

**WOOD BUFFALO ENVIRONMENTAL ASSOCIATION
ANNUAL AMBIENT AIR QUALITY MONITORING REPORT
2024
REPORT HISTORY**

Original report release date: March 31, 2025

Revised report release date: April 3, 2025

Revision 1: Corrected “Number of Values Exceeding 1-hour Objective” for Particulate Matter 2.5 (PM_{2.5})

During the review of the 2024 Annual Report, it was identified that the number of 1-hour exceedances for PM_{2.5} was incorrectly reported on the annual report, volume 1, pages 471 to 485. This error resulted from a temporary bulk reporting protocol in effect from April 1, 2024, to October 31, 2024. The software used to generate the tables did not account for this protocol change, leading to incorrect exceedance values being reported.

Once the issue was identified, WBEA staff manually corrected the exceedance numbers and submitted the accurate data to Alberta Environment and Protected Areas (AB EPA).

On April 3, 2025, the revised annual report, reflecting the corrected values for each affected parameter and station, was resubmitted to the Electronic Transfer System (ETS).



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Wood Buffalo Environmental Association

ANNUAL REPORT – VOLUME 1

2024 CONTINUOUS DATA

March 2025

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





WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY MONITORING PROGRAM ANNUAL REPORT

ANNUAL 2024

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

March 2025



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March 31, 2025

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SUBMITTED VIA EMAIL

RE: Annual Ambient Air Quality Monitoring Report 2024 Wood Buffalo Environmental Association

Enclosed is the 2024 Annual Ambient Air Quality Monitoring Report for the Wood Buffalo Environmental Association (WBEA) regional air 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 21 - Conklin
AMS 02 – Mildred Lake	AMS 22 – Janvier
AMS 03 – Lower Camp (Meteorology)	AMS 23 – Fort Hills
AMS 04 – Buffalo Viewpoint	AMS 25 – Waskōw ohci Pimâtisiwin
AMS 05 – Mannix	AMS 26 – Christina Lake
AMS 06 – Patricia McInnes	AMS 27 – Jackfish 2/3
AMS 07 – Athabasca Valley	AMS 29 – Surmont 2
AMS 08 – Fort Chipewyan	AMS 30 – Ells River
AMS 09 – Barge Landing	AMS 33 – Monday Creek
AMS 11 – Lower Camp (Air Quality)	AMS 501 – Leismer
AMS 13 – Fort McKay South	AMS 505 – Sawbones Bay
AMS 14 – Anzac	AMS 506 – Jackfish 1
AMS 17 - Wapasu	AMS 507 – Kirby South
AMS 18 – Stony Mountain	AMS 508 – Kirby North
AMS 19 - Firebag	AMS 511 – Blackgold
AMS 20 – MacKay River	AMS 512 – Hangingstone Expansion



This report is submitted by the WBEA on behalf of its members. This report may also satisfy the ambient air reporting requirements in industry members' 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



1. Introduction

The WBEA is a multi-stakeholder, consensus-based, not-for-profit association that strives to lead in state-of-the-art environmental monitoring to enable informed decision-making. The WBEA monitors the ambient air quality of the Regional Municipality of Wood Buffalo 24 hours a day and 365 days a year.

1.1 Air Monitoring Parameters

Table 1 provides a list of stations with their names and corresponding WBEA identification number, and the air quality parameters measured by continuous methods at each site. Parameters measured include hydrogen sulphide (H₂S), total reduced sulphur (TRS), sulphur dioxide (SO₂), nitrogen dioxide (NO₂), ozone (O₃), fine particulate matter (PM_{2.5}) total hydrocarbons (THC), methane (CH₄), non-methane hydrocarbons (NMHC), carbon dioxide (CO₂), carbon monoxide (CO) and ammonia (NH₃). Sites are categorized based on the setting in which they are located.

Table 1. Summary of stations and parameters measured continuously at WBEA sites.

WBEA ID	TYPE	STATION NAME	SO ₂	NO _x /NO/NO ₂	O ₃	PM _{2.5}	TRS	H ₂ S	THC	CH ₄	NMHC	CO	CO ₂	NH ₃
1	COMMUNITY	BERTHA GANTER - FORT MCKAY	X	X	X	X	X	X	X	X	X	X	X	X
2	COMPLIANCE	MILDRED LAKE	X					X	X	X	X			
3	METEOROLOGICAL	LOWER CAMP MET TOWER												
4	COMPLIANCE	BUFFALO VIEWPOINT	X	X	X	X		X	X	X	X			
5	COMPLIANCE / METEOROLOGICAL	MANNIX	X					X	X	X	X			
6	COMMUNITY	PATRICIA MCINNES	X	X	X	X	X		X	X	X			X
7	COMMUNITY	ATHABASCA VALLEY	X	X	X	X	X		X	X	X	X		
8	COMMUNITY / COMPLIANCE	FORT CHIPEWYAN	X	X	X	X	X					X	X	
9	ATTRIBUTION	BARGE LANDING	X	X		X	X		X	X	X			
11	COMPLIANCE	LOWER CAMP	X					X	X	X	X			
13	COMPLIANCE / ATTRIBUTION	FORT MCKAY SOUTH	X	X	X	X	X		X	X	X			
14	COMPLIANCE / COMMUNITY	ANZAC	X	X	X	X	X		X	X	X			
17	COMPLIANCE	WAPASU	X	X	X	X		X	X					
18	BACKGROUND	STONY MOUNTAIN	X	X	X	X	X		X	X	X	X	X	
19	COMPLIANCE	FIREBAG	X	X				X	X					
20	COMPLIANCE	MACKAY RIVER	X	X				X	X					
21	COMMUNITY	CONKLIN	X	X	X	X	X		X	X	X			
22	COMMUNITY	JANVIER	X	X	X	X	X		X	X	X			
23	COMPLIANCE	FORT HILLS	X	X		X	X		X	X	X			
25	EMERGENCY RESPONSE	WASKOW OHCI PIMATISIWIN	X					X						
26	COMPLIANCE	CHRISTINA LAKE	X	X				X						
27	COMPLIANCE	JACKFISH 2/3	X	X				X						
29	COMPLIANCE	SURMONT 2	X	X		X		X	X					
30	COMPLIANCE	ELLS RIVER	X	X		X	X		X	X	X			
33	COMPLIANCE	MONDAY CREEK	X	X				X						
501	COMPLIANCE	LEISMER	X	X				X						
505	COMPLIANCE	SAWBONES BAY	X	X				X						
506	COMPLIANCE	JACKFISH 1	X	X				X						
507	COMPLIANCE	KIRBY SOUTH	X	X				X	X					
508	COMPLIANCE	KIRBY NORTH	X	X				X	X					
511	COMPLIANCE	BLACKGOLD	X	X				X	X					
512	COMPLIANCE	HANGINGSTONE EXPANSION	X	X				X						



Table 2 provides a list of stations and meteorological parameters measured by continuous methods. Parameters measured include ambient temperature (AT), relative humidity (RH), barometric pressure (BP), wind speed (WS), wind direction (WD), vertical wind speed (VWS), global radiation (GR), precipitation (PC), and surface wetness (SW).

Table 2. Summary of stations and meteorological parameters measured continuously at WBEA sites.

WBEA ID	TYPE	STATION NAME	AT*	RH*	BP	WS*	WD*	VWS*	GR	PC	SW
1	COMMUNITY	BERTHA GANTER-FORT MCKAY	X ^{1,2}	X ¹		X ²	X ²		X	X	X
2	COMPLIANCE	MILDRED LAKE	X ¹	X ¹		X ²	X ²				
3	METEOROLOGICAL	LOWER CAMP MET TOWER	X ⁴	X ⁴		X ⁴	X ⁴	X ⁴			
4	COMPLIANCE	BUFFALO VIEWPOINT	X ¹	X ¹		X ²	X ²				
5	COMPLIANCE / METEOROLOGICAL	MANNIX	X ⁵	X ⁵		X ⁵	X ⁵	X ⁵			
6	COMMUNITY	PATRICIA MCINNES	X ¹	X ¹		X ²	X ²				
7	COMMUNITY	ATHABASCA VALLEY	X ¹	X ¹	X	X ²	X ²				
8	COMMUNITY / COMPLIANCE	FORT CHIPEWYAN	X ¹	X ¹		X ²	X ²		X		X
9	ATTRIBUTION	BARGE LANDING	X ¹	X ¹	X	X ^{2,3}	X ^{2,3}				
11	COMPLIANCE	LOWER CAMP	X ¹	X ¹	X	X ²	X ²				
13	COMPLIANCE / ATTRIBUTION	FORT MCKAY SOUTH	X ¹	X ¹		X ²	X ²				
14	COMPLIANCE / COMMUNITY	ANZAC	X ¹	X ¹		X ³	X ³				X
17	COMPLIANCE	WAPASU	X ¹	X ¹		X ²	X ²			X	
18	BACKGROUND	STONY MOUNTAIN	X ¹	X ¹		X ³	X ³		X	X	X
19	COMPLIANCE	FIREBAG	X ¹	X ¹		X ²	X ²				
20	COMPLIANCE	MACKAY RIVER	X ¹	X ¹		X ²	X ²			X	
21	COMMUNITY	CONKLIN	X ¹	X ¹		X ²	X ²				
22	COMMUNITY	JANVIER	X ¹	X ¹		X ^{2,3}	X ^{2,3}				
23	COMPLIANCE	FORT HILLS	X ¹	X ¹		X ²	X ²				
25	EMERGENCY RESPONSE	WASKOW OHCI PIMATISIWIN	X ¹	X ¹		X ²	X ²				
26	COMPLIANCE	CHRISTINA LAKE	X ¹	X ¹		X ²	X ²				
27	COMPLIANCE	JACKFISH 2/3	X ¹	X ¹		X ²	X ²				
29	COMPLIANCE	SURMONT 2	X ¹	X ¹		X ²	X ²				
30	COMPLIANCE	ELLS RIVER	X ¹	X ¹		X ²	X ²		X		
33	COMPLIANCE	MONDAY CREEK	X ¹	X ¹		X ²	X ²				
501	COMPLIANCE	LEISMER	X ¹	X ¹		X ²	X ²				
505	COMPLIANCE	SAWBONES BAY	X ¹	X ¹		X ²	X ²				
506	COMPLIANCE	JACKFISH 1	X ¹	X ¹		X ²	X ²				
507	COMPLIANCE	KIRBY SOUTH	X ¹	X ¹		X ²	X ²				
508	COMPLIANCE	KIRBY NORTH	X ¹	X ¹		X ²	X ²				
511	COMPLIANCE	BLACKGOLD	X ¹	X ¹		X ²	X ²				
512	COMPLIANCE	HANGINGSTONE EXPANSION	X ¹	X ¹		X ²	X ²				

*1 Parameter measured at 2m.

*2 Parameter measured at 10m.

*3 Parameter measured at 20m.

*4 Parameter measured at multiple elevations (i.e. 20m, 45m, 100m, 163m).

*5 Parameter measured at multiple elevations (i.e. 20m, 45m, 75m, 90m).



Table 3 provides a listing of stations and air quality parameters measured by time integrated methods. Parameters measured include volatile organic compounds (VOC), particulate matter less than 2.5 µm aerodynamic diameter (PM_{2.5}) including associated metal and ion analysis, particulate matter less than 10 µm aerodynamic diameter (PM₁₀), including associated metal and ion analysis, polycyclic aromatic hydrocarbons (PAH), wet precipitation (precip), including major ion analysis, total suspended particulates (TSP), and Dustfall.

Table 3. Summary of parameters measured using time integrated methods at WBEA sites

WBEA ID	TYPE	STATION NAME	VOC	PM _{2.5}	PM _{2.5} ECOC	PM ₁₀	PAH	PRECIP	TSP	DUSTFALL
1	COMMUNITY	BERTHA GANTER - FORT MCKAY	X	X	X	X	X	X		X
6	COMMUNITY	PATRICIA MCINNES	X	X		X	X			X
7	COMMUNITY	ATHABASCA VALLEY	X	X		X	X			X
8	COMPLIANCE / COMMUNITY	FORT CHIPEWYAN	X	X	X	X	X			
9	ATTRIBUTION	BARGE LANDING	X							
13	COMPLIANCE / ATTRIBUTION	FORT MCKAY SOUTH	X			X				
14	COMPLIANCE / COMMUNITY	ANZAC	X	X		X	X			X
17	COMPLIANCE	WAPASU			X			X		X
18	ENHANCED DEPOSITION / BACKGROUND	STONY MOUNTAIN			X			X		
21	COMMUNITY	CONKLIN	X	X		X	X			X
22	COMMUNITY	JANVIER	X	X		X	X			X
23	COMPLIANCE	FORT HILLS	X			X				
30	COMPLIANCE	ELLS RIVER	X			X			X	
CN 1		CANADIAN NATURAL DF1								X
CN 2		CANADIAN NATURAL DF2								X
CN 3		CANADIAN NATURAL DF3								X
CN 4		CANADIAN NATURAL DF4								X
CN 5		CANADIAN NATURAL DF5								X

1.2 Air Monitoring Site Locations

The map in Figure 1 shows the locations of all WBEA continuous air quality monitoring. Continuous monitoring sites are in areas of development, primarily along the Athabasca River Valley and cover the region from Conklin to Fort Chipewyan.



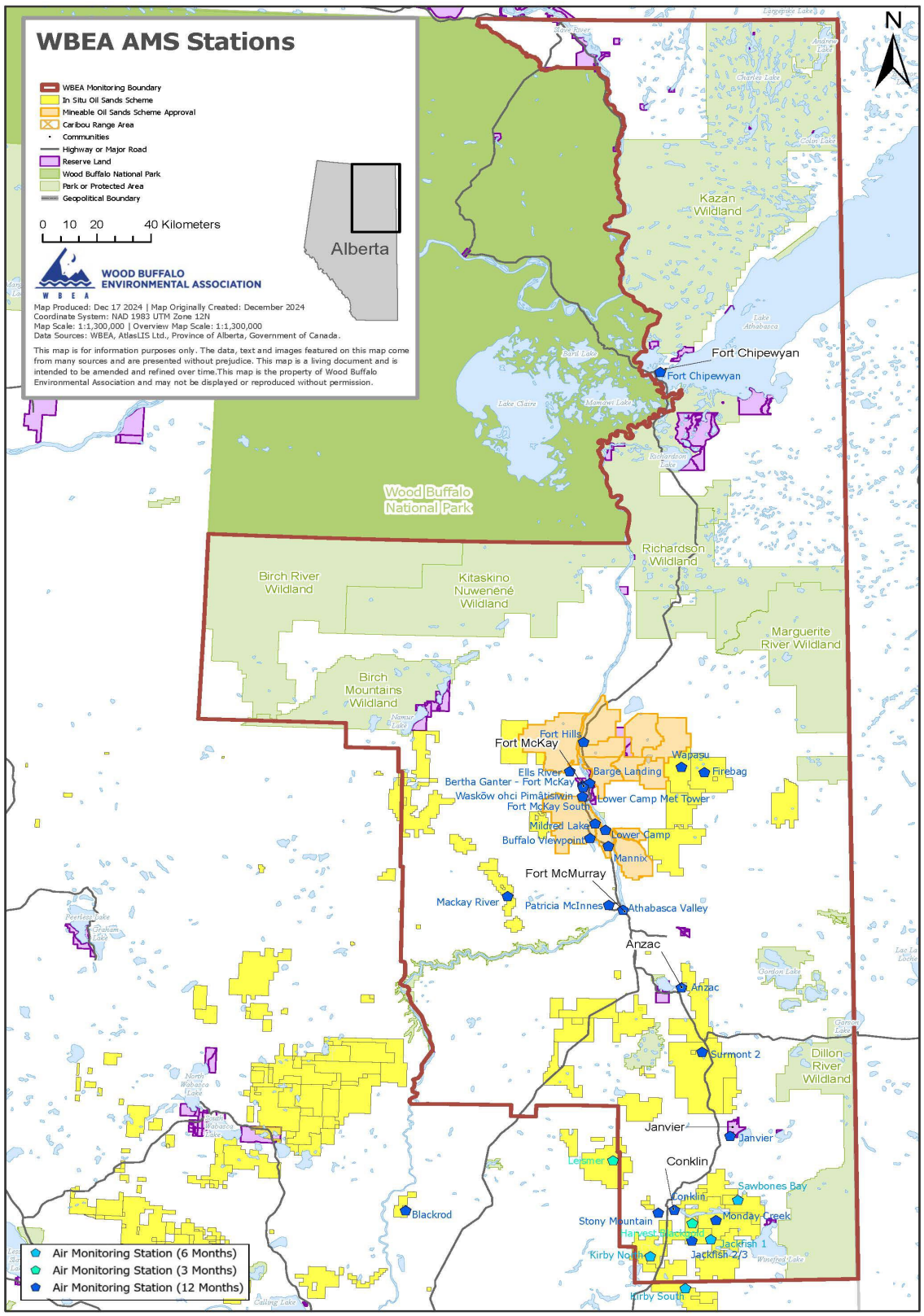


Figure 1. Continuous Air Monitoring Station Locations

2. Summary of Changes to the WBEA Air Monitoring Network

The WBEA retrieved ambient air quality monitoring station, Leismer, at the Athabasca Oil Leismer facility on April 1, 2024. The monitoring was conducted from October 1, 2023, until April 1, 2024, to fulfill the requirements of EPEA approval number 241311-00, as amended. The current EPEA approval for the Athabasca Oil Leismer facility requires ambient air monitoring at the facility for three months per calendar year. This station was equipped with ambient air quality analyzers for SO₂, H₂S, NO, NO₂, NO_x, and meteorological sensors for ambient temperature, relative humidity, and wind speed and direction.

The WBEA retrieved ambient air quality monitoring station, Blackgold, at the Harvest Operations Corp. facility on April 1, 2024. The monitoring was conducted from October 1, 2023, until April 1, 2024, to fulfill the requirements of EPEA approval number 246984-01-00, as amended. The current EPEA approval for the Harvest Operations Corp. facility requires ambient air monitoring at the facility for three months per calendar year. This station was equipped with ambient air quality analyzers for SO₂, H₂S, THC, NO, NO₂, NO_x, and meteorological sensors for ambient temperature, relative humidity, and wind speed and direction.

The WBEA conducts 6-months of monitoring each year at two sites, Kirby North and Kirby South, to meet the requirements of EPEA approval number 237382-01-00. Kirby South completed monitoring on June 30, 2024, and was moved to Kirby North on July 4, 2024. This station is equipped with ambient air quality analyzers for SO₂, H₂S, THC, NO, NO₂, NO_x, and meteorological sensors for ambient temperature, relative humidity, and wind speed and direction.

The WBEA commenced ambient air quality monitoring at the Jackfish 1 air monitoring station, at the Canadian Natural Resources Limited Jackfish 1 facility on July 1, 2024, to fulfill the requirements of EPEA approval number 224816-01-00, as amended. The current EPEA approval for the Canadian Natural Jackfish 1 facility requires ambient air monitoring at the facility for six months per calendar year. This station is equipped with ambient air quality analyzers for SO₂, H₂S, NO, NO₂, NO_x, and meteorological sensors for ambient temperature, relative humidity, and wind speed and direction.

The WBEA retrieved the ambient air quality monitoring station at Sawbones Bay, at the MEG Energy facility on July 1, 2024. The monitoring was conducted from July 1, 2023, until July 1, 2024, to fulfill the requirements of EPEA approval number 216466-01, as amended. The current EPEA approval for the MEG Energy Christina Lake facility requires ambient air monitoring at the facility for six months per calendar year. This station is equipped with ambient air quality analyzers for SO₂, H₂S, NO, NO₂, NO_x, and meteorological sensors for ambient temperature, relative humidity, and wind speed and direction.

The WBEA commenced ambient air quality monitoring at the Hangingstone Expansion air monitoring station, at the Greenfire Resources Operating Corporation facility on July 1, 2024, to fulfill the requirements of EPEA approval number 153105-01-00, as amended. The current EPEA approval for the Greenfire Resources Hangingstone Expansion facility requires ambient air monitoring at the facility for six months per calendar year. This station is equipped with ambient air quality analyzers for SO₂, H₂S, NO, NO₂, NO_x, and meteorological sensors for ambient temperature, relative humidity, and wind speed and direction.

The WBEA relocated Christina Lake air monitoring station to a new location within the Christina Lake facility operated by Cenovus Energy Inc. Christina Lake was removed from service on November 5, 2024 and was deployed as Monday Creek air monitoring station on November 7, 2024. Christina Lake and Monday Creek fulfill EPEA approval number 48522-02-00. This station is equipped with ambient air quality analyzers for



SO₂, H₂S, NO, NO₂, NO_x, and meteorological sensors for ambient temperature, relative humidity, and wind speed and direction.

In 2024, no new parameters were added to the WBEA network, nor were any existing analyzers replaced with updated technology.

3. Concentrations in Excess of Alberta Ambient Air Quality Objectives and Guidelines

Alberta Environment and Protected Areas (AEPA) has developed and issued a new ambient air quality guideline (AAAQG) for Total Reduced Sulphur (TRS) under Section 14(4) of the Environmental Protection and Enhancement Act, 1992. The updated guideline sets a 30-minute average limit of 5 ppb, with a focus on odour management. This guideline took effect within the WBEA network on December 13, 2024. As part of this change, the WBEA will no longer apply the Hydrogen Sulphide (H₂S) Alberta Ambient Air Quality Objective when assessing TRS exceedances. Moving forward, the WBEA will report solely against the TRS 30-minute AAAQG to align with AEPA's approach to air quality management.

Prior to the implementation of the TRS AAAQG, the WBEA airshed reported ambient air concentrations for total reduced sulphur (TRS) in excess of the H₂S AAAQO to AEPA. The statistical summary of the previous 5-year comparisons for ambient concentrations in excess of the AAAQOs and AAAQGs are shown in Figure 3. Until December 31, 2024, the H₂S summary includes the TRS concentrations in excess of the H₂S objectives.

During the 2023 wildfire season, the WBEA experienced a significant number of Alberta Ambient Air Quality Guideline (AAAQG) exceedances for 1-hour PM_{2.5} due to a prolonged wildfire season. This high volume of exceedances created a reporting burden and increased calls to Alberta Environmental and Dangerous Goods Emergencies (Alberta EDGE). In response, AEPA implemented the Temporary Alberta Airshed Wildfire Bulk Reporting Protocol to streamline reporting. For the 2024 wildfire season (April 1 to October 31), AEPA rescinded the requirement to report AAAQG PM_{2.5} exceedances under this protocol to prioritize managing high-risk environmental issues. The WBEA followed AEPA's protocol, ensuring full compliance with the established reporting guidelines.

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



WBEA Ambient Air Monitoring Network Ground level concentrations in excess of AAAQOs and AAAQGs.

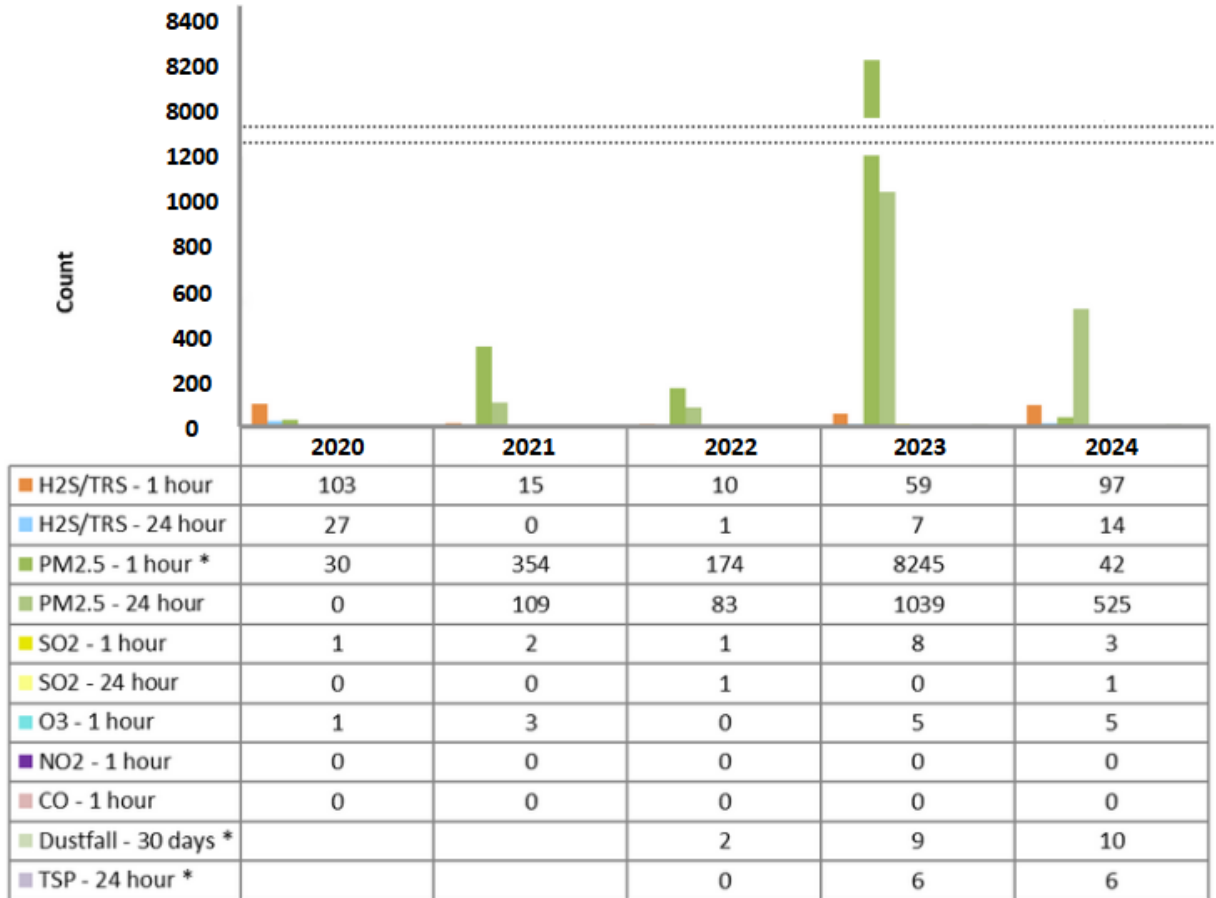


Figure 2. Ambient Air Concentrations in excess of the AAAQO and AAAQG (2020-2024)

*The PM_{2.5} 1-hour AAAQG was established on January 1, 2019

*The Dustfall 30-days AAAQG was first reported by the WBEA in November 2022

*The TSP – 24-hour AAAQO was first reported by the WBEA in September 2022

4. Operational Status – Instrument Operation Below 90 Percent of the Time

In 2024, there were 50 incidents of compliance monitoring instruments operating less than 90% of the time or other AMD non-compliances. A detailed summary of these incidents, including date, reference number, description, location, issue, and remedial action are included in Appendix II of the report.

5. External Audits and Results

Between the dates of July 3-12, 2024, AEPA conducted an audit of the following WBEA ambient air monitoring stations: Anzac, Wapasu, Barge Landing, Fort Hills, Athabasca Valley, Patricia McInnes, Bertha



Ganter, Buffalo Viewpoint, Lower Camp, Ells River, Mildred, Fort McKay South, and Waskow ochi Pimatisiwin. On July 12, AEPA decided to suspend the audit due to poor air quality related to wildfires and high ambient temperatures which were impacting analyzer performance and the audit. During the audit, the following instruments were found to be outside the Alberta Air Monitoring Directive (AMD) – Chapter 8 Audit Assessment Criteria and Chapter 7 Calibration:

1. The non-methane hydrocarbon analyzer in Fort Hills failed the low point on the non-methane channel. The low point was 11% higher than the expected value. Further testing was completed by WBEA's internal audit program, and a similar trend was demonstrated.

After the audit was completed at Fort Hills, the WBEA completed additional testing and audit results were confirmed. On July 10, the instrument was replaced to resolve the issue.

2. There were three T640 failures in the network. The T640s at Athabasca Valley, Patricia McInnes, and Buffalo Viewpoint all had span dust readings that were $> \pm 0.5$ from the expected reading. Technicians were advised to complete the necessary maintenance and perform a PMT adjustment. The following steps were taken to address the issues:

- Athabasca Valley: On July 8, the WBEA completed optical chamber and sample inlet cleaning, as well as a PMT adjustment.
- Patricia McInnes: On July 8, the WBEA completed optical chamber cleaning, as well as a PMT adjustment.
- Buffalo Viewpoint: On July 10, the WBEA completed optical chamber cleaning, PMT adjustment was not required after maintenance.

3. The H₂S analyzer at Mildred Lake failed to stabilize and read within 10% of the expected value within the allotted 20 minutes. The point was continued for an extended amount of time, and it did eventually reach stability at 8% low. Auditors were advised that maintenance had been completed on July 8th, two days prior to the audit due to a failed span. Upon further inspection, a loose fitting on the sample/span valve, as well as an excess of tubing between the manifold and analyzer, may have contributed to the excessive response time. The technician attached their sample calibration line directly to the oxidizer and response time was drastically reduced.

As indicated, this analyzer had been experiencing issues prior to the audit and the WBEA had performed maintenance on July 5, 8, and 9 including replacement of the scrubber beads, H₂S converter and pump. On July 11, after audit completion, the WBEA addressed the loose fitting on the sample/span valve and replaced all sample lines. In addition, the length of the sample line was reduced by relocating the instrument closer to the converter. On July 16, the span response slowed again, and the analyzer was replaced that day, resolving the issue. Data was invalidated from June 30 to July 11 due to the issues with this analyzer.



6. Monthly Report Revisions

The following revisions were identified during the year and made to associated monthly reports:

Revised Report	Revision	Details
April, June, July, 2019	Revision of PM _{2.5} Data at Stony Mountain	During the revision of T640 PM _{2.5} data, it was discovered that the SHARP PM _{2.5} data for the month of April, June, and July of 2019, had an unintentional offset of 0.7 ug/m ³ in the final five-minute dataset. Upon review, the WBEA found that this correction was mistakenly applied and subsequently removed the correction factor retroactively to recalculate the final hour averages. The updated data and revised summaries were then submitted to the Electronic Transfer system on May 6, 2024.
June 2024	Baseline correction of O ₃ analyzer at Fort McKay South and CO ₂ analyzer at Stony Mountain	<p>Ozone (O₃) data for the Fort McKay South air monitoring station (AMS) for June was revised to remove daily baseline-corrected values from June 23 to 30, which were determined to have been influenced by a power failure on June 23. This power interruption affected the in-situ calibrator configuration until June 30, impacting the hourly O₃ concentrations for that period.</p> <p>During the Level 3 data validation process, it was discovered that CO₂ baseline correction points were inadvertently not accepted during the Level 2 data validation from June 18 to June 30. The acceptance of these baseline corrections resulted in changes to the hourly CO₂ concentrations for that timeframe.</p> <p>As a result, CO₂ data at Stony Mountain AMS and O₃ data at Fort McKay South for the month of June was revised. On August 29, 2024, the monthly reports, data reports, were re-submitted to the Electronic Transfer System (ETS).</p>
October 2019 – October 2020	Resubmission of PM _{2.5} Data at Buffalo Viewpoint	<p>Following a review, it was determined that the PM_{2.5} data for Buffalo Viewpoint, originally collected using a Thermo Scientific, Model SHARP 5030 analyzer, was submitted to the Alberta Air Data Warehouse under an incorrect VVC code. On September 22, 2020, the Thermo Scientific, Model SHARP 5030 analyzer was replaced with an API, Model T640 analyzer, and data collected thereafter has been submitted correctly with no issues. To ensure that the historical data accurately reflects the measurements from the Thermo Scientific, Model SHARP analyzer, the WBEA will resubmit the data for the period of October 1, 2019, to October 1, 2020, under the appropriate VVC code.</p> <p>The PM_{2.5} data from Buffalo Viewpoint for this period has been reviewed and validated through the WBEA's quality assurance process, with no changes made. The data was submitted through the ETS on January 24, 2025.</p>



7. 2011-2024 WBEA Data Compared to LARP Triggers and Limits

Official assignment of air quality levels against the LARP triggers and limits, and reporting on management responses, is conducted and made publicly available by AEPA. However, a summary of data from the WBEA air monitoring stations compared to the Lower Athabasca Regional Plan (LARP) trigger levels and limits for NO₂ and SO₂ is provided in Appendix III.

8. 2024 Annual Air Concentrations

This report contains a summary of operational times for the year, the monthly averages, the number of readings in excess of the AAAQO/Gs, frequency distributions of 1-hour data, and annual average concentration plots over the past five years. Annual average concentration plots have been provided for stations for which there is more than one year of data, and for which 12-month monitoring is completed. Calculation of annual averages cannot be provided for portable monitoring stations which are only required to monitor for 3 or 6 months per year, based on their EPEA approval.

Annual statistics for all integrated results are provided for all species analyzed.



If additional information is required, please contact either Emilie Briggs at (780) 747-8219 or the Wood Buffalo Environmental Association at (780) 799-4420.

Yours sincerely,

Wood Buffalo Environmental Association

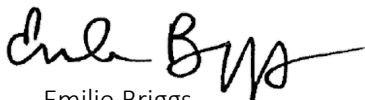
The representative of the Person Responsible for this monitoring program is Emilie Briggs, Operations Manager WBEA.

Report prepared and submitted by Asad Hidayat and Denny Estador of the WBEA and reviewed by Emilie Briggs of WBEA. The WBEA has retained the services of Air Resource Specialists (ARS) to conduct reporting functions on its behalf, specifically, Level 3 – Independent Assessment. As required, the contact information for WBEA staff is included below.

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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.



Emilie Briggs
Operations Manager

Wood Buffalo Environmental Association
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R00_2024_Annual



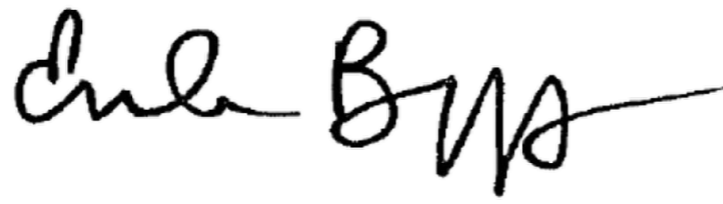
WOOD BUFFALO ENVIRONMENTAL ASSOCIATION
ANNUAL AIR MONITORING 2024 SUMMARY

							2024
							page 1 of 3
							Prepared: February 5, 2023 9:00 MST
APPROVAL NUMBERS	REPORT DATE						
	YEAR						
289664-00-00	2024						
241311-00-00	CONTINUOUS AMBIENT MONITORING						
20809-02-00							
149968-01-00							
237382-00-00							
48522-01-00							
240008-00-00							
48263-01-00							
224816-00-00							
151469-01-00							
189942-00-00							
206355-00-00							
46586-00-00							
73203-02-00							
216466-01-00							
137467-01-00							
236394-00-00							
254465-00-00							
094-03-00							
80105-01-00							
305529-00-00							
318401-00-00							
026-03-00							
364232-00-00							
228044-00-00							
247548-00-00							
231302-00-00							
246984-01-00							
153125-01-00							
	PARAMETER	STN. NO.	% TIME OPERATIONAL	ONE-HOUR AVERAGE MAXIMUM CONCENTRATION	NO. READINGS > REGULATION	24-HOUR AVERAGE MAXIMUM CONCENTRATION	NO. READINGS > REGULATION
	SO2(ppb)	1	100	53.3	0	8.5	0
	SO2(ppb)	2	100	76.9	0	21.0	0
	SO2(ppb)	4	100	92.6	0	15.2	0
	SO2(ppb)	5	99	106.5	0	22.4	0
	SO2(ppb)	6	100	35.9	0	6.9	0
	SO2(ppb)	7	100	38.6	0	6.9	0
	SO2(ppb)	8	99	11.7	0	3.8	0
	SO2(ppb)	9	100	52.7	0	9.0	0
	SO2(ppb)	11	100	327.3	3	49.1	1
	SO2(ppb)	13	100	130.0	0	8.0	0
	SO2(ppb)	14	99	25.5	0	5.3	0
	SO2(ppb)	17	99	43.1	0	7.8	0
	SO2(ppb)	18	99	11.9	0	2.4	0
	SO2(ppb)	19	100	35.5	0	6.7	0
	SO2(ppb)	20	100	59.5	0	13.3	0
	SO2(ppb)	21	99	6.1	0	2.1	0
	SO2(ppb)	22	100	10.3	0	4.6	0
	SO2(ppb)	23	100	39.7	0	9.9	0
	SO2(ppb)	25	99	50.4	0	7.5	0
	SO2(ppb)	26	99	19.5	0	5.3	0
	SO2(ppb)	27	99	21.9	0	5.1	0
	SO2(ppb)	29	99	12.9	0	5.0	0
	SO2(ppb)	30	100	51.5	0	10.8	0
	SO2(ppb)	33	100	15.2	0	5.4	0
	SO2(ppb)	501	100	31.5	0	5.3	0
	SO2(ppb)	505	98	18.3	0	7.4	0
	SO2(ppb)	506	100	22.7	0	4.9	0
	SO2(ppb)	507	98	12.4	0	4.1	0
	SO2(ppb)	508	100	8.6	0	2.5	0
	SO2(ppb)	511	95	19.2	0	4.9	0
	SO2(ppb)	512	99	168.5	0	33.9	0
	H2S(ppb)	1	99	9.2	0	1.6	0
	H2S(ppb)	2	96	25.9	20	5.5	3
	H2S(ppb)	4	100	12.7	1	2.2	0
	H2S(ppb)	5	99	32.1	19	5.8	3
	H2S(ppb)	11	98	58.7	51	7.4	7
	H2S(ppb)	17	100	1.9	0	0.5	0
	H2S(ppb)	19	99	7.7	0	0.9	0
	H2S(ppb)	20	100	7.2	0	1.1	0
	H2S(ppb)	25	99	10.4	1	1.4	0
	H2S(ppb)	26	100	10.2	1	1.4	0
	H2S(ppb)	27	100	2.2	0	0.7	0
	H2S(ppb)	29	99	2.1	0	0.5	0
	H2S(ppb)	33	100	0.6	0	0.2	0
	H2S(ppb)	501	100	0.6	0	0.2	0
	H2S(ppb)	505	95	1.8	0	0.7	0
	H2S(ppb)	506	100	4.7	0	0.7	0
	H2S(ppb)	507	100	51.0	2	3.2	1
	H2S(ppb)	508	100	3.9	0	0.5	0
	H2S(ppb)	511	99	5.0	1	0.5	0
	H2S(ppb)	512	99	4.1	0	1.1	0
	TRS(ppb)	1	100	10.0	0	2.1	0
	TRS(ppb)	6	99	4.0	0	1.4	0
	TRS(ppb)	7	100	6.1	0	2.2	0
	TRS(ppb)	8	100	1.7	0	0.6	0
	TRS(ppb)	9	100	7.1	0	2.7	0
	TRS(ppb)	13	99	10.6	1	1.9	0
	TRS(ppb)	14	100	5.4	0	0.9	0
	TRS(ppb)	18	98	4.2	0	0.5	0
	TRS(ppb)	21	99	1.3	0	0.6	0
	TRS(ppb)	22	100	1.1	0	0.5	0
	TRS(ppb)	23	100	4.2	0	1.6	0
	TRS(ppb)	30	100	4.5	0	2.0	0
	THC(ppm)	1	99	4.8	-	3.0	-
	THC(ppm)	2	97	13.8	-	4.3	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION
ANNUAL AIR MONITORING 2024 SUMMARY

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	YEAR						
289664-00-00	2024						
241311-00-00	CONTINUOUS AMBIENT MONITORING						
20809-02-00				ONE-HOUR AVERAGE		24-HOUR AVERAGE	
149968-01-00	PARAMETER	STN. NO.	% TIME OPERATIONAL	MAXIMUM CONCENTRATION	NO. READINGS > REGULATION	MAXIMUM CONCENTRATION	NO. READINGS > REGULATION
237382-00-00	THC(ppm)	4	100	8.5	-	3.2	-
48522-01-00	THC(ppm)	5	96	7.5	-	3.4	-
240008-00-00	THC(ppm)	6	97	3.4	-	2.4	-
48263-01-00	THC(ppm)	7	98	3.5	-	2.5	-
224816-00-00	THC(ppm)	9	99	4.1	-	2.7	-
151469-01-00	THC(ppm)	11	99	4.4	-	3.1	-
189942-00-00	THC(ppm)	13	98	4.9	-	2.9	-
206355-00-00	THC(ppm)	14	93	3.8	-	2.7	-
46586-00-00	THC(ppm)	17	100	3.5	-	2.6	-
73203-02-00	THC(ppm)	18	92	3.6	-	2.3	-
216466-01-00	THC(ppm)	19	99	4.3	-	2.7	-
137467-01-00	THC(ppm)	20	99	4.1	-	2.9	-
236394-00-00	THC(ppm)	21	97	2.9	-	2.6	-
254465-00-00	THC(ppm)	22	99	2.5	-	2.3	-
094-03-00	THC(ppm)	23	97	9.0	-	3.6	-
80105-01-00	THC(ppm)	29	98	3.9	-	2.6	-
305529-00-00	THC(ppm)	30	99	7.1	-	3.4	-
318401-00-00	THC(ppm)	507	98	23.0	-	3.8	-
026-03-00	THC(ppm)	508	100	4.6	-	2.6	-
364232-00-00	THC(ppm)	511	98	5.0	-	2.7	-
228044-00-00	O3(ppb)	1	100	66.4	0	39.4	-
247548-00-00	O3(ppb)	4	100	77.5	1	48.6	-
231302-00-00	O3(ppb)	6	99	95.7	2	51.7	-
246984-01-00	O3(ppb)	7	99	106.2	2	47.0	-
153125-01-00	O3(ppb)	8	99	74.9	0	54.8	-
	O3(ppb)	13	100	66.1	0	39.4	-
	O3(ppb)	14	99	64.1	0	48.2	-
	O3(ppb)	17	100	70.1	0	55.6	-
	O3(ppb)	18	99	56.3	0	50.2	-
	O3(ppb)	21	99	64.1	0	45.5	-
	O3(ppb)	22	99	67.3	0	53.3	-
	NO2(ppb)	1	99	59.5	0	25.7	-
	NO2(ppb)	4	100	44.3	0	30.3	-
	NO2(ppb)	6	100	35.9	0	21.1	-
	NO2(ppb)	7	100	46.7	0	24.2	-
	NO2(ppb)	8	99	32.4	0	13.5	-
	NO2(ppb)	9	100	45.1	0	31.0	-
	NO2(ppb)	13	99	43.6	0	27.2	-
	NO2(ppb)	14	100	31.3	0	11.9	-
	NO2(ppb)	17	99	31.7	0	11.8	-
	NO2(ppb)	18	94	16.0	0	6.8	-
	NO2(ppb)	19	99	48.6	0	18.2	-
	NO2(ppb)	20	99	32.5	0	25.2	-
	NO2(ppb)	21	99	19.2	0	8.0	-
	NO2(ppb)	22	99	21.5	0	11.0	-
	NO2(ppb)	23	100	59.9	0	35.1	-
	NO2(ppb)	26	100	30.2	0	17.0	-
	NO2(ppb)	27	99	19.8	0	6.3	-
	NO2(ppb)	29	99	23.5	0	11.6	-
	NO2(ppb)	30	100	46.7	0	26.8	-
	NO2(ppb)	33	99	20.3	0	6.6	-
	NO2(ppb)	501	100	19.0	0	6.0	-
	NO2(ppb)	505	98	33.3	0	13.4	-
	NO2(ppb)	506	99	23.8	0	8.2	-
	NO2(ppb)	507	97	49.9	0	29.8	-
	NO2(ppb)	508	99	22.4	0	6.5	-
	NO2(ppb)	511	99	20.0	0	8.7	-
	NO2(ppb)	512	99	21.2	0	12.1	-
	CO(ppm)	1	100	11.2	0	2.0	-
	CO(ppm)	7	100	3.9	0	1.2	-
	CO(ppm)	8	100	1.9	0	0.7	-
	CO(ppm)	18	99	4.4	0	1.8	-
	CO2(ppm)	1	100	566.1	-	490.3	-
	CO2(ppm)	8	95	498.0	-	450.6	-
	CO2(ppm)	18	99	497.3	-	455.5	-
	NH3(ppb)	1	95	222.1	0	40.3	-

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION
ANNUAL AIR MONITORING 2024 SUMMARY

APPROVAL NUMBERS	2024						
	page 3 of 3						
	Prepared: February 5, 2023 9:00 MST						
REPORT DATE							
YEAR							
2024							
CONTINUOUS AMBIENT MONITORING							
PARAMETER	STN. NO.	% TIME OPERATIONAL	ONE-HOUR AVERAGE		24-HOUR AVERAGE		
			MAXIMUM CONCENTRATION	NO. READINGS > REGULATION	MAXIMUM CONCENTRATION	NO. READINGS > REGULATION	
289664-00-00	NH3(ppb)	6	91	79.6	0	24.7	-
241311-00-00	PM2.5(ug/m3)	1	99	1001.8	1	200.7	38
20809-02-00	PM2.5(ug/m3)	4	100	364.1	0	148.8	34
149968-01-00	PM2.5(ug/m3)	6	99	723.9	0	193.7	33
237382-00-00	PM2.5(ug/m3)	7	100	679.6	0	237.7	43
48522-01-00	PM2.5(ug/m3)	8	100	431.2	0	166.8	27
240008-00-00	PM2.5(ug/m3)	9	100	1086.2	2	209.1	45
48263-01-00	PM2.5(ug/m3)	13	100	984.5	0	202.2	42
224816-00-00	PM2.5(ug/m3)	14	100	629.5	1	288.3	45
151469-01-00	PM2.5(ug/m3)	17	100	616.8	0	174	30
189942-00-00	PM2.5(ug/m3)	18	98	685.8	0	235.8	30
206355-00-00	PM2.5(ug/m3)	21	100	467.2	1	158.5	30
46586-00-00	PM2.5(ug/m3)	22	100	314	4	161.5	28
73203-02-00	PM2.5(ug/m3)	23	100	431.9	28	171.7	43
216466-01-00	PM2.5(ug/m3)	29	99	245.5	1	154.3	27
137467-01-00	PM2.5(ug/m3)	30	100	786	4	163.6	30
236394-00-00	WS(km/h)	1	96	32	-	22	-
254465-00-00	WS(km/h)	2	99	36	-	21	-
094-03-00	WS(km/h)	4	99	32	-	25	-
80105-01-00	WS(km/h)	5	99	37	-	28	-
305529-00-00	WS(km/h)	6	100	38	-	25	-
318401-00-00	WS(km/h)	7	100	40	-	24	-
026-03-00	WS(km/h)	8	100	47	-	31	-
364232-00-00	WS(km/h)	9	99	33	-	26	-
228044-00-00	WS(km/h)	11	99	34	-	22	-
247548-00-00	WS(km/h)	13	97	30	-	22	-
231302-00-00	WS(km/h)	14	98	37	-	23	-
246984-01-00	WS(km/h)	17	98	28	-	19	-
153125-01-00	WS(km/h)	18	93	29	-	21	-
	WS(km/h)	19	98	36	-	27	-
	WS(km/h)	20	99	25	-	15	-
	WS(km/h)	21	99	23	-	17	-
	WS(km/h)	22	98	30	-	18	-
	WS(km/h)	23	100	38	-	31	-
	WS(km/h)	25	97	24	-	15	-
	WS(km/h)	26	100	33	-	23	-
	WS(km/h)	27	99	23	-	14	-
	WS(km/h)	29	97	19	-	13	-
	WS(km/h)	30	98	39	-	27	-
	WS(km/h)	33	99	25	-	18	-
	WS(km/h)	501	99	37	-	20	-
	WS(km/h)	505	98	34	-	24	-
	WS(km/h)	506	93	20	-	13	-
	WS(km/h)	507	100	34	-	23	-
	WS(km/h)	508	98	26	-	18	-
	WS(km/h)	511	100	25	-	17	-
	WS(km/h)	512	99	27	-	19	-
							
SIGNATURE OF ASSOCIATION REPRESENTATIVE					FOR ALBERTA ENVIRONMENT USE ONLY		

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
ANNUAL REPORT

**SULPHUR DIOXIDE
ANNUAL 2024**

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

March 2025



Wood Buffalo Environmental Association - Fort McKay - Bertha Ganter (AMS01)
Annual Summary for the Year 2024
Sulphur Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range				
								0 - 20	21 - 60	61 - 110	111 - 170	171 - 340
January	100	708	0.9	23.0	0	3.1	0	99.9	0.1	0.0	0.0	0.0
February	100	661	0.8	18.2	0	2.8	0	100.0	0.0	0.0	0.0	0.0
March	98	696	2.0	34.8	0	8.4	0	98.3	1.7	0.0	0.0	0.0
April	100	684	0.8	33.6	0	5.1	0	99.6	0.4	0.0	0.0	0.0
May	100	706	0.5	29.5	0	2.4	0	99.9	0.1	0.0	0.0	0.0
June	99	679	0.6	21.8	0	4.7	0	99.7	0.3	0.0	0.0	0.0
July	99	702	1.2	29.8	0	6.5	0	99.4	0.6	0.0	0.0	0.0
August	100	706	1.5	53.2	0	6.4	0	99.6	0.4	0.0	0.0	0.0
September	100	683	0.9	19.6	0	4.8	0	100.0	0.0	0.0	0.0	0.0
October	100	708	0.6	25.1	0	5.0	0	99.9	0.1	0.0	0.0	0.0
November	100	684	0.3	15.0	0	1.4	0	100.0	0.0	0.0	0.0	0.0
December	100	708	1.0	53.3	0	8.5	0	99.6	0.4	0.0	0.0	0.0
Annual	100	8325	0.9	53.3	0	8.5	0	99.6	0.4	0.0	0.0	0.0



Wood Buffalo Environmental Association - Mildred Lake (AMS02)
Annual Summary for the Year 2024
Sulphur Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range				
								0 - 20	21 - 60	61 - 110	111 - 170	171 - 340
January	100	709	2.6	43.8	0	12.5	0	97.3	2.7	0.0	0.0	0.0
February	100	664	2.5	41.4	0	11.8	0	97.4	2.6	0.0	0.0	0.0
March	100	707	2.2	76.9	0	11.5	0	97.5	2.4	0.1	0.0	0.0
April	100	683	2.3	41.1	0	9.8	0	98.4	1.6	0.0	0.0	0.0
May	99	701	1.1	37.3	0	6.6	0	99.0	1.0	0.0	0.0	0.0
June	100	683	1.5	62.9	0	9.6	0	98.2	1.6	0.2	0.0	0.0
July	99	705	3.7	54.1	0	21.0	0	93.8	6.2	0.0	0.0	0.0
August	100	704	1.6	59.8	0	5.1	0	98.6	1.4	0.0	0.0	0.0
September	100	683	2.2	47.4	0	6.7	0	98.2	1.8	0.0	0.0	0.0
October	100	708	2.4	43.8	0	14.9	0	96.8	3.3	0.0	0.0	0.0
November	100	684	1.0	35.7	0	5.9	0	99.4	0.6	0.0	0.0	0.0
December	100	709	1.5	35.4	0	4.8	0	99.4	0.6	0.0	0.0	0.0
Annual	100	8340	2.1	76.9	0	21.0	0	97.8	2.2	0.0	0.0	0.0



Wood Buffalo Environmental Association - Buffalo Viewpoint (AMS04)
Annual Summary for the Year 2024
Sulphur Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range				
					Objective		Objective	0 - 20	21 - 60	61 - 110	111 - 170	171 - 340
January	100	709	0.7	39.9	0	4.0	0	99.6	0.4	0.0	0.0	0.0
February	100	663	0.9	21.3	0	3.4	0	99.9	0.2	0.0	0.0	0.0
March	100	707	0.7	53.3	0	12.3	0	99.2	0.9	0.0	0.0	0.0
April	100	684	0.9	58.1	0	8.8	0	99.0	1.0	0.0	0.0	0.0
May	100	710	0.5	26.8	0	3.2	0	99.6	0.4	0.0	0.0	0.0
June	100	687	1.3	29.1	0	7.5	0	99.6	0.4	0.0	0.0	0.0
July	99	705	1.4	92.5	0	15.2	0	98.6	1.1	0.3	0.0	0.0
August	100	709	1.1	75.2	0	6.3	0	99.2	0.6	0.3	0.0	0.0
September	100	684	0.4	19.6	0	2.5	0	100.0	0.0	0.0	0.0	0.0
October	100	707	0.5	21.1	0	4.3	0	99.9	0.1	0.0	0.0	0.0
November	100	686	0.3	10.9	0	1.9	0	100.0	0.0	0.0	0.0	0.0
December	100	709	0.2	3.7	0	0.7	0	100.0	0.0	0.0	0.0	0.0
Annual	100	8360	0.7	92.5	0	15.2	0	99.5	0.4	0.1	0.0	0.0



Wood Buffalo Environmental Association - Mannix (AMS05)
Annual Summary for the Year 2024
Sulphur Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range				
								0 - 20	21 - 60	61 - 110	111 - 170	171 - 340
January	100	709	2.4	38.2	0	11.7	0	98.5	1.6	0.0	0.0	0.0
February	100	662	3.9	106.5	0	20.4	0	95.5	3.9	0.6	0.0	0.0
March	100	709	2.8	61.3	0	15.1	0	97.9	2.0	0.1	0.0	0.0
April	100	684	3.1	76.1	0	22.4	0	94.3	5.6	0.2	0.0	0.0
May	88	620	2.0	44.9	0	13.1	0	97.3	2.7	0.0	0.0	0.0
June	99	682	1.4	51.4	0	8.2	0	99.4	0.6	0.0	0.0	0.0
July	100	709	2.3	61.8	0	11.4	0	97.0	2.8	0.1	0.0	0.0
August	100	708	1.3	50.8	0	6.2	0	99.2	0.9	0.0	0.0	0.0
September	100	686	1.0	37.7	0	7.9	0	99.1	0.9	0.0	0.0	0.0
October	100	709	1.9	78.4	0	14.6	0	97.6	2.0	0.4	0.0	0.0
November	100	687	1.2	40.4	0	7.7	0	99.0	1.0	0.0	0.0	0.0
December	100	708	1.0	54.5	0	4.8	0	99.6	0.4	0.0	0.0	0.0
Annual	99	8273	2.0	106.5	0	22.4	0	97.9	2.0	0.1	0.0	0.0



Wood Buffalo Environmental Association - Patricia McInnes (AMS06)
Annual Summary for the Year 2024
Sulphur Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Number of Values Exceeding	Maximum	Number of Values Exceeding	% of Data in Each Concentration Range				
				1-Hour Value	1-Hour Objective	24-Hour Value	24-Hour Objective	0 - 20	21 - 60	61 - 110	111 - 170	171 - 340
January	100	705	1.6	32.4	0	6.9	0	99.6	0.4	0.0	0.0	0.0
February	100	660	1.5	24.1	0	6.2	0	99.2	0.8	0.0	0.0	0.0
March	100	707	0.9	21.8	0	3.2	0	99.9	0.1	0.0	0.0	0.0
April	100	685	0.7	14.3	0	2.8	0	100.0	0.0	0.0	0.0	0.0
May	100	708	0.5	27.4	0	5.0	0	99.7	0.3	0.0	0.0	0.0
June	100	686	0.6	20.9	0	2.5	0	99.9	0.2	0.0	0.0	0.0
July	99	700	0.9	16.8	0	3.9	0	100.0	0.0	0.0	0.0	0.0
August	100	707	0.5	20.6	0	2.8	0	99.9	0.1	0.0	0.0	0.0
September	100	685	0.4	9.9	0	1.7	0	100.0	0.0	0.0	0.0	0.0
October	100	709	0.5	35.9	0	5.1	0	99.7	0.3	0.0	0.0	0.0
November	100	684	0.8	15.3	0	3.4	0	100.0	0.0	0.0	0.0	0.0
December	100	707	0.7	24.9	0	3.5	0	99.9	0.1	0.0	0.0	0.0
Annual	100	8343	0.8	35.9	0	6.9	0	99.8	0.2	0.0	0.0	0.0



Wood Buffalo Environmental Association - Athabasca Valley (AMS07)
Annual Summary for the Year 2024
Sulphur Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range				
								0 - 20	21 - 60	61 - 110	111 - 170	171 - 340
January	100	705	0.5	6.3	0	1.9	0	100.0	0.0	0.0	0.0	0.0
February	100	660	1.0	38.6	0	6.9	0	99.6	0.5	0.0	0.0	0.0
March	100	709	0.6	17.2	0	2.1	0	100.0	0.0	0.0	0.0	0.0
April	100	685	0.4	13.3	0	2.6	0	100.0	0.0	0.0	0.0	0.0
May	100	708	0.2	9.8	0	2.0	0	100.0	0.0	0.0	0.0	0.0
June	100	683	0.3	8.0	0	1.6	0	100.0	0.0	0.0	0.0	0.0
July	100	706	0.8	21.0	0	4.2	0	99.9	0.1	0.0	0.0	0.0
August	100	707	0.4	18.6	0	3.5	0	100.0	0.0	0.0	0.0	0.0
September	100	686	0.3	10.1	0	1.6	0	100.0	0.0	0.0	0.0	0.0
October	100	709	0.4	26.9	0	4.3	0	99.7	0.3	0.0	0.0	0.0
November	99	682	0.5	10.6	0	2.2	0	100.0	0.0	0.0	0.0	0.0
December	100	708	0.3	4.9	0	1.7	0	100.0	0.0	0.0	0.0	0.0
Annual	100	8348	0.5	38.6	0	6.9	0	99.9	0.1	0.0	0.0	0.0



**Wood Buffalo Environmental Association - Fort Chipewyan (AMS08)
Annual Summary for the Year 2024
Sulphur Dioxide (ppb) Average**

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range				
								0 - 20	21 - 60	61 - 110	111 - 170	171 - 340
January	96	679	0.5	9.2	0	3.8	0	100.0	0.0	0.0	0.0	0.0
February	99	660	0.2	9.6	0	2.2	0	100.0	0.0	0.0	0.0	0.0
March	100	708	0.4	5.8	0	2.4	0	100.0	0.0	0.0	0.0	0.0
April	100	687	0.0	1.9	0	0.2	0	100.0	0.0	0.0	0.0	0.0
May	100	709	0.0	1.6	0	0.6	0	100.0	0.0	0.0	0.0	0.0
June	100	687	0.1	3.0	0	0.8	0	100.0	0.0	0.0	0.0	0.0
July	100	710	0.2	7.0	0	1.7	0	100.0	0.0	0.0	0.0	0.0
August	100	708	0.2	2.8	0	1.0	0	100.0	0.0	0.0	0.0	0.0
September	100	687	0.1	2.2	0	0.6	0	100.0	0.0	0.0	0.0	0.0
October	100	709	0.1	4.1	0	1.9	0	100.0	0.0	0.0	0.0	0.0
November	96	657	0.2	9.2	0	1.8	0	100.0	0.0	0.0	0.0	0.0
December	92	650	0.6	11.7	0	3.7	0	100.0	0.0	0.0	0.0	0.0
Annual	99	8251	0.2	11.7	0	3.8	0	100.0	0.0	0.0	0.0	0.0



**Wood Buffalo Environmental Association - Barge Landing (AMS09)
Annual Summary for the Year 2024
Sulphur Dioxide (ppb) Average**

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range				
								0 - 20	21 - 60	61 - 110	111 - 170	171 - 340
January	100	709	0.7	12.1	0	3.9	0	100.0	0.0	0.0	0.0	0.0
February	100	663	0.6	10.7	0	2.9	0	100.0	0.0	0.0	0.0	0.0
March	100	708	2.1	52.7	0	9.0	0	98.7	1.3	0.0	0.0	0.0
April	100	686	0.6	27.9	0	4.3	0	99.9	0.2	0.0	0.0	0.0
May	100	709	0.3	25.9	0	2.2	0	99.9	0.1	0.0	0.0	0.0
June	99	681	0.6	24.8	0	5.2	0	99.9	0.2	0.0	0.0	0.0
July	100	707	0.9	34.9	0	5.2	0	99.7	0.3	0.0	0.0	0.0
August	100	708	1.2	29.5	0	5.9	0	99.6	0.4	0.0	0.0	0.0
September	100	686	0.8	27.2	0	4.1	0	99.9	0.2	0.0	0.0	0.0
October	100	709	0.4	14.6	0	1.8	0	100.0	0.0	0.0	0.0	0.0
November	100	685	0.3	10.8	0	2.2	0	100.0	0.0	0.0	0.0	0.0
December	100	709	0.8	36.3	0	5.9	0	99.7	0.3	0.0	0.0	0.0
Annual	100	8360	0.8	52.7	0	9.0	0	99.8	0.2	0.0	0.0	0.0



Wood Buffalo Environmental Association - Lower Camp (AMS11)
Annual Summary for the Year 2024
Sulphur Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range				
								0 - 20	21 - 60	61 - 110	111 - 170	171 - 340
January	100	709	1.3	33.8	0	5.6	0	99.0	1.0	0.0	0.0	0.0
February	100	662	2.1	40.5	0	9.0	0	97.4	2.6	0.0	0.0	0.0
March	100	709	3.4	104.3	0	18.6	0	95.9	3.0	1.1	0.0	0.0
April	100	686	2.9	327.3	1	20.0	0	97.2	1.6	0.9	0.2	0.2
May	100	709	1.6	181.8	1	14.0	0	98.0	1.6	0.3	0.0	0.1
June	100	686	3.4	175.6	1	20.2	0	96.5	2.6	0.4	0.3	0.2
July	97	686	2.9	111.0	0	18.5	0	96.8	2.5	0.6	0.2	0.0
August	100	708	3.8	126.6	0	14.1	0	94.8	4.5	0.6	0.1	0.0
September	100	685	2.8	97.7	0	11.4	0	97.4	2.2	0.4	0.0	0.0
October	100	708	6.9	151.0	0	49.1	1	91.2	4.8	3.0	1.0	0.0
November	100	685	3.5	168.8	0	21.7	0	94.7	4.4	0.6	0.3	0.0
December	100	709	1.8	102.6	0	10.6	0	98.7	1.0	0.3	0.0	0.0
Annual	100	8342	3.0	327.3	3	49.1	1	96.5	2.7	0.7	0.2	0.0



Wood Buffalo Environmental Association - Fort McKay South (AMS13)
Annual Summary for the Year 2024
Sulphur Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range				
								0 - 20	21 - 60	61 - 110	111 - 170	171 - 340
January	100	709	0.9	25.1	0	3.3	0	99.9	0.1	0.0	0.0	0.0
February	100	663	1.1	130.0	0	6.7	0	99.9	0.0	0.0	0.2	0.0
March	100	708	1.8	23.6	0	5.6	0	99.6	0.4	0.0	0.0	0.0
April	100	684	1.1	26.2	0	5.9	0	99.6	0.4	0.0	0.0	0.0
May	100	709	0.9	35.8	0	3.5	0	99.9	0.1	0.0	0.0	0.0
June	99	682	1.0	30.1	0	6.5	0	99.9	0.2	0.0	0.0	0.0
July	99	698	1.6	32.9	0	6.8	0	99.4	0.6	0.0	0.0	0.0
August	100	710	2.0	56.1	0	7.6	0	98.5	1.6	0.0	0.0	0.0
September	100	687	1.2	22.0	0	4.1	0	99.9	0.2	0.0	0.0	0.0
October	100	710	0.9	28.8	0	5.0	0	99.4	0.6	0.0	0.0	0.0
November	100	687	0.6	11.6	0	2.1	0	100.0	0.0	0.0	0.0	0.0
December	100	710	1.2	26.0	0	8.0	0	99.4	0.6	0.0	0.0	0.0
Annual	100	8357	1.2	130.0	0	8.0	0	99.6	0.4	0.0	0.0	0.0



Wood Buffalo Environmental Association - Anzac (AMS14)
Annual Summary for the Year 2024
Sulphur Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range				
								0 - 20	21 - 60	61 - 110	111 - 170	171 - 340
January	100	709	1.2	20.4	0	3.8	0	100.0	0.0	0.0	0.0	0.0
February	100	663	1.2	11.9	0	4.7	0	100.0	0.0	0.0	0.0	0.0
March	100	708	0.6	6.3	0	1.3	0	100.0	0.0	0.0	0.0	0.0
April	99	677	0.5	9.4	0	2.2	0	100.0	0.0	0.0	0.0	0.0
May	100	706	0.3	7.3	0	0.8	0	100.0	0.0	0.0	0.0	0.0
June	100	685	0.3	7.8	0	1.2	0	100.0	0.0	0.0	0.0	0.0
July	99	702	0.6	7.5	0	1.8	0	100.0	0.0	0.0	0.0	0.0
August	100	709	0.3	8.1	0	1.2	0	100.0	0.0	0.0	0.0	0.0
September	99	682	0.4	7.7	0	1.4	0	100.0	0.0	0.0	0.0	0.0
October	94	669	0.2	4.4	0	1.0	0	100.0	0.0	0.0	0.0	0.0
November	100	686	0.4	8.0	0	2.2	0	100.0	0.0	0.0	0.0	0.0
December	100	709	1.1	25.5	0	5.3	0	99.9	0.1	0.0	0.0	0.0
Annual	99	8305	0.6	25.5	0	5.3	0	100.0	0.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Wapasu (AMS17)
Annual Summary for the Year 2024
Sulphur Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range				
								0 - 20	21 - 60	61 - 110	111 - 170	171 - 340
January	100	709	1.0	19.4	0	5.0	0	100.0	0.0	0.0	0.0	0.0
February	100	661	1.3	20.6	0	7.8	0	99.9	0.2	0.0	0.0	0.0
March	100	709	0.5	19.8	0	5.3	0	100.0	0.0	0.0	0.0	0.0
April	100	686	0.5	16.3	0	2.7	0	100.0	0.0	0.0	0.0	0.0
May	100	710	0.3	13.6	0	1.7	0	100.0	0.0	0.0	0.0	0.0
June	94	646	0.4	43.1	0	3.8	0	99.7	0.3	0.0	0.0	0.0
July	99	703	1.1	24.0	0	4.9	0	99.7	0.3	0.0	0.0	0.0
August	100	708	0.4	28.9	0	4.2	0	99.9	0.1	0.0	0.0	0.0
September	100	685	0.7	16.7	0	4.9	0	100.0	0.0	0.0	0.0	0.0
October	100	707	0.9	17.5	0	4.6	0	100.0	0.0	0.0	0.0	0.0
November	100	685	0.6	20.4	0	5.7	0	100.0	0.0	0.0	0.0	0.0
December	100	709	1.1	23.7	0	4.5	0	99.9	0.1	0.0	0.0	0.0
Annual	99	8318	0.7	43.1	0	7.8	0	99.9	0.1	0.0	0.0	0.0



Wood Buffalo Environmental Association - Stony Mountain (AMS18)
Annual Summary for the Year 2024
Sulphur Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range				
								0 - 20	21 - 60	61 - 110	111 - 170	171 - 340
January	92	650	0.7	11.9	0	2.4	0	100.0	0.0	0.0	0.0	0.0
February	100	660	0.5	5.6	0	2.1	0	100.0	0.0	0.0	0.0	0.0
March	100	708	0.5	5.1	0	2.1	0	100.0	0.0	0.0	0.0	0.0
April	100	684	0.3	5.2	0	1.0	0	100.0	0.0	0.0	0.0	0.0
May	100	707	0.2	2.1	0	0.6	0	100.0	0.0	0.0	0.0	0.0
June	100	683	0.2	3.7	0	0.6	0	100.0	0.0	0.0	0.0	0.0
July	94	667	0.2	2.8	0	1.1	0	100.0	0.0	0.0	0.0	0.0
August	100	708	0.2	3.7	0	0.6	0	100.0	0.0	0.0	0.0	0.0
September	100	684	0.2	3.1	0	0.8	0	100.0	0.0	0.0	0.0	0.0
October	100	707	0.2	2.5	0	0.7	0	100.0	0.0	0.0	0.0	0.0
November	100	681	0.3	7.0	0	1.4	0	100.0	0.0	0.0	0.0	0.0
December	100	709	0.5	5.8	0	2.2	0	100.0	0.0	0.0	0.0	0.0
Annual	99	8248	0.3	11.9	0	2.4	0	100.0	0.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Firebag (AMS19)
Annual Summary for the Year 2024
Sulphur Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range				
								0 - 20	21 - 60	61 - 110	111 - 170	171 - 340
January	100	709	1.3	26.0	0	5.9	0	99.6	0.4	0.0	0.0	0.0
February	99	659	1.2	17.8	0	6.7	0	100.0	0.0	0.0	0.0	0.0
March	99	699	0.5	13.4	0	3.4	0	100.0	0.0	0.0	0.0	0.0
April	100	686	0.5	15.1	0	2.4	0	100.0	0.0	0.0	0.0	0.0
May	100	707	0.3	15.2	0	1.5	0	100.0	0.0	0.0	0.0	0.0
June	100	686	0.5	28.6	0	2.7	0	99.7	0.3	0.0	0.0	0.0
July	100	710	0.9	18.8	0	3.8	0	100.0	0.0	0.0	0.0	0.0
August	100	708	0.4	32.9	0	4.7	0	99.9	0.1	0.0	0.0	0.0
September	100	684	0.6	16.5	0	2.6	0	100.0	0.0	0.0	0.0	0.0
October	100	709	0.9	18.5	0	4.6	0	100.0	0.0	0.0	0.0	0.0
November	99	680	0.7	15.5	0	4.9	0	100.0	0.0	0.0	0.0	0.0
December	100	708	1.3	35.5	0	6.5	0	99.6	0.4	0.0	0.0	0.0
Annual	100	8345	0.8	35.5	0	6.7	0	99.9	0.1	0.0	0.0	0.0



**Wood Buffalo Environmental Association - Mackay River (AMS20)
Annual Summary for the Year 2024
Sulphur Dioxide (ppb) Average**

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range				
								0 - 20	21 - 60	61 - 110	111 - 170	171 - 340
January	100	709	1.1	24.0	0	4.6	0	99.6	0.4	0.0	0.0	0.0
February	100	663	0.8	27.6	0	4.7	0	99.9	0.2	0.0	0.0	0.0
March	100	709	1.6	40.8	0	9.5	0	99.2	0.9	0.0	0.0	0.0
April	100	686	0.7	13.6	0	2.9	0	100.0	0.0	0.0	0.0	0.0
May	100	710	0.6	12.0	0	2.9	0	100.0	0.0	0.0	0.0	0.0
June	100	688	0.7	37.0	0	4.3	0	99.4	0.6	0.0	0.0	0.0
July	100	709	0.8	26.8	0	4.9	0	99.6	0.4	0.0	0.0	0.0
August	100	708	0.3	10.4	0	1.8	0	100.0	0.0	0.0	0.0	0.0
September	100	686	0.2	16.1	0	2.4	0	100.0	0.0	0.0	0.0	0.0
October	100	709	0.4	11.6	0	2.8	0	100.0	0.0	0.0	0.0	0.0
November	100	687	1.1	59.5	0	13.3	0	99.3	0.7	0.0	0.0	0.0
December	100	710	1.2	33.3	0	8.6	0	98.9	1.1	0.0	0.0	0.0
Annual	100	8374	0.8	59.5	0	13.3	0	99.6	0.4	0.0	0.0	0.0



**Wood Buffalo Environmental Association - Conklin (AMS21)
Annual Summary for the Year 2024
Sulphur Dioxide (ppb) Average**

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range				
								0 - 20	21 - 60	61 - 110	111 - 170	171 - 340
January	100	709	0.5	5.9	0	1.2	0	100.0	0.0	0.0	0.0	0.0
February	100	663	0.4	6.1	0	0.9	0	100.0	0.0	0.0	0.0	0.0
March	100	707	0.5	5.2	0	1.8	0	100.0	0.0	0.0	0.0	0.0
April	100	683	0.2	3.1	0	0.7	0	100.0	0.0	0.0	0.0	0.0
May	100	708	0.2	1.8	0	0.5	0	100.0	0.0	0.0	0.0	0.0
June	100	685	0.1	2.9	0	0.5	0	100.0	0.0	0.0	0.0	0.0
July	97	690	0.2	2.3	0	0.6	0	100.0	0.0	0.0	0.0	0.0
August	99	699	0.2	2.2	0	0.5	0	100.0	0.0	0.0	0.0	0.0
September	91	626	0.1	1.3	0	0.4	0	100.0	0.0	0.0	0.0	0.0
October	100	709	0.2	5.9	0	0.6	0	100.0	0.0	0.0	0.0	0.0
November	100	686	0.3	3.4	0	1.2	0	100.0	0.0	0.0	0.0	0.0
December	100	709	0.5	6.0	0	2.1	0	100.0	0.0	0.0	0.0	0.0
Annual	99	8274	0.3	6.1	0	2.1	0	100.0	0.0	0.0	0.0	0.0



**Wood Buffalo Environmental Association - Janvier (AMS22)
Annual Summary for the Year 2024
Sulphur Dioxide (ppb) Average**

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding	Maximum 24-Hour Value	Number of Values Exceeding	% of Data in Each Concentration Range				
					1-Hour Objective		24-Hour Objective	0 - 20	21 - 60	61 - 110	111 - 170	171 - 340
January	100	708	0.7	10.3	0	4.6	0	100.0	0.0	0.0	0.0	0.0
February	100	663	0.4	5.0	0	1.3	0	100.0	0.0	0.0	0.0	0.0
March	95	673	0.4	2.8	0	1.2	0	100.0	0.0	0.0	0.0	0.0
April	100	685	0.2	2.9	0	1.0	0	100.0	0.0	0.0	0.0	0.0
May	100	708	0.1	1.7	0	0.3	0	100.0	0.0	0.0	0.0	0.0
June	100	685	0.2	2.6	0	0.6	0	100.0	0.0	0.0	0.0	0.0
July	100	709	0.2	1.9	0	0.6	0	100.0	0.0	0.0	0.0	0.0
August	100	707	0.1	2.9	0	0.5	0	100.0	0.0	0.0	0.0	0.0
September	100	685	0.1	2.5	0	0.4	0	100.0	0.0	0.0	0.0	0.0
October	100	707	0.1	3.0	0	0.4	0	100.0	0.0	0.0	0.0	0.0
November	100	685	0.3	7.5	0	1.7	0	100.0	0.0	0.0	0.0	0.0
December	100	708	0.5	8.7	0	2.2	0	100.0	0.0	0.0	0.0	0.0
Annual	100	8323	0.3	10.3	0	4.6	0	100.0	0.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Fort Hills (AMS23)
Annual Summary for the Year 2024
Sulphur Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range				
								0 - 20	21 - 60	61 - 110	111 - 170	171 - 340
January	100	710	0.8	20.8	0	3.6	0	99.9	0.1	0.0	0.0	0.0
February	100	664	0.6	15.2	0	2.6	0	100.0	0.0	0.0	0.0	0.0
March	100	710	1.9	39.7	0	9.9	0	98.2	1.8	0.0	0.0	0.0
April	100	686	0.6	23.9	0	4.1	0	99.9	0.2	0.0	0.0	0.0
May	99	702	0.4	11.6	0	2.2	0	100.0	0.0	0.0	0.0	0.0
June	100	686	0.4	14.7	0	2.5	0	100.0	0.0	0.0	0.0	0.0
July	99	706	0.9	23.8	0	6.2	0	99.4	0.6	0.0	0.0	0.0
August	100	708	1.0	28.5	0	5.9	0	99.9	0.1	0.0	0.0	0.0
September	99	683	0.8	24.8	0	4.3	0	99.9	0.2	0.0	0.0	0.0
October	100	708	0.7	20.4	0	4.5	0	100.0	0.0	0.0	0.0	0.0
November	100	686	0.5	11.7	0	2.2	0	100.0	0.0	0.0	0.0	0.0
December	100	708	1.3	34.5	0	6.3	0	99.2	0.9	0.0	0.0	0.0
Annual	100	8357	0.8	39.7	0	9.9	0	99.7	0.3	0.0	0.0	0.0



**Wood Buffalo Environmental Association - Waskow ohci Pimatisiwin (AMS25)
Annual Summary for the Year 2024
Sulphur Dioxide (ppb) Average**

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range				
								0 - 20	21 - 60	61 - 110	111 - 170	171 - 340
January	100	709	0.8	20.0	0	2.8	0	100.0	0.0	0.0	0.0	0.0
February	100	663	0.7	15.6	0	2.3	0	100.0	0.0	0.0	0.0	0.0
March	100	708	1.9	35.8	0	7.5	0	98.6	1.4	0.0	0.0	0.0
April	100	686	0.7	33.9	0	4.9	0	99.6	0.4	0.0	0.0	0.0
May	95	675	0.4	28.0	0	2.4	0	99.9	0.2	0.0	0.0	0.0
June	99	681	0.7	21.5	0	4.9	0	99.9	0.2	0.0	0.0	0.0
July	99	705	2.4	26.5	0	6.4	0	99.6	0.4	0.0	0.0	0.0
August	100	709	1.4	50.4	0	6.0	0	99.7	0.3	0.0	0.0	0.0
September	100	687	0.8	18.9	0	3.9	0	100.0	0.0	0.0	0.0	0.0
October	100	709	0.6	21.2	0	4.3	0	99.9	0.1	0.0	0.0	0.0
November	100	686	0.3	11.4	0	1.1	0	100.0	0.0	0.0	0.0	0.0
December	100	710	0.9	45.2	0	7.5	0	99.6	0.4	0.0	0.0	0.0
Annual	99	8328	1.0	50.4	0	7.5	0	99.7	0.3	0.0	0.0	0.0



Wood Buffalo Environmental Association - Christina Lake (AMS26)
Annual Summary for the Year 2024
Sulphur Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range				
								0 - 20	21 - 60	61 - 110	111 - 170	171 - 340
January	100	709	1.1	13.7	0	3.2	0	100.0	0.0	0.0	0.0	0.0
February	92	607	0.8	10.8	0	2.2	0	100.0	0.0	0.0	0.0	0.0
March	100	709	1.0	19.5	0	4.4	0	100.0	0.0	0.0	0.0	0.0
April	100	686	0.7	17.2	0	5.3	0	100.0	0.0	0.0	0.0	0.0
May	100	709	0.6	15.5	0	4.0	0	100.0	0.0	0.0	0.0	0.0
June	100	686	0.7	12.8	0	3.8	0	100.0	0.0	0.0	0.0	0.0
July	100	709	0.8	7.6	0	3.1	0	100.0	0.0	0.0	0.0	0.0
August	96	683	0.6	10.3	0	3.6	0	100.0	0.0	0.0	0.0	0.0
September	100	686	0.6	18.7	0	3.6	0	100.0	0.0	0.0	0.0	0.0
October	100	710	0.6	17.4	0	4.2	0	100.0	0.0	0.0	0.0	0.0
November	100	123	0.3	3.5	0	0.9	0	100.0	0.0	0.0	0.0	0.0
Annual	99	7017	0.7	19.5	0	5.3	0	100.0	0.0	0.0	0.0	0.0



**Wood Buffalo Environmental Association - Jackfish 2/3 (AMS27)
Annual Summary for the Year 2024
Sulphur Dioxide (ppb) Average**

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range				
					Objective		Objective	0 - 20	21 - 60	61 - 110	111 - 170	171 - 340
January	92	650	0.8	11.4	0	2.6	0	100.0	0.0	0.0	0.0	0.0
February	97	639	0.7	11.3	0	1.8	0	100.0	0.0	0.0	0.0	0.0
March	100	710	0.8	12.1	0	2.5	0	100.0	0.0	0.0	0.0	0.0
April	99	682	0.5	10.5	0	2.2	0	100.0	0.0	0.0	0.0	0.0
May	100	710	0.4	10.1	0	2.5	0	100.0	0.0	0.0	0.0	0.0
June	100	686	0.4	10.5	0	1.3	0	100.0	0.0	0.0	0.0	0.0
July	99	704	0.6	21.9	0	3.3	0	99.9	0.1	0.0	0.0	0.0
August	100	707	0.5	8.1	0	2.2	0	100.0	0.0	0.0	0.0	0.0
September	100	684	0.5	8.6	0	2.3	0	100.0	0.0	0.0	0.0	0.0
October	100	708	0.4	8.0	0	3.2	0	100.0	0.0	0.0	0.0	0.0
November	100	683	0.7	13.3	0	5.1	0	100.0	0.0	0.0	0.0	0.0
December	100	706	0.7	13.8	0	1.6	0	100.0	0.0	0.0	0.0	0.0
Annual	99	8269	0.6	21.9	0	5.1	0	100.0	0.0	0.0	0.0	0.0



**Wood Buffalo Environmental Association - Surmont 2 (AMS29)
Annual Summary for the Year 2024
Sulphur Dioxide (ppb) Average**

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range				
					Objective		Objective	0 - 20	21 - 60	61 - 110	111 - 170	171 - 340
January	91	643	0.9	12.9	0	2.9	0	100.0	0.0	0.0	0.0	0.0
February	99	658	0.6	8.9	0	2.3	0	100.0	0.0	0.0	0.0	0.0
March	99	704	0.4	12.0	0	1.5	0	100.0	0.0	0.0	0.0	0.0
April	100	683	0.3	5.7	0	1.3	0	100.0	0.0	0.0	0.0	0.0
May	100	709	0.1	2.1	0	0.4	0	100.0	0.0	0.0	0.0	0.0
June	100	684	0.3	5.5	0	0.8	0	100.0	0.0	0.0	0.0	0.0
July	100	709	0.4	7.7	0	1.2	0	100.0	0.0	0.0	0.0	0.0
August	100	707	0.3	5.1	0	0.9	0	100.0	0.0	0.0	0.0	0.0
September	100	684	0.3	6.4	0	1.1	0	100.0	0.0	0.0	0.0	0.0
October	99	705	0.3	4.5	0	0.7	0	100.0	0.0	0.0	0.0	0.0
November	100	686	0.4	6.7	0	2.1	0	100.0	0.0	0.0	0.0	0.0
December	100	707	0.9	11.5	0	5.0	0	100.0	0.0	0.0	0.0	0.0
Annual	99	8279	0.4	12.9	0	5.0	0	100.0	0.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Ells River (AMS30)
Annual Summary for the Year 2024
Sulphur Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding	Maximum 24-Hour Value	Number of Values Exceeding	% of Data in Each Concentration Range				
					1-Hour Objective		24-Hour Objective	0 - 20	21 - 60	61 - 110	111 - 170	171 - 340
January	100	709	0.4	13.5	0	2.5	0	100.0	0.0	0.0	0.0	0.0
February	100	663	0.6	17.3	0	3.1	0	100.0	0.0	0.0	0.0	0.0
March	100	708	1.8	31.3	0	10.1	0	97.5	2.5	0.0	0.0	0.0
April	100	684	0.7	21.4	0	4.5	0	99.9	0.2	0.0	0.0	0.0
May	100	707	0.6	17.1	0	3.7	0	100.0	0.0	0.0	0.0	0.0
June	99	679	0.3	7.8	0	2.2	0	100.0	0.0	0.0	0.0	0.0
July	99	705	0.7	28.9	0	5.4	0	99.7	0.3	0.0	0.0	0.0
August	100	706	1.1	49.8	0	10.8	0	99.2	0.9	0.0	0.0	0.0
September	100	686	0.6	51.5	0	6.3	0	99.9	0.2	0.0	0.0	0.0
October	100	709	0.6	23.4	0	7.3	0	99.7	0.3	0.0	0.0	0.0
November	100	684	0.3	11.3	0	2.8	0	100.0	0.0	0.0	0.0	0.0
December	100	709	0.7	30.8	0	3.8	0	99.7	0.3	0.0	0.0	0.0
Annual	100	8349	0.7	51.5	0	10.8	0	99.6	0.4	0.0	0.0	0.0



Wood Buffalo Environmental Association - Monday Creek (AMS33)
Annual Summary for the Year 2024
Sulphur Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range				
								0 - 20	21 - 60	61 - 110	111 - 170	171 - 340
November	100	535	0.5	6.7	0	1.9	0	100.0	0.0	0.0	0.0	0.0
December	100	708	0.9	15.2	0	5.4	0	100.0	0.0	0.0	0.0	0.0
Annual	100	1243	0.7	15.2	0	5.4	0	100.0	0.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Leismer (AMS501)
Annual Summary for the Year 2024
Sulphur Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range				
								0 - 20	21 - 60	61 - 110	111 - 170	171 - 340
January	100	708	1.2	20.6	0	5.3	0	99.9	0.1	0.0	0.0	0.0
February	99	660	1.0	31.5	0	4.0	0	99.9	0.2	0.0	0.0	0.0
March	100	709	0.7	18.5	0	4.4	0	100.0	0.0	0.0	0.0	0.0
Annual	100	2077	1.0	31.5	0	5.3	0	99.9	0.1	0.0	0.0	0.0



Wood Buffalo Environmental Association - Sawbones Bay (AMS505)
Annual Summary for the Year 2024
Sulphur Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range				
								0 - 20	21 - 60	61 - 110	111 - 170	171 - 340
January	100	709	1.2	14.6	0	3.8	0	100.0	0.0	0.0	0.0	0.0
February	100	663	1.6	18.3	0	7.4	0	100.0	0.0	0.0	0.0	0.0
March	100	707	0.6	14.8	0	2.9	0	100.0	0.0	0.0	0.0	0.0
April	100	687	0.6	15.9	0	2.6	0	100.0	0.0	0.0	0.0	0.0
May	100	709	0.6	11.7	0	4.5	0	100.0	0.0	0.0	0.0	0.0
June	88	608	0.3	7.0	0	1.3	0	100.0	0.0	0.0	0.0	0.0
Annual	98	4083	0.8	18.3	0	7.4	0	100.0	0.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Jackfish 1 (AMS506)
Annual Summary for the Year 2024
Sulphur Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range				
								0 - 20	21 - 60	61 - 110	111 - 170	171 - 340
July	99	704	0.7	7.3	0	2.1	0	100.0	0.0	0.0	0.0	0.0
August	100	709	0.6	14.0	0	4.1	0	100.0	0.0	0.0	0.0	0.0
September	100	686	0.6	22.7	0	3.1	0	99.9	0.2	0.0	0.0	0.0
October	100	710	0.5	12.6	0	3.9	0	100.0	0.0	0.0	0.0	0.0
November	99	682	0.6	15.1	0	4.9	0	100.0	0.0	0.0	0.0	0.0
December	100	708	0.7	10.7	0	4.0	0	100.0	0.0	0.0	0.0	0.0
Annual	100	4199	0.6	22.7	0	4.9	0	100.0	0.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Kirby South (AMS507)
Annual Summary for the Year 2024
Sulphur Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range				
								0 - 20	21 - 60	61 - 110	111 - 170	171 - 340
January	97	685	0.9	12.4	0	3.3	0	100.0	0.0	0.0	0.0	0.0
February	97	639	0.8	12.0	0	2.3	0	100.0	0.0	0.0	0.0	0.0
March	100	707	0.5	8.2	0	2.0	0	100.0	0.0	0.0	0.0	0.0
April	99	678	0.4	5.8	0	0.9	0	100.0	0.0	0.0	0.0	0.0
May	97	688	0.5	10.0	0	4.1	0	100.0	0.0	0.0	0.0	0.0
June	100	584	0.2	7.8	0	0.7	0	100.0	0.0	0.0	0.0	0.0
Annual	98	3981	0.5	12.4	0	4.1	0	100.0	0.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Kirby North (AMS508)
Annual Summary for the Year 2024
Sulphur Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range				
								0 - 20	21 - 60	61 - 110	111 - 170	171 - 340
July	100	535	0.5	7.1	0	2.2	0	100.0	0.0	0.0	0.0	0.0
August	100	708	0.3	6.4	0	1.5	0	100.0	0.0	0.0	0.0	0.0
September	100	683	0.6	8.6	0	2.5	0	100.0	0.0	0.0	0.0	0.0
October	100	708	0.3	2.9	0	0.9	0	100.0	0.0	0.0	0.0	0.0
November	100	684	0.5	5.7	0	2.2	0	100.0	0.0	0.0	0.0	0.0
December	99	699	0.5	4.2	0	1.5	0	100.0	0.0	0.0	0.0	0.0
Annual	100	4017	0.4	8.6	0	2.5	0	100.0	0.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Blackgold (AMS511)
Annual Summary for the Year 2024
Sulphur Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range				
								0 - 20	21 - 60	61 - 110	111 - 170	171 - 340
January	91	644	1.2	19.2	0	4.9	0	100.0	0.0	0.0	0.0	0.0
February	93	613	1.3	18.1	0	4.5	0	100.0	0.0	0.0	0.0	0.0
March	100	709	1.2	14.3	0	4.6	0	100.0	0.0	0.0	0.0	0.0
Annual	95	1966	1.2	19.2	0	4.9	0	100.0	0.0	0.0	0.0	0.0



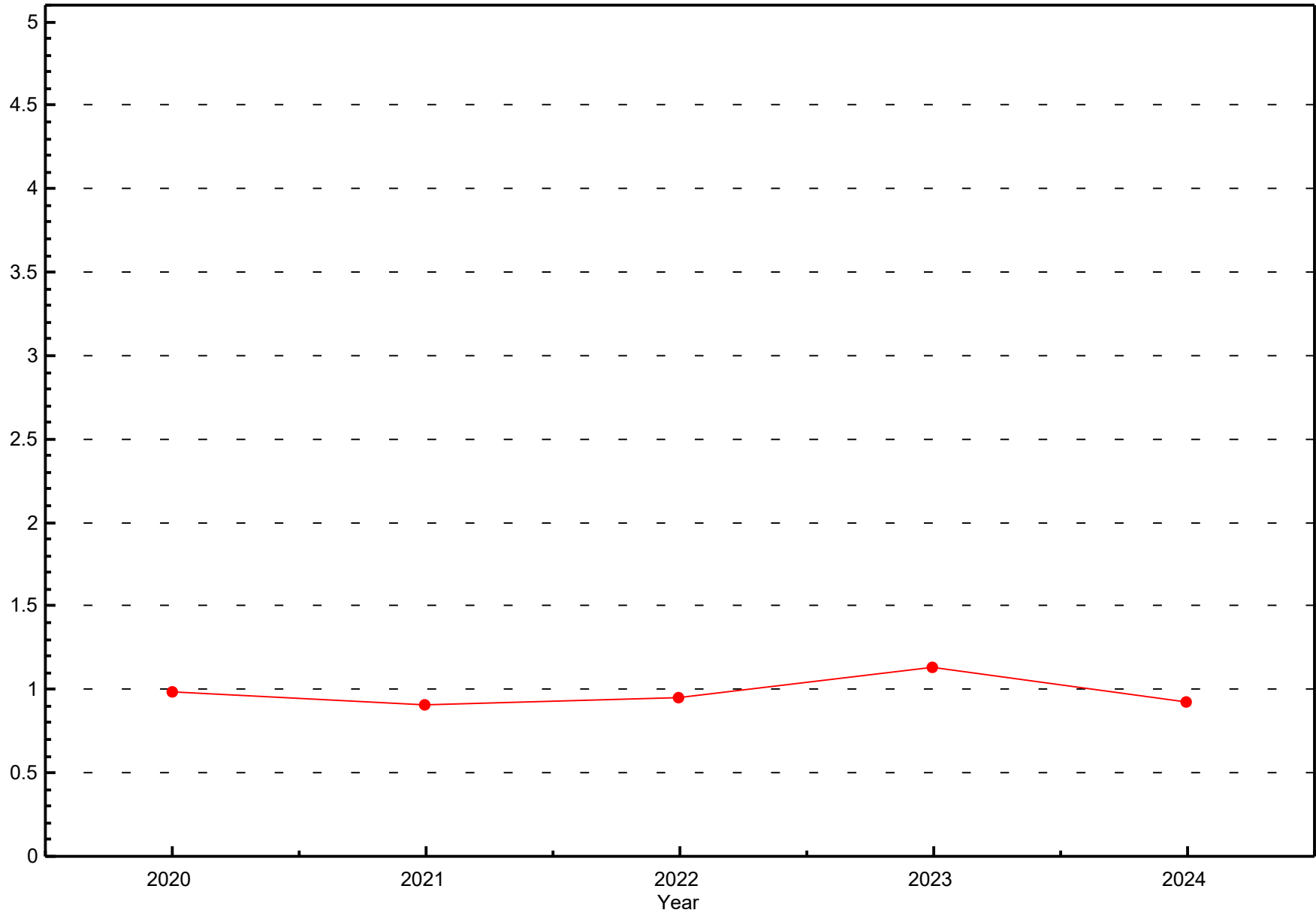
Wood Buffalo Environmental Association - Hangingstone Expansion (AMS512)
Annual Summary for the Year 2024
Sulphur Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range				
								0 - 20	21 - 60	61 - 110	111 - 170	171 - 340
July	97	684	2.2	73.2	0	21.0	0	97.5	2.3	0.2	0.0	0.0
August	100	710	1.1	28.2	0	7.4	0	99.6	0.4	0.0	0.0	0.0
September	100	686	3.3	115.4	0	13.9	0	95.8	3.5	0.6	0.2	0.0
October	97	691	4.9	134.2	0	26.1	0	92.3	6.2	1.2	0.3	0.0
November	100	686	2.9	168.5	0	28.6	0	97.2	1.8	0.9	0.2	0.0
December	100	707	5.7	158.8	0	33.9	0	92.5	4.5	2.3	0.7	0.0
Annual	99	4164	3.3	168.5	0	33.9	0	95.8	3.1	0.8	0.2	0.0



Yearly Averages

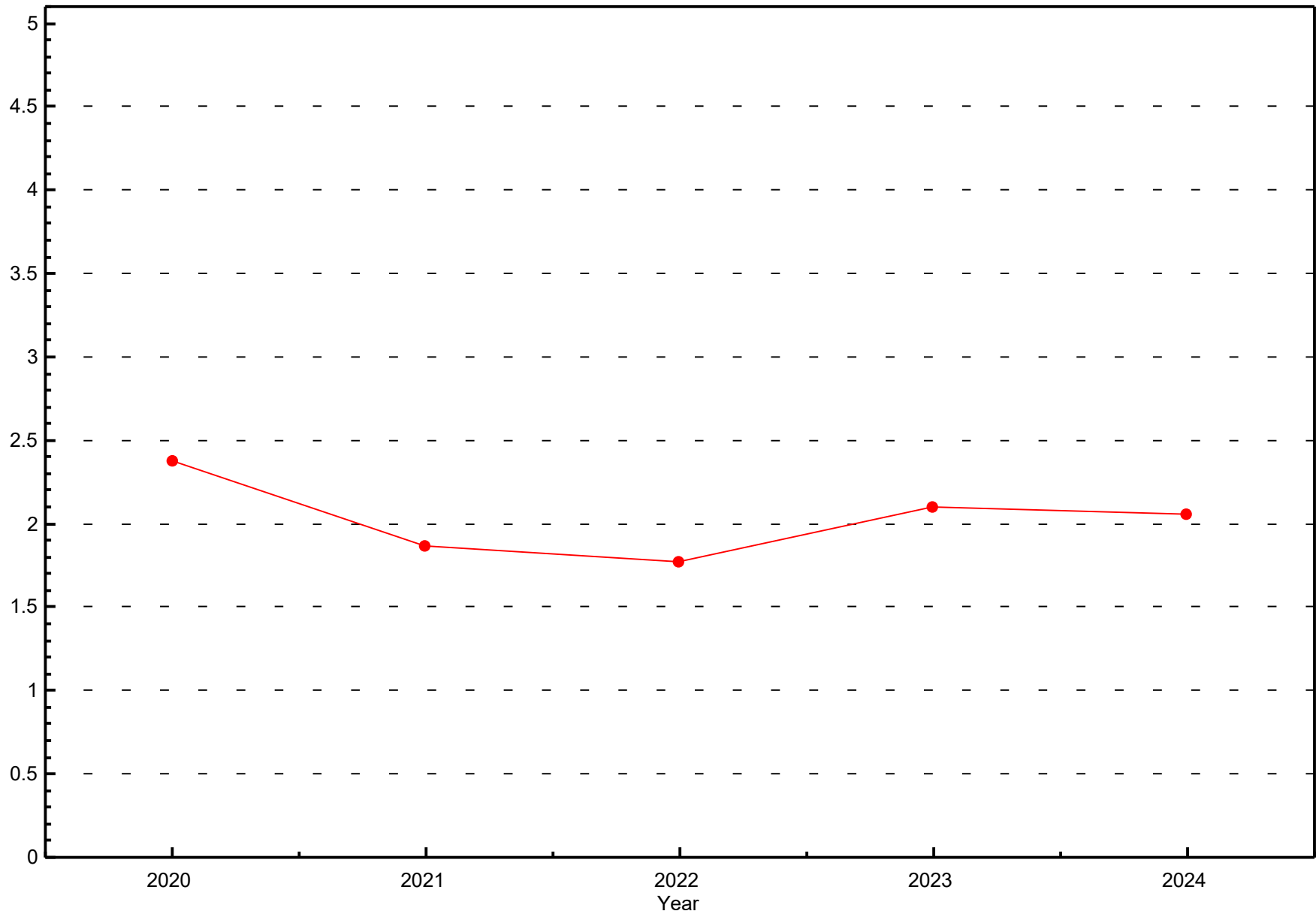
Sulphur Dioxide (SO₂) - ppb
Fort McKay - Bertha Ganter (2020 to 2024)





Yearly Averages

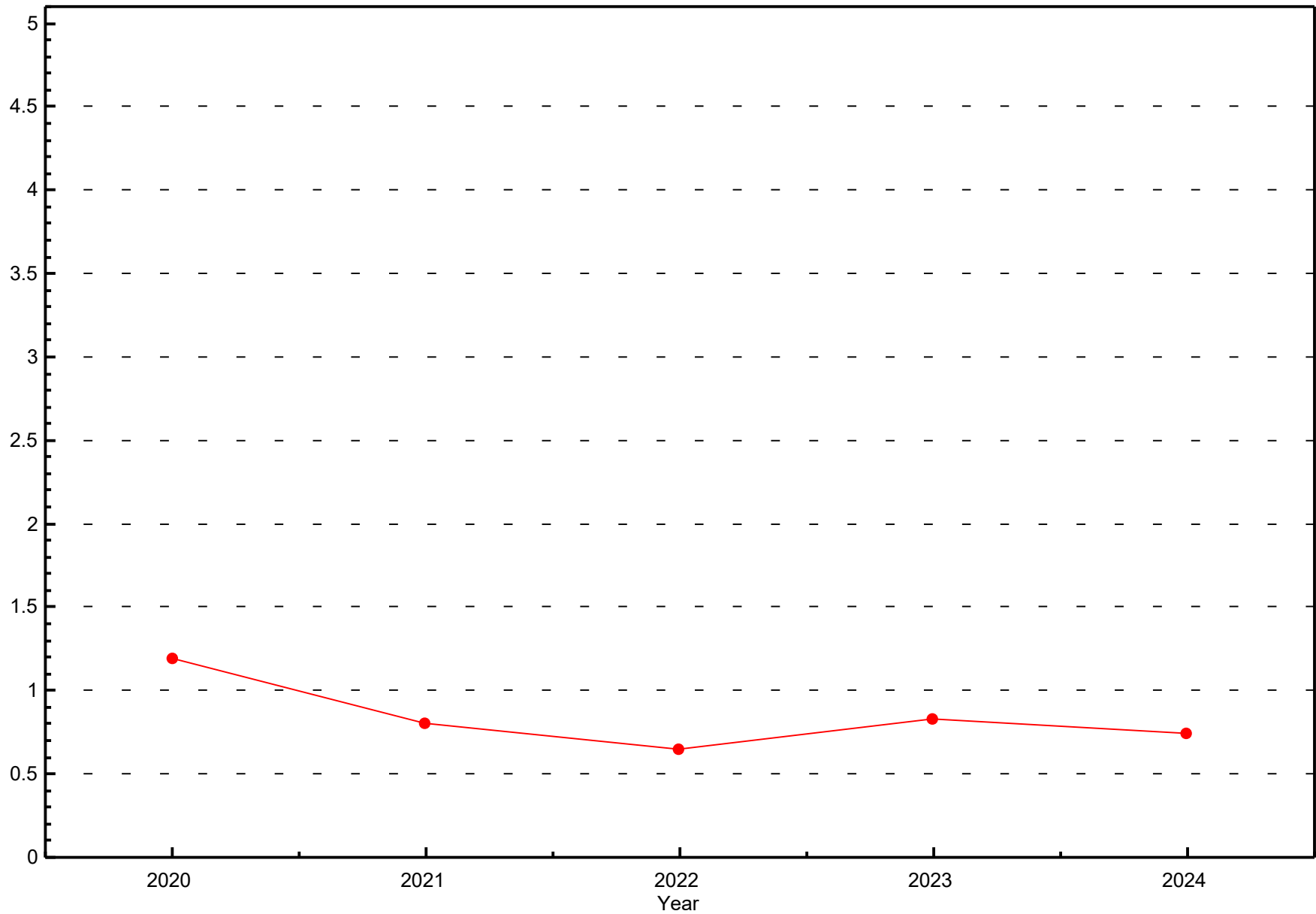
Sulphur Dioxide (SO₂) - ppb
Mildred Lake (2020 to 2024)





Yearly Averages

Sulphur Dioxide (SO₂) - ppb
Buffalo Viewpoint (2020 to 2024)

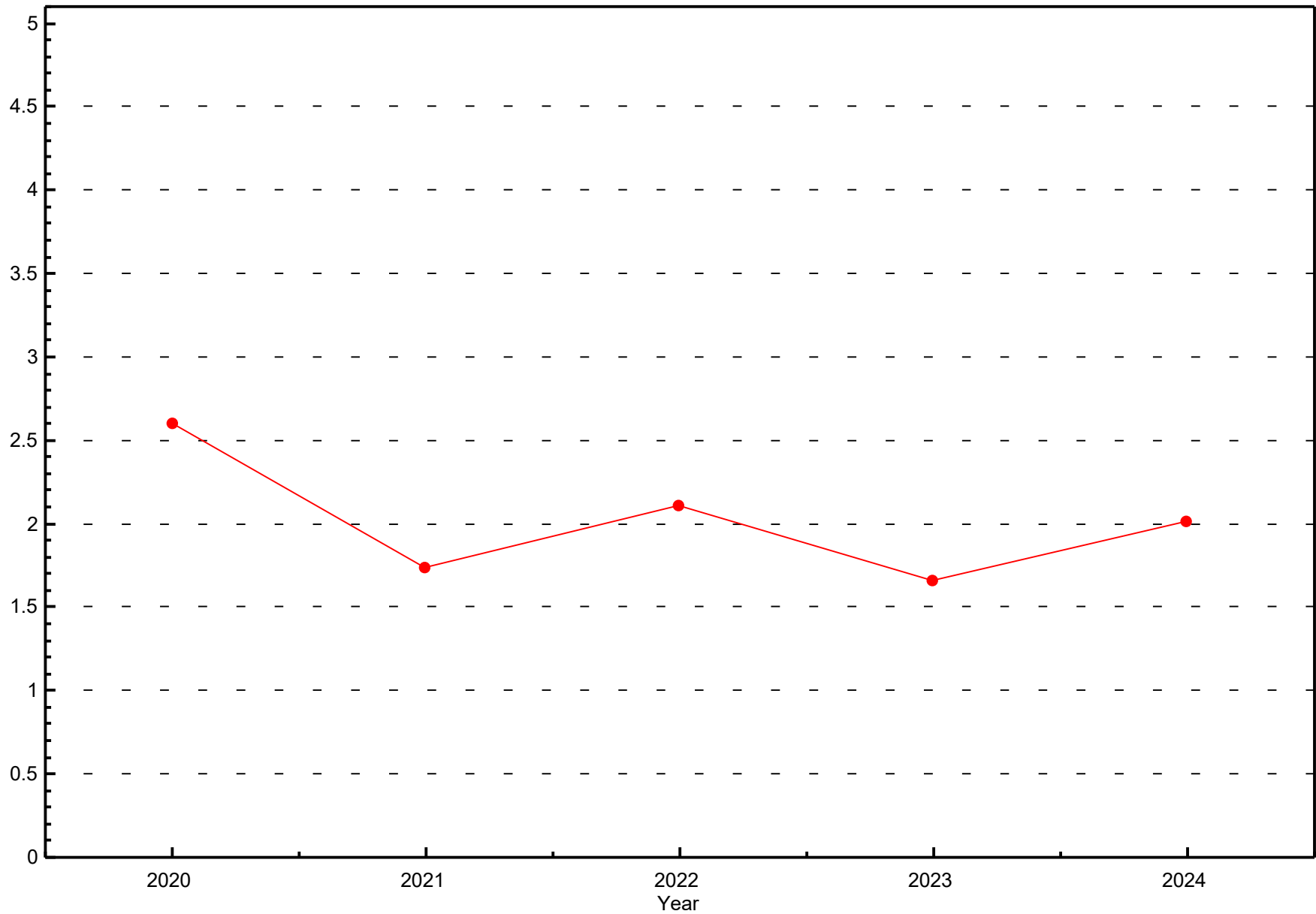




Yearly Averages

Sulphur Dioxide (SO₂) - ppb

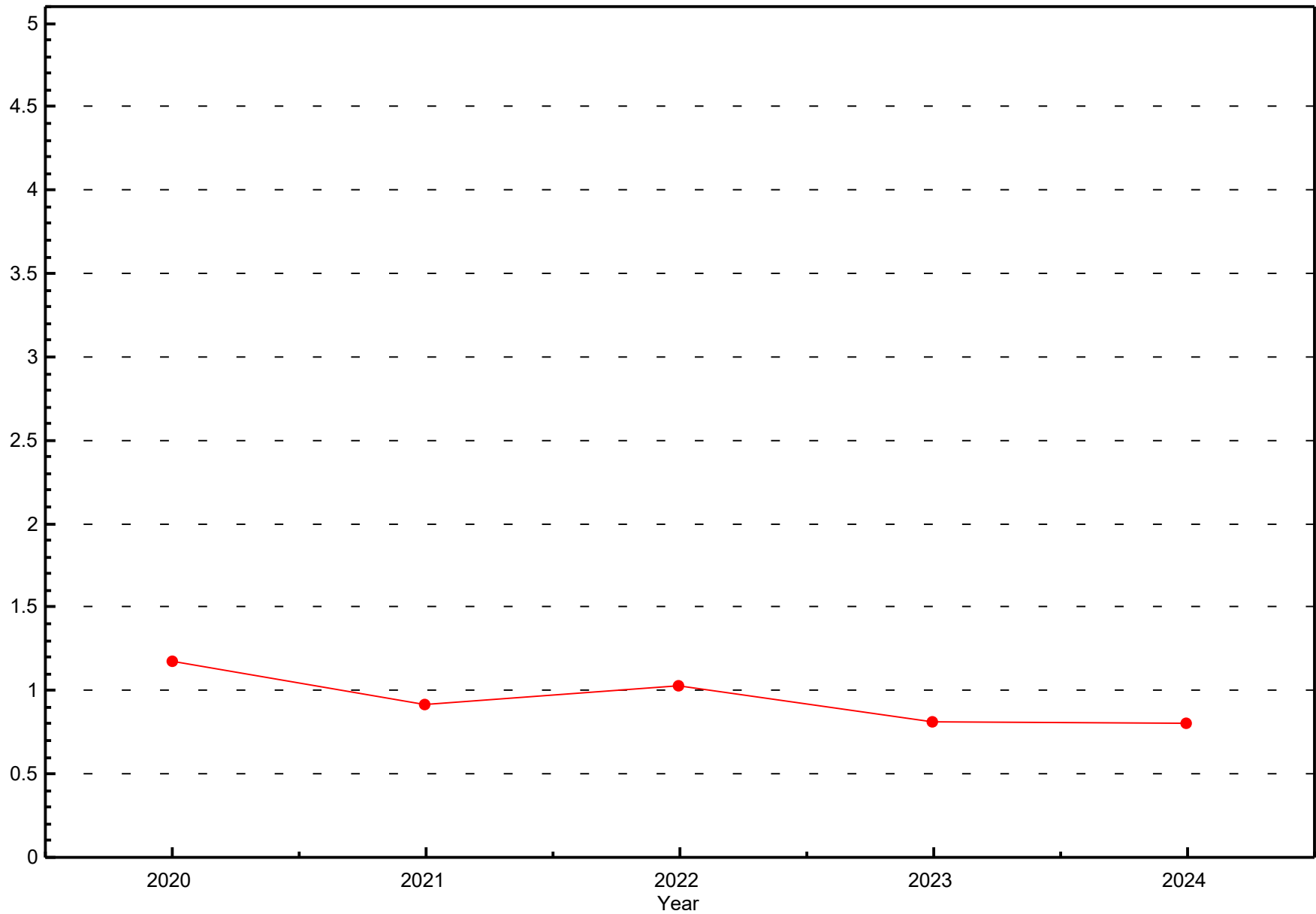
Mannix (2020 to 2024)





Yearly Averages

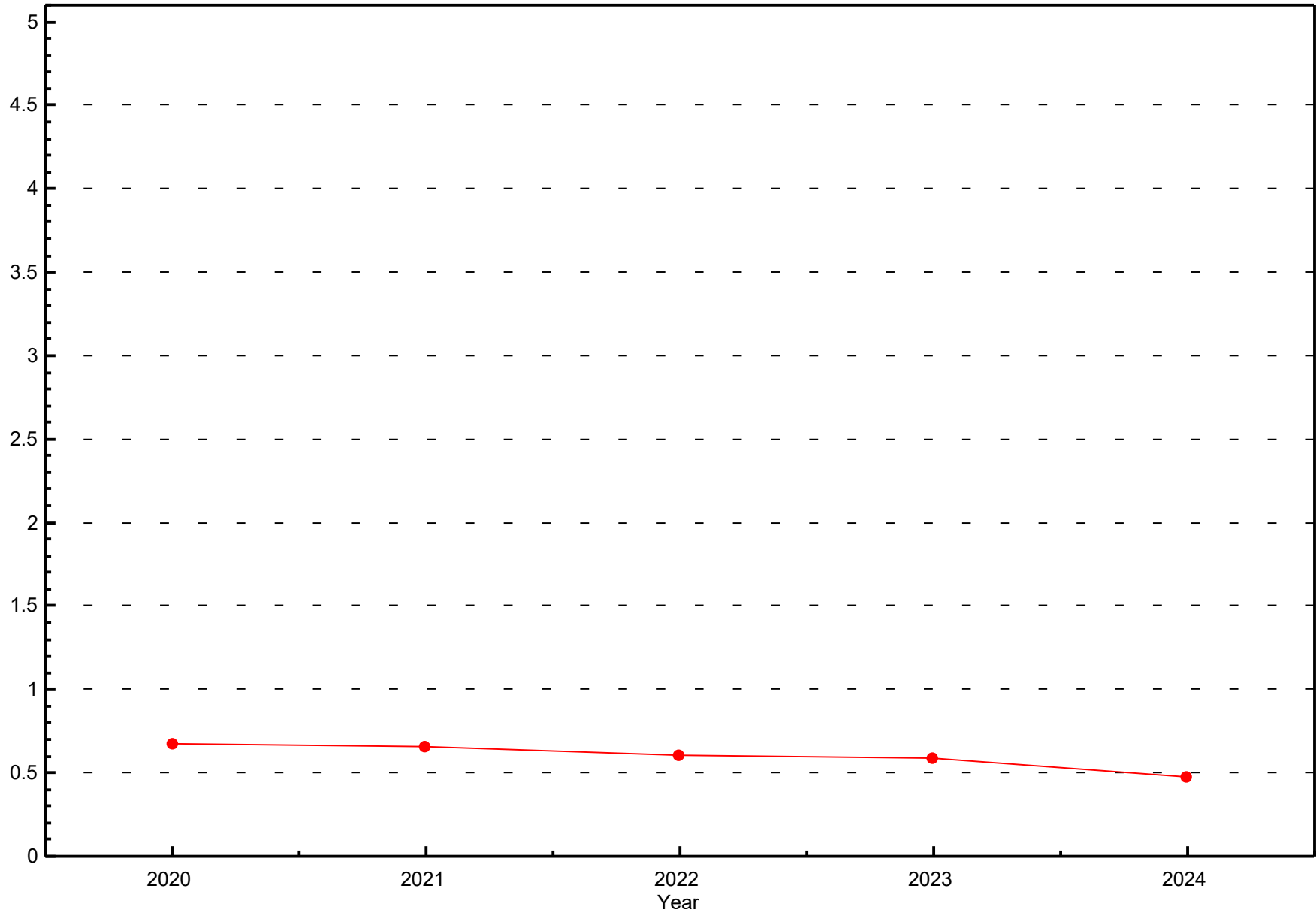
Sulphur Dioxide (SO₂) - ppb
Patricia McInnes (2020 to 2024)





Yearly Averages

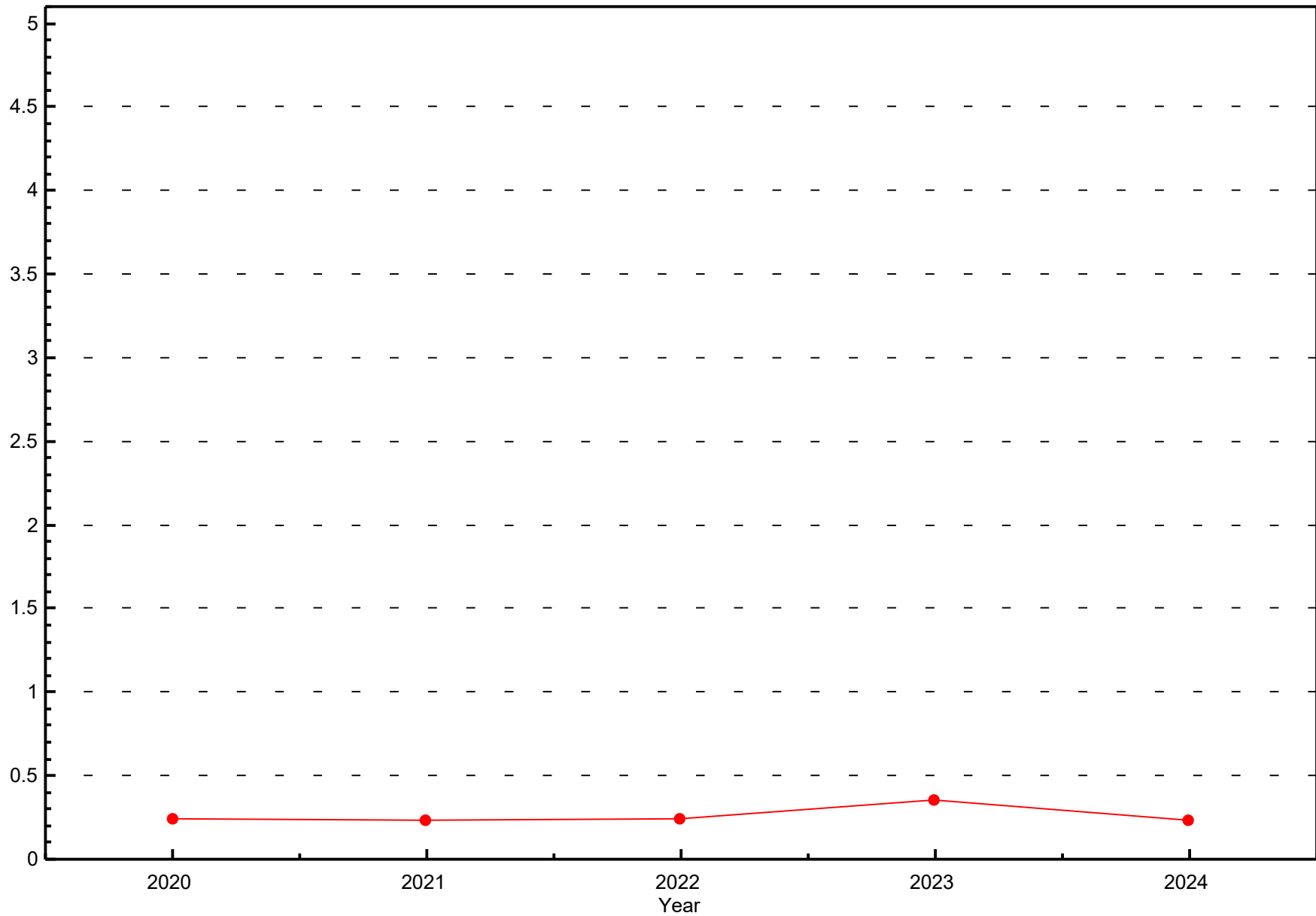
Sulphur Dioxide (SO₂) - ppb
Athabasca Valley (2020 to 2024)





Yearly Averages

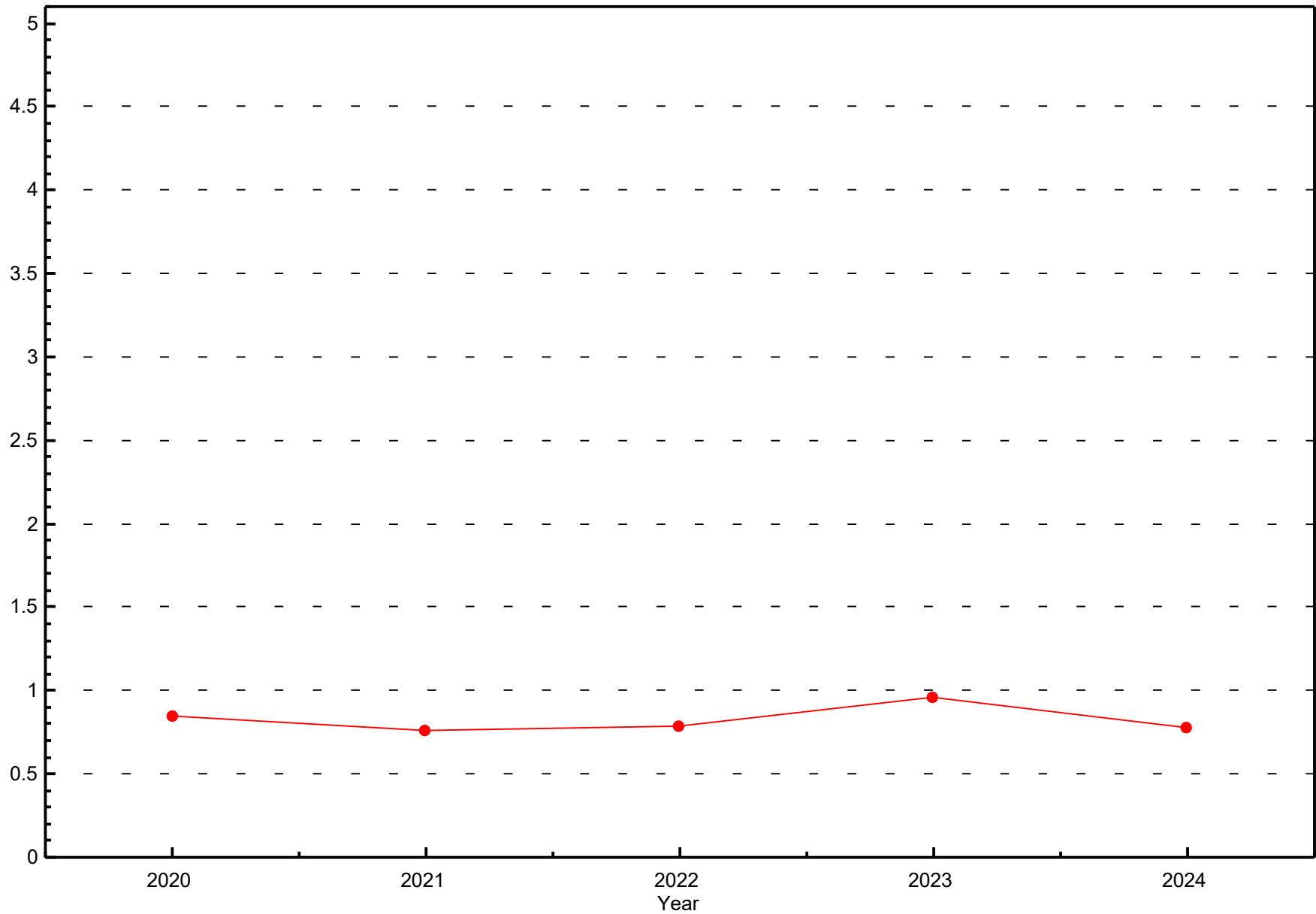
Sulphur Dioxide (SO₂) - ppb
Fort Chipewyan (2020 to 2024)





Yearly Averages

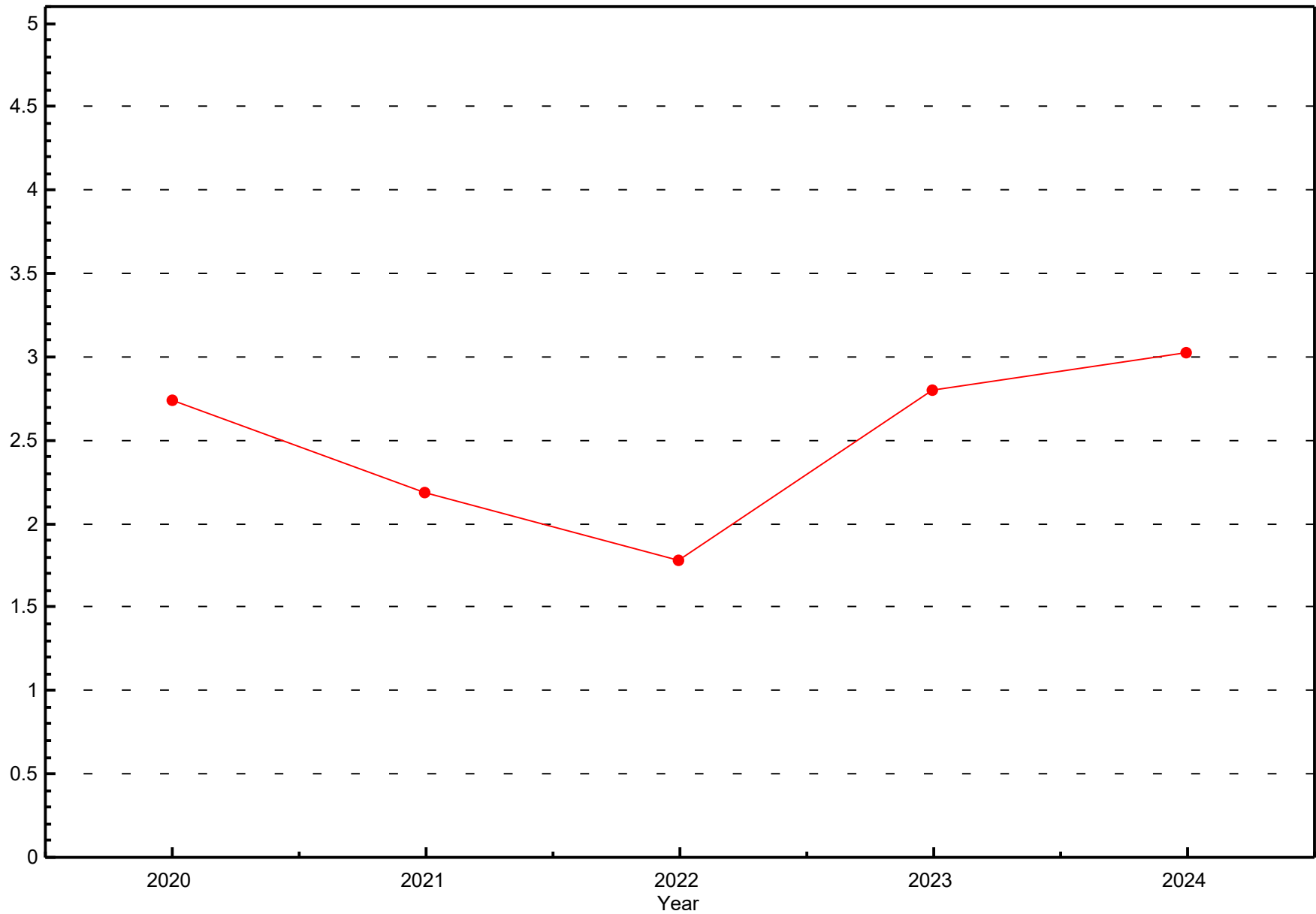
Sulphur Dioxide (SO₂) - ppb
Barge Landing (2020 to 2024)





Yearly Averages

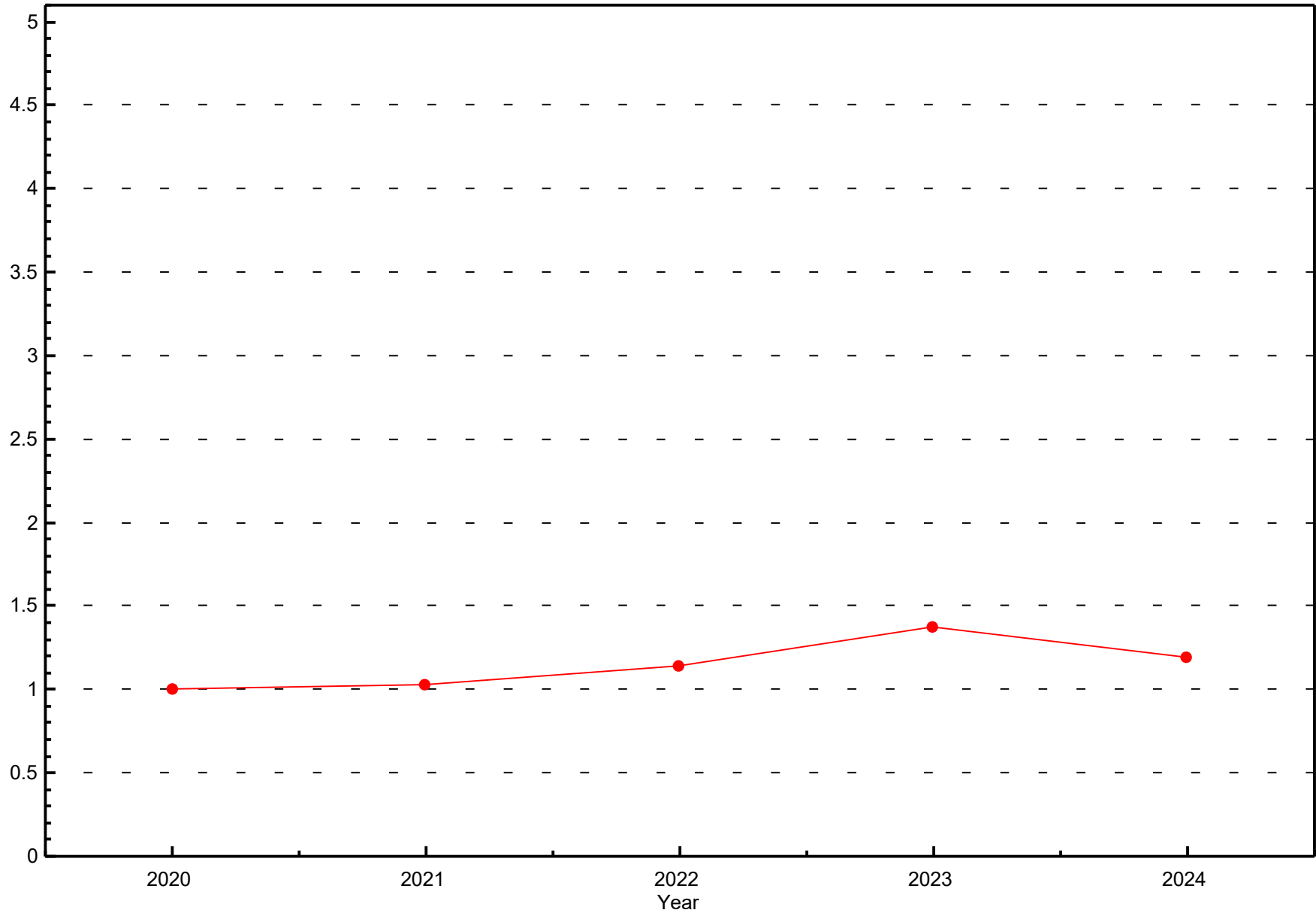
Sulphur Dioxide (SO₂) - ppb
Lower Camp (2020 to 2024)





Yearly Averages

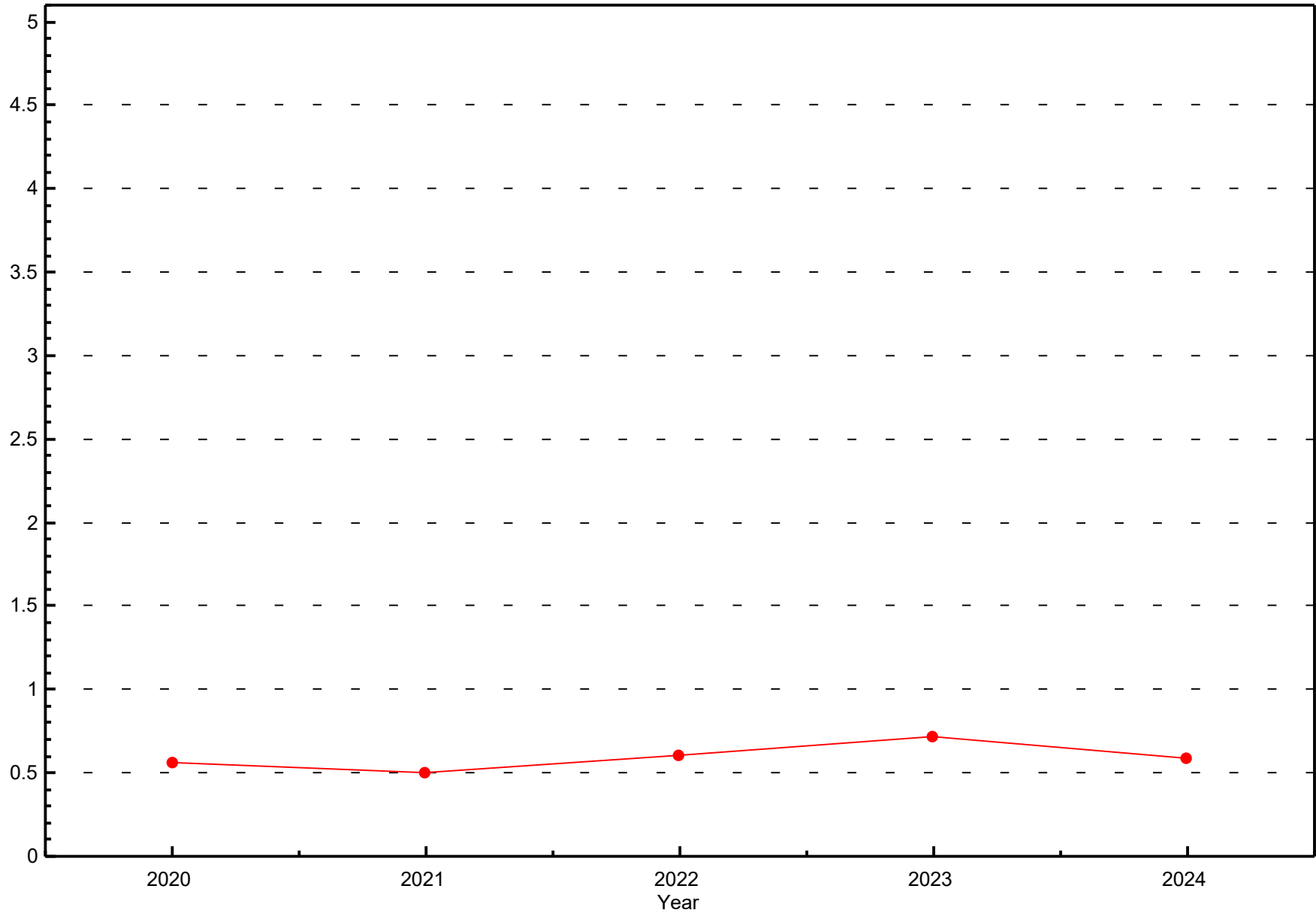
Sulphur Dioxide (SO₂) - ppb
Fort McKay South (2020 to 2024)





Yearly Averages

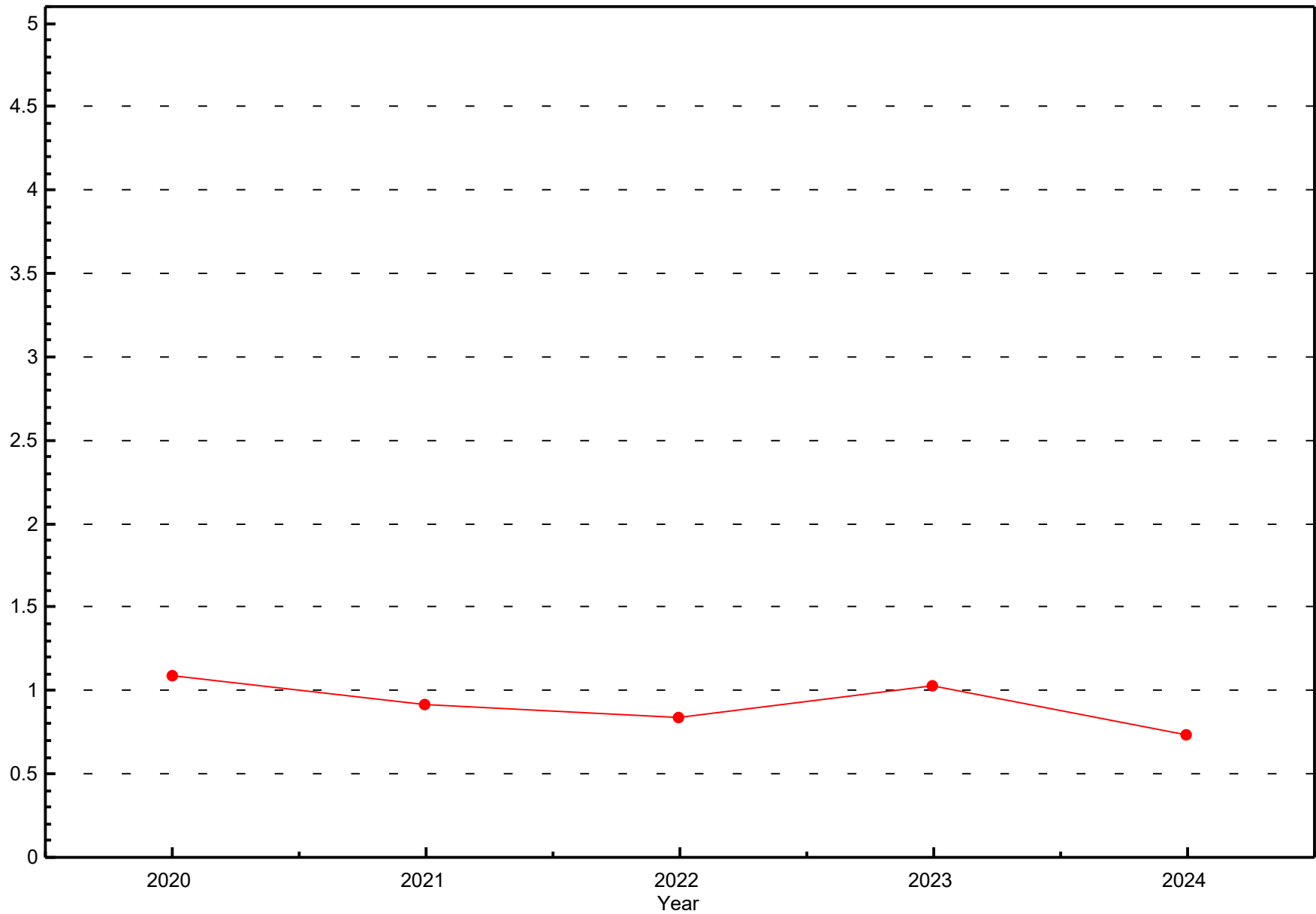
Sulphur Dioxide (SO₂) - ppb
Anzac (2020 to 2024)





Yearly Averages

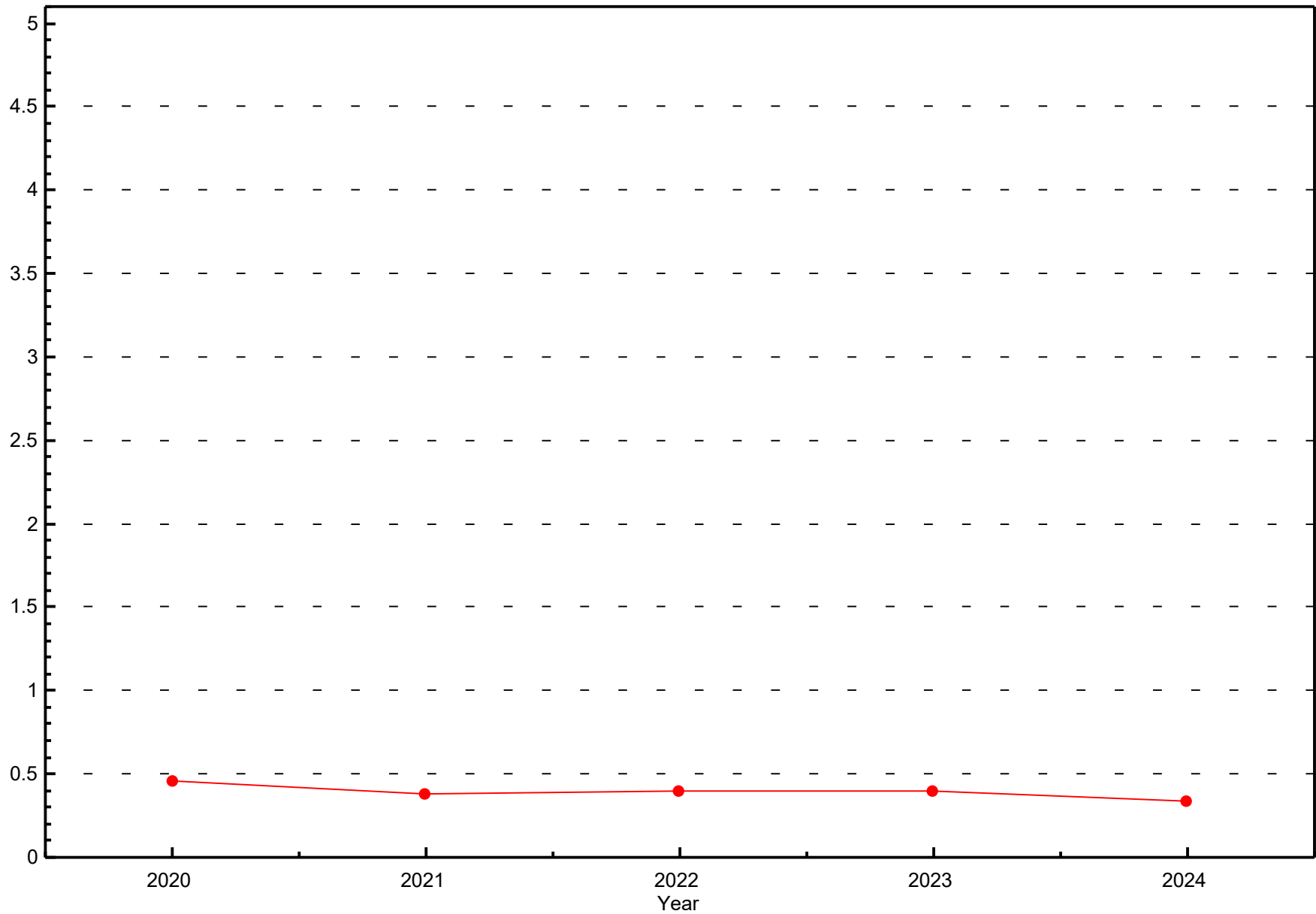
Sulphur Dioxide (SO₂) - ppb
Wapasu (2020 to 2024)





Yearly Averages

Sulphur Dioxide (SO₂) - ppb
Stony Mountain (2020 to 2024)

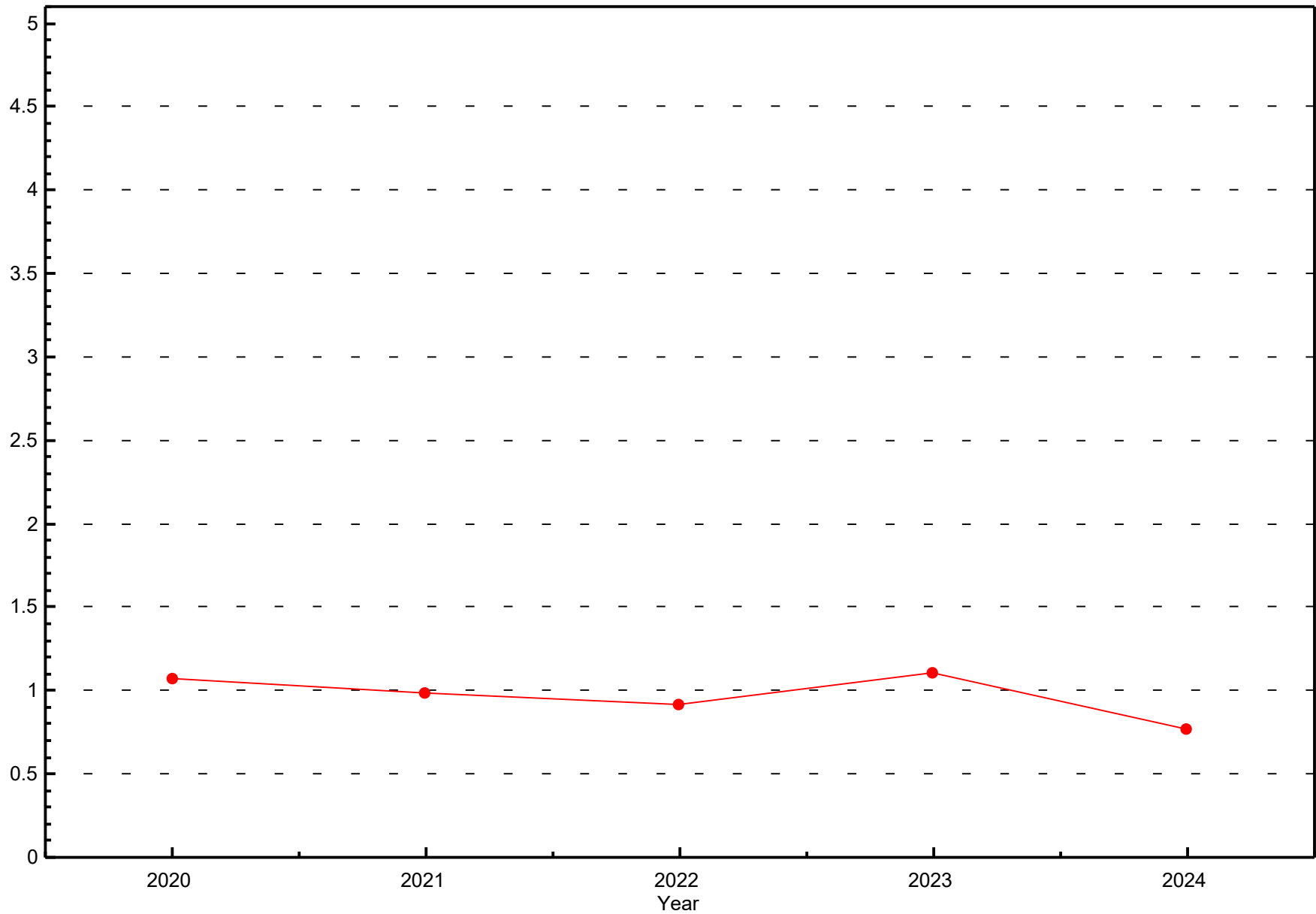




Yearly Averages

Sulphur Dioxide (SO₂) - ppb

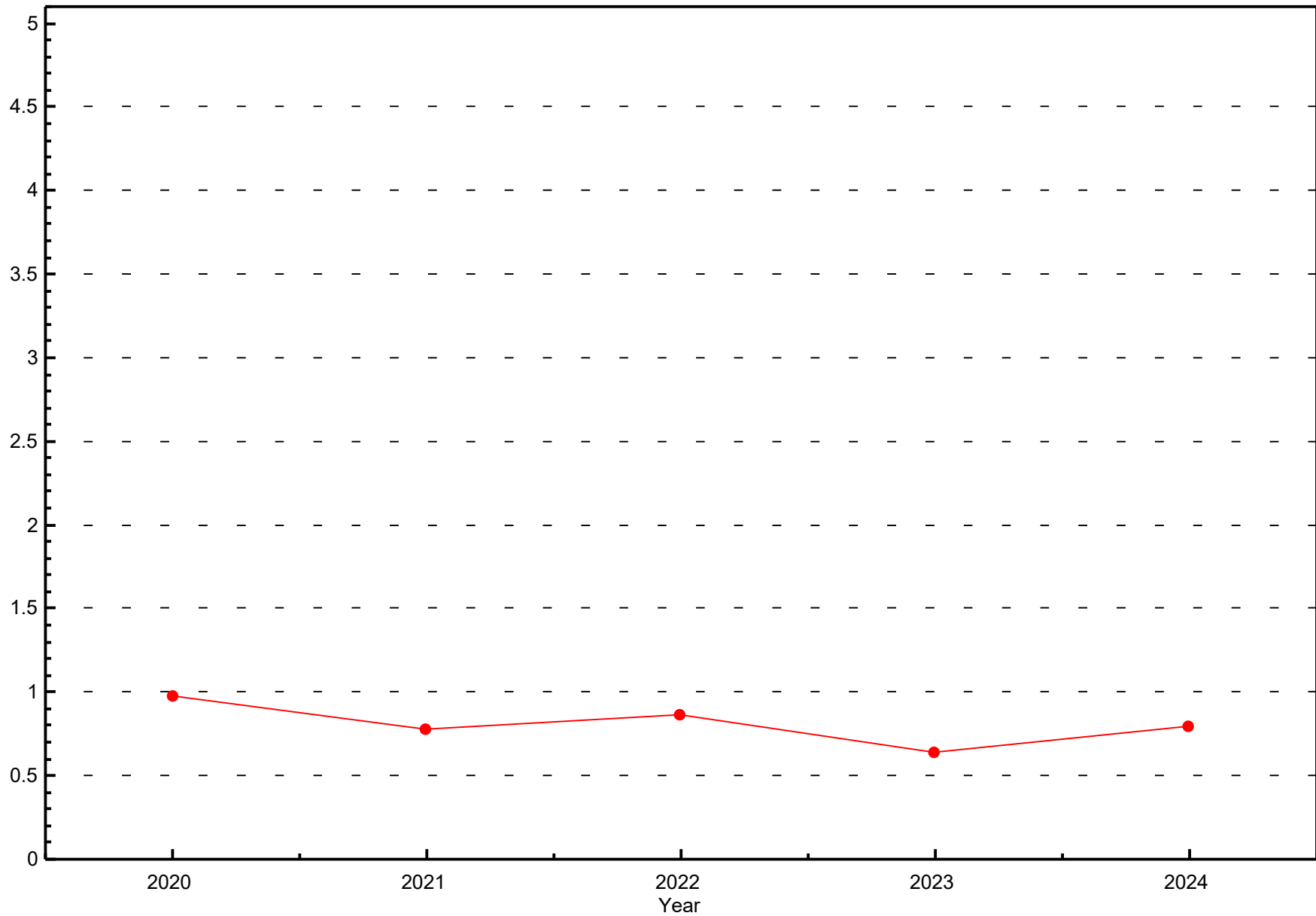
Firebag (2020 to 2024)





Yearly Averages

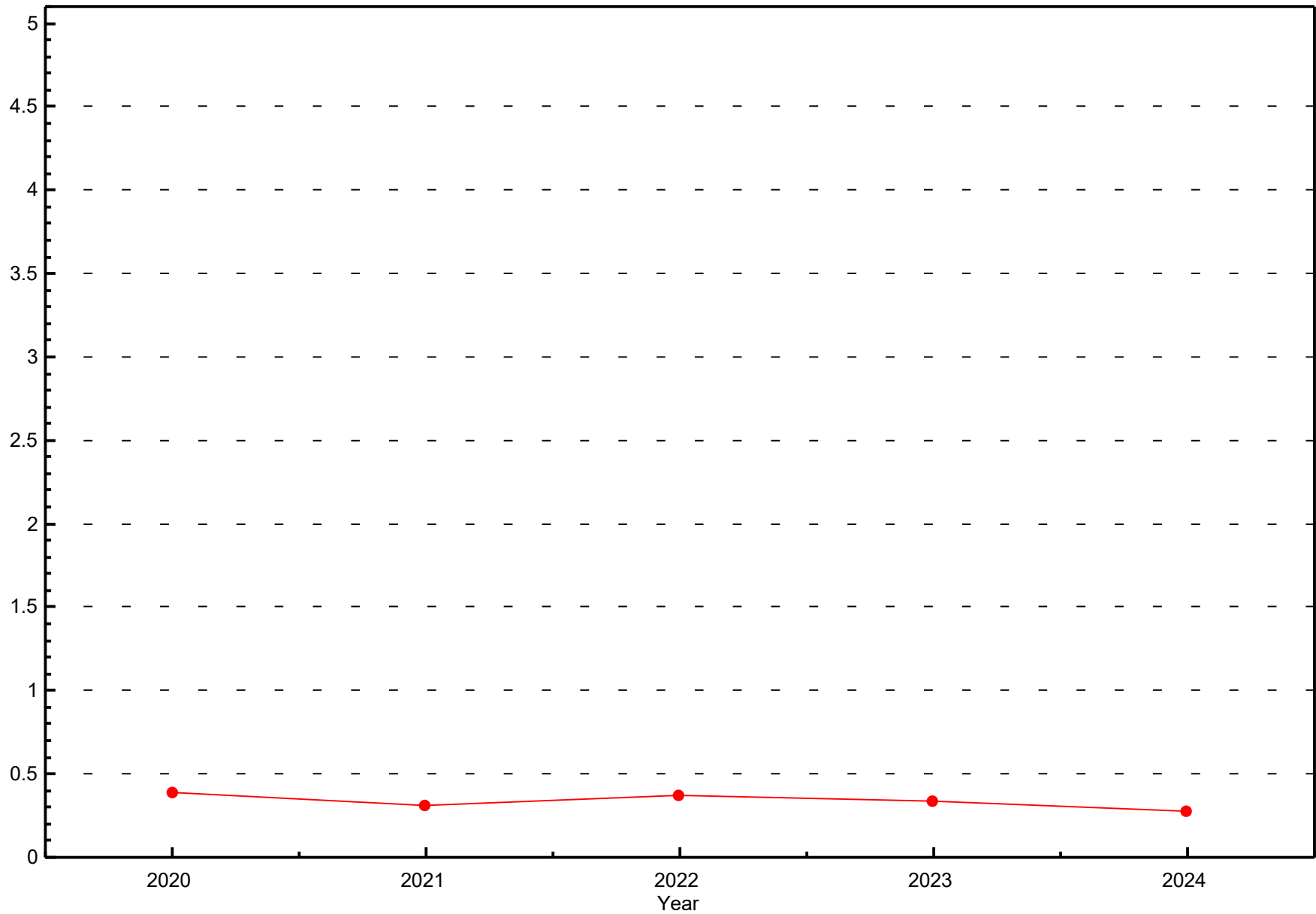
Sulphur Dioxide (SO₂) - ppb
Mackay River (2020 to 2024)





Yearly Averages

Sulphur Dioxide (SO₂) - ppb
Conklin (2020 to 2024)

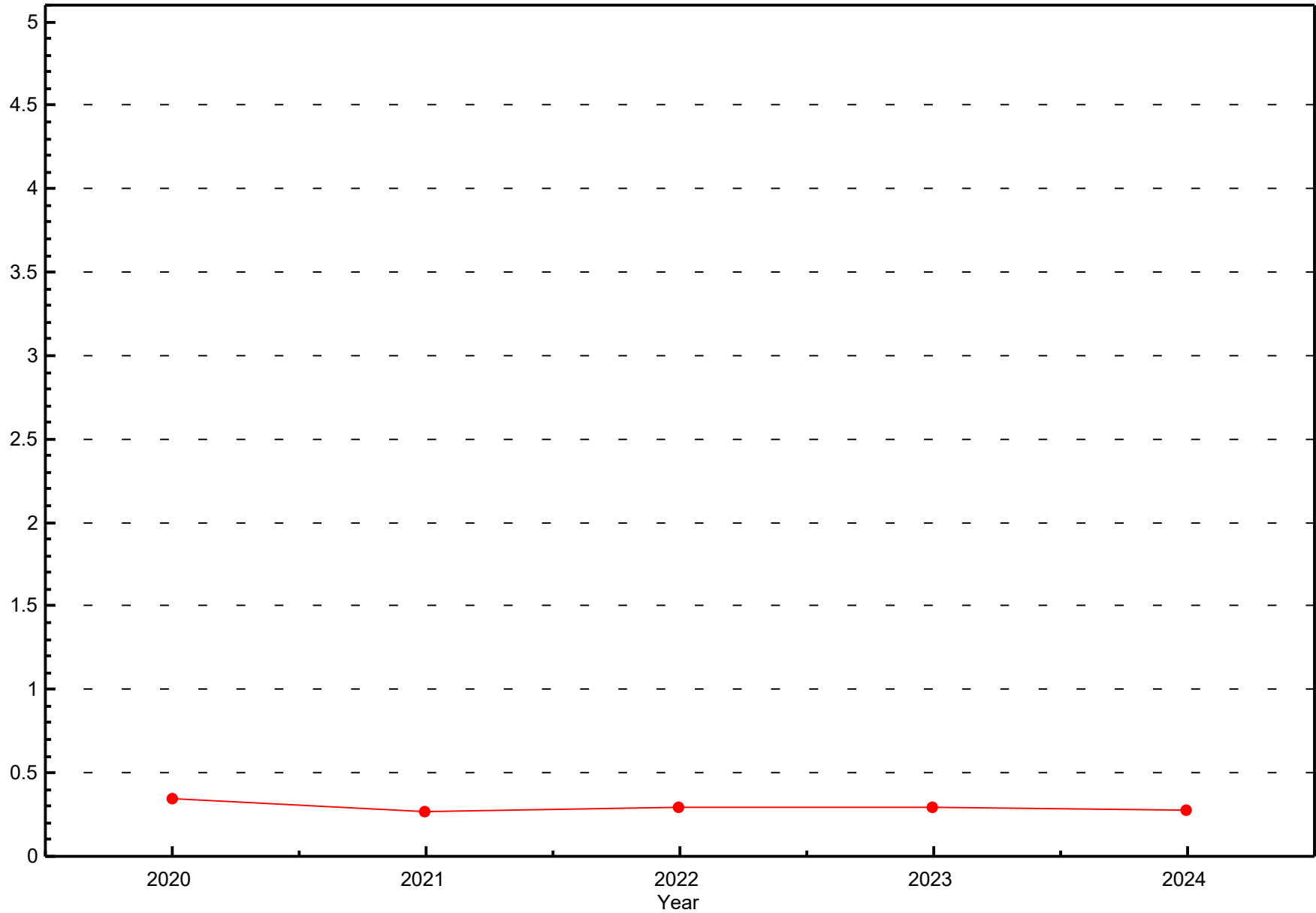




Yearly Averages

Sulphur Dioxide (SO₂) - ppb

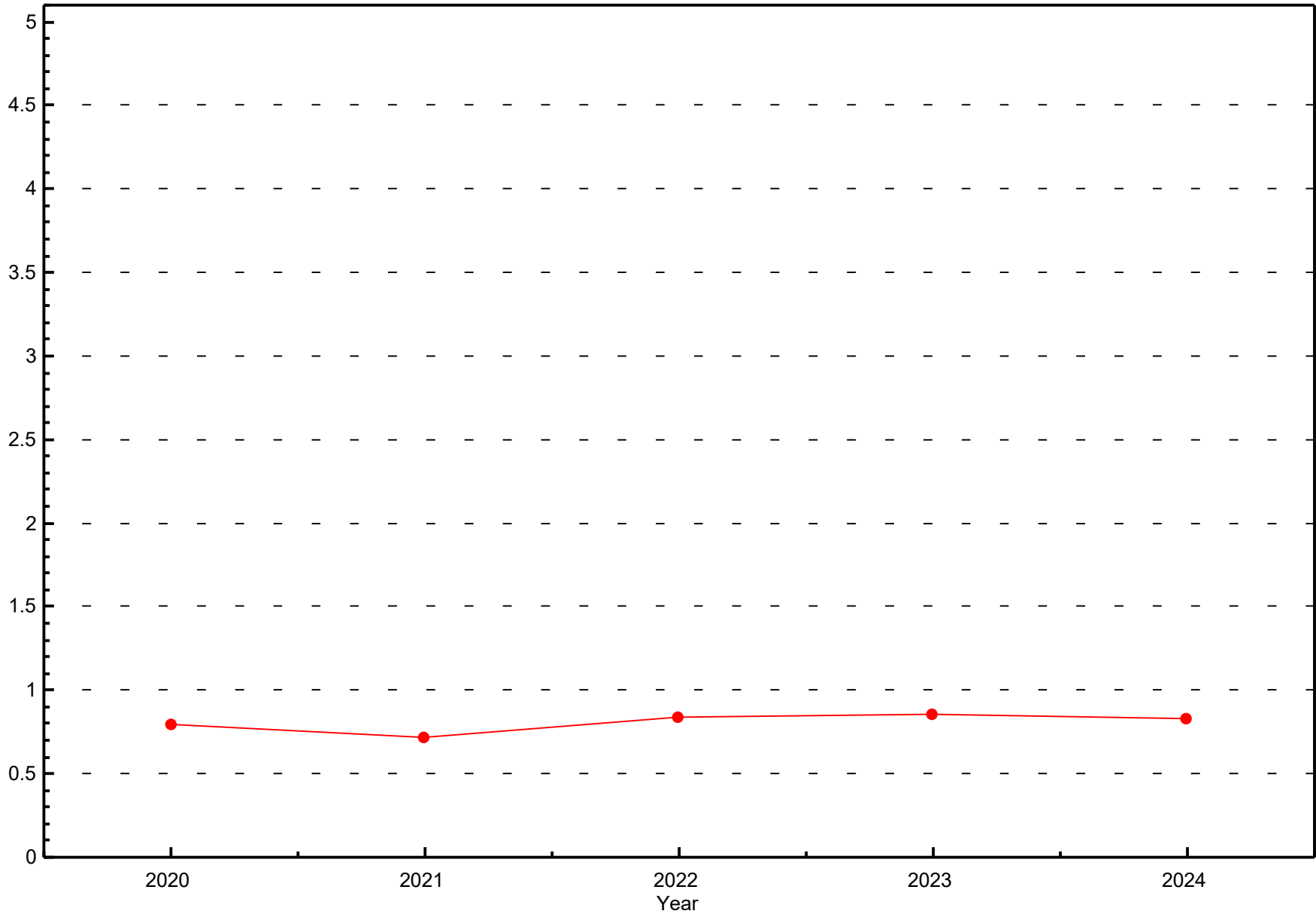
Janvier (2020 to 2024)





Yearly Averages

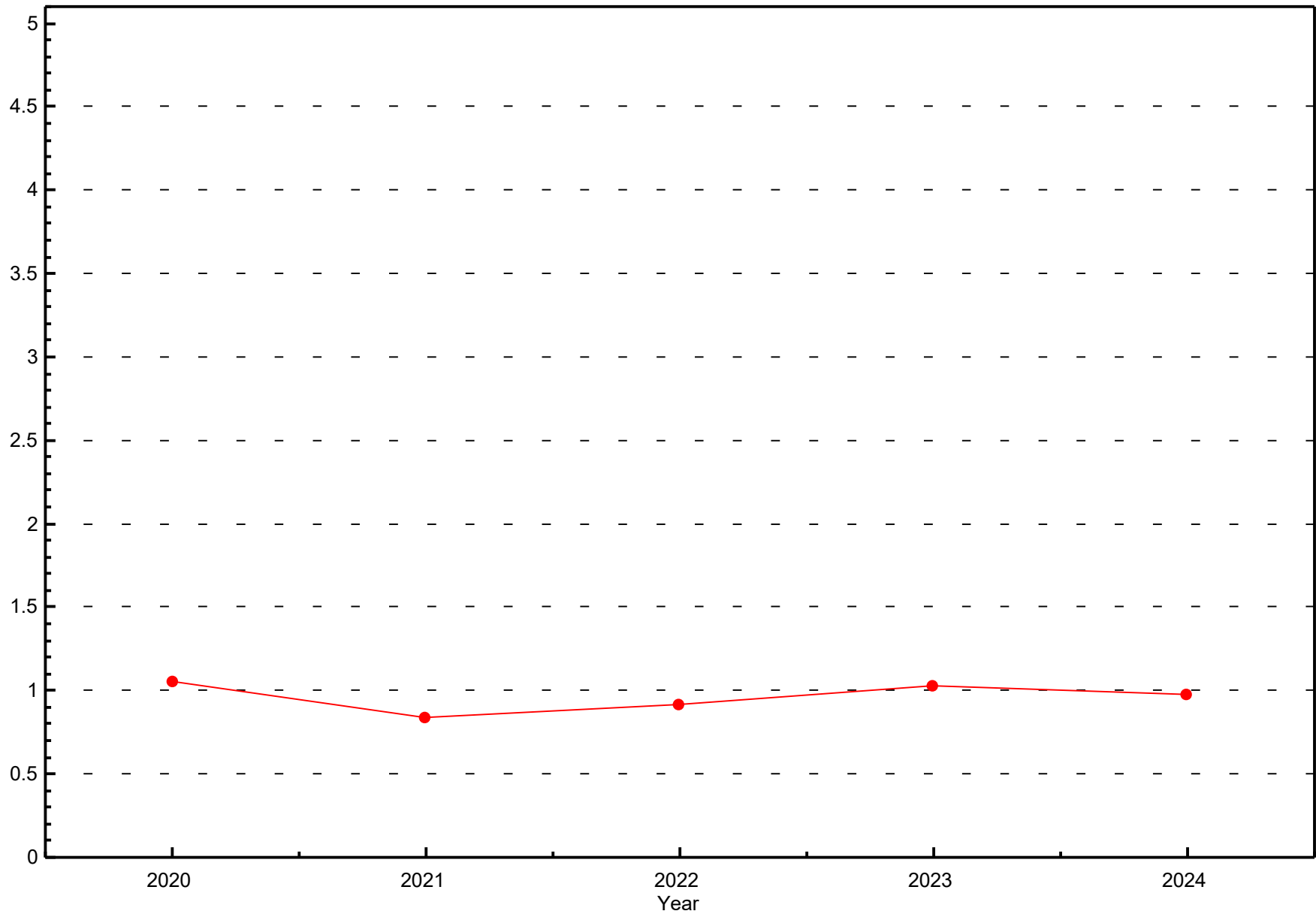
Sulphur Dioxide (SO₂) - ppb
Fort Hills (2020 to 2024)





Yearly Averages

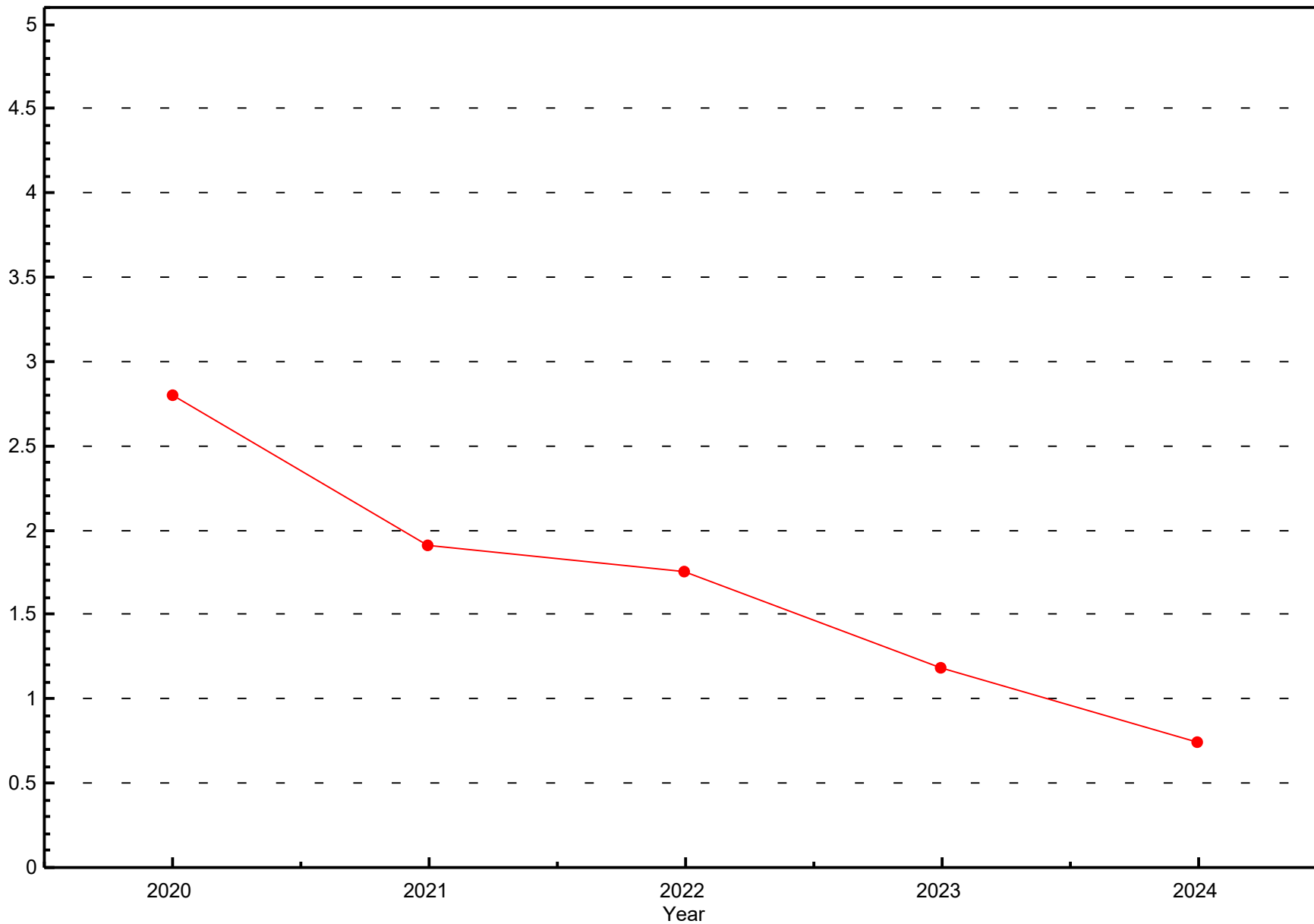
Sulphur Dioxide (SO₂) - ppb
Waskow ohci Pimatisiwin (2020 to 2024)





Yearly Averages

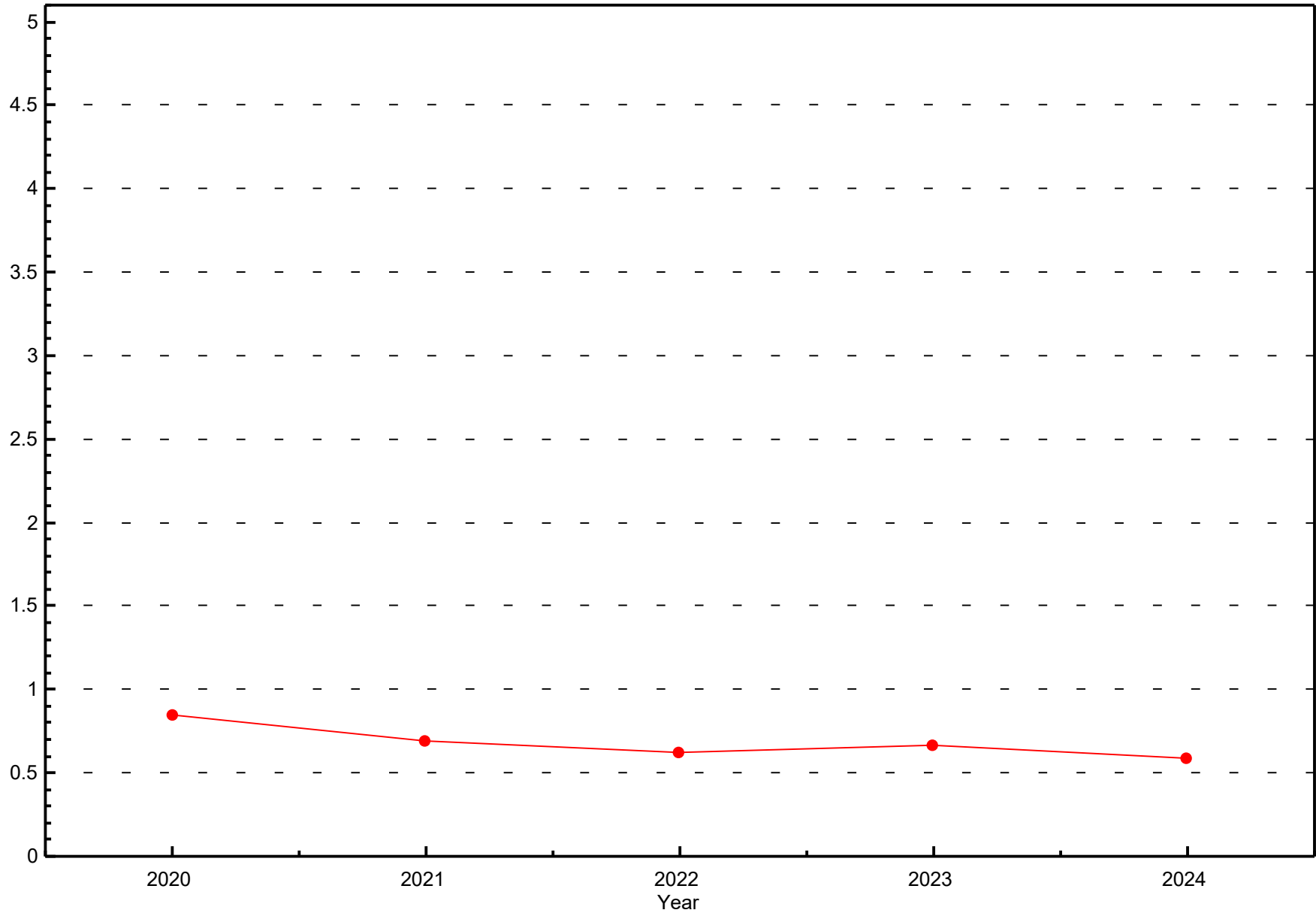
Sulphur Dioxide (SO₂) - ppb
Christina Lake (2020 to 2024)





Yearly Averages

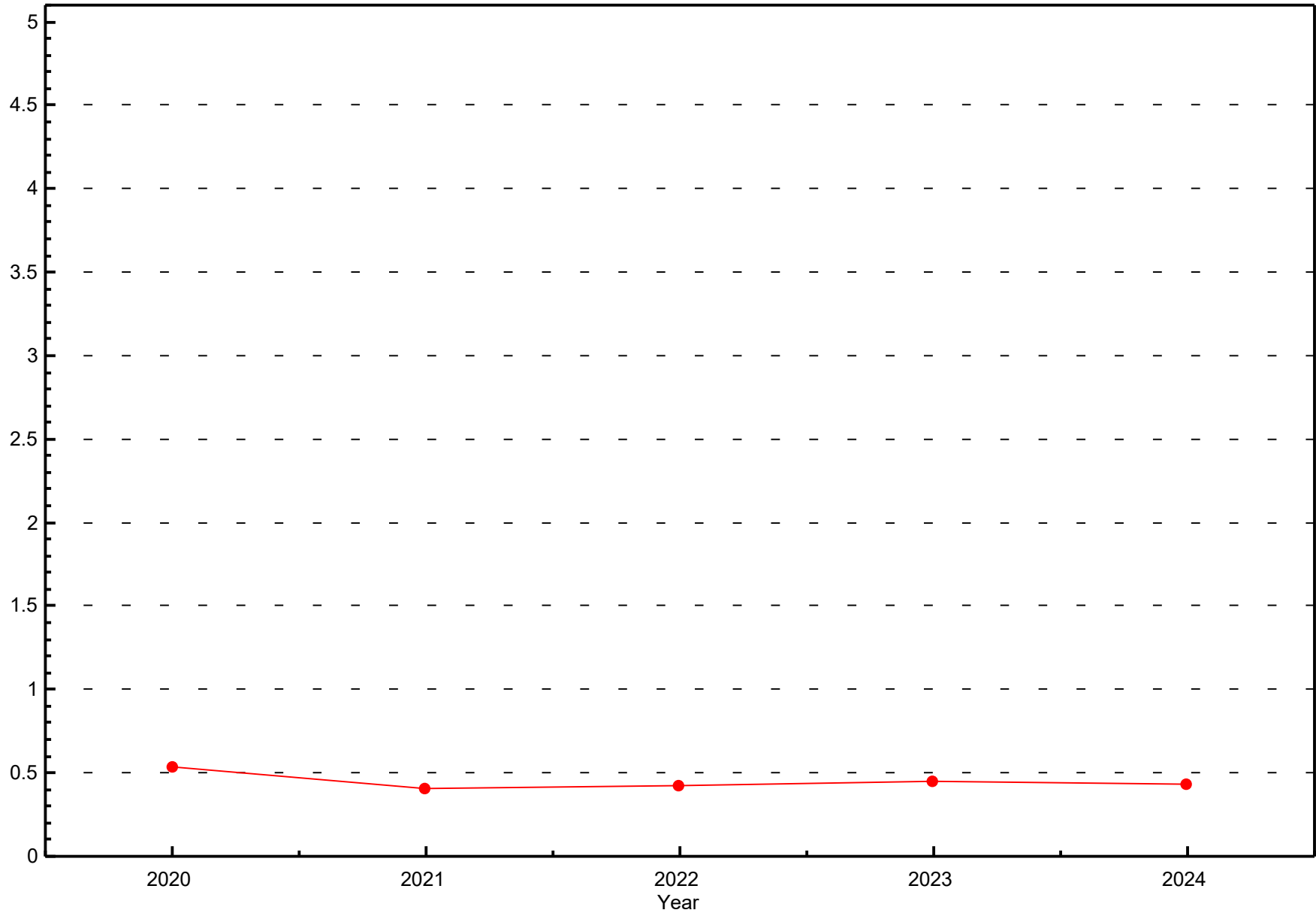
Sulphur Dioxide (SO₂) - ppb
Jackfish 2/3 (2020 to 2024)





Yearly Averages

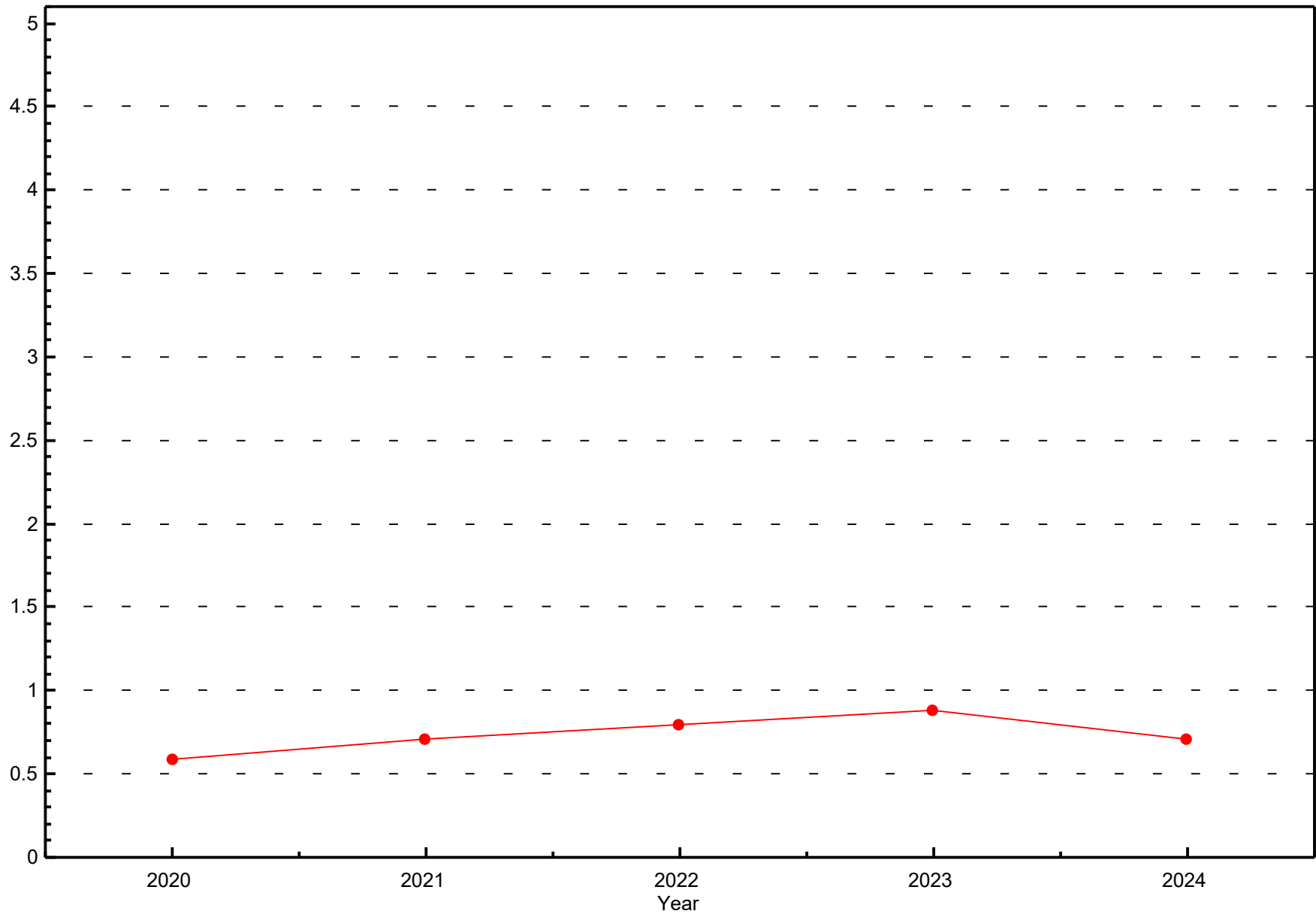
Sulphur Dioxide (SO₂) - ppb
Surmont 2 (2020 to 2024)





Yearly Averages

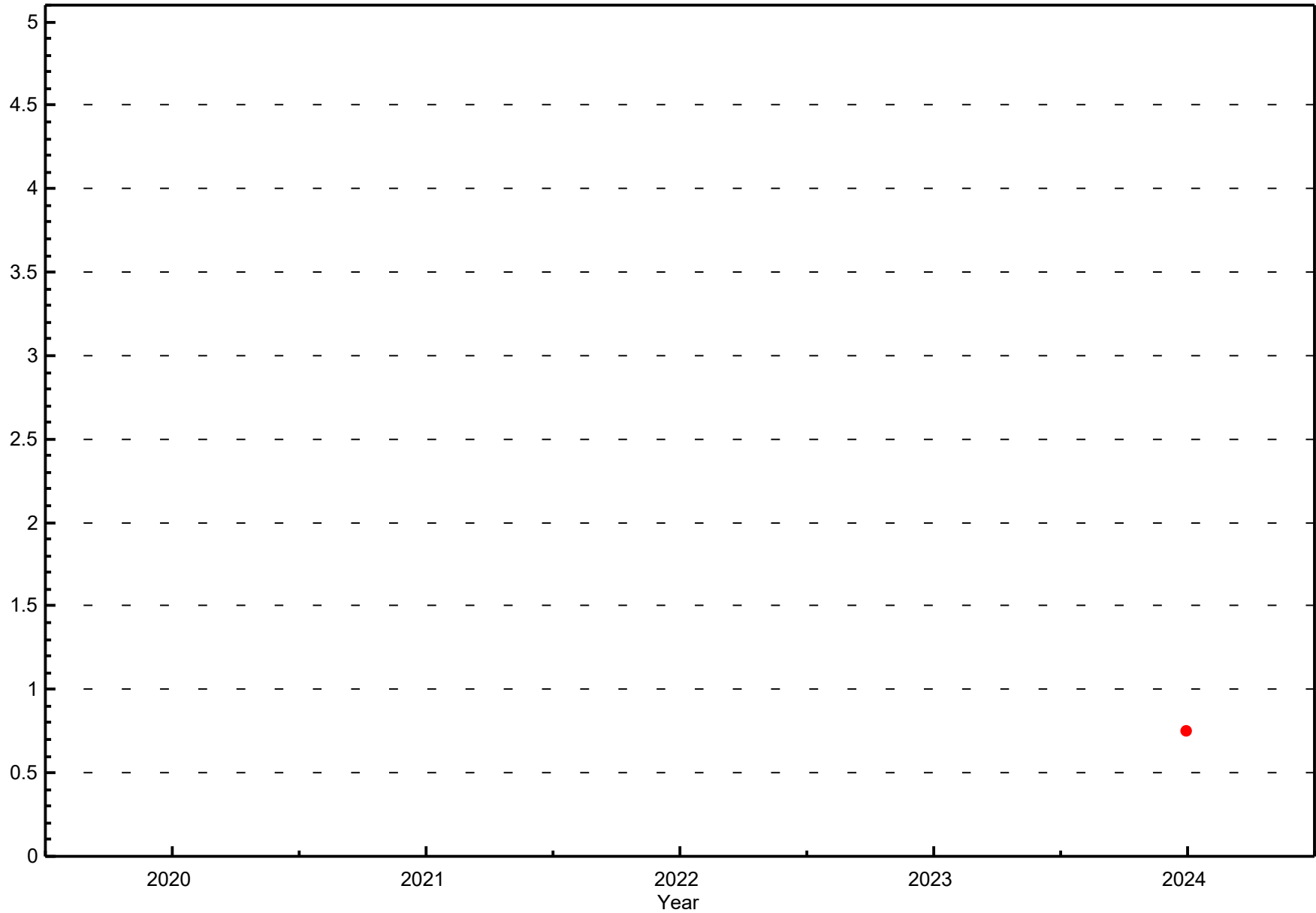
Sulphur Dioxide (SO₂) - ppb
Ells River (2020 to 2024)





Yearly Averages

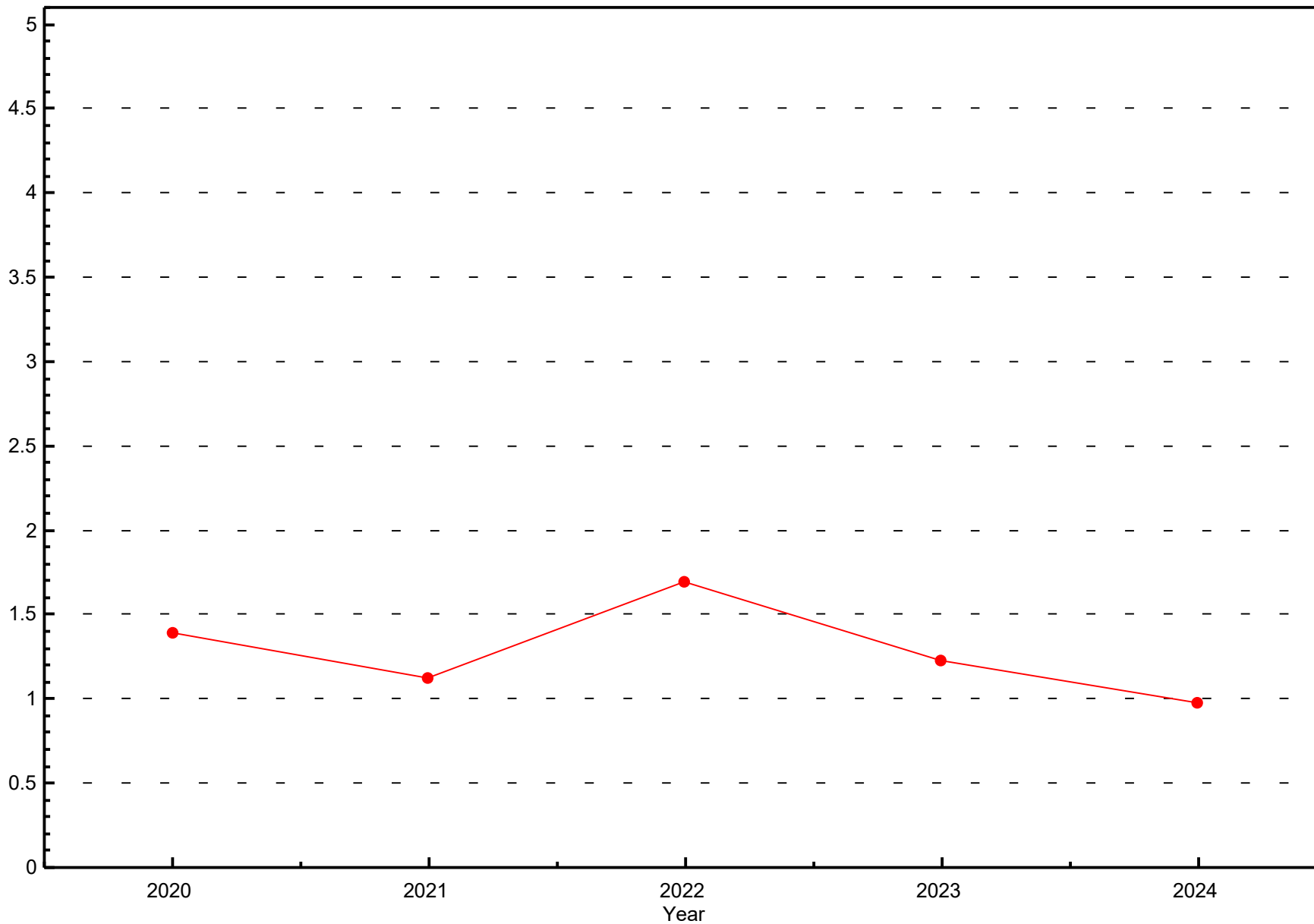
Sulphur Dioxide (SO₂) - ppb
Monday Creek (2020 to 2024)





Yearly Averages

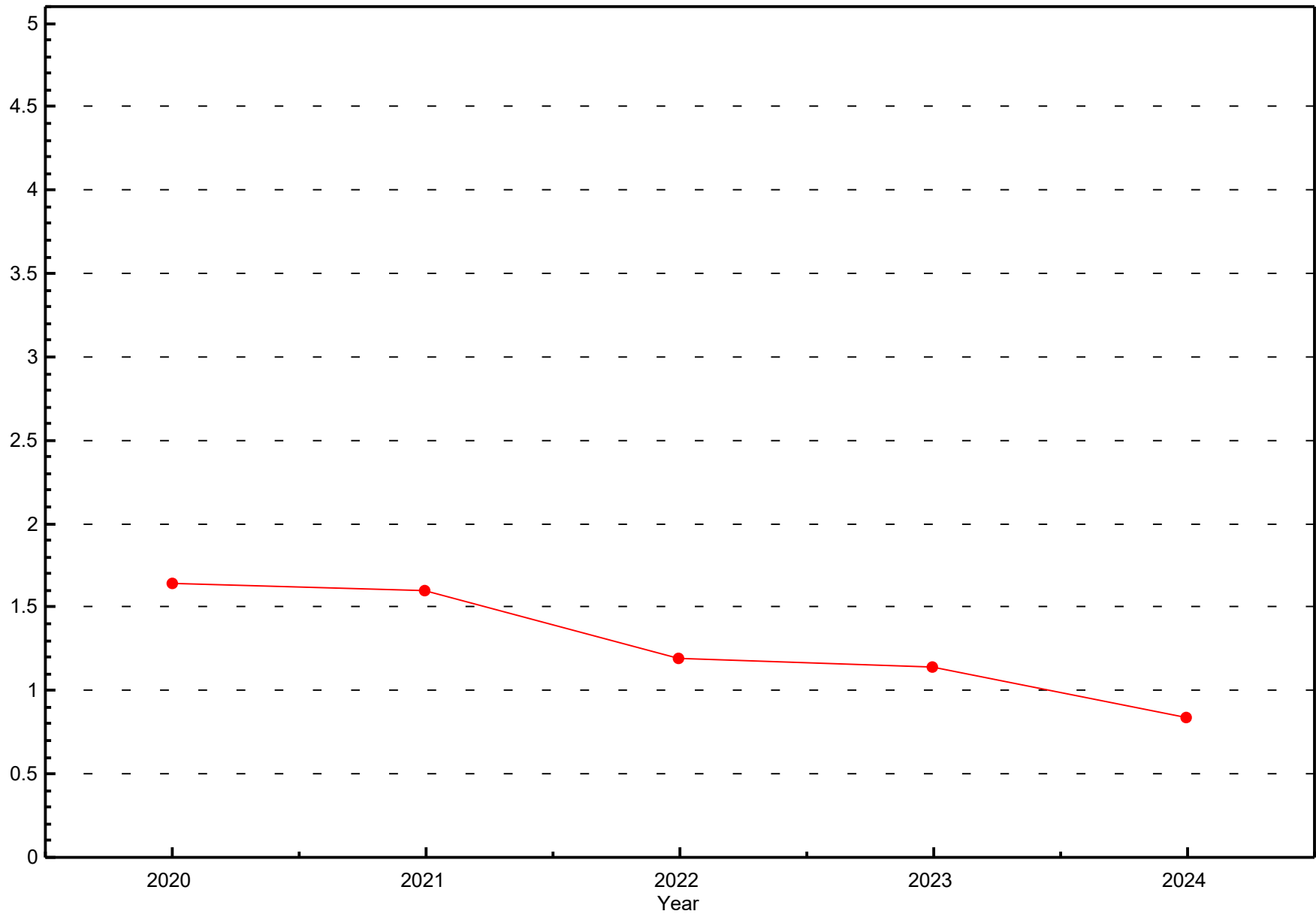
Sulphur Dioxide (SO₂) - ppb
Leismer (2020 to 2024)





Yearly Averages

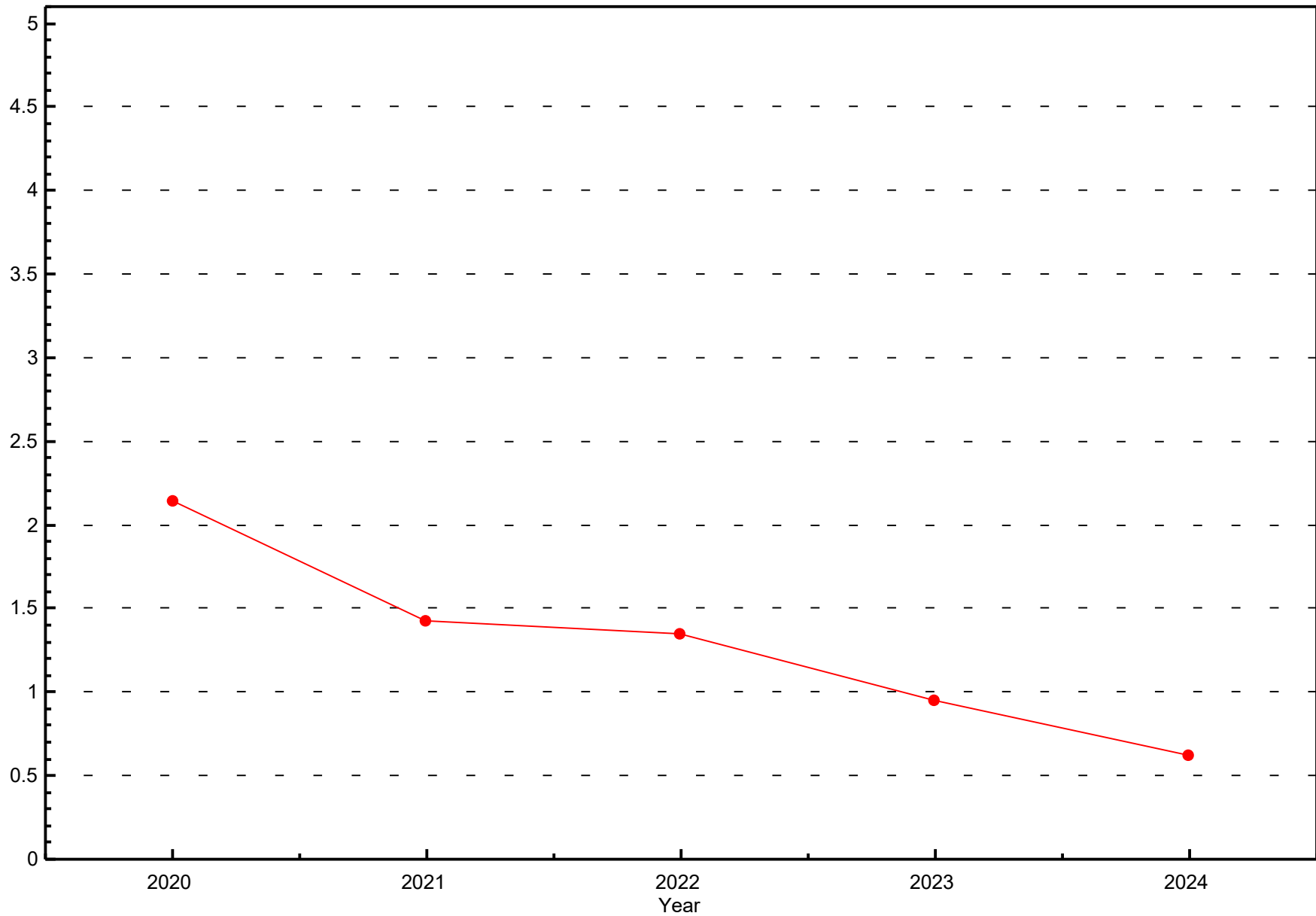
Sulphur Dioxide (SO₂) - ppb
Sawbones Bay (2020 to 2024)





Yearly Averages

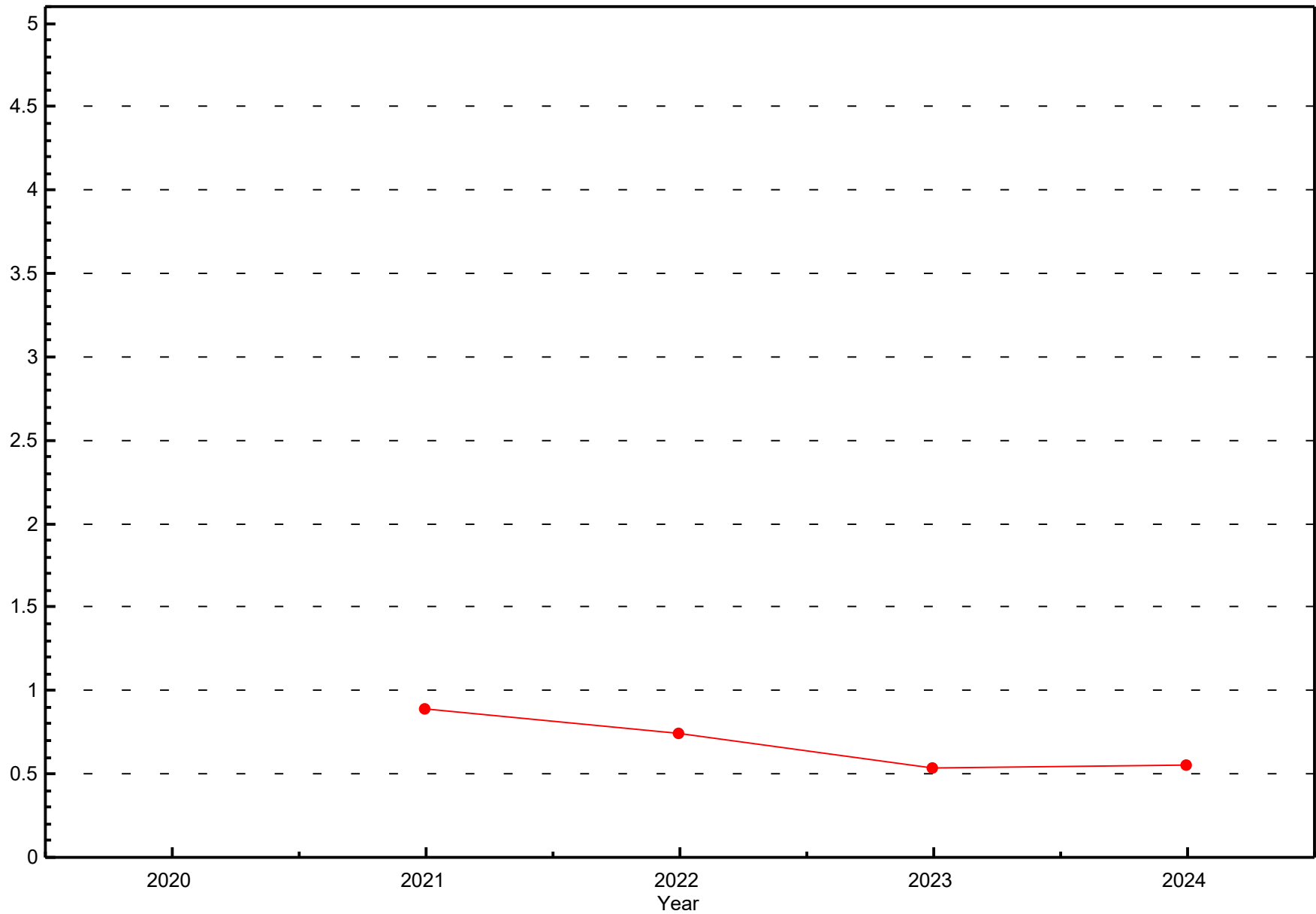
Sulphur Dioxide (SO₂) - ppb
Jackfish 1 (2020 to 2024)





Yearly Averages

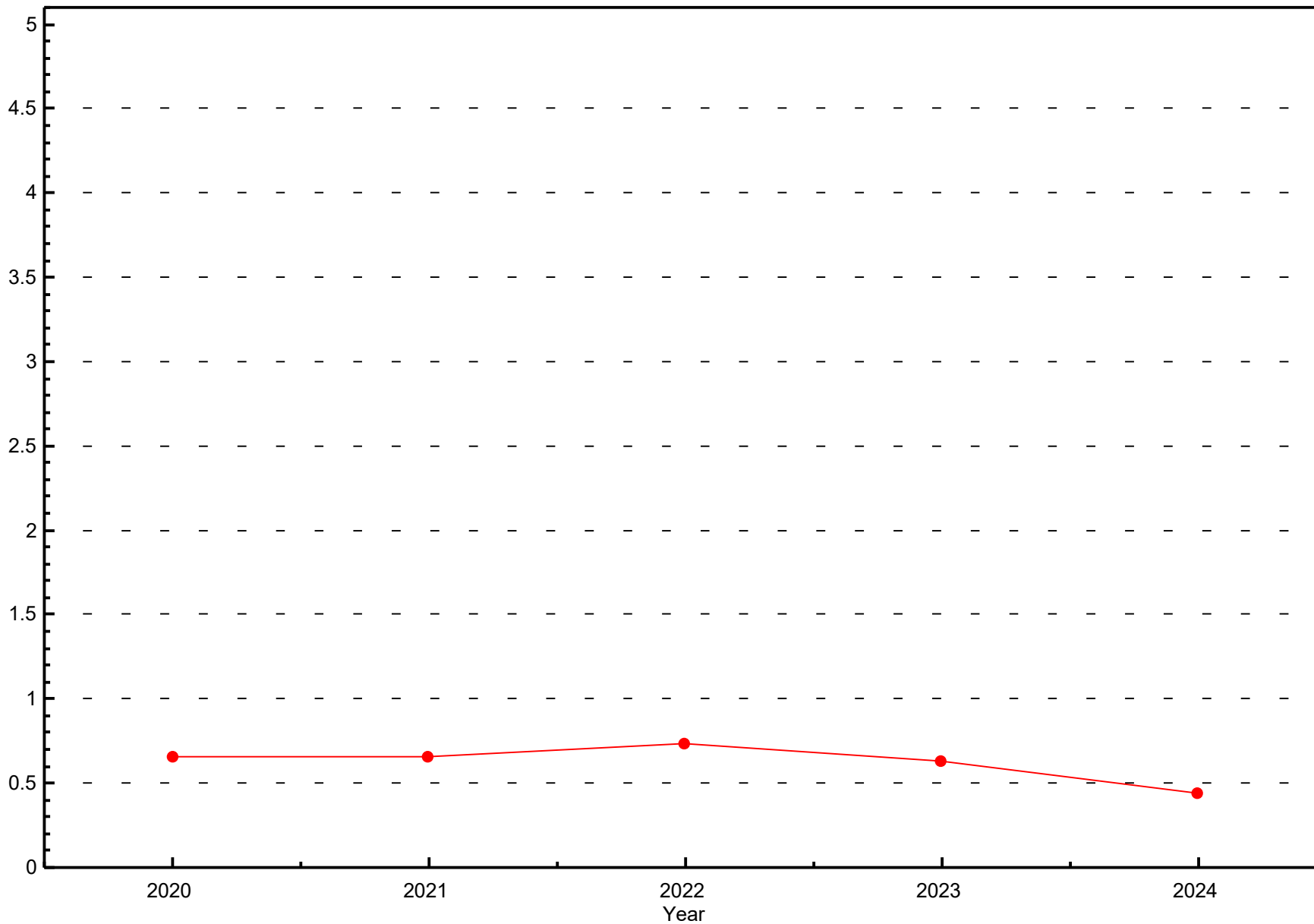
Sulphur Dioxide (SO₂) - ppb
Kirby South (2020 to 2024)





Yearly Averages

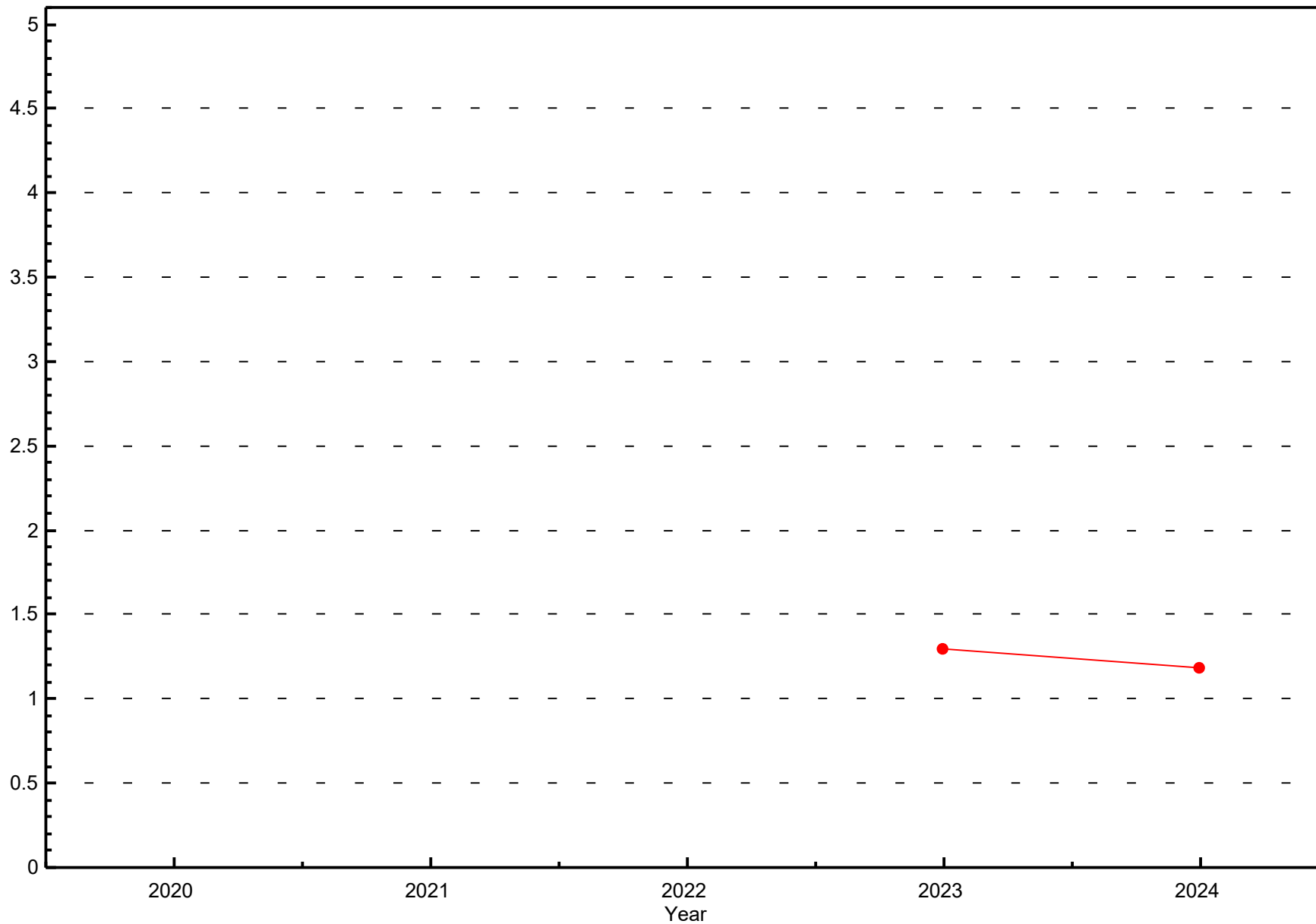
Sulphur Dioxide (SO₂) - ppb
Kirby North (2020 to 2024)





