Peace Airshed Zone Association

Ambient Air Monitoring Network Summary

Ambient Air Quality Monitoring Program

Monthly Report

February 2025

March 31, 2025

Alberta Environment and Protected Areas
11th Floor, Oxbridge Place
9820-106 Street
Edmonton Alberta T5K 2J6

Subject: **Peace Airshed Zone Association (PAZA)**
February 2025 Ambient Air Quality Monitoring Report

Please find enclosed the PAZA Ambient Air Quality Monitoring Network Report for the month of February 2025.

The representative of the Person Responsible for this monitoring program is:

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This report was prepared by Dr. Kevin McCullum, P.Eng., and reviewed by Mandeep Dhaliwal. PAZA has retained the services of WSP Canada Inc. to conduct continuous ambient monitoring and Dr. Kevin McCullum, P.Eng. to provide data validation and reporting.

This report is submitted by PAZA on behalf of the industrial member companies to satisfy the requirements of the facility Operating Approvals listed in Table A

The monthly summary report includes the operational summaries and hourly continuous monitoring and monthly passive results. The Milner station is being reported under the PAZA Monthly report.

Continuous Monitoring:

Eight (8) Stations including Henry Pirker (Grande Prairie), Dunes, Smoky Heights, Beaverlodge, Valleyview, Fox Creek, Happy Valley-Portable and Milner.
Detailed Summaries are included in the report.

Calibration and Data Submission:

Monthly report, hourly data and calibration reports for February 2025 were submitted to the ETS data system.

Table A. PAZA members with Facility Operating Approvals

Company	Facility	LSD	EPEA Approval No.
Advantage Oil & Gas Ltd.	Glacier	05-02-076-13-W6	00262479-00-00
Alberta Power (2000) Ltd. (an ATCO company)	Sturgeon	SW-06-069-21-W5	00010283-02-02
ATCO Power Canada	Poplar Hill	11-19-073-08-W6	00067774-01-01
ATCO Power Canada	Valleyview	SW-06-069-21-W5	00147709-01-01
AltaGas Ltd.	Pouce Coupe	03-03-081-13-W6	00247673-00-00
	Gordondale	02-26-068-25-W5	00287474-00-00
Apache Canada Ltd.	House Mountain	01-08-070-10-W5	00010137-02-02
ARC Resources Ltd.	ARC Ante Creek	02-26-068-25-W5	00266694-01-00
Birchcliff Energy Ltd.	Pouce Coupe	03-22-078-12-W6	00252529-00-00
Canadian Natural Resources Limited	Bonanza	11-25-081-11-W6	00000029-01-00
	Progress/Gordondale	01-01-077-10-W6	00010036-02-00
	Gold Creek	13-26-067-05-W6	00010446-02-00
	Teepee Creek	SE-2-074-04-W6	00001635-02-00
	Sturgeon/Valleyview	02-02-069-22-W5	00001633-02-00
Canfor Forest Products	Grande Prairie	SW-23-071-06-W6	00152645-01-00
Conocophillips Canada Energy Partnership	Wembley	06-19-073-08-W6	00000212-01-00
Encana Corporation	Sexsmith	04-08-075-07-W6	00010002-01-00
Enerplus Resources	Pouce Coupe	SW-06-069-21-W5	00001464-02-03
Exshaw Oil Corporation	Spirit River	03-10-077-07-W6	00344521-00-00
Grande Prairie Generation Inc.	Northern Prairie Power Project	04-19-073-08-W6	00238762-00-00
Inception Exploration Ltd.	Gold Creek	03-26-069-05-W6	00335317-00-02
KANATA Energy Group Ltd.	Valhalla	13-21-076-09-W6	00017620-02-02
Long Run Exploration	Eaglesham	01-25-076-01-W6	00241532-00-00
	Kakut	14-12-075-03-W6	00248469-00-00
	Donnelly	06-01-077-21-W5	00000087-02-00
	Puskwaskau	03-26-074-01-W6	00017524-01-00
Longview Oil Corp.	Sunset House	06-22-070-20-W5	00138884-01-00
Milner Power Limited Partnership	H.R. Milner thermal electric power plant	SE-15-058-08-W6	00009814-03-03
NorthRiver Midstream Inc.	Fourth Creek	16-11-082-09-W6	00000263-01-00
	Gordondale	11-26-079-09-W6	00011495-01-01
	Pouce Coupe/Bonanza	03-23-080-13-W6	00070203-01-01
Pembina Pipeline Corporation	Kakwa River	08-13-063-05 W6	00335342-01-00
Penn West Petroleum Ltd.	Tangent	13-29-080-23-W5	00001746-02-00
	Pouce Coupe	16-07-078-11-W6	00000614-01-00
Petrus Resources	Rycroft	08-25-077-06-W6	00011351-02-00
	Spirit River	08-34-077-06-W6	00011096-02-00
Strathcona Resources Ltd.	Jayar Sour Gas Processing Plant	06-08-062-03 W6	03612040-00-00
Suncor Energy Inc.	Progress	07-22-078-09-W6	00011428-02-00
Tidewater Midstream and Infrastructure Ltd.	Pipestone Sour Gas Plant	NW-35-70-9 W6	00403309-00-00
Veresen Energy	Hythe Brainard	11-18-074-12-W6	00010910-02-00
Weyerhaeuser Canada	Grande Prairie Pulp and Wood Plant	01-14-070-05-W6	00000113-02-00

Concentrations in excess of the Clean Air (Maximum Levels) Regulation:

- There was one TRS reading above the 30-min AAAQG (5ppb)
- There was 1 reading above the 24hr $PM_{2.5}$ AAAQO, 11 readings above the 1hr $PM_{2.5}$ AAAQG for the month

30-minute readings above the TRS AAAQG (5ppb) recorded as follows:

Site	reference	Pollutant	Date	From MST	To MST	Average ppb	WS km/hr	WD degrees
Happy Valley	*e-reported*	TRS	14-Feb-25	20:00	20:30	6.6	3.5	203

One-hr readings above the $PM_{2.5}$ AAAQO (80µg/m³) recorded as follows:

Site	reference	Pollutant	Date	From MST	To MST	Average µg/m³	WS km/hr	WD degrees
Fox Creek	**437604**	$PM_{2.5}$	10-Feb-25	21:00	22:00	296.0	0.6	197
Fox Creek	**437604**	$PM_{2.5}$	10-Feb-25	22:00	23:00	209.8	1.2	248
Fox Creek	**437635**	$PM_{2.5}$	11-Feb-25	21:00	22:00	136.8	0.5	246
Fox Creek	**437635**	$PM_{2.5}$	11-Feb-25	22:00	23:00	119.3	0.5	266
Fox Creek	**437635**	$PM_{2.5}$	11-Feb-25	23:00	00:00	174.7	0.5	202
Fox Creek	**437635**	$PM_{2.5}$	12-Feb-25	00:00	01:00	127.4	0.5	195
Fox Creek	**437635**	$PM_{2.5}$	12-Feb-25	01:00	02:00	84.1	0.7	198
Fox Creek	**437718**	$PM_{2.5}$	14-Feb-25	22:00	23:00	91.1	1.0	268
Fox Creek	**437718**	$PM_{2.5}$	14-Feb-25	23:00	00:00	93.4	0.3	268
Fox Creek	**437733**	$PM_{2.5}$	15-Feb-25	00:00	01:00	124.0	0.5	258
Fox Creek	**437733**	$PM_{2.5}$	15-Feb-25	01:00	02:00	88.1	1.0	194

24-hr readings above the $PM_{2.5}$ AAAQO (29µg/m³) recorded as follows:

Site	reference	Pollutant	Date	Average µg/m³	WS km/hr	WD degrees
Fox Creek	**437733**	$PM_{2.5}$	15-Feb-25	30.8	1.9	106

Operational times less than 90 percent

- All instruments in the network were in operation >90% during the month.

Air Incidents

Localized burning was taking place near the Fox Creek station resulting in the elevated particulate readings through the month

Deviations from Authorized Monitoring Methods

None were reported.

Passive Monitoring

- The 2025 Passive rotation took effect in February 2025
- 54 Stations throughout the PAZA zone

- Passive sample analyses were performed by Bureau Veritas Laboratories

There were 19 duplicates sampled in the month of February:

- Eight SO_2 duplicates located at Hythe, Beaverlodge, Jean Cote, McLennan, Duvernay 3, Kakwa 4, Milner Wanyandie, Jayar2 14-8
  - RPD ranging from 0% to 16%, no fails
- One O_3 duplicate at Bay Tree
  - RPD at 10%, no fail
- Seven NO_2 duplicates at Boone Creek, Wembley, Valleyview, Peavine, Kakwa 1, Milner Powerline, Jayar5 Camp
  - RPD ranging from 2% to 127% (one fail at Jayar5 Camp (10.8 and 2.4 ppb results) results are highly suspect due to extreme differences in duplicate))
- Four H_2S duplicates at Duvernay 3, Kakwa 2, Jayar1 Plant
  - RPD ranging from 6% to 109% (one fail at Kakwa 2, 0.05 and 0.17 ppb)
  - No sample collection at Girouxville 3 and 4 due to impassible roads

Dustfall Monitoring

- Five Stations collected Total Dustfall and Fixed Dustfall
- Total dustfall ranged from 12.2 to 43.5 mg/100cm²/30day
- RPD was 16 to 30% (no fails)

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.

Mandeep Dhaliwal, B.Sc., P.Chem.
Program Manager

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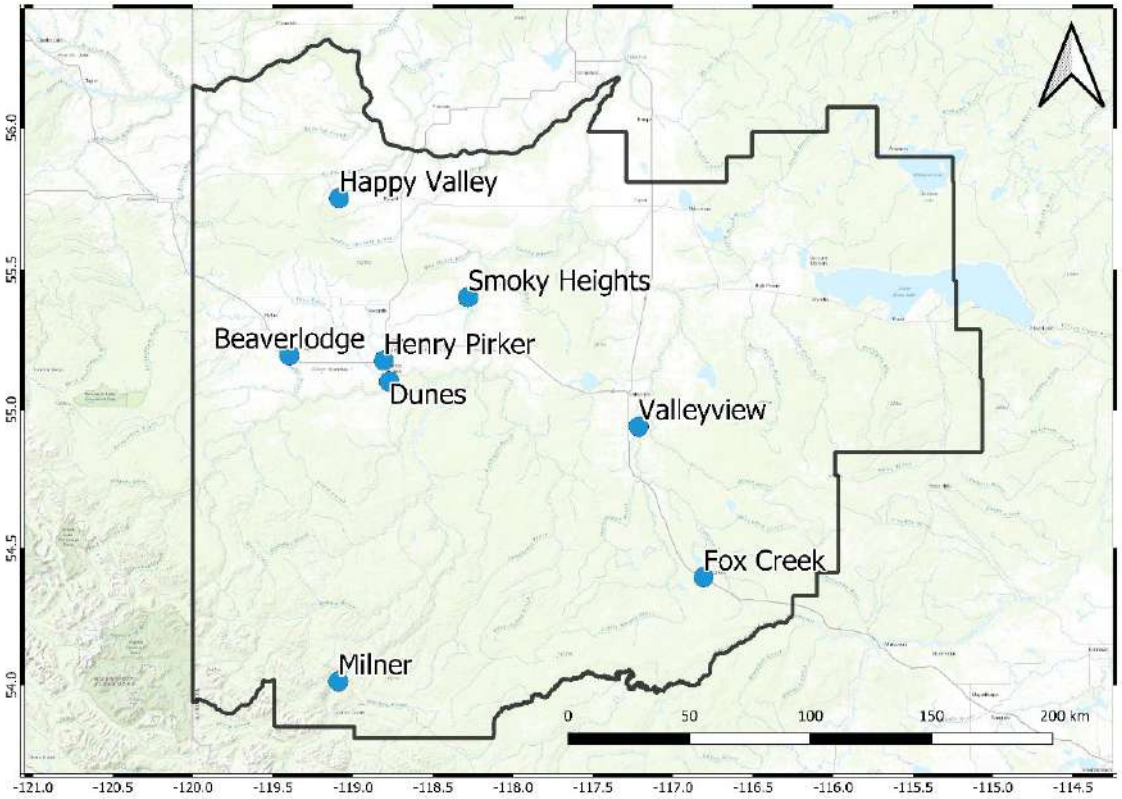
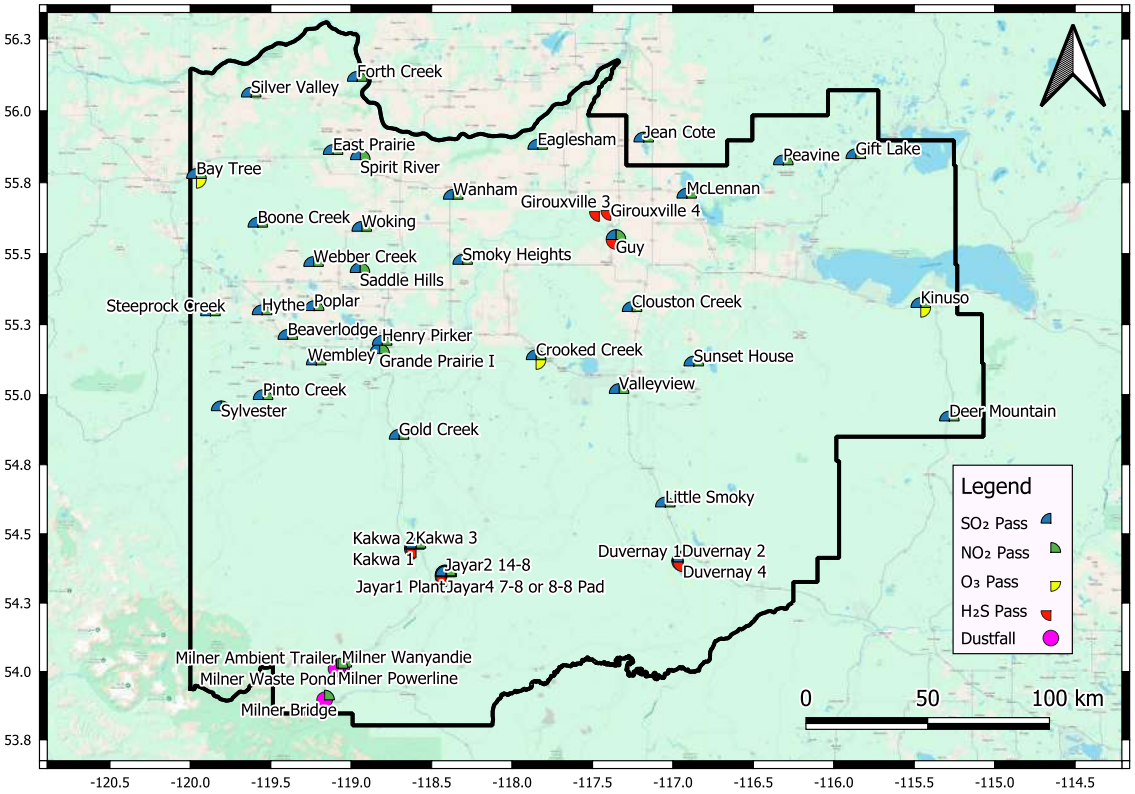
PAZA Continuous Monitoring Station Locations



PAZA Passive Monitoring Station Locations



1 February 2025 Monthly Station Summaries

The following summaries are for the equipment and data results from the continuous ambient work

1.1 Beaverlodge Air Monitoring Station

PAZA - February 2025 Beaverlodge Station Report

Parameter	February Average	Minimum	Valid	Operational	1-hour Max	1-hour Objective	1-hour Max Day and Time	24-hour Max	24-hour Objective	24-hour Max Day	Exceedance 1hr	Exceedance 8hr	Exceedance 24hr	Exceedance 30d	Calibration Date
NO (ppb)	2.7	0.0	91.7%	96.3%	63.8	-	Feb-04 11:00	9.0	-	Feb-17	-	-	-	-	Feb 05, 2025
NO_2 (ppb)	9.9	0.6	91.7%	96.3%	44.6	159	Feb-04 07:00	20.7	-	Feb-17	0	-	-	-	Feb 05, 2025
NO_x (ppb)	12.6	0.6	91.7%	96.3%	101.9	-	Feb-04 07:00	29.8	-	Feb-17	-	-	-	-	Feb 05, 2025
O_3 (ppb)	27.2	0.8	95.4%	100.0%	47.6	76	Feb-28 15:00	44.7	-	Feb-23	0	-	-	-	Feb 05, 2025
$PM_{2.5}$ (µg/m³)	5.4	0.1	99.9%	100.0%	28.8	80	Feb-05 04:00	15.6	29	Feb-17	0	-	0	-	Feb 05, 2025
SO_2 (ppb)	1.2	0.0	95.2%	100.0%	15.0	172	Feb-04 22:00	5.7	48	Feb-04	0	-	0	0	Feb 04, 2025

	Average	Minimum	Valid	Operational	Maximum
Temp (°C)	-12.6	-34.7	95.4%	95.4%	8.4
RH (%)	67.2	33.7	100.0%	100.0%	93.6
WS (km/hr)	7.6	0.1	100.0%	100.0%	44.8
WD (deg)	284	1.6	100.0%	100.0%	359.3

Note: Valid hours must be greater than 75%
Operational hours must be greater than 90%

Average Wind Direction 284 WNW

Update Summary:

Parameter	Make	Model	Equipment summary
$NO/NO_2/NO_x$	Thermo	42iQ	Feb 4, analyzer glitched causing an auto span, then drop to extreme negative, data removed from glitch to calibration on Feb 5 (25hrs removed)
O_3	Thermo	49iQ	No Operational issues noted
$PM_{2.5}$	API	T640	No Operational issues noted
SO_2	Thermo	43i-TLE	No Operational issues noted
Met Equip	MetOne	50.5	For ET, daily drop removed every day 04:21-04:43 (31hrs); Feb 4, 3hrs removed due to extreme readings

1.2 Dunes Air Monitoring Station

PAZA - February 2025 Dunes Station Report

Parameter	February Average	Minimum	Valid	Operational	30min / 1-hour Max	30min / 1-hour Objective	30min / 1-hour Max Day and Time	24-hour Max	24-hour Objective	24-hour Max Day	Exceedance 1hr	Exceedance 8hr	Exceedance 24hr	Exceedance 30d	Calibration Date
$PM_{2.5}$ (µg/m³)	4.2	0.0	99.1%	99.4%	25.7	80	Feb-17 14:00	14.9	29	Feb-17	0	-	0	-	Feb-06-2025
SO_2 (ppb)	0.7	0.0	95.2%	100.0%	7.9	172	Feb-03 17:00	2.1	48	Feb-05	0	-	0	0	Feb-06-2025
TRS (ppb)	0.5	0.0	95.2%	100.0%	2.8	5	Feb-21 17:00	1.0	3	Feb-05	0	-	0	-	Feb-06-2025

	Average	Minimum	Valid	Operational	Maximum
Temp (°C)	-13.6	-37.8	100.0%	100.0%	10.6
RH (%)	65.9	23.8	100.0%	100.0%	92.8
WS (km/hr)	3.3	0.0	100.0%	100.0%	12.8
WD (deg)	302	0.6	100.0%	100.0%	359.7

Note: Valid hours must be greater than 75%
Operational hours must be greater than 90%

Average Wind Direction 302 WNW

Update Summary:

Parameter	Make	Model	Equipment summary
$PM_{2.5}$	Thermo	SHARP 5030	Feb 4, analyzer flatlined, recovered no issues (4hrs removed)
SO_2	Thermo	43i	No Operational issues noted during the month
TRS	Thermo	43i	No Operational issues noted during the month
Met Equip	Gil/RMYoung	MetPak/RMY86004	No Operational issues noted during the month

1.3 Grande Prairie - Henry Pirker Air Monitoring Station

PAZA - February 2025 Henry Pirker Station Report

Parameter	February Average	Minimum	Valid	Operational	1-hour Max	1-hour Objective	1-hour Max Day and Time	8-hour / 24-hour Max	8-hour / 24-hour Objective	8-hour / 24-hour Max Day	Exceedance 1hr	Exceedance 8hr	Exceedance 24hr	Exceedance 30d	Calibration Date
NO (ppb)	9.4	0.0	94.9%	100.0%	75.4	-	Feb-24 10:00	24.5	-	Feb-04	-	-	-	-	Feb 05, 2025
NO_2 (ppb)	18.7	1.8	94.9%	100.0%	54.3	159	Feb-20 19:00	29.8	-	Feb-04	0	-	-	-	Feb 05, 2025
NO_X (ppb)	28.3	2.0	94.9%	100.0%	126.7	-	Feb-20 19:00	54.5	-	Feb-04	-	-	-	-	Feb 05, 2025
O_3 (ppb)	20.3	0.4	95.4%	100.0%	45.4	76	Feb-23 12:00	41.5	-	Feb-23	0	-	-	-	Feb 06, 2025
$PM_{2.5}$ (µg/m³)	5.9	0.2	99.9%	100.0%	29.1	80	Feb-16 09:00	14.9	29	Feb-17	0	-	0	-	Feb 06, 2025
SO_2 (ppb)	0.5	0.0	95.2%	100.0%	15.4	172	Feb-05 20:00	4.2	48	Feb-05	0	-	0	0	Feb 06, 2025
H_2S (ppb)	0.3	0.0	94.5%	99.7%	1.4	10	Feb-05 18:00	0.8	3	Feb-05	0	-	0	-	Feb 03, 2025
CH_4 (ppm)	2.2	1.8	85.7%	90.9%	3.4	-	Feb-24 06:00	2.4	-	Feb-10	-	-	-	-	Feb 05, 2025
THC (ppm)	2.1	1.8	85.7%	90.9%	3.4	-	Feb-24 06:00	2.4	-	Feb-17	-	-	-	-	Feb 05, 2025
NMHC (ppm)	0.0	0.0	85.7%	90.9%	0.6	-	Feb-20 19:00	0.1	-	Feb-20	-	-	-	-	Feb 05, 2025
CO (ppm)	0.2	0.1	95.1%	99.7%	1.3	13	Feb-20 19:00	0.4	5	Feb-20	0	0	-	-	Feb 03, 2025

	Average	Minimum	Valid	Operational	Maximum			
Temp (°C)	-13.3	-37.8	100.0%	100.0%	11.8			Dec 12, 2024
RH (%)	60.2	29.7	100.0%	100.0%	84.6			Dec 12, 2024
SR (W/m²)	48.9	0.0	100.0%	100.0%	388.1			Dec 12, 2024
WS (km/hr)	5.5	0.1	98.2%	98.2%	27.7			Dec 12, 2024
WD (deg)	287	5.8	98.2%	98.2%	359.9	Average Wind Direction	287 WNW	Dec 12, 2024

Note: Valid hours must be greater than 75%
Operational hours must be greater than 90%

Update Summary:

Parameter	Make	Model	Equipment summary
$NO/NO_2/NO_X$	Thermo	42i	No operational issues noted during the month
O_3	TECO	49i	No operational issues noted during the month
$PM_{2.5}$	API	T640	No operational issues noted during the month
SO_2	Thermo	43i-TLE	No operational issues noted during the month
H_2S	TEI	450i	Feb 22, span fail, as found performed and was <3%, no data removed; ran manual AIC to verify (2hrs maintenance)
THC/CH_4/NMHC	TEI	55i	Jan 31 pump repaired, equipment left overnight to calibrate on Feb 1 (12hrs removed, 3hrs maintenance); Feb 2, data drifted below 1.8ppb (1hr removed); Feb 4, data started to flatline, Feb 5 on site investigation had flow error (pump issue), pump was repaired on site and analyzer calibrated, data from Feb 4 span to calibration invalidated (31hrs removed); Feb 23 data drifting below 1.8ppb (13 hrs removed)
CO	Thermo	48i-TLE	Feb 7, span failed to run, upon investigation it was found the pressure valve was near zero, manual AIC performed to verify equipment ok (2hrs removed)
Met Equip	MetOne	50.5	Feb 2 to Feb 16, excessive wind speeds removed, likely due to extreme cold temperatures (12hrs removed)

1.4 Smoky Heights Air Monitoring Station

PAZA - February 2025 Smoky Heights Station Report

Parameter	February Average	Minimum	Valid	Operational	30min / 1-hour Max	30min / 1-hour Objective	30min / 1-hour Max Day and Time	24-hour Max	24-hour Objective	24-hour Max Day	Exceedance 1hr	Exceedance 8hr	Exceedance 24hr	Exceedance 30d	Calibration Date
$PM_{2.5}$ (µg/m³)	4.2	0.0	95.2%	95.5%	15.6	80	Feb-04 23:00	9.3	29	Feb-17	0	-	0	-	Feb 10, 2025
SO_2 (ppb)	0.6	0.0	95.2%	100.0%	6.3	172	Feb-05 19:00	2.0	48	Feb-05	0	-	0	0	Feb 10, 2025
TRS (ppb)	0.2	0.0	95.2%	100.0%	0.3	5	Feb-21 17:00	0.4	3	Feb-03	0	-	0	-	Feb 10, 2025

	Average	Minimum	Valid	Operational	Maximum			
Temp (°C)	-14.5	-38.7	100.0%	100.0%	6.2			
WS (km/hr)	10.3	0.2	100.0%	100.0%	40.2			Oct 10, 2024
WD (deg)	263	0.6	100.0%	100.0%	360.0	Average Wind Direction	263 WNW	Oct 10, 2024

Note: Valid hours must be greater than 75%
Operational hours must be greater than 90%

Update Summary:

Parameter	Make	Model	Equipment summary
$PM_{2.5}$	Sharp	5030	Feb 3 to 5, periods of flatlining data due to extreme cold, 30hrs removed
SO_2	TECO	43i	No Operational issues noted during the month
TRS	TEI	43I APSAA	No Operational issues noted during the month
Met Equip	MetOne	50.5	No Operational issues noted during the month

1.5 Valleyview Air Monitoring Station

PAZA - February 2025 Valleyview Station Report

Parameter	February Average	Minimum	Valid	Operational	1-hour Max	1-hour Objective	1-hour Max Day and Time	24-hour Max	24-hour Objective	24-hour Max Day	Exceedance 1hr	Exceedance 8hr	Exceedance 24hr	Exceedance 30d	Calibration Date
SO_2 (ppb)	0.2	0.0	95.4%	100.0%	1.6	172	Feb-21 22:00	0.4	48	Feb-17	0	-	0	0	Feb 04, 2025
H_2S (ppb)	0.1	0.0	94.7%	99.7%	0.8	10	Feb-04 22:00	0.2	3	Feb-23	0	-	0	-	Feb 04, 2025

	Average	Minimum	Valid	Operational	Maximum
Temp (°C)	-13.5	-40.0	100.0%	100.0%	11.6
RH (%)	69.8	27.5	100.0%	100.0%	93.6
WS (km/hr)	4.0	0.1	100.0%	100.0%	17.7
WD (deg)	249	0.5	100.0%	100.0%	360.0

Note: Valid hours must be greater than 75%
Operational hours must be greater than 90%

Average Wind Direction	249	NW

Update Summary:

Parameter	Make	Model	Equipment summary
SO_2	TEI	43i-APSCB	No operational issues noted during the month
H_2S	TEI	450i-APHAA / 43C	Feb 2,3, spans failed due to extreme cold temperatures, calibration performed Feb 4, as found <3%, no data removed; Feb 22, 23, 24, spans failed, Feb 23 ran as found and came <5%, 2hrs removed for maintenance
Met Equip	RMYoung	RMY86004	No operational issues noted during the month

1.6 Fox Creek Air Monitoring Station

PAZA - February 2025 Fox Creek Station Report

Parameter	February Average	Minimum	Valid	Operational	1-hour Max	1-hour Objective	1-hour Max Day and Time	8-hour / 24-hour Max	8-hour / 24-hour Objective	8-hour / 24-hour Max Day	Exceedance 1hr	Exceedance 8hr	Exceedance 24hr	Exceedance 30d	Calibration Date
NO (ppb)	15.3	0.0	94.5%	99.6%	159.8	-	Feb-20 11:00	50.9	-	Feb-20	-	-	-	-	**Feb 12, 2025**
NO_2 (ppb)	15.0	0.6	94.5%	99.6%	55.7	159	Feb-20 08:00	26.3	-	Feb-20	0	-	-	-	**Feb 12, 2025**
NO_x (ppb)	30.6	1.0	94.5%	99.6%	212.6	-	Feb-20 08:00	77.4	-	Feb-20	-	-	-	-	**Feb 12, 2025**
O_3 (ppb)	24.9	0.9	90.5%	94.9%	51.6	76	Feb-23 11:00	36.6	-	Feb-27	0	-	-	-	**Feb 12, 2025**
$PM_{2.5}$ (µg/m³)	9.7	0.3	99.7%	100.0%	296.0	80	Feb-10 22:00	30.8	29	Feb-15	11	-	1	-	**Feb 13, 2025**
SO_2 (ppb)	0.5	0.0	95.2%	100.0%	4.5	172	Feb-25 10:00	0.9	48	Feb-25	0	-	0	0	**Feb 13, 2025**
H_2S (ppb)	0.3	0.0	85.9%	90.8%	1.4	10	Feb-20 08:00	0.7	3	Feb-10	0	-	0	-	**Feb 12, 2025**

	Average	Minimum	Valid	Operational	Maximum
Temp (°C)	-12.5	-36.0	100.0%	100.0%	12.5
WS (km/hr)	6.1	0.2	100.0%	100.0%	25.9
WD (deg)	209	0.3	100.0%	100.0%	359.8

Note: Valid hours must be greater than 75%
Operational hours must be greater than 90%

Average Wind Direction	209	SSW

Update Summary:

Parameter	Make	Model	Equipment summary
$NO/NO_2/NO_x$	Thermo	42IQ	Feb 23, ran NOX GPT for O3 reference points (3hrs maintenance)
O_3	TECO	49I	Feb 12, removal calibration came in >10%, data removed to morning span (14hrs); Feb 12 removal calibration, with install calibration performed Feb 13 following lamp voltage adjustment (13hrs removed, 3hrs maintenance); Feb 23 calibration to verify unit based on failed span, as founds came in <5%, no additional data removed (4hrs maintenance)
$PM_{2.5}$	API	T640	Feb 10 to 15, local burning taking place, 11x1hr above AAAQG and 1x24hr above AAAQO
SO_2	TEI	43I-TLE	No operational issues noted
H_2S	TEI	450i	Feb 12, removal calibration for flash lamp and socket assembly replacement; Feb 13, install calibration allowing unit to stabilize (13 hrs removed, 3hrs maintenance); Feb 18-22 spans ran for a few minutes then data missing, with recovery showing a very long decay tail, 1hr removed extra each day (5hrs); Feb 23 on site to investigate failed span on Feb 22, found pump issue, no removal calibration possible, rebuilt pump, left analyzer to purge overnight, Feb 24 install calibration performed (38hrs removed, 3hrs maintenance)
Met Equip	MetOne	50.5	No operational issues noted

1.7 Happy Valley Air Monitoring Station

PAZA - February 2025 Happy Valley Station Report

Parameter	February Average	Minimum	Valid	30min / 1-hour Operational	Max	Objective	Max Day and Time	24-hour Max	Objective	Max Day	Exceedance 1hr	8hr	24hr	30d	Calibration Date
NO (ppb)	0.8	0.0	95.1%	100.0%	13.2	-	Feb-05 14:00	2.3	-	Feb-03	-	-	-	-	Feb 10, 2025
NO_2 (ppb)	3.6	0.4	95.1%	100.0%	19.4	159	Feb-18 08:00	7.4	-	Feb-04	0	-	-	-	Feb 10, 2025
NO_X (ppb)	4.5	0.4	95.1%	100.0%	25.7	-	Feb-05 14:00	9.7	-	Feb-04	-	-	-	-	Feb 10, 2025
O_3 (ppb)	33.3	13.3	95.4%	100.0%	48.9	76	Feb-23 15:00	46.1	-	Feb-23	0	-	-	-	Feb 10, 2025
$PM_{2.5}$ (µg/m³)	3.3	0.0	99.9%	100.0%	31.6	80	Feb-21 23:00	9.3	29	Feb-04	0	-	0	-	Feb 11, 2025
SO_2 (ppb)	0.6	0.0	95.2%	100.0%	7.7	172	Feb-05 01:00	2.4	48	Feb-05	0	-	0	0	Feb 10, 2025
TRS (ppb)	0.4	0.1	95.4%	100.0%	6.6	5	Feb-14 20:30	0.6	3	Feb-04	1	-	0	-	Feb 11, 2025
THC (ppm)	2.1	1.9	95.4%	100.0%	3.0	-	Feb-12 06:00	2.3	-	Feb-19	-	-	-	-	Feb 11, 2025

	Average	Minimum	Valid	Operational	Maximum
Temp (°C)	-14.6	-35.5	100.0%	100.0%	8.1
WS (km/hr)	12.0	0.4	100.0%	100.0%	41.7
WD (deg)	259	0.1	100.0%	100.0%	356.9

Note: Valid hours must be greater than 75%
Operational hours must be greater than 90%

Average Wind Direction 259 W

Update Summary:

Parameter	Make	Model	Equipment summary
$NO/NO_2/NO_X$	TEI	42i	No operational issues noted
O_3	TEI	49I	No operational issues noted
$PM_{2.5}$	API	T640	No operational issues noted
SO_2	TEI	43I	No operational issues noted
TRS	TEI	43I	One reading above the TRS 30min AAAQG
THC	TEI	55i / 51Ii-LT	No operational issues noted
Met Equip	MetOne	50.5	No operational issues noted

1.8 Milner Air Monitoring Station

PAZA - February 2025 Milner Station Report

Parameter	February Average	Minimum	Valid	1-hour Operational	Max	Objective	Max Day and Time	24-hour Max	Objective	Max Day	Exceedance 1hr	8hr	24hr	30d	Calibration Date
NO (ppb)	1.3	0.0	95.1%	100.0%	29.2	-	Feb-04 13:00	5.2	-	Feb-16	-	-	-	-	Feb 13, 2025
NO_2 (ppb)	4.6	0.0	95.1%	100.0%	25.0	159	Feb-19 18:00	11.1	-	Feb-19	0	-	-	-	Feb 13, 2025
NO_X (ppb)	6.0	0.0	95.1%	100.0%	44.7	-	Feb-04 13:00	15.7	-	Feb-16	-	-	-	-	Feb 13, 2025
$PM_{2.5}$ (µg/m³)	2.7	0.1	99.7%	100.0%	13.2	80	Feb-18 09:00	7.7	29	Feb-18	0	-	0	-	Feb 13, 2025

	Average	Minimum	Valid	Operational	Maximum
WS (km/hr)	7.3	0.1	100.0%	100.0%	39.6
WD (deg)	264	0.2	100.0%	100.0%	356.1

Note: Valid hours must be greater than 75%
Operational hours must be greater than 90%

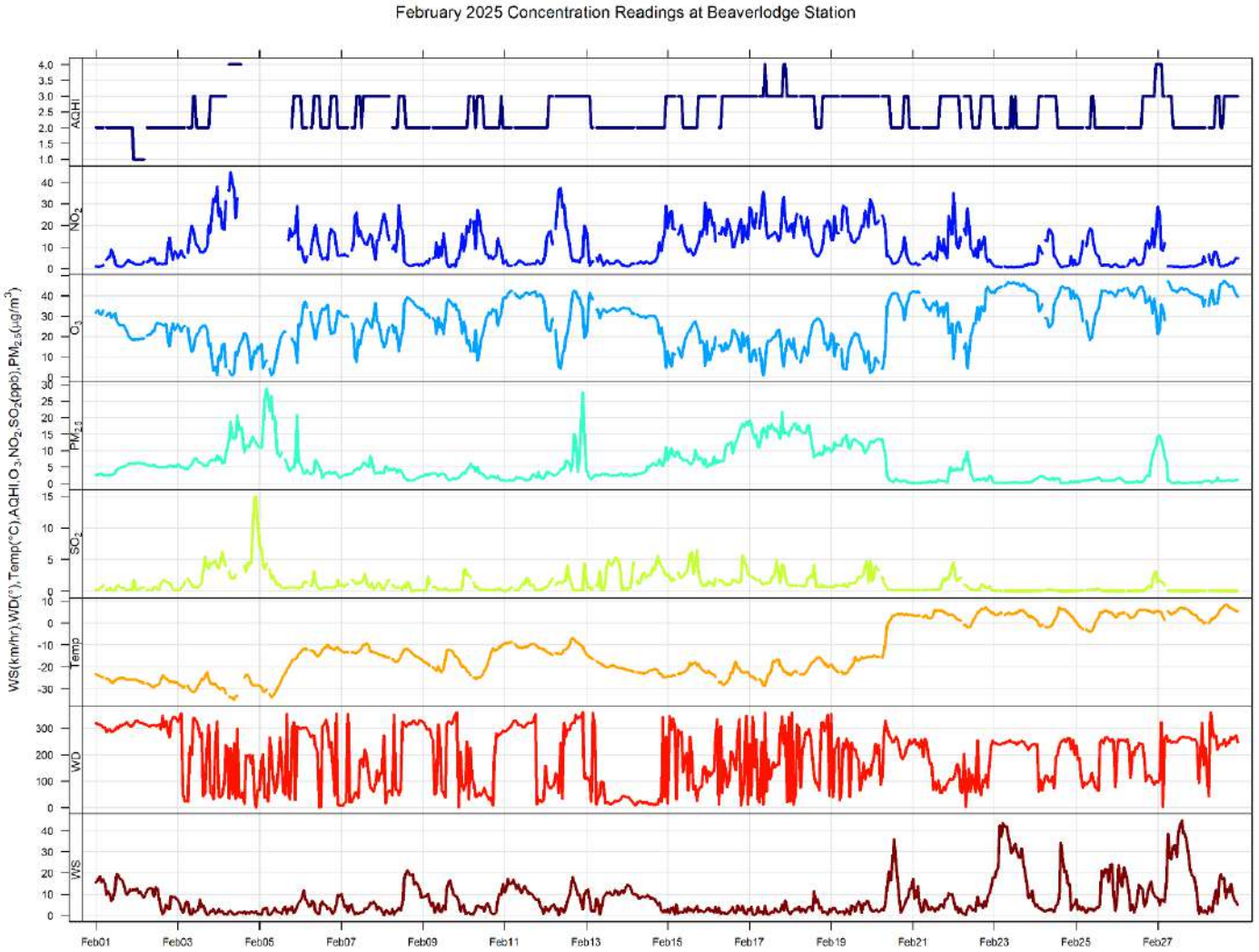
Average Wind Direction 264 W

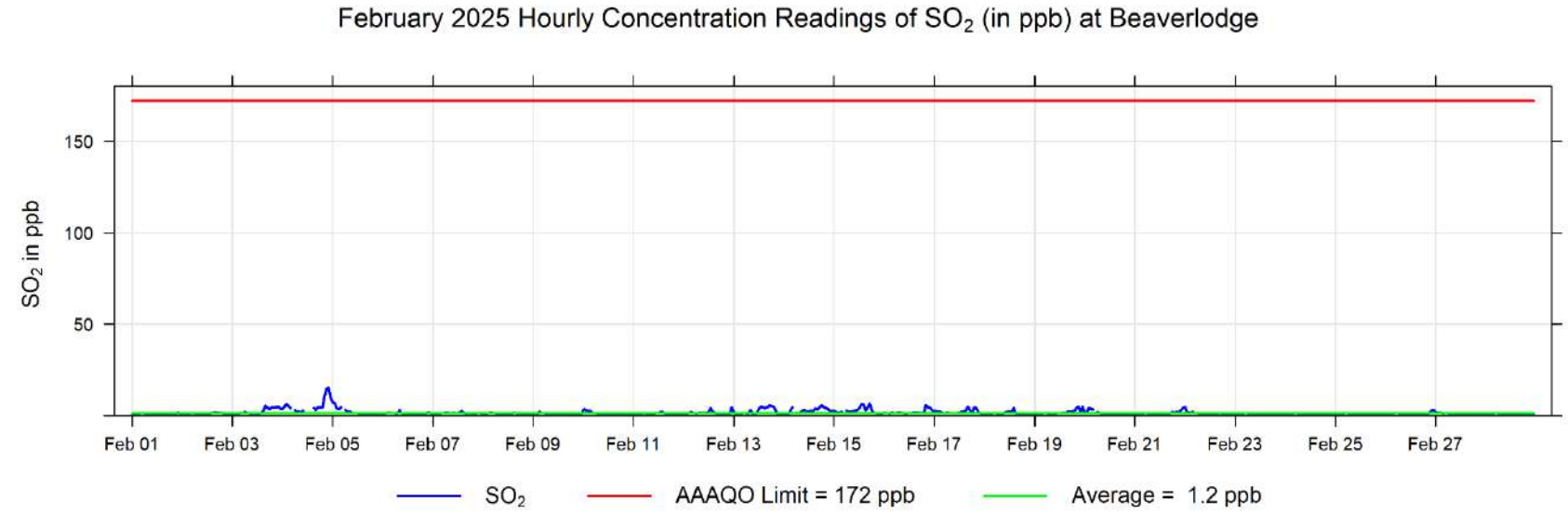
Update Summary:

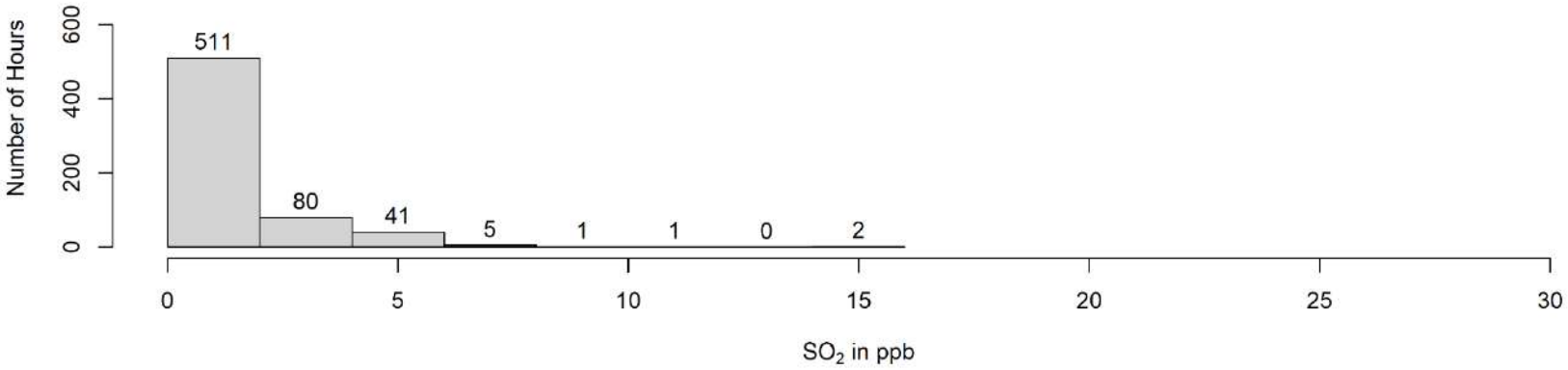
Parameter	Make	Model	Equipment summary
$NO/NO_2/NO_X$	Thermo	42i	No Operational issues noted
$PM_{2.5}$	API	T640	No Operational issues noted
Met Equip	MetOne	50.5	No Operational issues noted

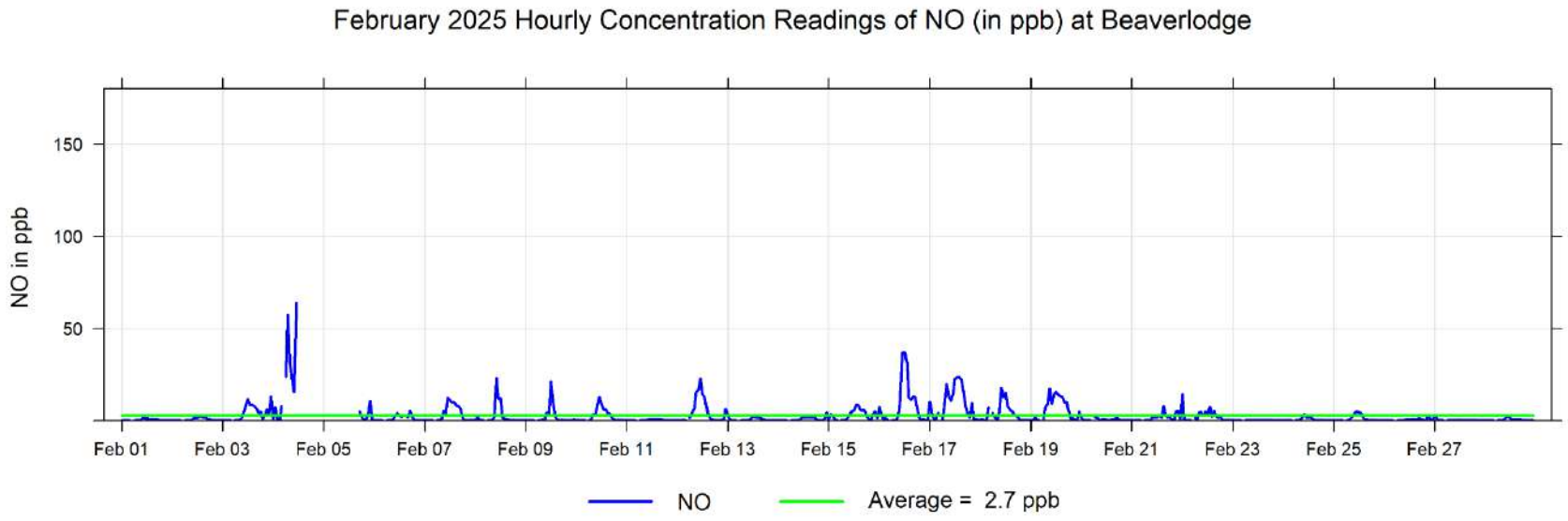
2 Beaverlodge Charts

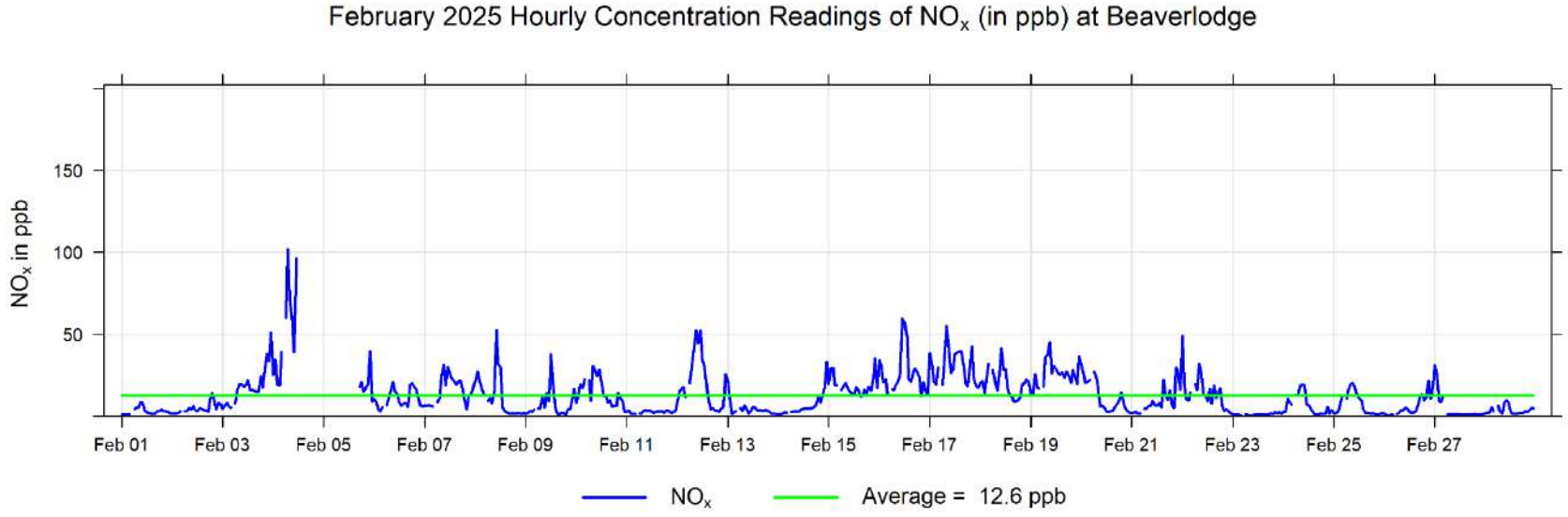
The following pages include the charts and histograms for Beaverlodge Station

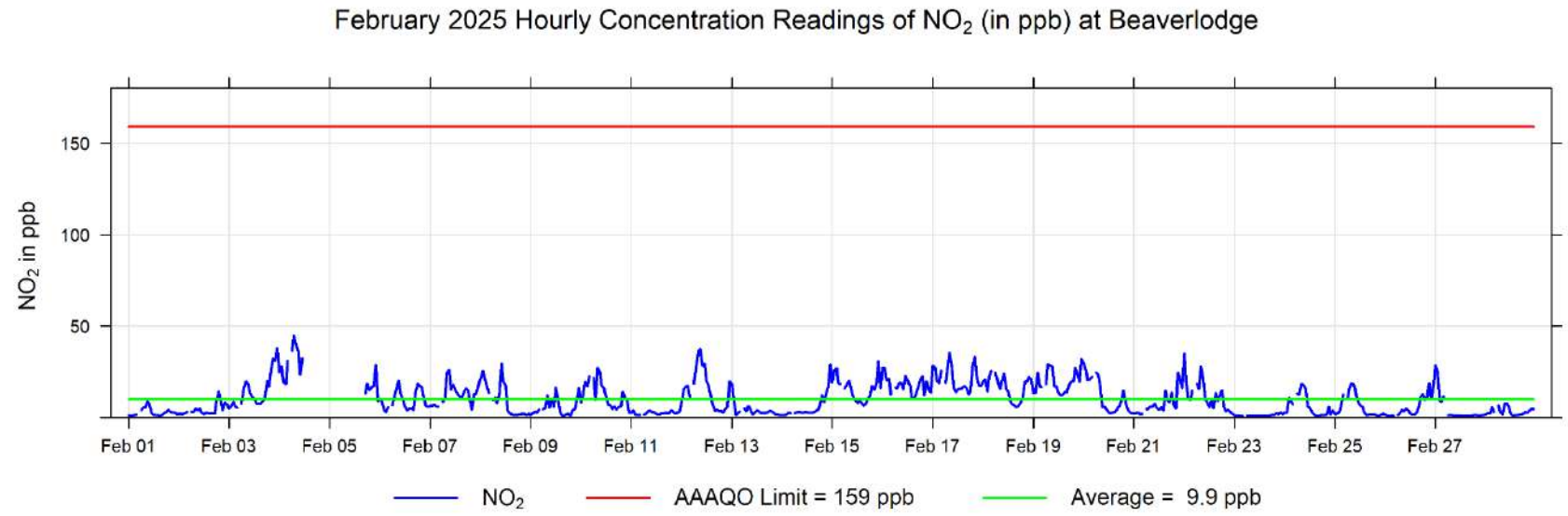


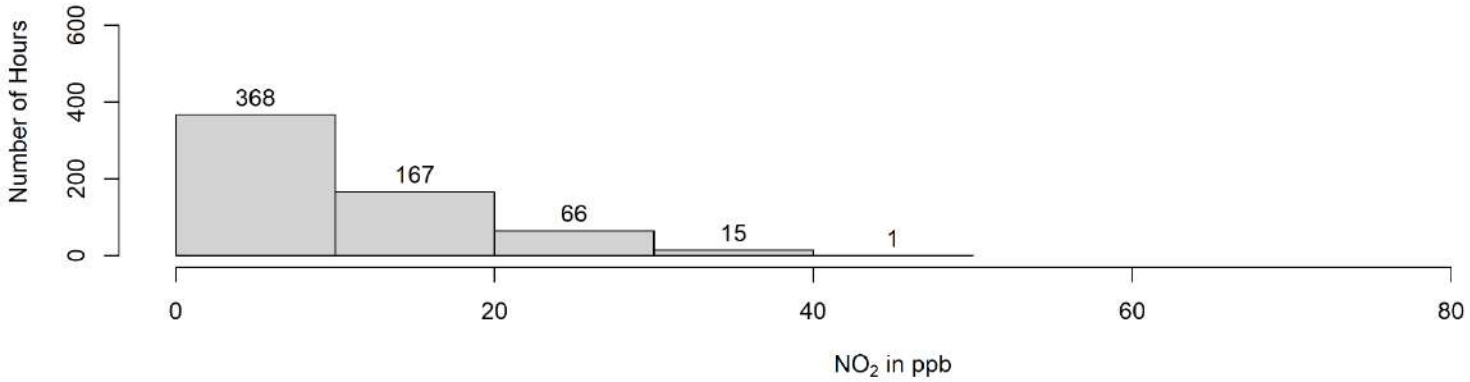

February 2025 Hourly Concentration Readings of SO2 (in ppb) at Beaverlodge
SO2 in ppb
150
100
50
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
SO2
AAAQO Limit = 172 ppb
Average = 1.2 ppb

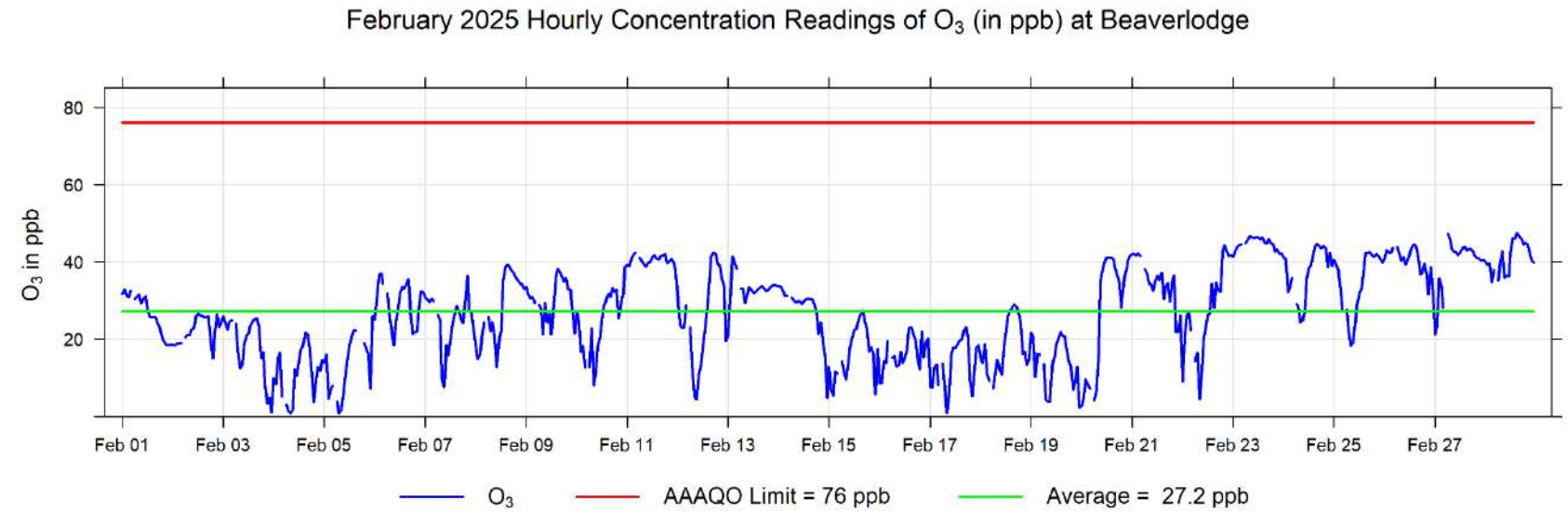

Number of Hours
0
200
400
600
511
80
41
5
1
1
0
2
0
5
10
15
20
25
30
SO2 in ppb

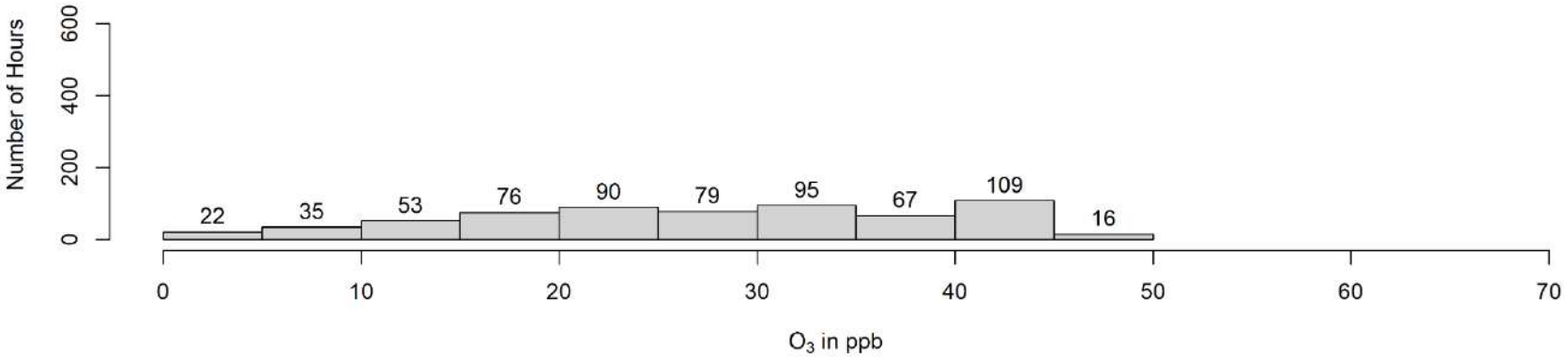

February 2025 Hourly Concentration Readings of NO (in ppb) at Beaverlodge
NO in ppb
150
100
50
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
NO
Average = 2.7 ppb

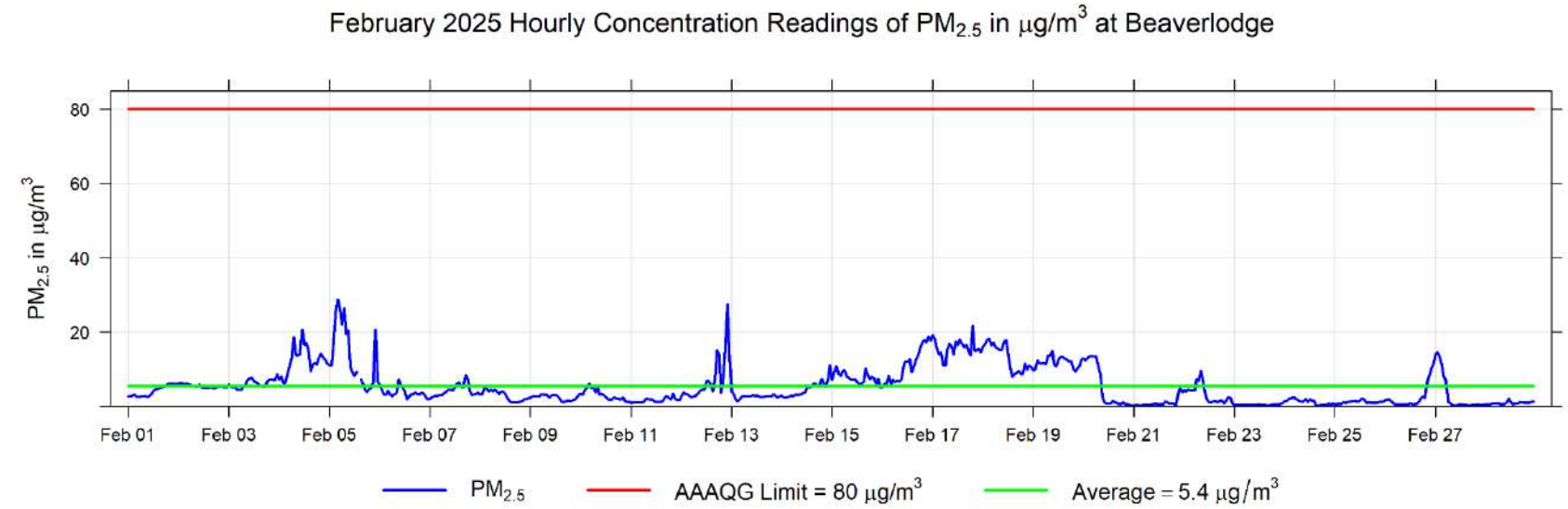

February 2025 Hourly Concentration Readings of NOx (in ppb) at Beaverlodge
NOx in ppb
150
100
50
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
NOx
Average = 12.6 ppb

