	-25.0	-25.0	-25.0	-24.9	-25.1	-24.9	-24.6	-24.3	-24.0	-23.6	-23.2	-23.0	-23.1	-23.4	-23.5	-23.6	-23.6	-24.0	-25.6	-26.9	-24.4	-23.0
3-Feb	-27.2	-27.8	-28.1	-28.3	-29.3	-30.0	-29.5	-29.7	-30.2	-29.9	-28.0	-25.3	-24.1	-23.2	-22.0	-21.6	-21.7	-23.0	-24.7	-24.2	-25.4	-24.9	-26.1	-27.2	-26.3	-21.6
4-Feb	-28.2	-28.7	-29.9	-30.1	-30.8	-31.1	-30.8	-30.8	-30.8	-29.2	-26.8	-24.2	-21.7	-19.6	-18.1	-17.7	-18.3	-19.5	-20.3	-20.7	-20.5	-20.3	-20.3	-20.2	-24.5	-17.7
5-Feb	-20.0	-19.9	-20.1	-20.4	-20.6	-20.9	-20.9	-20.8	-20.4	-20.0	-19.4	-18.6	-17.4	-15.9	-15.1	-14.7	-14.8	-15.1	-15.1	-15.6	-15.3	-14.8	-14.2	-13.3	-17.6	-13.3
6-Feb	-12.7	-13.3	-11.7	-11.6	-10.7	-10.8	-10.7	-11.0	-10.4	-12.4	-13.5	-13.7	-15.0	-15.8	-15.7	-15.8	-16.8	-18.2	-17.9	-17.5	-17.6	-18.2	-18.4	-18.2	-14.5	-10.4
7-Feb	-18.0	-17.9	-18.0	-17.9	-17.5	-19.2	-20.7	-19.8	-20.5	-19.3	-18.0	-15.9	-14.4	-13.0	-11.6	-10.6	-11.4	-14.5	-17.2	-17.9	-20.1	-19.9	-21.2	-21.4	-17.3	-10.6
8-Feb	-22.6	-22.1	-23.2	-23.4	-23.6	-24.0	-24.1	-24.2	-24.3	-23.6	-22.0	-20.1	-17.4	-15.6	-13.8	-13.1	-14.1	-14.5	-14.7	-16.5	-18.1	-19.1	-19.4	-20.5	-19.7	-13.1
9-Feb	-21.7	-22.2	-23.2	-25.0	-26.3	-26.7	-27.6	-29.7	-30.5	-29.5	-27.9	-26.7	-26.3	-25.6	-24.9	-24.3	-24.8	-27.9	-30.5	-31.4	-31.7	-32.4	-31.5	-31.1	-27.5	-21.7
10-Feb	-31.1	-31.2	-31.4	-31.6	-31.5	-31.5	-31.4	-30.6	-29.4	-27.6	-24.5	-22.1	-19.7	-18.8	-17.8	-17.7	-17.3	-17.8	-18.3	-18.6	-19.4	-20.1	-21.5	-23.7	-24.4	-17.3
11-Feb	-25.2	-23.6	-23.5	-23.9	-24.3	-24.4	-24.9	-24.5	-23.9	-23.5	-22.9	-21.9	-21.3	-19.6	-19.4	-19.9	-20.7	-21.7	-22.8	-22.0	-21.5	-21.6	-21.9	-22.7	-22.6	-19.4
12-Feb	-22.6	-22.6	-22.7	-23.6	-23.6	-23.3	-23.2	-23.2	-22.8	-22.1	-21.1	-20.4	-20.0	-18.7	-18.6	-19.0	-19.3	-19.8	-20.1	-20.3	-20.8	-21.3	-21.7	-22.1	-21.4	-18.6
13-Feb	-22.8	-23.7	-24.1	-24.9	-25.9	-28.4	-28.5	-27.2	-28.8	-27.9	-26.5	-24.9	-23.5	-22.4	-21.5	-21.5	-21.8	-22.6	-23.6	-24.6	-25.7	-26.5	-27.4	-27.5	-25.1	-21.5
14-Feb	-28.0	-29.9	-30.7	-32.1	-33.2	-34.9	-36.2	-36.6	-36.7	-33.1	-29.6	-27.8	-26.3	-24.8	-23.9	-23.4	-22.7	-24.4	-27.1	-28.4	-30.4	-31.1	-30.7	-32.9	-29.8	-22.7
15-Feb	-33.2	-32.3	-32.4	-32.2	-33.0	-33.0	-31.8	-30.6	-30.0	-28.3	-26.6	-24.8	-22.4	-20.4	-18.8	-18.8	-19.5	-20.3	-20.5	-20.7	-21.2	-22.4	-24.5	-27.2	-26.0	-18.8
16-Feb	-28.5	-29.7	-30.5	-30.9	-30.3	-30.1	-30.2	-30.5	-29.9	-28.4	-26.5	-24.4	-22.4	-20.2	-18.7	-17.9	-18.1	-19.4	-21.5	-21.8	-23.4	-22.8	-23.0	-23.4	-25.1	-17.9
17-Feb	-23.3	-23.2	-23.2	-23.7	-23.5	-23.2	-22.7	-22.3	-22.6	-22.4	-21.7	-20.7	-19.5	-18.4	-17.5	-16.7	DF	-18.7	-19.9	-20.8	-21.9	-22.9	-23.6	-24.9	-21.6	-16.7
18-Feb	-26.8	-27.3	-27.3	-27.3	-28.0	-28.3	-28.5	-29.9	-29.9	-27.7	-25.3	-22.6	-20.6	-19.4	-17.7	-16.4	-16.0	-17.2	-19.3	-19.5	-20.4	-21.3	-23.6	-23.7	-23.5	-16.0
19-Feb	-21.9	-23.5	-23.8	-25.2	-25.6	-25.4	-25.6	-26.9	-27.9	-24.7	-22.4	-20.1	-17.6	-15.9	-14.0	-12.8	-12.5	-13.7	-14.3	-14.8	-14.7	-14.8	-14.9	-15.2	-19.5	-12.5
20-Feb	-15.4	-15.6	-16.0	-16.5	-17.3	-17.5	-17.7	-17.9	-17.9	-17.7	-17.0	-16.5	-15.5	-13.2	-10.8	-9.8	-8.8	-9.1	-10.2	-11.6	-13.6	-14.2	-16.3	-17.3	-14.7	-8.8
21-Feb	-17.7	-17.3	-15.7	-15.4	-15.2	-14.9	-15.4	-16.3	-14.8	-12.8	-11.9	-9.8	-8.3	-7.8	-7.6	-8.0	-8.3	-8.9	-9.5	-10.4	-11.2	-11.7	-11.4	-11.8	-12.2	-7.6
22-Feb	-12.1	-12.4	-12.6	-12.1	-11.9	-12.3	-12.6	-11.9	-11.9	-11.0	-10.0	-8.9	-6.7	-5.5	-4.0	-2.2	-2.2	-2.8	-2.5	-3.9	-4.1	-6.1	-6.4	-5.7	-8.0	-2.2
23-Feb	-3.9	-2.7	-1.8	-0.6	-0.2	0.0	0.2	0.2	-1.9	-5.6	-6.0	-6.1	-6.5	-6.3	-6.0	-6.4	-7.1	-7.8	-8.0	-8.3	-8.7	-9.2	-10.1	-10.7	-5.2	0.2
24-Feb	-11.1	-11.4	-11.6	-11.6	-11.9	-11.9	-11.9	-11.4	-11.0	-10.3	-9.7	-8.8	-7.4	-6.2	-5.1	-4.0	-3.4	-3.3	-3.6	-4.0	-5.4	-6.1	-6.9	-8.1	-8.2	-3.3
25-Feb	-8.9	-9.5	-10.3	-10.7	-11.2	-11.3	-11.4	-11.5	-11.3	DF	-11.0	-10.4	-9.9	-9.1	-8.7	-8.5	-8.6	-8.6	-8.6	-8.7	-9.1	-9.4	-9.2	-8.9	-9.8	-8.5
26-Feb	-8.7	-8.4	-8.4	-9.1	-9.7	-8.7	-9.0	-9.8	-10.6	-10.0	-9.2	-7.6	-5.6	-5.0	-5.8	-5.4	-6.0	-6.3	-7.1	-7.4	-7.3	-7.5	-7.8	-7.8	-7.8	-5.0
27-Feb	-8.1	-8.3	-8.1	-7.8	-7.1	-7.1	-6.8	-6.4	-6.0	-5.1	-4.0	-2.4	-2.8	-3.6	-4.5	-5.6	-6.2	-7.1	-8.1	-9.1	-9.7	-10.0	-10.2	-10.3	-6.8	-2.4
28-Feb	-10.2	-10.3	-10.3	-10.4	-10.5	-10.6	-10.5	-10.4	-10.2	-9.5	-9.3	-8.7	-7.2	-5.7	-4.4	-3.6	-2.9	-4.3	-6.7	-8.4	-7.7	-8.9	-9.4	-10.2	-8.3	-2.9
	-20.0	-20.2	-20.3	-20.6	-20.8	-21.0	-21.1	-21.1	-21.2	-20.8	-19.3	-17.9	-16.7	-15.6	-14.7	-14.3	-14.4	-15.5	-16.4	-17.0	-17.6	-18.1	-18.6	-19.2	Diurnal Average	
	-3.9	-2.7	-1.8	-0.6	-0.2	0.0	0.2	0.2	-1.9	-5.1	-4.0	-2.4	-2.8	-3.6	-4.0	-2.2	-2.2	-2.8	-2.5	-3.9	-4.1	-6.1	-6.4	-5.7	Diurnal Maximum	

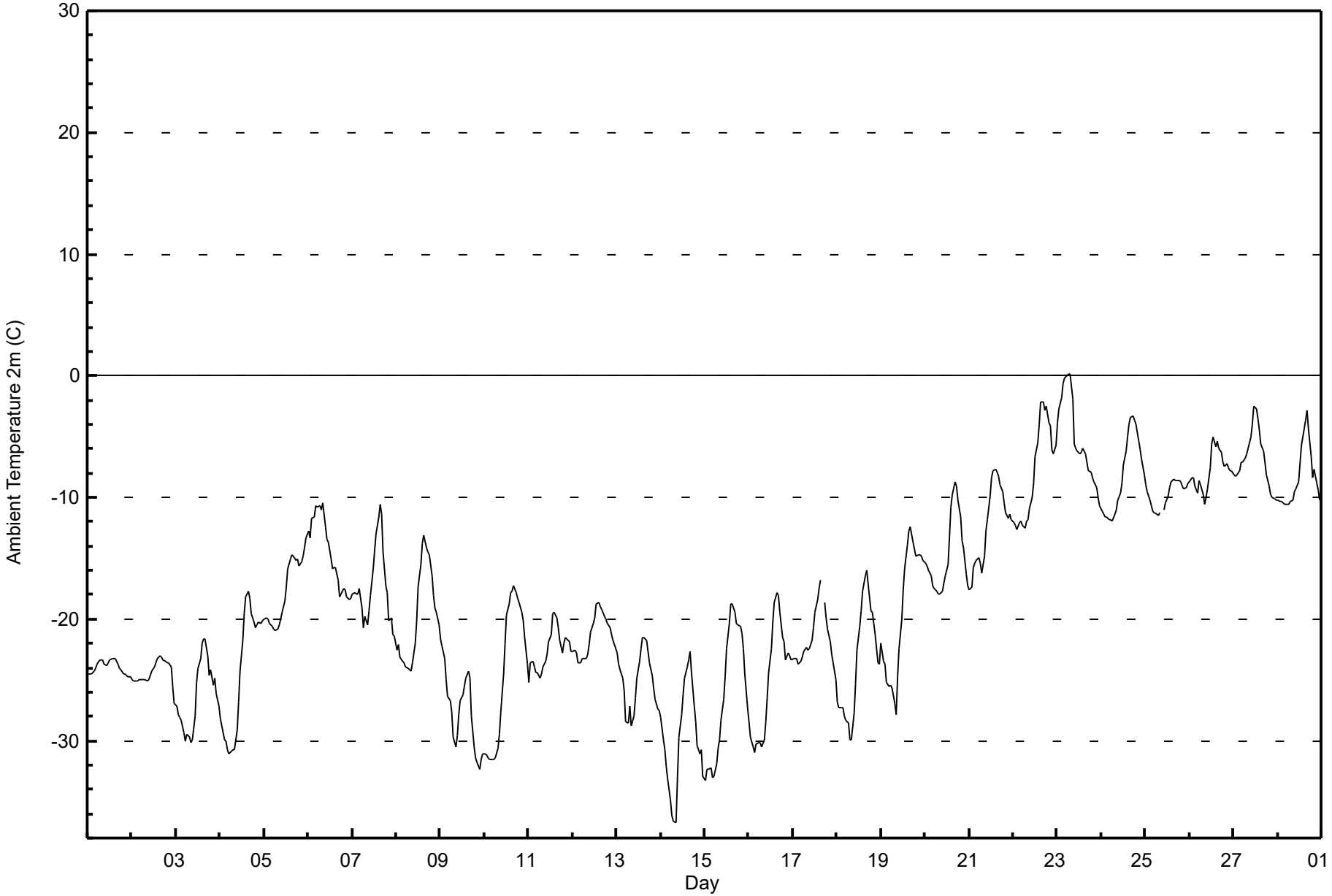
DF - DAS Failure

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Fort Hills - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	330	49.25	49.25
-20 - 0	338	50.45	99.70
0 - 10	2	0.30	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 670

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Fort Hills - February 2025

Maximum Value: 97.6 % on Feb 23 08:00

Maximum Daily Average: 86.9 % on Feb 23

Minimum Value: 41.0 % on Feb 18 16:00

Minimum Daily Average: 53.2 % on Feb 19

Maximum Diurnal Average: 76.1 % at hour 9

Minimum Diurnal Average: 64.2 % at hour 16

Monthly Average: 72.52 %

Percentiles: P_1 = 45.2 P_{10} = 60.1 Q_1 = 67.5 Median = 73.3 Q_3 = 78.5 P_{90} = 83.5 P_{99} = 93.5

Hours in Service:	672
Hours of Data:	670
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-Feb	74.6	74.2	74.2	74.2	74.4	74.4	74.0	74.5	74.9	73.4	72.0	70.6	69.6	68.9	69.7	71.6	71.5	71.5	72.8	73.0	72.4	72.8	73.4	72.0	72.7	74.9
2-Feb	71.1	71.1	71.9	72.6	73.0	72.8	72.5	71.4	70.8	69.4	68.4	68.1	66.8	67.8	69.1	69.9	72.0	73.6	72.6	75.6	75.4	76.4	76.6	76.1	71.9	76.6
3-Feb	75.9	75.5	75.3	75.0	74.2	73.9	74.1	73.8	73.4	73.3	73.9	68.2	62.8	67.3	66.7	66.0	67.5	74.1	77.7	76.5	76.1	72.8	73.6	74.3	72.6	77.7
4-Feb	74.7	74.0	73.9	73.5	73.3	72.9	72.1	71.2	71.0	69.0	66.5	63.3	61.1	60.6	61.0	62.5	64.2	67.3	68.3	70.3	69.6	68.5	67.2	67.2	68.5	74.7
5-Feb	66.9	67.1	67.4	68.7	68.6	67.5	67.5	68.2	70.5	72.5	74.0	74.4	74.9	73.6	73.6	75.6	78.7	80.3	82.0	83.5	83.2	83.2	83.8	83.1	74.5	83.8
6-Feb	81.5	83.0	77.5	77.5	74.2	76.7	76.8	78.8	80.3	77.1	69.6	64.4	66.5	62.9	58.9	55.3	56.7	61.7	62.1	61.1	63.1	65.0	68.2	69.2	69.5	83.0
7-Feb	71.2	72.4	74.3	74.3	72.3	77.2	79.6	79.4	78.4	74.4	69.2	62.0	57.8	58.5	55.9	53.9	58.8	67.8	79.3	83.6	82.4	81.9	81.1	80.7	71.9	83.6
8-Feb	80.2	80.1	79.3	79.1	78.8	78.5	78.5	78.3	78.1	78.1	78.3	77.6	65.8	60.0	57.5	59.3	65.1	75.1	78.3	76.8	75.3	73.5	75.4	70.4	74.1	80.2
9-Feb	72.7	73.2	69.0	67.3	63.2	62.2	65.2	70.7	73.8	71.8	69.9	63.6	59.9	56.9	54.8	52.1	54.6	65.3	71.3	72.9	72.8	72.7	72.6	72.5	66.7	73.8
10-Feb	72.2	71.8	70.7	70.5	70.4	70.9	71.4	71.1	70.5	70.0	66.7	62.1	60.9	63.5	64.0	66.3	66.1	68.3	70.0	73.9	76.1	77.2	78.3	78.5	70.0	78.5
11-Feb	77.6	79.0	78.6	78.1	77.8	77.7	77.5	77.6	77.9	77.9	77.8	75.4	71.4	64.7	64.1	67.7	71.9	76.0	78.8	79.2	76.0	73.8	75.1	78.7	75.4	79.2
12-Feb	78.9	78.6	78.3	78.5	78.5	78.4	78.2	78.3	78.1	77.2	75.3	73.4	73.9	69.4	62.6	62.1	63.1	69.3	70.3	70.8	71.8	72.7	73.6	74.5	73.6	78.9
13-Feb	75.2	76.4	76.8	77.1	76.6	74.8	75.1	75.8	74.4	75.0	75.0	73.0	70.9	68.4	64.4	63.0	64.6	67.2	68.9	71.3	74.8	75.5	75.3	75.0	72.7	77.1
14-Feb	73.9	73.7	73.2	72.5	71.7	70.3	69.4	69.2	69.3	71.1	71.3	69.0	69.4	66.8	66.2	65.1	65.7	71.4	75.3	75.1	73.0	73.2	73.4	71.4	70.9	75.3
15-Feb	71.5	72.4	72.1	72.0	71.5	71.5	72.1	72.8	73.1	73.7	73.3	71.0	70.9	67.3	65.3	62.3	61.9	65.6	68.6	67.5	70.3	70.7	77.4	75.6	70.4	77.4
16-Feb	74.8	73.9	73.8	73.3	73.7	73.7	73.6	73.3	73.5	73.7	74.8	74.5	67.4	62.9	59.7	57.7	59.4	63.9	67.4	65.0	67.7	64.9	64.1	64.2	68.8	74.8
17-Feb	64.5	66.1	67.4	68.7	69.7	69.8	68.7	64.0	64.6	61.9	59.5	58.1	55.2	50.7	48.0	45.2	DF	51.2	55.4	57.1	60.3	61.8	62.4	66.2	60.7	69.8
18-Feb	70.6	72.0	71.7	70.2	70.1	71.6	71.6	72.5	71.9	68.2	63.2	55.3	50.1	48.0	44.8	41.0	41.1	44.6	50.2	55.7	54.5	57.7	65.5	66.3	60.4	72.5
19-Feb	58.6	61.8	60.1	61.2	61.9	60.2	59.3	65.3	68.4	58.5	52.0	50.1	48.8	48.2	47.3	47.5	46.9	49.1	46.4	47.1	45.1	44.0	44.1	45.9	53.2	68.4
20-Feb	46.6	46.0	47.9	51.2	54.5	57.9	59.2	60.1	60.7	61.5	61.1	72.5	71.7	65.3	59.1	59.4	59.6	61.2	63.1	68.0	75.7	74.9	82.6	82.1	62.6	82.6
21-Feb	84.3	83.4	83.9	82.0	82.9	81.5	81.4	82.6	81.5	79.5	77.3	72.6	68.6	67.5	66.4	66.6	66.3	67.2	67.2	69.4	71.8	73.6	73.1	73.8	75.2	84.3
22-Feb	73.9	74.0	75.9	73.5	72.8	75.2	76.1	76.6	84.7	85.8	85.7	85.1	83.3	82.9	81.8	79.2	77.8	79.4	78.4	82.7	84.8	91.5	93.7	91.3	81.1	93.7
23-Feb	87.9	87.1	89.2	94.3	95.1	96.7	97.6	97.6	95.0	89.5	87.0	85.7	85.0	83.8	82.3	80.7	81.1	82.7	80.7	80.9	80.5	82.0	82.1	82.1	86.9	97.6
24-Feb	80.8	80.6	78.6	80.6	82.8	83.9	84.7	83.0	82.4	81.1	80.4	79.8	82.8	83.1	82.4	82.8	85.5	86.6	88.6	87.4	83.8	83.2	83.4	82.9	83.0	88.6
25-Feb	82.1	83.5	82.8	83.0	82.7	78.3	77.7	79.7	80.2	DF	78.6	73.7	72.0	72.3	70.2	70.9	72.1	72.3	73.4	75.6	79.0	85.2	85.7	85.7	78.1	85.7
26-Feb	89.4	88.4	87.9	89.0	90.0	89.0	88.3	86.3	83.8	81.9	77.9	71.3	64.2	61.8	68.4	68.3	71.6	75.9	79.3	81.7	81.7	82.1	83.2	84.6	80.3	90.0
27-Feb	88.2	88.5	89.0	89.5	91.1	92.9	93.0	93.4	92.9	91.8	88.9	85.8	85.5	82.0	75.7	75.3	73.9	75.4	79.0	80.5	78.8	79.5	80.0	80.8	84.6	93.4
28-Feb	81.5	76.4	77.3	79.6	79.2	79.4	77.8	77.7	78.0	77.8	82.8	85.4	81.4	76.4	73.4	70.6	68.3	74.7	85.0	89.6	86.6	86.9	86.9	87.2	80.0	89.6
	75.0	75.1	74.9	75.3	75.2	75.4	75.5	75.8	76.1	74.6	73.2	70.9	68.5	66.5	64.8	64.2	66.1	69.2	71.8	73.3	73.7	74.2	75.4	75.4	Diurnal Average	
	89.4	88.5	89.2	94.3	95.1	96.7	97.6	97.6	95.0	91.8	88.9	85.8	85.5	83.8	82.4	82.8	85.5	86.6	88.6	89.6	86.6	91.5	93.7	91.3	Diurnal Maximum	

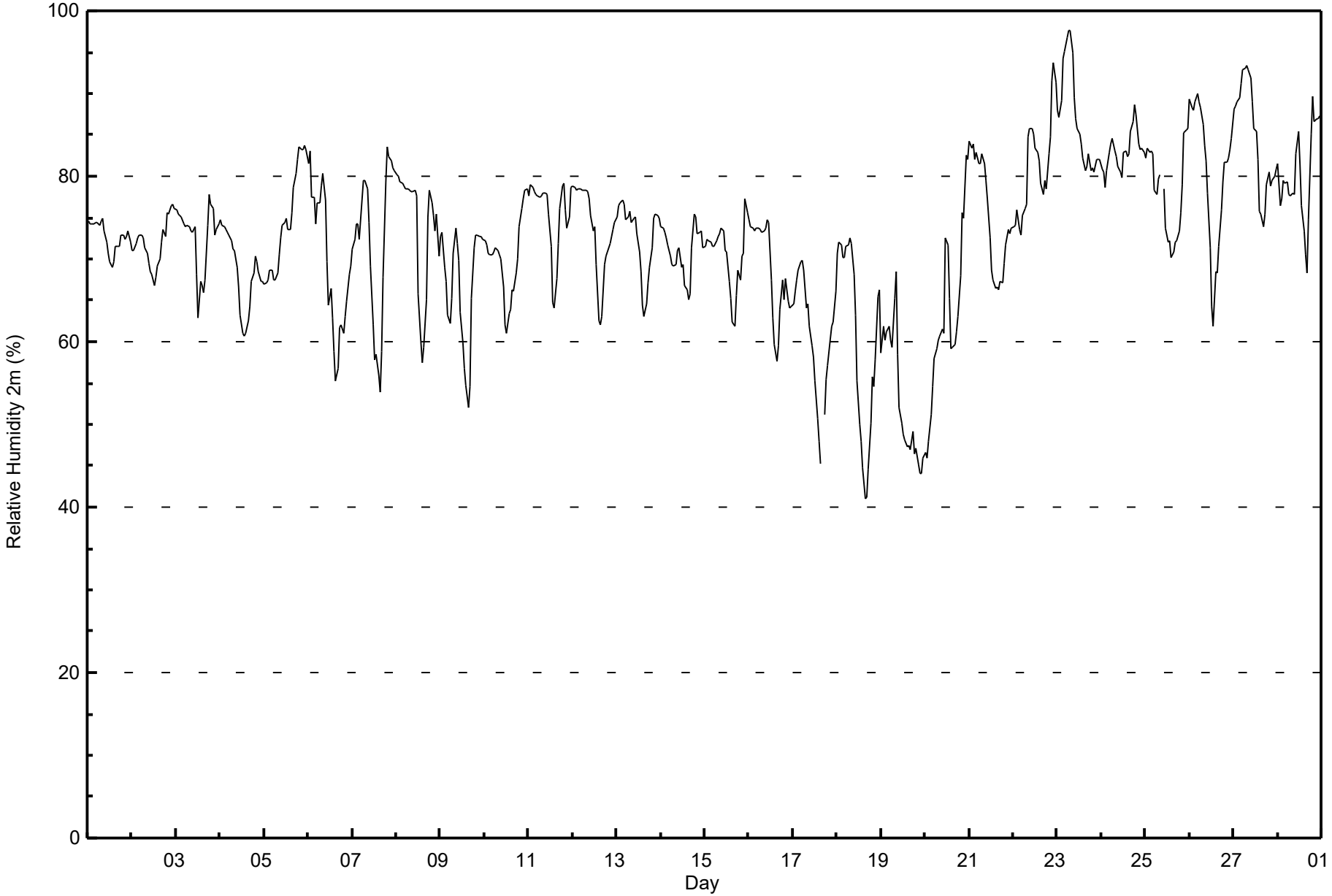
DF - DAS Failure

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Fort Hills - February 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	0	0.00	0.00
40 - 60	65	9.70	9.70
60 - 80	469	70.00	79.70
80 - 100	136	20.30	100.00

Total Number of Valid Hours: 670

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Fort Hills - February 2025

Maximum Speed: 35 km/h on Feb 1 10:00

Maximum Daily Speed Average: 27.8 km/h on Feb 1

Minimum Speed Value: 0 km/h on Feb 28 08:00

Minimum Daily Speed Average: 0.8 km/h on Feb 14

Maximum Diurnal Speed Average: 3.5 km/h at hour 20

Minimum Diurnal Speed Average: 0.7 km/h at hour 24

Monthly Average Velocity: 1.6 km/h 92.1 deg

Percentiles: P_1 = 1 P_{10} = 3 Q_1 = 5 Median = 9 Q_3 = 14 P_{90} = 20 P_{99} = 32

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Percent Operational Time:	95.1

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-Feb	N31	N32	N32	N33	N33	N32	N30	N32	N32	N35	N34	N33	N28	NNW21	NNW21	N21	N26	N23	N22	N25	NNE25	N25	N21	N23	N27.8	N35
2-Feb	N25	N26	N22	N18	N17	N19	N19	N19	N17	N19	N20	N21	N18	N16	N14	N12	NNE10	NNE6	NNE7	NW4	NNW5	W1	NW1	SW3	N13.9	N26
3-Feb	SSW4	S5	S6	S5	SSE4	SSE5	SE5	SE5	SE6	SE7	SE7	SE6	ESE10	ESE11	SE11	SE10	SE7	SSE5	S6	SSW6	SSW5	SW10	SSW8	SSW5	SSE5.5	ESE11
4-Feb	S6	SE8	SE9	SE10	SE11	SE10	SSE13	SE13	SE12	SSE13	SSE16	S18	S19	S19	SSW21	SSW21	SSW21	SSW19	SSW18	SSW18	SSW22	SSW23	SSW24	SSW24	S14.7	SSW24
5-Feb	SSW23	SSW22	S21	S21	SSW22	SSW16	S15	S15	SSE13	S14	SSE15	SSE15	S14	S14	S13	S14	S11	SSE8	SSE8	SE8	SE8	SE8	SE6	SSE7	S13.1	SSW23
6-Feb	SSE6	SSE6	SSW12	S8	SW12	SSW7	ENE1	NE1	N10	N25	N27	N22	N23	N20	N16	NW14	WNW11	WNW8	WNW6	WNW5	SW6	SSW4	SSW7	SSW6	NNW4.9	N27
7-Feb	SSW7	SSW8	S5	S7	S3	ESE5	S5	S4	S3	S3	S8	SSW11	S11	SSE10	ESE8	E7	ESE6	ESE3	W3	NW4	SSW3	S4	SSE4	S5	S4.4	SSW11
8-Feb	SSE6	SE5	SE6	SE6	SE7	SE8	SE9	SE10	SSE8	SE7	SE7	SE6	ESE3	ESE2	NNE2	NNE2	NNE4	N5	NNE14	NNE24	N28	N24	N14	N22	NE4.2	N28
9-Feb	N17	N17	N12	NNW10	NW8	NW9	N7	NW4	NNE4	NW3	N8	NNE15	NNE14	NNE8	NE6	NE5	NE2	SSW3	SSW4	S5	NNW1	SSW5	S8	S7	N4.4	N17
10-Feb	SSE7	SSE7	SSE9	SSE9	SE10	SE11	SE12	SE12	SE12	SE13	SSE13	S14	S15	SE14	ESE13	ESE9	N7	NNE7	N5	N10	N9	N10	N9	WNW3	SE5.2	S15
11-Feb	NNW5	N13	N9	N4	NW3	NNW6	NNW3	NW2	ENE2	NE4	NNW3	ENE1	SE4	NNE3	SE2	SE3	ESE4	ENE3	N2	NNE5	NE8	NE8	ESE1	WSW4	NNE2.7	N13
12-Feb	W2	SSE3	SE5	SSE5	S4	SSE6	SSE5	SSE3	SSE3	E2	ESE5	NNE2	N4	N4	NE10	NNE12	NNE14	NNE14	N16	N17	N18	N19	N21	N20	NNE5.8	N21
13-Feb	N19	N19	NNE19	N12	N4	NW4	N5	N7	NNW4	WNW4	NNW5	N6	N6	N8	NNE10	NNE14	NNE13	NNE13	NNE12	N10	N9	N9	N10	NNE11	N9.4	NNE19
14-Feb	N5	NW6	NW5	NW4	NNW3	NNW3	NW3	NNW3	S5	SE4	ESE5	ESE6	SE8	SE7	SE8	ESE7	E5	NNE3	N4	N3	NW4	W3	NNE1	W1	ENE0.8	SE8
15-Feb	SSW2	SSE6	SE8	SE5	SE5	SSE5	SE6	SSE5	SE7	SE7	ESE6	ESE9	ESE8	ESE8	E6	ESE6	ESE4	UO	N5	NE15	NNE11	NNE4	NNW6	NW3	ESE4.0	NE15
16-Feb	N4	NW2	NW2	NE2	ESE6	SE8	SSE7	SE9	SSE8	S8	S8	S10	SSE11	SSE16	SSE12	S11	S9	S7	SSE10	SSE9	SSE7	SSE10	SSE13	SSE10	SSE7.3	SSE16
17-Feb	SSE11	S7	S8	S6	S6	S6	S9	SSE13	SSE11	SSE14	SSE17	SE16	SE15	SSE15	SSE14	SSE15	DF	SSE9	SE8	SE8	SE9	SSE13	S4	SE5	SSE10.1	SSE17
18-Feb	SSE9	SSE9	SSE7	S11	S10	S9	S16	S13	S11	S11	SSW13	S14	SSE15	SSE16	S14	S14	S12	SSE12	SSE11	SE14	SSE12	S7	S7	SSE10	S11.2	SSE16
19-Feb	SSE11	SSE10	SSE10	SSE10	SSE12	SSE12	S10	S7	S7	S9	S12	SSW15	S20	S18	S17	SSE16	SSE16	SSE12	SSE17	SSE17	SSE21	SSE20	SSE20	SSE18	SSE13.7	SSE21
20-Feb	S19	SSE22	S21	S19	S18	S19	S19	S21	S25	S23	SSW21	SSW21	SSW22	S18	SSE15	SE14	ESE11	ESE11	ESE10	NE2	N7	NNW3	NW4	WSW2	S12.7	S25
21-Feb	SW3	N1	N2	NW1	SSW2	NW1	NNW3	W2	NNW5	N12	N14	N14	N14	N14	N16	NNE17	NNE16	NNE13	NNE12	N12	N9	N11	N10	N12	N8.4	NNE17
22-Feb	NNW11	NNW9	NNW6	N6	N6	NNW6	NW6	WSW1	WSW3	SSE1	SW3	S2	S7	SSW10	SSW11	S17	S15	SSE15	S15	SE8	ESE8	SE9	SE12	SE10	S3.4	S17
23-Feb	SE13	SE12	SE11	SE10	SE9	SSE9	SE8	ESE3	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	----	SE13
24-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	SSE7	SE10	SSE8	SSW8	SSE4	ENE4	N12	N17	NNE16	N19	NNE21	----	NNE21
25-Feb	N19	N16	NNE14	NNE16	NNE16	NNE12	NNE11	NNE8	NNE10	DF	N9	N5	N5	NE5	NE2	N4	N7	NE5	NE5	NNW4	NNW7	NNW6	UO	SE7	NNE7.9	N19
26-Feb	SSE13	SE12	SE8	ESE8	N4	NNE10	N6	N14	N10	N9	N7	N4	ESE2	SW0	NNE7	N10	N11	NNE9	N9	NNE9	N9	N13	N14	N15	NNE5.8	N15
27-Feb	N12	N11	N6	N3	NE2	WNW3	ESE2	SSW4	SSW4	S9	S14	SSW2	N17	NNE20	NNE20	NNE21	NNE17	NNE16	NNE17	NNE17	NNE17	N14	NNE6	NNW4	NNE7.7	NNE21
28-Feb	ENE3	N5	N4	NE1	ESE5	SE4	ESE4	E0	W3	SE3	SE8	SE7	SE4	SE4	SE4	ESE6	E4	ESE7	SSE7	S9	S7	SSE9	SSE10	SE10	SE3.9	SSE10
	NE1.1	ENE1.4	E1.5	ESE1.6	SE1.7	SE1.5	SE2.1	SE1.9	SE1.7	SE1.8	SE1.8	SE1.8	ESE2.4	SE3.1	ESE3.5	ESE3.0	ENE2.1	ENE2.5	ENE2.4	NNE3.5	NNE3.5	NNE2.2	NNE0.9	NE0.7	Diurnal Average	
	N31	N32	N32	N33	N33	N32	N30	N32	N32	N35	N34	N33	N28	NNW21	NNW21	N21	N26	N23	N22	N25	N28	N25	SSW24	SSW24	Diurnal Maximum	

DF - DAS Failure UO - Unstable Operation

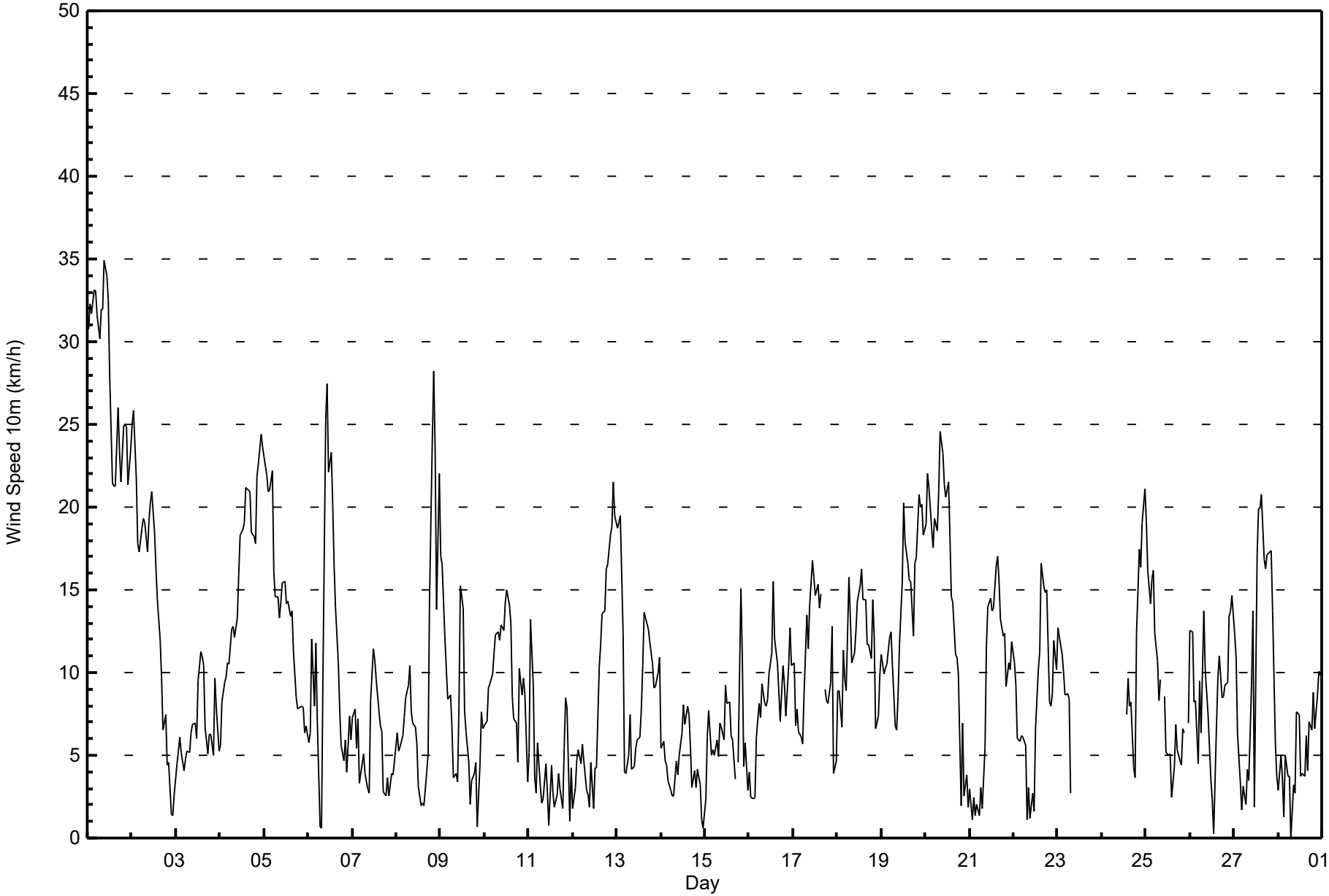
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Fort Hills - February 2025



Wind Speed 10m (WS10) - km/h
Fort Hills - February 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	178	27.86	27.86
6 - 11	235	36.78	64.63
12 - 19	158	24.73	89.36
20 - 28	56	8.76	98.12
29 - 38	12	1.88	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Fort Hills - February 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	10	12	6	4	14	16	13	15	13	4	4	7	4	18	15	178
6 - 11	35	16	4	0	1	22	51	40	37	11	2	0	0	3	4	9	235
12 - 19	44	25	1	0	0	1	14	33	31	7	1	0	0	0	1	0	158
20 - 28	24	6	0	0	0	0	0	4	7	13	0	0	0	0	0	2	56
29 - 38	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	138	57	17	6	5	37	81	90	90	44	7	4	7	7	23	26	639

Total Number of Valid Hours: 639

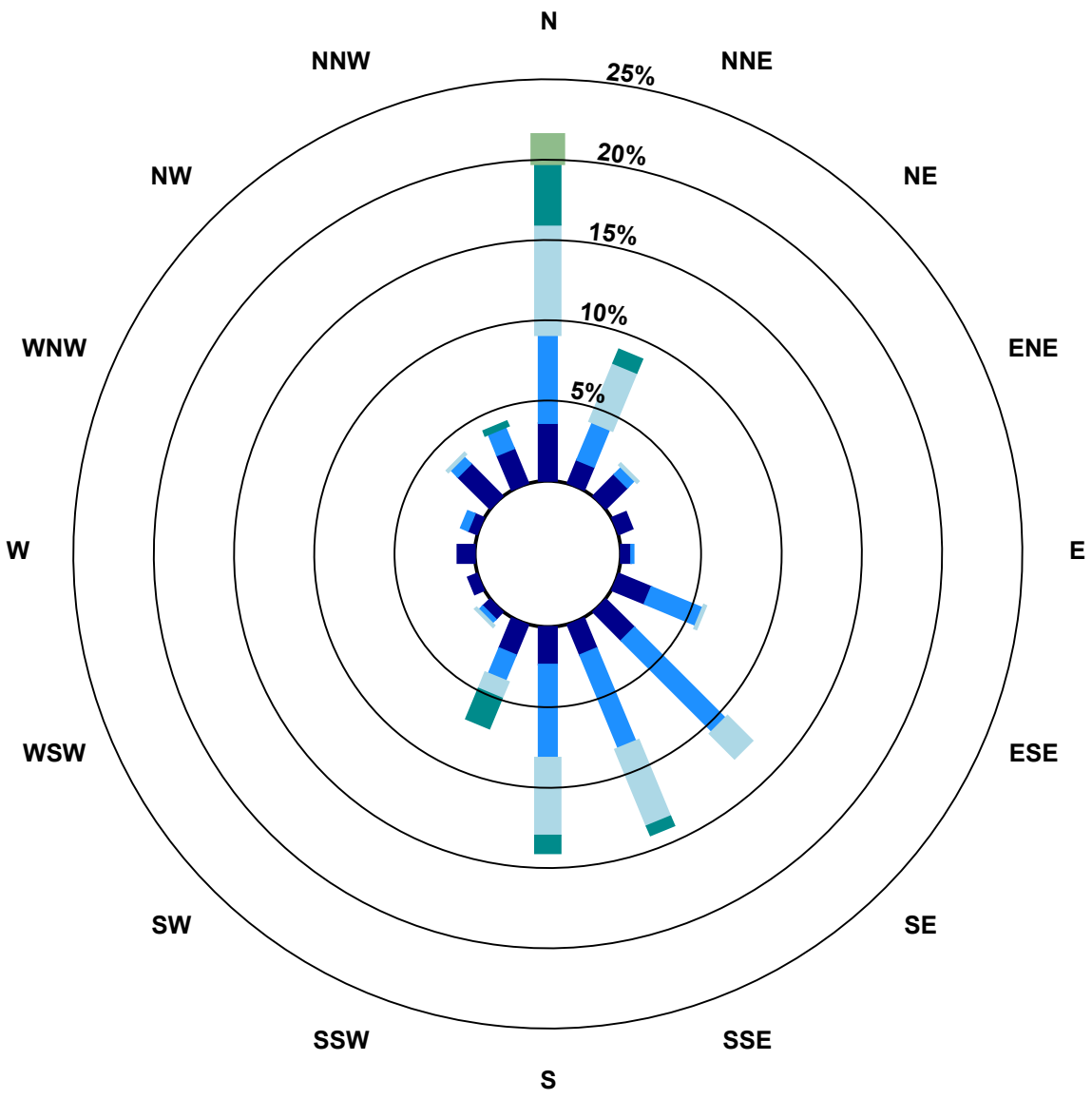
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Wind Speed 10m (WS10) - km/h

Fort Hills



Classes (km/h)

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

Total Number of Valid Hours: 639

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Fort Hills - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8 km/h on Feb 6 09:00

Minimum Value: 1 km/h on Feb 9 20:00

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

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	0
Percent Operational Time:	95.1

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

DF - DAS Failure UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Fort Hills - February 2025

Direction of Maximum Speed: 0 deg on Feb 1 10:00
Direction of Maximum Daily Speed Average: 1.1 deg on Feb 1

Direction of Minimum Speed: 98 deg on Feb 28 08:00
Direction of Minimum Daily Speed Average: 0.8 deg on Feb 14

Monthly Average Direction: 92.1 deg

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Percent Operational Time:	95.1

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-Feb	4	4	1	358	1	0	1	3	2	0	0	359	356	345	347	354	359	3	5	11	14	11	3	1	1.1
2-Feb	3	8	4	5	8	7	3	1	2	6	5	7	2	7	10	11	21	20	18	320	329	279	325	236	4.7
3-Feb	211	183	178	171	165	149	141	142	136	142	142	139	113	121	125	124	133	154	187	195	208	227	211	193	157.2
4-Feb	170	144	137	131	139	142	152	140	143	149	160	173	182	181	192	194	199	200	199	198	202	204	202	204	180.3
5-Feb	204	198	189	186	196	196	183	177	168	173	167	165	171	182	172	180	172	160	150	132	127	130	138	164	177.2
6-Feb	159	158	203	182	221	210	61	37	8	8	360	353	8	2	356	323	300	301	295	299	233	207	206	211	333.2
7-Feb	205	192	170	187	169	121	183	180	184	188	179	194	191	163	112	101	102	122	280	313	197	182	159	173	171.5
8-Feb	147	142	139	138	136	142	144	143	149	144	138	129	108	109	33	31	12	11	16	14	4	1	351	0	46.6
9-Feb	4	359	358	328	318	314	349	322	15	306	4	13	19	30	38	35	38	196	195	184	330	192	184	179	357.1
10-Feb	167	159	160	156	144	136	138	138	140	141	161	176	176	132	121	109	6	19	356	351	353	358	1	294	134.2
11-Feb	337	3	3	10	308	327	335	321	73	46	340	67	144	27	143	127	109	63	7	15	46	42	116	238	19.0
12-Feb	277	165	145	162	174	155	162	166	166	86	110	21	10	359	44	19	13	14	8	359	3	2	1	5	16.4
13-Feb	353	7	14	2	350	305	357	9	331	292	341	358	355	355	15	23	15	17	19	6	357	3	5	13	4.2
14-Feb	9	306	314	316	329	342	309	332	181	144	117	114	128	144	142	117	79	27	357	354	310	260	14	261	70.9
15-Feb	210	156	139	135	138	150	139	148	127	124	114	117	116	113	101	106	121	UO	4	38	26	19	334	322	104.1
16-Feb	354	321	314	54	123	131	152	142	162	175	187	175	147	150	150	180	183	188	155	155	162	159	162	164	159.5
17-Feb	164	172	179	178	178	189	171	160	158	157	157	142	146	156	158	167	DF	155	134	135	137	155	182	138	157.4
18-Feb	155	162	158	183	175	175	176	191	186	185	195	176	168	168	170	176	175	162	153	138	149	176	169	158	170.3
19-Feb	159	162	154	158	160	156	170	191	189	179	183	198	181	183	173	163	162	157	154	150	155	157	167	166	166.8
20-Feb	169	168	171	177	180	183	188	187	188	189	193	198	196	188	157	125	115	112	109	56	357	347	314	246	175.5
21-Feb	215	3	10	313	213	312	332	281	341	352	349	359	354	11	8	14	15	16	18	7	5	358	359	353	1.6
22-Feb	347	331	330	353	9	327	321	250	243	147	220	183	186	199	197	179	183	166	170	142	121	131	136	138	172.8
23-Feb	145	142	142	136	139	155	126	112	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--
24-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	155	131	158	201	152	78	2	6	12	8	13	--
25-Feb	11	9	25	24	21	31	28	21	32	DF	2	6	11	49	38	1	2	44	41	327	333	327	UO	142	17.9
26-Feb	147	146	145	121	359	16	349	10	358	349	357	353	119	218	20	7	4	24	10	14	2	0	357	356	16.2
27-Feb	356	355	357	350	54	299	117	192	205	177	175	197	6	20	24	23	24	24	16	24	18	10	25	341	17.5
28-Feb	61	357	354	55	115	128	117	98	280	136	130	127	140	128	128	104	94	110	147	178	178	148	149	144	132.3
	43.6	57.1	95.1	120.2	138.7	132.5	133.7	133.5	133.0	124.5	129.1	130.2	123.6	127.6	106.7	101.4	62.8	74.7	61.7	33.6	24.0	25.4	29.6	41.1	
	Diurnal Average																								

DF - DAS Failure UO - Unstable Operation

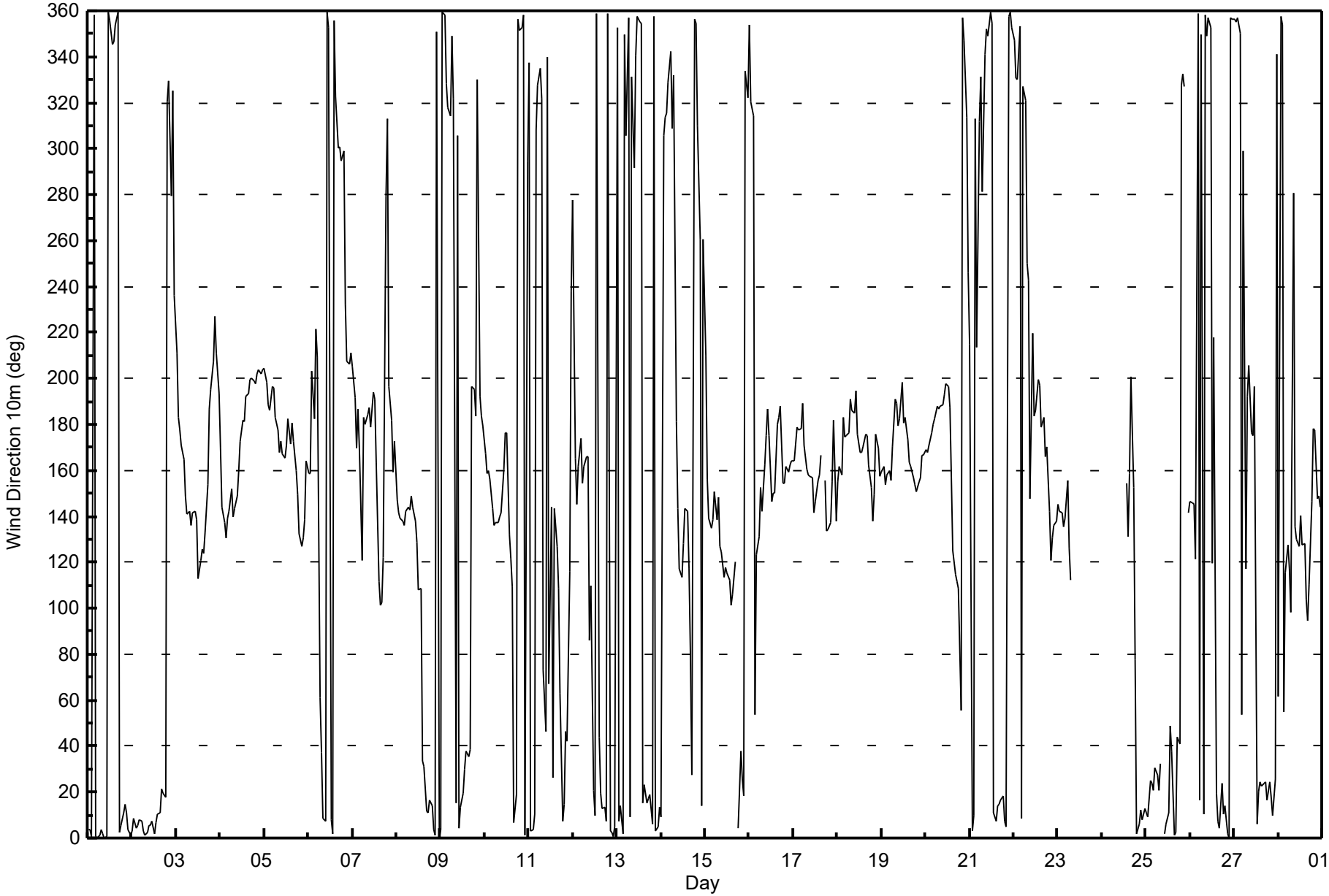
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Fort Hills - February 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Fort Hills - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 97 deg on Feb 11 12:00

Minimum Value: 2 deg on Feb 19 04:00

Percentiles: P_1 = 5 P_{10} = 7 Q_1 = 10 Median = 14 Q_3 = 23 P_{90} = 43 P_{99} = 88

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	0
Percent Operational Time:	95.1

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-Feb	22	21	24	24	24	24	22	20	21	23	21	22	23	18	19	20	22	21	19	14	11	15	22	24	24
2-Feb	21	16	19	18	16	18	23	23	22	19	20	17	21	20	14	15	10	12	8	28	27	47	25	78	78
3-Feb	11	27	6	12	29	31	15	9	9	7	7	24	15	7	9	7	20	24	16	35	27	10	8	22	35
4-Feb	22	10	11	10	7	8	7	9	8	9	7	9	8	9	8	8	7	7	7	7	7	8	7	7	22
5-Feb	7	7	9	7	9	12	11	8	8	8	7	7	9	9	9	8	9	9	8	10	8	8	10	14	14
6-Feb	26	27	14	23	12	22	88	93	36	18	21	23	18	21	23	21	11	13	10	23	12	17	11	17	93
7-Feb	11	13	21	34	64	26	25	42	81	56	18	8	11	18	26	24	20	32	52	26	91	33	43	26	91
8-Feb	8	12	19	13	8	10	6	6	8	7	9	15	30	49	37	34	28	20	13	13	18	19	19	19	49
9-Feb	19	21	23	10	10	13	23	47	57	38	16	14	14	22	20	20	58	13	7	10	91	32	10	13	91
10-Feb	12	16	12	10	8	10	8	6	7	8	13	11	11	18	16	19	24	18	32	22	18	20	19	53	53
11-Feb	25	15	20	64	56	23	43	59	58	15	35	97	25	42	30	32	13	29	20	22	7	8	78	18	97
12-Feb	17	27	7	21	12	13	23	48	50	61	25	77	27	51	9	10	9	9	15	17	16	17	18	17	77
13-Feb	20	20	14	20	55	46	58	25	43	27	27	19	19	19	18	10	11	9	8	15	20	19	17	10	58
14-Feb	27	12	16	14	32	26	23	34	14	26	13	14	10	12	12	13	22	36	18	39	21	38	69	85	85
15-Feb	40	19	9	22	18	15	11	18	11	11	16	12	13	13	24	20	32	UO	31	10	11	31	18	28	40
16-Feb	11	35	52	48	13	6	10	7	22	13	11	11	12	9	11	14	11	12	10	9	10	8	6	10	52
17-Feb	10	12	11	11	10	8	20	6	6	8	9	8	9	11	11	9	DF	11	14	15	9	8	70	16	70
18-Feb	6	21	17	7	7	10	5	5	8	12	8	12	10	11	10	8	11	5	9	6	5	10	11	5	21
19-Feb	3	4	4	2	5	3	12	14	11	13	14	18	11	10	9	10	7	8	5	5	6	7	6	6	18
20-Feb	7	7	6	7	7	7	8	8	8	8	9	9	9	12	18	7	14	15	18	76	24	62	35	67	76
21-Feb	63	77	25	77	76	86	44	55	21	12	14	14	15	11	13	10	8	9	10	11	22	14	14	13	86
22-Feb	12	14	21	15	11	31	18	64	22	34	71	88	25	12	12	11	10	11	8	10	17	10	8	14	88
23-Feb	9	8	11	10	9	9	12	61	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	61
24-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	30	9	31	20	45	40	13	12	11	12	11	45
25-Feb	12	12	11	11	10	11	14	14	11	DF	12	17	21	36	47	42	11	26	12	31	8	14	UO	9	47
26-Feb	7	7	12	10	52	19	38	9	12	14	15	29	60	88	17	12	10	9	13	11	11	12	12	12	88
27-Feb	13	11	14	16	82	40	84	56	80	33	19	76	13	10	11	9	10	10	10	11	9	12	24	37	84
28-Feb	33	18	25	93	30	12	30	90	35	62	12	14	31	40	52	21	28	17	13	11	9	5	7	6	93
	63	77	52	93	82	86	88	93	81	62	71	97	60	88	52	42	58	45	52	76	91	62	78	85	
	Diurnal Maximum																								

DF - DAS Failure UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS25
WASKŌW OHCI PIMÂTISIWIN
FEBRUARY 2025

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

March 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - WASKŌW OHCI PIMÂTISIWIN (AMS25)
FEBRUARY 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	639	31	33	99.7	24.9	0	4.1	0
H2S(ppb) Average	613	33	59	96.13	1.5	0	0.5	0
Temperature 2 m (C) Average	672	0	0	100	0.5	0	-5.4	0
Relative Humidity (%) Average	672	0	0	100	100	-	90.7	-
Wind Speed 10 m (km/h) Average	638	0	34	94.94	15	0	12	0
Wind Direction 10 m (deg) Average	638	0	34	94.94	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - WASKŌW OHCI PIMÂTISIWIN (AMS25)
FEBRUARY 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	639	0.68	1.9	-	0	0	0	0.1	0.4	1.5	24.9
H2S (ppb) Average	613	0.28	0.2	-	0	0.1	0.1	0.2	0.4	0.6	1.5
Temperature 2 m (C) Average	672	-18.67	8.7	-	-38.3	-30.5	-24.6	-19.7	-10.8	-7	0.5
Relative Humidity (%) Average	672	72.42	9.9	-	40	59.8	67.6	72.8	77.6	84	100
Wind Speed 10 m (km/h) Average	638	4.6	3	-	0	1	2	4	7	9	15
Wind Direction 10 m (deg) Average	638	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - WASKŌW OHCI PIMÂTISIWIN (AMS25)

FEBRUARY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL GASEOUS ANALYZERS	20 Feb 2025 13:00	20 Feb 2025 15:00	2	Maintenance - WBEA internal audit
H2S	11 Feb 2025 11:00	12 Feb 2025 10:00	24	Maintenance - station operator activities
Wind Speed, Wind Direction	02 Feb 2025 20:00	02 Feb 2025 23:00	4	Flat line in sensor output signal
Wind Speed, Wind Direction	03 Feb 2025 02:00	03 Feb 2025 08:00	7	Flat line in sensor output signal
Wind Speed, Wind Direction	09 Feb 2025 21:00	09 Feb 2025 21:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	12 Feb 2025 02:00	12 Feb 2025 03:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction	12 Feb 2025 09:00	12 Feb 2025 09:00	1	Maintenance - station operator activities
Wind Speed, Wind Direction	14 Feb 2025 09:00	14 Feb 2025 09:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	15 Feb 2025 07:00	15 Feb 2025 07:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	15 Feb 2025 18:00	15 Feb 2025 20:00	3	Flat line in sensor output signal
Wind Speed, Wind Direction	16 Feb 2025 01:00	16 Feb 2025 02:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction	16 Feb 2025 05:00	16 Feb 2025 05:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	16 Feb 2025 07:00	16 Feb 2025 07:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	16 Feb 2025 09:00	16 Feb 2025 09:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	17 Feb 2025 20:00	17 Feb 2025 20:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	18 Feb 2025 19:00	18 Feb 2025 20:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction	19 Feb 2025 09:00	19 Feb 2025 09:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	20 Feb 2025 20:00	20 Feb 2025 20:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	21 Feb 2025 07:00	21 Feb 2025 07:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	23 Feb 2025 05:00	23 Feb 2025 06:00	2	Flat line in sensor output signal
Wind Speed, Wind Direction	23 Feb 2025 21:00	23 Feb 2025 21:00	1	Flat line in sensor output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Waskow ohci Pimatisiwin - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 24.9 ppb on Feb 18 16:00 Maximum Daily Average: 4.1 ppb on Feb 18

Minimum Value: 0.0 ppb on Feb 2 17:00 Minimum Daily Average: 0.0 ppb on Feb 7
Maximum Diurnal Average: 2.2 ppb at hour 16 Minimum Diurnal Average: 0.2 ppb at hour 2
Monthly Average: 0.68 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.4 P_{90} = 1.5 P_{99} = 10.5

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	31
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-Feb	0.1	Z	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.2
2-Feb	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1
3-Feb	0.0	0.0	0.0	Z	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
4-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.3	0.3	0.1	0.7	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.7
5-Feb	0.1	0.1	0.1	0.2	0.2	Z	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.2
6-Feb	0.1	Z	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
7-Feb	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.2	0.2	0.1	0.2	0.1	0.0	0.0	0.4	0.2	0.0	0.0	0.0	0.0	0.1	0.4
9-Feb	0.0	0.0	0.0	Z	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	2.6	4.1	3.2	0.9	0.4	0.3	0.2	0.1	0.0	0.0	0.6	4.1
10-Feb	0.0	0.0	0.0	0.0	Z	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.5	2.5	3.5	3.6	1.7	0.8	0.6	0.4	0.7	3.6
11-Feb	0.3	0.3	0.3	0.2	0.2	Z	0.3	0.3	0.4	0.3	0.3	0.3	0.4	0.7	0.7	0.5	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.7
12-Feb	Z	0.3	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.5	2.2	2.8	3.2	1.9	1.9	1.8	2.7	2.5	2.0	1.4	0.9	0.5	0.3	1.2	3.2
13-Feb	0.2	Z	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.3	0.3	0.4	0.3	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.1	0.4
14-Feb	0.2	0.1	Z	0.2	0.2	0.2	0.1	0.1	0.2	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.3
15-Feb	0.1	0.1	0.2	Z	0.3	0.3	0.3	0.3	0.4	0.6	0.5	0.4	0.2	0.2	0.2	0.2	0.2	0.4	0.3	0.3	0.2	0.1	0.1	0.1	0.3	0.6
16-Feb	0.1	0.1	0.2	0.1	Z	0.1	0.1	0.1	0.3	0.2	0.7	0.6	1.5	11.8	10.0	7.7	4.1	1.7	0.6	0.4	0.2	0.2	0.1	0.8	1.8	11.8
17-Feb	3.3	0.5	0.3	0.3	0.3	Z	0.3	0.2	0.8	2.3	4.1	4.7	4.2	5.0	4.7	1.4	0.5	0.3	0.2	0.1	0.1	0.0	0.0	0.0	1.5	5.0
18-Feb	Z	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	1.0	12.9	5.0	9.1	16.8	24.9	13.5	3.2	2.0	2.3	1.0	0.6	0.4	0.5	4.1	24.9
19-Feb	0.5	Z	0.8	0.8	0.5	0.4	0.4	0.4	0.6	0.9	C	C	C	2.3	1.1	2.8	4.9	3.4	1.4	0.5	1.7	5.1	3.7	0.9	1.7	5.1
20-Feb	0.6	0.6	Z	10.8	6.8	1.3	0.6	0.6	0.6	0.6	0.6	0.9	0.8	M	M	0.8	1.3	2.1	1.5	1.0	0.7	0.4	0.3	0.3	1.6	10.8
21-Feb	0.4	0.3	0.4	Z	0.5	0.6	0.5	0.6	0.7	1.0	1.5	0.9	0.6	0.5	0.5	0.4	0.3	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.5	1.5
22-Feb	0.0	0.0	0.1	0.1	Z	0.1	0.2	0.1	0.2	0.3	0.4	2.3	4.0	3.6	2.3	1.5	0.9	0.5	0.1	0.2	0.1	0.1	0.1	0.2	0.8	4.0
23-Feb	0.4	0.5	0.4	0.4	0.3	Z	0.2	0.2	0.3	0.4	0.6	0.6	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.3	0.2	0.2	0.3	0.6
24-Feb	Z	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.7	1.7	2.9	3.7	1.2	1.1	0.8	0.6	0.4	0.4	1.8	2.8	1.8	1.0	3.7
25-Feb	0.6	Z	0.3	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.6
26-Feb	0.1	0.1	Z	0.0	0.1	0.1	0.1	0.3	0.4	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
27-Feb	0.0	0.0	0.0	Z	0.1	0.2	0.2	0.1	0.5	0.8	0.3	0.4	0.6	0.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8
28-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.2	0.2	1.1	2.0	8.9	12.1	7.8	5.7	3.3	1.0	0.5	0.3	0.2	0.1	1.9	12.1
	0.3	0.2	0.2	0.6	0.5	0.2	0.2	0.2	0.2	0.4	0.5	1.1	0.9	1.6	2.0	2.2	1.5	0.9	0.6	0.5	0.3	0.4	0.4	0.2	Diurnal Average	
	3.3	0.6	0.8	10.8	6.8	1.3	0.6	0.6	0.8	2.3	4.1	12.9	5.0	11.8	16.8	24.9	13.5	5.7	3.5	3.6	1.7	5.1	3.7	1.8	Diurnal Maximum	

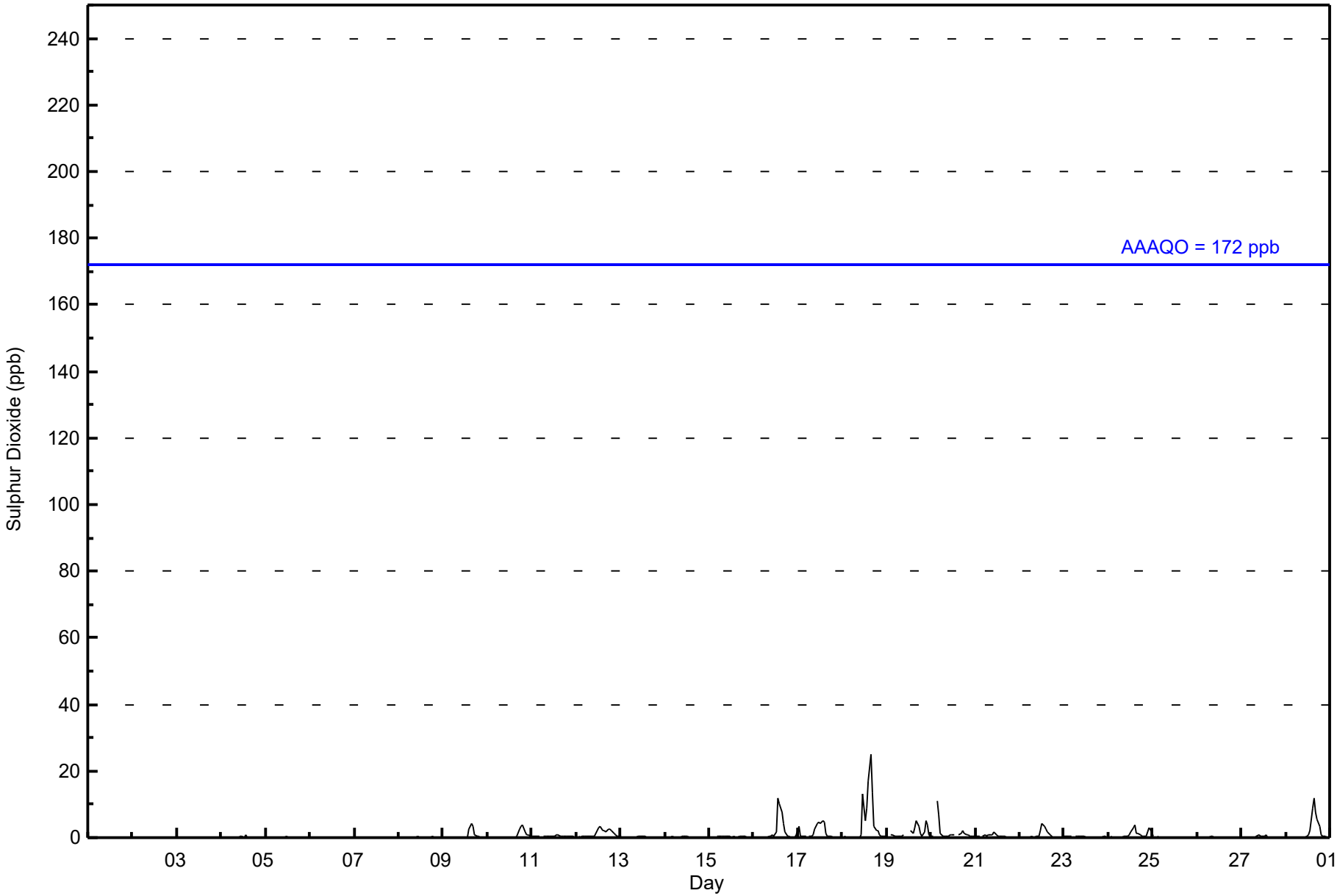
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Waskow ohci Pimatisiwin - February 2025



Sulphur Dioxide (SO_2) - ppb

Waskow ohci Pimatisiwin - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	632	98.90	98.90
11 - 20	6	0.94	99.84
21 - 60	1	0.16	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: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Waskow ohci Pimatisiwin - February 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	94	48	23	12	5	17	44	133	53	20	23	18	18	22	22	49	601
11 - 20	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	6
21 - 60	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	94	48	23	12	5	17	44	140	53	20	23	18	18	22	22	49	608

Total Number of Valid Hours: 608

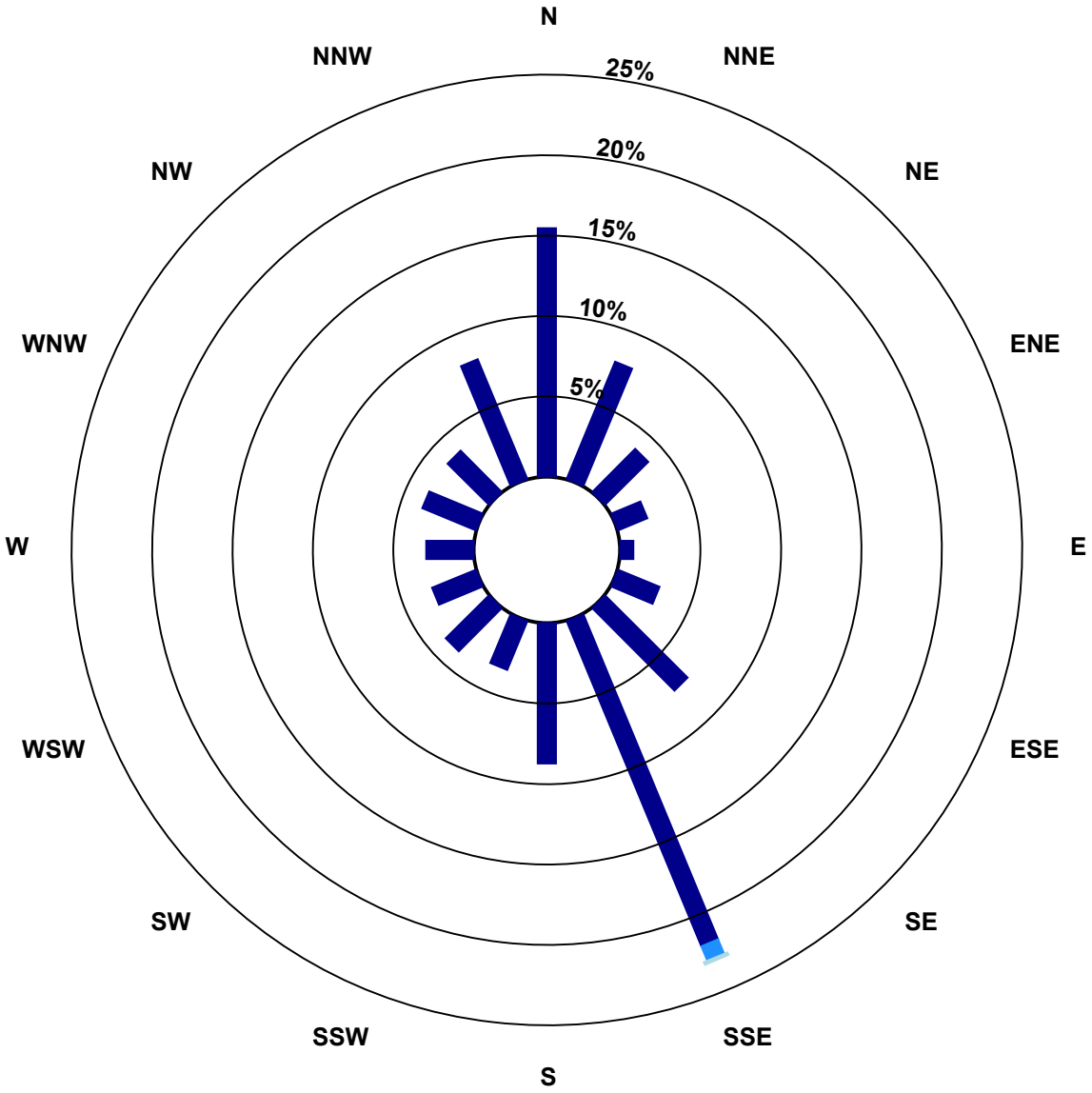
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Sulphur Dioxide (SO_2) - ppb

Waskow ohci Pimatisiwin



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

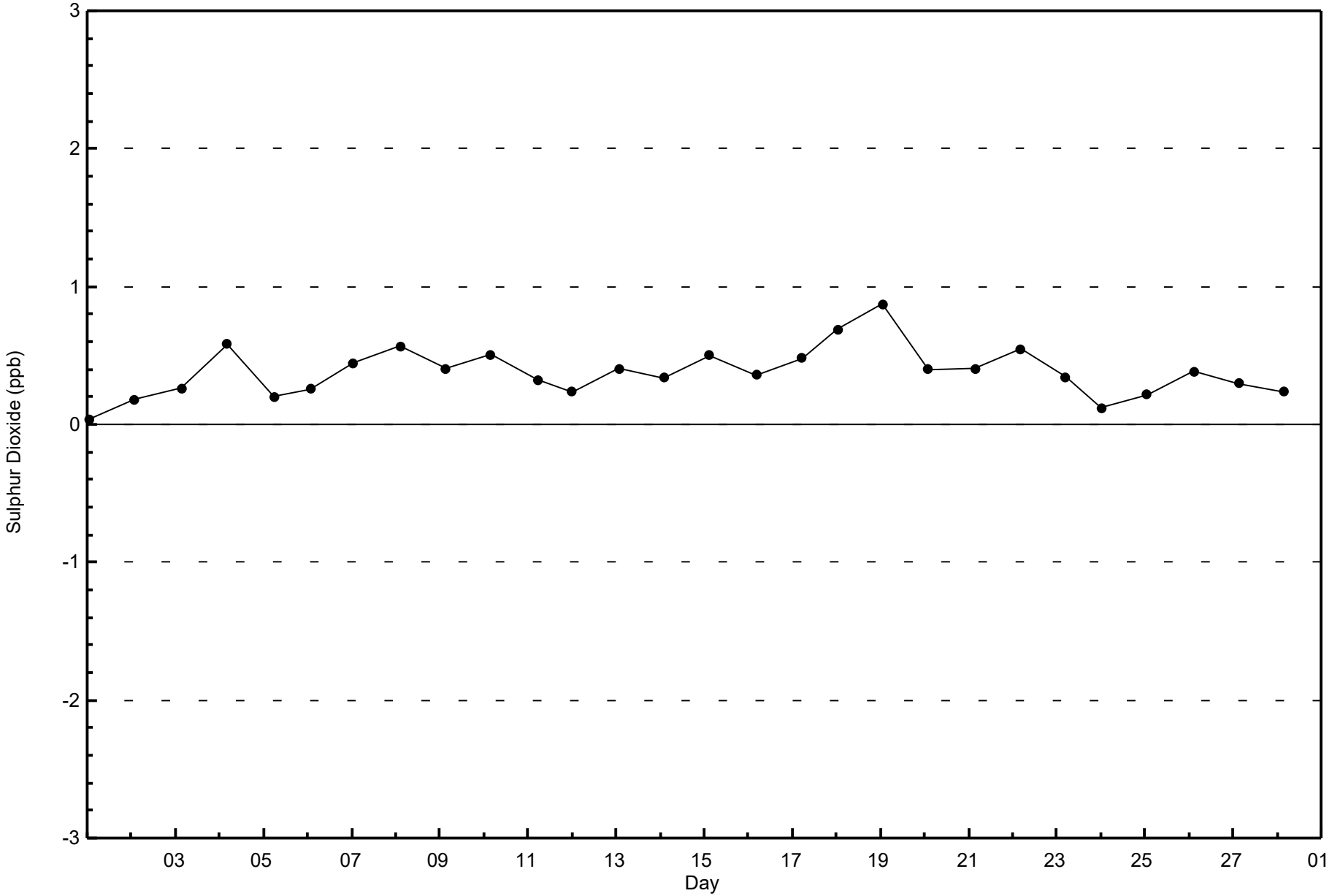
Total Number of Valid Hours: 608

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Waskow ohci Pimatisiwin - February 2025

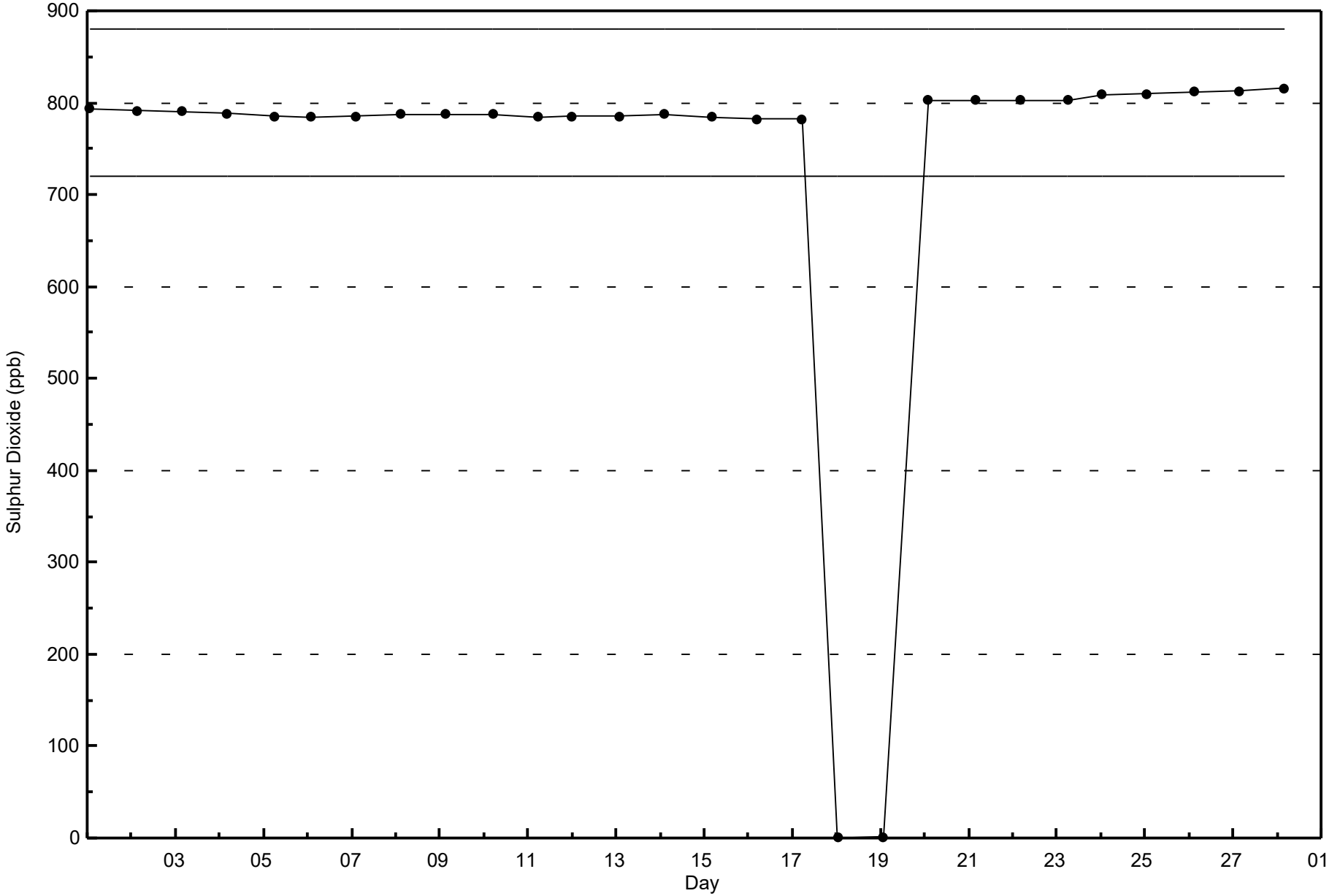


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Waskow ohci Pimatisiwin - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Waskow ohci Pimatisiwin - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.5 ppb on Feb 24 14:00 Maximum Daily Average: 0.5 ppb on Feb 23

Minimum Value: 0.0 ppb on Feb 7 05:00 Minimum Daily Average: 0.1 ppb on Feb 7
Maximum Diurnal Average: 0.4 ppb at hour 11 Minimum Diurnal Average: 0.2 ppb at hour 1
Monthly Average: 0.28 ppb Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.1 Median = 0.2 Q_3 = 0.4 P_{90} = 0.6 P_{99} = 1.2

Hours in Service:	672
Hours of Data:	613
Hours of Missing Data:	59
Hours of Calibration:	33
Percent Operational Time:	96.1

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-Feb	0.2	0.2	Z	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2
2-Feb	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
3-Feb	0.1	0.2	0.2	0.1	Z	0.3	0.1	0.2	0.2	0.2	0.3	0.2	0.1	0.2	0.2	0.3	0.2	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.2	0.3
4-Feb	0.0	0.2	0.2	0.3	0.3	Z	0.4	0.3	0.3	0.4	0.3	0.3	0.2	0.3	0.2	0.1	0.0	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.4
5-Feb	Z	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2
6-Feb	0.1	0.1	Z	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
7-Feb	0.1	0.0	Z	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2
8-Feb	0.2	0.2	0.2	Z	0.4	0.5	0.6	0.6	0.6	0.6	0.8	0.6	0.7	0.6	0.5	0.3	0.3	0.5	0.9	0.5	0.2	0.2	0.1	0.1	0.4	0.9
9-Feb	0.1	0.1	0.1	0.1	Z	0.2	0.3	0.3	0.2	0.3	0.4	0.3	0.1	0.1	0.2	0.3	0.4	0.4	0.3	0.4	0.4	0.3	0.4	0.4	0.3	0.4
10-Feb	0.4	0.4	0.4	0.3	0.3	Z	0.4	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.6	0.5	0.4	0.4	0.3	0.4	0.3	0.6
11-Feb	Z	0.6	0.5	0.5	0.5	0.5	0.5	0.5	C	C	M	M	M	M	M	M	M	M	M	M	M	M	M	M	--	0.6
12-Feb	M	M	M	M	M	M	M	M	M	M	C	C	C	C	0.3	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	--	0.3
13-Feb	0.2	0.2	Z	0.3	0.3	0.3	0.3	0.3	0.4	0.6	0.4	0.5	0.4	0.3	0.2	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.6
14-Feb	0.3	0.2	0.3	Z	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.2	0.2	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.4
15-Feb	0.3	0.4	0.4	0.7	Z	0.8	0.7	0.9	1.0	1.3	1.1	0.8	0.6	0.3	0.1	0.1	0.1	0.2	0.3	0.3	0.1	0.2	0.2	0.2	0.5	1.3
16-Feb	0.2	0.2	0.2	0.2	0.1	Z	0.2	0.2	0.3	0.3	0.5	0.4	0.4	0.5	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.5
17-Feb	Z	0.1	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.3	0.3	0.2	0.2	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.3
18-Feb	0.2	Z	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.6	0.4	0.2	0.2	0.5	0.6	0.3	0.3	0.4	0.3	0.4	0.3	0.3	0.3	0.6
19-Feb	0.3	0.3	Z	0.3	0.4	0.3	0.4	0.4	0.4	0.3	0.4	0.5	0.2	0.3	0.1	0.2	0.4	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.3	0.5
20-Feb	0.1	0.1	0.1	Z	0.5	0.1	0.2	0.3	0.2	0.3	0.1	0.2	M	M	0.2	0.2	0.5	0.5	0.6	0.6	0.7	0.6	0.6	0.6	0.3	0.7
21-Feb	0.6	0.6	0.7	0.7	Z	0.8	0.8	0.8	0.8	1.0	1.4	0.5	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.5	1.4
22-Feb	0.3	0.2	0.3	0.2	0.2	Z	0.5	0.4	0.4	0.5	0.6	0.9	0.9	0.9	0.9	0.7	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.9
23-Feb	Z	1.1	1.1	1.1	1.2	1.3	1.3	1.2	1.1	0.5	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	0.5	1.3
24-Feb	0.1	Z	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.4	0.3	0.4	1.0	1.5	0.6	0.4	0.5	0.5	0.5	0.4	0.4	0.5	0.4	0.3	0.4	1.5
25-Feb	0.2	0.2	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	0.2	0.2	0.3	0.2	0.3	0.4	0.3	0.3	0.4	0.2	0.4
26-Feb	0.4	0.3	0.6	Z	0.6	0.7	0.7	0.9	0.7	0.2	0.2	0.3	0.2	0.2	0.4	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.4	0.9
27-Feb	0.2	0.2	0.2	0.1	Z	0.2	0.2	0.2	0.5	0.6	0.3	0.2	0.3	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.6
28-Feb	0.1	0.2	0.1	0.1	0.1	Z	0.1	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.4	0.6	0.4	0.3	0.2	0.2	0.2	0.2	0.3	0.6
	0.2	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	Diurnal Average	
	0.6	1.1	1.1	1.1	1.2	1.3	1.3	1.2	1.1	1.3	1.4	0.9	1.0	1.5	0.9	0.7	0.6	0.6	0.9	0.6	0.7	0.6	0.6	0.6	Diurnal Maximum	

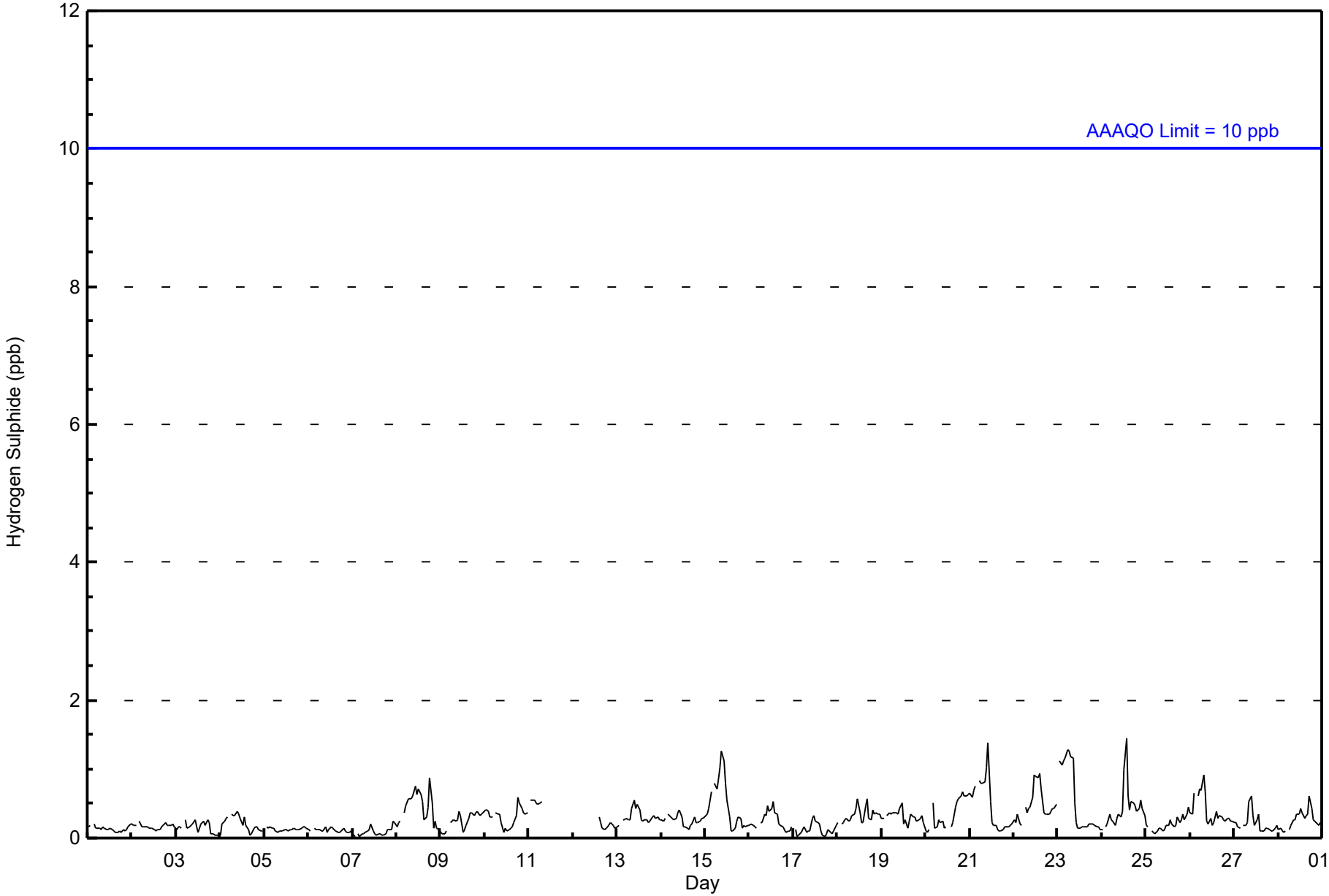
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Waskow ohci Pimatisiwin - February 2025



Hydrogen Sulphide (H_2S) - ppb

Waskow ohci Pimatisiwin - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	613	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: 613

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Waskow ohci Pimatisiwin - February 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	96	43	22	11	3	16	42	140	51	19	21	14	20	18	21	46	583
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	96	43	22	11	3	16	42	140	51	19	21	14	20	18	21	46	583

Total Number of Valid Hours: 583

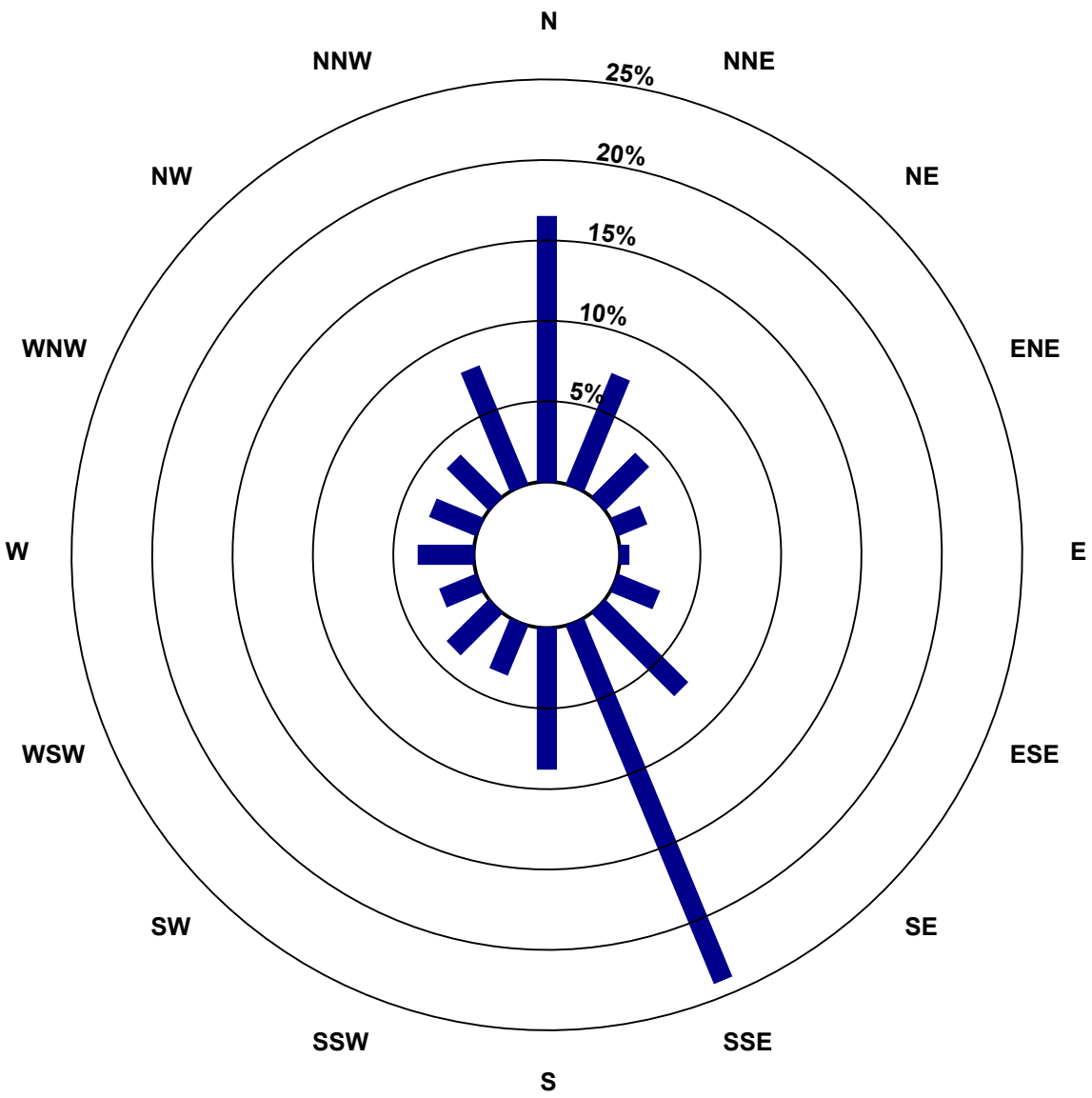
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Hydrogen Sulphide (H_2S) - ppb

Waskow ohci Pimatisiwin



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

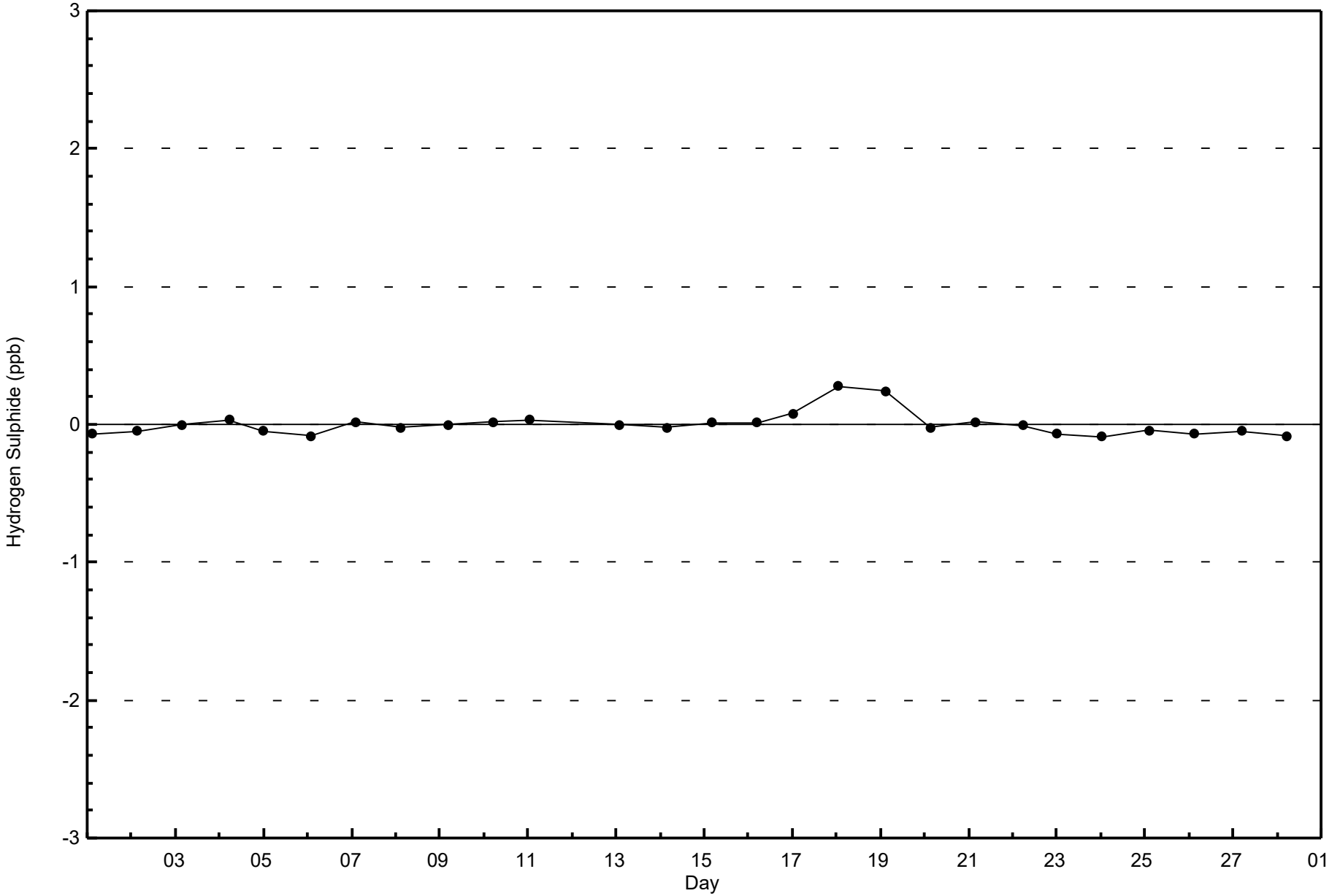
Total Number of Valid Hours: 583

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Waskow ohci Pimatisiwin - February 2025

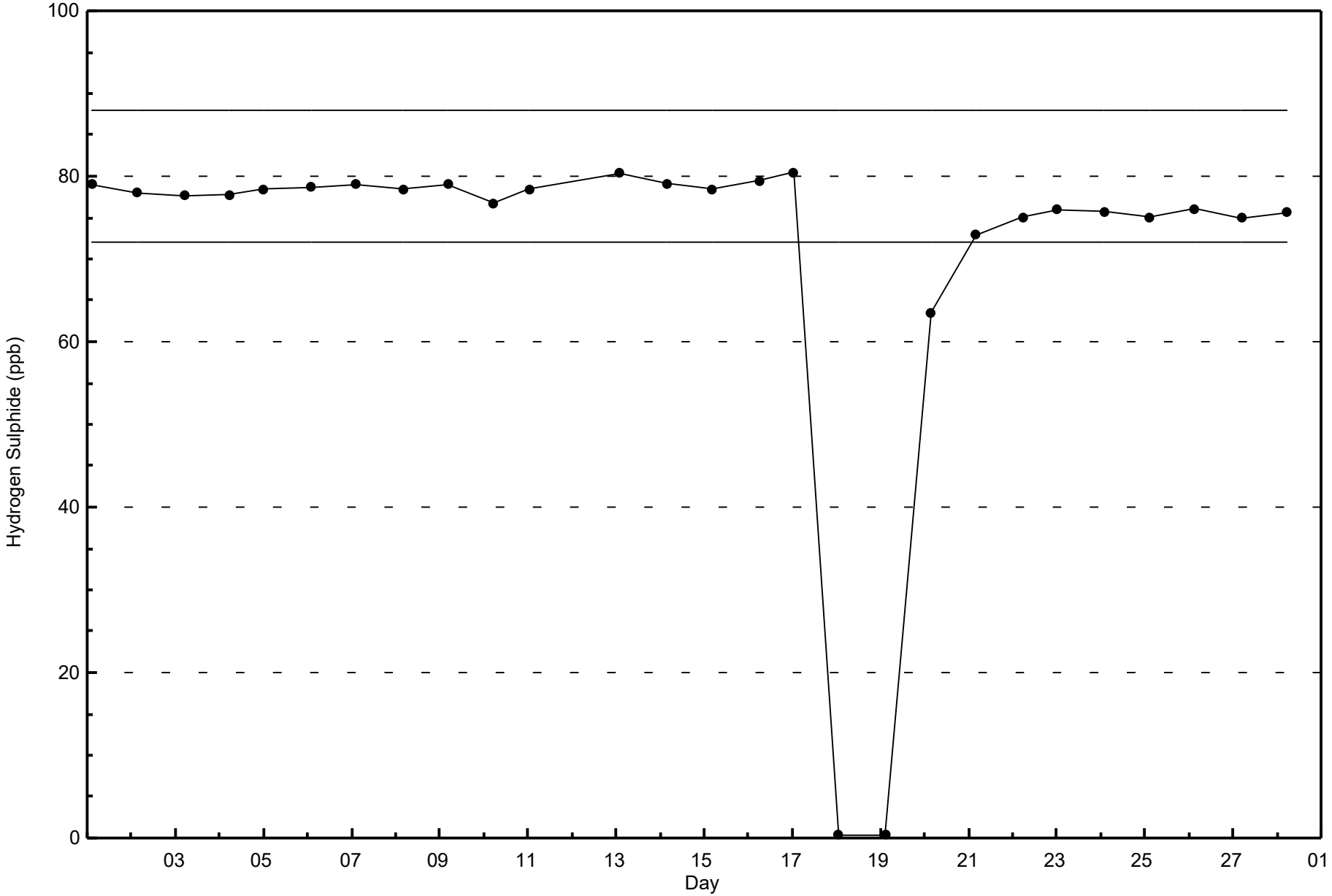


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Waskow ohci Pimatisiwin - February 2025



Maximum Value: 0.5 C on Feb 27 13:00

Maximum Daily Average: -5.4 C on Feb 23

Minimum Value: -38.3 C on Feb 14 09:00

Minimum Daily Average: -30.8 C on Feb 14

Maximum Diurnal Average: -13.7 C at hour 16

Minimum Diurnal Average: -22.3 C at hour 8

Monthly Average: -18.67 C

Percentiles: P_1 = -36.4 P_{10} = -30.5 Q_1 = -24.6 Median = -19.7 Q_3 = -10.8 P_{90} = -7.0 P_{99} = -1.8

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

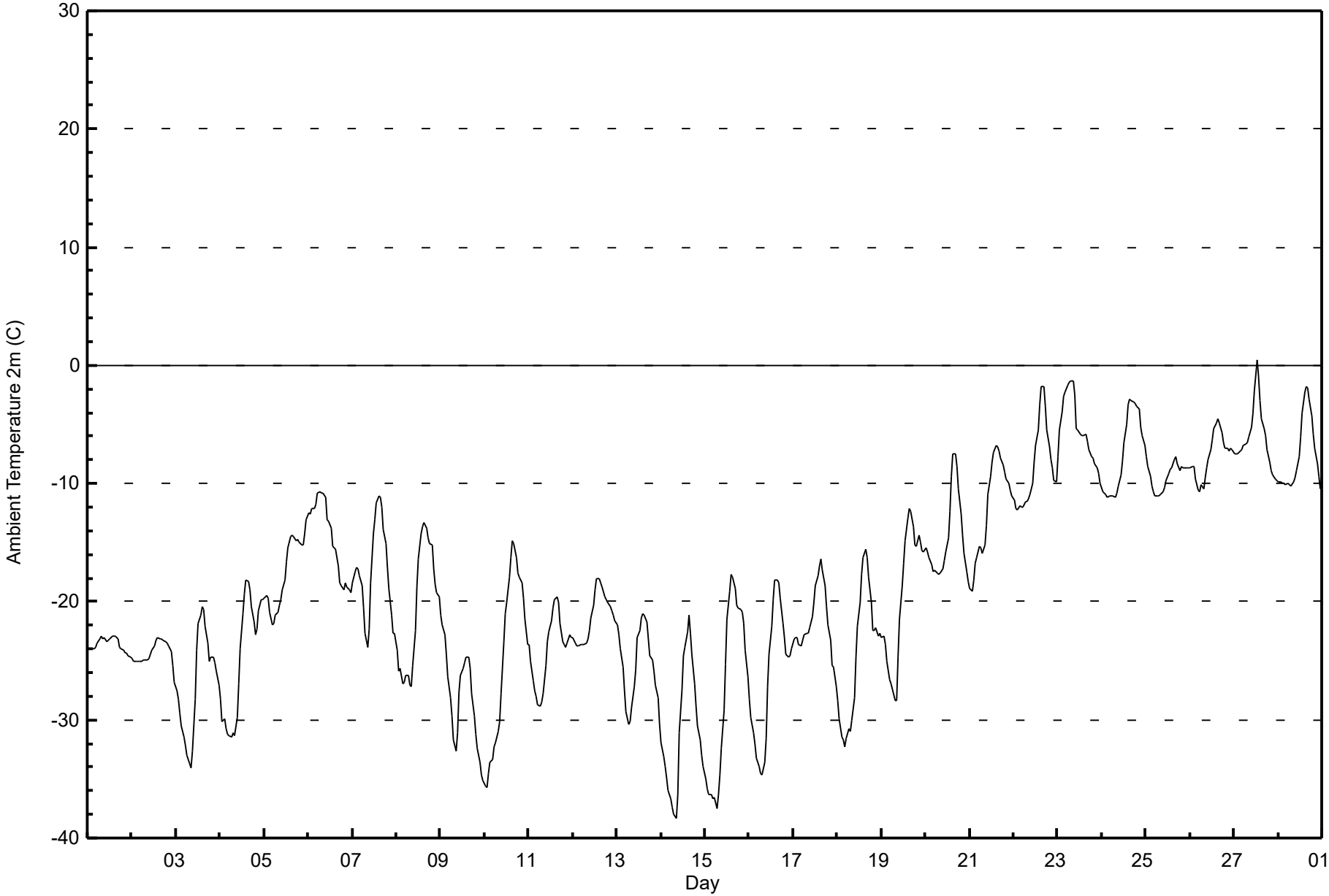
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-24.0	-24.0	-24.0	-24.0	-23.8	-23.5	-23.1	-22.9	-23.2	-23.1	-23.3	-23.3	-23.2	-23.0	-22.9	-23.0	-23.2	-23.8	-24.0	-24.2	-24.4	-24.4	-24.6	-24.7	-23.6	-22.9
2-Feb	-24.8	-25.0	-25.0	-25.0	-25.0	-25.0	-25.0	-24.9	-24.9	-24.8	-24.5	-24.1	-23.8	-23.3	-23.1	-23.1	-23.2	-23.3	-23.4	-23.5	-23.8	-24.3	-25.4	-26.9	-24.4	-23.1
3-Feb	-27.5	-28.2	-29.4	-30.5	-31.4	-32.2	-33.0	-33.7	-34.0	-32.6	-28.2	-24.1	-21.9	-21.1	-20.4	-20.7	-22.1	-23.5	-25.0	-24.7	-24.7	-25.2	-25.9	-27.0	-27.0	-20.4
4-Feb	-28.2	-30.1	-29.9	-30.8	-31.2	-31.4	-31.5	-31.1	-31.3	-29.8	-27.0	-24.0	-21.0	-19.4	-18.2	-18.3	-19.0	-20.5	-21.8	-22.8	-22.3	-20.8	-19.9	-19.8	-25.0	-18.2
5-Feb	-19.7	-19.5	-19.7	-20.9	-22.0	-21.8	-21.2	-20.9	-20.4	-19.8	-19.0	-18.2	-16.7	-15.5	-14.5	-14.3	-14.5	-14.9	-14.7	-15.0	-15.2	-15.2	-14.2	-13.1	-17.5	-13.1
6-Feb	-12.5	-12.6	-12.1	-12.1	-11.7	-10.8	-10.7	-10.8	-10.9	-11.1	-13.1	-13.2	-13.8	-15.3	-15.5	-15.5	-16.9	-18.4	-18.7	-19.0	-18.4	-18.7	-19.0	-19.2	-14.6	-10.7
7-Feb	-18.4	-17.4	-17.1	-17.2	-17.8	-18.6	-20.5	-22.7	-23.9	-22.3	-18.4	-14.2	-13.1	-11.7	-11.1	-11.1	-12.0	-13.9	-15.1	-17.1	-18.9	-21.1	-22.7	-22.6	-17.5	-11.1
8-Feb	-24.2	-25.9	-25.7	-26.9	-26.9	-26.3	-26.2	-27.0	-27.2	-25.4	-22.4	-18.8	-16.4	-14.2	-13.7	-13.3	-13.8	-14.7	-15.1	-15.2	-17.2	-18.5	-19.2	-19.6	-20.6	-13.3
9-Feb	-21.2	-21.9	-22.8	-24.4	-26.4	-28.1	-29.7	-31.7	-32.6	-31.1	-27.7	-26.3	-25.7	-25.2	-24.7	-24.7	-25.7	-27.8	-29.7	-31.2	-32.4	-33.6	-34.6	-35.1	-28.1	-21.2
10-Feb	-35.6	-35.7	-34.5	-33.6	-33.3	-32.3	-31.9	-31.0	-30.1	-27.7	-23.4	-21.0	-20.0	-17.9	-16.3	-14.8	-15.1	-16.3	-17.6	-17.9	-18.4	-19.7	-21.5	-23.6	-24.6	-14.8
11-Feb	-23.6	-25.0	-26.7	-27.5	-28.1	-28.8	-28.9	-28.5	-27.8	-25.4	-23.4	-22.5	-21.7	-20.6	-19.9	-19.5	-20.0	-21.9	-23.4	-23.7	-23.8	-23.5	-22.8	-23.0	-24.2	-19.5
12-Feb	-23.1	-23.5	-23.8	-23.7	-23.6	-23.6	-23.7	-23.5	-23.2	-22.4	-21.3	-20.3	-19.0	-18.1	-18.0	-18.4	-18.7	-19.6	-19.9	-20.0	-20.4	-20.7	-21.1	-21.6	-21.3	-18.0
13-Feb	-22.0	-22.8	-24.0	-25.6	-27.5	-29.3	-30.3	-30.1	-29.0	-27.2	-25.7	-23.1	-22.4	-21.4	-21.0	-21.1	-21.8	-23.2	-24.6	-25.0	-25.9	-27.0	-28.1	-30.3	-25.3	-21.0
14-Feb	-31.9	-33.1	-34.0	-34.9	-35.9	-36.7	-37.4	-38.0	-38.3	-36.3	-31.1	-27.4	-24.6	-23.9	-22.5	-21.2	-22.7	-24.5	-26.9	-28.9	-30.5	-31.7	-33.0	-34.0	-30.8	-21.2
15-Feb	-35.0	-35.8	-36.3	-36.4	-36.6	-36.6	-37.5	-36.4	-34.7	-32.4	-29.2	-25.2	-21.5	-19.1	-17.7	-17.9	-18.9	-20.3	-20.5	-20.7	-20.9	-21.8	-24.2	-26.4	-27.6	-17.7
16-Feb	-28.2	-29.8	-31.2	-32.0	-33.2	-34.0	-34.5	-34.6	-33.6	-31.6	-27.2	-24.4	-22.1	-19.8	-18.2	-18.1	-18.4	-19.7	-21.9	-23.1	-24.5	-24.7	-24.6	-24.0	-26.4	-18.1
17-Feb	-23.2	-23.0	-23.1	-23.7	-23.7	-23.3	-22.9	-22.7	-22.7	-22.2	-21.3	-20.1	-18.6	-17.8	-17.0	-16.4	-17.3	-18.7	-20.4	-22.0	-23.2	-25.4	-25.5	-27.1	-21.7	-16.4
18-Feb	-28.3	-30.0	-31.4	-31.7	-32.3	-31.6	-30.7	-31.0	-30.0	-28.2	-24.8	-22.0	-20.1	-17.7	-16.3	-15.5	-16.2	-18.0	-20.1	-22.5	-22.5	-22.2	-23.0	-22.6	-24.5	-15.5
19-Feb	-23.0	-22.9	-23.6	-25.0	-26.6	-27.0	-27.4	-28.3	-28.4	-24.7	-21.5	-18.7	-16.8	-14.8	-13.0	-12.1	-12.3	-13.7	-15.2	-15.3	-14.3	-14.9	-15.7	-15.8	-19.6	-12.1
20-Feb	-15.4	-15.8	-16.3	-16.9	-17.5	-17.3	-17.6	-17.7	-17.6	-17.2	-16.5	-15.7	-14.6	-12.4	-9.3	-7.5	-7.5	-8.6	-10.5	-12.6	-14.4	-15.9	-17.5	-18.3	-14.6	-7.5
21-Feb	-18.8	-19.1	-18.1	-16.7	-16.3	-15.4	-15.4	-15.9	-15.1	-13.5	-10.9	-9.3	-8.2	-7.3	-6.8	-6.9	-7.3	-7.9	-8.4	-9.1	-9.6	-10.0	-10.5	-11.0	-12.0	-6.8
22-Feb	-11.4	-12.1	-12.3	-11.9	-12.0	-12.0	-11.5	-11.5	-11.2	-11.0	-10.0	-8.2	-6.7	-5.5	-3.4	-1.8	-1.8	-3.4	-5.5	-6.9	-7.9	-8.7	-9.7	-9.9	-8.6	-1.8
23-Feb	-7.7	-5.4	-3.9	-2.6	-2.3	-1.7	-1.4	-1.4	-1.3	-2.5	-5.4	-5.4	-5.9	-5.9	-5.9	-5.9	-6.4	-7.1	-7.7	-7.8	-8.3	-8.7	-9.1	-10.0	-5.4	-1.3
24-Feb	-10.7	-10.8	-10.9	-11.2	-11.1	-11.1	-11.1	-11.2	-10.8	-10.3	-9.2	-8.0	-6.6	-5.0	-3.4	-2.9	-2.9	-3.1	-3.3	-3.5	-3.7	-5.2	-6.0	-6.8	-7.4	-2.9
25-Feb	-7.7	-8.5	-9.4	-10.3	-10.7	-11.1	-11.0	-11.1	-11.0	-10.7	-10.3	-9.8	-9.2	-8.7	-8.6	-8.0	-7.7	-8.3	-8.9	-8.6	-8.7	-8.7	-8.7	-8.7	-9.4	-7.7
26-Feb	-8.7	-8.6	-8.6	-9.6	-10.5	-10.8	-10.1	-10.5	-9.5	-8.7	-7.9	-7.2	-6.2	-5.4	-4.9	-4.5	-4.9	-5.7	-6.6	-7.0	-7.0	-7.3	-7.0	-7.2	-7.7	-4.5
27-Feb	-7.4	-7.4	-7.5	-7.3	-7.1	-6.7	-6.7	-6.5	-6.0	-5.2	-4.0	-2.2	0.5	-0.9	-3.0	-4.5	-5.3	-6.0	-7.1	-8.2	-8.9	-9.2	-9.7	-9.8	-6.1	0.5
28-Feb	-9.9	-9.9	-10.0	-10.0	-10.1	-10.0	-10.1	-10.2	-9.8	-9.6	-8.9	-7.8	-6.1	-4.0	-2.3	-1.8	-1.9	-2.8	-4.3	-5.8	-7.0	-8.3	-9.4	-10.5	-7.5	-1.8
	-20.4	-20.9	-21.1	-21.5	-21.9	-22.0	-22.2	-22.3	-22.1	-21.0	-19.1	-17.3	-15.9	-14.8	-14.0	-13.7	-14.2	-15.3	-16.4	-17.2	-17.8	-18.4	-19.0	-19.6	Diurnal Average	
	-7.4	-5.4	-3.9	-2.6	-2.3	-1.7	-1.4	-1.4	-1.3	-2.5	-4.0	-2.2	0.5	-0.9	-2.3	-1.8	-1.8	-2.8	-3.3	-3.5	-3.7	-5.2	-6.0	-6.8	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Waskow ohci Pimatisiwin - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	327	48.66	48.66
-20 - 0	344	51.19	99.85
0 - 10	1	0.15	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Waskow ohci Pimatisiwin - February 2025

Maximum Value: 100.0 % on Feb 23 09:00

Maximum Daily Average: 90.7 % on Feb 23

Minimum Value: 40.0 % on Feb 18 15:00

Minimum Daily Average: 55.7 % on Feb 19

Maximum Diurnal Average: 76.3 % at hour 22

Minimum Diurnal Average: 62.5 % at hour 15

Monthly Average: 72.42 %

Percentiles: P_1 = 45.1 P_{10} = 59.8 Q_1 = 67.6 Median = 72.8 Q_3 = 77.6 P_{90} = 84.0 P_{99} = 96.0

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

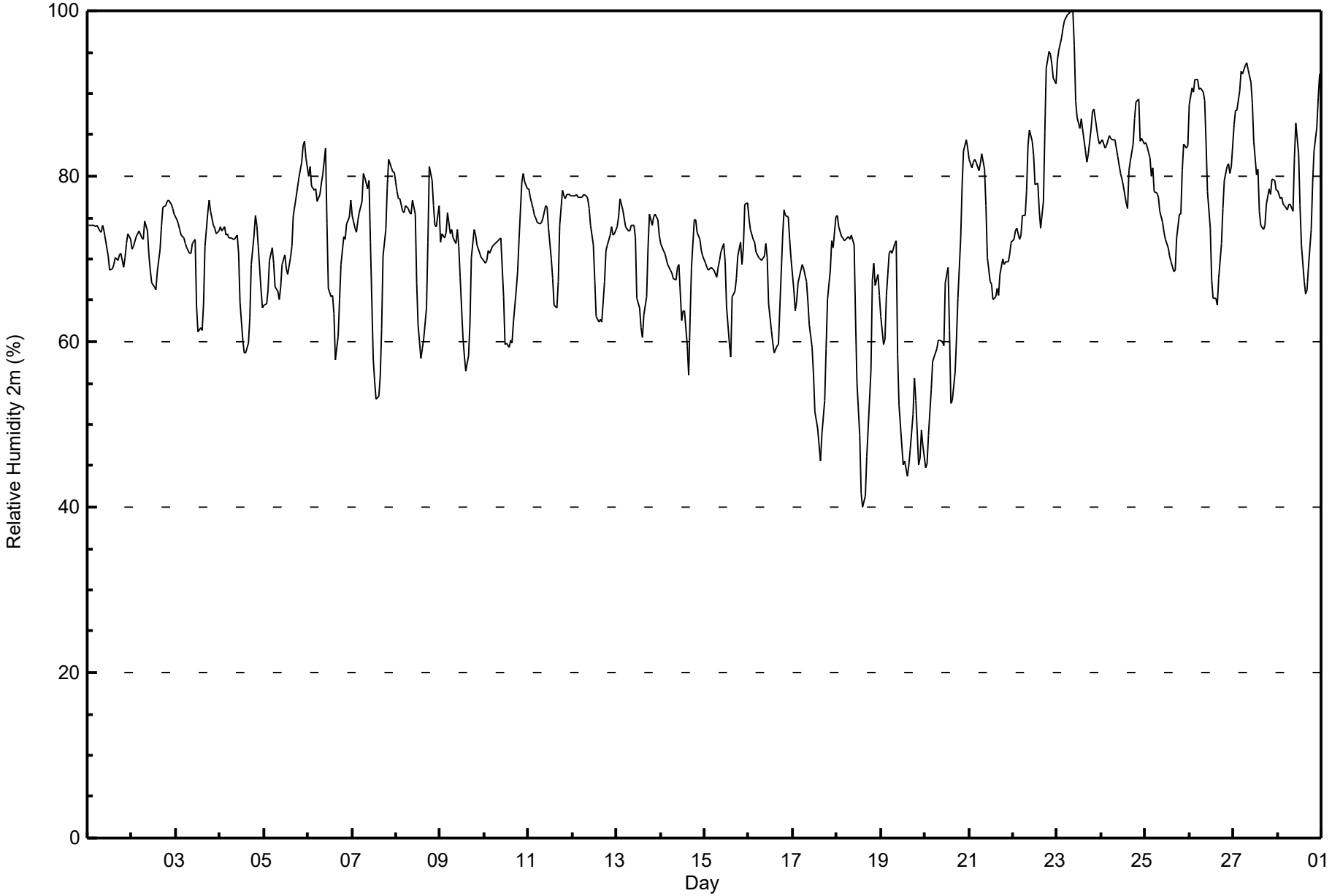
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	74.1	74.1	74.1	74.0	73.9	74.0	73.4	73.2	74.1	73.5	71.4	70.3	68.6	68.8	69.3	70.2	69.9	70.5	70.6	68.9	70.1	71.9	73.0	72.4	71.8	74.1
2-Feb	71.2	71.5	72.7	73.0	73.4	72.6	72.3	74.5	73.3	70.5	68.7	67.1	66.6	66.3	68.5	71.2	74.0	76.2	76.5	76.9	77.0	76.7	76.1	75.3	72.6	77.0
3-Feb	74.7	74.3	73.6	72.9	72.6	71.9	71.3	70.7	70.6	71.9	72.4	64.2	61.2	61.6	61.4	64.6	71.6	75.5	77.0	75.8	74.1	73.7	73.0	73.4	71.0	77.0
4-Feb	74.0	73.3	73.8	72.8	73.0	72.6	72.5	72.4	72.3	72.9	70.8	64.7	60.1	58.6	58.6	59.8	62.9	69.3	72.8	75.3	74.0	71.6	66.3	64.0	69.1	75.3
5-Feb	64.4	64.5	66.3	69.9	71.4	69.5	66.6	66.1	65.0	66.6	69.2	70.5	68.8	68.1	70.1	71.5	75.2	77.4	78.6	79.9	81.7	83.7	84.2	82.2	72.1	84.2
6-Feb	80.1	81.3	78.8	78.2	78.5	76.9	77.8	79.2	80.1	83.3	74.3	66.5	65.4	65.7	63.5	57.8	60.7	65.2	69.4	72.8	72.3	74.3	75.1	77.1	73.1	83.3
7-Feb	75.3	73.7	73.2	74.6	75.5	77.0	80.4	79.9	78.5	79.6	72.0	58.0	55.2	53.1	53.4	55.7	61.6	70.4	73.6	78.7	82.0	81.1	80.4	80.5	71.8	82.0
8-Feb	78.2	77.3	77.3	75.8	75.6	76.5	76.2	75.5	75.4	77.1	75.4	67.2	62.0	58.0	59.1	60.3	64.1	72.1	81.2	79.6	76.4	74.1	73.9	76.5	72.7	81.2
9-Feb	72.0	73.1	72.6	73.2	75.5	73.1	73.6	72.6	71.9	73.5	71.6	67.7	60.5	58.2	56.4	58.3	62.2	70.2	73.5	72.8	71.7	70.7	70.1	70.0	69.4	75.5
10-Feb	69.6	69.8	71.0	70.7	71.4	71.6	71.9	72.1	72.3	72.6	65.3	59.6	59.8	59.3	60.2	59.8	62.3	66.3	68.5	72.5	79.3	80.3	79.3	78.4	69.3	80.3
11-Feb	78.4	77.4	76.1	75.3	74.9	74.4	74.2	74.4	74.9	76.5	76.2	73.8	70.1	67.6	64.4	64.0	67.3	74.1	78.3	77.6	77.3	77.8	77.8	77.6	74.2	78.4
12-Feb	77.6	77.6	77.8	77.5	77.5	77.5	77.7	77.6	77.2	76.1	74.0	71.6	67.5	63.1	62.3	62.8	62.5	67.4	71.0	71.8	72.8	73.8	72.9	73.1	72.5	77.8
13-Feb	74.0	75.1	77.3	75.9	74.9	73.8	73.4	73.4	74.1	74.1	72.6	65.2	64.1	61.7	60.5	63.2	65.5	71.4	75.3	74.1	75.1	75.4	74.8	73.0	71.6	77.3
14-Feb	71.9	71.0	70.7	69.9	69.3	68.6	68.3	67.6	67.5	69.0	69.3	62.5	63.7	63.7	59.5	56.0	62.9	68.9	74.7	74.7	73.1	72.4	71.0	70.3	68.2	74.7
15-Feb	69.5	69.0	68.7	69.0	68.8	68.7	67.9	69.0	69.9	70.9	71.9	69.7	64.2	59.8	58.2	65.4	66.2	67.6	70.4	72.0	69.3	71.3	76.6	76.7	68.8	76.7
16-Feb	74.9	73.5	72.5	72.0	70.8	70.2	69.9	69.8	70.4	71.9	70.2	64.6	61.3	59.9	58.6	59.5	59.7	64.1	72.7	76.0	75.3	75.1	72.3	69.9	69.0	76.0
17-Feb	66.3	63.7	65.0	67.1	68.6	69.3	68.8	67.2	65.0	62.0	59.3	56.2	51.4	49.5	47.5	45.6	48.8	52.9	59.1	65.1	68.6	72.2	71.3	75.1	61.9	75.1
18-Feb	75.3	73.9	72.7	72.5	72.2	72.4	72.6	72.4	72.9	71.7	62.9	55.1	48.7	41.7	40.0	41.4	46.1	49.5	56.6	67.5	69.4	66.7	68.2	65.6	62.8	75.3
19-Feb	63.1	59.7	60.3	65.5	70.6	71.0	70.8	71.8	72.2	58.6	52.4	47.5	45.1	45.6	43.7	45.0	46.9	51.2	55.6	52.9	45.1	45.9	49.3	47.5	55.7	72.2
20-Feb	44.8	45.3	48.7	54.3	57.6	58.2	59.2	60.2	60.2	60.0	59.5	67.1	68.9	61.3	52.6	52.9	56.3	60.4	65.3	72.5	78.8	83.0	84.4	83.3	62.3	84.4
21-Feb	82.1	81.1	81.7	82.1	81.8	80.7	81.5	82.8	80.9	76.5	70.2	67.3	66.9	65.1	65.4	66.4	65.7	68.2	70.1	69.3	69.6	69.6	70.7	72.0	73.6	82.8
22-Feb	72.4	73.5	73.7	72.5	73.0	75.2	75.2	78.3	83.7	85.6	84.3	82.6	79.0	79.1	76.0	73.7	77.0	85.3	93.0	95.1	94.7	93.5	91.9	91.2	81.6	95.1
23-Feb	94.0	95.3	96.7	98.0	98.9	99.4	99.7	99.9	100.0	95.7	89.2	87.1	85.8	86.9	85.7	83.0	81.8	82.7	85.7	87.9	88.1	85.8	84.7	83.8	90.7	100.0
24-Feb	84.3	83.9	83.4	83.7	84.9	84.6	84.4	84.3	83.4	82.4	80.4	79.6	78.8	76.8	76.2	80.7	81.9	83.9	86.9	88.9	89.3	84.2	84.7	83.9	83.1	89.3
25-Feb	84.0	83.6	82.1	80.1	81.1	78.2	78.0	77.5	75.7	74.4	73.2	72.3	71.3	70.4	69.7	68.4	68.6	72.6	75.4	75.4	80.7	83.9	83.3	83.8	76.8	84.0
26-Feb	88.7	90.7	90.1	91.7	91.7	90.4	90.7	90.3	89.2	84.1	78.1	73.7	67.5	65.3	65.2	64.3	67.6	71.9	76.1	79.4	81.2	81.6	80.3	81.3	80.5	91.7
27-Feb	86.3	88.0	88.0	90.4	92.6	92.5	93.4	93.7	92.9	91.3	88.8	84.3	80.2	80.9	75.8	74.1	73.6	74.0	76.7	78.6	77.9	79.7	79.6	78.3	83.8	93.7
28-Feb	78.2	77.3	77.4	76.6	76.4	76.0	76.6	76.6	75.8	82.2	86.4	82.7	76.5	71.6	67.3	65.8	66.2	69.0	73.6	79.1	83.1	85.9	89.5	92.3	77.6	92.3
	75.0	74.7	74.9	75.3	75.9	75.6	75.6	75.8	75.7	75.2	72.5	68.5	65.7	63.8	62.5	62.9	65.3	69.6	73.5	75.4	76.0	76.3	76.2	76.0	Diurnal Average	
	94.0	95.3	96.7	98.0	98.9	99.4	99.7	99.9	100.0	95.7	89.2	87.1	85.8	86.9	85.7	83.0	81.9	85.3	93.0	95.1	94.7	93.5	91.9	92.3	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Waskow ohci Pimatisiwin - February 2025



Relative Humidity 2m (RH2) - %

Waskow ohci Pimatisiwin - February 2025

Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	1	0.15	0.15
40 - 60	69	10.27	10.42
60 - 80	476	70.83	81.25
80 - 100	126	18.75	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Waskow ohci Pimatisiwin - February 2025

Maximum Speed: 15 km/h on Feb 1 11:00

Maximum Daily Speed Average: 11.9 km/h on Feb 1

Minimum Speed Value: 0 km/h on Feb 24 17:00

Minimum Daily Speed Average: 0.5 km/h on Feb 22

Maximum Diurnal Speed Average: 2.0 km/h at hour 14

Minimum Diurnal Speed Average: 0.2 km/h at hour 4

Monthly Average Velocity: 0.6 km/h 43.3 deg

Percentiles: $P_1 = 0$ $P_{10} = 1$ $Q_1 = 2$ Median = 4 $Q_3 = 7$ $P_{90} = 9$ $P_{99} = 13$

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
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-Feb	N13	N12	N12	N11	N11	N12	N13	N12	N12	N11	NNW15	NNW13	NNW15	NNW13	NNW12	NNW11	NNW12	N12	N10	N12	N11	N9	N11	N10	N11.9	NNW15
2-Feb	N12	N11	N11	N9	N7	N9	NNW9	N6	N7	N10	N9	N12	N9	N8	N6	NNE4	N4	NNE3	NNE2	UO	UO	UO	UO	SW2	N7.2	N12
3-Feb	SSW1	UO	UO	UO	UO	UO	UO	UO	SE2	SSE2	SE4	SSE3	S4	SE4	SE5	SE4	SSE4	SSE3	S2	SW4	WSW6	WSW5	SW4	S2	----	WSW6
4-Feb	SSE3	SSE3	SSE4	SSE4	SSE5	SSE5	SSE5	SSE5	SSE5	SSE6	SE6	SE7	SSE7	SE6	SSE8	SSE8	SSE6	SSE5	SSE5	SSE4	SSE5	SSE4	S7	S9	SSE5.4	S9
5-Feb	S7	SSE6	SSE5	SSE5	SSE5	SSE5	S6	S6	S7	S6	S6	S7	S7	S7	SSW6	SSW6	S5	SSW4	S3	S3	SE2	SE3	SSE1	SSW4	S5.0	S7
6-Feb	WSW2	SSW3	WSW6	SSW3	WSW3	WNW4	W8	W6	W4	N8	N12	N14	N11	N11	N9	NW11	WNW9	WNW6	W3	W1	WSW2	SW1	SSW1	S1	NW3.7	N14
7-Feb	WSW3	SW3	SSW3	S3	S4	N1	ENE0	SSE1	SSE1	SSE2	SE2	SW4	SW8	SSW7	S6	SSE5	S4	SSW3	SW4	WSW4	W2	SSE1	SE2	SSE3	SSW2.6	SW8
8-Feb	SSE3	ESE1	SE2	SSE2	SSE3	SSE3	SSE3	SSE3	SSE3	SSE4	SE6	SE4	ESE3	ESE2	N3	N4	N4	NNW5	NNW5	N8	NNE11	N12	N9	N10	NNE1.7	N12
9-Feb	N10	N9	N7	NW4	NW4	NNW2	NW2	SSW1	SW1	WNW2	N4	N6	NNE7	NE4	NE3	ENE3	ENE2	WSW3	WSW2	SW1	UO	S1	ESE1	SE2	N2.2	N10
10-Feb	SE2	SSE3	SSE4	SSE4	SE5	SSE5	SE5	SSE5	SSE5	SSE5	SSE5	SE5	SE7	SE7	SE6	ESE3	ESE2	N5	NNW3	NNW4	NNW5	NNW3	NW3	W3	SE2.1	SE7
11-Feb	NW4	NW4	WNW3	WNW3	W2	W3	WSW2	WSW1	SE1	SE1	NE2	NNE3	N3	NNE1	E1	ESE1	NW2	WNW2	WSW1	SW0	NNW1	WNW1	WNW1	WSW1	NW1.1	NW4
12-Feb	WNW2	UO	UO	SSE2	SE1	SSE1	E1	SSW1	M	E0	SSE1	S2	NNE4	NE4	NE5	NNE7	N8	N7	N9	N10	N7	NNW6	NNW8	NNW8	N3.4	N10
13-Feb	NNW7	N6	NNW4	NW1	W1	WSW1	NW1	WNW2	WNW2	N1	NNE2	NE3	NNE4	NE4	NNE6	NE4	NNE4	NNW3	N4	N5	NW5	N3	N2	WNW2	N2.8	NNW7
14-Feb	W2	WNW2	NW2	WNW1	WNW1	WNW1	W2	WSW1	UO	SE1	SSE2	ESE2	NNE4	NNE5	NNW2	ESE3	SE3	ENE1	NW2	WNW2	W3	WNW2	WNW1	SW1	NW0.7	NNE5
15-Feb	S1	SSE2	S2	SSE3	WSW0	SW2	UO	SSE2	SSE2	S3	SSE4	SSE4	SE4	SE2	S1	ESE3	NE2	UO	UO	UO	NE5	NE3	NNW2	W1	SE1.3	NE5
16-Feb	UO	UO	W1	W1	UO	SW1	UO	SW1	UO	SSE3	SSE4	SSE5	S6	SSE9	SSE9	SSE7	SSE7	SSE4	SSE2	ESE2	SE3	SSE3	SSE5	SE6	SSE3.8	SSE9
17-Feb	SSE8	SSE8	SSE6	SSE5	SSE3	SSE3	SSE4	SE4	SSE6	SSE7	SSE9	SSE7	SSE8	SSE8	SSE9	SSE8	SSE6	SE2	ESE1	UO	SE1	SSE4	SSE3	NE0	SSE5.1	SSE9
18-Feb	SSW1	SSW2	SW1	S2	S3	SSW3	S5	SSE3	SSE4	SSE4	SSE5	SSE6	SSE7	SSE8	SSE8	SSE7	SSE5	S3	UO	UO	SSW2	SSW2	SSE3	SSE4	SSE3.7	SSE8
19-Feb	SSE3	SSE1	ESE1	NE2	E2	SE2	SW2	WSW2	UO	SSE6	SSE9	S9	SSE10	SSE10	SSE8	SSE10	SSE7	SSE4	SSE4	SSE7	SSE14	SSE12	SSE8	SSE8	SSE5.7	SSE14
20-Feb	SSE9	SSE10	SSE9	SSE8	SSE8	S8	S9	S8	S9	S9	S9	S8	S8	SSE9	SSE7	SSE5	SSE4	S4	SSE3	UO	NW2	NNW2	SW1	NW1	S6.1	SSE10
21-Feb	SW1	SSW1	W0	W1	SE1	ESE0	UO	SW0	NNW3	NNE2	NNE4	N7	NNW8	N8	N9	N10	N8	N7	N7	N8	N7	N5	N6	NNW7	N4.4	N10
22-Feb	NNW8	NW5	NNW5	N4	N3	NNW3	NNW1	NE1	NW2	NE2	NNW2	NW3	ESE1	SE3	SE3	S4	SSW2	SSE2	S2	S2	S2	SW1	S2	SSE2	NNW0.5	NNW8
23-Feb	SSE5	SSE5	S4	SE1	UO	UO	SSW1	SSE2	WNW1	N13	N12	NNE11	N11	NNE10	NNE8	NNE8	NNE7	NNE6	NW3	SE1	UO	ENE2	NE3	ENE4	NNE3.8	N13
24-Feb	NE3	NNE4	NE3	N2	N3	N4	N4	NNE2	SSE1	WNW2	W0	SE3	SE4	SE4	SSE4	S2	ESE0	N2	NNW2	NW2	N8	N9	N9	N7	NNE2.0	N9
25-Feb	N7	N8	NNE7	NNE8	NNE7	NNE8	NNE4	N5	N6	NNE6	NNE5	NNE4	NE4	NE4	N4	N5	NNE4	NNE3	N3	NNW2	NNW4	NW4	NW4	SW0	NNE4.5	NNE8
26-Feb	SSE4	SSE6	SSE5	SSE3	SSE3	WNW1	NW2	NNW5	N5	N7	NE5	NNE4	N6	NNE5	NNE7	NNE7	N7	N6	NNW6	NNW5	N5	NNW5	NNW7	N6	N3.2	N7
27-Feb	NNW5	NNW5	NNW3	NNE1	NNE2	NNW2	ENE2	NW1	W0	SSW2	SSE5	SW5	NNW8	NNE10	NE9	NNE9	NE8	NE6	NE5	NE6	NNE6	NE4	ENE3	NNE2	NNE3.1	NNE10
28-Feb	ENE2	E1	ESE2	E2	ESE1	SW0	NE2	NNE2	SSE0	SE2	S3	SSE3	S4	SSE6	SE5	SSE5	SSE6	SSE5	SSE4	SSE3	S3	SSE2	S2	SSE3	SSE2.4	SSE6
	N0.8	N0.4	NNE0.4	ENE0.2	ESE0.3	NW0.3	W0.2	SSW0.3	SSE0.4	E0.7	E1.2	E0.9	ENE1.0	E2.0	E1.7	E1.3	NE0.9	N1.0	NNW1.2	N1.5	N1.6	N1.1	N1.1	NNW0.3	Diurnal Average	
	N13	N12	N12	N11	NNW11	NNW12	N13	N12	N12	N13	NNW15	N14	NNW15	NNW13	NNW12	NNW11	NNW12	N12	N10	N12	SSE14	N12	N11	N10	Diurnal Maximum	

M - Maintenance UO - Unstable Operation

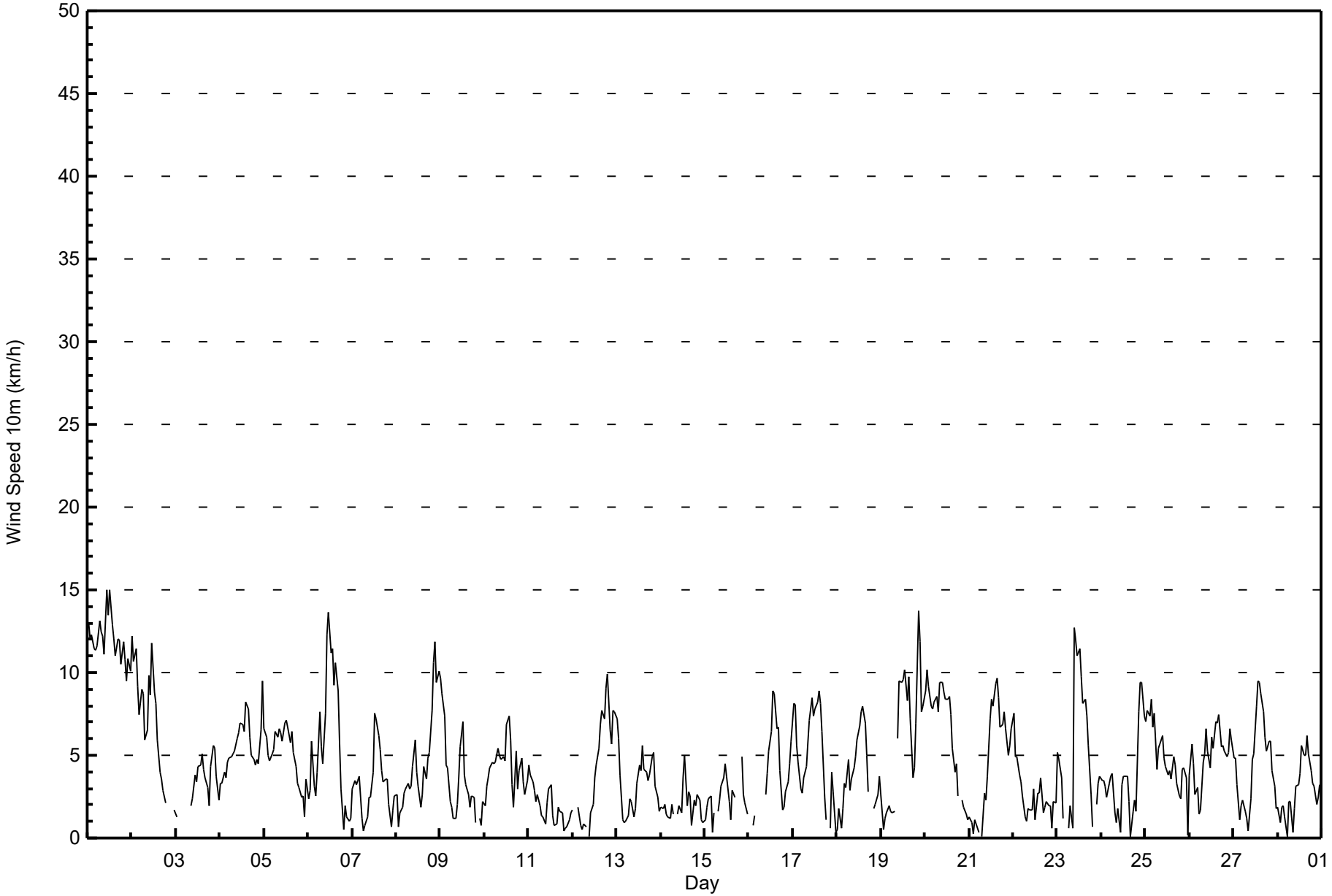
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Waskow ohci Pimatisiwin - February 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	430	67.40	67.40
6 - 11	184	28.84	96.24
12 - 19	24	3.76	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: 638

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Waskow ohci Pimatisiwin - February 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	28	21	12	5	18	38	102	32	19	23	16	18	21	23	28	430
6 - 11	58	21	3	0	0	0	8	47	22	3	1	2	2	2	1	14	184
12 - 19	15	0	0	0	0	0	0	2	0	0	0	0	0	0	0	7	24
20 - 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	99	49	24	12	5	18	46	151	54	22	24	18	20	23	24	49	638

Total Number of Valid Hours: 638

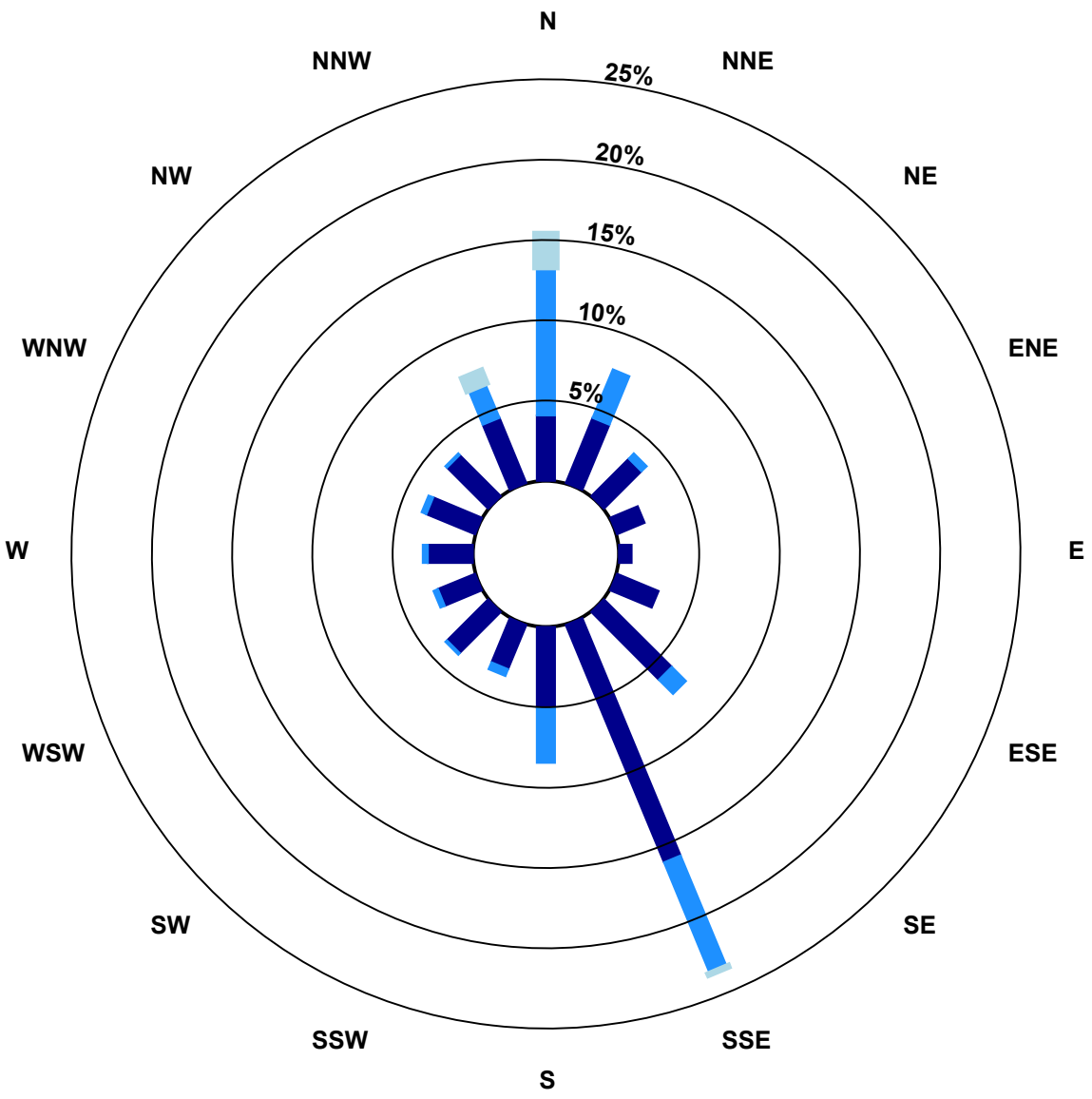
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Wind Speed 10m (WS10) - km/h

Waskow ohci Pimatisiwin



Classes (km/h)

0 - 5

6 - 11

12 - 19

20 - 28

29 - 38

> 38

Total Number of Valid Hours: 638

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Waskow ohci Pimatisiwin - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 5 km/h on Feb 1 18:00

Minimum Value: 0 km/h on Feb 3 07:00

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

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	0
Percent Operational Time:	95.2

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

M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Waskow ohci Pimatisiwin - February 2025

Direction of Maximum Speed: 346 deg on Feb 1 11:00
Direction of Maximum Daily Speed Average: 350.0 deg on Feb 1

Direction of Minimum Speed: 120 deg on Feb 24 17:00
Direction of Minimum Daily Speed Average: 0.5 deg on Feb 22

Monthly Average Direction: 43.3 deg

Hours in Service:	672
Hours of Data:	638
Hours of Missing Data:	34
Percent Operational Time:	94.9

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-Feb	354	353	358	349	349	349	351	355	350	351	346	344	337	341	342	339	342	350	355	356	360	357	360	360	350.0
2-Feb	360	356	352	360	3	356	347	7	3	355	2	360	3	359	6	20	355	14	15	UO	UO	UO	UO	236	359.1
3-Feb	201	UO	UO	UO	UO	UO	UO	UO	139	148	136	155	170	130	130	133	148	162	180	216	242	242	231	185	--
4-Feb	162	165	152	151	157	157	159	163	155	153	145	137	149	137	149	160	166	151	157	154	153	147	182	186	156.5
5-Feb	174	167	156	158	159	165	169	175	178	183	180	180	182	187	194	201	186	195	181	173	144	140	161	212	177.0
6-Feb	242	202	237	195	242	294	276	266	268	7	4	352	358	3	355	307	296	291	273	280	249	224	210	184	316.4
7-Feb	254	227	208	180	189	2	78	153	152	157	125	218	220	201	176	168	179	202	224	247	262	166	129	150	196.2
8-Feb	158	118	137	165	152	155	159	154	151	151	143	139	123	114	0	4	355	340	340	10	12	5	357	349	30.2
9-Feb	1	357	352	326	307	331	312	205	227	295	7	6	17	38	56	71	62	256	245	221	UO	175	122	140	355.8
10-Feb	125	149	150	151	146	151	145	154	156	155	164	141	136	132	128	109	116	1	344	344	345	335	321	279	136.5
11-Feb	311	316	286	286	278	270	255	254	146	142	50	33	358	18	79	111	316	282	244	220	332	289	294	237	304.1
12-Feb	283	UO	UO	163	125	159	98	204	M	94	153	178	12	54	34	22	6	6	358	355	352	334	341	344	2.8
13-Feb	346	352	347	309	261	253	304	282	294	356	26	38	18	40	19	39	16	342	349	353	322	357	353	289	353.9
14-Feb	277	285	304	292	291	287	280	257	UO	137	168	105	13	23	346	123	138	60	307	289	272	291	302	222	308.1
15-Feb	184	156	173	162	254	232	UO	159	153	169	157	162	144	136	184	104	51	UO	UO	UO	40	45	327	264	141.5
16-Feb	UO	UO	265	272	UO	214	UO	231	UO	151	164	168	171	160	157	166	160	162	157	119	138	163	147	145	161.1
17-Feb	155	163	161	166	147	159	151	141	147	153	157	147	150	152	159	155	150	143	118	UO	134	156	161	45	153.5
18-Feb	200	203	225	191	182	192	173	161	160	147	162	147	150	158	159	164	155	172	UO	UO	200	211	149	153	164.1
19-Feb	150	160	103	43	98	144	232	253	UO	160	152	170	163	156	155	156	158	165	153	149	157	157	156	162	157.3
20-Feb	166	166	159	157	168	174	177	178	176	181	182	183	178	168	167	150	157	173	147	UO	323	327	235	309	171.8
21-Feb	229	210	281	275	127	113	UO	234	332	14	16	6	345	357	354	359	357	1	357	2	5	11	354	331	356.0
22-Feb	340	326	338	353	10	336	336	43	311	49	334	313	123	143	137	172	194	161	173	181	185	230	176	153	335.2
23-Feb	166	161	169	137	UO	UO	198	155	291	359	6	18	11	20	15	14	14	16	324	132	UO	74	55	61	21.3
24-Feb	50	27	52	6	356	350	350	28	156	295	281	129	138	135	158	180	120	1	346	321	352	3	360	10	15.2
25-Feb	9	359	20	18	18	23	25	354	6	30	23	18	41	56	5	4	28	16	4	335	342	317	321	226	11.4
26-Feb	155	159	157	161	166	292	320	331	355	3	46	12	10	15	28	22	4	3	332	346	355	346	346	354	6.1
27-Feb	333	328	341	14	20	339	61	324	274	203	168	230	337	24	35	29	34	35	41	49	33	46	62	19	20.7
28-Feb	74	95	107	92	112	220	49	17	164	142	176	164	180	154	139	152	164	162	155	163	171	158	170	166	150.4
	355.6	350.0	15.8	70.5	105.3	320.8	276.3	210.2	165.6	92.2	98.9	82.9	58.7	88.4	86.6	85.8	51.1	4.7	345.2	358.8	358.3	3.1	357.8	333.4	
	Diurnal Average																								

M - Maintenance UO - Unstable Operation

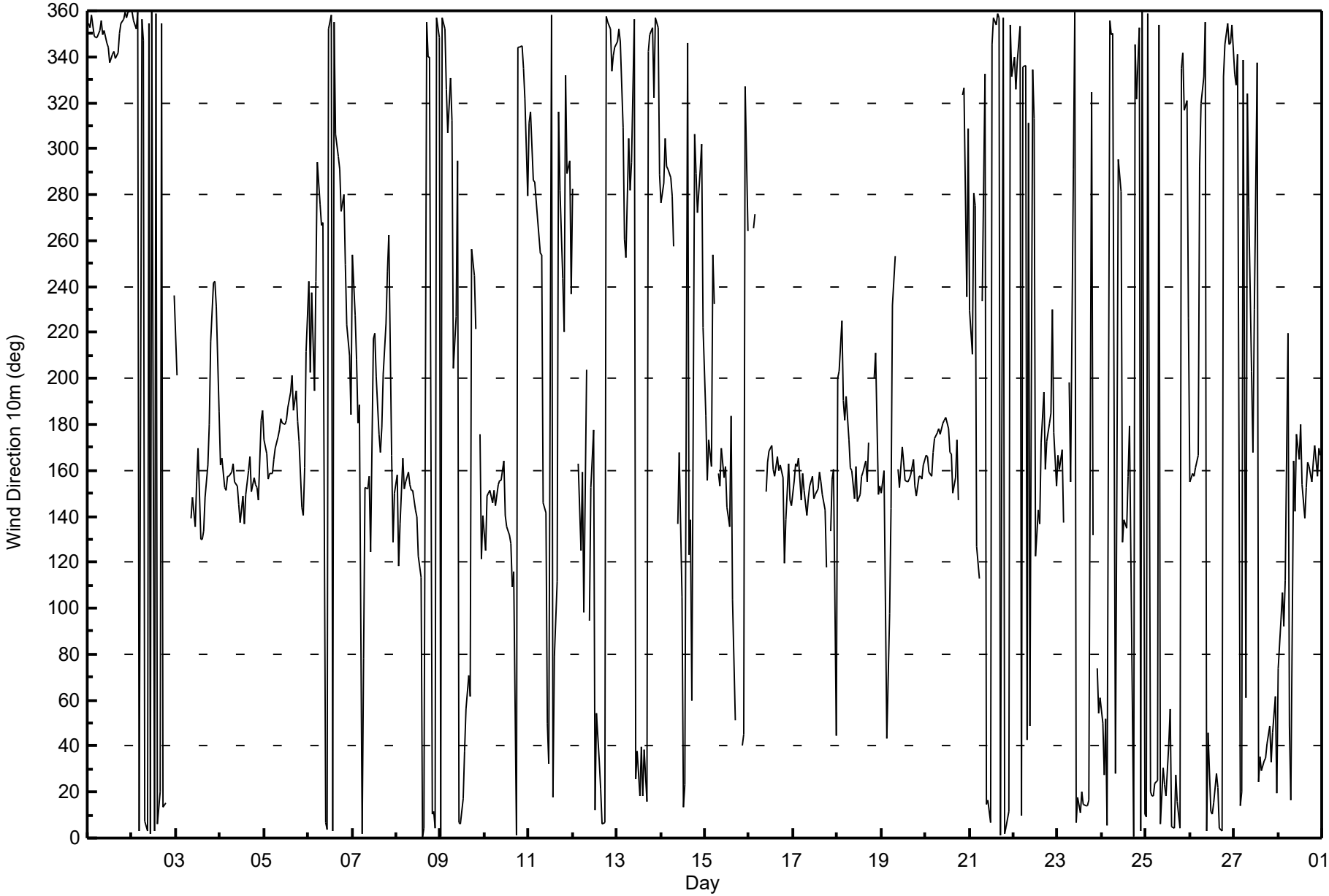
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Waskow ohci Pimatisiwin - February 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Waskow ohci Pimatisiwin - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 109 deg on Feb 27 09:00

Minimum Value: 0 deg on Feb 3 07:00

Percentiles: P_1 = 15 P_{10} = 19 Q_1 = 23 Median = 28 Q_3 = 42 P_{90} = 68 P_{99} = 97

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	0
Percent Operational Time:	95.2

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-Feb	22	25	23	23	22	21	24	24	22	25	21	21	19	21	19	20	19	22	24	23	24	26	22	22	26
2-Feb	23	23	23	23	23	23	19	24	25	24	24	22	25	24	26	23	27	22	28	UO	UO	UO	UO	39	39
3-Feb	32	UO	UO	UO	UO	UO	0	86	37	44	18	44	47	35	24	23	16	15	54	37	34	36	55	63	86
4-Feb	27	46	31	20	19	16	15	15	15	17	18	21	27	23	24	26	25	21	19	18	20	28	47	37	47
5-Feb	32	33	34	22	18	27	29	29	30	36	36	35	34	37	46	41	38	45	54	41	24	19	86	60	86
6-Feb	94	61	50	72	90	64	25	36	32	25	24	23	25	23	24	22	18	12	53	77	38	65	66	66	94
7-Feb	61	45	54	43	54	94	74	82	72	39	55	72	37	39	36	33	31	26	27	17	52	68	43	48	94
8-Feb	33	83	34	37	24	34	18	25	25	19	18	32	30	73	44	22	21	21	16	26	25	23	24	22	83
9-Feb	24	21	22	28	19	39	66	74	79	56	27	30	29	40	30	20	29	19	34	58	UO	40	48	20	79
10-Feb	22	19	25	26	16	19	16	14	18	20	42	42	24	24	24	35	61	22	28	23	17	28	32	17	61
11-Feb	17	36	23	28	39	63	25	31	66	63	36	36	37	71	89	88	45	30	38	73	65	70	59	40	89
12-Feb	37	UO	UO	29	64	61	67	99	M	99	74	69	46	33	27	21	22	19	18	18	26	18	18	16	99
13-Feb	15	20	16	47	64	66	68	27	40	65	30	41	38	33	31	31	23	18	20	19	17	15	29	21	68
14-Feb	10	19	23	25	31	49	19	40	UO	27	54	53	45	35	77	38	29	63	27	24	9	19	70	40	77
15-Feb	77	39	27	38	83	53	UO	53	44	29	19	21	25	62	90	23	33	UO	UO	UO	23	30	28	32	90
16-Feb	UO	UO	53	61	UO	58	UO	52	UO	24	22	28	27	23	22	24	21	29	42	29	29	26	18	29	61
17-Feb	22	21	26	19	31	22	17	23	24	26	24	25	23	24	22	25	28	31	53	UO	72	27	55	90	90
18-Feb	74	34	93	46	20	28	15	40	35	28	29	23	25	26	25	28	23	27	UO	UO	35	30	35	16	93
19-Feb	30	90	65	30	33	62	43	61	UO	32	24	31	26	23	25	22	21	25	26	22	21	19	20	21	90
20-Feb	22	20	21	23	25	25	26	27	27	29	29	30	28	29	31	29	31	26	68	UO	23	81	78	38	81
21-Feb	61	71	79	71	65	89	UO	93	24	27	33	24	22	22	20	22	19	20	19	20	23	25	18	16	93
22-Feb	17	17	30	22	24	36	65	61	35	50	71	51	83	29	37	27	90	28	29	41	49	99	24	32	99
23-Feb	18	20	31	63	UO	UO	84	48	92	22	24	27	25	26	26	23	24	29	63	73	UO	19	21	23	92
24-Feb	28	28	25	40	27	25	25	60	86	84	102	33	41	35	48	63	94	65	22	63	18	20	20	22	102
25-Feb	25	19	25	23	30	22	28	27	25	30	31	39	36	32	44	26	23	19	23	30	16	20	22	91	91
26-Feb	17	21	28	35	29	83	41	26	20	19	30	39	26	33	23	24	22	19	19	17	23	16	18	23	83
27-Feb	23	27	31	62	48	84	95	102	109	64	32	47	45	24	25	25	24	25	26	29	26	26	24	33	109
28-Feb	24	75	38	30	42	95	27	36	98	78	45	46	41	27	28	30	23	22	24	23	29	47	27	14	98
	94	90	93	72	90	95	95	102	109	99	102	72	83	73	90	88	94	65	68	77	72	99	86	91	
	Diurnal Maximum																								

M - Maintenance UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS27
JACKFISH 2/3
FEBRUARY 2025

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

March 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JACKFISH 2/3 (AMS27)
FEBRUARY 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	639	33	33	100	8.9	0	2.6	0
H2S (ppb) Average	632	36	40	99.4	0.4	0	0.2	0
NO2 (ppb) Average	638	34	34	100	26.6	0	11.4	-
NO (ppb) Average	638	34	34	100	7.8	-	2.2	-
NOX (ppb) Average	638	34	34	100	27.9	-	13.6	-
Temperature 2 m (C) Average	672	0	0	100	8.1	-	3.9	-
Relative Humidity (%) Average	672	0	0	100	95.4	-	80.6	-
Wind Speed 10 m (km/h) Average	672	0	0	100	19	-	13	-
Wind Direction 10 m (deg) Average	672	0	0	100	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JACKFISH 2/3 (AMS27)
FEBRUARY 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	639	0.91	1.3	-	0	0	0.2	0.5	1	2.3	8.9
H2S (ppb) Average	632	0.05	0.1	-	0	0	0	0	0.1	0.1	0.4
NO2 (ppb) Average	638	2.52	2.7	-	0	0.7	1.2	1.9	3.2	4.4	26.6
NO (ppb) Average	638	0.3	0.8	-	0	0	0	0	0.3	0.7	7.8
NOX (ppb) Average	638	2.82	3	-	0	0.8	1.3	2.1	3.5	4.8	27.9
Temperature 2 m (C) Average	672	-15.7	11.4	-	-31.6	-27.9	-24.6	-19.5	-4.4	2.5	8.1
Relative Humidity (%) Average	672	70.88	11.5	-	24	54.8	65.3	73.6	77.7	82.6	95.4
Wind Speed 10 m (km/h) Average	672	7.1	3	-	0	3	5	7	9	11	19
Wind Direction 10 m (deg) Average	672	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JACKFISH 2/3 (AMS27)
FEBRUARY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
H2S	14 Feb 2025 10:00	14 Feb 2025 11:00	2	Maintenance - reinitiated daily QA check
H2S	19 Feb 2025 12:00	19 Feb 2025 13:00	2	Maintenance - reinitiated daily QA check

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Jackfish 2/3 - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8.9 ppb on Feb 25 14:00 Maximum Daily Average: 2.6 ppb on Feb 14

Minimum Value: 0.0 ppb on Feb 1 01:00 Minimum Daily Average: 0.3 ppb on Feb 24
Maximum Diurnal Average: 1.6 ppb at hour 12 Minimum Diurnal Average: 0.5 ppb at hour 18
Monthly Average: 0.91 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.2 Median = 0.5 Q_3 = 1.0 P_{90} = 2.3 P_{99} = 6.6

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.3	2.6	2.6	2.6	1.7	1.6	0.9	7.3	7.0	4.3	1.4	0.4	0.1	1.4	7.3
2-Feb	4.8	2.0	Z	1.8	3.8	4.5	3.3	2.2	2.5	2.3	1.9	2.7	2.7	2.6	3.3	3.1	2.2	0.9	0.5	0.5	0.7	0.9	0.7	0.8	2.2	4.8
3-Feb	0.8	0.9	1.1	Z	1.3	1.3	0.8	1.4	0.3	0.9	1.2	5.1	2.3	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.8	5.1
4-Feb	0.0	0.1	0.1	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.2	0.9	1.0	0.9	0.4	0.5	0.3	0.0	0.0	0.1	0.0	0.2	0.6	1.4	0.3	1.4
5-Feb	0.6	1.7	1.9	1.8	0.9	Z	0.3	0.2	0.6	0.6	0.4	0.4	0.3	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	SP	0.5	1.9
6-Feb	Z	0.1	5.8	1.5	1.0	0.0	0.0	0.0	0.1	8.5	8.7	8.4	1.8	2.6	3.2	0.4	0.5	0.7	1.1	1.0	0.5	0.6	0.8	0.9	2.1	8.7
7-Feb	0.2	Z	1.2	0.8	3.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.0	0.1	0.1	0.3	0.3	0.2	0.3	3.8
8-Feb	0.2	0.2	Z	0.2	0.0	0.9	0.8	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.4	0.2	0.2	0.2	0.2	0.1	1.0	2.8	0.9	0.4	2.8
9-Feb	1.9	1.2	2.1	Z	2.1	2.0	1.9	0.3	5.6	0.3	0.2	0.3	0.3	0.3	0.6	0.3	0.1	0.6	0.5	0.8	1.8	4.1	2.7	1.3	1.4	5.6
10-Feb	1.1	0.0	0.0	0.0	Z	0.1	0.2	0.2	0.2	0.3	0.1	0.1	0.1	0.3	0.7	0.3	0.5	0.4	0.4	0.2	0.5	0.3	3.0	2.6	0.5	3.0
11-Feb	0.6	0.6	0.5	0.6	0.5	Z	0.6	0.4	0.3	0.5	0.9	1.2	0.4	0.2	0.2	0.4	0.7	0.7	1.0	1.5	1.6	1.1	1.7	2.3	0.8	2.3
12-Feb	Z	1.2	0.8	0.8	0.6	0.5	0.5	0.4	0.2	0.4	0.6	0.9	C	C	C	C	0.5	0.5	0.2	0.4	0.4	0.5	0.6	0.5	0.6	1.2
13-Feb	0.5	Z	0.4	0.4	0.3	0.4	0.4	0.4	0.5	0.8	1.2	2.5	0.9	1.9	1.7	1.6	1.2	0.7	0.6	0.5	0.4	0.3	0.4	2.2	0.9	2.5
14-Feb	3.7	4.7	Z	4.2	5.0	4.7	3.1	3.3	4.3	1.5	1.3	2.4	3.7	3.8	5.1	2.8	1.9	0.9	0.5	0.4	0.5	0.5	0.6	0.6	2.6	5.1
15-Feb	0.7	1.2	0.7	Z	0.5	0.8	2.7	2.1	1.6	4.8	0.9	1.6	2.6	2.6	1.3	0.5	0.4	0.3	0.6	0.6	0.5	0.5	0.7	0.4	1.2	4.8
16-Feb	0.4	0.3	0.4	0.4	Z	0.6	0.5	0.7	1.3	1.3	1.1	0.9	0.9	1.1	1.2	1.1	1.0	0.8	0.8	1.0	0.9	0.7	0.8	0.7	0.8	1.3
17-Feb	0.8	0.8	0.7	0.8	1.2	Z	1.5	1.4	1.0	0.7	0.5	0.5	0.6	0.6	0.5	0.5	0.4	0.4	0.2	0.3	0.2	0.1	0.2	0.5	0.6	1.5
18-Feb	Z	0.3	0.4	0.5	0.5	0.4	0.6	0.5	0.4	1.2	1.3	0.9	0.3	0.3	0.1	0.2	0.0	0.2	0.0	0.1	0.5	1.0	0.8	0.8	0.5	1.3
19-Feb	0.8	Z	0.8	0.8	0.9	1.0	0.9	0.8	0.6	0.4	0.7	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.5	0.6	0.5	0.7	0.6	1.0
20-Feb	0.7	0.8	Z	1.7	1.1	0.5	0.4	0.3	0.3	0.5	0.6	0.6	0.7	0.7	0.8	1.0	1.0	0.5	0.6	1.4	0.6	0.8	1.1	1.2	0.8	1.7
21-Feb	1.2	1.0	0.6	Z	0.6	0.8	1.3	0.8	1.0	0.7	0.7	5.5	3.2	0.5	2.8	0.4	0.7	2.0	0.9	1.0	0.8	0.4	0.4	0.3	1.2	5.5
22-Feb	0.4	0.3	0.3	0.2	Z	0.4	0.6	0.8	0.6	0.6	1.0	0.7	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.5	0.6	1.3	1.6	1.2	0.6	1.6
23-Feb	0.8	0.9	0.7	0.6	0.5	Z	0.7	0.6	0.5	0.3	0.0	0.0	0.1	0.0	0.8	1.4	0.6	0.7	0.4	1.0	2.4	1.9	1.0	1.0	0.7	2.4
24-Feb	Z	1.0	0.9	0.6	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.5	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.4	0.1	0.2	0.3	1.0
25-Feb	0.1	Z	0.0	0.1	0.4	0.9	1.8	3.3	2.4	1.8	1.8	2.7	2.6	8.9	2.6	0.7	0.7	0.7	0.5	0.5	0.3	0.2	0.4	0.2	1.5	8.9
26-Feb	1.2	1.9	Z	0.3	0.1	0.8	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.3	0.1	0.1	0.1	0.6	0.6	0.3	0.3	0.3	0.3	1.9
27-Feb	0.7	0.7	0.2	Z	0.5	0.0	0.3	0.9	0.8	1.0	0.4	0.1	2.4	3.3	1.6	8.8	0.1	0.2	0.1	0.2	0.3	0.0	1.1	1.4	1.1	8.8
28-Feb	0.9	1.3	0.3	0.2	Z	0.0	0.0	0.0	0.0	0.2	0.5	4.1	0.7	1.1	1.4	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.2	0.5	4.1
	1.0	1.0	0.9	0.8	1.1	0.9	0.8	0.8	0.9	1.1	0.9	1.6	1.2	1.3	1.2	1.0	0.6	0.5	0.6	0.7	0.7	0.7	0.8	0.8	Diurnal Average	
	4.8	4.7	5.8	4.2	5.0	4.7	3.3	3.3	5.6	8.5	8.7	8.4	3.7	8.9	5.1	8.8	2.2	2.0	7.3	7.0	4.3	4.1	3.0	2.6	Diurnal Maximum	

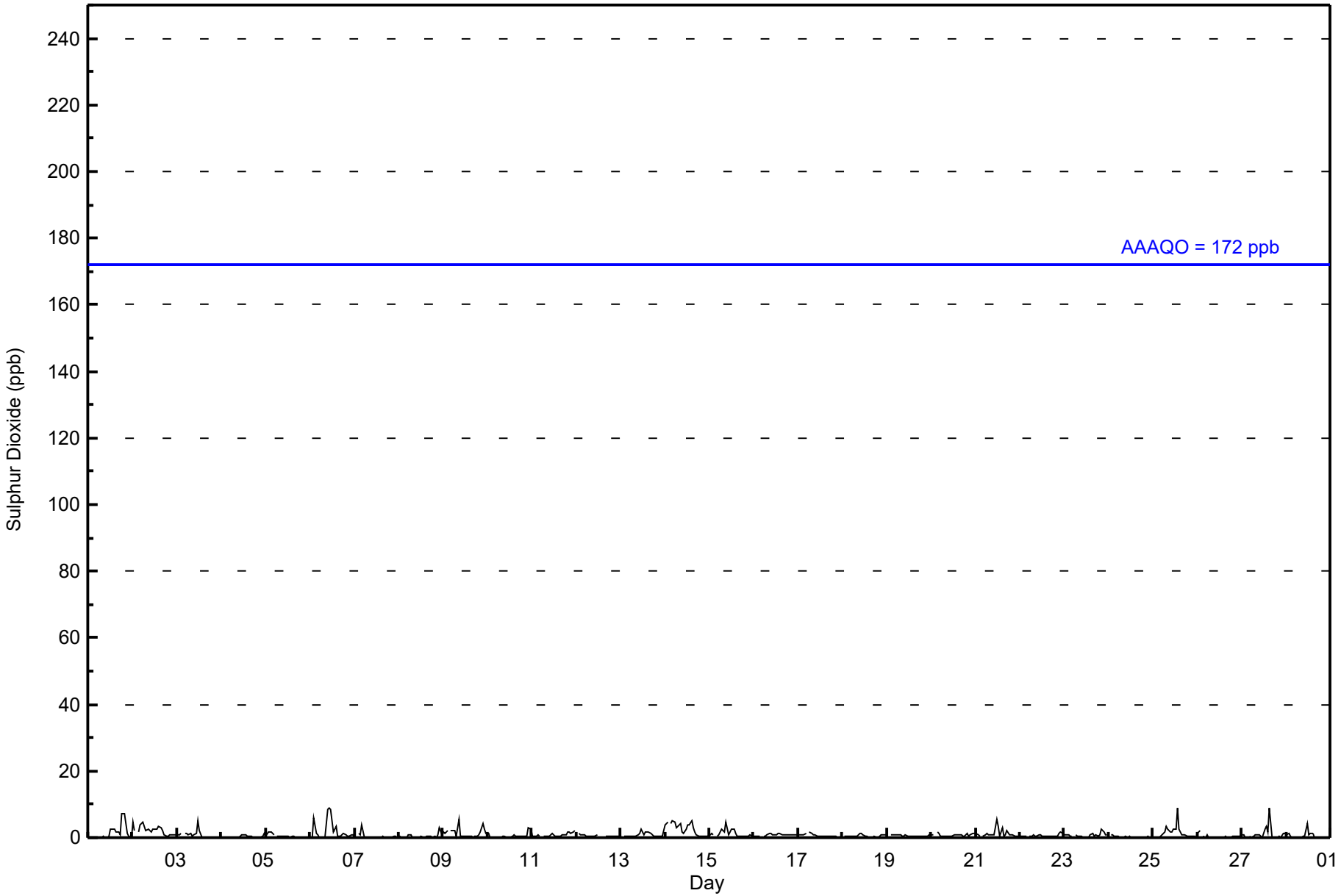
Z - zerospan C - Calibration SP - Span
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Jackfish 2/3 - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	639	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: 639

Total Number of Hours: 672



Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Jackfish 2/3 - February 2025

Concentration	**Wind Direction**																
Ranges (ppb)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Total Number of Valid Hours: 0

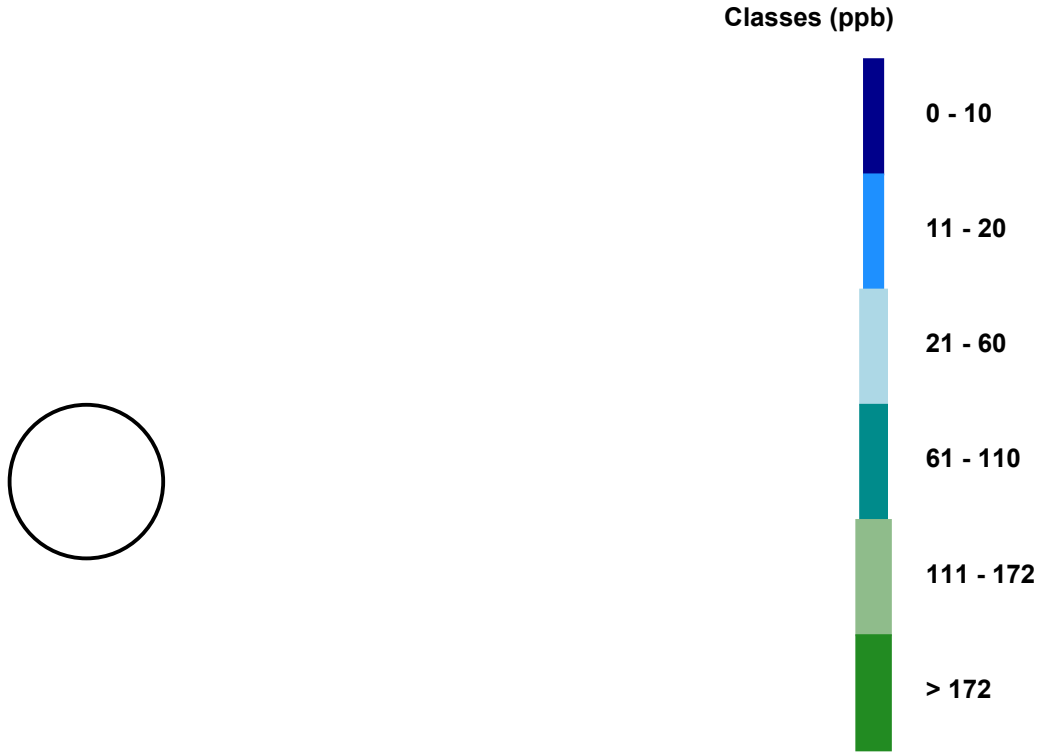
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Sulphur Dioxide (SO_2) - ppb

Jackfish 2/3



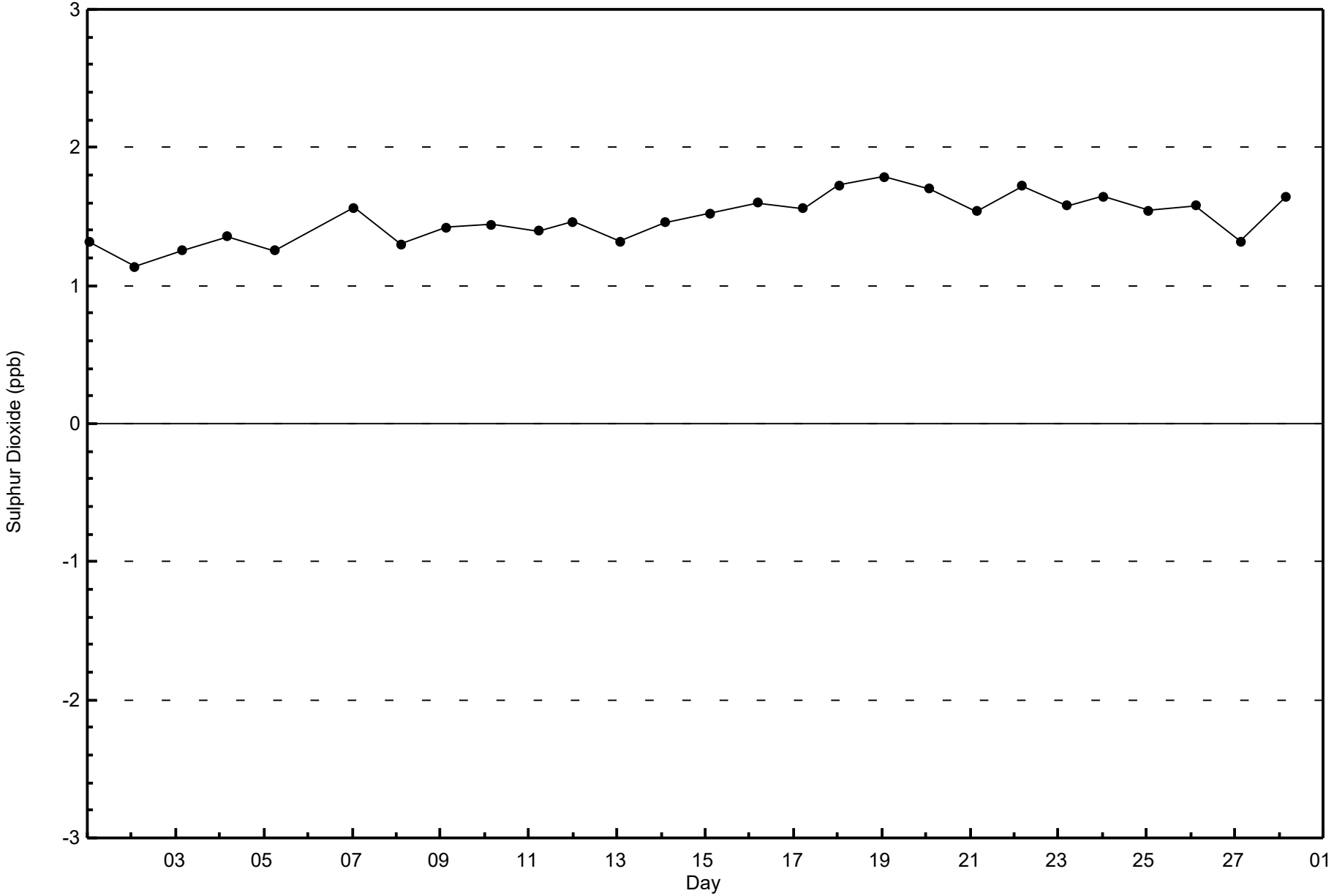
Total Number of Valid Hours: 0

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Jackfish 2/3 - February 2025

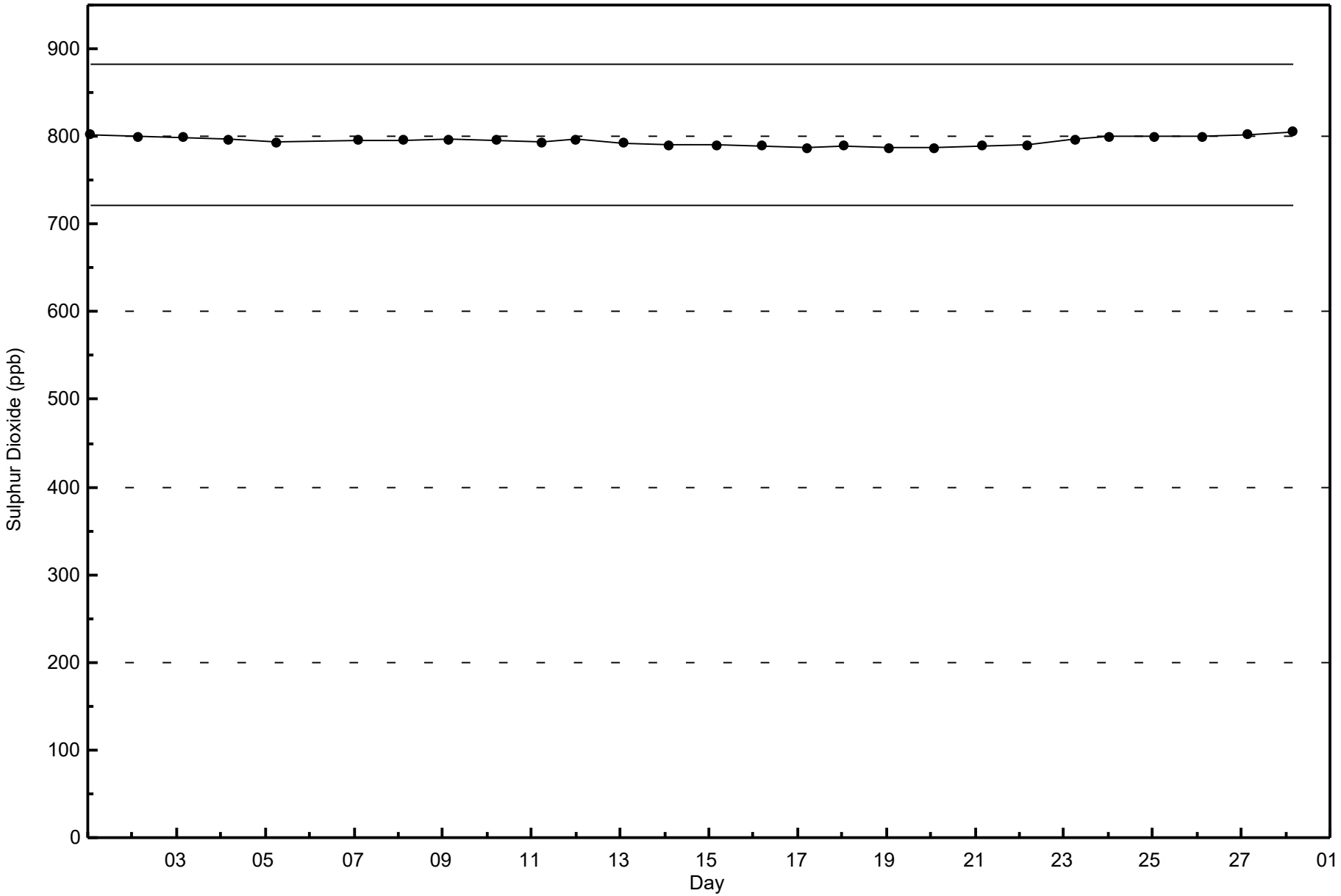


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Jackfish 2/3 - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H2S) - ppb

Jackfish 2/3 - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 0.4 ppb on Feb 24 09:00 Maximum Daily Average: 0.2 ppb on Feb 25

Minimum Value: 0.0 ppb on Feb 1 02:00 Minimum Daily Average: 0.0 ppb on Feb 18
Maximum Diurnal Average: 0.1 ppb at hour 4 Minimum Diurnal Average: 0.0 ppb at hour 17
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:	672
Hours of Data:	632
Hours of Missing Data:	40
Hours of Calibration:	36
Percent Operational Time:	99.4

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
2-Feb	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	0.0	0.0	0.0	0.0	0.0	0.1
3-Feb	0.0	0.0	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	0.2
4-Feb	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
5-Feb	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
6-Feb	0.0	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
7-Feb	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	0.1	0.0	0.1
8-Feb	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	0.0	0.0	0.0	0.0	0.0	0.1
9-Feb	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
10-Feb	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	0.1	0.1	0.0	0.1
11-Feb	Z	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
12-Feb	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
13-Feb	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
14-Feb	0.0	0.1	0.1	Z	0.2	0.2	0.1	0.1	0.1	M	M	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
15-Feb	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
16-Feb	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
17-Feb	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
18-Feb	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
19-Feb	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	M	M	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
20-Feb	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	C	C	C	C	C	C	C	C	0.2	0.1	0.1	0.1	0.1	--	0.2
21-Feb	0.1	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2
22-Feb	0.3	0.2	0.1	0.1	0.1	Z	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.3
23-Feb	Z	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2
24-Feb	0.2	Z	0.4	0.2	0.2	0.2	0.2	0.3	0.4	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	0.1	0.2	0.4
25-Feb	0.1	0.1	Z	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3
26-Feb	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2
27-Feb	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	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3
28-Feb	0.1	0.1	0.2	0.3	0.2	Z	0.2	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4
	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Diurnal Average	
	0.3	0.2	0.4	0.3	0.2	0.2	0.2	0.3	0.4	0.4	0.2	0.3	0.3	0.2	0.1	0.3	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.2	Diurnal Maximum	

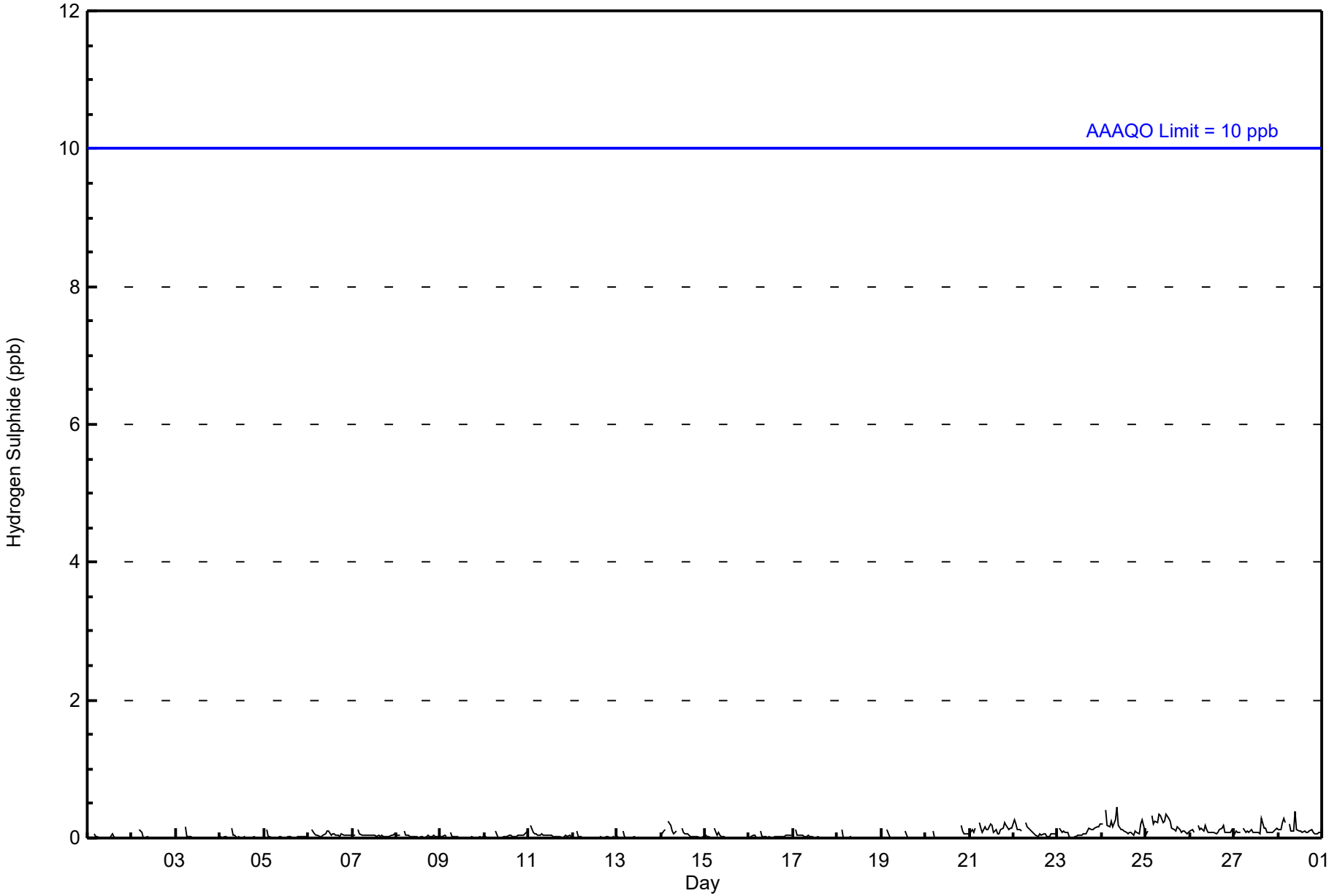
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H2S) - ppb

Jackfish 2/3 - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	632	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: 632

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H2S) - ppb

Jackfish 2/3 - February 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	20	40	24	5	5	7	23	84	49	59	111	64	35	54	35	632
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	20	40	24	5	5	7	23	84	49	59	111	64	35	54	35	632

Total Number of Valid Hours: 632

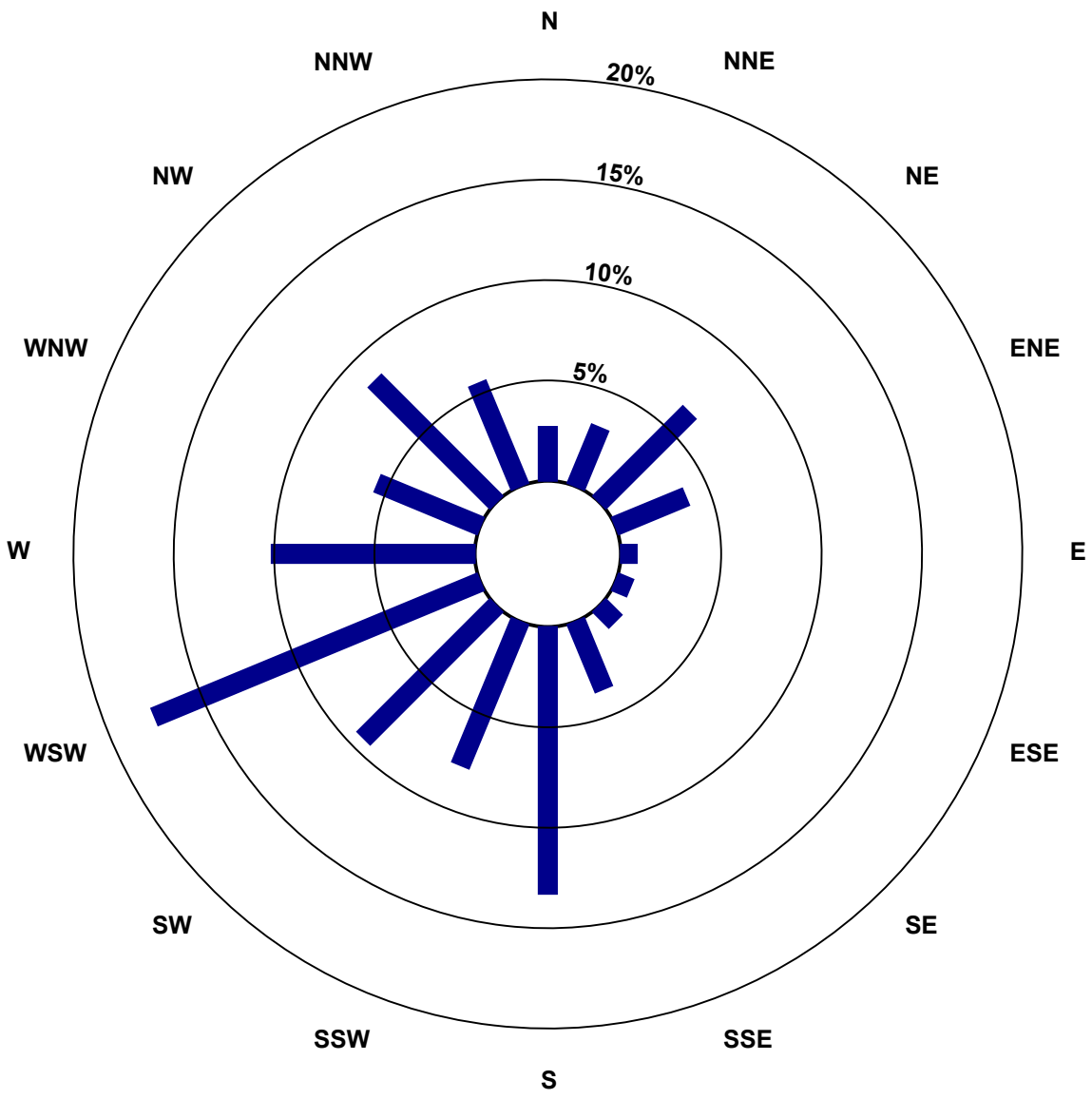
Total Number of Hours: 672

Wood Buffalo Environmental Association

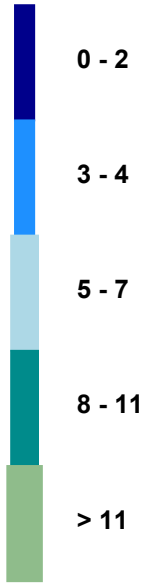
Wind Rose Feb 2025

Hydrogen Sulphide (H2S) - ppb

Jackfish 2/3



Classes (ppb)



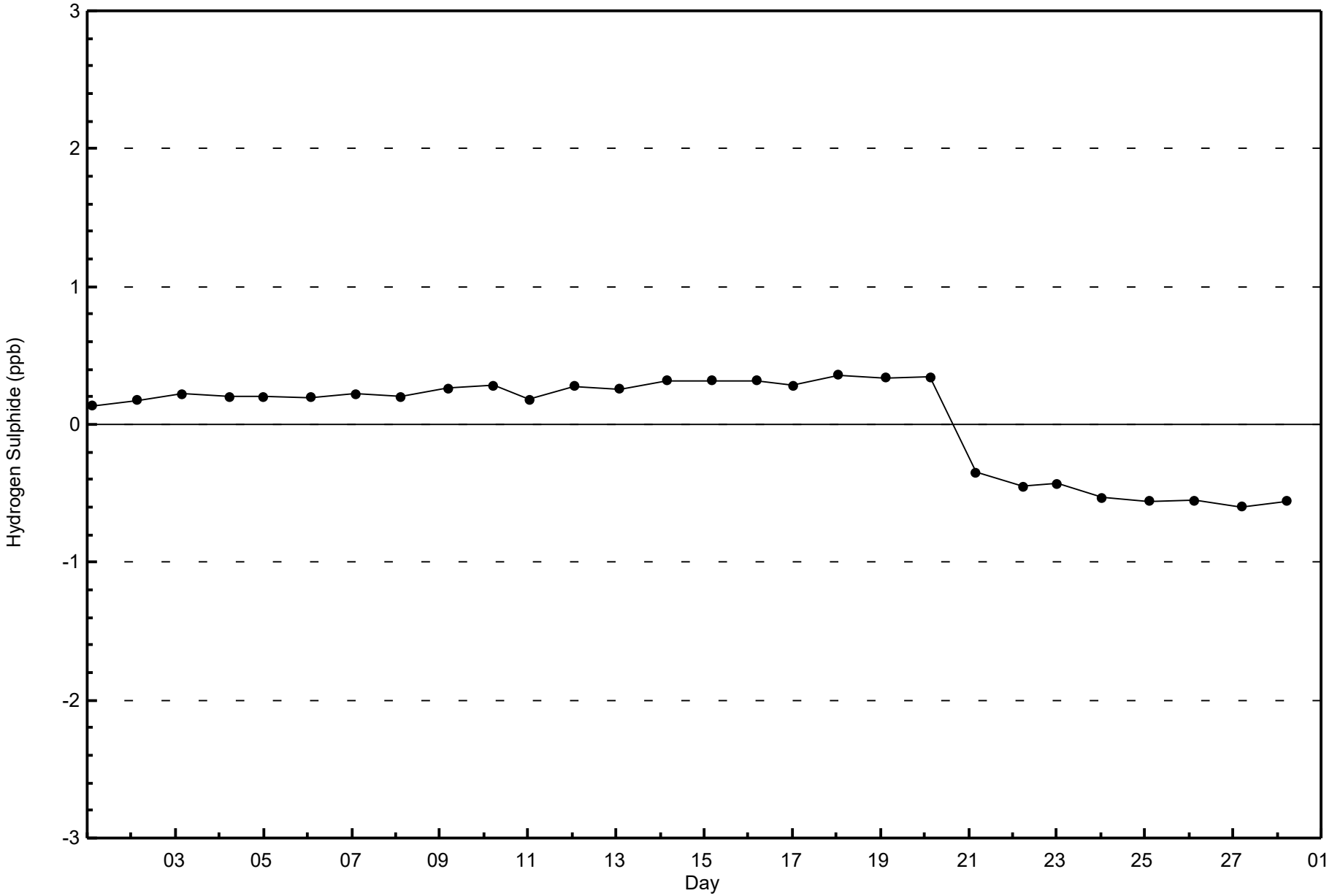
Total Number of Valid Hours: 632

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H2S) - ppb

Jackfish 2/3 - February 2025

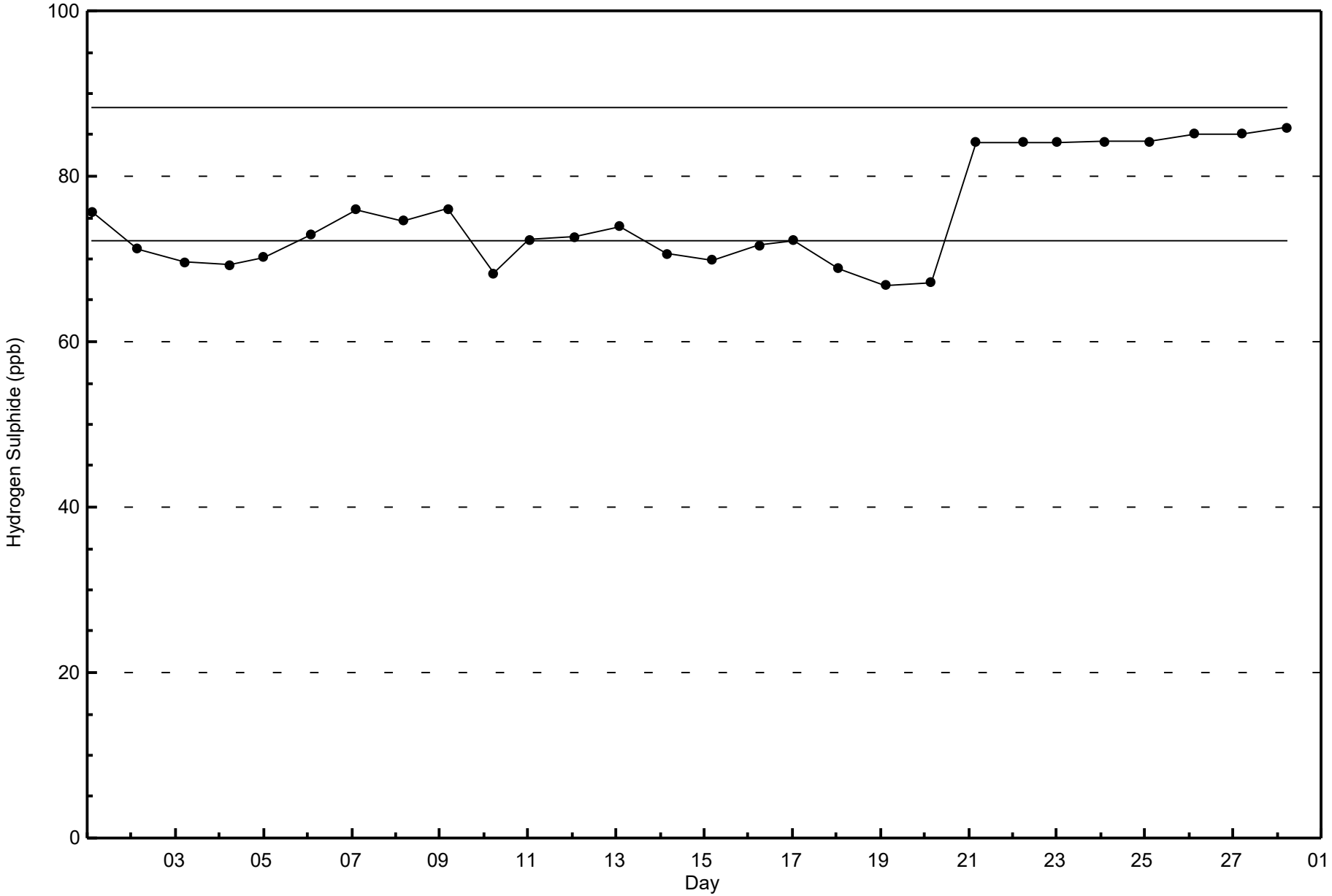


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H2S) - ppb

Jackfish 2/3 - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Jackfish 2/3 - February 2025

Maximum Value: 7.8 ppb on Feb 14 15:00

Maximum Daily Average: 2.2 ppb on Feb 14

Minimum Value: 0.0 ppb on Feb 1 01:00

Minimum Daily Average: 0.0 ppb on Feb 23

Maximum Diurnal Average: 0.9 ppb at hour 12

Minimum Diurnal Average: 0.0 ppb at hour 1

Monthly Average: 0.30 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.3 P_{90} = 0.7 P_{99} = 3.5

Hours in Service:	672
Hours of Data:	638
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-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.3	1.2	1.8	1.7	0.8	0.2	0.0	0.4	0.4	0.3	0.1	0.0	0.0	0.3	1.8
2-Feb	Z	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	1.0	1.5	2.1	1.9	1.6	1.6	0.9	0.4	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.5	2.1
3-Feb	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.3	0.4	1.2	0.7	1.1	0.6	0.3	0.1	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	1.2
4-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.8	0.0	0.6	0.6	0.5	0.7	0.7	0.5	0.3	0.4	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.8
5-Feb	0.0	0.0	0.0	Z	0.2	0.0	0.1	0.0	0.4	0.3	0.7	0.7	0.4	0.3	0.3	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
6-Feb	0.1	0.0	0.2	0.0	Z	0.0	0.1	0.2	0.1	1.0	1.3	1.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.4
7-Feb	0.0	0.0	0.0	0.0	0.1	Z	0.1	0.0	0.0	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.2
8-Feb	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.3	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.3
9-Feb	0.1	Z	0.0	0.0	0.0	0.0	0.1	0.0	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	0.1	0.1	0.0	0.1	0.3
10-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.2	0.0	0.2	0.5	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
11-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.6	1.0	0.8	0.5	0.5	0.4	0.2	0.1	2.7	0.2	0.0	0.0	0.0	0.0	0.0	0.3	2.7
12-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.5	0.0	0.0	0.5	0.5	0.5	0.6	0.5	0.3	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6
13-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.3	1.1	2.1	2.5	0.7	1.3	1.0	0.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	2.5
14-Feb	Z	0.4	0.4	0.2	1.3	0.4	0.1	0.3	4.1	3.7	5.1	7.4	7.2	7.2	7.8	3.2	1.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	2.2	7.8
15-Feb	0.0	Z	0.0	0.0	0.0	0.1	1.4	1.8	0.9	1.4	0.7	0.5	0.6	0.5	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.4	1.8
16-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.7	0.1	0.1	0.4	0.4	0.5	0.5	0.4	0.5	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
17-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.3	0.5	0.6	0.6	0.6	0.5	0.5	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6
18-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.0	0.4	1.3	1.5	C	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	1.5
19-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.3	0.1	0.4	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6
20-Feb	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.5	0.8	1.0	1.0	0.9	0.9	0.9	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.0
21-Feb	0.0	Z	0.0	0.0	0.0	0.0	0.4	0.3	0.3	0.7	0.9	1.2	0.7	0.3	0.4	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.2
22-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.7	0.5	0.2	0.4	0.4	0.5	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
23-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.2	0.0	0.1	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
24-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.2	0.2	0.4	0.5	0.2	0.1	0.3	0.0	0.1	0.4	0.0	0.1	0.2	0.0	0.2	0.0	0.1	0.5
25-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.2	0.6	1.0	1.0	0.9	3.0	1.0	0.2	0.2	0.0	1.3	0.0	0.5	0.0	0.1	0.0	0.4	3.0
26-Feb	Z	0.1	0.0	0.1	0.6	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.2	0.0	0.0	0.1	0.1	1.3	0.6	0.1	0.1	0.0	0.0	0.1	0.2	1.3
27-Feb	0.0	Z	0.1	0.1	0.3	0.0	0.0	0.2	0.1	0.1	0.3	0.1	0.2	0.3	0.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6
28-Feb	0.0	0.0	Z	0.0	0.7	0.0	0.0	0.0	0.1	0.3	0.5	0.8	0.3	0.5	0.5	0.1	0.1	0.8	1.6	0.6	0.6	1.0	0.4	0.4	0.4	1.6
	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.1	0.4	0.7	0.8	0.9	0.8	0.8	0.7	0.4	0.2	0.3	0.2	0.1	0.1	0.0	0.0	0.0	Diurnal Average	
	0.1	0.4	0.4	0.2	1.3	0.4	1.4	1.8	4.1	3.7	5.1	7.4	7.2	7.2	7.8	3.2	1.2	2.7	1.6	1.1	0.6	1.0	0.4	0.4	Diurnal Maximum	

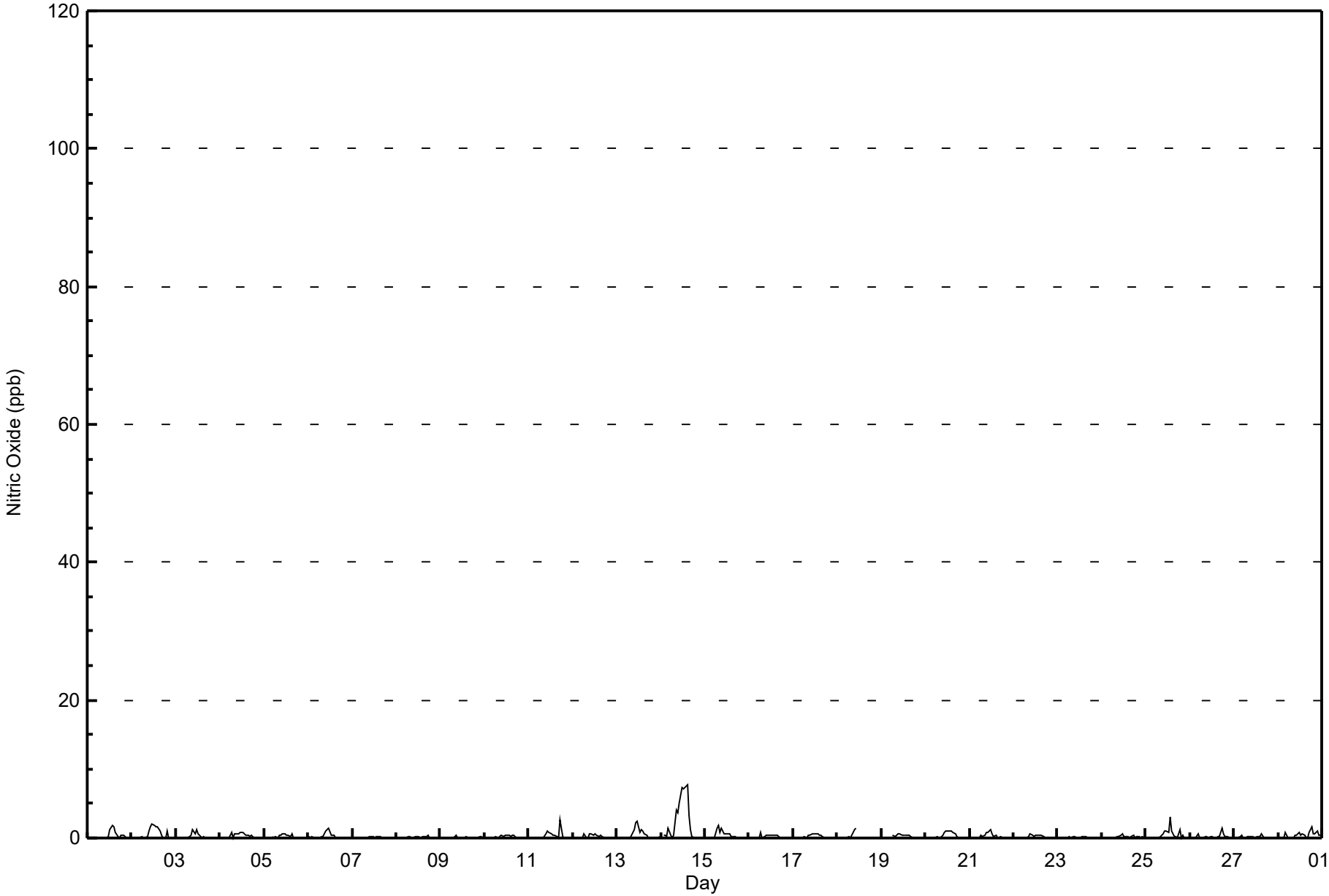
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Jackfish 2/3 - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	638	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: 638

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Jackfish 2/3 - February 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	18	19	41	24	4	5	6	23	86	46	60	117	65	34	57	33	638
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	18	19	41	24	4	5	6	23	86	46	60	117	65	34	57	33	638

Total Number of Valid Hours: 638

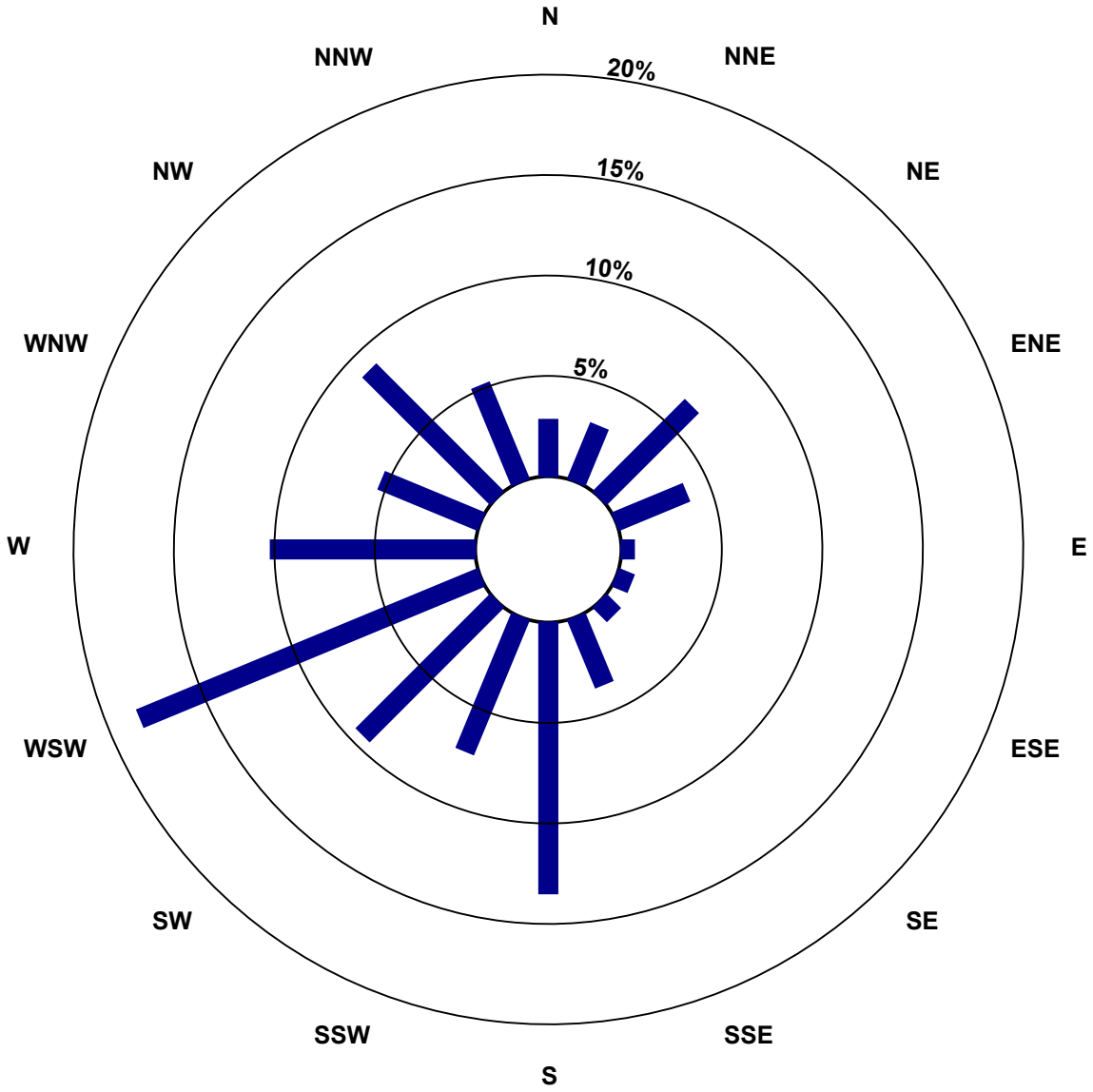
Total Number of Hours: 672

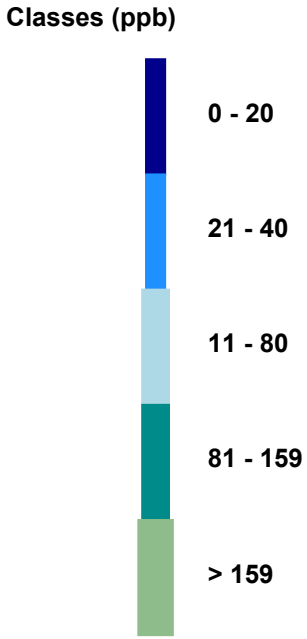
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitric Oxide (NO) - ppb