Yearly Averages

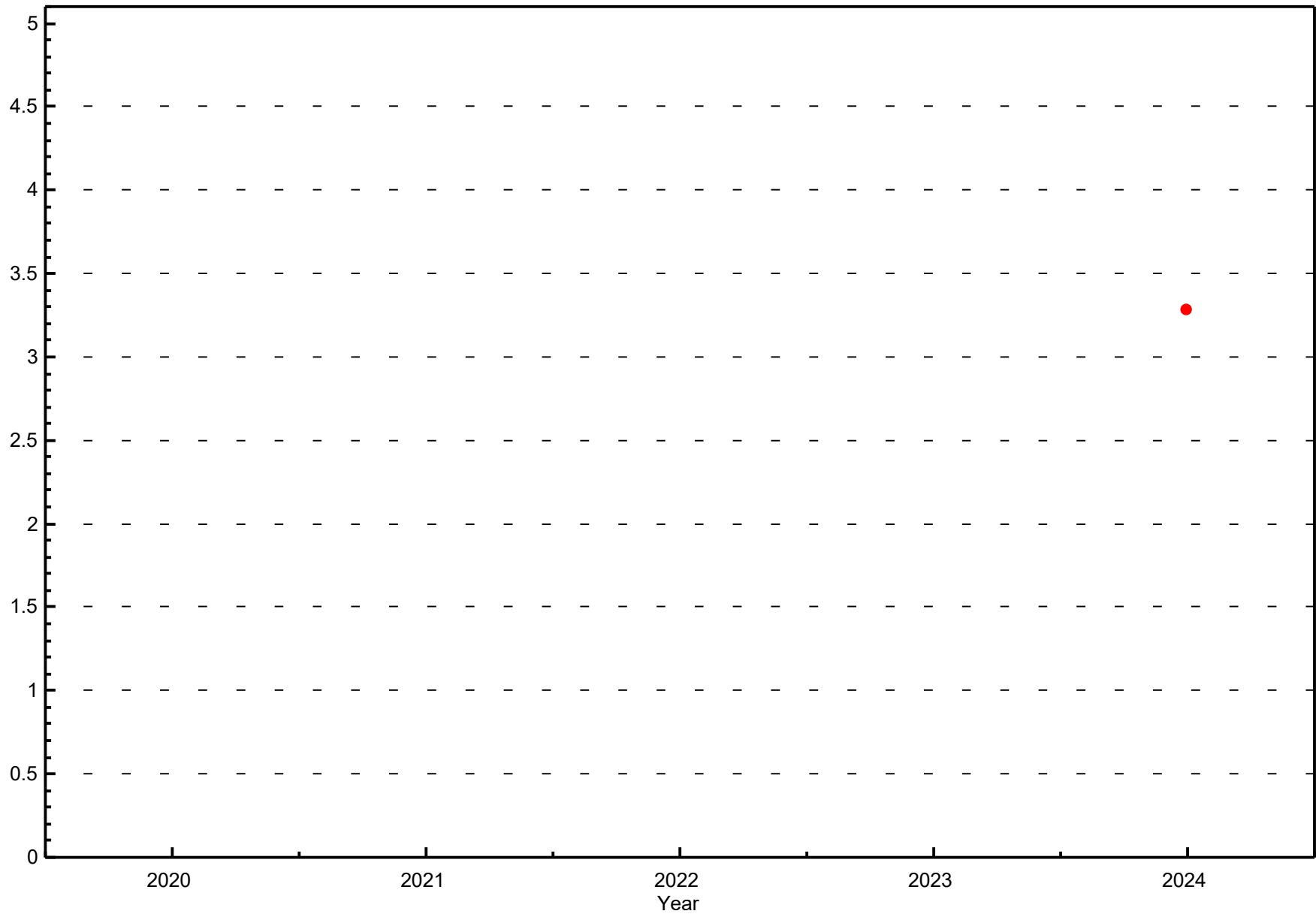
Sulphur Dioxide (SO₂) - ppb
Blackgold (2020 to 2024)





Yearly Averages

Sulphur Dioxide (SO₂) - ppb Hangingstone Expansion (2020 to 2024)



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
ANNUAL REPORT

HYDROGEN SULPHIDE ANNUAL 2024

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

March 2025



Wood Buffalo Environmental Association - Fort McKay - Bertha Ganter (AMS01)
Annual Summary for the Year 2024
Hydrogen Sulphide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Number of Values		Number of Values		% of Data in Each Concentration Range			
				Maximum 1-Hour Value	Exceeding 1-Hour Objective	Maximum 24-Hour Value	Exceeding 24-Hour Objective	0 - 3	4-10	11 - 50	> 50
January	99	700	0.5	6.8	0	1.6	0	99.6	0.4	0.0	0.0
February	100	661	0.4	3.3	0	0.9	0	100.0	0.0	0.0	0.0
March	100	707	0.3	2.6	0	1.2	0	100.0	0.0	0.0	0.0
April	100	684	0.2	2.1	0	0.7	0	100.0	0.0	0.0	0.0
May	100	705	0.1	1.3	0	0.4	0	100.0	0.0	0.0	0.0
June	99	678	0.2	2.0	0	0.5	0	100.0	0.0	0.0	0.0
July	99	700	0.4	9.2	0	1.3	0	99.4	0.6	0.0	0.0
August	100	705	0.4	4.3	0	1.1	0	99.6	0.4	0.0	0.0
September	100	682	0.3	3.5	0	0.7	0	100.0	0.0	0.0	0.0
October	100	706	0.2	2.4	0	0.8	0	100.0	0.0	0.0	0.0
November	97	661	0.2	2.3	0	0.5	0	100.0	0.0	0.0	0.0
December	100	706	0.4	2.8	0	0.8	0	100.0	0.0	0.0	0.0
Annual	99	8295	0.3	9.2	0	1.6	0	99.9	0.1	0.0	0.0



Wood Buffalo Environmental Association - Mildred Lake (AMS02)
Annual Summary for the Year 2024
Hydrogen Sulphide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values	Maximum 24-Hour Value	Number of Values	% of Data in Each Concentration Range			
					Exceeding 1-Hour Objective		Exceeding 24-Hour Objective	0 - 3	4-10	11 - 50	> 50
January	100	706	1.0	25.9	14	5.5	3	92.9	5.2	1.8	0.0
February	100	662	0.5	10.4	1	1.6	0	97.9	2.1	0.0	0.0
March	100	708	0.3	12.8	1	1.6	0	99.2	0.7	0.1	0.0
April	100	684	0.4	16.3	1	2.0	0	97.5	2.3	0.2	0.0
May	96	677	0.3	7.0	0	1.4	0	99.0	1.0	0.0	0.0
June	96	654	0.3	6.5	0	1.1	0	99.2	0.8	0.0	0.0
July	65	451	0.9	13.0	3	2.6	0	94.9	4.4	0.7	0.0
August	98	694	0.6	8.3	0	1.8	0	97.8	2.2	0.0	0.0
September	100	684	0.5	6.6	0	1.1	0	99.1	0.9	0.0	0.0
October	100	709	0.3	5.4	0	1.2	0	99.4	0.6	0.0	0.0
November	100	684	0.3	4.5	0	0.9	0	99.7	0.3	0.0	0.0
December	100	709	0.6	6.7	0	1.4	0	98.7	1.3	0.0	0.0
Annual	96	8022	0.5	25.9	20	5.5	3	98.1	1.7	0.2	0.0



Wood Buffalo Environmental Association - Buffalo Viewpoint (AMS04)
Annual Summary for the Year 2024
Hydrogen Sulphide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range			
					1-Hour Objective		24-Hour Objective	0 - 3	4-10	11 - 50	> 50
January	100	707	0.3	12.7	1	1.6	0	99.4	0.4	0.1	0.0
February	99	656	0.4	7.3	0	1.2	0	99.5	0.5	0.0	0.0
March	100	708	0.1	5.3	0	0.7	0	99.7	0.3	0.0	0.0
April	99	681	0.2	5.9	0	0.7	0	99.7	0.3	0.0	0.0
May	100	708	0.2	4.1	0	0.5	0	99.9	0.1	0.0	0.0
June	100	686	0.2	3.9	0	0.9	0	99.9	0.2	0.0	0.0
July	100	706	0.5	6.7	0	2.2	0	99.0	1.0	0.0	0.0
August	100	709	0.4	8.6	0	1.4	0	99.3	0.7	0.0	0.0
September	100	685	0.2	3.0	0	0.9	0	100.0	0.0	0.0	0.0
October	100	706	0.1	5.8	0	0.8	0	99.9	0.1	0.0	0.0
November	100	685	0.2	2.2	0	0.6	0	100.0	0.0	0.0	0.0
December	100	706	0.2	3.4	0	1.1	0	100.0	0.0	0.0	0.0
Annual	100	8343	0.3	12.7	1	2.2	0	99.7	0.3	0.0	0.0



Wood Buffalo Environmental Association - Mannix (AMS05)
Annual Summary for the Year 2024
Hydrogen Sulphide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding	Maximum 24-Hour Value	Number of Values Exceeding	% of Data in Each Concentration Range			
					1-Hour Objective		24-Hour Objective	0 - 3	4-10	11 - 50	> 50
January	96	676	0.7	10.5	1	2.5	0	97.2	2.8	0.0	0.0
February	100	662	0.9	13.3	4	3.0	0	94.4	5.0	0.6	0.0
March	100	706	0.4	11.3	1	1.5	0	99.0	0.9	0.1	0.0
April	100	684	0.4	4.8	0	1.3	0	99.0	1.0	0.0	0.0
May	91	638	0.5	6.9	0	1.4	0	98.9	1.1	0.0	0.0
June	99	682	0.4	7.2	0	1.5	0	99.3	0.7	0.0	0.0
July	100	709	0.8	32.1	5	5.8	1	96.3	3.0	0.7	0.0
August	100	708	0.8	15.7	5	3.5	1	94.6	4.7	0.7	0.0
September	100	684	0.5	16.8	3	3.1	1	97.8	1.8	0.4	0.0
October	100	708	0.3	4.0	0	1.3	0	99.4	0.6	0.0	0.0
November	100	683	0.3	5.7	0	1.6	0	99.6	0.4	0.0	0.0
December	100	707	0.4	3.4	0	1.1	0	100.0	0.0	0.0	0.0
Annual	99	8247	0.5	32.1	19	5.8	3	98.0	1.8	0.2	0.0



Wood Buffalo Environmental Association - Lower Camp (AMS11)
Annual Summary for the Year 2024
Hydrogen Sulphide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Number of Values		Number of Values		% of Data in Each Concentration Range			
				Maximum 1-Hour Value	Exceeding 1-Hour Objective	Maximum 24-Hour Value	Exceeding 24-Hour Objective	0 - 3	4-10	11 - 50	> 50
January	100	706	0.7	9.6	0	4.0	1	97.6	2.4	0.0	0.0
February	97	640	0.6	9.1	0	2.1	0	97.3	2.7	0.0	0.0
March	100	706	0.5	12.6	2	2.3	0	97.5	2.3	0.3	0.0
April	99	679	0.7	58.7	6	3.7	1	96.8	2.4	0.7	0.2
May	100	709	0.5	36.2	2	2.6	0	98.3	1.6	0.1	0.0
June	99	679	0.6	15.7	3	1.9	0	97.4	2.2	0.4	0.0
July	87	610	1.1	13.3	3	2.6	0	92.6	6.9	0.5	0.0
August	100	708	1.2	16.8	8	4.5	1	92.8	6.2	1.0	0.0
September	99	678	0.9	9.3	0	2.3	0	96.8	3.2	0.0	0.0
October	100	705	1.1	16.6	20	7.4	2	93.1	4.3	2.7	0.0
November	100	685	0.8	23.9	6	3.4	2	94.6	4.5	0.9	0.0
December	100	708	0.6	13.6	1	1.6	0	98.3	1.6	0.1	0.0
Annual	98	8213	0.8	58.7	51	7.4	7	96.2	3.3	0.5	0.0



Wood Buffalo Environmental Association - Wapasu (AMS17)
Annual Summary for the Year 2024
Hydrogen Sulphide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values	Maximum 24-Hour Value	Number of Values	% of Data in Each Concentration Range			
					Exceeding 1-Hour Objective		Exceeding 24-Hour Objective	0 - 3	4-10	11 - 50	> 50
January	100	708	0.1	1.2	0	0.3	0	100.0	0.0	0.0	0.0
February	99	658	0.1	1.9	0	0.4	0	100.0	0.0	0.0	0.0
March	100	707	0.1	1.2	0	0.2	0	100.0	0.0	0.0	0.0
April	100	683	0.1	0.6	0	0.2	0	100.0	0.0	0.0	0.0
May	100	708	0.1	0.7	0	0.2	0	100.0	0.0	0.0	0.0
June	99	680	0.1	0.6	0	0.3	0	100.0	0.0	0.0	0.0
July	99	702	0.2	1.9	0	0.5	0	100.0	0.0	0.0	0.0
August	100	707	0.2	1.1	0	0.4	0	100.0	0.0	0.0	0.0
September	100	684	0.2	1.9	0	0.4	0	100.0	0.0	0.0	0.0
October	100	704	0.1	1.4	0	0.3	0	100.0	0.0	0.0	0.0
November	100	685	0.1	0.9	0	0.4	0	100.0	0.0	0.0	0.0
December	100	708	0.2	1.2	0	0.3	0	100.0	0.0	0.0	0.0
Annual	100	8334	0.1	1.9	0	0.5	0	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Firebag (AMS19)
Annual Summary for the Year 2024
Hydrogen Sulphide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Number of Values		Number of Values		% of Data in Each Concentration Range			
				Maximum 1-Hour Value	Exceeding 1-Hour Objective	Maximum 24-Hour Value	Exceeding 24-Hour Objective	0 - 3	4-10	11 - 50	> 50
January	100	707	0.2	1.4	0	0.3	0	100.0	0.0	0.0	0.0
February	99	657	0.2	6.5	0	0.4	0	99.9	0.2	0.0	0.0
March	99	697	0.1	1.5	0	0.2	0	100.0	0.0	0.0	0.0
April	100	684	0.1	2.9	0	0.4	0	100.0	0.0	0.0	0.0
May	100	706	0.1	3.6	0	0.4	0	99.9	0.1	0.0	0.0
June	100	684	0.1	5.4	0	0.5	0	99.7	0.3	0.0	0.0
July	100	705	0.3	3.7	0	0.7	0	99.9	0.1	0.0	0.0
August	100	707	0.2	7.7	0	0.9	0	99.7	0.3	0.0	0.0
September	100	684	0.2	2.7	0	0.7	0	100.0	0.0	0.0	0.0
October	100	707	0.1	4.0	0	0.6	0	99.7	0.3	0.0	0.0
November	96	658	0.1	2.8	0	0.4	0	100.0	0.0	0.0	0.0
December	100	707	0.1	1.4	0	0.3	0	100.0	0.0	0.0	0.0
Annual	99	8303	0.2	7.7	0	0.9	0	99.9	0.1	0.0	0.0



Wood Buffalo Environmental Association - Mackay River (AMS20)
Annual Summary for the Year 2024
Hydrogen Sulphide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Number of Values		Number of Values		% of Data in Each Concentration Range			
				Maximum 1-Hour Value	Exceeding 1-Hour Objective	Maximum 24-Hour Value	Exceeding 24-Hour Objective	0 - 3	4-10	11 - 50	> 50
January	100	708	0.2	1.3	0	0.4	0	100.0	0.0	0.0	0.0
February	100	662	0.1	1.5	0	0.3	0	100.0	0.0	0.0	0.0
March	100	708	0.1	1.9	0	0.3	0	100.0	0.0	0.0	0.0
April	100	685	0.1	4.8	0	0.6	0	99.7	0.3	0.0	0.0
May	100	706	0.1	3.2	0	0.6	0	100.0	0.0	0.0	0.0
June	100	685	0.2	7.2	0	1.1	0	99.3	0.7	0.0	0.0
July	100	706	0.2	4.3	0	0.9	0	99.9	0.1	0.0	0.0
August	100	708	0.2	3.7	0	0.4	0	99.9	0.1	0.0	0.0
September	100	685	0.1	2.1	0	0.3	0	100.0	0.0	0.0	0.0
October	100	708	0.1	1.1	0	0.2	0	100.0	0.0	0.0	0.0
November	100	685	0.1	0.7	0	0.4	0	100.0	0.0	0.0	0.0
December	100	708	0.2	3.7	0	0.9	0	99.9	0.1	0.0	0.0
Annual	100	8354	0.1	7.2	0	1.1	0	99.9	0.1	0.0	0.0



Wood Buffalo Environmental Association - Waskow ohci Pimatisiwin (AMS25)
Annual Summary for the Year 2024
Hydrogen Sulphide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Number of Values		Number of Values		% of Data in Each Concentration Range			
				Maximum 1-Hour Value	Exceeding 1-Hour Objective	Maximum 24-Hour Value	Exceeding 24-Hour Objective	0 - 3	4-10	11 - 50	> 50
January	100	707	0.5	2.8	0	1.4	0	100.0	0.0	0.0	0.0
February	100	660	0.4	3.1	0	0.9	0	100.0	0.0	0.0	0.0
March	100	706	0.3	2.7	0	1.1	0	100.0	0.0	0.0	0.0
April	100	683	0.2	2.3	0	0.7	0	100.0	0.0	0.0	0.0
May	95	671	0.1	1.4	0	0.3	0	100.0	0.0	0.0	0.0
June	99	678	0.2	2.3	0	0.4	0	100.0	0.0	0.0	0.0
July	99	702	0.5	10.4	1	1.3	0	99.4	0.6	0.0	0.0
August	100	707	0.4	6.2	0	1.4	0	99.4	0.6	0.0	0.0
September	100	683	0.3	3.1	0	0.7	0	100.0	0.0	0.0	0.0
October	100	706	0.2	2.5	0	0.8	0	100.0	0.0	0.0	0.0
November	100	683	0.2	2.2	0	0.5	0	100.0	0.0	0.0	0.0
December	100	708	0.4	2.6	0	0.8	0	100.0	0.0	0.0	0.0
Annual	99	8294	0.3	10.4	1	1.4	0	99.9	0.1	0.0	0.0



Wood Buffalo Environmental Association - Christina Lake (AMS26)
Annual Summary for the Year 2024
Hydrogen Sulphide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding	Maximum 24-Hour Value	Number of Values Exceeding	% of Data in Each Concentration Range			
					1-Hour Objective		24-Hour Objective	0 - 3	4-10	11 - 50	> 50
January	100	707	0.1	0.9	0	0.4	0	100.0	0.0	0.0	0.0
February	100	659	0.2	10.2	1	1.4	0	99.7	0.3	0.0	0.0
March	100	707	0.1	0.7	0	0.4	0	100.0	0.0	0.0	0.0
April	97	661	0.3	10.0	0	1.2	0	99.1	0.9	0.0	0.0
May	100	708	0.1	1.4	0	0.3	0	100.0	0.0	0.0	0.0
June	100	686	0.2	1.9	0	0.4	0	100.0	0.0	0.0	0.0
July	100	708	0.3	1.5	0	0.7	0	100.0	0.0	0.0	0.0
August	100	705	0.2	1.2	0	0.4	0	100.0	0.0	0.0	0.0
September	100	685	0.2	1.2	0	0.5	0	100.0	0.0	0.0	0.0
October	100	709	0.2	1.0	0	0.3	0	100.0	0.0	0.0	0.0
November	100	106	0.2	1.1	0	0.2	0	100.0	0.0	0.0	0.0
Annual	100	7041	0.2	10.2	1	1.4	0	99.9	0.1	0.0	0.0



Wood Buffalo Environmental Association - Jackfish 2/3 (AMS27)
Annual Summary for the Year 2024
Hydrogen Sulphide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Number of Values		Number of Values		% of Data in Each Concentration Range			
				Maximum 1-Hour Value	Exceeding 1-Hour Objective	Maximum 24-Hour Value	Exceeding 24-Hour Objective	0 - 3	4-10	11 - 50	> 50
January	99	702	0.2	0.9	0	0.4	0	100.0	0.0	0.0	0.0
February	100	660	0.2	1.4	0	0.5	0	100.0	0.0	0.0	0.0
March	100	706	0.2	1.2	0	0.3	0	100.0	0.0	0.0	0.0
April	99	678	0.2	2.2	0	0.5	0	100.0	0.0	0.0	0.0
May	100	701	0.2	2.2	0	0.5	0	100.0	0.0	0.0	0.0
June	100	685	0.2	0.8	0	0.4	0	100.0	0.0	0.0	0.0
July	99	701	0.3	1.9	0	0.7	0	100.0	0.0	0.0	0.0
August	100	703	0.3	1.7	0	0.5	0	100.0	0.0	0.0	0.0
September	100	685	0.3	1.8	0	0.5	0	100.0	0.0	0.0	0.0
October	100	706	0.2	1.6	0	0.3	0	100.0	0.0	0.0	0.0
November	99	675	0.2	1.9	0	0.4	0	100.0	0.0	0.0	0.0
December	100	705	0.1	1.3	0	0.4	0	100.0	0.0	0.0	0.0
Annual	100	8307	0.2	2.2	0	0.7	0	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Surmont 2 (AMS29)
Annual Summary for the Year 2024
Hydrogen Sulphide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Number of Values		Number of Values		% of Data in Each Concentration Range			
				Maximum 1-Hour Value	Exceeding 1-Hour Objective	Maximum 24-Hour Value	Exceeding 24-Hour Objective	0 - 3	4-10	11 - 50	> 50
January	91	642	0.1	0.7	0	0.2	0	100.0	0.0	0.0	0.0
February	99	658	0.1	0.7	0	0.3	0	100.0	0.0	0.0	0.0
March	99	702	0.1	0.4	0	0.1	0	100.0	0.0	0.0	0.0
April	100	683	0.1	0.7	0	0.1	0	100.0	0.0	0.0	0.0
May	100	706	0.1	0.4	0	0.2	0	100.0	0.0	0.0	0.0
June	100	684	0.1	0.3	0	0.1	0	100.0	0.0	0.0	0.0
July	100	704	0.2	1.1	0	0.5	0	100.0	0.0	0.0	0.0
August	100	706	0.2	2.1	0	0.4	0	100.0	0.0	0.0	0.0
September	100	683	0.1	0.6	0	0.3	0	100.0	0.0	0.0	0.0
October	100	707	0.1	0.6	0	0.1	0	100.0	0.0	0.0	0.0
November	100	684	0.1	0.3	0	0.1	0	100.0	0.0	0.0	0.0
December	97	684	0.1	0.8	0	0.3	0	100.0	0.0	0.0	0.0
Annual	99	8243	0.1	2.1	0	0.5	0	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Monday Creek (AMS33)
Annual Summary for the Year 2024
Hydrogen Sulphide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values	Maximum 24-Hour Value	Number of Values	% of Data in Each Concentration Range			
					Exceeding 1-Hour Objective		Exceeding 24-Hour Objective	0 - 3	4-10	11 - 50	> 50
November	100	537	0.1	0.5	0	0.2	0	100.0	0.0	0.0	0.0
December	100	707	0.1	0.6	0	0.2	0	100.0	0.0	0.0	0.0
Annual	100	1244	0.1	0.6	0	0.2	0	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Leismer (AMS501)
Annual Summary for the Year 2024
Hydrogen Sulphide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values	Maximum 24-Hour Value	Number of Values	% of Data in Each Concentration Range			
					Exceeding 1-Hour Objective		Exceeding 24-Hour Objective	0 - 3	4-10	11 - 50	> 50
January	100	707	0.1	0.6	0	0.2	0	100.0	0.0	0.0	0.0
February	99	658	0.1	0.5	0	0.2	0	100.0	0.0	0.0	0.0
March	100	708	0.1	0.3	0	0.1	0	100.0	0.0	0.0	0.0
Annual	100	2073	0.1	0.6	0	0.2	0	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Sawbones Bay (AMS505)
Annual Summary for the Year 2024
Hydrogen Sulphide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values	Maximum 24-Hour Value	Number of Values	% of Data in Each Concentration Range			
					Exceeding 1-Hour Objective		Exceeding 24-Hour Objective	0 - 3	4-10	11 - 50	> 50
January	92	652	0.2	1.8	0	0.5	0	100.0	0.0	0.0	0.0
February	100	662	0.2	1.5	0	0.7	0	100.0	0.0	0.0	0.0
March	93	656	0.1	1.0	0	0.4	0	100.0	0.0	0.0	0.0
April	100	686	0.1	1.6	0	0.3	0	100.0	0.0	0.0	0.0
May	100	706	0.1	1.0	0	0.5	0	100.0	0.0	0.0	0.0
June	88	606	0.1	1.7	0	0.4	0	100.0	0.0	0.0	0.0
Annual	95	3968	0.1	1.8	0	0.7	0	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Jackfish 1 (AMS506)
Annual Summary for the Year 2024
Hydrogen Sulphide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Number of Values		Number of Values		% of Data in Each Concentration Range			
				Maximum 1-Hour Value	Exceeding 1-Hour Objective	Maximum 24-Hour Value	Exceeding 24-Hour Objective	0 - 3	4-10	11 - 50	> 50
July	99	703	0.2	1.5	0	0.6	0	100.0	0.0	0.0	0.0
August	100	708	0.2	3.2	0	0.4	0	100.0	0.0	0.0	0.0
September	100	686	0.2	4.7	0	0.7	0	99.9	0.2	0.0	0.0
October	100	708	0.1	1.9	0	0.3	0	100.0	0.0	0.0	0.0
November	100	684	0.1	1.1	0	0.3	0	100.0	0.0	0.0	0.0
December	100	707	0.2	2.0	0	0.4	0	100.0	0.0	0.0	0.0
Annual	100	4196	0.2	4.7	0	0.7	0	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Kirby South (AMS507)
Annual Summary for the Year 2024
Hydrogen Sulphide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding	Maximum 24-Hour Value	Number of Values Exceeding	% of Data in Each Concentration Range			
					1-Hour Objective		24-Hour Objective	0 - 3	4-10	11 - 50	> 50
January	100	704	0.3	51.0	2	3.2	1	99.7	0.0	0.1	0.1
February	100	660	0.1	0.8	0	0.3	0	100.0	0.0	0.0	0.0
March	100	705	0.1	0.8	0	0.1	0	100.0	0.0	0.0	0.0
April	99	676	0.1	1.8	0	1.0	0	100.0	0.0	0.0	0.0
May	100	707	0.1	0.7	0	0.2	0	100.0	0.0	0.0	0.0
June	100	579	0.1	0.2	0	0.1	0	100.0	0.0	0.0	0.0
Annual	100	4031	0.1	51.0	2	3.2	1	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Kirby North (AMS508)
Annual Summary for the Year 2024
Hydrogen Sulphide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values	Maximum 24-Hour Value	Number of Values	% of Data in Each Concentration Range			
					Exceeding 1-Hour Objective		Exceeding 24-Hour Objective	0 - 3	4-10	11 - 50	> 50
July	100	536	0.3	2.2	0	0.5	0	100.0	0.0	0.0	0.0
August	100	704	0.2	3.9	0	0.4	0	99.9	0.1	0.0	0.0
September	100	684	0.2	2.4	0	0.4	0	100.0	0.0	0.0	0.0
October	100	705	0.1	1.8	0	0.4	0	100.0	0.0	0.0	0.0
November	100	680	0.1	1.8	0	0.3	0	100.0	0.0	0.0	0.0
December	99	696	0.1	0.4	0	0.2	0	100.0	0.0	0.0	0.0
Annual	100	4005	0.2	3.9	0	0.5	0	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Blackgold (AMS511)
Annual Summary for the Year 2024
Hydrogen Sulphide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values	Maximum 24-Hour Value	Number of Values	% of Data in Each Concentration Range			
					Exceeding 1-Hour Objective		Exceeding 24-Hour Objective	0 - 3	4-10	11 - 50	> 50
January	97	684	0.1	2.0	0	0.3	0	100.0	0.0	0.0	0.0
February	100	662	0.1	1.4	0	0.3	0	100.0	0.0	0.0	0.0
March	100	708	0.1	5.0	0	0.5	0	99.9	0.1	0.0	0.0
Annual	99	2054	0.1	5.0	1	0.5	0	100.0	0.0	0.0	0.0



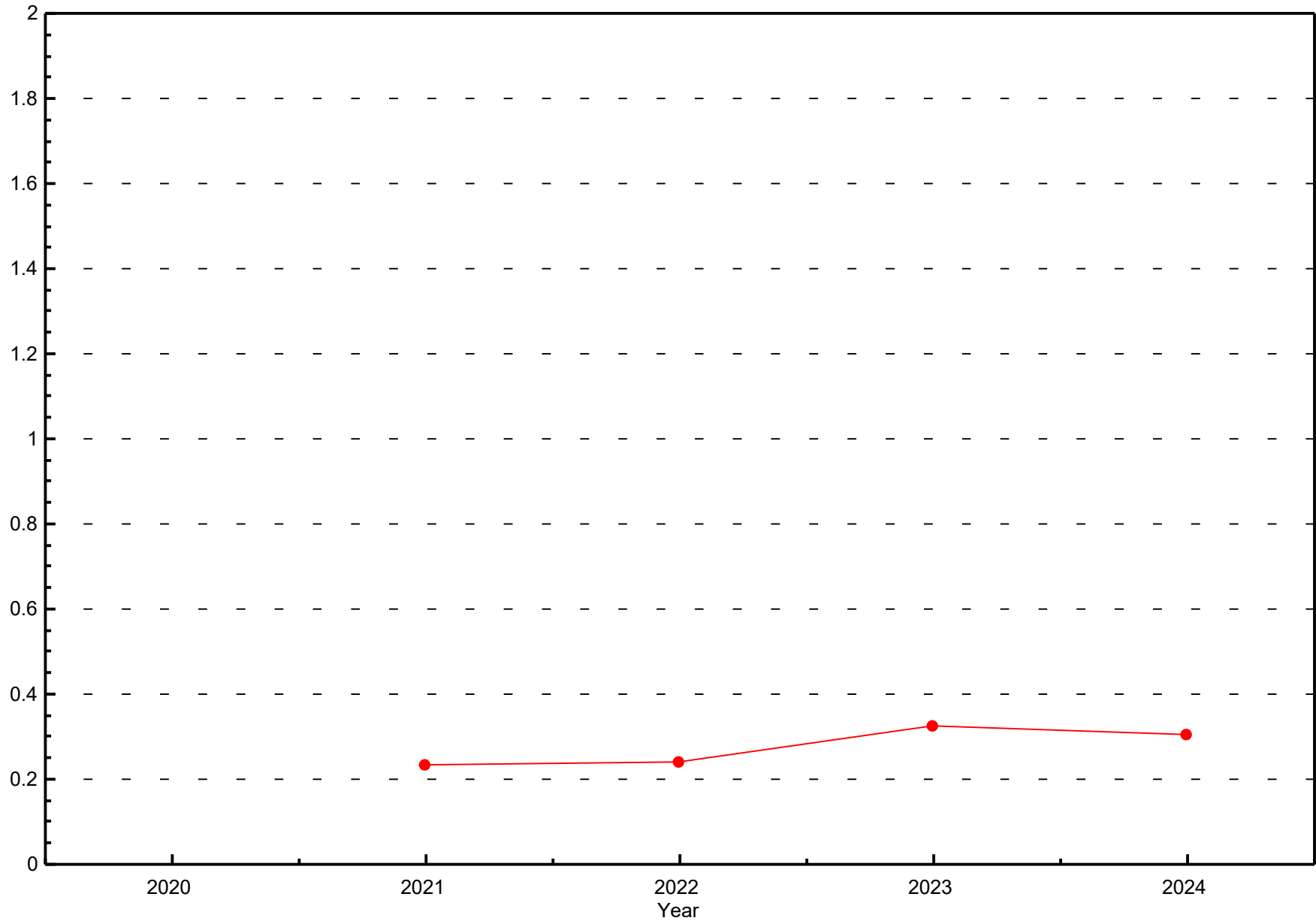
Wood Buffalo Environmental Association - Hangingstone Expansion (AMS512)
Annual Summary for the Year 2024
Hydrogen Sulphide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values	Maximum 24-Hour Value	Number of Values	% of Data in Each Concentration Range			
					Exceeding 1-Hour Objective		Exceeding 24-Hour Objective	0 - 3	4-10	11 - 50	> 50
July	98	697	0.3	3.2	0	0.7	0	100.0	0.0	0.0	0.0
August	100	709	0.2	1.4	0	0.4	0	100.0	0.0	0.0	0.0
September	100	684	0.3	4.1	0	1.1	0	99.4	0.6	0.0	0.0
October	97	690	0.2	2.5	0	0.5	0	100.0	0.0	0.0	0.0
November	100	685	0.1	1.6	0	0.4	0	100.0	0.0	0.0	0.0
December	100	705	0.2	2.5	0	0.8	0	100.0	0.0	0.0	0.0
Annual	99	4170	0.2	4.1	0	1.1	0	99.9	0.1	0.0	0.0



Yearly Averages

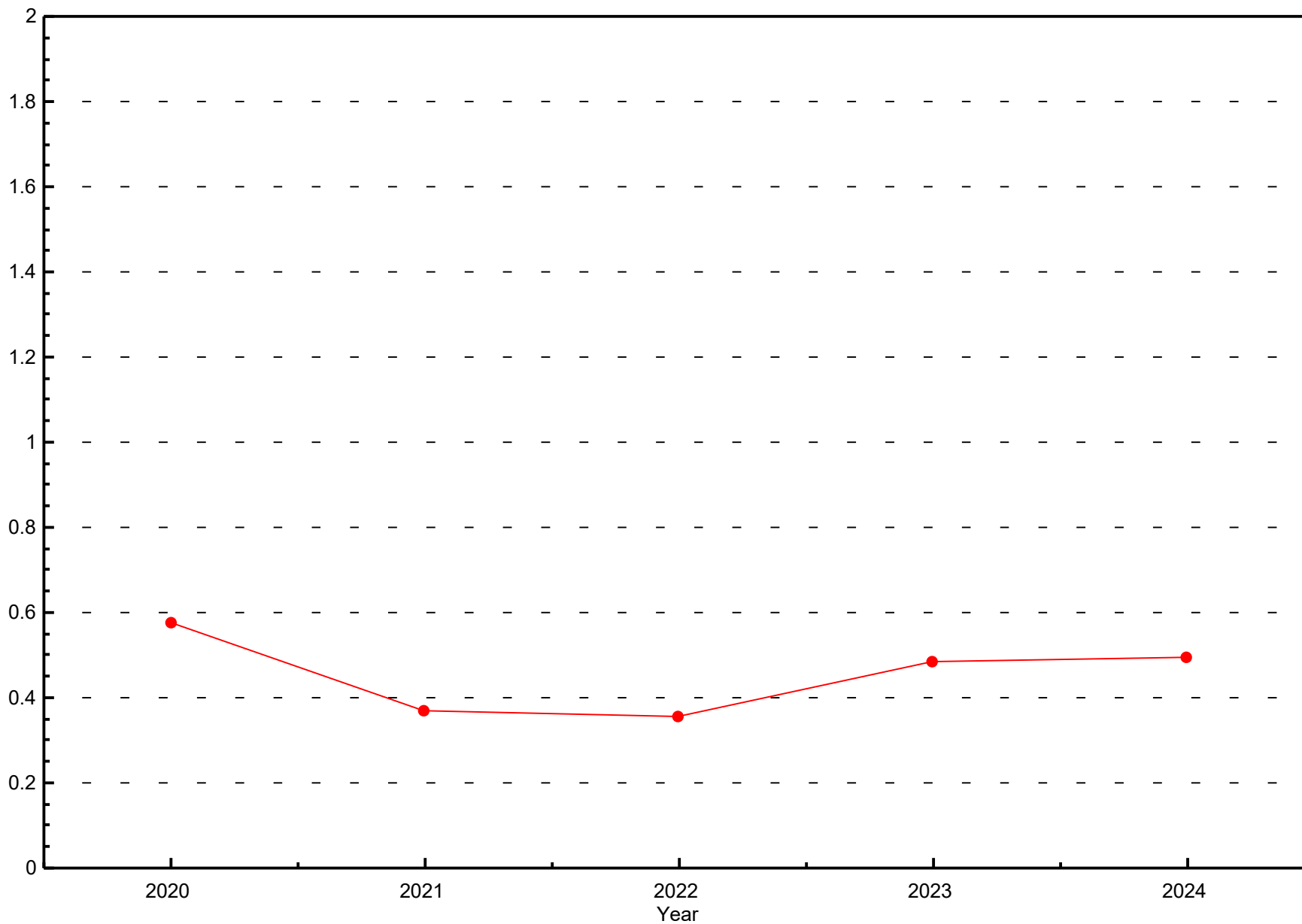
Hydrogen Sulphide (H₂S) - ppb
Fort McKay - Bertha Ganter (2020 to 2024)





Yearly Averages

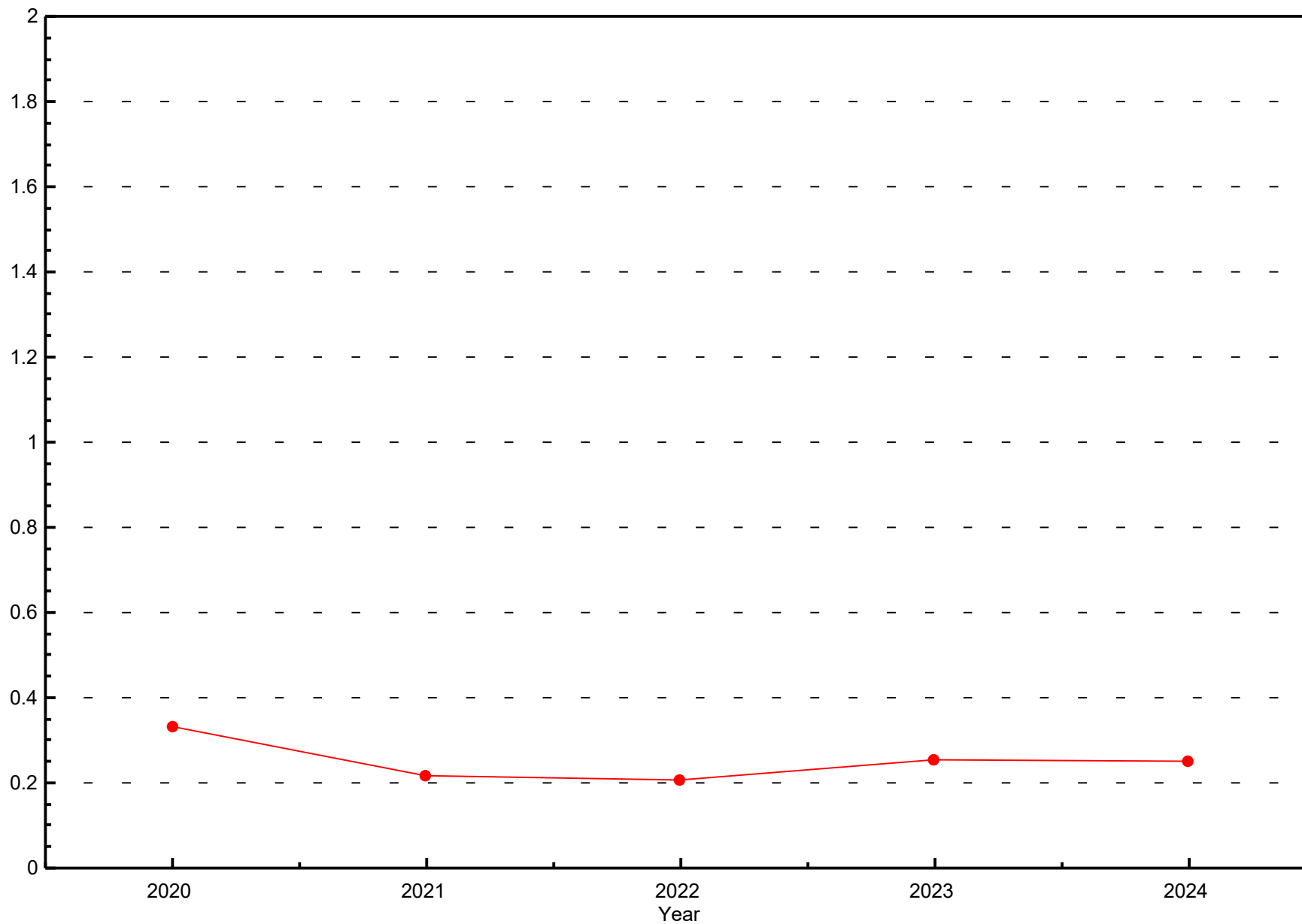
Hydrogen Sulphide (H₂S) - ppb
Mildred Lake (2020 to 2024)





Yearly Averages

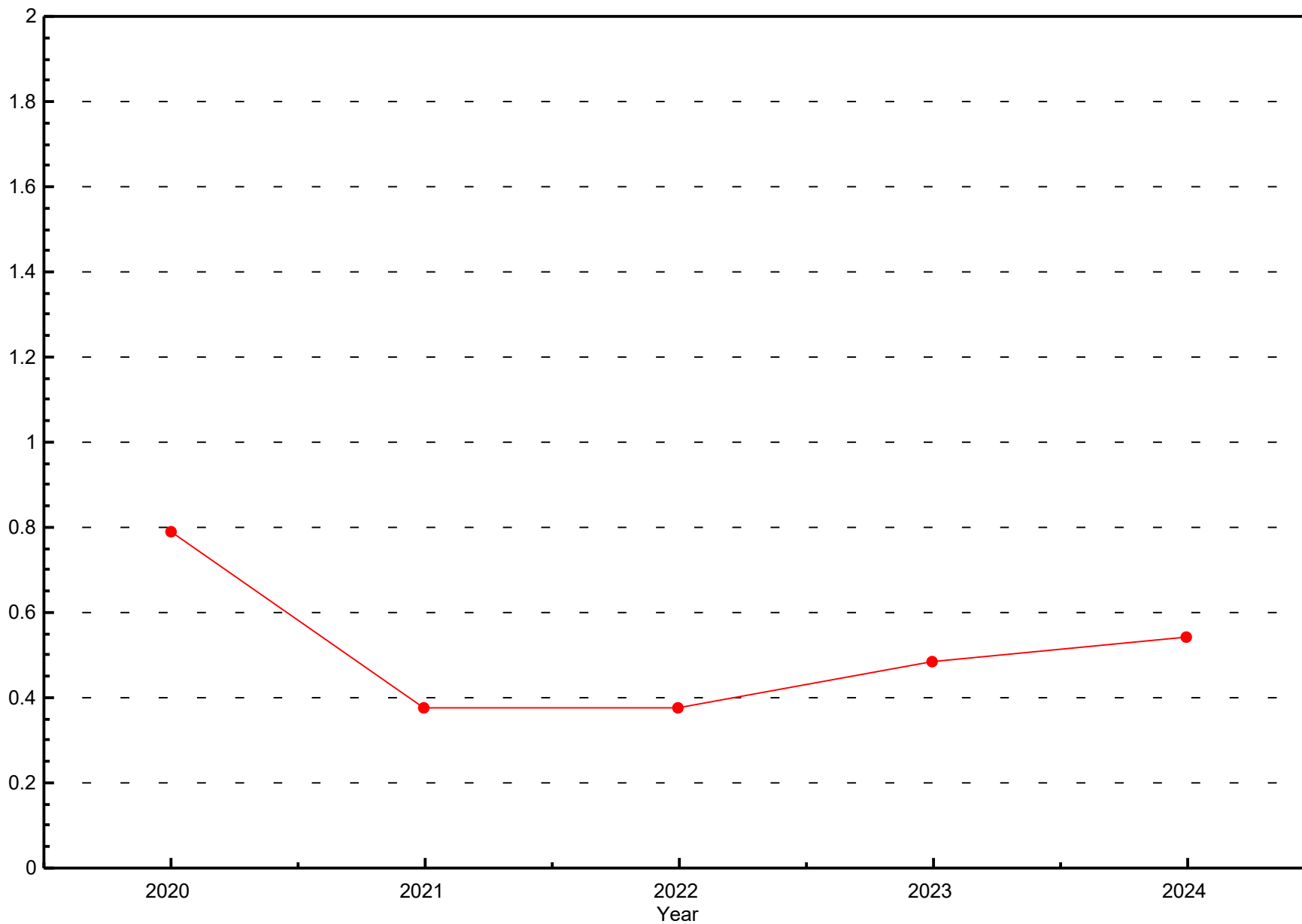
Hydrogen Sulphide (H₂S) - ppb
Buffalo Viewpoint (2020 to 2024)





Yearly Averages

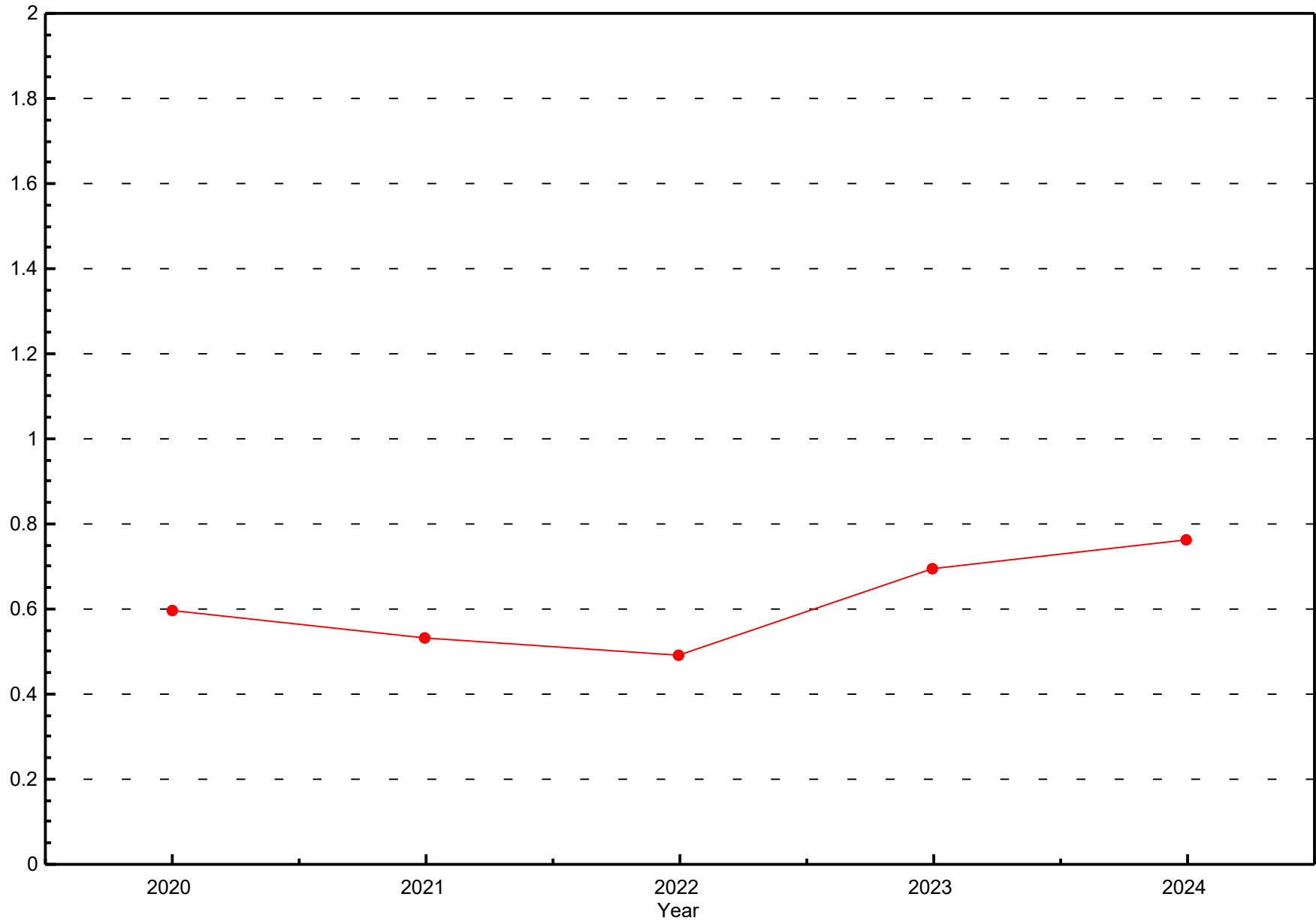
Hydrogen Sulphide (H₂S) - ppb
Mannix (2020 to 2024)





Yearly Averages

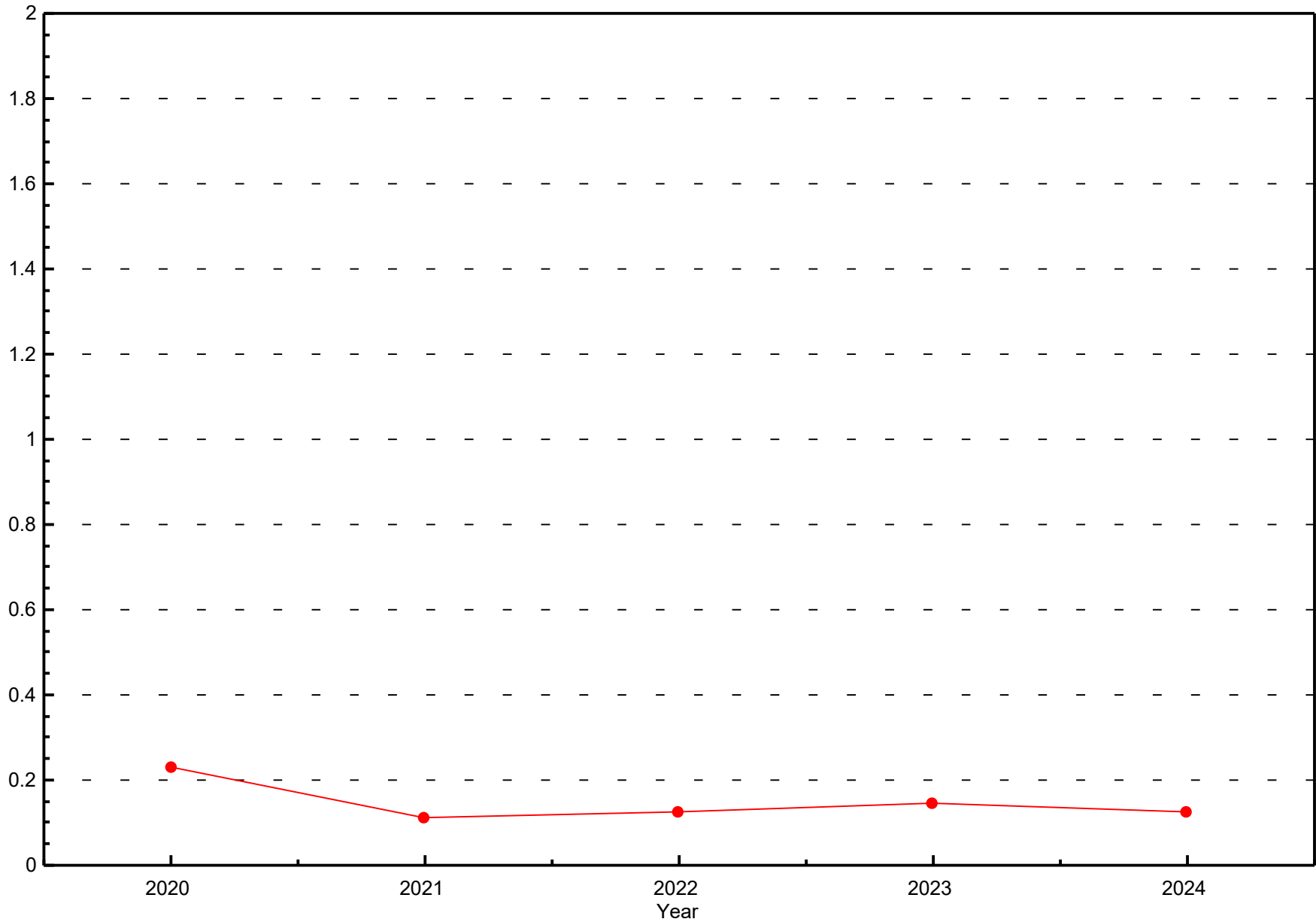
Hydrogen Sulphide (H₂S) - ppb
Lower Camp (2020 to 2024)





Yearly Averages

Hydrogen Sulphide (H₂S) - ppb
Wapasu (2020 to 2024)

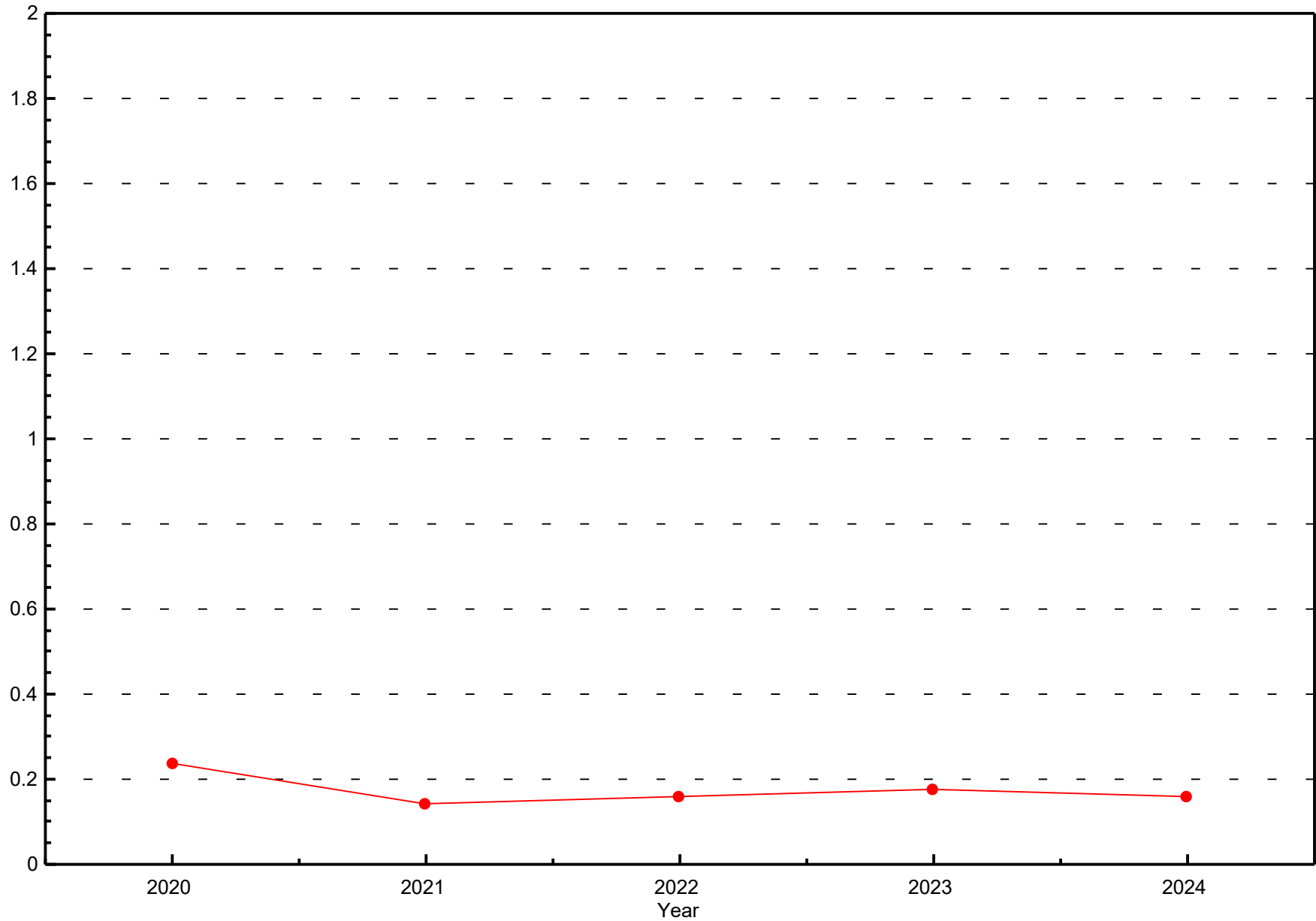




Yearly Averages

Hydrogen Sulphide (H₂S) - ppb

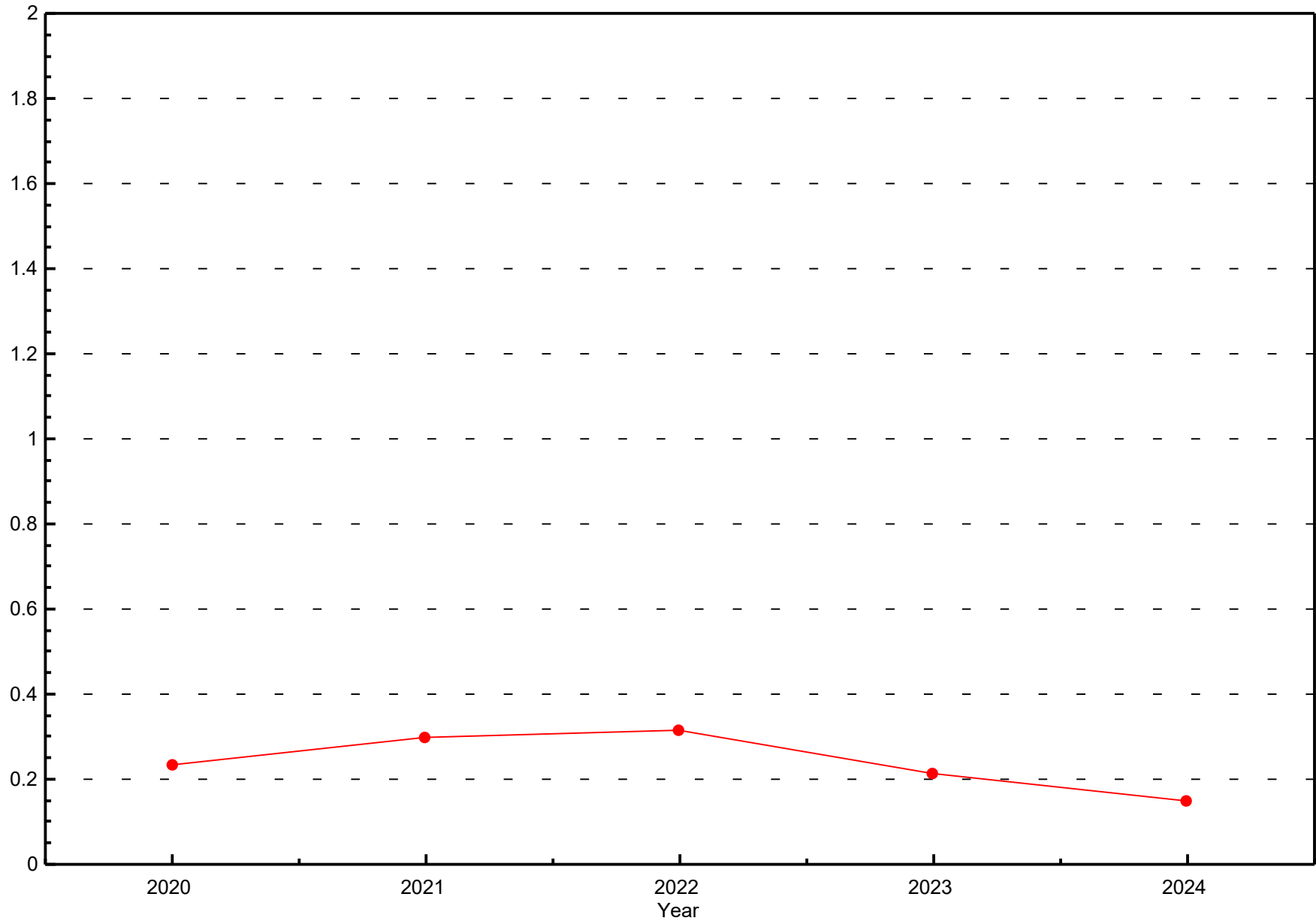
Firebag (2020 to 2024)





Yearly Averages

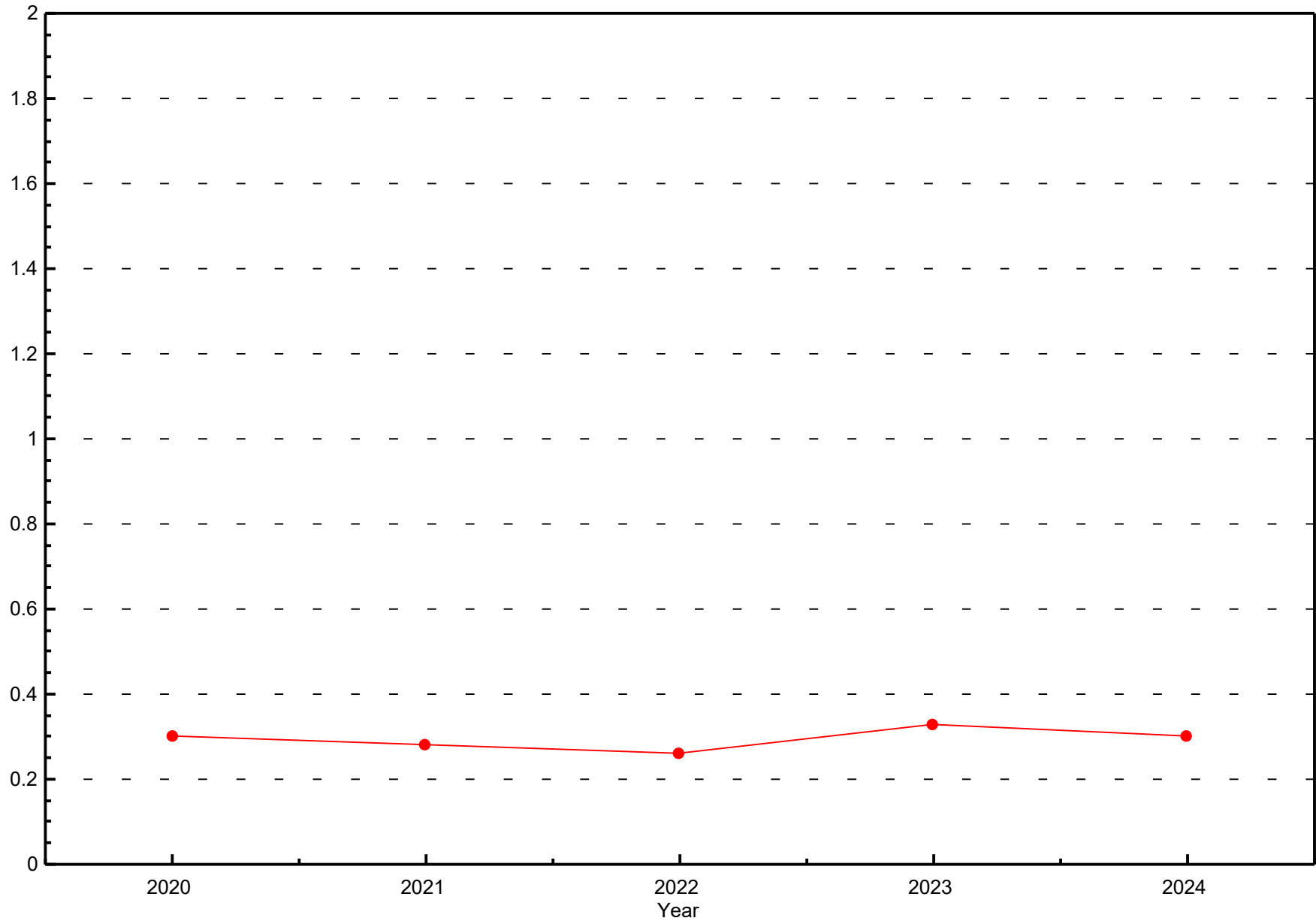
Hydrogen Sulphide (H₂S) - ppb
Mackay River (2020 to 2024)





Yearly Averages

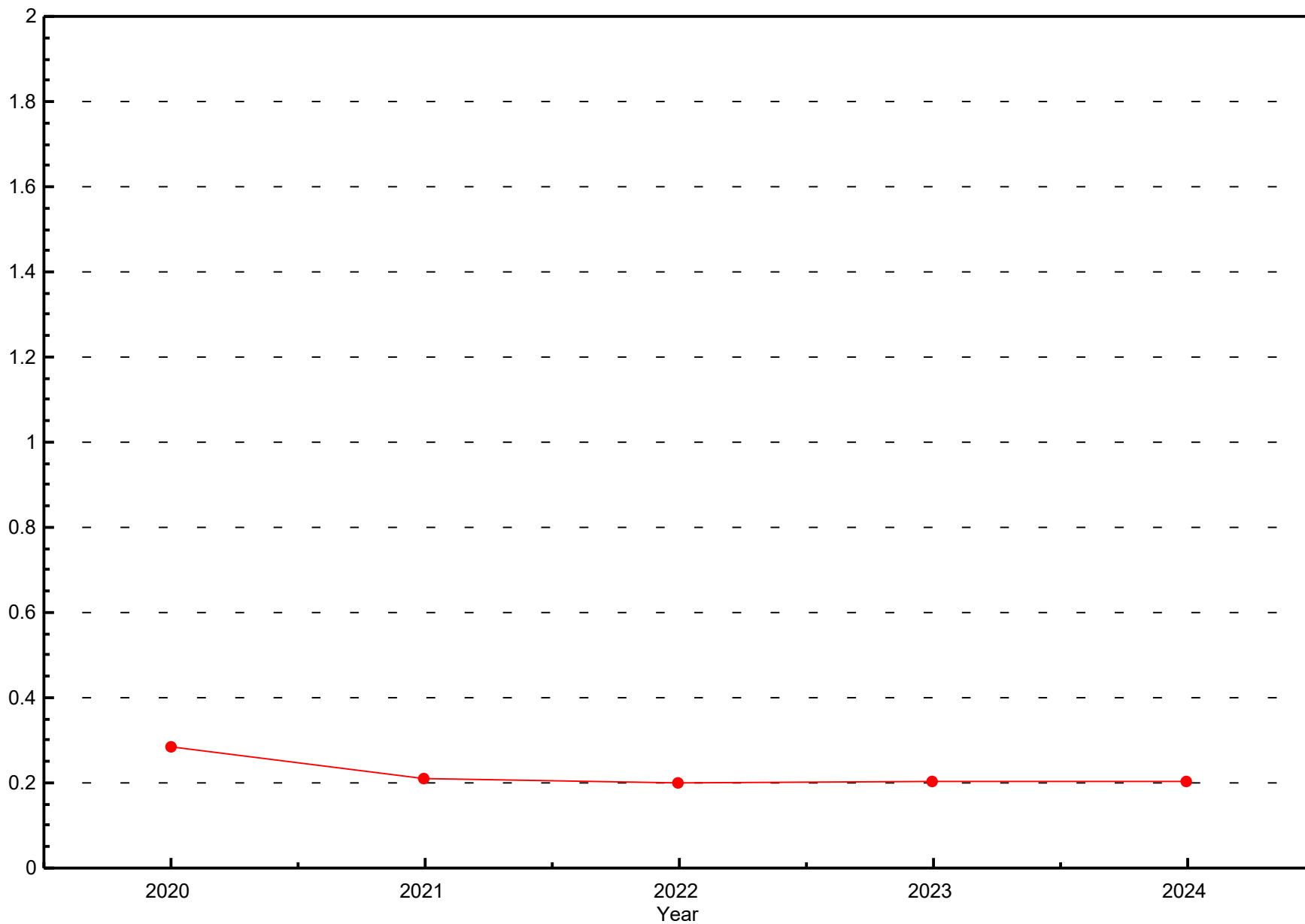
Hydrogen Sulphide (H₂S) - ppb
Waskow ohci Pimatisiwin (2020 to 2024)





Yearly Averages

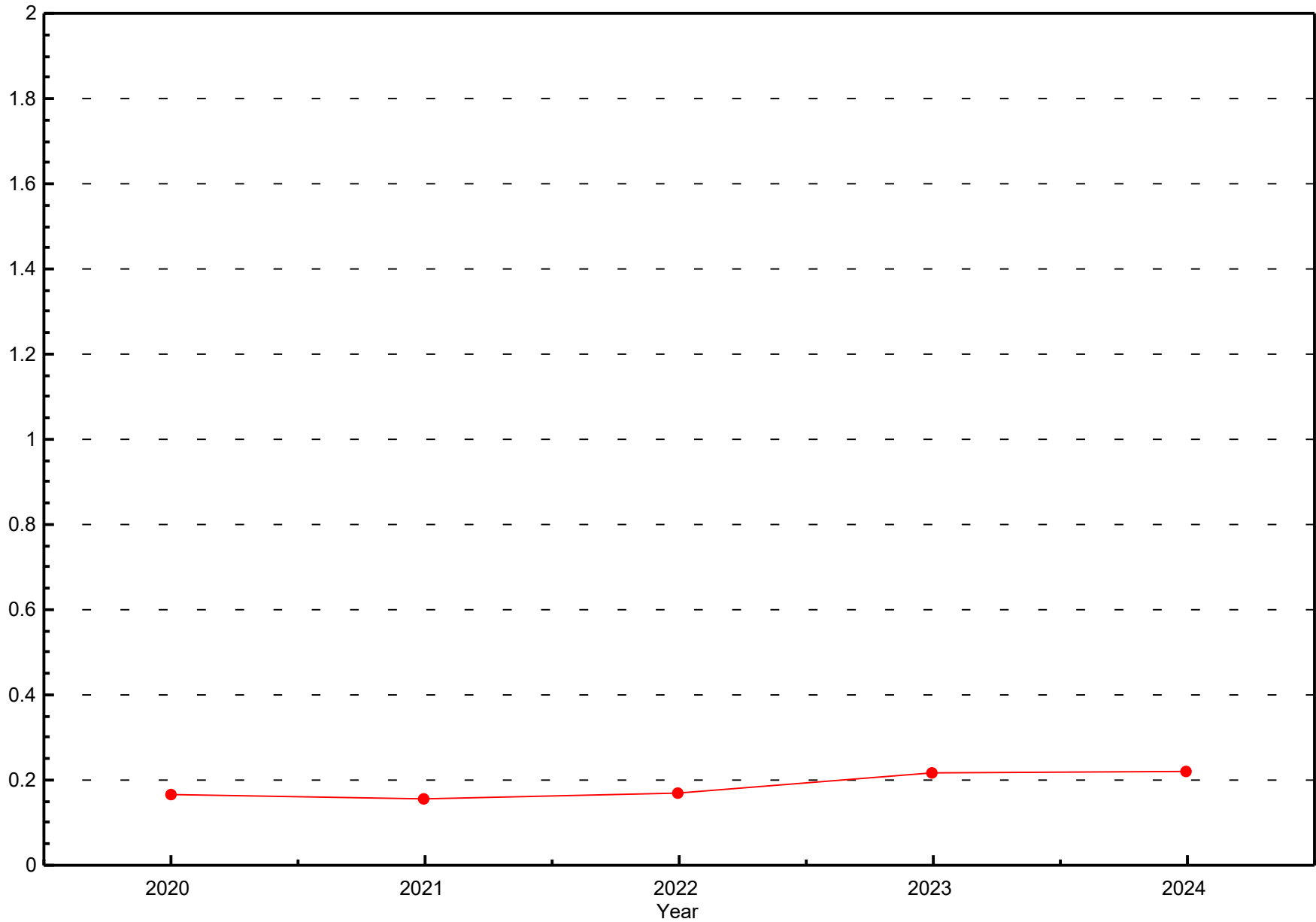
Hydrogen Sulphide (H₂S) - ppb
Christina Lake (2020 to 2024)





Yearly Averages

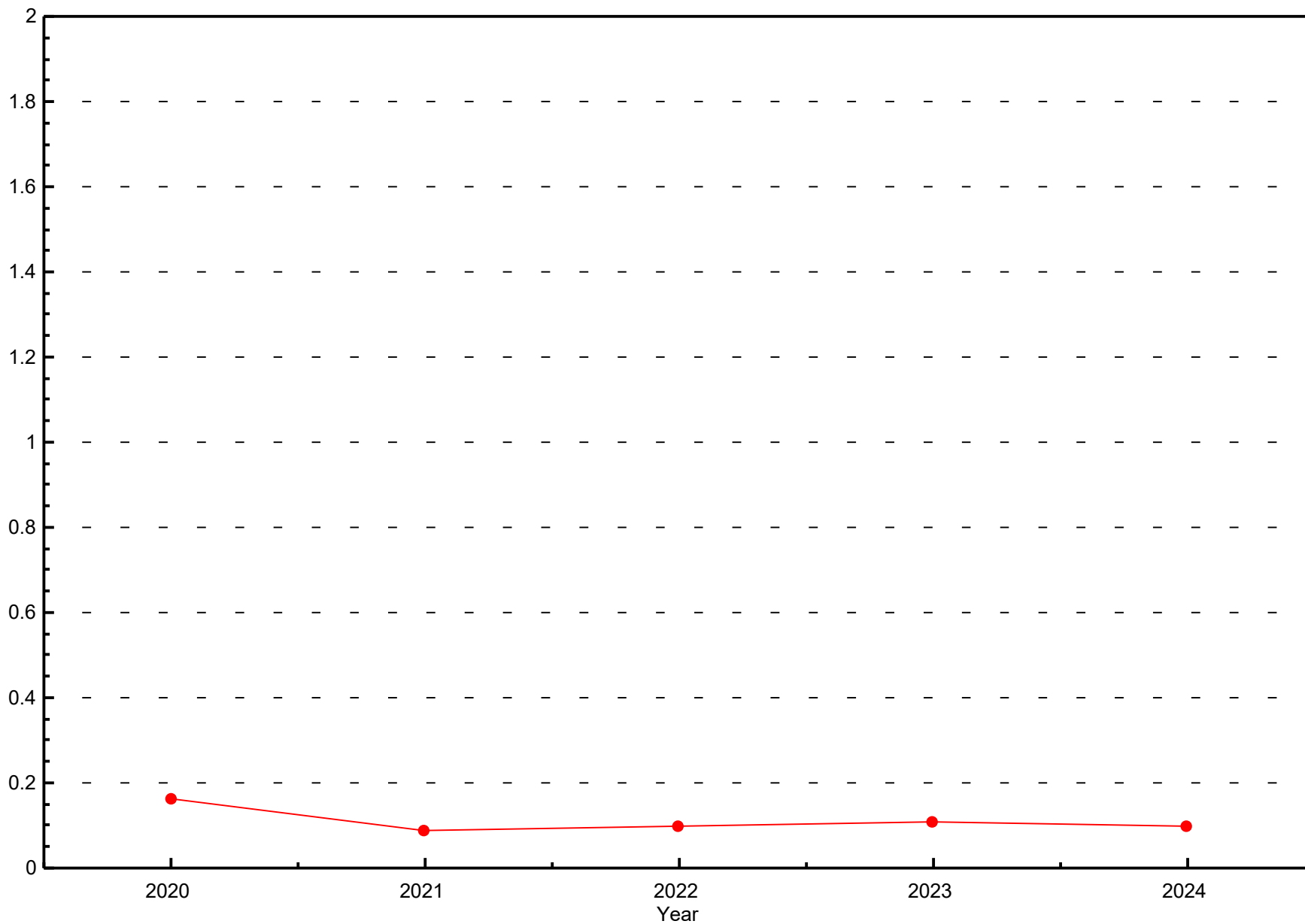
Hydrogen Sulphide (H₂S) - ppb
Jackfish 2/3 (2020 to 2024)





Yearly Averages

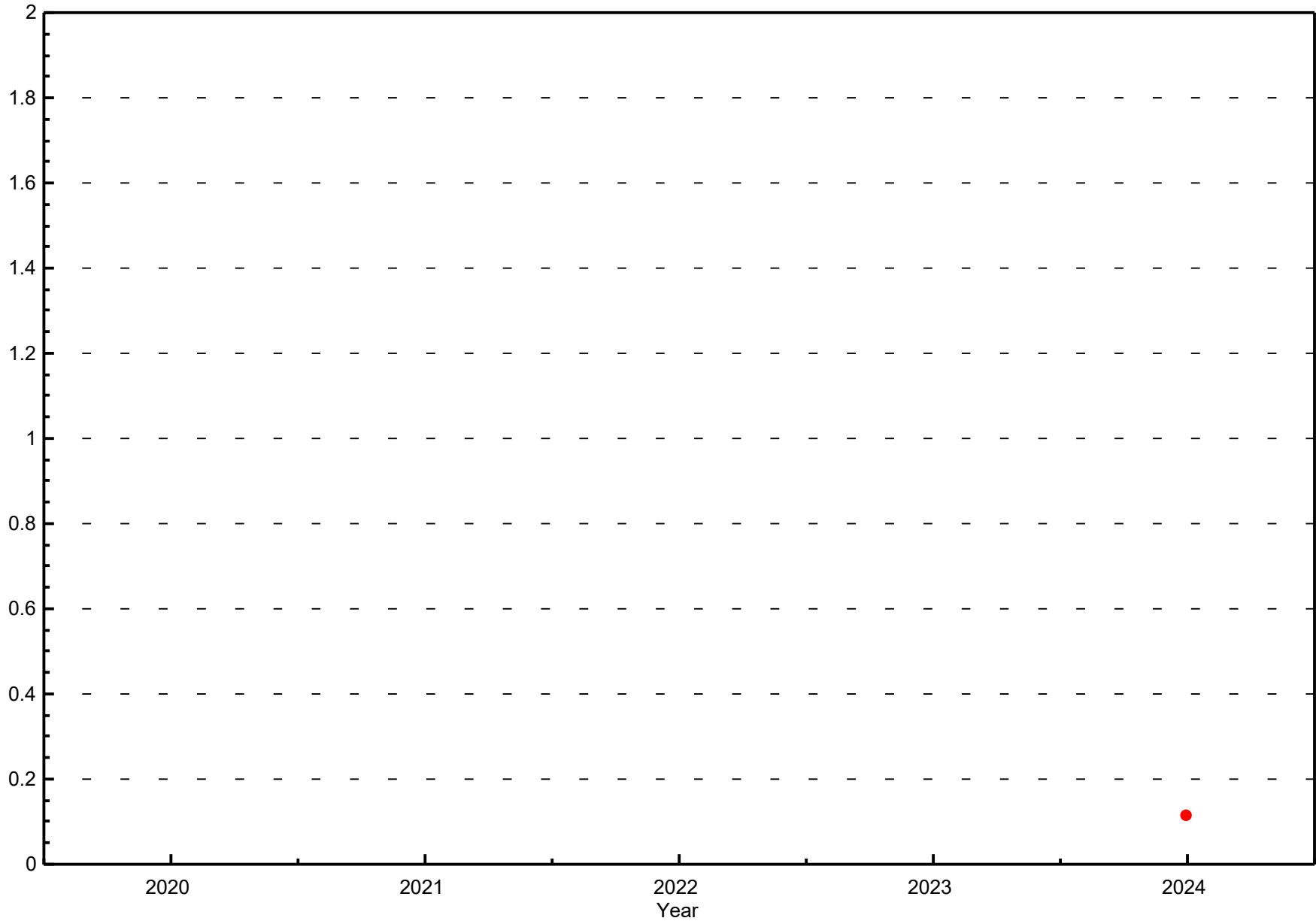
Hydrogen Sulphide (H₂S) - ppb
Surmont 2 (2020 to 2024)





Yearly Averages

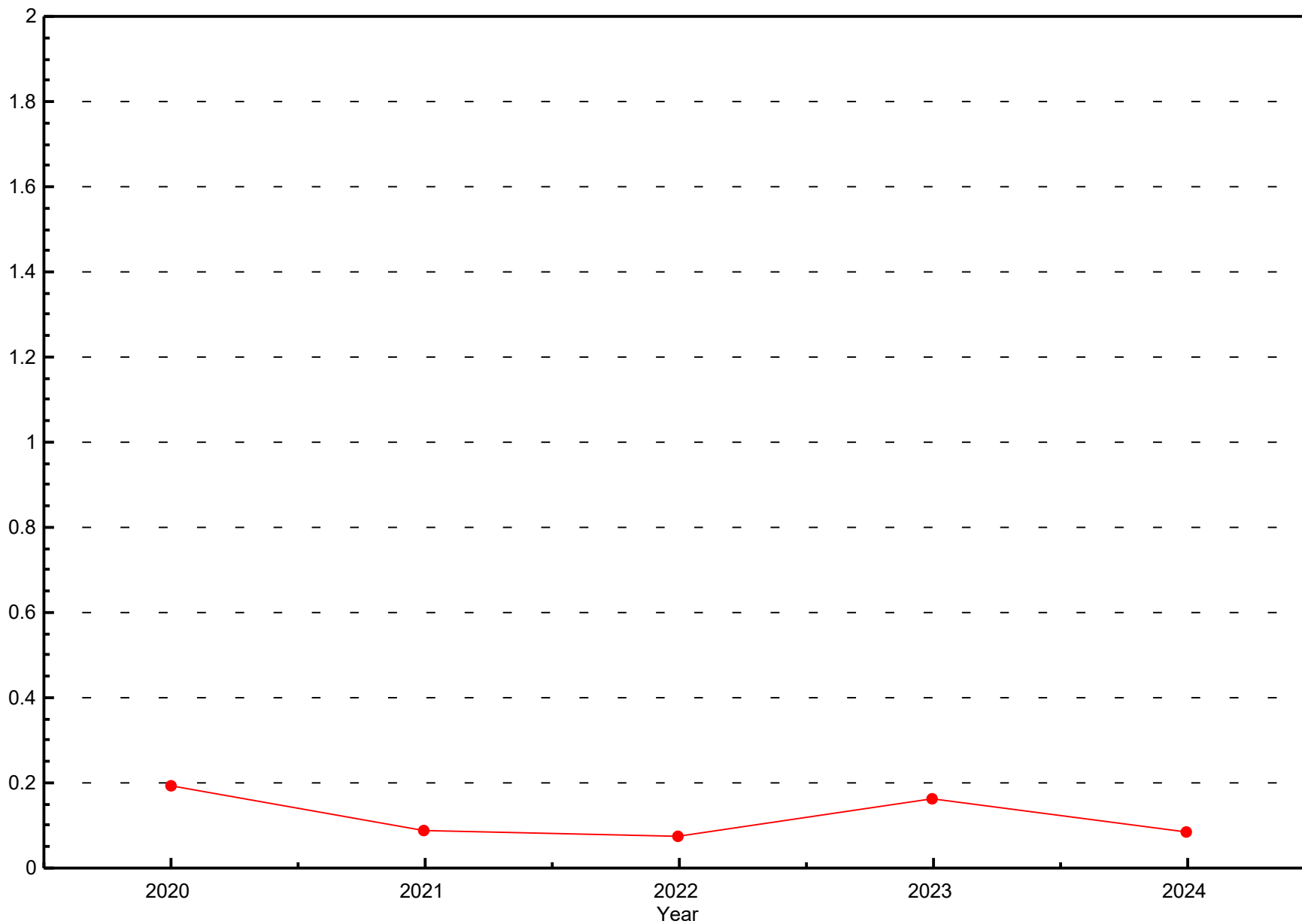
Hydrogen Sulphide (H₂S) - ppb
Monday Creek (2020 to 2024)





Yearly Averages

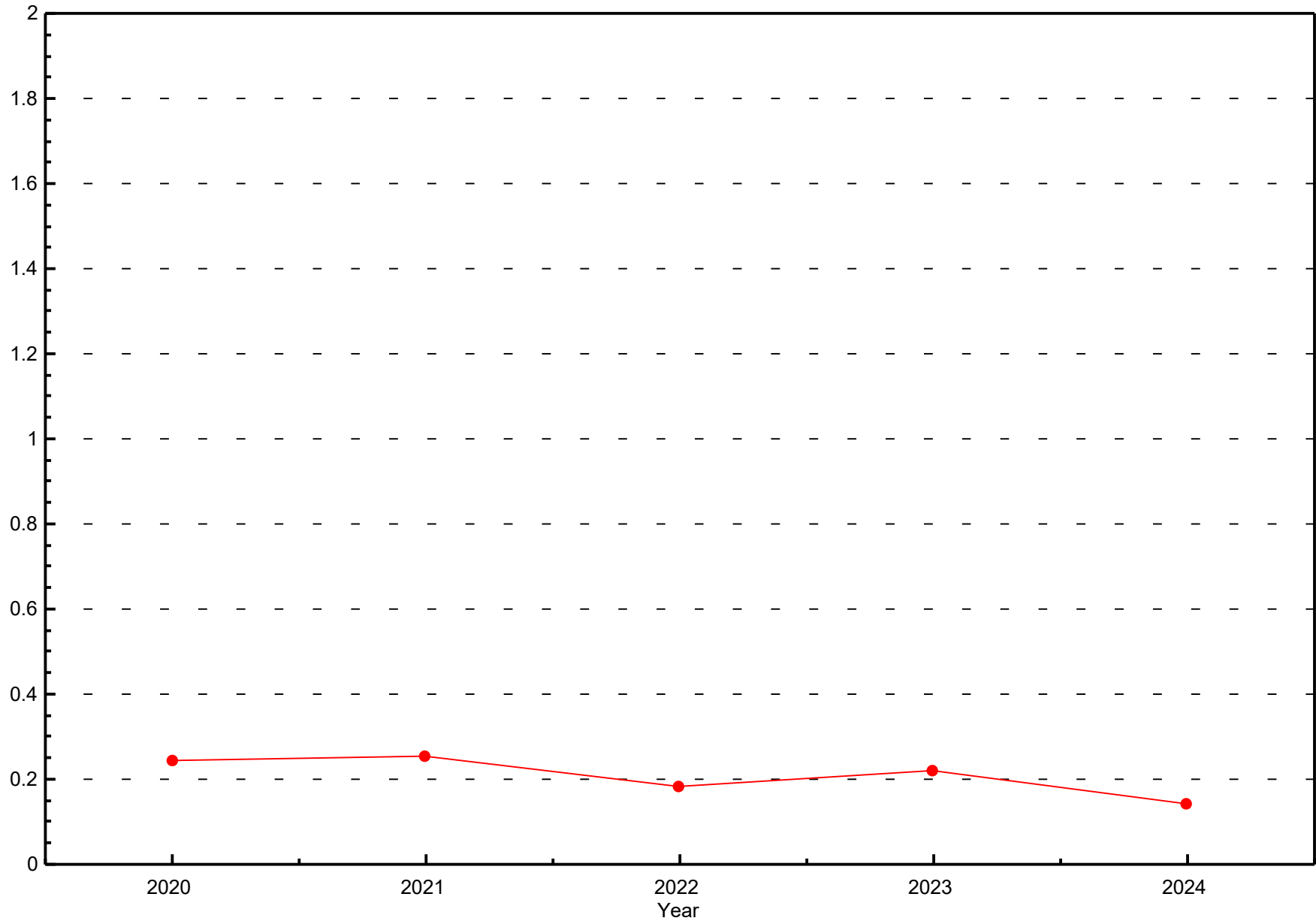
Hydrogen Sulphide (H₂S) - ppb
Leismer (2020 to 2024)





Yearly Averages

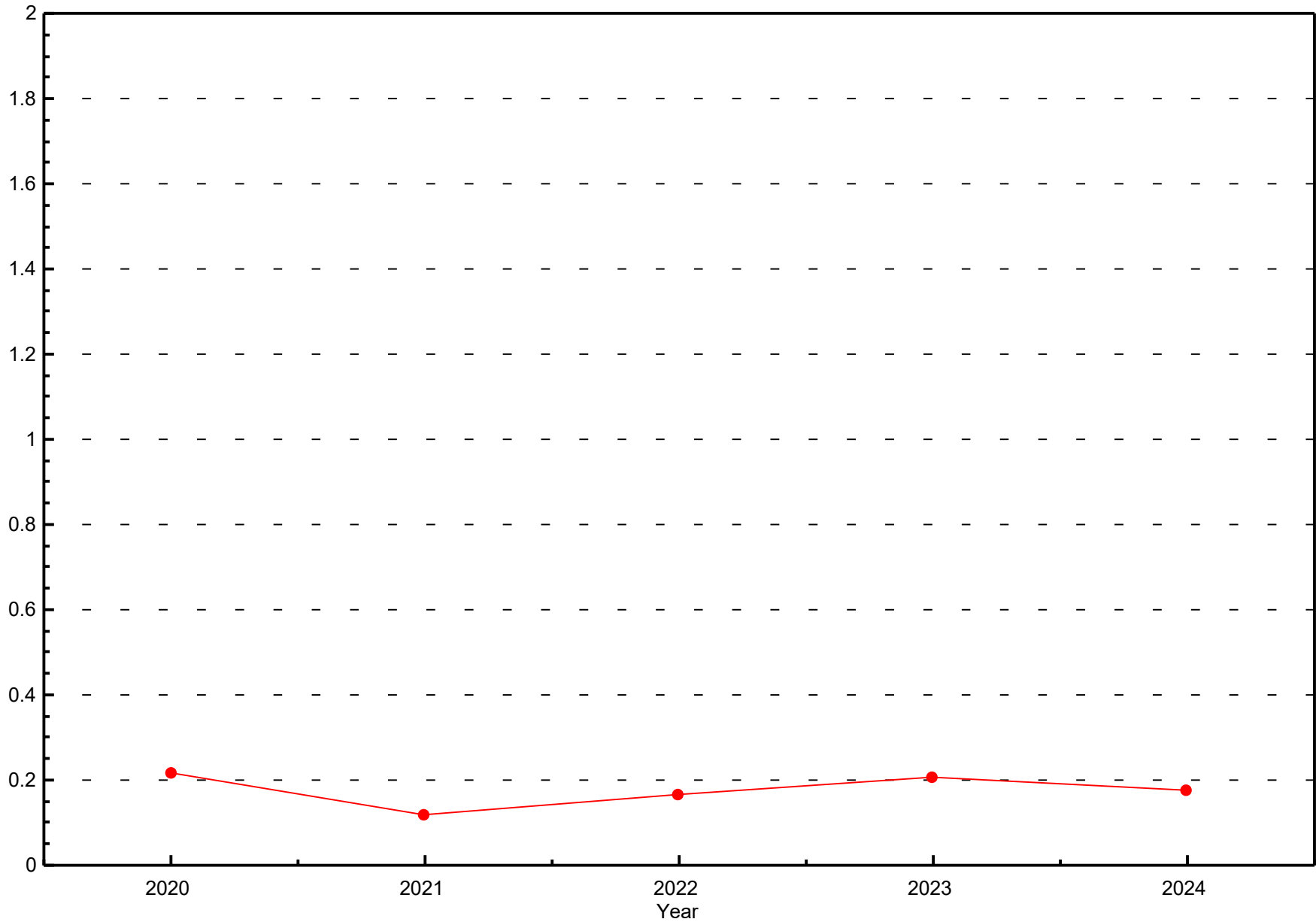
Hydrogen Sulphide (H₂S) - ppb
Sawbones Bay (2020 to 2024)





Yearly Averages

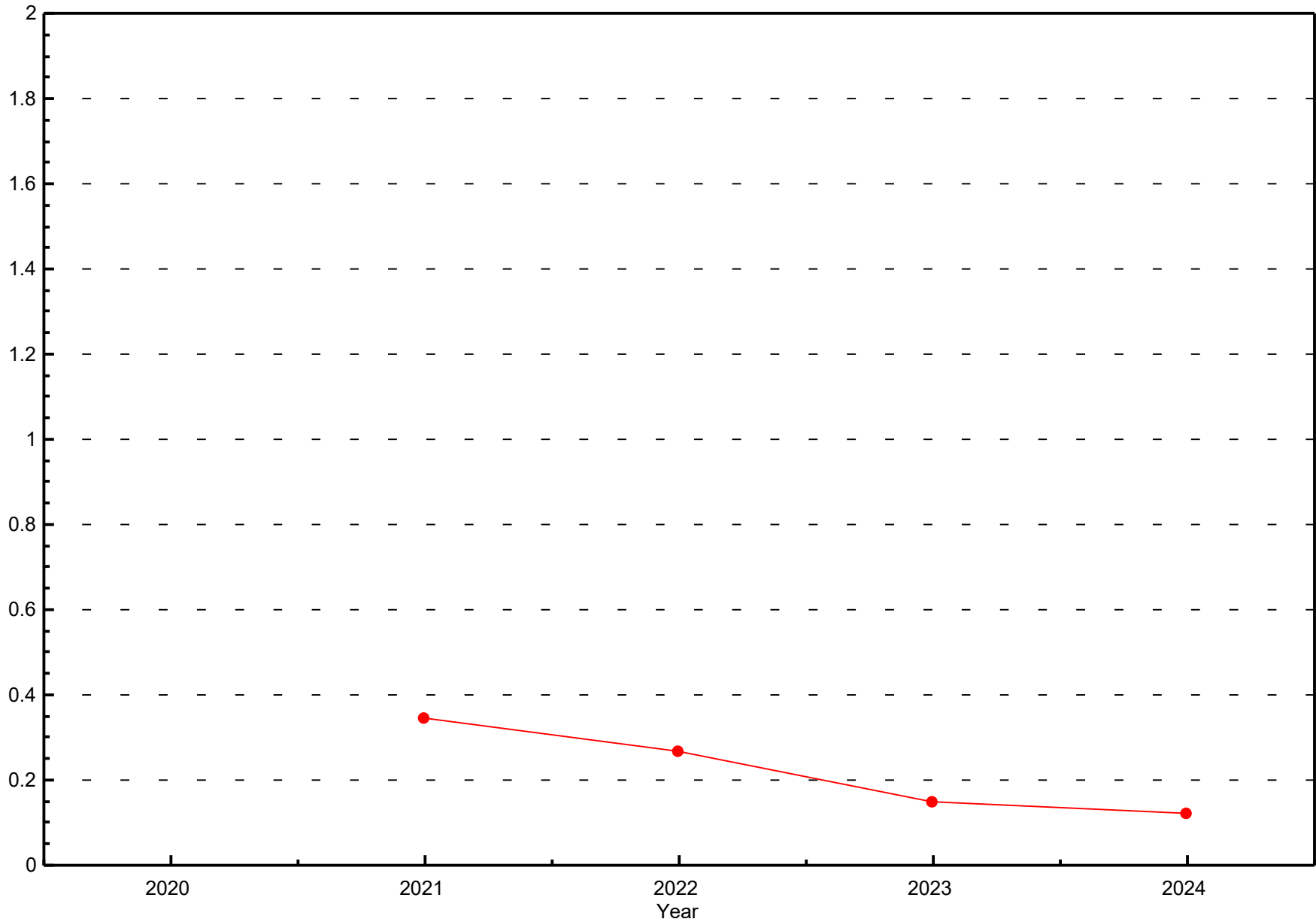
Hydrogen Sulphide (H₂S) - ppb
Jackfish 1 (2020 to 2024)





Yearly Averages

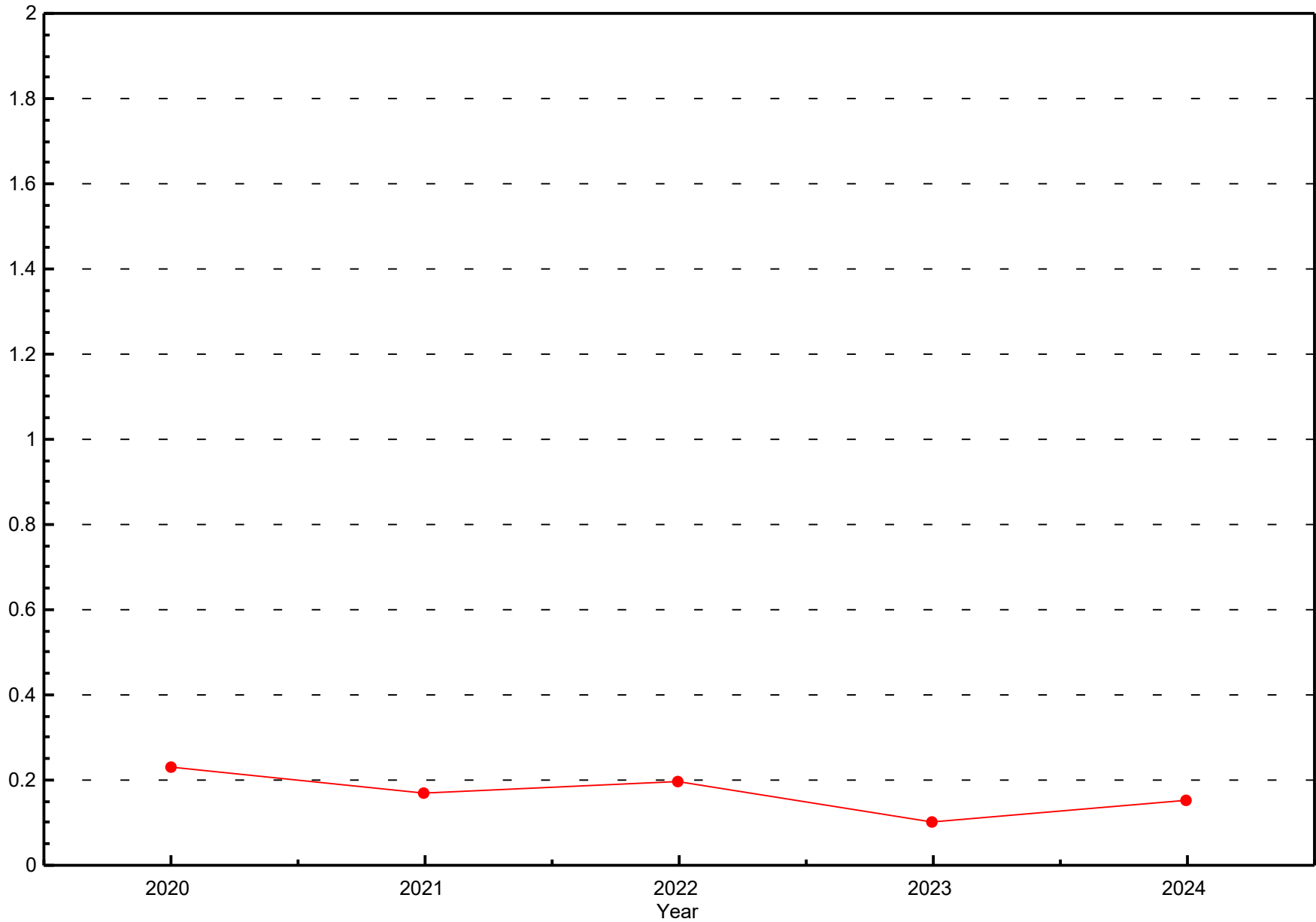
Hydrogen Sulphide (H₂S) - ppb
Kirby South (2020 to 2024)





Yearly Averages

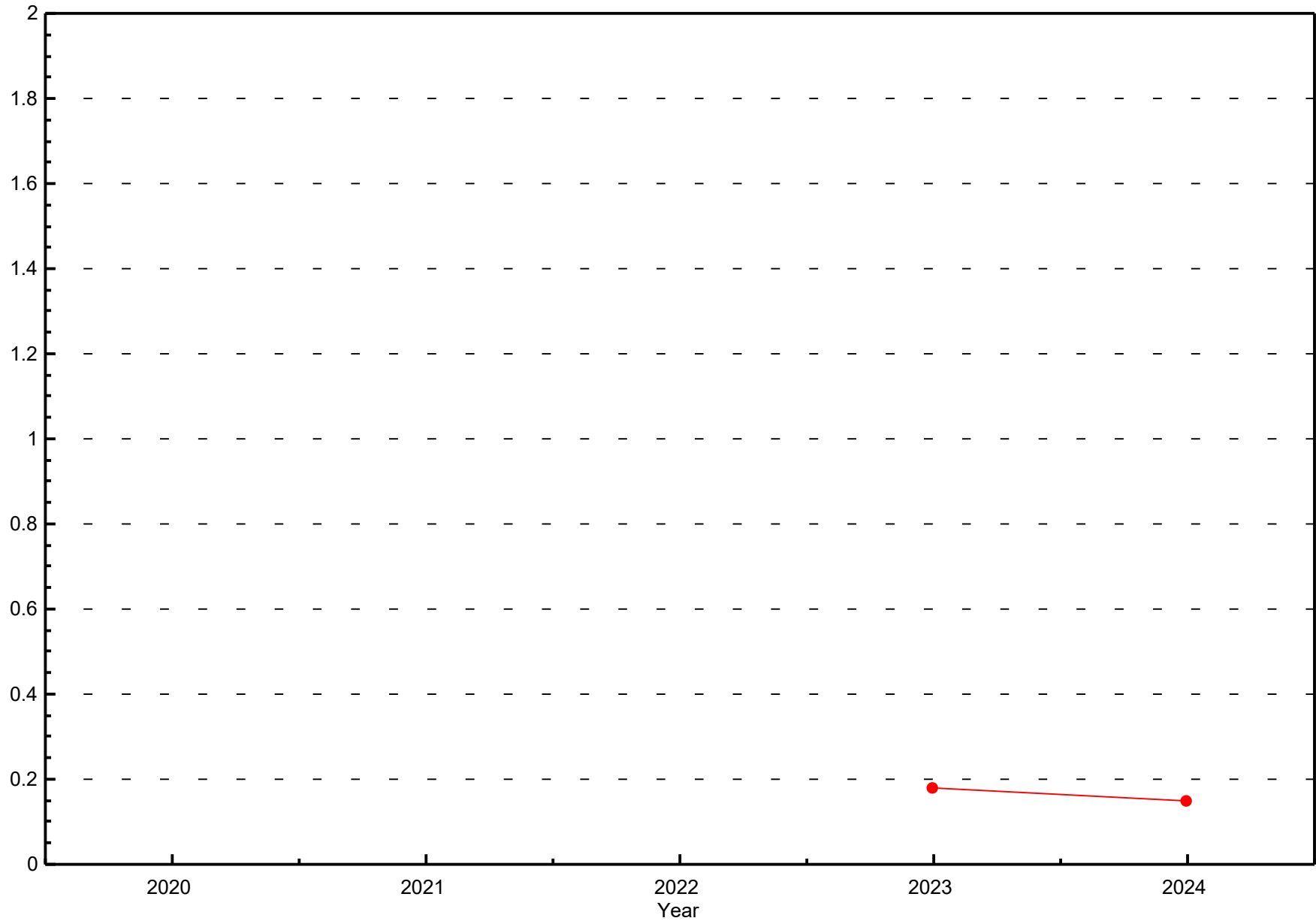
Hydrogen Sulphide (H₂S) - ppb
Kirby North (2020 to 2024)





Yearly Averages

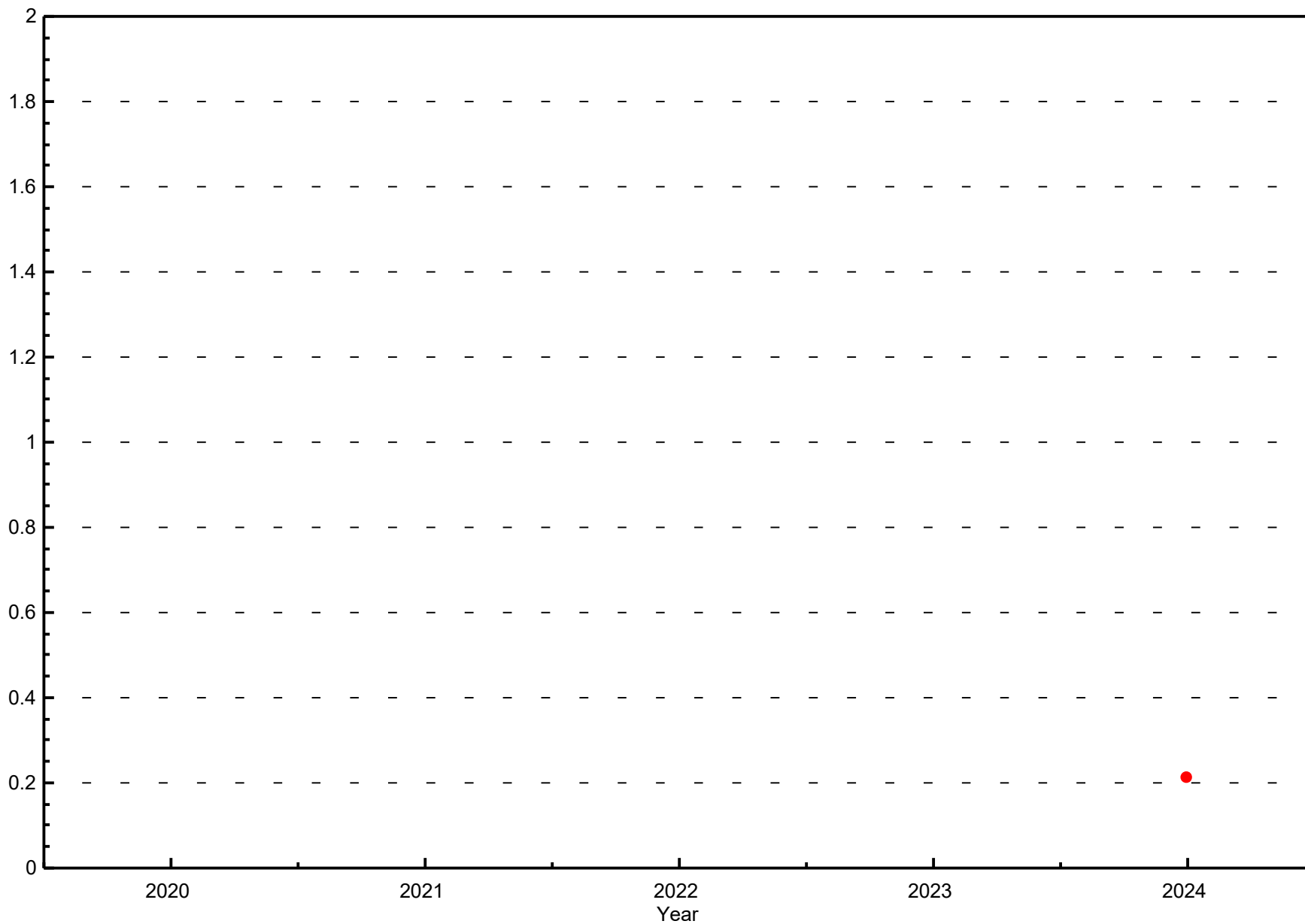
Hydrogen Sulphide (H₂S) - ppb
Blackgold (2020 to 2024)





Yearly Averages

Hydrogen Sulphide (H₂S) - ppb Hangingstone Expansion (2020 to 2024)



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
ANNUAL REPORT

**TOTAL REDUCED SULPHUR
ANNUAL 2024**

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

March 2025



Wood Buffalo Environmental Association - Fort McKay - Bertha Ganter (AMS01)
Annual Summary for the Year 2024
Total Reduced Sulphur (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range			
								0 - 3	4 - 10	11 - 50	> 50
January	99	701	0.8	8.2	0	2.1	0	98.7	1.3	0.0	0.0
February	100	661	0.7	4.6	0	1.5	0	98.3	1.7	0.0	0.0
March	100	707	0.7	3.5	0	1.9	0	99.9	0.1	0.0	0.0
April	100	684	0.6	3.2	0	1.3	0	100.0	0.0	0.0	0.0
May	100	705	0.5	1.7	0	0.7	0	100.0	0.0	0.0	0.0
June	99	678	0.5	2.3	0	0.8	0	100.0	0.0	0.0	0.0
July	99	699	0.8	10.0	0	1.8	0	99.0	1.0	0.0	0.0
August	100	705	0.7	4.8	0	1.6	0	99.6	0.4	0.0	0.0
September	100	682	0.6	3.9	0	1.1	0	99.9	0.2	0.0	0.0
October	100	706	0.5	2.8	0	1.2	0	100.0	0.0	0.0	0.0
November	100	683	0.5	3.0	0	0.9	0	100.0	0.0	0.0	0.0
December	100	706	0.7	3.2	0	1.3	0	100.0	0.0	0.0	0.0
Annual	100	8317	0.6	10.0	0	2.1	0	99.6	0.4	0.0	0.0



Wood Buffalo Environmental Association - Patricia McInnes (AMS06)
Annual Summary for the Year 2024
Total Reduced Sulphur (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range			
								0 - 3	4 - 10	11 - 50	> 50
January	100	706	0.6	2.2	0	1.4	0	100.0	0.0	0.0	0.0
February	98	650	0.5	2.1	0	1.0	0	100.0	0.0	0.0	0.0
March	96	678	0.4	1.4	0	0.5	0	100.0	0.0	0.0	0.0
April	96	661	0.4	1.6	0	0.7	0	100.0	0.0	0.0	0.0
May	95	673	0.2	1.9	0	0.7	0	100.0	0.0	0.0	0.0
June	100	684	0.2	1.3	0	0.5	0	100.0	0.0	0.0	0.0
July	99	701	0.4	4.0	0	1.3	0	99.9	0.1	0.0	0.0
August	100	706	0.3	2.9	0	1.0	0	100.0	0.0	0.0	0.0
September	100	685	0.2	2.4	0	0.9	0	100.0	0.0	0.0	0.0
October	100	707	0.2	1.2	0	0.5	0	100.0	0.0	0.0	0.0
November	100	683	0.2	0.9	0	0.4	0	100.0	0.0	0.0	0.0
December	100	706	0.2	1.3	0	0.4	0	100.0	0.0	0.0	0.0
Annual	99	8240	0.3	4.0	0	1.4	0	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Athabasca Valley (AMS07)
Annual Summary for the Year 2024
Total Reduced Sulphur (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range			
								0 - 3	4 - 10	11 - 50	> 50
January	100	705	0.3	2.6	0	0.8	0	100.0	0.0	0.0	0.0
February	100	660	0.3	2.0	0	0.8	0	100.0	0.0	0.0	0.0
March	100	707	0.2	2.8	0	0.4	0	100.0	0.0	0.0	0.0
April	100	684	0.2	1.0	0	0.4	0	100.0	0.0	0.0	0.0
May	100	707	0.2	1.1	0	0.3	0	100.0	0.0	0.0	0.0
June	100	682	0.2	1.1	0	0.3	0	100.0	0.0	0.0	0.0
July	99	699	0.4	4.3	0	1.4	0	99.6	0.4	0.0	0.0
August	100	705	0.4	6.1	0	2.2	0	99.0	1.0	0.0	0.0
September	100	684	0.3	2.7	0	1.0	0	100.0	0.0	0.0	0.0
October	100	708	0.2	1.8	0	0.7	0	100.0	0.0	0.0	0.0
November	100	681	0.2	1.8	0	0.7	0	100.0	0.0	0.0	0.0
December	97	686	0.2	1.2	0	0.5	0	100.0	0.0	0.0	0.0
Annual	100	8308	0.3	6.1	0	2.2	0	99.9	0.1	0.0	0.0



Wood Buffalo Environmental Association - Fort Chipewyan (AMS08)
Annual Summary for the Year 2024
Total Reduced Sulphur (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Number of Values		Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range			
				Maximum 1-Hour Value	Exceeding 1-Hour Objective			0 - 3	4 - 10	11 - 50	> 50
January	100	708	0.2	0.8	0	0.5	0	100.0	0.0	0.0	0.0
February	100	662	0.2	0.6	0	0.2	0	100.0	0.0	0.0	0.0
March	100	705	0.2	0.4	0	0.2	0	100.0	0.0	0.0	0.0
April	100	686	0.1	0.4	0	0.2	0	100.0	0.0	0.0	0.0
May	100	709	0.1	1.7	0	0.6	0	100.0	0.0	0.0	0.0
June	100	685	0.1	0.3	0	0.2	0	100.0	0.0	0.0	0.0
July	100	709	0.3	1.2	0	0.6	0	100.0	0.0	0.0	0.0
August	100	707	0.2	1.1	0	0.5	0	100.0	0.0	0.0	0.0
September	100	684	0.2	0.6	0	0.3	0	100.0	0.0	0.0	0.0
October	100	708	0.1	0.4	0	0.3	0	100.0	0.0	0.0	0.0
November	100	686	0.1	0.4	0	0.2	0	100.0	0.0	0.0	0.0
December	100	708	0.2	0.6	0	0.4	0	100.0	0.0	0.0	0.0
Annual	100	8357	0.2	1.7	0	0.6	0	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Barge Landing (AMS09)
Annual Summary for the Year 2024
Total Reduced Sulphur (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range			
					0 - 3		4 - 10	11 - 50	> 50		
January	100	708	0.8	7.1	0	2.7	0	96.6	3.4	0.0	0.0
February	100	663	0.6	4.3	0	1.3	0	99.6	0.5	0.0	0.0
March	100	707	0.5	3.7	0	1.1	0	99.7	0.3	0.0	0.0
April	100	685	0.4	2.2	0	0.8	0	100.0	0.0	0.0	0.0
May	100	707	0.4	2.9	0	0.8	0	100.0	0.0	0.0	0.0
June	99	678	0.4	2.1	0	0.7	0	100.0	0.0	0.0	0.0
July	100	706	0.7	7.1	0	1.8	0	99.0	1.0	0.0	0.0
August	100	707	0.6	4.5	0	1.3	0	99.6	0.4	0.0	0.0
September	100	685	0.6	6.3	0	1.2	0	99.3	0.7	0.0	0.0
October	100	708	0.4	2.8	0	1.3	0	100.0	0.0	0.0	0.0
November	100	685	0.4	3.4	0	1.1	0	100.0	0.0	0.0	0.0
December	100	708	0.6	2.9	0	1.2	0	100.0	0.0	0.0	0.0
Annual	100	8347	0.5	7.1	0	2.7	0	99.5	0.5	0.0	0.0



Wood Buffalo Environmental Association - Anzac (AMS14)
Annual Summary for the Year 2024
Total Reduced Sulphur (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding	Maximum 24-Hour Value	Number of Values Exceeding	% of Data in Each Concentration Range			
					1-Hour Objective		24-Hour Objective	0 - 3	4 - 10	11 - 50	> 50
January	100	707	0.3	5.4	0	0.8	0	99.7	0.3	0.0	0.0
February	100	660	0.2	1.4	0	0.5	0	100.0	0.0	0.0	0.0
March	100	709	0.2	3.1	0	0.3	0	100.0	0.0	0.0	0.0
April	100	684	0.1	0.7	0	0.2	0	100.0	0.0	0.0	0.0
May	100	706	0.2	1.2	0	0.3	0	100.0	0.0	0.0	0.0
June	100	684	0.1	1.2	0	0.2	0	100.0	0.0	0.0	0.0
July	99	700	0.3	2.4	0	0.9	0	100.0	0.0	0.0	0.0
August	100	707	0.2	1.9	0	0.4	0	100.0	0.0	0.0	0.0
September	99	680	0.2	1.3	0	0.5	0	100.0	0.0	0.0	0.0
October	96	682	0.1	0.9	0	0.2	0	100.0	0.0	0.0	0.0
November	100	684	0.2	0.7	0	0.3	0	100.0	0.0	0.0	0.0
December	100	707	0.3	1.5	0	0.6	0	100.0	0.0	0.0	0.0
Annual	100	8310	0.2	5.4	0	0.9	0	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Stony Mountain (AMS18)
Annual Summary for the Year 2024
Total Reduced Sulphur (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	Number of Values Exceeding 24-Hour Objective	% of Data in Each Concentration Range			
					Objective		Objective	0 - 3	4 - 10	11 - 50	> 50
January	100	708	0.2	0.4	0	0.3	0	100.0	0.0	0.0	0.0
February	100	660	0.3	0.5	0	0.3	0	100.0	0.0	0.0	0.0
March	100	708	0.2	0.4	0	0.3	0	100.0	0.0	0.0	0.0
April	100	683	0.2	4.2	0	0.4	0	99.9	0.2	0.0	0.0
May	100	707	0.2	0.6	0	0.4	0	100.0	0.0	0.0	0.0
June	100	683	0.2	0.4	0	0.2	0	100.0	0.0	0.0	0.0
July	74	525	0.3	2.1	0	0.4	0	100.0	0.0	0.0	0.0
August	100	706	0.4	0.7	0	0.5	0	100.0	0.0	0.0	0.0
September	100	683	0.4	0.7	0	0.5	0	100.0	0.0	0.0	0.0
October	100	706	0.3	0.7	0	0.5	0	100.0	0.0	0.0	0.0
November	100	682	0.4	0.6	0	0.4	0	100.0	0.0	0.0	0.0
December	100	707	0.4	0.7	0	0.5	0	100.0	0.0	0.0	0.0
Annual	98	8158	0.3	4.2	0	0.5	0	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Conklin (AMS21)
Annual Summary for the Year 2024
Total Reduced Sulphur (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding	Maximum 24-Hour Value	Number of Values Exceeding	% of Data in Each Concentration Range			
					1-Hour Objective		24-Hour Objective	0 - 3	4 - 10	11 - 50	> 50
January	100	707	0.4	0.6	0	0.5	0	100.0	0.0	0.0	0.0
February	100	661	0.4	0.7	0	0.5	0	100.0	0.0	0.0	0.0
March	100	704	0.4	0.6	0	0.5	0	100.0	0.0	0.0	0.0
April	99	681	0.4	1.3	0	0.5	0	100.0	0.0	0.0	0.0
May	100	707	0.4	0.8	0	0.5	0	100.0	0.0	0.0	0.0
June	99	680	0.4	0.5	0	0.4	0	100.0	0.0	0.0	0.0
July	95	669	0.3	1.1	0	0.6	0	100.0	0.0	0.0	0.0
August	100	707	0.2	0.4	0	0.3	0	100.0	0.0	0.0	0.0
September	99	678	0.1	0.4	0	0.2	0	100.0	0.0	0.0	0.0
October	100	708	0.1	0.4	0	0.2	0	100.0	0.0	0.0	0.0
November	100	677	0.2	0.5	0	0.3	0	100.0	0.0	0.0	0.0
December	100	707	0.3	0.6	0	0.3	0	100.0	0.0	0.0	0.0
Annual	99	8286	0.3	1.3	0	0.6	0	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Janvier (AMS22)
Annual Summary for the Year 2024
Total Reduced Sulphur (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding	Maximum 24-Hour Value	Number of Values Exceeding	% of Data in Each Concentration Range			
					1-Hour Objective		24-Hour Objective	0 - 3	4 - 10	11 - 50	> 50
January	100	707	0.3	0.7	0	0.5	0	100.0	0.0	0.0	0.0
February	100	662	0.3	0.7	0	0.4	0	100.0	0.0	0.0	0.0
March	100	707	0.2	0.9	0	0.3	0	100.0	0.0	0.0	0.0
April	100	684	0.1	0.3	0	0.2	0	100.0	0.0	0.0	0.0
May	100	707	0.2	0.6	0	0.4	0	100.0	0.0	0.0	0.0
June	100	685	0.2	0.3	0	0.2	0	100.0	0.0	0.0	0.0
July	100	706	0.2	1.1	0	0.5	0	100.0	0.0	0.0	0.0
August	100	707	0.2	0.8	0	0.3	0	100.0	0.0	0.0	0.0
September	100	683	0.2	0.5	0	0.3	0	100.0	0.0	0.0	0.0
October	100	706	0.2	0.5	0	0.3	0	100.0	0.0	0.0	0.0
November	100	684	0.2	0.5	0	0.2	0	100.0	0.0	0.0	0.0
December	100	708	0.2	0.5	0	0.3	0	100.0	0.0	0.0	0.0
Annual	100	8346	0.2	1.1	0	0.5	0	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Fort Hills (AMS23)
Annual Summary for the Year 2024
Total Reduced Sulphur (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding	Maximum 24-Hour Value	Number of Values Exceeding	% of Data in Each Concentration Range			
					1-Hour Objective		24-Hour Objective	0 - 3	4 - 10	11 - 50	> 50
January	100	709	0.4	3.6	0	1.6	0	99.9	0.1	0.0	0.0
February	100	663	0.3	2.1	0	0.5	0	100.0	0.0	0.0	0.0
March	100	708	0.3	2.3	0	1.0	0	100.0	0.0	0.0	0.0
April	100	685	0.2	1.4	0	0.6	0	100.0	0.0	0.0	0.0
May	99	701	0.1	1.2	0	0.2	0	100.0	0.0	0.0	0.0
June	100	684	0.3	1.7	0	0.7	0	100.0	0.0	0.0	0.0
July	100	705	0.5	2.6	0	1.0	0	100.0	0.0	0.0	0.0
August	100	708	0.6	4.2	0	1.0	0	99.7	0.3	0.0	0.0
September	100	682	0.5	2.7	0	0.9	0	100.0	0.0	0.0	0.0
October	100	707	0.5	2.9	0	1.0	0	100.0	0.0	0.0	0.0
November	100	684	0.5	3.9	0	0.8	0	99.9	0.2	0.0	0.0
December	100	708	0.7	2.2	0	1.2	0	100.0	0.0	0.0	0.0
Annual	100	8344	0.4	4.2	0	1.6	0	100.0	0.1	0.0	0.0



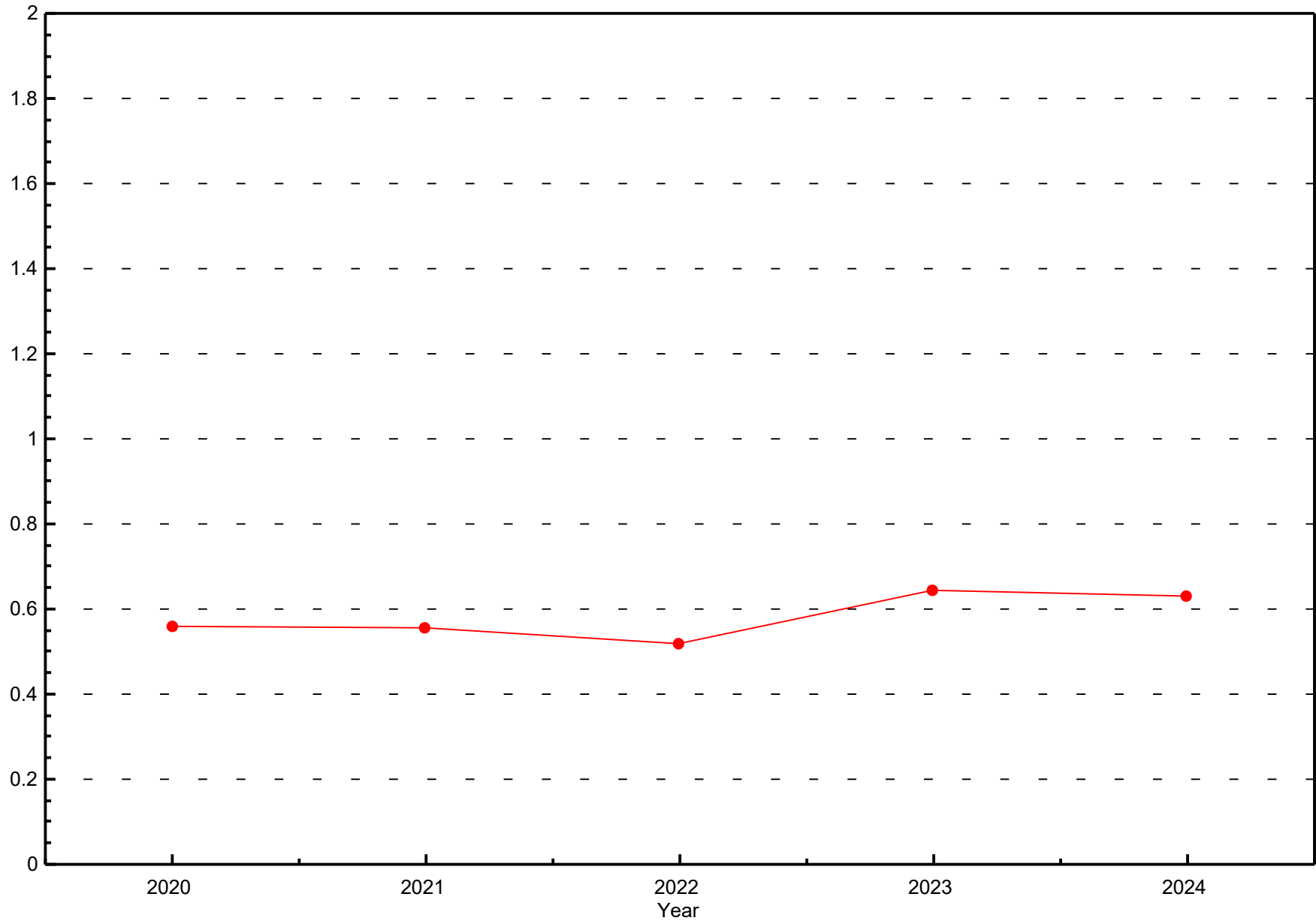
Wood Buffalo Environmental Association - Ells River (AMS30)
Annual Summary for the Year 2024
Total Reduced Sulphur (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding	Maximum 24-Hour Value	Number of Values Exceeding	% of Data in Each Concentration Range			
					1-Hour Objective		24-Hour Objective	0 - 3	4 - 10	11 - 50	> 50
January	100	707	0.6	3.9	0	1.1	0	99.9	0.1	0.0	0.0
February	100	661	0.6	2.4	0	0.8	0	100.0	0.0	0.0	0.0
March	100	708	0.5	1.7	0	0.8	0	100.0	0.0	0.0	0.0
April	100	682	0.5	2.6	0	1.0	0	100.0	0.0	0.0	0.0
May	100	707	0.5	1.2	0	0.6	0	100.0	0.0	0.0	0.0
June	99	680	0.5	4.0	0	0.7	0	99.9	0.2	0.0	0.0
July	99	702	0.6	3.7	0	1.3	0	99.9	0.1	0.0	0.0
August	100	706	0.6	4.0	0	1.2	0	99.6	0.4	0.0	0.0
September	100	685	0.5	1.6	0	0.7	0	100.0	0.0	0.0	0.0
October	100	708	0.4	2.0	0	0.7	0	100.0	0.0	0.0	0.0
November	100	683	0.5	3.0	0	0.7	0	100.0	0.0	0.0	0.0
December	100	707	0.6	4.5	0	2.0	0	99.0	1.0	0.0	0.0
Annual	100	8336	0.5	4.5	0	2.0	0	99.8	0.2	0.0	0.0



Yearly Averages

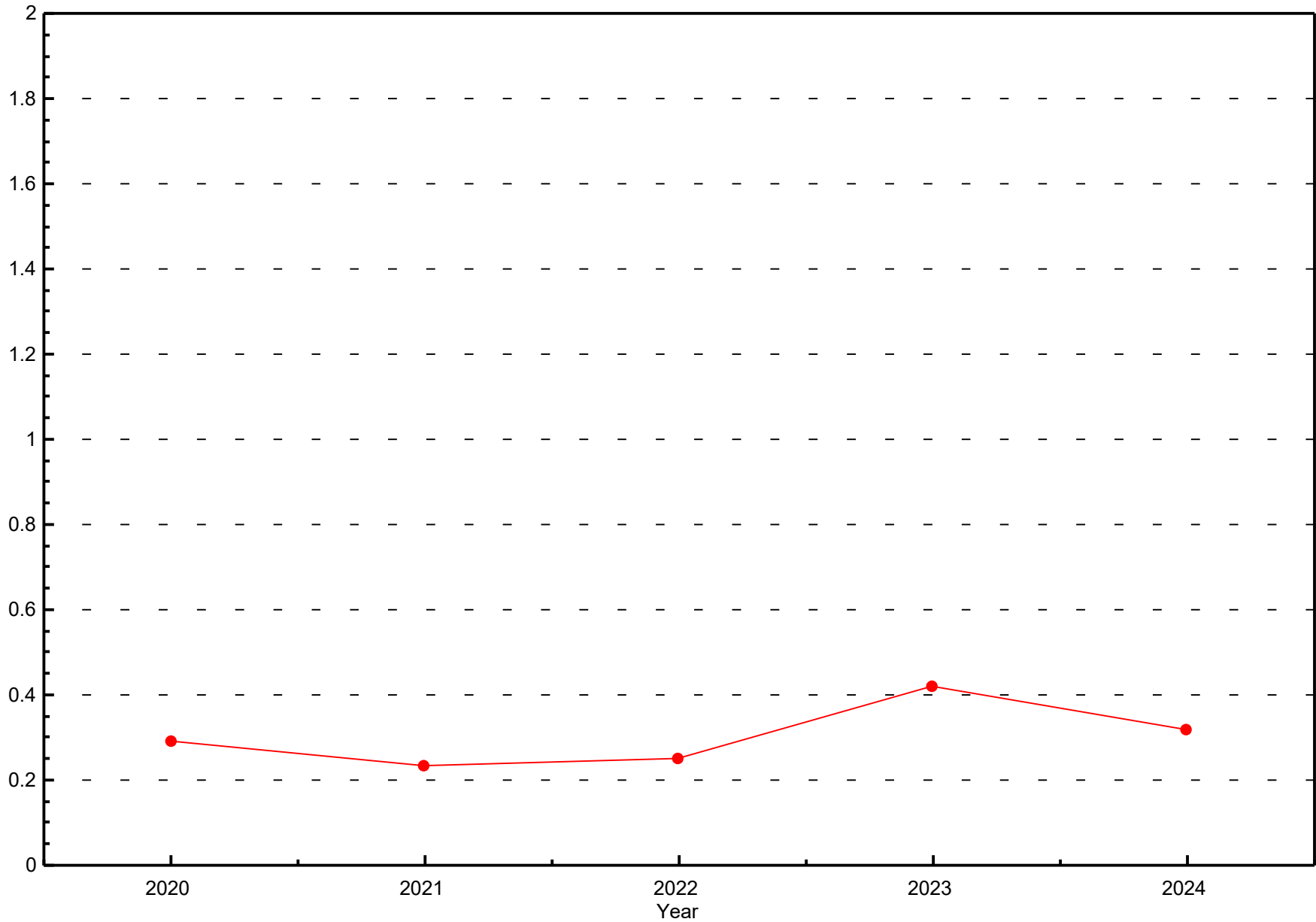
Total Reduced Sulphur (TRS) - ppb
Fort McKay - Bertha Ganter (2020 to 2024)





Yearly Averages

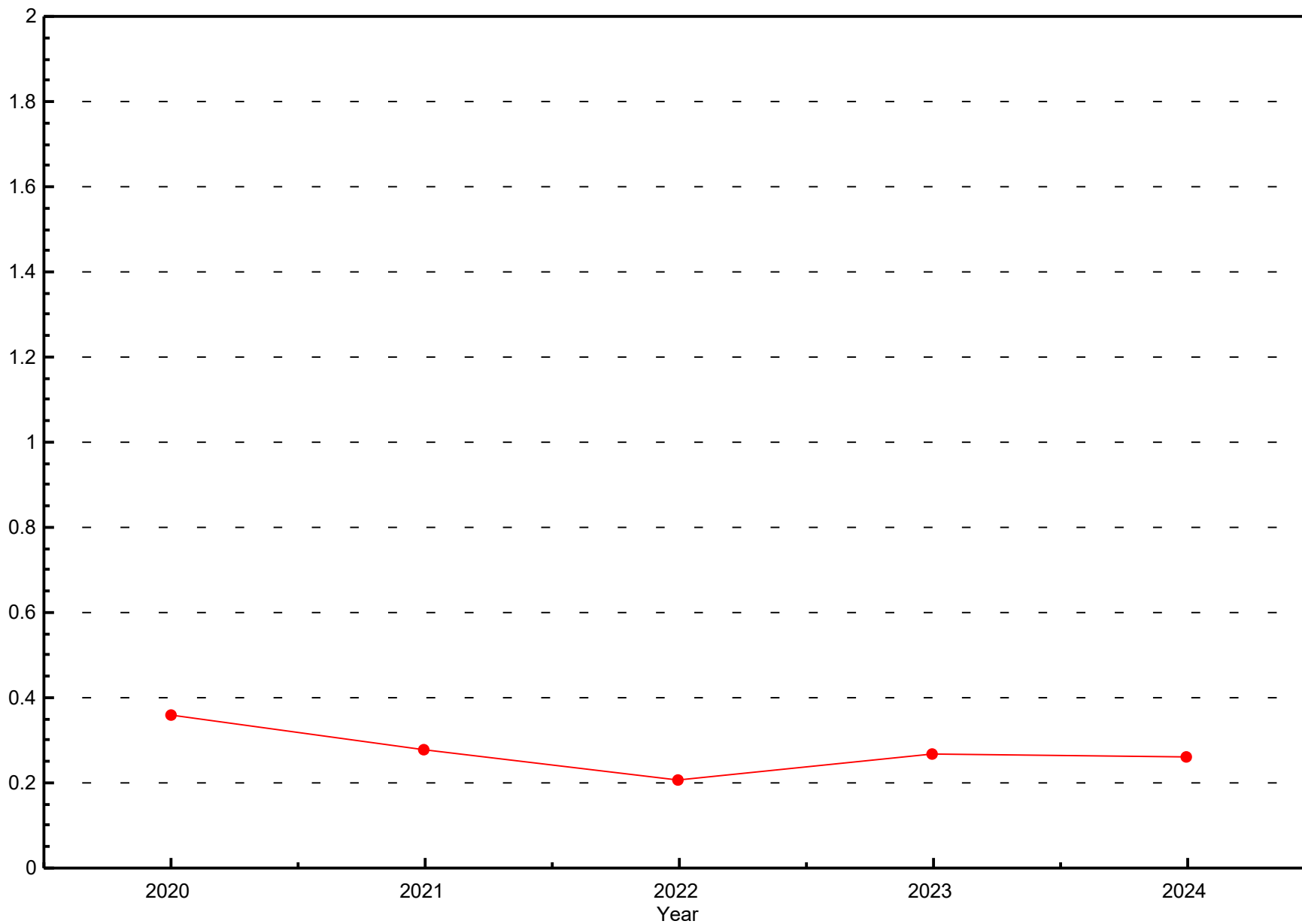
Total Reduced Sulphur (TRS) - ppb
Patricia McInnes (2020 to 2024)





Yearly Averages

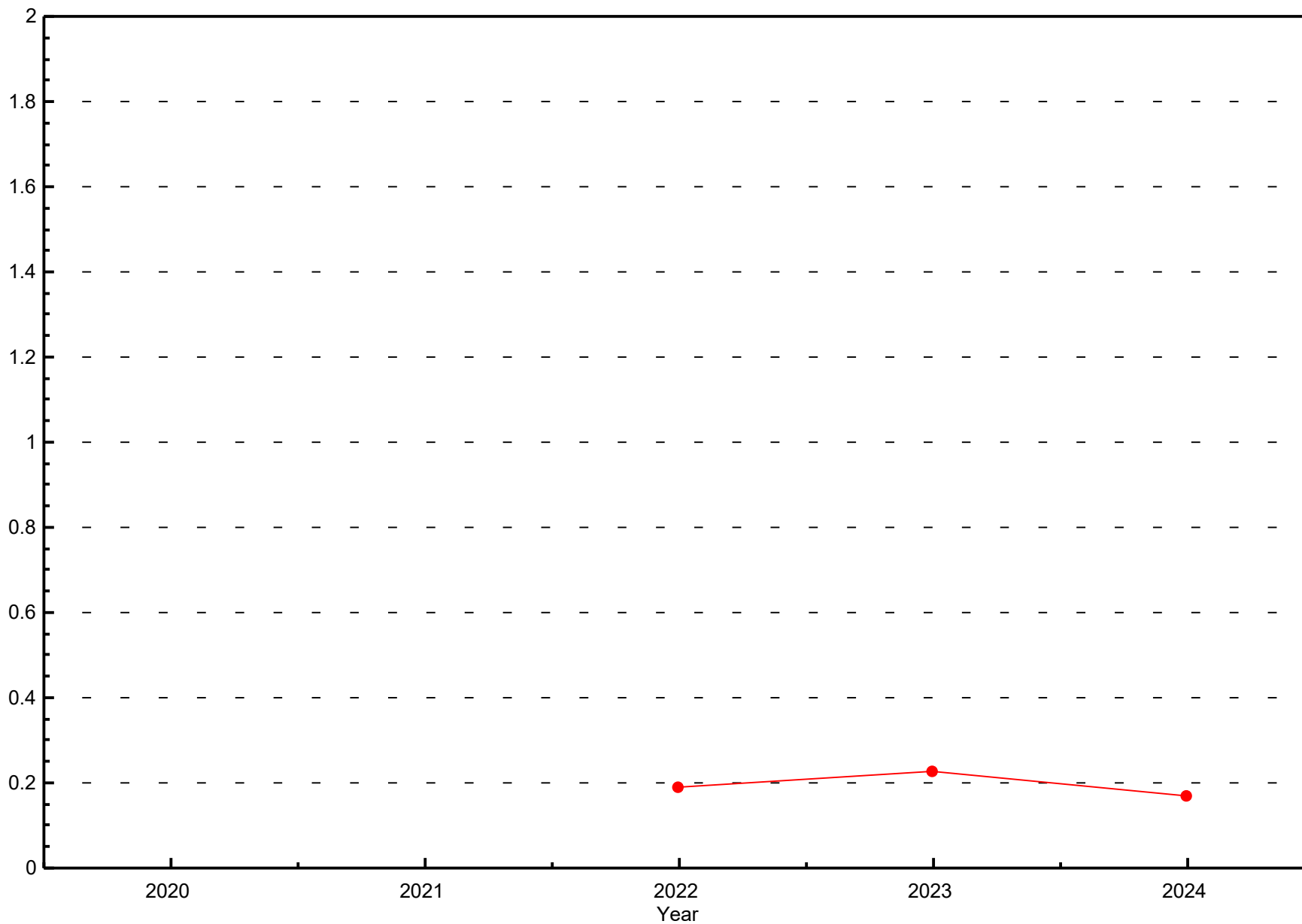
Total Reduced Sulphur (TRS) - ppb
Athabasca Valley (2020 to 2024)





Yearly Averages

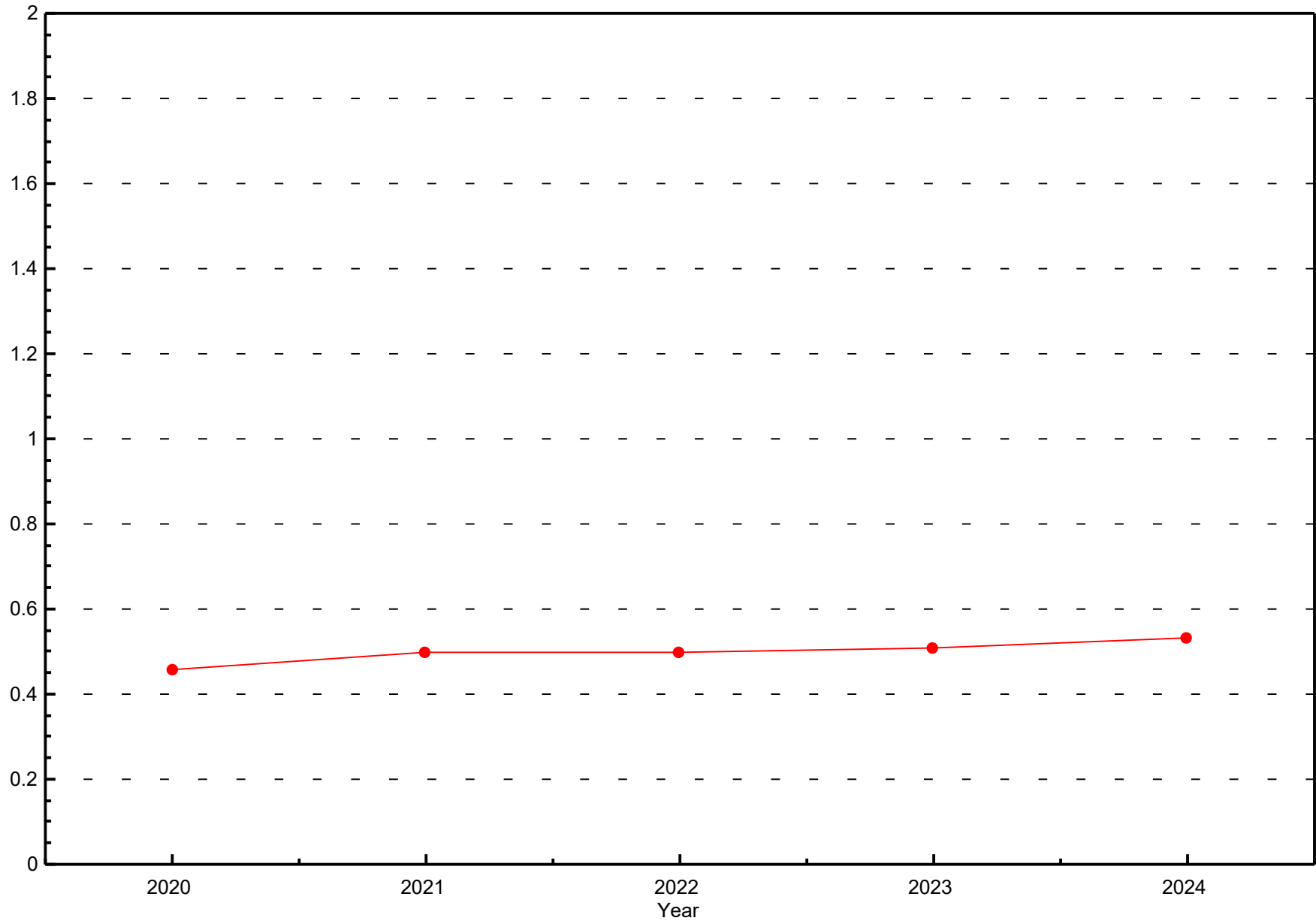
Total Reduced Sulphur (TRS) - ppb
Fort Chipewyan (2020 to 2024)





Yearly Averages

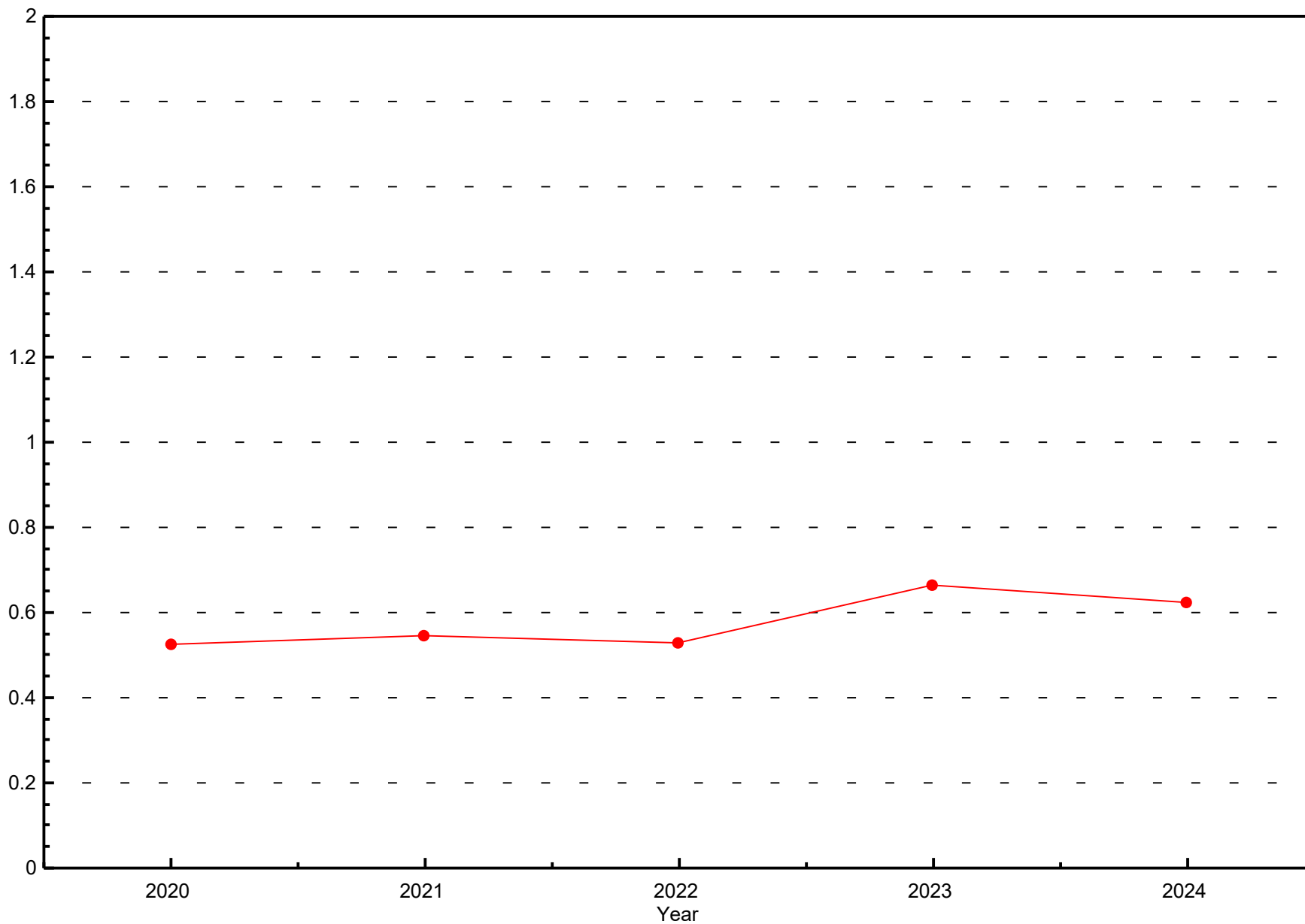
Total Reduced Sulphur (TRS) - ppb
Barge Landing (2020 to 2024)





Yearly Averages

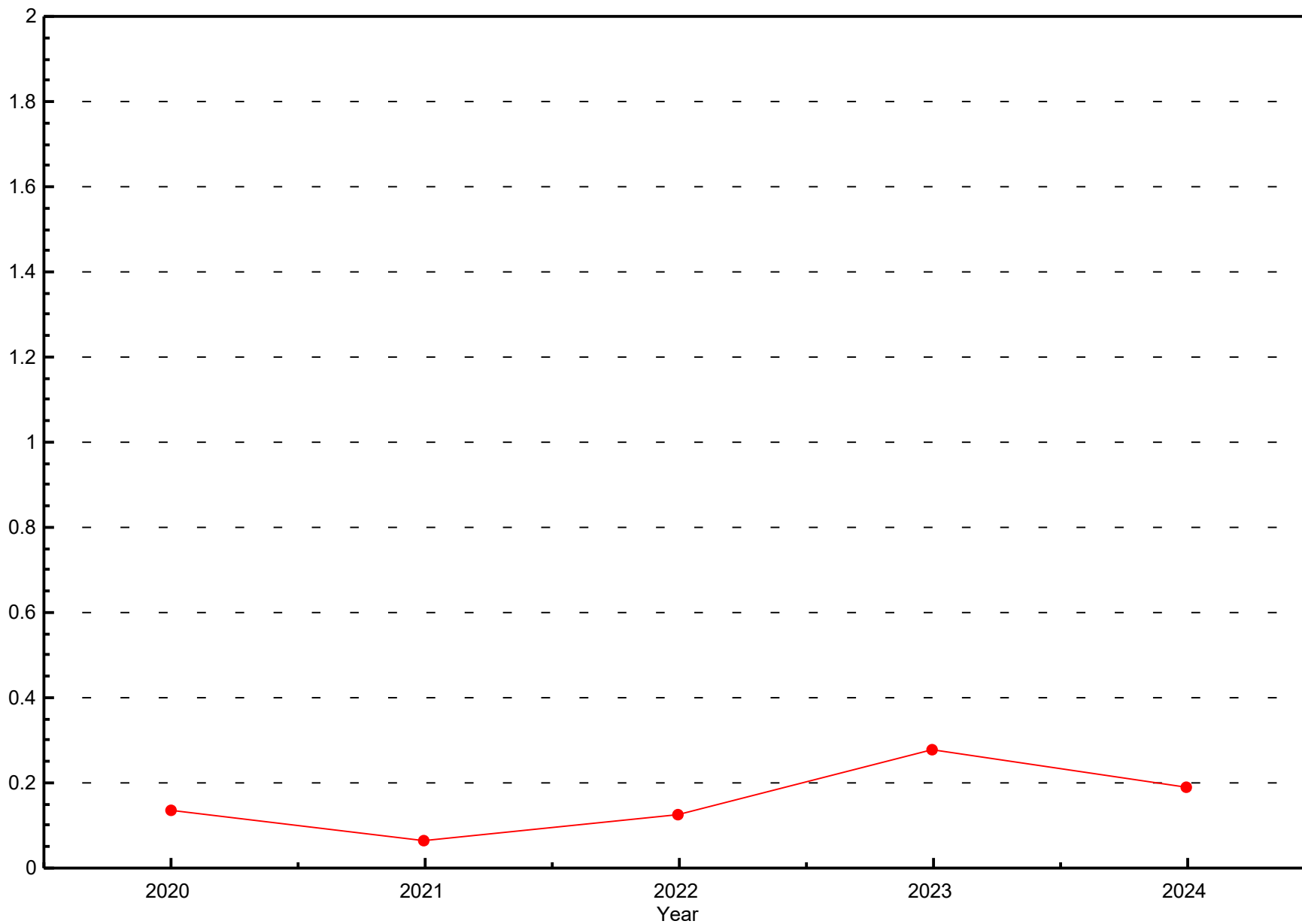
Total Reduced Sulphur (TRS) - ppb
Fort McKay South (2020 to 2024)





Yearly Averages

Total Reduced Sulphur (TRS) - ppb
Anzac (2020 to 2024)

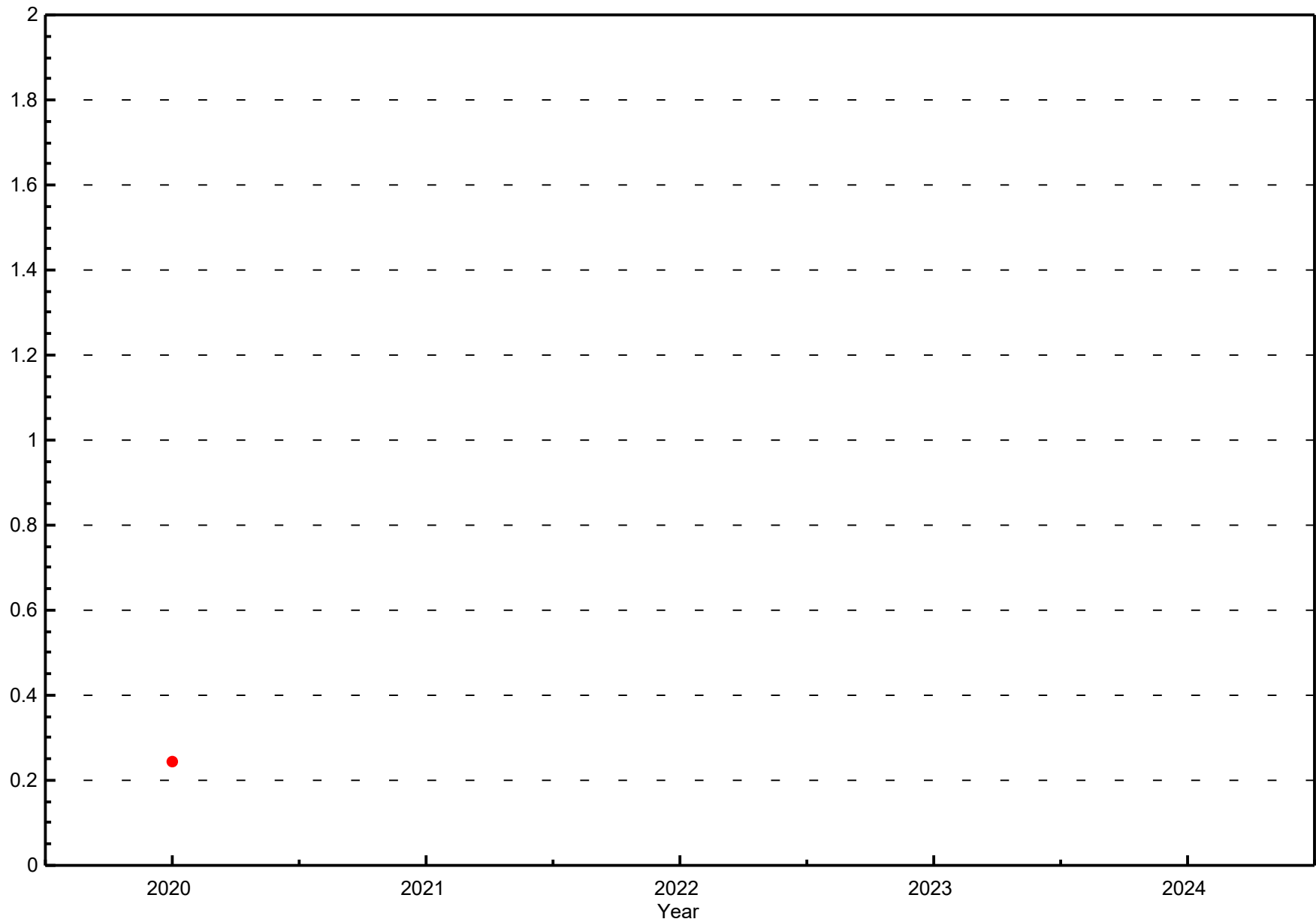




Yearly Averages

Total Reduced Sulphur (TRS) - ppb

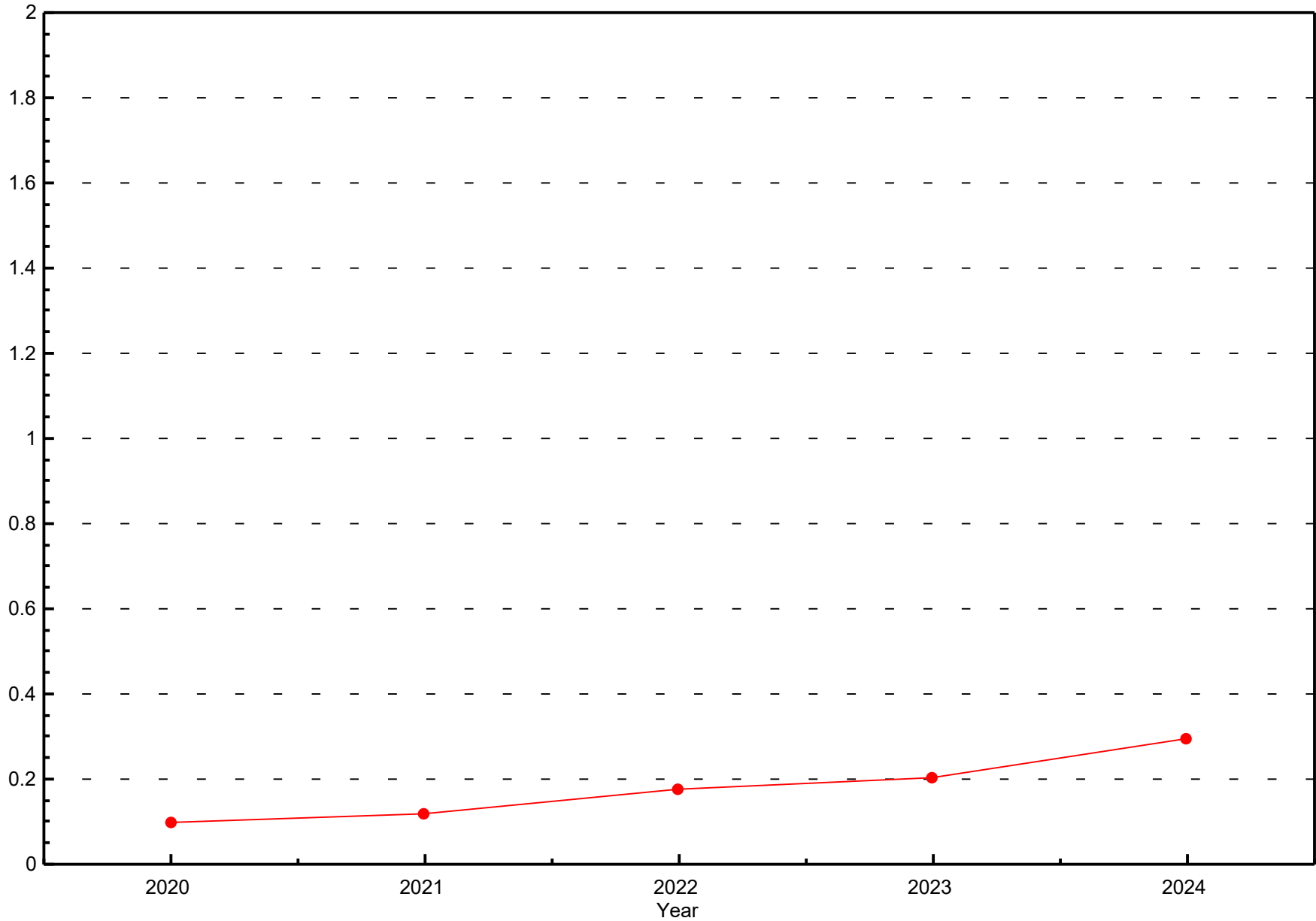
Horizon (2020 to 2024)





Yearly Averages

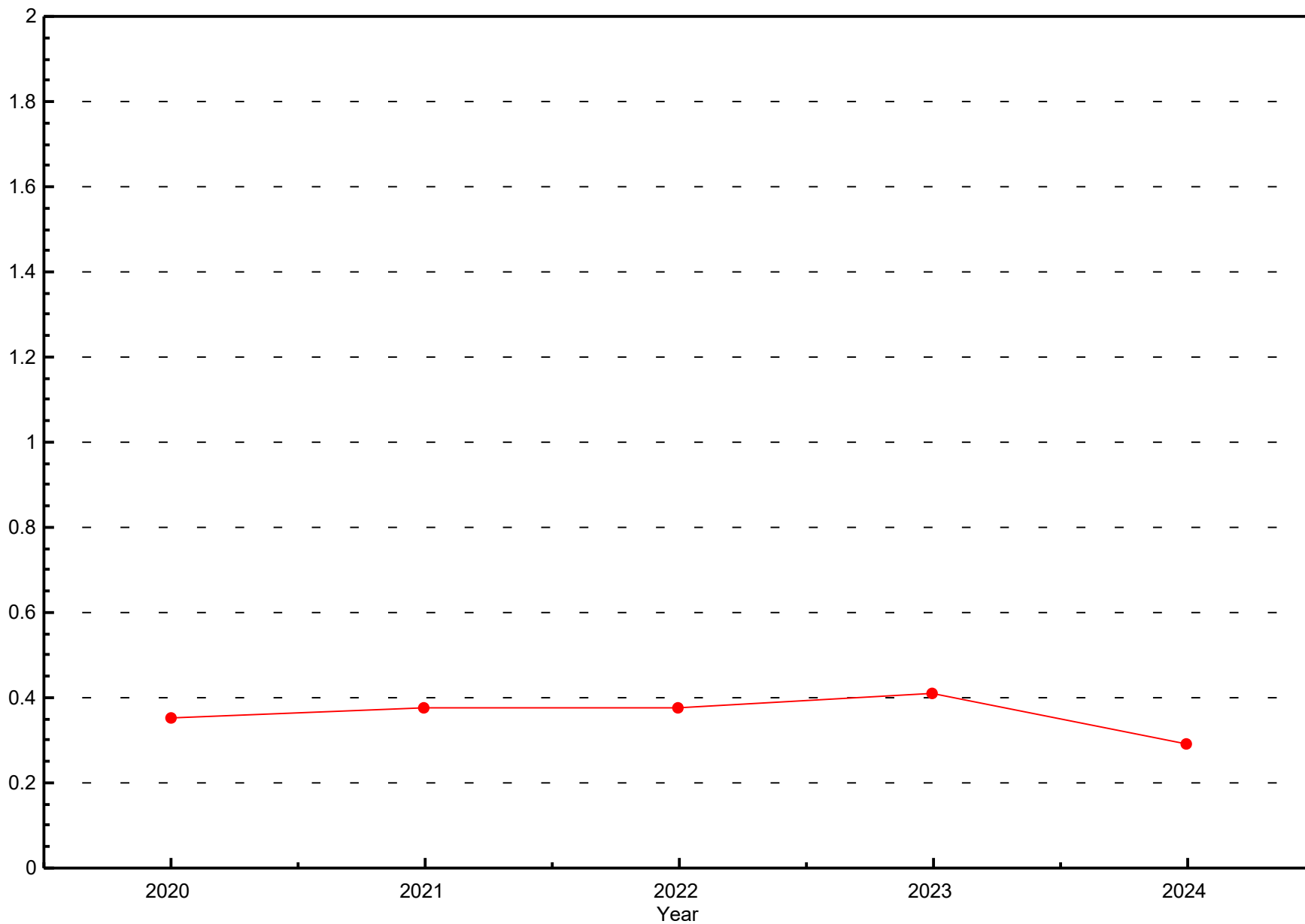
Total Reduced Sulphur (TRS) - ppb
Stony Mountain (2020 to 2024)





Yearly Averages

Total Reduced Sulphur (TRS) - ppb
Conklin (2020 to 2024)

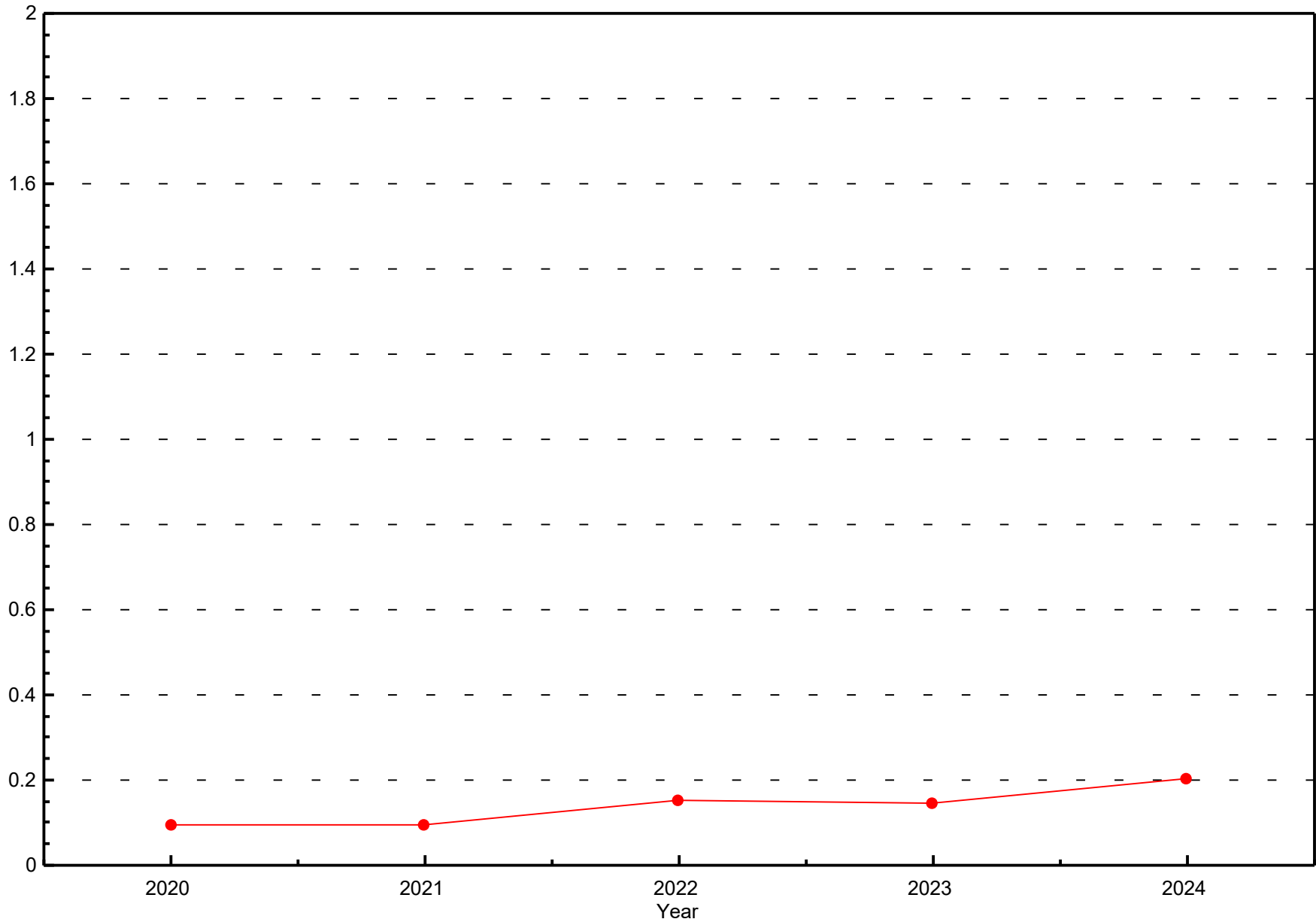




Yearly Averages

Total Reduced Sulphur (TRS) - ppb

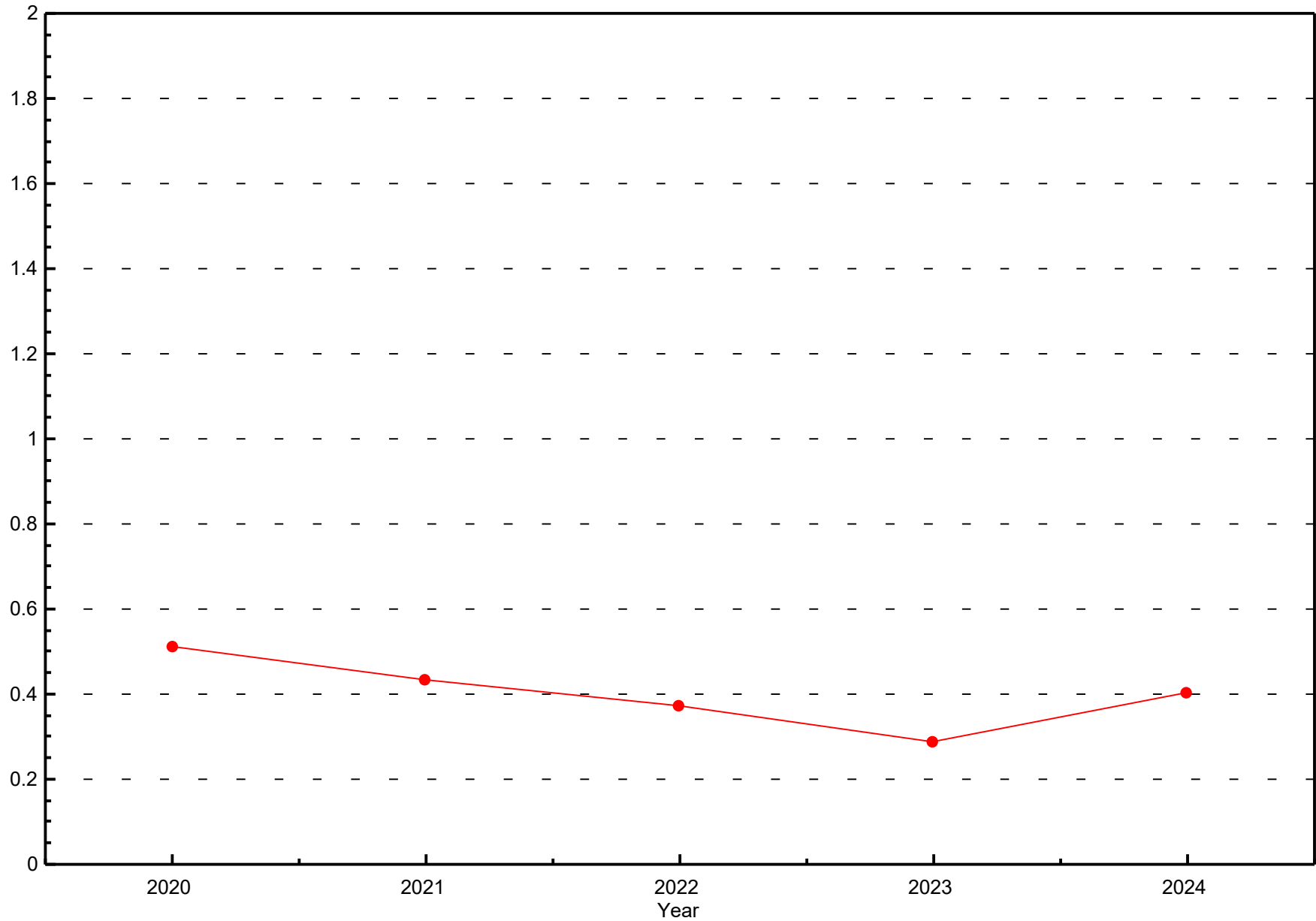
Janvier (2020 to 2024)





Yearly Averages

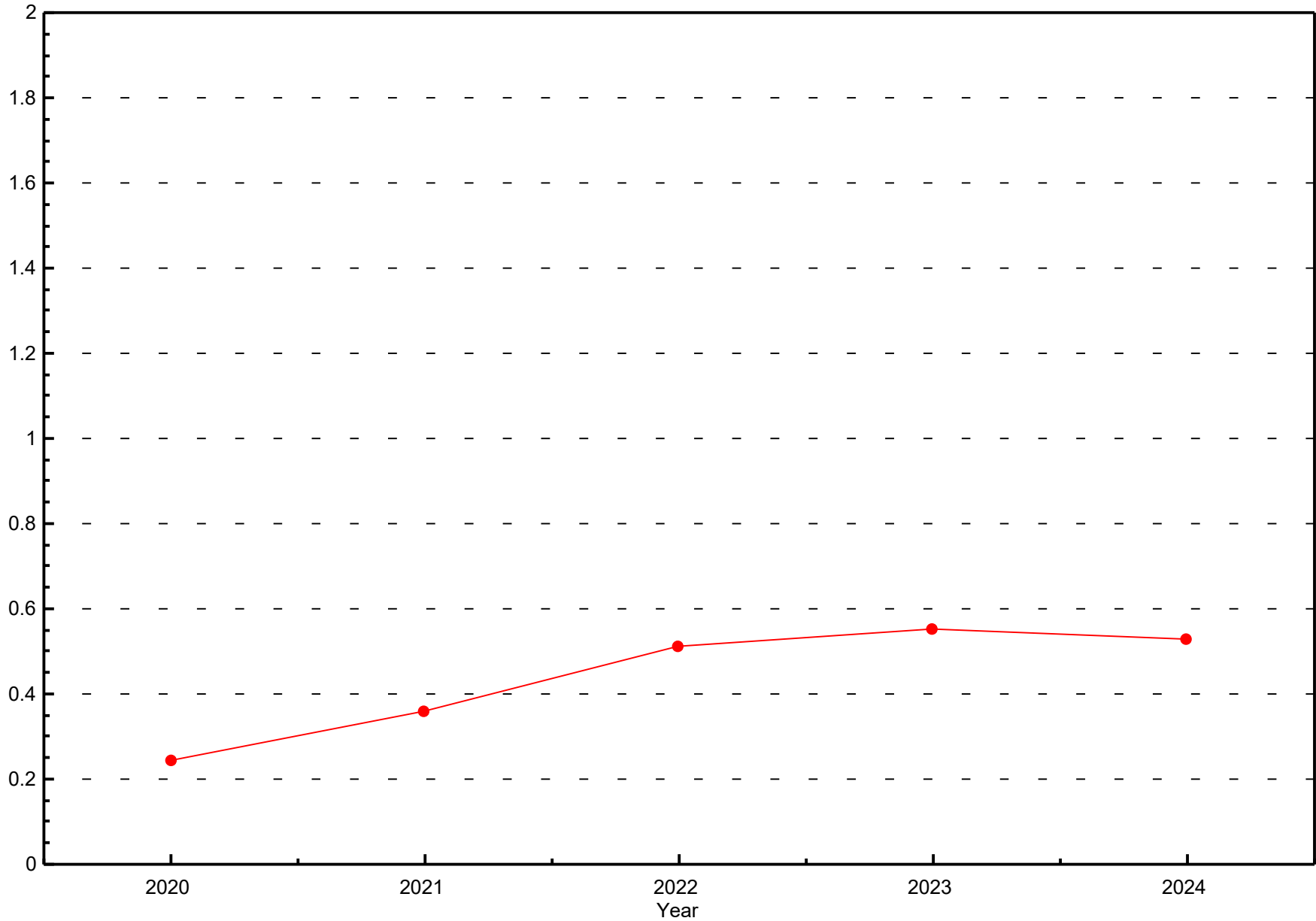
Total Reduced Sulphur (TRS) - ppb
Fort Hills (2020 to 2024)





Yearly Averages

Total Reduced Sulphur (TRS) - ppb
Ells River (2020 to 2024)



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
ANNUAL REPORT

NITROGEN DIOXIDE ANNUAL 2024

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

March 2025



Wood Buffalo Environmental Association - Fort McKay - Bertha Ganter (AMS01)
Annual Summary for the Year 2024
Nitrogen Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	% of Data in Each Concentration Range			
							0 - 40	41 - 80	81 - 159	>159
January	100	707	14.8	36.1	0	24.9	100	0.0	0.0	0.0
February	100	659	12.5	38.1	0	21.5	100	0.0	0.0	0.0
March	100	706	9.1	45.2	0	24.0	100	0.3	0.0	0.0
April	100	684	7.5	40.7	0	16.1	100	0.2	0.0	0.0
May	92	650	4.9	38.5	0	15.7	100	0.0	0.0	0.0
June	99	678	4.1	21.4	0	8.4	100	0.0	0.0	0.0
July	99	697	4.2	59.5	0	12.1	100	0.1	0.0	0.0
August	99	702	3.6	24.7	0	6.8	100	0.0	0.0	0.0
September	100	683	4.3	27.6	0	8.8	100	0.0	0.0	0.0
October	100	707	6.6	33.2	0	18.2	100	0.0	0.0	0.0
November	100	683	8.7	37.4	0	25.7	100	0.0	0.0	0.0
December	100	705	12.6	33.1	0	23.1	100	0.0	0.0	0.0
Annual	99	8261	7.8	59.5	0	25.7	100	0.1	0.0	0.0



Wood Buffalo Environmental Association - Buffalo Viewpoint (AMS04)
Annual Summary for the Year 2024
Nitrogen Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	% of Data in Each Concentration Range			
							0 - 40	41 - 80	81 - 159	>159
January	100	708	8.9	34.1	0	21.5	100	0.0	0.0	0.0
February	100	661	9.4	38.5	0	30.3	100	0.0	0.0	0.0
March	100	708	4.5	32.8	0	17.3	100	0.0	0.0	0.0
April	99	679	4.7	44.3	0	13.5	100	0.4	0.0	0.0
May	100	707	3.3	36.5	0	11.5	100	0.0	0.0	0.0
June	100	685	3.0	23.4	0	7.8	100	0.0	0.0	0.0
July	99	703	2.9	27.5	0	11.4	100	0.0	0.0	0.0
August	100	707	1.7	25.1	0	4.9	100	0.0	0.0	0.0
September	100	681	3.2	23.0	0	11.4	100	0.0	0.0	0.0
October	97	682	2.8	20.7	0	11.2	100	0.0	0.0	0.0
November	100	684	5.9	30.3	0	23.6	100	0.0	0.0	0.0
December	100	705	7.2	38.0	0	16.7	100	0.0	0.0	0.0
Annual	100	8310	4.8	44.3	0	30.3	100	0.0	0.0	0.0



Wood Buffalo Environmental Association - Patricia McInnes (AMS06)
Annual Summary for the Year 2024
Nitrogen Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	% of Data in Each Concentration Range			
							0 - 40	41 - 80	81 - 159	>159
January	99	703	9.3	31.0	0	15.3	100	0.0	0.0	0.0
February	100	659	8.1	34.1	0	20.7	100	0.0	0.0	0.0
March	100	707	5.7	35.9	0	13.7	100	0.0	0.0	0.0
April	100	683	3.6	29.8	0	8.2	100	0.0	0.0	0.0
May	100	706	2.3	23.7	0	9.6	100	0.0	0.0	0.0
June	100	685	2.2	14.2	0	4.6	100	0.0	0.0	0.0
July	99	700	2.0	17.8	0	7.7	100	0.0	0.0	0.0
August	100	706	2.0	11.5	0	4.0	100	0.0	0.0	0.0
September	100	684	3.1	18.3	0	9.2	100	0.0	0.0	0.0
October	100	707	3.3	21.8	0	8.6	100	0.0	0.0	0.0
November	100	682	6.7	30.8	0	21.1	100	0.0	0.0	0.0
December	100	706	8.4	31.3	0	16.4	100	0.0	0.0	0.0
Annual	100	8328	4.7	35.9	0	21.1	100	0.0	0.0	0.0



Wood Buffalo Environmental Association - Athabasca Valley (AMS07)
Annual Summary for the Year 2024
Nitrogen Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	% of Data in Each Concentration Range			
							0 - 40	41 - 80	81 - 159	>159
January	100	705	11.0	34.1	0	17.2	100	0.0	0.0	0.0
February	100	661	11.0	37.1	0	20.6	100	0.0	0.0	0.0
March	100	707	7.6	46.7	0	14.1	100	0.3	0.0	0.0
April	100	684	5.4	31.0	0	12.0	100	0.0	0.0	0.0
May	100	707	3.2	21.1	0	7.6	100	0.0	0.0	0.0
June	100	682	3.3	15.1	0	5.5	100	0.0	0.0	0.0
July	99	704	3.7	22.1	0	8.6	100	0.0	0.0	0.0
August	100	708	3.6	13.5	0	5.9	100	0.0	0.0	0.0
September	100	685	4.9	19.4	0	9.4	100	0.0	0.0	0.0
October	100	707	5.9	32.6	0	11.2	100	0.0	0.0	0.0
November	99	674	8.6	31.9	0	24.2	100	0.0	0.0	0.0
December	100	707	10.2	27.7	0	15.1	100	0.0	0.0	0.0
Annual	100	8331	6.5	46.7	0	24.2	100	0.0	0.0	0.0



Wood Buffalo Environmental Association - Fort Chipewyan (AMS08)
Annual Summary for the Year 2024
Nitrogen Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	% of Data in Each Concentration Range			
							0 - 40	41 - 80	81 - 159	>159
January	99	703	2.4	29.1	0	13.5	100	0.0	0.0	0.0
February	93	610	1.0	17.0	0	4.9	100	0.0	0.0	0.0
March	99	705	1.2	15.9	0	4.6	100	0.0	0.0	0.0
April	100	685	0.5	8.9	0	2.3	100	0.0	0.0	0.0
May	100	709	0.3	3.6	0	1.3	100	0.0	0.0	0.0
June	100	685	0.3	6.1	0	1.9	100	0.0	0.0	0.0
July	100	708	0.6	8.0	0	1.6	100	0.0	0.0	0.0
August	100	708	0.6	13.0	0	2.2	100	0.0	0.0	0.0
September	100	684	0.7	10.6	0	3.3	100	0.0	0.0	0.0
October	100	708	0.8	10.0	0	4.3	100	0.0	0.0	0.0
November	100	685	1.0	13.1	0	5.3	100	0.0	0.0	0.0
December	100	708	2.3	32.4	0	12.4	100	0.0	0.0	0.0
Annual	99	8298	1.0	32.4	0	13.5	100	0.0	0.0	0.0



Wood Buffalo Environmental Association - Barge Landing (AMS09)
Annual Summary for the Year 2024
Nitrogen Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	% of Data in Each Concentration Range			
							0 - 40	41 - 80	81 - 159	>159
January	100	707	17.2	43.0	0	29.3	100	0.4	0.0	0.0
February	100	662	14.6	44.2	0	28.3	99	0.8	0.0	0.0
March	100	708	11.2	40.3	0	24.8	100	0.0	0.0	0.0
April	100	685	8.6	43.4	0	16.8	100	0.3	0.0	0.0
May	100	708	6.8	40.8	0	15.7	100	0.1	0.0	0.0
June	99	679	6.0	34.3	0	10.5	100	0.0	0.0	0.0
July	99	703	5.8	45.1	0	13.4	100	0.1	0.0	0.0
August	100	707	5.6	24.0	0	9.7	100	0.0	0.0	0.0
September	100	685	6.4	23.7	0	11.0	100	0.0	0.0	0.0
October	100	709	7.9	28.8	0	18.1	100	0.0	0.0	0.0
November	100	685	10.6	34.4	0	26.7	100	0.0	0.0	0.0
December	100	707	14.8	42.9	0	31.0	99	0.6	0.0	0.0
Annual	100	8345	9.6	45.1	0	31.0	100	0.2	0.0	0.0



Wood Buffalo Environmental Association - Fort McKay South (AMS13)
Annual Summary for the Year 2024
Nitrogen Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	% of Data in Each Concentration Range			
							0 - 40	41 - 80	81 - 159	>159
January	100	707	13.9	36.8	0	22.9	100	0.0	0.0	0.0
February	100	662	12.0	37.4	0	20.2	100	0.0	0.0	0.0
March	100	707	8.0	33.5	0	14.6	100	0.0	0.0	0.0
April	100	685	6.4	37.3	0	13.2	100	0.0	0.0	0.0
May	100	707	3.9	24.2	0	9.6	100	0.0	0.0	0.0
June	99	681	3.8	19.2	0	7.0	100	0.0	0.0	0.0
July	96	678	3.9	43.6	0	9.6	100	0.2	0.0	0.0
August	100	708	3.2	20.6	0	6.2	100	0.0	0.0	0.0
September	100	685	3.5	19.8	0	6.4	100	0.0	0.0	0.0
October	100	708	5.7	28.8	0	14.2	100	0.0	0.0	0.0
November	97	663	7.9	39.3	0	27.2	100	0.0	0.0	0.0
December	100	709	11.3	36.5	0	23.8	100	0.0	0.0	0.0
Annual	99	8300	6.9	43.6	0	27.2	100	0.0	0.0	0.0



Wood Buffalo Environmental Association - Anzac (AMS14)
Annual Summary for the Year 2024
Nitrogen Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	% of Data in Each Concentration Range			
							0 - 40	41 - 80	81 - 159	>159
January	100	707	4.8	31.3	0	11.3	100	0.0	0.0	0.0
February	100	661	3.5	20.8	0	10.2	100	0.0	0.0	0.0
March	100	707	2.3	28.8	0	5.6	100	0.0	0.0	0.0
April	97	665	1.6	28.4	0	4.3	100	0.0	0.0	0.0
May	100	706	1.0	8.2	0	2.4	100	0.0	0.0	0.0
June	100	684	1.1	9.8	0	2.5	100	0.0	0.0	0.0
July	99	699	1.7	17.1	0	5.0	100	0.0	0.0	0.0
August	100	707	1.3	9.5	0	3.2	100	0.0	0.0	0.0
September	99	681	1.5	16.0	0	7.7	100	0.0	0.0	0.0
October	100	707	1.5	16.9	0	4.2	100	0.0	0.0	0.0
November	100	684	2.7	28.3	0	7.6	100	0.0	0.0	0.0
December	100	708	3.7	28.7	0	11.9	100	0.0	0.0	0.0
Annual	100	8316	2.2	31.3	0	11.9	100	0.0	0.0	0.0



Wood Buffalo Environmental Association - Wapasu (AMS17)
Annual Summary for the Year 2024
Nitrogen Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	% of Data in Each Concentration Range			
							0 - 40	41 - 80	81 - 159	>159
January	100	708	4.8	29.6	0	11.8	100	0.0	0.0	0.0
February	100	659	4.5	31.0	0	11.5	100	0.0	0.0	0.0
March	100	709	2.1	31.7	0	5.9	100	0.0	0.0	0.0
April	93	631	1.9	18.7	0	4.4	100	0.0	0.0	0.0
May	100	707	1.0	11.2	0	2.7	100	0.0	0.0	0.0
June	99	680	1.9	24.3	0	4.1	100	0.0	0.0	0.0
July	99	702	2.6	21.5	0	4.9	100	0.0	0.0	0.0
August	100	707	2.1	21.2	0	6.9	100	0.0	0.0	0.0
September	100	685	2.8	17.7	0	4.3	100	0.0	0.0	0.0
October	100	704	3.2	19.0	0	7.1	100	0.0	0.0	0.0
November	100	685	3.5	27.6	0	8.7	100	0.0	0.0	0.0
December	100	709	5.1	28.2	0	8.9	100	0.0	0.0	0.0
Annual	99	8286	3.0	31.7	0	11.8	100	0.0	0.0	0.0



Wood Buffalo Environmental Association - Stony Mountain (AMS18)
Annual Summary for the Year 2024
Nitrogen Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	% of Data in Each Concentration Range			
							0 - 40	41 - 80	81 - 159	>159
January	100	707	2.4	16.0	0	5.0	100	0.0	0.0	0.0
February	100	661	1.7	11.9	0	5.4	100	0.0	0.0	0.0
March	100	707	1.6	7.5	0	4.1	100	0.0	0.0	0.0
April	100	684	0.9	7.9	0	1.8	100	0.0	0.0	0.0
May	100	707	0.7	7.4	0	1.4	100	0.0	0.0	0.0
June	100	678	0.6	3.9	0	1.2	100	0.0	0.0	0.0
July	40	272	0.4	2.0	0	0.8	100	0.0	0.0	0.0
August	100	706	0.6	4.4	0	1.2	100	0.0	0.0	0.0
September	97	661	0.4	3.1	0	1.4	100	0.0	0.0	0.0
October	97	687	0.6	8.5	0	2.8	100	0.0	0.0	0.0
November	100	682	1.0	8.6	0	3.3	100	0.0	0.0	0.0
December	100	707	2.1	13.0	0	6.8	100	0.0	0.0	0.0
Annual	94	7859	1.1	16.0	0	6.8	100	0.0	0.0	0.0



Wood Buffalo Environmental Association - Firebag (AMS19)
Annual Summary for the Year 2024
Nitrogen Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	% of Data in Each Concentration Range			
							0 - 40	41 - 80	81 - 159	>159
January	100	708	5.9	35.9	0	17.1	100	0.0	0.0	0.0
February	99	656	5.7	36.1	0	14.8	100	0.0	0.0	0.0
March	99	697	3.3	48.6	0	13.8	100	0.4	0.0	0.0
April	97	661	2.0	38.4	0	7.2	100	0.0	0.0	0.0
May	100	705	1.4	16.5	0	4.6	100	0.0	0.0	0.0
June	100	685	1.8	17.0	0	5.2	100	0.0	0.0	0.0
July	100	706	2.3	24.7	0	5.0	100	0.0	0.0	0.0
August	98	695	1.6	16.7	0	5.7	100	0.0	0.0	0.0
September	100	683	2.2	18.1	0	3.7	100	0.0	0.0	0.0
October	100	707	2.9	16.7	0	6.1	100	0.0	0.0	0.0
November	99	678	3.3	20.5	0	8.3	100	0.0	0.0	0.0
December	100	708	5.0	42.0	0	18.2	100	0.3	0.0	0.0
Annual	99	8289	3.1	48.6	0	18.2	100	0.1	0.0	0.0



Wood Buffalo Environmental Association - Mackay River (AMS20)
Annual Summary for the Year 2024
Nitrogen Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	% of Data in Each Concentration Range			
							0 - 40	41 - 80	81 - 159	>159
January	94	659	4.4	32.5	0	15.4	100	0.0	0.0	0.0
February	100	661	3.3	31.9	0	14.9	100	0.0	0.0	0.0
March	100	708	2.8	30.9	0	9.9	100	0.0	0.0	0.0
April	100	686	1.8	29.9	0	7.1	100	0.0	0.0	0.0
May	100	708	1.3	13.3	0	5.5	100	0.0	0.0	0.0
June	100	685	1.1	17.7	0	4.2	100	0.0	0.0	0.0
July	100	708	1.3	13.6	0	4.3	100	0.0	0.0	0.0
August	100	708	1.0	18.1	0	3.8	100	0.0	0.0	0.0
September	100	684	0.8	14.2	0	3.2	100	0.0	0.0	0.0
October	100	708	1.4	21.5	0	6.9	100	0.0	0.0	0.0
November	100	685	4.0	29.7	0	25.2	100	0.0	0.0	0.0
December	100	709	3.0	25.4	0	12.6	100	0.0	0.0	0.0
Annual	99	8309	2.2	32.5	0	25.2	100	0.0	0.0	0.0



Wood Buffalo Environmental Association - Conklin (AMS21)
Annual Summary for the Year 2024
Nitrogen Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	% of Data in Each Concentration Range			
							0 - 40	41 - 80	81 - 159	>159
January	100	704	3.4	17.1	0	8.0	100	0.0	0.0	0.0
February	100	661	2.7	19.2	0	7.5	100	0.0	0.0	0.0
March	100	706	2.4	18.6	0	5.4	100	0.0	0.0	0.0
April	88	599	1.4	16.9	0	2.6	100	0.0	0.0	0.0
May	100	707	1.3	14.4	0	2.8	100	0.0	0.0	0.0
June	100	682	1.0	10.2	0	2.4	100	0.0	0.0	0.0
July	100	707	1.3	9.1	0	3.9	100	0.0	0.0	0.0
August	100	706	1.4	7.5	0	3.2	100	0.0	0.0	0.0
September	100	682	1.5	9.6	0	3.2	100	0.0	0.0	0.0
October	100	708	1.7	11.4	0	3.0	100	0.0	0.0	0.0
November	100	683	1.8	11.5	0	4.0	100	0.0	0.0	0.0
December	100	708	3.1	11.0	0	6.4	100	0.0	0.0	0.0
Annual	99	8253	1.9	19.2	0	8.0	100	0.0	0.0	0.0



Wood Buffalo Environmental Association - Janvier (AMS22)
Annual Summary for the Year 2024
Nitrogen Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	% of Data in Each Concentration Range			
							0 - 40	41 - 80	81 - 159	>159
January	100	706	3.0	19.1	0	6.2	100	0.0	0.0	0.0
February	100	661	1.9	11.1	0	5.3	100	0.0	0.0	0.0
March	100	708	1.4	6.8	0	3.9	100	0.0	0.0	0.0
April	100	685	0.5	5.9	0	1.3	100	0.0	0.0	0.0
May	100	707	0.2	3.7	0	0.7	100	0.0	0.0	0.0
June	100	681	0.5	4.4	0	1.2	100	0.0	0.0	0.0
July	100	708	0.7	6.1	0	2.1	100	0.0	0.0	0.0
August	98	694	0.6	5.0	0	1.6	100	0.0	0.0	0.0
September	92	628	0.5	4.6	0	1.5	100	0.0	0.0	0.0
October	100	707	0.8	14.1	0	3.0	100	0.0	0.0	0.0
November	96	658	1.5	12.7	0	4.2	100	0.0	0.0	0.0
December	100	707	2.7	21.5	0	11.0	100	0.0	0.0	0.0
Annual	99	8250	1.2	21.5	0	11.0	100	0.0	0.0	0.0



Wood Buffalo Environmental Association - Fort Hills (AMS23)
Annual Summary for the Year 2024
Nitrogen Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	% of Data in Each Concentration Range			
							0 - 40	41 - 80	81 - 159	>159
January	100	707	19.7	56.6	0	27.0	99	1.3	0.0	0.0
February	100	662	17.2	52.5	0	35.1	98	2.3	0.0	0.0
March	100	708	13.2	53.5	0	29.4	98	2.3	0.0	0.0
April	100	684	12.5	59.9	0	23.9	97	2.9	0.0	0.0
May	99	700	10.2	43.0	0	20.0	100	0.4	0.0	0.0
June	100	685	7.0	40.8	0	14.8	100	0.2	0.0	0.0
July	99	704	7.2	39.2	0	15.8	100	0.0	0.0	0.0
August	100	707	6.9	35.7	0	11.8	100	0.0	0.0	0.0
September	99	681	8.4	46.3	0	15.7	100	0.3	0.0	0.0
October	100	707	9.7	35.8	0	21.6	100	0.0	0.0	0.0
November	100	685	12.8	42.9	0	25.1	100	0.3	0.0	0.0
December	97	686	17.0	44.2	0	28.4	99	0.7	0.0	0.0
Annual	100	8316	11.8	59.9	0	35.1	99	0.9	0.0	0.0



Wood Buffalo Environmental Association - Christina Lake (AMS26)
Annual Summary for the Year 2024
Nitrogen Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	% of Data in Each Concentration Range			
							0 - 40	41 - 80	81 - 159	>159
January	100	706	5.5	24.5	0	10.8	100	0.0	0.0	0.0
February	100	659	4.7	27.7	0	17.0	100	0.0	0.0	0.0
March	100	707	3.7	30.2	0	8.2	100	0.0	0.0	0.0
April	100	684	3.1	20.2	0	5.6	100	0.0	0.0	0.0
May	100	705	2.2	20.2	0	7.1	100	0.0	0.0	0.0
June	100	685	2.0	19.1	0	4.5	100	0.0	0.0	0.0
July	100	707	2.5	18.3	0	7.1	100	0.0	0.0	0.0
August	100	706	1.9	13.9	0	4.9	100	0.0	0.0	0.0
September	100	684	2.8	11.5	0	4.6	100	0.0	0.0	0.0
October	100	708	2.5	21.9	0	4.2	100	0.0	0.0	0.0
November	100	103	3.1	16.8	0	4.7	100	0.0	0.0	0.0
Annual	100	7054	3.1	30.2	0	17.0	100	0.0	0.0	0.0



Wood Buffalo Environmental Association - Jackfish 2/3 (AMS27)
Annual Summary for the Year 2024
Nitrogen Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	% of Data in Each Concentration Range			
							0 - 40	41 - 80	81 - 159	>159
January	99	703	2.3	14.7	0	5.2	100	0.0	0.0	0.0
February	100	661	1.6	14.7	0	4.8	100	0.0	0.0	0.0
March	100	706	1.4	9.5	0	3.9	100	0.0	0.0	0.0
April	99	680	1.2	19.8	0	3.8	100	0.0	0.0	0.0
May	100	707	0.2	5.6	0	0.7	100	0.0	0.0	0.0
June	100	684	0.2	10.2	0	0.8	100	0.0	0.0	0.0
July	99	700	0.4	7.0	0	2.2	100	0.0	0.0	0.0
August	100	705	0.3	8.8	0	0.7	100	0.0	0.0	0.0
September	100	682	0.4	5.4	0	1.3	100	0.0	0.0	0.0
October	97	685	0.8	5.9	0	2.2	100	0.0	0.0	0.0
November	100	681	1.7	14.9	0	3.6	100	0.0	0.0	0.0
December	100	704	2.6	12.5	0	6.3	100	0.0	0.0	0.0
Annual	99	8298	1.1	19.8	0	6.3	100	0.0	0.0	0.0



Wood Buffalo Environmental Association - Surmont 2 (AMS29)
Annual Summary for the Year 2024
Nitrogen Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	% of Data in Each Concentration Range			
							0 - 40	41 - 80	81 - 159	>159
January	91	641	4.3	21.0	0	9.4	100	0.0	0.0	0.0
February	99	657	2.8	21.0	0	6.6	100	0.0	0.0	0.0
March	99	703	1.9	13.0	0	4.5	100	0.0	0.0	0.0
April	100	683	1.2	9.7	0	2.5	100	0.0	0.0	0.0
May	100	706	0.8	3.7	0	1.6	100	0.0	0.0	0.0
June	100	684	0.9	6.1	0	1.9	100	0.0	0.0	0.0
July	100	706	1.3	12.9	0	3.7	100	0.0	0.0	0.0
August	100	707	1.1	7.5	0	2.3	100	0.0	0.0	0.0
September	100	684	1.2	9.4	0	4.9	100	0.0	0.0	0.0
October	100	707	1.0	18.3	0	2.9	100	0.0	0.0	0.0
November	100	682	2.0	12.3	0	6.0	100	0.0	0.0	0.0
December	99	695	3.0	23.5	0	11.6	100	0.0	0.0	0.0
Annual	99	8255	1.8	23.5	0	11.6	100	0.0	0.0	0.0



Wood Buffalo Environmental Association - Ells River (AMS30)
Annual Summary for the Year 2024
Nitrogen Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	% of Data in Each Concentration Range			
							0 - 40	41 - 80	81 - 159	>159
January	100	707	13.0	35.1	0	23.5	100	0.0	0.0	0.0
February	100	660	11.3	46.7	0	23.3	100	0.5	0.0	0.0
March	100	707	8.1	46.6	0	26.8	99	0.7	0.0	0.0
April	99	681	5.4	32.6	0	11.8	100	0.0	0.0	0.0
May	100	707	4.9	36.7	0	9.1	100	0.0	0.0	0.0
June	99	679	4.7	25.5	0	9.9	100	0.0	0.0	0.0
July	99	702	3.9	34.8	0	12.7	100	0.0	0.0	0.0
August	100	708	4.0	26.0	0	9.2	100	0.0	0.0	0.0
September	100	685	4.1	32.2	0	11.2	100	0.0	0.0	0.0
October	100	707	4.9	29.4	0	20.2	100	0.0	0.0	0.0
November	100	684	7.9	31.7	0	20.8	100	0.0	0.0	0.0
December	100	708	11.2	38.9	0	23.7	100	0.0	0.0	0.0
Annual	100	8335	6.9	46.7	0	26.8	100	0.1	0.0	0.0



Wood Buffalo Environmental Association - Monday Creek (AMS33)
Annual Summary for the Year 2024
Nitrogen Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	% of Data in Each Concentration Range			
							0 - 40	41 - 80	81 - 159	>159
November	100	535	2.1	13.2	0	4.7	100	0.0	0.0	0.0
December	99	700	3.6	20.3	0	6.6	100	0.0	0.0	0.0
Annual	100	1235	2.8	20.3	0	6.6	100	0.0	0.0	0.0



Wood Buffalo Environmental Association - Leismer (AMS501)
Annual Summary for the Year 2024
Nitrogen Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	% of Data in Each Concentration Range			
							0 - 40	41 - 80	81 - 159	>159
January	100	706	3.1	15.4	0	6.0	100	0.0	0.0	0.0
February	99	658	2.2	17.7	0	3.9	100	0.0	0.0	0.0
March	100	708	1.7	19.0	0	4.9	100	0.0	0.0	0.0
Annual	100	2072	2.3	19.0	0	6.0	100	0.0	0.0	0.0



Wood Buffalo Environmental Association - Sawbones Bay (AMS505)
Annual Summary for the Year 2024
Nitrogen Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	% of Data in Each Concentration Range			
							0 - 40	41 - 80	81 - 159	>159
January	100	708	5.2	32.7	0	13.4	100	0.0	0.0	0.0
February	100	662	4.4	28.2	0	11.0	100	0.0	0.0	0.0
March	100	706	2.9	33.3	0	9.9	100	0.0	0.0	0.0
April	100	685	2.1	24.5	0	6.2	100	0.0	0.0	0.0
May	100	707	1.9	19.8	0	10.1	100	0.0	0.0	0.0
June	88	606	1.0	14.1	0	3.6	100	0.0	0.0	0.0
Annual	98	4074	2.9	33.3	0	13.4	100	0.0	0.0	0.0



Wood Buffalo Environmental Association - Jackfish 1 (AMS506)
Annual Summary for the Year 2024
Nitrogen Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	% of Data in Each Concentration Range			
							0 - 40	41 - 80	81 - 159	>159
July	99	701	1.8	17.8	0	5.7	100	0.0	0.0	0.0
August	97	685	1.4	13.1	0	5.2	100	0.0	0.0	0.0
September	97	662	1.6	19.5	0	4.3	100	0.0	0.0	0.0
October	100	708	2.0	13.1	0	5.7	100	0.0	0.0	0.0
November	99	681	2.4	23.8	0	8.2	100	0.0	0.0	0.0
December	100	707	3.8	17.6	0	7.4	100	0.0	0.0	0.0
Annual	99	4144	2.2	23.8	0	8.2	100	0.0	0.0	0.0



Wood Buffalo Environmental Association - Kirby South (AMS507)
Annual Summary for the Year 2024
Nitrogen Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	% of Data in Each Concentration Range			
							0 - 40	41 - 80	81 - 159	>159
January	100	707	5.3	49.9	0	29.8	99	1.0	0.0	0.0
February	100	661	3.5	38.3	0	10.3	100	0.0	0.0	0.0
March	94	660	1.6	18.3	0	3.7	100	0.0	0.0	0.0
April	99	675	2.5	47.3	0	21.6	100	0.3	0.0	0.0
May	92	643	1.1	11.2	0	4.7	100	0.0	0.0	0.0
June	100	579	0.8	8.0	0	1.7	100	0.0	0.0	0.0
Annual	98	3925	2.5	49.9	0	29.8	100	0.2	0.0	0.0



Wood Buffalo Environmental Association - Kirby North (AMS508)
Annual Summary for the Year 2024
Nitrogen Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	% of Data in Each Concentration Range			
							0 - 40	41 - 80	81 - 159	>159
July	100	606	1.9	22.4	0	6.5	100	0.0	0.0	0.0
August	98	685	1.0	5.2	0	1.4	100	0.0	0.0	0.0
September	100	681	1.3	8.6	0	2.1	100	0.0	0.0	0.0
October	100	705	1.2	7.6	0	2.4	100	0.0	0.0	0.0
November	100	685	1.7	9.3	0	3.3	100	0.0	0.0	0.0
December	99	697	2.9	16.9	0	6.2	100	0.0	0.0	0.0
Annual	99	4059	1.7	22.4	0	6.5	100	0.0	0.0	0.0



Wood Buffalo Environmental Association - Blackgold (AMS511)
Annual Summary for the Year 2024
Nitrogen Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	% of Data in Each Concentration Range			
							0 - 40	41 - 80	81 - 159	>159
January	97	683	3.4	16.2	0	7.6	100	0.0	0.0	0.0
February	100	662	2.8	20.0	0	8.7	100	0.0	0.0	0.0
March	100	708	2.2	17.0	0	5.4	100	0.0	0.0	0.0
Annual	99	2053	2.8	20.0	0	8.7	100	0.0	0.0	0.0