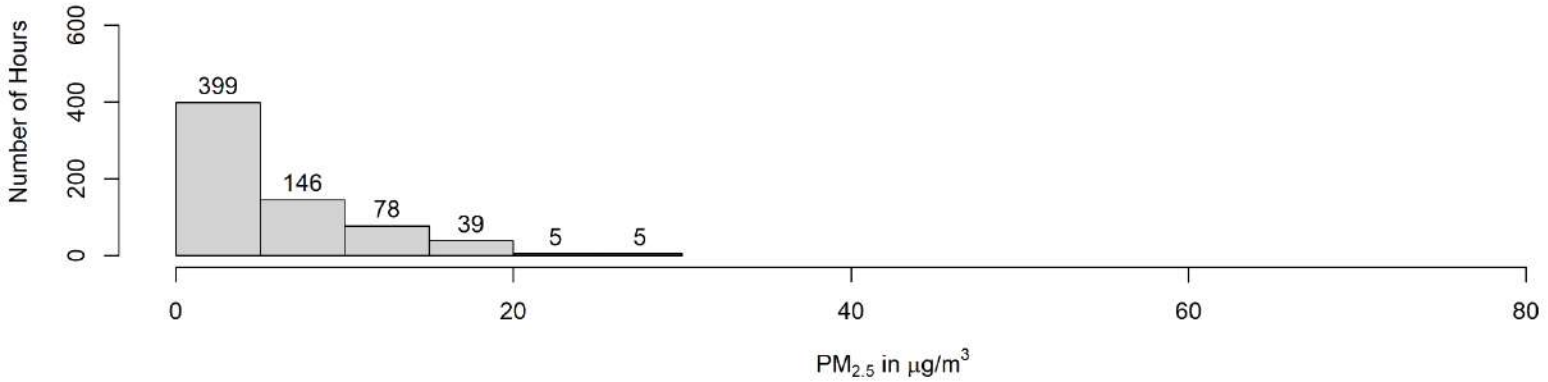

February 2025 Hourly Concentration Readings of NO2 (in ppb) at Beaverlodge
NO2 in ppb
150
100
50
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
NO2
AAAQO Limit = 159 ppb
Average = 9.9 ppb

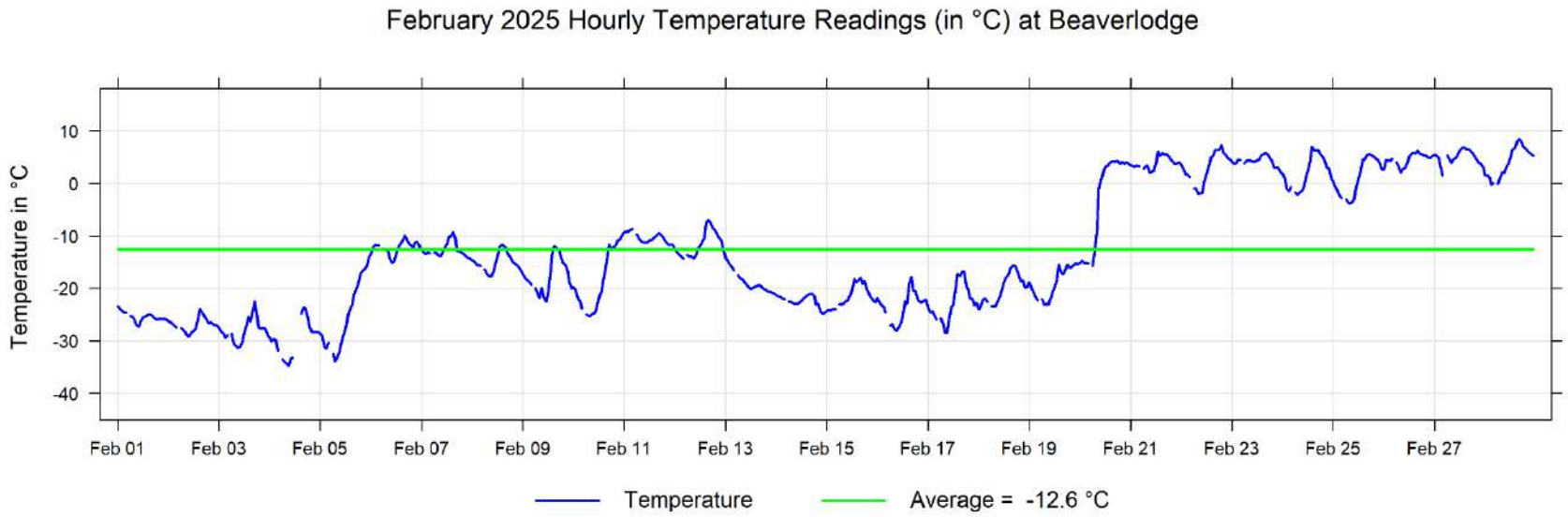

Number of Hours
0
200
400
600
368
167
66
15
1
0
20
40
60
80
NO2 in ppb

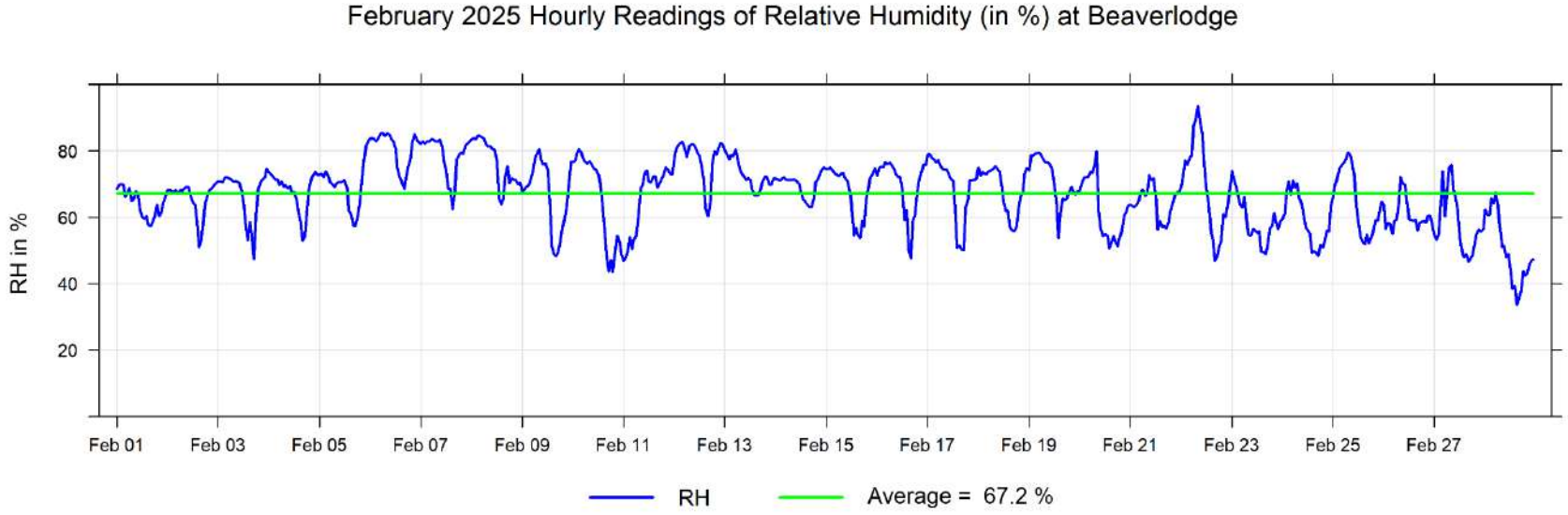

February 2025 Hourly Concentration Readings of O_3 (in ppb) at Beaverlodge
O_3 in ppb
80
60
40
20
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
O_3
AAAQO Limit = 76 ppb
Average = 27.2 ppb


Number of Hours
0
200
400
600
22
35
53
76
90
79
95
67
109
16
0
10
20
30
40
50
60
70
O_3 in ppb

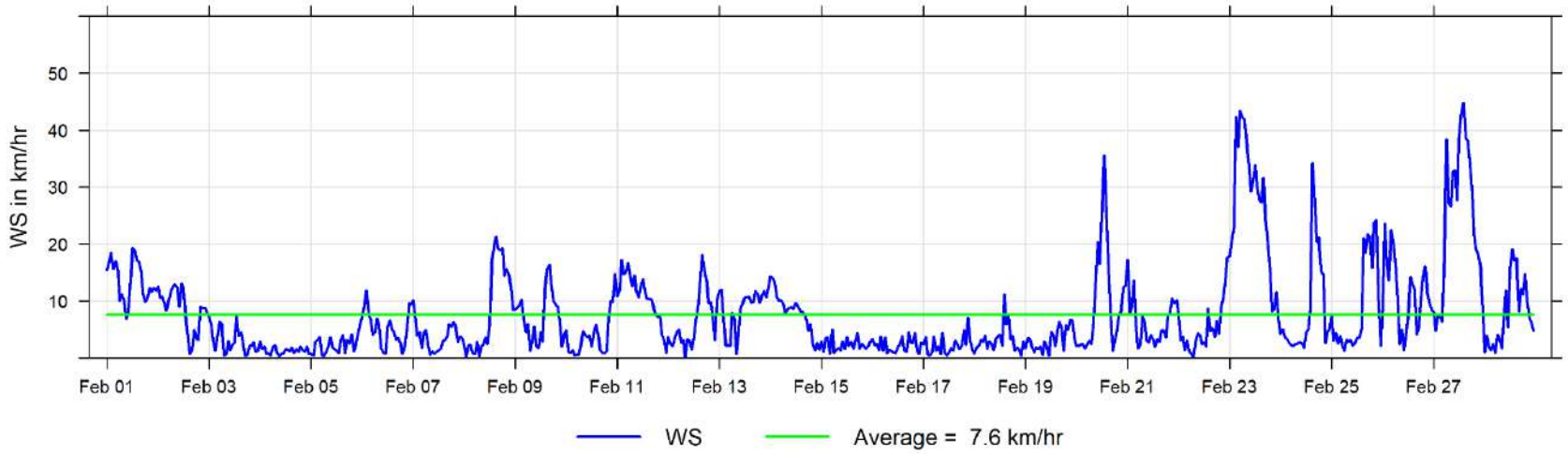

February 2025 Hourly Concentration Readings of PM2.5 in µg/m3 at Beaverlodge
PM2.5 in µg/m3
80
60
40
20
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
PM2.5
AAAQG Limit = 80 µg/m3
Average = 5.4 µg/m3


Number of Hours
0
200
400
600
399
146
78
39
5
5
0
20
40
60
80
PM2.5 in µg/m3

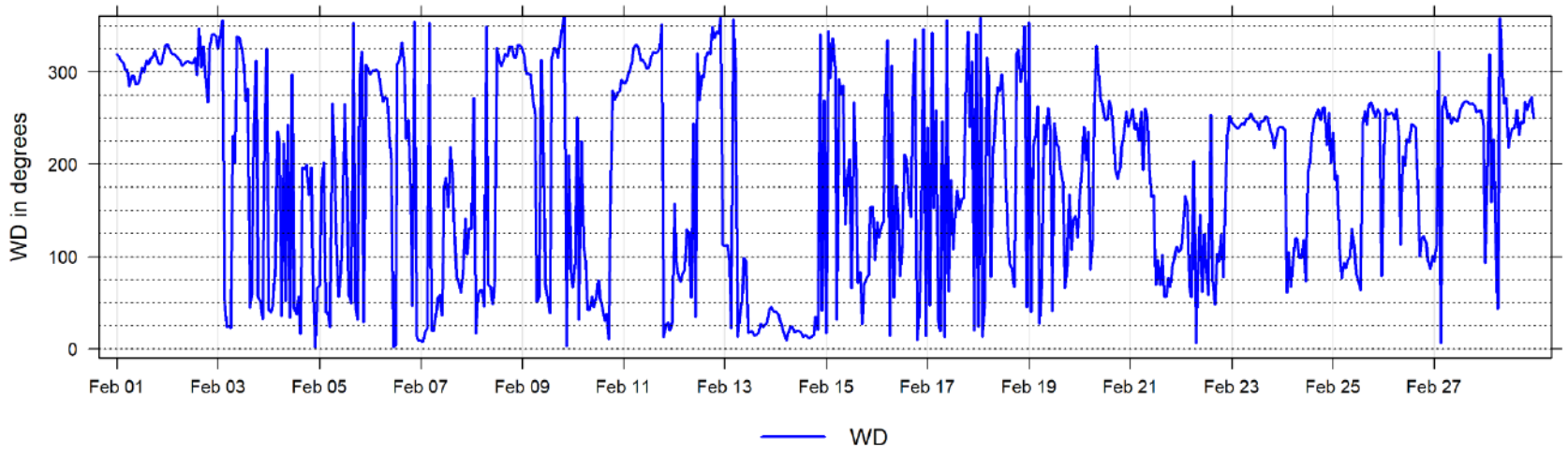

February 2025 Hourly Temperature Readings (in °C) at Beaverlodge
Temperature in °C
10
0
-10
-20
-30
-40
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
Temperature
Average = -12.6 °C

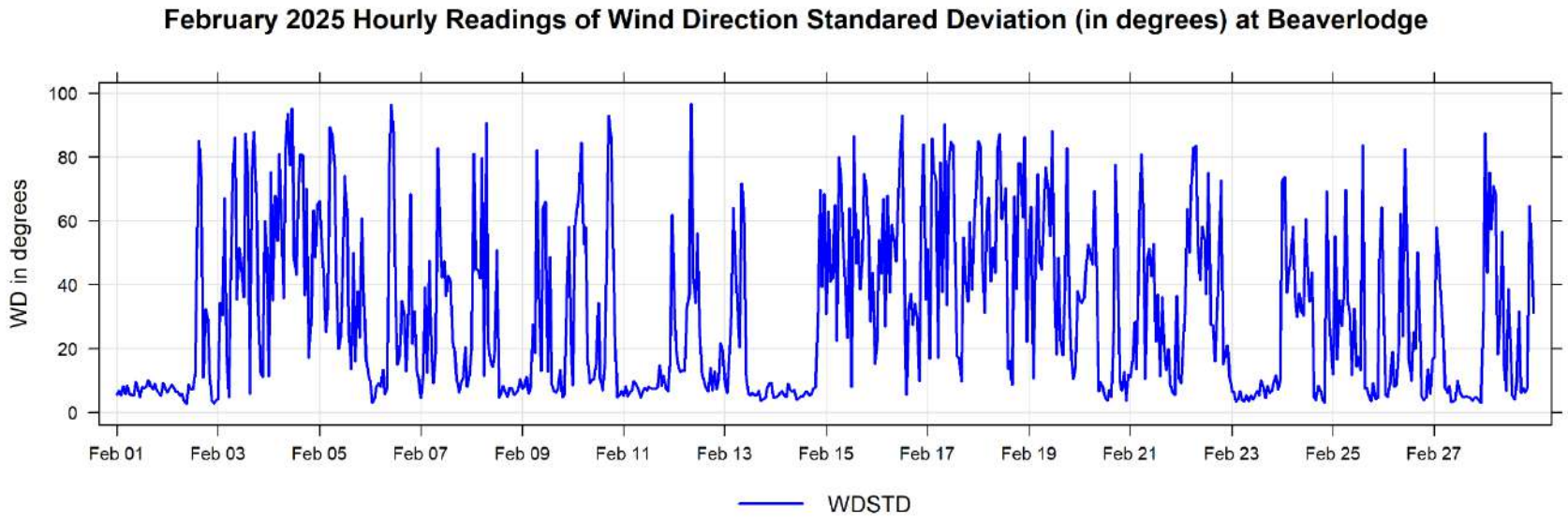

February 2025 Hourly Readings of Relative Humidity (in %) at Beaverlodge
RH in %
80
60
40
20
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
RH
Average = 67.2 %

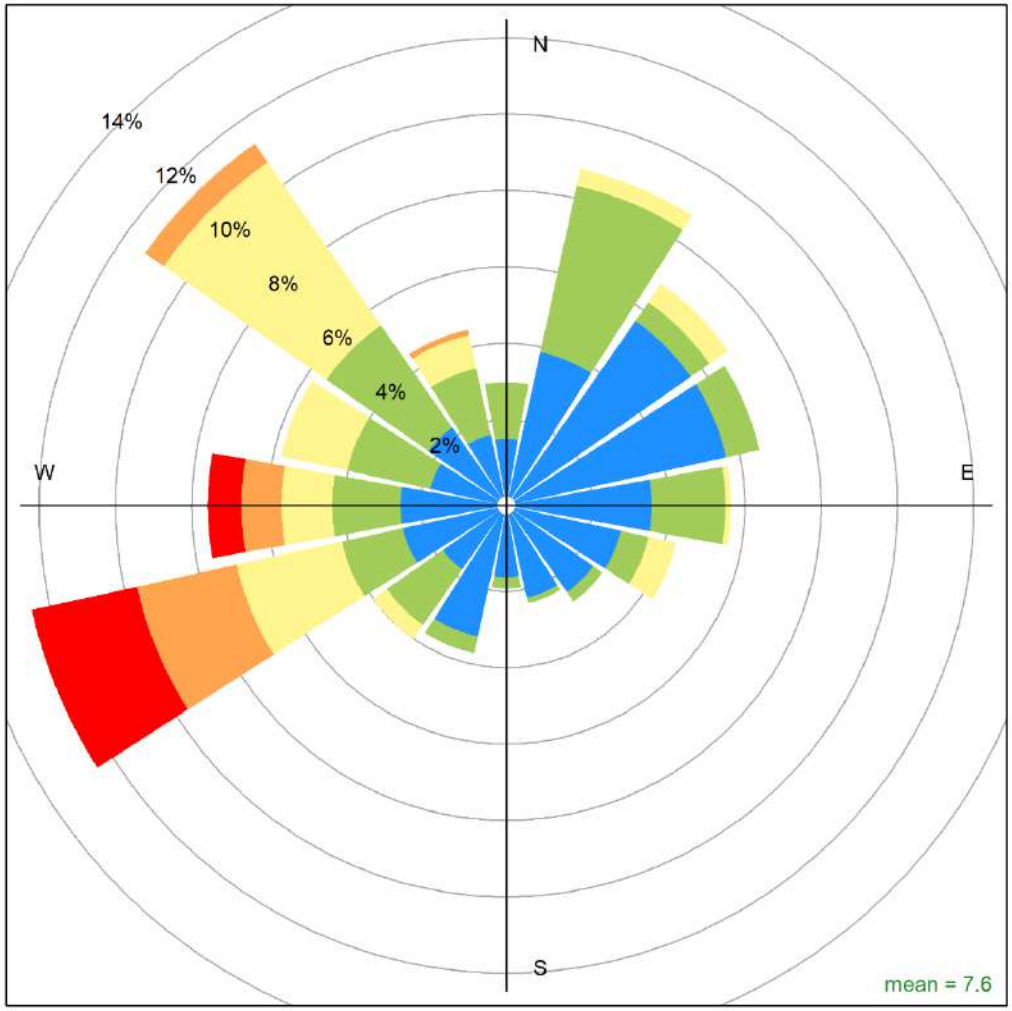
February 2025 Hourly Readings of Wind Speed (in km/hr) at Beaverlodge



February 2025 Hourly Readings of Wind Direction (in degrees) at Beaverlodge




February 2025 Hourly Readings of Wind Direction Standared Deviation (in degrees) at Beaverlodge
WD in degrees
100
80
60
40
20
0
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
WDSTD

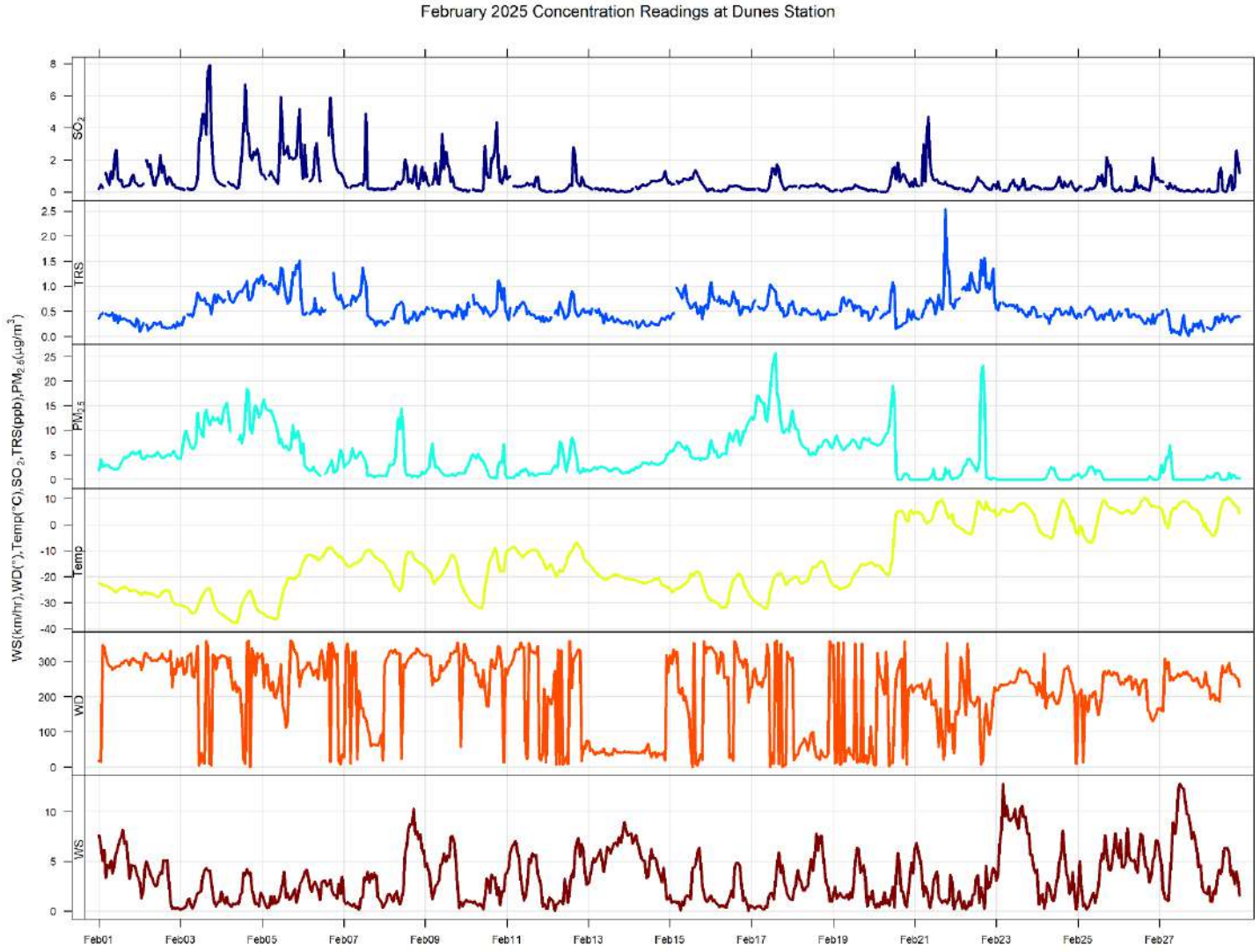


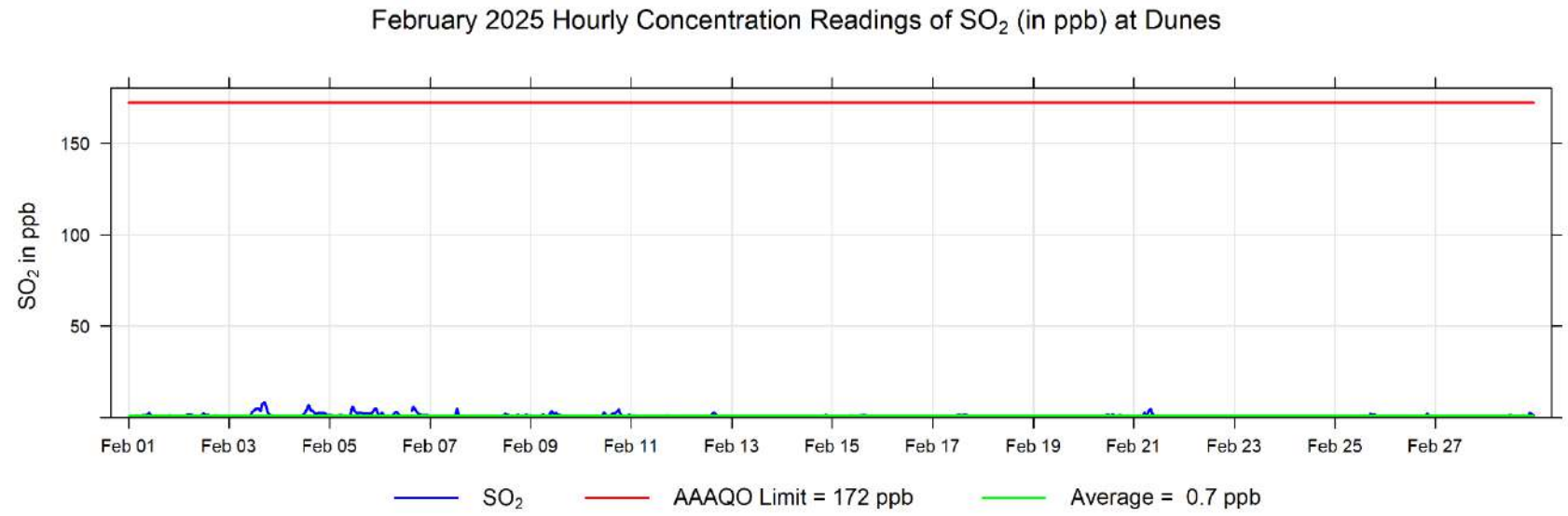
Beaverlodge February 2025 Wind Rose, wind speed in km/hr

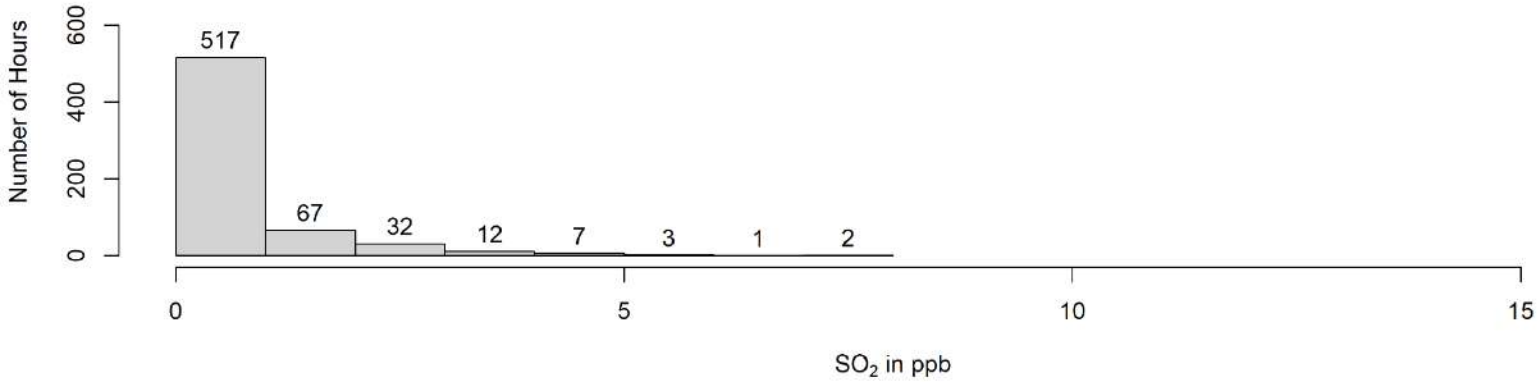
Calms (<1km/hr) = 8.5 %

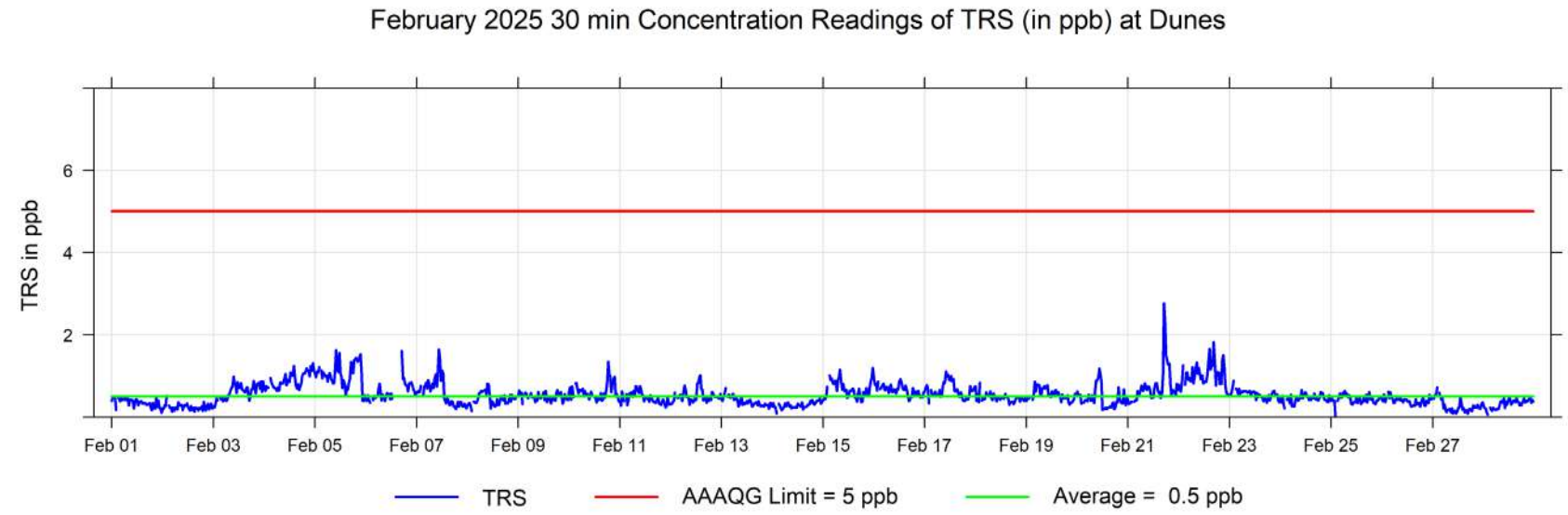
3 Dunes Charts

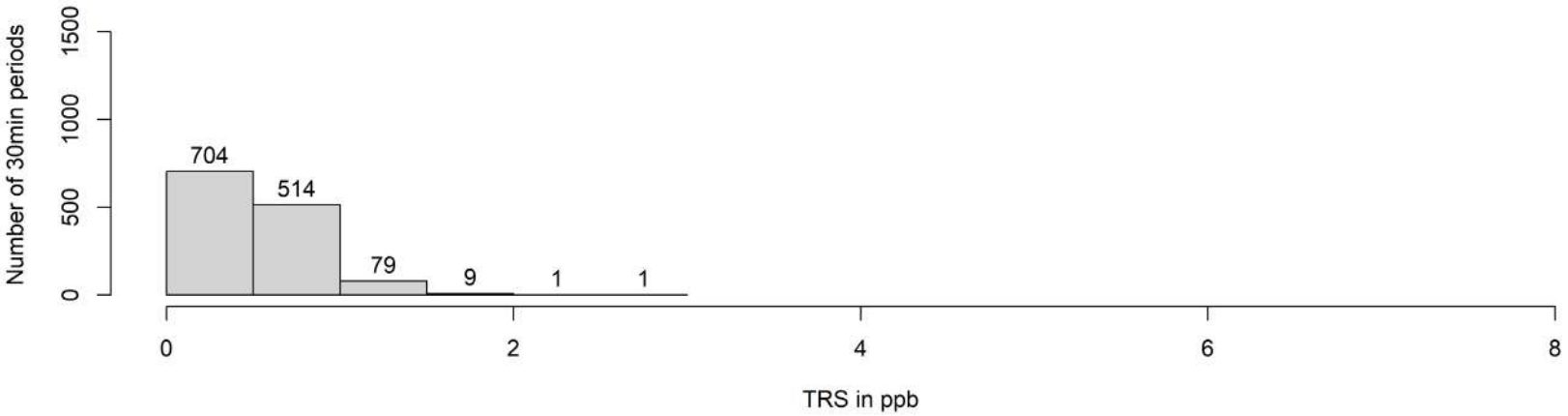
The following pages include the charts and histograms for Dunes Station

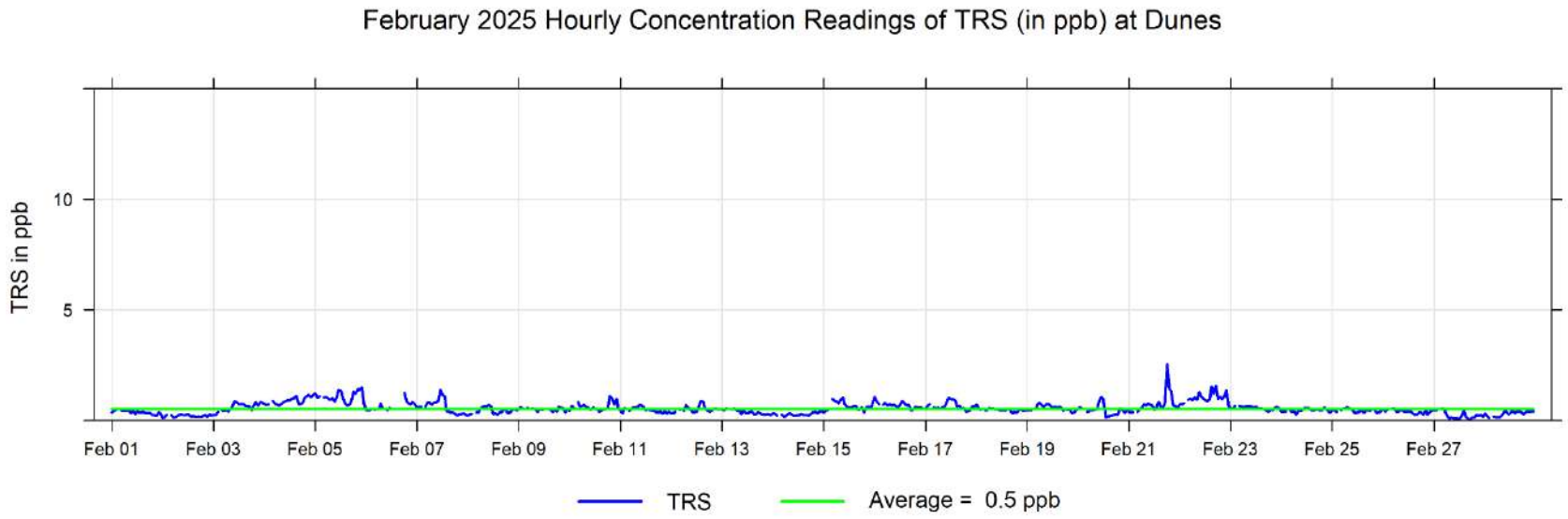


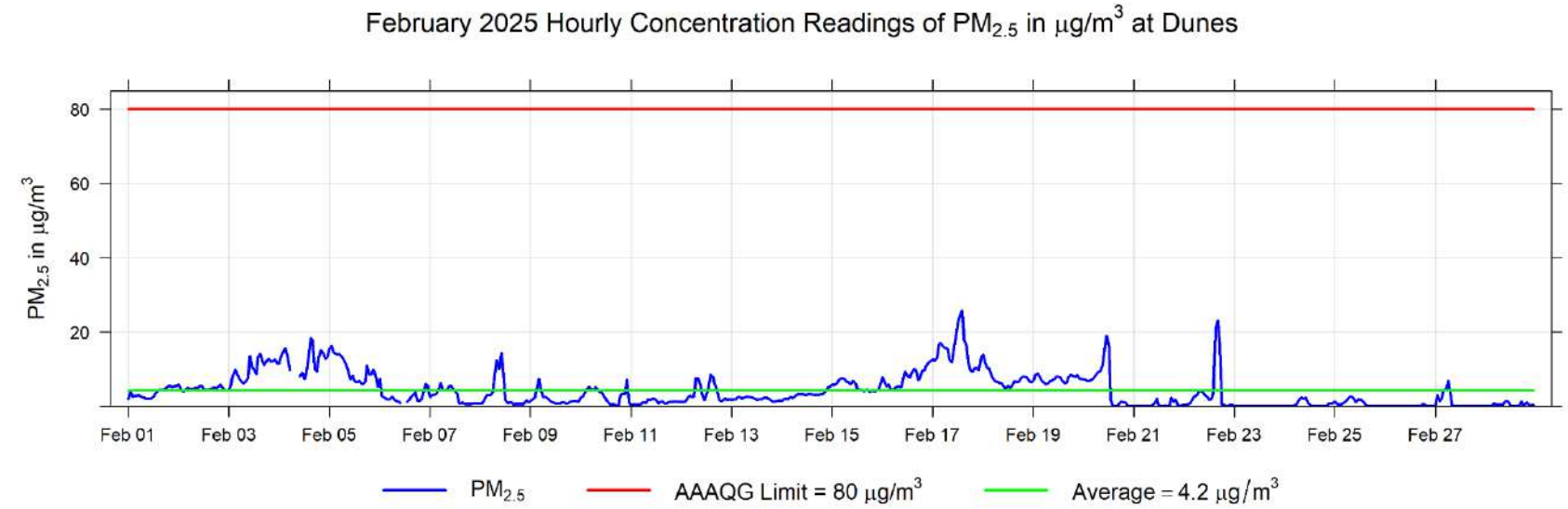

February 2025 Hourly Concentration Readings of SO_2 (in ppb) at Dunes
SO_2 in ppb
150
100
50
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
SO_2
AAAQO Limit = 172 ppb
Average = 0.7 ppb

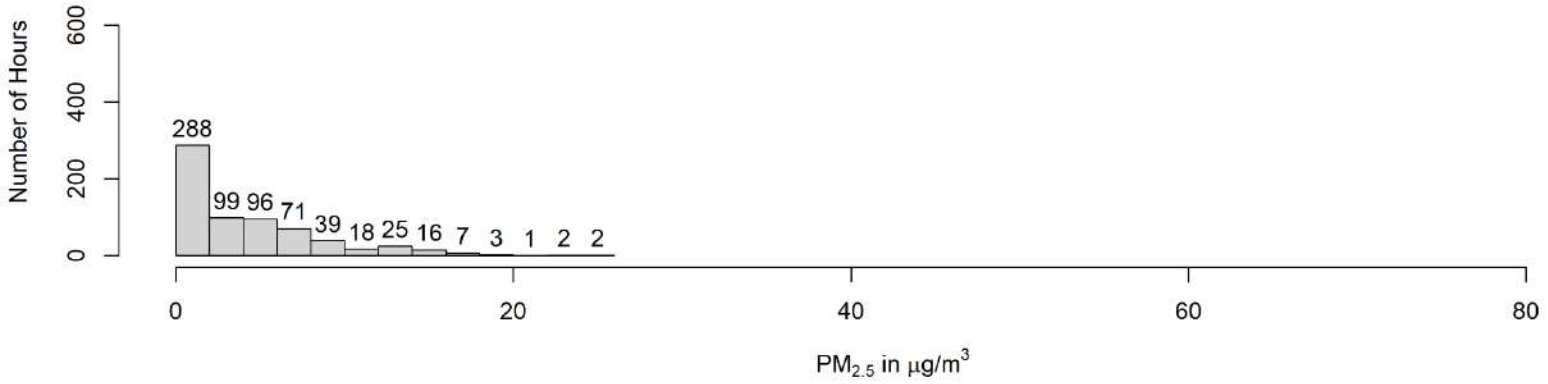

Number of Hours
0
200
400
600
517
67
32
12
7
3
1
2
0
5
10
15
SO_2 in ppb

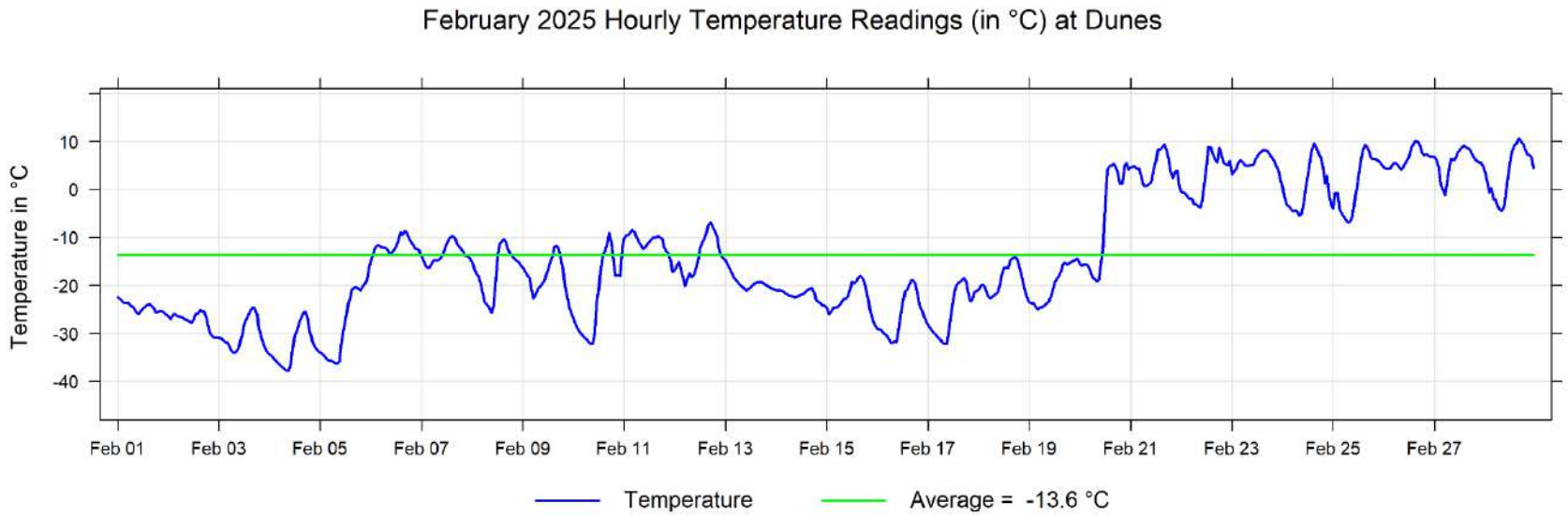

February 2025 30 min Concentration Readings of TRS (in ppb) at Dunes
TRS in ppb
6
4
2
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
TRS
AAAQG Limit = 5 ppb
Average = 0.5 ppb

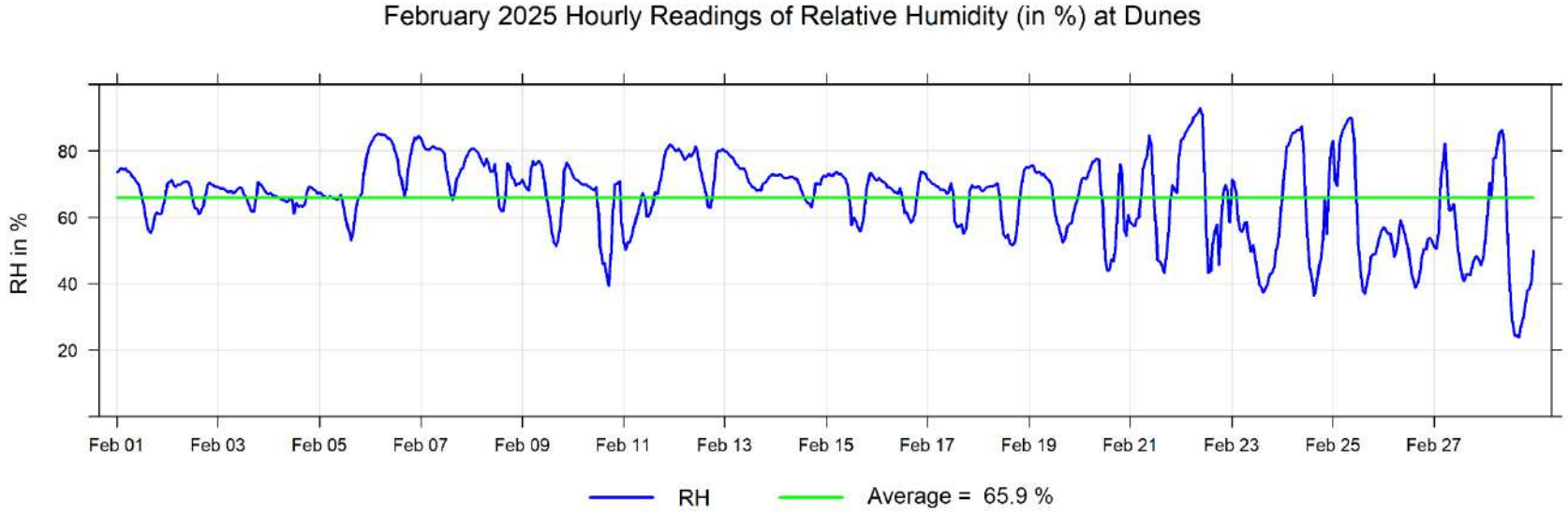

Number of 30min periods
0
500
1000
1500
704
514
79
9
1
1
0
2
4
6
8
TRS in ppb


February 2025 Hourly Concentration Readings of TRS (in ppb) at Dunes
TRS in ppb
10
5
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
TRS
Average = 0.5 ppb

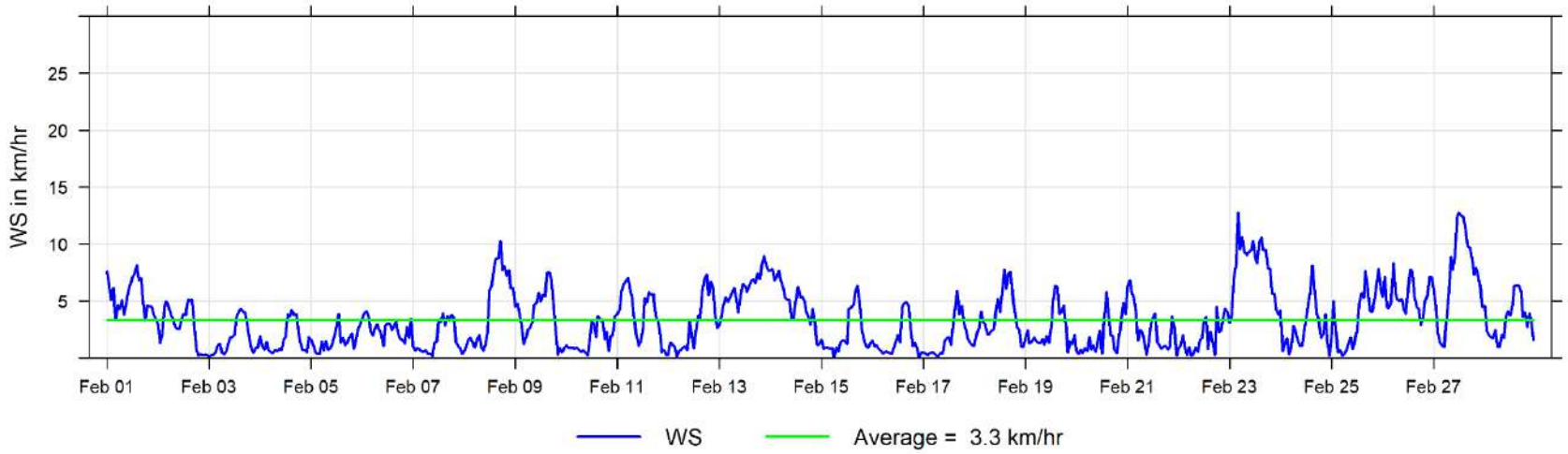

February 2025 Hourly Concentration Readings of PM2.5 in µg/m3 at Dunes
PM2.5 in µg/m3
80
60
40
20
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
PM2.5
AAAQG Limit = 80 µg/m3
Average = 4.2 µg/m3


Number of Hours
0
200
400
600
288
99
96
71
39
18
25
16
7
3
1
2
2
0
20
40
60
80
PM2.5 in µg/m3

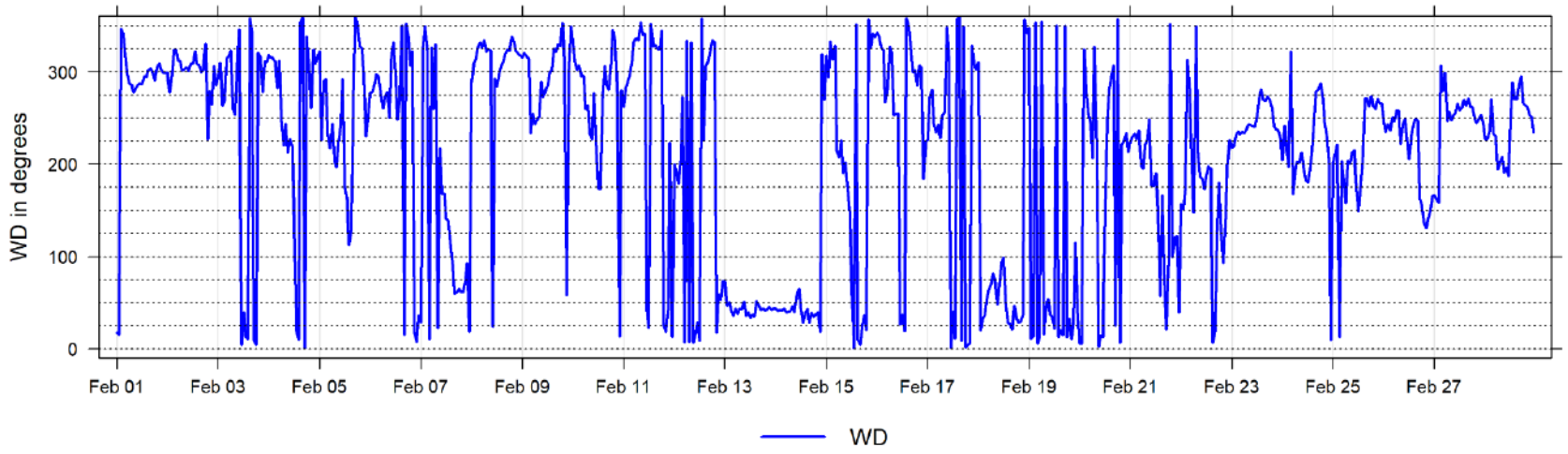

February 2025 Hourly Temperature Readings (in °C) at Dunes
Temperature in °C
10
0
-10
-20
-30
-40
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
Temperature
Average = -13.6 °C

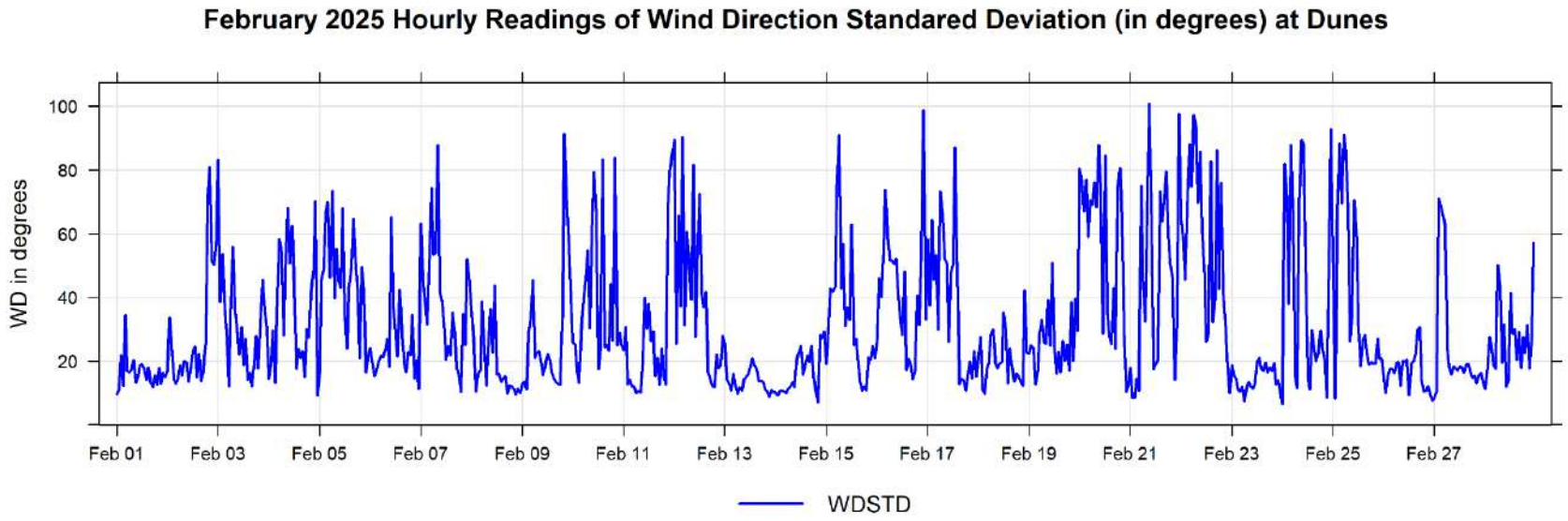

February 2025 Hourly Readings of Relative Humidity (in %) at Dunes
RH in %
80
60
40
20
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
RH
Average = 65.9 %

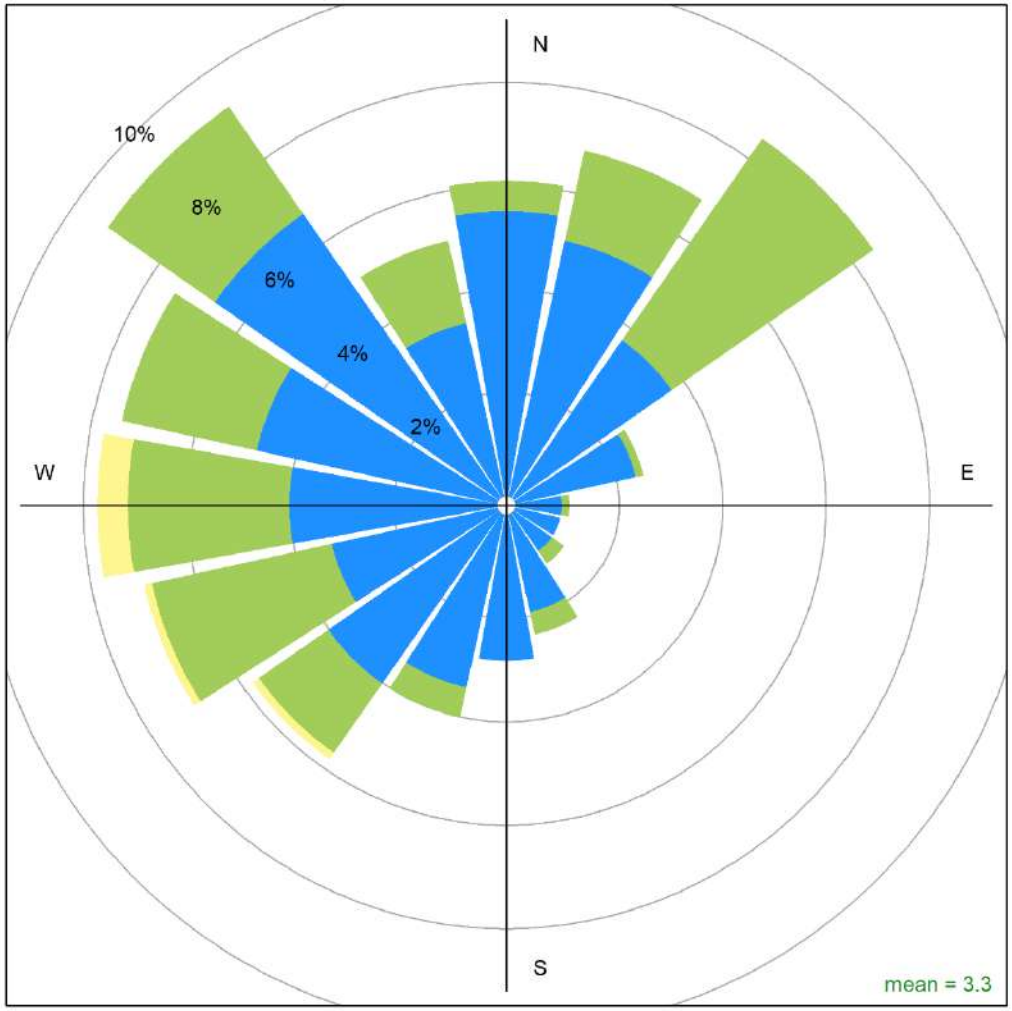
February 2025 Hourly Readings of Wind Speed (in km/hr) at Dunes



February 2025 Hourly Readings of Wind Direction (in degrees) at Dunes




February 2025 Hourly Readings of Wind Direction Standared Deviation (in degrees) at Dunes
WD in degrees
100
80
60
40
20
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
WDSTD