Jackfish 2/3





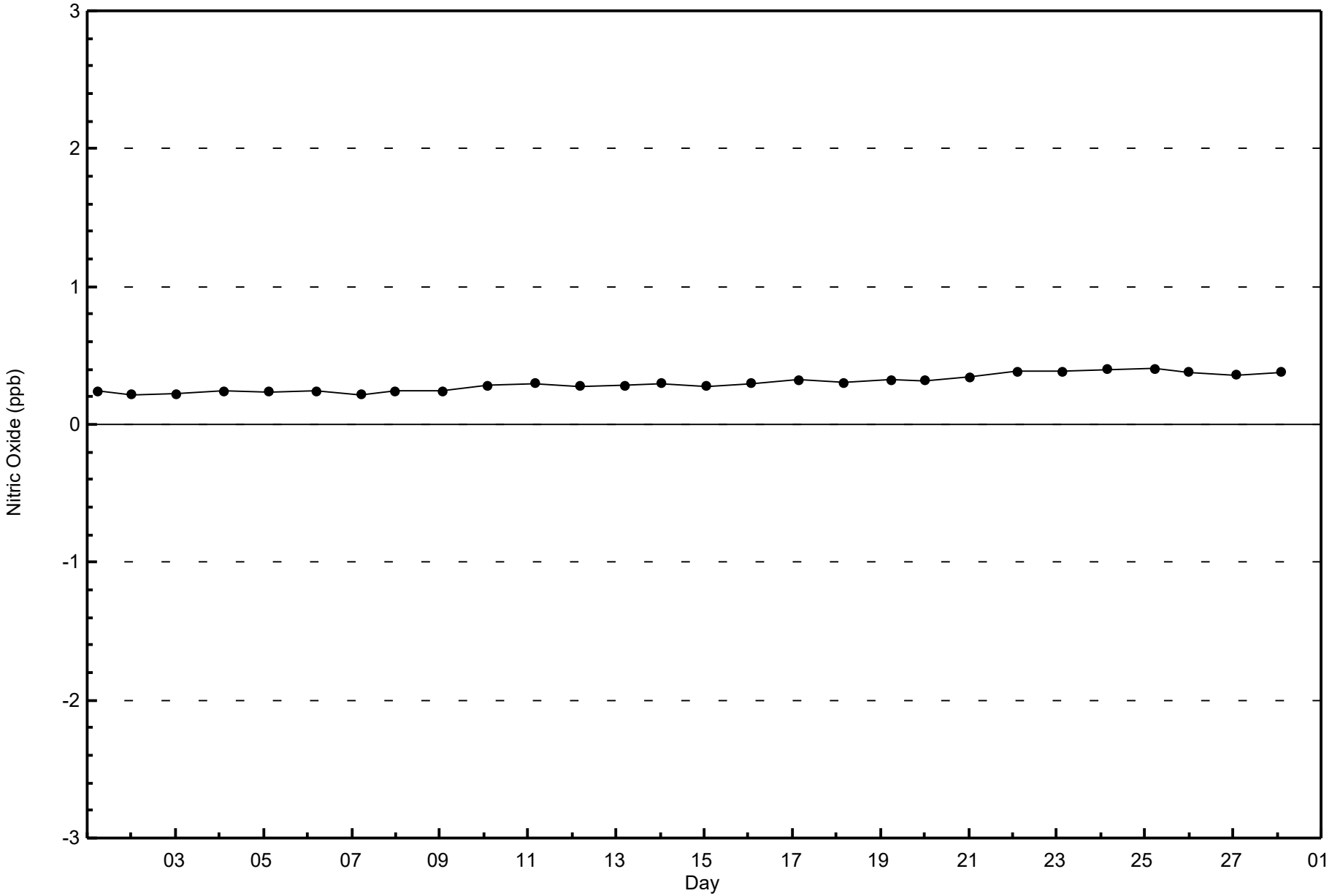
Total Number of Valid Hours: 638

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Jackfish 2/3 - February 2025

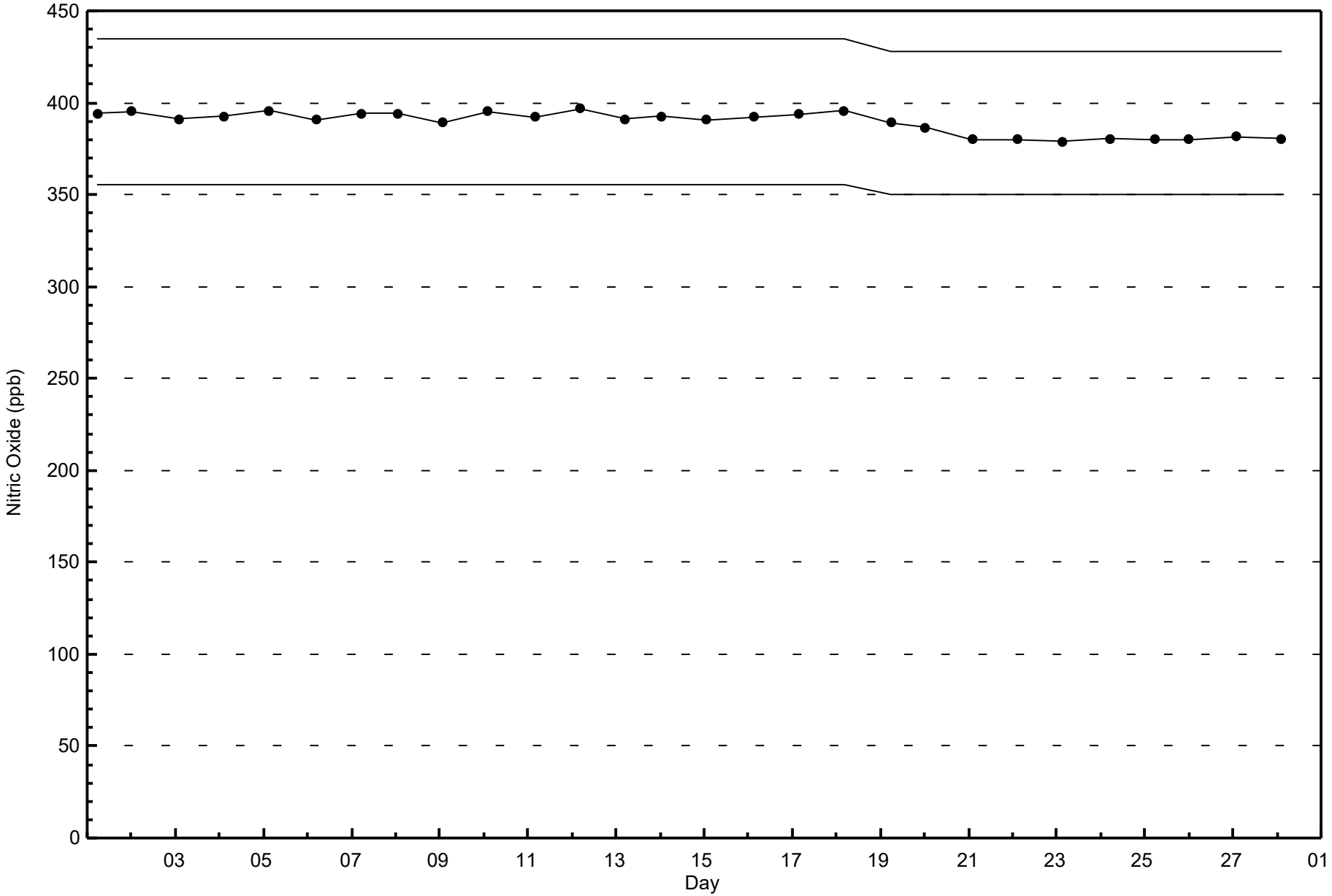


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Jackfish 2/3 - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Jackfish 2/3 - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 26.6 ppb on Feb 14 05:00
Maximum Daily Average: 11.4 ppb on Feb 14

Minimum Value: 0.0 ppb on Feb 2 00:00
Minimum Daily Average: 0.8 ppb on Feb 7
Maximum Diurnal Average: 3.8 ppb at hour 5
Minimum Diurnal Average: 1.6 ppb at hour 13
Monthly Average: 2.52 ppb
Percentiles: P_1 = 0.2 P_{10} = 0.7 Q_1 = 1.2 Median = 1.9 Q_3 = 3.2 P_{90} = 4.4 P_{99} = 15.3

Hours in Service:	672
Hours of Data:	638
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-Feb	0.4	0.2	0.6	0.2	0.2	Z	1.2	0.3	0.7	0.3	0.2	1.5	4.0	4.2	4.1	3.2	2.8	1.7	3.1	2.6	1.6	0.5	0.1	0.0	1.5	4.2
2-Feb	Z	2.0	2.0	2.3	4.4	3.8	3.9	3.3	3.4	3.1	2.8	2.8	2.7	2.7	3.1	3.3	4.5	5.2	3.9	3.0	1.3	0.9	1.4	1.2	2.9	5.2
3-Feb	1.2	Z	2.2	4.3	4.9	6.1	5.6	3.5	2.5	2.9	1.3	1.7	1.1	0.4	0.2	0.6	0.6	1.5	1.1	1.0	1.1	1.4	1.6	1.4	2.1	6.1
4-Feb	1.6	1.6	Z	1.6	1.5	1.5	2.2	1.6	2.3	2.1	1.3	1.4	1.3	1.1	0.9	1.4	1.3	3.1	3.2	2.8	1.9	2.0	2.0	2.6	1.8	3.2
5-Feb	1.2	2.2	1.9	Z	1.6	1.1	1.0	1.0	2.3	1.7	1.6	1.5	1.0	0.9	1.0	1.3	1.5	1.9	1.9	1.7	1.5	2.1	2.4	2.4	1.6	2.4
6-Feb	3.3	2.5	4.7	2.7	Z	1.9	1.9	2.6	2.9	4.8	4.8	4.1	1.6	1.7	1.8	0.6	1.3	2.1	3.3	3.1	1.6	0.3	0.4	0.3	2.4	4.8
7-Feb	0.3	0.4	1.2	0.9	2.0	Z	0.4	0.4	0.4	0.6	0.8	0.5	0.3	0.3	0.5	0.6	0.5	1.0	0.7	0.7	1.2	1.8	1.7	1.6	0.8	2.0
8-Feb	Z	1.5	1.2	1.2	0.8	1.0	1.2	0.7	0.4	0.3	0.5	0.5	0.5	0.5	0.9	1.1	1.5	2.2	1.8	1.7	1.1	1.5	2.3	1.2	1.1	2.3
9-Feb	2.8	Z	3.4	3.3	3.7	3.3	2.0	0.5	3.0	0.5	0.3	0.3	0.2	0.1	0.5	0.4	0.6	1.6	2.2	3.4	5.1	5.7	4.1	2.1	2.1	5.7
10-Feb	1.5	3.5	Z	0.5	0.6	1.2	1.8	1.8	2.3	1.7	0.7	0.9	0.8	0.9	0.8	0.9	1.5	1.0	1.3	1.3	2.4	1.7	3.2	2.8	1.5	3.5
11-Feb	1.2	1.2	1.2	Z	2.1	2.0	2.4	1.9	1.8	2.4	2.2	1.4	1.1	1.1	1.0	1.1	1.2	5.8	4.5	4.4	4.5	5.1	6.3	5.4	2.7	6.3
12-Feb	4.3	3.1	2.7	2.1	Z	2.1	2.1	1.4	1.3	2.0	1.7	1.7	1.6	1.6	1.3	2.4	2.3	3.5	3.7	2.9	2.4	2.2	2.2	1.8	2.3	4.3
13-Feb	1.5	1.4	1.5	1.4	1.9	Z	2.9	2.9	4.7	4.9	4.4	5.1	1.5	3.1	3.0	2.6	3.1	2.2	2.3	3.7	5.7	2.2	4.2	11.6	3.4	11.6
14-Feb	Z	26.1	22.6	21.9	26.6	25.7	16.8	12.8	17.8	8.6	6.1	7.6	7.4	8.1	9.7	6.2	5.8	6.1	5.7	4.7	3.2	3.7	5.4	4.5	11.4	26.6
15-Feb	4.6	Z	4.4	5.0	5.5	4.4	5.8	6.1	3.9	3.4	1.5	1.2	1.3	1.3	0.9	0.9	1.6	3.7	9.9	4.9	1.2	1.2	1.1	0.9	3.2	9.9
16-Feb	1.0	1.4	Z	2.4	2.4	2.3	4.3	1.8	1.5	1.4	1.0	0.8	0.9	0.9	1.0	1.3	1.7	3.5	3.9	3.6	2.9	2.7	3.2	3.1	2.1	4.3
17-Feb	2.4	3.0	3.6	Z	3.1	3.6	3.8	3.5	2.9	1.6	1.3	1.3	1.2	1.1	0.9	1.4	1.5	1.9	1.2	1.3	1.5	1.1	1.1	1.3	2.0	3.8
18-Feb	1.6	1.7	1.7	1.9	Z	2.1	2.6	2.3	2.0	2.6	2.5	C	C	C	C	C	C	1.2	0.7	0.9	1.6	2.7	3.0	2.7	--	3.0
19-Feb	2.2	2.3	2.2	2.3	3.3	Z	4.1	3.8	3.1	2.0	1.4	0.9	0.7	0.8	0.8	1.2	1.2	1.2	1.0	0.7	1.0	1.1	1.8	2.3	1.8	4.1
20-Feb	Z	2.6	2.7	4.0	3.1	2.1	2.0	1.9	1.9	2.3	2.7	2.5	2.5	2.3	2.5	3.0	3.5	3.9	4.2	4.6	3.9	4.2	4.0	3.9	3.1	4.6
21-Feb	4.3	Z	3.5	4.1	4.9	4.8	5.6	5.6	4.4	3.8	3.2	3.2	2.2	1.5	1.7	0.8	1.5	5.5	4.0	3.6	2.5	2.5	3.3	3.2	3.5	5.6
22-Feb	2.3	1.6	Z	1.9	2.9	2.9	3.8	4.3	4.2	4.1	3.2	2.0	2.2	2.4	2.1	2.2	2.7	3.1	2.7	2.6	2.7	4.4	5.6	4.1	3.0	5.6
23-Feb	3.1	3.3	3.8	Z	3.4	2.7	3.0	4.2	2.0	1.5	0.8	0.6	0.6	1.0	1.3	1.6	2.7	3.5	3.2	3.4	3.9	3.7	3.2	3.2	2.6	4.2
24-Feb	3.2	3.3	3.5	2.4	Z	2.1	2.0	1.8	2.1	1.6	1.6	1.2	0.9	0.8	0.9	0.6	0.9	4.9	1.8	1.7	1.6	1.2	1.5	1.1	1.9	4.9
25-Feb	1.0	0.9	1.0	1.8	3.5	Z	6.1	5.4	4.6	3.4	4.5	3.7	3.2	4.7	2.0	1.1	1.5	1.9	5.7	2.1	4.0	1.6	1.3	0.7	2.9	6.1
26-Feb	Z	1.9	1.0	1.3	1.5	1.0	0.8	0.8	0.9	0.9	0.6	0.7	0.7	0.5	0.6	0.9	1.3	2.6	2.3	1.6	1.5	1.0	1.3	1.3	1.2	2.6
27-Feb	1.5	Z	1.6	2.0	2.9	1.2	1.7	2.3	2.3	2.6	1.8	0.7	1.4	1.6	1.0	3.6	0.9	0.9	0.6	1.5	1.3	1.3	2.8	3.2	1.8	3.6
28-Feb	2.4	3.4	Z	2.0	3.5	1.2	1.2	1.3	1.4	1.6	1.4	1.6	0.9	1.4	1.4	0.7	0.6	3.9	2.4	2.3	1.1	3.6	1.3	2.0	1.9	3.9
	2.1	3.1	3.2	3.1	3.8	3.5	3.3	2.9	3.0	2.5	2.0	1.9	1.6	1.7	1.7	1.7	1.9	2.9	2.9	2.6	2.3	2.3	2.6	2.6	Diurnal Average	
	4.6	26.1	22.6	21.9	26.6	25.7	16.8	12.8	17.8	8.6	6.1	7.6	7.4	8.1	9.7	6.2	5.8	6.1	9.9	4.9	5.7	5.7	6.3	11.6	Diurnal Maximum	

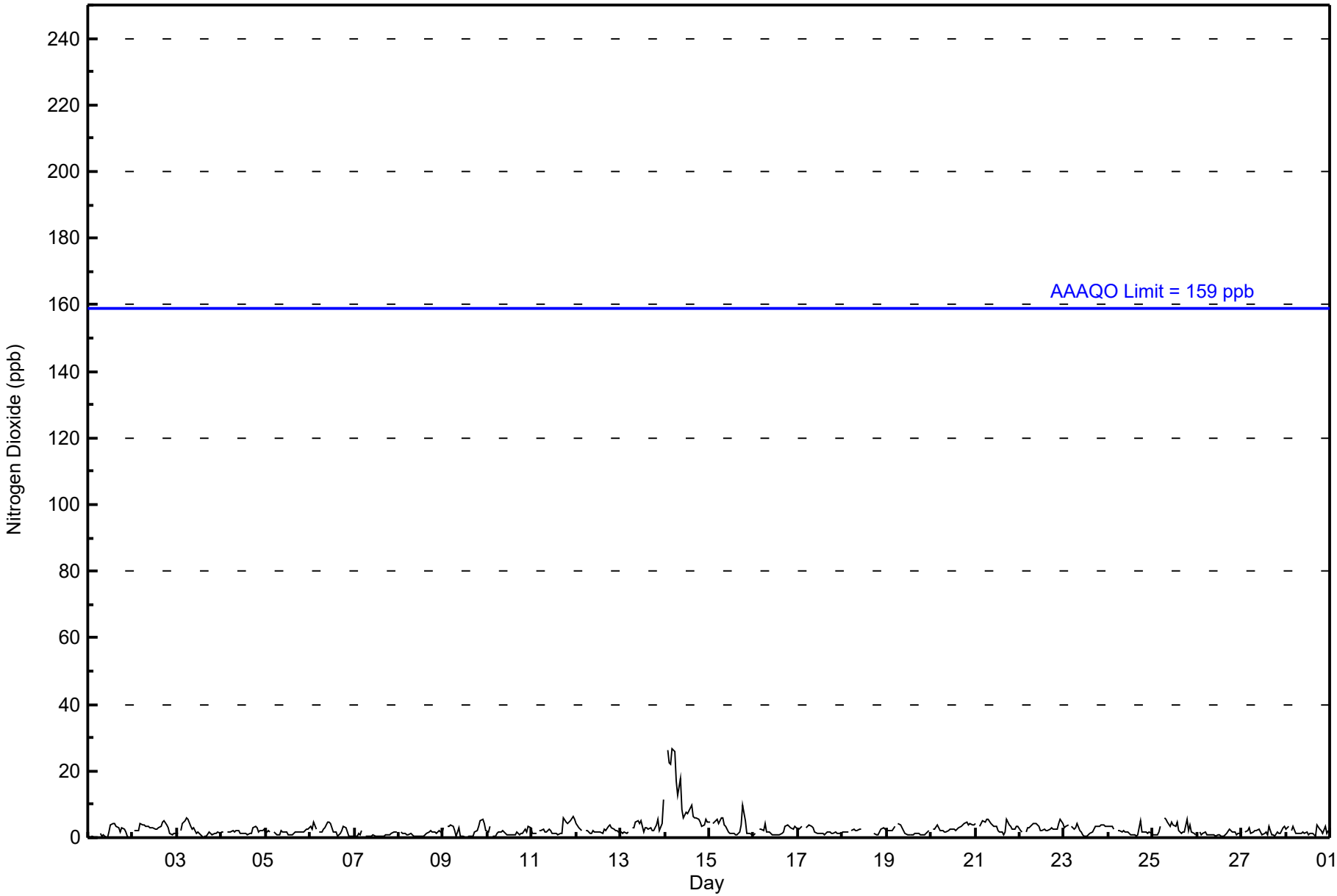
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Jackfish 2/3 - February 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Jackfish 2/3 - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	633	99.22	99.22
21 - 40	5	0.78	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: 638

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Jackfish 2/3 - February 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	18	19	36	24	4	5	6	23	86	46	60	117	65	34	57	33	633
21 - 40	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	18	19	41	24	4	5	6	23	86	46	60	117	65	34	57	33	638

Total Number of Valid Hours: 638

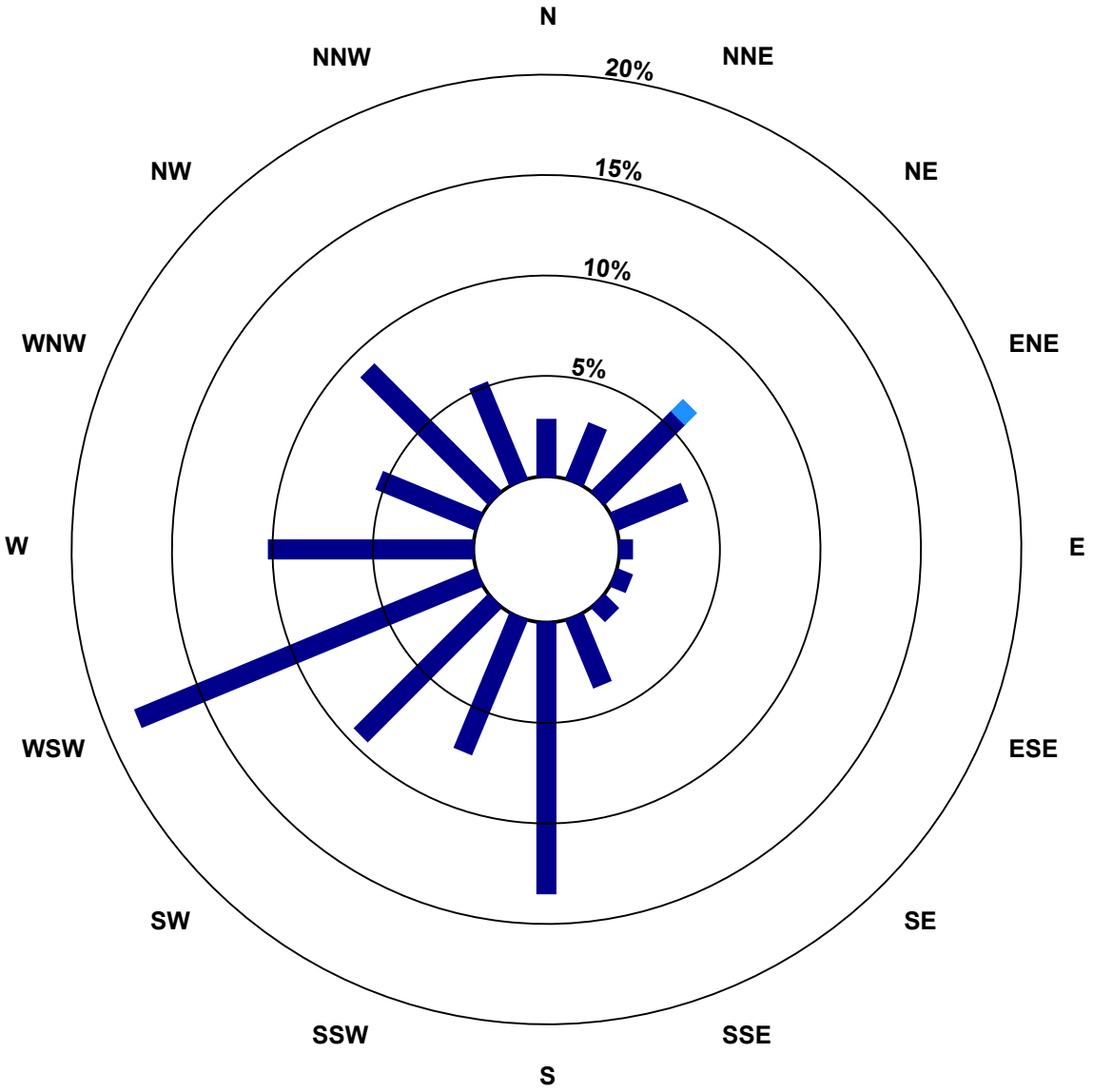
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Dioxide (NO_2) - ppb

Jackfish 2/3



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

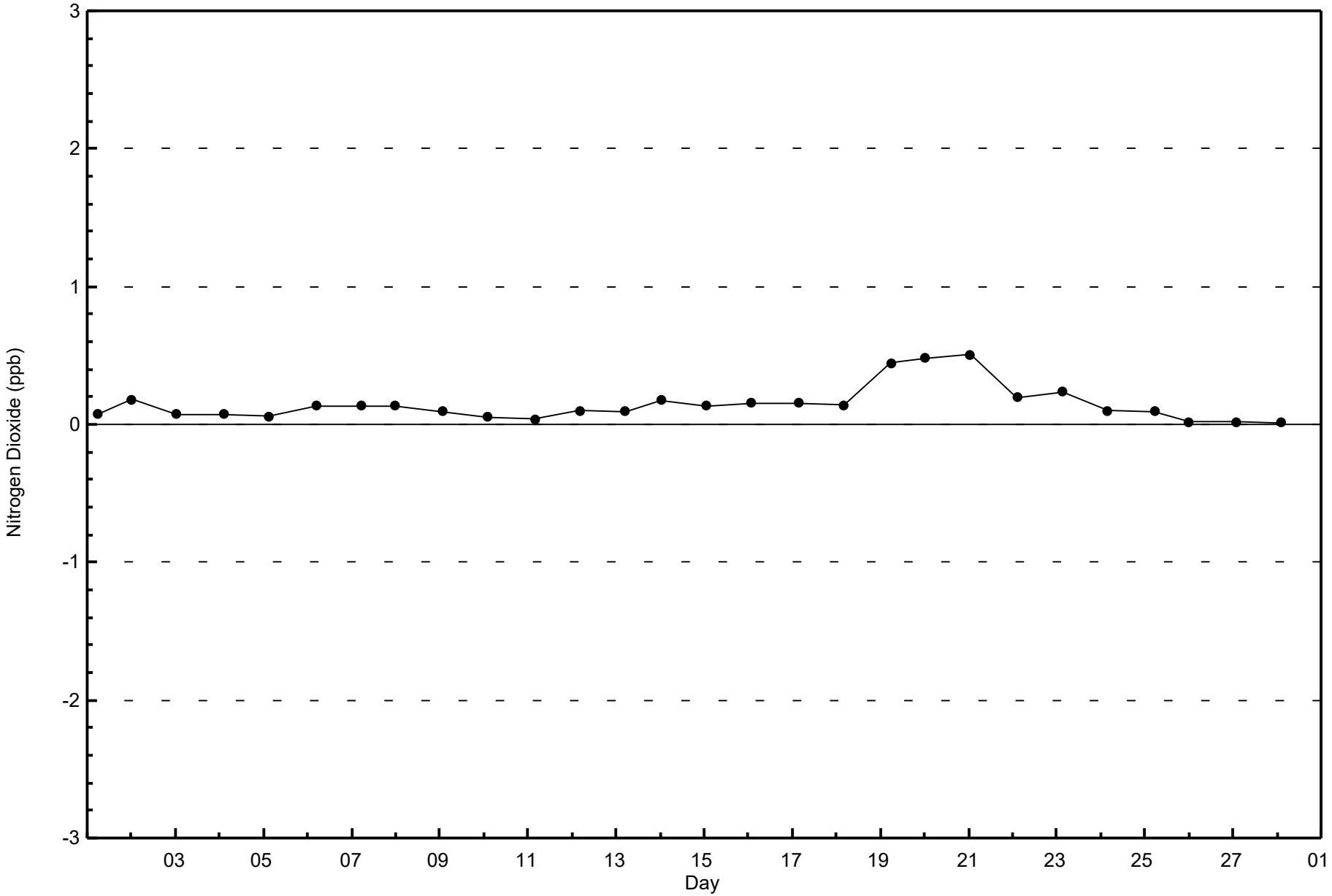
Total Number of Valid Hours: 638

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Jackfish 2/3 - February 2025

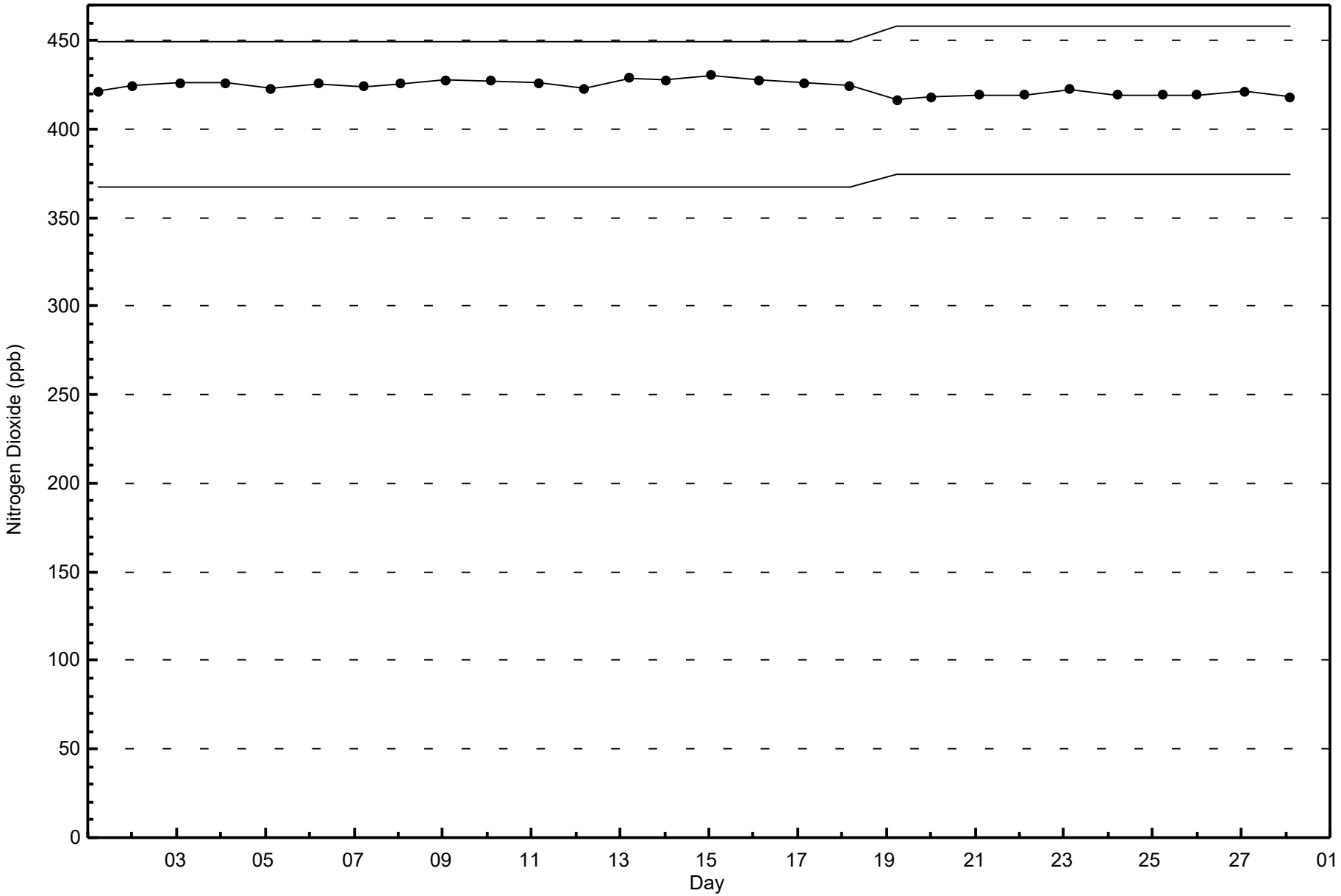


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Jackfish 2/3 - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Jackfish 2/3 - February 2025

Maximum Value: 27.9 ppb on Feb 14 05:00

Maximum Daily Average: 13.6 ppb on Feb 14

Minimum Value: 0.0 ppb on Feb 2 00:00

Minimum Daily Average: 0.9 ppb on Feb 7

Maximum Diurnal Average: 3.9 ppb at hour 5

Minimum Diurnal Average: 2.1 ppb at hour 17

Monthly Average: 2.82 ppb

Percentiles: P_1 = 0.2 P_{10} = 0.8 Q_1 = 1.3 Median = 2.1 Q_3 = 3.5 P_{90} = 4.8 P_{99} = 17.3

Hours in Service:	672
Hours of Data:	638
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-Feb	0.4	0.2	0.6	0.2	0.2	Z	1.2	0.3	0.7	0.3	0.2	1.8	5.2	6.0	5.8	4.0	3.0	1.7	3.5	3.0	1.9	0.6	0.1	0.0	1.8	6.0
2-Feb	Z	2.0	2.0	2.3	4.4	4.0	3.9	3.3	3.6	4.1	4.3	4.9	4.6	4.3	4.7	4.2	4.9	5.2	3.9	4.1	1.3	0.9	1.4	1.2	3.5	5.2
3-Feb	1.2	Z	2.2	4.3	4.9	6.1	5.6	3.8	2.9	4.1	2.0	2.8	1.7	0.7	0.3	0.8	0.6	1.5	1.2	1.0	1.1	1.4	1.6	1.4	2.3	6.1
4-Feb	1.6	1.6	Z	1.6	1.5	1.5	3.0	1.6	2.9	2.7	1.8	2.1	2.0	1.6	1.2	1.8	1.5	3.5	3.2	2.8	1.9	2.0	2.0	2.6	2.1	3.5
5-Feb	1.2	2.2	1.9	Z	1.8	1.1	1.1	1.0	2.7	2.0	2.3	2.2	1.4	1.2	1.3	1.9	1.6	1.9	1.9	1.7	1.5	2.1	2.4	2.4	1.8	2.7
6-Feb	3.4	2.5	4.9	2.7	Z	1.9	2.0	2.8	3.0	5.8	6.1	5.5	2.0	2.1	2.2	0.6	1.3	2.1	3.3	3.1	1.6	0.3	0.4	0.3	2.6	6.1
7-Feb	0.3	0.4	1.2	0.9	2.1	Z	0.5	0.4	0.4	0.7	1.0	0.7	0.4	0.5	0.7	0.8	0.6	1.1	0.7	0.7	1.3	1.8	1.7	1.6	0.9	2.1
8-Feb	Z	1.5	1.2	1.2	0.8	1.0	1.3	0.9	0.4	0.3	0.6	0.6	0.6	0.6	1.1	1.4	1.7	2.5	1.8	1.8	1.1	1.5	2.3	1.2	1.2	2.5
9-Feb	2.9	Z	3.4	3.3	3.7	3.3	2.1	0.5	3.3	0.6	0.4	0.3	0.2	0.1	0.6	0.4	0.6	1.6	2.2	3.4	5.1	5.8	4.2	2.1	2.2	5.8
10-Feb	1.5	3.5	Z	0.5	0.6	1.2	2.0	1.8	2.5	2.2	1.0	1.3	1.2	1.2	1.1	1.2	1.8	1.0	1.3	1.3	2.4	1.7	3.2	2.8	1.7	3.5
11-Feb	1.2	1.2	1.2	Z	2.1	2.0	2.4	1.9	1.9	3.0	3.2	2.2	1.6	1.6	1.4	1.3	1.3	8.5	4.7	4.4	4.5	5.1	6.3	5.4	3.0	8.5
12-Feb	4.3	3.1	2.7	2.1	Z	2.1	2.6	1.4	1.3	2.5	2.2	2.2	2.2	2.1	1.6	2.8	2.5	3.5	3.7	2.9	2.4	2.2	2.2	1.8	2.5	4.3
13-Feb	1.5	1.4	1.5	1.4	1.9	Z	2.9	2.9	5.0	6.0	6.5	7.6	2.2	4.4	4.0	3.3	3.5	2.2	2.3	3.7	5.7	2.2	4.2	11.8	3.8	11.8
14-Feb	Z	26.5	23.0	22.1	27.9	26.1	16.9	13.1	21.9	12.3	11.2	15.0	14.6	15.3	17.5	9.4	7.0	6.3	5.8	4.7	3.2	3.7	5.4	4.5	13.6	27.9
15-Feb	4.6	Z	4.4	5.0	5.5	4.5	7.2	7.9	4.8	4.8	2.2	1.7	1.9	1.8	1.2	1.0	1.7	3.8	10.0	4.9	1.2	1.2	1.1	0.9	3.6	10.0
16-Feb	1.0	1.4	Z	2.4	2.4	2.3	5.0	1.9	1.6	1.8	1.4	1.3	1.4	1.3	1.5	1.7	2.0	3.6	3.9	3.6	2.9	2.7	3.2	3.1	2.3	5.0
17-Feb	2.4	3.0	3.6	Z	3.1	3.6	3.9	3.6	3.2	2.1	1.9	1.9	1.8	1.6	1.4	1.8	1.8	1.9	1.2	1.3	1.5	1.1	1.1	1.3	2.2	3.9
18-Feb	1.6	1.7	1.7	1.9	Z	2.1	2.7	2.3	2.4	3.9	4.0	C	C	C	C	C	C	1.2	0.7	0.9	1.6	2.7	3.0	2.7	--	4.0
19-Feb	2.2	2.3	2.2	2.3	3.3	Z	4.4	3.9	3.5	2.6	2.0	1.4	1.1	1.2	1.2	1.6	1.4	1.2	1.0	0.7	1.0	1.1	1.8	2.3	2.0	4.4
20-Feb	Z	2.6	2.7	4.0	3.1	2.1	2.1	1.9	2.0	2.8	3.5	3.5	3.5	3.2	3.4	3.9	4.0	4.2	4.2	4.6	3.9	4.2	4.0	3.9	3.4	4.6
21-Feb	4.3	Z	3.5	4.1	4.9	4.8	6.0	5.9	4.7	4.5	4.1	4.4	2.9	1.8	2.1	0.8	1.5	5.6	4.0	3.6	2.5	2.5	3.3	3.2	3.7	6.0
22-Feb	2.3	1.6	Z	1.9	2.9	2.9	3.8	4.3	4.3	4.8	3.7	2.2	2.6	2.8	2.6	2.5	2.9	3.1	2.7	2.6	2.7	4.4	5.6	4.1	3.2	5.6
23-Feb	3.1	3.3	3.8	Z	3.4	2.7	3.2	4.2	2.1	1.7	0.8	0.7	0.6	1.1	1.4	1.7	2.8	3.5	3.2	3.4	3.9	3.7	3.2	3.2	2.6	4.2
24-Feb	3.2	3.3	3.5	2.4	Z	2.1	2.0	1.8	2.3	1.8	2.0	1.7	1.1	0.9	1.2	0.6	1.0	5.3	1.8	1.8	1.8	1.2	1.7	1.1	2.0	5.3
25-Feb	1.0	0.9	1.0	1.8	3.5	Z	6.1	5.4	4.8	4.0	5.5	4.7	4.1	7.7	3.0	1.3	1.7	1.9	7.0	2.1	4.5	1.6	1.4	0.7	3.3	7.7
26-Feb	Z	2.0	1.0	1.4	2.1	1.0	0.8	0.8	1.1	1.1	0.7	0.8	0.9	0.5	0.6	1.0	1.4	3.9	2.9	1.7	1.6	1.0	1.3	1.4	1.4	3.9
27-Feb	1.5	Z	1.7	2.1	3.2	1.2	1.7	2.5	2.4	2.7	2.1	0.8	1.6	1.9	1.1	4.2	0.9	0.9	0.6	1.5	1.3	1.3	2.8	3.2	1.9	4.2
28-Feb	2.4	3.4	Z	2.0	4.2	1.2	1.2	1.3	1.5	1.9	1.9	2.4	1.2	1.9	1.9	0.8	0.7	4.7	4.0	2.9	1.7	4.6	1.7	2.4	2.3	4.7
	2.1	3.1	3.3	3.1	3.9	3.5	3.5	3.0	3.3	3.1	2.8	2.8	2.4	2.6	2.5	2.1	2.1	3.1	3.1	2.6	2.4	2.3	2.6	2.6	Diurnal Average	
	4.6	26.5	23.0	22.1	27.9	26.1	16.9	13.1	21.9	12.3	11.2	15.0	14.6	15.3	17.5	9.4	7.0	8.5	10.0	4.9	5.7	5.8	6.3	11.8	Diurnal Maximum	

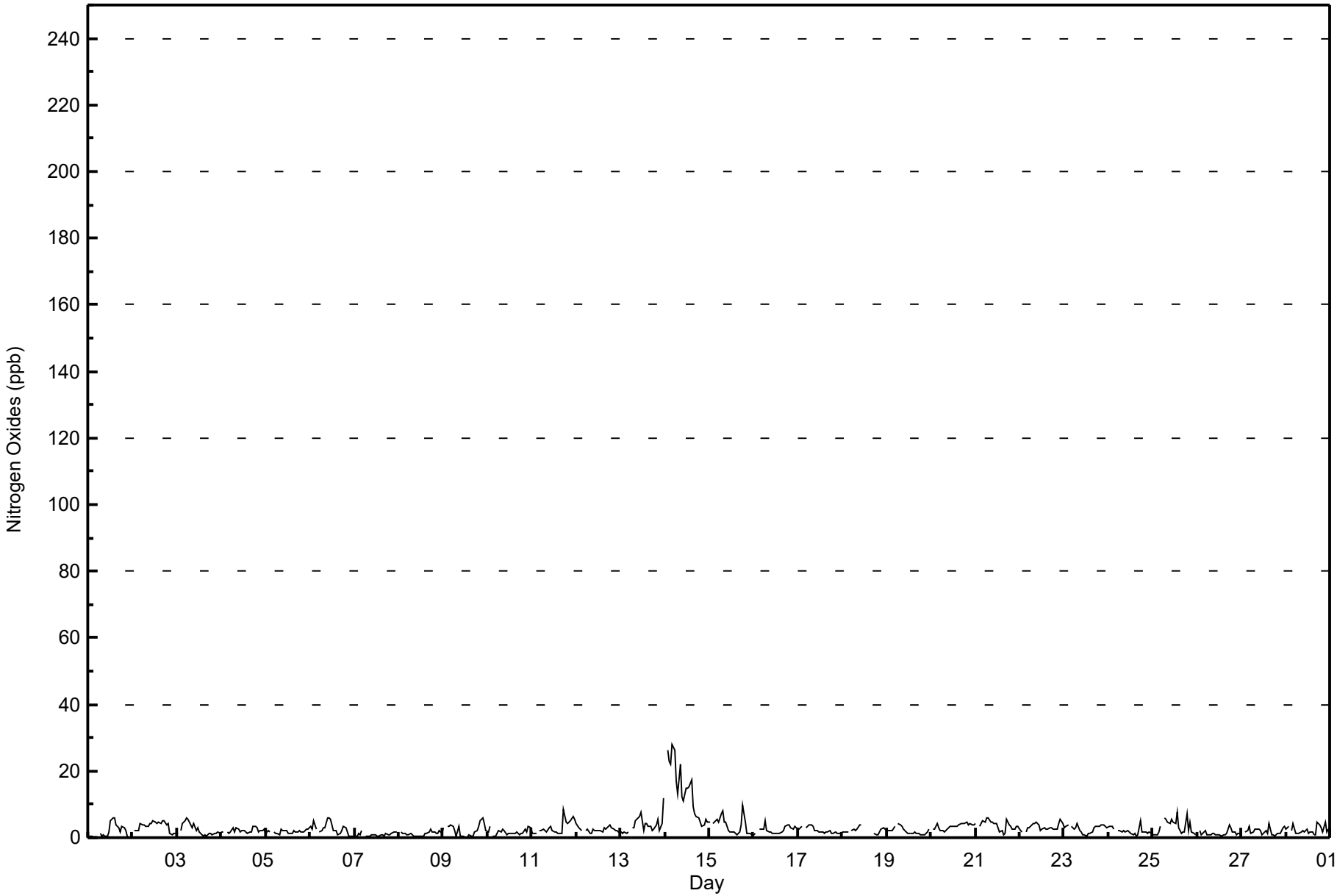
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Jackfish 2/3 - February 2025



Nitrogen Oxides (NO_X) - ppb
Jackfish 2/3 - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	632	99.06	99.06
21 - 40	6	0.94	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: 638

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Jackfish 2/3 - February 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	18	19	35	24	4	5	6	23	86	46	60	117	65	34	57	33	632
21 - 40	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	18	19	41	24	4	5	6	23	86	46	60	117	65	34	57	33	638

Total Number of Valid Hours: 638

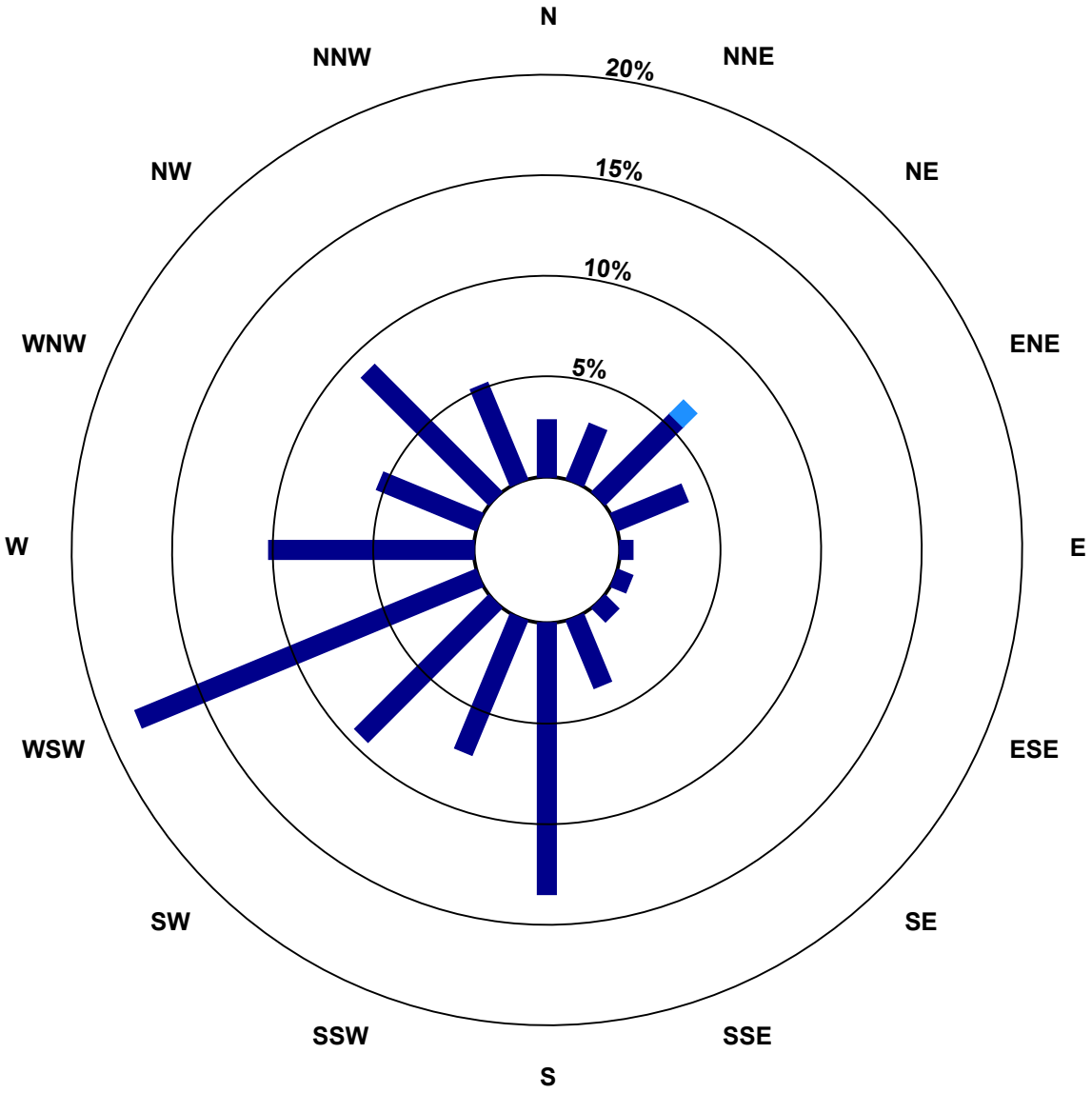
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Oxides (NO_X) - ppb

Jackfish 2/3



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

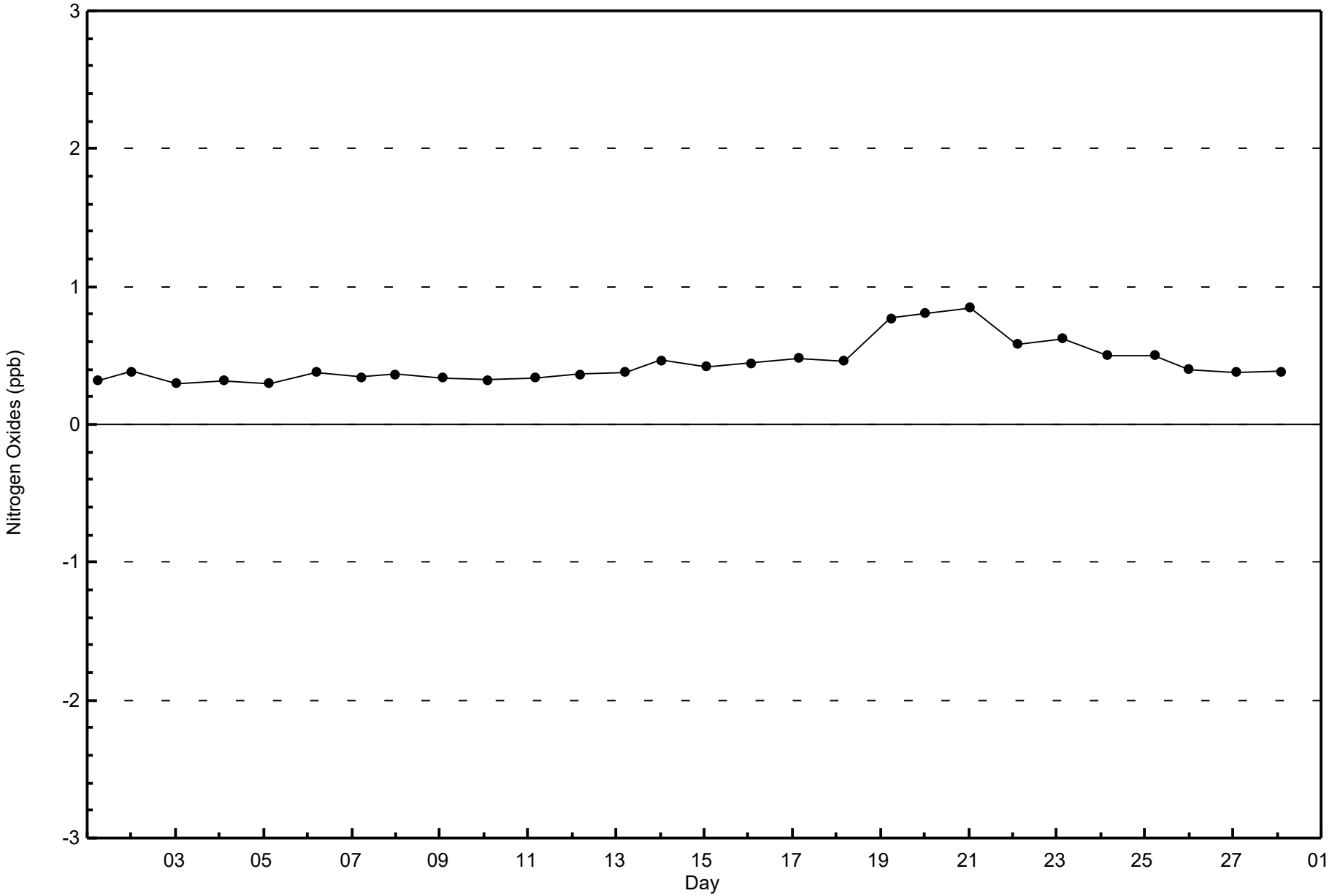
Total Number of Valid Hours: 638

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Jackfish 2/3 - February 2025

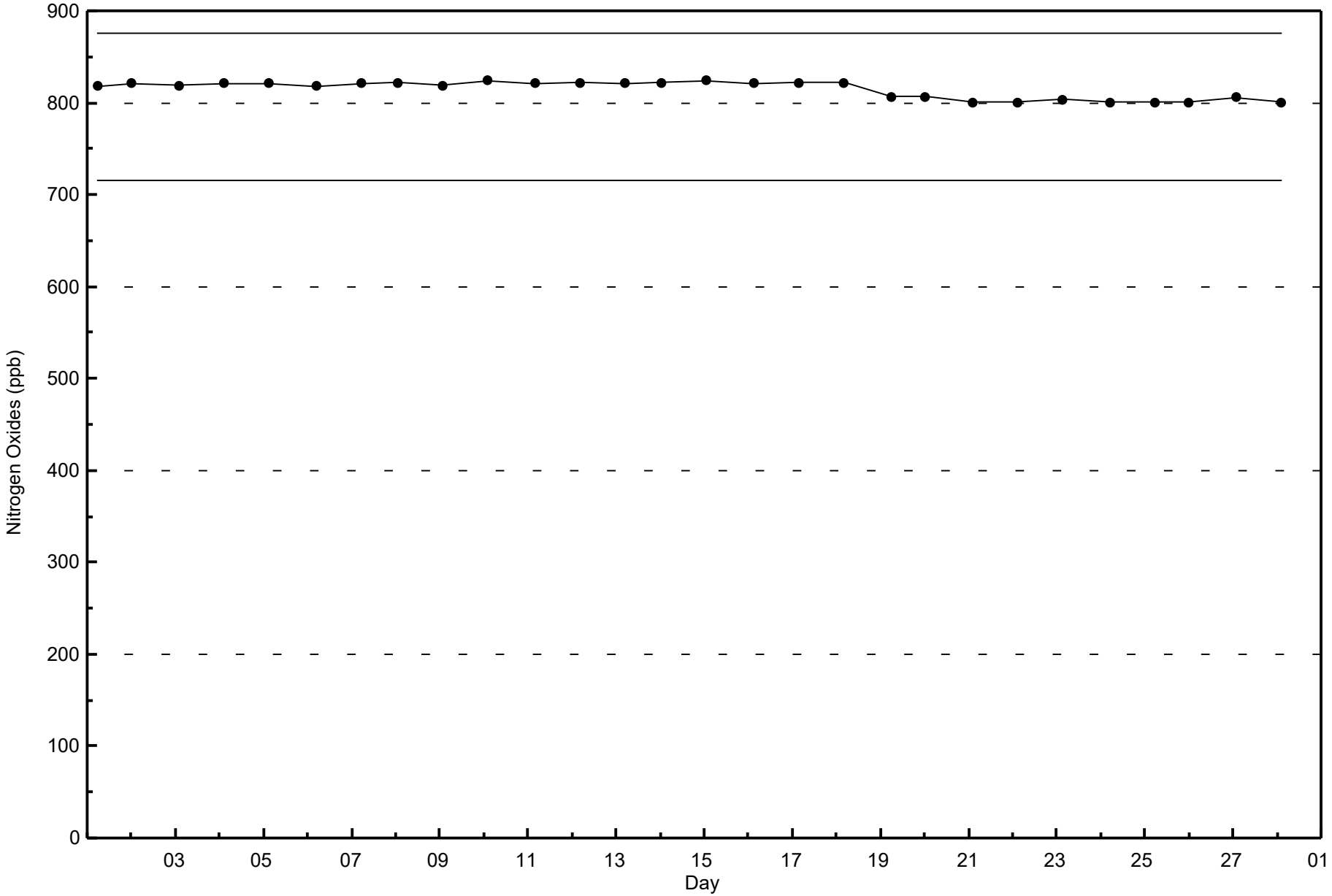


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Jackfish 2/3 - February 2025



Maximum Value: 8.1 C on Feb 22 16:00

Maximum Daily Average: 3.9 C on Feb 27

Minimum Value: -31.6 C on Feb 10 02:00

Minimum Daily Average: -27.6 C on Feb 2

Maximum Diurnal Average: -10.7 C at hour 16

Minimum Diurnal Average: -18.7 C at hour 7

Monthly Average: -15.70 C

Percentiles: P_1 = -30.8 P_{10} = -27.9 Q_1 = -24.6 Median = -19.5 Q_3 = -4.4 P_{90} = 2.5 P_{99} = 7.3

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

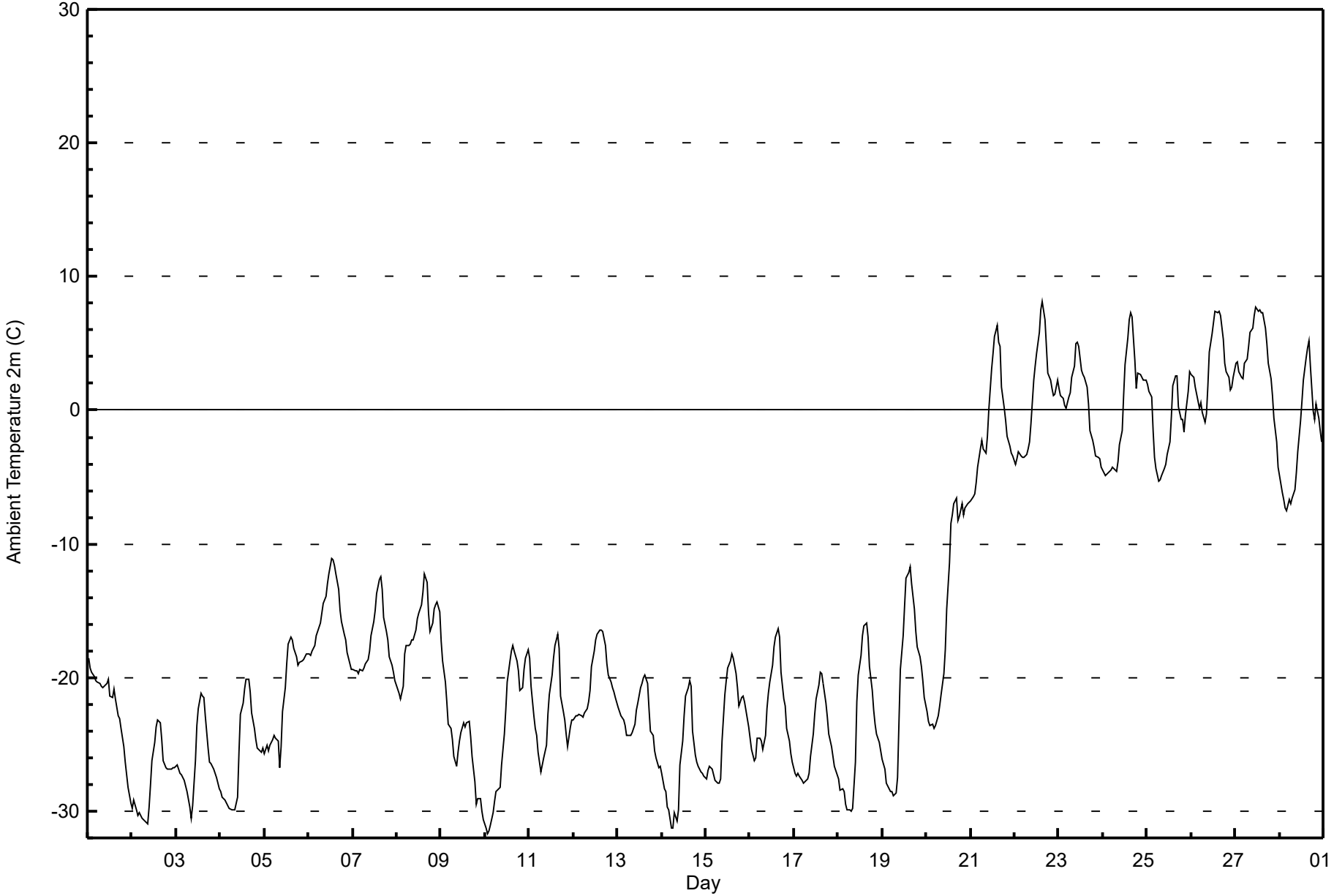
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-18.6	-19.3	-19.6	-19.9	-20.3	-20.4	-20.4	-20.6	-20.7	-20.7	-20.4	-20.1	-21.3	-21.5	-20.9	-21.6	-22.8	-23.1	-23.8	-25.1	-26.4	-27.3	-28.2	-29.4	-22.2	-18.6
2-Feb	-29.8	-29.2	-29.9	-30.3	-30.2	-30.5	-30.6	-30.8	-30.9	-29.7	-28.0	-26.2	-24.9	-23.7	-23.2	-23.4	-24.6	-26.2	-26.8	-26.8	-26.8	-26.8	-26.7	-26.7	-27.6	-23.2
3-Feb	-26.5	-26.8	-27.2	-27.3	-27.7	-28.1	-28.5	-29.7	-30.5	-29.6	-26.2	-23.6	-22.3	-21.1	-21.4	-21.5	-22.9	-25.3	-26.3	-26.4	-26.9	-27.2	-27.5	-28.3	-26.2	-21.1
4-Feb	-28.5	-29.0	-29.1	-29.3	-29.6	-29.8	-29.9	-29.9	-29.9	-28.9	-25.6	-22.8	-21.9	-20.9	-20.1	-20.1	-21.1	-22.6	-23.8	-24.6	-25.3	-25.4	-25.6	-25.3	-25.8	-20.1
5-Feb	-25.7	-25.1	-25.5	-25.1	-24.7	-24.3	-24.6	-24.7	-26.7	-25.2	-22.6	-20.7	-18.9	-17.5	-17.0	-17.2	-17.8	-18.5	-19.0	-18.9	-18.7	-18.6	-18.5	-18.2	-21.4	-17.0
6-Feb	-18.2	-18.3	-18.0	-17.6	-16.9	-16.5	-15.9	-15.2	-14.5	-13.9	-13.0	-12.2	-11.1	-11.2	-11.6	-12.2	-13.4	-15.0	-15.8	-16.7	-17.2	-18.2	-19.0	-19.4	-15.5	-11.1
7-Feb	-19.4	-19.4	-19.5	-19.7	-19.4	-19.5	-19.2	-18.9	-18.7	-18.0	-16.9	-15.8	-15.0	-13.7	-12.7	-12.5	-13.4	-15.5	-16.6	-17.2	-18.4	-19.0	-19.6	-20.3	-17.4	-12.5
8-Feb	-20.9	-21.2	-21.5	-20.6	-18.2	-17.6	-17.6	-17.5	-17.2	-17.2	-16.4	-15.6	-15.2	-14.5	-13.6	-12.3	-12.9	-15.2	-16.5	-15.9	-14.9	-14.6	-14.3	-15.1	-16.5	-12.3
9-Feb	-17.3	-18.8	-20.3	-21.9	-23.4	-23.8	-24.6	-25.9	-26.6	-25.6	-24.7	-24.1	-23.4	-23.7	-23.4	-23.3	-24.5	-25.9	-27.8	-29.4	-29.1	-29.0	-30.0	-30.6	-24.9	-17.3
10-Feb	-31.3	-31.6	-31.5	-31.0	-30.1	-29.2	-28.6	-28.4	-28.2	-26.5	-24.3	-22.4	-20.3	-18.7	-18.0	-17.6	-18.0	-18.8	-19.5	-21.0	-20.7	-19.4	-18.6	-18.0	-23.8	-17.6
11-Feb	-18.6	-20.7	-22.8	-23.8	-24.3	-25.6	-27.1	-26.5	-26.0	-25.0	-22.7	-21.3	-19.8	-18.6	-17.6	-16.8	-17.8	-21.3	-22.6	-23.2	-24.3	-25.2	-23.7	-23.2	-22.4	-16.8
12-Feb	-23.1	-22.9	-22.8	-22.7	-22.9	-22.9	-22.7	-22.3	-21.8	-21.0	-19.2	-18.0	-17.2	-16.8	-16.5	-16.4	-16.5	-17.6	-19.0	-19.8	-20.4	-20.8	-21.1	-21.5	-20.2	-16.4
13-Feb	-22.2	-22.5	-22.8	-23.2	-23.6	-24.3	-24.3	-24.3	-24.1	-23.5	-22.4	-22.0	-20.8	-20.5	-20.1	-19.8	-20.4	-22.3	-24.0	-24.4	-25.5	-26.0	-26.7	-26.7	-23.2	-19.8
14-Feb	-27.2	-28.3	-28.5	-29.7	-29.9	-31.2	-31.3	-30.1	-30.7	-29.8	-26.5	-24.7	-22.8	-21.4	-20.7	-20.3	-20.6	-24.1	-25.9	-26.3	-26.7	-27.0	-27.2	-27.4	-26.6	-20.3
15-Feb	-27.6	-26.9	-26.6	-26.9	-27.3	-27.7	-27.9	-27.9	-27.6	-24.7	-21.3	-20.2	-19.3	-18.7	-18.3	-18.5	-19.7	-20.8	-22.2	-21.5	-21.4	-21.8	-22.4	-23.7	-23.4	-18.3
16-Feb	-24.5	-25.4	-26.3	-26.0	-24.5	-24.6	-24.7	-25.4	-24.3	-22.3	-21.2	-20.3	-19.1	-17.7	-17.0	-16.4	-16.9	-19.6	-21.6	-22.2	-23.8	-24.8	-25.7	-26.3	-22.5	-16.4
17-Feb	-27.2	-27.4	-27.2	-27.4	-27.7	-27.9	-27.7	-27.6	-27.1	-25.9	-24.3	-22.8	-21.6	-20.5	-19.6	-19.7	-20.4	-21.9	-22.9	-24.2	-25.1	-25.9	-26.7	-27.2	-24.8	-19.6
18-Feb	-27.6	-28.4	-28.3	-28.5	-29.5	-29.9	-30.0	-30.0	-29.8	-26.3	-21.9	-19.9	-18.4	-16.9	-16.1	-15.9	-17.0	-19.2	-21.0	-22.4	-23.5	-24.2	-24.9	-25.5	-24.0	-15.9
19-Feb	-26.1	-26.9	-27.9	-28.1	-28.5	-28.5	-28.8	-28.6	-27.5	-23.4	-19.4	-16.9	-14.7	-12.6	-12.1	-11.7	-13.0	-14.9	-16.6	-17.7	-18.4	-19.2	-20.2	-21.5	-21.0	-11.7
20-Feb	-22.6	-23.3	-23.5	-23.5	-23.8	-23.6	-22.9	-22.1	-21.3	-19.7	-17.9	-14.9	-11.5	-8.5	-7.8	-7.0	-6.6	-8.2	-7.9	-7.0	-7.8	-7.3	-7.0	-6.9	-14.7	-6.6
21-Feb	-6.8	-6.4	-6.2	-5.4	-4.3	-2.8	-2.3	-2.9	-3.2	-2.0	0.0	3.1	4.2	5.5	6.3	5.0	4.7	1.7	0.1	-0.8	-1.9	-2.7	-3.2	-3.4	-1.0	6.3
22-Feb	-4.1	-3.6	-3.1	-3.4	-3.5	-3.6	-3.3	-2.9	-2.4	-1.0	2.3	3.3	4.3	5.9	7.5	8.1	6.8	4.8	2.8	2.2	1.6	1.1	1.2	2.3	1.0	8.1
23-Feb	1.7	1.1	0.9	0.4	0.1	1.0	1.4	2.4	3.3	5.0	5.1	4.8	3.0	2.7	2.5	1.8	0.4	-1.5	-2.2	-2.8	-3.4	-3.5	-3.6	-4.3	0.7	5.1
24-Feb	-4.7	-4.9	-4.8	-4.6	-4.4	-4.3	-4.4	-4.5	-3.8	-2.6	-1.5	1.1	3.4	5.4	6.8	7.3	7.0	3.7	1.6	2.8	2.7	2.5	2.2	2.3	0.2	7.3
25-Feb	2.0	1.4	1.0	-1.5	-3.6	-4.3	-5.3	-5.2	-4.9	-4.4	-4.0	-3.3	-2.3	-0.4	1.9	2.6	2.5	0.3	-0.7	-0.7	-1.7	-0.4	1.4	2.9	-1.1	2.9
26-Feb	2.7	2.4	1.7	1.2	0.1	0.5	-0.1	-0.9	-0.2	1.9	4.4	5.7	6.6	7.4	7.3	7.4	7.1	5.4	3.5	2.9	2.5	1.5	1.8	2.5	3.1	7.4
27-Feb	3.5	3.6	2.9	2.5	2.3	3.5	3.8	4.8	5.9	6.1	7.0	7.7	7.4	7.5	7.3	7.3	6.1	4.9	3.5	2.4	1.2	-0.5	-2.4	-4.2	3.9	7.7
28-Feb	-4.9	-6.1	-6.7	-7.3	-7.5	-6.7	-6.9	-6.6	-6.0	-4.7	-3.1	-0.8	0.7	2.3	3.9	4.6	5.2	3.3	0.0	-0.7	0.5	-0.6	-1.5	-2.3	-2.2	5.2
	-17.6	-18.0	-18.3	-18.6	-18.7	-18.7	-18.7	-18.7	-18.4	-17.1	-15.2	-13.7	-12.6	-11.5	-10.9	-10.7	-11.4	-13.3	-14.7	-15.2	-15.7	-16.1	-16.3	-16.6	Diurnal Average	
	3.5	3.6	2.9	2.5	2.3	3.5	3.8	4.8	5.9	6.1	7.0	7.7	7.4	7.5	7.5	8.1	7.1	5.4	3.5	2.9	2.7	2.5	2.2	2.9	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Jackfish 2/3 - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	322	47.92	47.92
-20 - 0	239	35.57	83.48
0 - 10	111	16.52	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Jackfish 2/3 - February 2025

Maximum Value: 95.4 % on Feb 25 09:00

Maximum Daily Average: 80.6 % on Feb 8

Minimum Value: 24.0 % on Feb 19 16:00

Minimum Daily Average: 47.4 % on Feb 19

Maximum Diurnal Average: 77.0 % at hour 5

Minimum Diurnal Average: 58.3 % at hour 16

Monthly Average: 70.88 %

Percentiles: P_1 = 33.8 P_{10} = 54.8 Q_1 = 65.3 Median = 73.6 Q_3 = 77.7 P_{90} = 82.6 P_{99} = 90.9

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

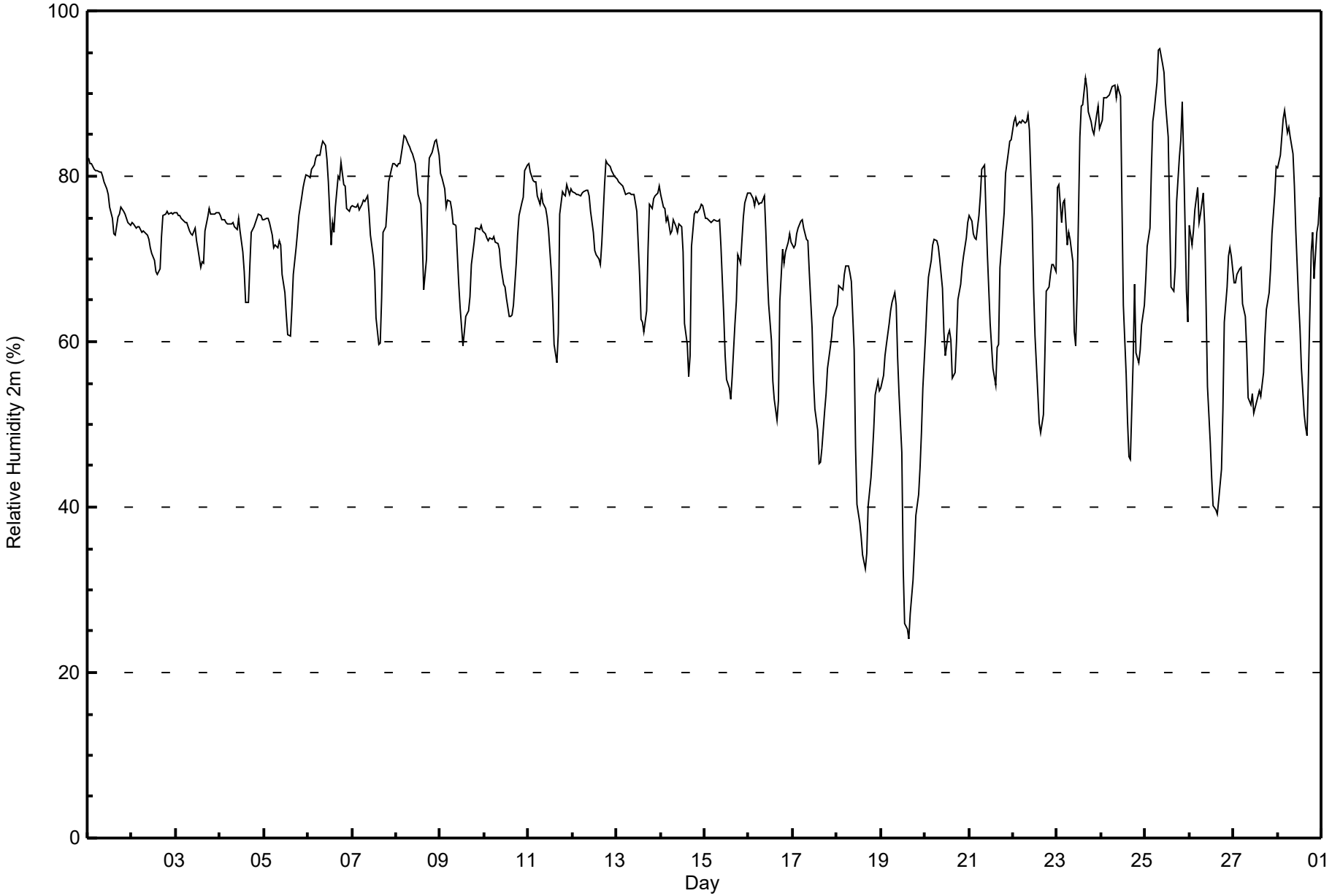
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	82.2	81.6	81.5	80.8	80.7	80.6	80.6	80.6	80.1	79.3	78.5	77.8	76.2	74.9	73.1	73.0	75.1	75.5	76.3	75.8	75.4	74.9	74.5	74.1	77.6	82.2
2-Feb	74.4	74.2	73.7	73.9	73.8	73.3	73.3	73.1	72.9	72.3	71.3	70.7	69.9	68.4	68.2	68.8	72.8	75.3	75.4	75.8	75.4	75.6	75.5	75.6	73.1	75.8
3-Feb	75.7	75.2	75.2	74.9	74.5	74.4	74.3	73.4	73.0	72.8	73.8	72.2	71.1	68.9	69.6	69.4	73.3	75.2	76.1	75.4	75.4	75.5	75.6	75.5	73.8	76.1
4-Feb	75.2	74.8	74.7	74.4	74.3	74.2	74.3	74.3	73.9	73.6	74.9	73.4	70.9	68.4	64.7	64.7	69.1	73.1	74.0	74.5	74.9	75.4	75.3	74.8	73.0	75.4
5-Feb	74.8	74.9	74.9	74.4	72.9	71.3	71.7	71.3	72.3	71.7	68.1	66.0	63.2	60.9	60.7	64.0	68.1	71.4	73.2	75.3	77.5	78.6	79.5	80.1	71.5	80.1
6-Feb	79.9	79.9	80.8	81.4	82.2	82.5	82.5	83.5	84.3	83.7	82.0	79.4	71.7	74.5	73.2	76.2	79.9	79.7	81.7	79.0	78.9	76.1	75.8	76.2	79.4	84.3
7-Feb	76.5	76.3	76.2	76.6	75.9	76.6	77.2	77.0	77.7	75.5	72.8	70.4	68.5	62.9	59.6	59.8	65.3	73.3	74.0	76.4	79.4	80.9	81.5	81.6	73.8	81.6
8-Feb	81.2	81.6	81.5	83.7	84.9	84.7	83.9	83.5	83.0	82.6	81.5	79.7	77.7	76.5	72.4	66.2	70.0	78.9	82.3	83.0	83.6	84.2	84.4	82.6	80.6	84.9
9-Feb	80.4	79.8	78.4	76.3	77.2	76.9	76.0	74.3	74.0	70.6	66.9	64.1	59.5	61.1	63.0	63.7	65.5	69.3	72.0	73.8	73.7	73.5	74.0	73.3	71.5	80.4
10-Feb	73.0	72.5	72.2	72.5	72.3	72.7	72.1	71.8	71.2	69.2	67.0	66.7	65.3	63.1	63.1	63.3	64.3	69.6	72.8	75.2	76.8	77.5	80.6	81.3	71.1	81.3
11-Feb	81.5	80.5	79.5	79.4	79.3	77.7	76.6	78.0	76.8	76.1	75.1	73.6	68.5	64.7	59.6	57.4	61.0	75.4	78.2	77.8	77.6	79.0	77.8	78.4	74.6	81.5
12-Feb	78.1	78.0	77.8	77.9	77.6	78.0	78.1	78.4	78.3	77.6	75.8	73.3	71.0	70.6	70.1	69.3	71.8	79.0	81.8	81.5	81.2	80.6	80.3	80.0	76.9	81.8
13-Feb	79.6	79.3	79.2	78.8	78.3	77.7	77.9	77.9	77.8	77.7	76.9	75.8	68.0	62.6	62.3	61.2	63.7	71.2	76.6	76.0	77.2	77.7	78.0	78.7	74.6	79.6
14-Feb	77.7	76.2	76.1	74.7	75.0	73.1	73.5	74.8	73.9	73.3	74.2	73.9	70.8	62.2	59.7	55.8	58.3	71.5	75.4	75.8	75.6	76.0	76.7	76.4	72.1	77.7
15-Feb	74.9	74.9	74.7	74.4	74.6	74.8	74.6	74.6	74.7	71.4	63.2	58.3	55.5	54.3	53.0	55.8	62.1	64.9	70.6	69.5	72.3	75.0	76.9	78.0	68.9	78.0
16-Feb	78.0	78.0	77.3	76.5	77.5	76.7	76.8	76.8	77.6	73.3	68.4	64.6	60.2	55.3	53.0	50.5	52.9	64.9	71.2	69.5	70.8	72.0	73.0	72.0	69.5	78.0
17-Feb	71.3	71.8	73.0	73.7	74.6	74.8	73.7	72.4	72.2	68.5	61.8	55.4	51.9	49.4	45.3	45.5	47.1	51.7	53.6	56.7	59.4	60.7	63.0	64.0	62.1	74.8
18-Feb	64.4	66.8	66.4	66.3	68.2	69.2	69.2	68.3	67.3	58.9	47.3	40.4	38.1	36.5	34.3	32.6	34.5	40.2	43.5	46.3	49.5	53.6	55.3	54.1	53.0	69.2
19-Feb	54.4	56.0	58.3	59.7	62.1	63.7	64.8	65.9	64.4	58.2	53.7	46.7	32.5	25.9	25.2	24.0	27.2	31.1	34.8	39.0	41.5	44.7	48.9	54.4	47.4	65.9
20-Feb	61.0	65.0	67.8	69.8	71.6	72.3	72.2	71.5	70.0	66.4	61.3	58.3	60.8	61.4	60.2	55.6	56.3	59.9	65.0	67.0	69.0	70.3	72.5	74.4	65.8	74.4
21-Feb	75.2	74.6	73.0	72.6	72.4	75.2	77.5	80.8	81.3	75.8	70.7	62.3	59.4	56.8	54.7	59.2	59.7	68.9	73.4	75.6	80.3	82.8	84.2	84.4	72.1	84.4
22-Feb	86.6	87.1	86.1	86.6	86.5	86.7	86.4	86.6	87.4	85.6	74.9	66.4	60.6	53.7	50.2	49.1	51.2	58.1	66.1	66.6	68.1	69.4	69.3	68.5	72.4	87.4
23-Feb	78.7	79.0	74.5	76.9	77.0	71.8	73.3	72.4	69.6	61.2	59.5	65.8	84.7	88.4	88.7	91.8	90.6	87.8	86.6	85.6	85.1	87.5	88.5	85.7	79.6	91.8
24-Feb	86.8	89.4	89.5	89.5	89.9	90.3	90.8	91.1	89.5	90.8	89.6	76.8	64.4	56.1	50.4	46.2	45.8	57.8	66.9	58.7	57.4	58.9	62.0	64.4	73.0	91.1
25-Feb	67.5	71.5	73.8	80.8	86.7	87.9	91.4	95.3	95.4	93.6	92.6	89.0	84.7	75.7	66.6	66.2	69.0	76.9	82.4	84.5	89.0	82.3	66.1	62.5	80.5	95.4
26-Feb	74.0	71.7	73.4	75.9	78.6	74.4	75.4	78.0	74.0	64.5	54.5	47.7	43.6	40.1	39.6	39.2	40.8	44.5	51.7	62.3	66.5	70.3	71.3	70.4	61.8	78.6
27-Feb	67.1	67.1	68.1	68.9	69.0	64.5	63.1	58.9	53.2	52.3	53.7	51.4	52.7	53.3	54.0	53.5	56.3	60.7	63.9	66.0	68.8	73.0	77.8	81.2	62.4	81.2
28-Feb	81.1	82.5	84.8	87.0	87.9	85.2	85.9	84.7	82.7	78.8	73.3	64.9	61.5	56.8	51.1	49.7	48.7	55.7	70.9	73.2	67.7	73.2	74.2	77.5	72.5	87.9
	75.4	75.7	75.8	76.4	77.0	76.5	76.7	76.7	76.0	73.4	70.1	66.6	63.7	60.8	58.8	58.3	60.7	66.5	70.4	71.3	72.4	73.5	74.0	74.3	Diurnal Average	
	86.8	89.4	89.5	89.5	89.9	90.3	91.4	95.3	95.4	93.6	92.6	89.0	84.7	88.4	88.7	91.8	90.6	87.8	86.6	85.6	89.0	87.5	88.5	85.7	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Jackfish 2/3 - February 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	15	2.23	2.23
40 - 60	93	13.84	16.07
60 - 80	450	66.96	83.04
80 - 100	114	16.96	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Jackfish 2/3 - February 2025

Maximum Speed: 19 km/h on Feb 23 11:00

Maximum Daily Speed Average: 12.1 km/h on Feb 20

Minimum Speed Value: 0 km/h on Feb 16 06:00

Minimum Daily Speed Average: 0.3 km/h on Feb 25

Maximum Diurnal Speed Average: 6.0 km/h at hour 12

Minimum Diurnal Speed Average: 2.6 km/h at hour 18

Monthly Average Velocity: 4.0 km/h 246.0 deg

Percentiles: $P_1 = 1$ $P_{10} = 3$ $Q_1 = 5$ Median = 7 $Q_3 = 9$ $P_{90} = 11$ $P_{99} = 16$

Hours in Service: 672

Hours of Data: 672

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-Feb	NE7	ENE8	NE7	NE9	NE8	NE7	NNE4	NNE5	N5	NNW5	NW5	NW6	NW8	NW8	NW6	NW8	NW8	NW7	WNW8	WNW9	WNW9	WNW9	WNW8	W7	NNW4.7	WNW9
2-Feb	WNW7	NW8	NW6	NW6	NW7	WNW8	NW7	NW7	NNW7	NNW6	NW7	NW7	NW7	NW7	NW8	NNW7	NNW6	NW4	NW5	NW4	NNW4	NW3	NW4	NW4	NW6.0	NW8
3-Feb	NW5	NNW5	NW3	NW3	NW2	NW2	W2	W4	WSW4	WSW6	W6	W6	W5	W7	W7	WNW5	W4	WSW2	WSW4	WSW6	WSW6	WSW6	WSW7	WSW8	W4.2	WSW8
4-Feb	WSW8	SW8	SW8	WSW7	WSW7	SW8	WSW8	WSW8	SW8	SW8	WSW10	WSW11	WSW11	WSW12	WSW11	WSW10	WSW9	SW7	SW7	SW7	SW8	SW9	SW11	SW11	WSW8.8	WSW12
5-Feb	SW10	WSW14	WSW13	WSW13	WSW13	WSW13	WSW9	WSW10	SW7	WSW11	WSW13	WSW14	WSW16	WSW13	WSW12	WSW11	WSW11	WSW12	WSW13	WSW13	W10	W10	W8	W9	WSW11.3	WSW16
6-Feb	WNW9	W8	WNW7	W7	W8	W9	WSW11	W9	W8	WNW10	WNW9	WNW9	NW7	NW9	NW10	NW7	N7	N6	N6	N6	NNW5	NNW7	NNW5	NW3	WNW6.5	WSW11
7-Feb	NNW3	NW4	W5	W6	WNW5	WSW6	WSW9	WSW11	WSW11	WSW9	W8	W9	WSW10	WSW11	WSW9	WSW10	WSW9	SW7	WSW9	SW11	SW10	WSW11	WSW6	WSW7	WSW7.8	WSW11
8-Feb	SW8	SW8	SW8	WSW8	W5	W6	W6	WSW6	W6	W7	WSW7	W8	W8	W8	W8	W7	WSW5	WSW6	WSW7	WSW7	WSW7	W7	NW7	NW8	W6.4	W8
9-Feb	NW9	NNW8	NNW8	NNW7	NW5	NW6	NW6	NW6	NW6	NNW5	NNW5	NNW5	NNW6	N6	N5	N6	NNW5	N5	NNW3	WNW2	WNW3	WNW5	W6	W5	NW5.2	NW9
10-Feb	W5	WSW8	WSW9	W9	WSW11	WSW11	WSW13	WSW14	WSW13	WSW12	WSW15	WSW14	WSW13	WSW13	WSW11	WSW13	WSW14	WSW12	SW11	WSW10	WSW10	W7	WNW5	NW5	WSW10.5	WSW15
11-Feb	N6	NNE5	N3	NNE3	NNE4	NNE3	N0	N2	NNW3	NNW4	NNW4	N5	N5	NNW6	NW5	NNW5	NNW4	SW2	WSW3	W4	WNW1	SW0	S3	S5	NNW2.3	N6
12-Feb	S5	SSW6	SSW6	SSW5	S5	S5	S6	SSW5	S5	S5	SSW5	SW5	SW7	SW6	SSW6	SSW4	ESE2	NNE2	NNE3	NNE4	NNE4	NNE4	NNE6	NE6	SSW2.2	SW7
13-Feb	NNE4	NNE4	NNE5	NE4	NNE3	NNE3	ENE3	NE3	NNE3	NNE3	NNE4	NE3	ENE4	NE4	NE4	NE5	NE5	ENE3	ENE3	ENE4	ENE3	ENE4	NE4	NE5	NE3.6	NE5
14-Feb	NE5	NE4	NE4	NE3	NE2	NE1	NE2	NE3	NE2	NE1	NE3	ENE2	ENE3	ENE4	ENE6	ENE5	NE3	ESE2	S2	S3	SSW3	S2	SSW1	SSW3	ENE1.8	ENE6
15-Feb	SW5	SW6	SW7	WSW7	WSW7	W5	W5	W5	W6	WNW6	NW6	NW7	WNW7	WNW7	NW7	NW7	NW5	NW4	WNW3	NW5	NNW5	NNW2	NE1	S1	WNW4.1	NW7
16-Feb	SSE1	E3	SSE2	S2	S3	SSE0	SSE2	S4	S4	S4	S4	SSW5	SE4	SSE4	S5	SSE4	SSE4	SE3	SE4	SSE5	S5	S7	S5	S7	S3.6	S7
17-Feb	S7	S6	S8	S8	S8	S8	S9	S8	S8	S9	S8	S8	S8	SSE7	SSE8	SSE6	SE6	SE5	SSE6	SSE5	SSE5	SSE6	S9	S7	S7.0	S9
18-Feb	S8	S8	SSW8	SSW7	SSW5	S7	SSW6	SSW7	S9	SSW8	S9	SSW10	S9	SSW9	SSW9	SSW10	S9	SSW7	S7	S8	S8	S10	S9	S10	S8.1	SSW10
19-Feb	SSW11	S10	S10	S10	S8	S9	S9	S10	S11	S11	SSW13	S11	S11	S11	S12	S11	S9	S9	SSE7	S8	S9	S9	S10	S10	S9.9	SSW13
20-Feb	SSW10	SSW10	SSW9	SSW9	SSW11	SSW9	SW10	SSW12	SW13	SW13	SW14	SW15	SW17	WSW16	WSW16	WSW15	WSW15	SW12	WSW15	WSW13	WSW13	WSW13	SW12	SW11	SW12.1	SW17
21-Feb	SW10	SW9	SSW9	SW9	SW9	SW10	WSW10	SW8	SW6	SW6	WSW7	WNW6	W7	W9	WNW8	NW6	N5	NE6	NE5	NE7	NE7	NE7	NE6	NE5	WSW2.9	SW10
22-Feb	ENE3	ESE4	SE4	S8	S9	S8	S8	S8	SSE7	S8	SSW10	SW12	SW11	SW10	SW9	SW11	SW10	SSW7	SSW7	SSW7	S6	S6	SSW6	SSW8	SSW6.9	SW12
23-Feb	SSW4	S5	S7	SSW7	SSW9	SW12	WSW12	WSW14	WSW15	WSW18	WSW19	W19	W16	W14	WNW13	WNW10	NNW9	NNW7	NNW7	NNW6	N5	N4	NE4	ENE6	W6.7	WSW19
24-Feb	ENE5	ENE4	ESE3	S3	ENE2	E2	NE3	NE3	SSE1	SW3	WSW5	WSW8	WSW7	W9	W9	WSW12	WSW10	SW4	SSW4	SW7	SW8	WSW8	WSW8	WSW8	WSW3.6	WSW12
25-Feb	WSW8	W6	W4	NE4	NE6	NE7	NE6	ENE5	ENE6	ENE7	ENE6	ESE3	ENE3	E1	SSW3	SW1	SSW1	E2	SSE3	SSE3	S4	SSW8	WSW11	WSW16	S0.3	WSW16
26-Feb	W10	W8	WSW10	WSW11	W8	WNW10	W9	W9	WSW12	W11	W11	W11	W12	W11	W10	WNW9	W7	W6	WSW7	WSW9	SW7	SSW7	SSW7	SW8	W8.6	WSW12
27-Feb	WSW10	SW8	SSW7	S7	SSW7	SW10	SSW10	SSW11	WSW15	W13	WNW15	WNW14	WNW17	WNW17	WNW17	WNW13	NW11	NW9	NW7	NNW7	NNW7	NNW6	NE8	NNE6	W7.0	WNW17
28-Feb	NE5	ENE5	E2	ENE3	S2	S5	SSE3	SSE4	SSE4	SE3	SSW4	SW3	WSW5	SW5	W6	WSW6	WSW7	SW4	S3	S5	SSW6	S5	S6	S7	SSW2.8	WSW7
	WSW2.8	WSW2.7	SW3.2	SW3.3	SW3.2	SW3.9	SW4.1	SW4.3	SW4.7	WSW4.8	WSW5.5	WSW6.0	WSW5.9	W6.0	W5.8	W4.9	W3.8	WSW2.6	WSW3.0	WSW3.4	WSW3.1	WSW3.4	WSW3.1	WSW3.5	Diurnal Average	
	SSW11	WSW14	WSW13	WSW13	WSW13	WSW13	WSW13	WSW14	WSW15	WSW18	WSW19	W19	SW17	WNW17	WNW17	WSW15	WSW15	WSW12	WSW15	WSW13	WSW13	WSW13	SW12	WSW16	Diurnal Maximum	

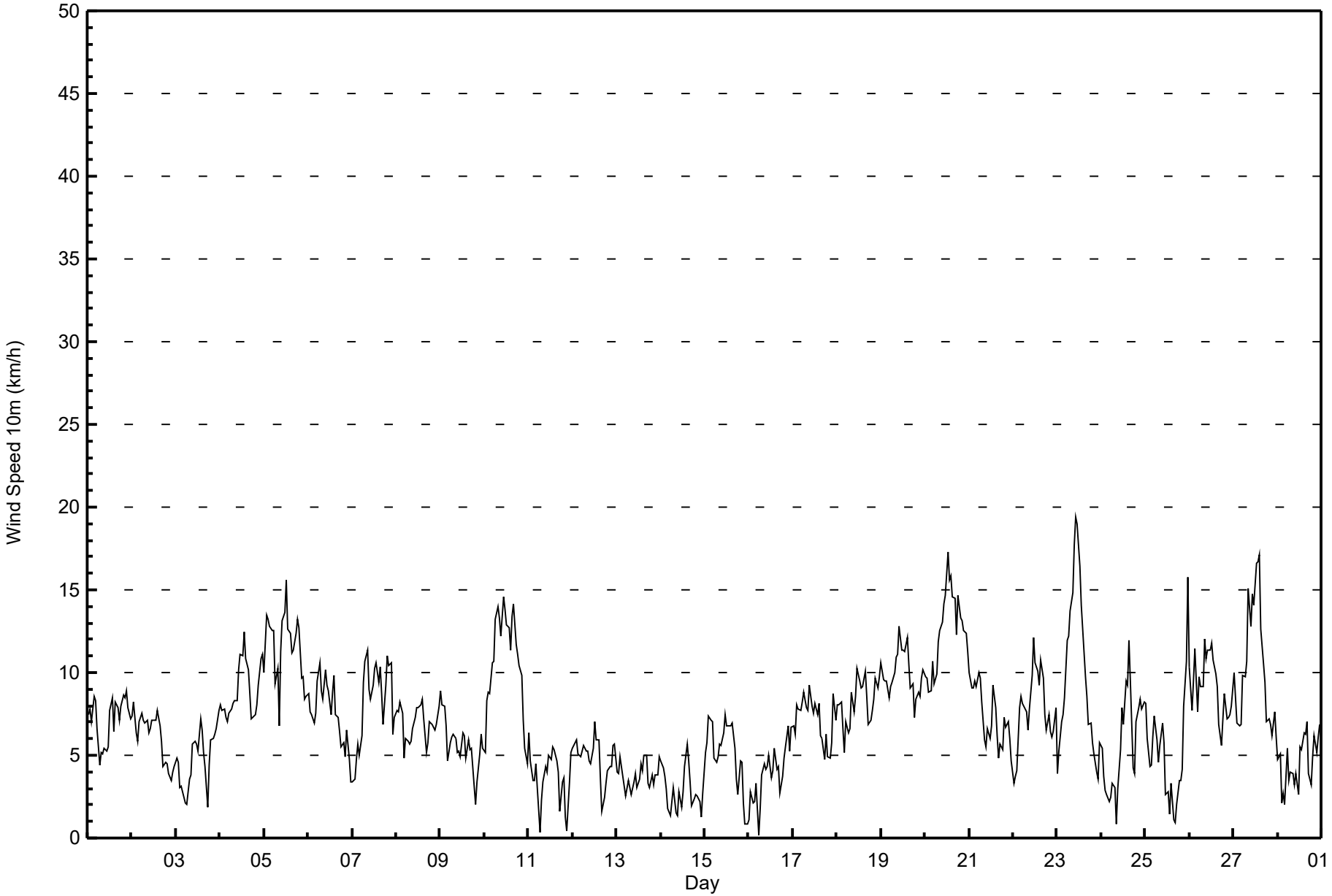
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Jackfish 2/3 - February 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	228	33.93	33.93
6 - 11	378	56.25	90.18
12 - 19	66	9.82	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: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Jackfish 2/3 - February 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	19	29	19	5	5	6	16	28	14	10	7	13	8	20	18	228
6 - 11	7	2	15	6	0	0	1	8	62	37	46	71	49	20	37	17	378
12 - 19	0	0	0	0	0	0	0	0	1	2	9	42	5	7	0	0	66
20 - 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	18	21	44	25	5	5	7	24	91	53	65	120	67	35	57	35	672

Total Number of Valid Hours: 672

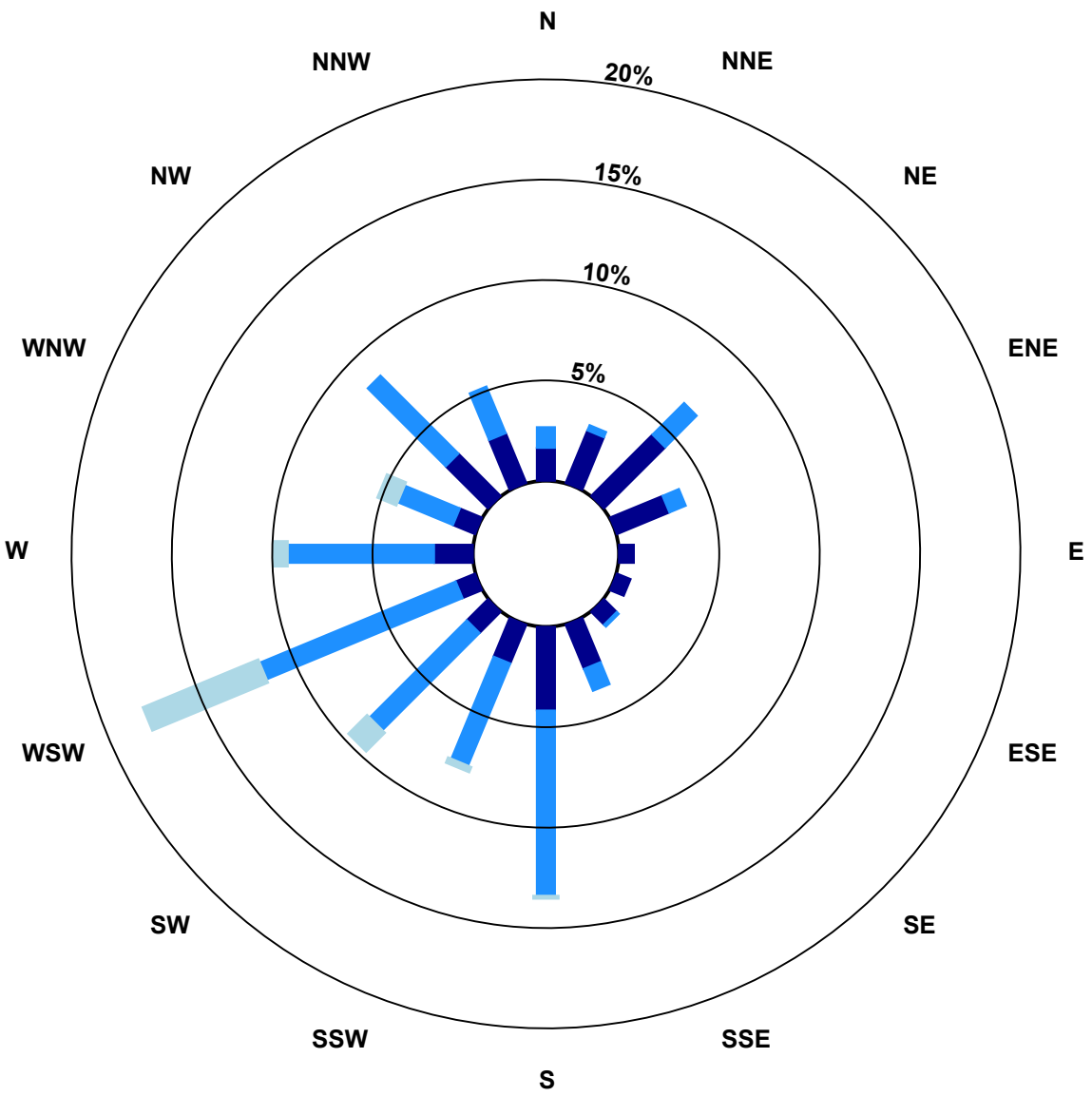
Total Number of Hours: 672

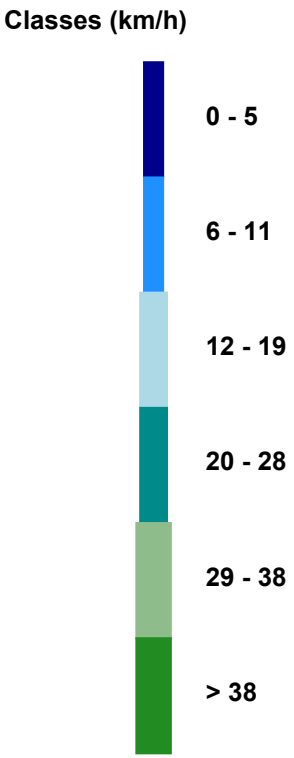
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Wind Speed 10m (WS10) - km/h

Jackfish 2/3





Total Number of Valid Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Jackfish 2/3 - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8 km/h on Feb 27 11:00

Minimum Value: 0 km/h on Feb 15 00:00

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

Hours in Service:	672
Hours of Data:	672
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-Feb	2	2	2	3	3	2	2	2	2	2	2	3	3	3	3	3	3	3	4	3	3	3	3	2	4
2-Feb	3	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2	1	1	2	4
3-Feb	2	2	1	1	1	1	1	1	1	1	2	2	2	3	2	2	2	1	2	1	1	1	1	2	3
4-Feb	2	2	2	2	1	2	2	2	2	2	2	3	3	3	3	3	3	2	2	2	2	3	3	3	3
5-Feb	2	3	3	3	3	3	2	3	2	3	4	4	4	4	4	3	3	3	3	3	3	3	3	3	4
6-Feb	3	3	3	3	3	2	3	3	3	4	4	4	3	4	4	3	3	2	2	2	2	3	2	1	4
7-Feb	1	2	1	2	2	2	2	2	3	3	3	3	3	3	2	3	2	1	2	2	2	2	2	2	3
8-Feb	2	1	2	3	2	2	2	1	2	2	2	3	3	3	3	3	2	1	1	1	1	2	3	4	4
9-Feb	4	4	3	3	2	3	3	3	3	2	2	2	3	2	2	3	2	2	1	1	1	2	2	1	4
10-Feb	1	2	2	2	2	3	3	3	3	3	4	4	4	4	3	4	4	3	3	2	2	3	2	2	4
11-Feb	3	2	2	1	2	1	1	1	1	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	3
12-Feb	1	1	1	1	1	1	1	1	1	1	1	1	3	2	2	1	1	1	1	1	2	1	2	1	3
13-Feb	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	1	1	1	1	1	1	1	2
14-Feb	1	1	1	1	2	1	1	1	1	1	1	1	1	2	2	2	1	1	0	0	0	1	1	0	2
15-Feb	1	1	1	1	1	1	1	1	1	2	3	3	3	3	3	3	3	2	1	2	2	1	1	1	3
16-Feb	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	1	1	2	2	2	2	3	3
17-Feb	3	2	3	3	3	3	3	3	3	4	3	3	3	3	3	3	3	2	3	2	2	2	3	3	4
18-Feb	3	3	3	2	2	2	2	2	3	3	3	4	3	3	3	3	3	3	3	3	3	4	3	3	4
19-Feb	4	3	3	3	3	3	3	3	4	4	5	5	4	5	5	4	4	4	3	3	3	3	3	4	5
20-Feb	4	3	4	3	4	3	4	4	4	4	4	4	4	4	5	4	4	3	3	4	3	3	3	2	5
21-Feb	2	2	2	2	2	2	2	2	1	2	2	3	3	4	3	2	3	2	1	2	2	2	2	1	4
22-Feb	1	1	2	2	2	2	2	2	2	3	4	4	3	3	3	3	3	2	2	2	2	2	2	3	4
23-Feb	2	2	2	2	2	3	3	3	4	5	6	6	6	5	5	5	4	3	3	3	2	2	2	1	6
24-Feb	2	1	1	1	1	1	1	1	2	1	2	3	3	3	3	4	3	1	1	2	2	2	2	2	4
25-Feb	2	2	2	2	2	2	2	2	2	2	2	1	2	1	2	2	1	1	1	2	1	2	3	5	5
26-Feb	4	3	2	3	2	4	3	3	3	4	4	4	4	4	4	3	3	2	2	2	2	2	2	2	4
27-Feb	3	2	2	2	2	3	3	3	5	4	8	7	6	7	7	7	5	4	3	3	3	2	3	2	8
28-Feb	2	2	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	1	1	1	2	1	1	2	2
	4	4	4	3	4	4	4	4	5	5	8	7	6	7	7	7	5	4	4	4	3	4	3	5	
	Diurnal Maximum																								

Direction of Maximum Speed: 255 deg on Feb 23 11:00
Direction of Maximum Daily Speed Average: 226.4 deg on Feb 20

Direction of Minimum Speed: 153 deg on Feb 16 06:00

Direction of Minimum Daily Speed Average: 0.3 deg on Feb 25

Monthly Average Direction: 246.0 deg

Hours in Service:	672
Hours of Data:	672
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-Feb	53	57	54	52	51	42	29	12	350	337	320	325	311	307	317	316	317	317	295	294	286	289	282	278	334.0
2-Feb	290	313	316	317	307	301	318	322	332	329	315	309	312	323	322	327	329	317	318	325	329	319	315	318	317.0
3-Feb	324	331	325	312	310	310	259	260	252	256	268	277	273	261	263	283	272	244	243	243	244	248	249	237	267.1
4-Feb	237	235	236	238	242	234	239	237	228	227	237	247	249	245	249	243	239	227	222	228	221	232	235	233	236.7
5-Feb	230	244	242	240	243	246	248	241	220	246	255	251	253	256	257	254	252	250	250	256	265	266	273	281	250.5
6-Feb	284	274	285	272	278	259	258	267	281	291	296	298	308	311	306	325	358	355	8	351	339	327	328	319	300.0
7-Feb	332	317	278	279	284	239	252	248	250	258	270	267	252	253	248	244	240	231	238	236	233	239	253	239	251.4
8-Feb	233	234	227	248	263	280	272	247	261	260	255	271	273	272	267	277	258	251	244	251	250	269	311	316	261.7
9-Feb	313	334	345	341	322	319	312	316	309	328	337	336	335	5	355	357	337	350	327	295	302	286	278	274	325.6
10-Feb	268	250	253	261	255	250	248	251	245	250	255	252	252	252	238	243	247	241	236	238	245	267	289	313	250.8
11-Feb	8	18	10	18	22	14	8	350	333	333	338	354	355	329	314	338	335	220	257	266	286	217	180	177	340.3
12-Feb	182	200	196	193	190	188	188	196	189	191	208	222	223	231	209	203	105	20	18	21	21	20	32	36	197.1
13-Feb	30	21	28	34	33	33	59	36	28	33	33	40	69	46	40	38	55	61	66	60	76	59	43	43	44.0
14-Feb	47	44	36	37	44	37	35	37	42	51	44	78	58	58	57	66	51	111	169	184	193	186	200	199	63.6
15-Feb	221	227	231	242	256	263	270	269	264	286	324	308	303	298	318	320	322	325	290	326	343	346	39	174	286.6
16-Feb	168	99	149	179	182	153	161	175	181	185	189	213	142	163	189	162	163	144	135	157	170	176	186	181	171.3
17-Feb	172	178	182	185	179	181	182	171	176	178	176	173	171	157	156	164	146	145	151	165	148	164	178	169	170.0
18-Feb	169	187	198	197	192	187	202	193	185	200	190	195	190	205	192	201	188	194	183	178	177	183	182	191	189.9
19-Feb	192	187	180	185	191	184	182	180	182	185	193	187	173	179	179	171	174	173	161	177	176	178	188	188	181.4
20-Feb	194	201	202	200	201	206	217	211	218	220	225	225	227	238	245	247	238	228	244	243	238	239	235	234	226.4
21-Feb	232	219	213	221	220	232	237	229	216	228	245	294	270	277	297	320	7	50	51	49	47	45	49	56	254.3
22-Feb	78	115	137	176	176	174	173	176	166	174	195	217	222	217	223	226	227	212	199	199	190	189	193	212	195.9
23-Feb	197	172	170	206	206	228	239	246	246	251	255	260	265	273	285	302	329	340	340	344	359	3	41	59	262.1
24-Feb	59	66	114	178	60	98	50	51	156	218	242	254	256	259	259	254	252	217	199	232	233	248	250	257	244.3
25-Feb	257	265	267	53	49	43	52	74	64	60	59	118	72	95	194	222	194	86	153	164	170	212	249	254	176.6
26-Feb	269	271	243	254	268	283	266	264	254	263	274	272	270	279	276	282	279	275	241	247	228	211	211	228	260.5
27-Feb	238	229	199	184	194	219	212	213	240	260	282	282	290	287	284	301	313	316	322	336	345	338	35	33	273.9
28-Feb	47	62	98	78	180	183	160	150	166	124	207	216	240	234	267	254	256	229	183	188	203	187	183	182	197.4
	242.8	237.6	226.6	229.6	231.7	234.4	235.5	233.9	234.4	243.8	252.4	255.3	256.3	260.6	260.4	265.6	264.8	252.4	240.3	244.0	238.4	241.1	240.9	237.9	
	Diurnal Average																								

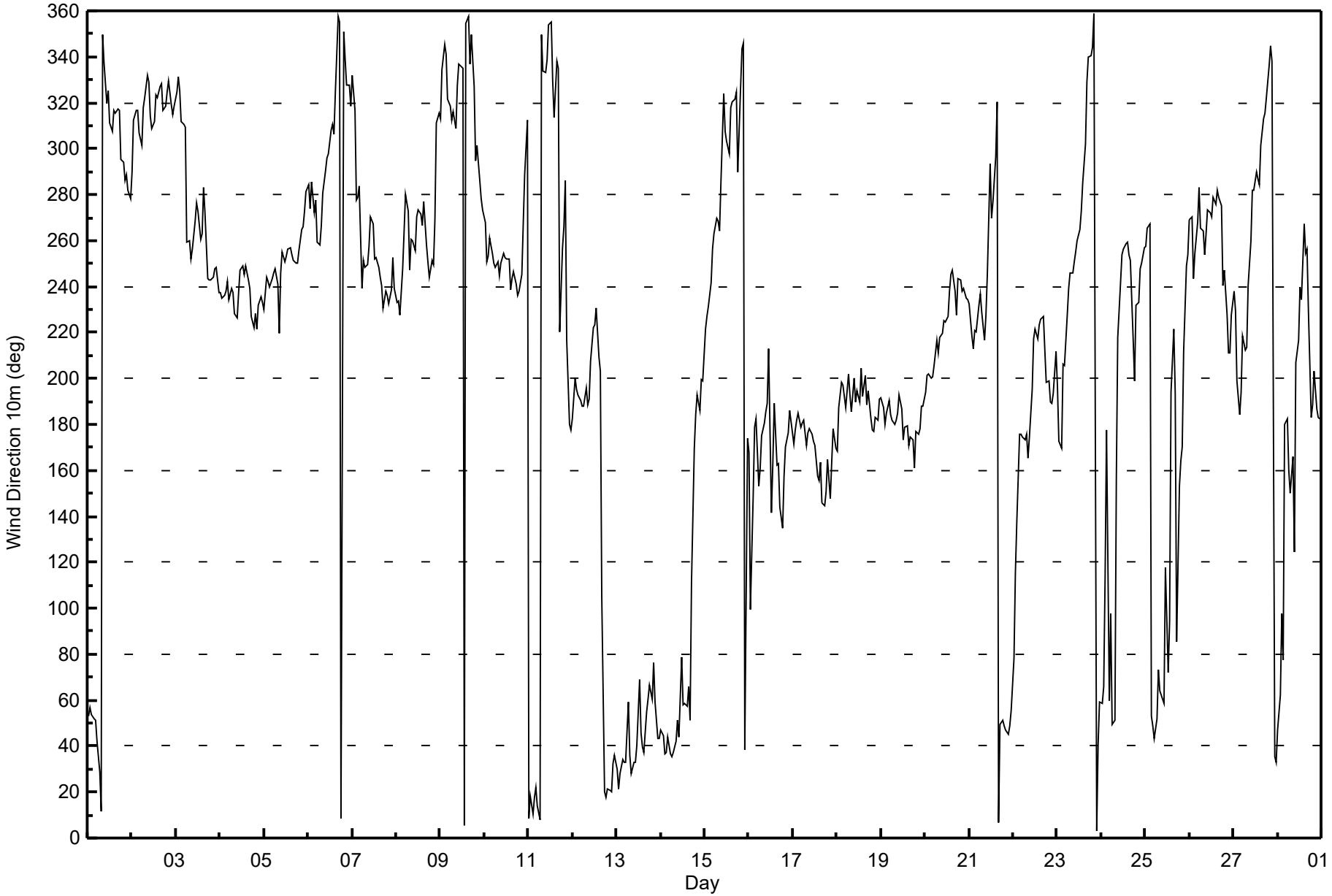
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Jackfish 2/3 - February 2025



Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 110 deg on Feb 11 07:00

Minimum Value: 5 deg on Feb 14 21:00

Percentiles: P_1 = 11 P_{10} = 16 Q_1 = 20 Median = 30 Q_3 = 41 P_{90} = 49 P_{99} = 83

Hours in Service:	672
Hours of Data:	672
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-Feb	25	23	21	25	25	25	45	39	40	40	43	44	40	42	45	45	43	47	38	34	33	31	30	32	47
2-Feb	34	45	44	48	43	37	38	39	33	40	42	45	42	45	43	48	40	41	47	43	51	43	36	37	51
3-Feb	42	45	55	49	61	64	60	15	13	16	31	41	52	36	29	35	29	35	15	13	14	14	14	17	64
4-Feb	15	17	17	16	16	16	16	15	16	17	18	21	20	20	21	20	18	19	17	17	17	22	15	17	22
5-Feb	15	16	16	16	16	16	15	17	22	18	22	19	20	23	23	22	16	16	16	20	28	31	34	31	34
6-Feb	31	33	32	30	28	20	26	30	38	35	38	41	44	43	43	42	51	42	42	46	47	46	43	57	57
7-Feb	41	36	27	30	30	20	14	15	16	25	31	28	21	22	21	20	17	16	16	16	16	15	15	16	41
8-Feb	17	15	16	23	35	35	33	19	30	33	28	37	36	37	33	32	34	15	11	12	15	28	42	43	43
9-Feb	40	46	41	41	44	39	39	45	40	58	53	51	49	51	52	54	51	45	52	58	37	26	18	18	58
10-Feb	17	12	13	15	14	16	15	16	17	18	19	21	20	24	21	20	17	17	16	14	16	30	32	41	41
11-Feb	49	36	33	35	31	37	110	83	46	35	54	48	58	41	50	54	50	76	22	19	79	89	11	14	110
12-Feb	16	14	16	16	13	16	14	15	15	21	31	33	29	31	39	36	53	33	35	37	36	35	26	23	53
13-Feb	29	35	29	27	27	31	18	17	27	33	42	52	71	49	55	40	28	19	19	19	17	15	16	16	71
14-Feb	13	11	13	11	60	19	17	15	38	42	40	64	51	47	39	32	32	38	23	10	5	21	62	5	64
15-Feb	14	15	13	12	11	14	14	12	14	32	40	45	43	44	49	48	49	54	59	36	40	37	85	84	85
16-Feb	53	32	44	23	25	98	44	16	15	23	45	45	60	67	49	52	43	35	23	36	33	26	33	37	98
17-Feb	39	34	26	29	29	29	29	36	36	35	42	43	38	42	43	51	42	46	49	45	46	36	24	42	51
18-Feb	30	28	24	24	24	22	23	26	21	26	31	33	37	37	40	30	33	34	32	33	34	32	30	30	40
19-Feb	29	27	29	26	29	28	28	27	28	29	31	37	38	39	37	40	44	35	46	41	35	35	30	34	46
20-Feb	34	32	34	29	26	26	26	25	21	23	23	23	21	20	21	21	17	18	17	17	15	15	14	13	34
21-Feb	14	15	15	16	16	17	13	17	21	22	28	54	40	36	44	48	55	18	18	25	22	22	26	28	55
22-Feb	34	32	42	17	19	20	24	26	30	32	30	28	20	22	26	23	22	19	20	23	22	20	23	28	42
23-Feb	30	23	25	27	19	20	17	17	19	18	21	28	30	33	37	45	43	41	41	52	45	47	58	23	58
24-Feb	26	31	52	56	68	57	31	35	90	51	31	34	42	28	29	25	22	28	21	16	17	12	13	21	90
25-Feb	17	25	47	31	21	25	30	36	31	26	42	62	64	87	61	79	80	33	29	44	24	22	25	19	87
26-Feb	32	34	18	22	28	33	28	24	15	30	32	37	32	37	35	38	32	28	17	16	20	20	18	20	38
27-Feb	18	23	20	21	21	23	25	26	22	25	37	38	35	34	36	43	45	46	48	46	47	42	37	33	48
28-Feb	29	29	47	30	67	23	44	40	31	42	39	60	40	48	40	39	25	28	23	11	18	14	13	16	67
	53	46	55	56	68	98	110	83	90	58	54	64	71	87	61	79	80	76	59	58	79	89	85	84	
	Diurnal Maximum																								

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS29
SURMONT 2
FEBRUARY 2025

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

March 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - SURMONT2 (AMS29)
FEBRUARY 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	639	32	33	99.85	7.1	0	1.8	0
H2S (ppb) Average	636	35	36	99.85	0.6	0	0.3	0
THC(ppm) Average	618	34	54	97.02	2.8	-	2.5	-
NO2 (ppb) Average	637	34	35	99.85	21.9	0	10.1	-
NO (ppb) Average	637	34	35	99.85	5.8	-	1.4	-
NOX (ppb) Average	637	34	35	99.85	22.7	-	11.5	-
PM2.5 (ug/m3) Average	669	2	3	99.85	12.7	0	7.6	0
Temperature 2 m (C) Average	672	0	0	100	7.5	-	0.6	-
Relative Humidity (%) Average	672	0	0	100	99.4	-	92.8	-
Wind Speed 10 m (km/h) Average	661	0	11	98.36	18	-	9	-
Wind Direction 10 m (deg) Average	661	0	11	98.36	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - SURMONT 2 (AMS29)
FEBRUARY 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	639	0.75	1	-	0	0	0.2	0.4	0.9	1.6	7.1
H2S (ppb) Average	636	0.09	0.1	-	0	0	0	0.1	0.1	0.2	0.6
THC (ppm) Average	618	2.41	0.1	-	2.3	2.4	2.4	2.4	2.4	2.5	2.8
NO2 (ppb) Average	637	3.18	3	-	0.3	0.7	1.3	2.3	3.8	7.1	21.9
NO (ppb) Average	637	0.29	0.6	-	0	0	0	0	0.3	0.9	5.8
NOX (ppb) Average	637	3.47	3.2	-	0.3	0.8	1.4	2.5	4.3	7.7	22.7
PM2.5 (ug/m3) Average	669	3.4	1.8	-	0.2	1.4	2.2	3	4.3	5.9	12.7
Temperature 2 m (C) Average	672	-16.87	10.6	-	-38.3	-28.5	-25	-19.7	-6.9	-1.1	7.5
Relative Humidity (%) Average	672	72.79	12.3	-	30.7	56	66.7	73.7	79.7	89.3	99.4
Wind Speed 10 m (km/h) Average	661	5.4	3	-	0	2	3	5	8	10	18
Wind Direction 10 m (deg) Average	661	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - SURMONT 2 (AMS29)
FEBRUARY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
AIR QUALITY ANALYZERS	05 Feb 2025 13:00	05 Feb 2025 13:00	1	Maintenance - station modem replaced
THC	05 Feb 2025 18:00	06 Feb 2025 12:00	19	Maintenance - zero air generator replaced
Wind Speed, Wind Direction	14 Feb 2025 00:00	14 Feb 2025 10:00	11	Flat line in sensor output signal - Sensor frozen

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Surmont 2 - February 2025

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

Maximum Value: 7.1 ppb on Feb 1 17:00 Maximum Daily Average: 1.8 ppb on Feb 1

Minimum Value: 0.0 ppb on Feb 1 01:00 Minimum Daily Average: 0.1 ppb on Feb 10

Maximum Diurnal Average: 1.3 ppb at hour 16 Minimum Diurnal Average: 0.4 ppb at hour 9

Monthly Average: 0.75 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.2 Median = 0.4 Q_3 = 0.9 P_{90} = 1.6 P_{99} = 5.3

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	32
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-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	0.4	0.9	1.3	3.7	5.6	7.1	5.6	1.5	2.9	4.0	3.6	3.7	1.3	1.8	7.1
2-Feb	0.4	0.2	0.7	Z	0.7	0.3	0.1	0.2	0.2	0.3	0.4	0.3	0.4	1.5	1.8	3.3	4.7	3.9	5.5	3.2	1.5	4.6	1.9	0.5	1.6	5.5
3-Feb	0.4	0.3	0.4	0.6	Z	1.2	0.7	0.4	0.5	1.4	2.8	2.5	1.6	1.1	1.0	1.3	0.3	0.2	0.2	0.5	0.5	0.2	0.3	0.4	0.8	2.8
4-Feb	1.7	2.1	0.7	0.2	0.0	Z	0.1	0.2	0.0	0.0	0.2	0.2	0.5	0.6	0.3	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.4	0.4	2.1
5-Feb	Z	0.3	0.5	0.4	0.2	0.2	0.3	0.5	0.4	0.1	0.3	0.4	M	C	C	C	C	0.4	0.2	0.5	1.9	2.5	2.0	1.7	0.7	2.5
6-Feb	2.0	Z	2.3	1.8	1.1	0.4	0.5	1.4	1.3	0.5	0.7	0.1	0.2	0.2	0.4	1.2	1.3	1.9	1.6	1.0	0.6	0.5	0.7	2.8	1.1	2.8
7-Feb	1.6	1.5	Z	0.7	3.6	0.9	0.3	0.6	0.5	1.0	0.8	0.5	0.3	0.1	0.1	0.1	0.5	0.5	0.2	0.1	0.1	0.1	0.1	0.1	0.6	3.6
8-Feb	0.2	0.2	0.1	Z	0.1	0.0	0.0	0.1	0.1	0.3	0.3	0.4	0.4	0.4	1.0	0.8	0.3	0.1	0.0	0.0	0.0	0.4	1.7	0.3	0.3	1.7
9-Feb	0.1	0.1	0.3	0.1	Z	0.1	0.2	0.3	0.1	0.2	1.9	2.4	2.4	3.7	4.0	0.9	0.5	1.4	2.5	1.5	0.8	0.7	0.2	0.1	1.1	4.0
10-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.4	0.2	0.3	0.5	0.5	0.6	0.1	0.6
11-Feb	Z	0.5	0.5	0.5	0.4	0.2	0.1	0.2	0.1	0.1	0.2	0.5	1.2	2.0	3.4	5.5	5.8	4.8	2.6	2.3	0.8	0.3	0.1	0.2	1.4	5.8
12-Feb	0.1	Z	0.2	0.3	0.3	0.6	1.0	0.8	0.6	0.8	1.1	1.1	0.7	1.1	1.4	1.2	0.7	0.9	0.7	0.6	0.5	1.0	1.2	1.4	0.8	1.4
13-Feb	1.4	1.3	Z	0.8	0.6	0.5	0.4	0.2	0.0	0.6	2.0	1.6	1.1	1.4	0.9	0.6	0.8	0.4	0.1	0.1	0.1	0.0	0.0	0.0	0.6	2.0
14-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.6	0.9	1.4	1.3	0.8	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.4
15-Feb	0.0	0.0	0.4	2.4	Z	1.2	0.6	1.5	1.5	0.7	0.5	0.5	0.3	0.2	0.3	1.0	0.6	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.6	2.4
16-Feb	0.2	0.1	0.2	0.2	0.2	Z	0.2	0.2	0.2	0.5	1.7	1.6	1.2	1.1	0.9	0.9	1.0	0.5	0.3	0.2	0.2	1.1	0.3	0.2	0.6	1.7
17-Feb	Z	0.3	0.5	0.7	0.8	0.7	0.5	0.7	1.0	1.2	1.0	0.8	0.7	0.5	0.4	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	1.2
18-Feb	0.1	Z	0.3	0.4	0.1	0.1	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.4	0.3	0.1	0.2	0.5	0.6	0.8	0.7	0.9	1.1	0.3	1.1
19-Feb	1.3	1.2	Z	0.9	1.3	1.4	1.1	1.1	1.2	1.2	1.4	1.3	1.2	1.1	0.7	0.7	0.5	0.5	0.2	0.3	0.4	0.1	0.2	0.3	0.8	1.4
20-Feb	0.5	0.6	0.3	Z	0.3	0.2	0.1	0.1	0.2	0.5	1.3	0.8	0.9	0.8	0.5	0.3	0.2	0.3	0.6	0.6	0.5	0.3	0.3	0.2	0.5	1.3
21-Feb	0.2	0.2	0.3	0.2	Z	0.2	0.2	0.1	0.2	0.3	0.5	1.1	1.2	0.6	1.1	2.6	1.5	0.7	1.1	1.3	0.8	0.7	0.6	0.5	0.7	2.6
22-Feb	0.4	0.5	1.5	0.7	0.2	Z	0.3	0.3	0.2	0.3	0.3	0.3	0.5	0.6	0.7	0.6	0.6	0.4	0.4	2.6	1.4	2.5	3.0	2.5	0.9	3.0
23-Feb	Z	0.6	0.6	0.3	0.4	1.1	0.4	0.3	0.4	0.3	0.3	0.2	0.4	1.1	1.2	0.4	0.3	0.8	2.3	3.8	2.4	1.9	3.1	2.6	1.1	3.8
24-Feb	1.4	Z	1.1	0.7	0.7	0.6	1.2	1.1	0.8	0.5	0.5	0.3	0.4	0.4	0.3	0.4	0.3	0.2	0.3	0.2	0.2	0.1	0.2	0.7	0.6	1.4
25-Feb	0.5	1.0	Z	6.0	3.3	1.4	1.8	1.5	1.1	1.0	0.8	0.8	0.8	0.8	1.2	4.4	1.1	0.5	0.4	0.4	0.3	0.6	0.4	0.4	1.3	6.0
26-Feb	0.6	0.7	1.2	Z	0.6	1.5	1.3	0.8	0.4	0.7	0.6	0.2	0.2	0.1	0.3	0.5	0.5	0.3	0.4	0.3	0.5	1.8	0.6	0.9	0.7	1.8
27-Feb	0.6	0.4	0.3	0.4	Z	0.3	0.1	0.2	0.1	0.2	0.2	0.5	0.1	0.1	0.1	0.0	0.0	0.0	1.2	4.0	1.4	0.3	0.3	0.0	0.5	4.0
28-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.2	1.0	0.4	0.5	1.1	0.2	0.2	0.2	0.3	0.1	0.6	0.4	0.1	0.3	0.2	0.3	0.1	0.1	0.3	1.1
	0.6	0.5	0.5	0.8	0.7	0.6	0.4	0.5	0.4	0.5	0.8	0.7	0.7	0.8	1.0	1.3	1.1	0.9	0.9	1.0	0.7	0.9	0.8	0.7	Diurnal Average	
	2.0	2.1	2.3	6.0	3.6	1.5	1.8	1.5	1.5	1.4	2.8	2.5	2.4	3.7	4.0	5.6	7.1	5.6	5.5	4.0	4.0	4.6	3.7	2.8	Diurnal Maximum	

Z - zerospan C - Calibration M - Maintenance

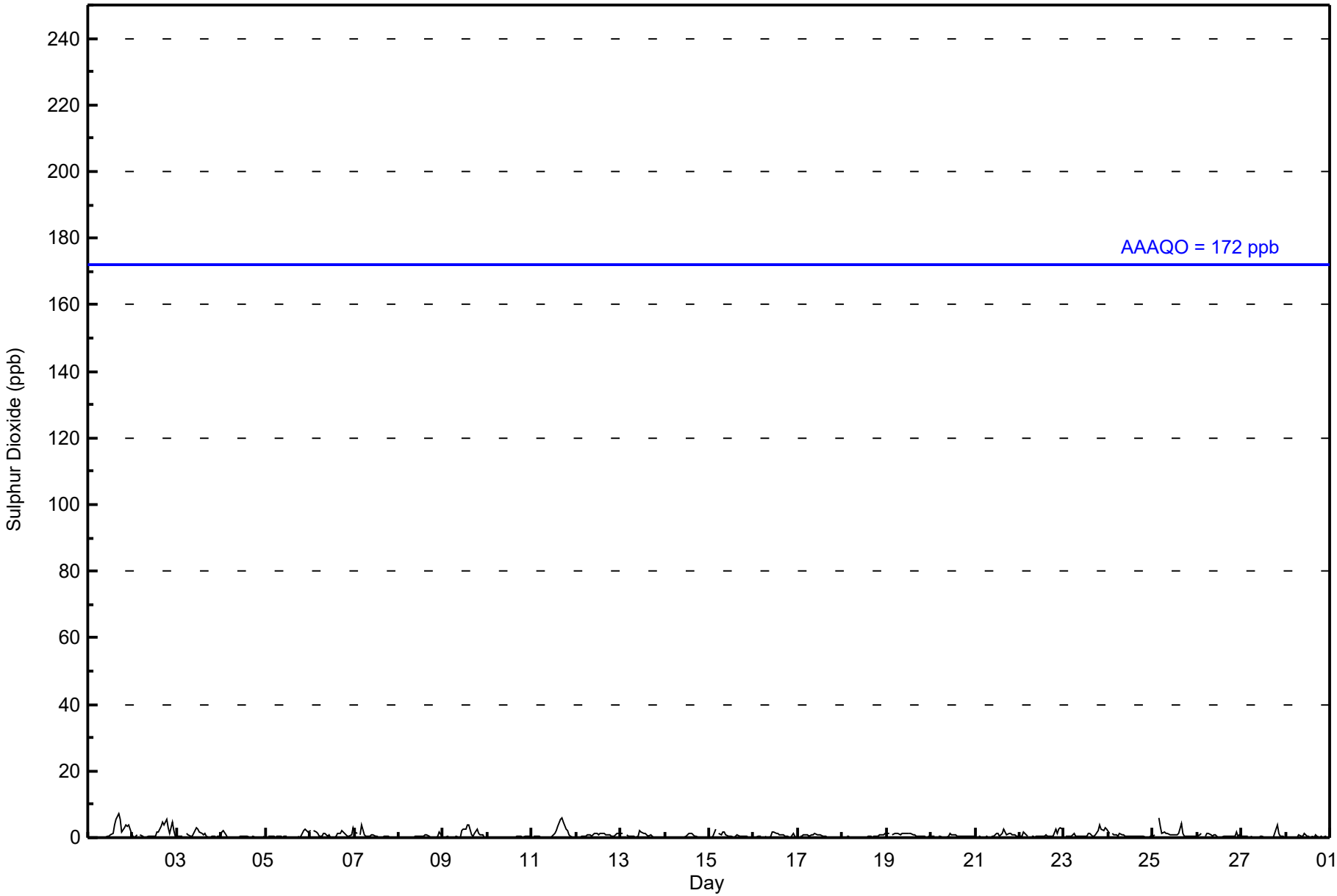
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Surmont 2 - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	639	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: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Surmont 2 - February 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	24	22	20	11	10	32	114	18	11	16	38	53	86	54	50	70	629
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	24	22	20	11	10	32	114	18	11	16	38	53	86	54	50	70	629

Total Number of Valid Hours: 629

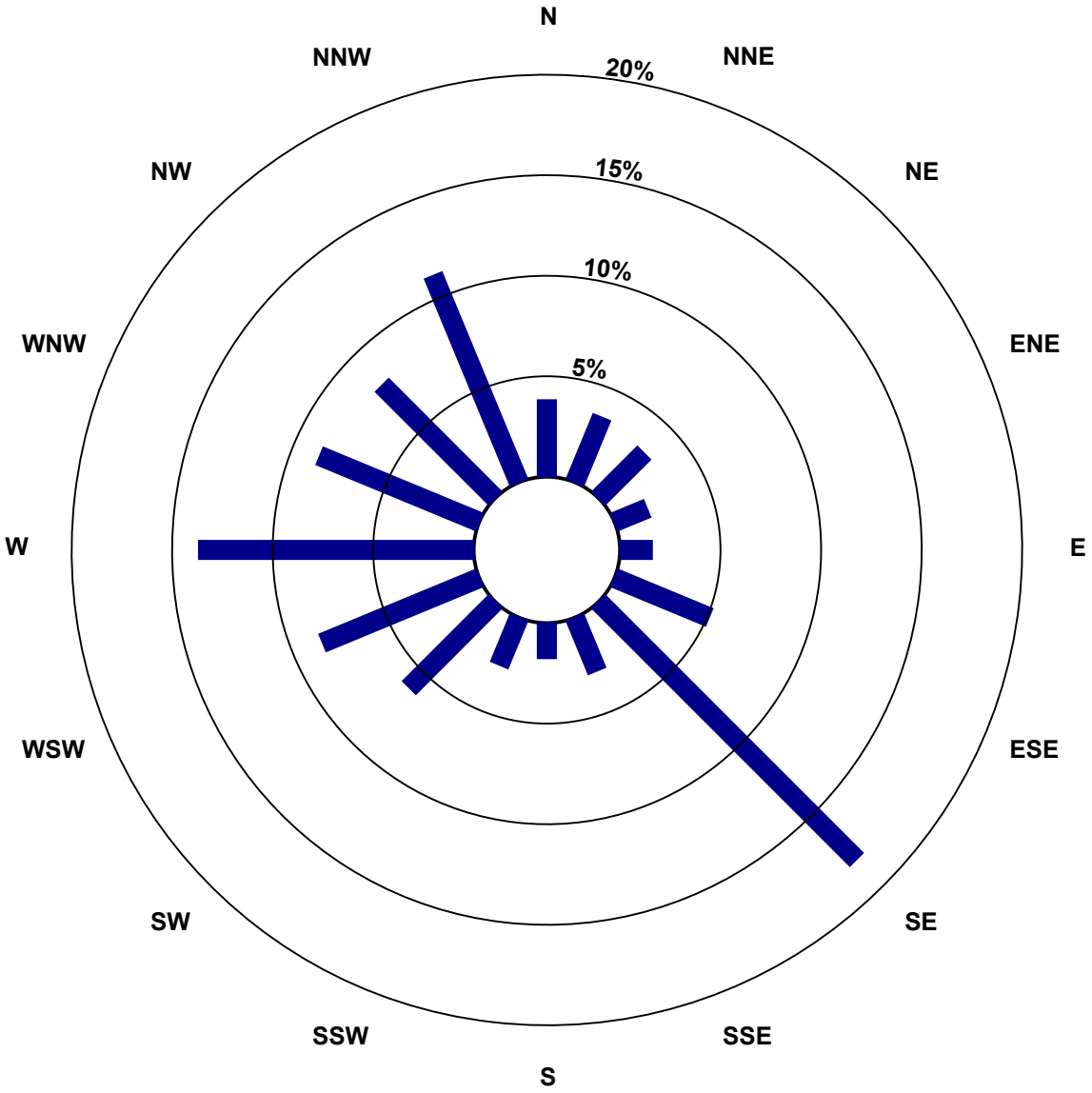
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Sulphur Dioxide (SO_2) - ppb

Surmont 2



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

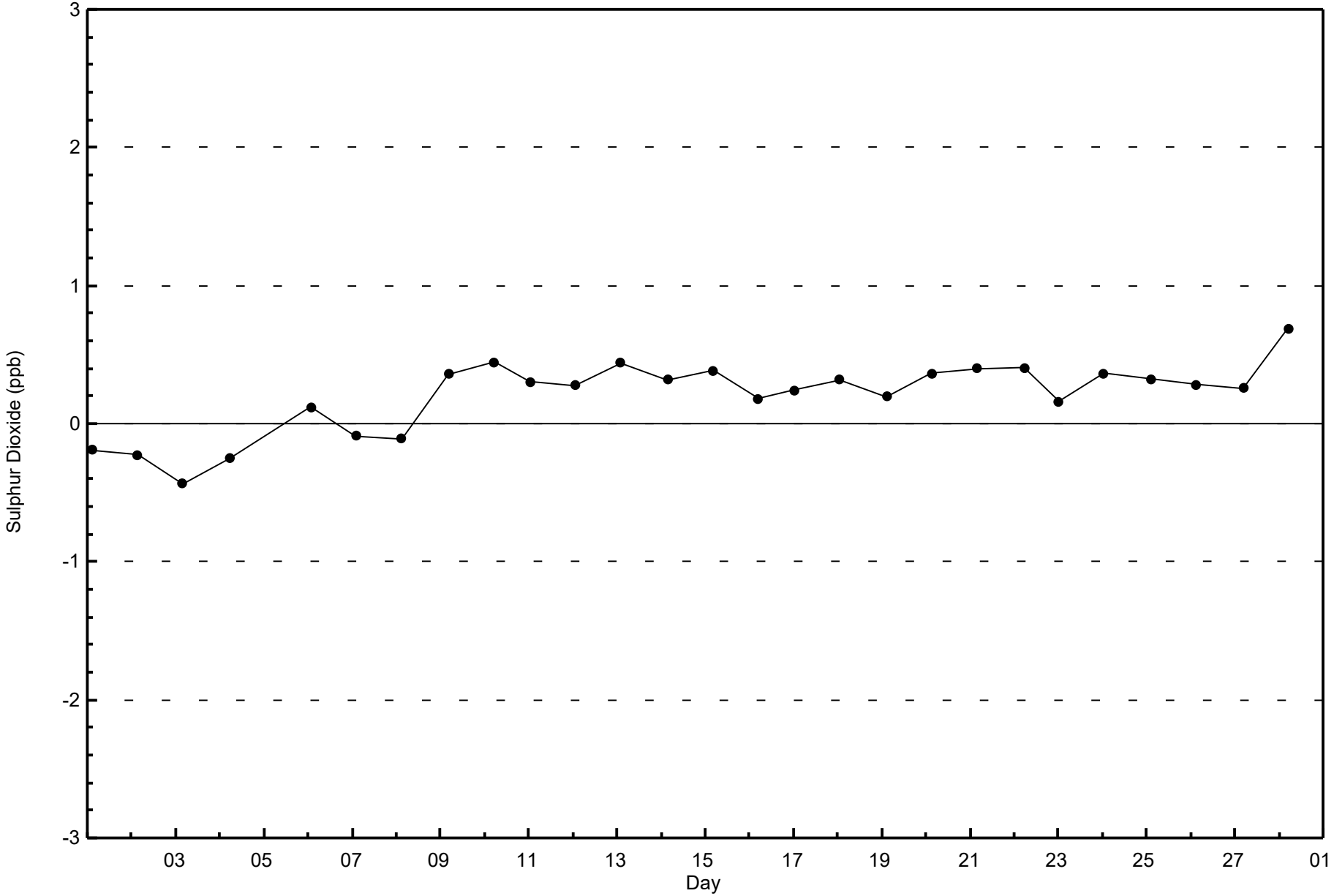
Total Number of Valid Hours: 629

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Surmont 2 - February 2025

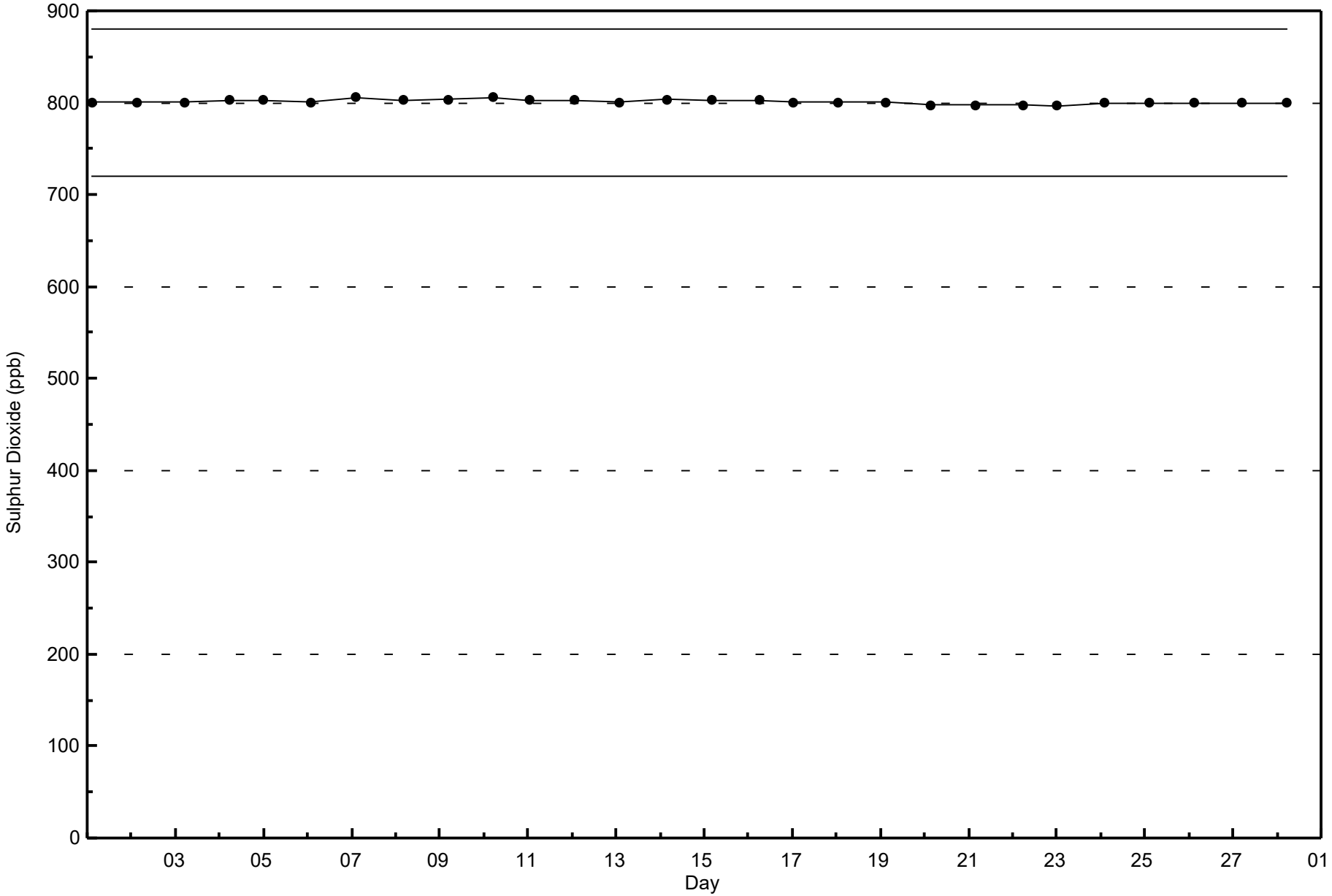


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Surmont 2 - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Surmont 2 - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 0.6 ppb on Feb 21 15:00 Maximum Daily Average: 0.3 ppb on Feb 25

Minimum Value: 0.0 ppb on Feb 10 09:00
Minimum Daily Average: 0.0 ppb on Feb 10
Maximum Diurnal Average: 0.1 ppb at hour 5
Minimum Diurnal Average: 0.1 ppb at hour 12
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:	672
Hours of Data:	636
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-Feb	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.2
2-Feb	0.0	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	0.2	0.1	0.1	0.1	0.2
3-Feb	0.1	0.1	0.1	0.1	0.3	Z	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
4-Feb	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
5-Feb	0.0	Z	0.1	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	0.1
6-Feb	0.1	0.1	Z	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1
7-Feb	0.1	0.0	0.0	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
8-Feb	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2
9-Feb	0.1	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	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1
10-Feb	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
11-Feb	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	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
12-Feb	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
13-Feb	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
14-Feb	0.1	0.2	0.2	0.2	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2
15-Feb	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
16-Feb	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
17-Feb	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
18-Feb	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
19-Feb	0.0	0.1	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1
20-Feb	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
21-Feb	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	0.6	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.6
22-Feb	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	0.1	0.2
23-Feb	0.1	Z	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.2	0.2	0.1	0.3
24-Feb	0.1	0.1	Z	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.2	0.5
25-Feb	0.1	0.2	0.4	Z	0.4	0.5	0.6	0.5	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.3	0.6
26-Feb	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	C	C	C	C	C	C	C	0.2	0.2	0.2	0.2	0.2	0.2	--	0.2
27-Feb	0.2	0.2	0.2	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
28-Feb	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	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	0.2	0.4	0.2	0.4	0.5	0.6	0.5	0.3	0.3	0.3	0.3	0.3	0.4	0.6	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.2	0.5	Diurnal Maximum	

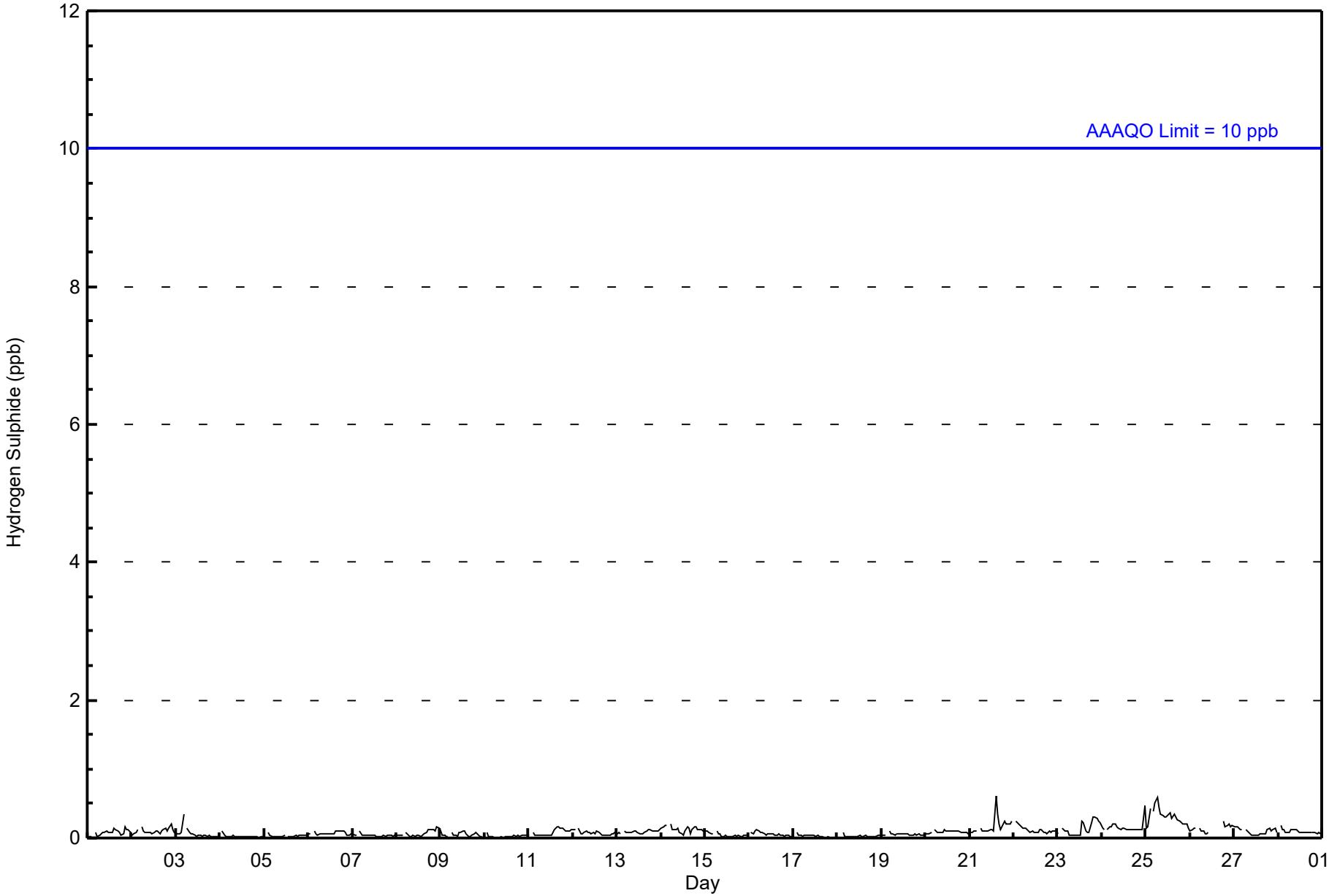
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Surmont 2 - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	636	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: 636

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Surmont 2 - February 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	21	18	9	10	34	112	18	12	18	35	57	86	52	51	68	626
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	25	21	18	9	10	34	112	18	12	18	35	57	86	52	51	68	626

Total Number of Valid Hours: 626

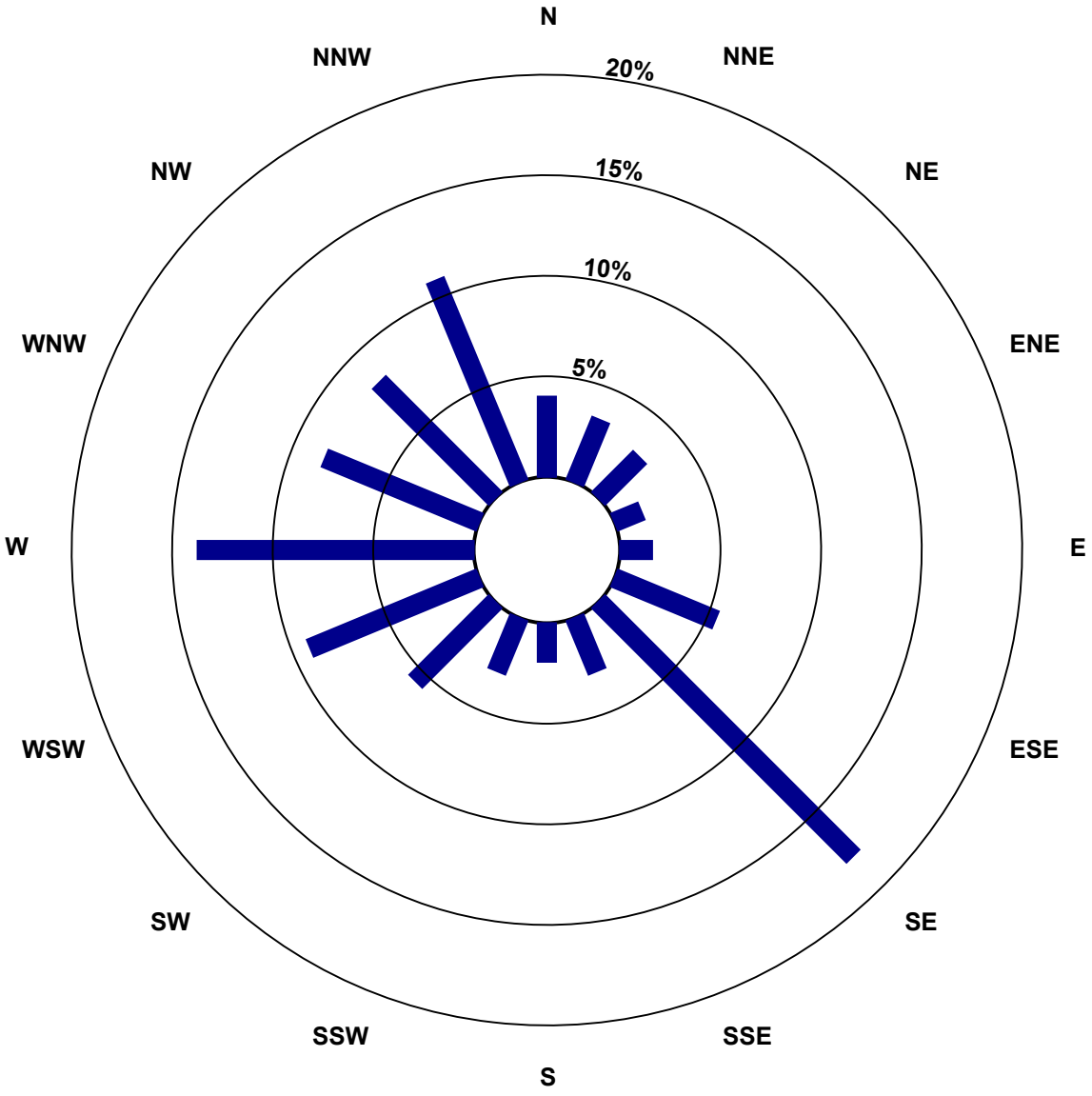
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Hydrogen Sulphide (H_2S) - ppb

Surmont 2



Classes (ppb)

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

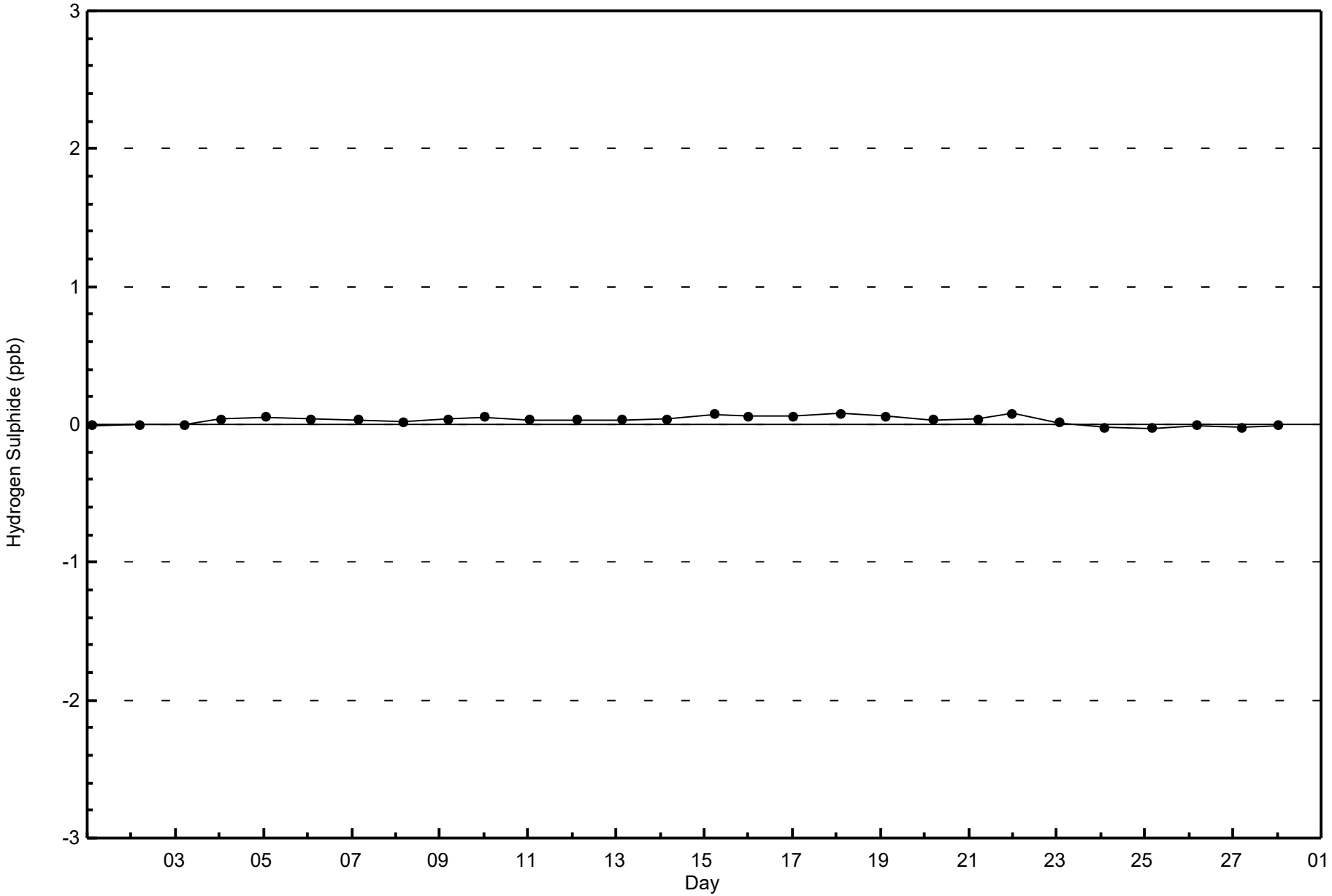
Total Number of Valid Hours: 626

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Surmont 2 - February 2025

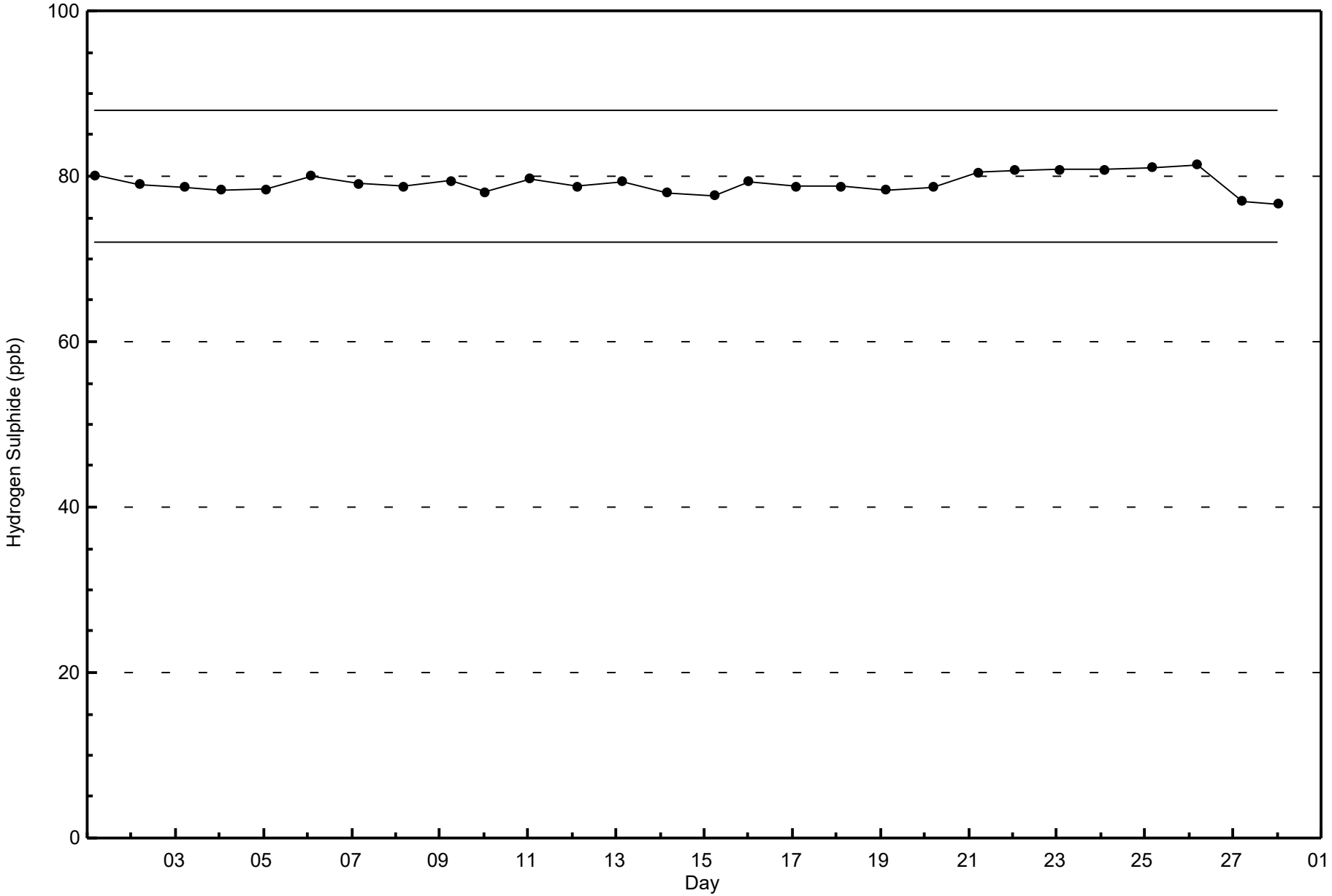


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Surmont 2 - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Surmont 2 - February 2025

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

Maximum Value: 2.8 ppm on Feb 25 06:00

Maximum Daily Average: 2.5 ppm on Feb 25

Minimum Value: 2.3 ppm on Feb 23 09:00

Minimum Daily Average: 2.4 ppm on Feb 7

Maximum Diurnal Average: 2.4 ppm at hour 23

Minimum Diurnal Average: 2.4 ppm at hour 10

Monthly Average: 2.41 ppm

Percentiles: P_1 = 2.3 P_{10} = 2.4 Q_1 = 2.4 Median = 2.4 Q_3 = 2.4 P_{90} = 2.5 P_{99} = 2.6

Hours in Service:	672
Hours of Data:	618
Hours of Missing Data:	54
Hours of Calibration:	34
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-Feb	2.3	2.3	Z	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	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
2-Feb	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	2.4	2.4	2.4	2.4	2.4	2.5	2.5	2.4	2.4	2.4	2.5
3-Feb	2.4	2.4	2.4	2.4	Z	2.5	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5
4-Feb	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	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
5-Feb	Z	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.4	2.4	2.3	2.4	M	C	C	C	C	M	M	M	M	M	M	M	--	2.4
6-Feb	M	M	M	M	M	M	M	M	M	M	M	M	C	C	C	2.3	2.3	2.4	2.4	2.4	2.4	2.3	2.3	2.4	--	2.4
7-Feb	2.4	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
8-Feb	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	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.5	2.4	2.5
9-Feb	2.4	2.4	2.4	2.4	Z	2.4	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5
10-Feb	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	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
11-Feb	Z	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	2.5	2.5	2.5	2.5	2.4	2.4	2.4	2.5	2.4	2.5
12-Feb	2.5	Z	2.5	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5
13-Feb	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	2.4	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.5	2.4	2.5
14-Feb	2.5	2.5	2.5	Z	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.4	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
15-Feb	2.5	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	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5
16-Feb	2.5	2.5	2.5	2.5	2.5	Z	2.4	2.5	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5
17-Feb	Z	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
18-Feb	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	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
19-Feb	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	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
20-Feb	2.4	2.4	2.4	Z	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5
21-Feb	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	2.5	2.8	2.6	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.6	2.5	2.8
22-Feb	2.7	2.6	2.6	2.5	2.5	Z	2.5	2.5	2.5	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.4	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.7
23-Feb	Z	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.6	2.5	2.4	2.3	2.4	2.4	2.5	2.5	2.5	2.5	2.5	2.4	2.6
24-Feb	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	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.4	2.5
25-Feb	2.4	2.4	Z	2.6	2.6	2.8	2.8	2.6	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.4	2.5	2.8
26-Feb	2.3	2.4	2.4	Z	2.4	2.4	2.4	2.4	2.4	2.3	2.4	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.4	2.5
27-Feb	2.5	2.5	2.5	2.4	Z	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5
28-Feb	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	2.4	2.4	2.4	2.4	2.4	2.3	2.4	2.4	2.4
	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	Diurnal Average	
	2.7	2.6	2.6	2.6	2.6	2.8	2.8	2.6	2.5	2.5	2.5	2.5	2.5	2.6	2.8	2.6	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.6	Diurnal Maximum	

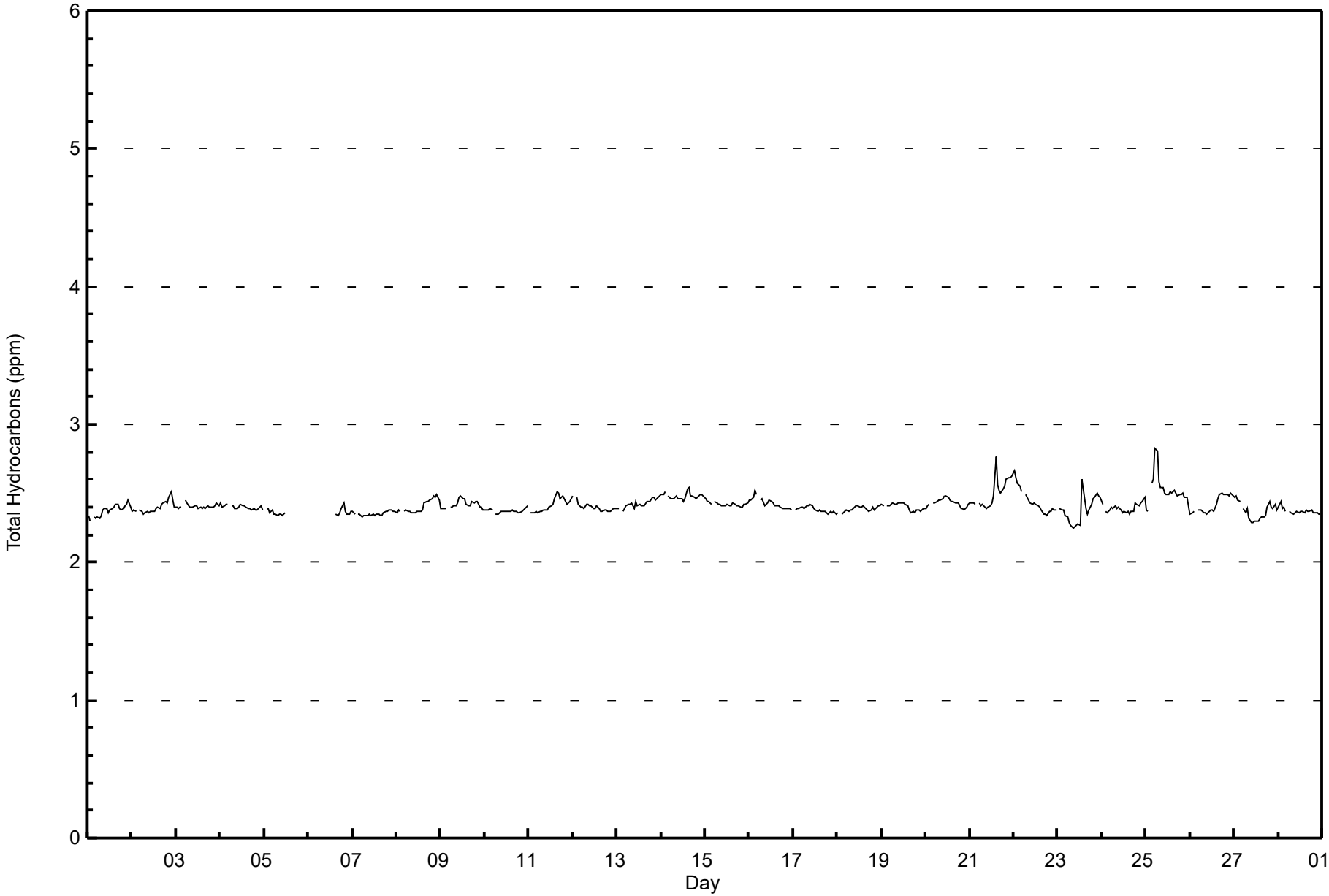
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Surmont 2 - February 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	0	0.00	0.00
2.1 - 3.0	618	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: 618

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Surmont 2 - February 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	23	22	20	11	10	32	114	18	11	16	38	53	79	43	50	68	608
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	22	20	11	10	32	114	18	11	16	38	53	79	43	50	68	608

Total Number of Valid Hours: 608

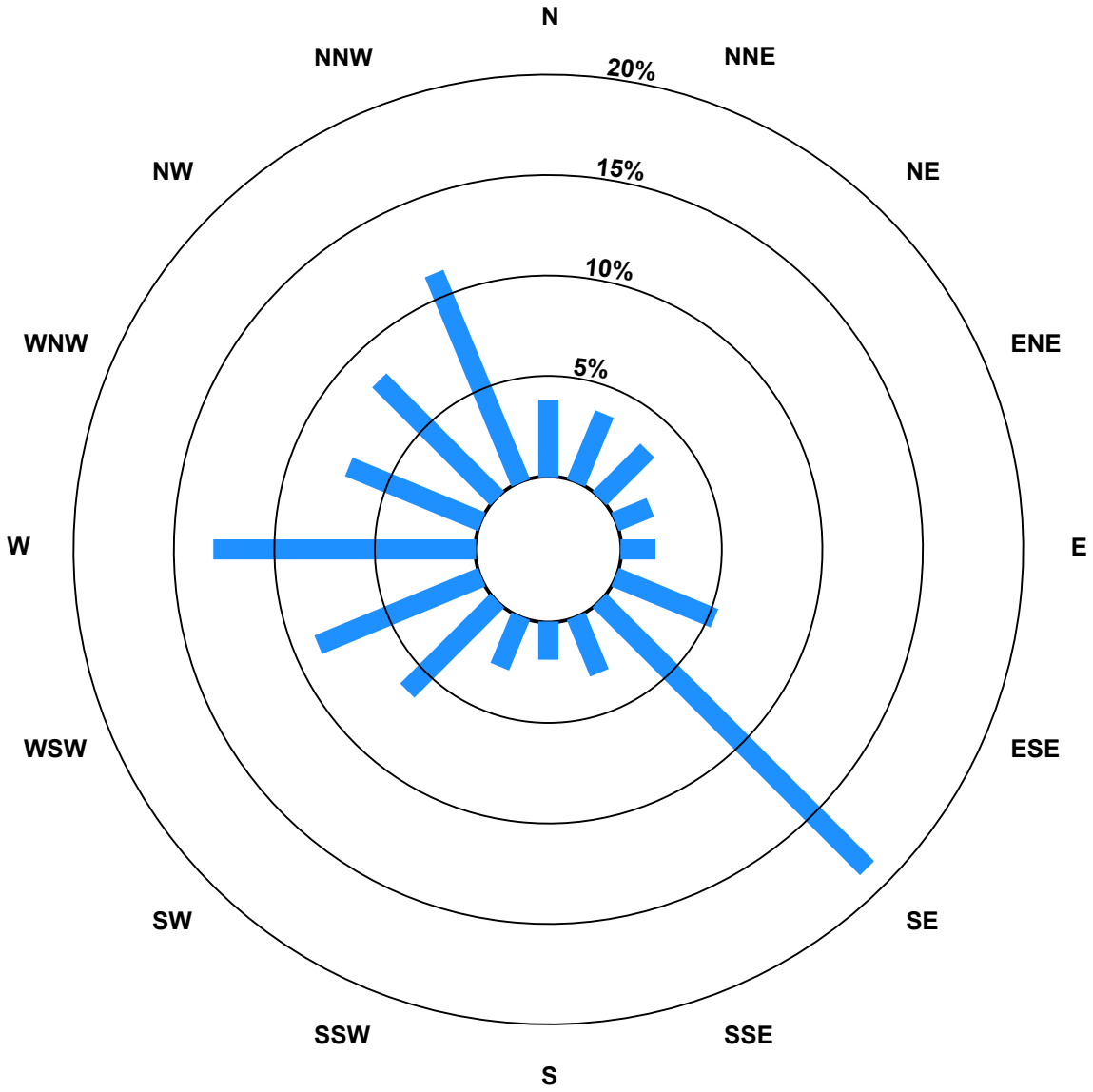
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Total Hydrocarbons (THC) - ppm

Surmont 2



Classes (ppm)

- 0 - 2.0
- 2.1 - 3.0
- 3.1 - 10.0
- > 10.0

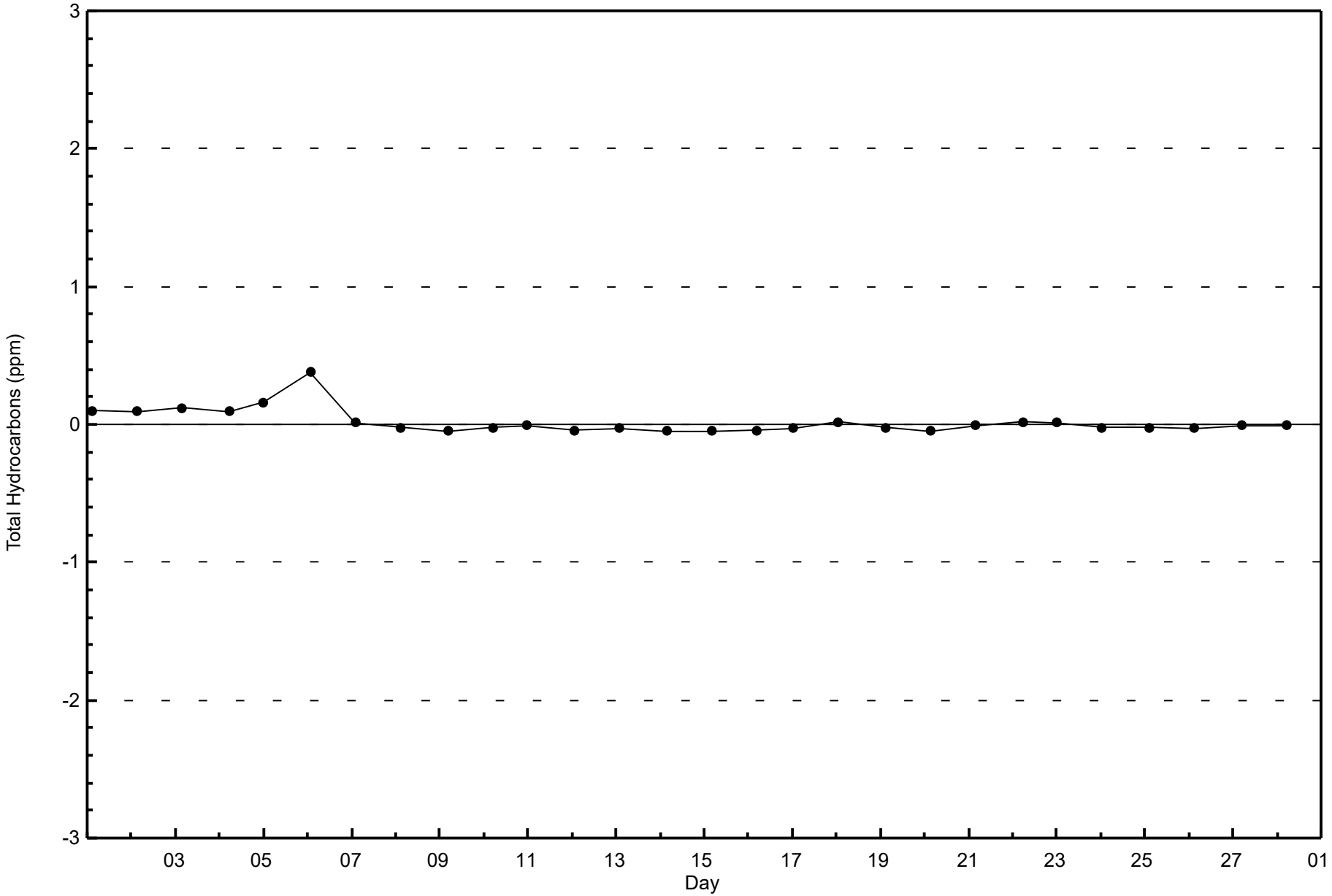
Total Number of Valid Hours: 608

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Surmont 2 - February 2025

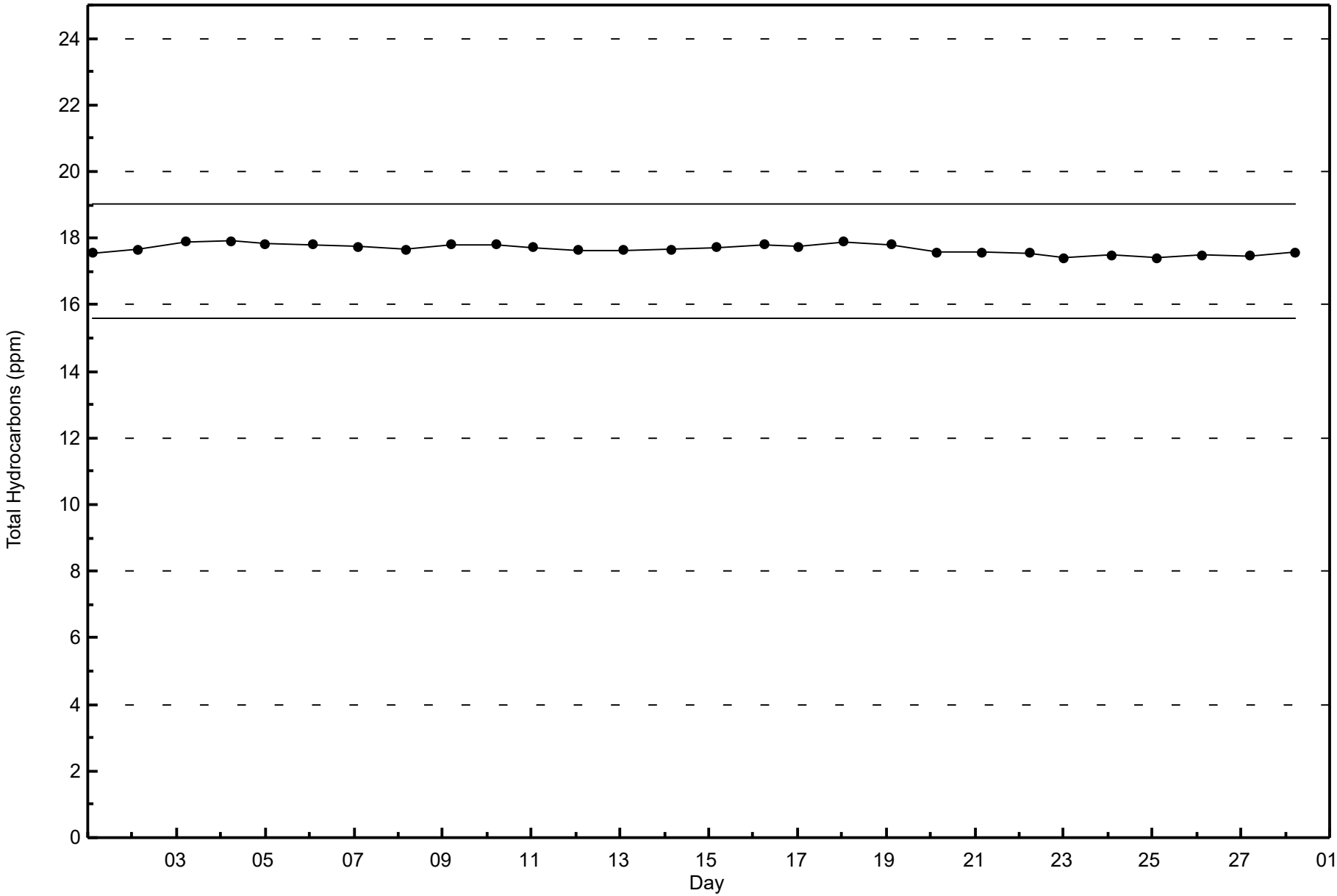


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Surmont 2 - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Surmont 2 - February 2025

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

Maximum Value: 5.8 ppb on Feb 14 10:00

Maximum Daily Average: 1.4 ppb on Feb 14

Minimum Value: 0.0 ppb on Feb 5 22:00

Minimum Daily Average: 0.1 ppb on Feb 28

Maximum Diurnal Average: 0.9 ppb at hour 14

Minimum Diurnal Average: 0.0 ppb at hour 2

Monthly Average: 0.29 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.3 P_{90} = 0.9 P_{99} = 2.8

Hours in Service:	672
Hours of Data:	637
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-Feb	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.5	0.8	0.8	0.6	0.5	0.8	1.5	0.8	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.3	1.5
2-Feb	0.1	Z	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.6	0.8	0.9	0.9	1.0	0.9	0.9	0.4	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.3	1.0
3-Feb	0.0	0.0	Z	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.4
4-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.3	0.4	0.4	0.5	0.6	0.5	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.6
5-Feb	0.0	0.1	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.2	0.2	0.3	M	0.3	0.3	0.3	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.3
6-Feb	0.1	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.2	0.1	0.2	0.2	0.3	0.5	0.3	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.5
7-Feb	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	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	0.1	0.3
8-Feb	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	0.4	0.2	0.4	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
9-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.2	0.0	0.7	1.5	3.3	2.6	2.3	1.8	1.3	1.0	0.6	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.7	3.3
10-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.1	C	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.1
11-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.0	0.2	0.3	0.5	0.7	1.1	1.8	2.2	2.1	1.3	0.2	0.3	0.1	0.0	0.0	0.0	0.0	0.5	2.2
12-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.2	0.4	0.4	0.6	0.4	0.8	0.7	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.8
13-Feb	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.9	1.5	2.6	1.9	1.7	1.9	1.4	1.4	0.8	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.7	2.6
14-Feb	0.1	Z	0.1	0.1	0.0	0.0	0.0	0.2	2.4	5.8	2.7	2.9	2.8	4.8	4.4	2.5	0.7	1.1	0.7	0.3	0.1	0.0	0.0	0.0	1.4	5.8
15-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.3	0.2	0.1	0.1	0.2	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
16-Feb	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.1	0.3	0.6	0.9	1.1	0.9	0.7	0.4	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.1
17-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.2	0.6	1.0	1.2	1.0	0.7	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.2
18-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.3	0.7	1.1	1.0	0.5	0.4	0.6	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.1
19-Feb	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.4	1.5	1.7	1.3	1.0	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.7
20-Feb	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	1.0	0.8	0.7	1.1	1.1	0.6	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.1
21-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.6	1.0	1.1	0.8	1.6	2.8	0.8	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.4	2.8
22-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.5	0.6	0.8	1.1	0.8	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.1
23-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	2.1	1.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	2.1
24-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.2	0.3	0.4	0.6	0.5	0.5	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6
25-Feb	Z	0.0	0.0	0.0	0.1	1.3	0.4	0.3	0.8	1.4	2.0	1.8	2.0	2.0	1.8	3.6	1.3	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.8	3.6
26-Feb	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	0.8	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8
27-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
28-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.1	0.2
	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.3	0.7	0.8	0.8	0.8	0.9	0.9	0.8	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	Diurnal Average	
	0.1	0.1	0.1	0.1	0.1	1.3	0.4	0.3	2.4	5.8	3.3	2.9	2.8	4.8	4.4	3.6	1.3	1.1	0.7	0.3	0.1	0.1	0.1	0.2	Diurnal Maximum	

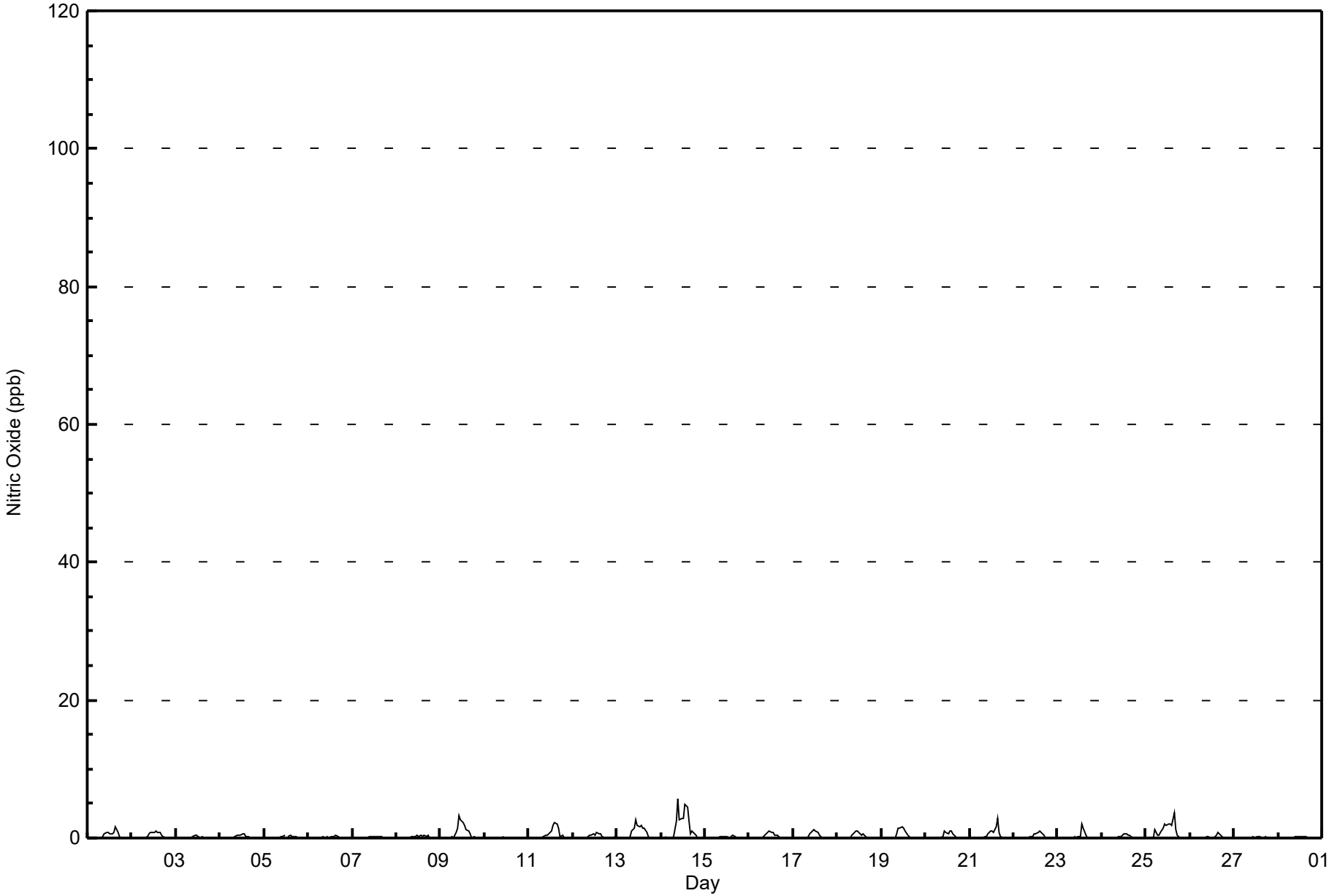
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Surmont 2 - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	637	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: 637

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Surmont 2 - February 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	22	20	11	10	32	112	18	12	17	37	53	87	53	49	70	627
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	22	20	11	10	32	112	18	12	17	37	53	87	53	49	70	627

Total Number of Valid Hours: 627

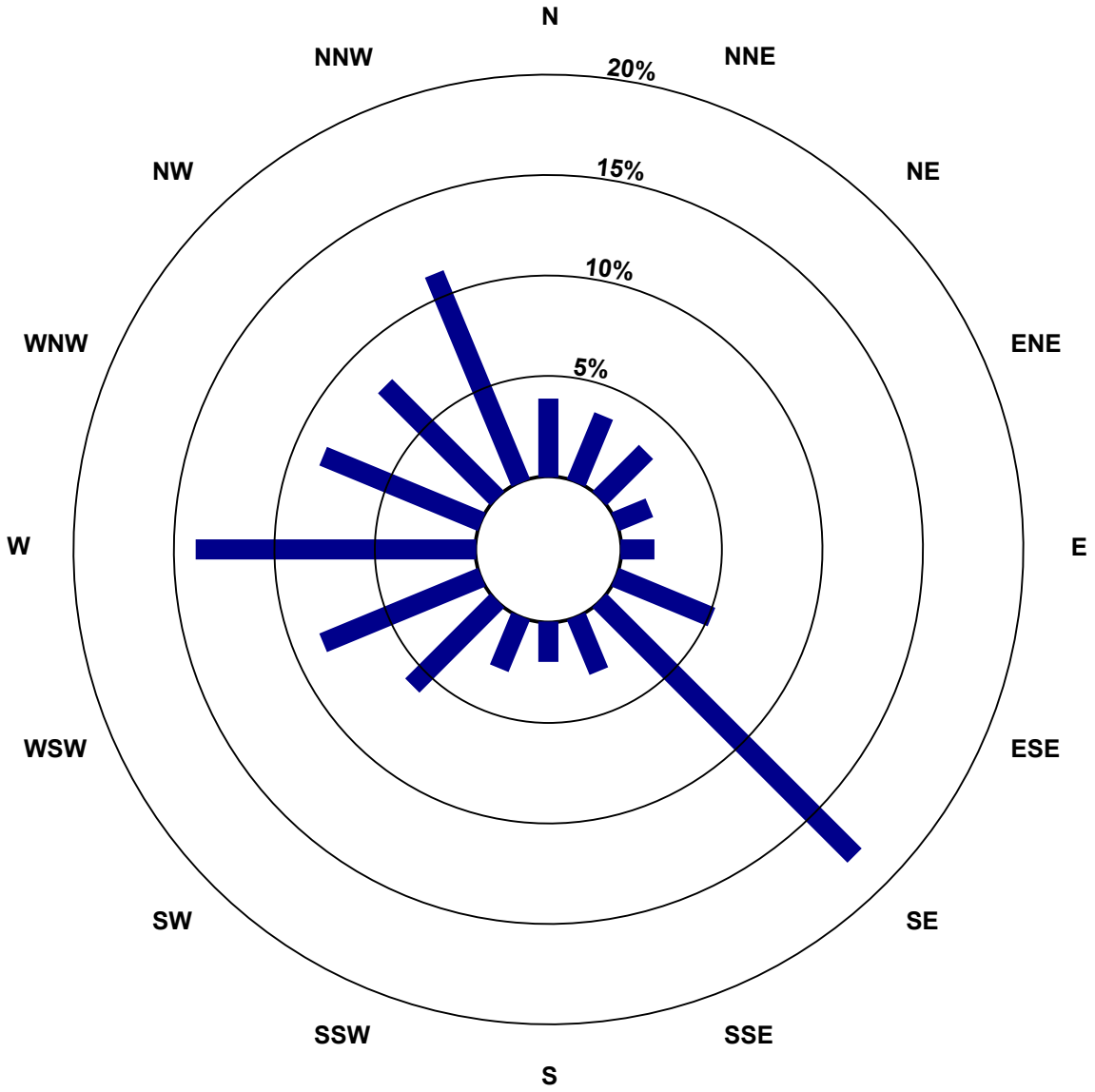
Total Number of Hours: 672

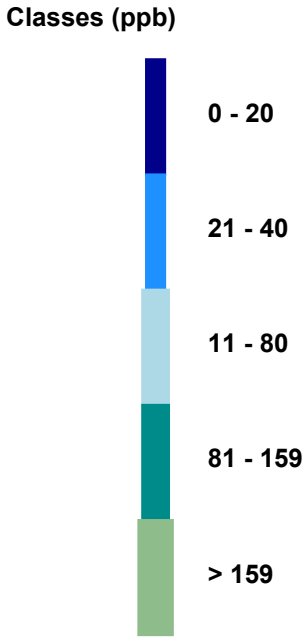
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitric Oxide (NO) - ppb

Surmont 2





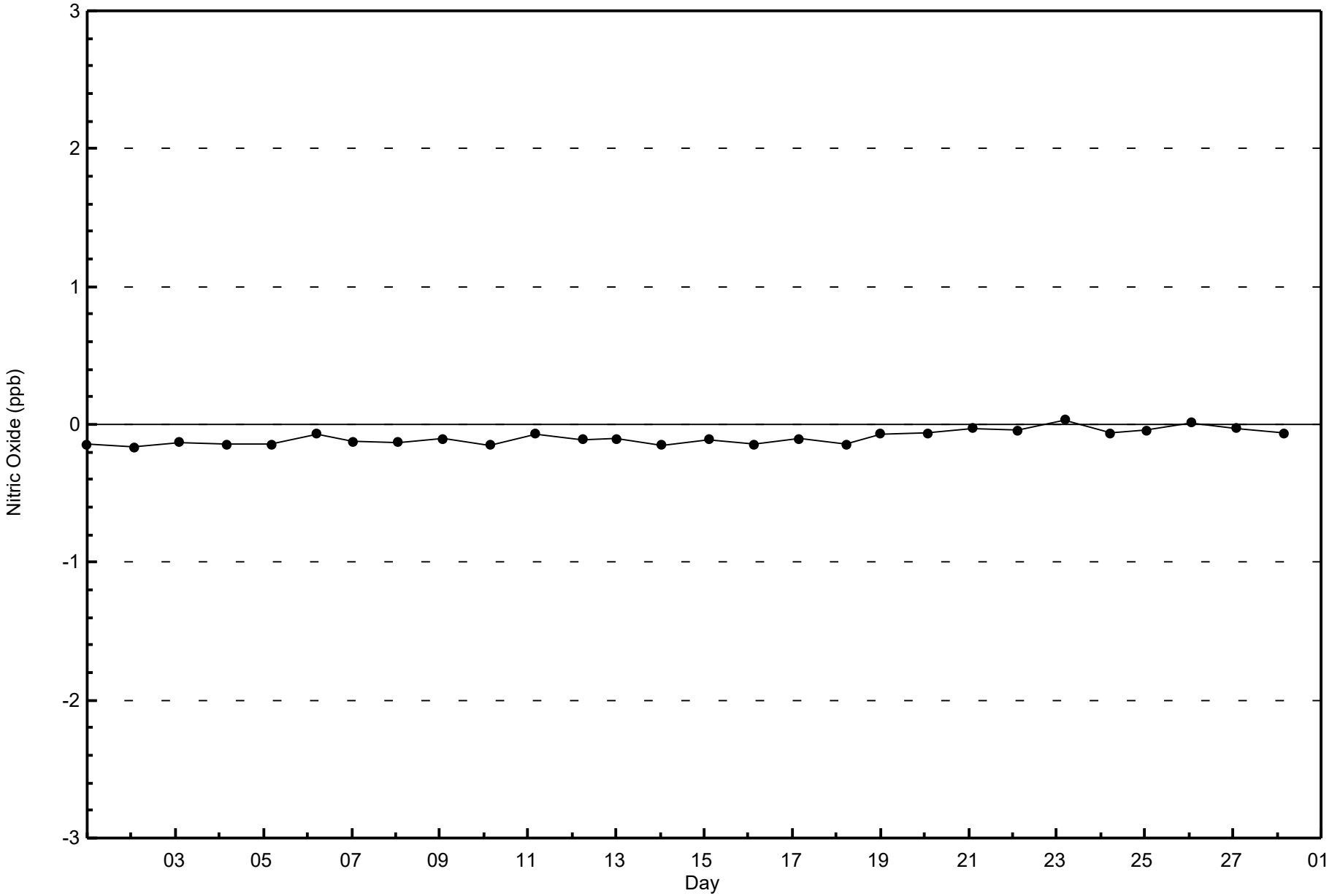
Total Number of Valid Hours: 627

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Surmont 2 - February 2025

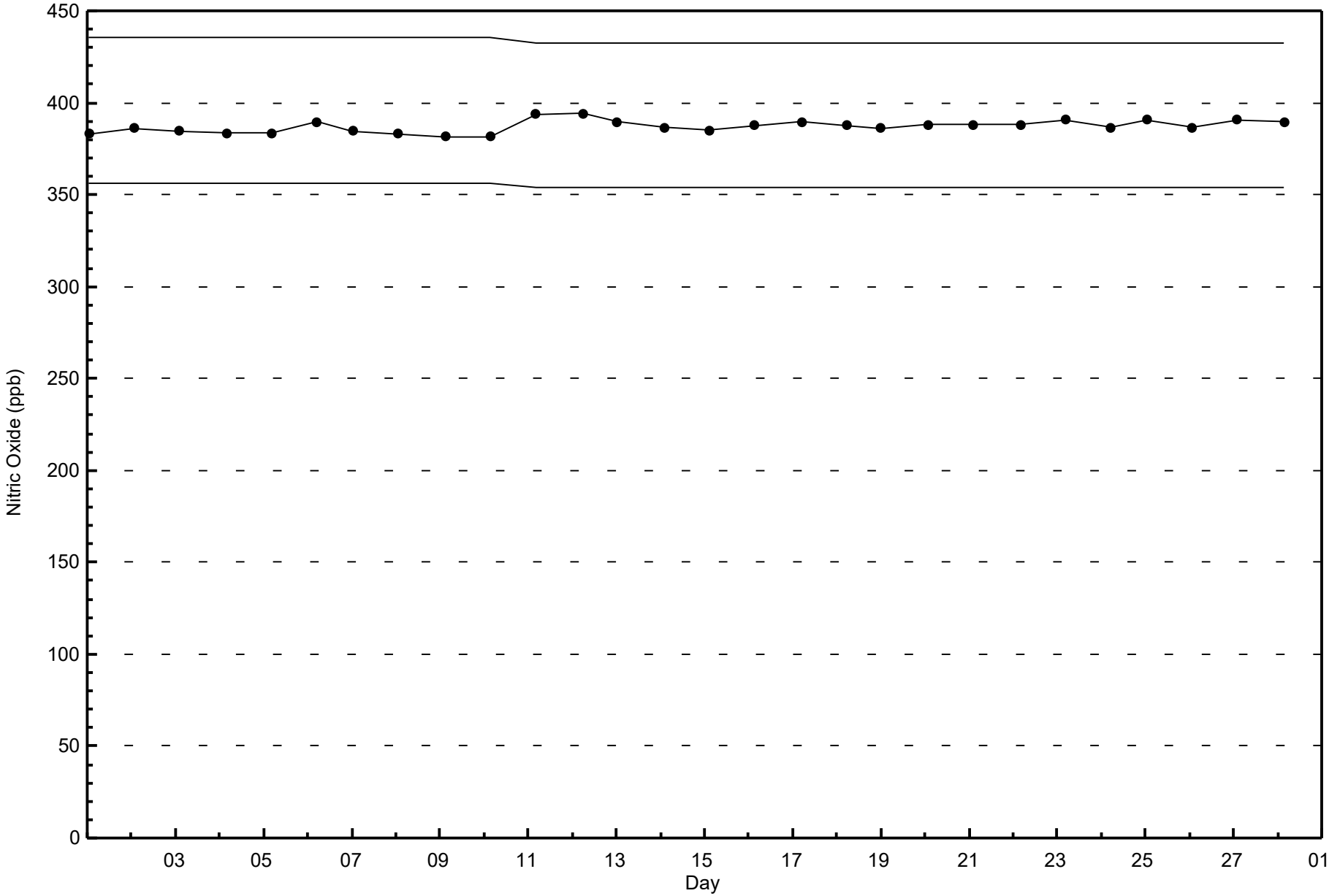


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Surmont 2 - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Surmont 2 - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 21.9 ppb on Feb 25 07:00
Maximum Daily Average: 10.1 ppb on Feb 14

Minimum Value: 0.3 ppb on Feb 1 02:00
Minimum Daily Average: 0.8 ppb on Feb 28
Maximum Diurnal Average: 4.4 ppb at hour 19
Minimum Diurnal Average: 1.9 ppb at hour 13
Monthly Average: 3.18 ppb
Percentiles: P_1 = 0.3 P_{10} = 0.7 Q_1 = 1.3 Median = 2.3 Q_3 = 3.8 P_{90} = 7.1 P_{99} = 13.9

Hours in Service:	672
Hours of Data:	637
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-Feb	Z	0.3	0.3	0.3	0.3	0.5	1.1	1.8	6.4	4.5	3.8	3.2	2.8	3.1	4.8	6.8	7.1	5.7	3.0	4.2	5.9	5.5	5.0	4.0	3.5	7.1
2-Feb	2.0	Z	2.0	2.3	2.1	2.0	2.1	1.9	1.9	2.5	2.2	1.9	2.0	2.4	2.4	3.4	5.1	6.4	6.3	5.9	7.7	9.4	4.8	3.1	3.6	9.4
3-Feb	3.1	2.1	Z	2.0	4.6	3.9	2.4	1.3	1.2	1.1	0.9	0.8	0.6	0.3	0.5	0.5	0.9	2.0	2.7	2.9	3.3	1.8	0.7	1.3	1.8	4.6
4-Feb	1.4	2.2	2.4	Z	1.4	1.8	4.1	4.6	3.5	1.4	1.1	1.0	1.3	1.2	0.6	0.6	1.3	4.5	2.8	1.1	1.0	1.0	2.5	2.5	2.0	4.6
5-Feb	1.9	1.6	1.6	1.8	Z	0.5	0.6	0.7	1.0	1.2	0.9	1.0	M	0.8	1.2	1.8	2.3	2.3	2.1	2.0	2.3	2.1	2.5	2.5	1.6	2.5
6-Feb	2.7	2.5	2.1	2.1	1.5	Z	1.1	1.2	1.3	1.0	0.9	0.6	1.4	1.4	1.6	3.3	4.1	4.9	6.4	5.4	3.4	1.2	1.1	2.4	2.3	6.4
7-Feb	Z	1.8	1.1	1.0	1.1	0.4	0.5	0.7	0.4	0.7	0.7	0.4	0.5	0.4	0.4	0.8	1.2	2.2	2.2	3.1	2.9	1.4	1.1	1.2	1.1	3.1
8-Feb	0.9	Z	0.9	0.6	1.6	2.7	3.7	2.2	1.8	1.3	0.8	0.9	0.7	0.9	1.1	2.3	2.6	9.7	9.9	9.2	11.6	10.2	10.7	7.7	4.1	11.6
9-Feb	2.0	1.3	Z	2.4	2.6	2.4	5.6	4.5	5.6	4.2	4.9	3.7	3.0	2.5	2.2	2.7	2.9	3.8	6.6	6.1	4.3	2.7	1.6	0.7	3.4	6.6
10-Feb	0.5	0.4	1.4	Z	2.9	0.8	0.5	0.7	0.4	0.5	0.5	C	C	C	C	C	C	2.3	2.0	1.7	1.0	1.3	2.2	2.3	--	2.9
11-Feb	2.2	2.2	2.7	2.9	Z	2.8	4.2	3.5	3.1	1.6	1.5	1.6	2.1	3.1	4.6	6.3	8.3	8.8	9.6	7.4	6.1	7.9	9.9	9.9	4.9	9.9
12-Feb	9.1	7.9	6.3	3.7	2.8	Z	3.5	3.8	3.3	2.6	2.2	2.2	1.7	2.3	2.4	2.8	2.3	2.4	1.7	1.5	1.3	1.5	2.1	3.1	3.2	9.1
13-Feb	Z	3.1	1.7	1.6	2.6	2.7	4.0	7.0	5.8	3.4	4.0	2.9	2.9	3.1	2.9	4.0	5.1	7.4	7.6	7.2	7.5	9.9	10.6	10.6	5.1	10.6
14-Feb	11.6	Z	16.7	16.7	11.7	10.0	8.9	10.2	7.6	7.3	3.4	3.2	3.4	5.8	6.5	5.4	3.7	13.1	18.7	18.9	13.2	13.8	13.1	10.3	10.1	18.9
15-Feb	8.5	7.1	Z	3.6	3.7	2.9	2.5	2.7	2.3	1.5	0.9	0.7	0.6	0.5	0.7	1.3	1.6	1.4	1.2	0.7	0.6	0.7	1.3	1.5	2.1	8.5
16-Feb	1.5	3.3	5.5	Z	11.6	8.9	7.3	4.9	2.3	1.5	1.9	2.0	1.6	1.5	1.2	1.7	2.0	1.7	1.0	0.4	0.3	0.5	0.4	0.3	2.8	11.6
17-Feb	0.4	1.3	2.3	2.7	Z	2.7	2.4	2.9	3.0	2.5	2.1	1.9	1.7	1.3	1.2	0.8	0.5	0.4	0.4	0.3	0.3	0.6	0.6	0.5	1.4	3.0
18-Feb	0.8	1.7	1.9	1.9	1.7	Z	1.8	1.5	2.0	1.9	1.7	1.4	1.0	0.9	1.3	1.2	0.9	1.0	1.4	1.8	1.8	2.0	2.5	2.9	1.6	2.9
19-Feb	Z	2.9	2.3	2.2	2.7	3.1	3.2	3.4	3.7	3.4	3.1	3.1	2.8	2.5	1.7	1.5	1.5	1.6	1.0	0.9	1.5	0.8	0.8	1.4	2.2	3.7
20-Feb	1.8	Z	1.9	1.8	1.8	1.8	1.9	2.0	2.2	2.7	4.4	3.2	3.3	3.2	3.3	2.9	2.9	3.7	3.7	3.2	2.5	2.9	2.2	2.7	2.7	4.4
21-Feb	3.5	3.1	Z	3.3	3.0	3.3	2.4	2.0	1.5	1.8	3.1	4.1	3.3	2.9	5.3	8.0	6.5	6.9	7.6	7.6	7.8	8.1	8.3	9.7	4.9	9.7
22-Feb	10.5	8.9	8.8	Z	5.6	4.8	5.1	4.6	4.0	2.1	2.2	2.1	2.8	2.9	2.8	3.2	3.0	2.8	2.2	4.9	3.7	5.3	5.5	4.9	4.5	10.5
23-Feb	2.6	3.0	4.5	1.9	Z	2.9	1.4	1.1	1.0	0.9	0.6	0.7	0.6	6.3	4.5	1.6	1.5	2.5	4.4	5.8	5.1	4.8	5.8	4.9	3.0	6.3
24-Feb	3.5	3.6	3.4	2.6	2.5	Z	2.5	2.1	1.7	1.4	1.3	1.6	1.8	1.5	1.2	1.3	1.2	1.8	4.6	3.4	3.9	3.6	3.2	4.2	2.5	4.6
25-Feb	Z	3.1	7.2	10.5	13.4	21.4	21.9	13.9	8.3	6.3	5.9	5.7	5.6	5.0	4.6	9.7	5.4	4.8	4.5	4.2	3.8	4.0	3.8	2.9	7.6	21.9
26-Feb	2.0	Z	2.1	1.7	1.5	1.6	1.5	1.7	1.1	0.9	0.8	0.6	0.6	0.5	1.4	2.7	3.2	3.8	4.1	4.1	4.3	4.8	4.1	3.9	2.3	4.8
27-Feb	3.4	2.9	Z	2.6	2.2	2.1	2.3	1.9	1.6	1.1	1.0	0.8	0.9	0.8	0.8	0.6	0.5	0.8	3.9	6.7	3.1	2.9	3.6	1.1	2.1	6.7
28-Feb	0.9	1.5	1.0	Z	0.8	0.8	0.8	1.0	0.8	0.9	0.9	0.7	0.7	0.8	0.7	0.9	1.2	1.2	0.9	0.6	0.7	0.4	0.5	0.5	0.8	1.5
	3.3	2.9	3.5	3.1	3.6	3.6	3.5	3.2	2.8	2.2	2.1	1.9	1.9	2.1	2.3	2.9	2.9	3.9	4.4	4.3	4.0	4.0	3.9	3.7	Diurnal Average	
	11.6	8.9	16.7	16.7	13.4	21.4	21.9	13.9	8.3	7.3	5.9	5.7	5.6	6.3	6.5	9.7	8.3	13.1	18.7	18.9	13.2	13.8	13.1	10.6	Diurnal Maximum	

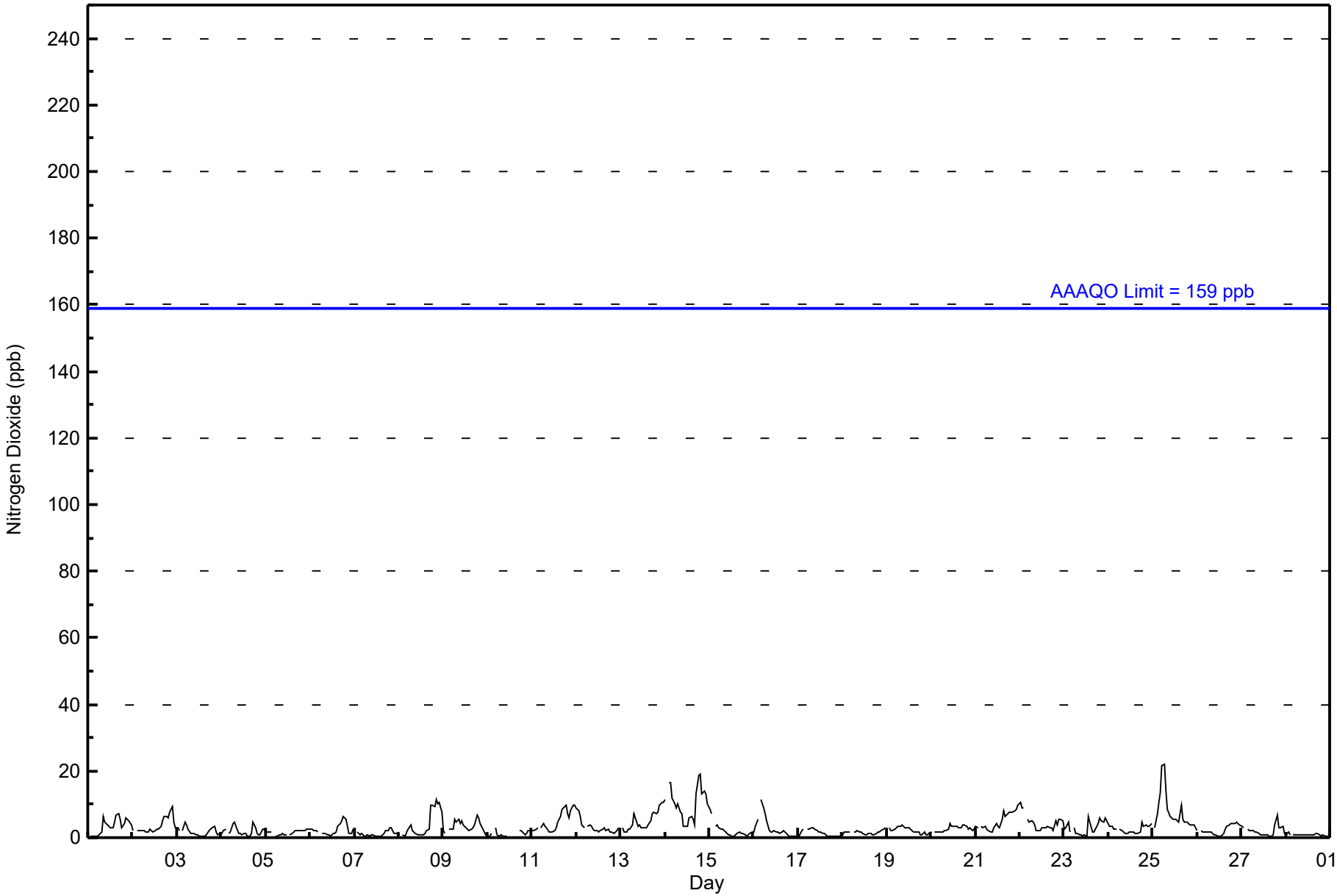
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Surmont 2 - February 2025



Nitrogen Dioxide (NO_2) - ppb

Surmont 2 - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	635	99.69	99.69
21 - 40	2	0.31	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: 637

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Surmont 2 - February 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	22	20	11	10	32	112	18	12	17	37	53	87	53	49	68	625
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	24	22	20	11	10	32	112	18	12	17	37	53	87	53	49	70	627

Total Number of Valid Hours: 627

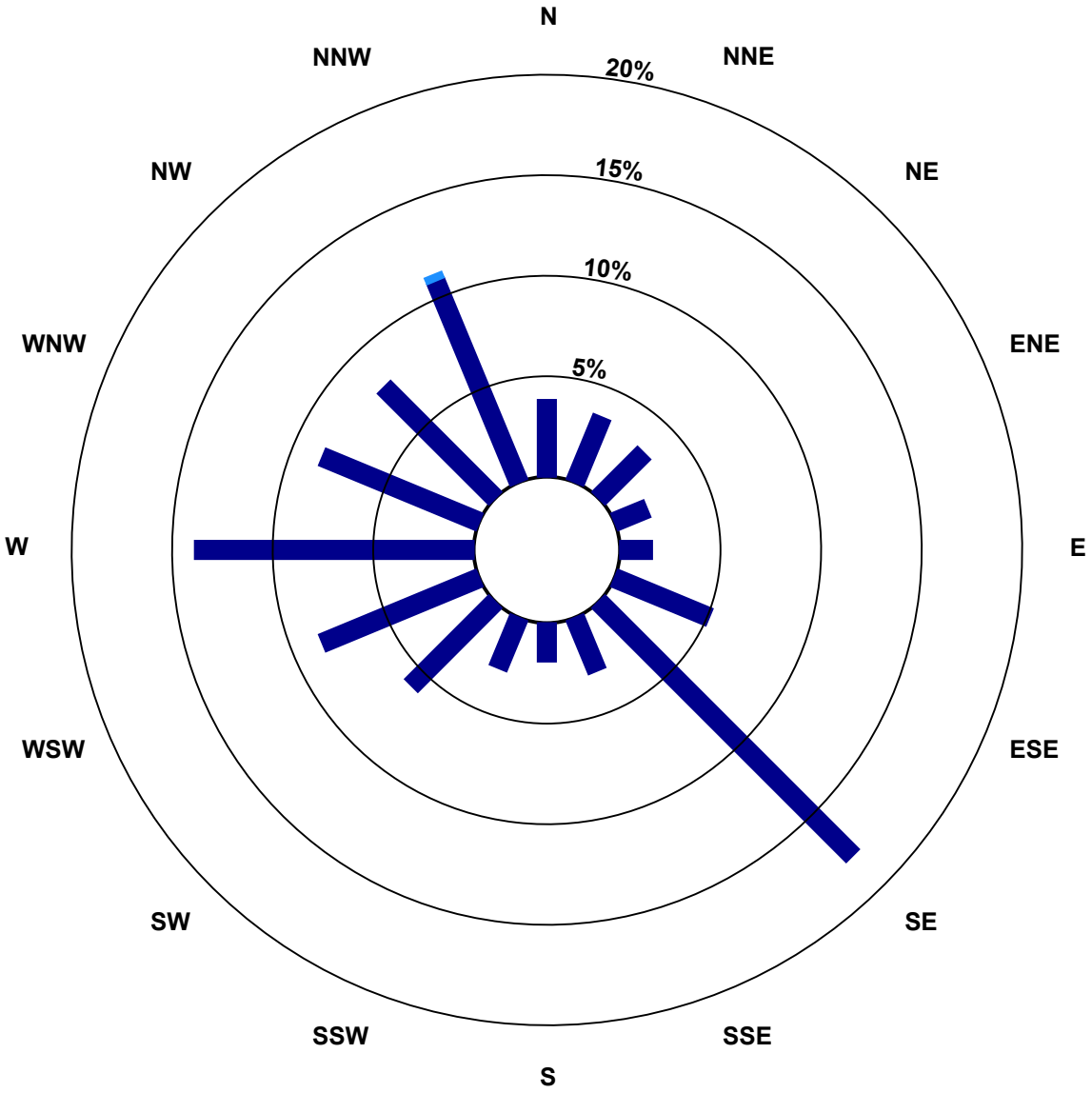
Total Number of Hours: 672

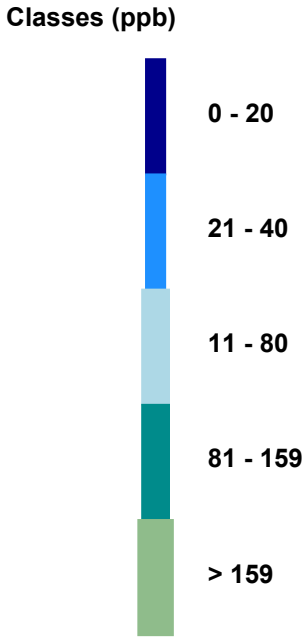
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Dioxide (NO_2) - ppb