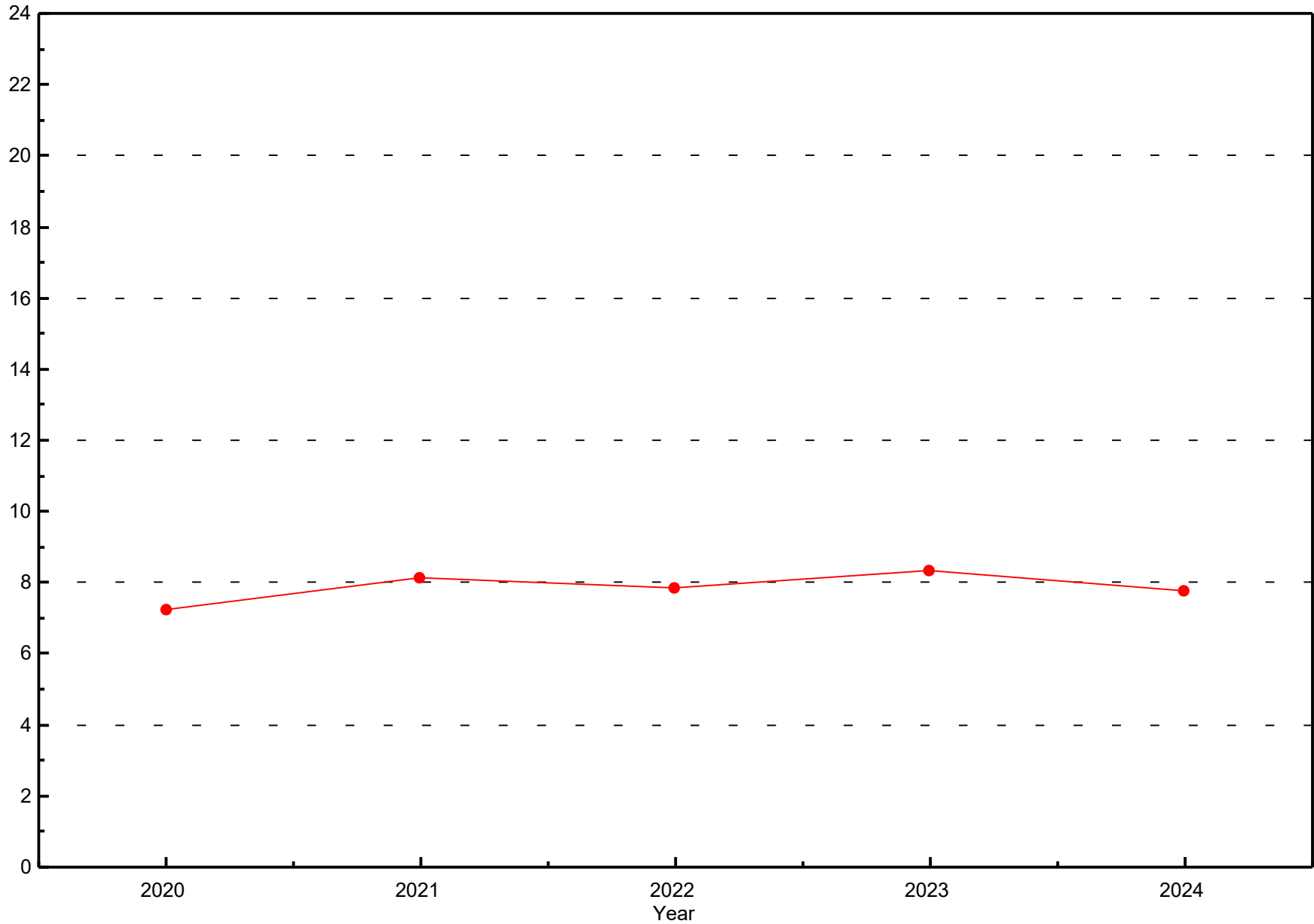
Wood Buffalo Environmental Association - Hangingstone Expansion (AMS512)
Annual Summary for the Year 2024
Nitrogen Dioxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	% of Data in Each Concentration Range			
							0 - 40	41 - 80	81 - 159	>159
July	98	695	1.2	7.1	0	3.6	100	0.0	0.0	0.0
August	100	708	1.0	6.3	0	2.1	100	0.0	0.0	0.0
September	100	686	1.4	12.6	0	4.2	100	0.0	0.0	0.0
October	97	690	1.6	16.1	0	4.6	100	0.0	0.0	0.0
November	100	685	2.9	18.7	0	10.1	100	0.0	0.0	0.0
December	100	705	3.3	21.2	0	12.1	100	0.0	0.0	0.0
Annual	99	4169	1.9	21.2	0	12.1	100	0.0	0.0	0.0



Yearly Averages

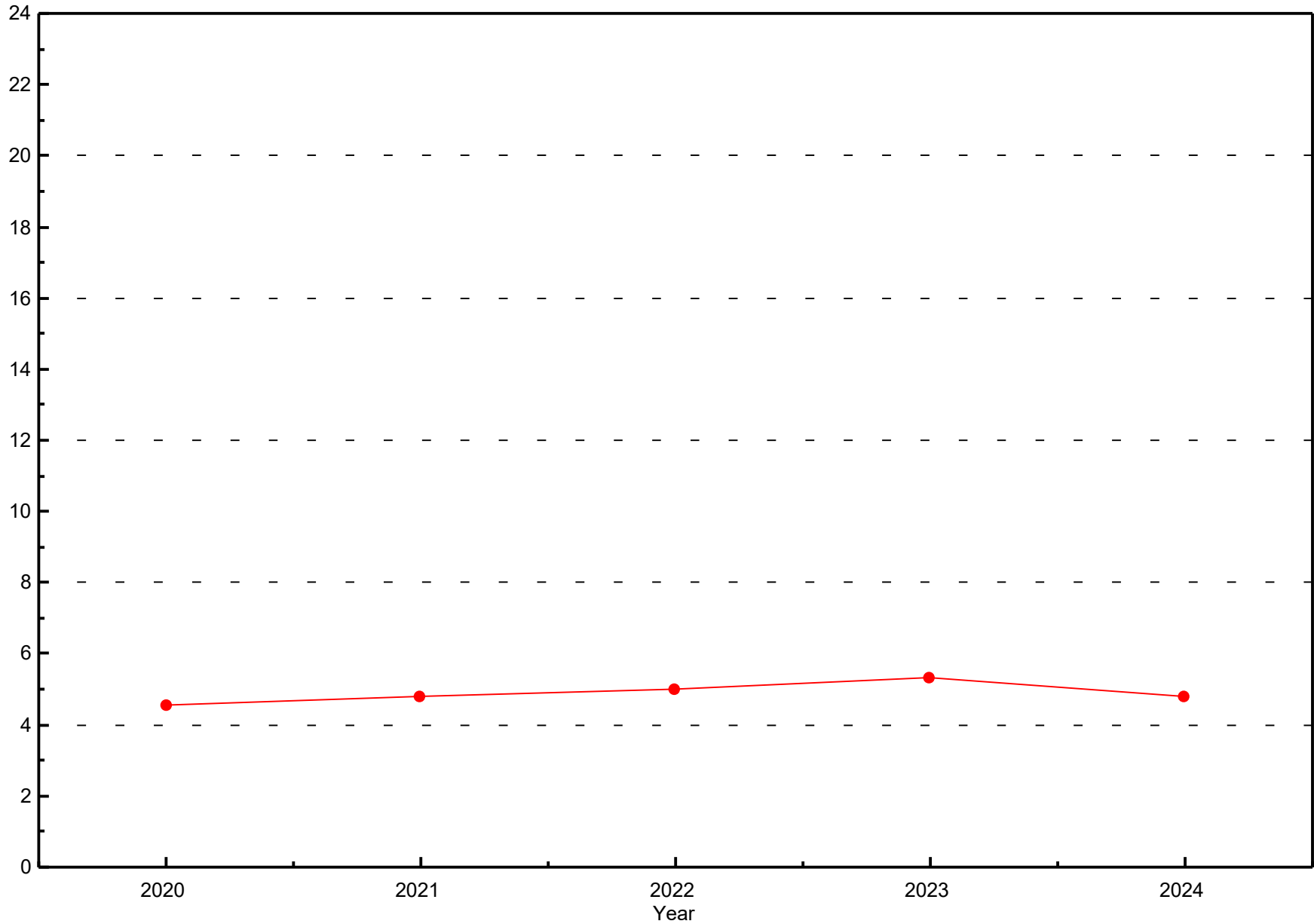
Nitrogen Dioxide (NO₂) - ppb
Fort McKay - Bertha Ganter (2020 to 2024)





Yearly Averages

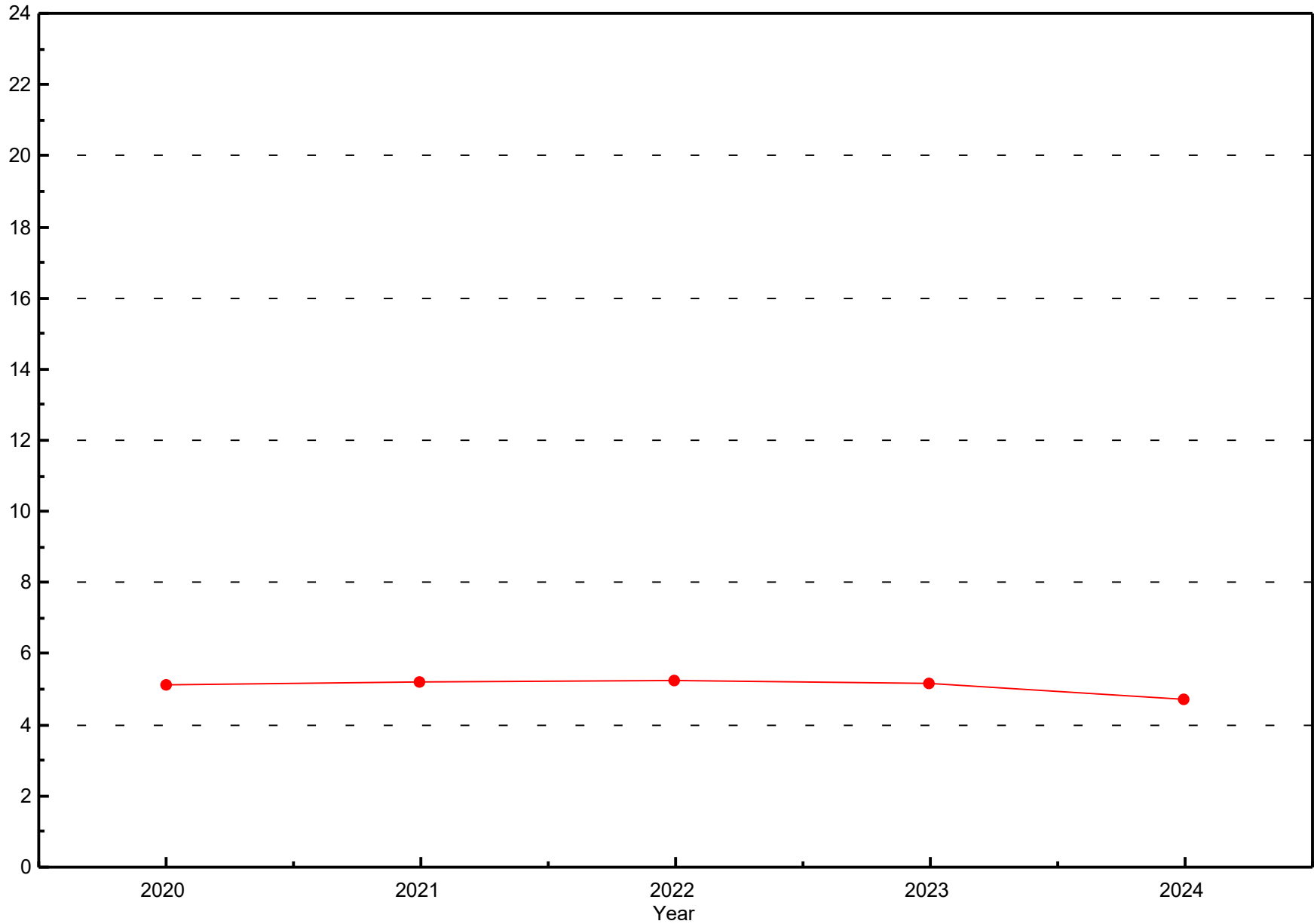
Nitrogen Dioxide (NO₂) - ppb
Buffalo Viewpoint (2020 to 2024)





Yearly Averages

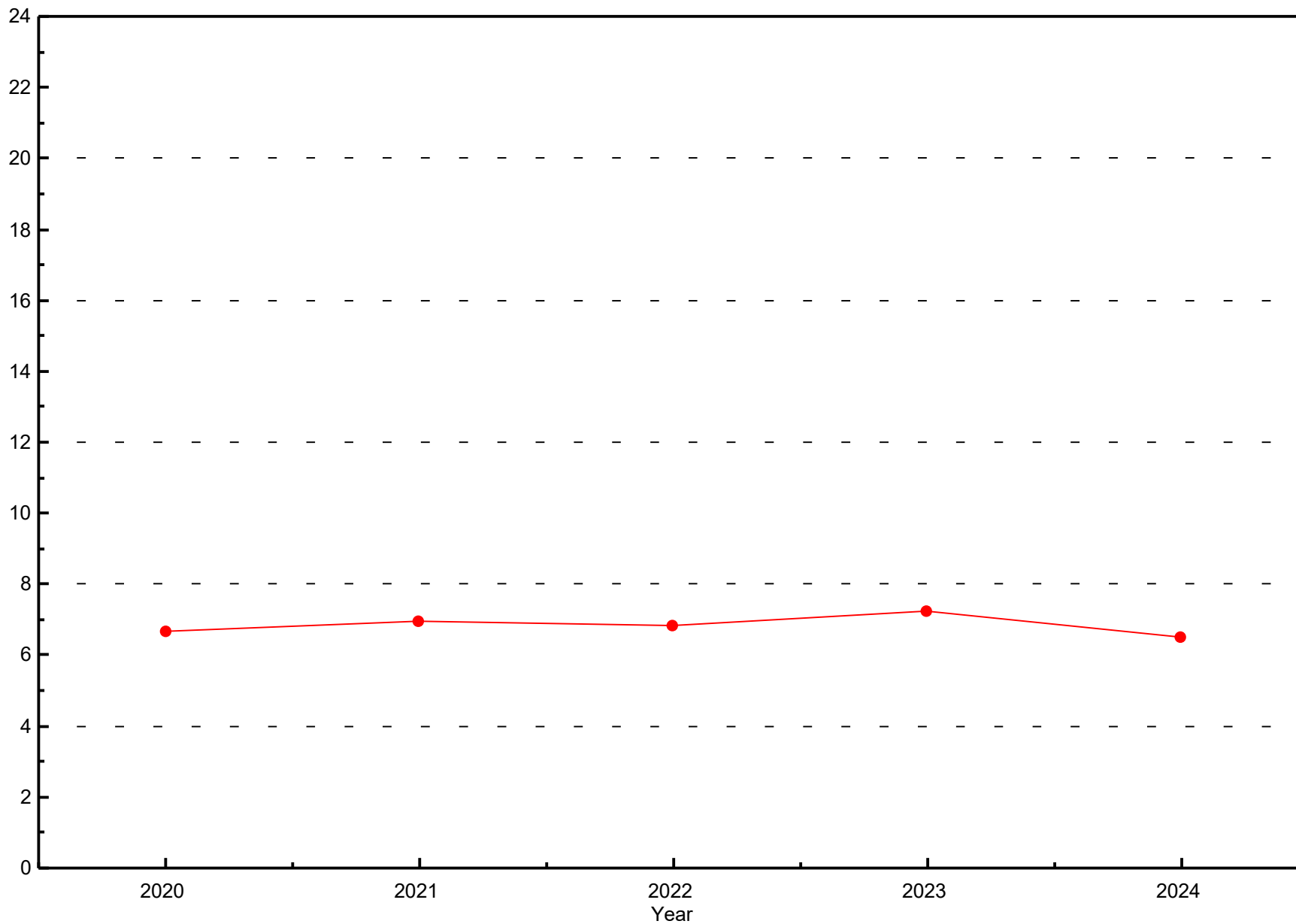
Nitrogen Dioxide (NO₂) - ppb
Patricia McInnes (2020 to 2024)





Yearly Averages

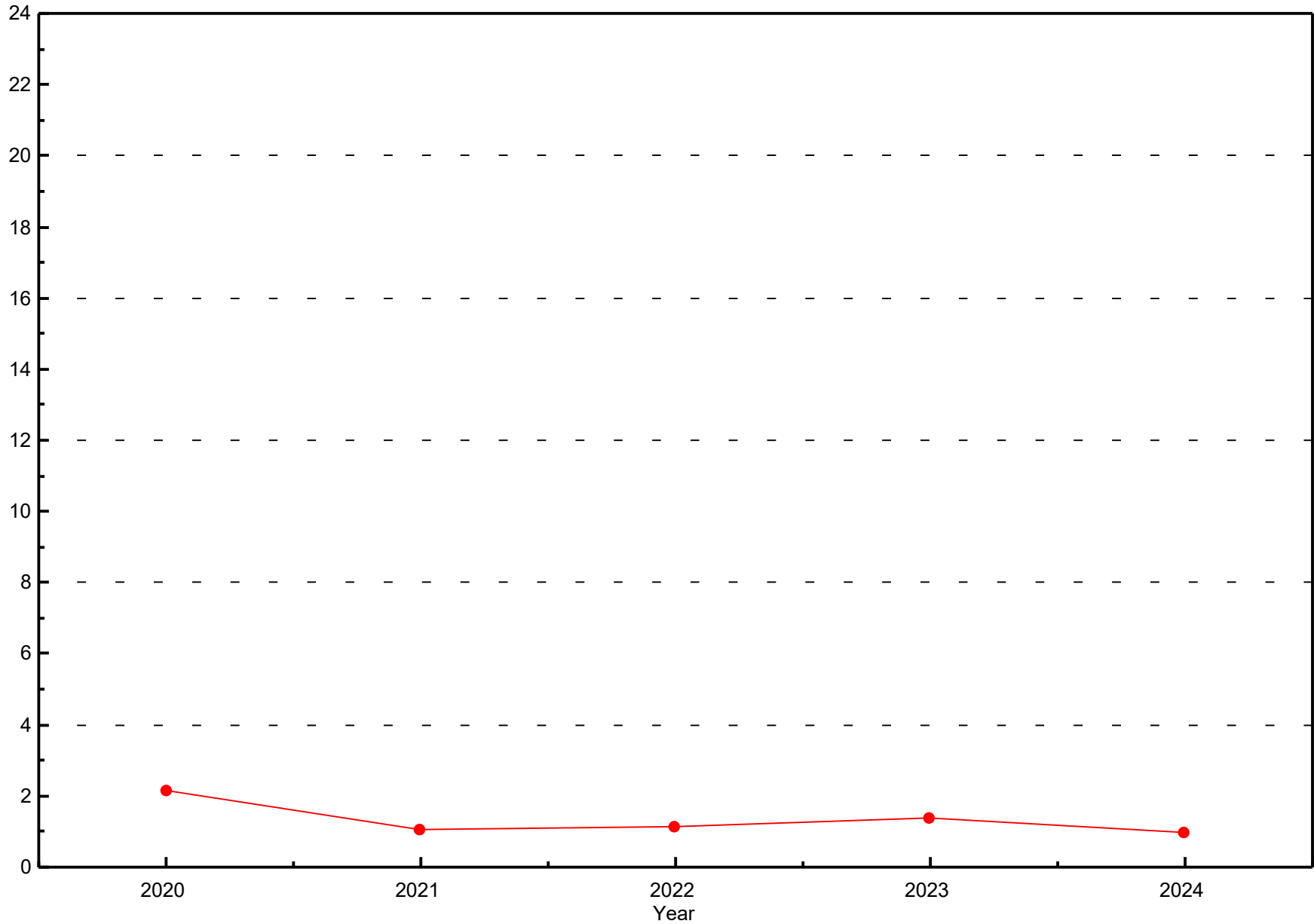
Nitrogen Dioxide (NO₂) - ppb
Athabasca Valley (2020 to 2024)





Yearly Averages

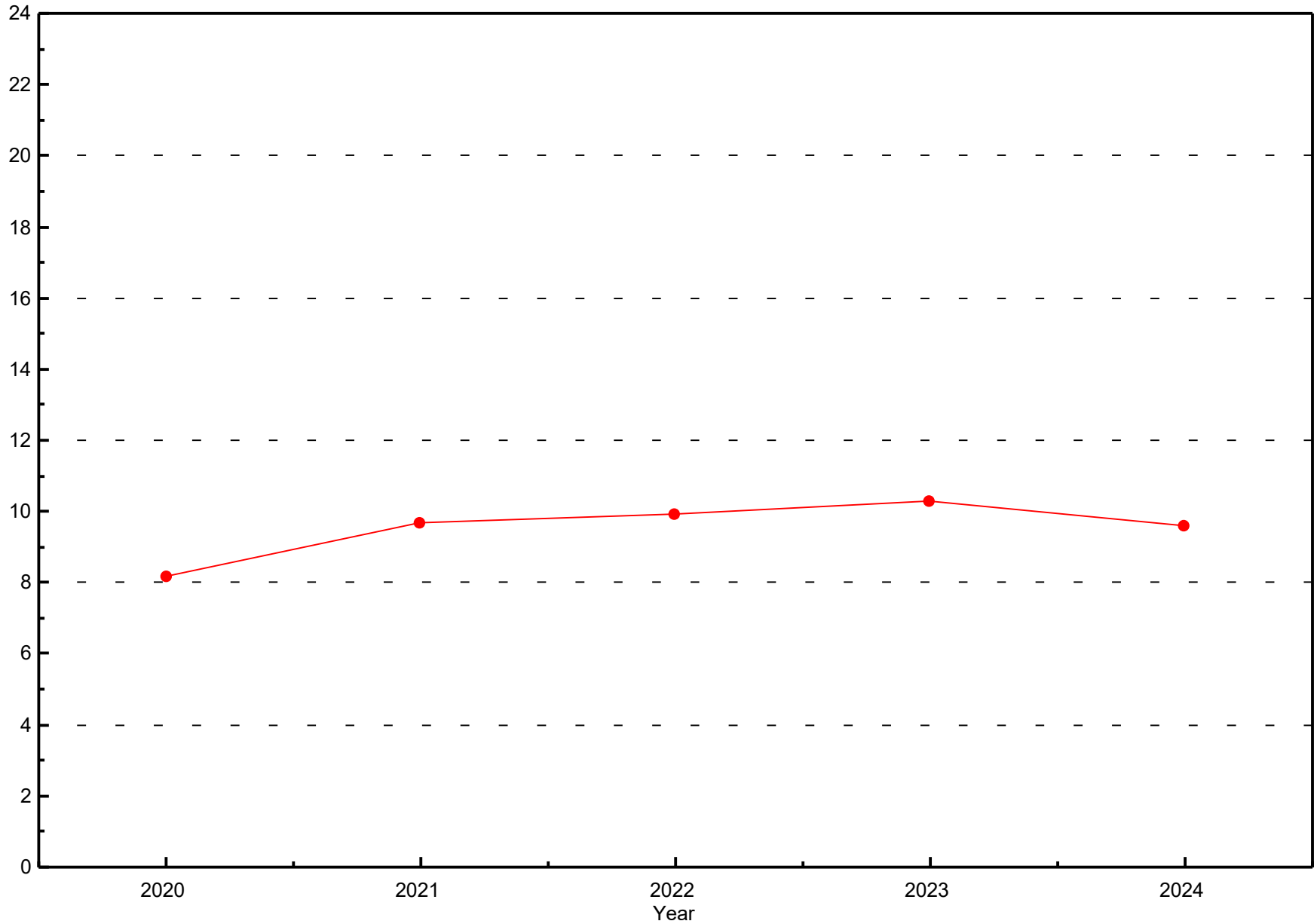
Nitrogen Dioxide (NO₂) - ppb
Fort Chipewyan (2020 to 2024)





Yearly Averages

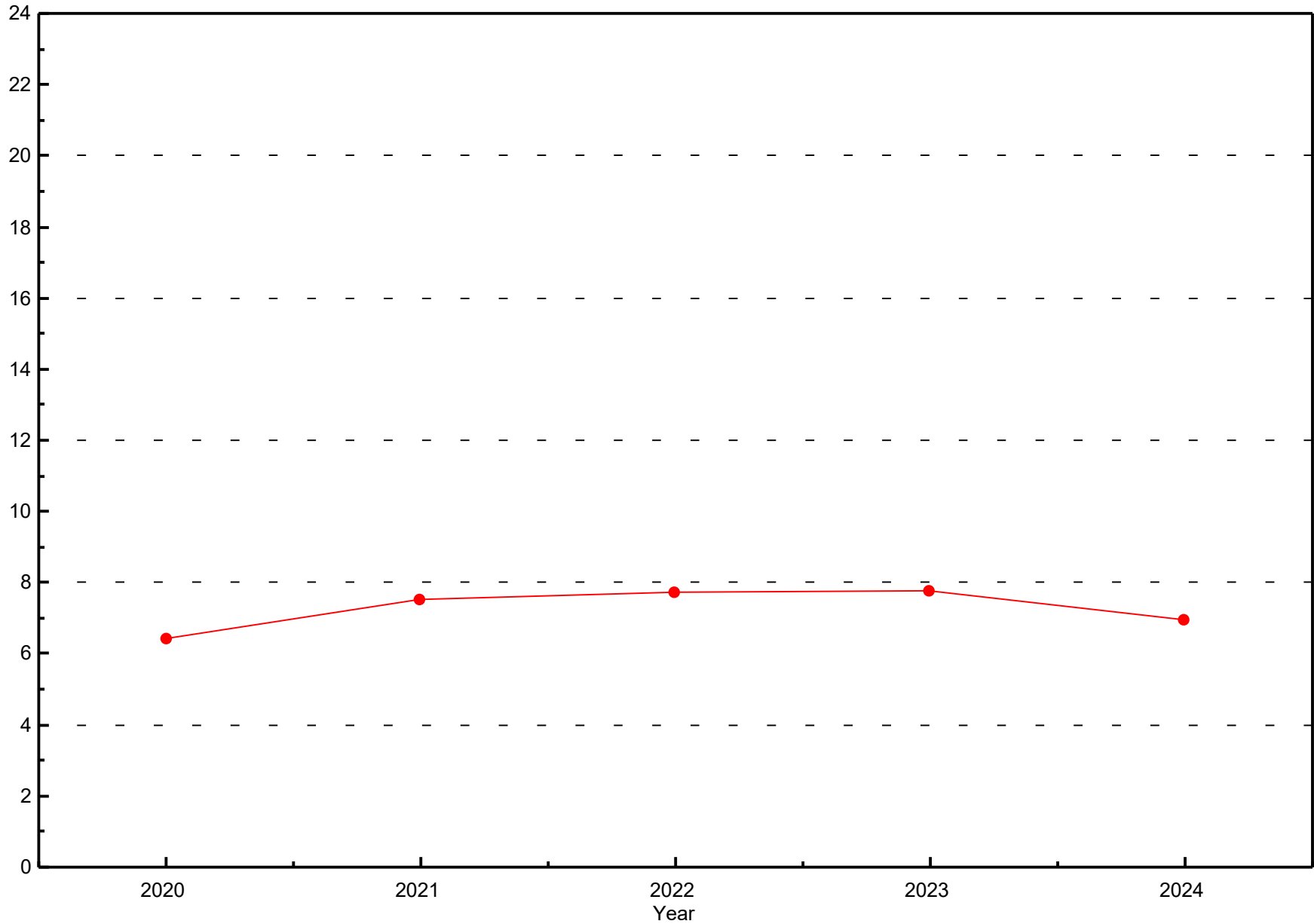
Nitrogen Dioxide (NO₂) - ppb
Barge Landing (2020 to 2024)





Yearly Averages

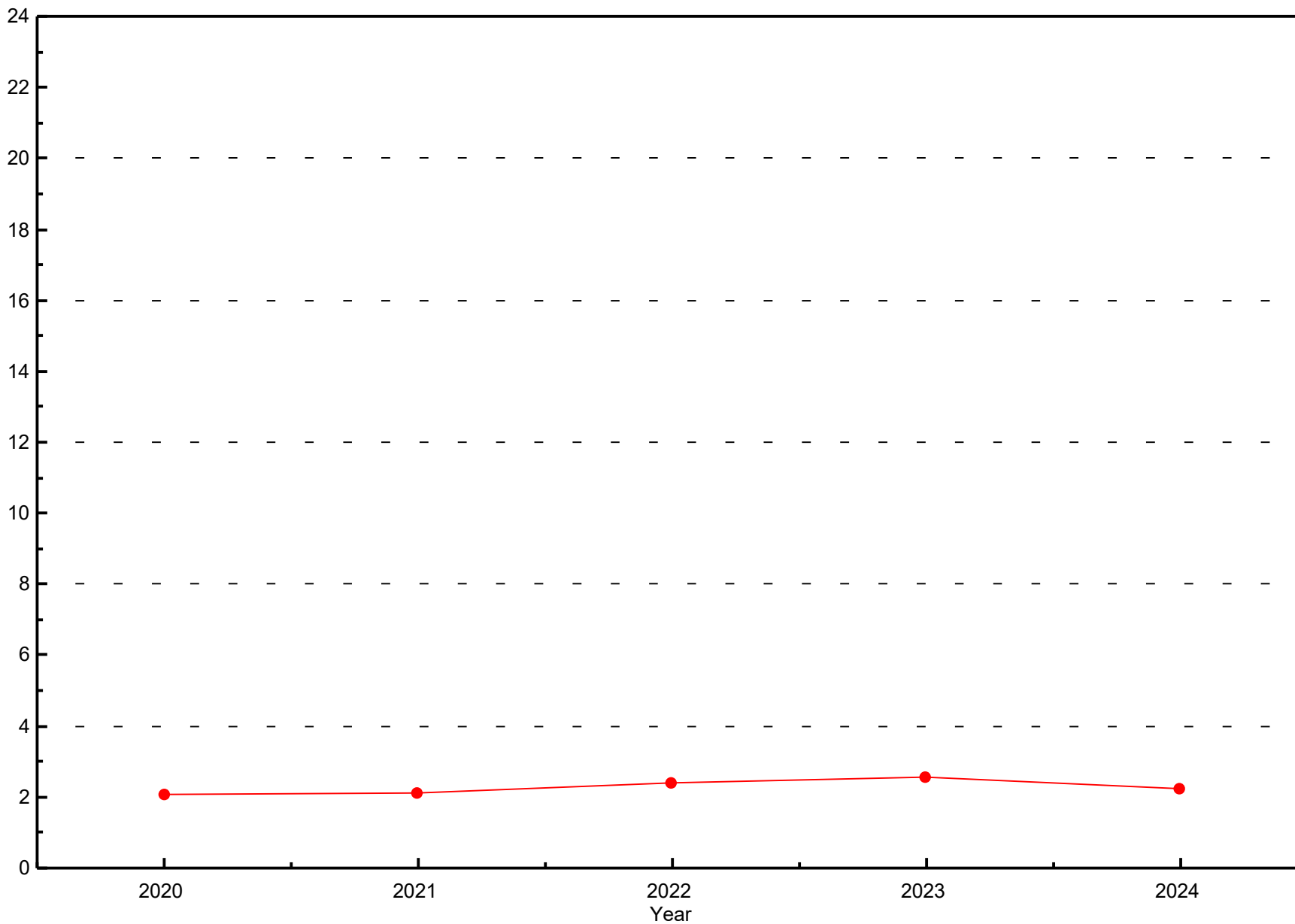
Nitrogen Dioxide (NO₂) - ppb
Fort McKay South (2020 to 2024)





Yearly Averages

Nitrogen Dioxide (NO₂) - ppb
Anzac (2020 to 2024)

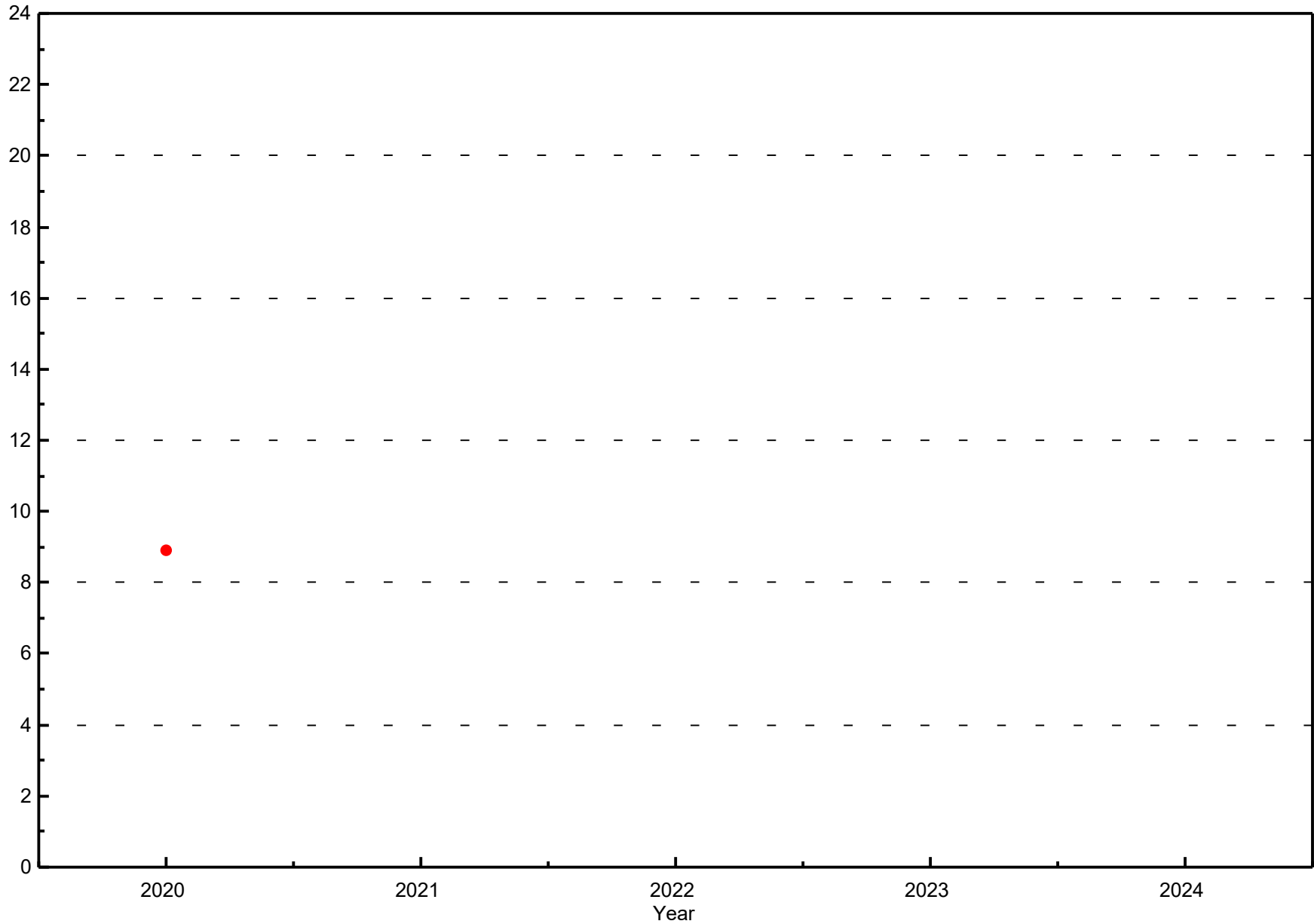




Yearly Averages

Nitrogen Dioxide (NO₂) - ppb

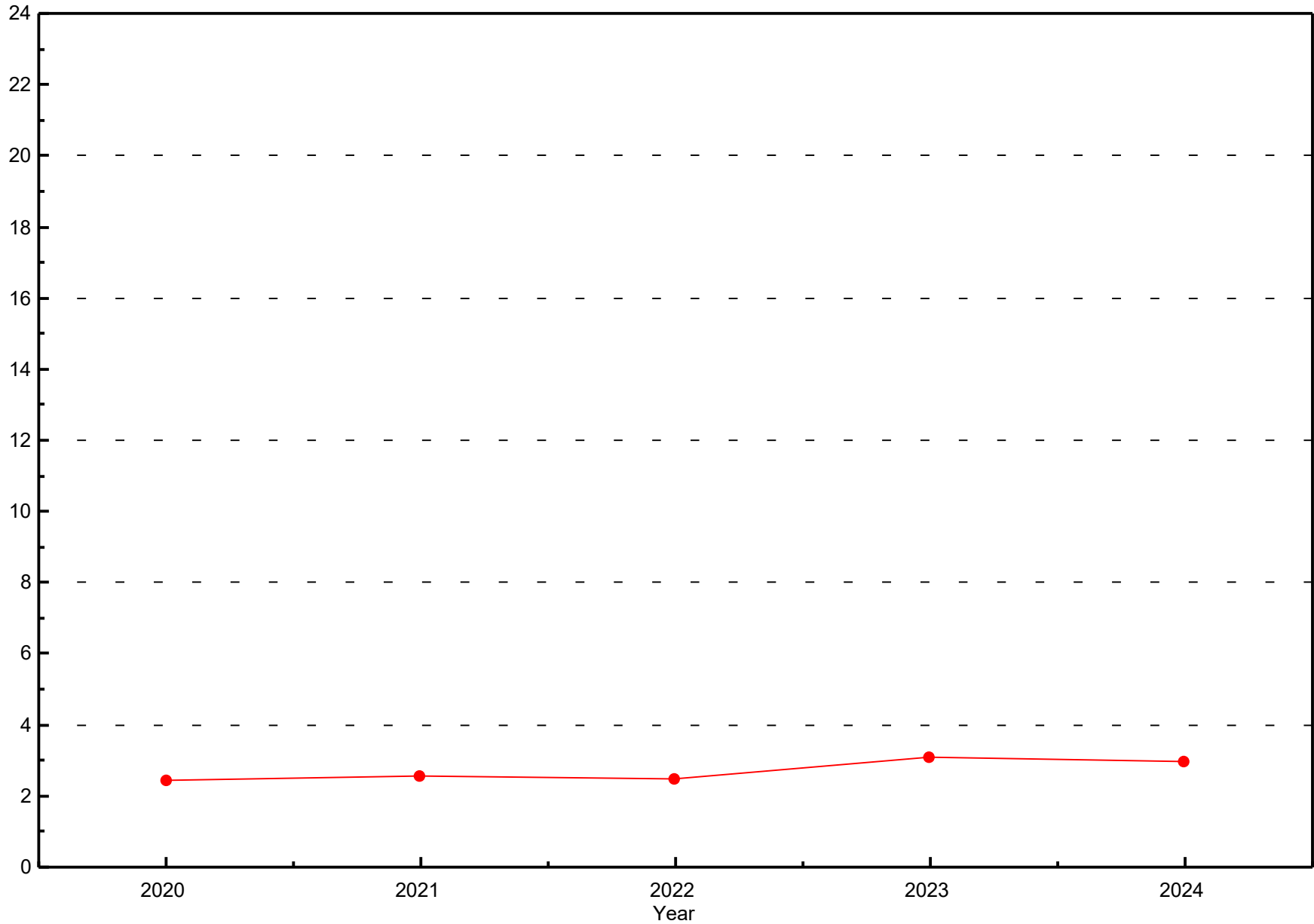
Horizon (2020 to 2024)





Yearly Averages

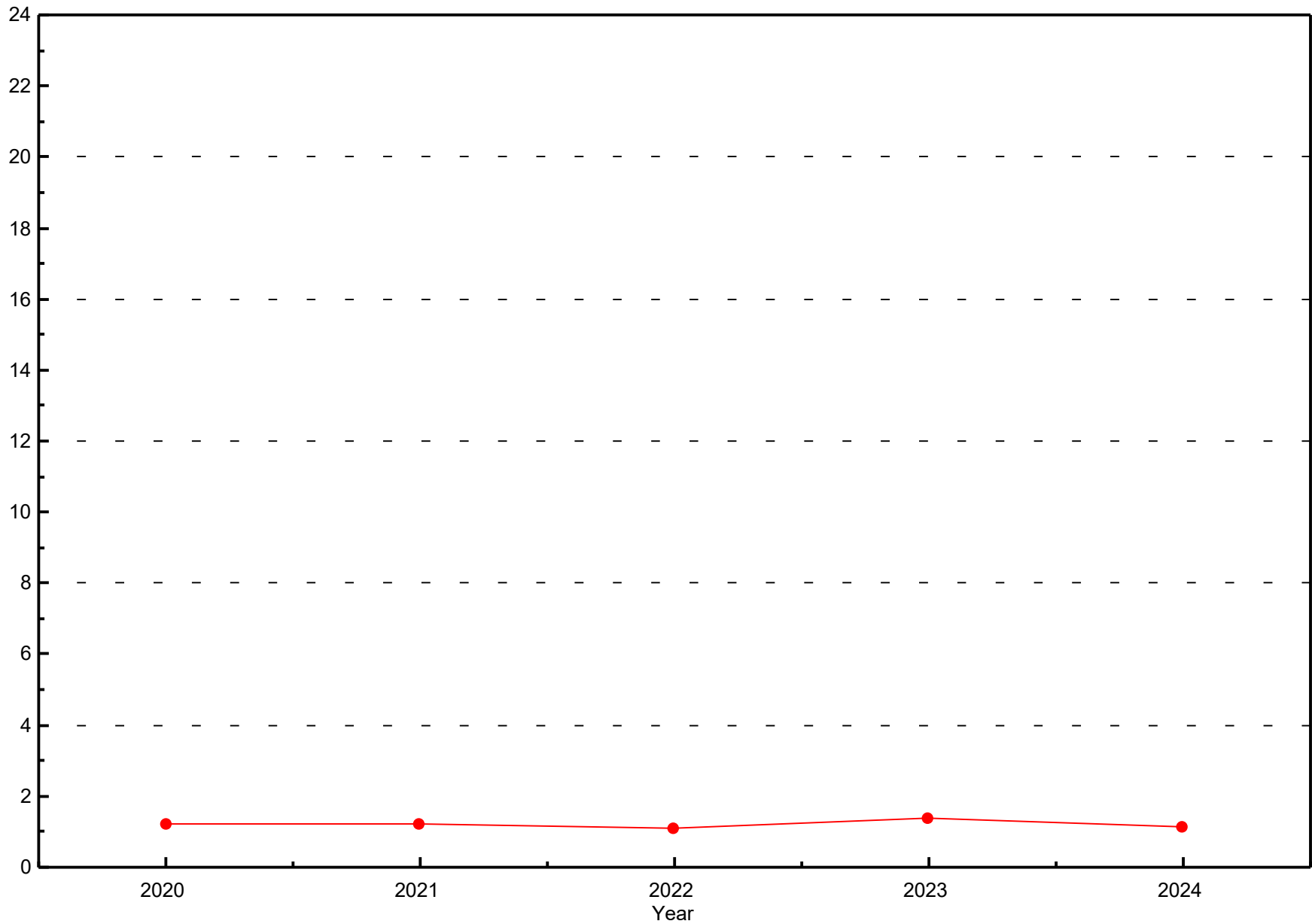
Nitrogen Dioxide (NO₂) - ppb
Wapasu (2020 to 2024)





Yearly Averages

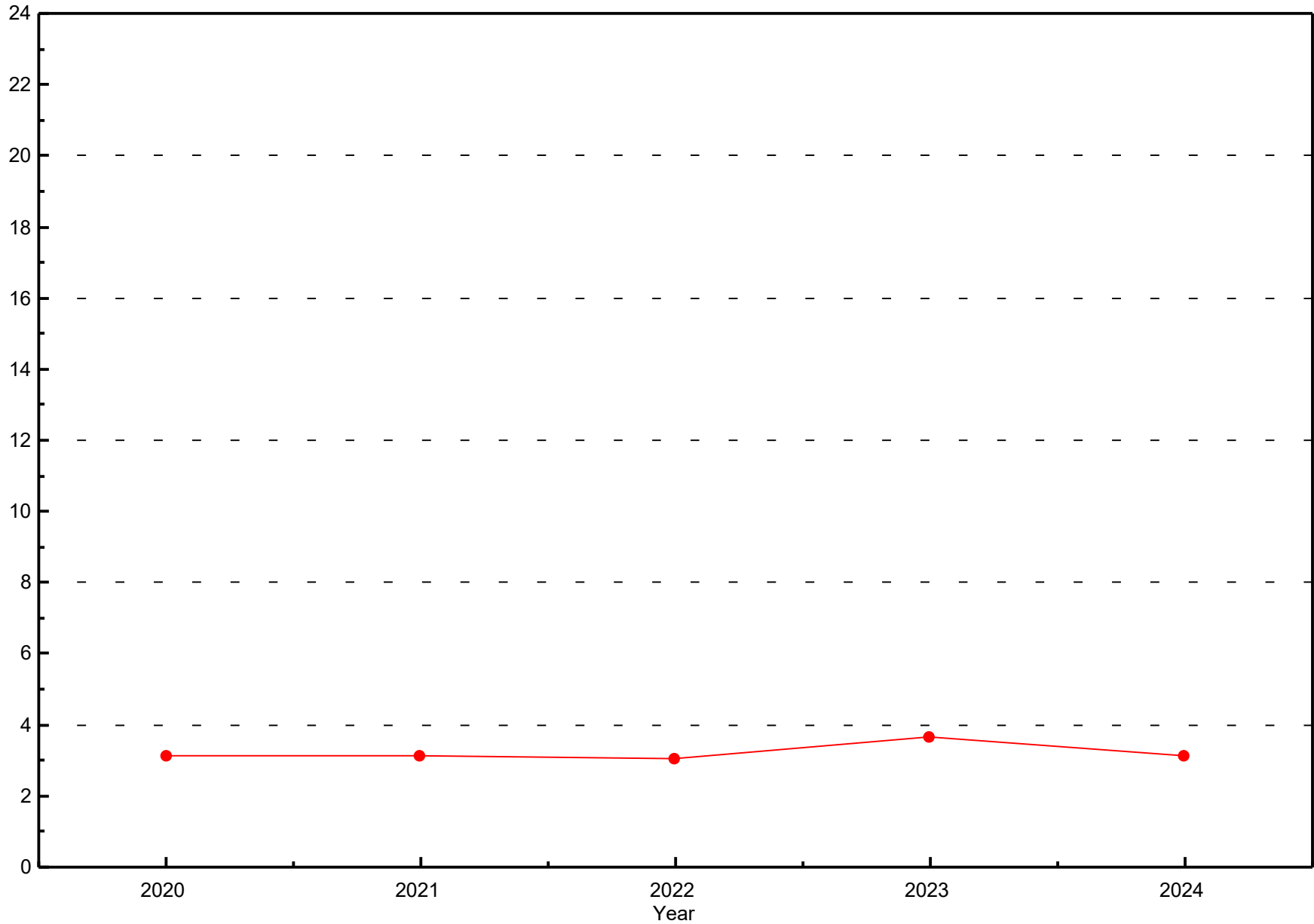
Nitrogen Dioxide (NO₂) - ppb
Stony Mountain (2020 to 2024)





Yearly Averages

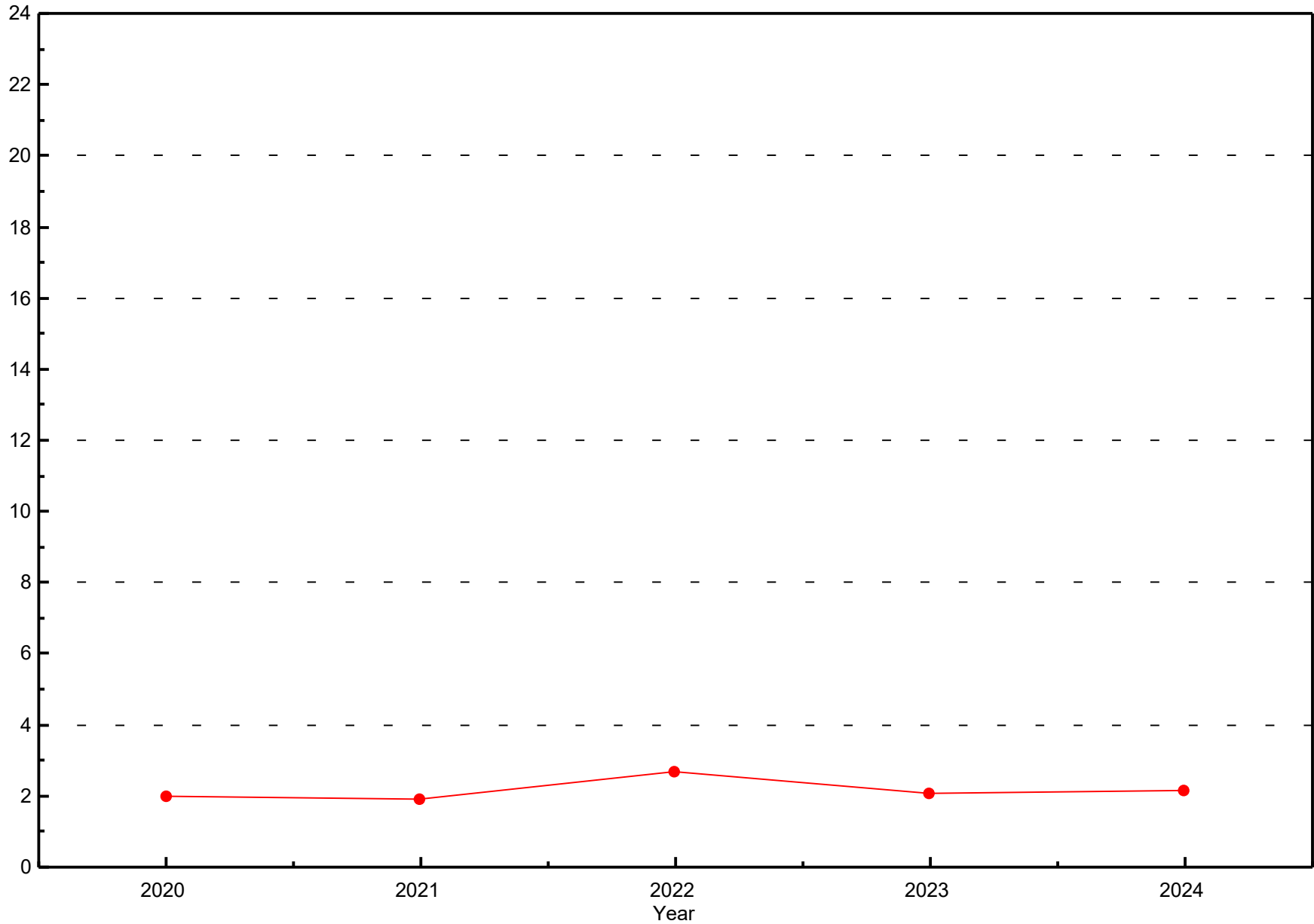
Nitrogen Dioxide (NO₂) - ppb
Firebag (2020 to 2024)





Yearly Averages

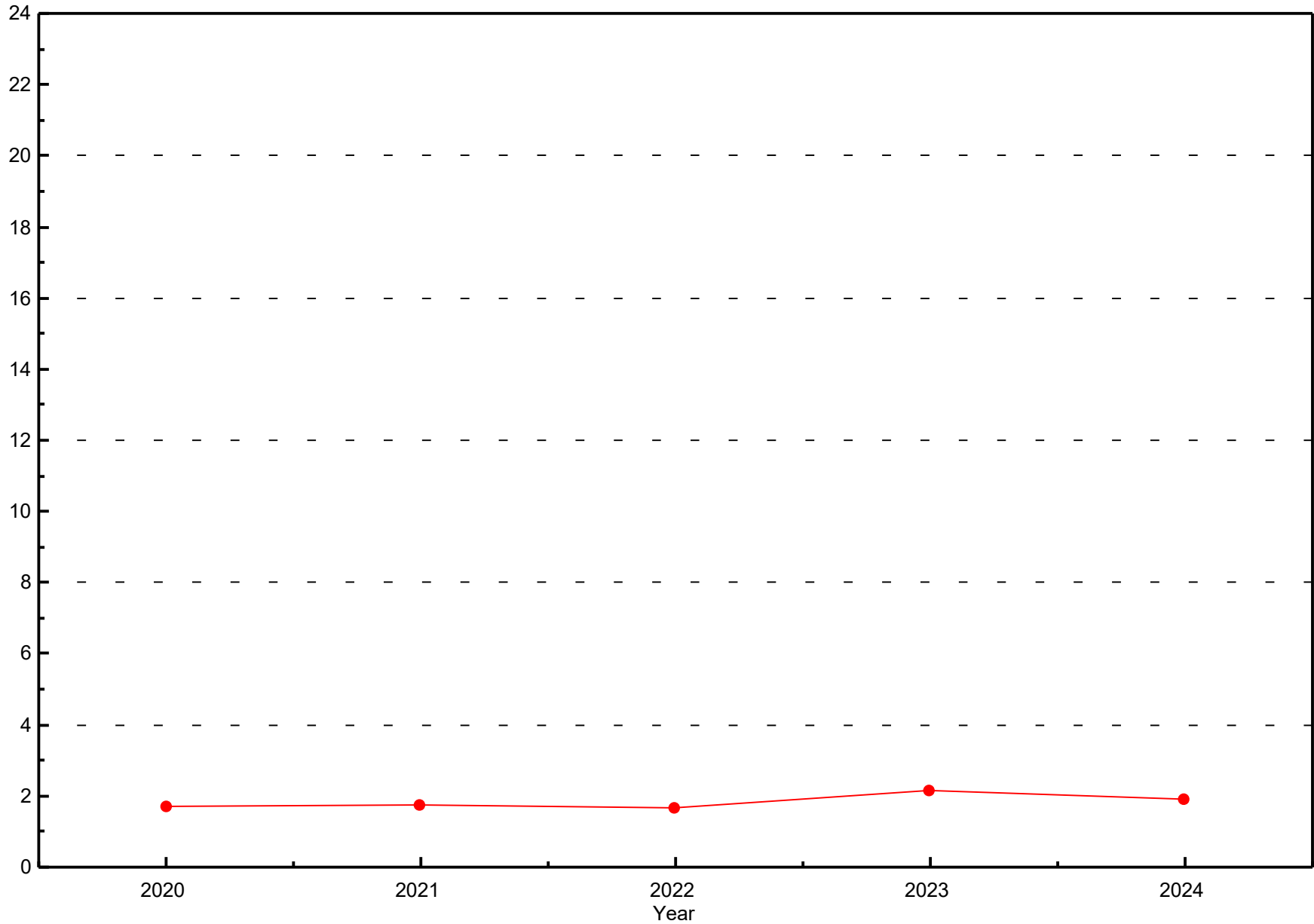
Nitrogen Dioxide (NO₂) - ppb
Mackay River (2020 to 2024)





Yearly Averages

Nitrogen Dioxide (NO₂) - ppb
Conklin (2020 to 2024)

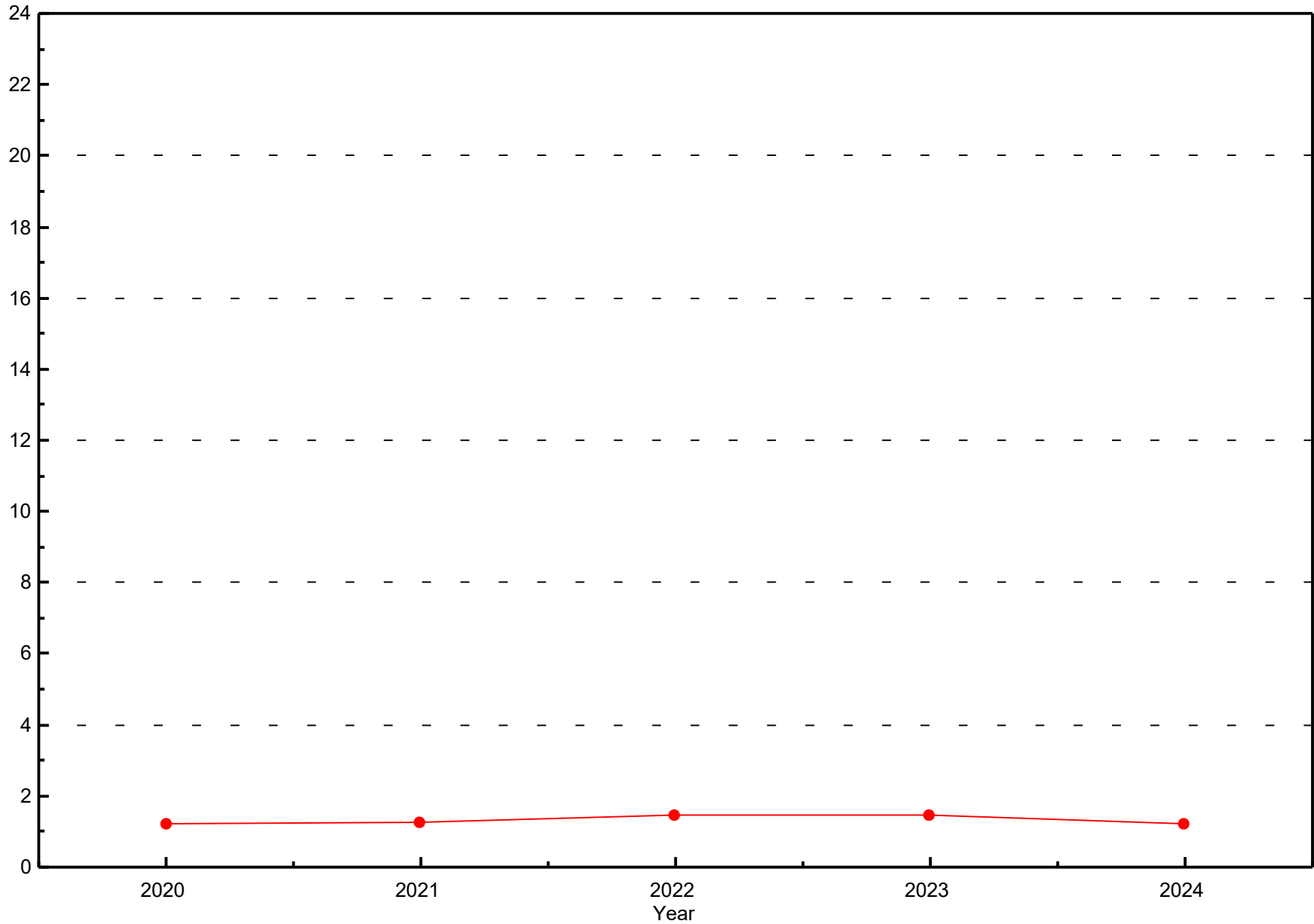




Yearly Averages

Nitrogen Dioxide (NO₂) - ppb

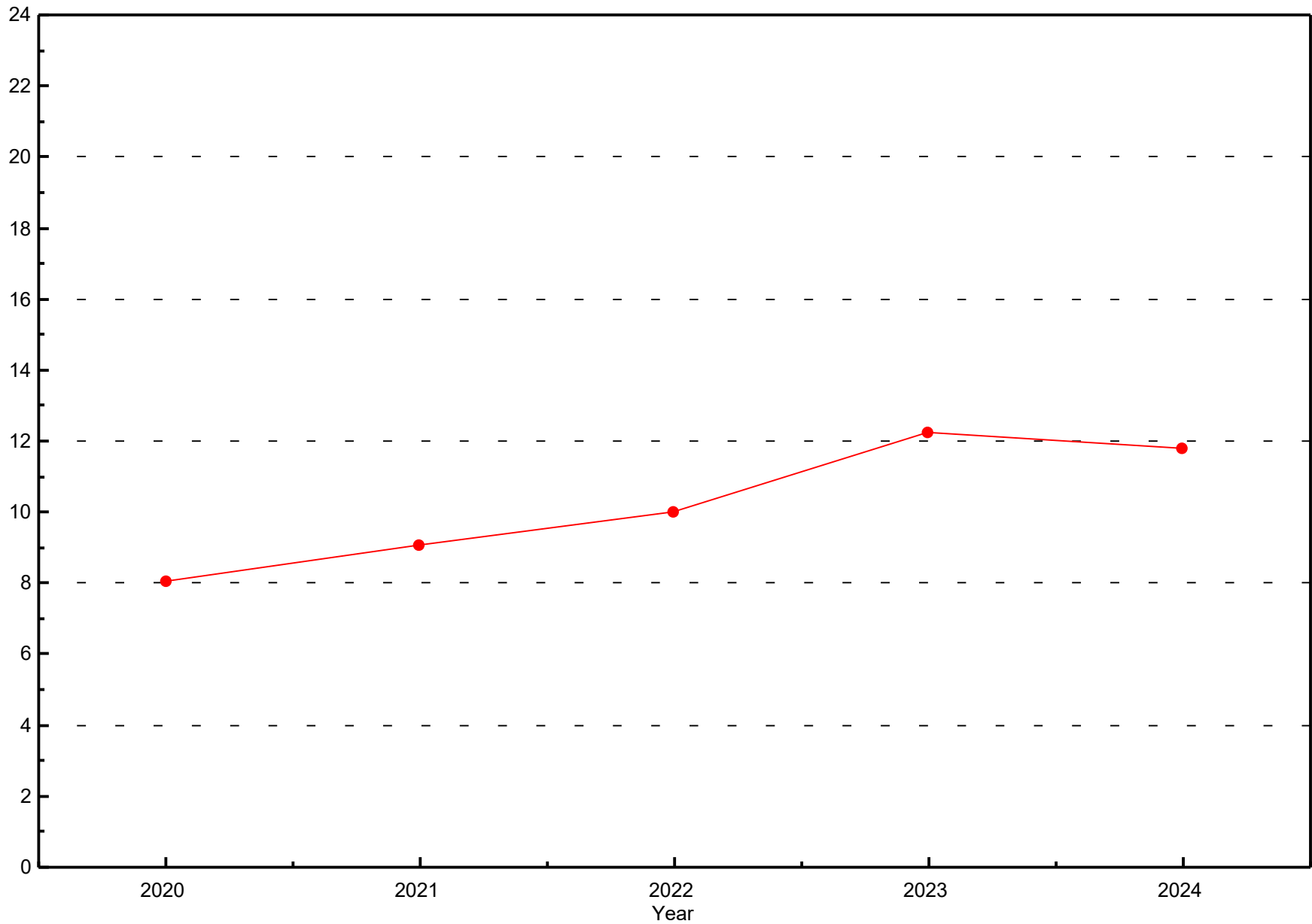
Janvier (2020 to 2024)





Yearly Averages

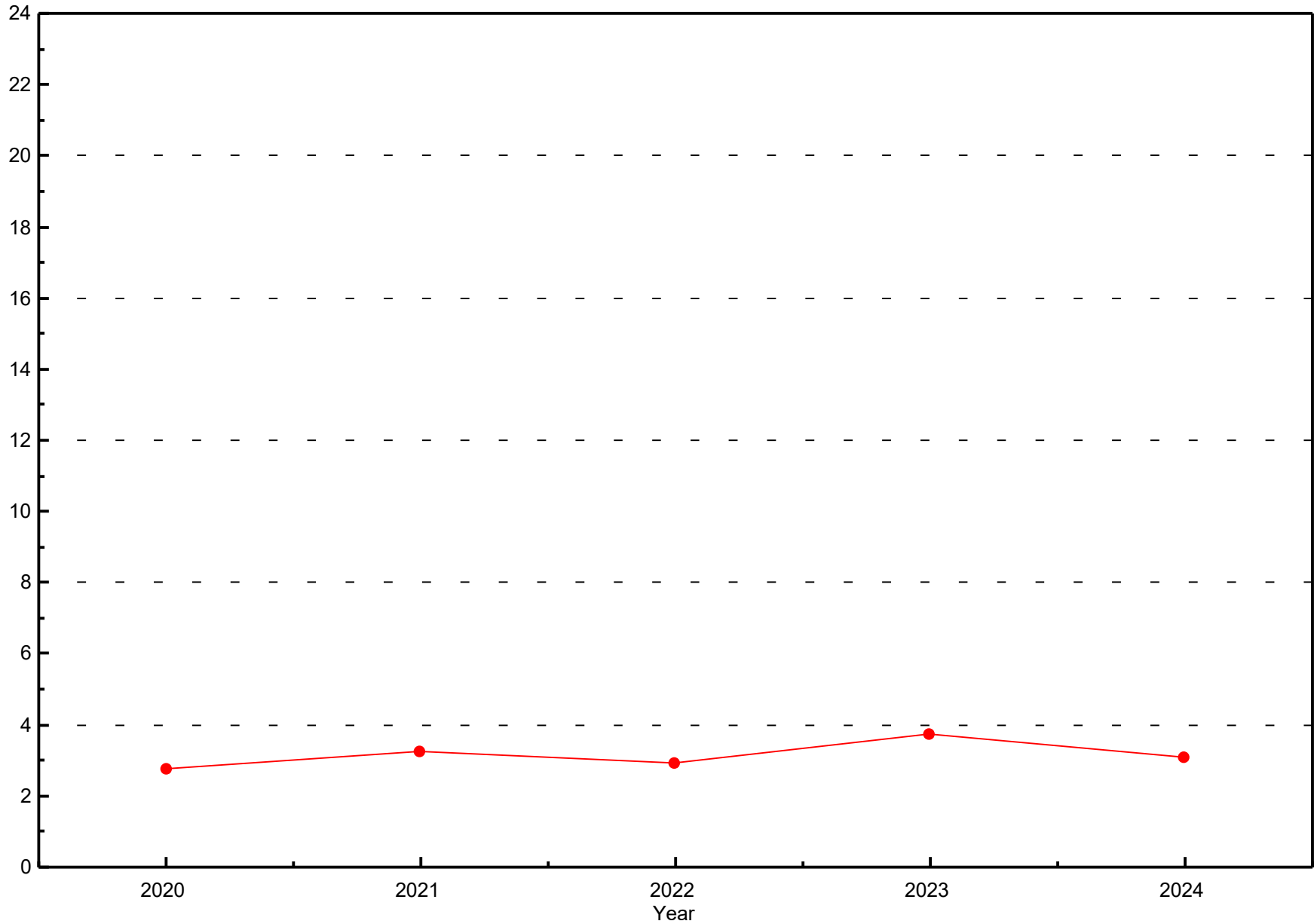
Nitrogen Dioxide (NO₂) - ppb
Fort Hills (2020 to 2024)





Yearly Averages

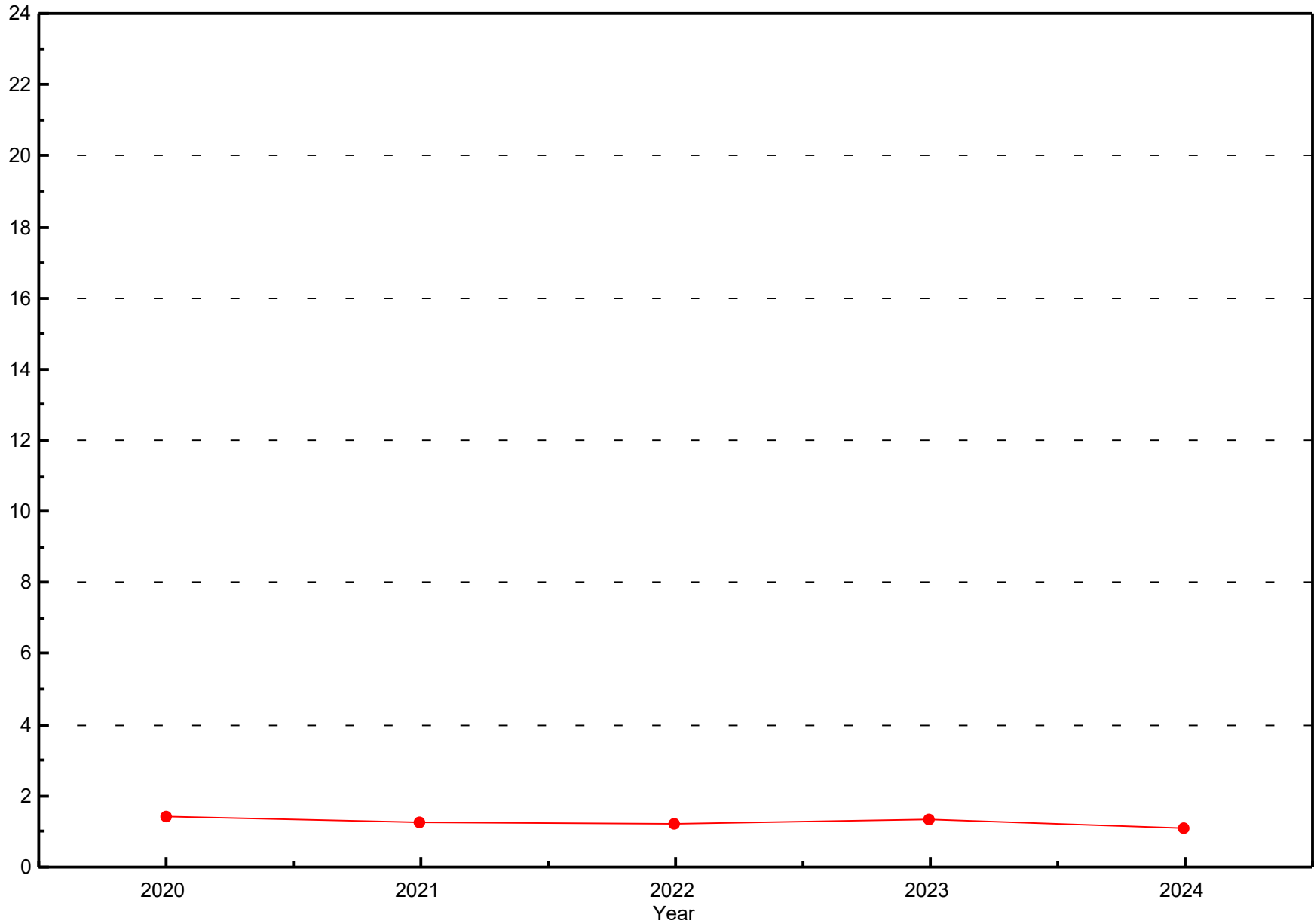
Nitrogen Dioxide (NO₂) - ppb
Christina Lake (2020 to 2024)





Yearly Averages

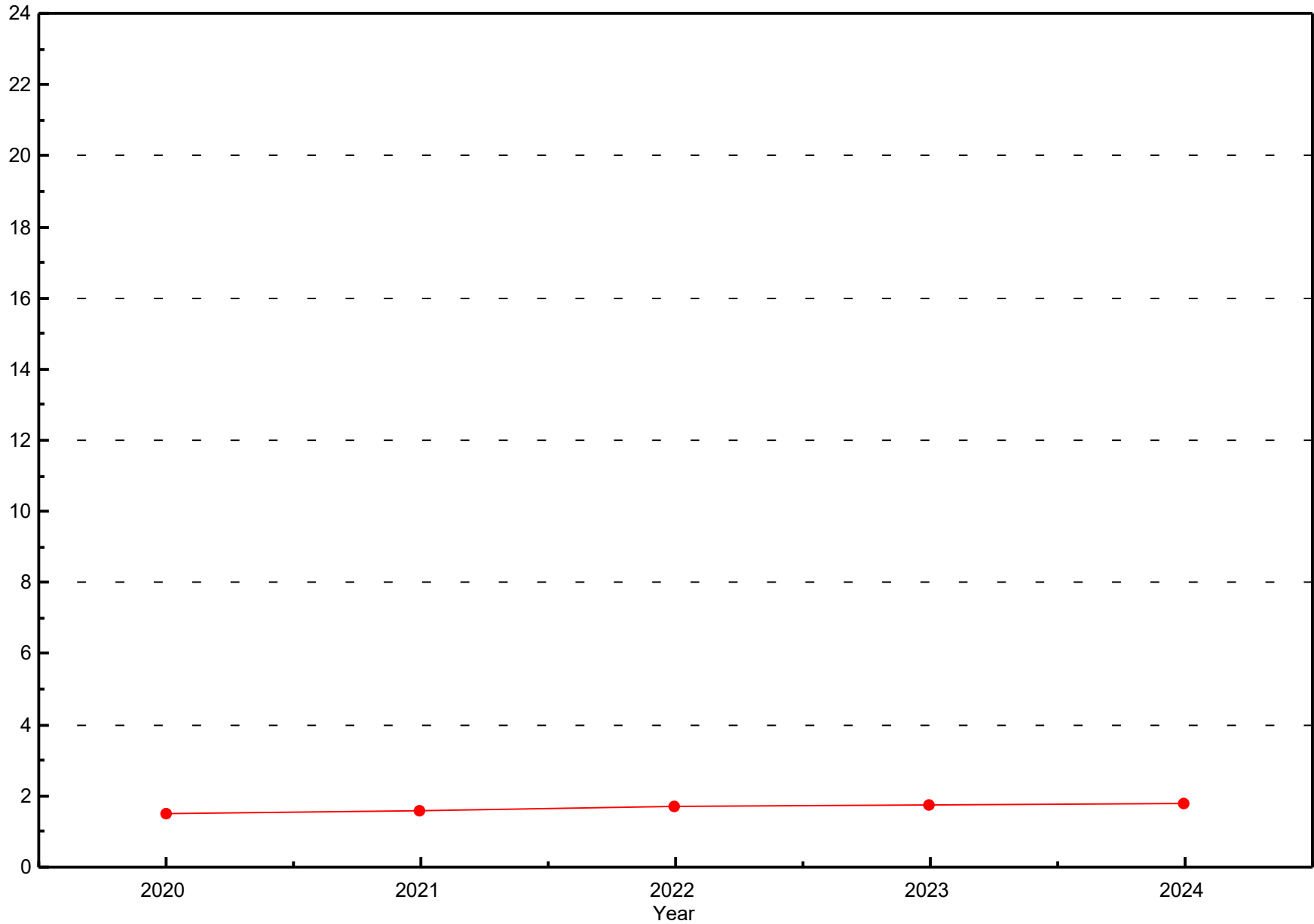
Nitrogen Dioxide (NO₂) - ppb
Jackfish 2/3 (2020 to 2024)





Yearly Averages

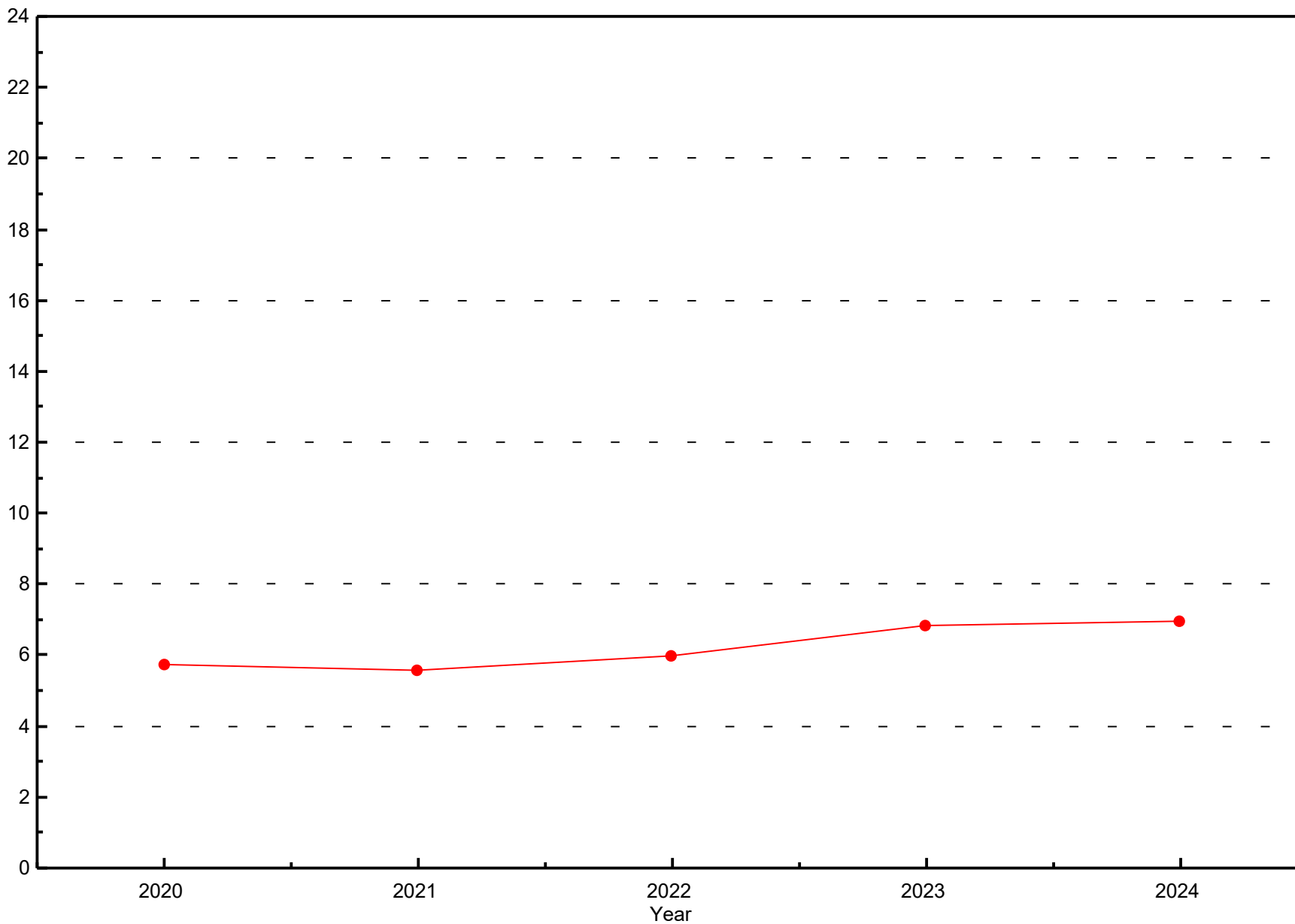
Nitrogen Dioxide (NO₂) - ppb
Surmont 2 (2020 to 2024)





Yearly Averages

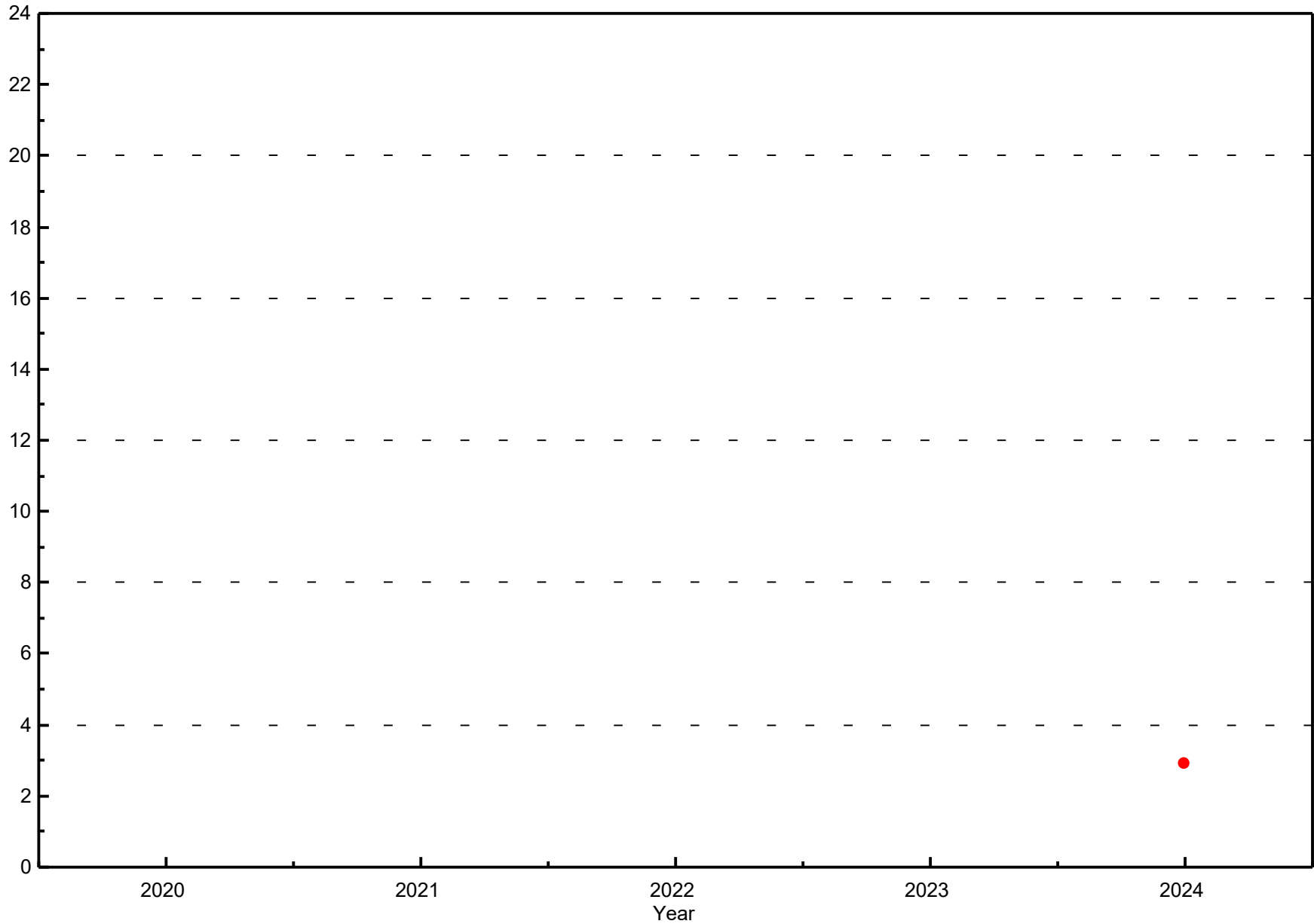
Nitrogen Dioxide (NO₂) - ppb
Ells River (2020 to 2024)





Yearly Averages

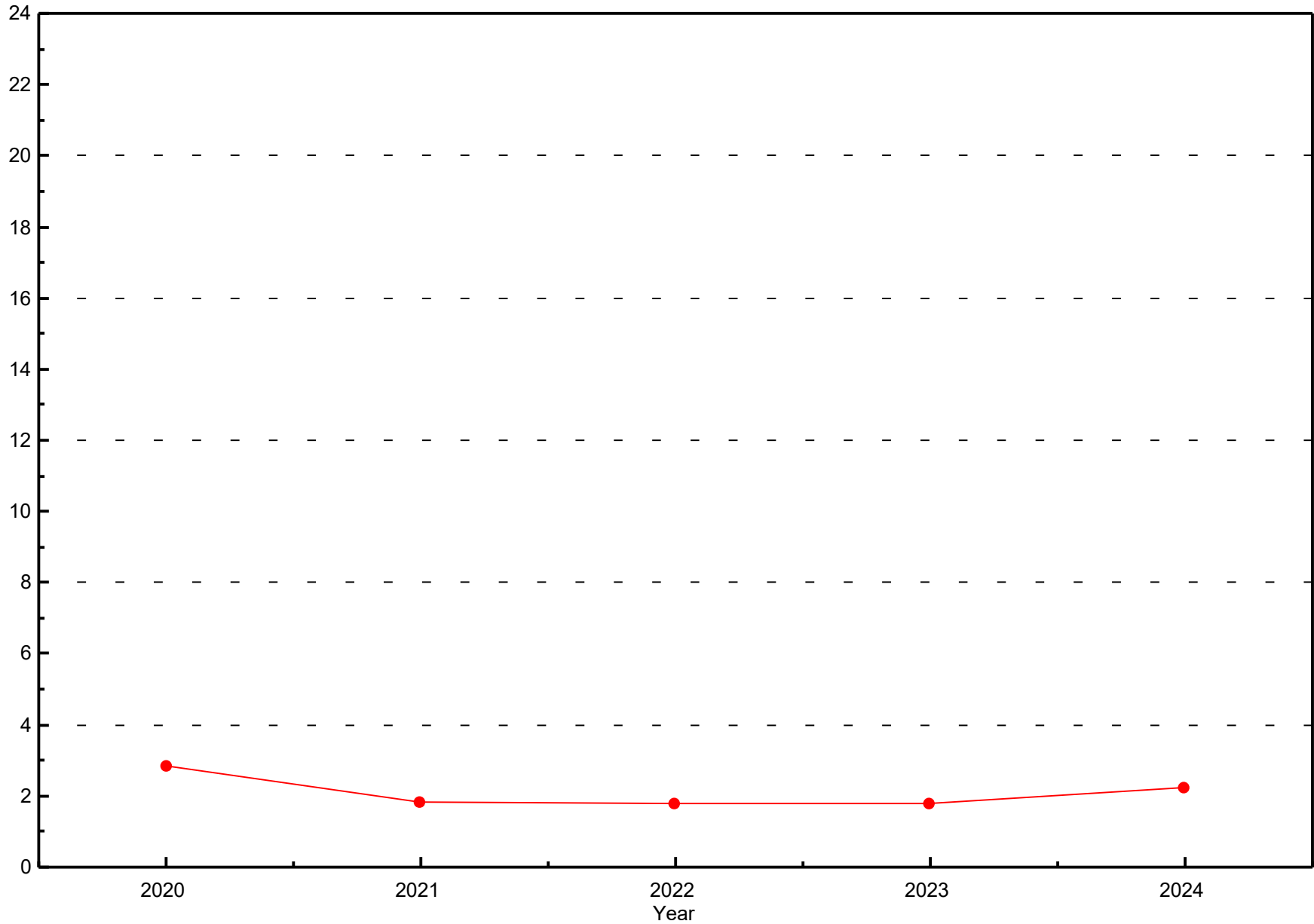
Nitrogen Dioxide (NO₂) - ppb
Monday Creek (2020 to 2024)





Yearly Averages

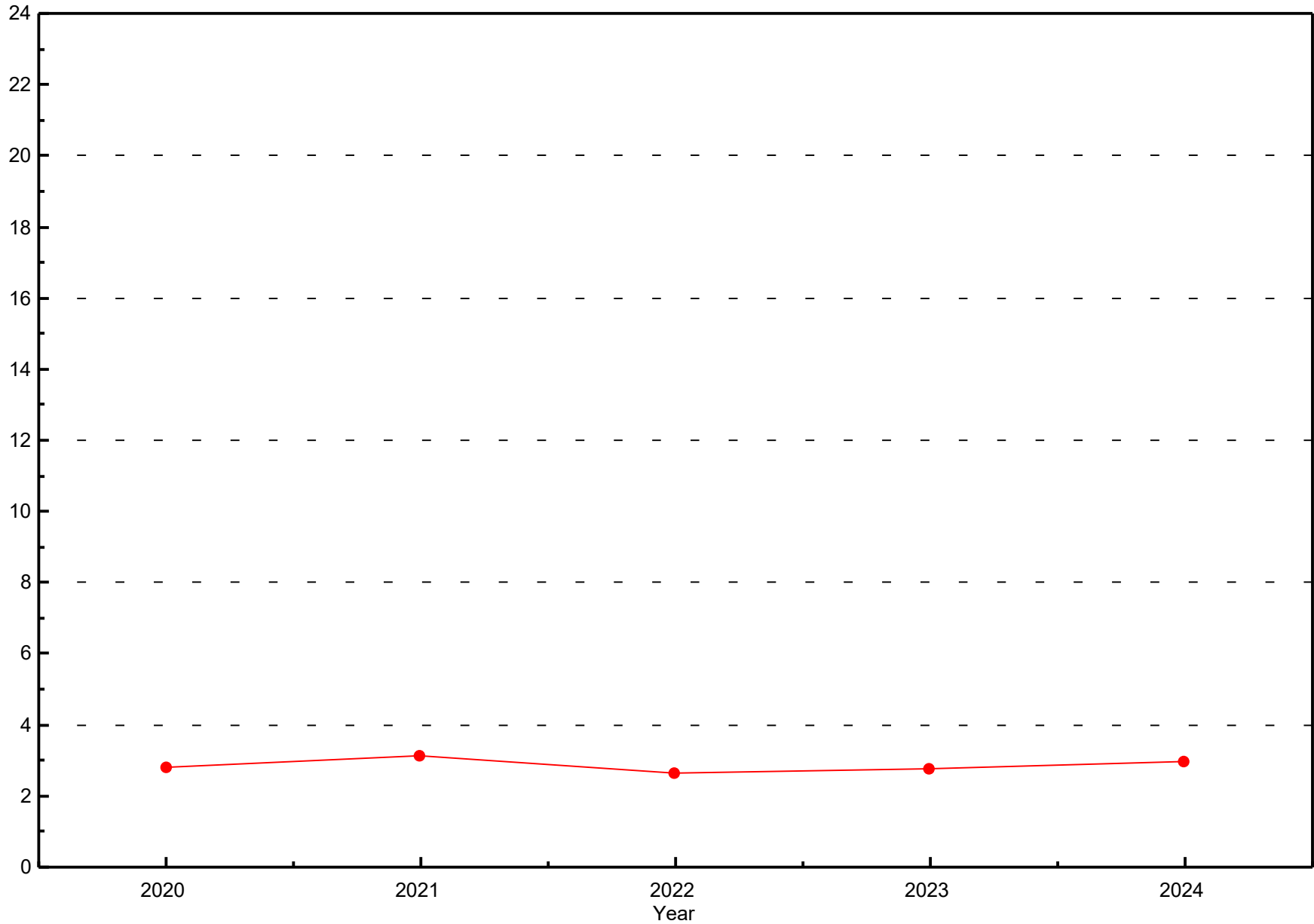
Nitrogen Dioxide (NO₂) - ppb
Leismer (2020 to 2024)





Yearly Averages

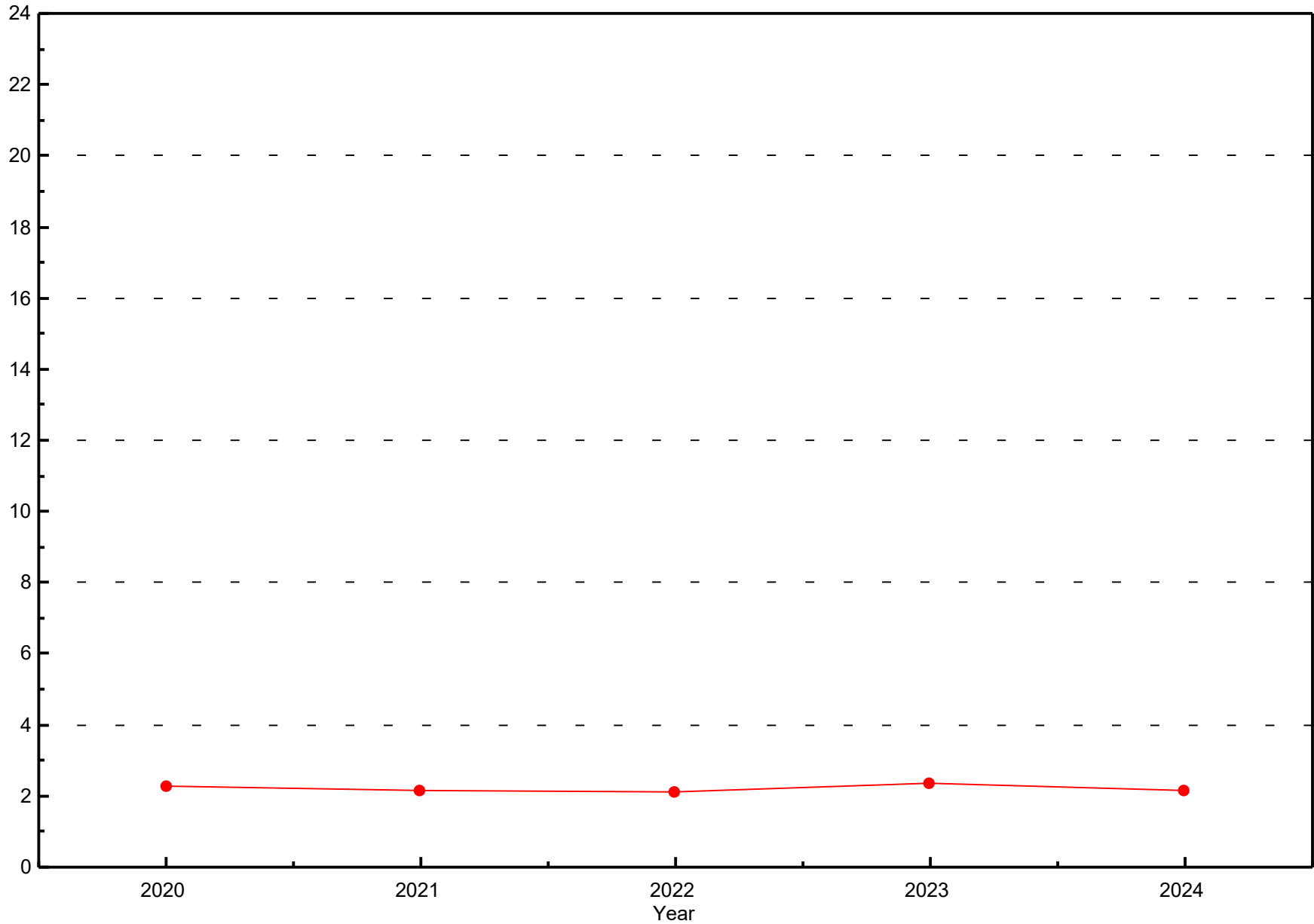
Nitrogen Dioxide (NO₂) - ppb
Sawbones Bay (2020 to 2024)





Yearly Averages

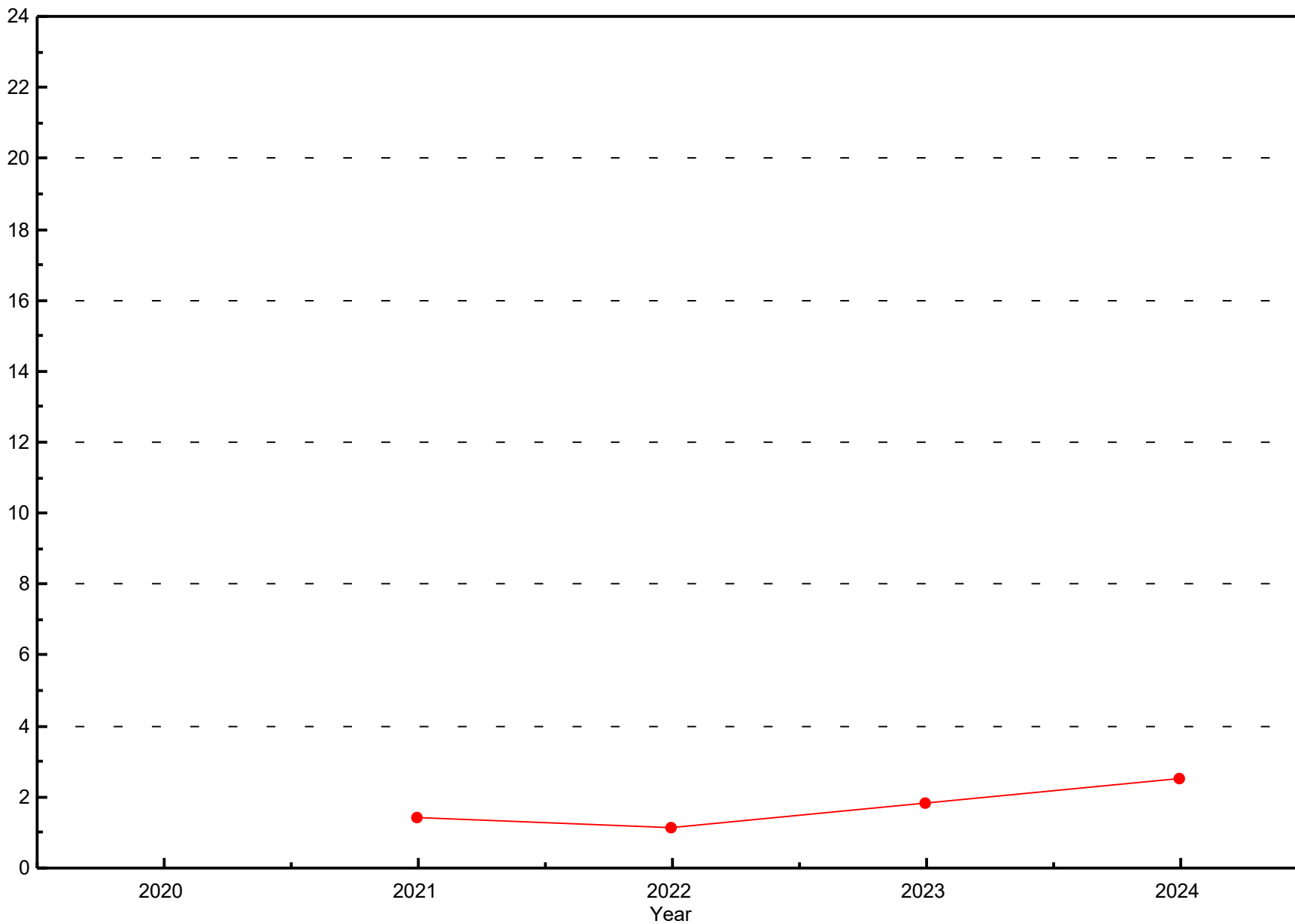
Nitrogen Dioxide (NO₂) - ppb
Jackfish 1 (2020 to 2024)





Yearly Averages

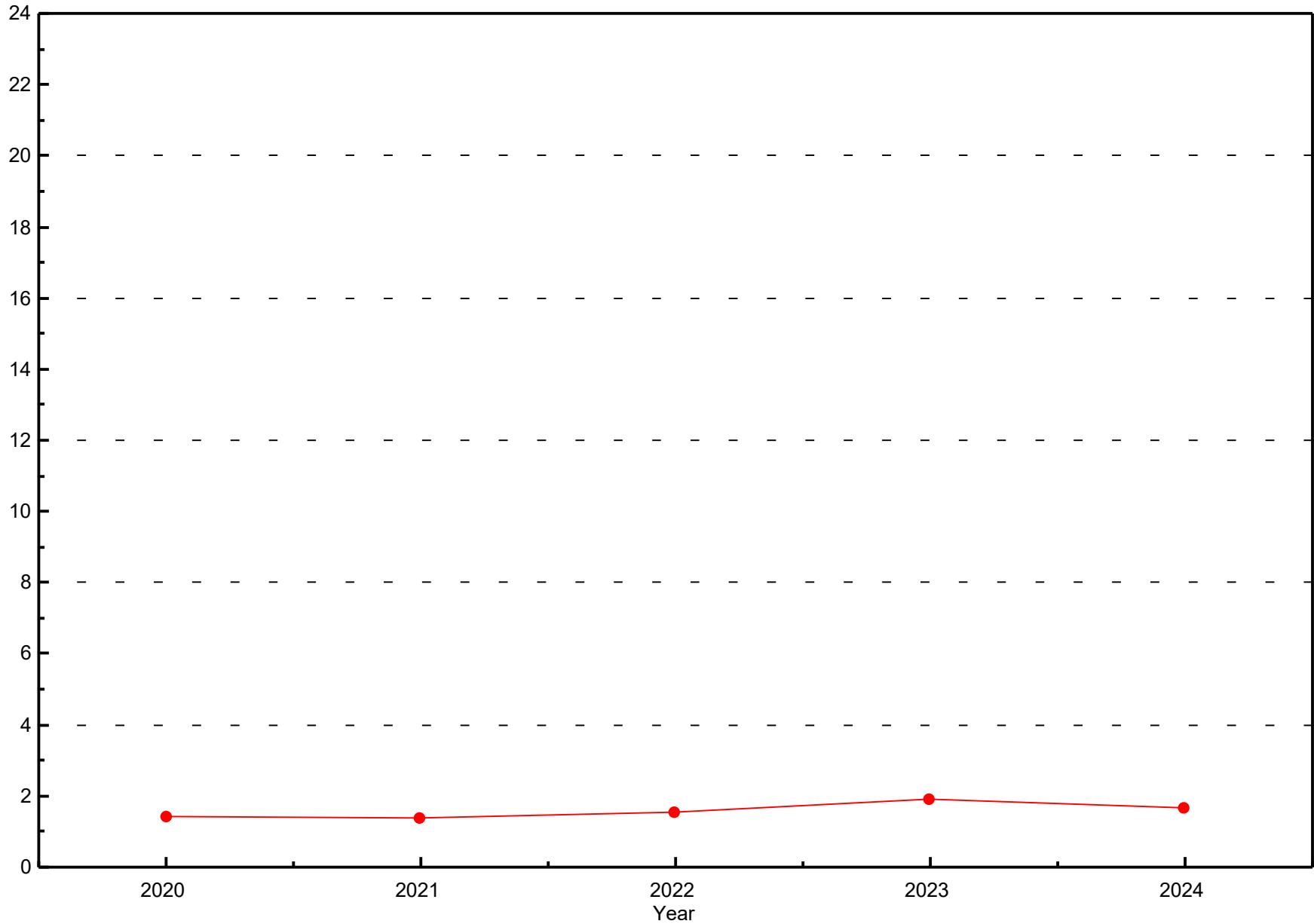
Nitrogen Dioxide (NO₂) - ppb
Kirby South (2020 to 2024)





Yearly Averages

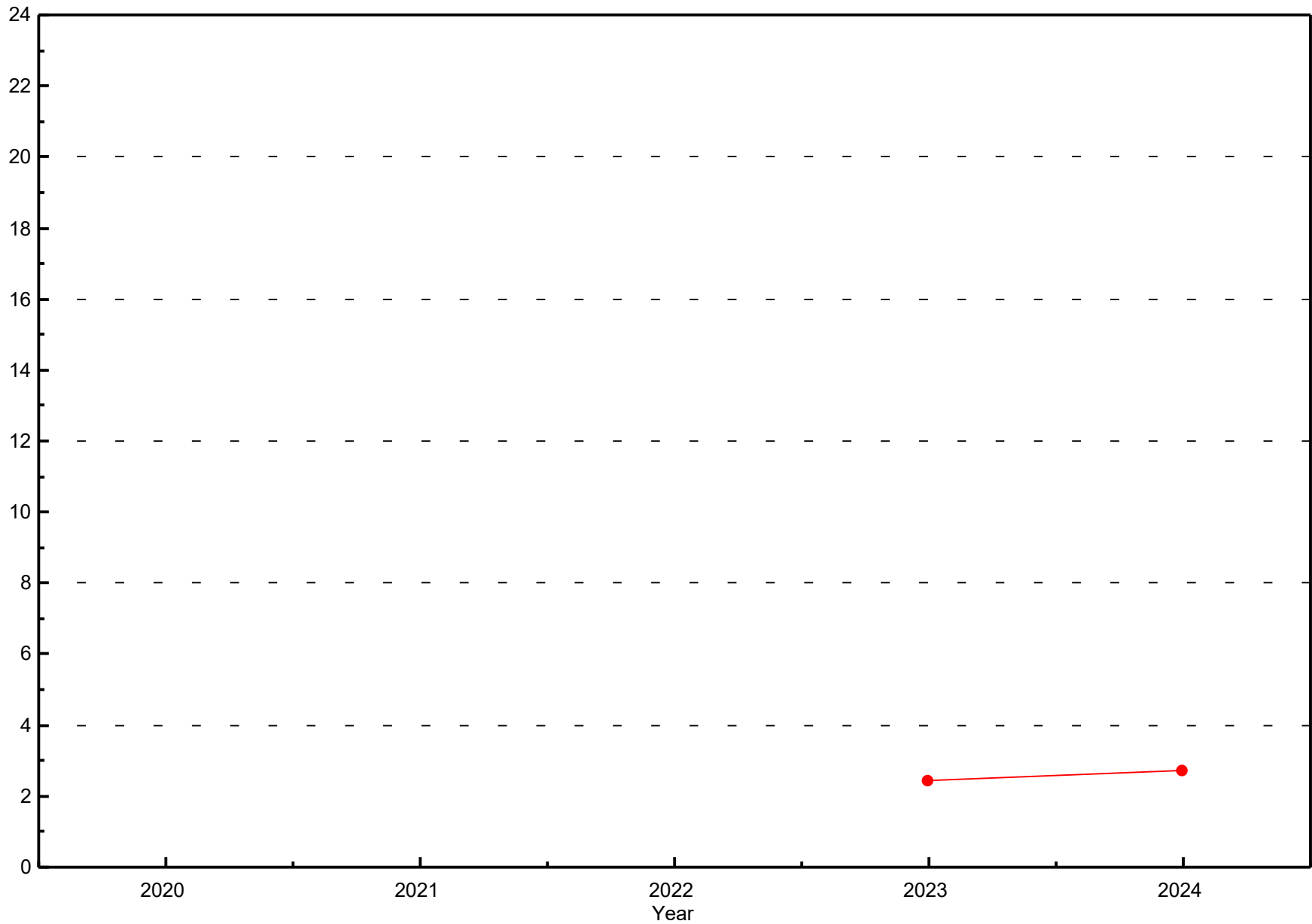
Nitrogen Dioxide (NO₂) - ppb
Kirby North (2020 to 2024)





Yearly Averages

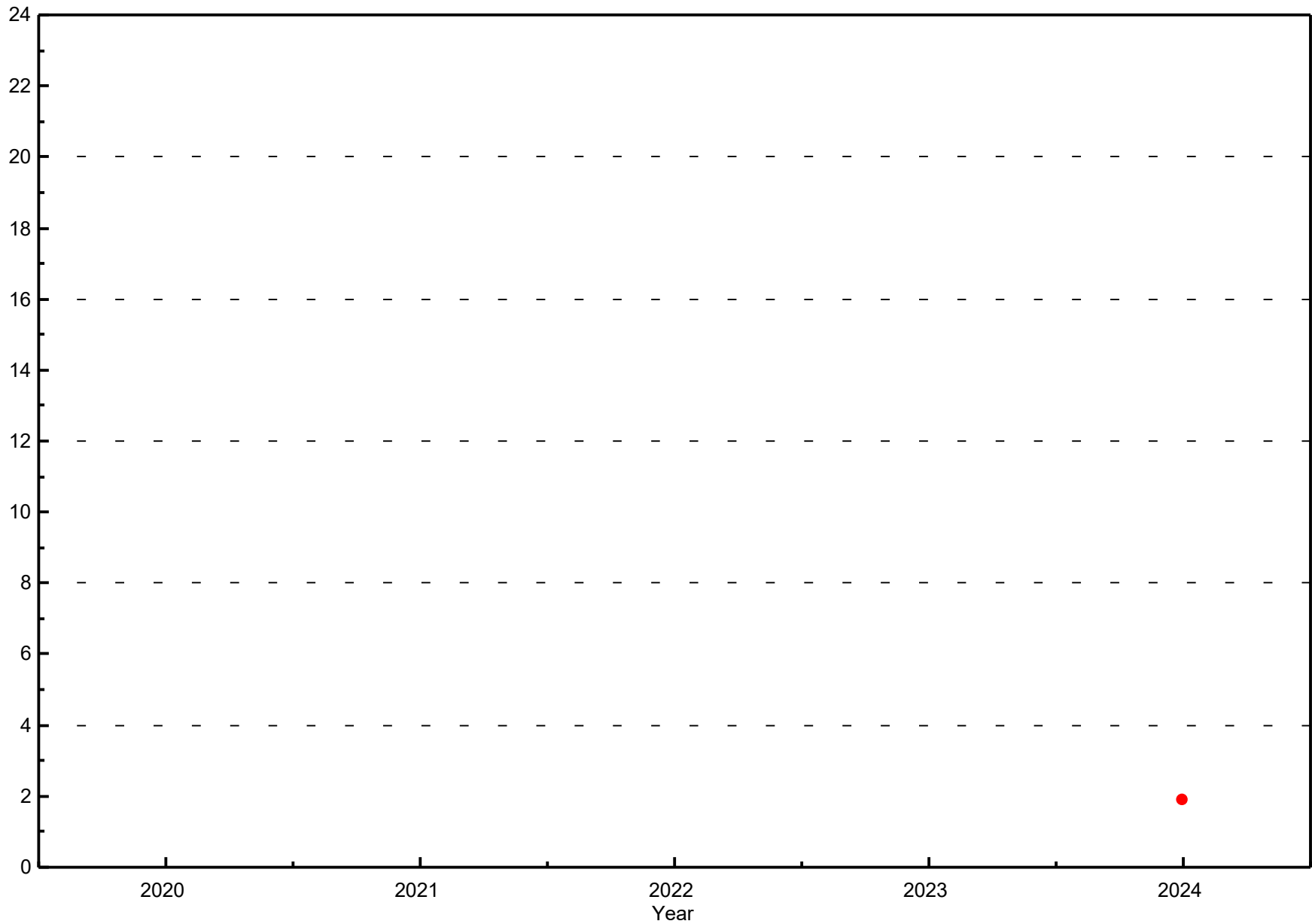
Nitrogen Dioxide (NO₂) - ppb
Blackgold (2020 to 2024)





Yearly Averages

Nitrogen Dioxide (NO₂) - ppb Hangingstone Expansion (2020 to 2024)



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
ANNUAL REPORT

**OXIDES OF NITROGEN
ANNUAL 2024**

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

March 2025



Wood Buffalo Environmental Association - Fort McKay - Bertha Ganter (AMS01)
Annual Summary for the Year 2024
Oxides of Nitrogen (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	707	22.2	103.5	63.4	86.9	11.2	2.0	0.0
February	100	659	18.5	98.0	46.2	88.3	11.1	0.6	0.0
March	100	706	10.8	67.7	30.4	98.9	1.1	0.0	0.0
April	100	684	9.1	90.2	19.4	97.4	2.3	0.3	0.0
May	92	650	6.2	91.9	18.5	99.1	0.6	0.3	0.0
June	99	678	5.5	63.3	17.9	99.6	0.4	0.0	0.0
July	99	697	5.4	85.2	18.8	98.9	1.0	0.1	0.0
August	99	702	4.9	63.7	10.5	99.9	0.1	0.0	0.0
September	100	683	7.5	80.1	16.7	98.2	1.8	0.0	0.0
October	100	707	10.8	174.5	43.6	94.3	5.1	0.4	0.1
November	100	683	13.5	158.6	54.4	94.4	4.7	0.9	0.0
December	100	705	20.6	131.0	53.0	85.4	11.9	2.7	0.0
Annual	99	8261	11.3	174.5	63.4	95.6	3.8	0.5	0.0



Wood Buffalo Environmental Association - Buffalo Viewpoint (AMS04)
Annual Summary for the Year 2024
Oxides of Nitrogen (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	708	12.2	109.3	44.0	94.8	4.5	0.7	0.0
February	100	661	15.3	147.1	79.9	87.8	9.4	2.9	0.0
March	100	708	5.2	65.9	24.4	99.7	0.3	0.0	0.0
April	99	679	6.1	149.7	29.2	97.8	1.5	0.7	0.0
May	100	707	3.9	107.8	20.2	99.4	0.4	0.1	0.0
June	100	685	3.6	40.2	9.9	100.0	0.0	0.0	0.0
July	99	703	3.6	58.3	19.7	99.4	0.6	0.0	0.0
August	100	707	2.1	32.9	6.9	100.0	0.0	0.0	0.0
September	100	681	5.6	159.4	29.0	97.5	1.9	0.6	0.0
October	97	682	3.8	66.9	22.7	99.4	0.6	0.0	0.0
November	100	684	8.2	111.8	36.6	96.5	3.1	0.4	0.0
December	100	705	11.1	159.0	35.3	93.1	5.0	2.0	0.0
Annual	100	8310	6.7	159.4	79.9	97.1	2.3	0.6	0.0



Wood Buffalo Environmental Association - Patricia McInnes (AMS06)
Annual Summary for the Year 2024
Oxides of Nitrogen (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	99	703	11.8	67.5	25.6	98.2	1.9	0.0	0.0
February	100	659	11.4	85.0	39.7	95.9	3.6	0.5	0.0
March	100	707	7.2	74.1	20.0	99.2	0.9	0.0	0.0
April	100	683	4.4	46.3	10.1	99.6	0.4	0.0	0.0
May	100	706	2.9	43.8	12.9	99.9	0.1	0.0	0.0
June	100	685	3.0	20.8	6.6	100.0	0.0	0.0	0.0
July	99	700	2.5	25.2	8.9	100.0	0.0	0.0	0.0
August	100	706	2.5	16.3	4.8	100.0	0.0	0.0	0.0
September	100	684	4.3	45.3	13.7	99.7	0.3	0.0	0.0
October	100	707	4.4	57.1	16.7	99.7	0.3	0.0	0.0
November	100	682	9.2	94.3	29.8	98.1	1.8	0.2	0.0
December	100	706	11.2	67.6	26.5	97.5	2.6	0.0	0.0
Annual	100	8328	6.2	94.3	39.7	99.0	1.0	0.1	0.0



Wood Buffalo Environmental Association - Athabasca Valley (AMS07)
Annual Summary for the Year 2024
Oxides of Nitrogen (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	705	14.9	70.5	32.8	95.9	4.1	0.0	0.0
February	100	661	16.5	87.1	45.1	90.5	8.8	0.8	0.0
March	100	707	9.4	77.1	19.3	98.9	1.1	0.0	0.0
April	100	684	6.4	36.9	14.3	100.0	0.0	0.0	0.0
May	100	707	3.9	32.3	10.4	100.0	0.0	0.0	0.0
June	100	682	4.2	22.3	6.8	100.0	0.0	0.0	0.0
July	99	704	4.4	39.5	10.6	100.0	0.0	0.0	0.0
August	100	708	4.5	22.1	7.5	100.0	0.0	0.0	0.0
September	100	685	7.1	36.9	16.4	100.0	0.0	0.0	0.0
October	100	707	8.4	71.1	19.0	99.3	0.7	0.0	0.0
November	99	674	12.8	79.4	38.9	95.4	4.6	0.0	0.0
December	100	707	14.2	61.2	26.3	97.5	2.6	0.0	0.0
Annual	100	8331	8.9	87.1	45.1	98.2	1.7	0.1	0.0



Wood Buffalo Environmental Association - Fort Chipewyan (AMS08)
Annual Summary for the Year 2024
Oxides of Nitrogen (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	99	703	2.7	45.8	17.9	99.7	0.3	0.0	0.0
February	93	610	1.2	21.6	5.0	100.0	0.0	0.0	0.0
March	99	705	1.4	16.2	5.7	100.0	0.0	0.0	0.0
April	100	685	0.6	11.9	3.6	100.0	0.0	0.0	0.0
May	100	709	0.4	5.1	1.5	100.0	0.0	0.0	0.0
June	100	685	0.5	12.5	1.9	100.0	0.0	0.0	0.0
July	100	708	0.8	10.7	1.9	100.0	0.0	0.0	0.0
August	100	708	0.8	13.1	2.6	100.0	0.0	0.0	0.0
September	100	684	0.9	11.6	3.7	100.0	0.0	0.0	0.0
October	100	708	1.0	17.7	4.6	100.0	0.0	0.0	0.0
November	100	685	1.2	16.5	6.2	100.0	0.0	0.0	0.0
December	100	708	2.6	36.0	14.4	100.0	0.0	0.0	0.0
Annual	99	8298	1.2	45.8	17.9	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Barge Landing (AMS09)
Annual Summary for the Year 2024
Oxides of Nitrogen (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	707	29.5	159.0	90.4	77.9	14.9	7.2	0.0
February	100	662	24.3	149.3	61.4	79.9	16.2	3.9	0.0
March	100	708	14.4	110.6	34.1	94.6	4.8	0.6	0.0
April	100	685	11.1	91.5	23.8	95.0	4.8	0.2	0.0
May	100	708	9.0	81.4	21.3	96.5	3.4	0.1	0.0
June	99	679	8.5	82.3	14.7	98.1	1.8	0.2	0.0
July	99	703	8.7	72.6	20.7	98.6	1.4	0.0	0.0
August	100	707	8.5	76.1	16.6	98.0	2.0	0.0	0.0
September	100	685	12.1	95.6	20.0	95.8	4.1	0.2	0.0
October	100	709	14.2	153.3	49.7	93.0	5.5	1.6	0.0
November	100	685	17.3	168.5	59.5	90.4	8.2	1.3	0.2
December	100	707	26.9	175.2	88.4	78.4	15.3	6.1	0.3
Annual	100	8345	15.4	175.2	90.4	91.5	6.8	1.7	0.0



Wood Buffalo Environmental Association - Fort McKay South (AMS13)
Annual Summary for the Year 2024
Oxides of Nitrogen (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	707	22.1	145.0	59.7	86.6	9.9	3.5	0.0
February	100	662	19.6	123.8	48.2	86.1	12.8	1.1	0.0
March	100	707	10.0	61.2	18.7	99.4	0.6	0.0	0.0
April	100	685	8.2	75.2	20.2	97.4	2.6	0.0	0.0
May	100	707	5.2	104.3	18.5	99.0	0.7	0.3	0.0
June	99	681	5.1	42.7	12.7	99.4	0.6	0.0	0.0
July	96	678	5.1	53.7	11.7	99.7	0.3	0.0	0.0
August	100	708	4.1	43.0	8.5	99.9	0.1	0.0	0.0
September	100	685	6.4	101.0	17.2	99.0	0.9	0.2	0.0
October	100	708	10.1	126.8	33.7	95.5	4.1	0.4	0.0
November	97	663	13.3	155.0	58.4	93.5	5.3	1.2	0.0
December	100	709	19.4	158.1	60.4	86.5	10.2	3.4	0.0
Annual	99	8300	10.7	158.1	60.4	95.5	3.7	0.8	0.0



Wood Buffalo Environmental Association - Anzac (AMS14)
Annual Summary for the Year 2024
Oxides of Nitrogen (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	707	5.6	53.6	14.1	99.9	0.1	0.0	0.0
February	100	661	4.4	53.2	13.4	99.9	0.2	0.0	0.0
March	100	707	2.8	43.1	6.9	99.7	0.3	0.0	0.0
April	97	665	2.0	41.8	4.6	99.9	0.2	0.0	0.0
May	100	706	1.2	20.6	2.8	100.0	0.0	0.0	0.0
June	100	684	1.4	27.8	3.0	100.0	0.0	0.0	0.0
July	99	699	1.9	19.4	5.6	100.0	0.0	0.0	0.0
August	100	707	1.7	24.5	4.2	100.0	0.0	0.0	0.0
September	99	681	1.9	23.7	10.5	100.0	0.0	0.0	0.0
October	100	707	2.0	34.4	6.4	100.0	0.0	0.0	0.0
November	100	684	3.4	46.2	10.6	99.7	0.3	0.0	0.0
December	100	708	4.2	42.0	14.5	99.9	0.1	0.0	0.0
Annual	100	8316	2.7	53.6	14.5	99.9	0.1	0.0	0.0



Wood Buffalo Environmental Association - Wapasu (AMS17)
Annual Summary for the Year 2024
Oxides of Nitrogen (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	708	5.4	62.7	12.8	99.4	0.6	0.0	0.0
February	100	659	5.2	61.6	16.4	99.2	0.8	0.0	0.0
March	100	709	2.3	32.3	6.7	100.0	0.0	0.0	0.0
April	93	631	2.1	19.3	5.0	100.0	0.0	0.0	0.0
May	100	707	1.1	13.7	3.0	100.0	0.0	0.0	0.0
June	99	680	2.1	27.9	4.6	100.0	0.0	0.0	0.0
July	99	702	2.8	26.4	5.4	100.0	0.0	0.0	0.0
August	100	707	2.4	21.9	8.0	100.0	0.0	0.0	0.0
September	100	685	3.3	41.8	6.7	99.9	0.2	0.0	0.0
October	100	704	3.8	35.3	10.1	100.0	0.0	0.0	0.0
November	100	685	4.0	36.7	12.3	100.0	0.0	0.0	0.0
December	100	709	5.5	50.2	9.6	99.7	0.3	0.0	0.0
Annual	99	8286	3.4	62.7	16.4	99.9	0.1	0.0	0.0



Wood Buffalo Environmental Association - Stony Mountain (AMS18)
Annual Summary for the Year 2024
Oxides of Nitrogen (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	707	2.5	16.0	5.2	100.0	0.0	0.0	0.0
February	100	661	1.9	12.8	6.5	100.0	0.0	0.0	0.0
March	100	707	1.7	7.5	4.3	100.0	0.0	0.0	0.0
April	100	684	1.0	10.2	2.1	100.0	0.0	0.0	0.0
May	100	707	0.8	7.5	1.6	100.0	0.0	0.0	0.0
June	100	678	0.7	5.3	1.5	100.0	0.0	0.0	0.0
July	40	272	0.7	2.4	1.3	100.0	0.0	0.0	0.0
August	100	706	0.8	7.8	1.5	100.0	0.0	0.0	0.0
September	97	661	0.6	4.9	1.5	100.0	0.0	0.0	0.0
October	97	687	0.9	8.8	3.0	100.0	0.0	0.0	0.0
November	100	682	1.3	9.1	3.9	100.0	0.0	0.0	0.0
December	100	707	2.4	14.7	8.6	100.0	0.0	0.0	0.0
Annual	94	7859	1.3	16.0	8.6	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Firebag (AMS19)
Annual Summary for the Year 2024
Oxides of Nitrogen (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	708	7.9	61.6	22.3	98.0	2.0	0.0	0.0
February	99	656	7.3	71.8	21.2	98.8	1.2	0.0	0.0
March	99	697	4.7	107.4	24.6	98.0	1.6	0.4	0.0
April	97	661	2.3	54.4	9.3	99.7	0.3	0.0	0.0
May	100	705	1.6	22.0	5.4	100.0	0.0	0.0	0.0
June	100	685	2.6	32.4	9.4	100.0	0.0	0.0	0.0
July	100	706	2.5	25.6	5.4	100.0	0.0	0.0	0.0
August	98	695	1.9	16.8	6.4	100.0	0.0	0.0	0.0
September	100	683	2.7	23.4	4.6	100.0	0.0	0.0	0.0
October	100	707	3.3	23.4	6.8	100.0	0.0	0.0	0.0
November	99	678	4.1	30.5	10.6	100.0	0.0	0.0	0.0
December	100	708	6.4	77.4	27.7	99.0	1.0	0.0	0.0
Annual	99	8289	3.9	107.4	27.7	99.5	0.5	0.0	0.0



Wood Buffalo Environmental Association - Mackay River (AMS20)
Annual Summary for the Year 2024
Oxides of Nitrogen (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	94	659	4.9	49.8	20.3	98.3	1.7	0.0	0.0
February	100	661	3.8	69.1	21.2	99.4	0.6	0.0	0.0
March	100	708	3.3	37.4	13.0	100.0	0.0	0.0	0.0
April	100	686	1.9	31.6	7.4	100.0	0.0	0.0	0.0
May	100	708	1.5	13.4	6.7	100.0	0.0	0.0	0.0
June	100	685	1.4	24.0	6.2	100.0	0.0	0.0	0.0
July	100	708	1.3	13.6	4.4	100.0	0.0	0.0	0.0
August	100	708	1.1	19.8	4.7	100.0	0.0	0.0	0.0
September	100	684	1.0	32.2	5.9	100.0	0.0	0.0	0.0
October	100	708	1.7	43.5	9.2	99.9	0.1	0.0	0.0
November	100	685	4.7	53.0	37.7	98.3	1.8	0.0	0.0
December	100	709	3.5	92.5	19.4	99.3	0.6	0.1	0.0
Annual	99	8309	2.5	92.5	37.7	99.6	0.4	0.0	0.0



Wood Buffalo Environmental Association - Conklin (AMS21)
Annual Summary for the Year 2024
Oxides of Nitrogen (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	704	3.8	26.0	9.6	100.0	0.0	0.0	0.0
February	100	661	3.3	35.0	8.5	100.0	0.0	0.0	0.0
March	100	706	3.0	36.8	9.3	100.0	0.0	0.0	0.0
April	88	599	1.7	20.7	3.8	100.0	0.0	0.0	0.0
May	100	707	1.7	16.8	3.9	100.0	0.0	0.0	0.0
June	100	682	1.4	24.9	3.0	100.0	0.0	0.0	0.0
July	100	707	1.9	21.1	8.0	100.0	0.0	0.0	0.0
August	100	706	2.1	29.0	5.0	100.0	0.0	0.0	0.0
September	100	682	2.2	24.2	4.8	100.0	0.0	0.0	0.0
October	100	708	2.4	27.3	4.8	100.0	0.0	0.0	0.0
November	100	683	2.1	26.4	5.5	100.0	0.0	0.0	0.0
December	100	708	3.6	26.2	9.1	100.0	0.0	0.0	0.0
Annual	99	8253	2.4	36.8	9.6	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Janvier (AMS22)
Annual Summary for the Year 2024
Oxides of Nitrogen (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	706	3.5	19.5	7.2	100.0	0.0	0.0	0.0
February	100	661	2.2	13.4	6.3	100.0	0.0	0.0	0.0
March	100	708	1.7	10.7	4.5	100.0	0.0	0.0	0.0
April	100	685	0.7	7.9	1.7	100.0	0.0	0.0	0.0
May	100	707	0.4	5.6	0.9	100.0	0.0	0.0	0.0
June	100	681	0.7	7.7	1.4	100.0	0.0	0.0	0.0
July	100	708	0.8	6.1	2.2	100.0	0.0	0.0	0.0
August	98	694	0.8	9.9	2.3	100.0	0.0	0.0	0.0
September	92	628	0.9	11.6	1.9	100.0	0.0	0.0	0.0
October	100	707	1.1	14.6	3.4	100.0	0.0	0.0	0.0
November	96	658	1.9	19.1	5.1	100.0	0.0	0.0	0.0
December	100	707	3.1	37.7	14.2	100.0	0.0	0.0	0.0
Annual	99	8250	1.5	37.7	14.2	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Fort Hills (AMS23)
Annual Summary for the Year 2024
Oxides of Nitrogen (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	707	36.2	392.3	114.8	72.8	18.8	7.2	1.1
February	100	662	33.2	291.0	95.3	73.3	17.1	8.5	1.2
March	100	708	19.4	237.6	60.9	89.7	7.8	1.7	0.9
April	100	684	21.4	407.7	89.1	84.7	11.1	2.8	1.5
May	99	700	17.1	161.1	33.6	87.1	10.3	2.4	0.1
June	100	685	10.9	133.6	28.3	94.9	4.1	1.0	0.0
July	99	704	11.6	136.1	32.0	93.5	5.8	0.7	0.0
August	100	707	11.2	106.5	24.8	95.6	3.8	0.6	0.0
September	99	681	17.1	153.2	49.1	88.7	7.9	3.4	0.0
October	100	707	19.3	203.3	64.5	84.3	11.9	3.5	0.3
November	100	685	26.0	220.4	66.6	82.0	12.1	5.1	0.7
December	97	686	36.5	253.0	97.8	71.1	16.9	8.5	3.5
Annual	100	8316	21.6	407.7	114.8	84.9	10.6	3.7	0.8



Wood Buffalo Environmental Association - Christina Lake (AMS26)
Annual Summary for the Year 2024
Oxides of Nitrogen (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	706	7.3	55.8	17.1	99.4	0.6	0.0	0.0
February	100	659	6.4	42.6	23.6	99.9	0.2	0.0	0.0
March	100	707	4.8	46.1	11.4	99.9	0.1	0.0	0.0
April	100	684	4.0	39.0	9.0	100.0	0.0	0.0	0.0
May	100	705	3.2	32.5	11.8	100.0	0.0	0.0	0.0
June	100	685	3.1	26.9	8.4	100.0	0.0	0.0	0.0
July	100	707	3.5	36.8	10.6	100.0	0.0	0.0	0.0
August	100	706	2.8	28.0	11.1	100.0	0.0	0.0	0.0
September	100	684	3.9	26.1	9.3	100.0	0.0	0.0	0.0
October	100	708	4.1	136.0	13.1	99.6	0.1	0.3	0.0
November	100	103	4.4	29.6	6.8	100.0	0.0	0.0	0.0
Annual	100	7054	4.3	136.0	23.6	99.9	0.1	0.0	0.0



Wood Buffalo Environmental Association - Jackfish 2/3 (AMS27)
Annual Summary for the Year 2024
Oxides of Nitrogen (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	99	703	2.6	15.5	6.3	100.0	0.0	0.0	0.0
February	100	661	1.9	19.5	5.4	100.0	0.0	0.0	0.0
March	100	706	1.7	13.3	4.3	100.0	0.0	0.0	0.0
April	99	680	1.6	27.8	5.3	100.0	0.0	0.0	0.0
May	100	707	0.3	7.8	1.2	100.0	0.0	0.0	0.0
June	100	684	0.4	11.8	1.1	100.0	0.0	0.0	0.0
July	99	700	0.5	8.1	2.4	100.0	0.0	0.0	0.0
August	100	705	0.4	18.5	1.3	100.0	0.0	0.0	0.0
September	100	682	0.5	6.7	1.3	100.0	0.0	0.0	0.0
October	97	685	1.1	11.6	2.8	100.0	0.0	0.0	0.0
November	100	681	1.8	14.9	3.9	100.0	0.0	0.0	0.0
December	100	704	2.8	14.8	6.7	100.0	0.0	0.0	0.0
Annual	99	8298	1.3	27.8	6.7	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Surmont 2 (AMS29)
Annual Summary for the Year 2024
Oxides of Nitrogen (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	91	641	4.6	21.2	10.6	100.0	0.0	0.0	0.0
February	99	657	3.4	23.3	7.6	100.0	0.0	0.0	0.0
March	99	703	2.4	16.9	5.7	100.0	0.0	0.0	0.0
April	100	683	1.5	13.0	2.9	100.0	0.0	0.0	0.0
May	100	706	1.0	4.4	2.2	100.0	0.0	0.0	0.0
June	100	684	1.0	6.1	2.2	100.0	0.0	0.0	0.0
July	100	706	1.5	13.7	3.9	100.0	0.0	0.0	0.0
August	100	707	1.4	9.2	2.7	100.0	0.0	0.0	0.0
September	100	684	1.5	10.8	5.6	100.0	0.0	0.0	0.0
October	100	707	1.2	26.9	3.9	100.0	0.0	0.0	0.0
November	100	682	2.1	19.1	6.4	100.0	0.0	0.0	0.0
December	99	695	3.2	24.0	12.6	100.0	0.0	0.0	0.0
Annual	99	8255	2.0	26.9	12.6	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Ells River (AMS30)
Annual Summary for the Year 2024
Oxides of Nitrogen (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	707	18.8	145.5	53.2	89.8	9.3	0.9	0.0
February	100	660	18.4	171.8	57.4	85.3	12.7	1.8	0.2
March	100	707	10.4	131.9	46.0	96.6	2.7	0.7	0.0
April	99	681	6.1	35.2	13.6	100.0	0.0	0.0	0.0
May	100	707	6.3	72.9	11.9	98.9	1.1	0.0	0.0
June	99	679	6.2	40.4	14.6	100.0	0.0	0.0	0.0
July	99	702	5.2	70.2	20.3	98.4	1.6	0.0	0.0
August	100	708	5.4	77.0	12.9	99.3	0.7	0.0	0.0
September	100	685	7.8	137.8	25.6	95.9	3.1	1.0	0.0
October	100	707	8.5	123.6	59.2	95.5	3.4	1.1	0.0
November	100	684	12.8	107.8	35.8	92.7	6.7	0.6	0.0
December	100	708	18.4	186.3	61.2	87.3	10.7	1.6	0.4
Annual	100	8335	10.3	186.3	61.2	95.1	4.2	0.6	0.1



Wood Buffalo Environmental Association - Monday Creek (AMS33)
Annual Summary for the Year 2024
Oxides of Nitrogen (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
November	100	535	2.3	14.5	5.0	100.0	0.0	0.0	0.0
December	99	700	4.0	25.7	8.0	100.0	0.0	0.0	0.0
Annual	100	1235	3.1	25.7	8.0	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Leismer (AMS501)
Annual Summary for the Year 2024
Oxides of Nitrogen (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	706	4.0	22.3	10.1	100.0	0.0	0.0	0.0
February	99	658	2.9	31.2	5.8	100.0	0.0	0.0	0.0
March	100	708	2.1	28.5	6.1	100.0	0.0	0.0	0.0
Annual	100	2072	3.0	31.2	10.1	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Sawbones Bay (AMS505)
Annual Summary for the Year 2024
Oxides of Nitrogen (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	708	6.1	59.2	18.0	99.4	0.6	0.0	0.0
February	100	662	5.5	43.0	15.3	99.9	0.2	0.0	0.0
March	100	706	3.4	39.1	11.3	100.0	0.0	0.0	0.0
April	100	685	2.5	36.0	7.7	100.0	0.0	0.0	0.0
May	100	707	2.3	25.6	13.5	100.0	0.0	0.0	0.0
June	88	606	1.4	21.3	5.3	100.0	0.0	0.0	0.0
Annual	98	4074	3.5	59.2	18.0	99.9	0.1	0.0	0.0



Wood Buffalo Environmental Association - Jackfish 1 (AMS506)
Annual Summary for the Year 2024
Oxides of Nitrogen (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
July	99	701	2.3	31.2	7.5	100.0	0.0	0.0	0.0
August	97	685	1.8	22.8	10.0	100.0	0.0	0.0	0.0
September	97	662	2.2	38.1	7.1	100.0	0.0	0.0	0.0
October	100	708	2.6	25.8	9.6	100.0	0.0	0.0	0.0
November	99	681	3.0	35.5	12.0	100.0	0.0	0.0	0.0
December	100	707	4.5	29.3	10.1	100.0	0.0	0.0	0.0
Annual	99	4144	2.8	38.1	12.0	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Kirby South (AMS507)
Annual Summary for the Year 2024
Oxides of Nitrogen (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	707	11.4	195.6	116.4	91.1	4.8	3.7	0.4
February	100	661	5.6	116.6	25.2	97.4	2.0	0.6	0.0
March	94	660	1.8	38.2	5.0	100.0	0.0	0.0	0.0
April	99	675	6.3	200.4	75.2	94.8	2.7	2.2	0.3
May	92	643	1.4	16.9	7.2	100.0	0.0	0.0	0.0
June	100	579	1.0	13.4	2.0	100.0	0.0	0.0	0.0
Annual	98	3925	4.6	200.4	116.4	97.2	1.6	1.1	0.1



Wood Buffalo Environmental Association - Kirby North (AMS508)
Annual Summary for the Year 2024
Oxides of Nitrogen (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
July	100	606	2.8	54.7	13.9	99.5	0.5	0.0	0.0
August	98	685	1.2	9.1	2.4	100.0	0.0	0.0	0.0
September	100	681	1.7	12.1	3.1	100.0	0.0	0.0	0.0
October	100	705	1.6	10.3	2.7	100.0	0.0	0.0	0.0
November	100	685	1.9	10.9	3.6	100.0	0.0	0.0	0.0
December	99	697	3.6	54.5	14.3	99.7	0.3	0.0	0.0
Annual	99	4059	2.1	54.7	14.3	99.9	0.1	0.0	0.0



Wood Buffalo Environmental Association - Blackgold (AMS511)
Annual Summary for the Year 2024
Oxides of Nitrogen (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	97	683	4.0	43.4	9.6	99.9	0.2	0.0	0.0
February	100	662	3.4	55.1	9.9	99.9	0.2	0.0	0.0
March	100	708	2.8	48.8	10.2	99.9	0.1	0.0	0.0
Annual	99	2053	3.4	55.1	10.2	99.9	0.1	0.0	0.0



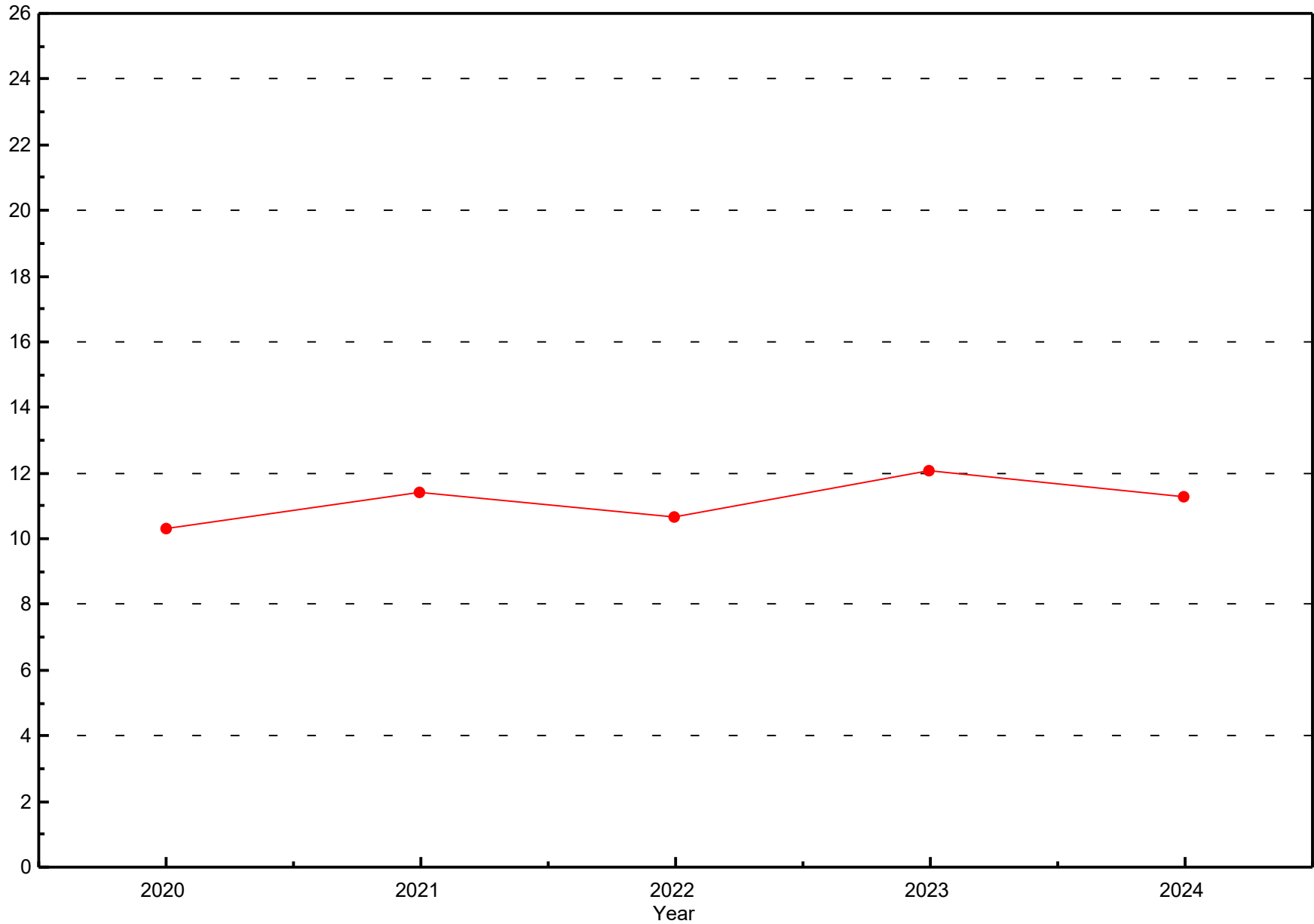
Wood Buffalo Environmental Association - Hangingstone Expansion (AMS512)
Annual Summary for the Year 2024
Oxides of Nitrogen (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
July	98	695	1.4	8.1	4.1	100.0	0.0	0.0	0.0
August	100	708	1.3	8.4	2.4	100.0	0.0	0.0	0.0
September	100	686	1.7	14.2	5.2	100.0	0.0	0.0	0.0
October	97	690	1.9	35.8	7.1	100.0	0.0	0.0	0.0
November	100	685	3.3	32.2	12.9	100.0	0.0	0.0	0.0
December	100	705	3.7	28.2	14.0	100.0	0.0	0.0	0.0
Annual	99	4169	2.2	35.8	14.0	100.0	0.0	0.0	0.0



Yearly Averages

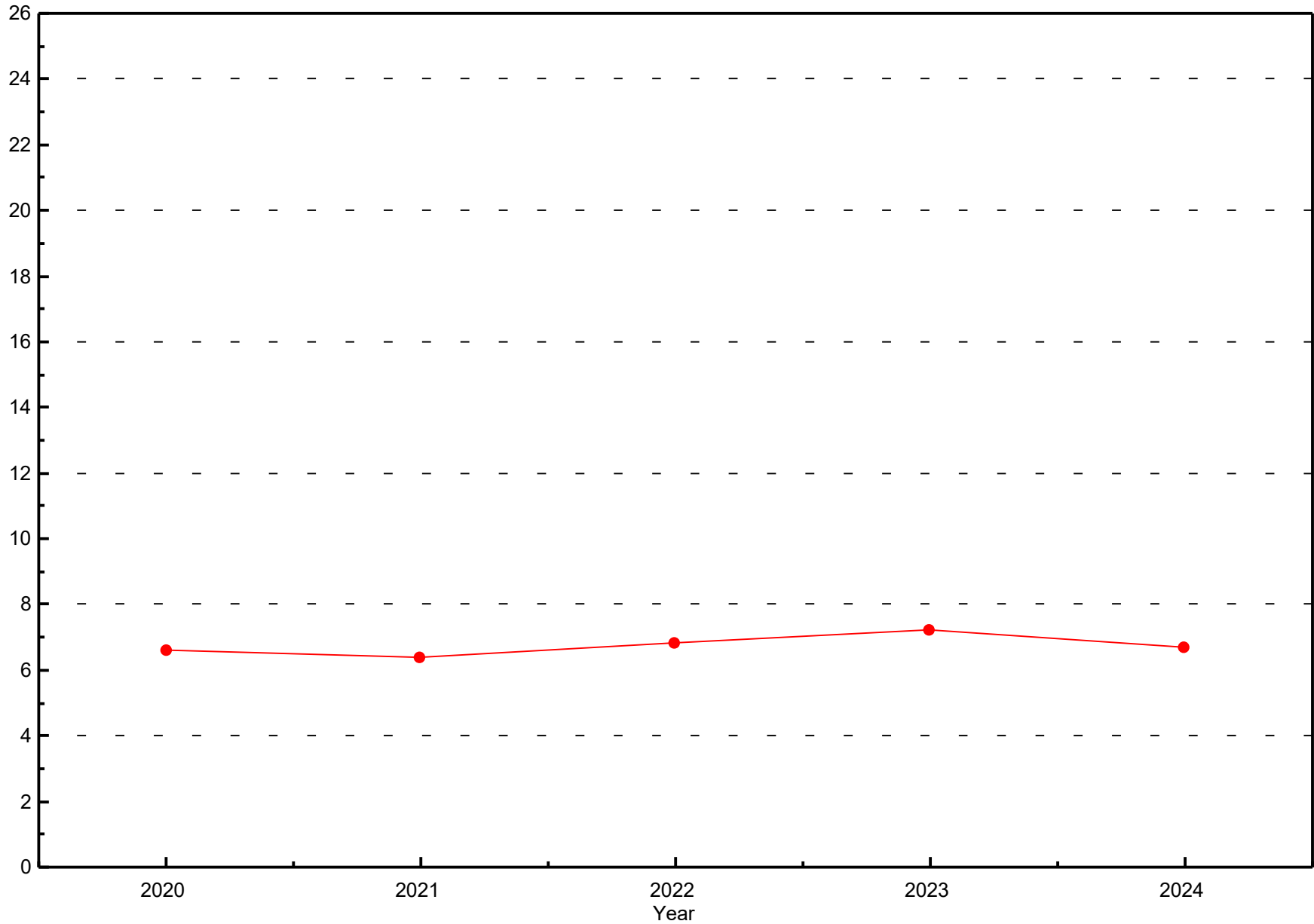
Nitrogen Oxides (NO_x) - ppb
Fort McKay - Bertha Ganter (2020 to 2024)





Yearly Averages

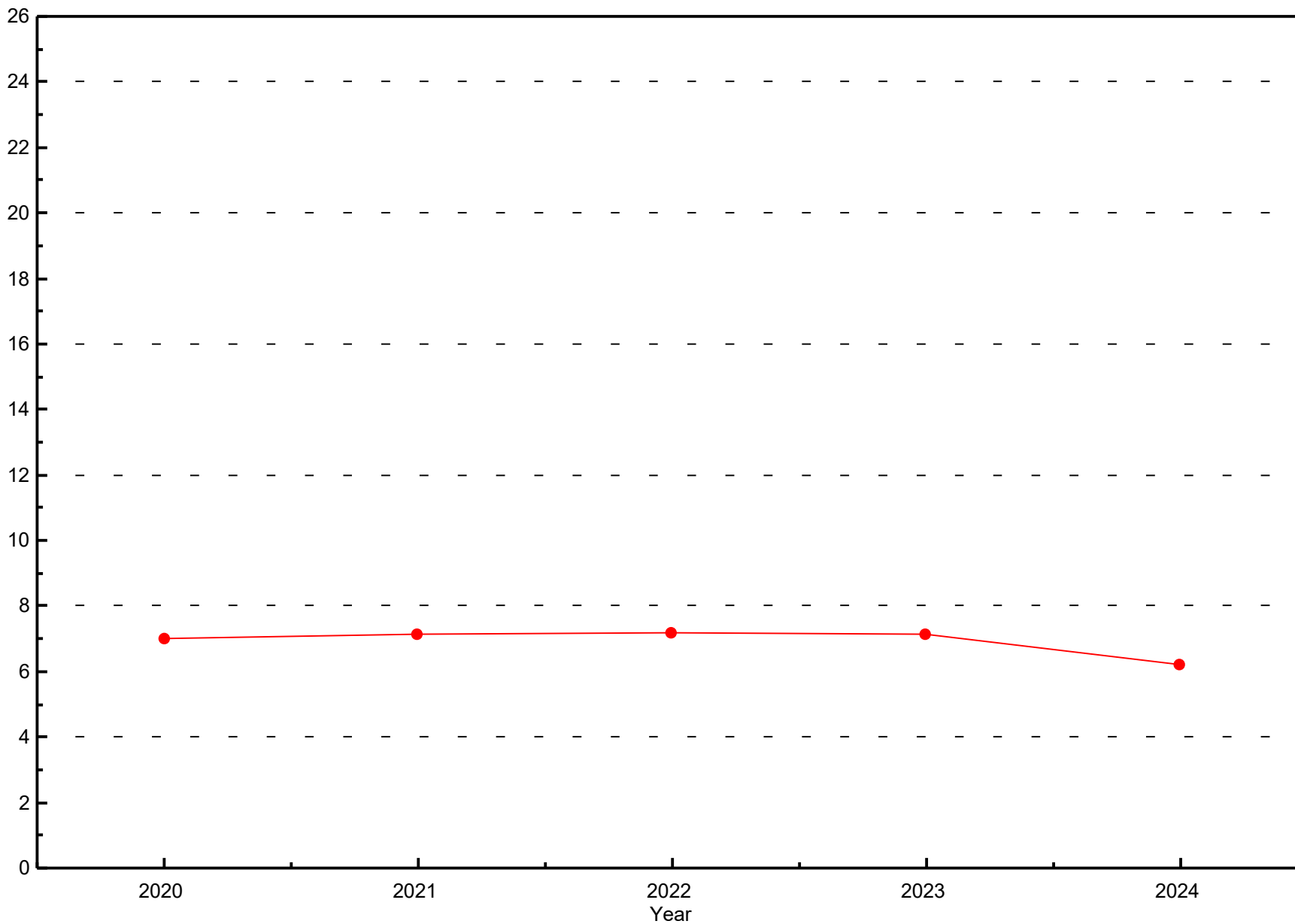
Nitrogen Oxides (NO_x) - ppb
Buffalo Viewpoint (2020 to 2024)





Yearly Averages

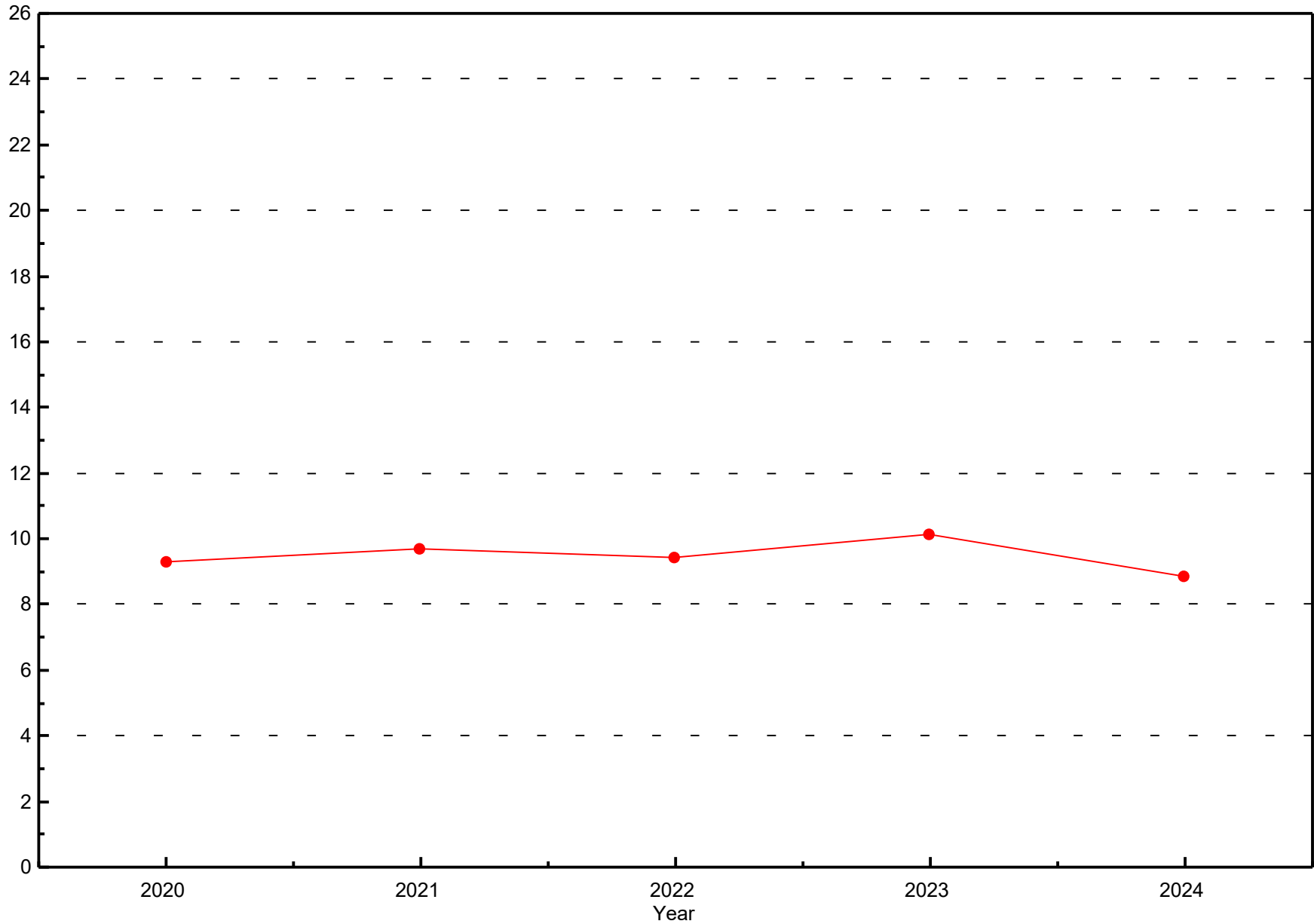
Nitrogen Oxides (NO_x) - ppb
Patricia McInnes (2020 to 2024)





Yearly Averages

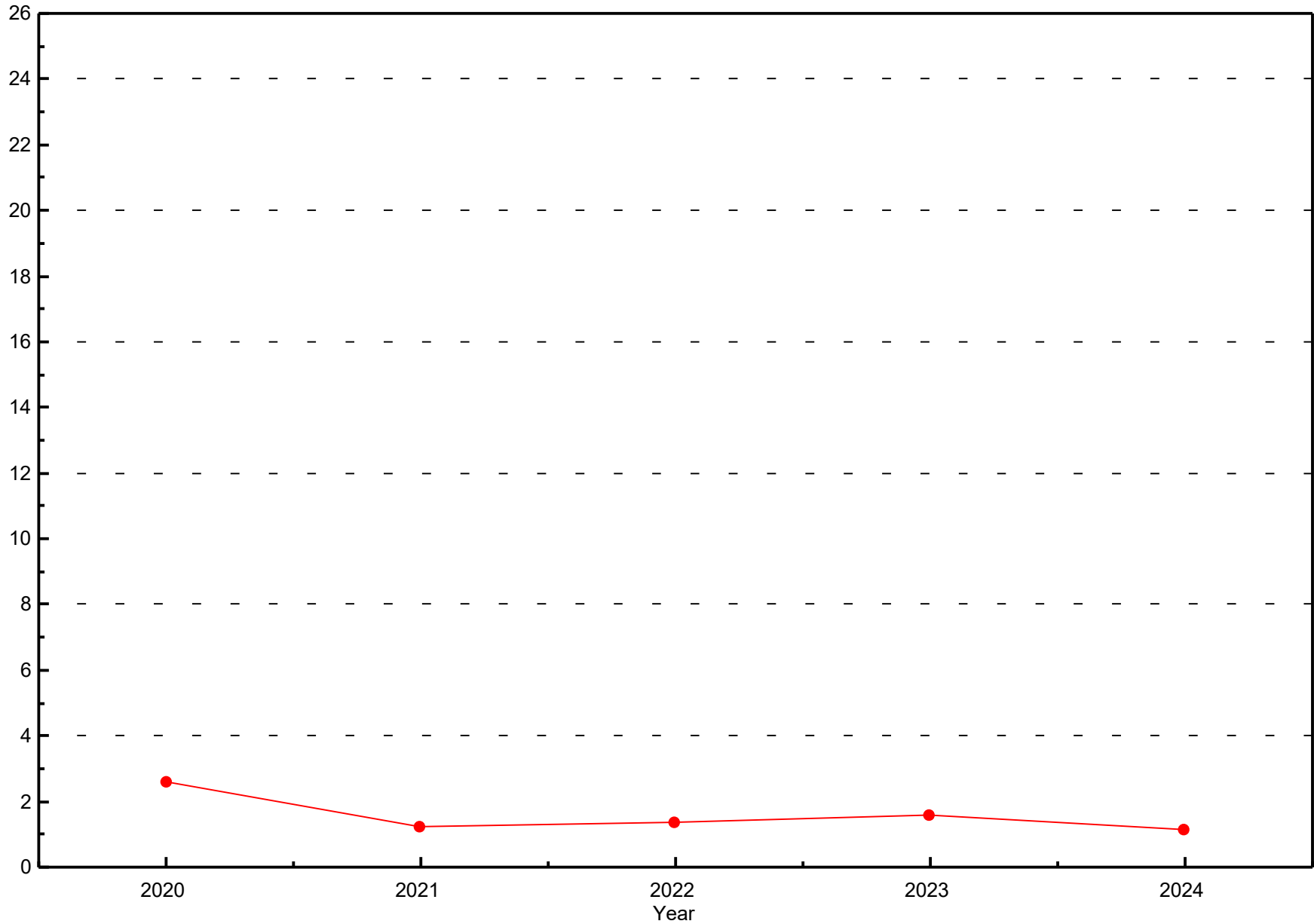
Nitrogen Oxides (NO_x) - ppb
Athabasca Valley (2020 to 2024)





Yearly Averages

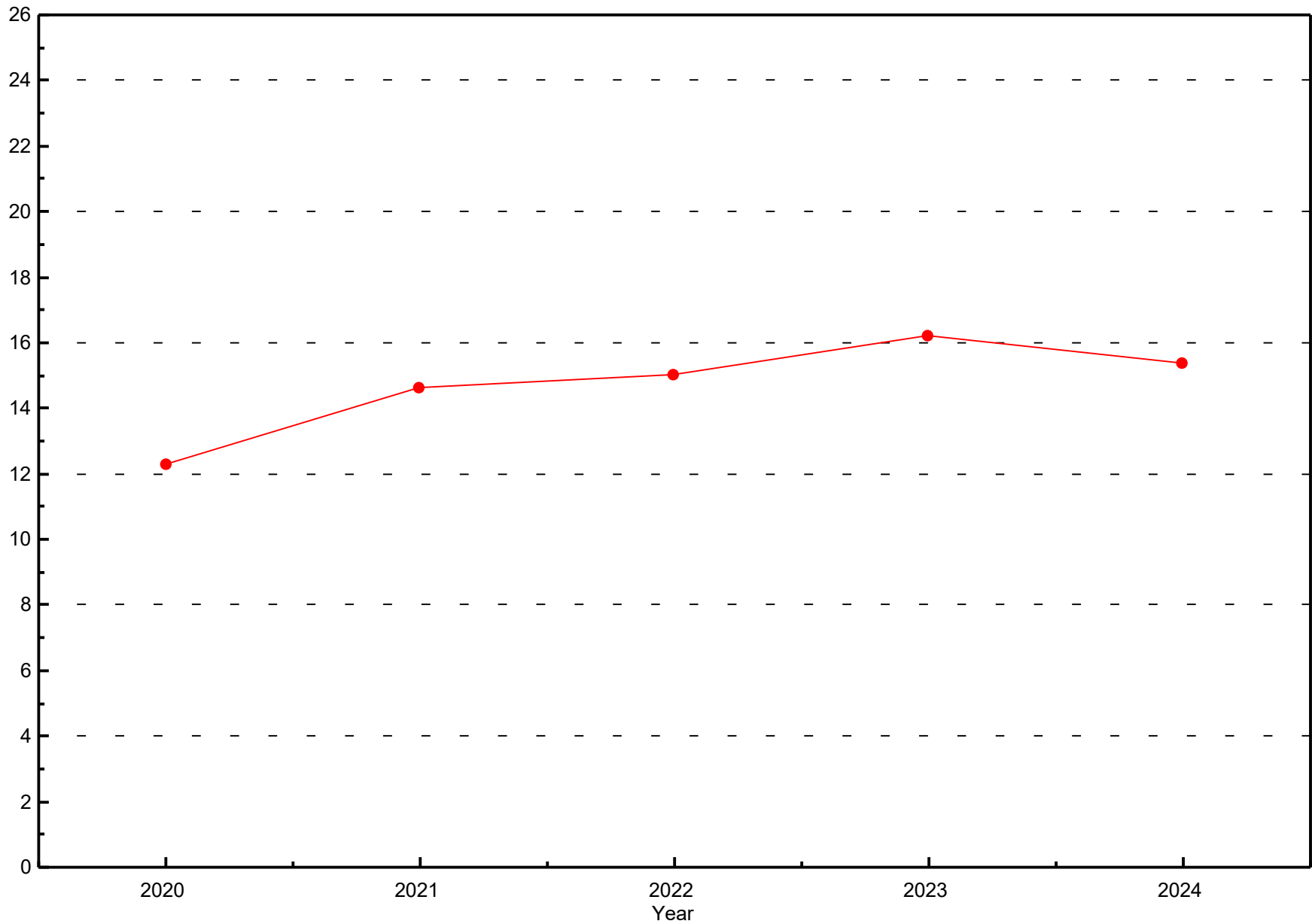
Nitrogen Oxides (NO_x) - ppb
Fort Chipewyan (2020 to 2024)





Yearly Averages

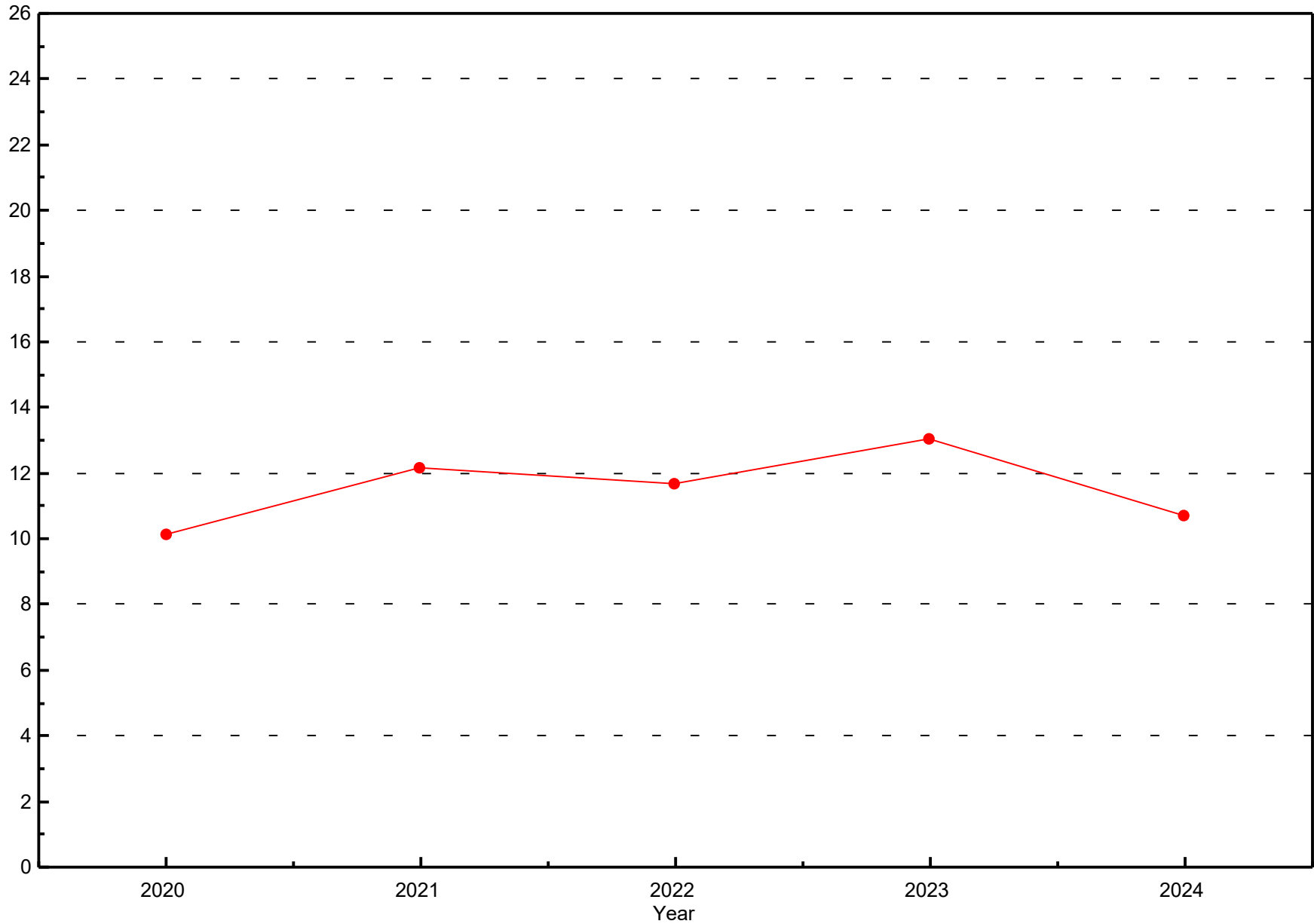
Nitrogen Oxides (NO_x) - ppb
Barge Landing (2020 to 2024)





Yearly Averages

Nitrogen Oxides (NO_x) - ppb
Fort McKay South (2020 to 2024)

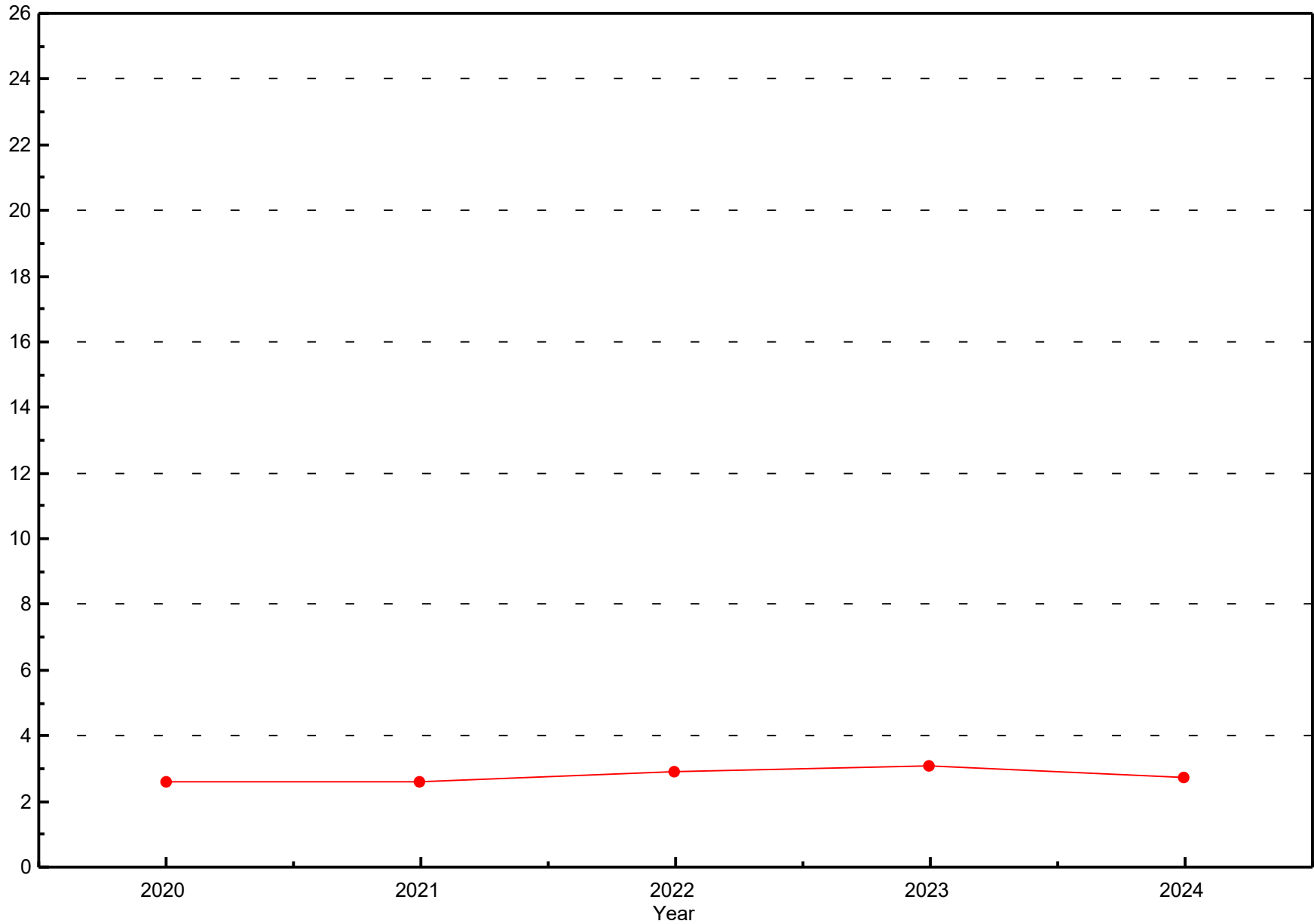




Yearly Averages

Nitrogen Oxides (NO_x) - ppb

Anzac (2020 to 2024)

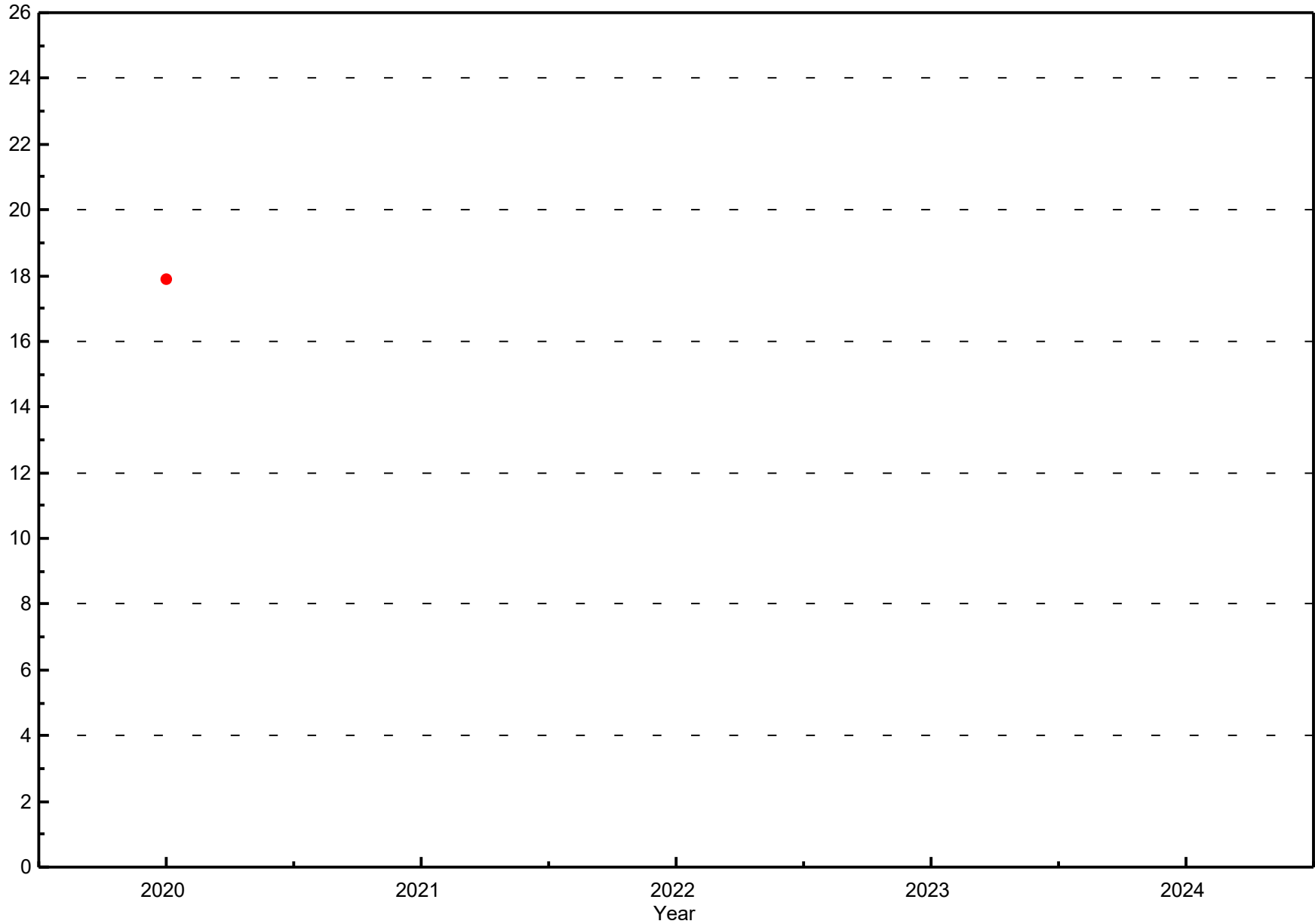




Yearly Averages

Nitrogen Oxides (NO_x) - ppb

Horizon (2020 to 2024)

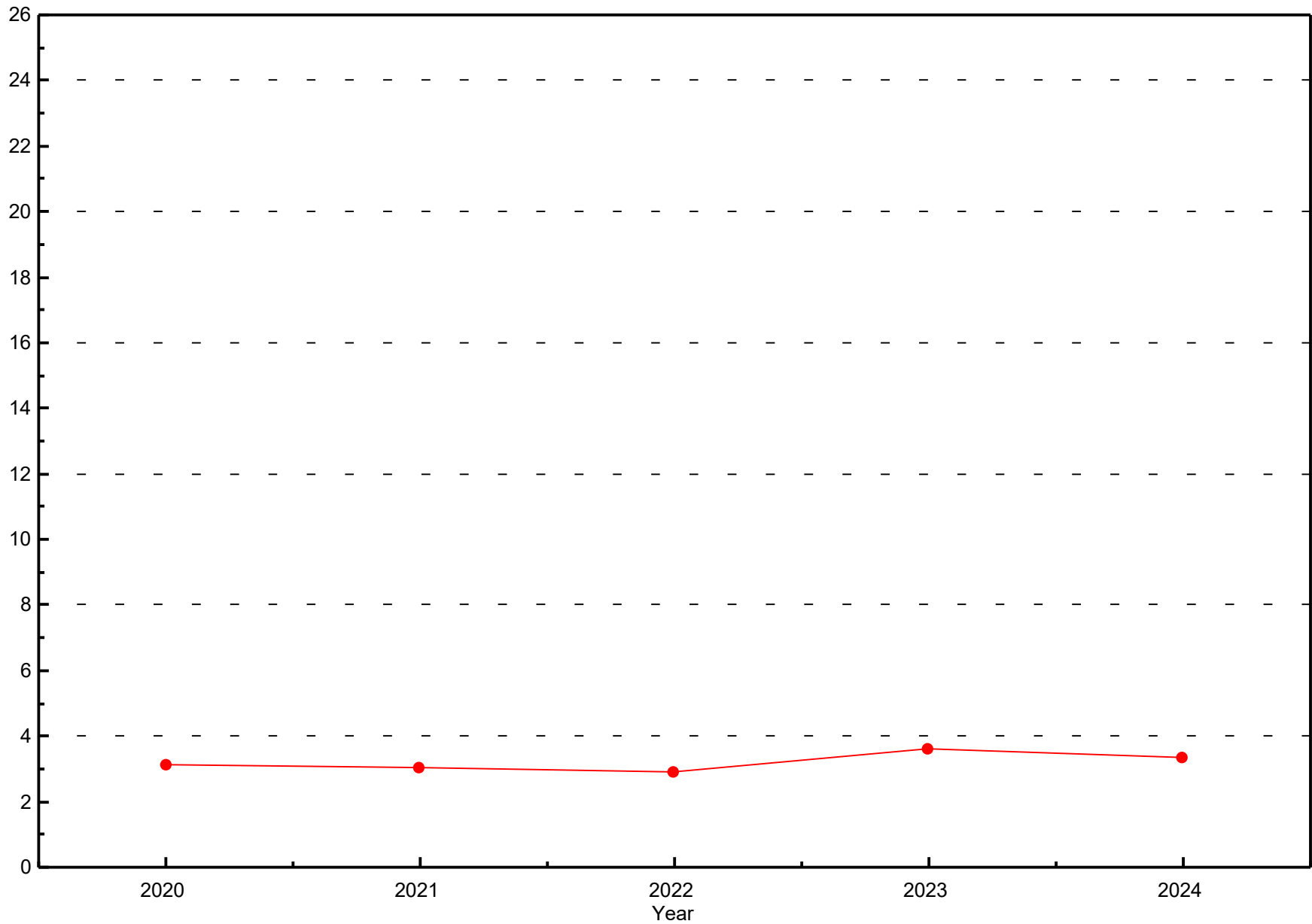




Yearly Averages

Nitrogen Oxides (NO_x) - ppb

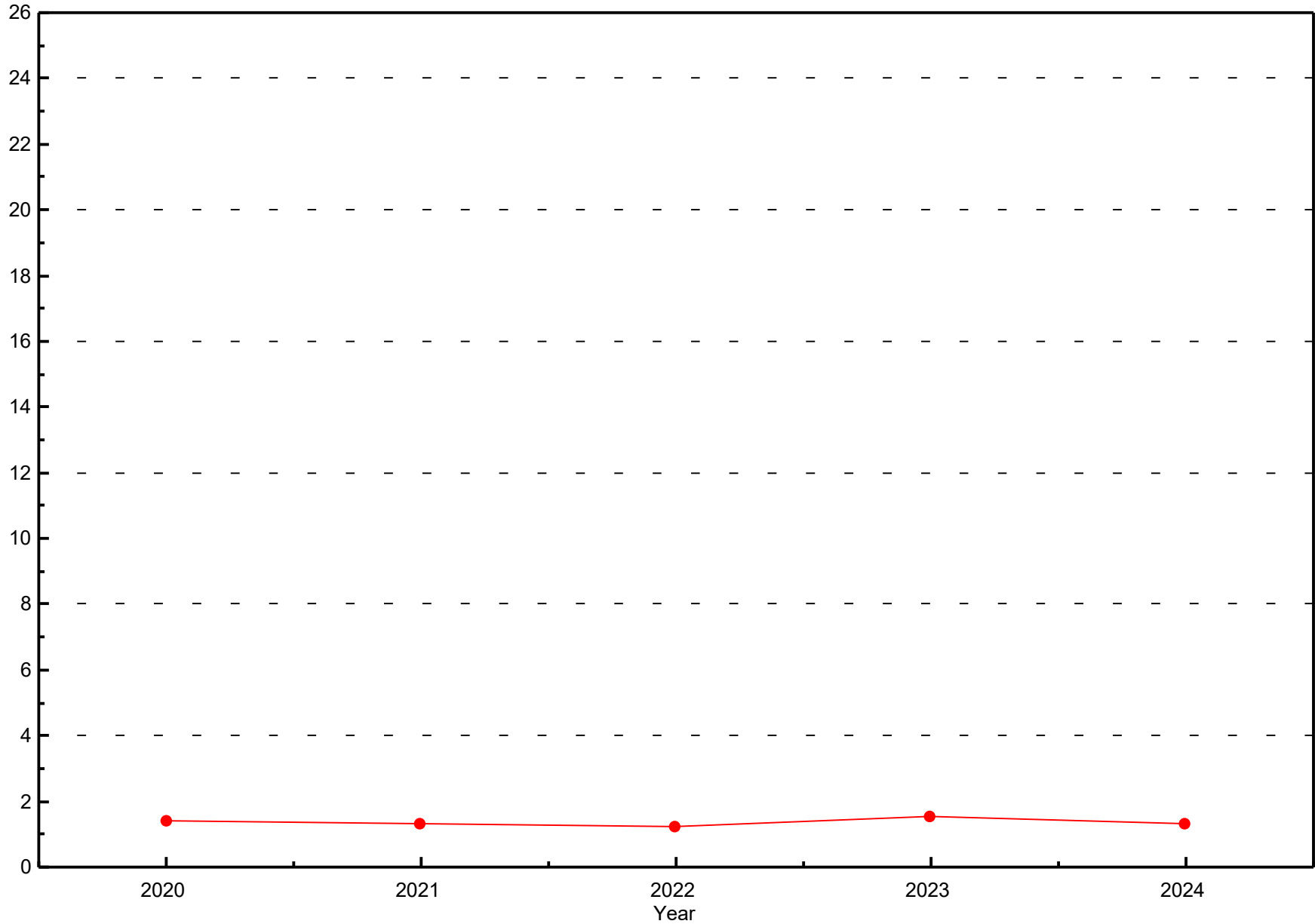
Wapasu (2020 to 2024)





Yearly Averages

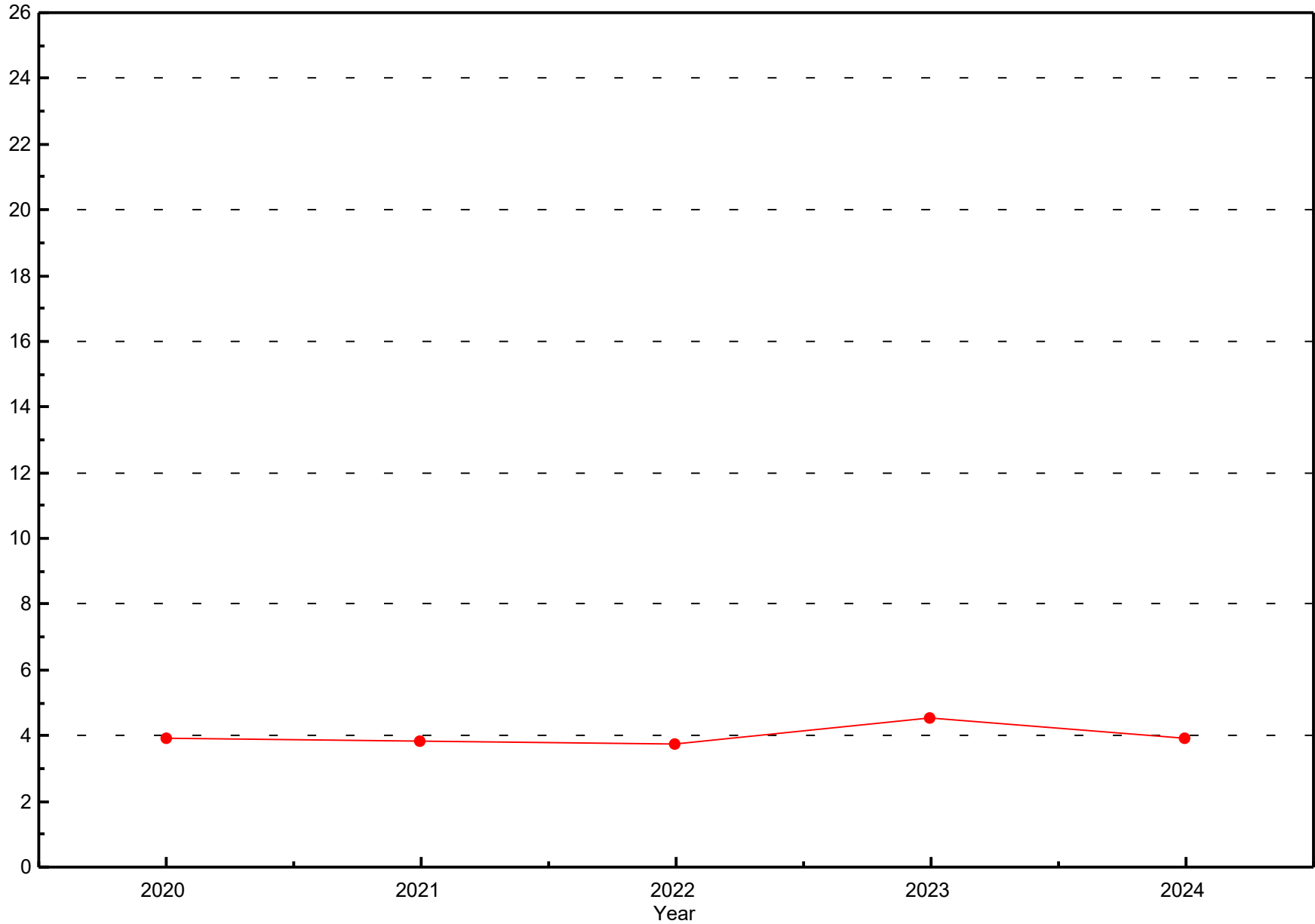
Nitrogen Oxides (NO_x) - ppb
Stony Mountain (2020 to 2024)





Yearly Averages

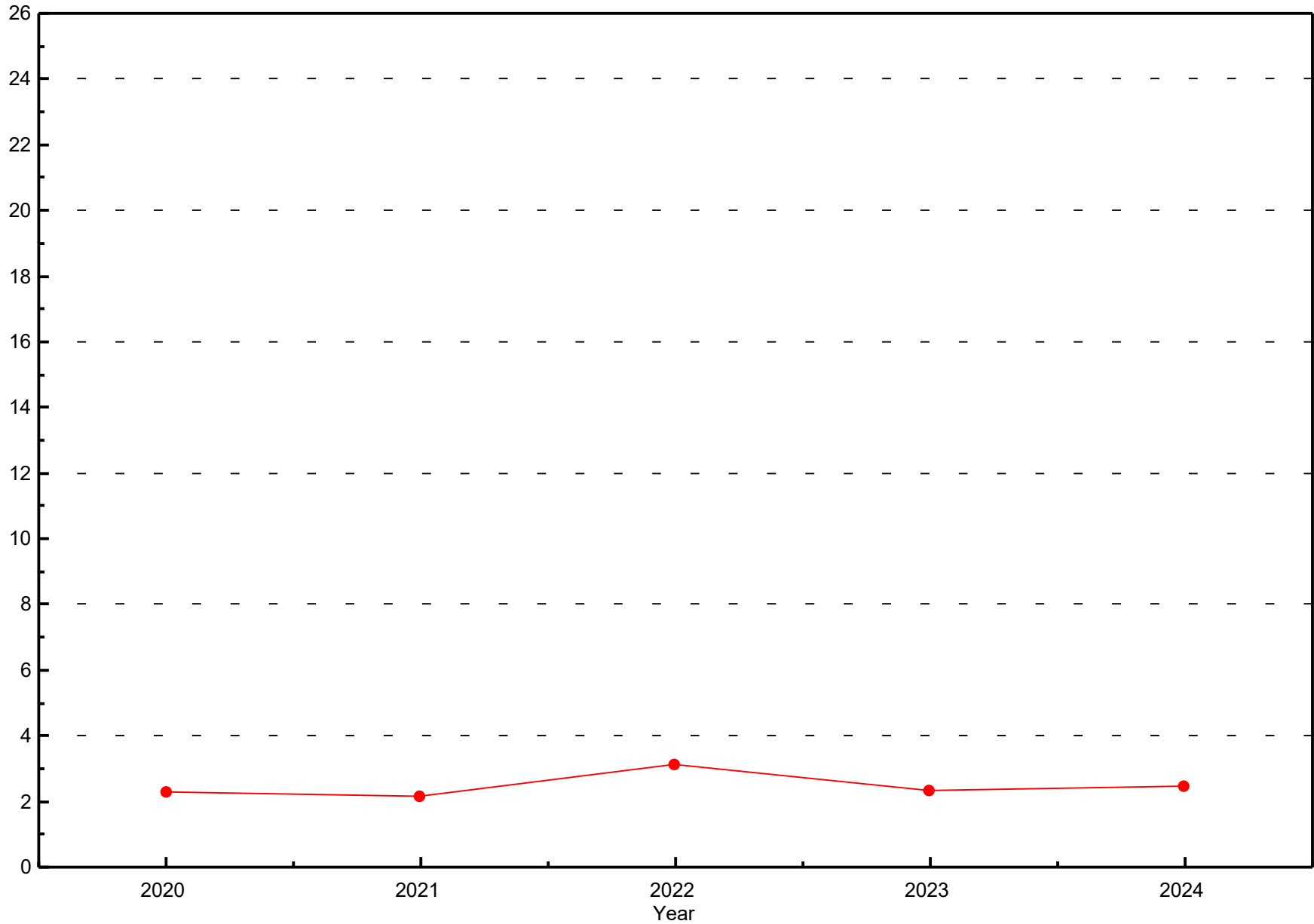
Nitrogen Oxides (NO_x) - ppb
Firebag (2020 to 2024)





Yearly Averages

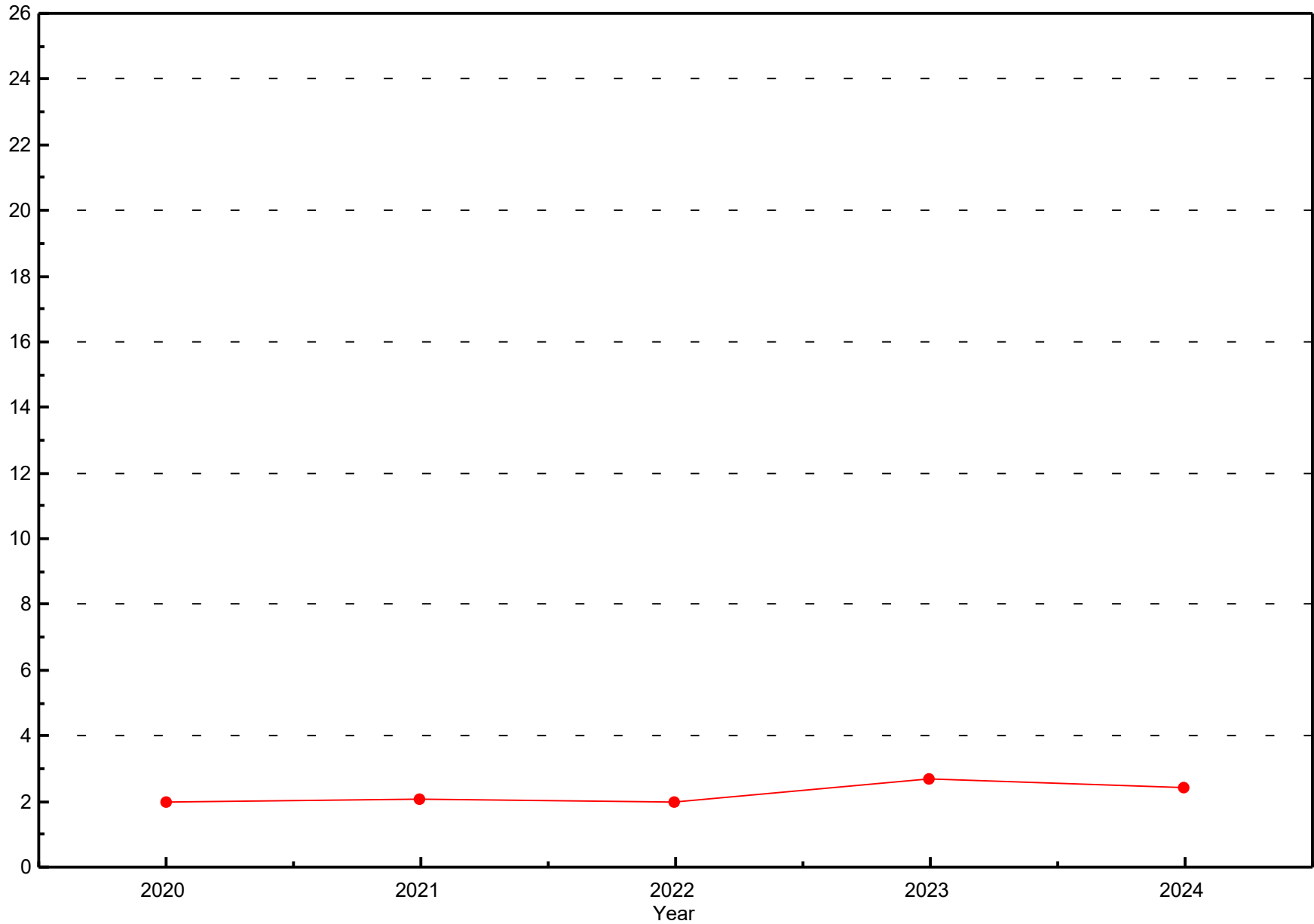
Nitrogen Oxides (NO_x) - ppb
Mackay River (2020 to 2024)





Yearly Averages

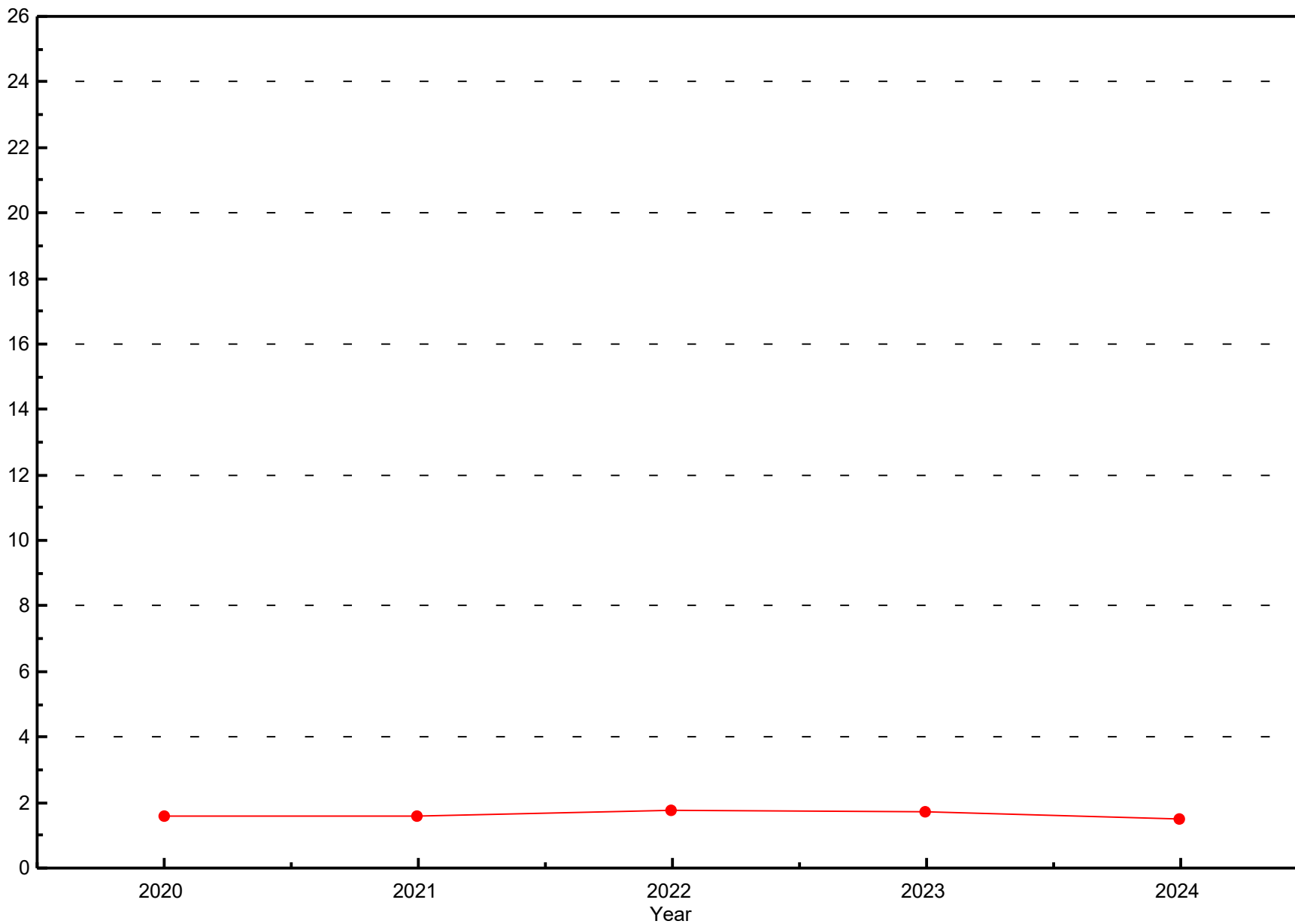
Nitrogen Oxides (NO_x) - ppb
Conklin (2020 to 2024)





Yearly Averages

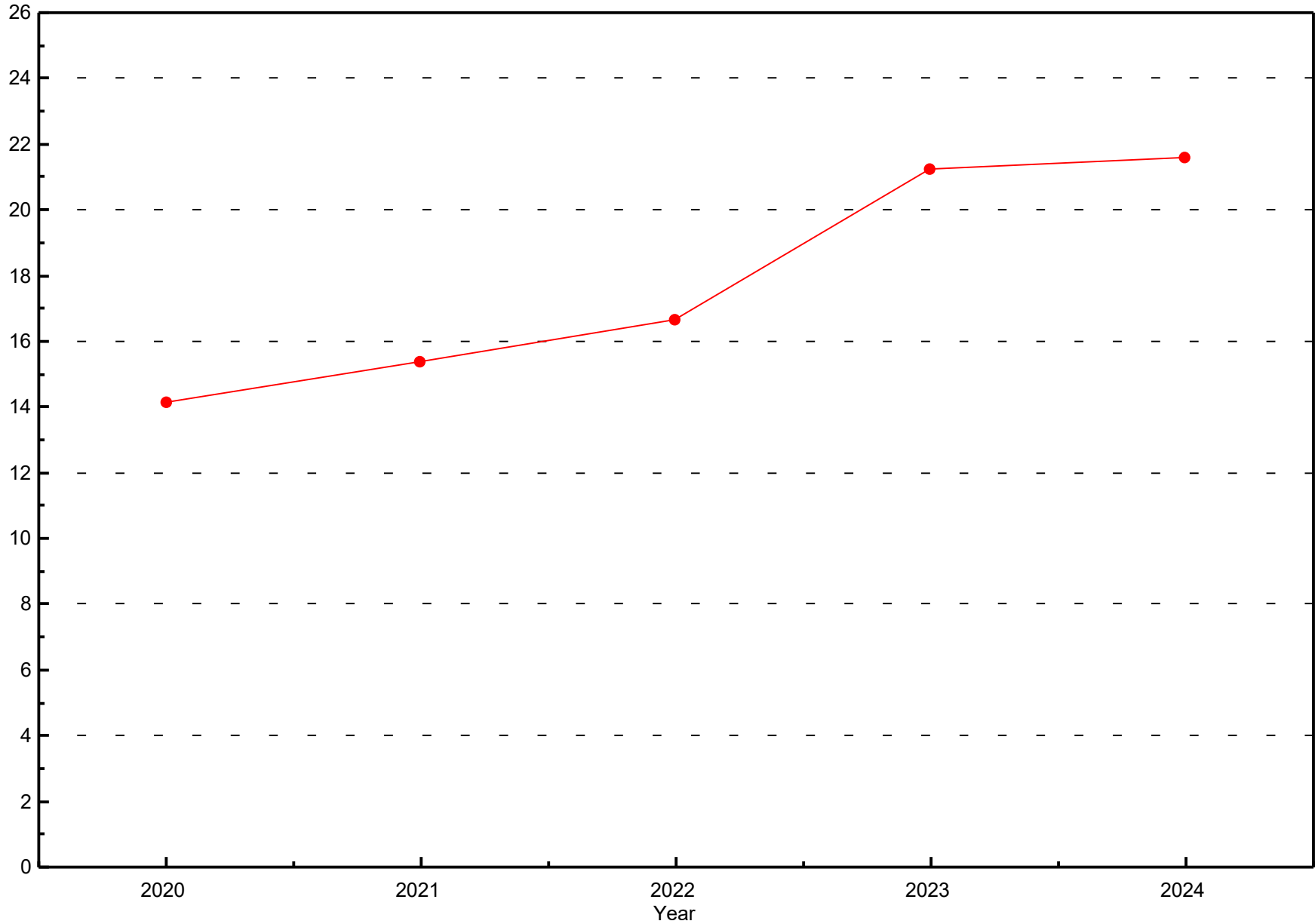
Nitrogen Oxides (NO_x) - ppb
Janvier (2020 to 2024)





Yearly Averages

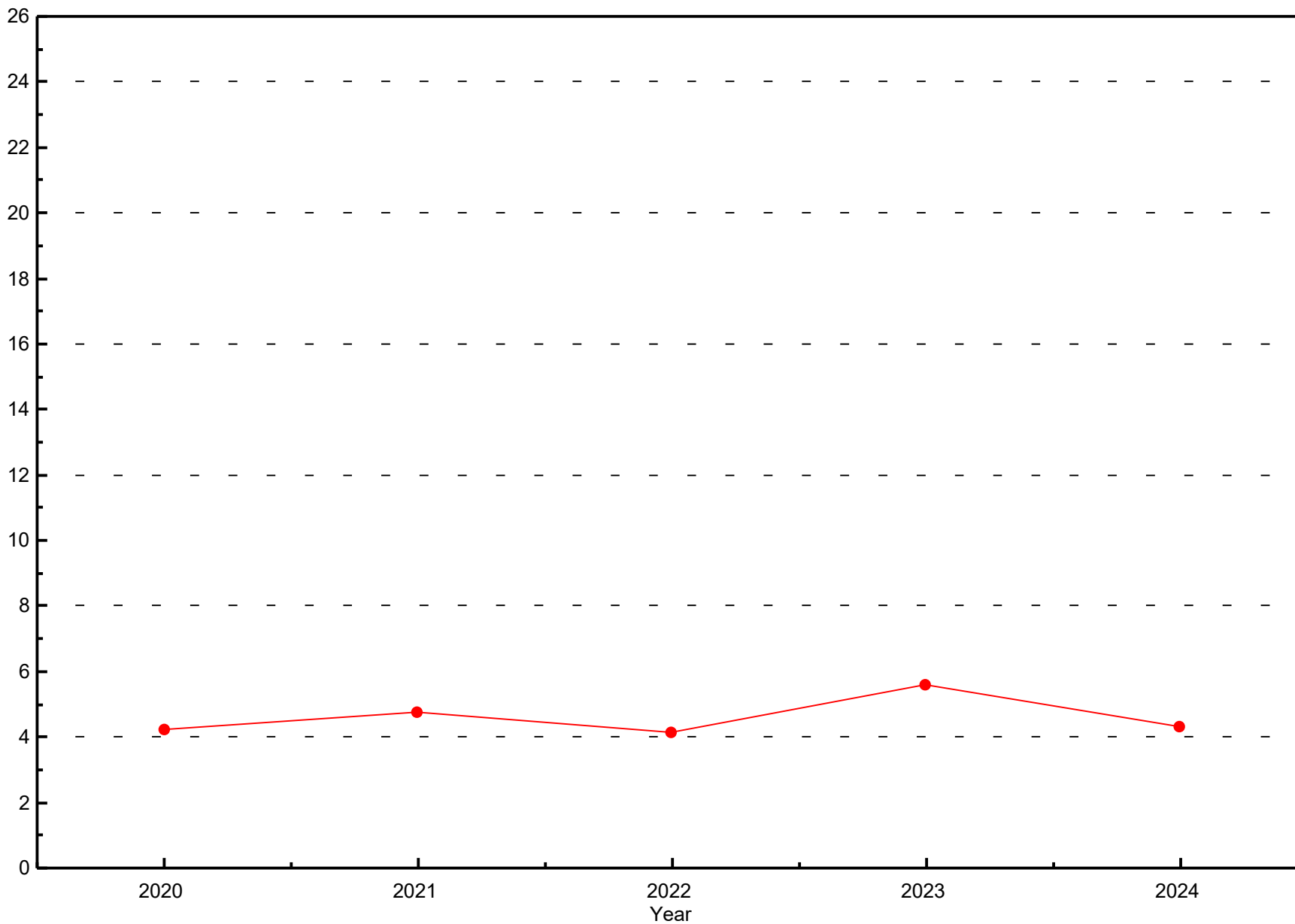
Nitrogen Oxides (NO_x) - ppb
Fort Hills (2020 to 2024)





Yearly Averages

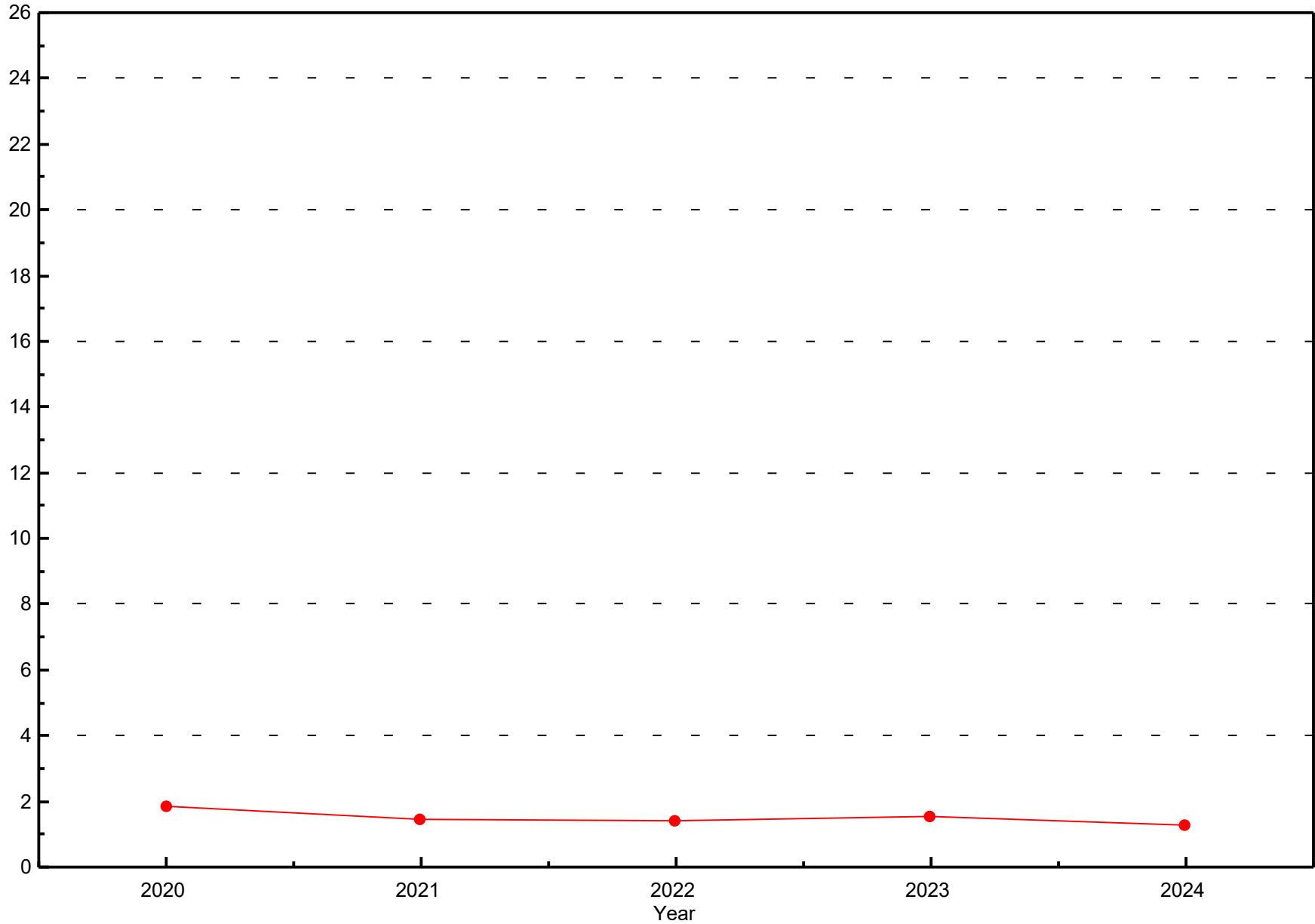
Nitrogen Oxides (NO_x) - ppb
Christina Lake (2020 to 2024)