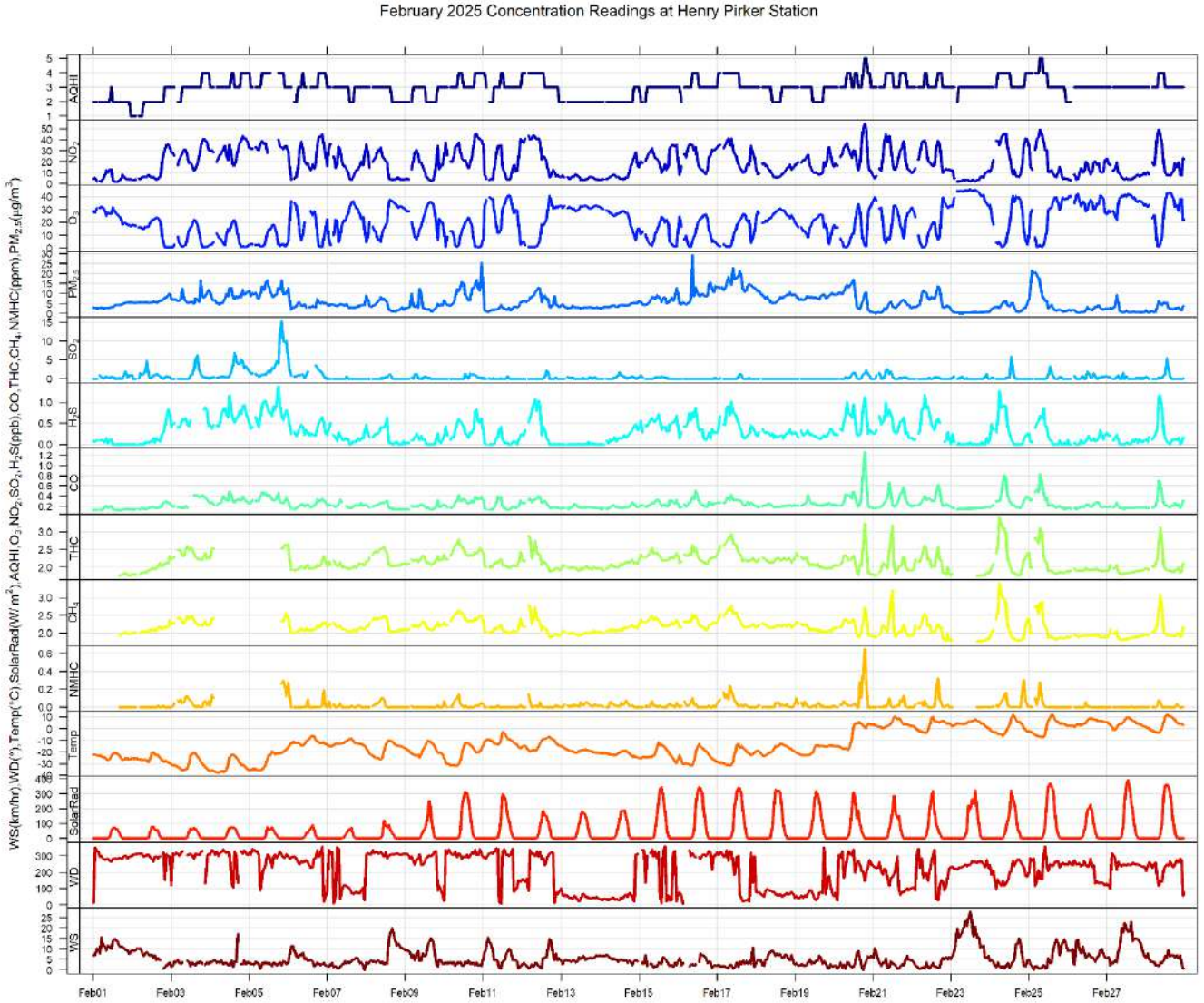


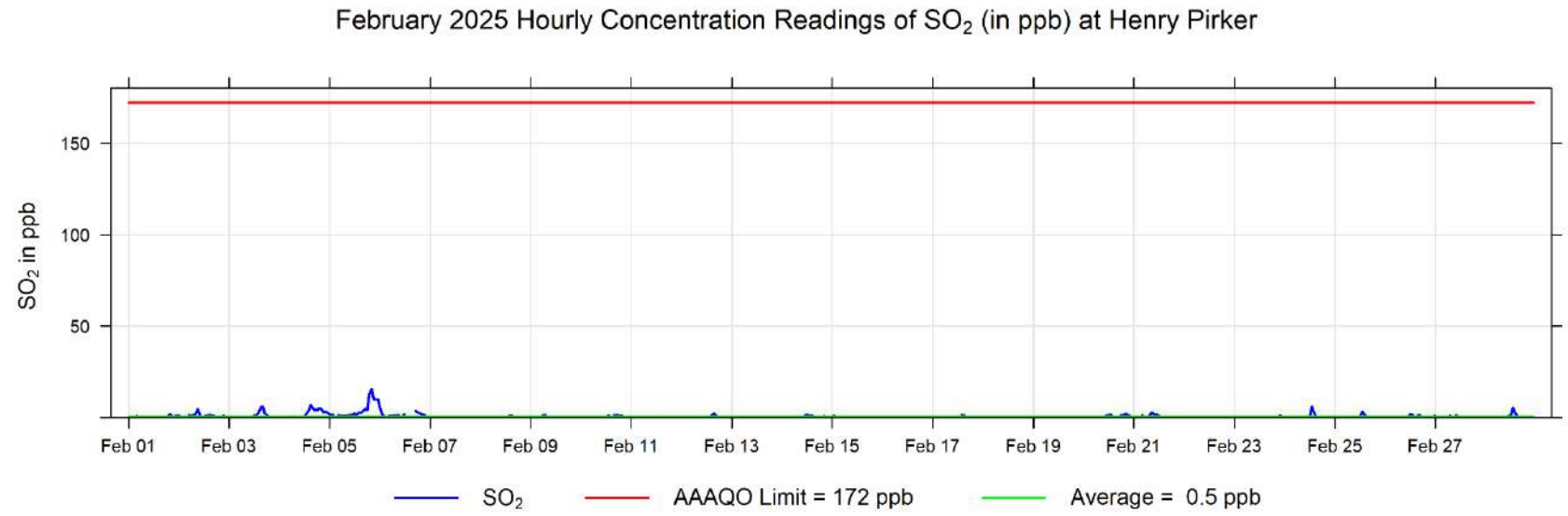
Dunes February 2025 Wind Rose, wind speed in km/hr

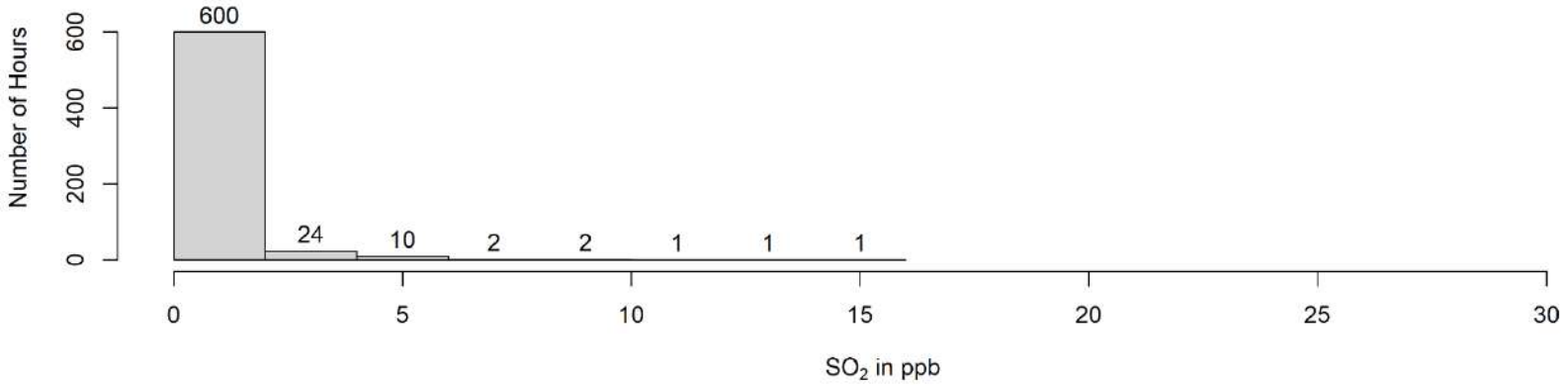
Calms (<1km/hr) = 21.5 %

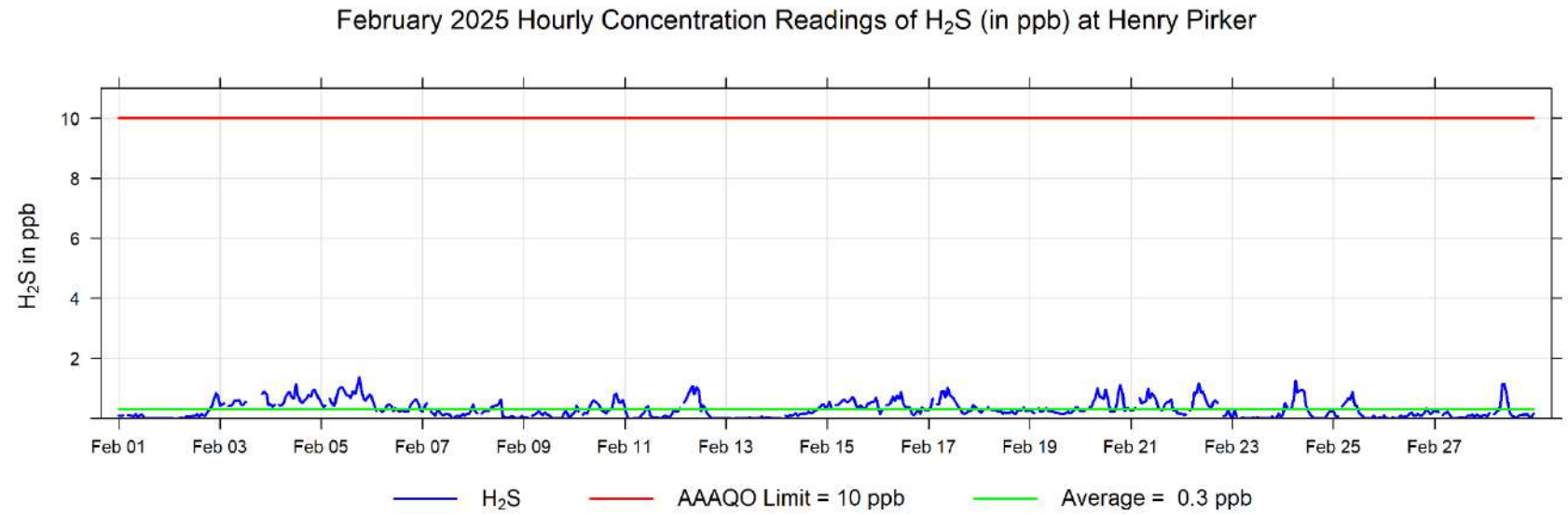
4 Grande Prairie - Henry Pirker Charts

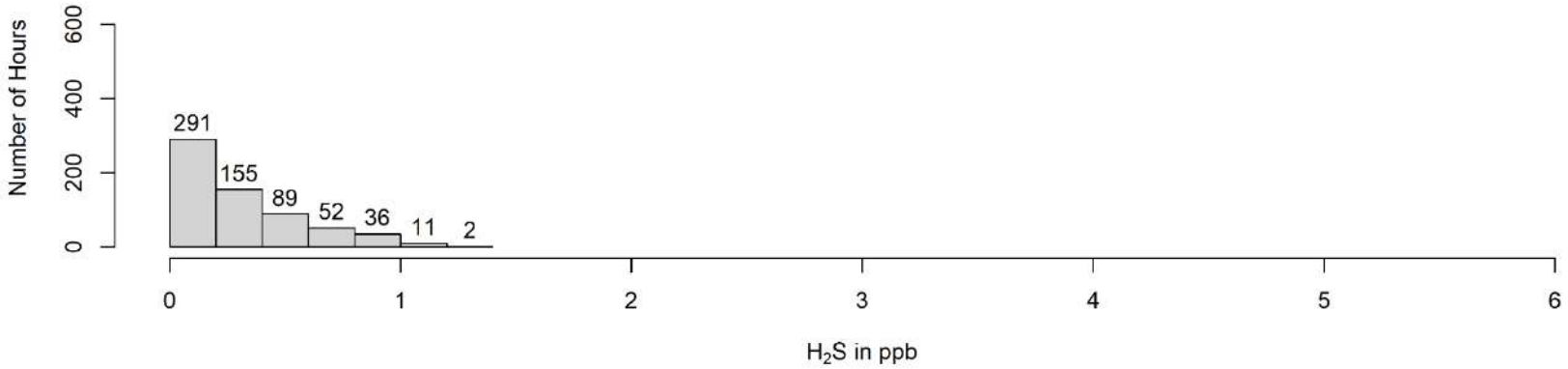
The following pages include the charts and histograms for Henry Pirker Station in Grande Prairie

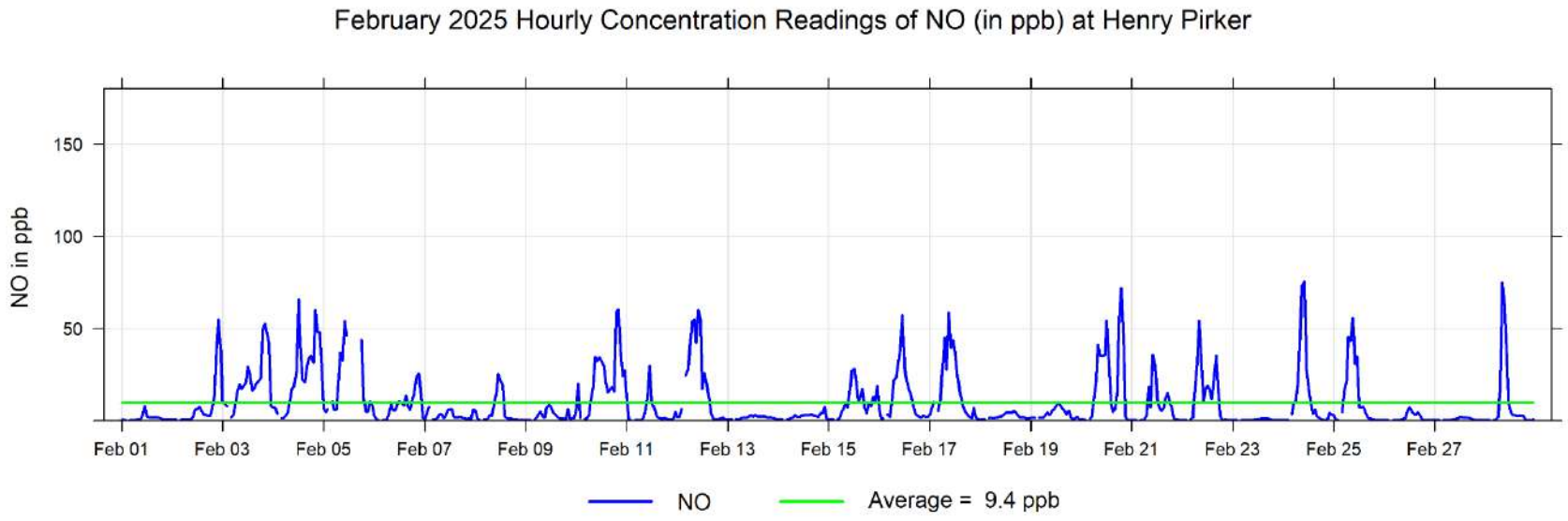


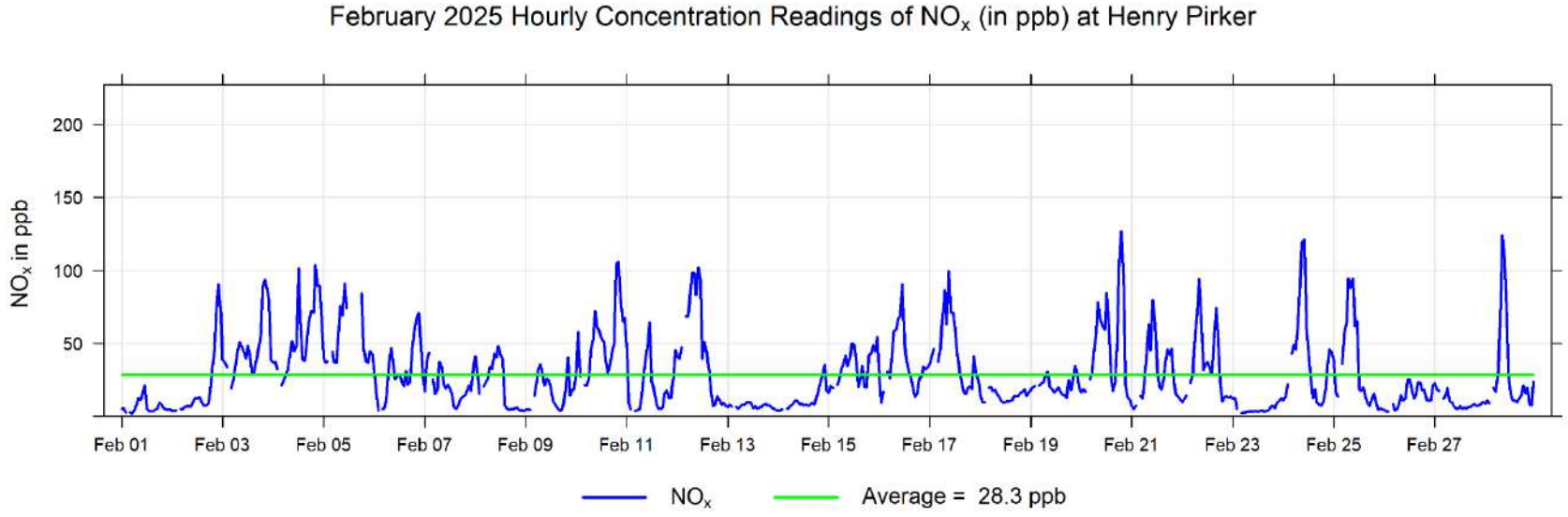

February 2025 Hourly Concentration Readings of SO2 (in ppb) at Henry Pirker
SO2 in ppb
150
100
50
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
SO2
AAAQO Limit = 172 ppb
Average = 0.5 ppb

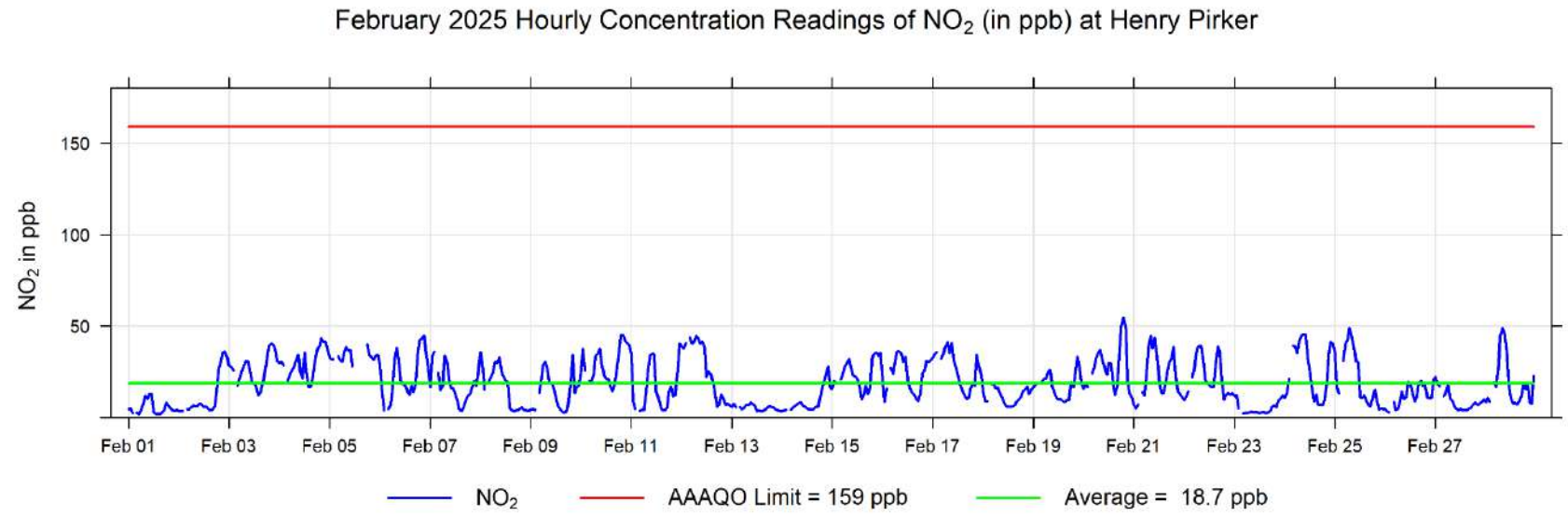

Number of Hours
0
200
400
600
600
24
10
2
2
1
1
1
0
5
10
15
20
25
30
SO2 in ppb

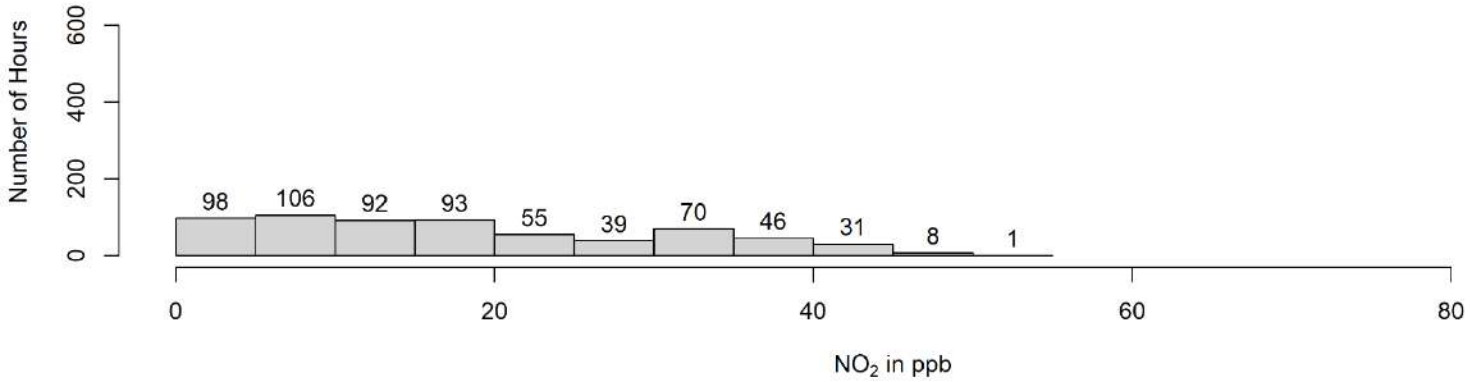

February 2025 Hourly Concentration Readings of H2S (in ppb) at Henry Pirker
H2S in ppb
10
8
6
4
2
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
H2S
AAAQO Limit = 10 ppb
Average = 0.3 ppb

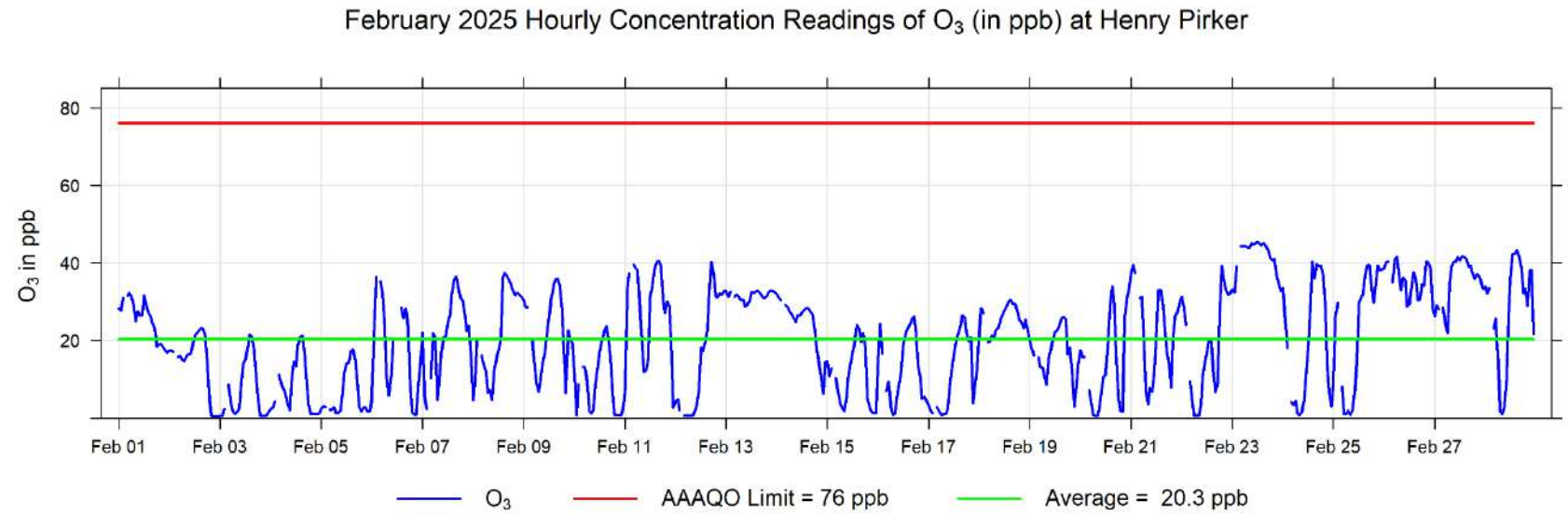

Number of Hours
0
200
400
600
291
155
89
52
36
11
2
0
1
2
3
4
5
6
H2S in ppb

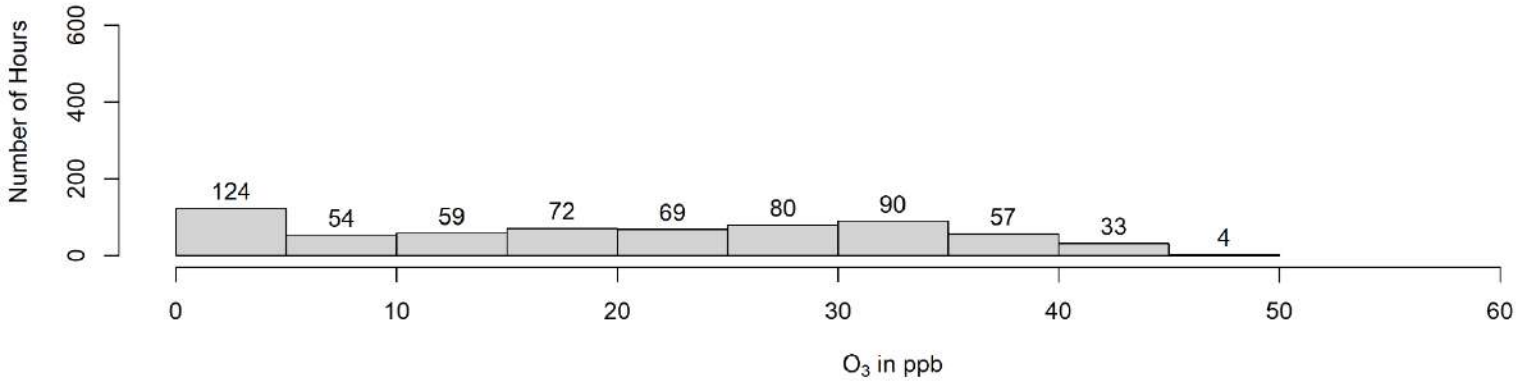

February 2025 Hourly Concentration Readings of NO (in ppb) at Henry Pirker
NO in ppb
150
100
50
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
NO
Average = 9.4 ppb

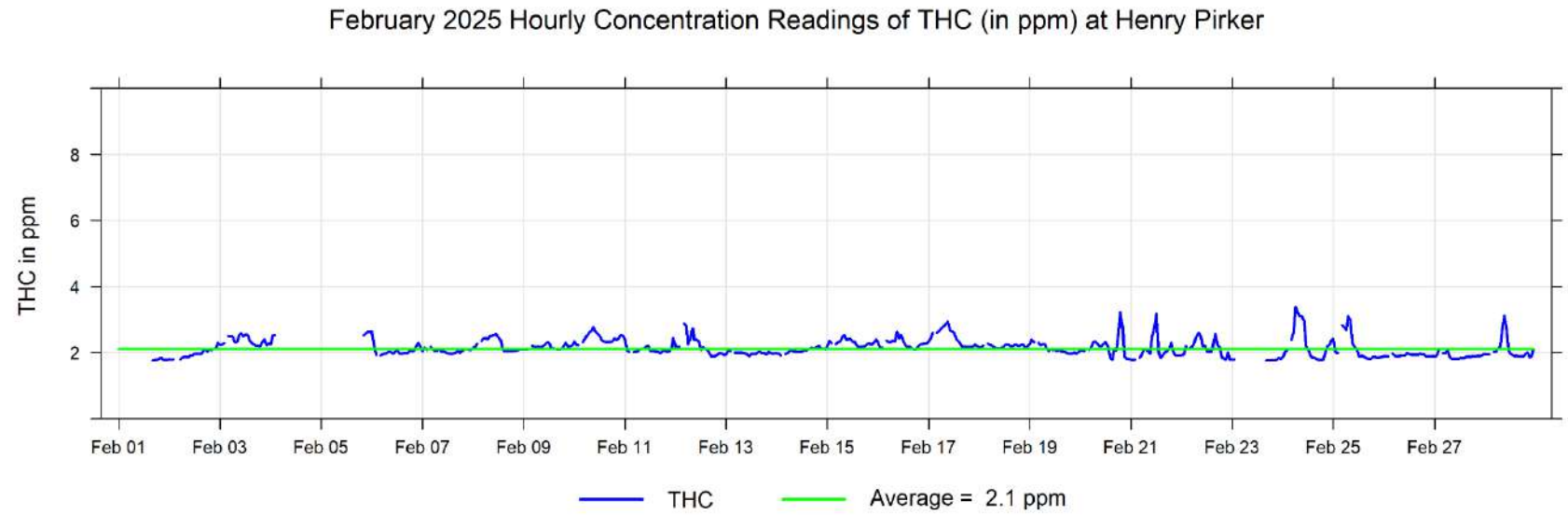

February 2025 Hourly Concentration Readings of NOx (in ppb) at Henry Pirker
NOx in ppb
200
150
100
50
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
NOx
Average = 28.3 ppb

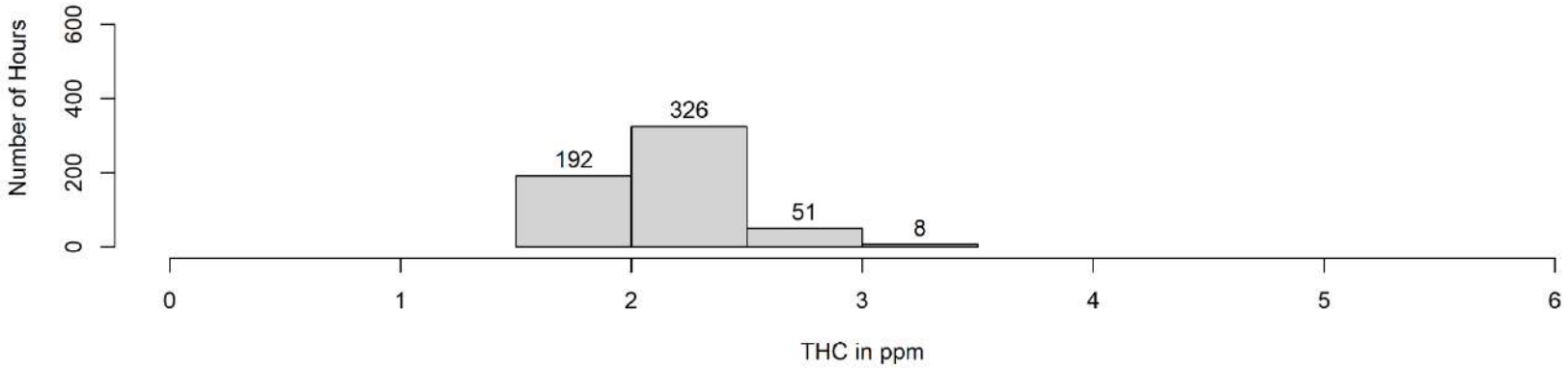

February 2025 Hourly Concentration Readings of NO2 (in ppb) at Henry Pirker
NO2 in ppb
150
100
50
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
NO2
AAAQO Limit = 159 ppb
Average = 18.7 ppb

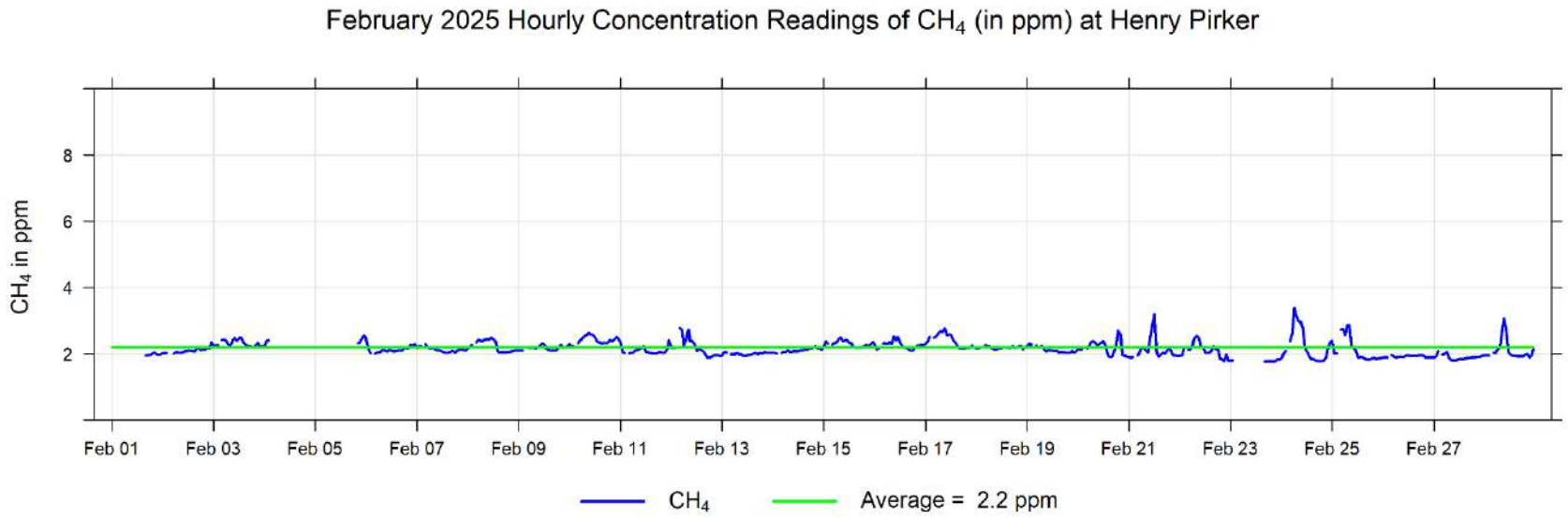

Number of Hours
0
200
400
600
98
106
92
93
55
39
70
46
31
8
1
0
20
40
60
80
NO2 in ppb

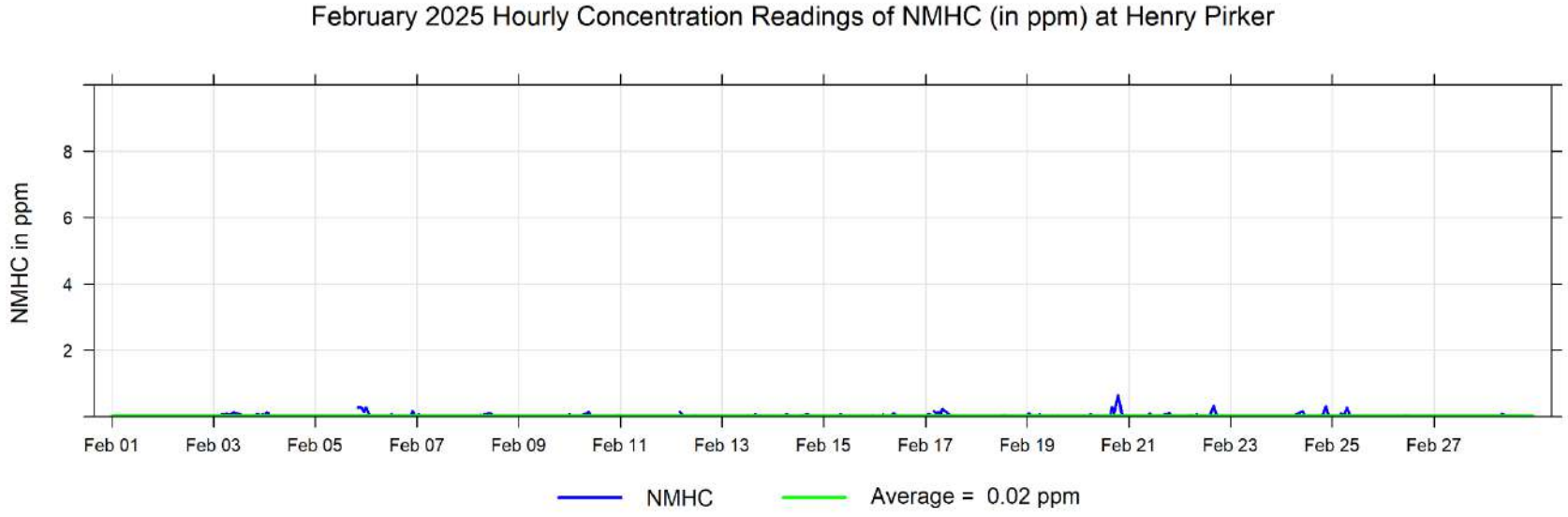

February 2025 Hourly Concentration Readings of O_3 (in ppb) at Henry Pirker
O_3 in ppb
80
60
40
20
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
O_3
AAAQO Limit = 76 ppb
Average = 20.3 ppb

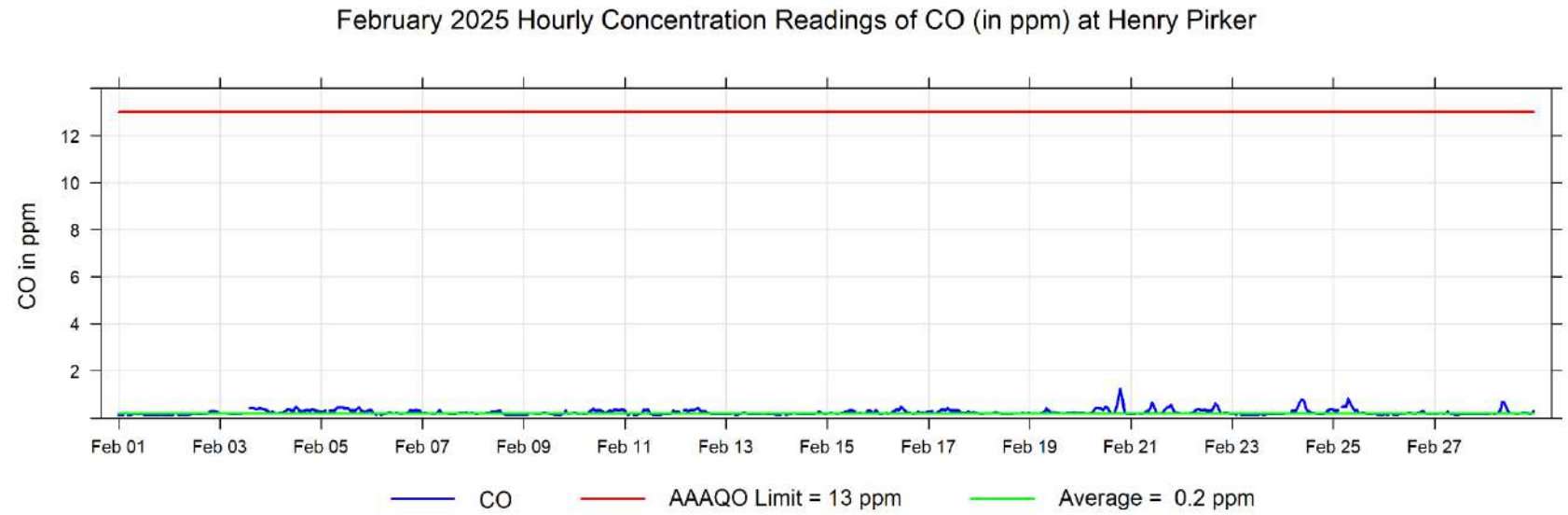

Number of Hours
0
200
400
600
124
54
59
72
69
80
90
57
33
4
0
10
20
30
40
50
60
O_3 in ppb

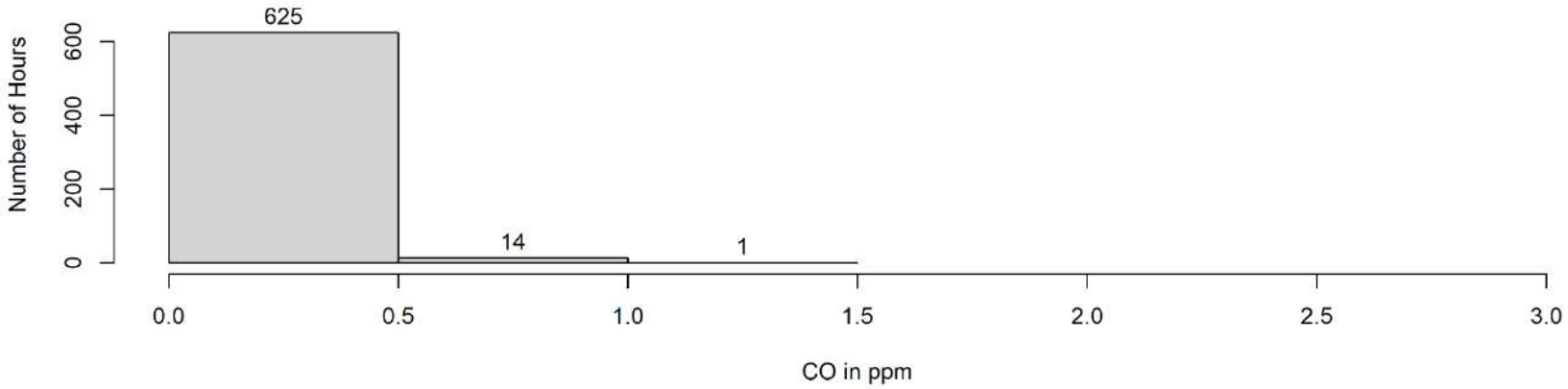

February 2025 Hourly Concentration Readings of THC (in ppm) at Henry Pirker
THC in ppm
8
6
4
2
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
THC
Average = 2.1 ppm

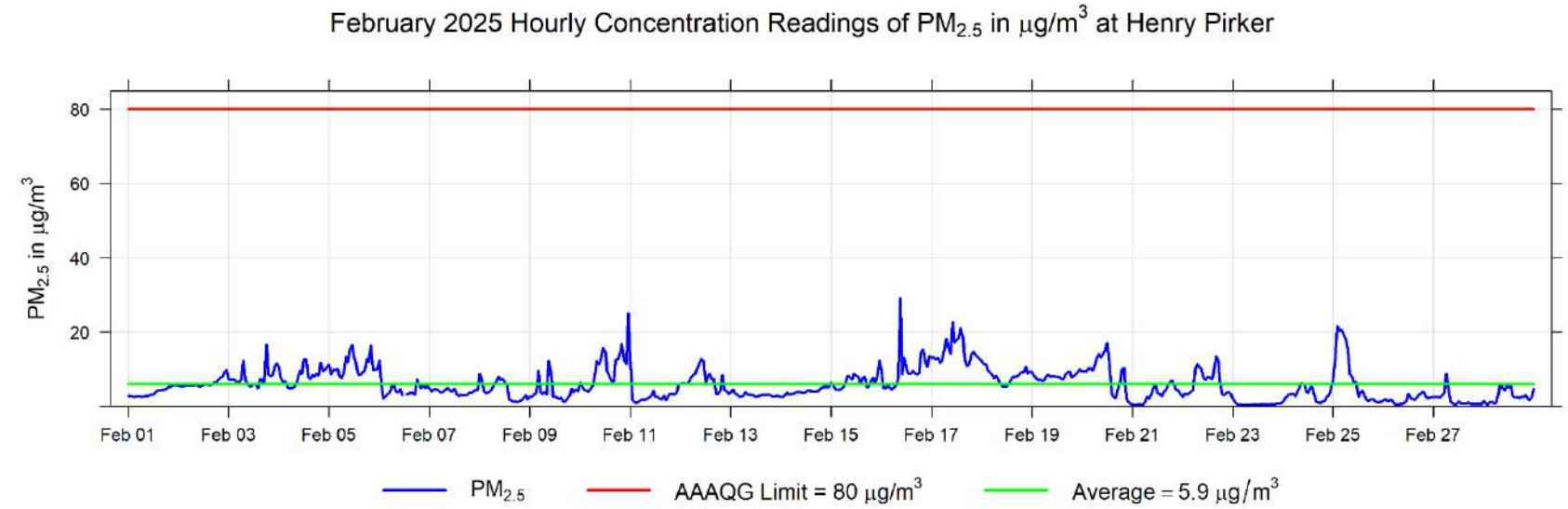

Number of Hours
0
200
400
600
192
326
51
8
0
1
2
3
4
5
6
THC in ppm

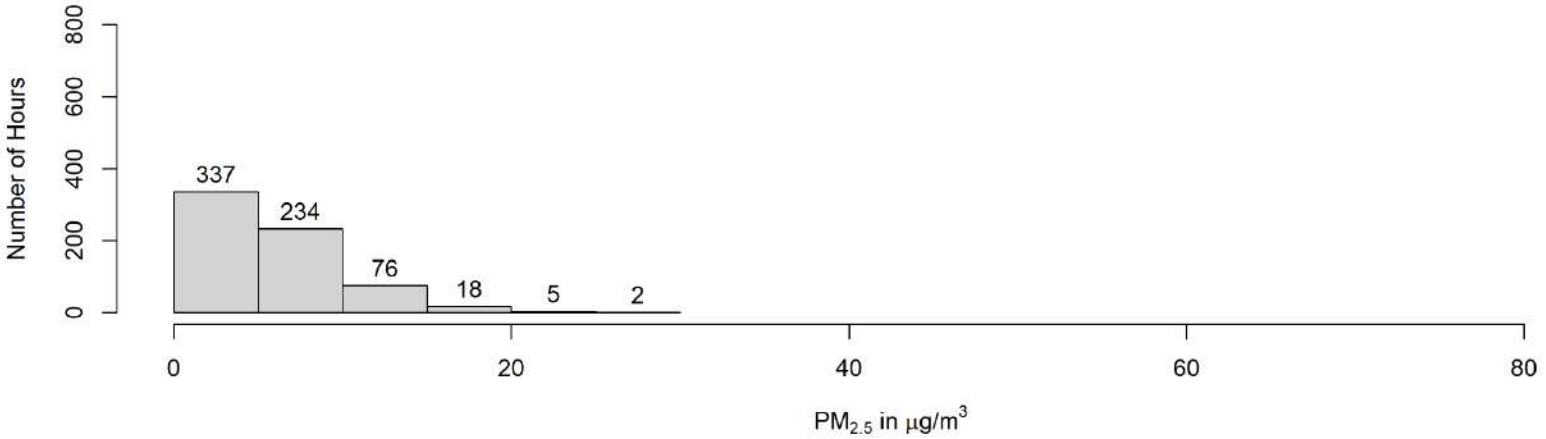

February 2025 Hourly Concentration Readings of CH_4 (in ppm) at Henry Pirker
CH_4 in ppm
8
6
4
2
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
CH_4
Average = 2.2 ppm

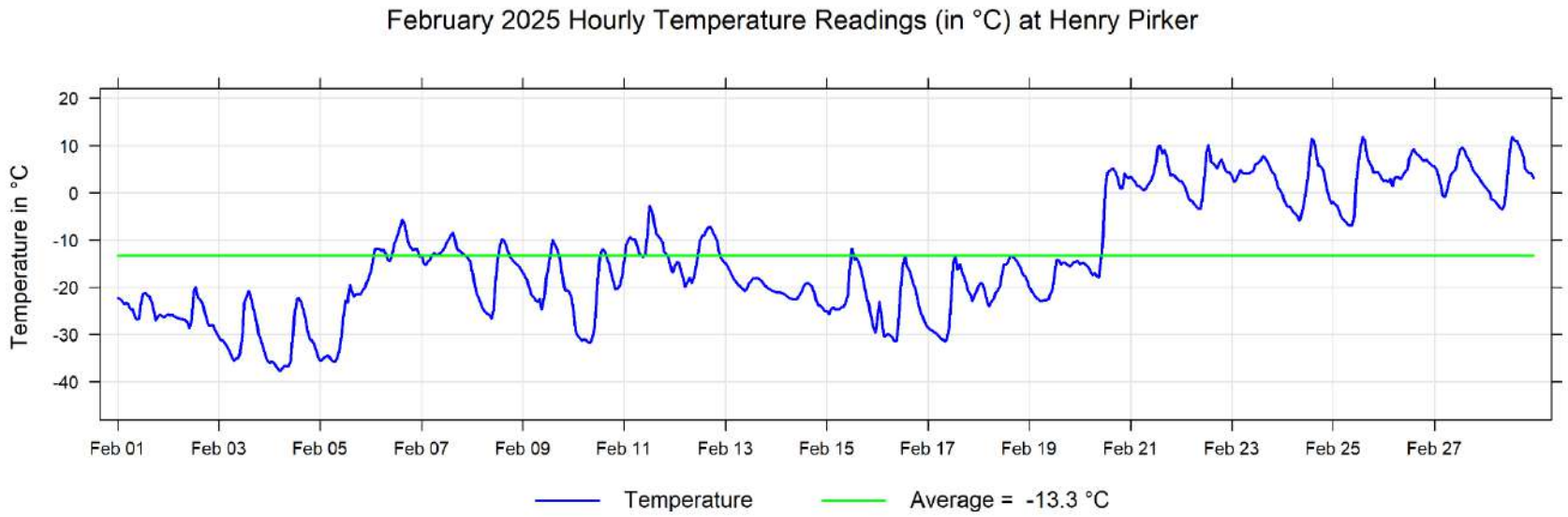

February 2025 Hourly Concentration Readings of NMHC (in ppm) at Henry Pirker
NMHC in ppm
8
6
4
2
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
NMHC
Average = 0.02 ppm

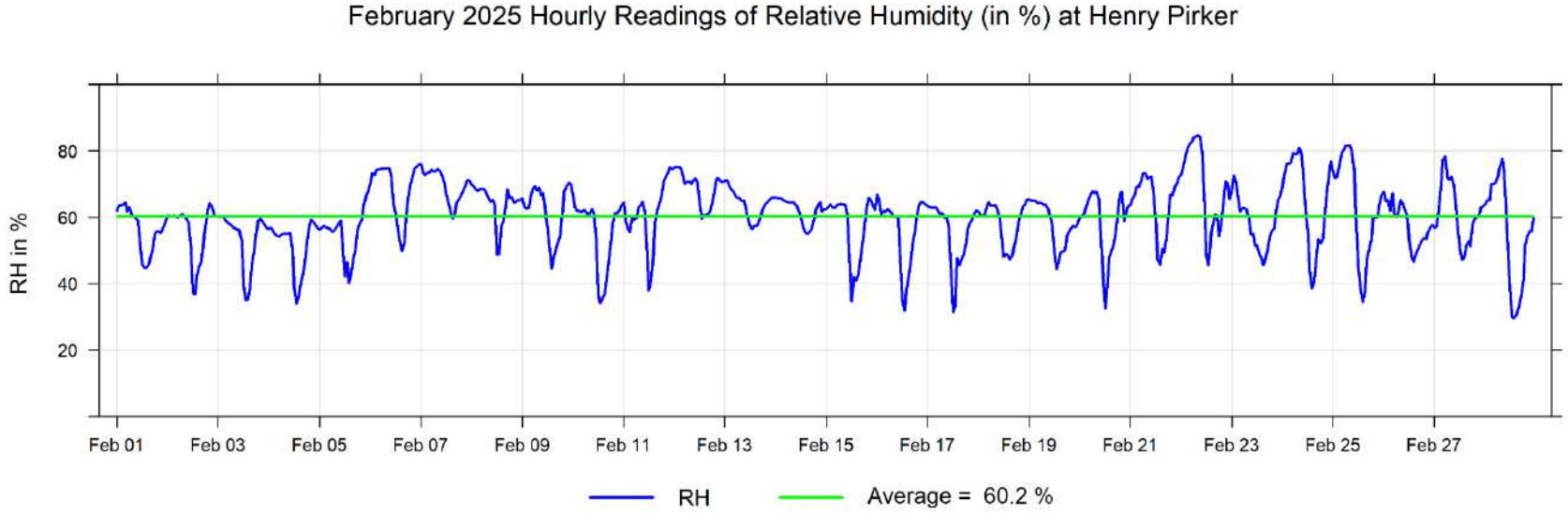

February 2025 Hourly Concentration Readings of CO (in ppm) at Henry Pirker
CO in ppm
12
10
8
6
4
2
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
CO
AAAQO Limit = 13 ppm
Average = 0.2 ppm

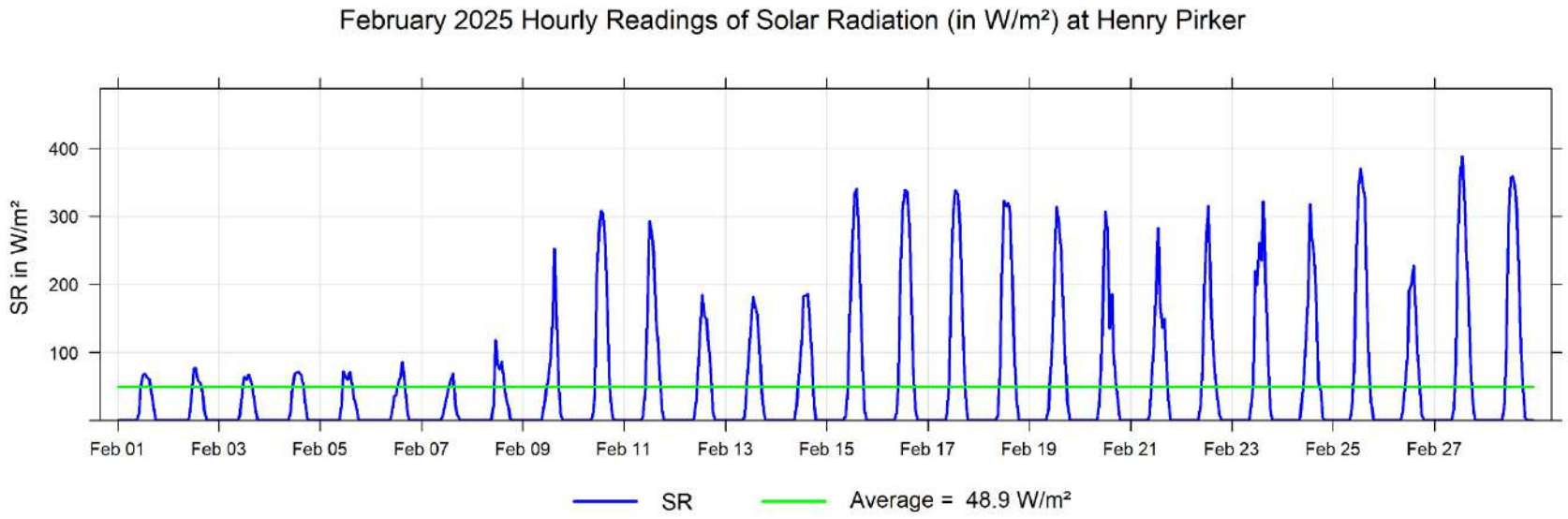

Number of Hours
0
200
400
600
625
14
1
0.0
0.5
1.0
1.5
2.0
2.5
3.0
CO in ppm

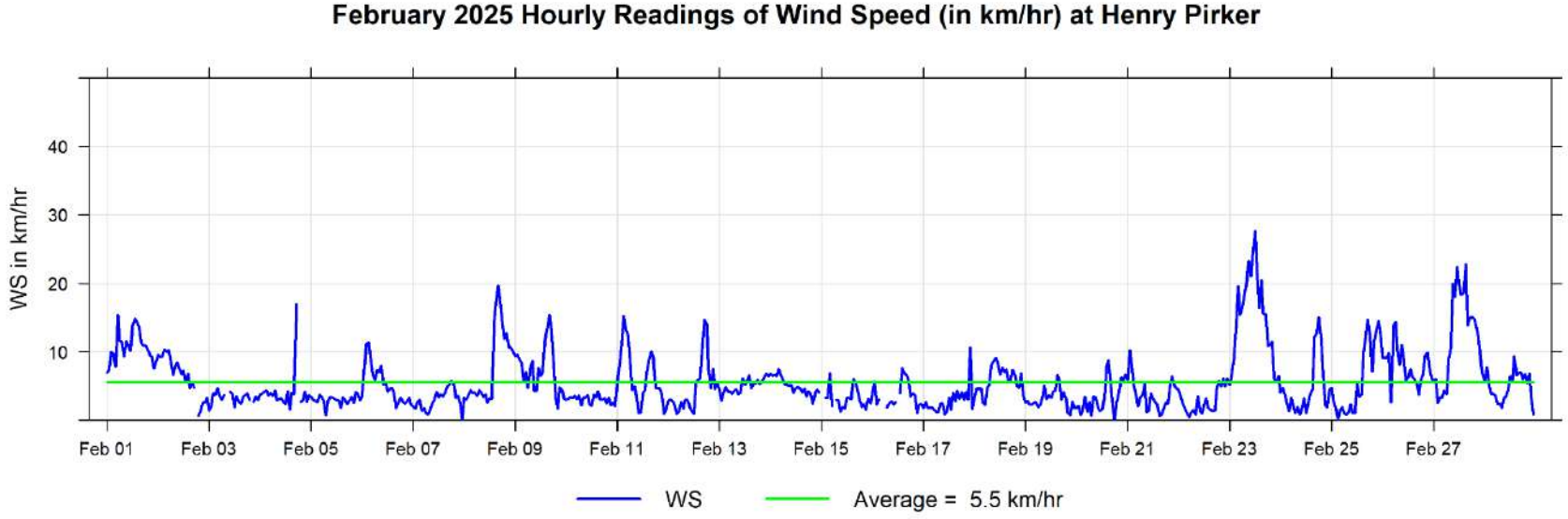

February 2025 Hourly Concentration Readings of PM2.5 in µg/m3 at Henry Pirker
PM2.5 in µg/m3
80
60
40
20
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
PM2.5
AAAQG Limit = 80 µg/m3
Average = 5.9 µg/m3


Number of Hours
0
200
400
600
800
337
234
76
18
5
2
0
20
40
60
80
PM2.5 in µg/m3

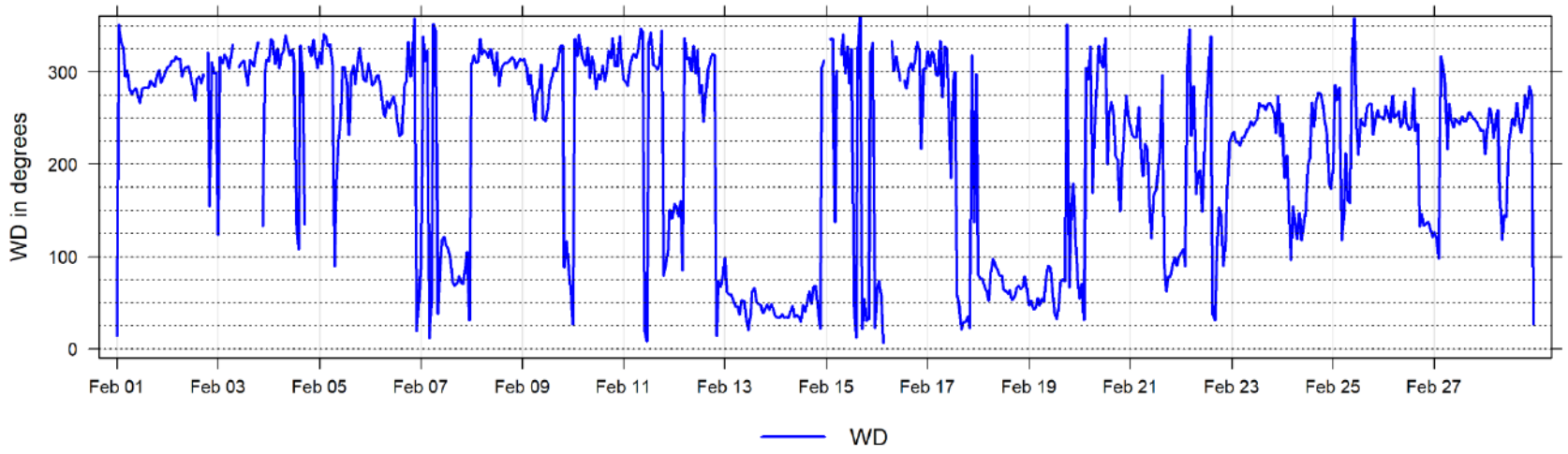

February 2025 Hourly Temperature Readings (in °C) at Henry Pirker
Temperature in °C
20
10
0
-10
-20
-30
-40
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
Temperature
Average = -13.3 °C


February 2025 Hourly Readings of Relative Humidity (in %) at Henry Pirker
RH in %
80
60
40
20
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
RH
Average = 60.2 %

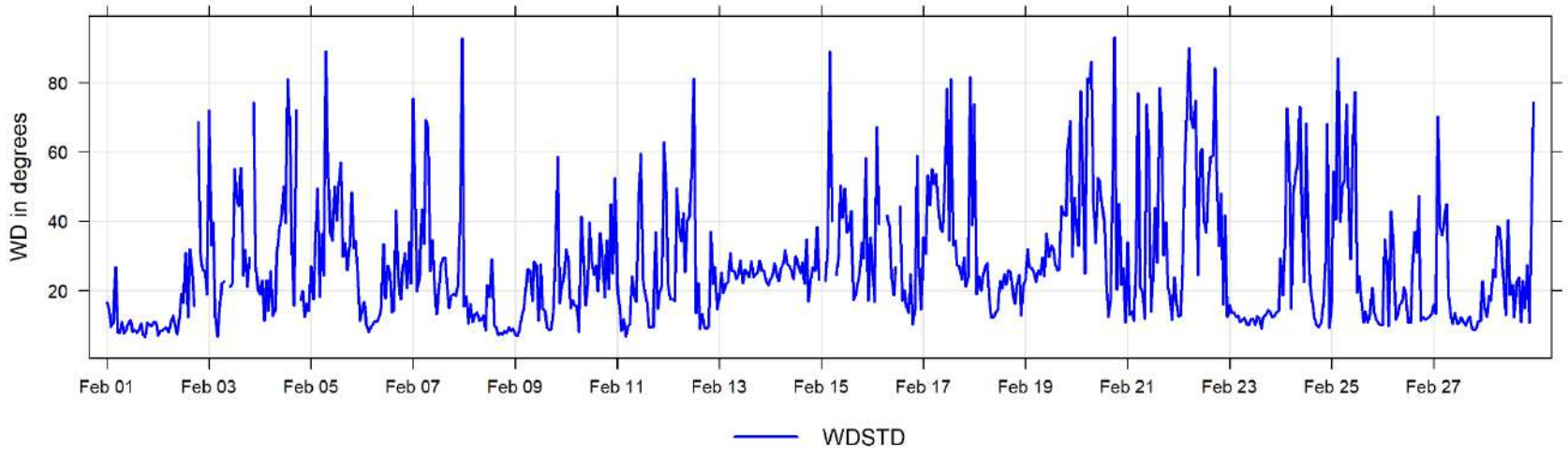

February 2025 Hourly Readings of Solar Radiation (in W/m²) at Henry Pirker
SR in W/m²
400
300
200
100
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
SR
Average = 48.9 W/m²