Surmont 2





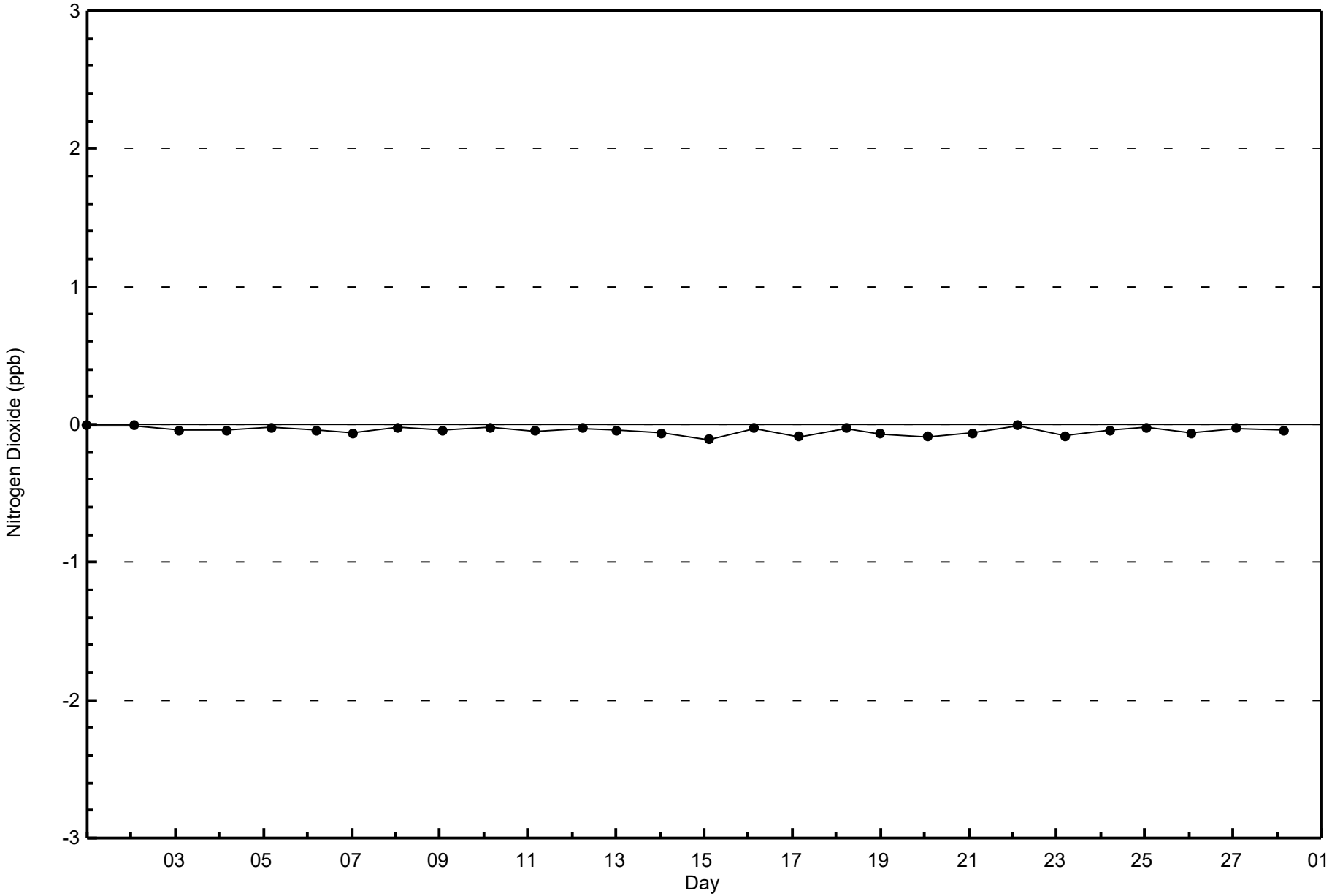
Total Number of Valid Hours: 627

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Surmont 2 - February 2025

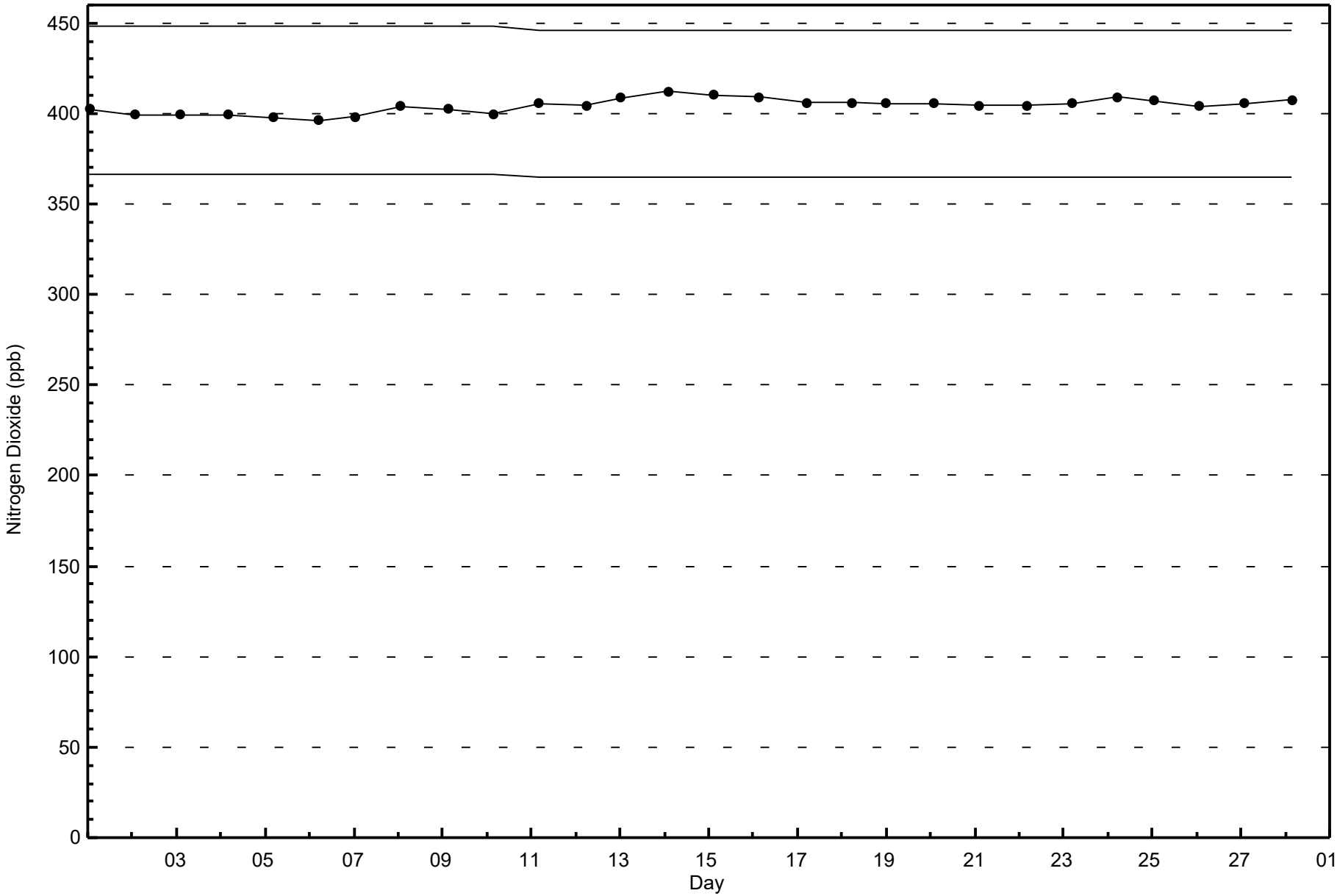


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Surmont 2 - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Surmont 2 - February 2025

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

Maximum Value: 22.7 ppb on Feb 25 06:00

Maximum Daily Average: 11.5 ppb on Feb 14

Minimum Value: 0.3 ppb on Feb 1 05:00

Minimum Daily Average: 0.9 ppb on Feb 28

Maximum Diurnal Average: 4.4 ppb at hour 19

Minimum Diurnal Average: 2.7 ppb at hour 13

Monthly Average: 3.47 ppb

Percentiles: P_1 = 0.3 P_{10} = 0.8 Q_1 = 1.4 Median = 2.5 Q_3 = 4.3 P_{90} = 7.7 P_{99} = 14.2

Hours in Service:	672
Hours of Data:	637
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-Feb	Z	0.3	0.3	0.3	0.3	0.5	1.1	1.9	6.6	5.0	4.6	4.0	3.4	3.6	5.6	8.3	7.9	5.8	3.1	4.3	6.0	5.6	5.1	4.0	3.8	8.3
2-Feb	2.1	Z	2.1	2.3	2.1	2.1	2.2	2.0	2.0	3.1	3.0	2.8	2.9	3.4	3.3	4.3	5.5	6.5	6.4	5.9	7.8	9.5	4.8	3.1	3.9	9.5
3-Feb	3.1	2.1	Z	2.1	4.7	3.9	2.4	1.3	1.3	1.3	1.3	1.1	0.8	0.4	0.6	0.6	1.0	2.0	2.7	3.0	3.3	1.8	0.7	1.3	1.9	4.7
4-Feb	1.4	2.2	2.4	Z	1.4	1.8	4.1	4.6	3.8	1.8	1.5	1.5	1.9	1.7	0.8	0.7	1.4	4.6	2.8	1.1	1.0	1.0	2.6	2.6	2.1	4.6
5-Feb	1.9	1.7	1.6	1.8	Z	0.5	0.6	0.7	1.0	1.4	1.1	1.3	M	1.1	1.5	2.1	2.4	2.5	2.2	2.0	2.3	2.1	2.5	2.5	1.7	2.5
6-Feb	2.8	2.5	2.1	2.1	1.5	Z	1.1	1.2	1.4	1.1	1.1	0.7	1.6	1.6	1.9	3.8	4.4	5.0	6.4	5.4	3.4	1.3	1.1	2.4	2.4	6.4
7-Feb	Z	1.8	1.1	1.0	1.1	0.4	0.5	0.7	0.4	0.8	1.0	0.6	0.6	0.6	0.6	1.0	1.3	2.2	2.2	3.1	2.9	1.4	1.1	1.2	1.2	3.1
8-Feb	0.9	Z	0.9	0.6	1.6	2.7	3.7	2.2	1.9	1.6	1.0	1.2	1.0	1.3	1.3	2.7	2.8	10.1	9.9	9.2	11.6	10.2	10.7	7.7	4.2	11.6
9-Feb	2.0	1.3	Z	2.4	2.6	2.4	5.8	4.5	6.3	5.7	8.2	6.3	5.3	4.3	3.5	3.7	3.5	3.9	6.7	6.2	4.3	2.7	1.6	0.7	4.1	8.2
10-Feb	0.5	0.4	1.4	Z	2.9	0.8	0.5	0.7	0.5	0.6	0.6	C	C	C	C	C	C	2.3	2.0	1.7	1.0	1.3	2.2	2.3	--	2.9
11-Feb	2.2	2.2	2.7	2.9	Z	2.8	4.3	3.5	3.3	1.9	2.0	2.3	3.2	4.9	6.8	8.4	9.6	9.0	9.9	7.5	6.1	7.9	9.9	9.9	5.4	9.9
12-Feb	9.1	7.9	6.3	3.7	2.8	Z	3.5	3.8	3.5	3.0	2.6	2.8	2.1	3.1	3.1	3.3	2.5	2.4	1.7	1.5	1.3	1.5	2.1	3.3	3.3	9.1
13-Feb	Z	3.1	1.7	1.6	2.6	2.7	4.0	7.2	6.7	4.9	6.6	4.8	4.6	5.0	4.3	5.4	5.9	7.6	7.7	7.2	7.6	10.0	10.7	10.7	5.8	10.7
14-Feb	11.7	Z	16.8	16.8	11.7	10.0	8.9	10.4	10.0	13.1	6.1	6.1	6.2	10.6	10.9	7.9	4.4	14.2	19.4	19.2	13.3	13.8	13.1	10.3	11.5	19.4
15-Feb	8.5	7.1	Z	3.6	3.7	2.9	2.5	2.7	2.5	1.8	1.2	0.9	0.7	0.6	0.9	1.6	1.8	1.4	1.2	0.7	0.6	0.7	1.3	1.5	2.2	8.5
16-Feb	1.5	3.3	5.5	Z	11.7	8.9	7.3	5.0	2.6	2.1	2.8	3.1	2.5	2.2	1.6	2.2	2.3	1.7	1.0	0.4	0.3	0.5	0.4	0.3	3.0	11.7
17-Feb	0.4	1.3	2.3	2.7	Z	2.7	2.4	2.9	3.2	3.1	3.1	3.1	2.7	2.0	1.7	1.0	0.5	0.4	0.4	0.3	0.3	0.6	0.6	0.5	1.7	3.2
18-Feb	0.8	1.7	1.9	1.9	1.7	Z	1.8	1.5	2.3	2.6	2.8	2.4	1.5	1.3	1.9	1.5	1.0	1.0	1.4	1.8	1.8	2.0	2.5	2.9	1.8	2.9
19-Feb	Z	2.9	2.3	2.2	2.7	3.1	3.2	3.4	4.3	4.8	4.6	4.8	4.1	3.5	2.1	1.8	1.6	1.6	1.0	0.9	1.5	0.8	0.8	1.4	2.6	4.8
20-Feb	1.8	Z	1.9	1.8	1.8	1.8	1.9	2.0	2.3	3.0	5.4	4.0	4.0	4.3	4.4	3.5	3.2	3.8	3.7	3.2	2.5	2.9	2.2	2.7	3.0	5.4
21-Feb	3.5	3.1	Z	3.3	3.0	3.3	2.4	2.0	1.7	2.1	3.7	5.1	4.4	3.7	6.9	10.8	7.3	7.1	7.6	7.6	7.8	8.1	8.4	9.7	5.3	10.8
22-Feb	10.5	8.9	8.8	Z	5.6	4.8	5.1	4.6	4.1	2.2	2.4	2.6	3.4	3.7	3.9	4.0	3.3	2.9	2.2	4.9	3.7	5.3	5.5	4.9	4.7	10.5
23-Feb	2.6	3.0	4.5	1.9	Z	2.9	1.4	1.1	1.0	1.0	0.7	0.8	0.7	8.4	5.9	1.9	1.6	2.5	4.4	5.8	5.1	4.8	5.8	4.9	3.2	8.4
24-Feb	3.5	3.6	3.4	2.6	2.5	Z	2.5	2.1	1.8	1.6	1.6	2.0	2.4	2.0	1.7	1.6	1.4	1.9	4.6	3.4	3.9	3.6	3.2	4.2	2.7	4.6
25-Feb	Z	3.1	7.2	10.5	13.5	22.7	22.3	14.2	9.1	7.7	7.9	7.5	7.6	7.0	6.4	13.3	6.7	5.2	4.5	4.2	3.8	4.0	3.8	2.9	8.5	22.7
26-Feb	2.0	Z	2.1	1.7	1.5	1.6	1.5	1.7	1.2	1.0	0.9	0.7	0.7	0.6	1.7	3.5	3.7	4.0	4.1	4.1	4.3	4.8	4.1	3.9	2.4	4.8
27-Feb	3.4	2.9	Z	2.6	2.2	2.1	2.3	1.9	1.7	1.2	1.1	0.9	1.0	0.9	0.9	0.7	0.6	0.9	3.9	6.7	3.1	2.9	3.6	1.1	2.1	6.7
28-Feb	0.9	1.5	1.0	Z	0.8	0.8	0.8	1.0	0.8	1.0	1.1	0.8	0.9	1.0	0.9	1.0	1.3	1.2	0.9	0.6	0.7	0.4	0.5	0.5	0.9	1.5
	3.3	2.9	3.5	3.2	3.6	3.7	3.6	3.2	3.1	2.9	2.9	2.7	2.7	3.1	3.2	3.7	3.3	4.1	4.4	4.4	4.0	4.0	4.0	3.7	Diurnal Average	
	11.7	8.9	16.8	16.8	13.5	22.7	22.3	14.2	10.0	13.1	8.2	7.5	7.6	10.6	10.9	13.3	9.6	14.2	19.4	19.2	13.3	13.8	13.1	10.7	Diurnal Maximum	

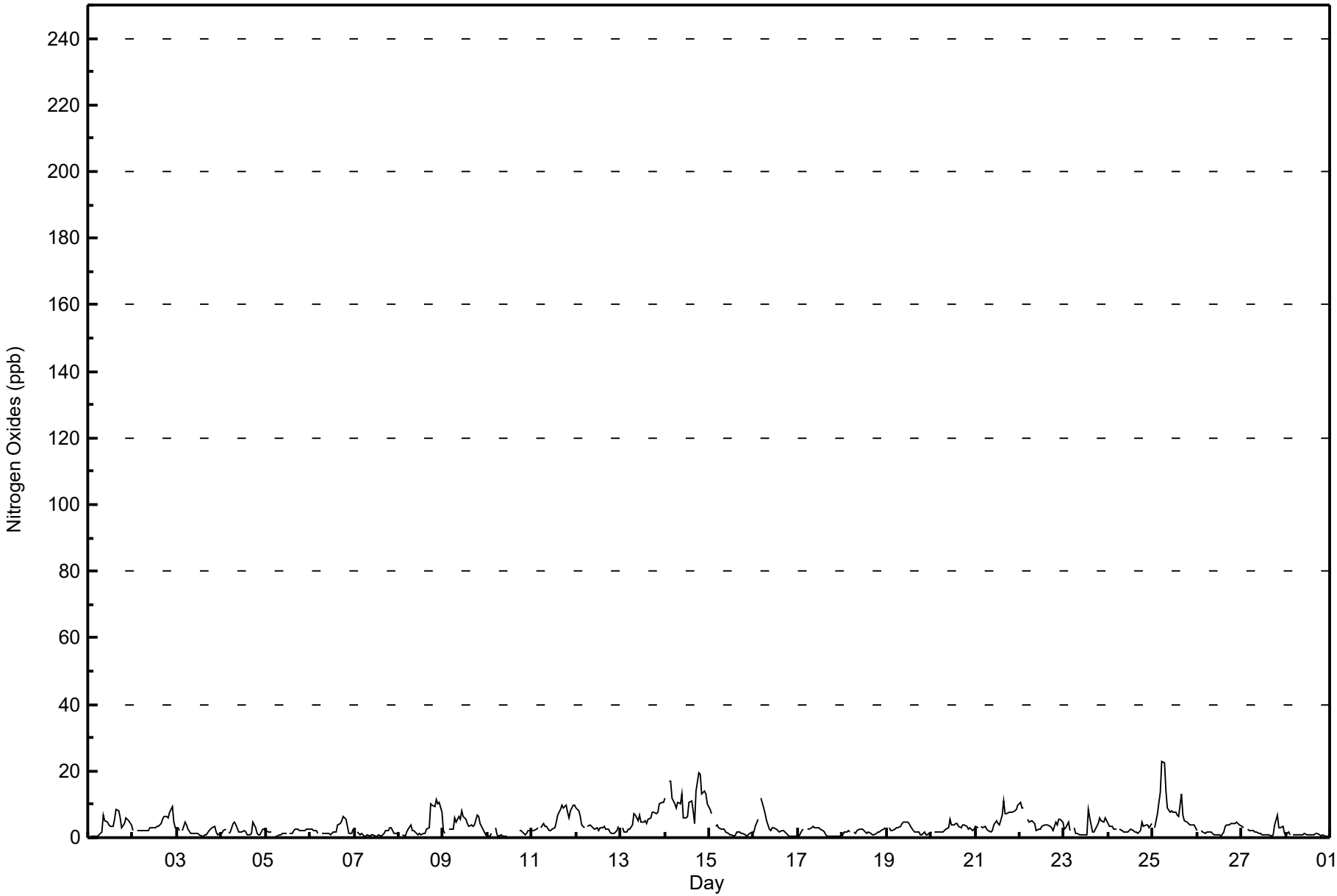
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Surmont 2 - February 2025



Nitrogen Oxides (NO_X) - ppb

Surmont 2 - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	635	99.69	99.69
21 - 40	2	0.31	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: 637

Total Number of Hours: 672



Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Surmont 2 - February 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	22	20	11	10	32	112	18	12	17	37	53	87	53	49	68	625
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	24	22	20	11	10	32	112	18	12	17	37	53	87	53	49	70	627

Total Number of Valid Hours: 627

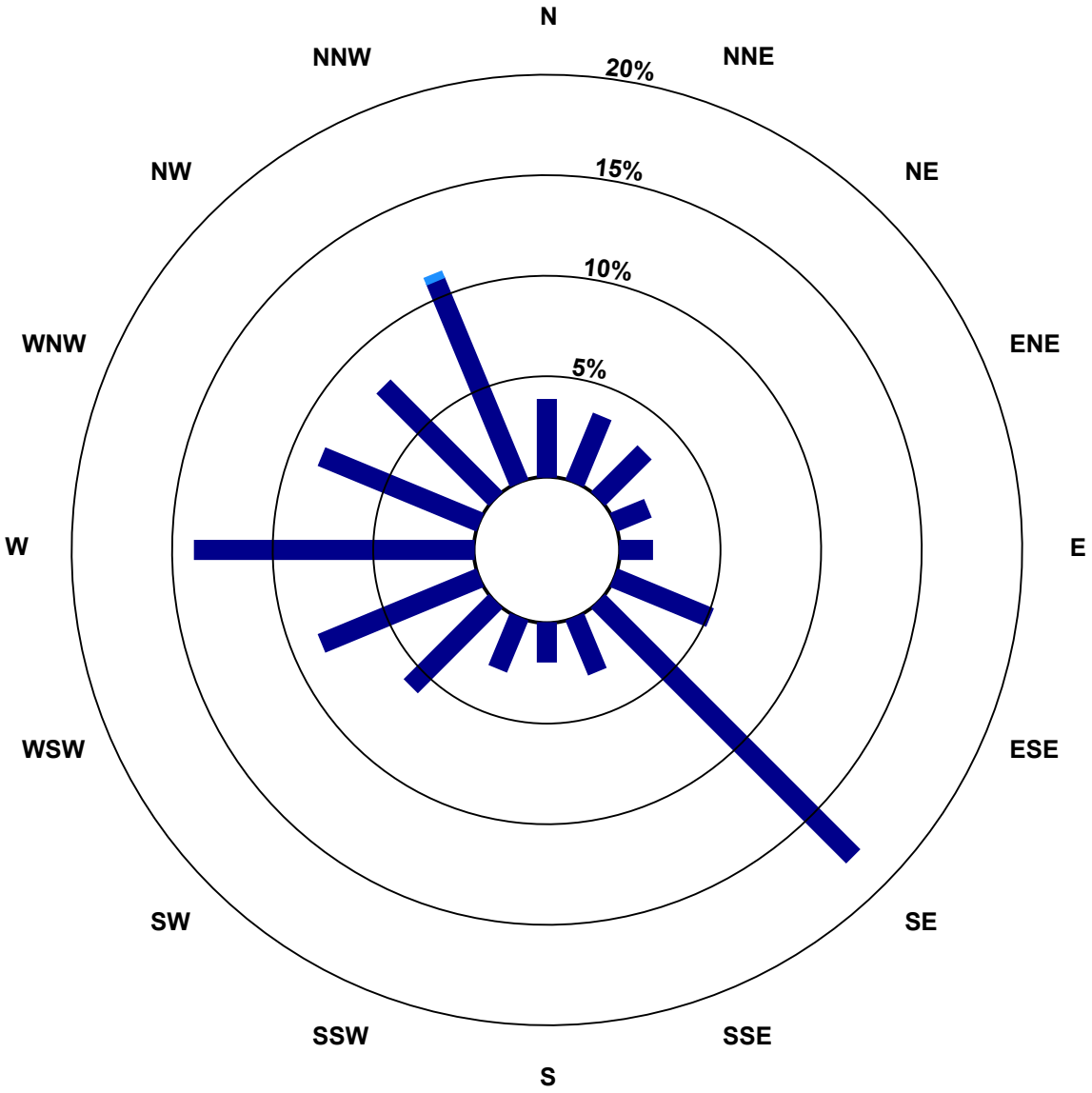
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Oxides (NO_X) - ppb

Surmont 2



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

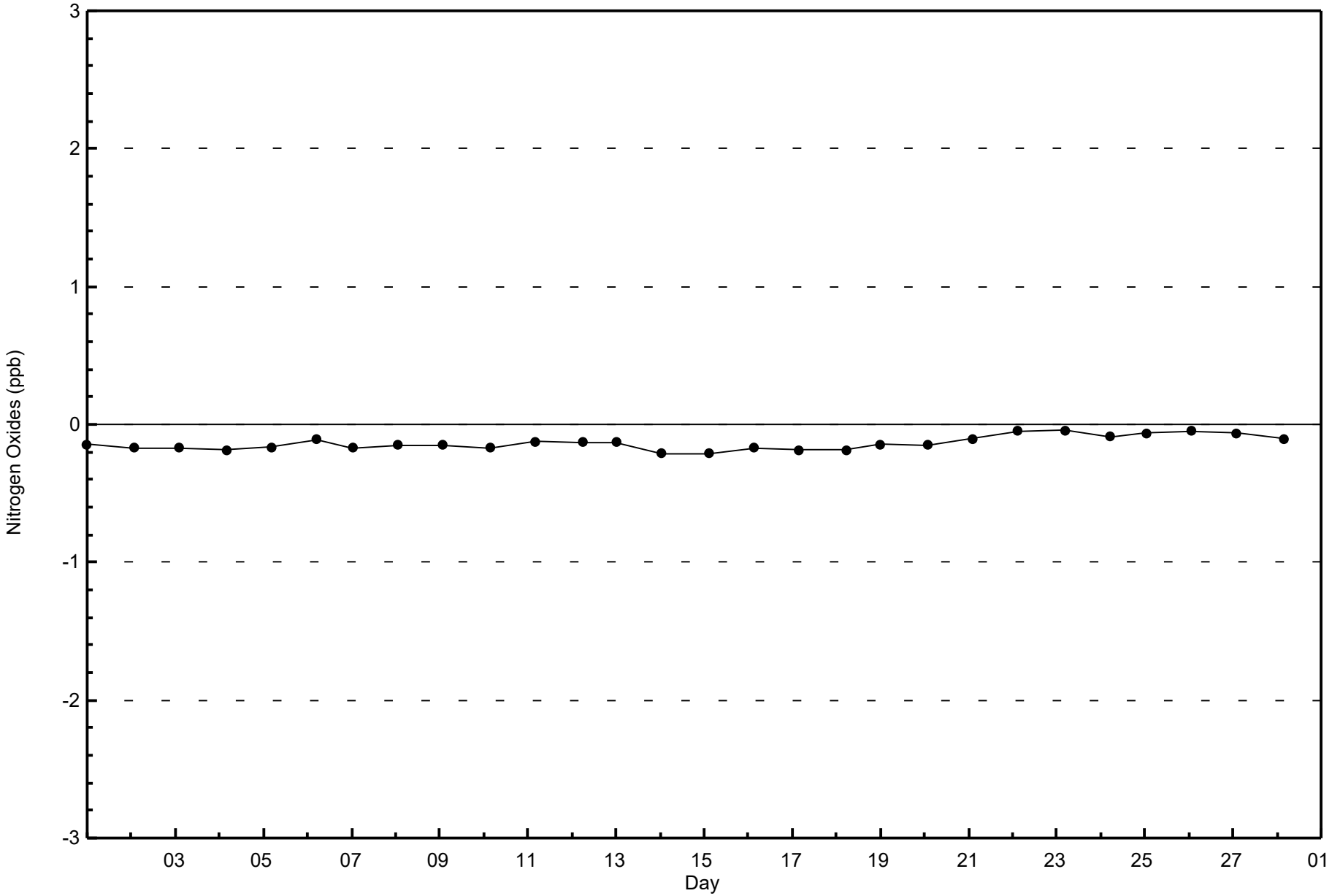
Total Number of Valid Hours: 627

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Surmont 2 - February 2025

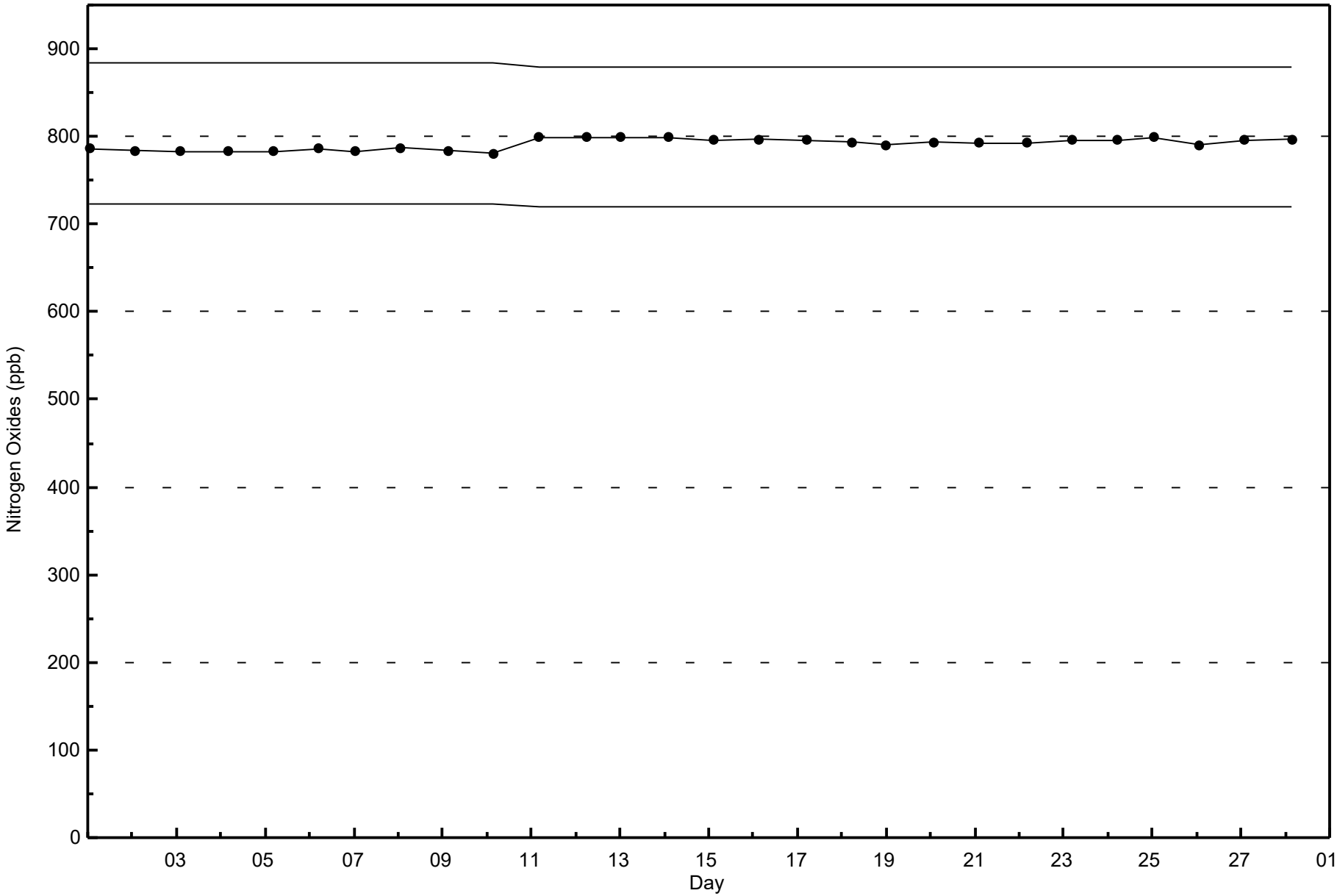


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Surmont 2 - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Surmont 2 - February 2025

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

Maximum Value: 12.7 $\mu g/m^3$ on Feb 8 23:00

Maximum Daily Average: 7.6 $\mu g/m^3$ on Feb 25

Minimum Value: 0.2 $\mu g/m^3$ on Feb 23 13:00

Minimum Daily Average: 1.4 $\mu g/m^3$ on Feb 4

Maximum Diurnal Average: 4.0 $\mu g/m^3$ at hour 23

Minimum Diurnal Average: 3.1 $\mu g/m^3$ at hour 9

Monthly Average: 3.40 $\mu g/m^3$

Percentiles: P_1 = 0.9 P_{10} = 1.4 Q_1 = 2.2 Median = 3.0 Q_3 = 4.3 P_{90} = 5.9 P_{99} = 9.5

Hours in Service:	672
Hours of Data:	669
Hours of Missing Data:	3
Hours of Calibration:	2
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-Feb	1.9	1.8	1.6	1.5	1.3	1.4	1.4	1.6	2.6	2.6	2.6	2.4	2.2	2.3	3.3	4.3	4.1	3.3	2.7	3.5	5.2	5.0	5.7	4.7	2.9	5.7
2-Feb	4.5	4.5	4.5	4.5	5.1	4.4	3.7	3.6	3.8	5.7	5.4	4.5	3.7	3.5	3.6	4.9	5.2	4.5	6.5	5.2	3.9	4.7	3.9	3.3	4.5	6.5
3-Feb	3.4	3.2	3.1	3.1	3.6	3.8	3.3	2.7	2.3	2.1	2.0	1.9	1.4	1.4	1.3	1.6	1.9	2.1	2.0	2.3	2.2	2.4	2.2	2.3	2.4	3.8
4-Feb	2.1	1.9	1.5	1.3	1.2	1.1	1.2	1.2	1.1	1.1	1.4	1.4	1.3	1.3	1.6	1.6	1.3	1.6	1.4	1.3	1.4	1.4	1.4	1.4	1.4	2.1
5-Feb	1.4	1.3	1.5	1.5	1.2	1.1	1.0	1.0	1.1	1.2	1.0	0.9	M	1.4	1.7	2.0	2.5	2.7	2.7	2.7	2.7	2.6	2.6	2.7	1.8	2.7
6-Feb	2.6	2.6	2.5	2.4	1.9	1.7	1.6	1.6	1.7	1.9	2.2	1.6	1.6	1.8	2.3	4.4	5.4	7.7	8.5	8.9	7.8	6.2	6.1	7.8	3.9	8.9
7-Feb	6.5	6.1	6.2	4.4	3.6	3.4	3.0	2.9	3.0	2.8	2.6	2.4	2.2	1.9	1.8	1.8	1.8	2.4	2.4	2.2	1.9	1.4	1.2	1.0	2.9	6.5
8-Feb	0.9	1.0	0.9	0.9	0.9	0.9	1.0	0.9	0.9	1.3	2.0	2.6	2.7	2.6	5.6	10.3	4.8	3.7	3.5	3.7	3.8	7.3	12.7	4.9	3.3	12.7
9-Feb	3.9	3.9	4.2	4.8	5.4	5.3	4.5	5.3	6.7	6.3	7.4	5.8	5.5	5.9	5.6	5.1	5.0	5.1	5.4	5.3	4.8	4.5	4.1	3.8	5.1	7.4
10-Feb	3.5	3.3	3.4	3.5	3.0	2.9	2.7	2.8	2.5	2.4	2.2	2.1	1.6	1.3	1.2	1.1	1.4	1.5	1.6	1.7	1.7	1.9	2.0	2.4	2.2	3.5
11-Feb	2.3	2.3	2.5	2.5	2.2	2.4	2.4	2.1	1.9	1.8	2.3	2.5	2.7	2.8	3.5	4.9	5.2	5.1	4.5	4.1	3.7	3.4	3.2	3.2	3.1	5.2
12-Feb	3.0	2.9	2.7	2.6	2.7	2.9	3.3	3.6	3.4	3.3	3.2	3.1	3.2	3.4	3.0	2.8	2.9	2.8	2.7	2.6	2.6	2.9	3.1	3.1	3.0	3.6
13-Feb	3.1	3.1	3.2	3.1	3.2	3.2	3.2	2.9	2.7	2.9	3.1	3.1	2.8	2.6	2.4	1.7	1.7	2.1	2.1	1.8	1.9	2.2	2.1	2.2	2.6	3.2
14-Feb	2.4	2.6	2.6	2.7	2.5	2.1	2.0	2.6	2.1	2.3	2.4	3.0	2.9	3.0	3.2	3.1	3.1	3.5	3.8	3.6	3.2	3.1	2.9	2.5	2.8	3.8
15-Feb	1.9	1.6	1.7	3.0	3.0	2.7	2.4	2.5	2.4	2.1	2.0	2.0	1.8	1.5	1.6	1.8	1.9	1.9	1.9	1.8	1.7	1.6	1.7	1.6	2.0	3.0
16-Feb	1.7	2.1	2.4	2.8	2.6	2.5	2.3	2.2	2.1	2.4	3.0	2.8	2.8	2.7	2.4	2.7	2.5	2.3	2.2	2.3	2.7	3.1	2.9	2.9	2.5	3.1
17-Feb	2.8	4.8	4.9	4.7	3.8	3.4	2.8	2.9	3.1	3.2	3.4	3.7	3.4	2.9	2.5	2.0	1.7	1.6	1.7	1.8	1.8	4.0	5.4	3.7	3.2	5.4
18-Feb	4.0	4.2	3.6	4.0	4.0	4.0	4.2	3.1	3.2	3.3	3.2	3.0	2.6	2.2	2.1	1.9	1.2	1.1	1.2	3.3	2.0	2.1	2.4	2.6	2.9	4.2
19-Feb	2.8	2.8	2.7	2.6	2.6	2.8	3.0	3.4	3.4	3.9	4.3	4.2	4.1	3.9	3.1	2.3	2.7	1.9	2.0	2.4	6.9	4.1	2.7	4.2	3.3	6.9
20-Feb	3.1	3.5	4.3	4.9	5.0	5.0	5.0	5.2	5.2	5.5	6.3	6.1	5.9	5.4	5.0	4.9	4.4	4.3	4.0	3.4	2.9	2.7	2.7	2.8	4.5	6.3
21-Feb	2.9	2.7	2.8	2.7	2.6	2.7	2.8	2.8	2.8	2.9	3.0	3.1	3.1	3.7	4.6	4.2	4.3	4.7	6.0	6.3	6.4	6.7	7.1	7.2	4.1	7.2
22-Feb	7.2	6.5	6.0	5.6	5.2	5.2	5.3	5.7	5.9	5.9	6.1	6.0	5.5	5.0	4.1	4.3	6.4	6.0	3.7	3.0	3.6	3.8	4.2	4.0	5.2	7.2
23-Feb	3.9	3.6	3.2	3.2	2.2	2.9	1.5	0.8	0.6	0.5	0.5	0.4	0.2	3.5	5.1	3.7	3.1	3.3	3.9	4.3	4.3	4.4	5.0	4.5	2.8	5.1
24-Feb	3.4	2.7	2.4	2.4	2.8	3.2	3.4	4.0	3.9	4.1	4.3	4.9	5.2	5.4	5.0	5.0	6.0	6.3	6.0	5.6	5.5	5.2	4.8	4.5	4.4	6.3
25-Feb	4.3	4.7	6.6	8.3	8.8	8.9	9.8	9.7	9.0	9.7	9.5	10.7	10.3	8.5	6.8	6.9	6.3	6.0	5.9	6.0	6.0	7.5	7.9	5.6	7.6	10.7
26-Feb	3.3	3.2	3.5	3.8	3.7	3.9	4.2	3.1	2.6	1.8	1.5	C	C	0.9	2.3	3.9	4.5	4.6	5.8	6.3	6.8	6.8	6.7	6.9	4.1	6.9
27-Feb	6.7	6.0	5.6	3.9	3.8	3.8	4.7	5.0	2.9	1.3	1.3	1.3	1.4	1.6	2.7	2.0	1.4	1.4	2.8	3.4	3.0	2.8	3.2	3.2	3.1	6.7
28-Feb	3.1	3.5	3.5	3.5	3.5	3.8	3.9	4.4	4.5	4.6	4.5	4.3	3.8	5.8	4.4	4.0	3.8	3.1	3.0	2.8	2.7	2.6	2.6	2.6	3.7	5.8
	3.3	3.3	3.3	3.4	3.3	3.3	3.2	3.2	3.1	3.2	3.3	3.3	3.2	3.1	3.3	3.5	3.4	3.5	3.6	3.6	3.7	3.8	4.0	3.6	Diurnal Average	
	7.2	6.5	6.6	8.3	8.8	8.9	9.8	9.7	9.0	9.7	9.5	10.7	10.3	8.5	6.8	10.3	6.4	7.7	8.5	8.9	7.8	7.5	12.7	7.8	Diurnal Maximum	

C - Calibration M - Maintenance

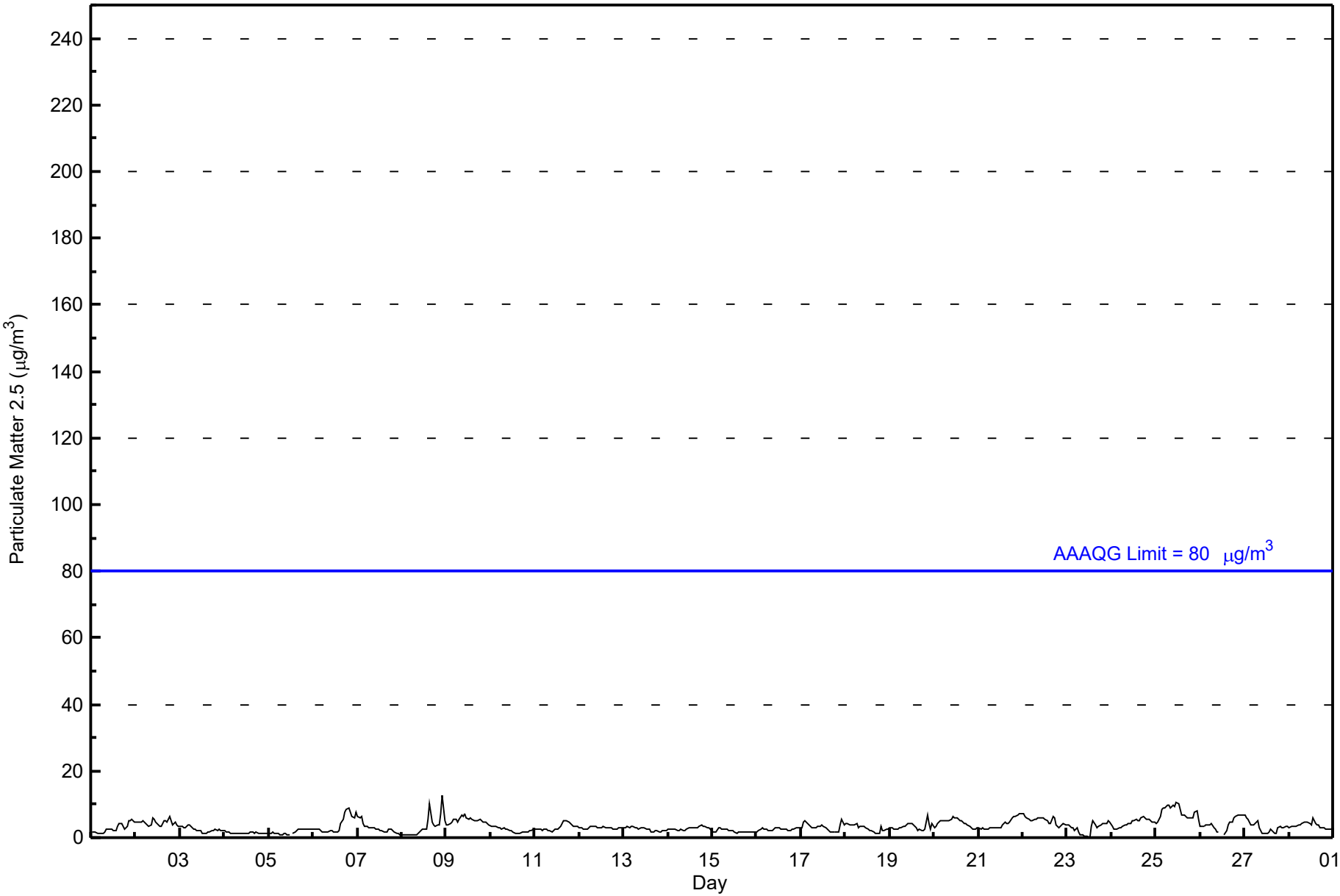
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Surmont 2 - February 2025



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

Surmont 2 - February 2025

Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	587	87.74	87.74
6 - 15	82	12.26	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: 669

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

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

Surmont 2 - February 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	21	18	14	11	9	25	101	15	10	16	37	55	89	53	44	58	576
6 - 15	4	4	6	1	2	9	16	4	2	2	3	2	4	3	7	13	82
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	22	20	12	11	34	117	19	12	18	40	57	93	56	51	71	658

Total Number of Valid Hours: 658

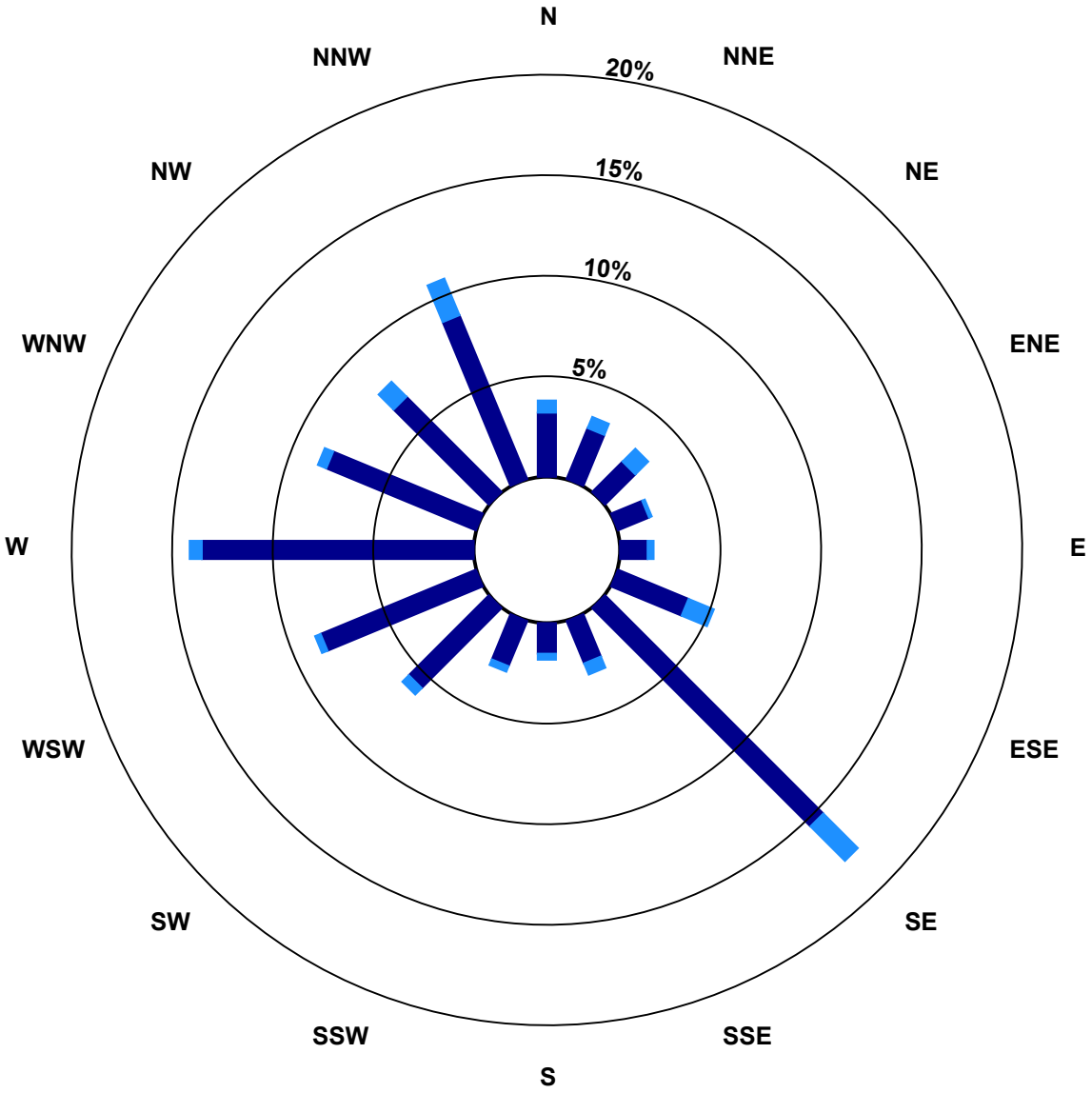
Total Number of Hours: 672

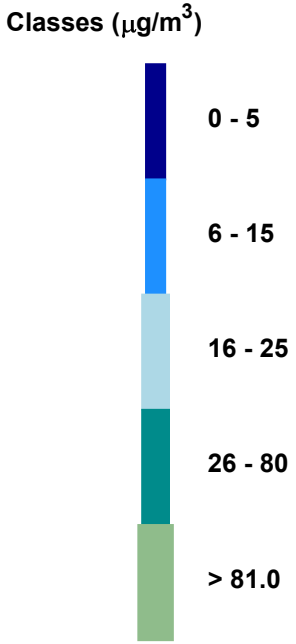
Wood Buffalo Environmental Association

Wind Rose Feb 2025

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

Surmont 2





Total Number of Valid Hours: 658

Maximum Value: 7.5 C on Feb 27 12:00
Maximum Daily Average: 0.6 C on Feb 27

Minimum Value: -38.3 C on Feb 14 08:00
Minimum Daily Average: -30.7 C on Feb 14
Maximum Diurnal Average: -11.9 C at hour 15
Minimum Diurnal Average: -19.9 C at hour 7
Monthly Average: -16.87 C
Percentiles: P_1 = -35.6 P_{10} = -28.5 Q_1 = -25.0 Median = -19.7 Q_3 = -6.9 P_{90} = -1.1 P_{99} = 6.0

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

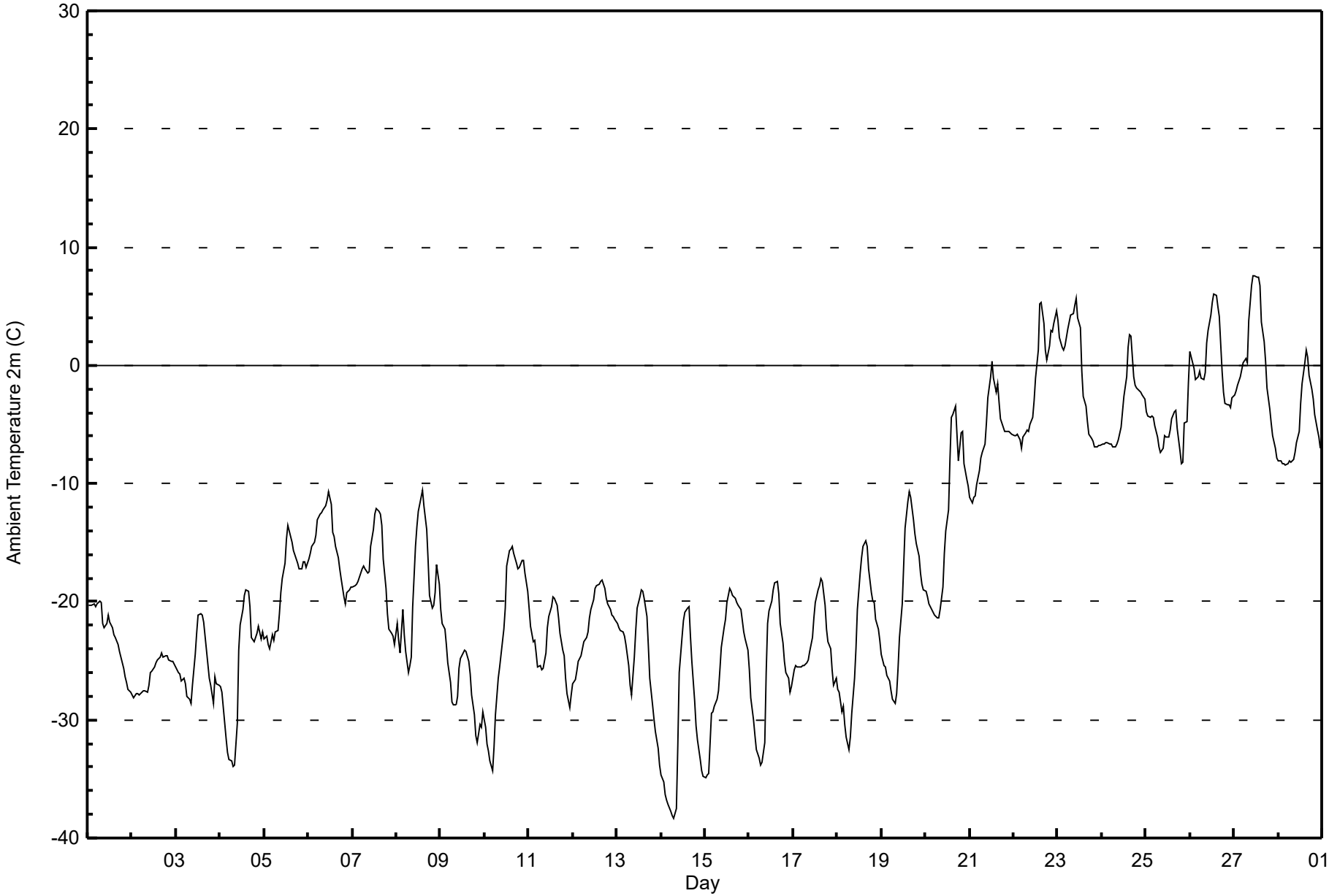
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-20.4	-20.3	-20.4	-20.2	-20.4	-20.2	-20.0	-20.0	-21.8	-22.2	-21.9	-21.2	-21.7	-22.2	-22.8	-23.1	-23.7	-24.2	-24.7	-25.6	-26.3	-26.9	-27.4	-27.7	-22.7	-20.0
2-Feb	-27.9	-28.1	-27.8	-27.8	-27.9	-27.7	-27.5	-27.5	-27.7	-27.1	-26.0	-25.8	-25.6	-25.1	-24.9	-24.8	-24.3	-24.7	-24.5	-24.6	-24.9	-25.1	-25.0	-25.3	-26.1	-24.3
3-Feb	-25.8	-26.0	-26.2	-26.7	-26.4	-27.0	-28.0	-28.2	-28.7	-27.1	-24.4	-22.6	-21.1	-21.0	-21.1	-21.8	-22.9	-25.3	-26.5	-27.1	-28.6	-26.4	-26.9	-27.1	-25.5	-21.0
4-Feb	-27.2	-27.6	-30.2	-31.6	-32.8	-33.4	-33.4	-34.0	-33.8	-30.3	-24.1	-21.9	-20.7	-19.5	-19.0	-19.1	-20.5	-23.0	-23.4	-23.0	-22.7	-22.1	-23.2	-22.6	-25.8	-19.0
5-Feb	-23.1	-22.9	-23.6	-24.0	-22.8	-23.3	-22.5	-22.5	-21.0	-19.2	-18.1	-16.7	-14.8	-13.6	-14.5	-15.0	-15.7	-16.4	-16.7	-17.2	-17.2	-16.7	-16.6	-17.1	-18.8	-13.6
6-Feb	-16.4	-16.0	-15.3	-15.0	-14.4	-13.1	-12.5	-12.4	-12.3	-11.9	-11.5	-10.7	-11.8	-14.1	-14.5	-15.4	-16.2	-17.3	-18.0	-19.5	-20.2	-19.2	-19.0	-18.8	-15.2	-10.7
7-Feb	-18.8	-18.6	-18.5	-18.3	-17.9	-17.3	-17.0	-17.3	-17.6	-17.5	-15.4	-13.9	-12.6	-12.1	-12.3	-12.6	-13.6	-16.4	-18.9	-21.0	-22.3	-22.7	-23.0	-23.6	-17.5	-12.1
8-Feb	-21.8	-23.2	-24.3	-20.7	-22.8	-24.3	-26.0	-25.5	-24.7	-20.5	-15.3	-13.7	-12.3	-11.2	-10.6	-11.8	-13.9	-16.6	-19.5	-20.5	-20.3	-19.3	-16.9	-18.5	-18.9	-10.6
9-Feb	-20.7	-21.9	-22.3	-23.7	-25.2	-26.8	-28.5	-28.7	-28.8	-28.0	-25.7	-24.8	-24.3	-24.1	-24.2	-25.1	-26.2	-27.9	-29.6	-31.3	-31.9	-30.4	-30.6	-29.4	-26.7	-20.7
10-Feb	-30.6	-32.1	-32.7	-33.5	-34.3	-32.3	-29.6	-26.5	-25.6	-24.4	-22.3	-20.6	-17.0	-15.7	-15.5	-15.3	-15.9	-16.8	-17.3	-17.1	-16.6	-16.5	-17.5	-19.1	-22.7	-15.3
11-Feb	-20.6	-22.0	-23.4	-23.3	-24.3	-25.5	-25.4	-25.8	-25.7	-24.3	-22.2	-21.2	-20.4	-19.6	-19.7	-20.3	-21.3	-22.6	-24.2	-24.6	-26.4	-27.7	-29.0	-27.9	-23.6	-19.6
12-Feb	-26.9	-26.6	-25.9	-25.0	-24.6	-24.0	-23.3	-23.1	-22.6	-21.3	-20.7	-19.8	-18.9	-18.7	-18.5	-18.3	-18.2	-18.8	-19.7	-20.2	-20.7	-21.1	-21.3	-21.5	-21.6	-18.2
13-Feb	-21.9	-22.3	-22.5	-22.6	-22.9	-23.6	-25.4	-27.1	-27.9	-24.7	-22.4	-20.6	-19.6	-19.0	-19.1	-19.7	-21.3	-23.7	-26.4	-28.7	-30.0	-31.0	-32.4	-33.9	-24.5	-19.0
14-Feb	-34.6	-35.3	-36.3	-36.8	-37.2	-37.8	-38.2	-38.3	-37.5	-32.1	-26.0	-23.1	-21.6	-20.9	-20.5	-20.4	-23.0	-25.1	-28.4	-30.5	-31.8	-33.3	-34.3	-34.8	-30.7	-20.4
15-Feb	-34.9	-34.6	-34.5	-29.4	-29.3	-28.9	-28.2	-27.6	-25.7	-23.8	-22.2	-21.4	-20.0	-18.9	-19.1	-19.5	-19.7	-20.1	-20.4	-20.7	-21.7	-22.5	-23.1	-24.1	-24.6	-18.9
16-Feb	-25.8	-28.1	-30.0	-31.3	-32.5	-33.2	-33.8	-33.6	-31.9	-26.0	-21.9	-20.8	-20.0	-19.0	-18.4	-18.3	-19.3	-21.8	-23.6	-25.1	-26.0	-26.5	-27.7	-27.2	-25.9	-18.3
17-Feb	-25.7	-25.4	-25.5	-25.5	-25.5	-25.4	-25.4	-25.2	-24.9	-24.2	-23.0	-21.3	-20.1	-19.0	-18.6	-18.0	-18.3	-20.3	-22.3	-23.3	-24.0	-25.8	-27.1	-26.4	-23.3	-18.0
18-Feb	-27.4	-27.7	-29.3	-28.8	-30.4	-31.4	-32.5	-31.4	-29.4	-26.5	-24.0	-20.6	-17.6	-16.2	-15.4	-14.8	-15.4	-17.2	-19.3	-20.0	-20.1	-21.5	-22.3	-23.3	-23.4	-14.8
19-Feb	-24.5	-25.4	-25.5	-26.2	-26.8	-27.6	-28.3	-28.6	-27.8	-25.6	-23.0	-20.1	-17.0	-13.8	-11.5	-10.7	-11.2	-13.1	-14.3	-15.0	-16.1	-17.6	-18.6	-19.0	-20.3	-10.7
20-Feb	-19.2	-19.6	-20.2	-20.6	-20.9	-21.1	-21.3	-21.4	-20.6	-18.8	-15.9	-14.0	-12.3	-8.0	-4.4	-4.2	-3.4	-5.8	-8.1	-5.7	-5.6	-8.3	-9.6	-10.2	-13.3	-3.4
21-Feb	-11.2	-11.7	-11.2	-11.1	-10.1	-8.9	-7.8	-7.4	-6.7	-4.9	-2.8	-0.9	0.3	-1.1	-2.3	-1.6	-3.1	-4.5	-5.3	-5.6	-5.6	-5.6	-5.7	-5.9	-5.9	0.3
22-Feb	-6.0	-6.0	-5.8	-6.3	-7.0	-6.1	-5.7	-5.5	-5.5	-5.0	-4.4	-3.0	-1.1	1.3	5.1	5.3	3.5	1.3	0.5	1.6	2.9	2.8	3.6	4.6	-1.5	5.3
23-Feb	3.8	2.3	1.5	1.3	1.7	3.0	3.7	4.2	4.3	5.1	5.7	4.0	3.2	-0.5	-2.6	-3.5	-4.8	-5.8	-6.2	-6.5	-6.9	-6.9	-6.8	-6.8	-0.6	5.7
24-Feb	-6.7	-6.6	-6.5	-6.5	-6.7	-6.7	-6.9	-6.9	-6.6	-6.3	-5.3	-3.9	-2.6	-1.0	1.6	2.6	2.5	-1.0	-1.7	-1.9	-2.1	-2.3	-2.5	-2.8	-3.6	2.6
25-Feb	-3.9	-4.3	-4.4	-4.3	-4.3	-5.1	-6.1	-6.8	-7.3	-7.0	-6.0	-6.0	-6.1	-5.4	-4.5	-3.9	-3.8	-5.3	-7.3	-8.4	-8.2	-4.9	-4.7	-1.4	-5.4	-1.4
26-Feb	1.2	0.3	-0.3	-1.2	-0.9	-0.5	-1.1	-1.2	-0.6	1.9	3.0	4.2	5.3	6.1	6.0	5.0	4.2	-0.5	-2.3	-3.3	-3.4	-3.3	-3.5	-2.7	0.5	6.1
27-Feb	-2.5	-2.2	-1.7	-0.9	-0.4	0.2	0.5	0.3	3.7	6.8	7.5	7.5	7.4	7.5	6.7	3.6	2.0	0.4	-1.9	-3.7	-4.8	-6.0	-7.0	-7.8	0.6	7.5
28-Feb	-8.1	-8.1	-8.3	-8.3	-8.5	-8.4	-8.1	-8.2	-8.0	-7.3	-6.6	-5.6	-3.3	-1.5	0.2	1.3	0.7	-0.8	-2.0	-2.8	-4.2	-5.5	-6.0	-7.0	-5.2	1.3
	-18.8	-19.3	-19.7	-19.6	-19.8	-19.9	-19.9	-19.9	-19.4	-17.6	-15.5	-14.2	-13.1	-12.4	-11.9	-12.1	-13.0	-14.8	-16.1	-16.8	-17.3	-17.6	-18.0	-18.1	Diurnal Average	
	3.8	2.3	1.5	1.3	1.7	3.0	3.7	4.2	4.3	6.8	7.5	7.5	7.4	7.5	6.7	5.3	4.2	1.3	0.5	1.6	2.9	2.8	3.6	4.6	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Surmont 2 - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	331	49.26	49.26
-20 - 0	287	42.71	91.96
0 - 10	54	8.04	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Surmont 2 - February 2025

Maximum Value: 99.4 % on Feb 23 04:00

Maximum Daily Average: 92.8 % on Feb 25

Minimum Value: 30.7 % on Feb 19 17:00

Minimum Daily Average: 48.9 % on Feb 19

Maximum Diurnal Average: 78.8 % at hour 4

Minimum Diurnal Average: 60.5 % at hour 15

Monthly Average: 72.79 %

Percentiles: P_1 = 37.5 P_{10} = 56.0 Q_1 = 66.7 Median = 73.7 Q_3 = 79.7 P_{90} = 89.3 P_{99} = 95.5

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

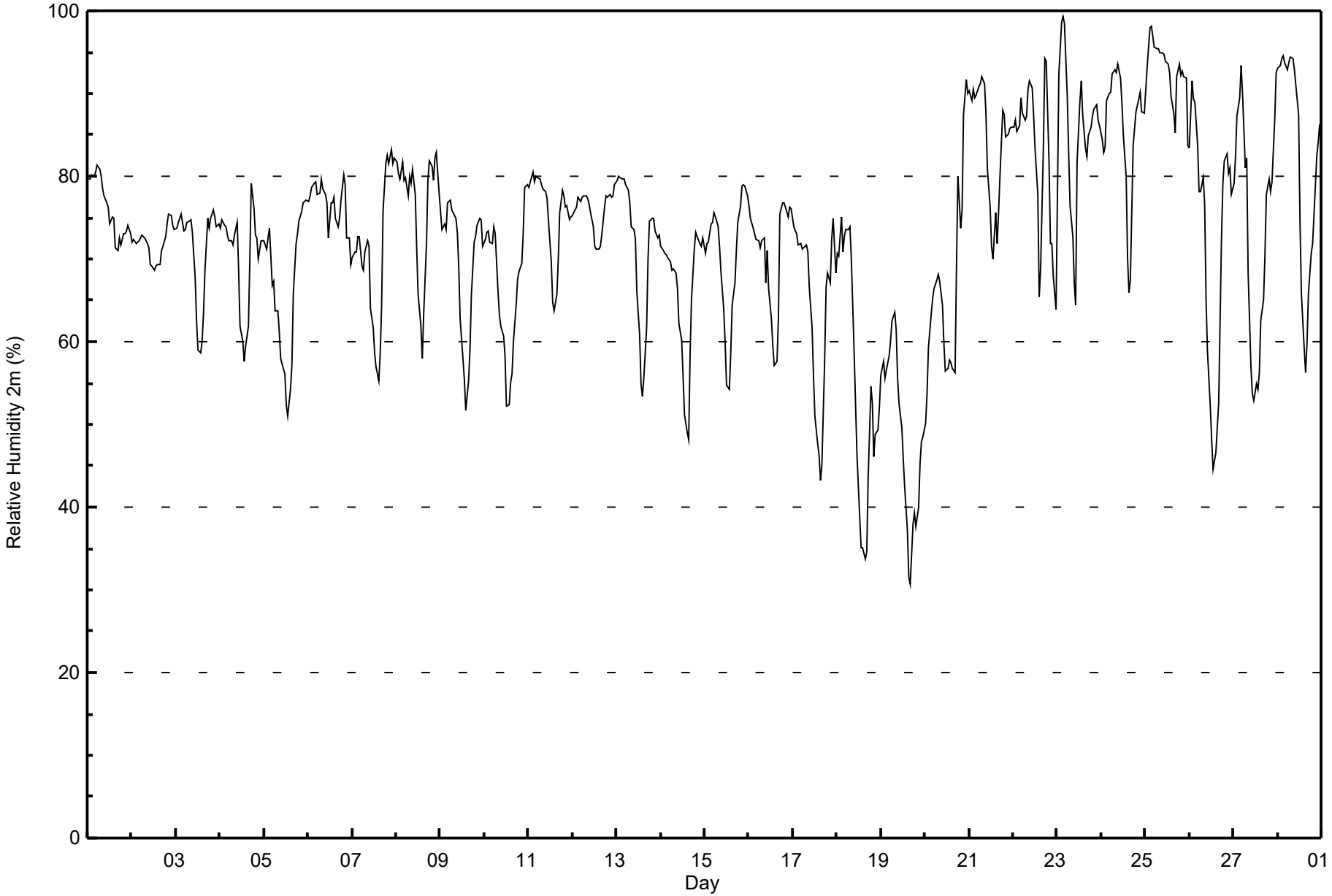
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	79.7	79.7	80.1	80.0	80.5	81.4	80.9	80.1	78.5	77.7	76.8	76.3	74.2	75.0	74.9	71.4	71.0	72.5	71.7	73.0	73.0	73.3	74.1	73.0	76.2	81.4
2-Feb	72.0	72.4	71.8	72.0	72.2	72.8	72.8	72.5	71.9	71.3	69.3	69.1	68.6	69.1	69.3	69.3	71.0	71.5	72.7	74.3	75.4	75.3	74.1	73.6	71.9	75.4
3-Feb	73.7	74.4	74.9	75.4	73.3	73.5	74.5	74.6	74.7	73.3	67.7	62.5	59.0	58.7	60.1	63.5	68.6	74.9	73.8	74.9	75.9	75.0	73.9	74.3	71.1	75.9
4-Feb	73.7	74.7	74.1	73.8	72.9	72.2	72.2	71.7	72.9	74.3	68.7	61.8	60.1	57.6	59.5	61.9	69.9	79.1	76.1	72.9	72.6	70.0	72.3	72.2	70.3	79.1
5-Feb	72.2	71.2	72.5	73.7	66.7	67.2	63.8	63.8	61.2	57.9	57.3	56.1	52.4	51.1	54.2	57.1	65.7	71.8	73.0	74.5	75.7	76.7	76.9	77.0	66.2	77.0
6-Feb	77.0	77.6	78.7	79.1	79.4	77.8	78.0	79.7	78.6	77.8	76.7	72.5	76.8	76.7	77.5	74.9	73.9	74.9	77.1	80.1	79.0	72.5	72.6	69.4	76.6	80.1
7-Feb	70.2	70.9	70.8	72.7	72.7	69.1	68.7	70.8	72.3	71.5	64.1	61.7	58.6	56.9	55.3	58.7	64.5	75.7	81.5	82.6	81.5	83.1	81.5	82.3	70.7	83.1
8-Feb	81.7	80.3	79.7	81.6	79.5	79.9	77.7	80.0	79.2	80.8	77.8	71.4	65.8	61.9	57.9	63.4	71.9	79.6	81.9	81.3	79.4	82.2	83.0	77.9	76.5	83.0
9-Feb	75.7	73.5	74.2	73.6	76.8	77.0	75.9	75.5	75.0	73.1	68.9	62.7	57.9	55.4	51.6	55.3	58.9	65.6	72.1	72.7	74.1	75.0	74.7	71.5	69.5	77.0
10-Feb	72.3	73.2	73.5	72.0	71.8	73.8	73.0	66.1	63.3	61.8	60.8	58.3	52.2	52.3	55.0	56.1	59.9	64.5	67.6	68.4	69.5	73.2	78.7	79.1	66.5	79.1
11-Feb	78.7	79.4	80.6	79.3	80.0	79.9	79.6	78.9	78.5	78.1	77.2	74.5	69.7	64.8	63.7	65.8	70.1	75.6	78.3	77.6	76.3	76.4	74.7	75.1	75.5	80.6
12-Feb	75.2	75.9	76.3	77.5	77.0	77.5	77.7	77.6	77.3	76.6	75.6	73.9	71.5	71.2	71.1	71.5	72.8	76.2	77.7	77.5	77.7	77.5	77.6	78.9	75.8	78.9
13-Feb	79.5	80.0	79.8	79.6	79.7	79.1	78.3	76.8	73.9	73.5	72.4	66.0	60.9	54.8	53.4	55.6	61.8	70.0	74.6	75.0	74.9	73.4	72.5	72.8	71.6	80.0
14-Feb	71.5	71.0	70.7	70.4	70.1	69.7	68.6	68.8	68.3	66.4	62.3	60.2	55.8	51.2	49.0	48.1	58.5	65.1	71.3	73.3	72.7	71.9	71.5	72.5	65.8	73.3
15-Feb	70.6	71.8	72.0	74.2	74.4	75.6	74.5	74.0	71.5	68.4	63.9	59.8	54.7	54.2	58.6	64.5	67.2	71.1	74.4	76.4	78.7	78.9	78.7	77.7	70.2	78.9
16-Feb	76.4	75.0	73.7	73.1	72.3	72.2	71.3	72.1	72.6	67.1	71.0	66.5	62.7	59.6	57.1	57.7	62.9	75.3	76.7	76.8	76.3	75.1	76.2	76.0	70.7	76.8
17-Feb	73.8	73.3	73.1	71.7	71.8	71.2	71.4	71.8	70.9	66.6	61.6	55.9	50.9	47.6	46.3	43.2	45.1	58.0	66.6	68.4	67.1	72.4	74.9	68.4	64.3	74.9
18-Feb	70.6	70.3	75.0	70.8	72.7	73.6	73.5	73.9	70.0	58.6	52.6	46.4	38.7	35.2	35.1	33.8	34.5	43.6	54.5	52.5	46.1	48.8	49.3	52.0	55.5	75.0
19-Feb	55.9	57.7	55.5	56.5	58.3	60.2	62.5	63.5	61.4	55.6	52.6	49.6	45.9	42.5	37.1	31.6	30.7	37.9	39.3	37.7	39.9	45.3	48.0	48.4	48.9	63.5
20-Feb	50.1	53.7	59.3	63.3	65.3	66.4	67.4	68.1	67.3	64.4	59.9	56.4	56.7	57.7	57.4	56.8	56.3	69.1	80.1	73.8	75.9	87.5	91.7	90.0	66.4	91.7
21-Feb	90.4	89.2	90.6	89.6	89.9	90.9	91.1	92.0	91.2	87.7	81.0	76.3	71.6	70.1	75.7	71.8	75.6	80.0	88.0	87.5	84.8	85.1	85.8	85.9	84.2	92.0
22-Feb	86.0	86.8	85.5	86.0	89.5	87.6	86.7	87.4	90.4	91.6	90.7	87.4	83.5	77.8	65.5	68.9	83.7	94.2	93.8	81.6	71.8	71.8	68.0	63.9	82.5	94.2
23-Feb	77.7	92.5	98.6	99.4	98.5	89.6	82.9	76.5	72.8	67.1	64.5	81.7	89.0	91.5	87.5	83.4	82.4	85.0	86.0	87.3	88.2	88.6	86.8	86.1	85.1	99.4
24-Feb	84.4	82.9	83.6	89.2	90.0	90.1	92.3	92.8	92.6	93.5	91.9	88.8	84.8	80.0	70.2	65.9	67.4	83.7	85.8	87.8	89.3	90.2	87.7	87.6	85.5	93.5
25-Feb	90.5	93.3	97.9	98.1	97.0	95.6	95.5	95.4	94.8	95.0	94.8	94.0	93.5	92.6	89.7	87.6	85.2	92.0	93.6	92.3	92.7	92.1	91.8	83.8	92.8	98.1
26-Feb	83.3	91.6	89.3	89.0	83.7	78.2	78.1	79.8	76.6	65.1	58.8	52.1	48.1	44.6	46.7	49.7	52.5	72.5	79.2	81.8	82.6	80.3	81.0	77.7	71.8	91.6
27-Feb	79.1	82.4	87.3	89.5	93.4	90.0	81.1	82.2	68.3	57.0	53.8	52.8	54.9	54.2	56.3	62.6	65.1	70.5	77.8	79.7	78.1	79.3	87.0	92.5	74.0	93.4
28-Feb	93.0	93.4	94.3	94.6	93.7	92.8	93.7	94.5	94.2	92.8	91.0	87.5	74.5	65.8	59.1	56.3	59.8	65.7	70.7	71.9	75.5	82.6	84.1	86.3	82.0	94.6
	76.3	77.4	78.3	78.8	78.7	78.0	77.3	77.2	75.7	73.0	70.1	67.2	64.0	61.8	60.5	60.9	64.5	72.0	75.6	75.5	75.2	76.2	76.8	75.9	Diurnal Average	
	93.0	93.4	98.6	99.4	98.5	95.6	95.5	95.4	94.8	95.0	94.8	94.0	93.5	92.6	89.7	87.6	85.2	94.2	93.8	92.3	92.7	92.1	91.8	92.5	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Surmont 2 - February 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	12	1.79	1.79
40 - 60	98	14.58	16.37
60 - 80	405	60.27	76.64
80 - 100	157	23.36	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Surmont 2 - February 2025

Maximum Speed: 18 km/h on Feb 27 13:00

Maximum Daily Speed Average: 8.7 km/h on Feb 2

Minimum Speed Value: 0 km/h on Feb 8 08:00

Minimum Daily Speed Average: 1.2 km/h on Feb 21

Maximum Diurnal Speed Average: 2.3 km/h at hour 11

Minimum Diurnal Speed Average: 0.8 km/h at hour 21

Monthly Average Velocity: 1.3 km/h 291.3 deg

Percentiles: P_1 = 1 P_{10} = 2 Q_1 = 3 Median = 5 Q_3 = 8 P_{90} = 10 P_{99} = 14

Hours in Service: 672

Hours of Data: 661

Hours of Missing Data: 11

Percent Operational Time: 98.4

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-Feb	E6	E5	ENE4	NE3	NNE3	N3	N3	N4	NW5	NNW5	NNW5	NNW5	NW8	NW8	NW8	NW11	NNW7	NW7	NW7	NW6	NW6	WNW5	NW6	NW8	NNW4.4	NW11
2-Feb	NW8	NW8	NNW9	NNW10	NNW9	NNW9	NNW9	NNW9	NNW10	NNW12	NNW11	NNW11	NNW10	NNW9	NNW8	NW7	NNW6	NNW8	NW8	NNW7	NNW7	NNW8	NNW10	NNW9	NNW8.7	NNW12
3-Feb	NNW8	NNW7	NW6	WNW3	W5	W5	W3	WSW5	W4	WNW4	NW4	WNW6	WNW7	WNW9	WNW7	WNW6	W5	WSW3	WSW5	W5	W4	W6	WNW4	W6	WNW4.9	WNW9
4-Feb	W5	W5	W2	WSW1	SW1	SW1	SW2	SSW2	S1	ESE2	WNW4	W8	W9	W9	WSW9	W7	WSW5	SSW2	SW4	WSW2	WSW3	WSW8	W2	W7	WSW3.8	WSW9
5-Feb	W3	WNW4	WNW3	W4	WNW6	NW1	W7	WSW3	W8	W12	W10	W11	W12	W10	W10	W9	W8	W9	WNW9	WNW8	WNW7	WNW8	WNW7	WNW8	W7.2	W12
6-Feb	WNW8	WNW8	W10	W9	W10	W10	W10	W12	WNW9	WNW9	WNW10	WNW11	NNW11	N10	NNW8	NNW10	NNW10	NNW9	NNW7	NW4	WNW4	WNW4	NNW4	NW5	WNW7.4	W12
7-Feb	WNW3	W5	W6	W6	W6	W5	WNW5	NW6	WNW5	NW4	WNW5	W8	W8	W9	W10	W7	W6	W3	WSW2	WSW2	SW2	SSW2	SSW1	SSW1	W4.6	W10
8-Feb	W2	WSW3	WSW1	WSW6	SW2	SW1	SSW1	NW0	NW2	W3	W6	W7	WSW8	W7	N4	NE5	N2	WSW3	SW3	WSW2	SSW0	NW2	NNW6	NNW11	WNW2.5	NNW11
9-Feb	NNW11	NNW10	NNW9	NNW7	NW4	W3	W3	WNW2	W2	SE0	NNW3	NNE7	N7	NNW8	NNW8	NNW8	NW7	WNW4	W3	WNW2	WNW3	NW3	WNW3	WNW4	NW4.5	NNW11
10-Feb	W3	SW1	SW2	SW2	SSW2	WSW1	W4	NW6	WNW9	W10	W10	W8	WNW8	WSW9	WSW9	W9	W7	W7	W10	W9	NW5	N4	N8	N6	W5.3	W10
11-Feb	N6	NNW5	NW3	NW4	NW5	NW4	NW4	NW4	WNW4	WNW3	NW6	NNW7	NNW8	N8	NNE7	NNE4	NNE3	NNW2	W3	WSW4	SW2	SW2	WSW2	SW1	NW3.4	N8
12-Feb	SSW1	SSW1	SW1	SSW2	S1	SE3	SE2	SE2	SE1	SE3	SE5	SE5	SE6	ESE6	ESE7	ESE6	ESE4	E5	ENE4	ENE4	ENE4	ENE3	NE3	NNE3	ESE2.6	ESE7
13-Feb	N2	NW2	NW3	WNW3	NW3	WNW2	WNW3	W3	W1	NW3	NNW4	N4	NNE5	NNE7	NNE7	NNE7	N5	W3	WSW2	WSW1	WSW2	WSW2	SW2	UO	NNW2.1	NNE7
14-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	NE2	ENE2	NE3	NNE4	NE6	NE4	NE2	W2	WSW3	WSW2	WSW3	SW1	SW2	WSW1	----	NE6
15-Feb	WSW2	SSW1	W2	WSW6	WSW5	W4	WSW3	WSW6	W6	WNW5	WNW8	NW7	NNW7	NNW8	NNW8	N7	N5	NNW5	NW3	NNW2	W1	WSW1	WSW2	WSW2	WNW3.3	NNW8
16-Feb	SW2	SW2	WSW2	SW3	WSW2	SW3	SW2	SW2	SSW1	ESE3	SSE6	SE9	SE9	SE9	SE8	SE7	SE5	SSE1	SE3	S2	SE3	S3	SSW2	SSE2	SSE2.9	SE9
17-Feb	SE5	SE7	SE7	SE7	SE7	SE8	SE7	SE7	SE7	SE8	SE8	SE10	SE10	SE11	SE11	SE10	SE8	SE3	SE2	S3	SE4	SE2	S2	SE5	SE6.6	SE11
18-Feb	SSE4	SE3	SE1	S3	S3	SSW2	SW2	SE3	SSE4	SE7	SE7	SE8	SE9	SE9	SE8	SE8	SSE7	SSE5	SE4	SE5	SE7	SE6	SE7	SE7	SE5.2	SE9
19-Feb	SE7	SE7	SE8	SE8	SE8	SE8	SE8	SE8	SE8	SE9	SE10	SE11	SE11	SE10	SE11	SE11	SE10	SE8	SE9	SE11	SE9	SE7	SE6	SE7	SE8.7	SE11
20-Feb	SSE6	SSE8	SSE9	SSE8	SE7	SE6	SE6	SE6	SE5	SE5	S4	SSE6	SE6	SW4	W10	W10	W10	W4	WSW3	W6	NW4	SE2	SW2	WSW2	S2.8	W10
21-Feb	WSW2	SW2	SW3	WSW2	S1	SW1	SW2	WSW1	SW1	E1	WSW1	ESE1	NNE3	NNE7	NE7	NE6	NE6	NNE5	NNE4	NNW3	E1	NE1	E2	NNE1	NE1.2	NNE7
22-Feb	ENE1	ESE2	ESE3	ESE3	E3	ESE4	ESE5	ESE6	SE7	SE6	SSE7	SE8	SSE6	SE5	SE5	SSE4	S3	SSW3	SW3	SW5	WSW7	WSW6	WSW6	WSW8	SSE3.1	SE8
23-Feb	WSW8	SW3	SSE1	SE3	SE4	SW7	W11	W14	W14	W15	W16	W12	W11	NNW11	NW12	NNW11	NNW12	NNW11	NNW9	N7	N6	N4	NNE4	NNE2	WNW6.0	W16
24-Feb	NE2	SSW1	SSE1	ESE2	ESE4	ESE4	ESE6	ESE5	SE4	SE6	SE7	SE5	ESE7	ESE7	SSE6	SE5	SE3	NW2	WSW2	W1	S0	WSW1	N2	NNW4	SE2.6	ESE7
25-Feb	NW5	NNW5	NW5	NNW4	N5	NNW5	NNW5	NNW5	N4	NE1	NNE2	NE6	NE4	N4	NE2	ESE4	ESE5	SE1	SW2	SW2	ESE1	SE4	ESE2	W7	N1.7	W7
26-Feb	W10	W8	WNW6	WNW5	WNW7	WNW11	NW6	NW4	NW3	WNW8	WNW11	NW9	NW8	WNW9	NNE6	ENE6	ENE3	E1	SW2	SSW1	SE3	SE4	ESE4	SE5	WNW3.4	WNW11
27-Feb	SE4	SE3	SE2	SE1	E2	SE4	ESE7	SE6	WSW6	W11	W11	WNW17	WNW18	NW16	NW15	NNW14	NW12	NNW10	NNW11	NNW10	N9	NNE7	NNE6	NE5	NW5.0	WNW18
28-Feb	NE3	ENE3	NE5	ENE4	E4	ESE5	SE5	ESE6	ESE6	ESE6	ESE8	SE7	SE8	SE8	SE7	SE5	ESE5	E5	ENE3	ESE5	SE2	ESE2	SW1	SW1	ESE4.1	SE8
	WNW1.4	WNW1.2	WNW1.1	WSW1.0	W0.8	WSW1.0	WSW1.2	W1.1	W1.8	W1.8	W2.3	WNW1.9	WNW1.9	NW2.0	NNW1.9	NNW1.4	NNW1.5	NW1.9	WNW2.0	WNW1.6	WNW0.8	W0.9	NW1.1	WNW1.7	Diurnal Average	
	NNW11	NNW10	W10	NNW10	W10	WNW11	W11	W14	W14	W15	W16	WNW17	WNW18	NW16	NW15	NNW14	NW12	NNW11	NNW11	SE11	SE9	WSW8	NNW10	NNW11	Diurnal Maximum	

UO - Unstable Operation

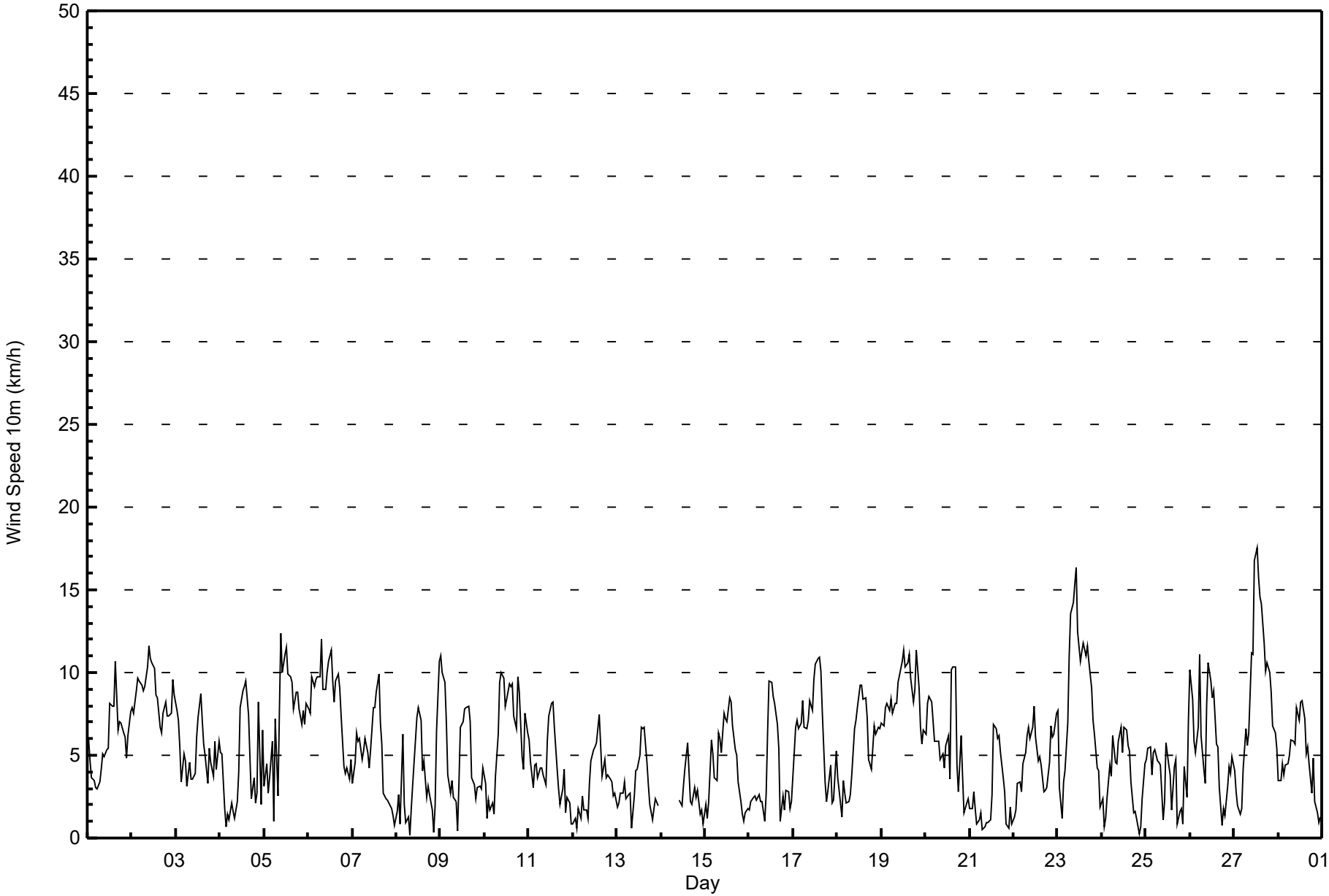
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Surmont 2 - February 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	357	54.01	54.01
6 - 11	287	43.42	97.43
12 - 19	17	2.57	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: 661

Total Number of Hours: 672



Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Surmont 2 - February 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	15	13	15	11	10	22	45	9	12	18	40	42	33	27	28	17	357
6 - 11	10	9	5	1	1	12	72	10	0	0	0	15	53	27	22	50	287
12 - 19	0	0	0	0	0	0	0	0	0	0	0	0	8	2	3	4	17
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	25	22	20	12	11	34	117	19	12	18	40	57	94	56	53	71	661

Total Number of Valid Hours: 661

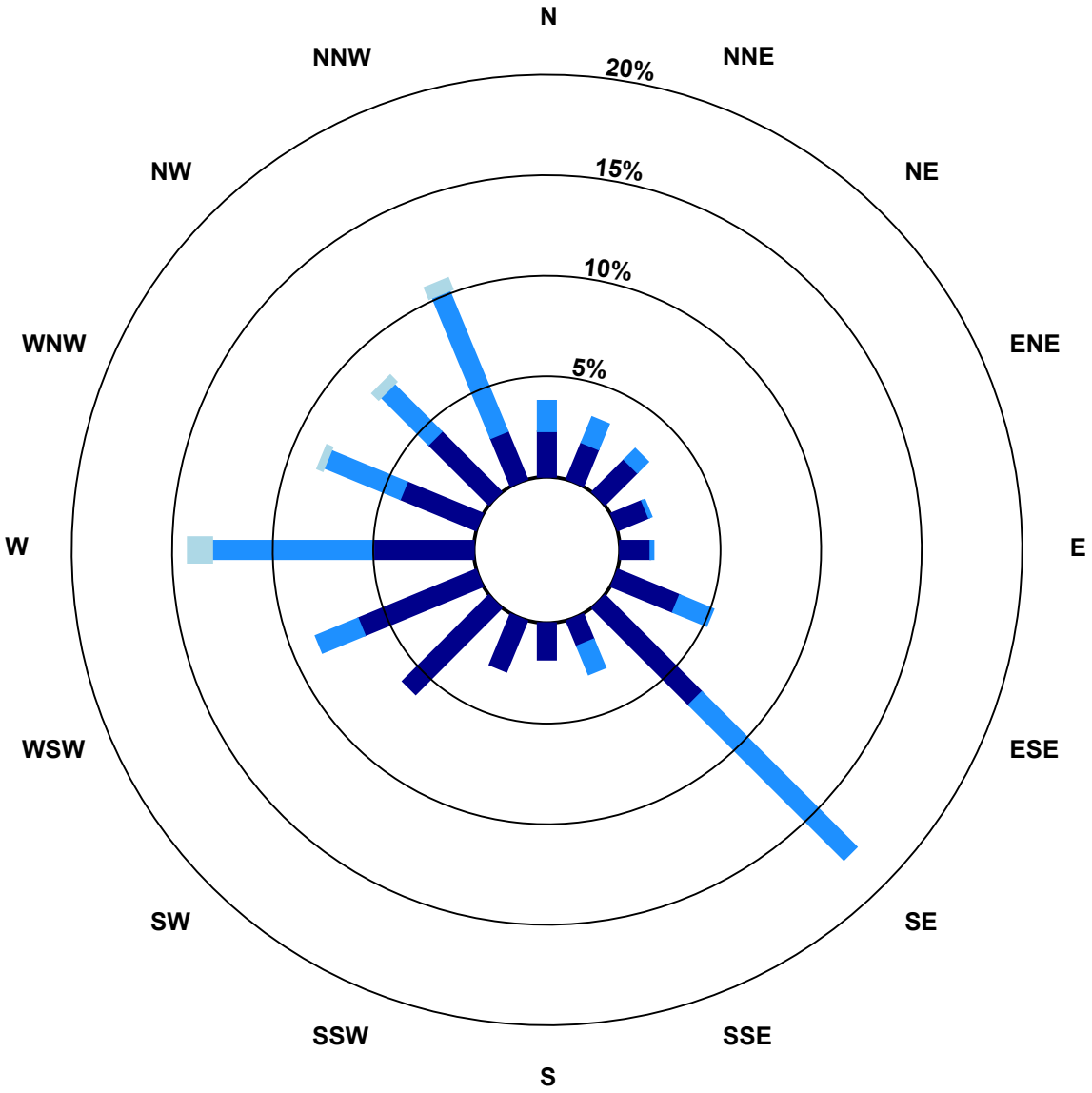
Total Number of Hours: 672

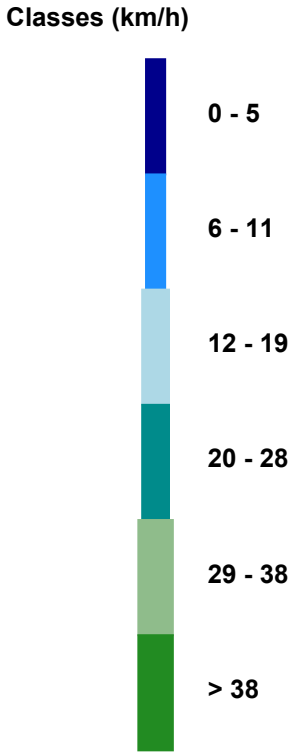
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Wind Speed 10m (WS10) - km/h

Surmont 2





Total Number of Valid Hours: 661

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Surmont 2 - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7 km/h on Feb 27 13:00

Minimum Value: 1 km/h on Feb 25 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:	672
Hours of Data:	661
Hours of Missing Data:	11
Hours of Calibration:	0
Percent Operational Time:	98.4

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

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Surmont 2 - February 2025

Direction of Maximum Speed: 299 deg on Feb 27 13:00
Direction of Maximum Daily Speed Average: 334.5 deg on Feb 2

Direction of Minimum Speed: 307 deg on Feb 8 08:00

Direction of Minimum Daily Speed Average: 1.2 deg on Feb 21

Monthly Average Direction: 291.3 deg

Hours in Service:	672
Hours of Data:	661
Hours of Missing Data:	11
Percent Operational Time:	98.4

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Feb	95	83	78	55	27	3	5	2	316	329	341	330	306	310	316	306	328	313	308	316	304	302	312	318	328.4
2-Feb	324	322	331	337	335	331	340	339	343	342	339	341	327	335	332	326	334	330	325	333	343	331	340	338	334.5
3-Feb	330	328	322	292	273	271	271	256	278	290	305	298	303	289	298	293	264	256	258	271	275	279	288	277	288.8
4-Feb	275	264	280	240	215	225	221	198	171	123	292	272	269	262	257	262	248	201	233	250	241	248	268	261	255.6
5-Feb	269	290	302	259	282	304	267	249	271	273	276	275	277	268	272	265	279	280	282	296	294	288	289	286	277.8
6-Feb	288	286	277	273	277	277	281	278	285	289	287	299	327	353	343	339	340	335	332	322	286	287	328	311	303.0
7-Feb	283	264	268	272	274	280	290	310	296	310	299	259	263	260	274	269	266	270	241	258	222	207	204	202	272.2
8-Feb	261	237	237	243	236	225	211	307	305	280	279	273	256	266	352	42	8	253	235	245	193	307	334	338	285.5
9-Feb	334	337	334	333	312	268	262	295	265	124	340	13	5	347	332	333	326	297	273	285	295	312	297	289	325.4
10-Feb	266	234	229	220	207	252	274	315	284	279	274	278	282	257	256	266	272	279	268	277	310	353	1	0	281.0
11-Feb	349	335	324	323	312	309	314	314	303	302	317	341	339	354	13	21	17	333	264	250	222	235	240	215	326.1
12-Feb	205	209	223	194	181	142	142	135	126	131	128	138	143	123	116	120	108	94	65	71	58	61	37	31	112.8
13-Feb	357	315	313	289	309	298	289	262	259	320	335	354	26	17	18	31	356	276	258	239	246	241	234	UO	332.5
14-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	41	58	40	28	49	52	36	279	242	243	239	232	229	237	--
15-Feb	252	200	270	250	252	270	250	257	266	290	295	316	334	348	345	7	5	342	324	332	260	244	254	249	303.6
16-Feb	224	236	239	231	237	235	234	232	213	119	147	129	132	134	136	136	126	168	144	177	125	184	196	150	154.3
17-Feb	127	127	132	128	127	125	130	132	136	133	139	137	132	132	128	130	131	143	140	176	130	125	181	140	133.0
18-Feb	149	145	140	177	180	202	221	140	161	142	138	135	135	135	146	145	159	147	131	135	138	134	135	129	143.9
19-Feb	129	126	131	133	138	129	131	137	138	140	145	140	139	141	127	135	133	130	131	127	127	139	140	138	134.3
20-Feb	150	165	164	149	132	145	138	135	137	129	178	154	140	226	274	276	280	264	251	279	306	130	235	257	188.4
21-Feb	242	230	232	238	176	217	220	247	235	98	246	106	32	33	44	50	38	30	28	347	80	52	80	17	34.8
22-Feb	71	121	118	113	90	109	117	122	140	144	147	139	150	129	138	150	171	199	219	216	245	245	239	246	160.2
23-Feb	248	221	148	128	146	236	267	268	267	268	274	271	281	336	326	342	337	343	338	350	2	360	24	31	298.4
24-Feb	43	206	164	109	116	115	113	114	138	142	134	128	111	122	163	139	146	316	243	259	188	255	3	334	126.3
25-Feb	321	328	319	346	3	345	342	337	4	49	16	43	51	5	34	118	121	143	232	218	115	130	117	260	1.1
26-Feb	275	280	288	290	294	287	309	326	318	299	295	313	305	290	33	69	60	95	221	196	131	146	122	129	298.6
27-Feb	126	136	141	140	99	127	120	129	252	265	280	288	299	304	319	327	323	328	345	345	354	13	22	39	319.3
28-Feb	42	64	41	68	99	109	126	115	115	111	116	134	136	143	131	145	117	91	76	113	134	112	226	221	114.3
	297.0	282.3	285.4	255.3	263.6	252.3	256.6	266.5	264.7	265.1	276.8	285.4	297.4	312.9	329.4	337.6	329.6	311.0	290.0	289.2	293.9	272.8	316.5	300.9	
	Diurnal Average																								

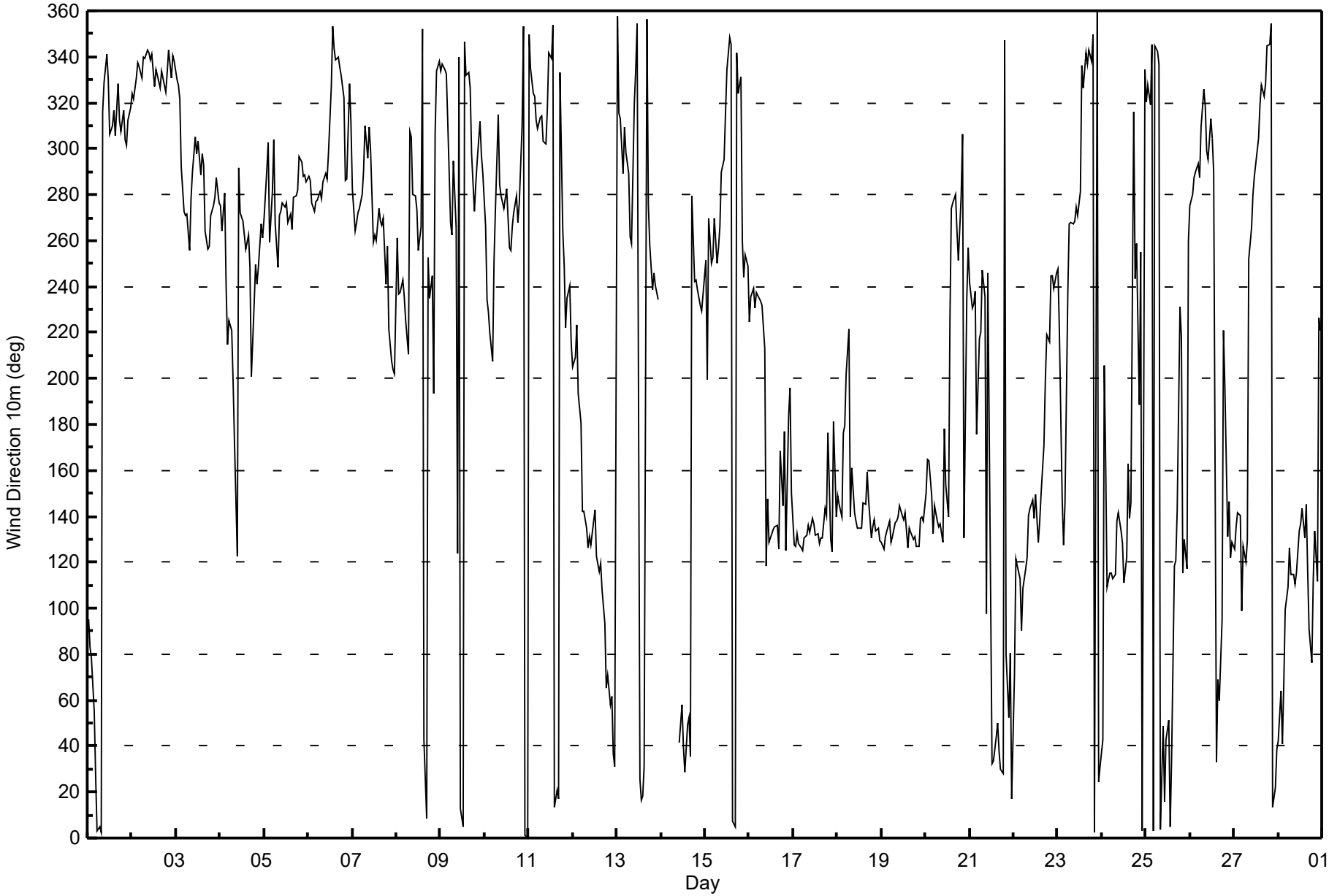
UO - Unstable Operation
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Surmont 2 - February 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Surmont 2 - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 109 deg on Feb 8 08:00

Minimum Value: 11 deg on Feb 8 04:00

Percentiles: P_1 = 19 P_{10} = 26 Q_1 = 32 Median = 39 Q_3 = 47 P_{90} = 66 P_{99} = 97

Hours in Service:	672
Hours of Data:	661
Hours of Missing Data:	11
Hours of Calibration:	0
Percent Operational Time:	98.4

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Feb	26	29	28	32	36	45	37	41	35	37	41	43	36	37	40	37	46	42	33	39	33	38	37	43	46
2-Feb	44	43	45	40	39	41	36	47	37	35	40	39	41	37	44	43	40	45	41	38	36	38	38	39	47
3-Feb	39	39	36	31	24	23	25	19	30	36	54	44	38	29	35	31	23	18	27	35	42	31	42	29	54
4-Feb	27	30	64	79	51	69	28	33	53	75	97	33	32	26	31	28	31	48	55	97	108	31	104	48	108
5-Feb	81	54	57	79	68	107	55	96	47	26	31	29	26	28	36	28	35	28	30	35	38	29	32	26	107
6-Feb	30	32	25	26	25	27	40	26	32	29	31	35	42	38	37	42	39	37	37	43	40	33	42	42	43
7-Feb	29	21	22	25	33	49	49	38	38	60	52	28	27	29	26	28	32	42	32	39	39	39	65	81	81
8-Feb	51	25	91	11	67	59	73	109	76	38	36	32	26	34	64	40	40	36	28	42	86	36	42	40	109
9-Feb	42	40	43	38	40	23	24	62	28	92	54	39	41	42	41	41	42	36	20	26	29	33	29	33	92
10-Feb	33	36	38	39	52	70	60	50	32	32	34	35	31	26	24	28	33	38	27	26	50	51	40	40	70
11-Feb	47	42	48	34	27	33	48	41	44	55	43	39	36	38	41	47	45	46	22	12	47	19	46	68	68
12-Feb	45	59	85	46	60	43	69	52	72	27	33	33	38	30	22	23	21	25	33	31	32	29	32	30	85
13-Feb	54	41	27	23	24	24	23	17	78	52	49	55	52	42	41	41	40	30	29	23	20	37	24	UO	78
14-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	60	91	80	71	43	45	53	45	16	45	25	42	43	90	91
15-Feb	86	26	85	21	23	30	28	20	36	32	32	40	44	37	34	36	39	37	43	43	58	65	29	23	86
16-Feb	38	46	30	49	25	19	25	22	51	42	44	34	31	38	37	39	30	66	52	66	51	54	51	68	68
17-Feb	39	29	34	31	29	25	31	34	35	33	40	42	36	35	32	31	33	51	70	61	39	60	61	41	70
18-Feb	57	48	70	54	49	65	42	43	44	38	36	33	30	38	42	44	47	50	43	41	41	40	42	42	70
19-Feb	34	33	34	39	43	32	33	42	39	38	44	37	35	38	31	35	38	37	33	32	34	44	48	48	48
20-Feb	54	46	46	49	43	49	44	40	45	38	65	41	26	78	30	32	33	50	76	34	78	73	39	59	78
21-Feb	42	38	35	49	63	70	63	83	62	83	71	66	80	34	30	28	32	36	38	47	66	88	60	90	90
22-Feb	81	70	43	49	29	34	33	37	37	38	45	35	51	37	27	35	55	37	44	64	41	58	51	48	81
23-Feb	32	73	67	32	49	64	28	27	27	29	29	33	33	42	42	42	40	37	41	39	41	43	47	52	73
24-Feb	63	90	60	25	20	29	14	27	39	39	32	32	20	32	34	34	44	90	63	76	97	62	54	36	97
25-Feb	41	43	43	41	35	36	35	40	38	87	61	33	41	49	82	40	26	64	43	42	98	54	63	70	98
26-Feb	27	27	32	27	40	29	49	51	73	40	32	39	43	38	46	34	45	83	46	62	35	37	33	35	83
27-Feb	21	46	49	85	67	31	32	26	83	26	33	29	39	41	42	42	44	39	38	34	37	40	39	39	85
28-Feb	46	38	33	35	26	27	27	19	21	20	21	36	38	36	34	52	19	33	32	24	62	33	60	56	62
	86	90	91	85	68	107	73	109	83	92	97	91	80	78	82	52	55	90	76	97	108	88	104	90	
	Diurnal Maximum																								

UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS30
ELLS RIVER
FEBRUARY 2025

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

March 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ELLS RIVER (AMS30)
FEBRUARY 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	640	32	32	100	-	-	33.5	0	7.6	0
TRS (ppb) Average	639	33	33	100	2.5	0	2.2	0	0.8	0
THC (ppm) Average	640	32	32	100	-	-	6.7	-	3	-
NMHC (ppm) Average	640	32	32	100	-	-	0.805	-	0.275	-
CH4 (ppm) Average	640	32	32	100	-	-	5.9	-	2.8	-
NO2 (ppb) Average	639	33	33	100	-	-	45.5	0	21.7	-
NO (ppb) Average	639	33	33	100	-	-	150.6	-	24.3	-
NOX (ppb) Average	639	33	33	100	-	-	193.2	-	45.5	-
PM2.5 (ug/m3) Average	670	2	2	100	-	-	87.6	2	11.1	0
Temperature 2 m (C) Average	672	0	0	100	-	-	1.4	-	-5	-
Relative Humidity (%) Average	672	0	0	100	-	-	94.6	-	86.6	-
Wind Speed 10 m (km/h) Average	657	0	15	97.77	-	-	32	-	23	-
Wind Direction 10 m (deg) Average	657	0	15	97.77	-	-	-	-	-	-
Global Solar Radiation (W/m2) Average	672	0	0	100	-	-	377.5	-	92.6	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ELLS RIVER (AMS30)
FEBRUARY 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	640	1.28	3.8	-	0	0	0	0.2	0.6	2.8	33.5
TRS (ppb) Average	639	0.56	0.2	-	0.4	0.4	0.4	0.5	0.6	0.8	2.2
THC (ppm) Average	640	2.31	0.4	-	2	2	2.1	2.1	2.4	2.8	6.7
NMHC(ppm) Average	640	0.076	0.142	-	0	0	0	0	0.1	0.3	0.805
CH4(ppm) Average	640	2.23	0.3	-	2	2	2.1	2.1	2.3	2.6	5.9
NO2 (ppb) Average	639	11.58	9.8	-	0	0.5	3.4	9.9	17.8	25.9	45.5
NO (ppb) Average	639	5.37	12.3	-	0	0	0.1	0.6	5.1	14.6	150.6
NOX (ppb) Average	639	16.96	19.7	-	0	0.6	3.9	11.8	22.6	39.4	193.2
PM2.5 (ug/m3) Average	670	5.09	5.9	-	0.9	1.8	3	4	5.9	7.9	87.6
Temperature 2 m (C) Average	672	-18.46	8.5	-	-38.9	-29.4	-24.3	-19.5	-11.1	-6.9	1.4
Relative Humidity (%) Average	672	68.95	9.8	-	37	56.7	64.3	68.8	74.8	81.4	94.6
Wind Speed 10 m (km/h) Average	657	9.2	6	-	0	3	5	8	13	16	32
Wind Direction 10 m (deg) Average	657	262.4	-	-	-	-	-	-	-	-	-
Global Solar Radiation (W/m2) Average	672	57.39	96.7	-	0	0	0	0.1	88.6	210.6	377.5

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - ELLS RIVER (AMS30)
FEBRUARY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
Wind Speed, Wind Direction	08 Feb 2025 12:00	08 Feb 2025 12:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	09 Feb 2025 18:00	09 Feb 2025 20:00	3	Flat line in sensor output signal
Wind Speed, Wind Direction	11 Feb 2025 18:00	11 Feb 2025 18:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	11 Feb 2025 22:00	11 Feb 2025 22:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	12 Feb 2025 01:00	12 Feb 2025 01:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	15 Feb 2025 19:00	15 Feb 2025 19:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	16 Feb 2025 01:00	16 Feb 2025 01:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	16 Feb 2025 03:00	16 Feb 2025 03:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	21 Feb 2025 03:00	21 Feb 2025 03:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	21 Feb 2025 07:00	21 Feb 2025 07:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	22 Feb 2025 08:00	22 Feb 2025 08:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	22 Feb 2025 10:00	22 Feb 2025 10:00	1	Flat line in sensor output signal
Wind Speed, Wind Direction	28 Feb 2025 09:00	28 Feb 2025 09:00	1	Flat line in sensor output signal

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Ells River - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 33.5 ppb on Feb 18 18:00 Maximum Daily Average: 7.6 ppb on Feb 19

Minimum Value: 0.0 ppb on Feb 1 01:00 Minimum Daily Average: 0.0 ppb on Feb 5
Maximum Diurnal Average: 3.2 ppb at hour 13 Minimum Diurnal Average: 0.3 ppb at hour 8
Monthly Average: 1.28 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.2 Q_3 = 0.6 P_{90} = 2.8 P_{99} = 20.7

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1
2-Feb	0.1	0.0	Z	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.5	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6
3-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	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	0.0	0.1
4-Feb	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.4	1.0	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.0
5-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6-Feb	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.7
7-Feb	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	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
8-Feb	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	0.1	0.0	0.1	0.1	0.3	0.0	0.0	0.0	1.7	1.4	0.2	1.7
9-Feb	0.0	0.1	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	4.3	8.2	10.6	3.5	0.8	0.3	0.2	0.2	0.1	0.2	0.1	1.3	10.6
10-Feb	0.1	0.1	0.1	0.1	Z	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	3.1	2.8	1.8	1.2	0.9	0.6	0.4	0.6	3.1
11-Feb	0.3	0.3	0.3	0.3	0.3	Z	0.3	0.2	0.3	0.3	0.3	0.3	0.3	1.1	1.1	0.8	0.6	0.4	0.3	0.2	0.2	0.2	0.3	0.2	0.4	1.1
12-Feb	Z	0.3	0.3	0.2	0.2	0.3	0.5	0.7	0.5	0.6	0.8	2.0	2.6	1.8	2.7	2.8	1.7	2.5	3.0	2.7	2.1	1.1	0.6	0.4	1.3	3.0
13-Feb	0.5	Z	0.3	0.3	0.3	0.2	0.1	0.3	0.3	0.5	0.5	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.5
14-Feb	0.2	0.2	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.2	0.3	0.4	0.7	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.7
15-Feb	0.1	0.1	0.1	Z	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.2	0.1	0.1	0.3	0.6	0.3	0.2	0.1	0.0	0.1	0.1	0.1	0.6
16-Feb	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.1	0.1	0.1	14.5	25.8	25.3	20.3	28.6	30.7	8.2	4.9	1.9	1.0	0.6	0.4	1.1	3.2	7.3	30.7
17-Feb	4.1	12.5	20.4	13.1	7.9	Z	1.0	1.1	5.8	4.7	7.4	12.5	8.6	8.0	8.5	3.3	2.5	0.8	0.6	0.4	0.2	0.2	0.1	0.3	5.4	20.4
18-Feb	Z	0.2	0.4	1.9	0.5	0.3	0.2	0.1	0.2	0.3	0.4	0.4	0.4	14.8	3.3	1.6	13.9	33.5	9.8	4.0	1.8	2.9	1.0	3.2	4.1	33.5
19-Feb	5.6	Z	5.2	4.7	3.3	8.3	5.8	1.8	1.1	4.9	5.7	12.0	28.8	12.4	17.7	7.9	2.2	1.3	1.8	3.6	7.3	1.7	10.5	20.9	7.6	28.8
20-Feb	11.1	1.8	Z	0.8	0.6	0.5	0.5	0.5	0.6	0.9	0.7	0.6	0.6	0.7	0.7	0.8	0.8	0.9	0.8	0.9	0.5	0.4	0.5	0.5	1.2	11.1
21-Feb	0.5	0.4	0.4	Z	0.6	0.6	0.5	0.4	0.4	1.2	1.0	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.4	1.2
22-Feb	0.2	0.4	0.6	0.4	Z	0.3	0.5	0.7	0.7	0.7	0.7	2.6	7.3	4.0	1.2	1.2	0.9	0.7	0.5	0.4	0.3	0.1	0.2	0.2	1.1	7.3
23-Feb	0.2	0.2	0.3	0.2	0.2	Z	0.1	0.1	0.1	0.3	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
24-Feb	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.4	0.5	0.5	0.4	0.1	0.1	0.1	0.0	0.0	0.5	1.2	1.2	0.4	0.2	1.2
25-Feb	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.1	0.5	1.0	0.2	0.2	0.1	0.1	0.3	0.4	0.3	0.2	1.0
26-Feb	0.5	0.8	Z	0.6	0.3	0.6	0.8	0.6	0.2	0.2	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.3	0.8
27-Feb	0.1	0.1	0.1	Z	0.6	0.5	0.9	1.0	1.0	0.7	0.5	0.5	0.8	0.5	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.4	1.0
28-Feb	0.1	0.1	0.0	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.3	1.5	8.8	8.9	4.3	9.3	13.8	6.3	3.6	1.4	1.3	1.7	0.6	0.4	2.7	13.8
	1.0	0.8	1.2	1.0	0.7	0.5	0.4	0.3	0.4	0.6	1.2	2.3	3.2	3.0	2.9	2.6	1.8	2.0	1.0	0.6	0.6	0.4	0.7	1.2	Diurnal Average	
	11.1	12.5	20.4	13.1	7.9	8.3	5.8	1.8	5.8	4.9	14.5	25.8	28.8	20.3	28.6	30.7	13.9	33.5	9.8	4.0	7.3	2.9	10.5	20.9	Diurnal Maximum	

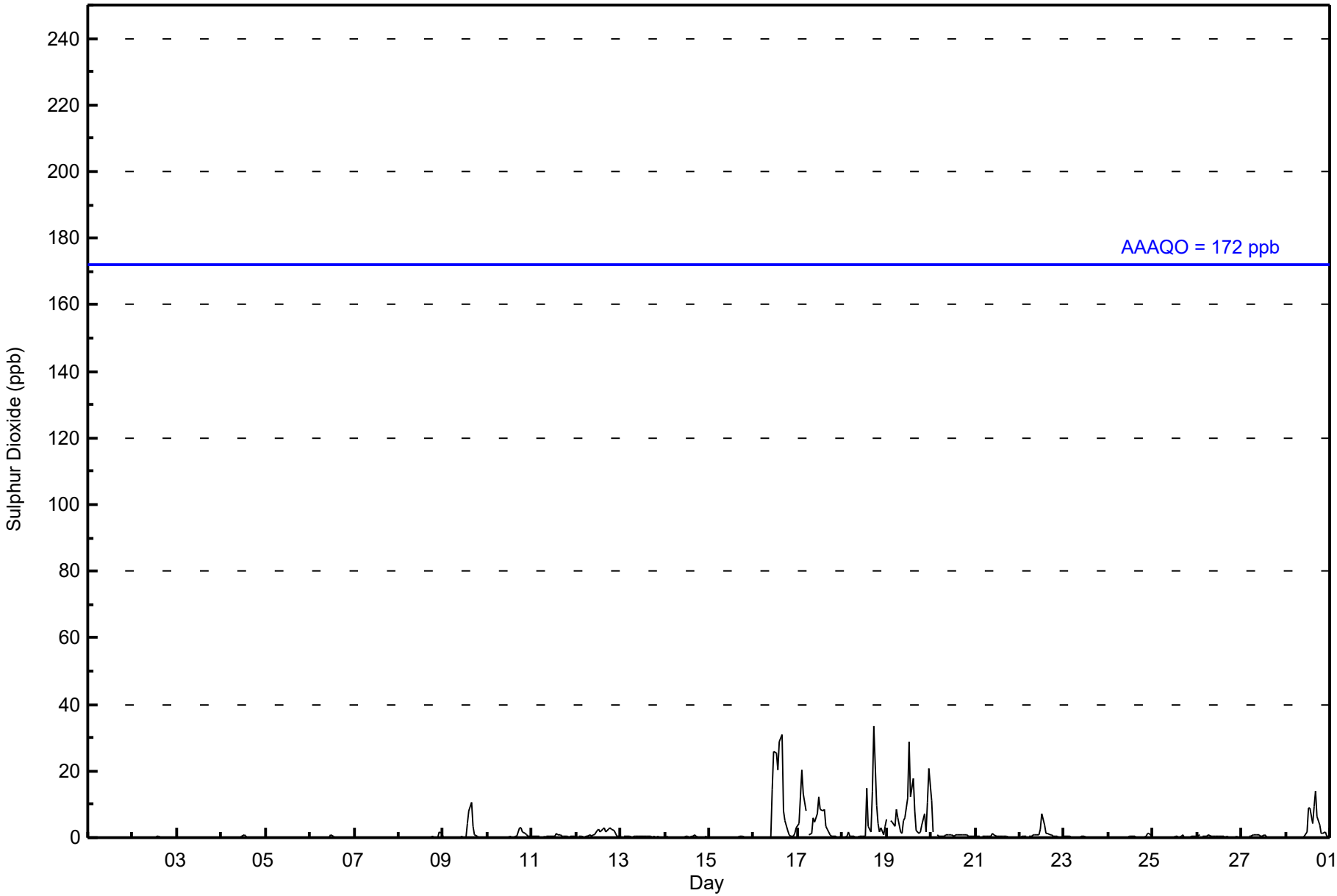
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Ells River - February 2025



Sulphur Dioxide (SO_2) - ppb
Ells River - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	618	96.56	96.56
11 - 20	15	2.34	98.91
21 - 60	7	1.09	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: 640

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Ells River - February 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	83	82	31	6	5	13	30	50	69	67	64	24	17	24	22	17	604
11 - 20	0	1	0	0	0	0	1	6	7	0	0	0	0	0	0	0	15
21 - 60	0	0	0	0	0	0	1	5	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	83	83	31	6	5	13	32	61	77	67	64	24	17	24	22	17	626

Total Number of Valid Hours: 626

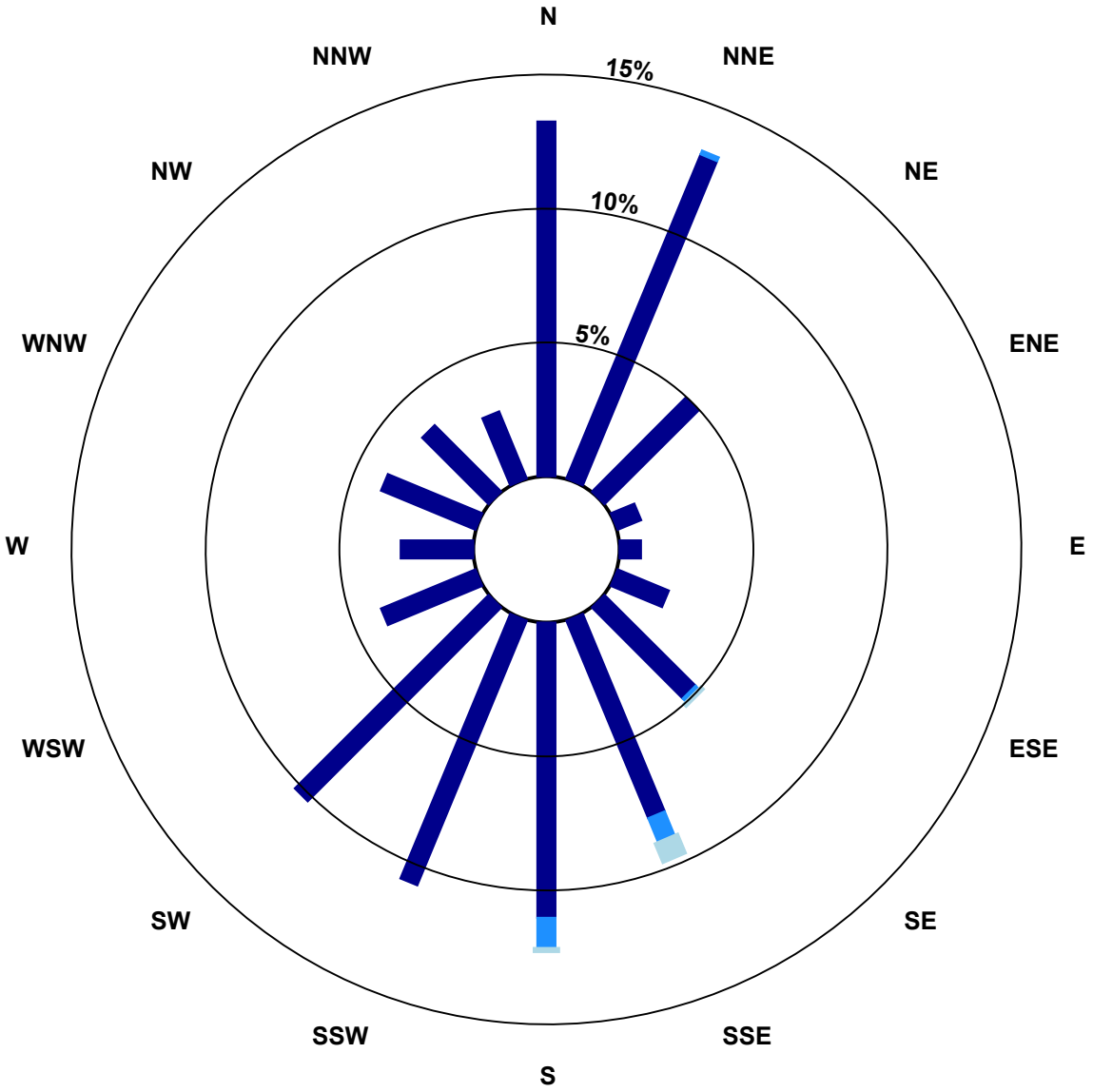
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Sulphur Dioxide (SO_2) - ppb

Ells River



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

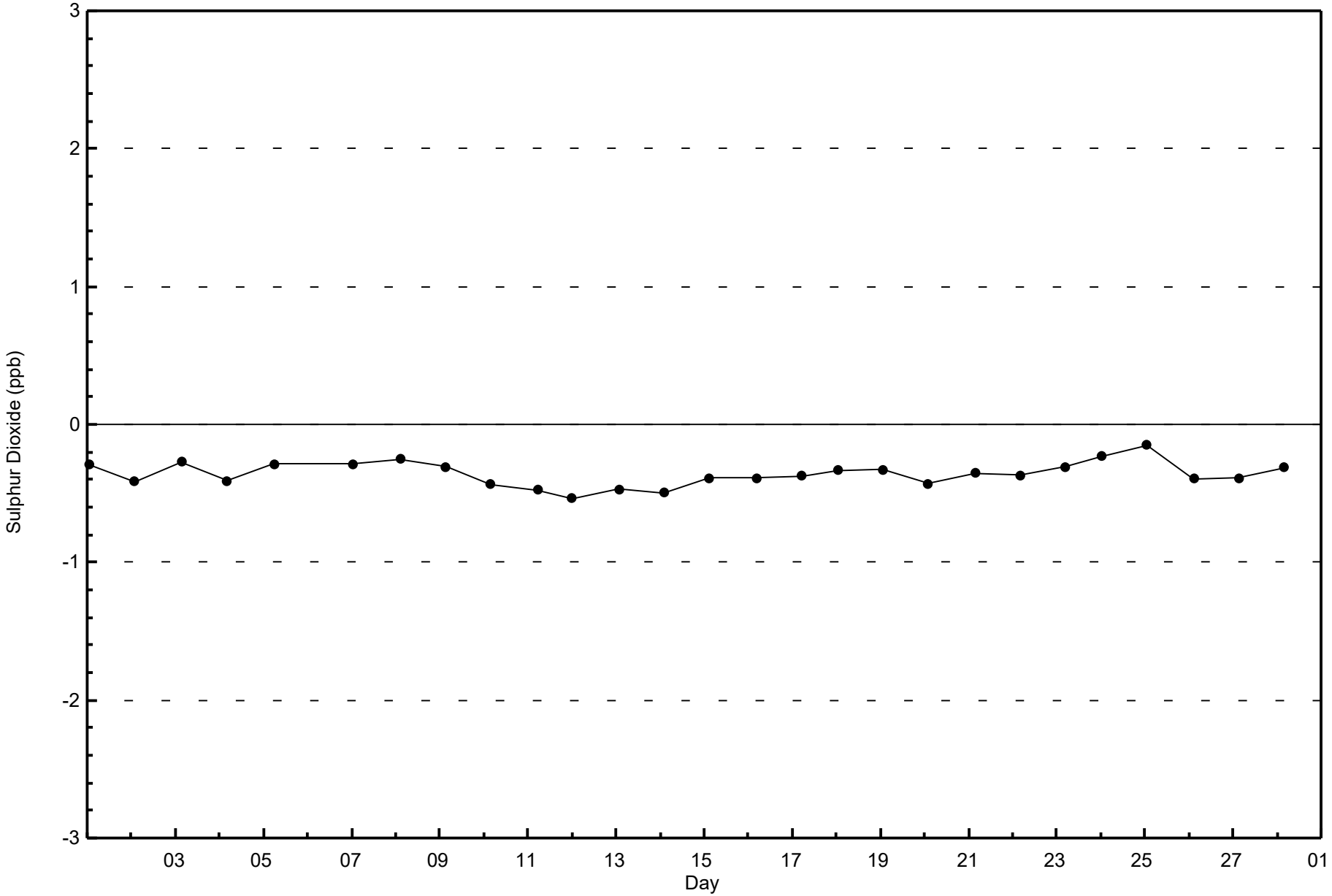
Total Number of Valid Hours: 626

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Ells River - February 2025

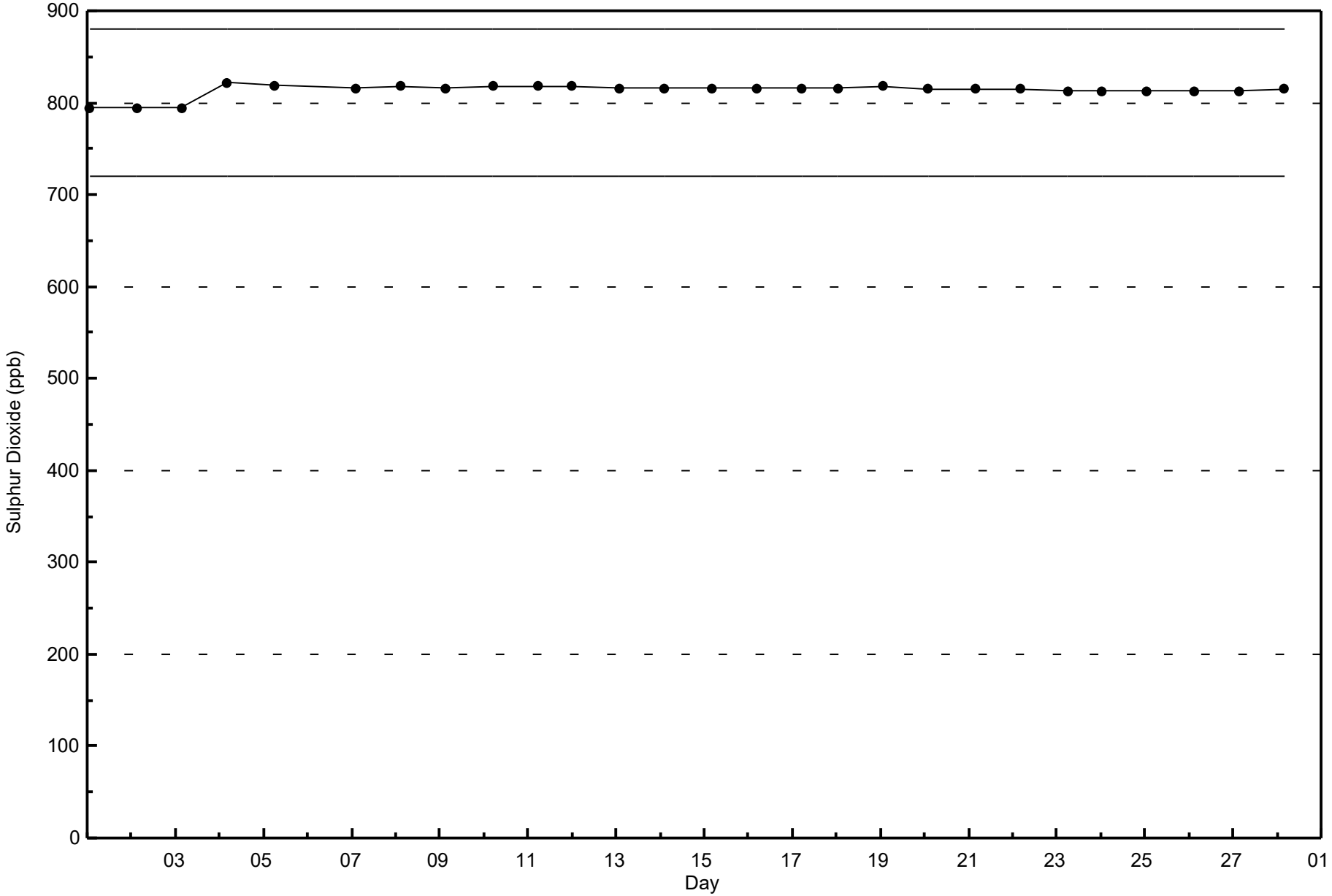


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Ells River - February 2025



Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Ells River - February 2025

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

Maximum Value: 2.5 ppb on Feb 21 10:00 Maximum Daily Average: 0.8 ppb on Feb 22

Minimum Value: 0.4 ppb on Feb 1 05:30 Minimum Daily Average: 0.4 ppb on Feb 3

Maximum Diurnal Average: 0.7 ppb at hour 7 Minimum Diurnal Average: 0.5 ppb at hour 1

Monthly Average: 0.56 ppb Percentiles: P_1 = 0.4 P_{10} = 0.4 Q_1 = 0.4 Median = 0.5 Q_3 = 0.6 P_{90} = 0.8 P_{99} = 1.6

Periods in Service:	1344
Periods of Valid Data:	1279
Periods of Invalid Data:	65
Periods of Calibration:	65
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-Feb	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	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
	0.4	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	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4		
2-Feb	0.5	0.4	0.5	Z	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
	0.4	0.4	0.5	SP	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5		
3-Feb	0.5	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	0.4	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	0.4		
4-Feb	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	0.4	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	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		
5-Feb	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	0.4	0.4		
6-Feb	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	C	C	C	C	0.7	0.6	0.5	0.5	0.4	0.4	0.4	0.5	0.4	0.4	0.7
	0.4	SP	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	C	C	C	C	C	0.6	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.4		
7-Feb	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.5
	0.4	0.4	SP	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.5	0.4	0.4		
8-Feb	0.4	0.5	0.5	Z	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.7	0.6	0.7	0.6	0.7	0.9	0.6	0.5	0.6	0.6	0.5	0.5	0.9
	0.4	0.5	0.5	SP	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.7	0.6	0.6	0.8	0.8	0.9	0.5	0.5	0.6	0.6	0.5		
9-Feb	0.4	0.4	0.4	0.4	Z	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.4	0.5	0.6	0.7	0.6	0.5	0.5	0.5	0.6	0.5	0.4	0.4	0.5	0.8
	0.4	0.4	0.4	0.5	SP	0.5	0.5	0.5	0.4	0.4	0.8	0.4	0.4	0.6	0.6	0.7	0.6	0.5	0.5	0.6	0.6	0.5	0.4	0.4		
10-Feb	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	0.7	0.7	0.7	0.6	0.6	0.7	0.7	0.5	0.8
	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	0.5	0.5	0.7	0.7	0.7	0.6	0.6	0.6	0.8		
11-Feb	Z	1.0	0.9	0.9	0.9	0.8	0.6	0.8	0.6	0.7	0.6	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	1.0
	SP	0.9	0.9	0.9	0.8	0.6	0.8	0.7	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		
12-Feb	0.5	Z	0.5	0.5	0.5	0.5	0.6	0.8	0.9	0.8	0.8	0.7	0.7	0.7	0.6	0.5	0.5	0.4	0.5	0.5	0.7	0.5	0.5	0.4	0.6	0.9
	0.5	SP	0.5	0.5	0.5	0.5	0.8	0.9	0.9	0.9	0.8	0.8	0.6	0.6	0.6	0.5	0.4	0.5	0.5	0.5	0.7	0.5	0.4	0.4		
13-Feb	0.4	0.4	Z	0.5	0.7	0.7	0.7	0.8	0.9	1.6	1.7	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	0.6	1.9
	0.4	0.4	SP	0.6	0.7	0.8	0.8	0.9	1.0	1.9	1.0	0.5	0.5	0.5	0.4	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.5		
14-Feb	0.5	0.5	0.5	Z	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.6	0.5	0.7
	0.5	0.6	0.6	SP	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.7	0.6		
15-Feb	0.6	0.6	0.5	0.5	Z	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.7	0.7	0.6	0.5	0.5	0.4	0.5	0.5	0.7
	0.6	0.6	0.5	0.5	SP	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.7	0.7	0.6	0.5	0.5	0.4	0.5		

Wood Buffalo Environmental Association

Summary of 30-Minute Averages

Total Reduced Sulphur (TRS) - ppb

Ells River - February 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-Feb	0.5	0.5	0.4	0.5	0.5	Z	0.5	0.5	0.5	0.5	0.8	1.0	1.0	0.9	0.7	0.9	0.7	0.6	0.5	0.6	0.5	0.5	0.6	1.3	0.6	1.3
	0.4	0.4	0.4	0.5	0.5	SP	0.5	0.5	0.5	0.6	0.7	1.0	0.9	0.7	0.9	0.8	0.7	0.6	0.5	0.5	0.5	0.5	0.9	0.5		
17-Feb	Z	0.6	0.7	0.7	0.7	0.6	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.8
	SP	0.8	0.7	0.7	0.6	0.6	0.5	0.5	0.7	0.6	0.6	0.7	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5		
18-Feb	0.5	Z	0.6	0.6	0.9	0.8	0.7	0.6	0.6	0.7	0.7	0.5	0.5	0.7	0.5	0.4	0.5	0.7	0.6	0.6	0.6	0.6	0.7	0.7	0.6	1.0
	0.5	SP	0.6	0.8	0.8	0.7	0.7	0.6	0.6	0.6	0.6	0.5	0.4	0.7	0.4	0.4	0.5	0.7	0.6	0.6	0.6	0.6	1.0	0.6		
19-Feb	0.7	0.7	Z	0.8	0.8	0.8	0.9	0.8	0.7	0.7	0.8	0.7	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0.7	0.8	0.6	0.5	0.6	0.7	1.0
	0.7	0.7	SP	0.7	0.8	1.0	0.8	0.7	0.6	0.9	0.8	0.7	0.8	0.6	0.7	0.6	0.5	0.5	0.6	0.7	0.7	0.5	0.7	0.6		
20-Feb	0.6	0.4	0.4	Z	0.8	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	0.8	0.7	0.8	0.9	0.9	0.6	1.0
	0.5	0.4	0.4	SP	0.6	0.5	0.5	0.5	0.4	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.7	0.8	0.7	0.9	1.0	0.9		
21-Feb	1.0	0.8	0.8	0.7	Z	0.9	0.8	0.7	0.7	1.8	1.2	0.6	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.7	0.7	2.5
	0.8	0.8	0.8	0.8	SP	0.8	0.8	0.7	1.0	2.5	0.9	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.7		
22-Feb	0.6	1.0	0.7	0.9	0.6	Z	1.1	1.3	1.2	1.0	0.9	0.9	1.0	0.9	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.8	1.8
	0.7	0.7	0.8	0.8	0.5	SP	1.8	1.2	1.1	1.0	0.9	1.0	1.0	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6		
23-Feb	Z	0.6	0.6	0.6	0.8	1.0	0.8	0.7	0.9	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.6	1.0
	SP	0.6	0.6	0.8	0.7	0.7	0.7	0.8	0.8	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	0.6	0.5		
24-Feb	0.5	Z	0.5	0.5	0.5	0.5	0.8	1.2	0.9	0.6	0.7	0.7	0.9	0.8	0.8	0.7	0.9	0.9	0.8	0.8	0.8	0.8	0.7	0.6	0.7	1.3
	0.5	SP	0.5	0.5	0.5	0.7	1.3	1.0	0.7	0.6	0.7	0.8	0.8	0.8	0.9	0.7	1.0	0.8	0.7	0.7	0.9	0.7	0.7	0.5		
25-Feb	0.5	0.5	Z	0.5	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.5	0.5	0.4	0.5	0.6	0.7	0.7	0.5	0.8
	0.5	0.4	SP	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.5	0.4	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.7	0.7	0.8		
26-Feb	0.8	0.7	0.7	Z	0.6	0.7	1.1	1.8	0.6	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.6	1.8
	0.8	0.7	0.6	SP	0.5	1.0	1.8	0.8	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4		
27-Feb	0.5	0.5	1.1	1.5	Z	0.9	1.8	1.5	1.0	0.7	0.6	0.5	0.6	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.7	1.9
	0.5	0.5	1.5	1.6	SP	1.7	1.9	1.4	0.7	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4		
28-Feb	0.4	0.5	0.5	0.5	0.5	Z	0.4	0.4	0.5	0.6	0.6	0.7	0.8	0.9	0.7	0.7	0.6	0.6	0.9	0.7	0.5	0.7	2.1	1.2	0.7	2.1
	0.4	0.4	0.4	0.5	0.5	SP	0.4	0.5	0.6	0.6	0.7	0.7	0.9	0.8	0.6	0.6	0.6	0.9	0.9	0.6	0.5	1.6	1.6	1.0		
	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	Diurnal Average	
	1.0	1.0	1.5	1.6	0.9	1.7	1.9	1.8	1.2	2.5	1.7	1.0	1.0	0.9	0.9	0.9	1.0	0.9	0.9	0.8	0.9	1.6	2.1	1.3	Diurnal Maximum	

Z - zerospan C - Calibration SP - Span

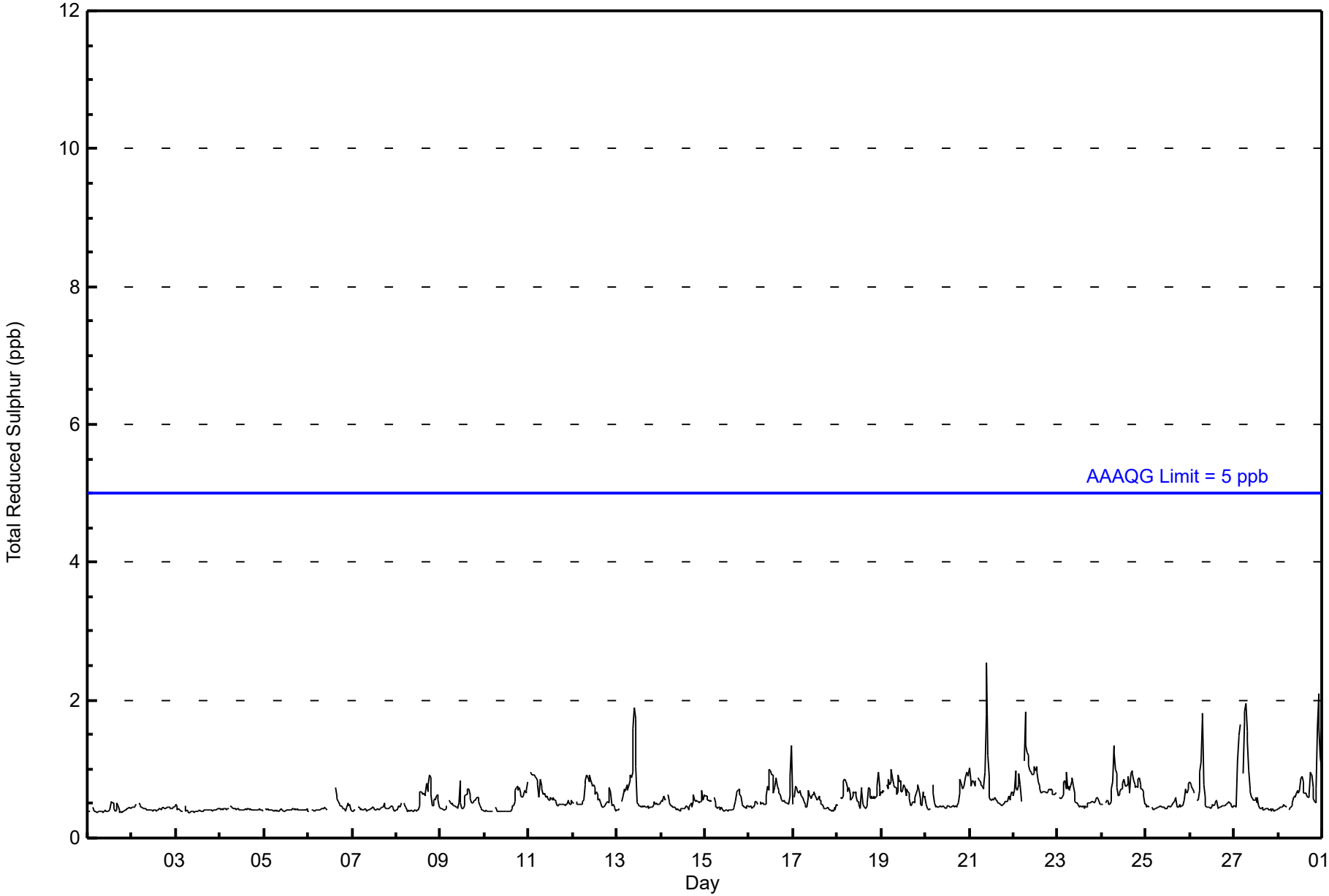
Alberta Ambient Air Quality Guideline (AAAQG): 30-Min: 5 ppb

Wood Buffalo Environmental Association

Hourly Averages

Total Reduced Sulphur (TRS) - ppb

Ells River - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Reduced Sulphur (TRS) - ppb

Ells River - February 2025

Maximum Value: 2.2 ppb on Feb 21 10:00

Maximum Daily Average: 0.8 ppb on Feb 22

Minimum Value: 0.4 ppb on Feb 3 08:00

Minimum Daily Average: 0.4 ppb on Feb 3

Maximum Diurnal Average: 0.7 ppb at hour 7

Minimum Diurnal Average: 0.5 ppb at hour 1

Monthly Average: 0.56 ppb

Percentiles: P_1 = 0.4 P_{10} = 0.4 Q_1 = 0.4 Median = 0.5 Q_3 = 0.6 P_{90} = 0.8 P_{99} = 1.5

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
2-Feb	0.4	0.4	0.5	Z	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5
3-Feb	0.5	0.4	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
4-Feb	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	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
5-Feb	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
6-Feb	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	C	C	C	C	C	0.7	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.4	0.4	0.7
7-Feb	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.5
8-Feb	0.4	0.5	0.5	Z	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.7	0.6	0.6	0.7	0.7	0.9	0.5	0.5	0.6	0.6	0.5	0.5	0.9
9-Feb	0.4	0.4	0.4	0.4	Z	0.5	0.5	0.5	0.5	0.4	0.7	0.5	0.4	0.5	0.6	0.7	0.6	0.5	0.5	0.6	0.6	0.5	0.4	0.4	0.5	0.7
10-Feb	0.4	0.4	0.4	0.4	0.4	Z	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.7	0.7	0.7	0.6	0.6	0.7	0.7	0.5	0.7
11-Feb	Z	0.9	0.9	0.9	0.9	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.9
12-Feb	0.5	Z	0.5	0.5	0.5	0.5	0.7	0.9	0.9	0.9	0.8	0.8	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.7	0.5	0.5	0.4	0.6	0.9
13-Feb	0.4	0.4	Z	0.6	0.7	0.7	0.7	0.9	0.9	1.7	1.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	1.7
14-Feb	0.5	0.6	0.6	Z	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.5	0.6	0.5	0.5	0.5	0.6	0.6	0.5	0.6
15-Feb	0.6	0.6	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	0.5	0.7	0.7	0.6	0.5	0.5	0.4	0.5	0.5	0.7
16-Feb	0.4	0.5	0.4	0.5	0.5	Z	0.5	0.5	0.5	0.6	0.7	1.0	0.9	0.8	0.8	0.8	0.7	0.6	0.5	0.5	0.5	0.5	0.8	1.0	0.6	1.0
17-Feb	Z	0.7	0.7	0.7	0.6	0.6	0.5	0.5	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.7
18-Feb	0.5	Z	0.6	0.7	0.8	0.8	0.7	0.6	0.6	0.7	0.6	0.5	0.5	0.7	0.5	0.4	0.5	0.7	0.6	0.6	0.6	0.6	0.9	0.7	0.6	0.9
19-Feb	0.7	0.7	Z	0.7	0.8	0.9	0.8	0.7	0.7	0.8	0.8	0.7	0.8	0.7	0.7	0.6	0.5	0.5	0.6	0.7	0.7	0.5	0.6	0.6	0.7	0.9
20-Feb	0.5	0.4	0.4	Z	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.4	0.5	0.5	0.5	0.6	0.8	0.7	0.8	0.9	0.9	0.6	0.9
21-Feb	0.9	0.8	0.8	0.8	Z	0.8	0.8	0.7	0.9	2.2	1.1	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.7	2.2
22-Feb	0.7	0.9	0.7	0.9	0.5	Z	1.5	1.3	1.1	1.0	0.9	1.0	1.0	0.9	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.8	1.5
23-Feb	Z	0.6	0.6	0.7	0.8	0.8	0.7	0.8	0.8	0.6	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.6	0.8
24-Feb	0.5	Z	0.5	0.5	0.5	0.6	1.1	1.1	0.8	0.6	0.7	0.7	0.8	0.8	0.8	0.7	1.0	0.9	0.8	0.7	0.9	0.8	0.7	0.5	0.7	1.1
25-Feb	0.5	0.5	Z	0.5	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.5	0.4	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.6	0.7	0.7	0.5	0.7
26-Feb	0.8	0.7	0.7	Z	0.6	0.8	1.4	1.3	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.6	1.4
27-Feb	0.5	0.5	1.3	1.6	Z	1.3	1.9	1.5	0.8	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.7	1.9
28-Feb	0.4	0.4	0.5	0.5	0.5	Z	0.4	0.5	0.5	0.6	0.7	0.7	0.8	0.9	0.7	0.6	0.6	0.8	0.9	0.7	0.5	1.2	1.9	1.1	0.7	1.9
	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	Diurnal Average	
	0.9	0.9	1.3	1.6	0.9	1.3	1.9	1.5	1.1	2.2	1.4	1.0	1.0	0.9	0.8	0.8	1.0	0.9	0.9	0.8	0.9	1.2	1.9	1.1	Diurnal Maximum	

Z - zerospan C - Calibration

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

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	639	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: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Total Reduced Sulphur (TRS) - ppb

Ells River - February 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	81	82	30	6	5	13	34	58	78	68	67	24	16	24	22	16	624
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	81	82	30	6	5	13	34	58	78	68	67	24	16	24	22	16	624

Total Number of Valid Hours: 624

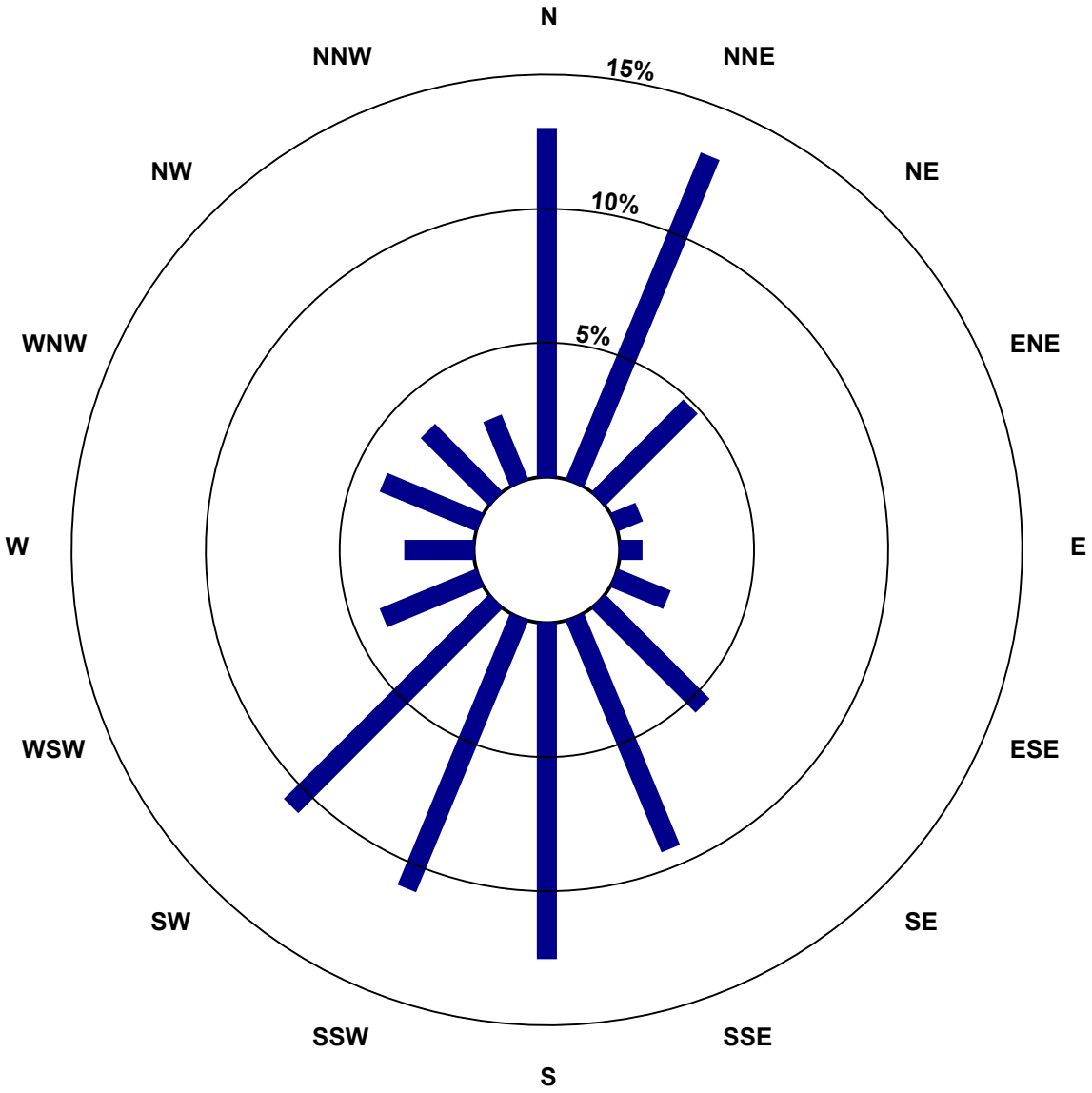
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Total Reduced Sulphur (TRS) - ppb

Ells River



Classes (ppb)

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

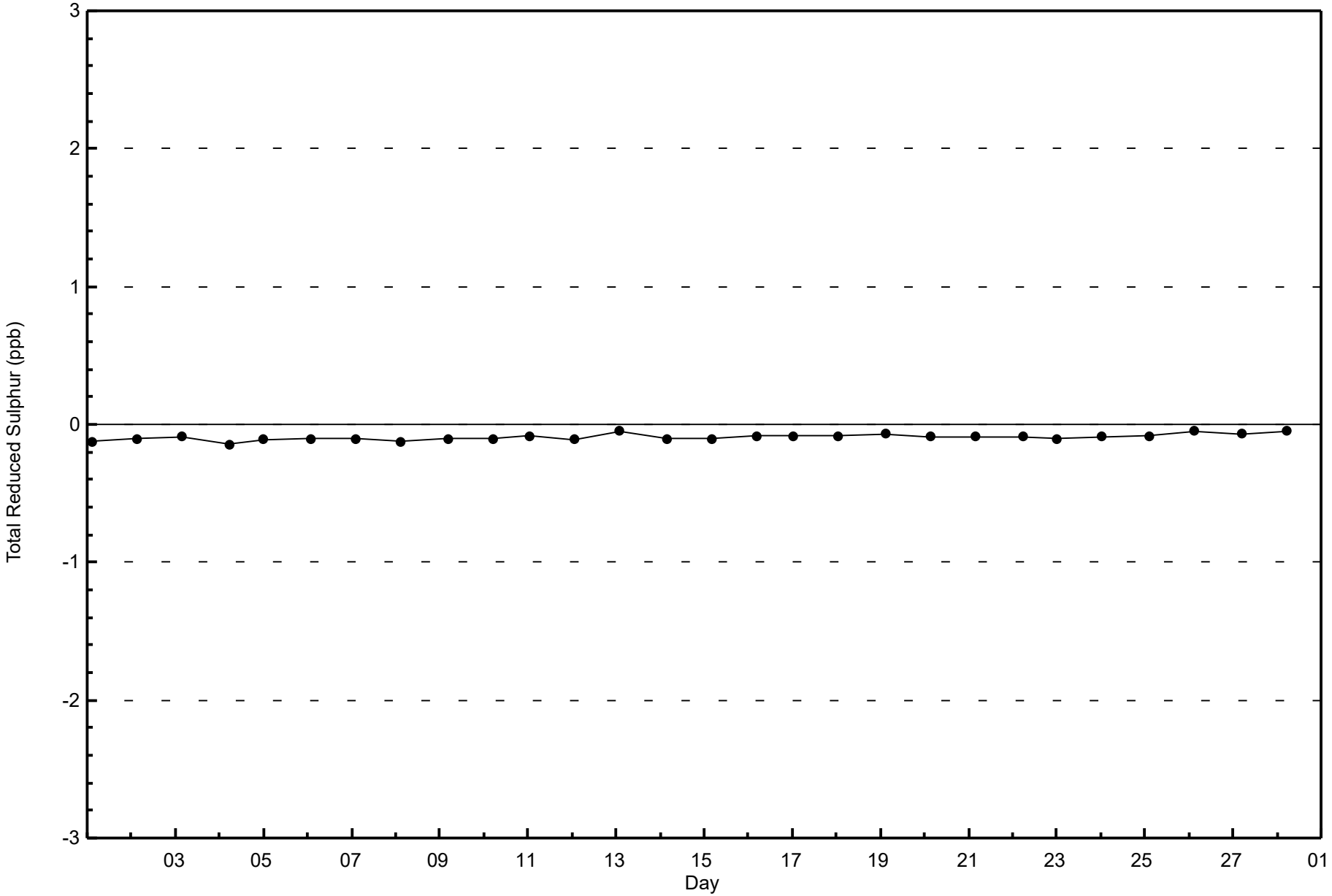
Total Number of Valid Hours: 624

Wood Buffalo Environmental Association

Zero Responses

Total Reduced Sulphur (TRS) - ppb

Ells River - February 2025

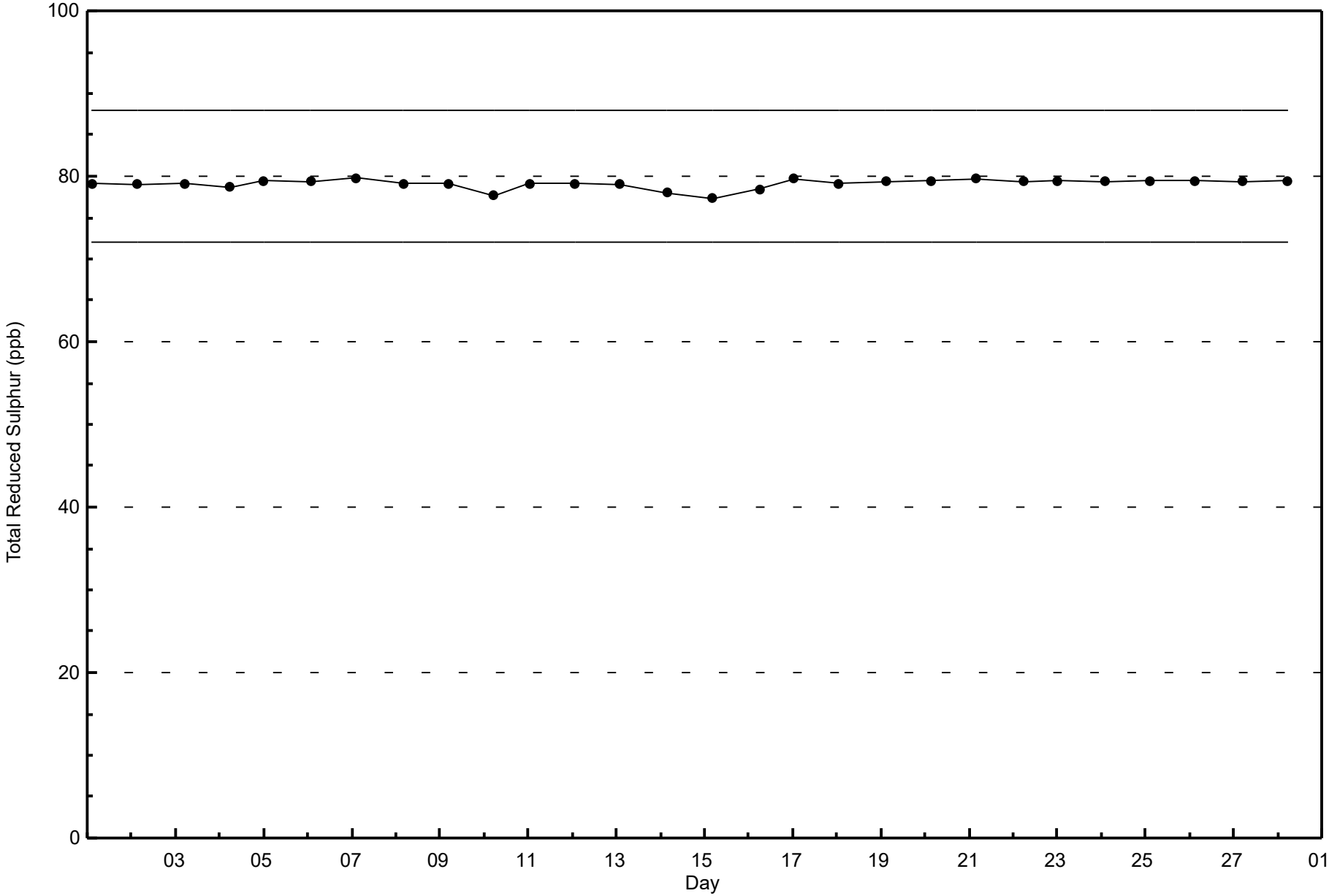


Wood Buffalo Environmental Association

Span Responses

Total Reduced Sulphur (TRS) - ppb

Ells River - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Ells River - February 2025

Maximum Value: 6.7 ppm on Feb 21 10:00

Maximum Daily Average: 3.0 ppm on Feb 21

Minimum Value: 2.0 ppm on Feb 6 02:00

Minimum Daily Average: 2.0 ppm on Feb 4

Maximum Diurnal Average: 2.5 ppm at hour 10

Minimum Diurnal Average: 2.1 ppm at hour 16

Monthly Average: 2.31 ppm

Percentiles: P_1 = 2.0 P_{10} = 2.0 Q_1 = 2.1 Median = 2.1 Q_3 = 2.4 P_{90} = 2.8 P_{99} = 4.1

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	2.1	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
2-Feb	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	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
3-Feb	2.1	2.2	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2
4-Feb	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
5-Feb	2.0	2.0	2.0	2.0	2.0	Z	2.0	2.0	2.0	2.5	2.0	2.0	2.0	2.0	2.4	2.0	2.0	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.5
6-Feb	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.2	2.1	2.1	2.0	2.0	2.1	2.2	2.2	2.1	2.1	2.1	2.0	2.1	2.2
7-Feb	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.4	2.8	2.0	2.0	2.0	2.0	2.0	2.4	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.8
8-Feb	2.0	2.0	Z	2.1	2.1	2.0	2.1	2.0	2.1	2.1	2.0	2.0	2.1	2.3	2.2	2.5	2.9	2.7	3.3	2.3	2.1	2.1	2.1	2.2	2.2	3.3
9-Feb	2.1	2.1	2.0	Z	2.4	2.6	2.4	2.3	2.2	2.2	3.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.2	3.1
10-Feb	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	2.5	2.6	2.7	2.6	2.7	2.7	2.8	2.2	2.8
11-Feb	3.0	3.1	3.1	3.1	3.1	Z	2.7	2.7	2.7	2.6	2.5	2.6	2.7	2.8	2.7	2.4	2.4	2.4	2.4	2.4	2.5	2.5	2.4	2.5	2.7	3.1
12-Feb	Z	2.4	2.4	2.4	2.3	2.3	2.4	2.6	2.6	2.5	2.4	2.3	2.4	2.9	2.2	2.1	2.1	2.1	2.2	2.3	2.4	2.2	2.2	2.1	2.3	2.9
13-Feb	2.0	Z	2.2	2.5	2.6	2.6	2.7	2.9	3.0	3.3	3.1	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.3	2.3	2.3	2.4	3.3
14-Feb	2.5	2.8	Z	2.6	2.5	2.5	2.5	2.4	2.4	2.3	2.2	2.1	2.1	2.2	2.3	2.1	2.1	2.2	2.7	2.4	2.2	2.2	2.7	2.7	2.4	2.8
15-Feb	2.9	2.9	2.7	Z	2.6	2.4	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.8	2.8	2.7	2.1	2.1	2.1	2.1	2.3	2.9
16-Feb	2.1	2.1	2.2	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.6	2.5	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.6
17-Feb	2.1	2.3	2.2	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	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.3
18-Feb	Z	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.1	2.1	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.2	2.1	2.2	2.3
19-Feb	2.3	Z	2.1	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.3
20-Feb	2.1	2.0	Z	2.1	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.4	2.3	2.9	3.6	3.7	2.3	3.7
21-Feb	3.8	3.5	3.5	Z	3.7	3.8	3.6	3.4	3.6	6.7	3.8	2.2	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.3	2.7	2.7	3.0	3.0	6.7
22-Feb	2.5	2.6	3.3	3.3	Z	2.3	3.6	4.3	4.4	4.3	3.8	3.2	3.0	2.6	2.5	2.4	2.2	2.2	2.2	2.4	2.4	2.4	2.3	2.3	2.9	4.4
23-Feb	2.2	2.2	2.1	2.6	2.8	Z	2.5	2.6	2.7	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.6	2.4	2.2	2.3	2.8
24-Feb	Z	2.1	2.2	2.7	2.2	2.5	3.5	3.3	2.7	2.9	2.8	2.6	2.6	2.4	2.3	2.2	2.4	2.4	2.3	2.3	3.0	2.6	2.3	2.1	2.5	3.5
25-Feb	2.1	Z	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	2.2	2.2	2.1	2.1	2.1	2.1	3.0	2.8	2.8	2.2	3.0
26-Feb	3.0	2.8	Z	2.6	2.5	3.5	4.5	3.8	2.2	2.2	2.2	2.1	2.3	2.6	2.9	2.1	2.1	2.3	2.3	2.3	2.5	2.8	2.5	2.1	2.6	4.5
27-Feb	2.3	2.5	3.2	Z	2.7	3.1	4.2	4.2	3.3	2.5	2.2	2.1	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.5	4.2
28-Feb	2.1	2.2	2.2	2.2	Z	2.1	2.1	2.2	2.6	2.5	2.4	2.4	2.7	2.7	2.3	2.2	2.1	2.2	2.2	2.2	2.2	2.5	2.3	2.1	2.3	2.7
	2.3	2.3	2.4	2.3	2.4	2.4	2.5	2.5	2.4	2.5	2.4	2.3	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.3	2.3	Diurnal Average	
	3.8	3.5	3.5	3.3	3.7	3.8	4.5	4.3	4.4	6.7	3.8	3.2	3.0	2.9	2.9	2.5	2.9	2.8	3.3	2.7	3.0	3.0	3.6	3.7	Diurnal Maximum	

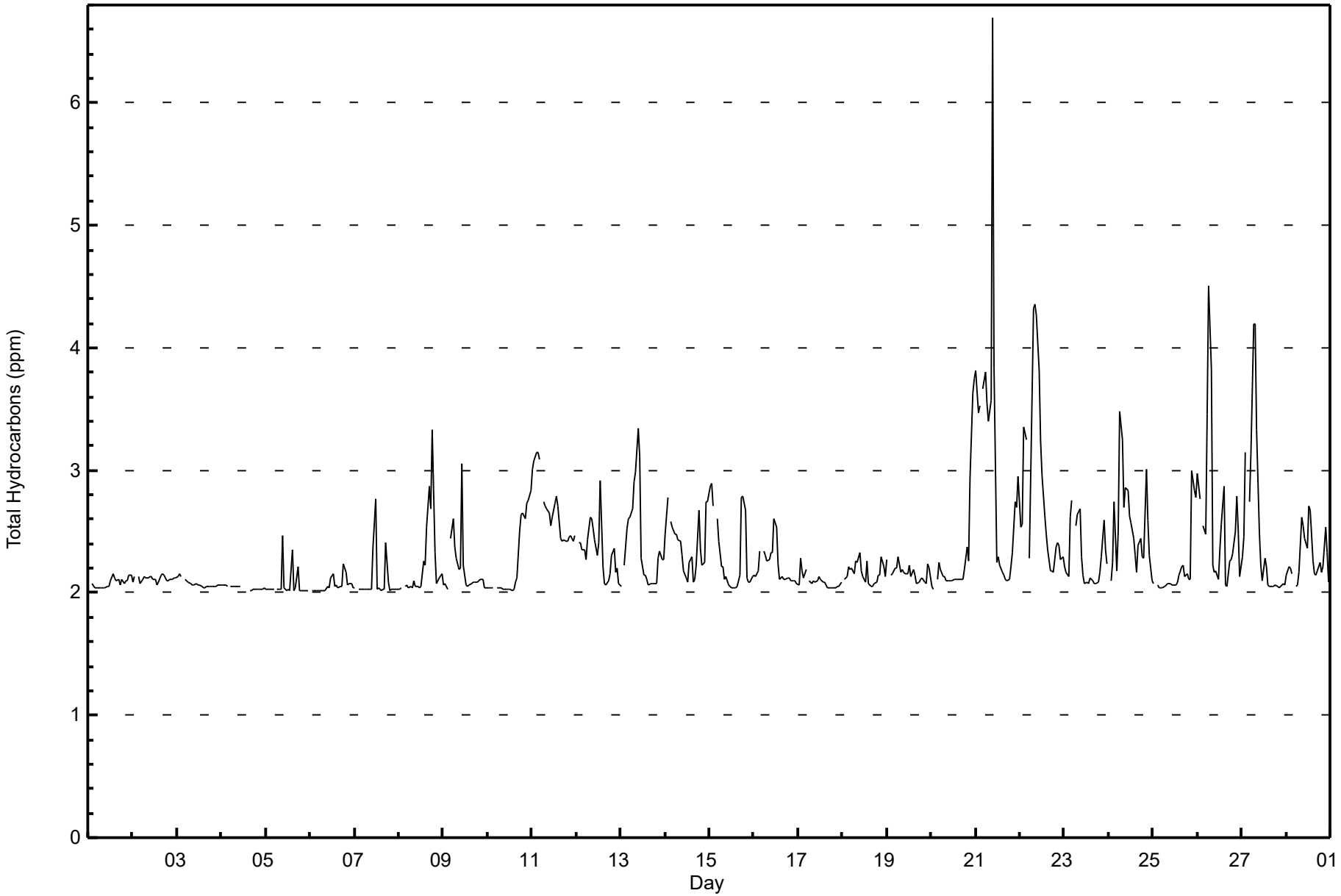
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Ells River - February 2025



Total Hydrocarbons (THC) - ppm
Ells River - February 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	115	17.97	17.97
2.1 - 3.0	487	76.09	94.06
3.1 - 10.0	38	5.94	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 640

Total Number of Hours: 672

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	5	10	1	0	0	3	3	1	5	36	36	5	3	4	2	0	114
2.1 - 3.0	73	73	30	6	3	10	29	60	72	29	27	16	11	15	15	9	478
3.1 - 10.0	5	0	0	0	2	0	0	0	0	1	2	3	3	5	5	8	34
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	83	83	31	6	5	13	32	61	77	66	65	24	17	24	22	17	626

Total Number of Valid Hours: 626

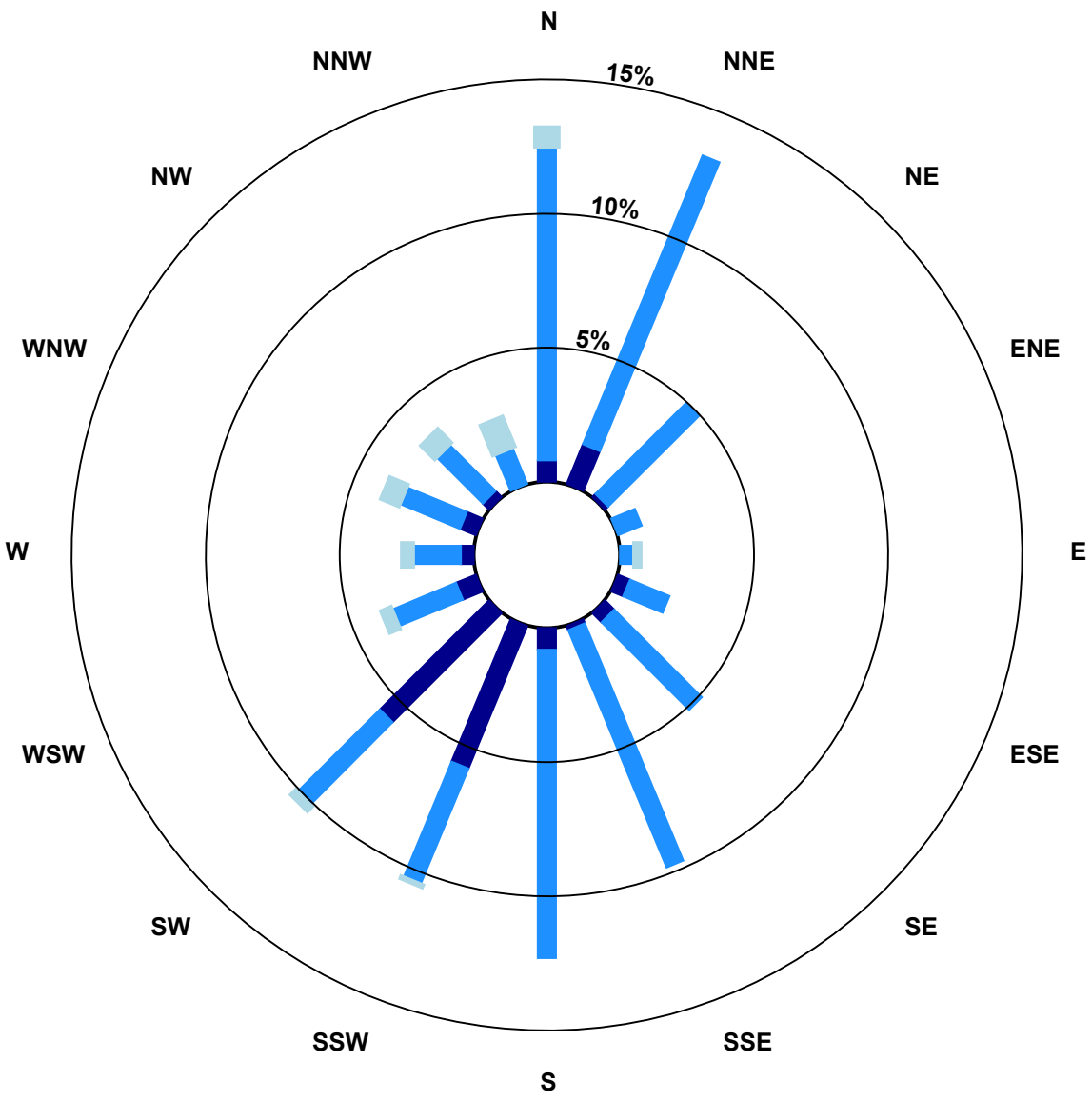
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Total Hydrocarbons (THC) - ppm

Ells River



Classes (ppm)

- 0 - 2.0
- 2.1 - 3.0
- 3.1 - 10.0
- > 10.0

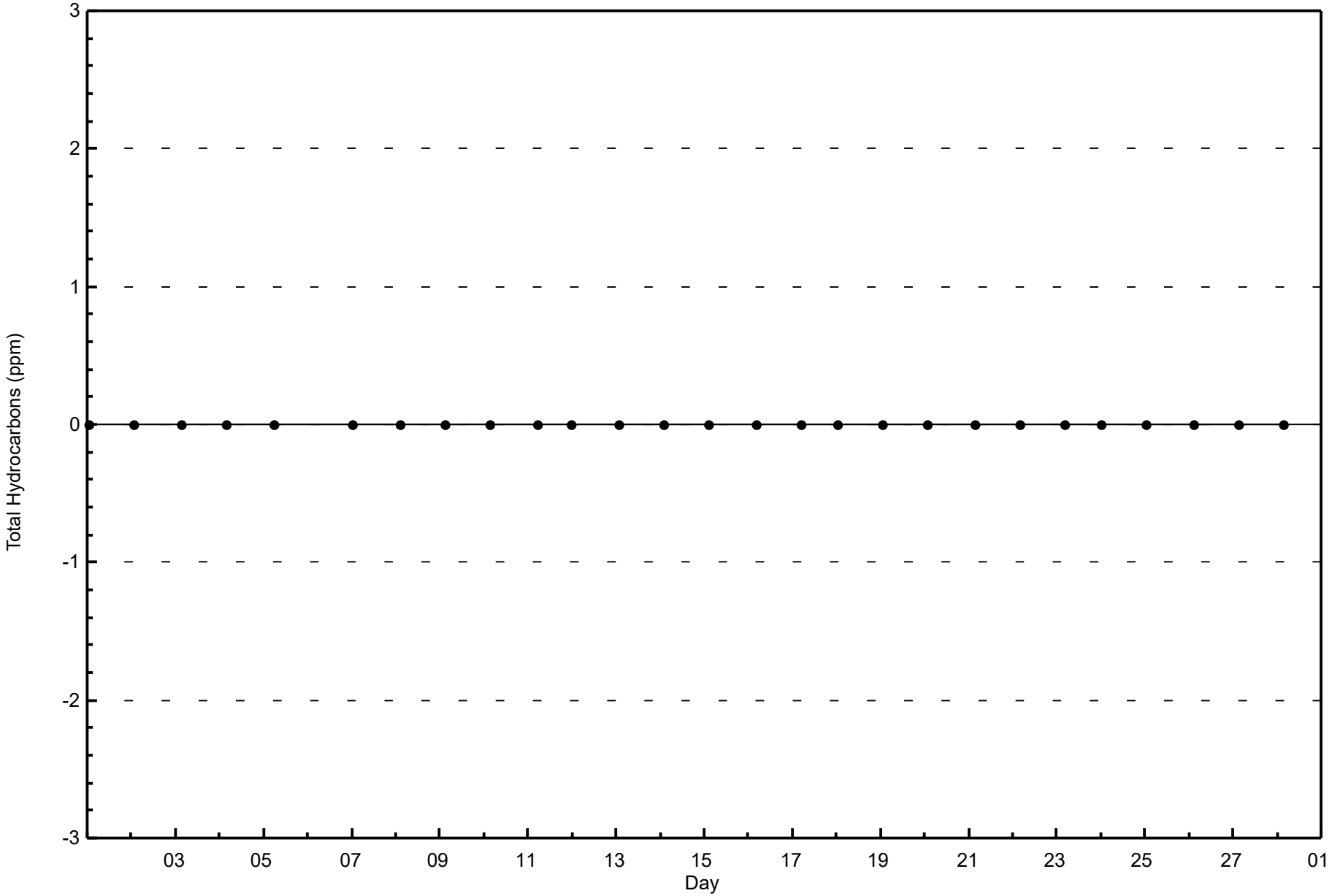
Total Number of Valid Hours: 626

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Ells River - February 2025

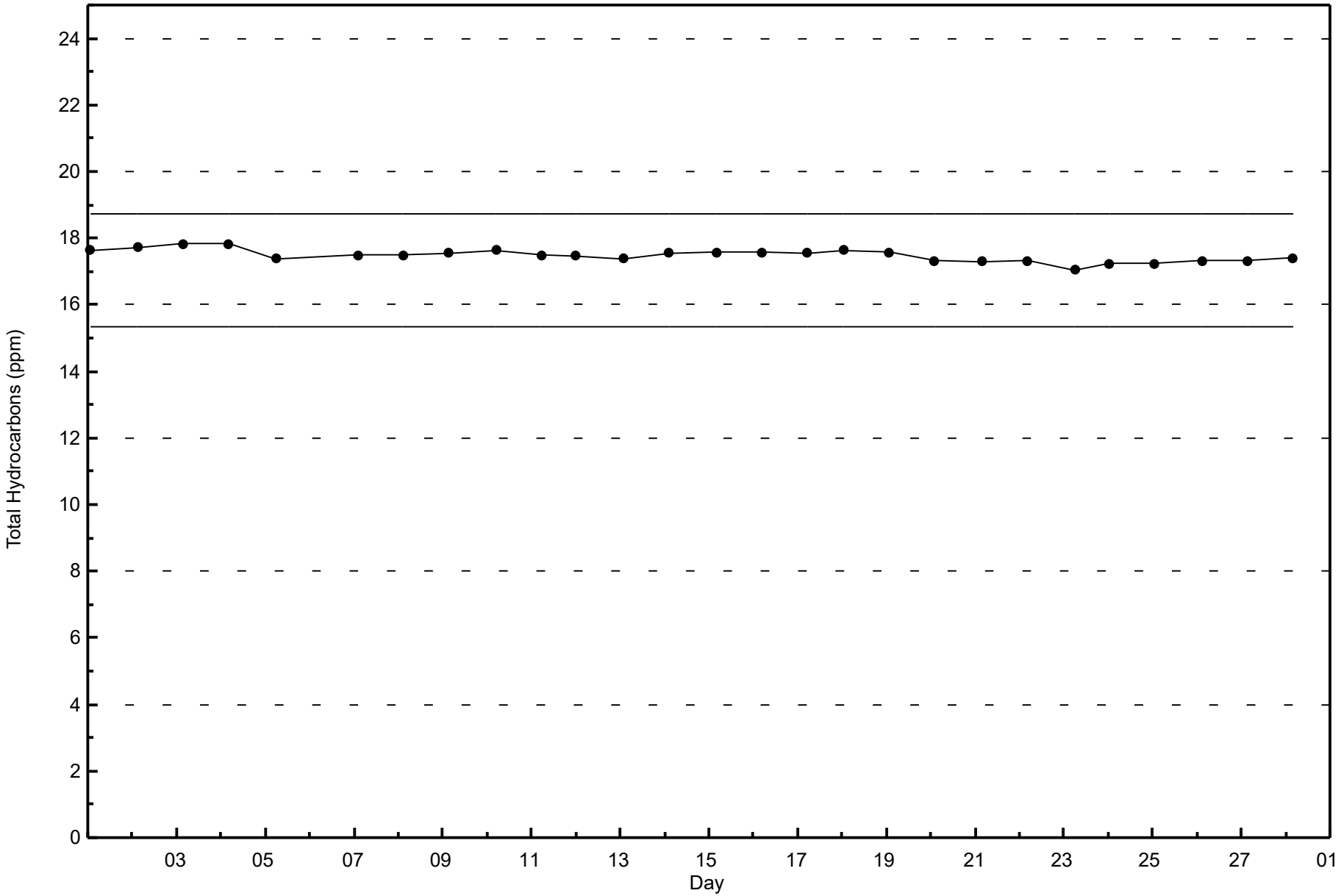


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Ells River - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Non Methane Hydrocarbons (NMHC) - ppm

Ells River - February 2025

Maximum Value: 0.805 ppm on Feb 21 10:00

Maximum Daily Average: 0.275 ppm on Feb 11

Minimum Value: 0.000 ppm on Feb 1 01:00

Minimum Daily Average: 0.000 ppm on Feb 1

Maximum Diurnal Average: 0.122 ppm at hour 10

Minimum Diurnal Average: 0.027 ppm at hour 17

Monthly Average: 0.076 ppm

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

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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-Feb	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	C	C	C	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5-Feb	0.000	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.431	0.016	0.000	0.000	0.000	0.332	0.000	0.016	0.191	0.000	0.000	0.000	0.000	0.000	0.000	0.043	0.431
6-Feb	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.091	0.051	0.000	0.000	0.000	0.000	0.006	0.091
7-Feb	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.330	0.734	0.000	0.000	0.000	0.000	0.000	0.366	0.069	0.000	0.000	0.000	0.000	0.000	0.065	0.734
8-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.008	0.002	0.228	0.193	0.355	0.514	0.080	0.000	0.000	0.000	0.000	0.060	0.514
9-Feb	0.000	0.000	0.000	Z	0.106	0.187	0.121	0.071	0.014	0.025	0.147	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.030	0.187
10-Feb	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	0.239	0.294	0.262	0.177	0.191	0.200	0.202	0.068	0.294
11-Feb	0.215	0.219	0.215	0.213	0.198	Z	0.004	0.002	0.029	0.204	0.238	0.398	0.490	0.558	0.518	0.311	0.306	0.323	0.316	0.320	0.336	0.339	0.287	0.294	0.275	0.558
12-Feb	Z	0.249	0.250	0.205	0.195	0.104	0.195	0.315	0.305	0.231	0.176	0.113	0.244	0.565	0.012	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000	0.000	0.137	0.565
13-Feb	0.000	Z	0.000	0.006	0.000	0.004	0.023	0.096	0.107	0.204	0.221	0.087	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.032	0.221
14-Feb	0.001	0.041	Z	0.004	0.000	0.001	0.003	0.000	0.000	0.000	0.000	0.028	0.000	0.125	0.161	0.000	0.000	0.057	0.292	0.121	0.017	0.007	0.294	0.304	0.063	0.304
15-Feb	0.371	0.396	0.310	Z	0.231	0.127	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.441	0.468	0.345	0.000	0.000	0.000	0.000	0.117	0.468
16-Feb	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.014	0.339	0.316	0.096	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.033	0.339
17-Feb	0.000	0.169	0.092	0.028	0.093	Z	0.000	0.000	0.000	0.000	0.000	0.023	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.018	0.169
18-Feb	Z	0.000	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.143	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.093	0.000	0.000	0.011	0.143
19-Feb	0.130	Z	0.002	0.002	0.019	0.067	0.126	0.000	0.000	0.000	0.000	0.027	0.105	0.000	0.023	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.112	0.152	0.033	0.152
20-Feb	0.000	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.070	0.006	0.207	0.410	0.442	0.050	0.442
21-Feb	0.447	0.395	0.492	Z	0.580	0.624	0.541	0.496	0.503	0.805	0.395	0.004	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.092	0.144	0.079	0.107	0.248	0.805
22-Feb	0.000	0.060	0.395	0.296	Z	0.009	0.282	0.568	0.544	0.550	0.589	0.448	0.396	0.258	0.195	0.147	0.015	0.007	0.000	0.105	0.098	0.073	0.025	0.006	0.220	0.589
23-Feb	0.000	0.000	0.000	0.109	0.173	Z	0.078	0.134	0.161	0.085	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.045	0.110	0.084	0.000	0.043	0.173
24-Feb	Z	0.000	0.000	0.147	0.000	0.047	0.247	0.188	0.128	0.393	0.349	0.349	0.243	0.128	0.000	0.000	0.122	0.178	0.081	0.046	0.360	0.231	0.075	0.000	0.144	0.393
25-Feb	0.000	Z	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.037	0.037	0.020	0.038	0.000	0.000	0.172	0.269	0.299	0.038	0.299
26-Feb	0.314	0.274	Z	0.221	0.186	0.406	0.580	0.359	0.011	0.003	0.008	0.000	0.198	0.426	0.663	0.000	0.000	0.147	0.142	0.159	0.181	0.168	0.040	0.000	0.195	0.663
27-Feb	0.000	0.000	0.003	Z	0.012	0.037	0.260	0.434	0.449	0.267	0.082	0.000	0.085	0.032	0.000	0.000	0.005	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.073	0.449
28-Feb	0.000	0.000	0.000	0.000	Z	0.000	0.000	0.000	0.259	0.210	0.168	0.163	0.444	0.414	0.127	0.076	0.076	0.000	0.000	0.000	0.027	0.290	0.159	0.000	0.105	0.444
	0.062	0.078	0.076	0.054	0.078	0.067	0.088	0.095	0.090	0.122	0.098	0.101	0.094	0.102	0.076	0.029	0.027	0.083	0.083	0.056	0.048	0.072	0.073	0.065	Diurnal Average	
	0.447	0.396	0.492	0.296	0.580	0.624	0.580	0.568	0.544	0.805	0.589	0.734	0.490	0.565	0.663	0.311	0.306	0.441	0.514	0.345	0.360	0.339	0.410	0.442	Diurnal Maximum	

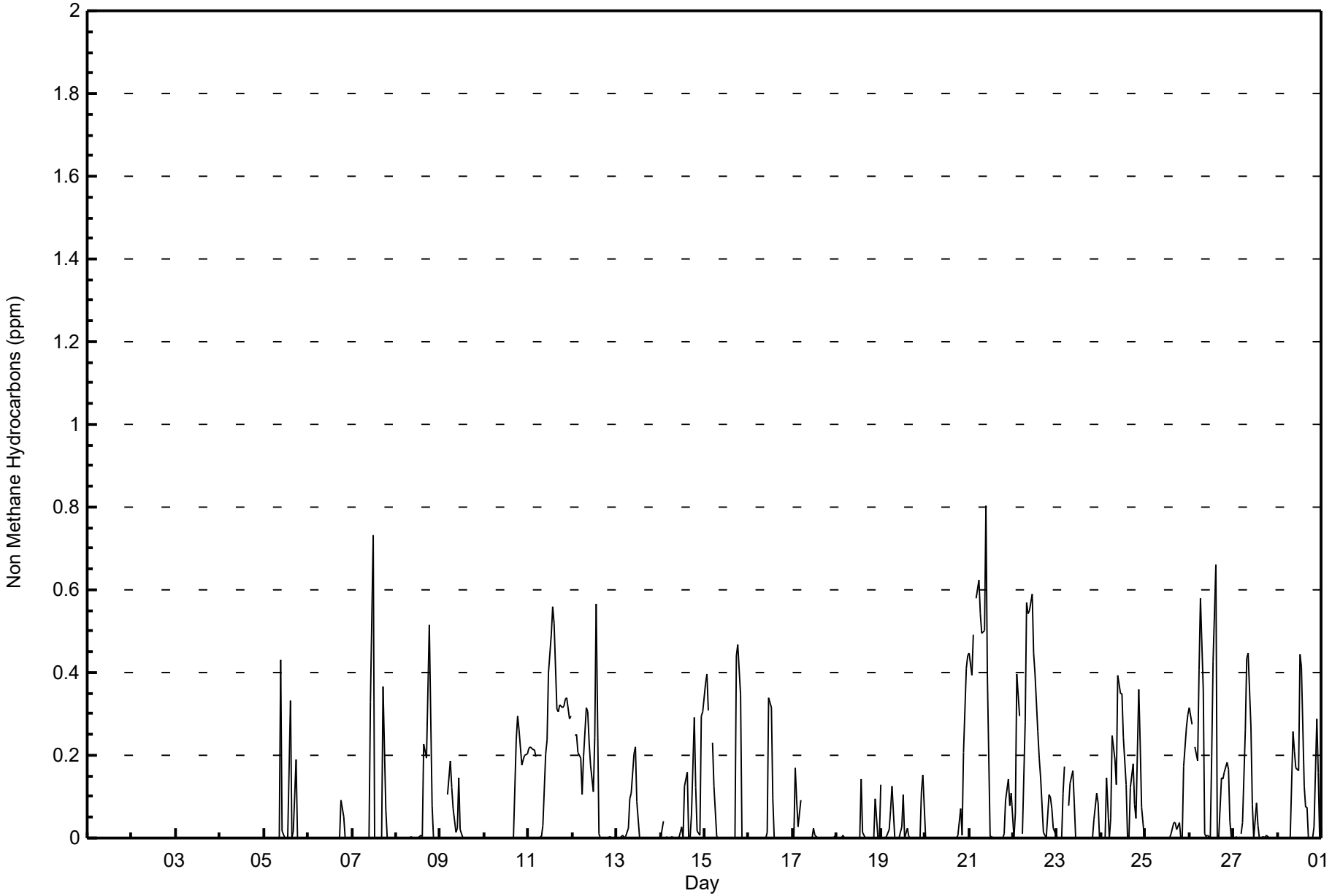
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Ells River - February 2025



Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Ells River - February 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 0.005	408	63.75	63.75
0.006 - 0.05	48	7.50	71.25
0.06 - 0.1	55	8.59	79.84
> 0.1	129	20.16	100.00

Total Number of Valid Hours: 640

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Non Methane Hydrocarbons (NMHC) - ppm

Ells River - February 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	51	67	23	3	2	5	15	37	42	55	54	18	8	9	8	5	402
0.006 - 0.05	7	8	3	0	1	0	1	4	11	2	0	1	2	4	1	3	48
0.06 - 0.1	8	3	1	3	0	1	4	11	9	3	1	0	1	2	6	2	55
> 0.1	17	5	4	0	2	7	12	9	15	6	10	5	6	9	7	7	121
Totals	83	83	31	6	5	13	32	61	77	66	65	24	17	24	22	17	626

Total Number of Valid Hours: 626

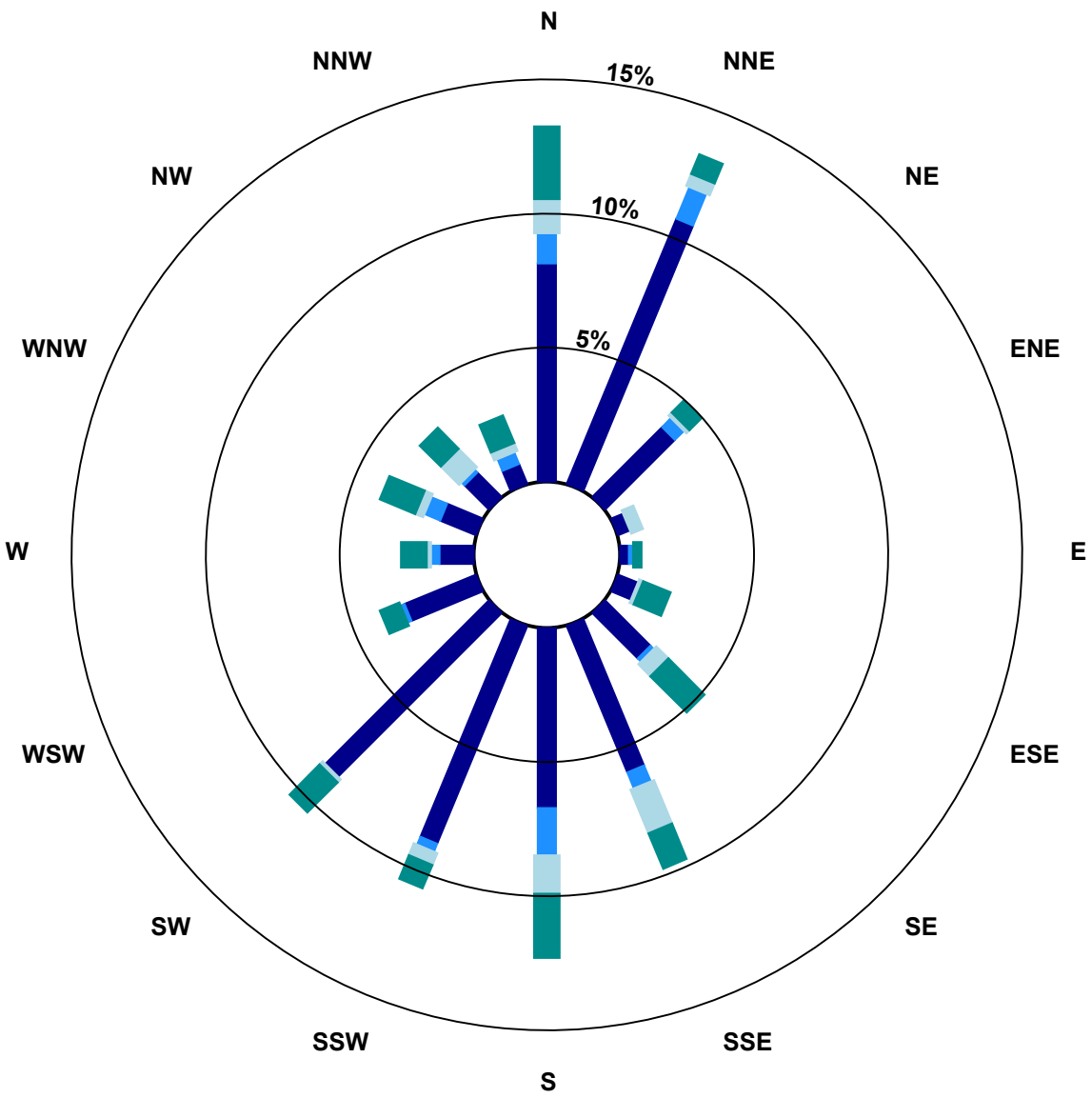
Total Number of Hours: 672

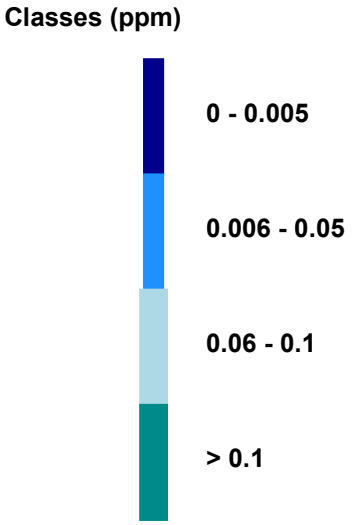
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Non Methane Hydrocarbons (NMHC) - ppm

Ells River





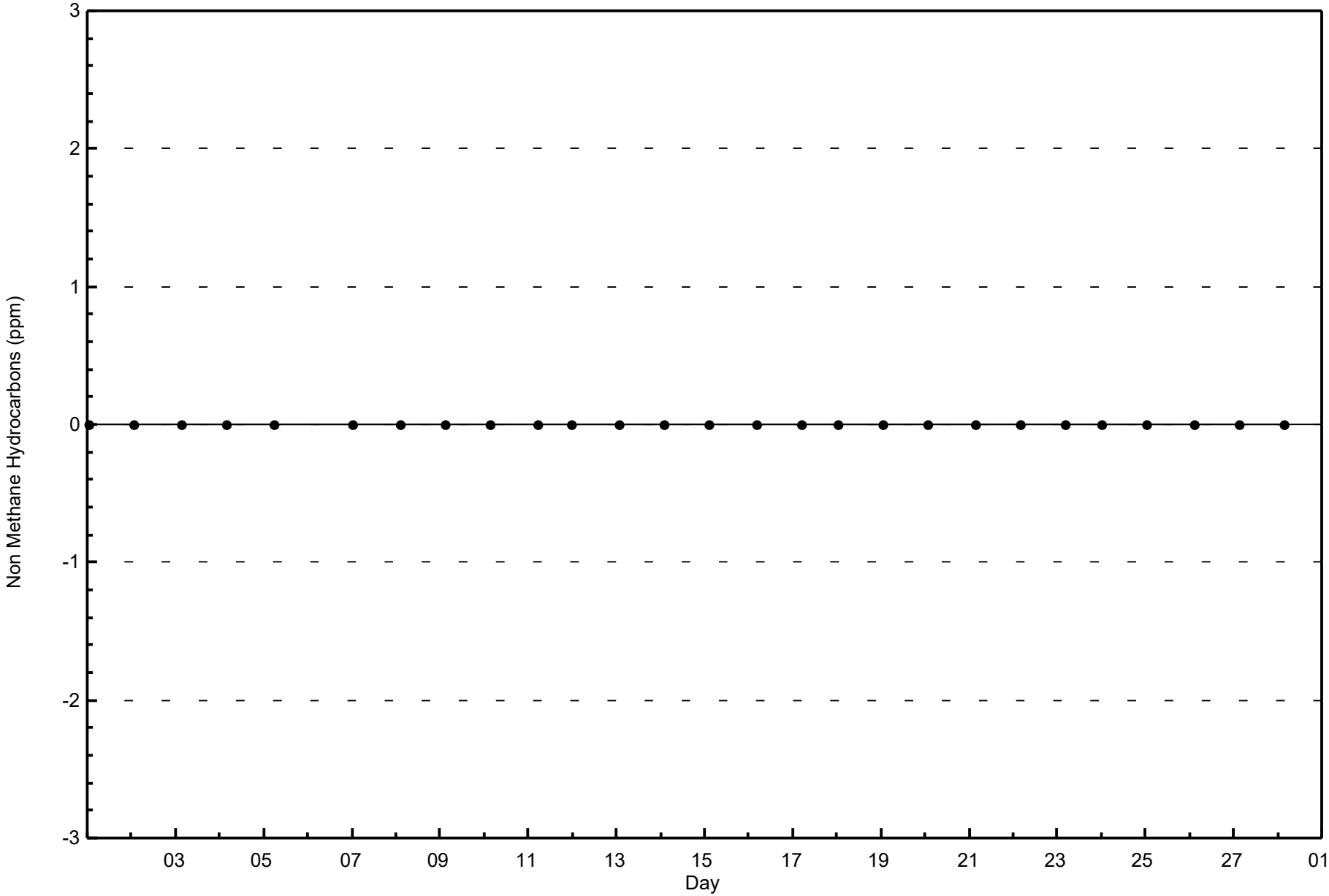
Total Number of Valid Hours: 626

Wood Buffalo Environmental Association

Zero Responses

Non Methane Hydrocarbons (NMHC) - ppm

Ells River - February 2025

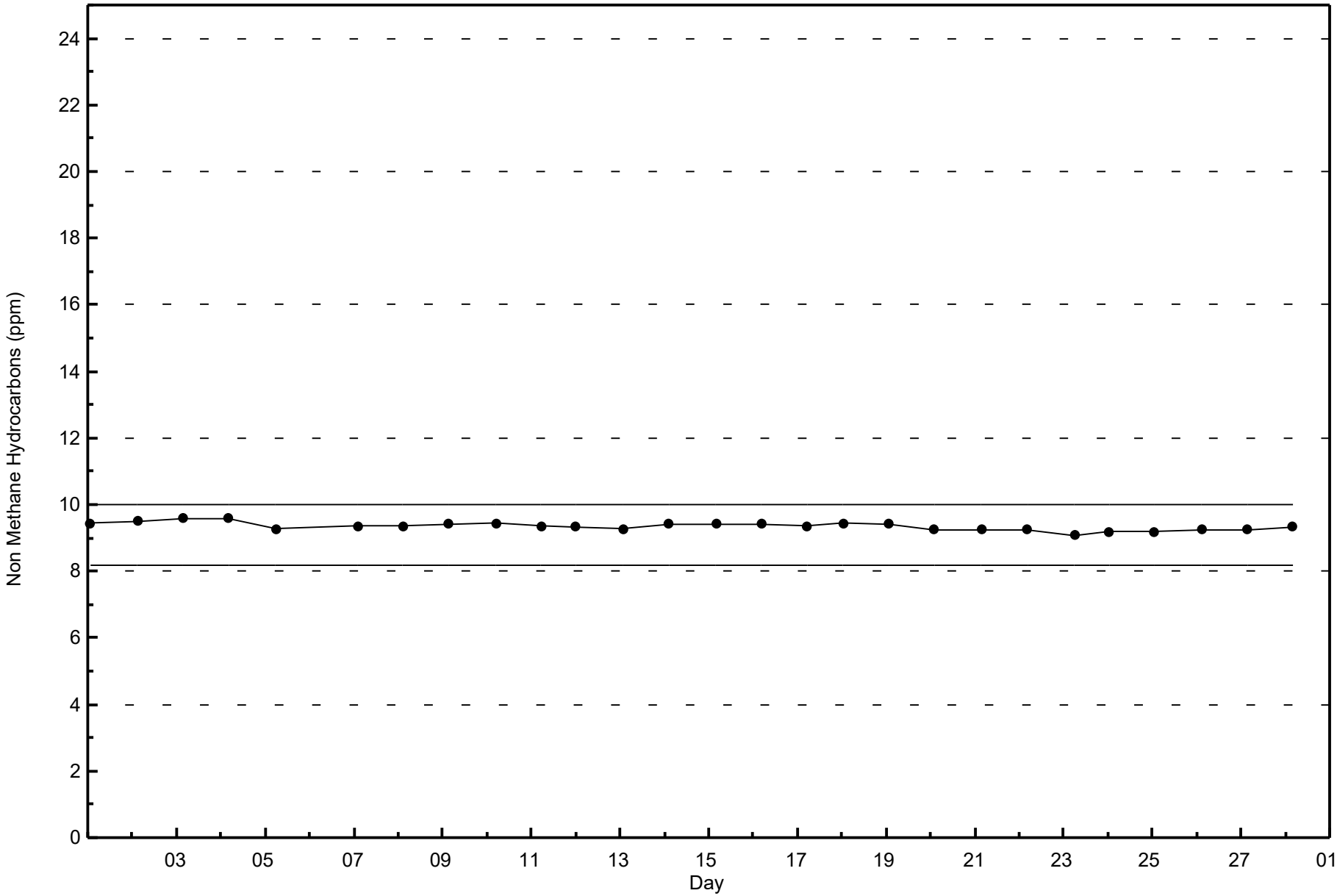


Wood Buffalo Environmental Association

Span Responses

Non Methane Hydrocarbons (NMHC) - ppm

Ells River - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Methane (CH_4) - ppm

Ells River - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 5.9 ppm on Feb 21 10:00
Maximum Daily Average: 2.8 ppm on Feb 21

Minimum Value: 2.0 ppm on Feb 6 02:00
Minimum Daily Average: 2.0 ppm on Feb 5
Maximum Diurnal Average: 2.4 ppm at hour 7
Minimum Diurnal Average: 2.1 ppm at hour 16
Monthly Average: 2.23 ppm
Percentiles: P_1 = 2.0 P_{10} = 2.0 Q_1 = 2.1 Median = 2.1 Q_3 = 2.3 P_{90} = 2.6 P_{99} = 3.6

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	2.1	Z	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
2-Feb	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	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
3-Feb	2.1	2.2	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2
4-Feb	2.1	2.1	2.1	2.1	Z	2.1	2.1	2.1	2.1	2.1	2.1	C	C	C	C	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1
5-Feb	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
6-Feb	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.2	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.2
7-Feb	2.0	Z	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
8-Feb	2.0	2.0	Z	2.1	2.1	2.0	2.1	2.0	2.1	2.1	2.0	2.0	2.1	2.2	2.2	2.3	2.7	2.3	2.8	2.3	2.1	2.1	2.1	2.2	2.2	2.8
9-Feb	2.1	2.1	2.0	Z	2.3	2.4	2.2	2.2	2.2	2.2	2.9	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.2	2.9
10-Feb	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	2.3	2.3	2.4	2.4	2.5	2.5	2.6	2.2	2.6
11-Feb	2.8	2.9	2.9	2.9	2.9	Z	2.7	2.7	2.7	2.4	2.3	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.4	2.9
12-Feb	Z	2.2	2.2	2.1	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.2	2.2	2.4	2.2	2.1	2.1	2.1	2.2	2.3	2.4	2.2	2.2	2.1	2.2	2.4
13-Feb	2.0	Z	2.2	2.5	2.6	2.6	2.7	2.8	2.9	3.1	2.9	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.3	2.3	2.3	2.4	3.1
14-Feb	2.5	2.7	Z	2.6	2.5	2.5	2.5	2.4	2.4	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.4	2.2	2.2	2.2	2.5	2.4	2.3	2.7
15-Feb	2.5	2.5	2.4	Z	2.4	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.3	2.3	2.3	2.1	2.1	2.1	2.1	2.2	2.5
16-Feb	2.1	2.1	2.2	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3
17-Feb	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	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
18-Feb	Z	2.1	2.1	2.2	2.2	2.2	2.2	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	2.2	2.1	2.2	2.3
19-Feb	2.1	Z	2.1	2.2	2.2	2.1	2.2	2.2	2.2	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	2.1	2.2
20-Feb	2.1	2.0	Z	2.1	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.7	3.2	3.3	2.3	3.3
21-Feb	3.4	3.1	3.0	Z	3.1	3.2	3.0	2.9	3.1	5.9	3.4	2.2	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.6	2.6	2.8	2.8	5.9
22-Feb	2.5	2.5	3.0	3.0	Z	2.3	3.3	3.8	3.8	3.7	3.2	2.8	2.6	2.4	2.3	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.3	2.7	3.8
23-Feb	2.2	2.2	2.1	2.5	2.6	Z	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	2.2	2.2	2.5	2.3	2.2	2.2	2.6
24-Feb	Z	2.1	2.2	2.6	2.2	2.5	3.2	3.1	2.6	2.5	2.5	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.2	2.2	2.7	2.4	2.2	2.1	2.4	3.2
25-Feb	2.1	Z	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	2.2	2.2	2.1	2.1	2.1	2.1	2.8	2.6	2.5	2.2	2.8
26-Feb	2.7	2.5	Z	2.3	2.3	3.0	3.9	3.5	2.2	2.2	2.2	2.1	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.3	2.6	2.5	2.1	2.4	3.9
27-Feb	2.3	2.5	3.1	Z	2.7	3.1	3.9	3.8	2.9	2.2	2.1	2.1	2.2	2.2	2.1	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.4	3.9
28-Feb	2.1	2.2	2.2	2.2	Z	2.1	2.1	2.2	2.4	2.3	2.3	2.2	2.3	2.3	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.4
	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.3	2.4	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	Diurnal Average	
	3.4	3.1	3.1	3.0	3.1	3.2	3.9	3.8	3.8	5.9	3.4	2.8	2.6	2.4	2.3	2.3	2.7	2.3	2.8	2.4	2.7	2.8	3.2	3.3	Diurnal Maximum	

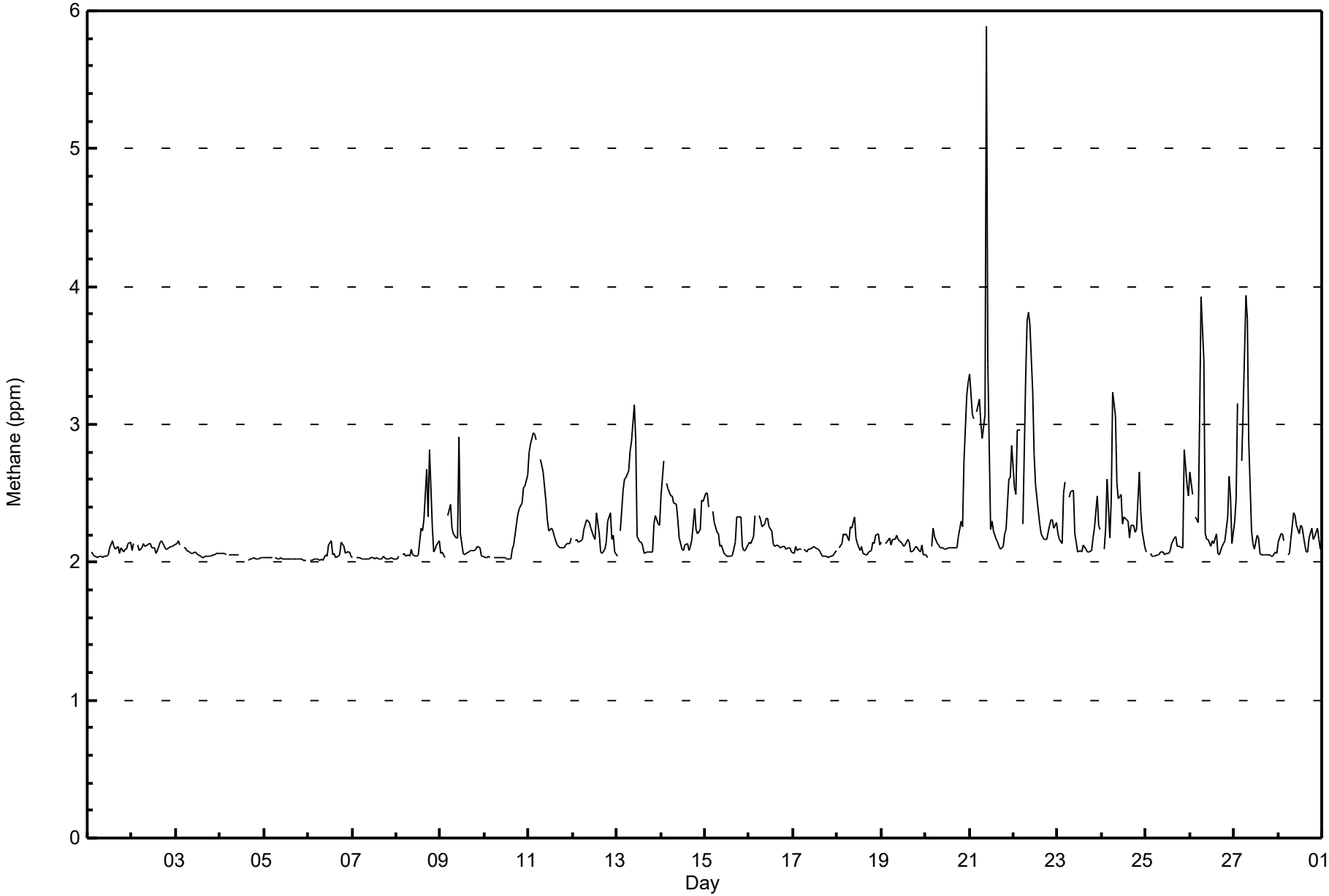
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Methane (CH_4) - ppm