Yearly Averages

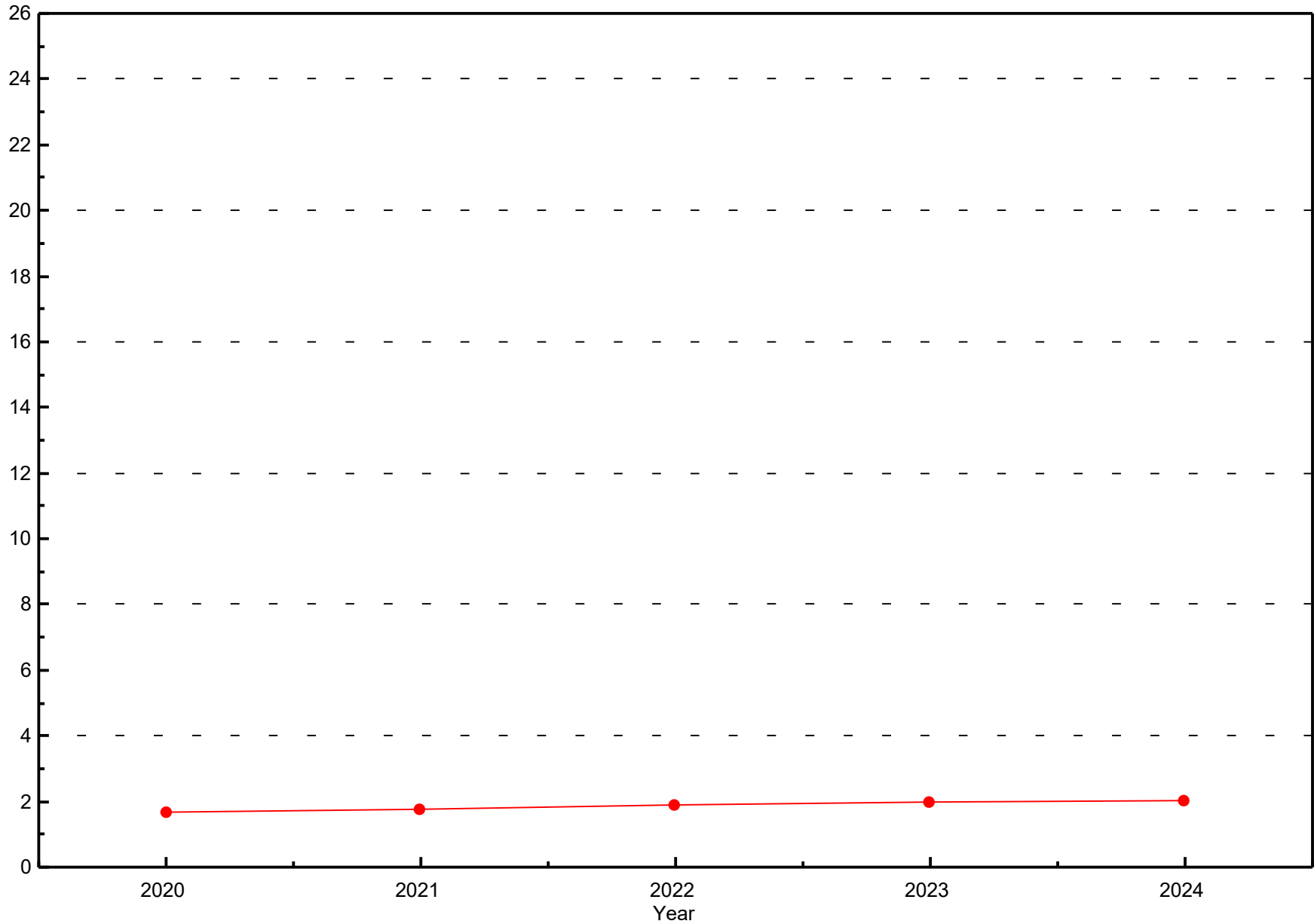
Nitrogen Oxides (NO_x) - ppb
Jackfish 2/3 (2020 to 2024)





Yearly Averages

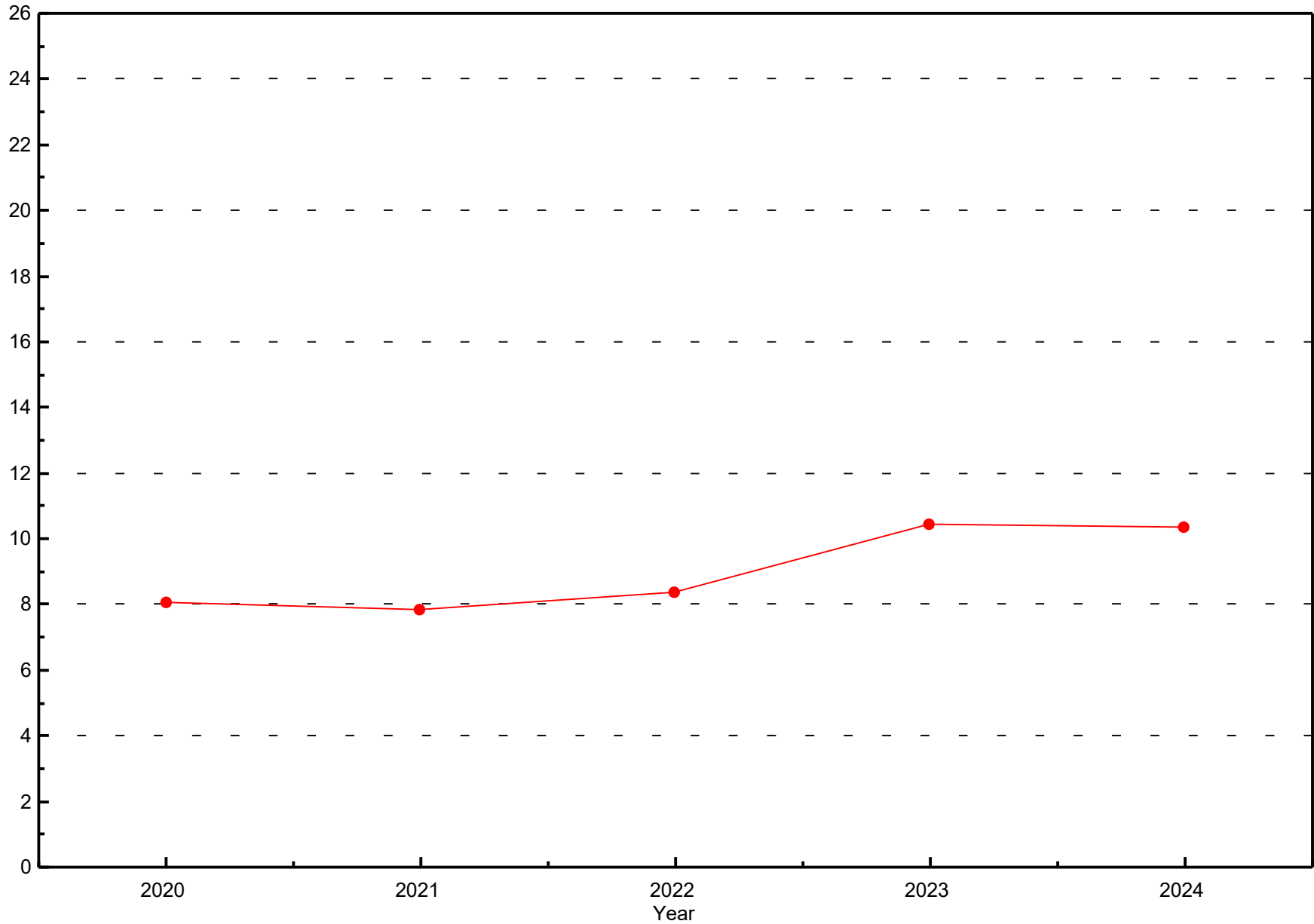
Nitrogen Oxides (NO_x) - ppb
Surmont 2 (2020 to 2024)





Yearly Averages

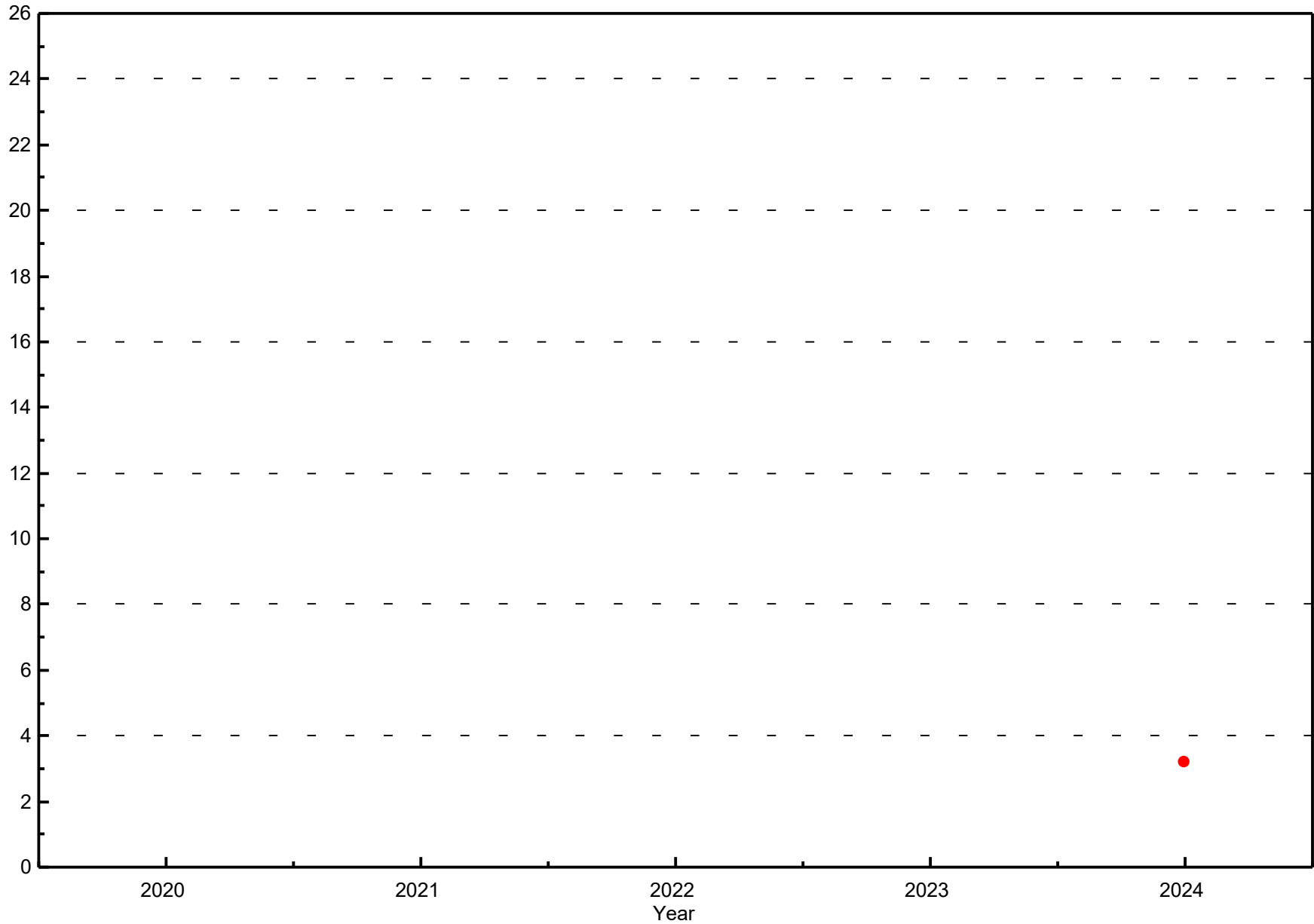
Nitrogen Oxides (NO_x) - ppb
Ells River (2020 to 2024)





Yearly Averages

Nitrogen Oxides (NO_x) - ppb
Monday Creek (2020 to 2024)

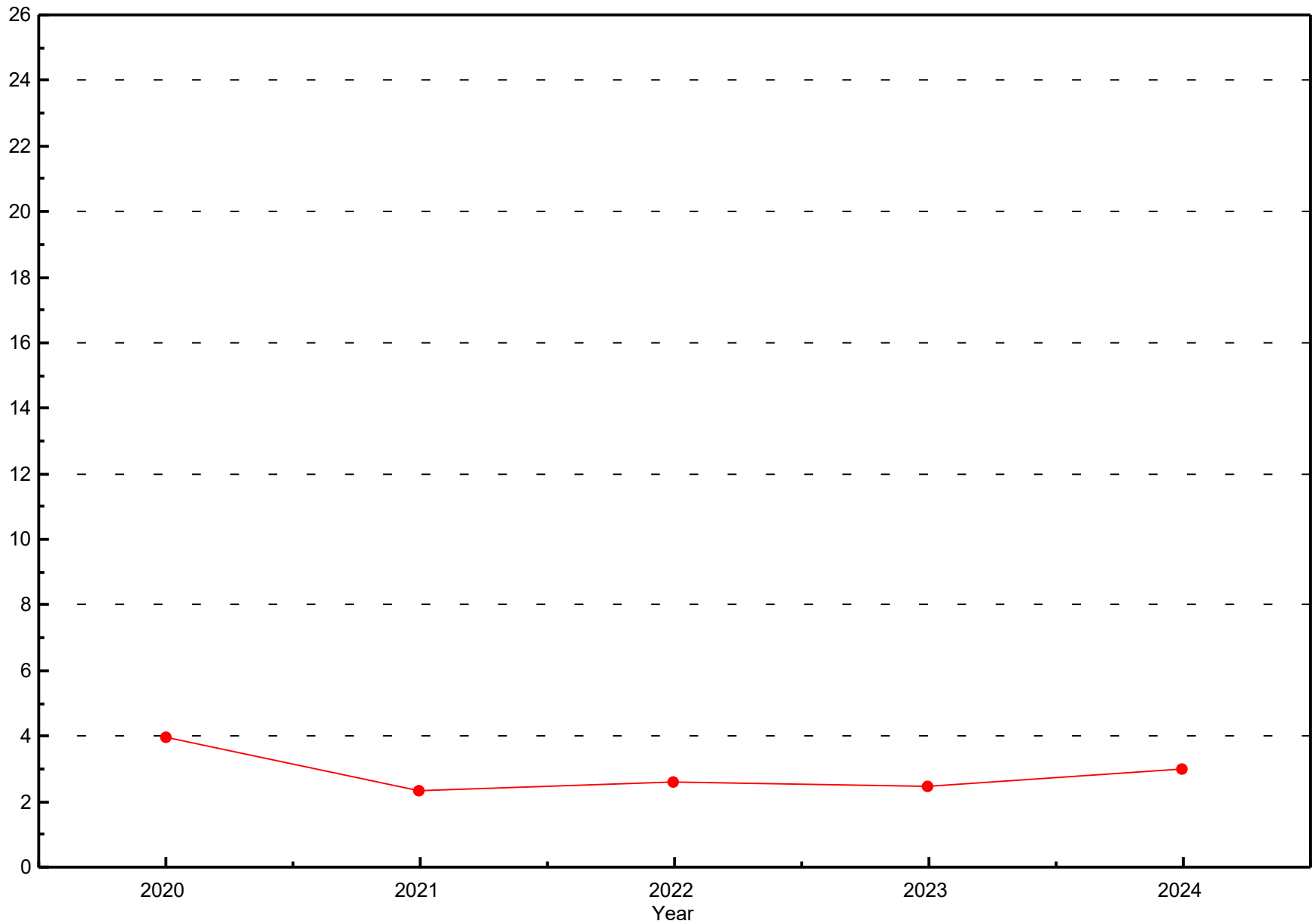




Yearly Averages

Nitrogen Oxides (NO_x) - ppb

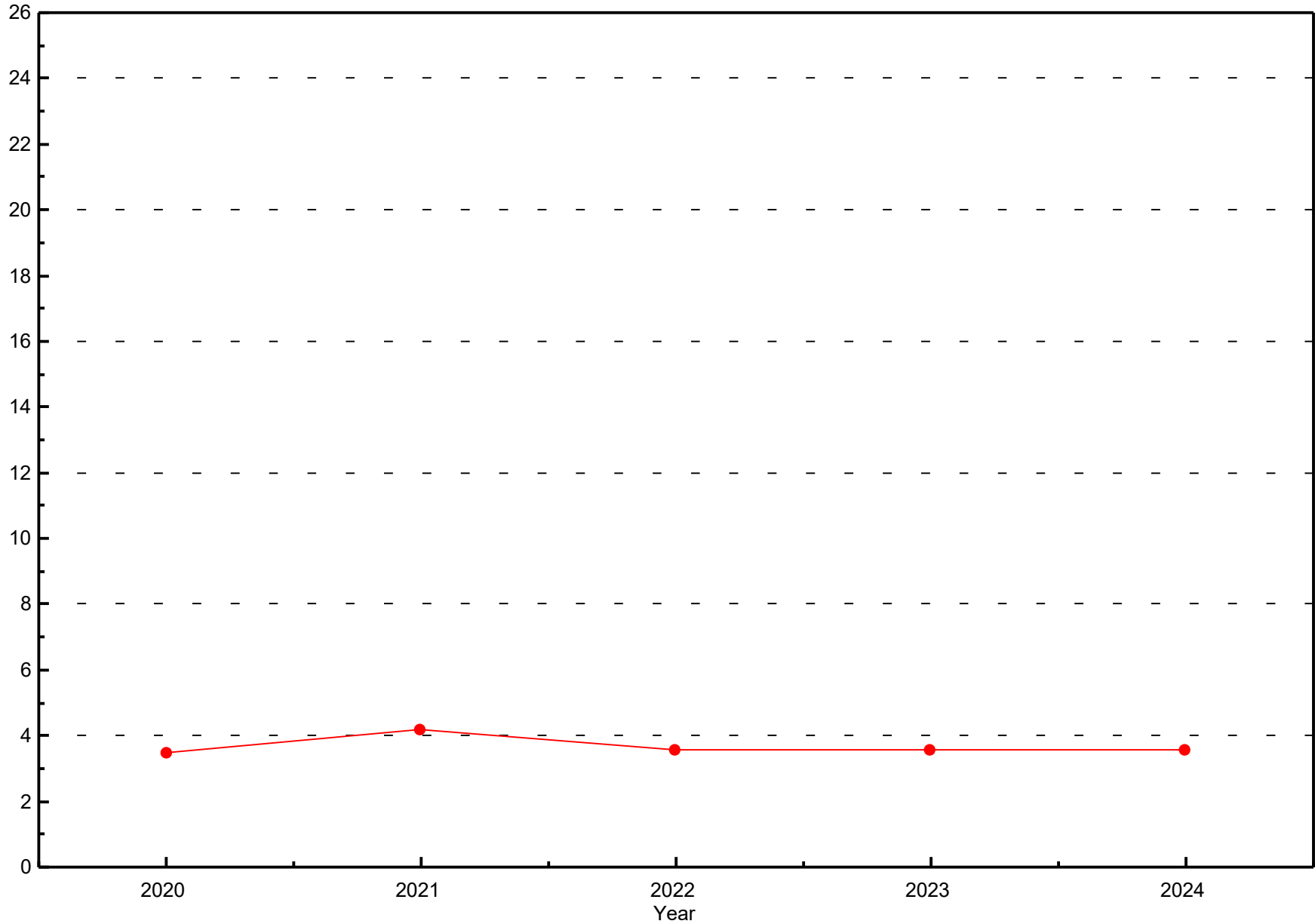
Leismer (2020 to 2024)





Yearly Averages

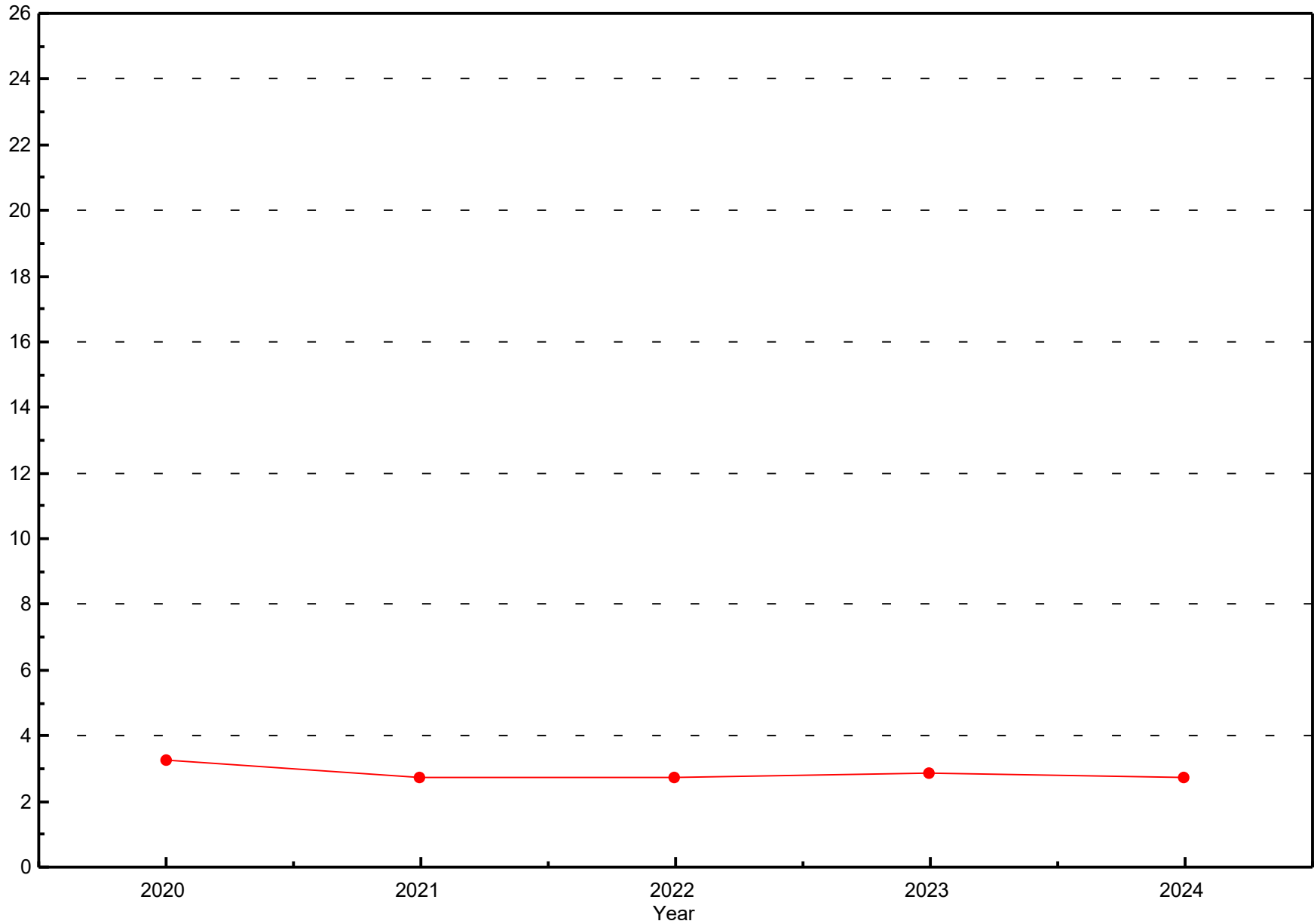
Nitrogen Oxides (NO_x) - ppb
Sawbones Bay (2020 to 2024)





Yearly Averages

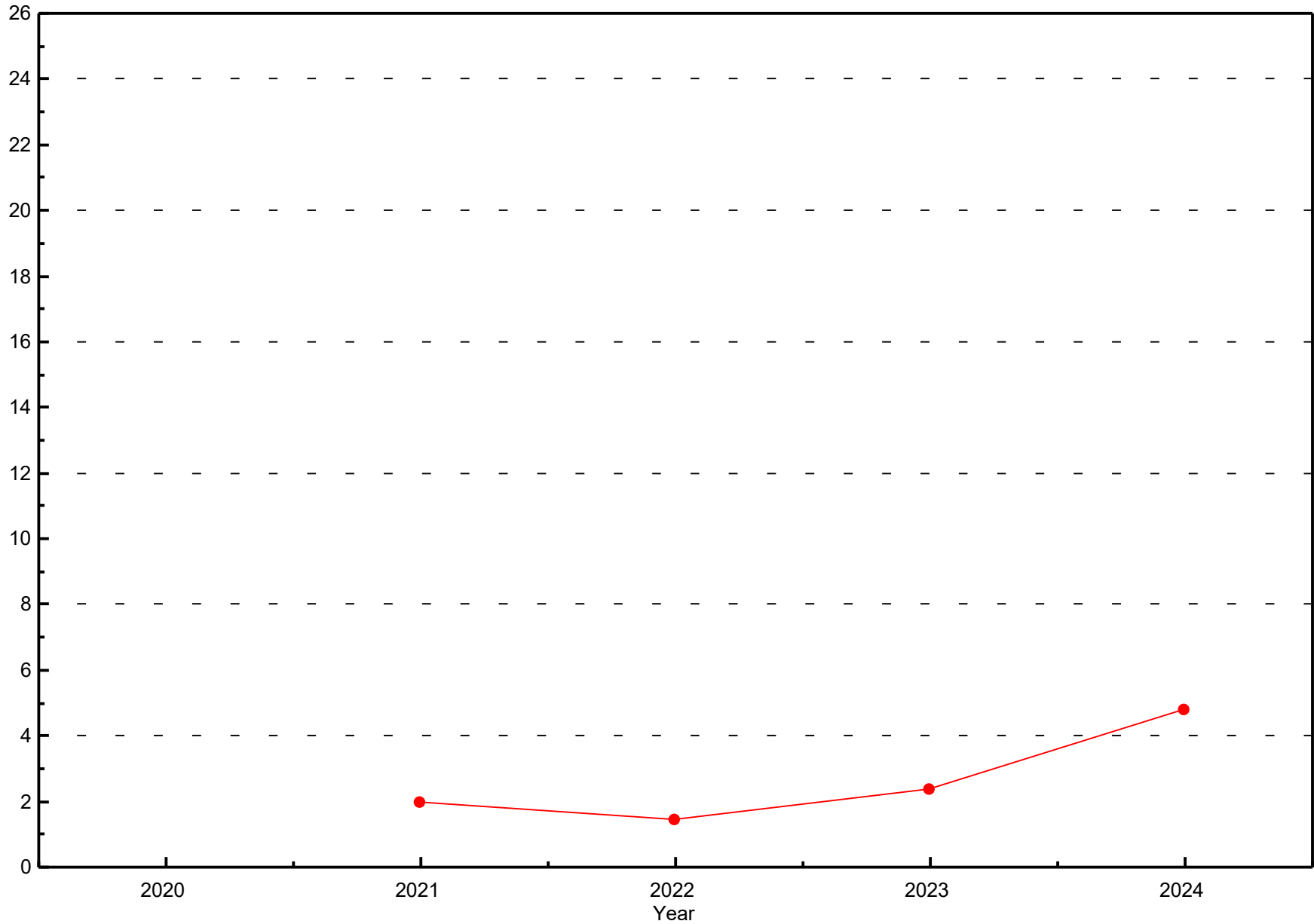
Nitrogen Oxides (NO_x) - ppb
Jackfish 1 (2020 to 2024)





Yearly Averages

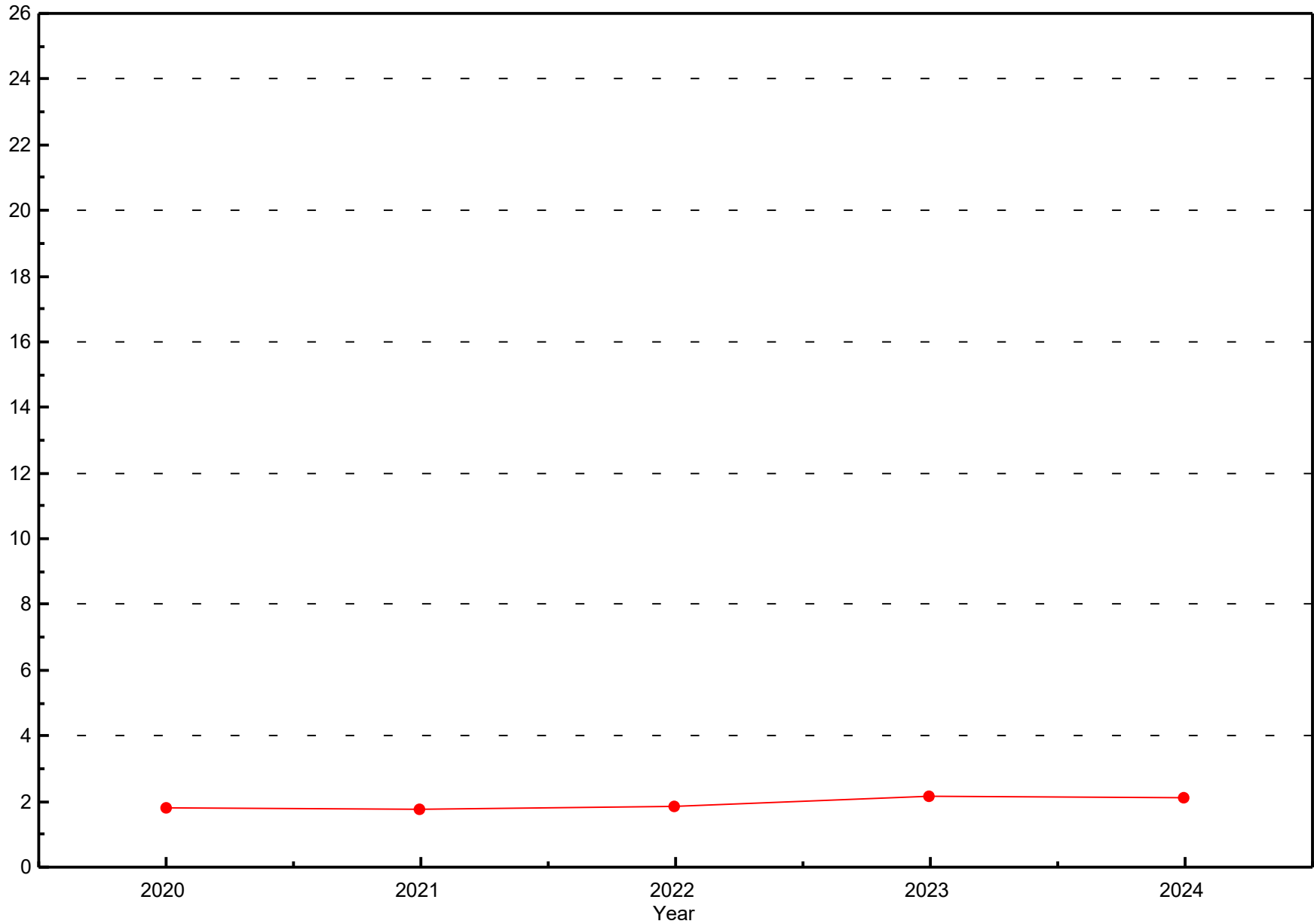
Nitrogen Oxides (NO_x) - ppb
Kirby South (2020 to 2024)





Yearly Averages

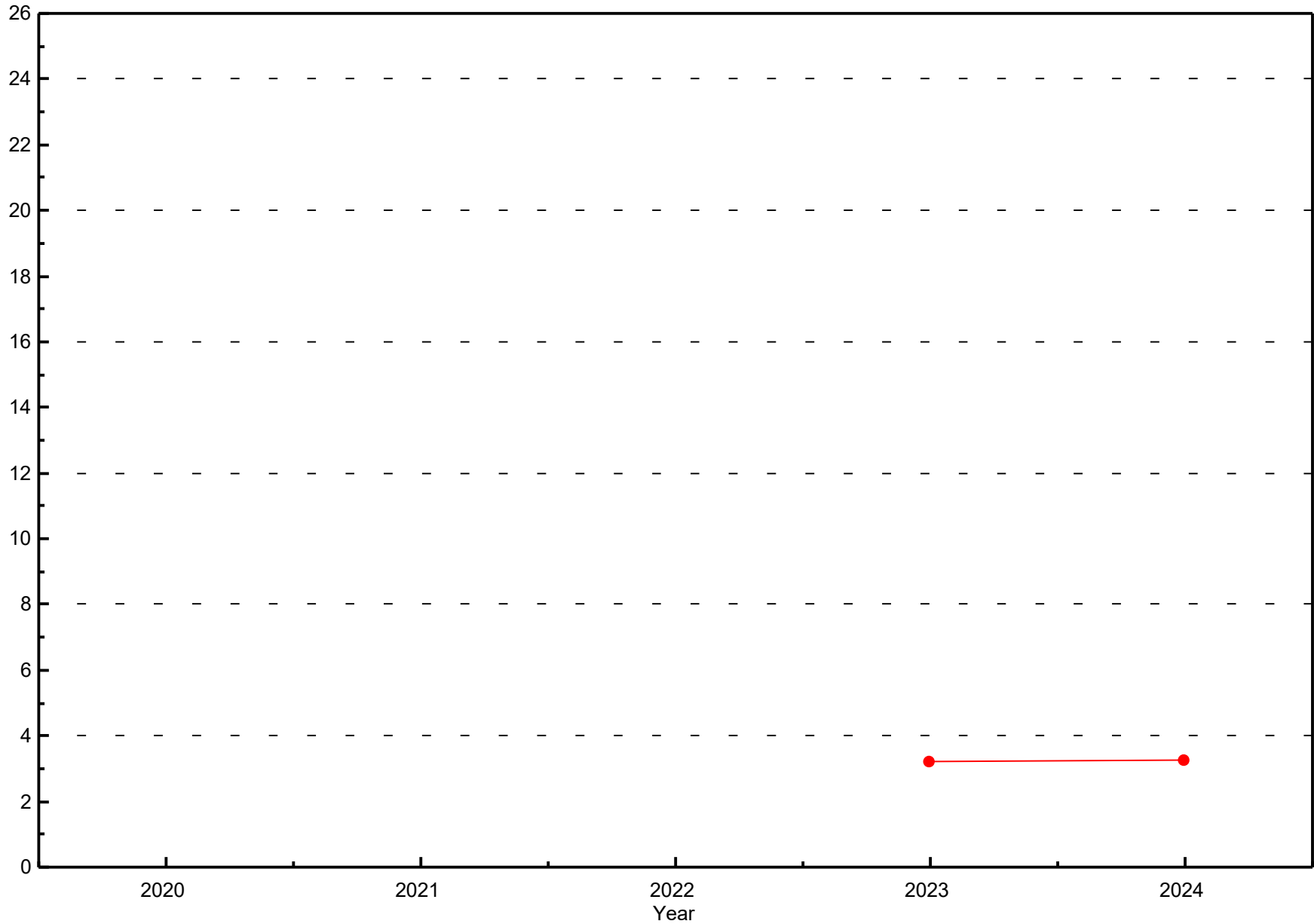
Nitrogen Oxides (NO_x) - ppb
Kirby North (2020 to 2024)





Yearly Averages

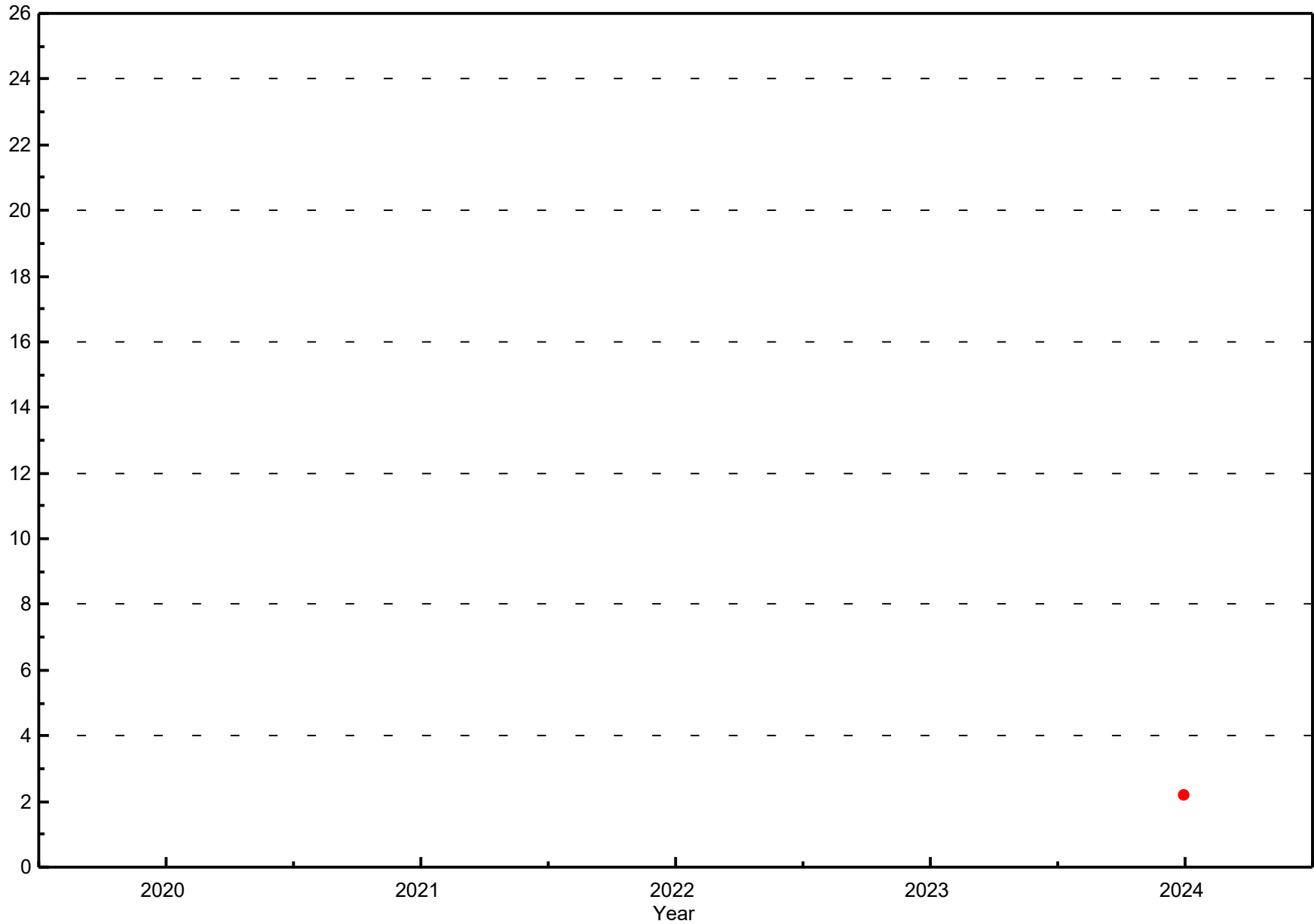
Nitrogen Oxides (NO_x) - ppb
Blackgold (2020 to 2024)





Yearly Averages

Nitrogen Oxides (NO_x) - ppb Hangingstone Expansion (2020 to 2024)



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY MONITORING PROGRAM ANNUAL REPORT

NITRIC OXIDE ANNUAL 2024

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

March 2025



Wood Buffalo Environmental Association - Fort McKay - Bertha Ganter (AMS01)
Annual Summary for the Year 2024
Nitrogen Oxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	707	7.4	75.0	39.6	95.6	4.4	0.0	0.0
February	100	659	6.0	67.6	24.7	97.6	2.4	0.0	0.0
March	100	706	1.6	25.2	6.4	100.0	0.0	0.0	0.0
April	100	684	1.6	51.0	6.3	99.6	0.4	0.0	0.0
May	92	650	1.2	61.0	10.5	99.4	0.6	0.0	0.0
June	99	678	1.3	47.4	9.6	99.9	0.2	0.0	0.0
July	99	697	1.2	42.5	6.7	99.9	0.1	0.0	0.0
August	99	702	1.3	41.4	4.5	99.9	0.1	0.0	0.0
September	100	683	3.3	68.2	11.1	99.1	0.9	0.0	0.0
October	100	707	4.2	141.3	25.4	98.3	1.4	0.3	0.0
November	100	683	4.8	121.2	28.7	98.0	1.5	0.6	0.0
December	100	705	8.1	97.9	29.9	95.0	4.1	0.9	0.0
Annual	99	8261	3.5	141.3	39.6	98.7	1.2	0.1	0.0



Wood Buffalo Environmental Association - Buffalo Viewpoint (AMS04)
Annual Summary for the Year 2024
Nitrogen Oxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	708	3.3	90.1	22.5	98.0	1.8	0.1	0.0
February	100	661	6.0	116.7	49.6	95.0	4.4	0.6	0.0
March	100	708	0.7	33.1	7.1	100.0	0.0	0.0	0.0
April	99	679	1.3	109.7	16.0	99.1	0.6	0.3	0.0
May	100	707	0.6	71.3	8.7	99.9	0.1	0.0	0.0
June	100	685	0.6	20.6	2.6	100.0	0.0	0.0	0.0
July	99	703	0.7	35.1	8.2	100.0	0.0	0.0	0.0
August	100	707	0.4	10.0	2.4	100.0	0.0	0.0	0.0
September	100	681	2.4	138.9	19.1	98.8	1.0	0.2	0.0
October	97	682	1.1	51.4	11.5	99.7	0.3	0.0	0.0
November	100	684	2.2	92.8	15.8	99.0	0.9	0.2	0.0
December	100	705	4.0	121.0	21.5	96.5	3.0	0.6	0.0
Annual	100	8310	1.9	138.9	49.6	98.8	1.0	0.2	0.0



Wood Buffalo Environmental Association - Patricia McInnes (AMS06)
Annual Summary for the Year 2024
Nitrogen Oxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	99	703	2.4	38.0	10.3	100.0	0.0	0.0	0.0
February	100	659	3.4	56.6	19.0	98.8	1.2	0.0	0.0
March	100	707	1.5	43.0	7.9	99.9	0.1	0.0	0.0
April	100	683	0.8	20.1	2.3	100.0	0.0	0.0	0.0
May	100	706	0.6	21.2	3.3	100.0	0.0	0.0	0.0
June	100	685	0.8	9.2	2.3	100.0	0.0	0.0	0.0
July	99	700	0.5	7.9	2.0	100.0	0.0	0.0	0.0
August	100	706	0.6	6.2	1.1	100.0	0.0	0.0	0.0
September	100	684	1.2	30.3	5.4	100.0	0.0	0.0	0.0
October	100	707	1.1	38.1	8.2	100.0	0.0	0.0	0.0
November	100	682	2.5	75.5	16.2	99.6	0.4	0.0	0.0
December	100	706	2.8	43.9	10.3	99.9	0.1	0.0	0.0
Annual	100	8328	1.5	75.5	19.0	99.8	0.2	0.0	0.0



Wood Buffalo Environmental Association - Athabasca Valley (AMS07)
Annual Summary for the Year 2024
Nitrogen Oxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	705	4.0	41.6	15.6	99.9	0.1	0.0	0.0
February	100	661	5.5	60.3	24.5	97.7	2.3	0.0	0.0
March	100	707	1.8	31.4	5.8	100.0	0.0	0.0	0.0
April	100	684	1.0	16.6	3.1	100.0	0.0	0.0	0.0
May	100	707	0.6	12.8	2.8	100.0	0.0	0.0	0.0
June	100	682	0.9	8.7	2.2	100.0	0.0	0.0	0.0
July	99	704	0.7	21.5	3.2	100.0	0.0	0.0	0.0
August	100	708	1.0	12.9	1.7	100.0	0.0	0.0	0.0
September	100	685	2.3	24.4	7.1	100.0	0.0	0.0	0.0
October	100	707	2.5	42.6	8.5	99.9	0.1	0.0	0.0
November	99	674	4.1	55.3	14.7	99.6	0.5	0.0	0.0
December	100	707	4.0	41.3	12.1	99.9	0.1	0.0	0.0
Annual	100	8331	2.3	60.3	24.5	99.8	0.2	0.0	0.0



Wood Buffalo Environmental Association - Fort Chipewyan (AMS08)
Annual Summary for the Year 2024
Nitrogen Oxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	99	703	0.3	19.8	4.4	100.0	0.0	0.0	0.0
February	93	610	0.1	6.0	0.8	100.0	0.0	0.0	0.0
March	99	705	0.2	3.8	1.2	100.0	0.0	0.0	0.0
April	100	685	0.1	6.1	1.3	100.0	0.0	0.0	0.0
May	100	709	0.1	2.0	0.5	100.0	0.0	0.0	0.0
June	100	685	0.1	6.8	0.8	100.0	0.0	0.0	0.0
July	100	708	0.2	3.2	0.5	100.0	0.0	0.0	0.0
August	100	708	0.2	4.8	0.5	100.0	0.0	0.0	0.0
September	100	684	0.1	4.8	0.6	100.0	0.0	0.0	0.0
October	100	708	0.2	9.2	1.5	100.0	0.0	0.0	0.0
November	100	685	0.2	7.0	0.9	100.0	0.0	0.0	0.0
December	100	708	0.3	8.2	2.0	100.0	0.0	0.0	0.0
Annual	99	8298	0.2	19.8	4.4	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Barge Landing (AMS09)
Annual Summary for the Year 2024
Nitrogen Oxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	707	12.2	116.5	61.1	90.1	7.5	2.4	0.0
February	100	662	9.7	105.1	37.1	94.0	5.3	0.8	0.0
March	100	708	3.2	76.0	14.2	99.2	0.9	0.0	0.0
April	100	685	2.5	54.2	7.3	99.6	0.4	0.0	0.0
May	100	708	2.3	55.6	7.2	99.6	0.4	0.0	0.0
June	99	679	2.5	71.5	7.2	99.3	0.7	0.0	0.0
July	99	703	2.9	59.0	7.7	99.6	0.4	0.0	0.0
August	100	707	2.9	57.6	8.2	99.6	0.4	0.0	0.0
September	100	685	5.7	87.8	11.8	98.0	1.9	0.2	0.0
October	100	709	6.3	124.5	31.6	97.0	2.3	0.7	0.0
November	100	685	6.6	138.3	32.8	96.9	2.3	0.7	0.0
December	100	707	12.1	132.3	57.3	90.4	7.5	2.1	0.0
Annual	100	8345	5.7	138.3	61.1	97.0	2.5	0.5	0.0



Wood Buffalo Environmental Association - Fort McKay South (AMS13)
Annual Summary for the Year 2024
Nitrogen Oxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	707	8.2	116.9	37.6	94.8	3.7	1.6	0.0
February	100	662	7.6	91.2	28.4	95.0	4.7	0.3	0.0
March	100	707	2.1	39.3	5.2	100.0	0.0	0.0	0.0
April	100	685	1.8	53.2	8.7	99.6	0.4	0.0	0.0
May	100	707	1.3	89.2	12.7	99.4	0.4	0.1	0.0
June	99	681	1.3	30.9	6.0	100.0	0.0	0.0	0.0
July	96	678	1.2	31.1	3.2	100.0	0.0	0.0	0.0
August	100	708	0.9	22.8	3.5	100.0	0.0	0.0	0.0
September	100	685	2.9	88.0	11.5	99.4	0.4	0.2	0.0
October	100	708	4.5	98.0	19.6	97.0	2.8	0.1	0.0
November	97	663	5.3	115.8	31.3	97.4	1.7	0.9	0.0
December	100	709	8.2	121.6	36.5	95.5	2.7	1.8	0.0
Annual	99	8300	3.8	121.6	37.6	98.3	1.3	0.4	0.0



Wood Buffalo Environmental Association - Anzac (AMS14)
Annual Summary for the Year 2024
Nitrogen Oxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	707	0.8	22.3	3.2	100.0	0.0	0.0	0.0
February	100	661	0.9	34.8	3.3	100.0	0.0	0.0	0.0
March	100	707	0.5	27.9	1.7	100.0	0.0	0.0	0.0
April	97	665	0.4	18.9	1.5	100.0	0.0	0.0	0.0
May	100	706	0.2	13.5	1.3	100.0	0.0	0.0	0.0
June	100	684	0.3	18.0	1.1	100.0	0.0	0.0	0.0
July	99	699	0.3	16.5	1.3	100.0	0.0	0.0	0.0
August	100	707	0.4	22.6	1.5	100.0	0.0	0.0	0.0
September	99	681	0.4	11.0	2.8	100.0	0.0	0.0	0.0
October	100	707	0.5	25.1	2.2	100.0	0.0	0.0	0.0
November	100	684	0.7	25.8	4.3	100.0	0.0	0.0	0.0
December	100	708	0.5	13.3	2.7	100.0	0.0	0.0	0.0
Annual	100	8316	0.5	34.8	4.3	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Wapasu (AMS17)
Annual Summary for the Year 2024
Nitrogen Oxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	708	0.7	34.9	3.2	100.0	0.0	0.0	0.0
February	100	659	0.8	39.4	4.9	100.0	0.0	0.0	0.0
March	100	709	0.2	3.9	0.8	100.0	0.0	0.0	0.0
April	93	631	0.2	4.9	0.8	100.0	0.0	0.0	0.0
May	100	707	0.1	2.5	0.3	100.0	0.0	0.0	0.0
June	99	680	0.3	14.4	1.5	100.0	0.0	0.0	0.0
July	99	702	0.3	7.2	0.7	100.0	0.0	0.0	0.0
August	100	707	0.3	6.8	1.1	100.0	0.0	0.0	0.0
September	100	685	0.5	26.9	3.4	100.0	0.0	0.0	0.0
October	100	704	0.5	24.4	5.3	100.0	0.0	0.0	0.0
November	100	685	0.5	20.9	3.6	100.0	0.0	0.0	0.0
December	100	709	0.4	27.3	3.0	100.0	0.0	0.0	0.0
Annual	99	8286	0.4	39.4	5.3	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Stony Mountain (AMS18)
Annual Summary for the Year 2024
Nitrogen Oxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	707	0.1	2.7	0.4	100.0	0.0	0.0	0.0
February	100	661	0.1	4.4	1.1	100.0	0.0	0.0	0.0
March	100	707	0.1	1.8	0.4	100.0	0.0	0.0	0.0
April	100	684	0.1	2.3	0.3	100.0	0.0	0.0	0.0
May	100	707	0.1	0.8	0.2	100.0	0.0	0.0	0.0
June	100	678	0.1	1.4	0.3	100.0	0.0	0.0	0.0
July	40	272	0.2	1.3	0.6	100.0	0.0	0.0	0.0
August	100	706	0.2	3.4	0.6	100.0	0.0	0.0	0.0
September	97	661	0.1	2.0	0.5	100.0	0.0	0.0	0.0
October	97	687	0.3	2.5	0.9	100.0	0.0	0.0	0.0
November	100	682	0.3	2.8	1.2	100.0	0.0	0.0	0.0
December	100	707	0.3	3.9	1.8	100.0	0.0	0.0	0.0
Annual	94	7859	0.2	4.4	1.8	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Firebag (AMS19)
Annual Summary for the Year 2024
Nitrogen Oxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	708	2.0	32.8	6.7	100.0	0.0	0.0	0.0
February	99	656	1.6	41.0	6.4	99.9	0.2	0.0	0.0
March	99	697	1.4	58.8	10.8	99.6	0.4	0.0	0.0
April	97	661	0.3	25.1	2.1	100.0	0.0	0.0	0.0
May	100	705	0.3	12.5	1.1	100.0	0.0	0.0	0.0
June	100	685	0.7	16.3	4.2	100.0	0.0	0.0	0.0
July	100	706	0.2	4.5	0.4	100.0	0.0	0.0	0.0
August	98	695	0.3	5.5	0.7	100.0	0.0	0.0	0.0
September	100	683	0.5	13.2	1.6	100.0	0.0	0.0	0.0
October	100	707	0.4	9.2	1.9	100.0	0.0	0.0	0.0
November	99	678	0.8	13.9	2.3	100.0	0.0	0.0	0.0
December	100	708	1.4	35.4	9.5	100.0	0.0	0.0	0.0
Annual	99	8289	0.8	58.8	10.8	100.0	0.1	0.0	0.0



Wood Buffalo Environmental Association - Mackay River (AMS20)
Annual Summary for the Year 2024
Nitrogen Oxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	94	659	0.5	19.2	4.9	100.0	0.0	0.0	0.0
February	100	661	0.5	40.5	6.3	100.0	0.0	0.0	0.0
March	100	708	0.4	11.5	3.1	100.0	0.0	0.0	0.0
April	100	686	0.2	5.9	1.2	100.0	0.0	0.0	0.0
May	100	708	0.2	4.1	1.1	100.0	0.0	0.0	0.0
June	100	685	0.3	11.9	2.5	100.0	0.0	0.0	0.0
July	100	708	0.0	1.4	0.2	100.0	0.0	0.0	0.0
August	100	708	0.1	3.4	0.9	100.0	0.0	0.0	0.0
September	100	684	0.2	18.8	2.7	100.0	0.0	0.0	0.0
October	100	708	0.3	23.6	2.3	100.0	0.0	0.0	0.0
November	100	685	0.7	27.7	12.4	100.0	0.0	0.0	0.0
December	100	709	0.6	67.1	10.0	99.7	0.3	0.0	0.0
Annual	99	8309	0.3	67.1	12.4	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Conklin (AMS21)
Annual Summary for the Year 2024
Nitrogen Oxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	704	0.4	14.4	1.6	100.0	0.0	0.0	0.0
February	100	661	0.5	15.8	2.1	100.0	0.0	0.0	0.0
March	100	706	0.6	18.2	3.9	100.0	0.0	0.0	0.0
April	88	599	0.3	12.6	1.4	100.0	0.0	0.0	0.0
May	100	707	0.4	8.7	1.1	100.0	0.0	0.0	0.0
June	100	682	0.3	21.5	1.6	100.0	0.0	0.0	0.0
July	100	707	0.6	19.4	4.1	100.0	0.0	0.0	0.0
August	100	706	0.8	23.5	2.8	100.0	0.0	0.0	0.0
September	100	682	0.7	20.4	2.5	100.0	0.0	0.0	0.0
October	100	708	0.7	18.5	2.3	100.0	0.0	0.0	0.0
November	100	683	0.3	18.0	1.4	100.0	0.0	0.0	0.0
December	100	708	0.5	15.6	3.0	100.0	0.0	0.0	0.0
Annual	99	8253	0.5	23.5	4.1	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Janvier (AMS22)
Annual Summary for the Year 2024
Nitrogen Oxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	706	0.4	4.9	0.9	100.0	0.0	0.0	0.0
February	100	661	0.3	8.2	1.3	100.0	0.0	0.0	0.0
March	100	708	0.2	4.4	1.0	100.0	0.0	0.0	0.0
April	100	685	0.2	3.3	0.4	100.0	0.0	0.0	0.0
May	100	707	0.2	2.0	0.6	100.0	0.0	0.0	0.0
June	100	681	0.2	3.3	0.4	100.0	0.0	0.0	0.0
July	100	708	0.1	2.2	0.4	100.0	0.0	0.0	0.0
August	98	694	0.2	6.8	0.7	100.0	0.0	0.0	0.0
September	92	628	0.4	10.2	1.1	100.0	0.0	0.0	0.0
October	100	707	0.3	6.3	0.8	100.0	0.0	0.0	0.0
November	96	658	0.4	6.4	1.3	100.0	0.0	0.0	0.0
December	100	707	0.4	20.0	3.3	100.0	0.0	0.0	0.0
Annual	99	8250	0.3	20.0	3.3	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Fort Hills (AMS23)
Annual Summary for the Year 2024
Nitrogen Oxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	707	16.6	335.7	87.8	88.0	8.9	2.1	1.0
February	100	662	15.9	238.5	67.8	87.5	8.8	3.3	0.5
March	100	708	6.3	188.6	31.5	97.5	1.3	1.0	0.3
April	100	684	9.0	347.8	65.2	94.9	2.9	1.6	0.6
May	99	700	6.8	124.0	20.8	95.9	3.3	0.9	0.0
June	100	685	3.9	98.5	17.4	98.1	1.6	0.3	0.0
July	99	704	4.4	96.9	17.3	97.3	2.4	0.3	0.0
August	100	707	4.3	87.6	13.0	98.6	1.3	0.1	0.0
September	99	681	8.7	130.0	35.4	95.3	2.5	2.2	0.0
October	100	707	9.5	167.5	42.8	93.2	5.2	1.4	0.1
November	100	685	13.2	177.5	42.9	90.1	6.9	2.8	0.3
December	97	686	19.5	208.9	71.5	84.8	7.7	6.1	1.3
Annual	100	8316	9.8	347.8	87.8	93.5	4.4	1.8	0.3



Wood Buffalo Environmental Association - Christina Lake (AMS26)
Annual Summary for the Year 2024
Nitrogen Oxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	706	1.9	39.2	6.3	100.0	0.0	0.0	0.0
February	100	659	1.7	27.3	6.6	100.0	0.0	0.0	0.0
March	100	707	1.2	15.9	3.9	100.0	0.0	0.0	0.0
April	100	684	1.0	19.4	3.5	100.0	0.0	0.0	0.0
May	100	705	1.1	20.0	6.1	100.0	0.0	0.0	0.0
June	100	685	1.0	15.5	4.3	100.0	0.0	0.0	0.0
July	100	707	1.1	19.3	4.1	100.0	0.0	0.0	0.0
August	100	706	0.9	17.8	6.2	100.0	0.0	0.0	0.0
September	100	684	1.1	15.1	4.7	100.0	0.0	0.0	0.0
October	100	708	1.6	114.5	9.4	99.7	0.1	0.1	0.0
November	100	103	1.3	12.8	2.1	100.0	0.0	0.0	0.0
Annual	100	7054	1.2	114.5	9.4	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Jackfish 2/3 (AMS27)
Annual Summary for the Year 2024
Nitrogen Oxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	99	703	0.3	4.1	1.1	100.0	0.0	0.0	0.0
February	100	661	0.2	5.9	1.1	100.0	0.0	0.0	0.0
March	100	706	0.3	5.1	0.8	100.0	0.0	0.0	0.0
April	99	680	0.4	9.7	1.7	100.0	0.0	0.0	0.0
May	100	707	0.2	3.7	0.5	100.0	0.0	0.0	0.0
June	100	684	0.2	6.8	0.6	100.0	0.0	0.0	0.0
July	99	700	0.1	3.5	0.3	100.0	0.0	0.0	0.0
August	100	705	0.1	10.7	0.7	100.0	0.0	0.0	0.0
September	100	682	0.1	4.4	0.3	100.0	0.0	0.0	0.0
October	97	685	0.3	6.5	0.8	100.0	0.0	0.0	0.0
November	100	681	0.1	2.2	0.5	100.0	0.0	0.0	0.0
December	100	704	0.2	4.3	0.9	100.0	0.0	0.0	0.0
Annual	99	8298	0.2	10.7	1.7	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Surrmont 2 (AMS29)
Annual Summary for the Year 2024
Nitrogen Oxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	91	641	0.3	8.8	1.1	100.0	0.0	0.0	0.0
February	99	657	0.6	7.2	2.3	100.0	0.0	0.0	0.0
March	99	703	0.5	9.1	1.5	100.0	0.0	0.0	0.0
April	100	683	0.3	3.4	1.1	100.0	0.0	0.0	0.0
May	100	706	0.3	2.4	0.7	100.0	0.0	0.0	0.0
June	100	684	0.1	1.6	0.4	100.0	0.0	0.0	0.0
July	100	706	0.2	1.5	0.4	100.0	0.0	0.0	0.0
August	100	707	0.2	2.5	0.6	100.0	0.0	0.0	0.0
September	100	684	0.2	4.3	0.7	100.0	0.0	0.0	0.0
October	100	707	0.1	8.6	1.0	100.0	0.0	0.0	0.0
November	100	682	0.1	6.8	0.8	100.0	0.0	0.0	0.0
December	99	695	0.2	6.9	1.1	100.0	0.0	0.0	0.0
Annual	99	8255	0.3	9.1	2.3	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Ells River (AMS30)
Annual Summary for the Year 2024
Nitrogen Oxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	707	5.8	118.6	29.7	97.6	2.0	0.4	0.0
February	100	660	7.1	143.1	34.1	96.5	2.7	0.8	0.0
March	100	707	2.3	85.3	19.3	99.3	0.6	0.1	0.0
April	99	681	0.8	16.1	2.5	100.0	0.0	0.0	0.0
May	100	707	1.4	45.4	7.0	99.9	0.1	0.0	0.0
June	99	679	1.5	25.2	5.8	100.0	0.0	0.0	0.0
July	99	702	1.3	45.9	7.6	99.6	0.4	0.0	0.0
August	100	708	1.4	65.7	6.7	99.6	0.4	0.0	0.0
September	100	685	3.7	123.0	19.0	97.2	2.2	0.6	0.0
October	100	707	3.7	105.4	39.0	97.5	1.8	0.7	0.0
November	100	684	4.9	93.2	18.7	98.4	1.5	0.2	0.0
December	100	708	7.2	150.2	41.6	96.8	2.3	1.0	0.0
Annual	100	8335	3.4	150.2	41.6	98.6	1.2	0.3	0.0



Wood Buffalo Environmental Association - Monday Creek (AMS33)
Annual Summary for the Year 2024
Nitrogen Oxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
November	100	535	0.2	4.2	0.8	100.0	0.0	0.0	0.0
December	99	700	0.4	7.9	1.7	100.0	0.0	0.0	0.0
Annual	100	1235	0.3	7.9	1.7	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Leismer (AMS501)
Annual Summary for the Year 2024
Nitrogen Oxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	706	0.9	13.5	4.3	100.0	0.0	0.0	0.0
February	99	658	0.8	15.4	2.4	100.0	0.0	0.0	0.0
March	100	708	0.5	14.2	2.1	100.0	0.0	0.0	0.0
Annual	100	2072	0.7	14.4	4.3	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Sawbones Bay (AMS505)
Annual Summary for the Year 2024
Nitrogen Oxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	708	0.9	26.5	4.6	100.0	0.0	0.0	0.0
February	100	662	1.0	27.5	4.4	100.0	0.0	0.0	0.0
March	100	706	0.5	12.7	2.2	100.0	0.0	0.0	0.0
April	100	685	0.4	14.0	1.5	100.0	0.0	0.0	0.0
May	100	707	0.4	7.3	3.4	100.0	0.0	0.0	0.0
June	88	606	0.4	8.6	1.7	100.0	0.0	0.0	0.0
Annual	98	4074	0.6	27.5	4.6	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Jackfish 1 (AMS506)
Annual Summary for the Year 2024
Nitrogen Oxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
July	99	701	0.5	19.3	4.1	100.0	0.0	0.0	0.0
August	97	685	0.5	11.4	4.8	100.0	0.0	0.0	0.0
September	97	662	0.5	18.6	2.8	100.0	0.0	0.0	0.0
October	100	708	0.7	12.7	3.9	100.0	0.0	0.0	0.0
November	99	681	0.6	15.5	3.7	100.0	0.0	0.0	0.0
December	100	707	0.7	11.7	3.2	100.0	0.0	0.0	0.0
Annual	99	4144	0.6	19.3	4.8	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Kirby South (AMS507)
Annual Summary for the Year 2024
Nitrogen Oxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	100	707	6.2	152.3	86.5	94.6	3.1	2.3	0.0
February	100	661	2.1	83.1	14.9	98.9	0.9	0.2	0.0
March	94	660	0.2	20.2	1.3	100.0	0.0	0.0	0.0
April	99	675	3.8	154.1	53.5	95.6	3.4	1.0	0.0
May	92	643	0.3	6.2	2.5	100.0	0.0	0.0	0.0
June	100	579	0.2	12.6	0.7	100.0	0.0	0.0	0.0
Annual	98	3925	2.1	154.1	86.5	98.2	1.2	0.6	0.0



Wood Buffalo Environmental Association - Kirby North (AMS508)
Annual Summary for the Year 2024
Nitrogen Oxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
July	100	606	1.0	32.3	7.4	100.0	0.0	0.0	0.0
August	98	685	0.2	4.6	1.0	100.0	0.0	0.0	0.0
September	100	681	0.4	5.9	1.6	100.0	0.0	0.0	0.0
October	100	705	0.3	5.6	1.1	100.0	0.0	0.0	0.0
November	100	685	0.2	3.6	0.5	100.0	0.0	0.0	0.0
December	99	697	0.8	37.6	8.9	100.0	0.0	0.0	0.0
Annual	99	4059	0.5	37.6	8.9	100.0	0.0	0.0	0.0



Wood Buffalo Environmental Association - Blackgold (AMS511)
Annual Summary for the Year 2024
Nitrogen Oxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
January	97	683	0.6	31.0	2.1	100.0	0.0	0.0	0.0
February	100	662	0.6	36.8	3.0	100.0	0.0	0.0	0.0
March	100	708	0.5	31.8	4.7	100.0	0.0	0.0	0.0
Annual	99	2053	0.6	36.8	4.7	100.0	0.0	0.0	0.0



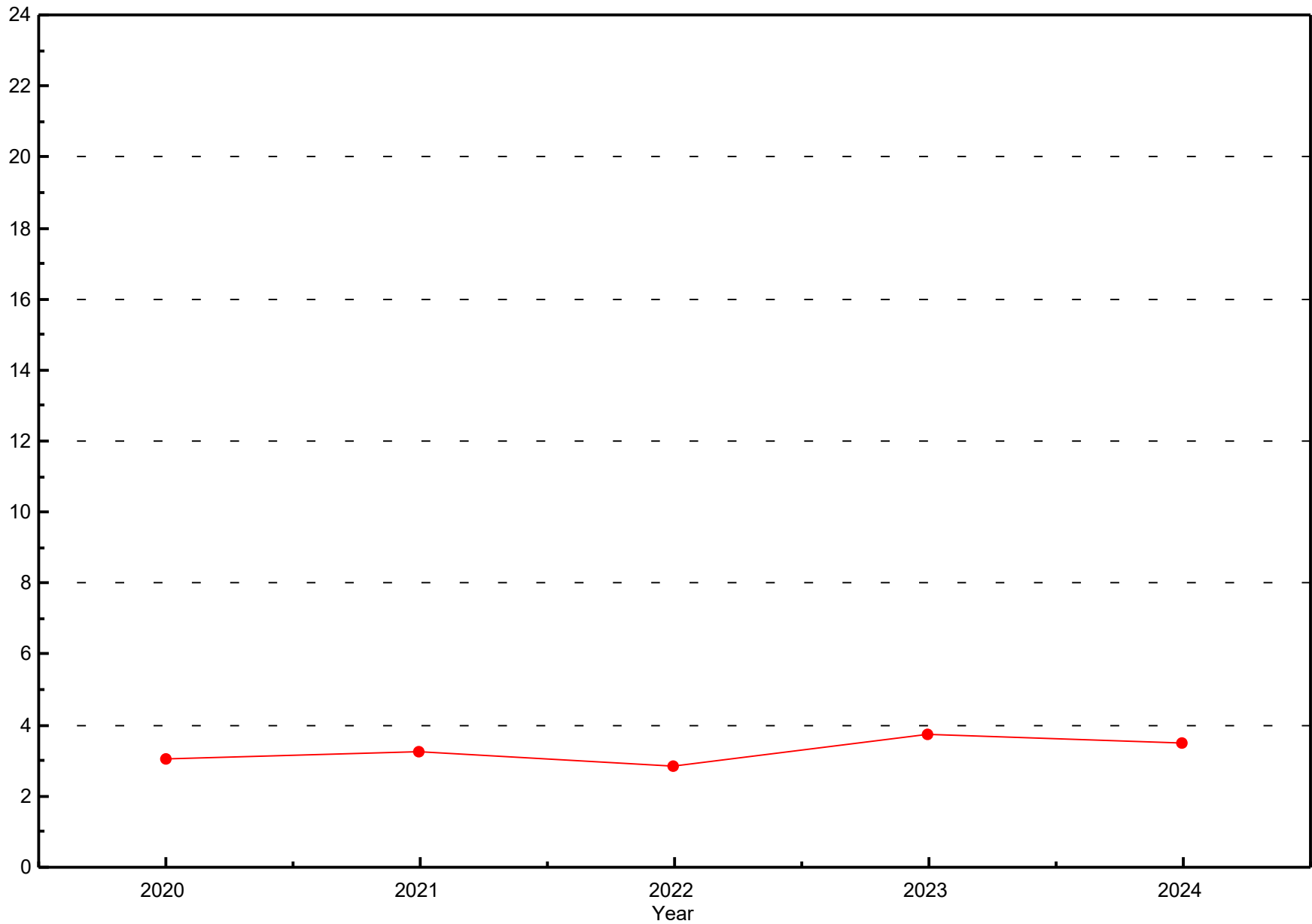
Wood Buffalo Environmental Association - Hangingstone Expansion (AMS512)
Annual Summary for the Year 2024
Nitrogen Oxide (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum	% of Data in Each Concentration Range			
				1-Hour Value	24-Hour Value	0 - 40	41 - 80	81 - 159	>159
July	98	695	0.2	2.9	0.6	100.0	0.0	0.0	0.0
August	100	708	0.2	3.3	0.6	100.0	0.0	0.0	0.0
September	100	686	0.3	5.9	0.9	100.0	0.0	0.0	0.0
October	97	690	0.3	19.7	2.5	100.0	0.0	0.0	0.0
November	100	685	0.5	13.5	2.8	100.0	0.0	0.0	0.0
December	100	705	0.4	9.5	1.9	100.0	0.0	0.0	0.0
Annual	99	4169	0.3	19.7	2.8	100.0	0.0	0.0	0.0



Yearly Averages

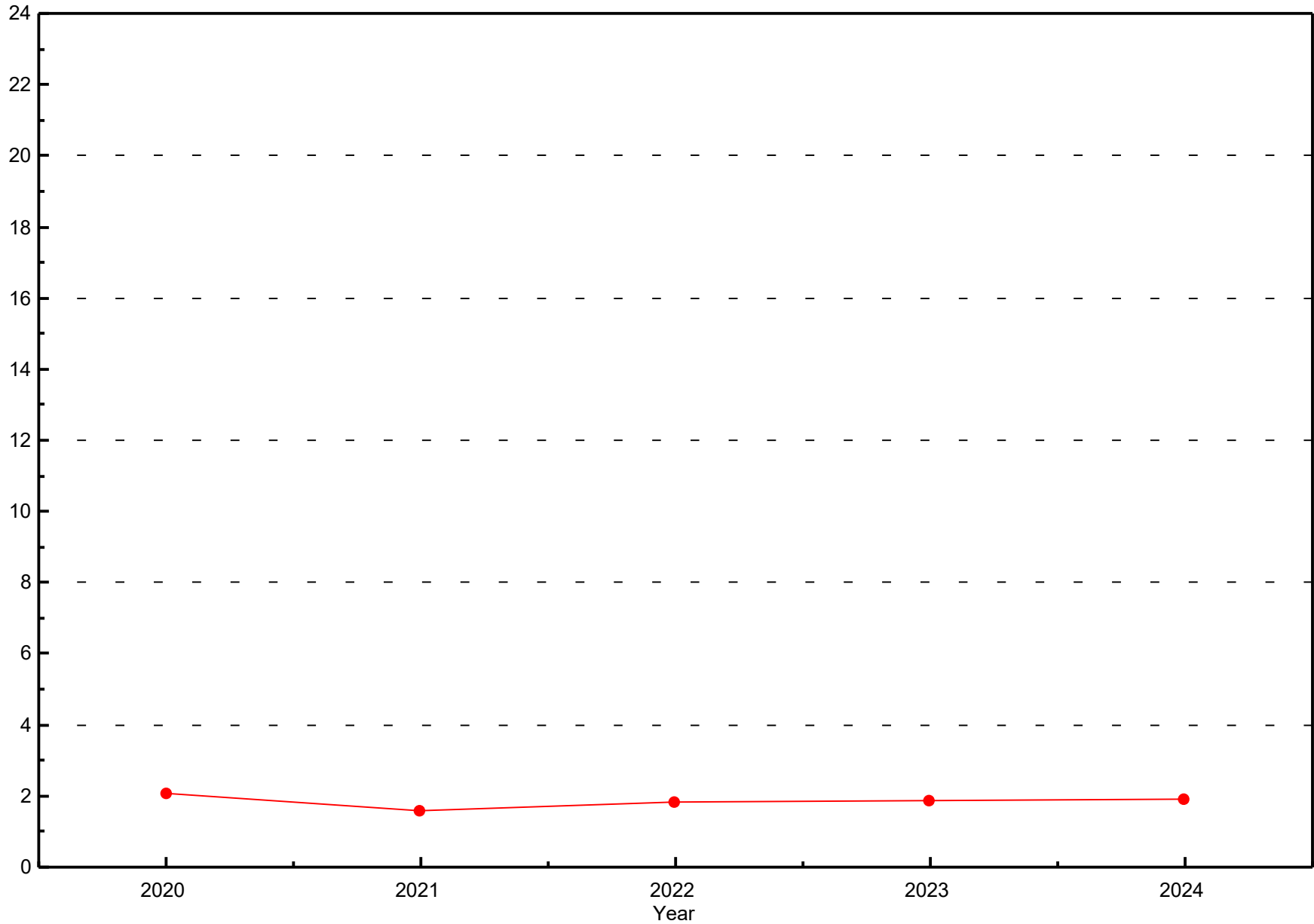
Nitric Oxide (NO) - ppb
Fort McKay - Bertha Ganter (2020 to 2024)





Yearly Averages

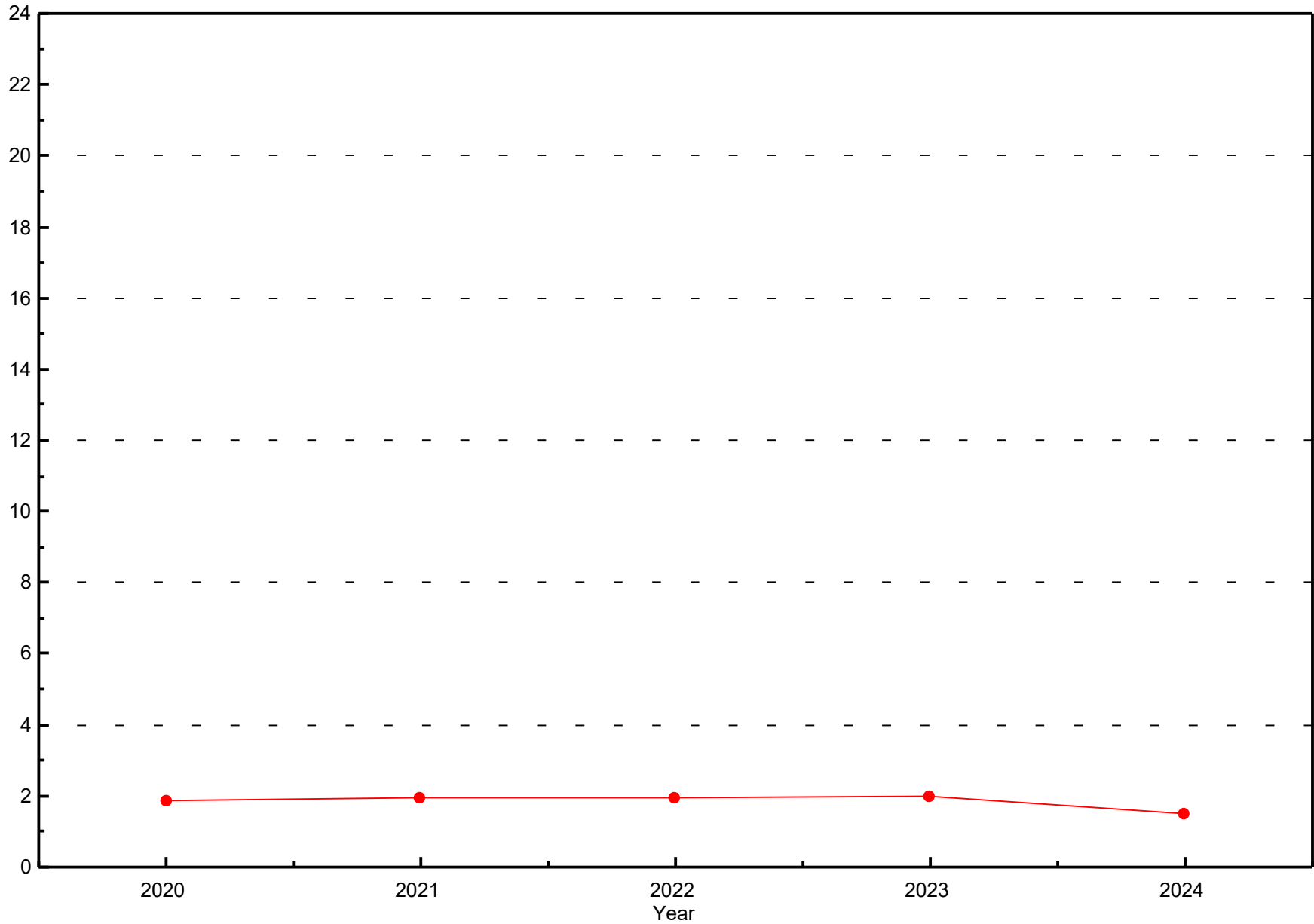
Nitric Oxide (NO) - ppb
Buffalo Viewpoint (2020 to 2024)





Yearly Averages

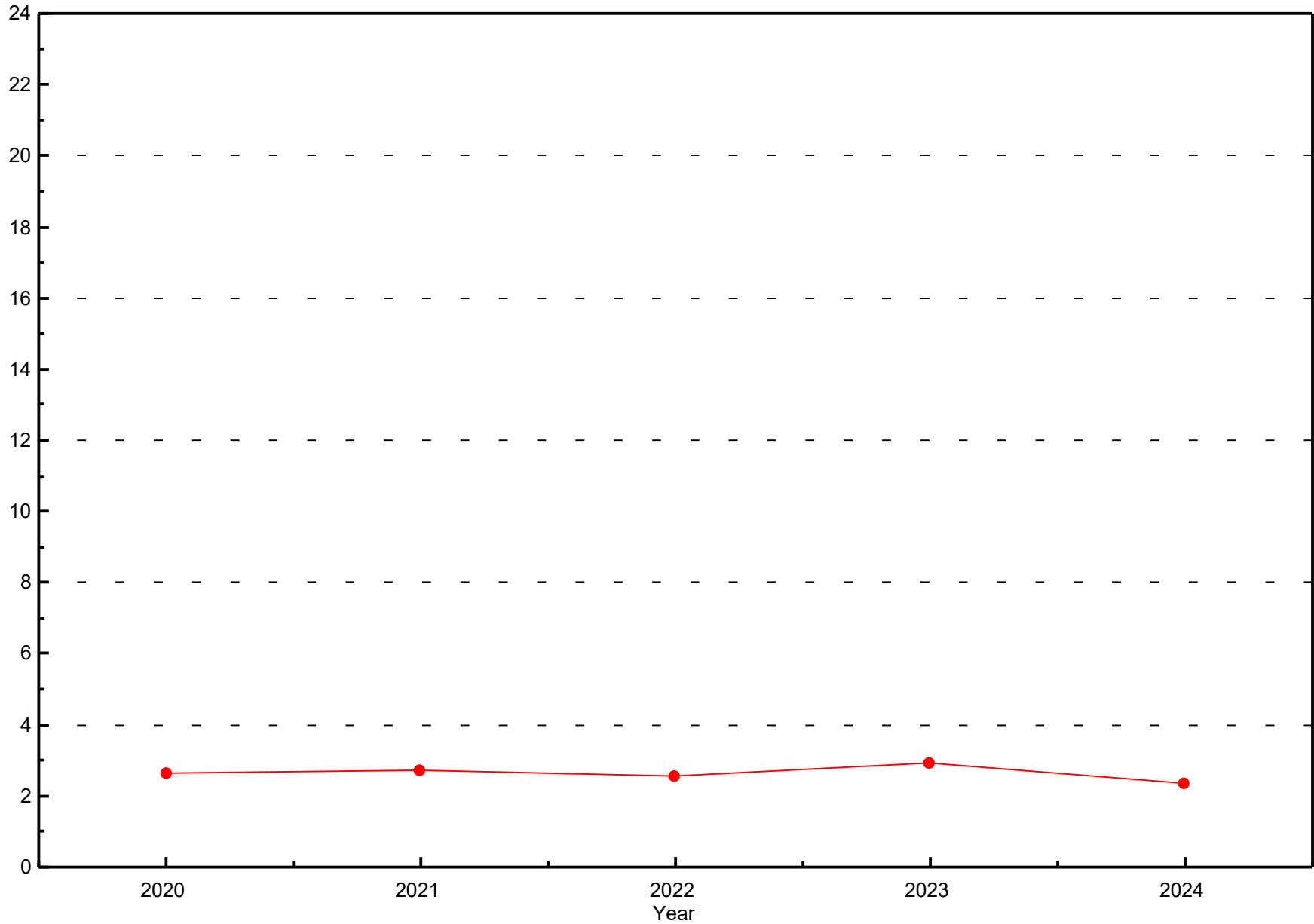
Nitric Oxide (NO) - ppb
Patricia McInnes (2020 to 2024)





Yearly Averages

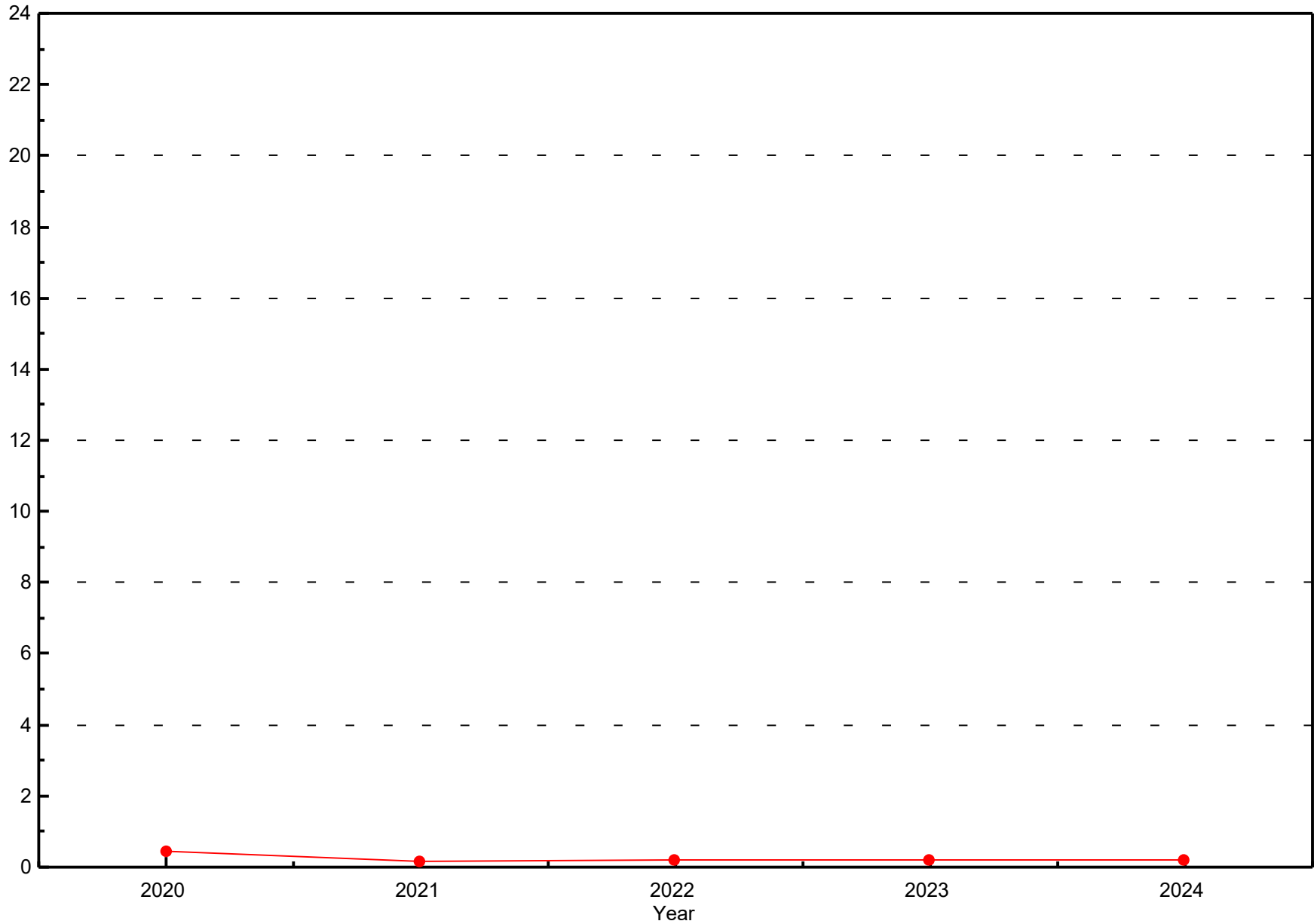
Nitric Oxide (NO) - ppb
Athabasca Valley (2020 to 2024)





Yearly Averages

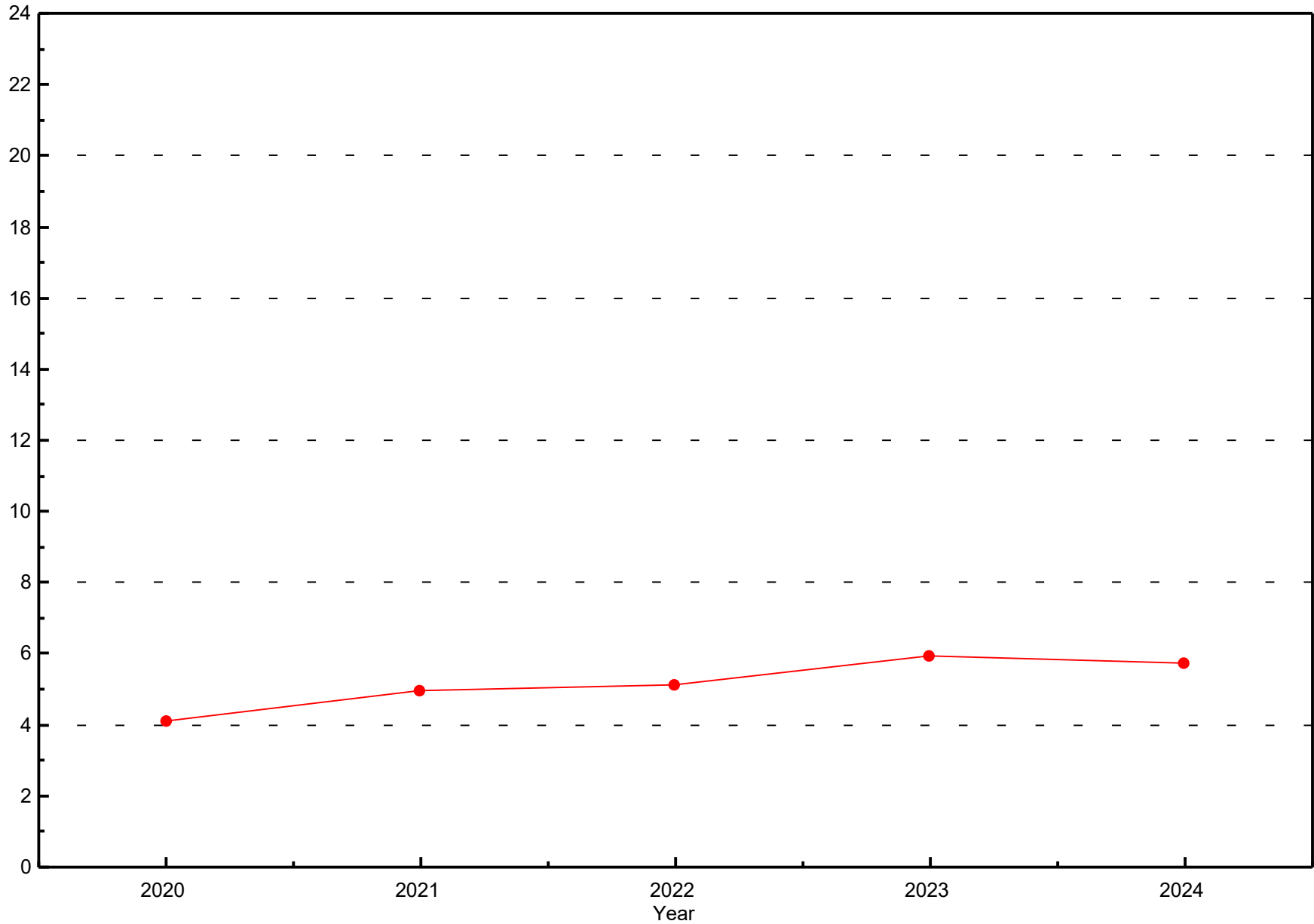
Nitric Oxide (NO) - ppb
Fort Chipewyan (2020 to 2024)





Yearly Averages

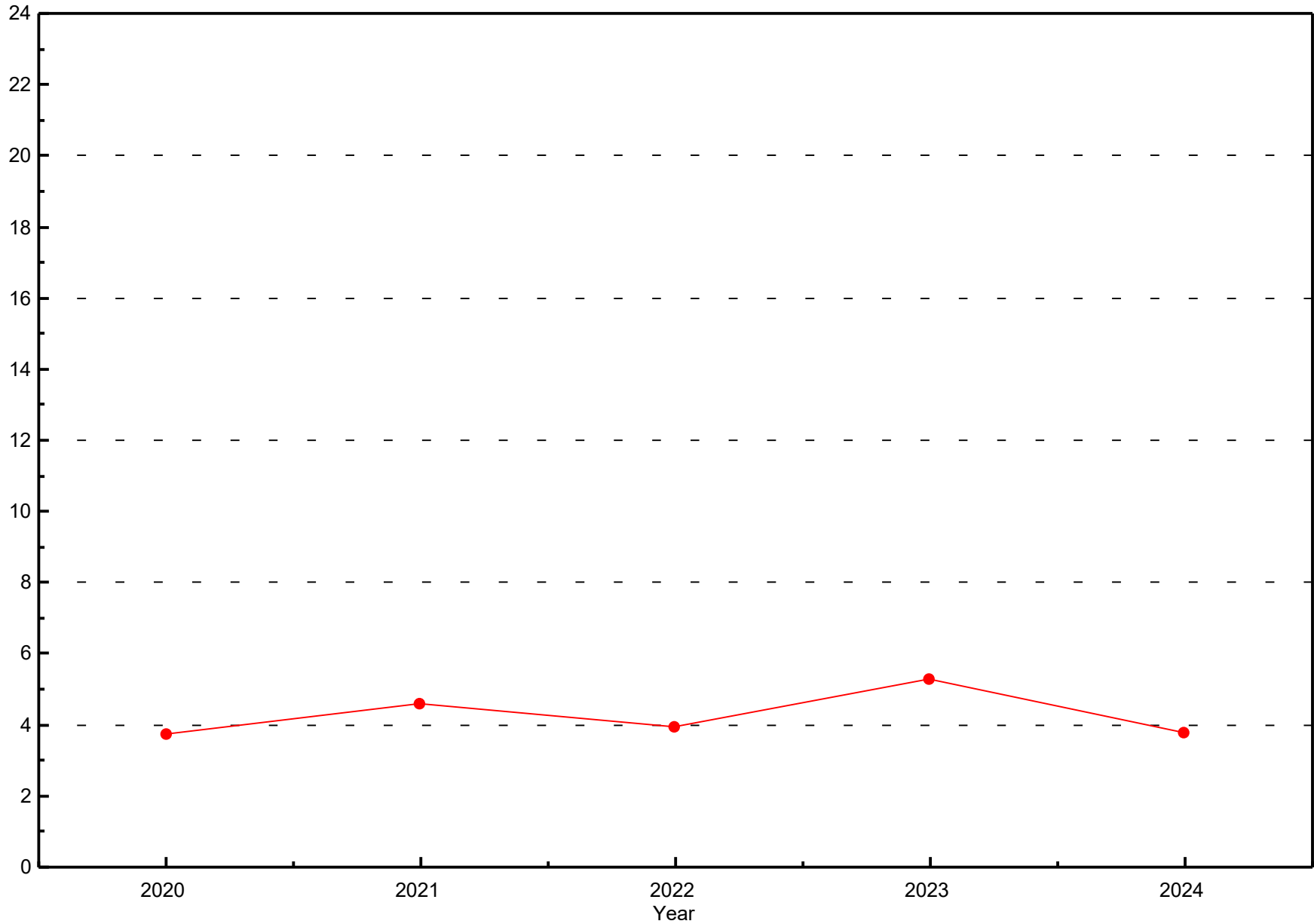
Nitric Oxide (NO) - ppb
Barge Landing (2020 to 2024)





Yearly Averages

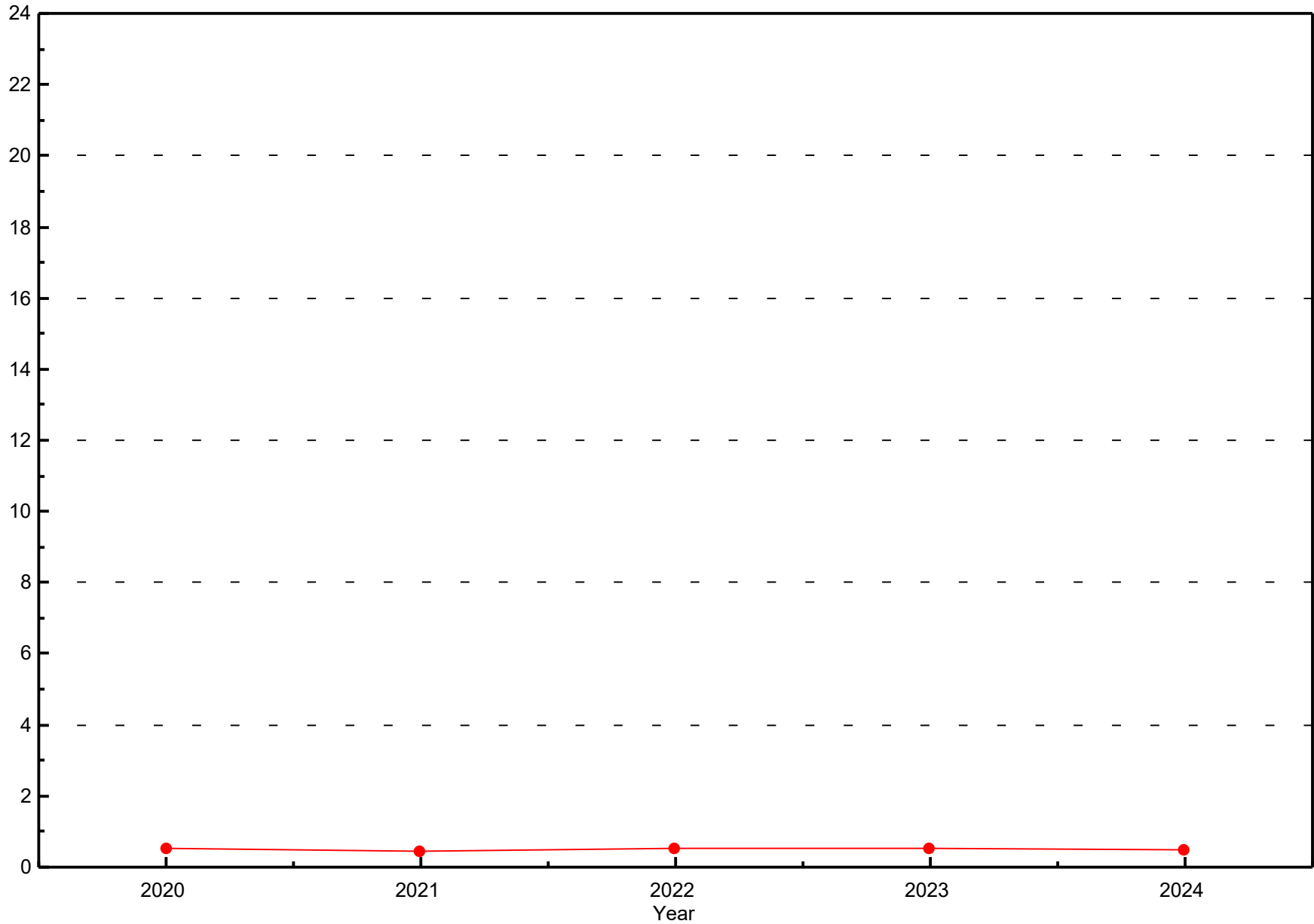
Nitric Oxide (NO) - ppb
Fort McKay South (2020 to 2024)





Yearly Averages

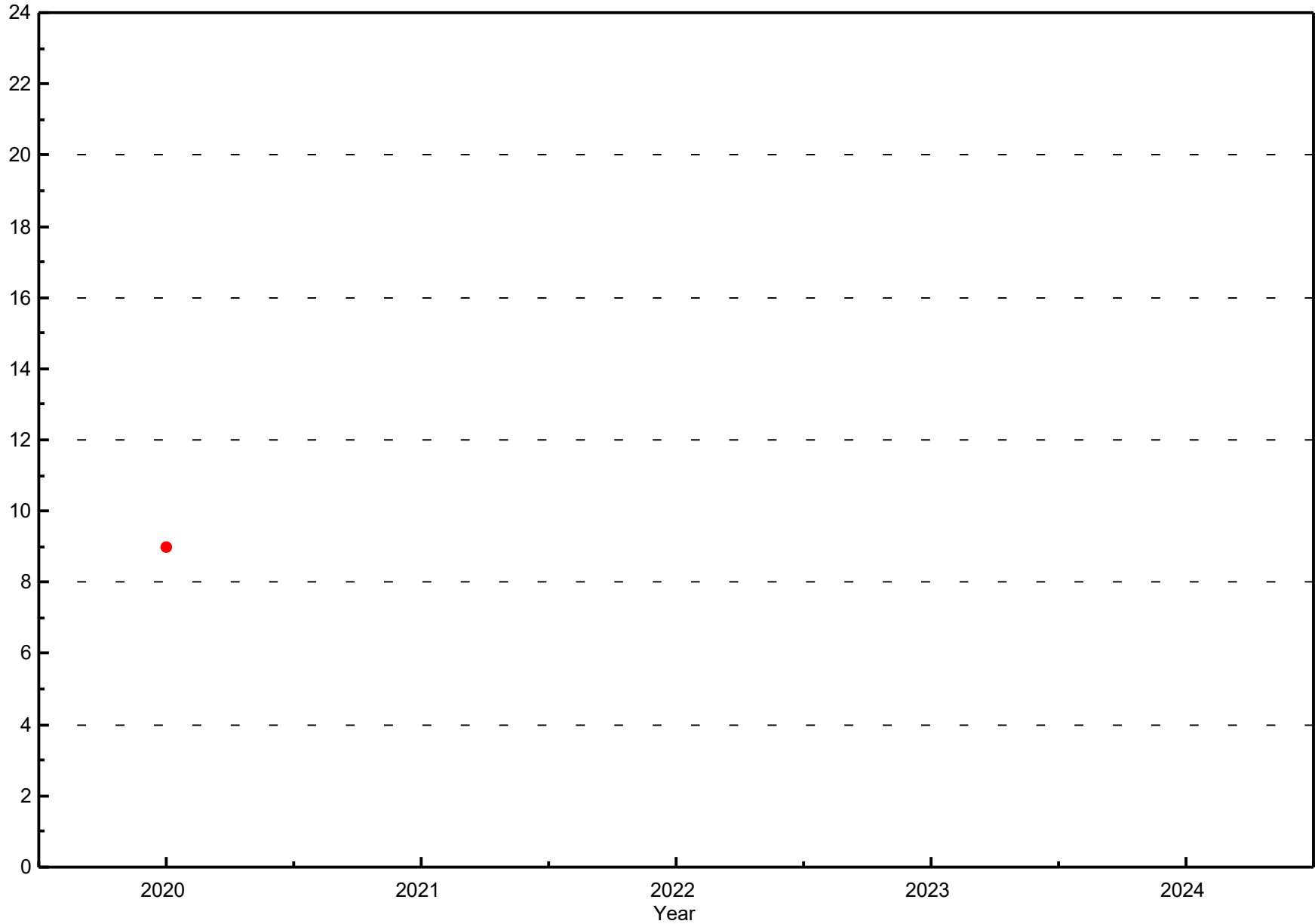
Nitric Oxide (NO) - ppb
Anzac (2020 to 2024)





Yearly Averages

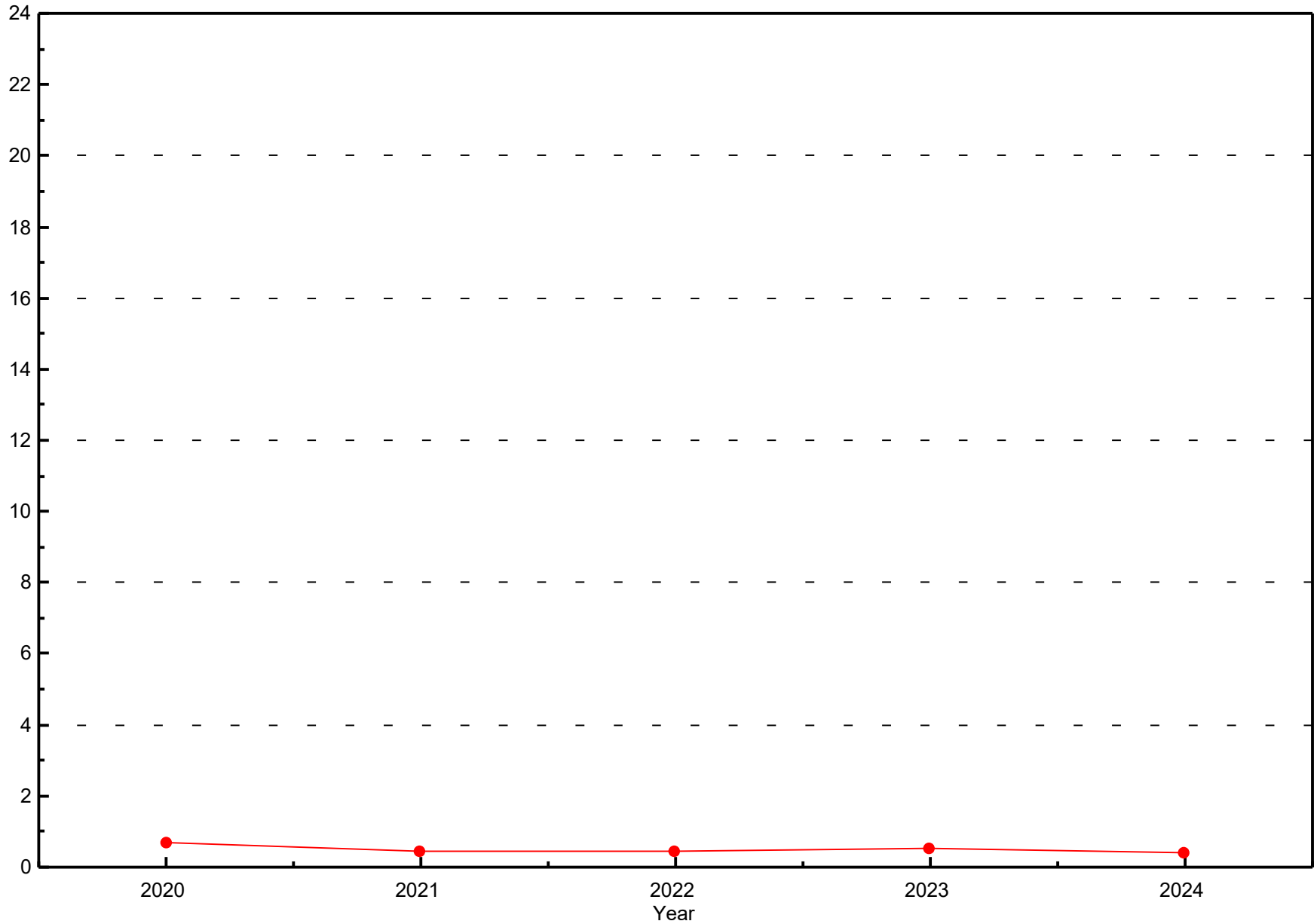
Nitric Oxide (NO) - ppb
Horizon (2020 to 2024)





Yearly Averages

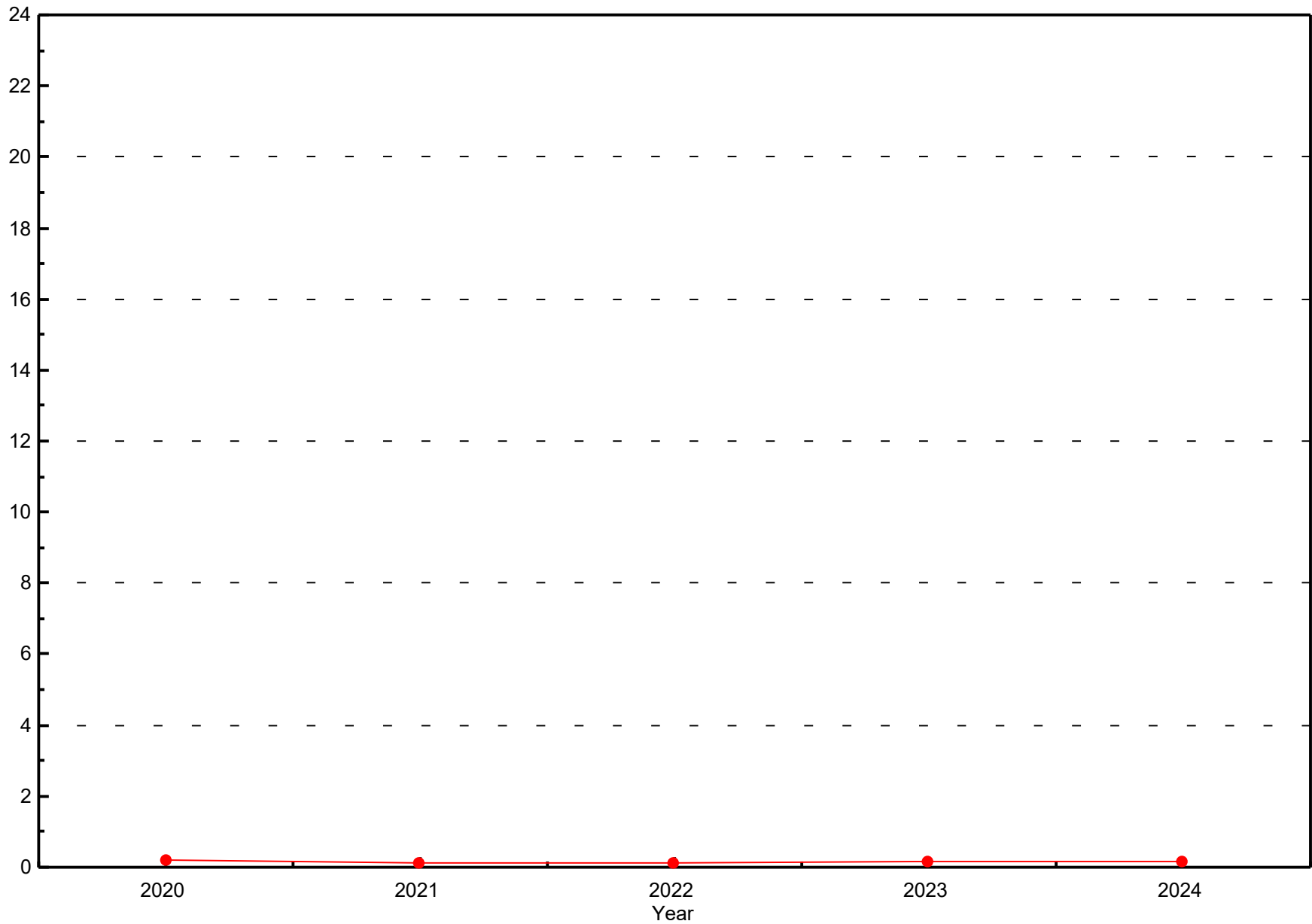
Nitric Oxide (NO) - ppb
Wapasu (2020 to 2024)





Yearly Averages

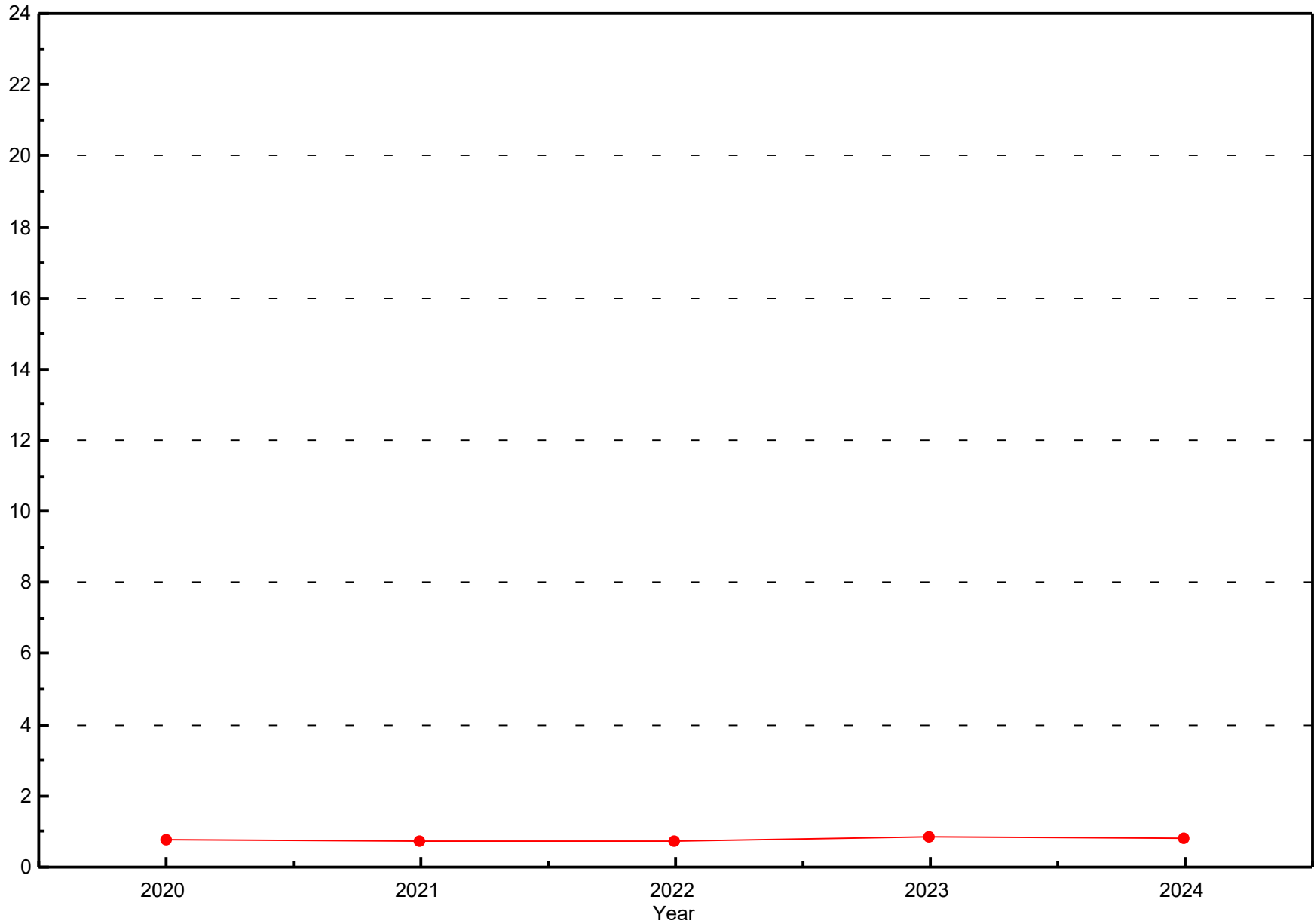
Nitric Oxide (NO) - ppb
Stony Mountain (2020 to 2024)





Yearly Averages

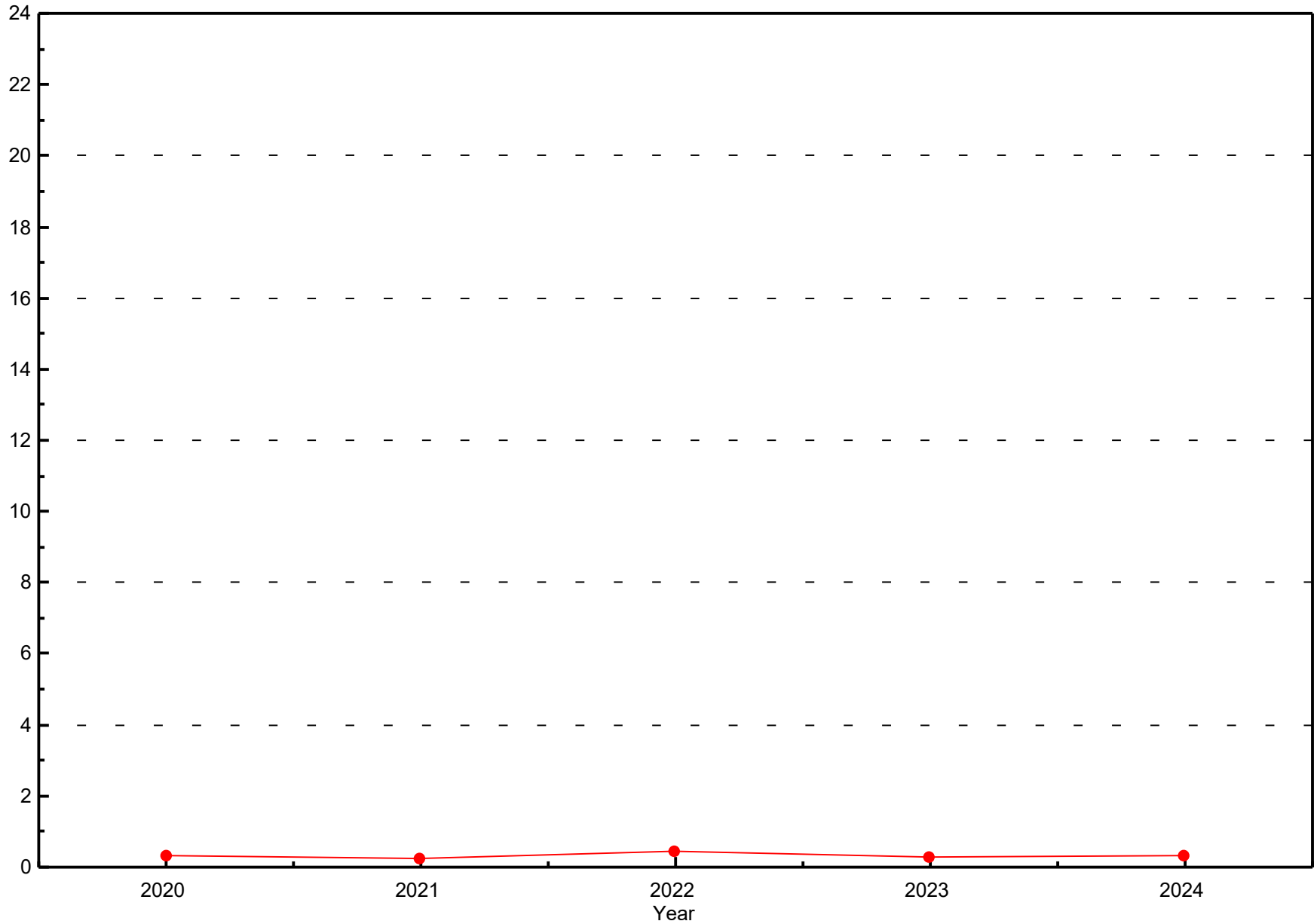
Nitric Oxide (NO) - ppb
Firebag (2020 to 2024)





Yearly Averages

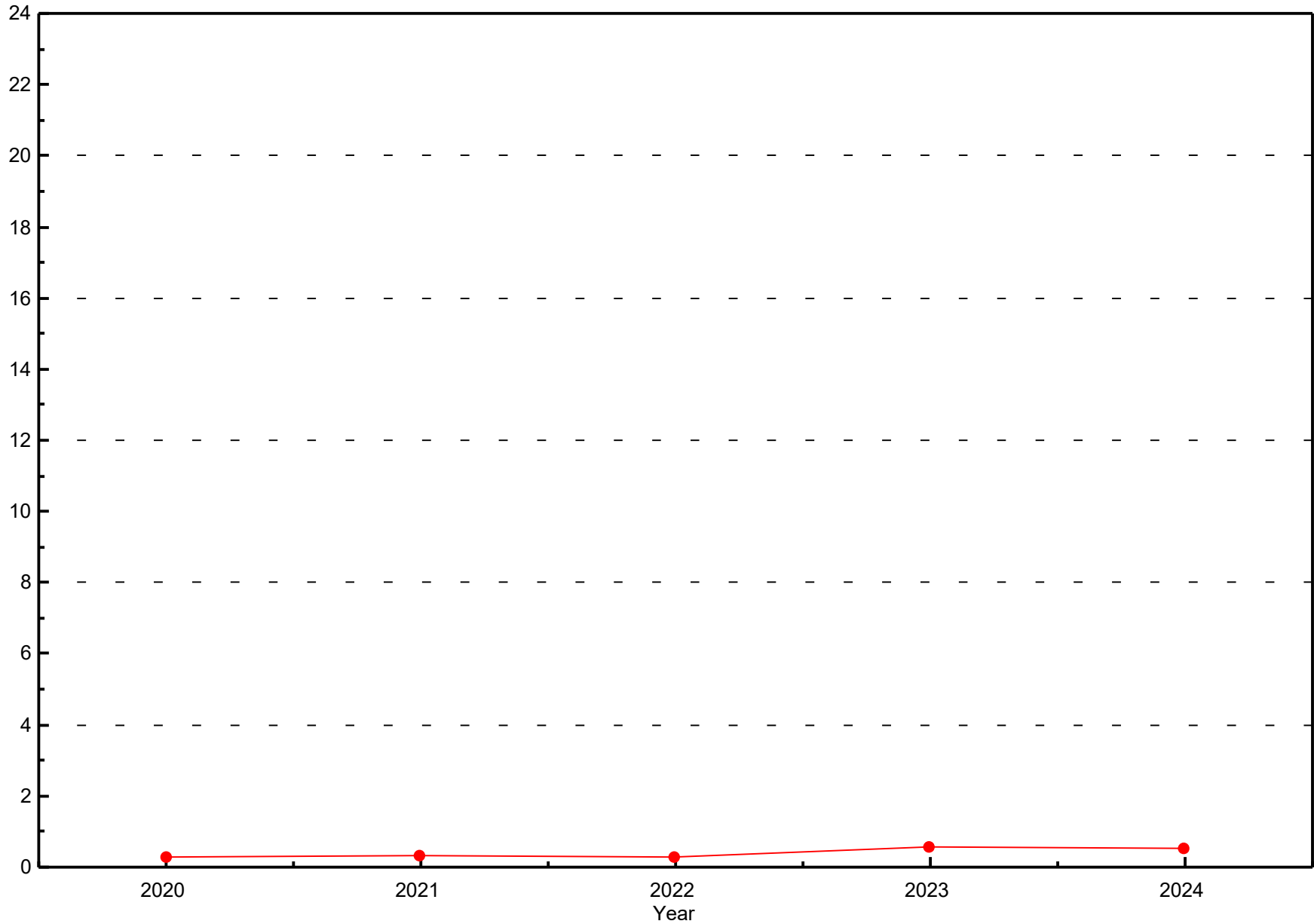
Nitric Oxide (NO) - ppb
Mackay River (2020 to 2024)





Yearly Averages

Nitric Oxide (NO) - ppb
Conklin (2020 to 2024)

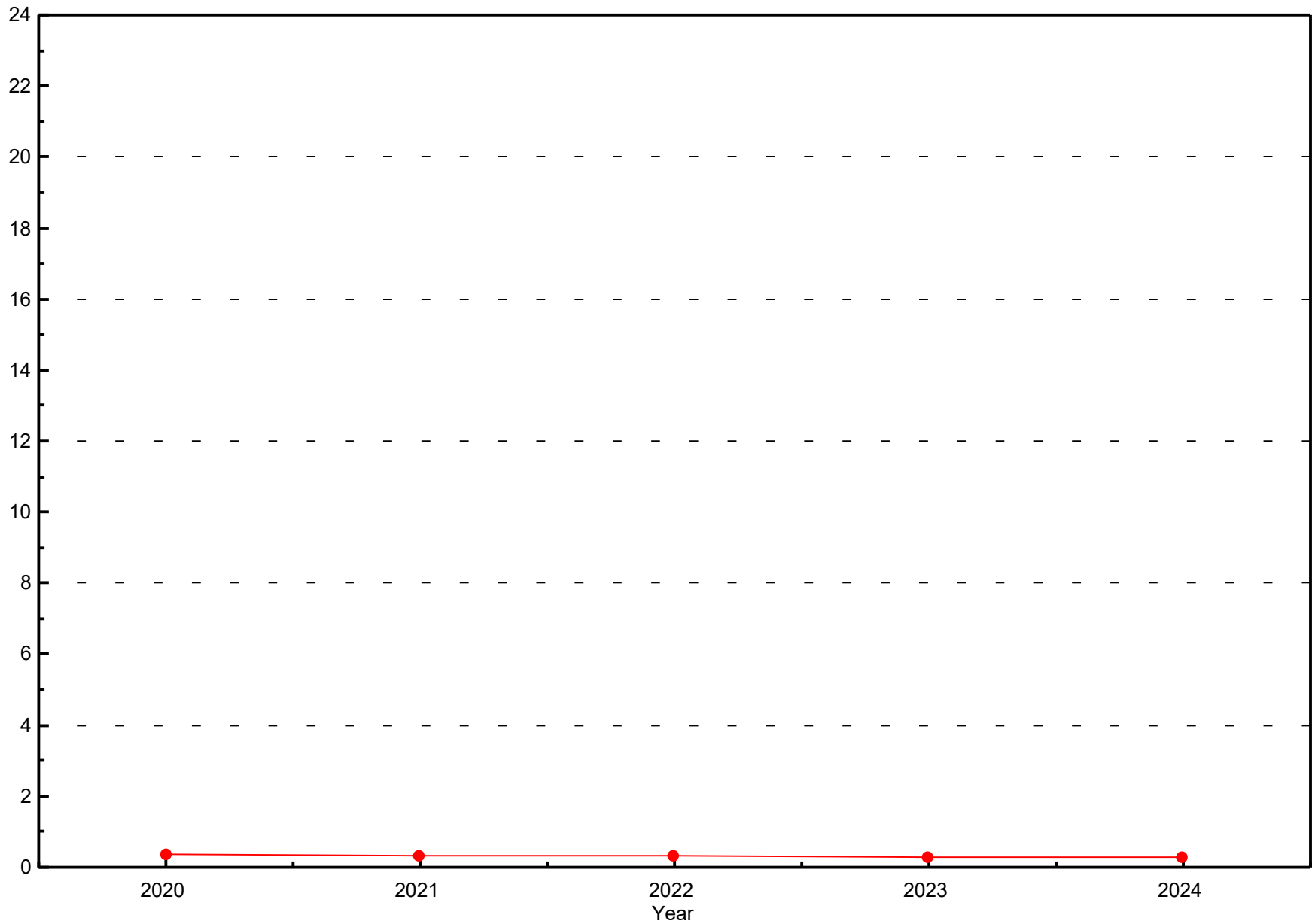




Yearly Averages

Nitric Oxide (NO) - ppb

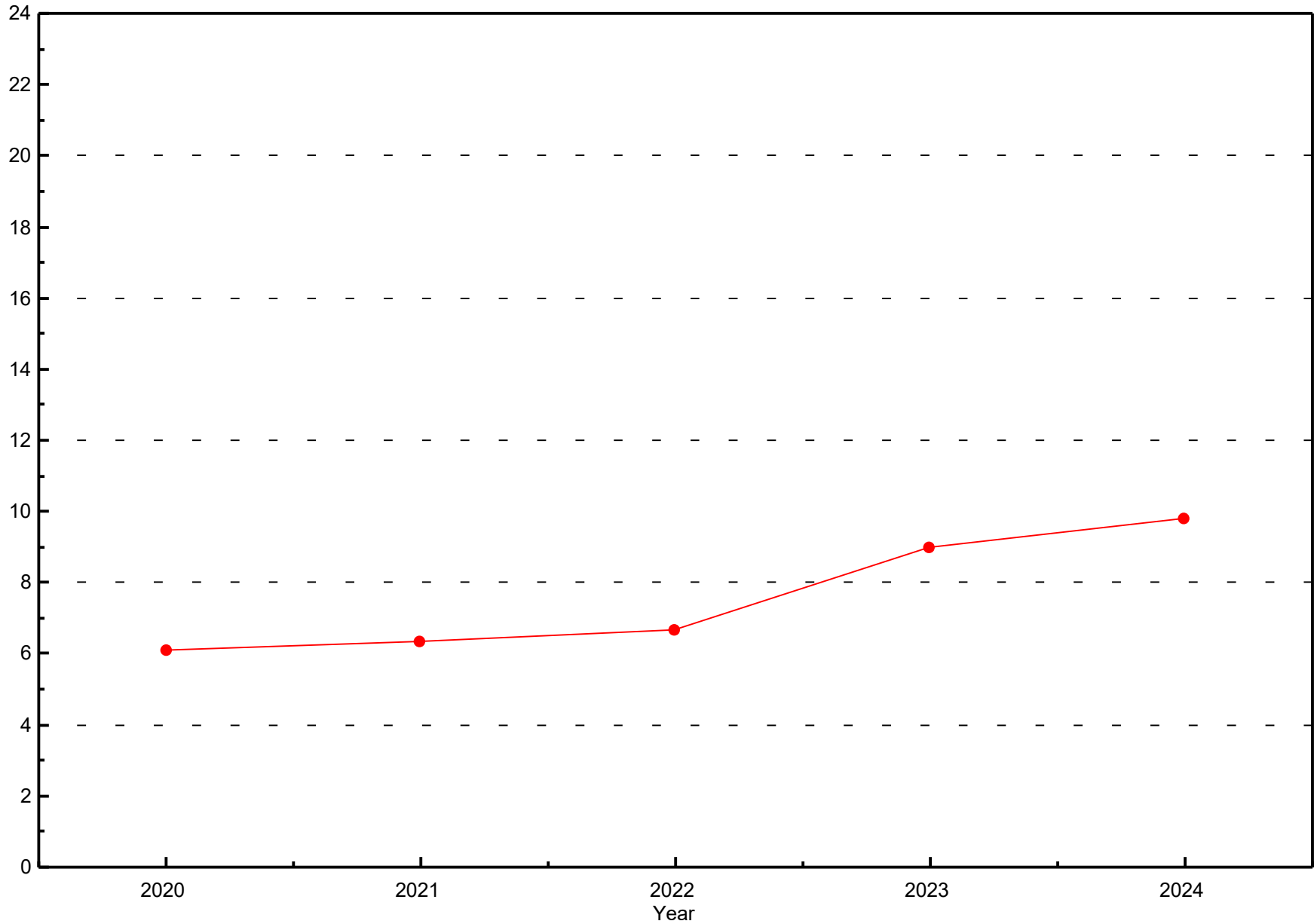
Janvier (2020 to 2024)





Yearly Averages

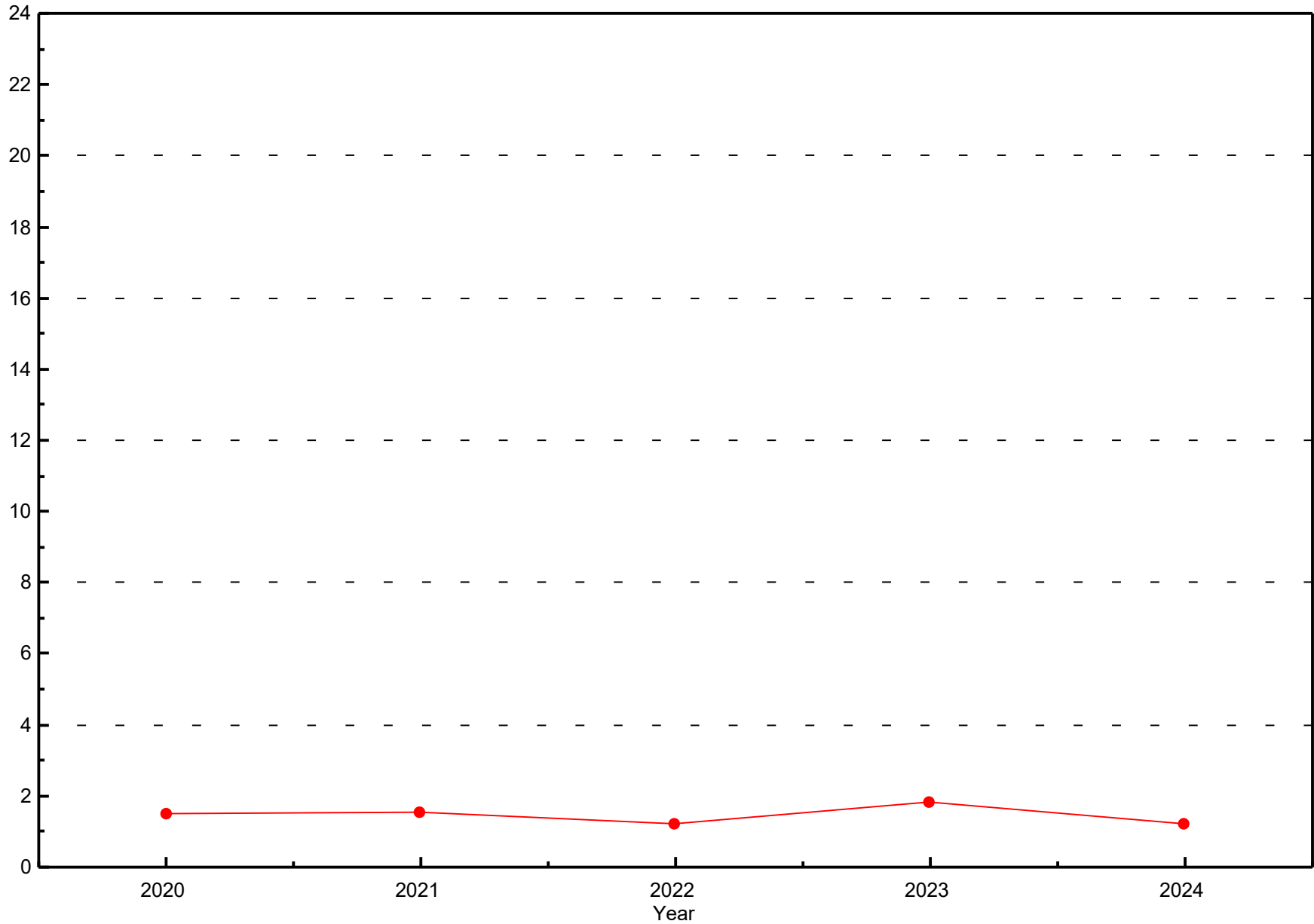
Nitric Oxide (NO) - ppb
Fort Hills (2020 to 2024)





Yearly Averages

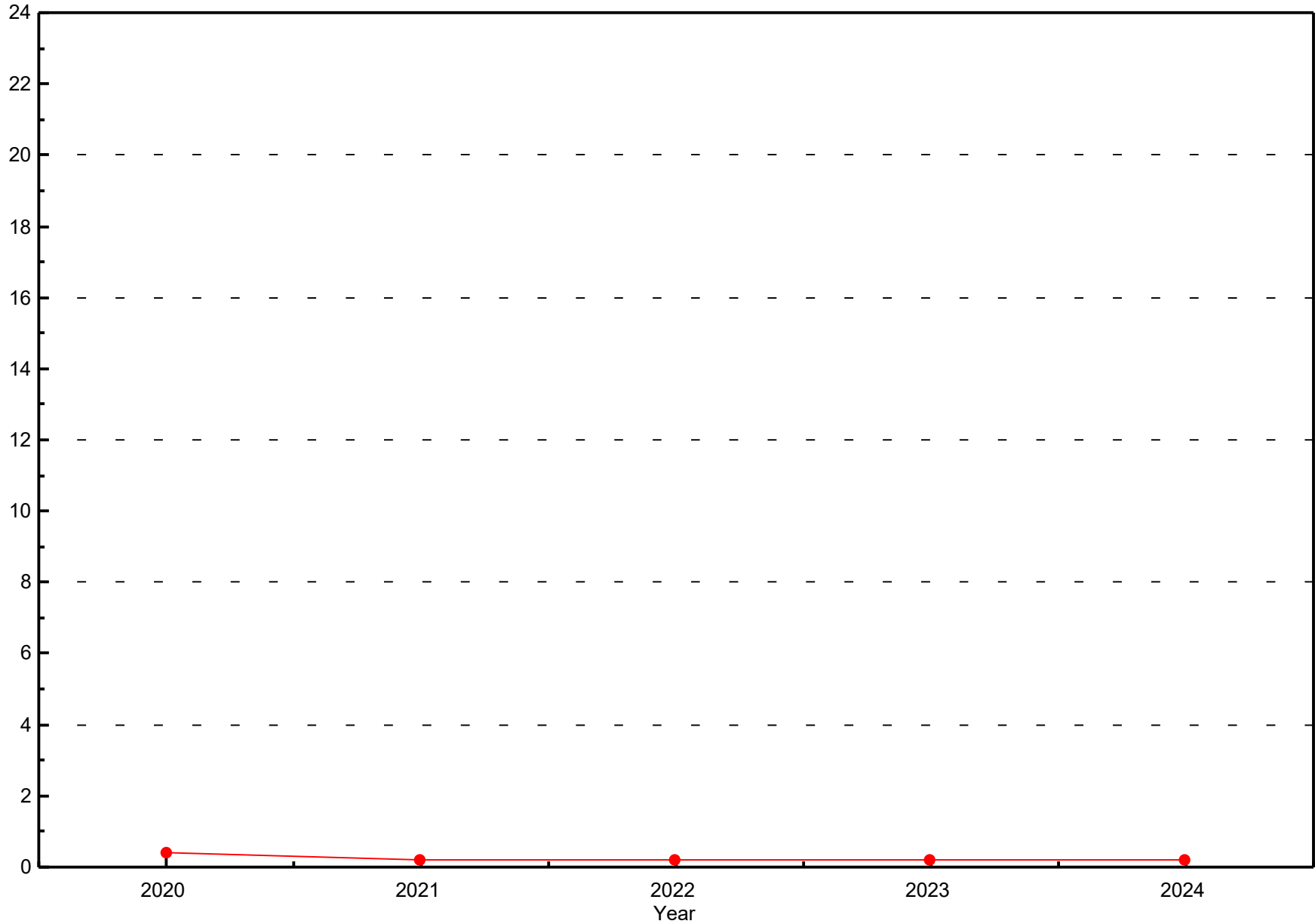
Nitric Oxide (NO) - ppb
Christina Lake (2020 to 2024)





Yearly Averages

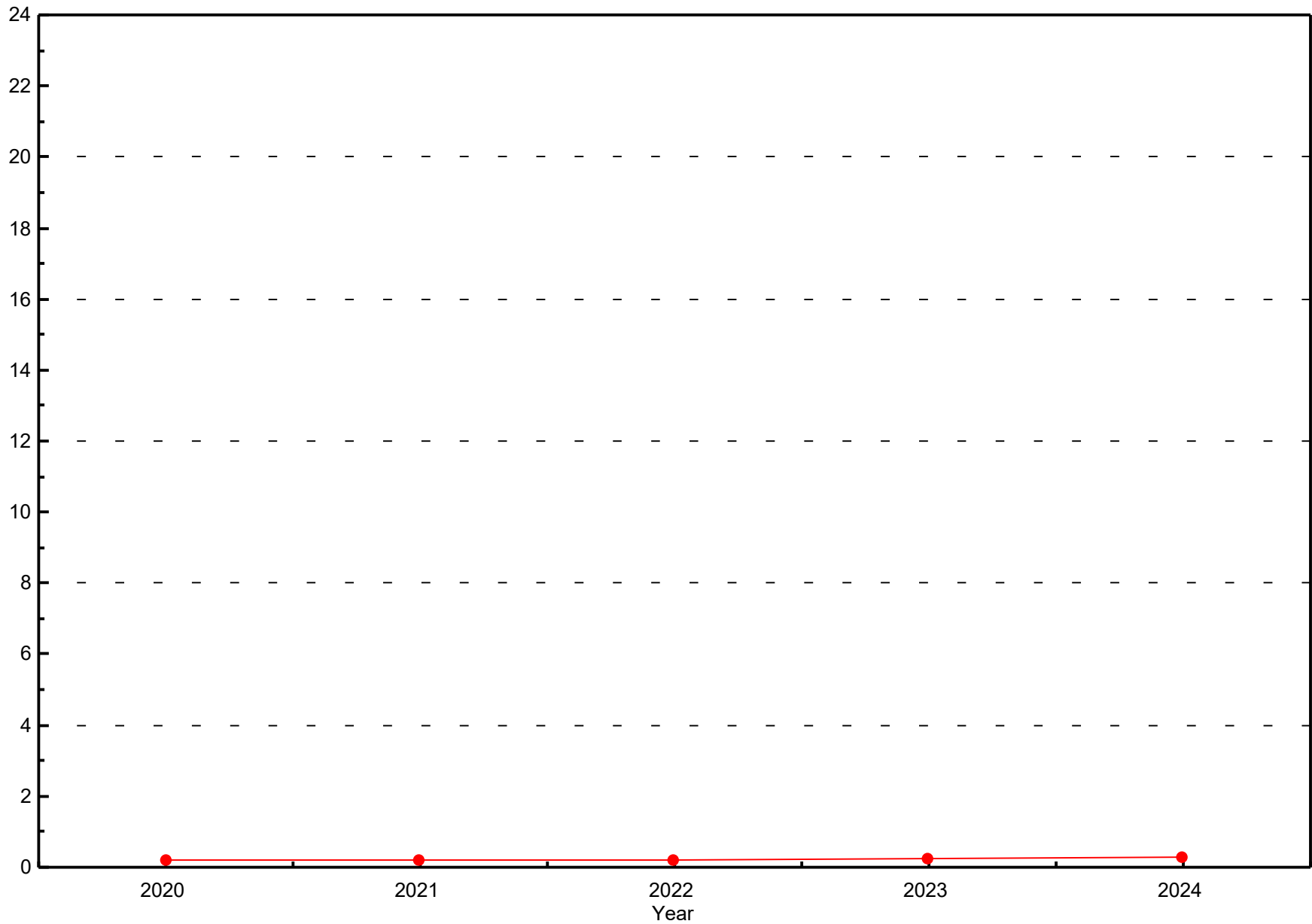
Nitric Oxide (NO) - ppb
Jackfish 2/3 (2020 to 2024)





Yearly Averages

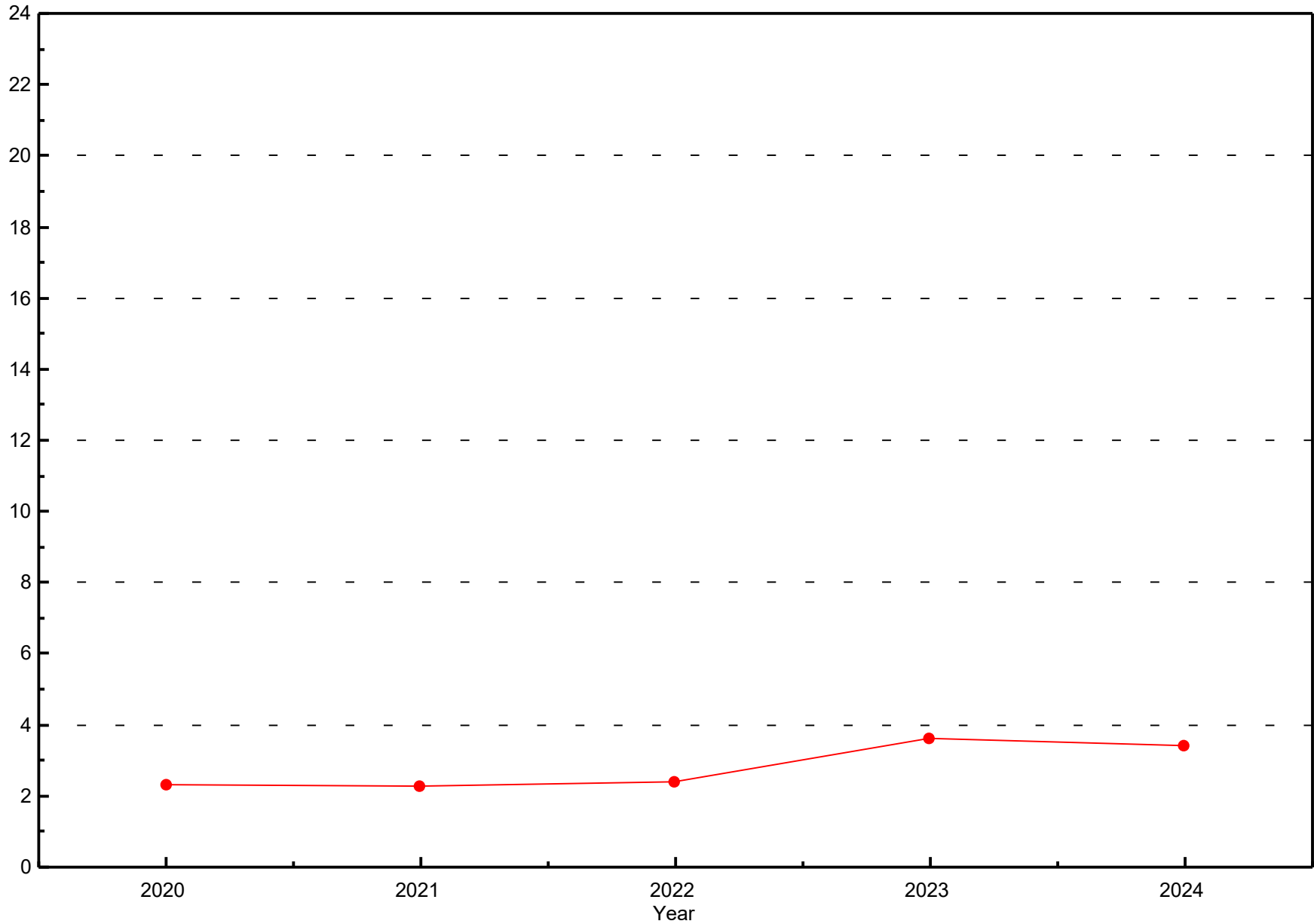
Nitric Oxide (NO) - ppb
Surmont 2 (2020 to 2024)





Yearly Averages

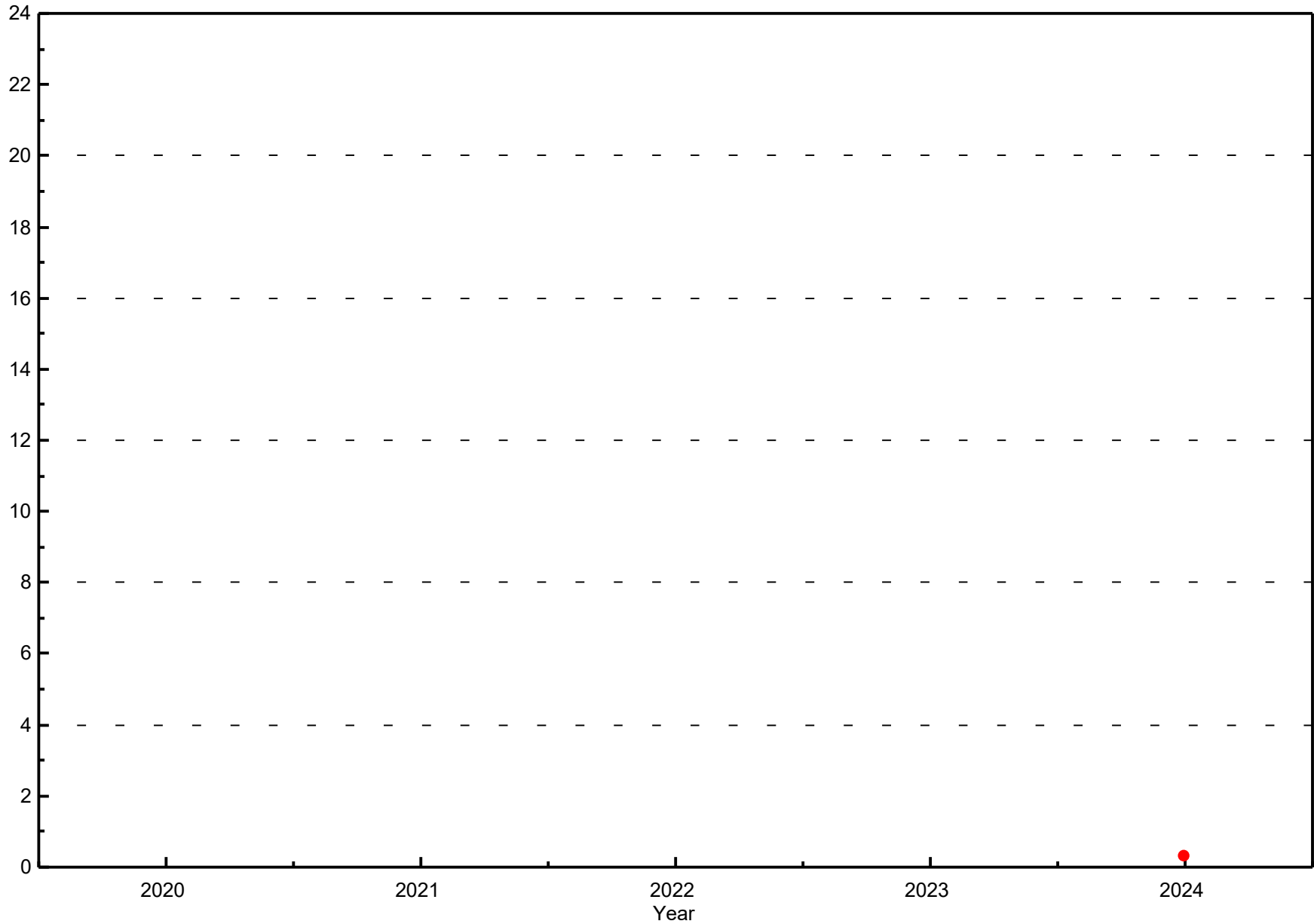
Nitric Oxide (NO) - ppb
Ells River (2020 to 2024)





Yearly Averages

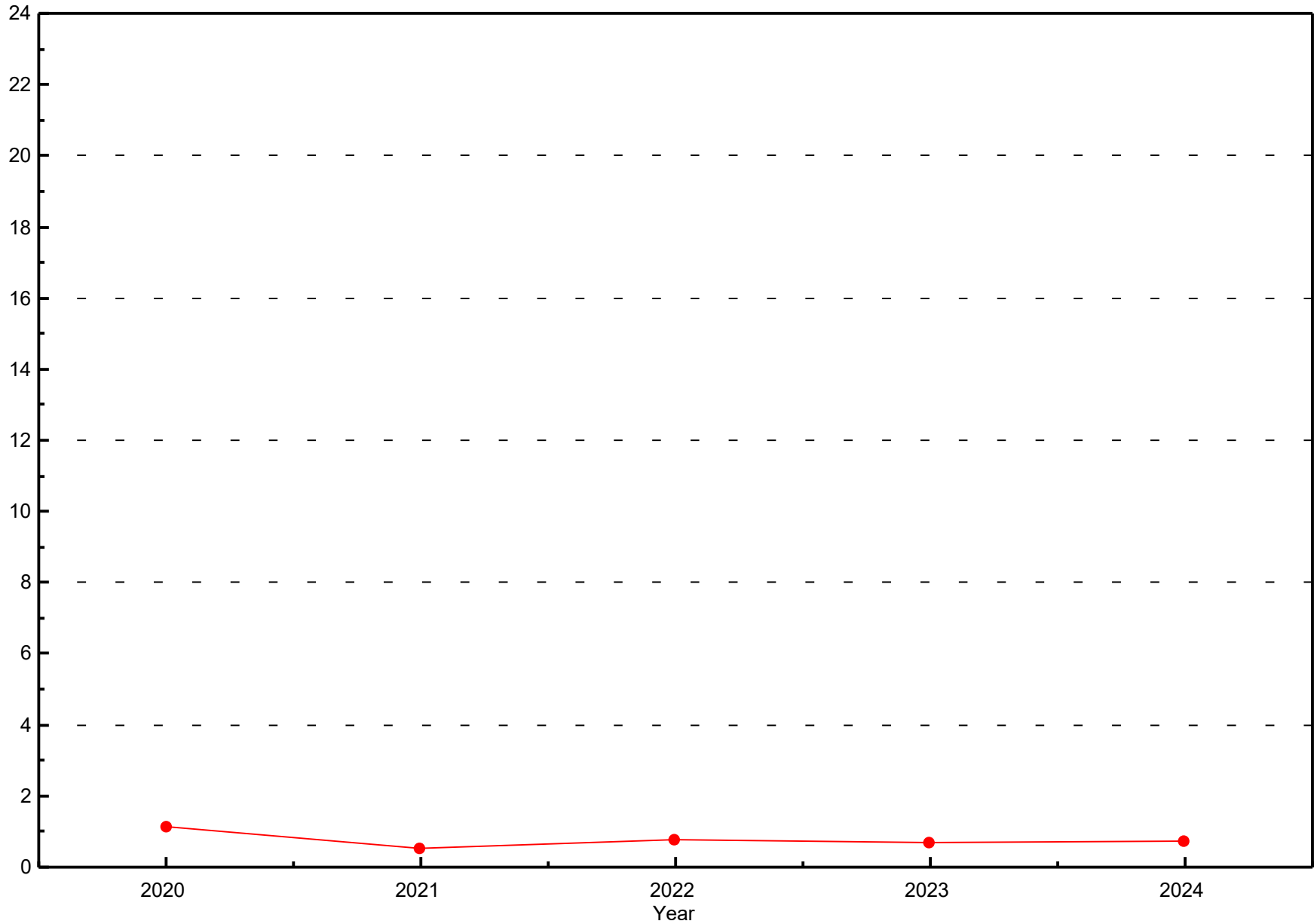
Nitric Oxide (NO) - ppb
Monday Creek (2020 to 2024)





Yearly Averages

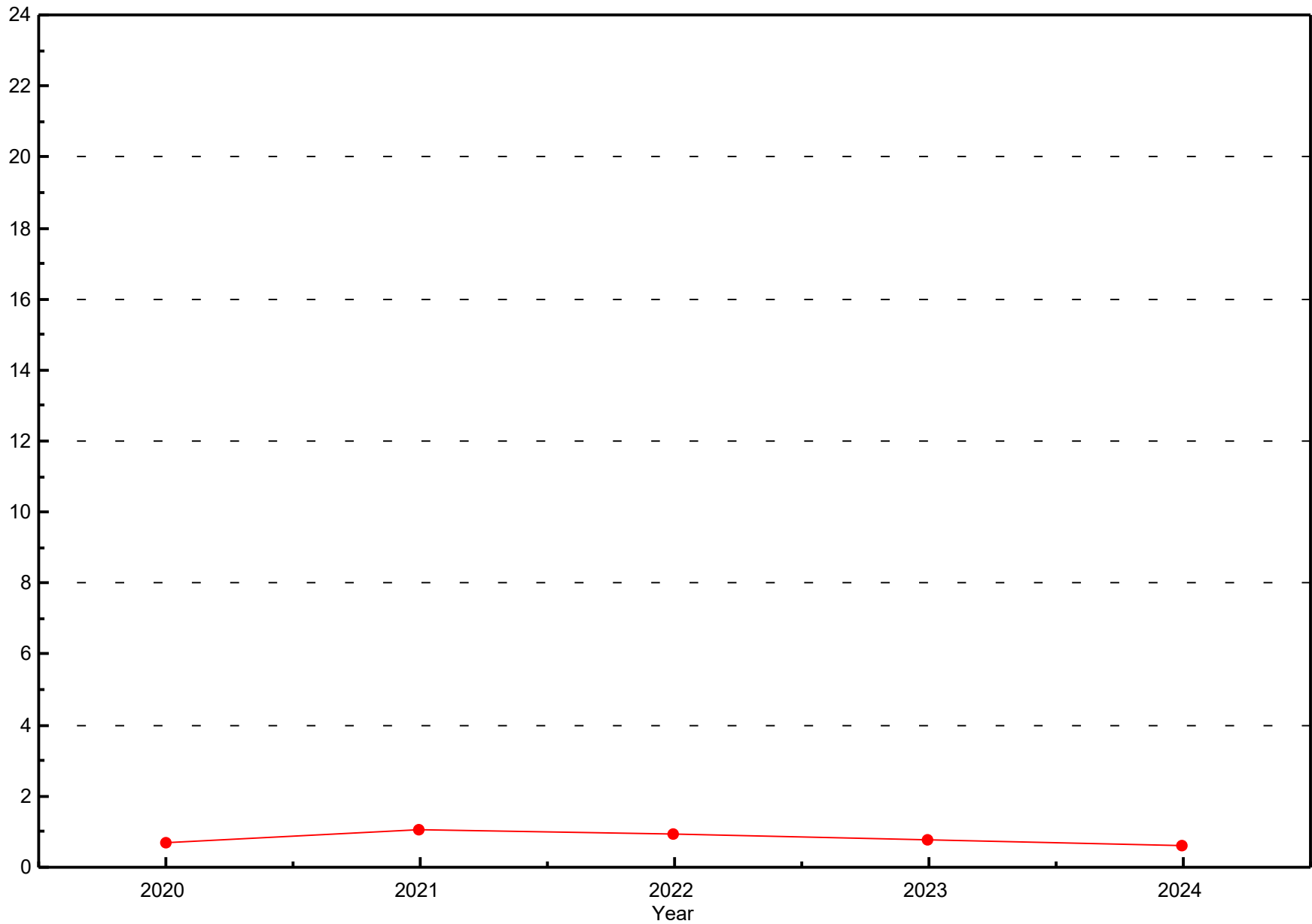
Nitric Oxide (NO) - ppb
Leismer (2020 to 2024)





Yearly Averages

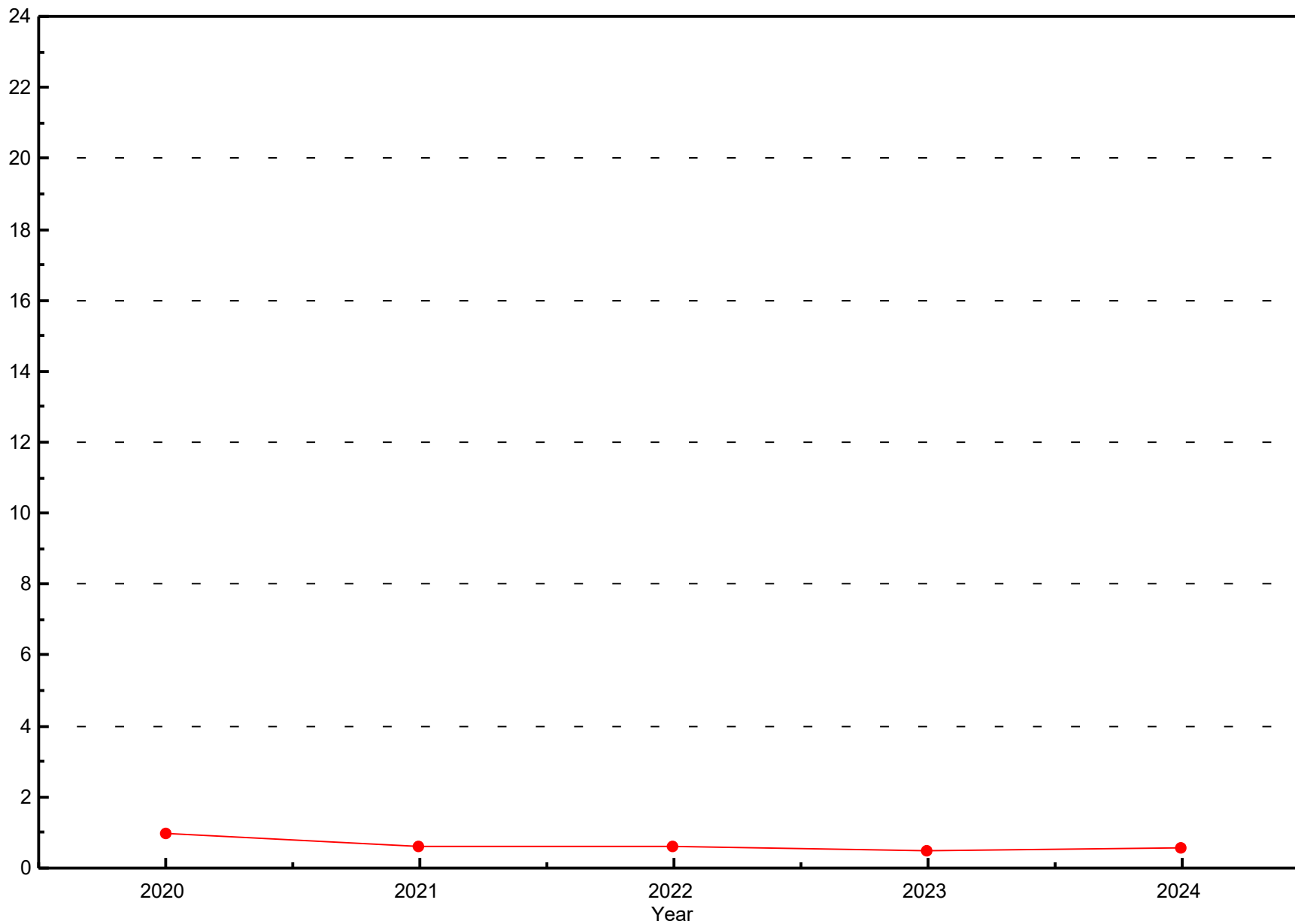
Nitric Oxide (NO) - ppb
Sawbones Bay (2020 to 2024)





Yearly Averages

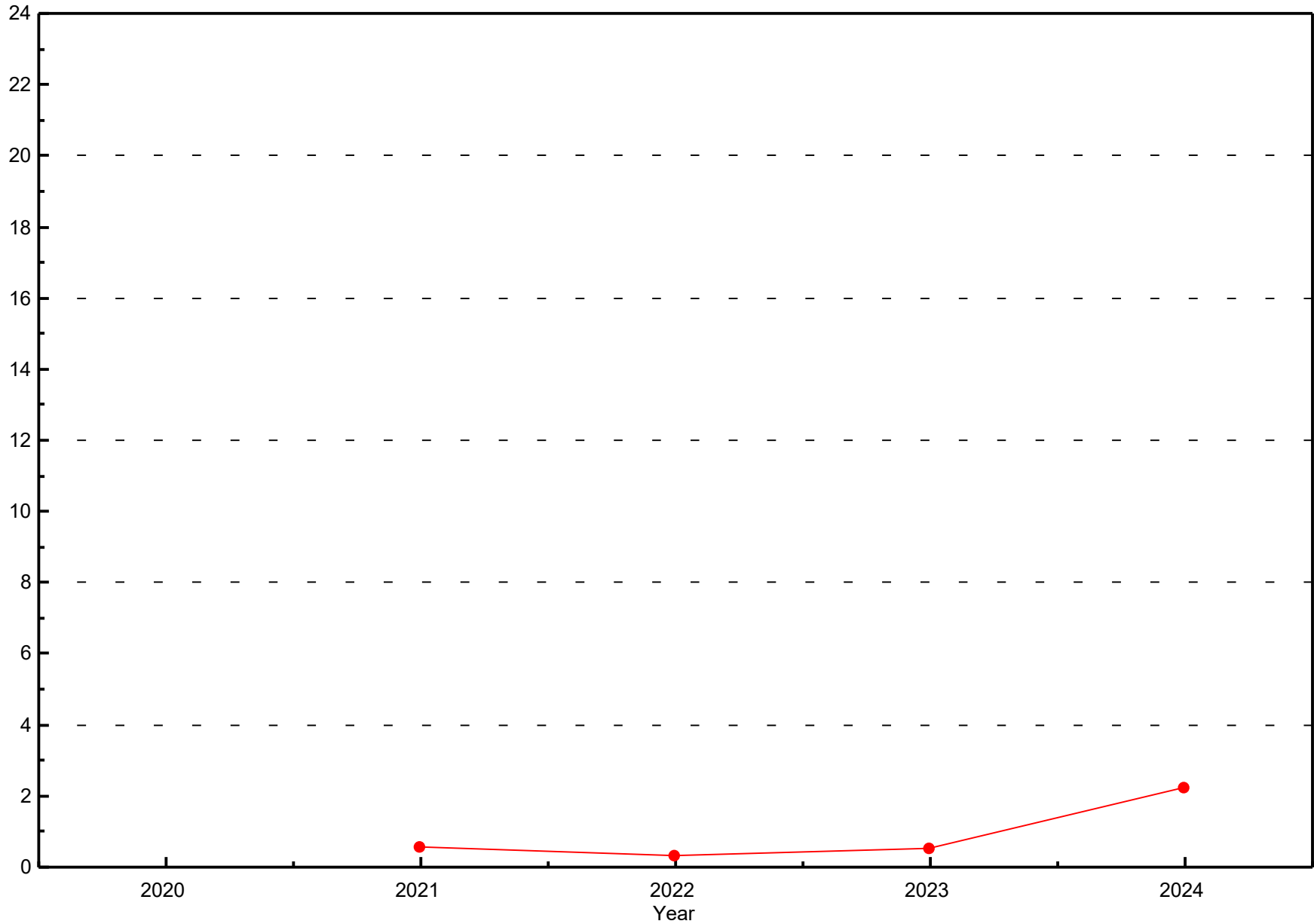
Nitric Oxide (NO) - ppb
Jackfish 1 (2020 to 2024)





Yearly Averages

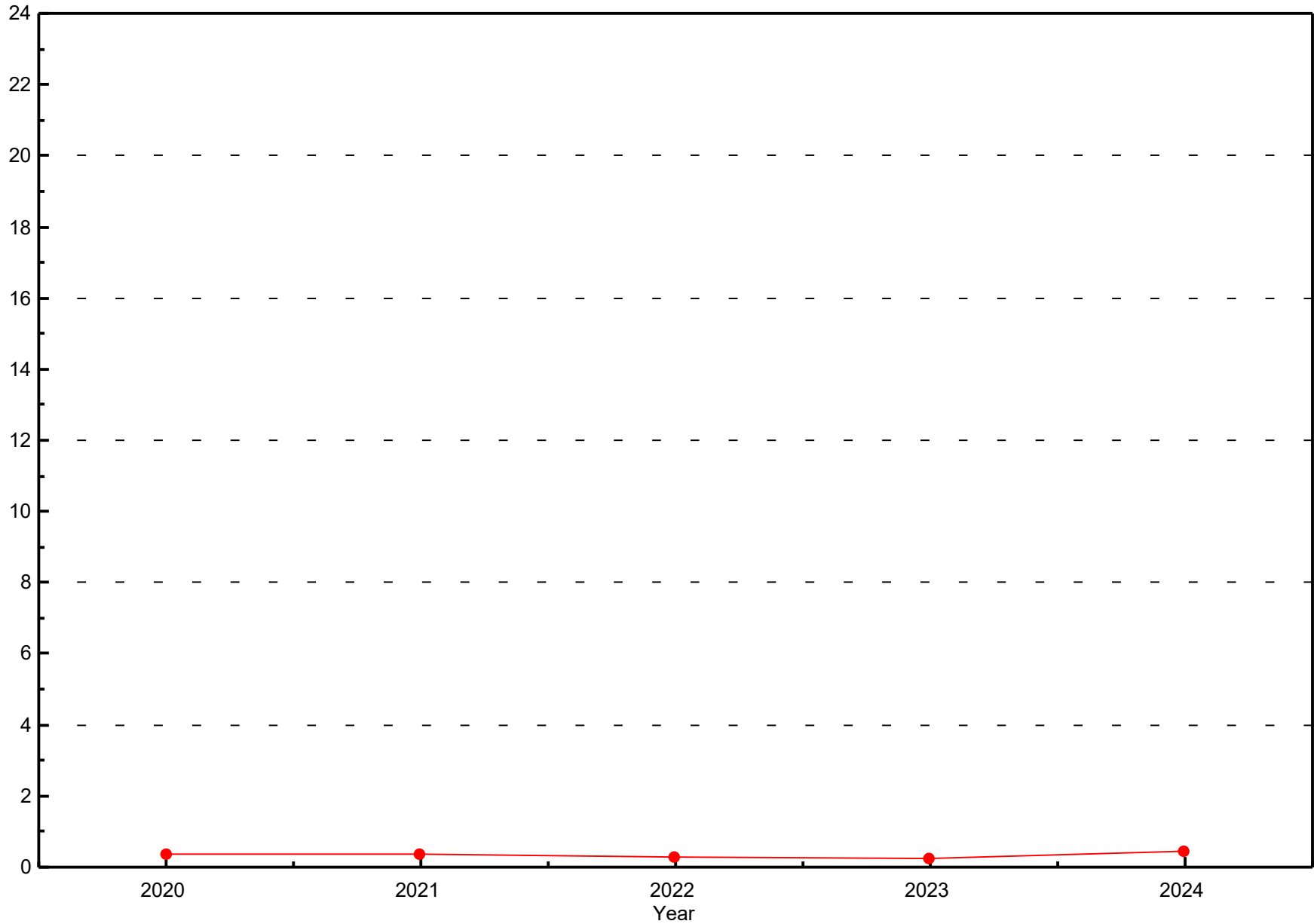
Nitric Oxide (NO) - ppb
Kirby South (2020 to 2024)





Yearly Averages

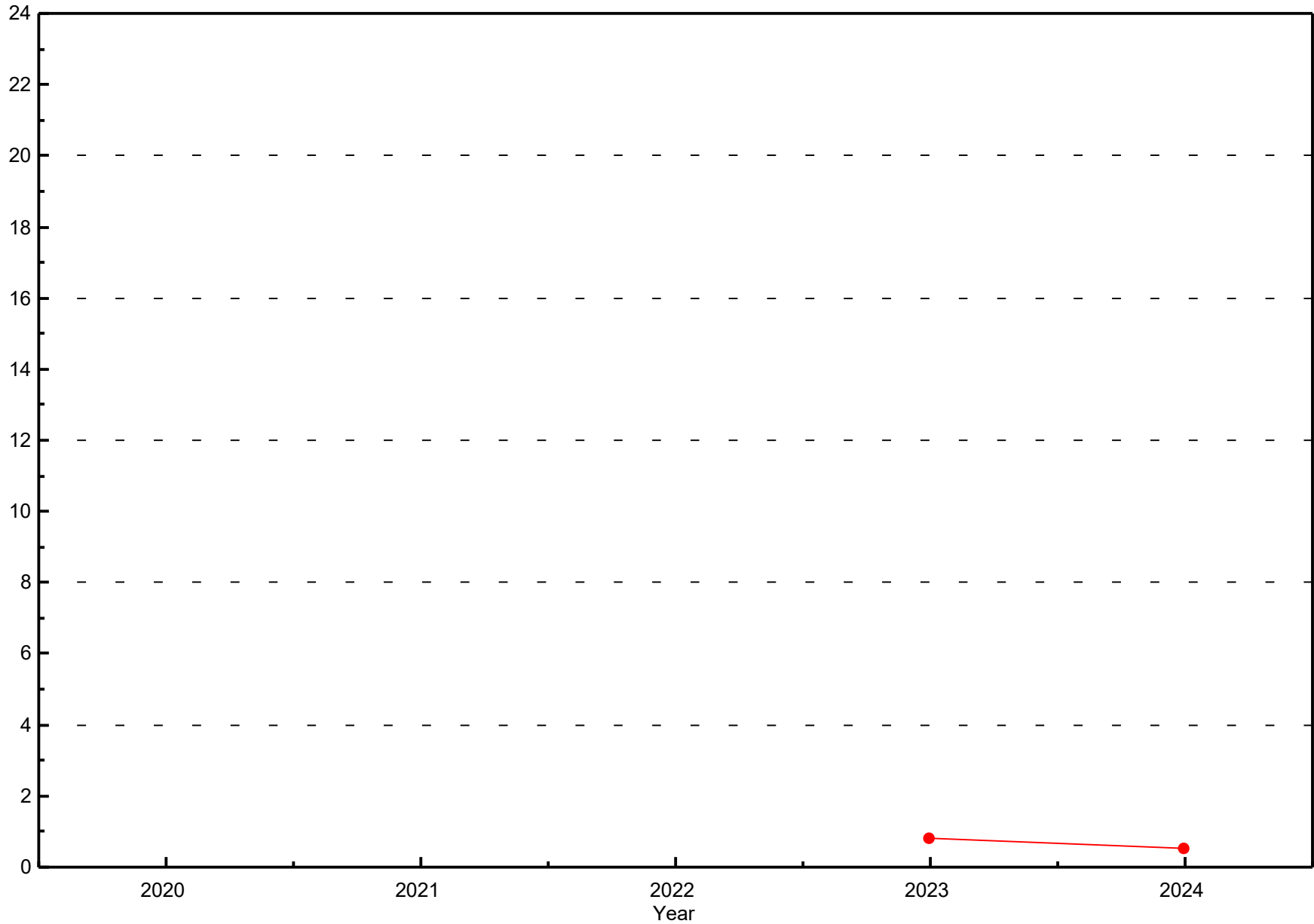
Nitric Oxide (NO) - ppb
Kirby North (2020 to 2024)





Yearly Averages

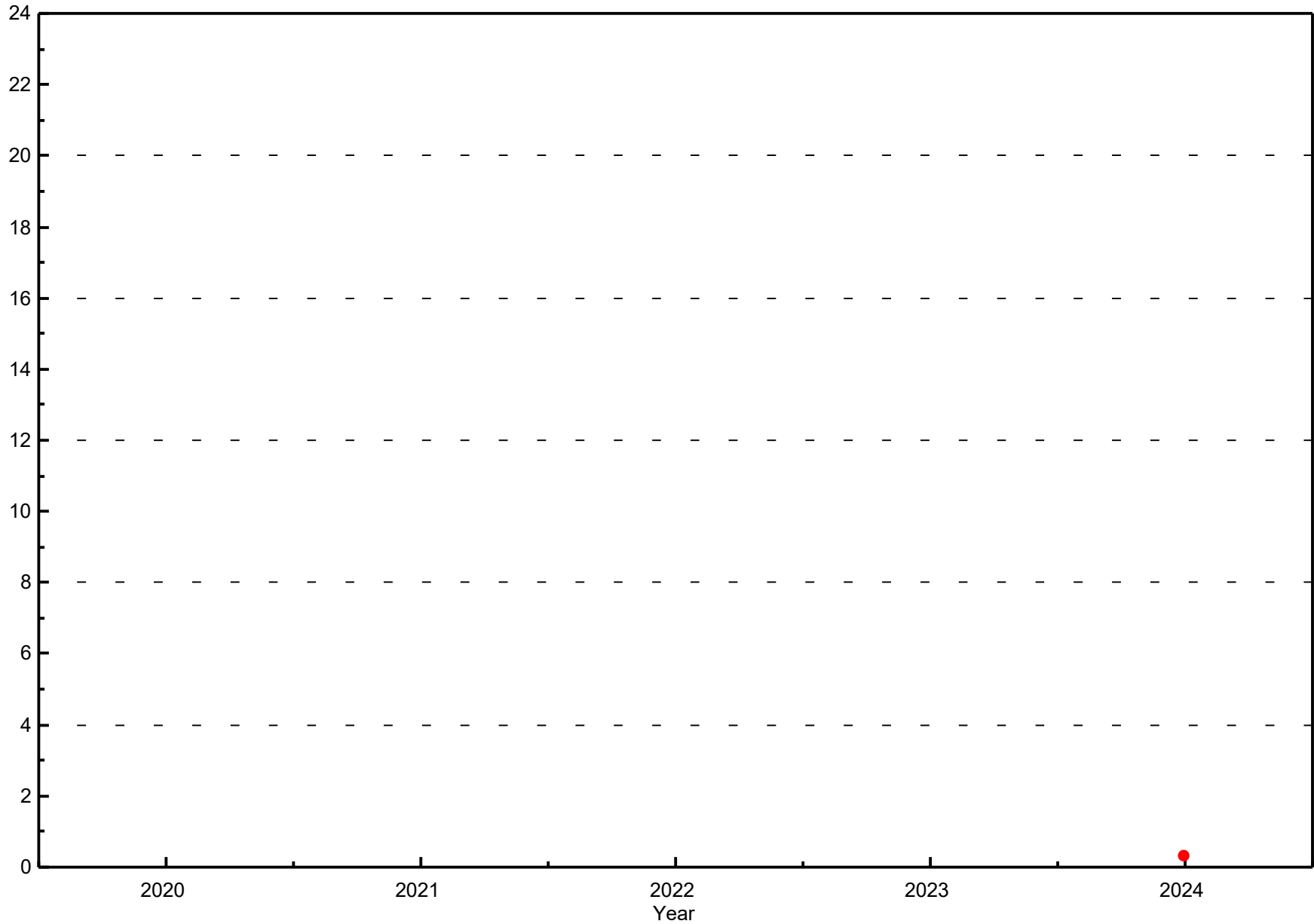
Nitrogen Oxide (NO) - ppb
Blackgold (2020 to 2024)





Yearly Averages

Nitric Oxide (NO) - ppb
Hangingstone Expansion (2020 to 2024)



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY MONITORING PROGRAM ANNUAL REPORT

OZONE ANNUAL 2024

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

March 2025



Wood Buffalo Environmental Association - Fort McKay - Bertha Ganter (AMS01)
Annual Summary for the Year 2024
Ozone (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value
January	100	710	13.1	39.5	0	24.9
February	100	662	16.2	41.1	0	28.3
March	100	708	25.6	40.5	0	34.5
April	100	685	26.6	47.2	0	36.5
May	100	708	24.1	48.1	0	36.5
June	99	679	20.8	53.6	0	39.4
July	99	698	19.3	66.4	0	27.3
August	100	706	18.7	56.9	0	33.1
September	100	684	15.0	42.6	0	21.6
October	100	709	16.2	35.5	0	26.8
November	100	685	13.3	33.2	0	30.3
December	100	709	11.3	31.9	0	26.4
Annual	100	8343	18.3	66.4	0	39.4



Wood Buffalo Environmental Association - Buffalo Viewpoint (AMS04)
Annual Summary for the Year 2024
Ozone (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value
January	100	710	21.9	48.3	0	37.2
February	100	663	23.7	45.7	0	38.4
March	100	710	34.1	50.2	0	43.2
April	100	684	35.2	57.2	0	48.1
May	100	708	30.5	57.7	0	40.3
June	100	687	26.7	61.0	0	48.6
July	100	707	25.1	77.5	1	38.2
August	100	709	24.3	58.9	0	39.8
September	100	684	20.5	41.9	0	28.3
October	100	706	22.7	37.0	0	31.8
November	100	685	18.3	38.2	0	30.7
December	100	708	18.8	34.7	0	31.1
Annual	100	8361	25.2	77.5	1	48.6



Wood Buffalo Environmental Association - Patricia McInnes (AMS06)
Annual Summary for the Year 2024
Ozone (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value
January	100	707	20.7	47.8	0	37.0
February	100	659	24.6	45.4	0	39.9
March	100	708	33.6	50.6	0	43.1
April	96	660	36.8	57.6	0	47.2
May	95	676	33.5	59.3	0	43.4
June	98	674	30.1	62.7	0	51.7
July	100	706	28.5	95.7	7	49.3
August	100	707	25.5	61.2	0	39.8
September	100	685	21.5	46.9	0	29.8
October	100	709	23.7	40.0	0	31.5
November	100	685	18.9	39.3	0	32.9
December	100	708	19.7	37.1	0	31.8
Annual	99	8284	26.4	95.7	7	51.7



Wood Buffalo Environmental Association - Athabasca Valley (AMS07)
Annual Summary for the Year 2024
Ozone (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value
January	100	707	19.1	46.3	0	30.8
February	100	660	21.1	44.5	0	32.6
March	100	709	32.3	49.4	0	41.6
April	100	685	34.5	58.0	0	42.8
May	94	664	33.0	58.8	0	42.3
June	100	681	28.5	62.9	0	44.2
July	100	705	27.5	106.2	7	47.0
August	100	706	23.4	61.0	0	33.0
September	100	686	18.8	47.1	0	25.9
October	100	709	21.1	39.5	0	29.7
November	100	683	17.2	37.4	0	31.9
December	100	710	16.4	34.4	0	29.3
Annual	99	8305	24.4	106.2	7	47.0



Wood Buffalo Environmental Association - Fort Chipewyan (AMS08)
Annual Summary for the Year 2024
Ozone (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value
January	100	709	28.5	40.7	0	36.8
February	98	648	31.1	44.2	0	40.0
March	99	706	37.4	48.3	0	44.0
April	100	687	37.5	54.1	0	44.1
May	100	710	34.9	50.2	0	44.5
June	100	687	32.2	70.2	0	54.8
July	100	710	28.2	74.0	0	39.8
August	100	709	28.7	74.9	0	46.9
September	100	686	23.7	51.5	0	30.2
October	100	708	25.5	37.3	0	32.2
November	100	687	23.1	34.8	0	32.7
December	96	681	24.2	38.4	0	32.4
Annual	99	8328	29.6	74.9	0	54.8



Wood Buffalo Environmental Association - Fort McKay South (AMS13)
Annual Summary for the Year 2024
Ozone (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value
January	100	709	13.5	42.7	0	26.1
February	100	663	16.5	44.2	0	28.9
March	100	708	26.5	43.7	0	37.1
April	100	686	27.6	50.0	0	37.5
May	100	708	24.8	53.0	0	39.4
June	99	681	22.1	58.3	0	37.9
July	99	705	19.9	66.1	0	28.9
August	100	709	18.4	57.4	0	30.3
September	100	686	14.9	39.3	0	21.3
October	100	708	15.3	35.4	0	26.2
November	100	687	13.5	33.9	0	30.7
December	100	709	11.6	32.3	0	28.6
Annual	100	8359	18.7	66.1	0	39.4



Wood Buffalo Environmental Association - Anzac (AMS14)
Annual Summary for the Year 2024
Ozone (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value
January	100	710	24.7	46.8	0	38.2
February	100	662	28.2	44.3	0	39.7
March	100	710	35.9	49.5	0	42.9
April	97	665	36.4	55.7	0	47.6
May	100	708	32.1	55.5	0	41.9
June	100	686	27.4	60.1	0	48.2
July	98	697	24.5	64.1	0	44.2
August	100	709	21.9	50.9	0	33.5
September	99	682	19.7	49.4	0	27.6
October	100	708	23.1	37.1	0	31.8
November	99	682	21.0	37.6	0	32.4
December	99	705	22.1	37.5	0	35.1
Annual	99	8324	26.4	64.1	0	48.2



Wood Buffalo Environmental Association - Wapasu (AMS17)
Annual Summary for the Year 2024
Ozone (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value
January	100	709	27.2	45.2	0	37.6
February	100	661	29.4	45.3	0	41.5
March	100	709	38.4	49.3	0	46.1
April	100	686	37.9	56.3	0	48.4
May	100	709	34.7	53.8	0	44.9
June	99	681	29.9	66.7	0	55.6
July	96	671	30.2	69.6	0	43.7
August	100	709	31.0	70.1	0	49.7
September	100	685	27.1	55.6	0	36.4
October	100	709	26.8	42.6	0	37.4
November	100	686	24.9	38.9	0	35.8
December	100	708	26.5	40.2	0	36.6
Annual	100	8323	30.3	70.1	0	55.6



Wood Buffalo Environmental Association - Stony Mountain (AMS18)
Annual Summary for the Year 2024
Ozone (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value
January	100	708	27.6	46.4	0	40.0
February	100	661	31.2	44.6	0	40.3
March	100	709	36.8	49.4	0	43.0
April	100	684	39.2	56.3	0	49.8
May	100	709	32.6	53.4	0	45.5
June	100	685	29.8	56.1	0	50.2
July	99	703	27.5	53.6	0	42.0
August	100	709	25.3	48.9	0	36.3
September	92	630	25.4	53.4	0	39.8
October	100	707	25.8	41.4	0	32.3
November	100	682	24.3	40.3	0	33.9
December	100	710	25.3	35.3	0	32.5
Annual	99	8297	29.3	56.3	0	50.2



Wood Buffalo Environmental Association - Conklin (AMS21)
Annual Summary for the Year 2024
Ozone (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value
January	95	676	25.6	48.8	0	36.7
February	100	663	28.7	46.1	0	39.9
March	100	707	34.8	51.6	0	41.5
April	100	683	34.5	59.3	0	43.3
May	100	708	29.3	56.0	0	42.5
June	100	684	29.2	64.1	0	45.5
July	100	708	25.4	61.9	0	41.3
August	100	707	21.9	53.7	0	33.3
September	100	682	21.8	55.2	0	33.6
October	98	694	23.4	45.1	0	30.7
November	95	648	21.6	39.3	0	31.7
December	100	709	23.1	38.4	0	33.3
Annual	99	8269	26.6	64.1	0	45.5



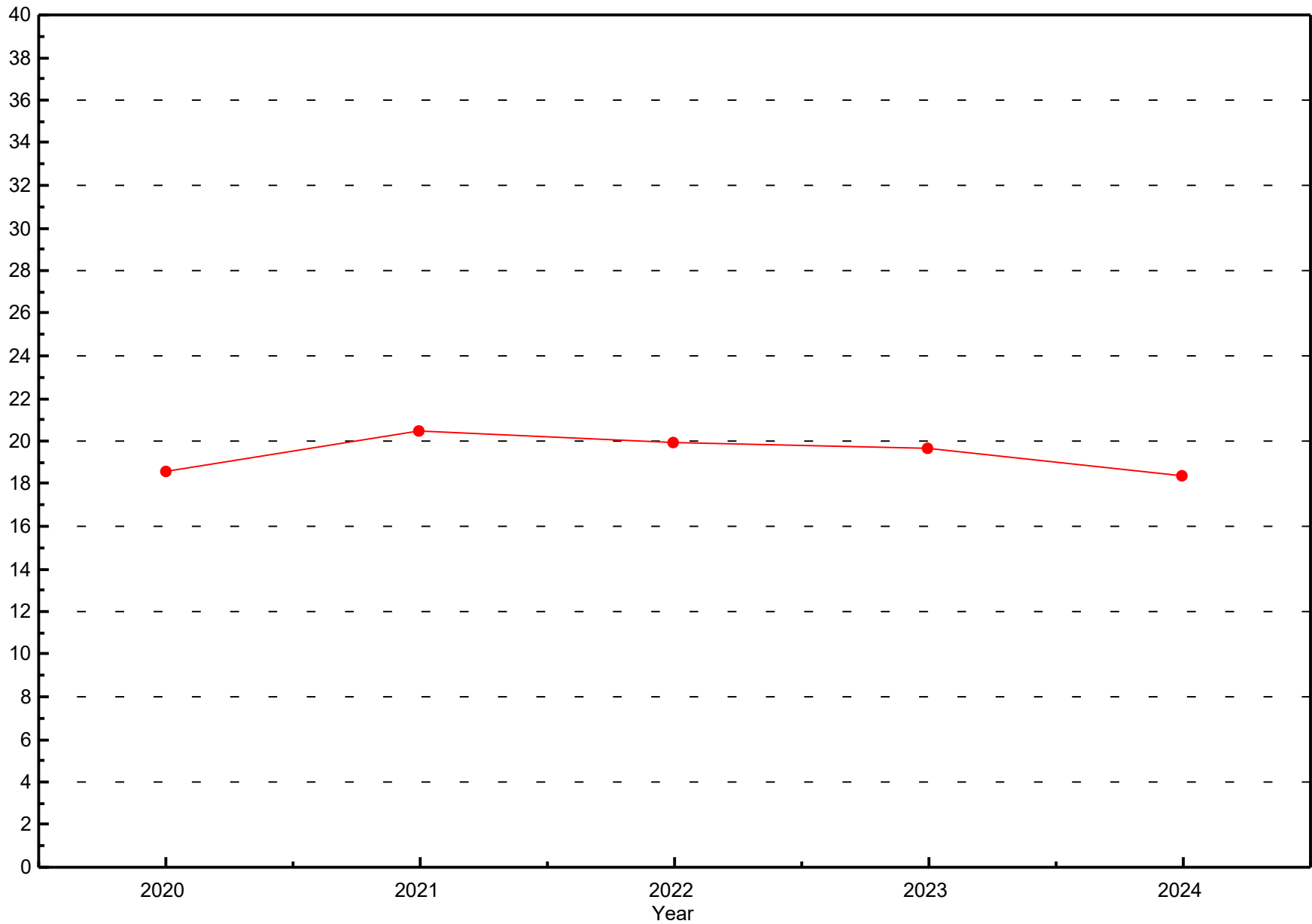
Wood Buffalo Environmental Association - Janvier (AMS22)
Annual Summary for the Year 2024
Ozone (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value
January	100	708	28.5	52.7	0	42.9
February	100	663	32.5	49.6	0	43.5
March	100	709	40.4	55.7	0	46.9
April	100	687	41.9	61.4	0	53.3
May	100	709	34.3	60.0	0	47.9
June	100	685	29.9	67.3	0	51.7
July	99	705	24.8	59.6	0	38.7
August	100	709	21.7	52.7	0	32.9
September	100	686	21.9	51.5	0	33.8
October	100	709	24.9	43.4	0	32.8
November	95	653	24.9	42.0	0	36.1
December	100	709	24.4	40.3	0	34.6
Annual	99	8332	29.2	67.3	0	53.3



Yearly Averages

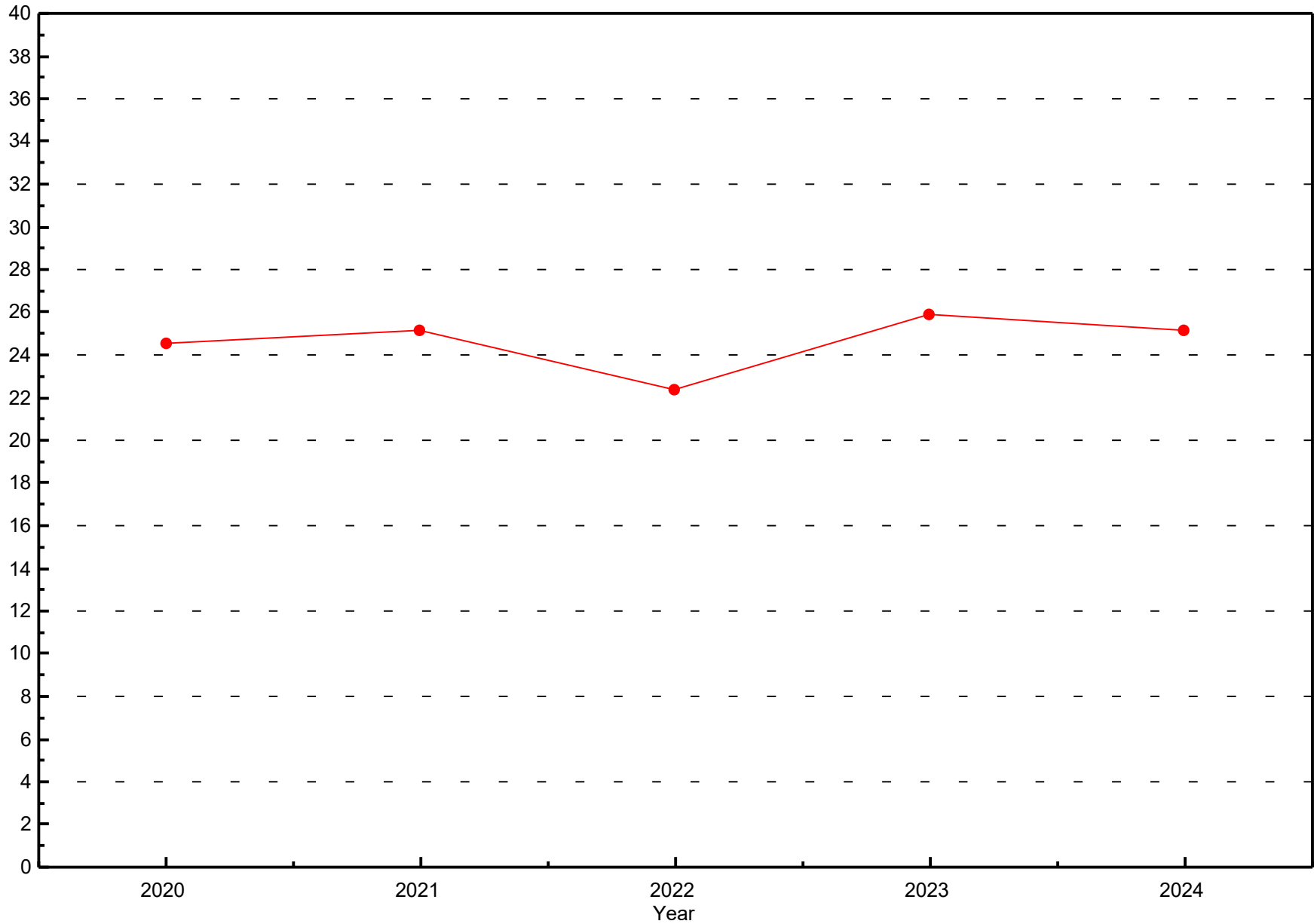
Ozone (O₃) - ppb
Fort McKay - Bertha Ganter (2020 to 2024)





Yearly Averages

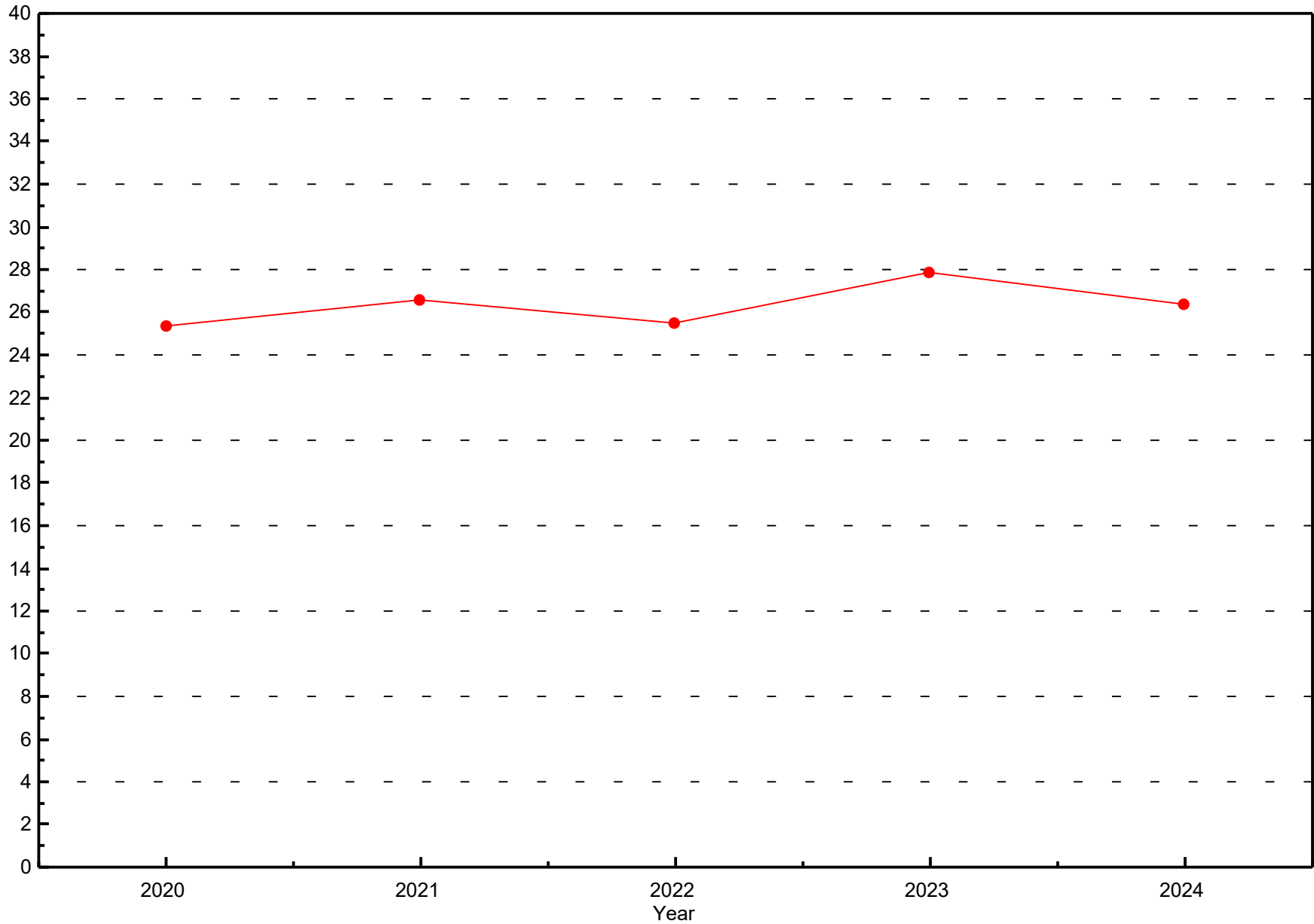
Ozone (O₃) - ppb
Buffalo Viewpoint (2020 to 2024)





Yearly Averages

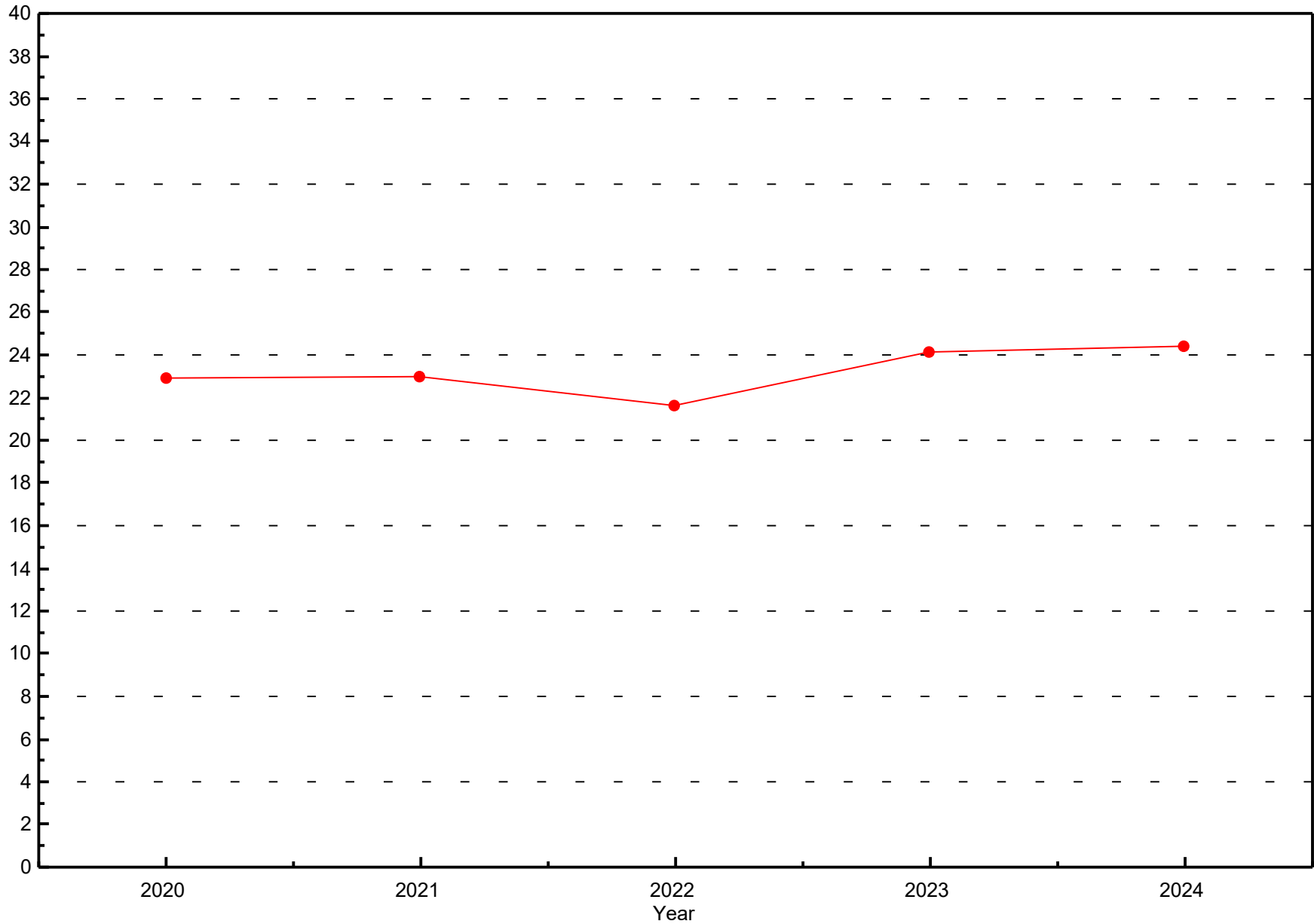
Ozone (O₃) - ppb
Patricia McInnes (2020 to 2024)





Yearly Averages

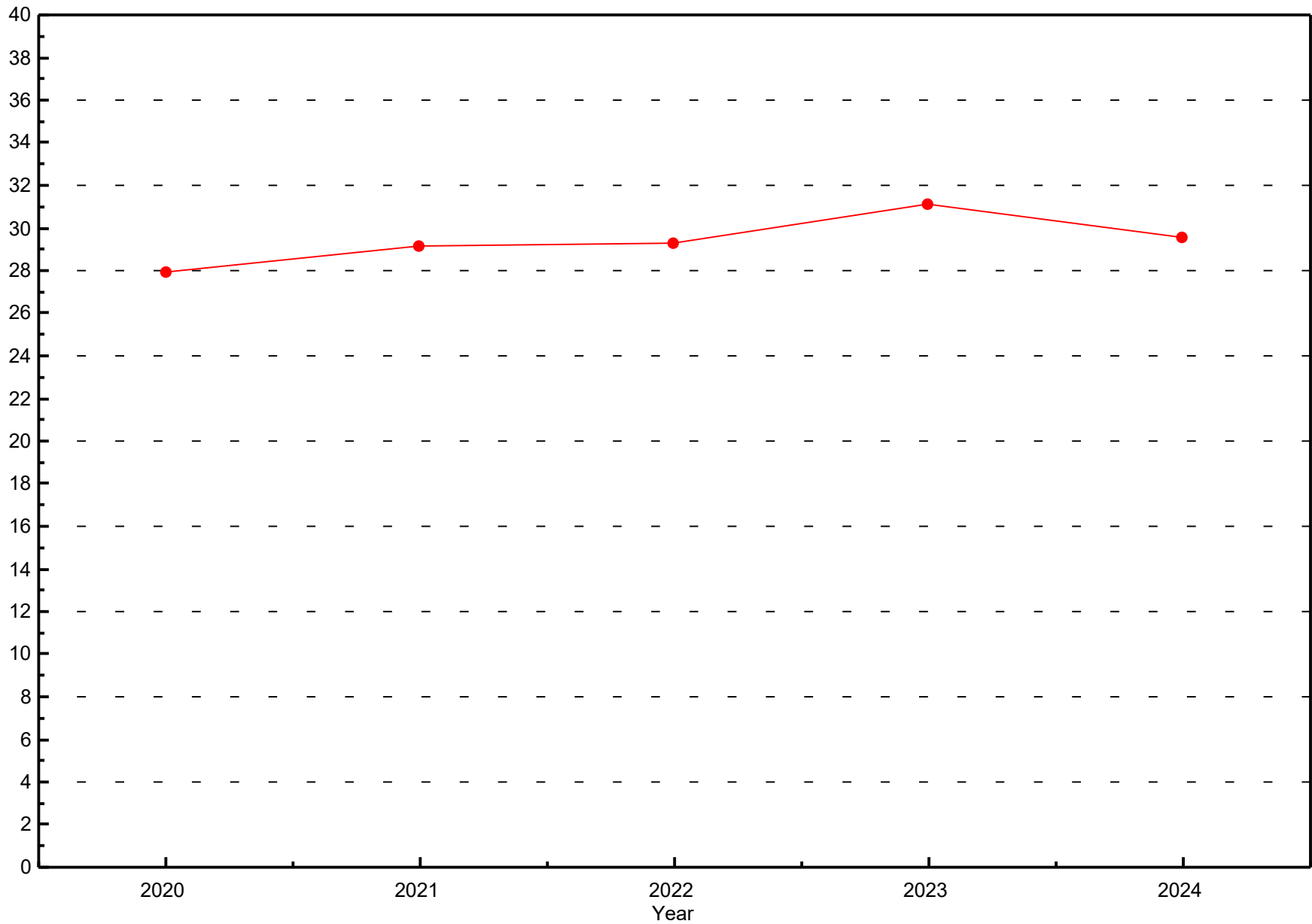
Ozone (O₃) - ppb
Athabasca Valley (2020 to 2024)





Yearly Averages

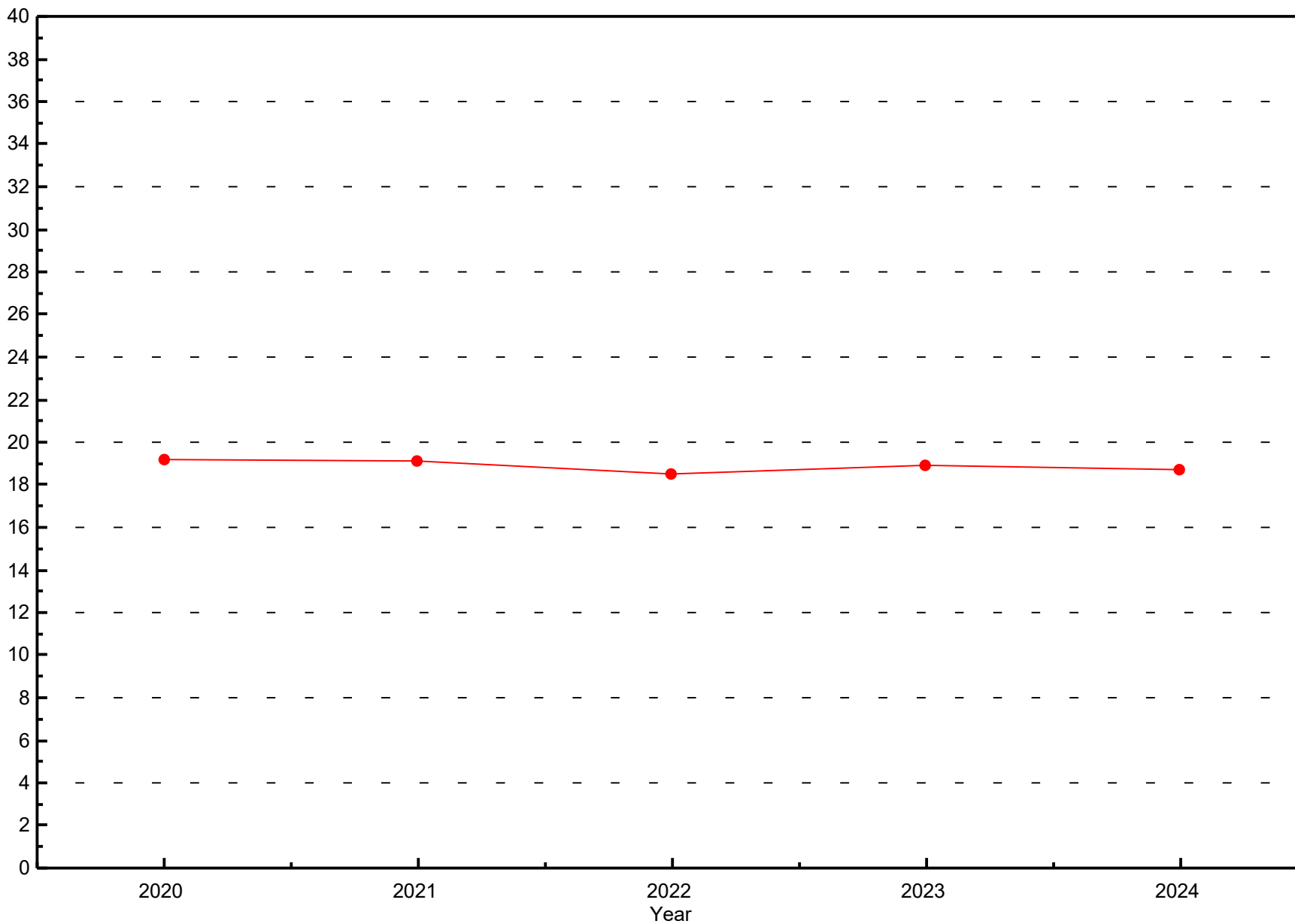
Ozone (O₃) - ppb
Fort Chipewyan (2020 to 2024)