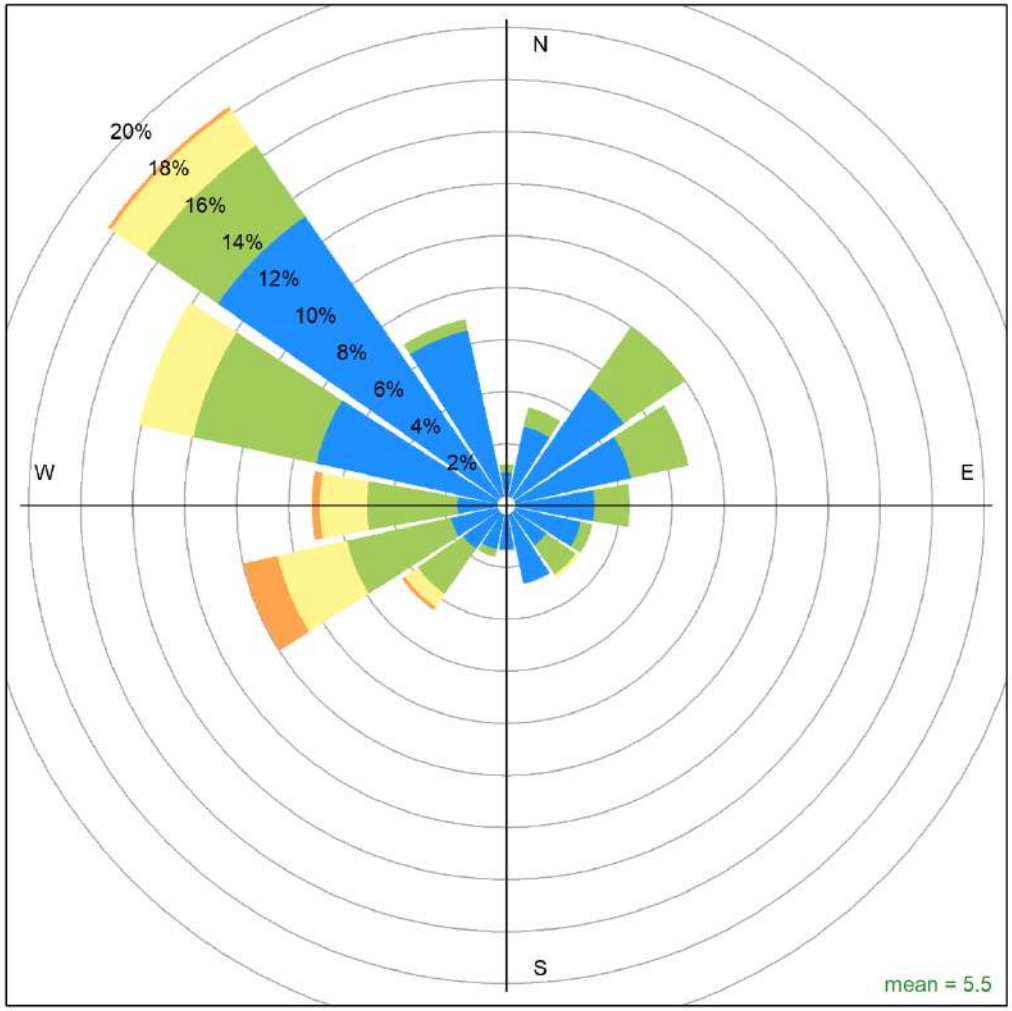

February 2025 Hourly Readings of Wind Speed (in km/hr) at Henry Pirker
WS in km/hr
40
30
20
10
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
WS
Average = 5.5 km/hr

February 2025 Hourly Readings of Wind Direction (in degrees) at Henry Pirker



February 2025 Hourly Readings of Wind Direction Standared Deviation (in degrees) at Henry Pirker



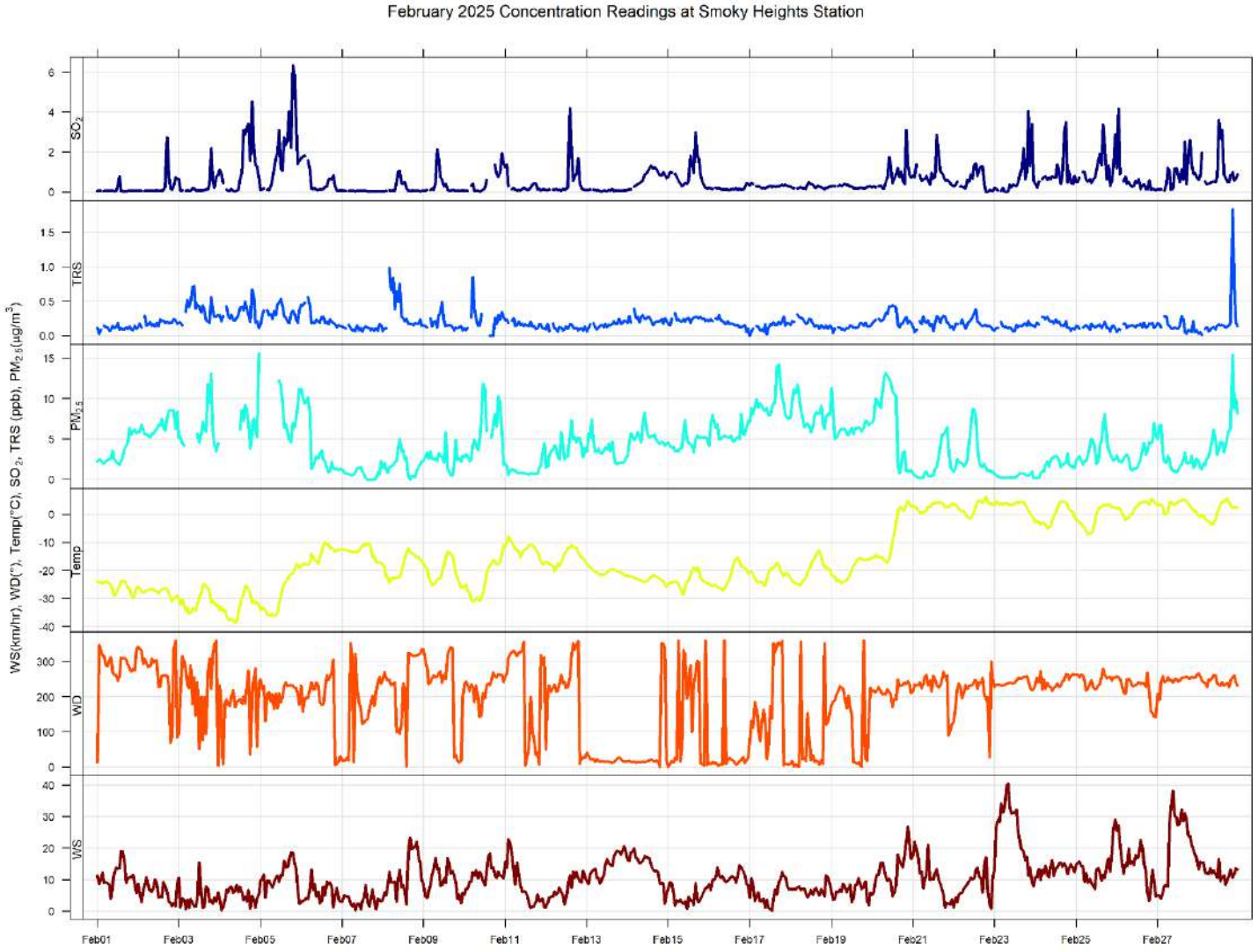


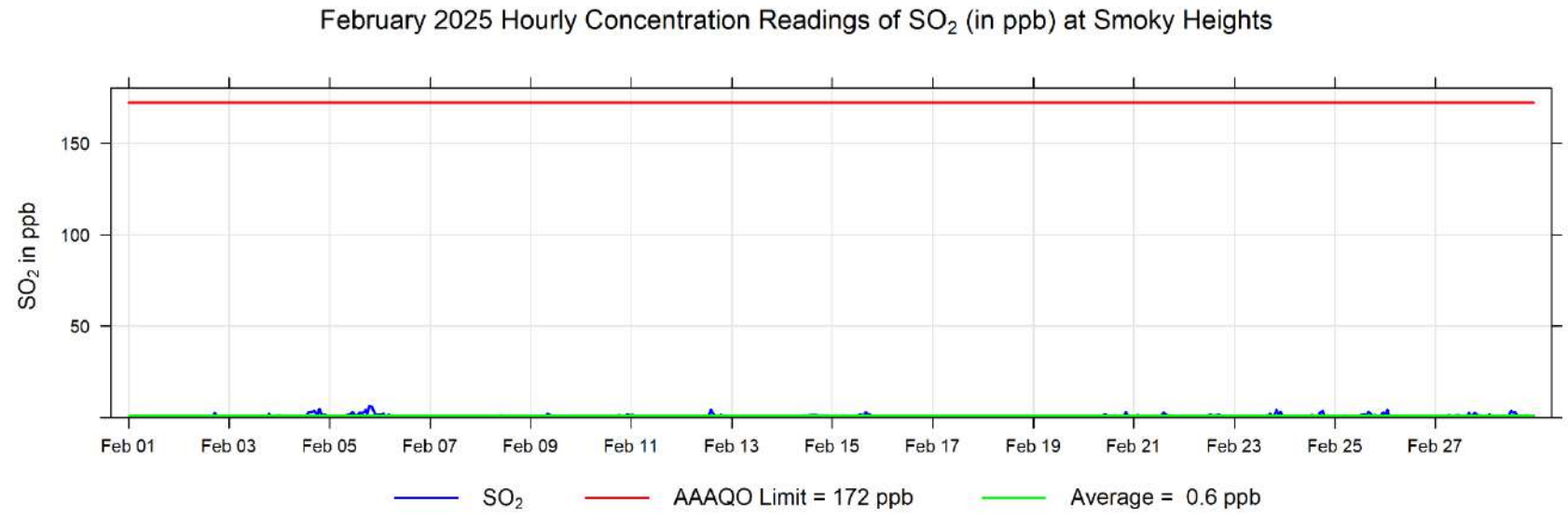
Henry Pirker February 2025 Wind Rose, wind speed in km/hr

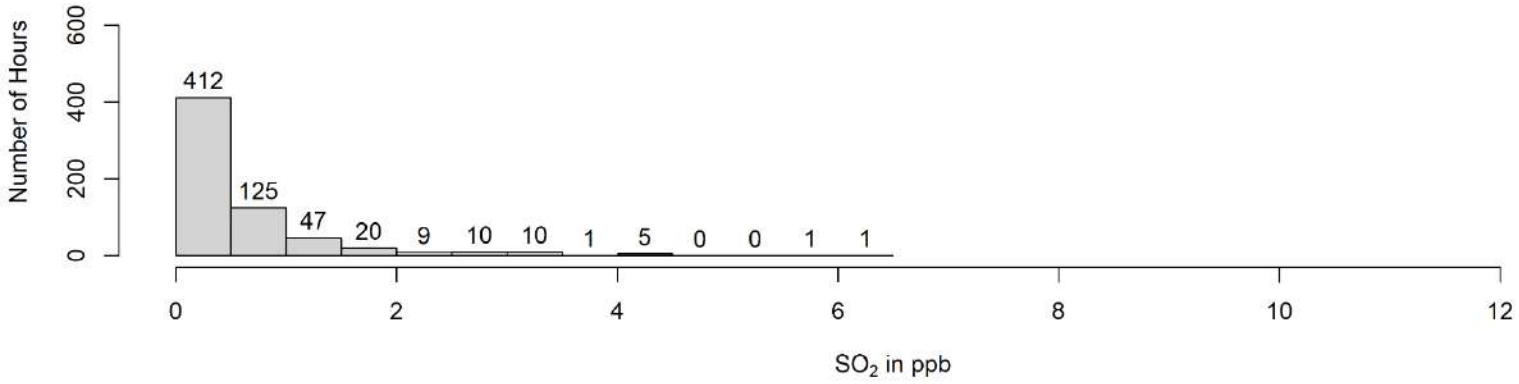
Calms (<1km/hr) = 3.3 %

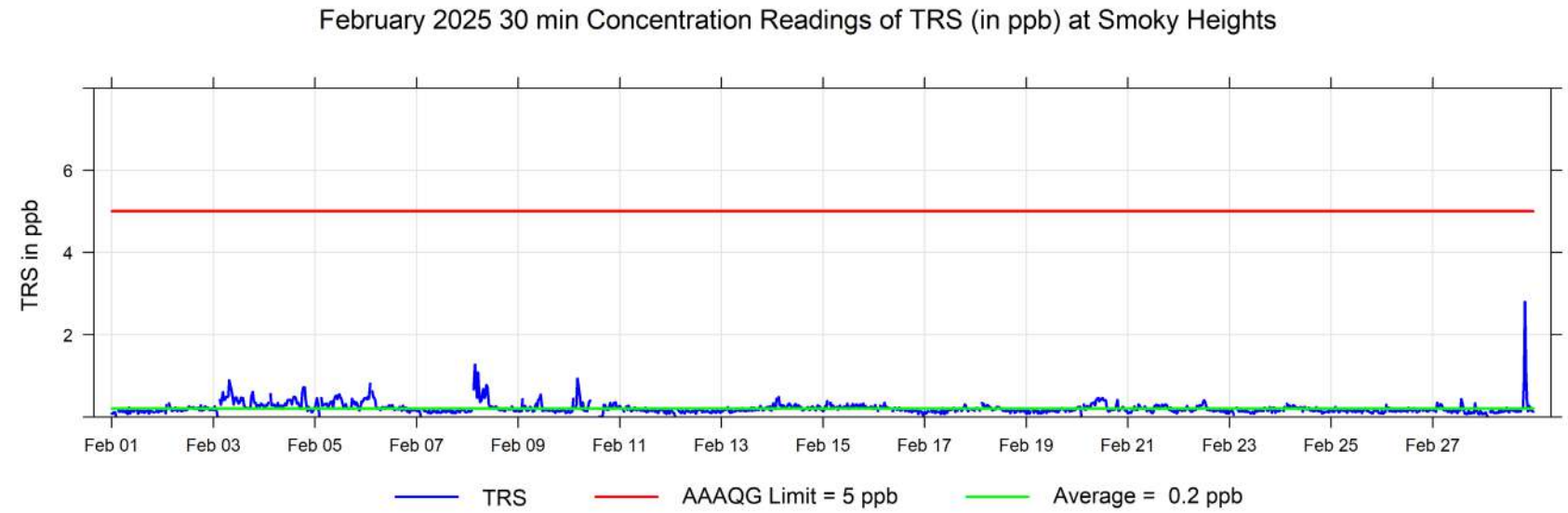
5 Smoky Heights Charts

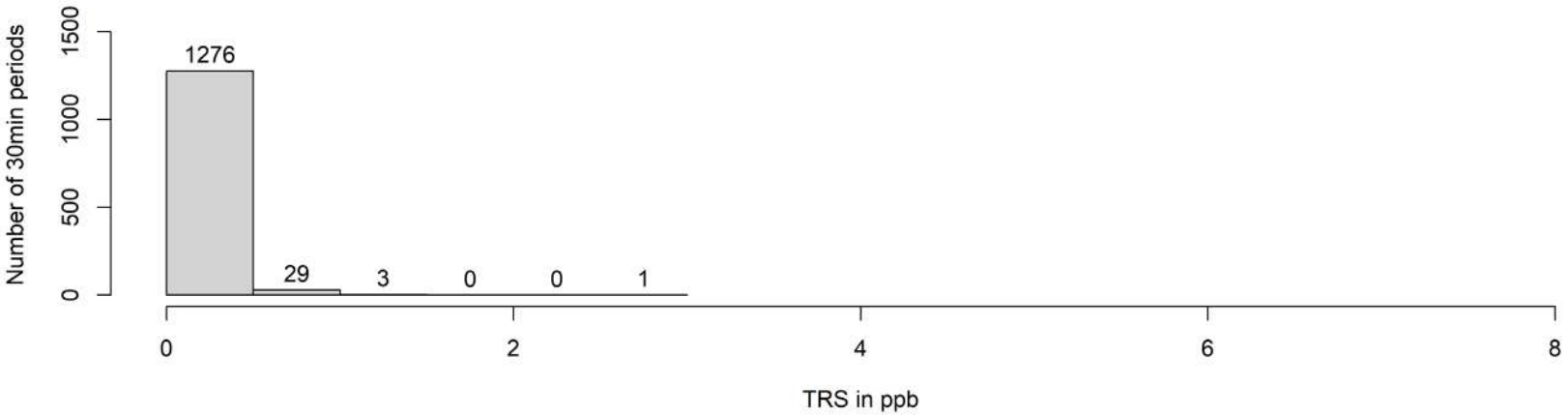
The following pages include the charts and histograms for Smoky Heights Station

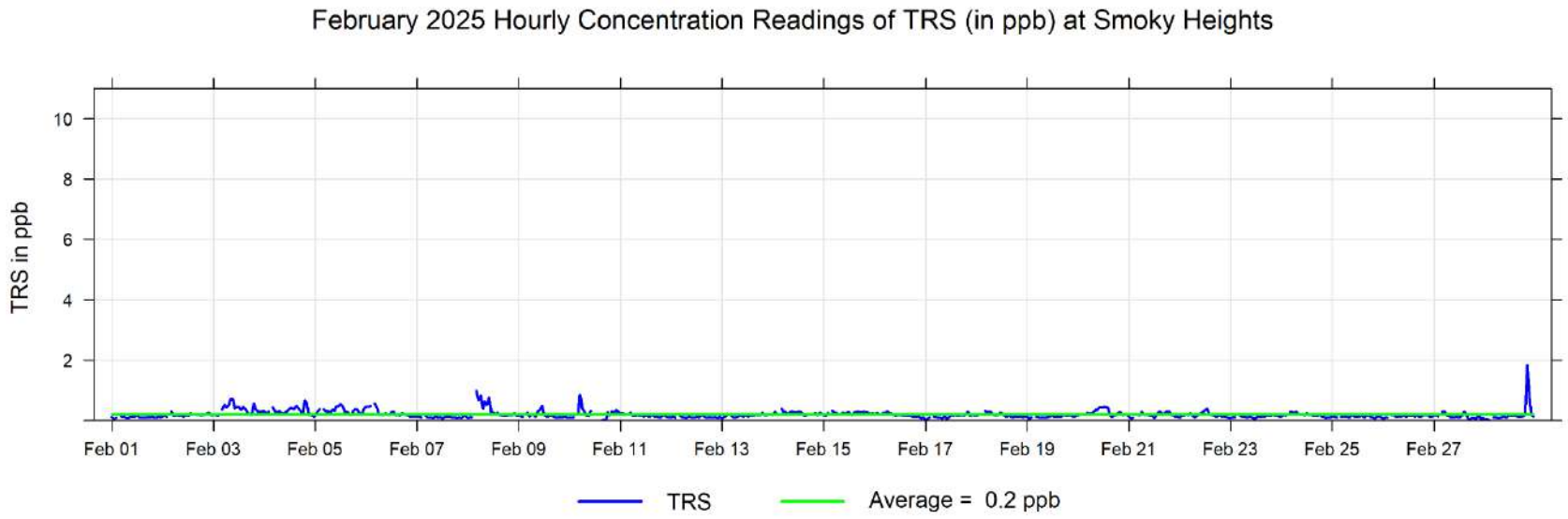


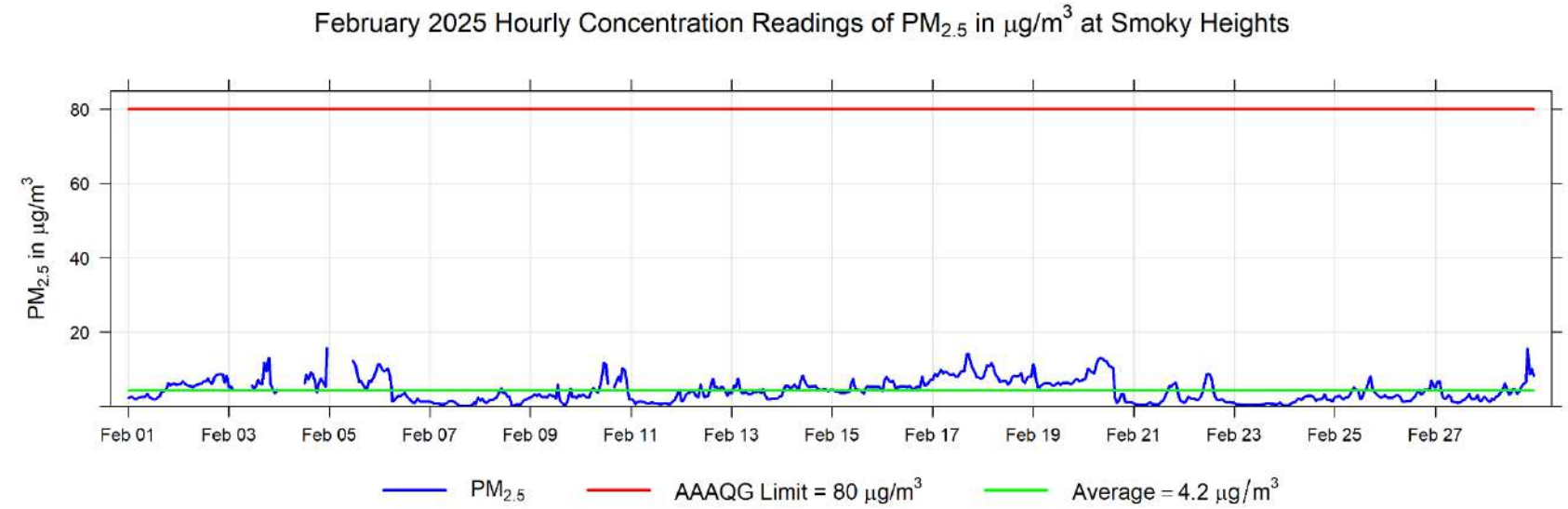

February 2025 Hourly Concentration Readings of SO_2 (in ppb) at Smoky Heights
SO_2 in ppb
150
100
50
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
SO_2
AAAQO Limit = 172 ppb
Average = 0.6 ppb

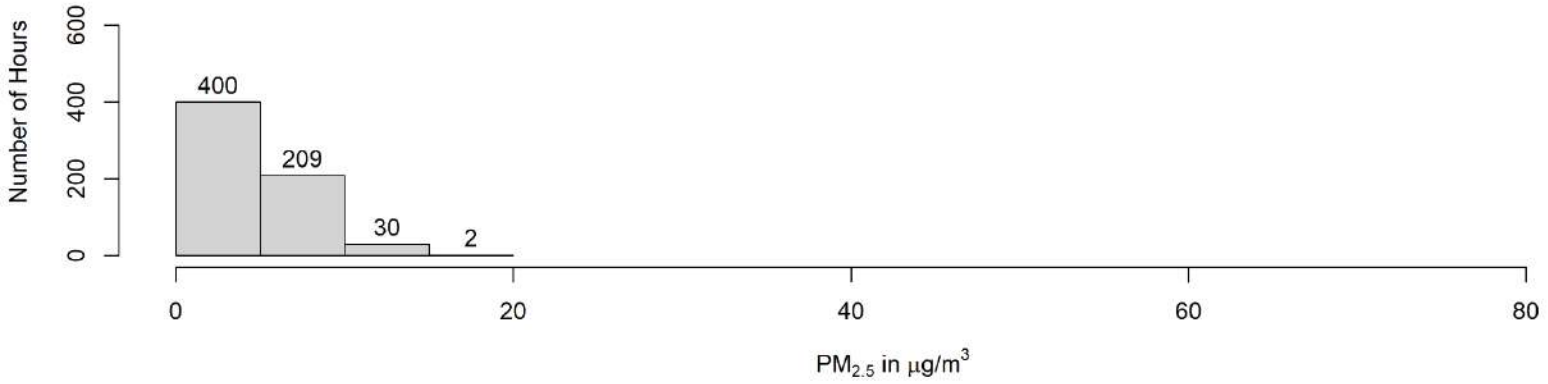

Number of Hours
0
200
400
600
412
125
47
20
9
10
10
1
5
0
0
1
1
0
2
4
6
8
10
12
SO_2 in ppb

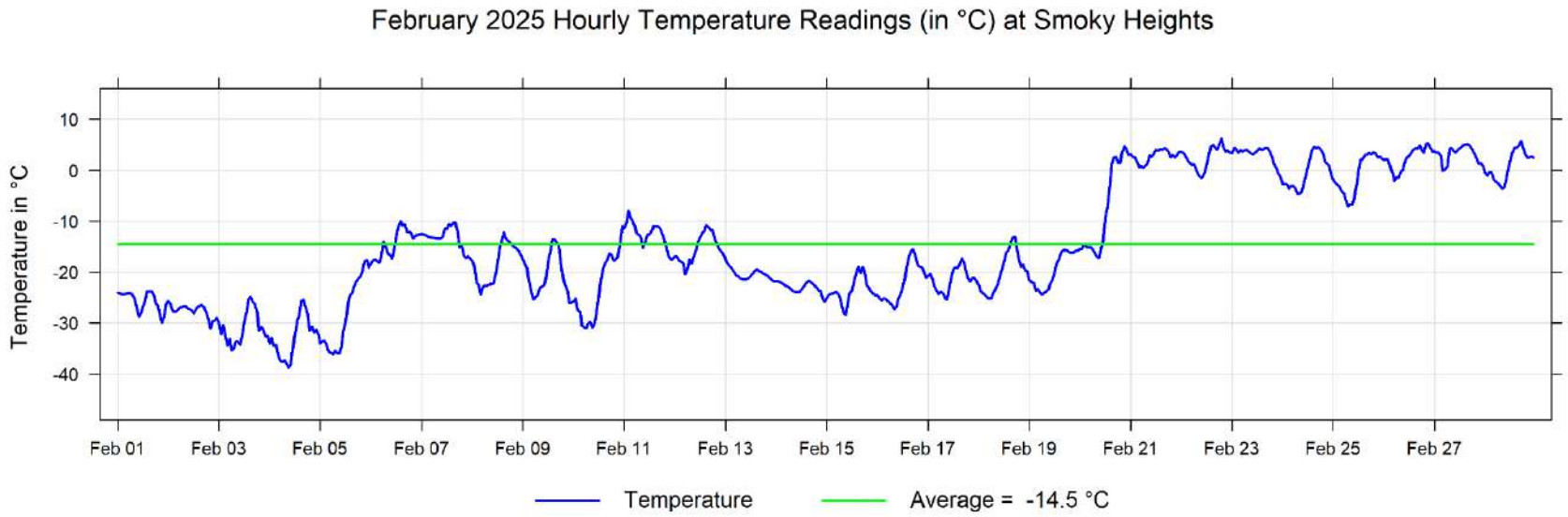

February 2025 30 min Concentration Readings of TRS (in ppb) at Smoky Heights
TRS in ppb
6
4
2
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
TRS
AAAQG Limit = 5 ppb
Average = 0.2 ppb

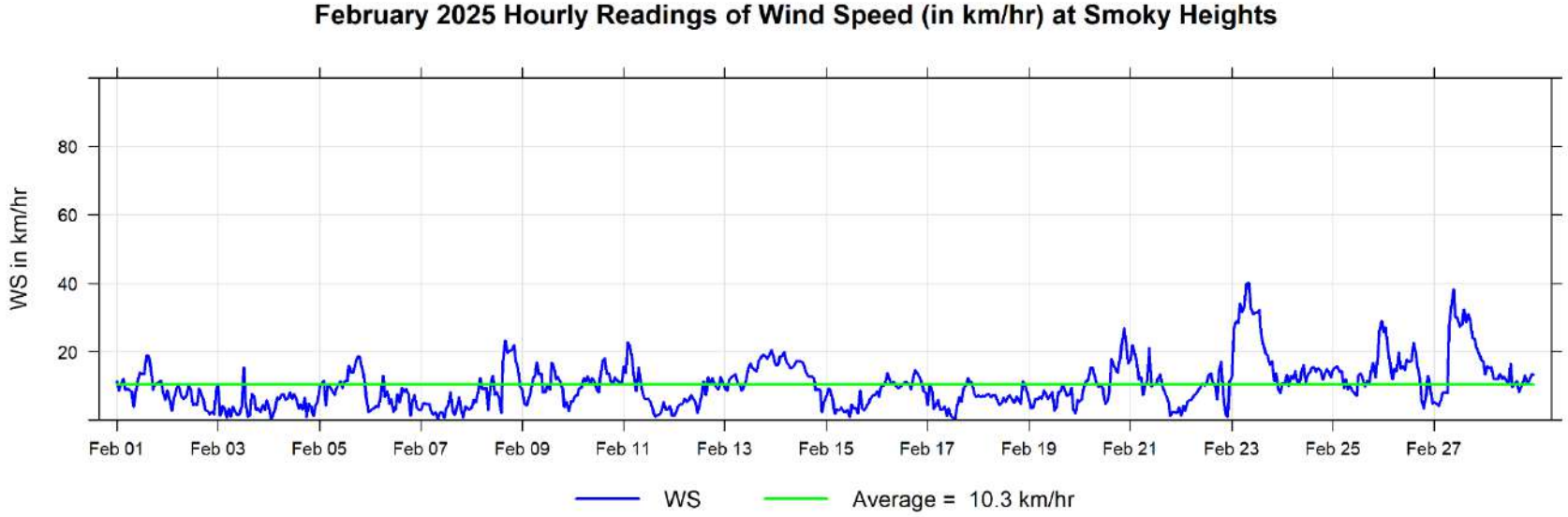

Number of 30min periods
0
500
1000
1500
1276
29
3
0
0
1
0
2
4
6
8
TRS in ppb

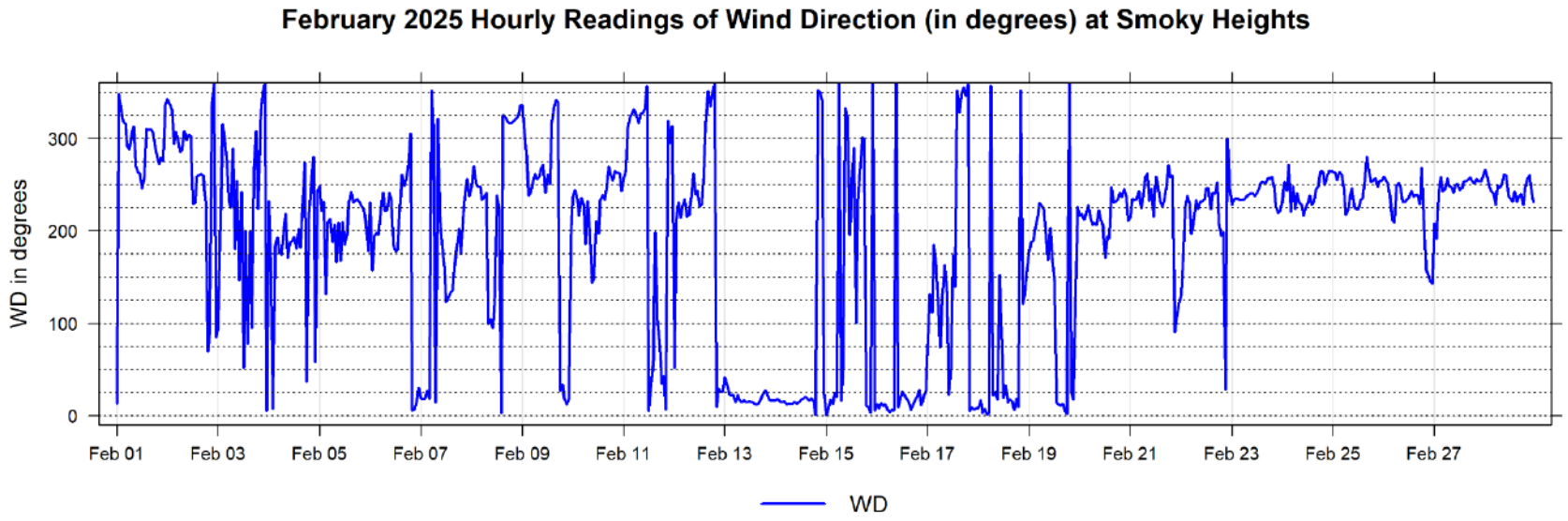

February 2025 Hourly Concentration Readings of TRS (in ppb) at Smoky Heights
TRS in ppb
10
8
6
4
2
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
TRS
Average = 0.2 ppb

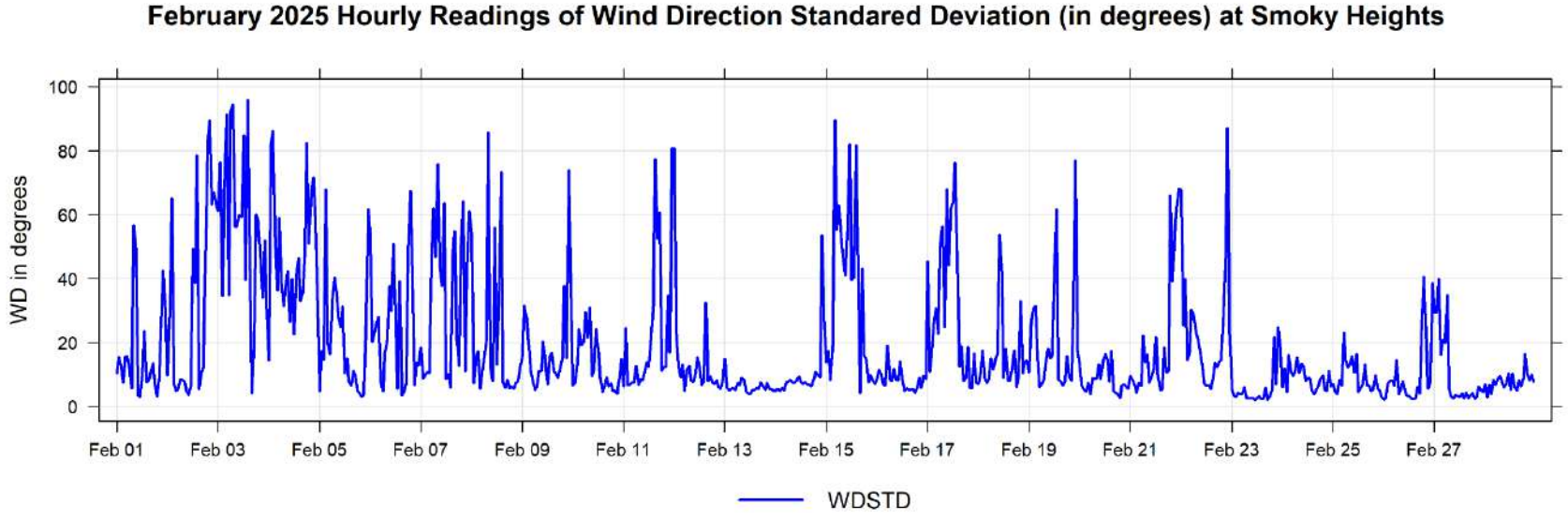

February 2025 Hourly Concentration Readings of PM2.5 in µg/m3 at Smoky Heights
PM2.5 in µg/m3
80
60
40
20
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
PM2.5
AAAQG Limit = 80 µg/m3
Average = 4.2 µg/m3

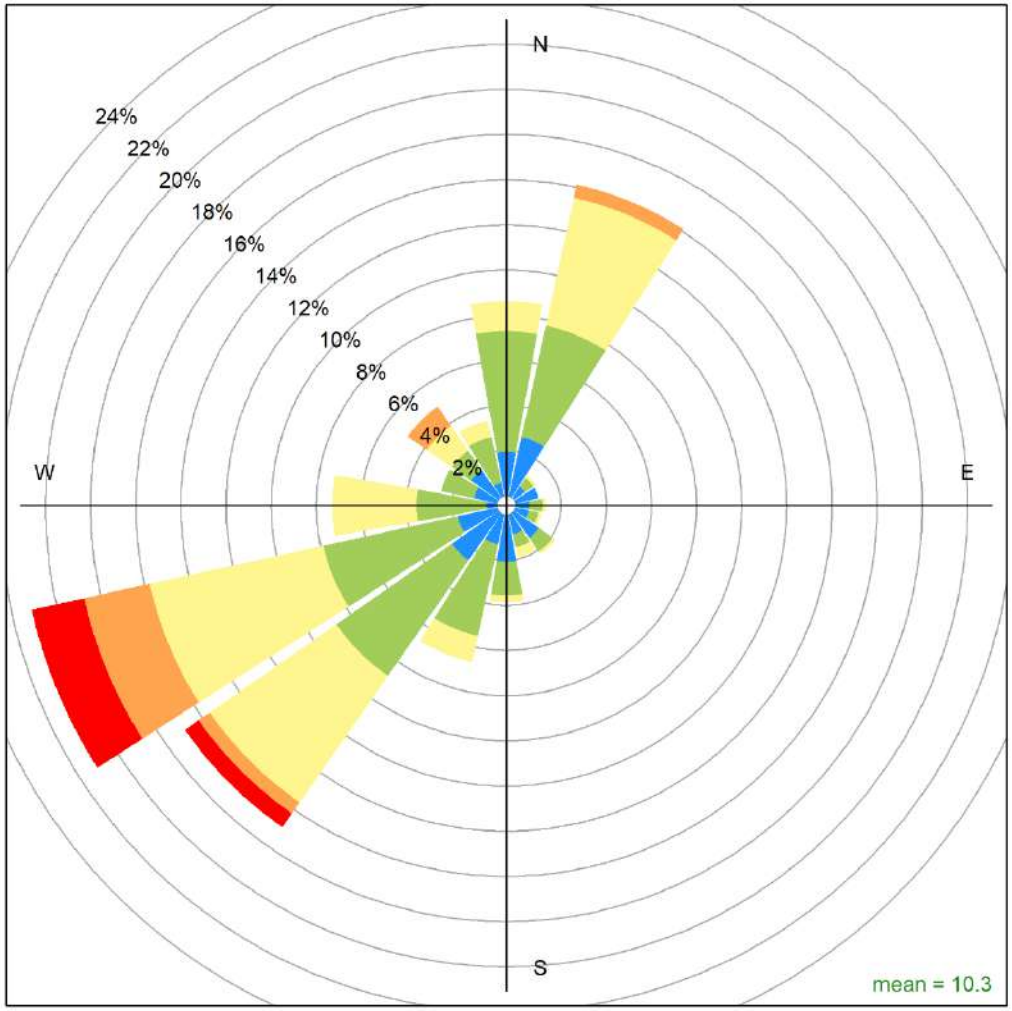

Number of Hours
0
200
400
600
400
209
30
2
0
20
40
60
80
PM2.5 in µg/m3


February 2025 Hourly Temperature Readings (in °C) at Smoky Heights
Temperature in °C
10
0
-10
-20
-30
-40
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
Temperature
Average = -14.5 °C


February 2025 Hourly Readings of Wind Speed (in km/hr) at Smoky Heights
WS in km/hr
80
60
40
20
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
WS
Average = 10.3 km/hr


February 2025 Hourly Readings of Wind Direction (in degrees) at Smoky Heights
WD in degrees
0
100
200
300
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
WD


February 2025 Hourly Readings of Wind Direction Standared Deviation (in degrees) at Smoky Heights
WD in degrees
0
20
40
60
80
100
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
WDSTD

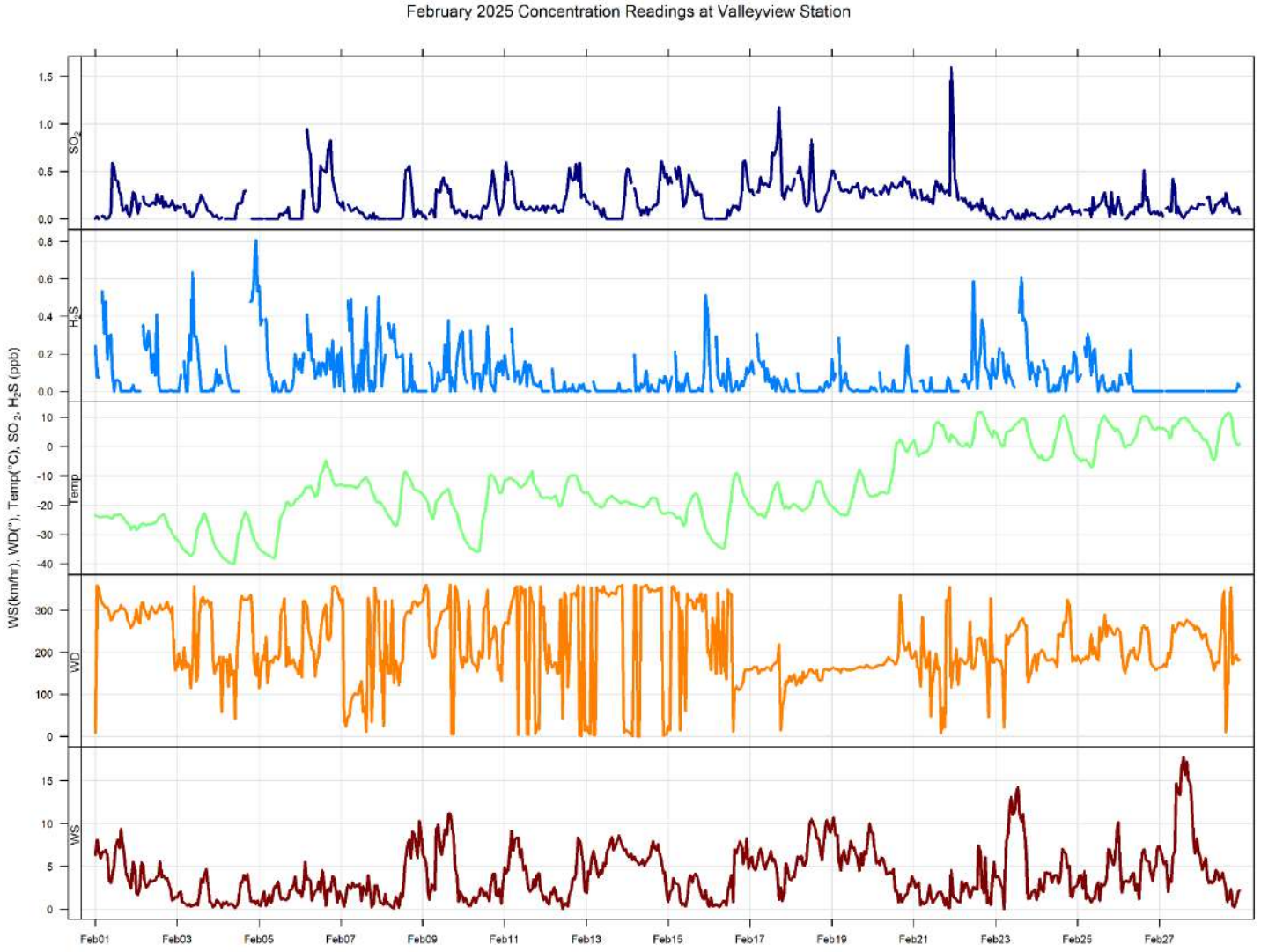


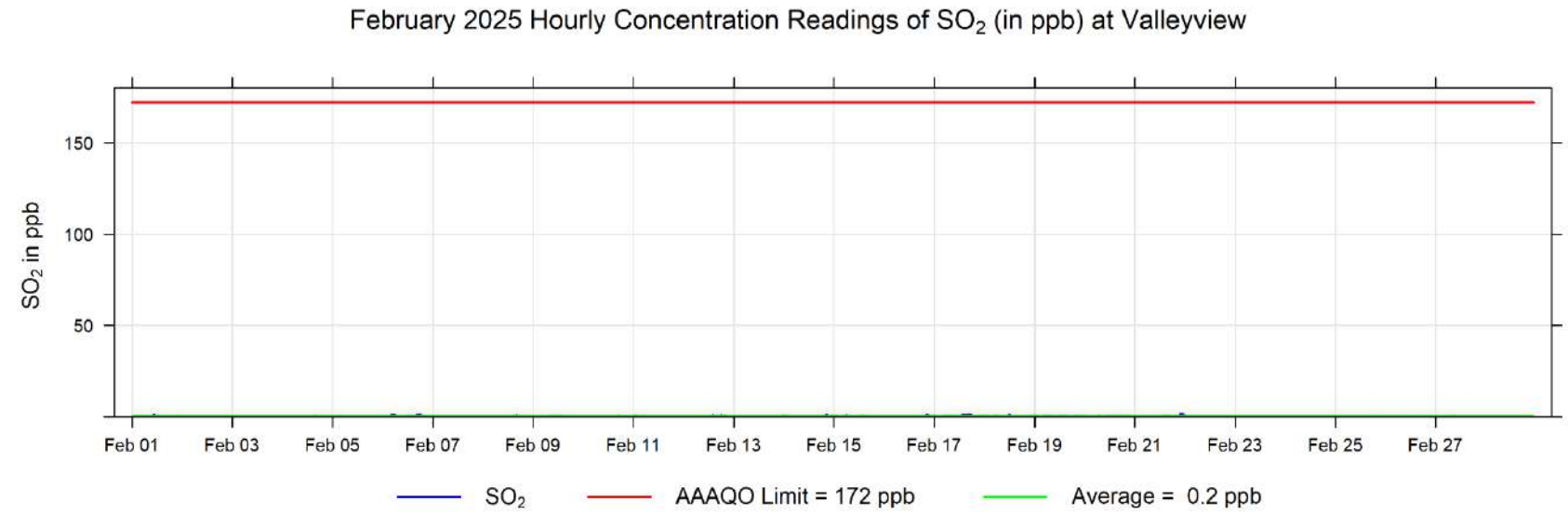
Smoky Heights February 2025 Wind Rose, wind speed in km/hr

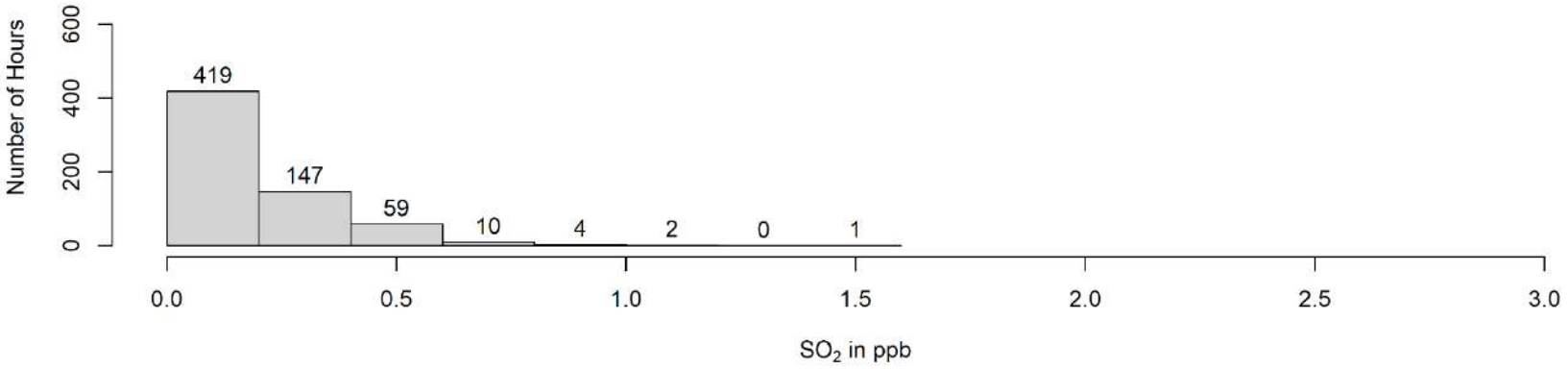
Calms (<1km/hr) = 1.6 %

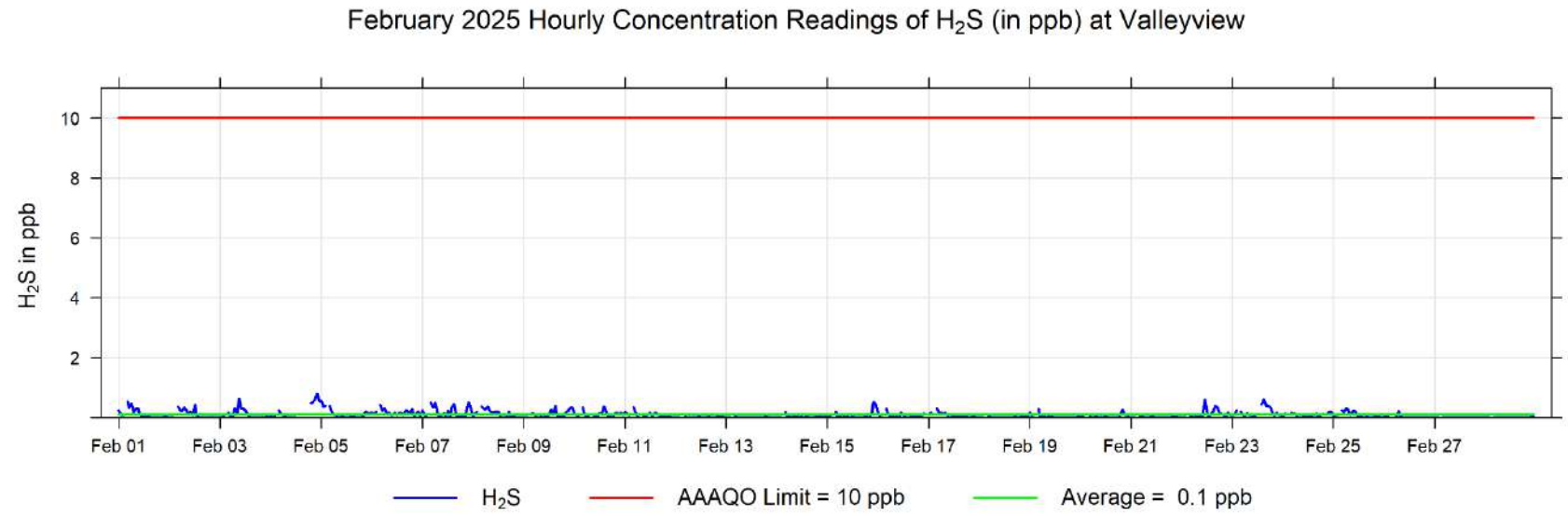
6 Valleyview Charts

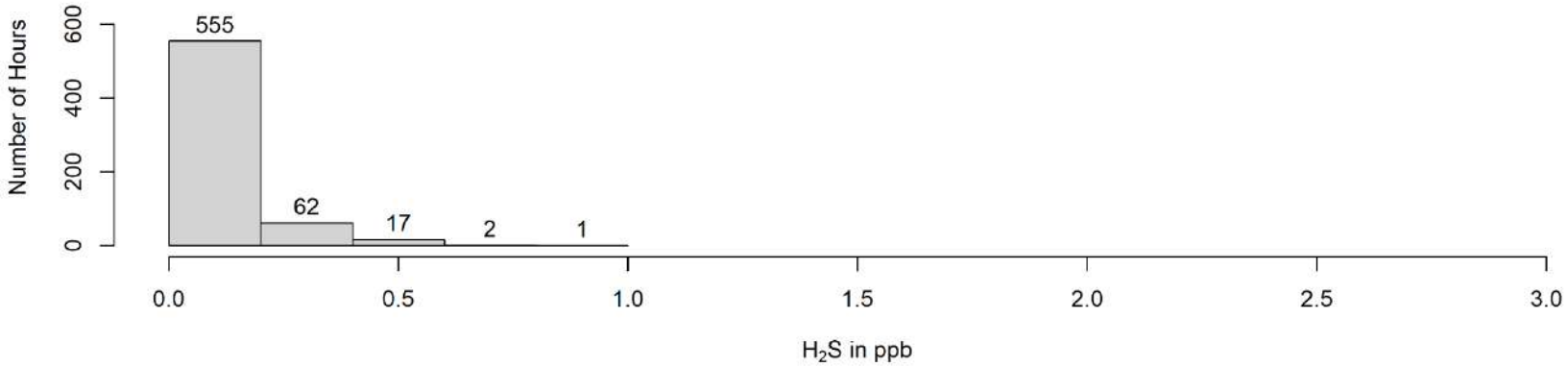
The following pages include the charts and histograms for Valleyview Station

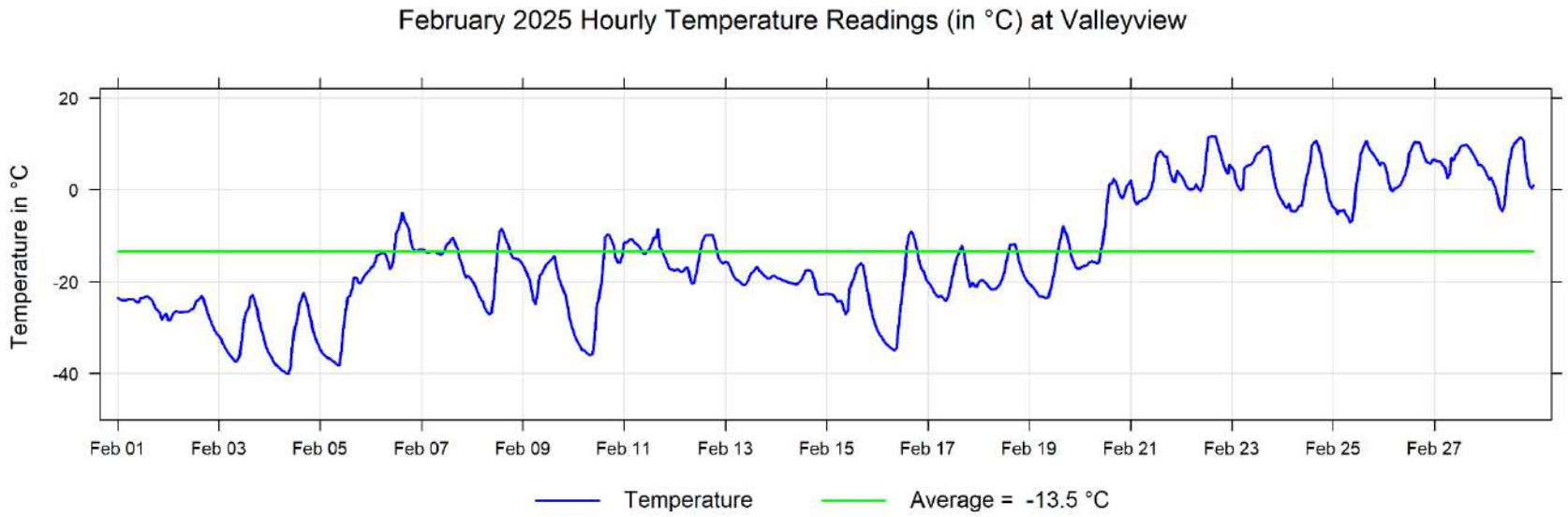


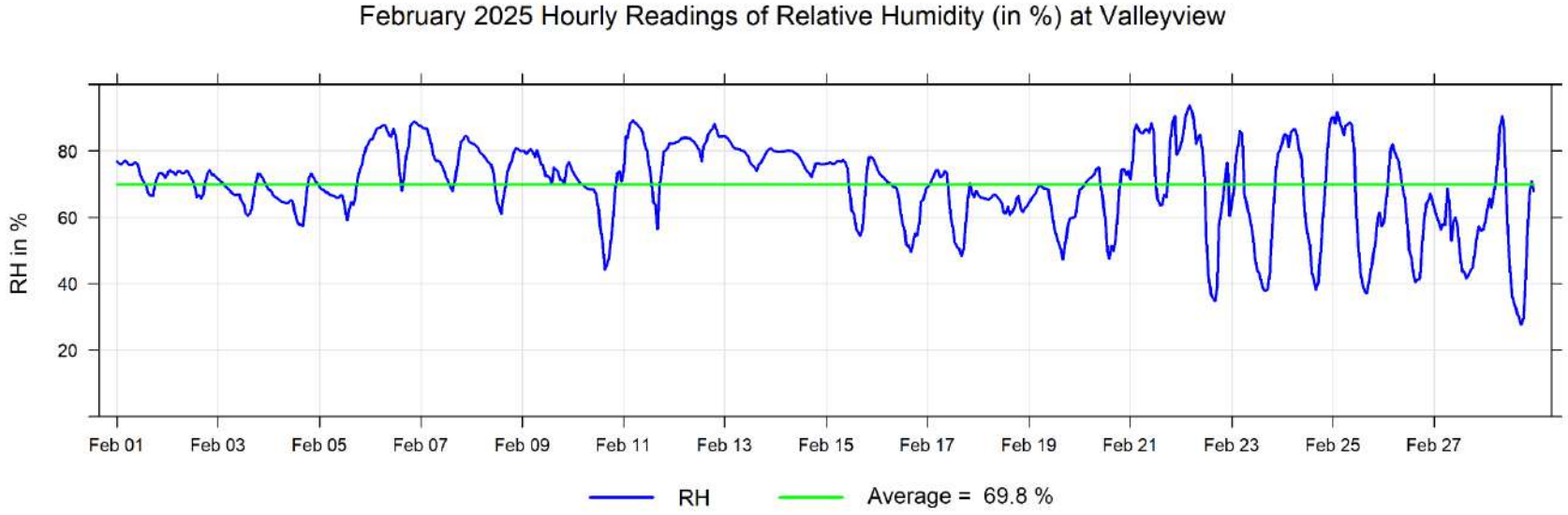

February 2025 Hourly Concentration Readings of SO2 (in ppb) at Valleyview
SO2 in ppb
150
100
50
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
SO2
AAAQO Limit = 172 ppb
Average = 0.2 ppb

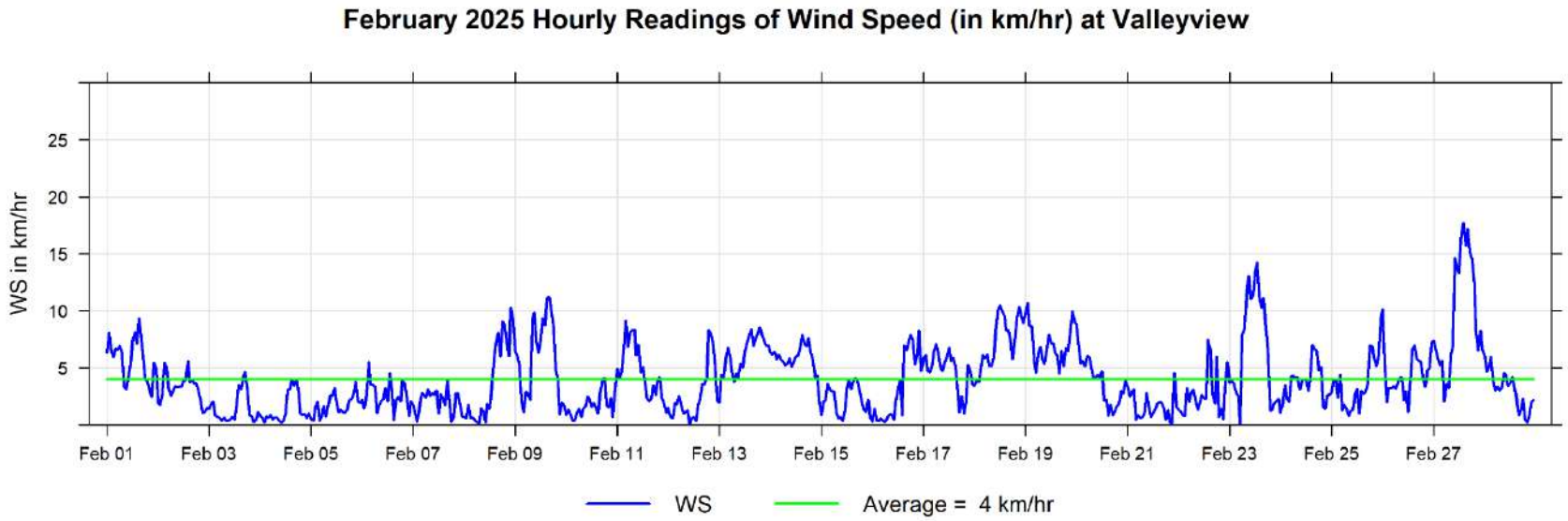

Number of Hours
0
200
400
600
419
147
59
10
4
2
0
1
0.0
0.5
1.0
1.5
2.0
2.5
3.0
SO2 in ppb