Ells River - February 2025



Methane (CH_4) - ppm
Ells River - February 2025

Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	123	19.22	19.22
2.1 - 3.0	494	77.19	96.41
3.1 - 10.0	23	3.59	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 640

Total Number of Hours: 672



Wood Buffalo Environmental Association

Frequency Distribution

Methane (CH_4) - ppm

Ells River - February 2025

Concentration Ranges (ppm)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2.0	5	11	1	0	0	3	3	1	5	38	41	5	3	4	2	0	122
2.1 - 3.0	75	72	30	6	3	10	29	60	72	27	22	18	12	17	17	13	483
3.1 - 10.0	3	0	0	0	2	0	0	0	0	1	2	1	2	3	3	4	21
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	83	83	31	6	5	13	32	61	77	66	65	24	17	24	22	17	626

Total Number of Valid Hours: 626

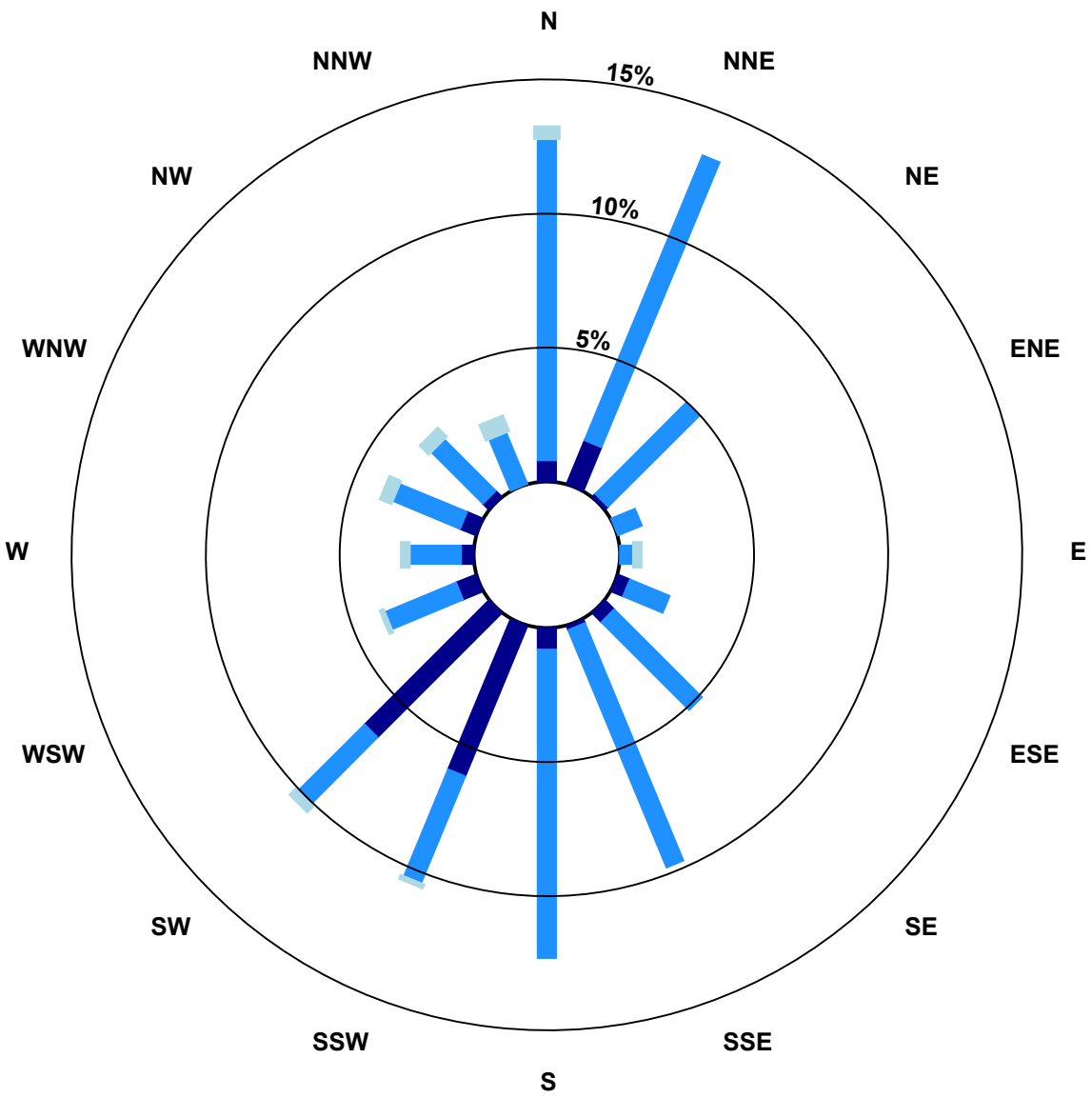
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Methane (CH_4) - ppm

Ells River



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

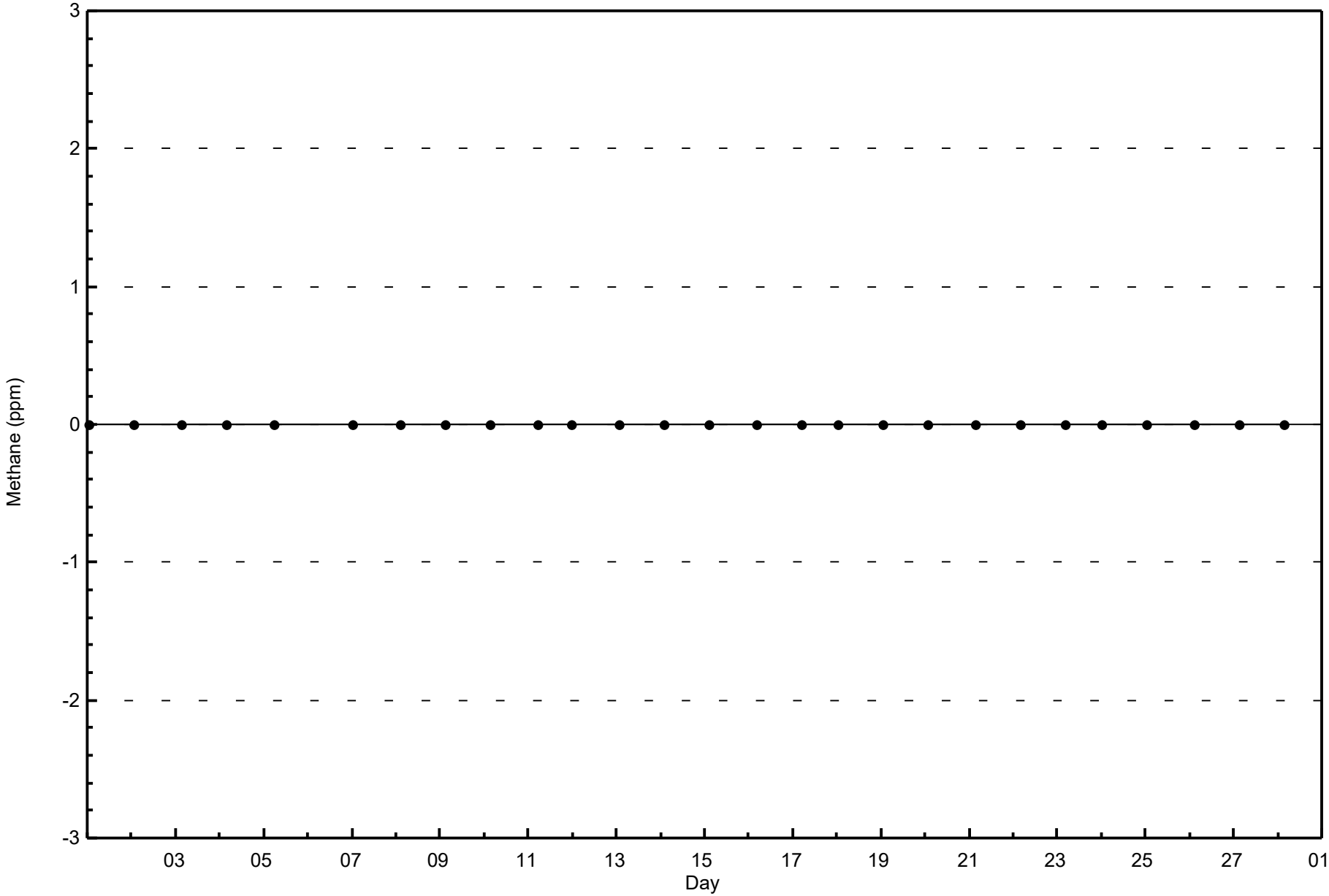
Total Number of Valid Hours: 626

Wood Buffalo Environmental Association

Zero Responses

Methane (CH_4) - ppm

Ells River - February 2025

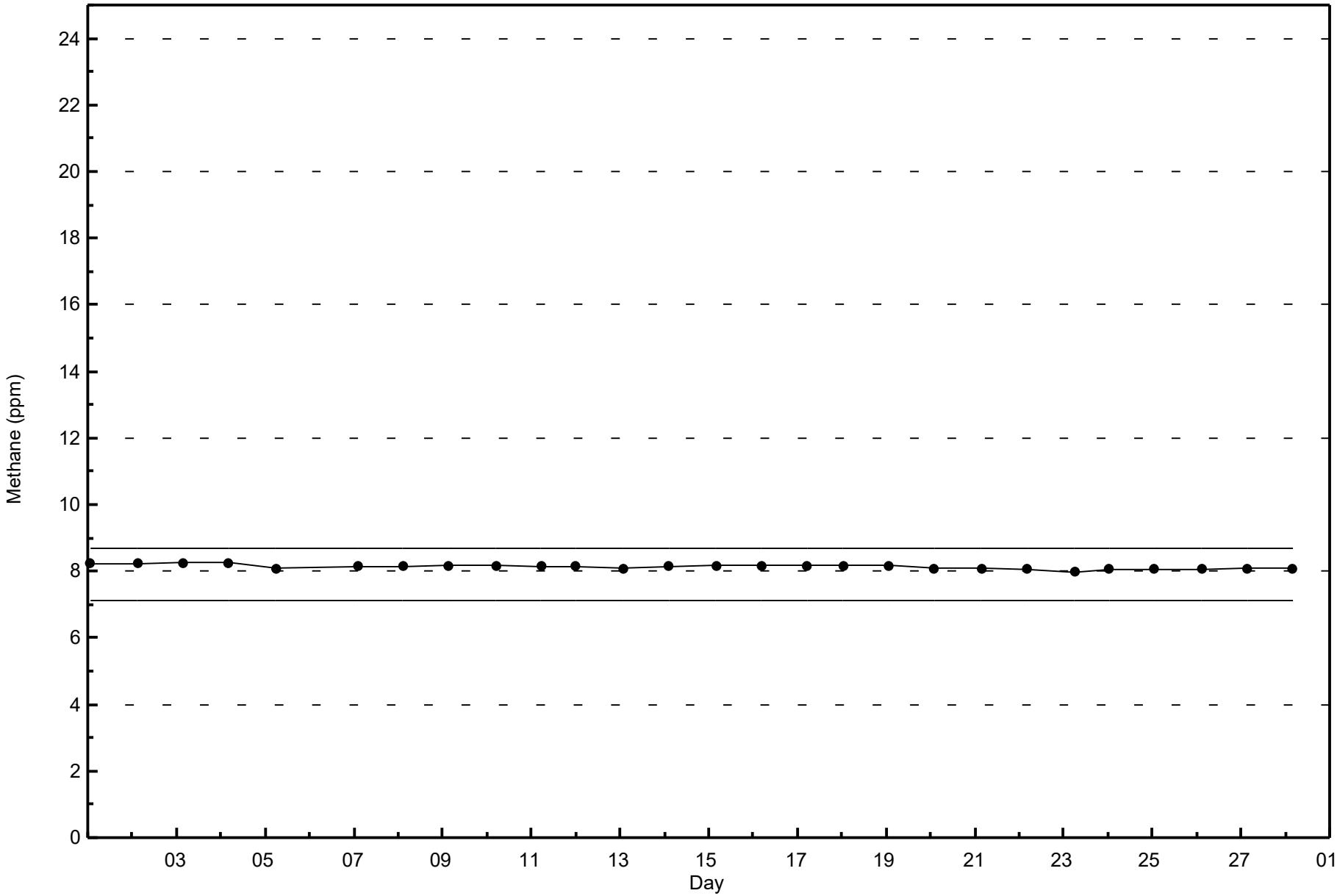


Wood Buffalo Environmental Association

Span Responses

Methane (CH_4) - ppm

Ells River - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Ells River - February 2025

Maximum Value: 150.6 ppb on Feb 21 10:00

Maximum Daily Average: 24.3 ppb on Feb 21

Minimum Value: 0.0 ppb on Feb 1 03:00

Minimum Daily Average: 0.1 ppb on Feb 4

Maximum Diurnal Average: 14.2 ppb at hour 10

Minimum Diurnal Average: 1.5 ppb at hour 21

Monthly Average: 5.37 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.6 Q_3 = 5.1 P_{90} = 14.6 P_{99} = 57.8

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.6	1.1	0.6	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.2	1.1
2-Feb	Z	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.4	1.8	3.1	2.3	2.8	0.8	1.5	2.8	2.0	0.5	0.1	0.2	0.0	0.1	0.0	0.0	0.8	3.1
3-Feb	0.2	Z	0.0	0.9	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.9
4-Feb	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.1	0.3	0.2	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.3
5-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.3	0.1	0.2	0.0	0.1	0.1	0.2	0.2	0.4	0.2	0.7	0.0	0.1	0.2	0.0	0.0	0.0	0.1	0.7
6-Feb	0.0	0.0	0.0	0.0	Z	0.2	0.0	0.0	0.1	0.4	0.5	1.1	1.8	1.2	0.7	0.9	1.1	0.2	0.3	0.2	0.1	0.1	0.2	0.1	0.4	1.8
7-Feb	0.1	0.2	0.0	0.0	0.0	Z	0.0	0.6	0.1	0.1	0.1	0.4	0.7	0.8	0.3	0.2	0.2	0.3	0.4	0.2	0.1	0.1	0.1	0.1	0.2	0.8
8-Feb	Z	0.2	2.4	0.8	0.1	0.1	0.1	1.4	5.8	1.0	0.3	0.5	1.2	11.0	10.5	12.3	12.0	6.5	61.3	9.4	0.0	0.1	0.1	0.1	6.0	61.3
9-Feb	0.0	Z	0.0	0.4	1.9	4.9	0.6	0.3	3.0	3.4	34.6	15.2	4.7	3.7	3.4	3.2	2.4	0.5	0.3	0.8	0.1	0.1	0.2	0.0	3.6	34.6
10-Feb	0.0	0.2	Z	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	C	C	C	C	C	0.8	8.2	19.4	18.6	8.4	5.5	11.1	13.7	4.8	19.4
11-Feb	19.0	23.0	23.3	Z	20.5	2.9	2.4	4.2	11.0	13.1	10.6	9.0	10.1	9.7	7.4	4.2	2.7	1.7	0.3	0.4	0.2	1.3	0.1	0.1	7.7	23.3
12-Feb	0.1	0.0	0.4	0.1	Z	0.3	2.7	8.2	10.6	16.5	16.5	14.5	12.1	19.5	11.3	2.5	1.8	0.4	0.2	0.1	0.1	0.1	0.1	0.1	5.1	19.5
13-Feb	0.1	0.1	0.1	0.8	2.5	Z	5.8	19.7	24.4	37.5	32.0	15.4	11.8	11.9	8.8	3.3	2.1	0.5	0.0	0.0	3.9	1.4	1.0	2.8	8.1	37.5
14-Feb	Z	14.3	14.0	8.9	5.6	2.6	2.4	2.9	4.7	6.0	6.4	1.9	2.5	6.3	6.7	4.2	5.1	6.0	18.1	7.2	3.9	4.7	28.8	19.4	8.0	28.8
15-Feb	23.9	Z	6.8	11.1	8.7	4.6	1.1	1.7	1.0	4.1	0.1	0.0	0.0	0.0	0.1	0.3	3.3	10.4	14.5	4.2	0.0	0.1	0.3	2.1	4.3	23.9
16-Feb	0.1	0.6	Z	2.0	3.6	2.5	1.1	4.5	9.2	17.1	20.1	9.2	8.7	11.5	16.4	15.1	3.2	0.6	2.1	1.6	0.6	0.4	1.9	1.1	5.8	20.1
17-Feb	0.1	0.0	0.0	Z	0.1	0.3	0.2	0.1	1.7	2.4	4.9	7.1	6.8	7.0	6.3	2.5	0.8	0.3	0.7	0.1	0.2	0.7	0.2	0.2	1.9	7.1
18-Feb	4.2	2.8	0.2	0.3	Z	0.5	0.3	11.2	20.3	27.4	12.6	7.0	3.0	5.6	0.9	0.5	0.7	0.4	0.2	0.1	0.3	0.1	0.3	0.3	4.3	27.4
19-Feb	0.1	0.0	0.2	0.1	0.3	Z	0.9	0.8	7.4	6.4	9.1	7.3	7.9	5.1	6.7	3.1	0.7	0.3	0.1	0.1	0.1	0.0	0.1	0.1	2.5	9.1
20-Feb	Z	0.1	0.0	0.2	0.1	0.1	0.0	0.0	0.2	0.5	0.6	0.6	0.5	0.8	0.7	0.8	0.3	0.1	0.3	0.2	0.5	33.2	54.8	54.7	6.5	54.8
21-Feb	53.4	Z	34.7	37.4	40.2	42.8	32.6	25.2	36.1	150.6	59.7	4.1	5.1	5.1	4.6	2.4	1.2	0.3	0.0	0.1	0.2	9.6	6.6	7.2	24.3	150.6
22-Feb	0.1	3.4	Z	12.7	0.0	0.7	49.7	83.6	82.4	67.3	46.5	21.3	15.4	11.4	8.7	4.5	2.2	1.0	0.3	0.1	0.2	0.4	1.2	8.1	18.3	83.6
23-Feb	2.0	1.4	0.1	Z	16.8	9.5	7.5	14.4	13.8	1.9	1.3	1.0	1.6	3.3	2.5	2.2	1.0	0.3	0.0	0.0	0.2	0.3	0.0	0.0	3.5	16.8
24-Feb	0.1	0.0	0.6	4.0	Z	1.0	17.1	16.6	10.3	18.6	16.7	9.6	18.6	18.7	11.1	3.1	3.3	1.5	0.3	0.2	19.8	3.4	0.1	0.0	7.6	19.8
25-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.6	1.3	1.8	3.4	4.1	5.0	4.8	5.7	5.8	1.6	0.2	0.0	0.0	26.2	25.8	16.8	4.5	26.2
26-Feb	Z	11.8	7.0	7.2	6.8	51.7	81.8	44.8	6.1	6.7	6.6	6.0	8.0	4.9	8.3	2.7	1.4	2.0	0.5	0.2	4.0	11.9	2.1	0.0	12.3	81.8
27-Feb	0.1	Z	0.2	8.0	1.2	6.0	37.3	51.5	28.0	3.4	2.0	1.7	4.9	6.3	2.8	0.7	1.2	0.4	0.1	0.0	0.1	0.1	0.1	0.1	6.8	51.5
28-Feb	0.1	0.1	Z	0.1	0.1	0.0	0.0	0.5	4.6	10.8	9.6	5.1	7.5	9.8	4.3	2.4	1.9	2.7	0.5	0.2	0.1	0.1	0.1	0.1	2.6	10.8
	4.5	2.5	3.9	4.0	4.5	5.7	8.7	10.5	10.1	14.2	10.6	5.3	5.2	5.9	4.8	3.0	2.1	1.7	4.3	1.6	1.5	3.6	4.8	4.5	Diurnal Average	
	53.4	23.0	34.7	37.4	40.2	51.7	81.8	83.6	82.4	150.6	59.7	21.3	18.6	19.5	16.4	15.1	12.0	10.4	61.3	18.6	19.8	33.2	54.8	54.7	Diurnal Maximum	

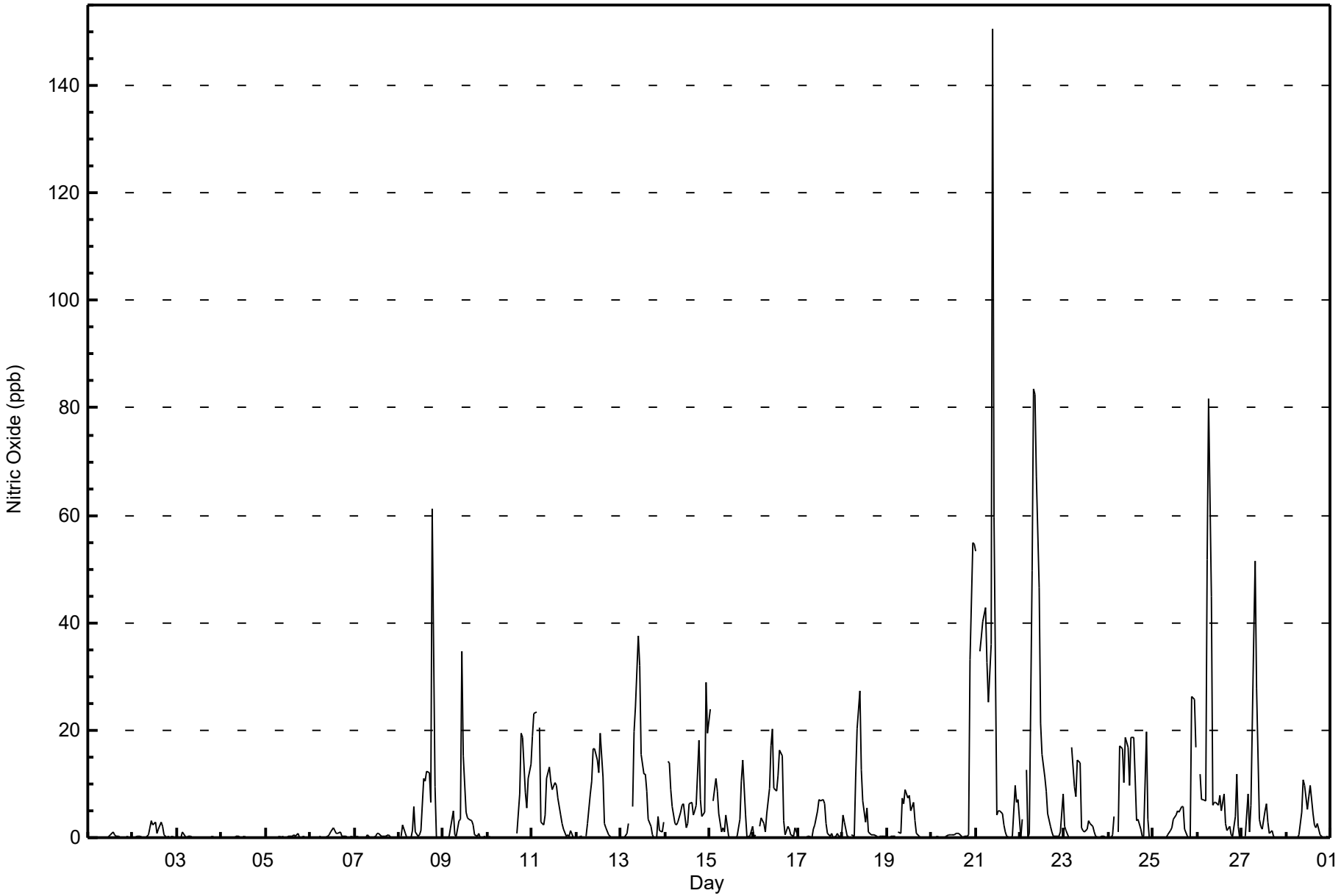
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Ells River - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	601	94.05	94.05
21 - 40	22	3.44	97.50
11 - 80	12	1.88	99.37
81 - 159	4	0.63	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Ells River - February 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	78	84	30	6	3	13	31	62	73	66	65	19	14	18	16	13	591
21 - 40	1	0	0	0	1	0	0	0	3	1	1	2	2	3	3	3	20
11 - 80	4	0	0	0	0	0	0	0	0	0	2	0	1	2	1	1	11
81 - 159	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	3
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	83	84	30	6	4	13	31	62	76	67	68	22	17	24	21	17	625

Total Number of Valid Hours: 625

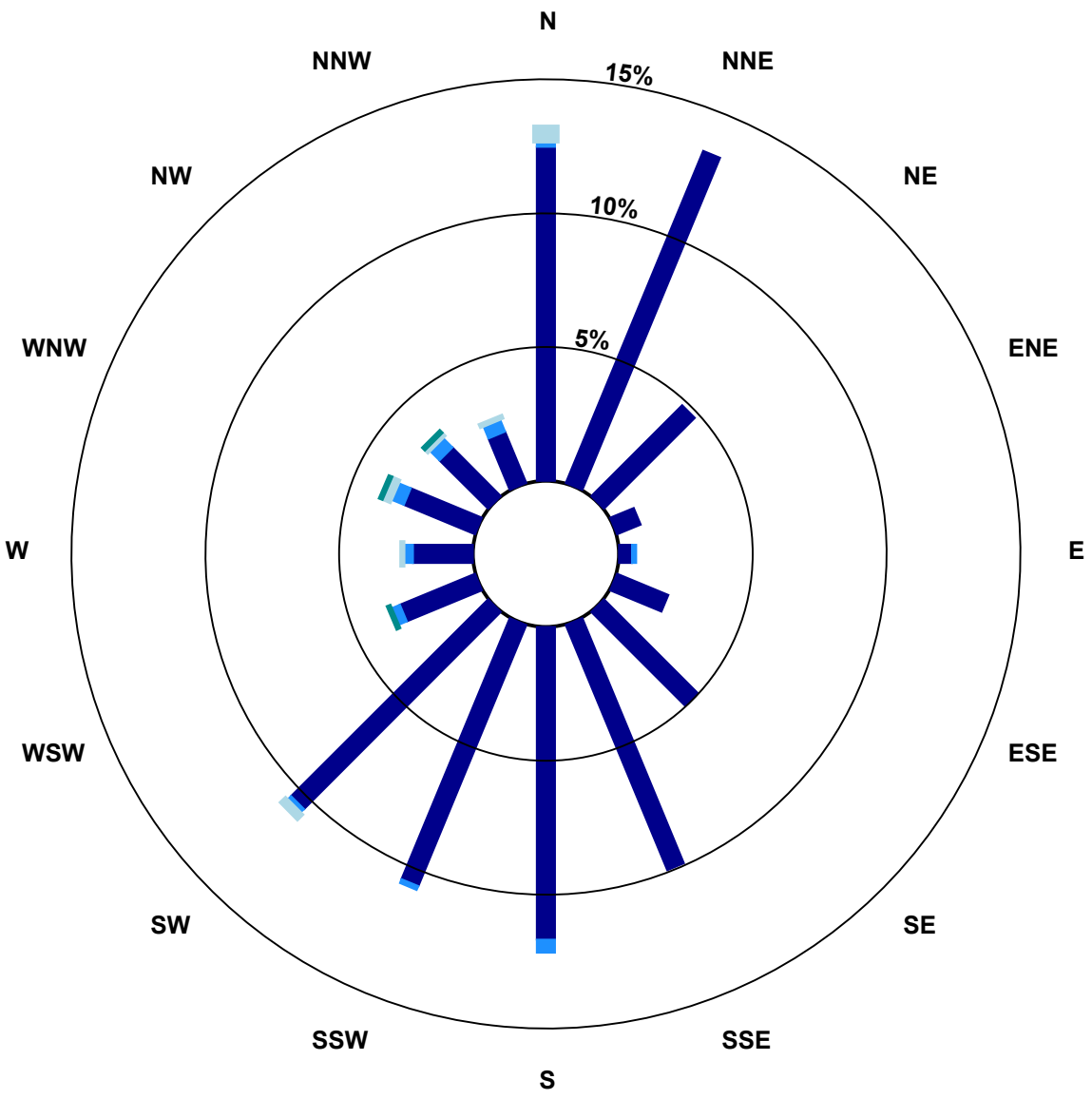
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitric Oxide (NO) - ppb

Ells River



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

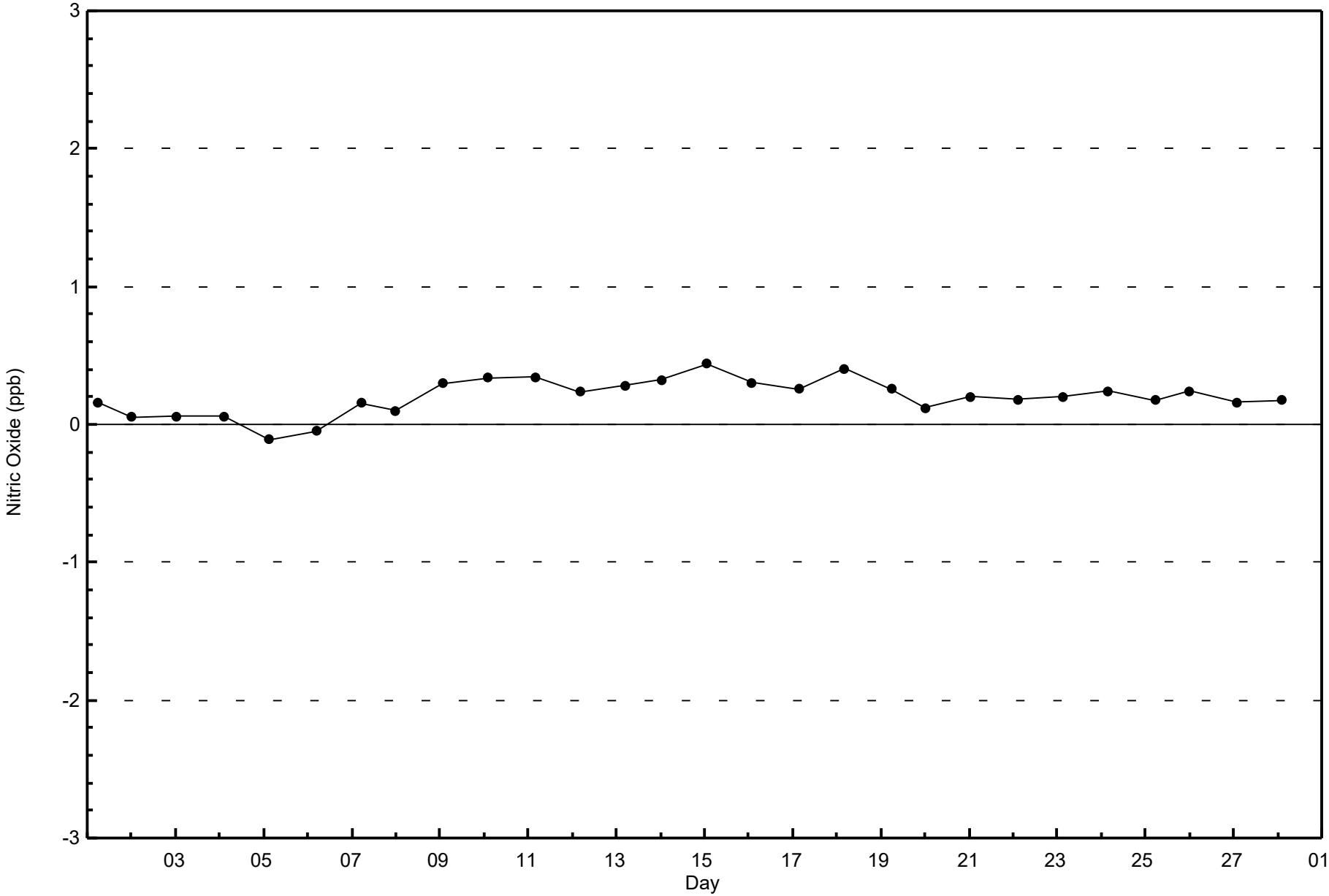
Total Number of Valid Hours: 625

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Ells River - February 2025

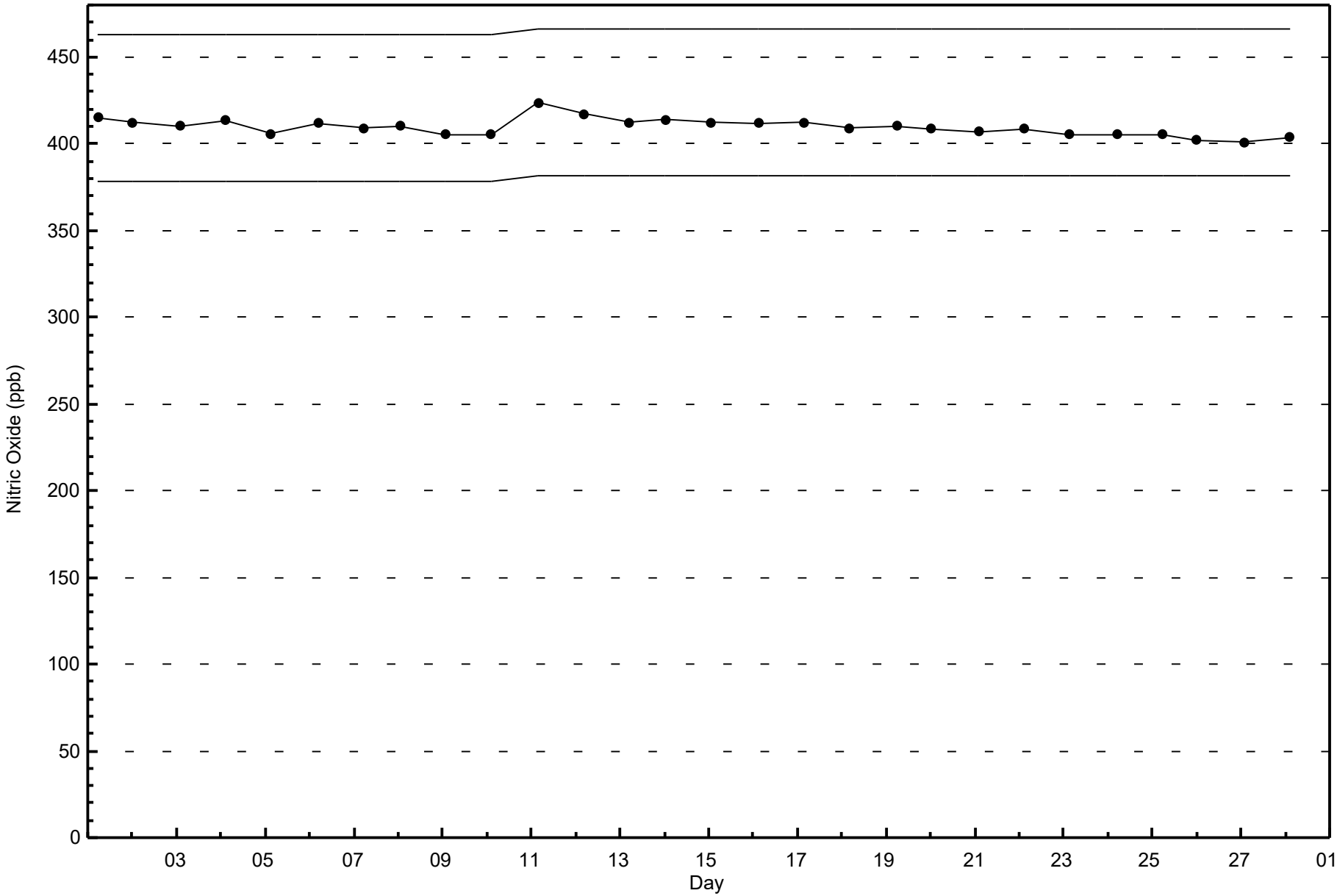


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Ells River - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Ells River - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 45.5 ppb on Feb 8 19:00 Maximum Daily Average: 21.7 ppb on Feb 22

Minimum Value: 0.0 ppb on Feb 3 15:00 Minimum Daily Average: 0.4 ppb on Feb 4
Maximum Diurnal Average: 14.9 ppb at hour 6 Minimum Diurnal Average: 6.4 ppb at hour 16
Monthly Average: 11.58 ppb Percentiles: P_1 = 0.1 P_{10} = 0.5 Q_1 = 3.4 Median = 9.9 Q_3 = 17.8 P_{90} = 25.9 P_{99} = 37.2

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	1.8	2.1	3.3	1.2	1.0	Z	1.5	1.4	0.8	0.5	0.6	0.6	1.6	3.5	2.6	2.0	2.6	0.9	4.1	4.9	10.0	12.4	12.3	7.7	3.5	12.4
2-Feb	Z	7.8	9.5	10.4	10.8	12.3	9.2	7.5	7.7	8.0	7.2	4.2	4.4	1.6	3.4	8.8	13.9	19.1	13.4	13.8	13.2	12.8	12.7	12.2	9.7	19.1
3-Feb	11.6	Z	5.1	4.9	4.4	5.1	1.3	1.2	0.6	0.2	0.2	0.2	0.1	0.4	0.0	0.2	0.1	0.1	0.2	0.2	0.4	0.1	0.1	0.2	1.6	11.6
4-Feb	0.2	0.2	Z	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.2	0.3	0.4	0.6	0.5	0.4	0.4	0.6	0.7	0.4	0.7
5-Feb	0.7	0.7	0.7	Z	0.7	0.6	0.6	0.7	0.6	0.6	0.7	0.7	0.7	0.7	0.8	0.9	0.9	1.2	0.9	1.0	1.0	0.7	0.6	0.6	0.8	1.2
6-Feb	0.5	0.5	0.7	0.6	Z	0.9	0.6	1.2	0.7	5.1	3.4	4.1	5.9	3.7	2.3	3.0	6.5	7.6	16.2	5.1	2.4	1.6	1.4	0.4	3.2	16.2
7-Feb	0.1	0.4	0.2	0.2	0.2	Z	1.7	2.7	0.2	0.2	0.2	0.3	1.5	1.5	0.9	1.6	1.3	1.8	0.5	0.8	0.9	0.3	0.2	0.1	0.8	2.7
8-Feb	Z	1.1	3.9	2.8	0.7	0.6	2.5	2.8	11.7	2.6	0.7	0.8	1.8	12.4	13.6	19.8	23.9	35.0	45.5	19.3	5.9	6.9	4.3	5.9	9.8	45.5
9-Feb	5.1	Z	1.2	11.7	23.3	25.7	17.0	12.7	11.6	5.3	17.7	11.3	4.4	3.7	4.0	5.5	8.6	12.0	11.3	11.6	9.2	5.5	0.9	0.4	9.6	25.7
10-Feb	0.2	0.2	Z	0.4	0.3	0.1	0.2	0.1	0.2	0.3	0.2	C	C	C	C	C	7.3	31.5	37.9	37.3	35.7	35.0	35.0	33.6	14.2	37.9
11-Feb	32.1	30.9	31.2	Z	30.5	30.1	30.5	28.2	25.2	22.7	17.5	13.9	13.6	13.4	11.2	10.1	10.4	12.6	11.5	12.2	12.5	17.2	12.7	17.3	19.5	32.1
12-Feb	14.1	12.9	12.6	11.8	Z	15.6	22.3	27.3	24.5	22.1	18.6	15.9	13.2	18.2	14.6	7.5	12.8	14.9	20.3	15.7	11.9	9.3	7.3	3.7	15.1	27.3
13-Feb	3.0	6.8	17.9	29.1	30.2	Z	29.3	30.2	29.7	27.2	22.4	13.5	10.7	10.9	9.8	7.0	8.6	11.1	10.7	12.2	25.0	25.2	27.3	28.2	18.5	30.2
14-Feb	Z	25.1	23.4	21.8	20.0	19.2	17.9	16.0	10.4	5.2	4.6	2.0	2.7	6.1	7.4	6.9	12.9	19.6	31.4	27.3	22.4	22.4	26.5	24.2	16.3	31.4
15-Feb	24.2	Z	24.4	23.0	21.5	19.8	14.9	11.6	5.0	7.7	0.7	0.5	0.3	0.3	0.7	1.5	12.3	33.4	35.9	31.3	9.9	8.4	12.8	15.5	13.7	35.9
16-Feb	13.8	11.2	Z	22.4	22.2	21.1	20.0	24.0	15.9	13.9	15.7	9.2	8.5	10.6	15.8	17.9	12.0	9.6	10.0	13.1	11.1	10.1	16.0	13.6	14.7	24.0
17-Feb	5.1	9.3	8.4	Z	9.3	11.0	12.5	7.5	9.4	6.4	7.1	7.7	6.6	7.2	7.9	5.5	4.1	4.2	10.1	9.4	7.4	6.2	9.1	5.6	7.7	12.5
18-Feb	7.8	10.3	11.6	16.9	Z	22.6	21.6	22.4	18.6	19.0	11.9	7.1	3.3	6.1	2.2	1.9	4.2	10.6	9.9	12.0	13.0	13.6	26.2	17.2	12.6	26.2
19-Feb	13.5	12.2	19.0	17.8	19.0	Z	18.1	13.1	12.9	10.3	10.7	8.7	8.8	7.3	10.6	8.2	4.9	5.4	7.8	9.5	13.9	6.9	7.8	5.4	10.9	19.0
20-Feb	Z	3.4	4.0	6.5	15.8	11.6	5.6	6.0	4.2	5.5	5.4	3.8	2.3	2.3	2.3	2.7	3.2	4.2	12.6	18.4	15.8	22.5	26.9	25.3	9.1	26.9
21-Feb	24.0	Z	23.5	22.2	24.0	25.8	22.2	19.9	20.4	42.6	28.9	6.7	11.8	10.3	12.1	9.0	8.4	8.1	11.9	21.3	28.0	36.4	36.7	32.5	21.2	42.6
22-Feb	13.9	24.6	Z	29.1	3.8	24.5	38.9	40.1	39.1	37.1	33.2	24.7	20.5	18.5	14.4	10.2	8.7	12.1	11.9	17.7	18.1	18.6	18.4	21.1	21.7	40.1
23-Feb	16.7	12.7	7.5	Z	24.5	22.2	18.9	19.5	17.8	9.1	6.1	4.7	5.7	8.0	7.1	7.4	7.8	8.1	10.6	14.9	18.8	26.9	19.3	15.1	13.5	26.9
24-Feb	19.9	11.3	20.6	34.7	Z	21.1	35.9	34.0	25.6	24.8	21.2	14.2	18.8	16.1	14.8	10.2	13.6	14.4	13.6	13.6	31.6	28.5	18.4	11.2	20.4	35.9
25-Feb	11.1	8.6	7.3	4.7	4.7	Z	5.6	5.4	6.0	6.0	5.1	7.2	7.4	8.1	10.9	11.8	16.2	16.4	18.3	14.5	11.8	29.7	34.7	33.3	12.4	34.7
26-Feb	Z	31.1	28.4	24.1	21.4	25.5	29.7	29.8	18.0	12.3	9.9	6.5	8.3	6.4	11.1	5.0	4.7	16.7	24.6	25.0	31.5	33.1	23.2	5.4	18.8	33.1
27-Feb	8.5	Z	14.9	28.9	13.4	23.8	33.5	33.5	26.3	10.9	5.9	4.5	6.5	8.8	7.2	3.1	8.0	7.8	8.3	6.6	7.3	5.9	6.4	6.2	12.4	33.5
28-Feb	12.6	14.1	Z	11.6	8.1	3.7	5.1	13.8	22.2	22.5	17.3	10.8	12.1	13.8	7.5	5.6	6.9	17.5	21.6	15.6	13.1	10.6	18.4	15.7	13.1	22.5
	10.5	10.3	12.1	14.0	12.9	14.9	14.9	14.7	13.1	11.7	9.8	6.8	6.7	7.4	7.2	6.4	8.0	12.0	14.7	13.7	13.7	14.5	14.9	12.8	Diurnal Average	
	32.1	31.1	31.2	34.7	30.5	30.1	38.9	40.1	39.1	42.6	33.2	24.7	20.5	18.5	15.8	19.8	23.9	35.0	45.5	37.3	35.7	36.4	36.7	33.6	Diurnal Maximum	

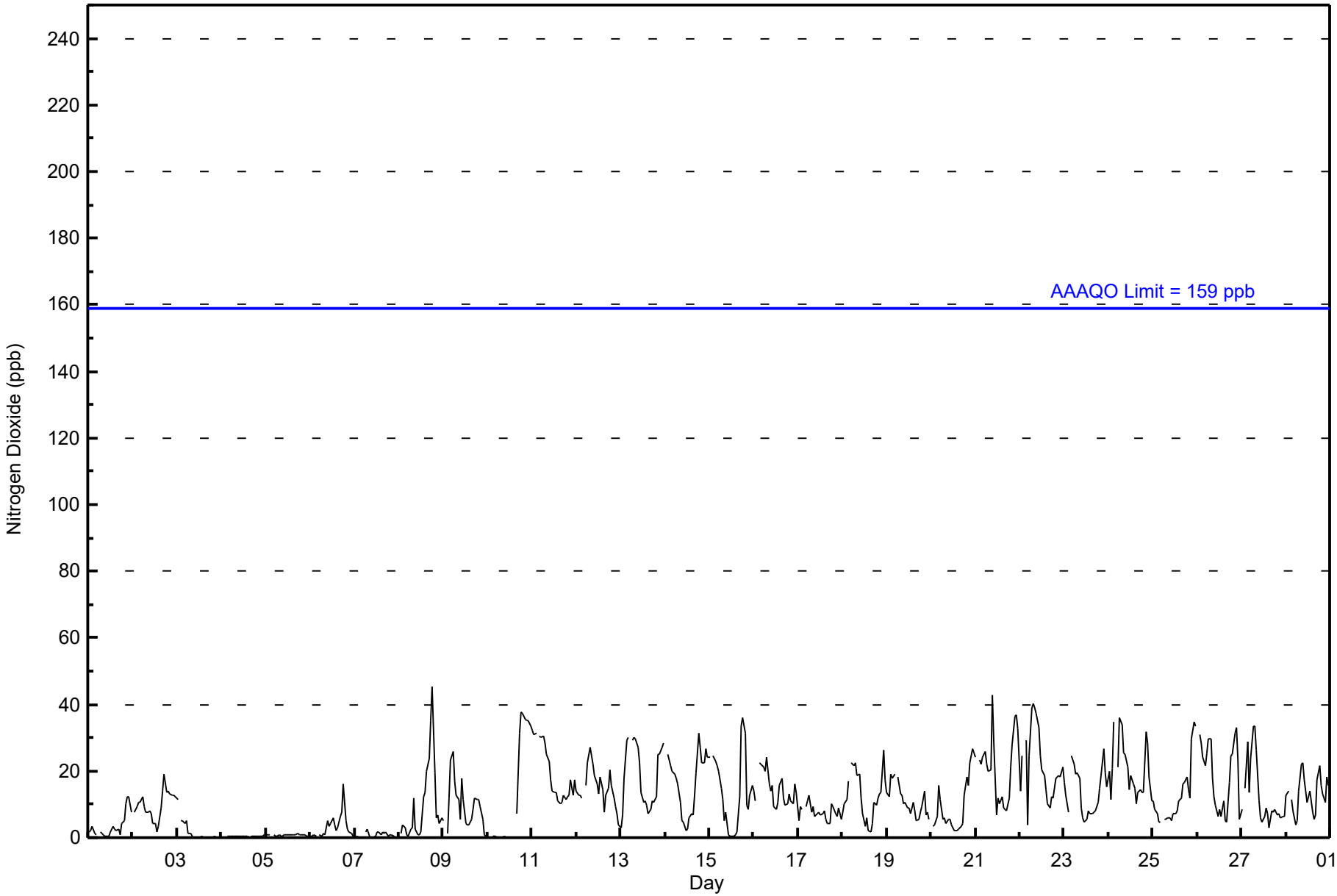
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Ells River - February 2025



Nitrogen Dioxide (NO_2) - ppb
Ells River - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	516	80.75	80.75
21 - 40	121	18.94	99.69
11 - 80	2	0.31	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Ells River - February 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	57	80	28	5	2	10	28	56	61	65	61	18	11	12	6	8	508
21 - 40	25	4	2	1	2	3	3	6	15	2	7	4	6	12	14	9	115
11 - 80	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	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	83	84	30	6	4	13	31	62	76	67	68	22	17	24	21	17	625

Total Number of Valid Hours: 625

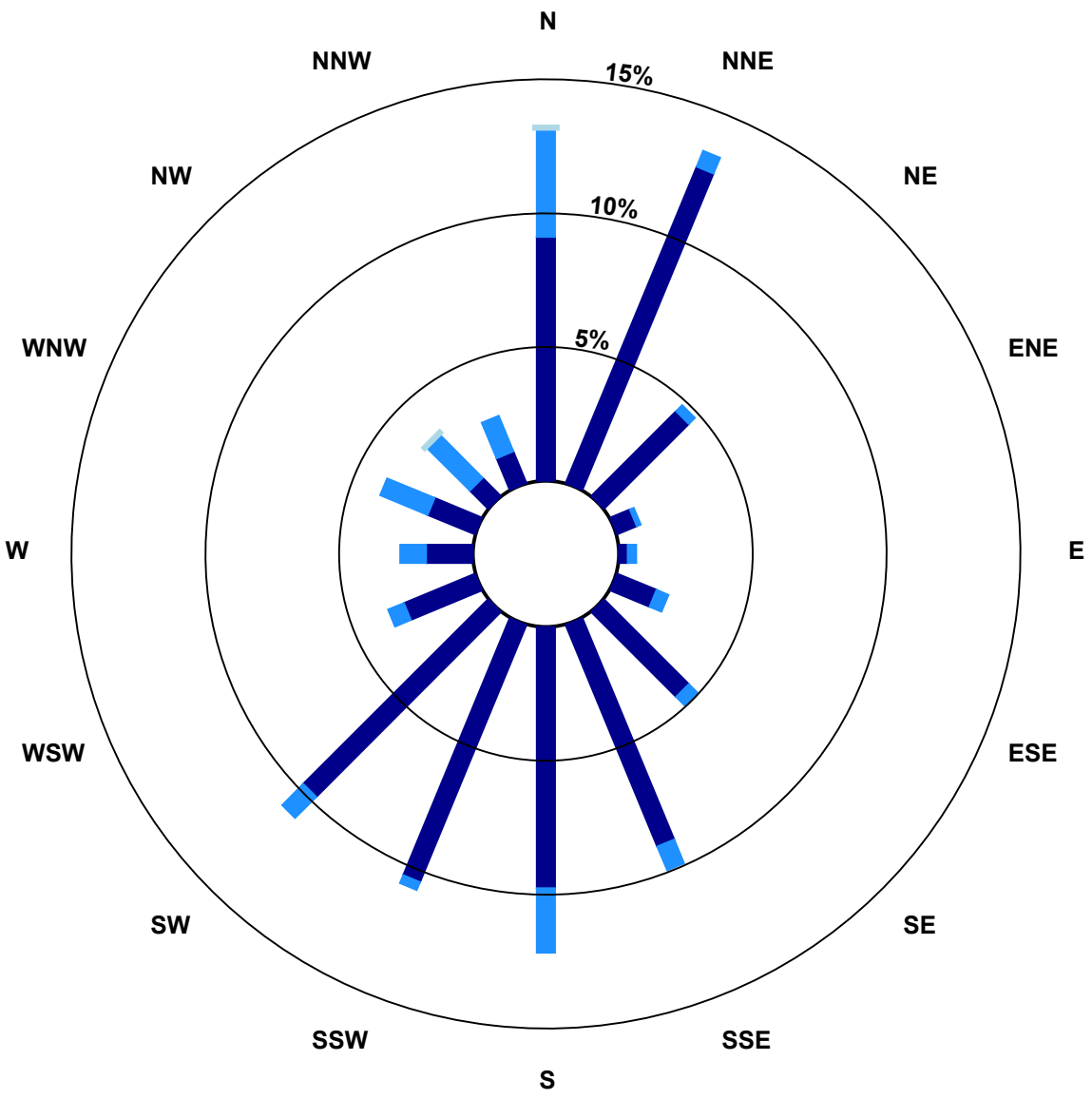
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Dioxide (NO_2) - ppb

Ells River



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

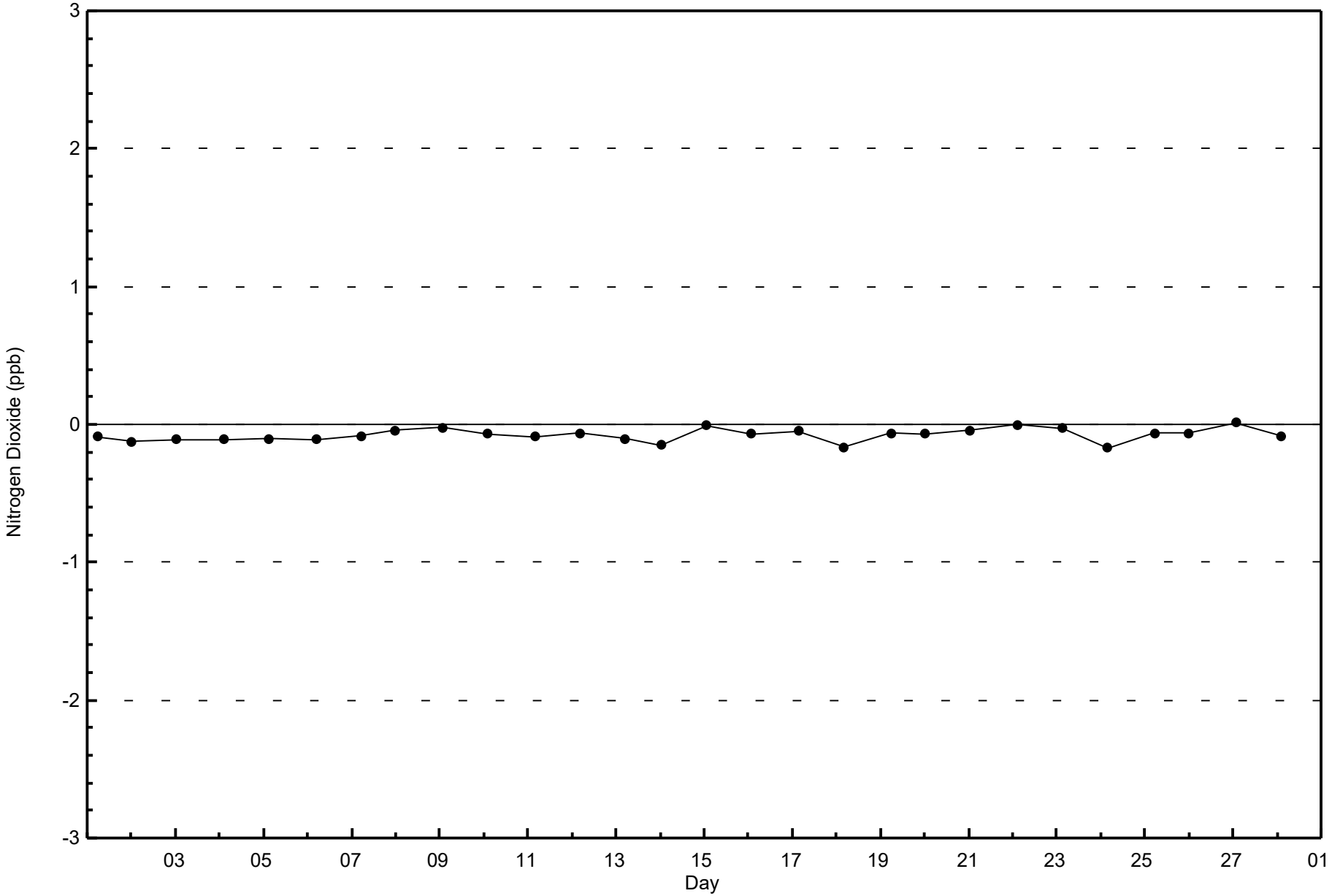
Total Number of Valid Hours: 625

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Ells River - February 2025

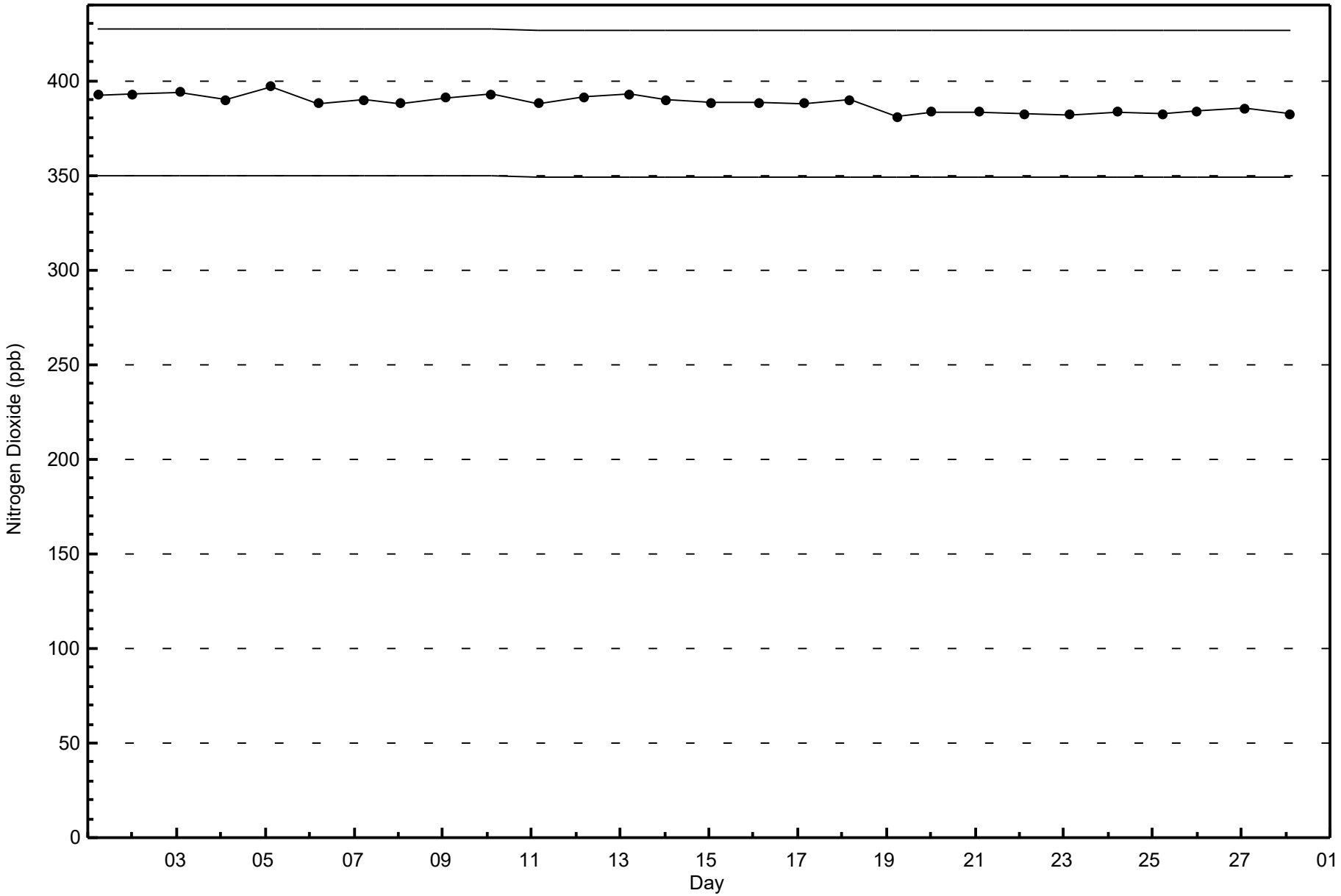


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Ells River - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Ells River - February 2025

Maximum Value: 193.2 ppb on Feb 21 10:00

Maximum Daily Average: 45.5 ppb on Feb 21

Minimum Value: 0.0 ppb on Feb 3 15:00

Minimum Daily Average: 0.4 ppb on Feb 4

Maximum Diurnal Average: 26.0 ppb at hour 10

Minimum Diurnal Average: 9.4 ppb at hour 16

Monthly Average: 16.96 ppb

Percentiles: P_1 = 0.2 P_{10} = 0.6 Q_1 = 3.9 Median = 11.8 Q_3 = 22.6 P_{90} = 39.4 P_{99} = 88.6

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	1.8	2.1	3.3	1.2	1.0	Z	1.5	1.4	0.8	0.6	0.7	0.7	2.2	4.6	3.2	2.3	2.8	1.0	4.2	5.0	10.1	12.5	12.4	7.7	3.6	12.5
2-Feb	Z	7.9	9.6	10.6	10.9	12.4	9.3	7.6	8.1	9.8	10.3	6.5	7.2	2.4	4.9	11.6	15.9	19.6	13.5	14.0	13.2	12.9	12.7	12.2	10.6	19.6
3-Feb	11.8	Z	5.1	5.8	4.6	5.2	1.5	1.4	0.7	0.3	0.3	0.2	0.1	0.4	0.0	0.2	0.1	0.1	0.2	0.4	0.4	0.1	0.1	0.2	1.7	11.8
4-Feb	0.2	0.2	Z	0.3	0.3	0.4	0.4	0.4	0.6	0.5	0.4	0.4	0.6	0.4	0.4	0.2	0.3	0.4	0.7	0.5	0.5	0.4	0.6	0.7	0.4	0.7
5-Feb	0.7	0.7	0.7	Z	0.7	0.6	0.7	1.0	0.7	0.8	0.7	0.8	0.8	0.9	1.0	1.3	1.1	1.9	0.9	1.1	1.2	0.7	0.6	0.6	0.9	1.9
6-Feb	0.5	0.5	0.7	0.6	Z	1.1	0.6	1.2	0.8	5.5	3.9	5.2	7.7	4.9	3.0	3.9	7.6	7.8	16.5	5.3	2.5	1.7	1.6	0.5	3.6	16.5
7-Feb	0.2	0.6	0.2	0.2	0.2	Z	1.7	3.3	0.3	0.3	0.3	0.7	2.2	2.3	1.2	1.8	1.5	2.1	0.9	1.0	1.0	0.4	0.3	0.2	1.0	3.3
8-Feb	Z	1.3	6.3	3.6	0.8	0.7	2.6	4.2	17.5	3.6	1.0	1.3	3.0	23.4	24.1	32.1	35.9	41.5	106.8	28.7	5.9	7.0	4.4	6.0	15.7	106.8
9-Feb	5.1	Z	1.2	12.1	25.2	30.6	17.6	13.0	14.6	8.7	52.3	26.5	9.1	7.4	7.4	8.7	11.0	12.5	11.6	12.4	9.3	5.6	1.1	0.4	13.2	52.3
10-Feb	0.2	0.4	Z	0.4	0.3	0.2	0.2	0.2	0.3	0.4	0.3	C	C	C	C	C	8.1	39.7	57.3	55.9	44.1	40.5	46.1	47.3	19.0	57.3
11-Feb	51.1	53.9	54.5	Z	51.0	33.0	32.9	32.4	36.2	35.8	28.1	22.9	23.7	23.1	18.6	14.3	13.1	14.3	11.8	12.6	12.7	18.5	12.8	17.4	27.2	54.5
12-Feb	14.2	12.9	13.0	11.9	Z	15.9	25.0	35.5	35.1	38.6	35.1	30.4	25.3	37.7	25.9	10.0	14.6	15.3	20.5	15.8	12.0	9.4	7.4	3.8	20.2	38.6
13-Feb	3.1	6.9	18.0	29.9	32.7	Z	35.1	49.9	54.1	64.7	54.4	28.9	22.5	22.8	18.6	10.3	10.7	11.6	10.7	12.2	28.9	26.6	28.3	31.0	26.6	64.7
14-Feb	Z	39.4	37.4	30.7	25.6	21.8	20.3	18.9	15.1	11.2	11.0	3.9	5.2	12.4	14.1	11.1	18.0	25.6	49.5	34.5	26.3	27.1	55.3	43.6	24.3	55.3
15-Feb	48.1	Z	31.2	34.1	30.2	24.4	16.0	13.3	6.0	11.8	0.8	0.5	0.3	0.3	0.8	1.8	15.6	43.8	50.4	35.5	9.9	8.5	13.1	17.6	18.0	50.4
16-Feb	13.9	11.8	Z	24.4	25.8	23.6	21.1	28.5	25.1	31.0	35.8	18.4	17.2	22.1	32.2	33.0	15.2	10.2	12.1	14.7	11.7	10.5	17.9	14.7	20.5	35.8
17-Feb	5.2	9.3	8.4	Z	9.4	11.3	12.7	7.6	11.1	8.8	12.0	14.8	13.4	14.2	14.2	8.0	4.9	4.5	10.8	9.5	7.6	6.9	9.3	5.8	9.5	14.8
18-Feb	12.0	13.1	11.8	17.2	Z	23.1	21.9	33.6	38.9	46.4	24.5	14.1	6.3	11.7	3.1	2.4	4.9	11.0	10.1	12.1	13.3	13.7	26.5	17.6	16.9	46.4
19-Feb	13.6	12.2	19.2	17.9	19.3	Z	19.0	13.9	20.3	16.7	19.8	16.0	16.7	12.4	17.3	11.3	5.6	5.7	7.9	9.6	14.0	6.9	7.9	5.5	13.4	20.3
20-Feb	Z	3.5	4.0	6.7	15.9	11.7	5.6	6.0	4.4	6.0	6.0	4.4	2.8	3.1	3.0	3.5	3.5	4.3	12.9	18.6	16.3	55.7	81.7	80.0	15.6	81.7
21-Feb	77.4	Z	58.2	59.6	64.2	68.6	54.8	45.1	56.5	193.2	88.6	10.8	16.9	15.4	16.7	11.4	9.6	8.4	11.9	21.4	28.2	46.0	43.3	39.7	45.5	193.2
22-Feb	14.0	28.0	Z	41.8	3.8	25.2	88.6	123.7	121.5	104.4	79.7	46.0	35.9	29.9	23.1	14.7	10.9	13.1	12.2	17.8	18.3	19.0	19.6	29.2	40.0	123.7
23-Feb	18.7	14.1	7.6	Z	41.3	31.7	26.4	33.9	31.6	11.0	7.4	5.7	7.3	11.3	9.6	9.6	8.8	8.4	10.6	14.9	19.0	27.2	19.3	15.1	17.0	41.3
24-Feb	20.0	11.3	21.2	38.7	Z	22.1	53.0	50.6	35.9	43.4	37.9	23.8	37.4	34.8	25.9	13.3	16.9	15.9	13.9	13.8	51.4	31.9	18.5	11.2	27.9	53.0
25-Feb	11.1	8.6	7.3	4.7	4.7	Z	5.6	5.5	6.6	7.3	6.9	10.6	11.5	13.1	15.7	17.5	22.0	18.0	18.5	14.5	11.8	55.9	60.5	50.1	16.9	60.5
26-Feb	Z	42.9	35.4	31.3	28.2	77.2	111.5	74.6	24.1	19.0	16.5	12.5	16.3	11.3	19.4	7.7	6.1	18.7	25.1	25.2	35.5	45.0	25.3	5.4	31.1	111.5
27-Feb	8.6	Z	15.1	36.9	14.6	29.8	70.8	85.0	54.3	14.3	7.9	6.2	11.4	15.1	10.0	3.8	9.2	8.2	8.4	6.6	7.4	6.0	6.5	6.3	19.2	85.0
28-Feb	12.7	14.2	Z	11.7	8.2	3.7	5.1	14.3	26.8	33.3	26.9	15.9	19.6	23.6	11.8	8.0	8.8	20.2	22.1	15.8	13.2	10.7	18.5	15.8	15.7	33.3
	15.0	12.9	16.1	18.0	17.4	20.6	23.6	25.2	23.1	26.0	20.3	12.1	11.9	13.4	12.0	9.4	10.1	13.7	19.0	15.3	15.2	18.1	19.7	17.3	Diurnal Average	
	77.4	53.9	58.2	59.6	64.2	77.2	111.5	123.7	121.5	193.2	88.6	46.0	37.4	37.7	32.2	33.0	35.9	43.8	106.8	55.9	51.4	55.9	81.7	80.0	Diurnal Maximum	

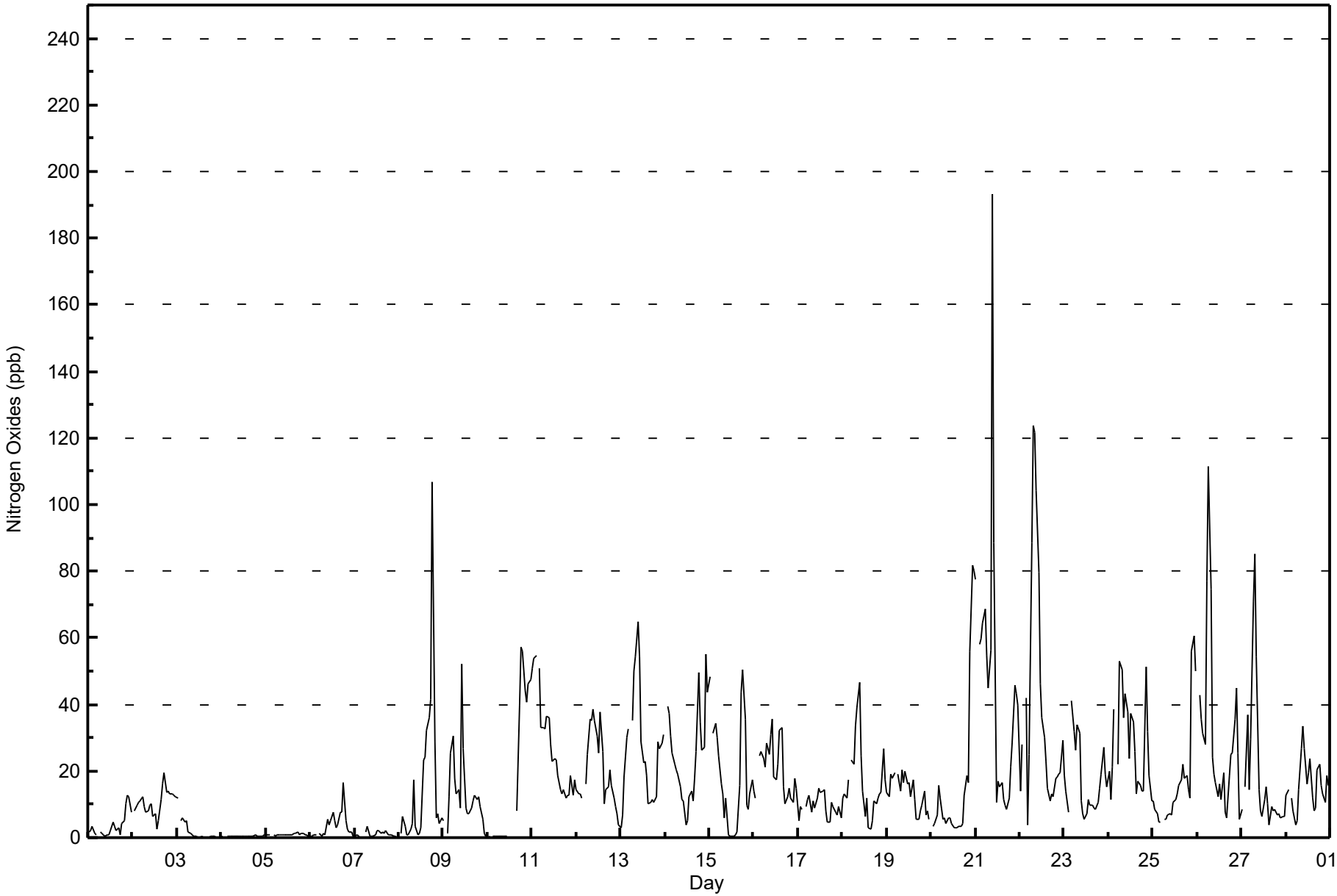
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Ells River - February 2025



Nitrogen Oxides (NO_X) - ppb
Ells River - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	468	73.24	73.24
21 - 40	109	17.06	90.30
11 - 80	52	8.14	98.44
81 - 159	9	1.41	99.84
> 159	1	0.16	100.00

Total Number of Valid Hours: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Ells River - February 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	50	76	25	4	2	8	20	50	52	63	61	17	9	12	6	5	460
21 - 40	21	6	4	2	0	5	11	11	19	3	2	2	5	5	7	5	108
11 - 80	10	2	1	0	2	0	0	1	5	1	4	2	2	6	7	6	49
81 - 159	2	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1	7
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Totals	83	84	30	6	4	13	31	62	76	67	68	22	17	24	21	17	625

Total Number of Valid Hours: 625

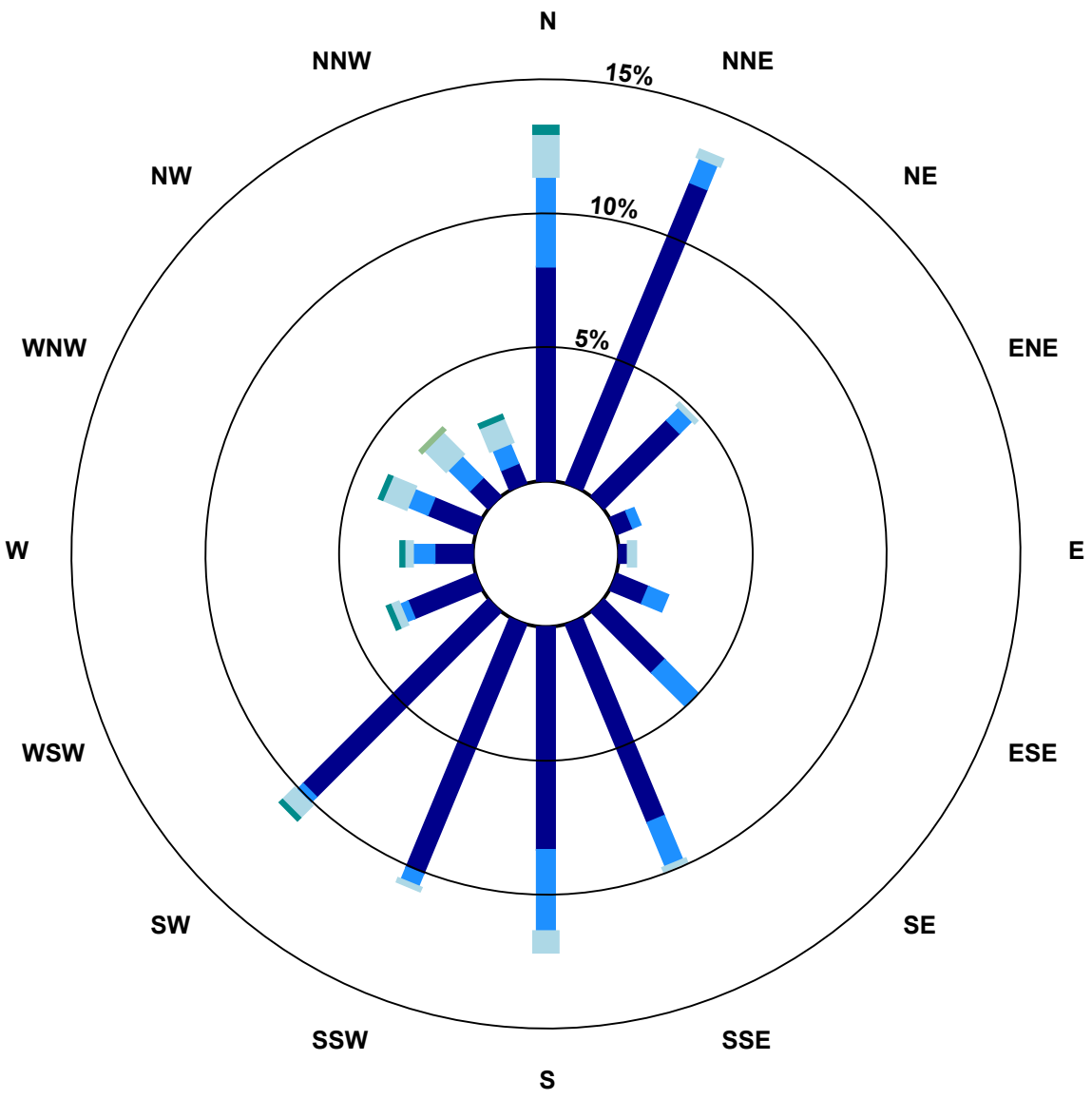
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Oxides (NO_X) - ppb

Ells River



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

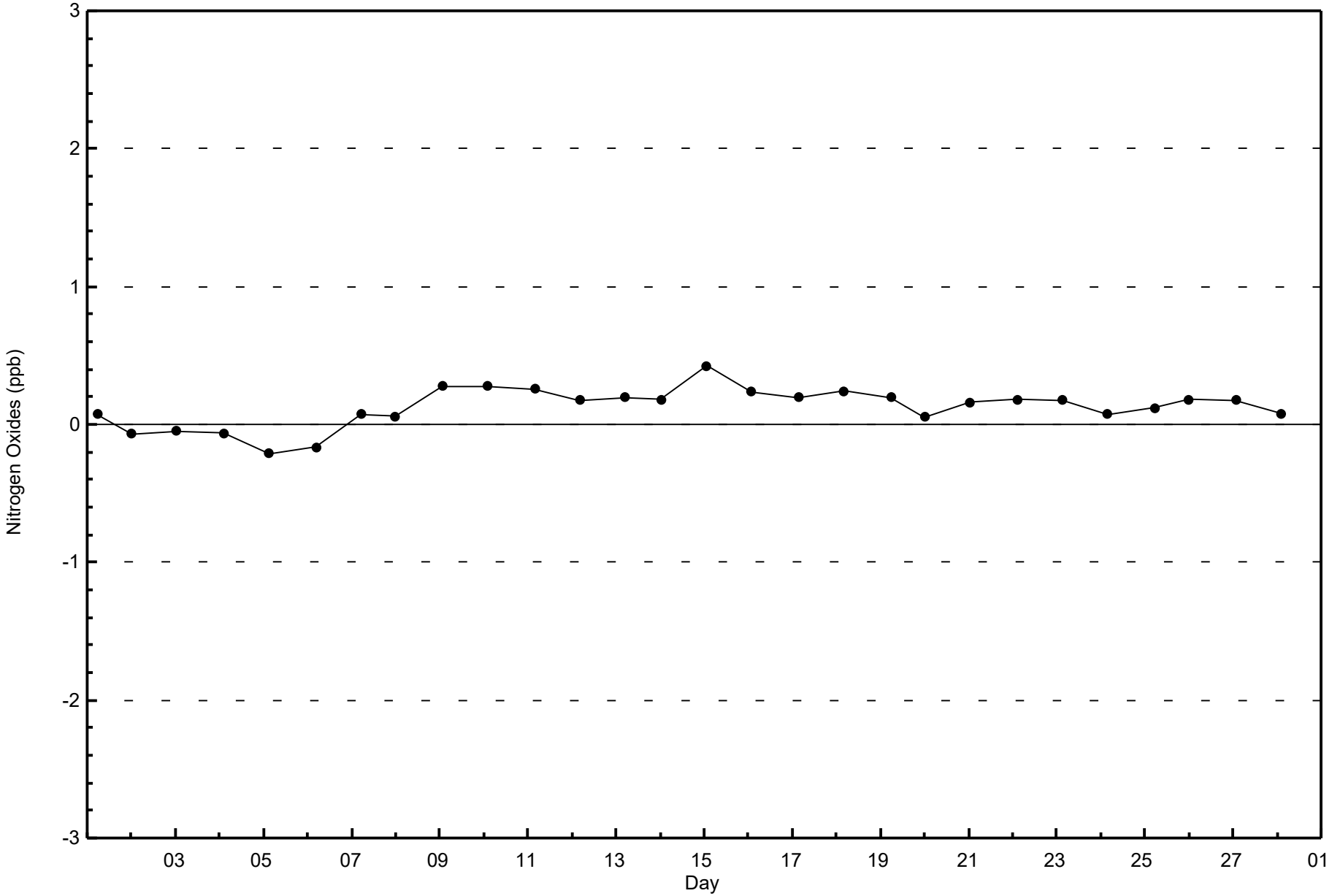
Total Number of Valid Hours: 625

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Ells River - February 2025

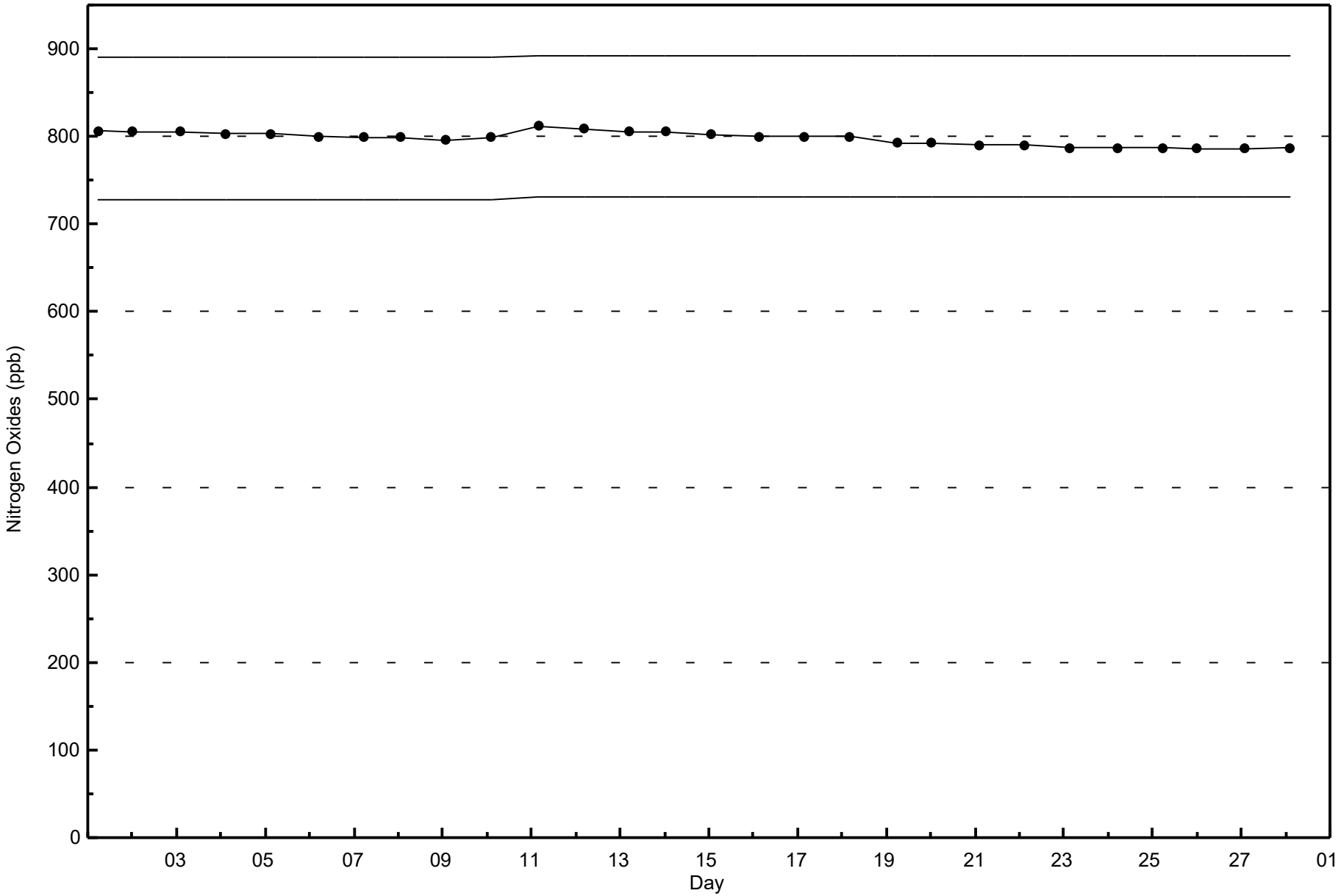


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Ells River - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

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

Ells River - February 2025

Number of Exceedences (AAAQO): 1-hr: 2 24-hr: 0
Maximum Value: 87.6 $\mu g/m^3$ on Feb 6 23:00 Maximum Daily Average: 11.1 $\mu g/m^3$ on Feb 6

Minimum Value: 0.9 $\mu g/m^3$ on Feb 4 05:00 Minimum Daily Average: 1.3 $\mu g/m^3$ on Feb 4
Maximum Diurnal Average: 7.8 $\mu g/m^3$ at hour 22 Minimum Diurnal Average: 4.0 $\mu g/m^3$ at hour 9
Monthly Average: 5.09 $\mu g/m^3$ Percentiles: P_1 = 1.0 P_{10} = 1.8 Q_1 = 3.0 Median = 4.0 Q_3 = 5.9 P_{90} = 7.9 P_{99} = 20.9

Hours in Service:	672
Hours of Data:	670
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-Feb	3.5	3.5	3.6	3.2	3.2	2.8	2.5	2.5	2.5	2.8	2.9	3.0	3.2	3.5	3.7	3.8	4.3	4.4	4.5	4.5	5.0	5.3	5.1	4.8	3.7	5.3
2-Feb	4.5	4.2	4.1	4.0	4.2	3.8	3.7	3.7	3.9	4.0	4.1	3.8	3.9	3.6	3.7	3.9	4.0	4.3	4.3	4.2	3.9	3.7	3.6	3.5	3.9	4.5
3-Feb	3.1	2.9	2.7	2.5	2.5	2.4	2.2	2.3	2.4	2.4	2.3	2.1	2.1	2.0	1.7	1.6	1.7	1.6	1.6	1.5	1.3	1.3	1.2	1.1	2.0	3.1
4-Feb	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0	0.9	1.0	1.0	1.0	1.1	1.2	1.3	1.5	1.8	2.0	2.0	1.9	2.0	2.2	1.3	2.2
5-Feb	2.0	1.8	1.7	1.6	1.6	1.6	1.5	1.5	1.5	2.5	1.7	1.8	1.6	1.4	1.6	1.6	1.5	1.4	1.3	1.3	1.1	1.1	1.1	1.0	1.5	2.5
6-Feb	1.0	1.0	1.1	1.2	1.2	1.2	1.2	1.2	1.2	2.0	2.6	3.6	5.8	6.1	6.9	6.9	8.0	8.1	8.2	7.1	6.6	83.4	87.6	13.5	11.1	87.6
7-Feb	5.4	6.6	7.0	5.9	9.0	3.2	3.0	3.0	2.9	2.9	3.6	3.8	3.1	2.9	2.8	11.6	14.9	50.8	10.3	6.7	11.0	20.0	6.4	4.3	8.4	50.8
8-Feb	4.5	22.9	24.1	35.7	50.1	11.2	3.2	2.7	3.1	4.5	14.7	3.4	3.0	10.2	5.7	5.6	6.2	6.8	11.9	5.2	3.8	3.8	3.5	3.7	10.4	50.1
9-Feb	4.7	5.0	5.0	5.4	6.1	6.5	5.6	5.1	4.8	4.3	8.1	7.0	5.9	5.9	5.9	6.2	6.8	6.6	6.2	5.6	5.0	4.2	3.8	3.6	5.6	8.1
10-Feb	3.4	3.8	5.2	5.6	6.6	5.9	5.1	4.5	3.6	3.1	2.8	2.7	2.5	C	C	3.2	3.1	8.0	9.0	8.3	6.3	5.4	5.4	5.1	4.9	9.0
11-Feb	5.0	4.6	4.3	4.2	3.7	3.2	3.0	2.8	2.7	3.0	3.2	3.2	3.3	3.2	3.0	2.8	2.7	2.7	2.6	2.7	2.5	2.8	2.6	2.8	3.2	5.0
12-Feb	2.7	2.6	2.7	2.6	2.6	3.0	4.7	5.6	5.2	4.8	4.6	4.5	4.3	4.7	3.9	3.4	3.6	4.4	4.9	3.8	3.1	2.6	2.3	1.8	3.7	5.6
13-Feb	1.8	2.0	2.8	3.1	3.2	3.5	3.4	3.6	3.6	4.1	4.0	3.4	3.1	3.2	3.3	3.1	3.2	3.4	3.4	3.2	4.1	3.1	3.2	3.6	3.3	4.1
14-Feb	3.9	3.9	3.4	2.7	2.3	2.1	1.9	1.8	1.4	1.6	2.5	3.1	3.0	3.3	3.6	3.2	3.7	4.8	7.3	5.1	4.0	4.3	5.9	4.8	3.5	7.3
15-Feb	4.6	4.3	3.7	3.5	3.2	3.5	2.2	1.7	1.7	2.2	1.7	1.8	1.8	1.9	1.8	2.0	3.2	5.7	5.3	4.8	3.9	4.0	3.4	3.4	3.1	5.7
16-Feb	3.2	2.7	3.0	3.3	3.2	2.9	2.8	3.1	2.8	2.7	3.9	6.5	6.3	11.3	17.2	17.3	5.7	4.6	4.9	4.7	4.0	3.5	6.1	9.3	5.6	17.3
17-Feb	6.8	8.9	5.1	4.7	4.5	4.4	3.9	3.4	4.5	4.3	5.4	7.5	6.4	5.7	5.4	3.4	3.1	3.1	6.9	4.3	3.5	3.0	3.6	2.9	4.8	8.9
18-Feb	2.7	3.1	3.4	3.9	4.0	4.3	4.3	3.7	3.4	5.6	4.3	3.9	3.4	4.9	3.1	2.6	2.9	6.7	4.2	5.3	5.0	4.7	6.1	4.3	4.2	6.7
19-Feb	4.1	4.6	4.6	4.2	4.6	4.3	4.1	3.4	3.7	4.2	5.4	9.1	8.7	8.5	13.2	7.8	4.8	3.4	4.1	7.4	8.4	4.9	6.2	3.7	5.7	13.2
20-Feb	3.2	2.9	3.0	4.0	6.0	6.5	5.4	5.6	5.4	5.5	5.2	5.6	5.6	5.4	5.5	5.5	5.7	5.5	6.3	8.5	6.8	10.1	10.4	9.6	6.0	10.4
21-Feb	8.9	6.8	7.5	6.8	7.8	8.4	7.6	6.6	7.3	14.8	11.0	6.7	6.2	6.5	7.1	6.9	6.6	6.4	6.6	7.9	8.7	9.5	8.0	7.5	7.8	14.8
22-Feb	5.0	5.6	7.9	6.5	4.3	6.4	11.5	13.3	11.7	10.0	9.0	7.9	8.4	7.8	7.0	6.7	6.1	6.2	6.2	6.5	6.6	6.5	6.4	7.3	7.5	13.3
23-Feb	9.6	14.1	19.2	11.7	10.2	9.7	9.4	9.1	9.4	5.3	5.8	4.7	4.5	4.1	3.8	3.6	3.3	3.7	3.8	3.8	3.9	3.8	3.9	3.4	6.8	19.2
24-Feb	3.5	3.4	3.7	4.1	3.8	3.8	4.8	4.7	4.3	4.9	5.3	6.7	6.7	6.3	6.6	5.4	7.0	7.1	6.5	6.3	7.3	7.0	6.2	4.5	5.4	7.3
25-Feb	3.5	3.2	3.2	3.4	3.4	3.0	2.9	3.0	3.4	3.4	3.1	3.5	3.5	4.1	4.6	4.8	5.3	4.9	5.6	4.5	4.4	5.9	6.2	6.4	4.1	6.4
26-Feb	6.6	6.4	6.4	6.6	6.7	7.5	8.3	6.2	3.3	3.2	3.2	3.1	3.4	3.6	4.0	3.4	3.4	4.1	4.2	4.9	5.1	5.1	4.2	3.4	4.8	8.3
27-Feb	3.4	3.3	3.8	4.4	3.7	3.9	5.8	6.5	7.0	6.6	5.3	5.2	4.4	4.0	2.8	2.8	3.1	3.1	3.0	3.0	2.8	2.8	3.1	3.1	4.0	7.0
28-Feb	3.1	3.1	3.3	3.1	2.8	2.6	2.8	3.0	3.9	5.3	7.4	9.1	16.5	18.0	8.0	5.7	5.9	7.2	6.9	5.2	4.7	5.1	4.8	4.0	5.9	18.0
	4.1	4.9	5.2	5.3	5.9	4.4	4.2	4.1	4.0	4.3	4.8	4.6	4.7	5.3	5.1	4.9	4.7	6.5	5.4	4.9	4.8	7.8	7.6	4.6	Diurnal Average	
	9.6	22.9	24.1	35.7	50.1	11.2	11.5	13.3	11.7	14.8	14.7	9.1	16.5	18.0	17.2	17.3	14.9	50.8	11.9	8.5	11.0	83.4	87.6	13.5	Diurnal Maximum	

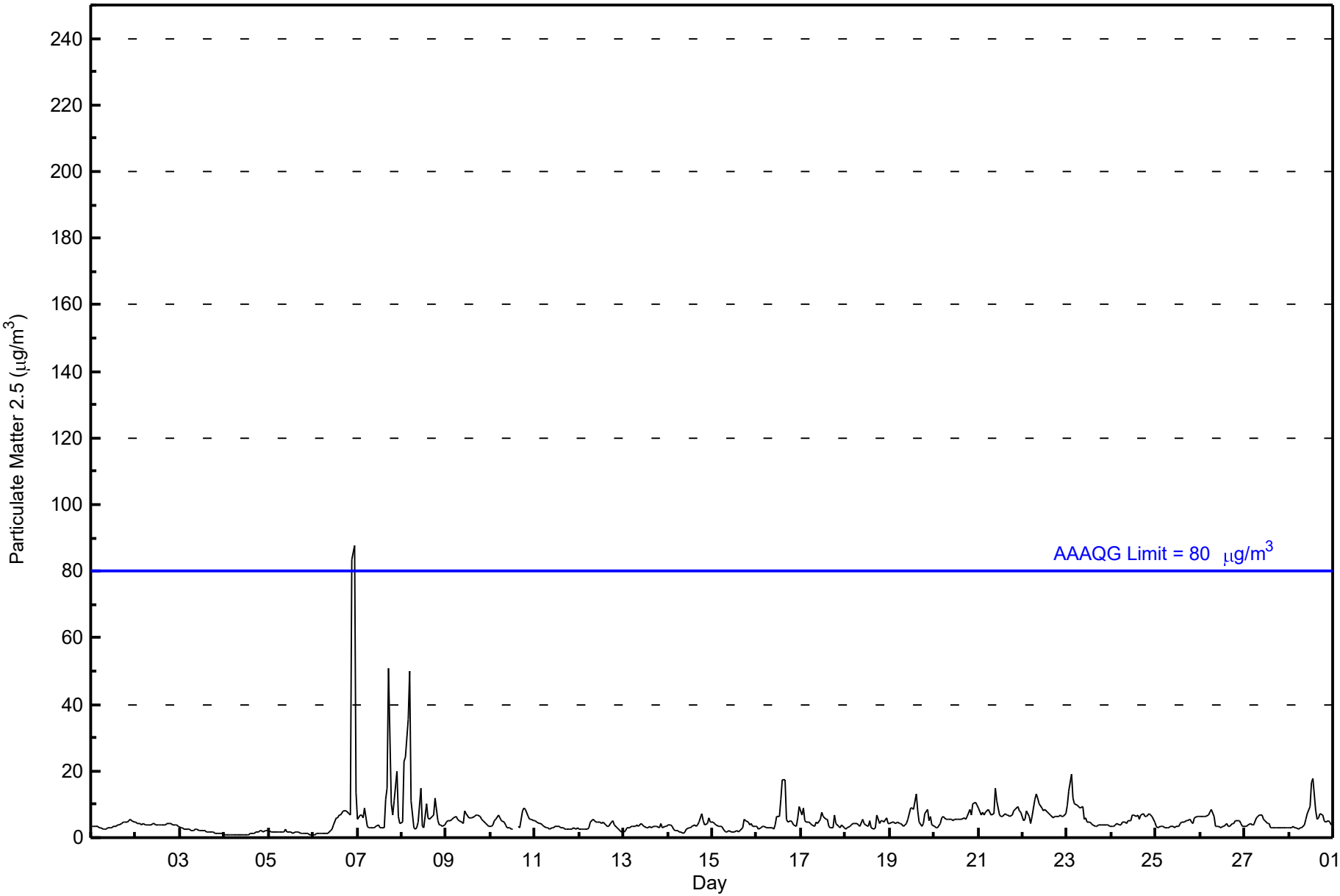
C - Calibration
Alberta Ambient Air Quality Guideline/Objectives: 1-hr 80 $\mu g/m^3$ 24-hr 29 $\mu g/m^3$

Wood Buffalo Environmental Association

Hourly Averages

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

Ells River - February 2025



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

Ells River - February 2025

Concentration Ranges ($\mu g/m^3$)	Number of Hours	%	Cumulative %
0 - 5	480	71.64	71.64
6 - 15	177	26.42	98.06
16 - 25	8	1.19	99.25
26 - 80	3	0.45	99.70
> 81.0	2	0.30	100.00

Total Number of Valid Hours: 670

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

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

Ells River - February 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	58	72	29	6	3	10	23	35	52	60	50	18	13	14	17	12	472
6 - 15	27	15	2	0	2	2	8	26	28	12	13	7	5	10	7	6	170
16 - 25	0	0	0	0	0	1	2	1	1	0	3	0	0	0	0	0	8
26 - 80	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	3
> 81.0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
Totals	85	87	31	6	5	13	33	62	82	73	69	25	18	24	24	18	655

Total Number of Valid Hours: 655

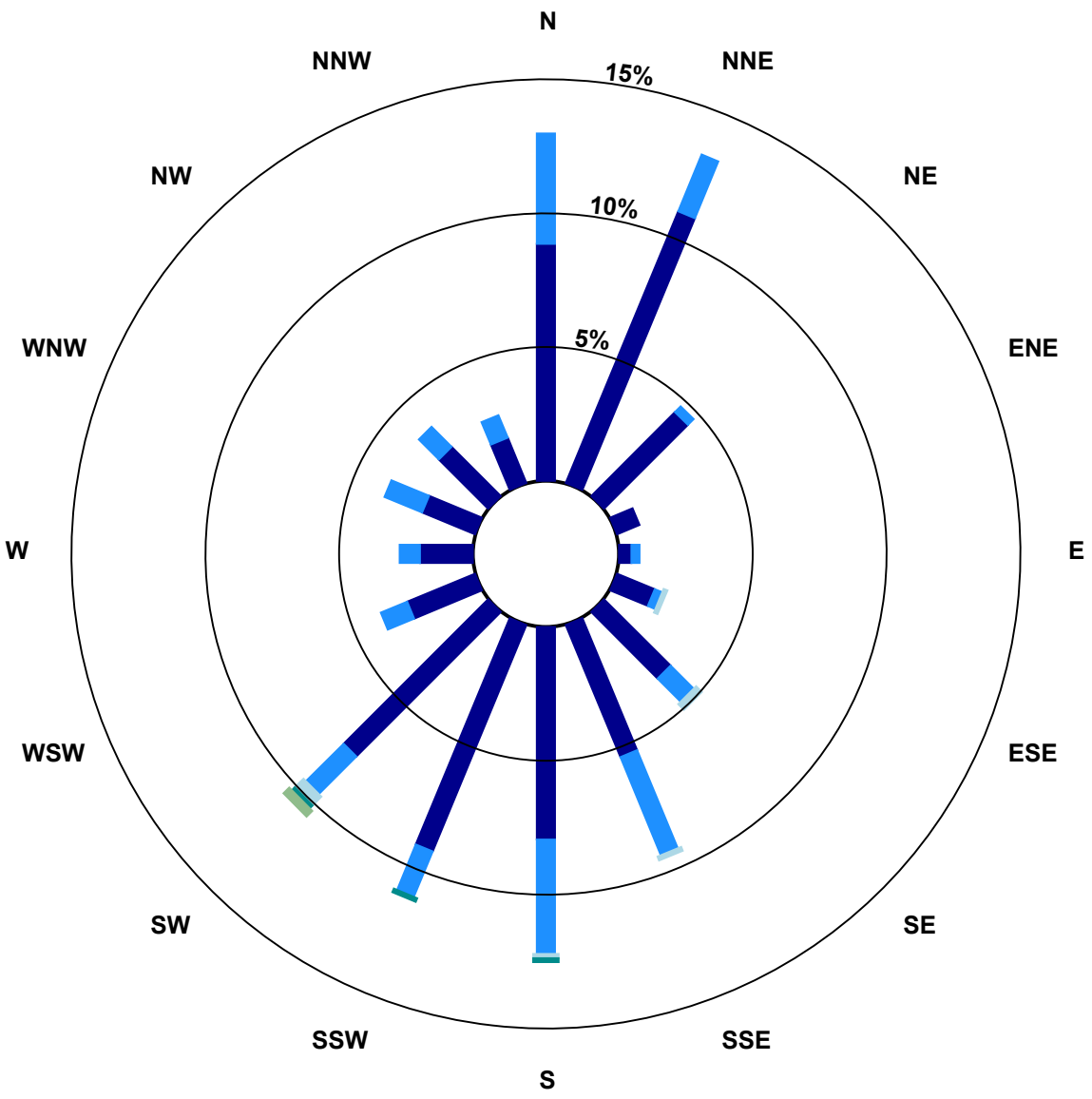
Total Number of Hours: 672

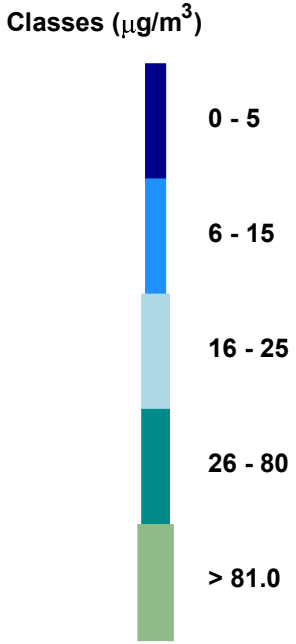
Wood Buffalo Environmental Association

Wind Rose Feb 2025

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

Ells River





Total Number of Valid Hours: 655

Maximum Value: 1.4 C on Feb 27 13:00

Maximum Daily Average: -5.0 C on Feb 23

Minimum Value: -38.9 C on Feb 14 08:00

Minimum Daily Average: -31.1 C on Feb 14

Maximum Diurnal Average: -13.9 C at hour 16

Minimum Diurnal Average: -21.9 C at hour 8

Monthly Average: -18.46 C

Percentiles: P_1 = -35.7 P_{10} = -29.4 Q_1 = -24.3 Median = -19.5 Q_3 = -11.1 P_{90} = -6.9 P_{99} = -1.2

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

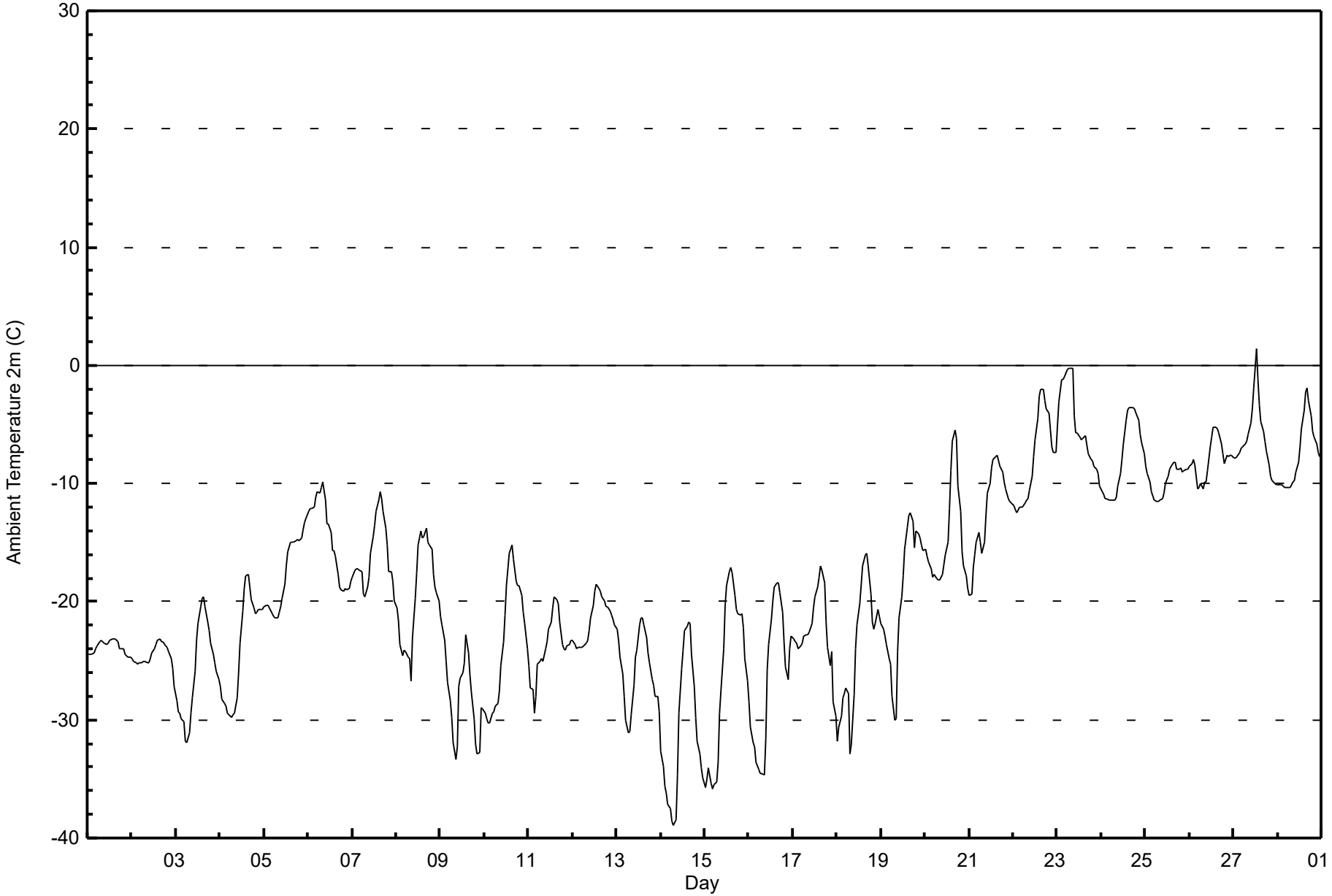
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-24.4	-24.4	-24.5	-24.3	-24.0	-23.7	-23.3	-23.2	-23.4	-23.6	-23.7	-23.5	-23.3	-23.2	-23.1	-23.2	-23.3	-23.9	-24.0	-24.0	-24.4	-24.6	-24.7	-24.7	-23.9	-23.1
2-Feb	-24.8	-25.1	-25.2	-25.2	-25.2	-25.1	-25.1	-25.0	-25.1	-25.1	-24.8	-24.4	-24.0	-23.6	-23.2	-23.1	-23.3	-23.4	-23.8	-23.9	-24.2	-24.8	-25.6	-27.2	-24.6	-23.1
3-Feb	-28.4	-29.3	-29.4	-29.9	-30.2	-31.8	-32.0	-31.1	-29.5	-28.1	-25.9	-23.2	-21.9	-20.4	-19.7	-19.6	-20.4	-21.7	-22.4	-23.5	-24.4	-25.2	-25.8	-26.6	-25.9	-19.6
4-Feb	-27.1	-28.3	-28.6	-28.8	-29.4	-29.6	-29.8	-29.6	-29.4	-28.2	-26.0	-23.5	-20.8	-18.9	-17.8	-17.7	-18.8	-19.9	-20.5	-21.0	-20.9	-20.7	-20.7	-20.7	-24.0	-17.7
5-Feb	-20.4	-20.3	-20.3	-20.6	-21.0	-21.3	-21.4	-21.4	-20.9	-20.4	-19.7	-18.5	-17.0	-15.8	-15.0	-14.9	-15.0	-14.8	-14.7	-14.8	-14.6	-13.9	-13.3	-12.9	-17.6	-12.9
6-Feb	-12.4	-12.1	-12.1	-12.1	-11.1	-10.7	-10.8	-10.3	-9.9	-11.3	-13.4	-13.5	-14.1	-15.6	-15.7	-16.2	-17.7	-18.7	-19.0	-19.1	-18.8	-19.0	-18.9	-18.2	-14.6	-9.9
7-Feb	-17.9	-17.3	-17.2	-17.3	-17.3	-17.4	-19.3	-19.6	-18.7	-17.9	-15.9	-14.5	-13.6	-12.3	-11.4	-10.7	-11.3	-12.4	-13.8	-15.2	-17.5	-17.4	-18.3	-19.9	-16.0	-10.7
8-Feb	-20.6	-21.7	-23.6	-24.6	-24.1	-24.2	-24.7	-24.8	-26.7	-23.1	-19.7	-17.5	-15.3	-14.0	-14.6	-14.5	-13.8	-15.0	-15.2	-15.6	-17.7	-18.8	-19.3	-19.9	-19.5	-13.8
9-Feb	-21.2	-21.9	-23.2	-25.1	-26.8	-28.4	-29.8	-32.0	-33.4	-32.3	-27.2	-26.5	-26.0	-25.2	-22.8	-24.4	-26.3	-27.6	-29.9	-32.0	-32.9	-32.8	-28.9	-29.1	-27.7	-21.2
10-Feb	-29.4	-29.9	-30.3	-30.3	-29.4	-29.3	-28.8	-28.6	-27.5	-25.4	-23.3	-21.1	-18.6	-15.9	-15.6	-15.3	-16.4	-18.2	-18.6	-18.6	-19.4	-20.9	-21.9	-24.0	-23.2	-15.3
11-Feb	-25.4	-27.3	-27.5	-29.4	-28.0	-25.3	-25.0	-24.8	-25.1	-24.0	-23.4	-22.4	-21.7	-20.6	-19.6	-19.9	-20.2	-21.7	-23.6	-24.0	-24.0	-23.7	-23.7	-23.3	-23.9	-19.6
12-Feb	-23.3	-23.6	-24.0	-23.9	-23.8	-23.8	-23.8	-23.6	-23.3	-22.4	-21.4	-20.3	-19.2	-18.5	-18.8	-19.2	-19.6	-20.0	-20.4	-20.5	-20.8	-21.1	-21.5	-21.9	-21.6	-18.5
13-Feb	-22.3	-23.3	-24.7	-26.1	-28.1	-30.1	-31.1	-31.0	-29.5	-27.1	-24.7	-24.1	-22.0	-21.4	-21.3	-22.0	-23.0	-24.3	-25.2	-26.6	-27.1	-28.1	-28.1	-29.3	-25.8	-21.3
14-Feb	-32.6	-34.0	-35.7	-36.3	-37.2	-37.5	-38.6	-38.9	-38.4	-34.7	-29.4	-25.7	-24.1	-22.4	-22.1	-21.8	-21.9	-24.5	-27.2	-29.8	-31.8	-32.9	-34.1	-34.9	-31.1	-21.8
15-Feb	-35.7	-35.0	-34.1	-35.4	-35.8	-35.5	-35.3	-33.6	-29.5	-27.5	-24.0	-20.3	-18.7	-17.4	-17.2	-17.6	-19.4	-20.6	-21.0	-21.1	-21.1	-22.2	-24.9	-26.7	-26.2	-17.2
16-Feb	-28.5	-30.6	-31.9	-32.3	-33.6	-34.2	-34.6	-34.5	-34.6	-31.5	-25.8	-23.6	-21.5	-20.0	-18.8	-18.4	-18.4	-19.2	-20.9	-23.4	-25.6	-26.6	-24.0	-22.9	-26.5	-18.4
17-Feb	-23.1	-23.4	-23.6	-24.0	-23.8	-23.5	-22.9	-22.8	-22.7	-22.6	-21.8	-20.5	-19.6	-18.7	-18.0	-17.0	-17.3	-18.5	-21.8	-23.8	-25.4	-24.2	-28.5	-29.7	-22.4	-17.0
18-Feb	-31.9	-30.7	-29.6	-28.1	-27.8	-27.3	-27.8	-32.9	-32.0	-27.9	-24.0	-22.0	-20.2	-18.7	-17.0	-16.0	-15.9	-17.0	-19.4	-21.7	-22.3	-21.9	-20.7	-21.3	-23.9	-15.9
19-Feb	-21.8	-22.4	-23.0	-23.6	-24.8	-25.3	-28.0	-30.1	-29.9	-24.3	-21.4	-19.6	-17.8	-15.6	-13.6	-12.8	-12.4	-13.2	-15.4	-14.1	-14.2	-14.7	-15.3	-15.6	-19.5	-12.4
20-Feb	-15.6	-16.1	-16.6	-17.2	-17.9	-17.7	-18.0	-18.1	-18.2	-17.7	-16.9	-16.1	-14.9	-12.1	-8.9	-6.4	-5.5	-6.2	-10.2	-12.4	-15.8	-17.0	-17.8	-18.9	-14.7	-5.5
21-Feb	-19.4	-19.3	-17.1	-16.0	-15.0	-14.2	-15.0	-15.9	-15.0	-12.7	-10.8	-10.0	-8.6	-8.0	-7.7	-7.6	-8.1	-8.6	-9.1	-9.8	-10.4	-11.3	-11.6	-11.7	-12.2	-7.6
22-Feb	-11.9	-12.2	-12.5	-12.0	-12.0	-12.0	-11.7	-11.4	-11.3	-10.5	-9.4	-7.8	-6.3	-4.5	-2.7	-2.0	-2.0	-3.0	-3.7	-4.0	-5.5	-6.9	-7.4	-7.3	-7.9	-2.0
23-Feb	-5.1	-3.1	-1.3	-1.2	-0.9	-0.4	-0.3	-0.3	-0.3	-4.2	-5.7	-5.7	-6.0	-6.3	-6.1	-6.0	-6.8	-7.5	-7.9	-8.1	-8.5	-8.7	-9.2	-10.2	-5.0	-0.3
24-Feb	-10.7	-11.0	-11.2	-11.3	-11.4	-11.4	-11.4	-11.4	-11.2	-10.2	-9.2	-8.0	-6.7	-4.6	-3.8	-3.5	-3.6	-3.6	-3.7	-4.0	-4.6	-5.8	-6.5	-7.5	-7.8	-3.5
25-Feb	-8.5	-9.2	-9.9	-10.6	-11.0	-11.4	-11.5	-11.5	-11.4	-11.3	-10.8	-10.0	-9.4	-8.8	-8.5	-8.2	-8.3	-8.8	-8.8	-8.7	-9.0	-8.9	-8.8	-8.7	-9.7	-8.2
26-Feb	-8.6	-8.3	-8.0	-8.4	-10.5	-10.3	-10.0	-10.4	-9.9	-9.8	-8.9	-6.9	-6.1	-5.3	-5.2	-5.4	-5.8	-6.7	-7.5	-8.3	-7.6	-7.7	-7.6	-7.6	-7.9	-5.2
27-Feb	-7.8	-7.9	-7.7	-7.3	-7.0	-6.9	-6.6	-6.4	-5.8	-4.9	-3.7	-1.9	1.4	-1.2	-3.3	-4.8	-5.6	-6.4	-7.2	-8.4	-9.4	-9.7	-10.0	-10.0	-6.2	1.4
28-Feb	-10.1	-10.1	-10.1	-10.2	-10.3	-10.3	-10.3	-10.4	-9.9	-9.7	-9.1	-8.2	-6.9	-5.4	-3.8	-2.3	-1.9	-3.0	-4.3	-5.6	-6.0	-6.7	-7.4	-7.8	-7.5	-1.9
	-20.3	-20.6	-20.8	-21.1	-21.3	-21.4	-21.7	-21.9	-21.5	-20.3	-18.6	-17.1	-15.8	-14.8	-14.1	-13.9	-14.4	-15.3	-16.4	-17.2	-18.0	-18.4	-18.7	-19.2	Diurnal Average	
	-5.1	-3.1	-1.3	-1.2	-0.9	-0.4	-0.3	-0.3	-0.3	-4.2	-3.7	-1.9	1.4	-1.2	-2.7	-2.0	-1.9	-3.0	-3.7	-4.0	-4.6	-5.8	-6.5	-7.3	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Ells River - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	322	47.92	47.92
-20 - 0	349	51.93	99.85
0 - 10	1	0.15	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Ells River - February 2025

Maximum Value: 94.6 % on Feb 23 07:00

Maximum Daily Average: 86.6 % on Feb 23

Minimum Value: 37.0 % on Feb 18 16:00

Minimum Daily Average: 51.0 % on Feb 19

Maximum Diurnal Average: 72.1 % at hour 21

Minimum Diurnal Average: 61.0 % at hour 15

Monthly Average: 68.95 %

Percentiles: P_1 = 44.1 P_{10} = 56.7 Q_1 = 64.3 Median = 68.8 Q_3 = 74.8 P_{90} = 81.4 P_{99} = 89.8

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

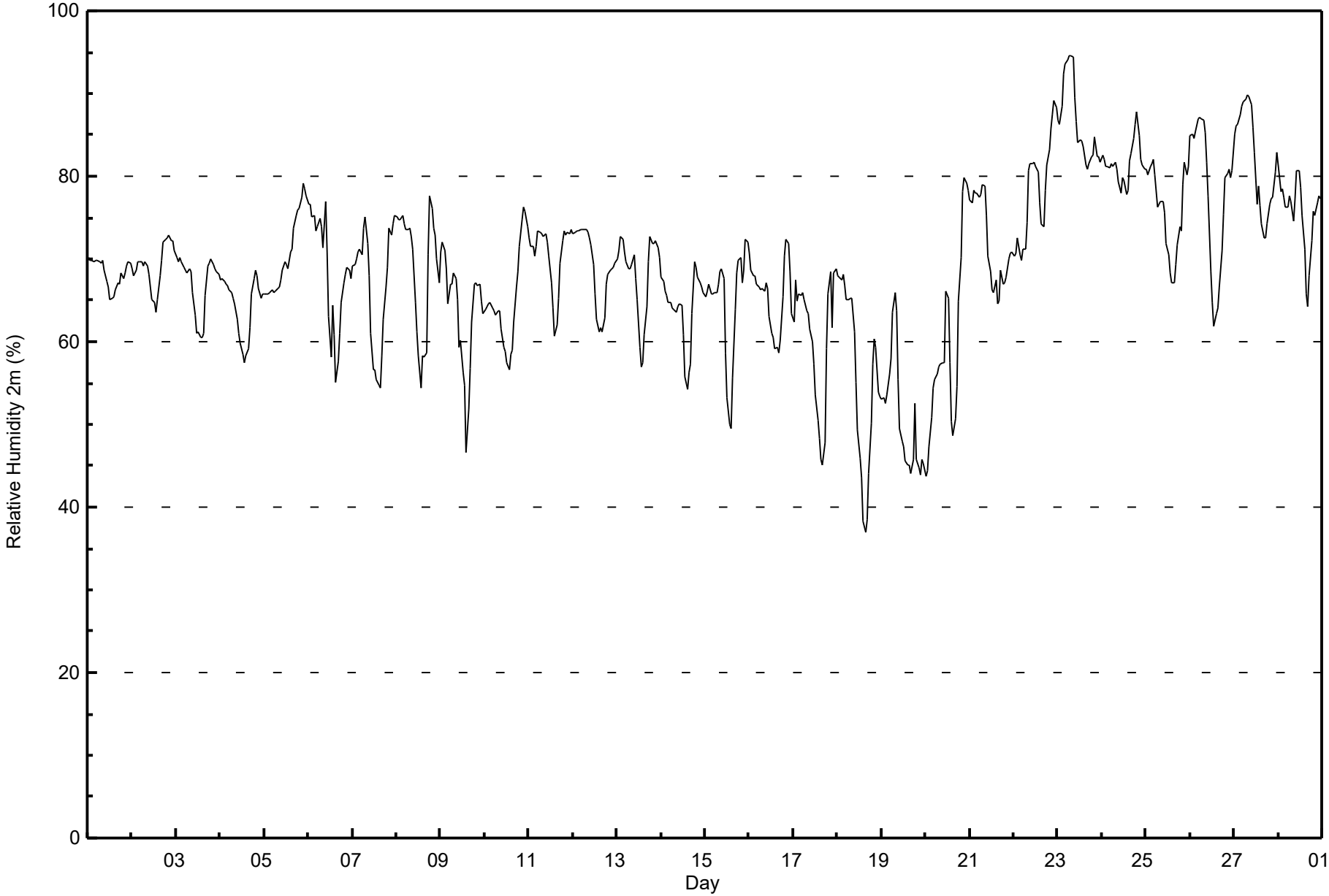
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	70.1	69.9	69.8	69.6	69.8	69.8	69.7	69.5	69.9	68.7	67.3	66.7	65.2	65.3	65.4	66.3	67.1	66.9	68.3	67.6	68.4	69.1	69.6	69.6	68.3	70.1
2-Feb	68.8	68.0	68.6	69.6	69.6	69.6	69.2	69.6	69.2	68.2	66.6	65.0	64.7	63.6	65.2	68.0	69.8	72.0	72.3	72.6	72.8	72.2	72.2	71.1	69.1	72.8
3-Feb	70.1	69.7	70.2	69.7	69.0	68.6	68.3	68.8	68.5	65.9	63.2	61.0	61.1	60.5	60.4	61.1	65.6	69.1	69.6	70.0	69.4	68.8	68.5	68.1	66.9	70.2
4-Feb	67.5	67.7	67.4	66.9	66.7	66.3	66.0	65.3	64.5	62.7	61.1	59.9	58.5	57.4	58.4	59.2	61.8	65.8	67.7	68.6	67.9	66.4	65.3	65.8	64.4	68.6
5-Feb	65.8	65.7	65.7	66.0	66.3	65.9	66.1	66.4	66.6	67.5	68.7	69.6	69.3	68.9	70.8	71.2	73.7	75.2	75.9	76.1	77.4	79.1	78.5	77.7	70.6	79.1
6-Feb	76.5	76.6	75.0	75.3	73.4	73.9	74.9	74.0	71.3	76.9	70.8	63.0	58.2	64.3	60.8	55.0	57.5	61.1	64.8	67.1	68.1	68.9	68.6	67.7	68.5	76.9
7-Feb	69.1	69.3	70.0	70.8	71.1	70.5	73.7	75.0	71.9	68.0	61.0	56.6	56.5	55.5	54.8	54.4	58.3	62.8	66.7	69.0	73.7	72.9	74.2	75.3	66.7	75.3
8-Feb	75.1	74.7	74.7	75.3	74.3	73.5	73.6	73.7	72.7	71.3	64.8	61.2	58.3	54.4	58.2	58.1	58.6	70.5	77.6	76.1	73.7	72.9	70.0	67.1	69.2	77.6
9-Feb	70.8	72.0	71.0	68.9	64.7	66.9	67.0	68.2	67.7	65.1	59.3	60.2	56.2	54.7	46.6	51.9	56.7	62.4	66.9	67.1	66.8	67.0	64.9	63.4	63.6	72.0
10-Feb	63.9	64.2	64.6	64.8	64.0	63.7	63.1	63.6	63.8	61.5	59.3	58.7	57.4	56.6	58.4	59.0	62.4	66.6	68.5	71.5	74.8	76.2	75.8	73.9	64.9	76.2
11-Feb	72.6	71.6	71.5	70.4	71.4	73.4	73.3	73.1	72.6	73.0	72.0	70.3	67.2	64.1	60.6	62.1	65.2	69.5	72.2	73.5	72.8	73.2	73.0	73.6	70.5	73.6
12-Feb	73.1	73.2	73.4	73.3	73.5	73.5	73.6	73.6	73.3	72.5	71.8	69.3	65.7	62.6	61.1	61.6	61.2	62.9	67.0	68.2	68.6	68.9	68.9	69.4	69.2	73.6
13-Feb	70.1	71.0	72.7	72.3	70.9	69.6	68.8	68.8	69.4	70.4	67.6	65.0	59.3	57.0	57.5	60.8	64.3	69.7	72.6	71.8	71.9	72.2	71.3	70.1	68.1	72.7
14-Feb	67.9	67.2	66.0	65.5	64.8	64.7	64.0	63.8	63.6	64.2	64.5	64.4	60.9	55.7	54.3	56.2	57.2	63.4	69.7	69.1	67.7	67.1	66.6	65.9	63.9	69.7
15-Feb	65.4	66.2	66.9	65.8	65.8	66.0	66.0	67.0	68.5	68.8	67.7	58.7	53.2	50.0	49.5	55.6	63.8	68.2	69.8	70.1	67.1	68.7	72.5	72.0	64.7	72.5
16-Feb	70.7	68.6	68.0	68.0	67.0	66.5	66.2	66.5	66.1	67.1	66.5	63.0	61.0	60.6	59.1	59.4	58.6	60.1	65.3	70.3	72.3	71.9	68.4	63.4	65.6	72.3
17-Feb	62.3	67.4	64.8	65.8	65.6	66.0	65.1	63.7	63.4	61.5	59.9	57.2	53.6	50.5	48.2	45.8	45.1	47.8	59.2	65.7	68.4	61.7	68.4	68.9	60.3	68.9
18-Feb	68.0	67.8	67.4	68.1	66.7	65.1	65.1	65.2	65.2	61.2	55.1	49.3	45.9	43.6	38.2	37.0	38.4	44.1	50.1	57.2	60.3	59.3	53.8	53.3	56.1	68.1
19-Feb	53.0	53.2	52.6	53.6	56.2	58.0	63.6	65.9	63.7	55.4	49.5	47.9	47.3	45.5	45.0	45.0	44.1	45.8	52.5	45.8	44.8	43.8	45.8	45.3	51.0	65.9
20-Feb	43.8	44.5	47.3	50.9	54.4	55.5	56.1	56.9	57.2	57.5	57.5	66.1	65.2	57.5	50.4	48.6	50.6	54.5	65.0	70.1	78.1	79.8	79.1	78.2	59.4	79.8
21-Feb	77.1	76.8	78.4	77.9	78.0	77.5	77.8	79.0	78.8	75.2	70.4	68.5	66.3	66.0	67.4	64.6	64.9	68.6	66.9	67.1	67.7	69.9	70.6	70.9	71.9	79.0
22-Feb	70.3	70.6	72.5	70.5	69.8	71.3	71.2	74.3	80.6	81.5	81.5	81.6	81.2	80.5	76.8	74.3	73.9	78.3	81.4	83.2	85.8	87.5	89.2	88.3	78.2	89.2
23-Feb	86.8	86.3	88.4	92.3	93.6	94.1	94.6	94.6	94.5	89.4	86.6	84.1	84.4	84.2	83.6	81.4	80.9	81.6	82.3	82.6	84.7	82.4	82.5	81.6	86.6	94.6
24-Feb	82.6	82.1	81.3	81.2	81.1	81.5	81.3	81.8	80.8	79.2	78.0	79.8	79.5	77.7	78.4	81.9	82.7	84.6	86.2	87.8	85.0	82.1	81.3	80.9	81.6	87.8
25-Feb	80.9	80.1	81.3	81.6	82.1	80.2	76.3	76.7	76.9	76.9	75.5	71.8	70.6	68.4	67.1	67.2	69.3	71.7	74.0	73.4	79.0	81.8	80.2	81.2	76.0	82.1
26-Feb	84.9	85.2	84.5	85.5	86.9	87.1	87.0	86.8	85.2	81.7	77.7	68.5	64.7	61.9	63.4	64.1	66.6	71.1	75.5	79.8	80.4	80.8	79.9	80.6	77.9	87.1
27-Feb	85.1	86.1	86.3	87.4	88.5	89.0	89.4	89.8	89.7	88.6	85.9	82.9	76.7	78.8	76.5	74.2	72.5	72.6	74.2	76.7	77.2	77.5	80.6	82.9	82.0	89.8
28-Feb	81.3	78.1	78.5	77.5	76.3	76.3	77.6	76.9	74.5	77.3	80.7	80.7	78.7	75.3	71.2	65.8	64.2	68.1	72.2	75.8	75.2	76.7	77.6	77.4	75.6	81.3
	71.2	71.2	71.4	71.6	71.5	71.6	71.7	72.1	71.8	70.6	68.2	66.1	63.8	62.2	61.0	61.1	62.7	66.3	69.8	71.2	72.1	72.1	72.0	71.6	Diurnal Average	
	86.8	86.3	88.4	92.3	93.6	94.1	94.6	94.6	94.5	89.4	86.6	84.1	84.4	84.2	83.6	81.9	82.7	84.6	86.2	87.8	85.8	87.5	89.2	88.3	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Ells River - February 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	3	0.45	0.45
40 - 60	102	15.18	15.63
60 - 80	474	70.54	86.16
80 - 100	93	13.84	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Global Radiation (GR) - W/m2

Ells River - February 2025

Maximum Value: 377.5 W/m2 on Feb 8 13:00

Maximum Daily Average: 92.6 W/m2 on Feb 18

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

Minimum Daily Average: 22.5 W/m2 on Feb 1

Maximum Diurnal Average: 253.7 W/m2 at hour 14

Minimum Diurnal Average: 0.0 W/m2 at hour 5

Monthly Average: 57.39 W/m2

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 88.6 P_{90} = 210.6 P_{99} = 364.6

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

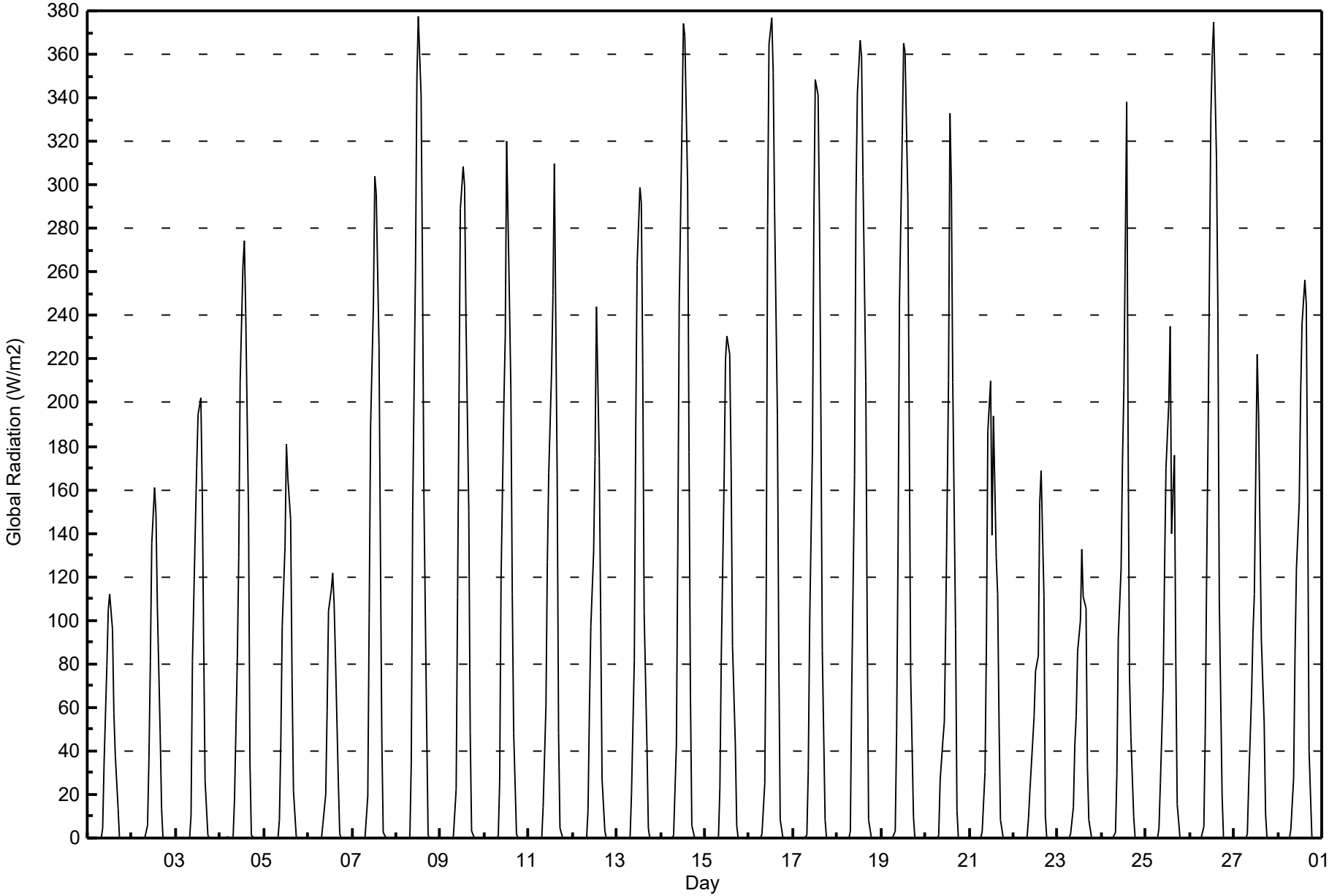
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	33.9	79.4	104.9	112.2	95.7	57.1	37.9	13.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	22.5	112.2
2-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	36.4	81.1	135.4	160.9	149.0	106.3	48.3	13.7	0.3	0.0	0.0	0.0	0.0	0.2	0.2	30.7	160.9
3-Feb	0.1	0.1	0.2	0.1	0.0	0.1	0.0	0.1	10.2	81.5	140.9	169.8	194.5	202.2	159.1	90.1	26.2	1.3	0.2	0.2	0.1	0.2	0.2	0.2	44.9	202.2
4-Feb	0.2	0.3	0.3	0.3	0.4	0.3	0.2	0.4	17.8	82.5	128.6	209.3	262.6	274.6	241.2	147.5	34.8	1.3	0.2	0.1	0.0	0.0	0.0	0.0	58.5	274.6
5-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.5	44.5	97.5	134.2	181.0	165.4	146.5	74.0	21.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	36.4	181.0
6-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	19.7	57.9	104.2	114.3	121.8	107.8	81.6	25.9	2.0	0.0	0.0	0.0	0.0	0.0	0.0	26.7	121.8
7-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	19.5	102.8	189.3	245.0	303.9	296.0	226.4	133.1	45.8	2.9	0.1	0.0	0.0	0.0	0.0	0.0	65.2	303.9
8-Feb	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.5	34.8	150.2	261.3	349.1	377.5	341.4	261.0	157.1	50.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	82.7	377.5
9-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	22.8	111.0	198.9	289.3	308.7	299.3	238.4	150.2	49.0	3.5	0.2	0.1	0.0	0.0	0.0	0.0	69.7	308.7
10-Feb	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.5	25.6	118.6	199.8	230.3	320.2	246.1	206.0	112.3	48.6	2.2	0.0	0.0	0.0	0.0	0.0	0.0	62.9	320.2
11-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	13.9	60.5	126.9	168.4	214.0	249.3	310.0	167.0	48.6	4.2	0.0	0.0	0.0	0.0	0.0	0.0	56.8	310.0
12-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	12.8	59.3	97.0	131.3	175.1	243.8	174.3	103.7	26.9	3.1	0.0	0.0	0.0	0.0	0.0	0.0	42.8	243.8
13-Feb	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.8	20.5	81.5	187.5	263.6	298.8	291.8	217.3	103.5	42.3	4.2	0.0	0.0	0.0	0.0	0.0	0.0	63.0	298.8
14-Feb	0.0	0.0	0.0	0.0	0.0	0.1	0.0	1.4	43.2	133.4	245.0	328.3	374.0	368.1	300.0	177.3	65.9	5.8	0.1	0.1	0.1	0.1	0.1	0.1	85.1	374.0
15-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	23.5	83.6	164.5	219.7	230.6	222.4	170.4	88.2	43.1	5.7	0.0	0.0	0.0	0.0	0.0	0.1	52.2	230.6
16-Feb	0.1	0.1	0.0	0.0	0.0	0.0	0.0	2.0	25.4	108.1	281.7	364.4	376.6	351.7	287.9	194.2	83.2	8.1	0.1	0.1	0.0	0.0	0.0	0.0	86.8	376.6
17-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	31.0	98.5	179.5	284.6	348.7	341.6	285.0	195.9	86.2	8.3	0.2	0.0	0.0	0.2	0.0	0.1	77.6	348.7
18-Feb	0.1	0.0	0.0	0.0	0.0	0.0	0.1	2.9	69.9	166.6	293.1	341.7	366.7	358.7	304.1	209.9	98.9	8.6	0.1	0.1	0.1	0.2	0.2	0.2	92.6	366.7
19-Feb	0.2	0.2	0.2	0.2	0.0	0.1	0.1	3.5	49.4	132.9	245.4	322.6	365.0	360.9	293.7	187.5	75.3	9.8	0.0	0.0	0.0	0.0	0.0	0.0	85.3	365.0
20-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	26.3	45.1	53.2	98.8	210.7	332.9	300.0	209.2	96.2	12.9	0.2	0.1	0.0	0.0	0.0	0.0	57.8	332.9
21-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	30.5	89.6	187.0	210.0	139.0	193.7	128.6	112.1	52.9	8.1	0.0	0.0	0.0	0.0	0.0	0.0	48.1	210.0
22-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	8.7	21.8	44.7	56.0	76.6	83.7	154.1	168.4	111.2	10.2	0.0	0.0	0.0	0.0	0.0	0.0	30.7	168.4
23-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	14.2	42.4	56.3	86.0	99.9	133.0	111.1	105.9	32.8	8.2	0.0	0.0	0.0	0.0	0.0	0.0	28.8	133.0
24-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	29.8	92.2	123.5	173.4	206.5	338.4	182.5	74.8	46.3	10.0	0.0	0.0	0.0	0.0	0.0	0.0	53.3	338.4
25-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	25.2	69.4	123.5	170.2	199.4	234.8	139.6	175.7	81.4	15.5	0.0	0.0	0.0	0.0	0.0	0.0	51.6	234.8
26-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	48.7	122.5	185.4	331.5	359.7	375.1	312.1	242.3	109.4	20.0	0.0	0.0	0.0	0.0	0.0	0.0	88.0	375.1
27-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	25.7	65.9	94.2	111.8	222.4	195.4	141.1	90.8	52.7	11.0	0.0	0.0	0.0	0.0	0.0	0.0	42.2	222.4
28-Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	28.0	84.7	123.5	154.6	204.3	236.4	256.7	245.3	156.5	40.1	0.9	0.1	0.2	0.2	0.0	0.1	64.0	256.7
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	24.4	83.5	151.7	206.7	243.0	253.7	207.8	138.7	58.6	7.5	0.1	0.0	0.0	0.0	0.0	0.0	Diurnal Average	
	0.2	0.3	0.3	0.3	0.4	0.3	0.2	5.5	69.9	166.6	293.1	364.4	377.5	375.1	312.1	245.3	156.5	40.1	0.9	0.2	0.2	0.2	0.2	0.2	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Global Radiation (GR) - W/m2

Ells River - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Ells River - February 2025

Maximum Speed: 32 km/h on Feb 1 03:00

Maximum Daily Speed Average: 22.6 km/h on Feb 1

Minimum Speed Value: 0 km/h on Feb 26 05:00

Minimum Daily Speed Average: 0.3 km/h on Feb 11

Maximum Diurnal Speed Average: 2.3 km/h at hour 15

Minimum Diurnal Speed Average: 0.3 km/h at hour 12

Monthly Average Velocity: 0.1 km/h 139.5 deg

Percentiles: P_1 = 1 P_{10} = 3 Q_1 = 5 Median = 8 Q_3 = 13 P_{90} = 16 P_{99} = 28

Hours in Service:	672
Hours of Data:	657
Hours of Missing Data:	15
Percent Operational Time:	97.8

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-Feb	N28	N27	NNE32	NNE28	N28	N28	NNE26	N26	N26	NNE31	N25	N22	N23	N22	N24	N22	N17	N23	NNE19	NNE20	NNE16	NNE14	NNE11	NNE11	N22.6	NNE32
2-Feb	NNE15	NNE18	NNE16	NNE16	NNE13	NNE15	NNE13	N10	NNE13	NNE17	NNE17	NNE16	NNE15	NNE12	N7	NE5	NE6	NE4	NE5	WNW1	WSW3	WSW2	SSE1	SW2	NNE9.3	NNE18
3-Feb	SW2	WSW3	SW5	SW6	W5	W2	WSW4	WSW5	WSW8	SW8	SW8	SW8	SSW10	SSW10	SSW11	SSW11	SSW9	SSW8	SW10	SW10	SW10	SW10	SW9	SW8	SW7.1	SSW11
4-Feb	SW10	SW9	SSW9	SSW7	SSW9	SSW10	SSW12	SSW11	SSW13	SSW14	SSW15	SSW15	SSW15	SSW17	SSW17	SSW17	SSW15	SSW11	SSW11	SSW13	SSW13	SSW14	SSW15	SSW17	SSW12.7	SSW17
5-Feb	SSW14	SSW15	SSW13	SSW14	SSW15	SSW15	SW17	SSW14	SSW15	SSW15	SSW14	SSW12	SSW13	SSW12	SSW13	SSW13	SSW10	SW9	SW10	SW9	SW6	SW7	SW8	SW9	SSW12.0	SW17
6-Feb	WSW9	SW8	SW12	SW5	WSW11	WSW9	W7	WNW8	WNW9	NNE20	NNE22	N25	N24	NNE21	N14	NW17	NW11	WNW8	W6	WSW5	WSW4	SW5	SW6	SW7	NW6.3	N25
7-Feb	SW8	SSW8	SW6	SW9	SW11	WSW8	W4	SW6	SW10	SW8	SW10	SW11	SSW14	SSW14	S13	SW10	SSW8	SW9	SW8	WSW8	WSW6	SW9	SW10	SW10	SW8.6	SSW14
8-Feb	SW12	SW7	SW4	SSW4	S5	S6	SSE6	S6	SSE6	S6	SW1	UO	NNW2	N6	N8	N6	N5	NNE7	N9	NNE19	NNE24	NNE22	N20	N21	N3.8	NNE24
9-Feb	NNE13	NNE13	N11	NW7	NW7	WNW8	WNW5	NW3	S3	WNW5	NNW4	NNE13	NE13	NNE6	N3	NNE4	NNE5	UO	UO	UO	W6	WSW8	SW10	SW11	NNW4.0	NNE13
10-Feb	SW10	SW10	SSW9	SSW9	SW10	SSW9	SW12	SSW10	SW12	SW11	SW12	SSW13	SSW13	S12	SE11	E9	NE6	N11	N5	N6	N9	N6	NNW7	NW4	SW4.5	SSW13
11-Feb	NW3	WNW4	WNW5	NW7	NNW6	NNW6	NW5	NW2	SE3	SE5	SE6	ESE4	SE5	SE4	SE6	SE7	S5	UO	W2	SE2	ESE1	UO	W1	SW3	SSE0.3	SE7
12-Feb	UO	WSW1	SSE4	S4	S2	SSE3	SSE4	SSE1	ESE1	ESE3	SE5	ESE3	NE4	NE7	NNE10	NNE12	NNE14	NNE15	N14	N15	N14	N16	N16	N17	NNE5.6	N17
13-Feb	N17	N15	NNW8	NNW7	NW4	NW3	WNW2	NW4	NW4	NW4	N4	NNW8	N6	NE9	NNE11	NNE12	NNE10	N7	NNE8	N9	N7	N9	N5	N6	N6.9	N17
14-Feb	NW5	WNW6	W6	W4	W2	WSW1	WNW3	WSW1	S1	SW1	ENE1	NNE2	ENE4	ENE5	SE6	SE8	SE8	ENE3	WNW3	WNW3	W3	W2	SW2	SW1	WSW0.5	SE8
15-Feb	S4	SSW4	S4	S2	SSE2	SSE3	S4	SW5	SW6	SSW3	WSW7	WSW6	W5	WNW3	WNW6	NW8	NE8	NE4	UO	NNE5	NE10	NNE4	N3	WNW2	W1.1	NE10
16-Feb	UO	WSW3	UO	SW2	S4	S4	S5	S6	S5	S4	SSE12	SSE12	SSE11	SE14	SSE15	SE15	SSE14	SSE10	SE7	ESE2	SSE4	SE3	SE10	SSE15	SSE7.6	SSE15
17-Feb	SSE17	SSE11	S12	S9	SSE8	SE6	SSE8	SSE10	SSE13	SE19	SE17	SSE14	SE13	SE14	SE15	SSE15	SE15	SE7	ESE4	ESE3	ESE6	SSE7	WNW2	S5	SSE10.0	SE19
18-Feb	S6	S9	SSE7	S11	S12	S12	S10	SSW4	SSW4	S5	S11	S12	SSE13	S14	S15	S14	SSE12	SSE11	SSE8	SSE6	SSE7	S8	S11	S11	S9.6	S15
19-Feb	S10	S11	S10	S10	SSE7	S7	SSE4	SSW3	SSE4	SSE9	SSE9	S15	SSE16	S16	SSE17	SSE17	SSE14	SSE9	SSE7	SSE13	SSE18	SSE18	S13	S13	SSE11.1	SSE18
20-Feb	S16	S16	SSE16	S14	S12	S13	S15	S16	S18	S17	SSW15	SSW13	SSW16	SSW16	S15	SSW13	SSW11	S8	E6	NNE0	WNW5	NW4	SW3	WNW1	S10.4	S18
21-Feb	SW3	W3	UO	S5	SSW2	N1	UO	W2	NNW3	NW5	N10	N15	N13	N13	N16	NNE16	NNE16	NNE13	N13	N13	N10	N9	N11	N12	N8.1	NNE16
22-Feb	N11	NW7	NNW5	NNW4	NNE6	NNW4	NNW4	UO	WSW2	UO	WNW3	WSW3	S6	S8	SSW8	SSW11	S9	S9	S9	S11	SSE6	SSW6	S8	S9	SSW3.0	N11
23-Feb	SSE9	S9	S8	SE6	SSE6	SW2	SSE6	S7	N7	N31	NNE21	NNE25	NNE23	NNE21	NNE16	NNE15	NE11	NE10	N5	NE1	NE5	ENE7	NE9	NE9	NE7.1	N31
24-Feb	NNE7	NE8	NE8	N4	N5	NNW5	NNW4	E3	SE4	SW1	WSW3	S8	S8	SSE8	S8	SSW6	SSE6	ESE4	SE3	N5	NNE18	NNE18	N19	NNE19	NE3.1	N19
25-Feb	NNE16	NNE16	NNE15	NNE15	NNE14	NE12	NE8	NE7	NNE7	NE10	NNE7	N5	N4	NE6	NNE4	N6	NNE8	NE7	NNE5	NNW3	NNW5	WNW5	W4	S5	NNE7.0	NNE16
26-Feb	S8	S11	S7	SSE5	WNW0	NW5	WNW4	N10	N10	N11	NNE8	N6	N8	NE8	NE12	NNE13	NNE12	NNE10	N9	N7	N9	N10	N12	N12	N5.7	NNE13
27-Feb	N9	N8	NNW3	NW2	N4	NW3	E2	W2	WSW4	SSW6	SSW10	SW8	NW19	NE17	NE17	NE17	NNE14	NE13	NNE13	NNE15	NNE12	NNE11	NNE7	N2	NNE5.8	NW19
28-Feb	E5	ESE3	SE4	SE5	SE5	S3	ENE5	N6	UO	ESE3	SE5	SE6	ESE5	SE5	SSE7	S10	SSE10	SE9	SSE4	SSE9	S9	S7	S9	S10	SSE5.1	SSE10
	W0.5	WSW0.9	SSW0.8	SSW1.3	SW1.1	WSW1.2	SW1.5	SW1.6	SW1.8	NE0.4	SSE0.8	SSE0.3	E0.6	E2.1	ESE2.3	ESE1.7	E2.1	ENE2.1	NNE1.4	N1.6	N2.0	NNW1.6	NW1.1	WSW1.1	Diurnal Average	
	N28	N27	NNE32	NNE28	NNE28	NNE28	NNE26	N26	N26	N31	N25	NNE25	N24	N22	N24	N22	N17	NNE23	NNE19	NNE20	NNE24	NNE22	N20	N21	Diurnal Maximum	

UO - Unstable Operation

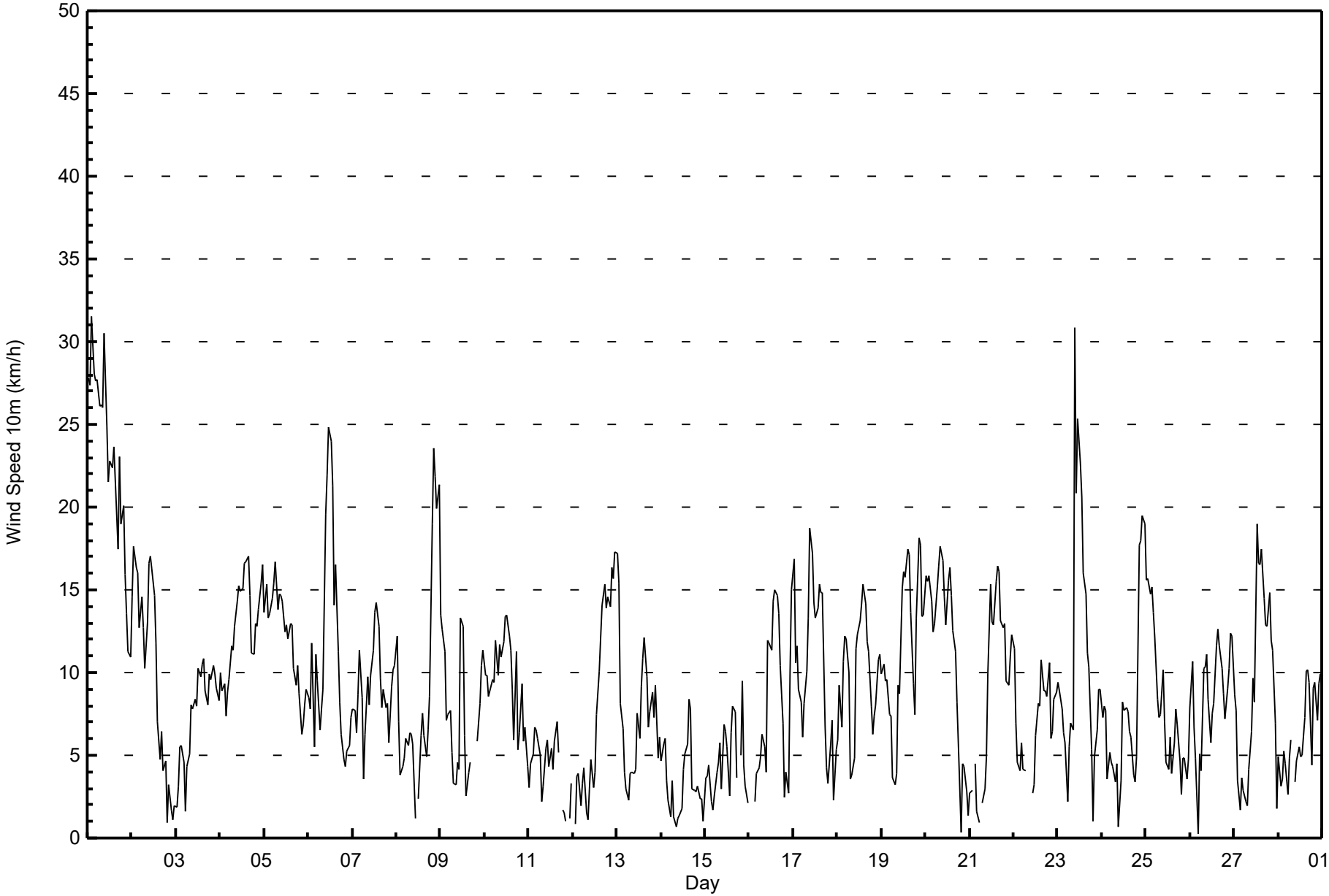
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Ells River - February 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	195	29.68	29.68
6 - 11	263	40.03	69.71
12 - 19	167	25.42	95.13
20 - 28	29	4.41	99.54
29 - 38	3	0.46	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 657

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Ells River - February 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	8	7	5	3	12	14	12	20	7	17	15	14	18	16	12	195
6 - 11	36	18	17	1	2	1	13	30	40	27	46	10	4	6	6	6	263
12 - 19	19	44	7	0	0	0	7	20	23	39	6	0	0	0	2	0	167
20 - 28	14	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29
29 - 38	1	2	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	85	87	31	6	5	13	34	62	83	73	69	25	18	24	24	18	657

Total Number of Valid Hours: 657

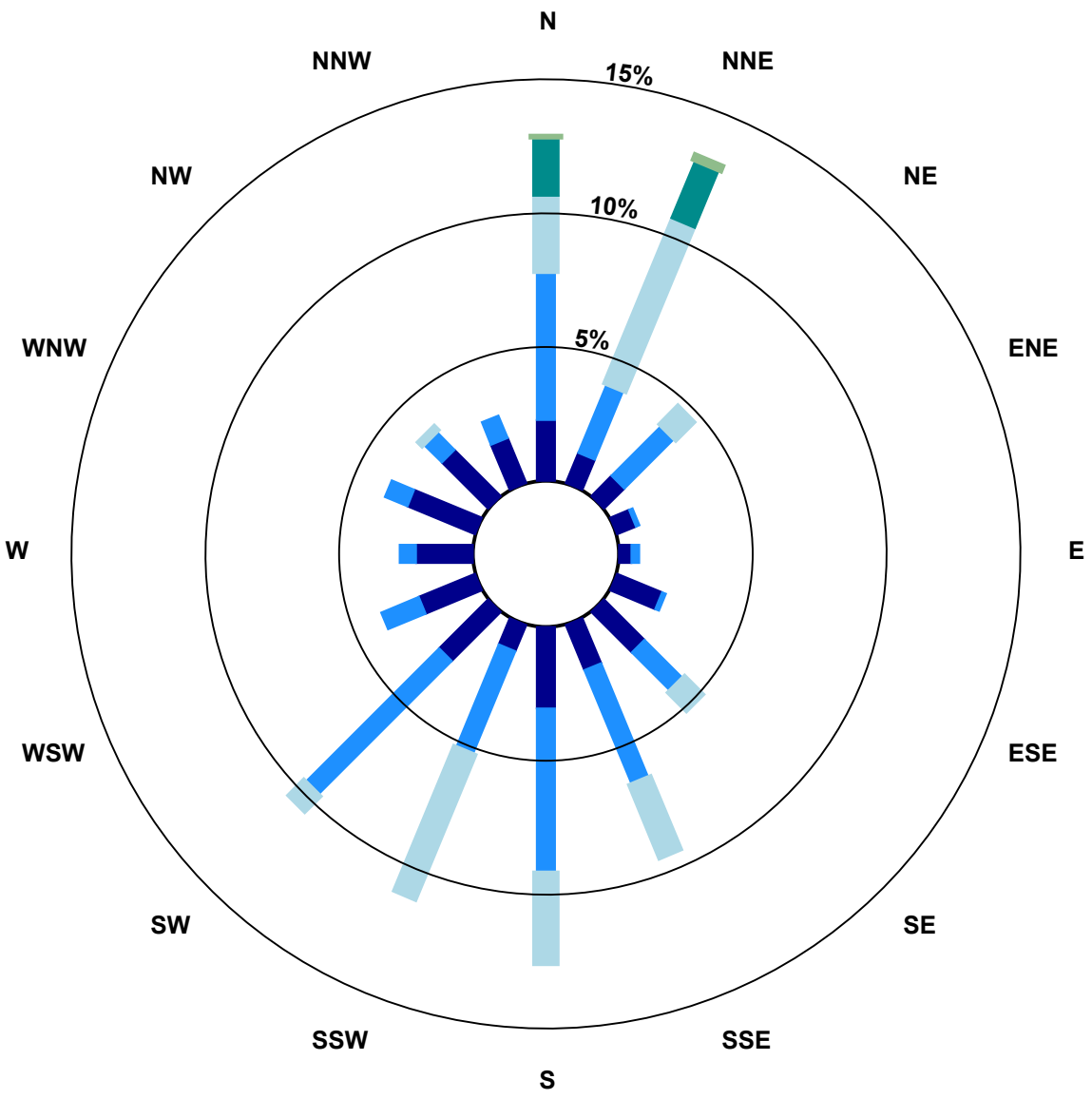
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 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: 657

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

Maximum Value: 9 km/h on Feb 23 09:00

Minimum Value: 0 km/h on Feb 14 19:00

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

Hours in Service:	672
Hours of Data:	657
Hours of Missing Data:	15
Hours of Calibration:	0
Percent Operational Time:	97.8

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

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Ells River - February 2025

Direction of Maximum Speed: 12 deg on Feb 1 03:00
Direction of Maximum Daily Speed Average: 10.0 deg on Feb 1

Direction of Minimum Speed: 291 deg on Feb 26 05:00
Direction of Minimum Daily Speed Average: 0.3 deg on Feb 11

Monthly Average Direction: 139.5 deg

Hours in Service:	672
Hours of Data:	657
Hours of Missing Data:	15
Percent Operational Time:	97.8

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-Feb	10	11	12	13	11	11	14	9	9	12	8	9	356	355	3	356	2	11	12	21	21	17	32	23	10.0
2-Feb	12	18	19	22	22	25	16	8	20	20	16	14	15	16	9	40	42	47	55	282	248	246	166	220	18.4
3-Feb	221	241	230	235	260	265	241	243	241	236	231	221	204	203	193	196	193	211	232	225	230	227	226	227	221.9
4-Feb	220	218	210	210	202	204	193	198	203	204	196	196	196	201	193	196	201	196	195	198	203	206	209	204	201.4
5-Feb	201	199	197	194	200	211	214	213	208	204	203	199	206	205	205	210	207	217	224	223	215	231	233	230	208.7
6-Feb	241	229	228	235	245	257	271	286	287	16	19	360	1	18	352	309	313	298	274	253	247	230	214	234	315.1
7-Feb	233	211	219	215	230	253	272	225	232	228	230	223	202	197	182	214	210	216	227	249	248	235	232	226	222.1
8-Feb	224	226	225	197	188	170	167	182	166	177	214	UO	329	350	354	359	6	28	8	23	23	16	2	358	6.1
9-Feb	18	17	7	320	307	303	288	308	183	286	343	27	35	18	359	29	32	UO	UO	UO	276	242	232	231	337.8
10-Feb	227	221	209	210	216	211	223	207	217	215	214	202	198	187	142	100	34	10	349	352	359	2	341	306	215.7
11-Feb	309	294	302	306	336	339	321	307	136	126	131	108	125	135	135	138	170	UO	277	142	104	UO	273	234	158.5
12-Feb	UO	249	148	180	177	168	160	164	123	123	140	113	45	40	31	31	16	14	4	356	359	1	359	3	18.1
13-Feb	5	10	341	330	326	317	291	319	310	323	357	347	9	40	29	24	14	11	15	2	349	4	358	355	1.2
14-Feb	322	284	277	275	281	245	283	257	182	221	77	21	58	72	131	139	132	57	299	287	271	273	214	234	253.9
15-Feb	189	209	172	182	168	152	187	222	234	210	240	252	271	291	303	316	48	54	UO	25	38	19	10	285	273.3
16-Feb	UO	258	UO	217	179	172	185	178	186	171	163	161	149	137	148	143	149	156	142	117	149	125	146	159	155.6
17-Feb	163	164	170	169	160	142	148	151	149	144	146	150	136	131	136	151	145	135	117	116	122	157	299	188	148.7
18-Feb	177	179	162	173	176	171	180	203	210	181	169	172	158	170	174	171	164	156	154	156	164	185	184	178	171.7
19-Feb	181	182	183	183	168	175	158	206	164	153	157	176	153	174	167	158	157	155	160	160	161	162	170	171	166.6
20-Feb	169	169	168	170	172	178	188	187	182	188	192	200	200	193	191	201	205	187	91	30	295	313	229	302	186.2
21-Feb	232	278	UO	181	198	353	UO	267	332	326	351	9	1	8	6	20	17	12	11	4	8	1	356	353	2.7
22-Feb	353	313	332	347	20	333	329	UO	238	UO	303	248	175	187	209	193	179	176	176	180	159	198	182	171	200.4
23-Feb	166	184	173	139	159	218	164	172	9	9	24	26	26	24	19	27	40	38	359	37	55	63	49	47	36.9
24-Feb	33	38	42	3	356	342	340	83	143	220	254	180	173	157	169	199	149	112	128	353	12	13	9	16	33.8
25-Feb	21	14	32	29	29	37	41	34	33	34	23	2	360	48	14	6	26	37	19	334	336	298	269	190	22.6
26-Feb	173	174	169	158	291	320	294	353	3	5	17	350	8	34	42	25	24	15	351	360	357	351	358	2	9.4
27-Feb	355	353	345	313	5	306	80	280	253	198	194	225	316	35	44	40	30	34	27	28	31	27	32	351	17.3
28-Feb	93	112	131	130	128	181	65	11	UO	115	142	134	123	139	150	172	167	141	161	162	183	181	174	179	150.0
	277.9	250.5	201.2	200.1	218.6	241.3	219.4	230.8	218.6	47.8	158.3	153.5	82.8	100.8	116.1	115.2	94.6	60.1	15.9	7.7	7.2	340.7	305.9	257.0	
	Diurnal Average																								

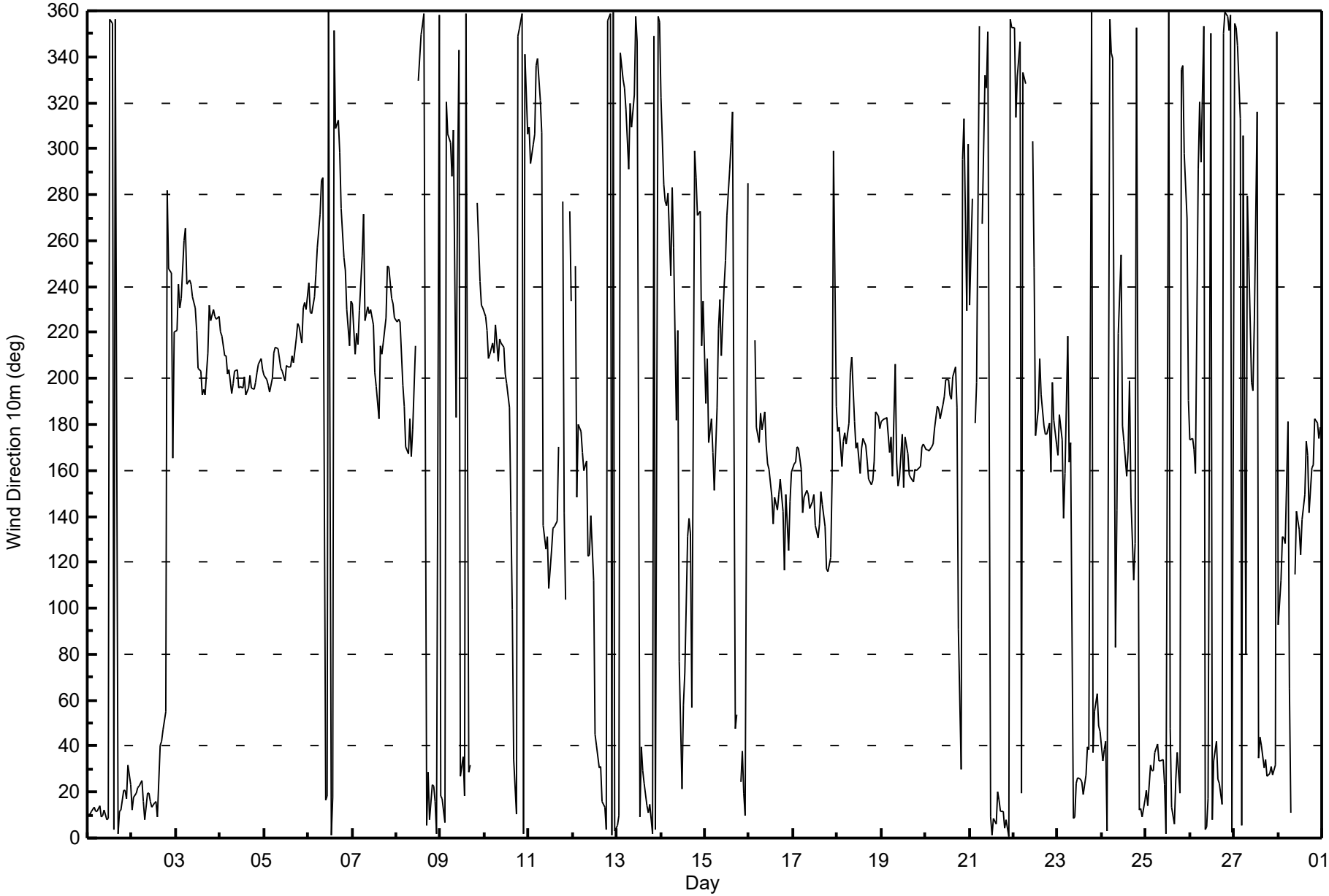
UO - Unstable Operation
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Ells River - February 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Ells River - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 96 deg on Feb 8 11:00

Minimum Value: 5 deg on Feb 13 18:00

Percentiles: P_1 = 6 P_{10} = 9 Q_1 = 11 Median = 15 Q_3 = 23 P_{90} = 40 P_{99} = 84

Hours in Service:	672
Hours of Data:	657
Hours of Missing Data:	15
Hours of Calibration:	0
Percent Operational Time:	97.8

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-Feb	8	9	7	9	8	9	8	10	11	9	11	12	12	13	12	13	14	11	9	10	8	11	10	15	15
2-Feb	10	9	6	6	9	7	9	11	9	6	8	9	9	11	21	10	9	17	10	60	12	22	70	34	70
3-Feb	61	30	16	15	37	37	15	20	15	17	17	18	19	21	19	13	11	13	14	15	19	16	15	17	61
4-Feb	16	15	14	22	15	13	12	16	13	13	13	14	15	16	13	15	15	14	13	14	16	17	18	15	22
5-Feb	16	13	14	12	14	15	15	16	16	15	16	17	17	18	17	17	15	20	17	16	17	17	18	17	20
6-Feb	18	21	19	48	20	38	22	16	13	31	9	14	14	11	28	10	10	13	21	20	27	18	22	16	48
7-Feb	16	16	21	18	21	21	34	47	14	17	16	17	16	17	16	18	13	13	14	21	22	15	11	12	47
8-Feb	22	29	35	24	18	12	14	19	15	17	96	UO	8	13	6	10	25	9	8	9	8	8	13	15	96
9-Feb	9	7	11	29	10	10	33	46	56	15	27	10	17	17	16	20	20	UO	UO	UO	12	13	11	12	56
10-Feb	14	16	18	15	20	22	17	18	17	17	19	17	18	21	13	17	42	9	17	28	11	10	12	18	42
11-Feb	21	20	20	11	14	30	22	52	33	17	23	25	27	33	18	15	12	UO	18	33	52	UO	64	24	64
12-Feb	UO	72	14	15	62	29	18	45	59	26	20	39	47	21	16	10	7	6	11	12	11	11	12	9	72
13-Feb	10	5	21	22	11	48	43	27	12	21	24	8	33	12	14	10	6	5	10	9	15	8	18	8	48
14-Feb	21	10	8	18	20	41	17	40	83	64	31	15	44	26	19	18	16	47	32	30	18	34	57	67	83
15-Feb	53	27	25	53	68	50	27	32	21	43	18	23	33	85	50	32	18	10	UO	46	9	33	35	50	85
16-Feb	UO	35	UO	49	33	30	24	10	16	22	12	14	18	10	12	11	9	10	10	36	36	41	11	11	49
17-Feb	10	10	10	9	13	8	10	8	9	8	9	14	11	11	11	13	11	12	11	26	28	17	71	32	71
18-Feb	50	7	25	8	6	8	10	55	26	40	13	20	16	17	14	12	13	8	11	9	12	9	6	5	55
19-Feb	7	7	6	6	14	7	51	38	19	13	21	18	16	15	15	12	9	8	15	10	10	11	10	10	51
20-Feb	11	11	10	10	10	12	13	12	12	13	14	17	17	17	16	18	13	7	26	90	14	27	35	67	90
21-Feb	45	23	UO	25	40	22	UO	41	20	27	14	10	15	10	11	10	8	8	10	9	12	9	10	8	45
22-Feb	11	10	33	25	10	25	31	UO	23	UO	53	53	24	16	25	15	13	7	6	7	13	11	12	9	53
23-Feb	10	19	12	10	22	80	48	7	82	10	11	8	8	7	8	8	14	12	27	67	16	12	11	8	82
24-Feb	9	9	9	38	19	23	22	37	16	89	50	22	28	25	22	33	12	39	38	65	12	12	10	8	89
25-Feb	10	9	10	9	14	9	13	18	13	11	20	23	22	27	47	14	15	14	11	24	9	12	25	17	47
26-Feb	9	11	19	28	94	25	23	12	9	8	12	17	24	19	13	13	8	7	12	13	9	9	11	11	94
27-Feb	15	12	28	75	41	94	84	92	78	39	21	24	29	32	12	12	11	9	8	12	13	11	20	29	94
28-Feb	11	18	34	23	23	71	16	21	UO	40	29	26	19	34	25	20	14	16	18	10	11	7	6	6	71
	61	72	35	75	94	94	84	92	83	89	96	53	47	85	50	33	42	47	38	90	52	41	71	67	
	Diurnal Maximum																								

UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS31
BLACKROD
FEBRUARY 2025

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

March 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BLACKROD (AMS31)
FEBRUARY 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	626	29	46	97.47	3	0	0.9	0
H2S (ppb) Average	625	30	47	97.47	0.7	0	0.3	0
NO2 (ppb) Average	623	32	49	97.47	32.5	0	12.7	-
NO (ppb) Average	623	32	49	97.47	50.9	-	20	-
NOX (ppb) Average	623	32	49	97.47	83.4	-	30.2	-
Temperature 2 m (C) Average	671	0	1	99.85	8.8	-	5.7	-
Relative Humidity (%) Average	671	0	1	99.85	96.8	-	84.3	-
Wind Speed 10 m (km/h) Average	624	0	48	92.86	33	-	25	-
Wind Direction 10 m (deg) Average	624	0	48	92.86	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BLACKROD (AMS31)
FEBRUARY 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	626	0.25	0.3	-	0	0	0.1	0.2	0.3	0.5	3
H2S (ppb) Average	625	0.15	0.1	-	0	0	0.1	0.1	0.2	0.3	0.7
NO2 (ppb) Average	623	6.93	5.2	-	0.3	1.7	3	5.5	9.6	14.2	32.5
NO (ppb) Average	623	7.72	9	-	0	0.1	0.4	4.1	12.5	21.7	50.9
NOX (ppb) Average	623	14.65	13.5	-	0.6	1.9	3.7	9.6	22.4	35	83.4
Temperature 2 m (C) Average	671	-14.92	12.2	-	-34.3	-29	-23.8	-18.9	-2.3	4.3	8.8
Relative Humidity (%) Average	671	70.27	11.4	-	34.5	54.7	62.7	72.9	78.2	82.3	96.8
Wind Speed 10 m (km/h) Average	625	10.6	7	-	1	3	5	9	14	21	33
Wind Direction 10 m (deg) Average	625	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - BLACKROD 2/3 (AMS31)
FEBRUARY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
ALL PARAMETERS	04 Feb 2025 13:00	04 Feb 2025 13:00	1	Maintenance - station modem replaced
ALL GASEOUS ANALYZERS	10 Feb 2025 20:00	11 Feb 2025 11:00	16	Station power failure
Wind Speed, Wind Direction	02 Feb 2025 09:00	02 Feb 2025 10:00	2	Flat line in sensor output signal - Sensor frozen
Wind Speed, Wind Direction	02 Feb 2025 18:00	04 Feb 2025 13:00	44	Flat line in sensor output signal - Sensor frozen
Wind Speed, Wind Direction	20 Feb 2025 14:00	20 Feb 2025 14:00	1	Maintenance - station operator activities

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Blackrod - February 2025

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

Maximum Value: 3.0 ppb on Feb 11 14:00

Maximum Daily Average: 0.9 ppb on Feb 13

Minimum Value: 0.0 ppb on Feb 1 01:00

Minimum Daily Average: 0.0 ppb on Feb 27

Maximum Diurnal Average: 0.4 ppb at hour 10

Minimum Diurnal Average: 0.2 ppb at hour 2

Monthly Average: 0.25 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.2 Q_3 = 0.3 P_{90} = 0.5 P_{99} = 1.9

Hours in Service:	672
Hours of Data:	626
Hours of Missing Data:	46
Hours of Calibration:	29
Percent Operational Time:	97.5

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-Feb	0.0	0.0	Z	0.1	0.0	0.0	0.8	1.7	2.0	1.6	0.3	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.2	0.3	0.2	0.3	2.0
2-Feb	0.1	0.4	0.4	Z	0.2	0.4	0.5	0.1	0.1	0.3	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.0	0.1	0.3	0.3	0.1	0.2	0.2	0.5
3-Feb	0.2	0.1	0.1	0.2	Z	0.2	0.5	0.3	0.4	0.5	0.2	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5
4-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.2	0.3	0.1	0.0	0.0	M	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.1	0.3
5-Feb	0.4	Z	0.4	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.0	0.1	0.0	0.2	0.1	0.1	0.0	0.0	0.1	0.2	0.2	0.2	0.4
6-Feb	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.7	0.3	0.0	0.2	0.7	0.0	0.2	0.7
7-Feb	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.3
8-Feb	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.1	0.4	0.5	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.3	0.3	0.2	0.1	0.1	0.2	0.5
9-Feb	0.1	0.3	0.3	Z	0.2	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.2	0.4	0.4	0.2	0.3	0.1	0.2	0.4	0.1	0.0	0.0	0.0	0.2	0.4
10-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	PF	PF	PF	PF	PF	0.0	0.1
11-Feb	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	2.2	2.7	3.0	2.1	2.2	2.4	0.6	0.3	0.2	0.3	0.3	0.4	0.3	--	3.0
12-Feb	Z	0.3	0.4	0.5	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.3	0.2	0.2	0.0	0.1	0.3	0.7	1.0	0.3	1.0
13-Feb	1.1	Z	0.8	0.8	0.5	0.8	1.4	1.3	1.2	1.1	1.4	0.8	0.9	0.9	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.6	0.6	0.9	1.4
14-Feb	0.5	0.5	Z	0.4	0.4	0.2	0.2	0.3	0.7	1.0	0.7	0.6	0.5	0.4	0.5	0.4	0.6	0.7	0.3	0.2	0.1	0.1	0.1	0.0	0.4	1.0
15-Feb	0.0	0.0	0.0	Z	0.0	0.4	0.0	0.1	0.4	0.7	1.1	0.5	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.2	0.3	1.1
16-Feb	0.0	0.1	0.0	0.2	Z	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.4	0.7	0.6	0.4	0.2	0.7
17-Feb	0.4	0.6	0.6	0.6	0.6	Z	0.5	0.6	0.4	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.1	0.2	0.1	0.0	0.2	0.2	0.3	0.6
18-Feb	Z	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.3	0.3	0.3	0.5	0.3	0.5
19-Feb	0.5	Z	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.2	0.3	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.4	0.5
20-Feb	0.3	0.3	Z	0.3	0.4	0.4	0.6	0.4	0.6	0.6	0.6	0.5	C	C	C	0.3	0.1	0.2	0.3	0.2	0.2	0.1	0.2	0.2	0.3	0.6
21-Feb	0.3	0.2	0.0	Z	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.2	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.4	0.1	0.4	0.3	0.4
22-Feb	0.5	0.4	0.2	0.0	Z	0.2	0.8	0.3	0.0	0.1	0.5	0.4	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.2	0.2	0.2	0.8
23-Feb	0.0	0.0	0.1	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6	0.1	0.0	0.0	0.0	0.0	0.6
24-Feb	Z	0.0	0.0	0.1	0.1	0.0	0.4	0.2	0.1	0.1	0.2	0.2	0.4	0.5	0.5	0.4	0.5	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.2	0.5
25-Feb	0.1	Z	0.1	0.1	0.1	0.2	0.3	0.1	0.3	0.5	0.5	0.5	0.4	0.3	0.5	0.4	0.4	0.2	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.5
26-Feb	0.2	0.2	Z	0.3	0.2	0.3	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3
27-Feb	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
28-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.0	0.3	0.1	0.0	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.3
	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Diurnal Average	
	1.1	0.6	0.8	0.8	0.6	0.8	1.4	1.7	2.0	1.6	1.4	2.2	2.7	3.0	2.1	2.2	2.4	0.7	0.8	0.7	0.7	0.7	0.7	1.0	Diurnal Maximum	

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

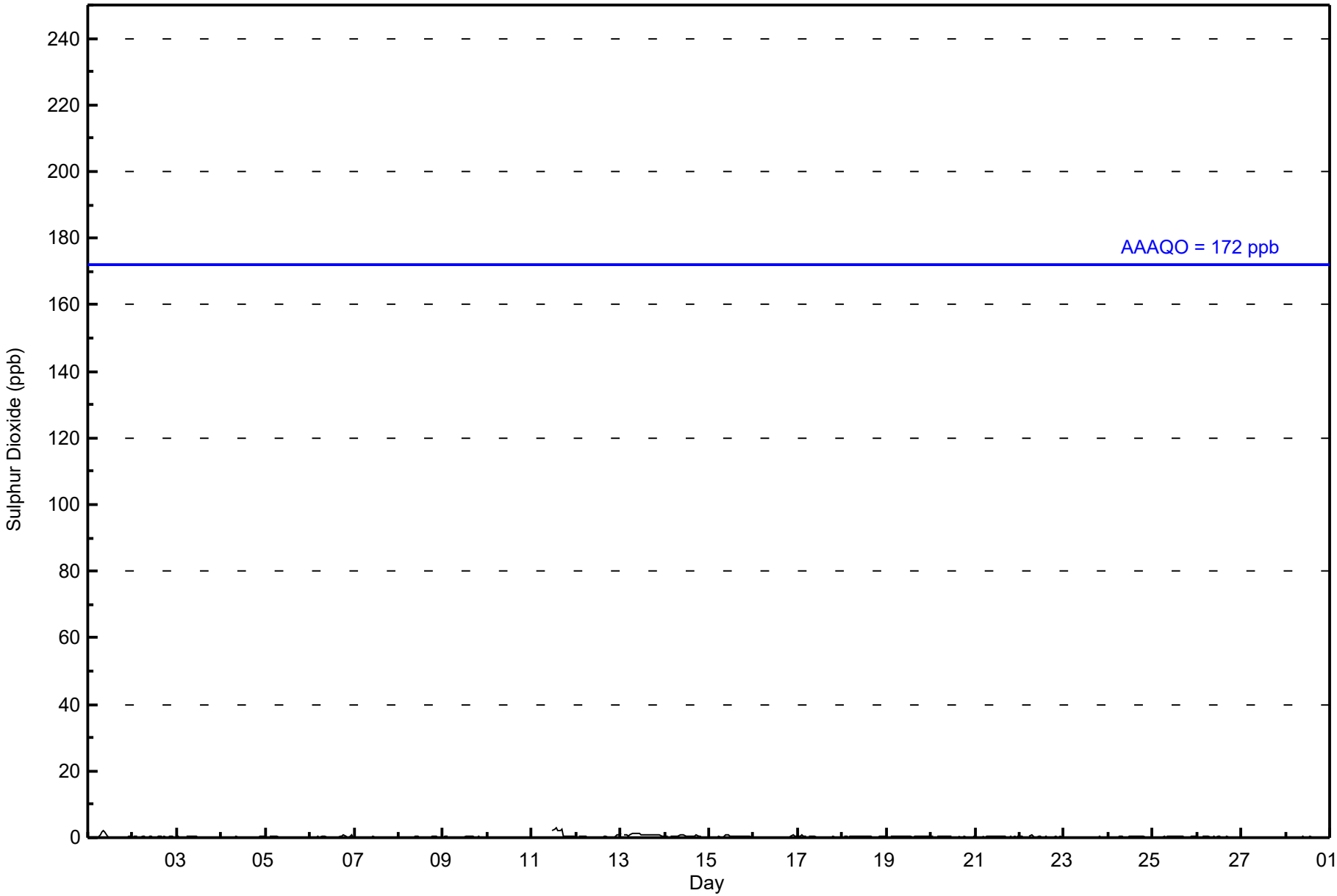
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Blackrod - February 2025



Sulphur Dioxide (SO_2) - ppb
Blackrod - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	626	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: 626

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Blackrod - February 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	28	33	18	5	13	6	13	48	187	68	20	13	16	47	46	21	582
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	28	33	18	5	13	6	13	48	187	68	20	13	16	47	46	21	582

Total Number of Valid Hours: 582

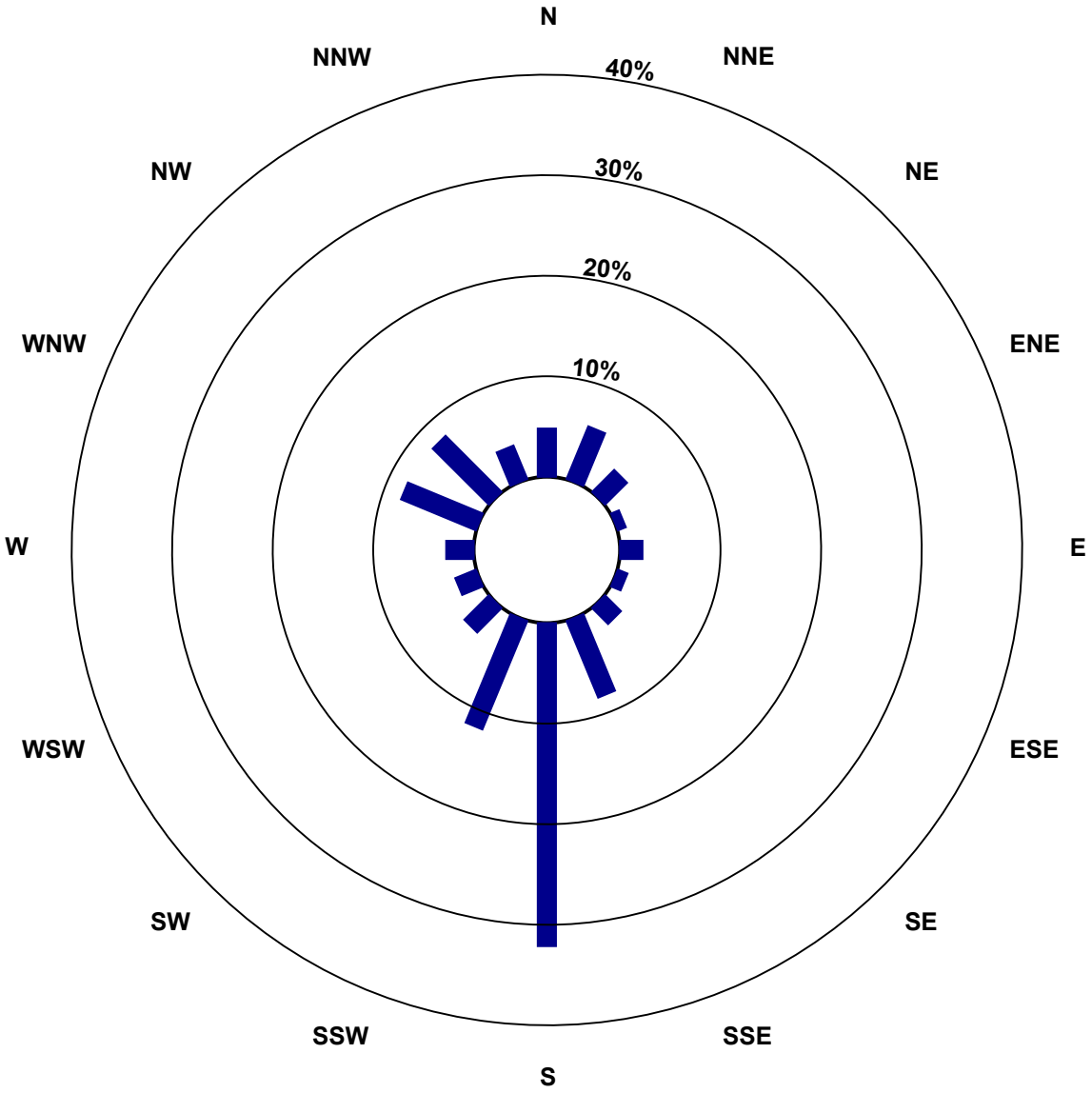
Total Number of Hours: 672

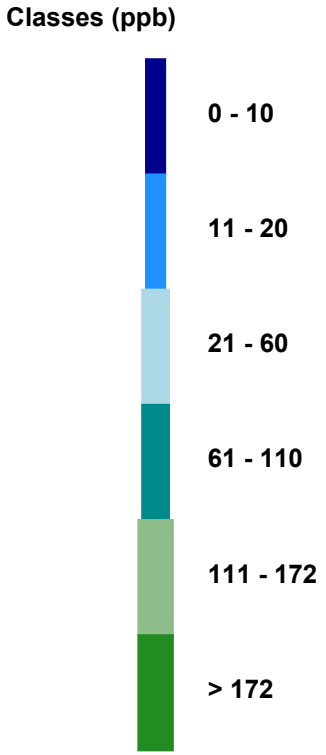
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Sulphur Dioxide (SO_2) - ppb

Blackrod





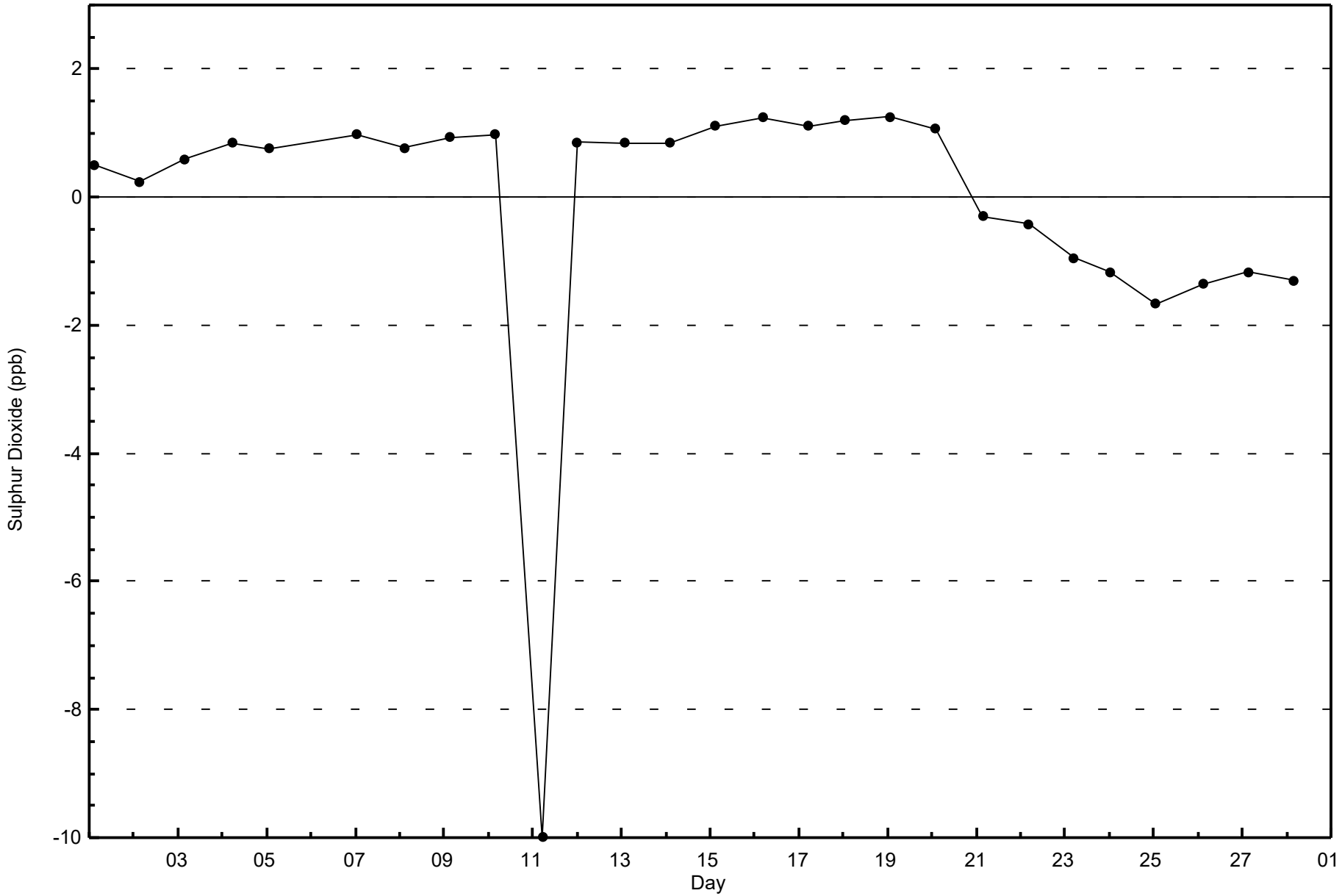
Total Number of Valid Hours: 582

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Blackrod - February 2025

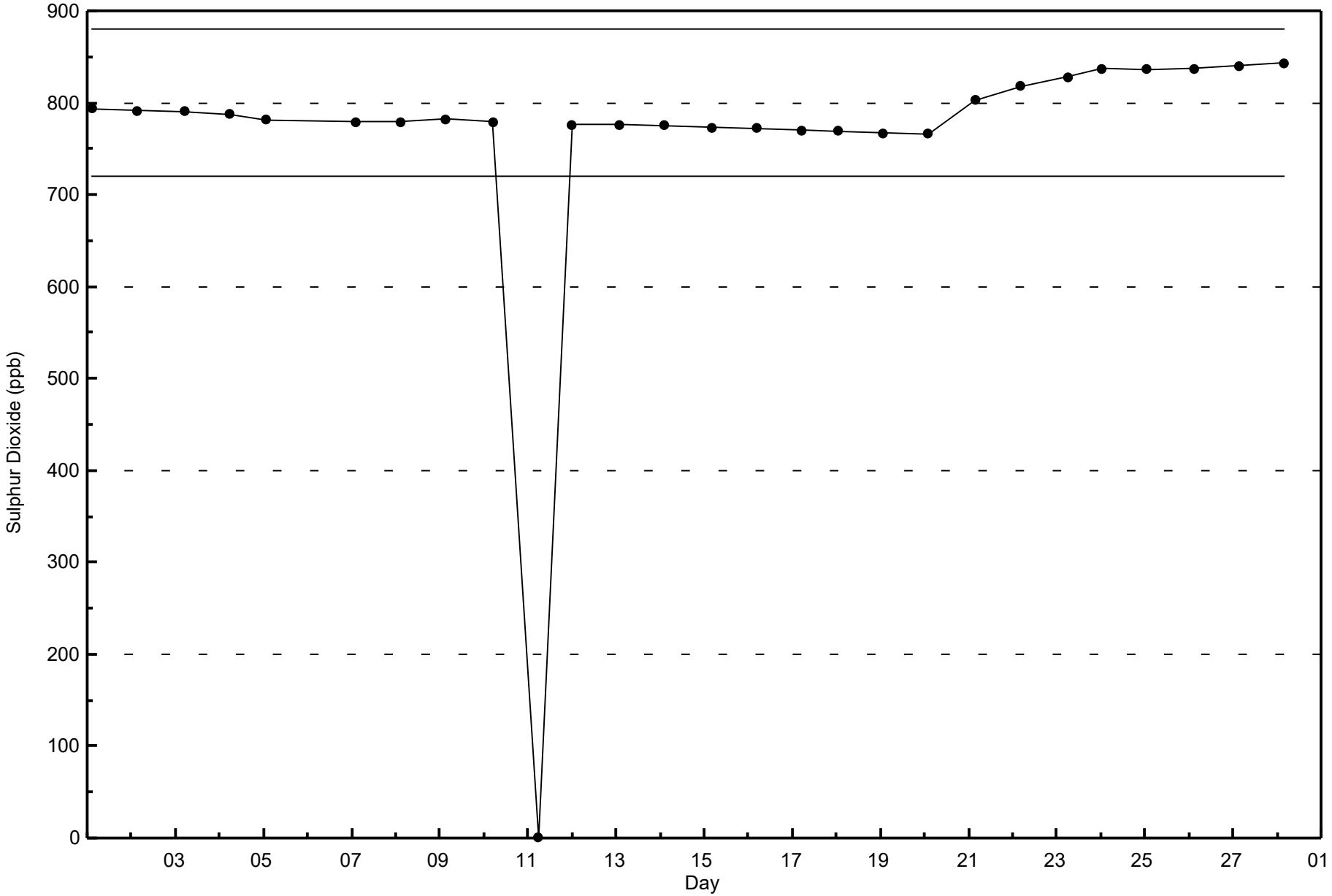


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Blackrod - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Blackrod - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 0.7 ppb on Feb 14 09:00 Maximum Daily Average: 0.3 ppb on Feb 1

Minimum Value: 0.0 ppb on Feb 27 15:00
Maximum Diurnal Average: 0.2 ppb at hour 10
Monthly Average: 0.15 ppb

Minimum Daily Average: 0.0 ppb on Feb 27
Minimum Diurnal Average: 0.1 ppb at hour 3
Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.1 Q_3 = 0.2 P_{90} = 0.3 P_{99} = 0.5

Hours in Service:	672
Hours of Data:	625
Hours of Missing Data:	47
Hours of Calibration:	30
Percent Operational Time:	97.5

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-Feb	0.1	0.1	0.3	Z	0.2	0.1	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.3	0.4	0.3	0.3	0.4
2-Feb	0.2	0.2	0.2	0.2	Z	0.3	0.3	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.5	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.5
3-Feb	0.1	0.2	0.2	0.2	0.1	Z	0.6	0.4	0.4	0.4	0.2	0.2	0.1	0.1	0.4	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.0	0.2	0.6
4-Feb	Z	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.4	0.2	0.1	0.1	M	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4
5-Feb	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	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2
6-Feb	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.2	0.3	0.2	0.4	0.2	0.1	0.2	0.4	0.1	0.3	0.4
7-Feb	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.3
8-Feb	0.0	0.1	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.5	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.5
9-Feb	0.2	0.3	0.3	0.3	Z	0.3	0.4	0.4	0.2	0.1	0.0	0.1	0.3	0.3	0.4	0.3	0.3	0.4	0.5	0.3	0.2	0.2	0.1	0.1	0.2	0.5
10-Feb	0.1	0.1	0.1	0.1	0.0	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	PF	PF	PF	PF	PF	0.1	0.2
11-Feb	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	0.4	0.4	0.3	0.2	0.3	0.4	0.1	0.2	0.1	0.1	0.1	0.1	0.1	--	0.4
12-Feb	0.1	Z	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.4	0.4	0.1	0.4
13-Feb	0.5	0.6	Z	0.3	0.2	0.2	0.4	0.4	0.4	0.5	0.6	0.3	0.1	0.2	0.3	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.3	0.6
14-Feb	0.1	0.1	0.1	Z	0.2	0.2	0.3	0.4	0.7	0.7	0.5	0.3	0.3	0.1	0.2	0.3	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.3	0.7
15-Feb	0.1	0.0	0.0	0.0	Z	0.7	0.2	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.7
16-Feb	0.1	0.1	0.1	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
17-Feb	Z	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	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.2
18-Feb	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
19-Feb	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	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
20-Feb	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
21-Feb	0.1	0.0	0.0	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.3	0.2	0.4	0.1	0.4
22-Feb	0.4	0.3	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	0.4
23-Feb	Z	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.4	0.3	0.1	0.1	0.1	0.1	0.4
24-Feb	0.1	Z	0.1	0.2	0.1	0.1	0.3	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.3
25-Feb	0.0	0.0	Z	0.1	0.1	0.1	0.2	0.2	0.1	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.3
26-Feb	0.1	0.0	0.1	Z	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.2
27-Feb	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.0	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.1
28-Feb	0.0	0.0	0.0	0.1	0.1	Z	0.2	0.2	0.2	0.5	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.5
	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	Diurnal Average	
	0.5	0.6	0.3	0.3	0.2	0.7	0.6	0.4	0.7	0.7	0.6	0.4	0.4	0.4	0.4	0.3	0.4	0.5	0.5	0.4	0.4	0.3	0.4	0.4	Diurnal Maximum	

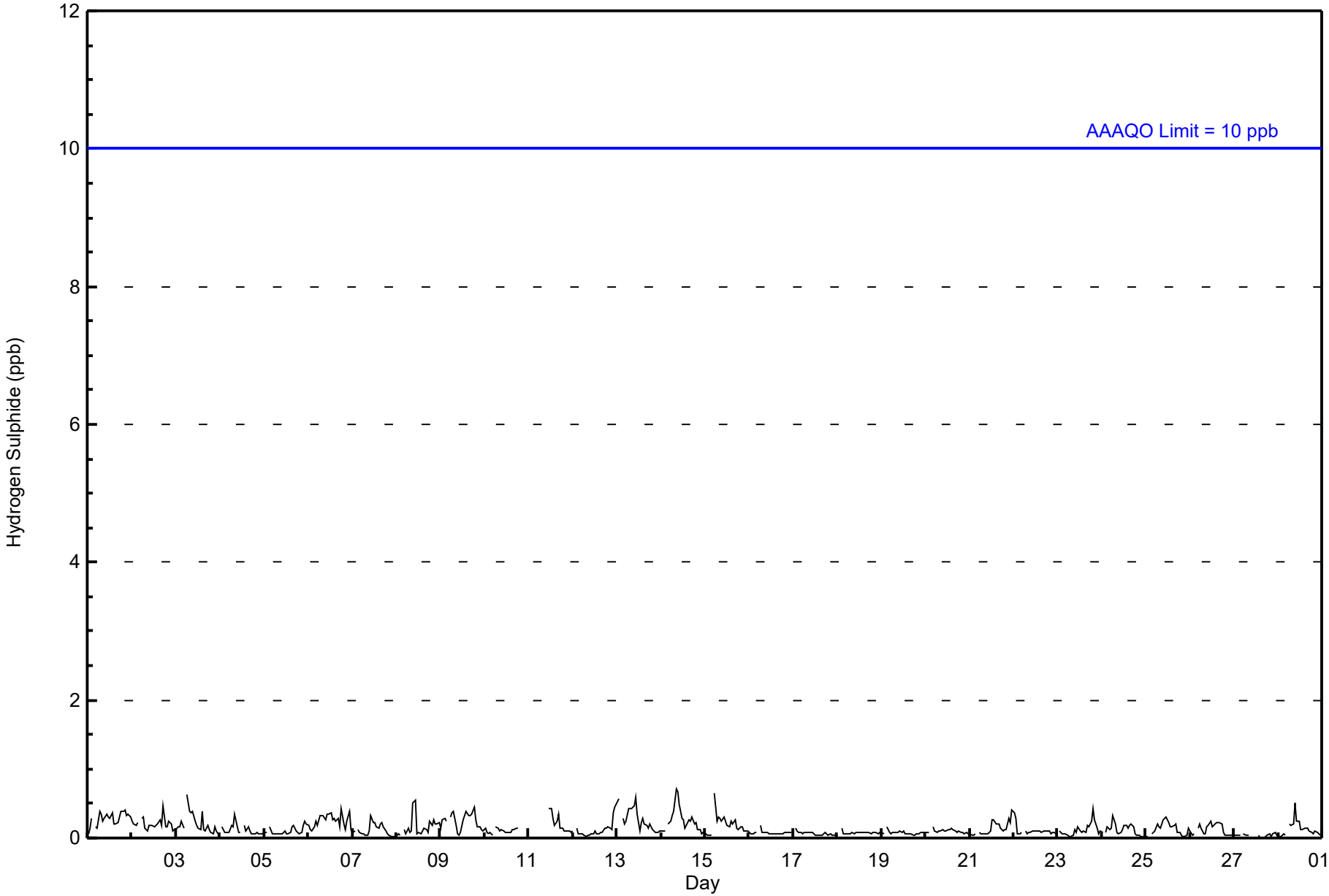
Z - zerospan C - Calibration M - Maintenance PF - Power Failure
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Blackrod - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	625	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: 625

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Blackrod - February 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	28	33	18	5	13	8	14	46	191	66	20	13	15	43	46	21	580
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	28	33	18	5	13	8	14	46	191	66	20	13	15	43	46	21	580

Total Number of Valid Hours: 580

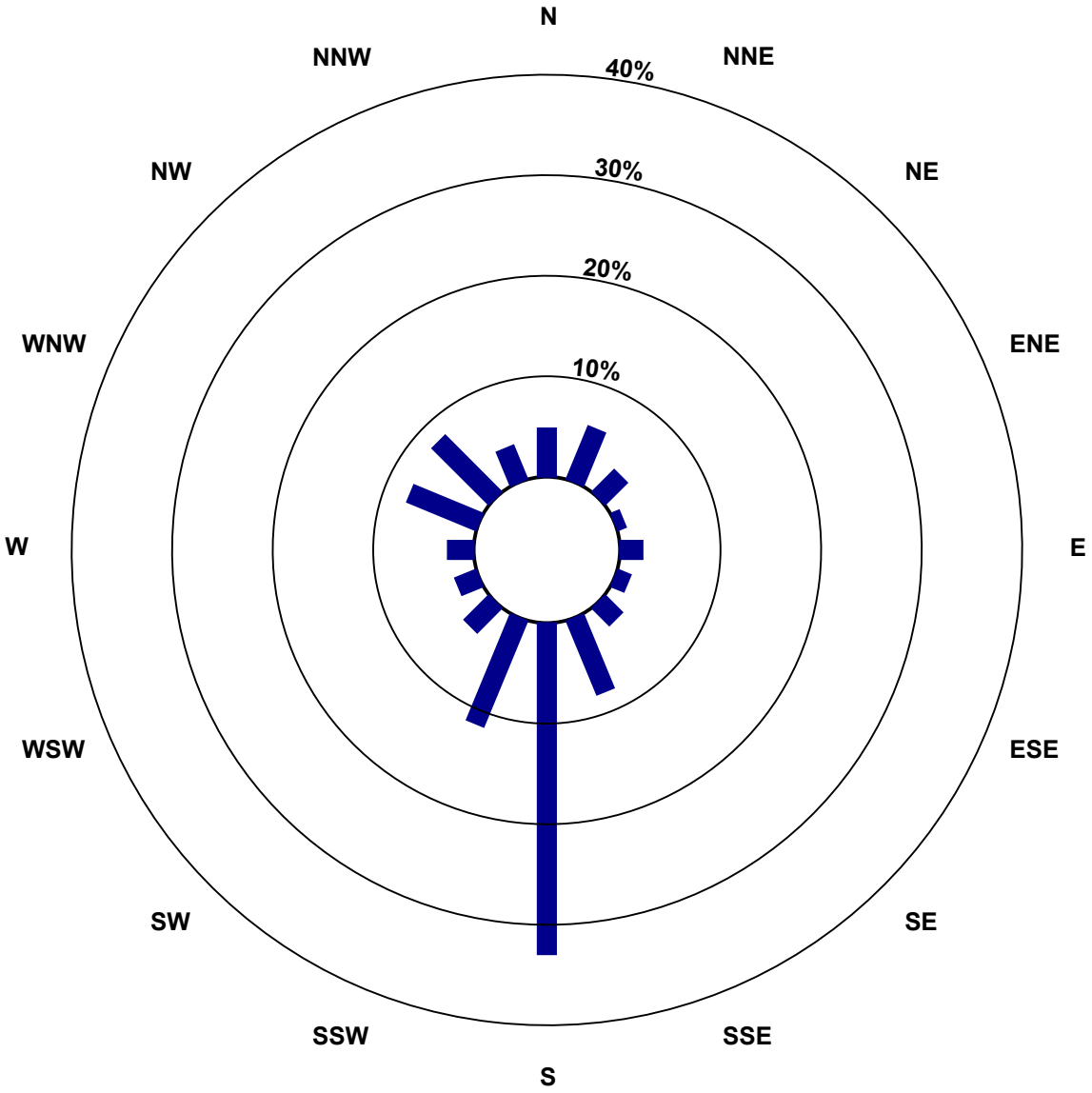
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Hydrogen Sulphide (H_2S) - ppb

Blackrod



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

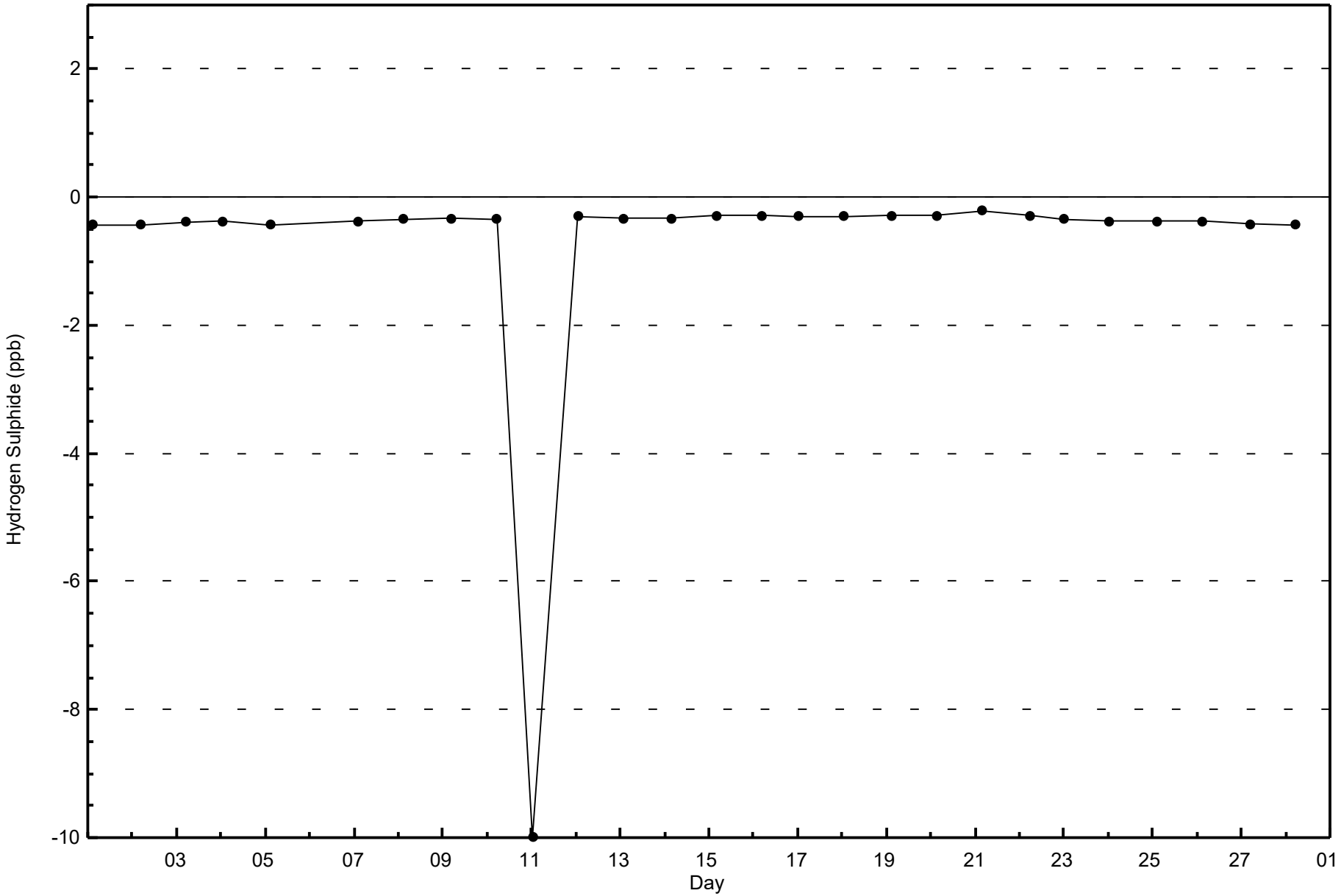
Total Number of Valid Hours: 580

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Blackrod - February 2025

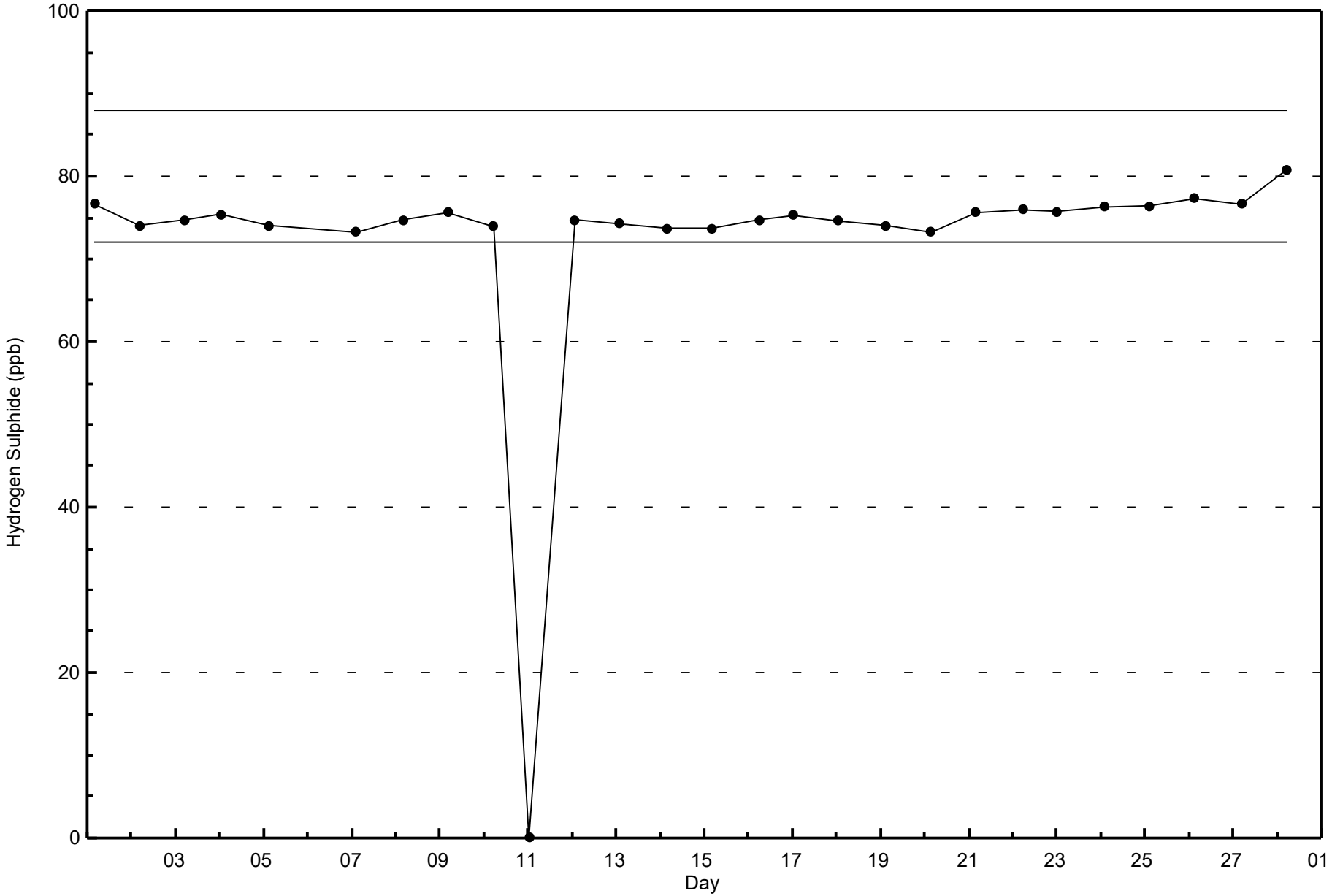


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Blackrod - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxide (NO) - ppb

Blackrod - February 2025

Maximum Value: 50.9 ppb on Feb 14 09:00

Maximum Daily Average: 20.0 ppb on Feb 1

Minimum Value: 0.0 ppb on Feb 17 20:00

Minimum Daily Average: 0.7 ppb on Feb 16

Maximum Diurnal Average: 12.5 ppb at hour 11

Minimum Diurnal Average: 3.4 ppb at hour 5

Monthly Average: 7.72 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.4 Median = 4.1 Q_3 = 12.5 P_{90} = 21.7 P_{99} = 35.4