Yearly Averages

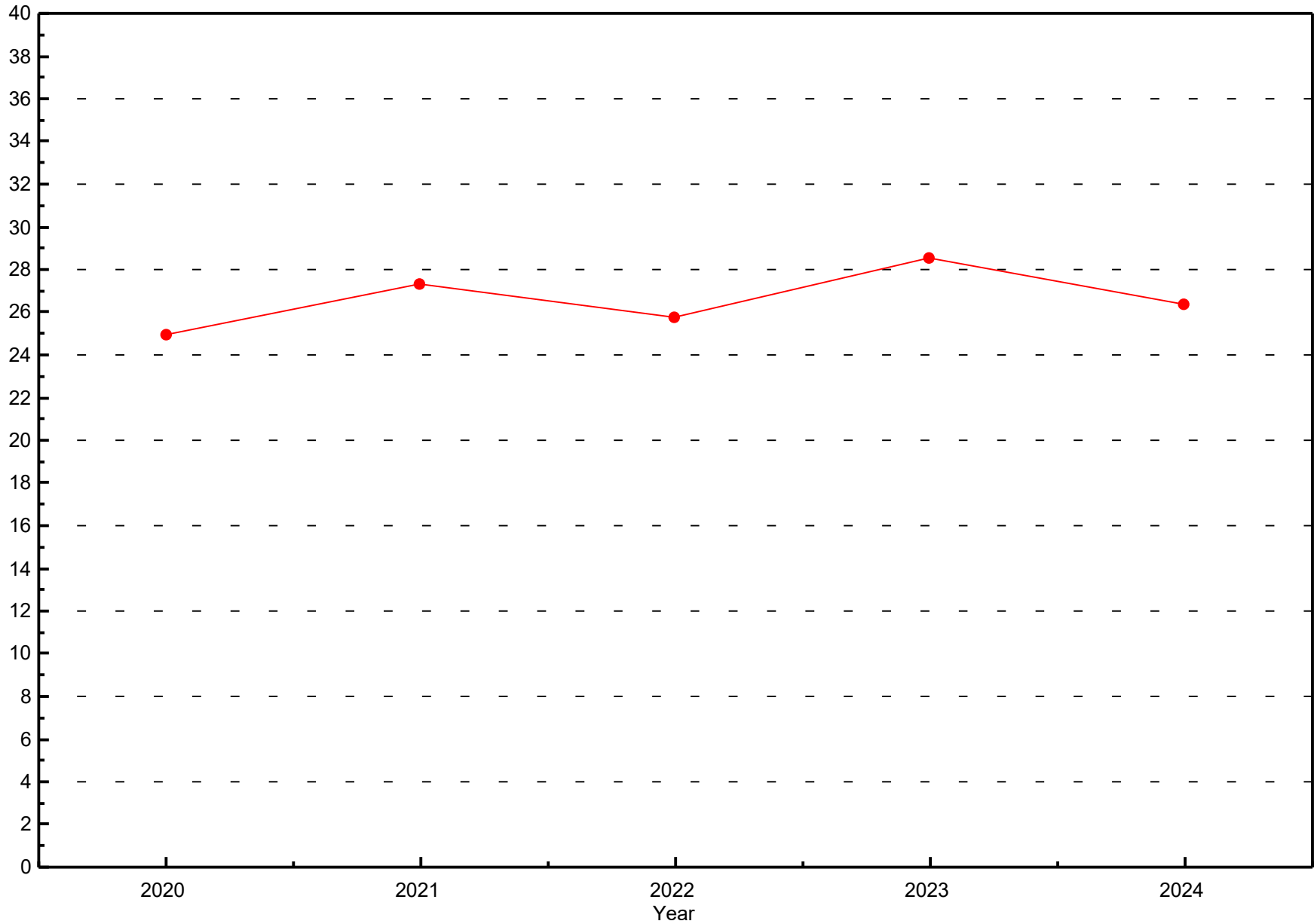
Ozone (O₃) - ppb
Fort McKay South (2020 to 2024)





Yearly Averages

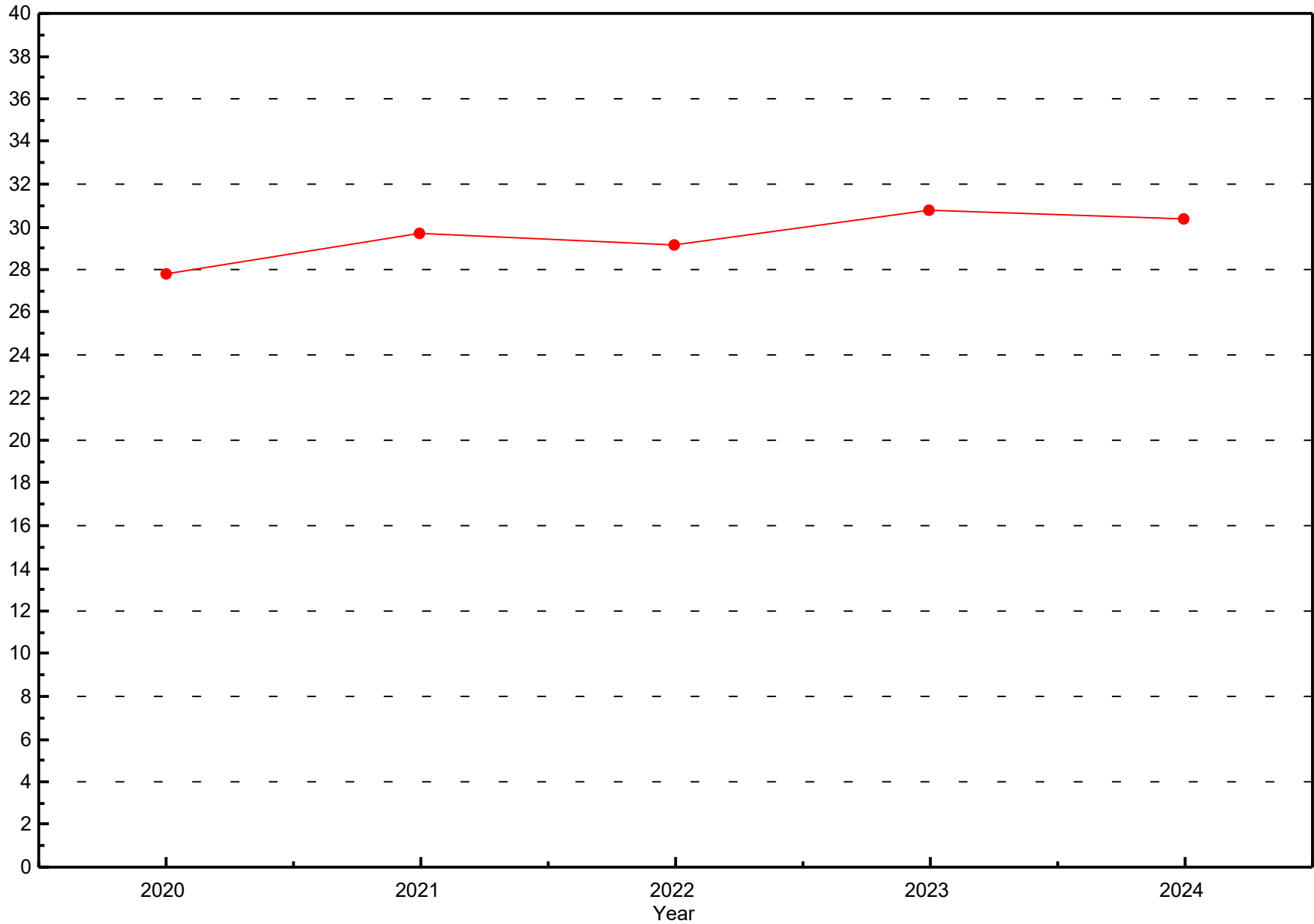
Ozone (O₃) - ppb
Anzac (2020 to 2024)





Yearly Averages

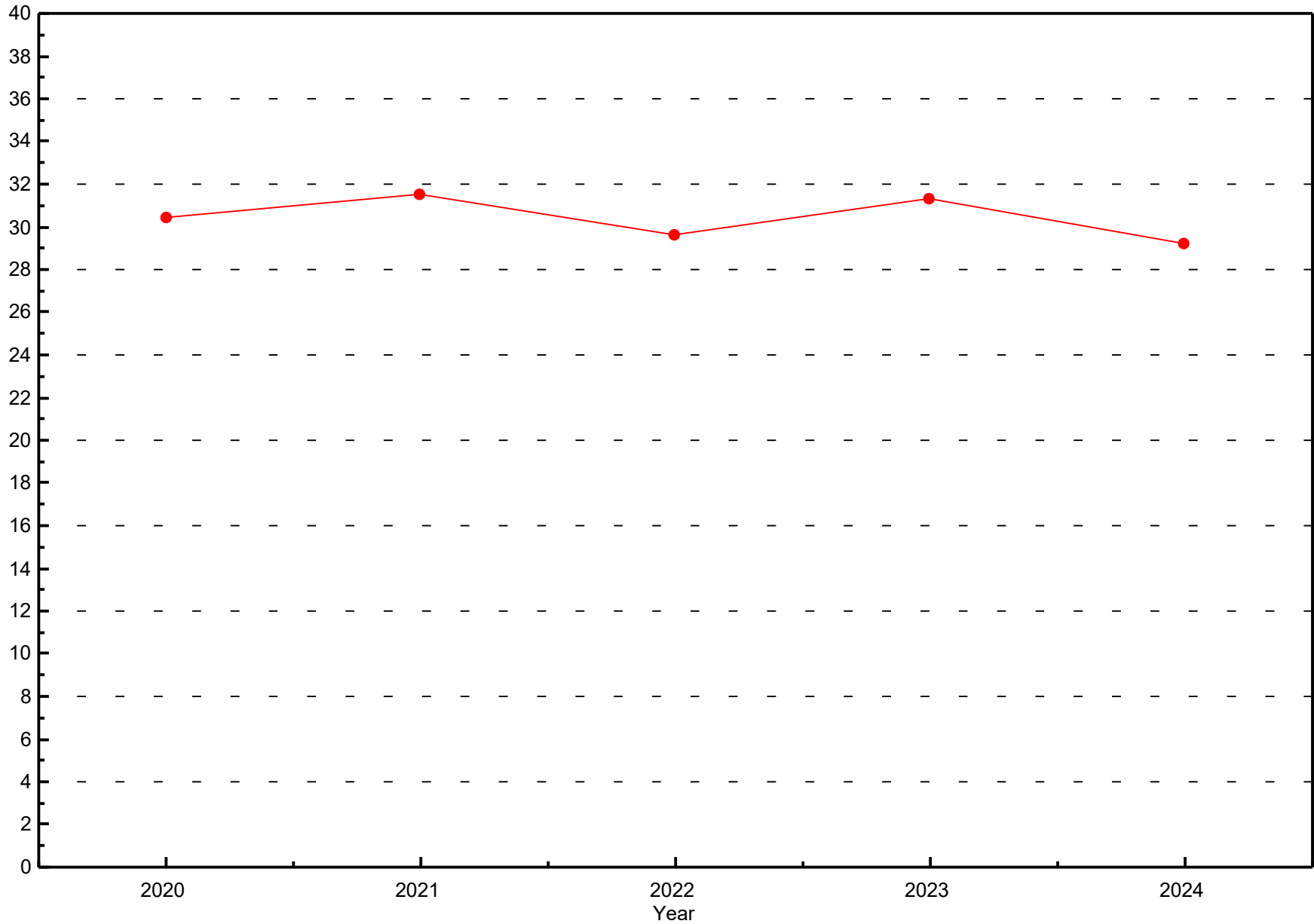
Ozone (O₃) - ppb
Wapasu (2020 to 2024)





Yearly Averages

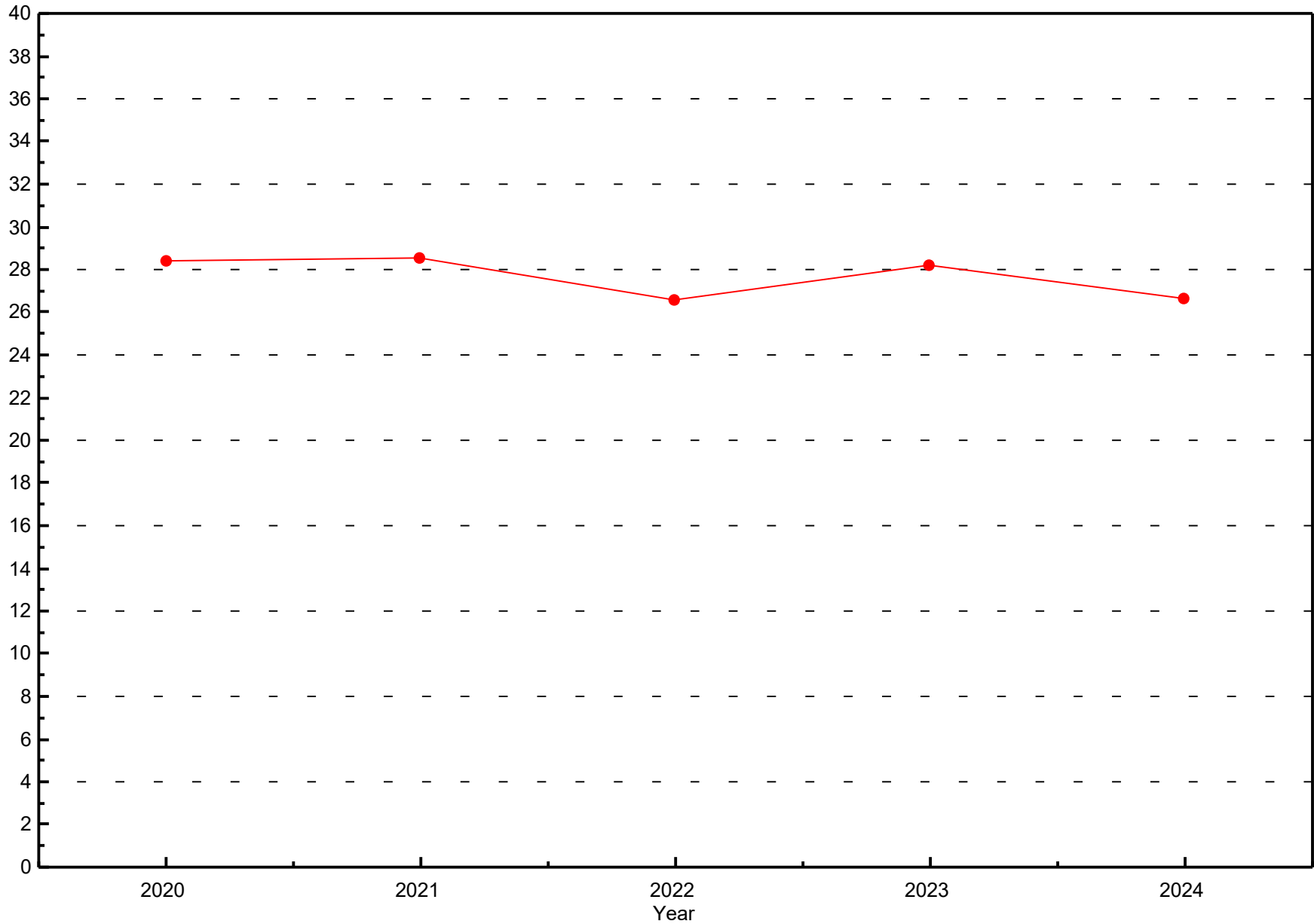
Ozone (O₃) - ppb
Stony Mountain (2020 to 2024)





Yearly Averages

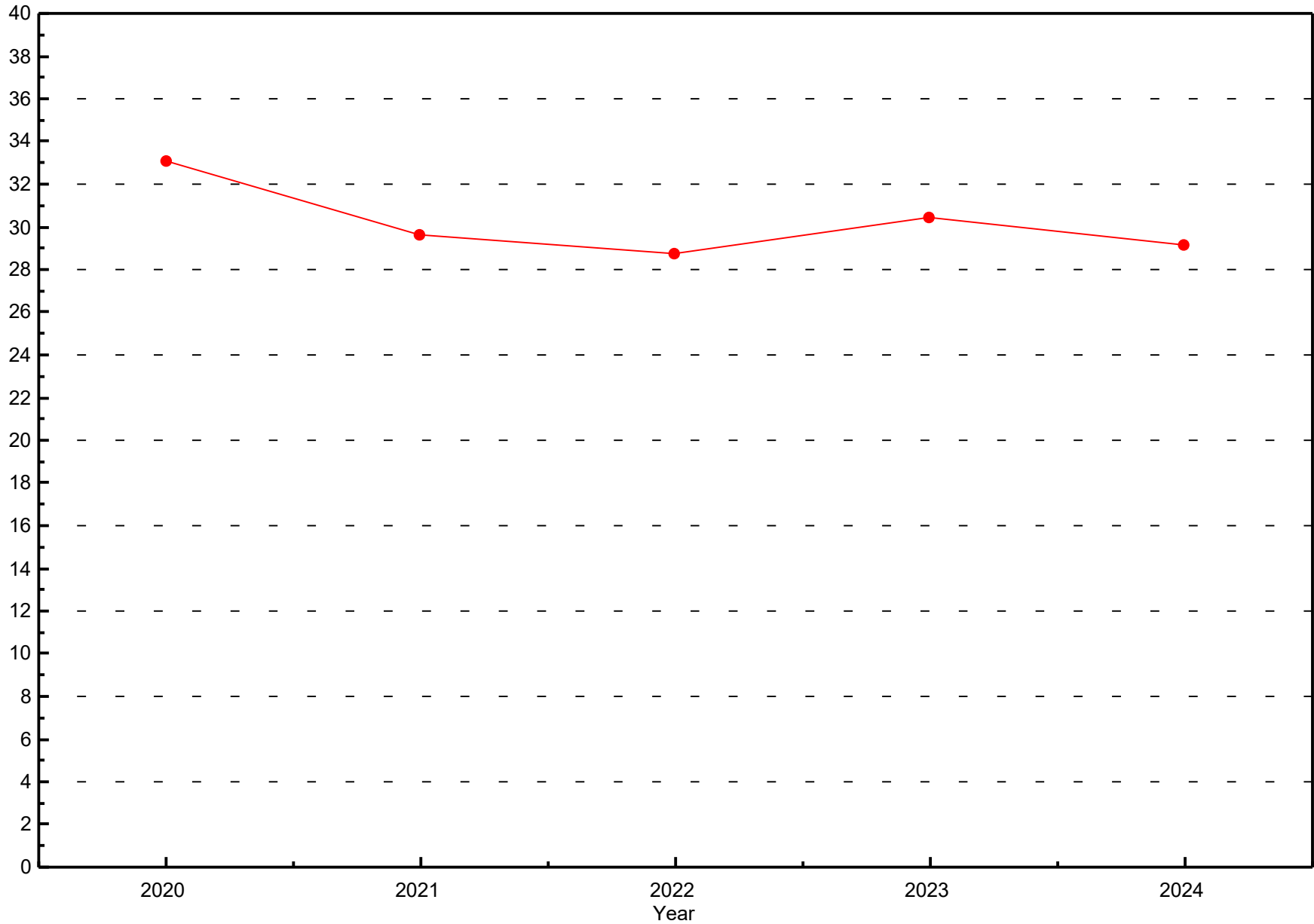
Ozone (O₃) - ppb
Conklin (2020 to 2024)





Yearly Averages

Ozone (O₃) - ppb
Janvier (2020 to 2024)



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
ANNUAL REPORT

**TOTAL HYDROCARBONS
ANNUAL 2024**

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

March 2025



Wood Buffalo Environmental Association - Fort McKay - Bertha Ganter (AMS01)
Annual Summary for the Year 2024
Total Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	99.2	703.0	2.3	4.0	3.0
February	99.7	661.0	2.3	3.9	2.9
March	99.9	708.0	2.1	4.2	2.8
April	99.9	684.0	2.1	3.6	2.2
May	99.7	706.0	2.0	3.7	2.2
June	98.3	674.0	2.1	3.1	2.2
July	99.1	702.0	2.2	4.6	2.8
August	99.6	706.0	2.2	3.8	2.5
September	99.7	683.0	2.2	3.6	2.4
October	99.5	705.0	2.1	4.2	2.8
November	99.9	684.0	2.1	3.8	2.6
December	99.2	703.0	2.3	4.8	2.8
Annual	99.5	8319.0	2.2	4.8	3.0



Wood Buffalo Environmental Association - Mildred Lake (AMS02)
Annual Summary for the Year 2024
Total Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	98.4	695.0	2.5	13.8	4.3
February	99.7	662.0	2.2	4.1	3.0
March	99.7	707.0	2.1	5.6	3.0
April	93.6	640.0	2.1	6.4	2.4
May	97.5	690.0	2.0	2.8	2.2
June	94.0	640.0	2.0	3.5	2.2
July	99.5	705.0	2.1	3.5	2.4
August	96.9	683.0	2.1	3.1	2.2
September	99.7	683.0	2.2	3.5	2.3
October	91.5	645.0	2.1	4.7	2.5
November	99.2	680.0	2.2	3.7	2.4
December	99.9	708.0	2.3	5.2	2.7
Annual	97.5	8138.0	2.2	13.8	4.3



Wood Buffalo Environmental Association - Buffalo Viewpoint (AMS04)
Annual Summary for the Year 2024
Total Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	99.7	707.0	2.1	8.5	2.5
February	99.4	657.0	2.3	5.1	3.2
March	100.0	708.0	2.1	3.7	2.4
April	99.4	683.0	2.1	4.2	2.5
May	99.6	708.0	2.1	3.0	2.2
June	100.0	687.0	2.1	2.7	2.2
July	99.5	706.0	2.1	3.0	2.4
August	99.7	707.0	2.1	2.7	2.2
September	99.6	684.0	2.2	3.6	2.6
October	99.3	705.0	2.1	3.3	2.3
November	99.6	684.0	2.1	3.7	2.3
December	100.0	710.0	2.2	3.5	2.6
Annual	99.7	8346.0	2.1	8.5	3.2



Wood Buffalo Environmental Association - Mannix (AMS05)
Annual Summary for the Year 2024
Total Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Maximum 24-Hour Value
January	100.0	709.0	2.2	7.5	2.9
February	92.5	613.0	2.2	6.7	3.4
March	91.7	650.0	2.1	4.0	2.3
April	99.7	684.0	2.1	4.2	2.4
May	86.7	609.0	2.1	2.9	2.3
June	98.6	676.0	2.1	3.4	2.2
July	95.6	676.0	2.2	3.6	2.6
August	99.9	708.0	2.1	2.7	2.3
September	96.3	658.0	2.2	4.0	2.7
October	95.4	673.0	2.2	4.5	2.4
November	100.0	687.0	2.2	4.5	2.7
December	99.7	708.0	2.2	3.8	2.8
Annual	96.3	8051.0	2.2	7.5	3.4



Wood Buffalo Environmental Association - Patricia McInnes (AMS06)
Annual Summary for the Year 2024
Total Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Maximum 24-Hour Value
January	99.7	705.0	2.1	2.9	2.3
February	97.0	642.0	2.1	2.9	2.4
March	99.9	707.0	2.1	2.5	2.2
April	97.1	663.0	2.0	2.4	2.1
May	100.0	709.0	2.0	2.4	2.1
June	100.0	686.0	2.0	2.3	2.1
July	93.3	657.0	2.1	3.1	2.3
August	98.8	699.0	2.1	2.7	2.2
September	91.0	622.0	2.1	2.8	2.3
October	92.6	655.0	2.0	2.8	2.1
November	91.0	623.0	2.1	3.4	2.3
December	98.5	701.0	2.0	2.9	2.2
Annual	96.6	8069.0	2.1	3.4	2.4



Wood Buffalo Environmental Association - Athabasca Valley (AMS07)
Annual Summary for the Year 2024
Total Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	94.2	666.0	2.1	2.8	2.3
February	92.2	607.0	2.1	3.2	2.5
March	97.5	690.0	2.0	3.5	2.3
April	100.0	685.0	2.0	2.7	2.1
May	100.0	708.0	2.0	2.5	2.1
June	97.6	668.0	2.0	2.5	2.1
July	99.7	707.0	2.1	2.7	2.3
August	99.5	705.0	2.1	2.5	2.2
September	99.7	684.0	2.1	2.7	2.3
October	100.0	706.0	2.1	2.9	2.2
November	91.9	631.0	2.1	3.5	2.4
December	99.6	705.0	2.1	2.8	2.4
Annual	97.7	8162.0	2.1	3.5	2.5



Wood Buffalo Environmental Association - Barge Landing (AMS09)
Annual Summary for the Year 2024
Total Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	100.0	709.0	2.2	3.3	2.7
February	100.0	663.0	2.2	3.8	2.6
March	99.3	704.0	2.1	3.4	2.3
April	100.0	686.0	2.0	3.2	2.2
May	88.8	630.0	2.0	3.4	2.1
June	99.3	681.0	2.0	2.7	2.1
July	99.7	707.0	2.1	3.5	2.4
August	99.7	707.0	2.1	3.0	2.3
September	99.7	684.0	2.1	3.5	2.3
October	100.0	710.0	2.1	3.3	2.4
November	100.0	685.0	2.1	3.1	2.3
December	99.5	706.0	2.1	4.1	2.5
Annual	98.8	8272.0	2.1	4.1	2.7



Wood Buffalo Environmental Association - Lower Camp (AMS11)
Annual Summary for the Year 2024
Total Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Maximum 24-Hour Value
January	98.7	699.0	2.2	3.1	2.7
February	99.9	662.0	2.3	4.4	3.1
March	95.6	677.0	2.2	4.3	3.0
April	100.0	686.0	2.1	4.0	2.4
May	99.7	707.0	2.1	3.2	2.2
June	100.0	686.0	2.1	3.3	2.3
July	97.3	687.0	2.2	3.5	2.5
August	100.0	708.0	2.0	3.7	2.4
September	100.0	686.0	2.1	3.0	2.4
October	100.0	708.0	2.1	3.1	2.3
November	98.9	678.0	2.0	4.4	2.5
December	100.0	709.0	2.2	3.7	2.6
Annual	99.2	8293.0	2.1	4.4	3.1



Wood Buffalo Environmental Association - Fort McKay South (AMS13)
Annual Summary for the Year 2024
Total Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	100.0	709.0	2.3	4.3	2.9
February	100.0	663.0	2.3	4.4	2.9
March	99.9	708.0	2.2	4.9	2.7
April	100.0	684.0	2.2	3.2	2.3
May	99.9	709.0	2.1	3.3	2.3
June	99.0	679.0	2.1	3.0	2.2
July	97.7	688.0	2.1	4.3	2.6
August	99.1	704.0	2.1	2.8	2.3
September	100.0	687.0	2.2	4.1	2.5
October	95.2	675.0	2.2	3.4	2.6
November	86.4	585.0	2.2	3.6	2.6
December	100.0	710.0	2.4	4.3	2.8
Annual	98.1	8201.0	2.2	4.9	2.9



Wood Buffalo Environmental Association - Anzac (AMS14)
Annual Summary for the Year 2024
Total Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	83.6	584.0	2.0	2.5	2.3
February	94.5	626.0	2.0	2.9	2.2
March	99.9	708.0	2.0	2.6	2.1
April	99.6	683.0	1.9	2.4	2.0
May	99.9	706.0	1.9	2.9	2.0
June	93.5	639.0	1.9	3.3	2.1
July	88.6	626.0	2.0	2.6	2.3
August	87.4	611.0	2.0	2.5	2.2
September	97.6	669.0	2.0	2.8	2.3
October	97.2	689.0	2.0	2.5	2.1
November	94.3	646.0	2.0	2.8	2.2
December	83.7	591.0	2.1	3.8	2.7
Annual	93.3	7778.0	2.0	3.8	2.7



Wood Buffalo Environmental Association - Wapasu (AMS17)
Annual Summary for the Year 2024
Total Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	100.0	709.0	2.4	3.3	2.6
February	99.6	661.0	2.3	3.1	2.5
March	100.0	709.0	2.3	2.9	2.4
April	100.0	686.0	2.2	2.7	2.3
May	100.0	710.0	2.2	2.5	2.3
June	99.2	680.0	2.2	2.9	2.4
July	99.2	703.0	2.2	3.0	2.6
August	100.0	708.0	2.3	3.1	2.4
September	99.9	685.0	2.3	3.5	2.5
October	99.6	706.0	2.3	2.9	2.4
November	100.0	685.0	2.3	3.1	2.5
December	100.0	709.0	2.3	3.4	2.5
Annual	99.8	8351.0	2.3	3.5	2.6



Wood Buffalo Environmental Association - Stony Mountain (AMS18)
Annual Summary for the Year 2024
Total Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Maximum 24-Hour Value
January	52.7	369.0	2.1	2.4	2.1
February	94.7	627.0	2.0	2.4	2.2
March	98.0	694.0	2.1	2.4	2.3
April	99.6	682.0	2.1	2.3	2.1
May	97.5	685.0	2.1	2.2	2.1
June	91.7	627.0	2.1	2.2	2.1
July	76.9	537.0	2.1	3.6	2.3
August	94.9	671.0	2.1	2.5	2.2
September	95.4	653.0	2.1	2.3	2.2
October	99.5	705.0	2.0	2.3	2.1
November	98.3	672.0	2.1	2.2	2.2
December	100.0	709.0	2.1	2.4	2.3
Annual	91.5	7631.0	2.1	3.6	2.3



Wood Buffalo Environmental Association - Firebag (AMS19)
Annual Summary for the Year 2024
Total Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Maximum 24-Hour Value
January	96.5	684.0	2.3	3.4	2.5
February	99.3	659.0	2.3	2.8	2.4
March	98.3	697.0	2.3	2.8	2.4
April	100.0	686.0	2.3	2.8	2.4
May	99.9	707.0	2.2	3.5	2.3
June	100.0	686.0	2.2	2.9	2.3
July	100.0	710.0	2.3	4.3	2.7
August	97.9	694.0	2.3	3.8	2.5
September	97.6	671.0	2.3	3.1	2.4
October	100.0	709.0	2.3	2.8	2.4
November	99.2	680.0	2.3	2.7	2.4
December	97.0	688.0	2.3	2.6	2.4
Annual	98.8	8271.0	2.3	4.3	2.7



Wood Buffalo Environmental Association - Mackay River (AMS20)
Annual Summary for the Year 2024
Total Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Maximum 24-Hour Value
January	100.0	709.0	2.4	3.1	2.7
February	99.9	663.0	2.3	3.5	2.5
March	100.0	709.0	2.3	3.0	2.6
April	100.0	686.0	2.3	3.1	2.4
May	100.0	710.0	2.3	2.8	2.4
June	100.0	688.0	2.2	3.2	2.4
July	99.7	708.0	2.3	3.5	2.7
August	96.0	678.0	2.3	3.0	2.5
September	100.0	686.0	2.3	3.2	2.6
October	100.0	710.0	2.3	3.7	2.5
November	100.0	687.0	2.4	3.2	2.8
December	95.6	678.0	2.5	4.1	2.9
Annual	99.3	8312.0	2.3	4.1	2.9



Wood Buffalo Environmental Association - Conklin (AMS21)
Annual Summary for the Year 2024
Total Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Maximum 24-Hour Value
January	99.6	706.0	2.1	2.9	2.6
February	100.0	663.0	2.1	2.5	2.3
March	93.3	650.0	2.1	2.5	2.2
April	87.6	596.0	2.1	2.7	2.2
May	98.9	701.0	2.1	2.8	2.1
June	99.9	685.0	2.0	2.4	2.1
July	100.0	709.0	2.1	2.9	2.4
August	95.6	673.0	2.1	2.8	2.3
September	99.4	681.0	2.0	2.4	2.0
October	100.0	709.0	2.0	2.3	2.0
November	88.9	606.0	2.0	2.2	2.1
December	100.0	709.0	2.1	2.6	2.3
Annual	97.0	8088.0	2.1	2.9	2.6



Wood Buffalo Environmental Association - Janvier (AMS22)
Annual Summary for the Year 2024
Total Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	91.0	643.0	2.1	2.5	2.3
February	99.4	659.0	2.1	2.3	2.1
March	99.1	701.0	2.1	2.3	2.2
April	99.4	681.0	2.0	2.2	2.1
May	100.0	708.0	2.0	2.3	2.0
June	99.9	685.0	2.0	2.2	2.0
July	100.0	709.0	2.0	2.4	2.2
August	97.9	693.0	2.0	2.3	2.1
September	98.6	677.0	2.0	2.2	2.1
October	99.9	707.0	2.0	2.3	2.1
November	100.0	685.0	2.0	2.3	2.1
December	99.5	705.0	2.1	2.3	2.2
Annual	98.7	8253.0	2.0	2.5	2.3



Wood Buffalo Environmental Association - Fort Hills (AMS23)
Annual Summary for the Year 2024
Total Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Maximum 24-Hour Value
January	100.0	710.0	2.5	9.0	3.4
February	100.0	664.0	2.5	7.9	3.4
March	100.0	710.0	2.3	7.1	3.6
April	99.9	686.0	2.3	6.1	3.0
May	98.4	697.0	2.2	5.2	2.6
June	99.9	686.0	2.2	6.3	3.0
July	82.8	584.0	2.5	5.4	3.2
August	98.5	695.0	2.3	5.5	2.7
September	81.9	555.0	2.4	4.7	2.7
October	99.7	708.0	2.3	4.7	2.7
November	99.7	686.0	2.3	4.7	2.7
December	99.7	706.0	2.4	7.4	3.2
Annual	96.7	8087.0	2.3	9.0	3.6



Wood Buffalo Environmental Association - Surmont 2 (AMS29)
Annual Summary for the Year 2024
Total Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	90.9	643.0	2.1	2.4	2.3
February	86.9	574.0	2.0	2.4	2.2
March	99.3	704.0	2.3	2.7	2.4
April	99.7	683.0	2.3	3.0	2.5
May	100.0	709.0	2.3	2.7	2.4
June	99.9	684.0	2.3	2.5	2.4
July	100.0	709.0	2.4	2.9	2.6
August	99.7	707.0	2.4	3.9	2.6
September	99.9	684.0	2.3	2.9	2.5
October	100.0	710.0	2.3	2.7	2.3
November	99.9	686.0	2.3	2.6	2.4
December	99.5	705.0	2.4	2.8	2.5
Annual	98.0	8198.0	2.3	3.9	2.6



Wood Buffalo Environmental Association - Ells River (AMS30)
Annual Summary for the Year 2024
Total Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Maximum 24-Hour Value
January	100.0	709.0	2.3	5.8	2.6
February	99.7	661.0	2.3	5.9	3.0
March	96.8	685.0	2.2	4.2	2.7
April	97.6	671.0	2.1	3.7	2.3
May	99.9	707.0	2.1	4.0	2.3
June	99.3	679.0	2.2	3.5	2.4
July	99.9	708.0	2.4	5.0	3.2
August	99.7	706.0	2.2	4.1	2.5
September	100.0	686.0	2.3	7.1	3.1
October	99.7	707.0	2.2	4.8	3.4
November	99.7	684.0	2.2	4.1	2.7
December	99.6	706.0	2.3	6.1	3.2
Annual	99.3	8309.0	2.2	7.1	3.4



Wood Buffalo Environmental Association - Kirby South (AMS507)
Annual Summary for the Year 2024
Total Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Maximum 24-Hour Value
January	97.0	685.0	2.6	23.0	3.8
February	93.5	619.0	2.4	3.0	2.5
March	99.9	707.0	2.3	3.4	2.5
April	98.9	678.0	2.3	3.0	2.5
May	97.3	687.0	2.3	2.9	2.5
June	100.0	584.0	2.3	2.8	2.5
Annual	97.8	3960.0	2.4	23.0	3.8



Wood Buffalo Environmental Association - Kirby North (AMS508)
Annual Summary for the Year 2024
Total Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
July	100.0	535.0	2.3	4.6	2.6
August	99.7	708.0	2.3	2.7	2.4
September	99.3	680.0	2.3	2.6	2.4
October	100.0	708.0	2.3	2.5	2.4
November	100.0	684.0	2.3	2.6	2.4
December	98.7	699.0	2.4	3.2	2.6
Annual	99.6	4014.0	2.3	4.6	2.6



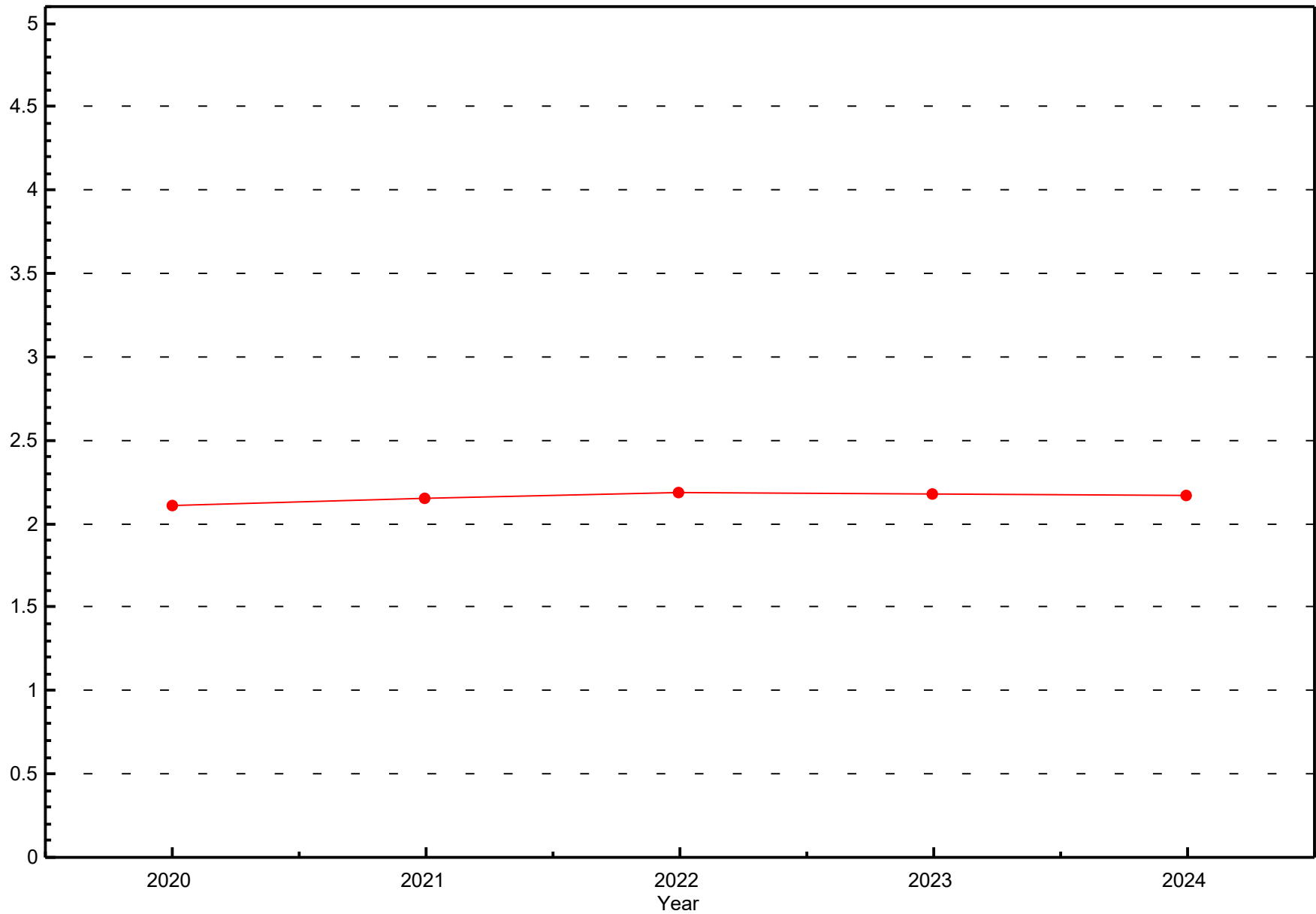
Wood Buffalo Environmental Association - Blackgold (AMS511)
Annual Summary for the Year 2024
Total Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Maximum 24-Hour Value
January	93.4	662.0	2.4	2.8	2.7
February	100.0	663.0	2.3	3.4	2.4
March	100.0	709.0	2.3	5.0	2.5
Annual	97.8	2034.0	2.3	5.0	2.7



Yearly Averages

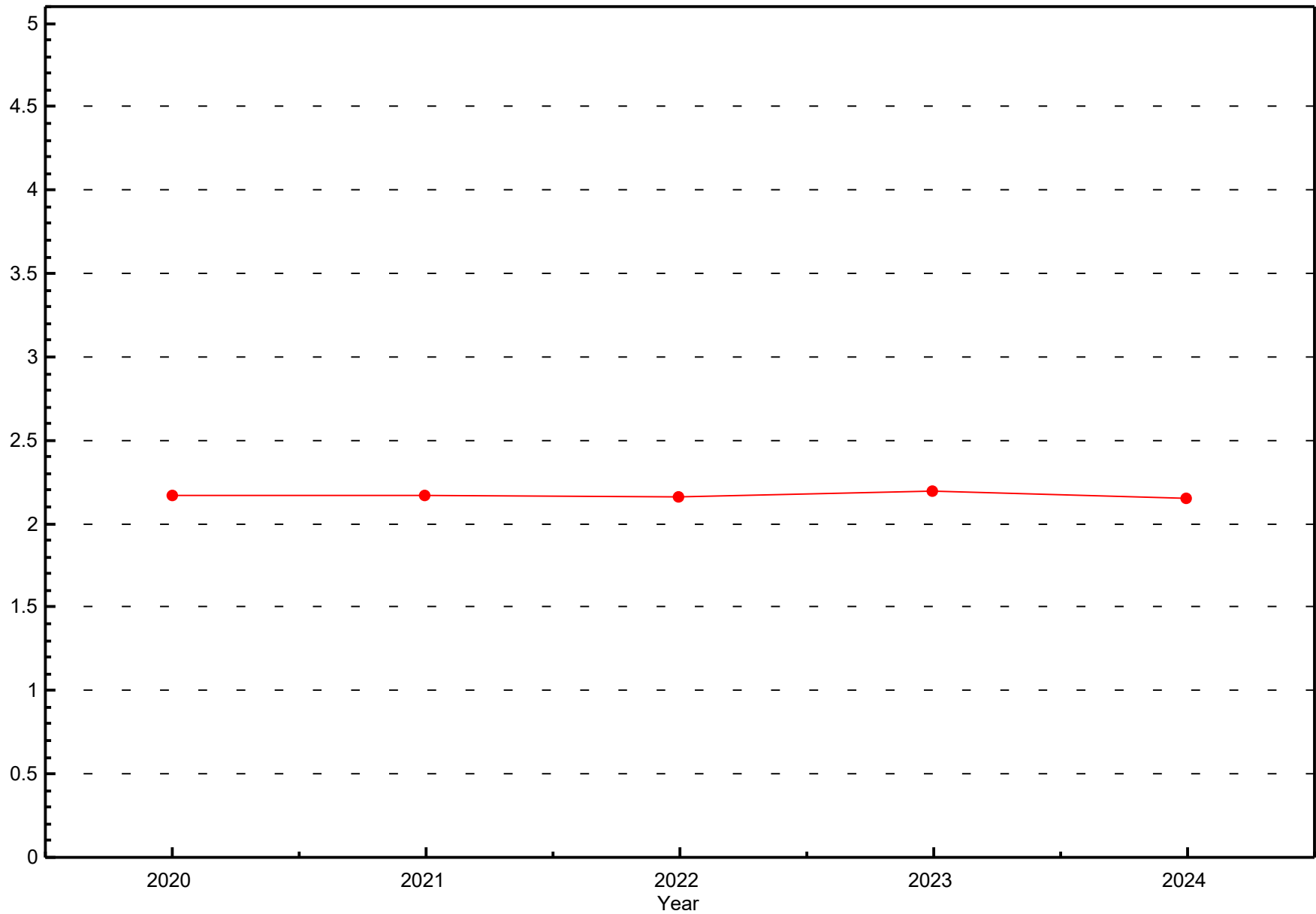
Total Hydrocarbons (THC) - ppm
Fort McKay - Bertha Ganter (2020 to 2024)





Yearly Averages

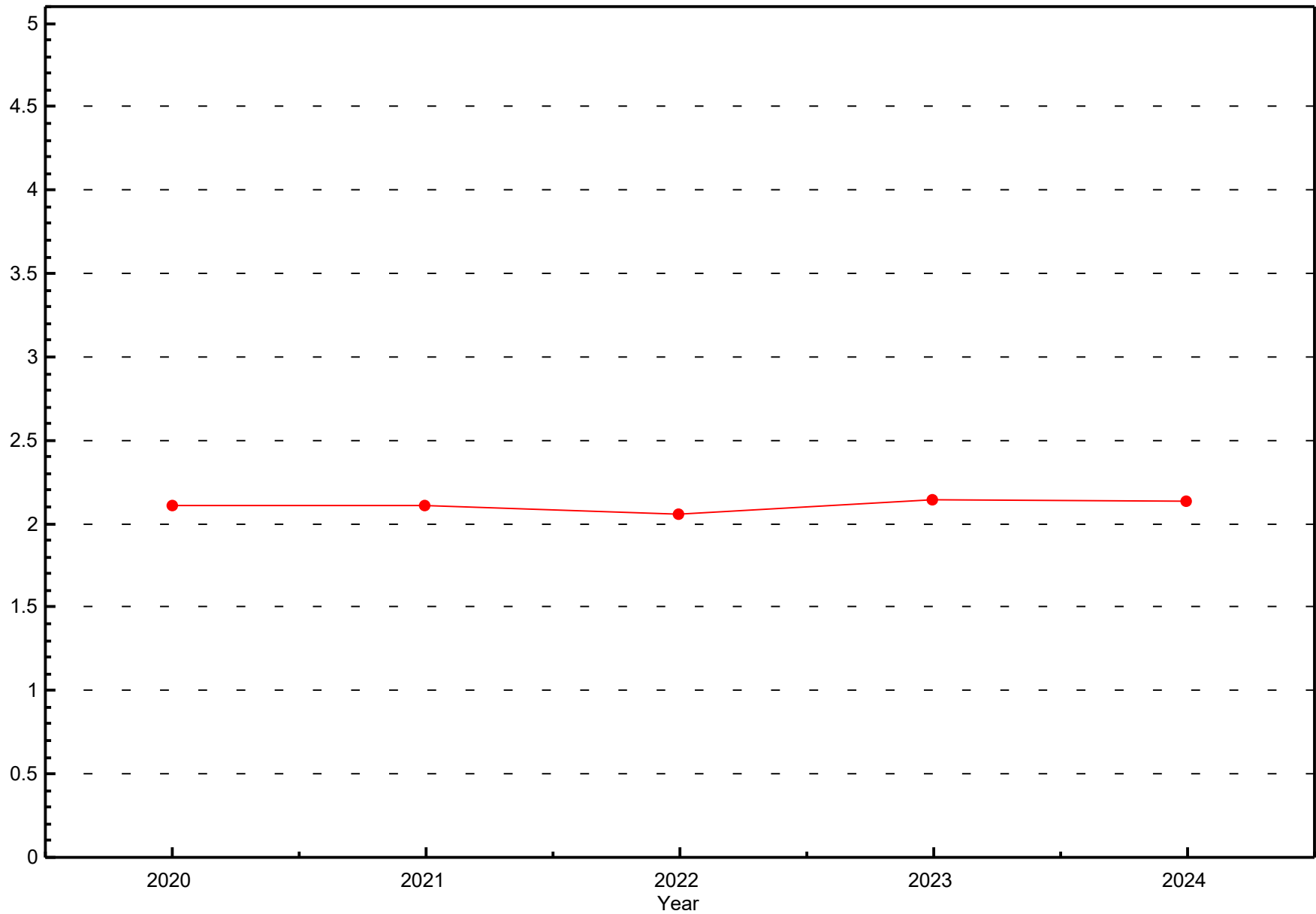
Total Hydrocarbons (THC) - ppm Mildred Lake (2020 to 2024)





Yearly Averages

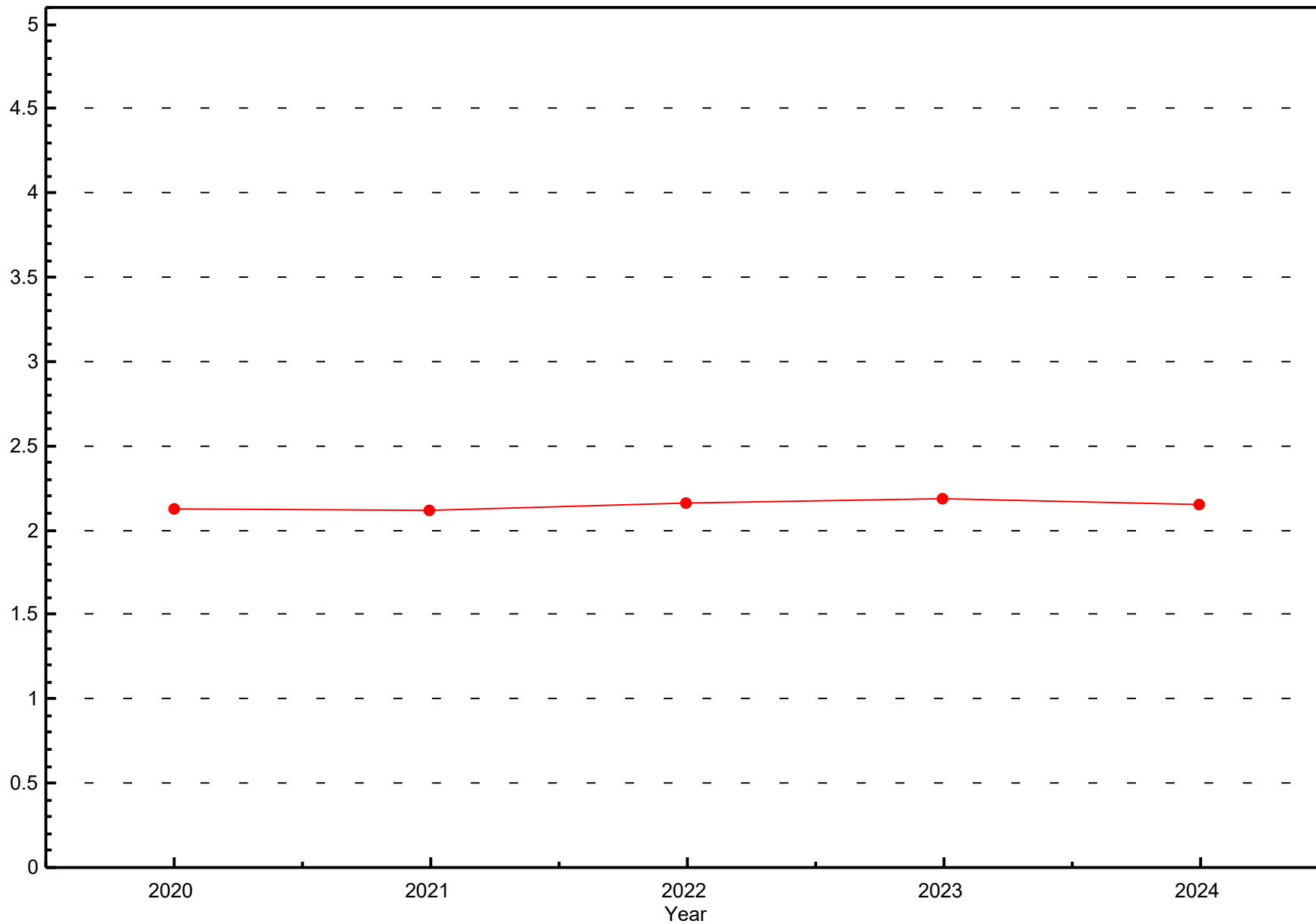
Total Hydrocarbons (THC) - ppm
Buffalo Viewpoint (2020 to 2024)





Yearly Averages

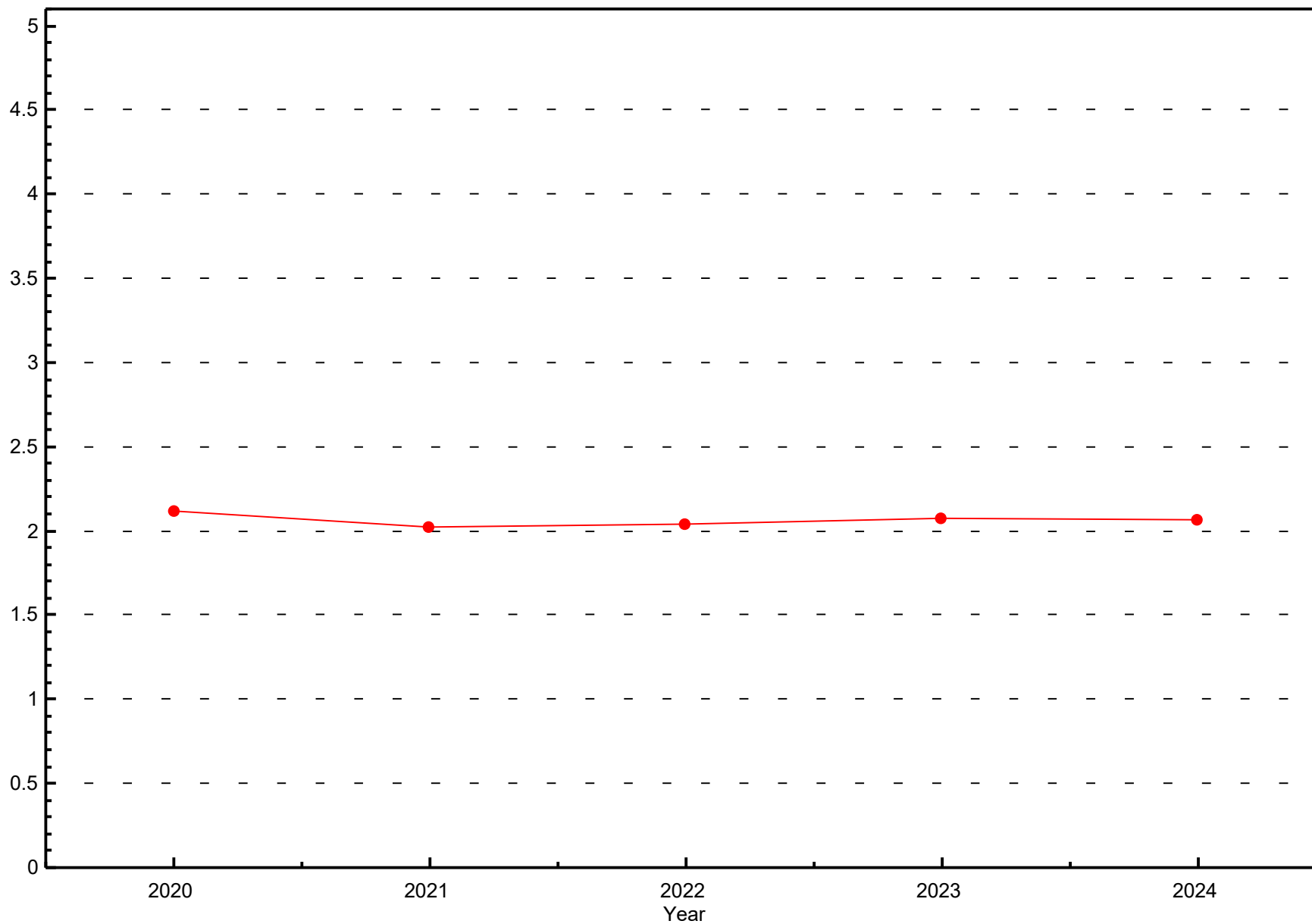
Total Hydrocarbons (THC) - ppm
Mannix (2020 to 2024)





Yearly Averages

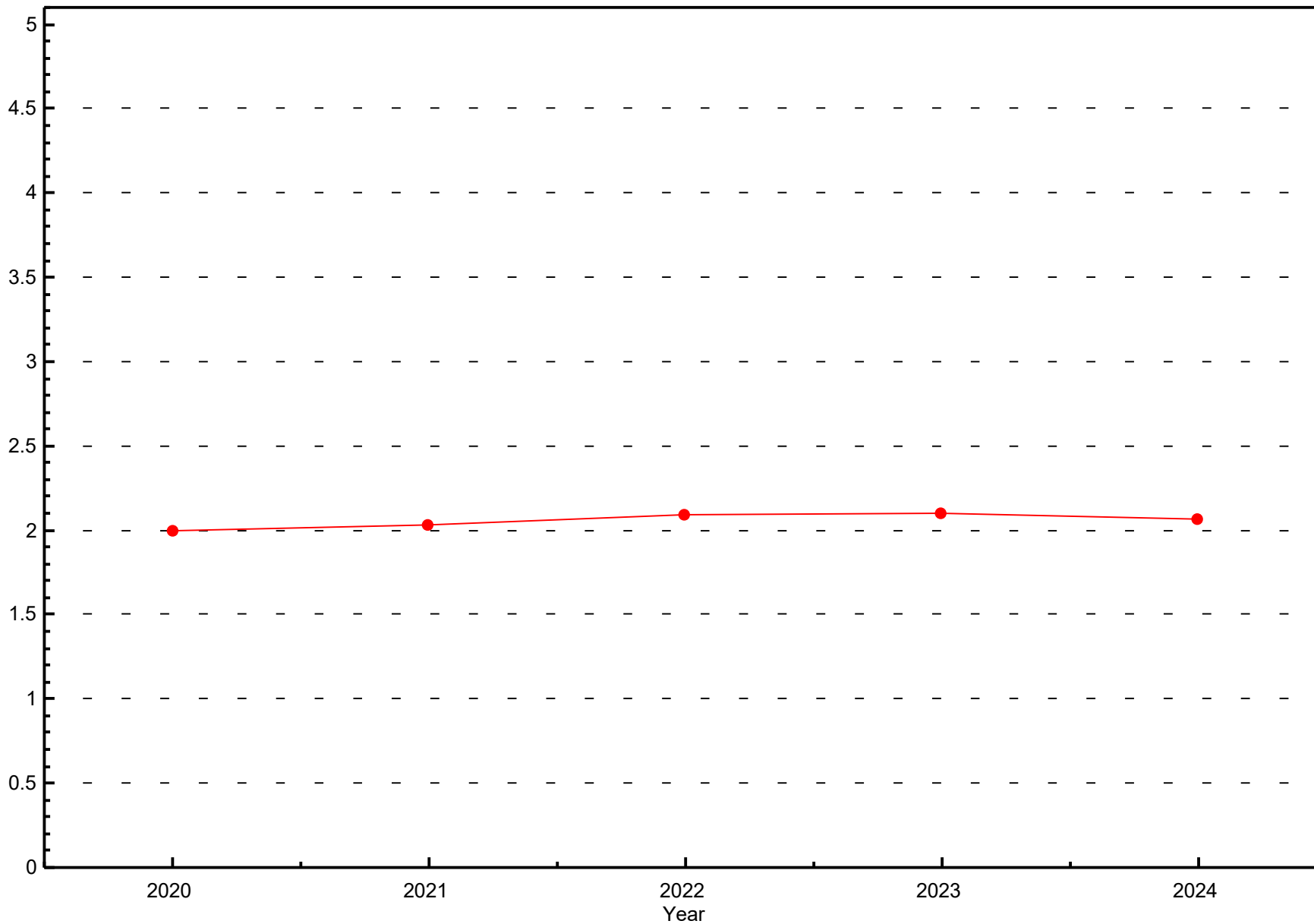
Total Hydrocarbons (THC) - ppm
Patricia McInnes (2020 to 2024)





Yearly Averages

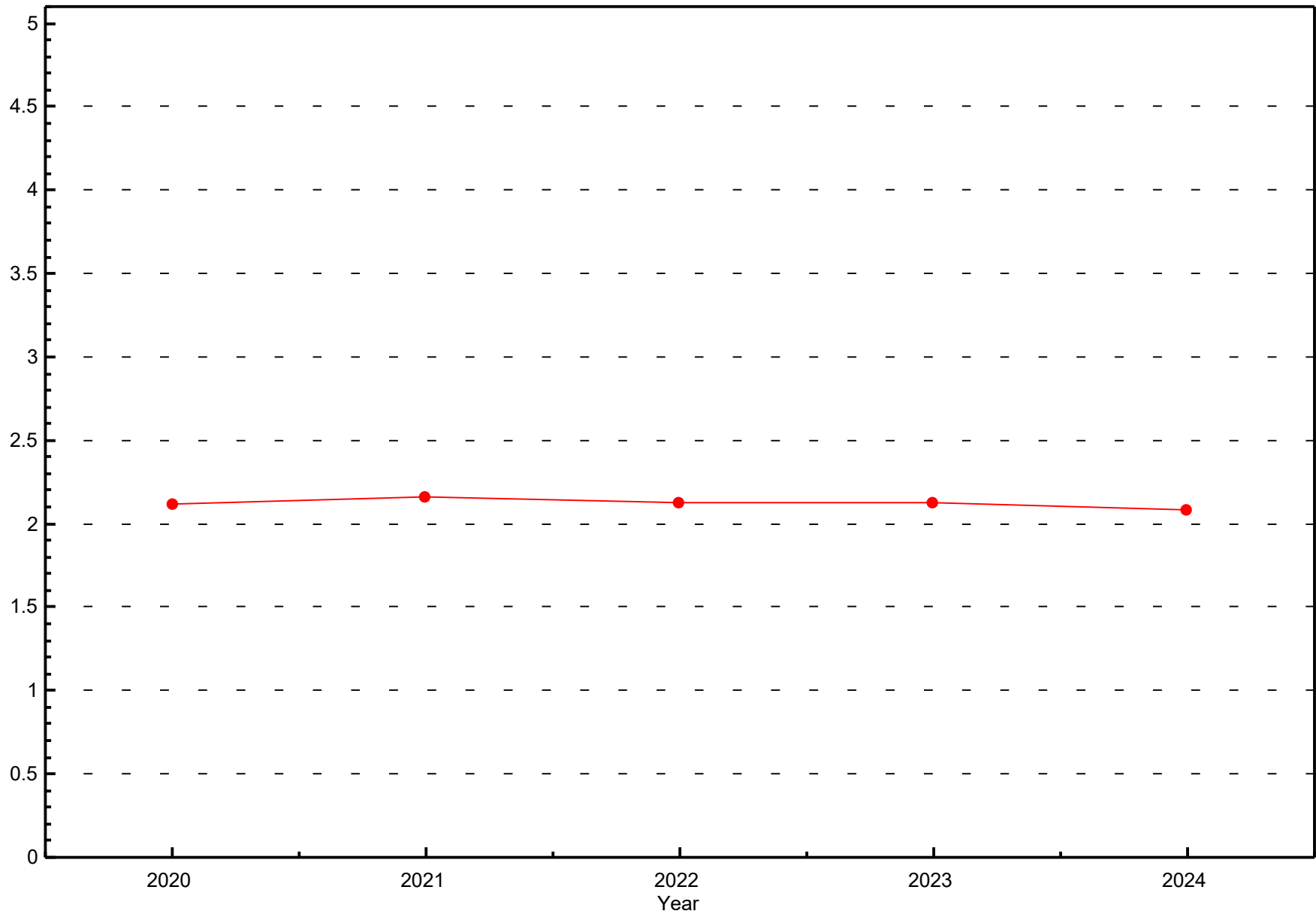
Total Hydrocarbons (THC) - ppm
Athabasca Valley (2020 to 2024)





Yearly Averages

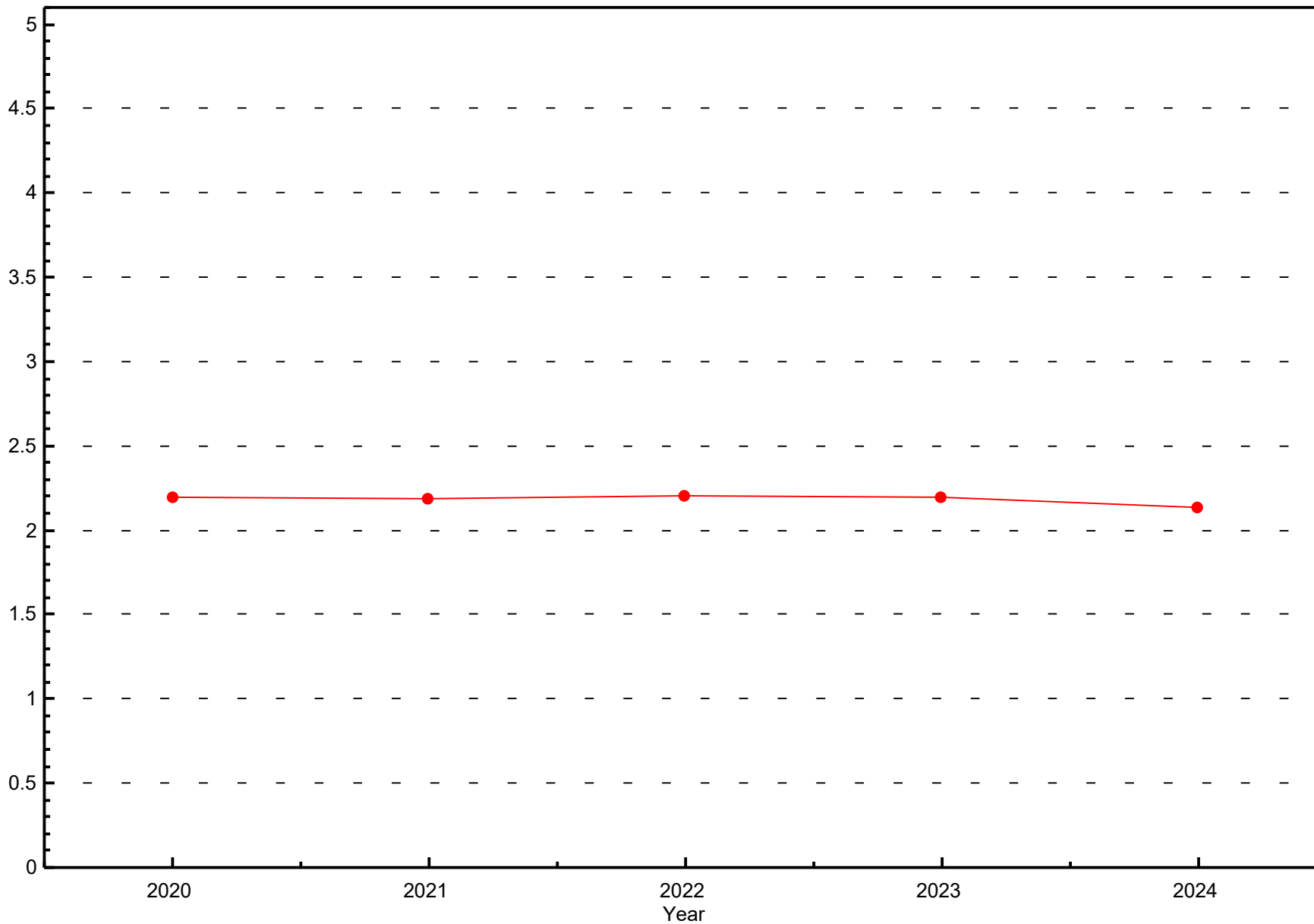
Total Hydrocarbons (THC) - ppm Barge Landing (2020 to 2024)





Yearly Averages

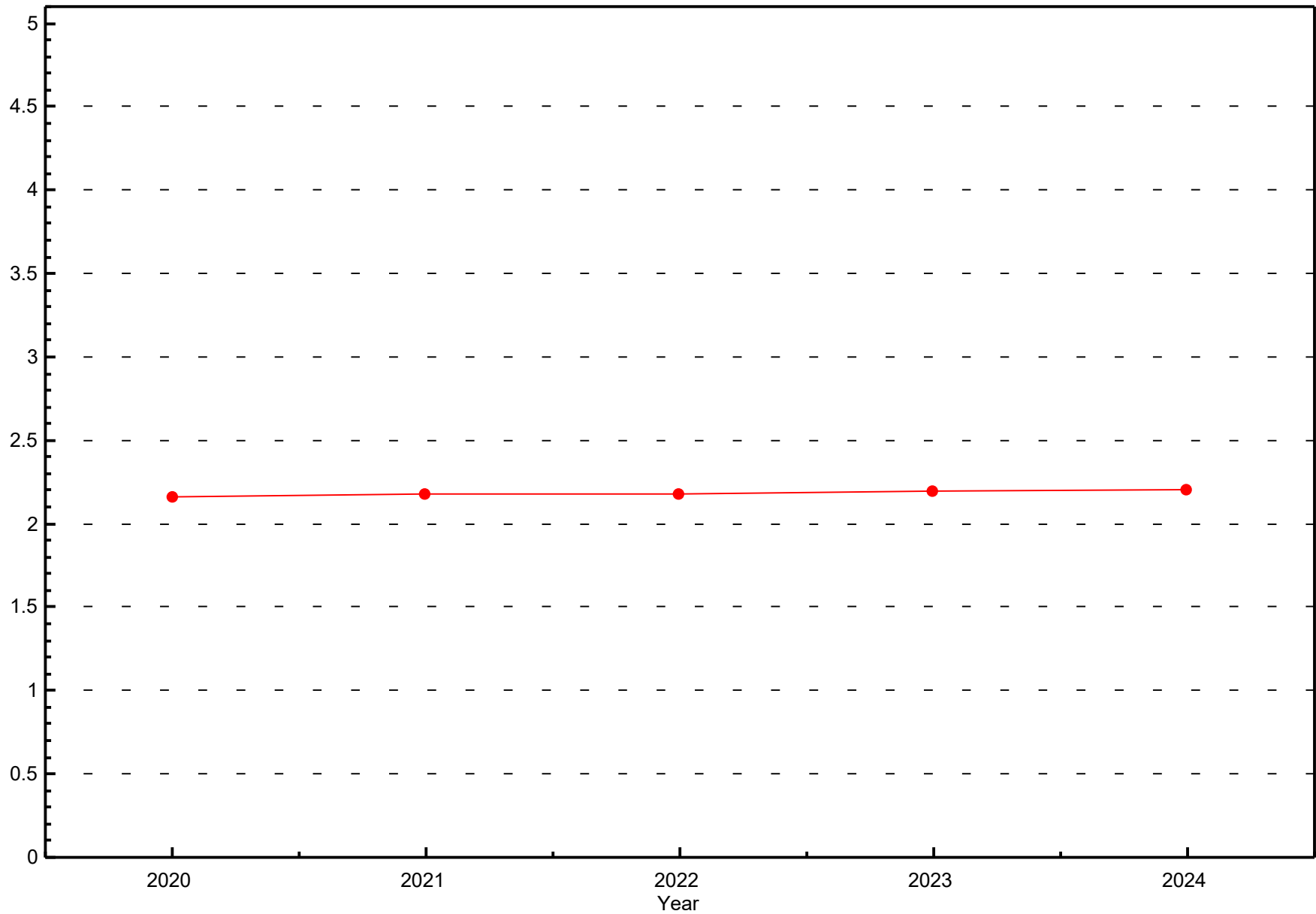
Total Hydrocarbons (THC) - ppm Lower Camp (2020 to 2024)





Yearly Averages

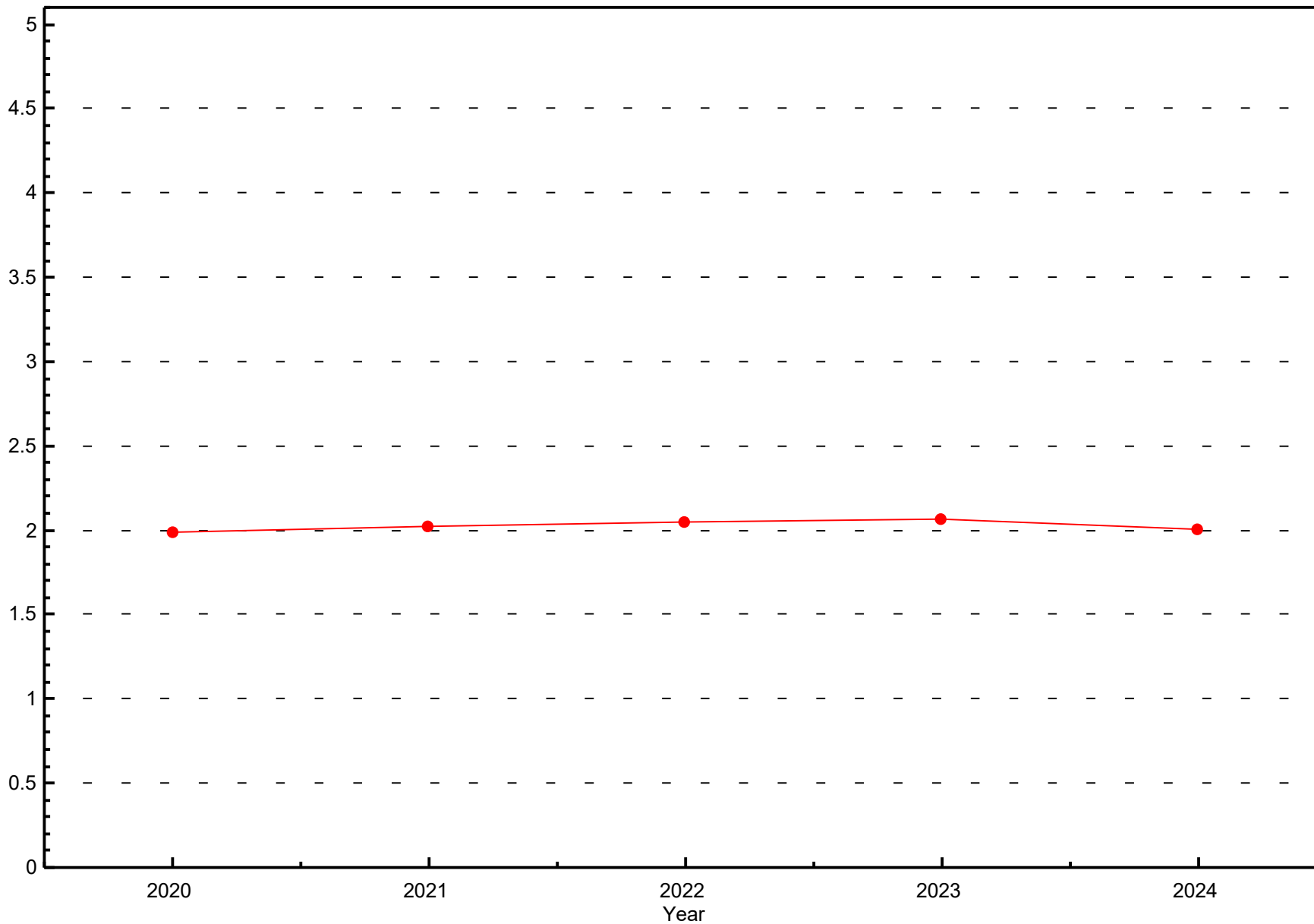
Total Hydrocarbons (THC) - ppm
Fort McKay South (2020 to 2024)





Yearly Averages

Total Hydrocarbons (THC) - ppm
Anzac (2020 to 2024)

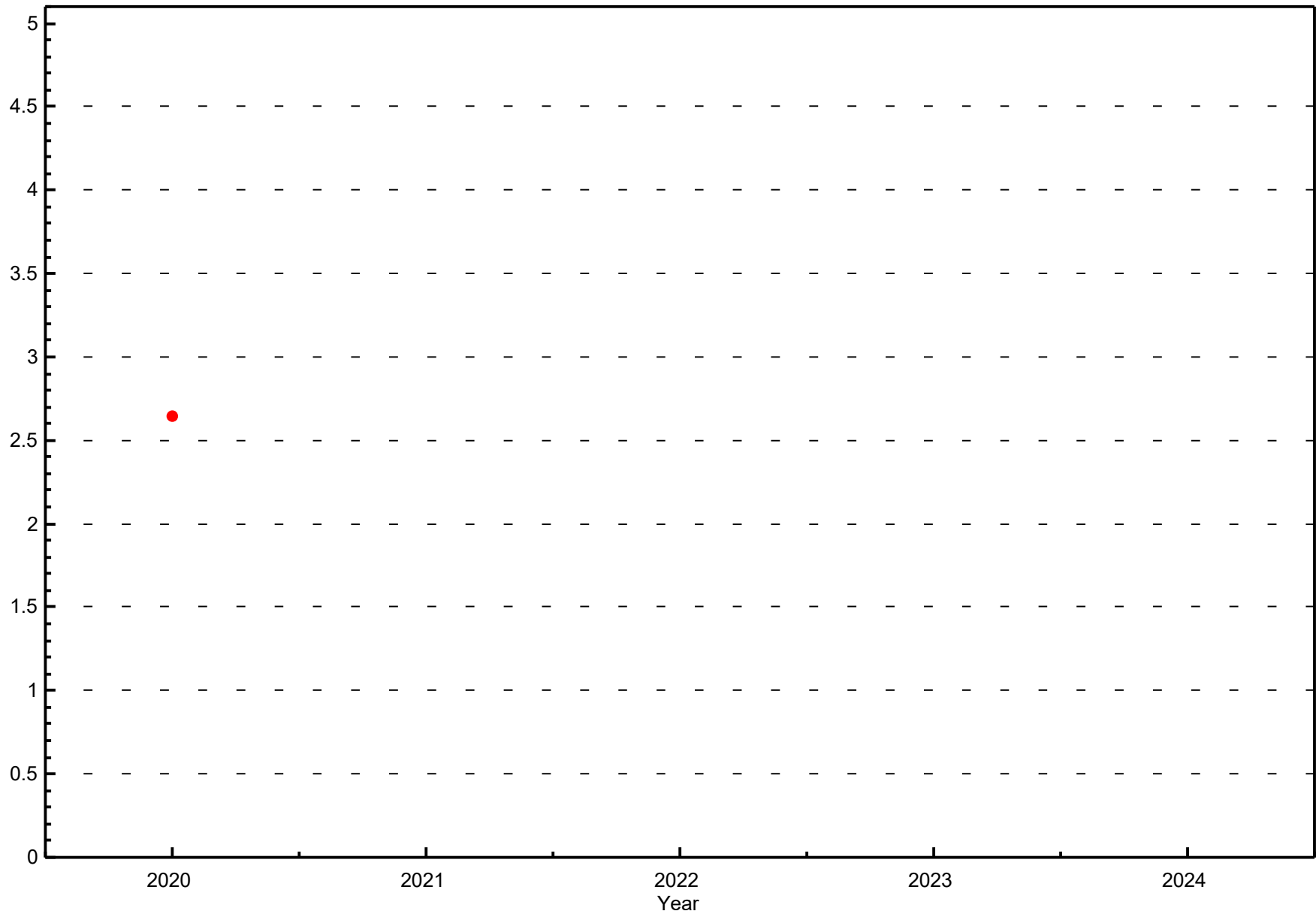




Yearly Averages

Total Hydrocarbons (THC) - ppm

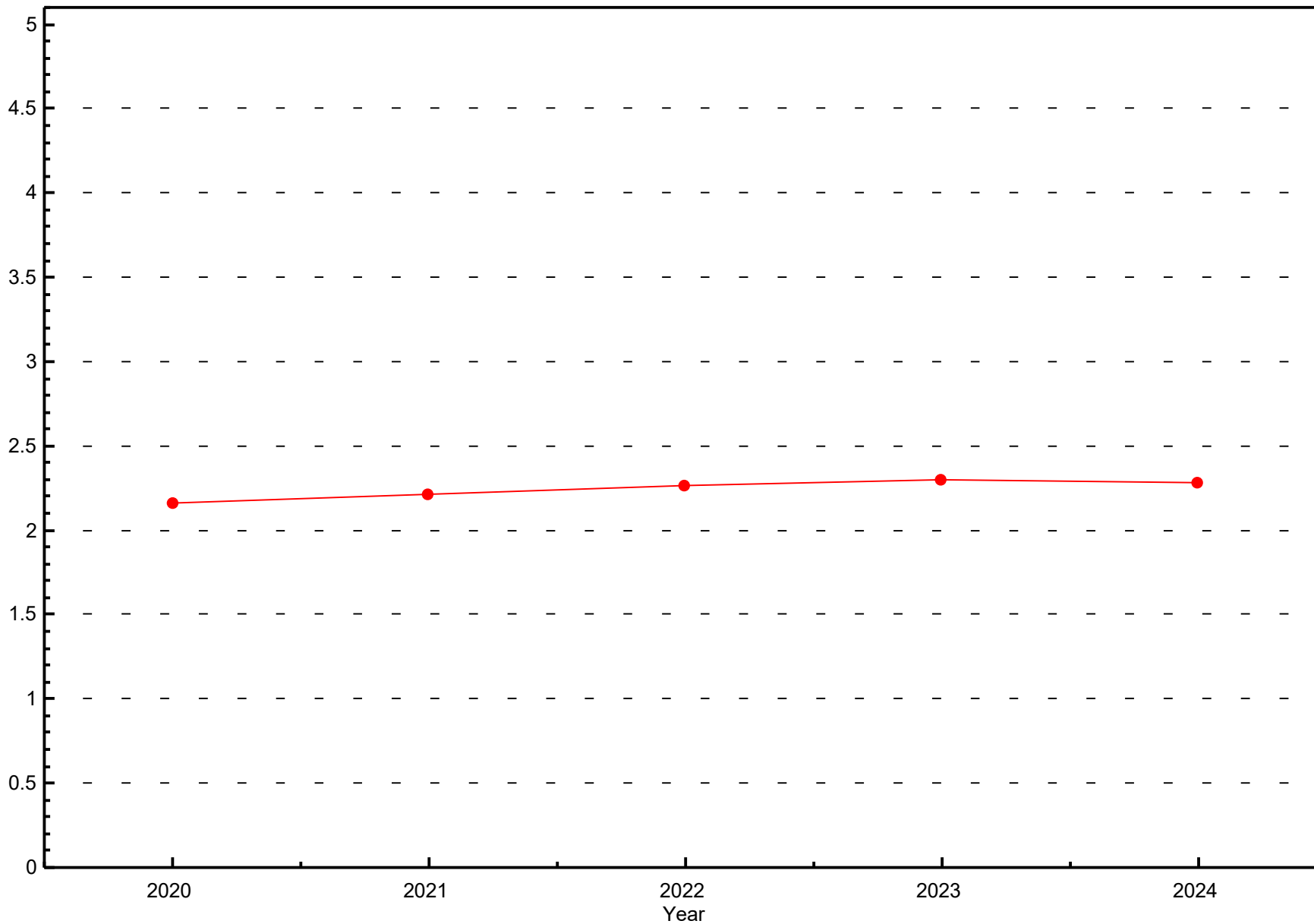
Horizon (2020 to 2024)





Yearly Averages

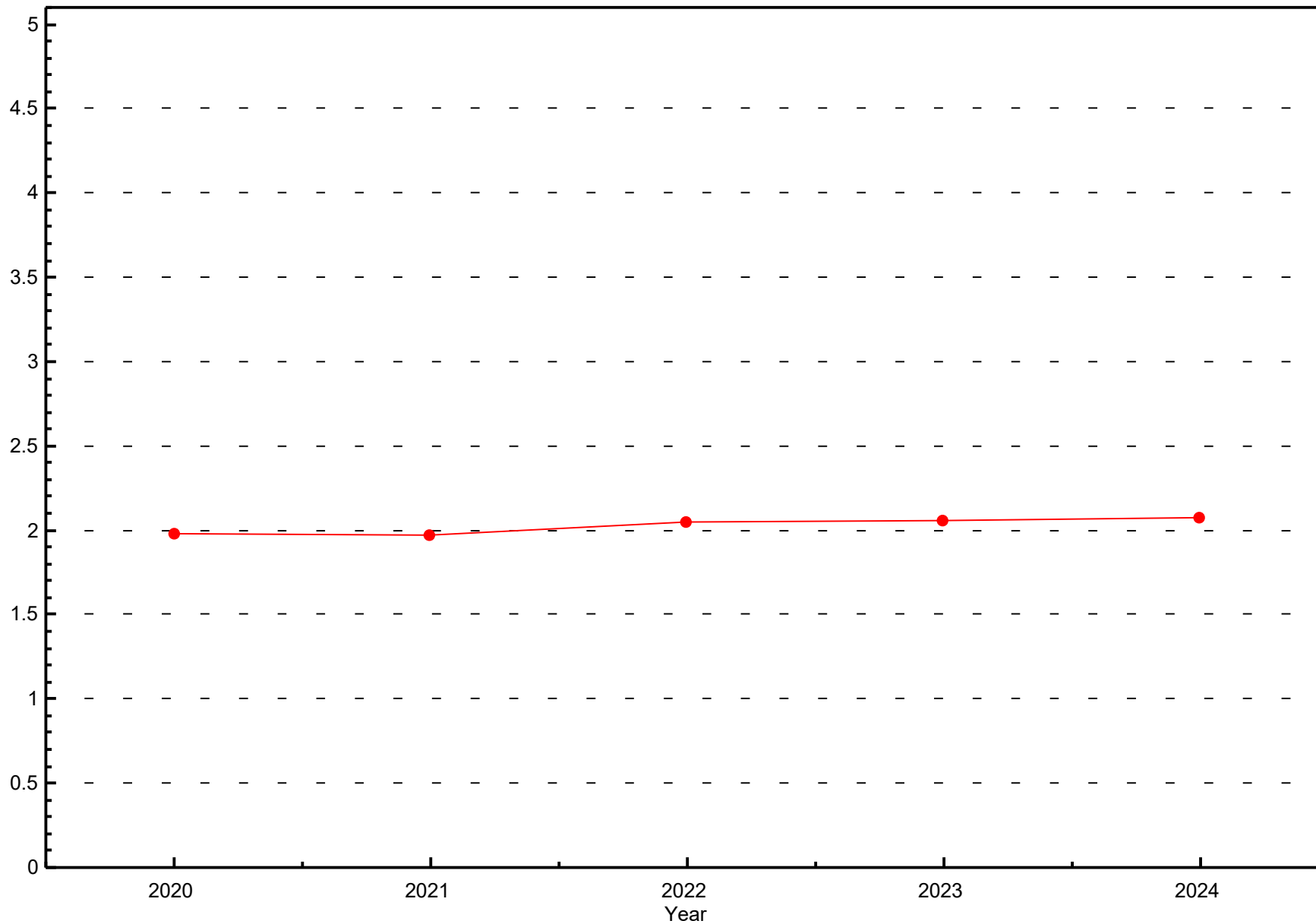
Total Hydrocarbons (THC) - ppm
Wapasu (2020 to 2024)





Yearly Averages

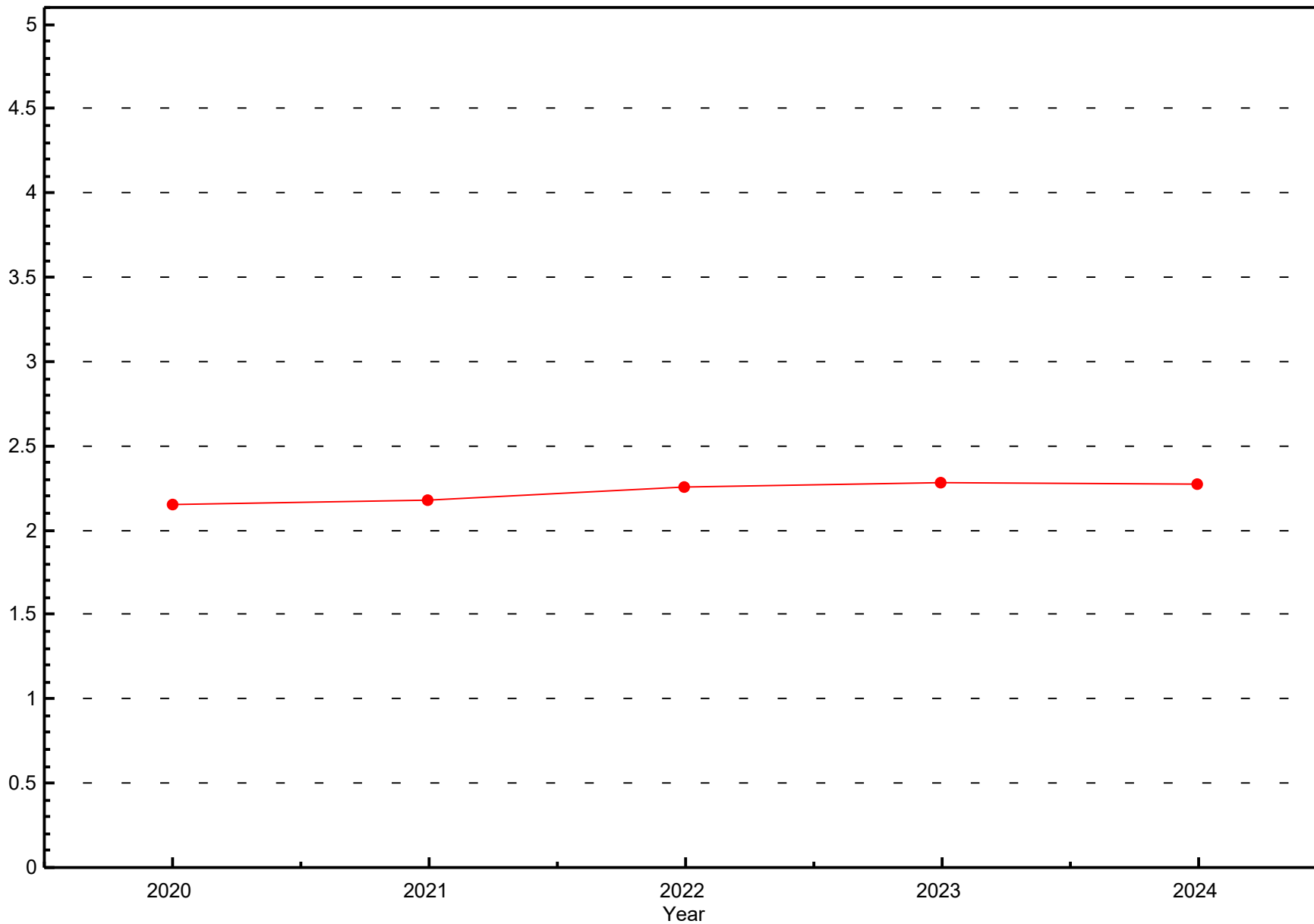
Total Hydrocarbons (THC) - ppm
Stony Mountain (2020 to 2024)





Yearly Averages

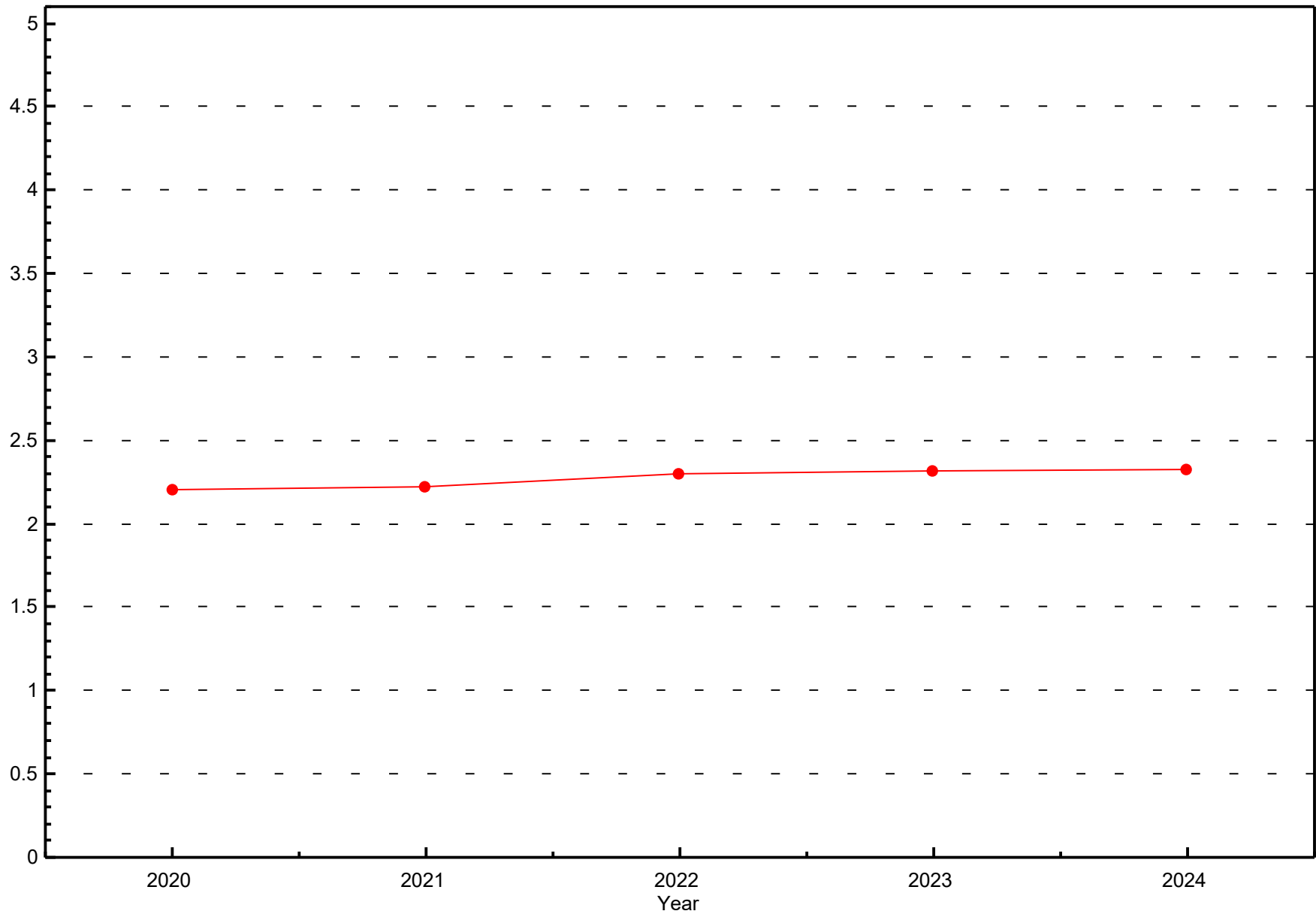
Total Hydrocarbons (THC) - ppm
Firebag (2020 to 2024)





Yearly Averages

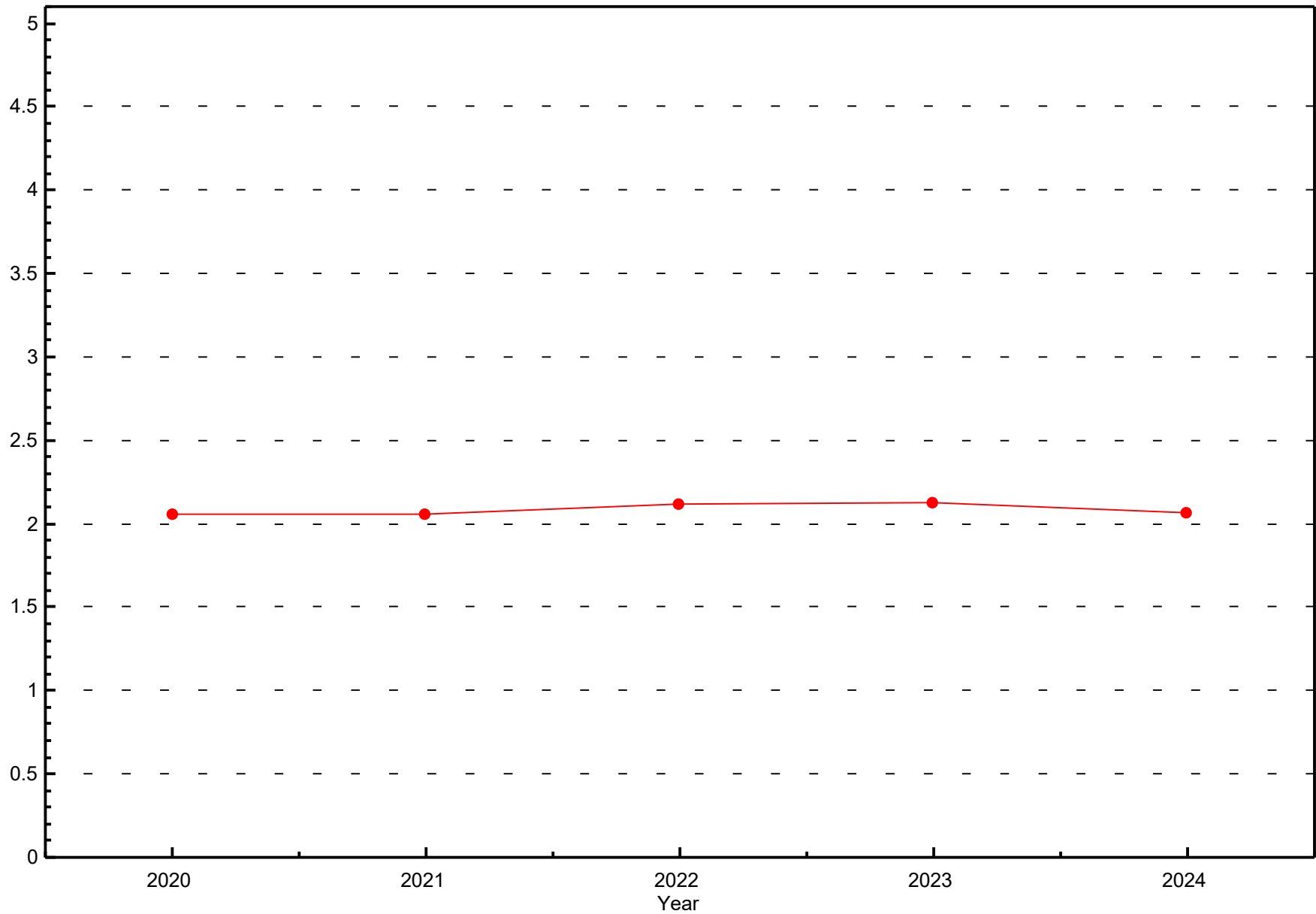
Total Hydrocarbons (THC) - ppm Mackay River (2020 to 2024)





Yearly Averages

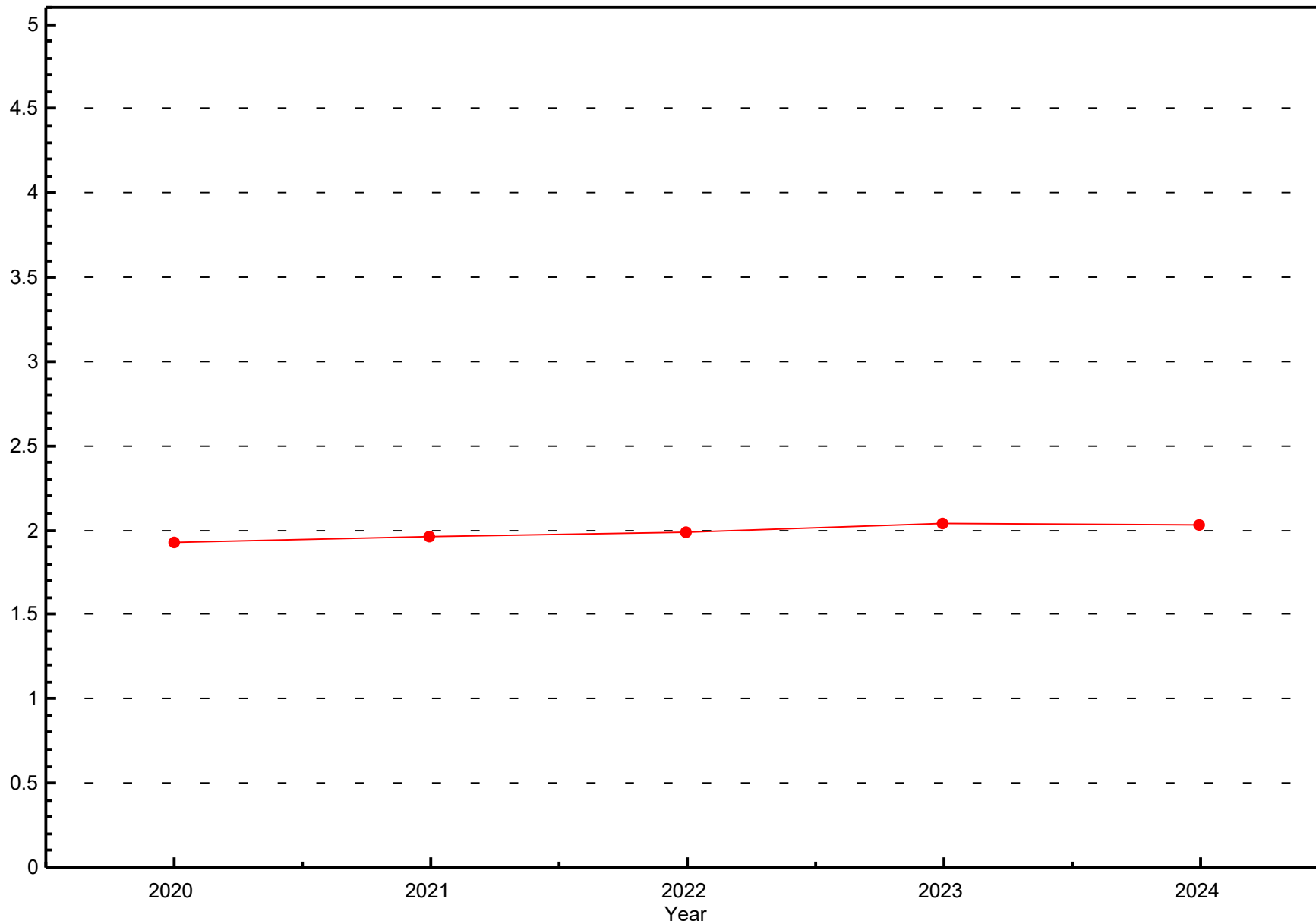
Total Hydrocarbons (THC) - ppm
Conklin (2020 to 2024)





Yearly Averages

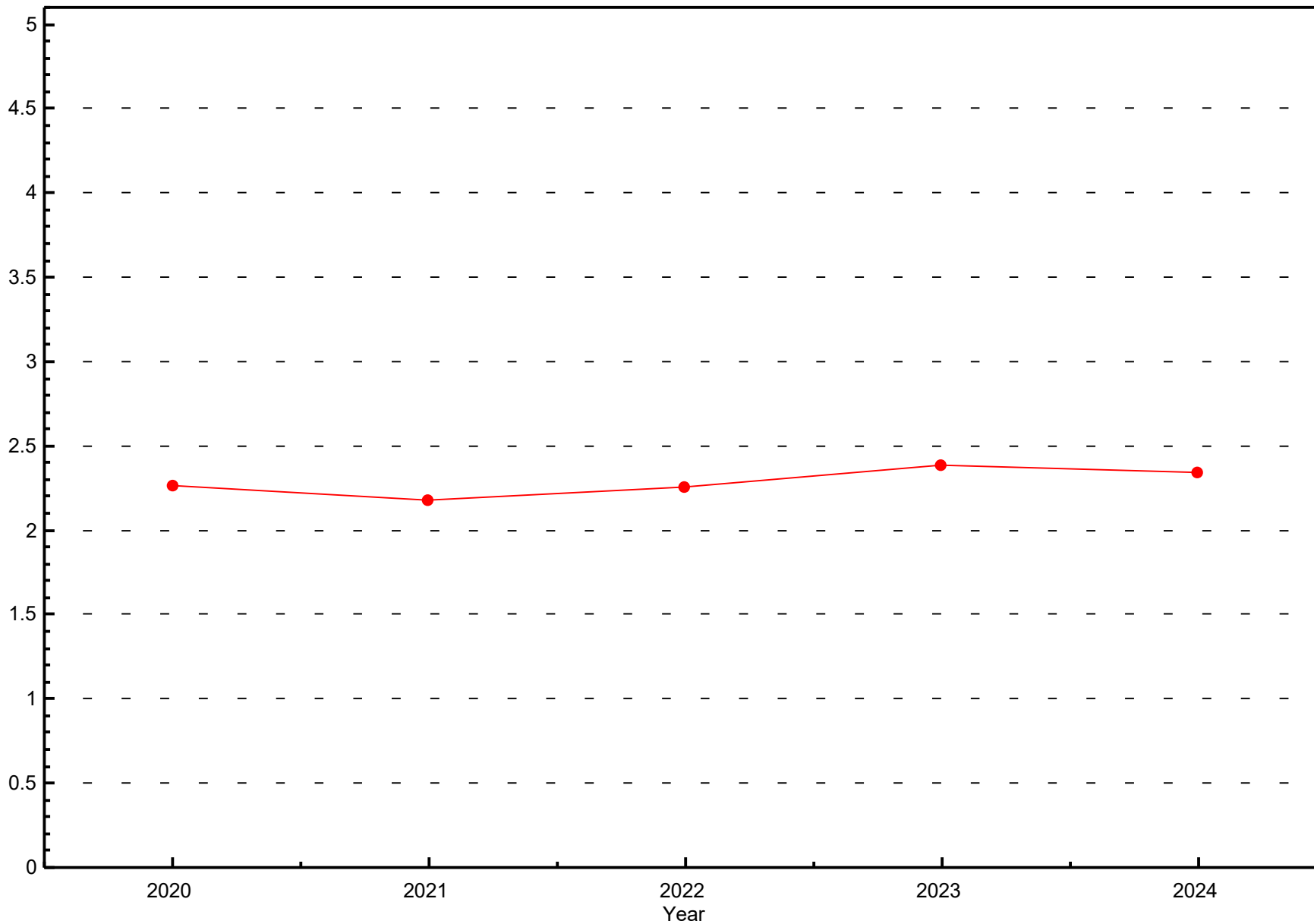
Total Hydrocarbons (THC) - ppm
Janvier (2020 to 2024)





Yearly Averages

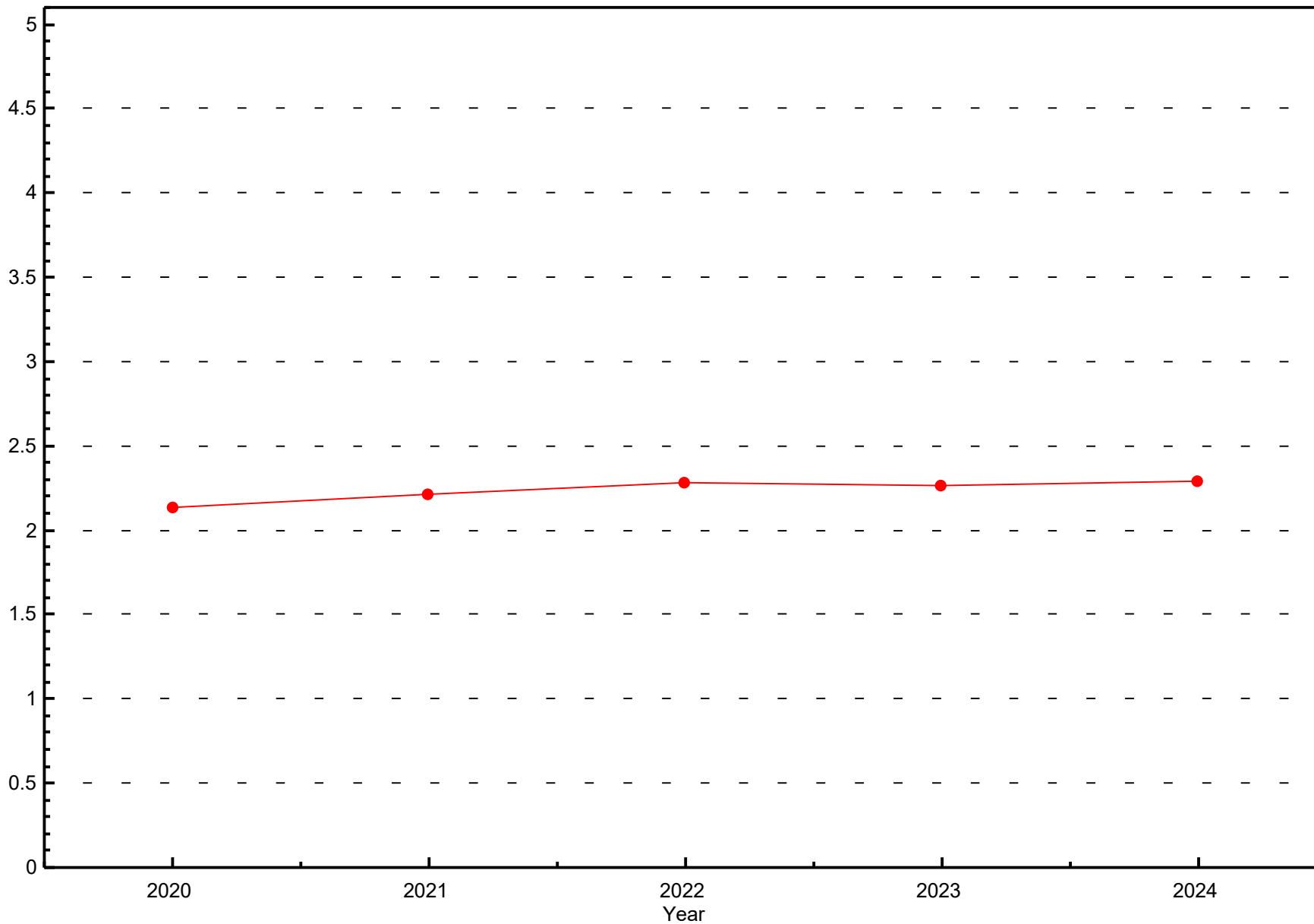
Total Hydrocarbons (THC) - ppm Fort Hills (2020 to 2024)





Yearly Averages

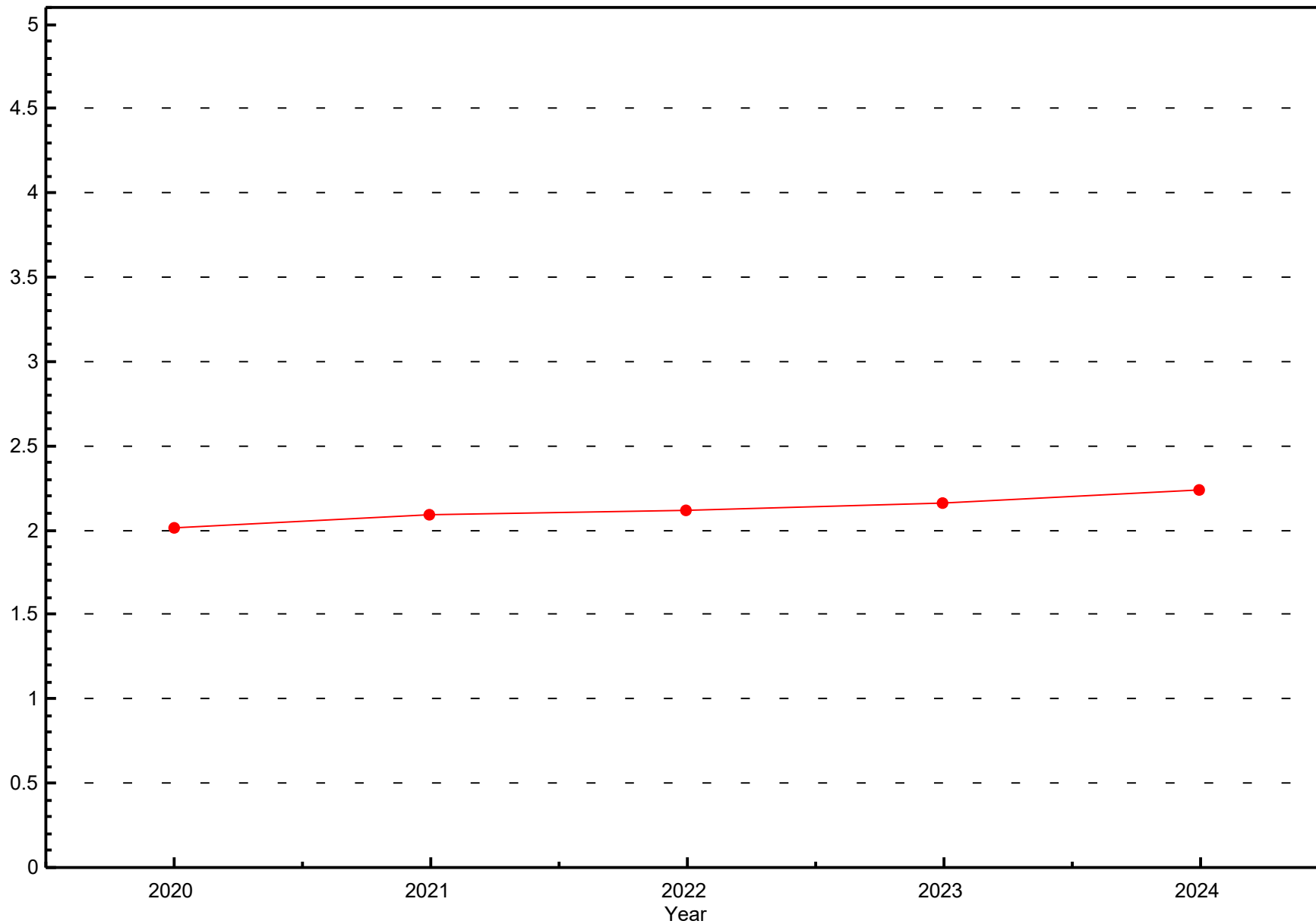
Total Hydrocarbons (THC) - ppm
Surmont 2 (2020 to 2024)





Yearly Averages

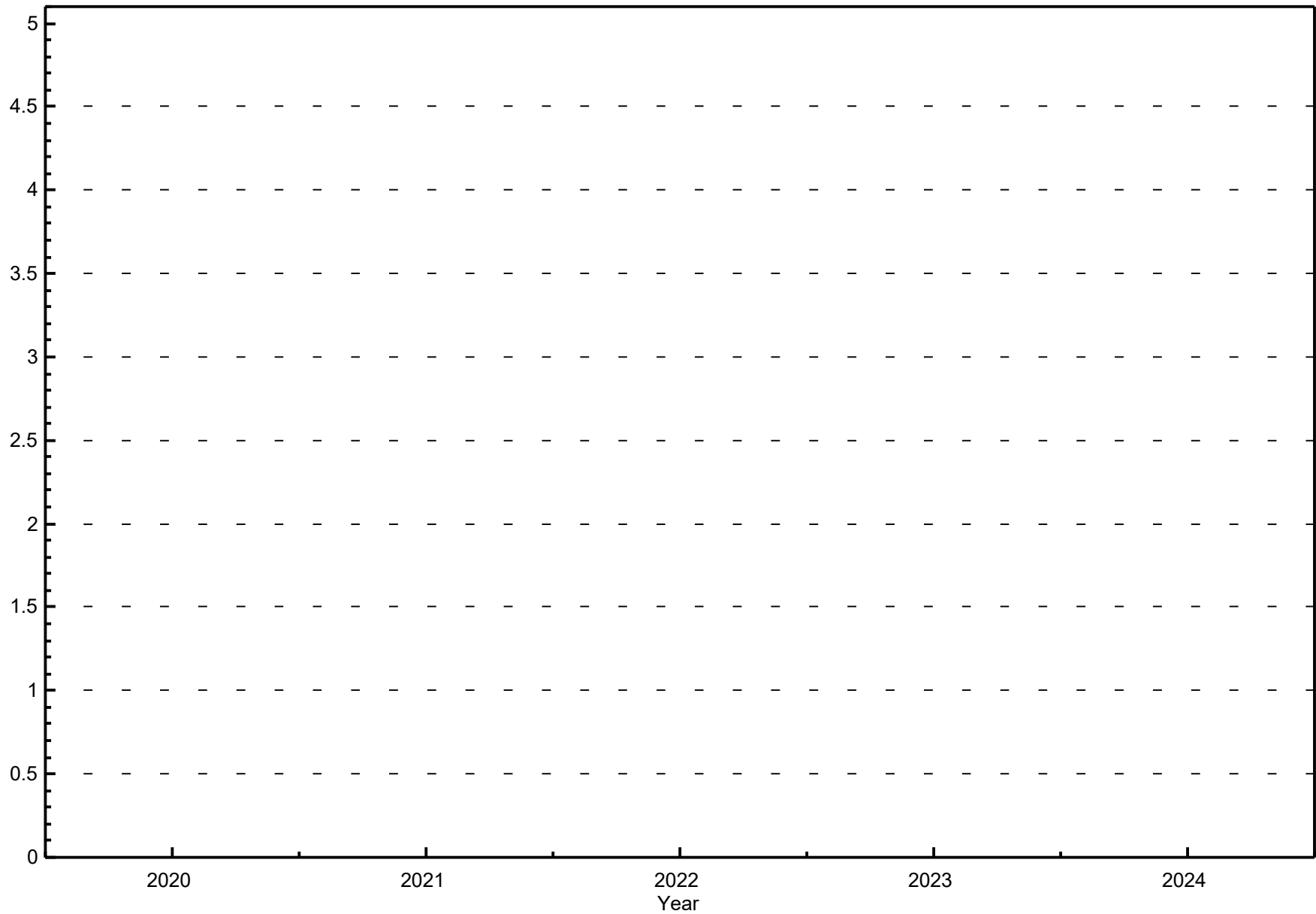
Total Hydrocarbons (THC) - ppm Ells River (2020 to 2024)





Yearly Averages

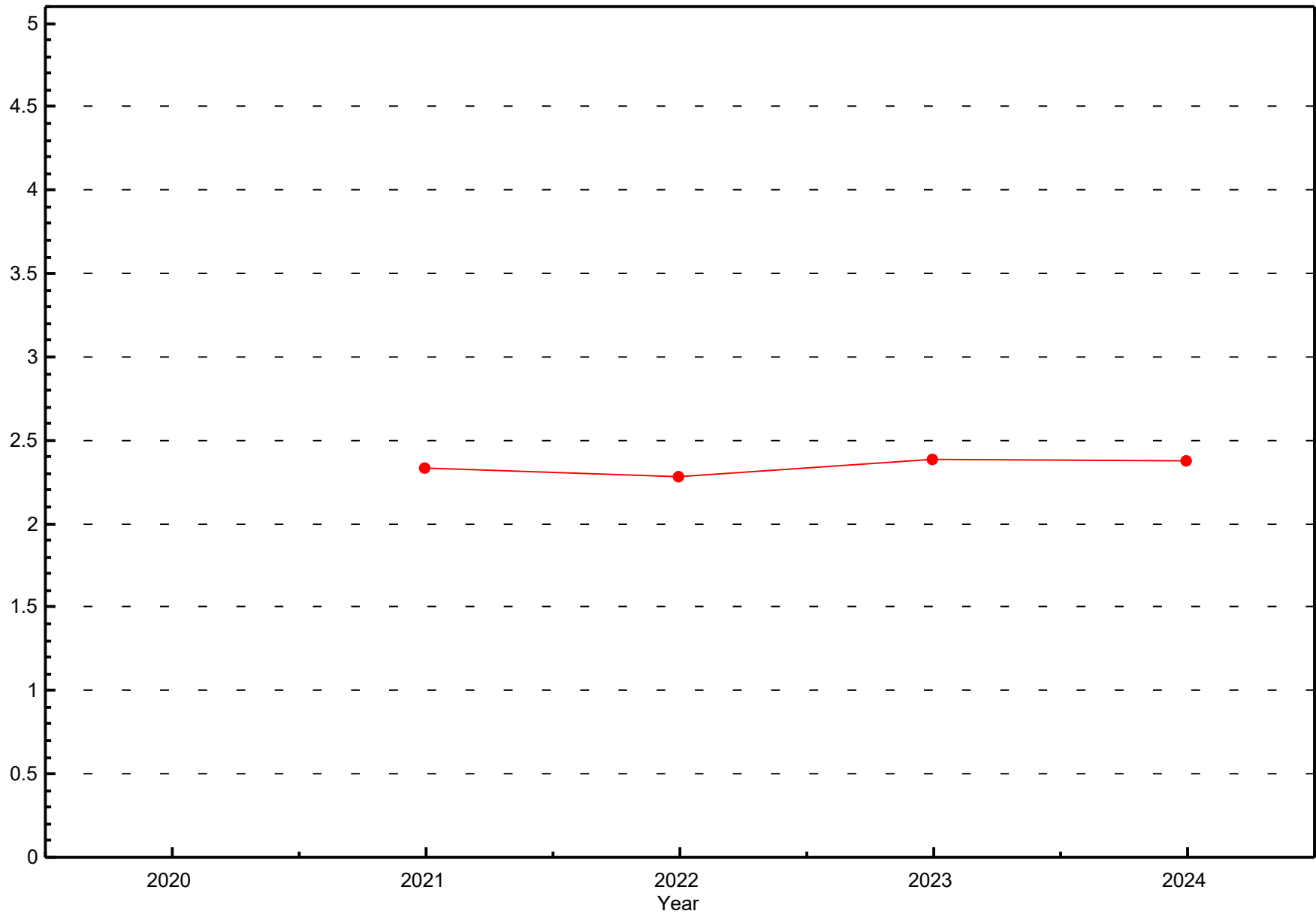
Total Hydrocarbons (THC) - ppm
Sawbones Bay (2020 to 2024)





Yearly Averages

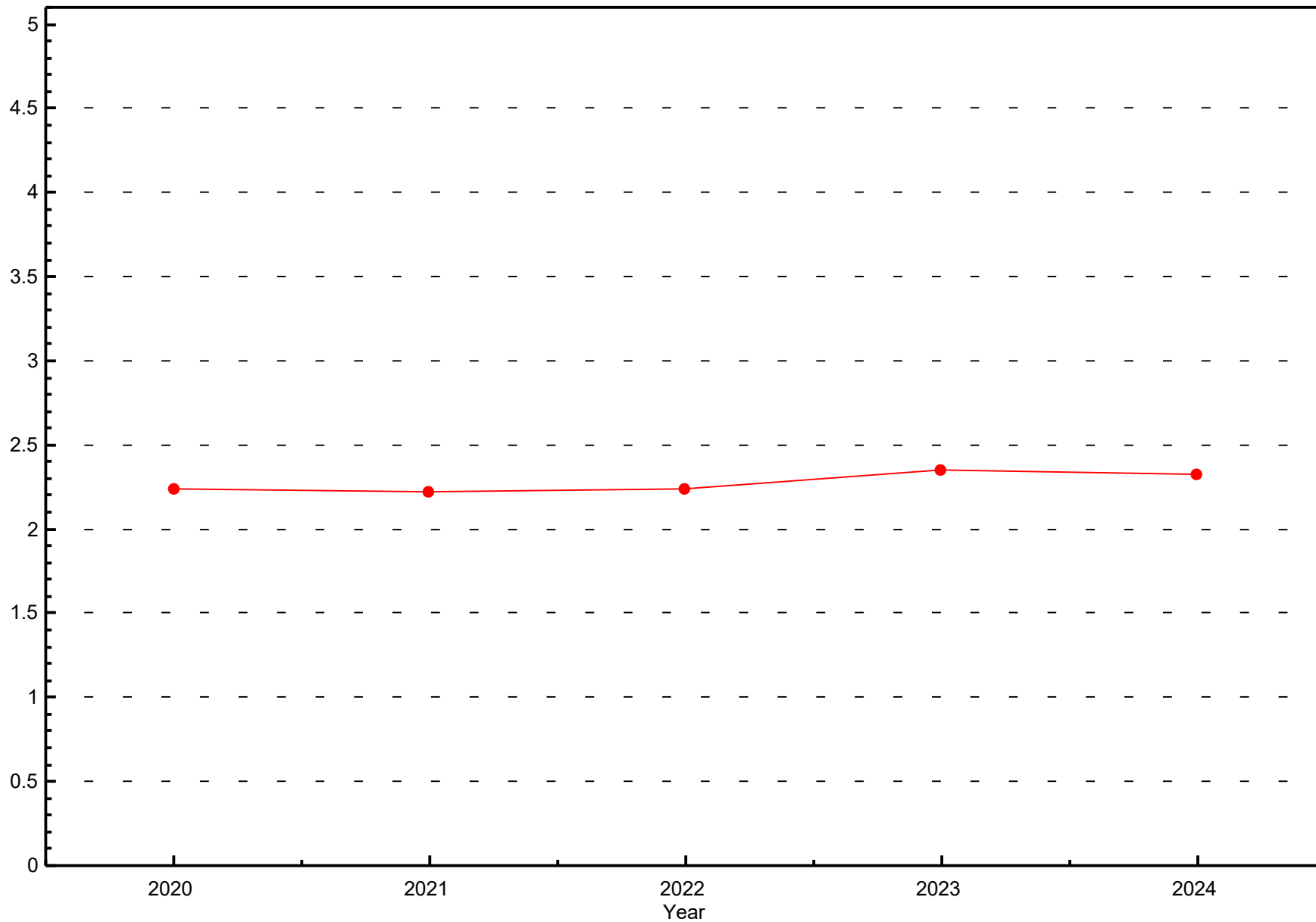
Total Hydrocarbons (THC) - ppm Kirby South (2020 to 2024)





Yearly Averages

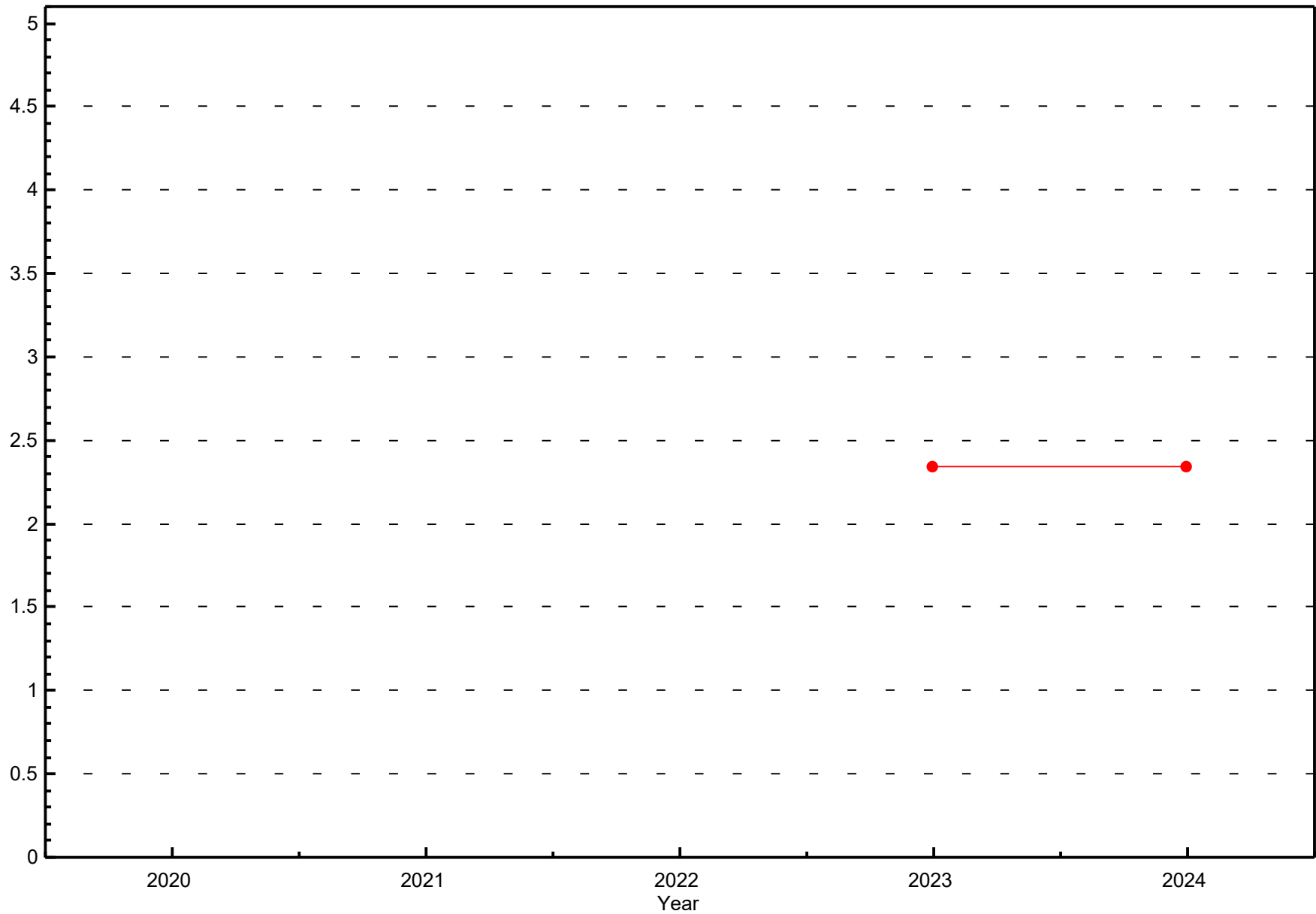
Total Hydrocarbons (THC) - ppm
Kirby North (2020 to 2024)





Yearly Averages

Total Hydrocarbon (THC) - ppm
Blackgold (2020 to 2024)



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
ANNUAL REPORT

**NON-METHANE HYDROCARBONS
ANNUAL 2024**

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

March 2025



Wood Buffalo Environmental Association - Fort McKay - Bertha Ganter (AMS01)
Annual Summary for the Year 2024
Non Methane Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	
				1-Hour Value	24-Hour Value
January	99	703	0.0518	0.4263	0.2144
February	100	661	0.0541	0.7117	0.2533
March	100	708	0.0204	0.3568	0.1560
April	100	684	0.0447	0.8938	0.1409
May	100	706	0.0406	1.4428	0.1900
June	98	674	0.0422	0.4994	0.1376
July	99	702	0.1448	1.4897	0.4790
August	100	706	0.0899	1.0916	0.2119
September	100	683	0.0628	0.6215	0.2027
October	99	705	0.0424	0.7703	0.2770
November	100	684	0.0368	0.8225	0.1367
December	99	703	0.0644	0.6086	0.1539
Annual	99	8319	0.0580	1.4897	0.4790



Wood Buffalo Environmental Association - Mildred Lake (AMS02)
Annual Summary for the Year 2024
Non Methane Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Maximum 24-Hour Value
January	98	695	0.0756	2.7978	0.4878
February	100	662	0.0153	0.5786	0.1398
March	100	707	0.0033	0.2014	0.0342
April	94	640	0.0379	3.9737	0.3289
May	97	690	0.0064	0.3780	0.0358
June	94	640	0.0025	0.2368	0.0299
July	99	705	0.0009	0.3108	0.0282
August	97	683	0.0000	0.0018	0.0001
September	100	683	0.0000	0.0067	0.0003
October	92	645	0.0002	0.0403	0.0045
November	99	680	0.0013	0.2675	0.0368
December	100	708	0.0001	0.0422	0.0018
Annual	97	8138	0.0119	3.9737	0.4878



Wood Buffalo Environmental Association - Buffalo Viewpoint (AMS04)
Annual Summary for the Year 2024
Non Methane Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	100	707	0.0243	1.1384	0.1174
February	99	657	0.0098	0.6715	0.1029
March	100	708	0.0003	0.1299	0.0089
April	99	683	0.0000	0.0095	0.0006
May	100	708	0.0002	0.0793	0.0034
June	100	687	0.0003	0.1247	0.0055
July	99	706	0.0010	0.2024	0.0186
August	100	707	0.0001	0.0187	0.0019
September	100	684	0.0000	0.0000	0.0000
October	99	705	0.0001	0.0441	0.0028
November	100	684	0.0000	0.0007	0.0000
December	100	710	0.0000	0.0000	0.0000
Annual	100	8346	0.0030	1.1384	0.1174



Wood Buffalo Environmental Association - Mannix (AMS05)
Annual Summary for the Year 2024
Non Methane Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Maximum 24-Hour Value
January	100	709	0.0452	0.5904	0.3194
February	93	613	0.0795	1.7472	0.4376
March	92	650	0.0132	0.2791	0.0681
April	100	684	0.0084	0.3050	0.0350
May	87	609	0.0362	0.8936	0.2762
June	99	676	0.0067	0.7287	0.0466
July	96	676	0.0093	0.3526	0.0855
August	100	708	0.0066	0.3703	0.0375
September	96	658	0.0194	1.8838	0.1207
October	95	673	0.0049	0.2108	0.0331
November	100	687	0.0074	0.1692	0.0260
December	100	708	0.0144	0.2454	0.0755
Annual	96	8051	0.0204	1.8838	0.4376



Wood Buffalo Environmental Association - Patricia McInnes (AMS06)
Annual Summary for the Year 2024
Non Methane Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Maximum 24-Hour Value
January	100	705	0.0212	0.1142	0.0651
February	97	642	0.0170	0.0808	0.0415
March	100	707	0.0220	0.0978	0.0627
April	97	663	0.0206	0.0733	0.0425
May	100	709	0.0259	0.0931	0.0470
June	100	686	0.0193	0.1085	0.0460
July	93	657	0.0368	0.2645	0.1055
August	99	699	0.0067	0.1083	0.0210
September	91	622	0.0158	0.1155	0.0466
October	93	655	0.0145	0.1336	0.0306
November	91	623	0.0375	0.3800	0.0939
December	99	701	0.0037	0.1300	0.0178
Annual	97	8069	0.0199	0.3800	0.1055



Wood Buffalo Environmental Association - Athabasca Valley (AMS07)
Annual Summary for the Year 2024
Non Methane Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	94	666	0.0089	0.3042	0.0887
February	92	607	0.0085	0.2996	0.1099
March	97	690	0.0008	0.2331	0.0116
April	100	685	0.0017	0.5401	0.0236
May	100	708	0.0017	0.1888	0.0195
June	98	668	0.0010	0.1433	0.0071
July	100	707	0.0300	0.3059	0.1407
August	99	705	0.0013	0.1203	0.0095
September	100	684	0.0030	0.2673	0.0292
October	100	706	0.0006	0.2373	0.0110
November	92	631	0.0076	1.4718	0.0738
December	100	705	0.0027	0.1458	0.0143
Annual	98	8162	0.0056	1.4718	0.1407



Wood Buffalo Environmental Association - Barge Landing (AMS09)
Annual Summary for the Year 2024
Non Methane Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	100	709	0.0065	0.3743	0.0699
February	100	663	0.0027	0.2040	0.0226
March	99	704	0.0003	0.1059	0.0046
April	100	686	0.0080	0.3060	0.0317
May	89	630	0.0122	1.1673	0.0533
June	99	681	0.0127	0.7026	0.1176
July	100	707	0.0285	0.6083	0.1445
August	100	707	0.0090	0.4793	0.0704
September	100	684	0.0029	0.2292	0.0296
October	100	710	0.0089	0.4293	0.0700
November	100	685	0.0069	0.4848	0.0551
December	99	706	0.0053	0.2435	0.0275
Annual	99	8272	0.0087	1.1673	0.1445



Wood Buffalo Environmental Association - Lower Camp (AMS11)
Annual Summary for the Year 2024
Non Methane Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Maximum 24-Hour Value
January	99	699	0.0213	0.1728	0.0957
February	100	662	0.0220	0.2366	0.1267
March	96	677	0.0122	0.1404	0.0756
April	100	686	0.0141	0.2085	0.0539
May	100	707	0.0117	0.5347	0.0488
June	100	686	0.0193	0.1939	0.0549
July	97	687	0.0737	0.3324	0.1461
August	100	708	0.0416	0.3763	0.1036
September	100	686	0.0288	0.1887	0.0840
October	100	708	0.0123	0.1793	0.0563
November	99	678	0.0187	0.3008	0.0591
December	100	709	0.0412	0.4268	0.1334
Annual	99	8293	0.0264	0.5347	0.1461



Wood Buffalo Environmental Association - Fort McKay South (AMS13)
Annual Summary for the Year 2024
Non Methane Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Maximum 24-Hour Value
January	100	709	0.0026	0.2493	0.0320
February	100	663	0.0117	0.5448	0.1405
March	100	708	0.0032	0.4723	0.0467
April	100	684	0.0175	0.5637	0.0804
May	100	709	0.0154	0.5600	0.0850
June	99	679	0.0108	0.5089	0.0661
July	98	688	0.0212	1.4370	0.2236
August	99	704	0.0081	0.3203	0.0325
September	100	687	0.0025	0.1797	0.0217
October	95	675	0.0027	0.1318	0.0187
November	86	585	0.0047	0.2349	0.0368
December	100	710	0.0138	0.4189	0.0771
Annual	98	8201	0.0096	1.4370	0.2236



Wood Buffalo Environmental Association - Anzac (AMS14)
Annual Summary for the Year 2024
Non Methane Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Maximum 24-Hour Value
January	84	584	0.0053	0.2058	0.0403
February	95	626	0.0187	0.4787	0.0963
March	100	708	0.0122	0.2303	0.0703
April	100	683	0.0089	0.3689	0.0337
May	100	706	0.0076	0.8637	0.0733
June	93	639	0.0038	0.7160	0.0540
July	89	626	0.0303	0.3251	0.1465
August	87	611	0.0308	0.5047	0.1029
September	98	669	0.0152	0.4761	0.0939
October	97	689	0.0038	0.2870	0.0456
November	94	646	0.0017	0.2055	0.0248
December	84	591	0.0189	0.7265	0.2562
Annual	93	7778	0.0129	0.8637	0.2562



Wood Buffalo Environmental Association - Stony Mountain (AMS18)
Annual Summary for the Year 2024
Non Methane Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Maximum 24-Hour Value
January	53	369	0.0026	0.1339	0.0147
February	95	627	0.0088	0.1188	0.0512
March	98	694	0.0051	0.1130	0.0280
April	100	682	0.0038	0.1059	0.0186
May	97	685	0.0125	0.1187	0.0519
June	92	627	0.0139	0.1390	0.0428
July	77	537	0.0820	1.5329	0.2128
August	95	671	0.0487	0.1353	0.0995
September	95	653	0.0278	0.1158	0.0933
October	99	705	0.0048	0.0781	0.0273
November	98	672	0.0081	0.0877	0.0331
December	100	709	0.0290	0.1028	0.0781
Annual	92	7631	0.0202	1.5329	0.2128



Wood Buffalo Environmental Association - Conklin (AMS21)
Annual Summary for the Year 2024
Non Methane Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Maximum 24-Hour Value
January	100	706	0.0071	0.1157	0.0652
February	100	663	0.0032	0.1830	0.0168
March	93	650	0.0019	0.0696	0.0203
April	88	596	0.0015	0.5808	0.0313
May	99	701	0.0009	0.2772	0.0219
June	100	685	0.0012	0.2009	0.0114
July	100	709	0.0254	0.3809	0.1613
August	96	673	0.0024	0.1039	0.0175
September	99	681	0.0005	0.0797	0.0035
October	100	709	0.0009	0.1655	0.0072
November	89	606	0.0036	0.1103	0.0194
December	100	709	0.0065	0.3849	0.0528
Annual	97	8088	0.0047	0.5808	0.1613



Wood Buffalo Environmental Association - Janvier (AMS22)
Annual Summary for the Year 2024
Non Methane Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Maximum 24-Hour Value
January	91	643	0.0003	0.0249	0.0048
February	99	659	0.0007	0.0312	0.0052
March	99	701	0.0004	0.0525	0.0031
April	99	681	0.0001	0.0086	0.0009
May	100	708	0.0004	0.0988	0.0081
June	100	685	0.0000	0.0036	0.0002
July	100	709	0.0024	0.0883	0.0237
August	98	693	0.0000	0.0162	0.0009
September	99	677	0.0001	0.0134	0.0012
October	100	707	0.0001	0.0073	0.0003
November	100	685	0.0000	0.0115	0.0005
December	99	705	0.0000	0.0036	0.0002
Annual	99	8253	0.0004	0.0988	0.0237



Wood Buffalo Environmental Association - Fort Hills (AMS23)
Annual Summary for the Year 2024
Non Methane Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Maximum 24-Hour Value
January	100	710	0.1275	1.3778	0.4307
February	100	664	0.1445	1.0448	0.4412
March	100	710	0.0913	1.0806	0.4569
April	100	686	0.1549	2.2238	0.4538
May	98	697	0.1643	2.3972	0.3728
June	100	686	0.1313	2.5723	0.5712
July	83	584	0.2266	1.6651	0.6387
August	99	695	0.1640	2.2508	0.4246
September	82	555	0.1361	1.6405	0.3835
October	100	708	0.0382	0.6428	0.1849
November	100	686	0.0287	0.7411	0.1278
December	100	706	0.0494	0.5626	0.1828
Annual	97	8087	0.1194	2.5723	0.6387



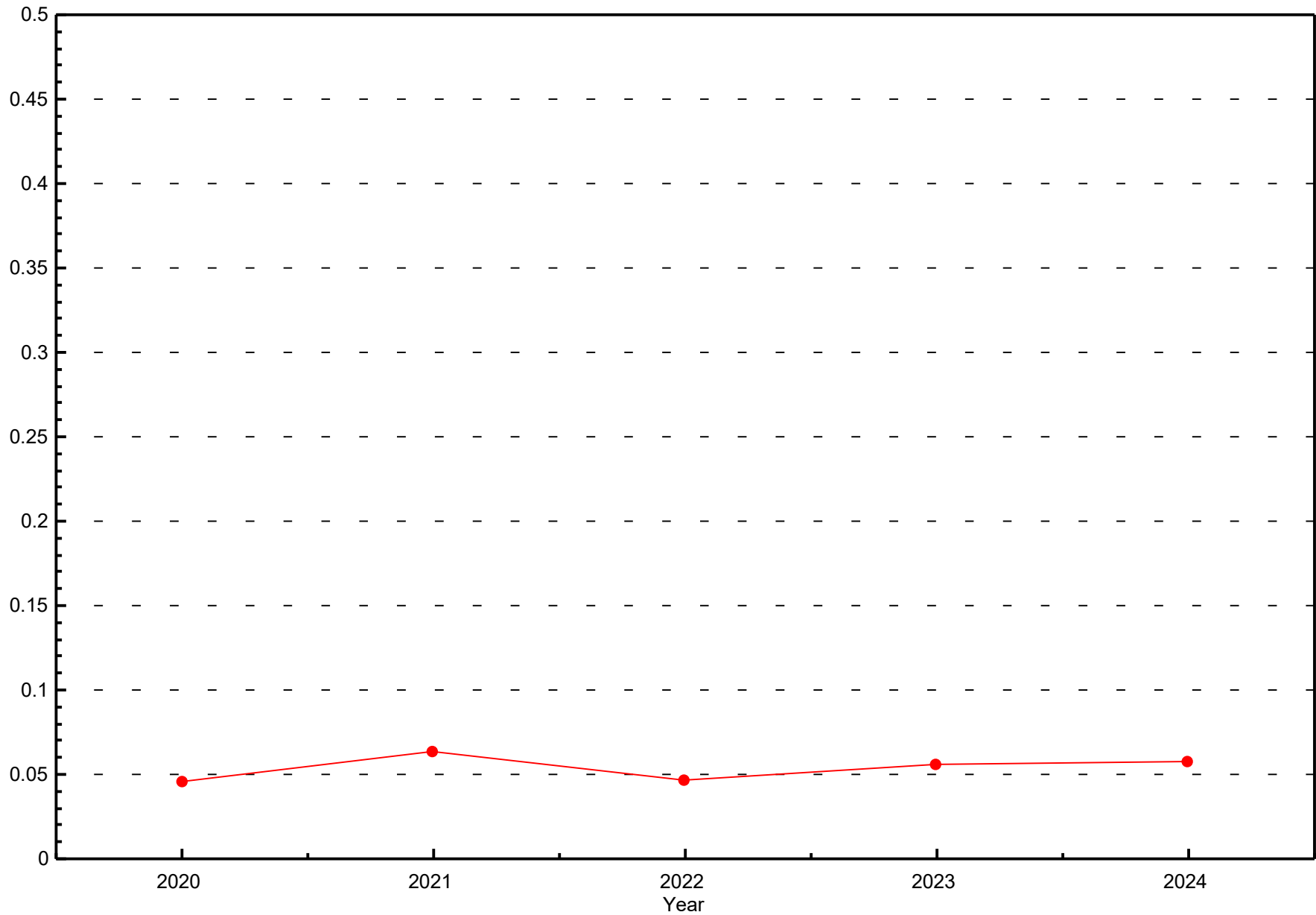
Wood Buffalo Environmental Association - Ells River (AMS30)
Annual Summary for the Year 2024
Non Methane Hydrocarbons (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Maximum 24-Hour Value
January	100	709	0.0008	0.3169	0.0220
February	100	661	0.0091	0.3541	0.0563
March	97	685	0.0064	0.5594	0.0706
April	98	671	0.0514	1.1009	0.1380
May	100	707	0.0570	1.3465	0.1832
June	99	679	0.0700	0.9196	0.3036
July	100	708	0.2213	1.4197	0.6925
August	100	706	0.0995	0.9828	0.2649
September	100	686	0.0999	1.6456	0.3664
October	100	707	0.0564	1.6378	0.3874
November	100	684	0.0572	0.7576	0.1664
December	100	706	0.0617	1.0820	0.2511
Annual	99	8309	0.0664	1.6456	0.6925



Yearly Averages

Non Methane Hydrocarbons (NMHC) - ppm
Fort McKay - Bertha Ganter (2020 to 2024)

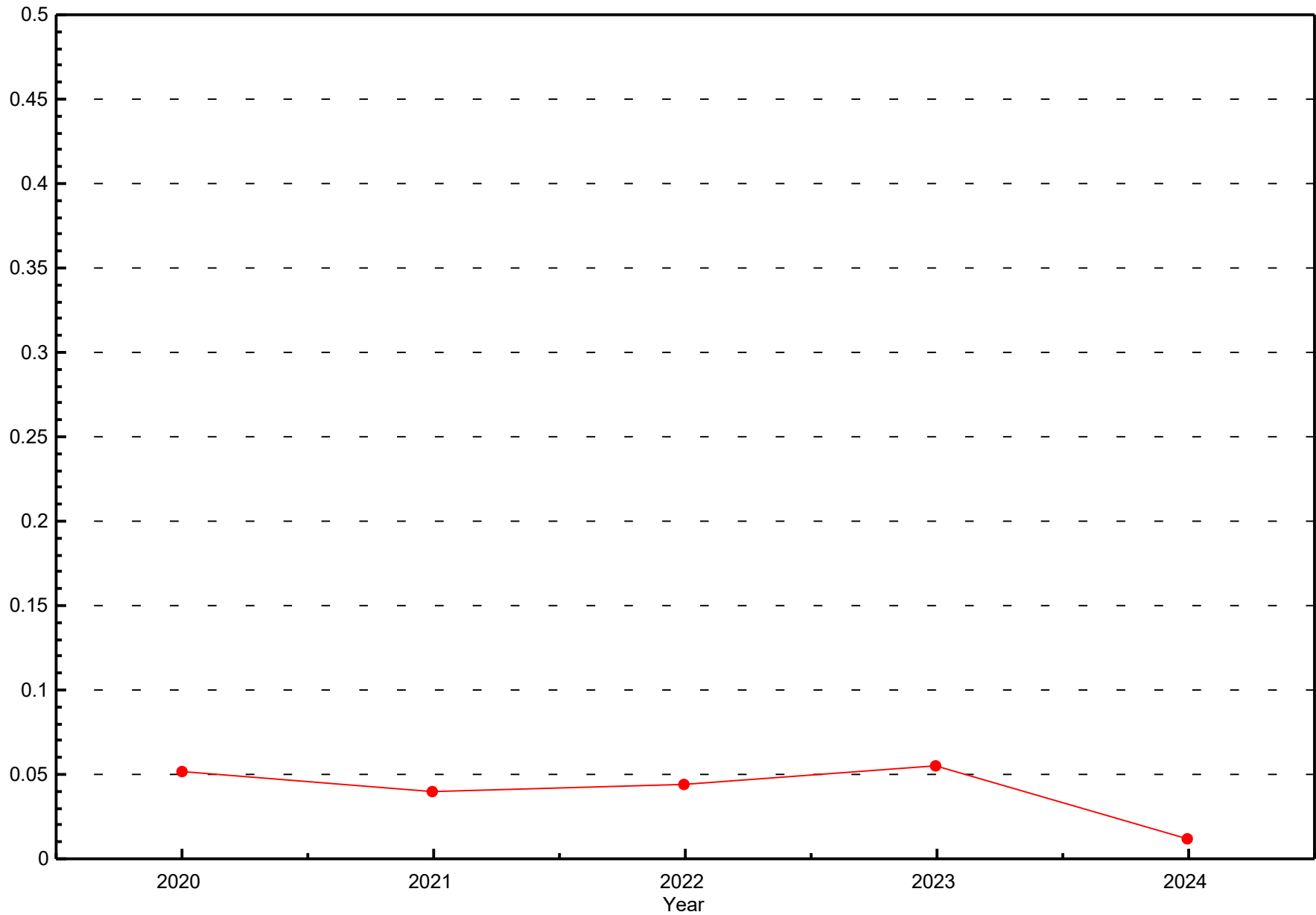




Yearly Averages

Non Methane Hydrocarbons (NMHC) - ppm

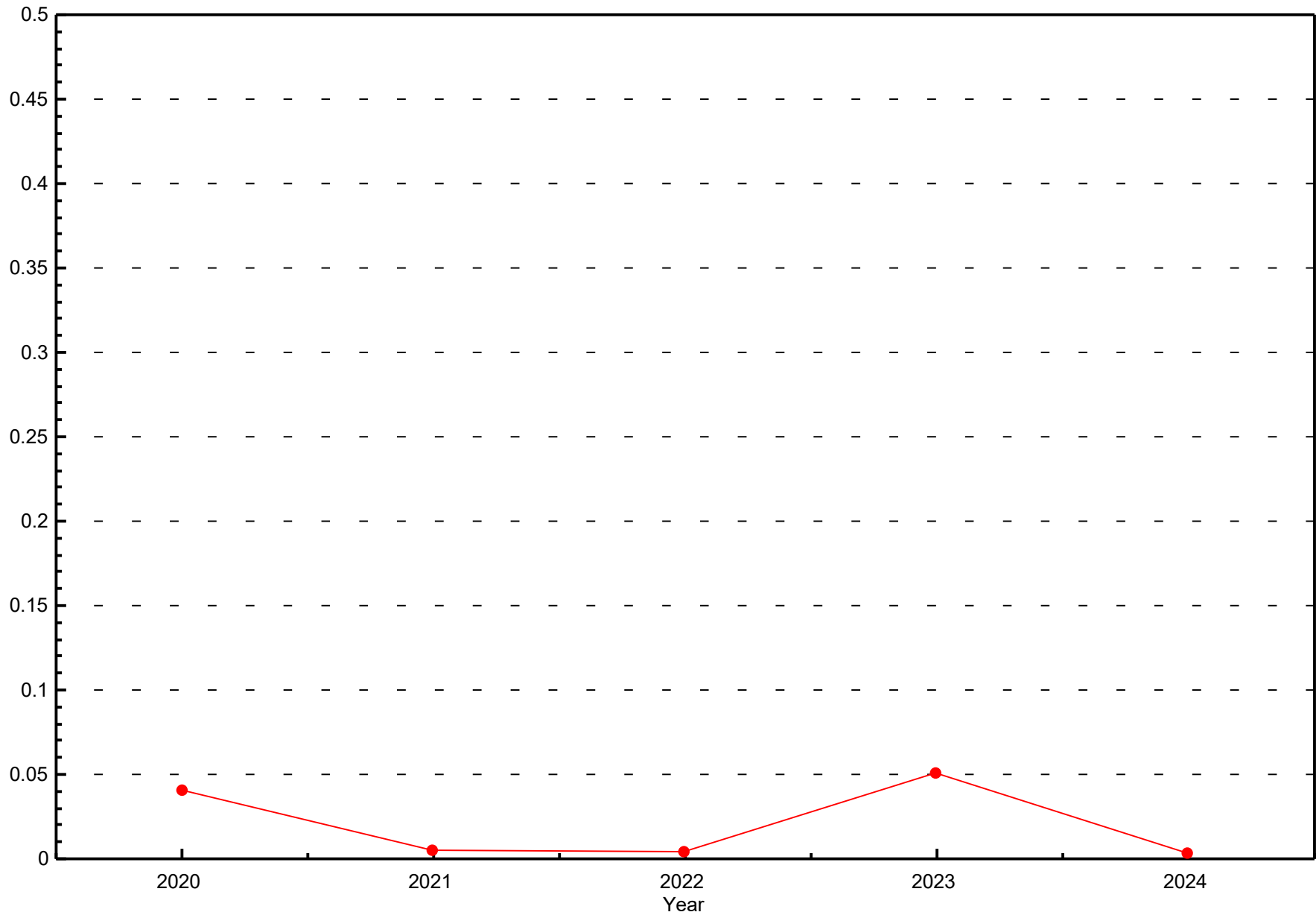
Mildred Lake (2020 to 2024)





Yearly Averages

Non Methane Hydrocarbons (NMHC) - ppm Buffalo Viewpoint (2020 to 2024)

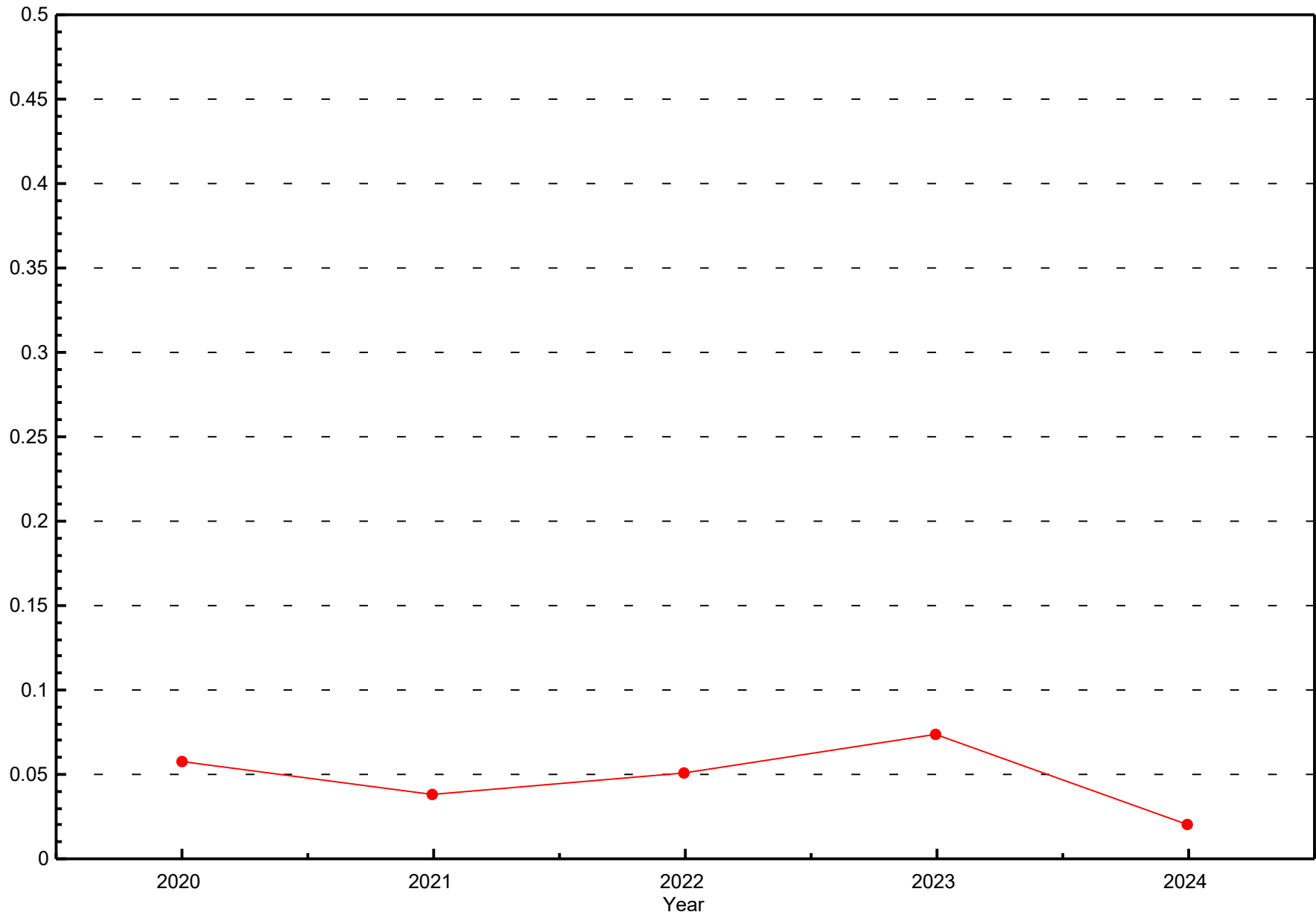




Yearly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Mannix (2020 to 2024)

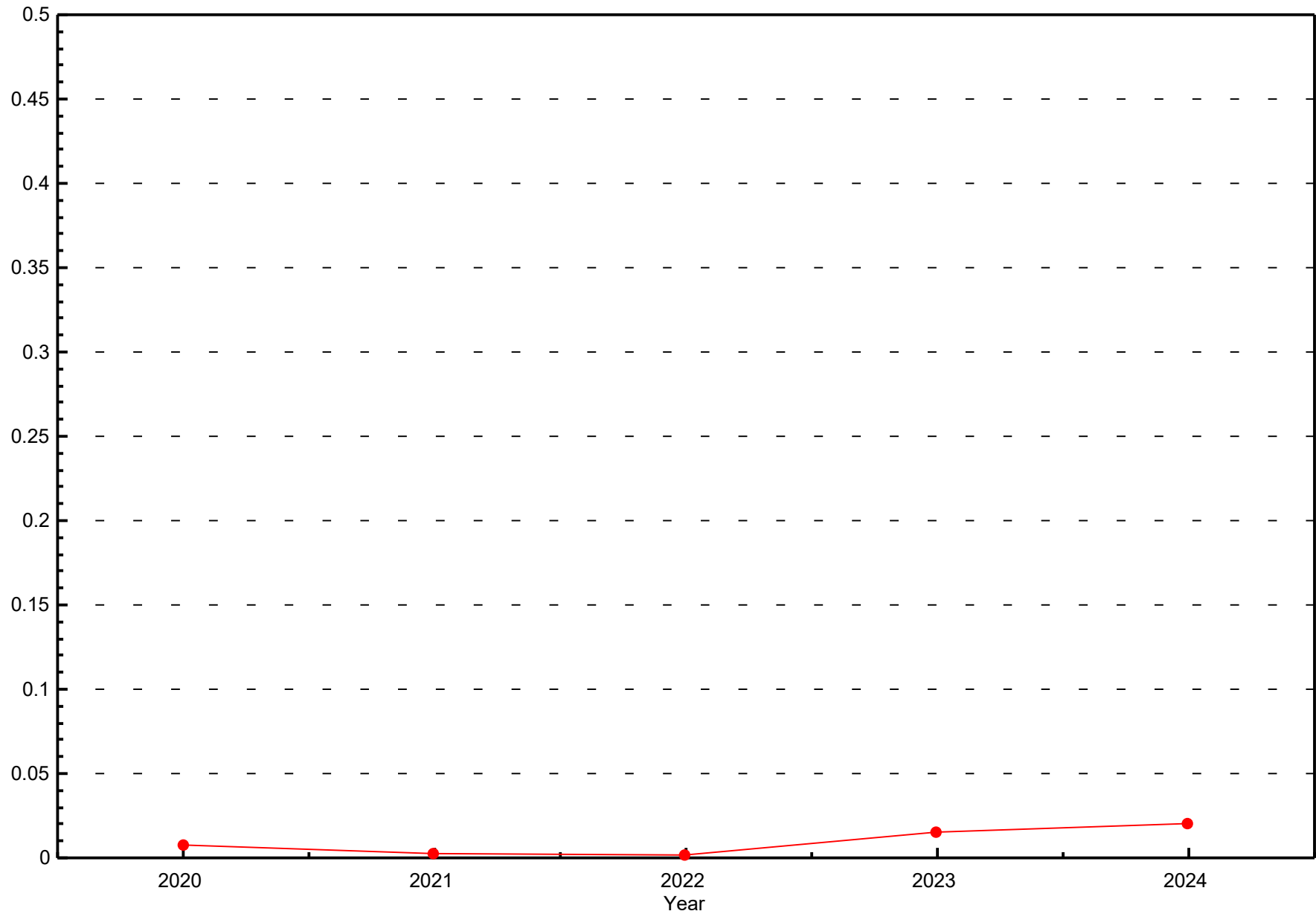




Yearly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Patricia McInnes (2020 to 2024)

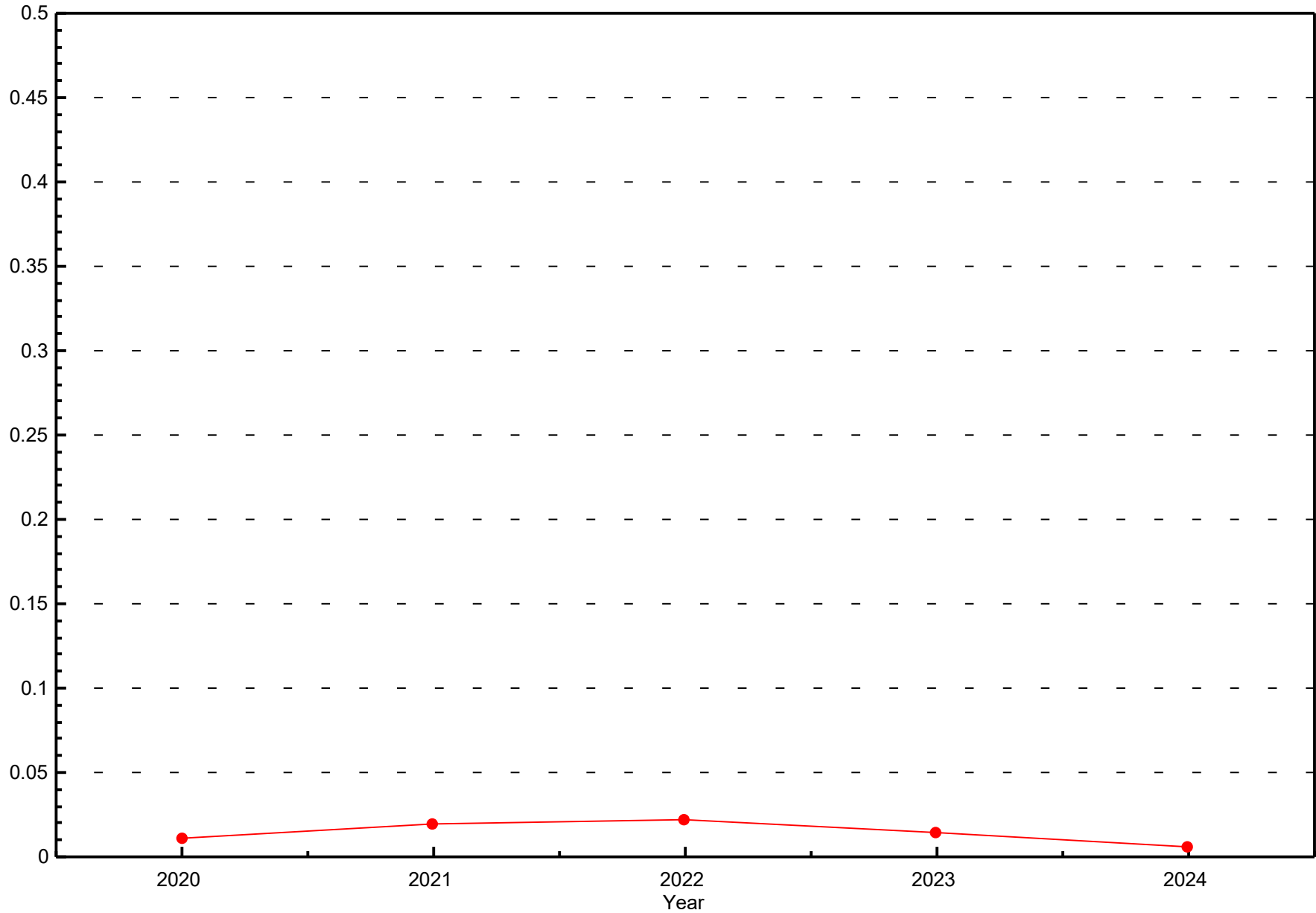




Yearly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Athabasca Valley (2020 to 2024)

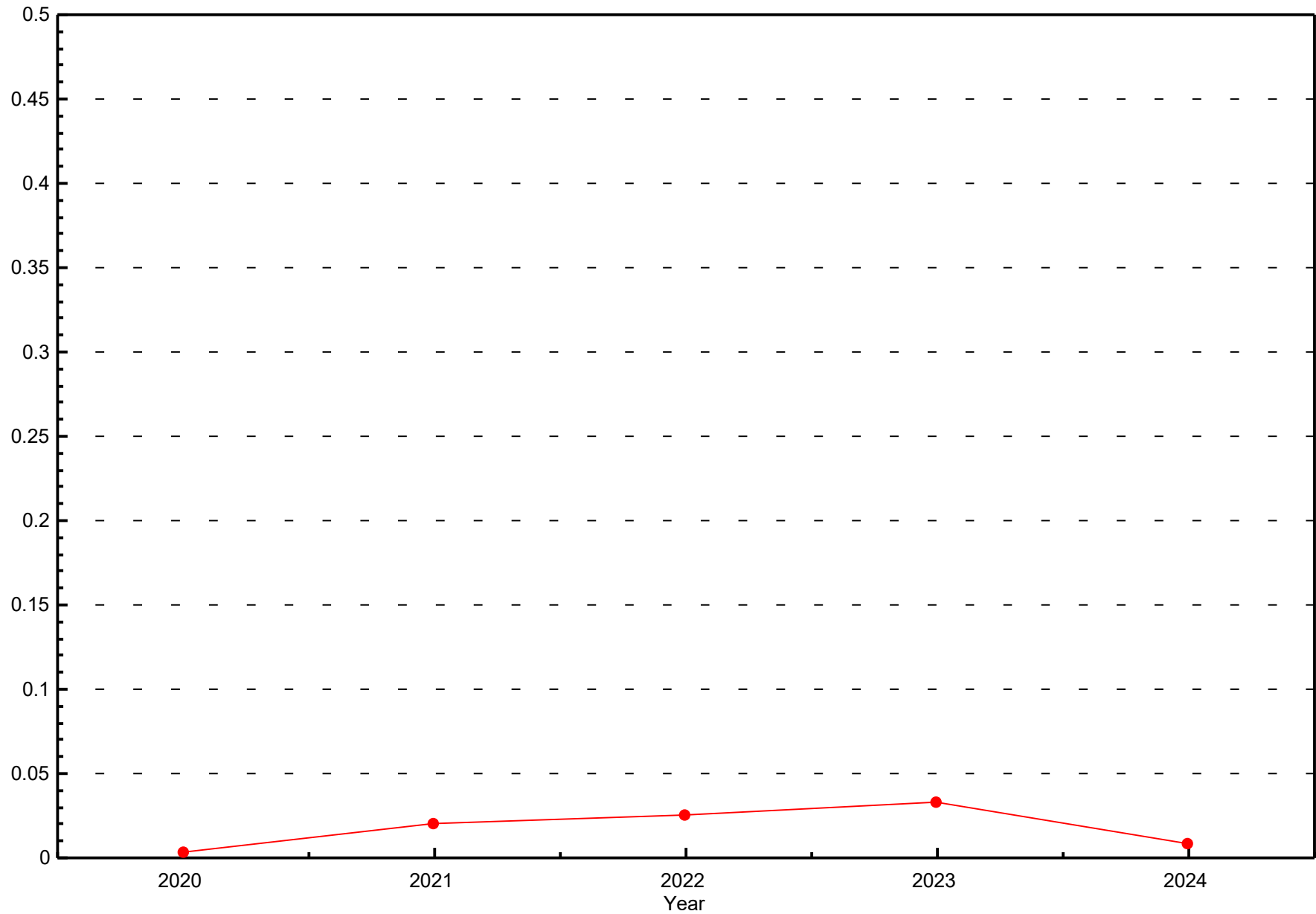




Yearly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Barge Landing (2020 to 2024)

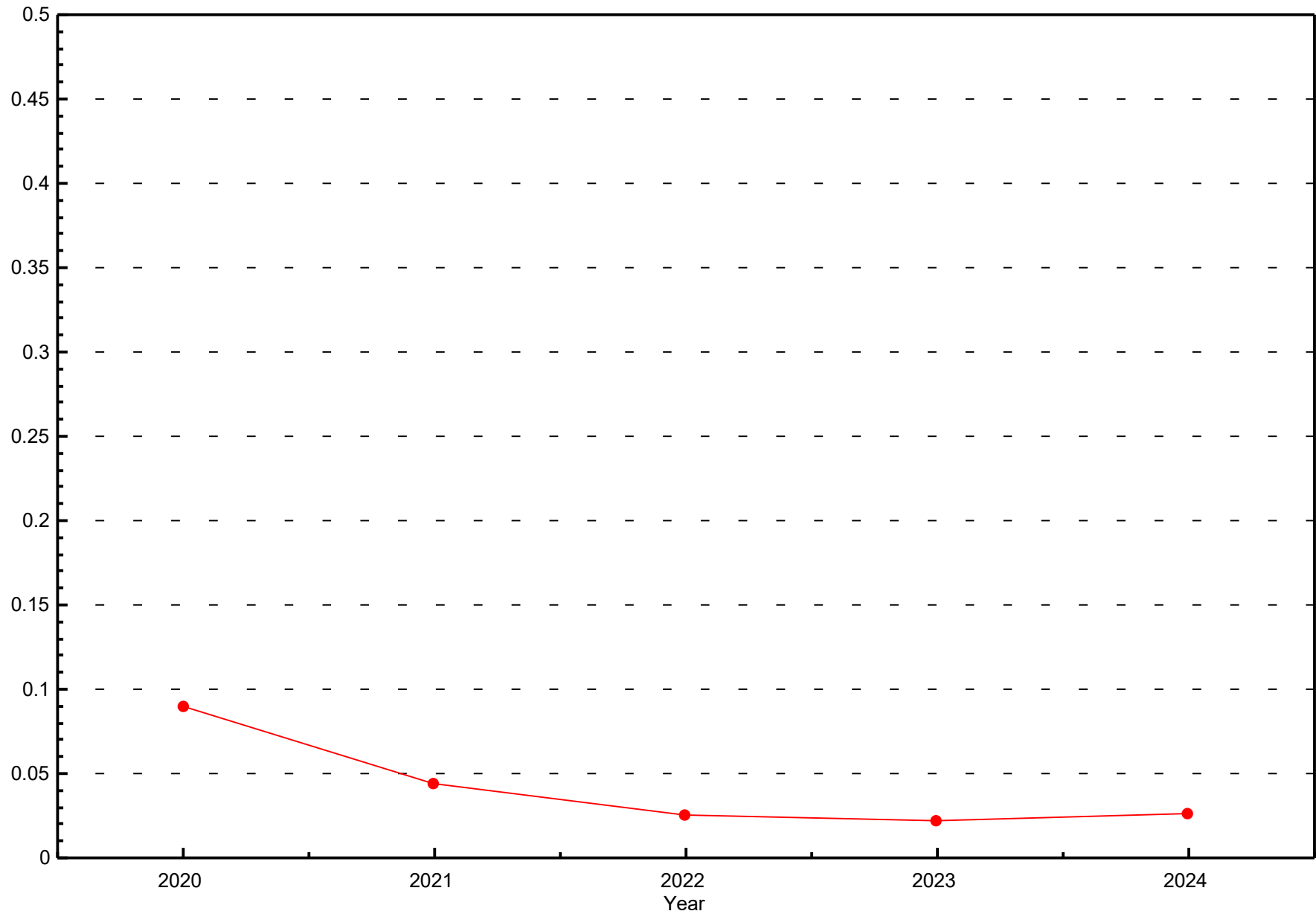




Yearly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Lower Camp (2020 to 2024)

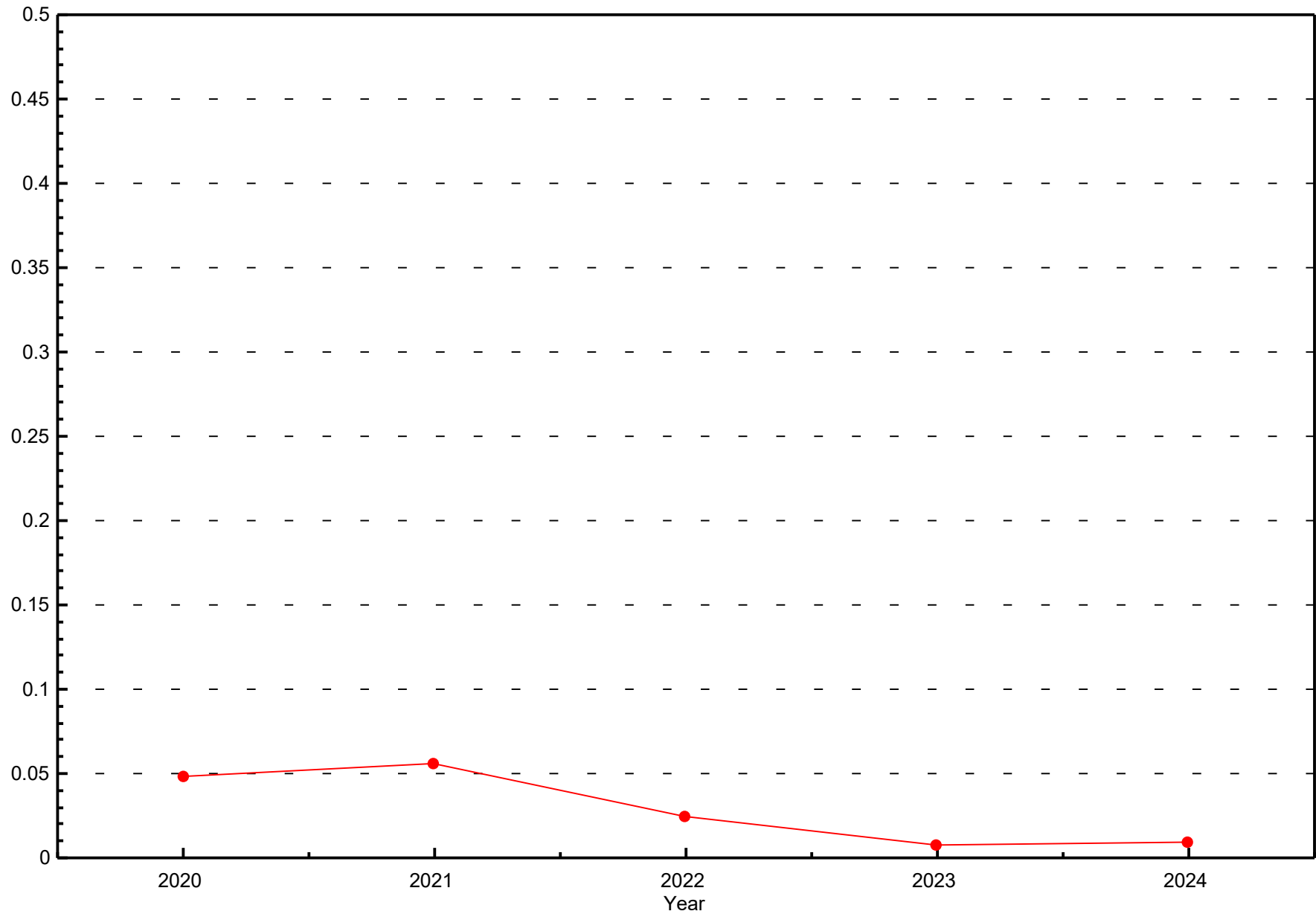




Yearly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Fort McKay South (2020 to 2024)

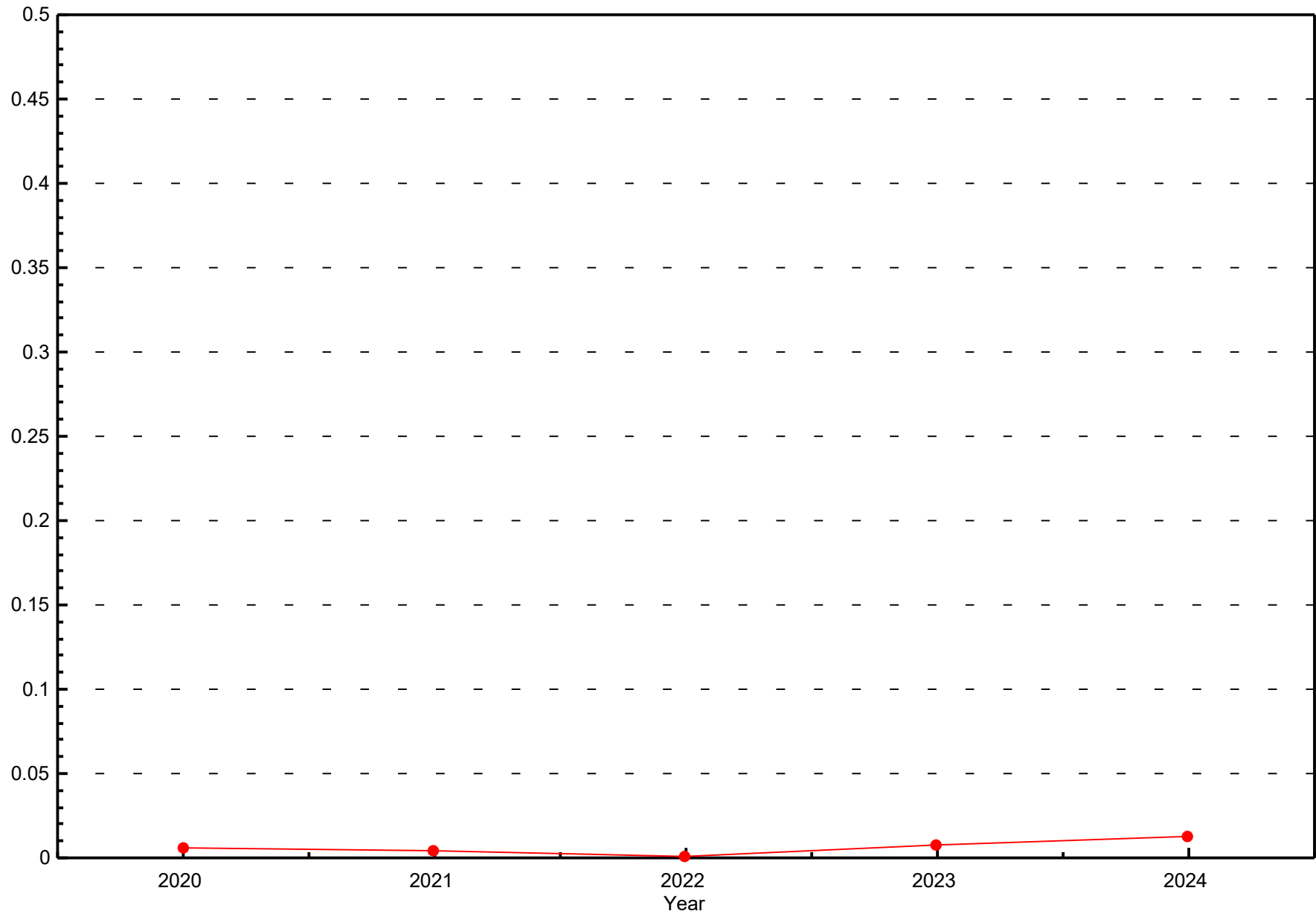




Yearly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Anzac (2020 to 2024)

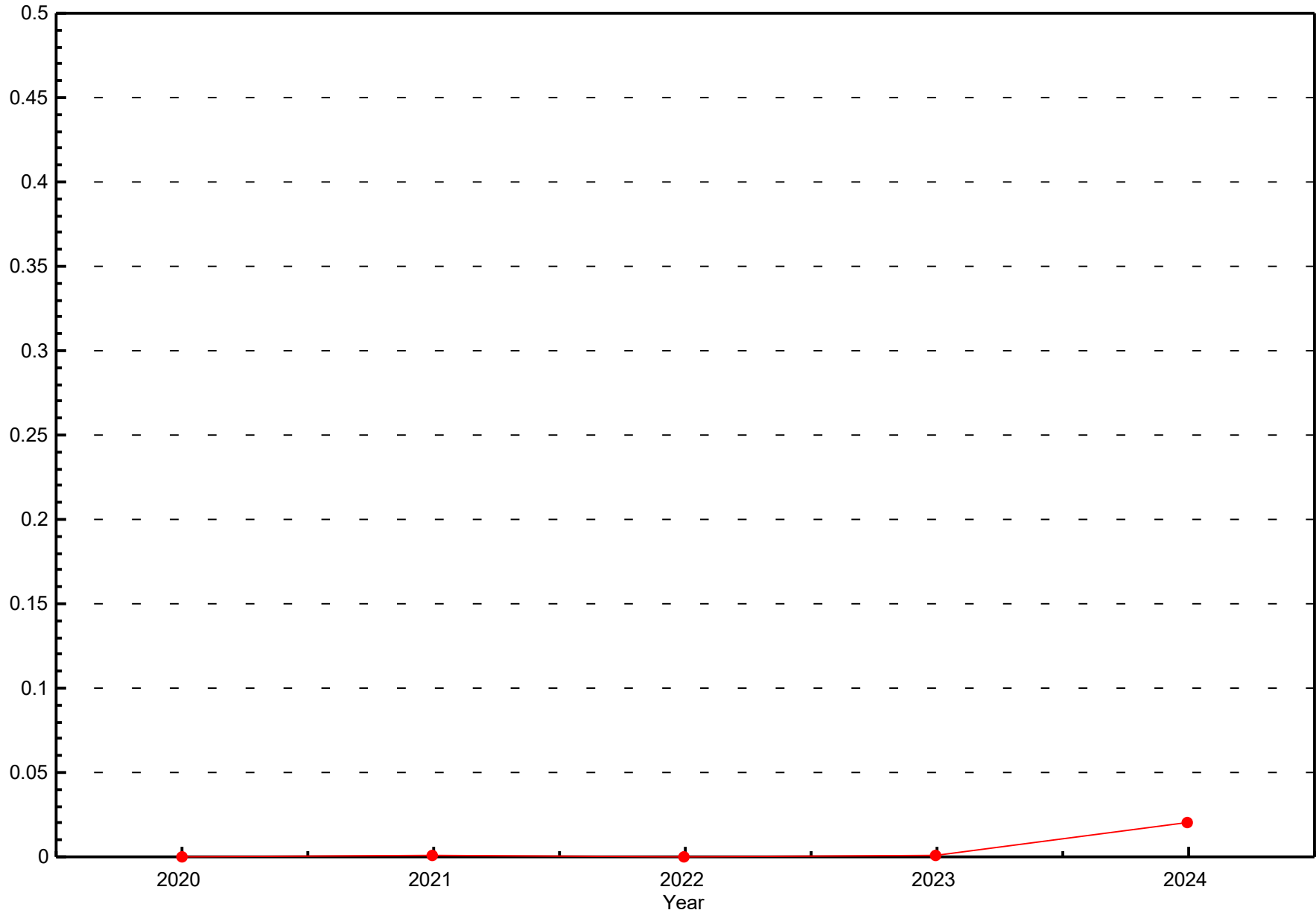




Yearly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Stony Mountain (2020 to 2024)

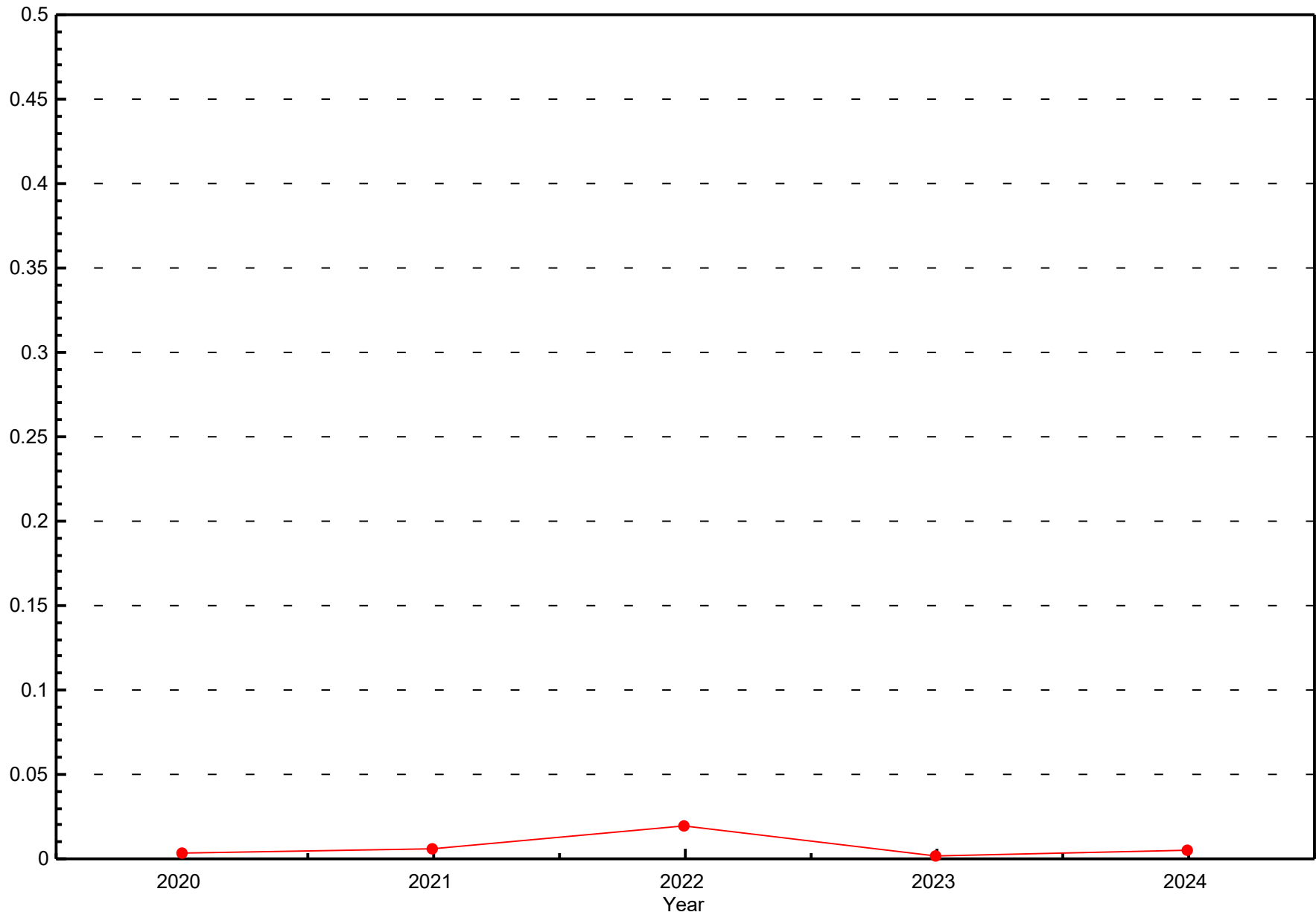




Yearly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Conklin (2020 to 2024)

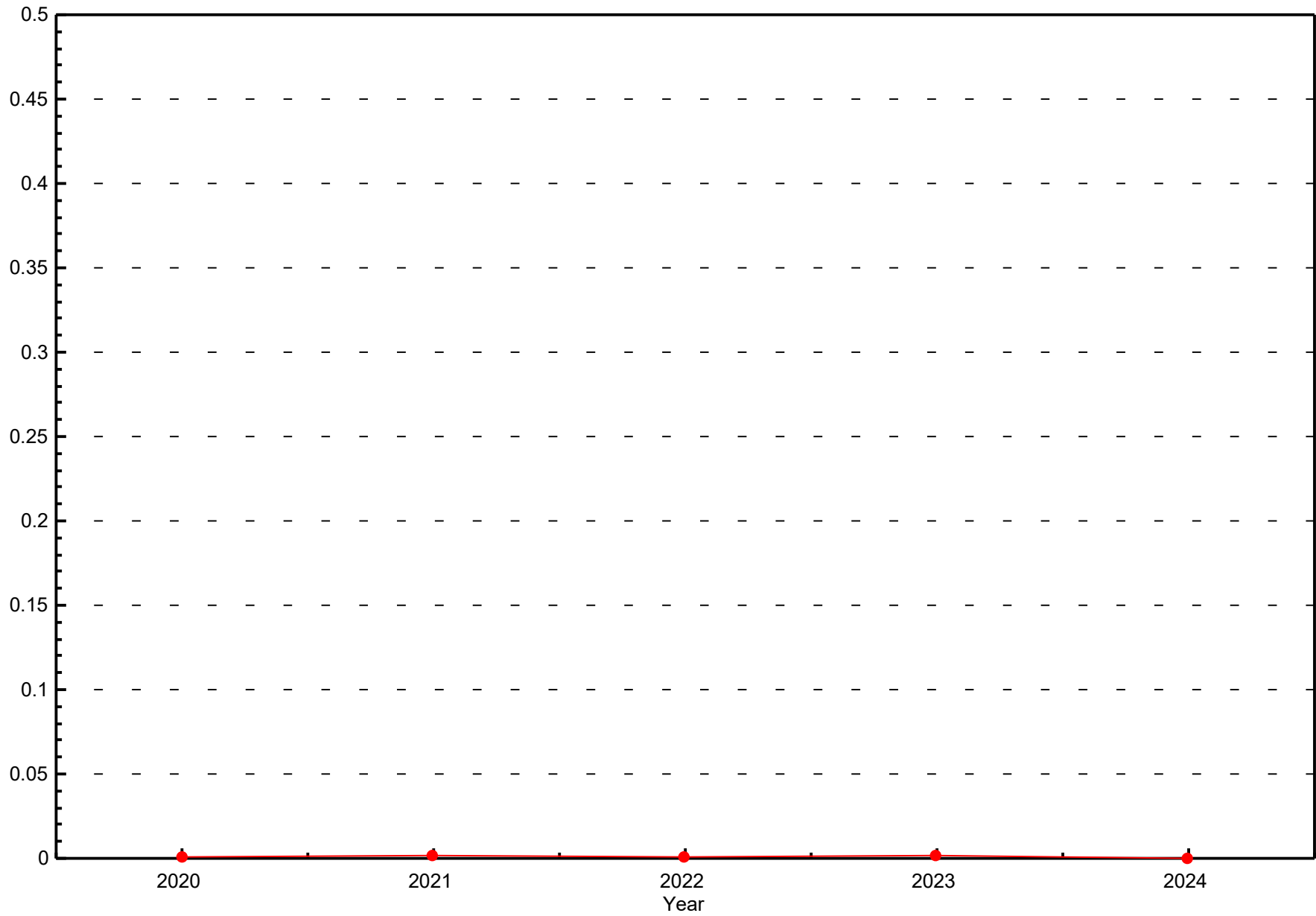




Yearly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Janvier (2020 to 2024)

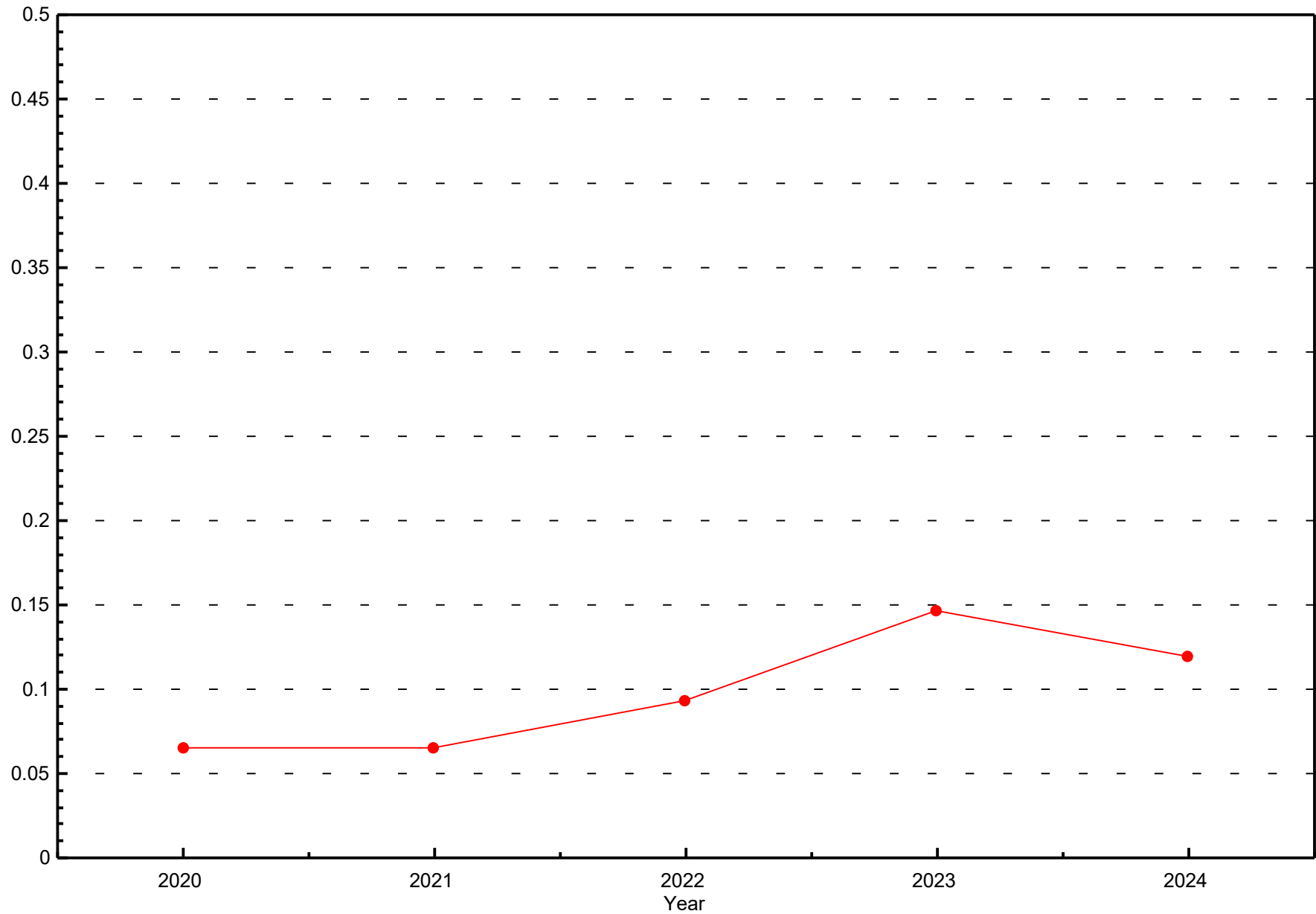




Yearly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Fort Hills (2020 to 2024)

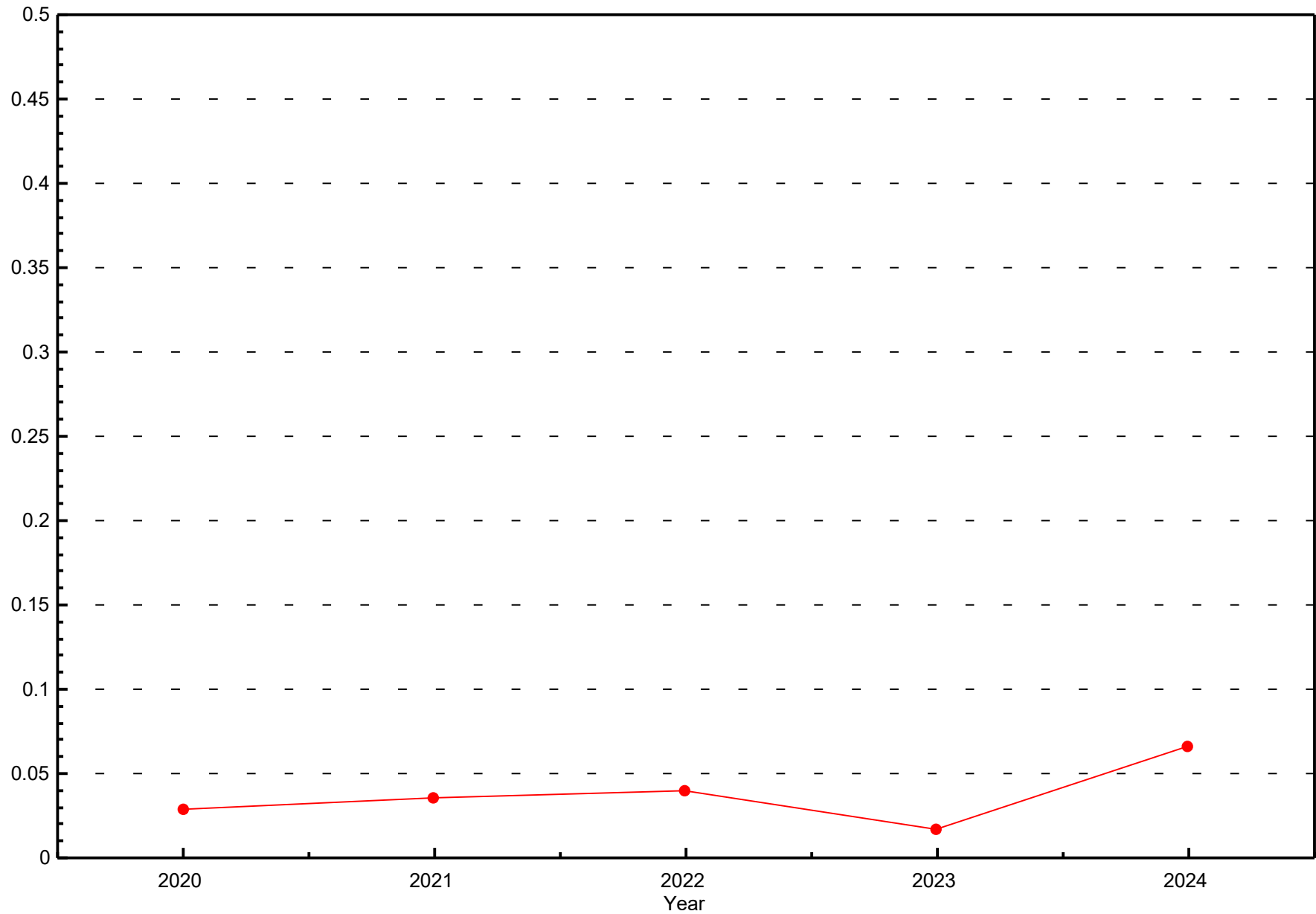




Yearly Averages

Non Methane Hydrocarbons (NMHC) - ppm

Ells River (2020 to 2024)



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY MONITORING PROGRAM ANNUAL REPORT

METHANE ANNUAL 2024

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

March 2025



Wood Buffalo Environmental Association - Fort McKay - Bertha Ganter (AMS01)
Annual Summary for the Year 2024
Methane (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	99	703	2.2714	3.5557	2.7800
February	100	661	2.2537	3.6228	2.6893
March	100	708	2.1232	3.8839	2.6859
April	100	684	2.0395	2.7606	2.1641
May	100	706	1.9973	2.8188	2.0979
June	98	674	2.0262	2.6981	2.1218
July	99	702	2.0814	3.1307	2.3111
August	100	706	2.0635	2.7184	2.2569
September	100	683	2.0888	3.3148	2.3189
October	99	705	2.0631	3.4393	2.5137
November	100	684	2.1084	3.1453	2.4238
December	99	703	2.1953	4.4790	2.6220
Annual	99	8319	2.1090	4.4790	2.7800



Wood Buffalo Environmental Association - Mildred Lake (AMS02)
Annual Summary for the Year 2024
Methane (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Maximum 24-Hour Value
January	98	695	2.3890	10.9944	3.8154
February	100	662	2.1833	4.0015	2.8719
March	100	707	2.0597	5.4171	2.9484
April	94	640	2.0448	4.8658	2.2942
May	97	690	2.0084	2.6461	2.1709
June	94	640	2.0299	3.5044	2.2294
July	99	705	2.1289	3.5170	2.3612
August	97	683	2.1021	3.1292	2.2073
September	100	683	2.1770	3.5253	2.3490
October	92	645	2.1186	4.6833	2.5153
November	99	680	2.1886	3.6504	2.3796
December	100	708	2.2760	5.2031	2.6552
Annual	97	8138	2.1437	10.9944	3.8154



Wood Buffalo Environmental Association - Buffalo Viewpoint (AMS04)
Annual Summary for the Year 2024
Methane (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	100	707	2.1012	7.3592	2.4110
February	99	657	2.2570	4.9159	3.1878
March	100	708	2.1327	3.6623	2.4126
April	99	683	2.1336	4.2392	2.4614
May	100	708	2.0716	2.9653	2.2276
June	100	687	2.0622	2.6760	2.1464
July	99	706	2.1386	3.0465	2.4357
August	100	707	2.0832	2.7339	2.2460
September	100	684	2.1546	3.5885	2.5571
October	99	705	2.1020	3.2844	2.3031
November	100	684	2.1314	3.7352	2.3250
December	100	710	2.1843	3.4788	2.6239
Annual	100	8346	2.1287	7.3592	3.1878



Wood Buffalo Environmental Association - Mannix (AMS05)
Annual Summary for the Year 2024
Methane (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	100	709	2.1929	7.0790	2.5757
February	93	613	2.1533	6.1245	2.9880
March	92	650	2.0440	3.7096	2.2040
April	100	684	2.0840	4.1968	2.3487
May	87	609	2.0541	2.5740	2.1446
June	99	676	2.0849	2.8152	2.1797
July	96	676	2.1457	3.4693	2.5520
August	100	708	2.0824	2.7100	2.2486
September	96	658	2.1779	3.8340	2.7194
October	95	673	2.1594	4.5101	2.3602
November	100	687	2.2015	4.4548	2.6421
December	100	708	2.2272	3.7526	2.7337
Annual	96	8051	2.1351	7.0790	2.9880



Wood Buffalo Environmental Association - Patricia McInnes (AMS06)
Annual Summary for the Year 2024
Methane (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	100	705	2.1133	2.8776	2.2353
February	97	642	2.0711	2.9298	2.4098
March	100	707	2.0547	2.4188	2.1595
April	97	663	2.0191	2.3941	2.0749
May	100	709	1.9924	2.3569	2.0909
June	100	686	2.0074	2.3147	2.0555
July	93	657	2.0248	2.9889	2.2596
August	99	699	2.0769	2.7177	2.2187
September	91	622	2.0615	2.7736	2.2574
October	93	655	2.0190	2.7818	2.1353
November	91	623	2.0345	3.0250	2.2198
December	99	701	2.0297	2.7628	2.1504
Annual	97	8069	2.0421	3.0250	2.4098



Wood Buffalo Environmental Association - Athabasca Valley (AMS07)
Annual Summary for the Year 2024
Methane (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	94	666	2.0825	2.5658	2.2520
February	92	607	2.0441	2.9248	2.3439
March	97	690	2.0222	3.4668	2.2859
April	100	685	2.0331	2.4738	2.0901
May	100	708	1.9951	2.4780	2.0960
June	98	668	2.0093	2.4818	2.0791
July	100	707	2.0252	2.6362	2.2439
August	99	705	2.0617	2.5067	2.2028
September	100	684	2.1022	2.6575	2.3481
October	100	706	2.1013	2.9120	2.2485
November	92	631	2.1319	2.7533	2.4127
December	100	705	2.1425	2.8369	2.3988
Annual	98	8162	2.0624	3.4668	2.4127