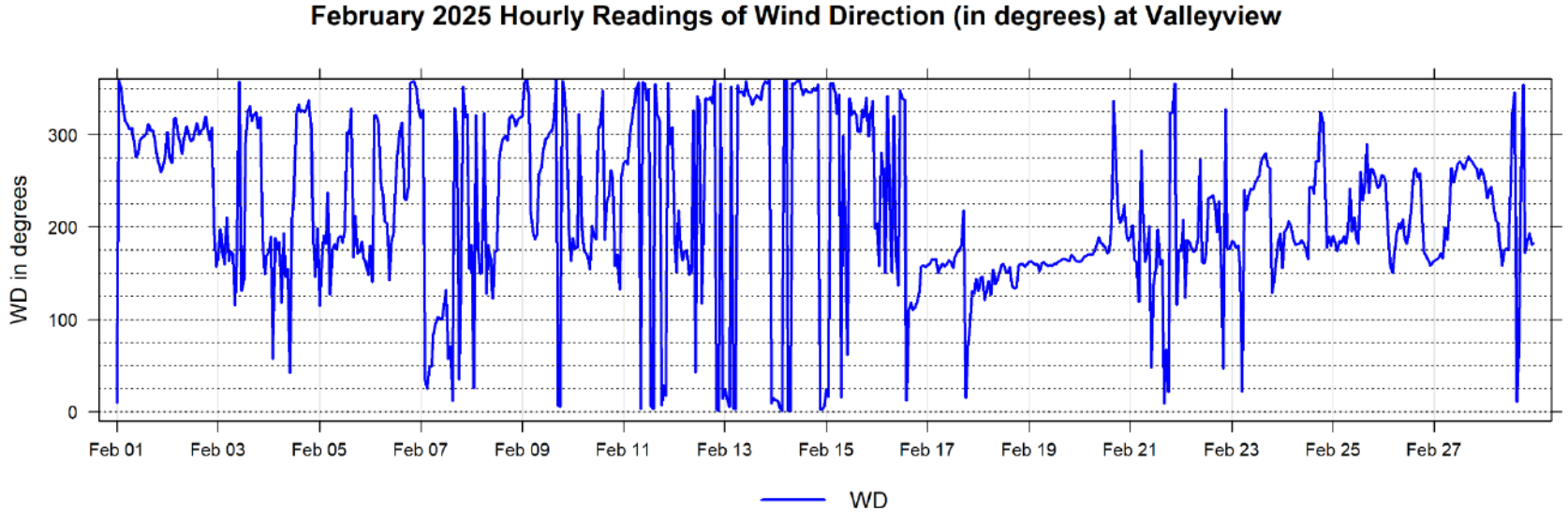

February 2025 Hourly Concentration Readings of H2S (in ppb) at Valleyview
H2S in ppb
10
8
6
4
2
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
H2S
AAAQO Limit = 10 ppb
Average = 0.1 ppb

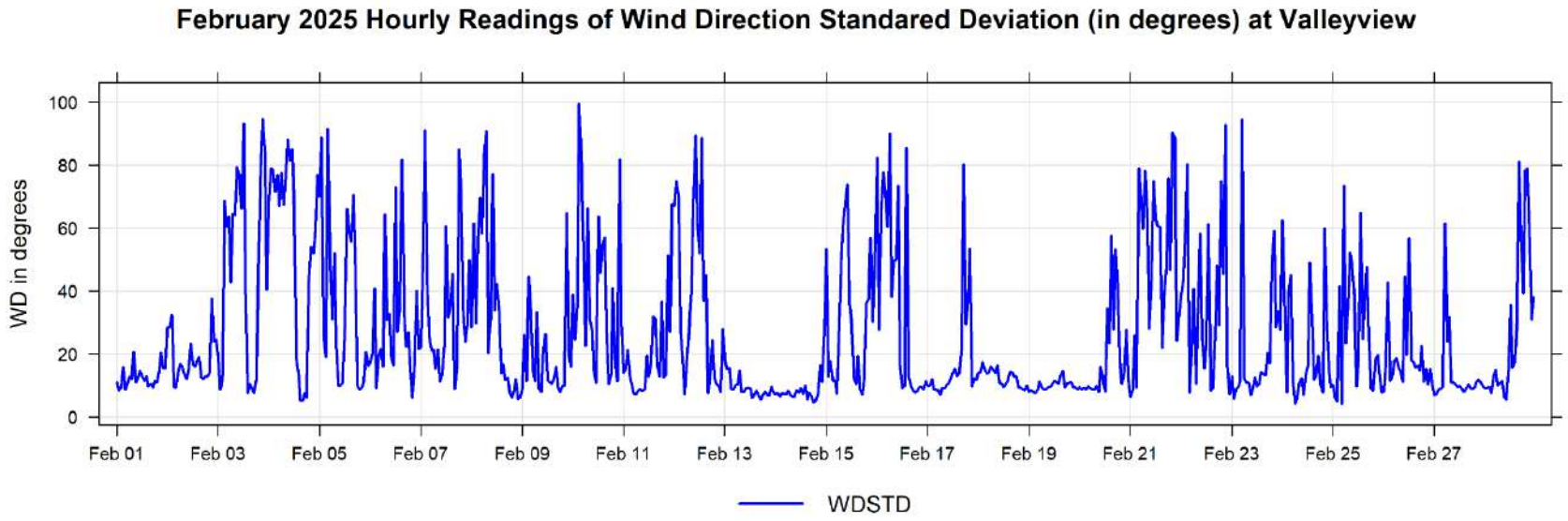

Number of Hours
0
200
400
600
555
62
17
2
1
0.0
0.5
1.0
1.5
2.0
2.5
3.0
H2S in ppb

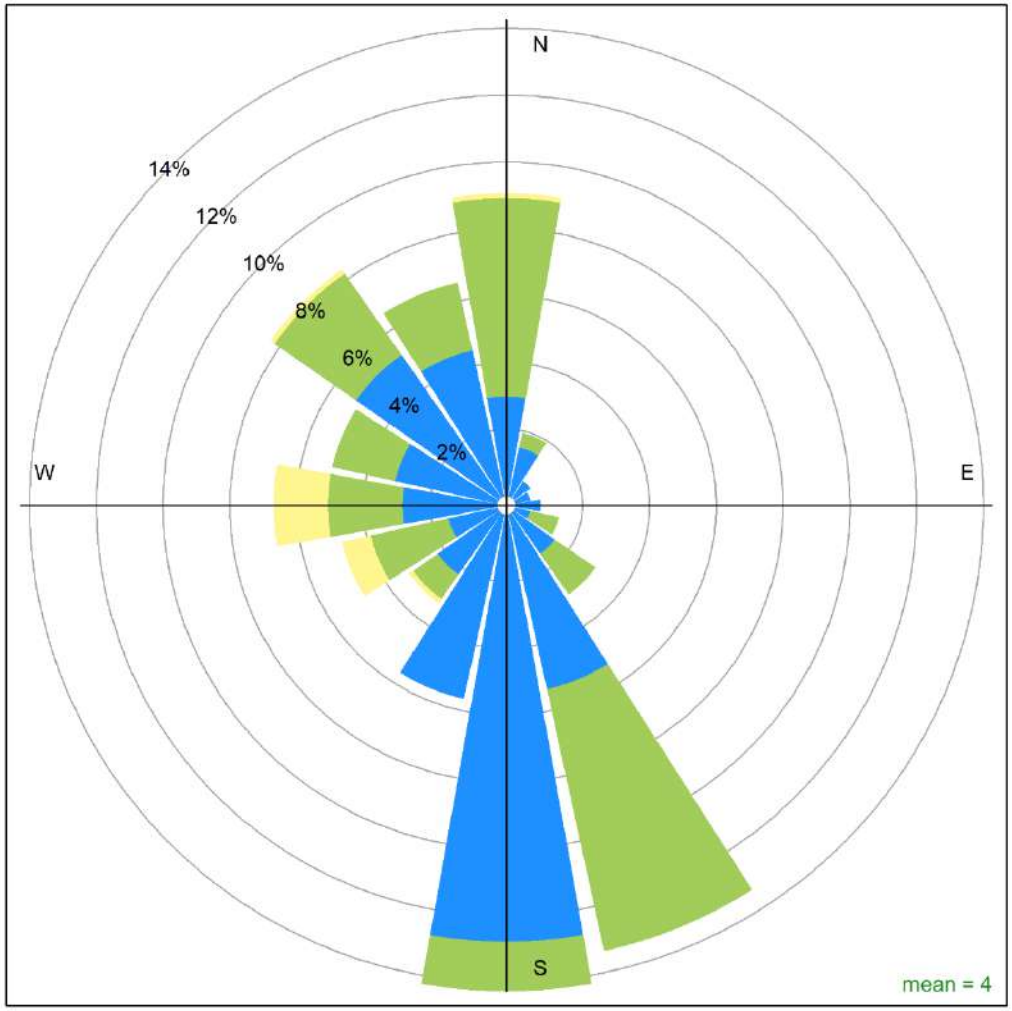

February 2025 Hourly Temperature Readings (in °C) at Valleyview
Temperature in °C
20
0
-20
-40
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
Temperature
Average = -13.5 °C


February 2025 Hourly Readings of Relative Humidity (in %) at Valleyview
RH in %
80
60
40
20
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
RH
Average = 69.8 %


February 2025 Hourly Readings of Wind Speed (in km/hr) at Valleyview
WS in km/hr
25
20
15
10
5
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
WS
Average = 4 km/hr


February 2025 Hourly Readings of Wind Direction (in degrees) at Valleyview
WD in degrees
300
200
100
0
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
WD


February 2025 Hourly Readings of Wind Direction Standared Deviation (in degrees) at Valleyview
WD in degrees
100
80
60
40
20
0
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
WDSTD

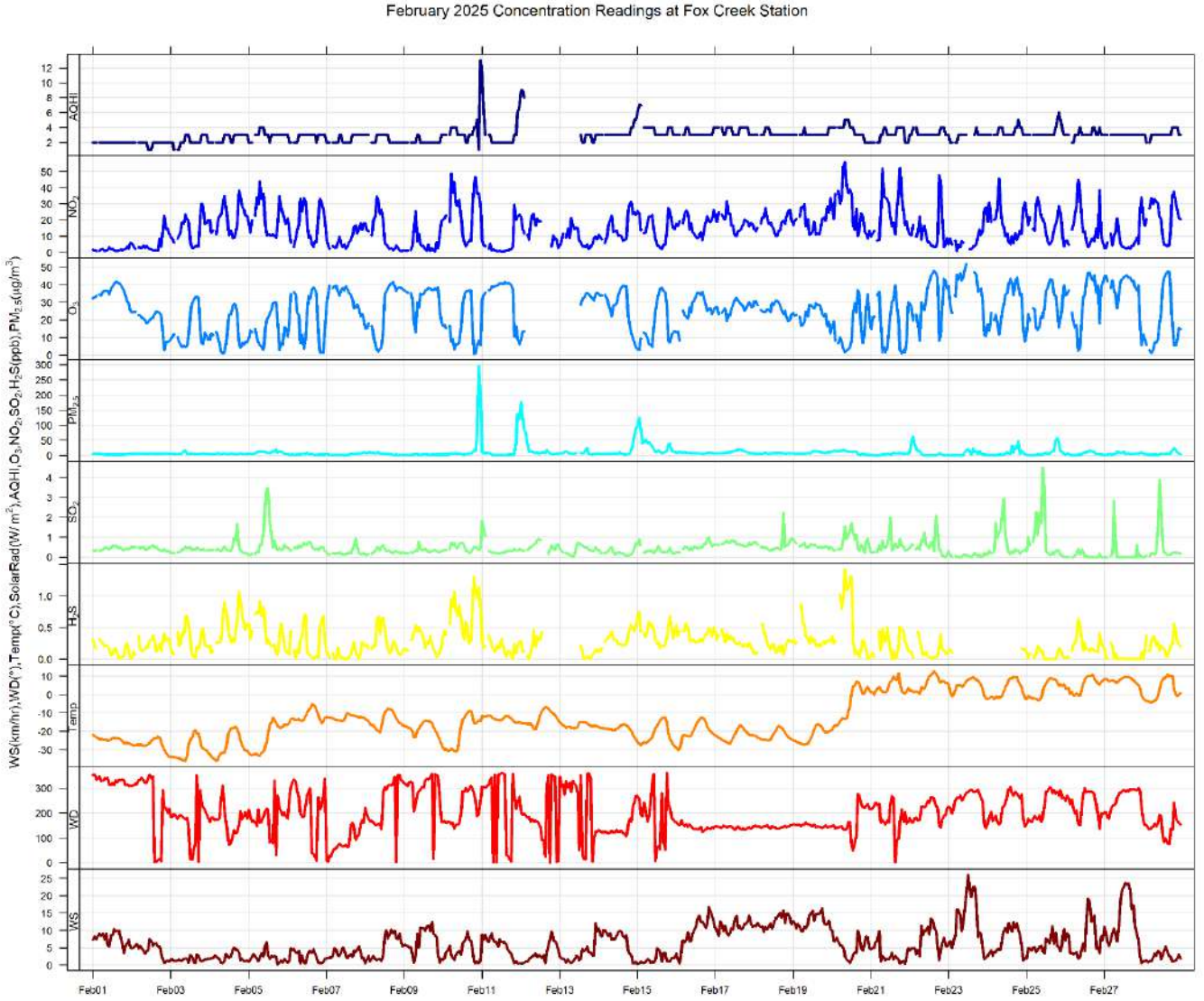


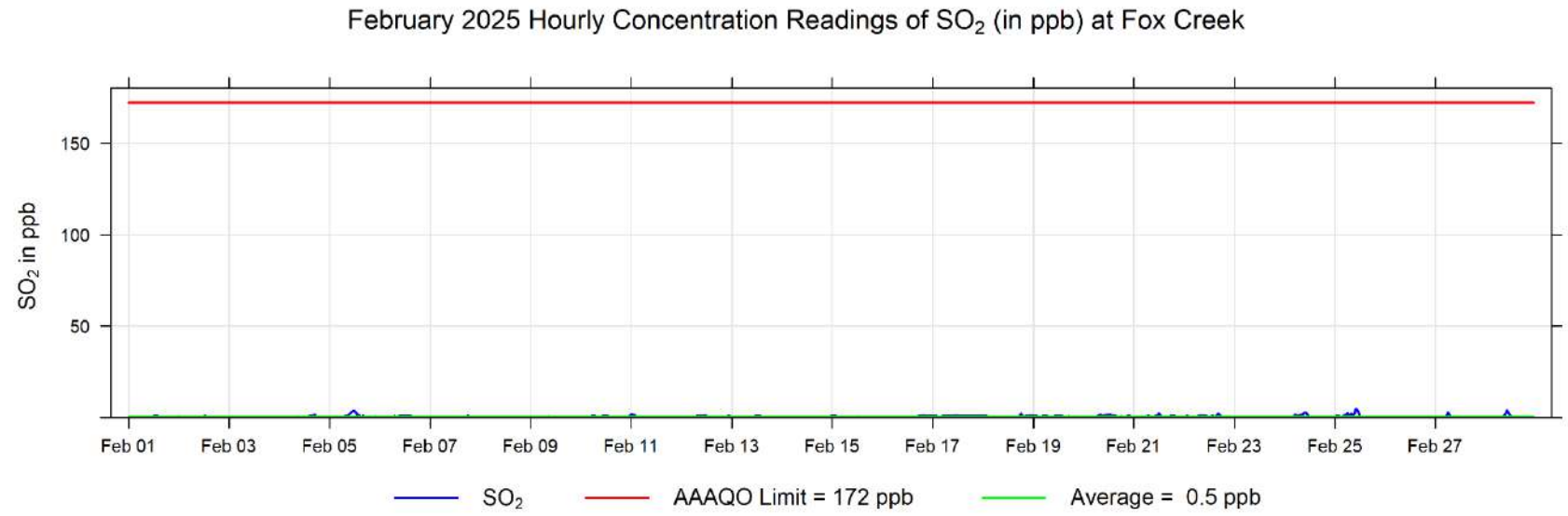
Valleyview February 2025 Wind Rose, wind speed in km/hr

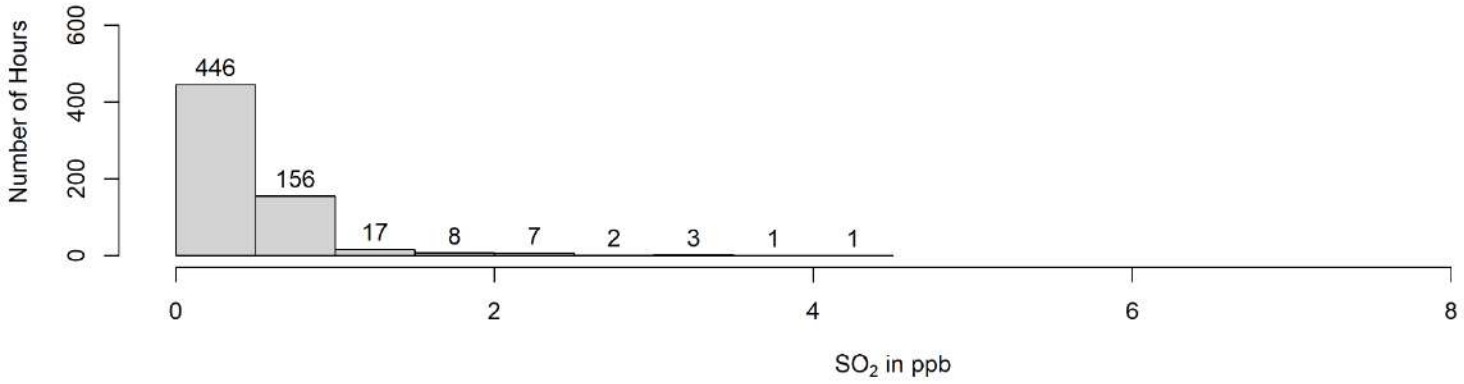
Calms (<1km/hr) = 15 %

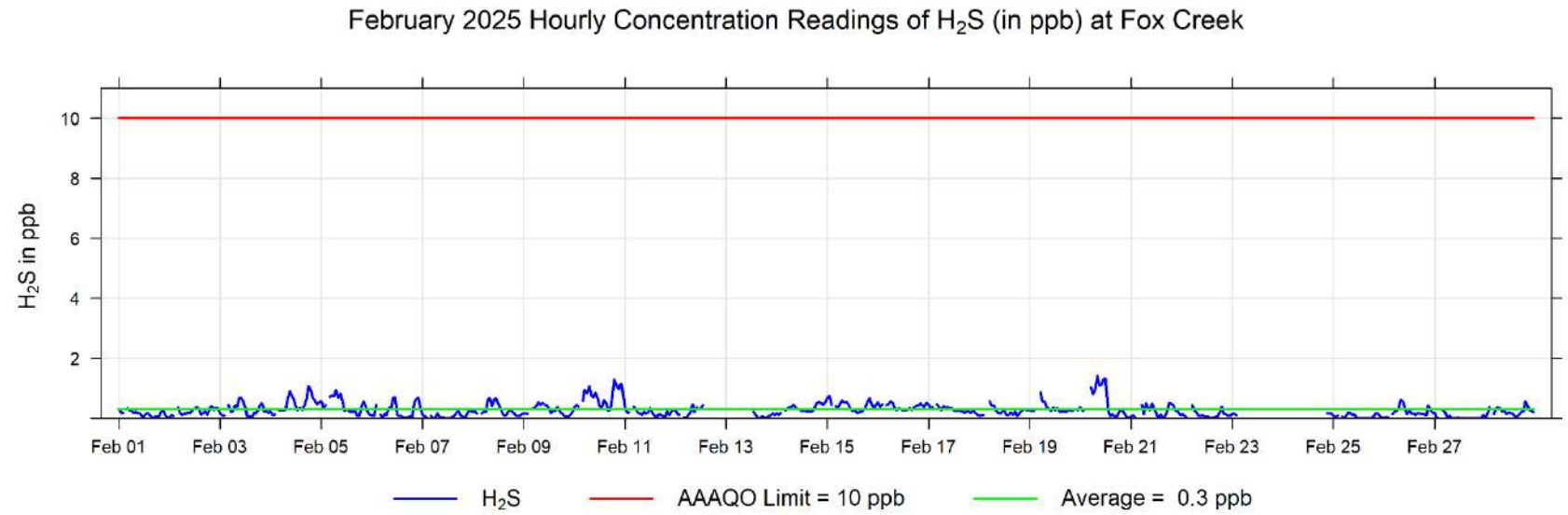
7 Fox Creek Charts

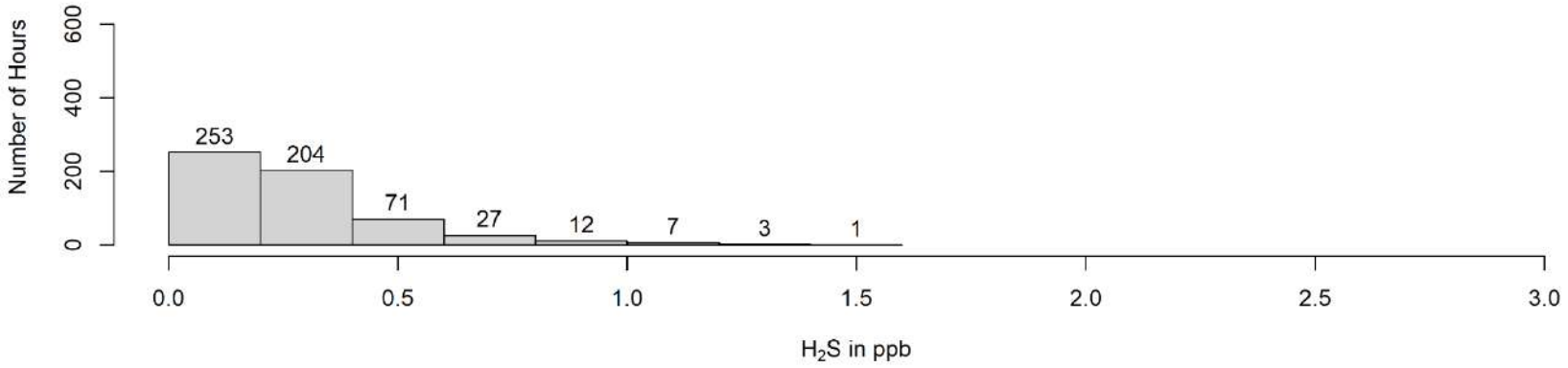
The following pages include the charts and histograms for Fox Creek Station

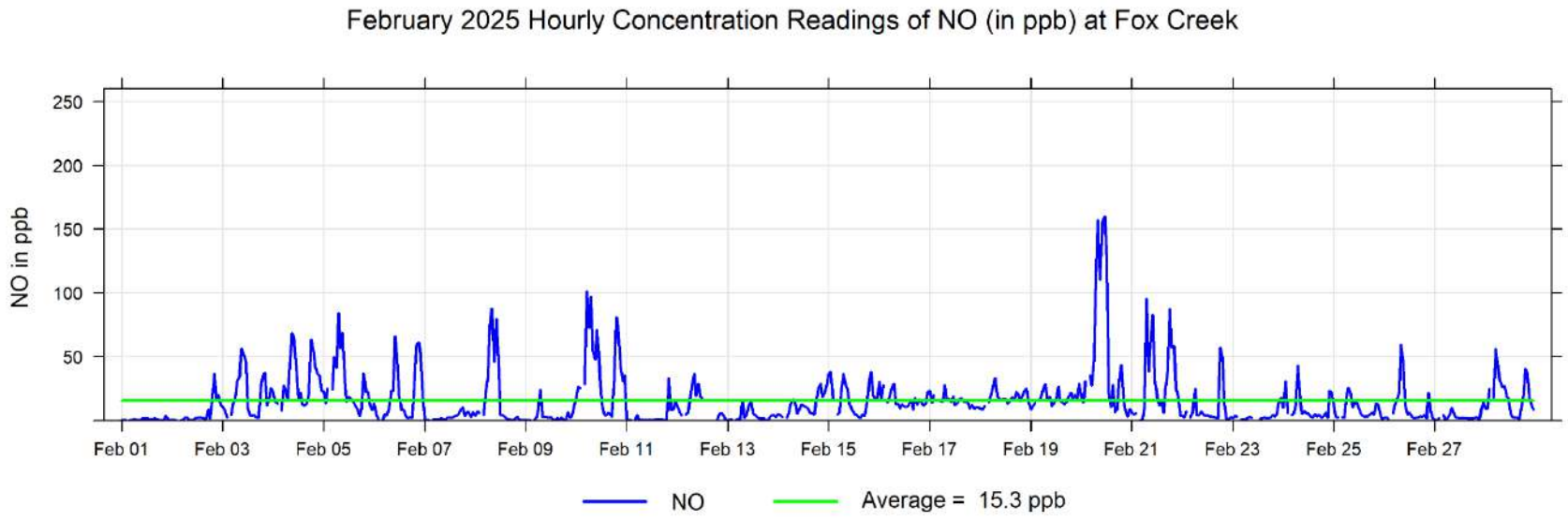


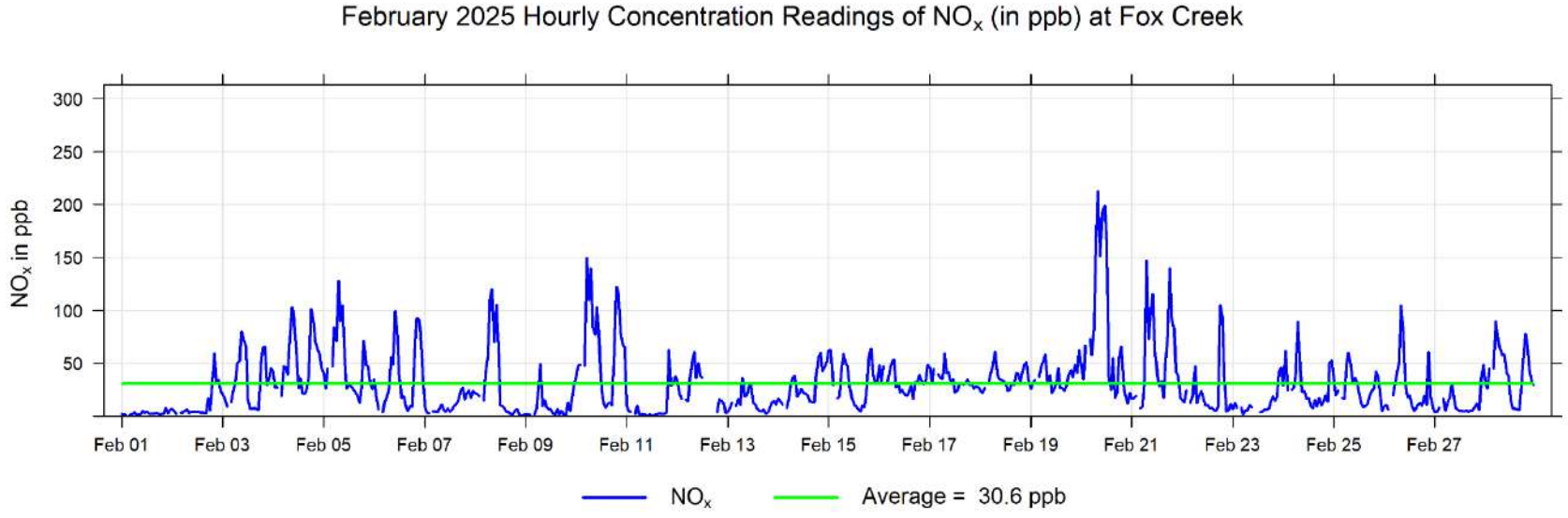

February 2025 Hourly Concentration Readings of SO_2 (in ppb) at Fox Creek
SO_2 in ppb
150
100
50
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
SO_2
AAAQO Limit = 172 ppb
Average = 0.5 ppb

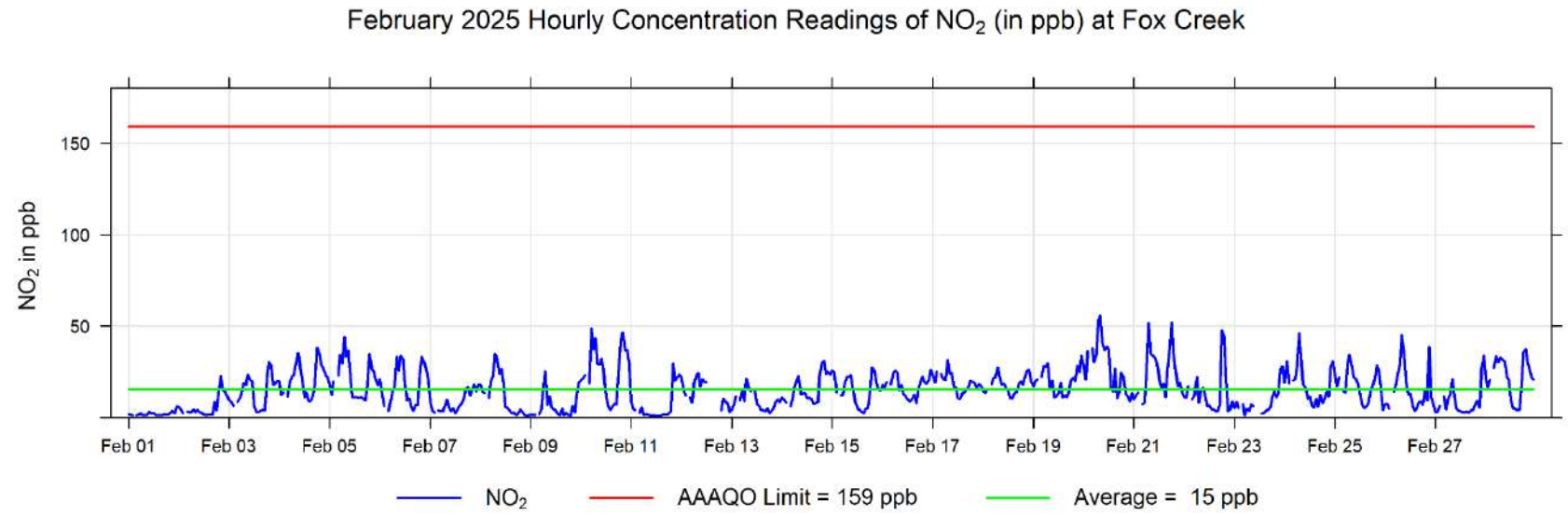

Number of Hours
0
200
400
600
446
156
17
8
7
2
3
1
1
0
2
4
6
8
SO_2 in ppb

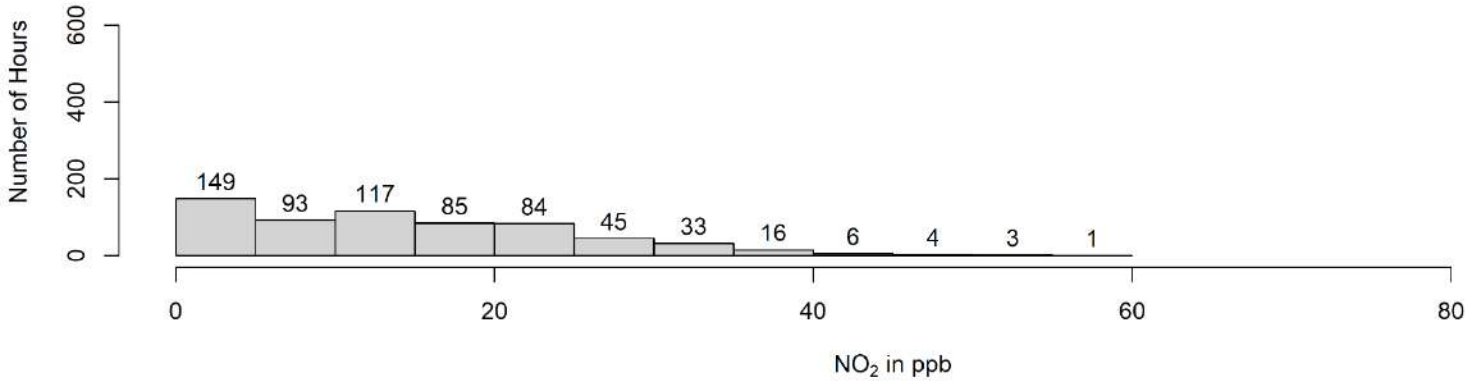

February 2025 Hourly Concentration Readings of H2S (in ppb) at Fox Creek
H2S in ppb
10
8
6
4
2
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
H2S
AAAQO Limit = 10 ppb
Average = 0.3 ppb

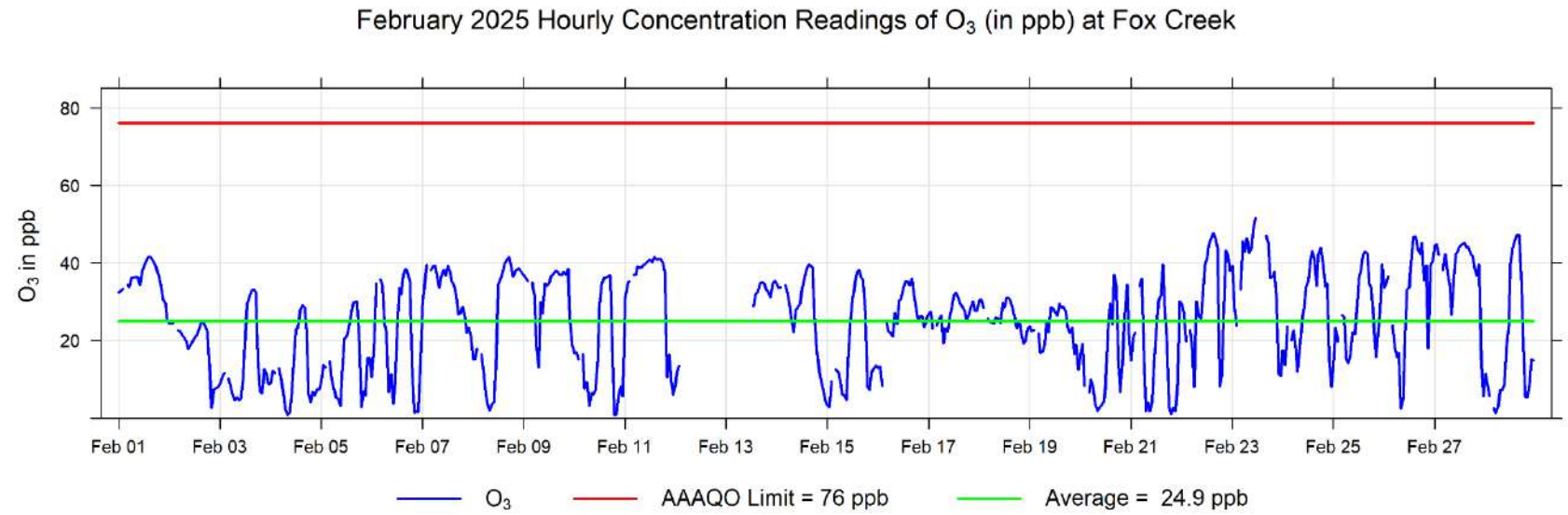

Number of Hours
0
200
400
600
253
204
71
27
12
7
3
1
0.0
0.5
1.0
1.5
2.0
2.5
3.0
H2S in ppb

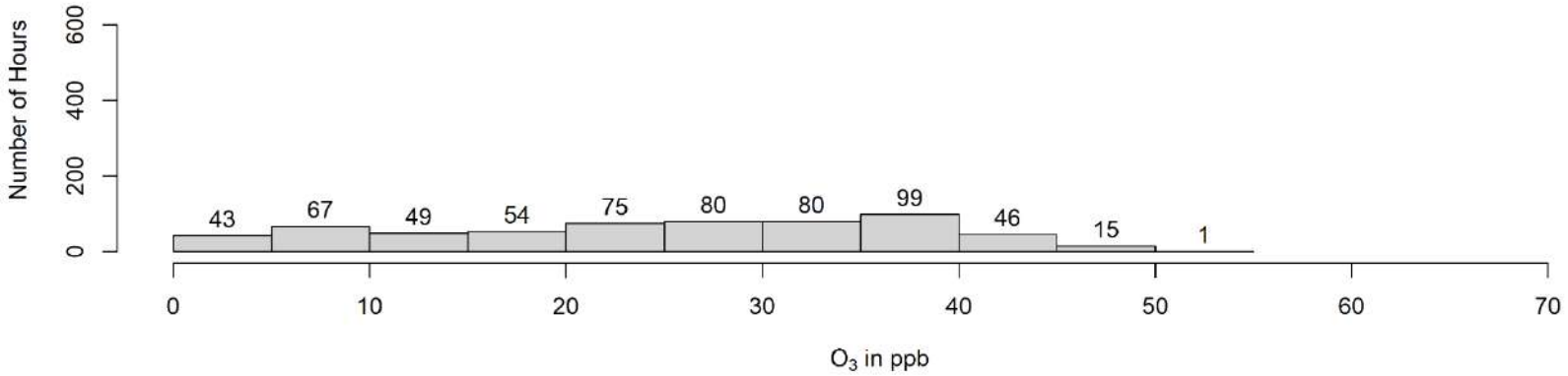

February 2025 Hourly Concentration Readings of NO (in ppb) at Fox Creek
NO in ppb
250
200
150
100
50
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
NO
Average = 15.3 ppb

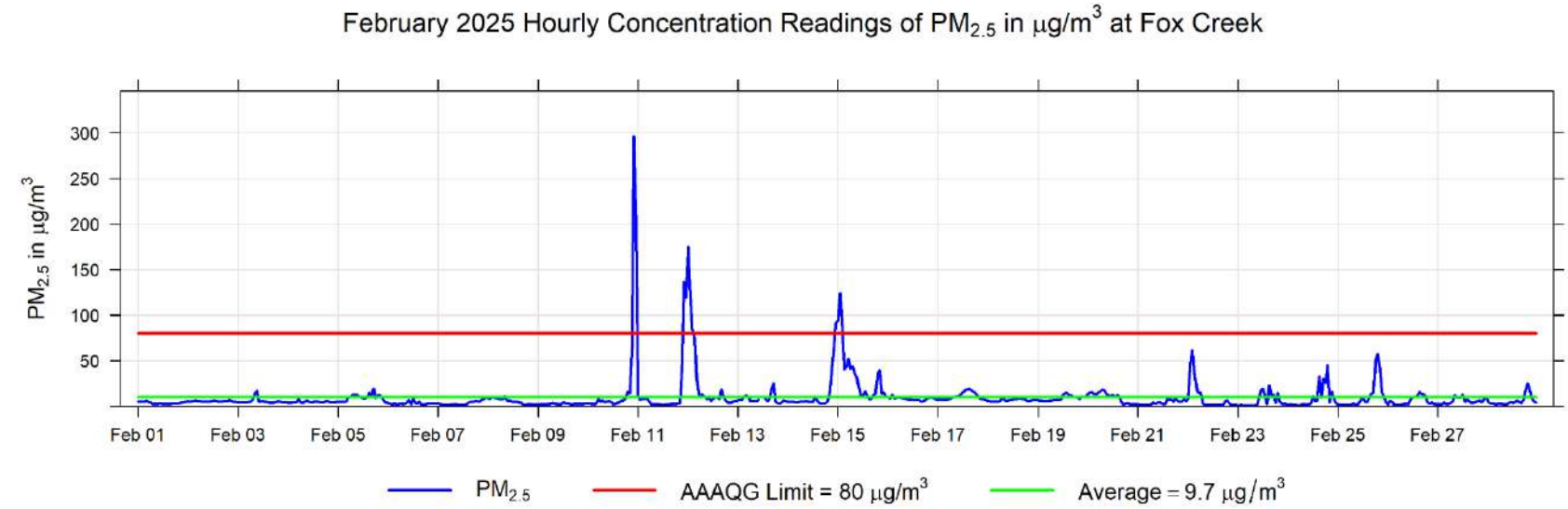

February 2025 Hourly Concentration Readings of NOx (in ppb) at Fox Creek
NOx in ppb
300
250
200
150
100
50
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
NOx
Average = 30.6 ppb

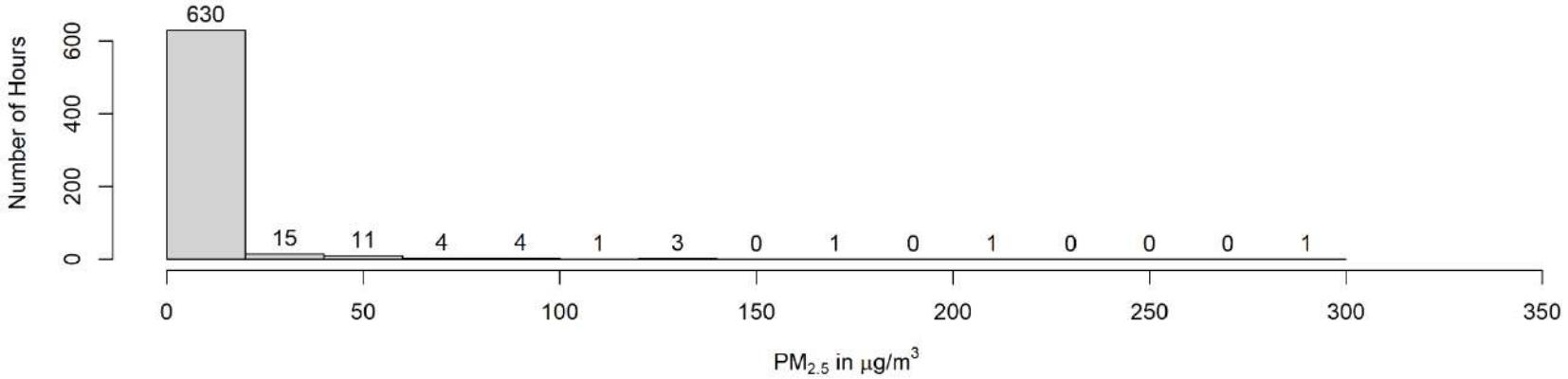

February 2025 Hourly Concentration Readings of NO2 (in ppb) at Fox Creek
NO2 in ppb
150
100
50
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
NO2
AAAQO Limit = 159 ppb
Average = 15 ppb

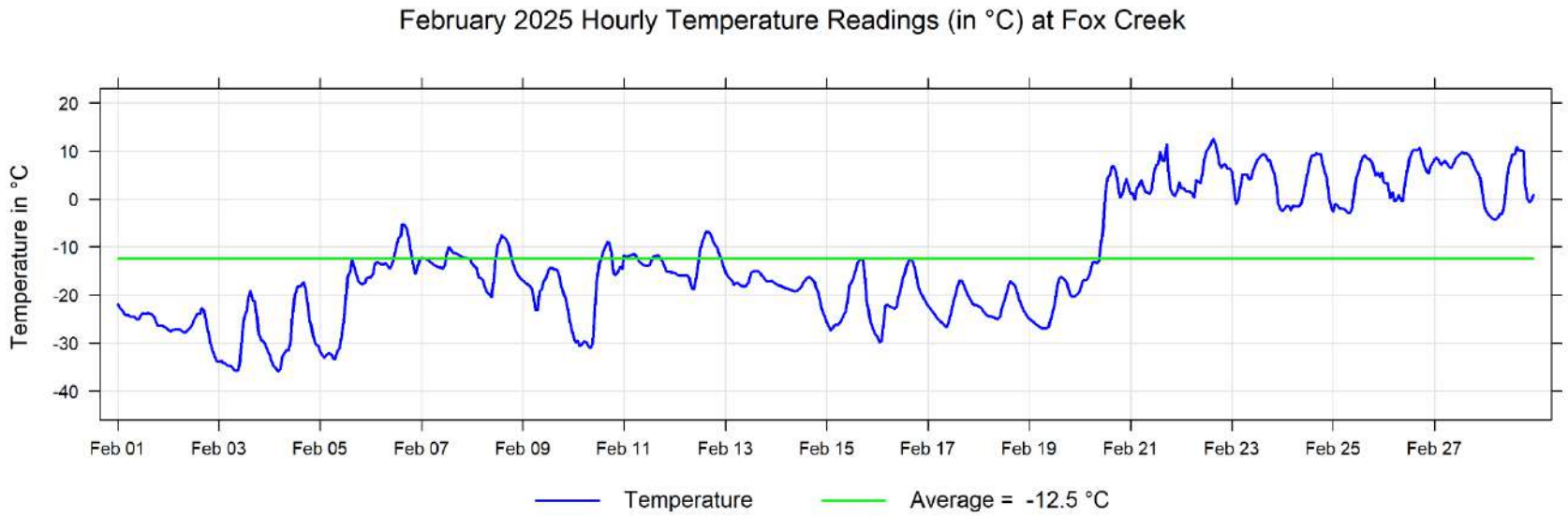

Number of Hours
0
200
400
600
149
93
117
85
84
45
33
16
6
4
3
1
0
20
40
60
80
NO2 in ppb

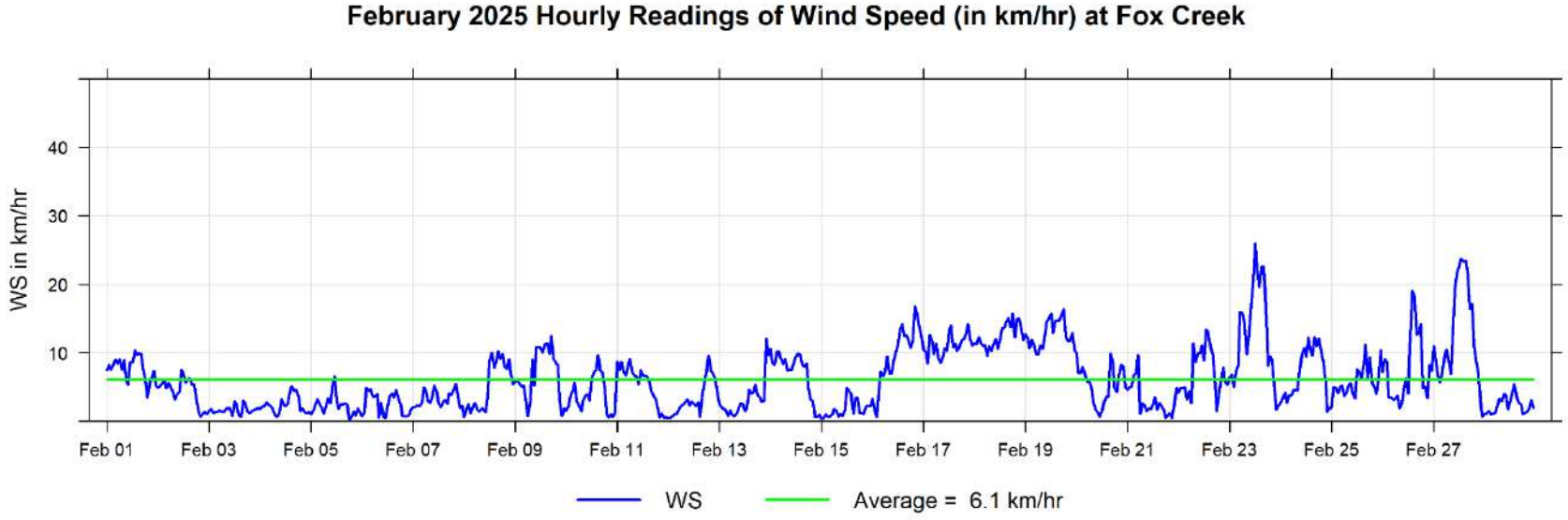

February 2025 Hourly Concentration Readings of O_3 (in ppb) at Fox Creek
O_3 in ppb
80
60
40
20
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
O_3
AAAQO Limit = 76 ppb
Average = 24.9 ppb


Number of Hours
0
200
400
600
43
67
49
54
75
80
80
99
46
15
1
0
10
20
30
40
50
60
70
O_3 in ppb

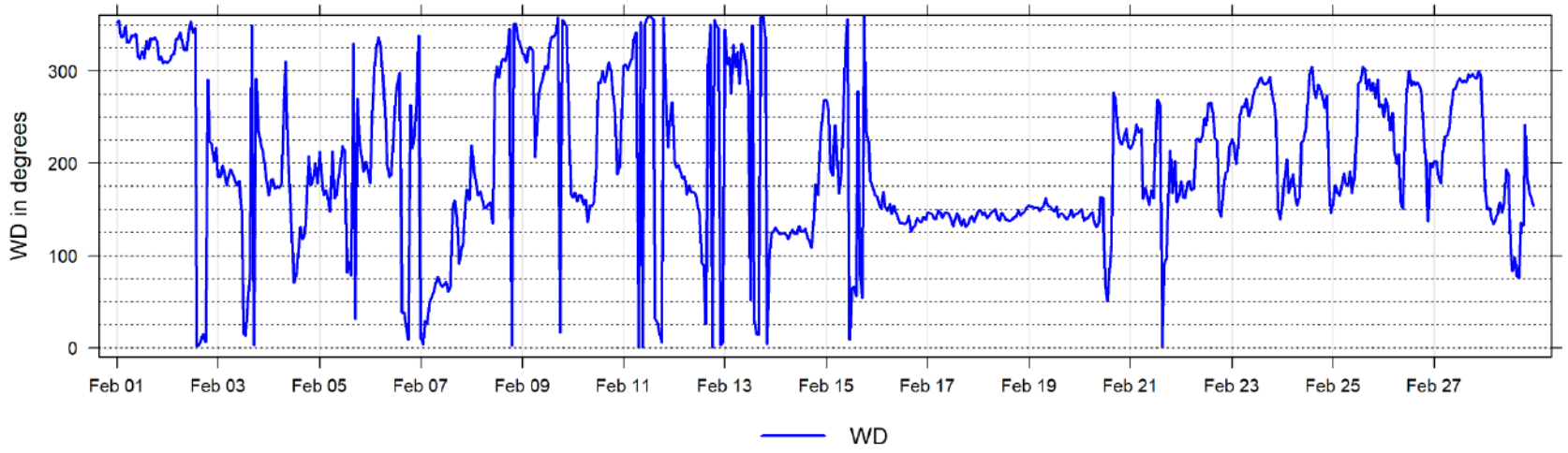

February 2025 Hourly Concentration Readings of PM2.5 in µg/m3 at Fox Creek
PM2.5 in µg/m3
300
250
200
150
100
50
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
PM2.5
AAAQG Limit = 80 µg/m3
Average = 9.7 µg/m3


Number of Hours
0
200
400
600
630
15
11
4
4
1
3
0
1
0
1
0
0
0
1
0
50
100
150
200
250
300
350
PM2.5 in µg/m3

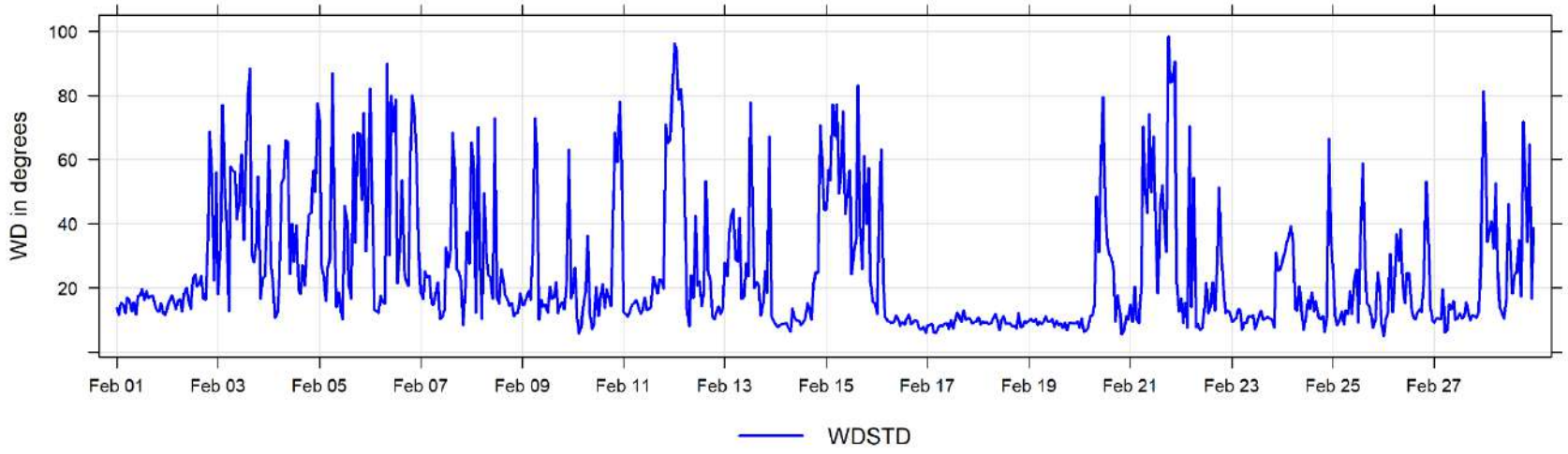

February 2025 Hourly Temperature Readings (in °C) at Fox Creek
Temperature in °C
20
10
0
-10
-20
-30
-40
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
Temperature
Average = -12.5 °C

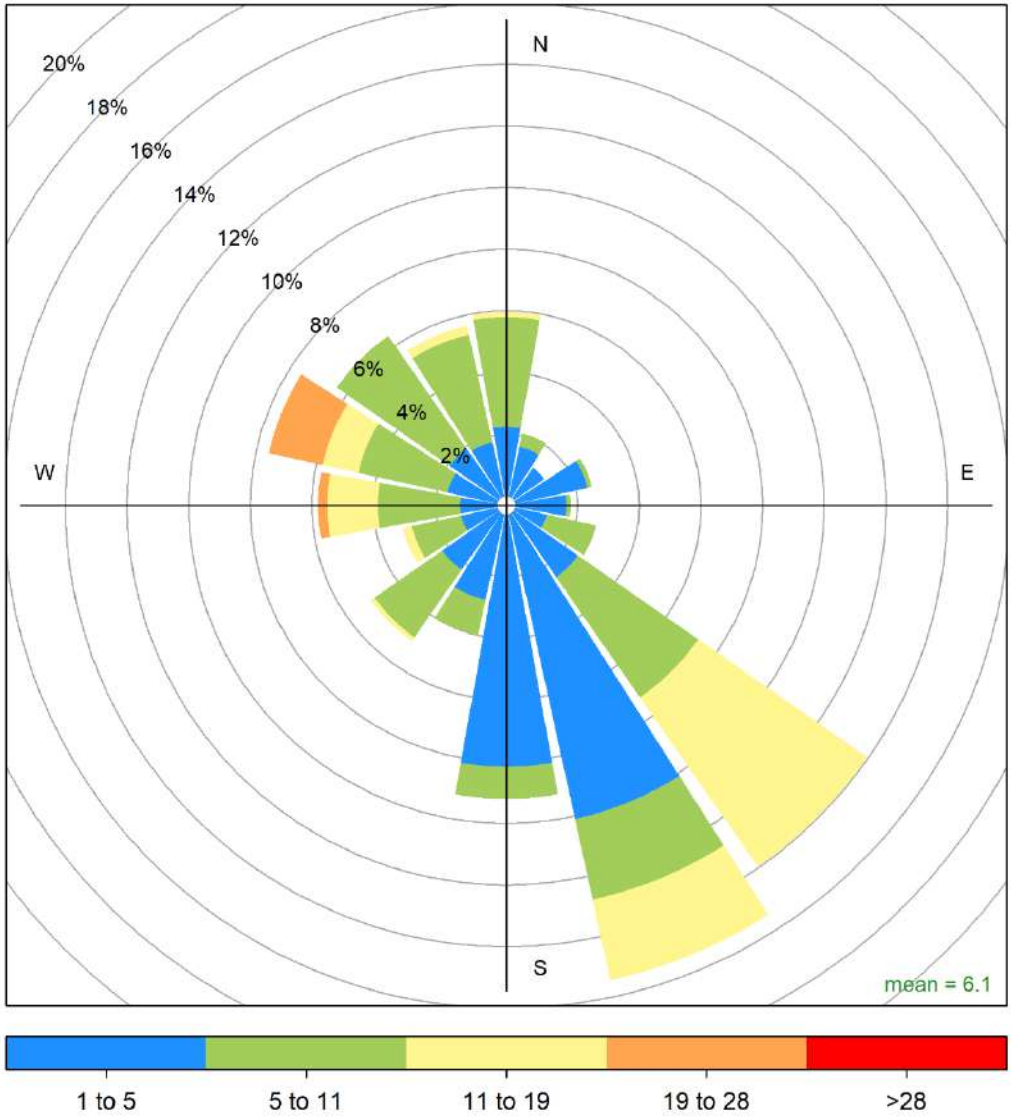

February 2025 Hourly Readings of Wind Speed (in km/hr) at Fox Creek
WS in km/hr
40
30
20
10
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
WS
Average = 6.1 km/hr

February 2025 Hourly Readings of Wind Direction (in degrees) at Fox Creek



February 2025 Hourly Readings of Wind Direction Standared Deviation (in degrees) at Fox Creek