Hours in Service:	672
Hours of Data:	623
Hours of Missing Data:	49
Hours of Calibration:	32
Percent Operational Time:	97.5

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-Feb	Z	13.6	25.7	28.8	4.7	9.4	20.6	18.1	14.2	16.3	24.3	22.0	22.4	28.0	16.3	15.8	17.0	21.1	26.5	24.5	26.6	22.2	23.6	18.9	20.0	28.8
2-Feb	11.8	Z	9.1	12.0	14.2	10.2	16.6	5.0	4.2	8.3	13.7	13.9	11.8	16.5	16.4	23.8	14.8	27.7	6.8	5.0	9.2	4.9	3.1	5.8	11.5	27.7
3-Feb	8.4	4.7	Z	18.3	5.4	8.1	34.1	22.9	19.4	23.6	12.0	10.2	8.6	8.2	8.5	5.4	3.6	9.1	6.3	2.3	0.4	4.1	0.5	0.1	9.7	34.1
4-Feb	2.5	1.2	1.4	Z	1.5	2.5	8.2	5.2	22.3	8.2	3.4	3.7	M	14.6	7.9	12.9	5.7	0.3	0.5	0.7	3.0	1.2	0.9	0.3	4.9	22.3
5-Feb	0.7	0.7	0.1	0.4	0.2	Z	0.7	1.5	1.1	1.6	2.4	4.8	2.3	2.9	6.5	14.4	16.4	5.8	1.8	0.2	2.4	12.6	19.3	16.3	5.0	19.3
6-Feb	12.8	4.7	4.4	8.2	15.2	6.0	18.3	18.8	21.8	18.2	25.9	25.6	27.5	19.2	22.3	16.9	18.1	6.3	28.9	9.4	0.3	13.6	26.8	2.7	15.5	28.9
7-Feb	1.9	2.7	0.1	0.1	0.2	Z	0.6	0.4	0.8	5.8	24.9	17.8	17.6	11.8	10.5	15.3	18.7	12.4	2.4	0.2	0.1	0.1	0.3	0.7	6.3	24.9
8-Feb	Z	1.6	0.4	0.3	0.3	1.5	5.8	2.8	5.0	40.4	47.4	1.5	4.5	3.6	7.3	9.2	6.5	1.9	15.7	12.0	21.5	15.8	16.3	17.0	10.4	47.4
9-Feb	11.4	Z	24.8	24.9	20.9	25.1	32.4	26.6	11.2	2.9	3.0	6.8	21.3	26.7	30.7	24.4	25.0	25.0	34.0	12.0	4.4	4.4	1.2	0.2	17.4	34.0
10-Feb	3.5	0.3	Z	1.0	0.1	0.2	0.6	5.5	4.2	6.1	4.7	4.8	6.1	5.0	4.3	7.4	5.5	4.6	5.1	PF	PF	PF	PF	PF	3.8	7.4
11-Feb	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	22.4	25.0	12.8	7.9	14.6	22.7	3.3	6.2	0.6	0.9	0.0	0.2	0.4	--	25.0
12-Feb	0.5	0.7	0.4	0.2	Z	0.2	0.8	0.5	1.8	2.2	2.7	2.0	5.2	1.6	2.3	2.0	2.2	7.4	6.5	10.9	9.6	8.1	27.2	30.6	5.4	30.6
13-Feb	37.2	35.4	17.2	3.9	3.2	Z	21.4	20.8	26.8	27.1	37.1	20.4	3.1	16.8	20.3	11.6	12.6	8.3	11.5	4.0	0.5	1.5	2.1	2.5	15.0	37.2
14-Feb	Z	1.4	0.3	6.3	3.4	6.0	9.0	18.7	50.9	32.8	33.2	18.3	15.7	6.3	16.8	18.3	16.3	19.5	11.4	10.8	3.6	2.4	0.2	2.0	13.2	50.9
15-Feb	0.3	Z	0.4	0.9	0.2	35.4	9.4	17.6	13.5	11.7	18.1	17.7	14.9	12.1	20.5	15.6	22.2	8.6	7.9	7.2	3.5	2.8	1.2	2.2	10.6	35.4
16-Feb	0.3	0.1	Z	0.2	0.3	5.7	1.7	0.1	0.3	1.5	3.3	0.4	0.4	0.5	0.4	0.5	0.2	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.7	5.7
17-Feb	0.1	0.0	0.0	Z	0.0	0.1	0.2	0.1	1.0	1.4	2.2	1.9	1.7	1.5	1.5	1.7	1.6	1.9	0.5	0.0	0.0	0.0	0.0	0.0	0.8	2.2
18-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.2	1.4	2.7	2.1	2.5	3.2	2.6	3.1	3.8	1.9	1.1	0.3	0.0	0.0	0.0	0.0	0.2	0.0	1.1	3.8
19-Feb	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.3	1.9	3.1	4.5	4.3	6.2	3.3	2.6	1.8	1.6	0.7	0.2	0.2	0.1	0.2	0.2	0.2	1.4	6.2
20-Feb	Z	0.3	0.3	0.2	0.2	0.2	0.2	3.9	4.2	5.2	4.3	5.2	5.3	5.7	6.7	4.6	3.8	0.4	0.5	0.0	0.0	0.0	0.0	0.0	2.2	6.7
21-Feb	0.0	Z	0.0	0.0	0.0	0.0	0.1	1.4	3.3	1.6	1.3	7.7	26.1	25.2	16.6	19.9	15.9	7.0	3.8	6.8	4.6	24.0	7.2	24.1	8.5	26.1
22-Feb	29.6	21.8	Z	0.0	0.0	0.0	0.1	0.3	0.1	0.3	0.6	0.6	0.6	0.7	0.6	0.5	0.7	0.3	0.1	0.5	0.0	0.0	0.0	0.1	2.5	29.6
23-Feb	2.6	2.0	0.0	Z	0.0	0.1	0.1	0.1	0.9	11.7	8.2	17.0	9.8	9.2	7.5	7.8	15.3	14.6	14.2	26.6	15.2	4.2	0.2	0.4	7.3	26.6
24-Feb	1.6	0.1	0.1	9.7	Z	3.7	26.0	14.5	4.6	2.1	6.2	9.3	17.8	17.2	12.0	16.5	16.5	10.3	1.3	0.4	0.6	0.1	0.0	0.1	7.4	26.0
25-Feb	0.4	0.0	0.0	0.0	2.1	Z	11.1	7.9	4.9	14.8	14.9	18.5	12.5	9.7	11.7	13.6	15.7	3.5	2.0	0.0	0.0	0.0	1.2	11.4	6.8	18.5
26-Feb	Z	0.0	2.9	8.2	8.5	13.6	6.8	0.3	1.0	11.3	C	C	C	C	C	C	17.9	11.3	1.2	0.0	0.0	0.0	0.0	0.4	--	17.9
27-Feb	1.3	Z	0.1	0.1	0.1	0.1	0.2	0.4	4.1	22.3	11.8	8.3	8.0	8.0	8.8	7.7	6.9	14.2	12.0	13.0	7.2	12.7	8.6	4.4	7.0	22.3
28-Feb	1.5	0.3	Z	0.9	0.4	1.8	9.6	9.2	11.3	41.5	13.7	11.4	5.2	7.2	8.2	7.8	6.4	2.6	2.2	0.4	2.2	0.7	0.0	0.1	6.3	41.5
	5.8	4.2	4.0	5.2	3.4	5.9	8.7	7.6	8.8	12.0	12.5	10.4	10.9	10.3	10.3	10.8	11.1	8.2	7.5	5.5	4.3	5.0	5.2	5.2	Diurnal Average	
	37.2	35.4	25.7	28.8	20.9	35.4	34.1	26.6	50.9	41.5	47.4	25.6	27.5	28.0	30.7	24.4	25.0	27.7	34.0	26.6	26.6	24.0	27.2	30.6	Diurnal Maximum	

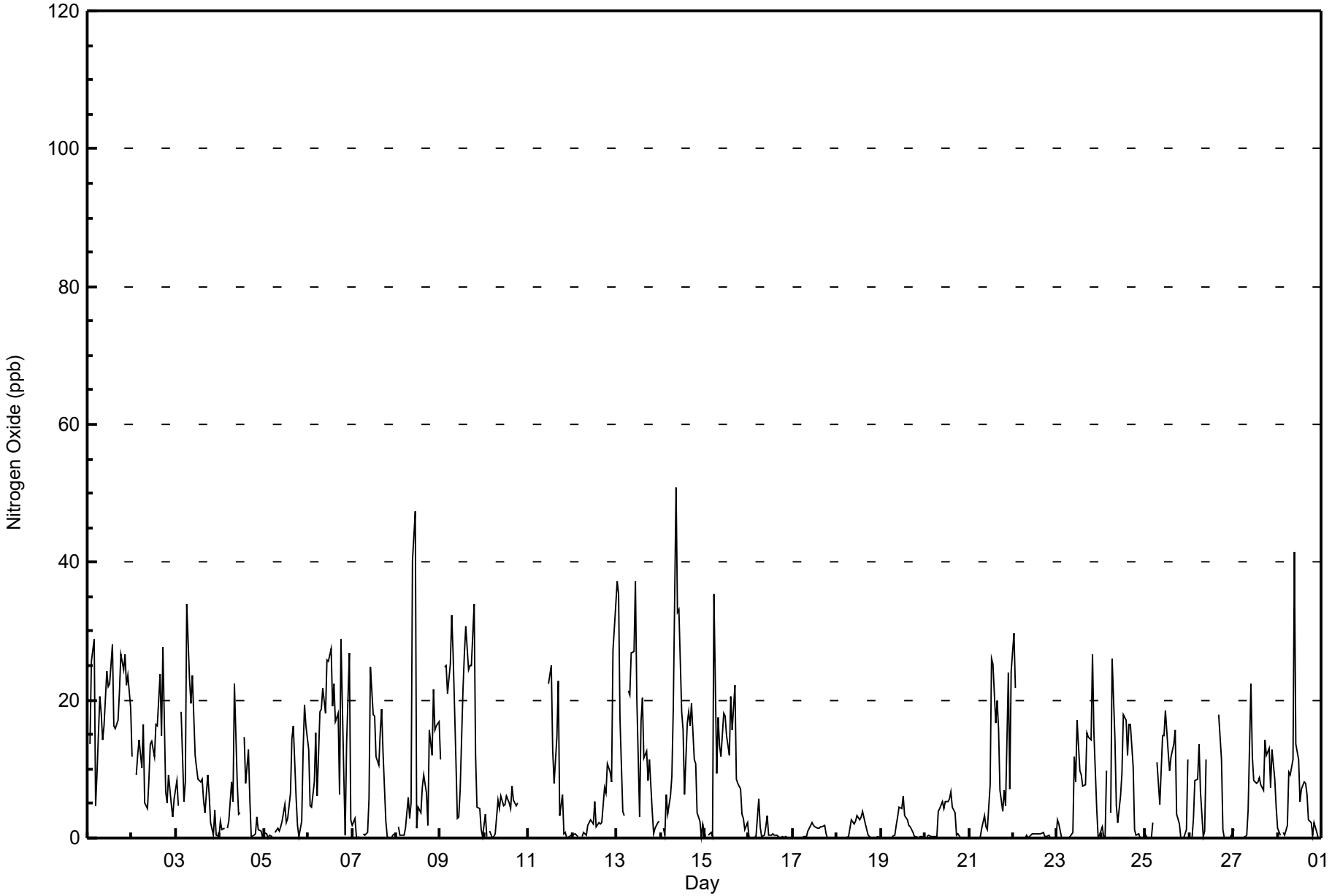
Z - zerospan C - Calibration M - Maintenance PF - Power Failure

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxide (NO) - ppb

Blackrod - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	552	88.60	88.60
21 - 40	68	10.91	99.52
11 - 80	3	0.48	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 623

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxide (NO) - ppb

Blackrod - February 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	16	23	15	5	12	8	12	46	188	64	20	12	9	31	34	17	512
21 - 40	12	10	0	0	1	0	2	0	1	3	0	1	3	13	13	4	63
11 - 80	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	3
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	28	33	15	5	13	8	14	46	189	69	20	13	13	44	47	21	578

Total Number of Valid Hours: 578

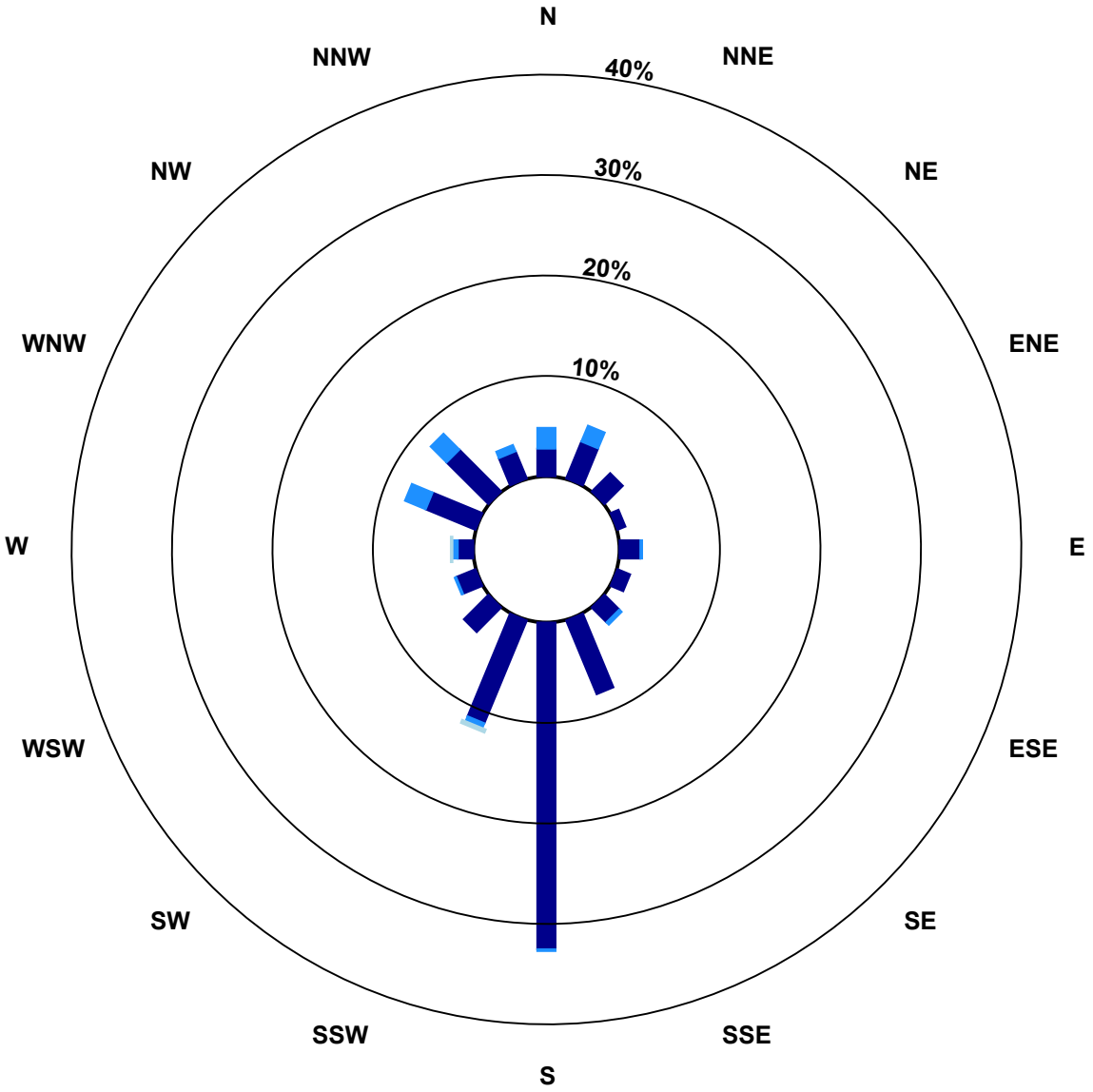
Total Number of Hours: 672

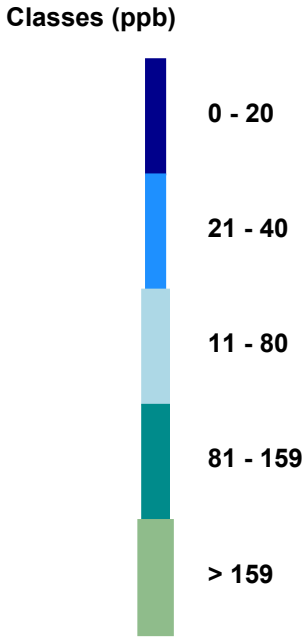
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Oxide (NO) - ppb

Blackrod





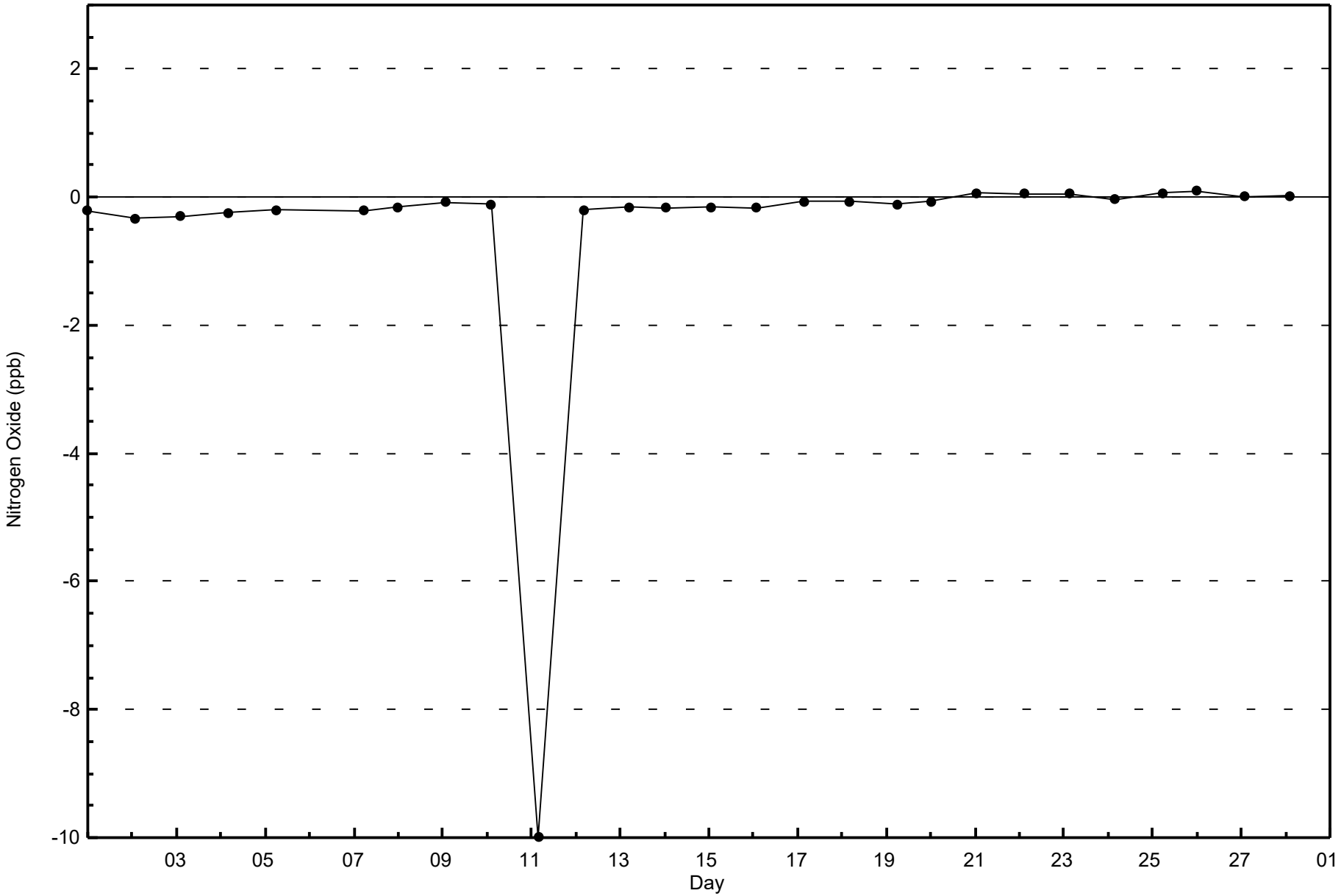
Total Number of Valid Hours: 578

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxide (NO) - ppb

Blackrod - February 2025

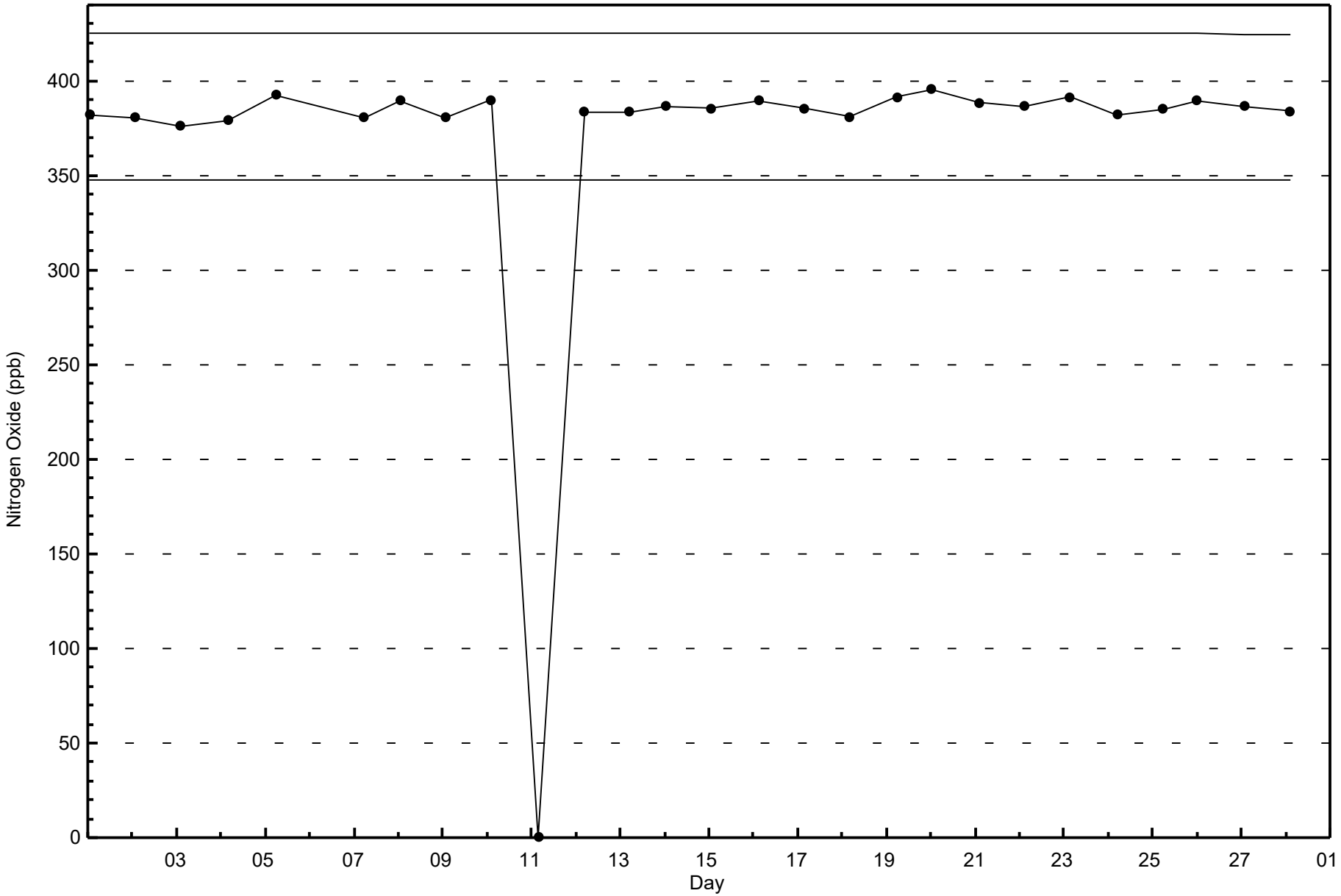


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxide (NO) - ppb

Blackrod - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Blackrod - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 32.5 ppb on Feb 14 09:00
Maximum Daily Average: 12.7 ppb on Feb 14

Minimum Value: 0.3 ppb on Feb 6 21:00
Minimum Daily Average: 2.2 ppb on Feb 18
Maximum Diurnal Average: 10.0 ppb at hour 7
Minimum Diurnal Average: 4.5 ppb at hour 3
Monthly Average: 6.93 ppb
Percentiles: P_1 = 0.6 P_{10} = 1.7 Q_1 = 3.0 Median = 5.5 Q_3 = 9.6 P_{90} = 14.2 P_{99} = 25.2

Hours in Service:	672
Hours of Data:	623
Hours of Missing Data:	49
Hours of Calibration:	32
Percent Operational Time:	97.5

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-Feb	Z	7.9	9.6	13.7	3.5	4.9	17.6	14.1	11.4	10.0	11.6	8.4	8.0	9.6	7.5	5.1	6.8	14.4	14.0	13.9	12.7	8.2	11.8	9.3	10.2	17.6
2-Feb	8.0	Z	7.3	5.7	7.2	6.4	9.3	4.6	3.0	5.9	4.6	4.4	3.1	5.2	6.0	7.6	3.5	12.3	12.7	12.2	12.7	9.8	5.2	5.2	7.0	12.7
3-Feb	5.8	5.1	Z	7.7	4.2	6.0	26.4	20.2	19.8	16.1	8.3	6.6	7.1	5.2	7.6	5.7	5.9	9.7	5.5	5.5	4.1	12.6	6.5	1.6	8.8	26.4
4-Feb	6.0	3.9	4.2	Z	5.0	5.2	11.3	12.2	14.8	7.2	2.2	2.9	M	8.5	5.0	8.1	3.4	1.4	1.9	3.2	6.5	4.5	3.2	1.8	5.6	14.8
5-Feb	2.3	2.7	1.7	2.1	2.0	Z	2.9	3.5	3.4	3.7	2.8	4.7	2.2	2.6	5.5	9.7	10.3	7.5	6.6	4.8	11.4	11.9	12.0	9.3	5.5	12.0
6-Feb	8.0	5.6	4.0	5.3	12.7	15.7	22.1	15.6	11.1	9.2	9.8	14.5	12.5	9.6	9.4	8.5	12.1	4.0	16.9	5.4	0.3	7.0	11.8	5.7	9.9	22.1
7-Feb	2.3	11.3	6.1	4.9	4.4	Z	1.9	1.5	2.9	8.7	14.8	13.6	12.7	10.1	9.7	12.4	8.1	13.5	10.6	10.0	3.8	1.0	2.3	4.0	7.4	14.8
8-Feb	Z	7.5	3.5	3.5	3.6	4.9	14.4	5.8	13.1	27.1	16.7	2.6	3.3	4.2	6.9	9.4	9.7	8.1	14.1	9.6	8.3	6.4	5.6	5.8	8.4	27.1
9-Feb	4.9	Z	11.0	8.1	11.1	9.9	17.9	27.6	12.8	3.8	2.0	6.5	13.5	12.3	14.5	9.4	14.2	10.4	11.0	9.1	9.4	10.6	7.1	6.8	10.6	27.6
10-Feb	9.8	6.9	Z	5.0	2.4	3.1	4.1	11.1	6.9	6.9	4.7	3.8	5.0	5.0	5.2	8.3	9.0	13.2	16.6	PF	PF	PF	PF	PF	7.1	16.6
11-Feb	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	11.2	12.5	10.3	8.3	9.2	17.4	6.0	10.1	6.7	7.6	5.1	5.9	7.1	--	17.4
12-Feb	5.0	5.3	3.8	2.3	Z	1.7	3.0	2.7	5.2	5.3	4.9	3.4	6.5	3.2	4.2	4.4	5.7	8.4	8.7	8.8	4.6	6.7	12.6	16.5	5.8	16.5
13-Feb	16.0	15.6	13.2	8.1	8.1	Z	16.6	19.7	14.6	16.9	15.9	8.3	3.1	7.4	9.4	8.8	5.0	5.5	8.7	4.0	3.2	4.0	5.1	5.7	9.7	19.7
14-Feb	Z	5.0	5.1	9.4	10.3	25.6	26.9	25.8	32.5	20.4	17.8	11.4	9.9	5.4	7.0	9.2	8.1	14.6	14.2	12.6	4.8	7.1	3.8	4.3	12.7	32.5
15-Feb	2.3	Z	5.3	4.7	3.0	23.4	16.1	19.1	17.0	11.1	13.8	9.6	5.4	6.4	9.4	6.8	7.0	4.9	2.7	4.6	2.2	1.8	2.5	5.2	8.0	23.4
16-Feb	6.0	1.6	Z	2.6	3.7	15.4	6.8	1.9	1.3	1.8	3.0	0.5	0.6	0.8	0.6	0.9	0.7	0.9	1.0	1.7	2.6	2.4	2.4	2.2	2.7	15.4
17-Feb	1.8	1.9	2.0	Z	2.0	2.1	2.6	3.1	3.5	3.0	3.1	2.2	1.9	1.8	2.5	3.1	3.7	4.5	2.8	1.7	1.8	1.7	1.5	1.3	2.4	4.5
18-Feb	1.3	1.7	1.6	1.5	Z	1.8	2.1	3.3	3.3	2.6	1.9	3.3	1.8	2.7	3.1	2.5	2.3	1.7	1.5	1.4	1.6	1.9	2.4	2.3	2.2	3.3
19-Feb	2.0	1.8	1.9	2.0	2.1	Z	2.7	3.0	3.9	4.6	4.7	3.5	4.8	3.3	3.3	3.1	3.8	3.2	2.9	3.3	3.1	2.8	3.2	3.3	3.1	4.8
20-Feb	Z	3.1	3.1	3.1	3.2	3.3	3.3	4.7	6.4	6.9	5.7	4.8	5.8	6.7	7.7	7.4	7.3	4.4	4.7	3.9	3.3	2.9	2.8	2.8	4.7	7.7
21-Feb	2.5	Z	2.5	2.9	3.1	3.1	3.5	5.6	7.9	5.0	3.2	6.6	18.2	20.1	13.3	11.8	11.3	16.8	9.1	9.9	7.1	14.7	14.8	14.9	9.0	20.1
22-Feb	16.2	9.1	Z	0.9	1.0	1.5	2.1	2.2	1.7	2.2	3.1	2.9	2.9	2.8	2.6	2.7	3.6	3.3	3.7	4.3	3.0	3.1	3.4	2.4	3.5	16.2
23-Feb	5.2	3.6	1.6	Z	2.2	1.7	1.4	1.6	2.2	8.5	9.3	17.7	9.8	9.1	6.4	6.7	9.9	9.1	8.3	12.0	8.8	5.1	2.1	5.2	6.4	17.7
24-Feb	7.3	1.8	1.1	9.7	Z	4.5	15.3	9.6	4.5	1.4	3.9	7.2	9.4	13.5	14.7	16.5	20.9	23.7	9.9	3.4	5.5	1.7	1.4	2.3	8.2	23.7
25-Feb	6.3	1.4	1.7	1.5	4.6	Z	10.0	5.6	3.5	7.2	7.4	6.4	10.5	10.5	11.1	13.0	13.5	7.1	6.6	1.7	0.9	1.2	4.6	18.2	6.7	18.2
26-Feb	Z	1.1	8.2	10.9	10.9	20.0	14.8	0.6	3.2	12.2	C	C	C	C	C	C	20.8	20.7	3.4	0.6	0.8	0.6	0.7	1.4	--	20.8
27-Feb	3.2	Z	0.6	0.8	0.7	0.8	0.9	1.5	4.0	19.1	11.5	8.0	7.8	7.4	7.4	7.0	6.5	7.5	7.1	9.1	5.7	9.4	6.3	4.9	6.0	19.1
28-Feb	2.1	1.6	Z	4.3	2.3	5.7	13.4	12.9	11.8	24.0	11.7	7.6	5.5	6.6	6.6	5.8	7.3	7.9	7.2	1.6	3.1	4.1	0.7	0.8	6.7	24.0
	5.7	4.8	4.5	5.0	4.7	7.6	10.0	8.9	8.4	9.3	7.6	6.8	7.1	7.0	7.2	7.5	8.5	8.7	7.9	6.1	5.1	5.5	5.2	5.6	Diurnal Average	
	16.2	15.6	13.2	13.7	12.7	25.6	26.9	27.6	32.5	27.1	17.8	17.7	18.2	20.1	14.7	16.5	20.9	23.7	16.9	13.9	12.7	14.7	14.8	18.2	Diurnal Maximum	

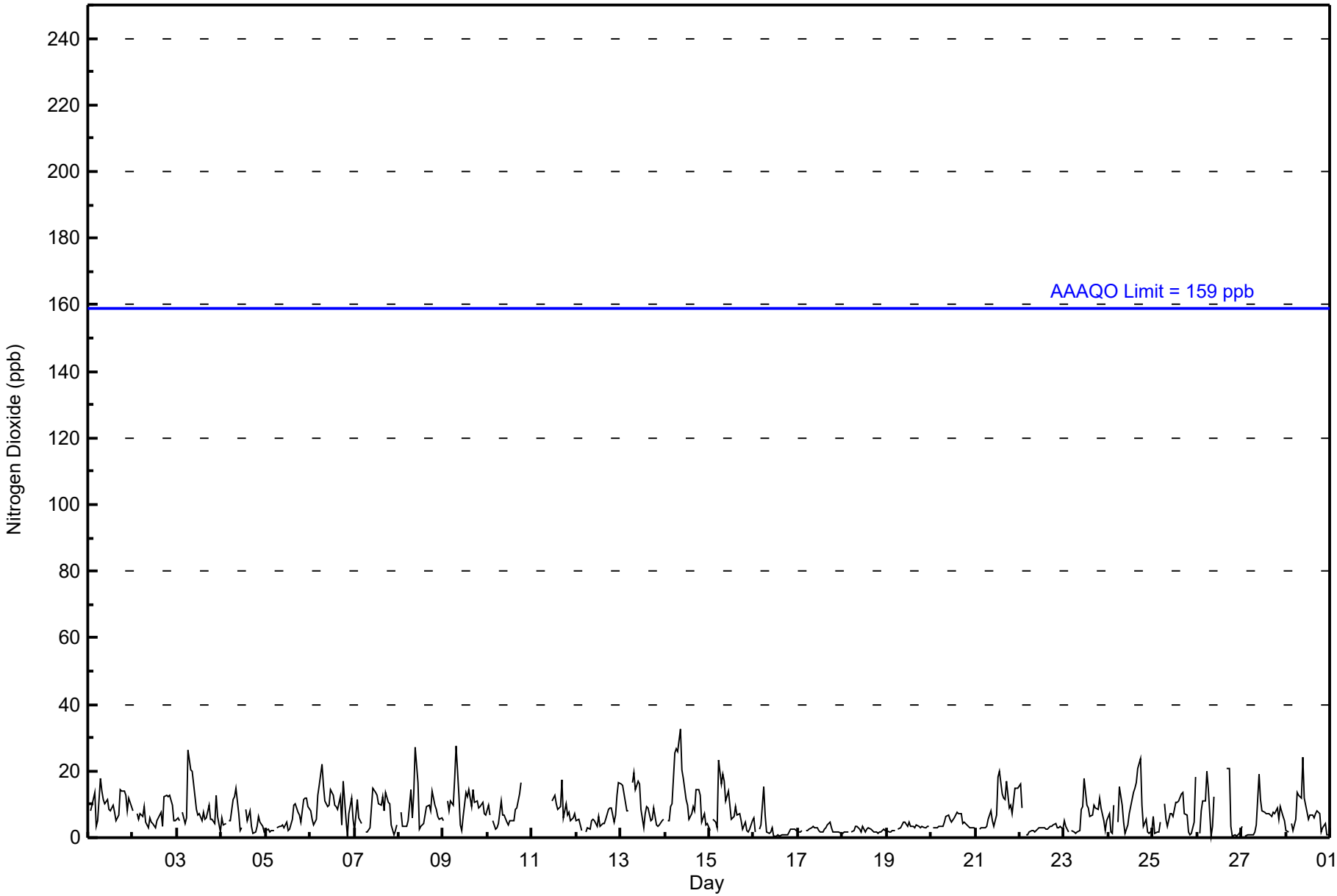
Z - zerospan C - Calibration M - Maintenance PF - Power Failure
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Blackrod - February 2025



Nitrogen Dioxide (NO_2) - ppb
Blackrod - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	609	97.75	97.75
21 - 40	14	2.25	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: 623

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Blackrod - February 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	28	33	15	5	12	8	13	44	189	67	20	10	10	43	47	21	565
21 - 40	0	0	0	0	1	0	1	2	0	2	0	3	3	1	0	0	13
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	28	33	15	5	13	8	14	46	189	69	20	13	13	44	47	21	578

Total Number of Valid Hours: 578

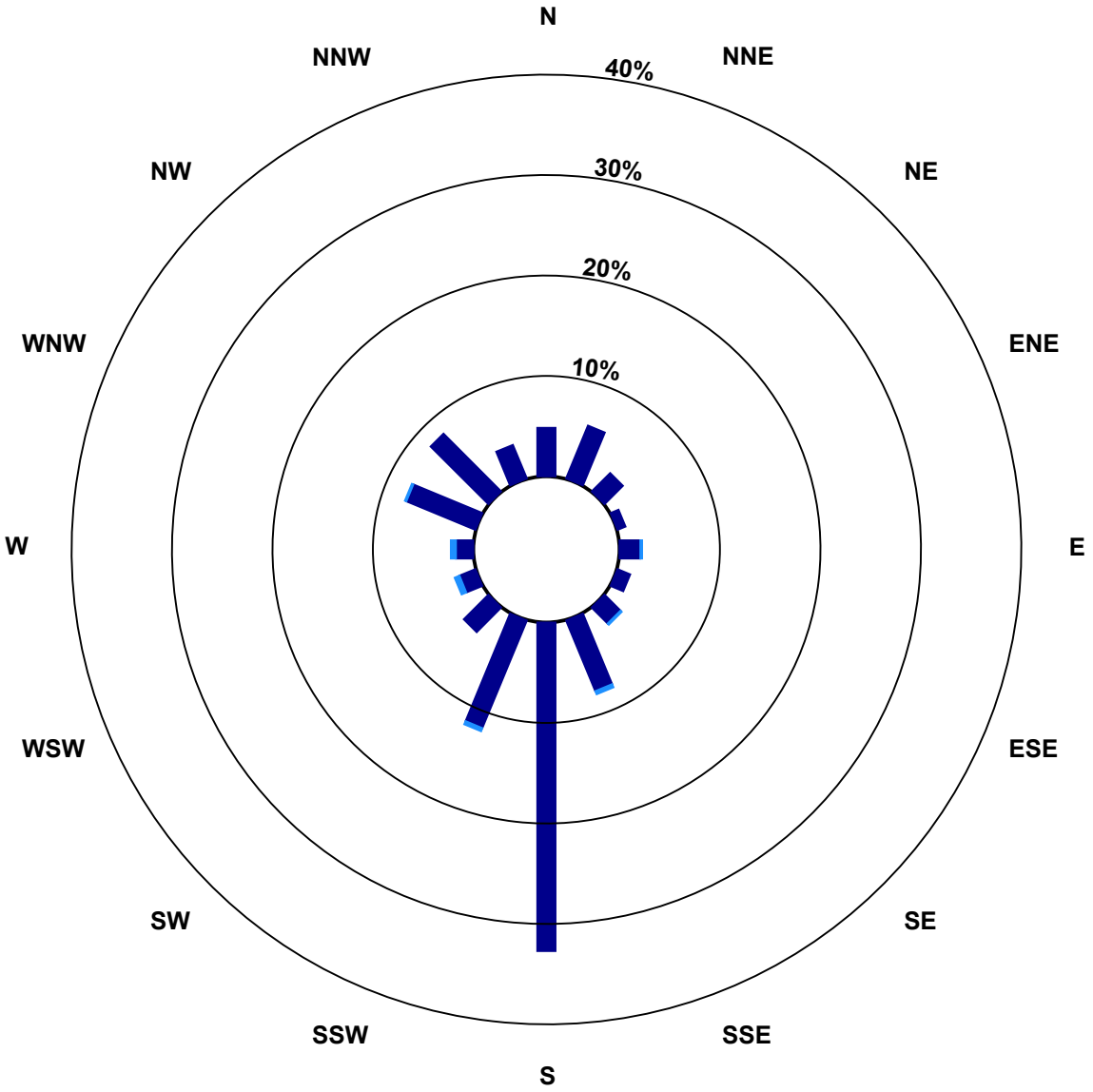
Total Number of Hours: 672

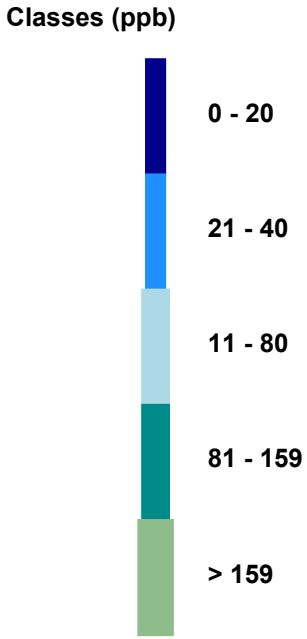
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Dioxide (NO_2) - ppb

Blackrod





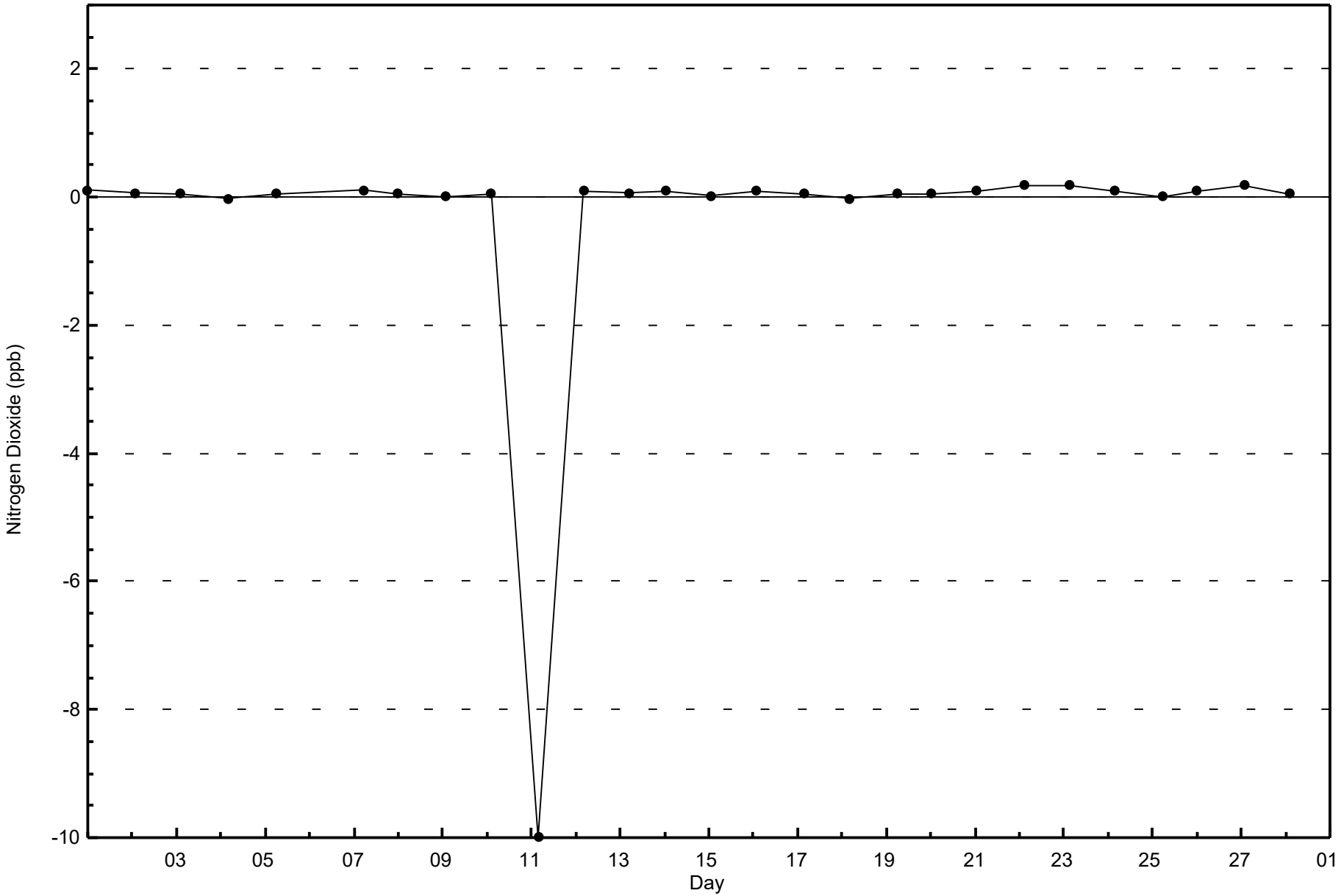
Total Number of Valid Hours: 578

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Blackrod - February 2025

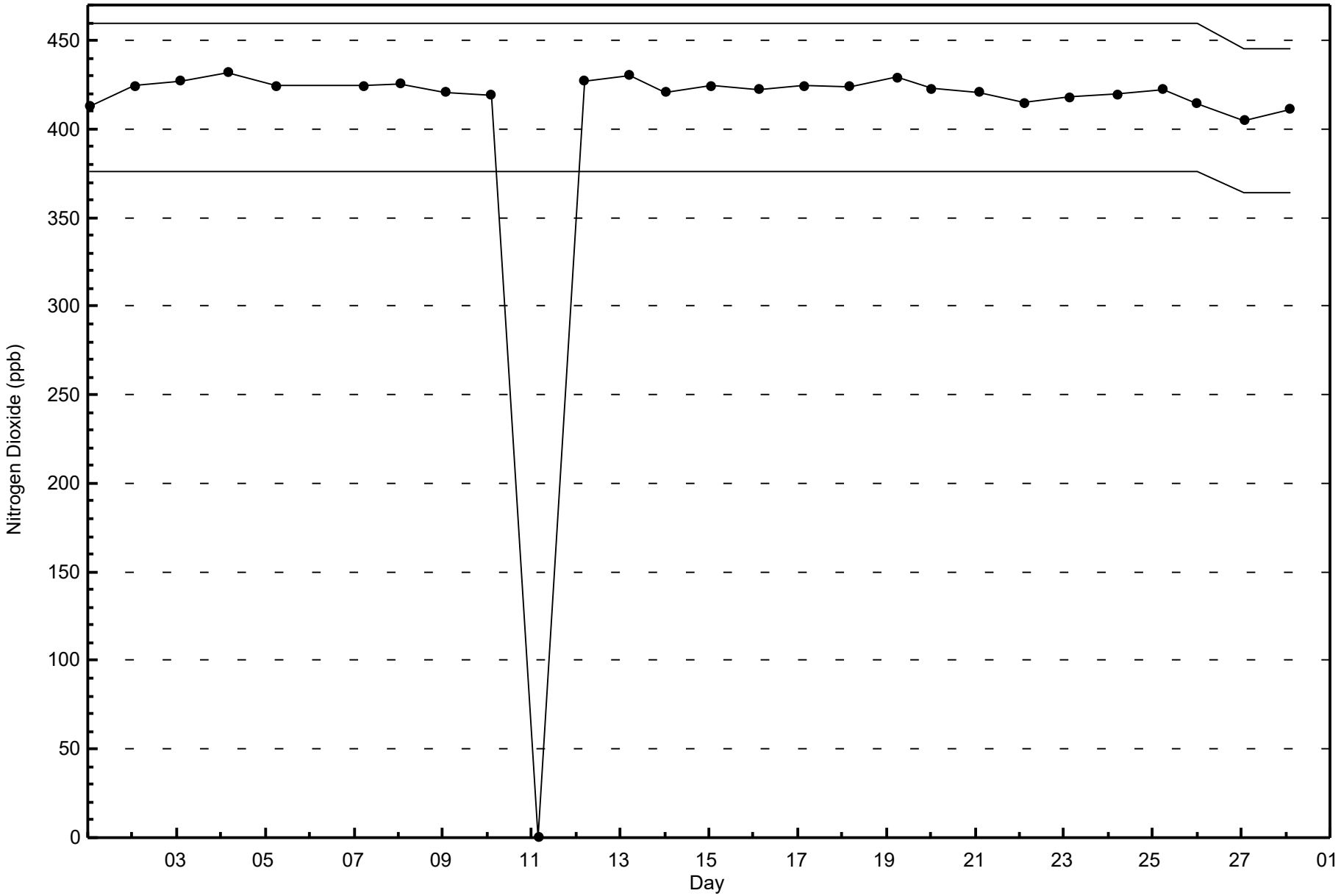


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Blackrod - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Blackrod - February 2025

Maximum Value: 83.4 ppb on Feb 14 09:00

Maximum Daily Average: 30.2 ppb on Feb 1

Minimum Value: 0.6 ppb on Feb 26 20:00

Minimum Daily Average: 3.2 ppb on Feb 17

Maximum Diurnal Average: 21.3 ppb at hour 10

Minimum Diurnal Average: 8.1 ppb at hour 5

Monthly Average: 14.65 ppb

Percentiles: P_1 = 0.8 P_{10} = 1.9 Q_1 = 3.7 Median = 9.6 Q_3 = 22.4 P_{90} = 35.0 P_{99} = 54.0

Hours in Service:	672
Hours of Data:	623
Hours of Missing Data:	49
Hours of Calibration:	32
Percent Operational Time:	97.5

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-Feb	Z	21.5	35.3	42.5	8.2	14.3	38.2	32.2	25.6	26.3	35.9	30.4	30.4	37.6	23.8	20.9	23.8	35.5	40.5	38.4	39.3	30.4	35.4	28.2	30.2	42.5
2-Feb	19.8	Z	16.4	17.7	21.4	16.6	25.9	9.6	7.2	14.2	18.3	18.3	14.9	21.7	22.4	31.4	18.3	40.0	19.5	17.2	21.9	14.7	8.3	11.0	18.5	40.0
3-Feb	14.2	9.8	Z	26.0	9.6	14.1	60.5	43.1	39.2	39.7	20.3	16.8	15.7	13.4	16.1	11.1	9.5	18.8	11.8	7.8	4.5	16.7	7.0	1.7	18.6	60.5
4-Feb	8.5	5.1	5.6	Z	6.5	7.7	19.5	17.4	37.1	15.4	5.6	6.6	M	23.1	12.9	21.0	9.1	1.7	2.4	3.9	9.5	5.7	4.1	2.1	10.5	37.1
5-Feb	3.0	3.4	1.8	2.5	2.2	Z	3.6	5.0	4.5	5.3	5.2	9.5	4.5	5.5	12.0	24.1	26.7	13.3	8.4	5.0	13.8	24.5	31.3	25.6	10.5	31.3
6-Feb	20.8	10.3	8.4	13.6	27.9	21.7	40.4	34.4	32.9	27.4	35.7	40.1	40.0	28.8	31.7	25.4	30.2	10.3	45.8	14.8	0.6	20.6	38.6	8.4	25.4	45.8
7-Feb	4.2	14.0	6.2	5.0	4.6	Z	2.5	1.9	3.7	14.5	39.7	31.4	30.3	21.9	20.2	27.7	26.8	25.9	13.0	10.2	3.9	1.1	2.6	4.7	13.7	39.7
8-Feb	Z	9.1	3.9	3.8	3.9	6.4	20.2	8.6	18.1	67.5	64.1	4.1	7.8	7.8	14.2	18.6	16.2	10.0	29.8	21.6	29.8	22.2	21.9	22.8	18.8	67.5
9-Feb	16.3	Z	35.8	33.0	32.0	35.0	50.3	54.2	24.0	6.7	5.0	13.3	34.8	39.0	45.2	33.8	39.2	35.4	45.0	21.1	13.8	15.0	8.3	7.0	28.0	54.2
10-Feb	13.3	7.2	Z	6.0	2.5	3.3	4.7	16.6	11.1	13.0	9.4	8.6	11.1	10.0	9.5	15.7	14.5	17.8	21.7	PF	PF	PF	PF	PF	10.9	21.7
11-Feb	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	33.6	37.5	23.1	16.2	23.8	40.1	9.3	16.3	7.3	8.5	5.1	6.1	7.5	--	40.1
12-Feb	5.5	6.0	4.2	2.5	Z	1.9	3.8	3.2	7.0	7.5	7.6	5.4	11.7	4.8	6.5	6.4	7.9	15.8	15.2	19.7	14.2	14.8	39.8	47.1	11.2	47.1
13-Feb	53.2	51.0	30.4	12.0	11.3	Z	38.0	40.5	41.4	44.0	53.0	28.7	6.2	24.2	29.7	20.4	17.6	13.8	20.2	8.0	3.7	5.5	7.2	8.2	24.7	53.2
14-Feb	Z	6.4	5.4	15.7	13.7	31.6	35.9	44.5	83.4	53.2	51.0	29.7	25.6	11.7	23.8	27.5	24.4	34.1	25.6	23.4	8.4	9.5	4.0	6.3	25.9	83.4
15-Feb	2.6	Z	5.7	5.6	3.2	58.8	25.5	36.7	30.5	22.8	31.9	27.3	20.3	18.5	29.9	22.4	29.2	13.5	10.6	11.8	5.7	4.6	3.7	7.4	18.6	58.8
16-Feb	6.3	1.7	Z	2.8	4.0	21.1	8.5	2.0	1.6	3.3	6.3	0.9	1.0	1.3	1.0	1.4	0.9	1.0	1.3	1.8	2.7	2.5	2.5	2.3	3.4	21.1
17-Feb	1.9	1.9	2.0	Z	2.0	2.2	2.8	3.2	4.5	4.4	5.3	4.1	3.6	3.3	4.0	4.8	5.3	6.4	3.3	1.7	1.8	1.7	1.5	1.3	3.2	6.4
18-Feb	1.3	1.7	1.6	1.5	Z	1.8	2.3	4.7	6.0	4.7	4.4	6.5	4.4	5.8	6.9	4.4	3.4	2.0	1.5	1.4	1.6	1.9	2.6	2.3	3.2	6.9
19-Feb	2.1	1.9	2.0	2.1	2.2	Z	2.8	3.3	5.8	7.7	9.2	7.8	11.0	6.6	5.9	4.9	5.4	3.9	3.1	3.5	3.2	3.0	3.4	3.5	4.5	11.0
20-Feb	Z	3.4	3.4	3.3	3.4	3.5	3.5	8.6	10.6	12.1	10.0	10.0	11.1	12.4	14.4	12.0	11.1	4.8	5.2	3.9	3.3	2.9	2.8	2.8	6.9	14.4
21-Feb	2.5	Z	2.5	2.9	3.1	3.1	3.6	7.0	11.2	6.6	4.5	14.3	44.3	45.3	29.9	31.7	27.2	23.8	12.9	16.7	11.7	38.7	22.0	39.0	17.6	45.3
22-Feb	45.8	30.9	Z	0.9	1.0	1.5	2.2	2.5	1.8	2.5	3.7	3.5	3.5	3.5	3.2	3.2	4.3	3.6	3.8	4.8	3.0	3.1	3.4	2.5	6.0	45.8
23-Feb	7.8	5.6	1.6	Z	2.2	1.8	1.5	1.7	3.1	20.2	17.5	34.7	19.6	18.3	13.9	14.5	25.2	23.7	22.5	38.6	24.0	9.3	2.3	5.6	13.7	38.6
24-Feb	8.9	1.9	1.2	19.4	Z	8.2	41.3	24.1	9.1	3.5	10.1	16.5	27.2	30.7	26.7	33.0	37.4	34.0	11.2	3.8	6.1	1.8	1.4	2.4	15.7	41.3
25-Feb	6.7	1.4	1.7	1.5	6.7	Z	21.1	13.5	8.4	22.0	22.3	24.9	23.0	20.2	22.8	26.6	29.2	10.6	8.6	1.7	0.9	1.2	5.8	29.6	13.5	29.6
26-Feb	Z	1.1	11.1	19.1	19.4	33.6	21.6	0.9	4.2	23.5	C	C	C	C	C	C	38.7	32.0	4.6	0.6	0.8	0.6	0.7	1.8	--	38.7
27-Feb	4.5	Z	0.7	0.9	0.8	0.9	1.1	1.9	8.1	41.4	23.3	16.3	15.8	15.4	16.2	14.7	13.4	21.7	19.1	22.1	12.9	22.1	14.9	9.3	12.9	41.4
28-Feb	3.6	1.9	Z	5.2	2.7	7.5	23.0	22.1	23.1	65.5	25.4	19.0	10.7	13.8	14.8	13.6	13.7	10.5	9.4	2.0	5.3	4.8	0.7	0.9	13.0	65.5
	11.5	9.0	8.5	10.2	8.1	13.5	18.7	16.4	17.2	21.3	20.2	17.1	17.9	17.3	17.5	18.3	19.6	16.9	15.4	11.6	9.5	10.5	10.5	10.8	Diurnal Average	
	53.2	51.0	35.8	42.5	32.0	58.8	60.5	54.2	83.4	67.5	64.1	40.1	44.3	45.3	45.2	33.8	40.1	40.0	45.8	38.6	39.3	38.7	39.8	47.1	Diurnal Maximum	

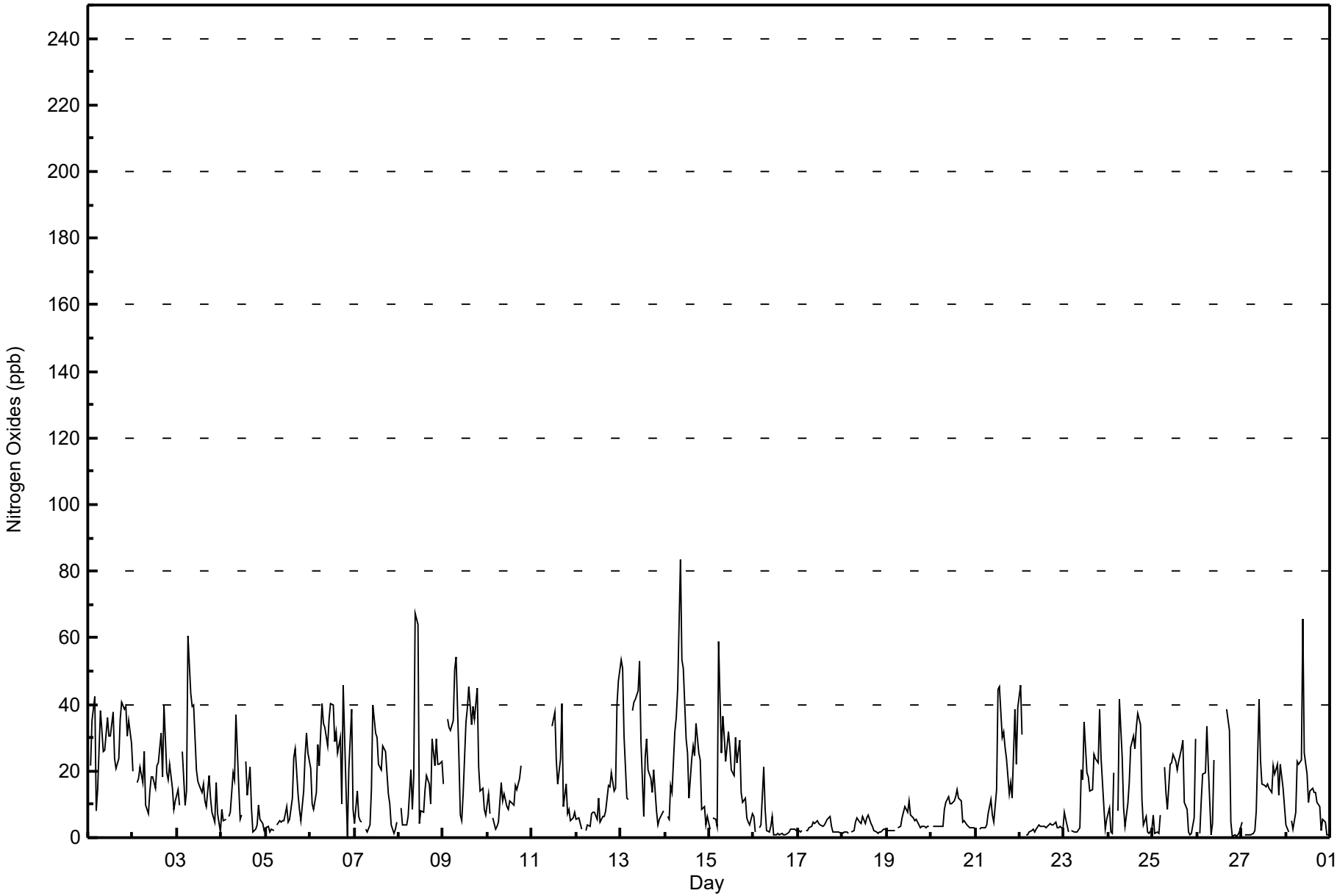
Z - zerospan C - Calibration M - Maintenance PF - Power Failure

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Blackrod - February 2025



Nitrogen Oxides (NO_X) - ppb
Blackrod - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	442	70.95	70.95
21 - 40	152	24.40	95.35
11 - 80	28	4.49	99.84
81 - 159	1	0.16	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 623

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Blackrod - February 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	14	12	3	11	7	10	44	186	58	12	4	2	14	12	10	406
21 - 40	17	13	3	2	1	1	2	2	3	6	8	8	7	28	35	9	145
11 - 80	4	6	0	0	1	0	2	0	0	4	0	1	4	2	0	2	26
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	28	33	15	5	13	8	14	46	189	69	20	13	13	44	47	21	578

Total Number of Valid Hours: 578

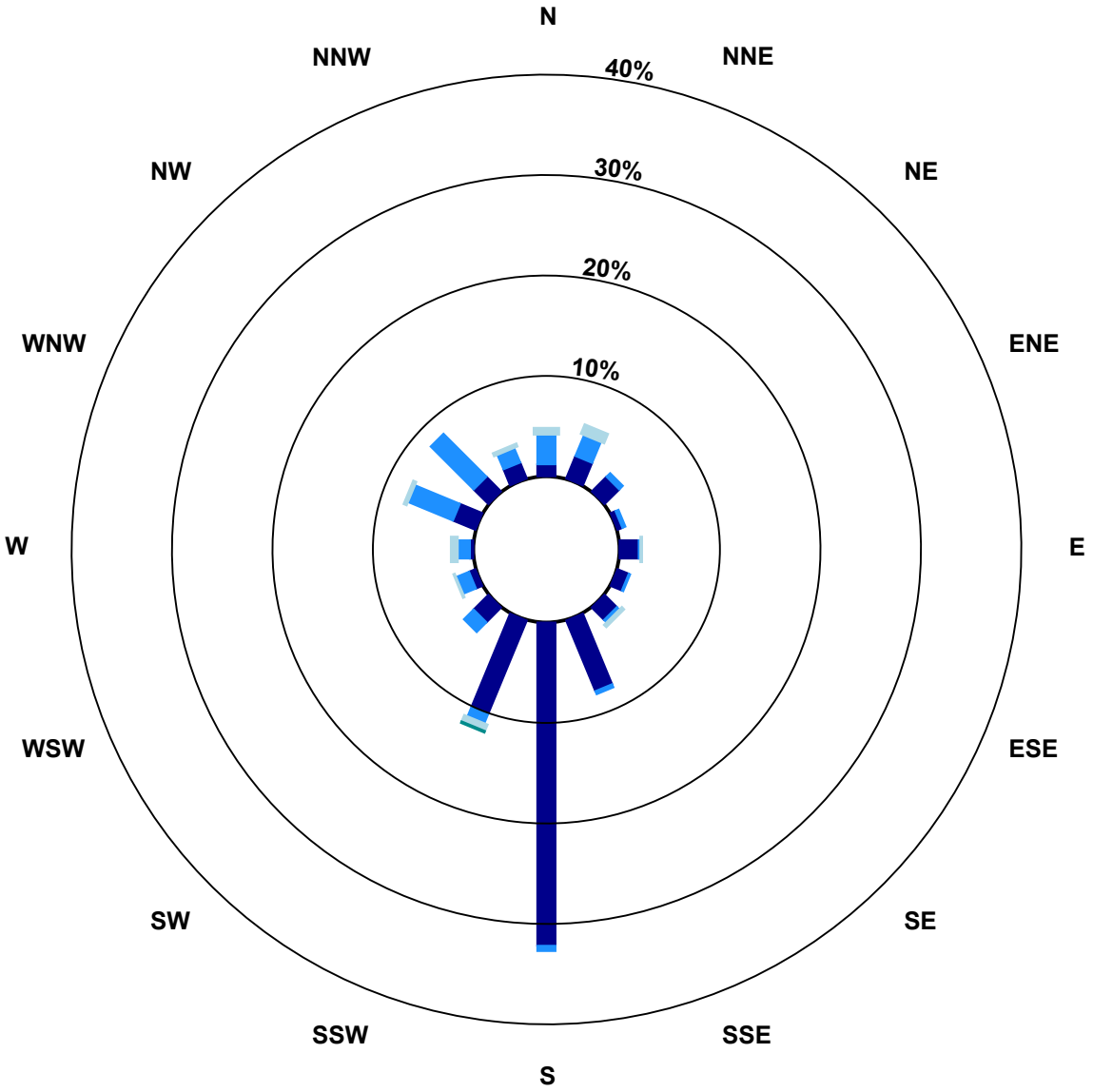
Total Number of Hours: 672

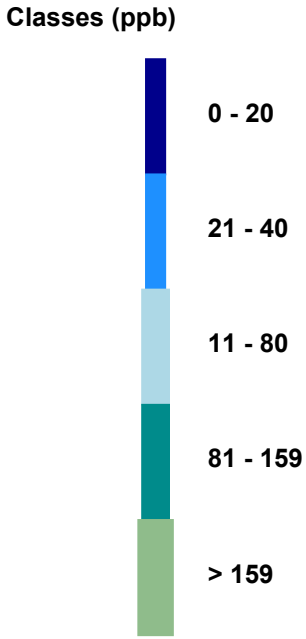
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Oxides (NO_X) - ppb

Blackrod





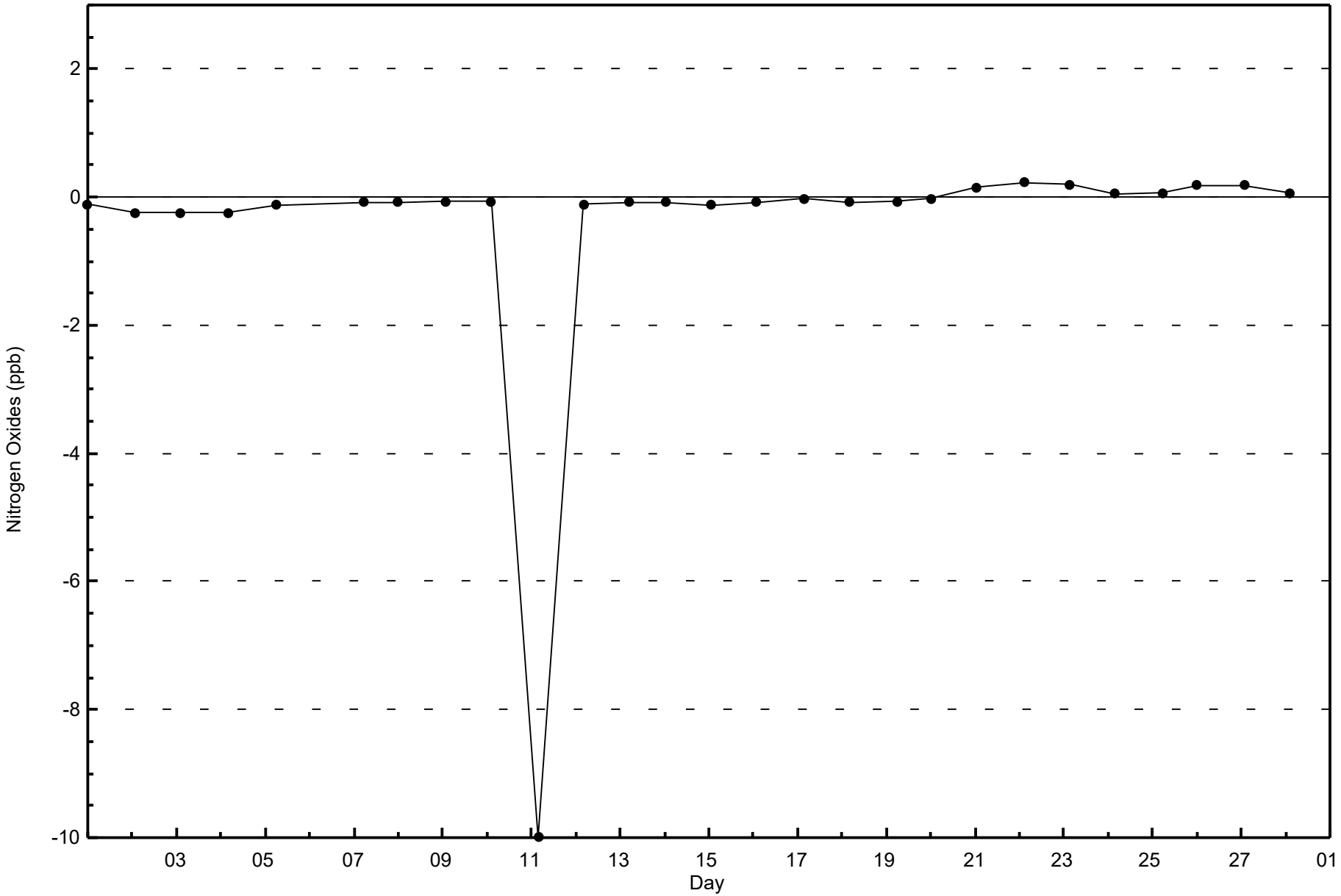
Total Number of Valid Hours: 578

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Blackrod - February 2025

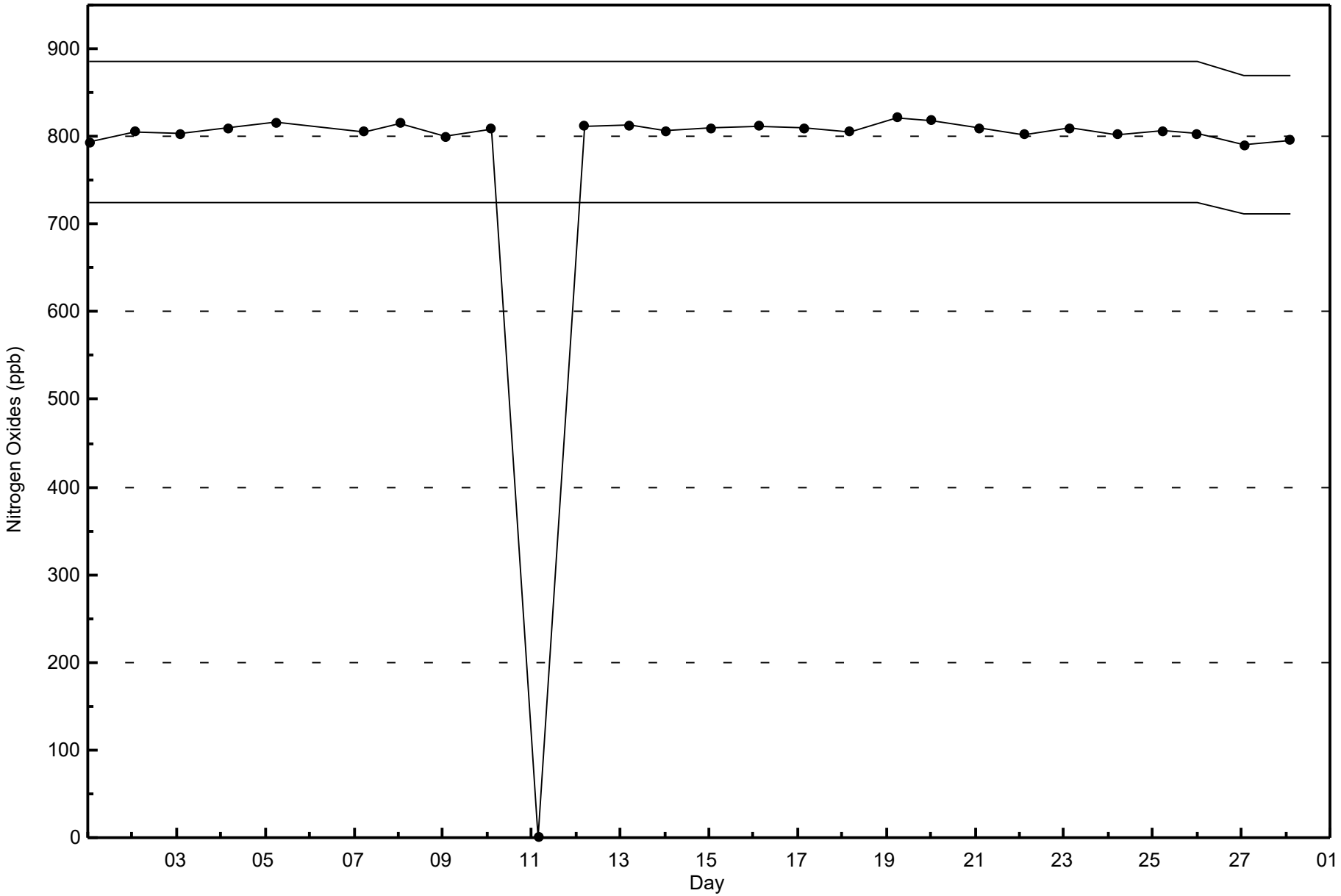


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Blackrod - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

Blackrod - February 2025

Maximum Value: 8.8 C on Feb 27 11:00

Maximum Daily Average: 5.7 C on Feb 27

Minimum Value: -34.3 C on Feb 4 09:00

Minimum Daily Average: -29.1 C on Feb 3

Maximum Diurnal Average: -10.2 C at hour 16

Minimum Diurnal Average: -18.3 C at hour 8

Monthly Average: -14.92 C

Percentiles: P_1 = -33.2 P_{10} = -29.0 Q_1 = -23.8 Median = -18.9 Q_3 = -2.3 P_{90} = 4.3 P_{99} = 7.9

Hours in Service:	672
Hours of Data:	671
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-Feb	-16.5	-17.0	-17.5	-17.8	-18.9	-20.5	-21.8	-22.8	-23.3	-23.3	-24.1	-24.5	-24.5	-23.6	-23.6	-23.8	-24.3	-24.9	-25.7	-26.6	-27.4	-28.0	-28.6	-29.0	-23.3	-16.5
2-Feb	-29.7	-30.4	-30.3	-30.2	-30.3	-30.4	-31.1	-32.2	-32.5	-31.2	-28.9	-27.2	-25.7	-25.3	-24.9	-24.6	-25.0	-25.9	-28.7	-30.4	-29.6	-29.4	-31.1	-30.6	-29.0	-24.6
3-Feb	-30.2	-31.2	-31.6	-32.7	-33.2	-32.9	-32.6	-33.9	-34.2	-31.7	-28.1	-25.3	-23.2	-22.0	-21.7	-21.6	-22.1	-26.4	-28.8	-30.0	-30.8	-31.3	-31.5	-31.6	-29.1	-21.6
4-Feb	-31.7	-32.0	-32.4	-32.4	-33.2	-33.7	-33.3	-33.5	-34.3	-32.5	-25.7	-23.9	M	-20.8	-20.1	-19.7	-20.3	-22.1	-23.3	-24.3	-25.0	-25.1	-25.0	-24.6	-27.3	-19.7
5-Feb	-24.8	-25.3	-25.1	-25.6	-26.2	-26.3	-26.5	-26.4	-27.5	-26.2	-24.2	-22.0	-19.4	-18.4	-17.5	-17.0	-17.2	-17.8	-18.6	-18.9	-18.7	-18.0	-17.7	-17.7	-21.8	-17.0
6-Feb	-17.7	-17.5	-17.5	-17.1	-16.6	-16.3	-15.6	-14.5	-14.0	-13.2	-12.4	-11.7	-11.3	-11.0	-10.6	-10.9	-11.4	-12.7	-13.7	-14.7	-15.8	-16.2	-17.2	-20.0	-14.6	-10.6
7-Feb	-21.5	-20.6	-21.0	-23.4	-23.0	-22.1	-21.7	-20.7	-20.3	-18.9	-17.7	-16.3	-15.5	-13.4	-12.4	-12.4	-12.6	-14.2	-17.8	-20.9	-22.3	-23.0	-23.7	-22.0	-19.1	-12.4
8-Feb	-18.1	-16.8	-16.9	-17.0	-16.9	-17.1	-17.4	-18.1	-17.3	-16.8	-16.7	-15.3	-13.5	-12.7	-11.6	-11.0	-11.4	-12.0	-12.4	-12.8	-13.4	-15.5	-17.0	-18.7	-15.3	-11.0
9-Feb	-19.8	-20.7	-21.1	-22.0	-23.6	-24.1	-24.0	-24.1	-24.1	-24.1	-23.2	-21.9	-22.1	-22.3	-22.5	-23.0	-23.5	-24.1	-25.7	-26.8	-28.7	-30.9	-32.1	-32.3	-24.4	-19.8
10-Feb	-32.6	-32.5	-32.4	-30.2	-29.4	-29.7	-29.8	-29.9	-28.2	-26.7	-24.1	-21.7	-19.3	-17.3	-15.7	-14.7	-14.7	-16.5	-19.9	-18.7	-16.2	-15.2	-15.4	-15.7	-22.8	-14.7
11-Feb	-16.9	-17.4	-18.9	-20.7	-22.9	-25.0	-25.4	-26.7	-25.4	-24.7	-23.7	-22.3	-21.3	-19.9	-17.2	-18.1	-18.3	-21.0	-22.3	-21.0	-20.1	-20.0	-19.8	-19.7	-21.2	-16.9
12-Feb	-19.6	-19.8	-19.4	-19.5	-19.4	-19.2	-19.4	-19.2	-19.3	-18.8	-18.1	-17.3	-16.5	-16.3	-16.1	-15.7	-16.0	-16.3	-16.7	-17.3	-18.0	-18.9	-19.2	-19.6	-18.2	-15.7
13-Feb	-20.1	-20.6	-20.8	-20.9	-21.0	-21.2	-21.7	-22.0	-22.4	-22.2	-21.4	-20.1	-19.0	-18.9	-18.6	-18.6	-19.0	-19.6	-20.4	-21.4	-21.8	-21.7	-21.9	-22.9	-20.8	-18.6
14-Feb	-23.4	-23.7	-24.0	-27.2	-29.7	-31.0	-31.9	-32.3	-32.4	-30.1	-25.5	-22.7	-21.0	-18.9	-18.8	-19.0	-19.1	-21.0	-25.2	-26.9	-27.7	-28.3	-28.6	-29.0	-25.7	-18.8
15-Feb	-29.2	-29.6	-30.1	-31.0	-30.9	-31.8	-31.5	-31.2	-30.1	-27.2	-22.9	-22.4	-20.9	-19.7	-18.9	-18.6	-18.7	-19.6	-20.1	-19.7	-19.6	-19.5	-19.6	-20.0	-24.3	-18.6
16-Feb	-20.5	-20.2	-20.2	-20.0	-20.1	-20.3	-20.9	-20.4	-20.4	-19.8	-19.1	-18.9	-18.5	-18.3	-17.8	-17.4	-17.7	-18.8	-20.8	-21.3	-21.5	-22.1	-22.9	-23.3	-20.0	-17.4
17-Feb	-23.7	-24.1	-24.3	-25.0	-25.0	-25.4	-26.0	-26.4	-26.3	-25.4	-23.7	-22.2	-20.4	-18.8	-18.1	-18.0	-18.5	-19.6	-20.8	-21.9	-22.6	-23.0	-23.6	-24.1	-22.8	-18.0
18-Feb	-24.5	-25.2	-25.5	-25.9	-26.1	-26.5	-27.0	-27.5	-27.5	-26.4	-24.4	-22.4	-20.6	-18.7	-17.7	-17.4	-17.5	-18.6	-19.9	-20.7	-21.9	-23.0	-23.9	-24.7	-23.1	-17.4
19-Feb	-24.5	-23.7	-24.2	-24.7	-25.0	-25.1	-25.8	-26.1	-26.0	-24.9	-22.9	-20.4	-17.7	-15.7	-14.1	-13.8	-14.4	-15.8	-16.8	-17.4	-18.7	-20.4	-21.7	-22.5	-20.9	-13.8
20-Feb	-23.2	-23.4	-23.7	-23.9	-23.5	-23.3	-22.8	-22.6	-22.2	-21.1	-19.1	-15.9	-12.5	-9.3	-6.0	-3.9	-2.4	-3.2	-4.3	-4.7	-3.9	-4.1	-3.9	-3.2	-13.6	-2.4
21-Feb	-2.4	-2.2	-1.9	-2.3	-2.3	-2.1	-2.2	-2.7	-2.6	-1.7	0.9	3.7	6.0	6.7	6.3	6.1	5.6	2.2	0.0	-0.4	-1.4	-0.4	-3.2	-3.2	0.3	6.7
22-Feb	-2.8	-1.0	1.1	1.4	1.3	1.9	2.1	2.2	1.5	1.3	1.9	2.8	3.9	4.8	5.8	6.8	6.4	5.6	4.9	5.0	4.9	4.9	4.1	2.7	3.1	6.8
23-Feb	2.0	2.2	4.5	3.4	3.1	2.6	2.6	2.3	2.4	4.0	4.5	3.5	3.7	4.1	4.0	3.5	2.2	1.1	-0.1	-1.1	-1.8	-2.3	-2.3	-2.6	1.9	4.5
24-Feb	-2.6	-2.3	-3.1	-3.7	-2.7	-2.3	-3.9	-5.3	-5.6	-2.1	1.0	3.6	5.8	6.8	7.7	7.9	8.4	7.6	6.3	5.0	4.7	3.2	2.9	2.7	1.7	8.4
25-Feb	2.3	0.6	-0.7	-1.3	-0.8	-0.6	-1.3	-1.7	-2.0	-1.6	-0.7	0.9	2.5	4.2	5.4	6.2	6.4	2.4	-0.3	1.6	2.7	3.7	4.6	4.6	1.5	6.4
26-Feb	4.0	3.0	2.7	3.5	2.9	2.2	1.5	-0.2	0.2	3.1	5.4	6.1	6.8	7.7	7.9	8.0	8.0	6.6	4.9	4.3	4.0	4.2	4.5	4.2	4.4	8.0
27-Feb	4.5	4.9	4.9	4.5	4.9	5.1	5.4	5.0	5.0	8.4	8.8	8.2	7.7	7.7	8.1	7.8	7.1	6.2	5.4	5.4	5.3	4.5	1.9	-0.6	5.7	8.8
28-Feb	-1.7	-2.3	-2.7	-2.9	-2.9	-3.3	-2.8	-2.8	-2.2	-0.3	1.0	1.7	3.3	5.0	6.0	7.7	7.6	5.4	0.3	-1.0	-1.5	-1.8	-1.6	-2.2	0.3	7.7
	-16.6	-16.7	-16.9	-17.3	-17.6	-17.8	-18.0	-18.3	-18.2	-16.9	-15.1	-13.7	-12.0	-11.2	-10.5	-10.2	-10.4	-11.9	-13.6	-14.2	-14.5	-14.9	-15.5	-15.9	Diurnal Average	
	4.5	4.9	4.9	4.5	4.9	5.1	5.4	5.0	5.0	8.4	8.8	8.2	7.7	7.7	8.1	8.0	8.4	7.6	6.3	5.4	5.3	4.9	4.6	4.6	Diurnal Maximum	

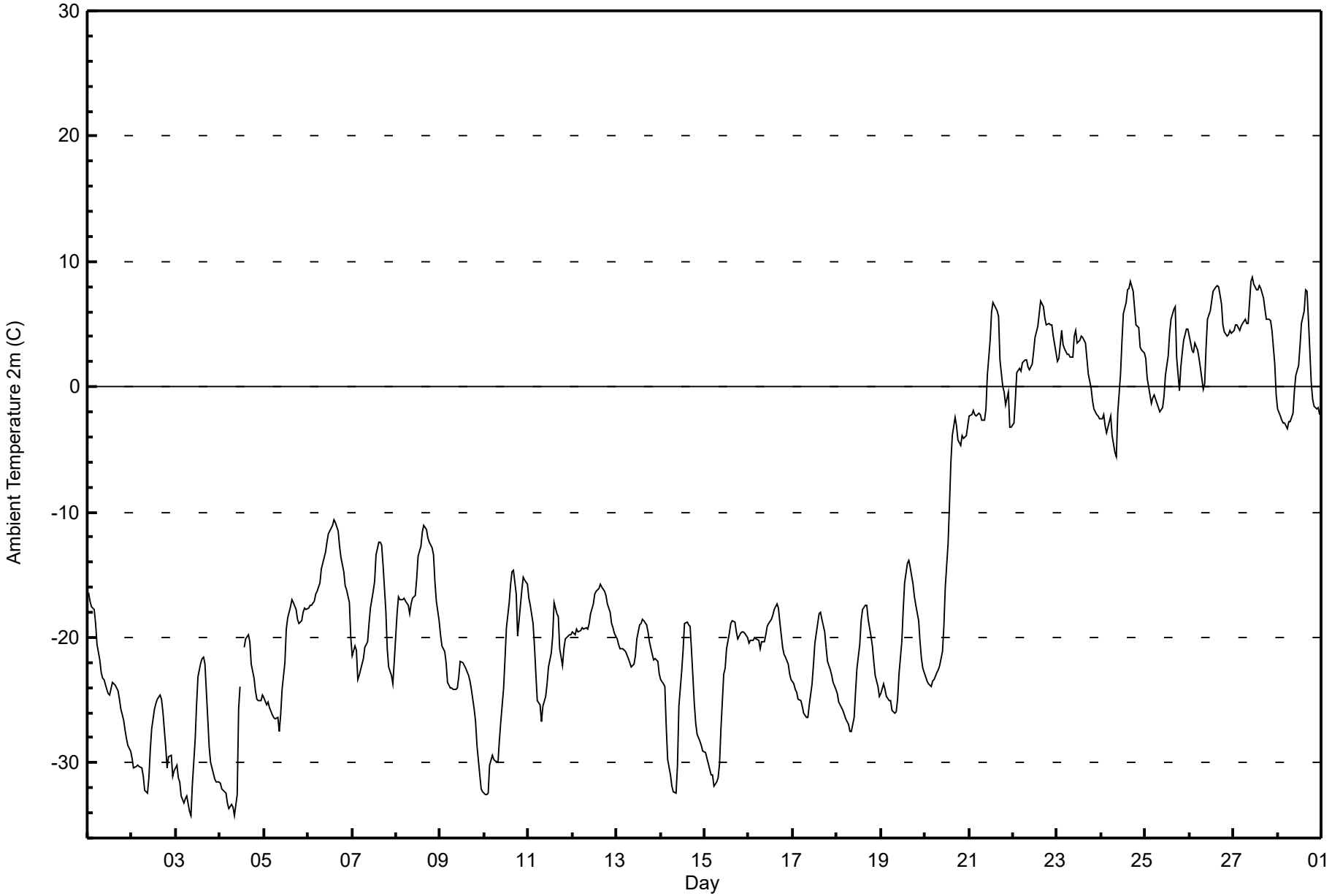
M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Blackrod - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	293	43.67	43.67
-20 - 0	246	36.66	80.33
0 - 10	132	19.67	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 671

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Blackrod - February 2025

Maximum Value: 96.8 % on Feb 24 04:00

Maximum Daily Average: 84.3 % on Feb 23

Minimum Value: 34.5 % on Feb 18 16:00

Minimum Daily Average: 51.3 % on Feb 18

Maximum Diurnal Average: 76.4 % at hour 8

Minimum Diurnal Average: 57.5 % at hour 15

Monthly Average: 70.27 %

Percentiles: P_1 = 40.1 P_{10} = 54.7 Q_1 = 62.7 Median = 72.9 Q_3 = 78.2 P_{90} = 82.3 P_{99} = 95.0

Hours in Service:	672
Hours of Data:	671
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-Feb	79.4	79.7	80.5	80.6	80.9	80.4	79.5	77.6	76.3	75.3	75.0	73.7	71.8	69.6	68.5	67.6	69.8	72.9	72.5	73.2	72.7	72.5	73.6	74.8	74.9	80.9
2-Feb	75.7	75.8	76.0	75.4	74.8	74.7	74.4	73.7	73.2	73.3	72.9	72.3	69.5	68.2	69.7	69.7	72.9	76.1	75.0	74.4	76.8	76.7	74.1	75.6	73.8	76.8
3-Feb	75.5	74.6	74.2	73.4	72.8	73.2	73.9	72.2	72.0	73.1	73.1	71.2	65.6	61.4	60.3	61.2	63.1	74.1	74.2	74.0	73.6	73.5	73.3	73.3	71.1	75.5
4-Feb	73.7	73.4	73.2	73.2	72.8	72.4	73.0	72.4	71.9	72.5	72.4	66.7	M	62.2	61.1	61.7	64.3	73.0	75.1	76.5	77.5	77.5	76.4	75.1	71.6	77.5
5-Feb	74.4	74.7	72.7	72.8	73.9	74.3	74.8	74.6	75.2	74.0	69.3	66.9	61.8	62.1	61.9	64.5	67.9	71.6	75.7	78.8	80.2	80.2	79.4	79.8	72.6	80.2
6-Feb	80.0	80.8	81.0	81.7	82.1	82.3	83.3	83.9	85.9	83.7	78.0	78.2	78.6	75.4	72.4	80.6	79.8	73.2	73.5	72.6	73.8	78.3	77.8	81.1	79.1	85.9
7-Feb	80.9	80.7	80.8	79.9	80.3	80.8	81.8	81.7	81.3	79.8	76.4	71.6	69.7	62.7	59.6	60.9	62.7	70.9	79.8	81.1	80.0	79.5	79.1	81.3	76.0	81.8
8-Feb	83.1	82.7	82.9	83.3	82.8	82.7	82.4	82.8	82.7	81.6	81.4	79.4	73.8	71.7	68.1	66.7	69.8	74.4	80.7	81.5	79.6	81.4	76.8	73.9	78.6	83.3
9-Feb	72.9	76.4	76.9	75.0	73.6	70.8	71.6	75.9	76.6	75.1	73.2	68.7	67.3	61.1	57.8	63.9	65.0	69.8	74.6	71.4	73.4	73.9	73.7	73.2	71.3	76.9
10-Feb	73.2	72.3	72.9	73.6	72.2	72.2	72.1	72.4	70.8	68.3	65.8	64.3	62.4	61.1	59.2	57.0	58.4	67.6	76.1	77.5	73.3	78.8	82.0	82.2	70.2	82.2
11-Feb	84.1	83.9	83.3	82.3	80.2	79.2	79.3	78.0	80.1	79.7	78.8	78.9	78.4	76.2	63.9	67.9	68.3	75.4	78.3	78.3	78.0	79.2	79.6	79.6	78.0	84.1
12-Feb	79.4	80.3	79.0	78.4	77.3	77.4	78.5	79.0	78.7	77.2	75.4	73.2	71.0	69.8	68.6	66.6	68.0	68.4	75.0	76.8	77.7	78.0	78.8	79.6	75.5	80.3
13-Feb	79.9	79.4	78.9	79.6	78.5	78.6	78.8	79.6	79.6	77.9	75.6	70.2	63.9	65.0	61.3	63.3	65.2	66.7	68.6	73.2	75.5	73.8	71.9	72.3	73.2	79.9
14-Feb	72.6	73.3	73.9	74.4	76.2	74.8	73.8	72.9	72.6	71.8	60.2	59.5	57.6	52.8	54.5	55.7	56.3	60.3	74.0	75.8	75.8	75.6	75.6	74.0	68.5	76.2
15-Feb	74.3	74.0	73.2	73.5	73.4	73.5	73.1	75.7	76.6	74.1	60.7	62.6	58.4	56.0	54.9	54.7	56.3	58.9	61.4	62.1	62.4	63.0	65.1	70.3	66.2	76.6
16-Feb	74.1	73.8	75.2	74.6	75.7	76.5	78.3	75.1	74.5	72.1	68.8	67.6	65.5	64.4	62.5	60.3	60.3	64.9	71.2	70.9	69.3	69.2	70.3	70.5	70.2	78.3
17-Feb	70.6	71.6	72.6	73.5	73.9	73.8	74.6	74.8	72.9	68.6	63.8	60.6	54.2	48.8	47.0	45.1	45.7	50.6	53.8	54.7	55.1	55.6	55.6	56.4	61.4	74.8
18-Feb	57.3	59.5	61.0	61.6	62.2	63.4	64.1	65.0	64.6	60.1	53.4	47.7	42.8	39.0	35.6	34.5	36.1	39.3	42.0	42.4	45.2	48.7	51.2	53.7	51.3	65.0
19-Feb	55.6	54.7	55.4	58.5	61.8	63.7	65.0	66.1	66.2	62.8	59.5	55.6	51.0	46.4	41.9	39.9	43.8	47.9	51.5	51.4	51.8	54.7	57.5	60.9	55.1	66.2
20-Feb	64.5	67.8	70.0	71.4	71.6	71.8	71.4	71.2	70.8	68.9	65.0	61.1	56.5	54.4	50.9	50.0	50.6	56.9	62.9	66.9	66.9	69.6	70.8	68.8	64.6	71.8
21-Feb	66.6	66.4	66.2	68.9	72.4	74.7	76.6	80.1	80.5	77.9	70.1	61.6	56.9	54.2	56.0	56.8	58.9	75.1	87.9	86.5	87.0	80.0	89.5	90.4	72.5	90.4
22-Feb	90.1	86.9	84.5	85.4	87.3	82.1	79.2	76.8	77.1	77.7	74.7	69.4	65.4	62.0	58.0	54.6	56.3	59.0	60.7	60.3	59.5	58.1	65.9	90.1	71.7	90.1
23-Feb	95.4	94.7	80.8	82.0	79.4	82.0	79.4	79.0	77.5	73.1	71.3	81.8	79.4	76.2	77.5	78.8	85.0	89.3	94.6	93.3	93.1	93.1	92.7	94.5	84.3	95.4
24-Feb	95.1	94.9	96.2	96.8	95.9	95.3	95.3	94.9	94.4	90.3	76.1	65.2	57.6	48.3	43.3	43.4	40.1	41.7	47.4	53.7	56.1	64.3	65.9	68.5	71.7	96.8
25-Feb	71.4	82.5	86.3	89.8	89.4	84.9	87.8	88.2	88.6	88.9	86.8	79.4	72.2	61.4	55.7	53.2	52.5	70.4	82.6	70.4	58.8	54.9	52.6	60.2	73.7	89.8
26-Feb	64.8	70.0	68.1	62.3	63.3	64.5	67.0	73.6	72.6	60.4	50.1	47.5	44.8	41.8	40.0	40.3	41.9	49.6	58.2	61.7	64.3	64.5	62.8	64.5	58.3	73.6
27-Feb	62.5	59.2	60.0	62.8	61.2	59.8	57.7	58.9	59.0	49.6	47.2	51.0	53.8	54.0	51.9	53.3	58.4	62.4	67.1	65.4	60.7	63.6	69.7	74.9	59.3	74.9
28-Feb	78.2	78.3	76.7	78.8	81.6	85.2	82.1	83.8	83.3	77.5	69.7	66.4	59.1	51.9	49.1	44.8	45.1	55.0	77.4	83.8	86.0	88.2	82.8	83.9	72.9	88.2
	75.2	75.8	75.4	75.8	76.0	75.9	76.0	76.4	76.3	73.8	69.5	66.9	63.3	59.9	57.5	57.7	59.4	64.8	70.4	71.0	70.9	71.7	72.3	74.4	Diurnal Average	
	95.4	94.9	96.2	96.8	95.9	95.3	95.3	94.9	94.4	90.3	86.8	81.8	79.4	76.2	77.5	80.6	85.0	89.3	94.6	93.3	93.1	93.1	92.7	94.5	Diurnal Maximum	

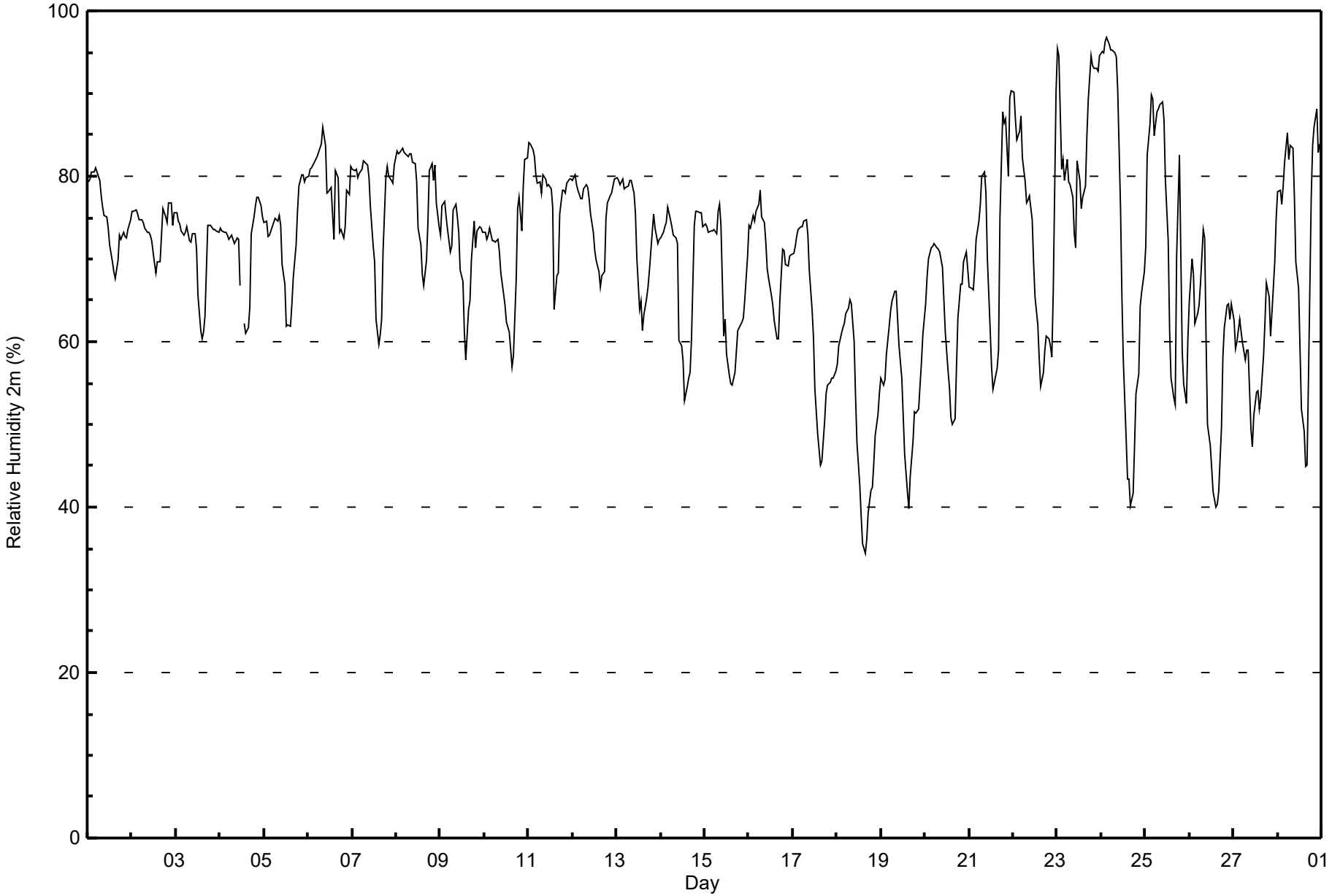
M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Blackrod - February 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	7	1.04	1.04
40 - 60	115	17.14	18.18
60 - 80	439	65.42	83.61
80 - 100	110	16.39	100.00

Total Number of Valid Hours: 671

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Blackrod - February 2025

Maximum Speed: 33 km/h on Feb 20 03:00

Maximum Daily Speed Average: 24.9 km/h on Feb 19

Minimum Speed Value: 1 km/h on Feb 14 04:00

Minimum Daily Speed Average: 0.3 km/h on Feb 28

Maximum Diurnal Speed Average: 7.2 km/h at hour 10

Minimum Diurnal Speed Average: 2.3 km/h at hour 18

Monthly Average Velocity: 4.7 km/h 204.4 deg

Percentiles: $P_1 = 1$ $P_{10} = 3$ $Q_1 = 5$ Median = 9 $Q_3 = 14$ $P_{90} = 21$ $P_{99} = 28$

Hours in Service: 672

Hours of Data: 624

Hours of Missing Data: 48

Percent Operational Time: 92.9

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-Feb	NE6	NNE5	N6	N9	NNW12	NW13	NW14	NW13	NW12	NW13	WNW13	WNW13	WNW15	WNW15	WNW19	WNW18	WNW14	WNW9	WNW6	WNW3	WNW6	NW7	NW6	NW3	NW9.5	WNW19
2-Feb	NW2	N5	N7	NNW9	NNW5	NNW10	N6	NNE6	UO	UO	NW7	NW10	NW12	NW12	NW11	WNW11	NW7	UO	UO	UO	UO	UO	UO	UO	----	NW12
3-Feb	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-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	SSW12	SSW11	SSW11	SSW10	S9	S8	S8	S8	S11	S14	----	S14
5-Feb	S12	S11	S13	S12	S11	S10	S10	S10	S9	SSW11	SSW10	SSW9	SSW14	SSW13	SSW10	SSW10	SSW8	SSW8	SSW6	SSW7	SSW4	WNW6	NW8	NW9	SSW8.2	SSW14
6-Feb	NW9	NNW9	NNW8	NNW6	NW5	SW3	SW4	NW10	NW14	WNW16	NW14	WNW14	NW17	NW17	NW16	NNW13	N15	N18	N18	N16	N13	N11	N11	NE2	NNW10.2	N18
7-Feb	E2	ESE1	S4	SSE4	SSE5	S5	S8	S11	S9	S5	NW3	WNW7	W7	WSW5	WSW5	SW7	SSW7	SW3	SE2	SE3	SE3	SE3	SSE3	S6	SSW3.4	S11
8-Feb	S6	SSW5	SSW5	SSW4	SSW4	SE3	SSW3	S7	SSE5	SSW8	SSW9	S10	SSW9	SSW10	SW8	SSW4	SW6	SSW5	WNW9	WNW12	NW17	NW19	NW21	NNW21	WSW4.6	NNW21
9-Feb	NNW20	NNW14	NW15	NW14	NW10	WNW10	WNW8	W4	SW2	S8	S5	S1	N11	N12	N14	NNE14	N10	NNW11	NNW7	N8	NNE4	E1	ENE2	SE2	NNW6.3	NNW20
10-Feb	ESE2	SE3	SSE4	S9	S10	S9	S9	S8	S12	S13	S15	S14	SSW12	SSW12	SSW12	SW11	SSW10	SSW7	S6	SW1	NW5	NW10	NNW12	NNW12	SSW5.9	S15
11-Feb	N8	NNE8	NNE8	NNE7	NNE6	NNE7	NNE7	NE6	NNE7	NNE7	NNE6	N6	N5	N3	SSW1	NNW4	NNE4	ENE3	ESE2	SSE1	S2	S3	S4	S4	NNE3.6	NNE8
12-Feb	S5	S5	S5	S9	S8	S9	S8	S9	S9	S7	S7	SSW6	SSW5	SSW6	S7	SSW6	ESE2	NE3	NE4	NNE8	NNE10	NE10	NNE9	N10	SSE2.6	N10
13-Feb	N12	NNE11	NNE7	NNE5	NE4	NNE6	NNE6	NNE8	NNE8	NNE7	NNE6	NNE7	E4	NNE7	NNE7	NNE10	NNE11	NE9	NNE7	NE5	NE7	ENE7	E8	E8	NE6.7	NNE12
14-Feb	E9	E9	ESE8	SW1	SSE1	SSE2	SSE1	SE1	SSW1	NNW2	SSW2	WSW2	WNW3	SSW1	N4	NNE6	N7	NNE6	ENE5	ENE4	E4	SSE2	SSE4	SSE2	E1.6	E9
15-Feb	SSE2	SSE3	SSE3	SE2	SSE2	E1	SE2	NE5	NE4	NE1	ESE1	NNW6	NW9	NW11	NW11	NW12	NW11	NW8	NW6	NNW6	NNW4	NNW4	N4	NNE1	NNW3.1	NW12
16-Feb	S4	SSE3	S2	SSE3	SSE2	SSW1	S3	S10	SSE10	SSE10	SSE10	S13	S14	SSW13	S13	S13	S12	S8	SSE6	S9	S14	S18	S17	S18	S9.3	S18
17-Feb	S21	S21	S22	S20	S21	S20	S20	S20	S18	S18	S18	S21	S22	S21	SSE18	SSE18	SSE15	SSE13	SSE13	SSE14	SSE19	S21	S20	S22	S18.8	S22
18-Feb	S20	S15	S22	S18	S21	S21	S16	S15	S19	S21	S20	S22	S21	S19	S22	S21	S18	S16	S18	S21	S24	S25	S26	S21	S20.0	S26
19-Feb	S24	S26	S26	S25	S23	S24	S22	S24	S29	S25	S27	S28	S27	S25	S24	S25	S22	S22	S24	S24	S24	S27	S27	S25	S24.9	S29
20-Feb	S26	S32	S33	S30	S26	S25	S23	S24	S25	S28	S28	S28	S25	M	S14	SSW15	S13	S12	S13	S14	S14	S12	S13	S14	S21.2	S33
21-Feb	S12	S14	S15	S14	S13	S13	S10	S7	S11	S10	SSW9	SSW6	WSW6	W8	NW10	NW8	NW7	S2	SSE4	NE5	E4	SE2	N3	WNW2	SSW5.1	S15
22-Feb	SSW3	S7	SSE11	S12	S14	SSE15	SSE19	S21	S21	S21	S18	S19	S18	S20	S17	S16	S13	S15	SSE19	SSE18	SSE19	SSE18	S17	SSE10	S15.6	S21
23-Feb	SSE4	S5	S15	S16	SSW15	S12	SSW13	S14	SSW12	SW18	W18	W20	WNW24	WNW26	WNW23	WNW19	NW16	NW14	NNW12	N11	N8	NNE6	NE3	NE1	W7.0	WNW26
24-Feb	SSW3	SSW5	SSW3	SW1	SSW4	S7	SE1	E2	SSW4	SSW9	SSW8	SW10	SW10	WSW12	WSW11	WNW9	WNW8	WSW7	SW6	SW9	SW7	SSW5	SSW7	SSW5	SW5.4	WSW12
25-Feb	SSW4	SSE4	SSE3	SE2	SE2	NE5	NNE6	NNE8	NNE9	NNE7	NNW5	NW3	NW1	W3	W4	W7	WNW3	SE2	SSE3	SSW9	SSW9	SSW10	SW13	W11	WSW1.3	SW13
26-Feb	SW8	SSW11	SW8	WNW14	WNW13	W9	WSW7	S9	S10	SW7	WNW17	WNW15	WNW17	W15	W13	W14	W14	WSW8	SSW8	S8	S8	S10	S10	S9	WSW8.0	WNW17
27-Feb	S12	SSE15	S14	S17	S18	S20	S25	S18	SSW13	W20	WNW27	WNW28	WNW27	WNW28	WNW25	WNW23	WNW24	NW20	NW16	NW14	WNW18	WNW12	N9	NNE9	W10.0	WNW28
28-Feb	NE7	NNE8	NE7	S2	E2	E2	SW1	SW4	SW2	W1	WNW4	NW5	WSW2	WSW4	WNW4	WSW1	N3	E2	ESE2	SSE3	SSE3	SSE6	SSE6	SSE5	ESE0.3	NNE8
	S4.0	S4.8	S5.8	S5.9	S6.2	S6.0	S6.1	S6.5	S7.0	SSW7.2	SW6.6	SW6.8	SW6.8	WSW6.8	WSW5.9	WSW5.2	WSW3.5	SW2.3	SSW2.5	S2.9	S3.2	SSW4.2	SSW3.8	S3.6	Diurnal Average	
	S26	S32	S33	S30	S26	S25	S25	S24	S29	S28	S28	WNW28	S27	WNW28	WNW25	S25	WNW24	S22	S24	S24	S24	S27	S27	S25	Diurnal Maximum	

M - Maintenance UO - Unstable Operation

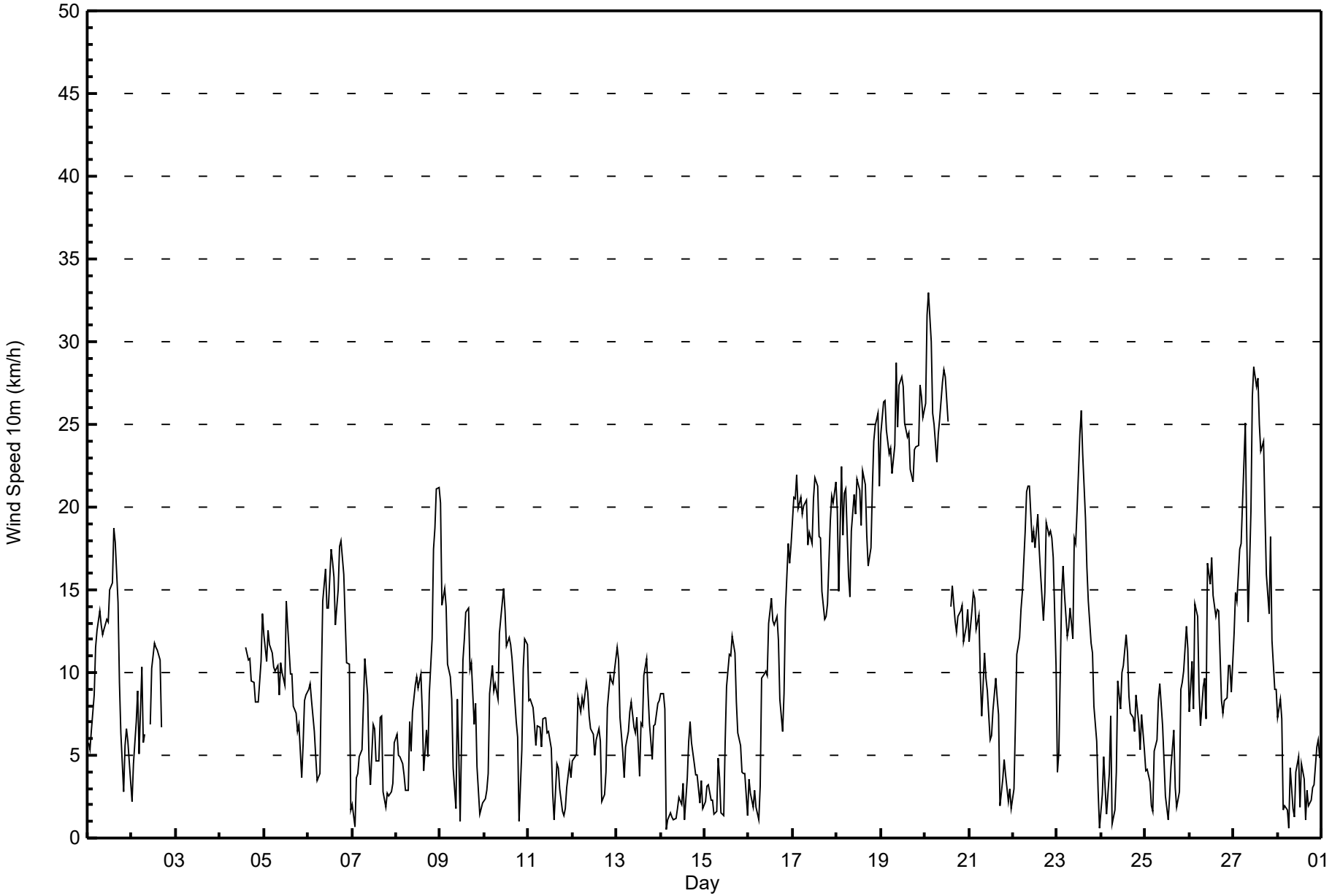
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Blackrod - February 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	167	26.76	26.76
6 - 11	218	34.94	61.70
12 - 19	151	24.20	85.90
20 - 28	84	13.46	99.36
29 - 38	4	0.64	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 624

Total Number of Hours: 672



Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Blackrod - February 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	7	5	12	4	10	7	14	27	18	24	8	7	4	6	8	6	167
6 - 11	16	36	7	1	4	1	0	8	50	32	12	5	5	11	21	9	218
12 - 19	7	2	0	0	0	0	0	15	60	14	2	1	5	20	18	7	151
20 - 28	0	0	0	0	0	0	0	0	68	0	0	0	2	10	2	2	84
29 - 38	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	30	43	19	5	14	8	14	50	200	70	22	13	16	47	49	24	624

Total Number of Valid Hours: 624

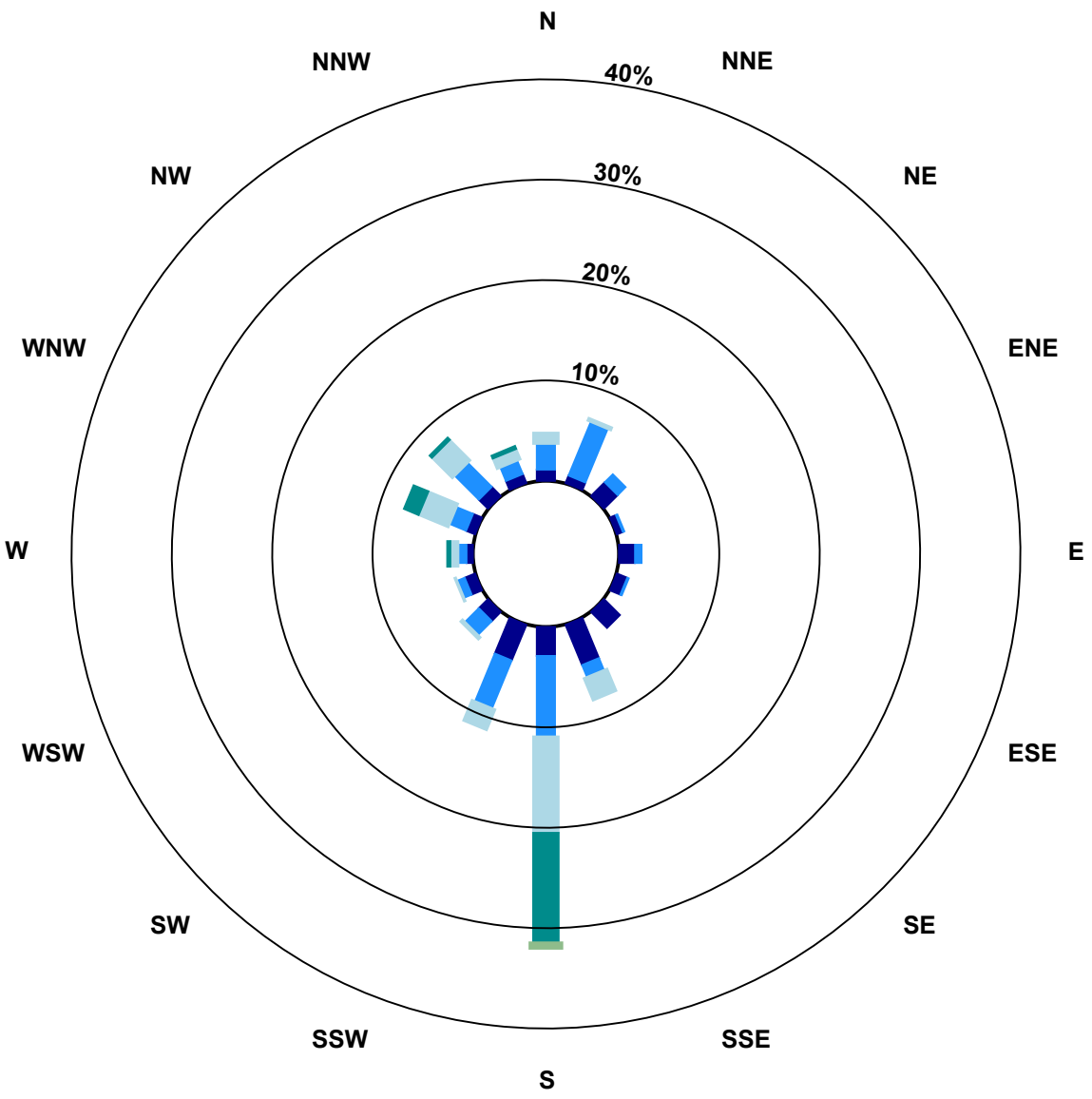
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Wind Speed 10m (WS10) - km/h

Blackrod



Classes (km/h)

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

Total Number of Valid Hours: 624

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

Maximum Value: 10 km/h on Feb 27 11:00

Minimum Value: 1 km/h on Feb 7 04:00

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

Hours in Service:	672
Hours of Data:	624
Hours of Missing Data:	48
Hours of Calibration:	0
Percent Operational Time:	92.9

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

M - Maintenance UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Blackrod - February 2025

Direction of Maximum Speed: 186 deg on Feb 20 03:00
Direction of Maximum Daily Speed Average: 179.3 deg on Feb 19

Direction of Minimum Speed: 222 deg on Feb 14 04:00

Direction of Minimum Daily Speed Average: 0.3 deg on Feb 28

Monthly Average Direction: 204.4 deg

Hours in Service:	672
Hours of Data:	624
Hours of Missing Data:	48
Percent Operational Time:	92.9

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-Feb	34	19	9	9	340	319	322	314	316	316	298	301	300	301	301	302	293	287	295	303	302	304	304	306	312.4
2-Feb	320	353	351	335	329	348	353	16	UO	UO	315	312	312	306	309	297	307	UO	UO	UO	UO	UO	UO	UO	--
3-Feb	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-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	208	211	204	192	185	182	182	177	181	184	--
5-Feb	186	183	182	186	184	182	181	182	188	193	198	199	194	198	204	210	211	210	211	196	199	292	305	313	198.9
6-Feb	317	328	334	334	306	232	236	307	308	299	307	297	309	307	314	336	350	355	5	357	351	7	8	55	328.3
7-Feb	96	108	170	165	166	171	181	183	182	177	321	286	276	246	244	216	198	232	138	140	135	141	149	172	192.6
8-Feb	180	208	205	196	197	141	197	185	167	209	203	183	202	211	224	212	217	210	284	296	317	304	325	331	252.0
9-Feb	336	330	326	315	304	301	301	277	227	183	183	183	2	8	7	16	354	346	345	1	16	84	77	124	338.5
10-Feb	104	132	159	182	183	176	173	175	183	187	187	191	197	203	202	220	206	202	174	228	319	324	333	344	198.1
11-Feb	9	21	26	22	16	29	30	37	31	31	29	3	3	358	205	337	21	66	113	162	174	176	181	174	26.0
12-Feb	184	175	191	187	176	182	175	172	171	185	188	200	206	200	178	211	115	54	35	27	30	39	14	11	165.0
13-Feb	11	13	20	22	40	22	26	19	25	23	15	26	84	26	25	30	33	36	29	56	54	73	89	86	34.3
14-Feb	94	97	109	222	157	166	168	146	200	342	200	244	289	194	356	13	9	24	61	72	85	156	156	148	80.4
15-Feb	152	149	163	143	154	96	128	53	39	49	104	328	315	309	309	306	312	326	325	339	347	333	349	21	327.3
16-Feb	178	158	177	160	164	204	180	170	168	158	167	186	189	193	180	183	170	175	163	183	184	182	182	180	178.3
17-Feb	179	181	180	181	177	177	173	176	169	173	175	171	170	176	159	157	154	156	154	160	168	174	175	176	171.5
18-Feb	177	175	175	175	178	181	178	175	182	185	183	179	179	180	186	183	174	175	176	179	181	179	176	175	178.7
19-Feb	174	178	173	175	173	178	180	179	176	180	184	186	186	182	176	175	173	180	183	182	177	180	184	188	179.3
20-Feb	184	187	186	187	188	190	190	189	187	188	190	186	187	M	191	193	187	180	183	183	181	182	182	185	186.7
21-Feb	186	187	186	189	191	188	185	183	185	182	193	198	250	271	310	318	326	183	152	54	89	135	8	303	198.6
22-Feb	205	175	162	177	171	167	168	171	181	185	179	183	189	187	186	189	180	169	165	164	164	168	178	160	175.5
23-Feb	149	178	173	187	194	189	194	190	203	235	260	268	282	289	300	296	317	325	347	5	9	24	49	36	262.8
24-Feb	207	193	201	216	199	186	140	99	201	196	204	221	226	237	258	297	289	251	235	224	228	195	194	205	223.6
25-Feb	204	159	152	135	139	39	18	25	28	13	334	304	311	268	274	280	286	124	147	192	193	212	233	273	252.6
26-Feb	232	201	234	286	285	273	238	190	183	234	293	290	291	280	277	275	274	258	199	182	188	184	188	174	249.0
27-Feb	179	166	172	179	179	178	173	186	196	273	287	292	295	290	296	295	295	313	313	304	301	303	11	23	266.3
28-Feb	34	30	37	187	91	80	224	221	214	261	297	317	256	243	285	249	6	99	102	147	152	165	161	164	119.6
	179.8	176.3	177.5	190.5	189.7	186.9	184.8	182.6	185.2	202.7	219.2	226.1	235.7	244.5	245.7	248.4	249.5	223.8	192.4	187.7	191.1	192.1	191.3	188.8	
	Diurnal Average																								

M - Maintenance UO - Unstable Operation

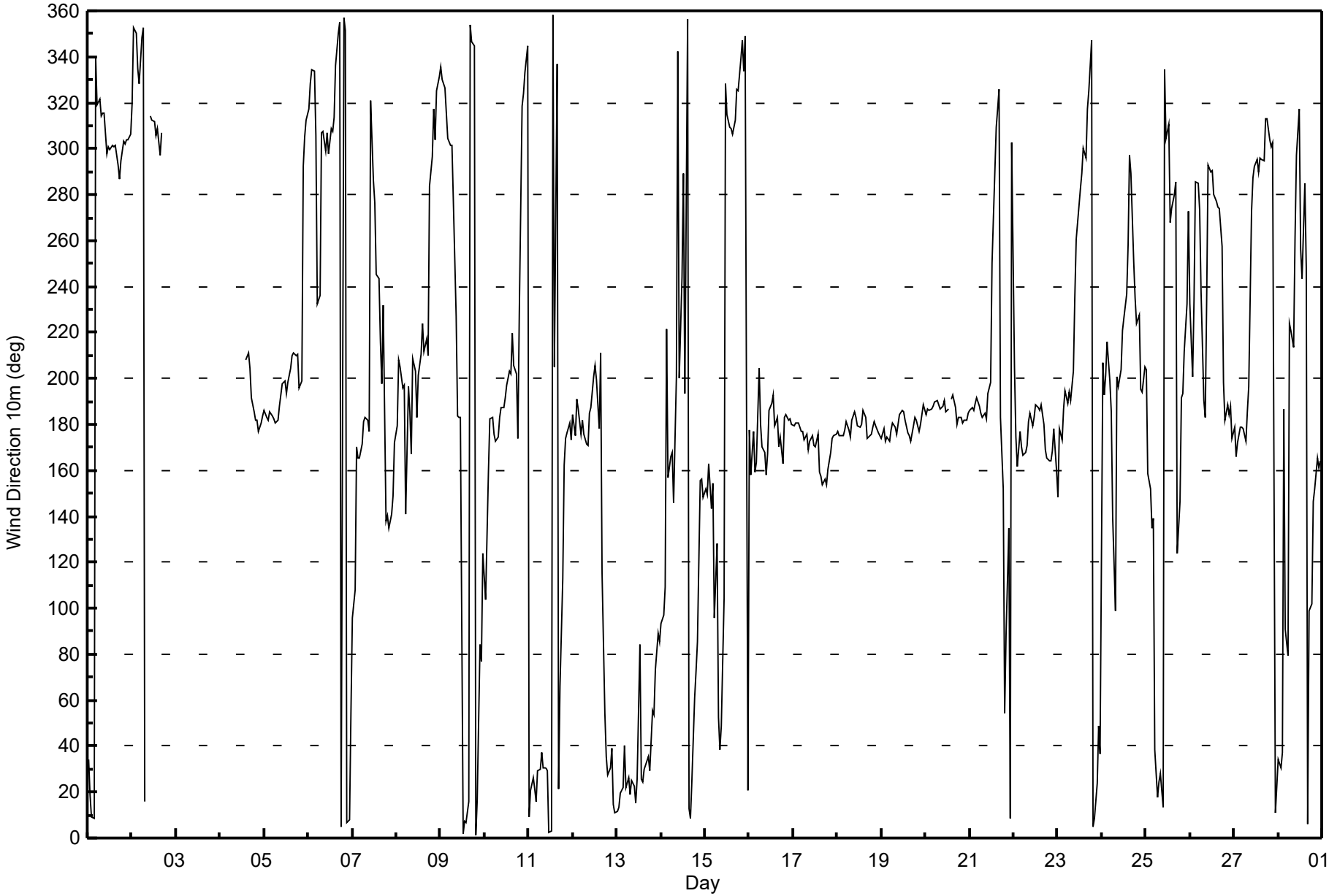
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Blackrod - February 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Blackrod - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 103 deg on Feb 9 12:00

Minimum Value: 7 deg on Feb 4 18:00

Percentiles: P_1 = 7 P_{10} = 10 Q_1 = 12 Median = 16 Q_3 = 23 P_{90} = 52 P_{99} = 89

Hours in Service:	672
Hours of Data:	624
Hours of Missing Data:	48
Hours of Calibration:	0
Percent Operational Time:	92.9

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-Feb	15	18	13	16	14	13	12	15	15	17	14	15	15	16	16	16	15	12	17	16	16	16	17	19	19
2-Feb	21	15	11	12	18	9	16	10	UO	UO	19	17	20	19	18	15	16	UO	UO	UO	UO	UO	UO	UO	21
3-Feb	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-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	M	20	17	11	7	8	7	8	14	9	8	20
5-Feb	10	10	8	8	7	7	7	8	8	8	11	14	12	14	18	14	12	14	17	9	40	51	22	19	51
6-Feb	18	15	17	19	31	44	33	34	17	13	16	14	16	17	18	16	16	14	14	14	11	19	15	75	75
7-Feb	45	88	14	18	8	12	9	9	10	62	62	25	27	39	50	26	13	62	53	16	18	14	9	16	88
8-Feb	19	26	13	13	31	34	37	15	14	17	18	10	22	17	28	64	16	21	26	16	17	16	17	15	64
9-Feb	15	13	14	16	18	16	19	34	77	12	17	103	22	18	17	14	21	13	11	14	21	60	34	24	103
10-Feb	31	20	23	11	7	9	11	11	11	9	9	10	18	17	18	18	12	14	12	86	28	17	13	13	86
11-Feb	16	11	11	10	17	9	9	10	12	13	16	19	24	69	81	36	23	35	47	45	25	12	12	21	81
12-Feb	16	26	22	12	12	14	18	10	11	15	17	23	41	31	27	31	64	43	40	13	13	22	24	14	64
13-Feb	13	15	18	39	43	22	13	12	12	14	16	20	52	20	25	19	16	13	12	26	12	16	21	19	52
14-Feb	23	27	26	84	72	61	65	64	79	59	58	67	52	93	73	32	19	22	9	16	27	59	13	52	93
15-Feb	14	16	13	32	17	69	50	20	36	70	61	39	22	24	24	22	16	12	13	20	15	14	28	63	70
16-Feb	14	12	63	20	60	74	29	9	11	12	20	15	17	19	20	20	15	12	12	9	11	11	12	12	74
17-Feb	12	11	12	12	13	12	13	13	15	15	14	16	17	17	17	17	19	17	18	15	12	12	12	12	19
18-Feb	15	15	12	14	11	11	12	13	12	12	12	14	14	14	13	13	15	14	13	13	12	12	12	13	15
19-Feb	13	14	14	13	12	13	13	13	13	13	13	13	14	15	16	14	15	13	12	12	13	12	12	12	16
20-Feb	11	10	10	10	11	10	10	11	10	10	10	10	11	M	13	10	11	10	13	9	9	8	8	12	13
21-Feb	10	12	9	11	10	10	9	10	16	10	13	38	32	34	22	22	15	67	11	34	66	92	48	78	92
22-Feb	67	46	14	12	12	11	11	12	10	10	13	11	9	10	10	9	11	13	9	10	12	11	12	19	67
23-Feb	42	61	15	11	11	9	9	9	16	17	25	17	16	14	15	13	17	14	18	14	23	16	51	87	87
24-Feb	33	17	27	64	64	42	84	58	32	11	23	20	22	20	25	25	21	26	20	15	16	20	10	19	84
25-Feb	35	15	24	20	56	26	22	13	14	13	26	63	97	80	52	29	77	37	21	18	10	13	20	17	97
26-Feb	30	13	27	16	15	18	30	11	11	36	18	17	16	20	19	17	16	29	11	9	10	7	9	11	36
27-Feb	10	13	15	10	11	12	10	14	19	25	19	15	15	14	16	14	14	16	19	15	13	15	41	11	41
28-Feb	13	14	14	59	60	56	96	16	52	90	37	36	83	53	52	98	58	48	38	34	41	8	13	21	98
	67	88	63	84	72	74	96	64	79	90	62	103	97	93	81	98	77	67	53	86	66	92	51	87	
	Diurnal Maximum																								

M - Maintenance UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS33
MONDAY CREEK
FEBRUARY 2025

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

March 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MONDAY CREEK (AMS33)
FEBRUARY 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	640	31	32	99.85	14	0	2.7	0
H2S (ppb) Average	640	32	32	100	1.1	0	0.5	0
NO2 (ppb) Average	634	37	38	99.85	28.2	0	15.2	-
NO (ppb) Average	634	37	38	99.85	91.7	-	24.9	-
NOX (ppb) Average	634	37	38	99.85	118.4	-	40	-
Temperature 2 m (C) Average	672	0	0	100	9.2	-	4.7	-
Relative Humidity (%) Average	672	0	0	100	97.6	-	79	-
Wind Speed 10 m (km/h) Average	668	0	4	99.4	30	-	16	-
Wind Direction 10 m (deg) Average	668	0	4	99.4	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MONDAY CREEK (AMS33)
FEBRUARY 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	640	1.03	1.3	-	0	0.2	0.3	0.6	1.2	2.1	14
H2S (ppb) Average	640	0.14	0.1	-	0	0.1	0.1	0.1	0.2	0.2	1.1
NO2 (ppb) Average	634	5.57	5.2	-	0.3	1.2	2.1	3.7	7.5	12.5	28.2
NO (ppb) Average	634	3.04	8.5	-	0	0	0.1	0.4	1.6	6.6	91.7
NOX (ppb) Average	634	8.61	12.2	-	0.3	1.5	2.4	4.4	9.4	19.9	118.4
Temperature 2 m (C) Average	672	-15.75	12.3	-	-38.8	-30.3	-24.5	-18.7	-4.7	3.4	9.2
Relative Humidity (%) Average	672	67.55	12.3	-	21.1	50.9	60.7	70.1	75.9	80	97.6
Wind Speed 10 m (km/h) Average	668	8.8	5	-	0	2	5	8	12	15	30
Wind Direction 10 m (deg) Average	668	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - MONDAY CREEK (AMS33)
FEBRUARY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
NO2, SO2	18 Feb 2025 17:00	18 Feb 2025 17:00	1	Maintenance - router replaced
Wind Speed, Wind Direction	14 Feb 2025 01:00	14 Feb 2025 01:00	1	Flat line in sensor output signal - Sensor frozen
Wind Speed, Wind Direction	14 Feb 2025 08:00	14 Feb 2025 09:00	2	Flat line in sensor output signal - Sensor frozen
Wind Speed, Wind Direction	16 Feb 2025 04:00	16 Feb 2025 04:00	1	Flat line in sensor output signal - Sensor frozen

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Monday Creek - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 14.0 ppb on Feb 23 08:00 Maximum Daily Average: 2.7 ppb on Feb 5

Minimum Value: 0.0 ppb on Feb 1 08:00 Minimum Daily Average: 0.3 ppb on Feb 11
Maximum Diurnal Average: 1.5 ppb at hour 8 Minimum Diurnal Average: 0.7 ppb at hour 22
Monthly Average: 1.03 ppb Percentiles: P_1 = 0.0 P_{10} = 0.2 Q_1 = 0.3 Median = 0.6 Q_3 = 1.2 P_{90} = 2.1 P_{99} = 6.4

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	31
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-Feb	0.1	Z	0.2	0.2	0.1	0.2	0.1	0.0	0.0	0.1	0.1	0.1	1.2	2.6	4.1	3.3	2.8	1.3	0.5	0.3	0.1	0.2	0.1	0.2	0.8	4.1
2-Feb	0.7	1.2	Z	0.8	1.3	1.4	2.6	1.4	1.8	2.2	2.0	1.7	1.0	0.8	0.7	1.8	3.6	2.9	1.9	1.1	0.8	0.7	0.7	0.6	1.5	3.6
3-Feb	0.7	0.8	0.9	Z	0.8	0.6	0.2	0.3	0.4	0.9	1.9	0.7	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.0	0.0	0.4	1.9
4-Feb	0.1	0.2	0.2	0.2	Z	0.1	0.4	0.3	0.3	0.4	1.2	1.5	1.6	1.2	1.4	0.3	0.6	0.4	0.5	0.6	0.7	1.3	1.2	1.6	0.7	1.6
5-Feb	1.1	5.0	4.7	4.5	1.4	Z	6.4	3.6	1.0	2.1	2.4	6.1	4.0	1.7	2.8	4.0	3.5	2.1	1.9	1.3	0.4	0.3	0.4	0.3	2.7	6.4
6-Feb	Z	0.4	0.5	0.4	0.4	0.4	0.3	0.1	0.3	0.3	0.3	0.2	0.3	0.2	0.1	0.3	0.6	1.0	1.0	0.7	0.7	1.1	0.4	0.2	0.4	1.1
7-Feb	0.5	Z	0.7	0.8	0.8	0.5	1.5	1.8	1.9	2.0	0.2	0.1	0.8	1.7	1.4	1.3	0.9	0.6	0.3	2.2	1.8	0.4	0.4	0.3	1.0	2.2
8-Feb	0.2	0.2	Z	0.2	0.3	0.4	0.3	1.1	0.6	1.0	2.0	0.3	0.3	0.2	0.3	0.2	0.3	0.4	0.6	0.4	0.4	0.3	0.1	0.6	0.5	2.0
9-Feb	0.9	0.6	1.2	Z	2.4	2.1	1.4	0.4	0.3	0.2	0.9	0.5	0.5	0.4	0.5	0.9	1.7	1.8	1.4	1.3	0.9	1.2	1.1	0.7	1.0	2.4
10-Feb	0.4	0.5	1.0	0.7	Z	1.0	3.7	5.9	6.4	3.2	3.8	3.1	1.6	1.3	0.3	0.5	0.4	2.2	1.3	4.7	2.0	1.3	0.4	0.3	2.0	6.4
11-Feb	0.5	0.5	0.5	0.5	0.3	Z	0.1	0.1	0.2	0.1	0.4	0.4	0.4	0.2	0.1	0.3	0.4	0.5	0.4	0.4	0.1	0.0	0.1	0.7	0.3	0.7
12-Feb	Z	1.2	1.1	1.0	0.8	0.7	0.5	0.5	0.5	0.3	1.1	3.4	C	C	C	0.8	0.7	0.5	0.5	0.7	1.0	0.9	0.8	0.7	0.9	3.4
13-Feb	0.4	Z	0.5	0.4	0.5	0.6	0.6	0.5	0.4	0.4	0.4	0.6	0.3	0.6	1.1	1.2	1.0	0.7	0.5	0.5	0.3	0.3	0.1	0.1	0.5	1.2
14-Feb	0.1	0.1	Z	0.2	0.2	0.2	0.2	0.3	0.5	0.6	0.4	0.9	1.5	1.1	0.7	0.7	0.6	0.5	0.4	0.2	0.2	0.3	0.2	0.1	0.4	1.5
15-Feb	0.1	0.3	0.3	Z	0.3	0.2	0.3	0.4	0.8	1.6	2.0	1.6	1.5	1.4	1.2	0.8	1.0	0.8	0.6	0.6	0.5	0.6	0.5	0.4	0.8	2.0
16-Feb	0.2	0.2	0.0	0.0	Z	0.2	0.2	0.3	0.3	0.6	1.4	2.9	2.0	1.5	1.4	1.2	1.1	0.9	0.5	0.2	0.3	0.5	0.5	0.3	0.7	2.9
17-Feb	0.6	0.6	0.8	0.6	1.1	Z	2.0	1.5	1.1	0.9	0.7	0.7	0.8	0.8	0.6	0.7	0.6	0.5	0.4	0.4	0.3	0.2	0.2	0.3	0.7	2.0
18-Feb	Z	0.2	0.1	0.1	0.1	0.3	0.3	0.2	0.6	0.6	0.4	0.6	0.5	0.4	0.4	0.3	M	0.4	0.2	0.2	0.8	1.1	0.8	1.0	0.4	1.1
19-Feb	1.1	Z	0.8	0.9	1.1	1.1	0.9	1.0	0.9	0.9	1.0	0.8	0.8	0.7	0.6	0.6	0.6	0.6	0.5	0.2	0.3	0.3	0.6	0.9	0.8	1.1
20-Feb	0.9	0.9	Z	1.0	0.9	0.8	1.1	1.7	1.0	0.9	1.8	2.4	2.0	2.3	2.5	3.3	2.1	1.5	4.2	9.1	6.4	1.1	4.7	7.9	2.6	9.1
21-Feb	1.1	2.1	2.3	Z	1.7	2.4	1.5	1.1	0.9	1.1	1.8	1.2	0.7	0.5	0.5	0.7	0.7	0.7	1.0	1.1	0.7	0.6	0.5	0.7	1.1	2.4
22-Feb	0.6	0.6	0.5	0.5	Z	0.6	0.7	0.9	1.1	1.1	1.3	1.7	1.5	1.1	1.4	1.3	1.4	0.8	0.9	1.9	1.9	0.8	1.7	2.0	1.1	2.0
23-Feb	1.7	0.7	0.5	1.4	1.0	Z	7.4	14.0	8.4	5.1	5.1	4.3	0.2	0.1	0.3	0.2	0.7	0.6	0.7	0.7	0.7	1.2	1.7	1.7	2.5	14.0
24-Feb	Z	1.3	0.9	0.7	0.4	0.4	0.4	0.4	0.3	0.4	0.8	2.5	1.5	1.8	2.8	0.7	1.8	1.4	0.8	0.7	0.8	1.1	1.4	2.4	1.1	2.8
25-Feb	1.1	Z	0.7	0.5	0.4	1.4	1.7	1.3	1.4	1.3	1.0	0.7	0.7	0.9	1.3	1.5	4.1	1.3	0.5	0.4	0.4	0.4	1.3	6.4	1.3	6.4
26-Feb	0.5	0.3	Z	3.9	0.2	0.4	0.2	0.4	0.3	0.4	0.2	0.1	0.0	0.0	0.1	0.1	0.2	0.1	0.2	1.6	0.6	0.8	1.3	1.4	0.6	3.9
27-Feb	3.7	4.2	1.1	Z	0.7	0.2	1.5	3.1	4.5	2.0	0.3	0.1	0.1	0.1	0.2	0.3	0.1	0.2	0.3	0.2	0.5	1.1	1.6	0.6	1.2	4.5
28-Feb	0.5	0.3	0.4	0.3	Z	0.2	0.2	0.2	0.2	0.1	0.6	2.1	5.3	2.7	1.4	0.5	0.3	0.4	0.4	0.6	0.3	0.2	0.1	0.1	0.8	5.3
	0.7	1.0	0.9	0.9	0.7	0.7	1.3	1.5	1.3	1.1	1.3	1.5	1.2	1.0	1.0	1.0	1.2	0.9	0.8	1.2	0.9	0.7	0.8	1.2	Diurnal Average	
	3.7	5.0	4.7	4.5	2.4	2.4	7.4	14.0	8.4	5.1	5.1	6.1	5.3	2.7	4.1	4.0	4.1	2.9	4.2	9.1	6.4	1.3	4.7	7.9	Diurnal Maximum	

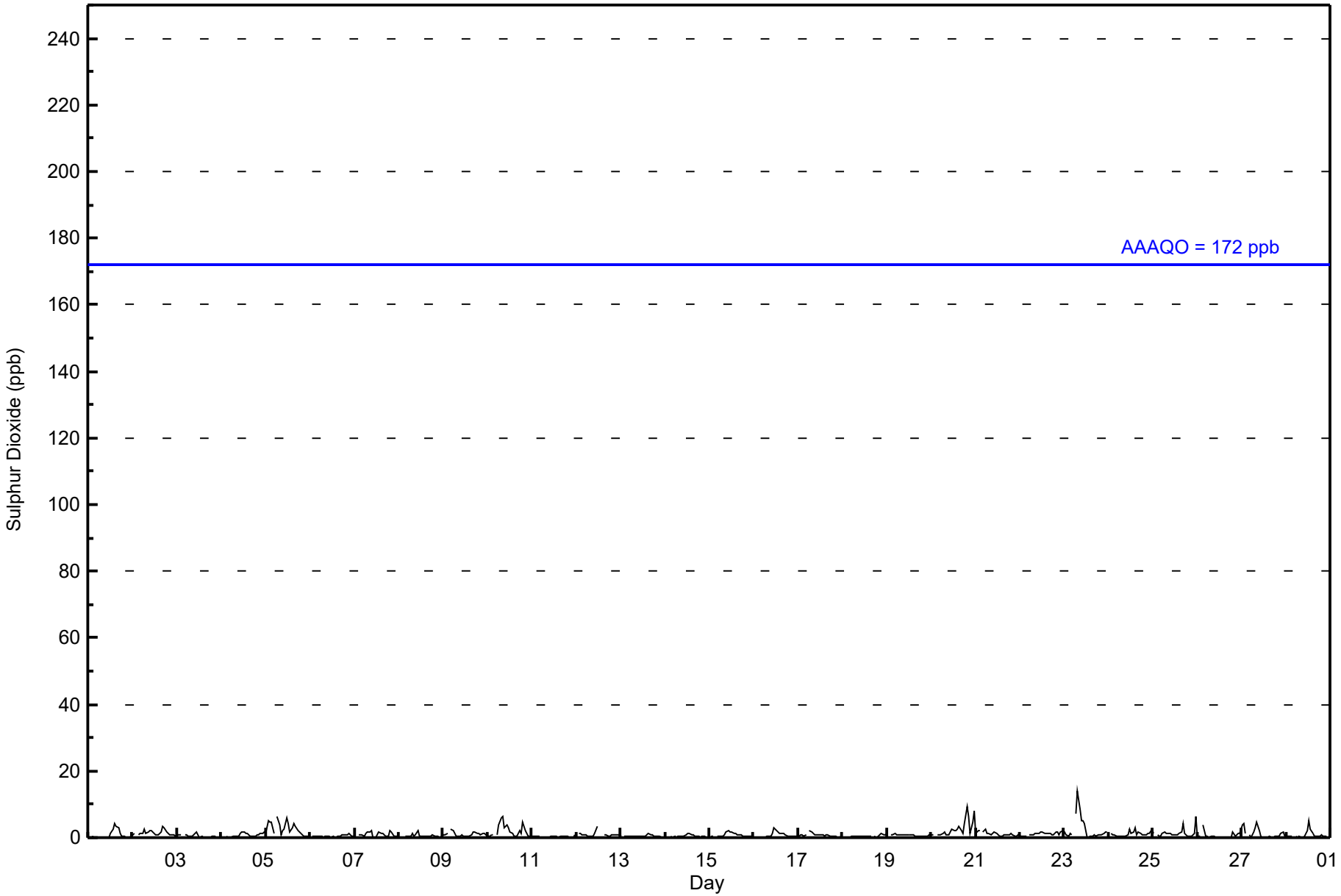
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Monday Creek - February 2025



Sulphur Dioxide (SO_2) - ppb
Monday Creek - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	639	99.84	99.84
11 - 20	1	0.16	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: 640

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Monday Creek - February 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 10	21	31	27	29	19	37	46	35	36	32	27	43	87	85	46	34	635
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	21	31	27	29	19	37	46	35	36	32	27	43	88	85	46	34	636

Total Number of Valid Hours: 636

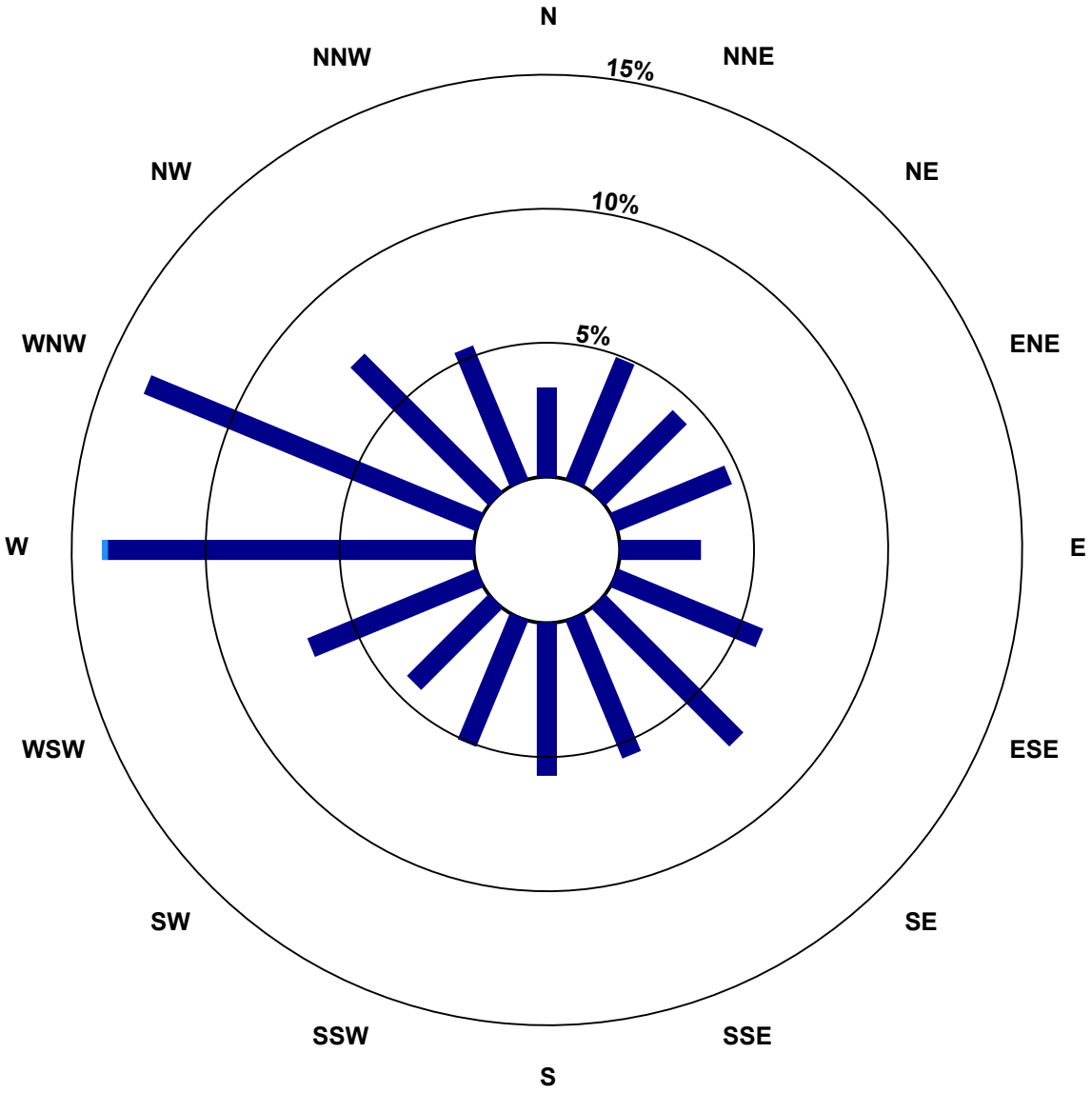
Total Number of Hours: 672

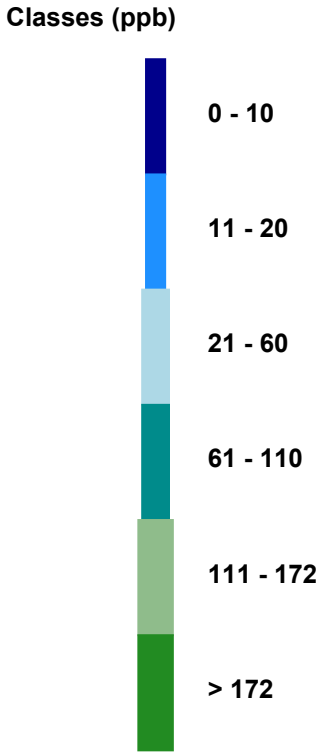
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Sulphur Dioxide (SO_2) - ppb

Monday Creek





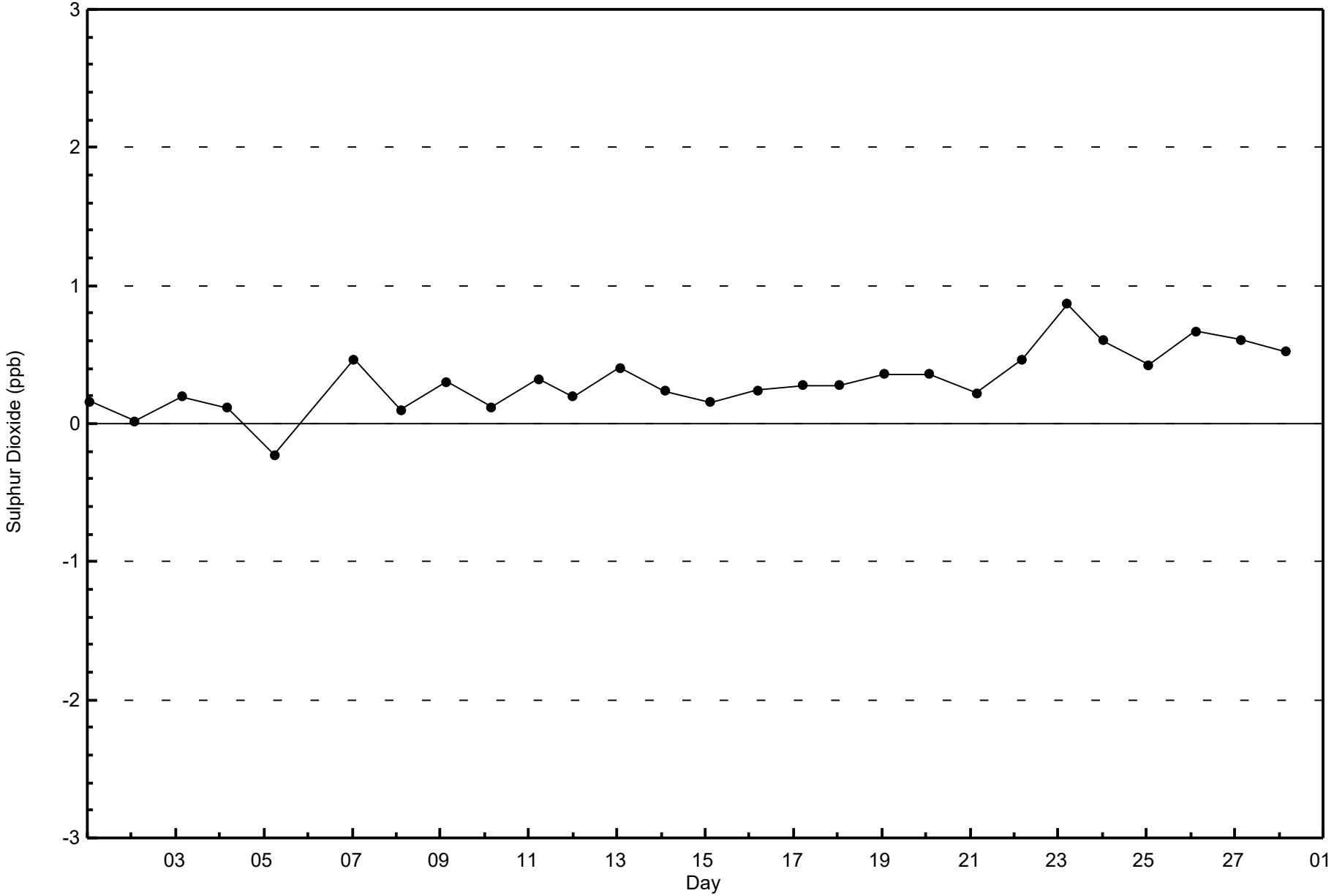
Total Number of Valid Hours: 636

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Monday Creek - February 2025

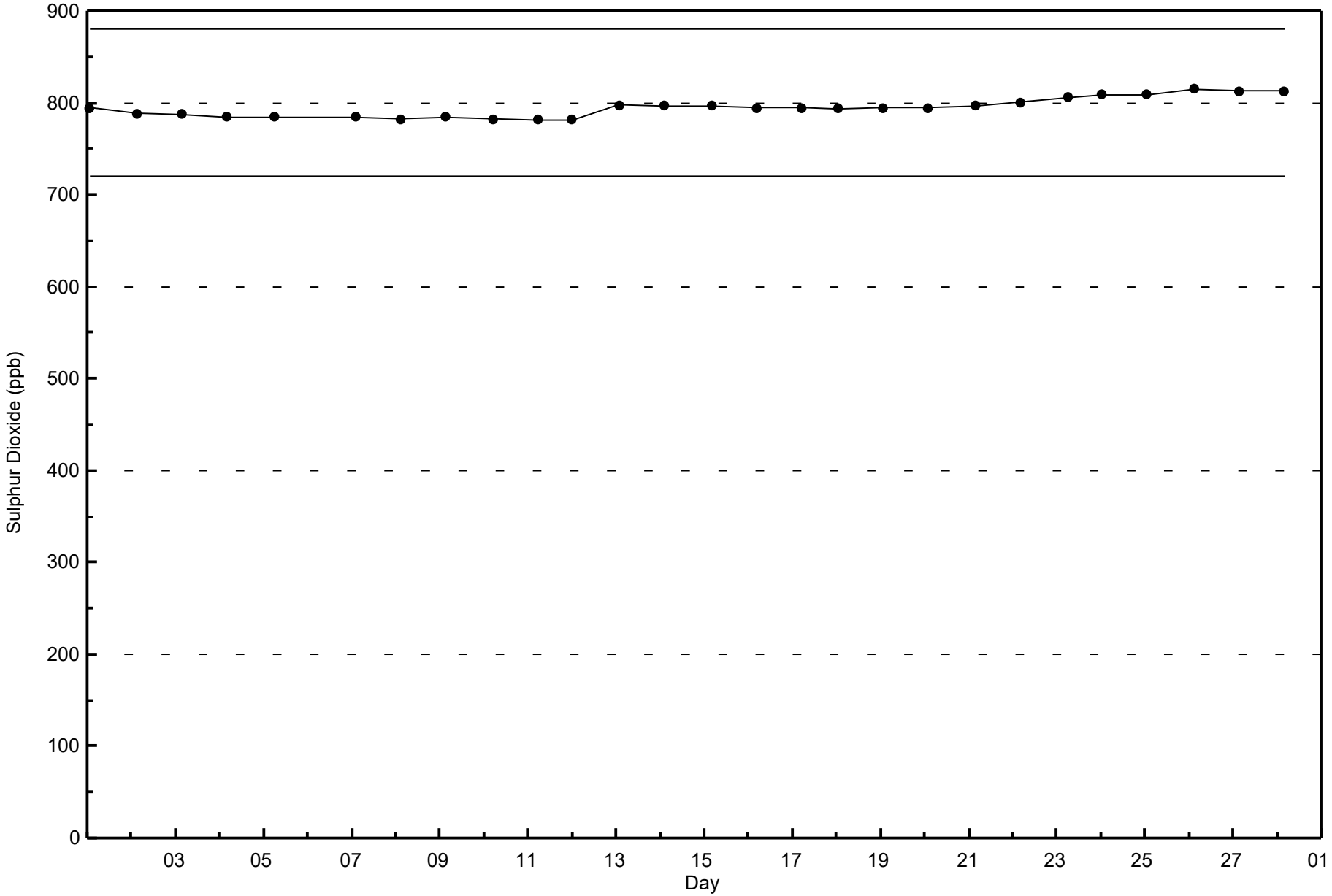


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Monday Creek - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Monday Creek - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 1.1 ppb on Feb 15 10:00 Maximum Daily Average: 0.5 ppb on Feb 15

Minimum Value: 0.0 ppb on Feb 18 18:00 Minimum Daily Average: 0.1 ppb on Feb 7
Maximum Diurnal Average: 0.2 ppb at hour 9 Minimum Diurnal Average: 0.1 ppb at hour 18
Monthly Average: 0.14 ppb Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.1 Median = 0.1 Q_3 = 0.2 P_{90} = 0.2 P_{99} = 0.7

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

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

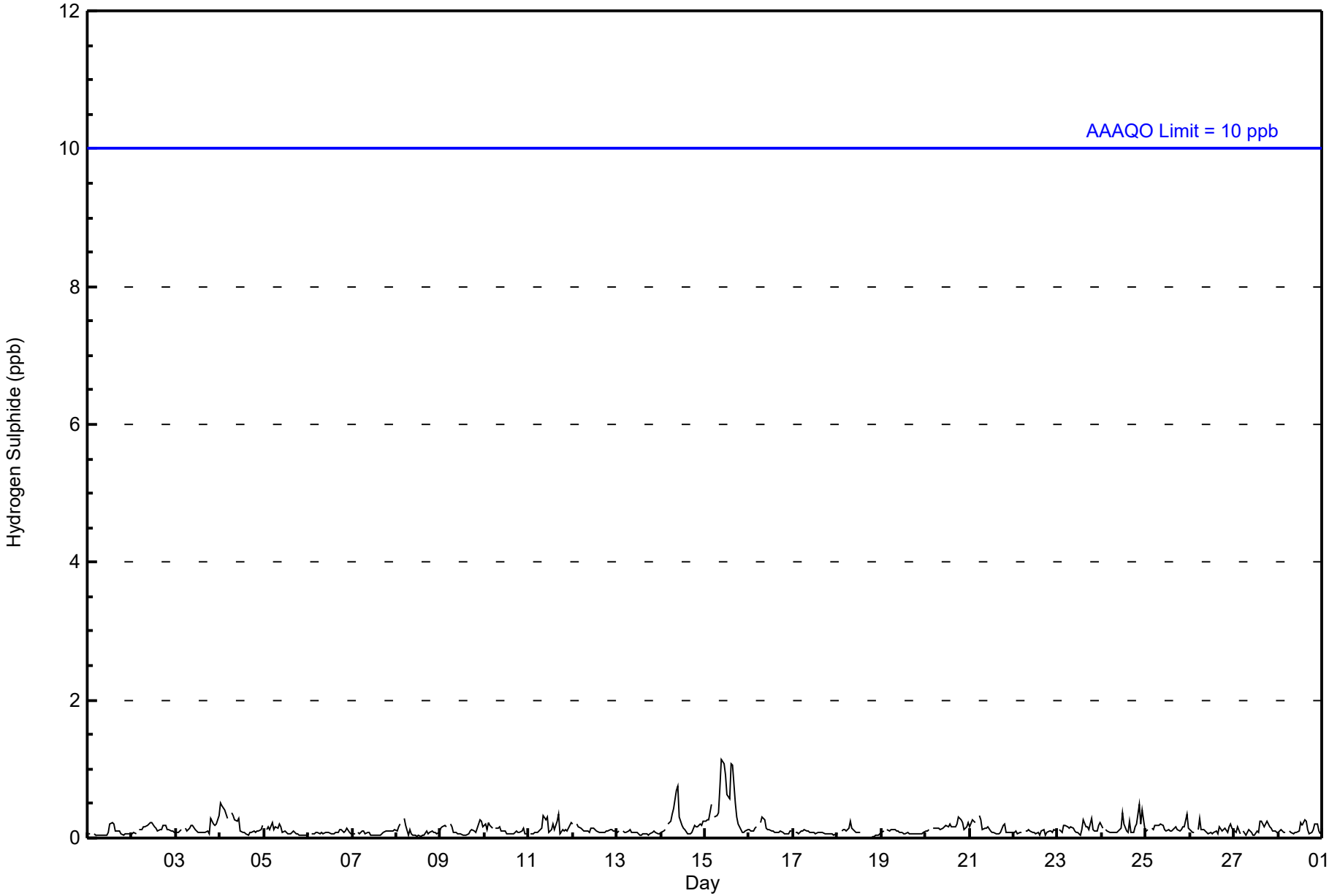
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Monday Creek - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	640	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: 640

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Monday Creek - February 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	21	31	26	30	20	37	47	36	33	32	27	43	88	86	45	34	636
3 - 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 - 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 - 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	21	31	26	30	20	37	47	36	33	32	27	43	88	86	45	34	636

Total Number of Valid Hours: 636

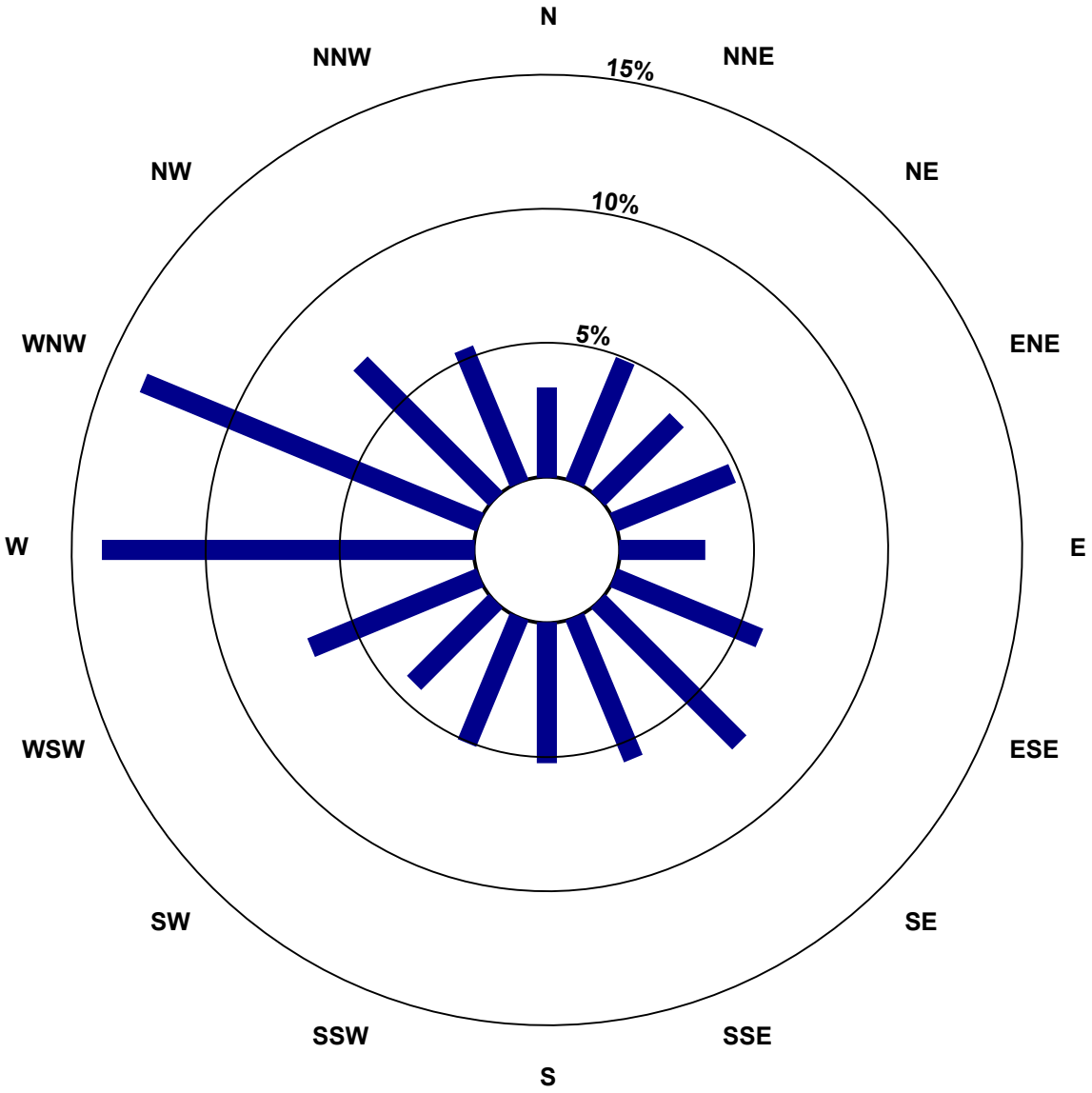
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Hydrogen Sulphide (H_2S) - ppb

Monday Creek



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

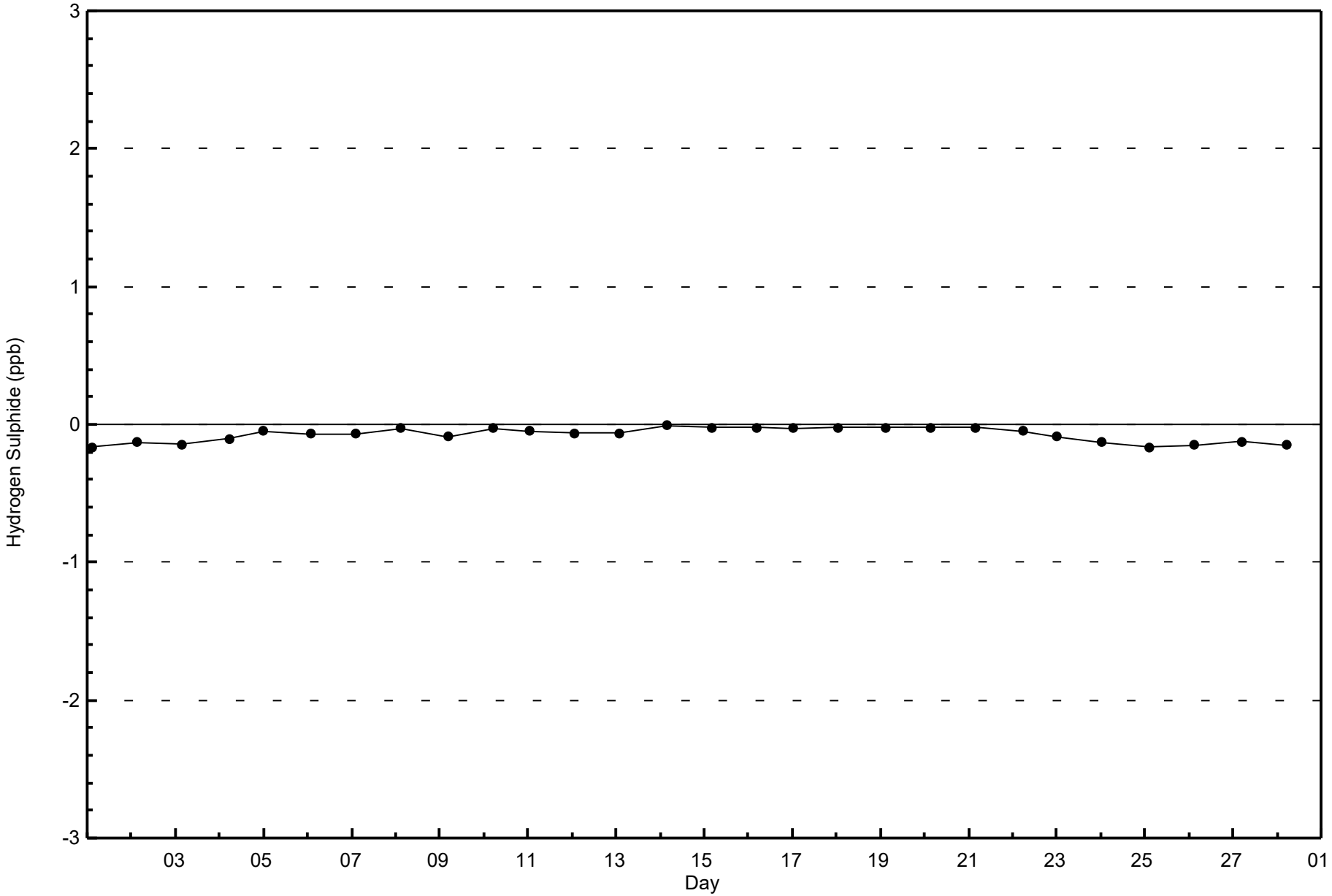
Total Number of Valid Hours: 636

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Monday Creek - February 2025

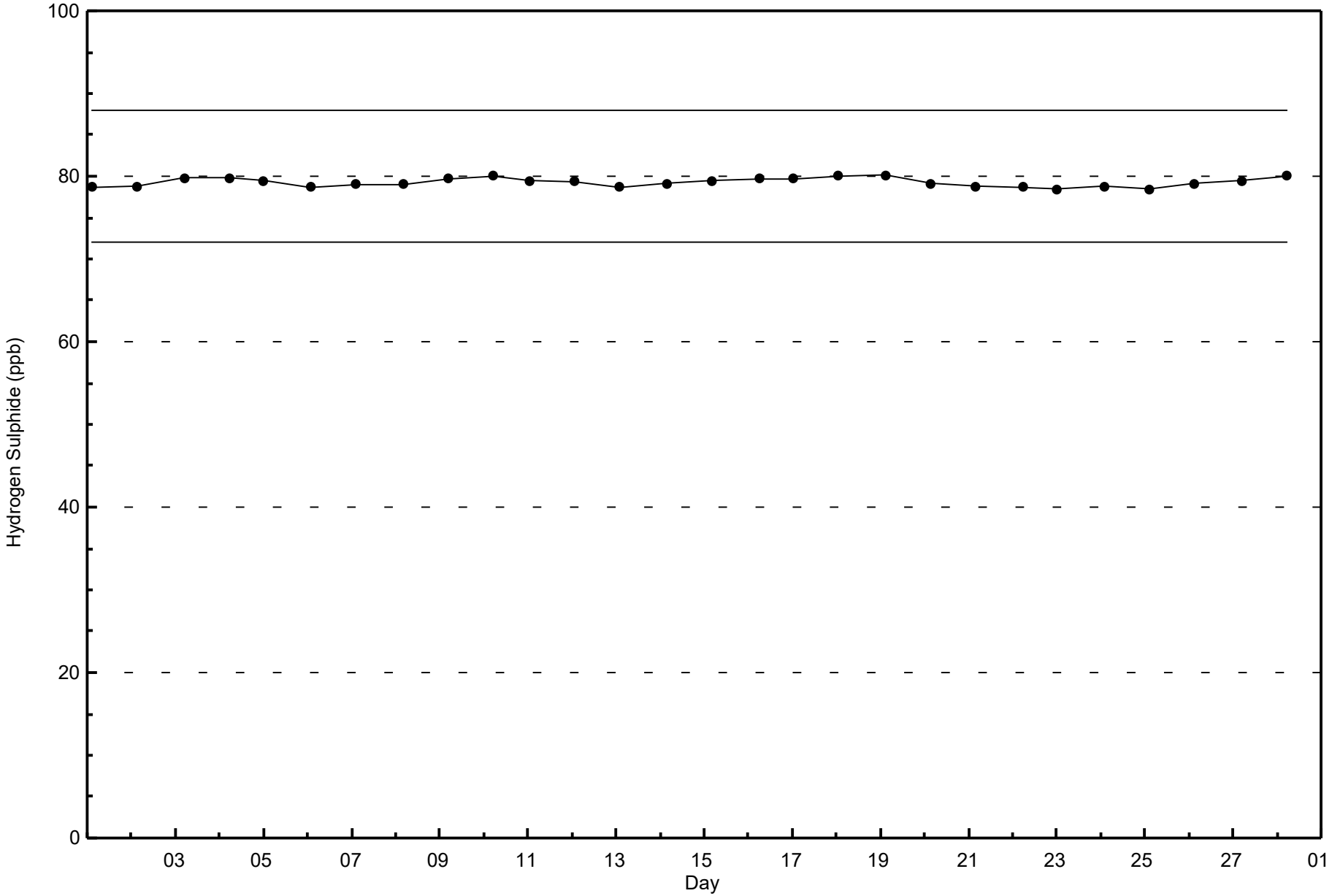


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Monday Creek - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Monday Creek - February 2025

Maximum Value: 91.7 ppb on Feb 15 10:00

Maximum Daily Average: 24.9 ppb on Feb 15

Minimum Value: 0.0 ppb on Feb 1 01:00

Minimum Daily Average: 0.1 ppb on Feb 6

Maximum Diurnal Average: 7.6 ppb at hour 10

Minimum Diurnal Average: 0.6 ppb at hour 24

Monthly Average: 3.04 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.4 Q_3 = 1.6 P_{90} = 6.6 P_{99} = 46.8

Hours in Service:	672
Hours of Data:	634
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-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.0	0.2	1.1	1.3	2.7	1.5	0.4	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.3	2.7
2-Feb	Z	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.4	1.4	1.8	1.5	0.9	0.7	0.7	0.7	0.6	0.2	0.3	0.2	0.3	0.1	0.1	0.1	0.5	1.8
3-Feb	0.0	Z	0.1	0.1	0.1	0.2	0.1	0.1	1.6	1.8	1.2	0.7	0.3	0.1	0.1	0.0	0.0	0.5	0.0	0.0	0.0	0.1	0.0	0.1	0.3	1.8
4-Feb	0.2	0.2	Z	0.1	0.2	0.1	0.5	2.1	1.5	1.6	4.7	1.8	1.3	2.9	1.1	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.8	4.7
5-Feb	0.1	0.2	0.1	Z	0.1	0.1	0.3	0.3	1.0	1.4	1.3	3.5	2.7	1.0	1.2	1.4	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.7	3.5
6-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.2	0.3	0.5	0.4	0.1	0.1	0.3	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.5
7-Feb	0.1	0.1	0.1	0.0	0.0	Z	0.0	0.0	0.1	0.4	0.3	0.3	0.4	0.8	0.9	0.6	0.4	0.0	0.0	0.0	0.0	0.1	0.0	0.6	0.2	0.9
8-Feb	Z	0.6	0.2	0.2	0.2	0.4	0.1	0.0	0.0	0.3	0.8	0.4	0.4	0.2	0.3	0.3	2.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.6
9-Feb	0.0	Z	0.1	0.1	0.1	0.2	0.1	0.1	0.5	0.1	0.1	0.3	0.6	0.8	1.0	1.2	1.2	0.2	0.1	0.1	1.0	5.1	4.0	1.3	0.8	5.1
10-Feb	3.5	0.1	Z	0.0	0.1	0.1	0.7	0.8	2.2	1.7	4.8	4.9	1.7	1.3	0.6	0.8	1.0	1.1	0.3	0.6	0.1	0.2	0.3	0.1	1.2	4.9
11-Feb	0.0	0.0	0.0	Z	0.1	0.1	2.1	4.0	20.6	21.5	24.1	2.6	7.0	18.3	7.9	20.0	29.5	0.4	0.3	0.1	0.3	0.1	3.9	0.5	7.1	29.5
12-Feb	0.5	0.2	0.2	0.1	Z	0.1	0.2	0.7	1.2	1.3	3.4	2.3	1.6	0.9	0.6	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	3.4
13-Feb	0.0	0.0	0.0	0.1	0.1	Z	0.3	0.4	0.3	0.3	0.8	0.9	0.2	0.4	0.7	0.4	0.2	0.1	0.0	0.5	0.1	0.3	0.1	0.1	0.3	0.9
14-Feb	Z	0.6	0.6	0.6	1.2	2.9	13.7	20.8	44.4	51.1	11.4	5.8	4.1	3.1	1.1	0.5	0.2	0.4	6.7	0.9	1.6	3.6	0.8	2.0	7.7	51.1
15-Feb	1.6	Z	5.6	29.4	4.8	5.8	7.0	12.3	46.9	91.7	65.4	68.0	52.1	46.6	47.6	23.4	29.7	17.8	11.0	3.8	0.5	0.0	0.3	0.4	24.9	91.7
16-Feb	1.0	0.8	Z	0.7	0.3	0.7	1.9	11.7	12.4	5.3	2.5	1.9	1.4	1.3	0.9	0.7	0.6	0.6	0.6	0.1	0.0	0.1	0.2	0.3	2.0	12.4
17-Feb	0.2	0.1	0.2	Z	0.1	0.1	0.2	0.2	0.4	0.9	1.0	0.5	0.8	2.0	0.5	0.7	0.3	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.4	2.0
18-Feb	0.0	0.4	0.4	0.9	Z	0.1	1.4	8.2	4.4	2.7	0.8	1.5	0.8	1.3	0.7	0.2	M	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.1	8.2
19-Feb	0.4	0.0	0.0	0.1	0.0	Z	0.2	0.3	C	C	C	C	C	C	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.1	--	0.4
20-Feb	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.7	1.3	2.1	1.8	2.5	2.4	2.7	1.8	0.3	0.7	1.8	0.9	0.1	0.5	0.7	0.9	2.7
21-Feb	0.1	Z	0.1	0.1	0.3	0.5	0.3	0.2	1.4	1.7	3.0	1.1	0.8	0.5	0.6	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	3.0
22-Feb	0.1	1.5	Z	0.2	1.2	2.3	0.1	1.5	1.9	1.1	0.7	0.7	0.6	0.7	0.8	0.7	0.8	0.2	0.0	0.0	0.2	0.1	0.1	0.0	0.7	2.3
23-Feb	0.0	0.0	0.0	Z	0.1	0.1	0.4	1.6	3.1	6.6	4.2	4.4	2.2	14.8	36.6	17.3	3.6	2.2	23.9	1.5	0.1	0.1	0.3	0.3	5.4	36.6
24-Feb	0.1	0.1	0.2	0.1	Z	0.4	0.2	0.1	0.1	0.4	3.8	20.0	5.1	4.4	4.4	24.6	2.2	3.0	5.6	2.0	1.7	3.7	39.5	5.0	5.5	39.5
25-Feb	6.6	5.3	5.8	0.1	0.1	Z	0.1	0.3	0.3	0.9	1.0	0.4	2.3	1.3	1.8	3.4	1.2	0.5	0.0	0.2	0.3	6.2	14.6	2.6	2.4	14.6
26-Feb	Z	7.1	4.5	2.3	9.8	27.4	8.9	7.4	6.0	5.4	4.0	6.0	4.9	10.3	10.2	6.8	20.5	8.0	12.6	3.6	0.8	0.9	2.3	1.1	7.4	27.4
27-Feb	1.5	Z	0.0	0.4	0.0	0.0	0.0	0.1	2.1	4.7	7.1	5.9	15.0	11.6	25.6	30.3	18.0	24.3	27.3	15.3	13.1	0.4	0.2	1.3	8.9	30.3
28-Feb	0.2	0.1	Z	0.0	0.1	0.2	0.0	0.1	0.1	0.2	0.5	2.2	7.0	4.1	18.2	18.9	3.2	0.2	0.4	1.2	1.4	6.0	0.2	0.1	2.8	18.9
	0.7	0.8	0.8	1.5	0.8	1.8	1.4	2.6	5.7	7.6	5.6	5.2	4.4	4.9	6.3	5.9	4.6	2.2	3.2	1.1	0.8	1.0	2.4	0.6	Diurnal Average	
	6.6	7.1	5.8	29.4	9.8	27.4	13.7	20.8	46.9	91.7	65.4	68.0	52.1	46.6	47.6	30.3	29.7	24.3	27.3	15.3	13.1	6.2	39.5	5.0	Diurnal Maximum	

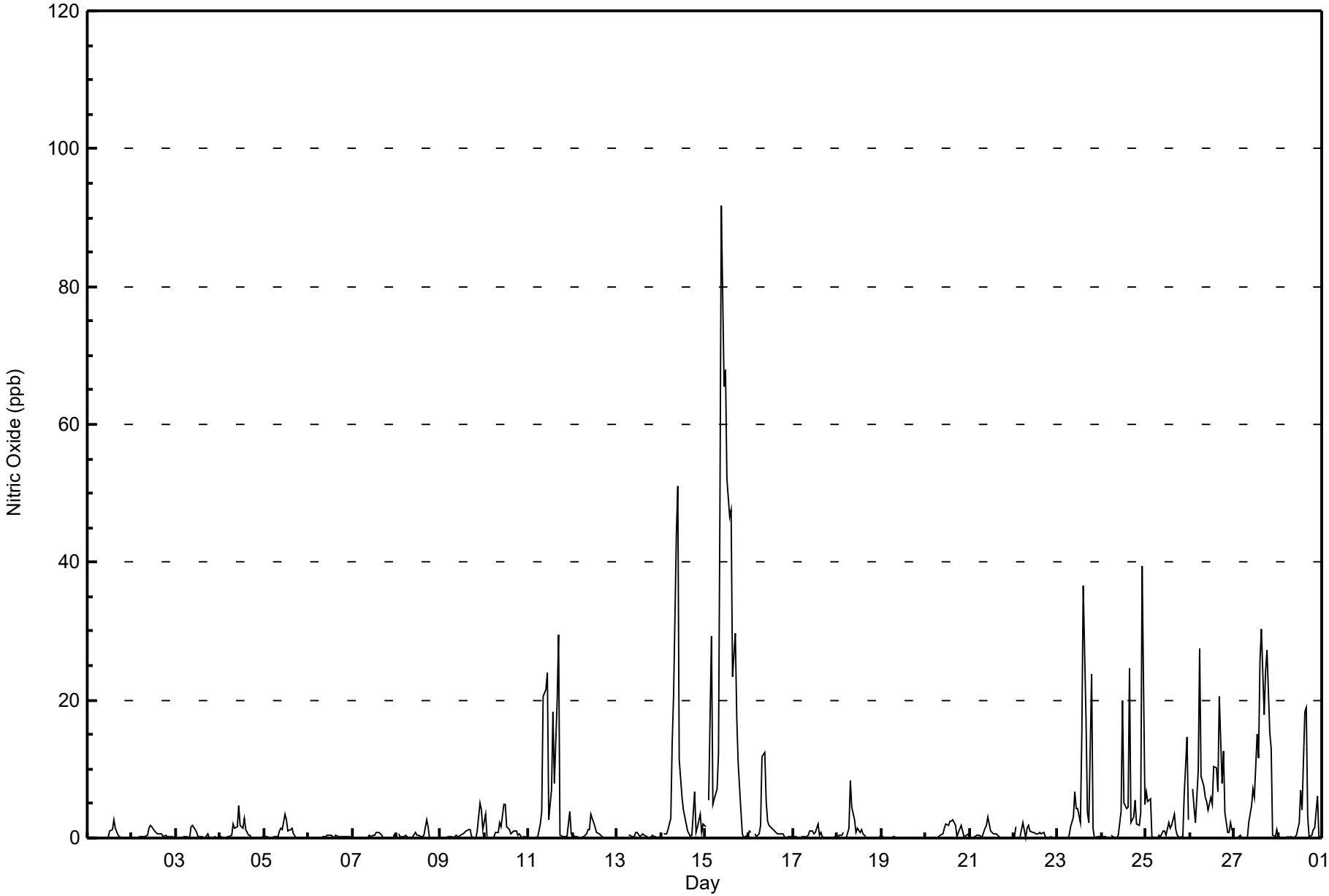
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Monday Creek - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	607	95.74	95.74
21 - 40	18	2.84	98.58
11 - 80	8	1.26	99.84
81 - 159	1	0.16	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 634

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Monday Creek - February 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	30	24	29	20	37	46	33	32	33	28	43	86	72	40	30	606
21 - 40	0	0	0	0	0	1	0	0	0	0	0	0	0	9	3	4	17
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	3	4	0	7
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	23	30	24	29	20	38	46	33	32	33	28	43	86	85	47	34	631

Total Number of Valid Hours: 631

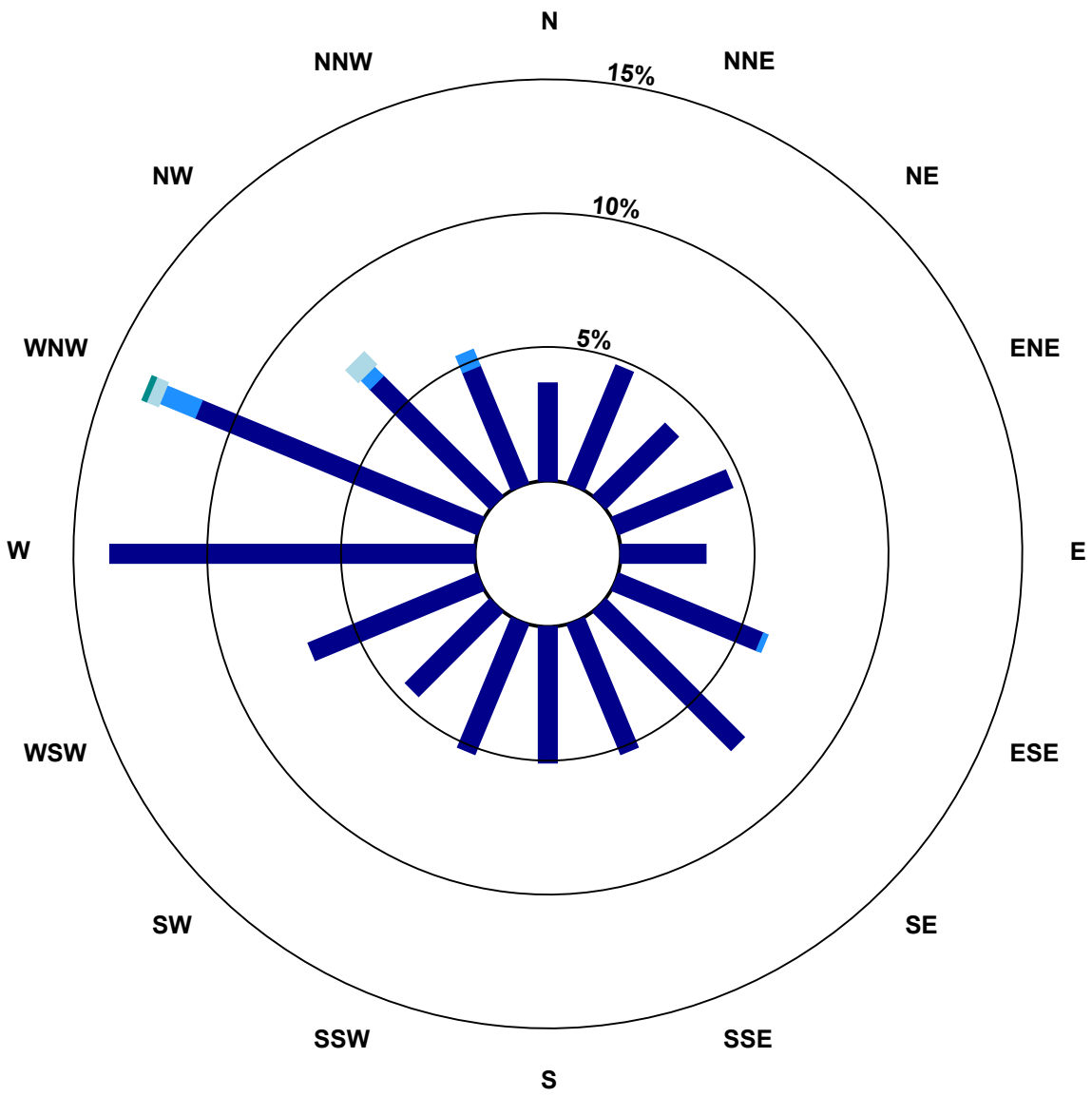
Total Number of Hours: 672

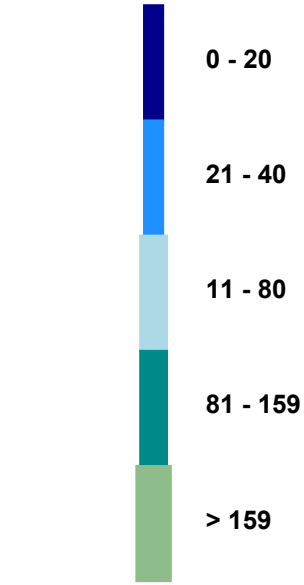
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitric Oxide (NO) - ppb

Monday Creek





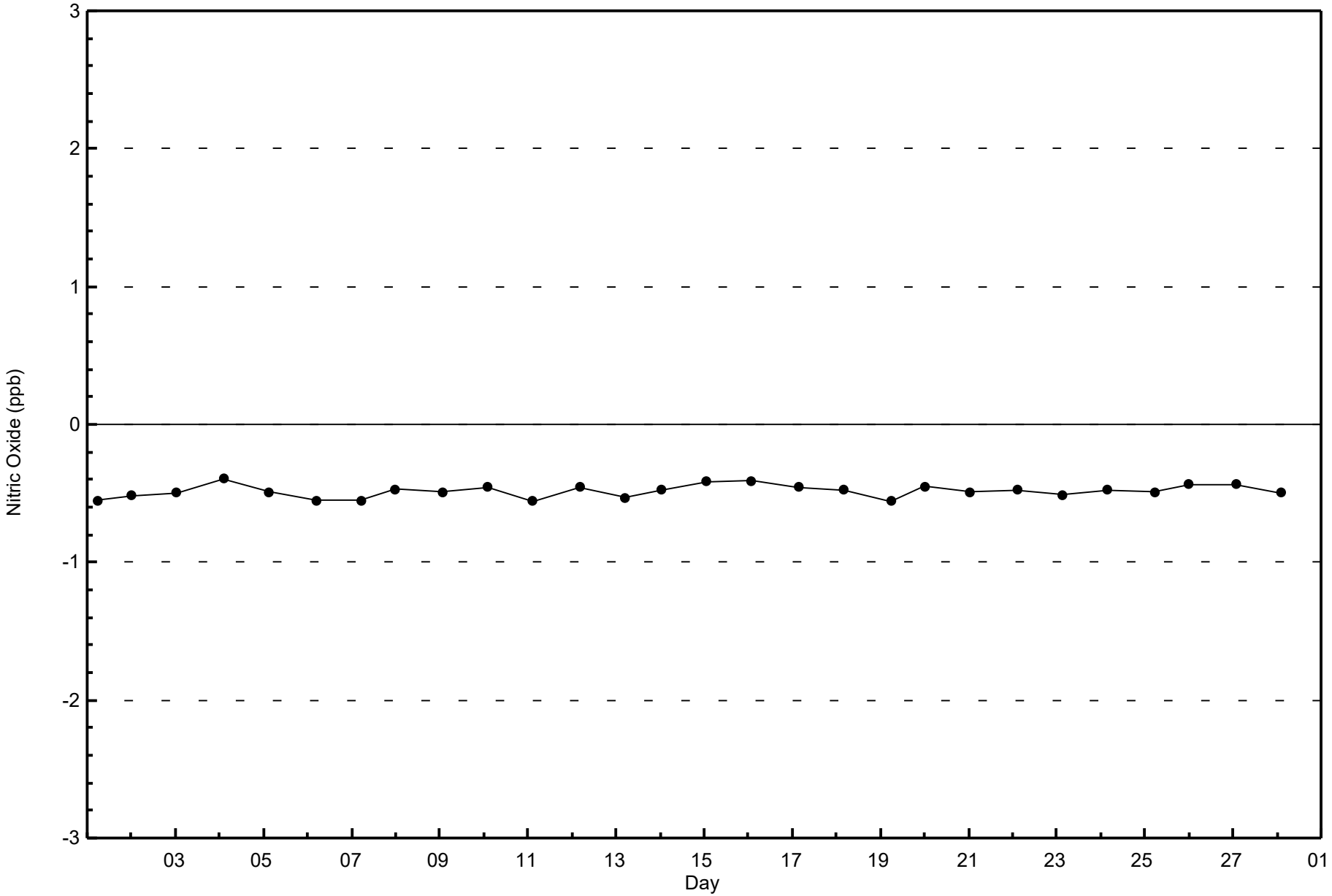
Total Number of Valid Hours: 631

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Monday Creek - February 2025

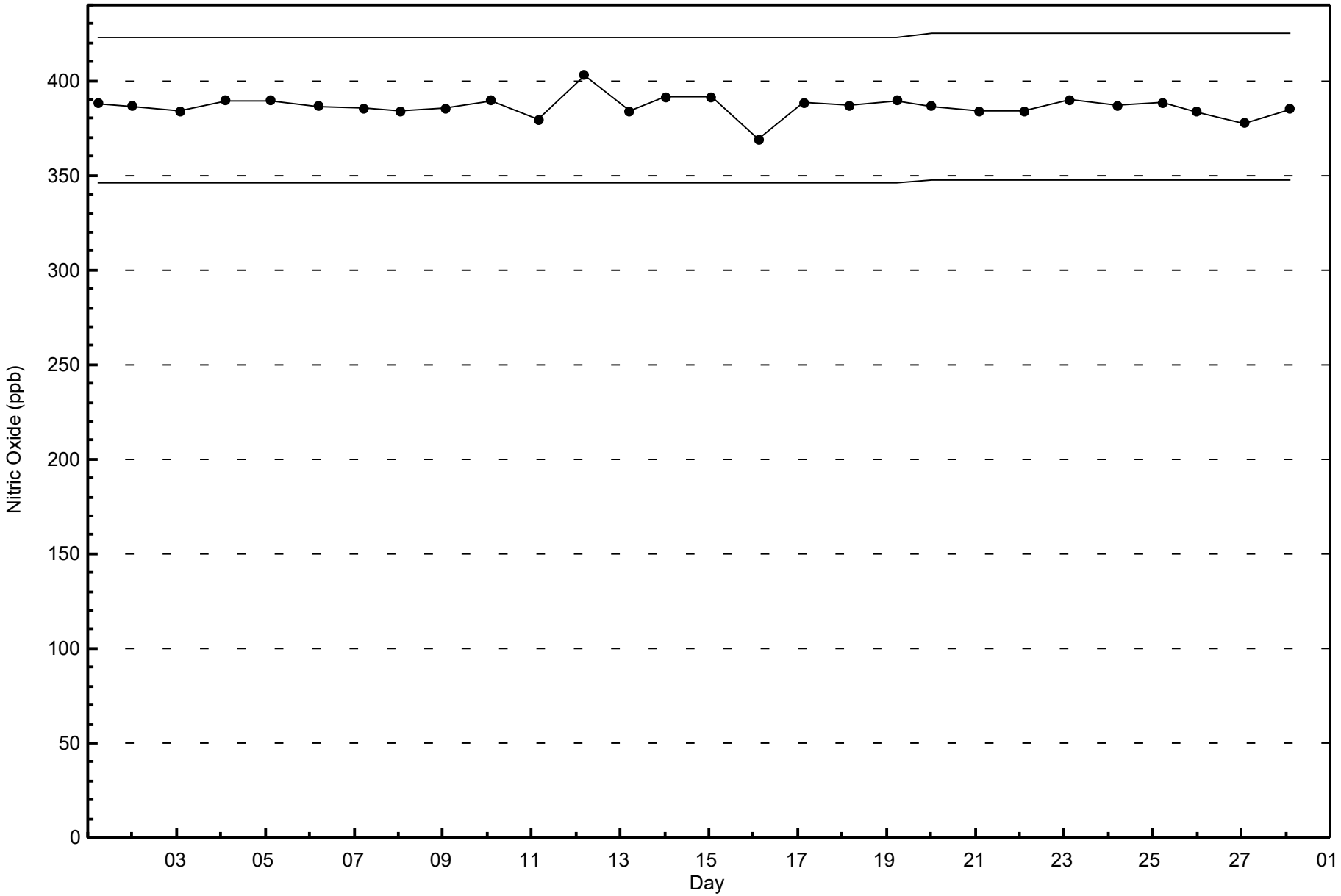


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Monday Creek - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Monday Creek - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 28.2 ppb on Feb 9 22:00 Maximum Daily Average: 15.2 ppb on Feb 15

Minimum Value: 0.3 ppb on Feb 1 02:00 Minimum Daily Average: 1.4 ppb on Feb 1
Maximum Diurnal Average: 7.9 ppb at hour 6 Minimum Diurnal Average: 3.3 ppb at hour 13
Monthly Average: 5.57 ppb Percentiles: P_1 = 0.4 P_{10} = 1.2 Q_1 = 2.1 Median = 3.7 Q_3 = 7.5 P_{90} = 12.5 P_{99} = 23.5

Hours in Service:	672
Hours of Data:	634
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-Feb	1.3	0.3	0.3	0.9	1.2	Z	0.7	0.3	0.7	1.1	0.3	0.9	2.9	3.2	4.3	4.0	4.1	2.4	0.9	0.4	0.4	0.8	0.8	1.1	1.4	4.3
2-Feb	Z	1.3	1.5	1.0	1.8	2.6	3.1	2.7	2.8	2.6	2.1	1.7	1.1	1.1	1.2	2.1	4.1	5.2	7.2	4.9	5.2	2.2	1.3	1.5	2.6	7.2
3-Feb	1.7	Z	2.9	2.3	2.8	4.4	2.5	2.8	8.2	3.8	1.7	1.1	0.6	0.5	0.5	0.3	0.5	8.2	1.9	4.5	7.6	10.0	9.0	9.4	3.8	10.0
4-Feb	9.5	7.9	Z	6.2	6.4	7.2	11.9	12.8	8.4	4.2	6.2	2.4	1.8	2.6	2.0	1.8	4.2	3.9	2.4	2.8	2.4	3.2	3.9	5.3	5.2	12.8
5-Feb	7.1	8.0	10.8	Z	6.3	7.8	11.7	12.8	7.9	4.0	2.4	4.5	3.7	1.7	2.5	5.3	5.2	3.3	3.1	2.7	2.1	2.1	2.3	3.1	5.2	12.8
6-Feb	3.2	3.1	3.0	2.9	Z	2.3	2.3	2.1	2.1	1.8	1.7	1.4	1.1	0.8	0.7	2.6	2.6	4.0	3.9	2.5	3.0	5.9	1.7	1.0	2.4	5.9
7-Feb	0.7	1.7	2.5	1.2	3.4	Z	2.1	2.4	2.2	2.3	0.8	0.8	1.0	1.5	2.0	2.4	3.9	5.4	2.2	6.3	7.9	10.6	7.6	9.6	3.5	10.6
8-Feb	Z	11.8	7.3	7.5	7.5	10.0	2.3	1.9	1.2	1.5	2.8	1.1	1.1	1.0	1.1	1.4	3.7	3.8	3.5	5.9	5.4	4.3	1.7	1.3	3.9	11.8
9-Feb	5.3	Z	2.6	2.8	3.6	5.8	2.5	0.5	2.7	0.5	0.4	0.7	1.0	1.1	1.6	2.8	5.0	4.6	3.0	4.5	14.8	28.2	20.9	19.2	5.8	28.2
10-Feb	22.5	5.0	Z	1.6	8.0	6.8	11.6	7.9	10.0	3.7	4.4	3.8	1.5	1.6	1.4	1.7	3.2	6.9	5.0	7.8	3.8	3.7	4.4	1.4	5.6	22.5
11-Feb	1.5	1.5	2.2	Z	2.7	2.9	8.0	9.3	19.1	9.8	10.0	2.1	4.0	7.6	4.7	9.0	11.2	2.3	7.7	5.8	10.6	9.9	15.9	17.1	7.6	19.1
12-Feb	12.0	11.2	12.9	9.1	Z	5.4	5.0	8.0	6.9	4.9	6.0	4.1	3.0	2.6	2.2	2.2	2.7	2.8	3.1	2.5	2.2	2.1	1.9	1.8	5.0	12.9
13-Feb	2.3	2.1	2.1	1.9	2.3	Z	3.2	5.1	1.6	1.0	1.2	1.2	0.6	1.1	1.3	1.5	1.5	4.7	4.0	7.6	8.6	7.6	7.4	6.5	3.3	8.6
14-Feb	Z	12.4	14.5	16.3	18.7	19.6	21.9	23.4	26.2	23.5	7.8	4.7	3.6	2.9	1.4	1.2	1.1	5.5	16.6	19.0	16.2	19.8	16.0	21.2	13.6	26.2
15-Feb	20.7	Z	20.9	23.0	21.6	21.0	21.5	21.9	24.5	26.7	17.2	18.1	16.1	14.2	17.3	11.2	11.8	12.7	9.2	4.1	1.6	1.3	2.8	9.7	15.2	26.7
16-Feb	7.6	8.9	Z	13.2	15.5	15.8	21.0	23.1	15.9	6.7	3.2	2.5	1.8	1.6	1.6	1.6	2.3	6.3	3.6	1.0	1.6	3.3	4.5	5.0	7.3	23.1
17-Feb	3.7	3.6	3.3	Z	4.1	4.8	4.5	4.0	3.1	2.6	1.9	1.1	1.1	2.5	1.2	1.7	1.7	1.6	1.1	1.9	1.4	1.1	1.5	2.8	2.4	4.8
18-Feb	1.3	3.2	6.4	11.6	Z	6.0	12.2	18.0	7.0	3.5	1.2	1.6	1.3	1.4	1.3	0.7	M	1.0	1.5	1.6	3.2	3.8	2.8	3.4	4.3	18.0
19-Feb	3.7	3.4	2.8	4.1	4.0	Z	4.7	5.4	C	C	C	C	C	C	C	C	C	1.8	1.2	0.6	0.8	1.7	1.7	2.5	--	5.4
20-Feb	Z	3.1	3.0	3.1	3.5	2.9	3.5	4.8	3.6	3.0	3.8	3.8	3.3	4.2	4.5	6.4	6.6	6.0	11.4	16.0	11.9	4.5	10.2	15.7	6.0	16.0
21-Feb	5.7	Z	5.0	4.9	6.3	12.0	13.9	5.1	8.3	6.2	6.5	2.7	2.2	1.8	1.7	1.6	2.0	2.2	3.1	3.4	2.2	2.3	2.0	3.5	4.5	13.9
22-Feb	3.9	10.3	Z	8.7	9.0	9.2	2.8	5.8	7.3	5.0	3.5	3.3	2.9	2.9	2.6	2.9	2.8	3.8	4.5	5.7	5.4	3.6	5.1	5.2	5.1	10.3
23-Feb	4.7	4.0	3.6	Z	6.0	3.7	11.5	14.7	10.1	7.4	6.7	5.3	1.9	8.0	14.3	8.8	5.8	4.5	11.4	2.7	1.9	3.0	5.8	6.3	6.6	14.7
24-Feb	4.4	3.3	2.9	2.5	Z	3.9	2.6	1.8	1.1	1.7	7.4	10.5	5.0	4.0	5.2	11.7	4.1	4.5	16.4	10.7	7.1	7.7	25.7	7.6	6.6	25.7
25-Feb	8.1	8.9	3.5	2.2	1.2	Z	3.6	4.6	3.3	3.7	2.9	1.4	2.7	2.4	3.1	4.6	5.2	4.8	5.2	7.1	6.7	10.5	15.2	9.4	5.2	15.2
26-Feb	Z	7.8	8.0	8.1	9.2	24.3	10.7	10.2	6.4	3.8	3.8	5.7	5.1	8.3	8.9	6.6	12.9	12.5	14.3	6.8	4.4	3.6	5.8	3.5	8.3	24.3
27-Feb	7.7	Z	2.2	2.6	2.4	2.0	3.3	6.7	9.0	7.7	6.6	5.8	12.5	8.0	15.0	15.9	12.6	14.7	12.1	9.1	6.3	3.5	3.5	2.5	7.5	15.9
28-Feb	2.5	1.4	Z	1.9	1.3	1.5	1.7	1.8	1.2	0.9	1.4	3.0	6.6	4.1	9.0	7.5	3.1	3.1	4.2	8.1	7.0	11.3	6.0	2.4	4.0	11.3
	6.1	5.4	5.4	5.8	6.2	7.9	7.4	7.9	7.4	5.3	4.2	3.5	3.3	3.4	4.2	4.4	4.8	5.1	5.8	5.6	5.4	6.1	6.7	6.4	Diurnal Average	
	22.5	12.4	20.9	23.0	21.6	24.3	21.9	23.4	26.2	26.7	17.2	18.1	16.1	14.2	17.3	15.9	12.9	14.7	16.6	19.0	16.2	28.2	25.7	21.2	Diurnal Maximum	

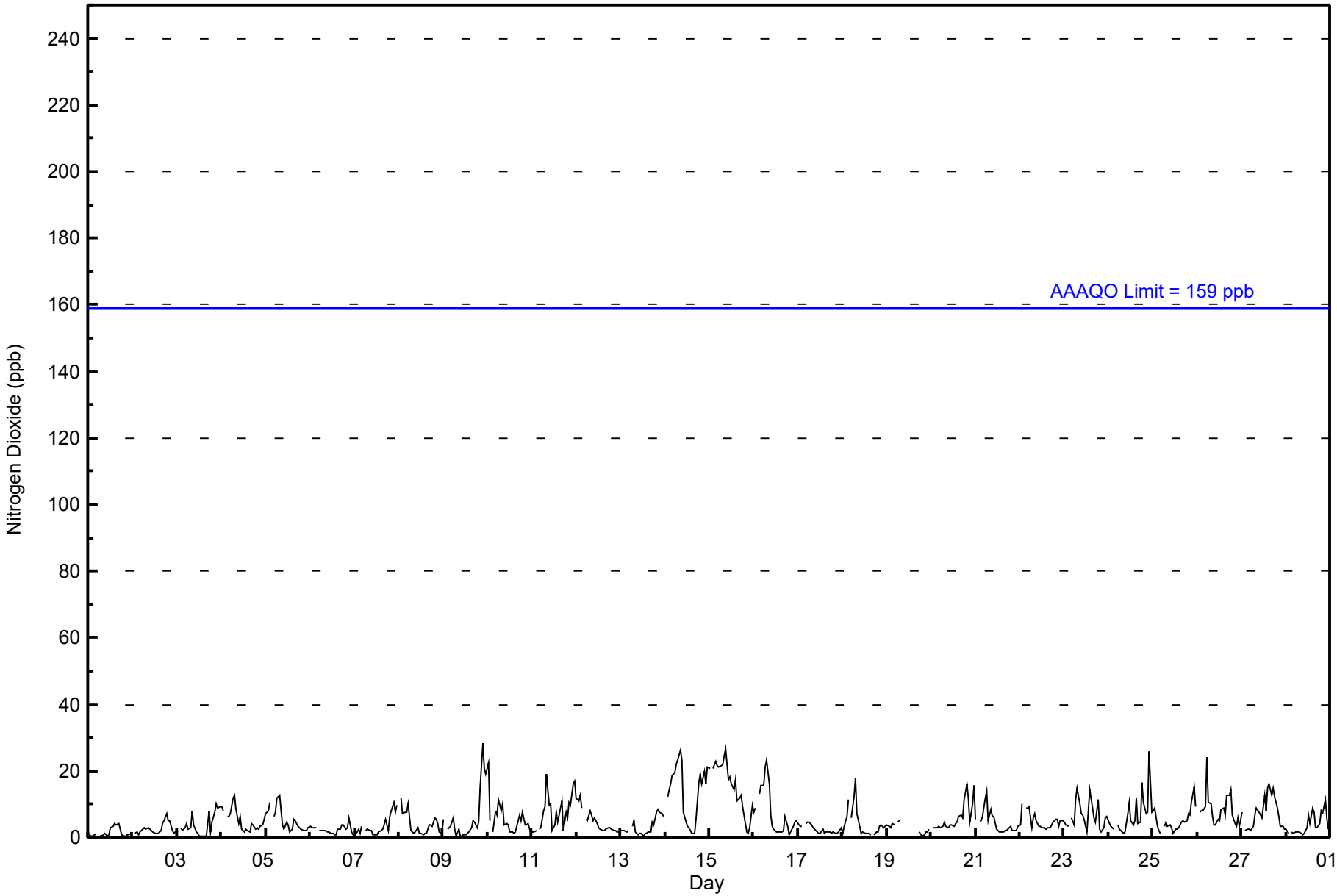
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Monday Creek - February 2025



Nitrogen Dioxide (NO_2) - ppb
Monday Creek - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	613	96.69	96.69
21 - 40	21	3.31	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: 634

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Monday Creek - February 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	29	24	29	19	34	44	33	29	33	28	43	85	78	47	34	612
21 - 40	0	1	0	0	1	4	2	0	3	0	0	0	1	7	0	0	19
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	23	30	24	29	20	38	46	33	32	33	28	43	86	85	47	34	631

Total Number of Valid Hours: 631

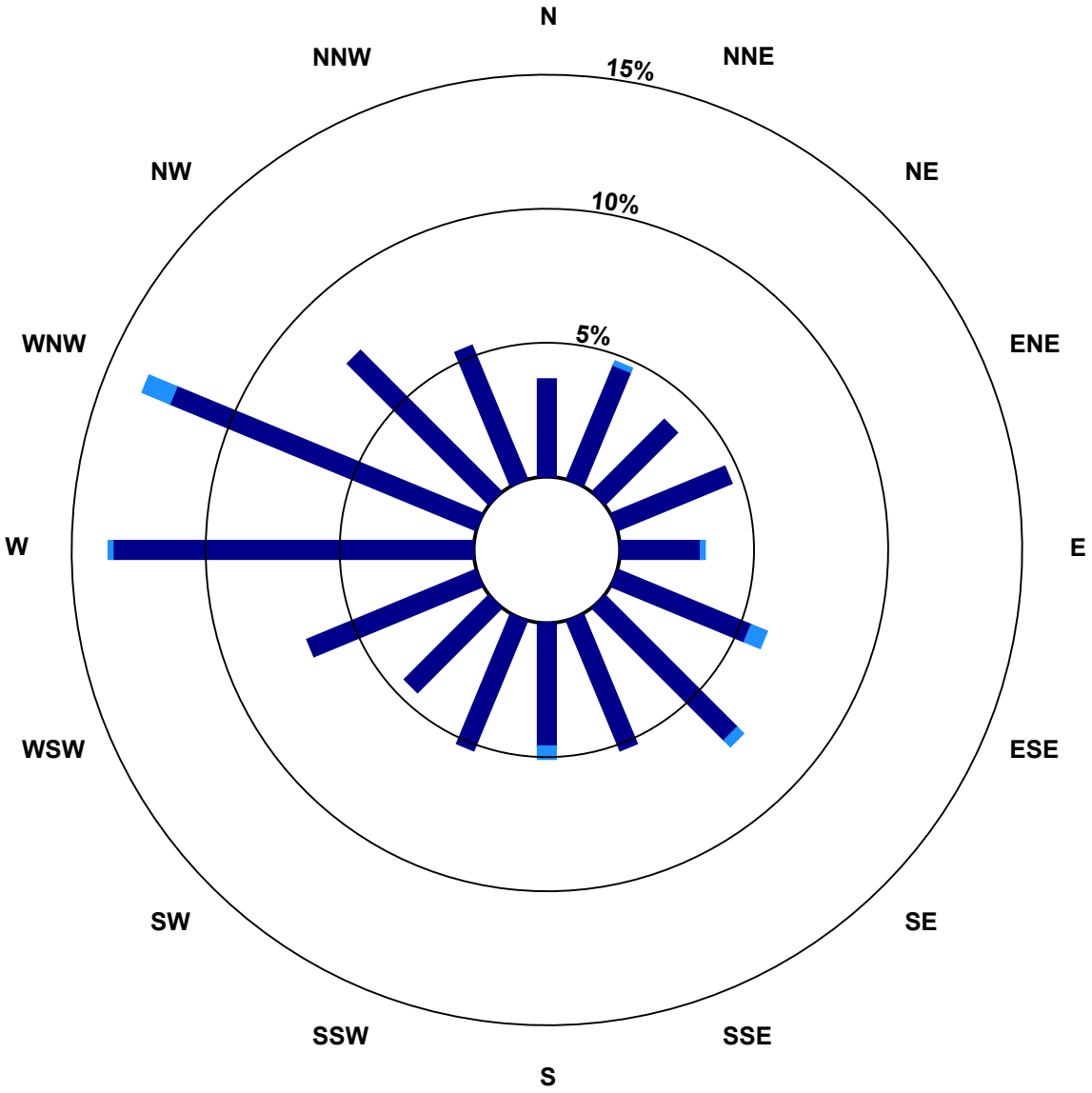
Total Number of Hours: 672

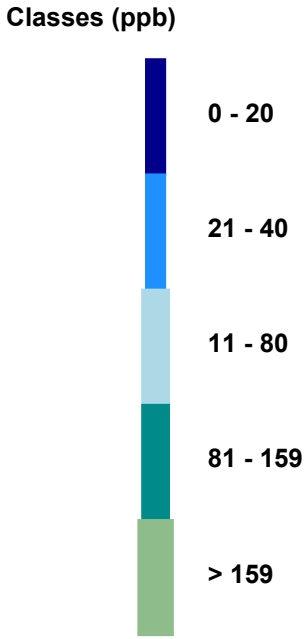
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Dioxide (NO_2) - ppb