Wood Buffalo Environmental Association - Barge Landing (AMS09)
Annual Summary for the Year 2024
Methane (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	100	709	2.1986	3.3339	2.6357
February	100	663	2.1929	3.8058	2.5898
March	99	704	2.0639	3.4412	2.3013
April	100	686	2.0377	3.0056	2.2309
May	89	630	2.0054	2.6380	2.1008
June	99	681	2.0035	2.4720	2.0686
July	100	707	2.0779	3.1054	2.3715
August	100	707	2.0419	2.9363	2.2461
September	100	684	2.0630	3.4951	2.2885
October	100	710	2.0530	3.0674	2.3854
November	100	685	2.0518	2.8997	2.2691
December	99	706	2.1055	4.1007	2.4805
Annual	99	8272	2.0750	4.1007	2.6357



Wood Buffalo Environmental Association - Lower Camp (AMS11)
Annual Summary for the Year 2024
Methane (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	99	699	2.1845	3.0242	2.5754
February	100	662	2.2949	4.2523	2.9588
March	96	677	2.2230	4.1878	2.8854
April	100	686	2.1246	3.8488	2.3853
May	100	707	2.0588	3.1325	2.1581
June	100	686	2.0995	3.2608	2.2506
July	97	687	2.1359	3.3151	2.3606
August	100	708	2.0077	3.5533	2.2600
September	100	686	2.0484	2.9412	2.3623
October	100	708	2.0387	3.1015	2.2511
November	99	678	2.0209	4.1275	2.4004
December	100	709	2.1144	3.4794	2.4984
Annual	99	8293	2.1116	4.2523	2.9588



Wood Buffalo Environmental Association - Fort McKay South (AMS13)
Annual Summary for the Year 2024
Methane (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Maximum 24-Hour Value
January	100	709	2.3420	4.2554	2.8768
February	100	663	2.2953	3.8407	2.7469
March	100	708	2.1516	4.4270	2.6324
April	100	684	2.1612	2.8040	2.3115
May	100	709	2.0874	3.0521	2.2174
June	99	679	2.0921	2.6682	2.1984
July	98	688	2.1221	2.9130	2.3599
August	99	704	2.1256	2.7077	2.2886
September	100	687	2.2141	4.0708	2.4848
October	95	675	2.1944	3.3068	2.6049
November	86	585	2.2163	3.5669	2.5600
December	100	710	2.3437	4.1903	2.7375
Annual	98	8201	2.1953	4.4270	2.8768



Wood Buffalo Environmental Association - Anzac (AMS14)
Annual Summary for the Year 2024
Methane (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Maximum 24-Hour Value
January	84	584	2.0100	2.4615	2.2651
February	95	626	1.9996	2.4480	2.1409
March	100	708	1.9787	2.4528	2.0582
April	100	683	1.9256	2.0965	1.9706
May	100	706	1.9260	2.2971	1.9668
June	93	639	1.9368	2.5536	2.0002
July	89	626	1.9950	2.2929	2.1331
August	87	611	1.9613	2.3596	2.1029
September	98	669	2.0224	2.4514	2.1852
October	97	689	2.0368	2.2494	2.0951
November	94	646	2.0369	2.5645	2.2384
December	84	591	2.1267	3.1520	2.3952
Annual	93	7778	1.9948	3.1520	2.3952



Wood Buffalo Environmental Association - Stony Mountain (AMS18)
Annual Summary for the Year 2024
Methane (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Maximum 24-Hour Value
January	53	369	2.0621	2.2971	2.1056
February	95	627	2.0362	2.2688	2.1316
March	98	694	2.0792	2.2903	2.2275
April	100	682	2.0612	2.2536	2.1059
May	97	685	2.0460	2.2023	2.0794
June	92	627	2.0383	2.1372	2.0908
July	77	537	2.0612	2.3148	2.1603
August	95	671	2.0528	2.3592	2.2031
September	95	653	2.0389	2.1518	2.1272
October	99	705	2.0401	2.1919	2.1148
November	98	672	2.0521	2.1655	2.1337
December	100	709	2.0882	2.2799	2.2167
Annual	92	7631	2.0547	2.3592	2.2275



Wood Buffalo Environmental Association - Conklin (AMS21)
Annual Summary for the Year 2024
Methane (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Maximum 24-Hour Value
January	100	706	2.1383	2.8415	2.5175
February	100	663	2.1216	2.4389	2.3088
March	93	650	2.0765	2.4265	2.2230
April	88	596	2.0729	2.4583	2.1604
May	99	701	2.0677	2.7696	2.1291
June	100	685	2.0428	2.3951	2.0823
July	100	709	2.0658	2.6985	2.2394
August	96	673	2.0636	2.8012	2.2464
September	99	681	1.9738	2.3833	2.0482
October	100	709	1.9768	2.3362	2.0484
November	89	606	2.0155	2.1446	2.1089
December	100	709	2.1032	2.3728	2.2695
Annual	97	8088	2.0601	2.8415	2.5175



Wood Buffalo Environmental Association - Janvier (AMS22)
Annual Summary for the Year 2024
Methane (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Maximum 24-Hour Value
January	91	643	2.1031	2.5321	2.3284
February	99	659	2.0581	2.2940	2.1204
March	99	701	2.0607	2.2734	2.1525
April	99	681	1.9979	2.1861	2.0867
May	100	708	1.9583	2.2122	1.9878
June	100	685	1.9842	2.2143	2.0076
July	100	709	2.0060	2.4462	2.1901
August	98	693	2.0263	2.3106	2.1030
September	99	677	2.0137	2.1848	2.1037
October	100	707	2.0287	2.3265	2.0917
November	100	685	2.0407	2.2708	2.0932
December	99	705	2.0815	2.2798	2.1760
Annual	99	8253	2.0294	2.5321	2.3284



Wood Buffalo Environmental Association - Fort Hills (AMS23)
Annual Summary for the Year 2024
Methane (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	100	710	2.3456	7.6499	3.0052
February	100	664	2.3297	6.9242	3.0072
March	100	710	2.2393	6.0933	3.1407
April	100	686	2.1429	4.7050	2.5829
May	98	697	2.0694	3.7087	2.2447
June	100	686	2.0746	4.7877	2.4259
July	83	584	2.2384	3.7252	2.5259
August	99	695	2.1536	3.4651	2.3969
September	82	555	2.2378	3.7661	2.3749
October	100	708	2.2229	4.5198	2.6483
November	100	686	2.2654	4.4022	2.6493
December	100	706	2.3982	6.9942	3.0469
Annual	97	8087	2.2264	7.6499	3.1407



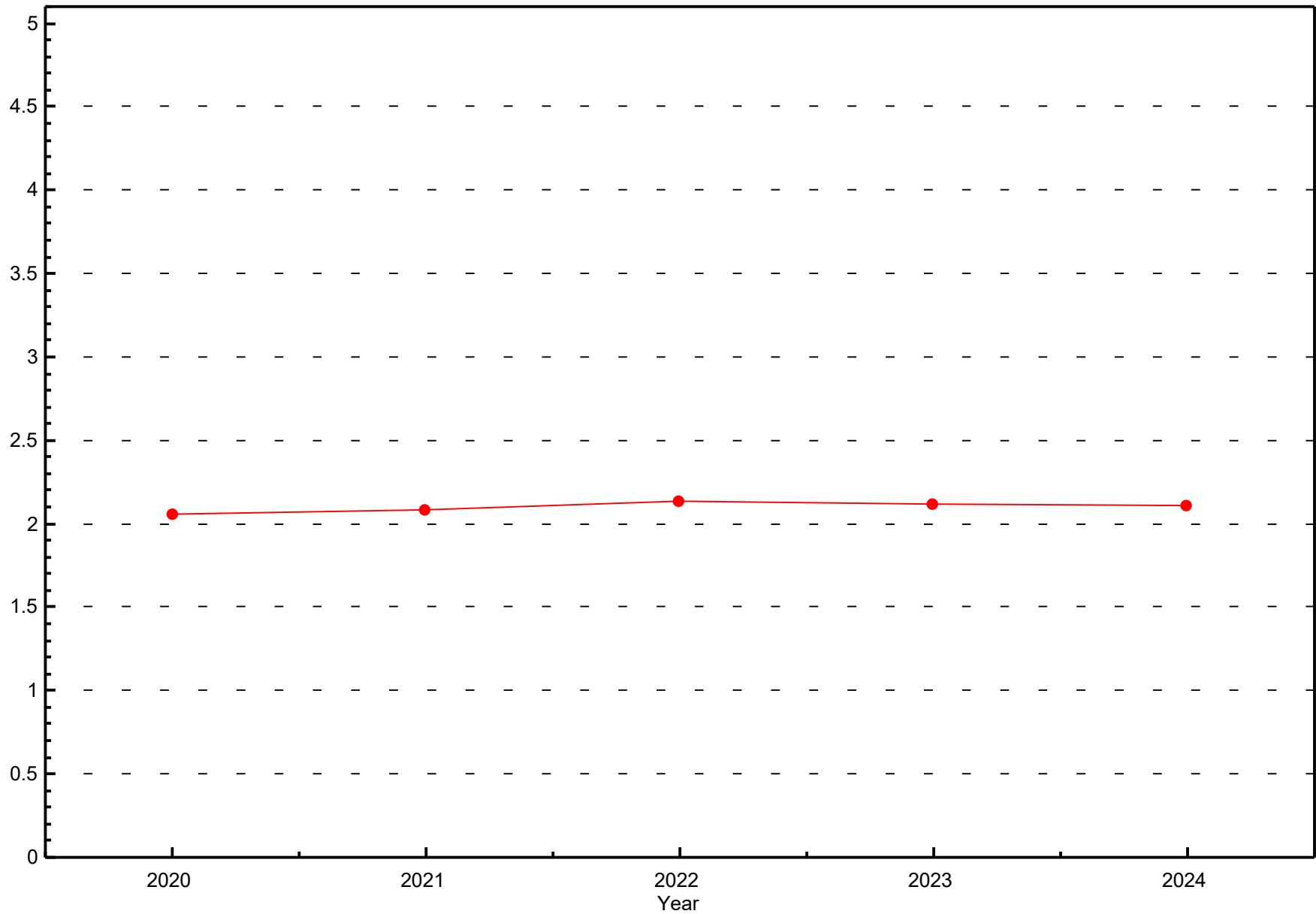
Wood Buffalo Environmental Association - Ells River (AMS30)
Annual Summary for the Year 2024
Methane (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	100	709	2.2649	5.5242	2.6223
February	100	661	2.2956	5.5822	2.9103
March	97	685	2.1552	4.2327	2.6719
April	98	671	2.0855	2.8415	2.1783
May	100	707	2.0749	2.8273	2.1687
June	99	679	2.0883	2.9548	2.1913
July	100	708	2.1401	3.6036	2.4599
August	100	706	2.1246	3.1644	2.2809
September	100	686	2.2038	6.0920	2.8333
October	100	707	2.1622	4.2175	2.9726
November	100	684	2.1769	3.6134	2.4955
December	100	706	2.2655	5.4613	3.0004
Annual	99	8309	2.1697	6.0920	3.0004



Yearly Averages

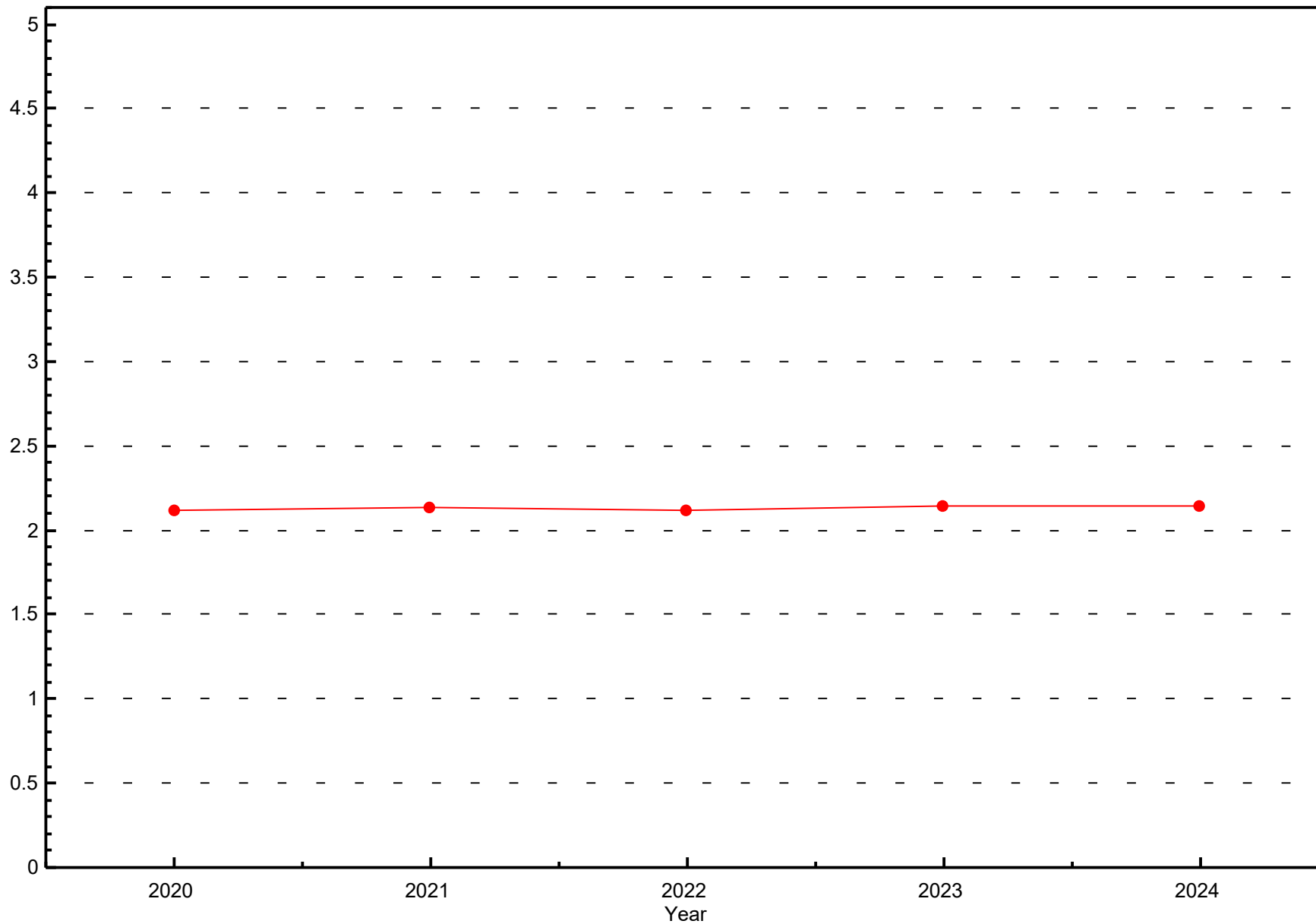
Methane (CH₄) - ppm
Fort McKay - Bertha Ganter (2020 to 2024)





Yearly Averages

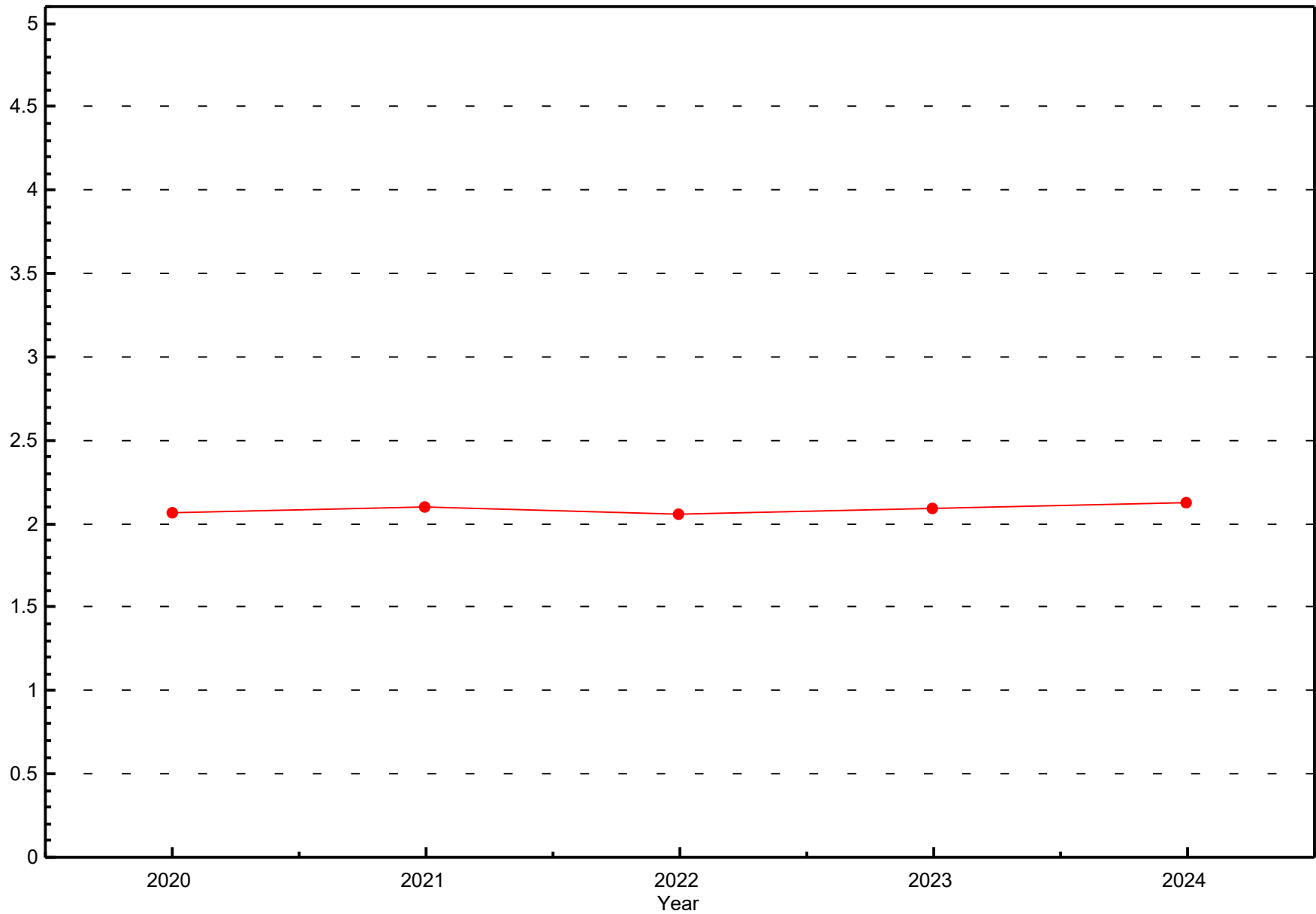
Methane (CH₄) - ppm
Mildred Lake (2020 to 2024)





Yearly Averages

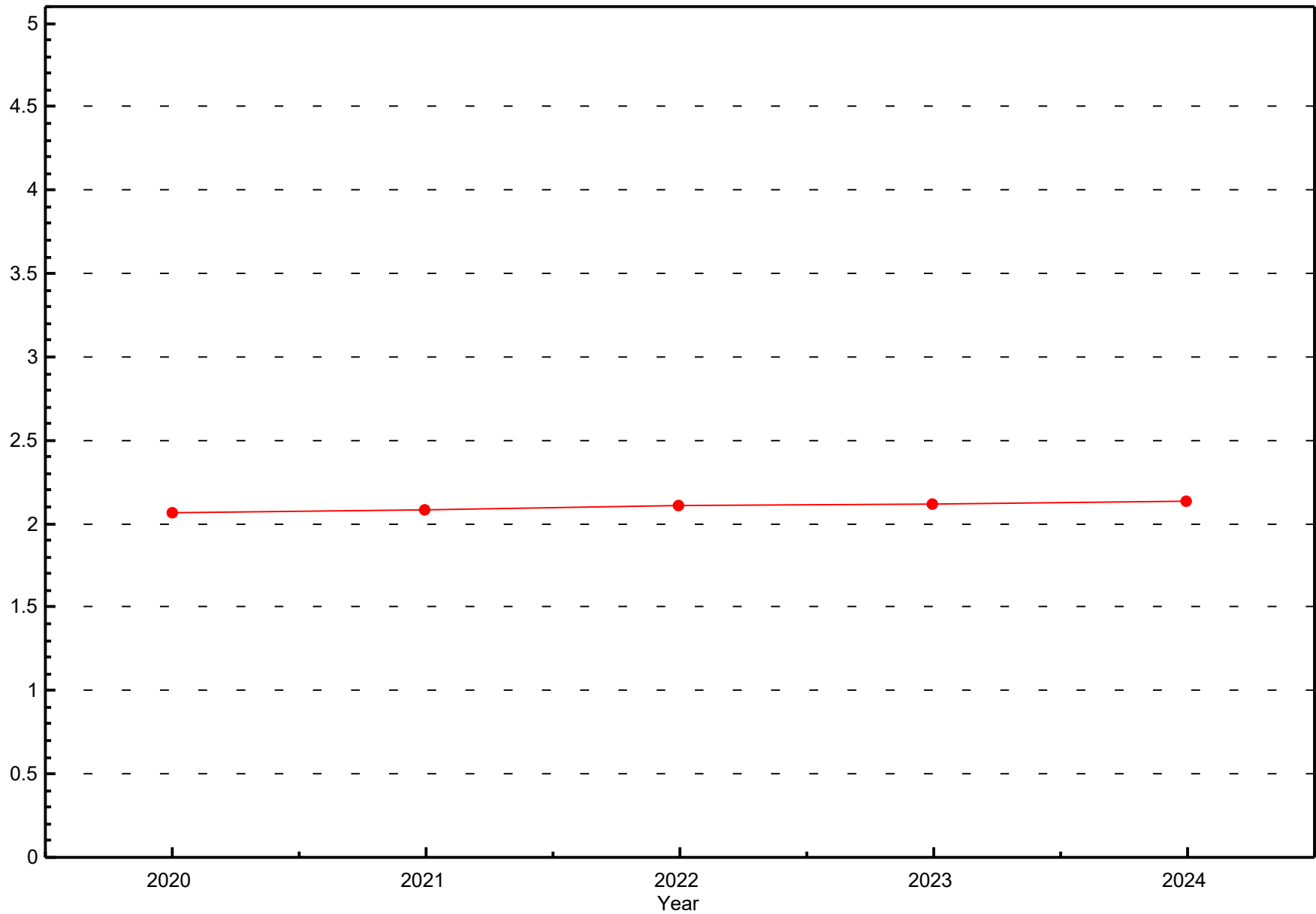
Methane (CH₄) - ppm
Buffalo Viewpoint (2020 to 2024)





Yearly Averages

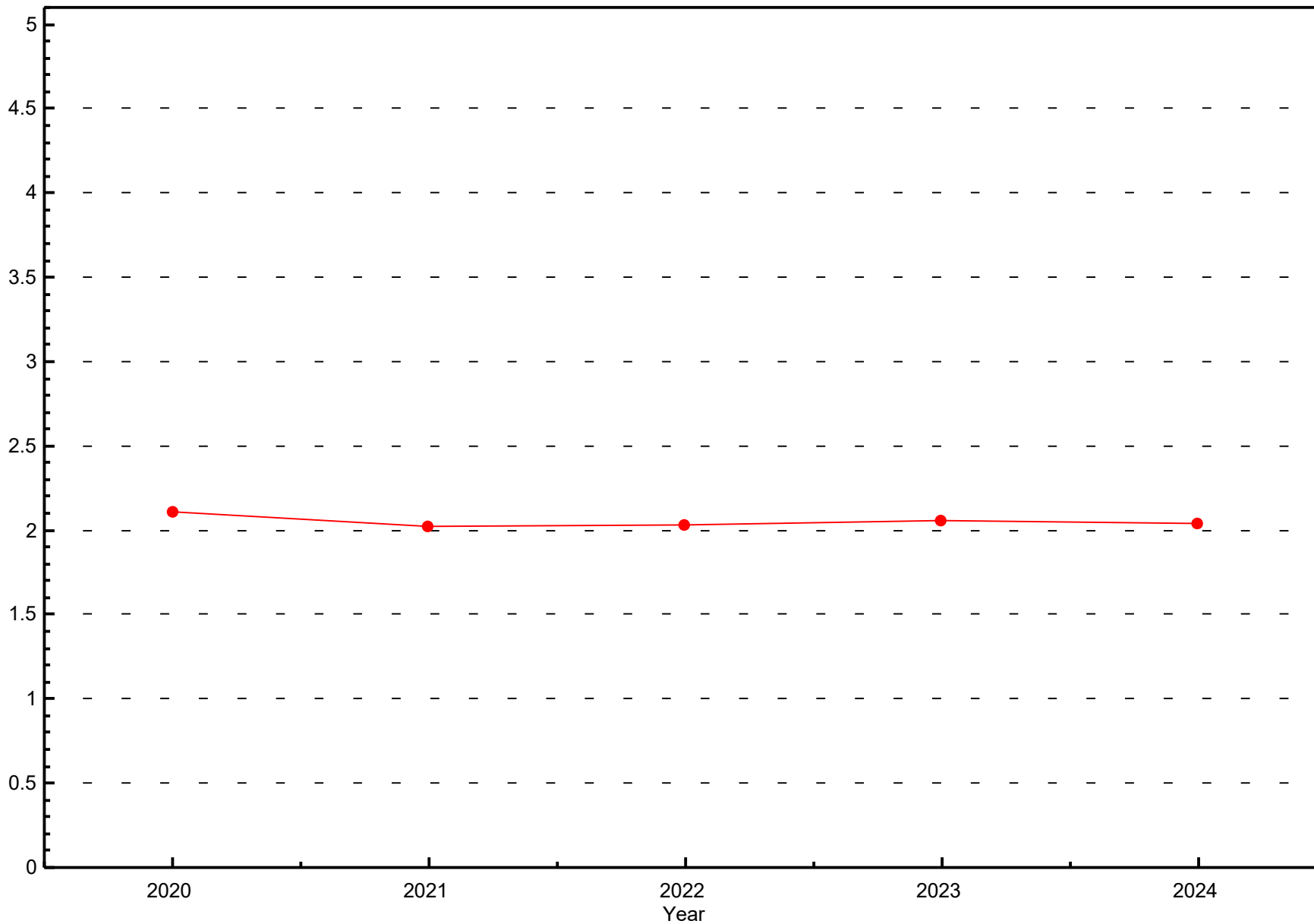
Methane (CH₄) - ppm
Mannix (2020 to 2024)





Yearly Averages

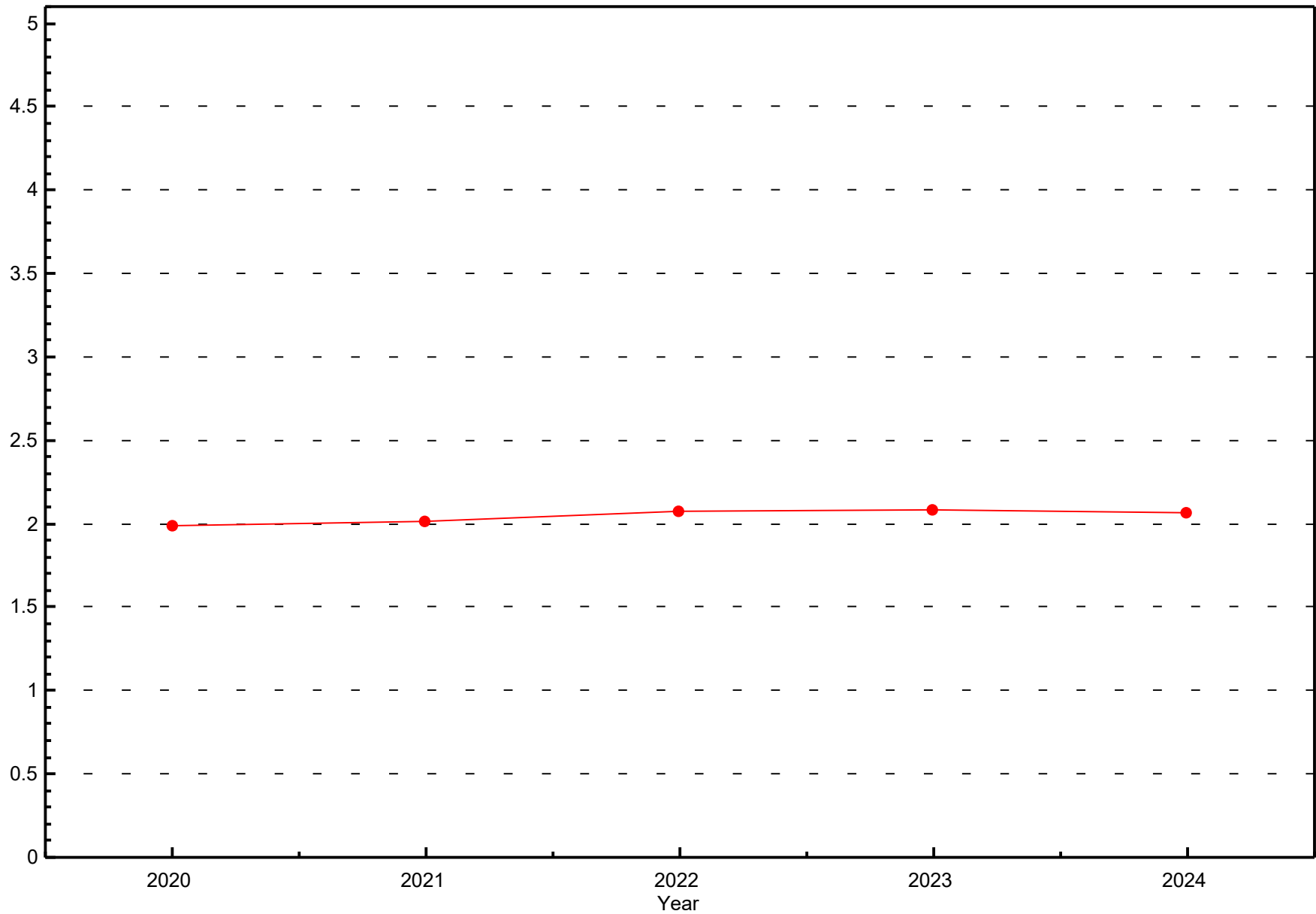
Methane (CH₄) - ppm
Patricia McInnes (2020 to 2024)





Yearly Averages

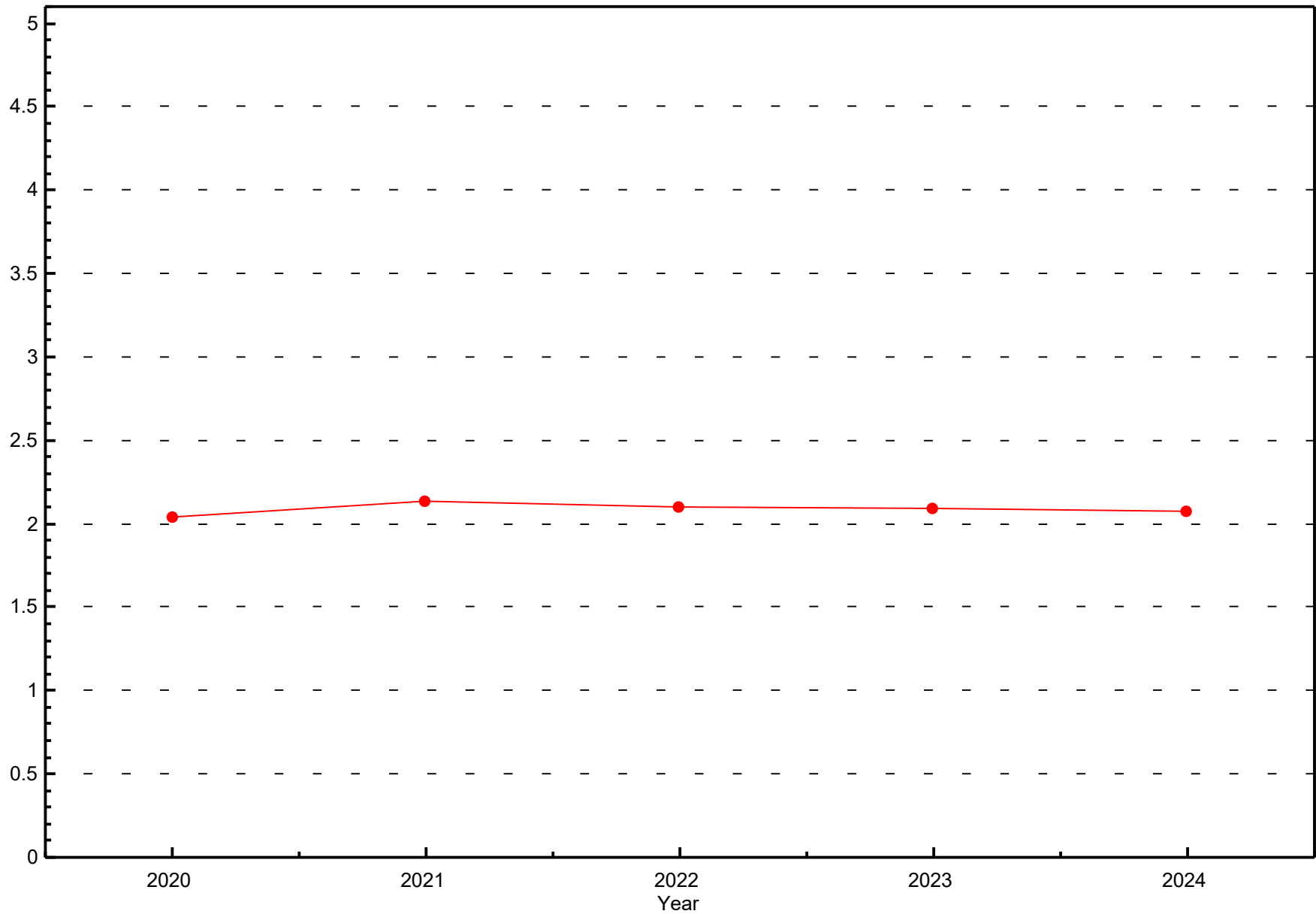
Methane (CH₄) - ppm
Athabasca Valley (2020 to 2024)





Yearly Averages

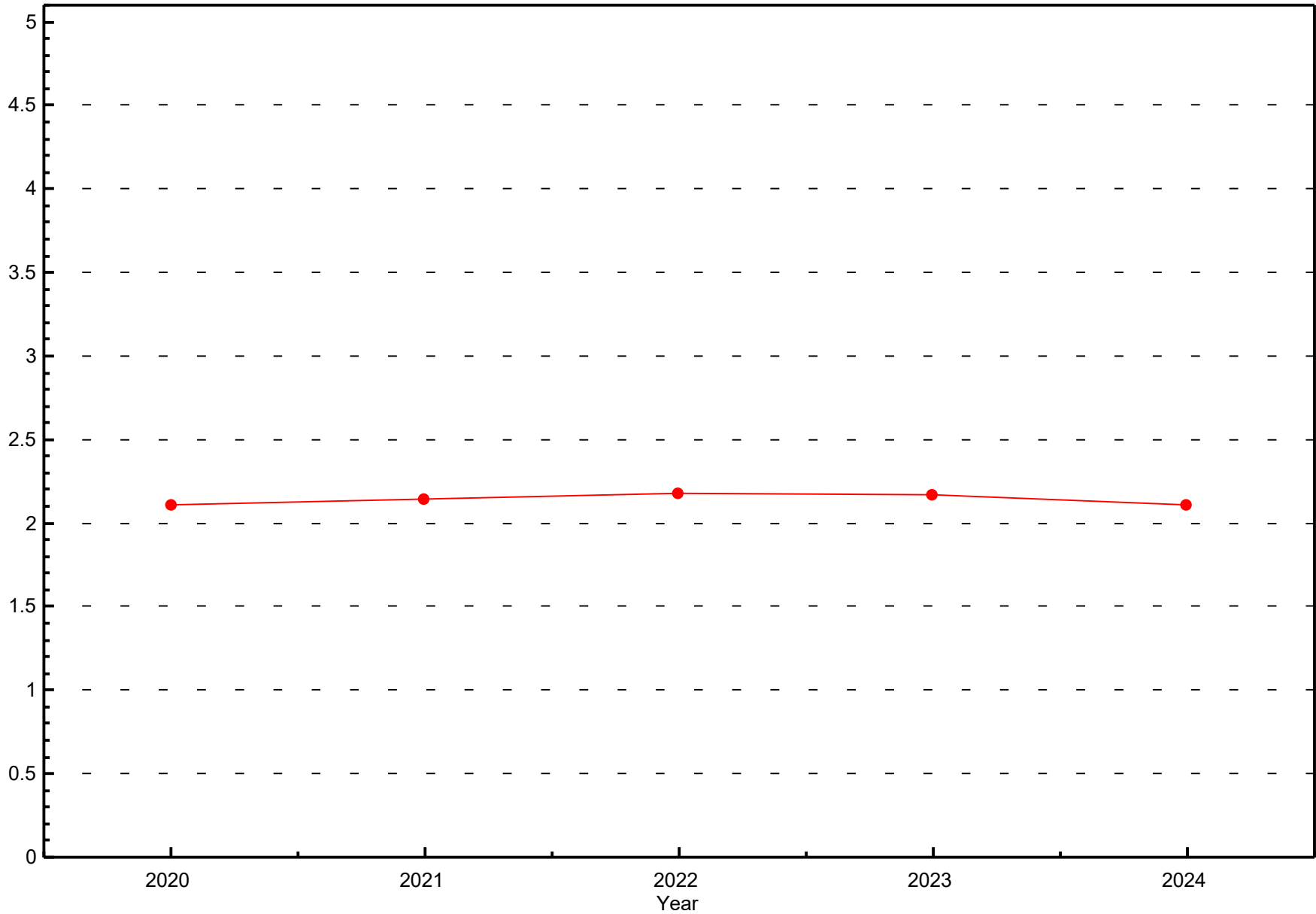
Methane (CH₄) - ppm
Barge Landing (2020 to 2024)





Yearly Averages

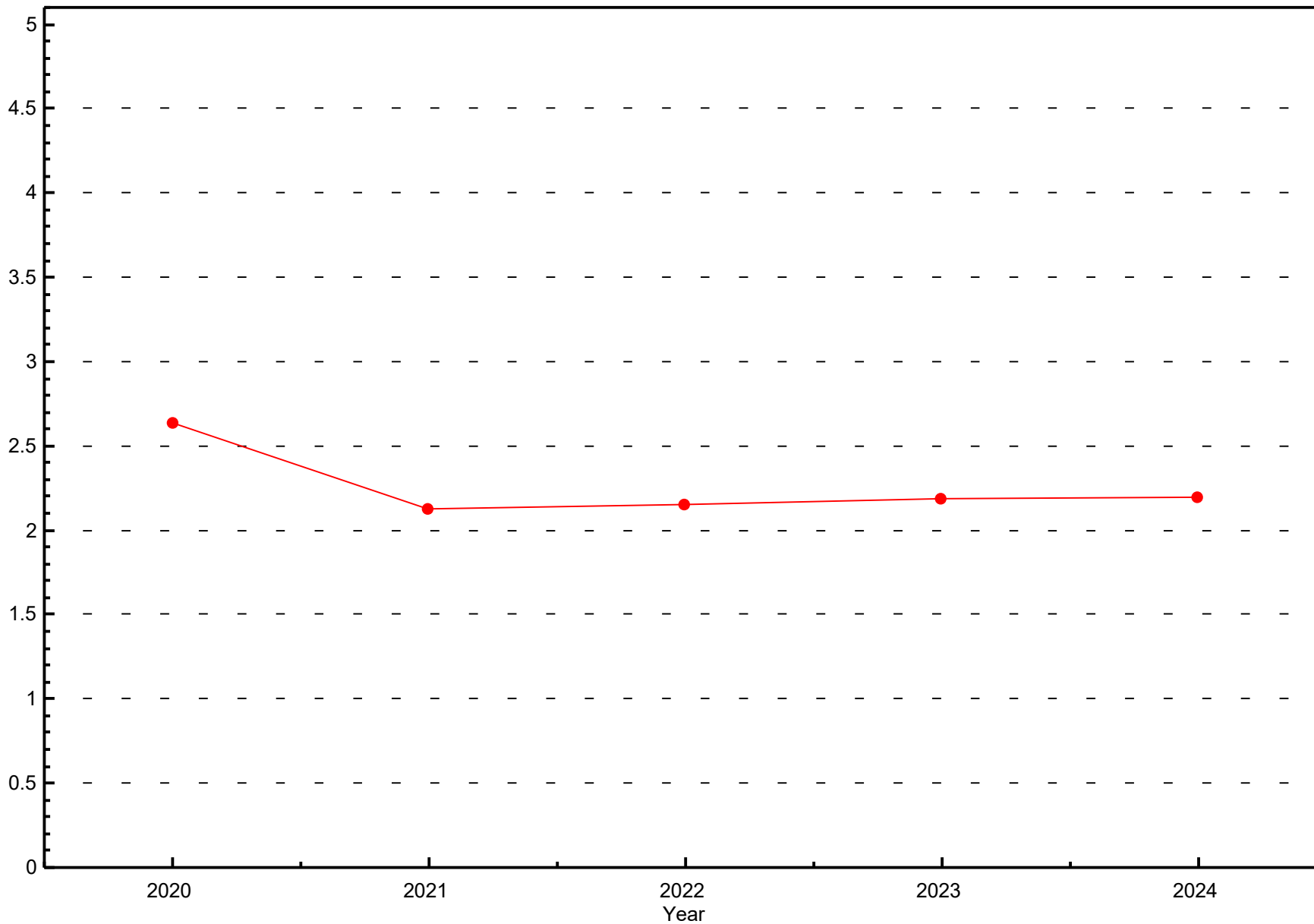
Methane (CH₄) - ppm
Lower Camp (2020 to 2024)





Yearly Averages

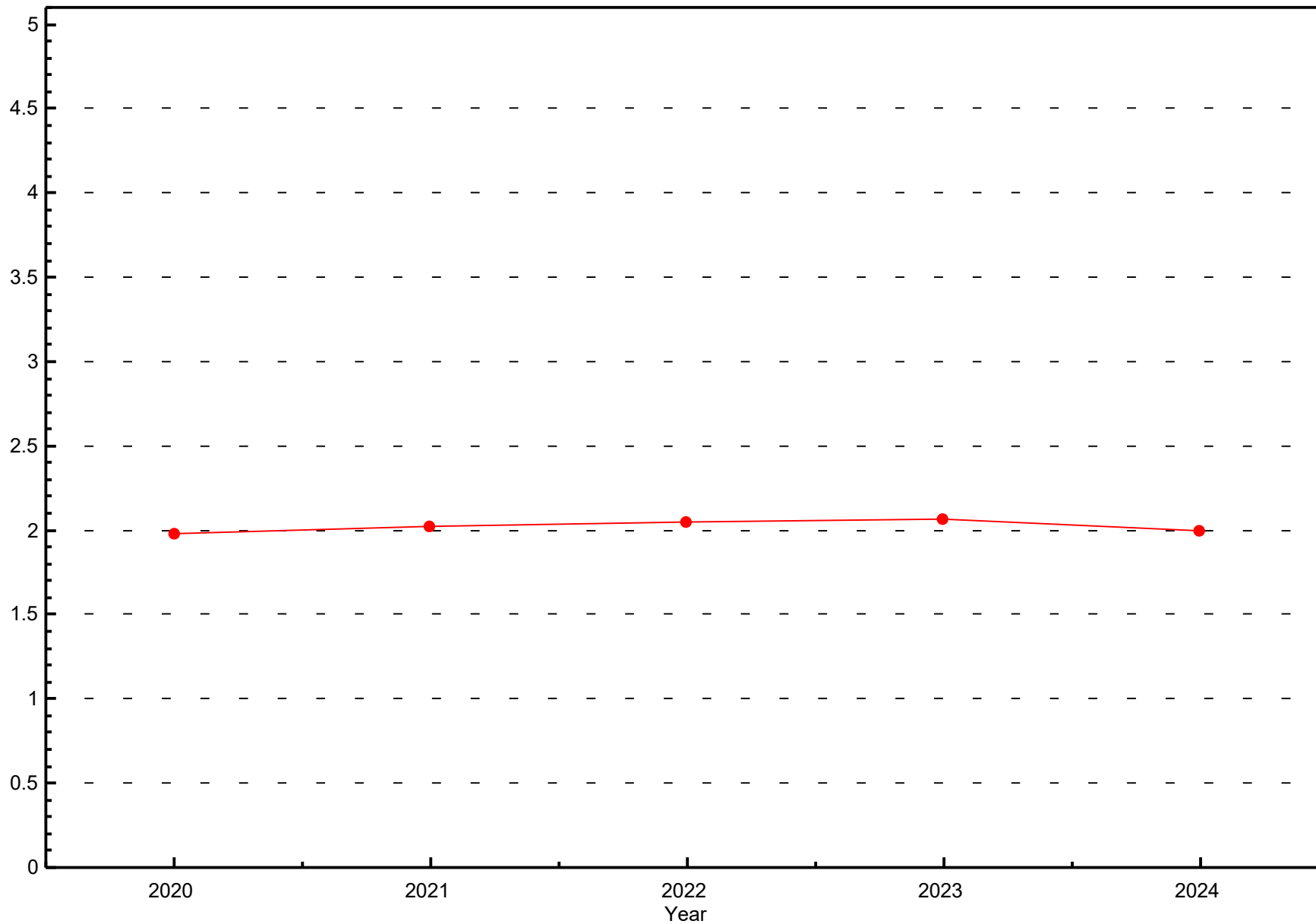
Methane (CH₄) - ppm
Fort McKay South (2020 to 2024)





Yearly Averages

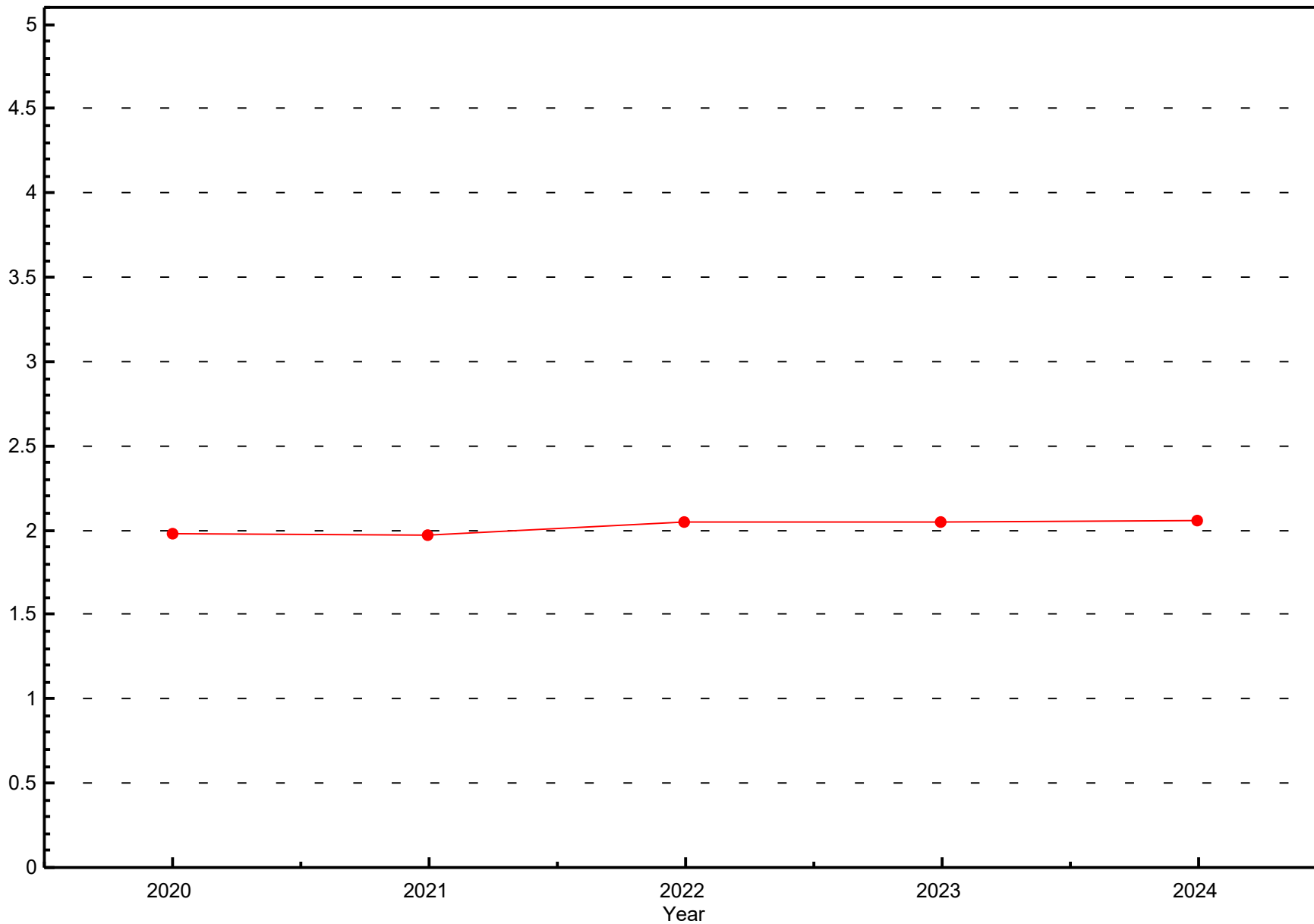
Methane (CH₄) - ppm
Anzac (2020 to 2024)





Yearly Averages

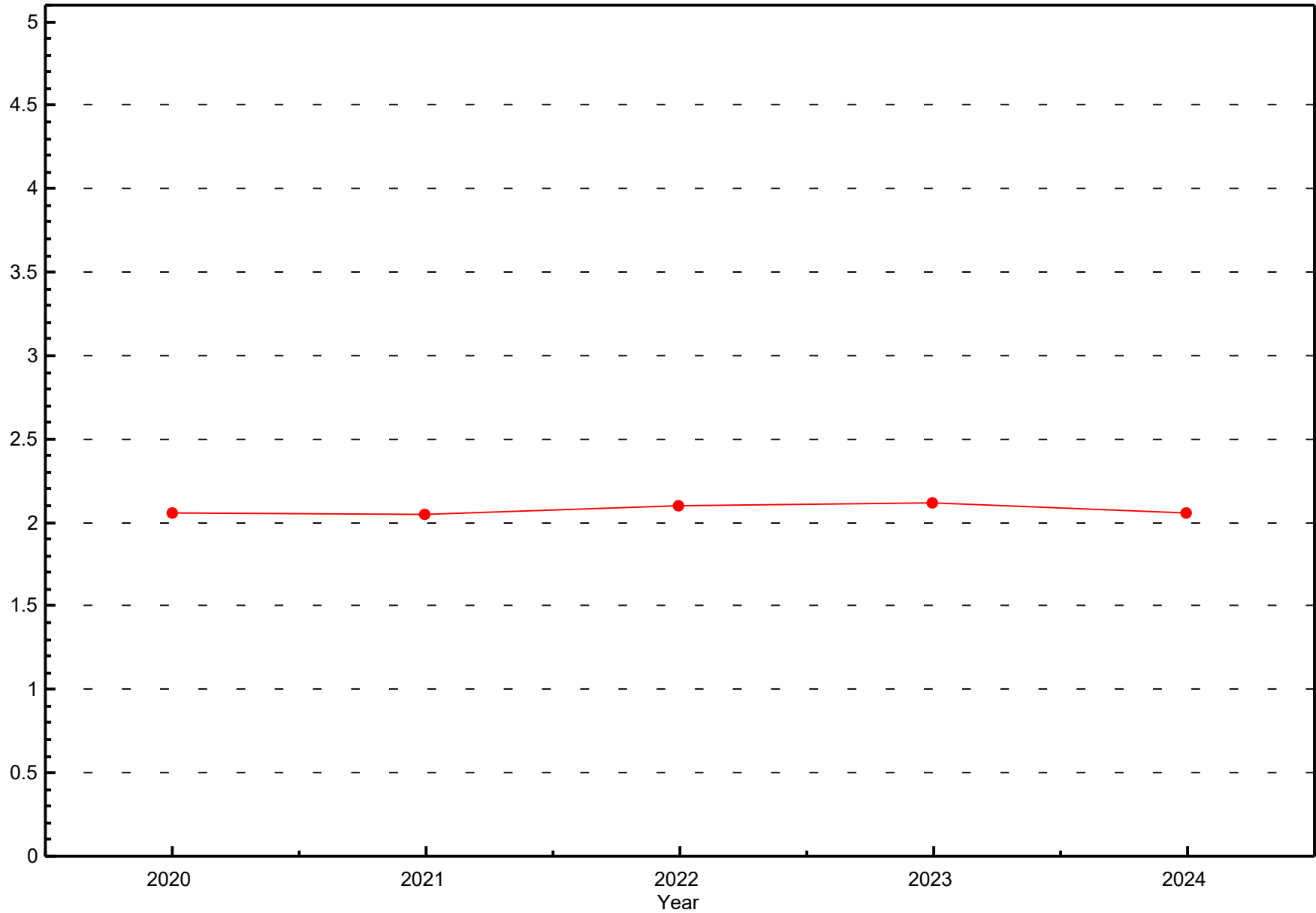
Methane (CH₄) - ppm
Stony Mountain (2020 to 2024)





Yearly Averages

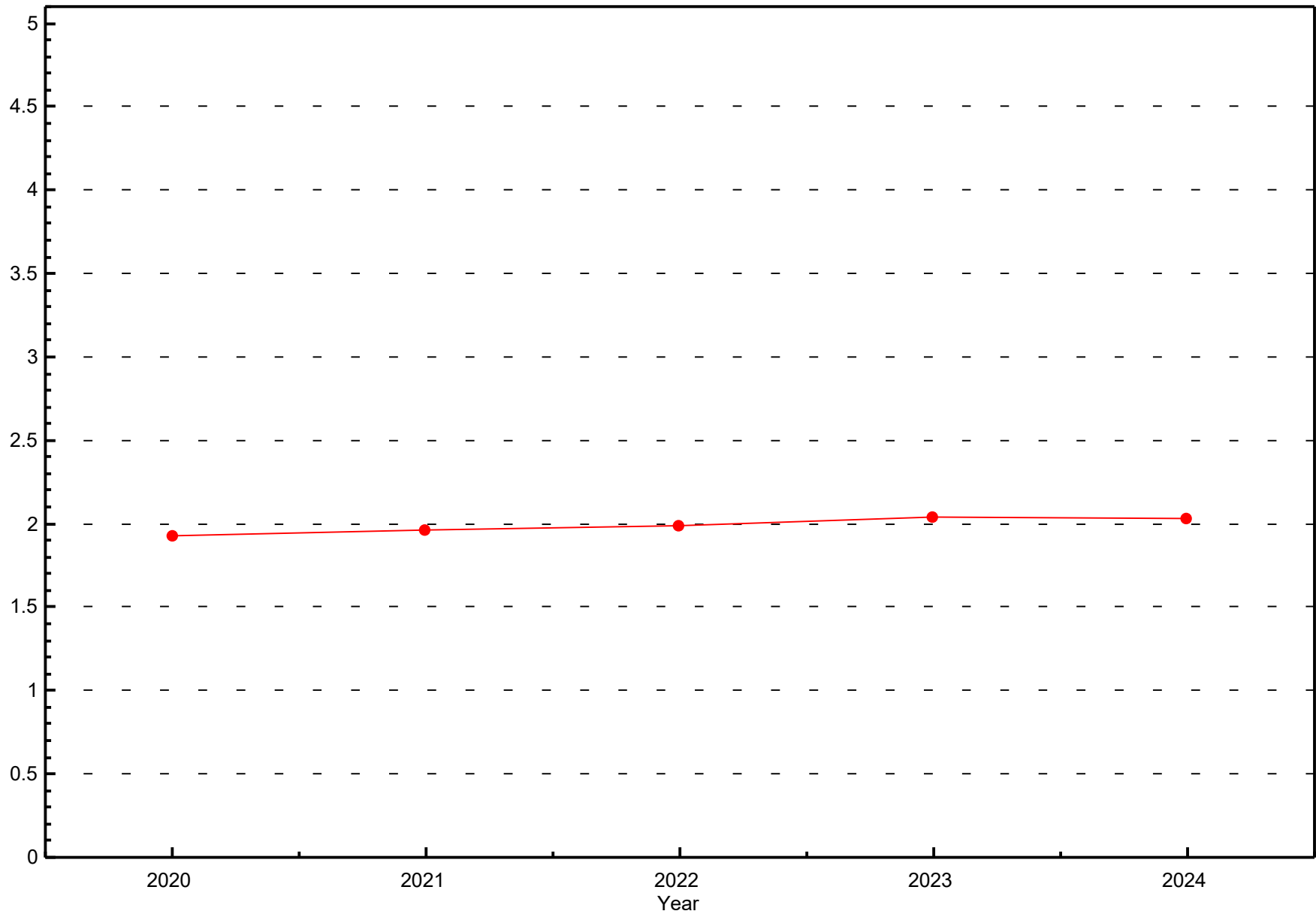
Methane (CH₄) - ppm
Conklin (2020 to 2024)





Yearly Averages

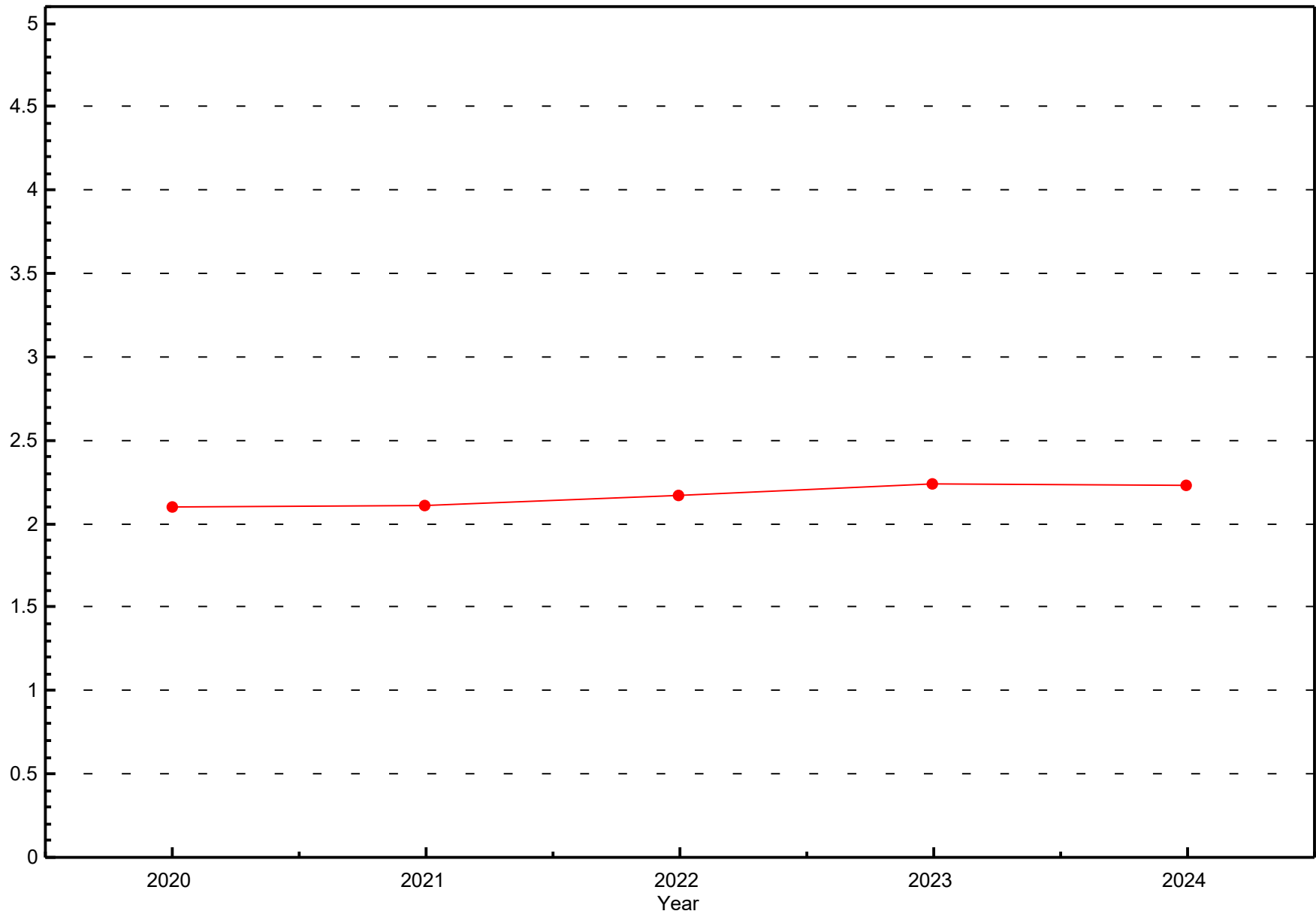
Methane (CH₄) - ppm
Janvier (2020 to 2024)





Yearly Averages

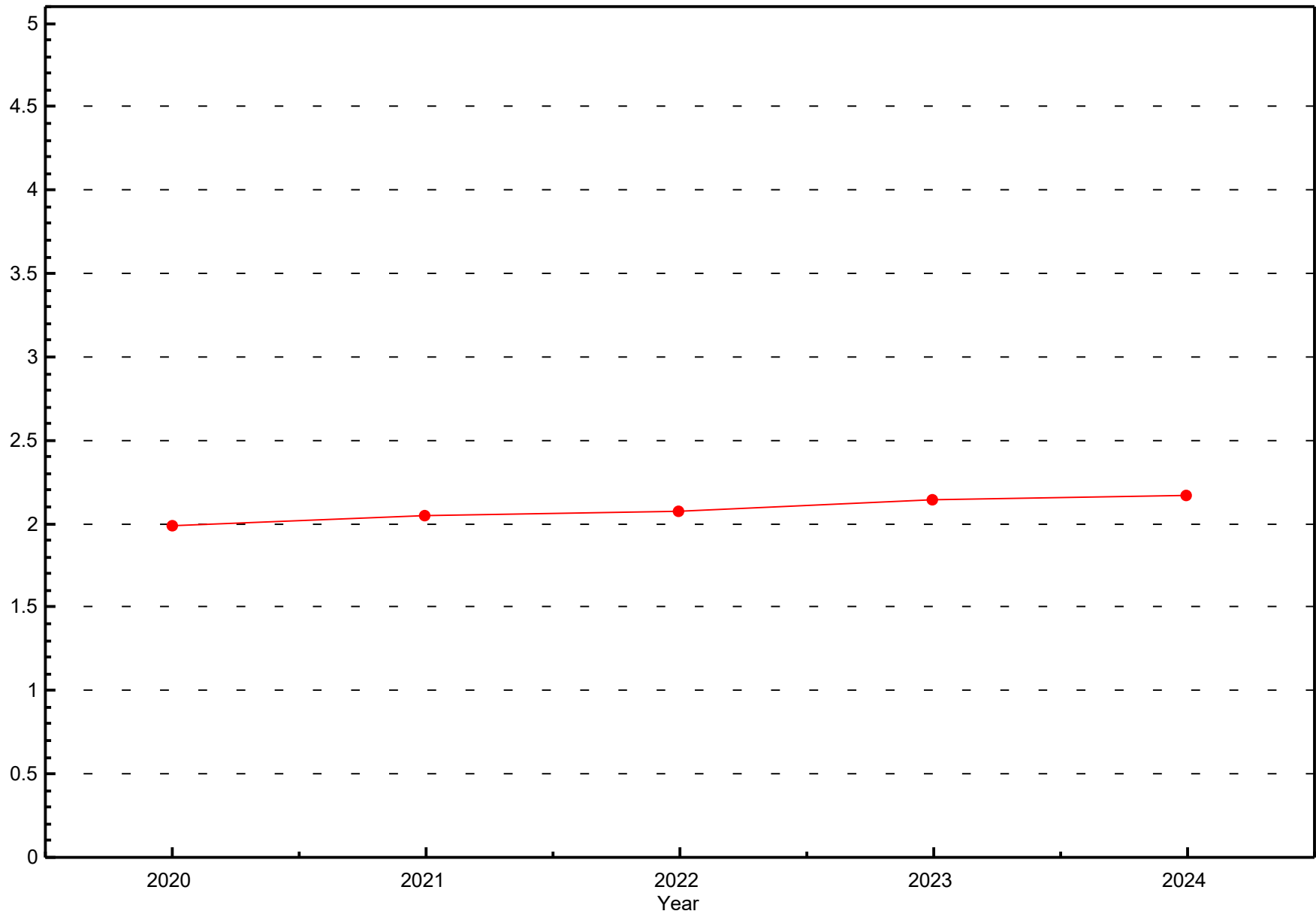
Methane (CH₄) - ppm
Fort Hills (2020 to 2024)





Yearly Averages

Methane (CH₄) - ppm
Ells River (2020 to 2024)



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
ANNUAL REPORT

**CARBON MONOXIDE
ANNUAL 2024**

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

March 2025



Wood Buffalo Environmental Association - Fort McKay - Bertha Ganter (AMS01)
Annual Summary for the Year 2024
Carbon Monoxide (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Maximum 24-Hour Value
January	100	708	0.2	0.4	0.3
February	100	662	0.2	0.4	0.3
March	100	708	0.2	0.3	0.3
April	100	685	0.2	0.5	0.3
May	100	709	0.3	0.7	0.4
June	99	679	0.3	0.4	0.3
July	99	700	0.6	11.2	2.0
August	100	706	0.5	1.7	0.9
September	100	684	0.4	1.0	0.7
October	100	709	0.3	0.6	0.4
November	100	685	0.2	0.4	0.3
December	100	708	0.2	0.6	0.3
Annual	100	8343	0.3	11.2	2.0



Wood Buffalo Environmental Association - Athabasca Valley (AMS07)
Annual Summary for the Year 2024
Carbon Monoxide (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	100	707	0.2	0.4	0.3
February	100	661	0.2	0.6	0.3
March	98	697	0.2	0.5	0.2
April	99	684	0.1	0.3	0.2
May	100	709	0.2	2.1	0.5
June	100	684	0.1	0.5	0.2
July	100	706	0.4	3.9	1.2
August	100	707	0.3	1.2	0.7
September	100	686	0.2	0.8	0.6
October	100	709	0.1	0.4	0.2
November	100	683	0.2	0.5	0.2
December	100	710	0.2	0.6	0.3
Annual	100	8343	0.2	3.9	1.2



Wood Buffalo Environmental Association - Fort Chipewyan (AMS08)
Annual Summary for the Year 2024
Carbon Monoxide (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	100	709	0.0	0.1	0.1
February	99	660	0.1	0.3	0.1
March	100	708	0.1	0.4	0.1
April	100	687	0.0	0.2	0.1
May	100	710	0.0	0.5	0.3
June	100	687	0.0	0.2	0.0
July	100	710	0.1	1.9	0.7
August	100	709	0.1	1.9	0.5
September	100	685	0.0	0.4	0.2
October	100	709	0.1	0.2	0.1
November	100	687	0.0	0.4	0.2
December	100	710	0.1	0.3	0.2
Annual	100	8371	0.1	1.9	0.7



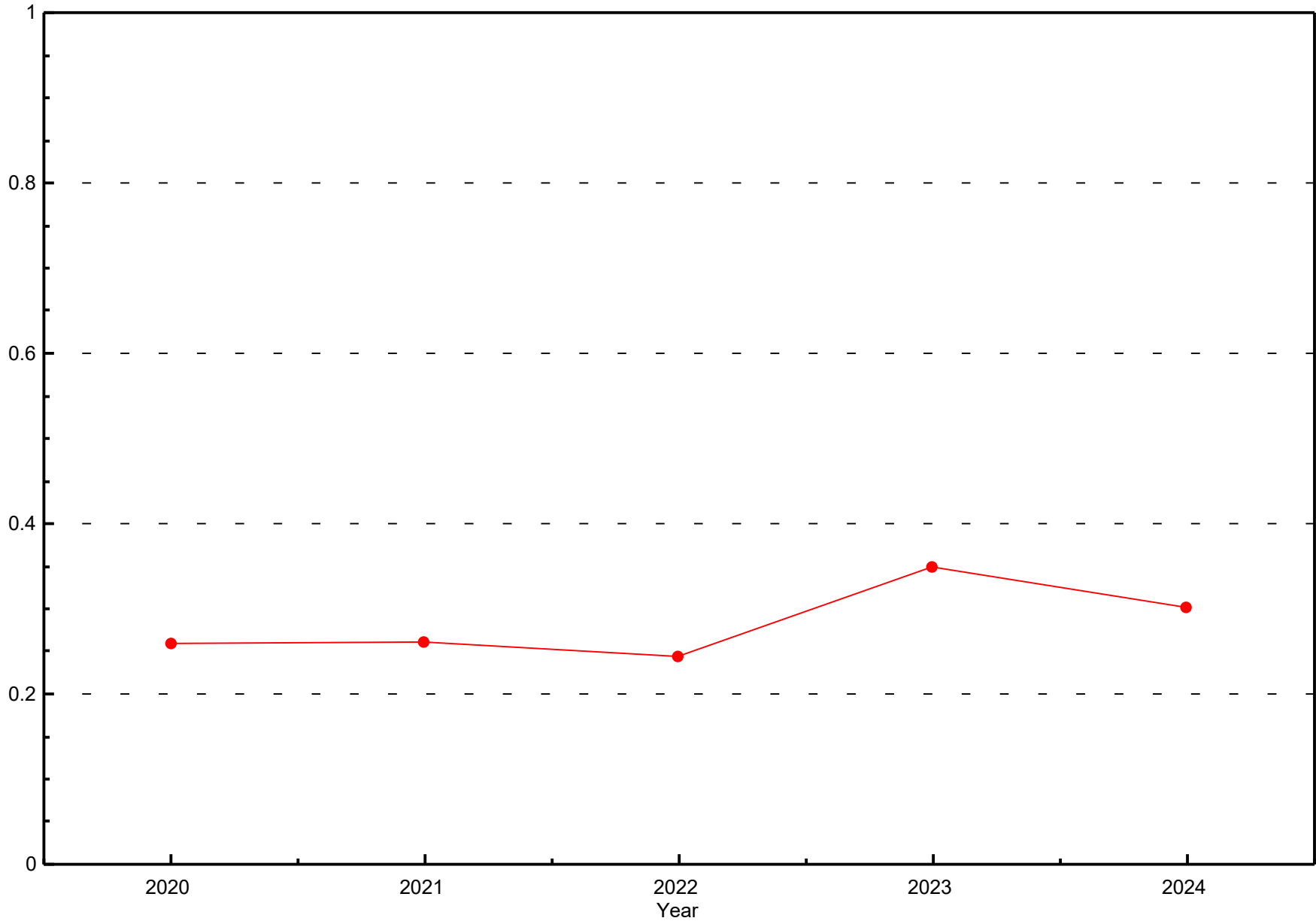
Wood Buffalo Environmental Association - Stony Mountain (AMS18)
Annual Summary for the Year 2024
Carbon Monoxide (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Maximum 24-Hour Value
January	92	646	0.2	0.3	0.2
February	100	661	0.2	0.2	0.2
March	100	709	0.2	0.2	0.2
April	100	685	0.2	0.2	0.2
May	100	709	0.2	0.5	0.4
June	100	684	0.2	0.4	0.3
July	93	660	0.5	4.4	1.8
August	100	709	0.3	1.0	0.7
September	100	686	0.3	1.1	0.8
October	100	707	0.2	0.3	0.2
November	100	683	0.2	0.4	0.2
December	100	709	0.2	0.3	0.2
Annual	99	8248	0.2	4.4	1.8



Yearly Averages

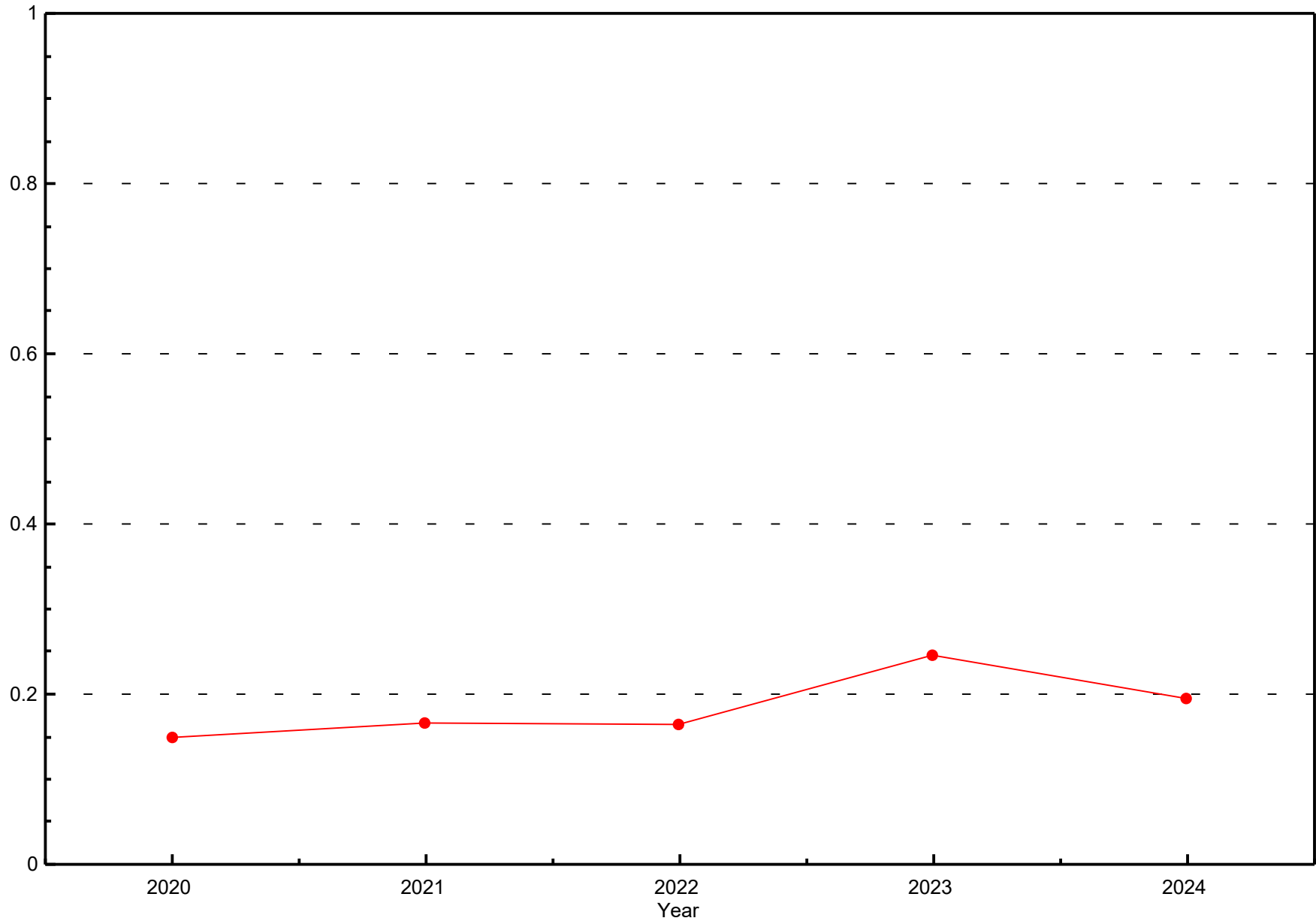
Carbon Monoxide (CO) - ppm
Fort McKay - Bertha Ganter (2020 to 2024)





Yearly Averages

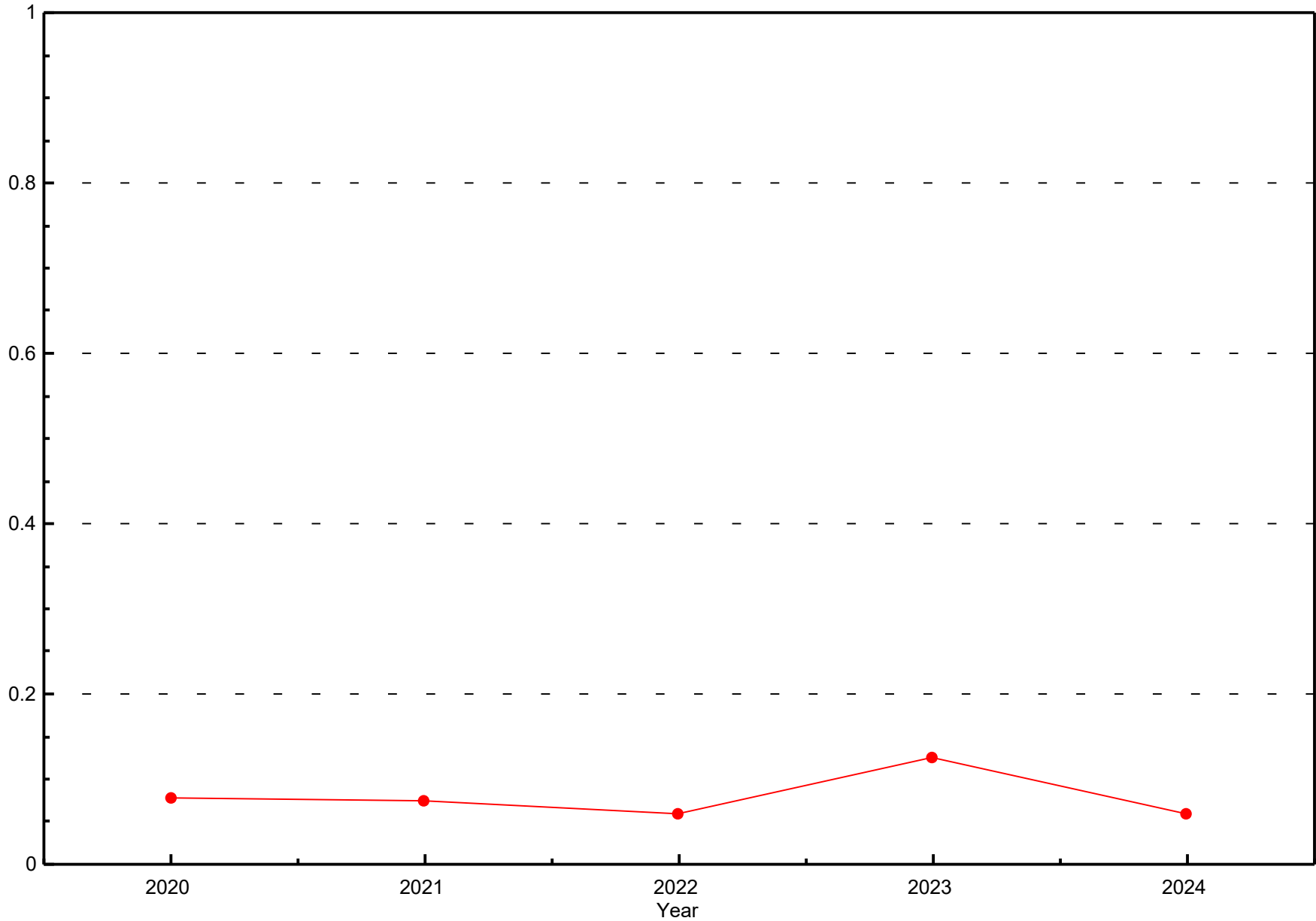
Carbon Monoxide (CO) - ppm
Athabasca Valley (2020 to 2024)





Yearly Averages

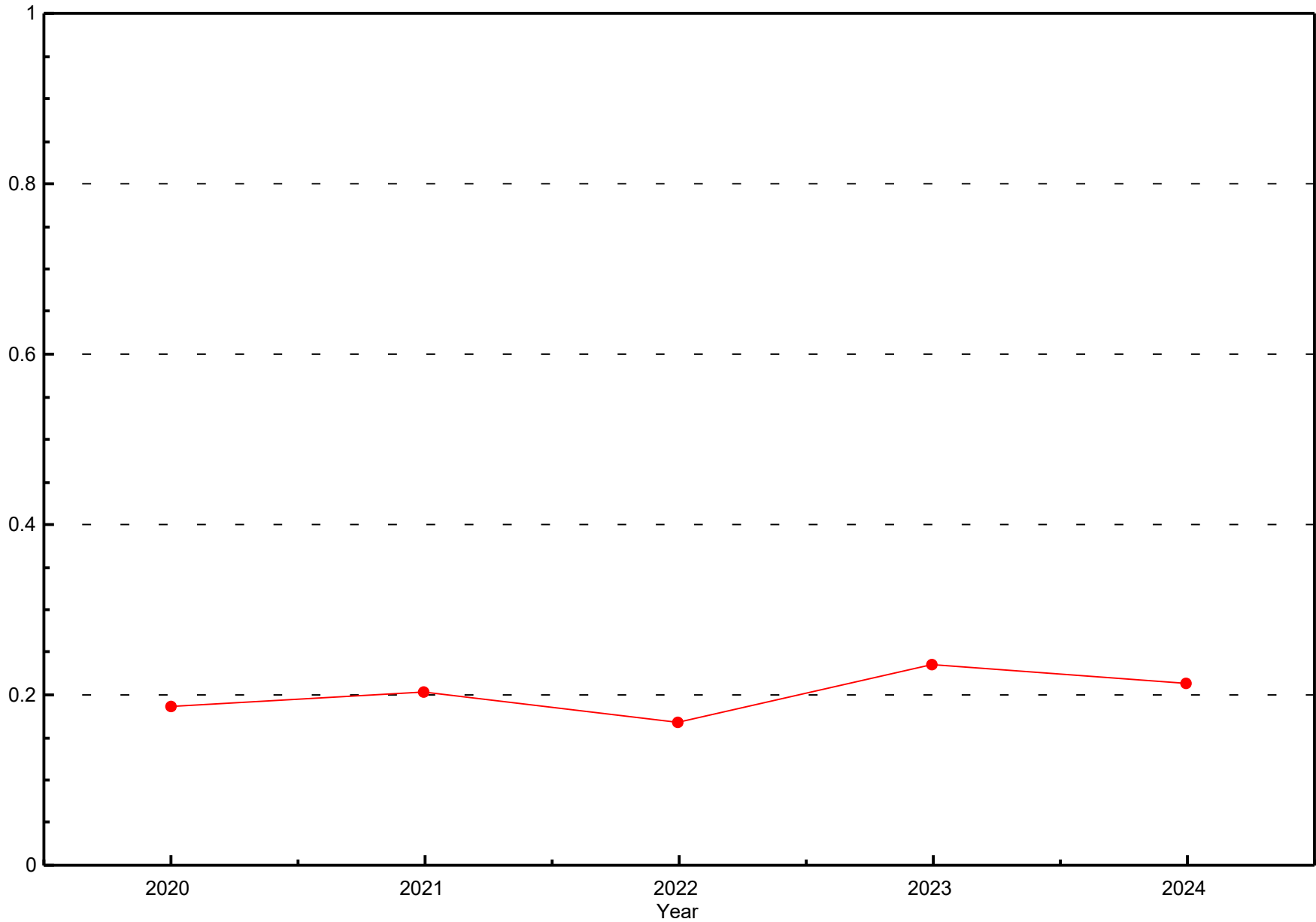
Carbon Monoxide (CO) - ppm
Fort Chipewyan (2020 to 2024)





Yearly Averages

Carbon Monoxide (CO) - ppm
Stony Mountain (2020 to 2024)



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
ANNUAL REPORT

CARBON DIOXIDE ANNUAL 2024

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

March 2025



Wood Buffalo Environmental Association - Fort McKay - Bertha Ganter (AMS01)
Annual Summary for the Year 2024
Carbon Dioxide (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	
				1-Hour Value	24-Hour Value
January	100	709	432.2	459.8	442.8
February	100	663	432.3	459.5	444.5
March	100	708	428.6	457.9	441.9
April	100	686	430.1	461.3	437.6
May	100	707	429.1	469.6	437.0
June	97	658	430.9	521.4	447.6
July	99	704	447.6	566.1	479.5
August	100	706	447.1	547.2	476.1
September	100	686	453.6	544.8	490.3
October	100	707	444.4	494.6	467.1
November	100	685	447.3	478.6	463.3
December	100	707	454.3	499.3	474.2
Annual	100	8326	439.9	566.1	490.3



Wood Buffalo Environmental Association - Fort Chipewyan (AMS08)
Annual Summary for the Year 2024
Carbon Dioxide (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	
				1-Hour Value	24-Hour Value
January	44	309	426.7	443.5	432.0
February	99	659	431.1	447.0	437.5
March	100	707	437.0	449.1	444.7
April	100	684	443.0	452.3	449.3
May	100	708	434.8	459.4	449.1
June	100	687	425.6	446.5	429.8
July	100	710	425.3	498.0	443.8
August	100	709	423.0	459.0	434.0
September	100	686	432.3	487.6	442.1
October	100	706	429.9	458.4	444.8
November	100	686	431.9	451.1	441.2
December	100	710	435.8	457.9	450.6
Annual	95	7961	431.6	498.0	450.6



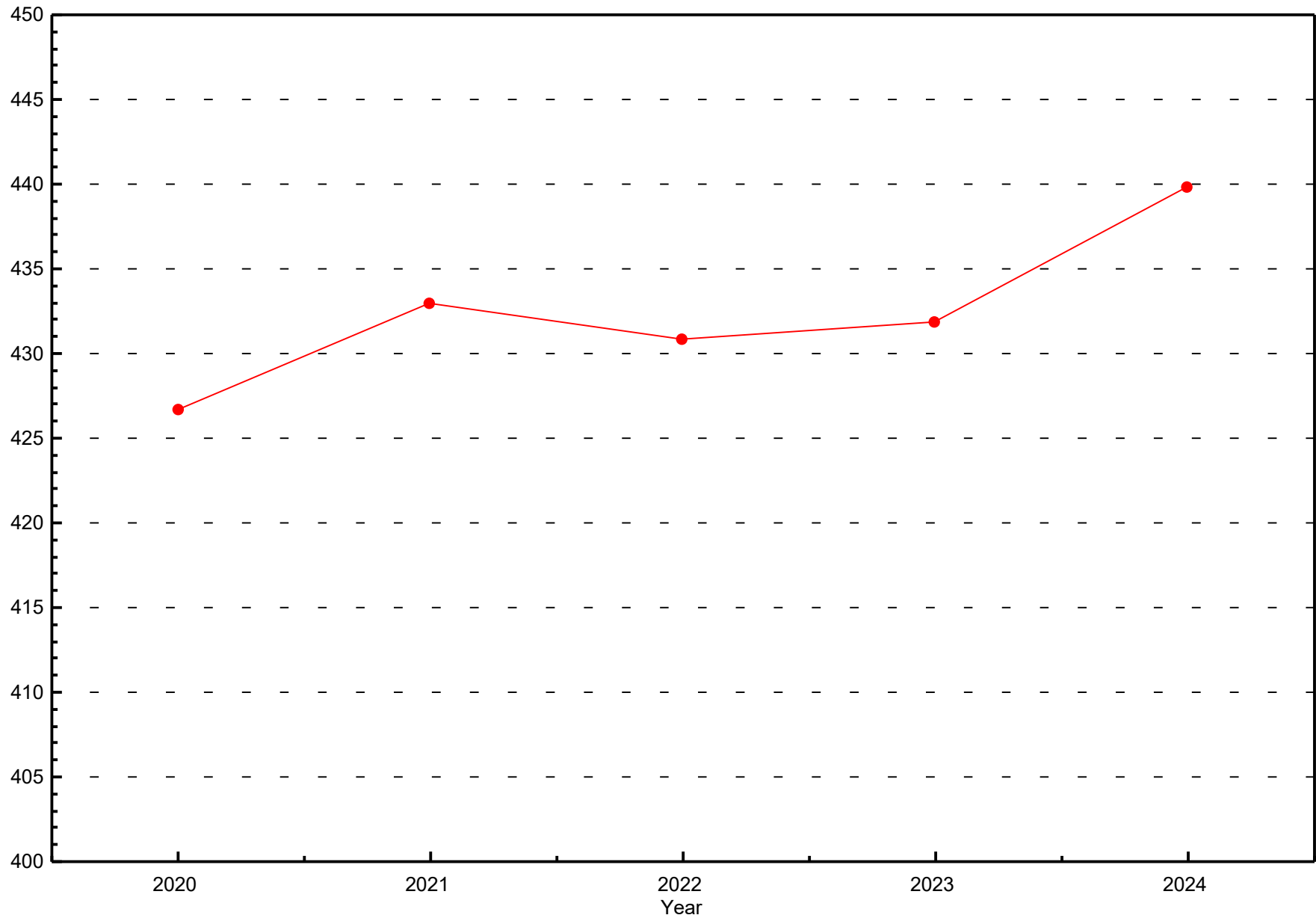
Wood Buffalo Environmental Association - Stony Mountain (AMS18)
Annual Summary for the Year 2024
Carbon Dioxide (ppm) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	100	709	436.1	452.9	445.9
February	100	660	442.4	467.6	451.1
March	100	709	439.3	450.2	445.5
April	100	685	436.5	448.7	440.6
May	100	708	439.8	461.5	445.1
June	100	684	440.8	468.1	447.4
July	93	661	441.4	497.3	452.5
August	100	709	427.2	480.6	442.9
September	100	685	432.5	475.1	446.0
October	100	707	435.2	453.8	443.0
November	99	682	438.5	460.5	443.3
December	100	709	442.1	461.5	455.5
Annual	99	8308	437.6	497.3	455.5



Yearly Averages

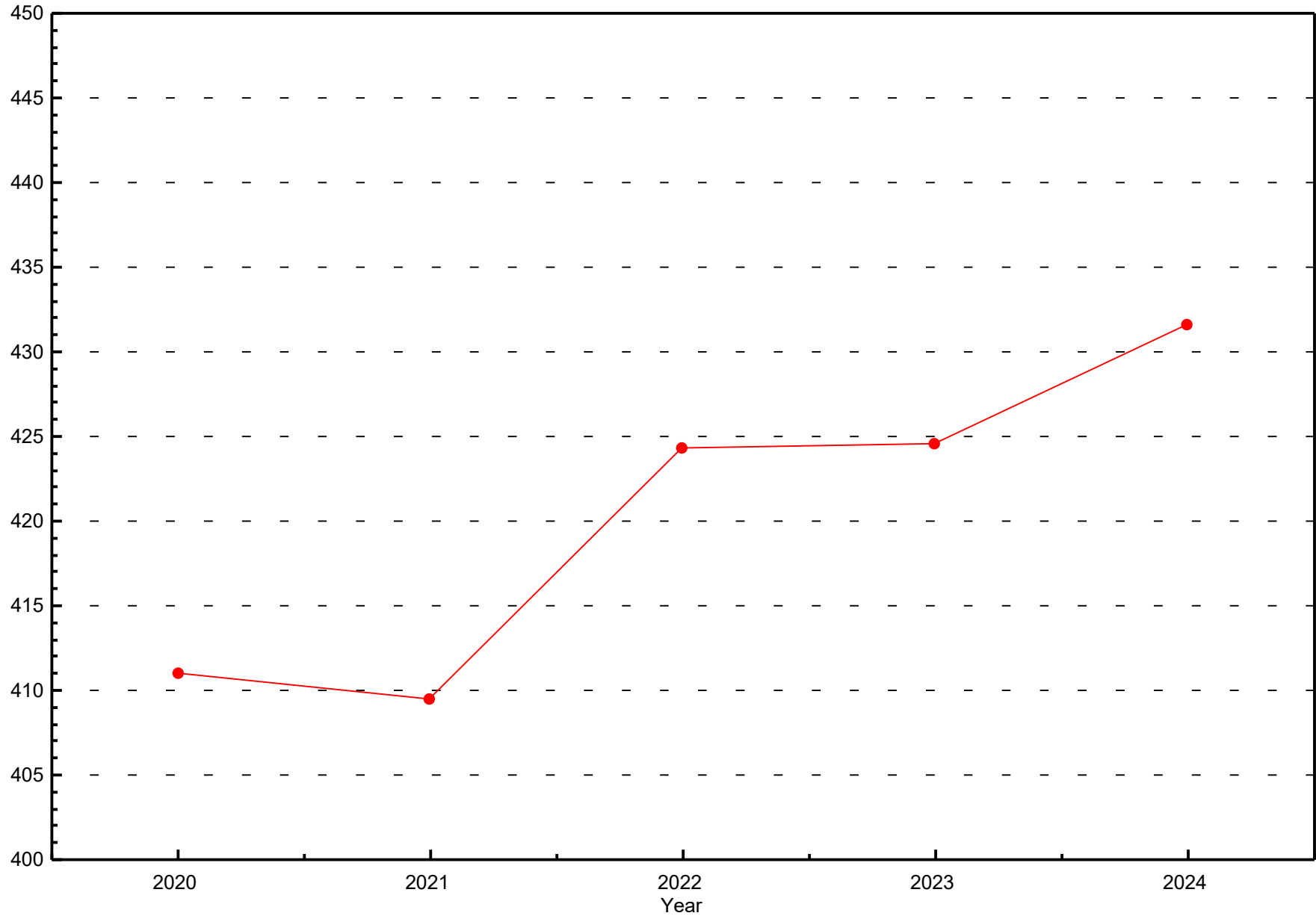
Carbon Dioxide (CO₂) - ppm
Fort McKay - Bertha Ganter (2020 to 2024)





Yearly Averages

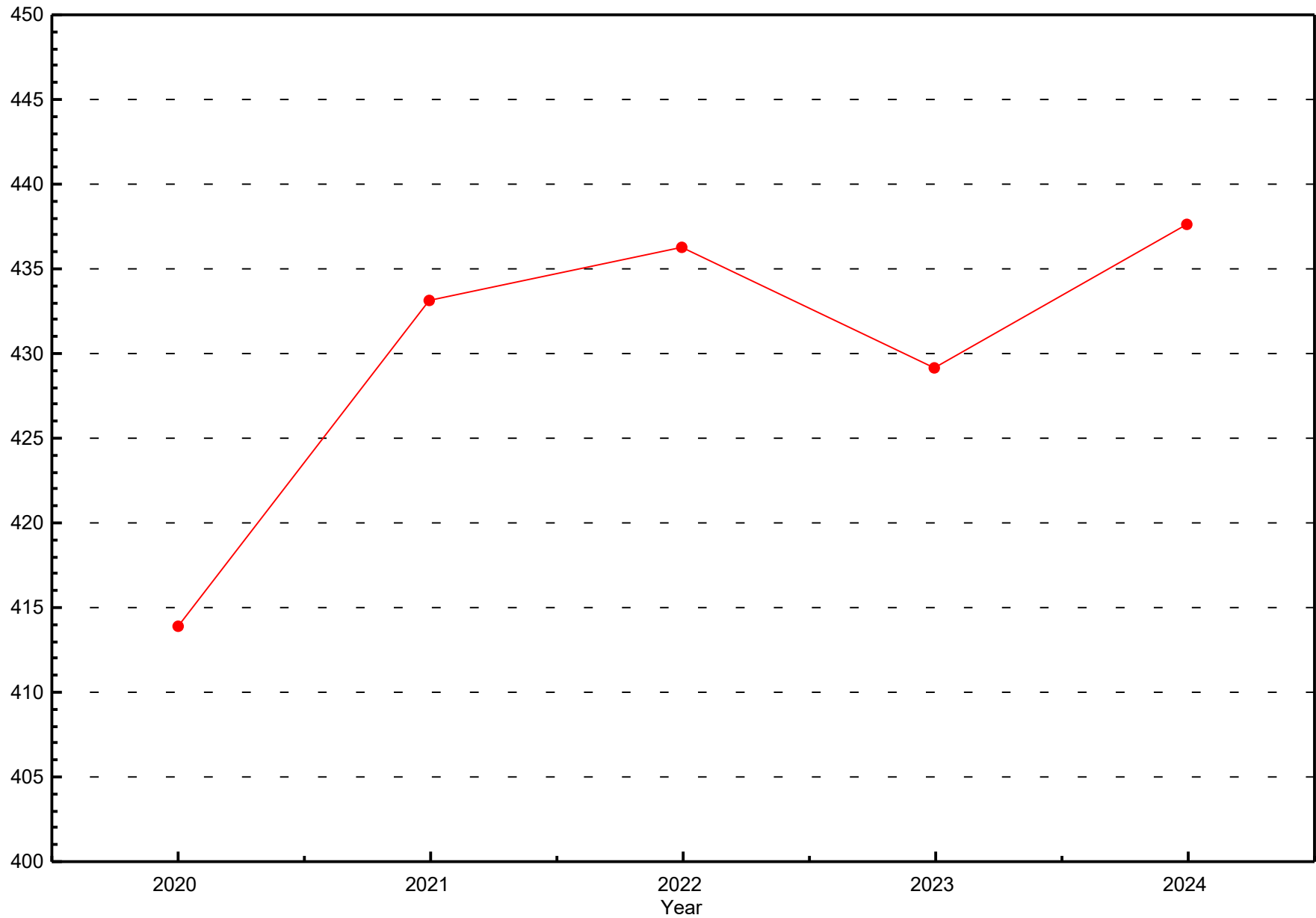
Carbon Dioxide (CO₂) - ppm
Fort Chipewyan (2020 to 2024)





Yearly Averages

Carbon Dioxide (CO₂) - ppm
Stony Mountain (2020 to 2024)



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY MONITORING PROGRAM ANNUAL REPORT

AMMONIA ANNUAL 2024

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

March 2025



Wood Buffalo Environmental Association - Fort McKay - Bertha Ganter (AMS01)
Annual Summary for the Year 2024
Ammonia (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	% of Data in Each Concentration Range		
							0 - 1000	1001 - 2000	> 2000
January	96	670	0.0	0.0	0	0.0	100.0	0.0	0.0
February	96	627	0.0	0.0	0	0.0	100.0	0.0	0.0
March	96	671	0.0	0.0	0	0.0	100.0	0.0	0.0
April	96	649	0.0	0.0	0	0.0	100.0	0.0	0.0
May	96	666	0.0	0.0	0	0.0	100.0	0.0	0.0
June	95	638	0.0	0.0	0	0.0	100.0	0.0	0.0
July	93	649	1.8	222.1	0	40.3	100.0	0.0	0.0
August	95	665	0.2	16.3	0	3.5	100.0	0.0	0.0
September	95	639	0.0	0.0	0	0.0	100.0	0.0	0.0
October	96	669	0.0	0.0	0	0.0	100.0	0.0	0.0
November	96	648	0.0	0.0	0	0.0	100.0	0.0	0.0
December	96	669	0.0	0.0	0	0.0	100.0	0.0	0.0
Annual	95	7860	0.2	222.1	0	40.3	100.0	0.0	0.0



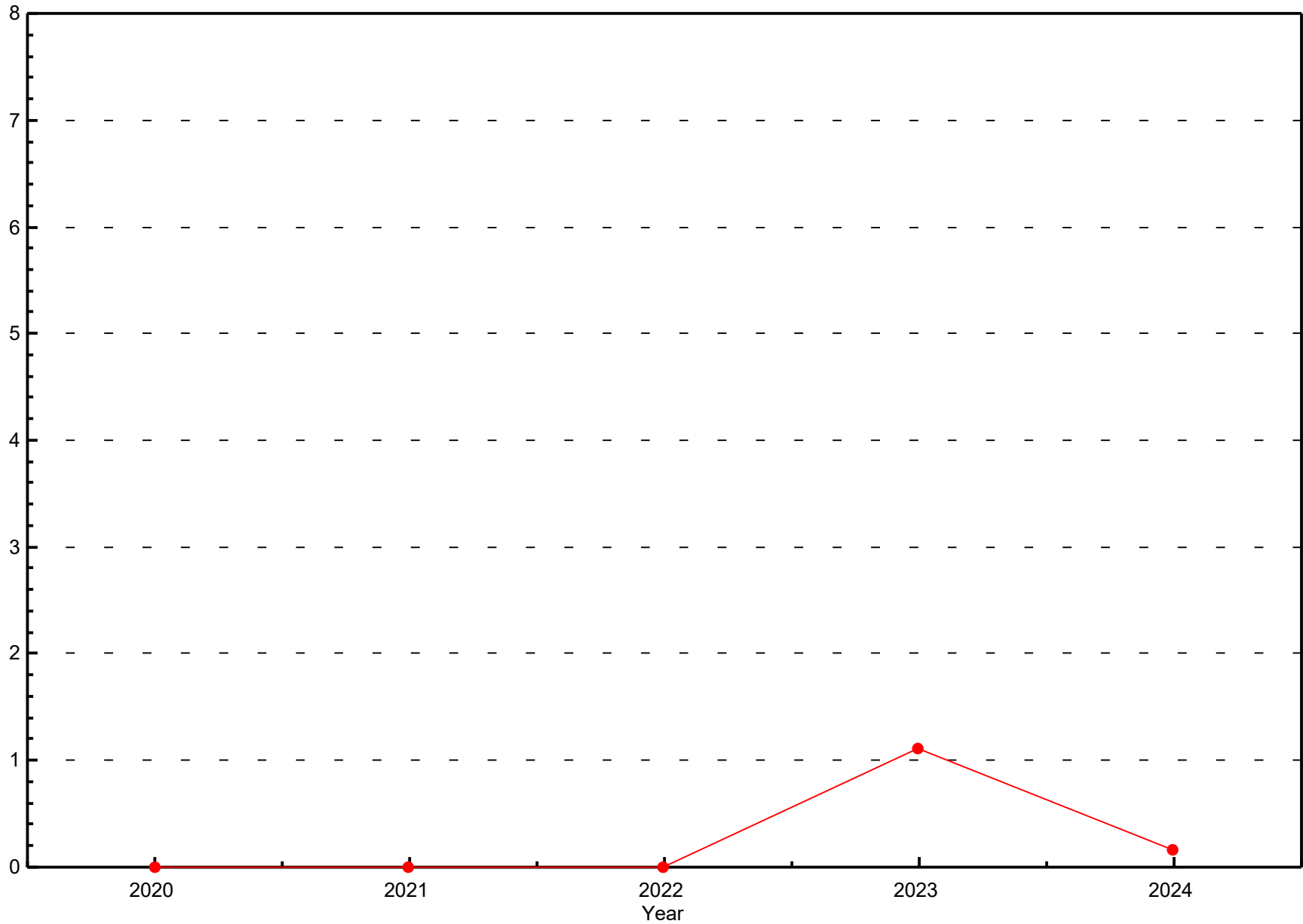
Wood Buffalo Environmental Association - Patricia McInnes (AMS06)
Annual Summary for the Year 2024
Ammonia (ppb) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum 1-Hour Value	Number of Values Exceeding 1-Hour Objective	Maximum 24-Hour Value	% of Data in Each Concentration Range		
							0 - 1000	1001 - 2000	> 2000
January	95	665	0.0	0.0	0	0.0	100.0	0.0	0.0
February	96	628	0.0	0.0	0	0.0	100.0	0.0	0.0
March	96	672	0.0	0.0	0	0.0	100.0	0.0	0.0
April	96	650	0.0	0.0	0	0.0	100.0	0.0	0.0
May	96	664	0.1	15.7	0	3.0	100.0	0.0	0.0
June	96	649	1.9	56.9	0	23.2	100.0	0.0	0.0
July	92	639	2.5	79.6	0	24.7	100.0	0.0	0.0
August	65	451	0.3	13.0	0	3.5	100.0	0.0	0.0
September	84	563	0.0	0.0	0	0.0	100.0	0.0	0.0
October	94	654	0.0	0.0	0	0.0	100.0	0.0	0.0
November	95	647	0.0	0.0	0	0.0	100.0	0.0	0.0
December	95	671	0.0	0.0	0	0.0	100.0	0.0	0.0
Annual	91	7553	0.4	79.6	0	24.7	100.0	0.0	0.0



Yearly Averages

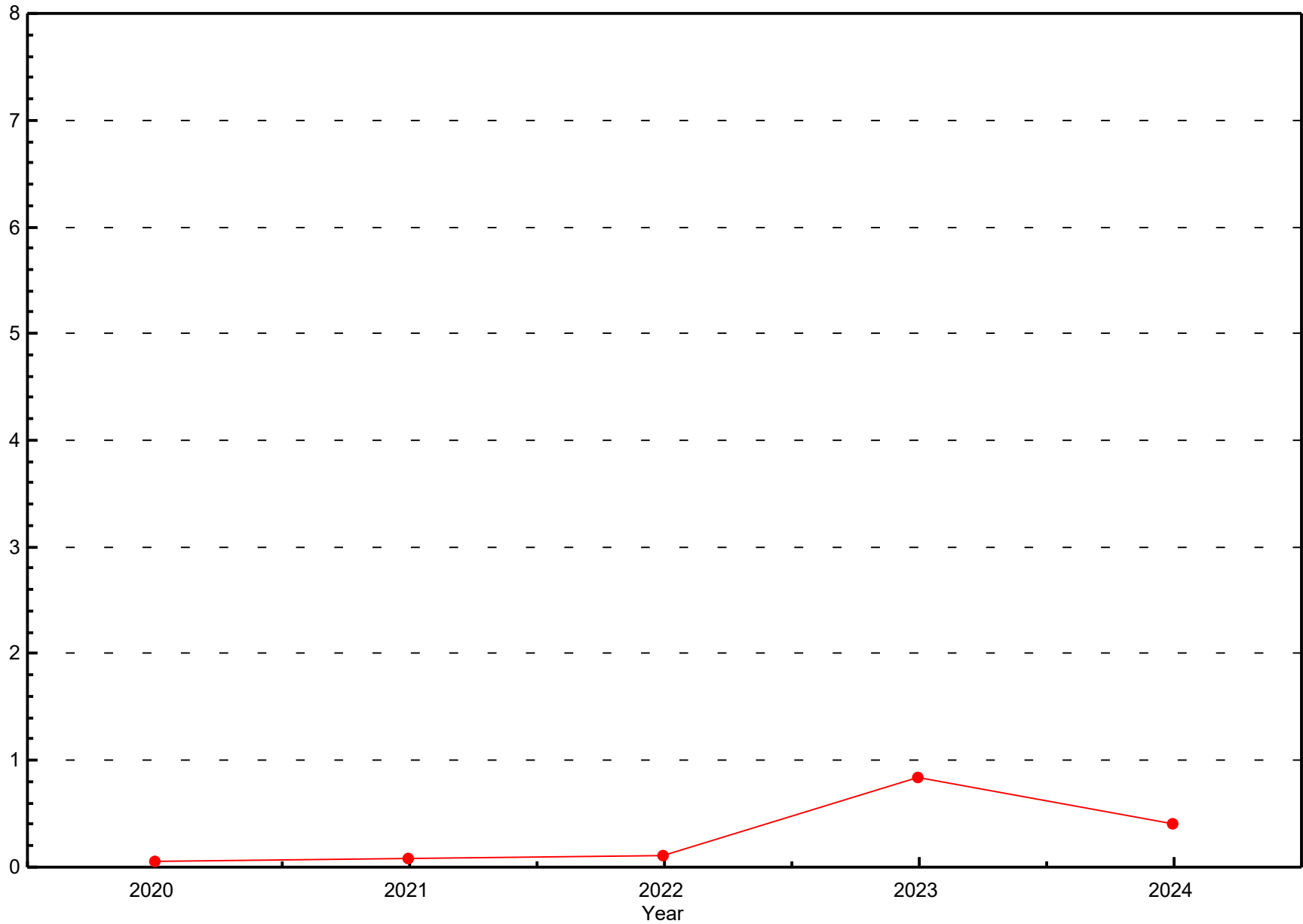
Ammonia (NH₃) - ppb
Fort McKay - Bertha Ganter (2020 to 2024)





Yearly Averages

Ammonia (NH₃) - ppb
Patricia McInnes (2020 to 2024)



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
ANNUAL REPORT

**PARTICULATE MATTER 2.5
ANNUAL 2024**

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

March 2025



Wood Buffalo Environmental Association - Fort McKay - Bertha Ganter (AMS01)
Annual Summary for the Year 2024
Particulate Matter 2.5 (ug/m³) Average

Month	Operational Time (%)	Number of Data	Mean Value	Number of Values		Number of Values		% of Data in Each Concentration Range				
				Maximum 1-Hour Value	Exceeding 1-Hour Objective	Maximum 24-Hour Value	Exceeding 24-Hour Objective	0 - 5	6 - 10	11 - 20	21 - 30	>30
January	100	741	5.9	31.2	0	17.7	0	61.5	25.4	12.2	0.8	0.1
February	100	695	7.6	96.6	1	17.1	0	50.8	25.5	19.1	3.3	1.3
March	100	742	8.6	66.8	0	31.3	1	47.6	29.5	14.3	4.7	3.9
April	100	716	5.6	45.9	0	13.6	0	67.0	22.1	8.9	1.5	0.4
May	94	693	9.2	142.0	0	53.6	2	69.1	17.0	7.7	1.2	5.1
June	99	712	5.2	28.8	0	13.3	0	61.5	28.2	9.6	0.7	0.0
July	96	709	56.0	1001.8	0	200.7	19	8.2	10.4	17.5	13.0	50.8
August	100	740	24.8	222.8	0	65.2	10	7.0	19.1	26.5	21.1	26.4
September	100	718	23.9	183.1	0	106.9	6	18.8	29.3	23.8	8.6	19.5
October	100	742	6.0	54.2	0	15.8	0	60.2	24.4	12.7	2.4	0.3
November	100	718	5.8	60.6	0	14.6	0	58.5	32.9	7.1	1.1	0.4
December	100	742	7.0	49.7	0	18.1	0	52.7	26.4	18.2	2.2	0.5
Annual	99	8668	13.8	1001.8	1	200.7	38	46.2	24.1	15.1	5.2	9.3



Wood Buffalo Environmental Association - Buffalo Viewpoint (AMS04)
Annual Summary for the Year 2024
Particulate Matter 2.5 (ug/m³) Average

Month	Operational Time (%)	Number of Data	Mean Value	Number of Values		Number of Values		% of Data in Each Concentration Range				
				Maximum 1-Hour Value	Exceeding 1-Hour Objective	Maximum 24-Hour Value	Exceeding 24-Hour Objective	0 - 5	6 - 10	11 - 20	21 - 30	>30
January	100	743	4.9	48.2	0	17.4	0	77.5	12.4	7.5	2.2	0.4
February	100	694	6.3	33.3	0	17.1	0	62.0	20.0	13.7	4.2	0.1
March	100	743	4.8	70.2	0	24.4	0	81.3	12.1	4.0	2.0	0.5
April	100	718	5.0	65.9	0	17.9	0	73.5	18.8	5.3	0.8	1.5
May	100	742	9.6	308.4	0	61.8	3	68.7	16.0	8.8	1.2	5.3
June	100	719	4.7	39.7	0	14.1	0	74.7	18.9	5.0	0.7	0.7
July	100	741	51.2	364.0	0	148.8	18	11.6	9.5	15.3	11.6	52.1
August	100	743	23.0	226.9	0	84.1	8	13.1	20.6	34.9	9.6	21.9
September	100	717	20.9	177.5	0	104.6	5	34.0	24.6	17.4	6.4	17.6
October	100	739	3.3	25.1	0	7.1	0	88.9	8.5	2.4	0.1	0.0
November	100	719	3.3	12.0	0	7.3	0	91.8	7.5	0.7	0.0	0.0
December	100	742	4.4	30.1	0	12.7	0	76.0	15.8	7.7	0.5	0.0
Annual	100	8760	11.8	364.0	0	148.8	34	63.1	15.4	10.1	3.1	8.2



Wood Buffalo Environmental Association - Patricia McInnes (AMS06)
Annual Summary for the Year 2024
Particulate Matter 2.5 (ug/m³) Average

Month	Operational Time (%)	Number of Data	Mean Value	Number of Values		Number of Values		% of Data in Each Concentration Range				
				Maximum 1-Hour Value	Exceeding 1-Hour Objective	Maximum 24-Hour Value	Exceeding 24-Hour Objective	0 - 5	6 - 10	11 - 20	21 - 30	>30
January	100	740	5.4	32.0	0	19.0	0	72.0	17.2	9.3	1.1	0.4
February	100	694	5.6	37.6	0	16.5	0	64.0	24.9	8.5	2.0	0.6
March	100	743	6.0	63.8	0	13.0	0	64.1	24.1	10.0	1.4	0.5
April	100	719	4.3	61.4	0	18.2	0	83.6	12.7	2.0	0.8	1.0
May	100	742	8.3	263.0	0	63.0	2	77.8	10.5	4.0	3.0	4.7
June	94	677	4.2	19.9	0	8.0	0	77.7	20.4	1.9	0.0	0.0
July	100	741	54.8	723.9	0	193.7	18	14.6	10.4	14.0	9.9	51.2
August	100	743	24.9	215.4	0	106.2	8	10.6	19.7	34.7	13.3	21.7
September	100	718	20.6	182.3	0	104.6	5	35.5	26.9	15.7	5.2	16.7
October	100	743	3.3	20.1	0	6.4	0	89.4	8.5	2.2	0.0	0.0
November	100	719	4.4	44.4	0	7.9	0	76.8	19.8	3.2	0.1	0.1
December	100	742	5.9	73.9	0	13.6	0	66.2	19.3	12.7	1.1	0.8
Annual	99	8721	12.4	723.9	0	193.7	33	60.9	17.8	9.9	3.2	8.3



Wood Buffalo Environmental Association - Athabasca Valley (AMS07)
Annual Summary for the Year 2024
Particulate Matter 2.5 (ug/m³) Average

Month	Operational Time (%)	Number of Data	Mean Value	Number of Values		Number of Values		% of Data in Each Concentration Range				
				Maximum 1-Hour Value	Exceeding 1-Hour Objective	Maximum 24-Hour Value	Exceeding 24-Hour Objective	0 - 5	6 - 10	11 - 20	21 - 30	>30
January	100	740	5.5	30.9	0	21.2	0	73.2	15.7	8.0	3.0	0.1
February	100	693	6.1	62.7	0	15.2	0	61.9	24.0	11.8	2.0	0.3
March	100	743	4.6	28.8	0	13.0	0	77.7	17.1	4.4	0.8	0.0
April	100	718	4.6	53.0	0	15.9	0	81.1	15.3	1.8	0.4	1.4
May	100	743	10.0	321.4	0	94.7	2	76.6	11.6	4.2	2.3	5.4
June	100	716	4.1	27.1	0	8.2	0	75.1	22.9	1.7	0.3	0.0
July	100	741	71.9	679.6	0	237.7	22	9.2	10.3	12.3	8.5	59.8
August	100	741	32.2	237.0	0	130.7	13	7.8	13.8	26.2	17.3	35.0
September	100	718	27.0	206.2	0	144.2	6	24.0	27.0	22.7	7.1	19.2
October	100	742	5.1	25.6	0	9.3	0	67.1	27.9	4.2	0.8	0.0
November	100	715	5.8	35.3	0	12.6	0	60.4	30.6	7.7	1.1	0.1
December	100	742	5.9	39.0	0	13.6	0	67.8	16.2	15.1	0.7	0.3
Annual	100	8752	15.3	679.6	0	237.7	43	56.9	19.1	10.0	3.7	10.3



Wood Buffalo Environmental Association - Fort Chipewyan (AMS08)
Annual Summary for the Year 2024
Particulate Matter 2.5 (ug/m³) Average

Month	Operational Time (%)	Number of Data	Mean Value	Number of Values		Number of Values		% of Data in Each Concentration Range				
				Maximum 1-Hour Value	Exceeding 1-Hour Objective	Maximum 24-Hour Value	Exceeding 24-Hour Objective	0 - 5	6 - 10	11 - 20	21 - 30	>30
January	100	743	4.0	30.5	0	10.6	0	82.8	14.0	3.0	0.3	0.0
February	100	693	2.7	12.3	0	4.2	0	96.5	3.3	0.1	0.0	0.0
March	100	742	3.1	38.7	0	6.7	0	95.4	4.3	0.0	0.0	0.3
April	100	719	2.6	11.7	0	4.7	0	97.9	1.8	0.3	0.0	0.0
May	100	742	8.1	221.7	0	94.9	2	83.4	8.2	3.1	1.5	3.8
June	100	718	3.6	25.4	0	11.1	0	80.1	15.3	4.5	0.1	0.0
July	100	742	48.3	431.2	0	166.8	16	15.5	12.0	17.4	10.5	44.6
August	100	742	21.4	369.3	0	101.4	6	27.5	17.8	19.3	19.1	16.3
September	100	718	13.2	144.9	0	90.0	3	49.9	24.4	14.4	3.9	7.5
October	100	743	3.0	23.5	0	12.2	0	88.4	9.0	2.4	0.1	0.0
November	100	720	3.6	28.7	0	14.2	0	87.1	9.0	3.1	0.8	0.0
December	100	743	3.9	17.2	0	10.1	0	84.5	10.0	5.5	0.0	0.0
Annual	100	8765	9.9	431.2	0	166.8	27	73.9	10.8	6.1	3.1	6.1



Wood Buffalo Environmental Association - Barge Landing (AMS09)
Annual Summary for the Year 2024
Particulate Matter 2.5 (ug/m³) Average

Month	Operational Time (%)	Number of Data	Mean Value	Number of Values		Number of Values		% of Data in Each Concentration Range				
				Maximum 1-Hour Value	Exceeding 1-Hour Objective	Maximum 24-Hour Value	Exceeding 24-Hour Objective	0 - 5	6 - 10	11 - 20	21 - 30	>30
January	100	742	6.8	38.9	0	22.8	0	56.1	27.0	13.5	3.0	0.5
February	100	695	9.4	54.9	0	25.1	0	38.0	29.5	21.7	8.8	2.0
March	100	743	10.2	212.8	2	33.3	2	39.0	34.6	16.7	5.0	4.7
April	100	718	7.6	46.3	0	15.3	0	40.8	41.4	13.4	3.5	1.0
May	100	743	11.7	153.4	0	62.3	3	51.8	25.2	12.1	4.4	6.5
June	99	714	8.0	94.7	1	24.5	0	51.8	25.4	15.0	5.3	2.5
July	100	743	61.4	1086.2	0	209.1	23	5.9	6.1	16.7	11.0	60.2
August	100	743	25.7	264.9	0	71.3	11	8.3	16.0	27.6	18.8	29.2
September	100	719	24.2	167.8	0	104.9	6	12.8	29.1	26.7	13.2	18.2
October	100	742	7.2	48.7	0	20.9	0	55.1	25.2	13.5	3.5	2.7
November	100	718	5.7	41.3	0	9.6	0	58.9	33.0	7.7	0.1	0.3
December	100	740	8.2	35.2	0	19.9	0	46.0	29.3	19.3	5.3	0.1
Annual	100	8760	15.6	1086.2	2	209.1	45	38.7	26.6	17.0	6.9	10.8



Wood Buffalo Environmental Association - Fort McKay South (AMS13)
Annual Summary for the Year 2024
Particulate Matter 2.5 (ug/m³) Average

Month	Operational Time (%)	Number of Data	Mean Value	Number of Values		Number of Values		% of Data in Each Concentration Range				
				Maximum 1-Hour Value	Exceeding 1-Hour Objective	Maximum 24-Hour Value	Exceeding 24-Hour Objective	0 - 5	6 - 10	11 - 20	21 - 30	>30
January	100	742	5.9	33.3	0	18.7	0	66.0	21.4	11.1	1.1	0.4
February	100	696	6.9	38.6	0	15.3	0	47.7	34.2	14.7	3.2	0.3
March	100	744	7.3	74.3	0	25.5	0	58.2	23.9	11.7	4.0	2.2
April	96	687	5.1	73.6	0	14.3	0	69.9	21.7	7.4	0.4	0.6
May	100	743	8.9	129.4	0	52.0	2	63.9	21.4	8.1	1.9	4.7
June	99	715	5.8	21.7	0	10.2	0	57.8	30.2	11.8	0.3	0.0
July	100	743	57.5	984.5	0	202.2	22	7.9	11.7	12.4	11.3	56.7
August	100	743	27.4	251.5	0	78.6	12	6.7	17.6	22.5	23.2	30.0
September	100	718	23.7	181.9	0	112.5	6	21.0	30.1	21.2	9.9	17.8
October	100	742	3.7	19.2	0	9.8	0	82.6	13.5	3.9	0.0	0.0
November	100	719	3.2	11.7	0	6.8	0	87.1	12.7	0.3	0.0	0.0
December	100	743	4.6	20.7	0	15.8	0	76.3	14.7	8.9	0.1	0.0
Annual	100	8735	13.5	984.5	0	202.2	42	53.5	21.1	11.3	4.6	9.5



Wood Buffalo Environmental Association - Anzac (AMS14)
Annual Summary for the Year 2024
Particulate Matter 2.5 (ug/m³) Average

Month	Operational Time (%)	Number of Data	Mean Value	Number of Values		Number of Values		% of Data in Each Concentration Range				
				Maximum 1-Hour Value	Exceeding 1-Hour Objective	Maximum 24-Hour Value	Exceeding 24-Hour Objective	0 - 5	6 - 10	11 - 20	21 - 30	>30
January	97	722	4.6	59.2	0	14.3	0	80.6	10.8	7.3	1.1	0.1
February	100	693	4.7	55.5	0	9.5	0	75.8	17.2	5.1	1.4	0.6
March	100	743	4.2	250.8	1	18.2	0	87.8	11.0	0.5	0.1	0.5
April	100	717	3.9	30.8	0	8.0	0	82.3	15.1	2.2	0.3	0.1
May	100	742	9.6	145.9	0	81.5	3	72.0	15.4	2.6	2.4	7.7
June	100	719	4.5	17.2	0	9.0	0	69.0	29.6	1.4	0.0	0.0
July	99	738	69.9	629.5	0	288.3	25	7.7	11.1	17.5	7.2	56.5
August	100	742	31.9	252.9	0	150.6	13	13.5	15.9	23.1	15.4	32.2
September	100	716	19.0	156.3	0	109.3	4	51.8	17.6	10.8	3.6	16.2
October	100	744	2.8	50.0	0	5.7	0	95.0	3.4	1.2	0.3	0.1
November	100	719	3.2	21.1	0	6.1	0	88.6	9.6	1.7	0.1	0.0
December	100	743	4.1	23.3	0	10.7	0	74.0	22.3	3.5	0.1	0.0
Annual	100	8738	13.6	629.5	1	288.3	45	66.2	14.9	6.4	2.7	9.8



Wood Buffalo Environmental Association - Wapasu (AMS17)
Annual Summary for the Year 2024
Particulate Matter 2.5 (ug/m³) Average

Month	Operational Time (%)	Number of Data	Mean Value	Number of Values		Number of Values		% of Data in Each Concentration Range				
				Maximum 1-Hour Value	Exceeding 1-Hour Objective	Maximum 24-Hour Value	Exceeding 24-Hour Objective	0 - 5	6 - 10	11 - 20	21 - 30	>30
January	100	743	4.2	31.2	0	16.9	0	84.0	8.3	6.5	0.9	0.3
February	100	692	3.6	18.2	0	10.6	0	84.3	12.6	3.2	0.0	0.0
March	100	744	3.3	18.1	0	7.1	0	92.2	7.0	0.8	0.0	0.0
April	100	717	3.3	38.5	0	6.1	0	91.9	7.3	0.6	0.1	0.1
May	100	743	6.8	137.0	0	49.2	2	82.0	7.4	5.0	1.2	4.4
June	99	714	3.2	24.6	0	7.4	0	83.5	16.0	0.4	0.1	0.0
July	100	740	51.3	616.8	0	174.0	18	11.6	10.5	17.7	12.2	48.0
August	100	742	19.2	196.4	0	79.4	6	17.0	25.2	32.1	11.1	14.7
September	100	716	16.0	170.6	0	99.5	4	51.8	19.4	11.9	3.2	13.7
October	100	743	2.8	15.5	0	5.4	0	95.2	4.4	0.4	0.0	0.0
November	100	718	2.9	11.3	0	6.0	0	87.3	12.5	0.1	0.0	0.0
December	100	742	3.6	16.9	0	9.6	0	82.8	13.8	3.5	0.0	0.0
Annual	100	8754	10.1	616.8	0	174.0	30	71.3	12.3	7.0	2.5	7.0



Wood Buffalo Environmental Association - Stony Mountain (AMS18)
Annual Summary for the Year 2024
Particulate Matter 2.5 (ug/m³) Average

Month	Operational Time (%)	Number of Data	Mean Value	Number of Values		Number of Values		% of Data in Each Concentration Range				
				Maximum 1-Hour Value	Exceeding 1-Hour Objective	Maximum 24-Hour Value	Exceeding 24-Hour Objective	0 - 5	6 - 10	11 - 20	21 - 30	>30
January	100	742	5.2	36.8	0	20.1	0	75.6	13.8	8.2	1.8	0.7
February	100	693	2.8	11.3	0	6.1	0	91.6	7.9	0.4	0.0	0.0
March	100	742	3.1	17.7	0	6.8	0	92.3	5.7	2.0	0.0	0.0
April	100	718	2.7	12.8	0	5.5	0	98.2	1.7	0.1	0.0	0.0
May	72	530	5.9	121.7	0	29.4	1	85.5	5.7	3.0	3.0	2.8
June	100	717	3.3	17.9	0	7.1	0	90.9	8.1	1.0	0.0	0.0
July	100	741	52.6	685.8	0	235.8	16	18.0	18.0	17.5	7.2	39.4
August	100	742	20.0	112.9	0	49.5	8	19.0	19.5	27.5	12.1	21.8
September	100	718	18.9	203.0	0	123.7	5	60.7	15.5	6.3	2.8	14.8
October	100	740	2.3	9.0	0	4.6	0	98.2	1.8	0.0	0.0	0.0
November	100	718	2.9	11.8	0	5.6	0	91.5	7.7	0.8	0.0	0.0
December	100	742	4.5	31.0	0	12.1	0	74.0	18.7	6.2	0.9	0.1
Annual	98	8543	10.5	685.8	0	235.8	30	72.8	10.8	6.6	2.5	7.3



Wood Buffalo Environmental Association - Conklin (AMS21)
Annual Summary for the Year 2024
Particulate Matter 2.5 (ug/m³) Average

Month	Operational Time (%)	Number of Data	Mean Value	Number of Values		Number of Values		% of Data in Each Concentration Range				
				Maximum 1-Hour Value	Exceeding 1-Hour Objective	Maximum 24-Hour Value	Exceeding 24-Hour Objective	0 - 5	6 - 10	11 - 20	21 - 30	>30
January	100	742	6.4	45.8	0	23.8	0	64.6	21.0	9.8	2.6	2.0
February	100	695	4.8	92.5	1	15.0	0	75.8	17.1	4.9	1.0	1.2
March	100	742	4.2	45.1	0	8.0	0	81.9	13.2	4.5	0.0	0.4
April	100	717	4.5	55.7	0	10.2	0	80.2	12.4	5.3	0.8	1.3
May	100	742	8.6	113.4	0	39.5	2	67.0	16.0	7.0	3.8	6.2
June	100	718	4.8	76.5	0	12.8	0	74.7	19.2	4.3	0.8	1.0
July	100	742	46.4	467.2	0	158.5	16	16.3	20.6	17.4	7.7	38.0
August	100	743	19.7	137.6	0	45.4	7	17.6	16.8	28.1	18.7	18.7
September	100	717	18.8	152.3	0	106.7	5	51.3	19.3	9.5	3.5	16.5
October	100	743	4.3	41.4	0	7.6	0	80.5	12.7	5.3	1.4	0.3
November	100	719	4.6	62.1	0	6.9	0	74.8	18.9	5.2	0.6	0.6
December	100	743	6.0	40.2	0	16.6	0	60.7	25.0	12.4	1.6	0.3
Annual	100	8763	11.2	467.2	1	158.5	30	61.8	17.7	9.5	3.6	7.3



Wood Buffalo Environmental Association - Janvier (AMS22)
Annual Summary for the Year 2024
Particulate Matter 2.5 (ug/m³) Average

Month	Operational Time (%)	Number of Data	Mean Value	Number of Values		Number of Values		% of Data in Each Concentration Range				
				Maximum 1-Hour Value	Exceeding 1-Hour Objective	Maximum 24-Hour Value	Exceeding 24-Hour Objective	0 - 5	6 - 10	11 - 20	21 - 30	>30
January	97	721	4.4	38.2	0	18.1	0	83.8	8.6	5.6	1.4	0.7
February	100	694	2.7	20.9	0	4.9	0	95.4	3.9	0.6	0.1	0.0
March	100	742	3.9	178.8	4	25.4	0	90.7	5.9	2.7	0.1	0.5
April	100	717	3.3	81.0	0	17.7	0	93.9	4.2	1.0	0.0	1.0
May	100	743	8.0	167.2	0	46.4	3	79.8	7.1	3.6	3.6	5.8
June	100	717	3.4	11.2	0	5.8	0	89.3	10.6	0.1	0.0	0.0
July	100	742	47.8	314.0	0	161.5	13	15.4	20.6	13.6	7.3	43.1
August	100	742	22.8	173.2	0	96.4	7	18.1	25.1	22.8	14.0	20.1
September	100	717	18.4	179.4	0	104.9	5	57.5	17.2	7.1	2.7	15.6
October	100	740	2.5	9.4	0	4.3	0	97.6	2.4	0.0	0.0	0.0
November	100	717	3.3	64.4	0	9.1	0	89.8	8.8	1.3	0.0	0.1
December	100	742	4.9	40.4	0	15.6	0	72.0	19.8	6.5	0.9	0.8
Annual	100	8734	10.6	314.0	4	161.5	28	73.5	11.1	5.4	2.6	7.5



Wood Buffalo Environmental Association - Fort Hills (AMS23)
Annual Summary for the Year 2024
Particulate Matter 2.5 (ug/m³) Average

Month	Operational Time (%)	Number of Data	Mean Value	Number of Values		Number of Values		% of Data in Each Concentration Range				
				Maximum 1-Hour Value	Exceeding 1-Hour Objective	Maximum 24-Hour Value	Exceeding 24-Hour Objective	0 - 5	6 - 10	11 - 20	21 - 30	>30
January	100	743	6.1	41.8	0	17.6	0	57.3	31.4	9.8	1.4	0.1
February	100	694	9.6	87.3	2	28.9	0	46.1	26.2	17.2	5.2	5.3
March	100	743	11.5	167.9	10	52.9	3	46.7	26.0	14.1	5.9	7.3
April	100	719	8.2	325.4	5	39.3	1	60.6	21.0	10.7	4.6	3.1
May	99	737	9.4	152.8	0	53.0	2	62.6	21.4	8.8	2.0	5.2
June	100	719	7.6	342.4	5	32.7	1	55.4	29.8	12.1	0.7	2.1
July	100	741	61.9	431.9	0	171.7	21	5.9	8.4	17.1	11.6	57.0
August	100	742	24.2	257.7	1	63.0	9	12.8	15.0	27.4	19.7	25.2
September	100	715	19.0	158.1	0	90.1	5	28.4	30.8	18.7	5.5	16.6
October	100	742	5.7	95.2	1	16.3	0	64.7	24.3	8.0	1.8	1.4
November	100	717	5.4	68.7	0	16.0	0	66.3	25.0	7.0	1.1	0.7
December	100	743	6.1	187.5	4	31.8	1	69.0	17.8	12.3	0.3	0.7
Annual	100	8755	14.6	431.9	28	171.7	43	48.0	23.1	13.6	5.0	10.3



Wood Buffalo Environmental Association - Surmont 2 (AMS 29)
Annual Summary for the Year 2024
Particulate Matter 2.5 (ug/m³) Average

Month	Operational Time (%)	Number of Data	Mean Value	Number of Values		Number of Values		% of Data in Each Concentration Range				
				Maximum 1-Hour Value	Exceeding 1-Hour Objective	Maximum 24-Hour Value	Exceeding 24-Hour Objective	0 - 5	6 - 10	11 - 20	21 - 30	>30
January	91	674	4.2	25.5	0	14.8	0	83.5	7.0	8.9	0.6	0.0
February	99	690	4.3	85.2	1	14.7	0	80.4	14.4	2.6	1.2	1.5
March	99	739	4.0	80.0	0	15.1	0	90.1	5.0	2.7	0.8	1.4
April	100	717	3.0	31.5	0	7.0	0	93.0	4.7	2.0	0.1	0.1
May	100	743	7.8	106.9	0	69.2	2	80.0	6.6	3.5	3.2	6.7
June	100	718	3.5	69.8	0	12.9	0	92.5	6.3	0.7	0.1	0.4
July	100	742	45.7	245.5	0	154.3	15	15.4	15.8	14.4	12.0	42.5
August	100	742	22.3	231.5	0	117.1	6	20.6	24.7	21.0	14.2	19.5
September	100	718	10.7	88.9	0	55.3	4	68.1	10.9	6.6	3.2	11.3
October	100	737	2.0	29.8	0	3.8	0	97.7	1.6	0.5	0.1	0.0
November	97	697	3.4	12.4	0	6.6	0	86.8	12.1	1.2	0.0	0.0
December	100	741	4.1	27.4	0	10.1	0	75.7	20.9	3.0	0.4	0.0
Annual	99	8658	9.7	245.5	1	154.3	27	72.9	11.0	5.8	3.2	7.2



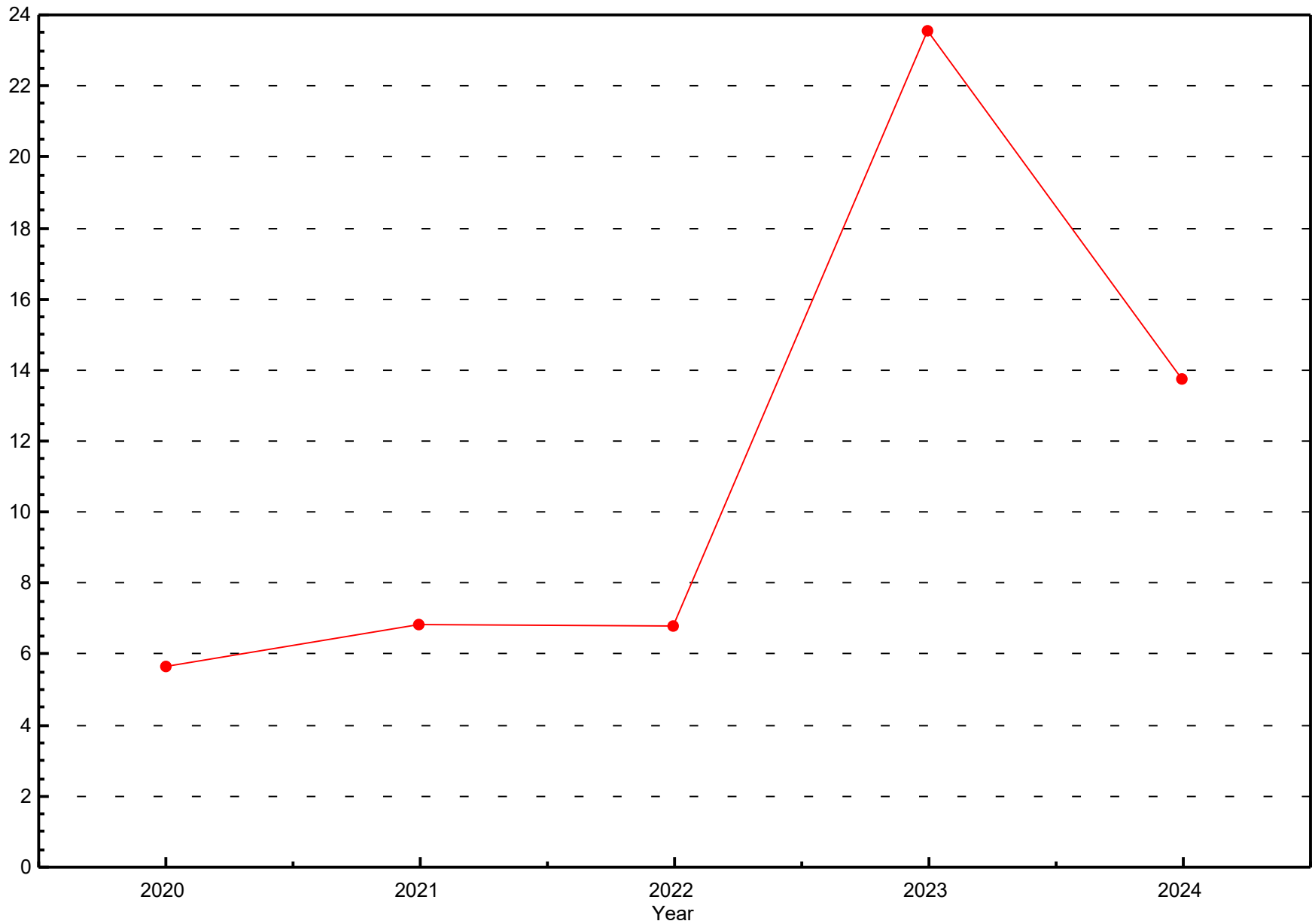
Wood Buffalo Environmental Association - Ells River (AMS30)
Annual Summary for the Year 2024
Particulate Matter 2.5 (ug/m³) Average

Month	Operational Time (%)	Number of Data	Mean Value	Number of Values		Number of Values		% of Data in Each Concentration Range				
				Maximum 1-Hour Value	Exceeding 1-Hour Objective	Maximum 24-Hour Value	Exceeding 24-Hour Objective	0 - 5	6 - 10	11 - 20	21 - 30	>30
January	100	741	5.3	26.4	0	16.4	0	66.9	25.4	6.6	1.1	0.0
February	100	695	6.5	38.9	0	18.1	0	58.7	24.8	12.2	3.7	0.6
March	100	744	8.0	43.8	0	21.3	0	44.8	35.2	13.7	4.7	1.6
April	100	716	3.9	40.2	0	8.0	0	81.3	16.5	1.8	0.1	0.3
May	100	742	8.1	153.3	4	50.4	2	76.4	13.6	4.9	0.9	4.2
June	99	714	4.0	21.1	0	9.3	0	80.3	17.0	2.7	0.1	0.0
July	100	742	50.5	786.0	0	163.6	18	10.9	11.1	16.0	12.0	50.0
August	100	742	19.6	190.3	0	53.1	6	17.5	22.2	28.2	15.2	16.9
September	100	719	16.5	138.4	0	86.2	4	43.0	23.4	16.4	3.9	13.4
October	100	742	3.4	19.6	0	8.9	0	83.8	13.2	3.0	0.0	0.0
November	100	717	3.6	12.9	0	6.7	0	83.4	16.2	0.4	0.0	0.0
December	100	743	4.6	26.3	0	14.4	0	75.0	15.8	9.0	0.3	0.0
Annual	100	8757	11.2	786.0	4	163.6	30	60.0	19.5	9.7	3.5	7.4



Yearly Averages

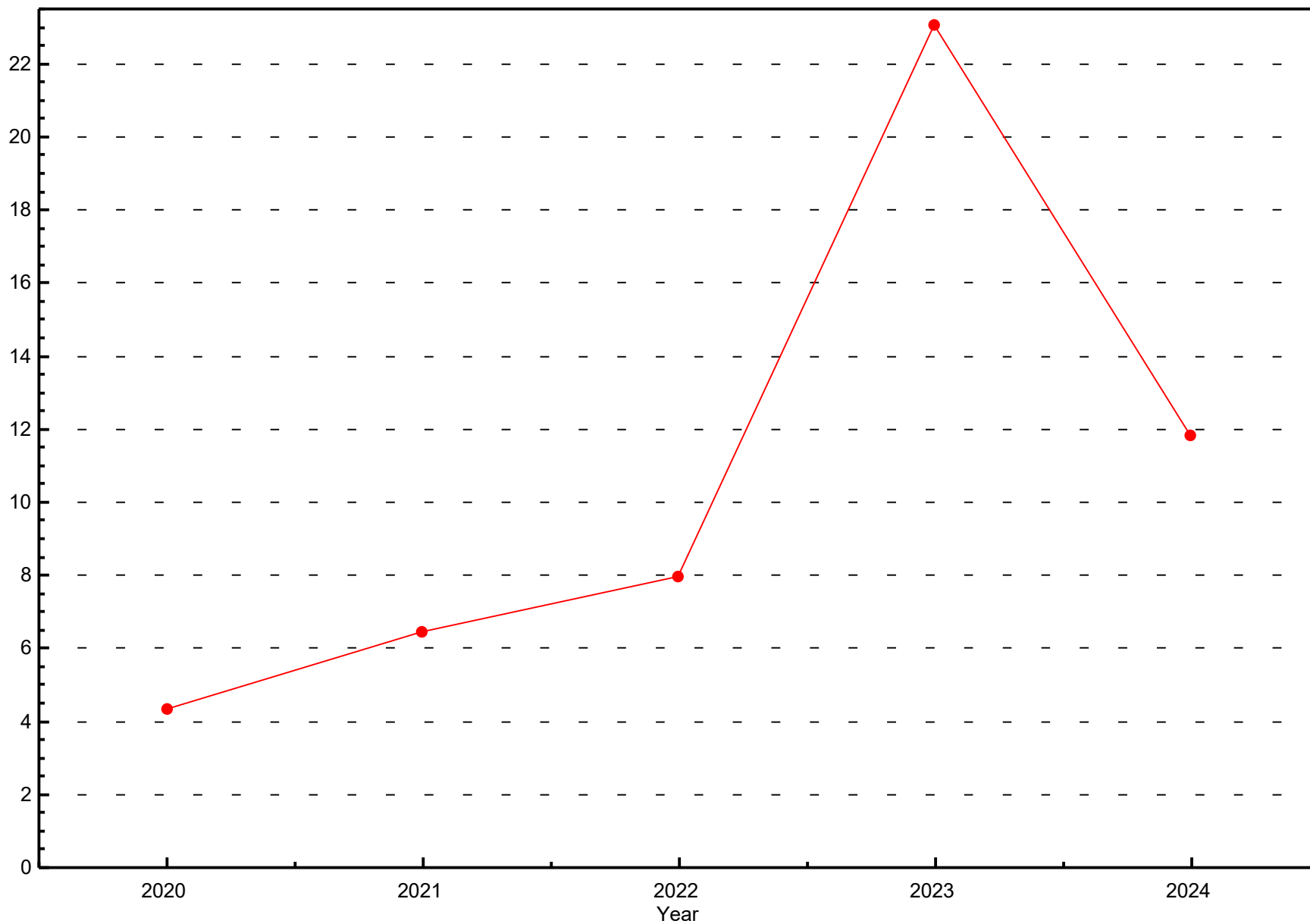
Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Fort McKay - Bertha Ganter (2020 to 2024)





Yearly Averages

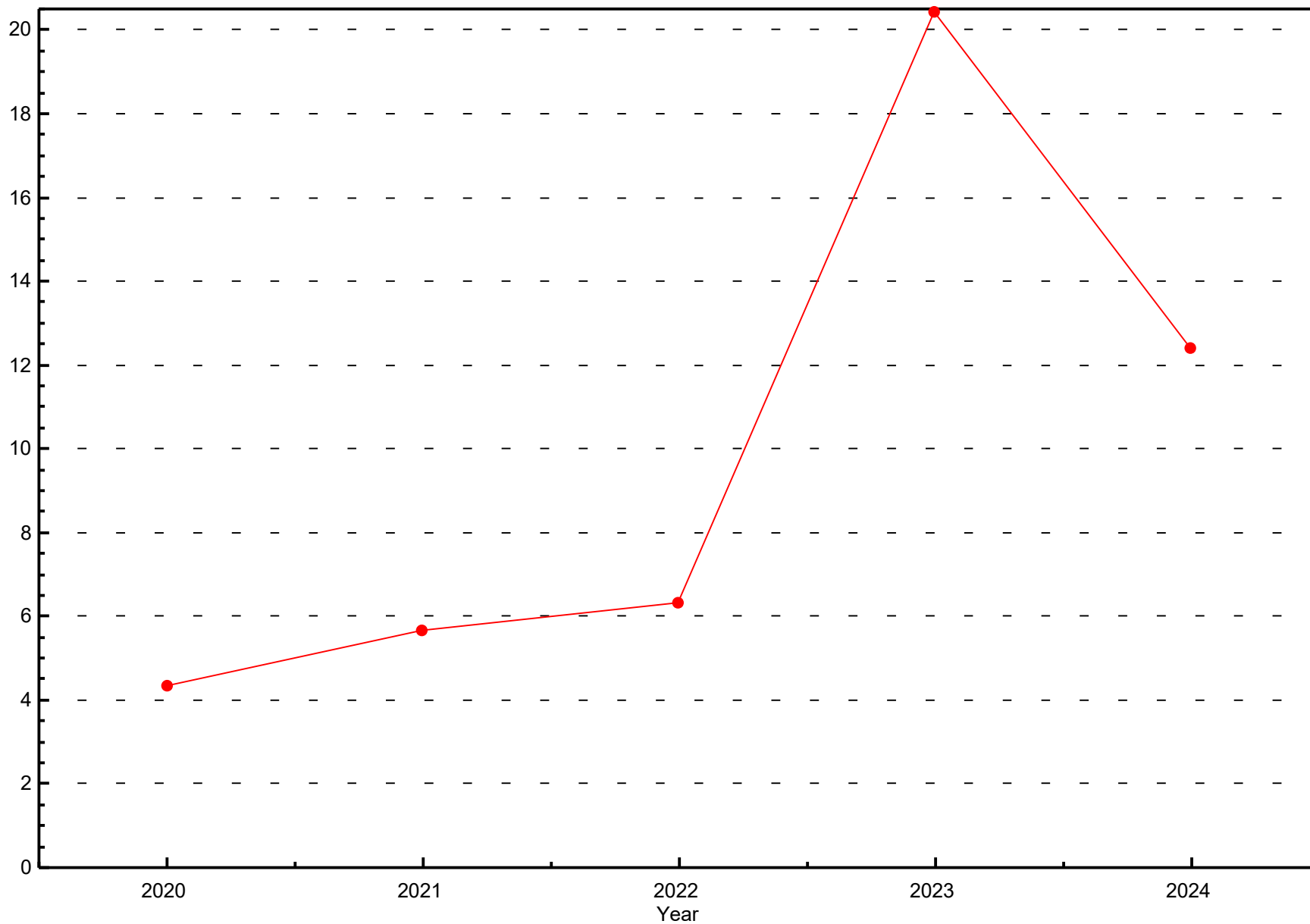
Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Buffalo Viewpoint (2020 to 2024)





Yearly Averages

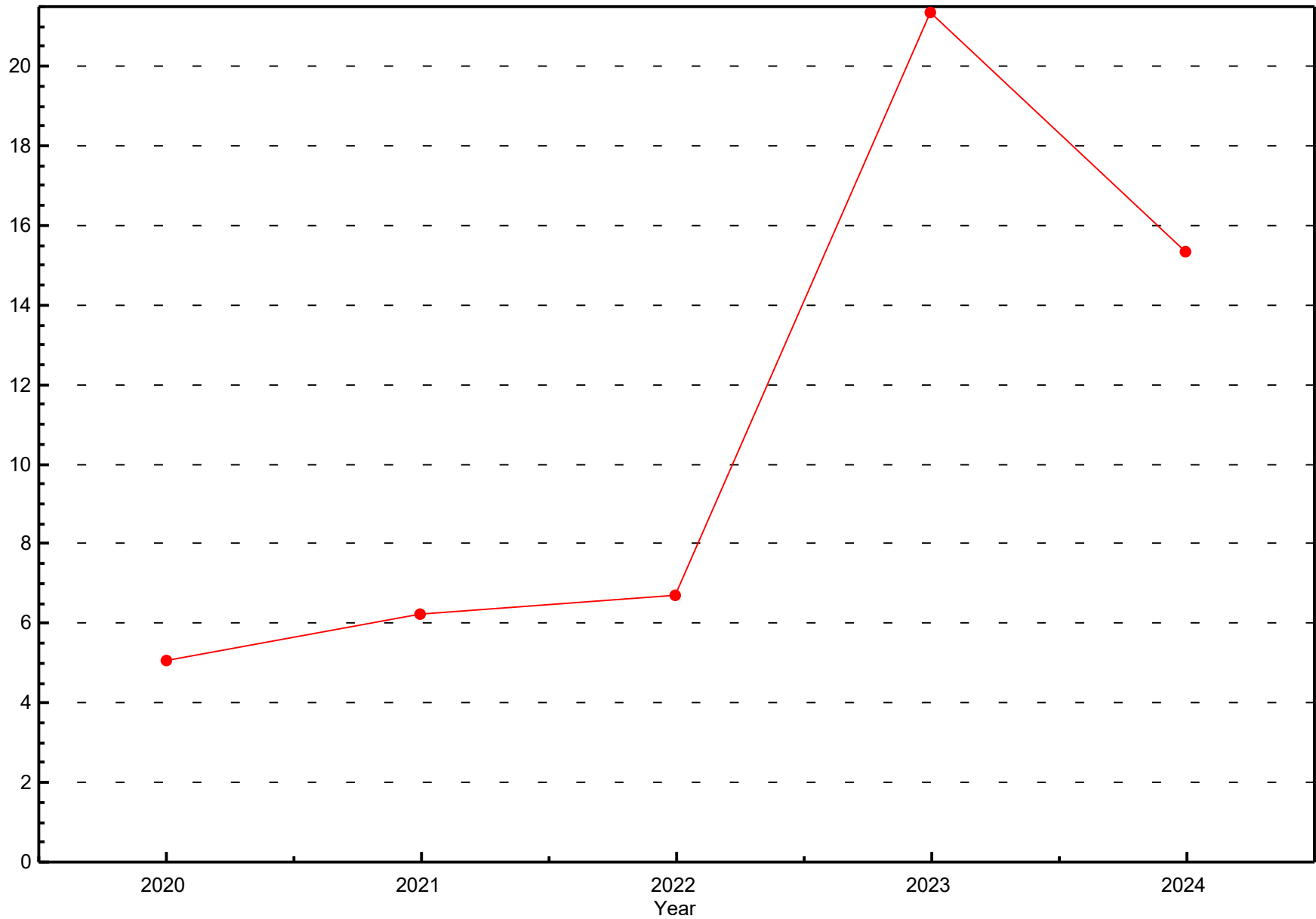
Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Patricia McInnes (2020 to 2024)





Yearly Averages

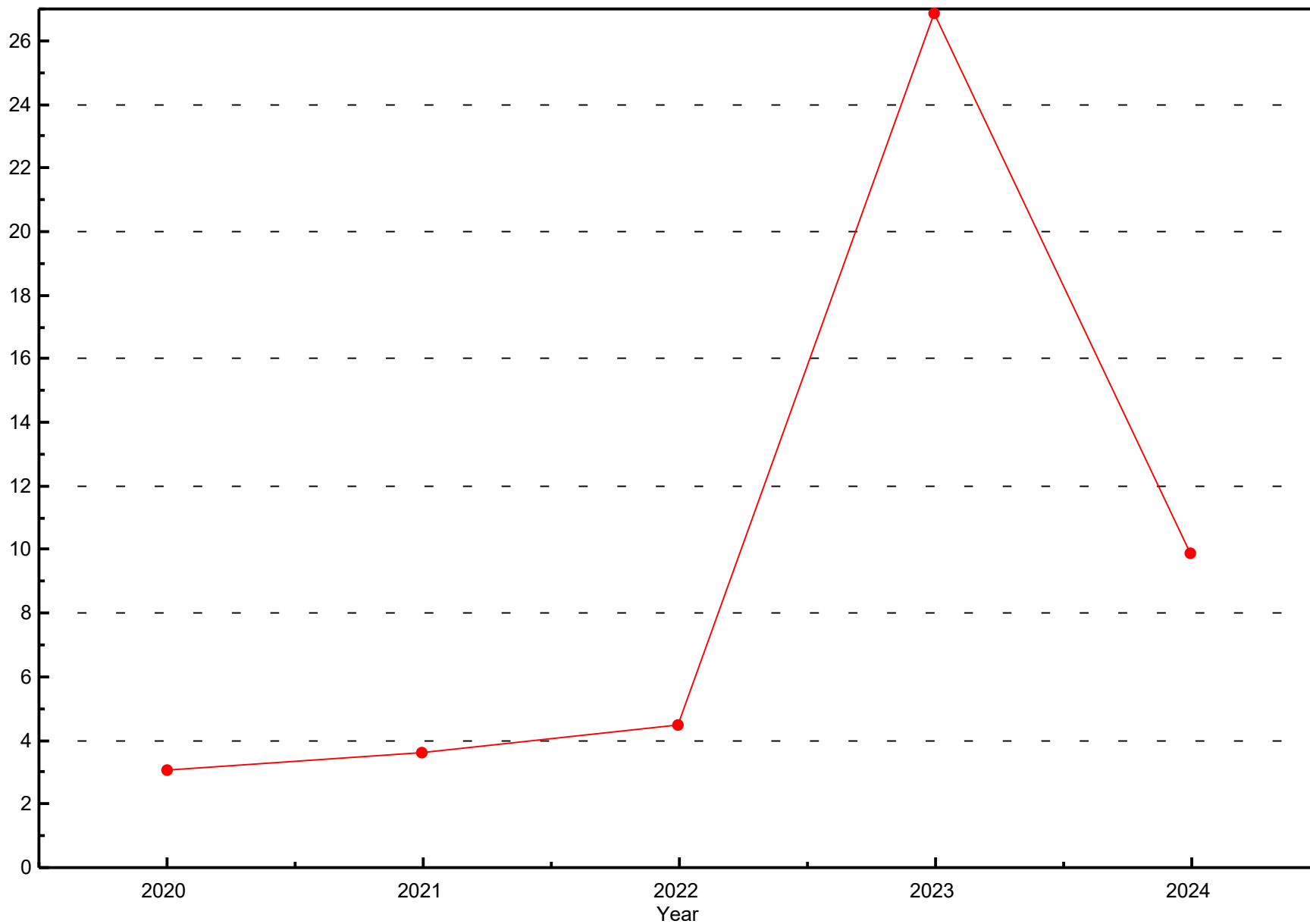
Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Athabasca Valley (2020 to 2024)





Yearly Averages

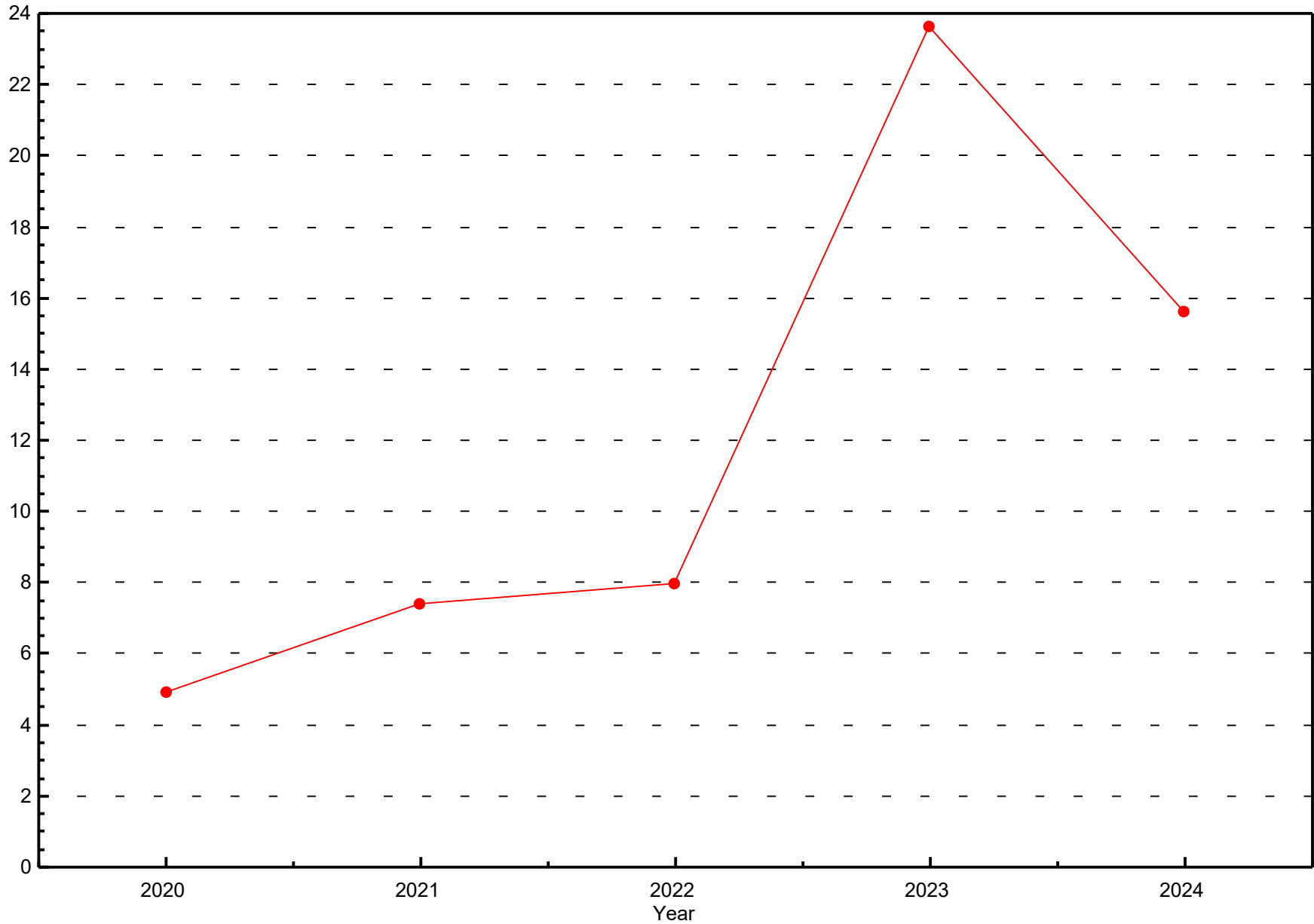
Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$ Fort Chipewyan (2020 to 2024)





Yearly Averages

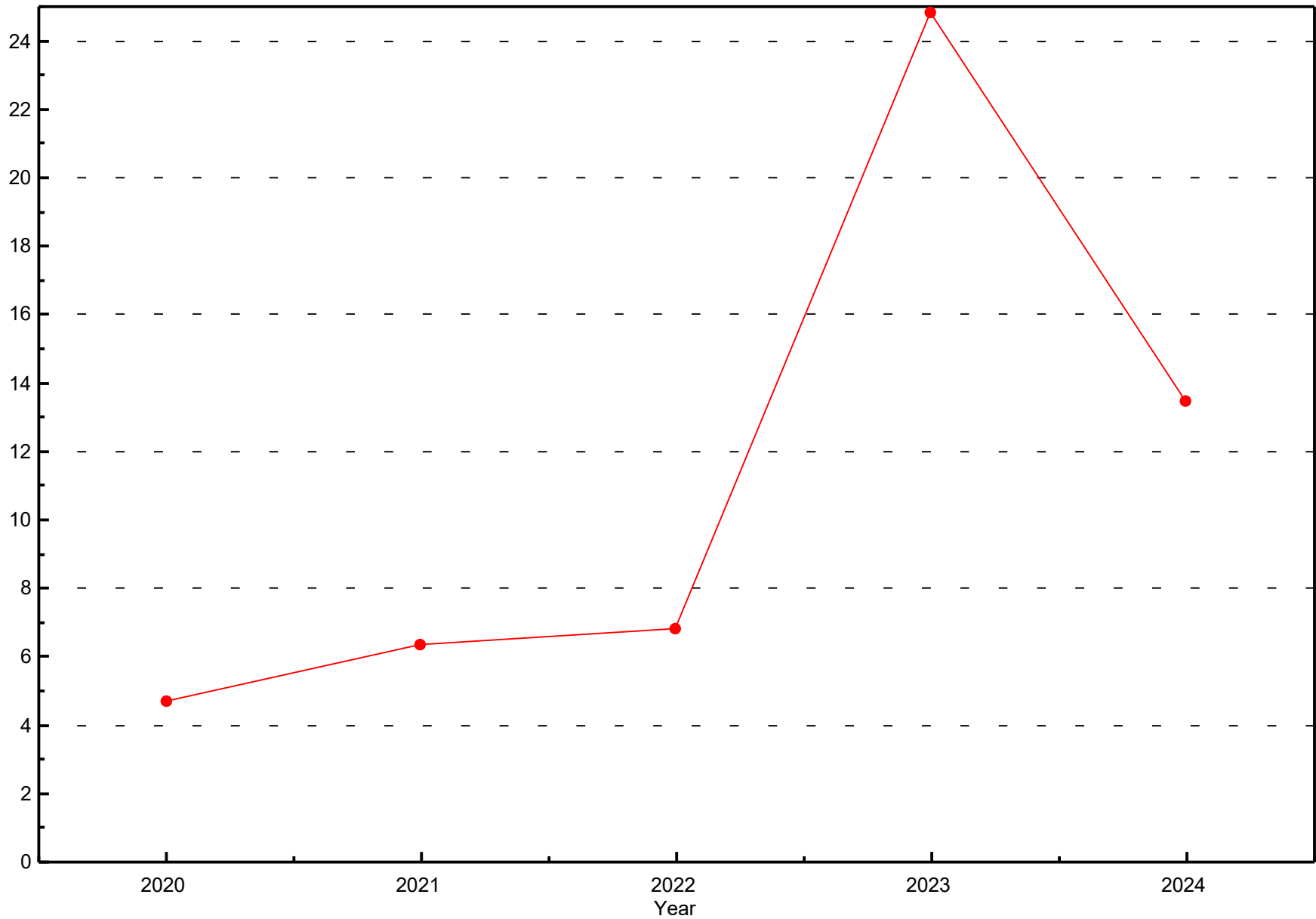
Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$ Barge Landing (2020 to 2024)





Yearly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$ Fort McKay South (2020 to 2024)

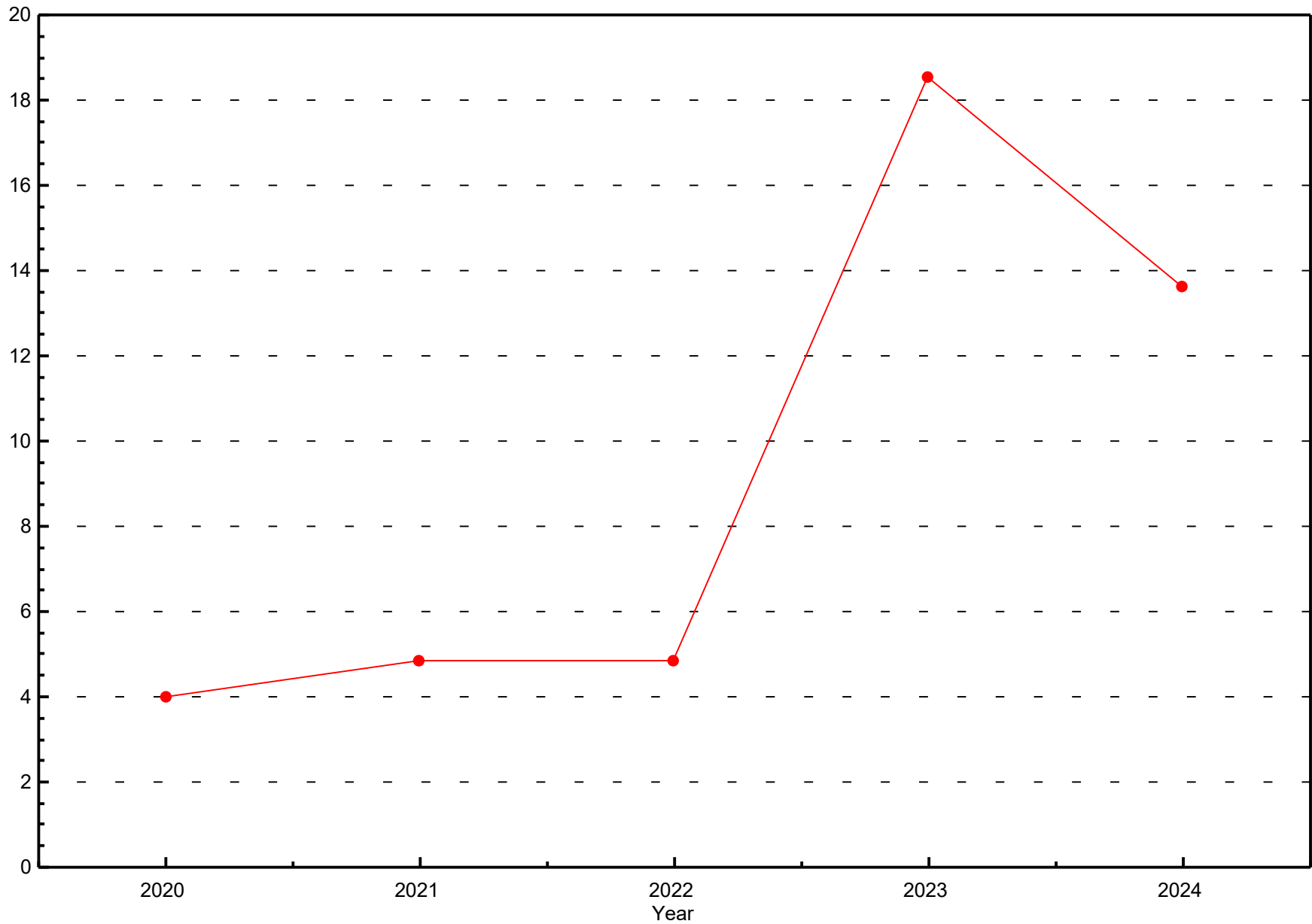




Yearly Averages

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

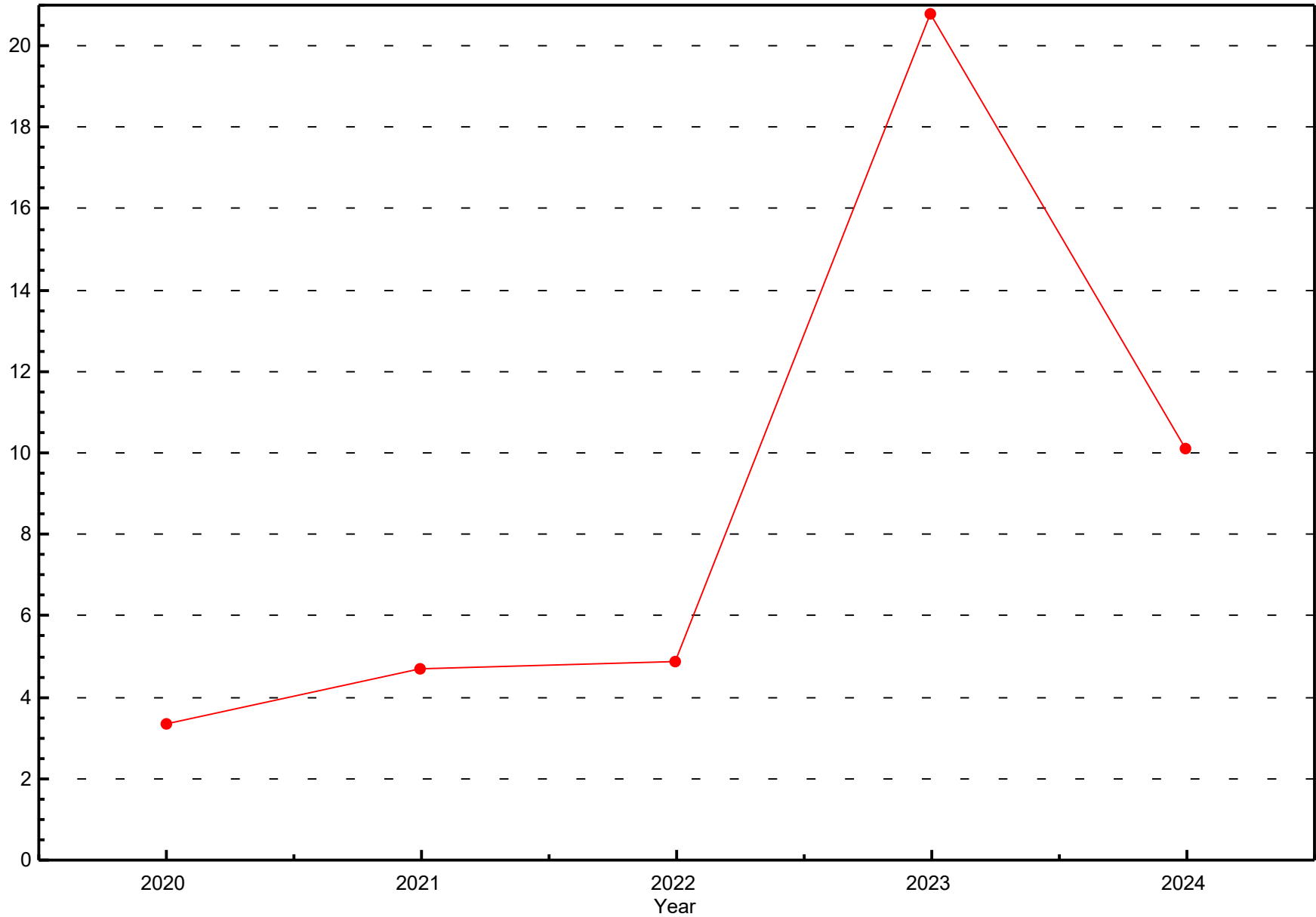
Anzac (2020 to 2024)





Yearly Averages

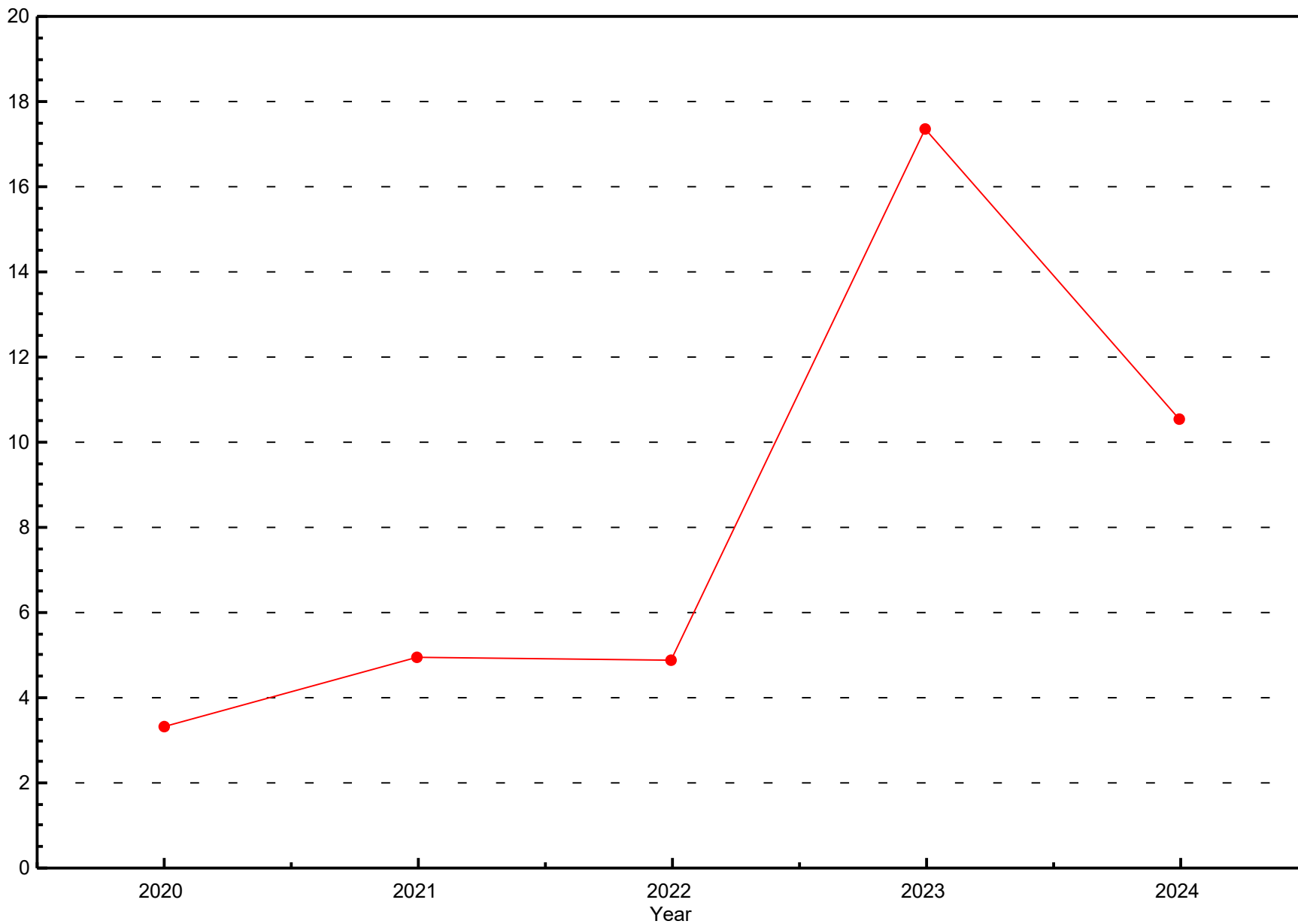
Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Wapasu (2020 to 2024)





Yearly Averages

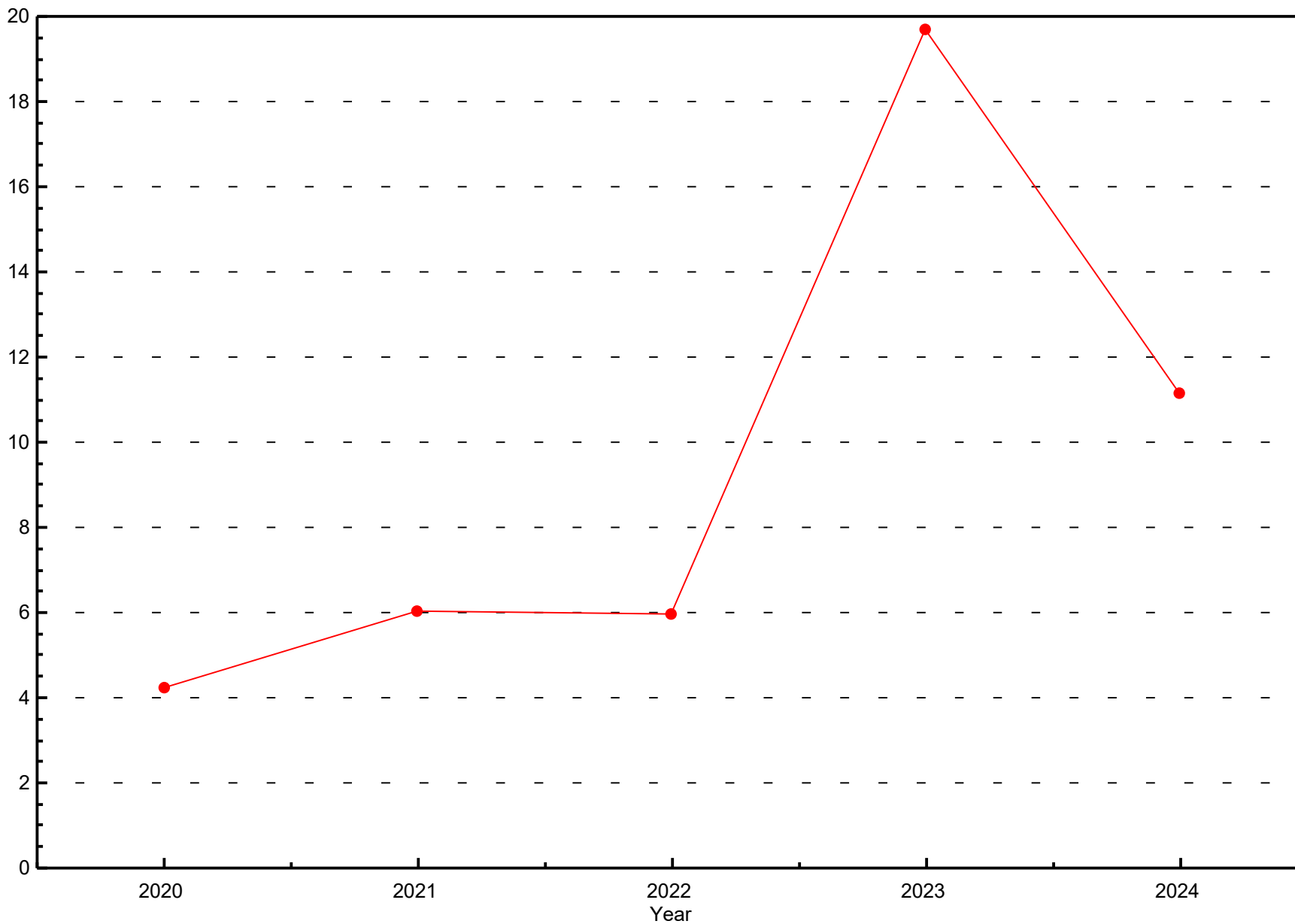
Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$ Stony Mountain (2020 to 2024)





Yearly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Conklin (2020 to 2024)

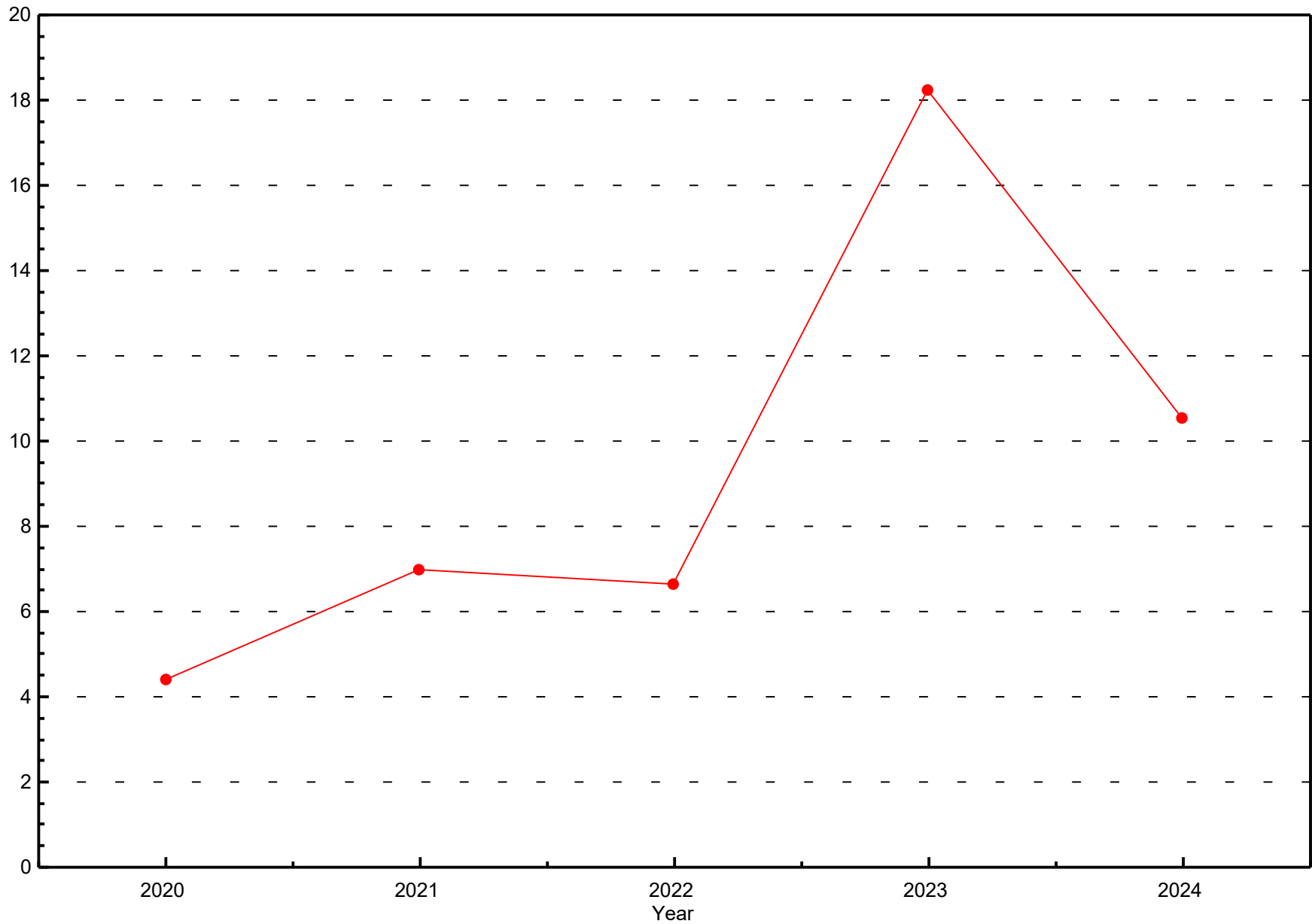




Yearly Averages

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

Janvier (2020 to 2024)

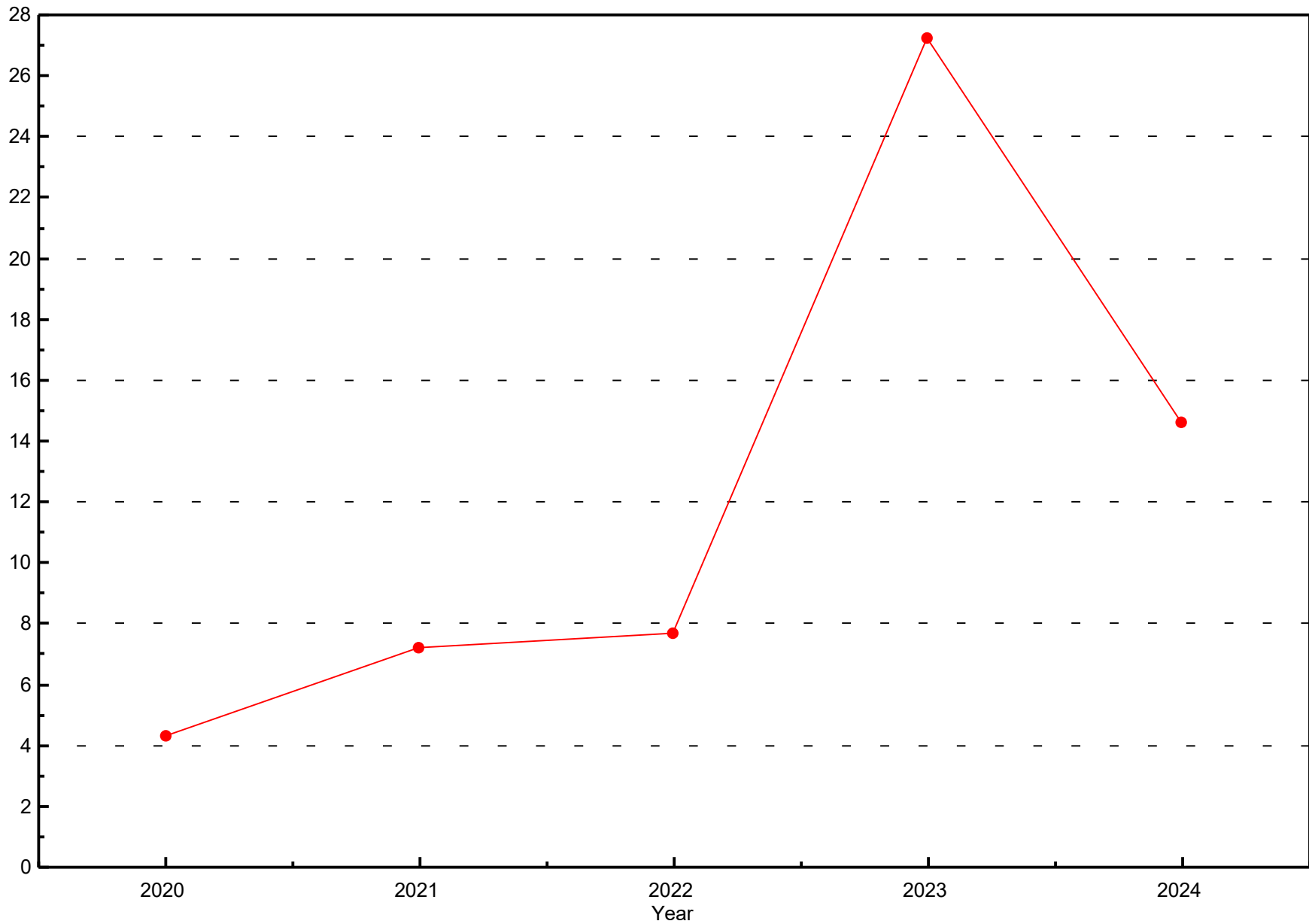




Yearly Averages

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

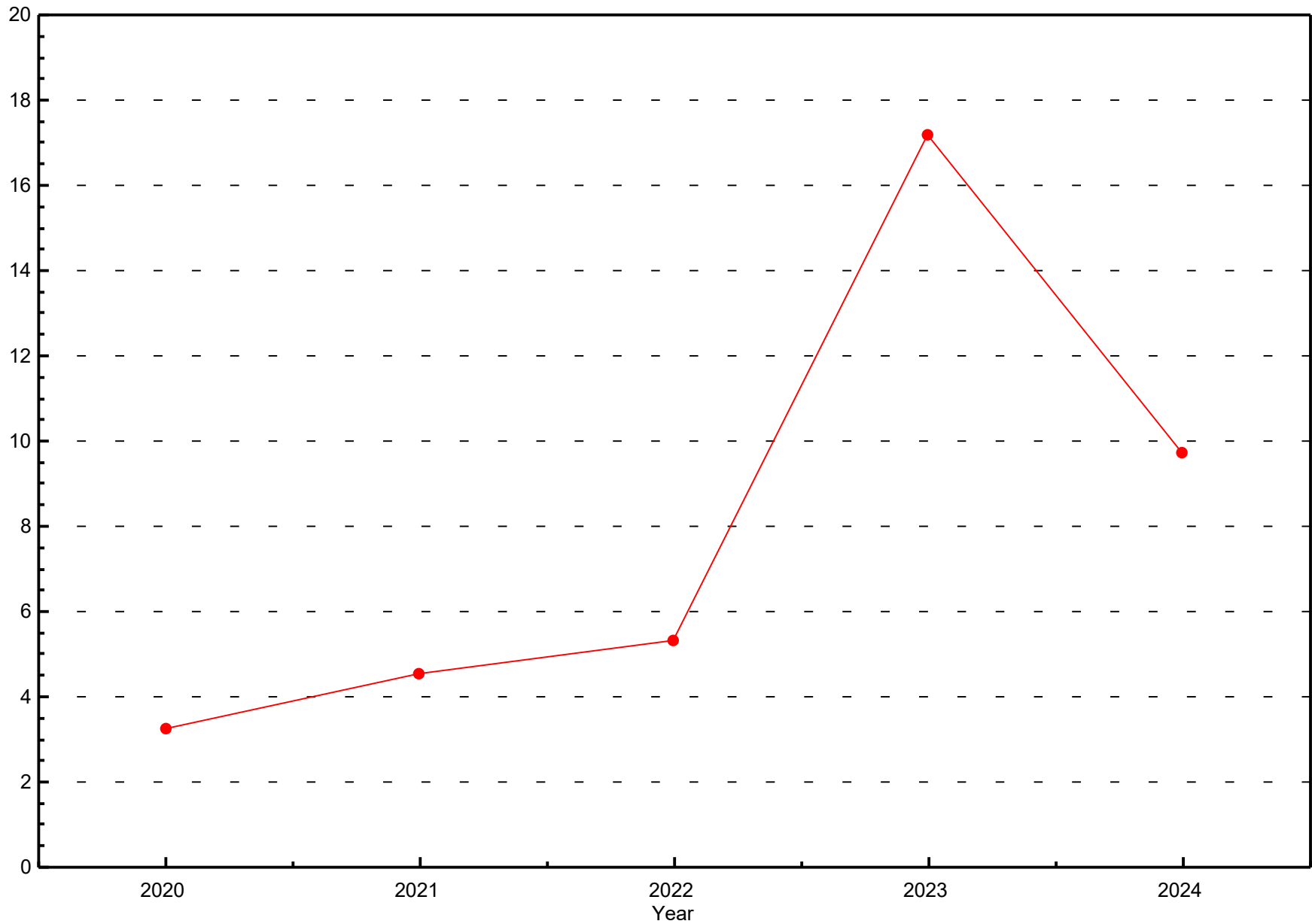
Fort Hills (2020 to 2024)





Yearly Averages

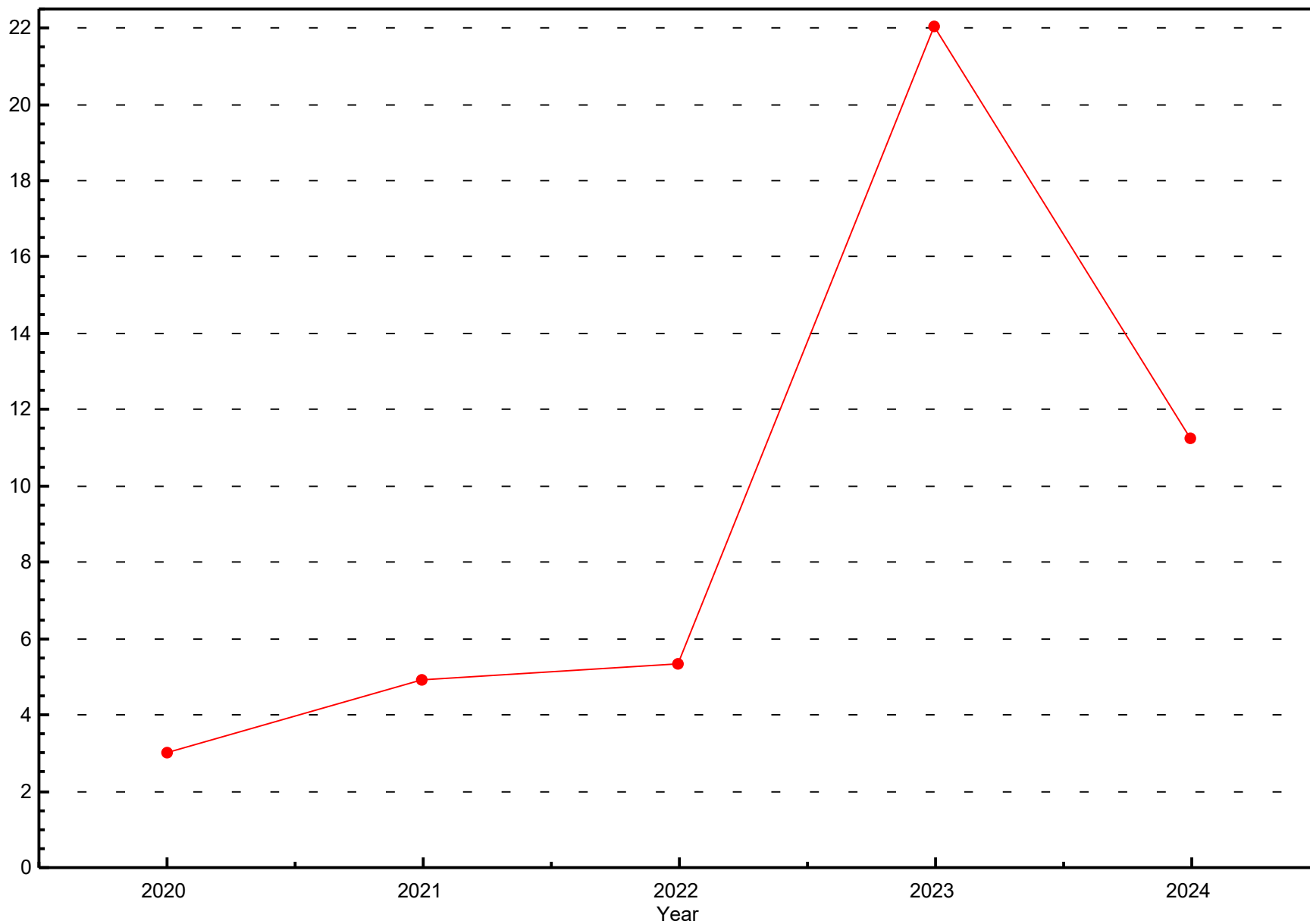
Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Surmont 2 (2020 to 2024)





Yearly Averages

Particulate Matter 2.5 (PM_{2.5}) - $\mu\text{g}/\text{m}^3$
Ells River (2020 to 2024)



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
ANNUAL REPORT

**AMBIENT TEMPERATURE
ANNUAL 2024**

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

March 2025



Wood Buffalo Environmental Association - Bertha Ganter - Fort McKay (AMS01)
Annual Summary for the Year 2024
Ambient Temperature 2 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	-43.1	11.1	-40.0	4.0	-18.3
February	100	696	-30.1	10.1	-24.0	1.1	-10.0
March	100	744	-30.3	13.2	-24.0	3.9	-7.6
April	100	720	-9.7	19.2	-2.3	10.3	5.3
May	100	744	-2.4	28.5	4.5	17.9	10.8
June	100	719	0.4	29.8	3.8	22.0	13.5
July	100	743	5.5	35.3	13.7	25.6	20.6
August	100	744	6.0	31.5	13.6	23.0	17.1
September	100	720	0.4	31.5	6.5	20.5	12.8
October	100	744	-9.6	18.8	-5.4	11.8	3.2
November	100	720	-31.9	13.0	-27.6	6.2	-7.9
December	100	744	-33.2	3.2	-29.8	0.4	-13.0
Annual	100	8782	-43.1	35.3	-40.0	25.6	2.2



Wood Buffalo Environmental Association - Bertha Ganter - Fort McKay (AMS01)
Annual Summary for the Year 2024
Ambient Temperature 10 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	-43.3	11.4	-40.3	4.6	-18.4
February	100	696	-30.2	9.8	-24.0	2.0	-9.9
March	100	744	-30.1	13.7	-24.0	4.2	-7.7
April	100	720	-9.1	18.4	-2.5	10.3	5.3
May	100	744	-1.5	27.6	4.4	17.6	10.8
June	100	719	0.3	28.9	3.6	22.1	13.4
July	100	743	6.1	34.2	13.9	25.7	20.6
August	100	744	7.4	30.9	13.6	23.6	17.2
September	100	720	1.2	30.8	7.0	20.7	13.0
October	100	744	-8.7	19.0	-5.4	12.4	3.4
November	100	720	-31.4	12.8	-27.4	6.6	-7.9
December	100	744	-32.9	3.0	-29.8	0.5	-12.9
Annual	100	8782	-43.3	34.2	-40.3	25.7	2.3



Wood Buffalo Environmental Association - Mildred Lake (AMS02)
Annual Summary for the Year 2024
Ambient Temperature 2 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	-42.2	11.3	-39.2	4.7	-17.6
February	100	696	-26.4	9.2	-24.0	2.8	-9.3
March	100	744	-26.8	13.8	-22.8	4.0	-7.4
April	100	720	-9.2	18.3	-2.5	10.5	5.3
May	100	744	-2.0	27.1	4.6	18.1	10.8
June	100	720	0.5	29.2	3.5	22.4	13.4
July	100	744	7.3	33.7	14.1	25.9	20.9
August	100	744	8.1	31.3	13.7	24.3	17.5
September	100	720	2.5	31.1	7.8	21.2	13.5
October	100	744	-7.9	19.5	-5.0	12.9	3.8
November	100	720	-30.0	13.4	-26.7	7.5	-7.7
December	100	744	-33.4	4.4	-29.9	1.1	-12.4
Annual	100	8784	-42.2	33.7	-39.2	25.9	2.6



Wood Buffalo Environmental Association - Lower Camp Meterological Tower (AMS03)
Annual Summary for the Year 2024
Ambient Temperature 20 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	97	719	-42.2	11.0	-39.1	5.1	-17.1
February	97	673	-26.2	8.9	-23.4	3.5	-8.8
March	93	693	-27.3	15.3	-22.2	4.5	-6.1
April	96	690	-9.0	18.9	-2.0	10.1	5.4
May	100	742	-1.0	27.2	5.3	18.2	11.4
June	100	719	1.0	28.7	3.9	22.7	13.8
July	100	744	8.5	33.3	14.9	26.2	21.2
August	99	737	9.9	31.0	14.2	24.3	18.1
September	98	707	3.6	30.9	8.3	21.4	14.0
October	100	744	-7.0	20.2	-4.5	13.9	4.4
November	94	675	-30.5	13.6	-27.3	7.7	-7.1
December	100	744	-32.7	4.9	-29.8	1.1	-12.2
Annual	98	8587	-42.2	33.3	-39.1	26.2	3.3



Wood Buffalo Environmental Association - Lower Camp Meterological Tower (AMS03)
Annual Summary for the Year 2024
Ambient Temperature 45 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	97	719	-40.9	11.2	-38.7	5.4	-16.9
February	97	674	-26.5	8.9	-23.4	3.9	-8.6
March	100	741	-27.2	15.6	-22.5	4.7	-6.8
April	96	689	-7.3	18.6	-2.3	10.7	5.6
May	100	743	-0.3	26.8	5.2	18.2	11.3
June	100	720	0.9	28.6	3.8	22.6	13.8
July	100	744	8.7	33.3	15.0	26.4	21.4
August	100	744	9.8	30.9	14.2	24.4	18.1
September	100	720	3.9	30.8	8.5	21.4	14.1
October	100	744	-6.9	20.5	-4.6	14.2	4.5
November	100	720	-29.5	13.9	-26.1	8.4	-7.0
December	100	744	-32.3	5.1	-29.4	1.5	-11.9
Annual	99	8702	-40.9	33.3	-38.7	26.4	3.2



Wood Buffalo Environmental Association - Lower Camp Meterological Tower (AMS03)
Annual Summary for the Year 2024
Ambient Temperature 100 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	97	719	-40.6	11.6	-37.5	6.7	-16.7
February	97	674	-27.1	8.8	-23.7	4.4	-8.4
March	100	741	-25.5	15.8	-22.9	4.8	-7.0
April	96	691	-7.4	17.9	-2.7	11.3	5.6
May	100	743	0.9	26.2	4.7	18.0	11.0
June	100	720	0.5	28.0	3.3	22.3	13.6
July	100	743	8.7	32.8	14.9	27.2	21.3
August	100	744	9.3	30.2	13.7	24.5	18.0
September	100	720	4.2	30.1	8.3	22.1	14.1
October	100	744	-7.3	20.6	-5.0	14.7	4.4
November	100	720	-27.0	13.8	-25.2	8.9	-7.1
December	100	744	-30.8	5.1	-28.1	2.2	-11.5
Annual	99	8703	-40.6	32.8	-37.5	27.2	3.2



Wood Buffalo Environmental Association - Lower Camp Meterological Tower (AMS03)
Annual Summary for the Year 2024
Ambient Temperature 163 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	97	719	-38.7	11.5	-36.3	7.5	-16.5
February	97	674	-27.6	8.4	-24.2	4.8	-8.3
March	100	741	-25.3	15.4	-23.4	4.7	-7.2
April	96	691	-8.1	17.2	-3.0	11.6	5.4
May	100	743	0.5	25.6	4.2	18.4	10.7
June	100	720	0.3	27.3	2.8	22.2	13.3
July	100	742	10.2	32.2	14.5	27.2	21.2
August	100	744	9.7	29.6	13.2	24.7	17.9
September	100	720	3.7	29.5	8.1	22.2	14.1
October	100	744	-7.8	20.1	-5.6	14.8	4.2
November	100	720	-26.2	13.4	-24.5	9.0	-7.4
December	100	744	-28.0	4.9	-26.4	2.6	-11.5
Annual	99	8702	-38.7	32.2	-36.3	27.2	3.1



Wood Buffalo Environmental Association - Buffalo Viewpoint (AMS04)
Annual Summary for the Year 2024
Ambient Temperature 2 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	-44.2	11.8	-39.5	5.1	-17.6
February	100	696	-26.8	9.7	-23.4	2.9	-9.1
March	100	744	-25.5	16.0	-22.6	4.6	-7.3
April	100	720	-9.6	18.7	-2.4	10.6	5.4
May	100	744	-1.2	27.2	4.8	17.7	10.8
June	100	720	0.6	28.9	3.6	21.9	13.4
July	100	744	7.4	33.6	14.3	25.9	20.7
August	100	744	7.5	31.1	13.4	23.4	17.3
September	100	720	2.0	30.9	7.6	20.9	13.3
October	100	744	-7.7	19.8	-4.9	13.0	3.7
November	100	720	-28.6	14.0	-26.3	7.6	-7.7
December	100	744	-32.9	4.7	-30.1	1.1	-12.3
Annual	100	8784	-44.2	33.6	-39.5	25.9	2.6



Wood Buffalo Environmental Association - Mannix (AMS05)
Annual Summary for the Year 2024
Ambient Temperature 2 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	99	737	-42.1	10.3	-38.9	4.2	-17.5
February	100	696	-26.9	9.1	-23.4	3.0	-9.3
March	100	744	-25.1	14.0	-22.3	3.8	-7.2
April	100	719	-8.2	19.7	-2.1	11.7	5.6
May	100	744	-0.8	27.9	5.0	18.0	11.3
June	100	717	0.3	29.3	3.4	21.1	13.2
July	100	744	6.9	34.1	13.8	25.4	20.3
August	100	744	6.7	32.0	13.4	22.7	17.1
September	100	720	2.1	31.0	7.0	20.4	13.0
October	100	744	-7.3	20.1	-4.7	12.7	3.5
November	99	714	-27.3	11.9	-25.6	6.1	-7.8
December	100	744	-32.0	3.9	-29.3	0.4	-12.4
Annual	100	8767	-42.1	34.1	-38.9	25.4	2.5



Wood Buffalo Environmental Association - Mannix (AMS05)
Annual Summary for the Year 2024
Ambient Temperature 20 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	99	737	-41.6	11.6	-37.9	5.6	-17.3
February	100	696	-26.8	9.2	-23.6	4.0	-8.8
March	100	744	-24.5	15.3	-22.8	4.5	-7.2
April	100	719	-7.2	17.9	-2.6	11.4	5.6
May	100	744	1.0	26.4	4.7	17.9	11.1
June	100	717	0.2	28.1	3.3	21.8	13.4
July	100	744	9.2	32.5	14.5	26.3	21.0
August	100	744	8.1	30.3	13.5	24.0	17.7
September	100	720	3.1	30.4	7.6	21.3	13.7
October	100	744	-7.1	20.2	-4.9	13.9	4.0
November	99	714	-26.6	13.4	-25.1	7.3	-7.6
December	100	744	-30.5	4.7	-28.1	1.3	-12.0
Annual	100	8767	-41.6	32.5	-37.9	26.3	2.8



Wood Buffalo Environmental Association - Mannix (AMS05)
Annual Summary for the Year 2024
Ambient Temperature 45 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	99	737	-40.3	11.6	-36.9	6.3	-17.2
February	100	696	-27.1	8.9	-23.8	4.3	-8.8
March	100	744	-24.9	15.3	-23.1	4.9	-7.3
April	100	719	-7.6	17.4	-2.9	11.4	5.6
May	100	744	1.0	26.1	4.4	17.7	10.8
June	100	717	0.1	27.5	3.1	21.8	13.2
July	100	744	9.0	32.2	14.5	26.8	21.0
August	100	744	8.6	29.7	13.2	24.1	17.6
September	100	720	2.9	30.0	7.5	21.7	13.8
October	100	744	-7.4	20.3	-5.2	14.1	4.0
November	99	714	-26.5	13.2	-24.9	7.6	-7.7
December	100	744	-29.3	4.7	-27.3	1.8	-11.8
Annual	100	8767	-40.3	32.2	-36.9	26.8	2.8



Wood Buffalo Environmental Association - Mannix (AMS05)
Annual Summary for the Year 2024
Ambient Temperature 75 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	99	737	-38.7	11.5	-36.3	7.2	-17.0
February	100	696	-27.4	8.7	-24.0	4.5	-8.7
March	100	744	-25.3	15.3	-23.4	4.9	-7.4
April	100	719	-7.9	17.1	-3.1	11.6	5.5
May	100	744	0.8	25.8	4.2	18.1	10.7
June	100	717	0.1	27.2	2.8	21.8	13.2
July	100	744	9.0	31.8	14.5	27.0	21.0
August	100	744	9.6	29.4	13.0	24.3	17.7
September	100	720	2.9	29.7	7.5	22.1	13.9
October	100	744	-7.7	20.2	-5.5	14.5	4.1
November	99	714	-26.0	13.1	-24.7	8.1	-7.7
December	100	744	-28.1	4.7	-26.5	2.4	-11.7
Annual	100	8767	-38.7	31.8	-36.3	27.0	2.8