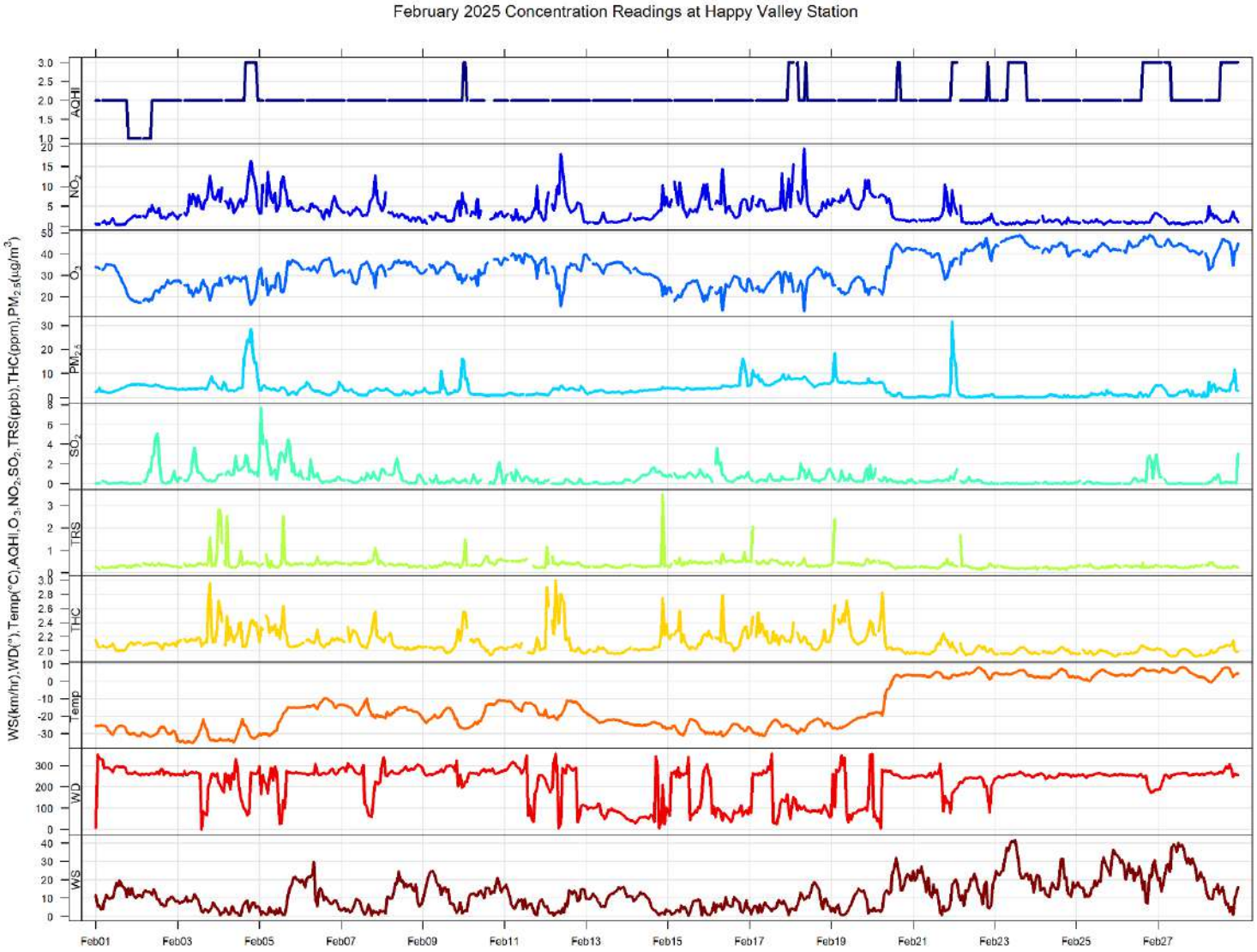


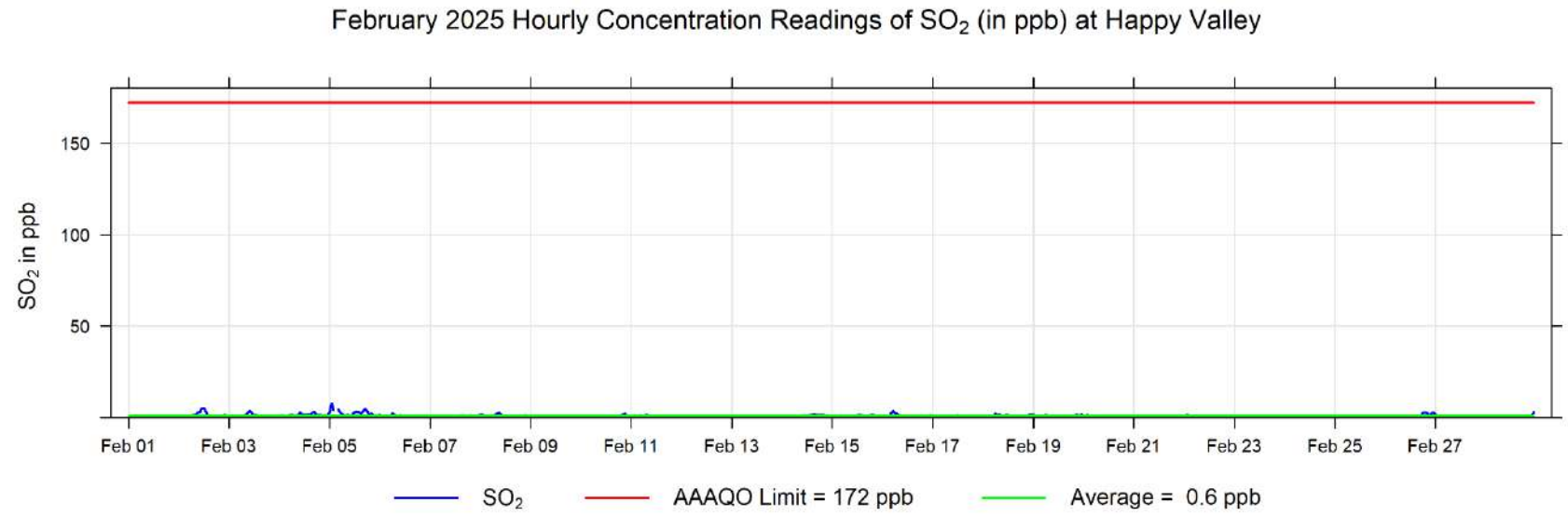
Fox Creek February 2025 Wind Rose, wind speed in km/hr

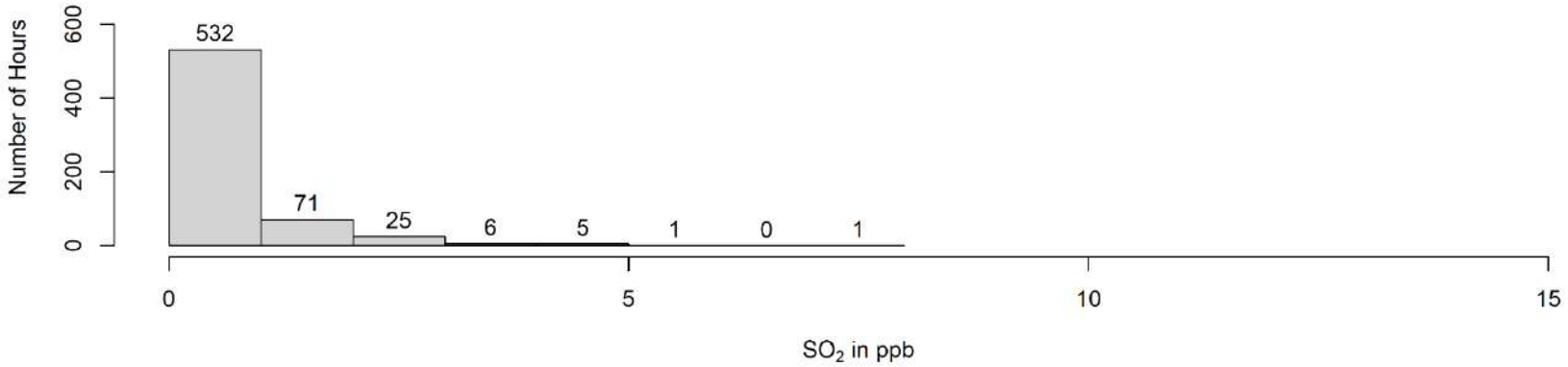
Calms (<1km/hr) = 7.4 %

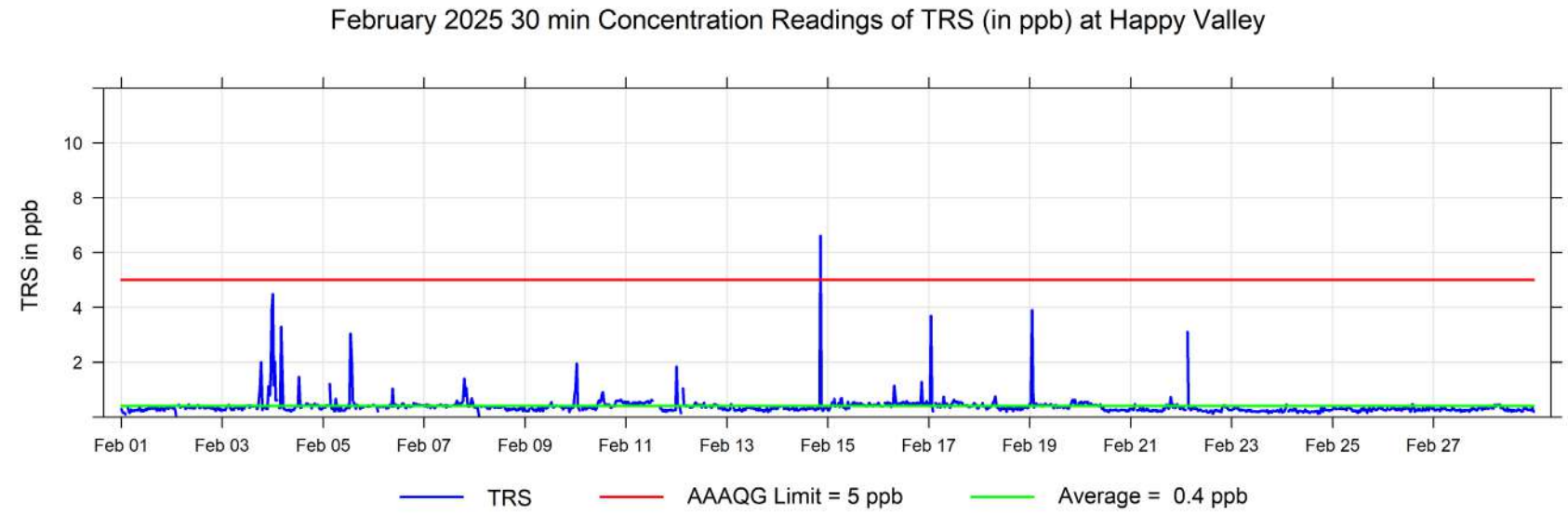
8 Happy Valley (Portable) Charts

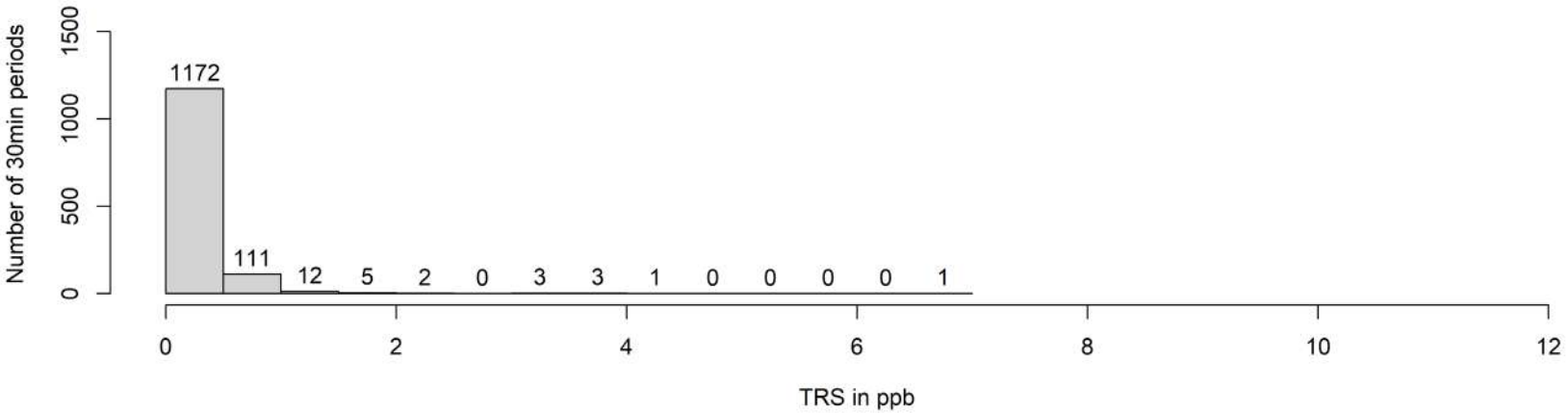
The following pages include the charts and histograms for Happy Valley Portable Station

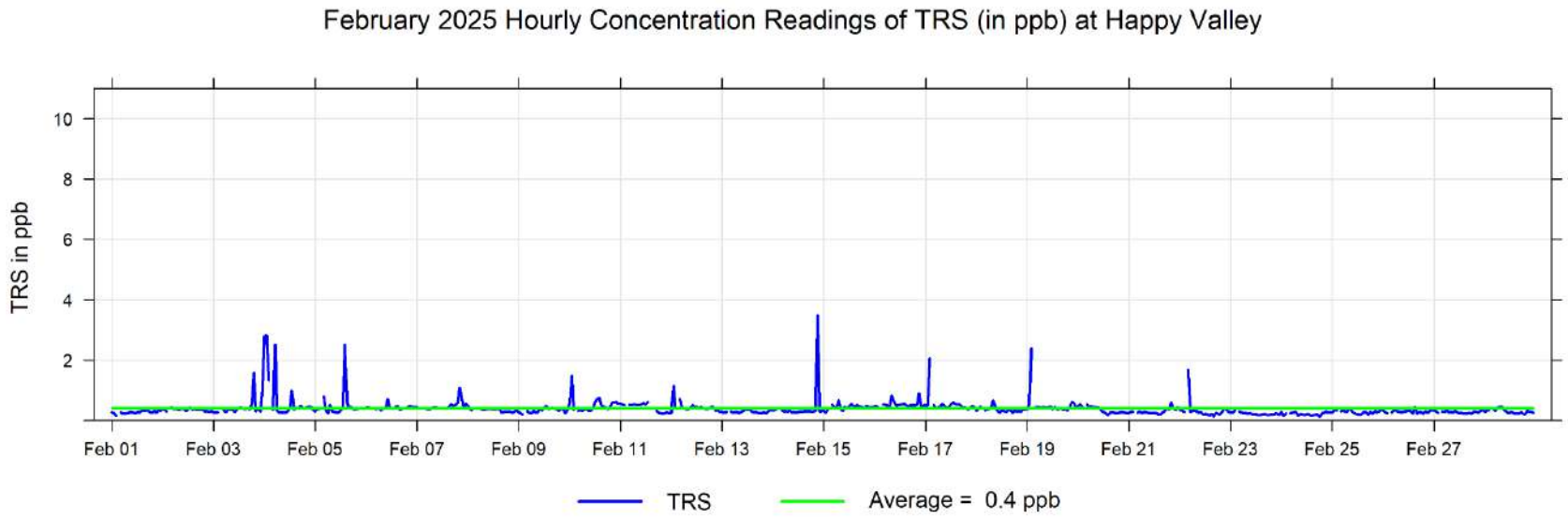


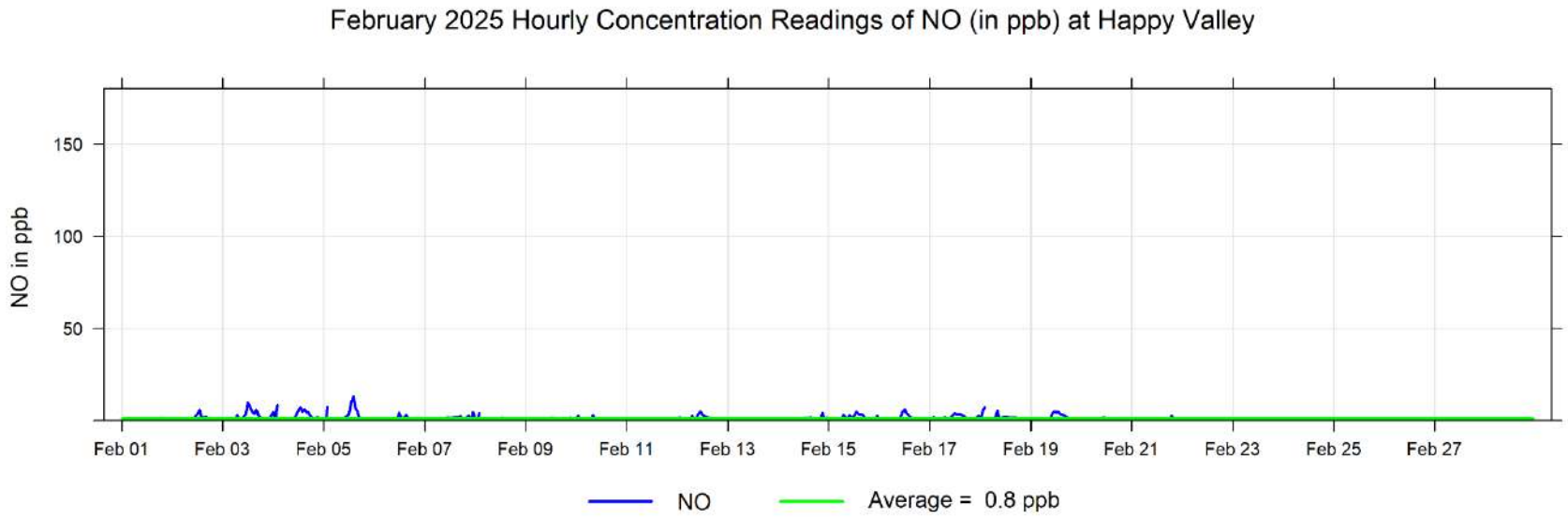

February 2025 Hourly Concentration Readings of SO_2 (in ppb) at Happy Valley
SO_2 in ppb
150
100
50
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
SO_2
AAAQO Limit = 172 ppb
Average = 0.6 ppb

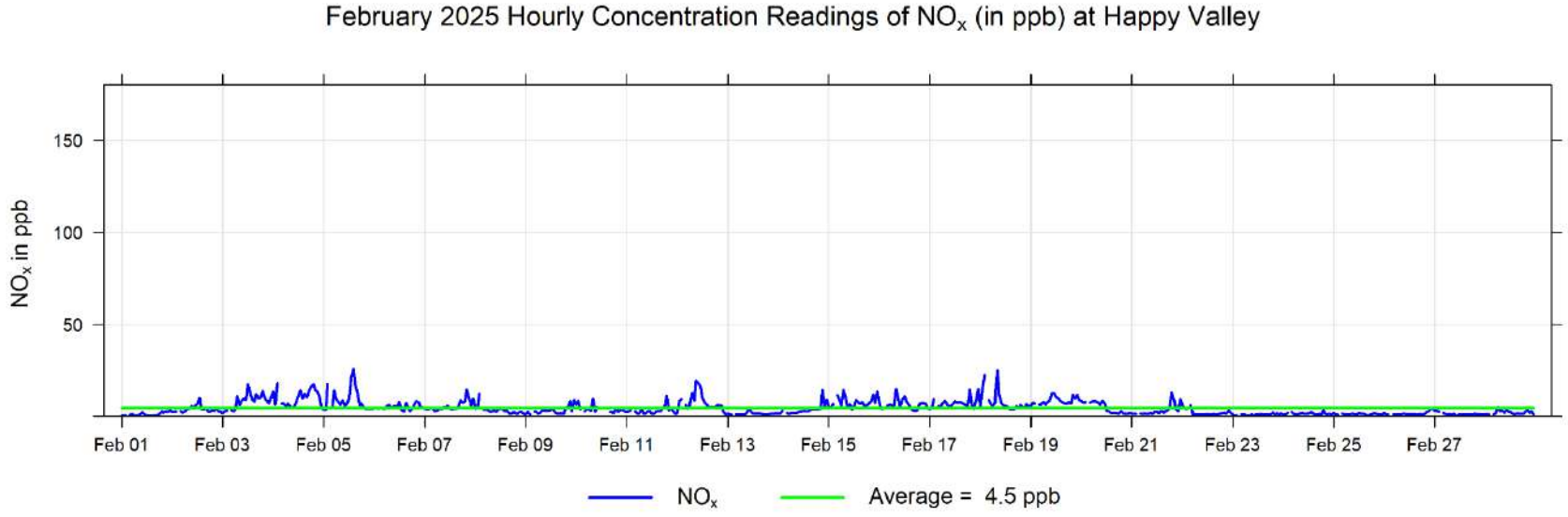

Number of Hours
0
200
400
600
532
71
25
6
5
1
0
1
0
5
10
15
SO_2 in ppb

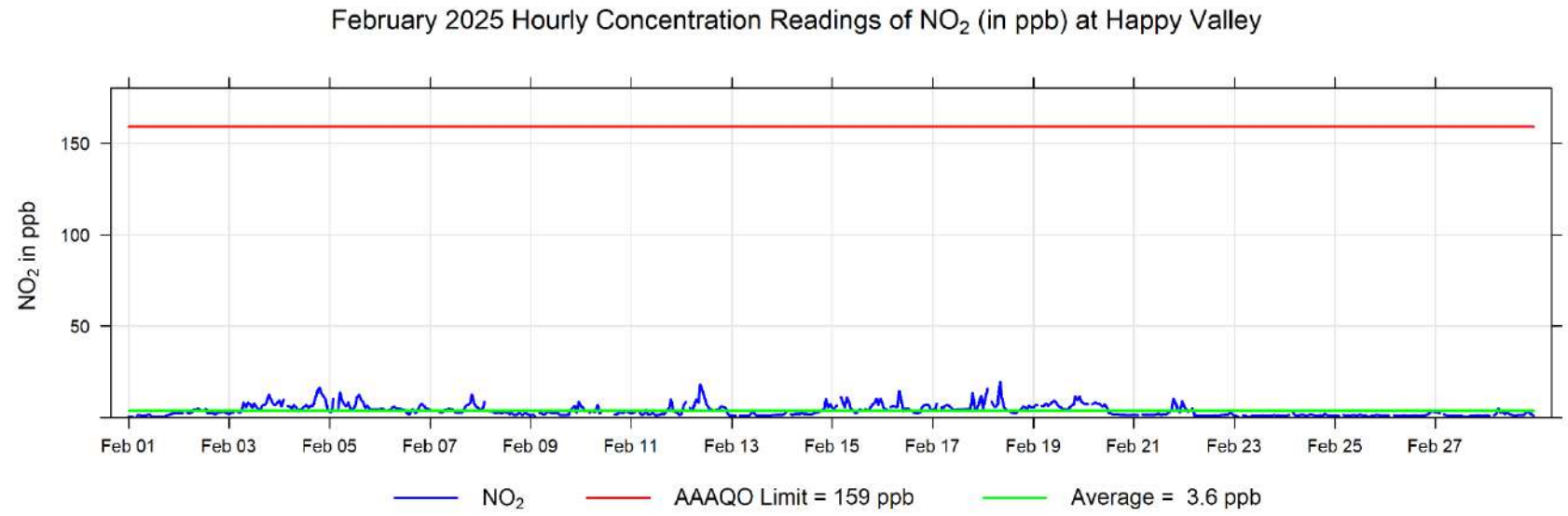

February 2025 30 min Concentration Readings of TRS (in ppb) at Happy Valley
TRS in ppb
10
8
6
4
2
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
TRS
AAAQG Limit = 5 ppb
Average = 0.4 ppb

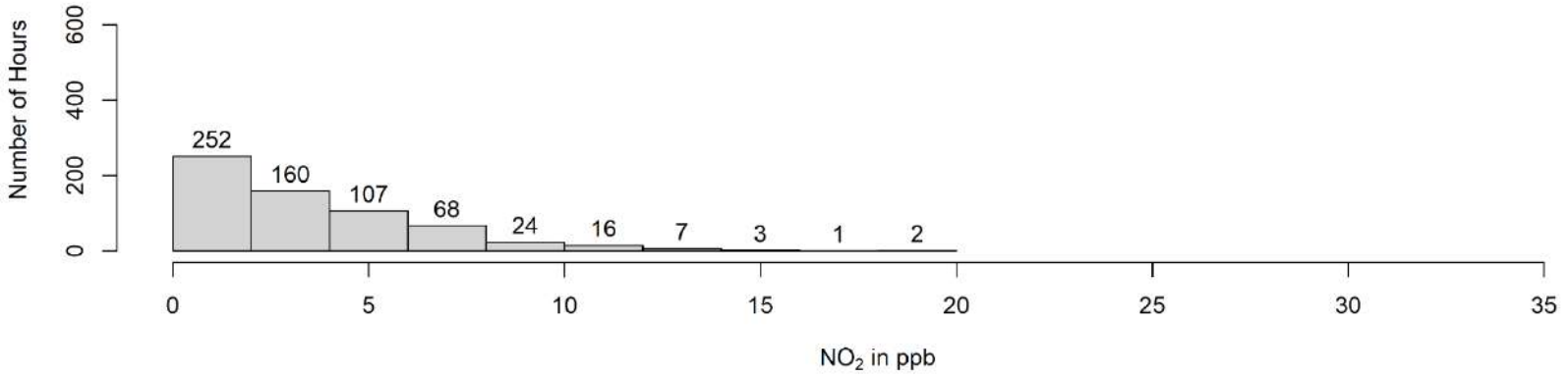

Number of 30min periods
0
500
1000
1500
1172
111
12
5
2
0
3
3
1
0
0
0
0
1
0
2
4
6
8
10
12
TRS in ppb

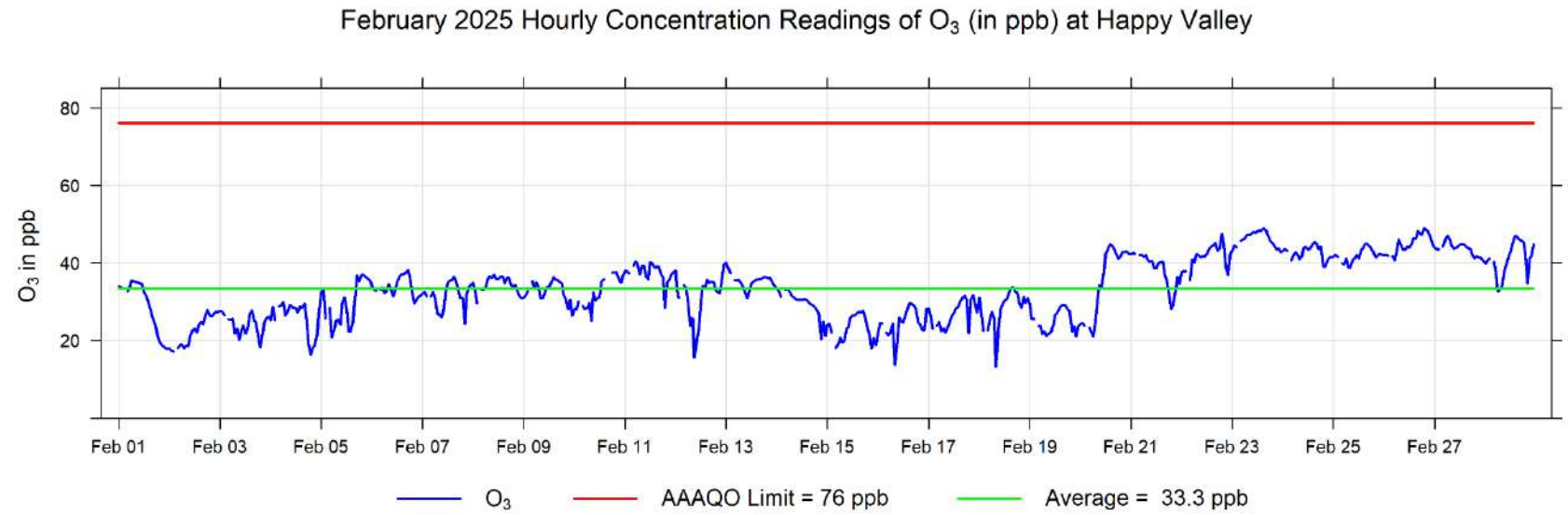

February 2025 Hourly Concentration Readings of TRS (in ppb) at Happy Valley
TRS in ppb
10
8
6
4
2
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
TRS
Average = 0.4 ppb

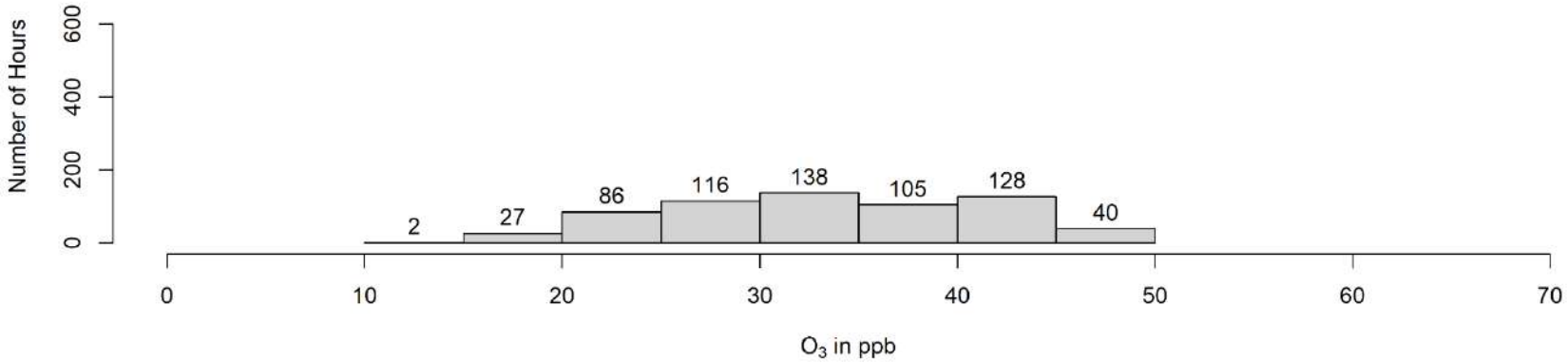

February 2025 Hourly Concentration Readings of NO (in ppb) at Happy Valley
NO in ppb
150
100
50
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
NO
Average = 0.8 ppb

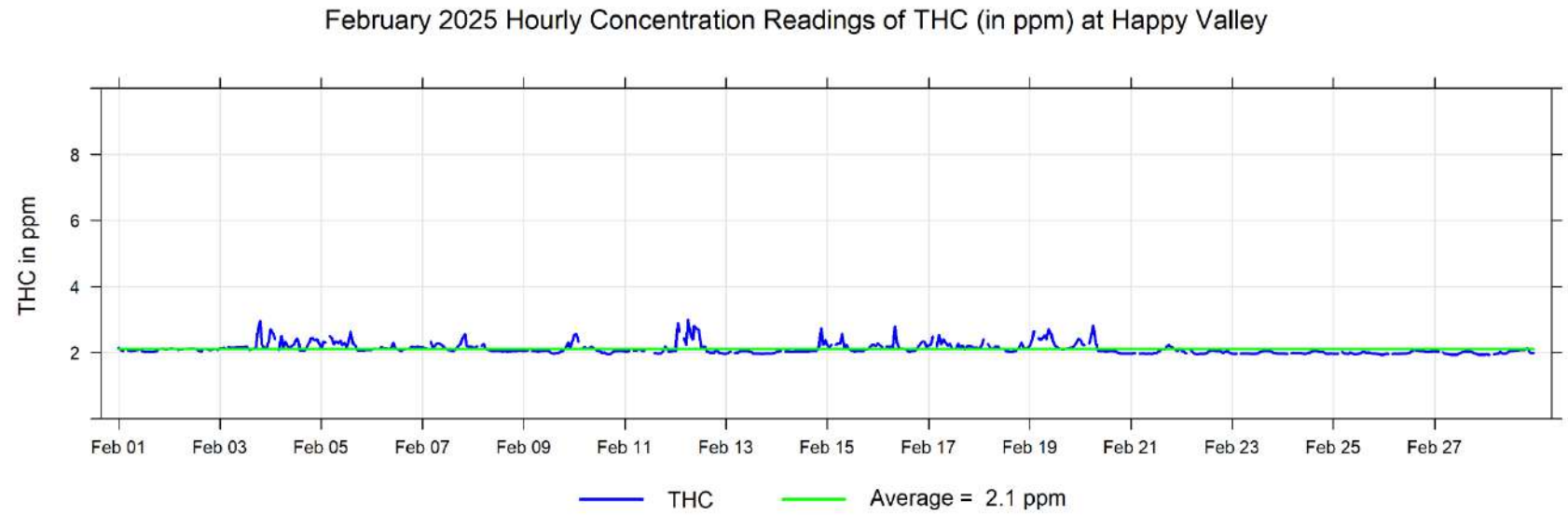

February 2025 Hourly Concentration Readings of NOx (in ppb) at Happy Valley
NOx in ppb
150
100
50
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
NOx
Average = 4.5 ppb

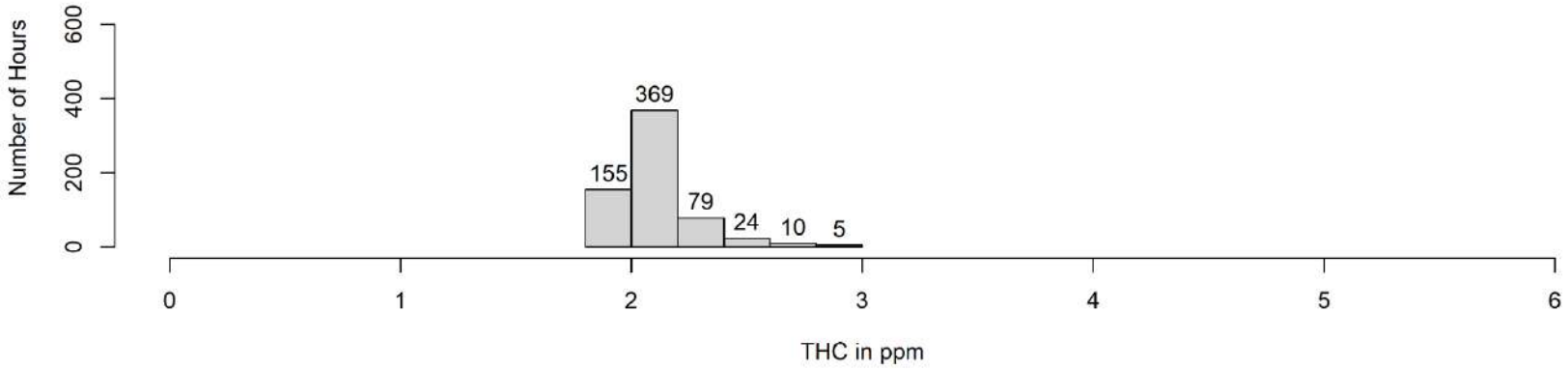

February 2025 Hourly Concentration Readings of NO2 (in ppb) at Happy Valley
NO2 in ppb
150
100
50
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
NO2
AAAQO Limit = 159 ppb
Average = 3.6 ppb

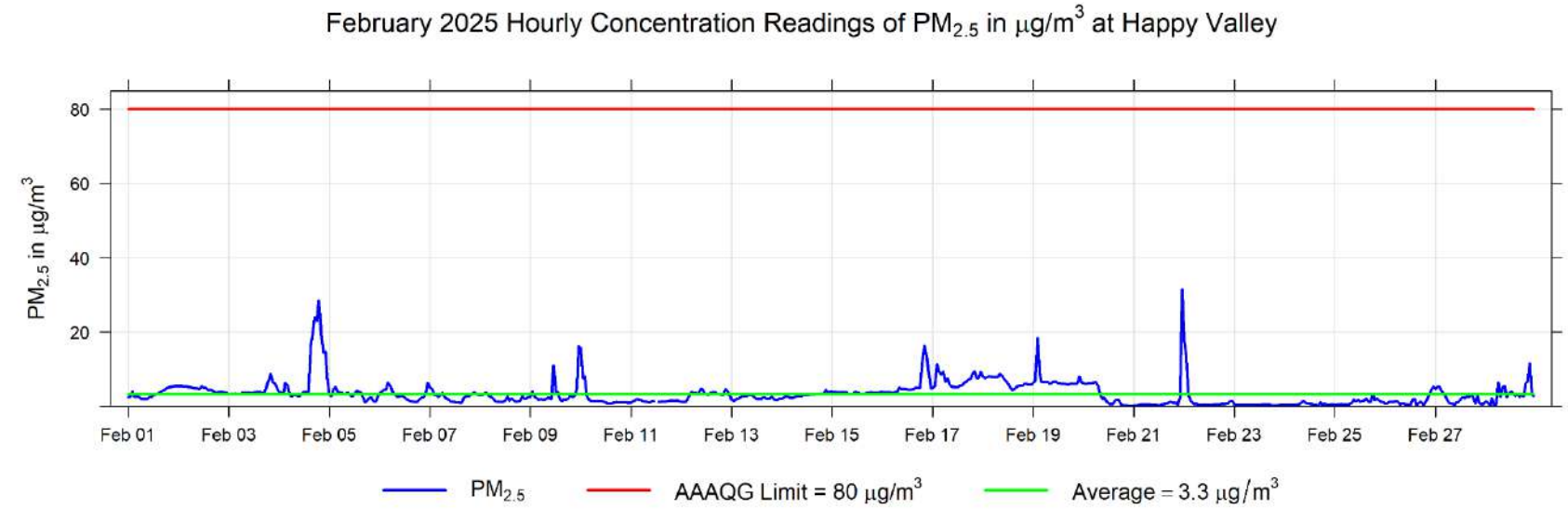

Number of Hours
0
200
400
600
252
160
107
68
24
16
7
3
1
2
0
5
10
15
20
25
30
35
NO2 in ppb

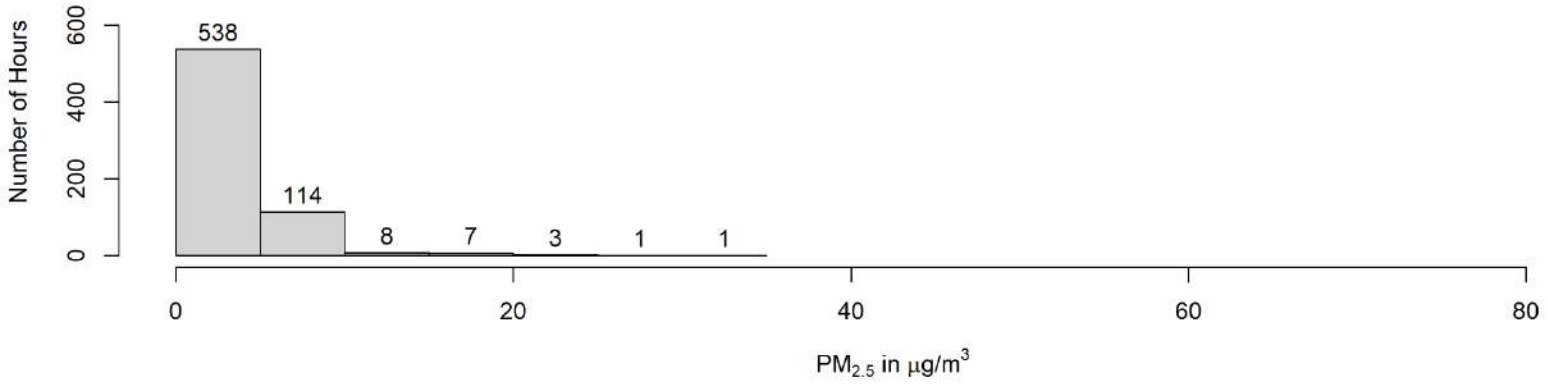

February 2025 Hourly Concentration Readings of O_3 (in ppb) at Happy Valley
O_3 in ppb
80
60
40
20
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
O_3
AAAQO Limit = 76 ppb
Average = 33.3 ppb

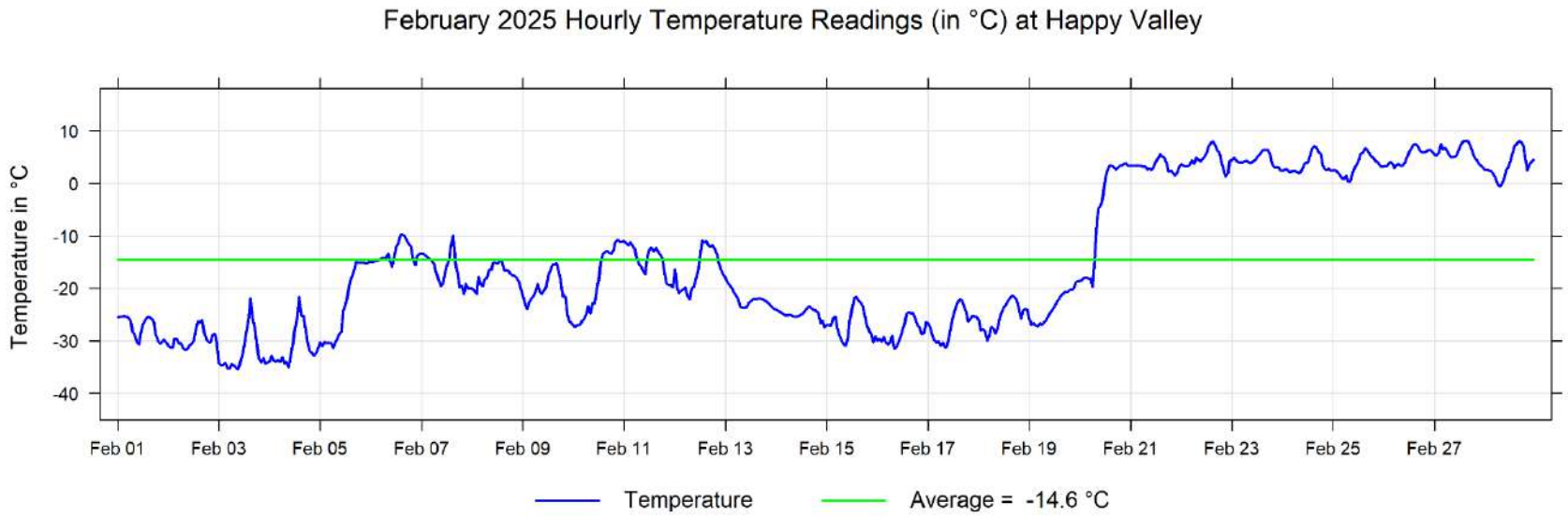

Number of Hours
0
200
400
600
2
27
86
116
138
105
128
40
0
10
20
30
40
50
60
70
O_3 in ppb

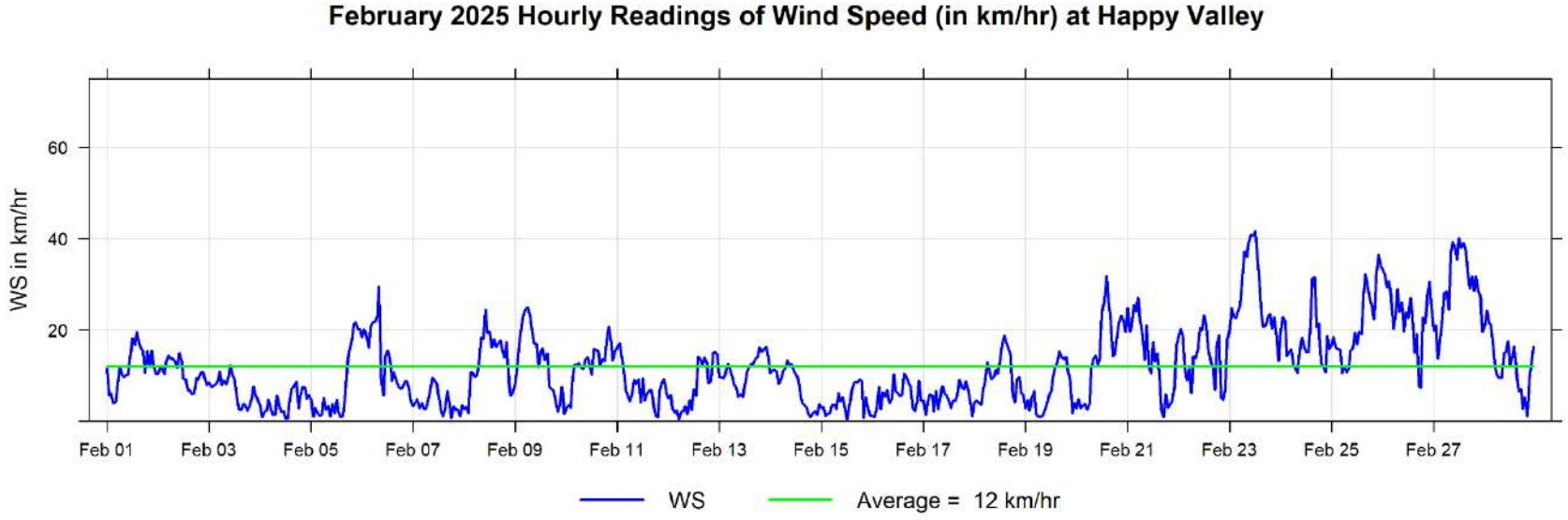

February 2025 Hourly Concentration Readings of THC (in ppm) at Happy Valley
THC in ppm
8
6
4
2
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
THC
Average = 2.1 ppm


Number of Hours
0
200
400
600
369
155
79
24
10
5
0
1
2
3
4
5
6
THC in ppm

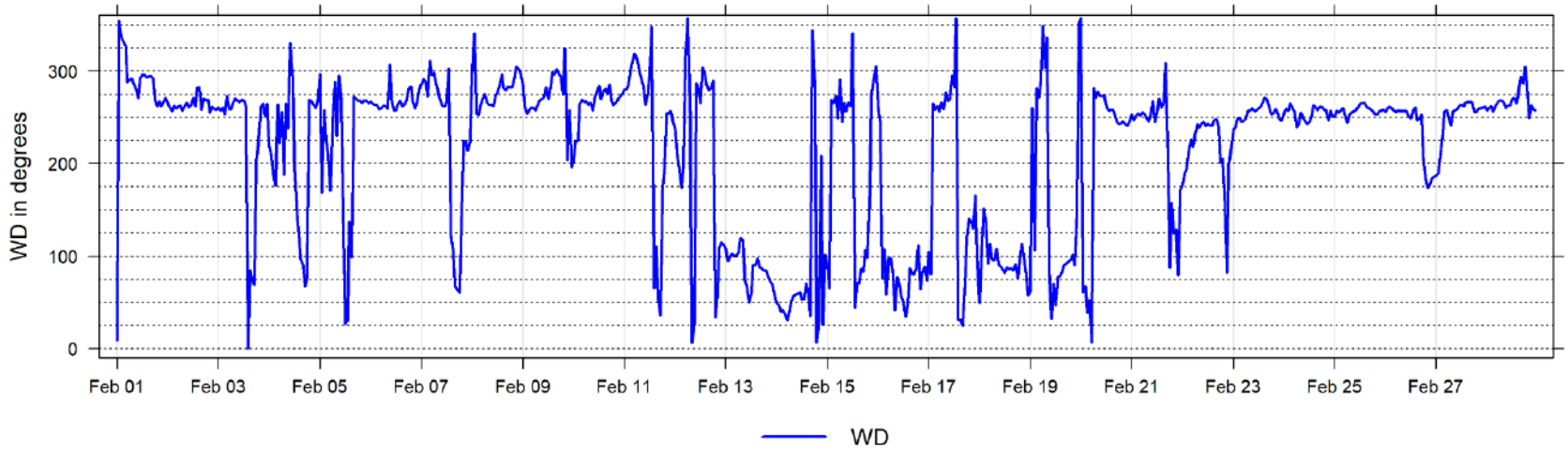

February 2025 Hourly Concentration Readings of PM2.5 in µg/m3 at Happy Valley
PM2.5 in µg/m3
80
60
40
20
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
PM2.5
AAAQG Limit = 80 µg/m3
Average = 3.3 µg/m3


Number of Hours
0
200
400
600
538
114
8
7
3
1
1
0
20
40
60
80
PM2.5 in µg/m3

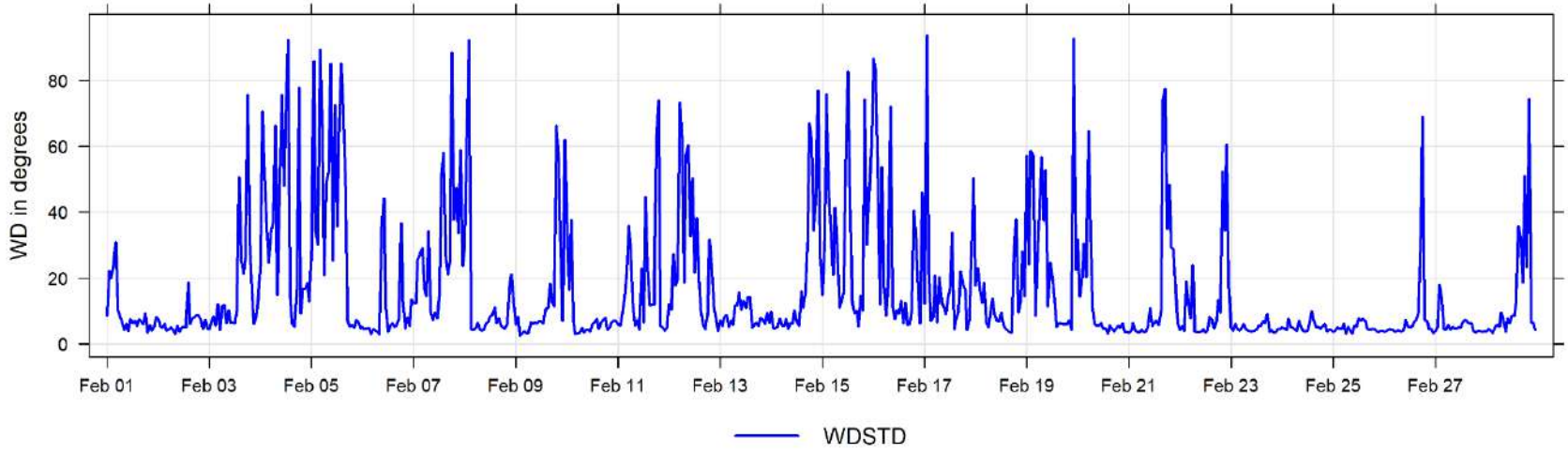

February 2025 Hourly Temperature Readings (in °C) at Happy Valley
Temperature in °C
10
0
-10
-20
-30
-40
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
Temperature
Average = -14.6 °C

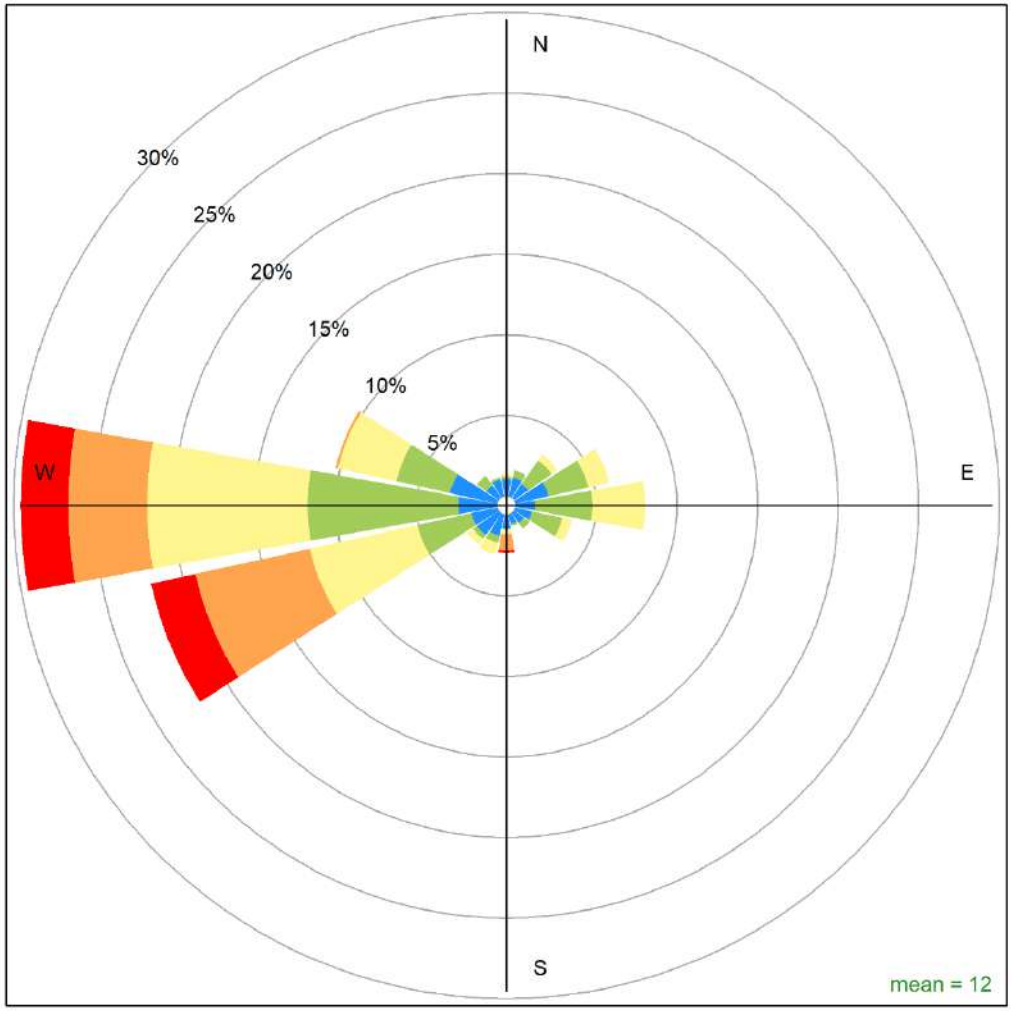

February 2025 Hourly Readings of Wind Speed (in km/hr) at Happy Valley
WS in km/hr
60
40
20
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
WS
Average = 12 km/hr

February 2025 Hourly Readings of Wind Direction (in degrees) at Happy Valley



February 2025 Hourly Readings of Wind Direction Standared Deviation (in degrees) at Happy Valley



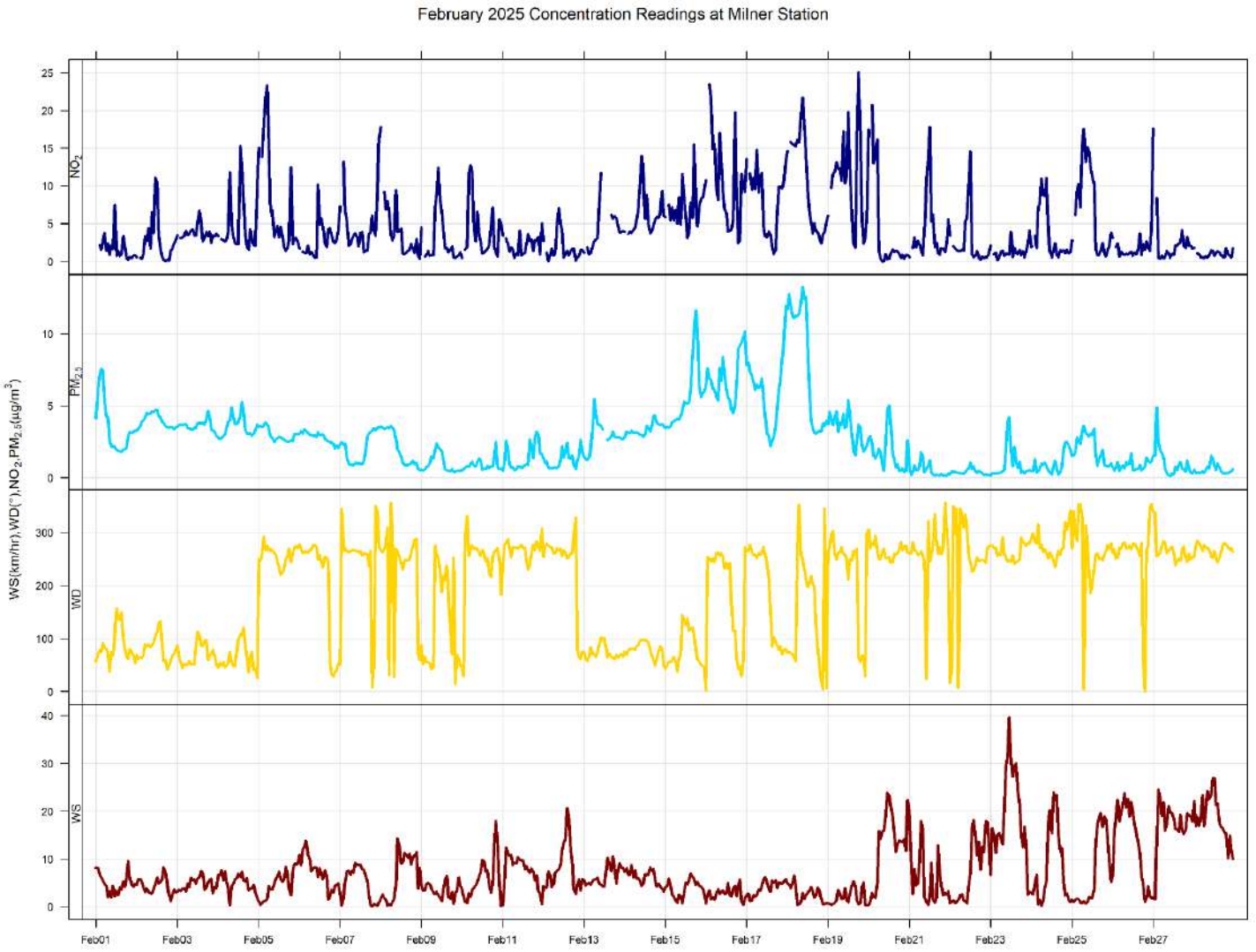


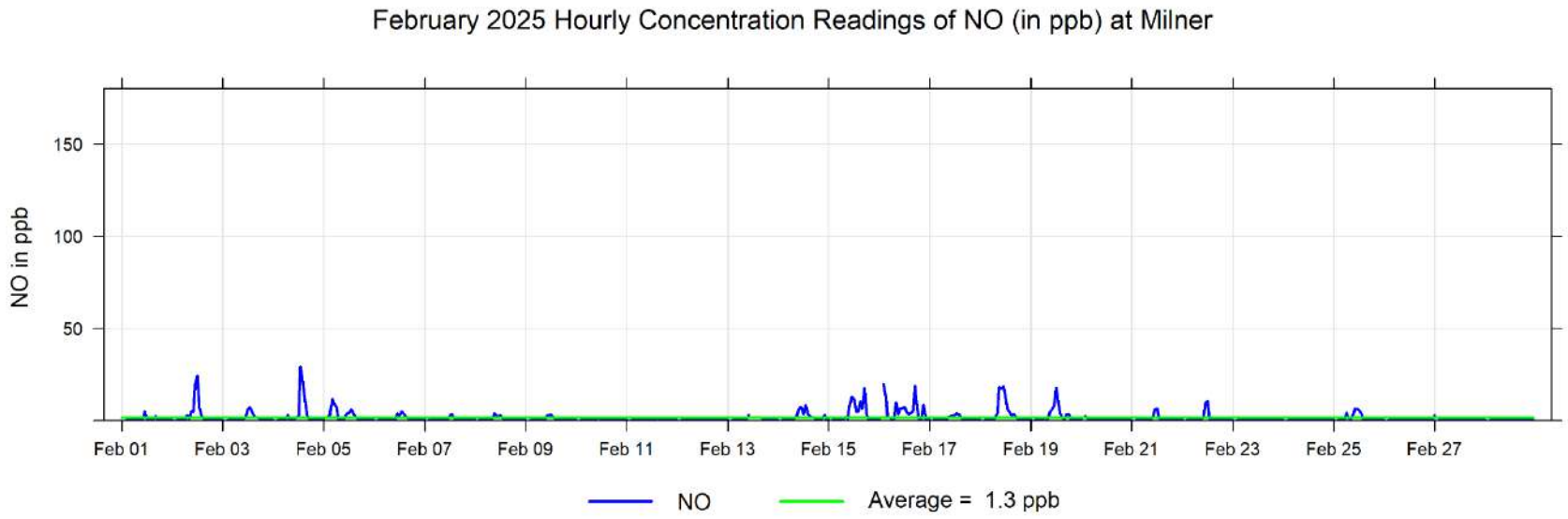
Happy Valley February 2025 Wind Rose, wind speed in km/hr