Monday Creek





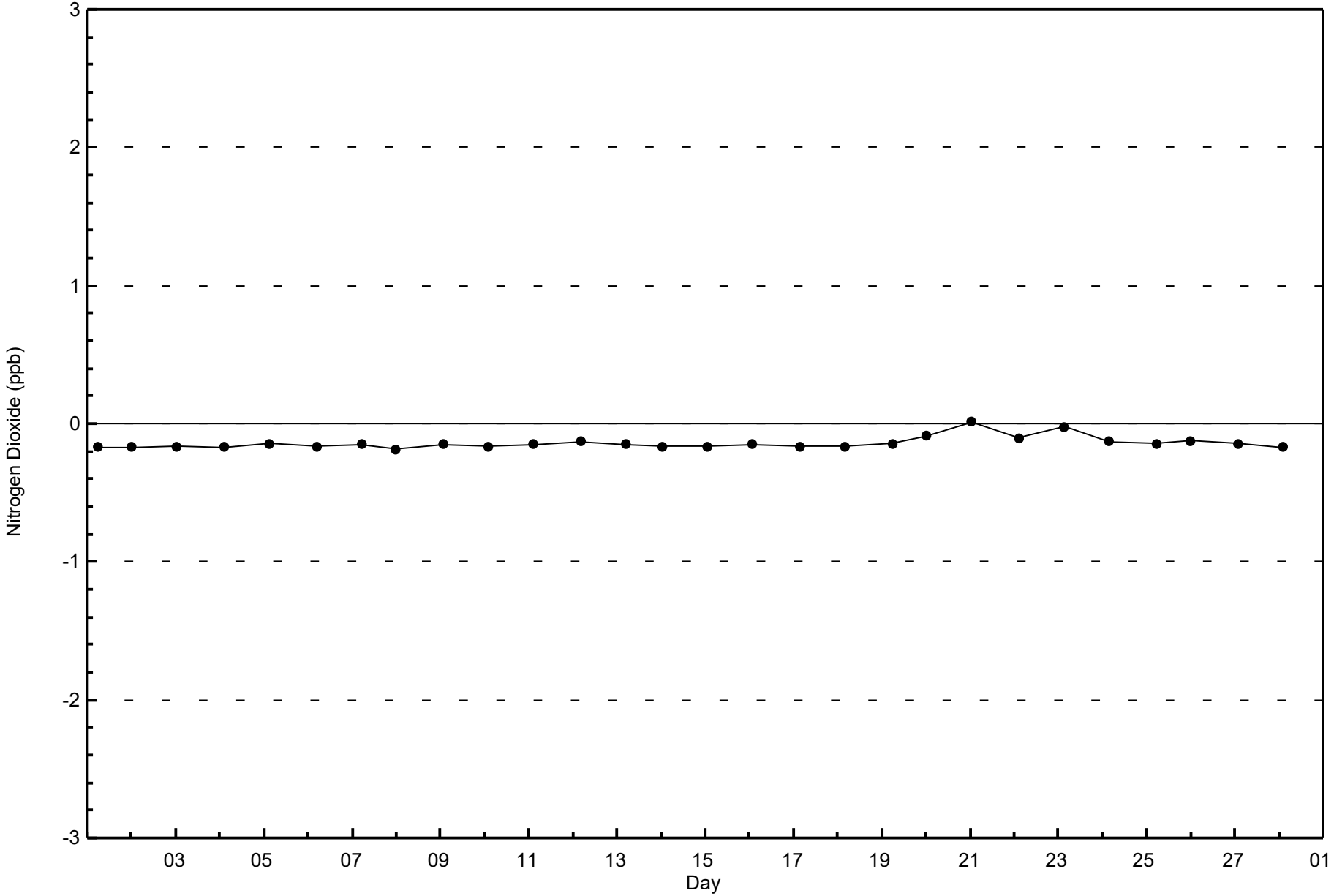
Total Number of Valid Hours: 631

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Monday Creek - February 2025

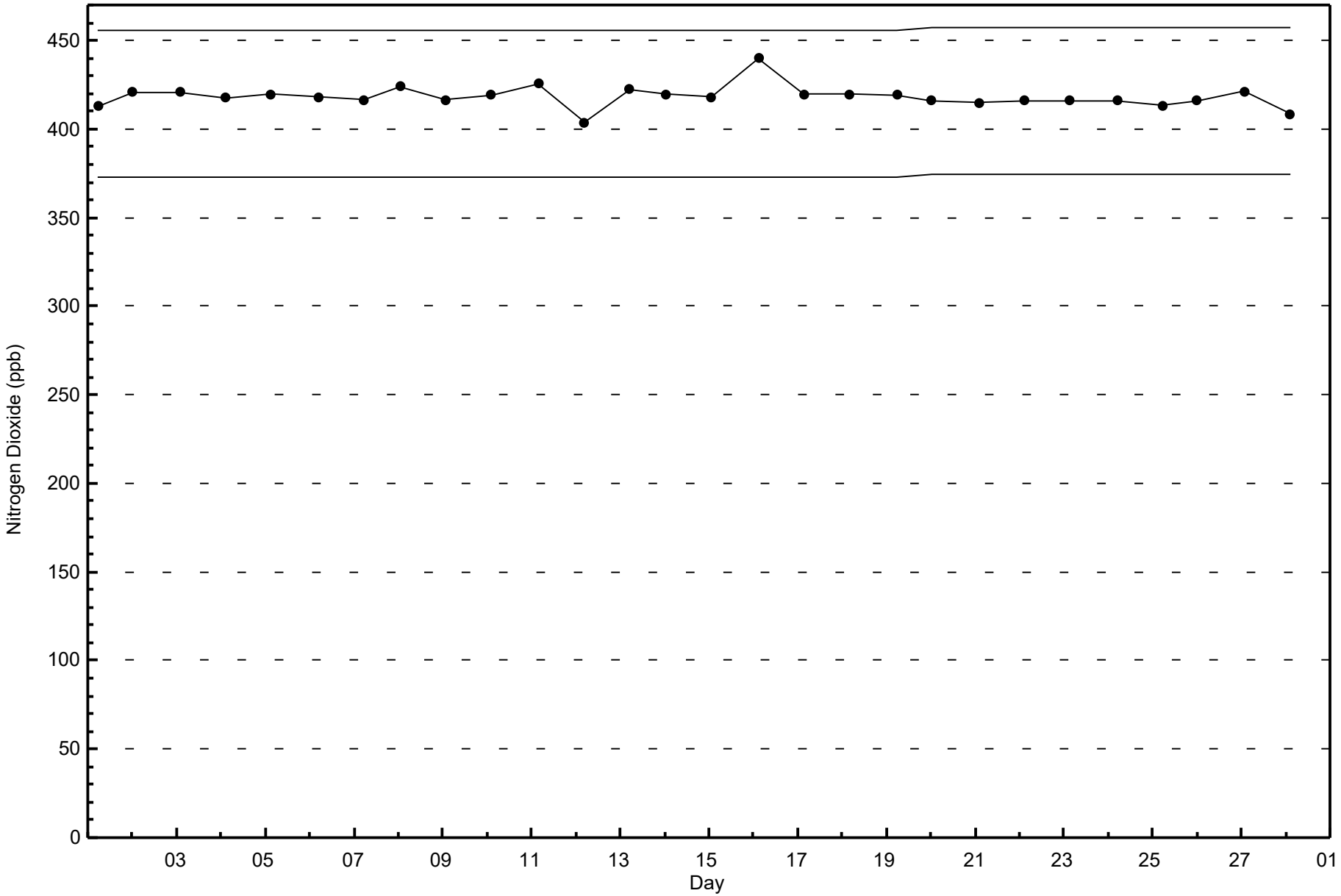


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Monday Creek - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Monday Creek - February 2025

Maximum Value: 118.4 ppb on Feb 15 10:00

Maximum Daily Average: 40.0 ppb on Feb 15

Minimum Value: 0.3 ppb on Feb 1 02:00

Minimum Daily Average: 1.8 ppb on Feb 1

Maximum Diurnal Average: 13.1 ppb at hour 9

Minimum Diurnal Average: 6.2 ppb at hour 2

Monthly Average: 8.61 ppb

Percentiles: P_1 = 0.4 P_{10} = 1.5 Q_1 = 2.4 Median = 4.4 Q_3 = 9.4 P_{90} = 19.9 P_{99} = 67.2

Hours in Service:	672
Hours of Data:	634
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-Feb	1.3	0.3	0.3	0.9	1.2	Z	0.7	0.3	0.7	1.2	0.3	1.1	4.0	4.5	7.0	5.5	4.5	2.5	1.0	0.4	0.4	0.9	0.9	1.2	1.8	7.0
2-Feb	Z	1.3	1.5	1.0	1.9	2.8	3.3	2.9	3.2	4.0	3.9	3.2	2.0	1.8	1.9	2.8	4.7	5.4	7.5	5.1	5.5	2.3	1.4	1.6	3.1	7.5
3-Feb	1.7	Z	3.0	2.4	2.9	4.6	2.6	2.9	9.8	5.6	2.9	1.8	0.9	0.6	0.6	0.3	0.5	8.7	1.9	4.5	7.6	10.1	9.0	9.5	4.1	10.1
4-Feb	9.7	8.1	Z	6.3	6.6	7.3	12.4	14.9	9.9	5.8	10.9	4.2	3.1	5.5	3.1	2.2	4.6	3.9	2.4	2.8	2.4	3.2	4.0	5.4	6.0	14.9
5-Feb	7.2	8.2	10.9	Z	6.4	7.9	12.0	13.1	8.9	5.4	3.7	8.0	6.4	2.7	3.7	6.7	5.8	3.4	3.1	2.7	2.1	2.1	2.3	3.1	5.9	13.1
6-Feb	3.2	3.1	3.0	2.9	Z	2.3	2.3	2.1	2.2	2.0	2.0	1.9	1.5	0.9	0.8	2.9	2.8	4.1	4.0	2.6	3.1	6.1	1.9	1.1	2.6	6.1
7-Feb	0.8	1.8	2.6	1.2	3.4	Z	2.1	2.4	2.3	2.7	1.1	1.1	1.4	2.3	2.9	3.0	4.3	5.4	2.2	6.3	7.9	10.7	7.6	10.2	3.7	10.7
8-Feb	Z	12.4	7.5	7.7	7.7	10.4	2.4	1.9	1.2	1.8	3.6	1.5	1.5	1.2	1.4	1.7	6.3	5.4	3.5	5.9	5.4	4.3	1.7	1.3	4.2	12.4
9-Feb	5.3	Z	2.7	2.9	3.7	6.0	2.6	0.6	3.2	0.6	0.5	1.0	1.6	1.9	2.6	4.0	6.2	4.8	3.1	4.6	15.8	33.3	24.9	20.5	6.6	33.3
10-Feb	26.0	5.1	Z	1.6	8.1	6.9	12.3	8.7	12.2	5.4	9.2	8.7	3.2	2.9	2.0	2.5	4.2	8.0	5.3	8.4	3.9	3.9	4.7	1.5	6.7	26.0
11-Feb	1.5	1.5	2.2	Z	2.8	3.0	10.1	13.3	39.7	31.3	34.1	4.7	11.0	25.9	12.6	29.0	40.7	2.7	8.0	5.9	10.9	10.0	19.8	17.6	14.7	40.7
12-Feb	12.5	11.4	13.1	9.2	Z	5.5	5.2	8.7	8.1	6.2	9.4	6.4	4.6	3.5	2.8	2.7	2.9	2.8	3.1	2.5	2.2	2.1	1.9	1.8	5.6	13.1
13-Feb	2.3	2.1	2.1	2.0	2.4	Z	3.5	5.5	1.9	1.3	2.0	2.1	0.8	1.5	2.0	1.9	1.7	4.8	4.0	8.1	8.7	7.9	7.5	6.6	3.6	8.7
14-Feb	Z	13.0	15.1	16.9	19.9	22.5	35.6	44.2	70.6	74.6	19.2	10.5	7.7	6.0	2.5	1.7	1.3	5.9	23.3	19.9	17.8	23.4	16.8	23.2	21.4	74.6
15-Feb	22.3	Z	26.5	52.4	26.4	26.8	28.5	34.2	71.4	118.4	82.6	86.1	68.2	60.8	64.9	34.6	41.5	30.5	20.2	7.9	2.1	1.3	3.1	10.1	40.0	118.4
16-Feb	8.6	9.7	Z	13.9	15.8	16.5	22.9	34.8	28.3	12.0	5.7	4.4	3.2	2.9	2.5	2.3	2.9	6.9	4.2	1.1	1.6	3.4	4.7	5.3	9.3	34.8
17-Feb	3.9	3.7	3.5	Z	4.2	4.9	4.7	4.2	3.5	3.5	2.9	1.6	1.9	4.5	1.7	2.4	2.0	1.6	1.1	1.9	1.4	1.1	1.6	3.2	2.8	4.9
18-Feb	1.3	3.6	6.8	12.5	Z	6.1	13.6	26.2	11.4	6.2	2.0	3.1	2.1	2.7	2.0	0.9	M	1.0	1.5	1.6	3.2	3.8	2.8	3.6	5.4	26.2
19-Feb	4.1	3.4	2.8	4.2	4.0	Z	4.9	5.7	C	C	C	C	C	C	C	C	C	1.8	1.2	0.6	0.8	1.7	1.7	2.6	--	5.7
20-Feb	Z	3.2	3.1	3.2	3.6	3.0	3.6	4.9	3.9	3.7	5.1	5.9	5.1	6.7	6.9	9.1	8.4	6.3	12.1	17.8	12.8	4.6	10.7	16.4	7.0	17.8
21-Feb	5.8	Z	5.1	5.0	6.6	12.5	14.2	5.3	9.7	7.9	9.5	3.8	3.0	2.3	2.3	1.9	2.2	2.3	3.1	3.4	2.2	2.3	2.0	3.5	5.0	14.2
22-Feb	4.0	11.8	Z	8.9	10.2	11.5	2.9	7.3	9.2	6.1	4.2	4.0	3.5	3.6	3.4	3.6	3.6	4.0	4.5	5.7	5.6	3.7	5.2	5.2	5.7	11.8
23-Feb	4.7	4.0	3.6	Z	6.1	3.8	11.9	16.3	13.2	14.0	10.9	9.7	4.1	22.8	50.9	26.1	9.4	6.7	35.3	4.2	2.0	3.1	6.1	6.6	12.0	50.9
24-Feb	4.5	3.4	3.1	2.6	Z	4.3	2.8	1.9	1.2	2.1	11.2	30.5	10.1	8.4	9.6	36.3	6.3	7.5	22.0	12.7	8.8	11.4	65.2	12.6	12.1	65.2
25-Feb	14.7	14.2	9.3	2.3	1.3	Z	3.7	4.9	3.6	4.6	3.9	1.8	5.0	3.7	4.9	8.0	6.4	5.3	5.2	7.3	7.0	16.7	29.8	12.0	7.6	29.8
26-Feb	Z	14.9	12.5	10.4	19.0	51.7	19.6	17.6	12.4	9.2	7.8	11.7	10.0	18.6	19.1	13.4	33.4	20.5	26.9	10.4	5.2	4.5	8.1	4.6	15.7	51.7
27-Feb	9.2	Z	2.2	3.0	2.4	2.0	3.3	6.8	11.1	12.4	13.7	11.7	27.5	19.6	40.6	46.2	30.6	39.0	39.4	24.4	19.4	3.9	3.7	3.8	16.4	46.2
28-Feb	2.7	1.5	Z	1.9	1.4	1.7	1.7	1.9	1.3	1.1	1.9	5.2	13.6	8.2	27.2	26.4	6.3	3.3	4.6	9.3	8.4	17.3	6.2	2.5	6.8	27.2
	6.8	6.2	6.2	7.3	7.0	9.7	8.8	10.5	13.1	12.9	9.8	8.7	7.7	8.4	10.4	10.3	9.4	7.3	9.1	6.7	6.2	7.1	9.1	7.0	Diurnal Average	
	26.0	14.9	26.5	52.4	26.4	51.7	35.6	44.2	71.4	118.4	82.6	86.1	68.2	60.8	64.9	46.2	41.5	39.0	39.4	24.4	19.4	33.3	65.2	23.2	Diurnal Maximum	

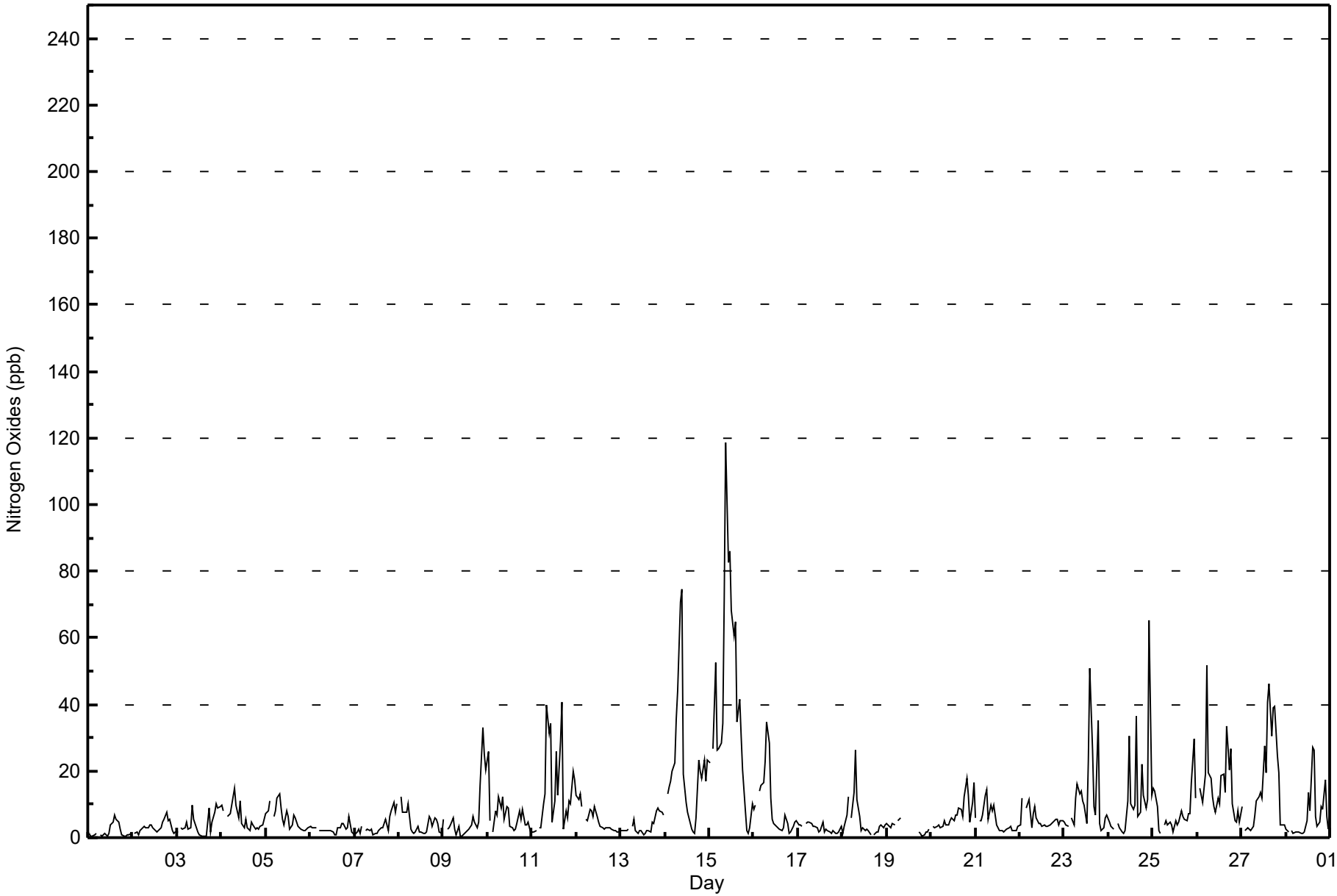
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Monday Creek - February 2025



Nitrogen Oxides (NO_X) - ppb
Monday Creek - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	573	90.38	90.38
21 - 40	43	6.78	97.16
11 - 80	15	2.37	99.53
81 - 159	3	0.47	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 634

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Monday Creek - February 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	29	23	29	18	32	44	32	29	32	28	43	83	65	35	28	572
21 - 40	1	1	1	0	2	5	2	1	3	1	0	0	3	12	6	5	43
11 - 80	0	0	0	0	0	1	0	0	0	0	0	0	0	7	4	1	13
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	23	30	24	29	20	38	46	33	32	33	28	43	86	85	47	34	631

Total Number of Valid Hours: 631

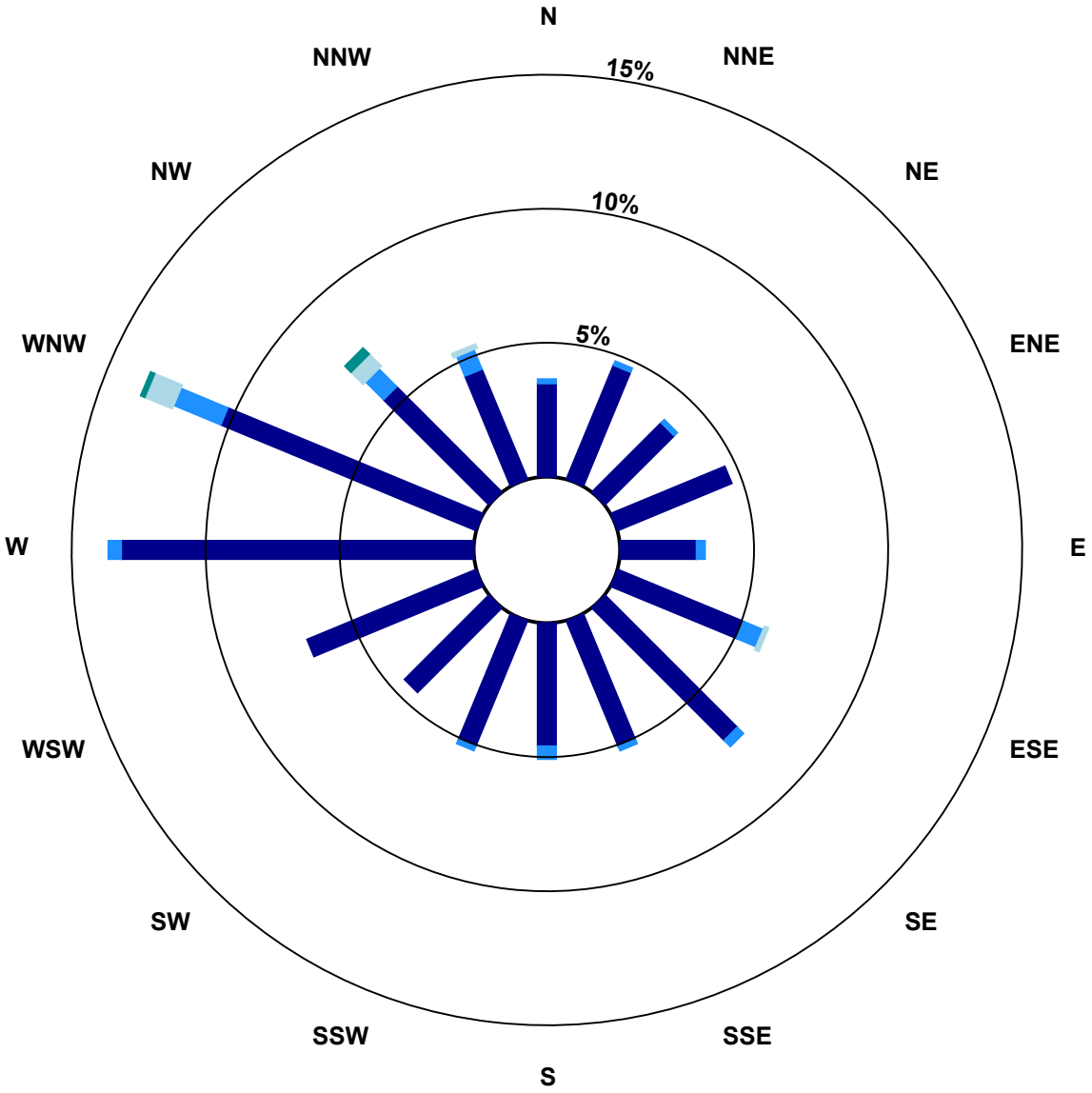
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Oxides (NO_X) - ppb

Monday Creek



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

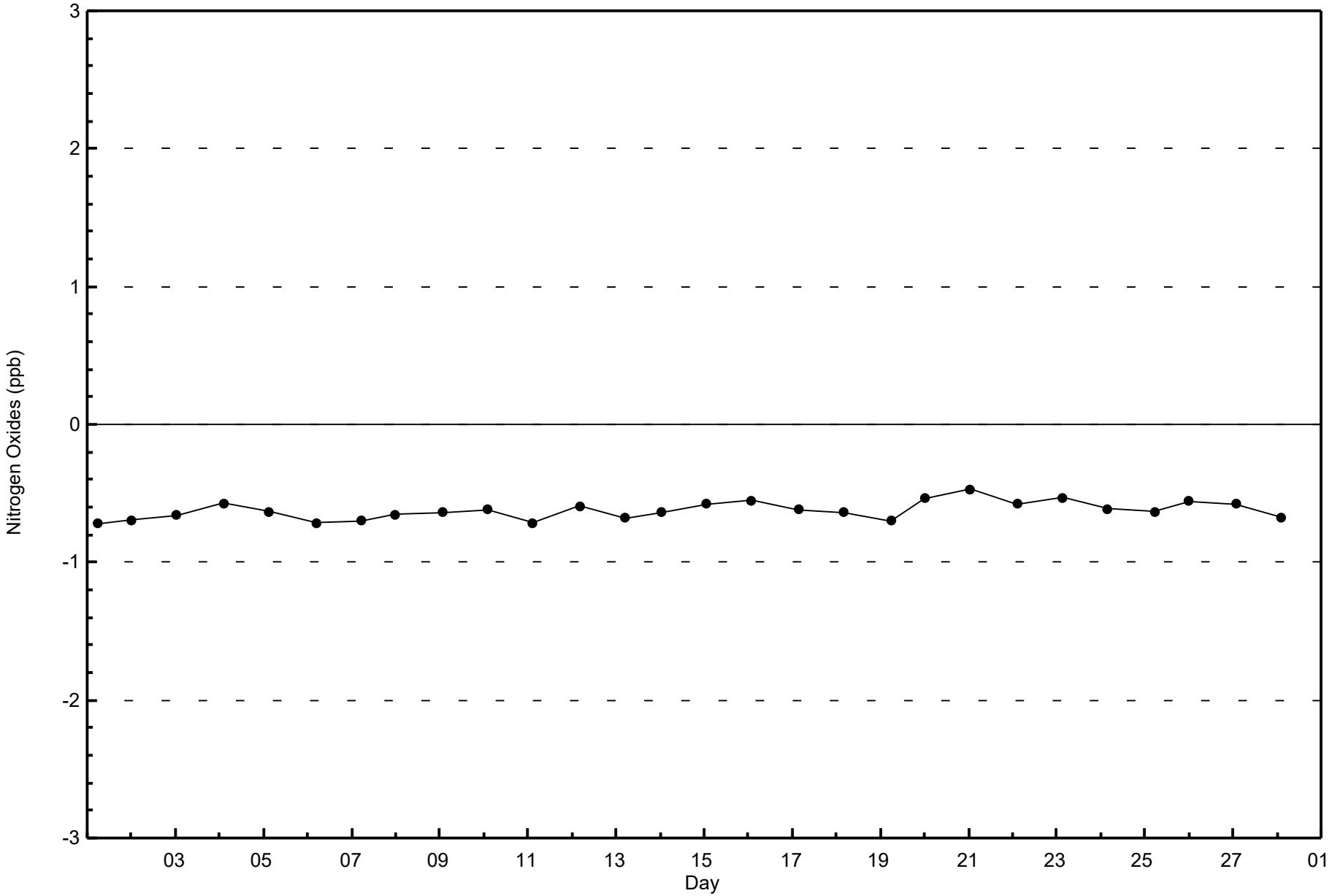
Total Number of Valid Hours: 631

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Monday Creek - February 2025

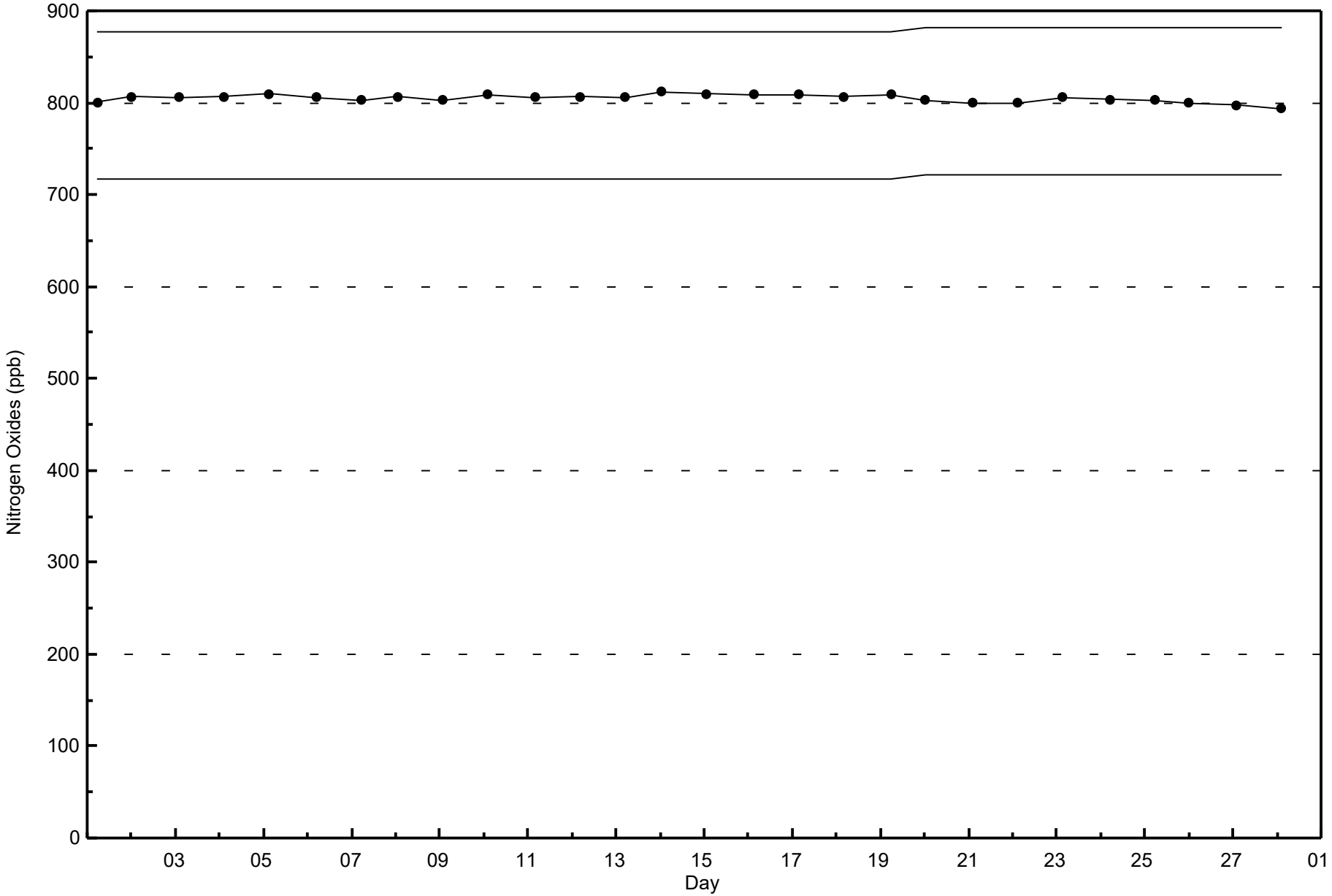


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Monday Creek - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Ambient Temperature 2m (AT2) - C

Monday Creek - February 2025

Maximum Value: 9.2 C on Feb 22 16:00

Maximum Daily Average: 4.7 C on Feb 27

Minimum Value: -38.8 C on Feb 15 08:00

Minimum Daily Average: -30.5 C on Feb 14

Maximum Diurnal Average: -9.8 C at hour 16

Minimum Diurnal Average: -19.9 C at hour 5

Monthly Average: -15.75 C

Percentiles: P_1 = -37.5 P_{10} = -30.3 Q_1 = -24.5 Median = -18.7 Q_3 = -4.7 P_{90} = 3.4 P_{99} = 8.4

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

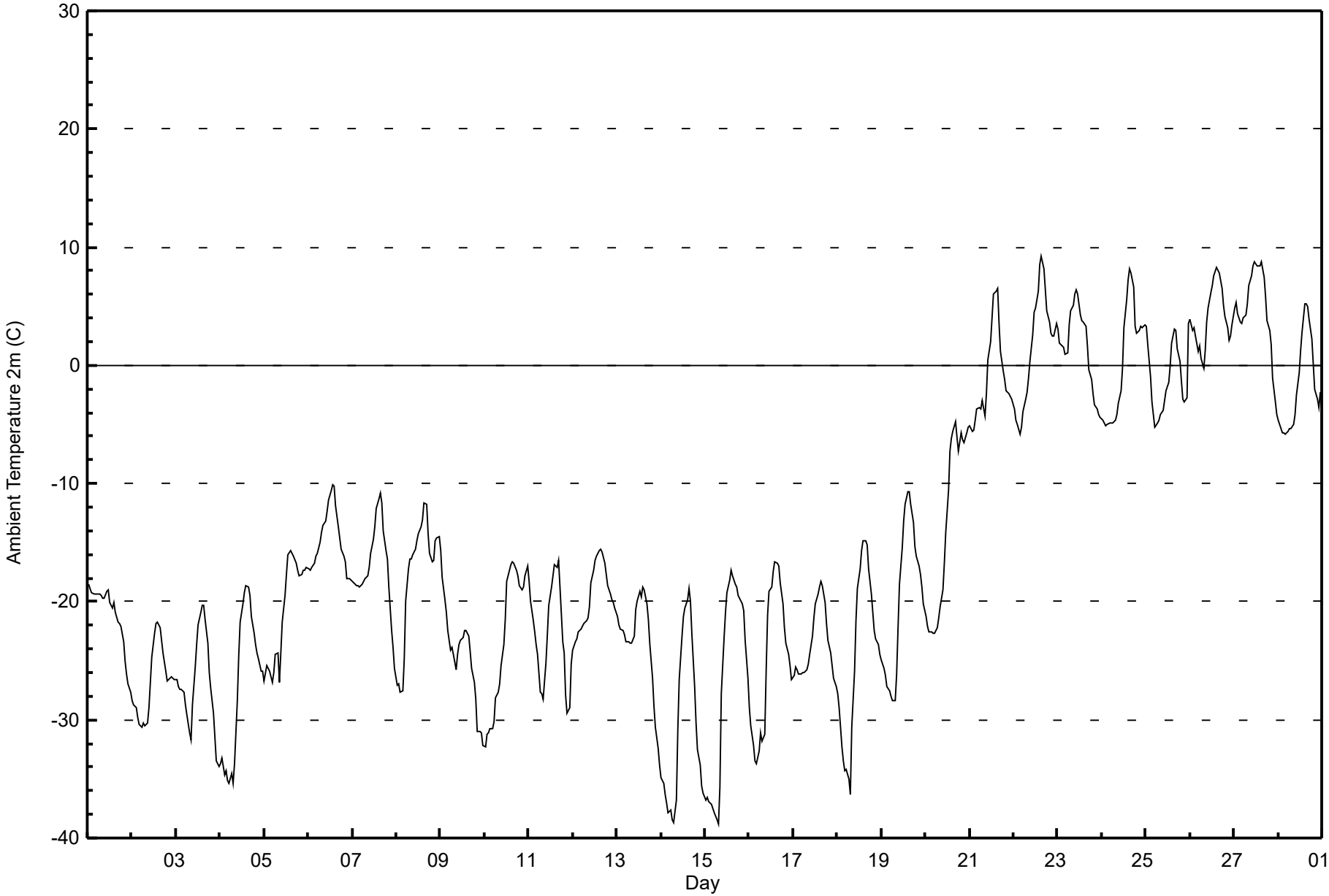
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-18.5	-18.9	-19.2	-19.4	-19.3	-19.4	-19.4	-19.5	-19.7	-19.7	-19.1	-19.0	-20.0	-20.5	-20.0	-20.9	-21.7	-21.8	-22.1	-23.4	-25.0	-26.1	-26.9	-27.6	-21.1	-18.5
2-Feb	-28.3	-28.7	-29.0	-29.8	-30.4	-30.7	-30.3	-30.5	-30.3	-28.9	-26.9	-24.7	-22.6	-21.8	-21.7	-22.2	-23.3	-24.4	-25.9	-26.7	-26.6	-26.4	-26.4	-26.6	-26.8	-21.7
3-Feb	-26.6	-27.2	-27.4	-27.4	-27.6	-28.7	-29.5	-31.1	-31.7	-28.7	-25.5	-23.6	-21.9	-20.9	-20.3	-20.3	-21.5	-23.5	-26.0	-27.3	-29.5	-31.5	-33.5	-33.9	-26.9	-20.3
4-Feb	-33.8	-33.2	-34.6	-34.3	-35.1	-35.4	-34.5	-35.3	-33.7	-28.4	-24.6	-21.8	-20.2	-19.3	-18.6	-18.7	-19.4	-21.3	-22.6	-23.6	-24.3	-24.8	-25.9	-25.9	-27.1	-18.6
5-Feb	-26.7	-25.4	-25.7	-25.9	-26.8	-26.0	-24.5	-24.3	-26.9	-24.4	-21.8	-19.4	-17.7	-16.0	-15.7	-16.0	-16.1	-16.7	-17.4	-17.8	-17.7	-17.3	-17.3	-17.2	-20.9	-15.7
6-Feb	-17.2	-17.3	-17.0	-16.7	-16.1	-15.9	-15.0	-14.1	-13.6	-13.2	-12.4	-11.4	-10.5	-10.1	-10.3	-11.9	-13.7	-14.7	-15.6	-16.1	-16.6	-18.1	-18.0	-18.2	-14.7	-10.1
7-Feb	-18.2	-18.6	-18.6	-18.7	-18.7	-18.5	-18.2	-18.1	-17.8	-17.1	-16.0	-14.7	-13.6	-12.1	-11.2	-10.8	-11.7	-14.0	-15.7	-16.3	-18.8	-22.4	-23.8	-25.7	-17.1	-10.8
8-Feb	-27.1	-26.9	-27.6	-27.5	-24.8	-19.9	-17.2	-16.4	-16.3	-16.1	-15.5	-14.8	-14.3	-13.6	-13.1	-11.6	-11.7	-14.2	-15.9	-16.6	-16.5	-14.8	-14.6	-14.5	-17.6	-11.6
9-Feb	-15.6	-17.9	-19.8	-20.9	-22.4	-24.1	-23.8	-24.4	-25.8	-24.5	-23.7	-23.3	-23.0	-22.5	-22.4	-22.9	-24.3	-25.6	-26.8	-28.3	-31.0	-31.0	-31.0	-32.2	-24.5	-15.6
10-Feb	-32.3	-31.2	-31.1	-30.8	-30.7	-30.1	-28.2	-27.6	-27.0	-25.5	-23.6	-21.5	-18.3	-17.4	-16.9	-16.6	-16.7	-17.3	-17.8	-18.6	-19.0	-18.8	-17.9	-17.0	-23.0	-16.6
11-Feb	-18.3	-19.9	-21.6	-22.6	-23.6	-24.5	-27.7	-27.8	-28.2	-25.2	-22.8	-20.3	-18.8	-17.8	-16.8	-17.1	-16.5	-18.8	-23.4	-24.4	-27.9	-29.4	-29.0	-25.3	-22.8	-16.5
12-Feb	-24.1	-23.4	-23.1	-22.6	-22.3	-22.1	-21.9	-21.6	-21.4	-20.4	-18.4	-17.4	-16.5	-16.2	-15.7	-15.5	-15.8	-16.7	-17.7	-18.6	-19.4	-19.9	-20.1	-20.5	-19.6	-15.5
13-Feb	-21.3	-22.0	-22.3	-22.4	-22.7	-23.4	-23.4	-23.5	-23.5	-22.9	-20.6	-20.0	-19.1	-19.6	-18.8	-19.0	-20.2	-21.5	-23.5	-26.4	-28.9	-30.7	-32.4	-33.8	-23.4	-18.8
14-Feb	-34.9	-35.3	-36.3	-37.0	-37.8	-37.6	-38.5	-38.6	-36.8	-30.8	-26.5	-23.0	-21.3	-20.5	-19.8	-18.8	-19.9	-22.7	-27.2	-30.2	-32.6	-33.8	-35.6	-36.2	-30.5	-18.8
15-Feb	-36.8	-36.5	-37.0	-37.2	-37.5	-37.9	-38.5	-38.8	-35.8	-27.8	-23.0	-20.8	-19.2	-18.2	-17.3	-17.8	-18.5	-18.8	-19.5	-19.9	-20.2	-20.8	-23.3	-26.5	-27.0	-17.3
16-Feb	-29.0	-30.5	-32.2	-33.5	-33.8	-32.6	-31.1	-31.8	-31.3	-25.7	-21.1	-19.2	-18.8	-17.5	-16.6	-16.8	-17.0	-18.4	-20.1	-22.2	-23.5	-24.4	-25.4	-26.6	-25.0	-16.6
17-Feb	-26.3	-25.5	-25.7	-26.1	-26.2	-26.0	-26.0	-25.8	-25.2	-24.5	-22.9	-21.4	-20.2	-19.4	-18.8	-18.3	-18.7	-20.1	-21.8	-23.2	-24.3	-25.4	-26.4	-27.2	-23.6	-18.3
18-Feb	-27.8	-28.9	-32.3	-33.4	-34.3	-34.2	-35.0	-36.4	-30.6	-25.9	-21.6	-18.9	-17.3	-15.6	-14.8	-14.8	-15.2	-17.3	-19.3	-20.9	-22.5	-23.1	-23.7	-24.4	-24.5	-14.8
19-Feb	-25.0	-25.7	-26.2	-27.2	-27.5	-28.0	-28.4	-28.3	-26.1	-22.2	-18.5	-15.4	-13.2	-11.7	-10.7	-10.6	-11.8	-13.3	-15.3	-16.1	-17.0	-17.7	-18.7	-20.2	-19.8	-10.6
20-Feb	-21.3	-22.1	-22.6	-22.6	-22.7	-22.6	-22.3	-21.3	-20.4	-18.9	-16.7	-14.2	-10.6	-7.3	-6.2	-5.6	-4.8	-6.0	-7.2	-5.7	-6.3	-6.5	-5.7	-5.2	-13.5	-4.8
21-Feb	-5.1	-5.6	-5.5	-4.7	-3.6	-3.6	-3.7	-2.9	-4.3	-2.4	0.4	2.0	4.0	6.1	6.3	6.5	3.5	1.2	-0.5	-1.2	-2.1	-2.4	-2.6	-2.9	-1.0	6.5
22-Feb	-3.7	-4.6	-5.0	-5.8	-5.3	-4.0	-2.9	-2.3	-1.1	0.3	2.6	4.5	4.9	6.3	8.5	9.2	8.2	6.3	4.6	3.6	2.7	2.4	2.5	3.5	1.5	9.2
23-Feb	3.1	1.9	1.7	1.5	0.9	1.1	3.4	4.6	5.1	6.0	6.4	6.1	4.3	3.8	3.7	3.3	1.6	-0.3	-1.2	-2.4	-3.4	-3.7	-4.1	-4.4	1.6	6.4
24-Feb	-4.6	-4.9	-5.1	-5.0	-4.9	-4.8	-4.8	-4.7	-4.2	-3.3	-2.2	-0.3	3.2	5.5	7.2	8.2	7.9	6.7	3.2	2.8	3.0	3.4	3.2	3.5	0.4	8.2
25-Feb	3.3	1.8	-1.0	-3.2	-4.2	-5.2	-4.8	-4.7	-4.2	-3.8	-3.0	-2.1	-1.4	0.0	1.9	3.1	2.9	1.4	0.4	-1.3	-2.8	-3.1	-2.7	3.5	-1.2	3.5
26-Feb	3.8	2.9	3.2	2.5	1.2	1.7	0.5	-0.2	1.3	3.6	4.9	6.1	6.8	7.5	8.3	8.1	7.8	6.5	5.1	4.2	3.1	2.1	2.4	3.5	4.0	8.3
27-Feb	4.8	5.3	4.4	3.6	3.6	4.0	4.2	5.2	6.7	7.6	8.4	8.7	8.4	8.4	8.4	8.7	7.5	5.8	3.8	2.9	1.7	-1.1	-3.2	-4.1	4.7	8.7
28-Feb	-4.7	-5.4	-5.7	-5.7	-5.8	-5.6	-5.4	-5.3	-5.1	-4.2	-2.5	-0.6	1.2	2.9	5.2	5.2	4.9	3.9	2.2	0.1	-2.0	-2.9	-3.6	-2.3	-1.7	5.2
	-18.3	-18.7	-19.4	-19.7	-19.9	-19.8	-19.5	-19.5	-18.8	-16.7	-14.5	-12.9	-11.6	-10.6	-9.9	-9.8	-10.5	-12.0	-13.7	-14.8	-16.0	-16.7	-17.3	-17.3	Diurnal Average	
	4.8	5.3	4.4	3.6	3.6	4.0	4.2	5.2	6.7	7.6	8.4	8.7	8.4	8.4	8.5	9.2	8.2	6.7	5.1	4.2	3.1	3.4	3.2	3.5	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Monday Creek - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	289	43.01	43.01
-20 - 0	271	40.33	83.33
0 - 10	112	16.67	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Monday Creek - February 2025

Maximum Value: 97.6 % on Feb 25 07:00

Maximum Daily Average: 79.0 % on Feb 25

Minimum Value: 21.1 % on Feb 19 16:00

Minimum Daily Average: 42.3 % on Feb 19

Maximum Diurnal Average: 75.2 % at hour 6

Minimum Diurnal Average: 54.2 % at hour 16

Monthly Average: 67.55 %

Percentiles: P_1 = 29.8 P_{10} = 50.9 Q_1 = 60.7 Median = 70.1 Q_3 = 75.9 P_{90} = 80.0 P_{99} = 91.1

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

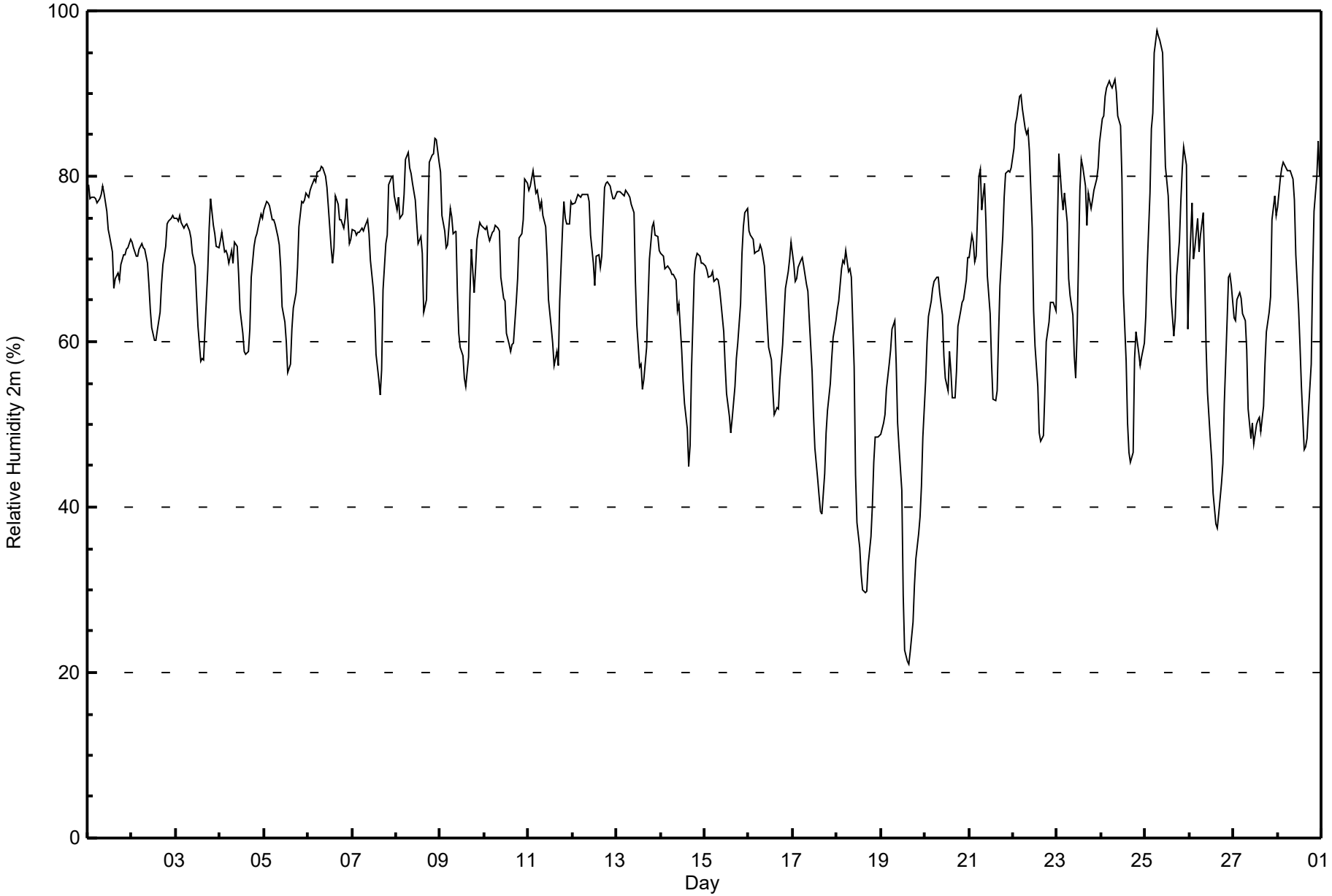
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	79.0	77.3	77.5	77.5	77.3	76.8	77.3	77.8	78.8	77.9	75.8	73.6	72.8	70.9	66.5	67.6	68.4	67.4	69.4	70.5	70.4	71.1	71.4	72.4	73.6	79.0
2-Feb	72.0	71.3	70.4	70.4	71.2	71.9	71.3	71.2	69.5	67.0	63.8	61.8	60.2	60.2	61.4	63.5	67.0	69.3	71.6	74.2	74.6	75.0	75.3	75.0	69.1	75.3
3-Feb	74.9	74.6	75.3	74.5	73.8	74.1	74.2	73.3	72.5	70.7	69.2	65.4	61.8	57.7	57.9	57.9	61.6	68.6	73.8	77.4	74.1	73.1	71.5	71.3	70.0	77.4
4-Feb	72.2	73.1	70.9	71.1	70.6	69.5	71.0	69.4	72.1	71.5	68.1	64.0	61.0	58.8	58.5	58.8	61.6	67.8	71.6	72.6	73.1	73.9	75.3	74.9	68.8	75.3
5-Feb	75.9	77.0	76.8	76.4	74.8	74.7	74.3	72.6	71.6	69.0	64.3	62.4	60.1	56.2	57.2	61.5	64.1	66.0	69.0	73.8	76.9	76.8	77.2	78.0	70.3	78.0
6-Feb	77.5	78.4	78.8	79.7	79.2	80.6	80.7	81.2	80.9	80.0	78.6	76.3	71.4	69.5	71.4	77.6	76.7	74.8	74.8	73.6	74.9	77.3	71.9	72.5	76.6	81.2
7-Feb	73.6	73.5	72.8	73.1	73.2	73.7	73.5	73.9	74.7	73.0	69.8	66.4	63.9	58.5	55.4	53.5	56.7	66.3	71.9	72.8	79.1	79.9	79.9	77.7	70.3	79.9
8-Feb	75.9	77.5	75.0	75.4	77.8	82.0	82.8	81.0	80.3	79.1	77.1	74.5	71.9	72.8	70.6	63.5	65.1	75.0	81.7	82.5	82.7	84.6	84.5	81.7	77.3	84.6
9-Feb	80.6	75.3	73.3	71.3	71.7	76.2	75.1	73.1	73.4	66.1	61.1	59.3	58.4	55.5	54.5	58.2	66.0	71.2	66.0	68.8	72.4	74.4	74.0	73.9	68.7	80.6
10-Feb	73.6	73.8	72.9	72.2	73.3	73.3	74.1	73.8	73.3	67.7	65.3	64.9	61.0	59.7	58.9	59.6	59.9	64.7	67.6	72.5	73.1	74.7	79.6	79.2	69.5	79.6
11-Feb	78.3	78.8	80.7	79.3	77.9	78.3	76.0	77.0	75.3	73.9	70.3	65.1	61.6	59.9	57.1	58.9	57.2	64.9	73.6	77.0	74.9	74.3	74.3	77.0	71.7	80.7
12-Feb	76.7	76.8	77.2	77.8	77.4	77.7	77.8	77.8	77.8	77.0	72.8	69.6	66.8	70.3	70.5	69.0	70.4	78.6	79.1	79.4	78.9	77.9	77.3	77.2	75.5	79.4
13-Feb	78.2	78.2	78.1	77.7	77.6	78.3	77.8	77.4	76.5	75.5	67.3	62.0	56.9	57.3	54.3	55.4	59.4	64.7	69.9	73.9	74.4	72.8	72.8	71.1	70.3	78.3
14-Feb	70.7	70.3	68.8	68.9	69.1	68.7	68.1	68.2	67.5	63.7	64.5	58.9	55.3	52.5	49.5	44.8	47.4	56.7	68.2	69.9	70.7	70.3	69.6	69.4	63.8	70.7
15-Feb	69.1	68.7	67.8	68.0	68.6	67.3	67.6	67.4	66.5	64.7	61.2	57.2	53.7	51.0	48.9	50.7	54.6	58.0	59.9	64.7	70.6	73.9	75.5	76.1	63.8	76.1
16-Feb	73.4	72.9	72.3	70.7	70.8	70.9	71.7	71.3	69.2	65.7	62.5	59.4	57.7	54.1	51.2	52.1	51.9	55.3	59.7	63.2	66.5	68.5	70.0	72.0	64.7	73.4
17-Feb	69.4	67.2	67.7	68.9	69.8	70.1	69.2	66.9	66.1	62.6	56.5	51.2	47.1	43.4	41.4	39.6	39.1	44.0	48.9	51.7	54.9	57.9	60.5	62.6	57.4	70.1
18-Feb	63.9	64.9	68.9	69.9	69.5	71.1	68.4	68.7	67.8	56.9	43.9	38.1	35.1	31.9	30.0	29.6	29.9	33.1	36.4	40.2	45.4	48.5	48.4	48.7	50.4	71.1
19-Feb	48.8	50.1	51.2	54.2	57.2	59.0	61.5	62.6	57.2	50.2	47.3	42.0	29.3	22.7	21.3	21.1	22.5	26.0	30.4	33.7	36.8	38.9	42.5	48.4	42.3	62.6
20-Feb	55.2	60.0	63.1	64.9	66.4	67.4	67.9	67.9	66.0	63.3	58.4	55.6	54.1	58.8	56.5	53.2	53.2	56.4	61.9	63.6	64.7	65.1	67.5	70.2	61.7	70.2
21-Feb	70.1	72.9	72.1	69.7	70.4	80.1	80.9	75.9	79.2	74.4	68.0	63.4	57.4	53.1	52.9	54.0	60.9	66.7	72.7	77.5	80.3	80.6	80.5	81.1	70.6	81.1
22-Feb	83.4	86.3	87.2	89.6	89.9	88.2	85.7	85.0	85.5	83.1	73.7	63.7	59.5	54.5	48.9	47.9	48.6	53.7	60.1	62.4	64.7	64.8	64.8	63.7	70.6	89.9
23-Feb	74.3	82.8	77.8	75.9	77.9	74.4	67.6	65.6	63.3	58.3	55.5	61.0	78.3	82.1	81.2	78.8	74.2	78.0	76.1	77.1	78.3	79.7	81.0	84.1	74.3	84.1
24-Feb	87.0	87.2	89.7	90.7	91.5	91.0	90.6	91.7	90.1	87.3	86.2	79.6	66.0	57.7	50.2	46.6	45.3	46.6	57.9	61.2	58.7	57.0	58.1	59.8	72.0	91.7
25-Feb	63.0	69.0	78.0	85.8	87.6	94.9	97.6	96.9	96.5	94.9	87.9	81.2	77.7	72.7	65.5	60.7	62.9	68.0	72.1	77.0	80.8	83.6	81.3	61.5	79.0	97.6
26-Feb	68.5	76.8	70.0	71.3	74.9	70.8	72.8	75.5	68.5	59.5	53.8	48.3	45.8	41.6	37.9	37.5	39.2	43.0	45.3	52.5	62.5	67.8	68.1	66.7	59.1	76.8
27-Feb	62.9	62.6	65.1	65.9	65.3	63.4	62.6	59.0	51.9	48.3	50.2	47.6	49.9	50.6	50.8	49.2	52.3	57.3	61.3	63.6	65.4	74.8	77.6	75.3	59.7	77.6
28-Feb	76.3	79.9	81.1	81.7	81.4	80.6	80.7	80.7	79.6	77.1	70.5	64.0	59.5	54.6	47.0	47.3	48.3	51.6	57.3	67.9	75.8	80.0	84.2	80.0	70.3	84.2
	72.3	73.5	73.6	74.0	74.5	75.2	75.0	74.4	73.3	69.9	65.8	62.0	59.1	56.7	54.6	54.2	55.9	60.5	64.6	67.7	69.8	71.3	72.0	71.5	Diurnal Average	
	87.0	87.2	89.7	90.7	91.5	94.9	97.6	96.9	96.5	94.9	87.9	81.2	78.3	82.1	81.2	78.8	76.7	78.6	81.7	82.5	82.7	84.6	84.5	84.1	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Monday Creek - February 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	23	3.42	3.42
40 - 60	140	20.83	24.26
60 - 80	441	65.63	89.88
80 - 100	68	10.12	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Monday Creek - February 2025

Maximum Speed: 30 km/h on Feb 27 14:00

Maximum Daily Speed Average: 11.6 km/h on Feb 5

Minimum Speed Value: 0 km/h on Feb 14 00:00

Minimum Daily Speed Average: 1.4 km/h on Feb 14

Maximum Diurnal Speed Average: 7.7 km/h at hour 14

Minimum Diurnal Speed Average: 0.4 km/h at hour 5

Monthly Average Velocity: 3.4 km/h 274.9 deg

Percentiles: P_1 = 1 P_{10} = 2 Q_1 = 5 Median = 8 Q_3 = 12 P_{90} = 15 P_{99} = 27

Hours in Service: 672

Hours of Data: 668

Hours of Missing Data: 4

Percent Operational Time: 99.4

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	ENE16	ENE12	ENE11	ENE11	ENE13	NE9	NNE7	NNE9	N8	NNW10	NW9	NW13	NW15	NW17	NW18	NW17	NW13	NW13	NW14	WNW17	WNW16	WNW16	WNW16	WNW14	NNW8.7	NW18
2-Feb	WNW12	NW11	NW12	NW11	WNW11	WNW12	WNW13	WNW15	NW11	WNW11	NW11	NW12	NNW11	NNW13	NNW14	NNW15	NNW13	NW11	WNW7	WNW8	WNW8	WNW8	WNW7	WNW7	NW10.7	NNW15
3-Feb	NW7	NW5	WNW7	NW6	NW6	WNW6	WNW6	W4	W4	W6	WNW6	WNW9	WNW10	WNW10	NW10	NW10	WNW10	WNW9	W5	WSW6	WSW2	SW2	SSW1	SW3	WNW5.8	WNW10
4-Feb	SW4	SSW3	S3	SSW2	S3	S2	S2	SSE2	S4	SSW5	WSW7	W12	W13	WSW14	WSW13	WSW12	WSW10	SW11	SW10	SW7	SW9	SW8	SW8	SSW6	SW6.4	WSW14
5-Feb	WSW5	W9	W5	W6	WSW6	WSW6	W10	WSW10	SSW9	WSW10	W15	W16	W18	W16	W17	W15	W15	W17	W15	W14	W12	W13	W14	WNW14	W11.6	W18
6-Feb	WNW14	WNW13	WNW14	W12	WNW13	W9	W11	WNW14	WNW20	WNW19	WNW20	WNW19	WNW16	WNW17	NW17	N14	NNE13	N13	N12	N10	N11	N5	NNW8	NW6	NW11.1	WNW20
7-Feb	NW6	WNW7	WNW8	W7	WNW6	WSW6	W9	W8	W13	W13	W12	WNW13	W11	W12	WSW12	WSW12	WSW11	WSW8	WSW10	W10	WSW4	WNW2	WSW3	SSW2	W8.2	W13
8-Feb	S2	S2	SSW2	S1	SSW2	W5	W8	W9	W10	W10	W11	W11	WNW13	W13	W12	WNW11	W7	W6	W6	W4	W1	NNW4	NNW6	NNW14	W6.3	NNW14
9-Feb	NNW16	NNW20	NNW18	NNW15	NW8	WNW7	NW10	NW11	WNW10	NW9	NNW10	N6	NNE6	N9	N9	N11	NNE10	N7	NNW9	NW5	WNW4	WNW4	WNW4	WNW6	NNW8.3	NNW20
10-Feb	W4	W6	W8	W7	WSW7	WSW10	WSW12	W17	WSW15	W18	W17	W15	W19	W16	WSW14	WSW16	WSW14	WSW12	W14	W13	W11	WSW6	NW6	NW8	W11.5	W19
11-Feb	N10	N9	N6	NNE9	NNE10	N6	NW3	WNW3	WNW3	WNW6	WNW6	NNW8	NW7	WNW9	WNW7	NW8	NW9	NNW6	NNW3	NNE5	NNW1	SSE1	SE3	SE3	NNW4.4	NNE10
12-Feb	SE3	SE4	SE4	SSE4	SE4	SE5	SE5	ESE4	ESE5	SE4	E3	S4	S4	ESE6	SSE9	S6	ENE2	NE6	NNE10	NNE9	NNE8	NNE8	NNE9	NNE7	E3.0	NNE10
13-Feb	NNE6	N6	N6	N4	NNE5	NE7	ENE3	ENE1	NE4	NNE5	NE4	NE7	N8	N4	ENE6	NE8	ENE8	ENE6	NE7	NE5	ESE1	NNE1	S1	ESE0	NE4.2	ENE8
14-Feb	UO	ENE1	ESE1	NNW0	SSE1	NE1	SE1	UO	UO	WNW1	NW2	SE2	ENE3	NE6	NNE7	NNE4	NE5	NNE2	ESE1	S0	E1	E2	SW2	SE1	NE1.4	NNE7
15-Feb	S2	E1	ESE0	ESE1	ESE1	NNE0	S0	S2	WNW1	WNW6	NW10	NW10	WNW12	NW13	NW13	NNW12	NNW11	NW8	NW6	NNW7	NNE5	NE3	N1	ESE2	NW4.3	NW13
16-Feb	ESE1	ESE1	E2	UO	E2	E2	E3	ESE4	ESE4	ESE3	SE5	SE5	ESE7	SE7	SE6	ESE9	ESE10	SE8	ESE10	SE10	SE8	SE7	SE6	SE6	SE5.4	SE10
17-Feb	SE7	SE5	SE8	SE7	SE7	SE6	SE8	SE8	SSE9	SSE11	SSE10	SSE10	S11	S13	SSE13	SSE14	SSE11	SSE8	SSE9	SE7	SE9	SE9	ESE7	ESE8	SSE8.6	SSE14
18-Feb	SE6	ESE4	ENE2	ESE3	E5	SE7	ESE5	SSE6	ESE7	ESE5	S11	S10	S11	S12	SSW14	S13	SSW11	S10	SSE7	SE9	SE9	SSE7	S7	S7	SSE6.8	SSW14
19-Feb	S9	SSE7	SSE6	SE5	SSE5	SE5	ESE7	ESE8	SSE7	SSE9	S13	S14	S16	S17	S16	SSE16	SSE14	SSE12	SSE12	SSE12	SSE9	SSE11	S11	S12	SSE10.1	S17
20-Feb	S13	S10	SSW11	SSW11	S11	SSW10	SSW10	SSW13	SSW14	SW12	SW14	SW14	SW13	WSW15	WSW17	WSW17	WSW17	SW15	WSW9	W16	W14	W15	W15	W12	SW11.5	WSW17
21-Feb	WSW9	SSW4	S4	SSW8	SW5	SSE2	NNW1	W4	N1	WNW3	WNW5	NW5	NNW5	NNW8	NNE8	NNW9	NE11	NE9	NE7	NE9	ENE9	NE8	ENE6	ENE7	NNE2.3	NE11
22-Feb	ENE5	E4	ENE3	E2	E3	ESE6	SE8	SSE5	SE6	SSE9	SSW11	SW12	SW10	SSW9	SW9	WSW12	WSW12	SW9	SW10	SSW9	SSW8	SSW11	SSW9	SW12	SSW5.9	WSW12
23-Feb	S4	SE6	SE9	WSW4	SSW6	SW9	WSW15	W22	W21	W26	W27	W27	W27	WNW26	WNW25	NW22	NNW18	NNW13	NNW11	NNE10	ENE6	ENE9	ENE7	E7	W9.3	W27
24-Feb	ENE8	E6	E7	E5	ENE7	E8	E7	ESE5	SE5	ESE2	SW1	NNW3	NNE1	W11	W14	WNW13	W14	W9	SSW4	SW3	WSW5	W7	WNW6	W13	W1.6	W14
25-Feb	W11	WNW7	NE8	NE7	NE8	NE8	ENE3	SE2	ENE6	ENE7	E6	ESE3	NE4	ENE6	NE4	NNE4	E3	E7	ESE5	NE3	SE2	SSW2	W5	W22	NE1.9	W22
26-Feb	WNW22	WNW13	W10	W12	W10	WNW12	WNW9	WNW7	W10	W17	WNW19	WNW17	WNW17	WNW18	WNW16	WNW17	WNW14	WNW8	W9	WSW9	SW7	SSW5	SSW5	SW8	W11.4	WNW22
27-Feb	WSW13	W12	SSW8	SSE7	SSW7	SW9	SSW8	SSW10	WSW15	WNW19	WNW27	WNW28	WNW29	WNW30	WNW27	NW27	NW22	NW16	NNW14	NNW13	NNW13	NNE15	NE14	NNE11	WNW11.0	WNW30
28-Feb	NNE9	ENE9	ESE5	ENE9	E7	SSE4	E5	ESE7	ESE5	SE5	ENE5	SE1	WSW6	SW4	NW4	N5	NE3	SE4	S4	ESE5	SE2	ESE2	SSE2	S5	ESE2.6	NNE9
	WNW2.1	WNW1.6	WNW0.8	WNW1.0	W0.4	WSW1.0	WSW2.2	WSW3.5	WSW3.8	W5.2	W6.7	W7.2	W7.5	W7.7	W7.2	WNW6.2	WNW4.7	WNW3.2	WNW2.5	WNW2.4	W1.6	W1.4	W1.9	W2.8	Diurnal Average	
	WNW22	NNW20	NNW18	NNW15	WNW13	WNW12	WSW15	W22	W21	W26	W27	WNW28	WNW29	WNW30	WNW27	NW27	NW22	W17	W15	WNW17	WNW16	WNW16	WNW16	W22	Diurnal Maximum	

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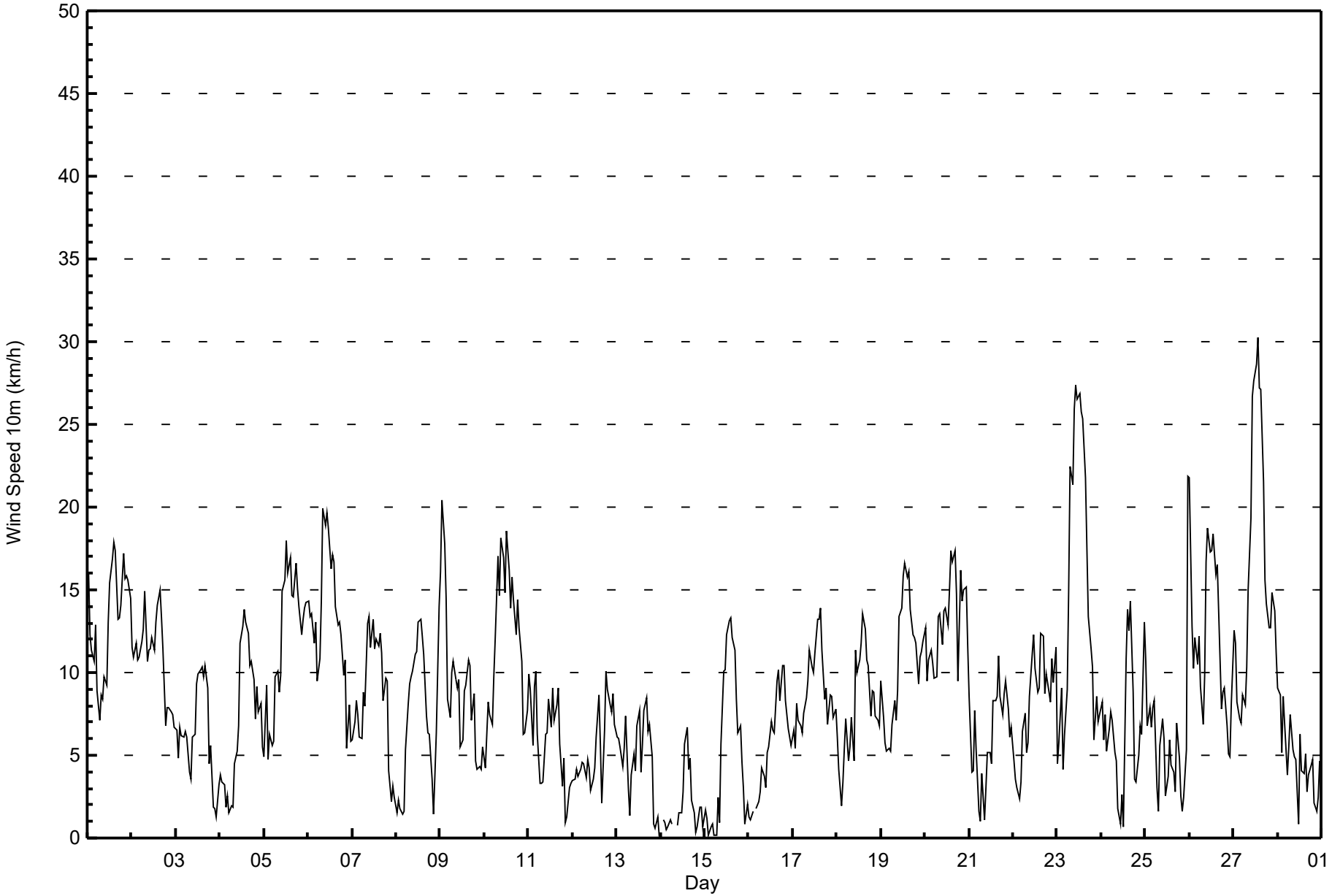
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Monday Creek - February 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	189	28.29	28.29
6 - 11	300	44.91	73.20
12 - 19	158	23.65	96.86
20 - 28	19	2.84	99.70
29 - 38	2	0.30	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 668

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Monday Creek - February 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	10	10	14	28	24	10	18	12	8	6	10	10	6	7	189
6 - 11	14	19	16	18	8	12	25	20	12	19	14	18	32	35	25	13	300
12 - 19	3	2	1	3	0	0	0	8	8	5	6	21	40	33	14	14	158
20 - 28	0	0	0	0	0	0	0	0	0	0	0	0	7	8	3	1	19
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	23	31	27	31	22	40	49	38	38	36	28	45	89	88	48	35	668

Total Number of Valid Hours: 668

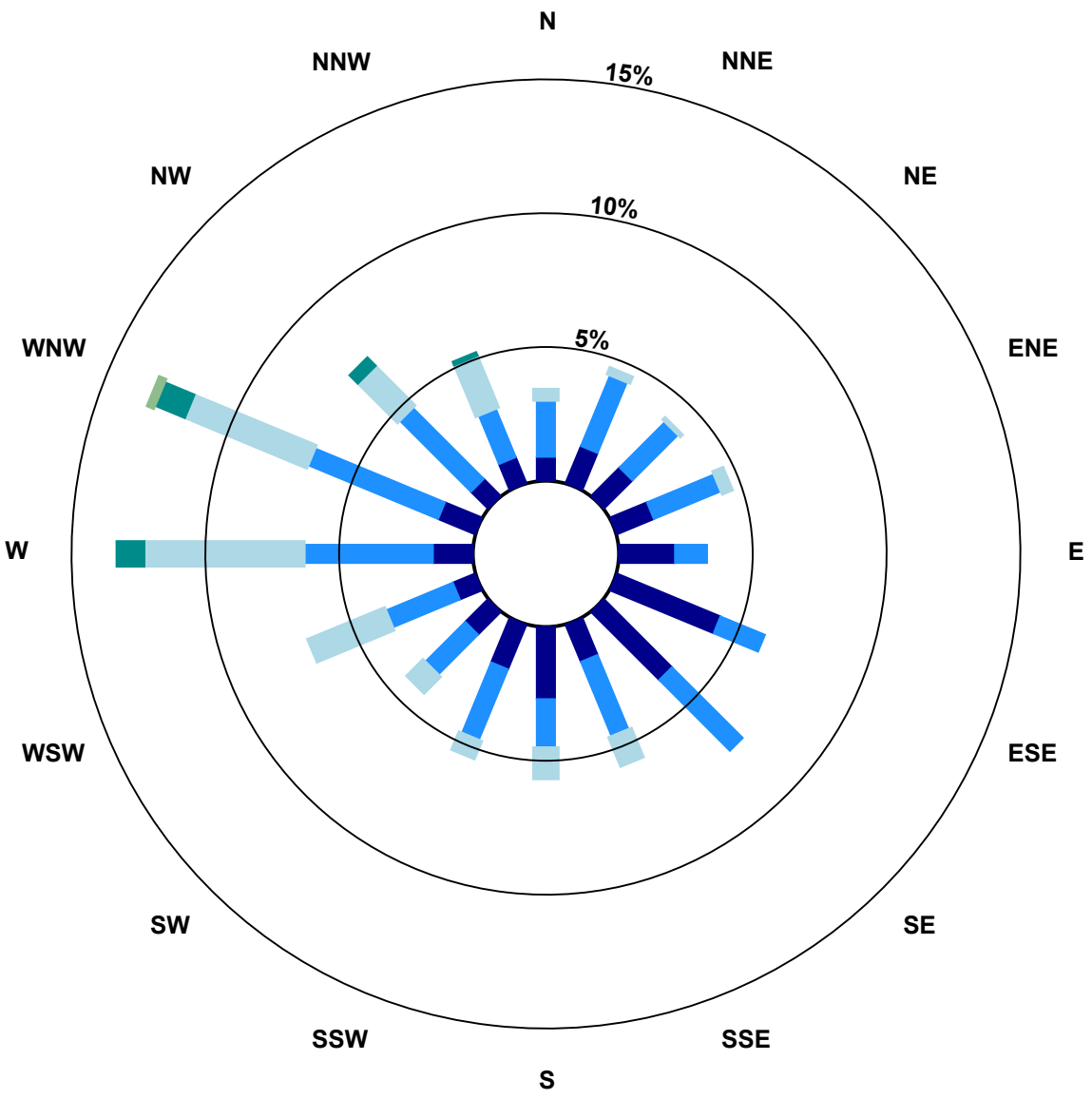
Total Number of Hours: 672

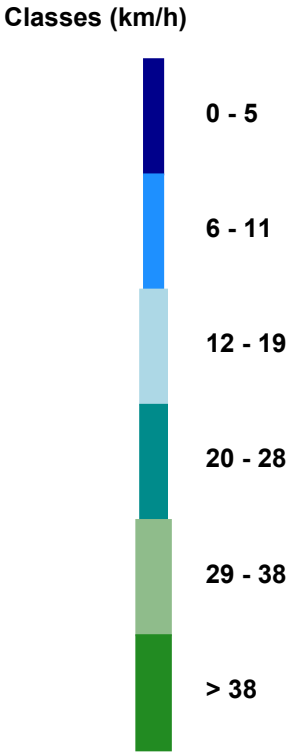
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Wind Speed 10m (WS10) - km/h

Monday Creek





Total Number of Valid Hours: 668

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Monday Creek - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8 km/h on Feb 27 11:00

Minimum Value: 1 km/h on Feb 3 09:00

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

Hours in Service:	672
Hours of Data:	668
Hours of Missing Data:	4
Hours of Calibration:	0
Percent Operational Time:	99.4

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

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Monday Creek - February 2025

Direction of Maximum Speed: 290 deg on Feb 27 14:00
Direction of Maximum Daily Speed Average: 263.5 deg on Feb 5

Direction of Minimum Speed: 105 deg on Feb 14 00:00

Direction of Minimum Daily Speed Average: 1.4 deg on Feb 14

Monthly Average Direction: 274.9 deg

Hours in Service:	672
Hours of Data:	668
Hours of Missing Data:	4
Percent Operational Time:	99.4

Day	Hourly Period Ending At (MST)																							Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average
1-Feb	66	74	69	63	61	55	26	12	0	341	317	321	310	312	310	310	321	320	309	297	294	289	292	292	331.7
2-Feb	303	310	314	311	303	293	299	298	307	300	305	312	331	327	336	332	328	322	303	295	292	295	298	301	310.5
3-Feb	309	309	297	304	307	296	291	280	277	272	282	289	299	303	306	307	299	289	267	240	250	226	197	214	290.8
4-Feb	224	205	190	209	190	184	175	166	187	206	251	278	278	250	250	243	248	231	226	232	226	235	221	210	236.2
5-Feb	242	268	262	266	237	252	262	256	211	246	262	266	268	269	262	259	261	264	262	263	269	277	281	290	263.5
6-Feb	293	285	290	280	287	277	273	287	295	297	297	295	294	303	312	9	25	10	10	356	7	354	335	315	310.5
7-Feb	306	286	286	270	282	255	263	264	265	264	277	293	277	267	248	253	249	251	238	259	254	282	247	202	265.4
8-Feb	169	181	206	174	200	279	260	260	263	267	259	280	288	279	277	295	279	268	274	280	271	340	327	334	279.0
9-Feb	339	337	336	335	325	302	306	306	295	315	339	6	16	11	2	2	21	2	338	311	292	288	297	283	333.7
10-Feb	275	266	260	260	253	246	251	263	256	267	266	260	263	264	243	240	249	251	259	268	264	253	304	325	260.1
11-Feb	8	11	2	15	25	5	304	291	303	299	299	337	304	302	299	306	310	338	344	28	337	157	146	130	336.7
12-Feb	126	136	143	149	138	130	139	114	116	136	85	190	186	104	149	172	57	49	26	28	27	28	27	28	89.2
13-Feb	30	8	2	356	32	53	60	68	37	33	53	34	356	3	66	49	60	63	52	48	110	27	175	105	38.0
14-Feb	UO	66	111	328	163	41	141	UO	UO	294	323	128	69	39	26	32	47	31	103	172	100	95	227	132	50.3
15-Feb	172	82	105	117	122	24	176	180	292	295	306	305	291	312	312	329	329	308	323	344	16	37	11	113	317.3
16-Feb	114	108	98	UO	88	90	95	110	118	110	146	126	110	126	146	109	120	125	120	135	135	136	142	135	124.0
17-Feb	139	144	132	130	129	132	135	146	162	166	168	167	171	169	161	151	165	157	148	131	125	132	119	115	148.8
18-Feb	140	104	63	106	101	132	122	149	120	123	188	180	177	191	199	188	192	186	168	143	138	157	170	172	163.7
19-Feb	169	156	149	133	153	131	119	123	148	167	188	191	178	170	178	161	166	153	151	162	158	167	174	177	163.9
20-Feb	185	187	194	192	190	194	200	208	213	214	222	231	228	248	254	252	246	234	252	269	271	277	267	263	232.6
21-Feb	246	202	177	204	233	149	348	280	352	283	287	317	334	327	17	346	36	49	42	53	65	54	62	63	14.3
22-Feb	71	89	61	94	101	118	140	147	141	150	193	225	215	212	217	241	240	218	215	208	197	202	204	215	197.6
23-Feb	187	136	146	246	198	221	252	264	261	266	263	267	274	282	295	307	327	340	347	21	58	58	78	85	280.7
24-Feb	77	91	92	80	71	88	87	115	130	122	215	327	24	268	269	291	260	261	209	222	249	270	288	267	262.6
25-Feb	275	289	35	53	44	49	63	140	69	72	82	114	44	67	43	32	92	100	113	34	144	213	276	266	40.4
26-Feb	285	286	270	271	280	300	287	282	274	280	286	294	288	289	291	284	291	283	269	246	233	203	209	233	279.0
27-Feb	250	264	206	168	195	215	197	213	242	282	289	288	295	290	294	314	319	325	338	343	348	32	35	33	296.2
28-Feb	29	74	112	67	83	158	97	102	121	133	78	144	243	219	319	3	45	137	183	122	131	105	158	178	102.3
	290.7	299.5	284.7	287.7	279.9	241.9	248.0	250.4	249.4	265.4	267.7	275.2	275.8	278.2	278.8	290.7	291.5	285.8	282.9	285.0	272.1	270.2	270.6	266.6	
	Diurnal Average																								

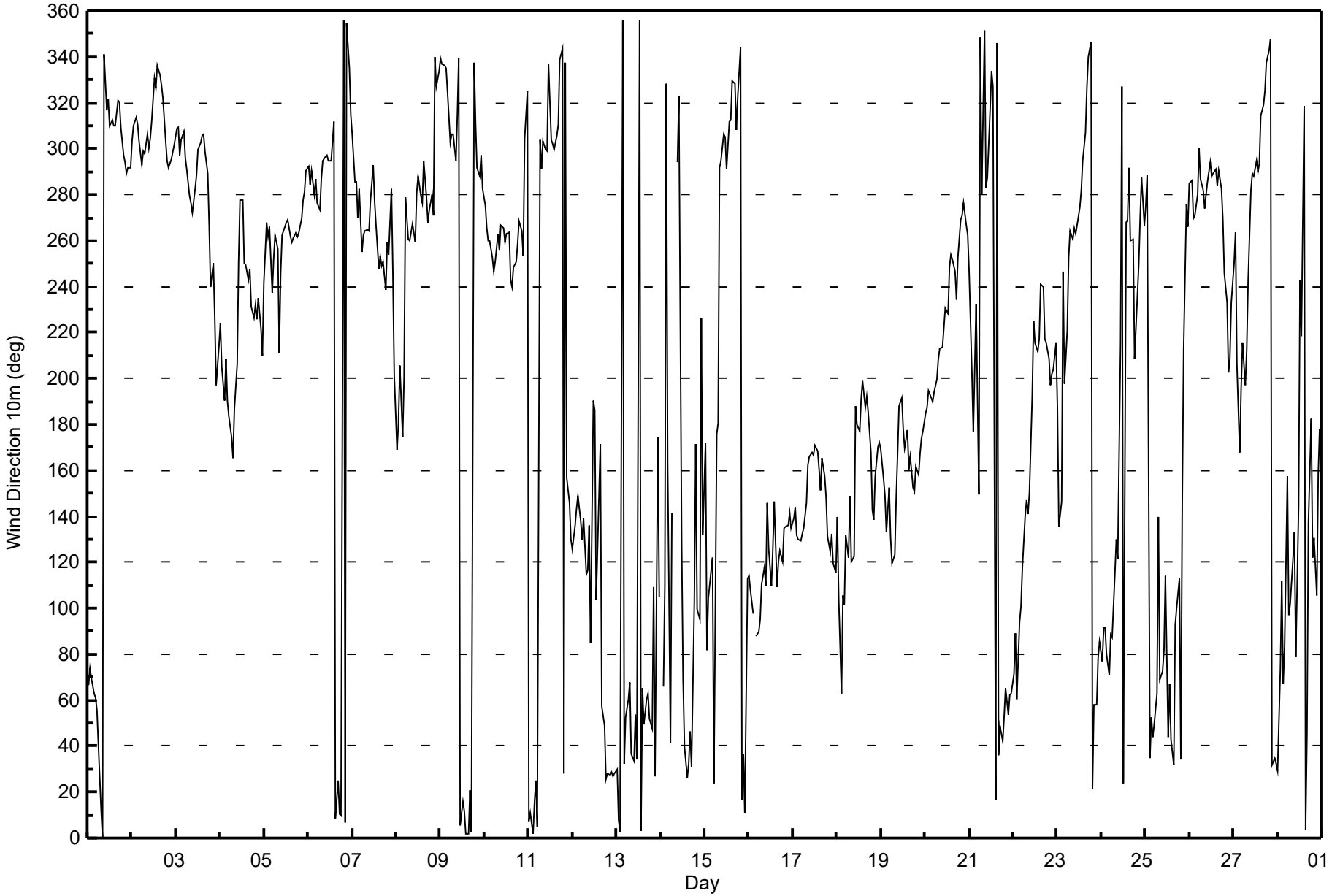
UO - Unstable Operation
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Monday Creek - February 2025



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

Maximum Value: 100 deg on Feb 15 07:00

Minimum Value: 7 deg on Feb 3 18:00

Percentiles: P_1 = 9 P_{10} = 11 Q_1 = 14 Median = 18 Q_3 = 25 P_{90} = 46 P_{99} = 89

Hours in Service:	672
Hours of Data:	668
Hours of Missing Data:	4
Hours of Calibration:	0
Percent Operational Time:	99.4

Day	Hourly Period Ending At (MST)																								Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Maximum
1-Feb	9	11	10	11	12	13	22	13	17	15	18	17	17	16	16	17	17	16	17	13	10	9	9	12	22
2-Feb	16	17	16	17	16	13	13	12	16	14	17	19	22	20	18	16	14	15	22	12	10	10	16	19	22
3-Feb	18	25	14	19	20	17	13	13	13	19	22	13	17	20	17	17	13	7	18	13	45	65	49	41	65
4-Feb	21	43	64	26	22	79	46	64	13	18	32	16	13	18	17	15	13	12	9	15	13	14	14	18	79
5-Feb	28	9	21	15	20	17	11	13	13	20	11	12	11	15	12	15	11	11	10	11	11	11	11	10	28
6-Feb	11	10	11	13	12	13	11	13	12	12	12	12	14	17	18	29	20	20	16	18	25	27	15	24	29
7-Feb	23	11	11	10	13	17	11	12	10	13	16	12	16	17	17	15	13	10	10	11	16	40	18	22	40
8-Feb	38	18	30	49	51	52	14	10	11	15	16	17	13	15	14	14	11	11	10	16	72	25	22	18	72
9-Feb	15	14	15	15	14	15	17	16	13	19	19	38	38	33	24	25	15	16	12	20	11	11	20	10	38
10-Feb	18	8	11	13	13	11	13	11	15	10	12	15	15	15	13	15	13	13	17	12	11	12	23	20	23
11-Feb	17	14	18	12	10	16	29	34	30	21	26	23	33	24	33	25	19	15	41	20	73	88	37	40	88
12-Feb	28	17	22	22	21	24	20	22	16	23	52	46	45	29	21	30	88	26	9	12	11	13	11	16	88
13-Feb	13	20	16	37	20	10	14	77	18	15	31	25	29	78	43	32	12	12	10	20	73	39	69	83	83
14-Feb	UO	41	65	67	52	25	64	UO	UO	77	81	62	50	28	26	35	15	20	43	98	67	54	39	63	98
15-Feb	26	63	92	72	39	93	100	32	67	27	20	23	17	22	20	20	20	19	17	12	27	19	88	55	100
16-Feb	56	84	74	UO	37	40	20	14	12	16	38	43	33	46	54	17	15	9	10	15	12	11	12	11	84
17-Feb	11	13	9	13	13	12	11	16	19	20	22	24	24	24	19	21	18	15	17	17	11	13	19	15	24
18-Feb	26	29	56	45	22	11	25	24	15	40	19	24	25	25	22	21	19	18	19	15	13	18	18	19	56
19-Feb	19	18	17	15	21	26	12	11	21	24	20	20	22	22	22	19	19	17	16	17	17	18	18	19	26
20-Feb	20	19	18	18	20	18	16	21	15	17	18	17	21	18	17	15	14	14	15	12	12	11	11	13	21
21-Feb	14	23	20	15	32	51	91	39	59	45	23	30	45	24	27	25	14	16	10	18	12	14	20	19	91
22-Feb	26	28	24	47	57	22	11	14	27	25	21	21	20	18	25	16	14	16	12	16	18	17	17	20	57
23-Feb	53	15	17	64	45	24	17	12	15	13	13	16	14	14	15	16	19	17	18	21	17	15	12	13	64
24-Feb	19	29	10	15	19	16	10	24	29	53	84	66	89	21	17	19	18	15	41	47	17	25	23	11	89
25-Feb	15	24	31	24	12	19	34	52	16	17	23	65	58	21	26	26	49	10	22	33	56	45	24	12	65
26-Feb	20	13	11	17	13	17	12	21	14	15	15	15	15	14	16	13	11	18	9	12	14	30	33	19	33
27-Feb	14	17	15	18	25	15	20	20	26	14	14	13	14	14	14	19	17	18	16	18	21	14	15	20	26
28-Feb	19	21	29	16	20	28	31	17	25	35	33	98	38	71	63	59	60	29	24	35	27	30	36	19	98
	56	84	92	72	57	93	100	77	67	77	84	98	89	78	63	59	88	29	43	98	73	88	88	83	
	Diurnal Maximum																								

UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS506
JACKFISH 1
FEBRUARY 2025

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

March 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JACKFISH 1 (AMS506)
FEBRUARY 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	641	31	31	100	38.4	0	4.4	0
H2S (ppb) Average	639	33	33	100	0.6	0	0.3	0
NO2 (ppb) Average	640	32	32	100	15.9	0	7.8	-
NO (ppb) Average	640	32	32	100	15.7	-	2	-
NOX (ppb) Average	640	32	32	100	26.9	-	9.5	-
Temperature 2 m (C) Average	672	0	0	100	8.7	-	3.7	-
Relative Humidity (%) Average	672	0	0	100	95.4	-	81.1	-
Wind Speed 10 m (km/h) Average	653	0	19	97.17	17	-	9	-
Wind Direction 10 m (deg) Average	653	0	19	97.17	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JACKFISH 1 (AMS506)
FEBRUARY 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	641	1.18	2.2	-	0	0.1	0.3	0.6	1.1	2.6	38.4
H2S (ppb) Average	639	0.11	0.1	-	0	0	0	0.1	0.1	0.2	0.6
NO2 (ppb) Average	640	3.67	2.6	-	0.1	1.4	1.9	2.9	4.6	6.9	15.9
NO (ppb) Average	640	0.85	1.6	-	0	0	0	0.2	1	2.4	15.7
NOX (ppb) Average	640	4.53	3.7	-	0.1	1.6	2.2	3.4	5.3	8.7	26.9
Temperature 2 m (C) Average	672	-15.46	11.4	-	-32.4	-27.9	-24.5	-19	-4.6	2.3	8.7
Relative Humidity (%) Average	672	70.92	11.2	-	30.6	55.6	64.3	73.8	78.3	82.8	95.4
Wind Speed 10 m (km/h) Average	653	5.4	3	-	0	2	3	5	7	9	17
Wind Direction 10 m (deg) Average	653	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - JACKFISH 1 (AMS506)
FEBRUARY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
Wind Speed, Wind Direction	16 Feb 2025 04:00	16 Feb 2025 04:00	1	Flat line in sensor output signal - Sensor frozen
Wind Speed, Wind Direction	23 Feb 2025 18:00	24 Feb 2025 11:00	18	Flat line in sensor output signal - Sensor frozen

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Jackfish 1 - February 2025

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

Maximum Value: 38.4 ppb on Feb 27 17:00

Maximum Daily Average: 4.4 ppb on Feb 27

Minimum Value: 0.0 ppb on Feb 1 04:00

Minimum Daily Average: 0.2 ppb on Feb 4

Maximum Diurnal Average: 2.5 ppb at hour 17

Minimum Diurnal Average: 0.6 ppb at hour 23

Monthly Average: 1.18 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.1 Q_1 = 0.3 Median = 0.6 Q_3 = 1.1 P_{90} = 2.6 P_{99} = 8.1

Hours in Service:	672
Hours of Data:	641
Hours of Missing Data:	31
Hours of Calibration:	31
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.0	0.1	Z	0.0	0.0	0.0	0.0	0.2	0.1	0.2	0.1	0.1	3.9	6.8	7.3	6.1	4.7	2.3	5.0	4.8	2.5	0.6	0.2	0.1	2.0	7.3
2-Feb	1.4	5.2	6.3	Z	8.2	7.6	9.7	5.6	4.3	2.5	3.8	2.5	3.4	3.7	4.2	5.3	3.3	1.9	1.2	1.3	1.0	0.8	0.7	2.0	3.7	9.7
3-Feb	3.8	1.2	1.4	1.9	Z	3.2	3.7	1.9	1.1	1.5	1.2	1.5	2.6	2.1	2.5	0.9	0.3	0.3	0.1	1.4	1.8	0.4	0.1	0.4	1.5	3.8
4-Feb	0.8	0.3	0.3	0.5	0.7	Z	0.3	0.1	0.1	0.1	0.1	0.5	0.5	0.2	0.3	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8
5-Feb	0.0	Z	1.0	1.2	0.8	0.6	0.7	0.2	0.3	0.5	1.9	1.8	1.1	1.6	1.2	1.0	0.3	0.4	1.4	1.4	1.4	2.4	0.2	0.1	0.9	2.4
6-Feb	0.2	0.1	0.6	0.2	0.0	0.4	3.0	1.7	1.0	2.5	7.1	5.9	12.2	6.2	7.3	2.8	0.3	1.1	0.9	0.7	0.7	1.0	0.4	0.4	2.4	12.2
7-Feb	1.0	Z	1.0	0.6	1.0	1.4	0.8	0.3	0.3	1.5	2.8	0.7	3.4	2.6	2.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5	0.9	3.4
8-Feb	0.1	0.1	Z	0.1	0.2	0.0	0.1	0.4	0.6	0.8	1.7	1.1	1.0	0.6	0.5	0.5	0.3	0.4	0.3	0.5	0.6	1.7	2.9	0.5	0.7	2.9
9-Feb	5.2	1.0	1.1	Z	2.4	2.6	4.4	4.3	1.1	2.2	0.4	0.7	1.0	0.6	0.3	0.6	1.3	1.6	1.7	1.8	3.0	2.4	1.3	0.5	1.8	5.2
10-Feb	0.4	0.9	2.2	3.7	Z	1.0	0.7	0.9	0.8	1.0	2.0	1.9	1.8	1.4	0.5	0.2	0.5	0.3	0.1	0.1	0.6	0.9	0.3	0.9	1.0	3.7
11-Feb	0.6	0.4	0.4	0.5	0.3	Z	0.4	0.5	0.5	0.6	1.2	1.3	2.2	2.4	0.9	0.3	0.8	1.1	1.3	1.5	1.0	1.2	0.8	1.2	0.9	2.4
12-Feb	Z	1.1	1.1	0.8	0.7	0.6	0.5	0.3	0.3	0.5	0.5	0.6	0.5	1.0	0.8	0.6	0.5	0.3	0.4	0.4	0.5	0.6	0.6	0.7	0.6	1.1
13-Feb	0.5	Z	0.4	0.4	0.4	0.3	0.3	0.4	0.3	0.2	0.2	0.3	0.4	0.4	0.4	0.6	0.6	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.3	0.6
14-Feb	0.1	0.3	Z	0.2	0.2	0.2	0.4	0.3	0.4	0.4	0.3	0.3	0.3	1.0	1.4	0.7	0.5	0.4	0.4	0.2	0.0	0.0	0.2	0.1	0.4	1.4
15-Feb	0.0	0.0	0.1	Z	0.0	0.4	1.0	0.7	0.5	4.3	4.6	2.7	3.2	1.4	2.1	0.8	3.2	2.7	0.5	0.4	0.6	0.5	0.3	0.3	1.3	4.6
16-Feb	0.2	0.4	0.7	0.5	Z	0.3	0.1	0.2	0.2	0.4	1.1	1.5	1.4	1.4	0.9	0.8	0.9	0.8	0.5	0.4	0.3	0.5	0.9	1.0	0.7	1.5
17-Feb	0.7	0.7	0.7	1.0	1.0	Z	1.6	1.4	1.0	0.9	0.7	0.7	0.8	0.8	0.6	0.4	0.6	0.4	0.2	0.1	0.1	0.0	0.1	0.1	0.6	1.6
18-Feb	Z	0.1	0.2	0.3	0.3	0.2	0.3	0.3	0.5	0.5	0.4	C	C	C	C	0.2	0.2	0.2	0.2	0.2	0.6	0.8	0.8	1.0	0.4	1.0
19-Feb	1.0	Z	0.8	1.0	1.1	1.2	1.0	0.9	1.1	0.9	1.0	0.6	0.6	0.6	0.6	0.6	0.5	0.4	0.4	0.4	0.3	0.3	0.4	0.5	0.7	1.2
20-Feb	0.6	0.6	Z	0.7	0.6	0.5	0.3	0.6	0.7	0.4	0.5	0.6	0.8	0.8	0.7	0.9	0.8	0.4	0.4	0.5	0.4	0.4	0.5	0.7	0.6	0.9
21-Feb	0.5	0.7	0.5	Z	0.5	0.5	0.8	0.8	0.9	1.3	2.2	2.7	4.6	3.8	5.6	2.5	0.7	0.7	0.5	0.6	0.4	0.3	0.3	0.3	1.4	5.6
22-Feb	0.3	0.1	0.1	0.0	Z	0.3	0.5	0.5	0.6	0.8	0.9	0.9	0.6	0.4	0.5	0.3	0.2	0.2	0.3	0.4	0.3	0.3	0.4	0.6	0.4	0.9
23-Feb	0.5	0.5	0.3	0.3	0.2	Z	0.3	0.4	0.4	0.7	0.7	0.7	0.4	0.5	0.6	7.1	5.9	0.8	0.6	0.8	1.1	1.2	1.3	1.4	1.2	7.1
24-Feb	Z	1.0	0.8	0.7	0.5	0.4	0.3	0.3	0.2	0.3	0.3	1.4	2.3	1.2	1.4	1.0	0.6	0.4	0.4	0.2	0.2	0.6	1.0	0.5	0.7	2.3
25-Feb	1.7	Z	0.7	0.6	0.9	0.4	0.7	1.0	1.1	1.0	0.9	0.8	0.9	1.9	4.8	2.1	0.7	0.7	0.4	0.4	0.3	0.3	0.4	1.0	1.0	4.8
26-Feb	1.8	1.4	Z	0.9	1.3	0.7	0.5	0.4	1.7	2.3	1.2	1.4	1.6	1.3	4.3	1.9	0.5	0.5	1.0	0.5	0.4	0.3	0.2	0.3	1.1	4.3
27-Feb	0.3	0.3	0.3	Z	0.3	0.3	0.3	0.7	0.8	2.0	3.1	1.9	7.9	8.8	2.8	17.8	38.4	10.0	0.7	0.5	0.5	0.4	1.2	0.9	4.4	38.4
28-Feb	0.6	0.5	0.4	0.3	Z	0.2	0.2	0.2	0.3	0.3	0.6	3.3	3.1	3.2	4.2	3.1	2.0	0.8	0.5	0.1	0.2	0.1	0.0	0.0	1.1	4.2
	0.9	0.7	0.9	0.7	1.0	1.0	1.2	0.9	0.8	1.1	1.5	1.4	2.3	2.1	2.2	2.1	2.5	1.1	0.7	0.7	0.7	0.7	0.6	0.6	Diurnal Average	
	5.2	5.2	6.3	3.7	8.2	7.6	9.7	5.6	4.3	4.3	7.1	5.9	12.2	8.8	7.3	17.8	38.4	10.0	5.0	4.8	3.0	2.4	2.9	2.0	Diurnal Maximum	

Z - zerospan C - Calibration

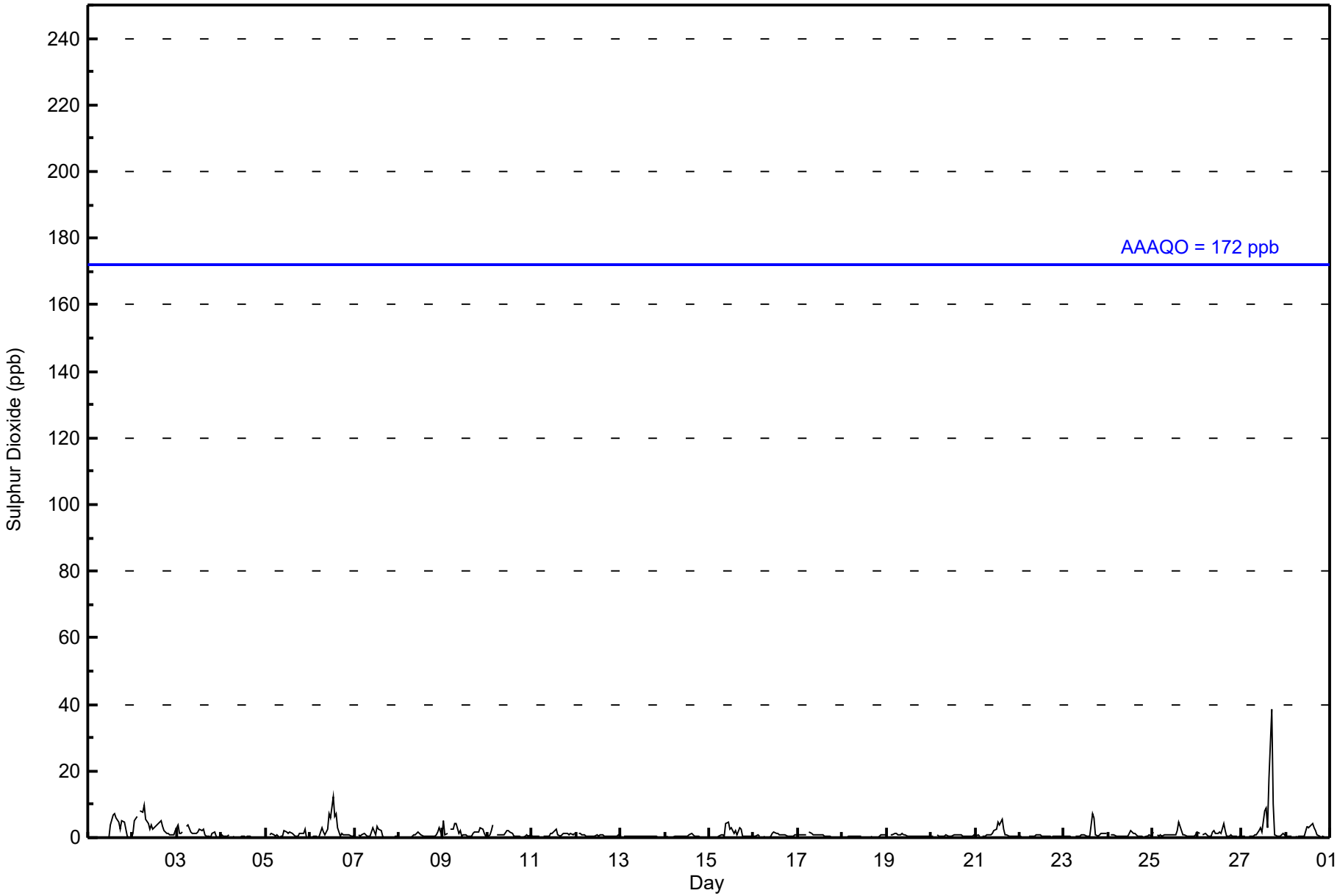
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Jackfish 1 - February 2025



Sulphur Dioxide (SO_2) - ppb
Jackfish 1 - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	638	99.53	99.53
11 - 20	2	0.31	99.84
21 - 60	1	0.16	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: 641

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Jackfish 1 - February 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	22	13	12	3	5	7	23	81	60	74	45	23	43	87	84	38	620
11 - 20	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	22	13	12	3	5	7	23	81	60	74	45	23	43	90	84	38	623

Total Number of Valid Hours: 623

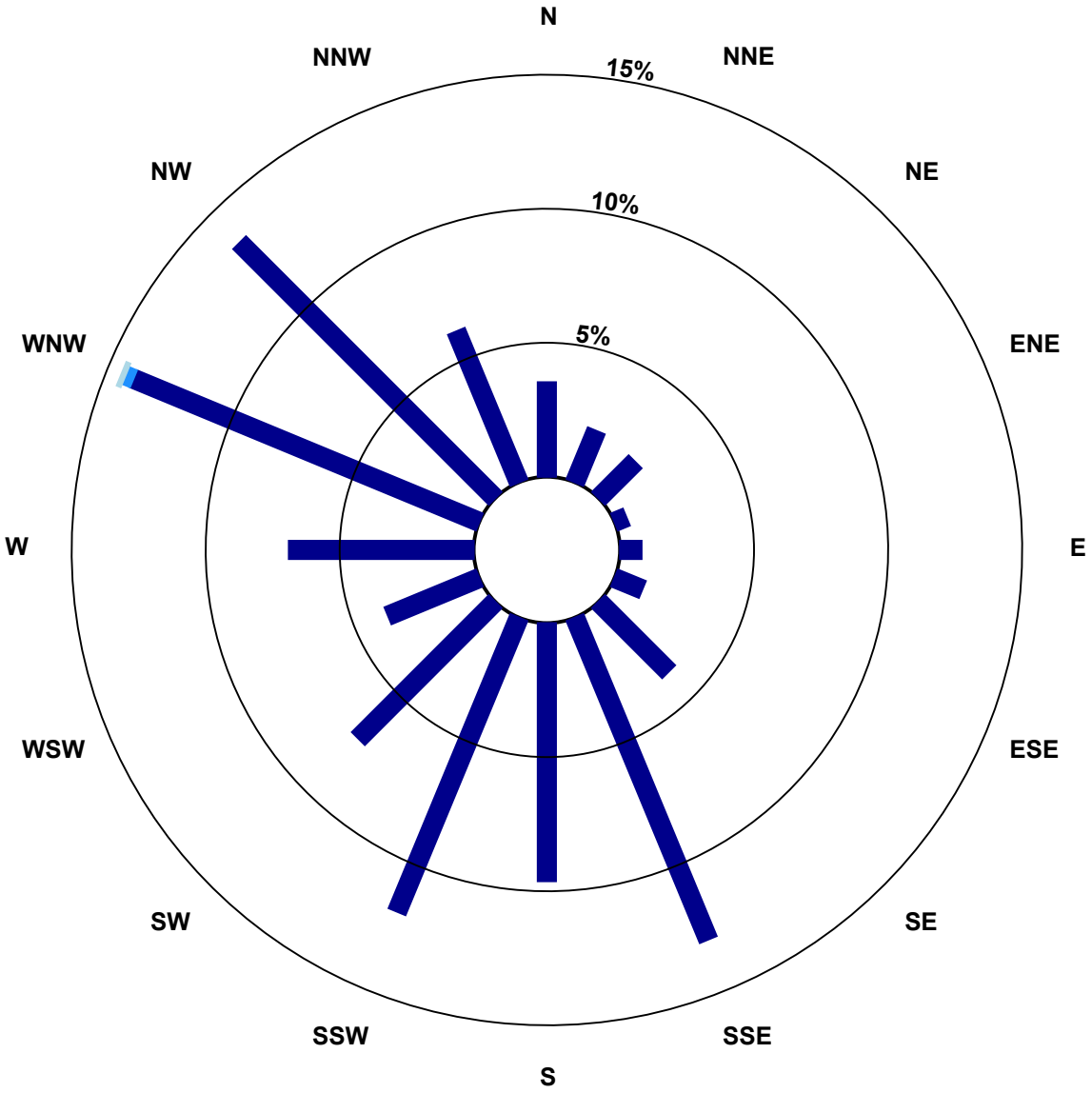
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Sulphur Dioxide (SO_2) - ppb

Jackfish 1



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

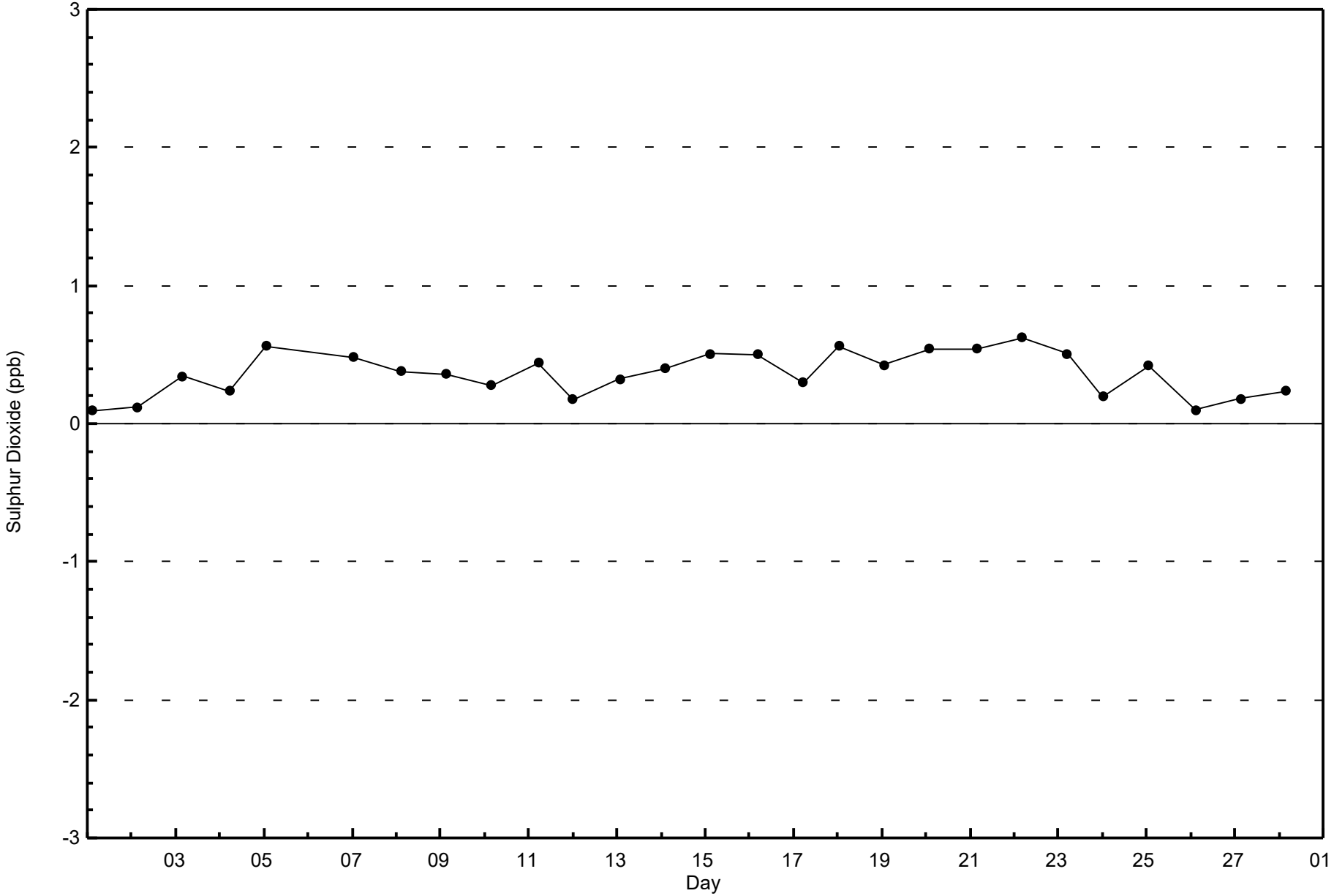
Total Number of Valid Hours: 623

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Jackfish 1 - February 2025

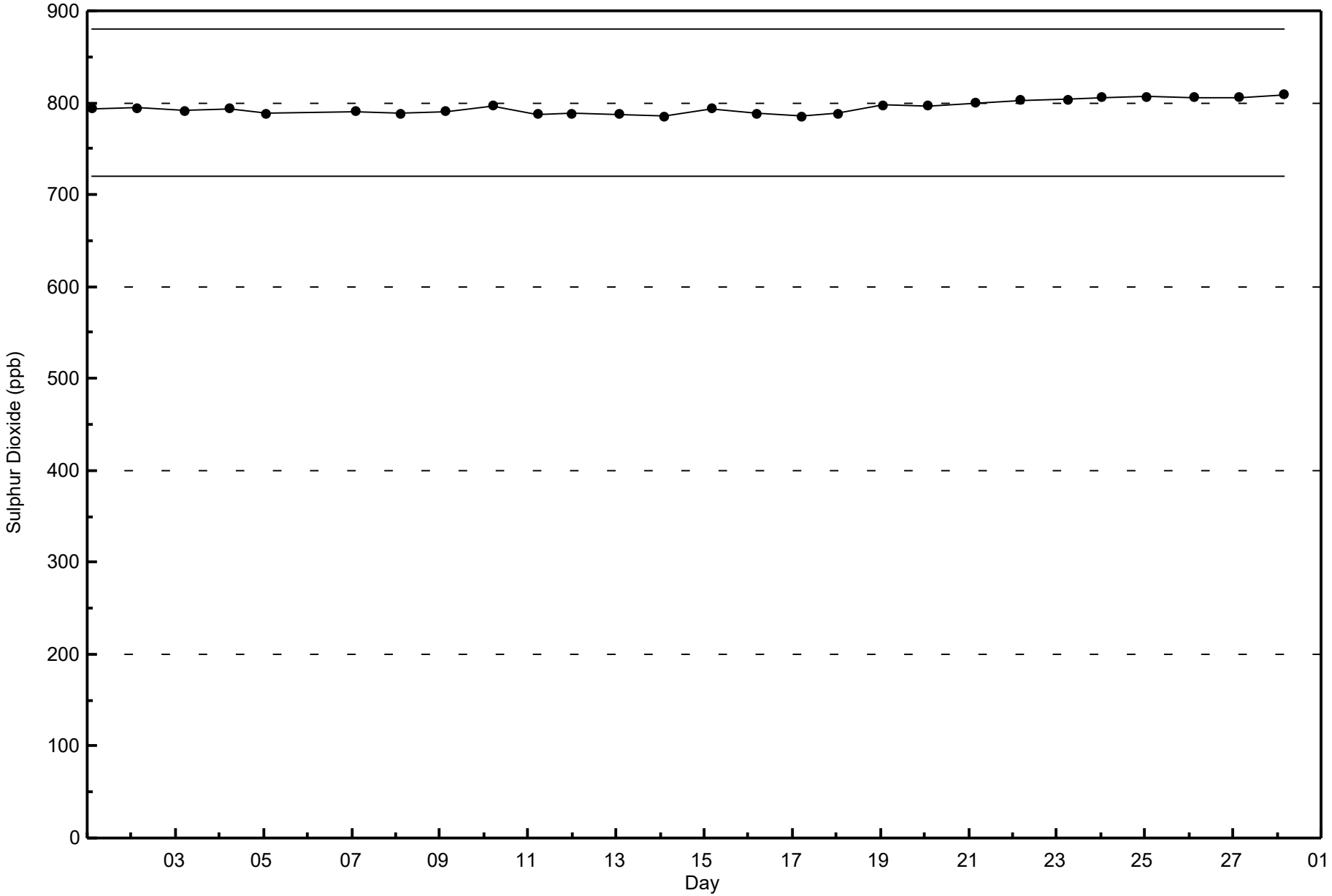


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Jackfish 1 - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H2S) - ppb

Jackfish 1 - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 0.6 ppb on Feb 14 07:00 Maximum Daily Average: 0.3 ppb on Feb 2

Minimum Value: 0.0 ppb on Feb 10 01:00 Minimum Daily Average: 0.0 ppb on Feb 10
Maximum Diurnal Average: 0.2 ppb at hour 6 Minimum Diurnal Average: 0.1 ppb at hour 12
Monthly Average: 0.11 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.1 P_{90} = 0.2 P_{99} = 0.5

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

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

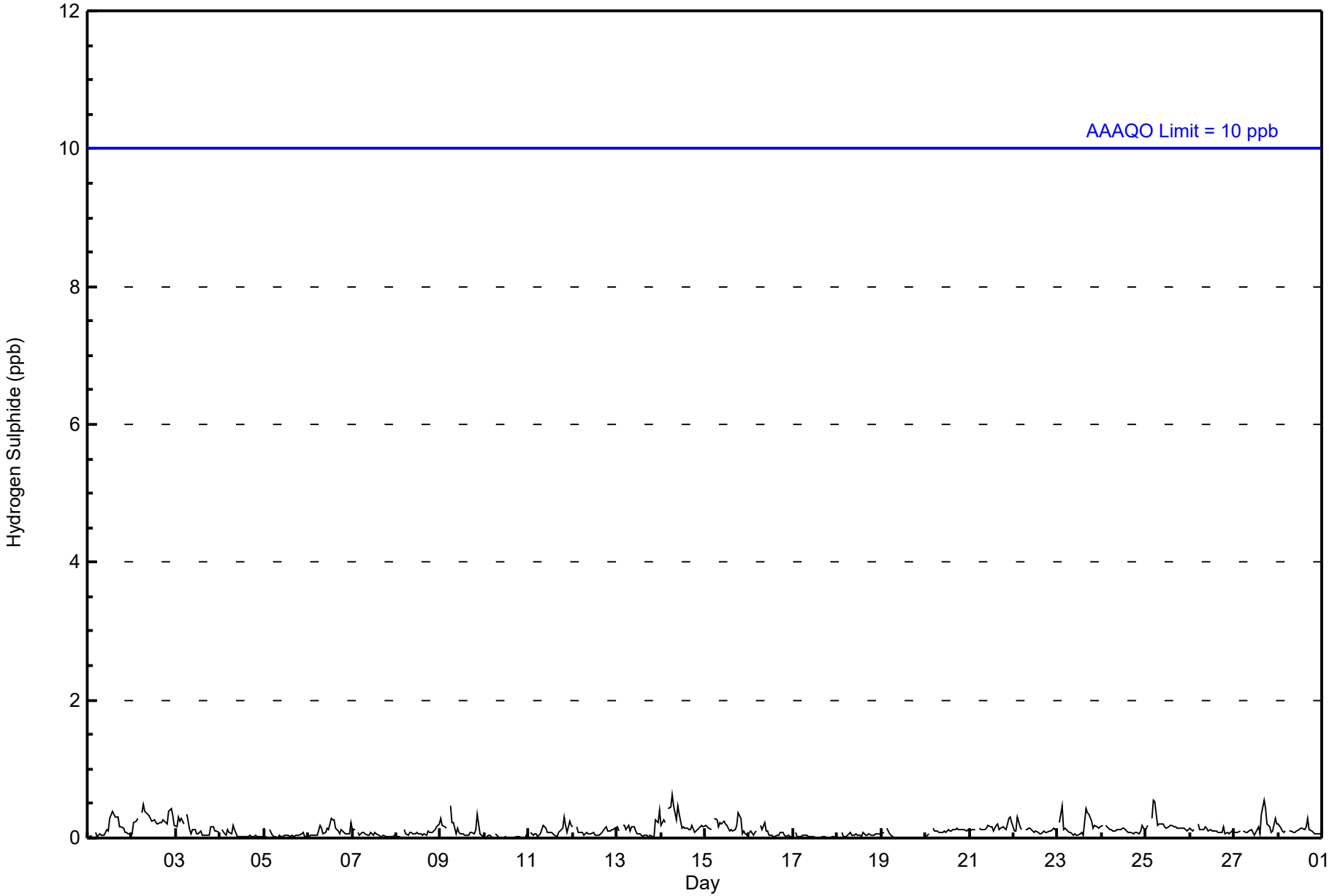
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H2S) - ppb

Jackfish 1 - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	639	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: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H2S) - ppb

Jackfish 1 - February 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	22	13	11	4	5	7	23	80	60	74	44	23	44	87	86	38	621
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	22	13	11	4	5	7	23	80	60	74	44	23	44	87	86	38	621

Total Number of Valid Hours: 621

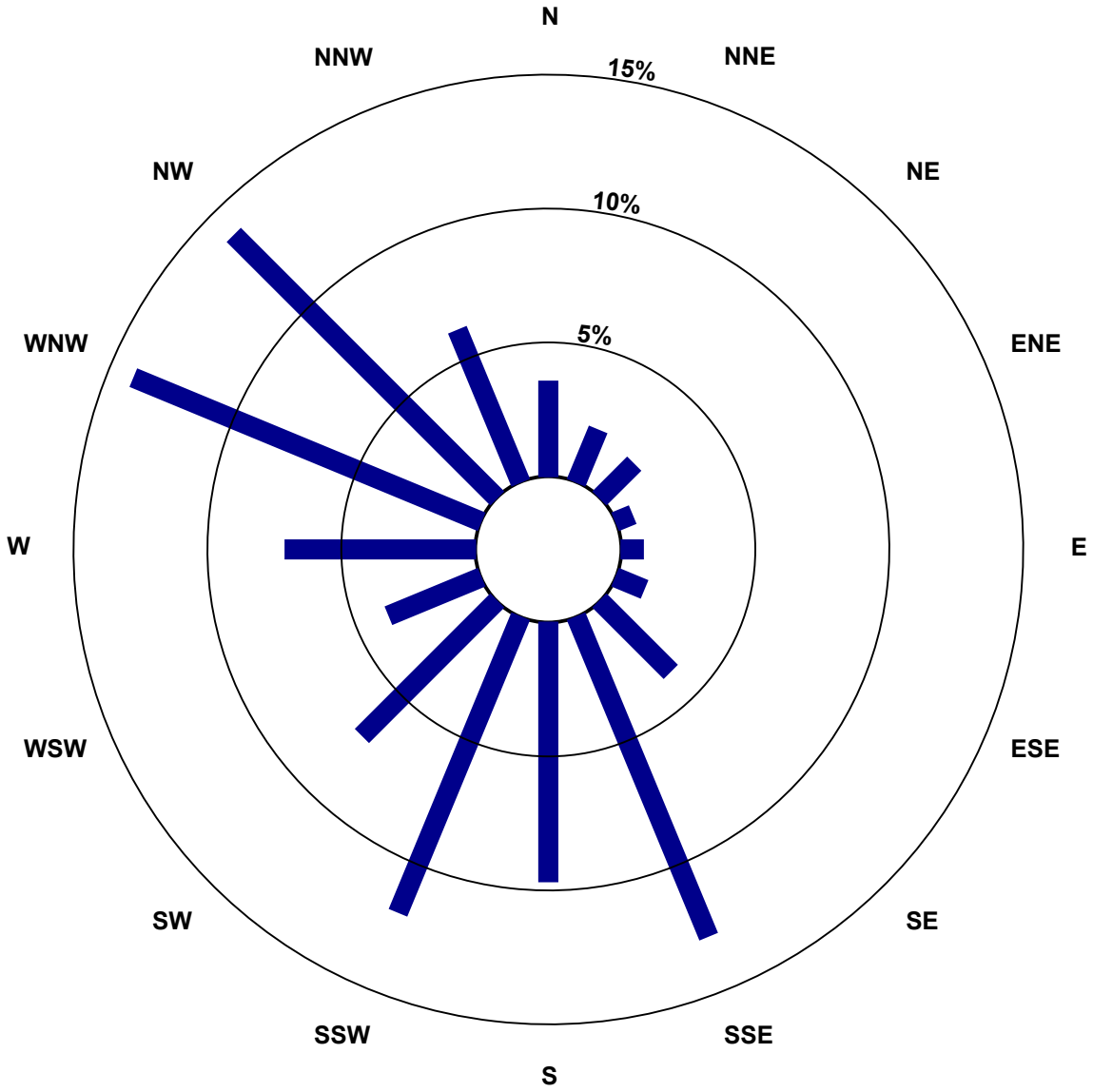
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Hydrogen Sulphide (H2S) - ppb

Jackfish 1



Classes (ppb)

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

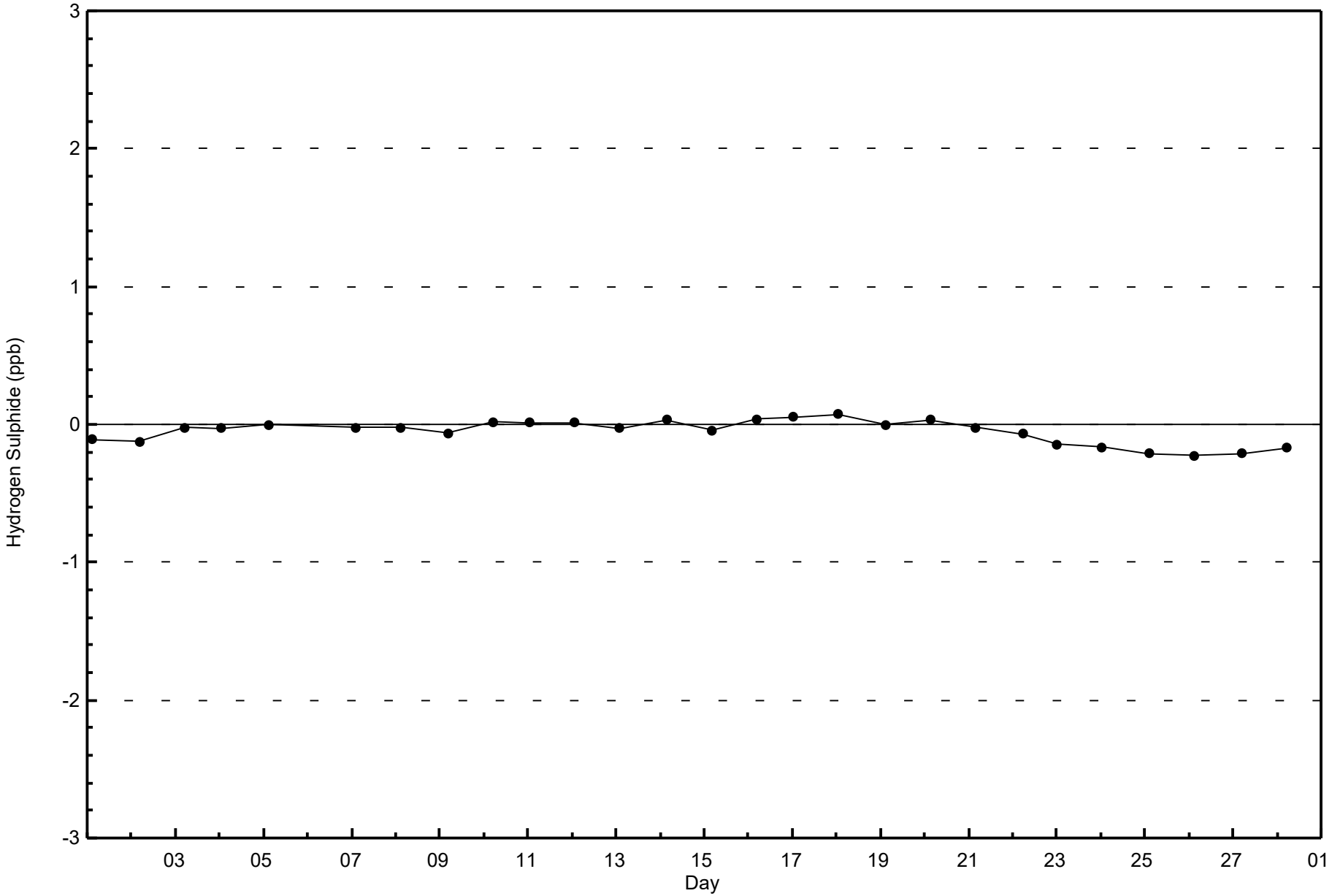
Total Number of Valid Hours: 621

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H2S) - ppb

Jackfish 1 - February 2025

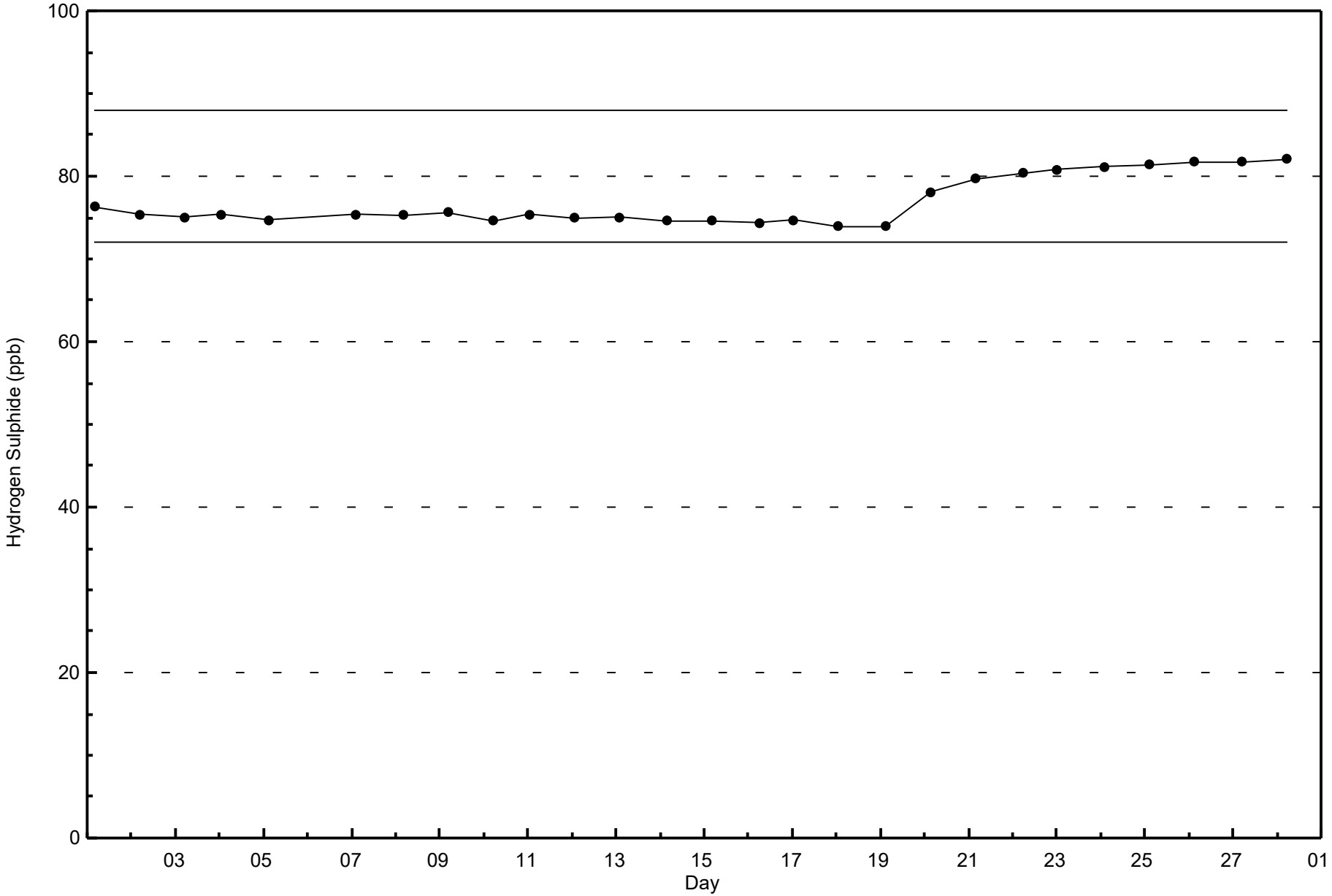


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H2S) - ppb

Jackfish 1 - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Jackfish 1 - February 2025

Maximum Value: 15.7 ppb on Feb 16 09:00

Maximum Daily Average: 2.0 ppb on Feb 2

Minimum Value: 0.0 ppb on Feb 1 02:00

Minimum Daily Average: 0.2 ppb on Feb 8

Maximum Diurnal Average: 2.0 ppb at hour 9

Minimum Diurnal Average: 0.0 ppb at hour 2

Monthly Average: 0.85 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.2 Q_3 = 1.0 P_{90} = 2.4 P_{99} = 7.6

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	Z	0.0	0.0	0.0	0.0	0.0	4.9	0.3	0.5	0.1	1.9	0.7	4.0	6.2	7.1	5.2	2.6	0.6	2.5	3.0	1.1	0.1	0.0	0.0	1.8	7.1
2-Feb	0.7	Z	2.1	2.6	4.4	4.1	5.9	3.1	1.9	2.6	3.2	2.0	3.1	3.2	3.0	2.8	0.9	0.2	0.1	0.0	0.0	0.0	0.0	0.4	2.0	5.9
3-Feb	1.1	0.0	Z	0.1	0.2	0.2	13.2	1.2	0.0	0.4	0.7	1.4	2.4	1.3	0.9	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	13.2
4-Feb	0.0	0.0	0.0	Z	0.1	0.0	2.1	3.4	7.4	0.4	0.5	0.7	0.8	0.3	0.8	0.5	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.8	7.4
5-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.2	0.6	0.4	1.0	1.7	0.8	1.6	0.6	0.5	0.1	0.5	0.5	0.0	0.0	0.1	0.0	0.0	0.4	1.7
6-Feb	0.1	0.0	0.3	0.0	0.0	0.0	0.2	0.3	0.6	1.7	5.4	4.2	8.6	4.0	5.2	2.2	0.6	0.1	0.1	0.0	0.0	0.0	0.0	0.0	1.4	8.6
7-Feb	0.1	0.4	0.1	0.0	0.1	Z	0.0	0.2	2.2	0.4	0.7	0.2	1.1	0.7	0.9	0.3	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.4	2.2
8-Feb	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.5	0.5	0.4	0.3	0.6	1.1	0.2	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.2	1.1
9-Feb	3.2	Z	0.0	0.0	0.0	0.1	1.5	1.8	0.4	1.6	0.5	0.7	1.5	0.4	0.7	0.7	2.0	0.5	0.1	0.0	0.4	0.1	0.0	0.0	0.7	3.2
10-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.6	1.5	0.4	0.5	0.8	1.4	0.8	1.2	0.3	0.3	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.2	0.4	1.5
11-Feb	0.0	0.0	0.0	Z	0.0	0.0	1.9	0.6	1.2	2.1	2.5	2.6	2.7	2.5	0.8	1.0	0.4	0.6	0.0	0.0	0.1	0.0	0.2	0.1	0.8	2.7
12-Feb	0.1	0.0	0.0	0.0	Z	0.1	1.0	1.2	1.1	1.0	1.8	3.8	1.8	1.1	0.7	0.4	2.8	4.0	1.9	0.1	0.0	0.0	0.0	0.0	1.0	4.0
13-Feb	0.0	0.0	0.0	0.0	0.0	Z	7.8	2.0	3.5	0.8	1.9	0.9	0.6	1.3	0.5	0.4	0.4	0.1	1.2	0.0	0.0	0.0	0.0	0.0	0.9	7.8
14-Feb	Z	0.0	0.0	0.0	0.0	0.0	8.0	0.8	5.4	6.3	2.9	1.9	3.9	3.9	4.2	1.9	0.6	0.2	0.0	0.0	0.0	0.2	0.1	0.0	1.8	8.0
15-Feb	0.0	Z	0.0	0.0	0.0	0.0	0.4	0.1	5.8	4.7	4.4	2.6	2.6	1.7	1.7	1.6	1.0	0.6	0.1	0.0	0.0	0.0	0.0	0.0	1.2	5.8
16-Feb	0.1	0.0	Z	0.0	0.1	1.0	3.8	0.9	15.7	5.9	5.4	2.1	1.3	1.3	0.8	2.0	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.8	15.7
17-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.2	0.6	1.7	1.6	1.8	1.0	1.6	0.7	0.9	1.5	1.6	0.4	0.0	0.0	0.1	0.1	0.1	0.0	0.6	1.8
18-Feb	0.1	0.1	0.0	0.0	Z	0.0	1.9	4.1	1.4	0.5	1.9	0.6	1.5	1.1	0.5	0.4	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	4.1
19-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.8	0.2	1.2	0.6	1.3	0.5	1.0	1.6	1.1	1.3	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.6
20-Feb	Z	0.0	0.0	0.0	0.0	0.0	0.7	1.2	0.9	1.6	0.8	1.7	1.3	1.3	0.8	1.1	0.7	0.8	0.1	0.0	0.0	0.0	0.0	0.0	0.6	1.7
21-Feb	0.0	Z	0.0	0.1	0.1	0.1	0.2	0.2	1.0	1.5	1.4	1.8	2.8	1.9	2.5	1.0	0.2	2.3	0.1	0.1	0.1	0.1	0.1	0.1	0.8	2.8
22-Feb	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.1	1.3	0.9	1.8	0.8	1.3	3.0	0.8	1.4	2.2	0.6	0.1	0.1	0.1	0.1	0.1	0.1	0.7	3.0
23-Feb	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.5	0.3	1.1	1.1	0.6	0.2	0.4	0.5	6.9	4.1	0.5	0.0	0.1	0.0	0.0	0.0	0.0	0.7	6.9
24-Feb	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.6	0.8	0.9	1.0	1.1	1.0	0.5	0.7	0.8	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.3	1.1
25-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.3	0.7	0.5	C	C	C	C	C	1.3	1.0	1.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.4
26-Feb	Z	0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.5	0.4	0.6	0.7	0.5	1.4	0.6	0.2	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.3	1.4
27-Feb	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.4	0.2	0.3	0.9	0.6	3.4	3.8	1.0	7.8	8.4	1.5	0.1	0.1	0.1	0.0	0.1	0.1	1.3	8.4
28-Feb	0.0	0.0	Z	0.0	0.1	0.1	0.4	0.6	0.6	1.4	1.0	1.4	3.6	1.2	2.1	1.0	0.6	0.3	0.1	0.1	0.1	0.1	0.1	0.0	0.7	3.6
	0.3	0.0	0.1	0.1	0.2	0.3	2.0	1.0	2.0	1.5	1.8	1.4	2.0	1.7	1.5	1.6	1.2	0.5	0.3	0.1	0.1	0.0	0.1	0.0	Diurnal Average	
	3.2	0.4	2.1	2.6	4.4	4.1	13.2	4.1	15.7	6.3	5.4	4.2	8.6	6.2	7.1	7.8	8.4	4.0	2.5	3.0	1.1	0.2	1.0	0.4	Diurnal Maximum	

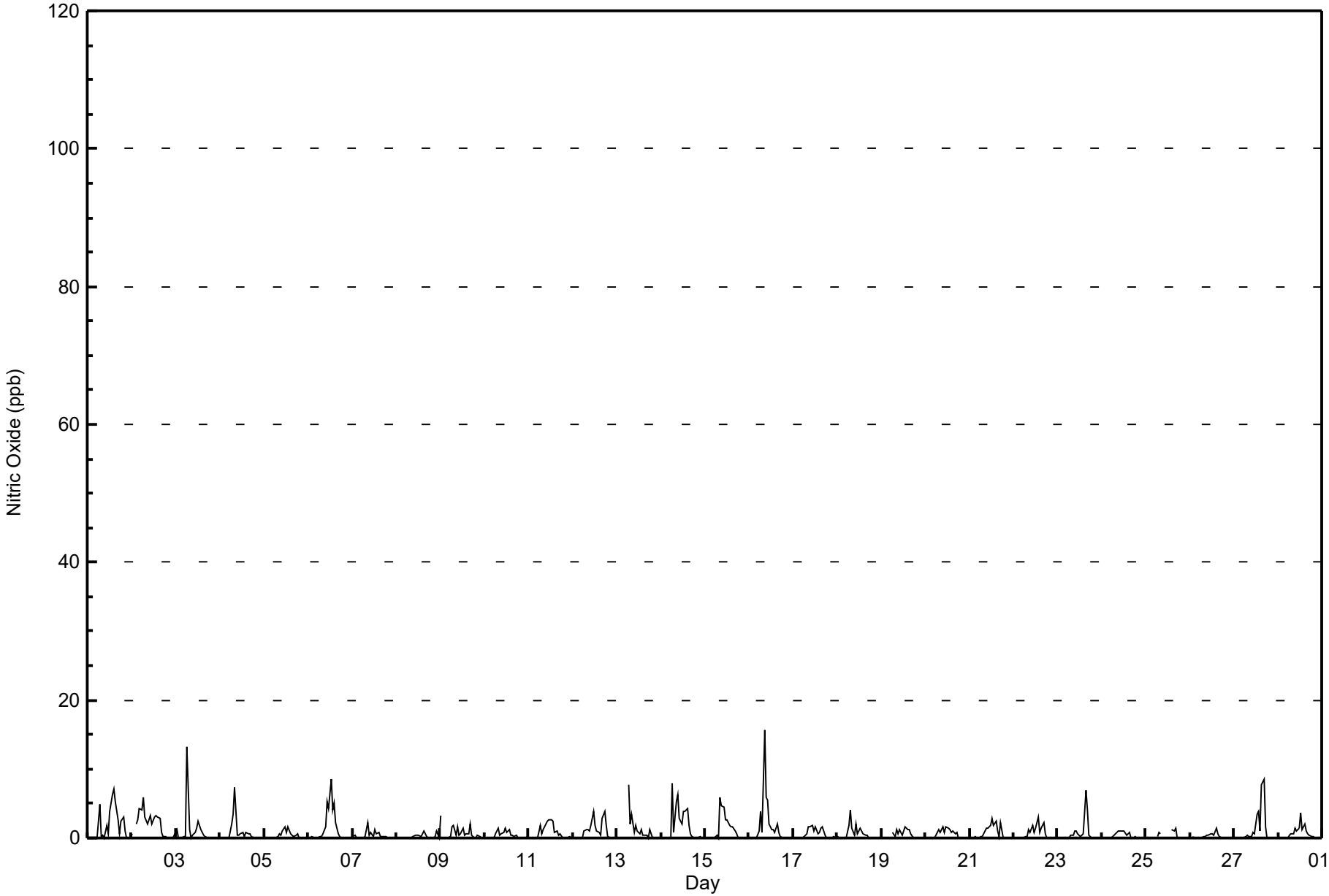
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Jackfish 1 - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	640	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: 640

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Jackfish 1 - February 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	20	13	9	4	3	6	22	84	63	71	47	22	45	89	85	39	622
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	20	13	9	4	3	6	22	84	63	71	47	22	45	89	85	39	622

Total Number of Valid Hours: 622

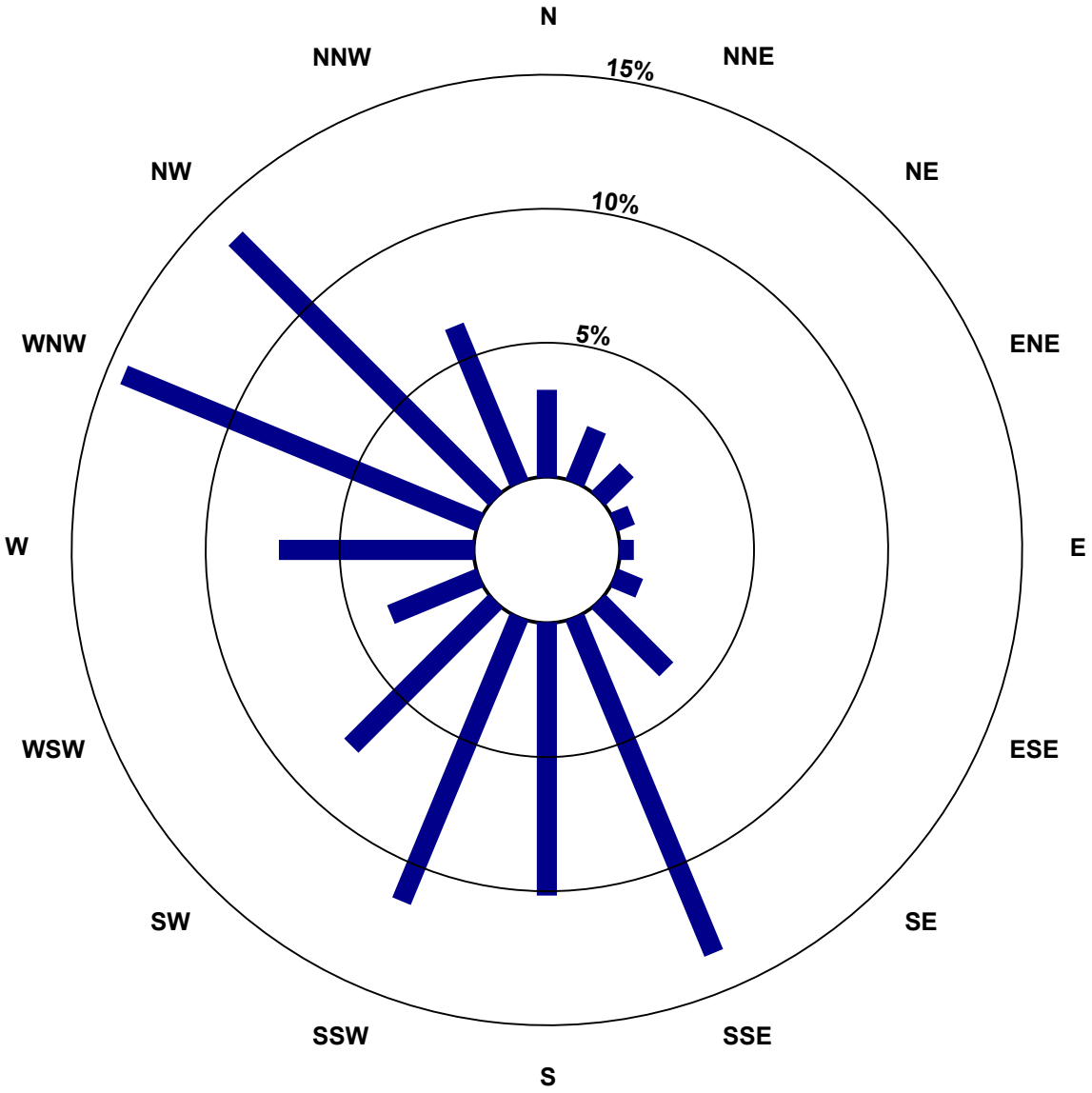
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitric Oxide (NO) - ppb

Jackfish 1



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

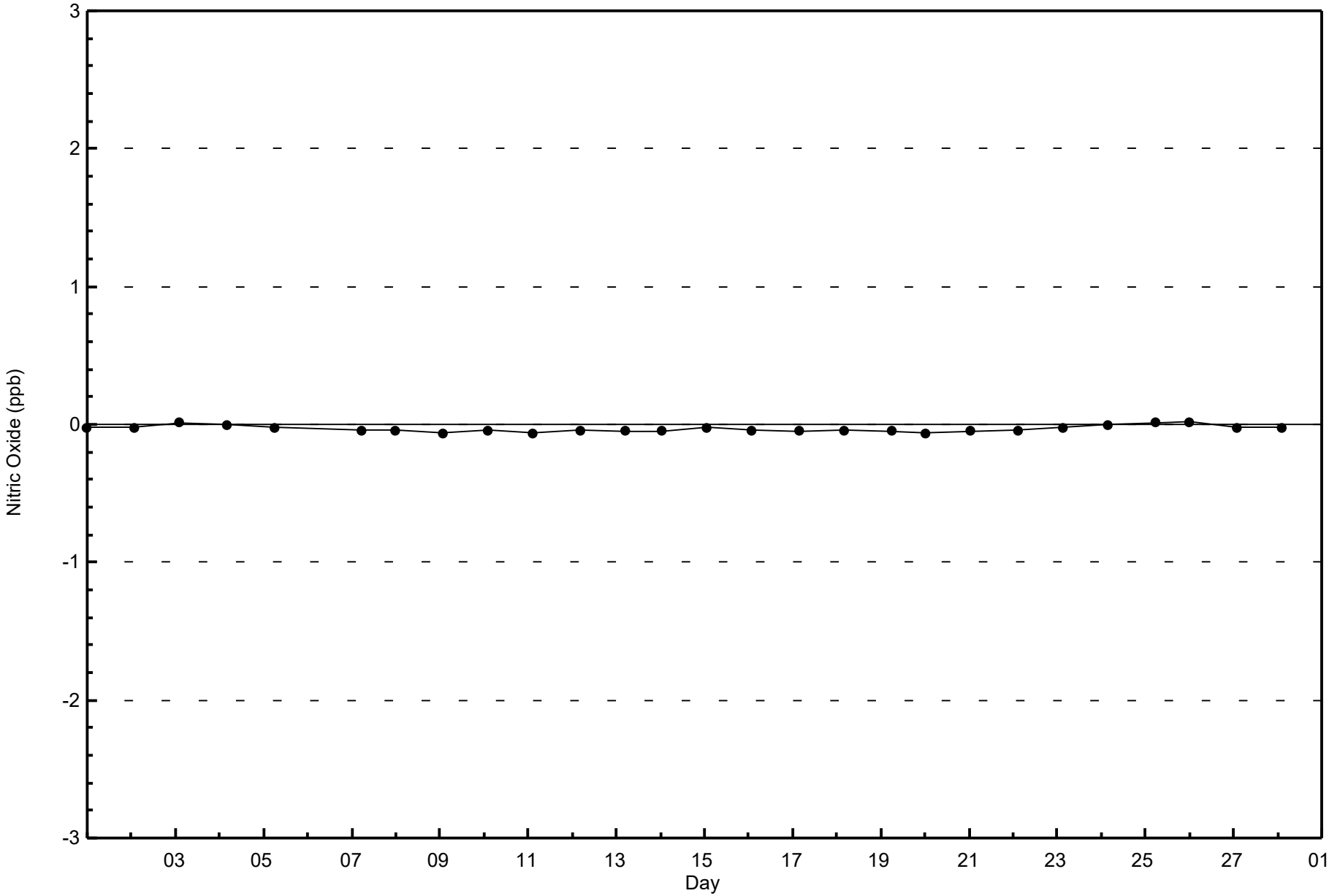
Total Number of Valid Hours: 622

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Jackfish 1 - February 2025

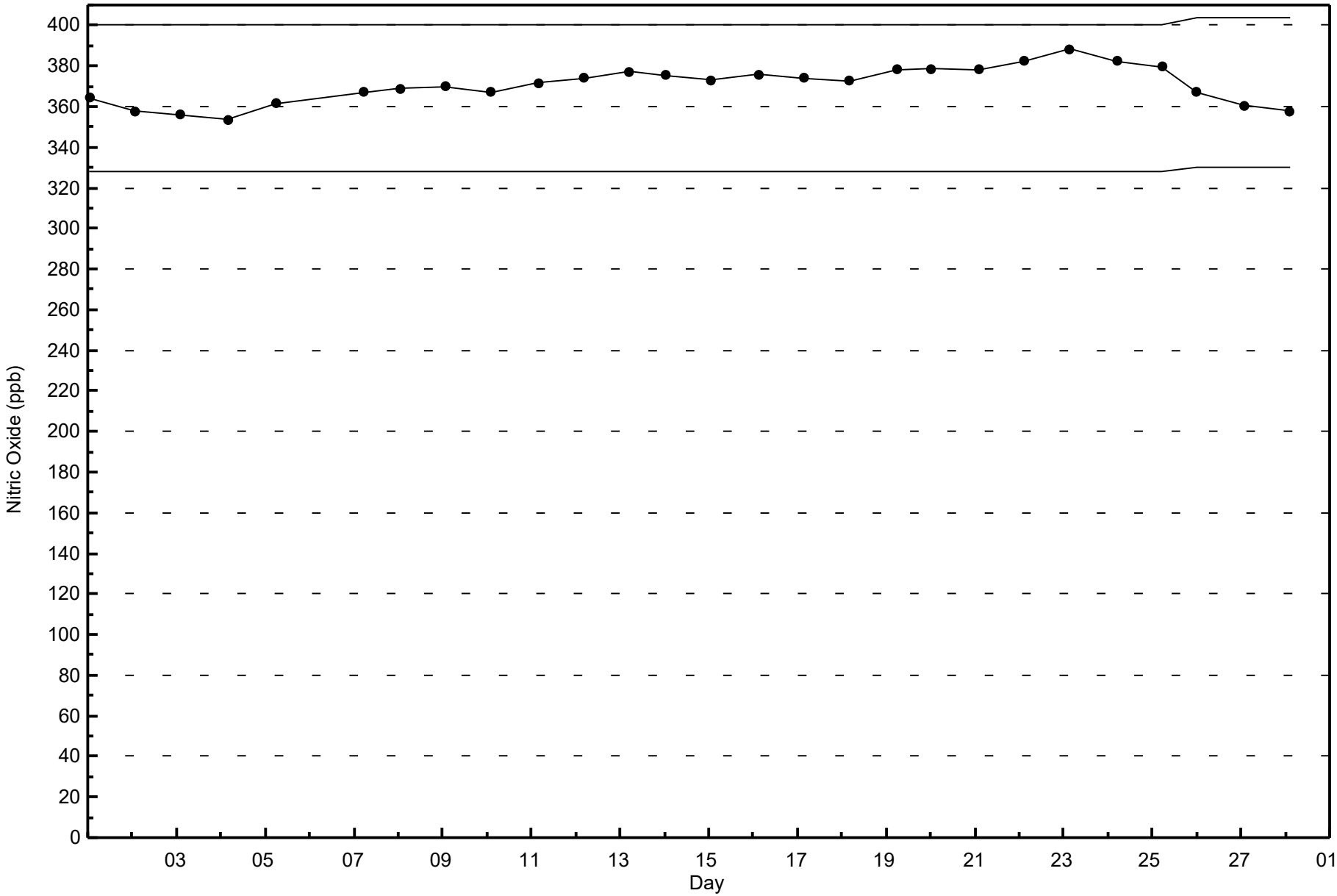


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Jackfish 1 - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Jackfish 1 - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 15.9 ppb on Feb 16 06:00 Maximum Daily Average: 7.8 ppb on Feb 14

Minimum Value: 0.1 ppb on Feb 1 03:00 Minimum Daily Average: 1.8 ppb on Feb 26
Maximum Diurnal Average: 5.6 ppb at hour 8 Minimum Diurnal Average: 2.7 ppb at hour 12
Monthly Average: 3.67 ppb Percentiles: P_1 = 0.6 P_{10} = 1.4 Q_1 = 1.9 Median = 2.9 Q_3 = 4.6 P_{90} = 6.9 P_{99} = 12.9

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	Z	0.2	0.1	0.4	1.1	0.7	3.6	1.6	1.8	1.5	2.0	2.3	7.1	9.3	9.4	8.6	7.3	4.6	7.1	6.5	3.5	0.6	0.2	0.4	3.5	9.4
2-Feb	2.5	Z	6.1	6.0	8.6	8.9	9.4	6.3	5.9	4.6	4.6	3.3	4.1	4.2	4.7	5.8	5.8	6.8	5.8	5.1	4.4	3.9	2.1	3.5	5.3	9.4
3-Feb	6.1	3.1	Z	4.3	6.6	8.1	13.7	8.2	2.2	2.1	1.8	2.3	3.3	2.8	2.4	1.5	1.9	1.2	1.3	2.5	5.0	1.4	2.9	2.7	3.8	13.7
4-Feb	1.9	1.8	1.9	Z	3.2	2.6	4.0	14.2	7.6	1.8	1.4	1.5	1.4	0.8	1.4	2.0	2.8	2.1	2.4	1.5	1.7	1.7	1.9	1.6	2.7	14.2
5-Feb	1.5	1.5	2.1	2.3	1.9	Z	3.2	3.0	4.6	2.0	2.7	3.1	2.0	2.2	2.1	2.2	1.9	3.5	4.2	3.0	2.6	3.2	2.3	2.5	2.6	4.6
6-Feb	2.8	2.6	3.6	2.4	2.1	2.3	4.9	4.2	4.1	5.6	10.0	7.7	13.3	8.0	10.2	4.6	4.1	4.6	4.6	3.4	2.3	3.2	1.9	1.8	4.8	13.3
7-Feb	1.9	2.2	1.6	1.1	2.1	Z	1.8	2.6	2.8	2.2	2.4	0.8	2.4	1.8	2.0	1.3	1.6	1.7	2.0	0.9	1.4	2.0	2.3	2.2	1.9	2.8
8-Feb	Z	1.5	1.4	1.4	1.2	1.0	1.5	1.6	1.7	1.3	1.8	1.5	1.4	1.1	1.8	3.1	2.1	2.2	1.9	1.6	1.8	3.4	5.4	1.9	1.9	5.4
9-Feb	7.5	Z	3.7	3.1	4.6	4.8	6.8	6.1	2.4	3.4	0.9	1.2	1.7	1.0	1.3	2.4	5.1	5.9	4.1	4.4	7.3	5.7	4.8	2.7	4.0	7.5
10-Feb	1.6	1.6	Z	2.8	2.2	2.0	3.0	4.2	2.4	1.8	1.9	2.2	1.7	2.2	1.1	1.2	1.9	1.7	1.3	1.7	2.3	2.4	2.2	2.8	2.1	4.2
11-Feb	1.9	2.5	2.8	Z	4.1	3.3	6.4	8.6	6.9	5.8	4.6	3.8	4.1	4.1	1.8	2.5	3.7	6.8	4.4	4.5	6.7	5.9	9.0	12.1	5.1	12.1
12-Feb	9.4	7.4	5.4	6.4	Z	6.1	6.8	7.3	7.5	4.2	3.8	4.6	2.7	2.8	2.2	2.5	6.5	11.3	7.6	4.7	3.6	3.1	2.9	2.3	5.3	11.3
13-Feb	2.1	3.4	3.8	3.6	4.1	Z	9.3	7.7	6.6	2.8	2.8	1.8	1.3	2.0	1.3	1.2	1.7	1.1	6.4	2.0	3.5	2.9	2.6	4.2	3.4	9.3
14-Feb	Z	9.3	12.2	11.4	10.8	9.4	12.5	14.4	13.0	8.6	4.1	2.9	4.5	5.3	6.3	4.5	3.7	4.6	4.9	5.5	6.7	10.1	7.7	6.4	7.8	14.4
15-Feb	7.6	Z	4.7	4.7	4.7	4.3	7.1	5.0	9.7	7.2	6.0	4.1	3.9	2.4	2.9	2.1	4.2	3.6	3.2	3.9	2.6	2.6	4.1	2.7	4.5	9.7
16-Feb	9.6	10.7	Z	6.1	10.6	15.9	12.7	9.7	11.2	8.0	6.8	2.9	1.9	2.0	1.8	3.2	3.4	3.5	6.3	3.6	2.7	3.2	2.9	2.4	6.1	15.9
17-Feb	2.6	3.8	3.0	Z	3.9	3.8	7.0	5.2	4.5	3.5	2.6	1.6	1.9	1.3	1.7	2.2	5.0	3.1	1.2	2.7	4.2	4.5	4.7	3.2	3.4	7.0
18-Feb	6.6	4.1	2.0	1.9	Z	6.9	6.8	8.9	4.4	1.2	2.1	1.1	2.0	1.7	1.3	1.2	1.6	1.1	1.5	1.6	2.5	3.6	2.8	3.3	3.1	8.9
19-Feb	3.3	3.0	2.5	3.4	3.6	Z	4.8	3.7	3.4	2.3	1.9	1.4	1.5	2.4	2.1	2.8	2.5	1.5	2.3	2.8	2.2	1.3	1.8	2.7	2.6	4.8
20-Feb	Z	3.3	3.2	3.3	3.0	2.6	4.6	5.0	4.4	4.4	2.9	3.7	3.3	3.1	2.8	3.9	4.4	5.2	4.4	4.2	4.3	4.3	4.0	3.9	3.8	5.2
21-Feb	3.9	Z	4.0	4.4	5.1	4.9	5.6	5.5	5.5	5.5	4.5	4.5	5.9	4.6	6.6	4.5	2.3	4.9	2.8	2.7	2.2	2.2	1.7	1.6	4.1	6.6
22-Feb	1.5	1.5	Z	2.2	4.0	3.6	5.0	5.4	6.6	4.9	3.9	3.5	4.8	5.2	3.0	5.4	6.7	4.7	4.7	4.3	3.7	3.7	4.2	4.1	4.2	6.7
23-Feb	4.4	3.9	3.8	Z	4.0	2.9	2.7	3.2	2.1	2.2	1.6	1.8	1.4	1.9	2.6	11.8	8.6	4.2	3.1	3.0	3.2	3.3	3.3	3.5	3.6	11.8
24-Feb	3.7	3.3	2.8	2.2	Z	2.3	2.1	2.9	1.7	2.5	3.0	2.3	2.3	1.6	2.2	2.0	1.3	2.1	5.9	2.4	1.3	1.6	2.0	1.3	2.4	5.9
25-Feb	1.7	1.6	2.1	4.5	5.1	Z	4.8	3.6	3.4	C	C	C	C	C	2.8	1.8	2.5	2.5	1.2	0.9	1.7	1.7	1.1	1.4	2.5	5.1
26-Feb	Z	2.5	1.5	1.6	1.8	1.8	1.4	3.5	1.8	2.2	1.5	1.3	1.8	1.3	3.7	2.6	2.2	1.4	2.2	1.1	1.2	0.9	1.0	1.0	1.8	3.7
27-Feb	1.0	Z	1.2	1.7	1.4	1.9	3.2	3.9	2.6	3.6	4.3	2.8	7.9	8.1	3.2	12.6	15.8	7.0	1.0	0.9	0.6	1.2	3.2	2.4	4.0	15.8
28-Feb	2.0	2.0	Z	1.4	2.1	1.1	1.6	1.8	1.4	2.1	2.3	2.6	3.5	2.4	3.8	3.5	3.4	4.0	6.4	5.0	1.2	1.0	1.1	2.0	2.5	6.4
	3.8	3.3	3.3	3.4	4.1	4.4	5.6	5.6	4.7	3.6	3.3	2.7	3.4	3.2	3.2	3.7	4.1	3.8	3.7	3.1	3.1	3.0	3.1	3.0	Diurnal Average	
	9.6	10.7	12.2	11.4	10.8	15.9	13.7	14.4	13.0	8.6	10.0	7.7	13.3	9.3	10.2	12.6	15.8	11.3	7.6	6.5	7.3	10.1	9.0	12.1	Diurnal Maximum	

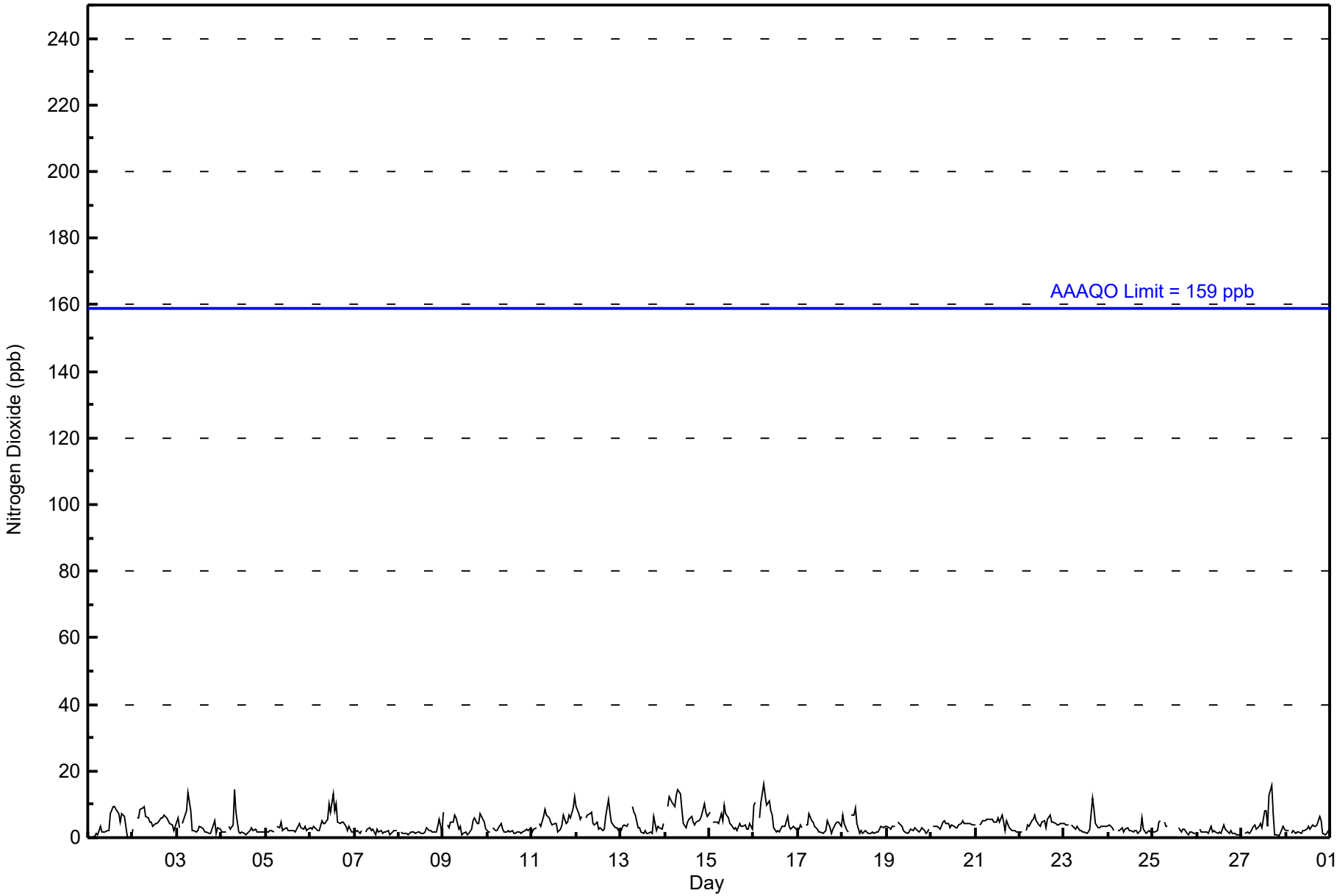
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Jackfish 1 - February 2025



Nitrogen Dioxide (NO_2) - ppb
Jackfish 1 - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	640	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: 640

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Jackfish 1 - February 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	20	13	9	4	3	6	22	84	63	71	47	22	45	89	85	39	622
21 - 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	20	13	9	4	3	6	22	84	63	71	47	22	45	89	85	39	622

Total Number of Valid Hours: 622

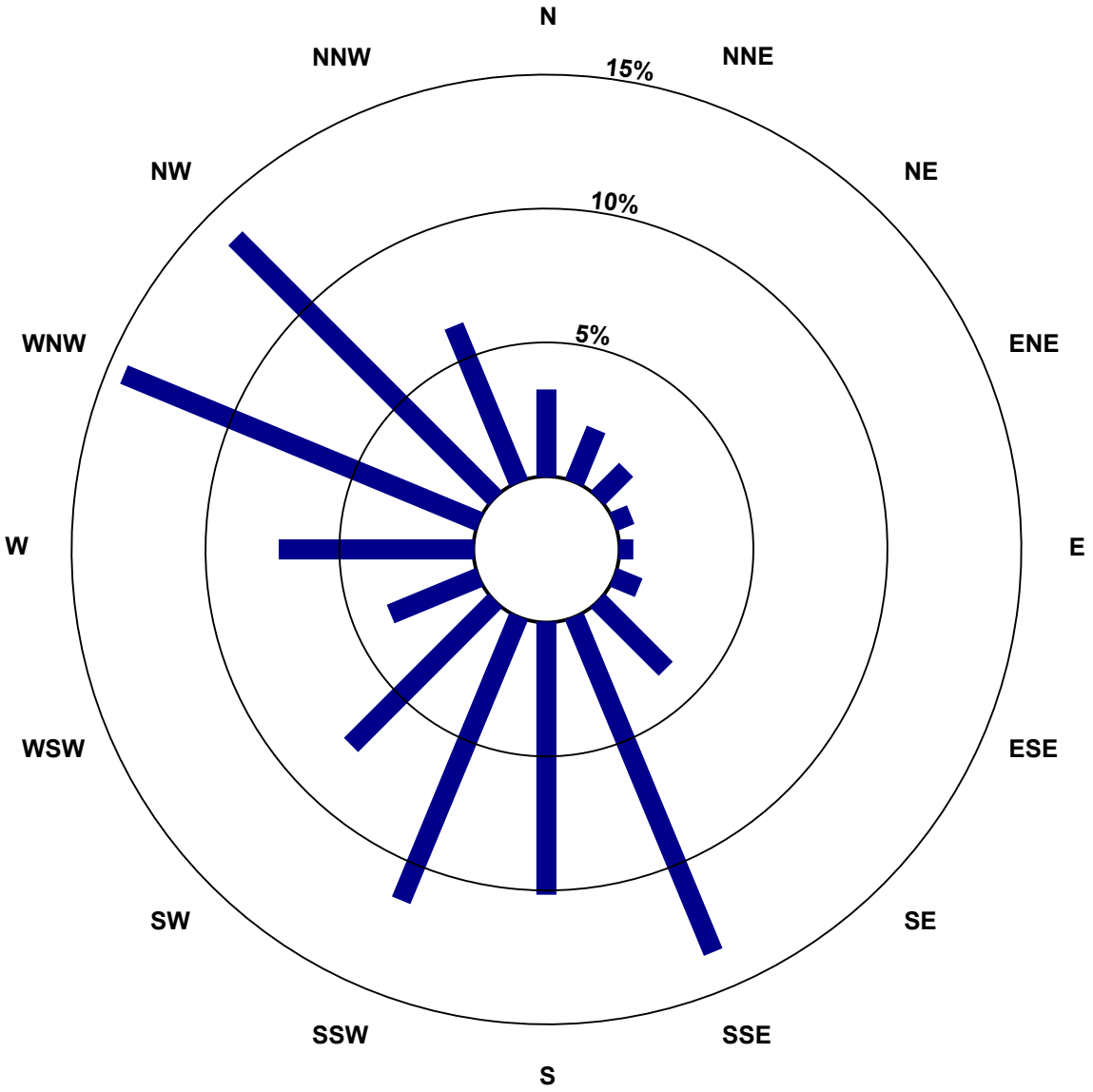
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Dioxide (NO_2) - ppb

Jackfish 1



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

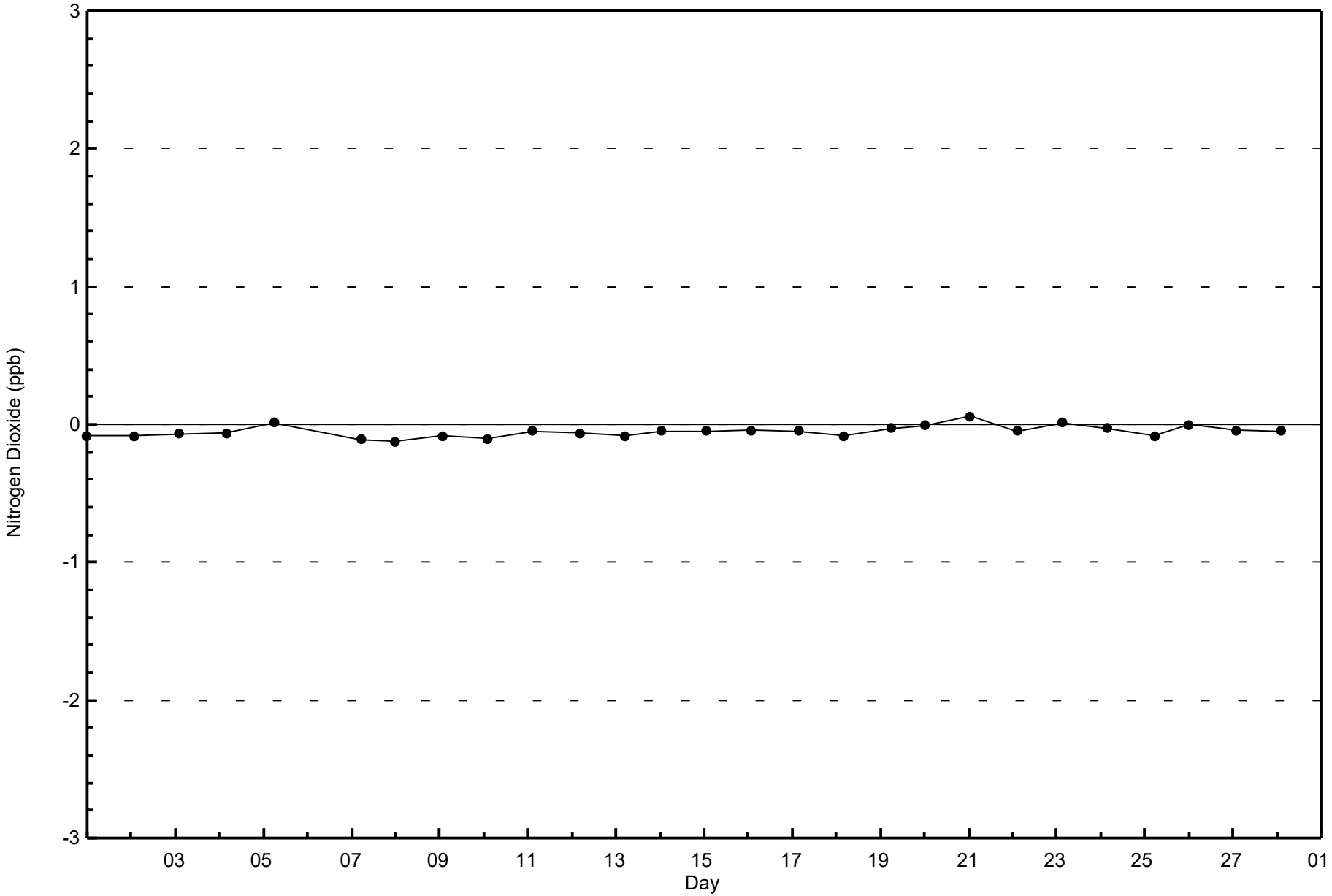
Total Number of Valid Hours: 622

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Jackfish 1 - February 2025

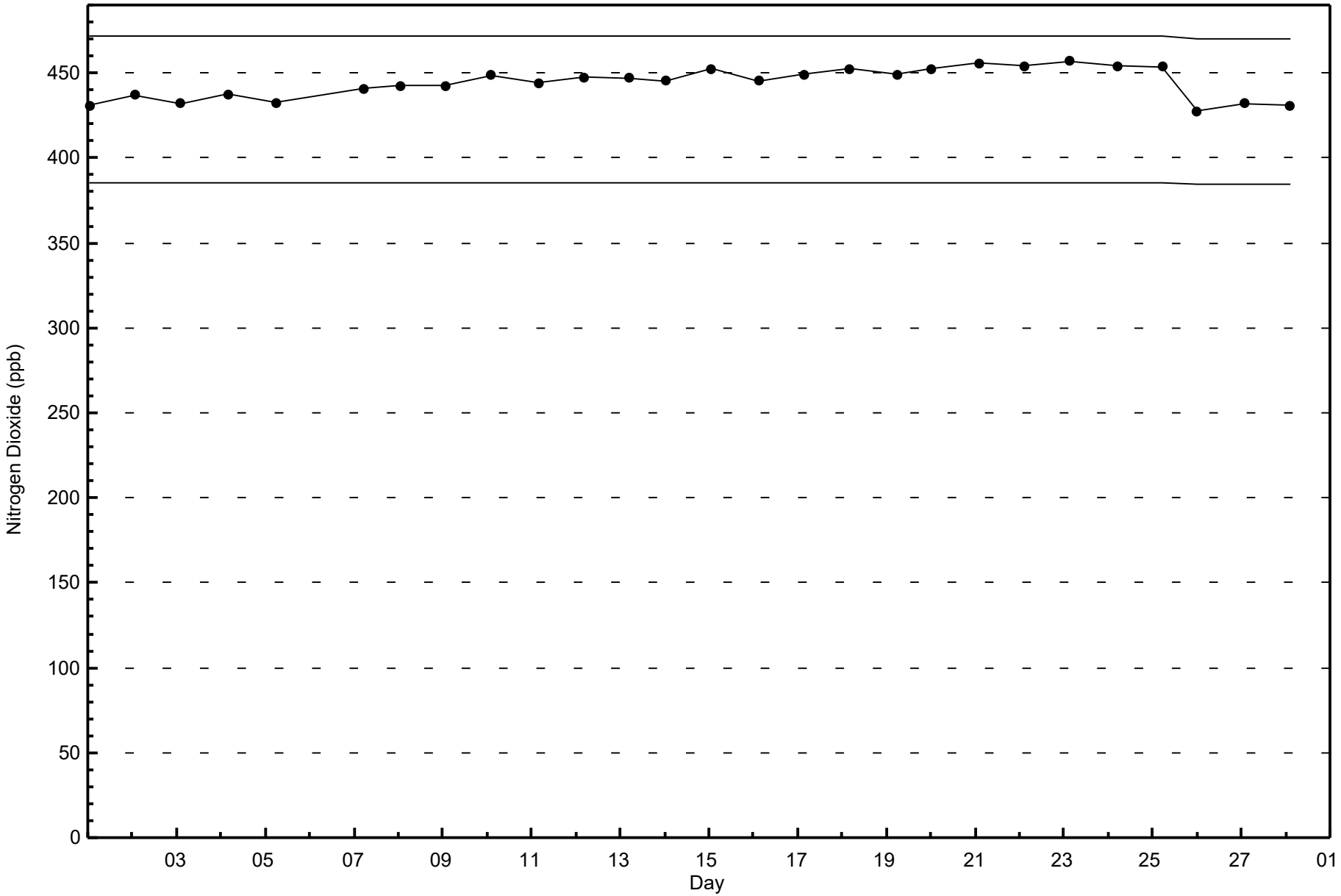


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Jackfish 1 - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Jackfish 1 - February 2025

Maximum Value: 26.9 ppb on Feb 16 09:00

Maximum Daily Average: 9.5 ppb on Feb 14

Minimum Value: 0.1 ppb on Feb 1 03:00

Minimum Daily Average: 2.0 ppb on Feb 26

Maximum Diurnal Average: 7.6 ppb at hour 7

Minimum Diurnal Average: 3.0 ppb at hour 24

Monthly Average: 4.53 ppb

Percentiles: P_1 = 0.7 P_{10} = 1.6 Q_1 = 2.2 Median = 3.4 Q_3 = 5.3 P_{90} = 8.7 P_{99} = 18.6

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	Z	0.2	0.1	0.4	1.1	0.7	8.5	1.9	2.3	1.6	3.9	3.0	11.1	15.5	16.5	13.8	9.9	5.2	9.6	9.5	4.6	0.7	0.2	0.4	5.3	16.5
2-Feb	3.2	Z	8.2	8.6	13.0	13.0	15.3	9.4	7.8	7.2	7.8	5.3	7.2	7.4	7.7	8.6	6.7	7.0	5.9	5.1	4.4	3.9	2.1	3.9	7.3	15.3
3-Feb	7.2	3.1	Z	4.4	6.8	8.3	26.9	9.4	2.2	2.5	2.5	3.7	5.7	4.1	3.3	1.9	2.1	1.2	1.3	2.5	5.0	1.4	2.9	2.7	4.8	26.9
4-Feb	1.9	1.8	1.9	Z	3.3	2.6	6.1	17.6	15.0	2.2	1.9	2.2	2.2	1.1	2.2	2.5	3.4	2.3	2.4	1.5	1.7	1.7	1.9	1.6	3.5	17.6
5-Feb	1.5	1.5	2.1	2.3	1.9	Z	3.2	3.2	5.2	2.4	3.7	4.8	2.8	3.8	2.7	2.7	2.0	4.0	4.7	3.0	2.6	3.3	2.3	2.5	3.0	5.2
6-Feb	2.9	2.6	3.9	2.4	2.1	2.3	5.1	4.5	4.7	7.3	15.4	11.9	21.9	12.0	15.4	6.8	4.7	4.7	4.7	3.4	2.3	3.2	1.9	1.8	6.2	21.9
7-Feb	2.0	2.6	1.7	1.1	2.2	Z	1.8	2.8	5.0	2.6	3.1	1.0	3.5	2.5	2.9	1.6	1.8	1.9	2.2	0.9	1.4	2.0	2.3	2.2	2.2	5.0
8-Feb	Z	1.5	1.4	1.4	1.2	1.0	1.5	1.6	1.8	1.4	2.3	2.0	1.8	1.4	2.4	4.2	2.3	2.2	1.9	1.6	1.8	3.5	6.4	1.9	2.1	6.4
9-Feb	10.7	Z	3.7	3.1	4.6	4.9	8.3	7.9	2.8	5.0	1.4	1.9	3.2	1.4	2.0	3.1	7.1	6.4	4.2	4.4	7.7	5.8	4.8	2.7	4.6	10.7
10-Feb	1.6	1.6	Z	2.8	2.2	2.0	3.6	5.7	2.8	2.3	2.7	3.6	2.5	3.4	1.4	1.5	2.2	2.0	1.4	1.7	2.3	2.4	2.2	3.0	2.5	5.7
11-Feb	1.9	2.5	2.8	Z	4.1	3.3	8.3	9.2	8.1	7.9	7.1	6.4	6.8	6.6	2.6	3.5	4.1	7.4	4.4	4.5	6.8	5.9	9.2	12.2	5.9	12.2
12-Feb	9.5	7.4	5.4	6.4	Z	6.2	7.8	8.5	8.6	5.2	5.6	8.4	4.5	3.9	2.9	2.9	9.3	15.3	9.5	4.8	3.6	3.1	2.9	2.3	6.3	15.3
13-Feb	2.1	3.4	3.8	3.6	4.1	Z	17.1	9.7	10.1	3.6	4.7	2.7	1.9	3.3	1.8	1.6	2.1	1.2	7.6	2.0	3.5	2.9	2.6	4.2	4.3	17.1
14-Feb	Z	9.3	12.2	11.4	10.8	9.4	20.5	15.2	18.4	14.9	7.0	4.8	8.4	9.2	10.5	6.4	4.3	4.8	4.9	5.5	6.7	10.3	7.8	6.4	9.5	20.5
15-Feb	7.6	Z	4.7	4.7	4.7	4.3	7.5	5.1	15.5	11.9	10.4	6.7	6.5	4.1	4.6	3.7	5.2	4.2	3.3	3.9	2.6	2.6	4.1	2.7	5.7	15.5
16-Feb	9.7	10.7	Z	6.1	10.7	16.9	16.5	10.6	26.9	13.9	12.2	5.0	3.2	3.3	2.6	5.2	4.1	3.6	6.3	3.6	2.7	3.2	2.9	2.4	7.9	26.9
17-Feb	2.6	3.8	3.0	Z	3.9	3.8	7.2	5.8	6.2	5.1	4.4	2.6	3.5	2.0	2.6	3.7	6.6	3.5	1.2	2.7	4.3	4.6	4.8	3.2	4.0	7.2
18-Feb	6.7	4.2	2.0	1.9	Z	6.9	8.7	13.0	5.8	1.7	4.0	1.7	3.5	2.8	1.8	1.6	2.1	1.1	1.5	1.6	2.5	3.6	2.8	3.3	3.7	13.0
19-Feb	3.3	3.0	2.5	3.4	3.6	Z	5.6	3.9	4.6	2.9	3.2	1.9	2.5	4.0	3.2	4.1	3.0	1.6	2.3	2.8	2.2	1.3	1.8	2.7	3.0	5.6
20-Feb	Z	3.3	3.2	3.3	3.0	2.6	5.3	6.2	5.3	6.0	3.7	5.4	4.6	4.4	3.6	5.0	5.1	6.0	4.5	4.2	4.3	4.3	4.0	3.9	4.4	6.2
21-Feb	3.9	Z	4.0	4.5	5.2	5.0	5.8	5.7	6.5	7.0	5.9	6.3	8.7	6.5	9.1	5.5	2.5	7.2	2.9	2.8	2.3	2.3	1.8	1.7	4.9	9.1
22-Feb	1.6	1.6	Z	2.3	4.1	3.7	5.2	5.5	7.9	5.8	5.7	4.3	6.1	8.2	3.8	6.8	8.9	5.3	4.8	4.4	3.8	3.8	4.3	4.2	4.9	8.9
23-Feb	4.5	4.0	3.9	Z	4.1	3.0	2.8	3.7	2.4	3.3	2.7	2.4	1.6	2.3	3.1	18.7	12.7	4.7	3.1	3.1	3.2	3.3	3.3	3.5	4.3	18.7
24-Feb	3.7	3.3	2.8	2.2	Z	2.4	2.2	3.5	2.5	3.4	4.0	3.4	3.3	2.1	2.9	2.8	1.4	2.1	6.0	2.5	1.3	1.6	2.0	1.3	2.7	6.0
25-Feb	1.7	1.6	2.1	4.5	5.1	Z	5.1	4.3	3.9	C	C	C	C	C	4.1	2.8	3.9	2.6	1.2	0.9	1.7	1.7	1.1	1.4	2.8	5.1
26-Feb	Z	2.6	1.5	1.6	1.8	1.9	1.5	3.7	2.0	2.7	1.9	1.9	2.5	1.8	5.1	3.2	2.4	1.4	2.2	1.1	1.2	1.0	1.1	1.1	2.0	5.1
27-Feb	1.1	Z	1.3	1.8	1.5	2.0	3.3	4.3	2.8	3.9	5.2	3.4	11.3	11.9	4.2	20.4	24.2	8.5	1.1	1.0	0.7	1.2	3.3	2.5	5.3	24.2
28-Feb	2.0	2.0	Z	1.4	2.2	1.2	2.0	2.4	2.0	3.5	3.3	4.0	7.1	3.6	5.9	4.5	4.0	4.3	6.5	5.1	1.3	1.1	1.2	2.0	3.2	7.1
	4.0	3.4	3.4	3.6	4.3	4.7	7.6	6.6	6.8	5.1	5.0	4.1	5.5	4.9	4.7	5.3	5.3	4.4	4.0	3.2	3.2	3.1	3.1	3.0	Diurnal Average	
	10.7	10.7	12.2	11.4	13.0	16.9	26.9	17.6	26.9	14.9	15.4	11.9	21.9	15.5	16.5	20.4	24.2	15.3	9.6	9.5	7.7	10.3	9.2	12.2	Diurnal Maximum	

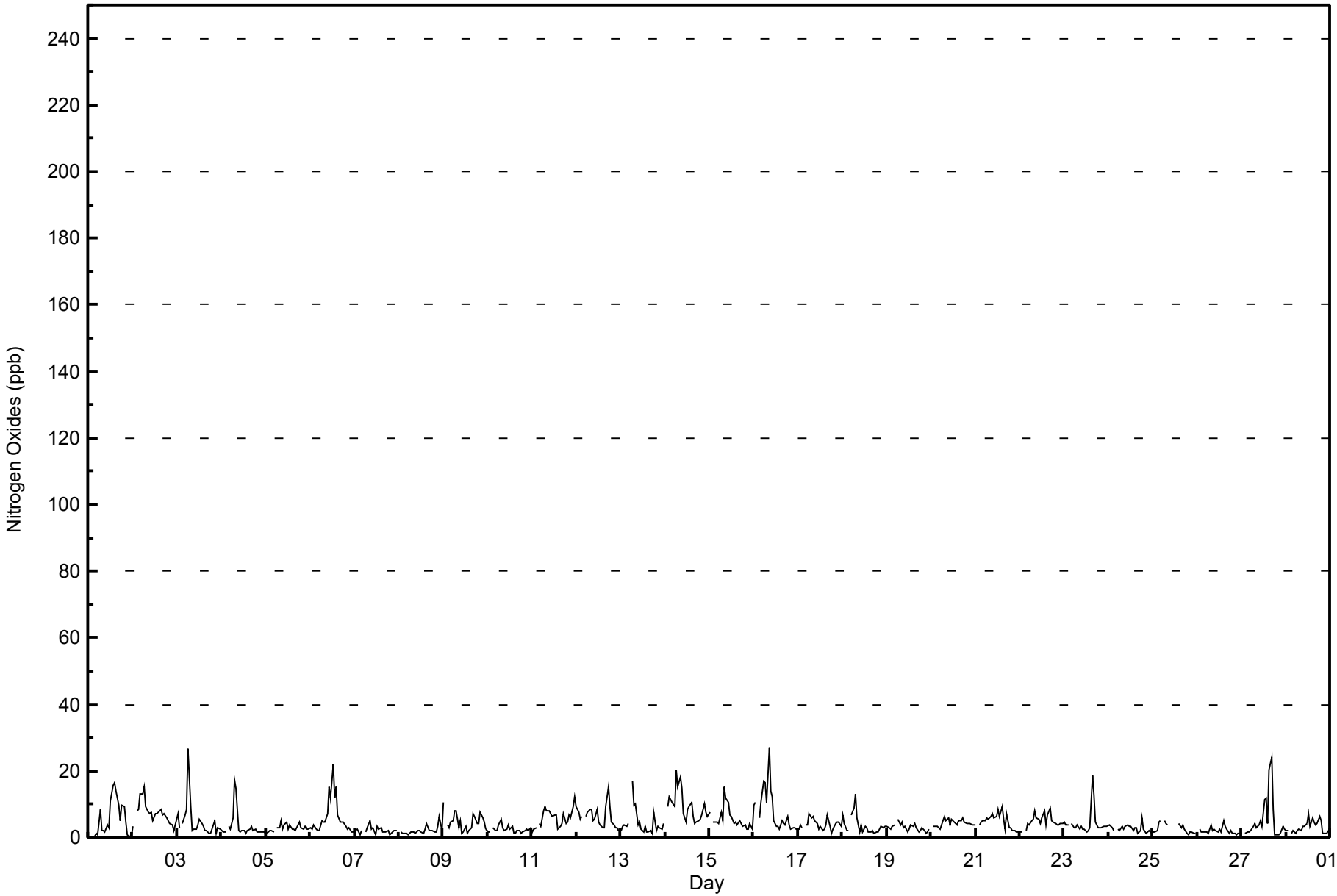
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Jackfish 1 - February 2025



Nitrogen Oxides (NO_X) - ppb

Jackfish 1 - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	636	99.38	99.38
21 - 40	4	0.63	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 640

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Jackfish 1 - February 2025

Concentration Ranges (ppb)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 20	20	13	9	4	3	6	22	84	62	71	47	22	44	87	85	39	618
21 - 40	0	0	0	0	0	0	0	0	1	0	0	0	1	2	0	0	4
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	20	13	9	4	3	6	22	84	63	71	47	22	45	89	85	39	622

Total Number of Valid Hours: 622

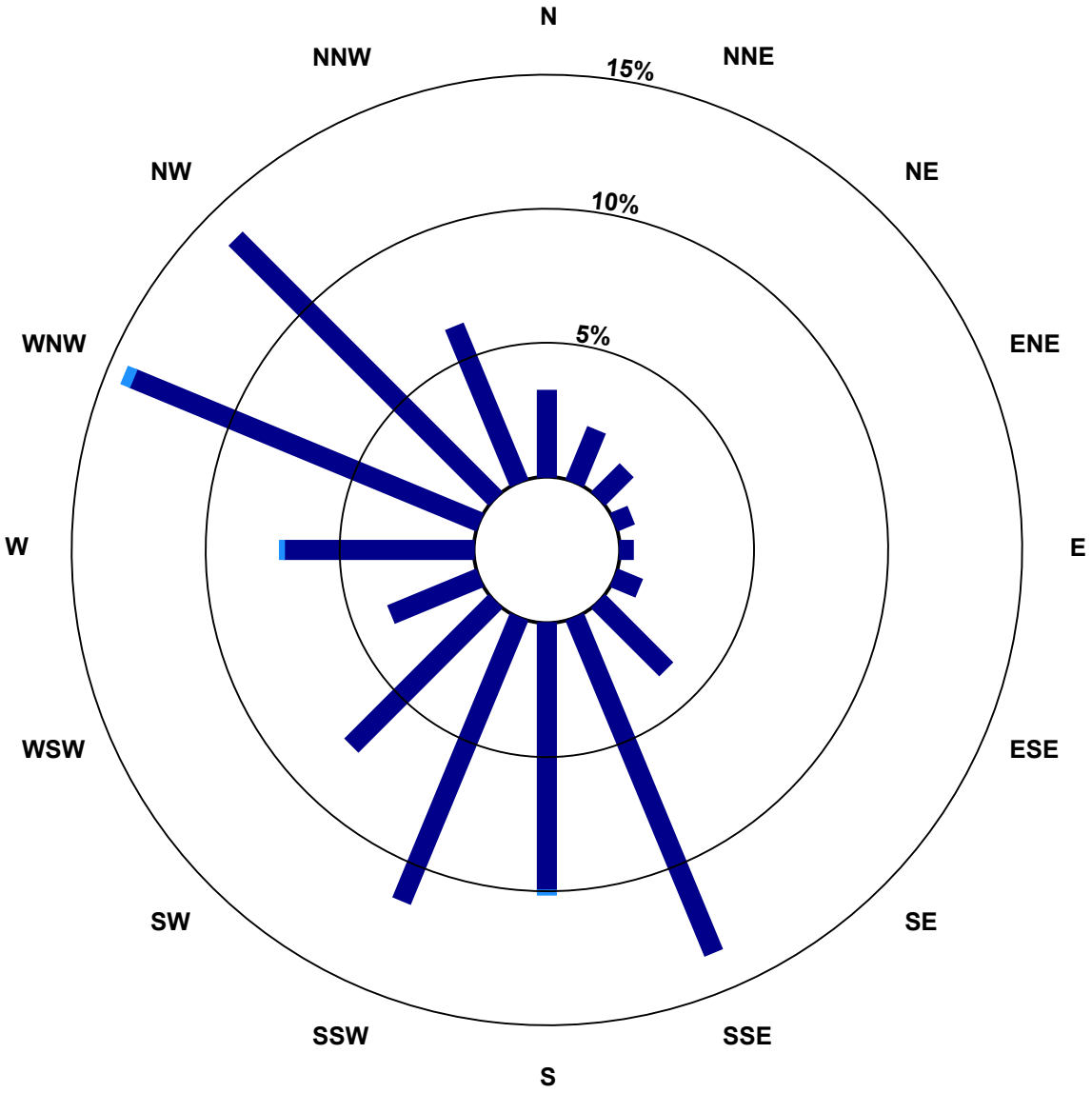
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Oxides (NO_X) - ppb

Jackfish 1



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

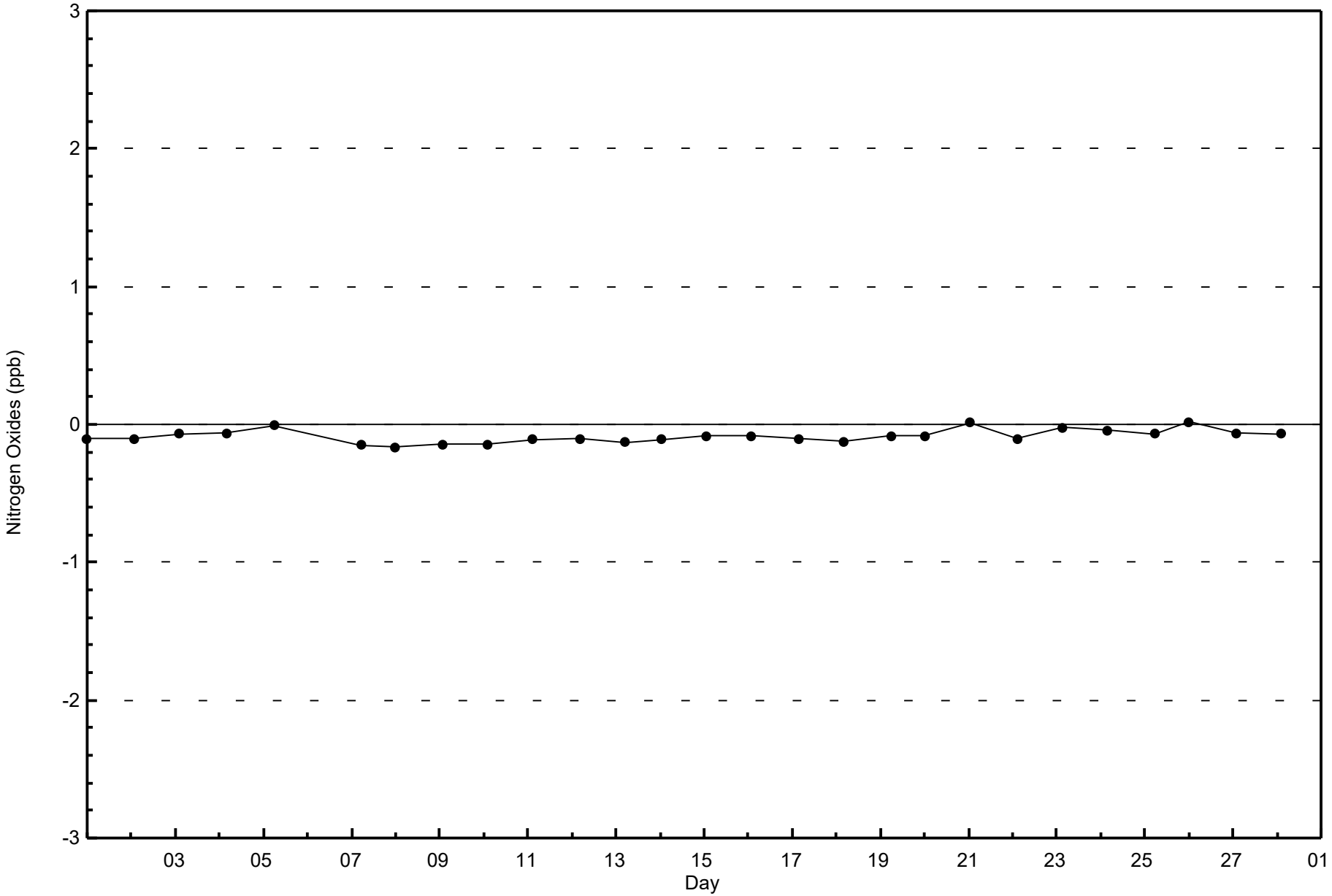
Total Number of Valid Hours: 622

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Jackfish 1 - February 2025

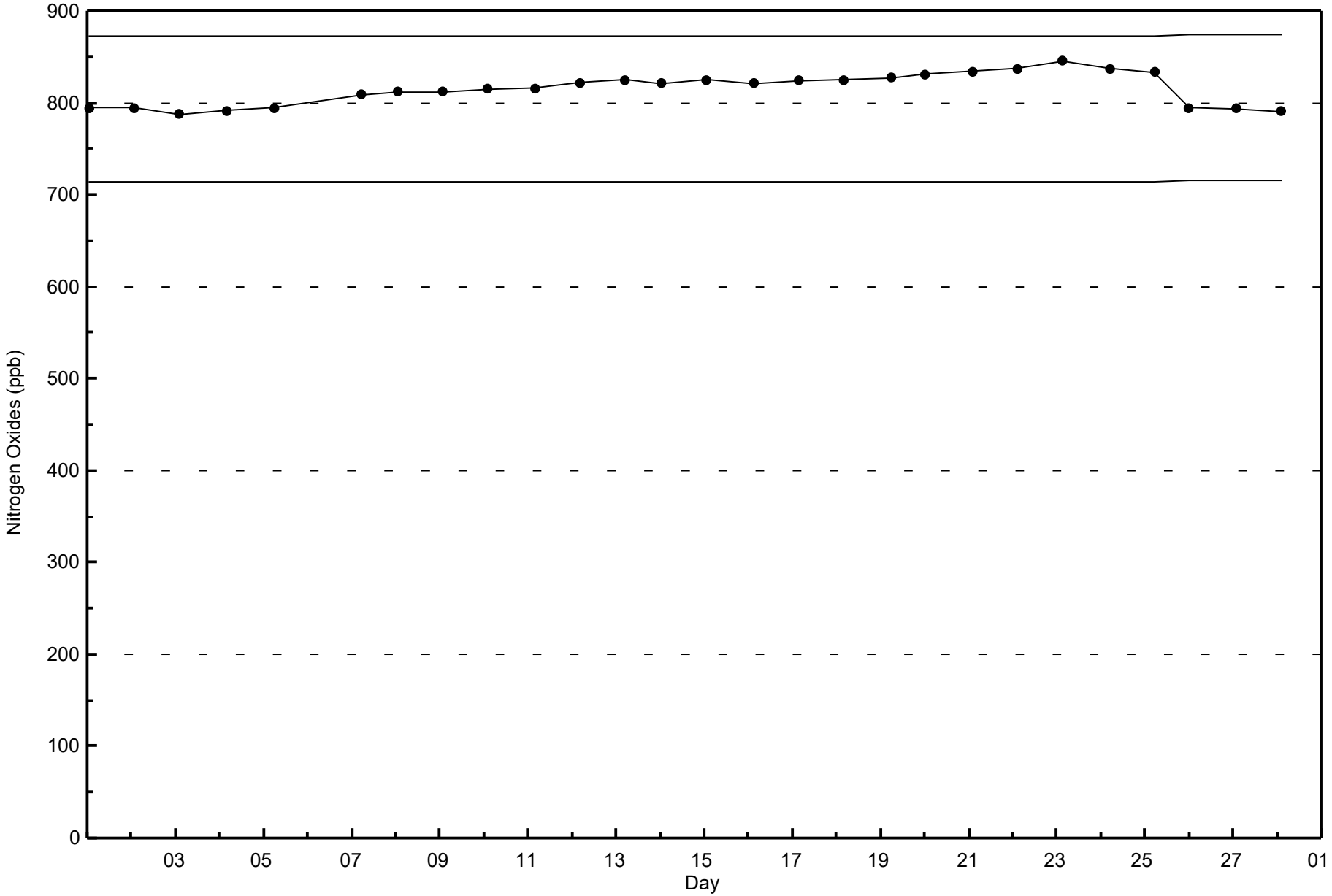


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Jackfish 1 - February 2025



Maximum Value: 8.7 C on Feb 22 16:00

Maximum Daily Average: 3.7 C on Feb 27

Minimum Value: -32.4 C on Feb 15 04:00

Minimum Daily Average: -27.0 C on Feb 2

Maximum Diurnal Average: -10.5 C at hour 15

Minimum Diurnal Average: -18.9 C at hour 5

Monthly Average: -15.46 C

Percentiles: P_1 = -31.2 P_{10} = -27.9 Q_1 = -24.5 Median = -19.0 Q_3 = -4.6 P_{90} = 2.3 P_{99} = 7.5

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

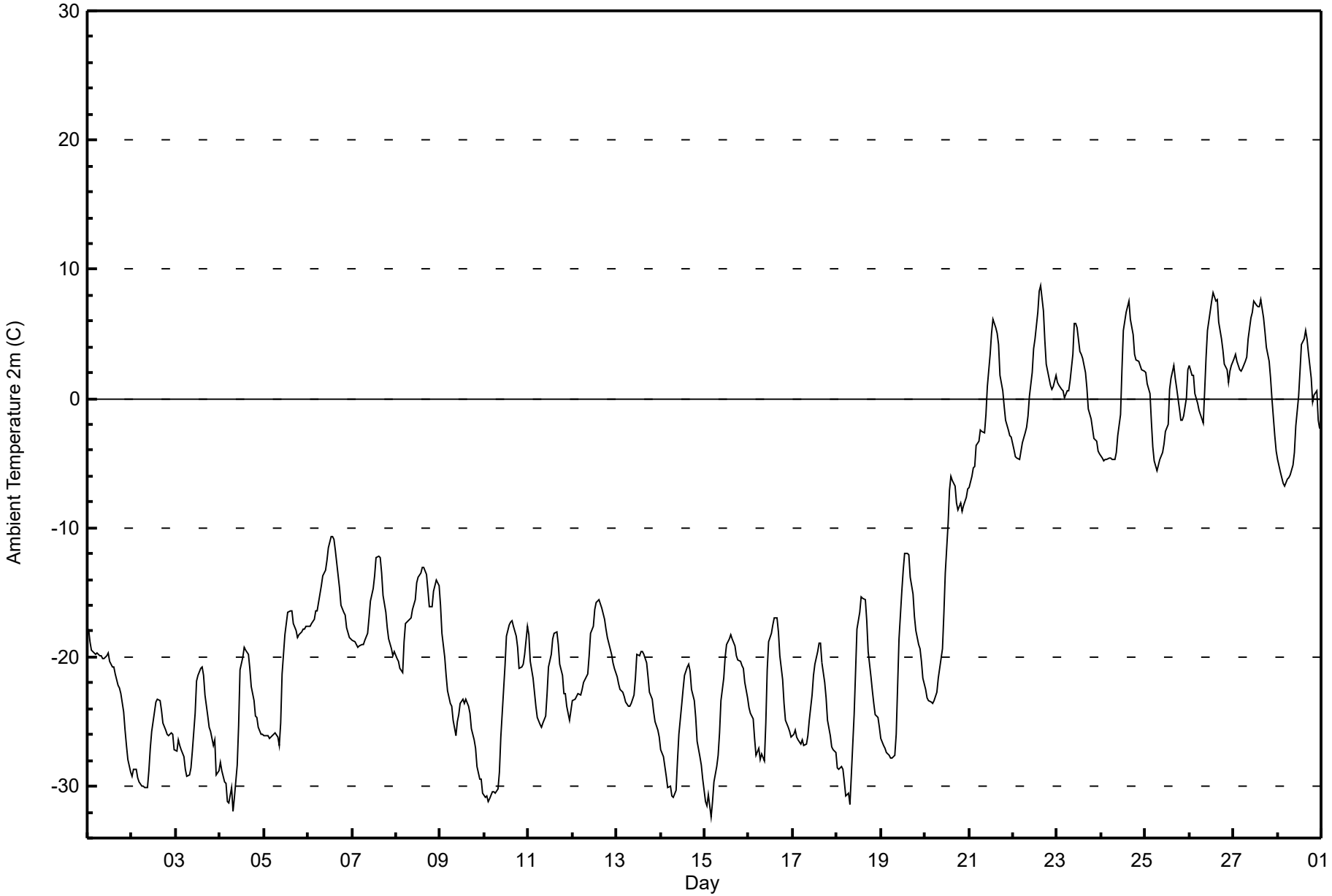
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-17.9	-18.8	-19.4	-19.7	-19.8	-19.7	-19.9	-19.9	-20.2	-20.2	-19.9	-19.6	-20.3	-20.8	-20.8	-21.4	-22.2	-22.4	-22.8	-24.2	-25.6	-26.8	-27.9	-28.9	-21.6	-17.9
2-Feb	-29.2	-28.7	-28.7	-29.3	-29.7	-30.0	-29.9	-30.1	-30.1	-28.8	-27.1	-25.7	-24.3	-23.5	-23.2	-23.4	-24.1	-25.1	-25.7	-26.0	-26.1	-25.8	-25.9	-27.2	-27.0	-23.2
3-Feb	-27.3	-26.4	-26.8	-27.1	-27.7	-28.7	-29.2	-29.1	-28.6	-27.3	-24.4	-21.9	-21.4	-20.9	-20.8	-21.4	-22.9	-24.6	-25.5	-25.7	-26.8	-26.4	-29.2	-28.8	-25.8	-20.8
4-Feb	-28.1	-28.8	-29.6	-29.7	-31.2	-31.3	-30.1	-31.9	-30.8	-28.4	-25.3	-21.0	-20.0	-19.2	-19.5	-19.8	-20.9	-22.3	-23.3	-24.6	-24.7	-25.4	-25.9	-26.0	-25.7	-19.2
5-Feb	-26.0	-26.0	-26.1	-26.3	-26.0	-25.9	-25.8	-26.2	-26.9	-25.1	-21.3	-18.3	-17.5	-16.5	-16.4	-16.5	-17.4	-18.0	-18.4	-18.3	-18.0	-17.9	-17.9	-17.6	-21.3	-16.4
6-Feb	-17.6	-17.7	-17.5	-17.1	-16.4	-16.4	-15.2	-14.5	-13.7	-13.3	-12.5	-11.6	-10.6	-10.6	-10.9	-11.8	-13.7	-14.7	-16.0	-16.6	-16.8	-17.7	-18.5	-18.6	-15.0	-10.6
7-Feb	-18.7	-18.8	-19.0	-19.3	-19.1	-19.0	-19.1	-18.7	-18.2	-17.0	-15.7	-14.7	-13.7	-12.3	-12.2	-12.3	-13.5	-15.3	-16.6	-17.7	-18.6	-19.3	-19.9	-19.5	-17.0	-12.2
8-Feb	-20.2	-20.4	-20.9	-21.2	-18.8	-17.4	-17.1	-17.1	-16.9	-16.3	-15.5	-14.3	-13.8	-13.5	-13.0	-13.1	-13.6	-14.8	-16.1	-16.1	-14.9	-14.4	-14.1	-14.5	-16.2	-13.0
9-Feb	-16.0	-18.1	-20.0	-21.4	-22.6	-23.6	-23.8	-24.9	-26.1	-25.0	-24.4	-23.6	-23.2	-23.6	-23.3	-23.8	-24.3	-25.6	-26.4	-27.1	-28.5	-29.4	-29.4	-30.5	-24.4	-16.0
10-Feb	-30.8	-30.7	-31.2	-31.0	-30.4	-30.5	-30.6	-30.2	-28.9	-26.2	-22.5	-20.6	-18.4	-17.6	-17.3	-17.2	-17.6	-18.3	-19.2	-20.9	-20.8	-20.5	-19.8	-17.6	-23.7	-17.2
11-Feb	-18.3	-20.3	-21.6	-22.7	-23.8	-24.7	-25.2	-25.4	-25.1	-24.5	-22.8	-20.7	-19.8	-18.6	-18.2	-18.0	-19.0	-20.5	-21.4	-22.8	-22.8	-23.8	-24.9	-24.1	-22.1	-18.0
12-Feb	-23.3	-23.3	-23.0	-22.9	-22.9	-22.5	-21.9	-21.6	-21.3	-19.9	-18.2	-17.6	-16.3	-15.8	-15.5	-15.9	-16.2	-17.0	-17.8	-18.5	-19.4	-19.8	-20.4	-20.9	-19.7	-15.5
13-Feb	-21.6	-22.1	-22.5	-22.7	-23.0	-23.5	-23.8	-23.8	-23.6	-23.0	-21.6	-19.8	-19.9	-19.5	-19.6	-19.8	-20.4	-21.6	-22.7	-23.2	-24.3	-25.0	-25.6	-26.2	-22.4	-19.5
14-Feb	-27.2	-27.7	-28.5	-29.2	-30.1	-30.0	-30.8	-30.9	-30.3	-28.1	-26.0	-23.7	-22.5	-21.4	-20.8	-20.5	-21.1	-22.5	-23.4	-24.7	-26.5	-27.7	-28.4	-29.4	-26.3	-20.5
15-Feb	-31.2	-31.5	-30.7	-32.4	-31.2	-29.6	-28.5	-27.6	-25.8	-23.4	-21.7	-20.0	-19.0	-18.6	-18.3	-18.6	-19.1	-19.9	-20.3	-20.4	-20.7	-20.9	-22.0	-23.1	-23.9	-18.3
16-Feb	-23.9	-24.4	-24.7	-26.3	-27.6	-27.1	-27.9	-27.5	-28.1	-25.1	-21.0	-18.9	-18.2	-17.5	-17.0	-16.9	-18.1	-19.9	-21.7	-23.6	-24.9	-25.4	-25.8	-26.2	-23.2	-16.9
17-Feb	-26.0	-25.7	-26.2	-26.4	-26.7	-26.4	-26.8	-26.8	-26.1	-24.9	-23.0	-21.4	-20.5	-19.5	-19.0	-19.0	-20.4	-22.0	-23.2	-24.9	-26.1	-27.0	-27.2	-27.4	-24.3	-19.0
18-Feb	-28.5	-28.6	-28.5	-28.7	-29.6	-30.7	-30.5	-31.4	-29.1	-24.5	-21.2	-17.8	-16.5	-15.4	-15.5	-15.6	-17.2	-19.5	-21.5	-22.6	-23.6	-24.4	-24.6	-25.4	-23.8	-15.4
19-Feb	-26.3	-26.8	-27.0	-27.4	-27.6	-27.8	-27.8	-27.6	-26.0	-22.3	-18.6	-14.9	-13.3	-11.9	-12.0	-12.1	-13.8	-15.2	-16.9	-18.0	-19.0	-19.4	-20.3	-21.7	-20.6	-11.9
20-Feb	-22.5	-23.2	-23.4	-23.4	-23.6	-23.3	-22.8	-21.6	-20.9	-19.4	-16.6	-13.5	-9.7	-7.1	-6.0	-6.4	-6.7	-8.1	-8.6	-8.1	-8.7	-8.3	-7.6	-7.0	-14.4	-6.0
21-Feb	-6.8	-6.0	-5.3	-5.3	-3.6	-3.3	-2.5	-2.6	-2.7	-1.3	1.0	3.4	5.1	6.1	5.5	5.0	4.2	1.8	0.6	-0.6	-1.7	-2.4	-2.8	-3.0	-0.7	6.1
22-Feb	-3.9	-4.5	-4.6	-4.7	-4.1	-3.4	-2.7	-2.2	-1.4	0.1	2.0	3.9	4.6	6.7	8.3	8.7	6.8	4.5	2.7	1.6	1.0	0.7	0.9	1.8	1.0	8.7
23-Feb	1.3	1.1	0.7	0.6	0.0	0.6	0.6	1.3	3.4	5.8	5.8	5.5	3.6	3.4	3.1	2.0	0.8	-0.8	-1.5	-2.3	-3.1	-3.3	-4.1	-4.2	0.8	5.8
24-Feb	-4.6	-4.8	-4.7	-4.7	-4.6	-4.6	-4.8	-4.7	-4.2	-2.8	-1.2	2.2	5.3	6.7	7.1	7.5	6.1	5.0	3.5	3.0	2.9	2.6	2.3	2.2	0.4	7.5
25-Feb	2.0	1.1	0.4	-1.8	-3.7	-4.8	-5.6	-5.1	-4.7	-4.2	-3.5	-2.6	-2.0	0.7	1.6	2.5	1.6	0.8	-0.8	-1.7	-1.7	-1.4	0.1	2.2	-1.3	2.5
26-Feb	2.6	1.8	1.8	0.4	-0.4	-1.0	-1.2	-1.9	0.6	3.3	5.2	6.8	7.6	8.2	7.5	7.6	5.9	4.6	3.7	2.7	2.2	1.2	2.1	2.5	3.1	8.2
27-Feb	3.1	3.4	2.9	2.2	2.2	2.3	2.9	3.2	4.6	6.2	6.6	7.5	7.2	7.1	7.1	7.7	6.2	5.1	4.0	2.9	1.6	-0.1	-2.9	-4.1	3.7	7.7
28-Feb	-4.7	-5.7	-6.2	-6.6	-6.8	-6.3	-6.1	-5.9	-5.2	-4.1	-2.1	0.2	2.2	4.2	4.6	5.2	4.6	3.5	1.5	-0.3	0.2	0.5	-1.6	-2.4	-1.5	5.2
	-17.6	-17.9	-18.2	-18.7	-18.9	-18.9	-18.8	-18.7	-18.1	-16.4	-14.5	-12.6	-11.6	-10.8	-10.5	-10.6	-11.6	-13.0	-14.1	-14.9	-15.5	-16.0	-16.5	-16.6	Diurnal Average	
	3.1	3.4	2.9	2.2	2.2	2.3	2.9	3.2	4.6	6.2	6.6	7.5	7.6	8.2	8.3	8.7	6.8	5.1	4.0	3.0	2.9	2.6	2.3	2.5	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Jackfish 1 - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	299	44.49	44.49
-20 - 0	258	38.39	82.89
0 - 10	115	17.11	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Jackfish 1 - February 2025