Wood Buffalo Environmental Association - Mannix (AMS05)
Annual Summary for the Year 2024
Ambient Temperature 90 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	99	737	-38.1	11.6	-36.1	7.6	-16.8
February	100	696	-27.4	8.7	-24.0	4.7	-8.5
March	100	744	-25.3	15.3	-23.4	5.0	-7.3
April	100	719	-8.0	17.1	-3.1	11.7	5.6
May	100	744	0.9	25.7	4.2	18.4	10.7
June	100	717	0.1	27.1	2.9	21.9	13.2
July	100	744	9.3	31.8	14.6	27.2	21.2
August	100	744	10.1	29.4	13.0	24.5	17.8
September	100	720	3.1	29.6	7.6	22.3	14.0
October	100	744	-7.6	20.2	-5.4	14.8	4.2
November	99	714	-25.6	13.2	-24.5	8.3	-7.7
December	100	744	-27.6	4.8	-26.1	2.7	-11.5
Annual	100	8767	-38.1	31.8	-36.1	27.2	2.9



Wood Buffalo Environmental Association - Patricia McInnes (AMS06)
Annual Summary for the Year 2024
Ambient Temperature 2 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	-41.9	11.3	-38.7	5.0	-17.1
February	100	696	-28.1	9.0	-23.1	2.8	-9.0
March	100	744	-27.9	16.0	-22.2	4.6	-7.1
April	100	720	-11.0	19.3	-2.5	11.2	5.2
May	100	744	-2.9	27.4	4.8	18.1	10.8
June	100	720	0.8	28.5	3.7	21.7	13.2
July	100	744	5.6	33.9	14.1	26.5	20.5
August	100	744	5.7	31.1	13.7	22.9	17.0
September	100	720	0.2	30.9	7.5	21.3	12.9
October	100	744	-8.7	21.0	-4.7	13.6	3.6
November	100	720	-29.6	14.1	-25.4	8.0	-7.5
December	100	744	-32.9	6.3	-28.8	1.1	-12.1
Annual	100	8784	-41.9	33.9	-38.7	26.5	2.6



Wood Buffalo Environmental Association - Athabasca Valley (AMS07)
Annual Summary for the Year 2024
Ambient Temperature 2 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	742	-42.6	12.3	-39.8	4.7	-17.2
February	100	696	-27.4	9.5	-22.5	2.1	-9.1
March	100	744	-29.1	16.4	-21.2	5.3	-6.7
April	100	720	-9.4	19.7	-1.6	11.3	5.6
May	100	744	-0.8	28.1	5.9	18.7	11.8
June	100	720	1.8	29.6	4.8	21.9	14.0
July	100	744	6.7	34.4	15.6	26.1	21.3
August	100	744	7.2	32.1	14.9	23.3	17.8
September	100	720	1.9	32.1	8.8	21.2	13.5
October	100	744	-7.2	21.3	-3.7	13.7	4.4
November	100	720	-27.7	12.1	-25.3	6.5	-6.8
December	100	744	-34.1	4.2	-31.1	-1.1	-12.8
Annual	100	8782	-42.6	34.4	-39.8	26.1	3.0



Wood Buffalo Environmental Association - Fort Chipewyan (AMS08)
Annual Summary for the Year 2024
Ambient Temperature 2 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	-42.1	7.1	-39.6	3.7	-20.7
February	100	696	-30.3	4.2	-26.0	1.2	-13.3
March	100	744	-30.6	6.7	-26.6	-0.4	-11.8
April	100	720	-9.0	14.3	-5.2	6.9	2.0
May	100	744	0.0	24.6	2.2	16.5	8.8
June	100	720	-0.5	30.0	3.7	23.0	13.3
July	100	744	9.6	31.9	11.9	25.4	20.2
August	100	744	7.8	30.6	12.4	24.2	17.2
September	100	720	0.5	28.3	4.4	18.4	12.1
October	100	744	-9.3	15.7	-7.6	10.4	1.8
November	100	720	-29.9	4.8	-28.2	2.5	-10.2
December	100	744	-32.9	1.5	-30.4	-2.3	-15.5
Annual	100	8784	-42.1	31.9	-39.6	25.4	0.4



Wood Buffalo Environmental Association - Barge Landing (AMS09)
Annual Summary for the Year 2024
Ambient Temperature 2 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	-42.4	11.2	-39.7	4.5	-18.2
February	100	696	-29.6	9.6	-23.8	2.0	-9.7
March	100	744	-29.7	14.3	-23.5	4.2	-7.3
April	100	720	-10.1	19.7	-2.0	10.6	5.4
May	100	744	-2.0	27.9	4.7	17.6	11.0
June	100	720	0.6	30.9	3.8	22.3	13.7
July	100	744	6.0	35.1	13.8	25.7	20.8
August	100	744	6.6	32.4	13.6	23.4	17.3
September	100	720	0.7	31.4	6.7	21.0	13.0
October	100	744	-9.4	19.8	-5.3	12.2	3.3
November	100	720	-31.1	13.2	-27.3	6.4	-7.8
December	100	741	-32.8	3.3	-29.7	0.8	-12.7
Annual	100	8781	-42.4	35.1	-39.7	25.7	2.4



Wood Buffalo Environmental Association - Lower Camp (AMS11)
Annual Summary for the Year 2024
Ambient Temperature 2 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	-42.9	11.2	-39.1	4.1	-17.9
February	100	696	-28.3	8.8	-23.6	2.3	-9.6
March	100	744	-27.1	14.6	-22.4	4.0	-7.1
April	100	720	-9.7	18.5	-2.3	9.8	5.0
May	100	744	-1.5	27.7	5.6	18.1	11.5
June	100	720	1.6	30.2	4.3	23.0	13.9
July	100	744	8.5	34.1	14.8	25.5	21.1
August	100	744	9.5	32.5	14.4	24.2	17.9
September	100	720	3.0	31.6	8.2	21.4	13.8
October	100	744	-6.9	19.8	-4.1	13.3	4.4
November	100	720	-30.3	14.0	-27.4	7.1	-7.0
December	100	744	-33.5	4.8	-29.8	1.0	-12.5
Annual	100	8784	-42.9	34.1	-39.1	25.5	2.8



Wood Buffalo Environmental Association - Fort McKay South (AMS13)
Annual Summary for the Year 2024
Ambient Temperature 2 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	-45.0	11.8	-41.6	3.4	-18.8
February	100	696	-33.9	10.3	-25.0	0.7	-10.7
March	100	744	-31.2	14.0	-24.6	3.5	-8.3
April	100	720	-12.4	19.1	-2.4	10.0	4.8
May	100	744	-4.8	28.0	4.6	17.4	10.3
June	100	720	0.5	30.5	3.6	22.1	13.2
July	100	744	3.4	34.8	13.1	24.2	20.0
August	100	744	3.8	32.2	13.2	22.2	16.5
September	100	720	-2.0	31.6	6.1	20.2	12.3
October	100	744	-11.3	19.5	-5.9	11.2	2.8
November	100	720	-33.3	12.8	-28.9	5.4	-8.3
December	100	744	-34.1	3.4	-30.7	-0.4	-13.4
Annual	100	8784	-45.0	34.8	-41.6	24.2	1.7



Wood Buffalo Environmental Association - Anzac (AMS14)
Annual Summary for the Year 2024
Ambient Temperature 2 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	-42.6	12.3	-38.4	5.4	-17.0
February	100	696	-28.5	7.7	-25.4	2.1	-9.2
March	100	744	-30.0	13.3	-23.0	4.1	-8.0
April	100	720	-12.5	17.7	-3.9	9.7	4.0
May	100	744	-4.4	25.8	3.4	17.1	9.5
June	100	720	-0.1	26.9	2.4	19.9	12.0
July	100	744	3.9	34.2	12.8	26.5	19.6
August	100	744	4.2	29.6	12.1	21.6	16.0
September	97	697	-0.6	31.2	6.9	20.9	12.4
October	100	744	-9.6	19.8	-5.5	14.2	3.1
November	100	720	-28.9	14.6	-25.0	9.1	-7.8
December	100	744	-32.1	5.9	-27.7	2.1	-12.1
Annual	100	8761	-42.6	34.2	-38.4	26.5	1.9



Wood Buffalo Environmental Association - Wapasu (AMS17)
Annual Summary for the Year 2024
Ambient Temperature 2 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	-42.9	8.7	-38.8	5.8	-18.0
February	100	696	-36.6	7.2	-27.8	2.8	-10.6
March	100	744	-34.3	11.9	-26.2	3.6	-8.7
April	100	720	-16.0	17.2	-5.5	10.1	3.7
May	100	744	-3.4	25.6	4.0	16.9	9.5
June	100	720	-0.2	28.0	1.7	21.6	11.9
July	100	744	1.2	31.9	11.1	25.1	19.5
August	100	744	3.0	30.2	11.7	23.9	16.1
September	100	720	-2.7	29.3	4.5	20.8	12.1
October	100	744	-10.2	19.4	-6.3	13.3	2.2
November	100	720	-29.0	11.6	-25.7	6.7	-8.7
December	100	744	-30.9	2.7	-26.3	0.7	-12.4
Annual	100	8784	-42.9	31.9	-38.8	25.1	1.4



Wood Buffalo Environmental Association - Stony Mountain (AMS18)
Annual Summary for the Year 2024
Ambient Temperature 2 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	-40.4	12.1	-37.2	6.4	-15.5
February	100	696	-27.1	10.3	-23.6	4.3	-7.4
March	100	744	-26.1	11.1	-21.9	4.6	-7.5
April	100	720	-9.5	19.4	-4.1	11.2	4.8
May	100	744	-1.1	25.4	2.1	18.6	9.2
June	100	720	1.1	25.3	4.2	19.2	12.0
July	100	744	9.6	34.4	11.7	26.1	19.6
August	100	744	8.7	29.0	12.7	21.5	16.3
September	100	720	1.4	31.0	5.7	22.3	13.0
October	100	744	-8.0	20.6	-5.5	13.9	3.3
November	100	720	-24.6	13.3	-22.6	6.7	-7.5
December	100	744	-29.3	5.8	-26.8	3.8	-11.1
Annual	100	8784	-40.4	34.4	-37.2	26.1	2.5



Wood Buffalo Environmental Association - Firebag (AMS19)
Annual Summary for the Year 2024
Ambient Temperature 2 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	-40.8	8.0	-38.6	5.5	-18.1
February	100	696	-32.2	5.9	-27.5	2.6	-10.6
March	99	736	-30.4	10.3	-25.7	2.6	-9.3
April	100	720	-11.5	15.8	-6.2	9.5	3.3
May	100	744	-1.9	24.6	3.8	16.8	9.0
June	100	720	-0.8	26.5	1.2	21.1	11.6
July	100	744	4.6	31.0	11.4	24.9	19.3
August	100	744	5.7	28.8	11.1	22.9	16.0
September	100	720	0.5	28.1	5.1	20.5	12.1
October	100	744	-11.3	18.1	-7.1	12.9	2.0
November	100	720	-27.7	10.4	-25.4	6.1	-9.0
December	100	744	-29.8	2.1	-26.2	0.3	-12.8
Annual	100	8776	-40.8	31.0	-38.6	24.9	1.2



Wood Buffalo Environmental Association - MacKay River (AMS20)
Annual Summary for the Year 2024
Ambient Temperature 2 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	-43.6	10.9	-39.3	5.2	-17.8
February	100	696	-29.8	8.1	-24.5	1.9	-9.8
March	100	744	-32.1	14.8	-24.6	5.0	-8.0
April	100	720	-15.3	18.9	-4.1	9.9	4.1
May	100	744	-5.9	26.6	2.9	16.5	9.2
June	100	720	-1.0	27.4	3.4	20.9	12.0
July	100	744	3.3	33.9	12.9	25.9	19.4
August	100	744	3.2	29.8	12.6	21.5	15.7
September	100	720	-2.3	30.3	5.4	19.3	11.5
October	100	744	-10.6	19.9	-6.1	12.6	2.1
November	100	720	-34.0	12.9	-28.0	7.6	-8.7
December	100	744	-35.2	4.6	-30.0	1.3	-12.6
Annual	100	8784	-43.6	33.9	-39.3	25.9	1.5



Wood Buffalo Environmental Association - Conklin (AMS21)
Annual Summary for the Year 2024
Ambient Temperature 2 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	-44.5	12.3	-39.5	4.9	-16.0
February	100	696	-30.2	10.9	-23.3	3.2	-8.3
March	100	744	-35.2	12.5	-24.5	3.4	-8.1
April	100	720	-14.0	19.2	-3.3	9.4	3.9
May	100	744	-6.1	26.1	1.8	17.4	9.0
June	100	720	-0.5	25.9	4.8	18.0	12.1
July	100	744	4.6	35.0	12.7	25.7	19.1
August	100	744	0.7	29.2	12.3	19.6	15.7
September	100	720	-1.5	31.7	6.2	20.3	12.1
October	100	744	-10.0	21.2	-5.0	12.7	2.7
November	100	720	-26.7	12.5	-22.3	6.5	-7.3
December	100	744	-35.0	6.3	-29.5	3.7	-11.4
Annual	100	8784	-44.5	35.0	-39.5	25.7	2.0



Wood Buffalo Environmental Association - Janvier (AMS22)
Annual Summary for the Year 2024
Ambient Temperature 2 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	-43.8	12.4	-38.7	5.7	-16.0
February	100	696	-30.0	10.1	-23.7	3.4	-8.1
March	100	744	-30.8	12.7	-21.5	4.6	-7.3
April	100	720	-9.6	18.7	-2.8	10.0	4.9
May	100	744	-1.8	26.8	3.7	17.8	9.9
June	100	720	0.8	26.4	4.6	19.2	12.4
July	100	744	7.3	35.4	14.0	25.6	19.4
August	100	744	5.0	29.3	12.6	20.6	16.2
September	100	720	1.0	31.5	7.4	21.0	12.7
October	100	744	-8.6	21.6	-5.4	14.3	3.4
November	100	720	-26.0	12.1	-22.5	6.8	-7.0
December	100	744	-34.0	7.2	-29.5	2.2	-11.6
Annual	100	8784	-43.8	35.4	-38.7	25.6	2.4



Wood Buffalo Environmental Association - Fort Hills (AMS23)
Annual Summary for the Year 2024
Ambient Temperature 2 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	-43.0	8.9	-39.3	4.4	-18.4
February	100	696	-28.2	8.1	-23.5	1.2	-9.9
March	100	744	-29.0	12.0	-23.8	3.5	-7.7
April	100	720	-7.6	18.3	-2.4	10.9	5.2
May	99	740	1.3	26.8	4.0	17.3	10.9
June	100	720	1.2	28.2	4.4	21.8	13.7
July	100	744	8.4	32.8	14.4	25.5	20.9
August	100	744	9.1	30.4	13.7	23.3	17.7
September	100	717	3.2	30.3	8.1	20.8	13.5
October	100	743	-7.8	18.5	-5.1	12.5	3.5
November	100	719	-31.1	12.0	-26.9	6.1	-7.9
December	100	744	-32.0	3.0	-28.8	0.5	-12.9
Annual	100	8775	-43.0	32.8	-39.3	25.5	2.4



Wood Buffalo Environmental Association - Waskow ohci Pimatisiwin (AMS25)

Annual Summary for the Year 2024

Ambient Temperature 2 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	-44.0	11.1	-40.7	3.6	-18.6
February	100	696	-31.5	10.1	-24.1	0.6	-10.2
March	100	744	-30.2	12.2	-24.0	3.8	-7.8
April	100	720	-10.2	19.1	-2.2	10.2	5.1
May	95	710	-2.8	28.0	4.6	17.4	10.6
June	99	716	0.4	29.4	3.9	21.6	13.2
July	100	742	5.6	34.4	13.5	24.3	20.2
August	100	744	6.0	31.2	13.4	22.1	16.7
September	100	720	-0.1	31.0	6.4	20.2	12.5
October	100	744	-9.8	18.7	-5.4	11.5	3.0
November	100	720	-31.9	12.6	-27.8	5.7	-8.1
December	100	744	-33.5	2.8	-30.3	0.0	-13.3
Annual	100	8744	-44.0	34.4	-40.7	24.3	1.9



Wood Buffalo Environmental Association - Christina Lake (AMS26)
Annual Summary for the Year 2024
Ambient Temperature 2 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	-41.2	12.0	-37.0	6.4	-14.9
February	100	696	-27.0	10.8	-22.9	4.0	-7.4
March	100	744	-32.1	11.4	-22.5	4.5	-7.2
April	100	720	-9.3	19.1	-3.3	10.5	4.7
May	100	744	-2.7	25.4	2.9	17.8	9.6
June	100	720	2.9	25.3	5.2	19.7	12.6
July	100	744	5.7	34.4	12.9	27.2	20.1
August	100	744	5.0	28.5	13.5	22.3	16.9
September	100	720	0.5	31.7	7.1	21.6	13.2
October	100	744	-7.3	21.2	-4.7	13.5	3.7
November	100	131	-7.5	5.3	-4.3	-0.2	-2.1
Annual	100	7451	-41.2	34.4	-37.0	27.2	4.5



Wood Buffalo Environmental Association - Jackfish 2/3 (AMS27)
Annual Summary for the Year 2024
Ambient Temperature 2 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	741	-41.0	10.9	-37.8	5.7	-15.6
February	100	696	-27.1	9.8	-23.8	3.7	-7.6
March	100	744	-27.8	10.8	-22.5	3.9	-7.8
April	100	718	-10.1	18.6	-4.1	11.0	4.4
May	100	744	-2.3	24.8	2.2	17.5	8.9
June	100	720	1.4	24.5	4.1	18.7	11.8
July	100	742	9.2	33.6	11.7	26.2	19.4
August	100	743	7.0	28.0	12.6	20.9	16.1
September	100	720	1.1	30.2	5.4	22.2	12.6
October	100	743	-7.8	20.3	-5.4	13.2	2.9
November	100	717	-23.8	9.2	-22.3	5.9	-7.6
December	100	741	-29.2	4.5	-26.4	2.8	-11.2
Annual	100	8769	-41.0	33.6	-37.8	26.2	2.2



Wood Buffalo Environmental Association - Surmont 2 (AMS29)
Annual Summary for the Year 2024
Ambient Temperature 2 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	97	725	-42.9	8.8	-39.6	5.3	-17.2
February	100	696	-30.2	7.6	-25.2	2.2	-8.8
March	100	744	-30.4	13.2	-22.6	4.4	-8.0
April	100	720	-13.5	17.7	-3.6	8.5	3.9
May	100	744	-3.3	26.1	3.2	16.7	9.1
June	100	720	-0.6	26.4	3.1	19.9	12.0
July	100	744	4.8	35.2	13.2	26.9	19.4
August	100	744	4.6	29.3	12.3	21.2	15.8
September	100	720	-1.3	31.2	6.9	20.7	12.4
October	100	744	-8.9	19.9	-5.5	13.8	2.9
November	100	720	-28.4	13.7	-24.3	8.5	-7.8
December	100	742	-32.4	6.6	-27.4	2.8	-11.7
Annual	100	8763	-42.9	35.2	-39.6	26.9	1.9



Wood Buffalo Environmental Association - Ells River (AMS30)
Annual Summary for the Year 2024
Ambient Temperature 2 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	-44.7	10.6	-40.9	4.1	-18.6
February	100	696	-32.2	9.8	-24.3	0.8	-10.1
March	100	744	-31.9	14.3	-25.0	3.9	-8.1
April	100	720	-10.6	18.5	-2.5	10.3	5.1
May	100	744	-2.3	27.4	4.3	17.4	10.5
June	100	720	0.5	29.3	4.3	21.6	13.4
July	100	744	5.9	35.0	13.6	25.9	20.6
August	100	744	5.8	31.3	13.4	22.6	17.1
September	100	720	0.8	31.1	7.1	20.6	12.8
October	100	744	-9.8	18.6	-5.6	12.1	3.1
November	100	719	-33.0	13.2	-28.1	5.8	-8.2
December	100	744	-34.0	3.1	-30.1	0.4	-13.1
Annual	100	8783	-44.7	35.0	-40.9	25.9	2.1



Wood Buffalo Environmental Association - Monday Creek (AMS33)
Annual Summary for the Year 2024
Ambient Temperature 2 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
November	100	565	-25.7	11.7	-21.7	7.0	-8.3
December	100	744	-32.7	6.5	-27.6	4.2	-10.8
Annual	100	1309	-32.7	11.7	-27.6	7.0	-9.5



Wood Buffalo Environmental Association - Leismer (AMS501)
Annual Summary for the Year 2024
Ambient Temperature 2 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	743	-42.7	10.7	-37.7	4.9	-16.1
February	99	692	-27.8	8.8	-24.1	3.6	-8.0
March	100	744	-27.6	12.3	-22.3	4.0	-7.7
Annual	100	2179	-42.7	12.3	-37.7	4.9	-10.6



Wood Buffalo Environmental Association - Sawbones Bay (AMS505)
Annual Summary for the Year 2024
Ambient Temperature 2 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	-42.8	11.4	-38.8	5.4	-15.9
February	100	696	-27.0	10.8	-23.9	4.2	-8.0
March	100	744	-30.0	11.7	-21.6	3.9	-7.7
April	100	719	-11.4	18.6	-4.5	10.7	4.3
May	100	744	-2.2	25.6	2.1	17.8	9.0
June	93	666	1.7	26.6	4.0	18.7	11.6
Annual	99	4313	-42.8	26.6	-38.8	18.7	-1.1



Wood Buffalo Environmental Association - Jackfish 1 (AMS506)
Annual Summary for the Year 2024
Ambient Temperature 2 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
July	100	741	7.6	35.9	12.2	26.7	19.6
August	100	744	6.0	29.2	13.0	21.7	16.5
September	100	720	0.7	32.1	5.6	22.5	12.8
October	100	744	-7.6	21.6	-5.0	13.1	3.2
November	100	720	-24.4	10.0	-22.0	5.9	-7.2
December	100	743	-31.4	4.4	-26.7	2.4	-11.0
Annual	100	4412	-31.4	35.9	-26.7	26.7	5.6



Wood Buffalo Environmental Association - Kirby South (AMS507)
Annual Summary for the Year 2024
Ambient Temperature 2 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	-40.1	10.3	-36.8	5.6	-15.4
February	100	696	-26.2	10.5	-23.3	4.0	-7.4
March	100	744	-28.3	9.8	-22.8	3.0	-7.9
April	99	712	-9.3	18.5	-4.3	11.7	4.4
May	100	744	-2.5	23.8	1.9	16.9	8.6
June	100	615	-0.6	23.7	4.4	18.3	10.8
Annual	100	4255	-40.1	23.8	-36.8	18.3	-1.2



Wood Buffalo Environmental Association - Kirby North (AMS508)
Annual Summary for the Year 2024
Ambient Temperature 2 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
July	100	639	6.9	33.2	11.6	26.3	19.4
August	97	721	5.4	27.9	12.4	21.6	16.2
September	100	720	0.0	29.8	5.5	22.3	12.5
October	100	744	-7.0	19.6	-5.0	13.2	3.0
November	100	720	-25.2	9.5	-22.2	5.7	-7.5
December	99	734	-29.6	4.2	-26.5	1.7	-11.2
Annual	99	4278	-29.6	33.2	-26.5	26.3	5.4



Wood Buffalo Environmental Association - Hangingstone Expansion (AMS512)

Annual Summary for the Year 2024

Ambient Temperature 2 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
July	99	734	7.2	33.6	12.3	25.4	19.3
August	100	744	6.1	28.5	12.2	22.6	16.1
September	100	720	0.7	29.5	5.3	21.4	12.5
October	97	724	-7.4	19.7	-5.6	14.3	3.0
November	100	720	-31.7	13.8	-26.7	9.1	-7.9
December	100	744	-31.3	5.8	-27.5	3.8	-10.4
Annual	99	4386	-31.7	33.6	-27.5	25.4	5.4



Wood Buffalo Environmental Association - Blackgold (AMS511)
Annual Summary for the Year 2024
Ambient Temperature 2 m (°C) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	-43.0	11.7	-38.5	6.1	-15.4
February	100	696	-27.5	10.3	-23.3	3.4	-7.9
March	100	744	-33.5	11.5	-22.8	3.7	-7.7
Annual	100	2184	-43.0	11.7	-38.5	6.1	-10.3

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
ANNUAL REPORT

**RELATIVE HUMIDITY
ANNUAL 2024**

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

March 2025



Wood Buffalo Environmental Association - Bertha Ganter - Fort McKay (AMS01)
Annual Summary for the Year 2024
Relative Humidity 2 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	45	97	63	91	75
February	100	696	29	96	55	90	71
March	100	744	23	90	45	78	60
April	100	720	8	98	22	89	55
May	100	744	16	98	35	96	62
June	100	719	21	98	41	91	66
July	100	743	19	99	50	91	66
August	100	744	22	100	49	93	70
September	100	720	25	99	59	88	74
October	100	744	29	99	55	87	72
November	100	720	41	98	70	94	82
December	100	744	64	97	70	95	82
Annual	100	8782	8	100	22	96	70



Wood Buffalo Environmental Association - Mildred Lake (AMS02)
Annual Summary for the Year 2024
Relative Humidity 2 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	41	99	61	95	77
February	100	696	32	98	53	95	72
March	100	744	22	92	44	81	61
April	100	720	11	100	25	92	55
May	100	744	15	100	35	99	62
June	100	720	18	100	40	94	66
July	100	744	22	100	50	92	64
August	100	744	23	100	41	95	67
September	100	720	24	100	55	90	71
October	100	744	29	100	50	89	71
November	100	720	38	99	68	95	84
December	100	744	66	99	73	93	83
Annual	100	8784	11	100	25	99	69



Wood Buffalo Environmental Association - Lower Camp Meterological Tower (AMS03)
Annual Summary for the Year 2024
Relative Humidity 20 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	97	719	40	96	59	93	76
February	97	674	31	98	50	92	71
March	93	693	23	90	43	77	58
April	96	690	10	99	24	89	56
May	100	743	14	99	34	96	60
June	100	720	18	99	39	91	64
July	100	744	21	99	47	89	64
August	99	737	20	99	42	91	65
September	98	707	23	99	53	91	69
October	100	744	27	98	50	86	68
November	94	675	39	99	65	91	80
December	100	744	62	97	69	91	81
Annual	98	8590	10	99	24	96	68



Wood Buffalo Environmental Association - Lower Camp Meterological Tower (AMS03)
Annual Summary for the Year 2024
Relative Humidity 45 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	97	719	40	97	58	95	76
February	97	674	30	99	49	94	71
March	100	741	22	90	43	78	59
April	96	689	10	100	22	90	54
May	100	743	14	98	31	95	59
June	100	720	17	98	36	90	62
July	100	744	20	98	45	88	61
August	100	744	20	99	41	91	63
September	100	720	22	99	51	90	67
October	100	744	26	98	49	86	66
November	100	720	35	97	62	89	79
December	100	744	61	96	68	90	80
Annual	99	8702	10	100	22	95	67



Wood Buffalo Environmental Association - Lower Camp Meteorological Tower (AMS03)
Annual Summary for the Year 2024
Relative Humidity 100 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	97	719	36	94	54	92	73
February	97	674	27	95	43	92	67
March	100	741	20	88	39	77	56
April	96	691	9	97	18	89	51
May	100	743	15	97	29	95	57
June	100	720	17	97	31	89	60
July	100	743	21	99	39	89	58
August	100	744	21	100	38	91	62
September	100	720	22	100	50	90	65
October	100	744	26	99	45	88	66
November	100	720	35	99	60	90	81
December	100	744	60	98	69	91	80
Annual	99	8703	9	100	18	95	65



Wood Buffalo Environmental Association - Lower Camp Meteorological Tower (AMS03)
Annual Summary for the Year 2024
Relative Humidity 163 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	97	719	37	96	54	93	74
February	97	674	28	97	40	95	68
March	100	741	21	92	34	80	57
April	96	691	9	99	17	93	52
May	100	743	16	100	29	98	59
June	100	720	19	100	30	92	61
July	100	743	23	98	38	88	58
August	100	744	20	99	34	91	59
September	100	720	22	99	47	90	62
October	100	744	26	98	43	89	64
November	100	720	35	98	57	90	80
December	100	744	51	98	63	90	79
Annual	99	8703	9	100	17	98	64



Wood Buffalo Environmental Association - Buffalo Viewpoint (AMS04)
Annual Summary for the Year 2024
Relative Humidity 2 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	38	96	57	93	76
February	100	696	28	97	47	94	71
March	100	744	22	91	43	81	60
April	100	720	9	98	20	92	55
May	100	744	18	99	35	98	62
June	100	720	19	98	41	94	66
July	100	744	21	98	50	91	65
August	100	744	23	99	43	93	68
September	100	720	25	98	55	90	71
October	100	744	28	98	50	94	70
November	100	720	35	98	64	94	83
December	100	744	64	97	73	91	82
Annual	100	8784	9	99	20	98	69



Wood Buffalo Environmental Association - Mannix (AMS05)
Annual Summary for the Year 2024
Relative Humidity 2 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	99	737	42	96	62	93	77
February	100	696	33	96	54	93	72
March	100	744	23	91	43	78	60
April	100	719	9	98	24	90	54
May	100	744	16	98	33	97	60
June	100	717	22	98	43	94	68
July	100	744	23	98	53	90	68
August	100	744	23	98	49	92	69
September	100	720	27	98	58	94	73
October	100	744	29	98	51	89	71
November	99	714	39	97	71	95	83
December	100	744	65	96	69	93	82
Annual	100	8767	9	98	24	97	70



Wood Buffalo Environmental Association - Mannix (AMS05)
Annual Summary for the Year 2024
Relative Humidity 20 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	99	737	37	98	57	94	76
February	100	696	28	98	44	95	69
March	100	744	20	92	40	80	58
April	100	719	10	99	18	92	53
May	100	744	16	99	30	97	59
June	100	717	19	99	35	92	64
July	100	744	20	100	44	89	62
August	98	728	22	100	40	92	63
September	94	675	23	99	53	79	66
October	95	704	28	99	47	82	66
November	91	655	36	100	63	90	81
December	96	712	62	99	68	93	81
Annual	98	8575	10	100	18	97	66



Wood Buffalo Environmental Association - Mannix (AMS05)
Annual Summary for the Year 2024
Relative Humidity 45 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	99	737	36	97	55	93	76
February	100	696	27	97	42	95	69
March	100	744	20	93	40	81	58
April	100	719	9	99	17	92	52
May	100	744	16	98	29	96	58
June	100	717	18	99	33	91	62
July	100	744	20	98	39	88	59
August	100	744	21	99	37	91	62
September	100	720	22	99	50	92	66
October	100	744	27	99	46	90	66
November	99	714	35	99	60	92	82
December	100	744	61	98	69	91	81
Annual	100	8767	9	99	17	96	66



Wood Buffalo Environmental Association - Mannix (AMS05)
Annual Summary for the Year 2024
Relative Humidity 75 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	99	737	36	100	54	98	77
February	100	696	27	100	41	99	70
March	100	744	20	100	38	83	59
April	90	650	9	100	16	79	48
May	87	645	17	97	29	77	53
June	85	614	18	100	31	74	57
July	96	712	20	98	36	78	57
August	93	691	22	99	36	82	59
September	94	679	23	99	49	80	63
October	92	682	27	98	45	86	63
November	87	624	36	100	60	95	83
December	93	695	57	100	64	97	82
Annual	93	8169	9	100	16	99	64



Wood Buffalo Environmental Association - Mannix (AMS05)
Annual Summary for the Year 2024
Relative Humidity 90 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	99	737	36	99	53	94	76
February	100	696	27	99	39	97	68
March	100	744	20	98	37	81	58
April	99	713	9	100	15	97	51
May	94	703	16	100	28	88	56
June	94	680	18	100	30	88	59
July	97	720	20	100	36	85	56
August	97	724	22	100	35	94	60
September	97	699	22	99	48	79	63
October	96	712	27	100	44	86	64
November	96	688	36	100	59	94	82
December	99	733	55	100	63	93	81
Annual	97	8549	9	100	15	97	65



Wood Buffalo Environmental Association - Patricia McInnes (AMS06)
Annual Summary for the Year 2024
Relative Humidity 2 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	38	96	60	93	76
February	100	696	31	97	50	95	71
March	100	744	22	91	40	80	60
April	100	720	10	98	22	90	55
May	100	744	17	98	33	95	60
June	100	720	19	98	39	91	65
July	100	744	21	98	46	88	63
August	100	744	21	99	44	90	66
September	100	720	26	99	53	93	71
October	100	744	29	99	52	91	70
November	100	720	47	98	66	93	82
December	100	744	55	98	71	91	82
Annual	100	8784	10	99	22	95	68



Wood Buffalo Environmental Association - Athabasca Valley (AMS07)
Annual Summary for the Year 2024
Relative Humidity 2 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	742	36	93	59	90	72
February	100	696	30	95	52	91	69
March	100	744	23	89	41	76	57
April	100	720	9	97	30	86	55
May	100	744	18	96	32	92	58
June	100	720	19	97	43	87	65
July	99	739	19	100	50	86	63
August	97	719	19	100	51	89	66
September	97	701	24	100	52	92	72
October	100	744	28	100	49	89	68
November	100	720	48	98	66	91	78
December	100	744	57	94	65	89	78
Annual	99	8733	9	100	30	92	67



Wood Buffalo Environmental Association - Fort Chipewyan (AMS08)
Annual Summary for the Year 2024
Relative Humidity 2 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	60	99	68	96	79
February	100	696	37	94	60	88	75
March	100	744	38	92	47	83	65
April	100	720	18	97	35	90	65
May	100	744	18	99	36	93	65
June	100	720	20	98	42	90	63
July	100	744	37	100	53	98	70
August	100	744	29	100	49	88	68
September	100	720	37	100	61	90	77
October	100	744	35	99	56	95	76
November	100	720	66	98	74	95	85
December	100	744	69	98	73	96	82
Annual	100	8784	18	100	35	98	72



Wood Buffalo Environmental Association - Barge Landing (AMS09)
Annual Summary for the Year 2024
Relative Humidity 2 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	45	97	66	93	78
February	100	696	29	96	55	91	72
March	100	744	18	91	45	80	61
April	100	720	9	98	22	90	56
May	100	744	16	99	37	97	63
June	100	720	19	99	39	94	67
July	100	744	20	99	51	92	67
August	100	744	22	100	47	95	70
September	100	720	26	100	60	90	74
October	100	744	30	100	56	91	73
November	100	720	43	100	71	96	84
December	100	741	58	99	71	96	84
Annual	100	8781	9	100	22	97	71



Wood Buffalo Environmental Association - Lower Camp (AMS11)
Annual Summary for the Year 2024
Relative Humidity 2 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	44	97	65	93	76
February	100	696	33	98	59	93	74
March	100	744	25	90	47	78	62
April	100	720	9	99	30	91	60
May	100	741	18	100	38	98	64
June	99	710	21	100	46	93	69
July	97	720	21	100	52	93	69
August	95	708	21	100	49	94	70
September	95	687	24	100	57	92	74
October	100	744	29	100	55	89	72
November	100	720	40	99	70	93	83
December	100	744	63	98	73	92	83
Annual	99	8678	9	100	30	98	71



Wood Buffalo Environmental Association - Fort McKay South (AMS13)
Annual Summary for the Year 2024
Relative Humidity 2 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	42	98	66	93	78
February	100	696	29	97	57	92	73
March	100	744	25	93	47	79	63
April	100	720	10	98	28	90	58
May	100	744	16	99	36	96	64
June	100	720	19	99	42	95	68
July	100	744	22	99	51	92	69
August	100	744	22	100	51	95	72
September	100	720	25	100	61	90	76
October	100	744	30	100	54	91	74
November	99	716	41	100	73	95	84
December	100	744	66	100	73	97	84
Annual	100	8780	10	100	28	97	72



Wood Buffalo Environmental Association - Anzac (AMS14)
Annual Summary for the Year 2024
Relative Humidity 2 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	36	96	54	93	74
February	100	696	25	98	43	97	71
March	100	744	20	90	40	83	59
April	100	720	11	100	22	94	57
May	100	744	17	100	33	98	64
June	100	720	20	100	40	96	69
July	100	744	26	100	51	91	66
August	97	718	21	100	47	93	69
September	84	607	21	100	55	90	70
October	100	744	31	100	51	94	72
November	100	720	39	100	60	96	83
December	100	744	46	99	64	94	83
Annual	98	8645	11	100	22	98	70



Wood Buffalo Environmental Association - Wapasu (AMS17)
Annual Summary for the Year 2024
Relative Humidity 2 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	43	98	60	95	79
February	100	696	34	99	52	96	74
March	100	744	18	94	38	82	61
April	100	717	11	100	23	97	60
May	96	716	18	100	33	95	62
June	98	703	19	100	35	96	68
July	96	715	21	100	48	90	63
August	96	711	21	100	37	90	67
September	97	698	26	100	52	91	72
October	98	727	32	100	49	97	76
November	99	712	47	100	70	98	88
December	99	739	66	100	73	99	86
Annual	98	8622	11	100	23	99	71



Wood Buffalo Environmental Association - Stony Mountain (AMS18)
Annual Summary for the Year 2024
Relative Humidity 2 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	32	96	54	90	76
February	100	696	21	97	34	92	67
March	100	744	22	95	38	84	61
April	100	719	11	100	17	97	53
May	96	713	15	100	29	99	66
June	94	679	24	100	41	96	67
July	99	735	25	100	49	95	65
August	93	695	22	100	47	90	69
September	93	669	25	100	52	89	68
October	93	691	31	100	53	95	71
November	99	713	43	100	67	97	81
December	100	744	56	99	70	95	83
Annual	97	8542	11	100	17	99	69



Wood Buffalo Environmental Association - Firebag (AMS19)
Annual Summary for the Year 2024
Relative Humidity 2 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	47	96	63	92	77
February	100	696	36	96	52	90	73
March	99	736	18	96	39	82	62
April	100	720	11	98	22	94	60
May	100	744	18	98	32	96	62
June	100	720	19	98	33	97	67
July	100	744	22	98	47	94	63
August	100	744	23	98	39	97	66
September	100	720	29	98	51	96	70
October	100	744	31	98	50	96	74
November	100	720	48	98	69	94	86
December	100	744	64	98	70	96	83
Annual	100	8776	11	98	22	97	70



Wood Buffalo Environmental Association - MacKay River (AMS20)
Annual Summary for the Year 2024
Relative Humidity 2 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	38	99	62	94	78
February	100	696	23	99	49	97	72
March	100	744	23	96	42	83	63
April	100	720	10	100	26	97	57
May	90	671	17	100	37	96	63
June	91	652	19	100	37	92	66
July	100	744	22	100	49	95	65
August	100	744	22	100	44	94	69
September	100	720	24	100	58	94	74
October	100	744	25	100	54	93	75
November	100	720	38	99	66	93	84
December	100	744	69	99	72	94	85
Annual	98	8643	10	100	26	97	71



Wood Buffalo Environmental Association - Conklin (AMS21)
Annual Summary for the Year 2024
Relative Humidity 2 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	32	95	61	89	76
February	100	696	21	95	45	91	70
March	100	744	23	96	48	83	63
April	100	720	10	99	38	95	59
May	100	744	14	99	32	96	69
June	100	720	23	99	47	94	69
July	100	744	24	99	51	91	69
August	100	744	20	100	56	96	73
September	100	720	23	100	60	100	76
October	100	744	30	100	60	98	77
November	100	720	46	98	67	95	81
December	100	744	57	98	73	91	82
Annual	100	8784	10	100	32	100	72



Wood Buffalo Environmental Association - Janvier (AMS22)
Annual Summary for the Year 2024
Relative Humidity 2 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	32	98	59	94	77
February	100	696	20	97	40	90	70
March	100	744	21	92	44	84	61
April	100	720	10	100	22	95	57
May	100	744	16	100	31	96	66
June	100	720	24	100	47	95	71
July	100	744	25	100	57	94	72
August	99	740	22	100	58	94	75
September	100	720	27	100	60	100	78
October	100	744	27	100	55	96	75
November	100	720	47	99	67	96	82
December	100	744	61	99	73	94	83
Annual	100	8780	10	100	22	100	72



Wood Buffalo Environmental Association - Fort Hills (AMS23)
Annual Summary for the Year 2024
Relative Humidity 2 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	53	98	66	93	77
February	100	696	30	98	52	91	72
March	100	744	21	93	44	80	62
April	100	720	9	98	23	89	55
May	99	740	16	98	36	95	61
June	100	720	20	98	38	87	63
July	100	744	20	99	46	87	63
August	100	744	23	100	47	91	66
September	100	717	24	100	51	88	70
October	100	743	23	99	53	87	71
November	100	719	44	99	64	95	82
December	100	744	58	97	72	94	83
Annual	100	8775	9	100	23	95	69



Wood Buffalo Environmental Association - Waskow ohci Pimatisiwin (AMS25)
Annual Summary for the Year 2024
Relative Humidity 2 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	45	100	65	93	77
February	100	696	29	98	57	92	73
March	100	744	25	92	48	79	62
April	100	720	9	100	23	90	56
May	94	703	15	100	36	98	64
June	99	716	21	100	44	92	68
July	99	735	20	100	52	93	69
August	97	723	24	100	54	97	72
September	98	706	26	100	60	89	75
October	100	744	30	100	57	89	74
November	100	720	41	100	72	96	84
December	100	744	64	100	73	98	84
Annual	99	8695	9	100	23	98	72



Wood Buffalo Environmental Association - Christina Lake (AMS26)
Annual Summary for the Year 2024
Relative Humidity 2 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	31	97	55	91	75
February	100	696	20	96	40	93	68
March	100	744	24	97	46	82	60
April	100	720	12	100	23	95	55
May	100	744	15	100	31	96	66
June	100	720	22	100	42	93	67
July	100	744	22	99	44	89	63
August	100	744	21	100	43	92	68
September	100	720	18	100	54	99	71
October	100	744	29	100	51	97	73
November	100	132	52	98	77	97	88
Annual	100	7452	12	100	23	99	69



Wood Buffalo Environmental Association - Jackfish 2/3 (AMS27)
Annual Summary for the Year 2024
Relative Humidity 2 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	741	33	94	57	91	77
February	100	696	21	94	37	92	69
March	100	744	22	95	40	85	61
April	100	718	11	98	21	97	54
May	100	744	16	99	30	97	67
June	100	720	22	99	42	96	68
July	100	742	23	98	46	94	64
August	100	743	21	99	47	93	70
September	100	720	22	99	52	99	72
October	100	743	30	99	54	98	75
November	100	717	47	98	67	95	82
December	100	741	59	98	75	94	84
Annual	100	8769	11	99	21	99	70



Wood Buffalo Environmental Association - Surmont 2 (AMS29)
Annual Summary for the Year 2024
Relative Humidity 2 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	97	725	45	97	61	94	77
February	100	696	24	98	44	91	72
March	100	744	21	95	47	86	62
April	100	720	11	100	22	96	61
May	100	744	17	100	33	98	68
June	100	720	21	100	41	94	70
July	100	744	22	100	51	91	67
August	100	744	20	100	52	95	72
September	100	720	21	101	56	100	74
October	100	744	33	100	58	95	74
November	100	720	42	100	63	96	83
December	100	742	56	99	68	95	83
Annual	100	8763	11	101	22	100	72



Wood Buffalo Environmental Association - Ells River (AMS30)
Annual Summary for the Year 2024
Relative Humidity 2 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	46	95	61	90	74
February	100	696	28	95	45	90	69
March	100	744	20	91	44	77	59
April	100	720	9	96	19	89	53
May	100	744	17	97	34	94	62
June	100	720	17	97	35	86	64
July	100	744	19	97	46	89	63
August	100	744	20	98	47	92	67
September	100	720	23	98	52	85	71
October	100	744	28	97	52	86	70
November	100	719	39	96	64	92	80
December	100	744	59	94	69	92	80
Annual	100	8783	9	98	19	94	68



Wood Buffalo Environmental Association - Monday Creek (AMS33)
Annual Summary for the Year 2024
Relative Humidity 2 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
November	100	564	44	97	65	90	79
December	100	744	53	99	68	93	81
Annual	100	1308	44	99	65	93	80



Wood Buffalo Environmental Association - Leismer (AMS501)
Annual Summary for the Year 2024
Relative Humidity 2 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	743	34	98	59	94	78
February	99	692	24	96	39	92	70
March	100	744	24	95	40	85	62
Annual	100	2179	24	98	39	94	70



Wood Buffalo Environmental Association - Sawbones Bay (AMS505)
Annual Summary for the Year 2024
Relative Humidity 2 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	94	701	34	100	58	96	79
February	95	664	25	100	39	100	70
March	94	703	25	97	44	82	61
April	88	632	10	100	24	91	51
May	100	744	16	99	32	96	67
June	93	666	23	99	44	94	69
Annual	94	4110	10	100	24	100	66



Wood Buffalo Environmental Association - Jackfish 1 (AMS506)
Annual Summary for the Year 2024
Relative Humidity 2 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
July	100	741	25	98	48	93	66
August	100	744	22	98	47	92	70
September	100	720	22	99	54	99	74
October	100	744	31	99	55	98	76
November	100	720	47	97	68	95	82
December	100	743	61	97	75	94	84
Annual	100	4412	22	99	47	99	75



Wood Buffalo Environmental Association - Kirby South (AMS507)
Annual Summary for the Year 2024
Relative Humidity 2 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	33	95	56	90	77
February	100	696	19	94	37	93	68
March	100	744	20	95	40	84	62
April	99	712	11	100	21	97	53
May	100	744	16	100	31	98	68
June	100	615	27	100	40	96	72
Annual	100	4255	11	100	21	98	67



Wood Buffalo Environmental Association - Kirby North (AMS508)
Annual Summary for the Year 2024
Relative Humidity 2 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
July	100	639	21	100	45	96	65
August	95	710	22	100	44	91	70
September	100	720	26	99	52	98	71
October	100	744	33	99	53	98	75
November	100	720	48	99	66	96	83
December	99	734	67	99	75	94	85
Annual	99	4267	21	100	44	98	75



Wood Buffalo Environmental Association - Hangingstone Expansion (AMS512)
Annual Summary for the Year 2024
Relative Humidity 2 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
July	99	734	21	99	44	93	64
August	100	744	24	99	40	94	68
September	100	720	24	100	51	99	71
October	97	724	32	99	47	96	72
November	100	720	46	98	60	96	83
December	100	744	45	99	60	95	83
Annual	99	4386	21	100	40	99	73



Wood Buffalo Environmental Association - Blackgold (AMS511)
Annual Summary for the Year 2024
Relative Humidity 2 m (%) Average

Month	Operational Time (%)	Number of Data	1-hr Min	1-hr Max	24-hr Min	24-hr Max	Average
January	100	744	32	95	56	90	76
February	100	696	21	96	40	93	69
March	100	744	24	98	46	83	61
Annual	100	2184	21	98	40	93	69

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
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**BAROMETRIC PRESSURE
ANNUAL 2024**

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

March 2025



Wood Buffalo Environmental Association - Athabasca Valley (AMS07)
Annual Summary for the Year 2024
Barometric Pressure (inHg) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	94	699	29.2	29.8	29.8
February	100	696	29.0	29.5	29.4
March	100	743	29.1	29.7	29.6
April	100	720	29.0	29.7	29.7
May	100	744	28.9	29.2	29.2
June	100	720	28.9	29.3	29.2
July	100	744	28.9	29.3	29.2
August	100	744	29.1	29.4	29.4
September	100	720	28.9	29.4	29.3
October	100	744	29.0	29.4	29.3
November	87	628	29.0	29.7	29.6
December	100	744	29.1	29.8	29.7
Annual	98	8646	29.0	29.8	29.8



Wood Buffalo Environmental Association - Barge Landing (AMS09)
Annual Summary for the Year 2024
Barometric Pressure (inHg) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	100	744	29.1	29.7	29.6
February	100	696	28.9	29.4	29.3
March	100	744	29.0	29.6	29.5
April	100	720	28.9	29.6	29.6
May	100	744	28.8	29.2	29.1
June	100	720	28.8	29.2	29.1
July	100	744	28.8	29.2	29.1
August	100	744	29.0	29.3	29.3
September	100	720	28.8	29.3	29.2
October	100	744	28.9	29.3	29.2
November	100	720	29.0	29.6	29.6
December	100	744	29.0	29.7	29.6
Annual	100	8784	28.9	29.7	29.6



Wood Buffalo Environmental Association - Lower Camp (AMS11)
Annual Summary for the Year 2024
Barometric Pressure (inHg) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	100	744	29.3	29.9	29.9
February	100	696	29.1	29.6	29.5
March	100	744	29.2	29.8	29.7
April	100	720	29.1	29.8	29.8
May	100	744	29.0	29.4	29.3
June	100	720	29.0	29.4	29.3
July	100	744	29.0	29.4	29.3
August	100	744	29.1	29.5	29.5
September	100	720	29.0	29.5	29.4
October	100	744	29.0	29.5	29.4
November	100	720	29.2	29.8	29.8
December	100	744	29.2	29.9	29.8
Annual	100	8784	29.1	29.9	29.9

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
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SOLAR RADIATION ANNUAL 2024

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

March 2025



Wood Buffalo Environmental Association - Fort McKay - Bertha Ganter (AMS01)
Annual Summary for the Year 2024
Solar Radiation (W/m²) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	
				1-Hour Value	24-Hour Value
January	100	744	22.6	310.8	57.3
February	100	696	60.8	447.9	105.3
March	100	744	133.5	663.9	218.9
April	100	720	185.3	808.5	292.0
May	100	744	197.9	908.9	352.8
June	100	719	226.8	939.3	367.9
July	100	743	218.1	868.5	333.1
August	100	744	197.9	814.3	291.8
September	100	720	136.1	690.4	224.2
October	100	744	69.8	502.8	133.7
November	100	720	20.9	322.9	68.4
December	100	743	14.9	241.9	39.2
Annual	100	8781	123.9	939.3	367.9



Wood Buffalo Environmental Association - Fort Chipewyan (AMS08)
Annual Summary for the Year 2024
Solar Radiation (W/m²) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	100	744	22.0	260.7	47.4
February	100	696	58.6	450.5	117.1
March	100	744	142.2	669.0	213.9
April	100	720	203.8	782.8	286.2
May	100	744	221.8	874.5	352.3
June	100	720	269.2	902.9	384.3
July	100	744	210.5	835.5	313.0
August	100	744	204.9	805.3	299.8
September	100	720	124.3	670.8	209.8
October	100	744	62.5	456.2	122.9
November	100	720	24.8	298.5	61.5
December	100	744	15.3	206.3	35.0
Annual	100	8784	130.1	902.9	384.3



Wood Buffalo Environmental Association - Stony Mountain (AMS18)
Annual Summary for the Year 2024
Solar Radiation (W/m²) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	
				1-Hour Value	24-Hour Value
January	100	744	15.7	308.6	50.0
February	100	696	61.8	498.2	123.1
March	100	744	133.8	748.5	209.3
April	100	720	170.4	881.3	284.1
May	100	744	167.5	918.2	314.2
June	100	720	185.3	1044.7	364.0
July	100	744	228.8	928.7	317.5
August	100	744	200.5	890.2	309.9
September	100	720	133.9	752.8	229.9
October	100	744	66.9	570.8	147.2
November	100	720	28.7	363.0	73.5
December	100	744	12.3	199.6	24.8
Annual	100	8784	117.3	1044.7	364.0



Wood Buffalo Environmental Association - Ells River (AMS30)
Annual Summary for the Year 2024
Solar Radiation (W/m²) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	
				1-Hour Value	24-Hour Value
January	100	744	18.6	293.5	46.1
February	100	696	55.5	409.4	97.4
March	100	744	120.4	629.8	205.0
April	100	720	172.6	770.7	274.8
May	100	744	185.5	827.1	312.0
June	100	720	211.9	874.1	348.7
July	100	744	202.6	852.8	311.3
August	100	744	184.1	734.0	275.2
September	100	720	125.3	639.3	204.7
October	100	744	62.7	473.5	116.6
November	100	719	21.9	316.7	47.9
December	100	744	15.7	209.2	33.9
Annual	100	8783	114.9	874.1	348.7

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
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PRECIPITATION ANNUAL 2024

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

March 2025



Wood Buffalo Environmental Association - Fort McKay - Bertha Ganter (AMS01)
Annual Summary for the Year 2024
Precipitation Collector (mm) Average

Month	Operational Time (%)	Number of Data	Total Value	Maximum	
				1-Hour Value	24-Hour Value
January	100	744	12.0	1.1	4.0
February	100	696	6.6	0.8	2.3
March	100	744	20.8	0.8	9.9
April	100	719	26.0	3.1	6.5
May	100	744	106.9	3.8	31.8
June	99	716	77.9	5.0	21.5
July	100	744	98.1	37.0	69.8
August	97	722	47.1	5.6	16.8
September	100	720	14.1	3.0	9.1
October	100	744	31.8	1.9	6.3
November	93	672	25.8	1.7	11.5
December	95	705	23.5	2.1	7.5
Annual	99	8670	490.4	37.0	69.8



Wood Buffalo Environmental Association - Fort Chipewyan (AMS08)
Annual Summary for the Year 2024
Precipitation Collector (mm) Average

Month	Operational Time (%)	Number of Data	Total Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	100	744	49.6	2.3	9.6
February	99	692	50.3	1.5	7.4
March	100	744	17.1	2.3	6.9
April	100	720	70.1	2.5	10.9
May	100	744	54.4	2.2	11.7
June	100	720	31.4	1.5	10.1
July	100	744	135.3	42.8	61.7
August	100	744	23.3	4.1	7.2
September	56	403	17.2	4.7	5.2
October	100	744	19.0	1.7	6.8
November	100	720	27.8	1.5	5.7
December	100	744	27.5	0.9	3.3
Annual	96	8463	522.8	42.8	61.7



Wood Buffalo Environmental Association - Wapasu (AMS17)
Annual Summary for the Year 2024
Precipitation Collector (mm) Average

Month	Operational Time (%)	Number of Data	Total Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	100	744	12.1	1.4	4.2
February	100	695	7.6	1.2	3.1
March	100	744	20.7	1.0	10.5
April	100	720	39.8	2.4	8.9
May	100	744	68.0	1.9	15.2
June	99	716	80.5	4.4	23.6
July	100	744	54.9	14.6	28.2
August	100	744	47.1	5.1	15.0
September	100	720	16.8	2.0	7.6
October	100	744	41.7	3.5	18.2
November	100	720	31.1	1.6	9.4
December	100	744	24.7	1.7	6.8
Annual	100	8779	444.9	14.6	28.2



Wood Buffalo Environmental Association - Stony Mountain (AMS18)
Annual Summary for the Year 2024
Precipitation Collector (mm) Average

Month	Operational Time (%)	Number of Data	Total Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	100	744	8.9	0.6	4.2
February	100	696	7.4	0.9	2.3
March	99	736	26.9	1.3	12.8
April	99	713	15.6	1.7	3.9
May	93	689	96.6	3.3	25.4
June	74	536	76.0	5.0	21.5
July	96	711	41.9	14.0	19.3
August	100	743	36.4	7.3	13.0
September	78	562	46.2	4.4	17.1
October	100	744	42.4	2.8	9.6
November	97	695	10.8	1.2	3.9
December	100	743	16.8	0.6	5.4
Annual	95	8312	425.9	14.0	25.4



Wood Buffalo Environmental Association - Mackay River (AMS20)
Annual Summary for the Year 2024
Precipitation Collector (mm) Average

Month	Operational Time (%)	Number of Data	Total Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	100	744	9.2	0.7	2.1
February	100	695	6.9	0.7	2.5
March	100	744	21.7	1.2	10.1
April	100	720	26.5	3.3	9.9
May	100	744	87.1	4.1	24.7
June	100	720	110.3	6.0	23.2
July	100	744	80.9	17.1	44.6
August	100	744	47.5	4.5	24.5
September	100	720	32.7	2.9	10.0
October	100	744	27.8	1.9	6.4
November	100	720	16.4	1.5	5.5
December	100	744	24.6	1.5	7.2
Annual	100	8783	491.5	17.1	44.6

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
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**SURFACE WETNESS
ANNUAL 2024**

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

March 2025



Wood Buffalo Environmental Association - Fort Chipewyan (AMS08)
Annual Summary for the Year 2024
Leaf Wetness (% of range) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	100	744	3.3	76.6	15.2
February	100	696	2.1	39.3	6.8
March	100	744	2.0	48.5	6.6
April	100	720	5.9	74.5	38.8
May	100	744	8.4	72.9	41.2
June	100	720	4.0	82.7	28.1
July	100	744	3.3	48.6	22.9
August	100	744	2.9	69.4	13.3
September	100	720	5.0	50.2	13.4
October	100	743	4.0	87.2	17.6
November	100	719	7.9	97.2	22.7
December	100	744	3.5	16.9	8.1
Annual	100	8782	4.3	97.2	41.2



Wood Buffalo Environmental Association - Anzac (AMS14)
Annual Summary for the Year 2024
Leaf Wetness (% of range) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	100	744	1.1	16.1	3.1
February	100	696	0.7	33.2	4.3
March	100	744	0.1	1.8	0.6
April	100	719	2.4	74.1	11.4
May	100	744	5.8	47.9	32.2
June	100	717	6.6	73.7	28.3
July	100	744	2.2	58.2	18.3
August	100	744	3.2	44.2	15.2
September	100	720	5.7	49.3	22.4
October	100	744	3.2	77.5	18.1
November	100	720	2.2	86.5	17.6
December	100	744	1.4	75.6	13.4
Annual	100	8780	2.9	86.5	32.2



Wood Buffalo Environmental Association - Stony Mountain (AMS18)
Annual Summary for the Year 2024
Leaf Wetness (% of range) Average

Month	Operational Time (%)	Number of Data	Mean Value	Maximum	Maximum
				1-Hour Value	24-Hour Value
January	100	744	3.7	33.7	6.5
February	100	696	2.0	18.6	5.1
March	100	744	1.8	13.4	3.2
April	98	704	2.6	38.4	13.0
May	100	744	7.2	38.3	29.8
June	100	720	6.6	33.5	23.1
July	100	744	2.7	37.8	14.8
August	100	744	5.1	41.9	17.2
September	100	720	5.9	52.8	22.6
October	100	744	6.3	59.4	27.3
November	100	720	3.9	52.0	9.1
December	100	743	3.9	66.4	9.1
Annual	100	8767	4.3	66.4	29.8

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
ANNUAL REPORT

**VERTICAL WIND SPEED
ANNUAL 2024**

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

March 2025



Wood Buffalo Environmental Association - Lower Camp Met Tower (AMS03)
 Annual Summary for the Year 2024
 Vertical Wind Speed 20m (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW		
< -10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-1.5 - -10	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.22	0.05	0.01	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.33
-0.8 - -1.4	0.14	0.00	0.00	0.00	0.01	0.14	1.27	0.97	0.55	0.13	0.20	1.27	0.67	0.49	0.30	0.32	0.32	6.44
-0.6 - -0.7	0.37	0.03	0.00	0.02	0.06	0.39	2.53	0.87	0.46	0.25	0.40	1.12	0.54	0.86	0.49	0.55	0.55	8.96
-0.4 - -0.5	0.93	0.14	0.12	0.02	0.16	0.92	4.21	0.87	0.53	0.43	0.48	1.31	0.66	0.99	0.98	1.33	1.33	14.08
0 - -0.3	6.39	1.36	0.75	0.62	1.09	3.20	8.43	2.54	1.01	0.72	1.68	1.71	1.28	1.70	5.22	9.81	9.81	47.53
0 - 0.3	3.93	1.85	0.76	0.63	0.47	1.81	4.11	0.93	0.36	0.39	0.39	0.30	0.26	0.49	1.27	4.35	4.35	22.31
0.4 - 0.5	0.06	0.02	0.00	0.00	0.00	0.03	0.07	0.02	0.01	0.00	0.02	0.00	0.00	0.00	0.01	0.01	0.01	0.26
0.6 - 0.7	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.07
0.8 - 1.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01
1.5 - 10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
> 10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	11.82	3.41	1.62	1.30	1.79	6.50	20.65	6.43	2.97	1.94	3.18	5.74	3.42	4.57	8.28	16.38	16.38	100.00

Total Number of Valid Hours 8692
 Total Number of Hours 8784



Wood Buffalo Environmental Association - Lower Camp Met Tower (AMS03)
 Annual Summary for the Year 2024
 Vertical Wind Speed 45m (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW		
< -10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-1.5 - -10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.03	0.00	0.00	0.00	0.08
-0.8 - -1.4	0.00	0.00	0.00	0.00	0.01	0.03	0.01	0.04	0.00	0.00	0.00	0.04	0.13	0.31	0.24	0.03	0.03	0.83
-0.6 - -0.7	0.01	0.00	0.01	0.03	0.01	0.01	0.03	0.10	0.04	0.00	0.00	0.06	0.13	0.44	0.39	0.20	0.20	1.46
-0.4 - -0.5	0.63	0.05	0.03	0.04	0.03	0.04	0.13	0.11	0.05	0.03	0.00	0.33	0.21	0.74	0.95	0.75	0.75	4.11
0 - -0.3	3.94	0.64	0.41	0.31	0.50	0.93	1.98	0.84	0.85	0.31	0.36	1.70	1.16	1.78	2.20	6.09	6.09	24.03
0 - 0.3	6.66	2.25	0.97	0.73	1.21	4.32	8.75	3.42	1.66	1.14	1.65	3.09	1.53	1.17	1.87	8.05	8.05	48.46
0.4 - 0.5	0.98	0.23	0.13	0.05	0.23	1.47	4.77	0.80	0.39	0.46	0.77	0.79	0.23	0.05	0.08	0.26	0.26	11.68
0.6 - 0.7	0.16	0.01	0.01	0.00	0.01	0.49	2.98	0.53	0.19	0.31	0.41	0.30	0.05	0.04	0.03	0.09	0.09	5.61
0.8 - 1.4	0.01	0.00	0.00	0.00	0.01	0.19	2.26	0.44	0.11	0.13	0.24	0.21	0.03	0.01	0.04	0.00	0.00	3.68
1.5 - 10	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.08
> 10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	12.40	3.18	1.56	1.16	2.01	7.47	20.96	6.28	3.29	2.39	3.44	6.58	3.45	4.57	5.79	15.47	15.47	100.00

Total Number of Valid Hours 7962
 Total Number of Hours 8784



Wood Buffalo Environmental Association - Lower Camp Met Tower (AMS03)
Annual Summary for the Year 2024
Vertical Wind Speed 100m (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW		
< -10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-1.5 - -10	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.01	0.00	0.02	0.06	0.04	0.12	0.20	0.01	0.51	
-0.8 - -1.4	0.08	0.00	0.02	0.00	0.00	0.00	0.18	0.33	0.12	0.02	0.10	0.62	0.31	1.55	1.13	0.27	4.75	
-0.6 - -0.7	0.24	0.01	0.06	0.02	0.01	0.08	0.11	0.23	0.21	0.08	0.08	0.43	0.24	0.56	0.62	0.60	3.59	
-0.4 - -0.5	0.63	0.16	0.12	0.07	0.02	0.10	0.35	0.63	0.41	0.21	0.14	0.51	0.47	0.51	0.80	1.00	6.13	
0 - -0.3	4.20	1.25	0.76	0.48	0.41	0.76	2.14	2.84	2.37	1.37	1.26	2.16	1.44	1.40	1.75	5.22	29.82	
0 - 0.3	7.79	1.85	0.80	0.64	0.85	2.18	3.96	3.67	1.37	1.03	1.15	2.03	1.00	0.39	0.30	1.92	30.93	
0.4 - 0.5	1.59	0.63	0.23	0.10	0.13	0.69	1.75	0.94	0.27	0.29	0.56	0.57	0.21	0.11	0.04	0.20	8.31	
0.6 - 0.7	0.89	0.42	0.10	0.02	0.00	0.56	1.36	0.74	0.14	0.13	0.42	0.26	0.05	0.08	0.05	0.07	5.30	
0.8 - 1.4	0.57	0.52	0.06	0.04	0.05	0.49	2.98	1.16	0.27	0.35	0.45	0.48	0.16	0.10	0.11	0.00	7.78	
1.5 - 10	0.01	0.04	0.00	0.00	0.00	0.08	1.53	0.69	0.04	0.08	0.00	0.31	0.07	0.01	0.00	0.01	2.87	
> 10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Totals	16.01	4.88	2.15	1.37	1.47	4.95	14.36	11.27	5.22	3.57	4.19	7.43	3.98	4.83	5.00	9.32	100.00	

Total Number of Valid Hours 8383
Total Number of Hours 8784



Wood Buffalo Environmental Association - Lower Camp Met Tower (AMS03)
 Annual Summary for the Year 2024
 Vertical Wind Speed 163m (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW		
< -10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-1.5 - -10	0.06	0.04	0.00	0.01	0.00	0.00	0.00	0.07	0.13	0.01	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.35
-0.8 - -1.4	0.18	0.19	0.09	0.10	0.00	0.07	0.22	0.28	0.32	0.01	0.01	0.05	0.01	0.09	0.15	0.11		1.87
-0.6 - -0.7	0.23	0.11	0.13	0.13	0.00	0.05	0.21	0.19	0.18	0.01	0.00	0.06	0.02	0.05	0.10	0.10		1.58
-0.4 - -0.5	0.43	0.09	0.30	0.13	0.05	0.13	0.44	0.29	0.28	0.06	0.02	0.06	0.01	0.12	0.23	0.17		2.82
0 - -0.3	2.81	1.28	0.97	0.80	0.35	0.78	1.28	1.05	1.10	0.49	0.15	0.29	0.12	0.54	1.27	0.99		14.25
0 - 0.3	5.39	3.89	1.39	0.72	0.79	1.83	2.54	2.51	2.51	1.55	0.84	1.02	0.60	1.62	2.02	2.74		31.95
0.4 - 0.5	1.62	1.78	0.27	0.09	0.11	0.46	1.13	1.30	0.91	0.79	0.84	0.80	0.34	0.67	0.41	0.66		12.18
0.6 - 0.7	0.71	1.07	0.09	0.04	0.06	0.19	0.80	1.10	0.51	0.51	0.58	0.54	0.49	0.57	0.23	0.30		7.79
0.8 - 1.4	0.69	1.30	0.11	0.04	0.01	0.15	1.98	2.19	0.94	1.00	1.18	2.07	1.84	1.27	0.34	0.30		15.41
1.5 - 10	0.06	0.23	0.00	0.00	0.00	0.07	1.56	2.71	0.56	0.65	0.80	2.68	1.75	0.57	0.10	0.05		11.79
> 10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Totals	12.18	9.98	3.35	2.06	1.38	3.74	10.16	11.70	7.44	5.07	4.44	7.57	5.18	5.50	4.84	5.42		100.00

Total Number of Valid Hours 8217
 Total Number of Hours 8784



Wood Buffalo Environmental Association - Mannix (AMS05)
Annual Summary for the Year 2024
Vertical Wind Speed 20m (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW		
< -10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-1.5 - -10	0.06	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.10
-0.8 - -1.4	1.50	0.65	0.00	0.00	0.00	0.00	0.00	0.06	0.02	0.00	0.00	0.01	0.02	0.18	0.30	0.71	0.71	3.46
-0.6 - -0.7	1.09	0.93	0.01	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.05	0.02	0.42	0.34	0.98	0.98	3.87
-0.4 - -0.5	2.08	1.61	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.07	0.26	0.90	0.77	1.16	1.16	7.17
0 - -0.3	3.93	4.66	0.74	0.02	0.03	0.03	0.05	0.02	0.48	1.33	1.76	3.49	5.11	3.79	2.28	2.95	2.95	30.68
0 - 0.3	0.66	1.32	1.42	1.17	0.58	0.66	1.25	4.64	4.13	2.20	1.71	2.56	1.57	0.61	0.61	0.35	0.35	25.44
0.4 - 0.5	0.03	0.03	0.05	0.33	0.52	0.29	2.69	5.82	1.12	0.14	0.05	0.01	0.00	0.02	0.02	0.01	0.01	11.13
0.6 - 0.7	0.00	0.00	0.00	0.23	0.26	0.48	3.43	4.96	0.23	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.01	9.62
0.8 - 1.4	0.02	0.00	0.00	0.01	0.23	1.14	3.95	2.59	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	7.99
1.5 - 10	0.01	0.01	0.00	0.00	0.01	0.06	0.07	0.30	0.05	0.01	0.00	0.00	0.00	0.02	0.00	0.01	0.01	0.55
> 10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	9.39	9.23	2.23	1.76	1.64	2.67	11.45	18.40	6.06	3.69	3.58	6.41	6.98	5.96	4.33	6.23	6.23	100.00

Total Number of Valid Hours 8735
 Total Number of Hours 8784



Wood Buffalo Environmental Association - Mannix (AMS05)
 Annual Summary for the Year 2024
 Vertical Wind Speed 45m (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW		
< -10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-1.5 - -10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
-0.8 - -1.4	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.09	0.22	1.32	0.51	0.68	0.32	1.11	0.00	0.00
-0.6 - -0.7	0.91	0.06	0.01	0.00	0.00	0.00	0.02	0.00	0.00	0.28	0.81	1.31	1.45	1.20	0.57	0.90	0.00	0.00
-0.4 - -0.5	1.88	0.16	0.01	0.00	0.01	0.00	0.04	0.14	0.65	1.13	1.78	2.02	1.72	0.95	1.17	0.00	0.00	0.00
0 - 0.3	5.60	3.54	0.35	0.07	0.18	0.08	0.46	1.01	2.43	1.93	1.52	2.03	2.25	1.80	2.05	2.54	0.00	0.00
0 - 0.3	1.46	3.25	1.38	0.81	0.61	0.43	3.61	5.50	2.34	0.47	0.28	0.26	0.21	0.20	0.44	0.61	0.00	0.00
0.4 - 0.5	0.22	0.67	0.40	0.32	0.34	0.25	4.00	3.31	0.39	0.02	0.01	0.01	0.02	0.01	0.04	0.05	0.00	0.00
0.6 - 0.7	0.04	0.18	0.15	0.23	0.35	0.41	3.27	2.58	0.18	0.02	0.00	0.00	0.01	0.01	0.01	0.06	0.00	0.00
0.8 - 1.4	0.02	0.04	0.07	0.26	0.47	1.39	3.24	2.39	0.07	0.04	0.01	0.01	0.00	0.00	0.02	0.02	0.00	0.00
1.5 - 10	0.00	0.00	0.00	0.01	0.01	0.48	0.09	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
> 10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	10.74	7.89	2.37	1.70	1.96	3.04	14.70	14.86	5.54	3.51	3.99	6.72	6.48	5.64	4.40	6.46	100.00	100.00

Total Number of Valid Hours 8551
 Total Number of Hours 8784



Wood Buffalo Environmental Association - Mannix (AMS05)
 Annual Summary for the Year 2024
 Vertical Wind Speed 75m (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW		
< -10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-1.5 - -10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-0.8 - -1.4	0.19	0.04	0.00	0.00	0.04	0.00	0.37	0.00	0.00	0.04	0.01	0.00	0.01	0.00	0.01	0.06	0.76	
-0.6 - -0.7	0.35	0.14	0.01	0.00	0.04	0.01	0.68	0.00	0.00	0.02	0.01	0.01	0.01	0.00	0.01	0.21	1.51	
-0.4 - -0.5	0.52	0.27	0.00	0.02	0.05	0.01	1.54	0.06	0.02	0.13	0.14	0.13	0.10	0.01	0.01	0.50	3.52	
0 - -0.3	2.67	2.63	0.24	0.14	0.43	0.13	4.46	0.37	0.32	1.84	1.93	1.96	1.02	0.26	0.60	1.90	20.91	
0 - 0.3	4.15	4.96	1.83	0.87	0.81	0.67	4.44	4.19	3.52	1.71	1.67	3.42	4.12	2.87	2.27	2.24	43.74	
0.4 - 0.5	0.86	1.09	0.43	0.55	0.31	0.32	0.77	3.69	1.92	0.32	0.25	0.52	0.99	1.61	0.68	0.39	14.70	
0.6 - 0.7	0.36	0.46	0.15	0.29	0.14	0.31	0.32	2.81	0.80	0.10	0.10	0.18	0.38	0.76	0.24	0.19	7.58	
0.8 - 1.4	0.44	0.14	0.08	0.14	0.24	1.06	0.42	2.32	0.44	0.06	0.08	0.08	0.19	0.38	0.17	0.25	6.50	
1.5 - 10	0.01	0.00	0.00	0.01	0.05	0.51	0.08	0.05	0.00	0.01	0.01	0.00	0.00	0.00	0.01	0.02	0.77	
> 10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Totals	9.55	9.75	2.75	2.02	2.09	3.02	13.08	13.48	7.02	4.24	4.20	6.31	6.82	5.89	4.00	5.77	100.00	

Total Number of Valid Hours 8402
 Total Number of Hours 8784



Wood Buffalo Environmental Association - Mannix (AMS05)
 Annual Summary for the Year 2024
 Vertical Wind Speed 90m (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW		
< -10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-1.5 - -10	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.00	0.00	0.01	0.04	0.00	0.01	0.00	0.02	0.00	0.00	0.14
-0.8 - -1.4	0.00	0.00	0.02	0.01	0.00	0.15	0.77	0.19	0.12	0.83	0.96	1.38	0.36	0.12	0.06	0.01	0.00	5.00
-0.6 - -0.7	0.02	0.00	0.01	0.00	0.01	0.10	0.38	0.13	0.27	0.73	0.83	1.33	0.58	0.38	0.08	0.05	0.00	4.92
-0.4 - -0.5	0.05	0.02	0.01	0.00	0.05	0.15	0.70	0.33	0.63	1.41	0.93	1.38	1.36	0.48	0.63	0.19	0.00	8.33
0 - -0.3	0.80	0.36	0.13	0.11	0.20	0.31	1.88	3.11	5.30	1.93	1.11	2.03	3.11	2.38	1.52	1.68	0.00	25.96
0 - 0.3	3.03	1.89	1.07	0.60	0.68	0.86	3.55	5.38	1.57	0.31	0.29	0.29	0.91	1.83	1.77	2.42	0.00	26.44
0.4 - 0.5	1.67	1.73	0.82	0.38	0.43	0.41	1.30	1.39	0.18	0.06	0.07	0.05	0.12	0.45	0.49	0.85	0.00	10.39
0.6 - 0.7	1.52	1.63	0.70	0.38	0.27	0.27	0.73	0.45	0.07	0.04	0.02	0.02	0.05	0.12	0.24	0.36	0.00	6.89
0.8 - 1.4	2.47	2.29	0.88	0.64	0.44	1.27	0.68	0.31	0.04	0.06	0.02	0.01	0.02	0.08	0.12	0.55	0.00	9.89
1.5 - 10	0.54	0.24	0.10	0.07	0.08	0.64	0.08	0.06	0.05	0.01	0.07	0.00	0.00	0.00	0.04	0.07	0.00	2.05
> 10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	10.09	8.16	3.75	2.19	2.17	4.19	10.11	11.36	8.23	5.38	4.35	6.49	6.52	5.85	4.98	6.17	0.00	100.00

Total Number of Valid Hours 8395
 Total Number of Hours 8784

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
ANNUAL REPORT

**WIND SPEED AND WIND DIRECTION
ANNUAL 2024**

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

March 2025



Wood Buffalo Environmental Association - Fort McKay - Bertha Ganter (AMS01)
 Annual Summary for the Year 2024
 Wind Speed (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	3.00	2.20	1.69	1.06	0.85	0.89	1.43	3.11	6.65	4.25	3.06	2.76	2.43	4.03	3.15	2.55	43.10
6 - 11	5.53	4.77	2.00	0.44	0.30	0.26	1.12	4.98	7.76	1.69	1.25	1.32	1.68	2.18	1.61	1.58	38.46
12 - 19	3.86	3.42	0.20	0.05	0.00	0.07	0.39	2.42	2.48	0.28	0.09	0.14	0.14	0.64	1.15	1.12	16.46
20 - 28	0.74	0.35	0.00	0.00	0.00	0.00	0.05	0.26	0.09	0.00	0.00	0.00	0.00	0.11	0.14	0.15	1.90
29 - 38	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.02	0.07
> 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	13.14	10.75	3.89	1.55	1.15	1.22	2.99	10.77	16.98	6.22	4.40	4.23	4.25	6.96	6.08	5.43	100.00

Total Number of Valid Hours 8468
 Total Number of Hours 8784



Wood Buffalo Environmental Association - Mildred Lake (AMS02)
 Annual Summary for the Year 2024
 Wind Speed (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	2.44	2.15	1.39	1.00	1.11	1.19	1.94	2.79	3.19	2.24	1.56	0.91	0.68	0.65	1.08	1.50	25.84
6 - 11	9.27	3.68	1.01	0.48	1.15	1.62	3.91	7.19	4.47	2.31	2.10	1.48	1.38	2.16	1.87	3.88	47.96
12 - 19	4.94	1.18	0.09	0.11	0.18	0.85	3.22	3.16	0.84	0.53	1.21	0.87	1.67	2.29	1.32	1.60	24.06
20 - 28	0.60	0.02	0.00	0.00	0.01	0.03	0.28	0.20	0.02	0.00	0.02	0.07	0.20	0.13	0.30	0.22	2.09
29 - 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.01	0.06
> 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	17.24	7.03	2.49	1.60	2.46	3.70	9.34	13.34	8.52	5.08	4.89	3.33	3.92	5.23	4.62	7.21	100.00

Total Number of Valid Hours 8705
 Total Number of Hours 8784



Wood Buffalo Environmental Association - Lower Camp Met Tower (AMS03)
Annual Summary for the Year 2024
Wind Speed 20m (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	3.32	1.60	1.15	1.15	1.31	2.91	3.88	1.44	0.66	0.75	0.85	1.05	0.95	1.38	4.73	7.92	35.04
6 - 11	5.17	1.21	0.43	0.14	0.43	2.62	9.25	1.76	0.83	0.48	1.21	1.69	1.13	1.09	2.35	6.22	36.00
12 - 19	2.96	0.56	0.05	0.01	0.06	0.97	6.74	1.98	1.20	0.54	0.91	2.29	1.10	1.91	1.06	2.08	24.41
20 - 28	0.37	0.03	0.00	0.00	0.00	0.00	0.78	1.13	0.29	0.16	0.20	0.70	0.23	0.18	0.15	0.16	4.38
29 - 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.16
> 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	11.82	3.41	1.62	1.30	1.79	6.50	20.65	6.43	2.97	1.94	3.18	5.74	3.42	4.57	8.28	16.38	100.00

Total Number of Valid Hours 8692
 Total Number of Hours 8784



Wood Buffalo Environmental Association - Lower Camp Met Tower (AMS03)
Annual Summary for the Year 2024
Wind Speed 45m (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	2.02	0.98	0.70	0.79	1.16	1.92	1.85	1.16	0.74	0.67	0.60	0.77	0.63	0.78	1.52	3.45	19.73
6 - 11	3.18	1.23	0.57	0.30	0.68	2.79	6.93	1.42	0.78	0.73	1.06	1.38	0.99	0.49	1.73	7.46	31.71
12 - 19	5.10	0.75	0.29	0.06	0.15	1.95	7.94	1.90	1.09	0.59	1.23	2.24	0.90	1.46	1.83	3.49	30.97
20 - 28	1.81	0.18	0.00	0.00	0.03	0.75	3.55	1.33	0.65	0.39	0.45	1.73	0.73	1.68	0.57	0.97	14.82
29 - 38	0.28	0.04	0.00	0.00	0.00	0.06	0.67	0.48	0.03	0.01	0.10	0.46	0.20	0.16	0.14	0.10	2.73
> 38	0.01	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
Totals	12.40	3.18	1.56	1.16	2.01	7.47	20.96	6.28	3.29	2.39	3.44	6.58	3.45	4.57	5.79	15.47	100.00

Total Number of Valid Hours 7962
 Total Number of Hours 8784



Wood Buffalo Environmental Association - Lower Camp Met Tower (AMS03)
 Annual Summary for the Year 2024
 Wind Speed 100m (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	0.89	0.66	0.69	0.61	0.64	0.87	0.91	0.94	0.78	0.80	0.51	0.49	0.48	0.51	0.73	0.86	11.37
6 - 11	3.53	1.56	0.69	0.45	0.54	1.50	2.43	2.54	1.75	1.13	1.23	1.25	0.85	0.69	1.19	3.23	24.59
12 - 19	6.38	1.63	0.61	0.30	0.20	1.73	5.03	3.98	1.44	0.67	1.51	1.74	0.80	0.75	1.35	3.50	31.64
20 - 28	3.66	0.84	0.14	0.01	0.08	0.67	3.32	2.77	0.94	0.68	0.63	2.39	1.04	1.71	1.23	1.40	21.50
29 - 38	1.34	0.19	0.01	0.00	0.00	0.18	2.40	0.89	0.26	0.24	0.30	1.29	0.69	1.16	0.42	0.27	9.64
> 38	0.20	0.00	0.00	0.00	0.00	0.00	0.27	0.14	0.05	0.05	0.00	0.27	0.13	0.01	0.08	0.06	1.28
Totals	16.01	4.88	2.15	1.37	1.47	4.95	14.36	11.27	5.22	3.57	4.19	7.43	3.98	4.83	5.00	9.32	100.00

Total Number of Valid Hours 8383
 Total Number of Hours 8784



Wood Buffalo Environmental Association - Lower Camp Met Tower (AMS03)
Annual Summary for the Year 2024
Wind Speed 163m (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	0.47	0.55	0.41	0.52	0.47	0.46	0.60	0.65	0.56	0.45	0.46	0.51	0.26	0.45	0.49	0.50	7.81
6 - 11	1.87	1.87	1.05	0.78	0.57	0.96	1.24	1.78	1.53	1.38	1.23	1.01	0.89	0.75	0.80	1.48	19.20
12 - 19	4.32	4.00	1.16	0.60	0.29	1.38	2.09	3.66	2.37	1.56	1.53	1.97	1.10	1.00	0.86	1.67	29.56
20 - 28	3.48	2.42	0.65	0.15	0.04	0.72	2.99	3.58	2.15	0.97	0.72	2.09	1.02	1.53	1.45	1.19	25.16
29 - 38	1.69	1.06	0.09	0.01	0.00	0.22	2.47	1.72	0.60	0.56	0.45	1.50	1.30	1.56	0.94	0.51	14.66
> 38	0.34	0.07	0.00	0.00	0.00	0.00	0.77	0.32	0.22	0.16	0.05	0.49	0.62	0.21	0.30	0.06	3.60
Totals	12.18	9.98	3.35	2.06	1.38	3.74	10.16	11.70	7.44	5.07	4.44	7.57	5.18	5.50	4.84	5.42	100.00

Total Number of Valid Hours 8217
 Total Number of Hours 8784



Wood Buffalo Environmental Association - Buffalo Viewpoint (AMS04)
Annual Summary for the Year 2024
Wind Speed (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	1.67	1.97	1.03	0.69	0.60	0.95	2.39	5.07	3.09	1.51	1.20	0.99	0.81	1.07	1.03	1.43	25.51
6 - 11	6.45	4.28	1.70	0.60	0.53	1.79	6.23	11.43	3.47	1.57	1.54	1.88	2.30	2.15	1.95	2.03	49.90
12 - 19	5.30	1.59	0.16	0.05	0.10	0.90	1.05	0.96	0.40	0.37	0.75	2.11	2.18	1.80	1.70	1.52	20.95
20 - 28	1.22	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.76	0.18	0.37	0.31	3.50
29 - 38	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.02	0.00	0.14
> 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	14.73	8.10	2.89	1.34	1.24	3.64	9.67	17.45	6.97	3.45	3.49	5.39	6.07	5.21	5.07	5.30	100.00

Total Number of Valid Hours 8663
Total Number of Hours 8784



Wood Buffalo Environmental Association - Mannix (AMS05)
 Annual Summary for the Year 2024
 Wind Speed 20m (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	1.08	0.84	0.60	0.61	0.58	0.86	1.11	1.56	1.57	1.18	0.95	1.14	1.09	1.19	1.09	0.92	16.35
6 - 11	3.73	3.93	1.27	0.72	0.58	0.93	3.54	10.31	3.58	1.91	1.65	2.45	2.05	1.37	1.97	2.76	42.76
12 - 19	3.19	3.55	0.35	0.44	0.44	0.80	5.55	5.98	0.88	0.58	0.80	1.90	2.20	2.16	0.93	2.11	31.86
20 - 28	1.19	0.89	0.01	0.00	0.03	0.08	1.25	0.55	0.02	0.01	0.18	0.85	1.44	1.11	0.29	0.44	8.35
29 - 38	0.19	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.21	0.13	0.06	0.01	0.69
> 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	9.39	9.23	2.23	1.76	1.64	2.67	11.45	18.40	6.06	3.69	3.58	6.41	6.98	5.96	4.33	6.23	100.00

Total Number of Valid Hours 8735
 Total Number of Hours 8784



Wood Buffalo Environmental Association - Mannix (AMS05)
 Annual Summary for the Year 2024
 Wind Speed 45m (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	0.57	0.55	0.53	0.46	0.53	0.49	0.56	0.88	0.60	0.54	0.53	0.55	0.54	0.54	0.61	0.55	9.00
6 - 11	2.21	2.32	0.98	0.55	0.67	1.02	2.41	2.74	1.70	1.15	1.15	1.33	1.11	0.96	1.63	1.92	23.82
12 - 19	3.74	3.72	0.77	0.63	0.64	1.18	6.65	7.36	2.27	1.17	1.43	2.34	2.18	1.56	1.26	2.14	39.04
20 - 28	2.84	1.20	0.08	0.06	0.13	0.35	4.78	3.72	0.95	0.62	0.75	1.81	1.98	1.86	0.65	1.43	23.21
29 - 38	1.19	0.11	0.01	0.00	0.00	0.00	0.29	0.18	0.04	0.04	0.14	0.69	0.62	0.67	0.20	0.42	4.58
> 38	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.06	0.05	0.00	0.34
Totals	10.74	7.89	2.37	1.70	1.96	3.04	14.70	14.86	5.54	3.51	3.99	6.72	6.48	5.64	4.40	6.46	100.00

Total Number of Valid Hours 8551
 Total Number of Hours 8784



Wood Buffalo Environmental Association - Mannix (AMS05)
 Annual Summary for the Year 2024
 Wind Speed 75m (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	0.54	0.57	0.42	0.42	0.52	0.56	0.64	0.67	0.51	0.43	0.51	0.33	0.36	0.49	0.51	0.37	7.84
6 - 11	1.67	1.63	1.02	0.61	0.77	1.40	2.14	2.18	1.58	1.18	0.93	0.85	0.89	0.73	1.18	1.49	20.25
12 - 19	2.76	4.21	1.08	0.80	0.74	1.04	4.93	4.26	2.13	1.44	1.40	1.70	2.04	1.30	1.12	1.80	32.74
20 - 28	2.58	2.63	0.20	0.20	0.06	0.02	4.36	4.78	2.36	1.04	0.96	2.18	2.46	2.04	0.81	1.40	28.09
29 - 38	1.57	0.69	0.02	0.00	0.00	0.00	1.01	1.58	0.44	0.15	0.39	1.15	1.00	1.17	0.31	0.67	10.16
> 38	0.43	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.10	0.07	0.18	0.07	0.05	0.92
Totals	9.55	9.75	2.75	2.02	2.09	3.02	13.08	13.48	7.02	4.24	4.20	6.31	6.82	5.89	4.00	5.77	100.00

Total Number of Valid Hours 8402
 Total Number of Hours 8784



Wood Buffalo Environmental Association - Mannix (AMS05)
 Annual Summary for the Year 2024
 Wind Speed 90m (km/h) Average

Wind Speed (km/h) Concentration	Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	0.42	0.55	0.35	0.46	0.45	0.48	0.58	0.54	0.43	0.54	0.55	0.31	0.35	0.36	0.61	0.39	7.35
6 - 11	1.79	1.42	1.10	0.61	0.69	1.29	1.55	2.00	1.69	1.26	0.94	0.96	0.85	0.67	1.11	1.29	19.20
12 - 19	2.74	3.35	1.52	0.88	0.85	1.67	2.95	3.55	2.32	1.62	1.49	1.66	2.03	1.19	1.25	1.91	30.97
20 - 28	2.56	2.39	0.69	0.21	0.18	0.74	3.85	3.72	2.72	1.49	0.89	2.14	1.82	2.13	1.23	1.60	28.36
29 - 38	1.98	0.44	0.10	0.02	0.00	0.02	1.18	1.55	1.06	0.48	0.48	1.27	1.35	1.31	0.67	0.86	12.76
> 38	0.61	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.14	0.13	0.19	0.12	0.13	1.36
Totals	10.09	8.16	3.75	2.19	2.17	4.19	10.11	11.36	8.23	5.38	4.35	6.49	6.52	5.85	4.98	6.17	100

Total Number of Valid Hours 8395



Wood Buffalo Environmental Association - Patricia McInnes (AMS06)
 Annual Summary for the Year 2024
 Wind Speed (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	0.91	0.85	0.49	0.68	0.77	1.26	2.07	2.11	2.64	2.12	1.69	1.30	1.16	1.31	1.32	1.36	22.05
6 - 11	4.12	2.67	1.21	1.20	1.37	2.62	5.39	3.20	2.67	3.53	3.67	2.13	1.56	1.74	1.77	4.00	42.83
12 - 19	4.15	1.47	0.24	0.51	0.63	3.17	2.47	0.51	0.64	0.60	2.00	2.57	1.89	2.24	1.49	3.13	27.73
20 - 28	1.20	0.25	0.03	0.02	0.08	0.44	0.21	0.11	0.08	0.02	0.24	0.68	1.03	1.13	0.71	0.66	6.89
29 - 38	0.13	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.09	0.10	0.10	0.05	0.50
> 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	10.50	5.26	1.97	2.41	2.85	7.50	10.14	5.93	6.03	6.28	7.60	6.70	5.73	6.53	5.39	9.19	100.00

Total Number of Valid Hours 8779
 Total Number of Hours 8784



Wood Buffalo Environmental Association - Athabasca Valley (AMS07)
 Annual Summary for the Year 2024
 Wind Speed (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	1.53	1.14	1.12	1.78	2.07	3.75	4.29	3.34	2.25	2.38	2.00	1.84	1.27	1.18	1.62	1.89	33.47
6 - 11	2.33	0.71	0.43	0.88	1.21	4.74	8.46	1.59	1.03	2.22	2.76	1.06	0.74	0.71	2.04	6.65	37.56
12 - 19	1.19	0.07	0.06	0.56	0.54	2.58	2.97	0.34	0.22	0.56	1.68	1.62	1.37	1.18	1.84	5.43	22.22
20 - 28	0.19	0.01	0.00	0.08	0.05	0.26	0.14	0.03	0.00	0.02	0.13	0.58	1.12	1.21	0.49	1.70	6.03
29 - 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.21	0.25	0.17	0.06	0.70
> 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.02
Totals	5.25	1.93	1.61	3.31	3.87	11.33	15.86	5.31	3.50	5.18	6.57	5.12	4.71	4.53	6.19	15.73	100.00

Total Number of Valid Hours 8743
 Total Number of Hours 8784



Wood Buffalo Environmental Association - Fort Chipewyan (AMS08)
 Annual Summary for the Year 2024
 Wind Speed (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	0.54	0.34	0.28	0.62	0.89	0.50	0.51	0.27	0.32	0.58	0.48	0.56	0.73	0.70	0.91	0.79	9.02
6 - 11	1.36	1.01	1.28	2.04	4.63	1.68	0.90	0.82	0.98	1.16	1.94	1.86	3.50	4.17	3.65	3.78	34.75
12 - 19	0.43	0.85	2.35	3.64	5.78	1.46	1.03	1.27	1.08	0.78	0.81	1.54	3.29	4.02	4.26	2.03	34.62
20 - 28	0.05	0.19	1.88	5.07	4.15	0.63	0.83	0.91	1.00	0.22	0.11	0.47	0.71	0.73	0.87	0.24	18.06
29 - 38	0.00	0.00	0.70	1.30	0.54	0.11	0.09	0.34	0.21	0.01	0.00	0.00	0.03	0.01	0.05	0.00	3.39
> 38	0.00	0.00	0.03	0.09	0.01	0.00	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
Totals	2.37	2.41	6.52	12.76	15.99	4.38	3.36	3.64	3.60	2.75	3.34	4.42	8.26	9.63	9.73	6.84	100.00

Total Number of Valid Hours 8773
 Total Number of Hours 8784



Wood Buffalo Environmental Association - Barge Landing (AMS09)
Annual Summary for the Year 2024
Wind Speed 20m (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	1.18	0.97	0.71	0.87	0.90	0.93	1.26	1.40	1.63	1.65	1.83	1.56	1.34	1.26	1.57	1.96	21.01
6 - 11	4.18	2.98	2.14	1.39	0.89	1.60	3.56	7.33	5.83	3.39	2.99	1.83	1.41	1.51	1.97	4.44	47.42
12 - 19	3.72	3.39	1.35	0.29	0.16	0.60	1.30	4.06	2.14	1.11	1.19	1.58	1.01	1.25	0.73	1.82	25.70
20 - 28	1.14	1.29	0.07	0.05	0.01	0.09	0.45	0.54	0.09	0.03	0.13	0.54	0.34	0.40	0.19	0.35	5.72
29 - 38	0.06	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.01	0.00	0.15
> 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	10.28	8.68	4.27	2.59	1.97	3.22	6.57	13.32	9.68	6.18	6.14	5.51	4.11	4.44	4.48	8.57	100.00

Total Number of Valid Hours 8736
 Total Number of Hours 8784



Wood Buffalo Environmental Association - Lower Camp (AMS11)
 Annual Summary for the Year 2024
 Wind Speed (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	1.26	0.97	1.00	0.96	1.64	2.82	2.99	1.33	0.70	0.62	0.92	1.12	3.70	6.42	4.48	2.27	33.21
6 - 11	2.22	0.93	0.29	0.38	0.96	7.61	5.89	1.80	0.77	0.71	1.16	1.85	1.46	3.34	4.71	4.49	38.56
12 - 19	1.89	0.39	0.14	0.08	0.72	4.52	2.96	0.28	0.06	0.17	0.83	2.48	1.83	1.79	1.38	3.06	22.56
20 - 28	0.45	0.02	0.00	0.02	0.19	1.43	0.36	0.00	0.00	0.00	0.19	0.68	0.70	0.80	0.13	0.46	5.43
29 - 38	0.00	0.00	0.00	0.00	0.00	0.09	0.01	0.00	0.00	0.00	0.00	0.02	0.03	0.08	0.00	0.00	0.24
> 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	5.82	2.32	1.42	1.44	3.52	16.47	12.21	3.40	1.52	1.50	3.09	6.14	7.73	12.43	10.69	10.28	100.00

Total Number of Valid Hours 8724
 Total Number of Hours 8784



Wood Buffalo Environmental Association - Fort McKay South (AMS13)
Annual Summary for the Year 2024
Wind Speed (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	3.12	2.05	1.06	0.44	0.63	0.90	1.49	2.22	5.20	4.63	4.62	5.59	2.80	2.80	3.36	3.28	44.20
6 - 11	6.61	3.84	0.57	0.21	0.13	0.48	1.99	3.80	4.55	2.05	2.13	3.11	1.95	1.97	1.63	2.68	37.71
12 - 19	5.21	2.07	0.09	0.00	0.00	0.05	0.76	2.54	1.74	0.46	0.40	0.87	0.29	0.39	0.60	0.77	16.23
20 - 28	1.01	0.15	0.00	0.00	0.00	0.00	0.07	0.30	0.11	0.00	0.00	0.00	0.00	0.05	0.01	0.13	1.83
29 - 38	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
> 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	15.99	8.11	1.73	0.66	0.76	1.43	4.31	8.87	11.60	7.14	7.15	9.57	5.04	5.20	5.59	6.86	100.00

Total Number of Valid Hours 8545
 Total Number of Hours 8784



Wood Buffalo Environmental Association - Anzac (AMS14)
Annual Summary for the Year 2024
Wind Speed 20m (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	0.57	0.80	0.53	0.78	0.82	1.07	1.42	1.01	0.86	0.81	0.94	0.89	0.69	0.69	0.79	0.59	13.26
6 - 11	1.55	0.93	1.07	1.75	2.00	3.66	4.62	4.83	3.33	1.89	2.44	2.65	4.54	5.36	3.22	1.82	45.65
12 - 19	0.94	0.32	0.41	0.61	1.27	2.33	3.62	2.89	0.85	0.56	0.73	2.26	4.48	6.30	3.51	1.85	32.92
20 - 28	0.30	0.03	0.00	0.00	0.34	0.38	0.35	0.60	0.21	0.03	0.23	0.91	1.50	1.42	0.79	0.65	7.76
29 - 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.05	0.02	0.06	0.02	0.12	0.14	0.42
> 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	3.36	2.08	2.00	3.14	4.43	7.43	10.01	9.34	5.24	3.29	4.39	6.74	11.28	13.80	8.42	5.05	100.00

Total Number of Valid Hours 8638
 Total Number of Hours 8784



Wood Buffalo Environmental Association - Wapasu (AMS17)
 Annual Summary for the Year 2024
 Wind Speed (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	1.87	2.74	1.94	1.65	1.60	1.60	3.13	2.97	1.86	1.14	0.88	0.76	0.92	0.76	0.97	1.19	25.98
6 - 11	6.21	3.71	1.62	1.23	0.86	1.50	3.49	9.29	6.84	3.34	3.31	2.21	1.42	1.17	1.73	3.43	51.37
12 - 19	1.98	0.53	0.13	0.22	0.44	1.16	2.08	4.83	1.78	1.14	2.14	1.31	0.56	0.44	0.51	2.05	21.30
20 - 28	0.07	0.00	0.00	0.00	0.00	0.02	0.35	0.40	0.05	0.01	0.05	0.01	0.00	0.01	0.05	0.34	1.35
29 - 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
> 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	10.13	6.99	3.69	3.11	2.91	4.29	9.05	17.48	10.52	5.63	6.38	4.29	2.90	2.38	3.26	7.00	100.00

Total Number of Valid Hours 8599
 Total Number of Hours 8784



Wood Buffalo Environmental Association - Conklin Lookout (AMS18)
 Annual Summary for the Year 2024
 Wind Speed 20m (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	0.88	1.10	1.09	0.93	0.81	0.78	0.51	0.53	0.67	0.60	0.55	0.45	0.59	1.00	1.37	1.33	13.20
6 - 11	2.30	2.72	2.72	2.46	2.94	1.53	1.70	2.25	2.94	4.05	3.77	2.58	3.65	5.11	4.75	3.08	48.53
12 - 19	0.94	0.67	1.13	0.57	0.44	0.38	0.87	1.91	3.17	4.75	3.40	2.39	4.46	4.34	3.76	1.32	34.50
20 - 28	0.07	0.07	0.05	0.00	0.06	0.05	0.00	0.11	0.34	0.82	0.23	0.15	0.55	0.55	0.46	0.24	3.77
29 - 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01
> 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	4.20	4.56	4.98	3.96	4.24	2.74	3.08	4.80	7.12	10.23	7.95	5.57	9.25	11.01	10.34	5.98	100.00

Total Number of Valid Hours 8175
 Total Number of Hours 8784



Wood Buffalo Environmental Association - Firebag (AMS19)
Annual Summary for the Year 2024
Wind Speed (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	1.33	1.23	1.01	0.61	0.57	0.66	0.95	1.21	1.18	1.16	0.99	0.78	0.56	0.76	0.80	0.83	14.63
6 - 11	4.38	2.68	1.66	0.99	0.62	1.65	1.85	2.11	3.20	3.15	3.64	2.16	1.56	1.62	1.34	3.33	35.94
12 - 19	3.42	1.72	0.92	0.70	1.14	1.83	2.11	3.01	4.18	3.89	3.39	2.55	1.68	1.34	1.35	3.10	36.31
20 - 28	0.77	0.48	0.02	0.06	0.63	0.55	0.71	1.78	1.77	1.22	0.67	0.71	0.54	0.28	0.43	1.36	11.97
29 - 38	0.01	0.00	0.00	0.00	0.02	0.08	0.07	0.24	0.38	0.03	0.02	0.00	0.00	0.00	0.05	0.23	1.15
> 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	9.90	6.11	3.62	2.35	2.98	4.77	5.69	8.36	10.71	9.46	8.72	6.20	4.33	3.99	3.97	8.84	100.00

Total Number of Valid Hours 8593
 Total Number of Hours 8784



Wood Buffalo Environmental Association -MacKay River (AMS20)
Annual Summary for the Year 2024
Wind Speed (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	1.32	2.39	2.04	1.45	1.32	2.64	5.67	5.25	3.30	2.40	2.79	3.75	2.92	1.80	1.37	1.68	42.10
6 - 11	1.77	4.95	3.03	0.96	1.53	3.90	2.71	2.46	6.13	3.25	2.54	4.52	3.42	3.62	2.35	1.55	48.70
12 - 19	0.84	1.33	0.12	0.09	0.30	0.38	0.31	0.31	1.10	0.32	0.33	0.68	0.77	1.03	0.73	0.37	9.01
20 - 28	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.03	0.01	0.20
29 - 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
> 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	3.95	8.67	5.19	2.50	3.15	6.92	8.69	8.02	10.52	5.98	5.67	8.95	7.11	6.58	4.49	3.61	100.00

Total Number of Valid Hours 8666
Total Number of Hours 8784



Wood Buffalo Environmental Association - Conklin (AMS21)
 Annual Summary for the Year 2024
 Wind Speed (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	2.58	1.73	1.41	1.36	1.23	2.01	3.55	5.95	5.89	3.51	1.70	1.11	1.67	3.10	5.38	6.37	48.55
6 - 11	2.26	2.53	1.14	0.81	0.85	2.02	1.45	2.05	2.78	4.21	4.22	1.89	2.61	4.53	5.02	2.68	41.05
12 - 19	0.66	0.43	0.12	0.00	0.05	0.37	0.72	0.78	1.07	0.92	0.98	0.67	1.05	0.36	0.83	0.99	9.99
20 - 28	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.02	0.03	0.01	0.02	0.00	0.00	0.02	0.14	0.40
29 - 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
> 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	5.58	4.68	2.66	2.17	2.13	4.39	5.72	8.86	9.77	8.67	6.91	3.69	5.33	7.99	11.25	10.17	100.00

Total Number of Valid Hours 8669
 Total Number of Hours 8784



Wood Buffalo Environmental Association - Janvier (AMS22)
 Annual Summary for the Year 2024
 Wind Speed 20m (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	3.37	4.70	1.88	1.37	1.34	1.05	1.18	1.28	2.46	3.72	2.24	1.48	0.98	1.09	1.14	1.30	30.59
6 - 11	3.68	6.08	2.63	2.02	1.53	1.04	1.34	1.88	2.98	9.17	7.28	2.22	1.98	2.16	2.29	1.30	49.56
12 - 19	1.26	1.54	0.92	0.39	0.26	0.20	0.25	0.72	1.11	2.14	2.87	1.14	1.86	2.37	1.11	0.23	18.36
20 - 28	0.04	0.12	0.06	0.00	0.00	0.00	0.00	0.05	0.07	0.11	0.06	0.08	0.30	0.44	0.15	0.01	1.48
29 - 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01
> 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	8.34	12.44	5.48	3.77	3.13	2.29	2.77	3.93	6.62	15.14	12.45	4.92	5.13	6.06	4.69	2.84	100.00

Total Number of Valid Hours 8569
 Total Number of Hours 8784



Wood Buffalo Environmental Association - Fort Hills (AMS23)
 Annual Summary for the Year 2024
 Wind Speed (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	1.57	0.70	0.51	0.56	0.53	0.74	1.21	2.34	2.33	1.70	1.39	0.98	1.02	1.06	1.74	2.19	20.59
6 - 11	5.08	2.89	1.62	0.72	0.37	1.17	3.61	6.37	5.70	3.29	1.29	0.75	0.83	1.35	1.04	2.25	38.34
12 - 19	5.65	5.33	1.34	0.17	0.13	0.30	1.29	3.92	3.62	2.77	1.63	0.74	0.69	0.91	0.90	1.20	30.59
20 - 28	2.47	2.23	0.17	0.03	0.00	0.01	0.30	0.79	0.58	0.37	0.47	0.42	0.40	0.33	0.30	0.42	9.29
29 - 38	0.62	0.33	0.01	0.01	0.00	0.00	0.00	0.09	0.06	0.00	0.00	0.00	0.00	0.00	0.01	0.06	1.19
> 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	15.37	11.48	3.66	1.50	1.02	2.22	6.41	13.51	12.30	8.13	4.79	2.90	2.94	3.66	3.99	6.13	100.00

Total Number of Valid Hours 8748
 Total Number of Hours 8784



Wood Buffalo Environmental Association - Waskow ohci Pimǎtisiwin (AMS25)
Annual Summary for the Year 2024
Wind Speed (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	3.18	2.60	2.47	1.27	1.60	2.65	6.10	9.66	4.64	3.17	2.77	4.01	5.50	4.29	3.68	4.09	61.69
6 - 11	5.97	2.74	0.83	0.11	0.12	0.51	4.75	4.31	0.97	1.02	1.36	1.46	1.37	1.95	1.75	4.13	33.35
12 - 19	1.56	0.25	0.00	0.00	0.00	0.00	0.20	0.20	0.01	0.01	0.01	0.08	0.21	0.47	0.65	1.11	4.76
20 - 28	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.08	0.06	0.21
29 - 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
> 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	10.74	5.58	3.30	1.38	1.72	3.17	11.05	14.17	5.62	4.20	4.14	5.55	7.07	6.75	6.17	9.39	100.00

Total Number of Valid Hours 8553
 Total Number of Hours 8784



Wood Buffalo Environmental Association - Christina Lake (AMS26)
 Annual Summary for the Year 2024
 Wind Speed (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	0.16	0.39	1.08	0.95	1.45	1.97	1.64	1.76	2.89	3.47	1.58	0.70	0.54	0.18	0.19	0.14	19.09
6 - 11	0.93	2.47	3.07	2.27	2.56	1.97	1.77	2.07	3.22	5.16	3.91	5.45	2.33	1.07	0.84	0.46	39.54
12 - 19	0.96	2.54	2.72	0.89	0.69	0.89	0.82	2.08	1.85	2.01	2.03	3.84	3.93	3.23	3.68	1.65	33.82
20 - 28	0.27	0.61	0.41	0.12	0.07	0.22	0.09	0.28	0.45	0.42	0.15	0.35	0.66	1.18	1.31	0.64	7.22
29 - 38	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.09	0.09	0.11	0.32
> 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	2.34	6.02	7.27	4.23	4.76	5.06	4.33	6.21	8.41	11.07	7.67	10.34	7.46	5.75	6.11	2.99	100.00

Total Number of Valid Hours 7397
 Total Number of Hours 8040



Wood Buffalo Environmental Association - Jackfish 2/3 (AMS27)
 Annual Summary for the Year 2024
 Wind Speed (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	2.11	2.74	3.03	2.59	1.32	1.28	1.69	1.75	3.98	3.87	2.39	2.53	2.60	1.78	2.39	2.66	38.73
6 - 11	1.25	2.16	3.33	2.34	1.74	1.62	1.02	1.88	4.23	6.45	5.83	6.85	5.17	3.82	3.87	1.70	53.26
12 - 19	0.07	0.07	0.44	0.20	0.16	0.08	0.01	0.03	0.17	0.78	0.98	2.50	1.35	0.73	0.23	0.08	7.87
20 - 28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.05	0.00	0.00	0.00	0.14
29 - 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
> 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	3.43	4.97	6.79	5.12	3.22	2.98	2.73	3.66	8.38	11.10	9.20	11.97	9.16	6.33	6.49	4.44	100.00

Total Number of Valid Hours 8686
 Total Number of Hours 8784



Wood Buffalo Environmental Association - Surmont 2 (AMS29)
Annual Summary for the Year 2024
Wind Speed (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	1.80	1.86	1.19	1.41	2.08	4.72	4.82	2.70	2.48	3.66	7.49	7.38	4.66	3.44	3.52	3.36	56.57
6 - 11	1.48	0.80	0.63	0.85	1.83	5.17	4.02	0.89	0.20	0.21	0.45	3.65	6.26	4.50	2.36	4.18	37.48
12 - 19	0.18	0.01	0.09	0.06	0.29	0.76	0.19	0.02	0.02	0.00	0.02	0.86	2.17	0.76	0.22	0.28	5.95
20 - 28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29 - 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
> 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	3.45	2.67	1.91	2.31	4.20	10.65	9.02	3.62	2.70	3.88	7.96	11.89	13.10	8.70	6.11	7.82	100.00

Total Number of Valid Hours 8514
 Total Number of Hours 8784



Wood Buffalo Environmental Association - Ells River (AMS30)
 Annual Summary for the Year 2024
 Wind Speed (km/h) Average

Wind Speed (km/h)	Wind Direction																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	1.54	1.08	0.71	0.63	0.77	0.94	1.00	1.82	3.05	2.76	2.20	1.96	2.81	2.29	1.79	1.68	27.03
6 - 11	4.22	3.02	1.60	0.70	0.35	0.82	2.22	5.85	6.91	3.96	3.77	1.65	1.96	1.71	0.94	1.30	40.97
12 - 19	4.52	4.08	1.01	0.24	0.13	0.31	1.21	2.70	1.60	1.42	1.64	0.93	0.70	1.32	1.53	0.98	24.32
20 - 28	2.45	1.64	0.17	0.01	0.03	0.01	0.58	0.43	0.15	0.02	0.00	0.06	0.12	0.28	0.34	0.44	6.74
29 - 38	0.54	0.21	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.08	0.07	0.92
> 38	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Totals	13.27	10.03	3.51	1.58	1.28	2.08	5.02	10.80	11.71	8.16	7.62	4.60	5.58	5.61	4.68	4.47	100.00

Total Number of Valid Hours 8586
 Total Number of Hours 8784



Wood Buffalo Environmental Association - Monday Creek (AMS33)
 Annual Summary for the Year 2024
 Wind Speed (km/h) Average

Wind Speed (km/h)	Wind Dire																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	0.96	0.82	1.78	1.64	1.50	2.33	4.38	3.28	1.92	2.60	1.23	0.55	1.37	2.19	0.82	1.23	28.59
6 - 11	1.64	0.55	0.14	0.68	0.68	1.64	5.20	2.33	3.56	7.52	2.05	1.78	3.56	6.02	6.02	3.15	46.51
12 - 19	0.00	0.82	0.00	0.96	0.00	0.00	0.00	0.27	1.37	2.46	2.05	2.87	2.46	4.79	3.69	1.78	23.53
20 - 28	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68	0.00	0.41	0.14	1.37
29 - 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
> 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	2.74	2.19	1.92	3.28	2.19	3.97	9.58	5.88	6.84	12.59	5.34	5.20	8.07	13.00	10.94	6.29	100.00

Total Number of Valid Hours 731
 Total Number of Hours 744



Wood Buffalo Environmental Association - Leismer (AMS501)
 Annual Summary for the Year 2024
 Wind Speed (km/h) Average

Wind Speed (km/h)	Wind Dire																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	1.71	1.11	1.39	1.39	1.76	2.82	1.94	1.71	2.27	2.64	1.02	1.44	1.94	1.30	0.83	1.06	26.34
6 - 11	3.10	1.71	2.22	1.81	3.66	4.03	3.01	3.01	2.64	4.26	0.69	0.42	3.33	2.55	1.76	4.58	42.78
12 - 19	2.13	0.51	0.14	0.42	1.48	1.67	1.30	1.99	1.30	1.20	0.09	0.09	1.57	3.06	2.87	2.69	22.50
20 - 28	0.09	0.00	0.00	0.00	0.00	0.14	0.05	0.56	0.14	0.00	0.00	0.00	0.97	2.41	1.76	1.25	7.36
29 - 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.37	0.14	0.14	1.02
> 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	7.04	3.33	3.75	3.61	6.90	8.66	6.30	7.27	6.34	8.10	1.81	1.94	8.19	9.68	7.36	9.72	100.00

Total Number of Valid Hours 2160
 Total Number of Hours 2184



Wood Buffalo Environmental Association -Sawbones Bay (AMSS05)
Annual Summary for the Year 2024
Wind Speed (km/h) Average

Wind Speed (km/h)	Wind Dire																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	1.37	2.05	1.98	1.86	2.33	1.63	1.37	2.28	1.49	0.75	0.54	0.49	0.47	0.51	0.84	1.24	21.21
6 - 11	4.05	5.17	1.98	1.49	3.17	2.56	2.87	4.94	4.24	2.40	1.19	0.58	0.89	2.94	2.17	2.07	42.72
12 - 19	3.36	2.59	0.30	0.05	0.70	0.89	1.51	2.63	1.70	0.70	1.37	2.17	2.31	4.33	2.42	1.65	28.69
20 - 28	0.96	0.21	0.00	0.00	0.00	0.02	0.00	0.40	0.23	0.09	0.12	0.49	1.47	1.65	0.84	0.51	6.99
29 - 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.16	0.12	0.02	0.40
> 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	9.74	10.02	4.26	3.40	6.20	5.10	5.76	10.25	7.67	3.94	3.22	3.73	5.22	9.60	6.39	5.50	100.00

Total Number of Valid Hours 4291
 Total Number of Hours 4368



Wood Buffalo Environmental Association -Jackfish 1(AMS506)
 Annual Summary for the Year 2024
 Wind Speed (km/h) Average

Wind Speed (km/h)	Wind Dire																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	1.51	1.66	1.49	1.22	1.00	1.41	2.02	9.24	12.34	9.41	4.00	2.85	4.49	8.27	4.05	2.54	67.51
6 - 11	1.54	0.71	0.59	0.49	0.49	1.24	2.29	4.07	3.54	3.12	0.49	0.27	0.22	3.51	5.22	3.73	31.51
12 - 19	0.05	0.02	0.00	0.00	0.00	0.10	0.12	0.00	0.00	0.02	0.00	0.00	0.00	0.05	0.59	0.00	0.95
20 - 28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.02
29 - 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
> 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	3.10	2.39	2.07	1.71	1.49	2.76	4.44	13.32	15.88	12.56	4.49	3.12	4.71	11.83	9.88	6.27	100.00

Total Number of Valid Hours 4100
 Total Number of Hours 4416



Wood Buffalo Environmental Association - Kirby South (AMS507)
 Annual Summary for the Year 2024
 Wind Speed (km/h) Average

Wind Speed (km/h)	Wind Dire																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	0.56	0.68	0.87	0.78	1.11	1.18	0.59	0.49	0.54	0.61	0.45	0.64	0.54	0.73	0.54	0.66	10.97
6 - 11	2.38	2.42	3.51	2.59	3.06	2.26	2.00	1.88	2.50	4.03	4.59	2.90	1.58	3.51	2.85	2.17	44.21
12 - 19	1.20	2.05	2.75	1.77	1.04	0.61	1.04	1.88	2.97	3.51	2.26	2.21	2.78	3.08	3.01	2.54	34.70
20 - 28	0.33	0.66	0.42	0.49	0.05	0.24	0.16	0.26	0.42	0.38	0.40	0.21	1.67	1.77	1.51	0.73	9.70
29 - 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.19	0.05	0.00	0.42
> 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	4.47	5.81	7.56	5.63	5.25	4.28	3.79	4.52	6.43	8.52	7.70	5.96	6.76	9.27	7.96	6.10	100.00

Total Number of Valid Hours 4248
 Total Number of Hours 4368



Wood Buffalo Environmental Association - Kirby North (AMS508)
 Annual Summary for the Year 2024
 Wind Speed (km/h) Average

Wind Speed (km/h)	Wind Dire																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	0.92	1.30	1.11	0.54	0.64	0.59	0.73	0.90	1.82	1.56	0.87	0.61	0.28	0.45	0.66	0.94	13.94
6 - 11	2.50	2.29	2.36	1.54	1.42	0.99	1.11	4.54	9.92	7.25	4.80	1.82	1.04	2.29	4.02	2.65	50.53
12 - 19	0.83	1.20	1.46	1.09	0.57	0.52	0.71	2.08	4.04	3.45	3.71	3.85	1.18	3.52	3.66	1.25	33.12
20 - 28	0.00	0.00	0.07	0.05	0.05	0.02	0.12	0.14	0.02	0.05	0.09	0.52	0.31	0.76	0.14	0.07	2.41
29 - 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
> 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	4.25	4.80	5.01	3.21	2.67	2.13	2.67	7.65	15.80	12.31	9.47	6.80	2.81	7.02	8.48	4.91	100.00

Total Number of Valid Hours 4233
 Total Number of Hours 4416



Wood Buffalo Environmental Association - Blackgold (AMS511)
Annual Summary for the Year 2024
Wind Speed (km/h) Average

Wind Speed (km/h)	Wind Dire																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	2.38	2.34	3.71	2.29	1.56	1.01	0.78	0.96	1.24	1.70	1.88	4.12	5.77	3.99	2.29	2.47	38.50
6 - 11	1.88	3.71	3.53	1.92	1.47	0.46	0.92	1.33	3.53	4.40	4.77	2.25	3.53	3.67	3.53	1.83	42.71
12 - 19	0.37	0.50	0.69	0.23	0.09	0.82	1.19	1.97	2.11	1.47	0.82	0.69	1.47	2.02	2.29	0.82	17.55
20 - 28	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.37	0.32	0.18	0.00	0.00	0.00	0.14	0.05	0.09	1.24
29 - 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
> 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	4.63	6.55	7.93	4.45	3.12	2.29	2.98	4.63	7.20	7.75	7.47	7.06	10.77	9.81	8.16	5.22	100.00

Total Number of Valid Hours 2182
 Total Number of Hours 2184



Wood Buffalo Environmental Association - Hangingstone Expansion (AMSS12)
Annual Summary for the Year 2024
Wind Speed (km/h) Average

Wind Speed (km/h)	Wind Dire																Totals
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0 - 5	1.31	1.38	0.89	0.62	0.62	1.01	0.99	1.12	1.01	1.35	1.24	1.47	1.56	1.15	1.15	0.83	17.68
6 - 11	1.70	2.16	1.31	0.71	0.83	1.77	2.66	3.94	7.55	9.11	5.89	5.34	4.15	3.37	2.71	1.61	54.79
12 - 19	0.41	0.32	0.16	0.30	0.60	0.44	0.69	2.18	4.38	2.06	2.25	3.81	2.57	3.17	1.67	0.18	25.18
20 - 28	0.00	0.00	0.00	0.00	0.00	0.02	0.09	0.80	0.76	0.00	0.00	0.09	0.07	0.25	0.21	0.05	2.34
29 - 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
> 38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	3.42	3.85	2.36	1.63	2.04	3.23	4.43	8.05	13.69	12.52	9.38	10.71	8.35	7.94	5.73	2.66	100.00

Total Number of Valid Hours 4360
 Total Number of Hours 4416

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY MONITORING PROGRAM ANNUAL REPORT

WIND ROSES ANNUAL 2024

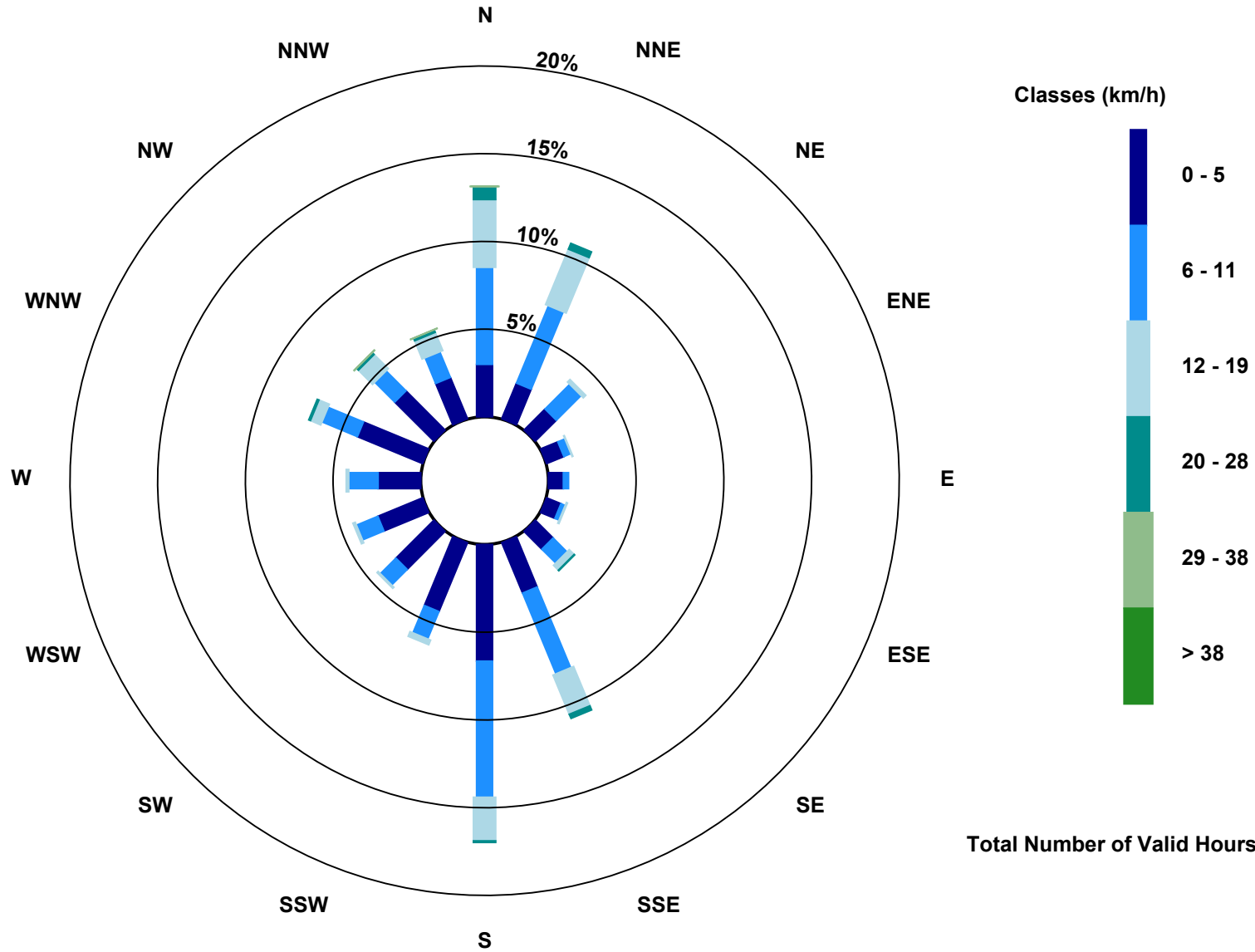
Operations, Data Collection,
QA/QC, Data Validation and Reporting by:
Wood Buffalo Environmental Association
Fort McMurray, Alberta

March 2025



Wood Buffalo Environmental Association
Wind Rose 2024

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

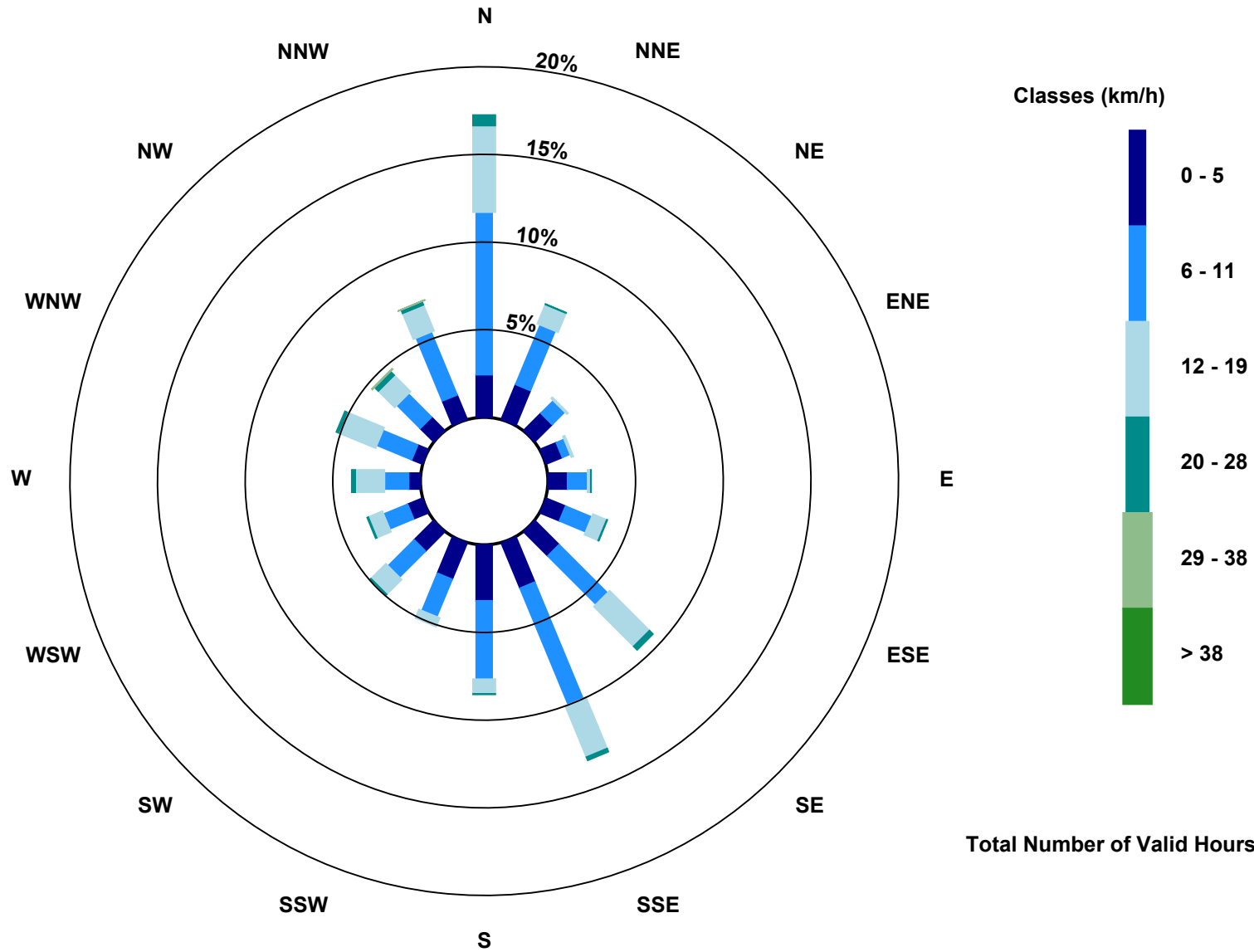


Total Number of Valid Hours: 8468



Wood Buffalo Environmental Association
Wind Rose 2024

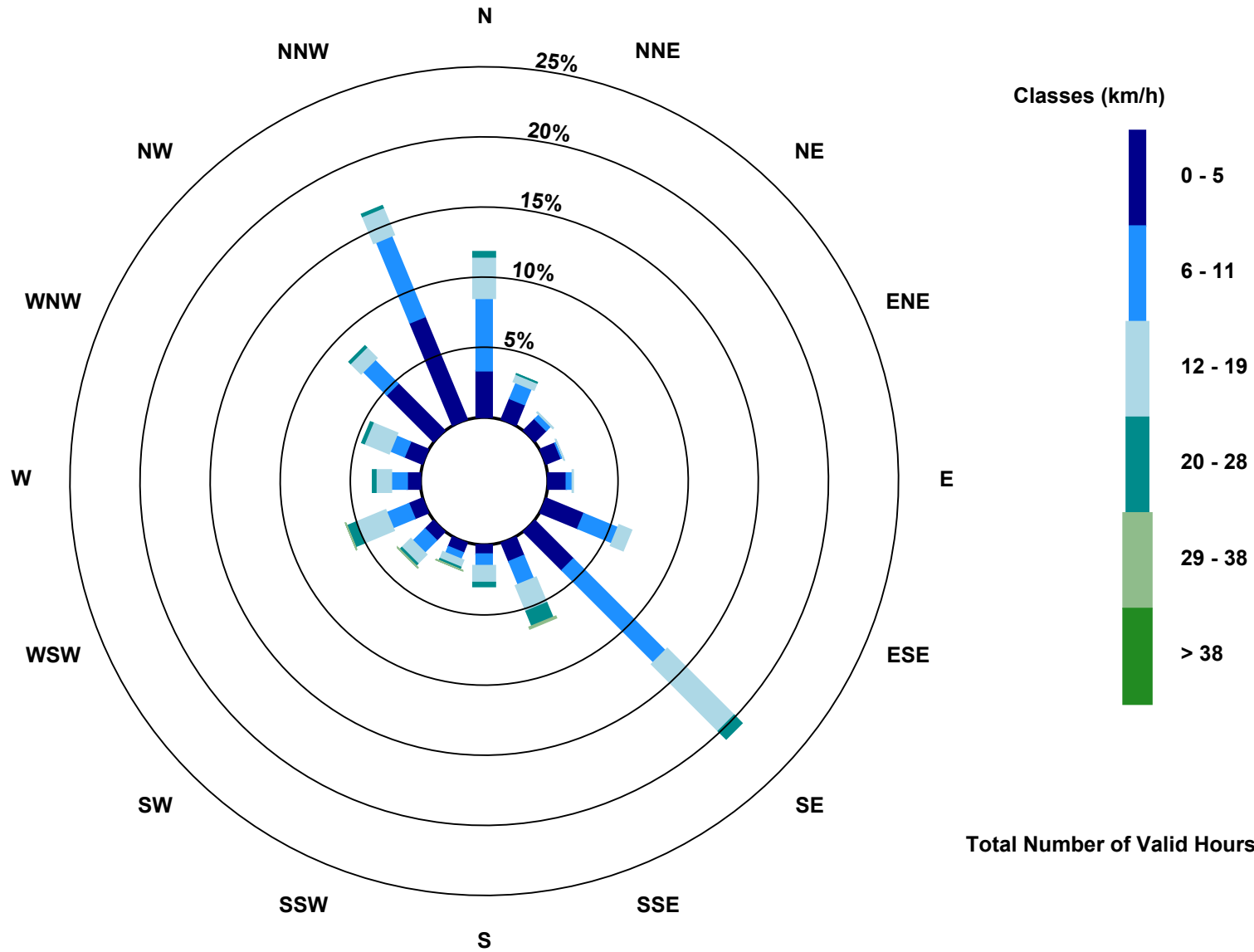
Wind Speed 10m (WS10) - km/h
Mildred Lake





Wood Buffalo Environmental Association
Wind Rose 2024

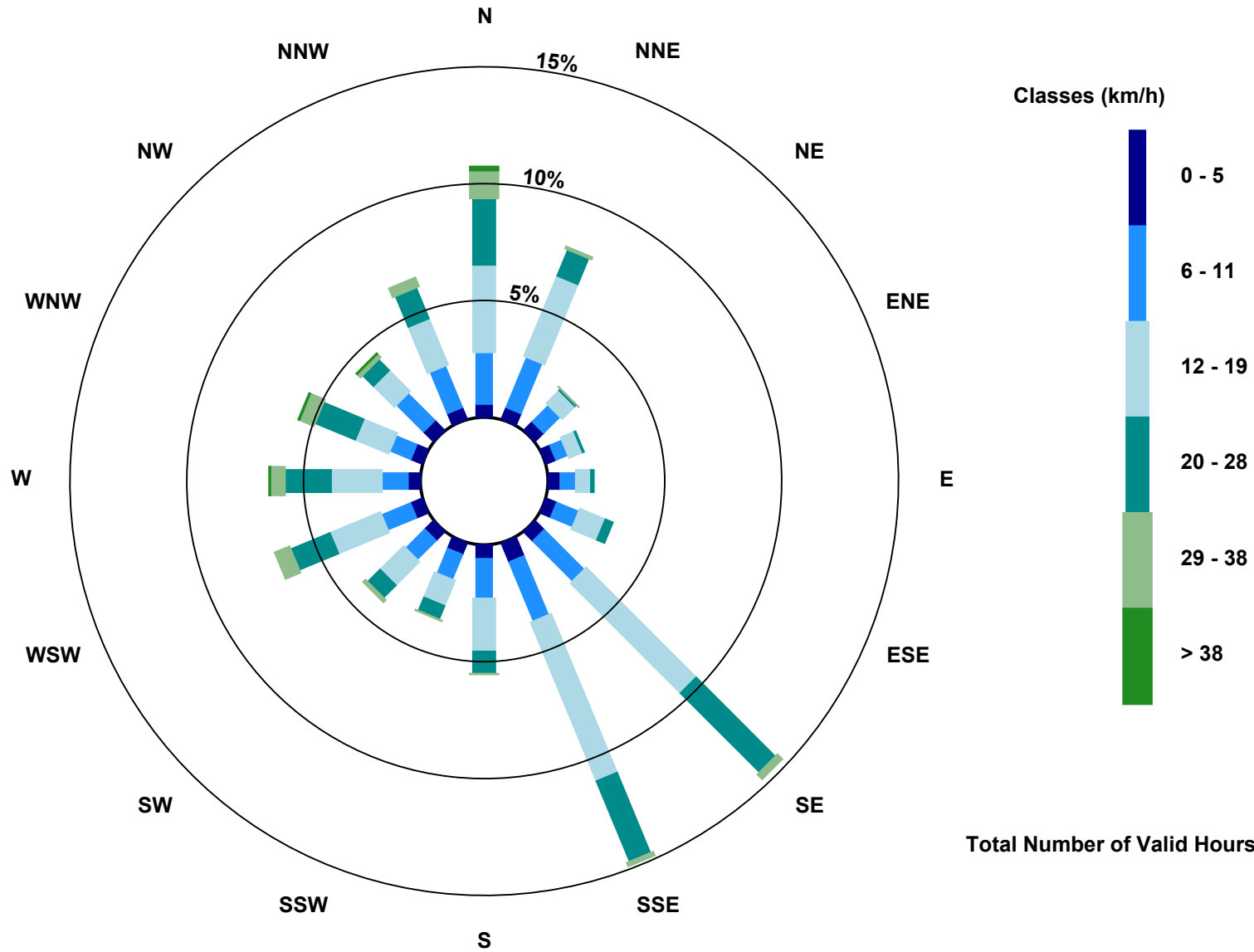
Wind Speed 20m (WS20) - km/h
Lower Camp Met Tower





Wood Buffalo Environmental Association
Wind Rose 2024

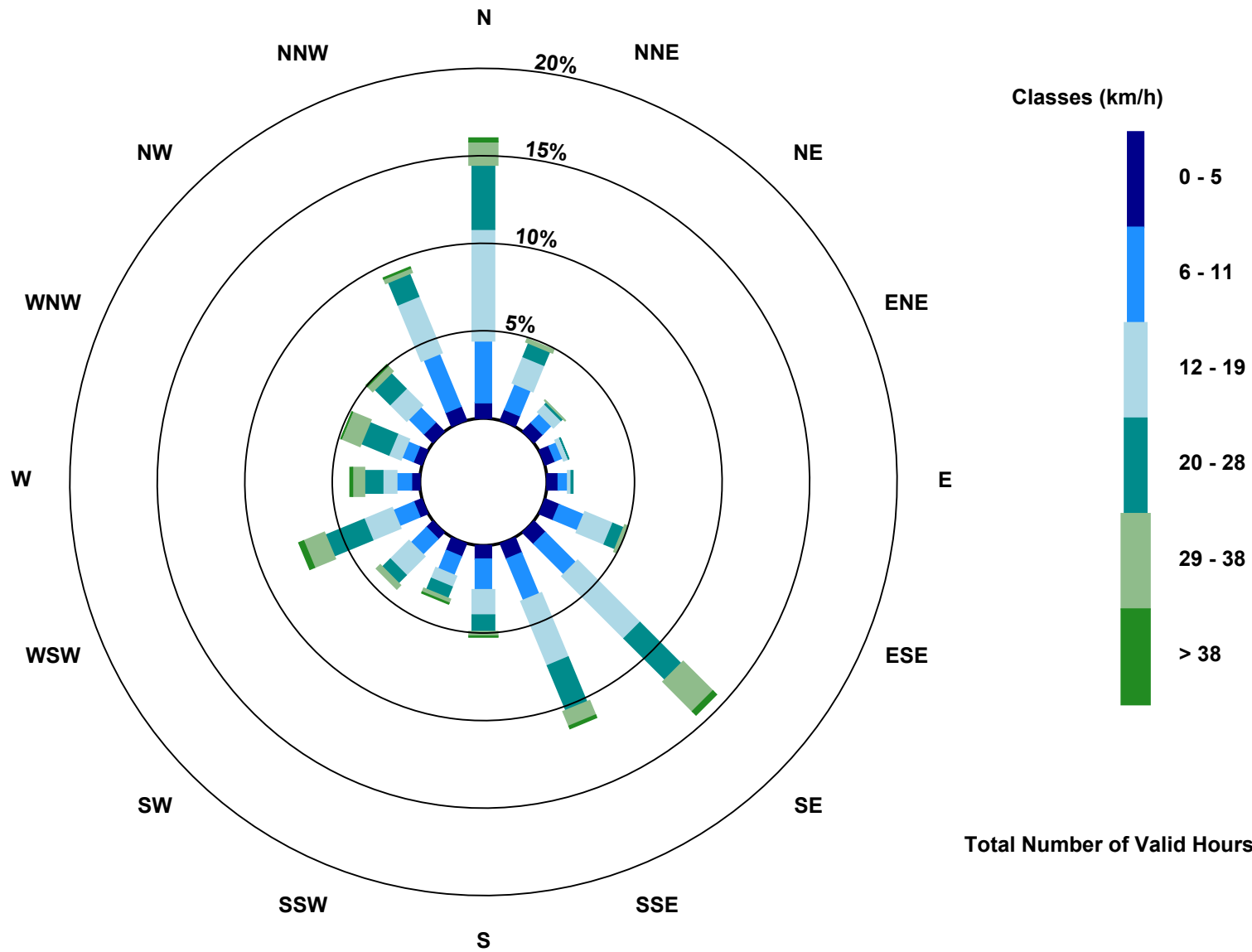
Wind Speed 45m (WS45) - km/h
Mannix





Wood Buffalo Environmental Association
Wind Rose 2024

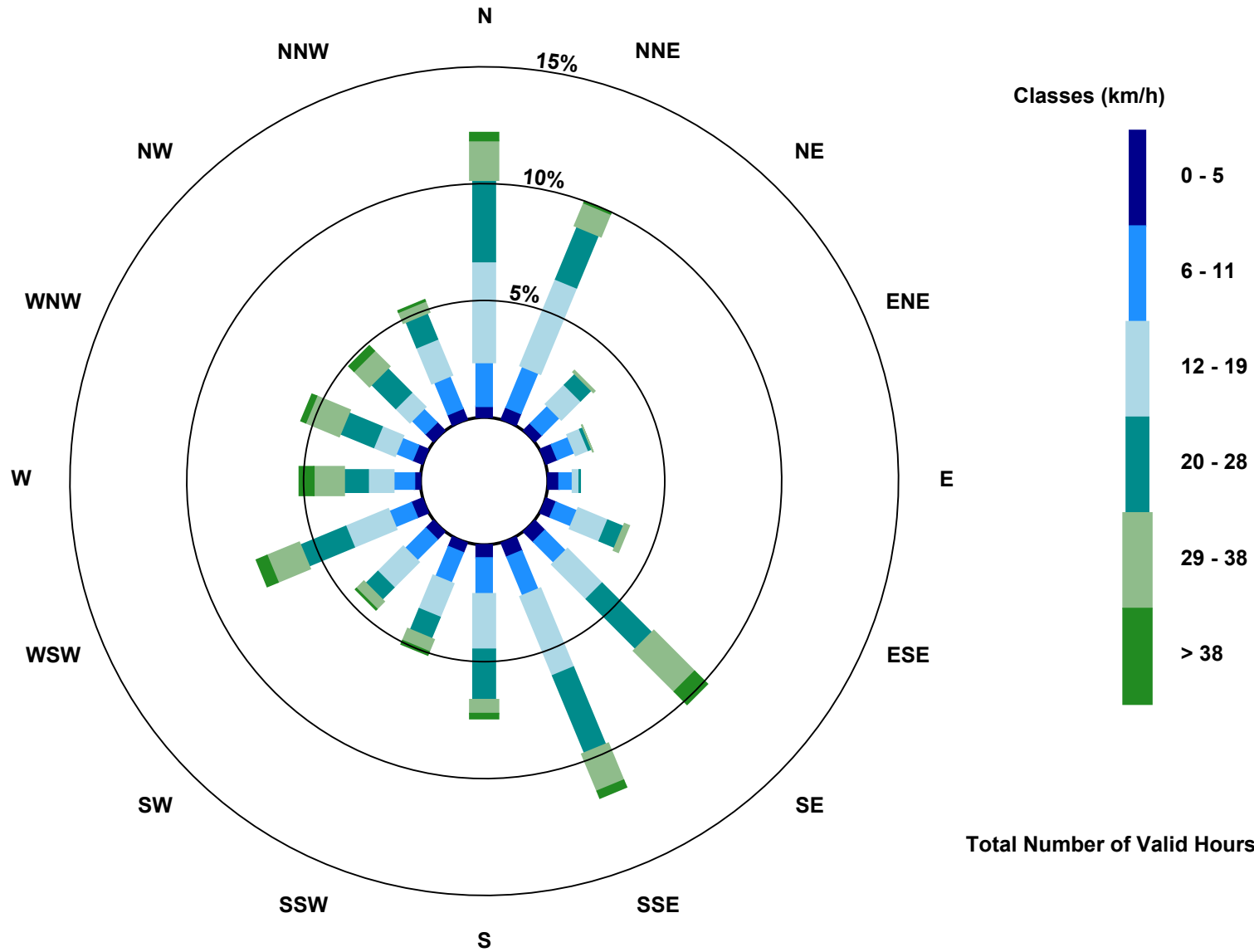
Wind Speed 100m (WS100) - km/h
Lower Camp Met Tower





Wood Buffalo Environmental Association
Wind Rose 2024

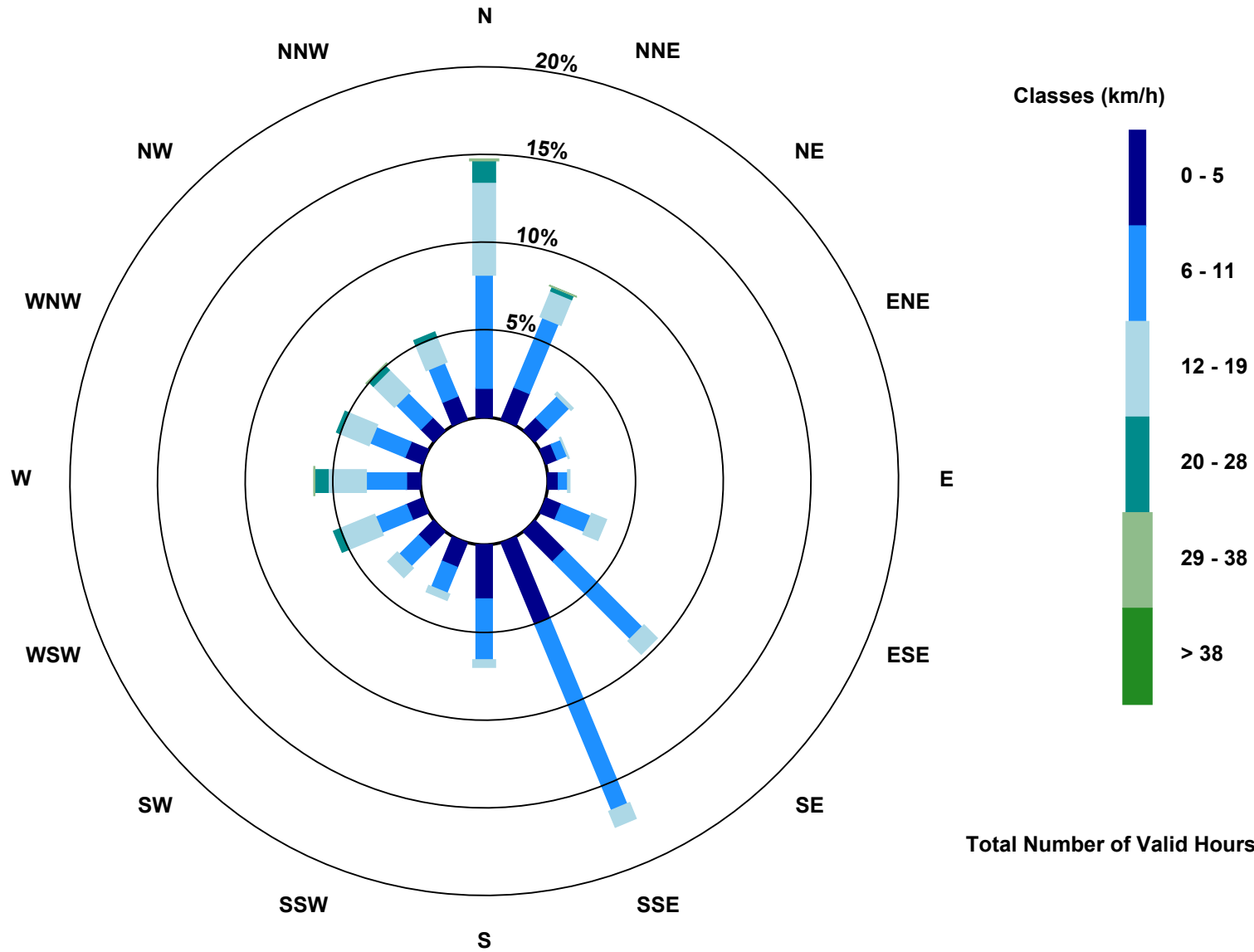
Wind Speed 163m (WS163) - km/h
Lower Camp Met Tower





Wood Buffalo Environmental Association
Wind Rose 2024

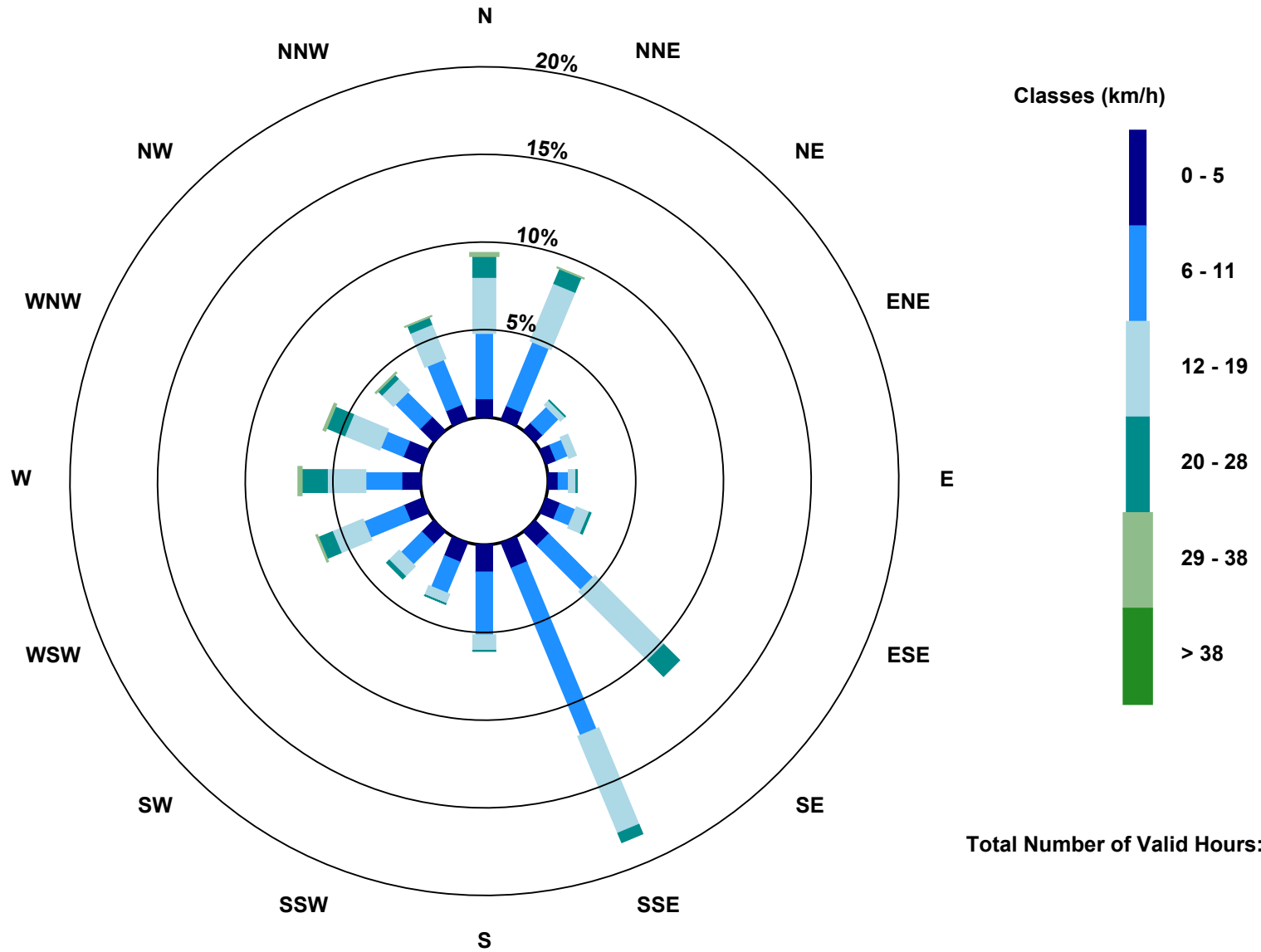
Wind Speed 10m (WS10) - km/h
Buffalo Viewpoint





Wood Buffalo Environmental Association
Wind Rose 2024

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

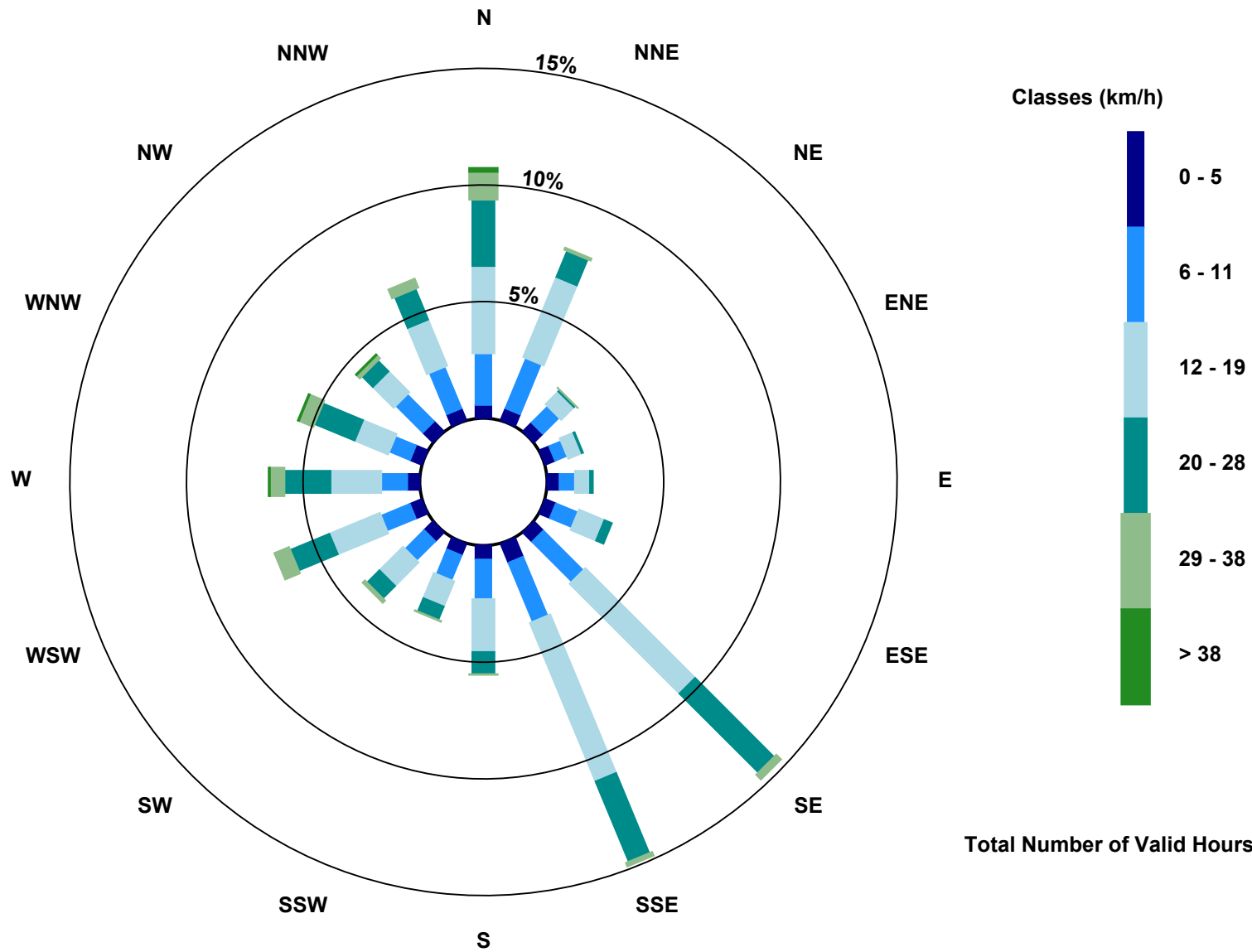


Total Number of Valid Hours: 8735



Wood Buffalo Environmental Association
Wind Rose 2024

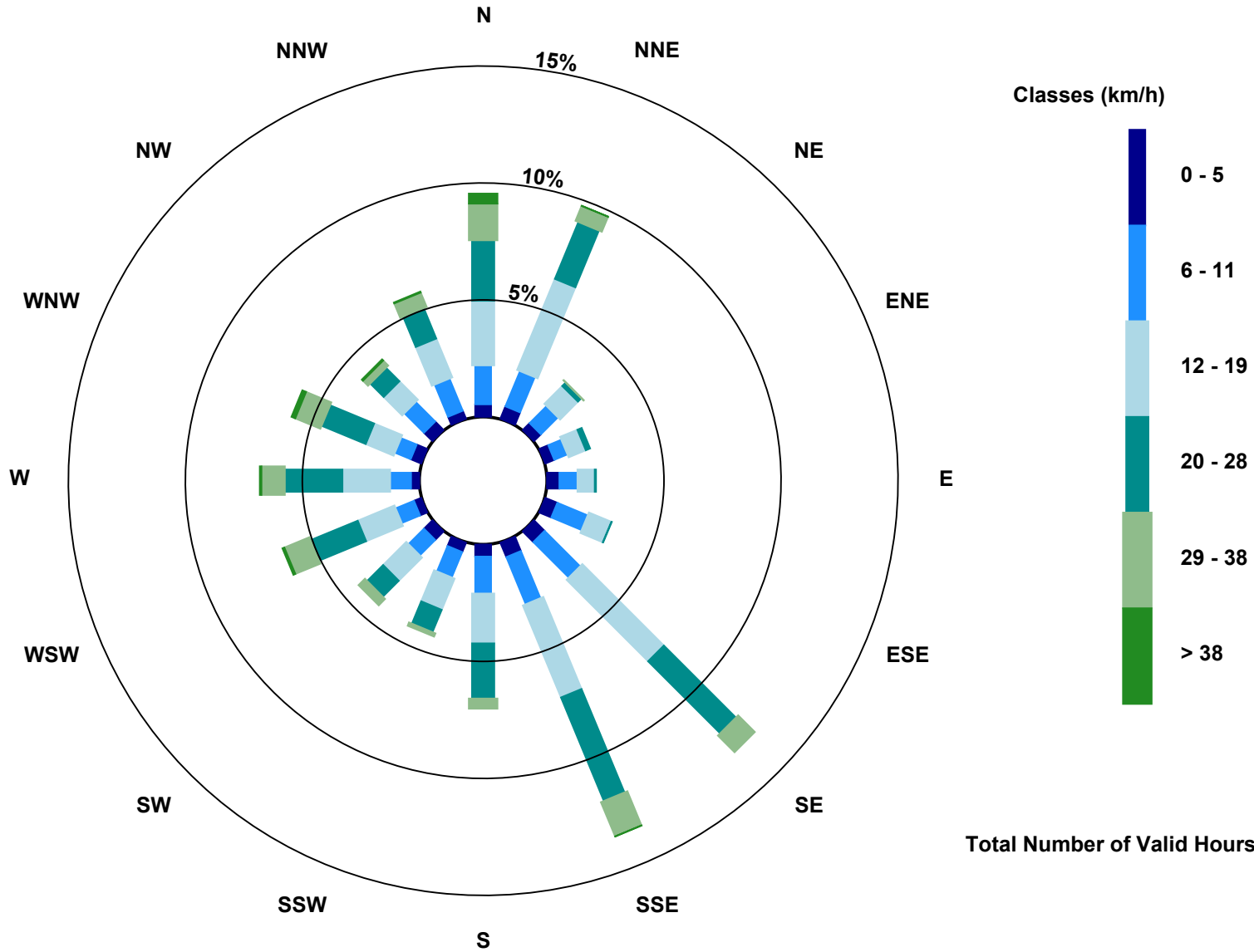
Wind Speed 45m (WS45) - km/h
Mannix





Wood Buffalo Environmental Association
Wind Rose 2024

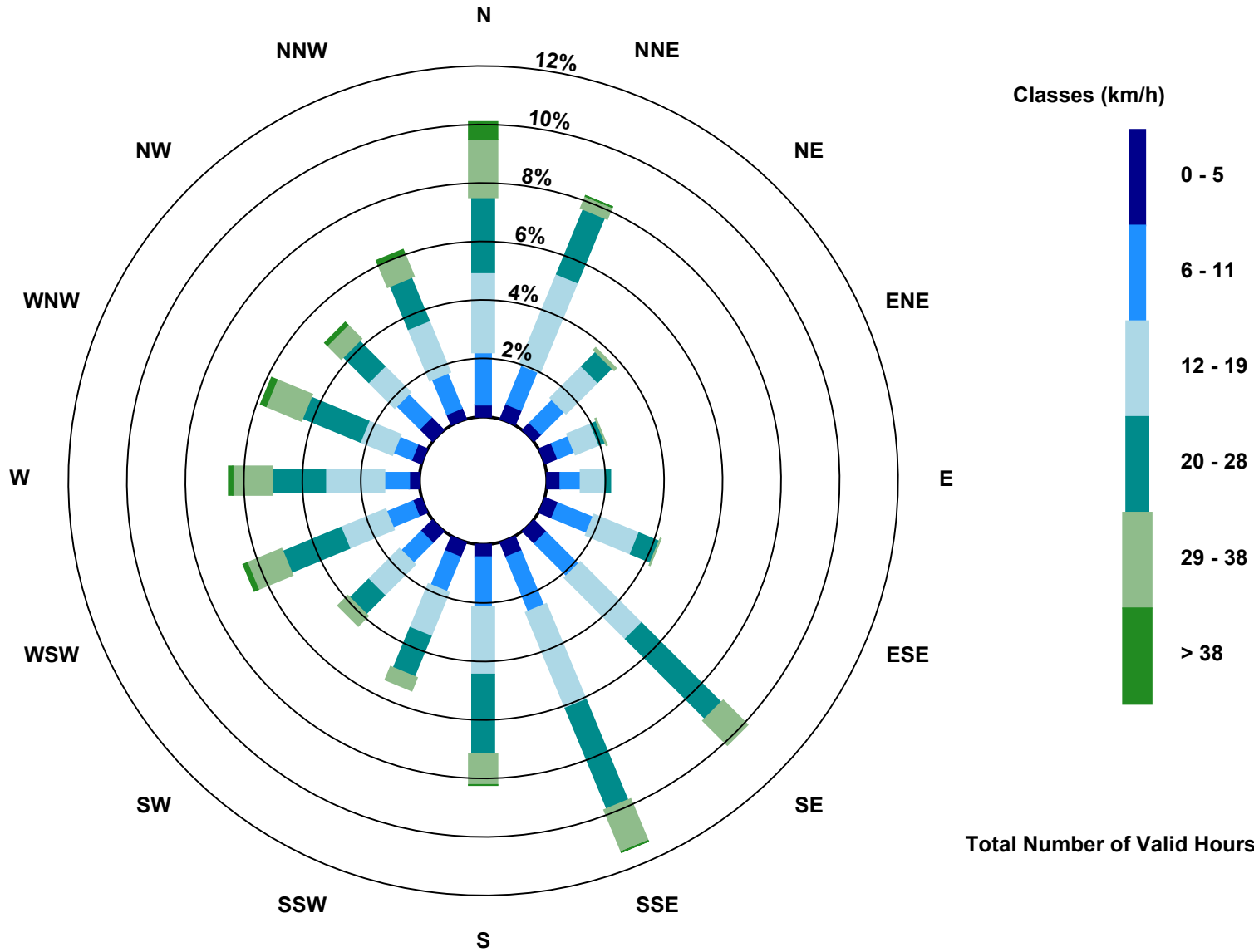
Wind Speed 75m (WS75) - km/h
Mannix





Wood Buffalo Environmental Association
Wind Rose 2024

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

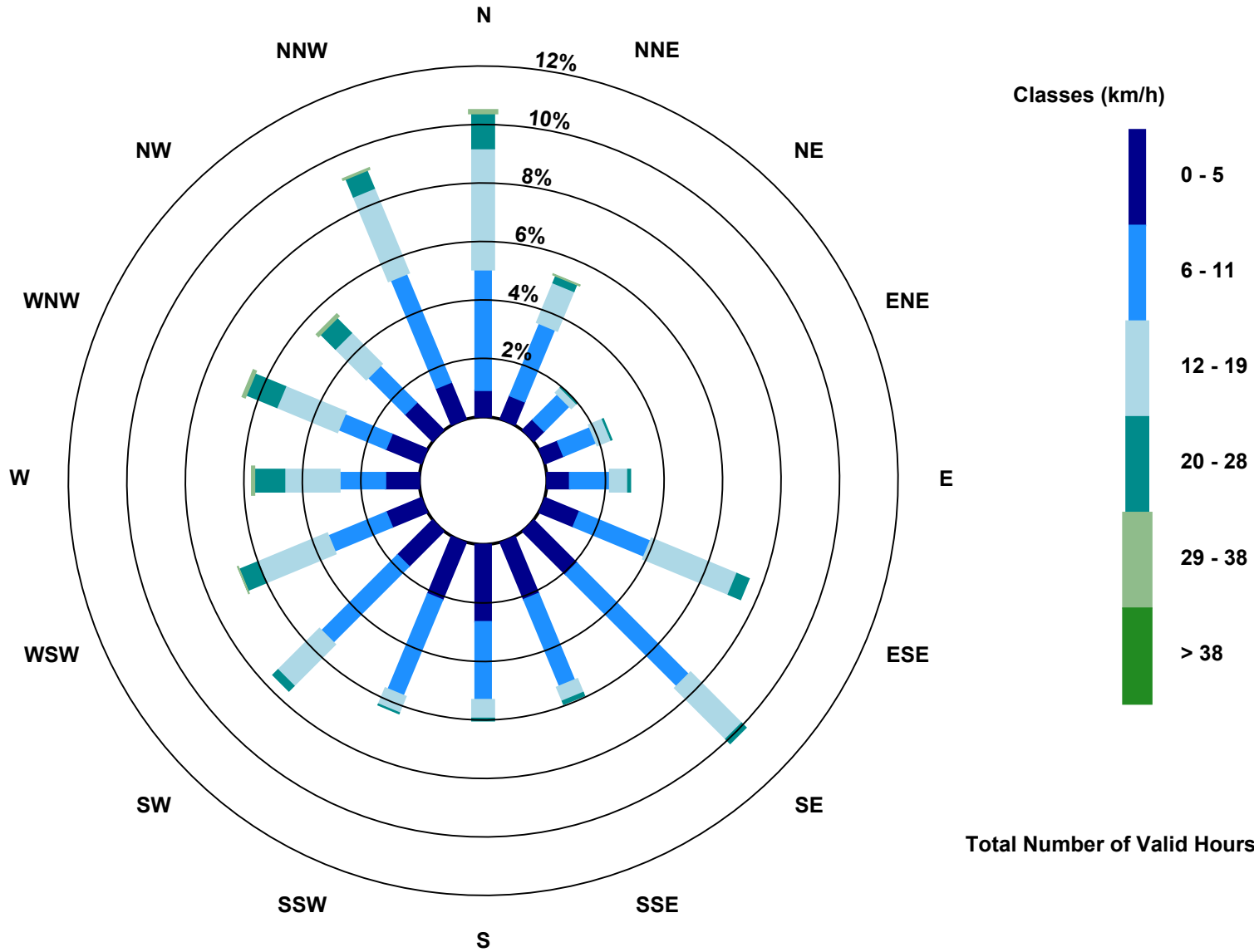


Total Number of Valid Hours: 8395



Wood Buffalo Environmental Association
Wind Rose 2024

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

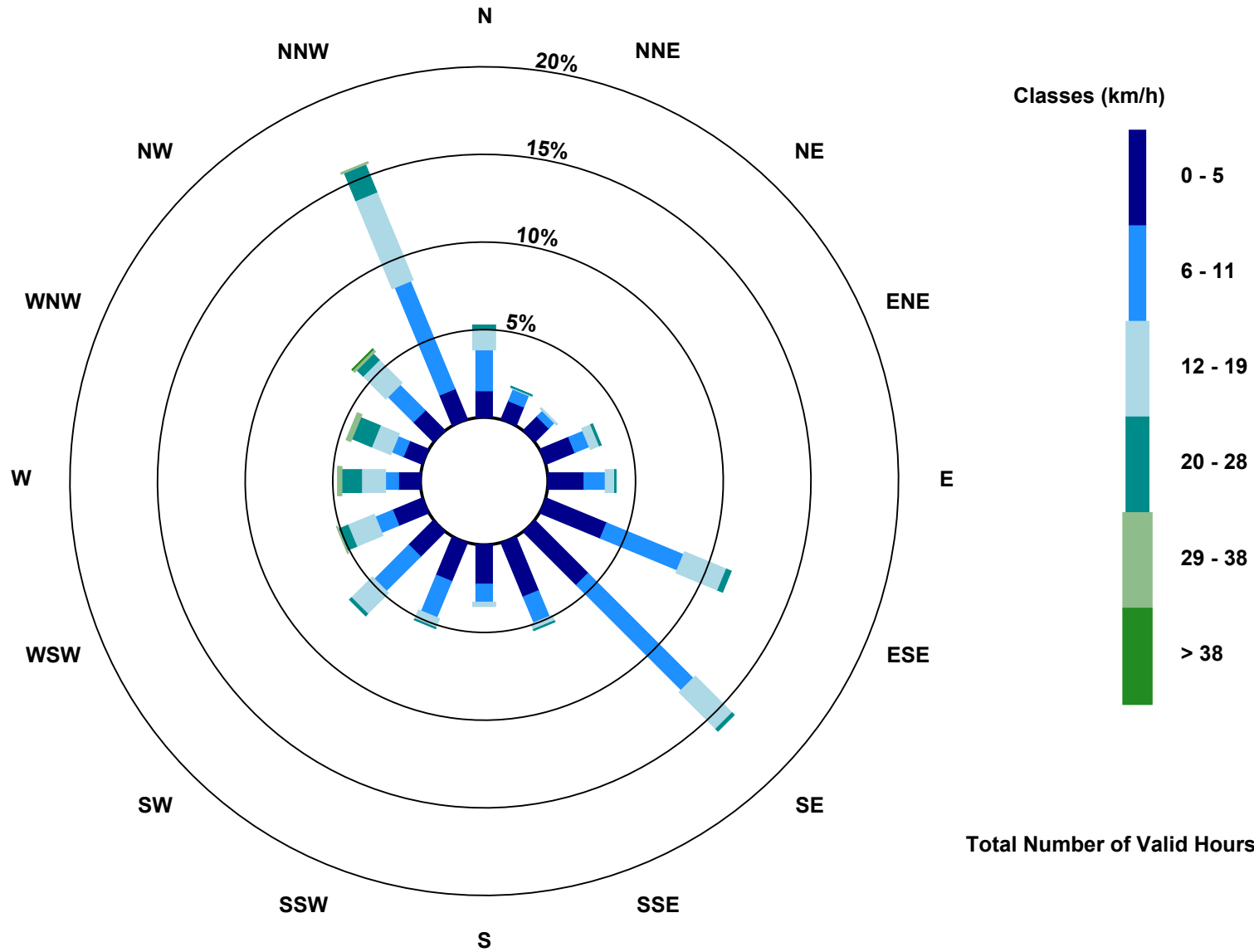


Total Number of Valid Hours: 8779



Wood Buffalo Environmental Association
Wind Rose 2024

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

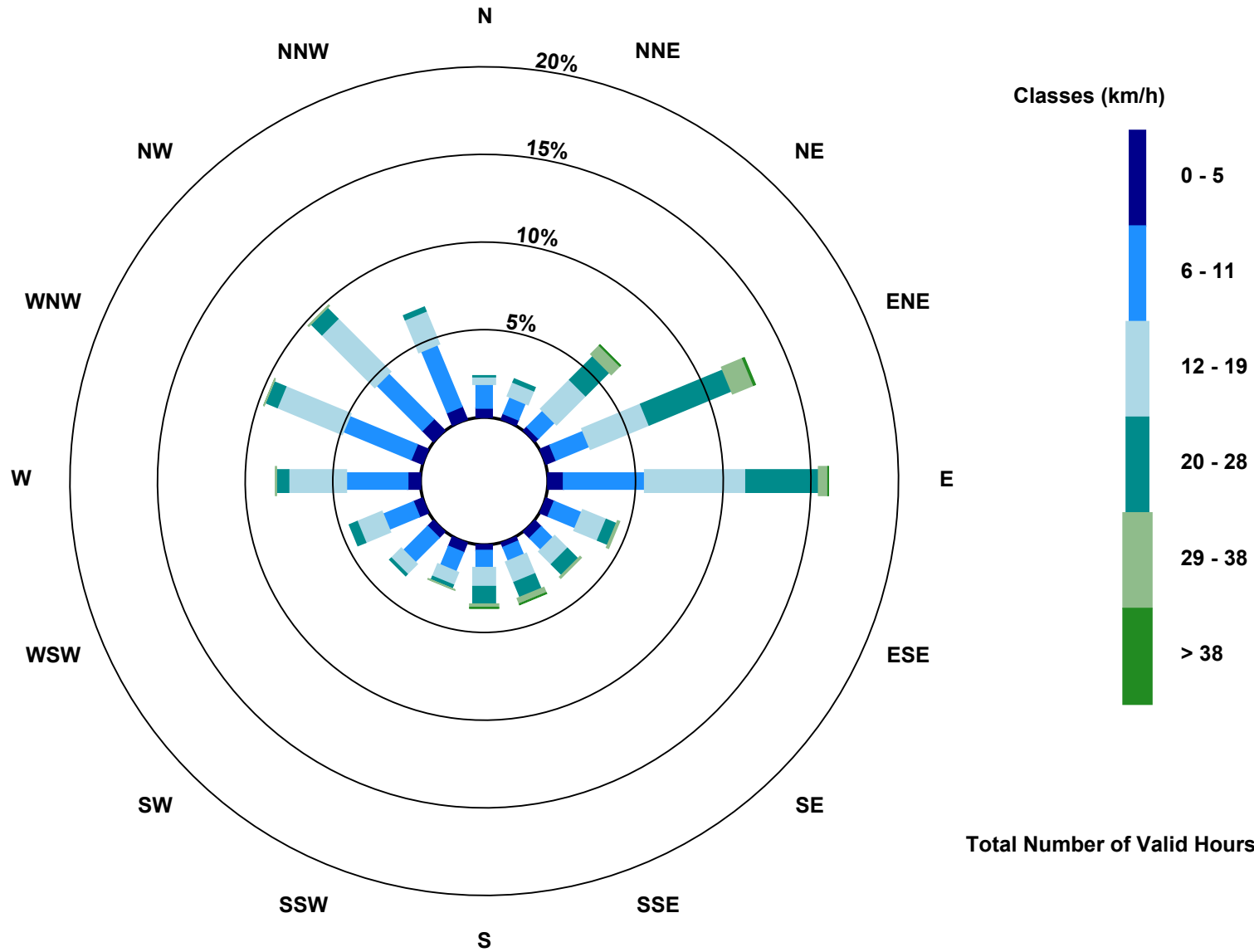


Total Number of Valid Hours: 8743



Wood Buffalo Environmental Association
Wind Rose 2024

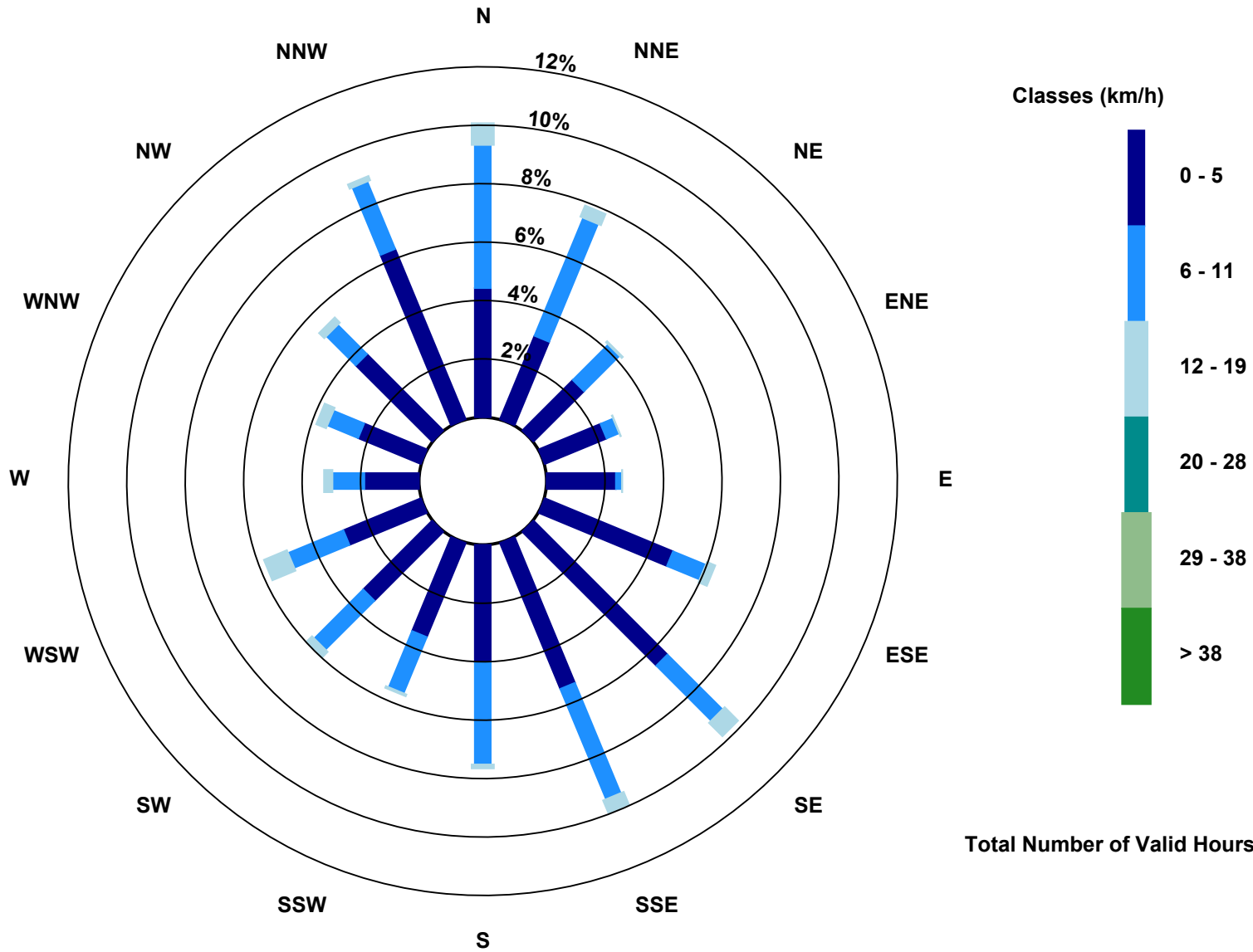
Wind Speed 10m (WS10) - km/h
Fort Chipewyan





Wood Buffalo Environmental Association
Wind Rose 2024

Wind Speed 10m (WS10) - km/h
Barge Landing

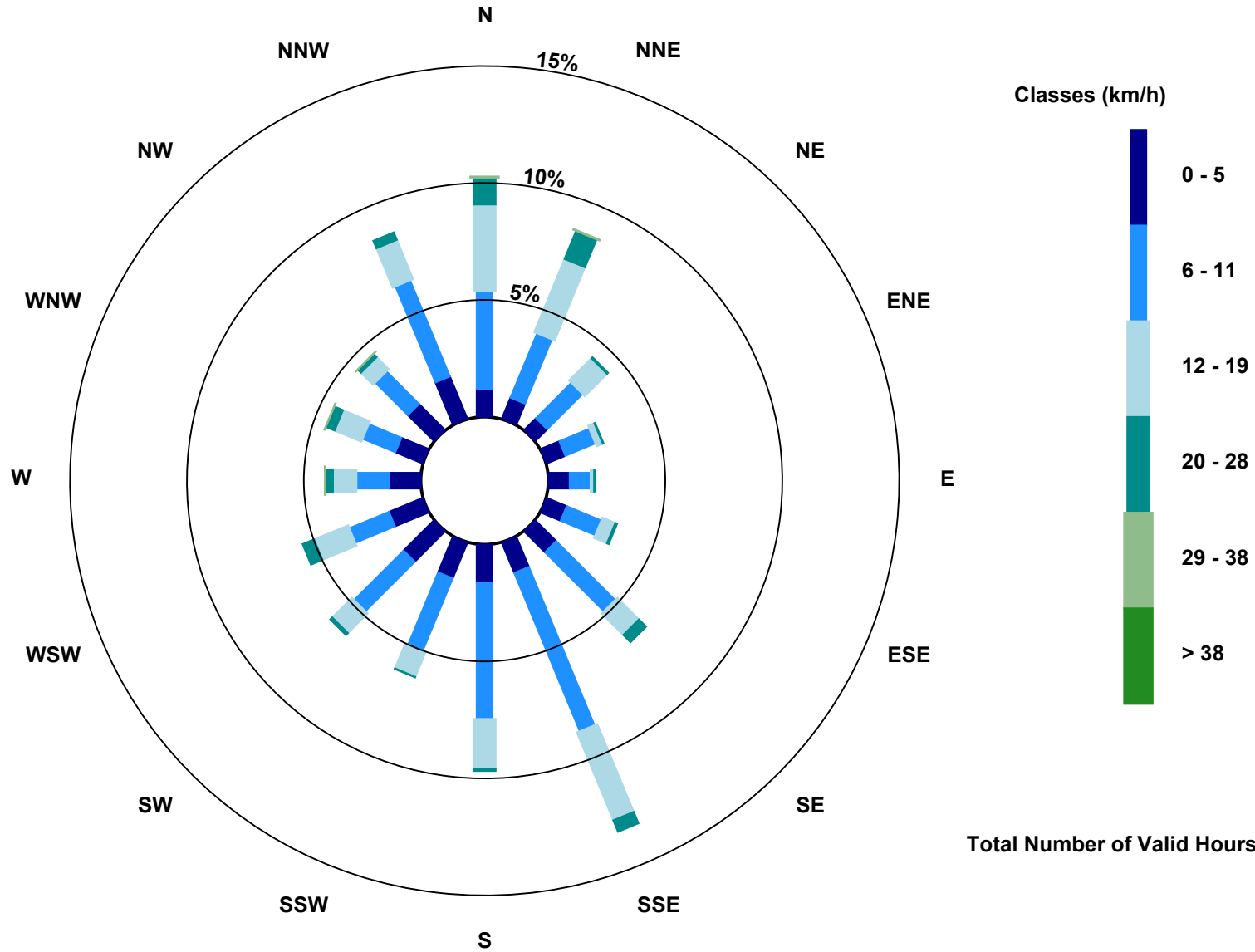


Total Number of Valid Hours: 8610



Wood Buffalo Environmental Association
Wind Rose 2024

Wind Speed 20m (WS20) - km/h
Barge Landing

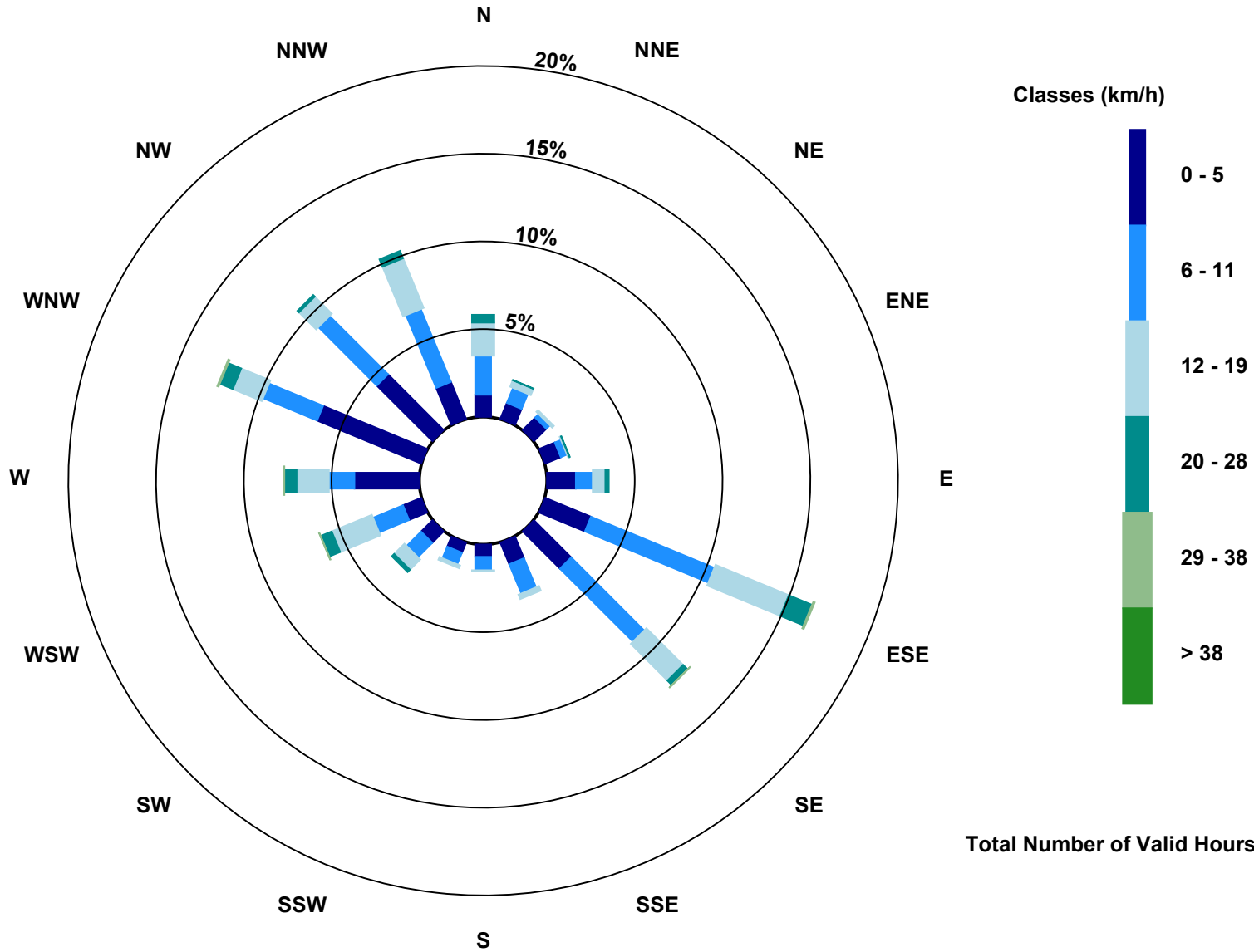


Total Number of Valid Hours: 8736



Wood Buffalo Environmental Association
Wind Rose 2024

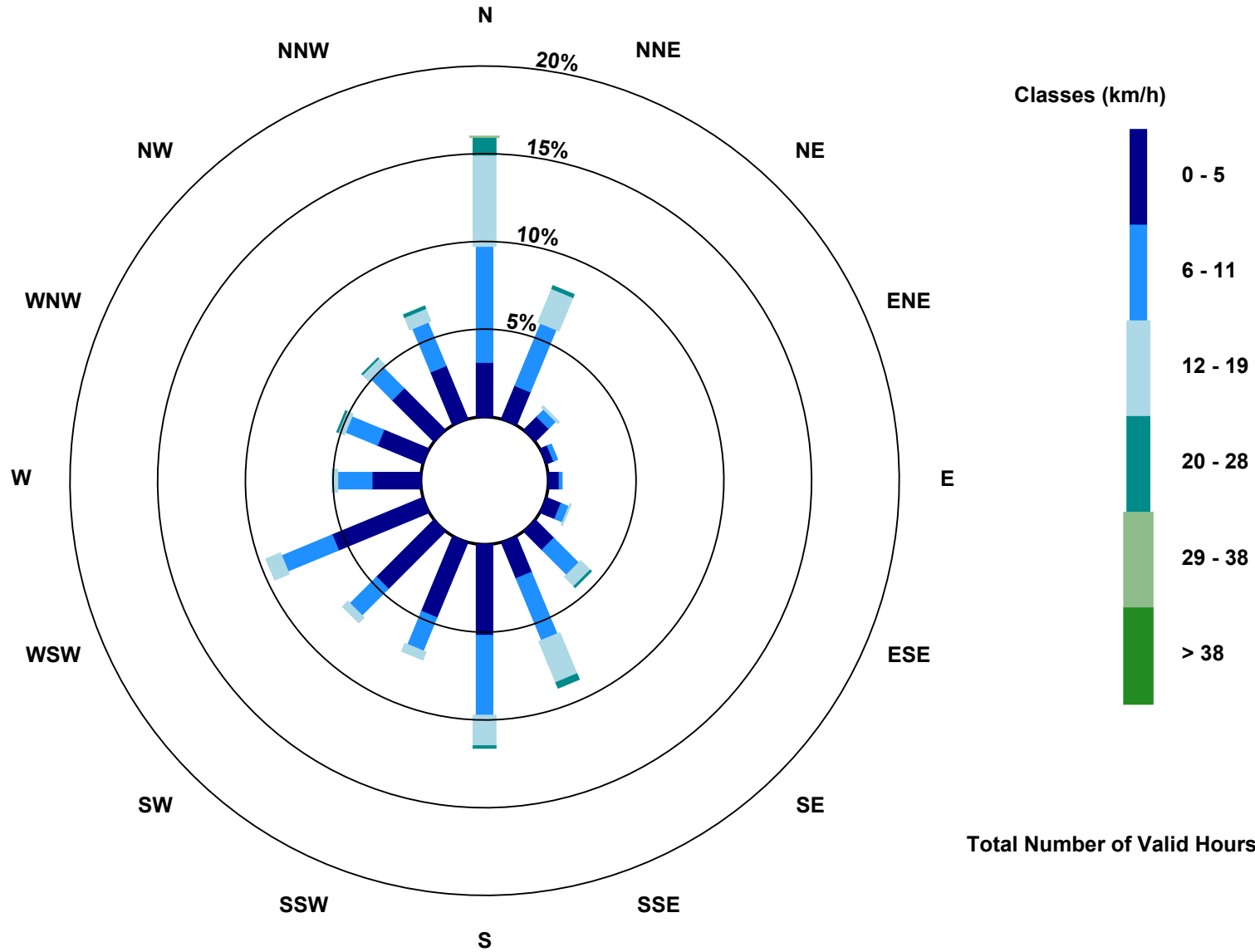
Wind Speed 10m (WS10) - km/h
Lower Camp





Wood Buffalo Environmental Association
Wind Rose 2024

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

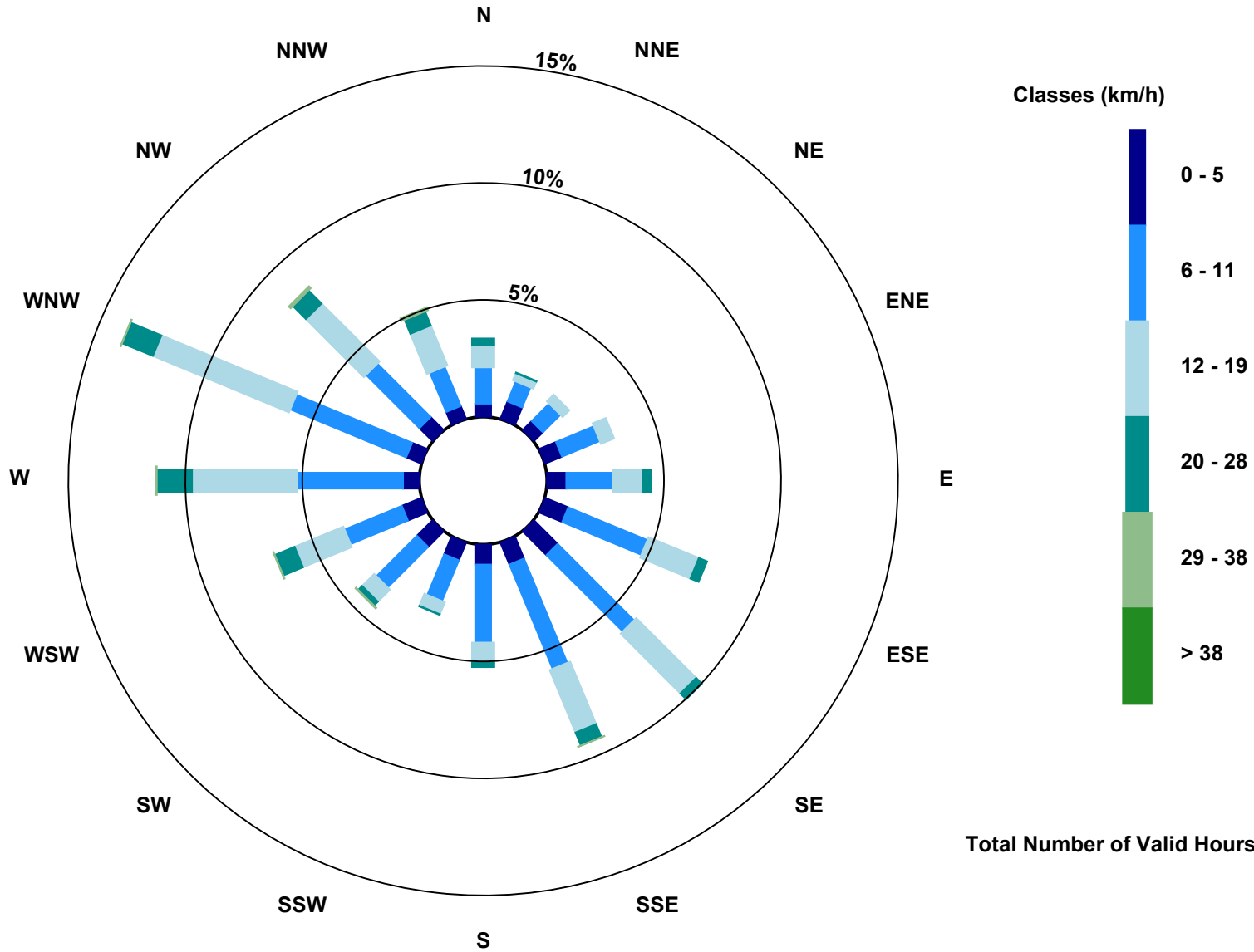


Total Number of Valid Hours: 8545



Wood Buffalo Environmental Association
Wind Rose 2024

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

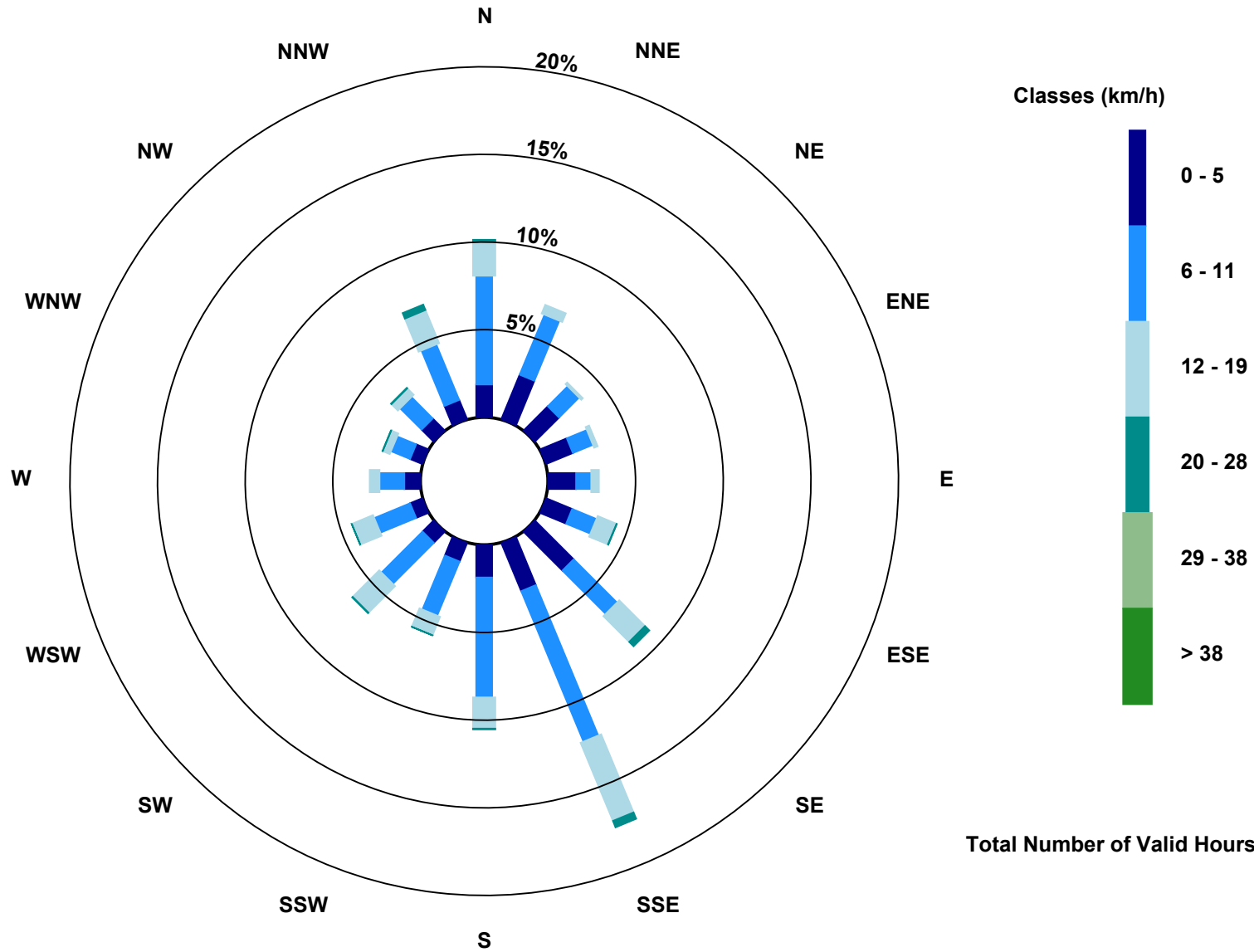


Total Number of Valid Hours: 8638



Wood Buffalo Environmental Association
Wind Rose 2024

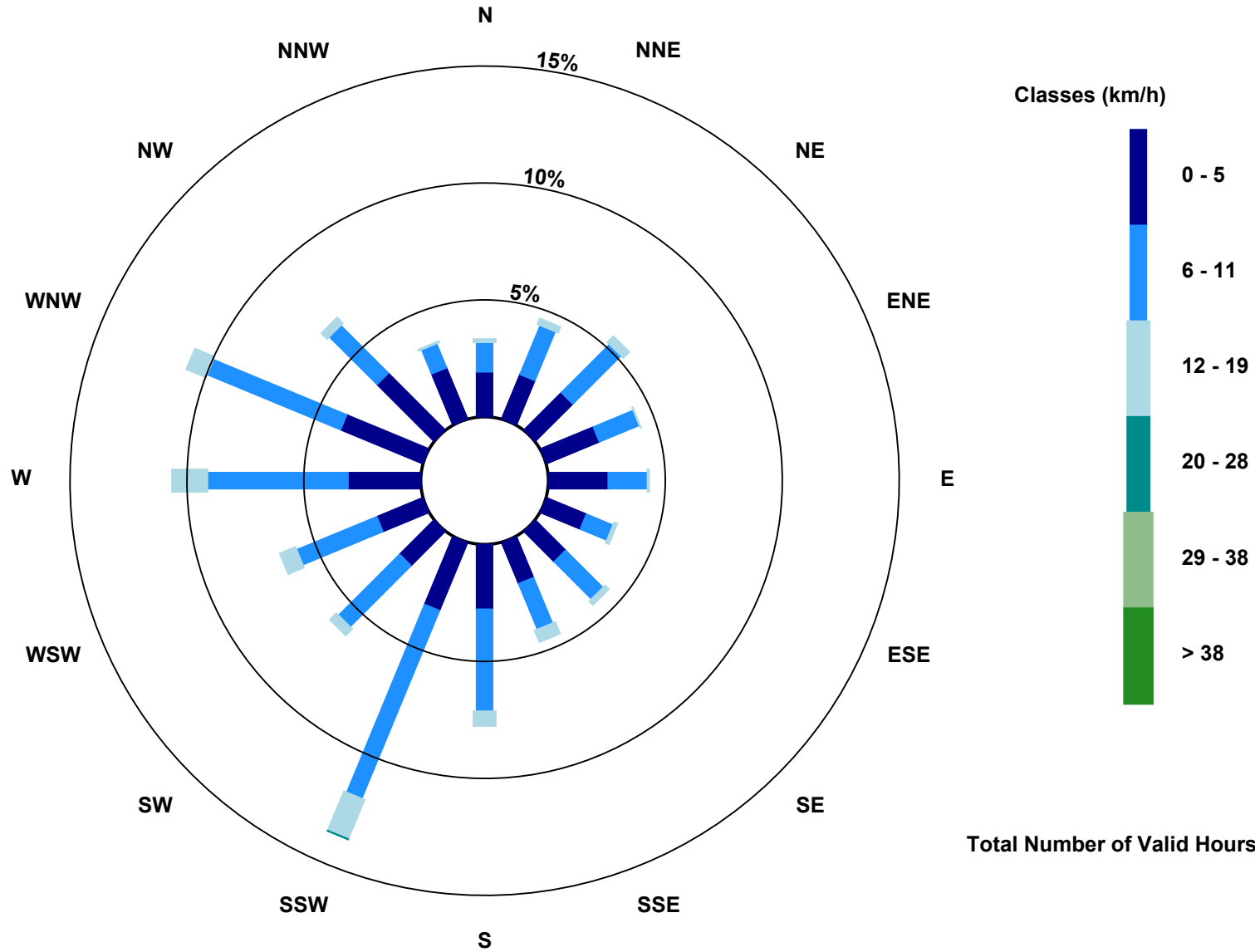
Wind Speed 10m (WS10) - km/h
Wapasu





Wood Buffalo Environmental Association
Wind Rose 2024

Wind Speed 10m (WS10) - km/h
Stony Mountain

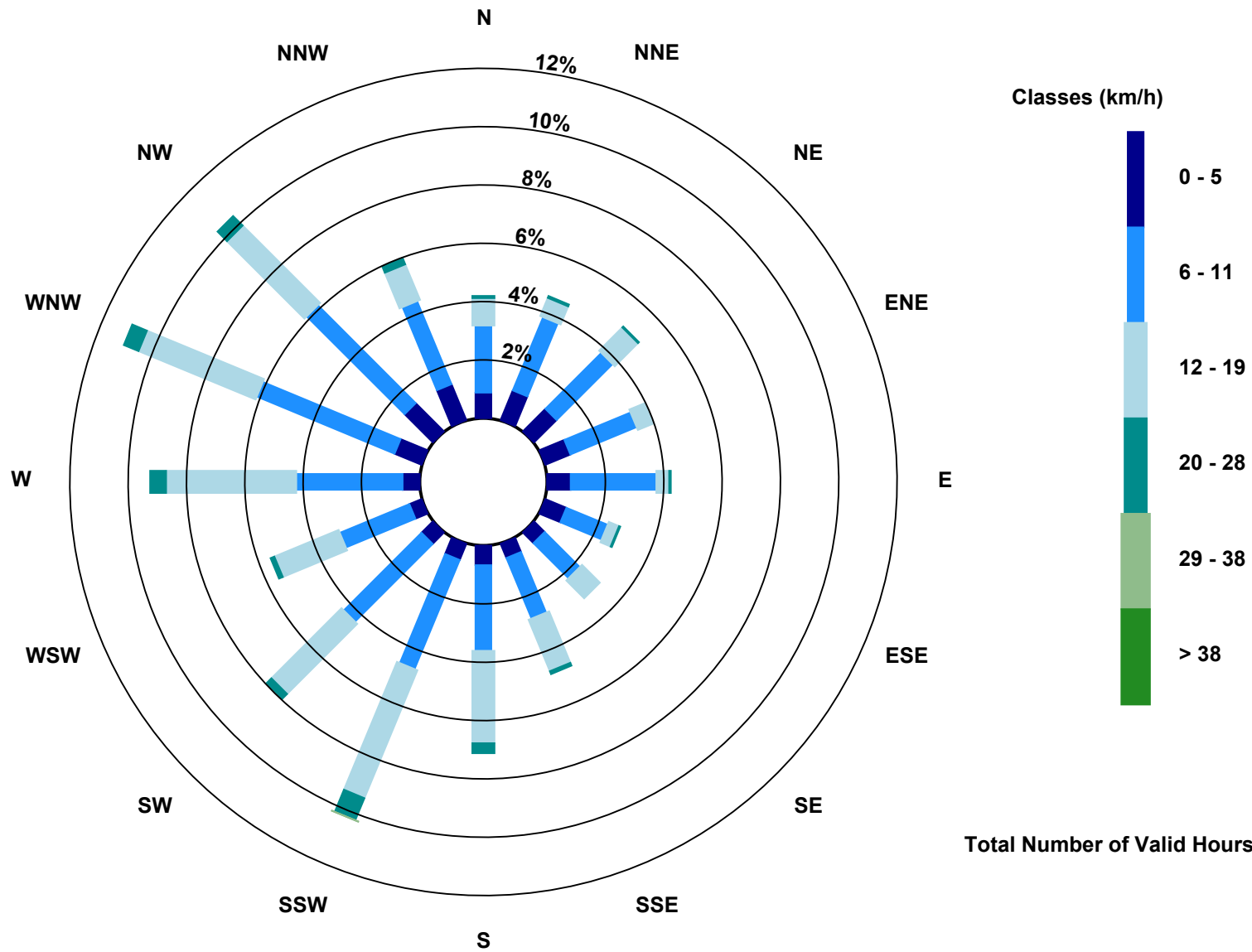


Total Number of Valid Hours: 7153



Wood Buffalo Environmental Association
Wind Rose 2024

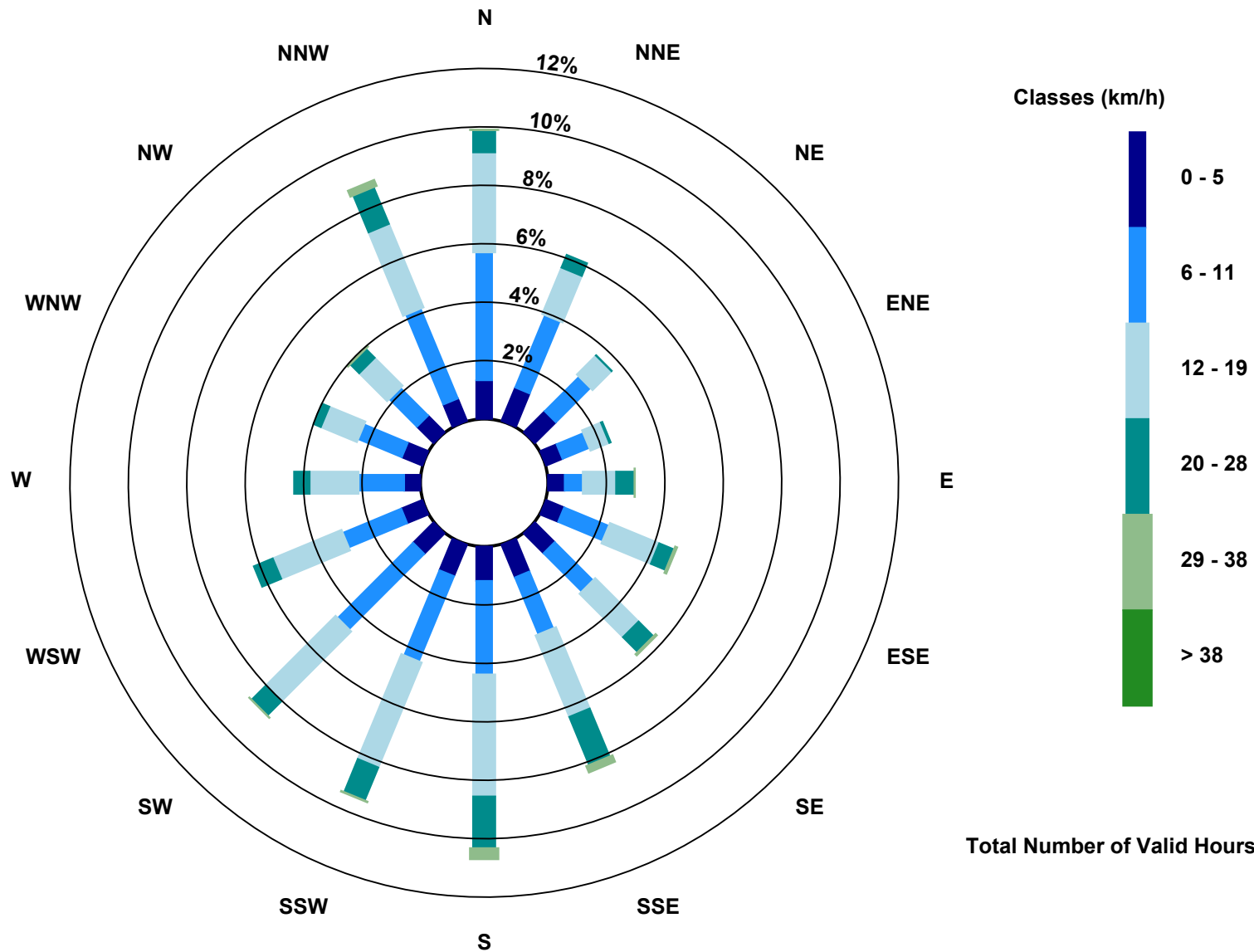
Wind Speed 20m (WS20) - km/h
Stony Mountain