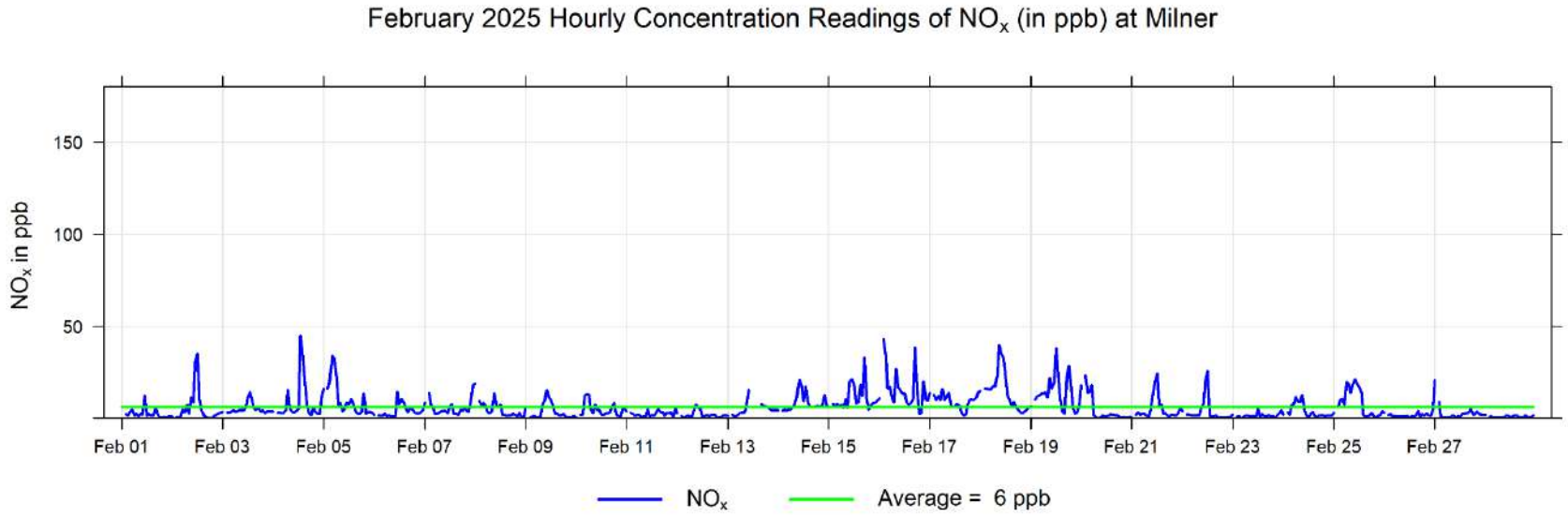
Calms (<1km/hr) = 2.2 %

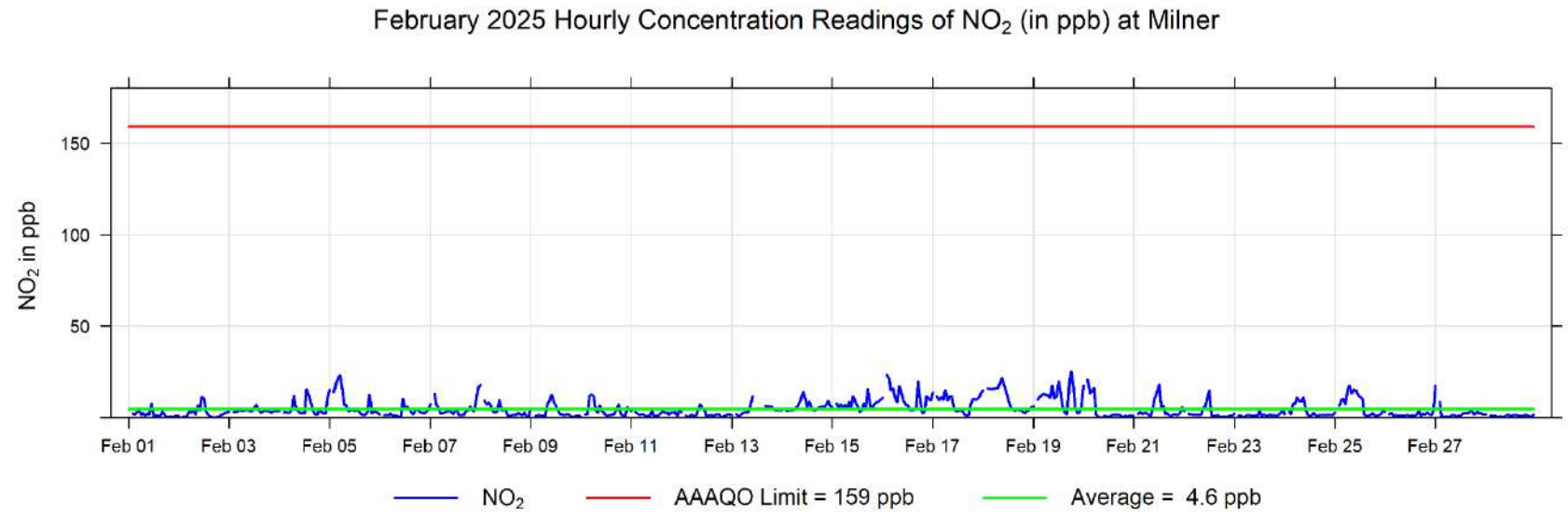
9 Milner Charts

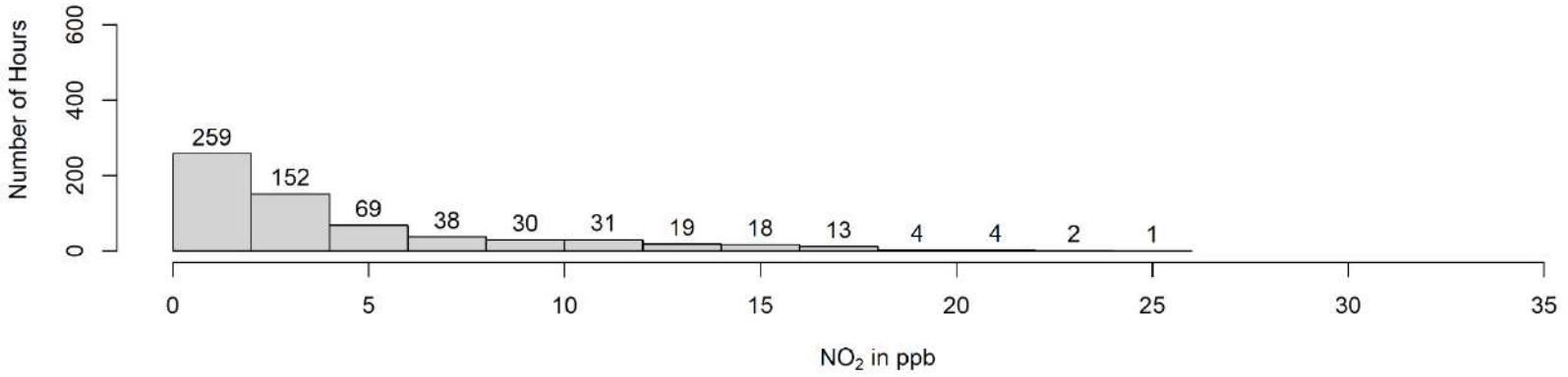
The following pages include the charts and histograms for Milner Station

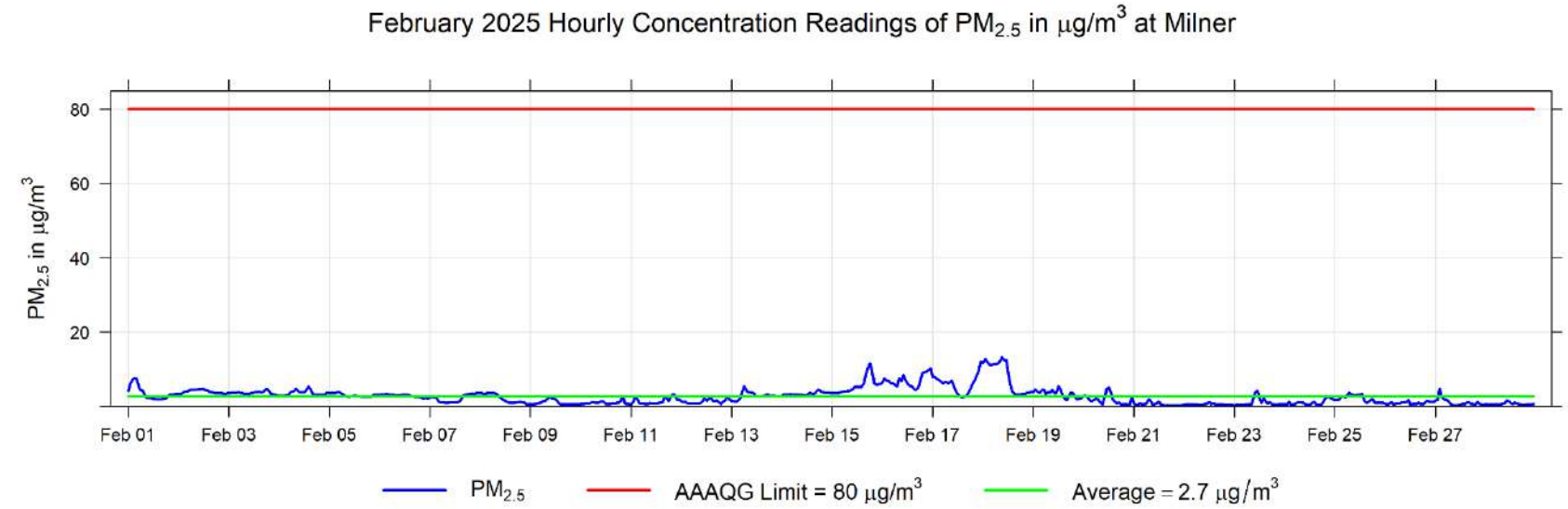


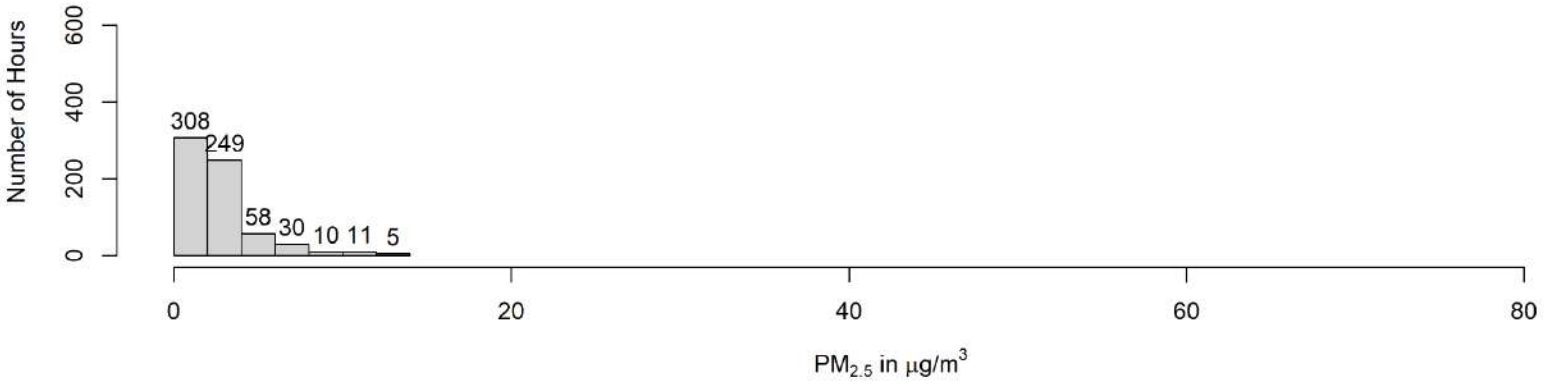

February 2025 Hourly Concentration Readings of NO (in ppb) at Milner
NO in ppb
150
100
50
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
NO
Average = 1.3 ppb

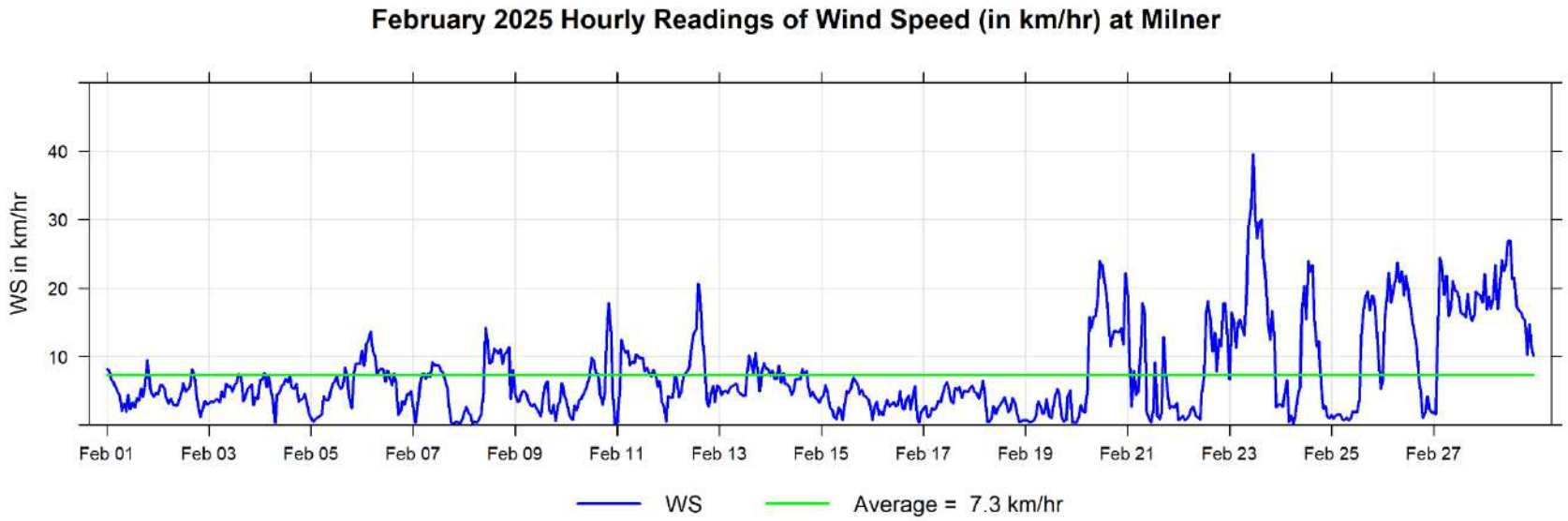

February 2025 Hourly Concentration Readings of NOx (in ppb) at Milner
NOx in ppb
150
100
50
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
NOx
Average = 6 ppb

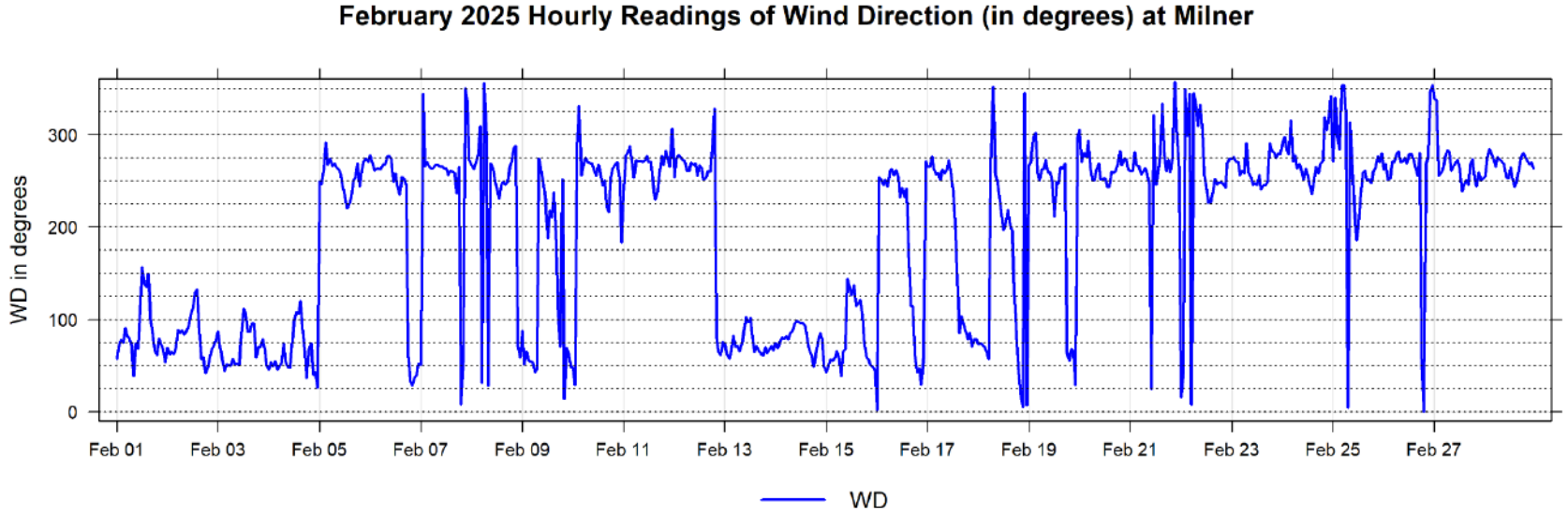

February 2025 Hourly Concentration Readings of NO2 (in ppb) at Milner
NO2 in ppb
150
100
50
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
NO2
AAAQO Limit = 159 ppb
Average = 4.6 ppb

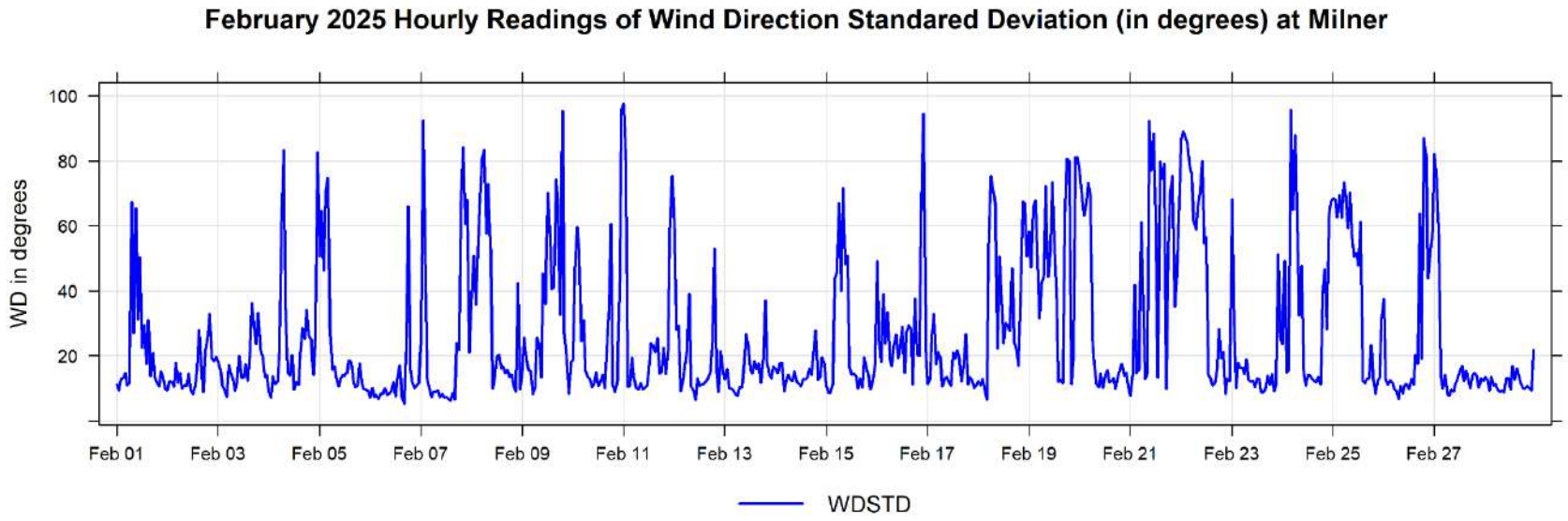

Number of Hours
0
200
400
600
259
152
69
38
30
31
19
18
13
4
4
2
1
0
5
10
15
20
25
30
35
NO2 in ppb

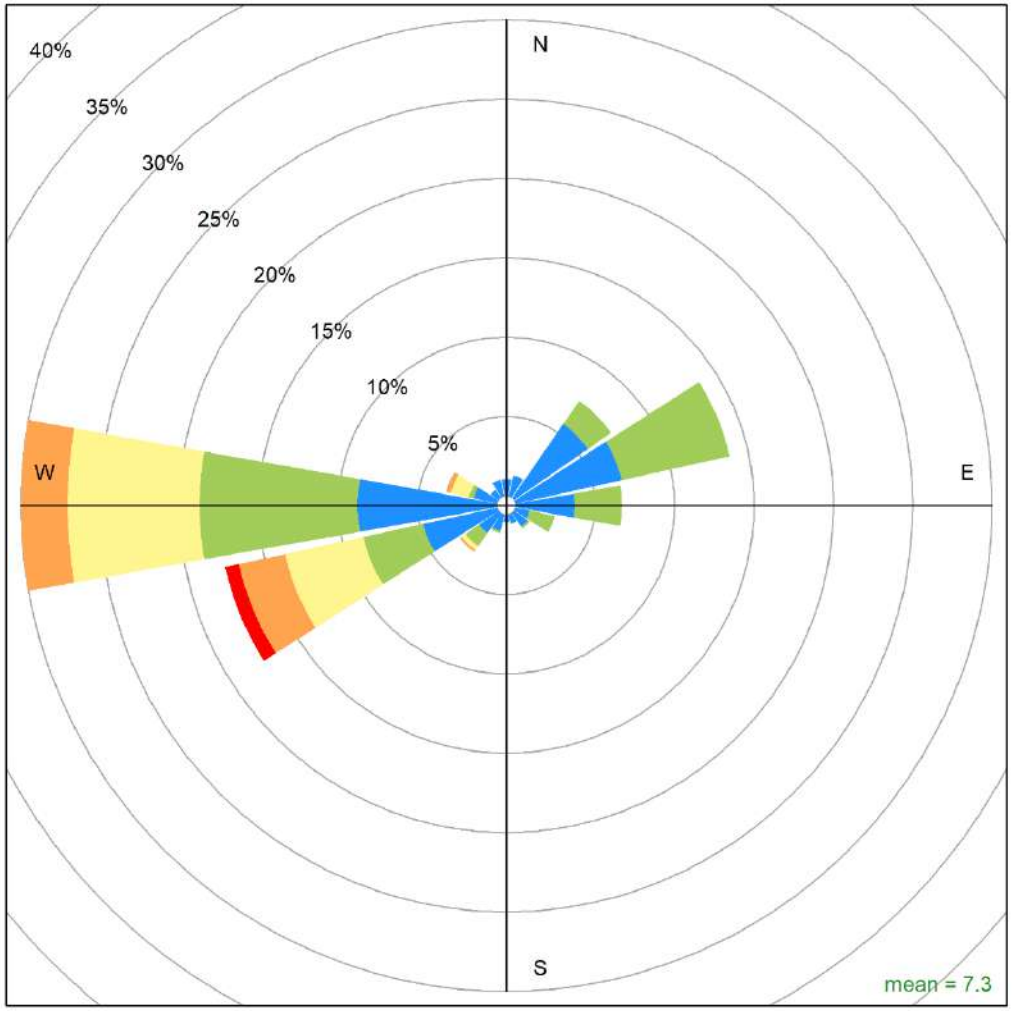

February 2025 Hourly Concentration Readings of PM2.5 in µg/m3 at Milner
PM2.5 in µg/m3
80
60
40
20
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
PM2.5
AAAQG Limit = 80 µg/m3
Average = 2.7 µg/m3


Number of Hours
0
200
400
600
308
249
58
30
10
11
5
0
20
40
60
80
PM2.5 in µg/m3


February 2025 Hourly Readings of Wind Speed (in km/hr) at Milner
WS in km/hr
40
30
20
10
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
WS
Average = 7.3 km/hr


February 2025 Hourly Readings of Wind Direction (in degrees) at Milner
WD in degrees
300
200
100
0
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
WD

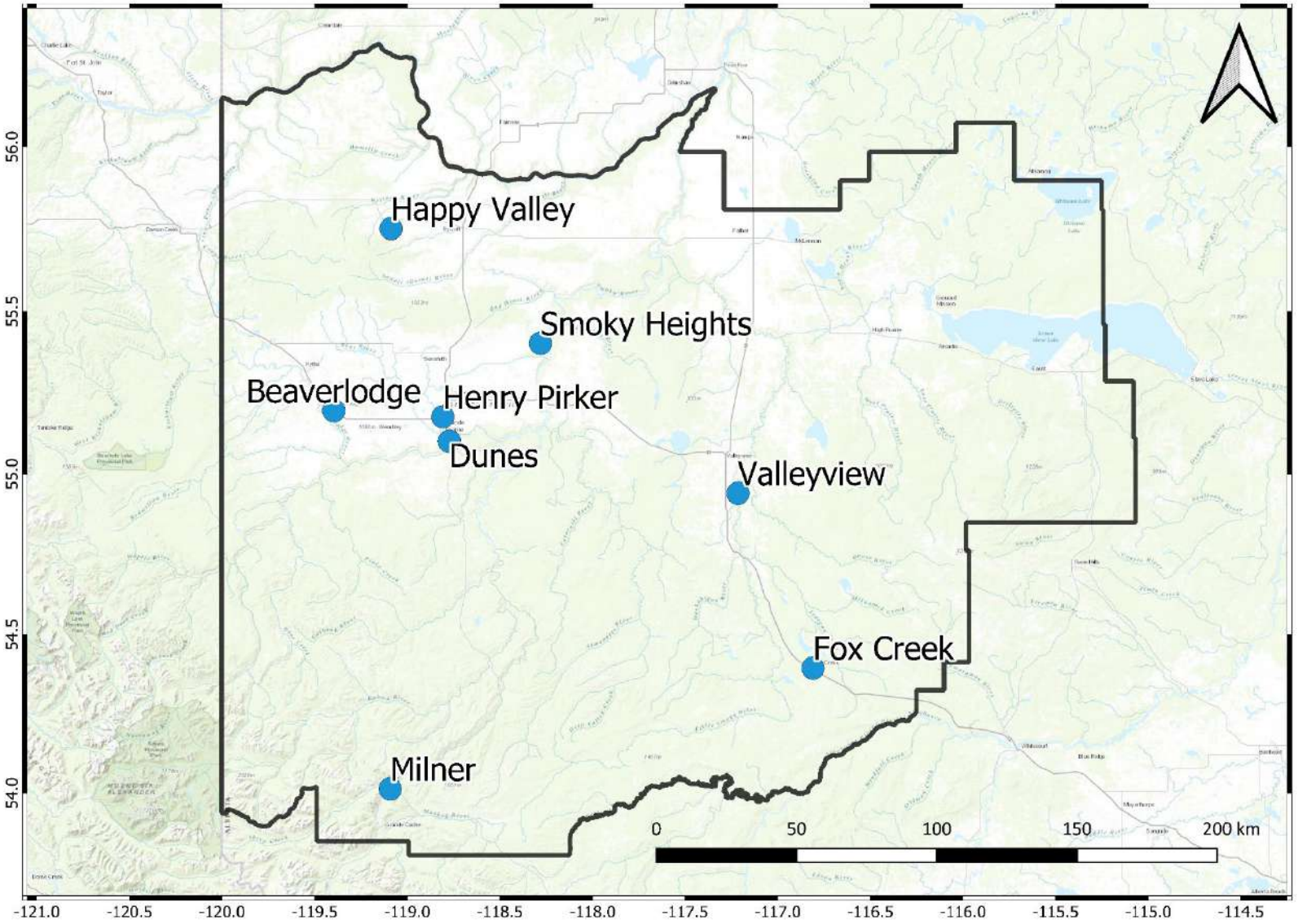

February 2025 Hourly Readings of Wind Direction Standared Deviation (in degrees) at Milner
WD in degrees
100
80
60
40
20
Feb 01
Feb 03
Feb 05
Feb 07
Feb 09
Feb 11
Feb 13
Feb 15
Feb 17
Feb 19
Feb 21
Feb 23
Feb 25
Feb 27
WDSTD



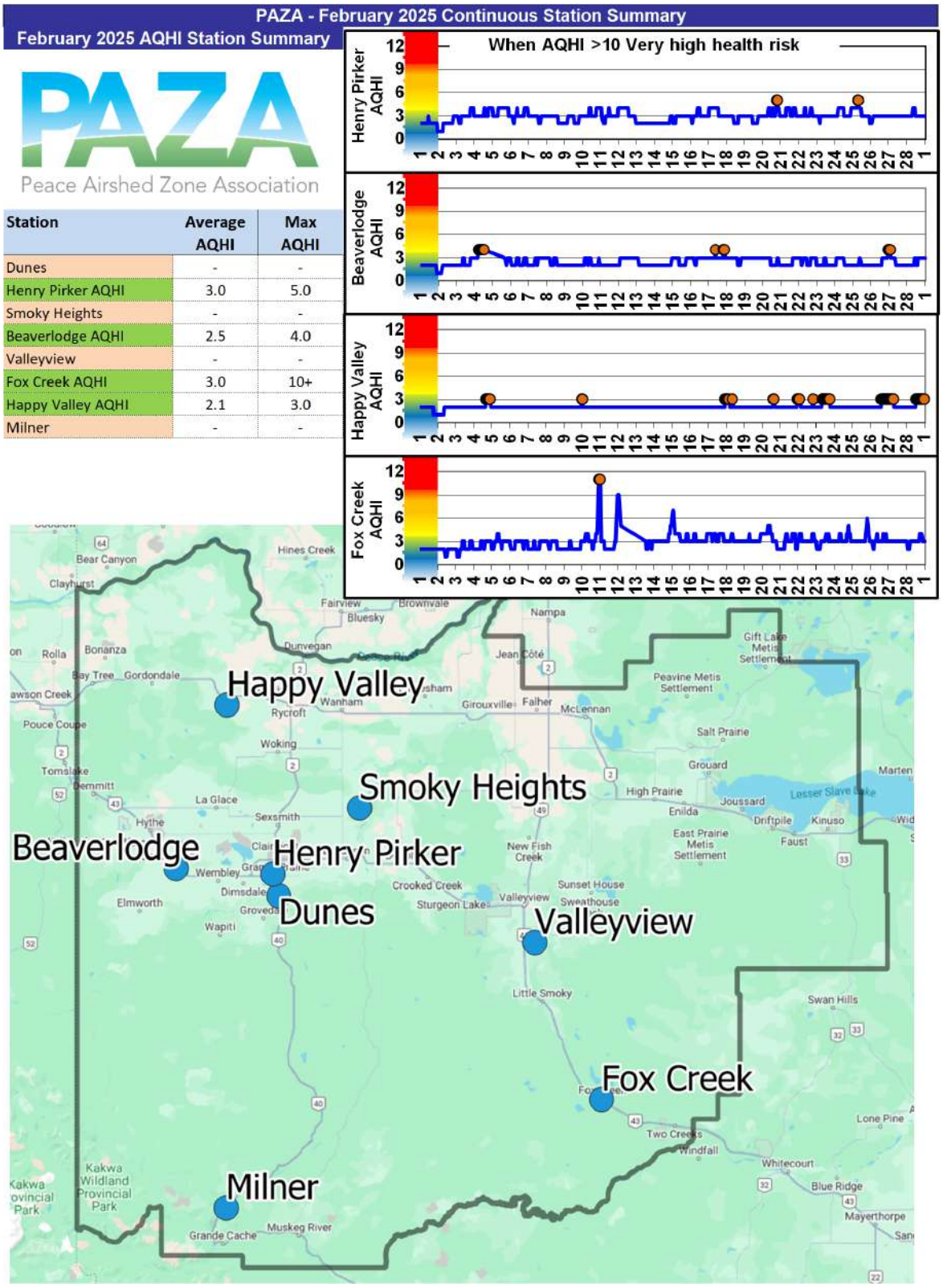
Milner February 2025 Wind Rose, wind speed in km/hr

Calms (<1km/hr) = 8.3 %

10 Concentration Summaries and Roses for PAZA

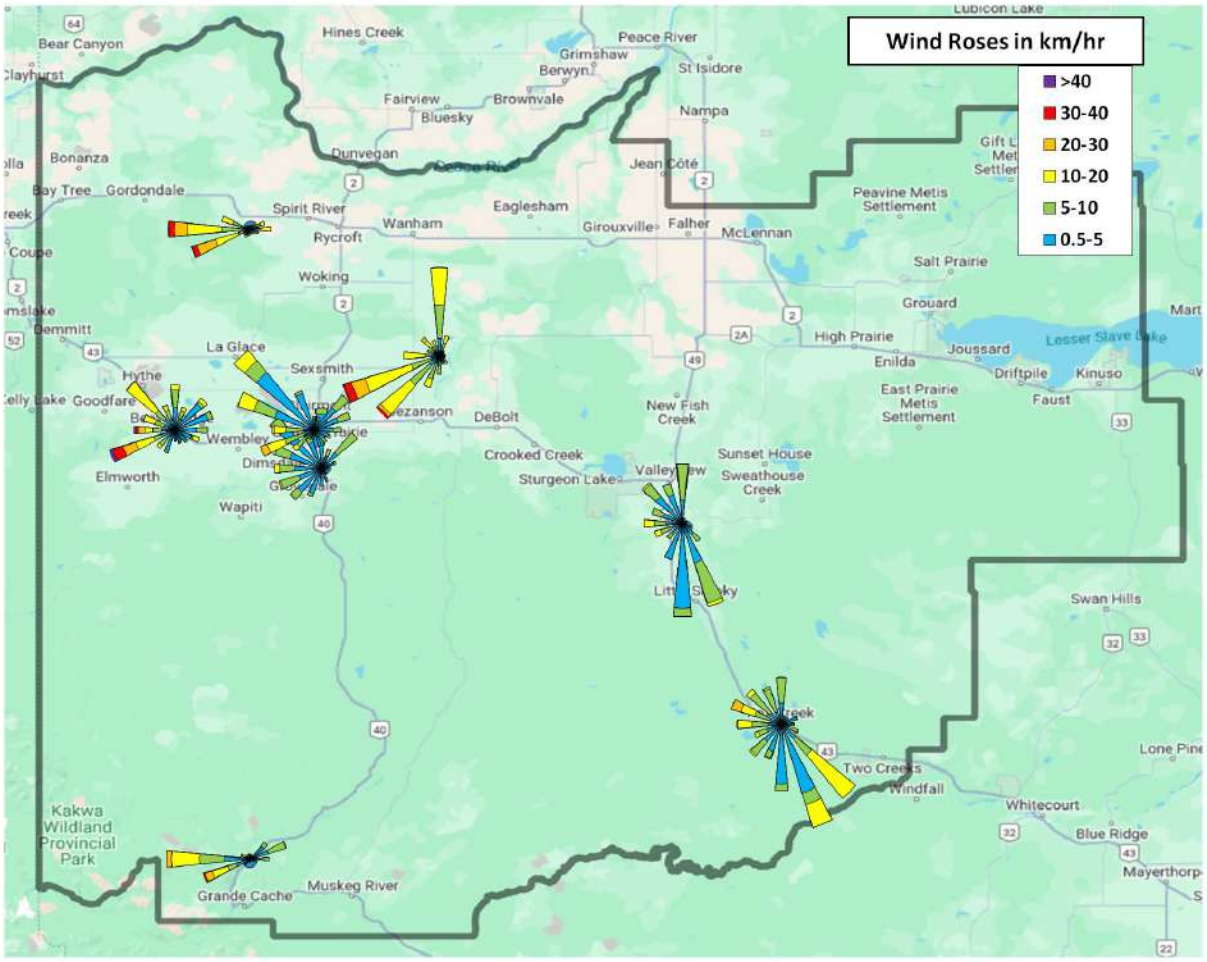


10.1 Air Quality Health Index (AQHI) Plots



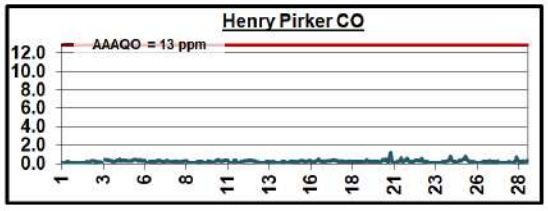
Station	Average AQHI	Max AQHI
Dunes	-	-
Henry Pirker AQHI	3.0	5.0
Smoky Heights	-	-
Beaverlodge AQHI	2.5	4.0
Valleyview	-	-
Fox Creek AQHI	3.0	10+
Happy Valley AQHI	2.1	3.0
Milner	-	-

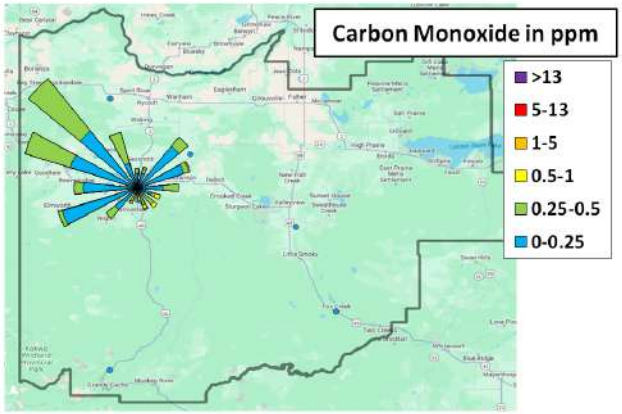
10.2 Wind Roses



10.3 Carbon Monoxide (CO) Plots

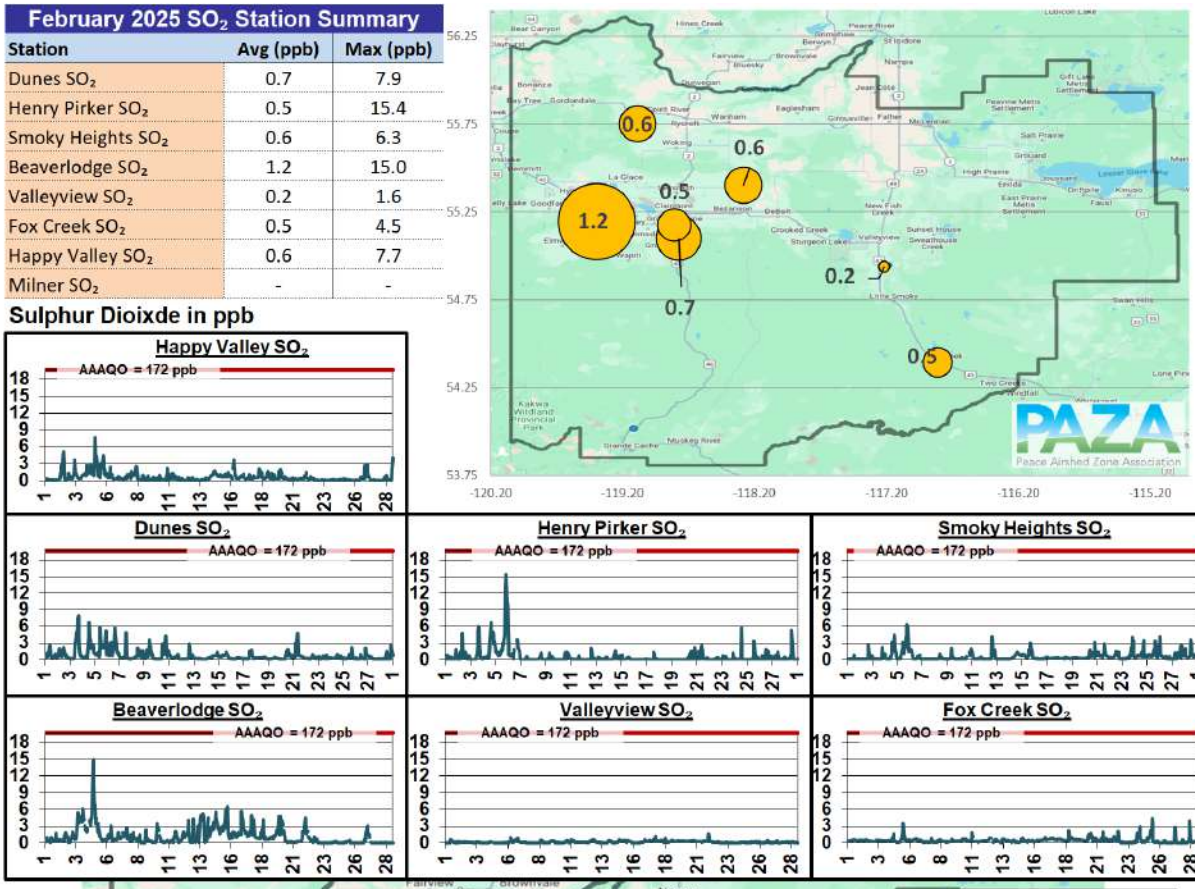
February 2025 CO Station Summary		
Station	Avg (ppm)	Max (ppm)
Henry Pirker CO	0.25	1.26

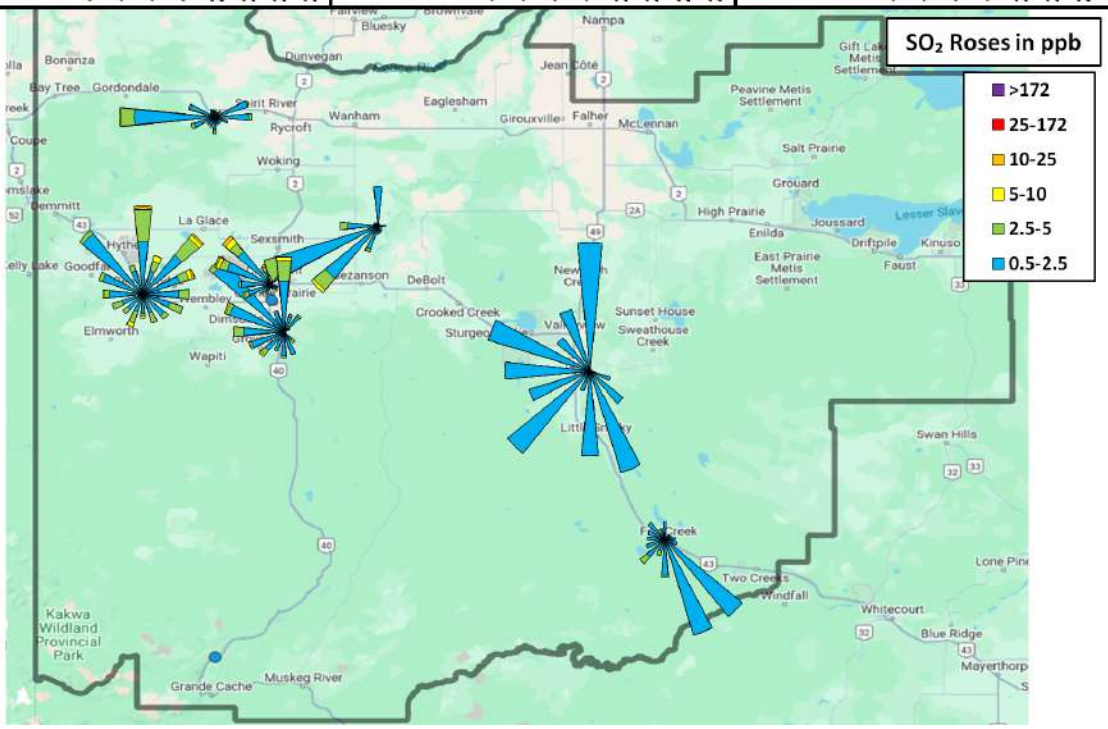




10.4 Sulphur Dioxide (SO_2) Plots

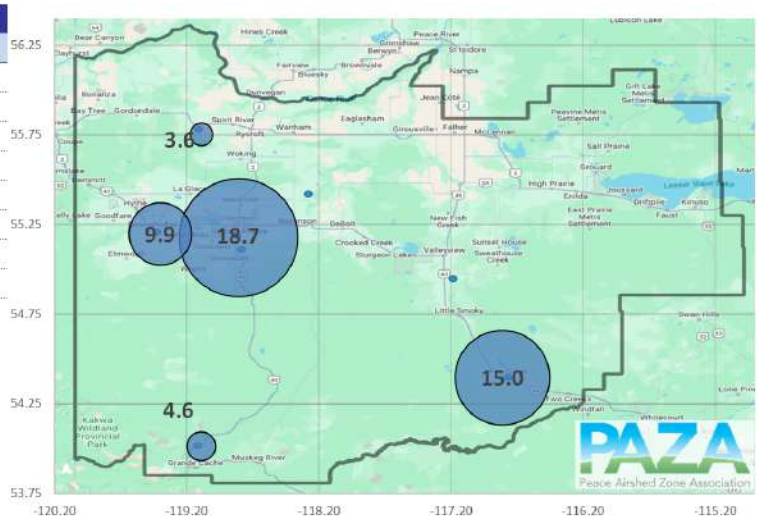
February 2025 SO_2 Station Summary		
Station	Avg (ppb)	Max (ppb)
Dunes SO_2	0.7	7.9
Henry Pirker SO_2	0.5	15.4
Smoky Heights SO_2	0.6	6.3
Beaverlodge SO_2	1.2	15.0
Valleyview SO_2	0.2	1.6
Fox Creek SO_2	0.5	4.5
Happy Valley SO_2	0.6	7.7
Milner SO_2	-	-



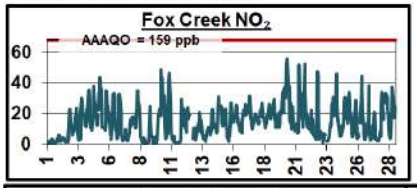


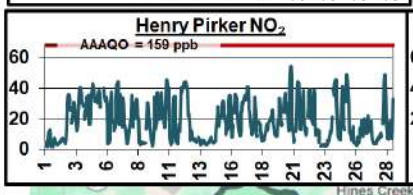
10.5 Nitrogen Dioxide (NO_2) Plots

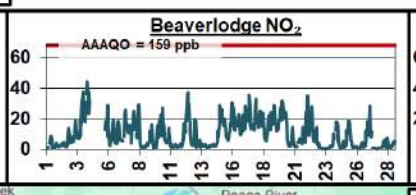
February 2025 NO_2 Station Summary		
Station	Avg (ppb)	Max (ppb)
Dunes NO_2	-	-
Henry Pirker NO_2	18.7	54.3
Smoky Heights NO_2	-	-
Beaverlodge NO_2	9.9	44.6
Valleyview NO_2	-	-
Fox Creek NO_2	15.0	55.7
Happy Valley NO_2	3.6	19.4
Milner NO_2	4.6	25.0

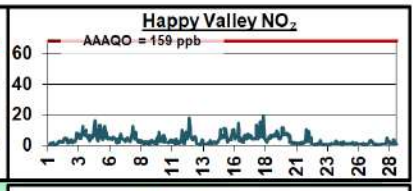


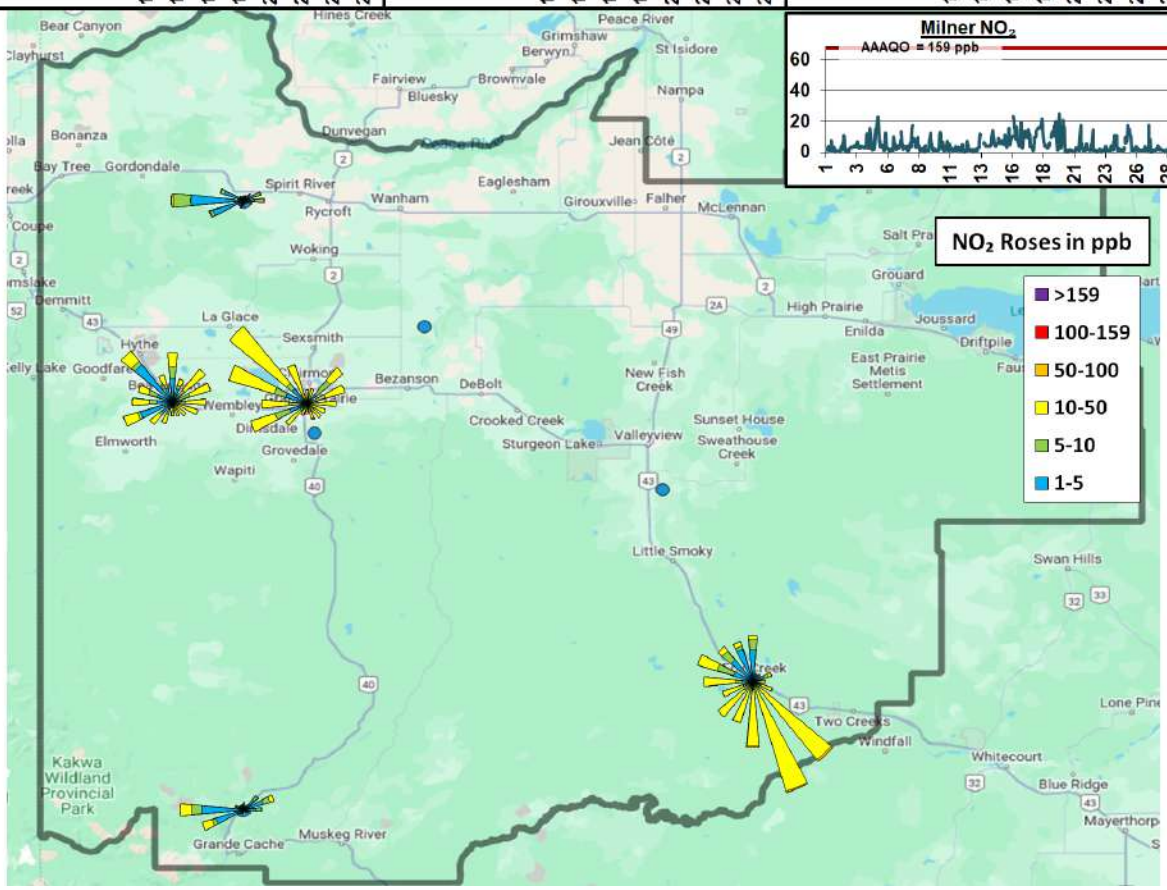
Nitrogen Dioixde in ppb





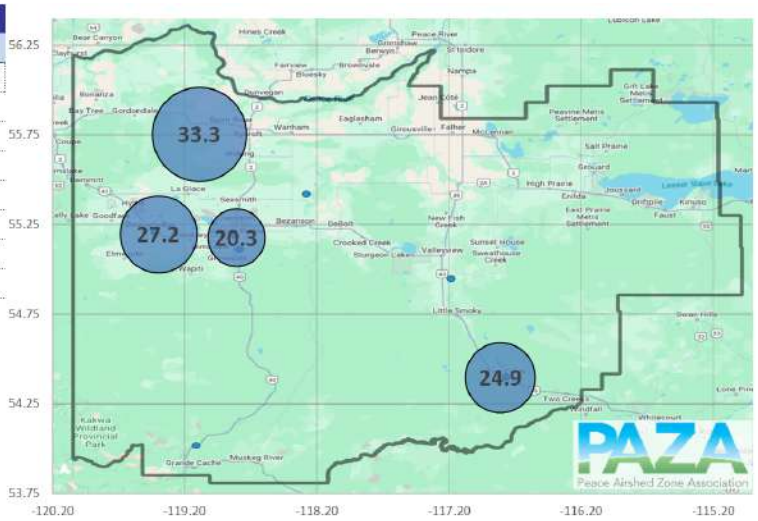




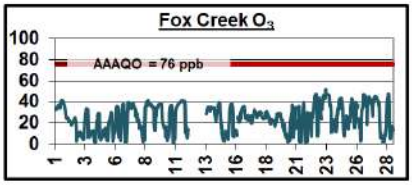


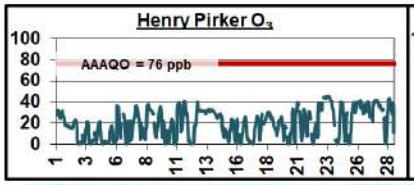
10.6 Ozone (O_3) Plots

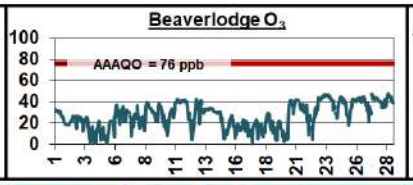
February 2025 O_3 Station Summary		
Station	Avg (ppb)	Max (ppb)
Dunes O_3	-	-
Henry Pirker O_3	20.3	45.4
Smoky Heights O_3	-	-
Beaverlodge O_3	27.2	47.6
Valleyview O_3	-	-
Fox Creek O_3	24.9	51.6
Happy Valley O_3	33.3	48.9
Milner O_3	-	-

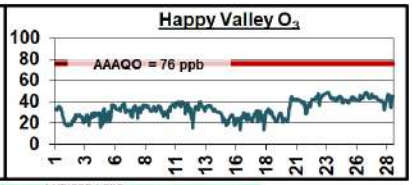


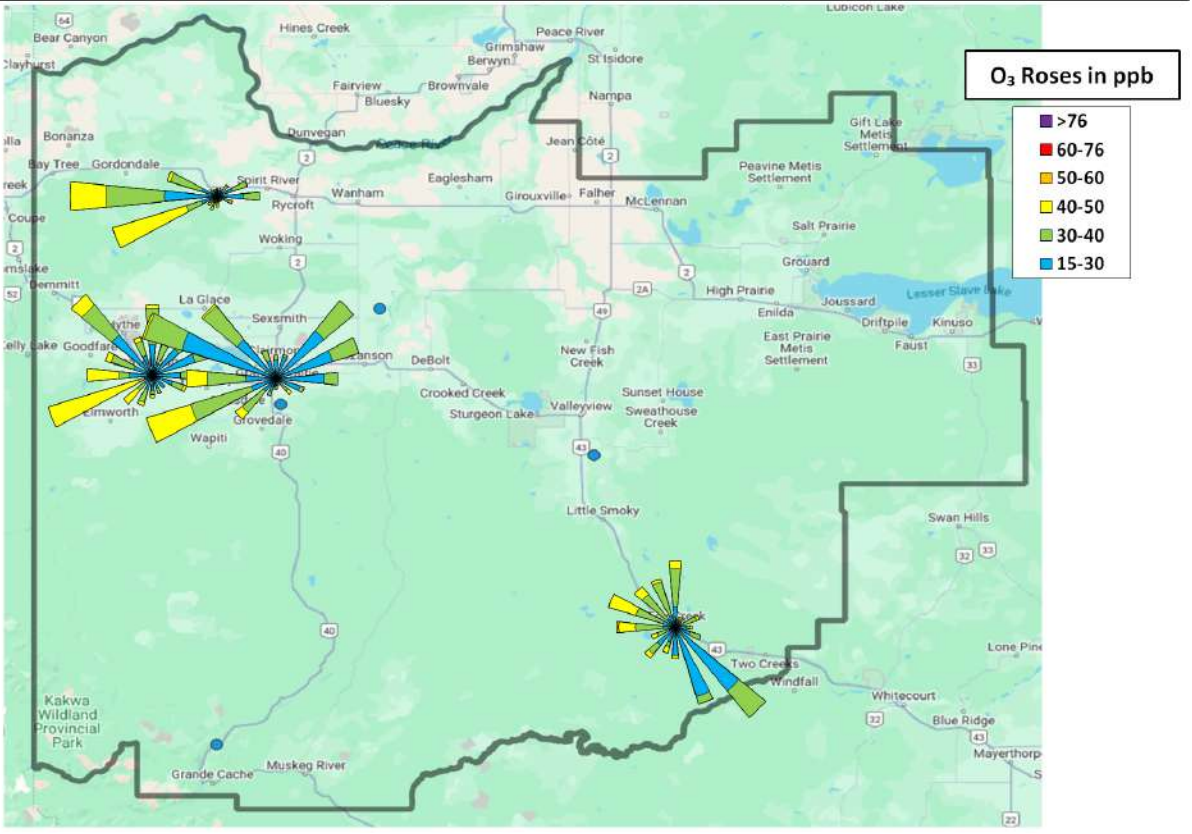
Ozone in ppb





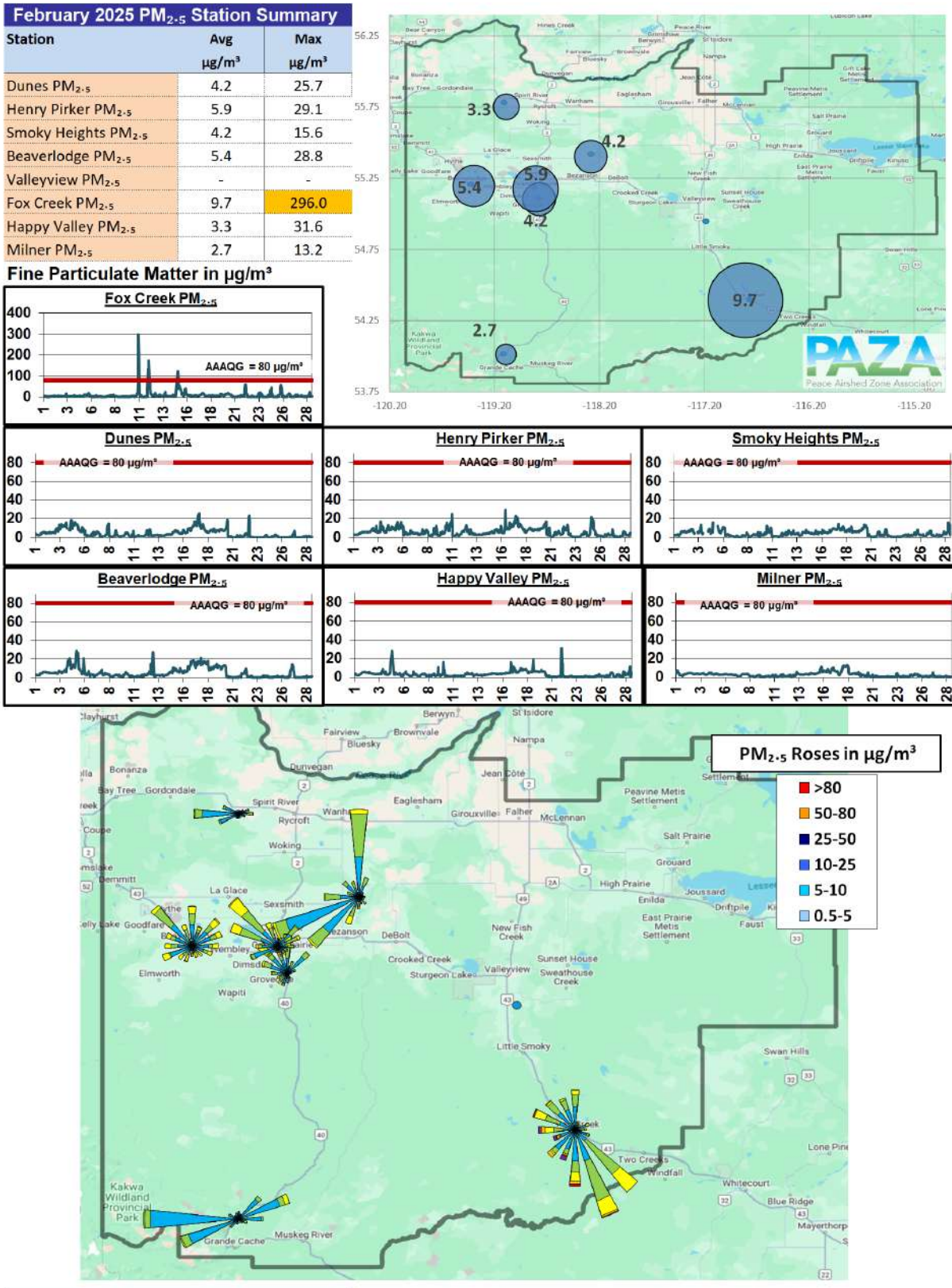






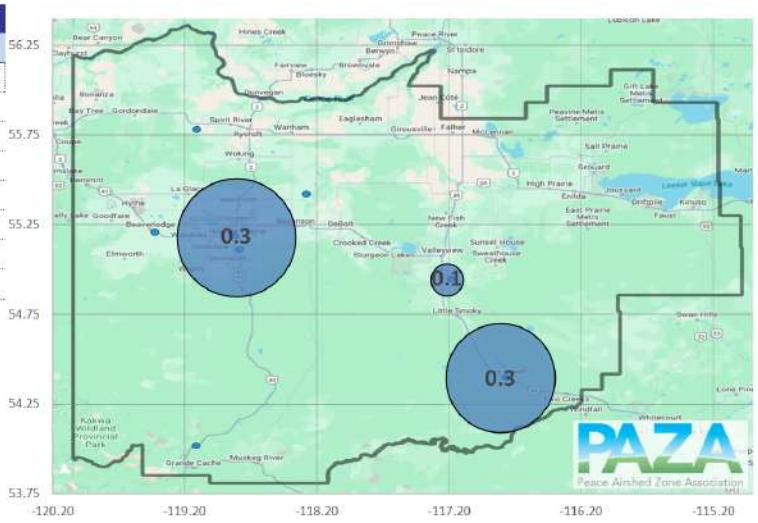
10.7 Fine Particulate Matter ($PM_{2.5}$) Plots