Maximum Value: 95.4 % on Feb 25 09:00

Maximum Daily Average: 81.1 % on Feb 25

Minimum Value: 30.6 % on Feb 19 14:00

Minimum Daily Average: 50.3 % on Feb 19

Maximum Diurnal Average: 78.1 % at hour 8

Minimum Diurnal Average: 58.6 % at hour 15

Monthly Average: 70.92 %

Percentiles: P_1 = 36.7 P_{10} = 55.6 Q_1 = 64.3 Median = 73.8 Q_3 = 78.3 P_{90} = 82.8 P_{99} = 92.0

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

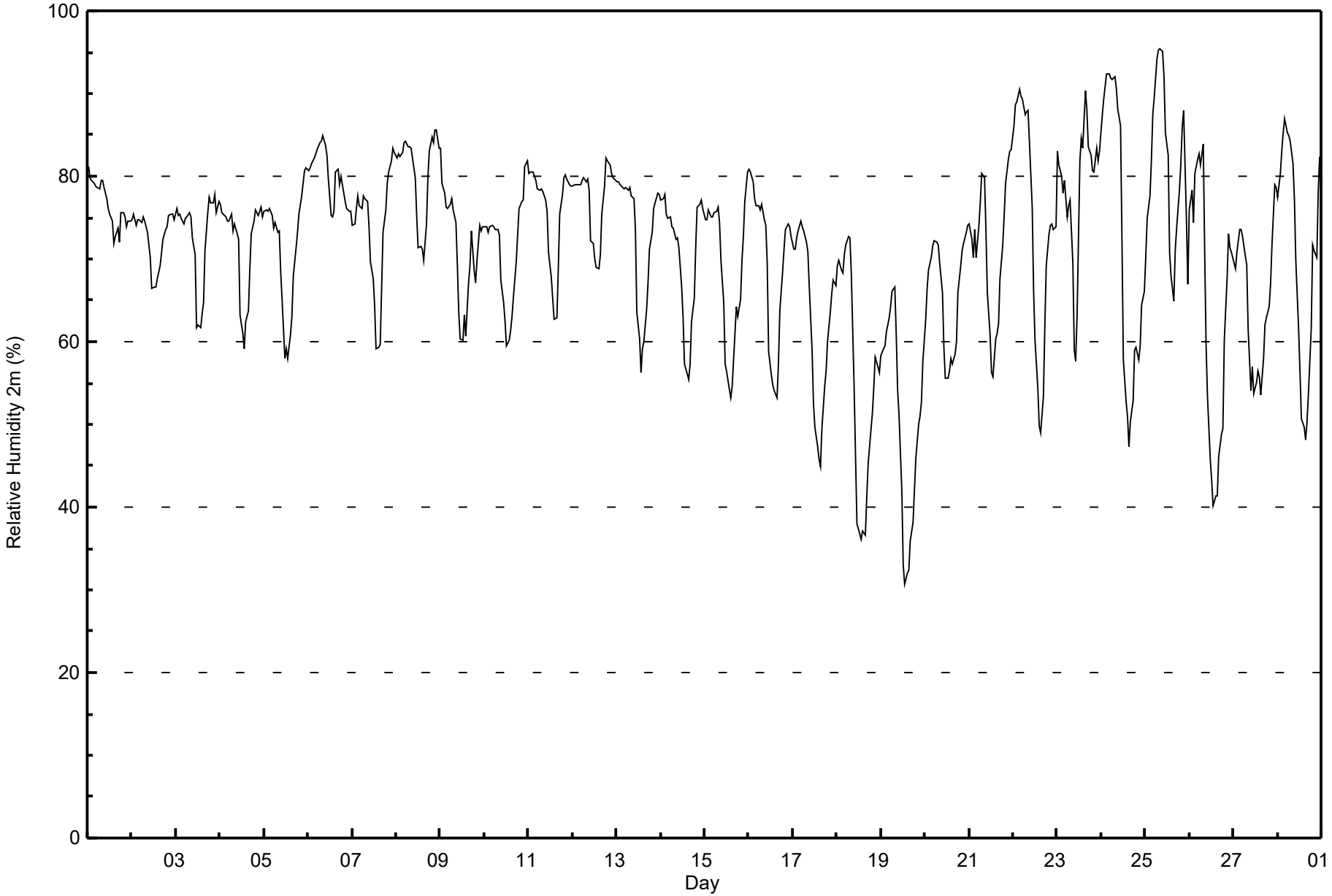
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	81.2	79.8	79.4	79.1	78.8	78.6	78.5	79.4	79.5	78.6	77.4	76.2	75.4	74.6	71.8	72.7	73.7	72.1	75.7	75.5	75.1	73.9	74.6	74.6	76.5	81.2
2-Feb	74.7	75.4	74.1	74.7	74.7	74.4	75.0	74.5	73.3	71.7	70.2	66.4	66.6	66.6	67.7	69.2	70.6	72.4	73.5	73.9	75.3	75.4	75.4	74.7	72.5	75.4
3-Feb	76.1	75.3	75.5	75.0	74.2	74.9	75.2	75.7	75.1	72.5	70.5	61.6	62.0	61.8	63.5	64.8	71.1	75.6	77.5	76.9	76.8	77.7	75.5	76.9	72.6	77.7
4-Feb	76.6	75.6	75.3	75.1	74.6	74.5	75.4	73.4	74.2	73.1	72.4	63.3	61.0	59.2	62.4	63.7	68.9	73.0	74.6	76.0	75.6	75.3	76.2	75.0	71.9	76.6
5-Feb	75.7	76.0	75.8	76.1	75.2	73.8	74.4	73.3	73.5	68.4	65.1	58.0	59.2	57.9	60.9	63.1	68.0	71.4	73.2	75.4	77.6	79.2	80.6	81.0	71.4	81.0
6-Feb	80.7	81.0	81.5	82.1	82.7	83.3	84.1	84.3	84.8	83.8	82.6	79.6	75.3	75.1	75.7	80.5	80.8	79.0	80.0	77.9	76.9	76.1	75.7	75.8	80.0	84.8
7-Feb	74.1	74.2	76.2	77.7	76.4	76.2	77.6	77.3	77.0	73.9	69.7	67.6	64.3	59.2	59.4	59.7	66.5	73.3	76.0	79.2	80.6	81.9	83.5	82.9	73.5	83.5
8-Feb	82.2	82.7	82.3	82.9	84.1	84.2	83.6	83.5	83.5	82.2	79.8	75.2	71.4	71.5	71.2	69.8	74.2	79.8	83.0	84.7	84.1	85.5	85.6	83.5	80.4	85.6
9-Feb	83.3	79.1	77.9	76.2	76.1	76.6	77.3	76.0	74.3	69.3	63.5	60.4	60.2	63.2	60.8	67.2	69.1	73.4	68.7	67.1	69.8	74.0	73.4	73.8	71.3	83.3
10-Feb	73.9	73.9	73.3	73.9	74.0	73.9	73.6	73.6	72.9	67.4	64.8	62.6	59.5	60.2	61.3	63.1	65.4	69.7	72.8	76.1	76.9	77.2	81.2	81.9	71.0	81.9
11-Feb	80.3	80.5	80.6	80.1	79.5	78.5	78.3	78.5	78.1	77.1	75.8	70.9	67.8	65.3	62.7	62.9	68.9	75.4	77.8	79.8	80.1	79.6	78.9	78.8	75.7	80.6
12-Feb	78.8	78.9	79.0	78.9	79.0	79.5	79.8	79.4	79.7	78.3	72.2	71.8	70.0	69.0	68.8	70.5	75.3	78.8	82.1	81.8	81.3	80.3	79.9	79.6	77.2	82.1
13-Feb	79.4	79.3	79.1	78.7	78.5	78.6	78.3	78.6	77.6	77.2	73.6	63.5	60.3	56.2	59.2	60.0	63.9	67.2	71.2	73.1	76.2	76.8	77.9	77.8	72.6	79.4
14-Feb	77.1	77.4	77.9	75.4	74.9	75.0	73.9	73.8	72.4	72.5	71.4	66.7	62.9	57.2	56.0	55.5	57.3	62.3	65.3	71.4	76.3	76.5	77.1	76.1	70.1	77.9
15-Feb	74.8	74.8	76.0	75.0	75.2	75.7	75.8	76.3	74.4	69.9	64.8	57.2	56.4	54.2	53.3	54.6	61.0	64.2	63.0	65.2	69.8	72.6	77.0	80.5	68.4	80.5
16-Feb	80.8	80.4	79.4	77.3	76.5	76.4	76.0	76.6	74.8	74.0	69.5	58.8	56.0	54.8	54.1	53.2	57.3	63.8	68.5	71.2	73.6	74.3	73.8	72.8	69.7	80.8
17-Feb	71.1	71.2	72.6	73.3	74.5	74.0	73.3	72.1	70.8	66.5	58.9	52.5	49.7	47.4	45.8	44.9	49.4	54.5	56.5	60.0	63.5	65.8	67.5	66.7	62.6	74.5
18-Feb	69.1	69.9	68.6	68.3	70.5	71.6	72.8	72.5	68.2	54.5	46.0	37.9	36.8	36.1	37.2	36.5	41.1	45.3	49.3	51.4	54.4	58.1	56.9	56.3	55.4	72.8
19-Feb	58.3	59.1	59.4	61.1	62.9	64.2	66.1	66.5	61.1	54.2	51.1	42.1	33.0	30.6	32.0	32.4	35.9	38.1	42.0	45.9	50.1	51.1	52.7	57.6	50.3	66.5
20-Feb	62.6	66.3	68.7	70.2	71.5	72.2	72.0	71.6	69.4	66.0	59.4	55.6	55.6	56.4	57.9	57.2	58.4	59.9	66.0	69.2	71.0	71.9	73.3	74.1	65.7	74.1
21-Feb	74.2	72.4	70.1	73.5	70.1	74.0	76.9	80.3	79.8	73.3	65.9	60.7	56.2	55.8	60.3	61.1	62.2	67.7	71.6	75.2	79.2	82.0	83.0	83.2	71.2	83.2
22-Feb	86.1	88.7	89.0	90.5	89.7	89.3	87.4	87.8	87.9	84.3	76.3	66.1	60.2	54.4	49.8	49.0	53.4	61.9	69.2	73.1	74.1	74.2	73.5	73.9	74.6	90.5
23-Feb	83.0	81.3	80.0	77.9	79.5	75.1	76.5	77.2	69.4	59.0	57.7	63.1	81.9	84.6	83.5	90.4	87.9	83.5	82.6	80.7	80.6	83.4	81.9	83.0	78.5	90.4
24-Feb	87.4	89.4	90.9	92.5	92.4	91.8	91.8	92.0	90.6	88.1	86.1	72.5	57.8	52.7	50.9	47.2	50.3	52.8	59.0	59.3	57.8	59.5	64.4	66.0	72.6	92.5
25-Feb	70.4	74.9	77.6	81.9	87.5	89.5	94.3	95.3	95.4	95.0	92.0	85.2	82.6	70.7	68.0	64.9	71.1	73.8	78.4	81.5	86.0	87.9	74.7	67.0	81.1	95.4
26-Feb	76.0	78.3	74.4	80.4	82.1	82.6	81.4	83.8	71.0	59.7	53.3	45.8	43.2	40.1	41.4	41.3	46.1	48.8	49.5	60.2	67.6	73.0	71.4	70.9	63.4	83.8
27-Feb	69.5	68.8	70.8	73.6	73.6	72.7	70.3	69.4	61.5	54.1	57.0	53.7	55.1	56.4	55.7	53.6	58.0	62.0	62.9	64.3	66.9	71.7	78.9	78.6	65.0	78.9
28-Feb	77.5	80.3	83.0	85.2	87.0	85.2	84.8	84.2	81.5	77.3	69.8	61.4	56.3	50.7	49.7	48.1	50.4	53.8	61.5	71.7	71.0	70.2	78.1	82.4	70.9	87.0
	76.3	76.6	76.7	77.4	77.7	77.7	78.0	78.1	76.1	72.2	68.5	62.7	60.6	58.6	58.6	59.2	62.7	66.2	69.0	71.3	73.1	74.5	75.1	75.2	Diurnal Average	
	87.4	89.4	90.9	92.5	92.4	91.8	94.3	95.3	95.4	95.0	92.0	85.2	82.6	84.6	83.5	90.4	87.9	83.5	83.0	84.7	86.0	87.9	85.6	83.5	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Jackfish 1 - February 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	11	1.64	1.64
40 - 60	108	16.07	17.71
60 - 80	434	64.58	82.29
80 - 100	119	17.71	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Jackfish 1 - February 2025

Maximum Speed: 17 km/h on Feb 9 02:00

Maximum Daily Speed Average: 9.4 km/h on Feb 2

Minimum Speed Value: 0 km/h on Feb 14 22:00

Minimum Daily Speed Average: 0.7 km/h on Feb 25

Maximum Diurnal Speed Average: 3.3 km/h at hour 16

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

Monthly Average Velocity: 1.9 km/h 255.0 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:	672
Hours of Data:	653
Hours of Missing Data:	19
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-Feb	NE6	ENE7	ENE6	NE6	NE6	NNE4	N5	NNW6	NNW7	NW9	NW9	NW10	NW10	NW10	WNW10	NW11	NW11	NW9	WNW7	WNW8	WNW6	WNW5	W4	W4	NW5.4	NW11
2-Feb	WNW6	WNW10	NW10	WNW9	WNW8	WNW7	WNW10	WNW11	NW10	NW11	NW9	NW10	NW9	WNW9	NW11	NW11	NW13	NW10	NW9	NW13	NW10	NW11	NW7	WNW5	NW9.4	NW13
3-Feb	WNW6	NW8	NW7	NW7	NW4	NW4	W1	WSW2	W4	WNW2	WNW3	NW5	NW5	WNW5	WNW3	W3	W2	SW1	WSW2	WSW2	SSW3	SW3	SW2	SSW4	WNW3.0	NW8
4-Feb	SW4	SSW4	SW4	SW4	SSW4	SSW4	SW4	SSW3	SSW5	SW5	SSW6	SSW4	WSW4	WSW5	W4	SW5	SSW5	SSW6	SSW5	SSW4	SSW7	SW5	SSW7	SW5	SW4.5	SSW7
5-Feb	SSW6	SSW4	SSW5	SSW6	SSW6	SSW5	SW5	SSW5	SSW6	SSW5	W4	W5	W5	W6	W5	W4	WSW4	WSW4	W4	WNW5	WNW5	WNW5	WNW4	WNW4	WSW4.0	SSW6
6-Feb	WNW5	WNW4	WNW5	WNW4	WNW4	WNW2	WNW3	WNW4	WNW5	WNW6	WNW7	WNW7	WNW7	WNW10	WNW10	NW11	N9	NNW9	NNW8	NNW8	NW11	NW10	NNW8	NW7	NW6.4	NW11
7-Feb	NW7	NW6	WNW3	WSW2	WNW3	SSW3	WSW2	SW1	W2	W3	WNW4	WNW4	W4	SW4	SW4	SW5	SSW5	SSW5	SW4	SSW4	SSW5	SSW4	SW2	SW4	WSW2.9	NW7
8-Feb	SW5	SW4	SW6	SW4	W2	W3	W3	SW3	WSW2	W3	W3	W4	WNW4	W4	WNW4	W3	SW2	SW2	SW3	SW3	WSW2	WNW1	WNW7	NW12	W3.0	NW12
9-Feb	NW11	NW17	NW14	NW13	NW11	NW7	WNW7	WNW8	WNW4	NW10	NW10	NW7	NNW7	N8	NNW8	NNW7	NNW8	NNW8	NW12	NW12	WNW5	WNW5	WNW5	WNW2	NW8.3	NW17
10-Feb	NW2	WSW2	WSW2	WSW2	SW3	SW3	SSW5	SW4	SW4	WSW4	W5	WNW5	W5	W5	SW6	SSW6	SW5	SW4	SSW5	SSW6	SSW5	S4	WSW0	NW9	WSW3.4	NW9
11-Feb	NNW9	NNW7	NNW6	NNW7	NNW6	NNW5	NW7	NW7	NW9	NW7	NW6	NNW6	NW6	NW7	NNW8	NW7	NW4	WNW1	W2	WNW1	NW3	SSW1	S3	S5	NW4.7	NNW9
12-Feb	S4	SSE3	SSE3	S3	SSE3	SSE3	S3	S3	SSE3	SSE3	SSE3	SE3	SSE4	S5	SSE4	SSE2	SE1	ENE2	N3	NNW4	NNW5	N4	NNW5	NNW5	SSE1.2	NNW5
13-Feb	NNW4	NNW4	NNW4	NNW4	N4	N3	NE0	N1	N3	NNW4	N4	NNW5	NNW6	NNE5	NNE5	N5	NNE4	NE4	NE4	NNE5	NE2	NNW3	NW3	NNW3	N3.5	NNW6
14-Feb	NW3	NW3	NW4	WNW3	NW2	NW3	NW3	NW2	NW2	NNW2	N3	NNW4	NW5	NNW5	NNW6	NNW4	N4	N2	SSE0	S2	SSW2	SW0	SW0	SW1	NW2.2	NNW6
15-Feb	SW2	SSW2	SW3	W1	SW0	NW1	W0	W1	WNW3	WNW6	NW8	NW8	NW8	NW10	NW10	NW11	WNW7	NW7	NW9	NW8	NW7	NNW4	NNE1	SSE1	NW4.4	NW11
16-Feb	E2	SE2	SSE1	UO	SSE3	SSW2	S3	S3	S2	SE4	SSE4	SSE4	SE5	SE5	SSE5	SE5	SE8	ESE6	SE5	SE6	SSE5	SSE5	S6	SSE6	SSE4.0	ESE8
17-Feb	SSE6	SSE4	SSE6	SSE7	SSE6	SSE6	SSE5	SSE7	SSE7	SSE7	SSE7	SSE7	SSE8	SSE8	SSE8	SE8	SE8	SSE7	SSE9	SE6	SE6	SSE5	SSE5	SE5	SSE6.6	SSE9
18-Feb	SSE5	S5	S8	S5	SSE3	SSE4	S4	S4	S8	SSE7	S7	S7	SSE7	SSE7	SSE7	S7	S5	S6	SSE6	SSE7	SSE9	SSE8	SSE8	S8	SSE6.3	SSE9
19-Feb	SSE8	SSE7	SSE7	SSE7	SSE8	SSE8	SSE6	SSE7	SSE9	SSE9	S9	SSE9	SSE10	SSE10	SSE10	SSE10	SSE9	SSE9	SE10	SSE9	SSE7	SSE7	SSE8	SSE8	SSE8.4	SSE10
20-Feb	SSE7	S6	S8	S8	S8	S6	S5	S7	SSW8	S7	SSW7	SSW8	SSW9	SSW8	WSW6	W6	SSW6	SSW7	SSW6	SSW6	SSW6	SSW6	SSW7	SSW7	SSW6.5	SSW9
21-Feb	SSW7	SSW7	SSW7	S5	SSW8	SSW5	SSW4	SSW4	SSW4	SSW4	SW3	NW6	NW4	WNW5	WNW7	NW7	N7	NNE3	NNE4	NNE5	NNE4	N4	N4	NNE2	W1.8	SSW8
22-Feb	ESE1	SE2	SE1	S3	SSE4	SSE4	SSE6	SSE6	SSE6	SSE7	S9	S9	S6	S5	S5	SSW6	S5	S5	S6	S8	S8	S9	S7	S6	S5.5	S9
23-Feb	SSE4	SSE5	SSE6	S5	S4	SSW6	SW5	SW5	W5	WSW7	WSW8	W8	WNW8	WNW8	WNW9	WNW12	NW11	UO	UO	UO	UO	UO	UO	UO	----	WNW12
24-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	W2	W3	W3	WNW3	WSW4	WSW3	SW1	S1	SSW4	SSW5	SW3	SW2	SW3	----	SSW5
25-Feb	W2	W1	WNW2	NNE4	NNE3	N6	NE3	E2	NE3	NE5	NE5	SSE3	ESE2	E2	SE3	SE3	SE2	ESE3	SSE5	S1	S3	S6	SW4	WSW5	ESE0.7	S6
26-Feb	WNW5	WNW3	SW3	W2	WNW4	WNW5	NW1	W2	WNW2	W4	WNW6	WNW6	WNW6	WNW6	WNW5	WNW4	W3	WSW2	SSW2	SSW3	SSW5	SSW4	SSW5	SSW5	W3.1	WNW6
27-Feb	SSW5	SSW5	S5	SSE5	S7	S7	S8	S9	SSW6	W6	WNW9	WNW9	WNW11	WNW11	WNW12	WNW15	WNW13	NW10	NW12	NW11	NW14	NNW10	N10	N7	WNW5.1	WNW15
28-Feb	N6	NE4	E1	ENE2	SSE2	SSE3	ESE3	E2	SE3	SE4	SSE3	SE2	S2	NNW2	WNW3	WNW3	N2	ESE2	SSE1	S4	SSW5	S6	S7	S6	SSE1.5	S7
	WSW1.7	W1.4	SW1.7	WSW1.4	SW1.5	SW1.7	SW1.7	SW2.0	SW2.2	WSW2.1	W2.5	W2.8	W3.0	W3.0	W3.2	WNW3.3	WNW2.1	W1.2	WSW1.3	W1.6	WSW1.9	SW1.7	SW1.7	WSW2.0	Diurnal Average	
	NW11	NW17	NW14	NW13	NW11	SSE8	WNW10	WNW11	NW10	NW11	NW10	NW10	WNW11	WNW11	WNW12	WNW15	WNW13	NW10	NW12	NW13	NW14	NW11	N10	NW12	Diurnal Maximum	

UO - Unstable Operation

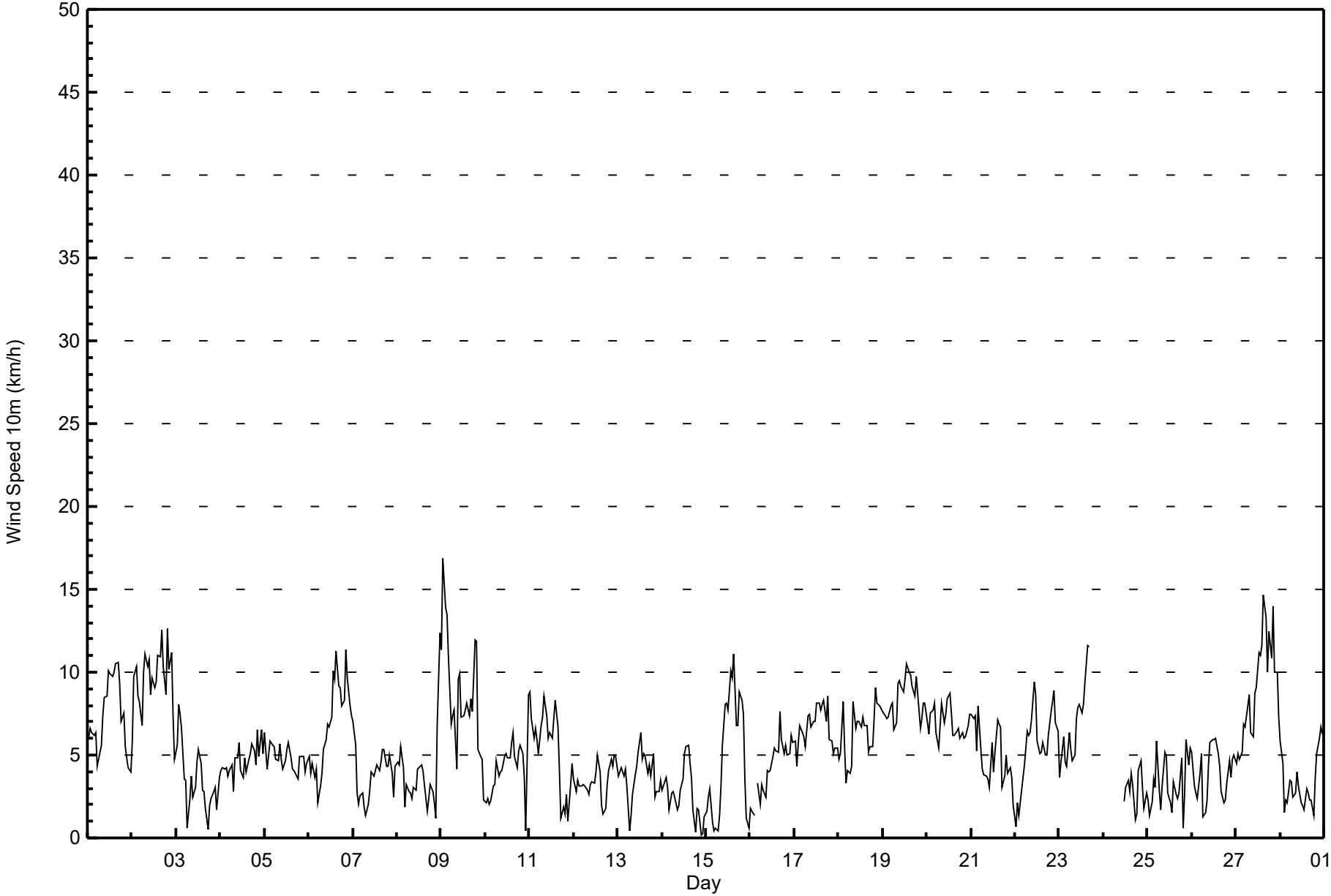
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Jackfish 1 - February 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	377	57.73	57.73
6 - 11	262	40.12	97.86
12 - 19	14	2.14	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: 653

Total Number of Hours: 672

Wind Speed 10m (WS10) - km/h
Jackfish 1 - February 2025

Wind Speed Ranges (km/h)	Wind Direction																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 5	15	13	9	2	5	5	17	38	31	47	46	20	41	51	18	19	377
6 - 11	7	0	3	2	0	2	6	53	33	30	2	3	4	36	60	21	262
12 - 19	0	0	0	0	0	0	0	0	0	0	0	0	0	4	10	0	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	22	13	12	4	5	7	23	91	64	77	48	23	45	91	88	40	653

Total Number of Valid Hours: 653

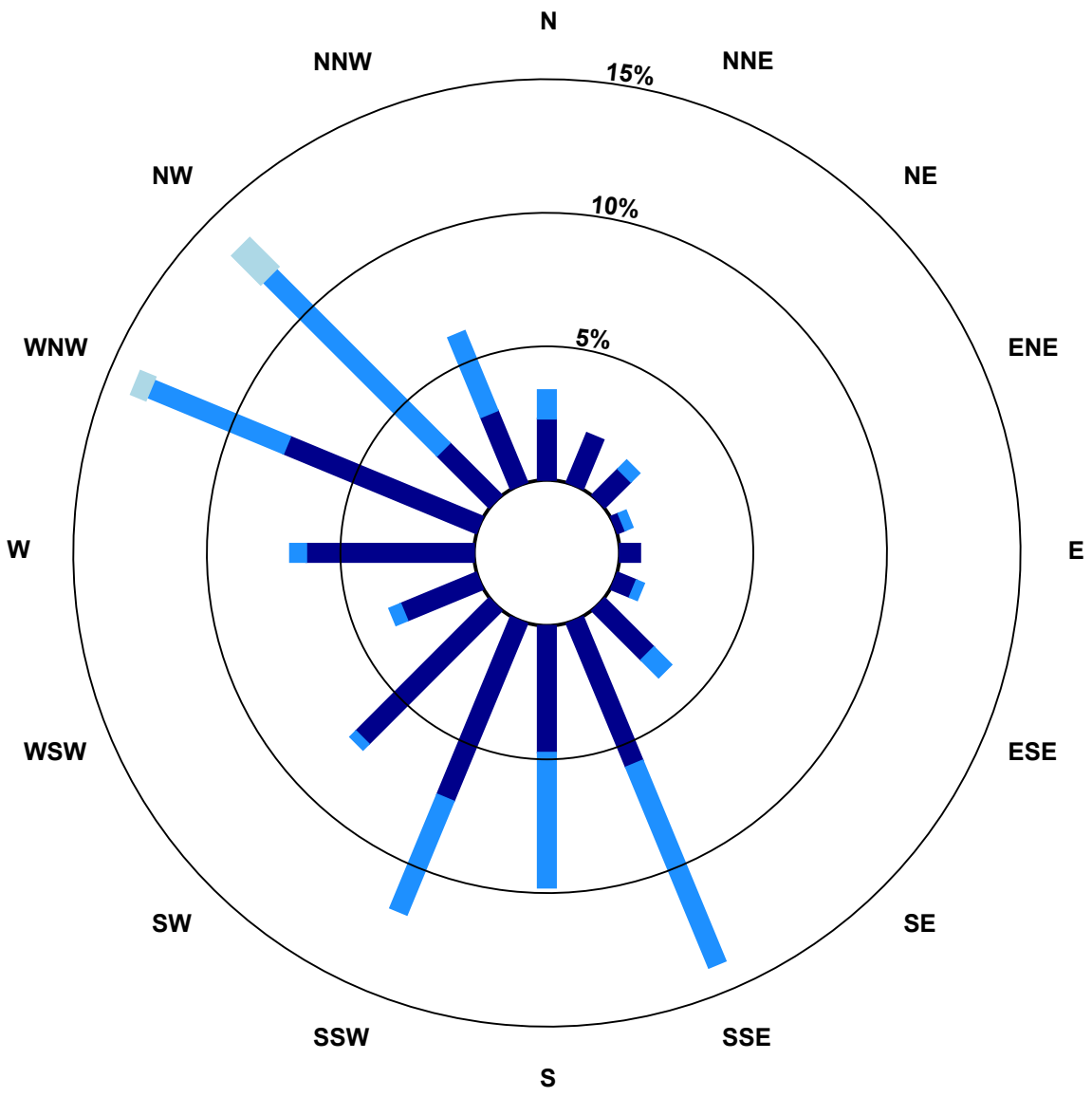
Total Number of Hours: 672

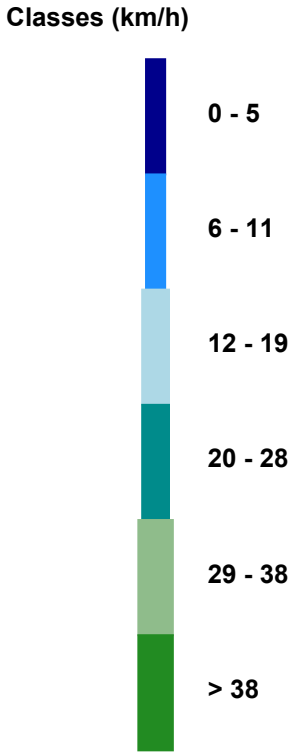
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Wind Speed 10m (WS10) - km/h

Jackfish 1





Total Number of Valid Hours: 653

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Jackfish 1 - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7 km/h on Feb 23 17:00

Minimum Value: 1 km/h on Feb 14 03:00

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

Hours in Service:	672
Hours of Data:	653
Hours of Missing Data:	19
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-Feb	2	2	2	2	3	2	2	2	2	2	2	3	3	2	2	3	3	3	2	2	2	1	2	1	3
2-Feb	2	2	2	2	2	2	2	2	2	3	2	3	3	2	3	3	3	2	2	3	2	2	1	2	3
3-Feb	1	2	1	2	2	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	2
4-Feb	1	1	1	1	1	1	1	2	2	2	2	2	2	3	2	2	2	1	1	1	2	2	2	2	3
5-Feb	2	2	2	2	2	2	1	1	2	2	2	2	3	3	3	2	2	2	2	2	2	1	1	1	3
6-Feb	1	1	1	1	1	1	1	1	2	1	2	2	2	2	3	3	3	3	2	3	3	2	2	2	3
7-Feb	2	3	2	1	1	1	1	1	1	1	2	2	2	2	2	2	2	1	1	2	1	2	1	1	3
8-Feb	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	1	1	1	1	1	1	3	3	3
9-Feb	3	4	3	4	3	1	2	2	2	3	3	2	2	2	2	2	3	2	2	2	2	1	1	1	4
10-Feb	1	1	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	2	2	2	2	1	1	4	4
11-Feb	3	2	1	2	2	1	1	2	2	2	1	2	2	2	3	2	2	1	2	2	1	1	1	1	3
12-Feb	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	2
13-Feb	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	1	1	2	1	1	1	1	2
14-Feb	1	1	1	1	2	1	1	1	1	1	1	1	1	1	2	1	2	1	1	1	1	1	1	1	2
15-Feb	1	1	1	1	1	1	1	1	1	1	2	2	3	3	3	3	2	1	2	2	1	1	1	1	3
16-Feb	1	1	1	UO	1	1	1	2	1	1	1	1	3	2	2	2	2	1	1	1	1	1	2	1	3
17-Feb	2	1	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	2	2	1	1	1	1	1	3
18-Feb	1	1	2	2	1	1	1	2	2	2	3	3	2	2	2	2	2	2	2	2	2	2	2	2	3
19-Feb	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2	3	3
20-Feb	2	2	3	2	3	2	2	3	3	3	3	3	4	3	3	3	3	2	2	2	1	2	2	2	4
21-Feb	2	1	2	2	3	2	1	1	1	1	1	3	1	2	3	3	2	1	1	2	2	2	1	2	3
22-Feb	1	1	2	1	1	1	1	2	2	2	3	3	2	1	2	2	2	1	1	2	2	2	2	2	3
23-Feb	1	1	2	2	1	3	2	2	3	4	5	4	3	3	3	3	7	UO	UO	UO	UO	UO	UO	UO	7
24-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	2	2	2	2	3	2	1	1	2	2	1	2	2	3
25-Feb	2	1	2	2	2	2	2	1	1	2	2	1	1	2	2	1	1	1	1	1	3	2	2	3	3
26-Feb	3	2	2	2	2	2	1	1	2	2	2	3	2	3	2	2	2	1	2	1	1	2	2	2	3
27-Feb	2	2	1	1	2	2	2	2	3	3	5	3	3	3	4	4	3	3	4	2	4	3	3	3	5
28-Feb	2	2	1	2	1	1	1	1	2	1	1	1	1	1	2	1	2	1	2	1	1	2	1	1	2
	3	4	3	4	3	3	2	3	3	4	5	4	4	3	4	4	7	3	4	3	4	3	3	4	
	Diurnal Maximum																								

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Jackfish 1 - February 2025

Direction of Maximum Speed: 322 deg on Feb 9 02:00
Direction of Maximum Daily Speed Average: 308.2 deg on Feb 2

Direction of Minimum Speed: 221 deg on Feb 14 22:00
Direction of Minimum Daily Speed Average: 0.7 deg on Feb 25

Monthly Average Direction: 255.0 deg

Hours in Service:	672
Hours of Data:	653
Hours of Missing Data:	19
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-Feb	53	59	63	40	41	26	11	345	330	326	312	315	306	304	303	305	305	306	295	294	287	284	281	281	324.0
2-Feb	290	302	304	300	298	299	302	302	306	313	306	310	309	303	309	308	319	315	308	322	318	320	310	294	308.2
3-Feb	296	315	313	313	306	305	270	258	271	285	285	312	313	301	295	271	266	227	237	237	212	221	223	211	287.5
4-Feb	217	213	214	214	207	203	214	209	209	217	206	197	248	246	269	224	202	203	208	213	208	215	207	219	214.8
5-Feb	211	206	208	203	204	206	214	206	208	211	277	274	264	270	268	262	253	258	267	286	285	287	288	286	243.8
6-Feb	285	283	290	284	283	291	282	286	285	289	290	291	297	301	299	321	350	333	347	331	326	326	330	314	310.7
7-Feb	314	308	290	258	282	213	237	233	266	281	292	285	267	222	227	225	204	203	214	209	203	207	227	220	243.2
8-Feb	215	221	214	224	261	274	269	229	237	273	260	278	285	281	284	281	233	222	221	221	238	292	302	319	262.7
9-Feb	307	322	324	324	325	305	299	299	289	311	319	320	336	360	341	337	337	331	320	323	302	283	292	296	319.5
10-Feb	304	246	242	237	225	217	203	221	221	251	281	284	272	279	221	208	236	222	209	205	201	184	249	317	238.0
11-Feb	332	340	337	345	344	330	322	314	318	316	318	339	324	322	328	323	308	286	274	291	306	209	182	180	322.4
12-Feb	172	150	168	171	166	164	171	174	160	161	164	144	160	170	162	163	144	67	6	328	336	350	345	346	159.1
13-Feb	343	347	333	337	350	2	43	2	1	345	356	347	342	13	16	1	20	34	44	24	35	332	313	332	358.3
14-Feb	312	322	316	303	304	306	321	304	310	334	356	336	325	332	336	345	6	5	164	185	201	221	216	234	324.3
15-Feb	234	210	223	270	223	318	270	281	297	299	313	308	307	317	310	314	301	305	318	319	323	341	24	162	308.1
16-Feb	93	131	150	UO	168	195	183	179	170	146	151	148	135	137	147	139	124	123	134	145	155	166	170	163	148.5
17-Feb	164	162	159	164	163	162	158	150	153	155	157	153	150	150	153	142	141	151	148	139	135	149	160	144	152.2
18-Feb	159	171	173	173	162	167	175	169	171	167	169	170	165	160	163	173	176	169	160	154	151	156	166	169	165.7
19-Feb	168	164	163	163	167	166	162	164	167	165	171	163	161	155	154	155	157	155	142	153	156	161	166	167	160.8
20-Feb	168	169	174	171	171	172	181	184	193	188	196	201	200	204	239	262	210	204	203	203	199	204	207	206	195.2
21-Feb	207	210	203	190	210	207	211	208	211	209	224	311	306	292	301	311	355	23	30	24	16	3	2	30	263.4
22-Feb	118	126	131	170	162	153	154	168	159	157	172	189	191	177	173	192	189	182	178	176	175	176	178	181	173.0
23-Feb	148	161	151	187	182	200	220	231	262	253	257	276	291	291	290	300	315	UO	UO	UO	UO	UO	UO	UO	--
24-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	281	265	265	283	252	247	219	173	201	201	219	219	228	--
25-Feb	269	264	294	16	13	4	45	91	49	44	44	164	106	89	145	131	135	114	153	179	173	181	216	246	107.5
26-Feb	285	286	216	278	285	283	320	274	290	277	290	289	291	292	290	293	278	256	209	198	199	195	202	199	265.5
27-Feb	203	201	179	158	173	173	173	176	209	280	291	291	292	292	292	300	300	309	317	323	321	332	359	2	289.6
28-Feb	3	38	87	67	161	154	123	101	130	126	147	133	190	333	294	299	355	113	155	177	194	181	171	169	146.5
	253.9	260.4	232.1	237.4	222.8	218.6	216.6	221.9	230.1	254.3	263.2	273.7	276.3	278.9	280.2	283.8	285.9	259.0	251.5	261.3	244.1	235.7	233.9	239.8	
	Diurnal Average																								

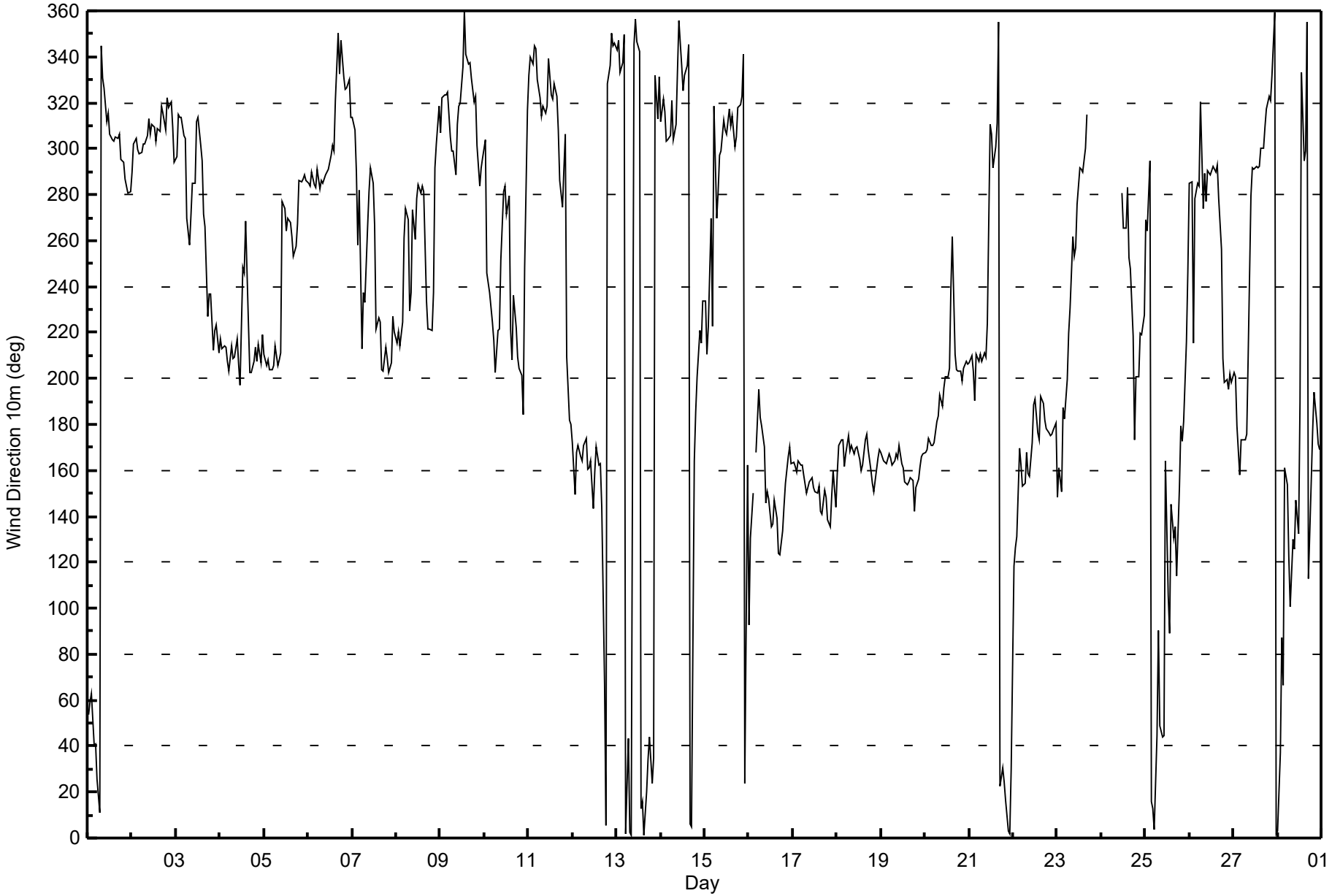
UO - Unstable Operation
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Jackfish 1 - February 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Jackfish 1 - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 107 deg on Feb 10 23:00

Minimum Value: 6 deg on Feb 14 07:00

Percentiles: P_1 = 10 P_{10} = 14 Q_1 = 17 Median = 25 Q_3 = 40 P_{90} = 61 P_{99} = 84

Hours in Service:	672
Hours of Data:	653
Hours of Missing Data:	19
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-Feb	30	26	26	27	31	34	24	25	17	15	15	15	13	13	12	13	14	16	14	16	22	26	25	26	34
2-Feb	20	11	13	14	15	14	11	10	11	12	14	16	16	14	14	13	13	11	12	12	11	12	9	25	25
3-Feb	17	10	9	16	27	28	82	26	25	65	54	32	27	42	48	53	42	81	56	12	24	14	53	19	82
4-Feb	22	18	21	21	17	26	23	42	19	27	32	53	71	60	67	59	35	18	17	24	17	31	21	46	71
5-Feb	21	33	31	21	32	27	28	30	20	38	58	68	62	59	58	67	56	69	74	50	37	29	30	22	74
6-Feb	26	32	22	22	26	55	43	29	29	22	21	24	19	15	17	21	26	20	25	20	14	16	14	15	55
7-Feb	18	23	24	39	41	27	42	65	71	56	40	60	54	54	61	48	26	18	33	29	24	26	16	21	71
8-Feb	20	24	17	30	37	28	44	42	53	54	74	55	51	53	52	52	70	24	22	29	23	46	14	15	74
9-Feb	15	14	14	13	13	12	14	13	26	17	15	22	29	27	27	21	23	16	10	10	23	17	11	30	30
10-Feb	75	36	69	63	36	32	38	51	48	55	56	64	60	59	53	39	61	58	33	24	28	30	107	28	107
11-Feb	17	19	16	22	22	14	9	13	11	12	15	27	21	21	20	21	21	74	61	51	33	66	19	12	74
12-Feb	20	16	19	28	17	23	25	30	22	24	28	33	34	30	29	44	64	40	34	21	23	27	23	23	64
13-Feb	24	23	21	20	22	26	98	49	31	28	33	35	24	45	43	30	25	18	14	23	21	17	23	18	98
14-Feb	12	12	7	11	32	18	6	24	23	19	31	44	24	24	25	28	20	15	82	51	15	77	72	23	82
15-Feb	49	14	16	53	69	80	80	39	25	13	20	15	17	17	15	16	17	14	13	11	10	22	23	76	80
16-Feb	34	55	55	UO	30	36	34	52	17	12	24	36	49	32	37	42	18	12	12	13	11	11	14	17	55
17-Feb	18	19	18	18	18	18	16	15	18	22	22	25	22	22	23	27	18	14	14	15	15	17	13	17	27
18-Feb	13	13	15	21	18	12	17	17	14	23	24	27	28	23	23	25	22	15	15	12	11	13	17	17	28
19-Feb	16	15	14	15	16	16	16	15	17	19	22	24	23	21	20	19	18	17	15	14	14	16	18	21	24
20-Feb	22	22	23	19	21	25	34	33	26	31	30	29	35	39	64	72	49	32	33	27	22	28	24	19	72
21-Feb	16	14	18	22	25	26	26	23	33	32	50	22	35	52	27	28	28	27	27	31	39	34	39	60	60
22-Feb	82	26	74	31	10	10	10	14	15	22	21	30	30	25	30	32	38	20	17	14	13	15	17	24	82
23-Feb	29	13	16	39	24	41	50	70	82	76	77	67	58	42	26	16	20	UO	UO	UO	UO	UO	UO	UO	82
24-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	79	65	72	78	83	68	37	15	28	32	36	53	64	83
25-Feb	63	52	36	28	38	31	42	41	36	33	38	47	68	80	42	37	24	23	12	83	68	24	56	71	83
26-Feb	64	70	87	89	50	30	87	60	80	62	34	57	42	50	54	51	59	53	44	41	22	33	39	41	89
27-Feb	45	38	25	14	16	16	16	15	60	58	40	36	22	25	27	16	13	18	13	14	14	21	25	27	60
28-Feb	28	37	45	47	35	31	27	26	37	33	41	69	85	84	58	59	63	48	80	14	17	18	12	11	85
	82	70	87	89	69	80	98	70	82	76	77	79	85	84	78	83	70	81	82	83	68	77	107	76	
	Diurnal Maximum																								

UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS508
KIRBY NORTH
FEBRUARY 2025

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

March 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - KIRBY NORTH (AMS 508)
FEBRUARY 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	620	38	52	97.92	16.8	0	4.1	0
H2S (ppb) Average	636	36	36	100	1.2	0	0.2	0
THC (ppm) Average	620	38	52	97.92	3.2	-	2.4	-
NO2 (ppb) Average	637	35	35	100	25.2	0	9.7	-
NO (ppb) Average	637	35	35	100	11.7	-	2.2	-
NOX (ppb) Average	637	35	35	100	26.9	-	11.9	-
Temperature 2 m (C) Average	672	0	0	100	7.4	-	3.8	-
Relative Humidity (%) Average	672	0	0	100	95.6	-	82.4	-
Wind Speed 10 m (km/h) Average	671	0	1	99.85	29	-	17	-
Wind Direction 10 m (deg) Average	671	0	1	99.85	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - KIRBY NORTH (AMS508)
FEBRUARY 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	620	0.84	1.5	-	0	0	0.1	0.4	0.8	1.8	16.8
H2S (ppb) Average	636	0.07	0.1	-	0	0	0	0	0.1	0.1	1.2
THC (ppm) Average	620	2.33	0.1	-	2.1	2.2	2.3	2.3	2.4	2.4	3.2
NO2 (ppb) Average	637	2.64	2.5	-	0.2	0.8	1.2	2.1	3.2	4.8	25.2
NO (ppb) Average	637	0.43	0.9	-	0	0	0	0.1	0.5	1.1	11.7
NOX (ppb) Average	637	3.07	2.9	-	0.2	0.9	1.5	2.3	3.7	5.7	26.9
Temperature 2 m (C) Average	672	-15.91	11.6	-	-33.8	-28.8	-24.7	-19.6	-3.6	2.4	7.4
Relative Humidity (%) Average	672	71.06	11.9	-	24	54.8	64.4	73.8	77.9	83.3	95.6
Wind Speed 10 m (km/h) Average	671	10.2	5	-	0	4	7	10	13	16	29
Wind Direction 10 m (deg) Average	671	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - KIRBY NORTH (AMS508)
FEBRUARY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
SO2, THC	12 Feb 2025 20:00	13 Feb 2025 09:00	14	Maintenance - calibration gas cylinder replaced
Wind Speed, Wind Direction	24 Feb 2025 01:00	24 Feb 2025 01:00	1	Flat line in sensor output signal - Sensor frozen

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Kirby North - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 16.8 ppb on Feb 14 10:00
Maximum Daily Average: 4.1 ppb on Feb 14

Minimum Value: 0.0 ppb on Feb 2 05:00
Maximum Diurnal Average: 1.5 ppb at hour 12
Monthly Average: 0.84 ppb
Minimum Daily Average: 0.1 ppb on Feb 4
Minimum Diurnal Average: 0.4 ppb at hour 1
Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.4 Q_3 = 0.8 P_{90} = 1.8 P_{99} = 8.2

Hours in Service:	672
Hours of Data:	620
Hours of Missing Data:	52
Hours of Calibration:	38
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-Feb	0.2	Z	0.9	0.7	0.4	0.6	0.4	0.2	0.1	0.2	0.5	2.0	2.9	3.2	2.1	1.8	0.7	0.2	0.2	0.1	0.0	0.1	0.4	0.2	0.8	3.2
2-Feb	0.0	0.1	Z	0.0	0.0	0.0	0.0	0.5	1.6	2.3	4.6	5.1	3.9	4.0	3.7	1.1	0.4	0.1	0.1	0.4	0.6	0.5	0.0	0.0	1.3	5.1
3-Feb	0.0	0.1	0.0	Z	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.6	0.6	0.1	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.6
4-Feb	0.0	0.0	0.5	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	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.5
5-Feb	0.2	0.3	0.6	0.8	0.9	Z	0.8	0.6	0.6	0.9	0.6	0.5	0.4	0.4	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.7	1.5	0.5	1.5
6-Feb	Z	0.2	0.0	0.4	0.5	1.4	2.1	3.2	2.6	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	1.2	1.5	1.3	0.9	0.2	0.2	0.1	0.7	3.2
7-Feb	0.0	Z	0.9	0.4	1.6	0.3	0.1	0.0	0.0	0.0	0.4	0.7	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.2	0.1	0.2	0.3	1.6
8-Feb	0.1	0.1	Z	0.2	0.1	0.4	0.2	0.6	0.5	0.4	0.3	0.8	0.6	1.5	0.6	0.6	0.2	0.0	0.1	0.0	0.0	1.1	0.1	0.0	0.4	1.5
9-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.4	0.4	0.2	0.6	1.1	0.8	1.4	1.9	1.9	0.8	0.3	0.2	0.4	1.9
10-Feb	1.1	1.4	1.2	0.0	Z	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.2	0.6	0.2	1.4
11-Feb	0.1	0.4	0.4	0.4	0.4	Z	0.2	0.1	0.1	0.0	0.0	0.1	0.1	0.3	0.6	0.5	1.0	1.8	2.2	2.2	1.7	1.9	1.4	1.2	0.7	2.2
12-Feb	Z	0.9	0.8	0.6	0.3	0.2	0.1	0.1	0.3	0.4	0.5	0.5	0.6	0.7	C	C	C	C	C	M	M	M	M	M	--	0.9
13-Feb	M	M	M	M	M	M	M	M	M	C	C	C	C	C	C	0.5	1.2	1.0	0.8	0.5	0.2	0.2	0.2	0.2	--	1.2
14-Feb	0.3	0.4	Z	4.2	1.2	9.5	9.9	2.2	6.5	16.8	8.9	7.2	6.1	6.1	3.3	1.2	1.8	1.1	1.1	1.5	1.7	1.6	1.5	1.1	4.1	16.8
15-Feb	0.8	0.9	0.7	Z	1.3	1.4	1.4	1.5	1.4	1.0	0.9	0.7	0.9	0.5	0.6	0.6	0.5	0.3	0.3	0.3	0.4	0.7	0.4	0.4	0.8	1.5
16-Feb	0.4	0.4	0.4	0.3	Z	0.5	0.4	0.5	0.5	0.5	1.1	0.6	0.7	1.0	0.8	0.7	0.9	0.9	1.0	1.1	0.6	0.5	0.2	0.4	0.6	1.1
17-Feb	0.7	0.6	0.5	1.3	1.6	Z	1.0	0.6	0.6	0.5	0.3	0.1	0.1	0.3	0.2	0.2	0.3	0.4	0.4	0.3	0.4	0.5	0.4	0.3	0.5	1.6
18-Feb	Z	0.4	0.4	0.4	0.4	0.5	0.4	0.3	0.3	0.4	0.3	0.5	0.5	0.2	0.2	0.2	0.1	0.2	0.3	0.4	0.5	0.6	0.3	0.4	0.4	0.6
19-Feb	0.7	Z	0.7	0.8	0.9	1.0	1.0	0.9	0.8	0.8	1.0	0.8	0.7	0.5	0.4	0.2	0.3	0.5	0.4	0.3	0.1	0.4	0.5	0.2	0.6	1.0
20-Feb	0.2	0.1	Z	0.1	0.1	0.2	0.1	0.1	0.4	0.6	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.4	0.4	0.7
21-Feb	0.4	0.4	0.4	Z	0.6	0.6	0.5	0.6	0.5	0.5	1.0	2.6	0.8	1.8	0.4	0.4	0.5	0.4	1.3	1.5	1.9	3.3	2.8	1.6	1.1	3.3
22-Feb	1.0	0.7	0.4	0.5	Z	0.5	0.4	0.5	0.4	0.5	0.4	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.6	0.6	0.6	0.7	0.5	1.0
23-Feb	0.7	0.7	0.6	0.5	0.4	Z	0.4	0.3	0.1	0.2	0.4	3.9	1.9	6.8	8.5	2.0	0.2	1.0	2.0	2.5	1.0	1.0	0.5	0.8	1.6	8.5
24-Feb	Z	1.4	1.6	0.6	0.2	0.4	0.2	0.4	0.2	0.1	0.2	0.3	0.8	0.8	0.4	0.4	0.3	0.1	0.2	0.2	0.1	0.3	0.1	0.1	0.4	1.6
25-Feb	0.1	Z	1.2	0.9	0.1	3.4	4.7	10.1	11.9	7.2	5.9	5.4	3.1	3.8	1.9	0.8	0.6	0.5	0.6	0.5	0.4	0.2	0.1	0.9	2.8	11.9
26-Feb	1.5	1.1	Z	0.3	4.8	1.7	2.3	1.3	0.2	1.6	3.1	4.7	3.8	3.5	1.8	1.7	2.8	0.2	0.1	0.0	0.0	0.1	0.1	0.0	1.6	4.8
27-Feb	0.1	0.0	0.0	Z	0.0	0.0	0.4	1.3	0.9	1.3	4.5	1.3	3.2	2.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.8	4.5
28-Feb	1.1	0.6	0.5	1.2	Z	0.7	0.4	0.3	0.4	0.6	0.7	0.5	0.4	0.5	0.6	0.7	0.6	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.5	1.2
	0.4	0.5	0.6	0.7	0.7	1.0	1.0	1.0	1.1	1.4	1.3	1.5	1.2	1.5	1.2	0.6	0.5	0.5	0.6	0.6	0.5	0.6	0.5	0.5	Diurnal Average	
	1.5	1.4	1.6	4.2	4.8	9.5	9.9	10.1	11.9	16.8	8.9	7.2	6.1	6.8	8.5	2.0	2.8	1.8	2.2	2.5	1.9	3.3	2.8	1.6	Diurnal Maximum	

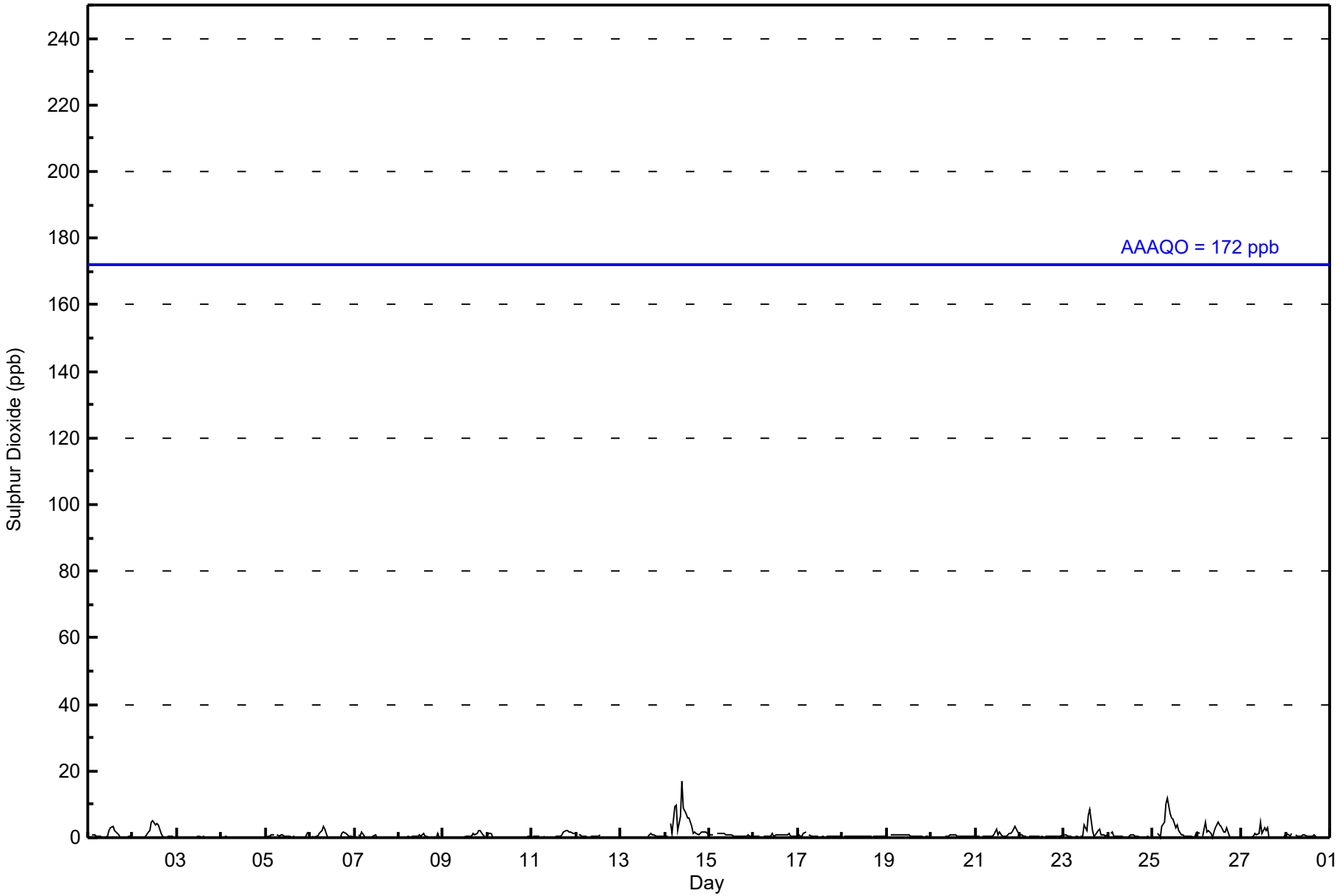
Z - zerospan C - Calibration M - Maintenance
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Kirby North - February 2025



Sulphur Dioxide (SO_2) - ppb
Kirby North - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	618	99.68	99.68
11 - 20	2	0.32	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: 620

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Kirby North - February 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	15	36	12	4	1	8	53	94	89	53	52	32	44	59	40	618
11 - 20	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
21 - 60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61 - 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111 - 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	26	15	37	13	4	1	8	53	94	89	53	52	32	44	59	40	620

Total Number of Valid Hours: 620

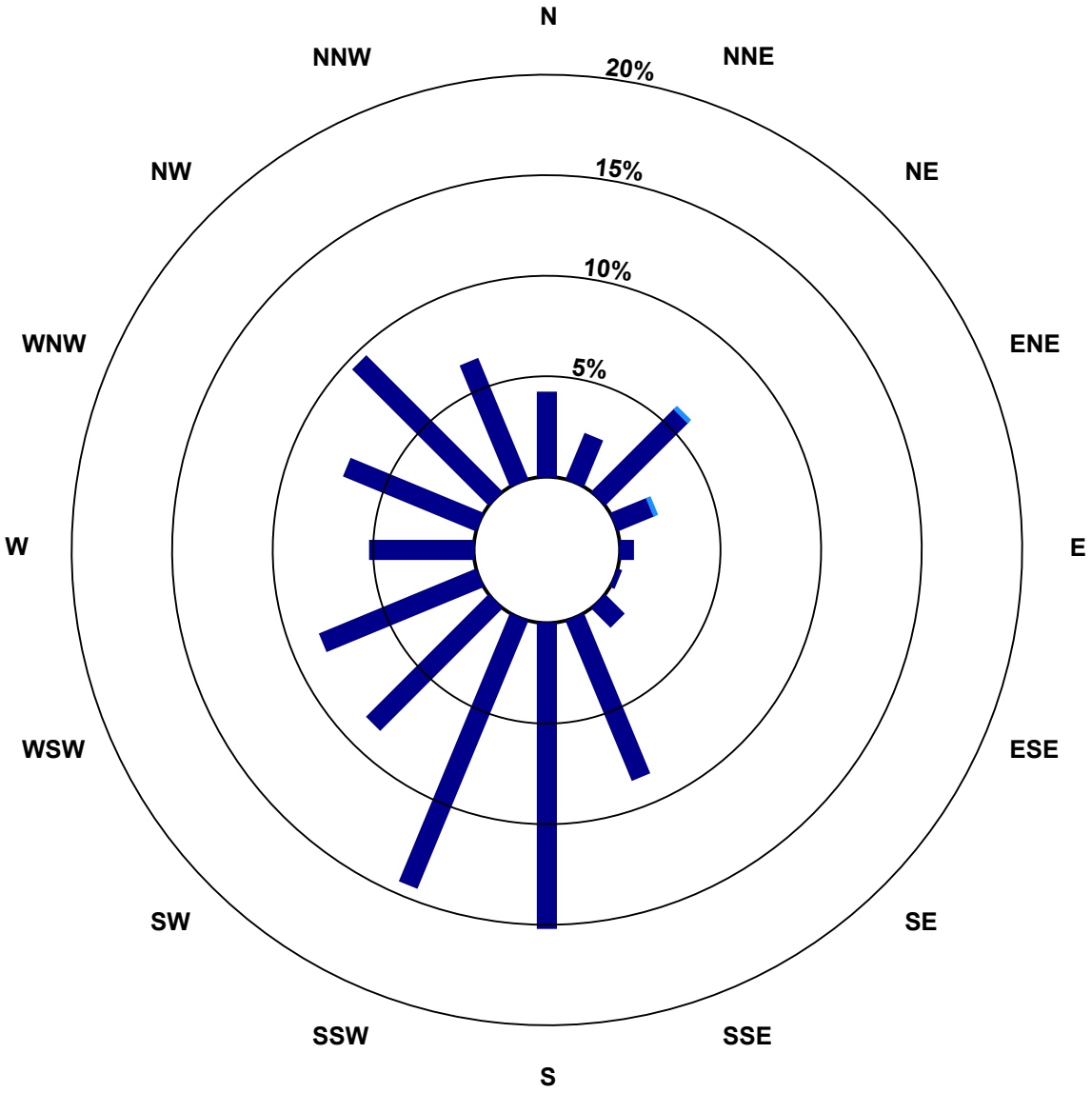
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Sulphur Dioxide (SO_2) - ppb

Kirby North



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

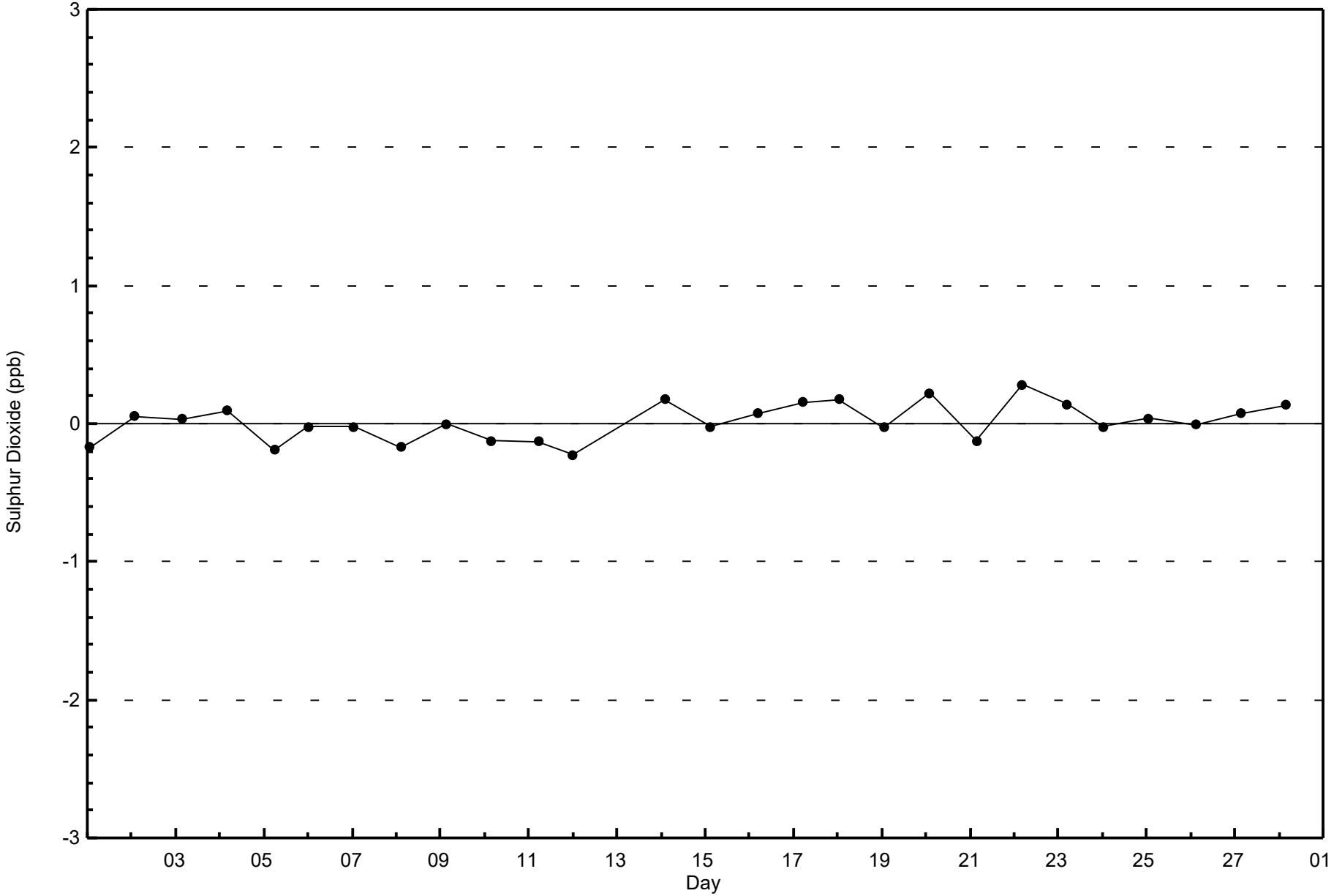
Total Number of Valid Hours: 620

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Kirby North - February 2025

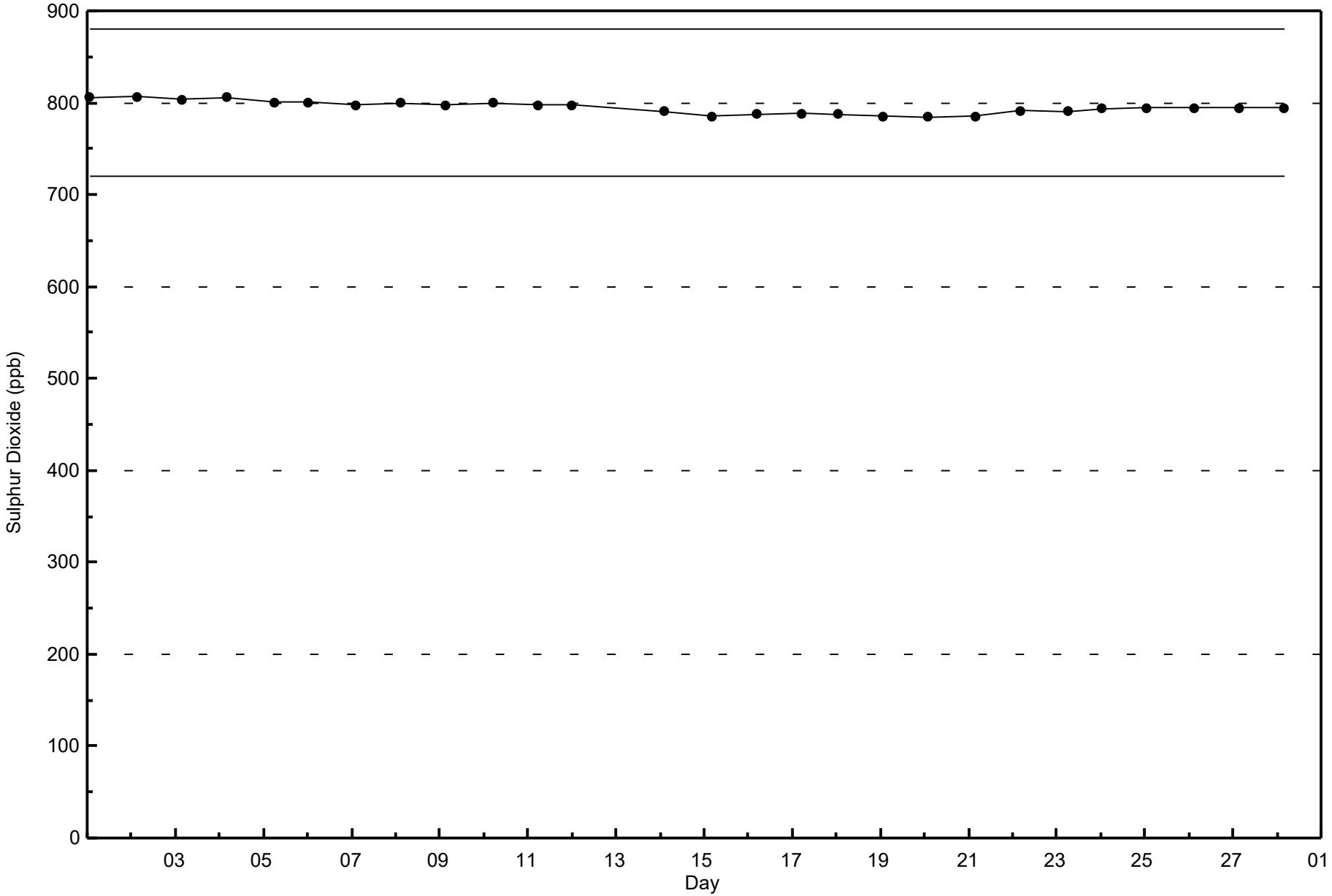


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Kirby North - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Kirby North - February 2025

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

Maximum Value: 1.2 ppb on Feb 3 10:00 Maximum Daily Average: 0.2 ppb on Feb 21

Minimum Value: 0.0 ppb on Feb 19 21:00 Minimum Daily Average: 0.0 ppb on Feb 10

Maximum Diurnal Average: 0.1 ppb at hour 10 Minimum Diurnal Average: 0.0 ppb at hour 17

Monthly Average: 0.07 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.0 Q_3 = 0.1 P_{90} = 0.1 P_{99} = 0.4

Hours in Service:	672
Hours of Data:	636
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-Feb	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	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
2-Feb	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.1	0.1
3-Feb	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.1	1.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.2
4-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
5-Feb	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	0.1	0.0	0.1
6-Feb	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.4	0.7	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.7
7-Feb	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	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1
8-Feb	0.1	0.0	0.1	Z	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.3
9-Feb	0.1	0.1	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	0.1
10-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
11-Feb	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.1
12-Feb	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	C	C	C	C	C	C	C	C	C	0.1	0.1	0.0	--	0.1
13-Feb	0.0	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
14-Feb	0.1	0.2	0.1	Z	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
15-Feb	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.9	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.9
16-Feb	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	0.1	0.1	0.1	0.0	0.1	0.0	0.1
17-Feb	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	0.0	0.0	0.1
18-Feb	0.0	Z	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
19-Feb	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
20-Feb	0.0	0.0	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
21-Feb	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	0.2	0.2	0.6	0.4	0.3	0.2	0.6
22-Feb	0.2	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.2
23-Feb	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
24-Feb	0.2	Z	0.4	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.4
25-Feb	0.1	0.1	Z	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.4
26-Feb	0.1	0.1	0.0	Z	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
27-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1
28-Feb	0.1	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	Diurnal Average	
	0.2	0.2	0.4	0.2	0.1	0.2	0.2	0.9	0.4	1.2	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.6	0.4	0.3	Diurnal Maximum	

Z - zerospan C - Calibration

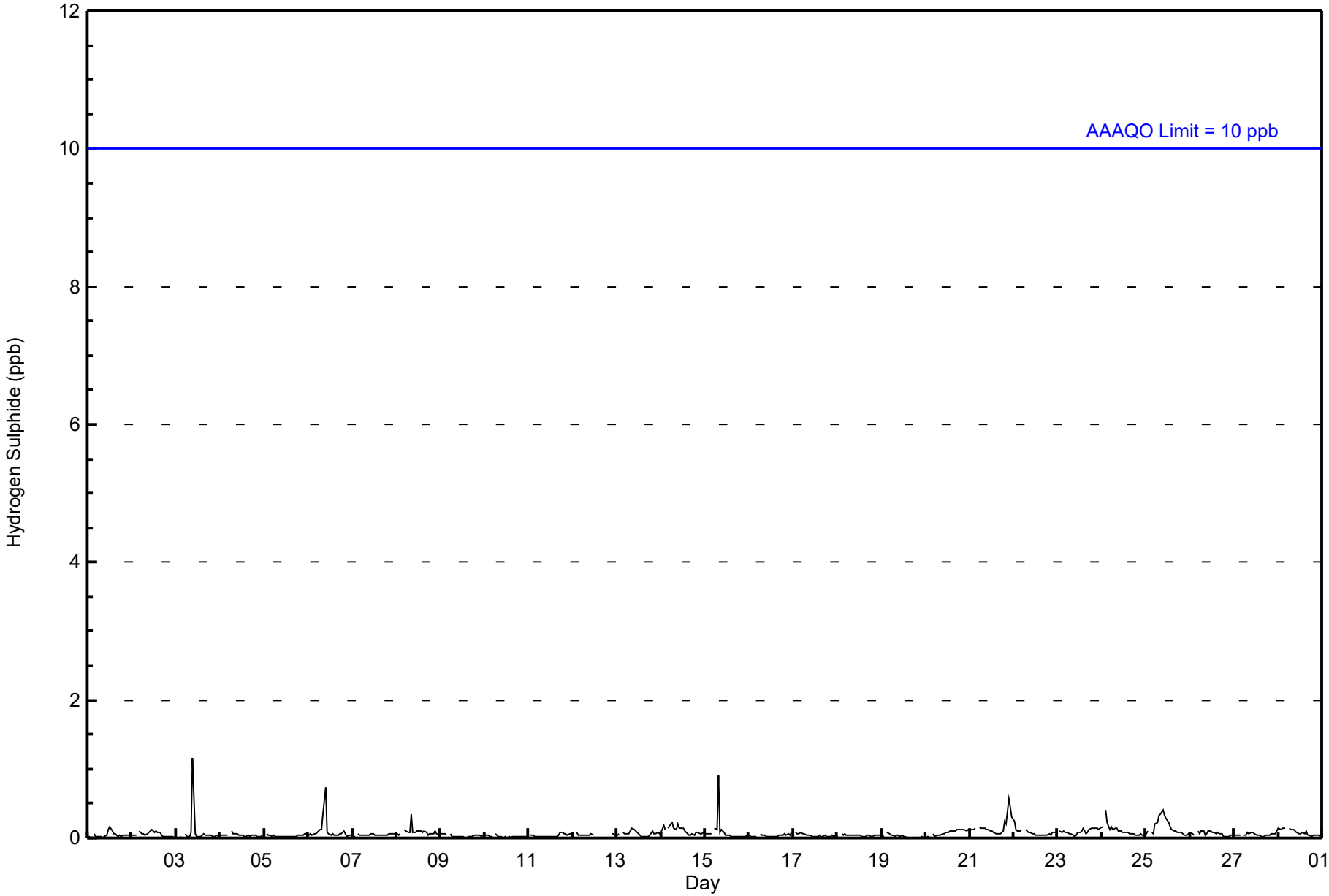
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Kirby North - February 2025



Hydrogen Sulphide (H_2S) - ppb

Kirby North - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	636	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: 636

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Kirby North - February 2025

Concentration	Wind Direction																
Ranges (ppb)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	**Totals**
0 - 2	26	22	44	15	5	1	7	53	95	87	55	50	32	44	60	39	635
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	22	44	15	5	1	7	53	95	87	55	50	32	44	60	39	635

Total Number of Valid Hours: 635

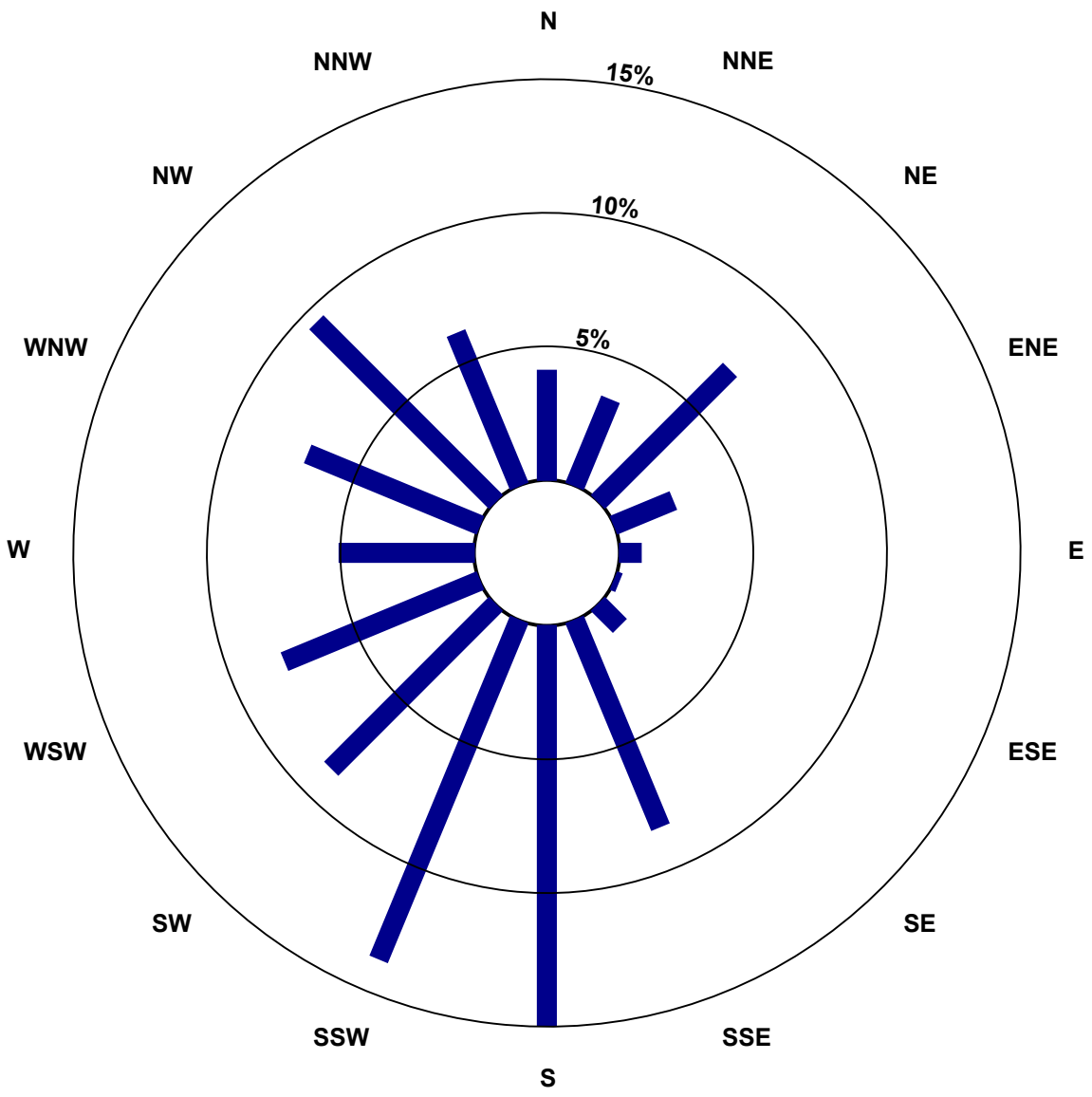
Total Number of Hours: 672

Wood Buffalo Environmental Association

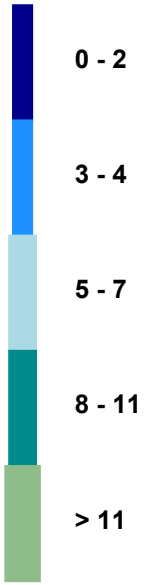
Wind Rose Feb 2025

Hydrogen Sulphide (H_2S) - ppb

Kirby North



Classes (ppb)



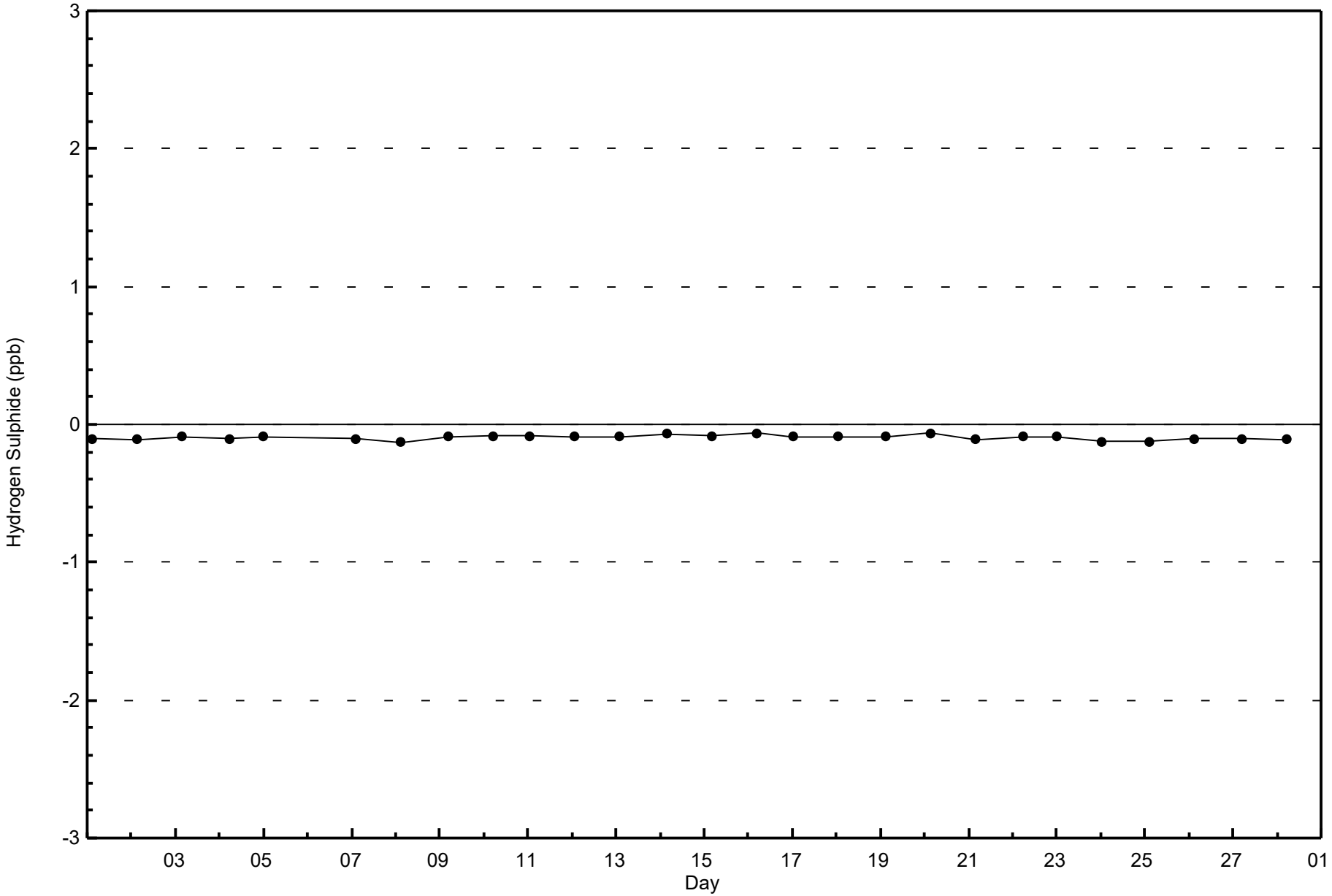
Total Number of Valid Hours: 635

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Kirby North - February 2025

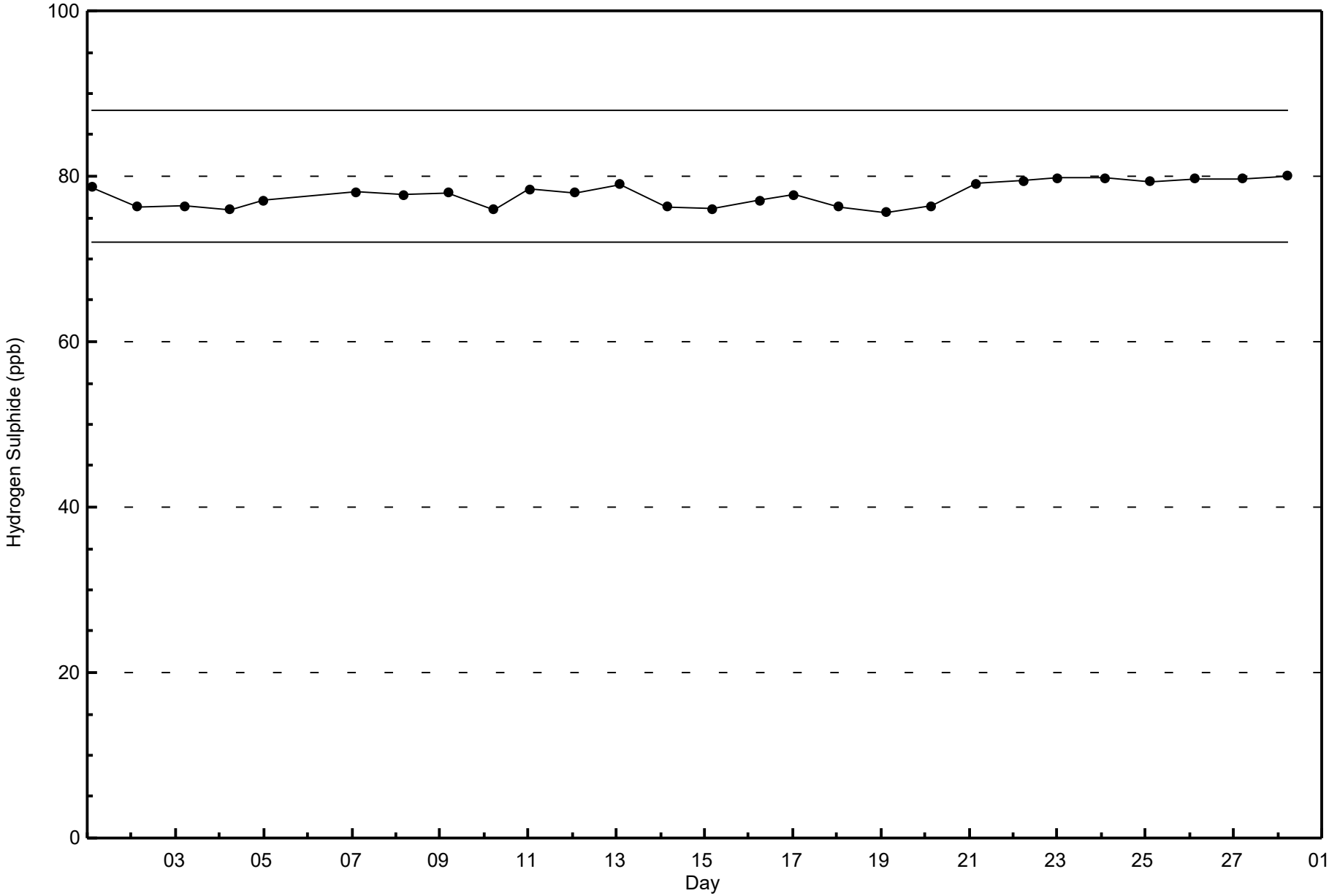


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Kirby North - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Total Hydrocarbons (THC) - ppm

Kirby North - February 2025

Maximum Value: 3.2 ppm on Feb 15 08:00

Maximum Daily Average: 2.4 ppm on Feb 4

Minimum Value: 2.1 ppm on Feb 27 15:00

Minimum Daily Average: 2.2 ppm on Feb 27

Maximum Diurnal Average: 2.4 ppm at hour 8

Minimum Diurnal Average: 2.3 ppm at hour 16

Monthly Average: 2.33 ppm

Percentiles: P_1 = 2.1 P_{10} = 2.2 Q_1 = 2.3 Median = 2.3 Q_3 = 2.4 P_{90} = 2.4 P_{99} = 2.5

Hours in Service:	672
Hours of Data:	620
Hours of Missing Data:	52
Hours of Calibration:	38
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-Feb	2.3	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.4	2.6
2-Feb	2.4	2.3	Z	2.4	2.4	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.5	2.5	2.4	2.5
3-Feb	2.3	2.3	2.4	Z	2.3	2.4	2.3	2.3	2.4	2.5	2.5	2.4	2.4	2.4	2.3	2.4	2.4	2.4	2.5	2.4	2.4	2.4	2.4	2.4	2.4	2.5
4-Feb	2.4	2.4	2.4	2.4	Z	2.5	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5
5-Feb	2.4	2.4	2.4	2.4	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	2.4	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4
6-Feb	Z	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.3	2.3	2.3	2.4	2.4
7-Feb	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	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.4
8-Feb	2.4	2.4	Z	2.4	2.4	2.4	2.3	2.3	2.7	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.3	2.4	2.7
9-Feb	2.3	2.3	2.3	Z	2.3	2.4	2.3	2.4	2.4	2.4	2.4	2.4	2.3	2.4	2.3	2.4	2.4	2.4	2.4	2.3	2.4	2.5	2.5	2.4	2.4	2.5
10-Feb	2.4	2.4	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	2.4	2.4
11-Feb	2.4	2.4	2.4	2.4	2.4	Z	2.3	2.3	2.3	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.4	2.5
12-Feb	Z	2.5	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3	C	C	C	C	C	M	M	M	M	M	--	2.5
13-Feb	M	M	M	M	M	M	M	M	M	C	C	C	C	C	C	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	--	2.4
14-Feb	2.4	2.4	Z	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.4
15-Feb	2.3	2.4	2.3	Z	2.4	2.4	2.5	3.2	2.4	2.5	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.3	2.3	2.5	2.5	2.4	3.2
16-Feb	2.4	2.3	2.3	2.4	Z	2.4	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	2.4	2.4	2.3	2.3	2.4
17-Feb	2.3	2.3	2.3	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
18-Feb	Z	2.3	2.4	2.4	2.3	2.3	2.3	2.4	2.3	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.4
19-Feb	2.4	Z	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.4
20-Feb	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	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
21-Feb	2.5	2.5	2.5	Z	2.5	2.4	2.4	2.4	2.4	2.4	2.4	2.2	2.2	2.1	2.1	2.2	2.1	2.2	2.3	2.3	2.3	2.3	2.4	2.4	2.3	2.5
22-Feb	2.4	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	2.4	2.3	2.3	2.4	2.4	2.4	2.3	2.4
23-Feb	2.4	2.4	2.4	2.5	2.4	Z	2.3	2.3	2.2	2.2	2.1	2.1	2.2	2.2	2.1	2.1	2.2	2.2	2.3	2.3	2.3	2.4	2.3	2.3	2.3	2.5
24-Feb	Z	2.4	2.5	2.4	2.3	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	2.2	2.2	2.2	2.2	2.3	2.5
25-Feb	2.2	Z	2.2	2.2	2.3	2.3	2.4	2.3	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.4
26-Feb	2.2	2.2	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	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.3
27-Feb	2.2	2.2	2.3	Z	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3
28-Feb	2.3	2.3	2.3	2.3	Z	2.3	2.3	2.4	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.3	2.4
	2.3	2.4	2.4	2.4	2.4	2.4	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	2.4	2.4	Diurnal Average	
	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3.2	2.7	2.5	2.5	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.5	2.4	2.4	2.5	2.5	2.5	Diurnal Maximum	

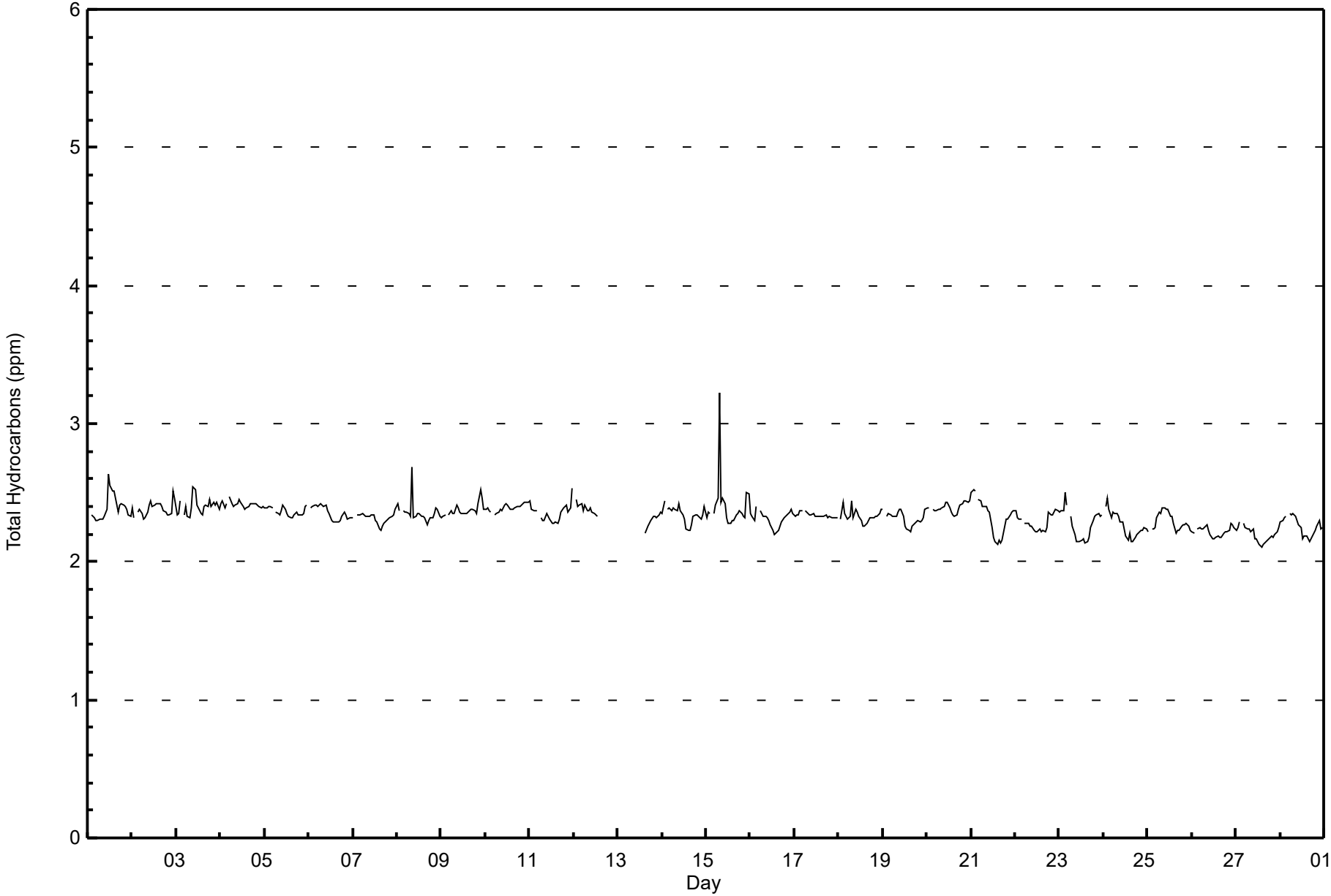
Z - zerospan C - Calibration M - Maintenance

Wood Buffalo Environmental Association

Hourly Averages

Total Hydrocarbons (THC) - ppm

Kirby North - February 2025



Concentration Ranges (ppm)	Number of Hours	%	Cumulative %
0 - 2.0	0	0.00	0.00
2.1 - 3.0	619	99.84	99.84
3.1 - 10.0	1	0.16	100.00
> 10.0	0	0.00	100.00

Total Number of Valid Hours: 620

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Total Hydrocarbons (THC) - ppm

Kirby North - February 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	15	37	13	4	1	8	53	94	89	53	52	32	44	58	40	619
3.1 - 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
> 10.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	26	15	37	13	4	1	8	53	94	89	53	52	32	44	59	40	620

Total Number of Valid Hours: 620

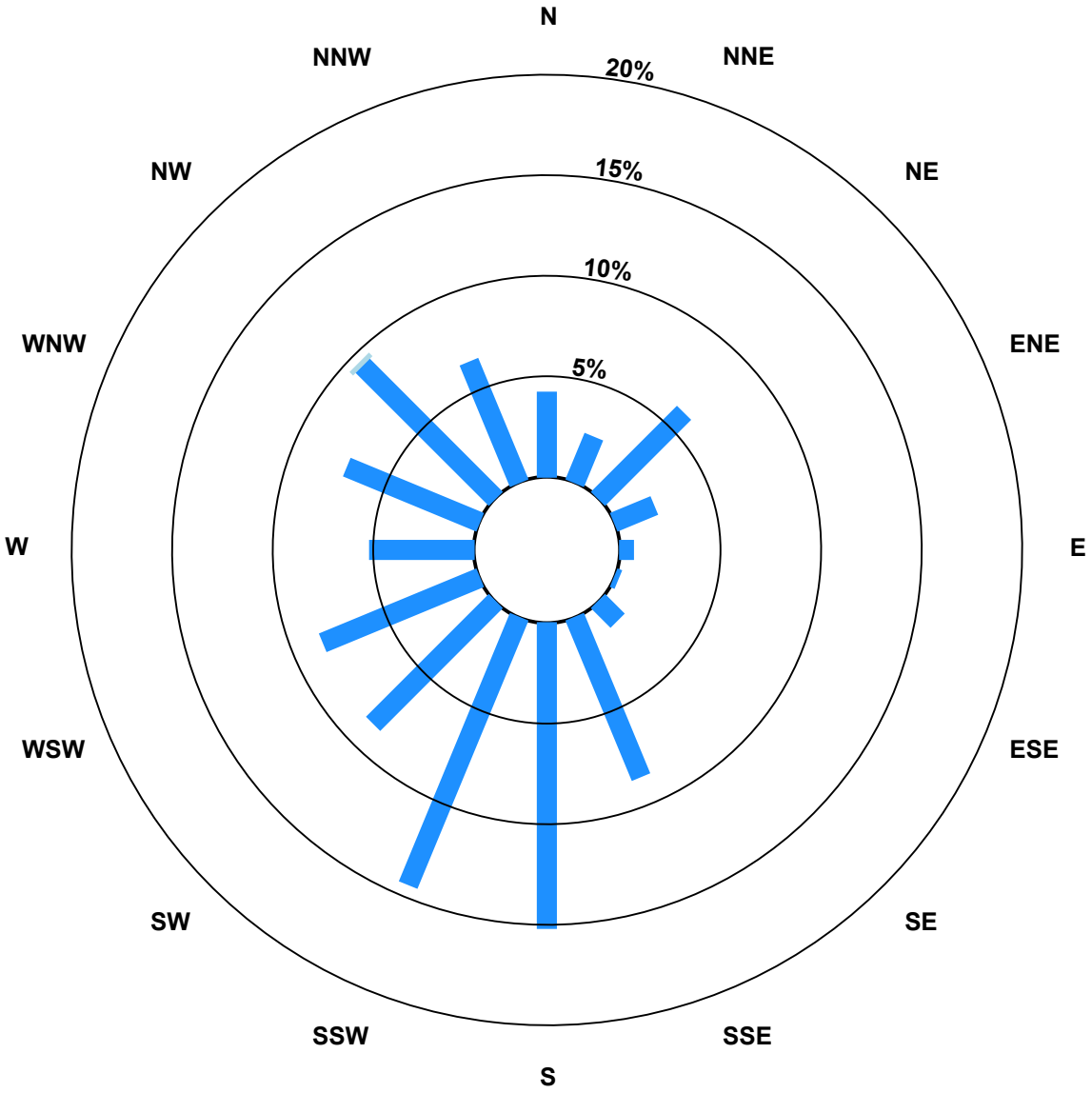
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Total Hydrocarbons (THC) - ppm

Kirby North



Classes (ppm)

0 - 2.0

2.1 - 3.0

3.1 - 10.0

> 10.0

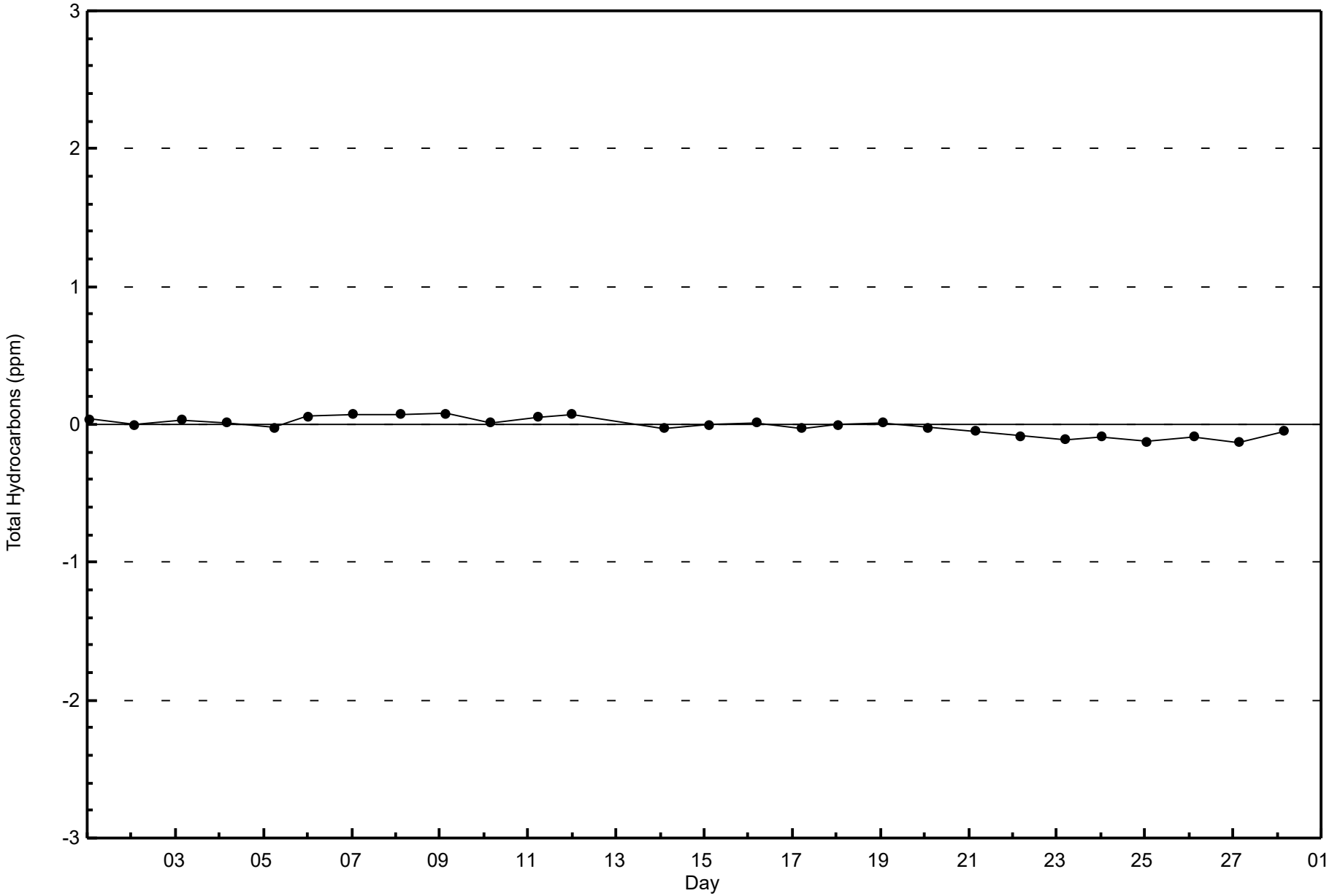
Total Number of Valid Hours: 620

Wood Buffalo Environmental Association

Zero Responses

Total Hydrocarbons (THC) - ppm

Kirby North - February 2025

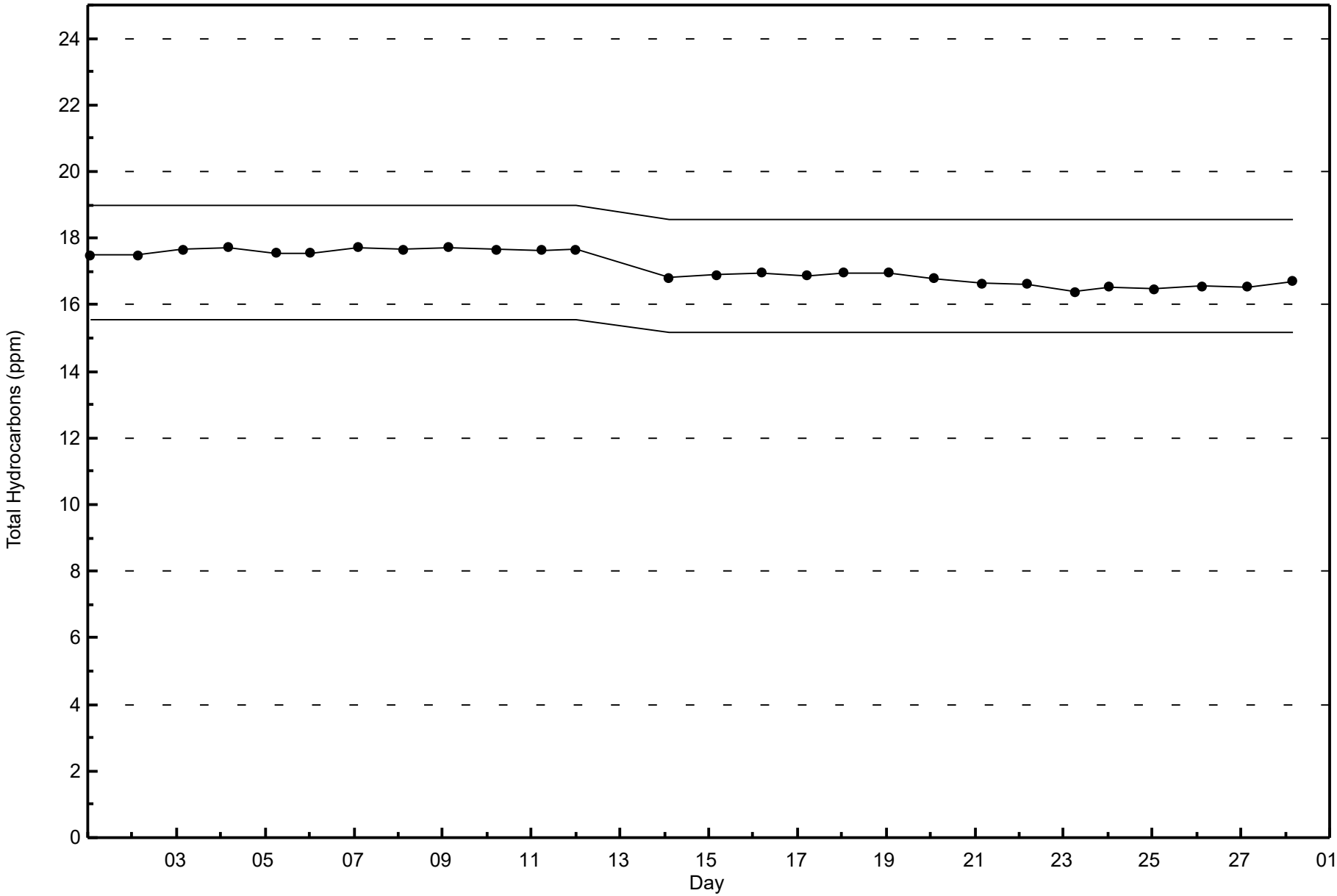


Wood Buffalo Environmental Association

Span Responses

Total Hydrocarbons (THC) - ppm

Kirby North - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Kirby North - February 2025

Maximum Value: 11.7 ppb on Feb 14 10:00

Maximum Daily Average: 2.2 ppb on Feb 14

Minimum Value: 0.0 ppb on Feb 2 20:00

Minimum Daily Average: 0.1 ppb on Feb 9

Maximum Diurnal Average: 1.3 ppb at hour 11

Minimum Diurnal Average: 0.0 ppb at hour 21

Monthly Average: 0.43 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.0 Median = 0.1 Q_3 = 0.5 P_{90} = 1.1 P_{99} = 3.8

Hours in Service:	672
Hours of Data:	637
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-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.4	1.2	2.3	2.5	1.8	1.1	0.1	0.3	0.2	0.4	0.1	0.1	0.6	0.4	0.5	2.5
2-Feb	Z	0.3	0.2	0.0	0.3	0.2	0.0	0.1	0.2	1.1	2.4	2.5	2.2	2.1	1.8	1.1	0.3	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.6	2.5
3-Feb	0.0	Z	0.2	0.7	0.0	0.0	0.0	0.0	1.3	2.9	2.9	1.0	0.9	0.6	0.8	1.2	0.8	0.4	0.2	0.1	0.0	0.1	0.1	0.0	0.6	2.9
4-Feb	0.0	0.1	Z	0.1	0.1	0.1	0.1	1.1	1.2	1.2	0.9	0.8	0.7	0.4	0.5	0.3	0.2	0.4	0.4	0.1	0.1	0.1	0.0	0.1	0.4	1.2
5-Feb	0.1	0.1	0.1	Z	0.1	0.2	0.1	0.2	0.1	0.4	0.7	0.7	0.8	0.7	0.6	0.5	0.4	0.2	0.1	0.4	0.2	0.2	0.8	0.6	0.4	0.8
6-Feb	0.4	0.1	0.1	0.3	Z	0.8	1.6	1.9	2.2	1.2	0.9	0.8	0.4	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	2.2
7-Feb	0.0	0.0	0.2	0.1	0.7	Z	0.4	0.1	0.1	0.2	1.6	0.8	0.5	0.3	0.1	0.1	0.0	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.2	1.6
8-Feb	Z	0.0	0.0	0.2	0.3	0.3	0.0	0.1	0.4	0.7	0.5	0.7	0.6	1.2	0.8	0.8	0.5	0.0	0.0	0.1	0.1	0.6	0.0	0.0	0.3	1.2
9-Feb	0.0	Z	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.2	0.3	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.4	0.1	0.4	0.1	0.4
10-Feb	0.9	1.1	Z	0.0	0.1	0.1	0.1	0.3	0.2	0.3	0.5	0.4	0.7	0.4	0.4	0.5	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.3	1.1
11-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.5	0.5	0.4	0.3	0.5	0.9	0.4	0.3	0.1	0.2	0.3	0.1	0.0	0.4	0.0	0.2	0.9
12-Feb	0.1	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.4	0.4	0.4	0.9	0.8	0.7	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.9
13-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.9	C	C	C	C	C	C	C	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	--	0.9
14-Feb	Z	0.1	0.0	0.2	0.1	1.5	0.8	0.4	3.6	11.7	7.1	7.6	7.0	4.4	1.9	0.7	0.4	0.0	0.0	0.0	0.0	0.0	1.0	1.3	2.2	11.7
15-Feb	0.0	Z	0.0	0.0	0.0	1.1	0.5	0.7	0.9	2.4	3.0	0.9	0.8	0.5	0.4	0.2	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	3.0
16-Feb	0.0	0.0	Z	0.3	0.0	0.1	0.0	0.5	0.3	0.4	0.5	0.9	0.5	0.5	0.5	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.9
17-Feb	0.0	0.1	0.0	Z	0.0	0.0	0.1	0.1	0.2	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5
18-Feb	0.0	0.0	0.1	0.1	Z	0.0	0.1	0.2	0.2	0.5	0.5	0.5	0.6	0.4	0.3	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6
19-Feb	0.0	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.4	0.7	1.0	0.8	0.6	0.4	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	1.0
20-Feb	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.4	0.9	1.2	1.5	1.2	1.4	1.4	1.5	0.9	0.2	0.0	0.0	0.1	0.2	0.1	0.1	0.5	1.5
21-Feb	0.0	Z	0.1	0.1	0.1	0.1	0.2	0.1	0.5	0.9	1.7	2.0	1.0	1.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.0
22-Feb	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.4	0.5	0.6	0.7	0.7	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
23-Feb	0.0	0.0	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.3	0.7	2.7	1.6	3.9	4.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	4.7
24-Feb	0.0	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.2	0.2	0.6	0.5	0.9	0.8	0.2	0.3	0.3	0.1	0.0	0.0	0.0	0.2	0.0	0.1	0.2	0.9
25-Feb	0.2	0.3	0.3	0.1	0.0	Z	0.1	0.2	1.8	2.4	2.0	1.9	1.9	2.5	1.1	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.7	2.5
26-Feb	Z	0.2	0.0	0.2	1.5	0.5	1.2	0.7	0.3	1.4	2.1	2.5	2.0	1.8	0.9	0.8	1.4	0.4	0.3	0.1	0.0	0.0	0.0	0.1	0.8	2.5
27-Feb	0.1	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.5	2.0	1.1	1.9	1.2	1.7	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.0
28-Feb	0.0	0.0	Z	0.0	0.2	0.0	0.1	0.1	0.7	0.5	0.6	0.5	0.6	0.6	0.4	0.6	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7
	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.6	1.2	1.3	1.3	1.2	1.1	0.9	0.5	0.3	0.1	0.1	0.1	0.0	0.1	0.1	0.1	Diurnal Average	
	0.9	1.1	0.3	0.7	1.5	1.5	1.6	1.9	3.6	11.7	7.1	7.6	7.0	4.4	4.7	1.5	1.4	0.4	0.4	0.4	0.2	0.6	1.0	1.3	Diurnal Maximum	

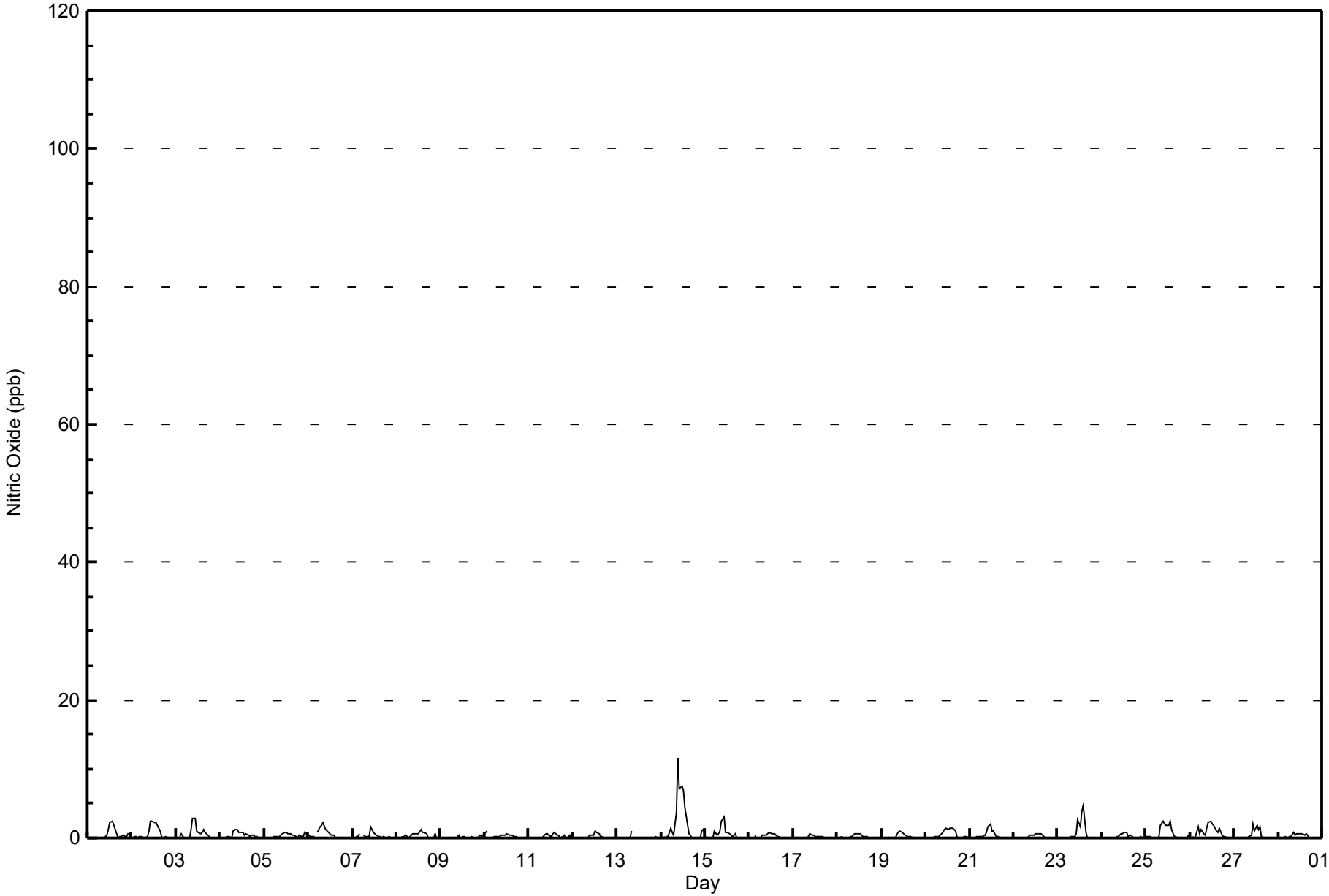
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Kirby North - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	637	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: 637

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Kirby North - February 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	26	38	13	3	1	9	57	93	89	56	49	32	43	62	39	636
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	26	38	13	3	1	9	57	93	89	56	49	32	43	62	39	636

Total Number of Valid Hours: 636

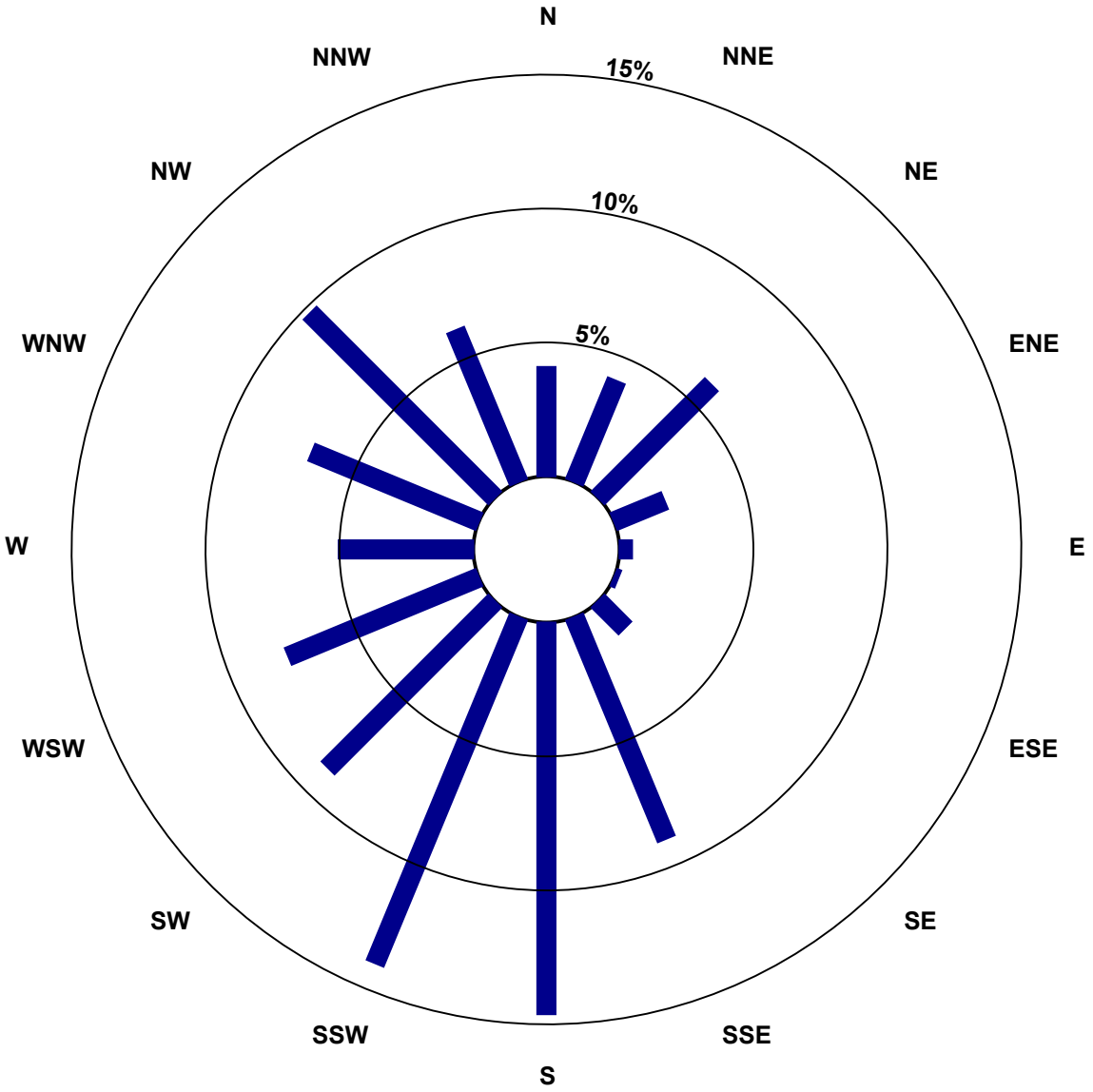
Total Number of Hours: 672

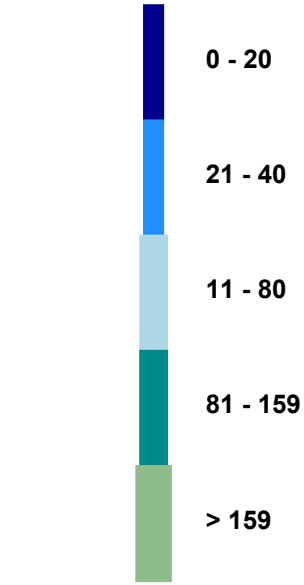
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitric Oxide (NO) - ppb

Kirby North





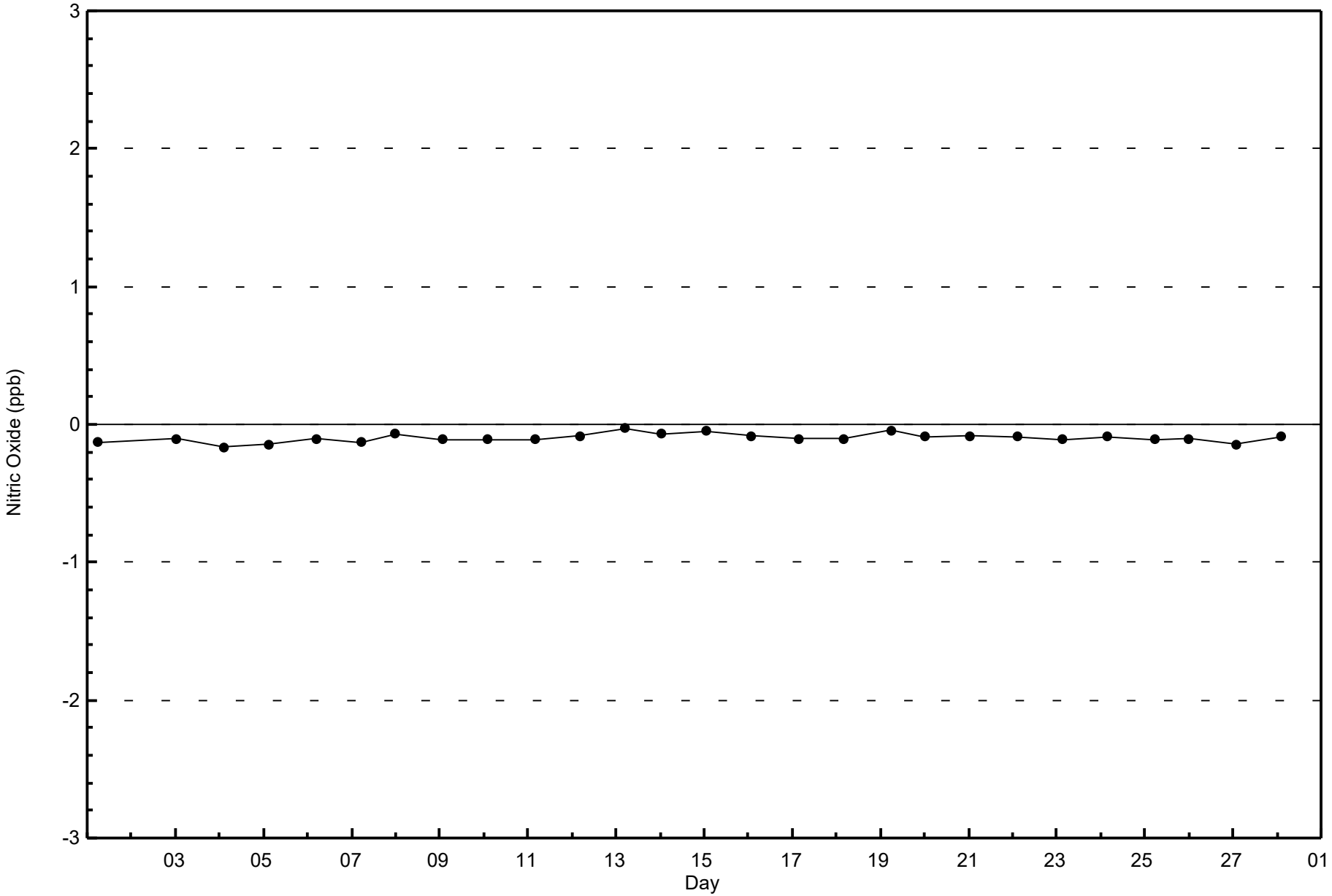
Total Number of Valid Hours: 636

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Kirby North - February 2025

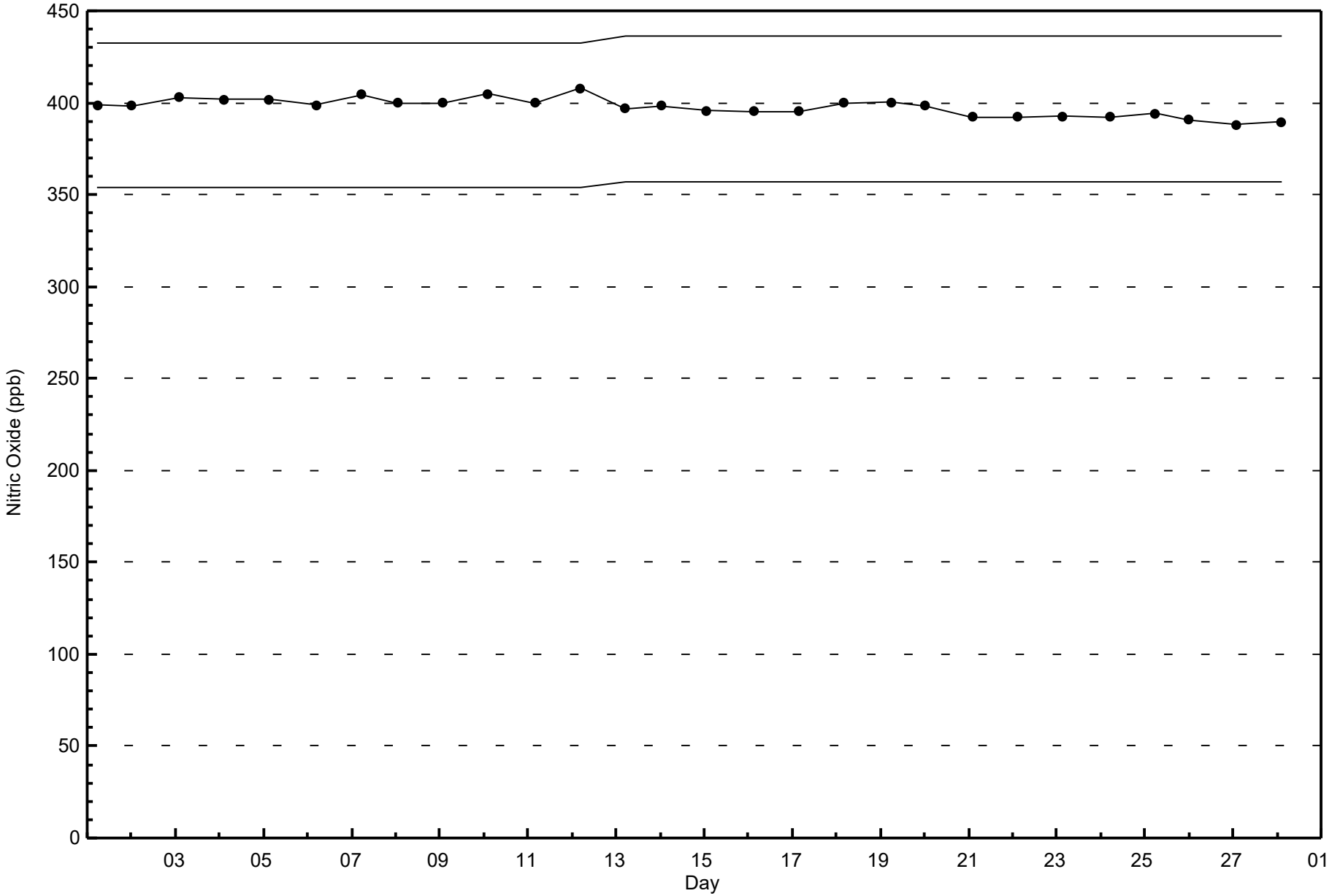


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Kirby North - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Kirby North - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 25.2 ppb on Feb 14 06:00
Maximum Daily Average: 9.7 ppb on Feb 14

Minimum Value: 0.2 ppb on Feb 9 03:00
Minimum Daily Average: 1.1 ppb on Feb 9
Maximum Diurnal Average: 3.7 ppb at hour 6
Minimum Diurnal Average: 1.6 ppb at hour 16
Monthly Average: 2.64 ppb
Percentiles: P_1 = 0.2 P_{10} = 0.8 Q_1 = 1.2 Median = 2.1 Q_3 = 3.2 P_{90} = 4.8 P_{99} = 12.2

Hours in Service:	672
Hours of Data:	637
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-Feb	1.4	1.4	1.4	1.5	1.0	Z	0.8	0.5	0.5	0.2	1.2	3.7	4.4	3.8	3.0	2.5	0.6	0.8	0.7	1.2	0.6	0.6	1.2	1.0	1.5	4.4
2-Feb	Z	0.8	1.0	0.2	0.7	0.7	0.4	1.3	2.6	2.7	3.2	3.0	3.0	3.1	3.1	2.9	1.8	1.0	0.9	0.6	0.9	1.2	0.7	0.5	1.6	3.2
3-Feb	0.4	Z	1.1	2.3	0.4	0.5	0.7	1.8	5.9	5.1	3.1	1.3	1.1	0.9	1.1	2.2	3.1	4.4	3.8	1.9	0.9	1.3	2.2	2.4	2.1	5.9
4-Feb	2.5	2.4	Z	2.2	2.4	3.6	2.8	6.2	5.5	3.4	1.6	1.2	1.0	0.7	1.1	1.0	1.3	2.0	1.8	1.5	1.7	1.4	1.4	1.3	2.2	6.2
5-Feb	1.6	1.7	2.6	Z	2.7	3.4	2.5	2.9	1.8	1.4	1.5	1.4	1.3	1.2	1.4	1.7	1.9	2.0	1.5	2.1	2.3	2.7	4.2	3.9	2.2	4.2
6-Feb	3.9	3.3	3.0	3.5	Z	4.0	4.8	5.1	6.1	3.8	2.5	1.8	1.2	1.1	1.3	0.6	0.6	2.2	2.7	3.6	2.2	0.5	1.0	0.6	2.6	6.1
7-Feb	0.4	0.5	1.1	1.0	2.3	Z	1.5	1.0	0.5	0.5	2.1	1.1	1.0	0.7	0.5	0.6	0.5	1.6	1.1	1.7	1.9	2.0	1.8	1.8	1.2	2.3
8-Feb	Z	2.1	2.7	2.6	2.5	3.0	1.2	1.8	2.6	2.0	1.0	1.5	1.3	2.1	1.4	2.1	1.8	1.3	1.0	1.2	1.4	3.2	1.4	0.7	1.8	3.2
9-Feb	0.6	Z	0.2	0.2	0.2	0.3	0.2	0.2	0.4	0.6	0.8	0.2	0.4	0.3	0.3	0.2	0.5	1.2	2.1	5.1	3.8	4.6	1.7	1.9	1.1	5.1
10-Feb	2.0	3.8	Z	1.1	1.0	1.1	1.1	1.2	1.3	0.9	0.8	0.6	0.8	0.5	0.8	0.9	1.1	1.2	1.1	1.3	1.8	2.0	1.9	3.2	1.4	3.8
11-Feb	3.0	1.3	1.4	Z	1.7	1.8	1.6	1.3	1.4	1.6	1.2	0.7	0.8	1.1	1.5	1.1	2.0	4.0	4.5	5.5	4.4	3.5	5.4	5.2	2.4	5.5
12-Feb	4.2	3.8	3.5	2.9	Z	1.7	1.8	1.6	1.7	2.3	1.9	1.5	2.3	2.8	2.8	2.1	2.9	3.0	4.0	4.5	2.7	2.2	2.0	2.0	2.6	4.5
13-Feb	2.0	1.6	1.5	1.6	1.9	Z	3.0	6.6	9.6	C	C	C	C	C	C	C	1.4	3.5	3.4	8.1	5.1	9.8	9.5	6.6	--	9.8
14-Feb	Z	11.2	11.0	18.8	12.3	25.2	25.1	14.6	14.2	15.2	8.3	7.5	7.1	5.3	2.9	1.9	2.3	3.4	3.4	5.7	6.6	5.3	6.2	9.6	9.7	25.2
15-Feb	5.2	Z	4.7	4.6	5.5	6.4	4.8	5.0	4.1	4.4	3.7	1.8	1.5	1.2	1.1	0.9	1.7	0.8	1.0	0.8	0.8	1.3	2.8	1.8	2.9	6.4
16-Feb	1.5	1.1	Z	3.3	1.7	2.3	2.1	3.9	3.1	1.5	1.3	1.1	1.1	1.2	1.2	0.9	1.0	1.6	2.1	3.2	3.6	3.2	3.0	2.8	2.1	3.9
17-Feb	3.8	3.2	3.1	Z	2.9	2.8	2.9	2.3	1.8	1.7	1.0	0.9	0.8	0.8	0.8	0.9	1.4	2.0	1.7	1.5	1.4	1.7	2.1	1.9	1.9	3.8
18-Feb	2.1	1.8	3.0	2.7	Z	1.7	2.1	3.5	1.5	1.3	1.1	1.0	1.1	0.8	0.8	1.0	1.5	2.0	1.7	1.5	1.5	1.9	1.7	2.2	1.7	3.5
19-Feb	2.4	1.9	1.9	2.3	2.6	Z	3.6	3.8	3.2	2.6	2.2	1.7	1.4	1.2	1.1	0.9	1.7	2.3	2.1	1.8	2.1	2.3	2.3	2.5	2.2	3.8
20-Feb	Z	2.3	2.5	2.4	2.3	2.4	2.6	2.9	2.9	3.0	2.8	3.0	2.7	2.9	3.1	3.7	4.3	4.5	4.7	4.8	5.3	6.0	5.5	5.4	3.6	6.0
21-Feb	5.7	Z	7.4	7.2	7.6	8.0	7.7	5.9	5.9	4.5	4.7	4.6	3.6	2.9	1.9	2.1	1.7	1.1	3.2	4.7	5.0	6.5	5.1	4.1	4.8	8.0
22-Feb	3.5	2.7	Z	3.0	3.1	3.0	3.5	3.6	3.3	3.1	2.6	2.3	2.9	3.1	2.8	3.1	3.0	2.9	3.3	3.7	3.2	3.4	3.9	4.0	3.2	4.0
23-Feb	3.8	3.7	3.9	Z	4.9	3.6	2.7	2.1	1.4	1.2	1.5	3.5	2.8	5.5	6.8	2.1	0.7	2.4	3.7	3.9	3.0	3.1	2.3	2.4	3.1	6.8
24-Feb	2.7	3.5	4.2	3.0	Z	1.7	2.0	2.0	1.7	1.0	1.4	1.2	2.0	1.6	1.1	1.3	1.8	1.6	0.8	0.9	1.0	2.6	1.4	1.4	1.8	4.2
25-Feb	2.2	4.0	3.5	2.8	1.4	Z	9.5	10.5	11.9	8.1	6.8	6.8	3.8	3.7	2.3	1.5	1.5	1.8	2.7	2.1	2.9	2.1	1.1	2.2	4.1	11.9
26-Feb	Z	2.1	0.9	2.3	4.0	2.3	3.2	2.5	1.1	2.3	3.4	3.5	3.0	2.3	2.4	2.2	4.5	3.0	1.6	1.3	1.0	1.8	1.7	1.0	2.3	4.5
27-Feb	1.0	Z	1.6	1.6	1.3	1.5	2.7	2.9	2.7	3.4	4.7	2.7	3.3	2.1	3.0	1.1	1.0	0.6	0.5	0.5	0.4	0.5	0.6	1.6	1.8	4.7
28-Feb	2.6	2.6	Z	4.3	5.6	3.7	3.7	2.6	4.1	1.8	1.8	1.6	1.3	1.5	1.4	1.7	1.6	2.4	0.9	0.7	1.2	2.0	0.9	0.7	2.2	5.6
	2.5	2.7	2.9	3.2	3.0	3.7	3.6	3.6	3.7	2.9	2.5	2.3	2.1	2.0	1.9	1.6	1.8	2.2	2.2	2.7	2.5	2.8	2.7	2.7	Diurnal Average	
	5.7	11.2	11.0	18.8	12.3	25.2	25.1	14.6	14.2	15.2	8.3	7.5	7.1	5.5	6.8	3.7	4.5	4.5	4.7	8.1	6.6	9.8	9.5	9.6	Diurnal Maximum	

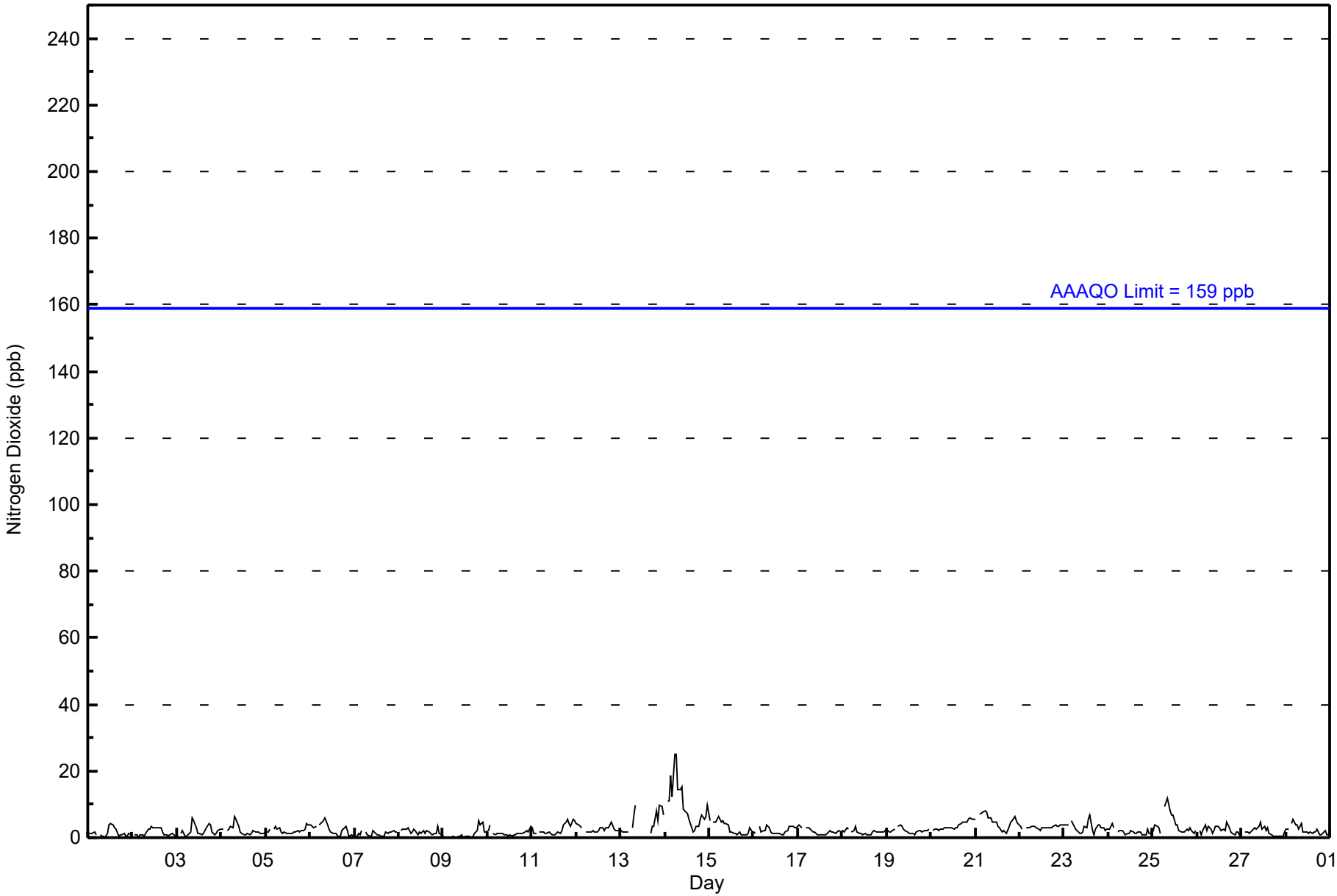
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Kirby North - February 2025



Nitrogen Dioxide (NO_2) - ppb
Kirby North - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	635	99.69	99.69
21 - 40	2	0.31	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: 637

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Kirby North - February 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	26	36	13	3	1	9	57	93	89	56	49	32	43	62	39	634
21 - 40	0	0	2	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	26	26	38	13	3	1	9	57	93	89	56	49	32	43	62	39	636

Total Number of Valid Hours: 636

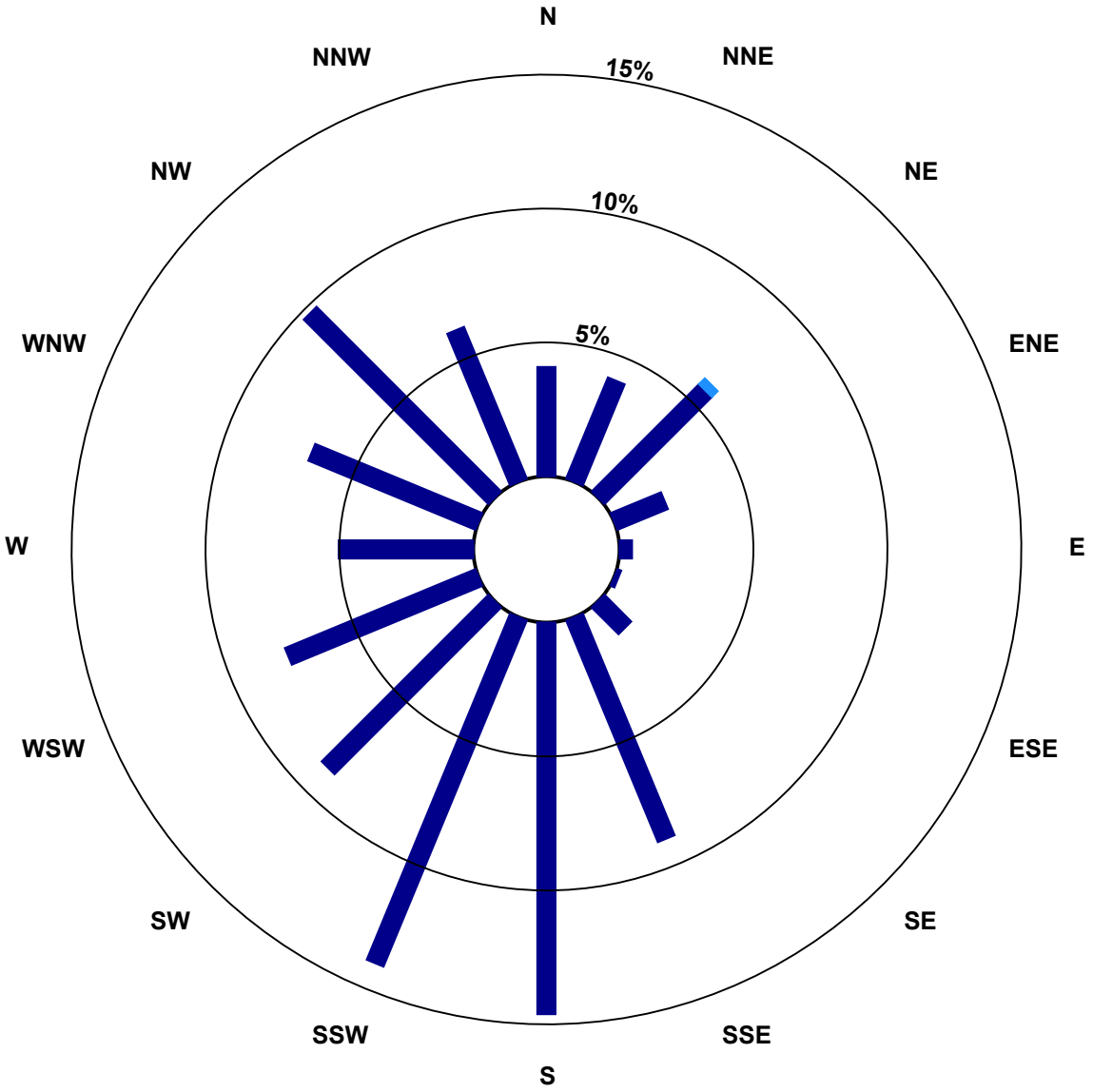
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Dioxide (NO_2) - ppb

Kirby North



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

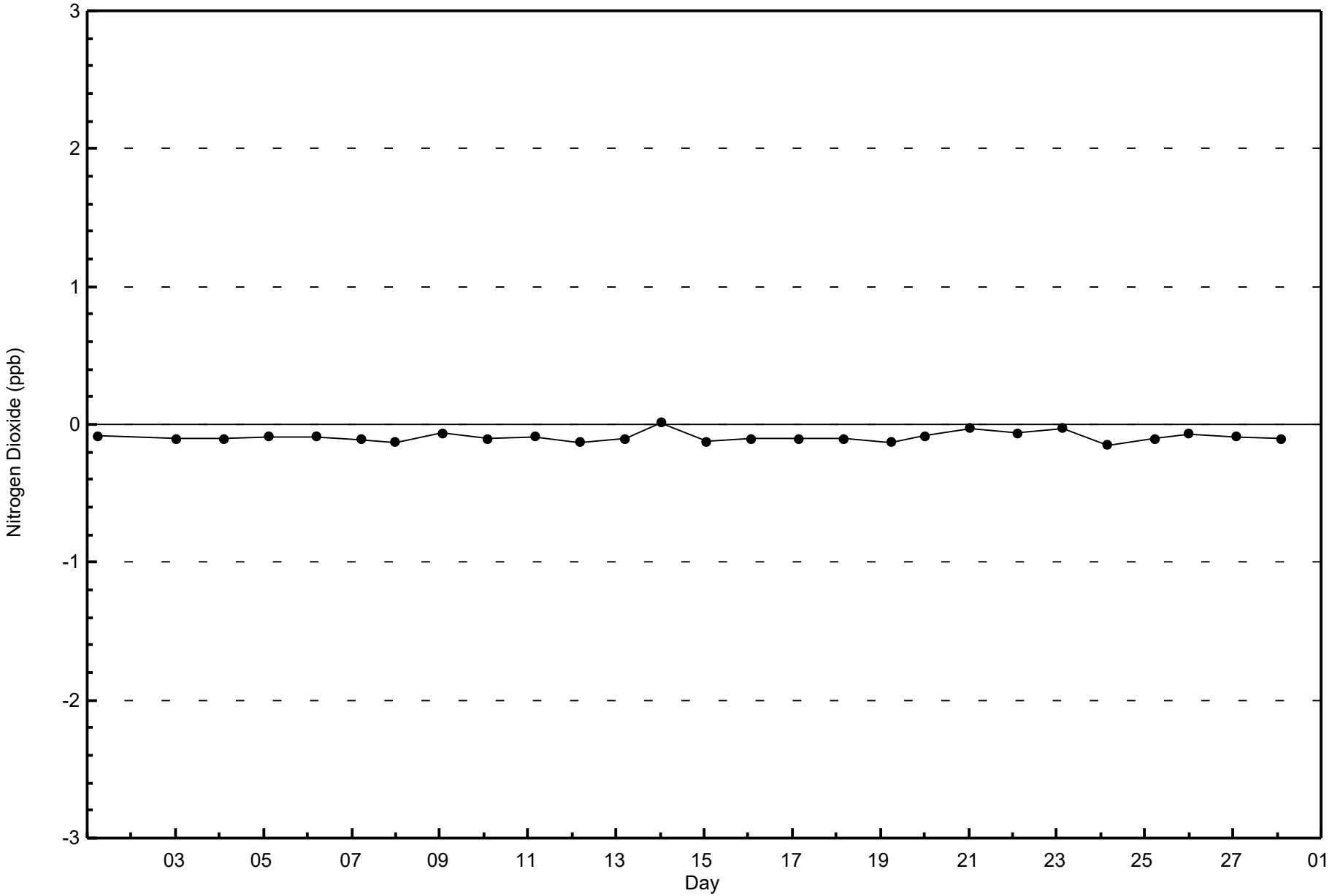
Total Number of Valid Hours: 636

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Kirby North - February 2025

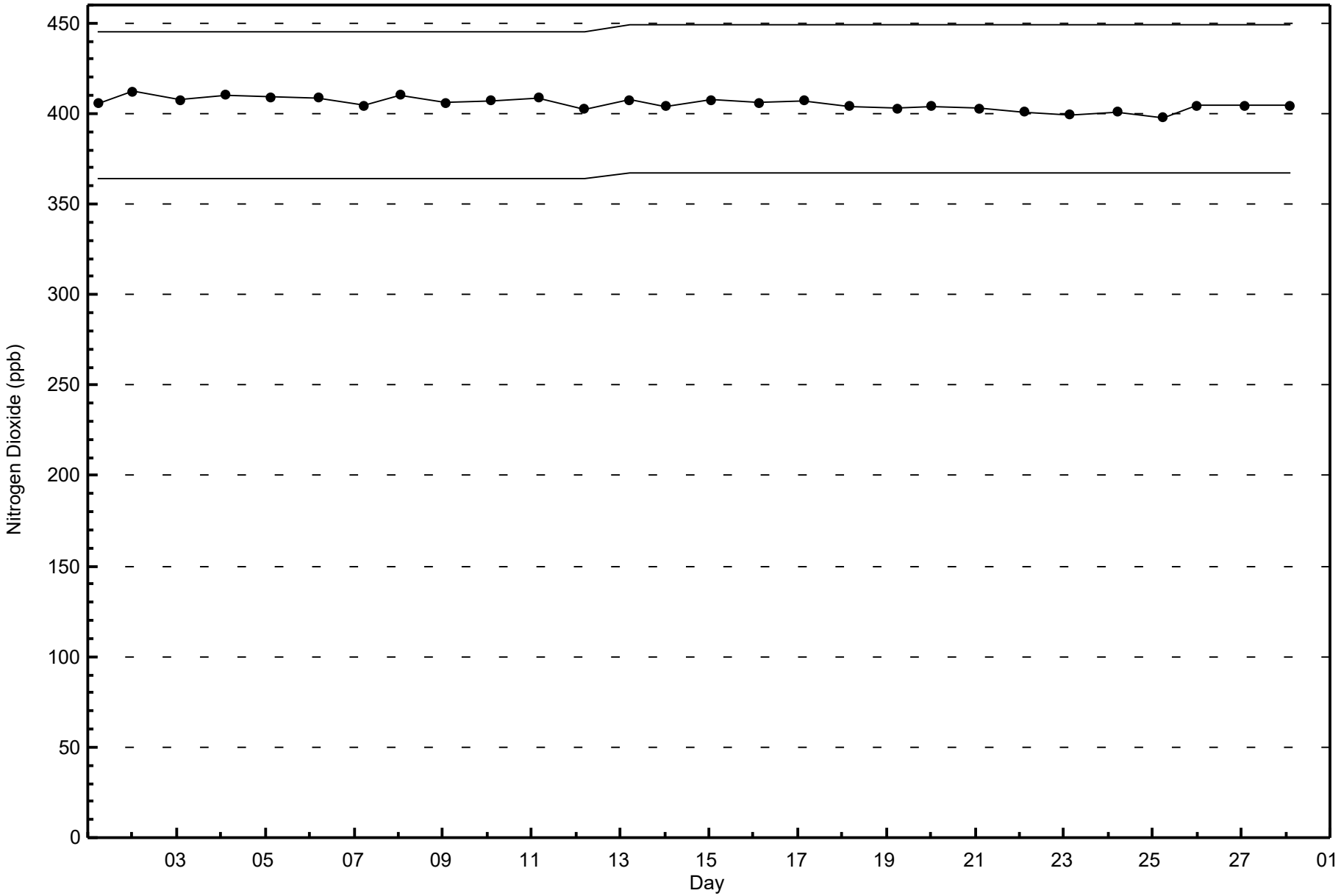


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Kirby North - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Kirby North - February 2025

Maximum Value: 26.9 ppb on Feb 14 10:00

Maximum Daily Average: 11.9 ppb on Feb 14

Minimum Value: 0.2 ppb on Feb 2 04:00

Minimum Daily Average: 1.2 ppb on Feb 9

Maximum Diurnal Average: 4.3 ppb at hour 9

Minimum Diurnal Average: 2.1 ppb at hour 17

Monthly Average: 3.07 ppb

Percentiles: P_1 = 0.3 P_{10} = 0.9 Q_1 = 1.5 Median = 2.3 Q_3 = 3.7 P_{90} = 5.7 P_{99} = 15.1

Hours in Service:	672
Hours of Data:	637
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-Feb	1.4	1.4	1.4	1.5	1.0	Z	0.8	0.5	0.5	0.2	1.6	4.9	6.7	6.3	4.8	3.6	0.7	1.1	0.9	1.6	0.7	0.7	1.8	1.4	2.0	6.7
2-Feb	Z	1.1	1.2	0.2	1.0	0.9	0.4	1.4	2.8	3.8	5.6	5.5	5.2	5.2	4.9	4.0	2.1	1.0	1.0	0.6	0.9	1.2	0.7	0.5	2.2	5.6
3-Feb	0.4	Z	1.3	3.0	0.4	0.5	0.7	1.8	7.2	8.0	6.0	2.3	2.0	1.5	1.9	3.4	3.9	4.8	4.0	2.0	0.9	1.4	2.3	2.4	2.7	8.0
4-Feb	2.5	2.5	Z	2.3	2.5	3.7	2.9	7.3	6.7	4.6	2.5	2.0	1.7	1.1	1.6	1.3	1.5	2.4	2.2	1.6	1.8	1.5	1.4	1.4	2.6	7.3
5-Feb	1.7	1.8	2.7	Z	2.8	3.6	2.6	3.1	1.9	1.8	2.2	2.1	2.1	1.9	2.0	2.2	2.3	2.2	1.6	2.5	2.5	2.9	5.0	4.5	2.5	5.0
6-Feb	4.3	3.4	3.1	3.8	Z	4.8	6.4	7.0	8.3	5.0	3.4	2.6	1.6	1.5	1.6	0.7	0.6	2.2	2.7	3.6	2.2	0.5	1.0	0.6	3.1	8.3
7-Feb	0.4	0.5	1.3	1.1	3.0	Z	1.9	1.1	0.6	0.7	3.7	1.9	1.5	1.0	0.6	0.7	0.5	1.8	1.1	1.7	2.0	2.0	1.8	1.8	1.4	3.7
8-Feb	Z	2.1	2.7	2.8	2.8	3.3	1.2	1.9	3.0	2.7	1.5	2.2	1.9	3.3	2.2	2.9	2.3	1.3	1.0	1.3	1.5	3.8	1.4	0.7	2.2	3.8
9-Feb	0.6	Z	0.3	0.2	0.2	0.4	0.2	0.3	0.4	0.8	1.1	0.2	0.5	0.4	0.3	0.3	0.5	1.3	2.1	5.1	3.9	5.0	1.8	2.3	1.2	5.1
10-Feb	2.9	4.9	Z	1.1	1.1	1.2	1.2	1.5	1.5	1.2	1.3	1.0	1.5	0.9	1.2	1.4	1.3	1.5	1.2	1.4	1.9	2.1	2.0	3.3	1.7	4.9
11-Feb	3.0	1.3	1.4	Z	1.7	1.8	1.6	1.3	1.5	2.1	1.7	1.1	1.1	1.6	2.4	1.5	2.3	4.1	4.7	5.8	4.5	3.5	5.8	5.2	2.6	5.8
12-Feb	4.3	3.8	3.5	2.9	Z	1.7	1.8	1.6	1.8	2.7	2.3	1.9	3.2	3.6	3.5	2.4	3.1	3.0	4.0	4.5	2.7	2.2	2.0	2.0	2.8	4.5
13-Feb	2.0	1.6	1.5	1.6	1.9	Z	3.0	6.6	10.5	C	C	C	C	C	C	C	1.5	3.5	3.4	8.1	5.1	9.9	9.5	6.7	--	10.5
14-Feb	Z	11.3	11.0	19.0	12.4	26.7	25.9	15.0	17.8	26.9	15.4	15.1	14.1	9.7	4.8	2.6	2.7	3.4	3.4	5.7	6.6	5.3	7.2	10.9	11.9	26.9
15-Feb	5.2	Z	4.7	4.6	5.5	7.5	5.3	5.7	5.0	6.8	6.7	2.7	2.3	1.7	1.5	1.1	2.4	0.8	1.0	0.8	0.8	1.3	2.8	1.9	3.4	7.5
16-Feb	1.5	1.1	Z	3.6	1.7	2.4	2.1	4.4	3.4	1.9	1.8	2.0	1.6	1.7	1.7	1.0	1.1	1.6	2.1	3.2	3.6	3.2	3.0	2.8	2.3	4.4
17-Feb	3.8	3.3	3.1	Z	2.9	2.8	3.0	2.4	2.0	2.2	1.4	1.2	1.1	1.1	1.1	1.2	1.7	2.1	1.7	1.5	1.4	1.7	2.1	1.9	2.0	3.8
18-Feb	2.1	1.8	3.1	2.8	Z	1.7	2.2	3.7	1.7	1.8	1.6	1.5	1.7	1.2	1.1	1.3	1.7	2.0	1.7	1.5	1.5	1.9	1.7	2.2	1.9	3.7
19-Feb	2.4	1.9	1.9	2.3	2.6	Z	3.6	3.8	3.6	3.3	3.2	2.5	2.0	1.6	1.4	1.0	1.8	2.3	2.1	1.8	2.1	2.3	2.3	2.6	2.4	3.8
20-Feb	Z	2.4	2.6	2.5	2.4	2.5	2.7	3.2	3.3	3.9	4.0	4.5	3.9	4.3	4.5	5.2	5.2	4.7	4.7	4.8	5.4	6.2	5.6	5.5	4.1	6.2
21-Feb	5.7	Z	7.5	7.3	7.7	8.1	7.9	6.0	6.4	5.4	6.4	6.6	4.6	3.9	2.1	2.3	1.8	1.1	3.2	4.7	5.0	6.5	5.1	4.1	5.2	8.1
22-Feb	3.5	2.7	Z	3.0	3.1	3.0	3.5	3.6	3.4	3.4	3.0	2.8	3.5	3.8	3.5	3.7	3.2	2.9	3.3	3.7	3.2	3.4	3.9	4.0	3.3	4.0
23-Feb	3.8	3.7	3.9	Z	5.0	3.7	2.8	2.2	1.5	1.5	2.2	6.2	4.4	9.4	11.5	3.0	0.7	2.4	3.7	3.9	3.0	3.1	2.3	2.4	3.7	11.5
24-Feb	2.7	3.5	4.2	3.0	Z	1.7	2.0	2.0	1.9	1.2	2.0	1.7	2.9	2.4	1.3	1.6	2.1	1.7	0.8	0.9	1.0	2.8	1.4	1.5	2.0	4.2
25-Feb	2.4	4.3	3.8	2.9	1.4	Z	9.6	10.7	13.7	10.5	8.8	8.7	5.7	6.2	3.4	1.8	1.6	1.8	2.7	2.1	2.9	2.1	1.1	2.7	4.8	13.7
26-Feb	Z	2.3	0.9	2.5	5.5	2.8	4.4	3.2	1.4	3.7	5.5	6.0	5.0	4.1	3.3	3.0	5.9	3.4	1.9	1.4	1.0	1.8	1.7	1.1	3.1	6.0
27-Feb	1.1	Z	1.6	1.6	1.3	1.5	2.8	3.0	2.9	3.9	6.7	3.8	5.2	3.3	4.7	1.3	1.1	0.6	0.5	0.5	0.4	0.5	0.6	1.6	2.2	6.7
28-Feb	2.6	2.6	Z	4.3	5.8	3.7	3.8	2.7	4.8	2.3	2.4	2.1	1.9	2.1	1.8	2.3	1.9	2.5	0.9	0.7	1.2	2.0	0.9	0.7	2.4	5.8
	2.6	2.8	3.0	3.3	3.2	3.9	3.8	3.8	4.3	4.2	3.9	3.5	3.3	3.1	2.8	2.1	2.1	2.3	2.3	2.7	2.5	2.9	2.8	2.8	Diurnal Average	
	5.7	11.3	11.0	19.0	12.4	26.7	25.9	15.0	17.8	26.9	15.4	15.1	14.1	9.7	11.5	5.2	5.9	4.8	4.7	8.1	6.6	9.9	9.5	10.9	Diurnal Maximum	

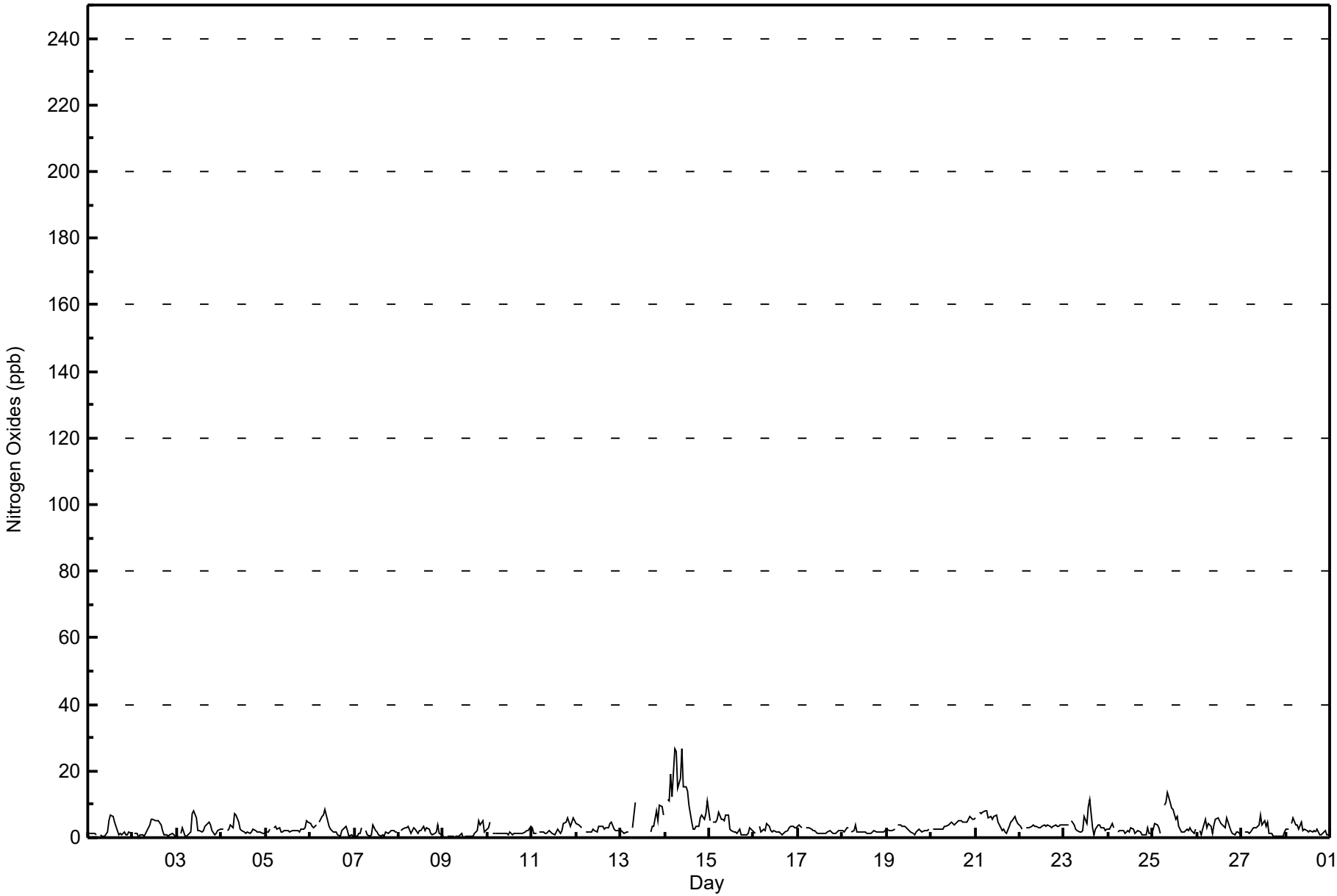
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Kirby North - February 2025



Nitrogen Oxides (NO_X) - ppb
Kirby North - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	634	99.53	99.53
21 - 40	3	0.47	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: 637

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Kirby North - February 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	26	35	13	3	1	9	57	93	89	56	49	32	43	62	39	633
21 - 40	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	26	26	38	13	3	1	9	57	93	89	56	49	32	43	62	39	636

Total Number of Valid Hours: 636

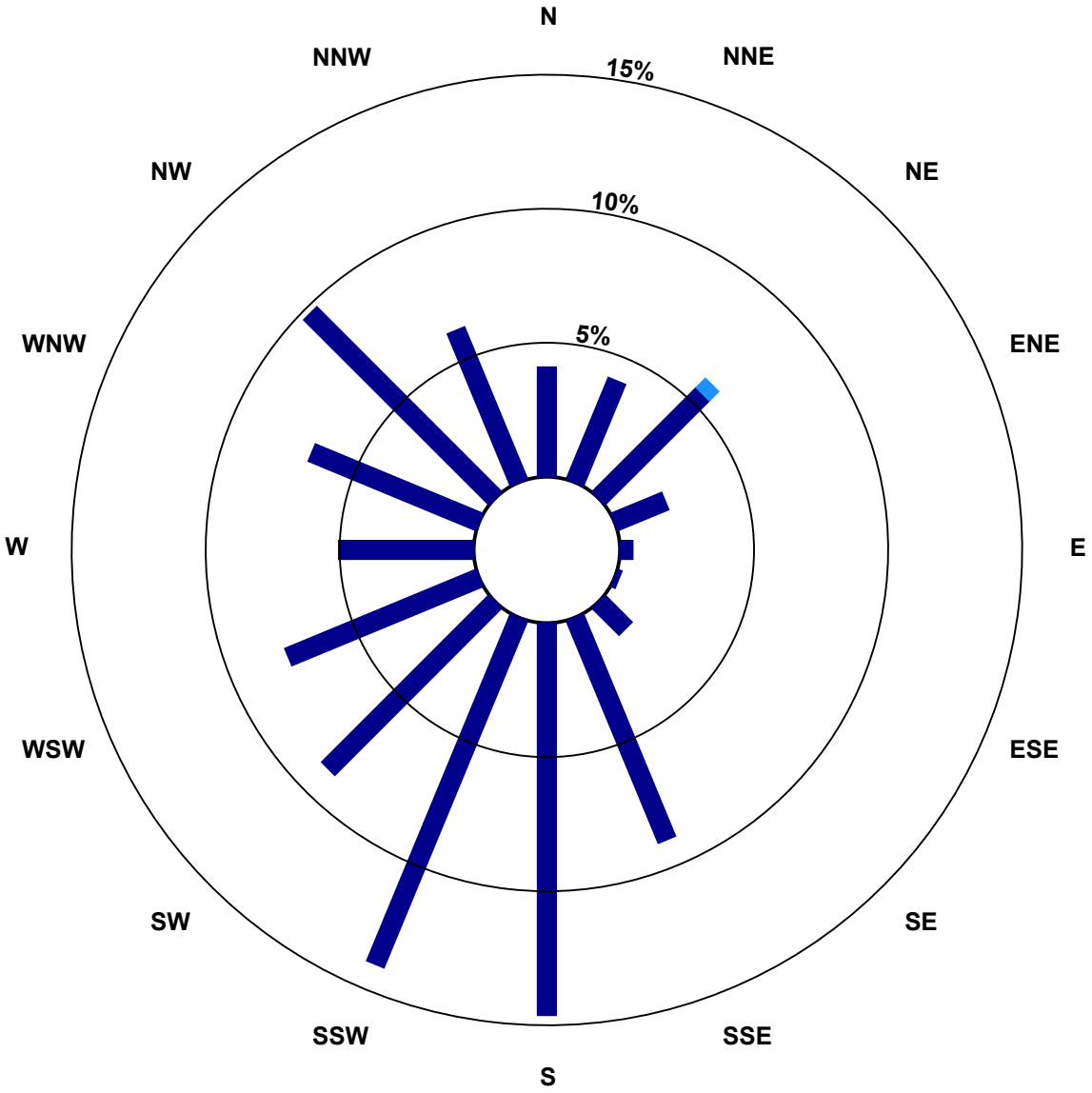
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Oxides (NO_X) - ppb

Kirby North



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

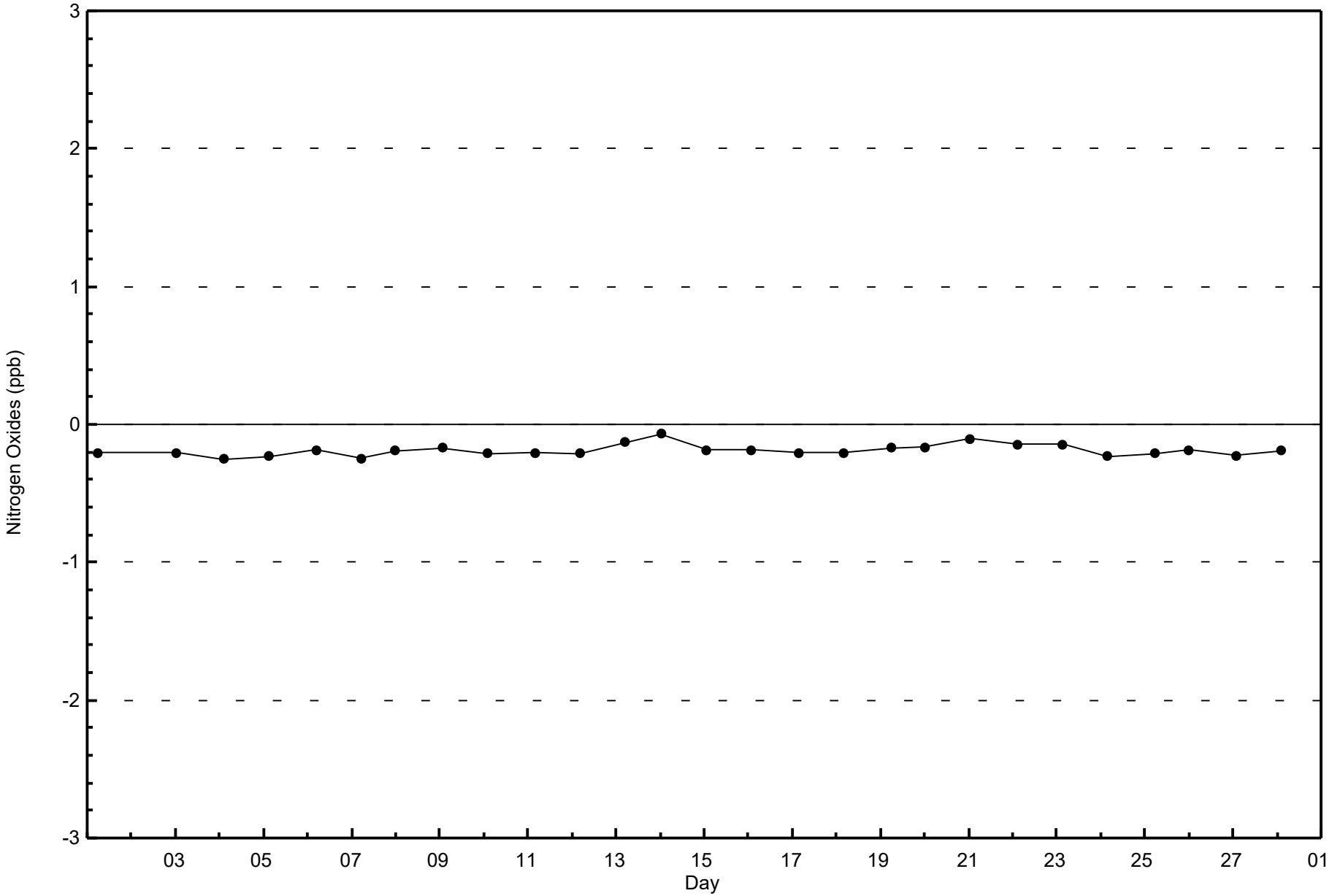
Total Number of Valid Hours: 636

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Kirby North - February 2025

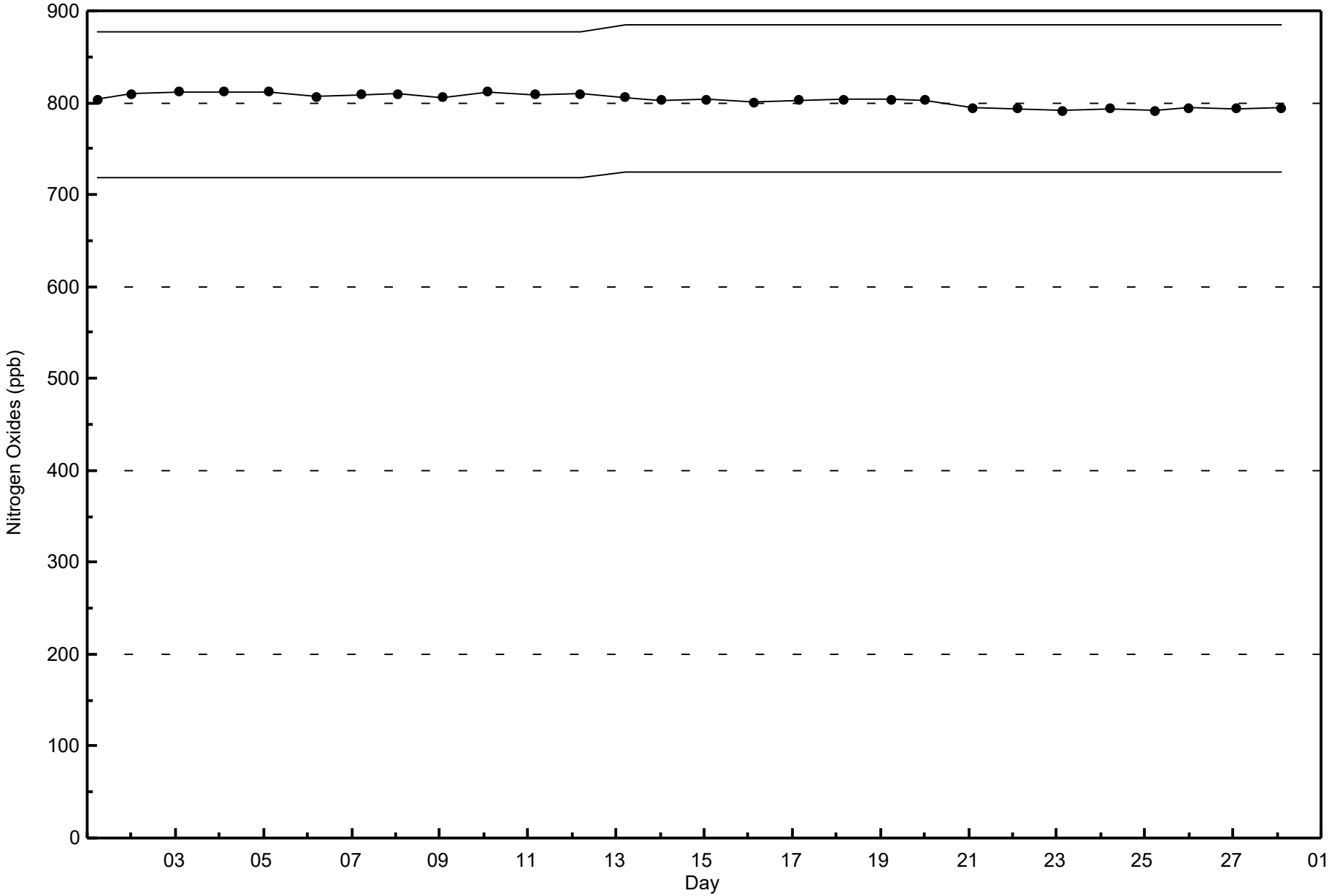


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Kirby North - February 2025



Maximum Value: 7.4 C on Feb 27 13:00

Maximum Daily Average: 3.8 C on Feb 27

Minimum Value: -33.8 C on Feb 10 06:00

Minimum Daily Average: -28.3 C on Feb 2

Maximum Diurnal Average: -10.9 C at hour 16

Minimum Diurnal Average: -19.2 C at hour 8

Monthly Average: -15.91 C

Percentiles: P_1 = -32.3 P_{10} = -28.8 Q_1 = -24.7 Median = -19.6 Q_3 = -3.6 P_{90} = 2.4 P_{99} = 7.0

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

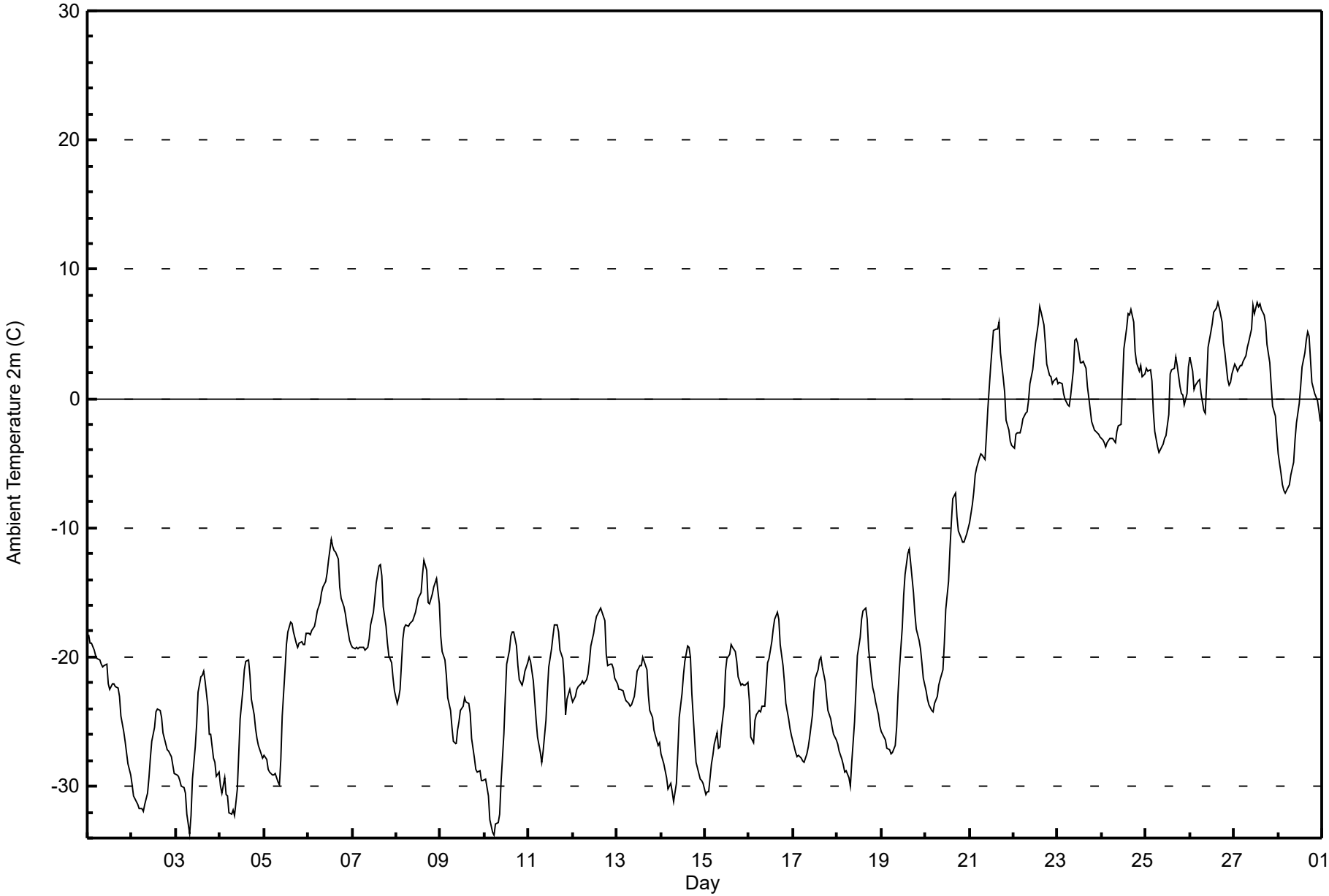
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-18.3	-18.9	-19.0	-19.5	-19.9	-20.1	-20.3	-20.5	-20.7	-20.6	-20.6	-22.1	-22.5	-22.1	-22.1	-22.2	-22.4	-23.0	-24.6	-25.7	-26.5	-27.3	-28.2	-29.1	-22.3	-18.3
2-Feb	-29.9	-30.7	-31.2	-31.4	-31.7	-31.7	-31.9	-31.4	-30.6	-29.4	-27.8	-26.5	-25.4	-24.3	-24.0	-24.1	-24.7	-25.9	-26.7	-27.2	-27.3	-27.7	-28.4	-29.0	-28.3	-24.0
3-Feb	-29.1	-29.2	-29.6	-30.0	-30.1	-30.5	-32.2	-33.7	-32.2	-29.5	-27.0	-25.2	-22.7	-21.5	-21.4	-21.1	-21.8	-23.8	-25.9	-26.0	-27.8	-28.2	-29.2	-28.9	-27.4	-21.1
4-Feb	-30.0	-30.5	-29.3	-30.6	-30.8	-32.1	-32.2	-31.9	-32.3	-30.2	-27.5	-24.7	-22.5	-21.0	-20.4	-20.2	-21.4	-23.3	-24.5	-25.5	-26.3	-26.9	-27.5	-27.8	-27.1	-20.2
5-Feb	-27.6	-27.9	-28.7	-28.9	-29.1	-29.1	-29.0	-29.6	-29.8	-27.9	-24.5	-21.0	-19.1	-18.1	-17.3	-17.4	-18.0	-18.9	-19.3	-19.0	-18.8	-19.0	-19.0	-18.2	-23.1	-17.3
6-Feb	-18.2	-18.3	-17.9	-17.6	-17.1	-16.5	-15.8	-15.0	-14.6	-14.2	-13.5	-12.6	-10.9	-11.4	-11.7	-11.9	-12.4	-14.6	-15.4	-16.1	-16.7	-17.4	-18.7	-19.0	-15.3	-10.9
7-Feb	-19.2	-19.4	-19.3	-19.4	-19.2	-19.3	-19.3	-19.4	-19.3	-18.6	-17.5	-16.5	-15.5	-14.2	-13.0	-12.8	-13.7	-16.1	-17.6	-18.9	-19.9	-20.4	-21.6	-22.7	-18.0	-12.8
8-Feb	-23.6	-23.1	-22.5	-18.5	-17.7	-17.6	-17.6	-17.4	-17.3	-17.2	-16.5	-16.0	-15.4	-15.0	-13.6	-12.5	-13.3	-15.8	-15.9	-15.1	-14.6	-14.2	-14.0	-15.9	-16.7	-12.5
9-Feb	-18.4	-19.5	-20.3	-21.4	-23.1	-24.1	-25.4	-26.5	-26.7	-25.7	-25.0	-24.1	-23.8	-23.1	-23.4	-23.6	-24.3	-26.3	-27.8	-28.7	-28.8	-28.8	-29.6	-29.5	-24.9	-18.4
10-Feb	-29.5	-30.0	-30.7	-32.6	-33.6	-33.8	-32.9	-32.8	-32.2	-29.6	-26.0	-23.1	-20.5	-19.4	-18.4	-18.0	-18.1	-19.1	-20.6	-21.8	-22.1	-21.8	-21.1	-20.5	-25.3	-18.0
11-Feb	-20.0	-20.3	-21.8	-23.3	-24.9	-26.2	-27.4	-28.1	-27.3	-24.9	-22.7	-20.7	-19.4	-18.4	-17.5	-17.5	-18.0	-19.5	-20.1	-21.7	-24.5	-23.2	-22.5	-23.1	-22.2	-17.5
12-Feb	-23.5	-23.0	-22.5	-22.3	-22.0	-21.9	-22.0	-21.8	-21.3	-20.3	-19.1	-18.1	-17.4	-16.9	-16.4	-16.2	-16.5	-17.2	-19.7	-20.6	-20.5	-20.6	-20.8	-21.6	-20.1	-16.2
13-Feb	-22.1	-22.5	-22.5	-22.7	-23.1	-23.4	-23.6	-23.8	-23.6	-23.1	-22.1	-21.1	-20.7	-20.7	-20.0	-20.4	-20.9	-22.9	-24.1	-24.6	-25.6	-26.1	-26.8	-26.6	-23.0	-20.0
14-Feb	-27.5	-28.3	-28.8	-29.3	-30.3	-29.8	-30.4	-31.1	-29.7	-27.4	-24.6	-22.8	-21.4	-20.4	-19.1	-19.2	-20.0	-22.8	-26.4	-28.2	-28.6	-29.5	-29.5	-29.8	-26.5	-19.1
15-Feb	-30.7	-30.5	-30.4	-28.2	-27.6	-26.7	-25.9	-27.1	-27.0	-25.7	-23.8	-21.1	-20.1	-19.8	-19.0	-19.2	-19.6	-20.3	-21.5	-22.2	-22.1	-22.2	-22.2	-22.0	-23.9	-19.0
16-Feb	-23.3	-26.2	-26.6	-24.9	-24.4	-24.1	-24.3	-23.8	-23.8	-22.1	-20.5	-20.1	-18.9	-17.8	-17.1	-16.6	-17.1	-19.0	-20.7	-22.0	-23.6	-24.7	-25.5	-26.1	-22.2	-16.6
17-Feb	-26.9	-27.3	-27.7	-27.6	-27.8	-28.0	-28.2	-27.5	-27.0	-26.2	-24.4	-22.7	-21.7	-21.0	-20.2	-20.0	-20.8	-21.9	-23.0	-24.1	-24.7	-25.4	-26.0	-26.4	-24.9	-20.0
18-Feb	-26.7	-27.3	-28.0	-28.3	-28.9	-28.8	-29.3	-30.0	-28.2	-24.9	-22.5	-20.0	-18.5	-17.1	-16.4	-16.2	-17.1	-19.4	-21.6	-22.4	-22.8	-23.4	-24.4	-25.3	-23.6	-16.2
19-Feb	-25.7	-26.2	-26.4	-27.0	-27.2	-27.5	-27.4	-26.9	-25.4	-22.9	-20.9	-17.7	-15.2	-13.6	-12.0	-11.7	-12.8	-15.0	-16.7	-17.8	-18.7	-19.3	-20.4	-21.7	-20.7	-11.7
20-Feb	-22.6	-23.3	-23.7	-24.1	-24.2	-23.6	-23.0	-22.2	-21.8	-21.0	-19.0	-16.4	-14.1	-11.7	-9.6	-7.8	-7.4	-9.1	-10.2	-10.8	-11.1	-11.1	-10.4	-10.0	-16.2	-7.4
21-Feb	-9.6	-8.2	-7.2	-5.9	-5.4	-4.6	-4.2	-4.4	-4.7	-2.9	-0.8	2.4	3.9	5.3	5.4	5.4	5.9	3.5	1.6	0.5	-1.7	-2.4	-3.3	-3.6	-1.5	5.9
22-Feb	-3.8	-2.7	-2.7	-2.6	-2.2	-1.6	-1.1	-1.0	-0.2	1.1	2.2	3.3	4.3	5.8	7.1	6.7	5.7	4.3	2.6	1.8	1.7	1.1	1.4	1.6	1.4	7.1
23-Feb	1.1	1.3	1.1	0.4	-0.1	-0.5	-0.6	0.2	2.2	4.5	4.6	4.3	2.8	2.8	2.9	2.3	0.9	0.0	-1.7	-2.1	-2.4	-2.7	-2.8	-3.0	0.6	4.6
24-Feb	-3.2	-3.5	-3.7	-3.4	-3.1	-3.1	-3.1	-3.4	-2.5	-2.1	-2.0	1.1	3.9	5.5	6.6	6.5	6.9	5.9	3.6	2.7	2.1	2.6	1.7	1.9	0.8	6.9
25-Feb	2.4	2.1	2.2	1.3	-1.0	-2.6	-3.7	-4.2	-3.9	-3.5	-3.1	-2.9	-1.2	1.9	2.3	2.4	3.2	2.6	1.0	0.4	0.3	-0.5	0.4	2.5	-0.1	3.2
26-Feb	3.2	2.2	0.7	1.0	1.4	1.4	0.4	-0.9	-1.1	1.2	4.0	5.1	5.9	6.6	7.0	7.4	7.0	5.9	4.3	3.5	1.4	1.0	1.3	1.9	3.0	7.4
27-Feb	2.6	2.5	2.1	2.6	2.5	2.9	3.4	3.9	4.4	5.3	7.2	6.6	7.4	7.1	7.3	6.9	6.5	5.8	4.2	2.7	1.0	-0.6	-1.4	-2.8	3.8	7.4
28-Feb	-4.3	-5.8	-6.6	-7.1	-7.3	-6.9	-6.7	-5.9	-4.9	-3.2	-1.9	-0.3	0.9	2.5	3.5	4.5	5.2	4.8	1.2	0.9	0.4	-0.1	-0.9	-1.7	-1.7	5.2
	-18.0	-18.4	-18.6	-18.6	-18.9	-18.9	-19.1	-19.2	-18.6	-17.2	-15.5	-14.0	-12.8	-11.8	-11.1	-10.9	-11.4	-12.9	-14.5	-15.3	-16.0	-16.4	-16.8	-17.0	Diurnal Average	
	3.2	2.5	2.2	2.6	2.5	2.9	3.4	3.9	4.4	5.3	7.2	6.6	7.4	7.1	7.3	7.4	7.0	5.9	4.3	3.5	2.1	2.6	1.7	2.5	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Kirby North - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	328	48.81	48.81
-20 - 0	226	33.63	82.44
0 - 10	118	17.56	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Kirby North - February 2025

Maximum Value: 95.6 % on Feb 24 10:00

Maximum Daily Average: 82.4 % on Feb 23

Minimum Value: 24.0 % on Feb 19 16:00

Minimum Daily Average: 47.1 % on Feb 19

Maximum Diurnal Average: 77.7 % at hour 8

Minimum Diurnal Average: 57.5 % at hour 16

Monthly Average: 71.06 %

Percentiles: P_1 = 33.2 P_{10} = 54.8 Q_1 = 64.4 Median = 73.8 Q_3 = 77.9 P_{90} = 83.3 P_{99} = 93.1

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

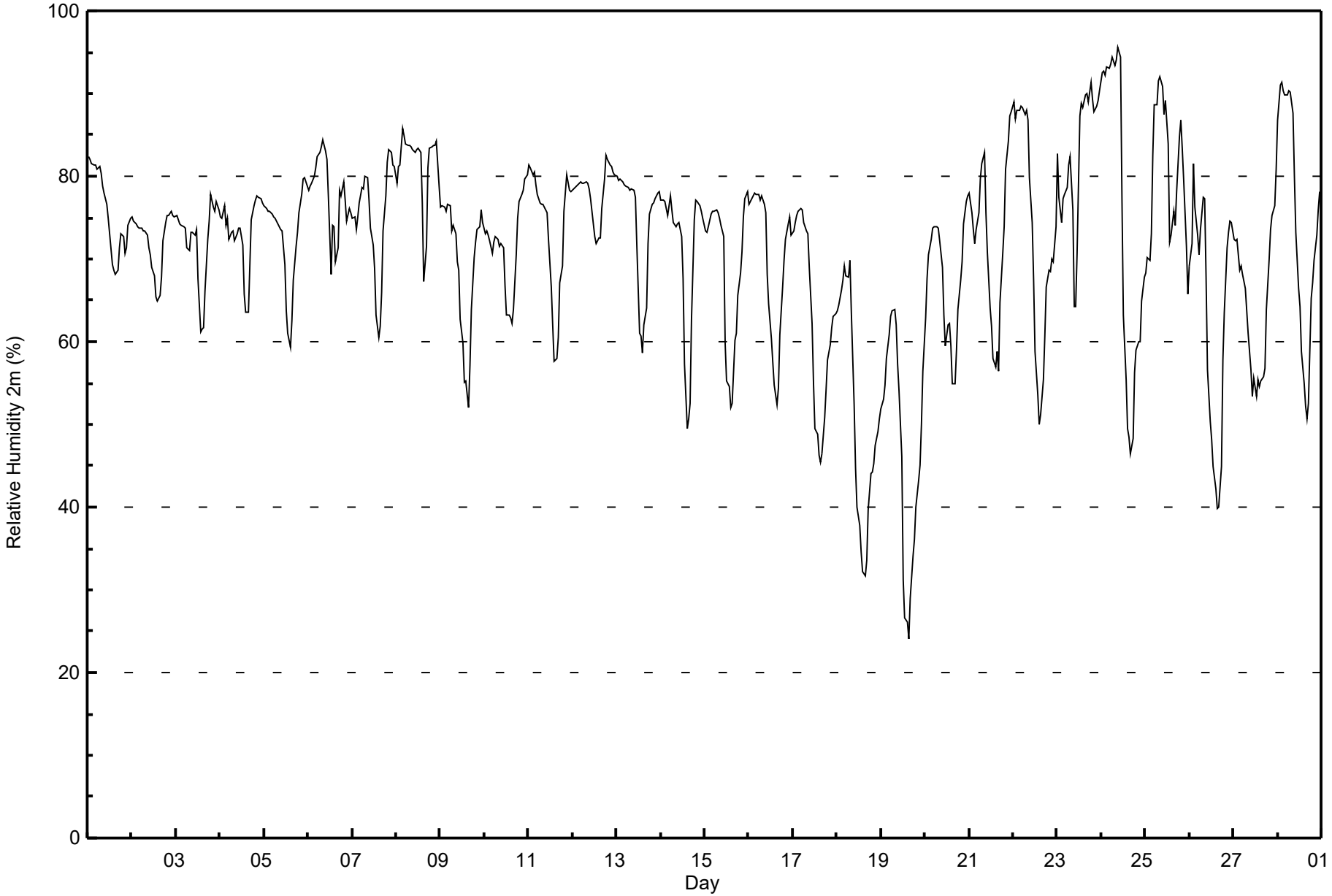
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	82.3	82.0	81.6	81.3	81.3	80.9	81.1	80.3	78.9	77.9	76.7	74.9	73.1	69.3	68.7	68.1	68.7	71.4	73.0	72.7	70.6	71.4	74.0	75.0	75.6	82.3
2-Feb	75.1	74.6	74.3	74.0	73.7	73.8	73.4	73.4	73.0	71.4	70.5	69.0	67.9	65.4	64.9	65.5	67.8	72.3	74.4	75.3	75.3	75.8	75.2	75.1	72.1	75.8
3-Feb	75.2	74.7	74.3	74.0	73.9	73.7	71.4	71.0	73.2	73.2	72.8	73.5	67.6	61.2	61.5	61.7	66.0	72.4	74.6	77.8	76.3	75.7	77.0	76.0	72.0	77.8
4-Feb	75.0	75.0	76.5	74.0	74.9	72.4	73.2	73.5	72.3	73.0	73.7	73.6	71.7	65.7	63.6	63.5	69.2	74.8	76.4	77.1	77.6	77.5	77.3	76.7	73.3	77.6
5-Feb	76.4	76.2	75.7	75.7	75.4	75.2	74.9	74.3	73.9	73.5	73.4	69.3	63.8	61.0	59.3	62.6	67.4	71.5	73.3	75.5	77.9	79.6	79.9	79.4	72.7	79.9
6-Feb	78.3	78.8	79.2	80.0	81.0	82.3	82.9	83.6	84.4	83.1	82.1	77.7	68.1	74.0	73.9	69.7	71.4	78.3	77.7	79.4	77.1	74.6	76.1	75.6	77.9	84.4
7-Feb	74.9	75.1	73.6	75.1	76.7	78.6	78.5	80.0	79.9	77.2	73.8	71.7	68.8	63.2	60.6	61.9	65.9	73.5	77.7	81.7	83.2	82.9	81.3	81.2	74.9	83.2
8-Feb	79.2	81.1	81.3	85.7	84.8	83.9	83.7	83.8	83.5	83.2	82.8	83.2	83.3	82.9	76.7	67.2	71.6	81.0	83.4	83.5	83.8	83.7	84.2	78.8	81.5	85.7
9-Feb	76.3	76.4	76.3	75.7	76.5	76.4	73.3	74.0	73.1	69.6	68.7	62.8	59.8	55.1	55.3	52.0	57.1	63.9	70.2	72.0	73.6	73.9	75.9	74.4	69.3	76.5
10-Feb	73.1	73.3	72.9	72.2	70.7	72.0	72.7	72.4	71.6	71.9	71.3	66.7	63.2	63.2	62.8	62.2	63.9	70.5	74.9	77.0	77.8	78.3	79.7	80.2	71.4	80.2
11-Feb	81.3	81.0	80.1	80.5	78.9	77.7	76.8	76.6	76.6	75.9	75.6	72.4	66.6	62.0	57.7	58.0	60.6	67.1	69.1	75.7	77.9	80.1	78.2	78.2	73.5	81.3
12-Feb	78.3	78.6	78.8	79.0	79.4	79.2	79.1	79.3	79.2	78.5	77.3	74.2	72.7	71.8	72.6	72.6	76.1	79.6	82.6	82.0	81.3	81.1	80.5	80.2	78.1	82.6
13-Feb	80.0	79.5	79.6	79.3	78.9	78.8	78.6	78.4	78.5	78.4	77.5	71.7	61.0	60.6	58.7	62.1	64.1	71.9	75.5	76.6	76.8	77.3	77.9	78.2	74.2	80.0
14-Feb	77.1	77.0	77.0	76.1	75.3	77.6	75.9	74.4	73.9	74.3	74.3	72.7	67.6	57.3	49.5	50.6	52.6	62.7	74.8	77.0	77.0	76.4	75.7	75.0	70.9	77.6
15-Feb	73.4	73.2	74.0	75.5	75.8	75.7	76.0	75.5	75.0	74.1	72.7	59.8	55.3	54.6	52.1	52.6	60.1	61.1	65.5	68.2	70.9	75.0	77.3	78.1	68.8	78.1
16-Feb	76.6	76.9	77.7	78.0	77.8	77.9	77.1	77.6	76.6	75.6	68.2	64.5	60.4	57.5	54.8	52.4	54.5	60.9	66.6	69.9	72.4	74.2	75.1	72.9	69.8	78.0
17-Feb	73.4	74.3	75.3	75.7	76.2	75.9	74.4	73.4	73.0	69.1	62.2	55.1	49.5	48.8	46.3	45.4	46.5	50.9	54.2	57.8	59.6	61.8	63.0	63.4	62.7	76.2
18-Feb	63.7	64.5	66.3	67.5	69.2	68.0	67.9	69.9	63.5	52.3	44.7	40.0	37.9	34.5	32.2	31.8	33.6	39.7	44.0	44.3	45.2	47.4	49.1	50.8	51.2	69.9
19-Feb	51.8	53.1	54.7	57.9	60.8	63.1	63.7	63.9	62.0	57.3	54.1	46.2	31.2	26.5	26.0	24.0	28.9	34.0	36.0	40.0	43.2	45.1	50.0	56.4	47.1	63.9
20-Feb	62.8	67.6	70.4	72.3	73.8	74.0	73.9	73.7	72.2	68.9	63.3	59.6	62.1	62.2	59.5	55.0	54.8	58.9	63.9	67.4	69.7	74.2	76.9	77.6	67.3	77.6
21-Feb	78.0	75.6	73.5	71.8	73.5	75.6	79.7	81.6	82.9	75.6	70.8	64.1	61.9	57.9	56.9	58.9	56.4	64.7	70.7	73.8	80.9	84.2	87.3	87.8	72.7	87.8
22-Feb	89.0	86.9	87.9	87.9	88.5	88.3	87.4	88.1	86.8	79.9	74.4	67.5	58.9	53.5	50.0	51.3	55.4	60.6	66.7	68.6	68.5	70.0	69.6	73.8	73.3	89.0
23-Feb	82.7	77.4	74.4	77.3	77.8	78.7	81.4	82.3	75.9	64.3	64.2	70.6	87.3	88.8	88.4	89.9	90.0	88.9	91.3	89.3	87.7	88.4	89.2	90.3	82.4	91.3
24-Feb	92.5	92.8	92.3	93.2	93.1	93.6	94.3	93.4	94.1	95.6	94.4	77.4	63.3	55.4	49.5	48.5	46.4	48.3	56.2	59.1	60.0	60.1	64.9	67.8	74.4	95.6
25-Feb	68.3	70.3	69.8	73.1	82.5	88.7	88.7	91.5	92.0	90.8	87.5	89.1	83.9	72.0	72.8	75.8	74.0	78.1	84.8	86.8	83.3	79.7	71.5	65.8	80.0	92.0
26-Feb	69.1	71.8	81.5	76.3	72.9	70.6	73.6	77.4	77.2	67.8	56.6	50.4	48.2	44.9	42.2	39.8	40.0	45.0	57.7	63.6	71.4	73.3	74.6	74.3	63.3	81.5
27-Feb	72.4	72.3	72.4	68.6	69.1	68.1	66.4	63.7	60.9	56.5	53.4	55.5	53.4	55.4	54.6	55.3	55.8	56.8	63.9	70.0	73.6	75.2	76.4	80.9	64.6	80.9
28-Feb	86.7	91.1	91.4	90.3	89.9	89.8	90.4	90.2	87.6	80.1	73.3	66.5	64.2	58.9	55.0	52.1	50.7	52.6	65.3	67.1	69.9	72.8	76.0	78.1	74.6	91.4
	75.8	76.1	76.5	76.7	77.2	77.5	77.5	77.7	76.8	73.9	71.1	67.1	63.3	60.1	58.1	57.5	59.6	64.7	69.4	71.8	73.0	73.9	74.8	75.1	Diurnal Average	
	92.5	92.8	92.3	93.2	93.1	93.6	94.3	93.4	94.1	95.6	94.4	89.1	87.3	88.8	88.4	89.9	90.0	88.9	91.3	89.3	87.7	88.4	89.2	90.3	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Kirby North - February 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	15	2.23	2.23
40 - 60	95	14.14	16.37
60 - 80	445	66.22	82.59
80 - 100	117	17.41	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Kirby North - February 2025

Maximum Speed: 29 km/h on Feb 23 12:00

Maximum Daily Speed Average: 16.4 km/h on Feb 19

Minimum Speed Value: 0 km/h on Feb 24 07:00

Minimum Daily Speed Average: 1.4 km/h on Feb 25

Maximum Diurnal Speed Average: 8.0 km/h at hour 14

Minimum Diurnal Speed Average: 1.9 km/h at hour 2

Monthly Average Velocity: 3.9 km/h 240.3 deg

Percentiles: P_1 = 1 P_{10} = 4 Q_1 = 7 Median = 10 Q_3 = 13 P_{90} = 16 P_{99} = 23