Wood Buffalo Environmental Association
Wind Rose 2024

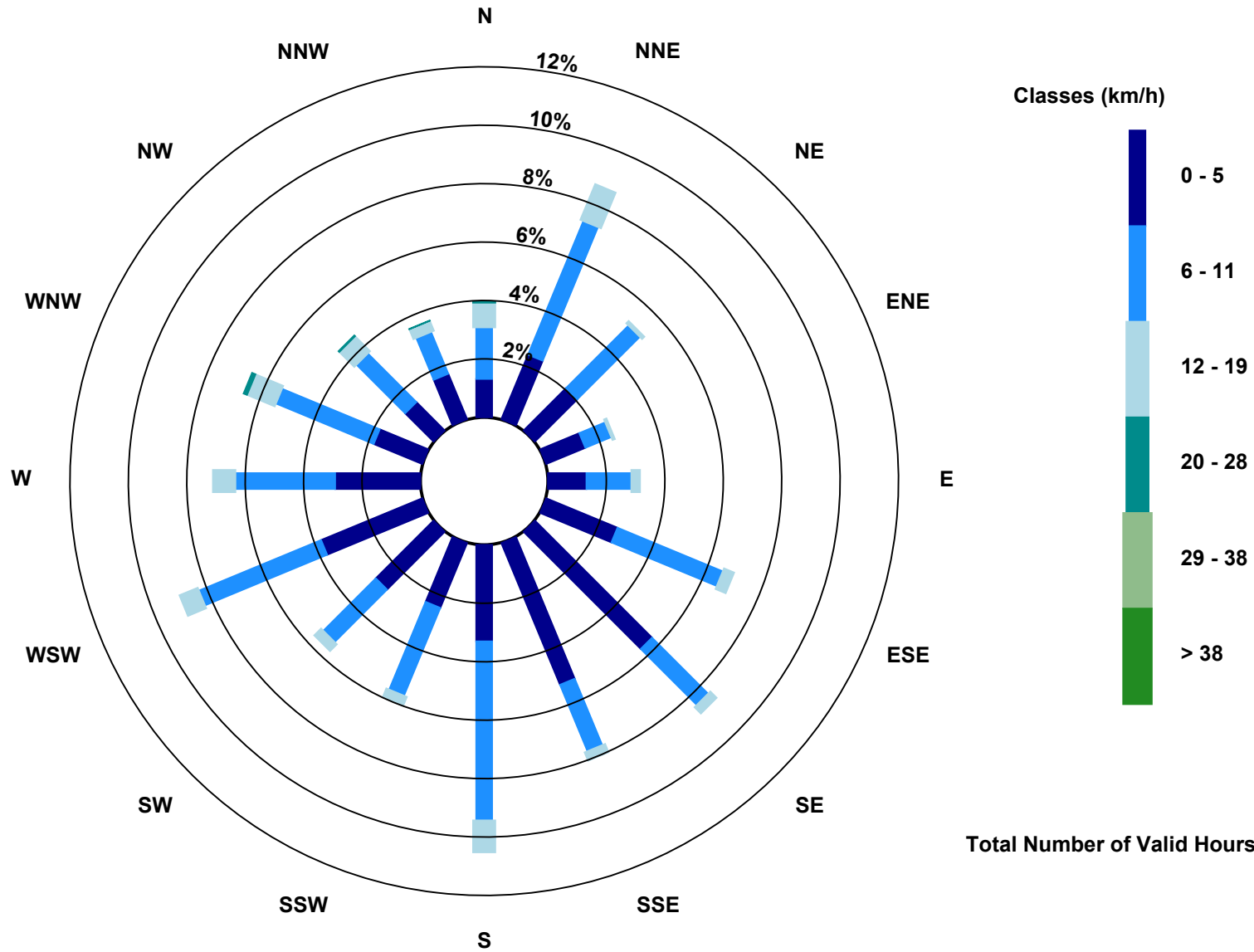
Wind Speed 10m (WS10) - km/h
Firebag





Wood Buffalo Environmental Association
Wind Rose 2024

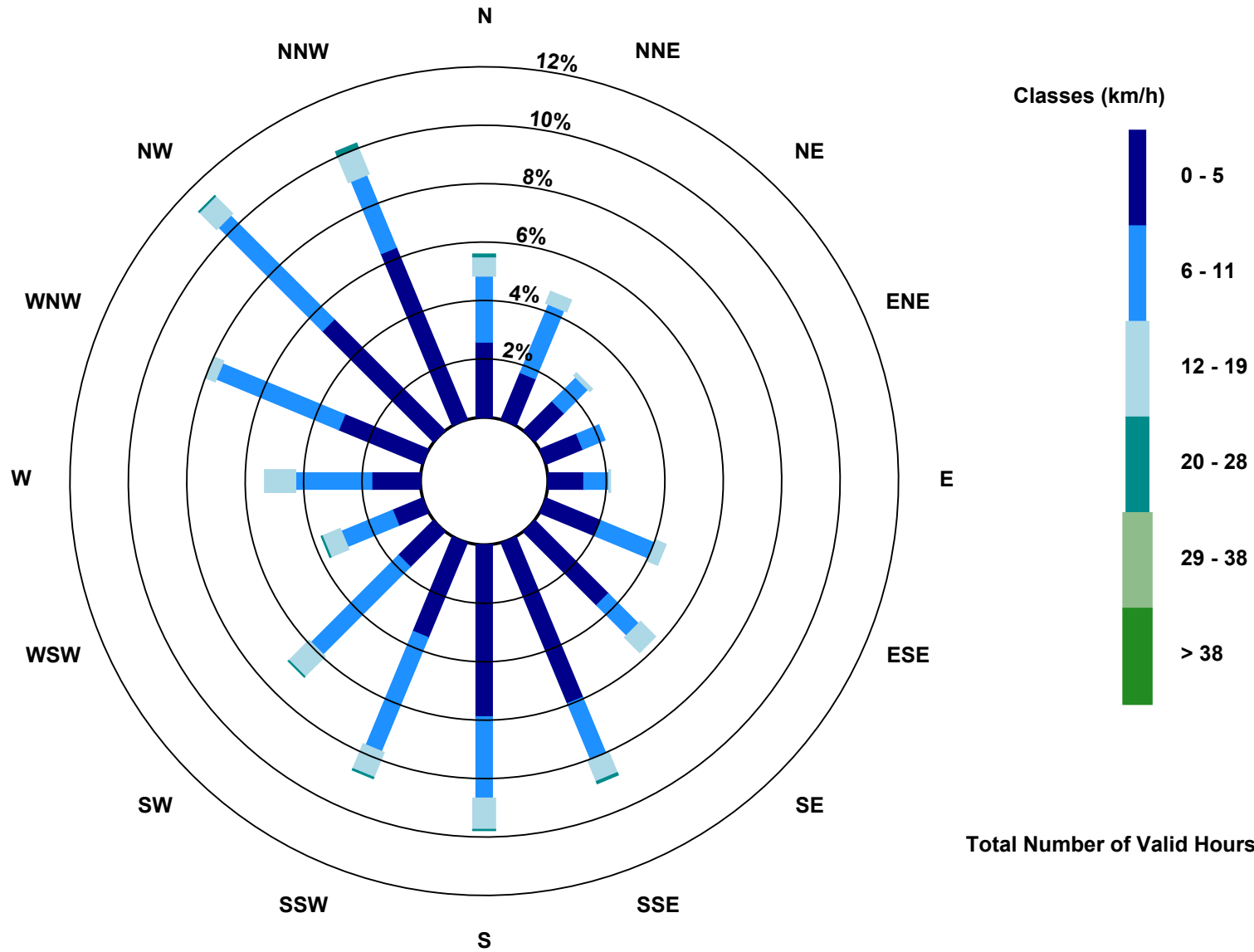
Wind Speed 10m (WS10) - km/h
Mackay River





Wood Buffalo Environmental Association
Wind Rose 2024

Wind Speed 10m (WS10) - km/h
Conklin

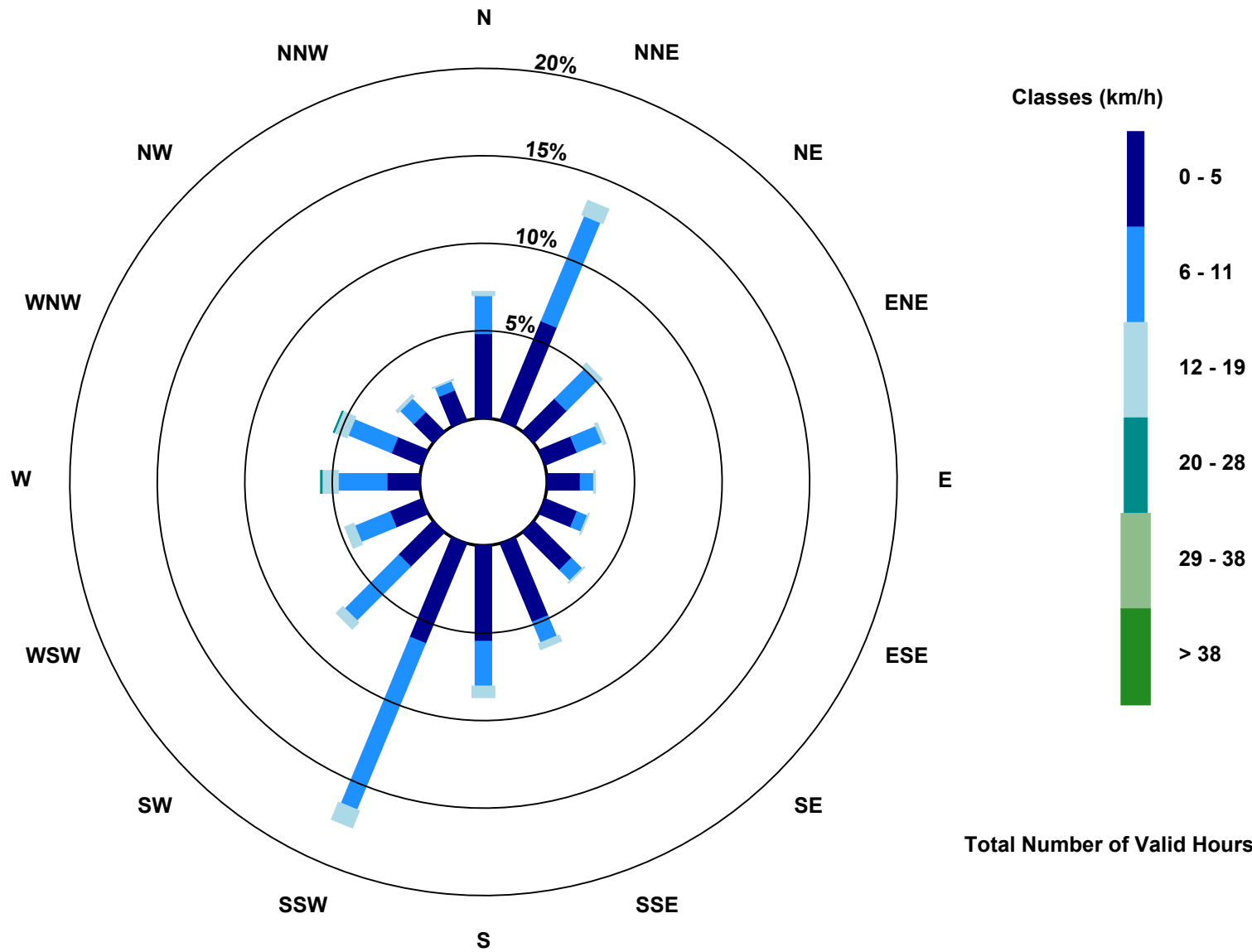


Total Number of Valid Hours: 8669



Wood Buffalo Environmental Association
Wind Rose 2024

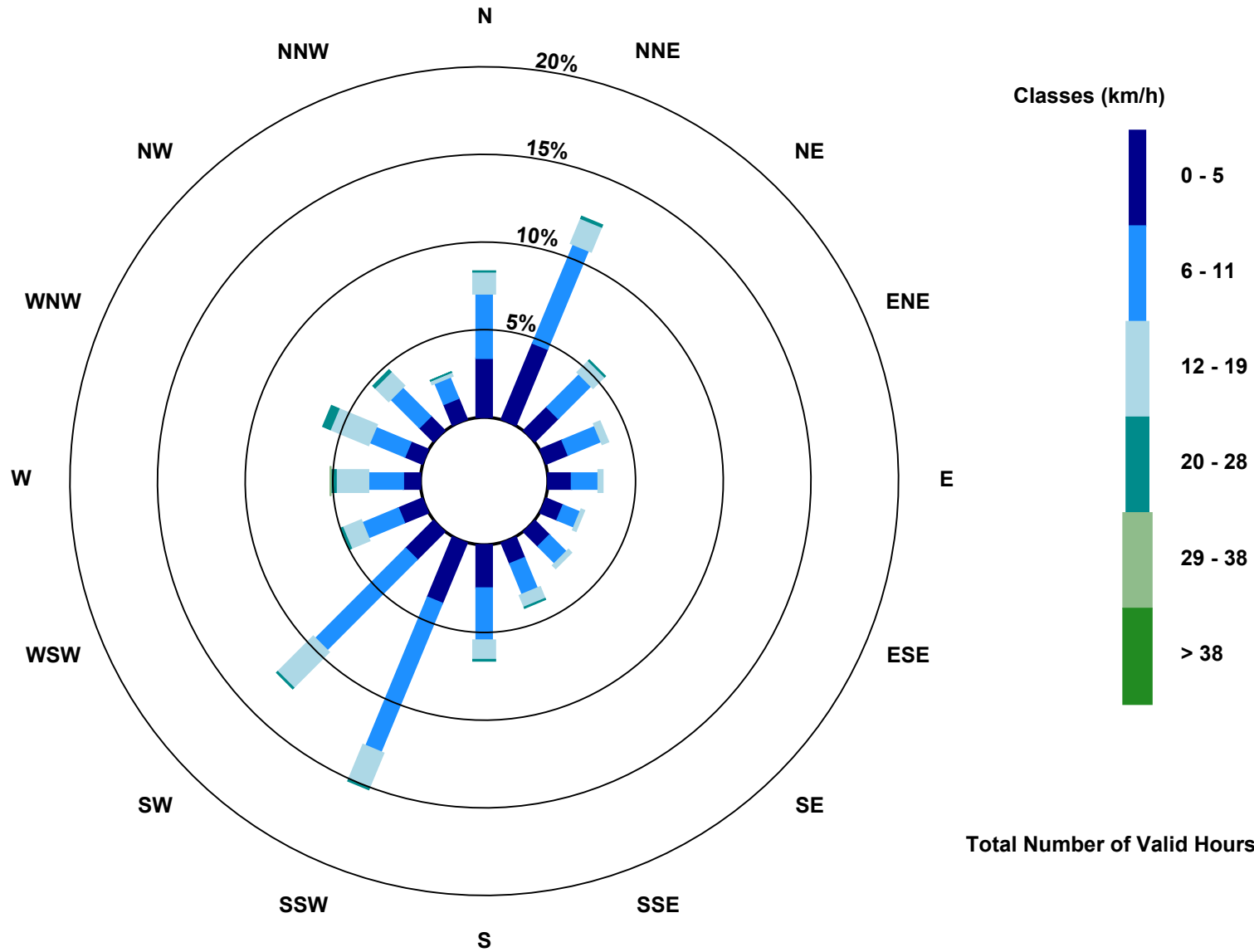
Wind Speed 10m (WS10) - km/h
Janvier





Wood Buffalo Environmental Association
Wind Rose 2024

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

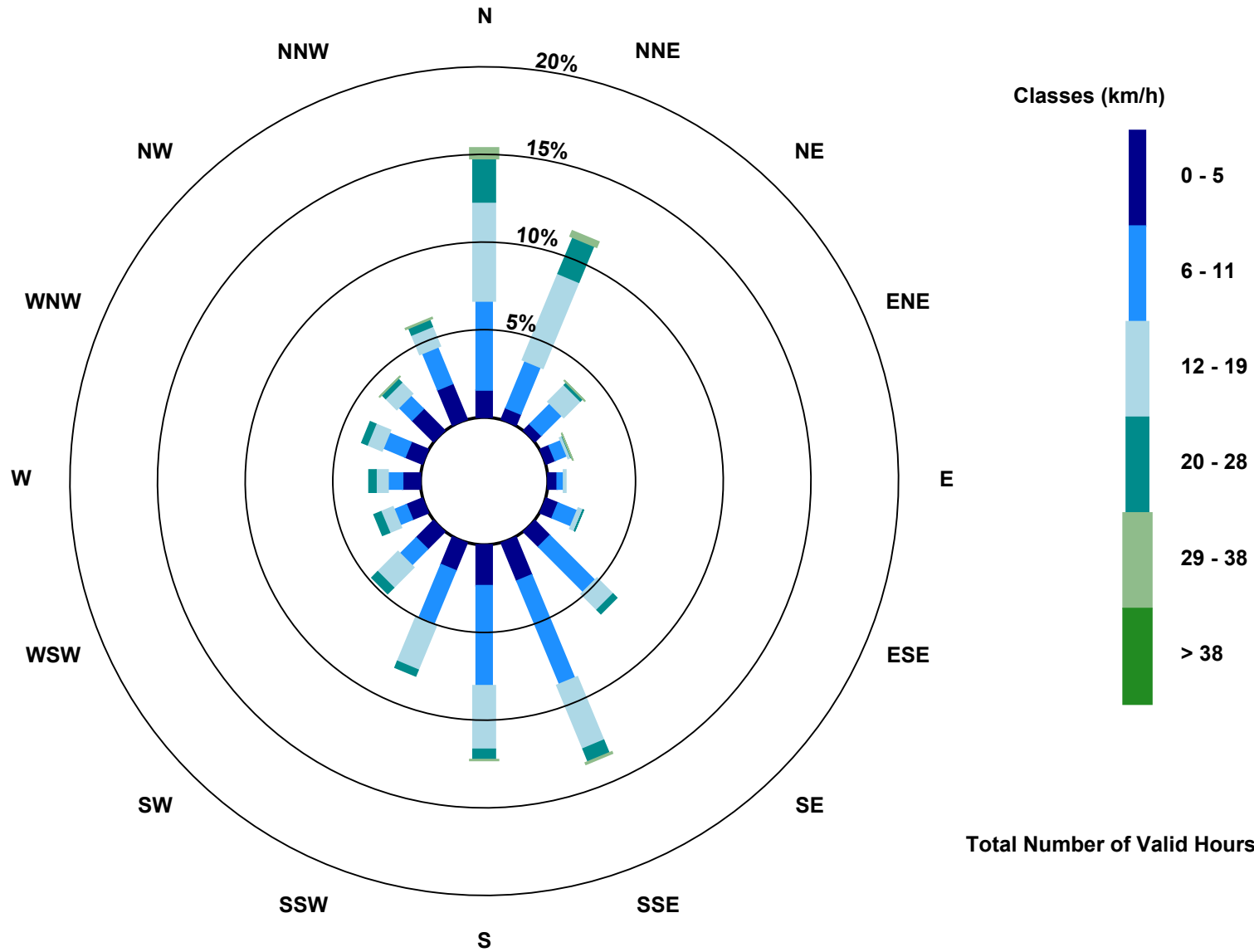


Total Number of Valid Hours: 8569



Wood Buffalo Environmental Association
Wind Rose 2024

Wind Speed 10m (WS10) - km/h
Fort Hills

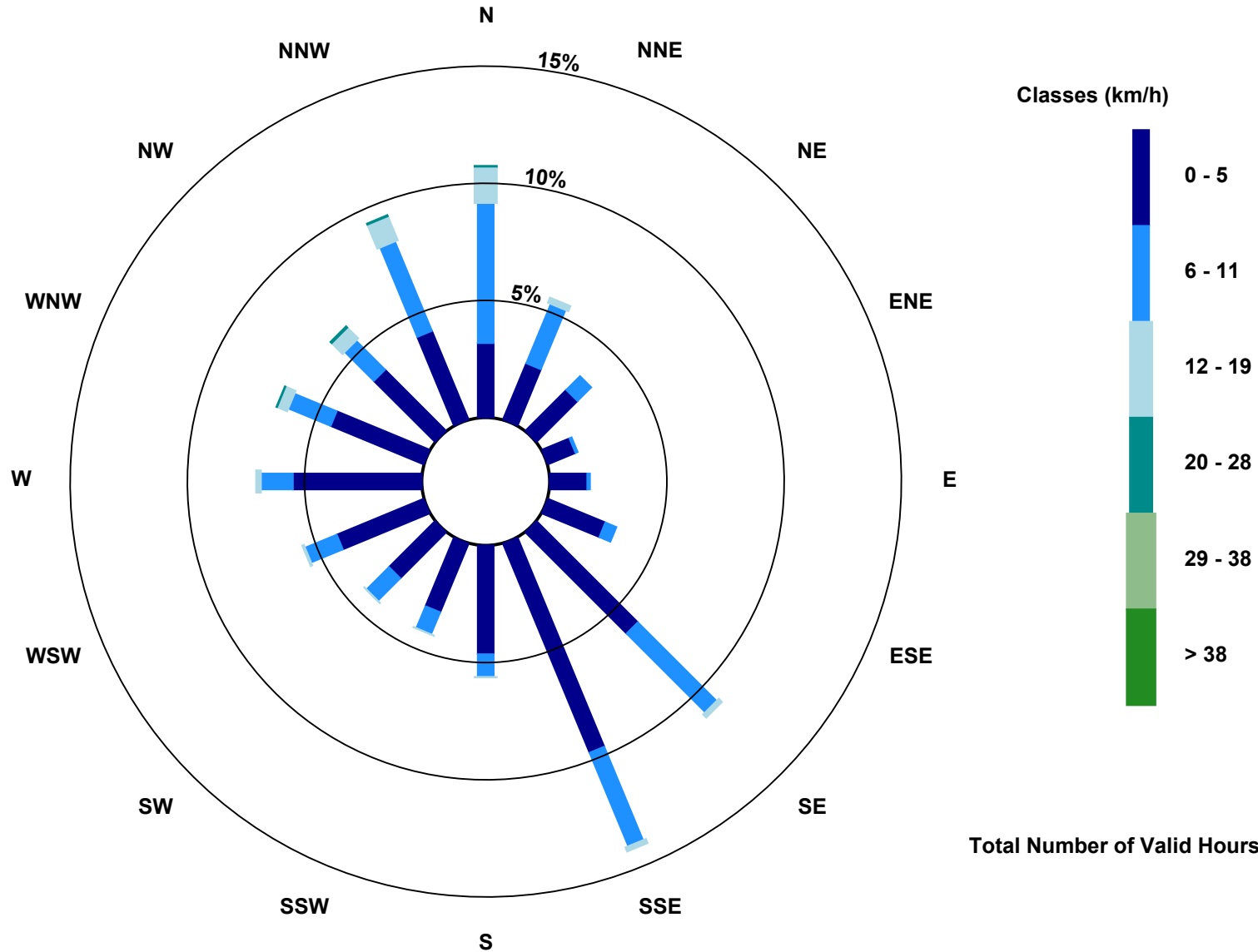


Total Number of Valid Hours: 8748



Wood Buffalo Environmental Association
Wind Rose 2024

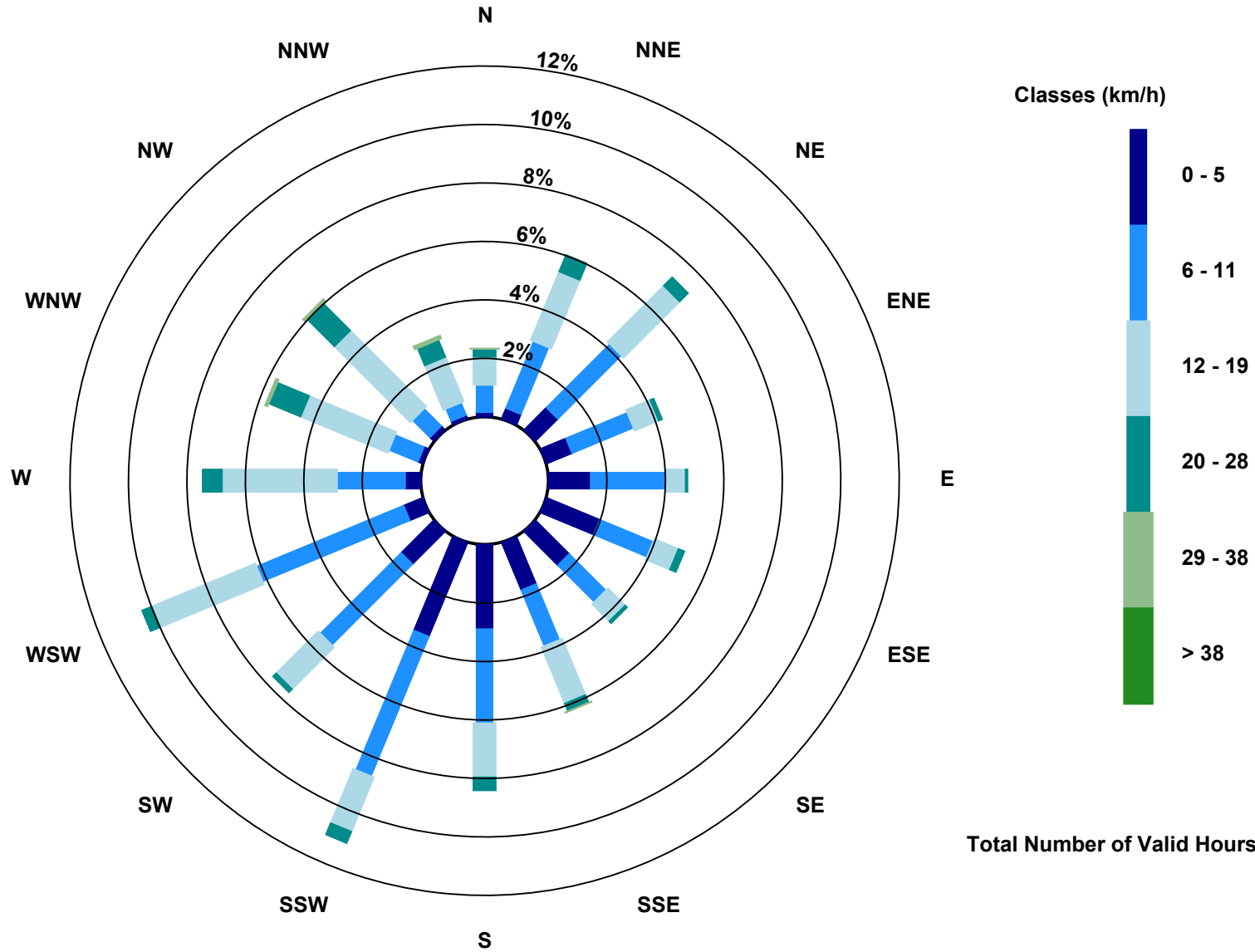
Wind Speed 10m (WS10) - km/h
Waskow ohci Pimatisiwin





Wood Buffalo Environmental Association
Wind Rose 2024

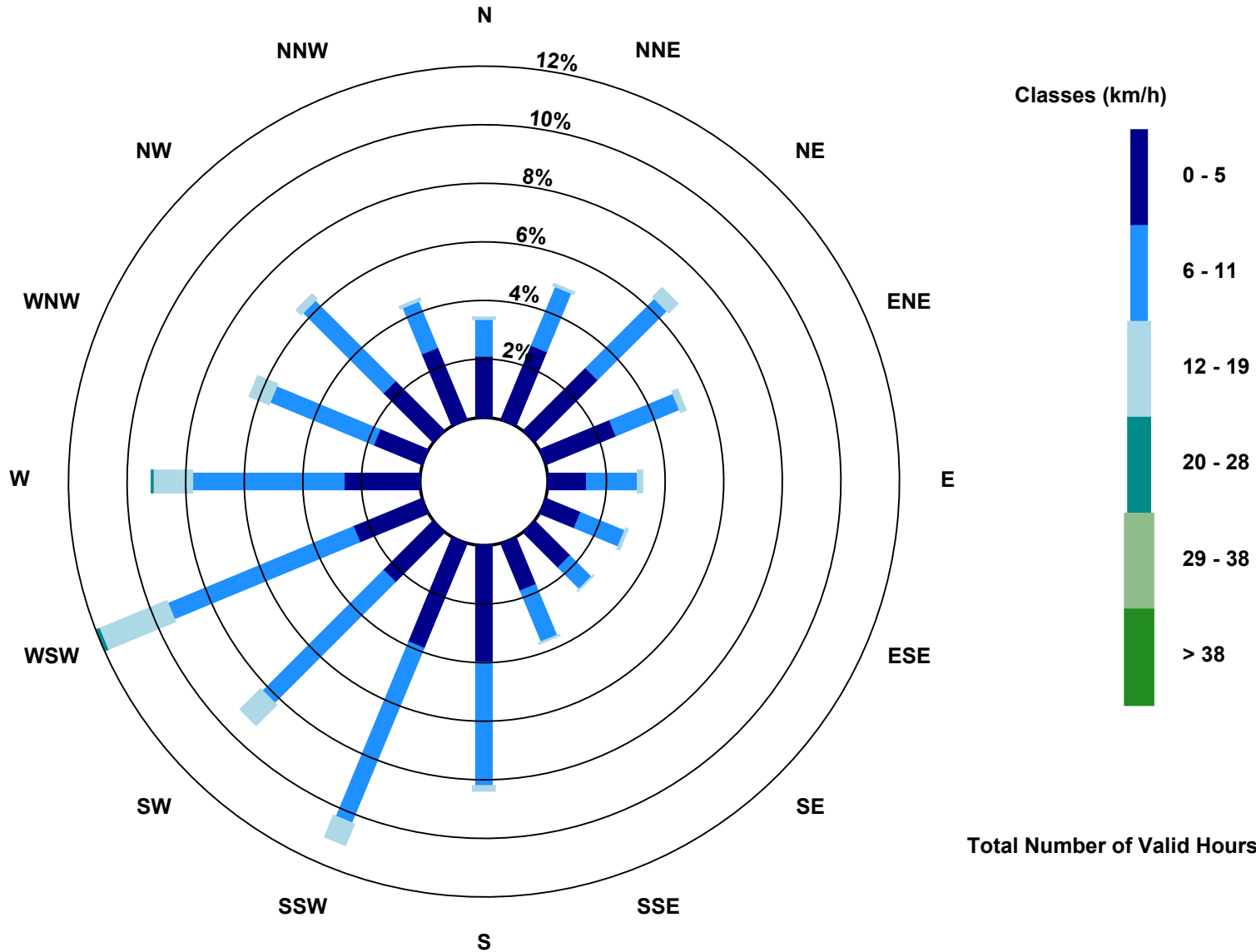
Wind Speed 10m (WS10) - km/h
Christina Lake





Wood Buffalo Environmental Association
Wind Rose 2024

Wind Speed 10m (WS10) - km/h
Jackfish 2/3

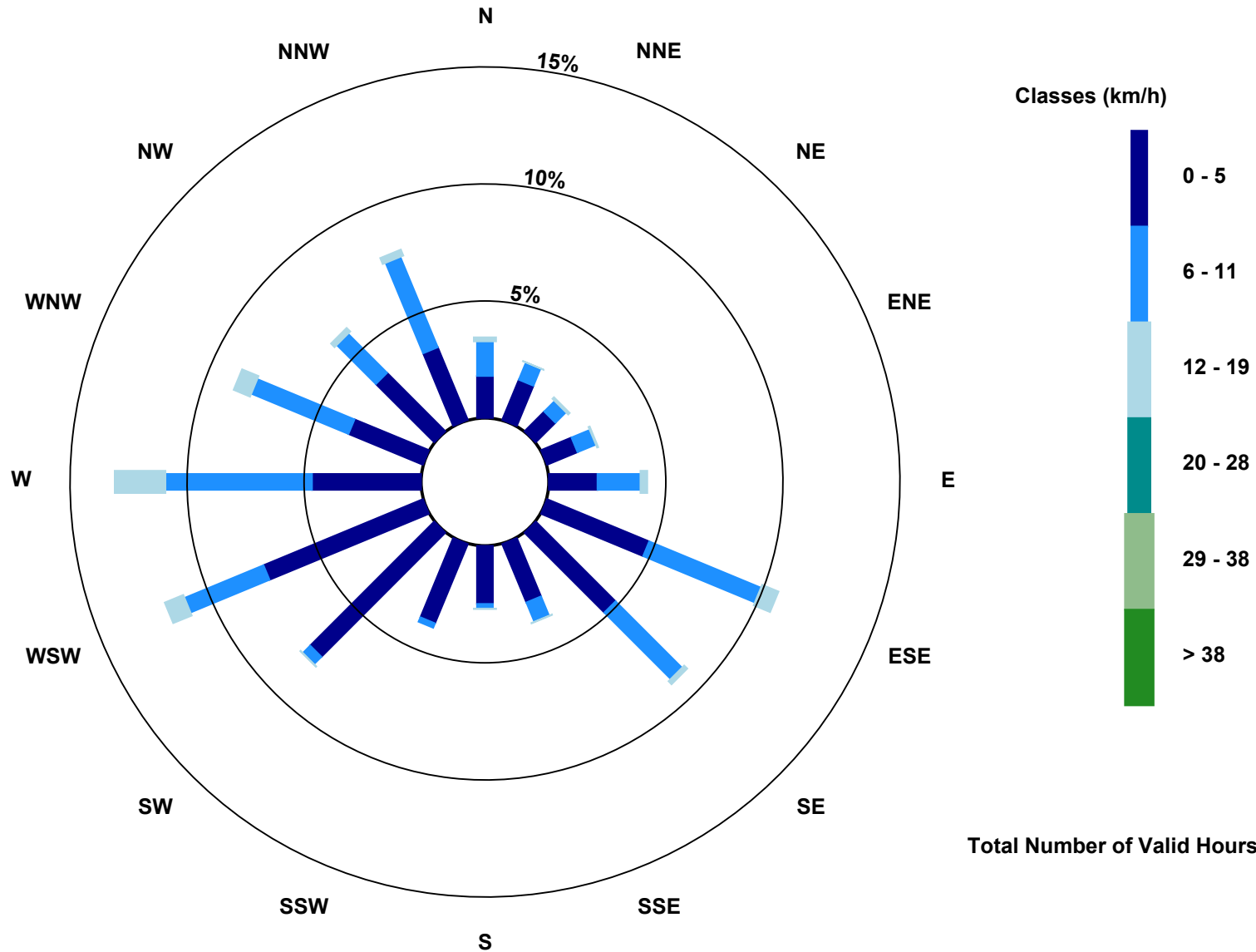


Total Number of Valid Hours: 8686



Wood Buffalo Environmental Association
Wind Rose 2024

Wind Speed 10m (WS10) - km/h
Surmont 2

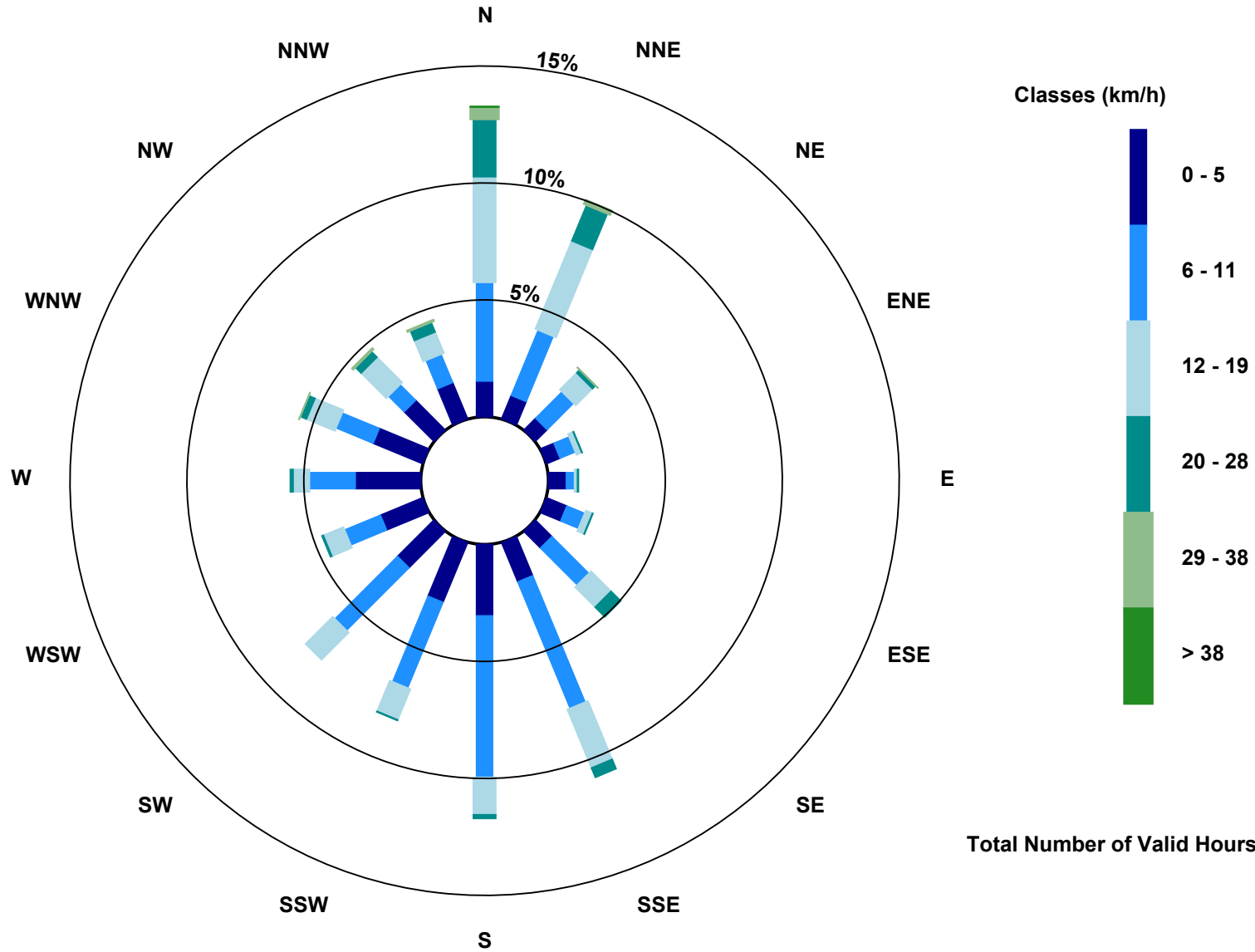


Total Number of Valid Hours: 8514



Wood Buffalo Environmental Association
Wind Rose 2024

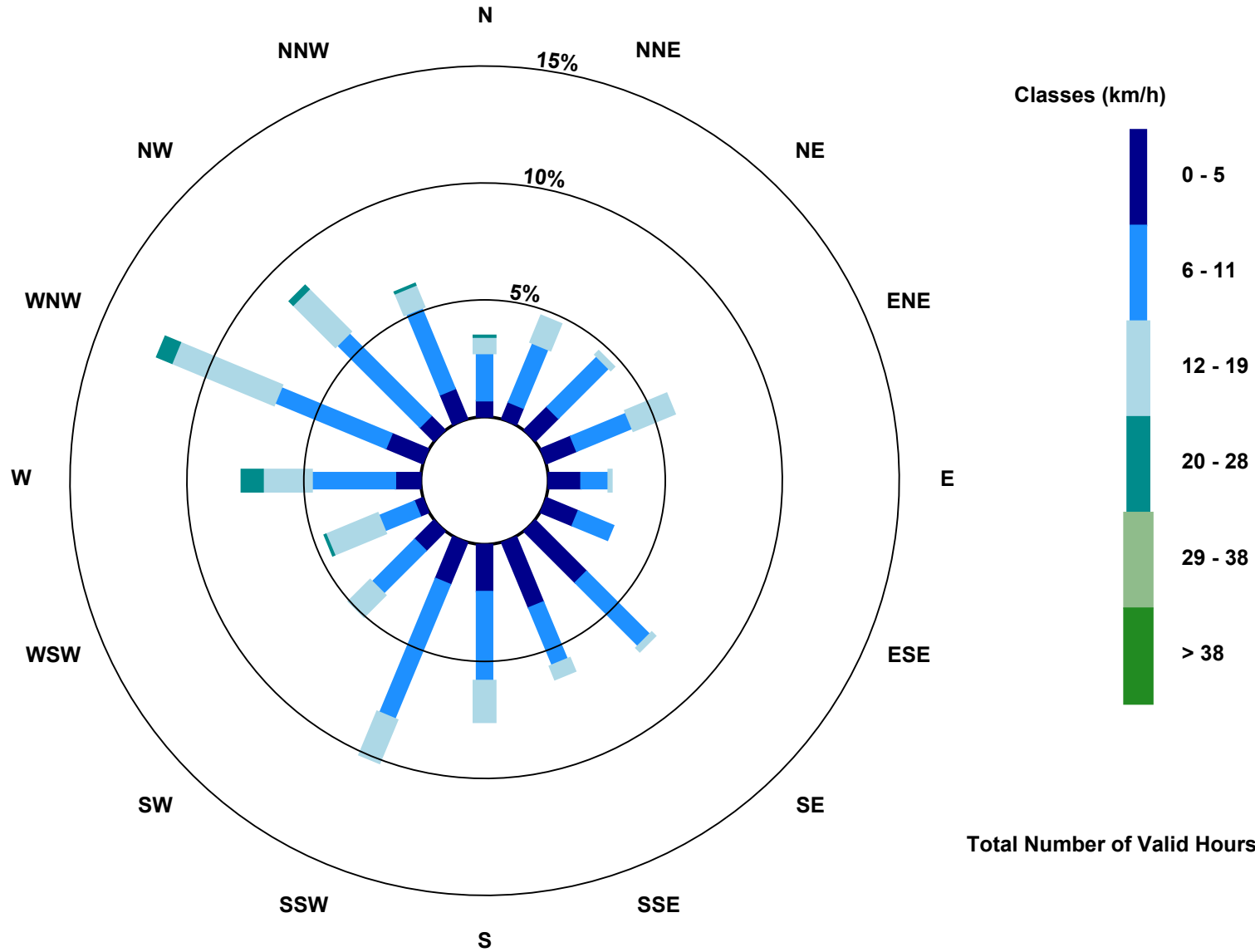
Wind Speed 10m (WS10) - km/h
Ells River





Wood Buffalo Environmental Association
Wind Rose 2024

Wind Speed 10m (WS10) - km/h
Monday Creek

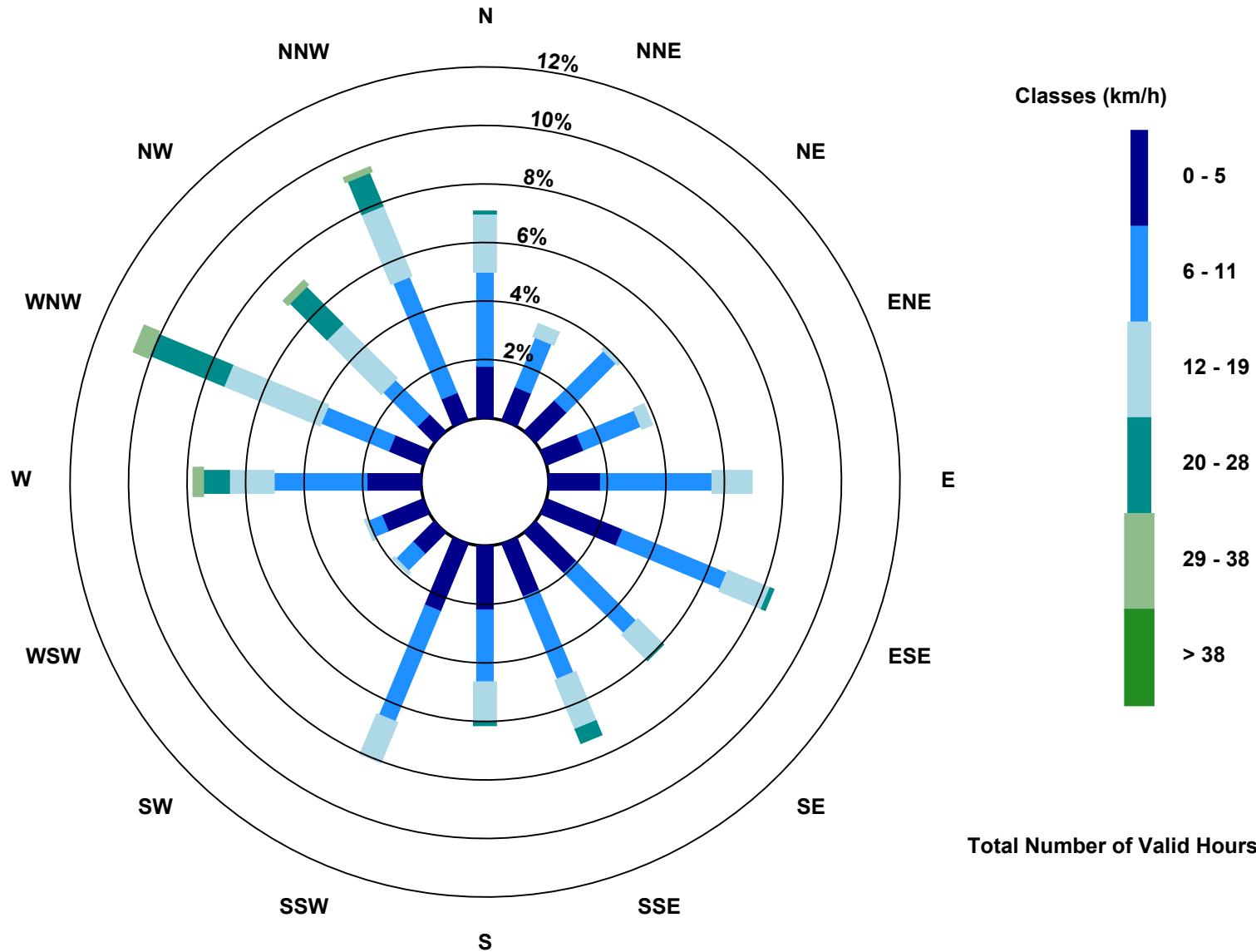


Total Number of Valid Hours: 1290



Wood Buffalo Environmental Association
Wind Rose 2024

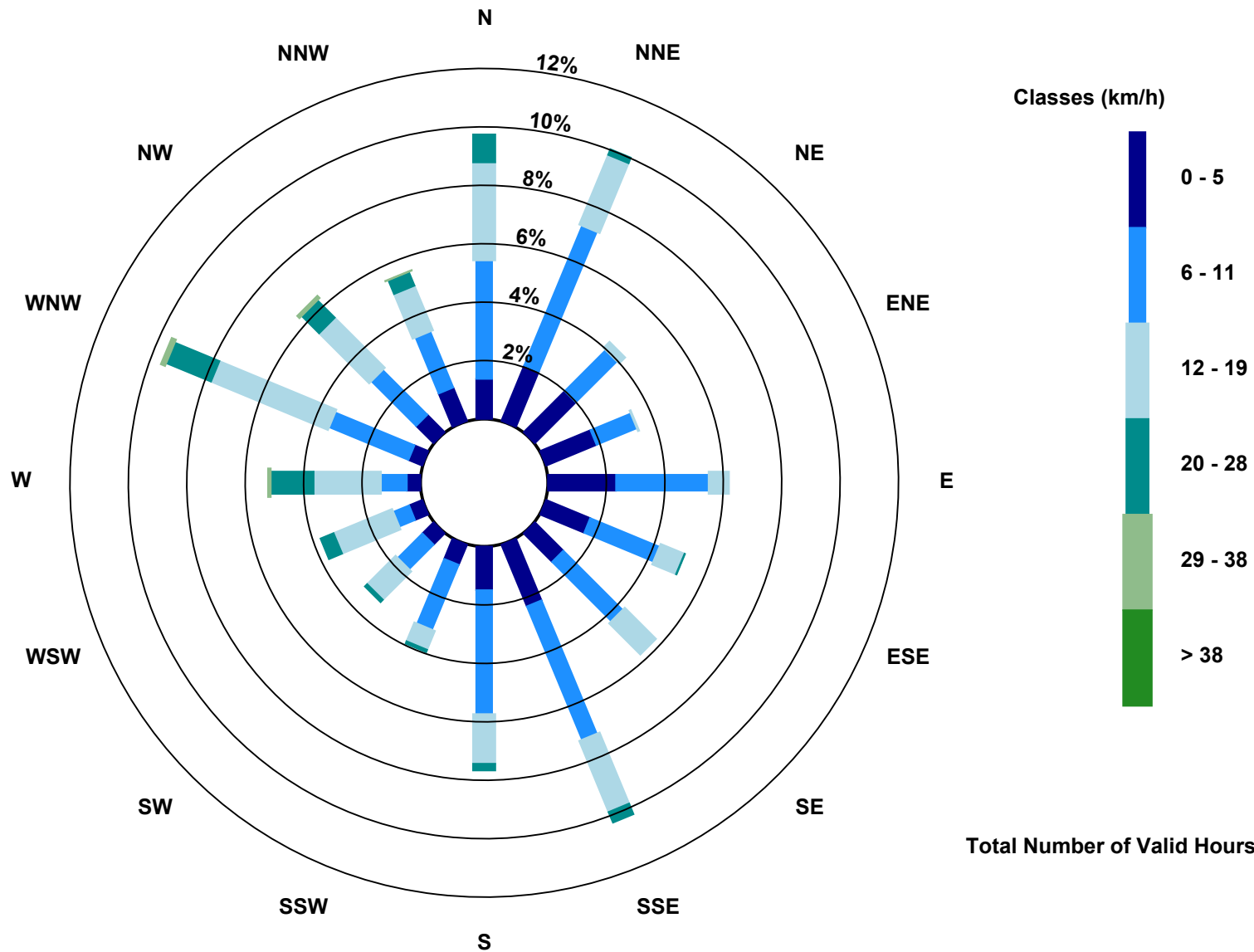
Wind Speed 10m (WS10) - km/h
Leismer





Wood Buffalo Environmental Association
Wind Rose 2024

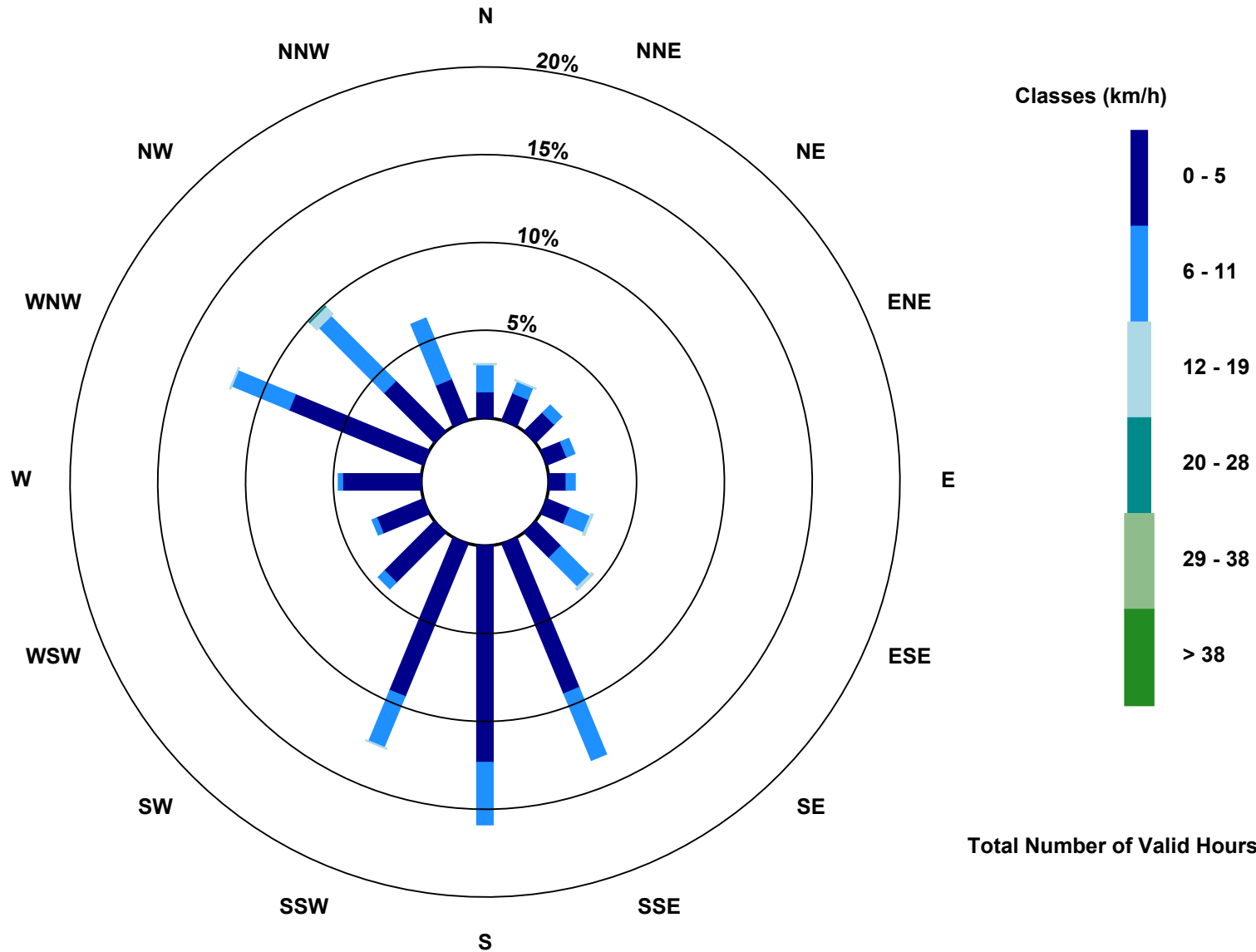
Wind Speed 10m (WS10) - km/h
Sawbones Bay





Wood Buffalo Environmental Association
Wind Rose 2024

Wind Speed 10m (WS10) - km/h
Jackfish 1

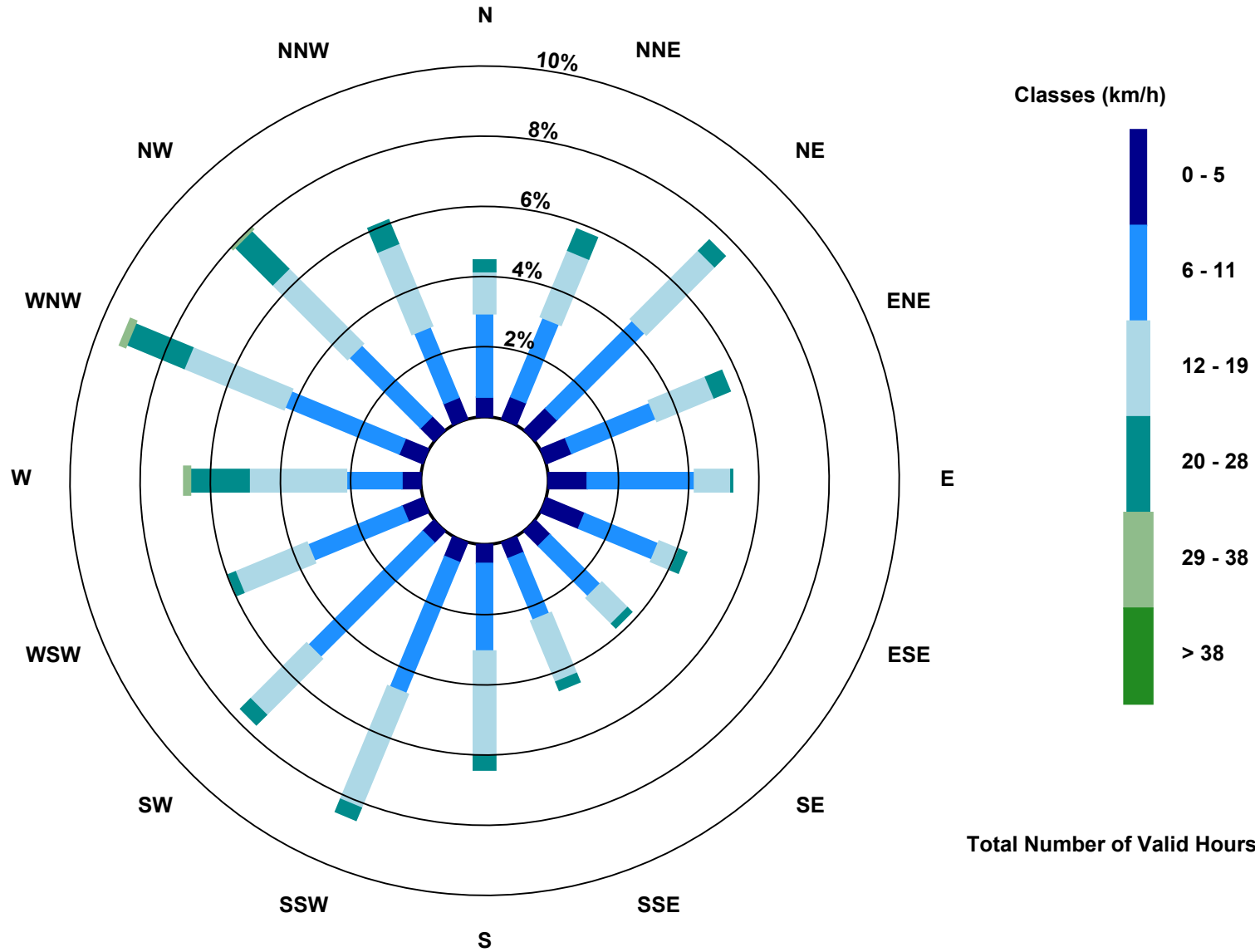


Total Number of Valid Hours: 4100



Wood Buffalo Environmental Association
Wind Rose 2024

Wind Speed 10m (WS10) - km/h
Kirby South

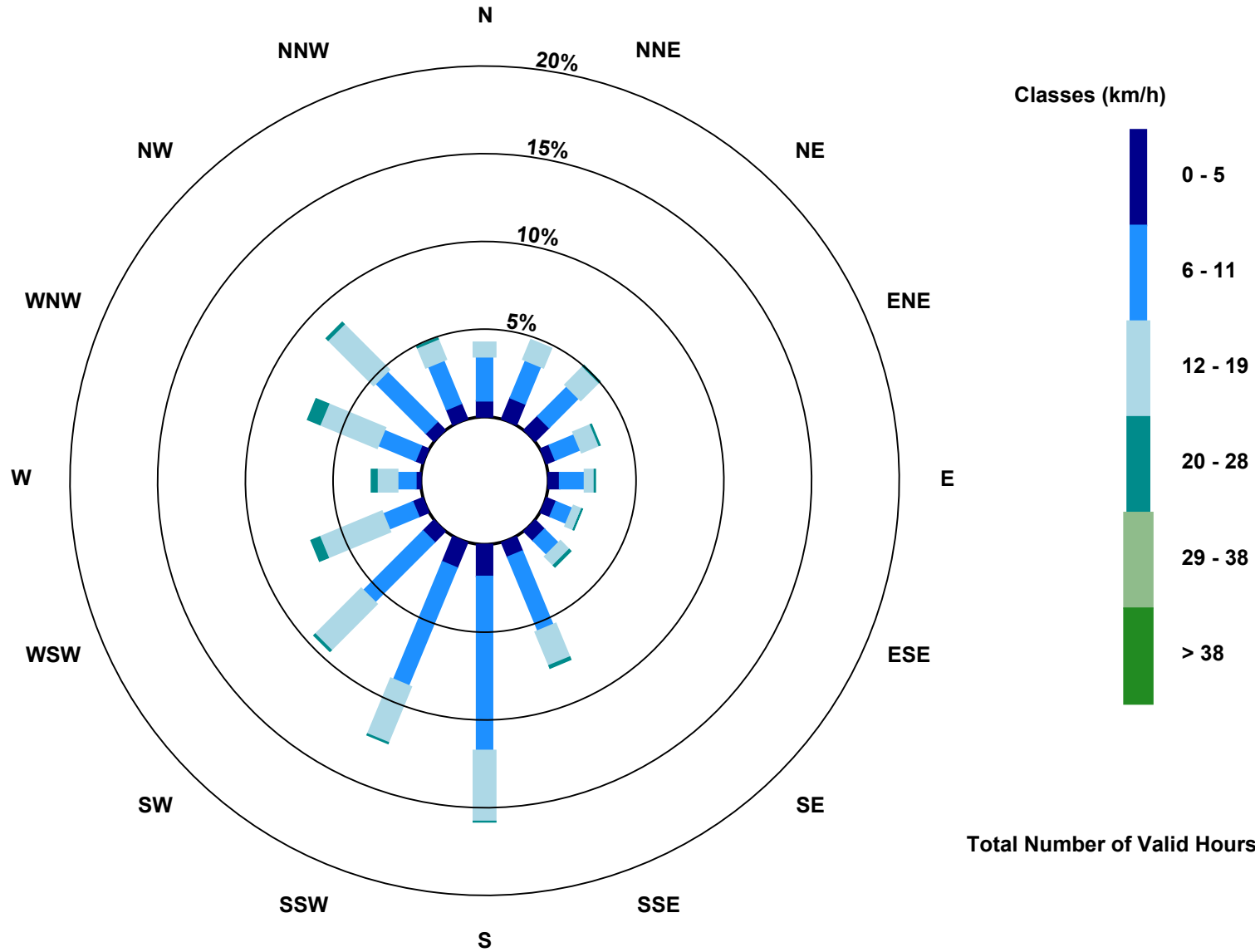


Total Number of Valid Hours: 4248



Wood Buffalo Environmental Association
Wind Rose 2024

Wind Speed 10m (WS10) - km/h
Kirby North

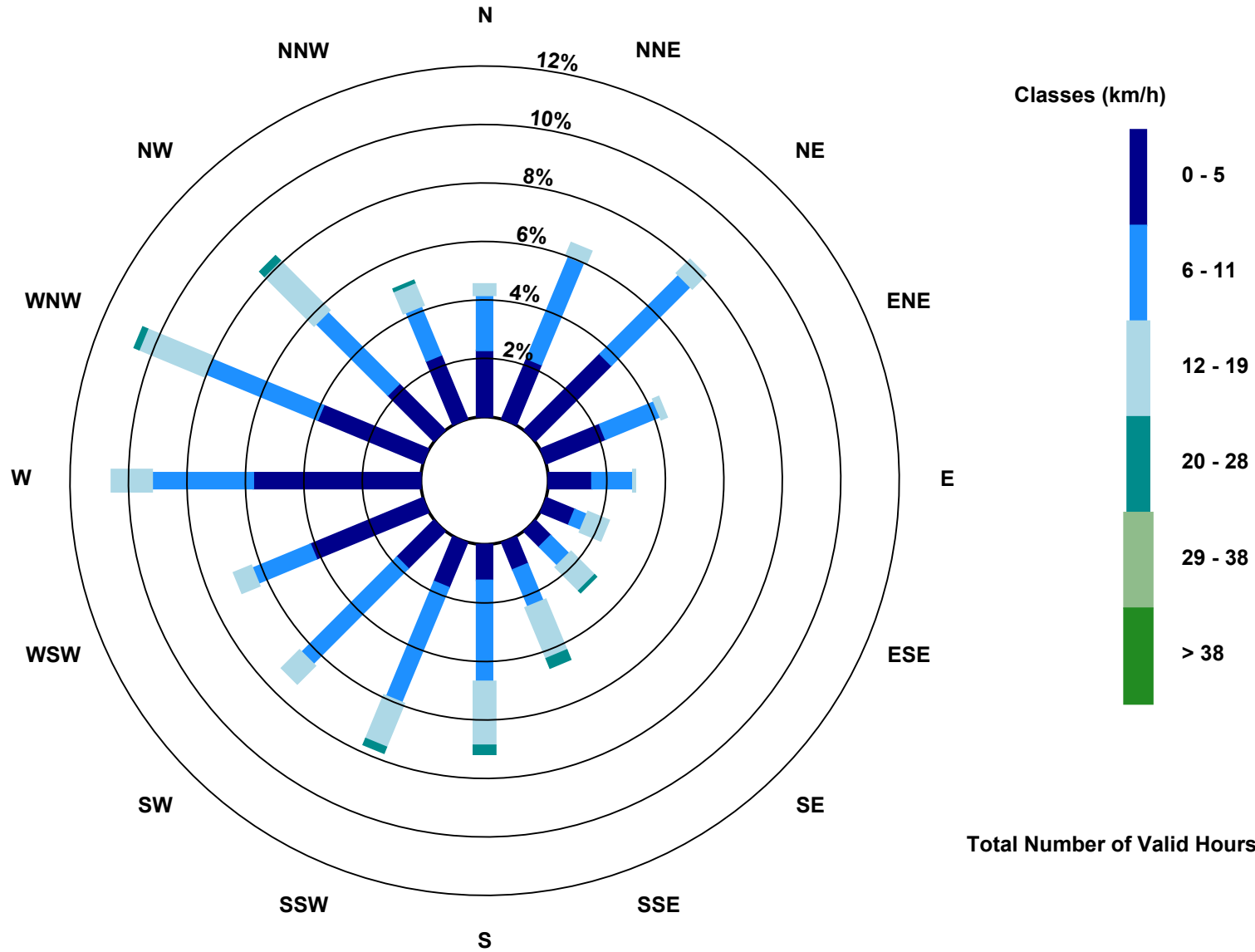


Total Number of Valid Hours: 4233



Wood Buffalo Environmental Association
Wind Rose 2024

Wind Speed 10m (WS10) - km/h
Blackgold

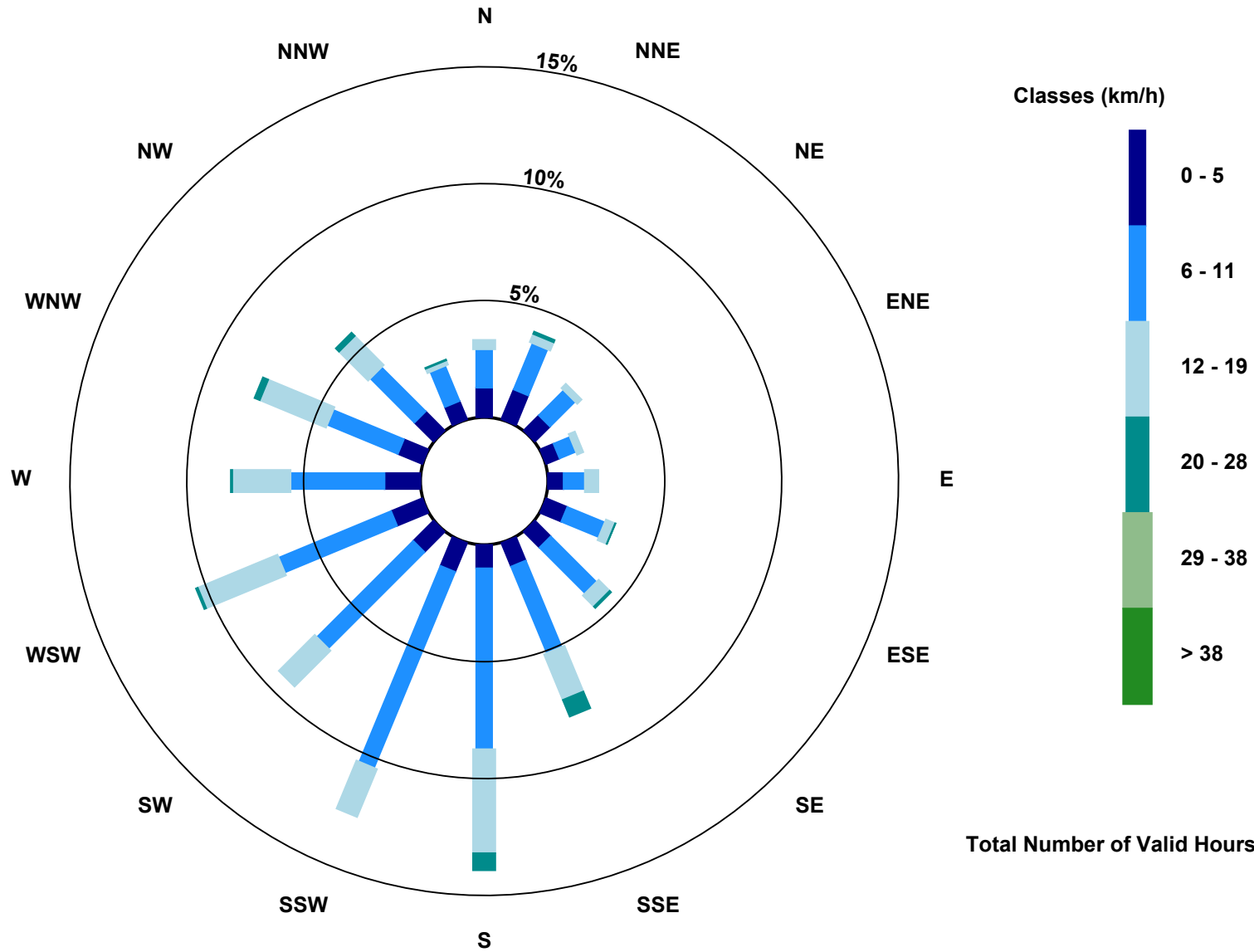


Total Number of Valid Hours: 2286



Wood Buffalo Environmental Association
Wind Rose 2024

Wind Speed 10m (WS10) - km/h
Hangingstone Expansion



WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
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APPENDIX I: AAAQO & AAAQG EXCEEDANCES 2024

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

March 2025



Wood Buffalo Environmental Association
Air Quality Events List 2024

Type	Site	Parameter	Date/Time	Reference	Period	Reported	Final	status
AAAQO	AMS05 Mannix	H2S	Jan 6, 2024 01:00	423599	1-hr	11	10.5	exc
AAAQO	AMS507 Kirby South	H2S	Jan 10, 2024 24:00	424956	24-hr	3	3.2	late
AAAQO	AMS507 Kirby South	H2S	Jan 10, 2024 12:00	423689	1-hr	51	51.0	exc
AAAQO	AMS507 Kirby South	H2S	Jan 10, 2024 13:00	423695	1-hr	19	18.8	exc
AAAQO	AMS02 Mildred Lake	H2S	Jan 13, 2024 24:00	423823	24-hr	6	5.5	exc
AAAQO	AMS02 Mildred Lake	H2S	Jan 13, 2024 17:00	423816	1-hr	16	16.3	exc
AAAQO	AMS02 Mildred Lake	H2S	Jan 13, 2024 18:00	423816	1-hr	13	13.2	exc
AAAQO	AMS02 Mildred Lake	H2S	Jan 13, 2024 20:00	423820	1-hr	14	14.1	exc
AAAQO	AMS02 Mildred Lake	H2S	Jan 13, 2024 21:00	423821	1-hr	11	10.6	exc
AAAQO	AMS02 Mildred Lake	H2S	Jan 14, 2024 24:00	423853	24-hr	5	4.4	exc
AAAQO	AMS11 Lower Camp	H2S	Jan 14, 2024 24:00	423854	24-hr	5	4.0	exc
AAAQO	AMS02 Mildred Lake	H2S	Jan 14, 2024 02:00	423826	1-hr	12	12.0	exc
AAAQO	AMS02 Mildred Lake	H2S	Jan 14, 2024 03:00	423827	1-hr	16	15.6	exc
AAAQO	AMS02 Mildred Lake	H2S	Jan 14, 2024 04:00	423829	1-hr	12	12.1	exc
AAAQO	AMS04 Buffalo Viewpoint	H2S	Jan 14, 2024 04:00	423830	1-hr	13	12.7	exc
AAAQO	AMS02 Mildred Lake	H2S	Jan 14, 2024 05:00	423832	1-hr	10	9.5	nae
AAAQO	AMS11 Lower Camp	H2S	Jan 14, 2024 17:00	423847	1-hr	10	9.6	nae
AAAQO	AMS11 Lower Camp	H2S	Jan 14, 2024 18:00	423850	1-hr	10	8.8	nae
AAAQO	AMS02 Mildred Lake	H2S	Jan 15, 2024 22:00	423898	1-hr	11	10.8	exc
AAAQO	AMS02 Mildred Lake	H2S	Jan 27, 2024 24:00	424384	1-hr	18	18.3	exc
AAAQO	AMS02 Mildred Lake	H2S	Jan 28, 2024 01:00	424385	1-hr	25	25.1	exc
AAAQO	AMS02 Mildred Lake	H2S	Jan 28, 2024 24:00	424413	24-hr	5	4.4	exc
AAAQO	AMS02 Mildred Lake	H2S	Jan 28, 2024 02:00	424386	1-hr	10	10.2	exc
AAAQO	AMS02 Mildred Lake	H2S	Jan 28, 2024 03:00	424387	1-hr	26	25.9	exc
AAAQO	AMS02 Mildred Lake	H2S	Jan 28, 2024 04:00	424388	1-hr	11	11.2	exc
AAAQO	AMS02 Mildred Lake	H2S	Jan 29, 2024 24:00	424459	24-hr	3	2.8	nae
AAAQO	AMS02 Mildred Lake	H2S	Jan 29, 2024 22:00	424459	1-hr	11	10.6	exc
AAAQG	AMS01 Bertha Ganter - Fort McKay	Dustfall	Feb 1, 2024 24:00	426451	30-day	117	117.0	exc
AAAQO	AMS05 Mannix	H2S	Feb 1, 2024 23:00	424590	1-hr	12	11.7	exc
AAAQO	AMS05 Mannix	H2S	Feb 2, 2024 24:00	424640	24-hr	3	3.0	nae
AAAQO	AMS05 Mannix	H2S	Feb 2, 2024 04:00	424593	1-hr	11	11.2	exc
AAAQO	AMS26 Christina Lake	H2S	Feb 3, 2024 23:00	424656	1-hr	10	10.2	exc
AAAQG	AMS21 Conklin	PM2.5	Feb 4, 2024 01:00	424671	1-hr	93	92.5	exc
AAAQO	AMS30 Ells River	TSP	Feb 5, 2024 24:00	425675	24-hr	171	171.0	exc
AAAQO	AMS05 Mannix	H2S	Feb 7, 2024 21:00	424780	1-hr	13	13.3	exc
AAAQO	AMS05 Mannix	H2S	Feb 8, 2024 07:00	424783	1-hr	11	11.0	exc
AAAQO	AMS30 Ells River	TSP	Feb 17, 2024 24:00	425676	24-hr	112	112.0	exc
AAAQO	AMS23 Fort Hills	PM2.5	Feb 19, 2024 24:00	425092	24-hr	29	28.9	nae
AAAQG	AMS23 Fort Hills	PM2.5	Feb 19, 2024 22:00	425092	1-hr	87	87.3	exc
AAAQG	AMS23 Fort Hills	PM2.5	Feb 19, 2024 23:00	425092	1-hr	80	80.2	exc
AAAQO	AMS02 Mildred Lake	H2S	Feb 21, 2024 12:00	425154	1-hr	11	10.4	exc
AAAQO	AMS30 Ells River	TSP	Feb 23, 2024 24:00	425677	24-hr	111	111.0	exc
AAAQG	AMS29 Surmont 2	PM2.5	Feb 27, 2024 20:00	425410	1-hr	85	85.2	exc
AAAQG	AMS01 Bertha Ganter - Fort McKay	PM2.5	Feb 28, 2024 03:00	425411	1-hr	97	96.6	exc
AAAQG	AMS01 Bertha Ganter - Fort McKay	Dustfall	Mar 1, 2024 24:00	427088	30-day	104	104.0	exc
AAAQG	AMS07 Athabasca Valley	Dustfall	Mar 1, 2024 24:00	427089	30-day	77	76.7	exc
AAAQO	AMS11 Lower Camp	H2S	Mar 6, 2024 17:00	425664	1-hr	13	13	exc
AAAQO	AMS11 Lower Camp	H2S	Mar 7, 2024 18:00	425706	1-hr	12	12	exc
AAAQO	AMS02 Mildred Lake	H2S	Mar 9, 2024 21:00	425748	1-hr	13	12.8	exc
AAAQO	AMS11 Lower Camp	H2S	Mar 14, 2024 21:00	425921	1-hr	10	9.5	nae
AAAQO	AMS23 Fort Hills	PM2.5	Mar 20, 2024 24:00	426146	24-hr	45	44.9	exc
AAAQG	AMS23 Fort Hills	PM2.5	Mar 20, 2024 08:00	426146	1-hr	93	92.8	exc
AAAQG	AMS23 Fort Hills	PM2.5	Mar 20, 2024 09:00	426146	1-hr	87	86.9	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Mar 21, 2024 24:00	426186	24-hr	31	31.3	exc
AAAQO	AMS09 Barge Landing	PM2.5	Mar 21, 2024 24:00	426187	24-hr	33	33.1	exc
AAAQO	AMS23 Fort Hills	PM2.5	Mar 21, 2024 24:00	426188	24-hr	53	52.9	exc
AAAQG	AMS23 Fort Hills	PM2.5	Mar 21, 2024 07:00	426188	1-hr	82	81.5	exc
AAAQG	AMS23 Fort Hills	PM2.5	Mar 21, 2024 08:00	426188	1-hr	85	84.7	exc
AAAQO	AMS23 Fort Hills	PM2.5	Mar 22, 2024 24:00	426224	24-hr	44	44.0	exc
AAAQO	AMS09 Barge Landing	PM2.5	Mar 22, 2024 24:00	426225	24-hr	33	33.3	exc
AAAQO	AMS05 Mannix	H2S	Mar 22, 2024 05:00	426189	1-hr	11	11.3	exc
AAAQG	AMS23 Fort Hills	PM2.5	Mar 22, 2024 05:00	426224	1-hr	88	87.6	exc
AAAQG	AMS29 Surmont 2	PM2.5	Mar 22, 2024 08:00	426247	1-hr	80	80.0	nae



Wood Buffalo Environmental Association
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Type	Site	Parameter	Date/Time	Reference	Period	Reported	Final	status
AAAQG	AMS23 Fort Hills	PM2.5	Mar 22, 2024 20:00	426224	1-hr	107	107.4	exc
AAAQG	AMS23 Fort Hills	PM2.5	Mar 22, 2024 21:00	426224	1-hr	108	108.3	exc
AAAQG	AMS09 Barge Landing	PM2.5	Mar 22, 2024 22:00	426225	1-hr	165	164.7	exc
AAAQG	AMS23 Fort Hills	PM2.5	Mar 22, 2024 22:00	426224	1-hr	151	151.4	exc
AAAQG	AMS09 Barge Landing	PM2.5	Mar 22, 2024 23:00	426225	1-hr	213	212.8	exc
AAAQG	AMS23 Fort Hills	PM2.5	Mar 22, 2024 23:00	426224	1-hr	168	167.9	exc
AAAQG	AMS23 Fort Hills	PM2.5	Mar 23, 2024 04:00	426246	1-hr	122	122.0	exc
AAAQG	AMS22 Janvier	PM2.5	Mar 27, 2024 21:00	426357	1-hr	93	93.4	exc
AAAQG	AMS22 Janvier	PM2.5	Mar 27, 2024 22:00	426357	1-hr	177	177.3	exc
AAAQG	AMS22 Janvier	PM2.5	Mar 27, 2024 23:00	426357	1-hr	179	178.8	exc
AAAQG	AMS22 Janvier	PM2.5	Mar 27, 2024 24:00	426357	1-hr	106	106.3	exc
AAAQG	AMS14 Anzac	PM2.5	Mar 30, 2024 02:00	426459	1-hr	251	250.8	exc
AAAQG	AMS01 Bertha Ganter - Fort McKay	Dustfall	Apr 1, 2024 24:00	428715	30-day	81	81.4	exc
AAAQO	AMS511 BlackGold	H2S	Apr 3, 2024 20:00	426526	1-hr	10	10.4	exc
AAAQO	AMS11 Lower Camp	H2S	Apr 8, 2024 20:00	426665	1-hr	15	15.6	exc
AAAQO	AMS02 Mildred Lake	H2S	Apr 11, 2024 07:00	426755	1-hr	16	16.3	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Apr 18, 2024 24:00		24-hr	0	0.0	nae
AAAQO	AMS13 Fort McKay South	PM2.5	Apr 19, 2024 24:00	427564	24-hr	33	-	ret
AAAQO	AMS11 Lower Camp	H2S	Apr 19, 2024 20:00	427106	1-hr	23	23.5	exc
AAAQO	AMS11 Lower Camp	H2S	Apr 19, 2024 21:00	427106	1-hr	11	11.7	exc
AAAQO	AMS11 Lower Camp	H2S	Apr 20, 2024 24:00	427120	24-hr	3	3.7	exc
AAAQO	AMS11 Lower Camp	H2S	Apr 20, 2024 20:00	427120	1-hr	58	58.7	exc
AAAQO	AMS11 Lower Camp	SO2	Apr 20, 2024 20:00	427121	1-hr	328	327.3	exc
AAAQO	AMS11 Lower Camp	H2S	Apr 20, 2024 21:00	427120	1-hr	15	15.5	exc
AAAQG	AMS23 Fort Hills	PM2.5	Apr 21, 2024 21:00	427150	1-hr	158.0	157.6	exc
AAAQG	AMS23 Fort Hills	PM2.5	Apr 21, 2024 22:00	427150	1-hr	118	118.3	exc
AAAQO	AMS23 Fort Hills	PM2.5	Apr 23, 2024 24:00	427228	24-hr	39	39.3	exc
AAAQG	AMS23 Fort Hills	PM2.5	Apr 23, 2024 03:00	427228	1-hr	113	113.4	exc
AAAQG	AMS23 Fort Hills	PM2.5	Apr 23, 2024 05:00	427228	1-hr	325	325.4	exc
AAAQG	AMS23 Fort Hills	PM2.5	Apr 23, 2024 06:00	427228	1-hr	108	108.2	exc
AAAQO	AMS11 Lower Camp	H2S	Apr 27, 2024 17:00	427396	1-hr	10	9.6	nae
AAAQO	AMS11 Lower Camp	H2S	Apr 27, 2024 18:00	427396	1-hr	13	12.4	exc
AAAQO	AMS26 Christina Lake	H2S	Apr 29, 2024 21:00	427462	1-hr	10	10.0	nae
AAAQG	AMS01 Bertha Ganter - Fort McKay	Dustfall	May 1, 2024 24:00	429184	30-day	91	90.5	exc
AAAQO	AMS11 Lower Camp	H2S	May 8, 2024 22:00	427746	1-hr	36	36.2	exc
AAAQO	AMS11 Lower Camp	SO2	May 8, 2024 22:00	427747	1-hr	183	181.8	exc
AAAQG	AMS30 Ells River	PM2.5	May 11, 2024 01:00	427965	1-hr	89	89.3	exc
AAAQO	AMS18 Stony Mountain	PM2.5	May 11, 2024 24:00	428770	24-hr	29	29.4	exc
AAAQO	AMS22 Janvier	PM2.5	May 11, 2024 24:00	428771	24-hr	46	46.4	exc
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	May 11, 2024 24:00	428772	24-hr	29	29.1	exc
AAAQO	AMS09 Barge Landing	PM2.5	May 11, 2024 24:00	428773	24-hr	33	32.6	exc
AAAQG	AMS30 Ells River	PM2.5	May 11, 2024 02:00	427965	1-hr	84	83.9	exc
AAAQG	AMS30 Ells River	PM2.5	May 11, 2024 03:00	427965	1-hr	91	91.4	exc
AAAQG	AMS30 Ells River	PM2.5	May 11, 2024 04:00	427965	1-hr	90	89.7	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	May 14, 2024 24:00	428774	24-hr	51	51.1	exc
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	May 14, 2024 24:00	428772	24-hr	62	61.8	exc
AAAQO	AMS06 Patricia McInnes	PM2.5	May 14, 2024 24:00	428775	24-hr	40	40.0	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	May 14, 2024 24:00	428776	24-hr	59	59.0	exc
AAAQO	AMS08 Fort Chipewyan	PM2.5	May 14, 2024 24:00	428777	24-hr	95	94.9	exc
AAAQO	AMS14 Anzac	PM2.5	May 14, 2024 24:00	428778	24-hr	31	30.8	exc
AAAQO	AMS23 Fort Hills	PM2.5	May 14, 2024 24:00	428779	24-hr	53.0	53.0	exc
AAAQO	AMS30 Ells River	PM2.5	May 14, 2024 24:00	428034	24-hr	49	49.1	exc
AAAQO	AMS09 Barge Landing	PM2.5	May 14, 2024 24:00	428773	24-hr	62	62.3	exc
AAAQO	AMS13 Fort McKay South	PM2.5	May 14, 2024 24:00	428781	24-hr	48	48.1	exc
AAAQO	AMS17 Wapasu	PM2.5	May 14, 2024 24:00	428782	24-hr	49	49.2	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	May 15, 2024 24:00	428774	24-hr	54	53.6	exc
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	May 15, 2024 24:00	428772	24-hr	58	57.5	exc
AAAQO	AMS13 Fort McKay South	PM2.5	May 15, 2024 24:00	428781	24-hr	52	52.0	exc
AAAQO	AMS14 Anzac	PM2.5	May 15, 2024 24:00	428778	24-hr	81	81.5	exc
AAAQO	AMS17 Wapasu	PM2.5	May 15, 2024 24:00	428782	24-hr	39	39.3	exc
AAAQO	AMS21 Conklin	PM2.5	May 15, 2024 24:00	728783	24-hr	36.0	36.2	exc
AAAQO	AMS22 Janvier	PM2.5	May 15, 2024 24:00	428771	24-hr	45	44.8	exc
AAAQO	AMS23 Fort Hills	PM2.5	May 15, 2024 24:00	428779	24-hr	44	44.4	exc



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Type	Site	Parameter	Date/Time	Reference	Period	Reported	Final	status
AAAQO	AMS06 Patricia McInnes	PM2.5	May 15, 2024 24:00	428775	24-hr	63	63.0	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	May 15, 2024 24:00	428776	24-hr	95	94.7	exc
AAAQO	AMS08 Fort Chipewyan	PM2.5	May 15, 2024 24:00	428777	24-hr	39	39.4	exc
AAAQO	AMS09 Barge Landing	PM2.5	May 15, 2024 24:00	428773	24-hr	62	61.7	exc
AAAQO	AMS29 Surmont 2	PM2.5	May 15, 2024 24:00	428784	24-hr	69	69.2	exc
AAAQO	AMS30 Ells River	PM2.5	May 15, 2024 24:00	428780	24-hr	50	50.4	exc
AAAQO	AMS14 Anzac	PM2.5	May 16, 2024 24:00	428778	24-hr	40	40.2	exc
AAAQO	AMS21 Conklin	PM2.5	May 16, 2024 24:00	728783	24-hr	40	39.5	exc
AAAQO	AMS22 Janvier	PM2.5	May 16, 2024 24:00	428771	24-hr	42	41.7	exc
AAAQO	AMS29 Surmont 2	PM2.5	May 16, 2024 24:00	428784	24-hr	36	35.6	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	May 18, 2024 24:00	428774	24-hr	31	-	ret
AAAQO	AMS11 Lower Camp	H2S	May 23, 2024 20:00	428337	1-hr	10	10.2	exc
AAAQG	AMS01 Bertha Ganter - Fort McKay	Dustfall	Jun 1, 2024 24:00	431518	30-day	81	80.6	exc
AAAQO	AMS11 Lower Camp	H2S	Jun 26, 2024 21:00	429624	1-hr	14	13.9	exc
AAAQO	AMS23 Fort Hills	PM2.5	Jun 28, 2024 24:00	429769	24-hr	33	32.7	exc
AAAQG	AMS23 Fort Hills	PM2.5	Jun 28, 2024 22:00	429769	1-hr	85	85.3	exc
AAAQG	AMS23 Fort Hills	PM2.5	Jun 28, 2024 23:00	429769	1-hr	342	342.4	exc
AAAQG	AMS23 Fort Hills	PM2.5	Jun 28, 2024 24:00	429769	1-hr	118	118.2	exc
AAAQG	AMS23 Fort Hills	PM2.5	Jun 29, 2024 01:00	429770	1-hr	171	171.0	exc
AAAQG	AMS23 Fort Hills	PM2.5	Jun 29, 2024 02:00	429770	1-hr	214	213.7	exc
AAAQO	AMS11 Lower Camp	H2S	Jun 29, 2024 23:00	429726	1-hr	16	15.7	exc
AAAQO	AMS11 Lower Camp	SO2	Jun 29, 2024 23:00	429727	1-hr	175	175.6	exc
AAAQO	AMS11 Lower Camp	H2S	Jun 30, 2024 24:00	429743	1-hr	14	13.2	exc
AAAQG	AMS01 Bertha Ganter - Fort McKay	Dustfall	Jul 1, 2024 24:00	432417	30-day	65	65.0	exc
AAAQO	AMS14 Anzac	PM2.5	Jul 3, 2024 24:00	431285	24-hr	44	43.5	exc
AAAQO	AMS14 Anzac	PM2.5	Jul 4, 2024 24:00	431285	24-hr	33	33.5	exc
AAAQO	AMS17 Wapasu	PM2.5	Jul 4, 2024 24:00	431286	24-hr	47	48.0	exc
AAAQO	AMS29 Surmont 2	PM2.5	Jul 4, 2024 24:00	431287	24-hr	32	31.7	exc
AAAQO	AMS09 Barge Landing	PM2.5	Jul 5, 2024 24:00	431288	24-hr	40	39.4	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Jul 5, 2024 24:00	431289	24-hr	29	29.1	exc
AAAQO	AMS23 Fort Hills	PM2.5	Jul 5, 2024 24:00	431284	24-hr	33	32.5	exc
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	Jul 6, 2024 24:00	431290	24-hr	65	64.8	exc
AAAQO	AMS06 Patricia McInnes	PM2.5	Jul 6, 2024 24:00	431291	24-hr	72	71.9	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Jul 6, 2024 24:00	431292	24-hr	70	69.0	exc
AAAQO	AMS09 Barge Landing	PM2.5	Jul 6, 2024 24:00	431288	24-hr	88	87.8	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Jul 6, 2024 24:00	431289	24-hr	76	75.7	exc
AAAQO	AMS21 Conklin	PM2.5	Jul 6, 2024 24:00	431293	24-hr	82	82.4	exc
AAAQO	AMS22 Janvier	PM2.5	Jul 6, 2024 24:00	431294	24-hr	84	84.2	exc
AAAQO	AMS23 Fort Hills	PM2.5	Jul 6, 2024 24:00	431284	24-hr	65	65.2	exc
AAAQO	AMS29 Surmont 2	PM2.5	Jul 6, 2024 24:00	431287	24-hr	79	79.1	exc
AAAQO	AMS30 Ells River	PM2.5	Jul 6, 2024 24:00	431295	24-hr	67	67.3	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Jul 6, 2024 24:00	431296	24-hr	59	59.4	exc
AAAQO	AMS14 Anzac	PM2.5	Jul 6, 2024 24:00	431285	24-hr	78	78.0	exc
AAAQO	AMS17 Wapasu	PM2.5	Jul 6, 2024 24:00	431286	24-hr	48	47.7	exc
AAAQO	AMS18 Stony Mountain	PM2.5	Jul 6, 2024 24:00	431297	24-hr	89	88.7	exc
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	Jul 7, 2024 24:00	431290	24-hr	39	38.8	exc
AAAQO	AMS06 Patricia McInnes	PM2.5	Jul 7, 2024 24:00	431291	24-hr	48	49.4	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Jul 7, 2024 24:00	431292	24-hr	59	59.3	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Jul 7, 2024 24:00	431289	24-hr	38	37.6	exc
AAAQO	AMS14 Anzac	PM2.5	Jul 7, 2024 24:00	431285	24-hr	58	58.5	exc
AAAQO	AMS18 Stony Mountain	PM2.5	Jul 7, 2024 24:00	431297	24-hr	58	58.4	exc
AAAQO	AMS21 Conklin	PM2.5	Jul 7, 2024 24:00	431293	24-hr	68	68.0	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Jul 7, 2024 24:00	431296	24-hr	32	31.7	exc
AAAQO	AMS09 Barge Landing	PM2.5	Jul 7, 2024 24:00	431288	24-hr	52	51.9	exc
AAAQO	AMS22 Janvier	PM2.5	Jul 7, 2024 24:00	431294	24-hr	62	62.1	exc
AAAQO	AMS23 Fort Hills	PM2.5	Jul 7, 2024 24:00	431284	24-hr	37	37.0	exc
AAAQO	AMS29 Surmont 2	PM2.5	Jul 7, 2024 24:00	431287	24-hr	49	48.8	exc
AAAQO	AMS30 Ells River	PM2.5	Jul 7, 2024 24:00	431295	24-hr	38	37.5	exc
AAAQO	AMS18 Stony Mountain	PM2.5	Jul 8, 2024 24:00	431297	24-hr	50	49.7	exc
AAAQO	AMS23 Fort Hills	PM2.5	Jul 8, 2024 24:00	431284	24-hr	60	60.4	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Jul 8, 2024 24:00	431296	24-hr	43	41.7	exc
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	Jul 8, 2024 24:00	431290	24-hr	55	55.2	exc
AAAQO	AMS06 Patricia McInnes	PM2.5	Jul 8, 2024 24:00	431291	24-hr	57	56.2	exc



Wood Buffalo Environmental Association
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Type	Site	Parameter	Date/Time	Reference	Period	Reported	Final	status
AAAQO	AMS07 Athabasca Valley	PM2.5	Jul 8, 2024 24:00	431292	24-hr	70	68.8	exc
AAAQO	AMS09 Barge Landing	PM2.5	Jul 8, 2024 24:00	431288	24-hr	60	59.4	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Jul 8, 2024 24:00	431289	24-hr	54	54.4	exc
AAAQO	AMS14 Anzac	PM2.5	Jul 8, 2024 24:00	431285	24-hr	67	67.1	exc
AAAQO	AMS17 Wapasu	PM2.5	Jul 8, 2024 24:00	431286	24-hr	49	49.3	exc
AAAQO	AMS21 Conklin	PM2.5	Jul 8, 2024 24:00	431293	24-hr	51	50.7	exc
AAAQO	AMS22 Janvier	PM2.5	Jul 8, 2024 24:00	431294	24-hr	58	58.5	exc
AAAQO	AMS29 Surmont 2	PM2.5	Jul 8, 2024 24:00	431287	24-hr	65	64.6	exc
AAAQO	AMS30 Ells River	PM2.5	Jul 8, 2024 24:00	431295	24-hr	48	48.4	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Jul 9, 2024 24:00	431289	24-hr	67	67.4	exc
AAAQO	AMS14 Anzac	PM2.5	Jul 9, 2024 24:00	431285	24-hr	95	95.4	exc
AAAQO	AMS17 Wapasu	PM2.5	Jul 9, 2024 24:00	431286	24-hr	56	56.3	exc
AAAQO	AMS18 Stony Mountain	PM2.5	Jul 9, 2024 24:00	431297	24-hr	52	52.1	exc
AAAQO	AMS21 Conklin	PM2.5	Jul 9, 2024 24:00	431293	24-hr	57	56.8	exc
AAAQO	AMS22 Janvier	PM2.5	Jul 9, 2024 24:00	431294	24-hr	99	98.6	exc
AAAQO	AMS23 Fort Hills	PM2.5	Jul 9, 2024 24:00	431284	24-hr	75	75.0	exc
AAAQO	AMS29 Surmont 2	PM2.5	Jul 9, 2024 24:00	431287	24-hr	82	81.8	exc
AAAQO	AMS30 Ells River	PM2.5	Jul 9, 2024 24:00	431295	24-hr	58	58.2	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Jul 9, 2024 24:00	431296	24-hr	57	55.5	exc
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	Jul 9, 2024 24:00	431290	24-hr	68	64.9	exc
AAAQO	AMS06 Patricia McInnes	PM2.5	Jul 9, 2024 24:00	431291	24-hr	70	70.0	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Jul 9, 2024 24:00	431292	24-hr	113	113.0	exc
AAAQO	AMS08 Fort Chipewyan	PM2.5	Jul 9, 2024 24:00	431298	24-hr	43	43.4	exc
AAAQO	AMS09 Barge Landing	PM2.5	Jul 9, 2024 24:00	431288	24-hr	72	72.5	exc
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	Jul 10, 2024 24:00	431290	24-hr	74	73.8	exc
AAAQO	AMS06 Patricia McInnes	PM2.5	Jul 10, 2024 24:00	431291	24-hr	56	56.0	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Jul 10, 2024 24:00	431292	24-hr	101	100.7	exc
AAAQO	AMS09 Barge Landing	PM2.5	Jul 10, 2024 24:00	431288	24-hr	87	86.7	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Jul 10, 2024 24:00	431289	24-hr	82	82.1	exc
AAAQO	AMS14 Anzac	PM2.5	Jul 10, 2024 24:00	431285	24-hr	61	60.8	exc
AAAQO	AMS17 Wapasu	PM2.5	Jul 10, 2024 24:00	431286	24-hr	95	95.1	exc
AAAQO	AMS23 Fort Hills	PM2.5	Jul 10, 2024 24:00	431284	24-hr	94	94.5	exc
AAAQO	AMS08 Fort Chipewyan	PM2.5	Jul 10, 2024 24:00	431298	24-hr	51	50.9	exc
AAAQO	AMS30 Ells River	PM2.5	Jul 10, 2024 24:00	431295	24-hr	81	79.8	exc
AAAQO	AMS07 Athabasca Valley	O3	Jul 10, 2024 14:00	430221	1-hr	104	106.2	exc
AAAQO	AMS06 Patricia McInnes	O3	Jul 10, 2024 15:00	430222	1-hr	93	95.7	exc
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	Jul 11, 2024 24:00	431290	24-hr	41	40.7	exc
AAAQO	AMS06 Patricia McInnes	PM2.5	Jul 11, 2024 24:00	431291	24-hr	41	41.2	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Jul 11, 2024 24:00	431292	24-hr	53	53.1	exc
AAAQO	AMS08 Fort Chipewyan	PM2.5	Jul 11, 2024 24:00	431298	24-hr	31	30.8	exc
AAAQO	AMS09 Barge Landing	PM2.5	Jul 11, 2024 24:00	431288	24-hr	42	41.8	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Jul 11, 2024 24:00	431289	24-hr	42	41.3	exc
AAAQO	AMS17 Wapasu	PM2.5	Jul 11, 2024 24:00	431286	24-hr	30	29.5	exc
AAAQO	AMS23 Fort Hills	PM2.5	Jul 11, 2024 24:00	431284	24-hr	38	38.2	exc
AAAQO	AMS29 Surmont 2	PM2.5	Jul 11, 2024 24:00	431287	24-hr	45	45.1	exc
AAAQO	AMS30 Ells River	PM2.5	Jul 11, 2024 24:00	431295	24-hr	34	34.3	exc
AAAQO	AMS14 Anzac	PM2.5	Jul 11, 2024 24:00	431285	24-hr	141	141.2	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Jul 12, 2024 24:00	431296	24-hr	55	54.6	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Jul 12, 2024 24:00	431289	24-hr	52	52.1	exc
AAAQO	AMS14 Anzac	PM2.5	Jul 12, 2024 24:00	431285	24-hr	59	58.6	exc
AAAQO	AMS17 Wapasu	PM2.5	Jul 12, 2024 24:00	431286	24-hr	33	32.5	exc
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	Jul 12, 2024 24:00	431290	24-hr	44	44.4	exc
AAAQO	AMS06 Patricia McInnes	PM2.5	Jul 12, 2024 24:00	431291	24-hr	73	73.3	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Jul 12, 2024 24:00	431292	24-hr	91	91.4	exc
AAAQO	AMS09 Barge Landing	PM2.5	Jul 12, 2024 24:00	431288	24-hr	55	55.0	exc
AAAQO	AMS23 Fort Hills	PM2.5	Jul 12, 2024 24:00	431284	24-hr	60	60.2	exc
AAAQO	AMS30 Ells River	PM2.5	Jul 12, 2024 24:00	431295	24-hr	50	49.8	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Jul 13, 2024 24:00	431289	24-hr	40	39.8	exc
AAAQO	AMS14 Anzac	PM2.5	Jul 13, 2024 24:00	431285	24-hr	79	79.3	exc
AAAQO	AMS23 Fort Hills	PM2.5	Jul 13, 2024 24:00	431284	24-hr	63	62.6	exc
AAAQO	AMS29 Surmont 2	PM2.5	Jul 13, 2024 24:00	431287	24-hr	31	31.1	exc
AAAQO	AMS30 Ells River	PM2.5	Jul 13, 2024 24:00	431295	24-hr	46	45.6	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Jul 13, 2024 24:00	431296	24-hr	49	48.5	exc



Wood Buffalo Environmental Association
Air Quality Events List 2024

Type	Site	Parameter	Date/Time	Reference	Period	Reported	Final	status
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	Jul 13, 2024 24:00	431290	24-hr	50	50.2	exc
AAAQO	AMS06 Patricia McInnes	PM2.5	Jul 13, 2024 24:00	431291	24-hr	51	51.0	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Jul 13, 2024 24:00	431292	24-hr	74	73.8	exc
AAAQO	AMS09 Barge Landing	PM2.5	Jul 13, 2024 24:00	431288	24-hr	49	49.3	exc
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	Jul 14, 2024 24:00	431290	24-hr	35	34.7	exc
AAAQO	AMS06 Patricia McInnes	PM2.5	Jul 14, 2024 24:00	431291	24-hr	60	60.4	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Jul 14, 2024 24:00	431292	24-hr	78	77.7	exc
AAAQO	AMS09 Barge Landing	PM2.5	Jul 14, 2024 24:00	431288	24-hr	31	31.3	exc
AAAQO	AMS21 Conklin	PM2.5	Jul 14, 2024 24:00	431293	24-hr	32	32.0	exc
AAAQO	AMS14 Anzac	PM2.5	Jul 14, 2024 24:00	431285	24-hr	41	44.5	exc
AAAQO	AMS18 Stony Mountain	PM2.5	Jul 14, 2024 24:00	431297	24-hr	31	31.0	exc
AAAQO	AMS22 Janvier	PM2.5	Jul 14, 2024 24:00	431294	24-hr	37	37.1	exc
AAAQO	AMS23 Fort Hills	PM2.5	Jul 14, 2024 24:00	431284	24-hr	38	37.8	exc
AAAQO	AMS29 Surmont 2	PM2.5	Jul 14, 2024 24:00	431287	24-hr	45	44.7	exc
AAAQO	AMS05 Mannix	H2S	Jul 14, 2024 02:00	430359	1-hr	12	11.6	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Jul 15, 2024 24:00	431292	24-hr	44	44.1	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Jul 15, 2024 24:00	431296	24-hr	31	30.8	exc
AAAQO	AMS09 Barge Landing	PM2.5	Jul 15, 2024 24:00	431288	24-hr	33	33.3	exc
AAAQO	AMS14 Anzac	PM2.5	Jul 15, 2024 24:00	431285	24-hr	30	30.3	exc
AAAQO	AMS17 Wapasu	PM2.5	Jul 15, 2024 24:00	431286	24-hr	61	61.2	exc
AAAQO	AMS02 Mildred Lake	H2S	Jul 15, 2024 07:00	430386	1-hr	13	13.0	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	TRS	Jul 15, 2024 08:00	430391	1-hr	10	10.0	nae
AAAQO	AMS13 Fort McKay South	TRS	Jul 15, 2024 08:00	430395	1-hr	10	10.6	exc
AAAQO	AMS25 Wasköw ohci Pimâtisiwin	H2S	Jul 15, 2024 08:00	430392	1-hr	11	10.4	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Jul 16, 2024 24:00	431296	24-hr	41	41.4	exc
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	Jul 16, 2024 24:00	431290	24-hr	34	33.6	exc
AAAQO	AMS06 Patricia McInnes	PM2.5	Jul 16, 2024 24:00	431291	24-hr	34	34.0	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Jul 16, 2024 24:00	431289	24-hr	39	39.2	exc
AAAQO	AMS14 Anzac	PM2.5	Jul 16, 2024 24:00	431285	24-hr	36	35.7	exc
AAAQO	AMS17 Wapasu	PM2.5	Jul 16, 2024 24:00	431286	24-hr	37	37.3	exc
AAAQO	AMS23 Fort Hills	PM2.5	Jul 16, 2024 24:00	431284	24-hr	47	46.6	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Jul 16, 2024 24:00	431292	24-hr	53	53.0	exc
AAAQO	AMS08 Fort Chipewyan	PM2.5	Jul 16, 2024 24:00	431298	24-hr	81	81.2	exc
AAAQO	AMS09 Barge Landing	PM2.5	Jul 16, 2024 24:00	431288	24-hr	45	45.4	exc
AAAQO	AMS30 Ells River	PM2.5	Jul 16, 2024 24:00	431295	24-hr	40	40.1	exc
AAAQO	AMS30 Ells River	TSP	Jul 16, 2024 24:00	432398	24-hr	221	221.0	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Jul 17, 2024 24:00	431296	24-hr	56	55.7	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Jul 17, 2024 24:00	431289	24-hr	49	48.6	exc
AAAQO	AMS14 Anzac	PM2.5	Jul 17, 2024 24:00	431285	24-hr	43	43.4	exc
AAAQO	AMS17 Wapasu	PM2.5	Jul 17, 2024 24:00	431286	24-hr	49	49.1	exc
AAAQO	AMS18 Stony Mountain	PM2.5	Jul 17, 2024 24:00	431297	24-hr	54	53.5	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Jul 17, 2024 24:00	431292	24-hr	31	30.8	exc
AAAQO	AMS08 Fort Chipewyan	PM2.5	Jul 17, 2024 24:00	431298	24-hr	114	115.0	exc
AAAQO	AMS09 Barge Landing	PM2.5	Jul 17, 2024 24:00	431288	24-hr	61	61.2	exc
AAAQO	AMS21 Conklin	PM2.5	Jul 17, 2024 24:00	431293	24-hr	30	29.5	exc
AAAQO	AMS23 Fort Hills	PM2.5	Jul 17, 2024 24:00	431284	24-hr	159	158.8	exc
AAAQO	AMS30 Ells River	PM2.5	Jul 17, 2024 24:00	431295	24-hr	91	90.4	exc
AAAQO	AMS09 Barge Landing	PM2.5	Jul 18, 2024 24:00	431288	24-hr	209	209.1	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Jul 18, 2024 24:00	431289	24-hr	202	202.2	exc
AAAQO	AMS17 Wapasu	PM2.5	Jul 18, 2024 24:00	431286	24-hr	154	153.9	exc
AAAQO	AMS22 Janvier	PM2.5	Jul 18, 2024 24:00	431294	24-hr	66	66.3	exc
AAAQO	AMS23 Fort Hills	PM2.5	Jul 18, 2024 24:00	431284	24-hr	123	124.7	exc
AAAQO	AMS30 Ells River	PM2.5	Jul 18, 2024 24:00	431295	24-hr	164	163.6	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Jul 18, 2024 24:00	431296	24-hr	201	200.7	exc
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	Jul 18, 2024 24:00	431290	24-hr	79	78.8	exc
AAAQO	AMS06 Patricia McInnes	PM2.5	Jul 18, 2024 24:00	431291	24-hr	51	51.5	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Jul 18, 2024 24:00	431292	24-hr	123	123.1	exc
AAAQO	AMS08 Fort Chipewyan	PM2.5	Jul 18, 2024 24:00	431298	24-hr	164	164.2	exc
AAAQO	AMS14 Anzac	PM2.5	Jul 18, 2024 24:00	431285	24-hr	42	42.2	exc
AAAQO	AMS18 Stony Mountain	PM2.5	Jul 18, 2024 24:00	431297	24-hr	74	74.3	exc
AAAQO	AMS21 Conklin	PM2.5	Jul 18, 2024 24:00	431293	24-hr	109	108.8	exc
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	Jul 19, 2024 24:00	431290	24-hr	149	148.8	exc
AAAQO	AMS06 Patricia McInnes	PM2.5	Jul 19, 2024 24:00	431291	24-hr	194	193.7	exc



Wood Buffalo Environmental Association
Air Quality Events List 2024

Type	Site	Parameter	Date/Time	Reference	Period	Reported	Final	status
AAAQO	AMS07 Athabasca Valley	PM2.5	Jul 19, 2024 24:00	431292	24-hr	201	201.2	exc
AAAQO	AMS08 Fort Chipewyan	PM2.5	Jul 19, 2024 24:00	431298	24-hr	125	125.1	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Jul 19, 2024 24:00	431289	24-hr	124	124.1	exc
AAAQO	AMS21 Conklin	PM2.5	Jul 19, 2024 24:00	431293	24-hr	159	158.5	exc
AAAQO	AMS22 Janvier	PM2.5	Jul 19, 2024 24:00	431294	24-hr	155	154.8	exc
AAAQO	AMS23 Fort Hills	PM2.5	Jul 19, 2024 24:00	431284	24-hr	114	113.8	exc
AAAQO	AMS29 Surmont 2	PM2.5	Jul 19, 2024 24:00	431287	24-hr	154	154.3	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Jul 19, 2024 24:00	431296	24-hr	139	139.2	exc
AAAQO	AMS02 Mildred Lake	H2S	Jul 19, 2024 24:00	430609	24-hr	3	2.6	nae
AAAQO	AMS09 Barge Landing	PM2.5	Jul 19, 2024 24:00	431288	24-hr	129	128.7	exc
AAAQO	AMS11 Lower Camp	H2S	Jul 19, 2024 24:00	430610	24-hr	3	2.6	nae
AAAQO	AMS14 Anzac	PM2.5	Jul 19, 2024 24:00	431285	24-hr	288	288.3	exc
AAAQO	AMS17 Wapasu	PM2.5	Jul 19, 2024 24:00	431286	24-hr	105	104.6	exc
AAAQO	AMS18 Stony Mountain	PM2.5	Jul 19, 2024 24:00	431297	24-hr	236	235.8	exc
AAAQO	AMS30 Ells River	PM2.5	Jul 19, 2024 24:00	431295	24-hr	114	114.6	exc
AAAQO	AMS02 Mildred Lake	H2S	Jul 19, 2024 03:00	430609	1-hr	12	11.5	exc
AAAQO	AMS11 Lower Camp	H2S	Jul 19, 2024 06:00	430610	1-hr	12	11.3	exc
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	Jul 20, 2024 24:00	431290	24-hr	134	134.4	exc
AAAQO	AMS05 Mannix	H2S	Jul 20, 2024 24:00	403701	24-hr	6	5.8	exc
AAAQO	AMS06 Patricia McInnes	PM2.5	Jul 20, 2024 24:00	431291	24-hr	136	136.2	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Jul 20, 2024 24:00	431292	24-hr	169	169.2	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Jul 20, 2024 24:00	431289	24-hr	127	127.0	exc
AAAQO	AMS17 Wapasu	PM2.5	Jul 20, 2024 24:00	431286	24-hr	119	118.9	exc
AAAQO	AMS18 Stony Mountain	PM2.5	Jul 20, 2024 24:00	431297	24-hr	186	186.5	exc
AAAQO	AMS21 Conklin	PM2.5	Jul 20, 2024 24:00	431293	24-hr	158	157.8	exc
AAAQO	AMS22 Janvier	PM2.5	Jul 20, 2024 24:00	431294	24-hr	162	161.5	exc
AAAQO	AMS23 Fort Hills	PM2.5	Jul 20, 2024 24:00	431284	24-hr	172	171.7	exc
AAAQO	AMS30 Ells River	PM2.5	Jul 20, 2024 24:00	431295	24-hr	115	115.4	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Jul 20, 2024 24:00	431296	24-hr	139	139.4	exc
AAAQO	AMS08 Fort Chipewyan	PM2.5	Jul 20, 2024 24:00	431298	24-hr	112	112.4	exc
AAAQO	AMS09 Barge Landing	PM2.5	Jul 20, 2024 24:00	431288	24-hr	141	140.8	exc
AAAQO	AMS14 Anzac	PM2.5	Jul 20, 2024 24:00	431285	24-hr	170	170.0	exc
AAAQO	AMS29 Surmont 2	PM2.5	Jul 20, 2024 24:00	431287	24-hr	129	129.1	exc
AAAQO	AMS05 Mannix	H2S	Jul 20, 2024 08:00	430683	1-hr	16	16.2	exc
AAAQO	AMS05 Mannix	H2S	Jul 20, 2024 22:00	430701	1-hr	13	13.3	exc
AAAQO	AMS05 Mannix	H2S	Jul 20, 2024 23:00	430701	1-hr	18	18.5	exc
AAAQO	AMS05 Mannix	H2S	Jul 20, 2024 24:00	430701	1-hr	32	32.1	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Jul 21, 2024 24:00	431296	24-hr	153	153.4	exc
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	Jul 21, 2024 24:00	431290	24-hr	146	145.6	exc
AAAQO	AMS09 Barge Landing	PM2.5	Jul 21, 2024 24:00	431288	24-hr	154	153.6	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Jul 21, 2024 24:00	431289	24-hr	142	141.9	exc
AAAQO	AMS14 Anzac	PM2.5	Jul 21, 2024 24:00	431285	24-hr	185	185.1	exc
AAAQO	AMS17 Wapasu	PM2.5	Jul 21, 2024 24:00	431286	24-hr	149	149.1	exc
AAAQO	AMS18 Stony Mountain	PM2.5	Jul 21, 2024 24:00	431297	24-hr	193	193.0	exc
AAAQO	AMS21 Conklin	PM2.5	Jul 21, 2024 24:00	431293	24-hr	147	147.3	exc
AAAQO	AMS22 Janvier	PM2.5	Jul 21, 2024 24:00	431294	24-hr	153	152.6	exc
AAAQO	AMS23 Fort Hills	PM2.5	Jul 21, 2024 24:00	431284	24-hr	170	170.3	exc
AAAQO	AMS06 Patricia McInnes	PM2.5	Jul 21, 2024 24:00	431291	24-hr	164	163.8	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Jul 21, 2024 24:00	431292	24-hr	201	201.4	exc
AAAQO	AMS08 Fort Chipewyan	PM2.5	Jul 21, 2024 24:00	431298	24-hr	40	39.9	exc
AAAQO	AMS29 Surmont 2	PM2.5	Jul 21, 2024 24:00	431287	24-hr	142	141.8	exc
AAAQO	AMS30 Ells River	PM2.5	Jul 21, 2024 24:00	431295	24-hr	125	125.1	exc
AAAQO	AMS11 Lower Camp	H2S	Jul 21, 2024 09:00	430712	1-hr	12	11.7	exc
AAAQO	AMS04 Buffalo Viewpoint	O3	Jul 21, 2024 14:00	432422	1-hr	78	77.6	late
AAAQO	AMS06 Patricia McInnes	O3	Jul 21, 2024 15:00	430874	1-hr	84	86.4	exc
AAAQO	AMS07 Athabasca Valley	O3	Jul 21, 2024 15:00	430875	1-hr	86	88.9	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Jul 22, 2024 24:00	431296	24-hr	128	128.4	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Jul 22, 2024 24:00	431292	24-hr	238	237.7	exc
AAAQO	AMS09 Barge Landing	PM2.5	Jul 22, 2024 24:00	431288	24-hr	128	127.5	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Jul 22, 2024 24:00	431289	24-hr	119	119.2	exc
AAAQO	AMS14 Anzac	PM2.5	Jul 22, 2024 24:00	431285	24-hr	222	222.1	exc
AAAQO	AMS18 Stony Mountain	PM2.5	Jul 22, 2024 24:00	431297	24-hr	152	151.9	exc
AAAQO	AMS23 Fort Hills	PM2.5	Jul 22, 2024 24:00	431284	24-hr	126	126.2	exc



Wood Buffalo Environmental Association
Air Quality Events List 2024

Type	Site	Parameter	Date/Time	Reference	Period	Reported	Final	status
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	Jul 22, 2024 24:00	431290	24-hr	139	138.6	exc
AAAQO	AMS06 Patricia McInnes	PM2.5	Jul 22, 2024 24:00	431291	24-hr	193	193.2	exc
AAAQO	AMS08 Fort Chipewyan	PM2.5	Jul 22, 2024 24:00	431298	24-hr	101	100.6	exc
AAAQO	AMS17 Wapasu	PM2.5	Jul 22, 2024 24:00	431286	24-hr	174	174.0	exc
AAAQO	AMS21 Conklin	PM2.5	Jul 22, 2024 24:00	431293	24-hr	145	145.4	exc
AAAQO	AMS22 Janvier	PM2.5	Jul 22, 2024 24:00	431294	24-hr	151	151.0	exc
AAAQO	AMS29 Surmont 2	PM2.5	Jul 22, 2024 24:00	431287	24-hr	147	146.9	exc
AAAQO	AMS30 Ells River	PM2.5	Jul 22, 2024 24:00	431295	24-hr	107	106.9	exc
AAAQO	AMS30 Ells River	TSP	Jul 22, 2024 24:00	432399	24-hr	149	149.0	exc
AAAQO	AMS11 Lower Camp	H2S	Jul 22, 2024 22:00	430796	1-hr	14	13.3	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Jul 23, 2024 24:00	431296	24-hr	95	94.7	exc
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	Jul 23, 2024 24:00	431290	24-hr	80	80.0	exc
AAAQO	AMS06 Patricia McInnes	PM2.5	Jul 23, 2024 24:00	431291	24-hr	76	76.0	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Jul 23, 2024 24:00	431292	24-hr	103	103.2	exc
AAAQO	AMS08 Fort Chipewyan	PM2.5	Jul 23, 2024 24:00	431298	24-hr	167	166.8	exc
AAAQO	AMS09 Barge Landing	PM2.5	Jul 23, 2024 24:00	431288	24-hr	94	93.8	exc
AAAQO	AMS11 Lower Camp	H2S	Jul 23, 2024 24:00	430863	24-hr	3	2.5	nae
AAAQO	AMS13 Fort McKay South	PM2.5	Jul 23, 2024 24:00	431289	24-hr	108	107.7	exc
AAAQO	AMS14 Anzac	PM2.5	Jul 23, 2024 24:00	431285	24-hr	81	80.5	exc
AAAQO	AMS17 Wapasu	PM2.5	Jul 23, 2024 24:00	431286	24-hr	80	80.4	exc
AAAQO	AMS18 Stony Mountain	PM2.5	Jul 23, 2024 24:00	431297	24-hr	81	80.8	exc
AAAQO	AMS21 Conklin	PM2.5	Jul 23, 2024 24:00	431293	24-hr	68	68.1	exc
AAAQO	AMS22 Janvier	PM2.5	Jul 23, 2024 24:00	431294	24-hr	65	64.6	exc
AAAQO	AMS23 Fort Hills	PM2.5	Jul 23, 2024 24:00	431284	24-hr	95	94.9	exc
AAAQO	AMS29 Surmont 2	PM2.5	Jul 23, 2024 24:00	431287	24-hr	62	62.4	exc
AAAQO	AMS30 Ells River	PM2.5	Jul 23, 2024 24:00	431295	24-hr	80	79.6	exc
AAAQO	AMS14 Anzac	PM2.5	Jul 24, 2024 24:00	431285	24-hr	86	85.7	exc
AAAQO	AMS18 Stony Mountain	PM2.5	Jul 24, 2024 24:00	431297	24-hr	79	79.3	exc
AAAQO	AMS22 Janvier	PM2.5	Jul 24, 2024 24:00	431294	24-hr	73	72.5	exc
AAAQO	AMS23 Fort Hills	PM2.5	Jul 24, 2024 24:00	431284	24-hr	77	77.1	exc
AAAQO	AMS30 Ells River	PM2.5	Jul 24, 2024 24:00	431295	24-hr	62	62.0	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Jul 24, 2024 24:00	431296	24-hr	88	89.7	exc
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	Jul 24, 2024 24:00	431290	24-hr	86	86.2	exc
AAAQO	AMS06 Patricia McInnes	PM2.5	Jul 24, 2024 24:00	431291	24-hr	74	73.5	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Jul 24, 2024 24:00	431292	24-hr	90	89.5	exc
AAAQO	AMS08 Fort Chipewyan	PM2.5	Jul 24, 2024 24:00	431298	24-hr	109	108.6	exc
AAAQO	AMS09 Barge Landing	PM2.5	Jul 24, 2024 24:00	431288	24-hr	79	79.0	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Jul 24, 2024 24:00	431289	24-hr	96	95.6	exc
AAAQO	AMS17 Wapasu	PM2.5	Jul 24, 2024 24:00	431286	24-hr	47	46.6	exc
AAAQO	AMS21 Conklin	PM2.5	Jul 24, 2024 24:00	431293	24-hr	69	68.5	exc
AAAQO	AMS29 Surmont 2	PM2.5	Jul 24, 2024 24:00	431287	24-hr	60	59.8	exc
AAAQO	AMS02 Mildred Lake	H2S	Jul 24, 2024 05:00	430865	1-hr	12	11.7	exc
AAAQO	AMS02 Mildred Lake	H2S	Jul 24, 2024 06:00	430866	1-hr	10	9.6	nae
AAAQO	AMS13 Fort McKay South	PM2.5	Jul 25, 2024 24:00	431289	24-hr	52	52.1	exc
AAAQO	AMS14 Anzac	PM2.5	Jul 25, 2024 24:00	431285	24-hr	60	59.7	exc
AAAQO	AMS18 Stony Mountain	PM2.5	Jul 25, 2024 24:00	431297	24-hr	52	51.9	exc
AAAQO	AMS21 Conklin	PM2.5	Jul 25, 2024 24:00	431293	24-hr	46	46.1	exc
AAAQO	AMS22 Janvier	PM2.5	Jul 25, 2024 24:00	431294	24-hr	56	56.1	exc
AAAQO	AMS23 Fort Hills	PM2.5	Jul 25, 2024 24:00	431284	24-hr	44	43.8	exc
AAAQO	AMS29 Surmont 2	PM2.5	Jul 25, 2024 24:00	431287	24-hr	47	46.8	exc
AAAQO	AMS30 Ells River	PM2.5	Jul 25, 2024 24:00	431295	24-hr	34	33.9	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Jul 25, 2024 24:00	431296	24-hr	45	45.0	exc
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	Jul 25, 2024 24:00	431290	24-hr	38	37.6	exc
AAAQO	AMS06 Patricia McInnes	PM2.5	Jul 25, 2024 24:00	431291	24-hr	35	34.7	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Jul 25, 2024 24:00	431292	24-hr	51	50.8	exc
AAAQO	AMS08 Fort Chipewyan	PM2.5	Jul 25, 2024 24:00	431298	24-hr	45	44.5	exc
AAAQO	AMS17 Wapasu	PM2.5	Jul 25, 2024 24:00	431286	24-hr	30	30.4	exc
AAAQO	AMS09 Barge Landing	PM2.5	Jul 25, 2024 24:00	431288	24-hr	46	46.4	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Jul 27, 2024 24:00	431289	24-hr	29	29.3	exc
AAAQO	AMS14 Anzac	PM2.5	Jul 27, 2024 24:00	431285	24-hr	29	29.3	exc
AAAQO	AMS18 Stony Mountain	PM2.5	Jul 27, 2024 24:00	431297	24-hr	37	36.7	exc
AAAQO	AMS21 Conklin	PM2.5	Jul 27, 2024 24:00	431293	24-hr	31	31.0	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Jul 27, 2024 24:00	431292	24-hr	34	33.7	exc



Wood Buffalo Environmental Association
Air Quality Events List 2024

Type	Site	Parameter	Date/Time	Reference	Period	Reported	Final	status
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Jul 28, 2024 24:00	431296	24-hr	32	31.6	exc
AAAQO	AMS09 Barge Landing	PM2.5	Jul 28, 2024 24:00	431288	24-hr	32	31.7	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Jul 28, 2024 24:00	431289	24-hr	34	34.5	exc
AAAQO	AMS14 Anzac	PM2.5	Jul 28, 2024 24:00	431285	24-hr	30	30.2	exc
AAAQO	AMS18 Stony Mountain	PM2.5	Jul 28, 2024 24:00	431297	24-hr	30	29.8	exc
AAAQO	AMS08 Fort Chipewyan	PM2.5	Jul 28, 2024 24:00	431298	24-hr	42	41.8	exc
AAAQO	AMS21 Conklin	PM2.5	Jul 28, 2024 24:00	431293	24-hr	31	31.2	exc
AAAQO	AMS23 Fort Hills	PM2.5	Jul 28, 2024 24:00	431284	24-hr	40	40.4	exc
AAAQO	AMS08 Fort Chipewyan	PM2.5	Jul 29, 2024 24:00	431298	24-hr	33	32.6	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Jul 30, 2024 24:00	431296	24-hr	31	30.6	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Jul 30, 2024 24:00	431292	24-hr	41	41.5	exc
AAAQO	AMS08 Fort Chipewyan	PM2.5	Jul 30, 2024 24:00	431298	24-hr	30	29.3	exc
AAAQO	AMS09 Barge Landing	PM2.5	Jul 30, 2024 24:00	431288	24-hr	31	30.7	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Jul 30, 2024 24:00	431289	24-hr	35	34.7	exc
AAAQO	AMS14 Anzac	PM2.5	Jul 30, 2024 24:00	431285	24-hr	36	35.6	exc
AAAQG	AMS01 Bertha Ganter - Fort McKay	Dustfall	Aug 31, 2024 12:00	433753	30-day	61	61.0	exc
AAAQG	AMS21 Conklin	Dustfall	Aug 31, 2024 12:00	433754	30-day	61	61.0	exc
AAAQO	AMS11 Lower Camp	H2S	Aug 4, 2024 09:00	431373	1-hr	10	10.3	exc
AAAQO	AMS05 Mannix	H2S	Aug 4, 2024 22:00	431381	1-hr	14	13.9	exc
AAAQO	AMS09 Barge Landing	PM2.5	Aug 5, 2024 24:00	432541	24-hr	32	31.9	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Aug 5, 2024 24:00	432542	24-hr	35	35.1	exc
AAAQO	AMS14 Anzac	PM2.5	Aug 5, 2024 24:00	432543	24-hr	37	37.2	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Aug 5, 2024 24:00	432544	24-hr	30	30.2	exc
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	Aug 5, 2024 24:00	432545	24-hr	33	33.1	exc
AAAQO	AMS06 Patricia McInnes	PM2.5	Aug 5, 2024 24:00	432546	24-hr	31	30.8	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Aug 5, 2024 24:00	432548	24-hr	37	36.9	exc
AAAQO	AMS18 Stony Mountain	PM2.5	Aug 5, 2024 24:00	432549	24-hr	31	31.2	exc
AAAQO	AMS23 Fort Hills	PM2.5	Aug 5, 2024 24:00	432550	24-hr	30	29.8	exc
AAAQO	AMS05 Mannix	H2S	Aug 6, 2024 24:00	431444	1-hr	16	15.7	exc
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	Aug 7, 2024 24:00	432545	24-hr	32	32.1	exc
AAAQO	AMS06 Patricia McInnes	PM2.5	Aug 7, 2024 24:00	432546	24-hr	33	33.3	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Aug 7, 2024 24:00	432548	24-hr	45	45.0	exc
AAAQO	AMS14 Anzac	PM2.5	Aug 7, 2024 24:00	432543	24-hr	46	46.1	exc
AAAQO	AMS18 Stony Mountain	PM2.5	Aug 7, 2024 24:00	432549	24-hr	32	32.0	exc
AAAQO	AMS21 Conklin	PM2.5	Aug 7, 2024 24:00	432551	24-hr	31	31.3	exc
AAAQO	AMS23 Fort Hills	PM2.5	Aug 7, 2024 24:00	432550	24-hr	36	35.6	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Aug 8, 2024 24:00	432544	24-hr	33	32.6	exc
AAAQO	AMS09 Barge Landing	PM2.5	Aug 8, 2024 24:00	432541	24-hr	36	36.1	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Aug 8, 2024 24:00	432542	24-hr	39	38.8	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Aug 9, 2024 24:00	432544	24-hr	29	29.1	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Aug 9, 2024 24:00	432542	24-hr	31	30.9	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Aug 9, 2024 24:00	432548	24-hr	33	32.8	exc
AAAQO	AMS09 Barge Landing	PM2.5	Aug 9, 2024 24:00	432541	24-hr	30	29.8	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Aug 10, 2024 24:00	432548	24-hr	29	29.1	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Aug 10, 2024 24:00	432542	24-hr	29	29.4	exc
AAAQO	AMS14 Anzac	PM2.5	Aug 10, 2024 24:00	432543	24-hr	29	29.4	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Aug 11, 2024 24:00	432548	24-hr	29	29.3	exc
AAAQO	AMS09 Barge Landing	PM2.5	Aug 11, 2024 24:00	432541	24-hr	30	30.0	exc
AAAQO	AMS14 Anzac	PM2.5	Aug 11, 2024 24:00	432543	24-hr	30	29.9	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Aug 11, 2024 24:00	432542	24-hr	31	31.3	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Aug 13, 2024 24:00	432544	24-hr	31	30.6	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Aug 13, 2024 24:00	432548	24-hr	39	39.3	exc
AAAQO	AMS08 Fort Chipewyan	PM2.5	Aug 13, 2024 24:00	432552	24-hr	101	101.4	exc
AAAQO	AMS09 Barge Landing	PM2.5	Aug 13, 2024 24:00	432541	24-hr	34	34.4	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Aug 13, 2024 24:00	432542	24-hr	31	30.9	exc
AAAQO	AMS14 Anzac	PM2.5	Aug 13, 2024 24:00	432543	24-hr	32	32.0	exc
AAAQO	AMS17 Wapasu	PM2.5	Aug 13, 2024 24:00	432553	24-hr	30	29.6	exc
AAAQO	AMS22 Janvier	PM2.5	Aug 13, 2024 24:00	432554	24-hr	35	35.2	exc
AAAQO	AMS23 Fort Hills	PM2.5	Aug 13, 2024 24:00	432550	24-hr	40	40.2	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Aug 14, 2024 24:00	432544	24-hr	60	60.1	exc
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	Aug 14, 2024 24:00	432545	24-hr	59	59.0	exc
AAAQO	AMS23 Fort Hills	PM2.5	Aug 14, 2024 24:00	432550	24-hr	59	59.3	exc
AAAQO	AMS06 Patricia McInnes	PM2.5	Aug 14, 2024 24:00	432546	24-hr	51	50.8	exc



Wood Buffalo Environmental Association
Air Quality Events List 2024

Type	Site	Parameter	Date/Time	Reference	Period	Reported	Final	status
AAAQO	AMS07 Athabasca Valley	PM2.5	Aug 14, 2024 24:00	432548	24-hr	67	67.4	exc
AAAQO	AMS08 Fort Chipewyan	PM2.5	Aug 14, 2024 24:00	432552	24-hr	42	42.0	exc
AAAQO	AMS09 Barge Landing	PM2.5	Aug 14, 2024 24:00	432541	24-hr	62	61.8	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Aug 14, 2024 24:00	432542	24-hr	56	56.1	exc
AAAQO	AMS14 Anzac	PM2.5	Aug 14, 2024 24:00	432543	24-hr	64	63.7	exc
AAAQO	AMS17 Wapasu	PM2.5	Aug 14, 2024 24:00	432553	24-hr	51	51.2	exc
AAAQO	AMS18 Stony Mountain	PM2.5	Aug 14, 2024 24:00	432549	24-hr	49	49.5	exc
AAAQO	AMS21 Conklin	PM2.5	Aug 14, 2024 24:00	432551	24-hr	45	45.4	exc
AAAQO	AMS22 Janvier	PM2.5	Aug 14, 2024 24:00	432554	24-hr	42	41.8	exc
AAAQO	AMS29 Surmont 2	PM2.5	Aug 14, 2024 24:00	432555	24-hr	45	45.4	exc
AAAQO	AMS30 Ells River	PM2.5	Aug 14, 2024 24:00	432556	24-hr	52	51.7	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Aug 15, 2024 24:00	432542	24-hr	56	55.7	exc
AAAQO	AMS14 Anzac	PM2.5	Aug 15, 2024 24:00	432543	24-hr	36	36.3	exc
AAAQO	AMS17 Wapasu	PM2.5	Aug 15, 2024 24:00	432553	24-hr	33	32.6	exc
AAAQO	AMS23 Fort Hills	PM2.5	Aug 15, 2024 24:00	432550	24-hr	45	44.6	exc
AAAQO	AMS30 Ells River	PM2.5	Aug 15, 2024 24:00	432556	24-hr	46	45.9	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Aug 15, 2024 24:00	432544	24-hr	49	48.9	exc
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	Aug 15, 2024 24:00	432545	24-hr	39	39.3	exc
AAAQO	AMS06 Patricia McInnes	PM2.5	Aug 15, 2024 24:00	432546	24-hr	37	36.9	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Aug 15, 2024 24:00	432548	24-hr	48	47.9	exc
AAAQO	AMS09 Barge Landing	PM2.5	Aug 15, 2024 24:00	432541	24-hr	49	48.8	exc
AAAQO	AMS30 Ells River	TSP	Aug 15, 2024 24:00	433564	24-hr	101	101.0	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Aug 16, 2024 24:00	432548	24-hr	45	46.1	exc
AAAQO	AMS18 Stony Mountain	PM2.5	Aug 16, 2024 24:00	432549	24-hr	46	46.3	exc
AAAQO	AMS22 Janvier	PM2.5	Aug 16, 2024 24:00	432554	24-hr	73	72.6	exc
AAAQO	AMS14 Anzac	PM2.5	Aug 16, 2024 24:00	432543	24-hr	71	71.2	exc
AAAQO	AMS21 Conklin	PM2.5	Aug 16, 2024 24:00	432551	24-hr	39	39.2	exc
AAAQO	AMS29 Surmont 2	PM2.5	Aug 16, 2024 24:00	432555	24-hr	50	50.0	exc
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	Aug 17, 2024 24:00	432545	24-hr	76	75.7	exc
AAAQO	AMS05 Mannix	H2S	Aug 17, 2024 24:00	431876	24-hr	3	3.5	exc
AAAQO	AMS06 Patricia McInnes	PM2.5	Aug 17, 2024 24:00	432546	24-hr	106	106.2	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Aug 17, 2024 24:00	432548	24-hr	113	113.2	exc
AAAQO	AMS08 Fort Chipewyan	PM2.5	Aug 17, 2024 24:00	432552	24-hr	44	43.7	exc
AAAQO	AMS14 Anzac	PM2.5	Aug 17, 2024 24:00	432543	24-hr	116	115.9	exc
AAAQO	AMS17 Wapasu	PM2.5	Aug 17, 2024 24:00	432553	24-hr	53	52.8	exc
AAAQO	AMS18 Stony Mountain	PM2.5	Aug 17, 2024 24:00	432549	24-hr	49	49.0	exc
AAAQO	AMS21 Conklin	PM2.5	Aug 17, 2024 24:00	432551	24-hr	42	42.5	exc
AAAQO	AMS22 Janvier	PM2.5	Aug 17, 2024 24:00	432554	24-hr	91	90.8	exc
AAAQO	AMS23 Fort Hills	PM2.5	Aug 17, 2024 24:00	432550	24-hr	63	63.0	exc
AAAQO	AMS29 Surmont 2	PM2.5	Aug 17, 2024 24:00	432555	24-hr	73	73.4	exc
AAAQO	AMS30 Ells River	PM2.5	Aug 17, 2024 24:00	432556	24-hr	53	53.1	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Aug 17, 2024 24:00	432544	24-hr	65	65.2	exc
AAAQO	AMS09 Barge Landing	PM2.5	Aug 17, 2024 24:00	432541	24-hr	71	71.3	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Aug 17, 2024 24:00	432542	24-hr	79	78.6	exc
AAAQO	AMS05 Mannix	H2S	Aug 17, 2024 22:00	431876	1-hr	15	14.9	exc
AAAQO	AMS05 Mannix	H2S	Aug 17, 2024 23:00	431876	1-hr	13	13.3	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Aug 18, 2024 24:00	432544	24-hr	53	53.1	exc
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	Aug 18, 2024 24:00	432545	24-hr	84	84.1	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Aug 18, 2024 24:00	432542	24-hr	64	63.9	exc
AAAQO	AMS14 Anzac	PM2.5	Aug 18, 2024 24:00	432543	24-hr	151	150.6	exc
AAAQO	AMS06 Patricia McInnes	PM2.5	Aug 18, 2024 24:00	432546	24-hr	99	98.6	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Aug 18, 2024 24:00	432548	24-hr	131	130.7	exc
AAAQO	AMS09 Barge Landing	PM2.5	Aug 18, 2024 24:00	432541	24-hr	54	53.8	exc
AAAQO	AMS17 Wapasu	PM2.5	Aug 18, 2024 24:00	432553	24-hr	79	79.4	exc
AAAQO	AMS18 Stony Mountain	PM2.5	Aug 18, 2024 24:00	432549	24-hr	34	33.6	exc
AAAQO	AMS21 Conklin	PM2.5	Aug 18, 2024 24:00	432551	24-hr	30	29.7	exc
AAAQO	AMS22 Janvier	PM2.5	Aug 18, 2024 24:00	432554	24-hr	96	96.4	exc
AAAQO	AMS23 Fort Hills	PM2.5	Aug 18, 2024 24:00	432550	24-hr	40	39.6	exc
AAAQO	AMS29 Surmont 2	PM2.5	Aug 18, 2024 24:00	432555	24-hr	117	117.1	exc
AAAQO	AMS30 Ells River	PM2.5	Aug 18, 2024 24:00	432556	24-hr	39	39.3	exc
AAAQO	AMS14 Anzac	PM2.5	Aug 19, 2024 24:00	432543	24-hr	58	58.2	exc
AAAQO	AMS18 Stony Mountain	PM2.5	Aug 19, 2024 24:00	432549	24-hr	40	40.4	exc
AAAQO	AMS21 Conklin	PM2.5	Aug 19, 2024 24:00	432551	24-hr	35	35.2	exc



Wood Buffalo Environmental Association
Air Quality Events List 2024

Type	Site	Parameter	Date/Time	Reference	Period	Reported	Final	status
AAAQO	AMS22 Janvier	PM2.5	Aug 19, 2024 24:00	432554	24-hr	38	37.6	exc
AAAQO	AMS23 Fort Hills	PM2.5	Aug 19, 2024 24:00	432550	24-hr	36	36.3	exc
AAAQO	AMS30 Ells River	PM2.5	Aug 19, 2024 24:00	432556	24-hr	30	30.0	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Aug 19, 2024 24:00	432544	24-hr	37	37.3	exc
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	Aug 19, 2024 24:00	432545	24-hr	35	35.1	exc
AAAQO	AMS06 Patricia McInnes	PM2.5	Aug 19, 2024 24:00	432546	24-hr	39	39.3	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Aug 19, 2024 24:00	432548	24-hr	53	53.2	exc
AAAQO	AMS09 Barge Landing	PM2.5	Aug 19, 2024 24:00	432541	24-hr	38	37.7	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Aug 19, 2024 24:00	432542	24-hr	44	43.8	exc
AAAQO	AMS29 Surmont 2	PM2.5	Aug 19, 2024 24:00	432555	24-hr	47	46.5	exc
AAAQO	AMS08 Fort Chipewyan	PM2.5	Aug 20, 2024 24:00	432552	24-hr	40	39.9	exc
AAAQO	AMS11 Lower Camp	H2S	Aug 20, 2024 07:00	431979	1-hr	11	10.7	exc
AAAQO	AMS11 Lower Camp	H2S	Aug 21, 2024 01:00	432025	1-hr	12	11.7	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Aug 21, 2024 24:00	432544	24-hr	53	53.3	exc
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	Aug 21, 2024 24:00	432545	24-hr	52	51.6	exc
AAAQO	AMS14 Anzac	PM2.5	Aug 21, 2024 24:00	432543	24-hr	47	47.4	exc
AAAQO	AMS17 Wapasu	PM2.5	Aug 21, 2024 24:00	432553	24-hr	42	42.6	exc
AAAQO	AMS18 Stony Mountain	PM2.5	Aug 21, 2024 24:00	432549	24-hr	36	36.2	exc
AAAQO	AMS21 Conklin	PM2.5	Aug 21, 2024 24:00	432551	24-hr	31	30.8	exc
AAAQO	AMS22 Janvier	PM2.5	Aug 21, 2024 24:00	432554	24-hr	31	30.6	exc
AAAQO	AMS23 Fort Hills	PM2.5	Aug 21, 2024 24:00	432550	24-hr	55	54.9	exc
AAAQO	AMS30 Ells River	PM2.5	Aug 21, 2024 24:00	432556	24-hr	46	46.2	exc
AAAQO	AMS06 Patricia McInnes	PM2.5	Aug 21, 2024 24:00	432546	24-hr	53	52.9	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Aug 21, 2024 24:00	432548	24-hr	59	58.9	exc
AAAQO	AMS08 Fort Chipewyan	PM2.5	Aug 21, 2024 24:00	432552	24-hr	75	75.1	exc
AAAQO	AMS09 Barge Landing	PM2.5	Aug 21, 2024 24:00	432541	24-hr	56	55.8	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Aug 21, 2024 24:00	432542	24-hr	60	60.1	exc
AAAQO	AMS29 Surmont 2	PM2.5	Aug 21, 2024 24:00	432555	24-hr	33	33.1	exc
AAAQO	AMS11 Lower Camp	H2S	Aug 23, 2024 24:00	432175	24-hr	3	3.0	nae
AAAQO	AMS13 Fort McKay South	PM2.5	Aug 23, 2024 24:00	432542	24-hr	29	28.3	nae
AAAQO	AMS11 Lower Camp	H2S	Aug 23, 2024 20:00	432173	1-hr	12	11.7	exc
AAAQO	AMS11 Lower Camp	H2S	Aug 23, 2024 21:00	432174	1-hr	17	16.8	exc
AAAQO	AMS14 Anzac	PM2.5	Aug 24, 2024 24:00	432543	24-hr	32	32.4	exc
AAAQO	AMS05 Mannix	H2S	Aug 25, 2024 21:00	432210	1-hr	13	13.6	exc
AAAQO	AMS11 Lower Camp	H2S	Aug 26, 2024 24:00	432256	24-hr	4	4.5	exc
AAAQO	AMS11 Lower Camp	H2S	Aug 26, 2024 18:00	432256	1-hr	14	14.0	exc
AAAQO	AMS11 Lower Camp	H2S	Aug 26, 2024 19:00	432256	1-hr	11	11.2	exc
AAAQO	AMS11 Lower Camp	H2S	Aug 26, 2024 21:00	432256	1-hr	12	11.8	exc
AAAQO	AMS23 Fort Hills	PM2.5	Aug 27, 2024 18:00	432514	1-hr	103	102.7	exc
AAAQO	AMS08 Fort Chipewyan	PM2.5	Aug 30, 2024 24:00	432552	24-hr	34	34.0	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	O3	Aug 30, 2024 11:16		1-hr	-	-	ret
AAAQO	AMS01 Bertha Ganter - Fort McKay	Dustfall	Sep 1, 2024 24:00	435016	30-day	60	59.8	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Sep 7, 2024 24:00	433774	24-hr	67	67.4	exc
AAAQO	AMS06 Patricia McInnes	PM2.5	Sep 7, 2024 24:00	433775	24-hr	85	85.4	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Sep 7, 2024 24:00	433776	24-hr	94	93.8	exc
AAAQO	AMS09 Barge Landing	PM2.5	Sep 7, 2024 24:00	433777	24-hr	68	68.1	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Sep 7, 2024 24:00	433778	24-hr	70	70.5	exc
AAAQO	AMS14 Anzac	PM2.5	Sep 7, 2024 24:00	433779	24-hr	61	61.2	exc
AAAQO	AMS18 Stony Mountain	PM2.5	Sep 7, 2024 24:00	433780	24-hr	124	123.7	exc
AAAQO	AMS21 Conklin	PM2.5	Sep 7, 2024 24:00	433782	24-hr	107	106.7	exc
AAAQO	AMS22 Janvier	PM2.5	Sep 7, 2024 24:00	433783	24-hr	104	104.4	exc
AAAQO	AMS23 Fort Hills	PM2.5	Sep 7, 2024 24:00	433784	24-hr	47	47.0	exc
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	Sep 7, 2024 24:00	433785	24-hr	69	68.9	exc
AAAQO	AMS17 Wapasu	PM2.5	Sep 7, 2024 24:00	433787	24-hr	40	40.3	exc
AAAQO	AMS29 Surmont 2	PM2.5	Sep 7, 2024 24:00	433788	24-hr	41	40.9	exc
AAAQO	AMS30 Ells River	PM2.5	Sep 7, 2024 24:00	433789	24-hr	49	48.6	exc
AAAQO	AMS06 Patricia McInnes	PM2.5	Sep 8, 2024 24:00	433775	24-hr	89	89.4	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Sep 8, 2024 24:00	433778	24-hr	104	104.1	exc
AAAQO	AMS14 Anzac	PM2.5	Sep 8, 2024 24:00	433779	24-hr	91	91.5	exc
AAAQO	AMS17 Wapasu	PM2.5	Sep 8, 2024 24:00	433787	24-hr	55	54.8	exc
AAAQO	AMS18 Stony Mountain	PM2.5	Sep 8, 2024 24:00	433780	24-hr	85	84.7	exc
AAAQO	AMS21 Conklin	PM2.5	Sep 8, 2024 24:00	433782	24-hr	64	63.9	exc
AAAQO	AMS30 Ells River	PM2.5	Sep 8, 2024 24:00	433789	24-hr	78	78.0	exc



Wood Buffalo Environmental Association
Air Quality Events List 2024

Type	Site	Parameter	Date/Time	Reference	Period	Reported	Final	status
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Sep 8, 2024 24:00	433774	24-hr	102	101.5	exc
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	Sep 8, 2024 24:00	433785	24-hr	96	96.0	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Sep 8, 2024 24:00	433776	24-hr	102	102.4	exc
AAAQO	AMS08 Fort Chipewyan	PM2.5	Sep 8, 2024 24:00	433790	24-hr	33	32.7	exc
AAAQO	AMS09 Barge Landing	PM2.5	Sep 8, 2024 24:00	433777	24-hr	99	99.0	exc
AAAQO	AMS22 Janvier	PM2.5	Sep 8, 2024 24:00	433783	24-hr	65	65.4	exc
AAAQO	AMS23 Fort Hills	PM2.5	Sep 8, 2024 24:00	433784	24-hr	81	80.9	exc
AAAQO	AMS29 Surmont 2	PM2.5	Sep 8, 2024 24:00	433788	24-hr	54	53.9	exc
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	Sep 9, 2024 24:00	433785	24-hr	32	31.5	exc
AAAQO	AMS23 Fort Hills	PM2.5	Sep 9, 2024 24:00	433784	24-hr	30	29.8	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Sep 9, 2024 24:00	433774	24-hr	35	34.7	exc
AAAQO	AMS06 Patricia McInnes	PM2.5	Sep 9, 2024 24:00	433775	24-hr	30	30.4	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Sep 9, 2024 24:00	433776	24-hr	43	43.1	exc
AAAQO	AMS09 Barge Landing	PM2.5	Sep 9, 2024 24:00	433777	24-hr	31	31.3	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Sep 9, 2024 24:00	433778	24-hr	34	33.7	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Sep 12, 2024 24:00	433774	24-hr	100	100.0	exc
AAAQO	AMS05 Mannix	H2S	Sep 12, 2024 24:00	432982	24-hr	3	3.1	exc
AAAQO	AMS06 Patricia McInnes	PM2.5	Sep 12, 2024 24:00	433775	24-hr	98	98.3	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Sep 12, 2024 24:00	433776	24-hr	134	133.6	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Sep 12, 2024 24:00	433778	24-hr	100	100.0	exc
AAAQO	AMS14 Anzac	PM2.5	Sep 12, 2024 24:00	433779	24-hr	109	109.3	exc
AAAQO	AMS23 Fort Hills	PM2.5	Sep 12, 2024 24:00	433784	24-hr	90	90.1	exc
AAAQO	AMS29 Surmont 2	PM2.5	Sep 12, 2024 24:00	433788	24-hr	55	55.3	exc
AAAQO	AMS30 Ells River	PM2.5	Sep 12, 2024 24:00	433789	24-hr	76	75.5	exc
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	Sep 12, 2024 24:00	433785	24-hr	97	97.2	exc
AAAQO	AMS08 Fort Chipewyan	PM2.5	Sep 12, 2024 24:00	433790	24-hr	90	90.0	exc
AAAQO	AMS09 Barge Landing	PM2.5	Sep 12, 2024 24:00	433777	24-hr	96	95.8	exc
AAAQO	AMS17 Wapasu	PM2.5	Sep 12, 2024 24:00	433787	24-hr	100	99.5	exc
AAAQO	AMS21 Conklin	PM2.5	Sep 12, 2024 24:00	433782	24-hr	85	85.5	exc
AAAQO	AMS22 Janvier	PM2.5	Sep 12, 2024 24:00	433783	24-hr	105	104.9	exc
AAAQO	AMS18 Stony Mountain	PM2.5	Sep 12, 2024 24:00	433780	24-hr	91	91.2	exc
AAAQO	AMS05 Mannix	H2S	Sep 12, 2024 09:00	432947	1-hr	11	11.3	exc
AAAQO	AMS05 Mannix	H2S	Sep 12, 2024 24:00	432982	1-hr	17	16.8	exc
AAAQO	AMS17 Wapasu	PM2.5	Sep 13, 2024 24:00	433787	24-hr	94	93.6	exc
AAAQO	AMS18 Stony Mountain	PM2.5	Sep 13, 2024 24:00	433780	24-hr	98	97.7	exc
AAAQO	AMS21 Conklin	PM2.5	Sep 13, 2024 24:00	433782	24-hr	92	92.3	exc
AAAQO	AMS22 Janvier	PM2.5	Sep 13, 2024 24:00	433783	24-hr	97	96.7	exc
AAAQO	AMS23 Fort Hills	PM2.5	Sep 13, 2024 24:00	433784	24-hr	84	83.6	exc
AAAQO	AMS29 Surmont 2	PM2.5	Sep 13, 2024 24:00	433788	24-hr	51	50.5	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Sep 13, 2024 24:00	433774	24-hr	107	106.9	exc
AAAQO	AMS04 Buffalo Viewpoint	PM2.5	Sep 13, 2024 24:00	433785	24-hr	105	104.6	exc
AAAQO	AMS06 Patricia McInnes	PM2.5	Sep 13, 2024 24:00	433775	24-hr	105	104.6	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Sep 13, 2024 24:00	433776	24-hr	144	144.2	exc
AAAQO	AMS08 Fort Chipewyan	PM2.5	Sep 13, 2024 24:00	433790	24-hr	77	76.8	exc
AAAQO	AMS09 Barge Landing	PM2.5	Sep 13, 2024 24:00	433777	24-hr	105	104.9	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Sep 13, 2024 24:00	433778	24-hr	112	112.5	exc
AAAQO	AMS14 Anzac	PM2.5	Sep 13, 2024 24:00	433779	24-hr	105	104.7	exc
AAAQO	AMS30 Ells River	PM2.5	Sep 13, 2024 24:00	433789	24-hr	86	86.2	exc
AAAQO	AMS09 Barge Landing	PM2.5	Sep 14, 2024 24:00	433777	24-hr	31	30.6	exc
AAAQO	AMS13 Fort McKay South	PM2.5	Sep 14, 2024 24:00	433778	24-hr	34	34.3	exc
AAAQO	AMS21 Conklin	PM2.5	Sep 14, 2024 24:00	433782	24-hr	34	34.1	exc
AAAQO	AMS22 Janvier	PM2.5	Sep 14, 2024 24:00	433783	24-hr	38	37.6	exc
AAAQO	AMS01 Bertha Ganter - Fort McKay	PM2.5	Sep 14, 2024 24:00	433774	24-hr	34	34.1	exc
AAAQO	AMS07 Athabasca Valley	PM2.5	Sep 14, 2024 24:00	433776	24-hr	42	42.4	exc
AAAQO	AMS18 Stony Mountain	PM2.5	Sep 14, 2024 24:00	433780	24-hr	33	32.3	exc
AAAQO	AMS05 Mannix	H2S	Sep 14, 2024 23:00	433043	1-hr	10	9.5	nae
AAAQO	AMS05 Mannix	H2S	Sep 20, 2024 05:00	433271	1-hr	11	10.9	exc
AAAQO	AMS06 Patricia McInnes	TRS	Sep 24, 2024 05:00	433342	1-hr	0	0.0	ret
AAAQO	AMS11 Lower Camp	H2S	Oct 3, 2024 19:00	433844	1-hr	12	12.7	exc
AAAQO	AMS11 Lower Camp	H2S	Oct 3, 2024 20:00	433844	1-hr	10	10.5	exc
AAAQO	AMS11 Lower Camp	H2S	Oct 5, 2024 18:00	433915	1-hr	13	13.2	exc
AAAQO	AMS11 Lower Camp	H2S	Oct 9, 2024 18:00	434064	1-hr	11	10.9	exc
AAAQO	AMS11 Lower Camp	H2S	Oct 11, 2024 18:00	434132	1-hr	11	11.7	exc



Wood Buffalo Environmental Association
Air Quality Events List 2024

Type	Site	Parameter	Date/Time	Reference	Period	Reported	Final	status
AAAQO	AMS11 Lower Camp	H2S	Oct 11, 2024 19:00	434133	1-hr	15	15.8	exc
AAAQO	AMS11 Lower Camp	H2S	Oct 11, 2024 20:00	434133	1-hr	16	15.9	exc
AAAQO	AMS11 Lower Camp	H2S	Oct 15, 2024 24:00	434233	24-hr	4	3.7	exc
AAAQO	AMS11 Lower Camp	H2S	Oct 15, 2024 18:00	434232	1-hr	16	16.6	exc
AAAQO	AMS11 Lower Camp	H2S	Oct 15, 2024 19:00	434233	1-hr	13	13.5	exc
AAAQO	AMS11 Lower Camp	H2S	Oct 15, 2024 20:00	434233	1-hr	15	15.3	exc
AAAQO	AMS11 Lower Camp	H2S	Oct 15, 2024 24:00	434233	1-hr	10	9.8	nae
AAAQO	AMS11 Lower Camp	H2S	Oct 18, 2024 17:00	434346	1-hr	11	11.8	exc
AAAQO	AMS11 Lower Camp	SO2	Oct 22, 2024 24:00	434445	24-hr	49	49.1	exc
AAAQO	AMS11 Lower Camp	H2S	Oct 22, 2024 24:00	434445	24-hr	7	7.4	exc
AAAQO	AMS11 Lower Camp	H2S	Oct 22, 2024 03:00	434412	1-hr	11	11.4	exc
AAAQO	AMS11 Lower Camp	H2S	Oct 22, 2024 04:00	434412	1-hr	12	12.5	exc
AAAQO	AMS11 Lower Camp	H2S	Oct 22, 2024 05:00	434412	1-hr	13	13.0	exc
AAAQO	AMS11 Lower Camp	H2S	Oct 22, 2024 09:00	434427	1-hr	11	11.5	exc
AAAQO	AMS11 Lower Camp	H2S	Oct 22, 2024 14:00	434445	1-hr	10	10.0	nae
AAAQO	AMS11 Lower Camp	H2S	Oct 22, 2024 15:00	434445	1-hr	13	13.3	exc
AAAQO	AMS11 Lower Camp	H2S	Oct 22, 2024 17:00	434445	1-hr	12	12.7	exc
AAAQO	AMS11 Lower Camp	H2S	Oct 22, 2024 19:00	434445	1-hr	12	11.9	exc
AAAQO	AMS11 Lower Camp	H2S	Oct 22, 2024 20:00	434445	1-hr	13	13.7	exc
AAAQO	AMS27 Jackfish 2/3	NO2	Oct 23, 2024 13:00		1-hr	234	234.0	nae
AAAQO	AMS11 Lower Camp	H2S	Oct 23, 2024 24:00	434517	1-hr	14	14.7	exc
AAAQO	AMS11 Lower Camp	H2S	Oct 24, 2024 01:00	434518	1-hr	10	9.9	nae
AAAQG	AMS23 Fort Hills	PM2.5	Oct 31, 2024 06:00	434942	1-hr	95	95.2	exc
AAAQO	AMS11 Lower Camp	H2S	Nov 3, 2024 24:00	436297	24-hr	3	3.0	late
AAAQO	AMS11 Lower Camp	H2S	Nov 3, 2024 10:00	434855	1-hr	10	10.7	exc
AAAQO	AMS11 Lower Camp	H2S	Nov 3, 2024 12:00	434855	1-hr	13	13.6	exc
AAAQO	AMS11 Lower Camp	H2S	Nov 5, 2024 24:00	434938	1-hr	12	12.2	exc
AAAQO	AMS11 Lower Camp	H2S	Nov 8, 2024 24:00	435052	24-hr	3	3.4	exc
AAAQO	AMS11 Lower Camp	H2S	Nov 8, 2024 17:00	435046	1-hr	24	23.9	exc
AAAQO	AMS11 Lower Camp	H2S	Nov 8, 2024 18:00	435048	1-hr	22	22.1	exc
AAAQO	AMS11 Lower Camp	H2S	Nov 9, 2024 17:00	435063	1-hr	21	20.8	exc
AAAQG	AMS30 Ells River	TRS	Dec 13, 2024 02:00		30-min	5	5.3	exc
AAAQO	AMS23 Fort Hills	PM2.5	Dec 18, 2024 24:00	436246	24-hr	32	31.8	exc
AAAQG	AMS23 Fort Hills	PM2.5	Dec 18, 2024 13:00	436226	1-hr	154	154.4	exc
AAAQG	AMS23 Fort Hills	PM2.5	Dec 18, 2024 14:00	436233	1-hr	187	187.5	exc
AAAQG	AMS23 Fort Hills	PM2.5	Dec 18, 2024 15:00	436235	1-hr	166	166.0	exc
AAAQG	AMS23 Fort Hills	PM2.5	Dec 18, 2024 16:00	436239	1-hr	90	90.5	exc
AAAQO	AMS11 Lower Camp	H2S	Dec 20, 2024 22:00	436308	1-hr	13	13.6	exc
AAAQG	AMS30 Ells River	TRS	Dec 26, 2024 18:30		30-min	6	5.7	exc

*status legend:

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

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

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

ret - retracted, reported exceedance was found to be not an exceedance after investigation of measurement system status and/or validation of raw data in conjunction with all associated measurement parameters.

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
ANNUAL REPORT

APPENDIX II: SUMMARY OF MONTHLY OPERATIONAL TIMES BELOW 90 PERCENT AND NON-COMPLIANCES 2024

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

March 2025

Reporting Period	Date Reported	AEP Reference Number	Location	Brief Description	Issue	Remedial Action
January	24-Jan-24	424206	Fort Chipewyan	The CO2 analyzer at the Fort Chipewyan AMS operated for less than 90% of December 2023, due to operator error.	On December 26, an onsite CO2 calibration failed the AMD criteria due to operator error, resulting in no valid calibration for the month of December. Prior to this incident, all daily quality assurance checks for the month of December were within AMD criteria. Following this incident, the CO2 daily span was above the AMD limits. The WBEA conducted a remote investigation and maintenance to correct the linearity of the instrument on January 3. On January 18, the CO2 analyzer's regular functionality was ultimately restored and resolved the issue following an on-site multipoint calibration. During the data validation process, the WBEA conservatively invalidated data between December 26 and January 18, resulting in 545 hours of invalid data.	The WBEA has communicated with right personnel regarding this operator error and provided them with tools and training to avoid the error in future.
January	24-Jan-24	424246	Lower Camp Met Tower	The WS/WD/VWS at the 45-meter, 100-meter and 163-meter elevation at Lower Camp Met Tower operated less than 90% of January 2024, due to ice fog events.	Throughout January 2024, intermittent flat-line periods in the WS/WD/VWS sensors' output signal at all three elevations occurred. Ice fog interfering with the sonic sensors is considered to be the most likely cause and the sensor operation returned to normal once weather conditions changed. Also, intermittent periods of data acquisition system failure resulted in additional downtime. During the data validation process, a total of 181, 121, and 143 hours were invalidated at the 45-meter, 100-meter, and 163-meter elevations, respectively.	NA
January	21-Feb-24	425140	Anzac	The THC/NMHC/CH4 analyzer at Anzac AMS operated less than 90% of January 2024, due to two different issues.	There were two issues associated with the operation of the THC/NMHC/CH4 analyzer that resulted in 122 hours of analyzer downtime. - On January 15 and January 24, the instrument's baseline was within acceptable AMD criteria, however, the data appeared noisy, and the baseline was dipping. An investigation, and subsequent maintenance, was conducted to resolve the issue, resulting in 70 hours of invalid data. - On January 30, the noisy data and dipping baseline issue persisted, prompting the replacement of the analyzer. The replacement, and subsequent performance verification, resulted in an additional 52 hours of invalid data.	The analyzer was replaced on January 30 to rectify this issue.
January	23-Feb-24	425252	Stony Mountain	The THC/NMHC/CH4 analyzer at Stony Mountain AMS operated less than 90% of January 2024, due to the station door was compromised and station temperature dropped below the range required for adequate operation of the air monitoring equipment.	On January 2, the station door was compromised, and the station temperature dropped below the range required for adequate operation of the air monitoring equipment. The WBEA completed repairs to the door and invalidated data associated with this period for a total of 90 hours. Additionally, throughout the remainder of the month, the instrument baseline appeared unstable. The WBEA completed several troubleshooting and maintenance activities to return the instrument to normal operation and ultimately replaced the instrument on January 23. Data was invalidated for periods of unstable baseline and maintenance for a total of 262 hours.	The WBEA completed repairs to the door and invalidated data associated with the incident.
February	11-Mar-23	425774	Surmont 2	The THC analyzer at the Surmont 2 air monitoring station (AMS) operated less than 90% of February 2024, due to suspected zero-air generator.	During the daily system check on February 24, the daily zero for THC was elevated and the daily span response was outside the AMD criteria. The WBEA investigated and determined the zero-air generator was defective and could not maintain adequate pressure. On February 26, the zero-air generator was replaced, its performance was verified, and the issue was resolved. During the monthly data validation process a total of 86 hours of data were invalidated due to this incident, resulting in an 86% operational time for February.	Zero-air generator was replaced and analyzer performance check was completed.
February	12-Mar-23	425820	Lower Camp Met Tower	The WS/WD/VWS sensor at the 163-meter elevation at Lower Camp Met Tower operated less than 90% of February 2024, due to ice fog and data logger communication issues.	Throughout February, there were intermittent flat-line periods in the WS/WD/VWS sensors' output signal at the 163-meter elevation. Ice fog interfering with the sonic sensor is considered to be the most likely cause and the sensor operation returned to normal once weather conditions changed. Also, periodic failure of the data acquisition system resulted in additional downtime. During the data validation process, a total of 92 hours of data were invalidated, resulting in 87% operational time for February.	The logger net was reset.
April	18-Apr-24	427024	Anzac	The WS/WD sensor at the Anzac AMS operated less than 90% of April 2024, due to a broken sensor.	On April 8, during the data validation process, the WBEA noted that the WS/WD sensor was not accurately reading and an on-site investigation determined a wire within the sensor had broken. The sensor was replaced that day and the issue was resolved. A total of 121 hours of data were invalidated due to this incident.	The sensor was replaced.
April	08-May-24	427717	Firebag	The WS/WD sensor at the Firebag AMS operated less than 90% of April 2024, due to a frozen sensor.	Throughout April, the WS/WD sensor froze due to weather conditions which resulted in intermittent flat-line periods in the output signal. The sensor operation returned to normal when weather conditions changed. Following data validation, a total of 81 hours of data were invalidated due to this issue, resulting in 89% operational time for April.	N/A

Reporting Period	Date Reported	AEP Reference Number	Location	Brief Description	Issue	Remedial Action
April	23-May-24	428314	Conklin	The NO/NO2/NOx analyzer at the Conklin AMS operated for less than 90% of April 2024, due to damaged sample pump.	On April 16, during the daily system check, the daily zero span was outside of acceptable criteria. That day, a site investigation determined the sample pump was damaged, the pump was replaced, and the instrument was left to stabilize overnight. On April 17, a follow-up calibration was completed, the analyzer performance was verified, and the issue was resolved. During the data validation process, a total of 89 hours were invalidated due to this incident.	The pump was replaced.
April	26-May-24	428412	Sawbones Bay	The relative humidity (RH) sensor at the Sawbones Bay air monitoring station (AMS) operated less than 90% of April 2024, due to over-ranging.	During routine daily system checks, it was identified that the RH measurements were over-ranging periodically, with the output signal of the sensor displaying values beyond 100%. On April 17, the RH sensor was replaced, and normal operations resumed. Data was invalidated during periods when RH measurements were inconsistent with comparable data in the WBEA ambient network, resulting in a total of 87 hours of invalid data.	The sensor was replaced.
April	28-May-24	428500	Conklin	The THC/NMHC/CH4 analyzer at Conklin AMS operated less than 90% of April 2024, due to noisy baseline.	From April 17 through 22, the instrument baseline data appeared noisy. The WBEA continued to troubleshoot the issue throughout that period, including the replacement of the actuator. However, the issue persisted and prompted the replacement of the analyzer on April 22. A total of 86 hours of data were invalidated due to this incident.	The analyzer was replaced on April 22.
April & May	09-May-24	427764	Lower Camp Met Tower	The WS/WD/VWS sensor at the 45-meter elevation at the Lower Camp Met Tower operated less than 90% of April and May 2024, due to communication issue.	Throughout April, the WS/WD/VWS sensor at the 45-meter elevation experienced communication issues. The WBEA continued to troubleshoot and ultimately determined the sensor was defective as it was unable to maintain stable communication. On May 6, the sensor was replaced, its performance was verified, and the issue was resolved. During the data validation process, a total of 378 hours of data were invalidated; 249 hours for April and 129 hours for May.	The sensor was replaced on May 6.
May	24-May-24	428349	Stony Mountain	The PM2.5 analyzer at Stony Mountain AMS operated less than 90% of May 2024, due to the heating stack issue.	On May 15, the PM2.5 data flatlined, indicating the analyzer was not operating as normal. Routine maintenance was conducted, and the issue was temporarily addressed. On May 19, the issue reoccurred, and additional investigation determined the particulate matter heating stack was the cause. On May 21, the heating stack was replaced, the performance of the analyzer was verified, and the issue was resolved. During the data validation process, a total of 157 hours of data were invalidated due to this incident.	The heating stack was replaced.
May	05-Jun-24	428792	Mannix	The SO2 and THC/NMHC/CH4 analyzers at Mannix AMS operated less than 90% of May 2024, due to station maintenance/upgrade.	During the week of May 21, the Mannix AMS shelter was replaced due to its advanced age and as part of planned maintenance and upgrades of the network. Activities associated with the shelter replacement, including returning to normal operations resulted in over 90 hours of invalid data.	N/A
May	05-Jun-24	428793	Mannix	The RH sensor at 75-meter elevation at Mannix AMS operated less than 90% of May 2024, due to over-ranging.	During monthly data validation, it was determined that the RH measurements at the 75m elevation were over-ranging periodically, with the output signal of the sensor displaying values above 100%. The WBEA is reliant on a third-party contractor, and subsequently their schedule, to complete the sensor replacement. The contractor has been notified. Data was invalidated during periods when RH measurements were inconsistent with comparable sensors in the WBEA ambient network, resulting in a total of 99 hours of invalid data and 86.69% operational time for May.	The sensor was replaced.
May	11-Jun-24	429031	Barge Landing	The THC/NMHC/CH4 analyzer at Barge Landing AMS operated less than 90% of May 2024, due to a baseline drift.	This instrument is a semi-continuous gas chromatograph that requires the CH4 and NMHC peaks to remain within the data capture windows. On May 8, these peaks shifted outside of the optimal data capture windows and as a result, the baseline shifted outside of the normal range. Throughout May, the WBEA performed multiple maintenance activities, including adjustments of the optimal data capture window, replacement of a line tube due to a leak, and associated as founds and calibrations. Ultimately, the analyzer was replaced, and normal operation resumed, on May 10, 2024. Following data validation, a total of 79 hours of data were invalidated due to this incident, resulting in an operational time of 88.84% for May.	The analyzer was replaced on May 10, 2024.
June	12-Jul-24	430310	Sawbones Bay	The SO2, H2S, and NO2 analyzers at the Sawbones Bay air monitoring station (AMS) operated for less than 90% of June 2024, due to scheduling error.	The Sawbones Bay AMS is a portable station that fulfills a six-month continuous monitoring requirement before it is removed from operation and relocated elsewhere in the ambient air network. Due to a scheduling error, the removal calibrations, and subsequent analyzer shut down, were completed earlier than necessary, resulting in an operational time of 88.5% for the month of June.	The WBEA has reviewed the incident details with appropriate personnel to determine how to prevent similar scheduling errors in the future.

Reporting Period	Date Reported	AEP Reference Number	Location	Brief Description	Issue	Remedial Action
June	15-Jul-24	430416	Mannix	The relative humidity (RH) sensor at the 75m elevation at the Mannix air monitoring station (AMS) operated less than 90% of June 2024.	During monthly data validation, it was determined that the RH measurements at the 75m elevation were over-ranging periodically, with the output signal of the sensor displaying values above 100%. The WBEA is reliant on a third-party contractor, and subsequently their schedule, to complete the sensor replacement. Data was invalidated during periods when RH measurements were inconsistent with comparable sensors in the WBEA ambient network, resulting in 85.28% operational time for June.	The contractor was notified in May when the issue was first identified (reference number 428793) and has since been scheduled for September 2024.
June	29-Jul-24	431102	Stony Mountain	The precipitation collector at the Stony Mountain air monitoring station (AMS) operated for less than 90% of June 2024, due to communication issues.	On June 10, during a routine system check, the WBEA field technician identified that the data logger was not communicating with the precipitation collector. The data logger was reset, and communications resumed on June 10 at 6:00 MST. Another similar event occurred on June 28, when it was again identified that the data logger was not communicating with the precipitation collector. The data logger was reset, and communications resumed on June 28 at 8:00 MST. During the monthly data validation process, it was determined that the communications failure of the precipitation collector during both events resulted in a total of 184 hours of invalidated precipitation data in June.	The data logger was reset both times and the issue was discussed with the station assigned tech to monitor it closely.
July	16-Jul-24	430460	Mildred Lake	The H2S analyzer at the Mildred Lake AMS operated for less than 90% of July 2024, due to daily QA checks not meeting AMD compliance.	During the first week of July, the H2S analyzer daily spans were intermittently erratic and failed to meet AMD criteria. Throughout July, the WBEA attempted to troubleshoot the issue including replacement of the scrubber beads, external converter, sample lines, and ultimately, replacement of the analyzer. Despite troubleshooting efforts, the issue persists and investigation is ongoing at the time of letter submission. Through observations of H2S analyzers throughout the network, it is suspected that poor air quality and intense smoke events in July may be impacting operation of this analyzer.	The WBEA technician replaced scrubber beads, external converter, sample lines, and ultimately the analyzer.
July	31-Jul-24	431167	Stony Mountain	The TRS, THC/NMHC/CH4, and NO2 analyzers at the Stony Mountain air monitoring station (AMS) operated for less than 90% of July 2024, due to HVAC issues causing extreme station temperatures.	The HVAC unit in the AMS failed to maintain a consistent station temperature throughout the month of July. Fluctuating station temperatures during the heat wave in the region affected the normal operations of the TRS, THC/NMHC/CH4, and NO2 analyzers resulting in periodic data loss. The WBEA performed several maintenance activities on each analyzer throughout the month of July to return to normal operations. To mitigate the station temperature issues, WBEA technicians installed two portable air conditioning units. Additionally, a third-party HVAC technician was procured to resolve the underlying HVAC issue. Data for the incident period of July 3 through 27 was invalidated for a total of 194, 172, and 444 hours for TRS, THC/NMHC/CH4, and NO2 analyzers, respectively.	To mitigate the station temperature issues, WBEA technicians installed two portable air conditioning units. Additionally, a third-party HVAC technician was procured to resolve the underlying HVAC issue.
July	20-Aug-24	431988	Fort Hills	The THC/NMHC/CH4 analyzer at Fort Hills air monitoring station (AMS) operated for less than 90% of July 2024, due to analyzer linearity issues.	On July 5, the THC/NMHC/CH4 analyzer failed the low point on the NMHC channel during the AB EPA audit. The WBEA followed up with an independent internal audit and found comparable issues. After troubleshooting, the issue was resolved by replacement of the analyzer, and its performance was confirmed through calibration, on July 10. During the data validation process, 125 hours of data were invalidated which resulted in 83% operational time for the month of July.	The THC/NMHC/CH4 analyzer was replaced.
July	21-Aug-24	432043	Jackfish 1	The wind speed and wind direction (WS/WD) sensor at Jackfish 1 air monitoring station (AMS) operated for less than 90% of July 2024, due to misalignment of wind direction sensor.	During the daily system check on July 5, it was noted that the WS/WD data at the Jackfish 1 AMS was not comparing well with nearby stations. A site visit was conducted on July 9 and determined the sensor was misaligned. The sensor declination was corrected, and the data issue was resolved that day. The data validation process confirmed the sensor data was valid for 70% of July.	The alignment of the wind cross-arm was corrected.
July	23-Aug-24	432142	Lower Camp	The H2S analyzer at the Lower Camp AMS operated for less than 90% of July 2024, due to intermittently flatlining signal issues.	In early July, the WBEA identified that the H2S analyzer had flatlined intermittently and attempted to troubleshoot the issue with a software update, followed by a calibration. Ongoing monitoring of the analyzer performance indicated an upward trend of span results following the software update. Additional troubleshooting determined a span adjustment had been required, in addition to the calibration, following the software update. The necessary adjustments were subsequently completed. Following data validation, 94 hours of data were invalidated during this incident resulting in an operational uptime time of 86.69% for the month of July.	The WBEA technician updated the software of the analyzer to resolve the issue.

Reporting Period	Date Reported	AEP Reference Number	Location	Brief Description	Issue	Remedial Action
July	23-Aug-24	432153	Buffalo Viewpoint	The WS/WD sensor at the Buffalo Viewpoint AMS operated less than 90% of July 2024, due to cross-arm misalignment.	On July 27, during the daily system check, the WBEA identified a discrepancy between the WS/WD data at Buffalo Viewpoint and data from nearby stations. An on-site inspection conducted on July 31 determined that the sensor was misaligned due to damage of the fitting that secured the sensor in place. The fitting was replaced, and the sensor alignment was corrected that day. A total of 112 hours of data were invalidated due to this incident resulting in an operational uptime of 85%.	The cross-arm fitting was replaced and wind sensor direction alignment was corrected.
July	26-Aug-24	432222	Anzac	The THC/NMHC/CH4 analyzer at Anzac AMS operated less than 90% of July 2024, due to multiple different issues.	Several events associated with the operation of the analyzer totaled 77 hours of downtime, resulting in an operational uptime of 88.6%, as follows: On July 1, a degrading analyzer pump was identified, and the pump was replaced. A total of 12 hours of data were invalidated due to this incident. On July 15, a leak in the support gas cylinder regulator was identified and maintenance was performed to replace the cylinder. A total of 29 hours of data were invalidated due to this incident. Beginning on July 23, the instrument's baseline was within acceptable AMD criteria, however, the data appeared to be excessively noisy, and the baseline was dipping. Troubleshooting included actuator replacement, analyzer recalibration, and span adjustments, however, the issue persisted. Ultimately, the analyzer was replaced on August 4, and its performance was confirmed. A total of 36 hours of data were invalidated due to this incident.	The THC/NMHC/CH4 analyzer was replaced.
August & September	18-Sep-24	433165	Patricia McInnes	The NH3 analyzer at Patricia McInnes air monitoring station (AMS) operated less than 90% of August and September 2024, due to slow analyzer response.	On August 23, during the daily system check, it was noted that the NH3 span did not reach span target. The WBEA investigated the issue from August 23 to September 3; however, no root cause could be identified. On September 4, the analyzer, converter, and pump were replaced, the analyzer performance was verified through a multi-point calibration, and normal operation resumed. During the data validation process, 235 hours of data were invalidated during this incident.	The analyzer was replaced along with its sample pump and convertor.
August	23-Sep-24	433354	Anzac	The THC/NMHC/CH4 analyzer at Anzac AMS operated less than 90% of August 2024, due to unstable baseline issues.	Several events associated with the operation of the analyzer totaled 94 hours of downtime, resulting in an operational uptime of 87.4%, as follows: <ul style="list-style-type: none"> - On August 1, the daily system check confirmed the analyzer was exhibiting an unstable baseline trend. Maintenance was completed to adjust the cylinder pressure and replace the actuator; however, the issue persisted, and the analyzer was replaced on August 3, with normal operation resuming on August 4. A total of 55 hours of data were invalidated due to this incident. - On August 5, a contaminated support gas cylinder was identified. This cylinder was replaced on August 6, which contributed an additional 5 hours of invalidated data. - On August 26, the daily system check confirmed the analyzer was again exhibiting an unstable baseline trend. Maintenance was completed to adjust the support gas cylinder pressures which resulted in additional 34 hours of invalidated data. 	The field maintenance was completed to replace the analyzer and support gases.
September	18-Sep-24	433165	Patricia McInnes	The NH3 analyzer at Patricia McInnes air monitoring station (AMS) operated less than 90% of August and September 2024.	On August 23, during the daily system check, it was noted that the NH3 span did not reach span target. The WBEA investigated the issue from August 23 to September 3; however, no root cause could be identified. On September 4, the analyzer, converter, and pump were replaced, the analyzer performance was verified through a multi-point calibration, and normal operation resumed. During the data validation process, 235 hours of data were invalidated during this incident.	Analyzer was replaced on September 4.
September	26-Sep-24	433509	Stony Mountain	The precipitation sensor at the Stony Mountain air monitoring station (AMS) operated for less than 90% of September 2024 due to communication failure.,	On September 11, during a routine system check, the WBEA detected a communication failure between the data acquisition system and the precipitation sensor. In response, the data logger was reset on the same day, which successfully restored communication. However, between September 12 and September 20, the data acquisition system continued to experience intermittent failures. To address the ongoing issue, the data logger was replaced on September 20 and communication resumed. During the monthly data validation process a total of 149 hours of data in September were invalidated due to this issue.	The data logger was replaced on September 20 and communication was restored.

Reporting Period	Date Reported	AEP Reference Number	Location	Brief Description	Issue	Remedial Action
September	07-Oct-24	433939	Fort Hills	The THC/NMHC/CH4 analyzer at Fort Hills air monitoring station (AMS) operated for less than 90% of September 2024, due to unstable baseline trend.	During September, the THC/NMHC/CH4 analyzer displayed an unstable baseline trend. The WBEA completed several maintenance procedures, including multiple adjustments to the window timing, recalibrations to adjust zero and span, and increased pressure in the support gas cylinders. Despite maintenance efforts, the issue remained unresolved. As a result, the analyzer was replaced on September 25, and its operation was subsequently verified. During the data validation process, 126 hours of data were invalidated due to this incident.	The analyzer was replaced on September 25, and normal operations resumed.
September	11-Oct-24	434118	Anzac	The relative humidity (RH) sensor at the Anzac air monitoring station (AMS) operated less than 90% of September 2024, due to over-ranging.	During routine daily system checks, it was identified that the RH measurements were over-ranging periodically, with the output signal of the sensor displaying values beyond 100%. On September 17, the RH sensor was replaced, and normal operations resumed. Data was invalidated during periods when RH measurements were inconsistent with comparable data in the WBEA ambient network, resulting in a total of 90 hours of invalid data.	The sensor was replaced on September 17.
September	26-Sep-24	434663	Fort Chipewyan	The precipitation sensor at the Fort Chipewyan air monitoring station (AMS) operated for less than 90% of September 2024, due to communication failure.	On September 5, during a routine system check, the WBEA detected that there was no data coming in for the precipitation sensor. Initial investigations were conducted on September 4; however, the root cause of the issue remained undetermined. Due to the AMS's remote location, it was decided that further troubleshooting would take place during an upcoming visit from an in-house technician. The issue was not addressed until September 17, when it was confirmed that the sensor was unresponsive. Following a reboot of the sensor, normal operations were restored. During the monthly data validation process a total of 317 hours of data in September were invalidated due to this issue.	The sensor was rebooted on September 17 and normal operations resumed.
October	29-Oct-24	434706	Stony Mountain	The wind speed and wind direction (WS/WD) sensor at the 20-meter elevation at Stony Mountain AMS operated less than 90% of October 2024, due to frozen sensor.	Throughout October, the WS/WD sensor froze due to weather conditions, resulting in inaccurate data. The sensor returned to normal operation when weather conditions changed, and the sensor thawed. Data from the freezing events were invalidated for a total of 79 hours, resulting in a sensor operational time of 89% for October.	N/A
October	04-Nov-24	434889	Jackfish 1	The wind speed and wind direction (WS/WD) sensor at the Jackfish 1 AMS operated less than 90% of October 2024, due to frozen sensor.	Throughout October, the WS/WD sensor froze due to weather conditions, resulting in inaccurate data. The sensor returned to normal operation when weather conditions changed, and the sensor thawed. Data from the freezing events were invalidated, resulting in a sensor operational time of 88% for October.	N/A
October	13-Nov-24	435156	Surmont 2	The wind speed and wind direction (WS/WD) sensor at the Surmont 2 AMS operated less than 90% of October 2024, due to frozen sensor.	Throughout October, the WS/WD sensor froze due to weather conditions, resulting in inaccurate data. The sensor returned to normal operation when weather conditions changed, and the sensor thawed. Data from the freezing events were invalidated, resulting in a sensor operational time of 88% for October.	N/A
November	17-Dec-24	436182	Stony Mountain	The wind speed and wind direction (WS/WD) sensor at the 10-meter elevation at Stony Mountain AMS operated less than 90% of December 2024, due to sensor not reading properly.	On December 3, the WS/WD sensor was not reading properly so the tower was lowered for troubleshooting. The pulley mechanism was not operating normally, and in addition, the sensor was frozen to the tower crossarm due to weather conditions. On December 18, the pulley was repaired, and the sensor was properly deployed. Data from the event was invalidated for a total of 340 hours, resulting in a sensor operational time of 46% for December.	The sensor was repaired.
November	06-Dec-24	435901	Mannix	The relative humidity (RH) sensor at the 75m elevation at the Mannix air monitoring station (AMS) operated less than 90% of November 2024, due to over-ranging.	During monthly data validation, it was identified that the RH sensor data at the 75m elevation was intermittently out of normal range. The WBEA relies on a third-party contractor for sensor replacement, which is subject to their availability. On November 9, sensor replacement was attempted but was unsuccessful due to instrument communication errors. Data was invalidated during periods when RH measurements were inconsistent with comparable sensors in the WBEA ambient network, resulting in 86.67% operational time for November.	The WBEA is currently working with the contractor to schedule their return at the earliest available opportunity.
November	06-Dec-24	435904	Fort McKay South	The THC/NMHC/CH4 analyzer at the Fort McKay South AMS operated for less than 90% of November 2024, due to unstable baseline response.	During the month of November, the THC/NMHC/CH4 analyzer displayed periods of unstable baseline response and days when the daily QA span check failed to meet AMD criteria. WBEA performed maintenance throughout November to adjust the span response and the chromatogram window, and to replace the actuator in the analyzer. The problem persisted prompting analyzer replacement on November 25. Data from periods of maintenance and unstable operation were invalidated for a total of 98 hours, resulting in an analyzer operational time of 86.4% for November.	Replaced actuator and adjusted window timing.

Reporting Period	Date Reported	AEP Reference Number	Location	Brief Description	Issue	Remedial Action
November	12-Dec-24	436050	Fort Chipewyan	The routine monthly calibration was not conducted on the PM2.5 analyzer at Fort Chipewyan AMS for the month of November 2024, due to malfunction of the instrument used for calibration.	The routine monthly calibration for PM2.5 was attempted on November 29; however, it was not completed due to a malfunction of the instrument used for calibration of this analyzer. The WBEA worked with the local technicians to arrange for delivery of a replacement instrument and to reschedule the calibration. The calibration was completed on December 10, 2024. The data validation for November confirmed that the monthly calibrations performed prior to November, on October 22, and after, on December 10, both met the AMD calibration criteria, and daily quality checks during this period were also within AMD criteria; trending closely with the nearest station, Fort Hills, located 219 km south. In addition, there were no ground level concentration exceedances of the maximum 24-hour Alberta Ambient Air Quality Objective (29 µg/m³) and the 1-hour Alberta Ambient Air Quality Guideline (80 µg/m³) for the Fort Chipewyan or Fort Hills station, or any station across the network for the month of November. The highest maximum 24-hour and 1-hour concentration reported at Fort Chipewyan for November was 14.2 µg/m³ and 28.7 µg/m³, respectively.	N/A
November	12-Dec-24	436051	Athabasca Valley	The barometric pressure (BP) sensor at Athabasca Valley AMS operated less than 90% of November 2024, due to local power outage.	On November 23, a local power outage occurred, impacting the station and causing the BP sensor signal to flatline. The WBEA reset the sensor, verified its performance, and resolved the issue on November 27. Data from this incident was invalidated for a total of 92 hours, resulting in an operational time of 87%.	Reset sensor on November 27.
November	13-Dec-24	436107	Conklin	The THC/NMHC/CH4 analyzer at the Conklin AMS operated for less than 90% of November, due to unstable baseline.	During daily system checks on November 16 and 17, the THC/NMHC/CH4 analyzer displayed unstable baseline readings and span response. The WBEA performed maintenance to adjust the span response and to replace the sample inlet filter. The problem persisted prompting analyzer replacement on November 18. Data from this incident were invalidated, resulting in an analyzer operational time of 89% for November.	Analyzer was recalibrated to adjust the span on November 18.
November & December	19-Dec-24	436271	Fort McKay - Bertha Ganter	The wind speed and wind direction (WS/WD) sensor at Bertha Ganter – Fort McKay AMS operated less than 90% of November and December 2024, due to odd signals.	Intermittently throughout November and December, the WS/WD sensor displayed odd signal outputs prompting an investigation. On December 4, the sensor was replaced, and normal operations resumed. Data from the event was invalidated for a total of 160 hours in November and 87 hours in December.	Sensor was replaced on December 4.
December	17-Dec-24	436182	Stony Mountain	The wind speed and wind direction (WS/WD) sensor at the 10-meter elevation at Stony Mountain AMS operated less than 90% of December 2024, due to inconsistent wind speed signals.	On December 3, the WS/WD sensor was not reading properly so the tower was lowered for troubleshooting. The pulley mechanism was not operating normally, and in addition, the sensor was frozen to the tower crossarm due to weather conditions. On December 18, the pulley was repaired, and the sensor was properly deployed. Data from the event was invalidated for a total of 340 hours, resulting in a sensor operational time of 46% for December.	Wind speed sensor was repaired on December 18.
December	08-Jan-25	436647	Fort McKay South	The wind speed and wind direction (WS/WD) sensor at the 10-meter elevation at Fort McKay South AMS operated less than 90% of December 2024, due to freezing wind speed sensor.	Throughout the month of December, the WS/WD sensor froze due to weather conditions, resulting in intermittent flatlining. Operation returned to normal once weather conditions changed. Data from these events were invalidated for a total of 83 hours, resulting in an operational time of 89% for December.	N/A
December	14-Jan-25	436819	Mannix	The WS/WD/VWS sensor at the 45-meter, 75-meter and 90-meter elevation at Mannix operated less than 90% of December 2024, due to ice fog events.	In December 2024, ice fog caused intermittent flat-line periods in the WS/WD/VWS sensors at the 45-meter, 75-meter, and 90-meter elevations. The sensors returned to normal operation once weather conditions changed. Following data validation, 95 hours of data were invalidated at the 45-meter elevation, 205 hours at the 75-meter elevation, and 195 hours at the 90-meter elevation. This led to operational times of 87%, 72%, and 74%, respectively.	N/A

Reporting Period	Date Reported	AEP Reference Number	Location	Brief Description	Issue	Remedial Action
December	16-Jan-25	436860	Anzac	The THC/NMHC/CH4 analyzer at Anzac AMS operated less than 90% of December 2024, due to unstable baseline.	During the month of December, the THC/NMHC/CH4 analyzer experienced periods of unstable baseline response and failure of the daily QA span check to meet AMD criteria. A variety of troubleshooting and maintenance was performed throughout December including adjustment to the span response and the chromatogram window, and replacement of the analyzer actuator. The problem persisted prompting analyzer replacement on January 3, 2025. Data from periods of maintenance and unstable operation were invalidated for a total of 121 hours, resulting in an analyzer operational time of 83.7% for December.	The THC/NMHC/CH4 analyzer was replaced on January 3, 2025.
December	17-Jan-25	436899	Janvier	The wind speed and wind direction (WS/WD) sensor at the 20-meter elevation at Janvier AMS operated less than 90% of December 2024, due to freezing weather conditions.	In early December, the WS/WD sensor froze due to weather conditions, resulting in intermittent flatlining. Operation returned to normal once weather conditions changed. Data from these events were invalidated for a total of 88 hours, resulting in an operational time of 89% for December.	N/A
December	28-Jan-25	437200	Lower Camp Met Tower	The WS/WD/VWS at the 100-meter and 163-meter elevation at Lower Camp Met Tower operated less than 90% of December 2024, due to ice fog events.	During the month of December 2024, the output signals from the WS/WD/VWS sensors at the 100-meter and 163-meter elevations experienced intermittent flat-line periods. These disruptions were likely caused by ice fog affecting the sonic sensors. The sensors returned to normal operation once the weather conditions improved. During the data validation process, a total of 92 hours of data at the 100-meter elevation and 196 hours at the 163-meter elevation were invalidated due to these sensor interruptions.	N/A

WOOD BUFFALO ENVIRONMENTAL ASSOCIATION

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
ANNUAL REPORT

APPENDIX III: 2011-2024 WBEA DATA COMPARED TO LARP TRIGGERS AND LIMITS 2024

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

March 2025



Comparison of WBEA NO₂ 2011 to 2024 Data With LARP Triggers and Limits (all data as ppb)

LARP Index	Year	Air Monitoring Stations														
		AMS01 Bertha Ganter	AMS04 Buffalo Viewpoint	AMS06 Patricia McInnes	AMS07 Athabasca Valley	AMS08 Fort Chipewyan	AMS09 Barge Landing	AMS12 Millennium Mine	AMS13 Fort McKay South	AMS14 Anzac	AMS15 Horizon	AMS16 Muskeg River	AMS17 Wapasu	AMS18 Stony Mountain	AMS19 Firebag	AMS20 Mackay River
NO ₂ Annual Average	2024	8	5	5	7	1	10		7	2			3	1	3	2
	2023	8	5	5	7	1	10		8	3			3	1	4	2
	2022	8	5	5	7	1	10		8	2			2	1	3	3
	2021	8	5	5	7	1	10		8	2			3	1	3	2
	2020	7	5	5	7	2	8		6	2	9		2	1	3	2
	2019	8	5	5	8	2	10		7	2	9		3	1	4	2
	2018	8	5	5	7	1	15		7	2	7	9	3	1	3	2
	2017	7	5	5	7	1			7	2	5	10	3	1	3	2
	2016	7		6	7	1			6	2	6	9	3	1	3	3
	2015	6		5	8	2			5	2	5	9	3	1	4	
	2014	8		6	11	1			12	3	7	12	6		4	
	2013	8		6	10	1			13	3	7	12				
	2012	7		6	9	1			13	3	6	11				
	2011	7		6	11	1			15	3	5	12				
	NO ₂ Hourly 99th Percentile	2024	30	29	26	27	11	35		29	14			18	6	22
2023		31	33	31	30	11	39		30	15			20	7	25	19
2022		32	32	30	30	12	40		32	17			17	7	22	23
2021		33	32	30	30	11	37		30	15			17	8	20	22
2020		31	31	29	29	12	35		28	18	41		17	7	23	22
2019		35	33	29	32	12	43		32	16	41		18	7	28	22
2018		33	30	28	30	10	36		32	15	36	39	17	8	20	20
2017		33	27	29	32	9			31	14	31	38	17	6	20	18
2016		28		27	30	11			26	17	30	36	16	8	18	23
2015		30		28	33	13			43	27	14	33	19	8	24	
2014		33		29	48	11			43	31	18	34	21		23	
2013		35		31	38	9			43	33	19	39	25			
2012		34		29	34	11			42	31	15	36	40			
2011		34		30	39	13			50	32	20	33	41			

LARP Index	Year	Air Monitoring Stations																	
		AMS21 Conklin	AMS22 Janvier	AMS23 Fort Hills	AMS24 Surmont	AMS26 Christina Lake	AMS27 Jackfish 2/3	AMS29 Surmont 2	AMS30 Ells River	AMS 33 Monday Creek	AMS500 Christina Lake	AMS501 Leismer	AMS502 Surmont	AMS505 Sawbones Bay	AMS506 Jackfish 1	AMS507 Kirby South	AMS508 Kirby North	AMS511 Blackgold	AMS512 Hangingstone Expansion
NO ₂ Annual Average	2024	2	1	12		3	1	2	7	3		2	3	2	3	2	3	2	2
	2023	2	1	12		4	1	2	7			2	3	2	2	2	2	2	
	2022	2	1	10		3	1	2	6			2	3	2	2	1	2		
	2021	2	1	9		3	1	2	6			2	3	2	2	1	1		
	2020	2	1	8		3	1	1	6			3	3	2	2	1	1		
	2019	2	1	10	5	3	1	1				2	2	2	2	4	1		
	2018	2	2	9	2	2	2				4	2	4	4	2				
	2017	2	1	8	2						3	3	3	3					
	2016	1									3	2	2						
	2015											2	3						
	2014										5	2	5						
	2013										5	5	5						
	2012												8						
	2011												7						
	NO ₂ Hourly 99th Percentile	2024	9	8	39		10	7	11	31	12		10	19	11	30	8	13	12
2023		10	7	41		17	7	10	30			10	15	11	10	9	12		
2022		9	8	41		15	7	12	33			9	19	12	7	8			
2021		10	8	39		16	7	11	32			10	18	12	11	7			
2020		10	9	39		13	8	13	30			12	18	13		6			
2019		11	8	44	19	16	7	9				10	15	11	22	6			
2018		13	10	42	13	10	7				23	15	17	22	19				
2017		12	8	40	12						17	23	13	17					
2016		8									18	10	18						
2015												9	22						
2014											32	8	22						
2013											17	41	45						
2012													36						
2011																			

Data Collection less than 12 months

NO ₂ Annual Average	Limit	24	NO ₂ Hourly 99th Percentile	Level 4 Trigger	92
	Level 3 Trigger	16		Level 3 Trigger	62
	Level 2 Trigger	8		Level 2 Trigger	30



Comparison of WBEA SO₂ 2011 to 2024 Data With LARP Triggers and Limits (all data as ppb)

LARP Index	Year	Air Monitoring Stations																
		AMS01 Bertha Ganter	AMS02 Mildred Lake	AMS04 Buffalo Viewpoint	AMS05 Mannix	AMS06 Patricia McInnes	AMS07 Athabasca Valley	AMS08 Fort Chipewyan	AMS09 Barge Landing	AMS11 Lower Camp	AMS12 Millennium Mine	AMS13 Fort McKay South	AMS14 Anzac	AMS15 Horizon	AMS16 Muskeg River	AMS17 Wapasu	AMS18 Stony Mountain	AMS19 Firebag
SO ₂ Annual Average	2024	1	2	1	2	1	0	0	1	3	1	1	1		1	0	1	
	2023	1	2	1	2	1	1	0	1	3		1	1		1	0	1	
	2022	1	2	1	2	1	1	0	1	2		1	1		1	0	1	
	2021	1	2	1	2	1	1	0	1	2		1	0		1	0	1	
	2020	1	2	1	3	1	1	0	1	3		1	1	1	1	0	1	
	2019	1	1	1	2	1	1	0	1	2		1	1	1	1	0	1	
	2018	1	2	1	2	1	1	0	1	2		1	1	1	1	0	1	
	2017	1	2	1	2	1	1	0	1	3		1	0	1	1	0	0	
	2016	1	2	1	3	1	1	0	1	3		1	1	1	1	0	1	
	2015	1	2	1	2	1	1	0	2	2	1	1	0	1	1	0	1	
	2014	1	2	1	2	1	1	0	1	1	1	1	1	1	1		1	
	2013	1	2	1	2	1	1	0	1	1	1	1	1	1	2			
	2012	1	2	1	2	1	0	0	1	1	1	1	1	1	1			
2011	2	3	1	2	1	1	0		2	1	1	1	1					
SO ₂ Hourly 99th Percentile	2024	14	28	13	30	11	7	4	13	55		15	6		11	3	11	
	2023	15	28	16	23	11	8	4	13	43		17	7		14	4	14	
	2022	14	28	11	31	13	8	4	13	26		16	7		11	3	11	
	2021	13	27	16	25	11	9	4	11	28		14	6		11	3	12	
	2020	15	33	19	39	15	9	4	14	32		15	6	11	13	4	12	
	2019	11	15	11	23	9	8	3	7	26		10	4	8	9	3	8	
	2018	12	22	14	24	10	7	3	7	30		10	6	9	14	3	11	
	2017	16	27	14	34	10	7	3		42		16	5	12	13	0	0	
	2016	15	29	14	36	12	11	5		43		15	5	12	15	2	12	
	2015	14	26	9	31	10	9	2		27	14	14	5	10	14	11	12	
	2014	15	28	10	32	12	9	3		16	19	17	6	15	16	11	13	
	2013	16	22	16	31	14	10	4		16	14	17	9	15	20	23		
	2012	17	32	13	28	11	8	4		21	15	18	9	16	20			
2011	17	45	22	29	13	10	4		26	16	17	6	13	13				

LARP Index	Year	Air Monitoring Stations																			
		AMS20 MacKay River	AMS21 Conklin	AMS22 Janvier	AMS23 Fort Hills	AMS24 Surmont	AMS25 Waskow ohci Pimatisiwin	AMS 26 Christina Lake	AMS 27 Jackfish 2/3	AMS29 Surmont 2	AMS30 Ells River	AMS33 Monday Creek	AMS500 Christina Lake	AMS 501 Leismer	AMS 502 Surmont	AMS 505 Sawbones Bay	AMS 506 Jackfish 1	AMS 507 Kirby South	AMS 508 Kirby North	AMS 511 Blackgold	AMS 512 Hangingstone Expansion
SO ₂ Annual Average	2024	1	0	0	1		1	1	0	1	1		1		1	1	1	0	1	3	
	2023	1	0	0	1		1	1	0	1	1		1		1	1	1	1	1	1	
	2022	1	0	0	1		1	2	1	0	1		2		1	1	1	1	1		
	2021	1	0	0	1		1	2	1	0	1		1		1	1	1	1	1		
	2020	1	0	0	1		1	3	1	1	1		1		2	2		1	1		
	2019	1	0	0	1	2	1	2	1	2					1	2	1		0		
	2018	1	0	0	1	1	1	1	1				1	1	1	1					
	2017	0	1	1	0	0	1						1	1	1	1					
	2016	1											1	1	1						
	2015												1	1	1						
	2014												0	0	1						
	2013														2						
	2012														3						
2011																					
SO ₂ Hourly 99th Percentile	2024	11	2	3	11		14	7	6	5	12	7		12		11	6	6	4	11	61
	2023	10	3	3	12		15	13	5	5	13			21		11	13	6	7	15	
	2022	12	3	3	13		14	23	5	4	14			22		19	25	9	10		
	2021	11	3	2	10		12	24	5	4	12			16		21	17	13	6		
	2020	12	3	3	9		14	35	6	5	9			14		27	26		6		
	2019	8	2	2	7	12	9	24	6	12				13		33	12	10	2		
	2018	8	3	2	8	6	10	20	5				16	10		16	8	8	8		
	2017	9	2	2	7	6	9						15	18	7	21					
	2016	8	1										9	6	11						
	2015												7	7	7						
	2014												7	4	9						
	2013												3	3	13						
	2012														26						
2011														36							

SO₂ Annual Average
 Limit 8
 Level 3 Trigger 5
 Level 2 Trigger 3

SO₂ Hourly 99th Percentile
 Level 4 Trigger 36
 Level 3 Trigger 24
 Level 2 Trigger 12

Data Collection less than 12 months

**ELECTRONIC TRANSFER SYSTEM
AIRDATA
SUBMISSION REPORT**

April 03, 2025
11:46:55 AM
Request # 4790512

Submitted by: EN6138
Submission Date: Apr 03, 2025 11:46:48 AM

File Type

Airshed Monitoring Report

File Name

WBEA-2024-R01.pdf

Total Number of Files: 1

*** End of Report ***

**ELECTRONIC TRANSFER SYSTEM
AIRDATA
SUBMISSION REPORT**

March 31, 2025
1:06:58 PM
Request # 4786967

Submitted by: EN6138_DENNY
Submission Date: Mar 31, 2025 1:06:50 PM

File Type
Airshed Monitoring Report

File Name
WBEA-2024.pdf

Total Number of Files: 1

*** End of Report ***



End of Report - Volume 1