Hours in Service: 672

Hours of Data: 671

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-Feb	NE10	NE10	NE10	NE14	NE13	NE11	NNE10	NNE11	N11	NNW10	NW12	NW14	NW14	NW16	NW18	NW19	NNW19	NW17	WNW14	WNW16	WNW15	WNW14	WNW15	WNW16	NNW10.7	NNW19
2-Feb	WNW14	NW12	NW12	NW12	WNW12	NW11	NNW9	NNW12	N14	NNW12	NNW14	NNW15	NNW15	NNW15	NNW15	NNW15	NNW12	NNW9	NNW8	NNW8	NNW8	NNW8	NW10	NW11	NNW11.5	NNW15
3-Feb	NW10	NNW9	NW9	NW9	NNW7	NNW5	NW2	WSW1	W5	WNW6	W4	W5	NW9	NW9	W10	W9	W7	NW0	WSW2	SSW2	SSE1	S2	S1	WSW2	WNW4.2	NW10
4-Feb	WSW1	SW2	WSW6	SW3	SW5	S4	WSW2	SW4	S9	SSW9	SSW10	SW10	SW12	SW14	SW13	WSW12	SW10	SW9	SSW9	SSW8	SSW9	SSW10	SSW10	SSW12	SW7.9	SW14
5-Feb	SSW11	SSW9	SSW8	SSW9	SSW10	SSW9	SSW10	SSW11	SSW12	SSW12	SW12	WSW13	WSW16	WSW17	WSW16	WSW14	WSW14	SW15	SW16	WSW15	WSW14	WSW13	W10	WNW12	SW11.2	WSW17
6-Feb	WNW14	WNW13	NW12	WNW11	WNW11	W10	W11	W12	WNW15	WNW16	WNW17	NW16	NW16	NW20	NW19	NW18	NNW16	N15	N12	N12	N12	NNW14	N9	NNW7	NW12.2	NW20
7-Feb	NNW7	NNW6	WNW8	WNW7	WNW9	W5	SW10	SW11	SW10	SW9	W8	WSW12	WSW12	WSW12	SW11	SW12	SW10	SW9	SSW10	SSW10	SSW11	SSW11	S3	S6	SW7.5	SW12
8-Feb	SSE3	S4	SSW7	WSW9	WSW7	WNW5	NW6	WNW5	WNW6	WSW6	WSW9	WNW9	W8	W10	W11	W9	WSW10	SSW7	SSW7	SW9	WSW11	W10	NW12	NW21	W6.7	NW21
9-Feb	NW21	NNW18	NNW16	NW14	NW10	NW10	NW13	NW7	NNW4	NW6	NW8	N10	N12	NNW14	N15	NNW14	NNW13	N9	N9	N9	NW7	NW8	NW9	WNW10	NNW10.6	NW21
10-Feb	WNW11	W9	WSW6	SSW3	S4	SSW10	SSW13	SSW12	SSW11	SSW11	SW14	SW15	SW16	SW15	SW15	WSW17	SW14	SW12	SSW13	SSW10	S3	SSW6	SSW7	SW3	SW9.8	WSW17
11-Feb	NNW5	NNE10	NNE9	NE8	NNE9	NNE9	NNE8	NNE7	N8	N8	NNE9	N8	NNW7	NW8	NW7	NW8	NW9	NW10	WNW12	NW9	NNW5	NE4	SSE3	SSW5	N5.9	WNW12
12-Feb	S6	S5	S7	S7	S8	SSE7	S7	SSE7	SSE6	S7	SSW8	SSW9	SSW8	SSW6	SSE5	SE5	SSE4	NNE4	NNE9	NNE9	NNE10	NNE9	NNE9	NNE9	SSE2.5	NNE10
13-Feb	NNE9	NNE7	NNE7	NE8	NE8	NE8	NE7	NE7	NE6	NE8	ENE8	ENE7	NNE4	NNE6	E6	NE8	NE6	ENE7	E9	ENE8	ENE10	ENE10	ENE10	NE10	NE7.4	ENE10
14-Feb	NE8	NE8	NE7	NE5	NE5	NE4	NE4	NE4	NE3	NE4	NE5	NE4	NE5	NE7	N5	NNE9	NE8	E5	ESE5	SE4	SSE3	SSE4	S4	S2	NE3.9	NNE9
15-Feb	SSW7	S5	S3	SW1	SW6	W7	WNW9	NW8	NW8	NW8	WNW8	NW10	NW14	NW12	NW14	NW14	NW12	NW8	NW7	NNW7	N8	NNE5	NNW4	NNW5	NW6.4	NW14
16-Feb	NNW4	NE2	NE2	SSW4	SSE4	SSE4	SE3	SSE4	SSE4	SSE5	S4	SW6	SW5	WSW5	SW7	SSE7	SE8	SE7	SSE7	SSE8	S10	S9	S9	S9	S4.5	S10
17-Feb	S9	S11	S11	S14	S12	SSE13	S11	S12	S13	SSE15	S15	SSE14	S15	S13	SSE14	SSE14	SSE12	SSE12	SSE11	SSE10	SSE12	SSE9	SSE12	S11	SSE12.1	SSE15
18-Feb	SSE13	SSE16	S11	S14	S13	S13	S10	S11	S12	S14	S14	S13	S12	S13	S14	S13	S13	S11	S11	S15	S16	S16	S17	S17	S13.3	S17
19-Feb	S17	S15	S15	S15	S15	S16	S16	S18	S20	S19	S20	S19	SSE20	S21	S15	SSE19	SSE15	SSE14	SSE14	S13	S12	S15	S16	S15	S16.4	S21
20-Feb	S14	S14	S14	S13	SSW15	SSW17	SSW19	SSW20	SSW20	SSW21	SW20	SW23	SSW22	SW21	SW19	SW16	SW14	SSW15	SSW15	SSW15	SSW15	SSW12	SSW12	SSW11	SSW16.3	SW23
21-Feb	S9	S12	S11	SSW12	SSW11	SSW10	SSW9	SSW9	S5	S6	WSW4	WNW8	WNW6	WSW8	SW11	WNW7	NNW7	NNE6	ENE9	NE9	NE9	NE7	NE7	NE7	SSW2.4	SSW12
22-Feb	ENE5	SE6	SSE8	SSE9	SSE10	SSE9	SSE9	S10	SSE13	S15	S16	SSW16	SSW12	SSW13	SSW13	SW15	SSW13	SSW10	S10	S10	S10	SSE10	S10	SSW8	S9.8	S16
23-Feb	SE5	SE8	SSE9	SSW8	SSW11	SSW13	SSW13	SW14	SW15	WSW20	WSW26	W29	W24	W22	WNW23	WNW22	NW18	NNW15	NNE11	N10	N11	N8	N6	NE4	W8.4	W29
24-Feb	UO	NNE3	NE1	SW3	SSW1	SSE2	NW0	NE3	SW4	SW8	SW9	WSW10	WSW13	WSW16	WSW17	WSW16	WSW10	SW7	SW9	SW9	SSW9	WSW10	SW8	SW11	SW6.9	WSW17
25-Feb	WSW13	W9	W11	W7	N5	NE8	NE9	ENE9	ENE8	ENE10	ENE10	ENE6	ENE2	SSE2	SW5	SSW4	SSE4	SE5	SSE7	SSE7	S8	SSW10	SW12	WSW17	SSW1.4	WSW17
26-Feb	WSW17	WSW10	SW11	WSW16	W18	WNW19	W14	WSW9	SW12	WSW15	WNW14	W18	W16	W17	WNW13	W13	WNW15	WSW8	WSW12	SW12	SSW9	SSW9	SSW9	SSW11	WSW11.8	WNW19
27-Feb	SSW11	SSW10	S9	S11	SSW10	SSW11	SSW12	SSW12	SW13	WSW15	W20	WSW18	WNW28	WNW28	WNW27	WNW26	NW21	NW20	NW11	NNW9	N11	N11	N12	NNE9	W9.2	WNW28
28-Feb	NNE5	NE3	E3	SSE4	S4	SSE2	SSE2	SSE3	SSE3	E2	NW1	SSW4	WSW6	WSW4	W7	WNW9	W9	SSW5	SSE5	SSE8	S8	S8	SSE9	S10	S2.8	S10
	WSW2.7	SW1.9	SW2.5	SW3.4	SW3.2	SW3.2	SW3.4	SSW3.8	SSW4.2	SW4.9	WSW5.9	WSW7.1	WSW7.4	W8.0	W7.7	W6.9	W5.1	WSW3.0	SW2.6	SW2.5	SW2.4	SW2.6	SW2.8	WSW3.4	Diurnal Average	
	NW21	NNW18	NNW16	WSW16	W18	WNW19	SSW19	SSW20	S20	SSW21	WSW26	W29	WNW28	WNW28	WNW27	WNW26	NW21	NW20	SW16	WNW16	S16	S16	S17	NW21	Diurnal Maximum	

UO - Unstable Operation

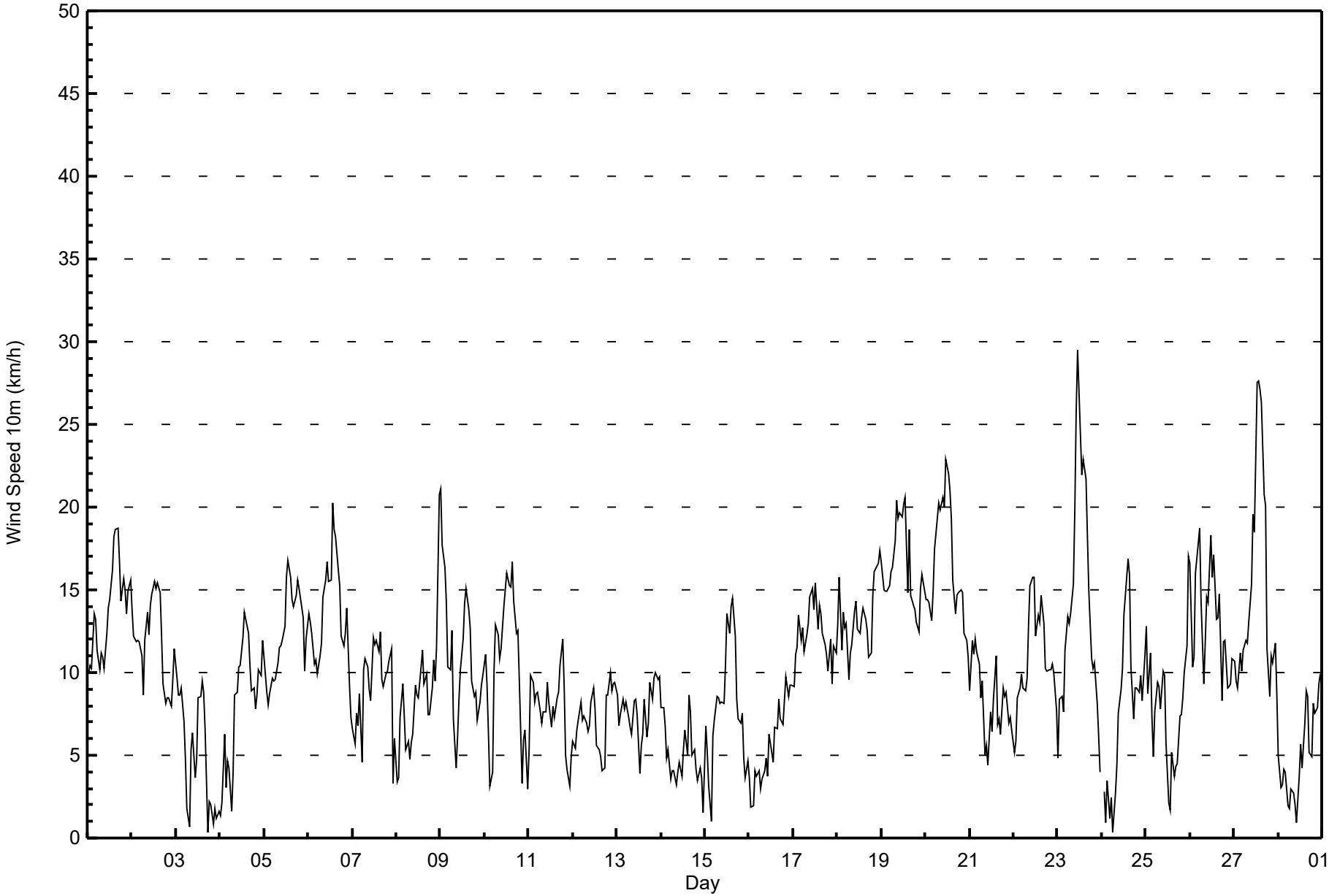
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Kirby North - February 2025



Wind Speed 10m (WS10) - km/h
Kirby North - February 2025

Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	114	16.99	16.99
6 - 11	313	46.65	63.64
12 - 19	216	32.19	95.83
20 - 28	27	4.02	99.85
29 - 38	1	0.15	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 671

Total Number of Hours: 672



Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Kirby North - February 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	5	17	2	3	1	5	21	15	8	10	8	4	2	4	7	114
6 - 11	16	23	27	13	2	0	4	20	36	53	22	16	19	16	30	16	313
12 - 19	8	0	2	0	0	0	0	17	46	26	23	26	6	21	23	18	216
20 - 28	0	0	0	0	0	0	0	1	3	6	1	2	3	6	5	0	27
29 - 38	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
> 38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	26	28	46	15	5	1	9	59	100	93	56	52	33	45	62	41	671

Total Number of Valid Hours: 671

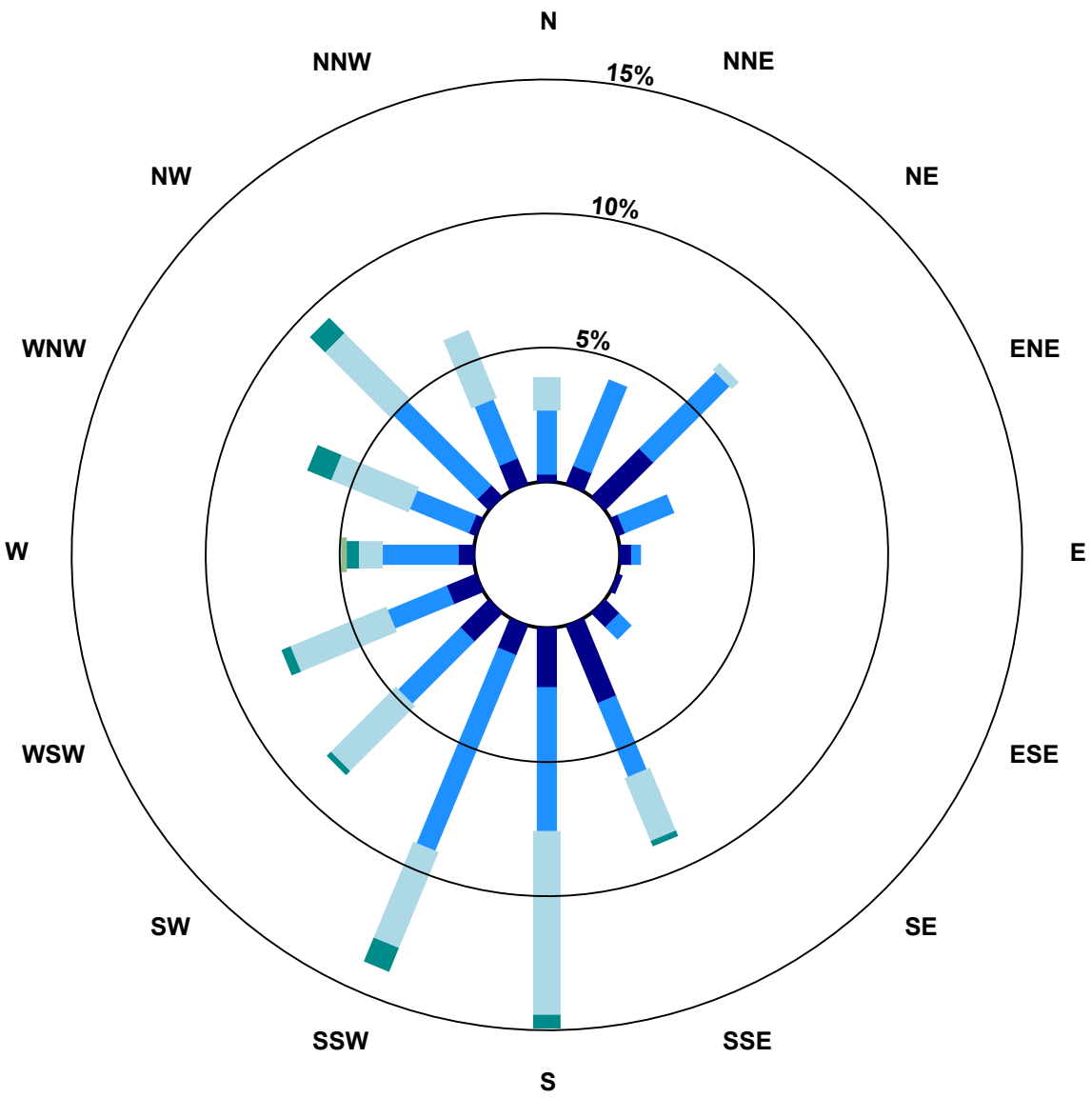
Total Number of Hours: 672

Wood Buffalo Environmental Association

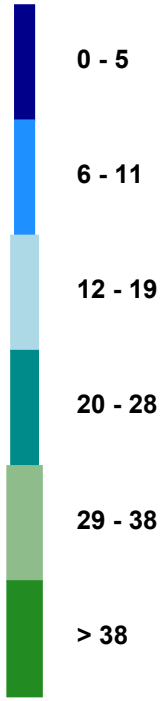
Wind Rose Feb 2025

Wind Speed 10m (WS10) - km/h

Kirby North



Classes (km/h)



Total Number of Valid Hours: 671

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Kirby North - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 8 km/h on Feb 27 13:00

Minimum Value: 1 km/h on Feb 15 22:00

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

Hours in Service:	672
Hours of Data:	671
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-Feb	2	2	2	3	3	2	2	2	3	2	4	3	4	4	4	5	4	4	4	4	4	3	3	3	5
2-Feb	3	3	2	2	2	3	3	2	3	3	3	3	4	4	4	4	3	2	2	2	2	1	2	2	4
3-Feb	2	2	1	2	2	1	1	1	3	3	2	2	2	2	3	2	2	2	1	1	1	2	2	2	3
4-Feb	2	2	4	2	4	2	1	2	1	2	2	2	3	3	3	3	2	1	2	1	2	2	2	2	4
5-Feb	2	2	1	1	1	2	2	2	2	2	2	3	4	3	4	3	3	3	3	3	2	2	3	3	4
6-Feb	3	3	3	3	3	3	3	3	4	4	4	4	5	5	5	5	4	4	3	3	4	4	2	2	5
7-Feb	1	1	2	2	3	2	2	2	2	2	2	3	2	3	3	3	2	1	1	2	2	1	3	2	3
8-Feb	2	3	2	3	2	2	2	2	2	2	2	2	2	3	3	3	2	1	2	2	2	3	4	6	6
9-Feb	5	5	4	4	3	3	3	2	1	2	2	2	3	3	4	4	3	2	1	1	1	2	2	2	5
10-Feb	3	4	4	2	3	2	2	2	2	2	3	3	4	3	3	4	3	2	2	2	2	3	3	1	4
11-Feb	2	2	1	1	1	1	1	1	1	2	2	2	2	3	2	2	2	3	2	1	1	1	1	2	3
12-Feb	2	2	1	1	1	2	1	1	1	2	2	3	2	2	2	2	2	2	1	1	1	2	2	1	3
13-Feb	2	1	2	1	2	1	1	1	1	2	2	2	3	2	3	2	2	1	1	1	1	1	1	1	3
14-Feb	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1	1	1	1	2	2
15-Feb	1	1	2	2	3	3	2	2	2	2	2	3	3	3	3	3	3	2	1	2	1	1	1	1	3
16-Feb	1	1	1	1	2	1	2	1	1	1	1	2	2	2	2	2	2	2	1	2	2	2	2	2	2
17-Feb	2	3	3	3	3	3	3	3	4	4	4	4	5	4	4	4	4	4	3	3	3	3	3	3	5
18-Feb	4	4	3	3	3	3	2	2	3	4	4	4	4	4	5	4	4	3	3	4	4	4	4	4	5
19-Feb	4	4	4	4	4	4	4	5	5	5	6	6	6	6	5	6	5	4	4	3	3	4	4	4	6
20-Feb	4	4	4	4	4	5	5	5	5	5	5	5	5	4	5	3	3	3	3	3	2	2	3	2	5
21-Feb	2	2	2	3	2	2	2	3	2	2	2	3	2	3	3	2	2	2	2	2	2	2	1	1	3
22-Feb	1	2	2	2	2	2	2	2	4	4	5	4	3	3	4	4	3	2	2	2	2	2	2	3	5
23-Feb	2	2	2	2	3	3	2	2	4	5	6	8	7	5	6	7	5	5	3	2	2	2	2	1	8
24-Feb	UO	2	1	1	2	2	1	1	4	3	3	3	3	4	4	4	2	1	1	2	2	3	2	3	4
25-Feb	2	2	3	3	1	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	2	2	2	4	4
26-Feb	5	3	2	3	4	4	4	2	3	3	4	4	4	4	4	5	5	3	2	3	2	2	2	2	5
27-Feb	2	2	2	2	2	3	3	3	3	3	7	5	8	8	7	8	6	5	3	3	3	3	3	2	8
28-Feb	1	2	1	2	2	2	1	1	1	1	1	2	2	2	2	3	2	2	2	1	1	1	1	2	3
	5	5	4	4	4	5	5	5	5	5	7	8	8	8	7	8	6	5	4	4	4	4	4	6	
	Diurnal Maximum																								

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Kirby North - February 2025

Direction of Maximum Speed: 259 deg on Feb 23 12:00
Direction of Maximum Daily Speed Average: 175.2 deg on Feb 19

Direction of Minimum Speed: 326 deg on Feb 24 07:00

Direction of Minimum Daily Speed Average: 1.4 deg on Feb 25

Monthly Average Direction: 240.3 deg

Hours in Service:	672
Hours of Data:	671
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-Feb	38	43	53	42	36	39	24	17	357	343	319	311	315	316	310	319	330	306	303	302	302	301	297	296	333.0
2-Feb	302	316	314	315	299	306	339	340	352	344	340	330	331	330	339	333	340	335	333	345	347	334	314	310	328.6
3-Feb	324	327	311	317	335	345	324	253	280	287	260	264	311	310	262	272	276	319	250	197	168	190	181	256	296.6
4-Feb	240	233	242	228	223	189	253	215	189	204	210	225	224	218	226	237	220	215	212	210	207	205	210	208	216.3
5-Feb	207	210	198	198	198	198	202	196	194	203	225	237	241	248	246	243	242	236	234	240	242	244	264	293	229.6
6-Feb	301	297	305	296	297	279	276	280	292	300	299	310	312	306	318	317	331	2	359	8	354	348	351	337	315.6
7-Feb	340	340	298	301	285	269	232	224	215	219	259	255	239	242	221	218	217	217	213	210	210	211	176	188	234.7
8-Feb	168	177	209	255	251	292	313	299	292	249	251	291	281	260	267	280	245	205	213	229	238	280	313	323	265.9
9-Feb	321	329	327	324	320	315	319	320	327	318	323	357	358	348	358	348	339	355	351	355	322	304	307	299	332.1
10-Feb	286	269	258	213	190	200	209	207	203	212	223	224	233	226	220	242	232	226	211	204	187	206	212	218	223.3
11-Feb	342	32	29	35	31	18	13	12	2	6	12	7	334	318	324	318	315	305	301	313	334	34	167	199	350.4
12-Feb	183	174	176	183	173	167	169	166	161	179	209	213	203	208	164	137	166	21	22	28	25	33	29	21	154.6
13-Feb	21	26	31	42	49	34	46	47	49	51	59	63	24	20	84	44	54	76	79	64	69	63	61	50	51.5
14-Feb	47	43	45	38	38	53	54	52	54	41	43	41	49	39	359	26	43	80	102	130	160	150	181	175	54.6
15-Feb	197	187	170	230	236	280	297	306	311	306	299	311	304	306	308	313	313	323	325	344	1	29	346	329	307.3
16-Feb	332	48	52	213	151	165	135	158	159	151	173	228	226	243	216	159	139	142	155	164	169	177	180	176	172.7
17-Feb	172	169	175	172	175	167	175	175	169	165	169	167	169	171	151	148	149	150	158	149	160	157	168	169	164.6
18-Feb	155	165	184	187	177	176	190	184	174	187	182	181	180	179	178	186	181	172	170	173	171	176	179	184	177.9
19-Feb	182	180	180	180	179	176	177	173	170	177	182	184	168	173	179	167	165	163	164	171	176	175	177	182	175.2
20-Feb	183	185	187	191	195	199	208	208	211	210	214	215	213	214	226	224	216	209	208	206	205	201	201	197	206.5
21-Feb	183	185	181	196	194	201	203	194	184	188	242	296	286	248	226	294	331	30	62	52	42	41	35	49	203.7
22-Feb	64	142	150	159	152	153	162	170	162	177	189	210	209	208	205	215	212	204	179	178	169	168	176	196	182.7
23-Feb	137	146	160	193	200	209	208	214	227	249	255	259	259	269	283	298	322	330	12	1	350	7	354	52	265.6
24-Feb	UO	21	46	215	203	161	326	52	215	217	221	245	254	255	253	250	250	228	214	214	208	246	220	233	236.2
25-Feb	246	260	280	264	353	41	48	62	63	67	62	68	75	154	236	205	162	141	156	163	181	208	221	249	199.4
26-Feb	255	237	220	245	279	294	269	241	230	252	282	267	270	266	282	281	286	256	239	233	200	193	198	211	255.2
27-Feb	213	203	179	172	192	197	192	193	220	244	271	254	290	294	291	302	305	307	319	329	359	359	358	12	276.0
28-Feb	32	45	80	166	178	162	147	158	166	94	314	192	243	254	263	295	260	212	148	150	178	177	166	171	189.6
	250.3	219.5	218.2	219.6	218.9	215.0	220.1	207.9	210.9	224.8	243.4	250.6	257.7	260.1	259.8	271.2	270.2	254.8	224.5	218.1	214.2	217.5	223.1	240.8	
	Diurnal Average																								

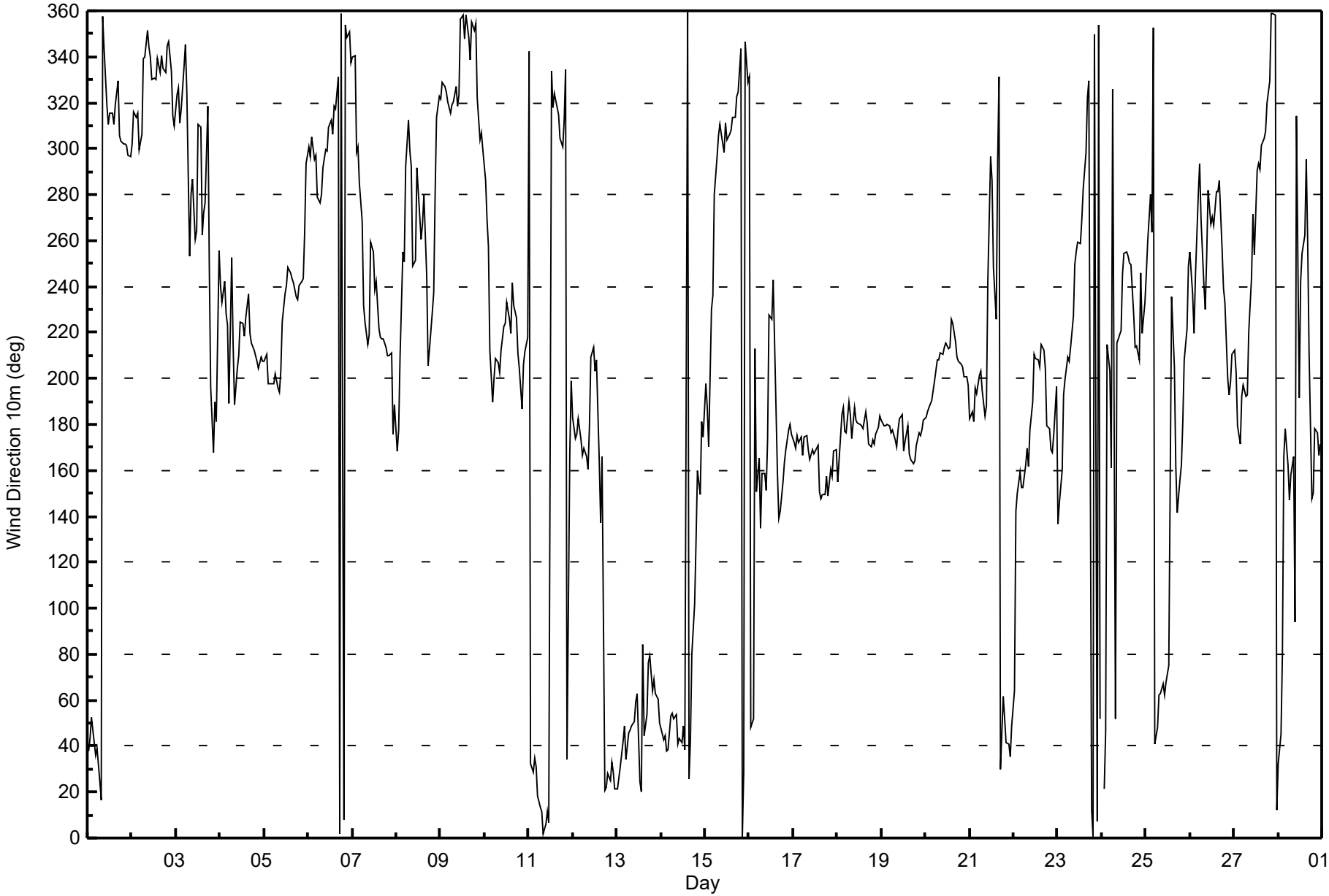
UO - Unstable Operation
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Kirby North - February 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Kirby North - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 101 deg on Feb 3 18:00

Minimum Value: 5 deg on Feb 13 21:00

Percentiles: P_1 = 7 P_{10} = 11 Q_1 = 14 Median = 16 Q_3 = 21 P_{90} = 35 P_{99} = 78

Hours in Service:	672
Hours of Data:	671
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-Feb	11	11	15	12	11	12	12	12	15	16	16	13	15	15	15	15	14	17	14	15	15	14	12	13	17
2-Feb	15	13	13	12	13	22	17	13	14	16	15	15	15	15	17	15	16	14	13	15	13	12	11	9	22
3-Feb	12	13	11	15	11	8	28	63	32	30	43	38	17	16	26	28	24	101	55	58	67	77	76	77	101
4-Feb	73	72	48	50	41	40	66	44	10	15	14	16	14	16	14	19	13	12	13	11	12	14	15	13	73
5-Feb	15	13	12	12	12	14	15	14	14	14	17	17	17	14	15	12	11	12	12	12	11	11	23	17	23
6-Feb	14	13	16	16	14	24	19	19	15	15	15	15	19	17	17	16	26	15	14	14	17	18	15	15	26
7-Feb	15	19	16	18	20	44	16	11	12	19	24	16	17	14	16	14	14	9	10	13	12	9	55	20	55
8-Feb	40	44	20	19	27	27	20	26	22	26	16	22	26	22	26	25	17	13	14	13	13	22	15	16	44
9-Feb	15	14	14	14	15	16	15	15	21	20	17	19	18	17	16	18	15	14	13	12	14	13	15	14	21
10-Feb	18	21	34	76	62	14	13	12	13	14	16	15	18	15	15	15	13	11	13	16	54	23	28	39	76
11-Feb	21	14	8	11	9	7	10	8	11	14	15	22	31	23	35	17	15	11	11	9	21	11	45	21	45
12-Feb	22	19	14	16	14	14	14	12	14	17	20	19	25	29	25	31	21	25	6	9	9	11	10	8	31
13-Feb	8	8	10	17	15	9	11	11	10	13	15	22	59	32	37	22	15	8	5	14	5	5	7	7	59
14-Feb	7	7	7	9	8	11	14	16	9	11	18	26	27	29	50	20	14	13	12	19	14	13	26	88	88
15-Feb	9	19	40	89	25	27	13	11	14	16	14	18	16	19	16	14	16	13	13	13	15	9	30	14	89
16-Feb	19	33	65	32	49	40	57	45	31	19	47	35	51	65	36	33	18	12	12	13	15	16	16	16	65
17-Feb	17	17	17	16	15	16	18	18	19	18	18	22	21	22	21	22	17	17	17	16	16	17	19	18	22
18-Feb	17	16	17	16	17	15	16	15	16	20	20	22	22	25	25	22	20	18	17	18	19	18	17	18	25
19-Feb	17	18	18	18	19	17	19	17	17	19	19	21	19	20	23	20	22	18	17	18	19	20	18	19	23
20-Feb	20	19	20	18	19	17	18	17	16	16	16	15	15	15	14	14	15	14	13	13	13	14	15	16	20
21-Feb	20	13	14	16	16	16	18	20	23	32	33	24	28	34	19	33	27	31	14	15	16	19	11	16	34
22-Feb	27	37	12	12	11	13	17	17	18	19	20	19	19	17	20	17	15	17	12	13	14	14	17	18	37
23-Feb	35	13	34	28	15	15	14	13	15	14	13	14	13	17	16	18	15	27	13	15	16	20	20	35	35
24-Feb	UO	43	61	19	71	72	92	41	73	23	17	21	16	15	15	13	11	19	12	13	12	17	23	17	92
25-Feb	12	17	17	31	38	13	16	14	15	13	18	24	82	88	36	40	23	12	9	11	19	14	16	14	88
26-Feb	14	23	13	13	19	14	20	29	17	22	20	17	21	19	24	26	19	22	12	15	14	15	14	14	29
27-Feb	13	16	14	14	18	19	19	18	19	14	23	21	15	15	15	15	14	14	16	28	16	16	16	14	28
28-Feb	13	30	42	46	54	74	80	20	27	53	77	47	47	39	30	26	29	25	45	11	11	10	9	13	80
	73	72	65	89	71	74	92	63	73	53	77	47	82	88	50	40	29	101	55	58	67	77	76	88	
	Diurnal Maximum																								

UO - Unstable Operation

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

AMS512
HANGINGSTONE EXPANSION
FEBRUARY 2025

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

March 31, 2025

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - HANGINGSTONE EXPANSION (AMS512)
FEBRUARY 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	640	32	32	100	112.4	0	24.4	0
H2S (ppb) Average	640	32	32	100	3.3	0	1.2	0
NO2 (ppb) Average	639	33	33	100	33	0	13.2	-
NO (ppb) Average	639	33	33	100	33.6	-	8	-
NOX (ppb) Average	639	33	33	100	61.7	-	21.1	-
Temperature 2 m (C) Average	672	0	0	100	8.2	-	2.3	-
Relative Humidity (%) Average	672	0	0	100	97.1	-	88.9	-
Wind Speed 10 m (km/h) Average	632	0	40	94.05	28	-	20	-
Wind Direction 10 m (deg) Average	632	0	40	94.05	-	-	-	-

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

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - HANGINGSTONE EXPANSION (AMS512)
FEBRUARY 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	640	4.28	11.9	-	0	0.2	0.3	0.7	2.2	9	112.4
H2S (ppb) Average	640	0.21	0.4	-	0	0	0.1	0.1	0.2	0.5	3.3
NO2 (ppb) Average	639	4.25	4.8	-	0.1	0.8	1.5	2.7	4.8	9.5	33
NO (ppb) Average	639	0.98	2.6	-	0	0	0.1	0.3	0.9	2.1	33.6
NOX (ppb) Average	639	5.24	6.6	-	0.2	1.1	1.8	3.1	5.8	10.6	61.7
Temperature 2 m (C) Average	672	-16.17	10.8	-	-37.7	-28.2	-24.2	-19.4	-6.7	0.7	8.2
Relative Humidity (%) Average	672	72.9	12.4	-	28	56.2	67.8	75.2	79.6	87.8	97.1
Wind Speed 10 m (km/h) Average	632	9.5	5	-	0	4	6	9	12	15	28
Wind Direction 10 m (deg) Average	632	-	-	-	-	-	-	-	-	-	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION - HANGINGSTONE EXPANSION (AMS512)
FEBRUARY 2025

OPERATIONAL NOTES

Parameter	Period Start	Period End	Duration (Hours)	Notes
Wind Speed, Wind Direction	23 Feb 2025 14:00	24 Feb 2025 12:00	23	Flat line in sensor output signal - Sensor frozen
Wind Speed, Wind Direction	25 Feb 2025 00:00	25 Feb 2025 16:00	17	Flat line in sensor output signal - Sensor frozen

Wood Buffalo Environmental Association

Summary of Hour Averages

Sulphur Dioxide (SO_2) - ppb

Hangingstone Expansion - February 2025

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

Maximum Value: 112.4 ppb on Feb 23 07:00

Maximum Daily Average: 24.4 ppb on Feb 5

Minimum Value: 0.0 ppb on Feb 3 14:00

Minimum Daily Average: 0.3 ppb on Feb 18

Maximum Diurnal Average: 10.3 ppb at hour 7

Minimum Diurnal Average: 1.5 ppb at hour 20

Monthly Average: 4.28 ppb

Percentiles: $P_1 = 0.0$ $P_{10} = 0.2$ $Q_1 = 0.3$ Median = 0.7 $Q_3 = 2.2$ $P_{90} = 9.0$ $P_{99} = 55.7$

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.3	0.2	0.4	Z	0.3	1.4	2.2	2.3	2.0	2.5	4.5	5.7	6.2	6.3	3.2	1.8	0.9	0.9	0.7	0.1	0.2	0.2	1.5	0.5	1.9	6.3
2-Feb	0.4	0.2	0.1	0.6	Z	0.2	0.2	0.1	0.1	0.2	1.1	2.9	3.8	3.2	1.4	0.8	0.3	0.1	0.1	0.1	0.2	0.3	1.7	3.2	0.9	3.8
3-Feb	2.3	1.7	1.6	1.1	1.3	Z	6.0	3.1	4.4	4.3	0.3	0.2	0.1	0.0	0.0	0.1	0.0	0.1	0.1	11.6	8.0	4.6	1.1	1.7	2.3	11.6
4-Feb	Z	0.1	0.1	0.1	0.9	8.3	3.9	4.1	8.9	34.1	12.8	2.9	22.5	22.2	40.5	11.6	17.0	1.6	0.2	0.3	5.2	5.7	8.4	2.3	9.3	40.5
5-Feb	5.0	Z	31.4	32.1	40.0	87.4	74.8	29.8	18.7	53.5	44.3	45.4	2.7	0.3	10.1	26.5	57.0	0.6	0.2	0.1	0.2	0.4	0.2	0.2	24.4	87.4
6-Feb	0.7	0.3	Z	8.6	13.7	16.0	0.6	0.4	0.3	0.2	0.2	0.0	0.0	1.7	3.1	1.8	2.2	1.4	0.0	0.2	0.1	0.2	0.1	0.0	2.3	16.0
7-Feb	0.0	0.0	0.0	Z	1.0	4.8	7.5	3.2	2.6	2.1	2.5	0.0	0.0	1.1	4.4	13.4	2.6	6.2	10.5	9.0	8.4	9.1	7.1	10.8	4.6	13.4
8-Feb	4.2	10.4	2.0	1.2	Z	1.1	1.1	0.1	0.9	1.4	0.6	0.5	1.7	0.3	0.1	0.1	0.0	0.6	0.6	0.3	0.4	3.5	1.6	3.3	1.6	10.4
9-Feb	4.4	3.9	1.9	2.1	3.2	Z	0.0	0.1	0.1	0.3	0.3	0.2	0.9	1.1	1.9	4.0	4.2	2.6	2.3	2.0	0.3	0.2	0.2	0.2	1.6	4.4
10-Feb	Z	4.3	12.9	23.9	12.2	12.1	42.2	27.9	8.0	25.4	30.2	5.3	20.9	4.3	39.1	15.1	12.3	22.3	20.0	0.3	0.1	0.3	0.5	0.7	14.8	42.2
11-Feb	1.0	Z	0.6	0.4	0.3	0.6	0.4	0.2	0.9	2.8	10.6	7.9	6.8	9.0	6.9	3.8	2.1	1.6	1.6	1.2	1.2	2.1	1.9	1.7	2.8	10.6
12-Feb	1.4	1.0	Z	0.6	1.6	1.0	1.1	0.5	0.5	0.2	0.4	0.4	0.3	0.3	0.3	0.6	1.2	1.6	1.3	1.1	0.8	0.7	0.7	0.6	0.8	1.6
13-Feb	0.6	0.7	0.7	Z	0.7	0.7	0.7	0.6	0.7	0.9	1.0	1.0	1.3	1.2	1.2	0.6	0.2	0.3	0.3	0.7	1.7	1.3	0.8	0.5	0.8	1.7
14-Feb	0.6	0.5	0.3	0.2	Z	0.5	0.5	C	C	C	C	0.0	0.0	0.1	0.7	0.8	0.8	0.8	0.7	0.3	0.3	1.4	1.3	0.7	0.6	1.4
15-Feb	1.2	2.4	2.4	1.3	2.8	Z	2.1	2.9	2.0	0.8	0.5	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	1.0	2.9
16-Feb	Z	0.2	0.3	0.4	0.4	0.3	0.4	0.5	0.8	1.0	0.8	0.7	0.6	0.7	0.6	0.5	0.8	0.6	0.7	1.1	0.7	0.5	0.6	0.7	0.6	1.1
17-Feb	0.7	Z	0.5	0.4	0.7	1.2	1.3	1.4	1.1	0.8	0.9	0.7	0.5	0.4	0.3	0.3	0.7	0.8	0.7	0.6	0.9	0.8	0.6	0.8	0.7	1.4
18-Feb	0.8	0.7	Z	0.4	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.3	0.2	0.3	0.3	0.5	0.6	0.3	0.8
19-Feb	0.5	0.4	0.4	Z	0.5	0.5	0.6	0.7	0.8	0.9	0.8	0.6	0.5	0.6	0.7	0.5	0.4	0.4	0.6	0.9	0.8	0.9	1.0	0.9	0.6	1.0
20-Feb	0.6	0.6	0.6	0.5	Z	0.6	0.6	0.9	1.0	0.8	1.1	3.6	18.8	1.2	0.7	3.6	16.9	87.3	50.5	1.1	6.5	33.4	37.6	7.1	12.0	87.3
21-Feb	2.5	0.4	0.5	0.7	0.7	Z	0.6	0.4	0.4	1.0	0.4	0.4	0.4	0.8	0.6	0.7	0.5	0.5	0.7	0.6	1.6	1.4	1.0	0.9	0.8	2.5
22-Feb	Z	0.6	0.4	0.3	0.8	1.3	0.7	0.4	0.4	0.5	0.7	0.9	1.2	20.3	31.3	32.0	20.4	0.6	0.9	0.9	1.1	2.4	1.6	5.3	5.4	32.0
23-Feb	0.4	Z	0.3	0.4	7.6	42.0	112.4	105.2	103.9	4.5	0.4	0.2	0.1	4.4	4.2	3.4	4.6	3.8	4.2	2.5	2.4	2.8	1.9	1.0	17.9	112.4
24-Feb	0.6	0.5	Z	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.3	2.7	5.8	1.3	0.6	0.4	0.3	0.8	0.7	0.6	0.2	0.2	0.3	0.2	0.7	5.8
25-Feb	0.3	1.7	3.0	Z	1.7	2.8	2.3	2.2	1.5	1.2	1.4	1.0	1.0	0.8	0.6	0.5	0.4	0.5	0.5	0.4	0.9	1.0	3.6	5.0	1.5	5.0
26-Feb	0.8	0.7	0.6	0.5	Z	1.8	24.7	18.7	33.1	0.8	0.3	0.2	0.2	0.2	0.1	0.1	0.3	1.8	2.2	2.3	0.9	0.3	0.2	2.4	4.1	33.1
27-Feb	10.3	12.2	0.3	0.6	0.9	Z	1.0	0.6	52.0	0.9	0.3	0.1	0.1	0.1	0.2	0.4	0.3	0.2	0.2	1.9	4.6	4.6	2.7	1.7	4.2	52.0
28-Feb	Z	0.8	0.8	0.4	0.2	0.2	0.4	0.4	0.9	0.7	0.9	1.2	3.7	1.9	0.3	0.3	0.6	0.7	0.3	0.5	0.5	0.5	0.3	0.5	0.7	3.7
	1.7	1.8	2.6	3.3	4.0	8.0	10.3	7.7	9.1	5.3	4.4	3.0	3.6	3.0	5.5	4.4	5.3	5.0	3.6	1.5	1.7	2.8	2.8	1.9	Diurnal Average	
	10.3	12.2	31.4	32.1	40.0	87.4	112.4	105.2	103.9	53.5	44.3	45.4	22.5	22.2	40.5	32.0	57.0	87.3	50.5	11.6	8.4	33.4	37.6	10.8	Diurnal Maximum	

Z - zerospan C - Calibration

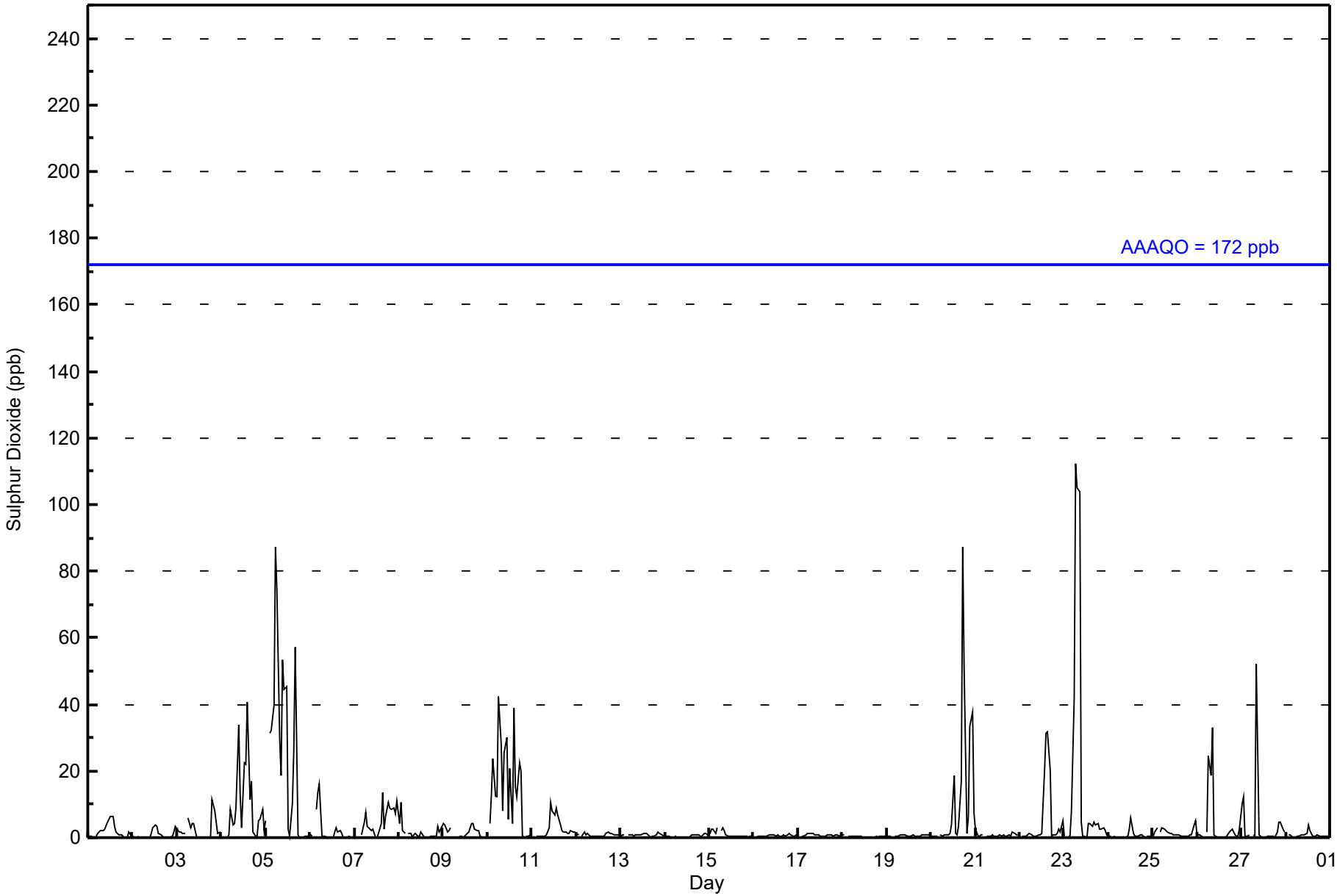
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb

Wood Buffalo Environmental Association

Hourly Averages

Sulphur Dioxide (SO_2) - ppb

Hangingstone Expansion - February 2025



Sulphur Dioxide (SO_2) - ppb

Hangingstone Expansion - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 10	582	90.94	90.94
11 - 20	22	3.44	94.38
21 - 60	30	4.69	99.06
61 - 110	5	0.78	99.84
111 - 172	1	0.16	100.00
> 172	0	0.00	100.00

Total Number of Valid Hours: 640

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Sulphur Dioxide (SO_2) - ppb

Hangingstone Expansion - February 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	47	33	18	16	4	8	11	48	72	42	44	75	34	33	32	27	544
11 - 20	0	0	0	0	0	0	0	0	0	0	10	11	0	0	1	0	22
21 - 60	0	0	0	0	0	0	0	0	0	0	16	14	0	0	0	0	30
61 - 110	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5
111 - 172	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
> 172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	47	33	18	16	4	8	11	48	72	42	76	100	34	33	33	27	602

Total Number of Valid Hours: 602

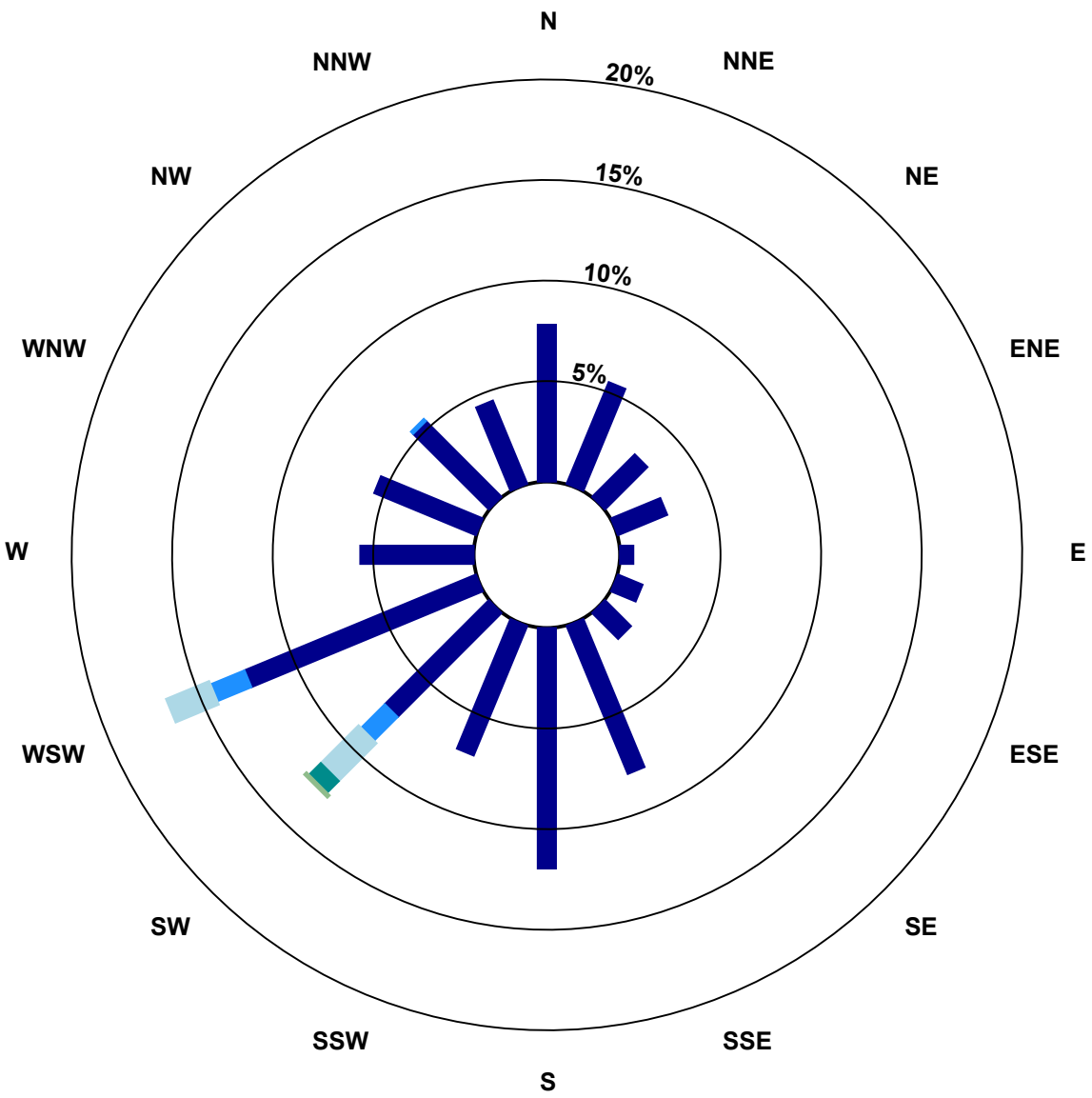
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Sulphur Dioxide (SO_2) - ppb

Hangingstone Expansion



Classes (ppb)

0 - 10

11 - 20

21 - 60

61 - 110

111 - 172

> 172

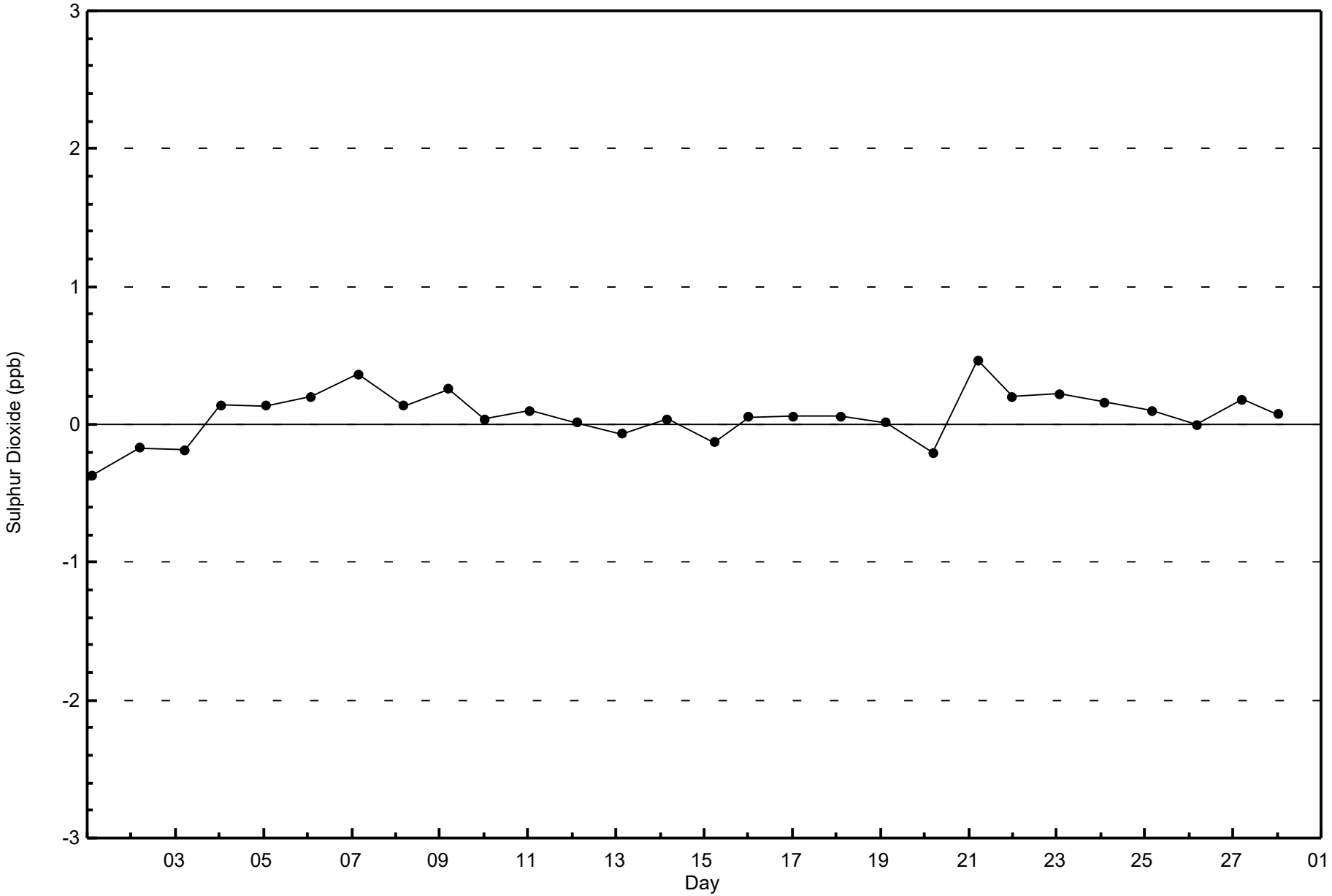
Total Number of Valid Hours: 602

Wood Buffalo Environmental Association

Zero Responses

Sulphur Dioxide (SO_2) - ppb

Hangingstone Expansion - February 2025

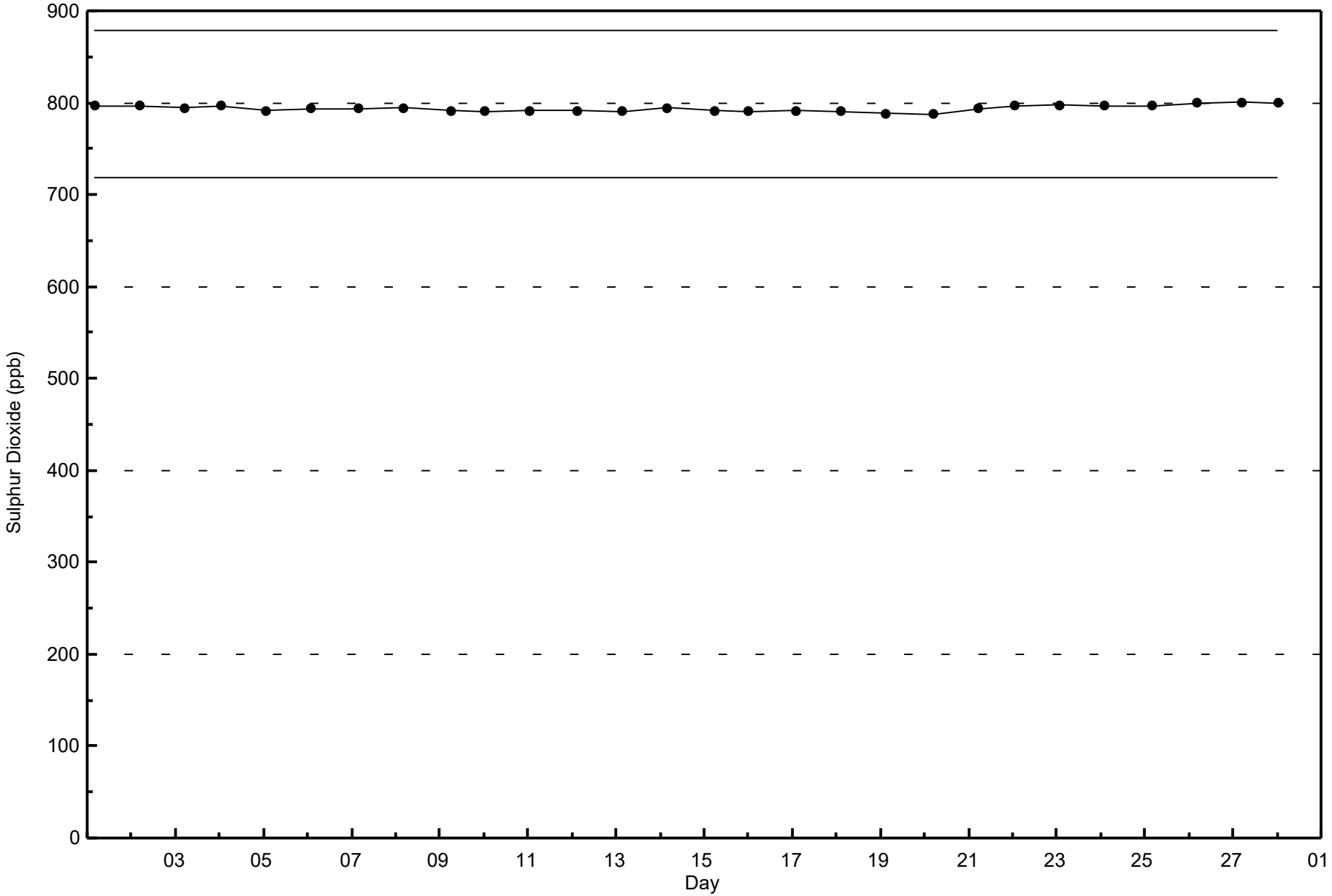


Wood Buffalo Environmental Association

Span Responses

Sulphur Dioxide (SO_2) - ppb

Hangingstone Expansion - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Hydrogen Sulphide (H_2S) - ppb

Hangingstone Expansion - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 3.3 ppb on Feb 10 08:00 Maximum Daily Average: 1.2 ppb on Feb 10

Minimum Value: 0.0 ppb on Feb 1 01:00 Minimum Daily Average: 0.0 ppb on Feb 18
Maximum Diurnal Average: 0.4 ppb at hour 7 Minimum Diurnal Average: 0.1 ppb at hour 1
Monthly Average: 0.21 ppb Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.1 Q_3 = 0.2 P_{90} = 0.5 P_{99} = 2.1

Hours in Service:	672
Hours of Data:	640
Hours of Missing Data:	32
Hours of Calibration:	32
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.0	0.0	0.0	0.0	Z	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
2-Feb	0.1	0.0	0.0	0.1	0.1	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.2
3-Feb	Z	0.2	0.2	0.1	0.2	0.9	0.6	0.4	0.3	0.2	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.4	0.3	0.1	0.2	0.2	0.9
4-Feb	0.1	Z	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.4	0.3	0.1	0.3	0.3	0.4	0.2	0.3	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.4
5-Feb	0.0	0.2	Z	0.4	0.4	1.2	1.0	0.3	0.2	0.5	0.7	0.6	0.1	0.1	0.2	0.5	0.8	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	1.2
6-Feb	0.1	0.1	0.2	Z	0.5	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.5
7-Feb	0.1	0.0	0.0	0.0	Z	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.3	0.0	0.2	0.4	0.7	0.7	0.8	0.5	0.7	0.2	0.8
8-Feb	0.1	0.5	0.2	0.2	0.3	Z	0.3	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.1	0.1	0.1	0.3	0.2	0.1	0.5
9-Feb	Z	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2
10-Feb	0.1	Z	2.0	3.0	0.5	0.6	2.9	3.3	0.5	1.6	1.7	0.4	1.5	0.5	1.4	0.8	1.2	2.2	2.3	0.1	0.0	0.0	0.1	0.1	1.2	3.3
11-Feb	0.2	0.1	Z	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.3	0.2	0.3	0.3	0.2	0.1	0.1	0.2	0.3	0.2	0.2	0.4	0.3	0.4	0.2	0.4
12-Feb	0.3	0.2	0.1	Z	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3
13-Feb	0.1	0.1	0.1	0.1	Z	0.1	0.1	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.3	0.2	0.3
14-Feb	0.3	0.3	0.2	0.1	0.1	Z	0.5	0.5	0.4	0.4	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.4	0.3	0.2	0.3	0.4	0.2	0.2	0.5
15-Feb	Z	2.1	1.9	0.5	1.5	1.1	0.1	1.0	0.7	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	0.1	0.0	0.4	2.1
16-Feb	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
17-Feb	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	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1
18-Feb	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
19-Feb	0.0	0.0	0.0	0.0	Z	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
20-Feb	0.1	0.1	0.1	0.1	0.0	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.2	0.6	1.3	1.1	0.2	0.4	0.6	0.6	0.2	0.3	1.3
21-Feb	Z	0.1	0.1	0.1	0.1	0.3	0.2	C	C	C	C	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.4	0.6	0.7	0.6	0.7	0.2	0.7
22-Feb	0.4	Z	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.7	1.0	0.9	0.7	0.1	0.0	0.0	0.0	0.1	0.0	0.3	0.2	1.0
23-Feb	0.0	0.1	Z	0.0	0.1	0.9	2.7	2.1	2.0	0.3	0.1	0.0	0.0	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.4	2.7
24-Feb	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2
25-Feb	0.1	0.2	0.2	0.3	Z	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.3	0.2	0.5
26-Feb	0.1	0.1	0.1	0.1	0.4	Z	0.7	0.6	1.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5	0.6	0.3	0.1	0.0	0.0	0.2	1.1
27-Feb	Z	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.9
28-Feb	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2
	0.1	0.2	0.3	0.3	0.2	0.3	0.4	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	Diurnal Average	
	0.4	2.1	2.0	3.0	1.5	1.2	2.9	3.3	2.0	1.6	1.7	0.6	1.5	0.7	1.4	0.9	1.2	2.2	2.3	0.7	0.7	0.8	0.6	0.7	Diurnal Maximum	

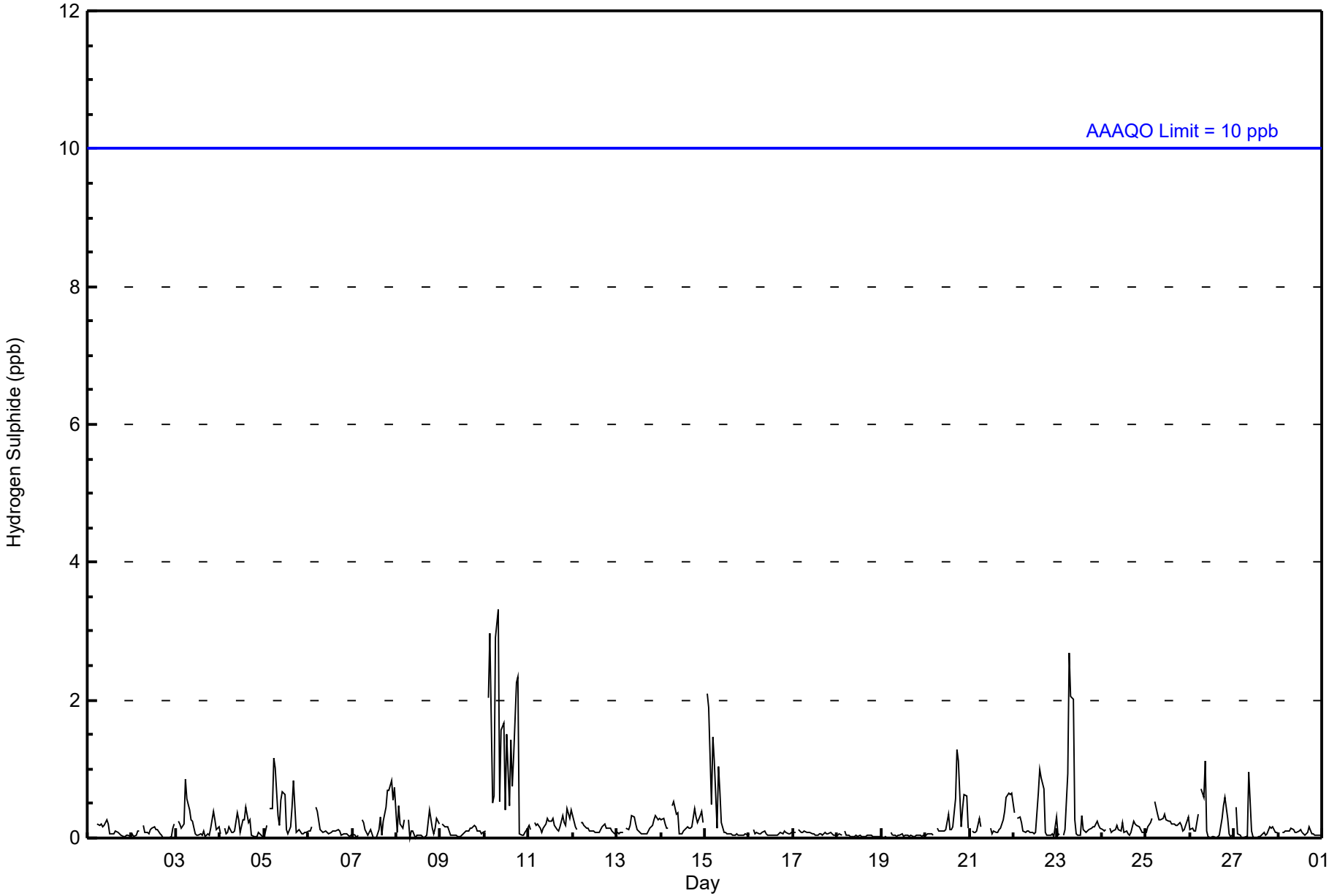
Z - zerospan C - Calibration
Alberta Ambient Air Quality Objective (AAAQO): 1-hour 10 ppb 24-hr 3 ppb

Wood Buffalo Environmental Association

Hourly Averages

Hydrogen Sulphide (H_2S) - ppb

Hangingstone Expansion - February 2025





Wood Buffalo Environmental Association

Cumulative Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Hangingstone Expansion - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 2	636	99.38	99.38
3 - 4	4	0.63	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: 640

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Hydrogen Sulphide (H_2S) - ppb

Hangingstone Expansion - February 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	32	22	14	5	9	12	48	72	42	73	97	35	33	32	26	598
3 - 4	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	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	46	32	22	14	5	9	12	48	72	42	77	97	35	33	32	26	602

Total Number of Valid Hours: 602

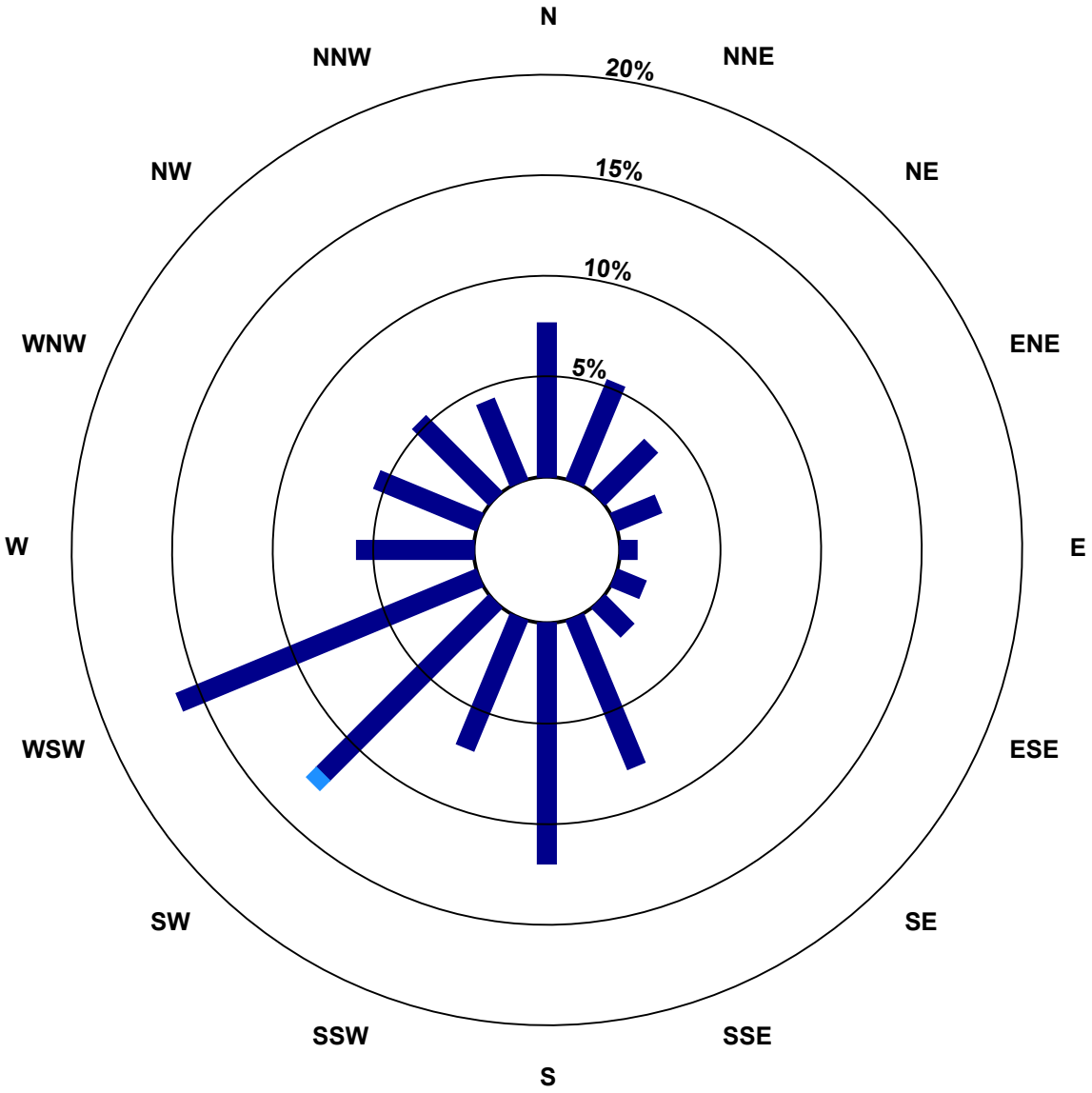
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Hydrogen Sulphide (H_2S) - ppb

Hangingstone Expansion



Classes (ppb)

0 - 2

3 - 4

5 - 7

8 - 11

> 11

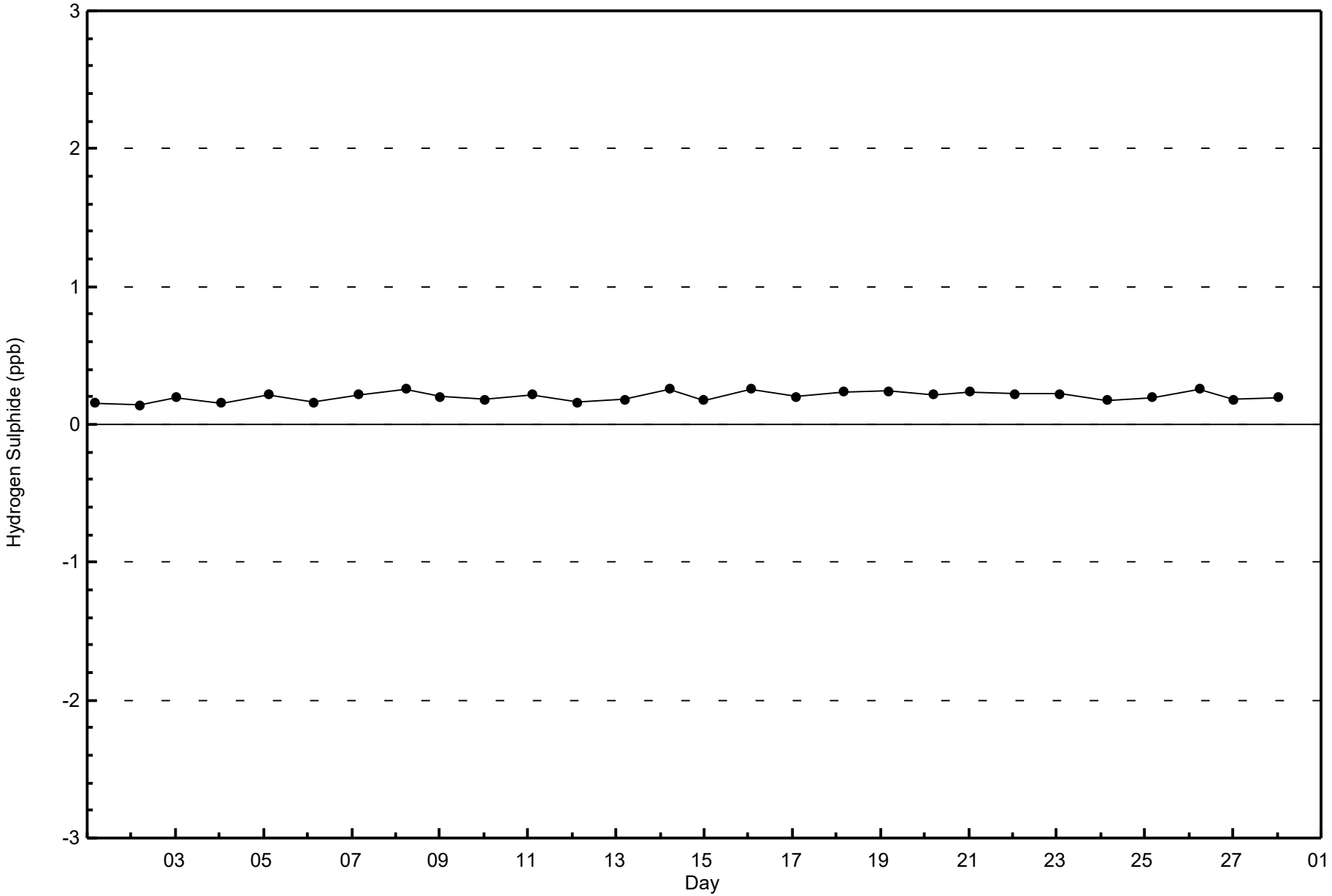
Total Number of Valid Hours: 602

Wood Buffalo Environmental Association

Zero Responses

Hydrogen Sulphide (H_2S) - ppb

Hangingstone Expansion - February 2025

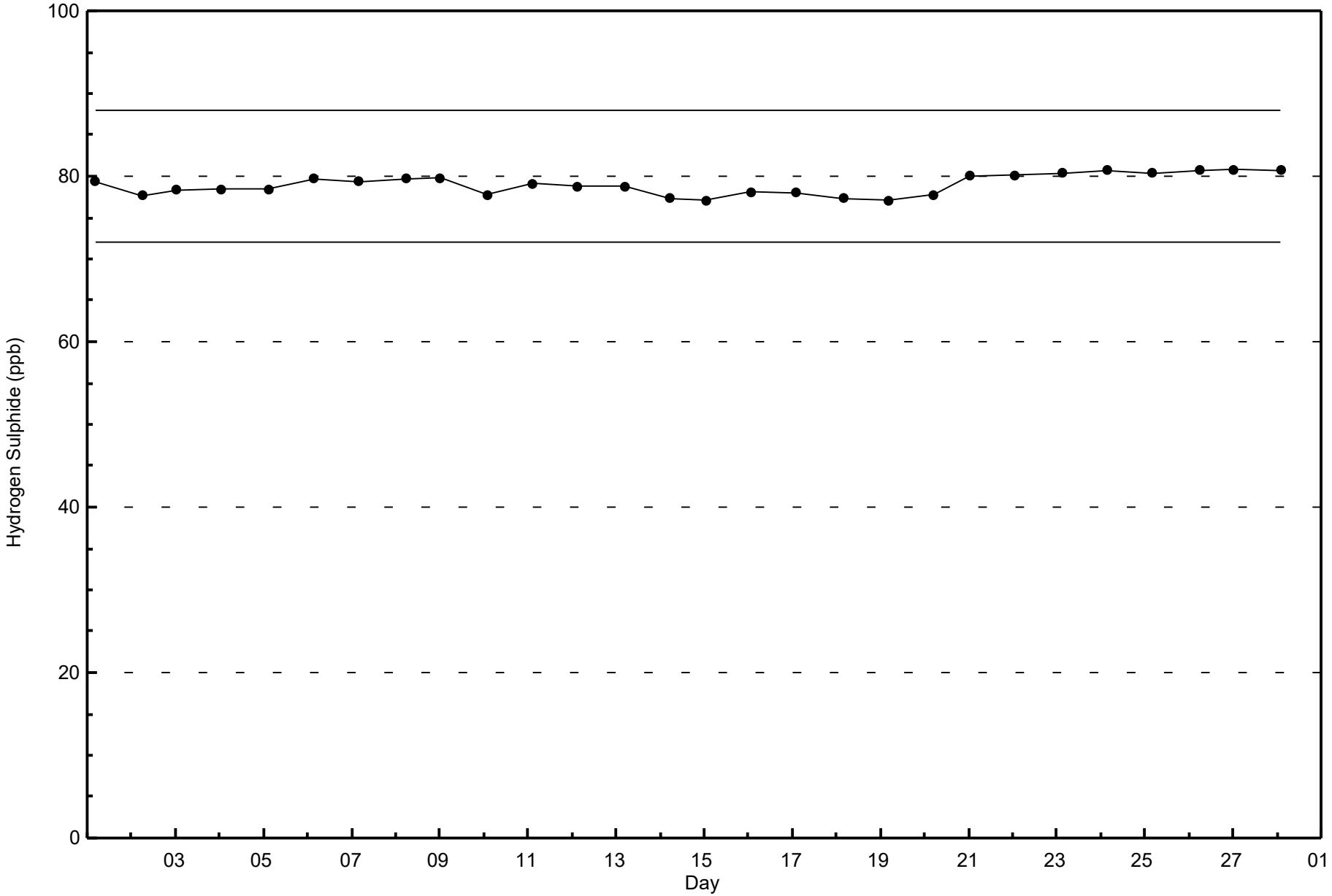


Wood Buffalo Environmental Association

Span Responses

Hydrogen Sulphide (H_2S) - ppb

Hangingstone Expansion - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitric Oxide (NO) - ppb

Hangingstone Expansion - February 2025

Maximum Value: 33.6 ppb on Feb 14 08:00

Maximum Daily Average: 8.0 ppb on Feb 14

Minimum Value: 0.0 ppb on Feb 1 01:00

Minimum Daily Average: 0.1 ppb on Feb 18

Maximum Diurnal Average: 2.4 ppb at hour 10

Minimum Diurnal Average: 0.3 ppb at hour 6

Monthly Average: 0.98 ppb

Percentiles: P_1 = 0.0 P_{10} = 0.0 Q_1 = 0.1 Median = 0.3 Q_3 = 0.9 P_{90} = 2.1 P_{99} = 9.1

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.0	Z	0.0	0.5	1.6	0.1	0.1	0.1	0.3	0.7	1.8	1.8	1.9	2.0	1.4	0.8	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.6	2.0
2-Feb	0.0	0.1	Z	0.0	0.1	0.0	0.1	0.3	0.3	0.6	2.2	2.8	2.9	2.7	2.6	1.4	0.2	0.0	0.0	0.0	0.0	0.0	1.7	0.9	0.8	2.9
3-Feb	0.1	0.4	0.1	Z	0.0	0.2	0.2	0.2	0.8	0.7	0.1	0.1	0.1	0.3	0.3	8.7	0.1	0.1	0.1	0.3	0.3	0.1	0.1	0.1	0.6	8.7
4-Feb	0.1	0.1	0.1	0.0	Z	0.3	0.2	C	C	C	C	C	0.9	0.6	1.3	0.3	0.3	0.1	0.0	0.1	0.2	0.3	0.3	0.2	0.3	1.3
5-Feb	0.5	1.1	0.8	0.7	1.0	Z	1.6	1.1	0.9	1.7	1.6	2.0	0.9	0.9	0.9	1.2	1.7	0.3	0.7	0.6	0.2	0.0	0.1	0.1	0.9	2.0
6-Feb	Z	0.1	0.1	0.3	0.2	0.3	0.1	0.1	0.1	0.3	0.4	0.3	0.4	0.7	1.1	0.5	0.3	0.1	0.0	0.9	0.5	0.5	0.6	0.1	0.3	1.1
7-Feb	0.1	Z	0.0	0.1	0.2	0.1	0.3	0.1	0.4	2.4	0.4	0.1	0.2	0.5	0.5	0.5	1.2	0.3	0.4	0.5	0.2	0.1	0.2	0.2	0.4	2.4
8-Feb	0.0	0.2	Z	0.0	0.1	0.1	0.0	0.5	0.4	0.9	1.5	1.2	0.7	0.6	0.5	0.9	0.2	0.5	2.1	0.3	0.5	0.2	0.3	0.1	0.5	2.1
9-Feb	0.0	0.1	0.5	Z	0.3	0.0	0.1	0.4	1.1	0.4	0.6	0.2	1.5	2.5	2.4	2.2	1.7	1.1	0.9	0.4	0.3	0.3	0.0	0.1	0.7	2.5
10-Feb	0.1	0.5	0.6	0.9	Z	0.3	1.0	0.9	0.5	1.3	1.8	0.6	1.2	0.4	1.6	0.6	0.3	0.3	0.3	0.1	0.0	0.1	0.0	0.1	0.6	1.8
11-Feb	0.2	0.1	0.2	1.5	1.2	Z	0.1	0.2	0.9	2.5	4.7	3.9	3.6	3.7	2.5	1.3	0.6	0.1	1.0	1.6	0.5	0.2	0.2	0.4	1.4	4.7
12-Feb	Z	0.7	0.2	0.1	0.1	0.3	0.4	1.3	0.8	0.6	1.2	1.4	1.3	0.8	1.7	1.8	1.0	0.2	0.1	0.0	0.0	0.2	0.1	0.0	0.6	1.8
13-Feb	0.6	Z	1.3	1.1	0.9	0.5	1.4	3.6	6.2	9.3	6.2	2.8	2.2	1.5	1.7	1.9	2.4	2.7	0.4	2.2	2.1	7.8	2.3	8.1	3.0	9.3
14-Feb	3.9	4.8	Z	1.4	0.9	2.1	22.0	33.6	23.4	32.3	2.9	3.2	5.7	3.1	3.8	2.7	1.3	0.6	18.8	8.1	1.8	2.8	3.8	0.4	8.0	33.6
15-Feb	0.3	0.3	0.4	Z	0.6	0.3	0.1	0.4	1.4	0.8	0.5	0.4	0.3	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.3	1.4
16-Feb	0.6	1.5	0.5	0.2	Z	0.5	0.3	0.9	3.4	0.6	0.4	0.5	0.5	0.4	0.3	0.2	0.2	0.1	0.0	0.0	0.3	0.1	0.1	0.1	0.5	3.4
17-Feb	0.2	0.0	0.1	0.1	0.0	Z	0.1	0.1	0.2	0.3	0.5	0.6	0.7	0.6	0.3	0.6	0.7	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.3	0.7
18-Feb	Z	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.3	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
19-Feb	0.0	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	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.5
20-Feb	0.1	0.2	Z	0.2	0.2	0.2	0.2	0.2	0.3	0.6	0.9	1.2	1.7	1.3	1.1	1.0	1.2	2.1	1.6	0.1	0.3	0.7	0.7	0.2	0.7	2.1
21-Feb	0.0	0.1	0.1	Z	0.2	0.3	0.4	0.1	0.4	0.8	0.6	0.9	1.0	2.0	1.1	1.1	1.4	1.7	0.7	2.8	1.0	2.1	4.2	4.8	1.2	4.8
22-Feb	1.0	2.9	0.8	1.3	Z	0.1	0.1	0.1	0.1	0.3	0.3	0.5	0.6	0.9	1.2	0.9	0.4	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.5	2.9
23-Feb	0.1	0.1	0.0	0.1	0.1	Z	2.2	2.0	2.6	0.3	0.1	0.1	0.1	2.5	1.2	0.7	0.7	0.3	0.5	0.2	0.2	1.0	0.1	0.4	0.7	2.6
24-Feb	Z	0.2	0.5	0.1	0.2	0.2	0.2	0.3	1.5	0.4	0.4	0.6	0.7	0.6	0.4	0.7	0.8	0.6	0.2	0.3	0.3	0.3	0.1	0.1	0.4	1.5
25-Feb	0.1	Z	0.2	0.3	1.0	0.6	0.8	0.9	0.9	2.1	2.1	1.9	2.6	3.1	2.6	3.1	3.1	1.2	0.6	0.8	0.2	0.2	0.2	0.4	1.3	3.1
26-Feb	0.2	0.3	Z	0.4	0.5	0.2	0.4	0.8	2.9	2.0	1.5	1.4	0.7	0.3	0.5	0.3	1.2	1.0	2.6	13.9	2.5	0.6	0.1	0.4	1.5	13.9
27-Feb	0.3	0.8	0.1	Z	0.1	0.1	0.1	0.7	0.8	0.7	0.7	0.4	0.4	2.6	0.3	0.6	2.2	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.5	2.6
28-Feb	0.3	0.3	0.3	0.5	Z	0.4	0.6	2.6	0.9	0.6	0.8	0.9	0.7	0.3	1.1	0.3	0.4	0.5	0.1	0.1	0.1	0.0	0.0	0.0	0.5	2.6
	0.4	0.6	0.3	0.4	0.4	0.3	1.2	1.9	1.9	2.4	1.3	1.1	1.2	1.3	1.2	1.2	0.9	0.5	1.1	1.2	0.4	0.6	0.6	0.6	Diurnal Average	
	3.9	4.8	1.3	1.5	1.6	2.1	22.0	33.6	23.4	32.3	6.2	3.9	5.7	3.7	3.8	8.7	3.1	2.7	18.8	13.9	2.5	7.8	4.2	8.1	Diurnal Maximum	

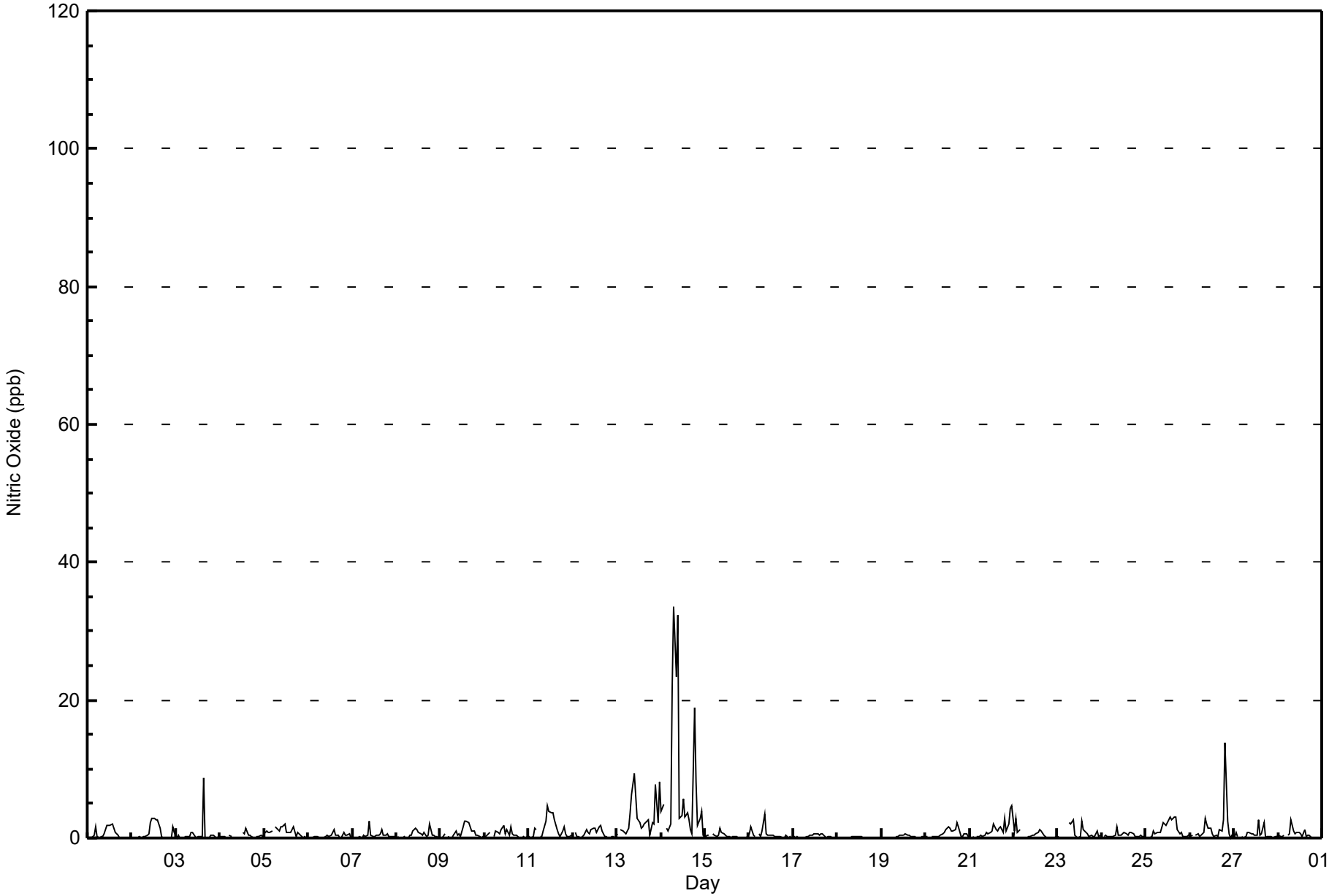
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitric Oxide (NO) - ppb

Hangingstone Expansion - February 2025



Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	635	99.37	99.37
21 - 40	4	0.63	100.00
11 - 80	0	0.00	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitric Oxide (NO) - ppb

Hangingstone Expansion - February 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	32	23	15	2	9	12	44	74	42	75	96	34	34	32	27	597
21 - 40	0	0	0	0	2	1	1	0	0	0	0	0	0	0	0	0	4
11 - 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	46	32	23	15	4	10	13	44	74	42	75	96	34	34	32	27	601

Total Number of Valid Hours: 601

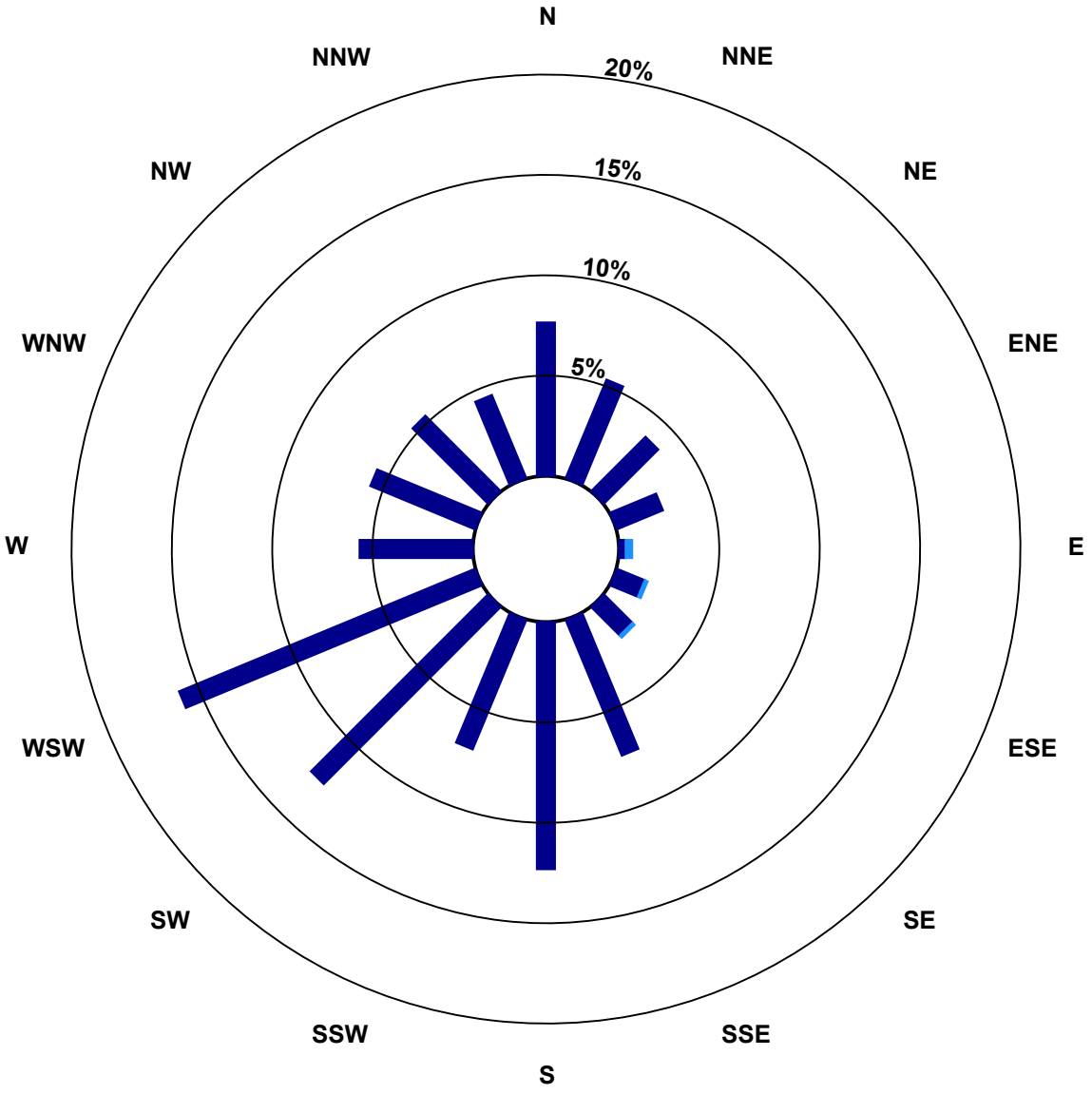
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitric Oxide (NO) - ppb

Hangingstone Expansion



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

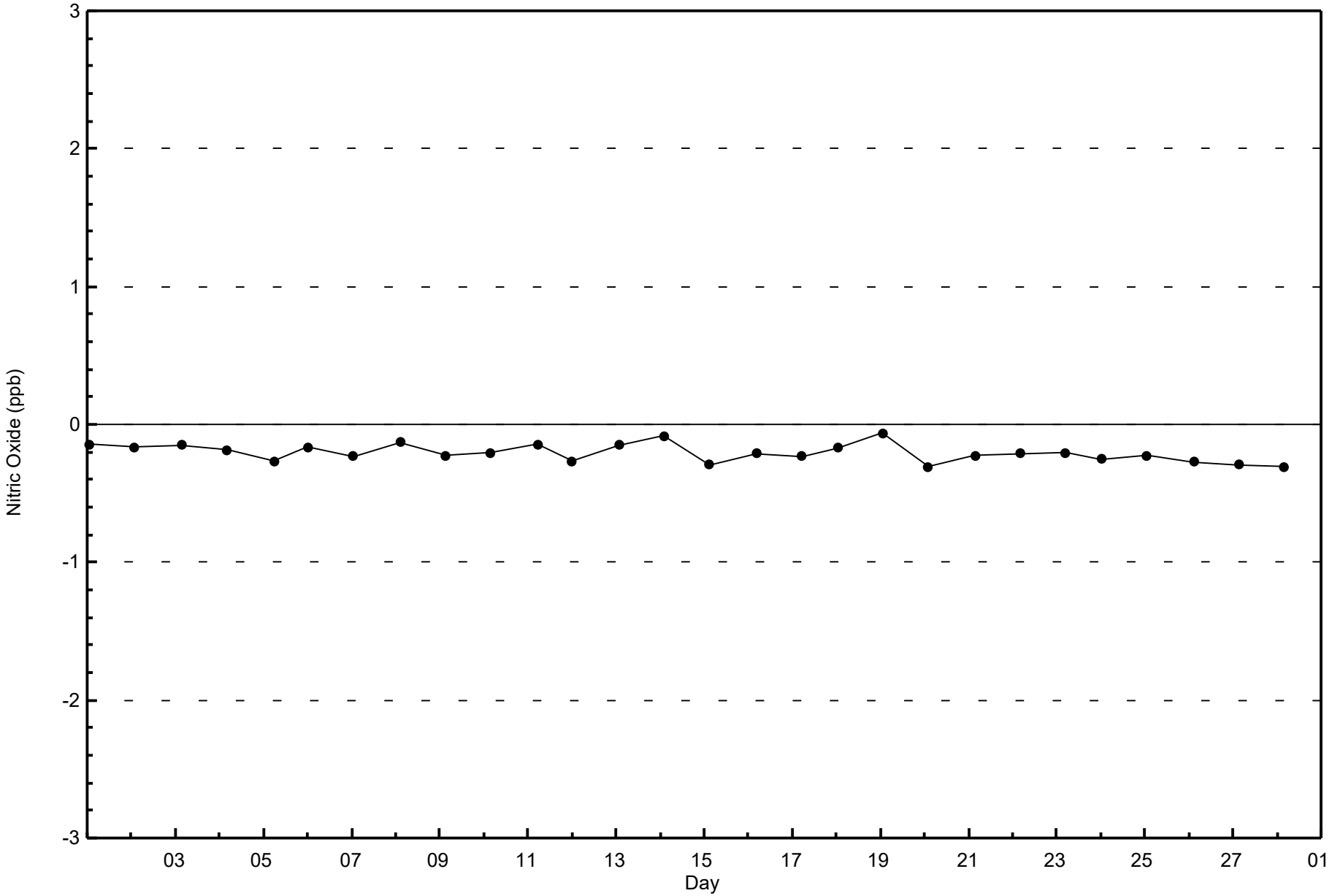
Total Number of Valid Hours: 601

Wood Buffalo Environmental Association

Zero Responses

Nitric Oxide (NO) - ppb

Hangingstone Expansion - February 2025

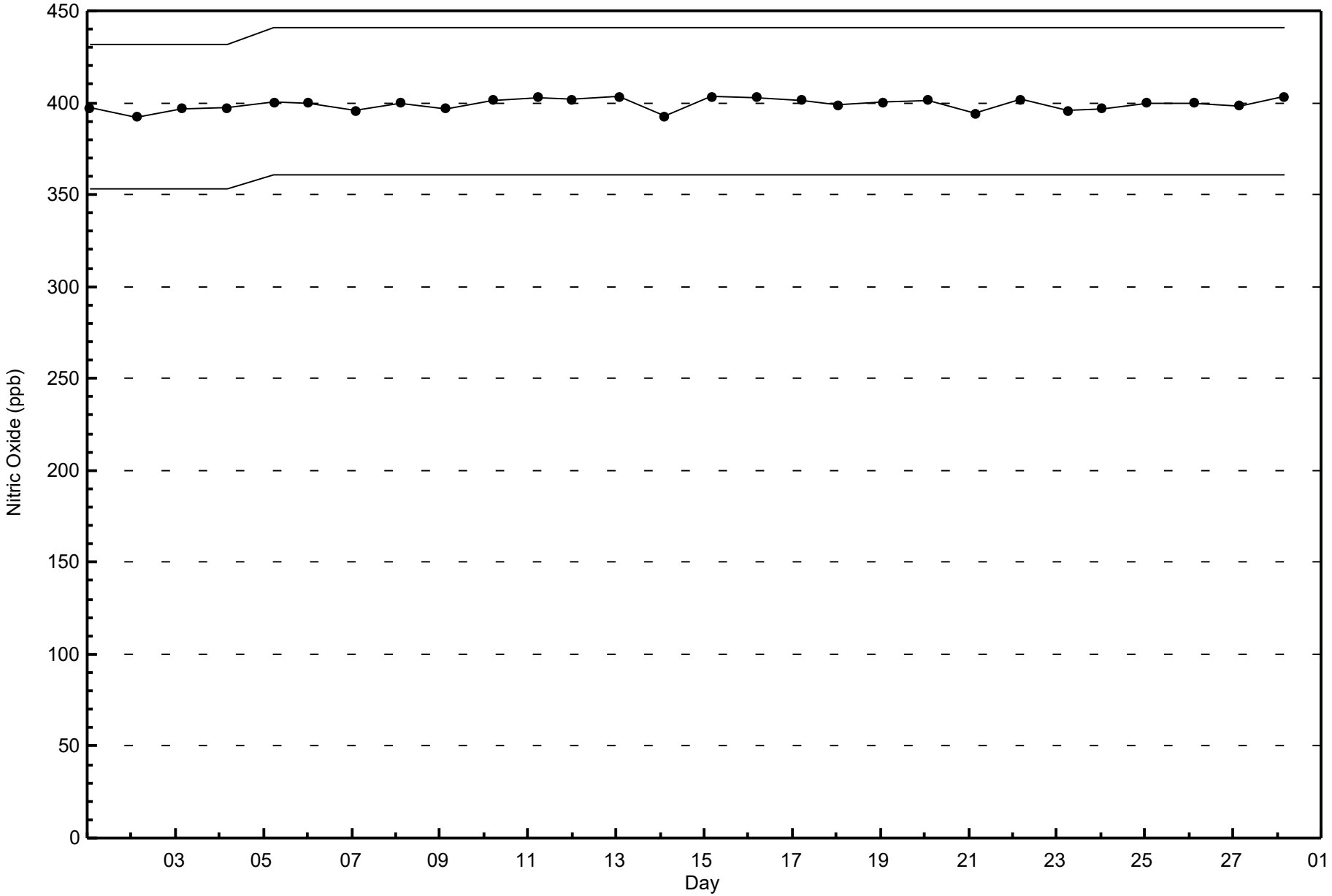


Wood Buffalo Environmental Association

Span Responses

Nitric Oxide (NO) - ppb

Hangingstone Expansion - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Dioxide (NO_2) - ppb

Hangingstone Expansion - February 2025

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

Maximum Value: 33.0 ppb on Feb 22 00:00

Maximum Daily Average: 13.2 ppb on Feb 14

Minimum Value: 0.1 ppb on Feb 9 07:00

Minimum Daily Average: 1.1 ppb on Feb 18

Maximum Diurnal Average: 6.6 ppb at hour 20

Minimum Diurnal Average: 2.2 ppb at hour 13

Monthly Average: 4.25 ppb

Percentiles: $P_1 = 0.2$ $P_{10} = 0.8$ $Q_1 = 1.5$ Median = 2.7 $Q_3 = 4.8$ $P_{90} = 9.5$ $P_{99} = 24.6$

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.4	Z	0.7	1.6	7.2	6.1	5.8	5.0	4.9	4.7	6.3	6.7	7.0	6.7	4.6	3.2	2.7	2.7	2.4	0.2	0.2	0.2	1.5	1.4	3.6	7.2
2-Feb	1.2	1.6	Z	3.1	2.7	1.4	1.0	0.8	1.3	1.3	3.1	3.7	4.0	4.1	4.9	4.1	2.2	1.9	0.6	0.4	2.6	1.7	9.4	11.1	3.0	11.1
3-Feb	9.7	9.5	10.0	Z	1.1	2.6	2.6	3.4	4.0	2.2	0.4	0.3	0.3	0.4	0.6	1.7	0.5	0.9	3.8	2.4	2.8	2.1	1.8	2.3	2.8	10.0
4-Feb	2.2	1.6	1.3	1.4	Z	2.6	1.9	C	C	C	C	C	1.8	1.5	2.7	1.5	2.7	2.4	2.3	2.2	2.4	2.7	3.1	2.5	2.2	3.1
5-Feb	3.0	4.6	3.9	3.4	3.6	Z	6.6	5.1	3.9	4.9	4.0	3.7	1.8	1.9	2.3	3.6	5.9	2.5	3.4	3.1	2.5	2.7	2.7	2.6	3.6	6.6
6-Feb	Z	2.5	2.2	2.8	2.8	3.0	1.5	1.5	1.4	1.8	1.1	0.6	1.3	2.9	4.7	3.8	5.3	2.6	0.2	4.9	4.9	1.7	1.8	0.9	2.4	5.3
7-Feb	1.4	Z	0.3	0.4	1.5	0.8	2.1	1.4	1.7	2.5	0.9	0.4	0.5	0.9	0.9	1.6	1.9	2.0	2.0	2.7	2.7	2.8	2.7	3.3	1.6	3.3
8-Feb	1.4	2.8	Z	1.6	1.5	1.8	2.4	1.2	1.5	2.7	2.1	1.5	1.3	1.1	1.2	1.6	1.5	3.5	5.3	3.0	4.7	9.7	14.4	4.1	3.1	14.4
9-Feb	4.0	3.8	6.3	Z	5.4	0.2	0.1	0.4	4.7	1.3	1.0	0.2	1.6	3.1	3.5	4.4	7.2	8.0	11.0	7.0	3.6	2.7	1.0	0.4	3.5	11.0
10-Feb	0.8	2.4	2.8	4.0	Z	1.6	3.5	2.8	2.0	2.6	2.8	1.0	1.8	1.0	2.9	1.7	1.8	2.7	2.6	0.8	1.3	1.8	2.8	11.0	2.5	11.0
11-Feb	12.5	10.5	11.2	18.0	14.3	Z	9.3	3.1	4.7	7.9	9.7	6.7	5.1	5.4	4.9	3.7	3.8	4.6	8.4	18.6	14.9	9.3	7.5	8.2	8.8	18.6
12-Feb	Z	8.4	3.8	4.3	3.2	2.7	2.9	5.4	9.7	3.7	3.9	3.7	2.8	2.1	2.7	4.2	4.7	5.4	5.0	5.9	6.0	4.3	2.5	1.9	4.3	9.7
13-Feb	2.6	Z	3.6	3.6	3.2	3.4	7.4	14.7	17.9	12.7	7.2	3.3	2.9	2.5	2.7	3.8	4.7	10.3	13.1	16.2	18.4	22.7	22.8	20.2	9.6	22.8
14-Feb	17.6	18.1	Z	12.7	10.3	11.7	25.5	28.1	21.6	18.5	2.7	3.2	4.9	3.2	4.2	4.0	4.2	8.0	28.0	22.5	13.7	14.2	17.2	8.5	13.2	28.1
15-Feb	4.5	5.4	5.6	Z	6.9	4.8	2.9	5.9	8.0	2.2	0.9	0.5	0.4	0.3	0.3	0.3	0.3	0.6	0.9	0.3	0.3	0.4	0.8	2.7	2.4	8.0
16-Feb	9.4	8.6	5.1	4.5	Z	6.1	5.4	7.2	6.4	2.0	0.9	0.7	0.7	0.8	0.6	0.7	1.3	1.7	3.2	3.6	3.3	1.6	2.3	3.3	3.5	9.4
17-Feb	3.6	2.9	2.7	1.6	1.8	Z	2.2	2.1	1.8	1.7	1.5	1.3	1.1	0.9	0.8	1.2	1.7	2.6	2.8	2.6	2.5	2.1	1.5	1.8	1.9	3.6
18-Feb	Z	1.9	1.5	1.2	1.3	1.3	1.3	1.3	1.1	1.0	0.8	0.6	0.4	0.5	0.5	0.5	0.8	1.0	1.8	1.5	1.5	1.5	1.3	1.3	1.1	1.9
19-Feb	1.2	Z	1.1	1.3	1.4	1.4	1.5	1.7	1.6	1.5	1.4	1.4	1.3	1.3	1.1	0.9	1.0	1.3	1.5	2.0	1.9	1.8	1.8	1.9	1.4	2.0
20-Feb	1.9	1.8	Z	2.0	1.9	2.2	2.4	3.1	4.1	3.7	4.0	4.6	4.7	3.1	3.0	3.3	5.2	9.8	9.2	2.3	3.4	6.2	5.9	2.9	3.9	9.8
21-Feb	1.9	2.1	2.5	Z	3.9	6.0	5.2	3.0	3.4	3.6	2.2	2.2	2.3	4.3	3.3	3.7	7.1	12.3	16.8	20.8	19.4	24.8	29.8	33.0	9.3	33.0
22-Feb	19.2	23.7	13.7	12.1	Z	3.3	2.1	1.8	1.9	1.9	1.9	2.2	3.4	3.5	3.4	3.6	3.7	2.5	2.6	2.2	2.4	2.8	2.3	2.4	5.2	23.7
23-Feb	1.7	1.9	1.6	1.2	1.4	Z	12.1	9.2	9.2	1.4	0.7	0.5	0.4	7.5	4.4	4.2	5.9	5.7	6.2	4.7	4.4	6.7	4.6	3.0	4.3	12.1
24-Feb	Z	1.9	3.1	1.6	1.8	3.2	4.4	5.4	7.0	1.9	1.3	1.8	1.5	1.5	1.3	1.6	2.8	4.0	6.3	7.9	7.6	4.3	2.6	1.9	3.3	7.9
25-Feb	1.9	Z	6.8	9.9	15.6	19.1	7.9	6.3	5.3	6.2	5.0	4.1	4.3	4.5	4.0	5.1	7.5	10.0	12.2	11.1	4.9	5.1	3.9	4.4	7.2	19.1
26-Feb	4.2	3.9	Z	3.6	4.5	1.9	4.5	4.1	6.3	2.0	1.4	1.8	1.1	0.6	1.0	0.5	2.5	10.0	24.3	28.0	18.2	4.8	1.3	1.2	5.7	28.0
27-Feb	1.8	2.4	1.2	Z	1.2	0.9	1.4	2.5	6.0	1.5	1.3	0.7	0.7	2.1	0.8	1.1	1.7	0.4	2.5	4.1	6.1	5.7	4.2	3.7	2.3	6.1
28-Feb	3.5	3.1	3.2	3.5	Z	4.9	6.3	10.3	4.4	1.4	1.7	2.1	1.2	0.8	1.4	0.8	1.5	2.3	3.8	4.8	1.9	1.8	0.7	0.7	2.9	10.3
	4.7	5.5	4.1	4.3	4.3	3.9	4.7	5.1	5.4	3.7	2.6	2.2	2.2	2.4	2.5	2.5	3.3	4.3	6.5	6.6	5.7	5.3	5.5	5.1	Diurnal Average	
	19.2	23.7	13.7	18.0	15.6	19.1	25.5	28.1	21.6	18.5	9.7	6.7	7.0	7.5	4.9	5.1	7.5	12.3	28.0	28.0	19.4	24.8	29.8	33.0	Diurnal Maximum	

Z - zerospan C - Calibration

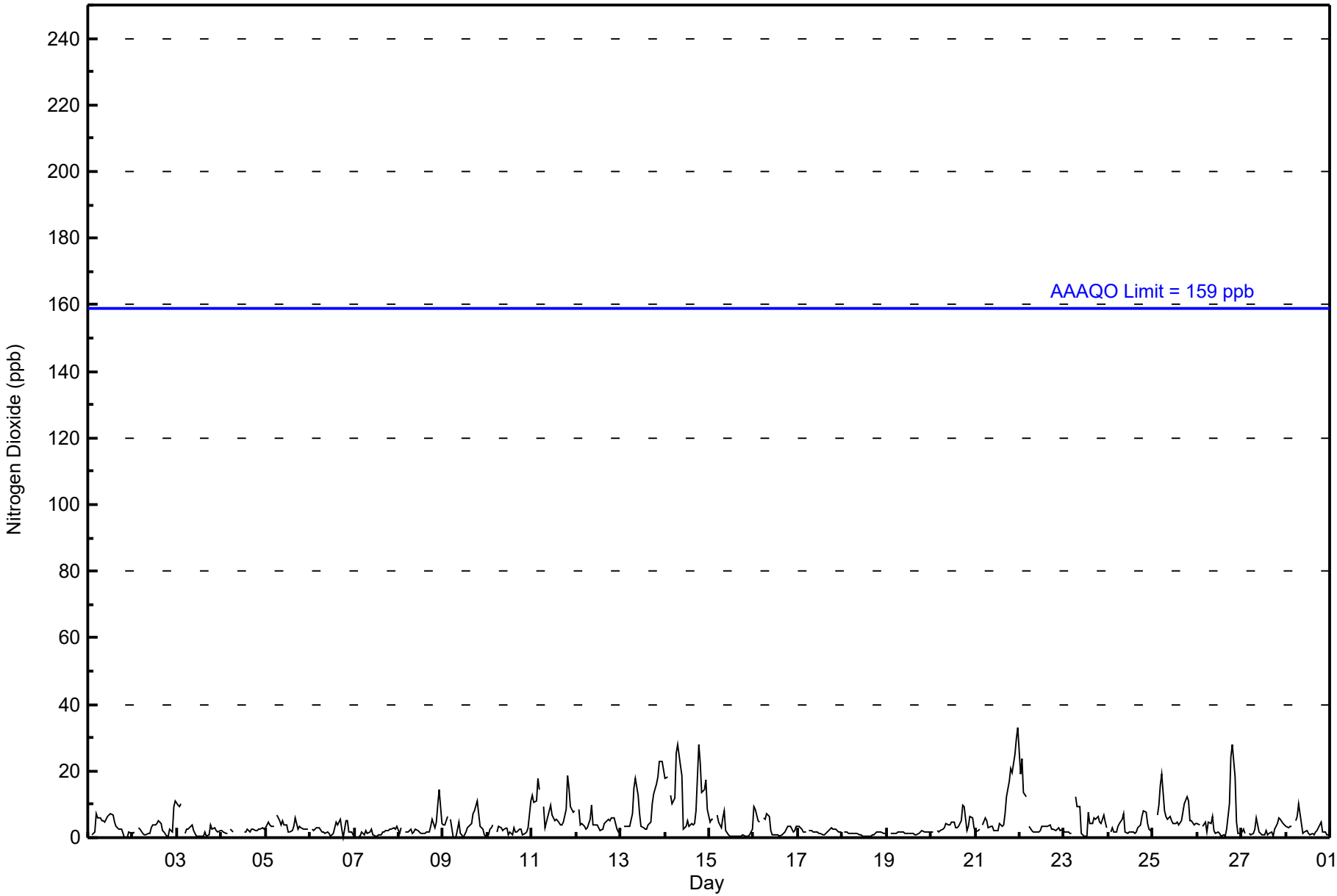
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Dioxide (NO_2) - ppb

Hangingstone Expansion - February 2025



Nitrogen Dioxide (NO_2) - ppb
Hangingstone Expansion - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	625	97.81	97.81
21 - 40	14	2.19	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: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Dioxide (NO_2) - ppb

Hangingstone Expansion - February 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	45	32	19	13	3	7	11	44	73	42	75	96	34	34	32	27	587
21 - 40	1	0	4	2	1	3	2	0	1	0	0	0	0	0	0	0	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	46	32	23	15	4	10	13	44	74	42	75	96	34	34	32	27	601

Total Number of Valid Hours: 601

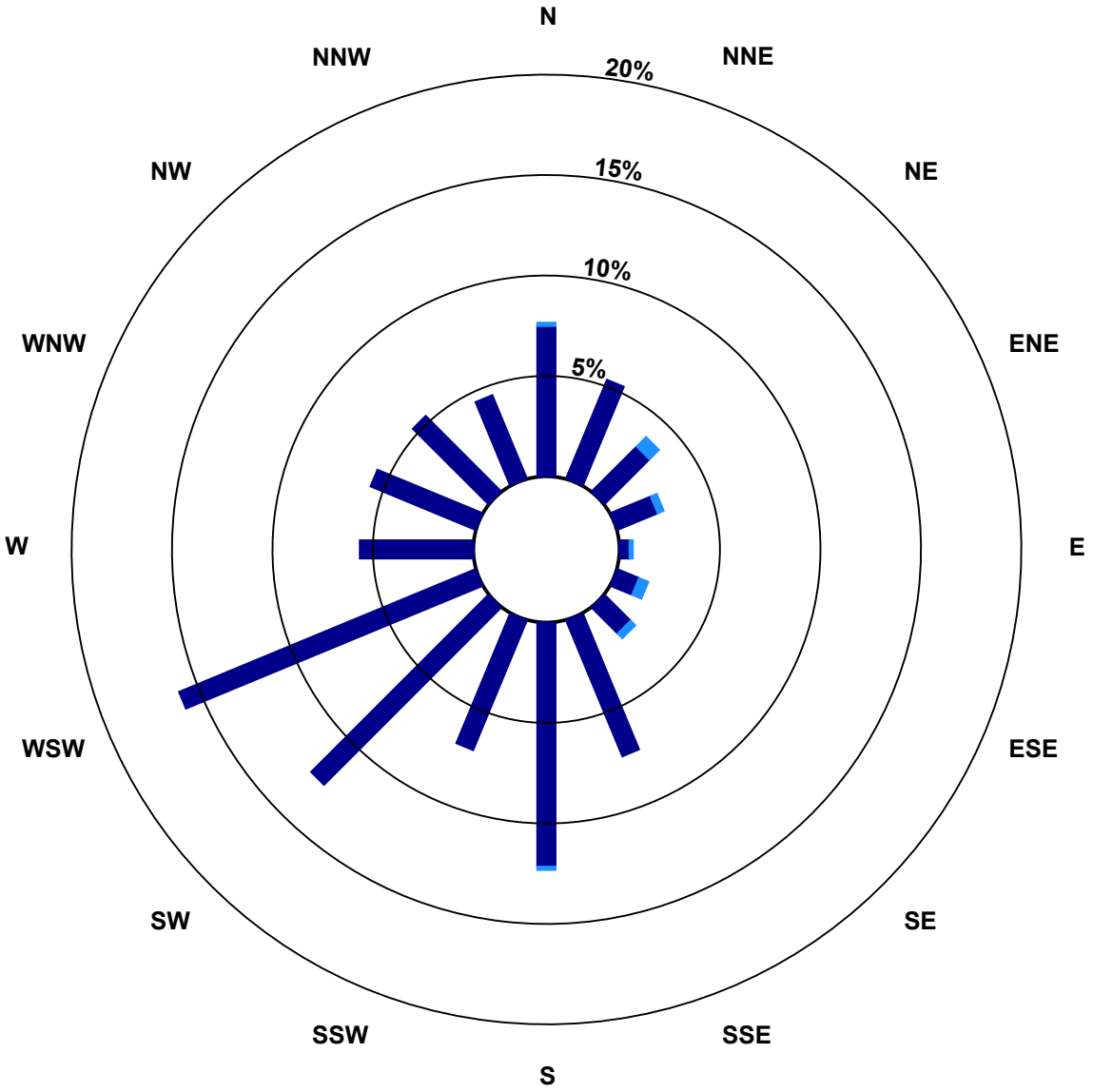
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Dioxide (NO_2) - ppb

Hangingstone Expansion



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

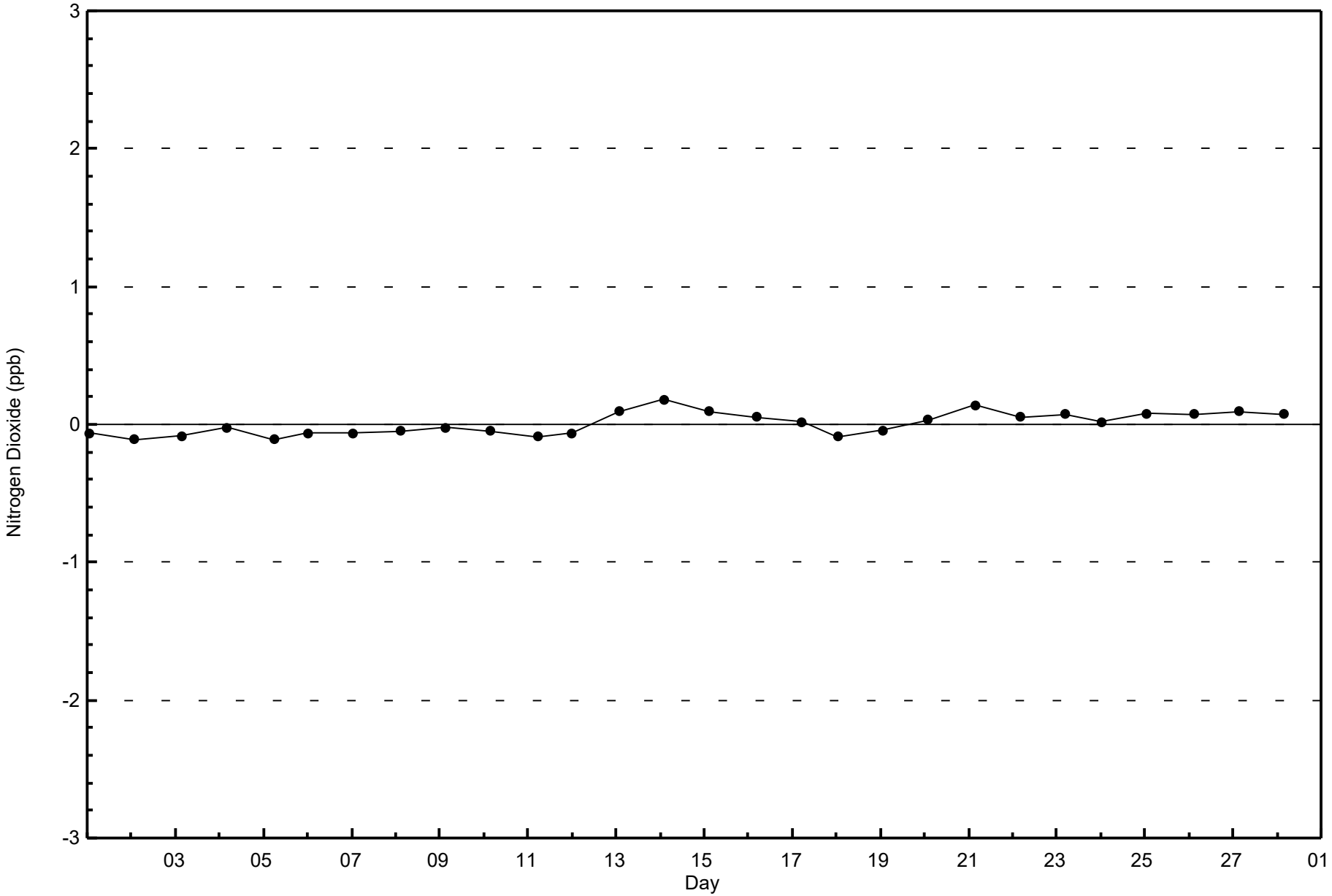
Total Number of Valid Hours: 601

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Dioxide (NO_2) - ppb

Hangingstone Expansion - February 2025

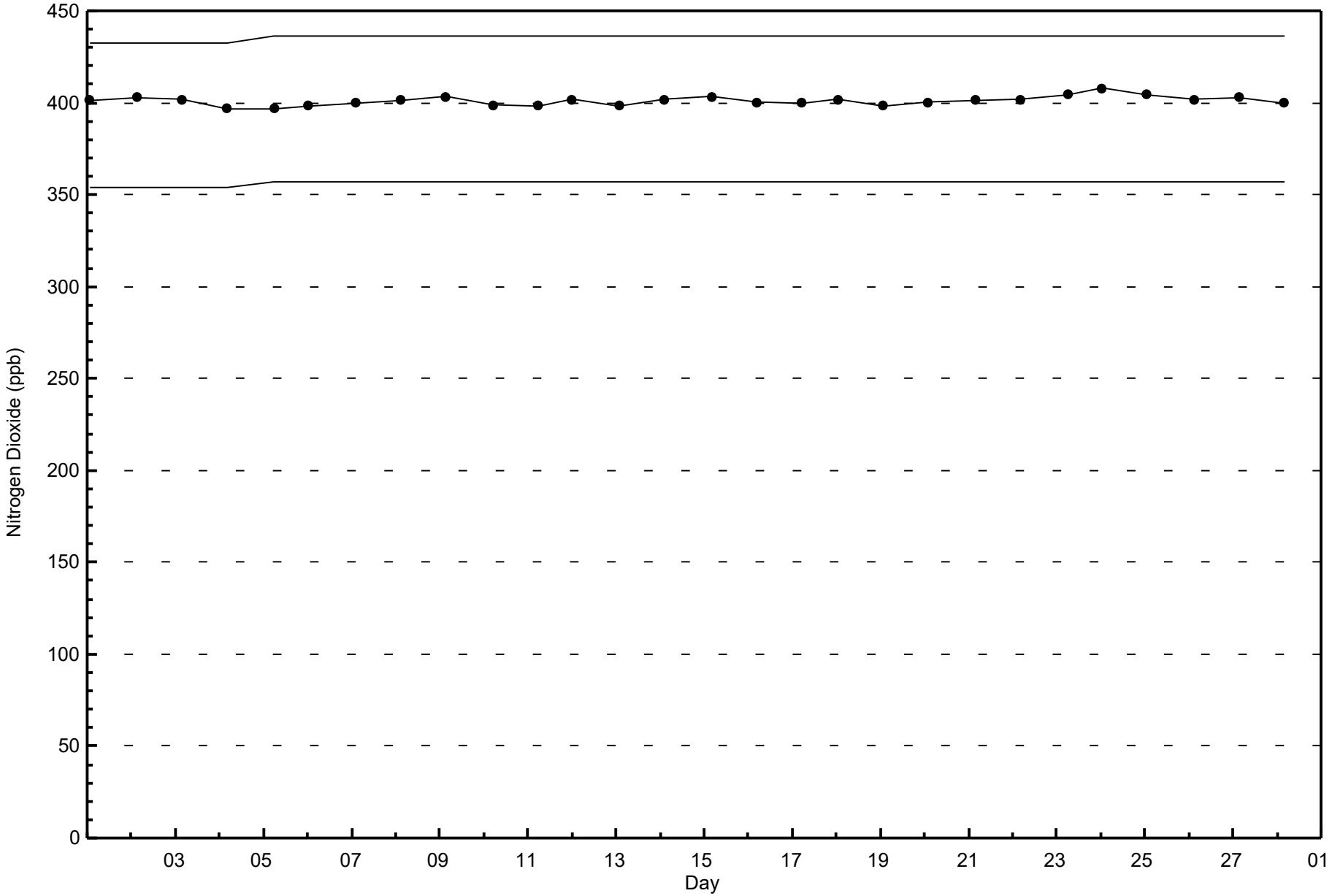


Wood Buffalo Environmental Association

Span Responses

Nitrogen Dioxide (NO_2) - ppb

Hangingstone Expansion - February 2025



Wood Buffalo Environmental Association

Summary of Hour Averages

Nitrogen Oxides (NO_X) - ppb

Hangingstone Expansion - February 2025

Maximum Value: 61.7 ppb on Feb 14 08:00

Maximum Daily Average: 21.1 ppb on Feb 14

Minimum Value: 0.2 ppb on Feb 1 20:00

Minimum Daily Average: 1.2 ppb on Feb 18

Maximum Diurnal Average: 7.9 ppb at hour 20

Minimum Diurnal Average: 3.3 ppb at hour 12

Monthly Average: 5.24 ppb

Percentiles: P_1 = 0.3 P_{10} = 1.1 Q_1 = 1.8 Median = 3.1 Q_3 = 5.8 P_{90} = 10.6 P_{99} = 36.3

Hours in Service:	672
Hours of Data:	639
Hours of Missing Data:	33
Hours of Calibration:	33
Percent Operational Time:	100.0

Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	0.4	Z	0.7	2.1	8.8	6.2	5.9	5.1	5.2	5.4	8.1	8.5	8.9	8.7	6.0	4.0	3.0	2.8	2.5	0.2	0.2	0.2	1.5	1.4	4.2	8.9
2-Feb	1.2	1.7	Z	3.1	2.8	1.4	1.1	1.1	1.6	1.9	5.3	6.5	6.9	6.8	7.5	5.5	2.4	1.9	0.6	0.4	2.6	1.7	11.1	12.0	3.8	12.0
3-Feb	9.8	9.9	10.1	Z	1.1	2.8	2.8	3.6	4.8	2.9	0.5	0.4	0.4	0.7	0.9	10.4	0.6	1.0	3.9	2.7	3.1	2.2	1.9	2.4	3.4	10.4
4-Feb	2.3	1.7	1.4	1.4	Z	2.9	2.1	C	C	C	C	C	2.7	2.1	4.0	1.8	3.0	2.5	2.3	2.3	2.6	3.0	3.4	2.7	2.5	4.0
5-Feb	3.5	5.7	4.7	4.1	4.6	Z	8.2	6.2	4.8	6.6	5.6	5.7	2.7	2.8	3.2	4.8	7.6	2.8	4.1	3.7	2.7	2.7	2.8	2.7	4.5	8.2
6-Feb	Z	2.6	2.3	3.1	3.0	3.3	1.6	1.6	1.5	2.1	1.5	0.9	1.7	3.6	5.8	4.3	5.6	2.7	0.2	5.8	5.4	2.2	2.4	1.0	2.8	5.8
7-Feb	1.5	Z	0.3	0.5	1.7	0.9	2.4	1.5	2.1	4.9	1.3	0.5	0.7	1.4	1.4	2.1	3.1	2.3	2.4	3.2	2.9	2.9	2.9	3.5	2.0	4.9
8-Feb	1.4	3.0	Z	1.6	1.6	1.9	2.4	1.7	1.9	3.6	3.6	2.7	2.0	1.7	1.7	2.5	1.7	4.0	7.4	3.3	5.2	9.9	14.7	4.2	3.6	14.7
9-Feb	4.0	3.9	6.8	Z	5.7	0.2	0.2	0.8	5.8	1.7	1.6	0.4	3.1	5.6	5.9	6.6	8.9	9.1	11.9	7.4	3.9	3.0	1.0	0.5	4.3	11.9
10-Feb	0.9	2.9	3.4	4.9	Z	1.9	4.5	3.7	2.5	3.9	4.6	1.6	3.0	1.4	4.5	2.3	2.1	3.0	2.9	0.9	1.3	1.9	2.8	11.1	3.1	11.1
11-Feb	12.7	10.6	11.4	19.5	15.5	Z	9.4	3.3	5.6	10.4	14.4	10.6	8.7	9.1	7.4	5.0	4.4	4.7	9.4	20.2	15.4	9.5	7.7	8.6	10.1	20.2
12-Feb	Z	9.1	4.0	4.4	3.3	3.0	3.3	6.7	10.5	4.3	5.1	5.1	4.1	2.9	4.4	6.0	5.7	5.6	5.1	5.9	6.0	4.5	2.6	1.9	4.9	10.5
13-Feb	3.2	Z	4.9	4.7	4.1	3.9	8.8	18.3	24.1	22.0	13.4	6.1	5.1	4.0	4.4	5.7	7.1	13.0	13.5	18.4	20.5	30.5	25.1	28.3	12.6	30.5
14-Feb	21.5	22.9	Z	14.1	11.2	13.8	47.5	61.7	45.0	50.8	5.6	6.4	10.6	6.3	8.0	6.7	5.5	8.6	46.8	30.6	15.5	17.0	21.0	8.9	21.1	61.7
15-Feb	4.8	5.7	6.0	Z	7.5	5.1	3.0	6.3	9.4	3.0	1.4	0.9	0.7	0.5	0.4	0.4	0.5	0.7	1.0	0.4	0.4	0.4	0.9	2.8	2.7	9.4
16-Feb	10.0	10.1	5.6	4.7	Z	6.6	5.7	8.1	9.8	2.6	1.3	1.2	1.2	1.2	0.9	0.9	1.5	1.8	3.2	3.6	3.6	1.7	2.4	3.4	4.0	10.1
17-Feb	3.8	2.9	2.8	1.7	1.8	Z	2.3	2.2	2.0	2.0	2.0	1.9	1.8	1.5	1.1	1.8	2.4	2.8	2.9	2.8	2.6	2.2	1.6	1.9	2.2	3.8
18-Feb	Z	1.9	1.6	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.1	0.8	0.5	0.6	0.5	0.6	0.8	1.0	1.8	1.5	1.5	1.5	1.3	1.3	1.2	1.9
19-Feb	1.2	Z	1.1	1.3	1.4	1.4	1.5	1.7	1.7	1.8	1.9	1.9	1.7	1.8	1.5	1.2	1.2	1.4	1.6	2.1	2.0	1.9	1.9	2.1	1.6	2.1
20-Feb	2.0	2.0	Z	2.2	2.1	2.4	2.6	3.3	4.4	4.3	4.9	5.8	6.4	4.4	4.1	4.3	6.4	11.9	10.8	2.4	3.7	6.9	6.6	3.1	4.7	11.9
21-Feb	1.9	2.2	2.6	Z	4.1	6.3	5.6	3.1	3.8	4.4	2.8	3.1	3.3	6.3	4.4	4.8	8.5	14.0	17.5	23.6	20.4	26.9	34.0	37.8	10.5	37.8
22-Feb	20.2	26.6	14.5	13.4	Z	3.4	2.2	1.9	2.0	2.2	2.2	2.7	4.0	4.4	4.6	4.5	4.1	2.6	2.6	2.2	2.5	2.9	2.3	2.5	5.7	26.6
23-Feb	1.8	2.0	1.6	1.3	1.5	Z	14.3	11.2	11.8	1.7	0.8	0.6	0.5	10.0	5.6	4.9	6.6	6.0	6.7	4.9	4.6	7.7	4.7	3.4	5.0	14.3
24-Feb	Z	2.1	3.6	1.7	2.0	3.4	4.6	5.7	8.5	2.3	1.7	2.4	2.2	2.1	1.7	2.3	3.6	4.6	6.5	8.2	7.9	4.6	2.7	2.0	3.7	8.5
25-Feb	2.0	Z	7.0	10.2	16.6	19.7	8.7	7.2	6.2	8.3	7.1	6.0	6.9	7.6	6.6	8.2	10.6	11.2	12.8	11.9	5.1	5.3	4.1	4.8	8.4	19.7
26-Feb	4.4	4.2	Z	4.0	5.0	2.1	4.9	4.9	9.2	4.0	2.9	3.2	1.8	0.9	1.5	0.8	3.7	11.0	26.9	41.9	20.7	5.4	1.4	1.6	7.2	41.9
27-Feb	2.1	3.2	1.3	Z	1.3	1.0	1.5	3.2	6.8	2.2	2.0	1.1	1.1	4.7	1.1	1.7	3.9	0.5	2.7	4.3	6.3	5.8	4.4	3.9	2.9	6.8
28-Feb	3.8	3.4	3.5	4.0	Z	5.3	6.9	12.9	5.3	2.0	2.5	3.0	1.9	1.1	2.5	1.1	1.9	2.8	3.9	4.9	2.0	1.8	0.7	0.7	3.4	12.9
	5.0	6.1	4.4	4.7	4.7	4.2	5.9	7.0	7.3	6.0	3.9	3.3	3.4	3.7	3.6	3.8	4.2	4.9	7.6	7.9	6.1	5.9	6.1	5.7	Diurnal Average	
	21.5	26.6	14.5	19.5	16.6	19.7	47.5	61.7	45.0	50.8	14.4	10.6	10.6	10.0	8.0	10.4	10.6	14.0	46.8	41.9	20.7	30.5	34.0	37.8	Diurnal Maximum	

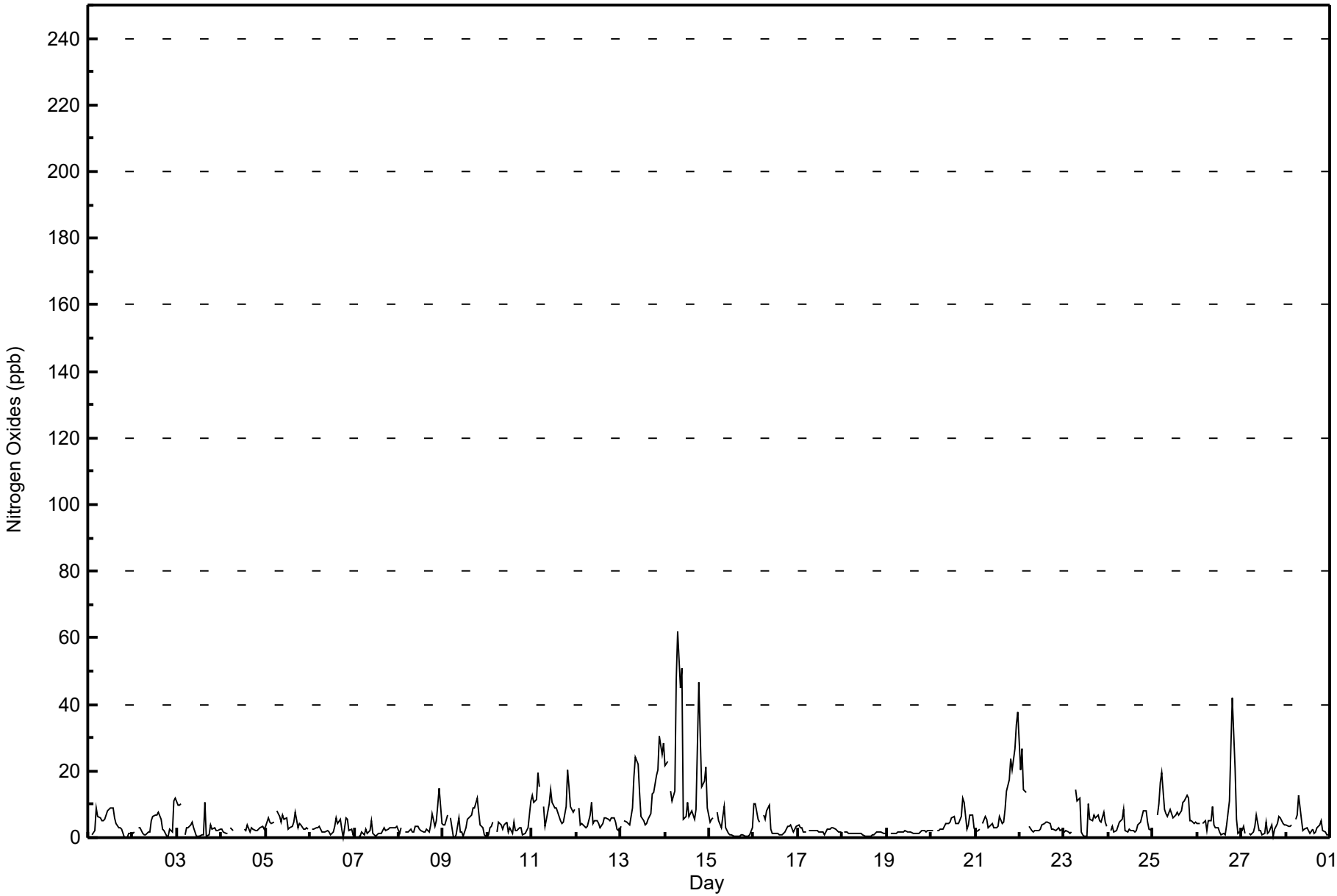
Z - zerospan C - Calibration

Wood Buffalo Environmental Association

Hourly Averages

Nitrogen Oxides (NO_X) - ppb

Hangingstone Expansion - February 2025



Nitrogen Oxides (NO_X) - ppb

Hangingstone Expansion - February 2025

Concentration Ranges (ppb)	Number of Hours	%	Cumulative %
0 - 20	616	96.40	96.40
21 - 40	17	2.66	99.06
11 - 80	6	0.94	100.00
81 - 159	0	0.00	100.00
> 159	0	0.00	100.00

Total Number of Valid Hours: 639

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Nitrogen Oxides (NO_X) - ppb

Hangingstone Expansion - February 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	45	32	19	10	1	5	11	44	71	42	75	96	34	34	32	27	578
21 - 40	1	0	4	4	1	4	0	0	3	0	0	0	0	0	0	0	17
11 - 80	0	0	0	1	2	1	2	0	0	0	0	0	0	0	0	0	6
81 - 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
> 159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	46	32	23	15	4	10	13	44	74	42	75	96	34	34	32	27	601

Total Number of Valid Hours: 601

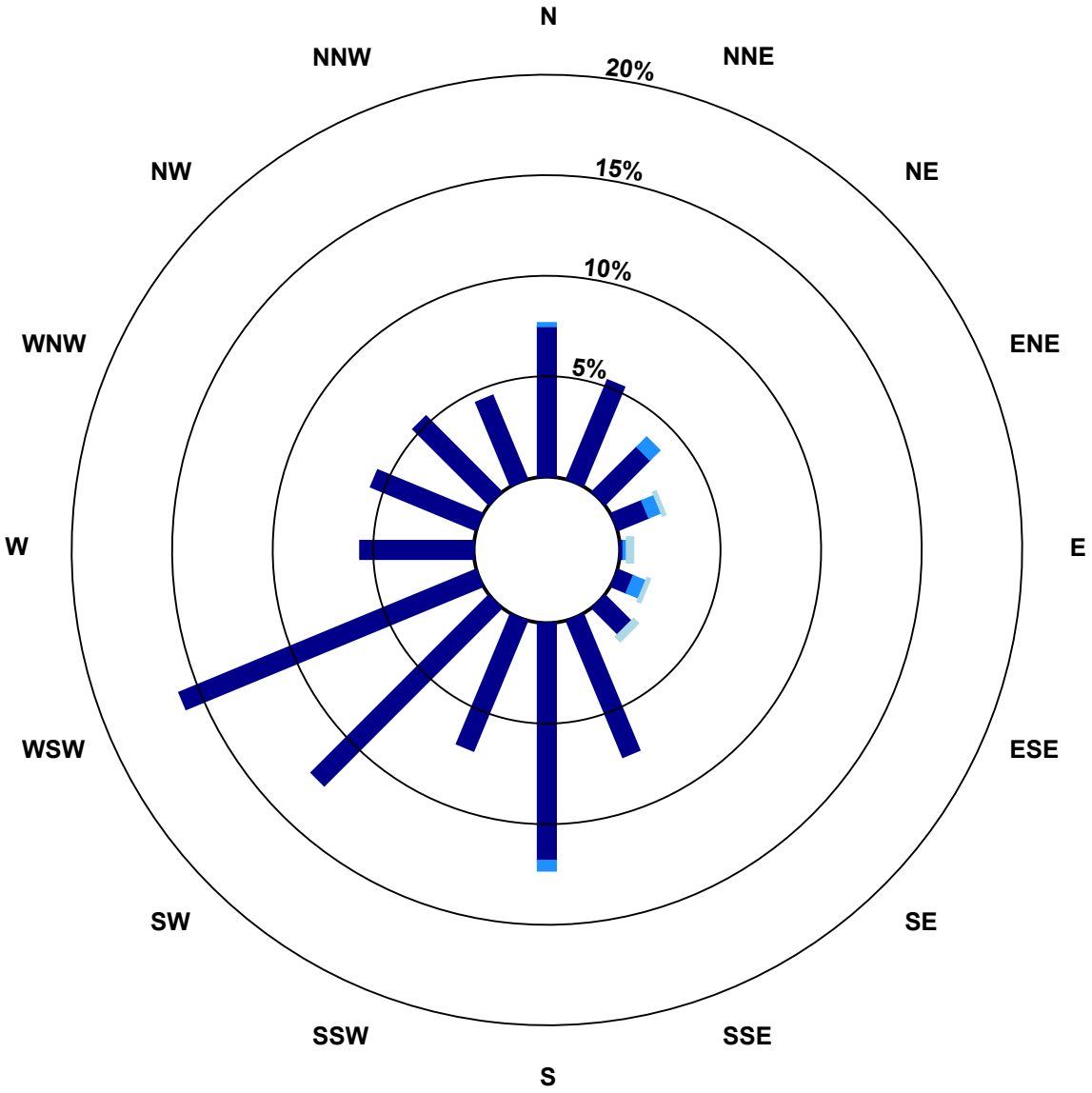
Total Number of Hours: 672

Wood Buffalo Environmental Association

Wind Rose Feb 2025

Nitrogen Oxides (NO_X) - ppb

Hangingstone Expansion



Classes (ppb)

0 - 20

21 - 40

11 - 80

81 - 159

> 159

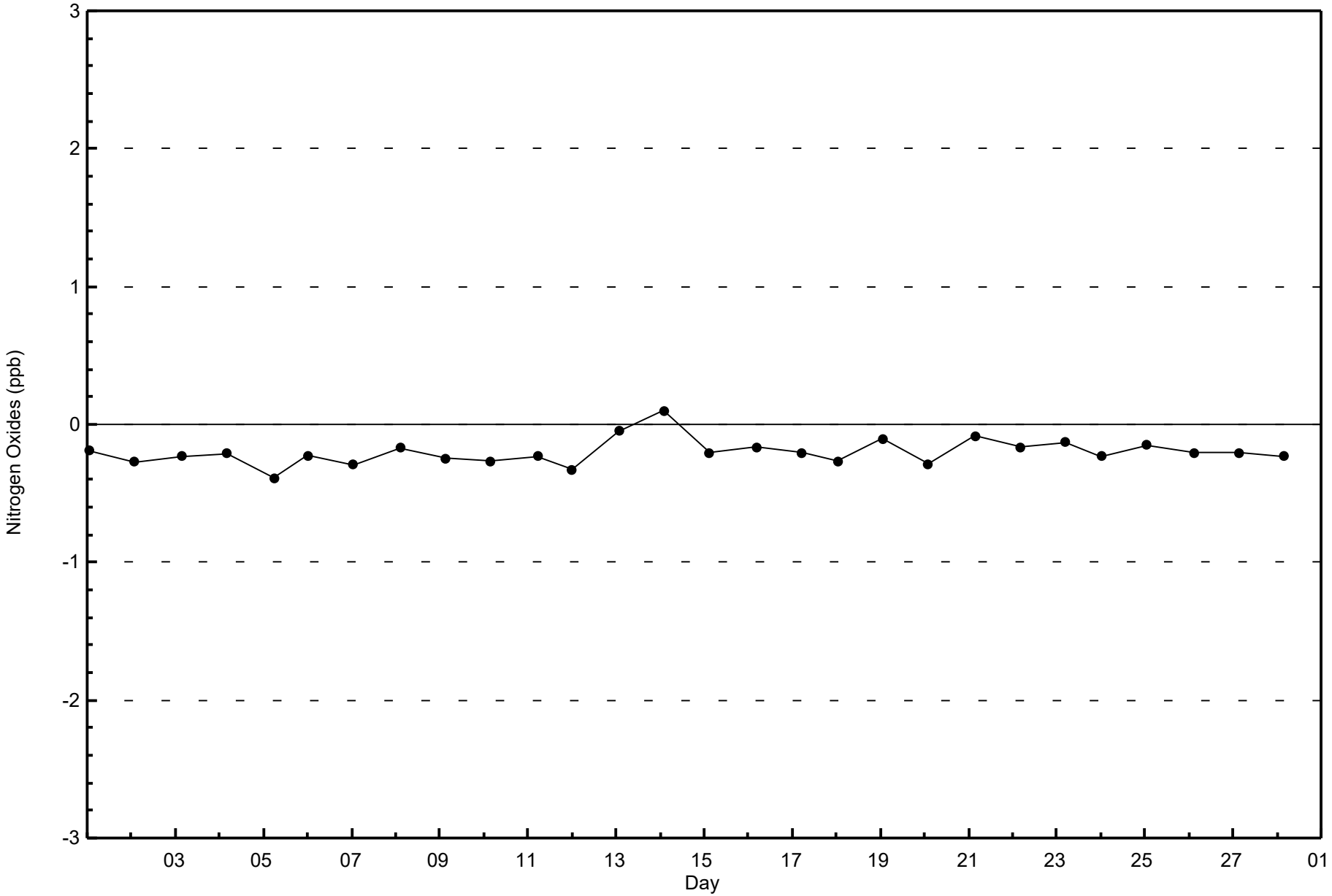
Total Number of Valid Hours: 601

Wood Buffalo Environmental Association

Zero Responses

Nitrogen Oxides (NO_X) - ppb

Hangingstone Expansion - February 2025

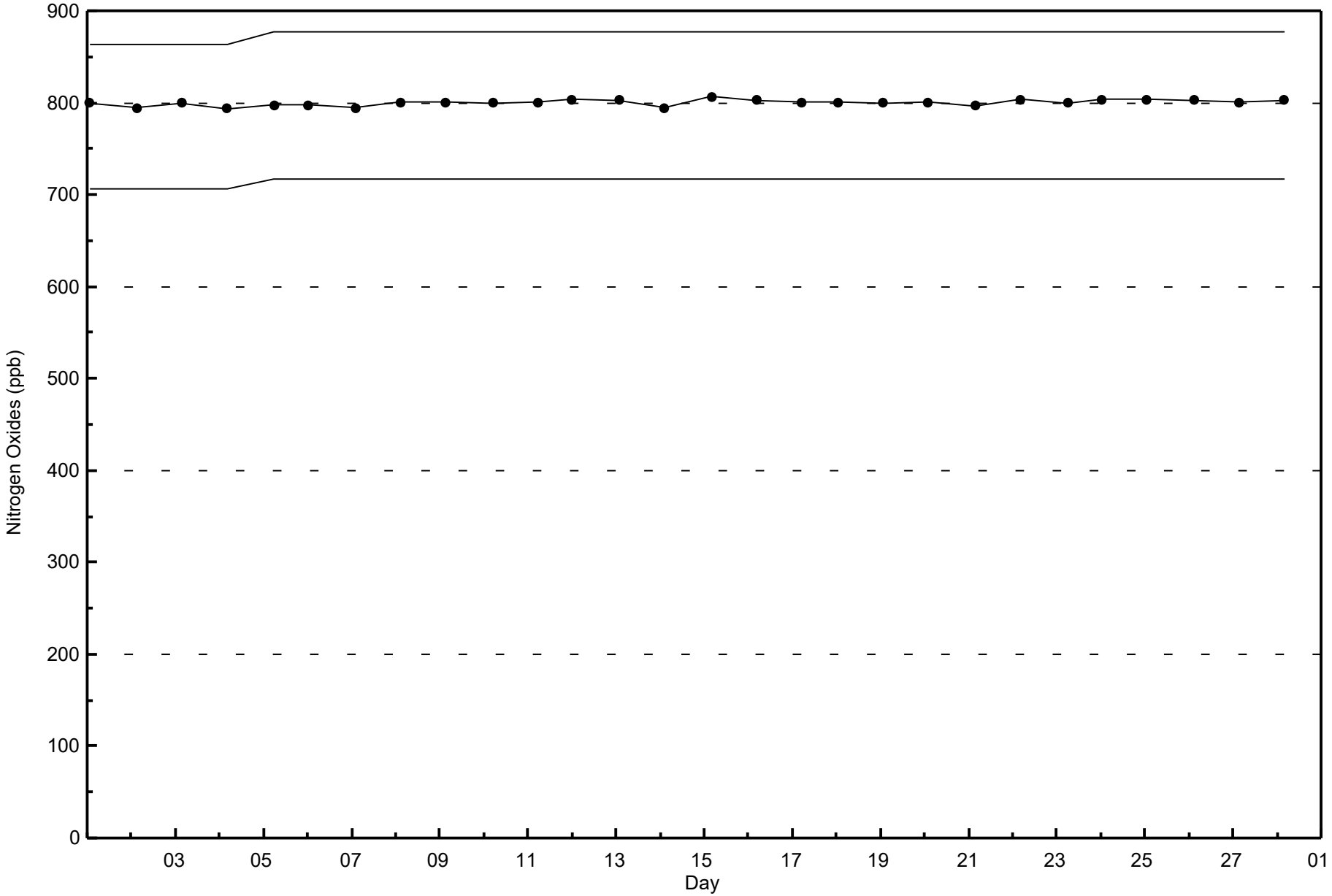


Wood Buffalo Environmental Association

Span Responses

Nitrogen Oxides (NO_X) - ppb

Hangingstone Expansion - February 2025



Maximum Value: 8.2 C on Feb 22 16:00

Maximum Daily Average: 2.3 C on Feb 27

Minimum Value: -37.7 C on Feb 14 08:00

Minimum Daily Average: -30.1 C on Feb 14

Maximum Diurnal Average: -12.3 C at hour 16

Minimum Diurnal Average: -18.7 C at hour 5

Monthly Average: -16.17 C

Percentiles: P_1 = -35.3 P_{10} = -28.2 Q_1 = -24.2 Median = -19.4 Q_3 = -6.7 P_{90} = 0.7 P_{99} = 6.4

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

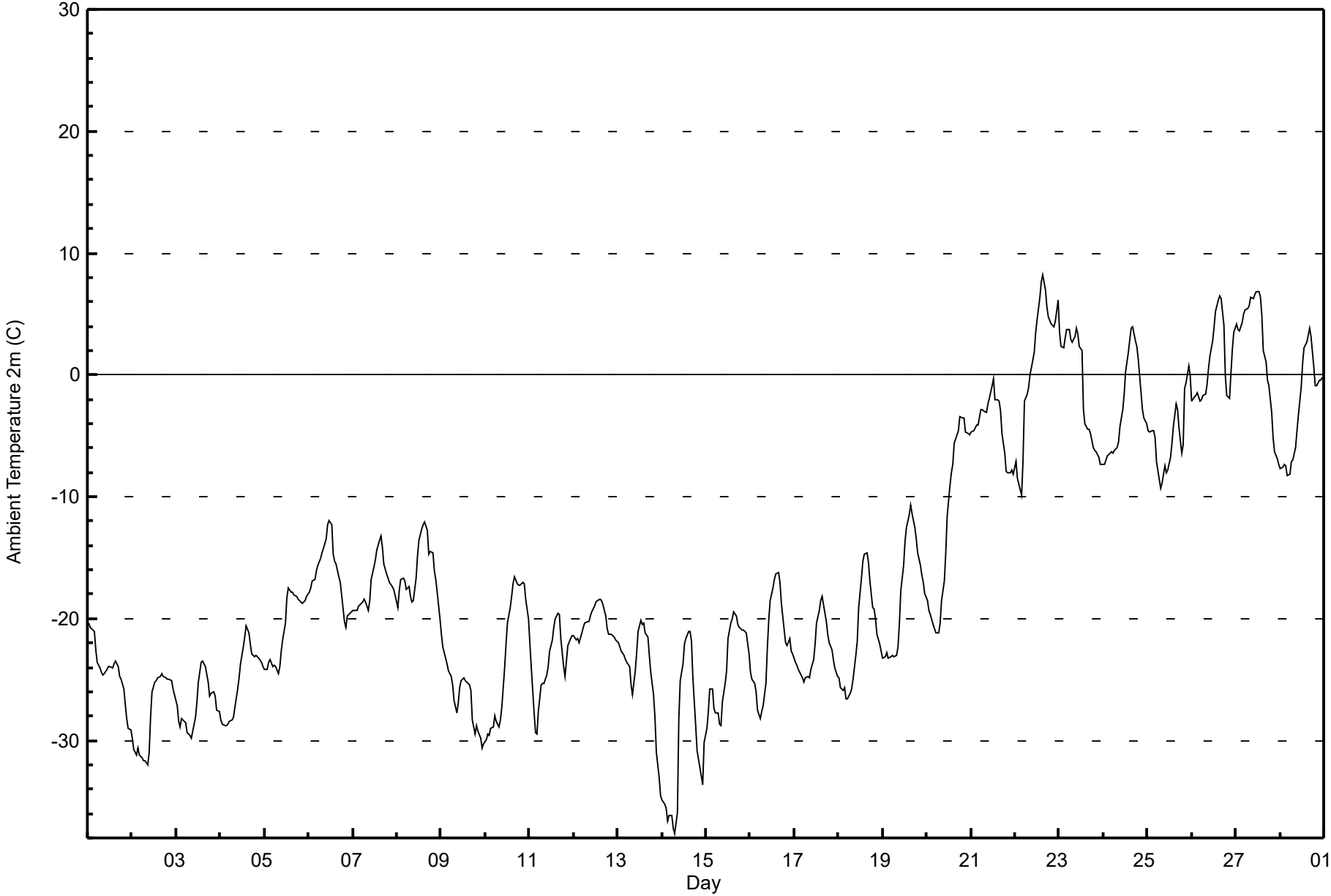
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	-20.4	-20.7	-20.8	-21.1	-22.5	-23.6	-24.0	-24.4	-24.7	-24.5	-24.1	-23.9	-23.9	-24.0	-23.7	-23.5	-24.0	-24.8	-24.9	-25.8	-27.0	-28.3	-29.0	-29.1	-24.3	-20.4
2-Feb	-29.8	-30.7	-31.2	-30.7	-31.2	-31.5	-31.6	-31.7	-32.0	-31.0	-28.1	-26.1	-25.3	-25.1	-24.9	-24.8	-24.5	-24.7	-24.8	-25.0	-24.9	-25.1	-25.8	-26.2	-27.8	-24.5
3-Feb	-27.2	-28.5	-28.9	-28.1	-28.4	-28.6	-29.4	-29.5	-29.8	-29.2	-28.1	-26.8	-25.2	-23.6	-23.5	-23.7	-23.9	-25.2	-26.3	-26.2	-26.0	-26.4	-27.5	-27.7	-27.0	-23.5
4-Feb	-28.3	-28.7	-28.8	-28.7	-28.7	-28.4	-28.4	-28.0	-27.2	-25.8	-24.9	-23.7	-22.3	-21.6	-20.6	-21.2	-22.1	-22.8	-23.1	-23.1	-23.1	-23.3	-23.6	-23.9	-25.0	-20.6
5-Feb	-24.2	-24.2	-23.6	-23.4	-23.9	-23.9	-23.9	-24.6	-24.0	-22.6	-21.8	-20.4	-18.3	-17.5	-17.8	-17.8	-18.1	-18.2	-18.4	-18.5	-18.8	-18.7	-18.5	-18.2	-20.8	-17.5
6-Feb	-17.9	-17.5	-16.9	-16.8	-16.1	-15.6	-15.0	-14.6	-14.2	-13.5	-12.3	-11.9	-12.3	-14.7	-15.3	-15.5	-16.6	-17.0	-18.0	-20.2	-20.7	-19.8	-19.6	-19.4	-16.3	-11.9
7-Feb	-19.4	-19.3	-19.3	-19.0	-18.9	-18.7	-18.4	-18.6	-19.3	-18.5	-16.8	-15.8	-15.1	-14.4	-13.5	-13.2	-14.1	-15.5	-16.3	-16.7	-17.0	-17.4	-17.6	-18.1	-17.1	-13.2
8-Feb	-19.1	-17.7	-16.8	-16.7	-16.9	-17.6	-17.4	-18.1	-18.7	-18.5	-16.7	-14.8	-13.5	-12.6	-12.3	-12.1	-12.7	-14.7	-14.5	-14.6	-16.1	-16.8	-17.8	-20.1	-16.1	-12.1
9-Feb	-21.3	-22.4	-23.2	-23.7	-24.2	-24.7	-25.5	-26.7	-27.8	-26.9	-25.6	-25.1	-24.8	-25.1	-25.2	-25.5	-25.9	-28.3	-29.5	-28.8	-29.2	-29.8	-30.6	-30.3	-26.3	-21.3
10-Feb	-29.9	-29.5	-29.6	-29.1	-28.9	-28.0	-28.5	-28.9	-28.3	-27.3	-24.1	-22.1	-20.3	-19.1	-18.2	-17.2	-16.6	-17.1	-17.2	-17.3	-17.0	-17.1	-18.4	-20.0	-22.9	-16.6
11-Feb	-22.1	-24.1	-27.7	-29.3	-29.4	-27.6	-25.4	-25.3	-25.3	-24.6	-23.9	-22.6	-21.8	-20.7	-20.0	-19.5	-19.7	-21.7	-24.0	-24.8	-23.5	-22.2	-21.6	-21.4	-23.7	-19.5
12-Feb	-21.3	-21.7	-21.6	-22.0	-21.2	-20.7	-20.4	-20.3	-20.3	-19.8	-19.5	-18.9	-18.6	-18.5	-18.4	-18.6	-18.9	-19.8	-20.8	-21.3	-21.3	-21.4	-21.6	-21.8	-20.4	-18.4
13-Feb	-22.0	-22.3	-22.7	-23.0	-23.3	-23.6	-23.9	-25.5	-26.2	-24.3	-22.8	-21.1	-20.2	-20.5	-20.4	-21.2	-21.6	-23.0	-24.4	-26.2	-28.1	-31.0	-33.1	-34.6	-24.4	-20.2
14-Feb	-34.9	-35.2	-35.5	-36.6	-36.1	-36.2	-37.2	-37.7	-35.9	-28.2	-25.0	-23.7	-22.1	-21.6	-21.0	-21.1	-21.9	-24.8	-28.8	-30.8	-31.6	-32.9	-33.6	-30.1	-30.1	-21.0
15-Feb	-29.1	-27.6	-25.8	-25.7	-27.4	-27.7	-27.7	-28.7	-28.8	-26.8	-25.3	-24.3	-21.6	-20.4	-20.0	-19.4	-19.8	-20.4	-20.7	-20.9	-20.9	-21.0	-21.2	-22.9	-23.9	-19.4
16-Feb	-24.4	-25.0	-25.4	-26.0	-27.5	-28.2	-27.6	-27.1	-25.3	-22.4	-20.2	-18.5	-17.4	-16.7	-16.3	-16.2	-17.1	-18.7	-20.9	-22.0	-22.2	-21.7	-22.6	-22.9	-22.2	-16.2
17-Feb	-23.6	-23.8	-24.2	-24.4	-24.9	-25.2	-24.8	-24.8	-24.8	-24.2	-23.4	-22.1	-20.4	-19.3	-18.5	-18.1	-18.8	-20.2	-21.3	-22.0	-22.6	-23.4	-24.0	-24.8	-22.7	-18.1
18-Feb	-24.9	-25.7	-25.9	-25.6	-26.6	-26.5	-26.1	-25.8	-24.9	-23.0	-21.9	-19.1	-16.7	-15.3	-14.7	-14.6	-15.4	-16.9	-19.1	-19.3	-20.0	-21.2	-22.1	-22.7	-21.4	-14.6
19-Feb	-23.3	-23.2	-22.8	-23.2	-23.2	-23.0	-23.1	-23.0	-22.3	-20.4	-17.7	-15.7	-13.7	-12.6	-11.5	-10.7	-11.4	-12.5	-13.5	-14.6	-15.6	-16.4	-17.0	-18.0	-17.9	-10.7
20-Feb	-18.5	-19.4	-19.7	-20.5	-20.8	-21.2	-21.2	-20.4	-18.6	-16.9	-14.7	-11.6	-9.1	-8.1	-7.4	-5.6	-4.9	-4.5	-3.4	-3.6	-3.5	-4.6	-4.8	-5.0	-12.0	-3.4
21-Feb	-4.6	-4.5	-4.4	-4.1	-4.1	-2.9	-2.8	-3.0	-3.0	-2.4	-1.9	-0.9	-0.3	-2.0	-2.1	-2.2	-3.0	-4.8	-6.4	-8.0	-8.0	-8.1	-7.8	-8.2	-4.1	-0.3
22-Feb	-7.1	-8.5	-9.0	-9.9	-7.0	-2.2	-1.6	-1.0	0.0	0.6	1.9	3.5	4.6	6.4	7.6	8.2	7.0	5.6	4.7	4.2	4.1	3.9	4.4	6.1	1.1	8.2
23-Feb	3.5	2.4	2.2	3.1	3.7	3.7	2.9	2.7	3.1	3.9	3.4	2.4	2.0	-2.9	-4.0	-4.5	-4.4	-4.8	-5.9	-6.2	-6.4	-6.7	-7.3	-7.4	-0.9	3.9
24-Feb	-7.3	-7.0	-6.6	-6.5	-6.3	-6.5	-6.2	-5.9	-5.5	-4.3	-2.9	-1.6	0.3	1.9	3.0	3.9	4.0	2.8	2.4	1.3	-1.4	-2.8	-3.5	-4.0	-2.5	4.0
25-Feb	-4.6	-4.7	-4.6	-4.6	-5.2	-7.1	-8.6	-9.3	-8.8	-7.5	-8.0	-7.8	-6.8	-5.6	-4.2	-2.4	-2.8	-4.3	-6.4	-5.7	-1.1	-0.6	0.7	-0.1	-5.0	0.7
26-Feb	-2.1	-1.8	-1.6	-1.5	-2.2	-2.0	-1.7	-1.6	-0.7	0.5	1.5	2.8	4.0	5.2	6.2	6.5	6.2	4.0	-0.1	-1.7	-2.0	0.2	2.1	3.5	1.0	6.5
27-Feb	4.2	3.8	3.7	4.3	5.0	5.3	5.5	5.7	6.4	6.2	6.6	6.8	6.9	6.4	4.9	2.0	1.1	-0.4	-0.9	-3.1	-5.1	-6.3	-6.9	-7.3	2.3	6.9
28-Feb	-7.7	-7.5	-7.4	-7.4	-8.2	-8.1	-7.1	-7.0	-5.9	-4.5	-3.3	-1.0	0.9	2.2	2.7	3.3	3.9	3.2	0.6	-0.9	-0.9	-0.4	-0.4	-0.2	-2.6	3.9
	-18.1	-18.4	-18.5	-18.6	-18.7	-18.6	-18.5	-18.7	-18.3	-17.0	-15.7	-14.4	-13.3	-12.9	-12.5	-12.3	-12.7	-13.9	-15.1	-15.8	-16.1	-16.4	-16.7	-16.9	Diurnal Average	
	4.2	3.8	3.7	4.3	5.0	5.3	5.5	5.7	6.4	6.2	6.6	6.8	6.9	6.4	7.6	8.2	7.0	5.6	4.7	4.2	4.1	3.9	4.4	6.1	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Ambient Temperature 2m (AT2) - C

Hangingstone Expansion - February 2025



Concentration Ranges (C)	Number of Hours	%	Cumulative %
-50 - -20	321	47.77	47.77
-20 - 0	277	41.22	88.99
0 - 10	74	11.01	100.00
10 - 20	0	0.00	100.00
> 20	0	0.00	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Relative Humidity 2m (RH2) - %

Hangingstone Expansion - February 2025

Maximum Value: 97.1 % on Feb 25 02:00

Maximum Daily Average: 88.9 % on Feb 23

Minimum Value: 28.0 % on Feb 19 16:00

Minimum Daily Average: 44.6 % on Feb 19

Maximum Diurnal Average: 77.1 % at hour 2

Minimum Diurnal Average: 63.7 % at hour 16

Monthly Average: 72.90 %

Percentiles: P_1 = 34.0 P_{10} = 56.2 Q_1 = 67.8 Median = 75.2 Q_3 = 79.6 P_{90} = 87.8 P_{99} = 95.0

Hours in Service:	672
Hours of Data:	672
Hours of Missing Data:	0
Hours of Calibration:	0
Percent Operational Time:	100.0

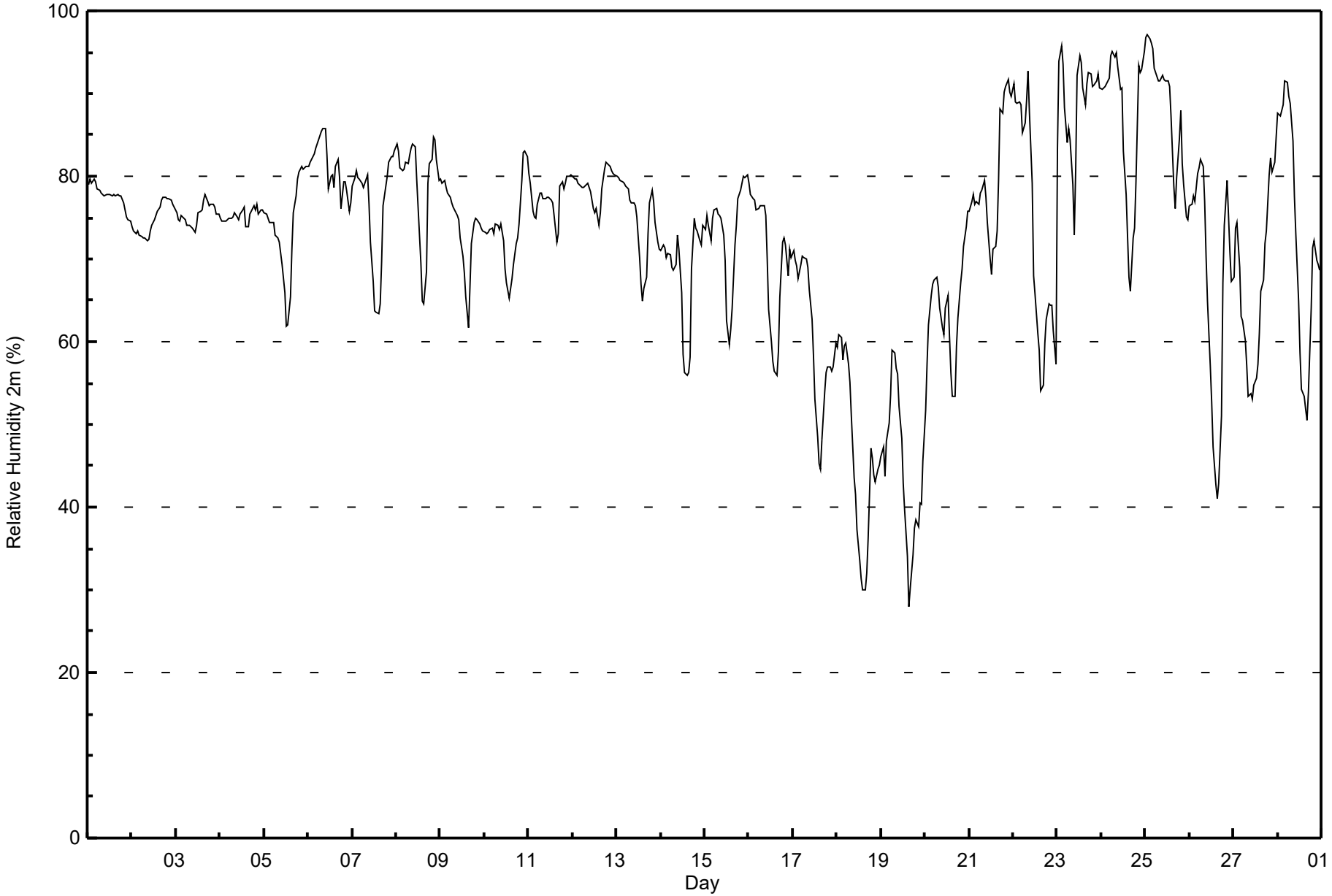
Day	Hourly Period Ending At (MST)																								Daily	Daily
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Average	Maximum
1-Feb	79.0	79.6	79.2	79.7	79.2	78.6	78.3	77.9	77.7	77.7	77.8	77.8	77.9	77.7	77.7	77.7	77.9	77.6	77.6	76.7	75.9	75.0	74.7	74.5	77.6	79.7
2-Feb	74.0	73.4	73.1	73.4	72.9	72.7	72.5	72.5	72.2	72.4	73.4	74.1	74.7	75.3	75.7	76.3	77.1	77.4	77.4	77.3	77.4	77.2	76.6	76.3	74.8	77.4
3-Feb	75.6	74.8	74.6	75.2	74.9	74.8	74.1	74.1	73.8	73.7	73.2	74.0	75.5	75.7	75.9	77.2	77.8	77.0	76.4	76.6	76.6	76.4	75.4	75.4	75.4	77.8
4-Feb	75.0	74.6	74.6	74.6	74.7	74.9	74.9	75.1	75.5	75.1	74.7	75.4	76.0	76.3	73.9	73.9	75.4	75.8	76.4	75.9	76.6	75.5	76.0	76.0	75.3	76.6
5-Feb	75.5	75.5	74.9	74.5	74.4	74.3	72.9	72.6	72.0	70.7	69.4	66.0	61.9	62.1	65.4	71.3	75.6	77.6	79.7	80.5	81.2	80.9	81.1	81.2	73.8	81.2
6-Feb	81.1	81.8	82.0	82.7	83.5	83.8	84.9	85.5	85.8	85.8	82.5	78.5	80.1	80.2	78.6	81.1	82.1	79.8	76.1	79.3	79.4	78.3	75.8	76.7	81.1	85.8
7-Feb	78.9	79.8	80.7	79.9	79.6	79.2	78.7	79.1	80.2	76.7	72.1	67.2	63.8	63.5	63.4	64.6	69.7	76.5	78.9	80.1	81.7	82.4	82.4	83.0	75.9	83.0
8-Feb	84.0	83.1	81.1	80.7	80.8	81.7	81.5	82.5	83.4	84.0	83.5	79.7	76.2	69.5	65.0	64.6	68.5	79.1	81.6	82.1	84.7	84.3	82.1	79.6	79.3	84.7
9-Feb	79.7	79.1	79.6	78.6	78.0	77.5	76.8	76.3	75.5	75.2	74.7	72.6	70.4	68.4	65.4	61.7	66.6	71.9	74.5	75.0	74.7	74.3	73.7	73.3	73.9	79.7
10-Feb	73.3	73.0	73.3	73.6	73.7	73.0	74.3	74.1	73.6	74.2	72.3	68.8	67.1	65.3	66.4	67.7	69.3	71.8	72.5	74.3	79.5	82.9	83.1	82.4	73.3	83.1
11-Feb	80.4	79.1	75.7	75.0	74.9	76.6	77.9	78.0	77.3	77.3	77.5	77.5	77.1	76.8	75.3	72.0	73.1	78.8	79.4	78.5	79.1	80.0	80.0	80.1	77.4	80.4
12-Feb	80.1	79.7	79.6	79.1	78.8	78.7	78.6	79.0	79.1	78.7	78.1	76.1	75.6	76.2	74.1	75.6	78.5	80.9	81.7	81.5	81.2	80.8	80.4	80.1	78.8	81.7
13-Feb	80.0	79.8	79.5	79.3	79.1	78.9	78.4	77.2	76.9	76.8	76.5	75.1	70.2	67.0	65.0	66.5	67.8	73.0	76.8	78.4	77.0	74.3	72.1	71.2	74.9	80.0
14-Feb	70.9	71.6	71.3	70.1	70.7	70.5	69.1	68.7	69.3	72.8	71.2	66.0	58.5	56.3	55.9	56.3	58.2	68.7	75.0	73.7	73.5	72.3	71.7	74.1	68.2	75.0
15-Feb	73.6	75.2	74.0	72.2	75.0	76.0	76.1	75.5	75.2	74.9	72.9	69.8	62.5	59.7	61.5	64.1	71.7	74.0	77.3	78.3	79.2	79.9	79.8	80.2	73.3	80.2
16-Feb	79.2	77.9	77.3	77.0	75.9	76.1	76.5	76.4	76.5	75.2	70.0	64.0	60.1	57.6	56.5	55.9	58.9	65.5	72.0	72.5	71.7	68.0	71.1	70.2	70.1	79.2
17-Feb	71.1	69.9	69.1	67.6	69.3	70.4	70.1	70.0	69.0	66.3	62.7	58.3	53.0	48.5	45.2	44.5	48.2	53.9	56.2	56.9	57.0	56.4	57.0	59.8	60.4	71.1
18-Feb	59.3	60.9	60.5	57.8	59.5	59.9	57.2	55.1	51.0	43.5	41.5	37.3	33.5	31.3	30.0	30.0	32.1	36.4	47.1	45.9	43.9	43.1	44.6	45.1	46.1	60.9
19-Feb	46.1	47.3	43.7	48.0	50.2	53.6	59.1	58.6	56.8	56.2	52.2	48.3	43.0	39.6	34.1	28.0	30.1	34.3	37.5	38.5	37.6	40.4	40.4	45.6	44.6	59.1
20-Feb	51.6	57.3	62.0	65.5	67.0	67.4	67.8	66.6	64.1	61.7	60.8	64.0	65.7	60.6	56.3	53.4	53.4	59.5	62.9	67.2	68.8	71.6	73.8	75.7	63.5	75.7
21-Feb	75.7	76.9	77.7	76.6	76.9	76.5	77.9	78.3	79.5	77.4	74.3	70.0	68.1	71.2	71.5	73.4	79.6	88.1	87.6	90.2	90.9	91.7	90.2	89.6	79.6	91.7
22-Feb	91.3	88.9	88.7	89.0	88.7	85.3	86.4	89.2	92.7	87.8	79.2	68.0	65.7	60.9	59.1	54.0	54.7	59.9	62.7	64.6	64.5	64.4	61.4	57.2	73.5	92.7
23-Feb	83.2	94.0	95.8	93.6	88.4	84.2	85.8	84.4	79.1	72.8	80.6	92.3	94.6	93.8	90.6	88.7	91.2	92.6	92.4	90.9	91.0	91.5	92.3	90.7	88.9	95.8
24-Feb	90.5	90.7	90.8	91.2	91.9	94.6	95.1	94.4	95.0	93.2	90.5	90.6	83.0	77.8	72.6	67.8	66.1	72.6	73.7	79.4	93.5	92.5	93.0	95.0	86.5	95.1
25-Feb	96.8	97.1	96.6	96.1	95.4	93.1	92.1	91.5	91.6	92.2	91.6	91.5	91.6	90.8	87.3	78.9	76.2	79.8	84.6	88.1	81.5	79.1	75.1	74.7	88.0	97.1
26-Feb	76.4	76.7	77.6	76.9	80.3	81.0	82.0	81.2	76.9	70.3	64.9	57.1	52.7	47.3	42.8	41.1	42.8	51.1	67.1	74.0	79.5	75.2	70.8	67.3	67.2	82.0
27-Feb	67.8	73.8	74.3	69.0	63.0	62.5	60.1	57.1	53.4	53.7	53.1	54.7	55.6	57.2	61.1	66.1	67.4	71.9	73.5	80.1	82.2	80.6	81.7	84.7	66.9	84.7
28-Feb	87.6	87.4	88.0	88.7	91.5	91.3	89.6	88.8	84.3	77.6	73.1	64.9	58.6	54.3	53.4	51.9	50.5	53.9	64.0	71.4	72.2	69.8	69.3	68.6	72.9	91.5
	76.3	77.1	77.0	76.6	76.7	76.7	76.7	76.4	75.6	74.1	72.3	70.0	67.6	65.8	64.3	63.7	65.7	70.0	72.9	74.6	75.4	75.0	74.5	74.6	Diurnal Average	
	96.8	97.1	96.6	96.1	95.4	94.6	95.1	94.4	95.0	93.2	91.6	92.3	94.6	93.8	90.6	88.7	91.2	92.6	92.4	90.9	93.5	92.5	93.0	95.0	Diurnal Maximum	

Wood Buffalo Environmental Association

Hourly Averages

Relative Humidity 2m (RH2) - %

Hangingstone Expansion - February 2025



Concentration Ranges (%)	Number of Hours	%	Cumulative %
0 - 20	0	0.00	0.00
20 - 40	15	2.23	2.23
40 - 60	85	12.65	14.88
60 - 80	422	62.80	77.68
80 - 100	150	22.32	100.00

Total Number of Valid Hours: 672

Total Number of Hours: 672

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Speed 10m (WS10) - km/h

Hangingstone Expansion - February 2025

Maximum Speed: 28 km/h on Feb 27 14:00

Maximum Daily Speed Average: 19.9 km/h on Feb 19

Minimum Speed Value: 0 km/h on Feb 12 04:00

Minimum Daily Speed Average: 1.2 km/h on Feb 21

Maximum Diurnal Speed Average: 6.4 km/h at hour 9

Minimum Diurnal Speed Average: 2.1 km/h at hour 18

Monthly Average Velocity: 4.1 km/h 227.8 deg

Percentiles: P_1 = 2 P_{10} = 4 Q_1 = 6 Median = 9 Q_3 = 12 P_{90} = 15 P_{99} = 23

Hours in Service: 672

Hours of Data: 632

Hours of Missing Data: 40

Percent Operational Time: 94.1

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-Feb	ENE9	ENE10	ENE10	NE8	NNE11	N10	N9	N8	N8	NNW8	NW9	NW11	NW11	NW13	NNW12	NNW12	NNW10	NNW7	WNW9	WNW11	WNW10	WNW7	WNW8	WNW7	NNW7.1	NW13
2-Feb	WNW6	W6	W6	NW6	W6	WSW6	WSW6	WSW6	WSW5	W5	NNW7	N12	NNW12	NNW13	NNW13	NNW14	NNW11	NW9	NW6	NW6	NNW8	NNW7	NNE6	N4	NW6.4	NNW14
3-Feb	NW2	WNW3	WSW4	WSW6	WSW6	SW6	SW5	SW6	SW7	WSW9	WSW8	WSW8	WSW8	W10	W10	W8	WSW7	SW4	SSW6	SW9	SW10	SW8	SSW7	SW7	WSW6.5	SW10
4-Feb	SSW7	SSW8	SSW8	SSW8	SSW7	SW8	SW8	SW8	SW9	SW9	WSW10	WSW12	WSW11	SW12	SW13	WSW11	SW9	SW11	SSW11	SW12	SW12	SW14	SW12	SW12	SW9.7	SW14
5-Feb	SW12	SW12	WSW13	WSW14	WSW13	SW12	SW12	SW12	SW12	SW12	SW12	WSW13	WSW14	WSW15	WSW13	WSW13	WSW12	WSW14	WSW12	WSW11	WSW11	WSW12	WSW10	WSW11	WSW12.2	WSW15
6-Feb	WSW12	WSW11	WSW12	SW11	WSW12	WSW13	WSW12	WSW11	WSW9	WSW10	WNW13	NW18	NW16	NNE15	N12	N11	N13	NNW11	NNW12	NW6	W6	WNW7	NW7	WNW5	WNW7.5	NW18
7-Feb	W5	WSW6	WSW7	WSW6	SW9	WSW10	SW9	WSW9	SSW8	SW9	WSW9	WSW9	W10	W10	WSW9	WSW9	SW10	WSW6	WSW10	WSW11	SW11	SW11	SW11	SW10	WSW8.6	SW11
8-Feb	SW8	SW9	WSW10	WSW9	WSW11	WSW10	WSW9	WSW9	SW8	SW8	WSW8	WSW8	WSW8	W9	WNW9	WNW7	W5	WSW5	WSW5	W5	NW5	N7	N15	N17	W6.0	N17
9-Feb	N14	N9	NNW6	N7	NW8	WNW13	NW12	WNW8	WNW5	NW5	NNE4	N7	NNE10	N10	N11	N11	N8	NNW4	W6	W7	W7	W7	WSW7	WSW8	NW6.3	N14
10-Feb	WSW10	WSW10	SW10	SW10	SW11	WSW13	SW11	SW11	SW11	SW12	WSW12	WSW13	WSW12	WSW13	WSW12	WSW13	WSW12	WSW11	WSW12	W10	WNW11	NW11	N9	N8	WSW9.4	WSW13
11-Feb	N5	N5	NNW3	NNE3	N3	NW4	N4	N6	NNE4	N3	NW3	NNW3	NNW4	WNW5	WNW4	NW5	NW5	WNW3	SSW2	SE5	S5	SW4	S3	SSW3	NNW2.0	N6
12-Feb	SSW3	SSE3	SSW4	SE0	SSW4	SSW4	SW3	SW2	ESE3	ESE2	N5	NNE5	NNE6	NNE8	NE9	NNE9	NNE9	N8	N8	N7	N6	N7	NNE5	NNE5	NNE3.0	NNE9
13-Feb	NNE7	NNE6	NNE6	NE6	NE6	NE5	NE4	NE4	ENE4	ENE2	NE5	NE6	NE6	N9	NNE9	NNE8	NE9	NNE6	NNE6	ENE5	ENE5	ESE4	ESE2	ESE4	NE5.0	N9
14-Feb	ESE5	E6	E5	E5	ESE6	ESE5	E4	ESE3	SE4	E2	NE3	N3	NNE5	N8	N7	N6	N6	NNE3	SE2	S7	SSE8	S8	S9	SSW8	ESE2.2	S9
15-Feb	SSW7	SW6	SW7	WSW8	SW6	SW6	WSW7	SSW6	SW6	WSW9	WNW9	WNW8	NW9	WNW10	NW11	NW10	NNW11	NNW7	NW4	NW4	NW3	NW3	NNW5	N4	W5.0	NW11
16-Feb	NE3	ENE2	SE7	SE6	SSE6	SSE7	SSE8	SSE7	SSE7	S8	S9	S8	S8	S9	S10	SSE10	SSE11	SSE8	SSE8	SE6	SE4	S9	S9	S11	SSE7.0	S11
17-Feb	S13	S14	S13	S12	S17	SSE17	SSE22	SSE21	SSE19	SSE14	SSE15	S15	SSE13	SSE16	SSE17	SSE18	SSE14	SE9	SE10	SE12	SSE15	SSE14	SSE12	SSE11	SSE14.5	SSE22
18-Feb	S12	SSE14	S15	S13	S8	S11	S11	S18	S17	S16	S15	S12	S12	S14	S15	S16	S14	S10	SSE9	SSE18	SSE24	SSE20	SSE19	SSE21	S14.5	SSE24
19-Feb	S19	S21	S23	S22	S24	S23	S21	S23	S23	S26	S23	S21	S18	SSE20	SSE20	SSE20	SSE19	SSE16	SSE19	SSE21	S18	S13	S14	S15	S19.9	S26
20-Feb	S17	SSW14	SSW13	SSW12	SSW12	S13	SSW12	SSW10	SSW10	SSW11	SSW11	SW10	WSW13	WSW16	WSW16	WSW14	SW11	SW13	WSW16	WSW14	WSW14	SW10	SW10	SW10	SW11.6	SSW17
21-Feb	SSW9	SSW7	S6	SSE5	SSE5	SW3	WSW4	SW4	WSW2	WSW4	WNW5	WNW4	NW6	N8	N6	NNE6	NNE8	NE10	ENE7	ENE8	NE6	NE6	NE5	NE4	NNE1.2	NE10
22-Feb	SE3	N5	NNE4	NNW3	SSE6	SSE11	SSE13	S14	S14	SSE15	S16	SSW15	SSW10	WSW10	SW10	WSW13	SW9	SSW9	SSW11	SSW12	S13	S13	SSW14	SSW11	SSW8.6	S16
23-Feb	SSW10	S8	S9	SSW11	SSW14	WSW17	SW13	SW13	SW16	WSW18	W19	W17	WNW19	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	----	WNW19
24-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	SW7	W8	W10	W8	W8	WSW4	SW3	SW1	N6	NNE7	NNE7	UO	----	W10
25-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	N7	NNE6	ENE6	SE7	S12	S13	SSW10	W12	----	S13
26-Feb	W9	W9	WSW9	W10	WSW11	WSW11	SW10	SW11	SW11	WSW12	WNW12	NW12	WNW11	WNW10	W10	W9	W6	NNW3	NE5	ENE4	S5	S7	SSW8	SSW10	WSW6.9	NW12
27-Feb	WSW10	SW8	S8	S11	S13	S13	S11	SSW11	SW12	WSW14	W15	WNW24	WNW26	NW28	NW23	NNW16	NNW14	N10	NW9	NNE11	NE11	NNE11	NNE9	NNE8	WNW6.2	NW28
28-Feb	NE5	ENE4	NE5	ENE3	N4	SSE4	SE1	NE3	ENE4	ENE7	SSE3	SW7	W7	W6	WNW8	WNW8	W9	WSW4	S5	S9	S7	S9	S10	S9	SSW1.5	S10
	SSW3.8	SSW3.8	SSW4.6	SSW4.5	SSW5.6	SW6.3	SSW6.0	SSW6.4	SSW6.4	SW6.3	WSW5.8	WSW5.7	W5.7	W5.3	W5.0	W4.3	W2.9	W2.1	SW2.6	SSW3.2	SSW3.8	SSW3.8	SSW3.1	SW3.8	Diurnal Average	
	S19	S21	S23	S22	S24	S23	SSE22	S23	S23	S26	S23	WNW24	WNW26	NW28	NW23	SSE20	SSE19	SSE16	SSE19	SSE21	SSE24	SSE20	SSE19	SSE21	Diurnal Maximum	

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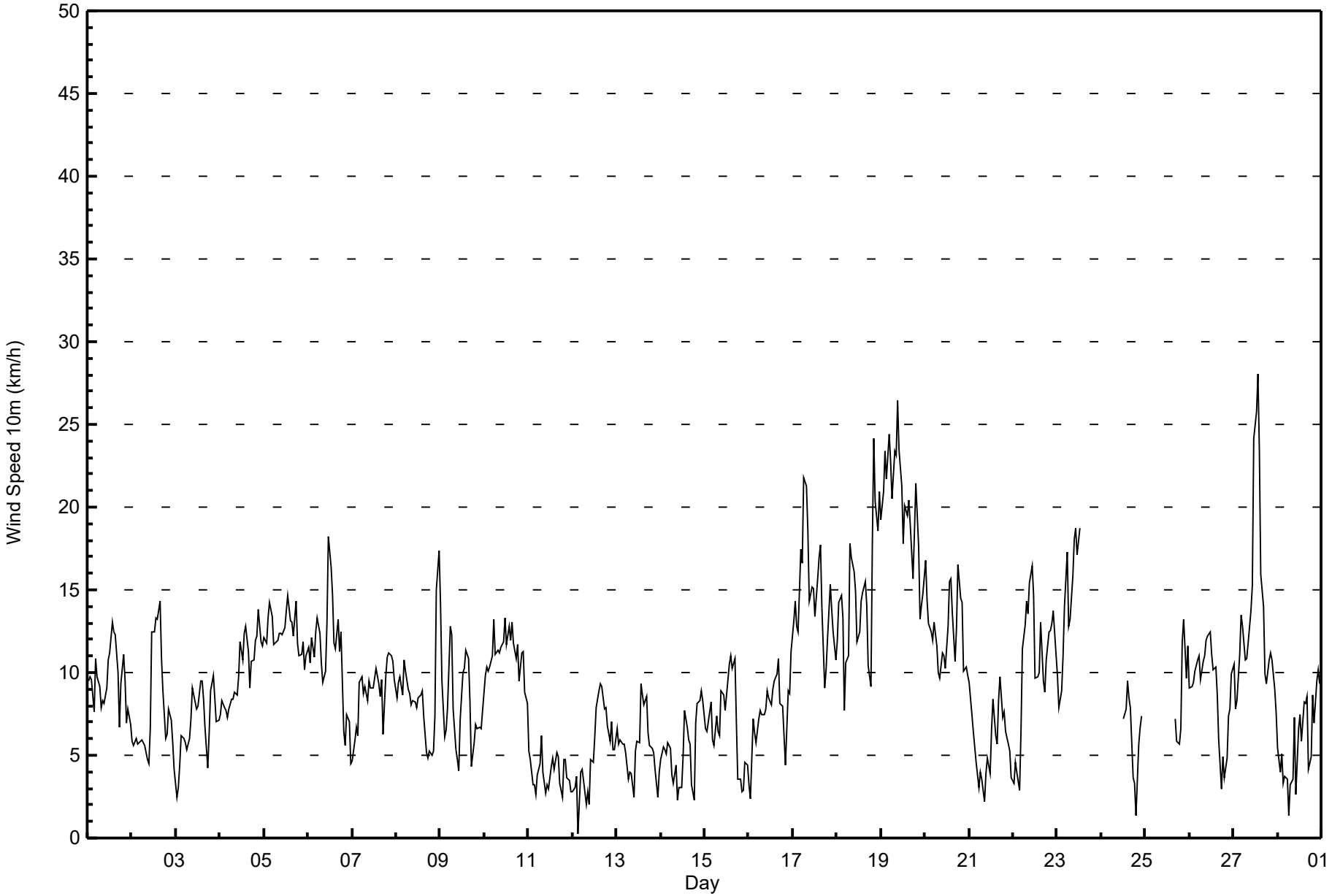
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Speed 10m (WS10) - km/h

Hangingstone Expansion - February 2025



Wind Speed Ranges (km/h)	Number of Hours	%	Cumulative %
0 - 5	123	19.46	19.46
6 - 11	330	52.22	71.68
12 - 19	155	24.53	96.20
20 - 28	24	3.80	100.00
29 - 38	0	0.00	100.00
> 38	0	0.00	100.00

Total Number of Valid Hours: 632

Total Number of Hours: 672

Wood Buffalo Environmental Association

Frequency Distribution

Wind Speed 10m (WS10) - km/h

Hangingstone Expansion - February 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	9	12	9	4	8	7	5	4	6	9	9	4	8	11	7	123
6 - 11	31	23	11	7	1	2	5	14	28	28	50	57	27	20	15	11	330
12 - 19	6	1	0	0	0	0	1	20	34	11	21	39	4	4	5	9	155
20 - 28	0	0	0	0	0	0	0	9	11	0	0	0	0	2	2	0	24
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	33	23	16	5	10	13	48	77	45	80	105	35	34	33	27	632

Total Number of Valid Hours: 632

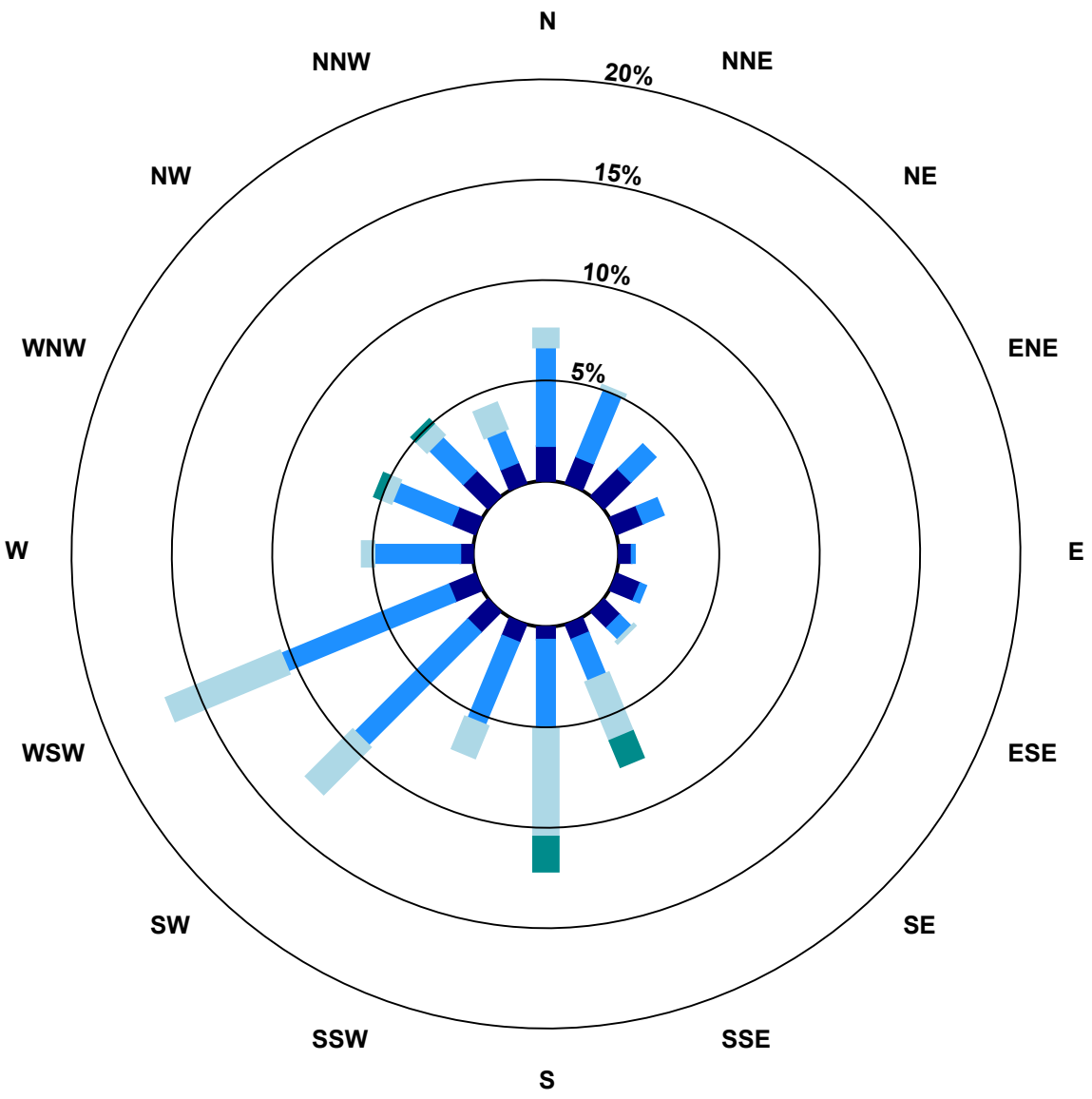
Total Number of Hours: 672

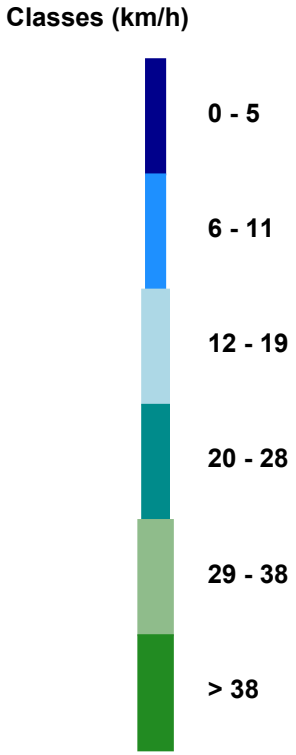
Wood Buffalo Environmental Association

Wind Rose Feb 2025

Wind Speed 10m (WS10) - km/h

Hangingstone Expansion





Total Number of Valid Hours: 632

Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Speed 10m (WS10) - km/h

Hangingstone Expansion - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 7 km/h on Feb 19 10:00

Minimum Value: 0 km/h on Feb 14 03:00

Percentiles: $P_1 = 0$ $P_{10} = 1$ $Q_1 = 1$ Median = 3 $Q_3 = 3$ $P_{90} = 4$ $P_{99} = 7$

Hours in Service:	672
Hours of Data:	632
Hours of Missing Data:	40
Hours of Calibration:	0
Percent Operational Time:	94.1

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

UO - Unstable Operation

Wood Buffalo Environmental Association

Summary of Hour Averages

Wind Direction 10m (WD10) - deg

Hangingstone Expansion - February 2025

Direction of Maximum Speed: 308 deg on Feb 27 14:00
Direction of Maximum Daily Speed Average: 172.4 deg on Feb 19

Direction of Minimum Speed: 145 deg on Feb 12 04:00

Direction of Minimum Daily Speed Average: 1.2 deg on Feb 21

Monthly Average Direction: 227.8 deg

Hours in Service:	672
Hours of Data:	632
Hours of Missing Data:	40
Percent Operational Time:	94.1

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-Feb	72	60	64	53	23	5	2	1	351	346	314	323	314	314	327	330	329	329	296	291	294	286	296	301	337.5
2-Feb	286	279	274	314	277	249	251	256	257	264	341	357	345	335	346	329	327	326	313	320	327	334	18	8	319.6
3-Feb	323	298	251	252	239	229	219	222	224	239	248	251	251	261	264	259	253	230	210	219	231	229	213	214	239.7
4-Feb	207	204	205	206	210	215	214	215	218	229	252	249	242	234	235	247	233	214	213	217	218	221	220	217	223.4
5-Feb	219	224	239	243	238	235	234	224	222	227	234	237	250	251	246	243	242	250	251	253	249	247	250	247	240.0
6-Feb	248	248	244	231	240	243	248	251	250	257	296	307	323	13	9	358	6	347	345	321	277	291	319	287	293.7
7-Feb	270	254	251	240	235	241	231	245	213	215	253	257	271	267	247	237	219	249	240	237	235	236	236	227	240.9
8-Feb	214	233	244	241	243	246	240	250	227	229	252	255	247	269	286	286	277	240	246	271	307	357	2	8	264.7
9-Feb	359	352	333	352	322	297	306	297	288	326	21	7	18	6	356	352	352	329	274	267	270	272	252	250	325.7
10-Feb	245	241	231	232	235	243	226	223	218	230	242	249	244	248	237	247	247	244	242	261	289	324	2	7	247.9
11-Feb	3	354	346	22	355	322	352	10	18	9	310	338	328	297	297	312	325	301	205	145	187	218	186	200	327.2
12-Feb	197	157	193	145	192	208	230	217	110	121	3	30	13	15	39	25	17	0	353	355	358	11	18	15	14.7
13-Feb	25	28	29	36	34	41	53	45	67	60	44	51	43	10	13	24	40	28	24	62	71	119	105	107	40.9
14-Feb	105	83	95	82	112	108	94	117	137	93	34	11	16	6	358	7	11	26	126	169	158	182	189	201	101.7
15-Feb	208	219	228	243	226	232	251	212	220	252	285	295	304	300	304	320	328	329	320	316	318	310	333	351	279.5
16-Feb	47	70	124	140	162	155	155	167	165	178	181	176	178	170	169	161	154	162	150	134	136	176	181	184	161.9
17-Feb	175	169	178	180	170	163	163	163	158	162	162	171	160	154	159	151	149	142	137	139	160	161	155	167	160.9
18-Feb	169	162	176	176	186	180	174	181	182	178	182	179	178	178	184	186	182	176	153	155	158	163	164	167	172.8
19-Feb	169	173	175	177	177	177	174	179	184	176	176	178	178	165	165	164	158	156	156	158	169	179	181	190	172.4
20-Feb	191	194	197	203	196	186	198	202	208	206	208	220	243	255	252	250	227	227	243	251	246	220	221	214	220.3
21-Feb	209	194	181	166	152	225	244	224	251	252	291	290	325	9	3	17	19	39	60	57	49	42	50	44	23.2
22-Feb	125	8	19	339	151	162	165	171	170	168	189	202	212	243	234	244	233	201	195	192	187	190	193	207	193.4
23-Feb	196	171	170	198	209	241	233	229	235	249	261	275	293	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	--
24-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	214	264	268	274	264	251	216	227	6	15	22	UO	--
25-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	9	24	76	134	174	177	207	266	--
26-Feb	278	261	254	264	247	247	224	222	234	258	282	313	297	282	276	267	264	332	54	78	173	189	203	213	256.1
27-Feb	242	222	175	172	191	191	190	211	231	252	268	293	299	308	312	345	339	358	322	18	36	26	32	26	292.1
28-Feb	36	67	55	65	358	150	128	54	60	58	151	224	264	279	293	285	269	257	181	173	171	170	175	174	196.9
	209.3	204.9	203.1	207.8	209.7	214.2	210.4	207.8	206.9	217.0	239.5	258.6	271.5	278.7	275.0	275.7	276.3	262.4	227.7	205.3	208.0	210.2	208.4	215.8	
	Diurnal Average																								

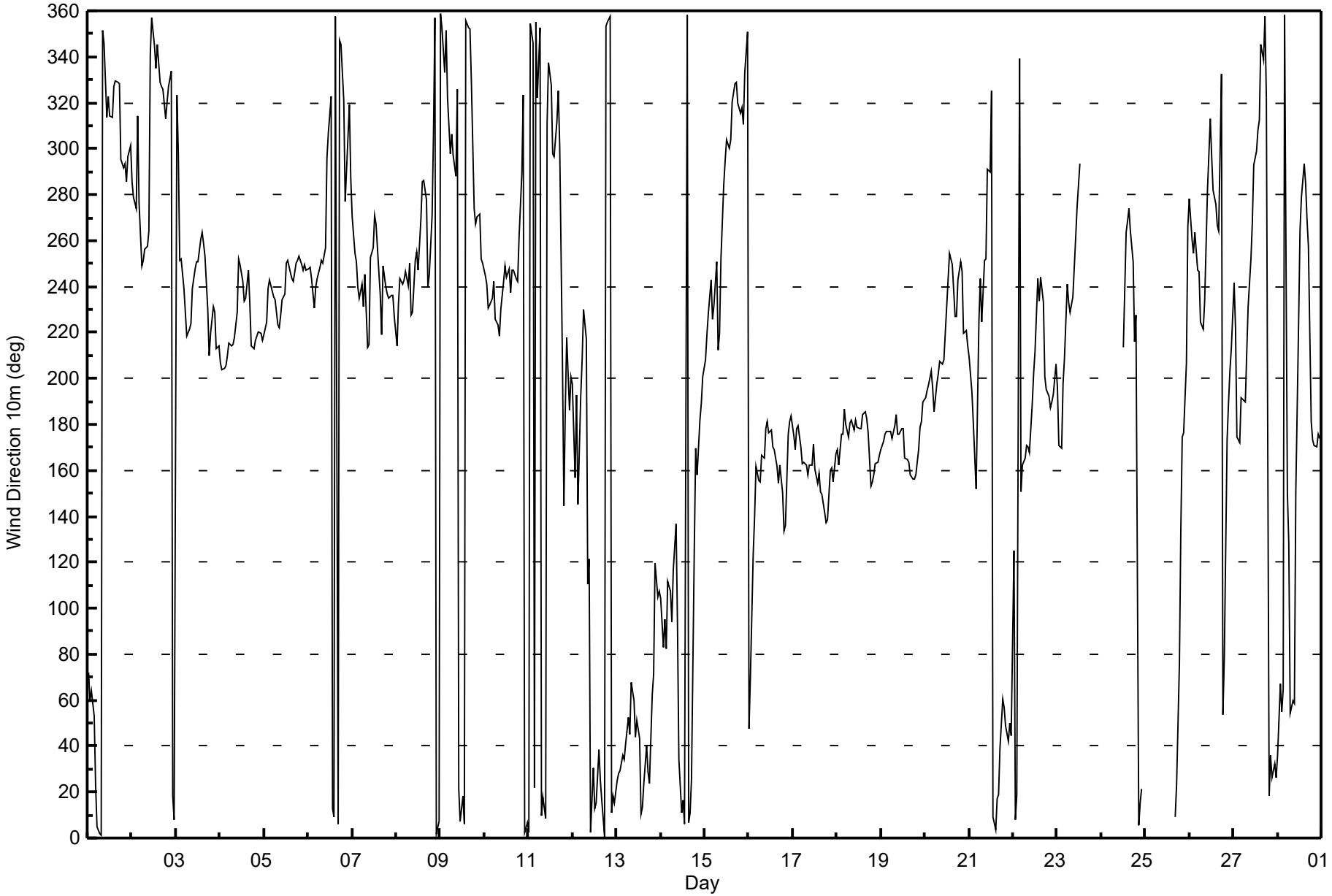
UO - Unstable Operation
All monthly, daily, and diurnal averages have been calculated using vector methods

Wood Buffalo Environmental Association

Hourly Averages

Wind Direction 10m (WD10) - deg

Hangingstone Expansion - February 2025



Wood Buffalo Environmental Association

Summary of Hour Standard Deviations

Wind Direction 10m (WD10) - deg

Hangingstone Expansion - February 2025

Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0
Maximum Value: 100 deg on Feb 12 04:00

Minimum Value: 5 deg on Feb 14 22:00

Percentiles: P_1 = 8 P_{10} = 13 Q_1 = 16 Median = 21 Q_3 = 25 P_{90} = 29 P_{99} = 70

Hours in Service:	672
Hours of Data:	632
Hours of Missing Data:	40
Hours of Calibration:	0
Percent Operational Time:	94.1

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-Feb	16	13	15	13	13	16	14	15	16	20	16	17	13	15	15	15	12	13	13	15	13	15	13	14	20
2-Feb	11	13	16	20	15	13	13	16	16	20	25	20	20	18	19	14	15	11	12	12	11	18	13	19	25
3-Feb	18	16	12	18	20	20	22	21	24	24	23	20	21	23	23	21	25	29	21	21	25	27	21	21	29
4-Feb	19	17	18	18	21	25	22	22	24	26	27	24	26	28	26	25	27	23	21	22	26	23	24	25	28
5-Feb	24	25	26	25	26	25	25	24	25	25	27	27	24	22	24	24	25	22	22	22	21	23	23	23	27
6-Feb	22	23	22	27	22	25	24	25	23	23	16	14	23	17	17	15	16	18	15	25	14	18	14	22	27
7-Feb	22	20	23	27	24	23	27	26	21	23	24	26	23	26	26	27	27	24	25	26	25	24	24	25	27
8-Feb	22	26	26	25	25	22	24	20	25	26	22	25	29	27	21	21	17	25	18	32	38	18	18	16	38
9-Feb	17	15	13	19	15	13	14	13	16	22	30	19	22	22	21	17	15	13	11	12	13	15	17	19	30
10-Feb	20	25	29	25	27	25	26	23	23	25	24	23	25	24	26	23	24	25	25	22	18	19	13	14	29
11-Feb	14	19	13	21	43	25	20	16	18	32	33	37	29	26	36	26	21	19	55	31	15	23	17	24	55
12-Feb	33	45	24	100	35	27	40	70	54	70	26	23	19	21	16	14	15	16	15	14	15	14	12	12	100
13-Feb	12	11	10	11	14	16	18	23	13	22	17	21	33	19	25	20	12	9	10	10	11	21	25	13	33
14-Feb	18	10	10	5	10	7	17	10	10	29	34	33	32	20	23	19	13	15	37	15	10	5	7	8	37
15-Feb	9	16	20	21	19	28	19	19	23	24	24	17	26	21	18	20	14	11	11	15	14	15	16	24	28
16-Feb	30	41	12	5	14	7	13	6	9	15	18	26	30	24	24	19	12	10	16	38	62	30	17	18	62
17-Feb	15	14	18	20	15	15	14	13	13	14	15	17	16	17	16	15	15	13	13	13	14	13	14	14	20
18-Feb	14	12	15	49	22	26	20	16	15	15	17	20	19	20	21	20	18	16	14	15	13	15	16	16	49
19-Feb	17	17	16	16	16	16	18	18	17	17	19	20	22	18	16	17	14	14	13	14	18	32	24	21	32
20-Feb	21	22	21	22	21	18	20	21	23	22	23	28	29	24	23	23	27	24	24	22	23	24	23	21	29
21-Feb	21	17	15	18	23	38	19	21	68	48	35	53	29	19	20	22	16	16	21	13	30	22	28	40	68
22-Feb	71	22	28	58	72	14	14	17	16	16	18	21	25	27	29	26	26	19	15	16	15	17	17	27	72
23-Feb	19	20	13	23	23	25	27	25	26	24	22	21	19	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	27
24-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	32	29	24	26	21	30	54	88	14	16	14	UO	88
25-Feb	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	UO	18	15	30	18	15	14	28	25	30
26-Feb	25	22	22	22	25	25	25	27	27	26	22	18	22	24	26	27	23	71	29	30	30	16	18	24	71
27-Feb	24	25	19	14	17	18	18	25	28	24	23	17	16	14	20	19	21	16	16	26	16	17	16	16	28
28-Feb	28	38	21	34	33	32	69	24	41	17	62	37	36	54	30	27	21	36	17	11	10	9	10	10	69
	71	45	29	100	72	38	69	70	68	70	62	53	36	54	36	27	27	71	55	88	62	32	28	40	
	Diurnal Maximum																								

UO - Unstable Operation

ELECTRONIC TRANSFER SYSTEM
AIRDATA
SUBMISSION REPORT

June 02, 2025
12:11:49 PM
Request # 4810717

Submitted by: EN6138_DENNY
Submission Date: Jun 02, 2025 12:11:39 PM

File Type	File Name
Airshed Monitoring Report	WBEA-202502-R01.pdf

Total Number of Files: 1

*** End of Report ***

ELECTRONIC TRANSFER SYSTEM
AIRDATA
SUBMISSION REPORT

June 02, 2025
12:15:29 PM
Request # 4810721

Submitted by: EN6138_DENNY
Submission Date: Jun 02, 2025 12:13:58 PM

File Type	File Name
Ambient Data	AMB-WBEA-202502-V01.xml

Total Number of Files: 1

*** End of Report ***



End of Report