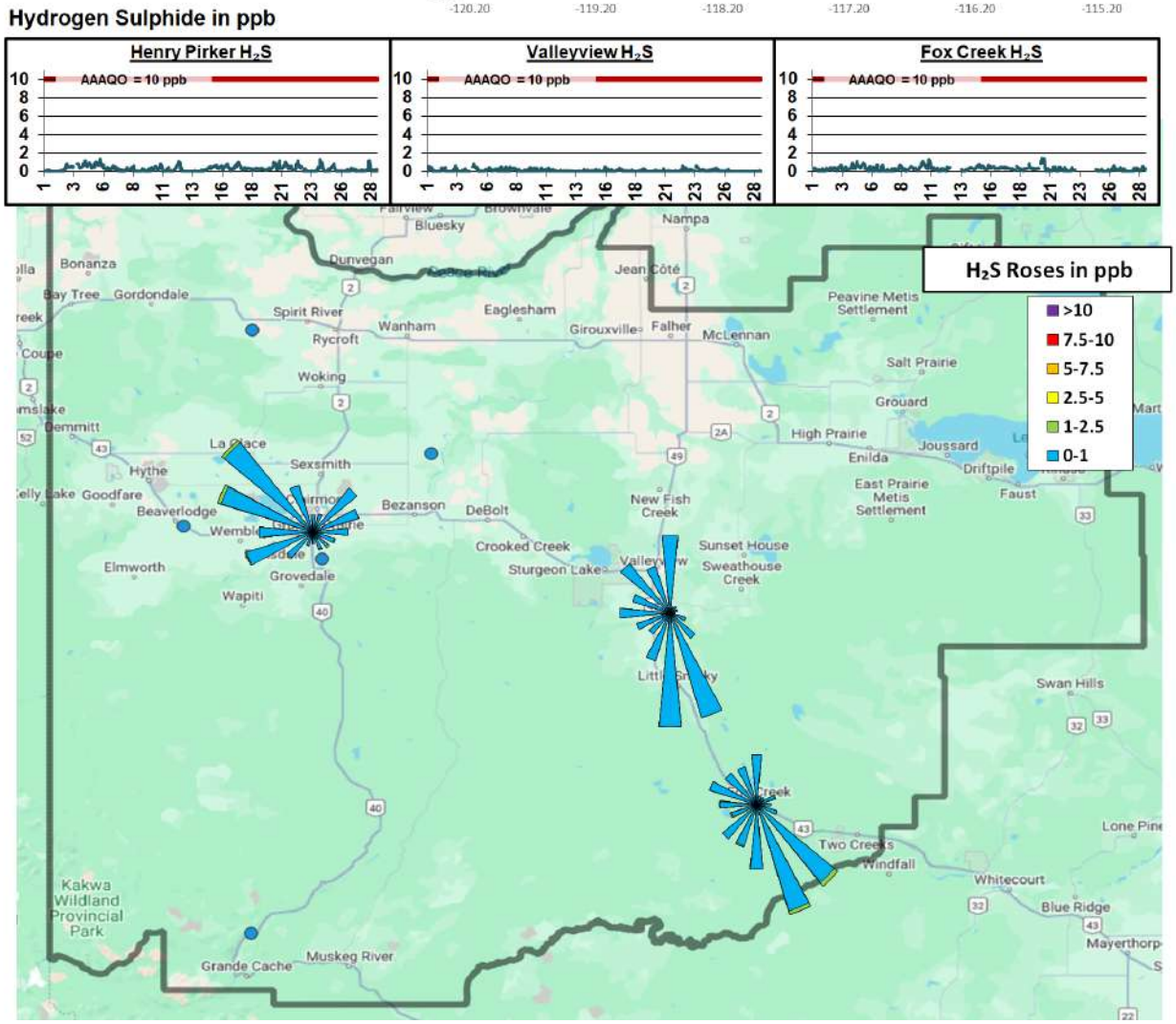
February 2025 $PM_{2.5}$ Station Summary		
Station	Avg µg/m³	Max µg/m³
Dunes $PM_{2.5}$	4.2	25.7
Henry Pirker $PM_{2.5}$	5.9	29.1
Smoky Heights $PM_{2.5}$	4.2	15.6
Beaverlodge $PM_{2.5}$	5.4	28.8
Valleyview $PM_{2.5}$	-	-
Fox Creek $PM_{2.5}$	9.7	296.0
Happy Valley $PM_{2.5}$	3.3	31.6
Milner $PM_{2.5}$	2.7	13.2



10.8 Hydrogen Sulphide (H_2S) Plots

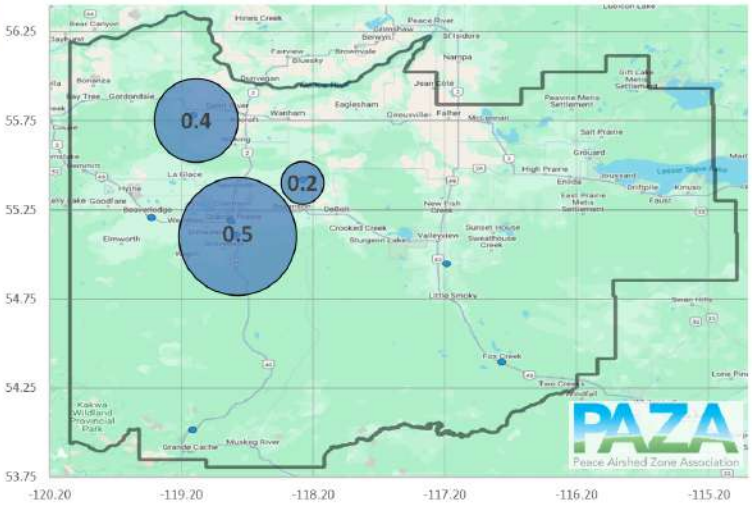
February 2025 H_2S Station Summary		
Station	Avg (ppb)	Max (ppb)
Dunes H_2S	-	-
Henry Pirker H_2S	0.3	1.4
Smoky Heights H_2S	-	-
Beaverlodge H_2S	-	-
Valleyview H_2S	0.1	0.8
Fox Creek H_2S	0.3	1.4
Happy Valley H_2S	-	-
Milner H_2S	-	-

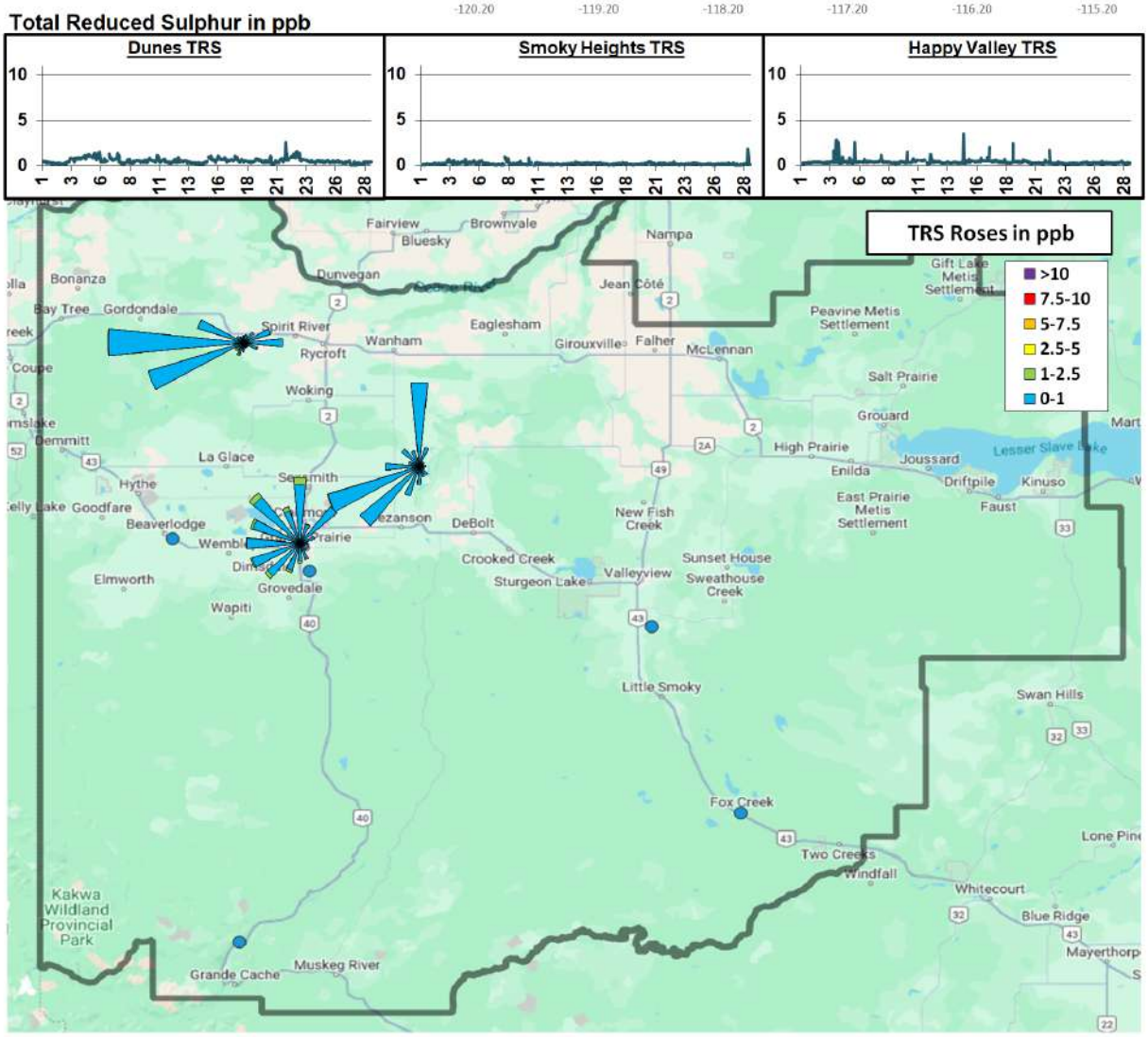




10.9 Total Reduced Sulphur (TRS) Plots

February 2025 TRS Station Summary		
Station	Avg (ppb)	Max (ppb)
Dunes TRS	0.5	2.5
Henry Pirker TRS	-	-
Smoky Heights TRS	0.2	1.8
Beaverlodge TRS	-	-
Valleyview TRS	-	-
Fox Creek TRS	-	-
Happy Valley TRS	0.4	3.5
Milner TRS	-	-



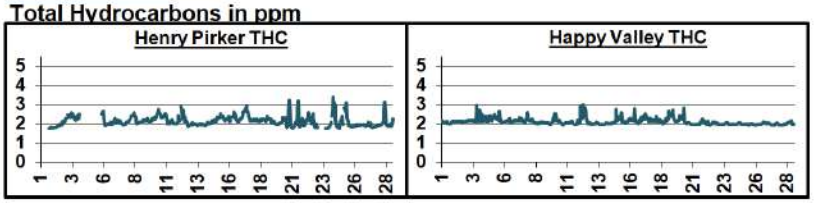


10.10 Total Hydrocarbon (THC) Plots

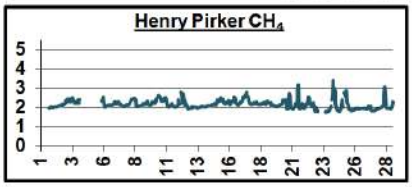
February 2025 THC Station Summary

Station	Total Hydrocarbons		Methane		Non-Methane HCs	
	Avg (ppm)	Max (ppm)	Avg (ppm)	Max (ppm)	Avg (ppm)	Max (ppm)
Dunes THC	-	-	-	-	-	-
Henry Pirker THC	2.1	3.4	2.2	3.4	0.02	0.65
Smoky Heights THC	-	-	-	-	-	-
Beaverlodge THC	-	-	-	-	-	-
Valleyview THC	-	-	-	-	-	-
Fox Creek THC	-	-	-	-	-	-
Happy Valley THC	2.1	3.0	-	-	-	-

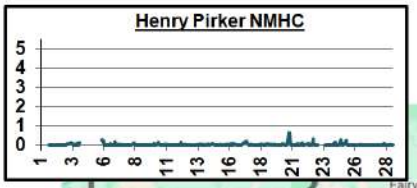
Total Hydrocarbons in ppm



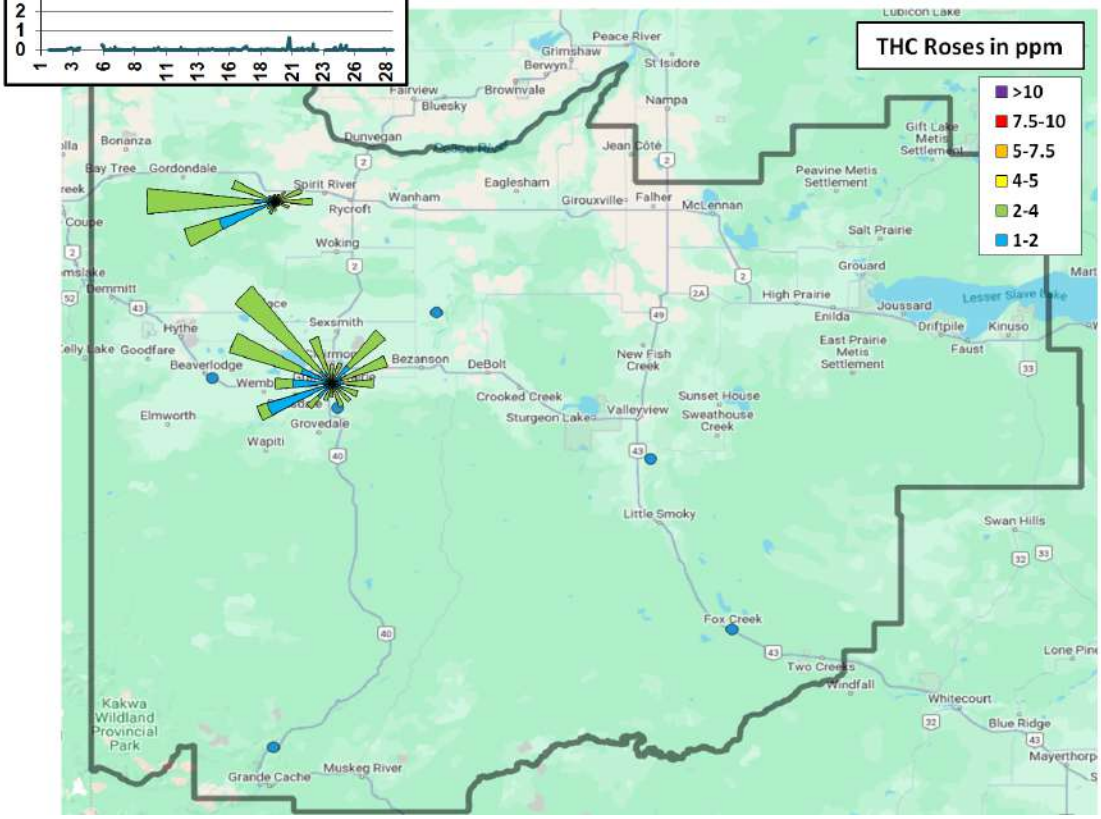
Total Hydrocarbons (THC)



Methane (CH_4)



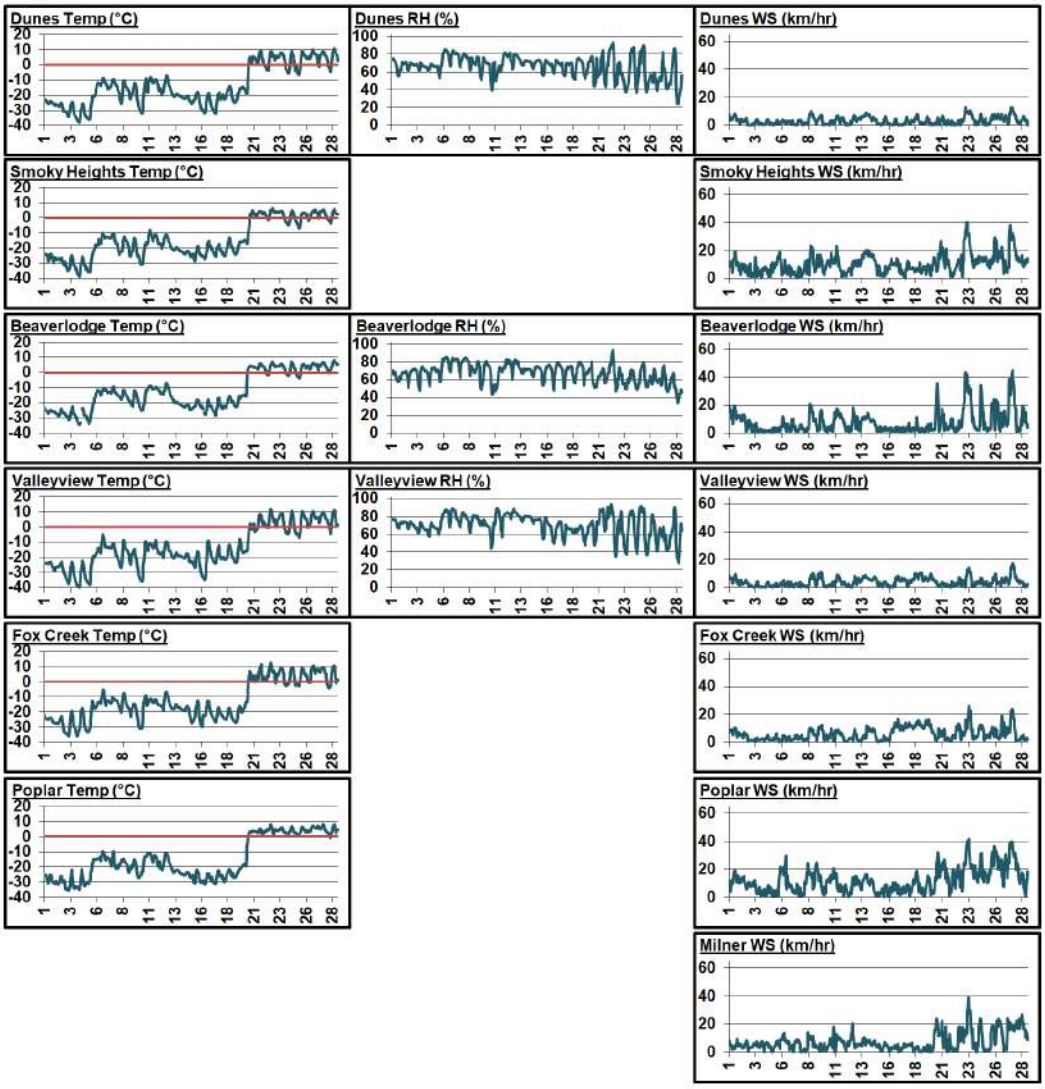
Non-Methane Hydrocarbons (NMHC)

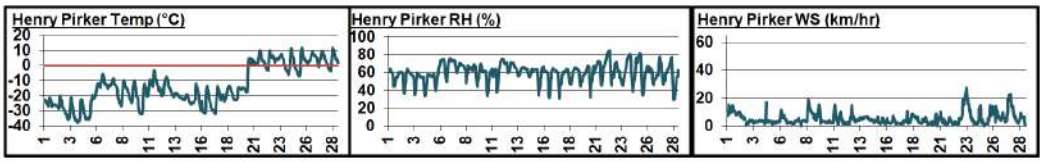


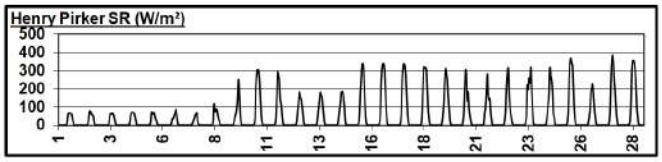
10.11 Meteorology Summary

February 2025 Meterological Summary						
Station	Temp (°C)	RH (%)	SR (W/m²)	WS (km/hr)	WD (deg)	WD
Dunes	-13.6	65.9	-	3.3	302	WNW
Henry Pirker	-13.3	60.2	48.9	5.5	287	WNW
Smoky Heights	-14.5	-	-	10.3	263	W
Beaverlodge	-12.6	67.2	-	7.6	284	WNW
Valleyview	-13.5	69.8	-	4.0	249	WSW
Fox Creek	-12.5	-	-	6.1	209	WSW
Happy Valley	-14.6	-	-	12.0	259	W
Milner	-	-	-	7.3	264	W

Temp (°C) Outside Temperature
RH (%) Relative Humidity
SR (W/m²) Solar Radiation
WS (km/hr) Wind Speed
WD (deg) Wind Direction
WD Wind Direction







11 Passive Monitoring Data

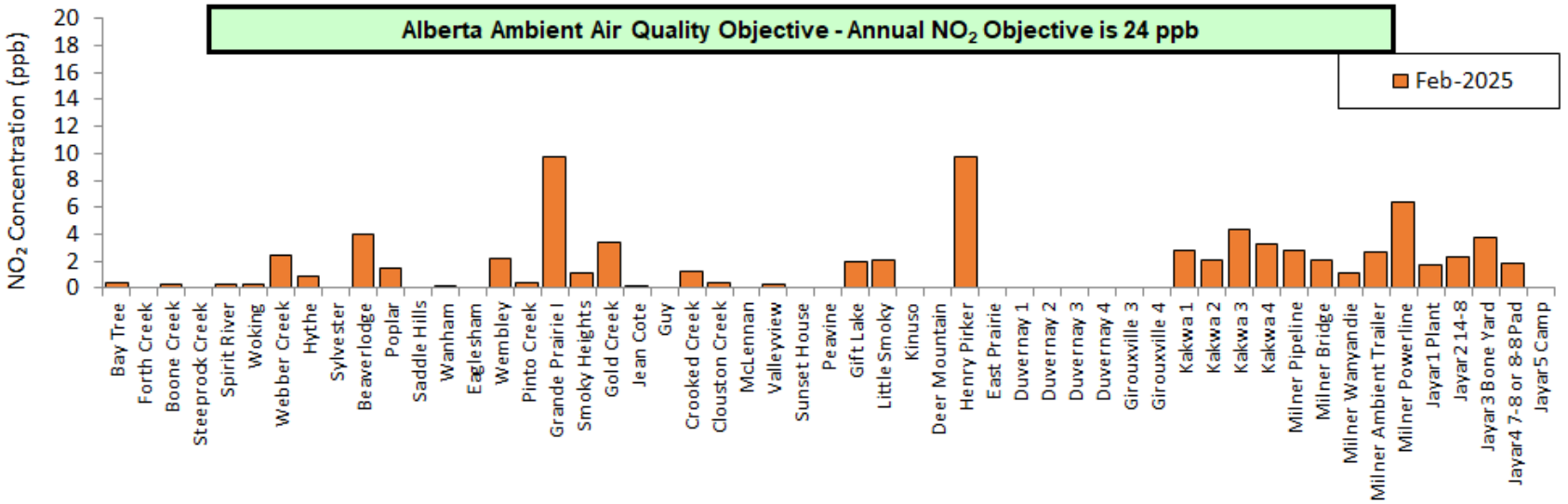
Peace Airshed Zone Association - PAZA Passive Stations for February 2025

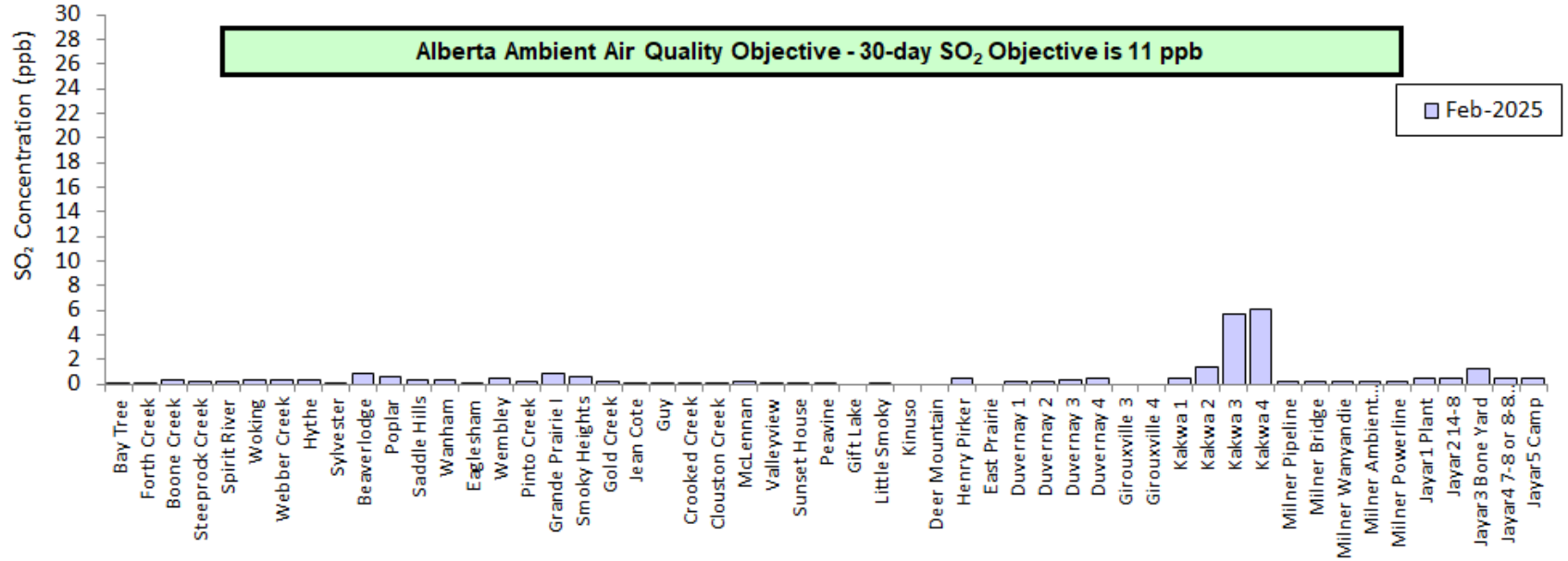
Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	LSD
Duplicates						
2a	Bay Tree		**44.1**			13-16-078-13 W6M
2b	Bay Tree		**39.7**			
5a	Boone Creek			**0.3**		01-23-076-11 W6M
5b	Boone Creek			**0.2**		
12a	Hythe	**0.3**				14-36-072-11 W6M
12b	Hythe	**0.3**				
16a	Beaverlodge	**0.8**				15-36-071-10 W6M
16b	Beaverlodge	**1.0**				
24a	Wembley			**2.1**		12-31-070-08 W6M
24b	Wembley			**2.2**		
35a	Jean Cote	**0.1**				12-35-079-21 W5M
35b	Jean Cote	**0.1**				
40a	McLennan	**0.1**				03-29-077-19 W5M
40b	McLennan	**0.1**				
41a	Valleyview			**0.2**		09-30-069-22 W5M
41b	Valleyview			**0.3**		
44a	Peavine			**0.0**		03-05-079-15 W5M
44b	Peavine			**0.0**		
D3a	Duvernay 3	**0.3**			**0.18**	04-33-062-20 W5M
D3b	Duvernay 3	**0.3**			**0.19**	
K1a	Kakwa 1			**2.8**		01-13-063-05 W6M
K1b	Kakwa 1			**2.7**		
K4a	Kakwa 4	**6.6**				06-18-063-04 W6M
K4b	Kakwa 4	**5.6**				
K2a	Kakwa 2				**0.05**	08-13-063-05 W6M
K2b	Kakwa 2				**0.17**	
M10a	Milner Powerline			**6.4**		06-14-058-08 W6M
M10b	Milner Powerline			**6.3**		
M7a	Milner Wanyandie	**0.2**				11-13-058-08 W6M
M7b	Milner Wanyandie	**0.2**				
J5Da	Jayar5 Camp			**10.8**		11-08-062-03 W6M
J5Db	Jayar5 Camp			**2.4**		
J2Da	Jayar2 14-8	**0.4**				07-08-062-03 W6M
J2Db	Jayar2 14-8	**0.4**				
J1Da	Jayar1 Plant				**0.16**	06-08-062-03 W6M
J1Db	Jayar1 Plant				**0.17**	

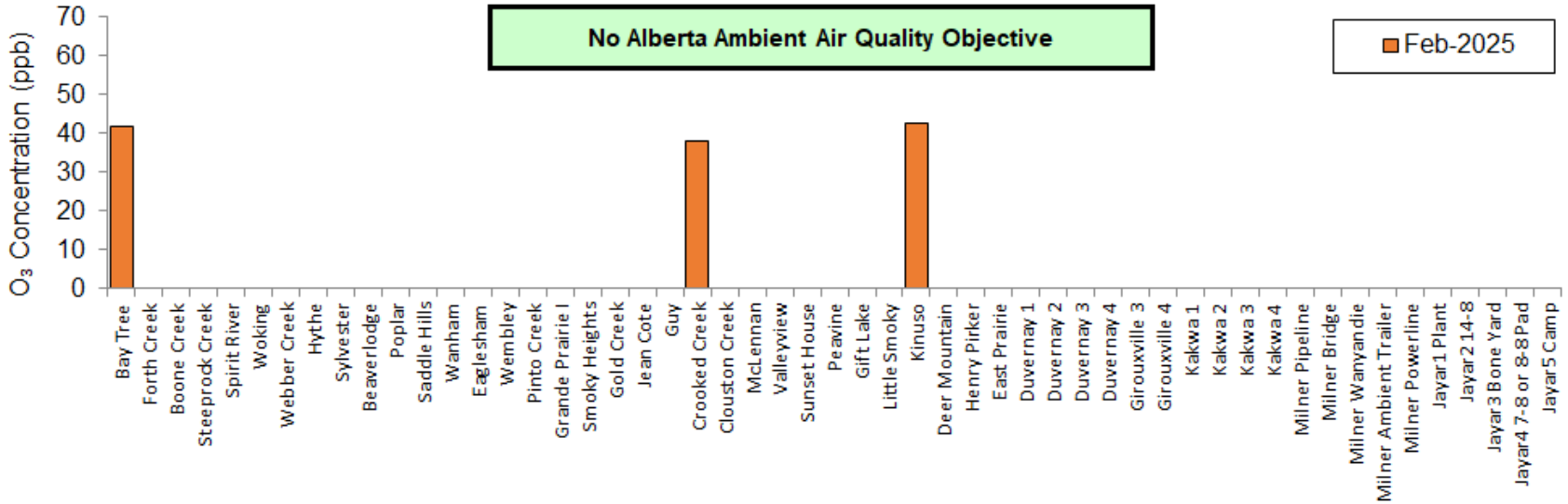
Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	LSD
1	Silver Valley	0.2	-	0.7	-	08-27-081-11 W6M
2	Bay Tree	0.0	41.9	0.4	-	13-16-078-13 W6M
3	Forth Creek	0.1	-	0.0	-	04-13-082-07 W6M
5	Boone Creek	0.4	-	0.2	-	01-23-076-11 W6M
7	Steeprock Creek	0.2	-	0.0	-	09-35-072-13 W6M
9	Spirit River	0.2	-	0.3	-	08-12-079-07 W6M
10	Woking	0.3	-	0.3	-	01-13-076-07 W6M
11	Webber Creek	0.3	-	2.5	-	09-36-074-09 W6M
12	Hythe	0.3	-	0.9	-	14-36-072-11 W6M
14	Sylvester	0.0	-	0.0	-	08-06-069-12 W6M
16	Beaverlodge	0.9	-	4.0	-	15-36-071-10 W6M
17	Poplar	0.6	-	1.5	-	13-06-073-08 W6M
18	Saddle Hills	0.3	-	0.0	-	04-25-074-07 W6M
19	Wanham	0.3	-	0.0	-	16-22-077-03 W6M
21	Eaglesham	0.0	-	0.0	-	16-21-079-25 W5M
24	Wembley	0.5	-	2.2	-	12-31-070-08 W6M
25	Pinto Creek	0.2	-	0.4	-	04-24-069-11 W6M
27	Grande Prairie I	0.8	-	9.8	-	08-15-071-06 W6M
29	Smoky Heights	0.6	-	1.1	-	04-06-075-02 W6M
32	Gold Creek	0.2	-	3.3	-	06-33-067-05 W6M
35	Jean Cote	0.1	-	0.0	-	12-35-079-21 W5M
36	Guy	0.1	-	0.0	-	03-04-076-22 W5M
37	Crooked Creek	0.1	37.9	1.3	-	16-01-071-26 W5M
39	Clouston Creek	0.0	-	0.4	-	12-01-073-22 W5M
40	McLennan	0.1	-	0.0	-	03-29-077-19 W5M
41	Valleyview	0.1	-	0.3	-	09-30-069-22 W5M
42	Sunset House	0.1	-	0.0	-	05-32-070-19 W5M
44	Peavine	0.0	-	0.0	-	03-05-079-15 W5M
45	Gift Lake	0.0	-	2.0	-	10-07-079-12 W5M
46	Little Smoky	0.0	-	2.1	-	12-01-065-21 W5M
47	Kinuso	0.0	42.9	0.0	-	12-10-073-10 W5M
48	Deer Mountain	0.0	-	0.0	-	15-22-068-09 W5M
49	Henry Pirker	0.5	-	9.8	-	17-26-071-06 W6M
50	East Prairie	0.0	-	0.0	-	11-13-079-08 W6M
D1	Duvernay 1	0.2	-	-	0.21	04-33-062-20 W5M
D2	Duvernay 2	0.2	-	-	0.19	04-33-062-20 W5M
D3	Duvernay 3	0.3	-	-	0.19	04-33-062-20 W5M
D4	Duvernay 4	0.4	-	-	0.22	04-33-062-20 W5M
G3	Girouxville 3	-	-	-	inaccessable	14-02-077-23 W5M
G4	Girouxville 4	-	-	-	inaccessable	04-08-077-22 W5M
K1	Kakwa 1	0.4	-	2.8	<0.02	01-13-063-05 W6M
K2	Kakwa 2	1.4	-	2.1	0.11	08-13-063-05 W6M
K3	Kakwa 3	5.7	-	4.4	0.22	12-18-063-04 W6M
K4	Kakwa 4	6.1	-	3.3	0.30	06-18-063-04 W6M
M1	Milner Pipeline	0.2	-	2.8	-	12-14-058-08 W6M
M2	Milner Bridge	0.2	-	2.1	-	08-06-057-08 W6M
M3	Milner Wanyandie	0.2	-	1.1	-	11-13-058-08 W6M
M4	Milner Ambient Trailer	0.2	-	2.7	-	09-15-058-08 W6M
M5	Milner Powerline	0.2	-	6.4	-	06-14-058-08 W6M
J1	Jayar1 Plant	0.4	-	1.7	0.17	06-08-062-03 W6M
J2	Jayar2 14-8	0.4	-	2.3	0.14	07-08-062-03 W6M
J3	Jayar3 Bone Yard	1.2	-	3.8	0.12	14-08-062-03 W6M
J4	Jayar4 7-8 or 8-8 Pad	0.5	-	1.8	0.14	10-08-062-03 W6M
J5	Jayar5 Camp	0.4	-	*max* (10.8 ppb)	0.38	11-08-062-03 W6M

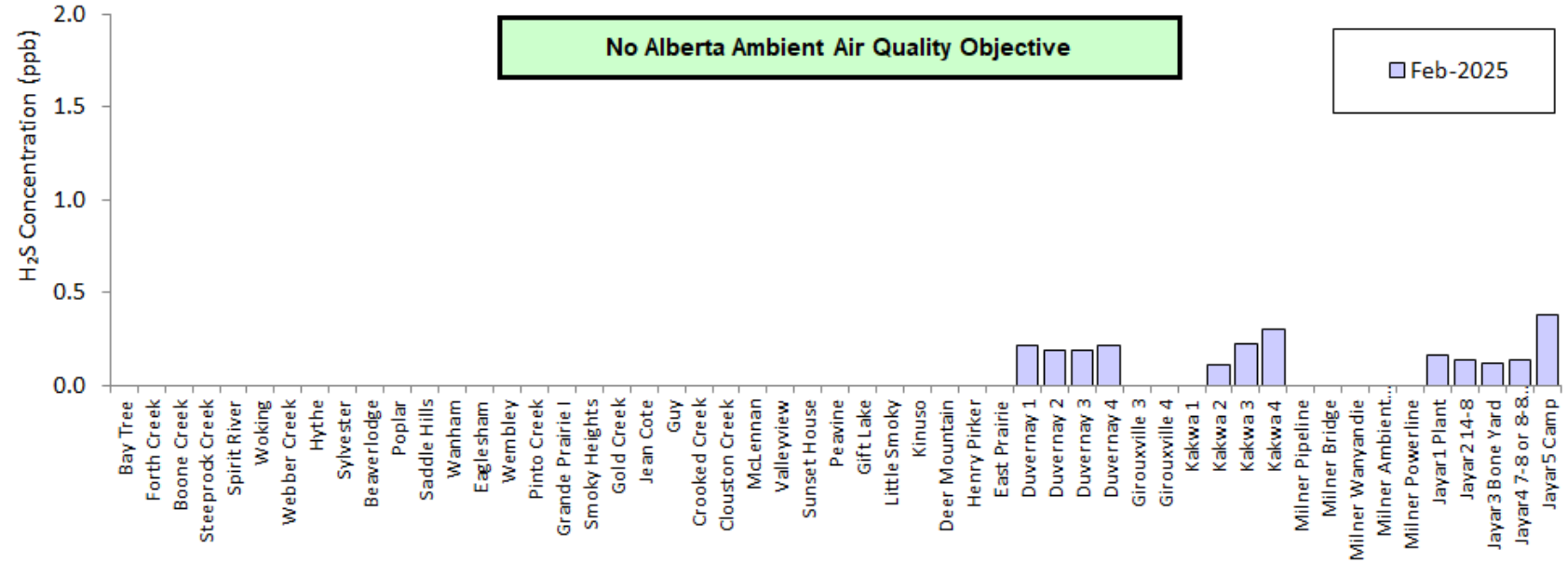
Passive Summary for February 2025

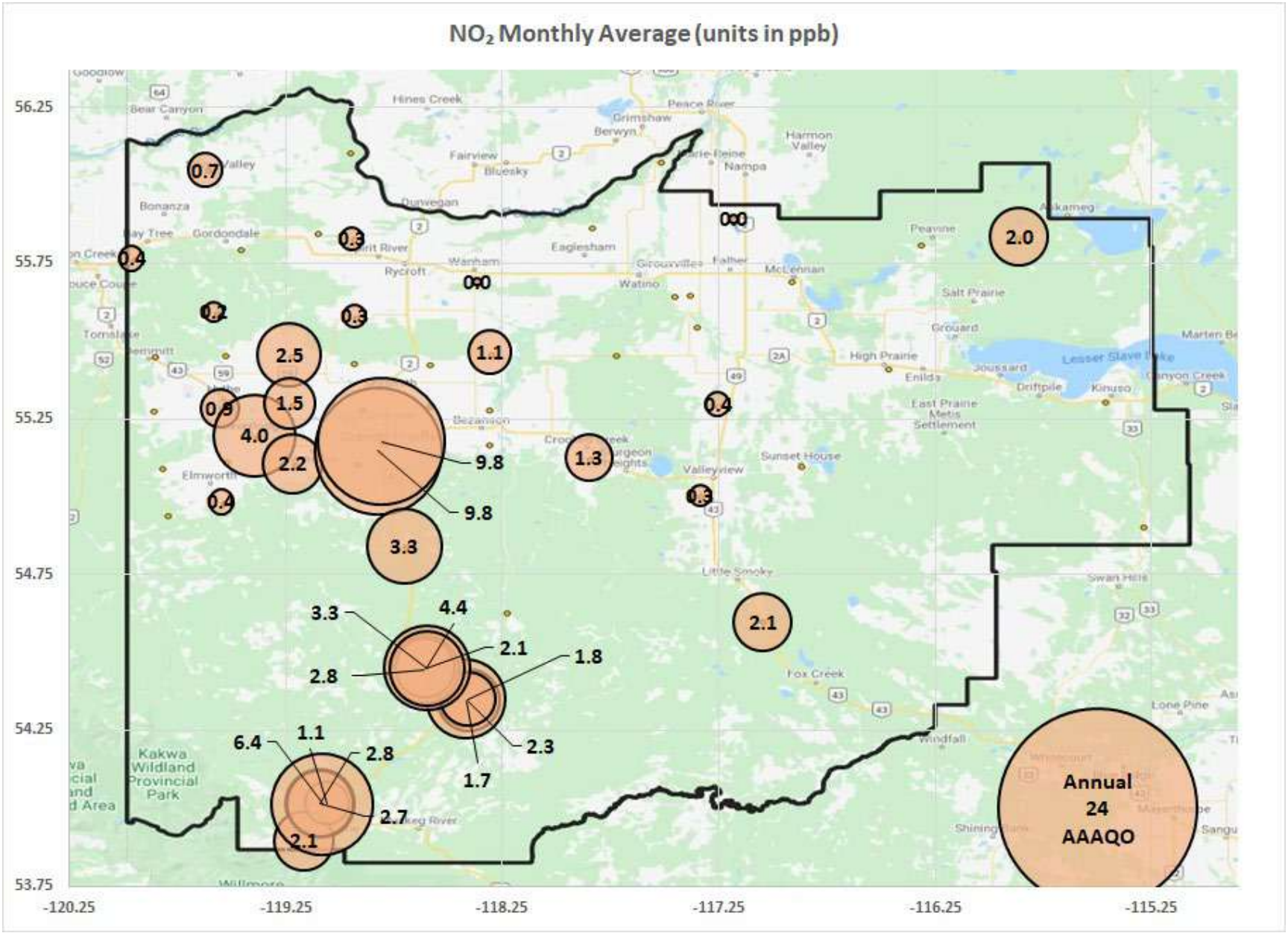
Stats	Sulphur Dioxide SO_2	Ozone O_3	Nitrogen Dioxide NO_2	Hydrogen Sulphide H_2S
	ppb	ppb	ppb	ppb
	Passive Summary for February 2025 (PAZA)			
Mean	0.5	40.9	1.7	0.2
Standard Deviation	1.1	2.6	2.3	0.1
Minimum	0.0 Gift Lake (#45)	37.9 Crooked Creek (#37)	0.0 Forth Creek (#3)	0.1 Kakwa 2 (#K2)
Maximum	6.1 Kakwa 4 (#K4)	42.9 Kinuso (#47)	9.8 Grande Prairie I (#27)	0.4 Jayar5 Camp (#J5)
	Continuous and Passive Monitoring Comparision			
PAZA Beaverlodge Station	**1.2**	**27.2**	**9.9**	**-**
Beaverlodge Passive (#16)	**0.9**	**-**	**4.0**	**-**
PAZA Henry Pirker Station	**0.5**	**20.3**	**18.7**	**0.3**
Henry Pirker passive (#49)	**0.5**	**-**	**9.8**	**-**
Milner Station	**-**	**-**	**4.6**	**-**
Milner passive	**0.2**	**-**	**2.7**	**-**

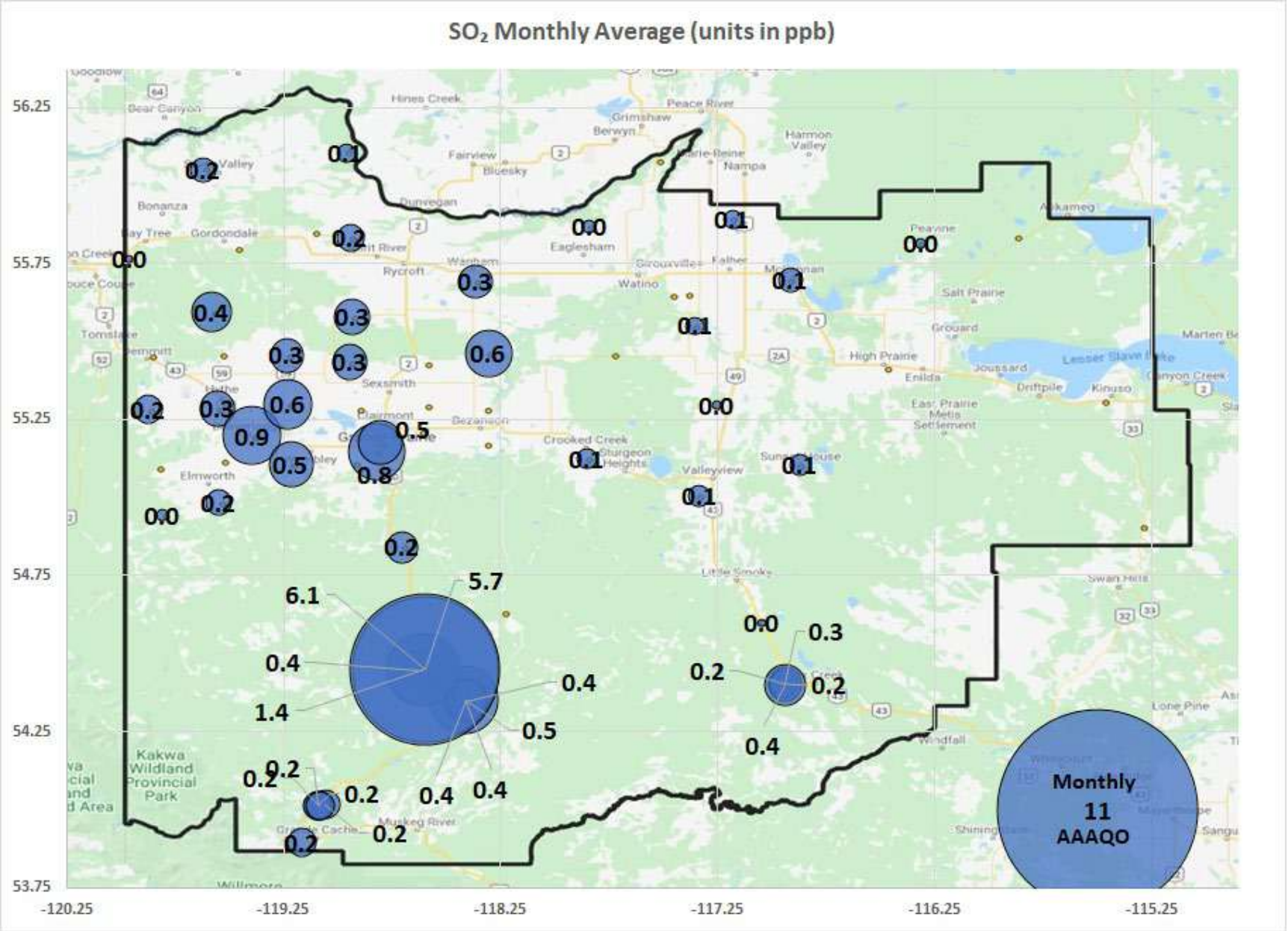

Alberta Ambient Air Quality Objective - Annual NO2 Objective is 24 ppb
NO2 Concentration (ppb)
Feb-2025
0
2
4
6
8
10
12
14
16
18
20
Bay Tree
Forth Creek
Boone Creek
Steeprock Creek
Spirit River
Woking
Webber Creek
Hythe
Sylvester
Beaverlodge
Poplar
Saddle Hills
Wanham
Eaglesham
Wembley
Pinto Creek
Grande Prairie I
Smoky Heights
Gold Creek
Jean Cote
Guy
Crooked Creek
Clouston Creek
McLennan
Valleyview
Sunset House
Peavine
Gift Lake
Little Smoky
Kinuso
Deer Mountain
Henry Pirker
East Prairie
Duvernay 1
Duvernay 2
Duvernay 3
Duvernay 4
Girouxville 3
Girouxville 4
Kakwa 1
Kakwa 2
Kakwa 3
Kakwa 4
Milner Pipeline
Milner Bridge
Milner Wanyandie
Milner Ambient Trailer
Milner Powerline
Jayar1 Plant
Jayar2 14-8
Jayar3 Bone Yard
Jayar4 7-8 or 8-8 Pad
Jayar5 Camp

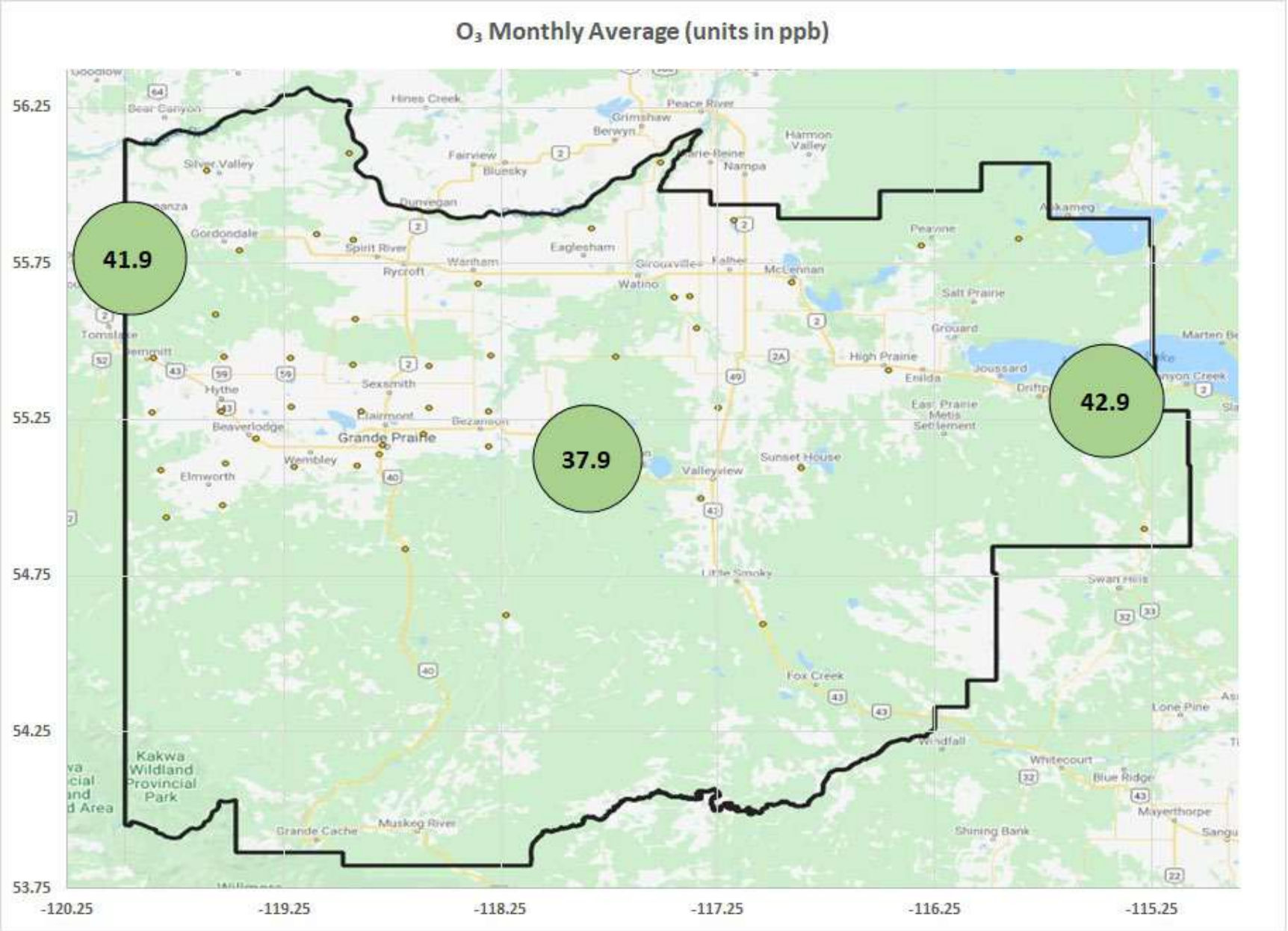

Alberta Ambient Air Quality Objective - 30-day SO2 Objective is 11 ppb
SO2 Concentration (ppb)
Feb-2025
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
Bay Tree
Forth Creek
Boone Creek
Steeprock Creek
Spirit River
Woking
Webber Creek
Hythe
Sylvester
Beaverlodge
Poplar
Saddle Hills
Wanham
Eaglesham
Wembley
Pinto Creek
Grande Prairie I
Smoky Heights
Gold Creek
Jean Cote
Guy
Crooked Creek
Clouston Creek
McLennan
Valleyview
Sunset House
Peavine
Gift Lake
Little Smoky
Kinuso
Deer Mountain
Henry Pirker
East Prairie
Duvernay 1
Duvernay 2
Duvernay 3
Duvernay 4
Girouxville 3
Girouxville 4
Kakwa 1
Kakwa 2
Kakwa 3
Kakwa 4
Milner Pipeline
Milner Bridge
Milner Wanyandie
Milner Ambient...
Milner Powerline
Jayar1 Plant
Jayar2 14-8
Jayar3 Bone Yard
Jayar4 7-8 or 8-8...
Jayar5 Camp

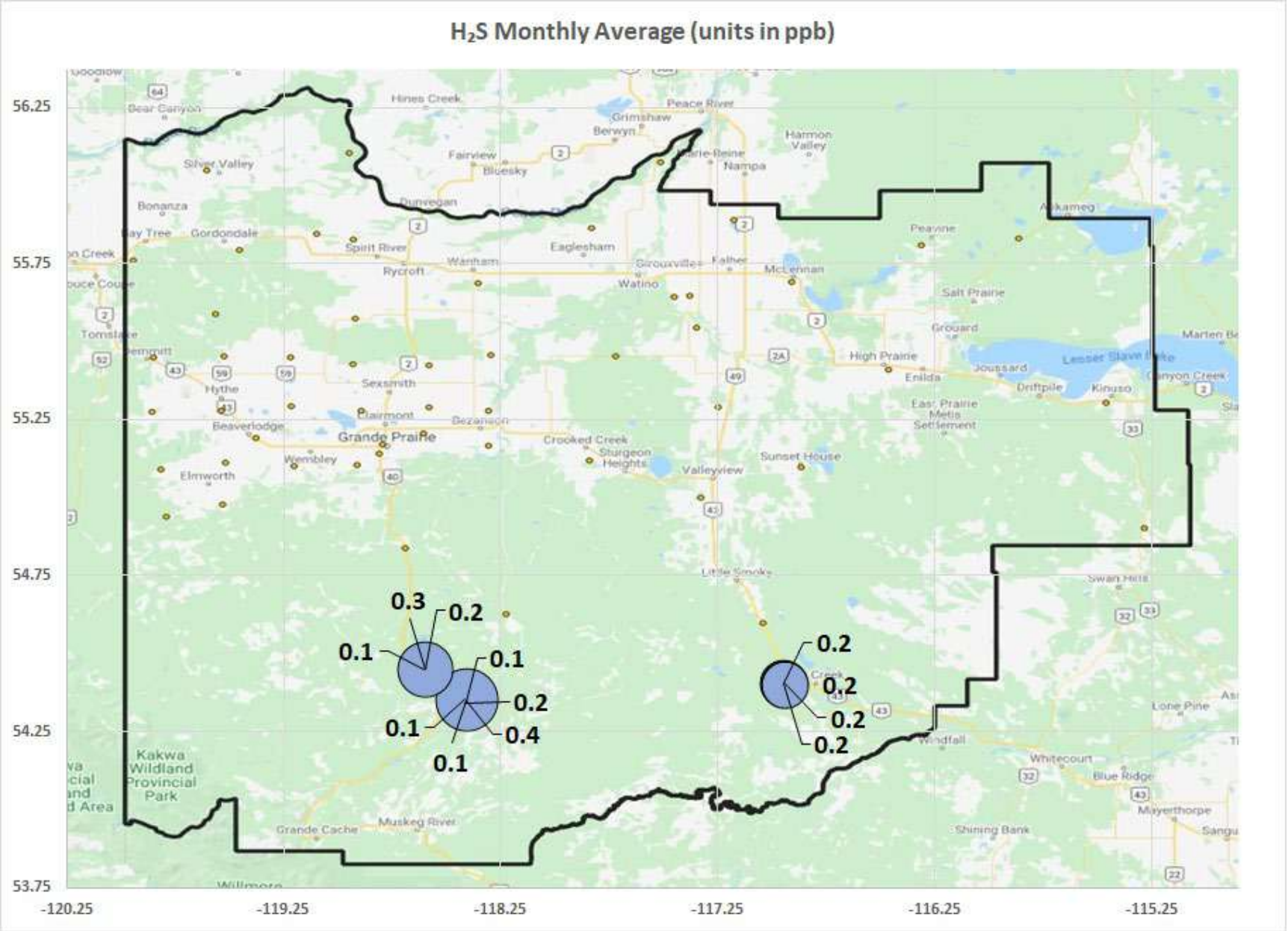

No Alberta Ambient Air Quality Objective
Feb-2025
O3 Concentration (ppb)
70
60
50
40
30
20
10
0
Bay Tree
Forth Creek
Boone Creek
Steeprock Creek
Spirit River
Woking
Webber Creek
Hythe
Sylvester
Beaverlodge
Poplar
Saddle Hills
Wanham
Eaglesham
Wembley
Pinto Creek
Grande Prairie I
Smoky Heights
Gold Creek
Jean Cote
Guy
Crooked Creek
Clouston Creek
McLennan
Valleyview
Sunset House
Peavine
Gift Lake
Little Smoky
Kinuso
Deer Mountain
Henry Pirker
East Prairie
Duvernay 1
Duvernay 2
Duvernay 3
Duvernay 4
Girouxville 3
Girouxville 4
Kakwa 1
Kakwa 2
Kakwa 3
Kakwa 4
Milner Pipeline
Milner Bridge
Milner Wanyandie
Milner Ambient Trailer
Milner Powerline
Jayar1 Plant
Jayar2 14-8
Jayar3 Bone Yard
Jayar4 7-8 or 8-8Pad
Jayar5 Camp


No Alberta Ambient Air Quality Objective
Feb-2025
H2S Concentration (ppb)
2.0
1.5
1.0
0.5
0.0
Bay Tree
Forth Creek
Boone Creek
Steeprock Creek
Spirit River
Woking
Webber Creek
Hythe
Sylvester
Beaverlodge
Poplar
Saddle Hills
Wanham
Eaglesham
Wembley
Pinto Creek
Grande Prairie I
Smoky Heights
Gold Creek
Jean Cote
Guy
Crooked Creek
Clouston Creek
McLennan
Valleyview
Sunset House
Peavine
Gift Lake
Little Smoky
Kinuso
Deer Mountain
Henry Pirker
East Prairie
Duvernay 1
Duvernay 2
Duvernay 3
Duvernay 4
Girouxville 3
Girouxville 4
Kakwa 1
Kakwa 2
Kakwa 3
Kakwa 4
Milner Pipeline
Milner Bridge
Milner Wanyandie
Milner Ambient...
Milner Powerline
Jayar1 Plant
Jayar2 14-8
Jayar3 Bone Yard
Jayar4 7-8 or 8-8...
Jayar5 Camp


NO2 Monthly Average (units in ppb)
56.25
55.75
55.25
54.75
54.25
53.75
-120.25
-119.25
-118.25
-117.25
-116.25
-115.25
0.7
0.4
0.3
0.2
0.3
2.5
1.5
0.5
4.0
2.2
9.8
9.8
3.3
0.4
1.1
1.3
0.4
0.3
2.0
0.0
0.0
0.0
3.3
4.4
2.1
2.8
1.8
2.3
1.7
6.4
1.1
2.8
2.7
2.1
2.1
Annual
24
AAAQO
Kakwa
Wildland
Provincial
Park
Hines Creek
Bear Canyon
Grimshaw
Berwyn
Peace River
Harmon
Valley
Fairview
Bluesky
Nampa
Dunvegan
Bonanza
Gordondale
Eaglesham
Rycroft
Watino
Girouxville
Father
McLennan
Peavine
Salt Prairie
Grouard
High Prairie
Enilda
Joussard
Driftpile
Kinuso
East Prairie
Metis
Settlement
Sunset House
Valleyview
Elmworth
Little Smoky
Swan Hills
Fox Creek
Windfall
Lone Pine
Shining
Willmore


SO2 Monthly Average (units in ppb)
56.25
55.75
55.25
54.75
54.25
53.75
-120.25
-119.25
-118.25
-117.25
-116.25
-115.25
Monthly
11
AAAQO

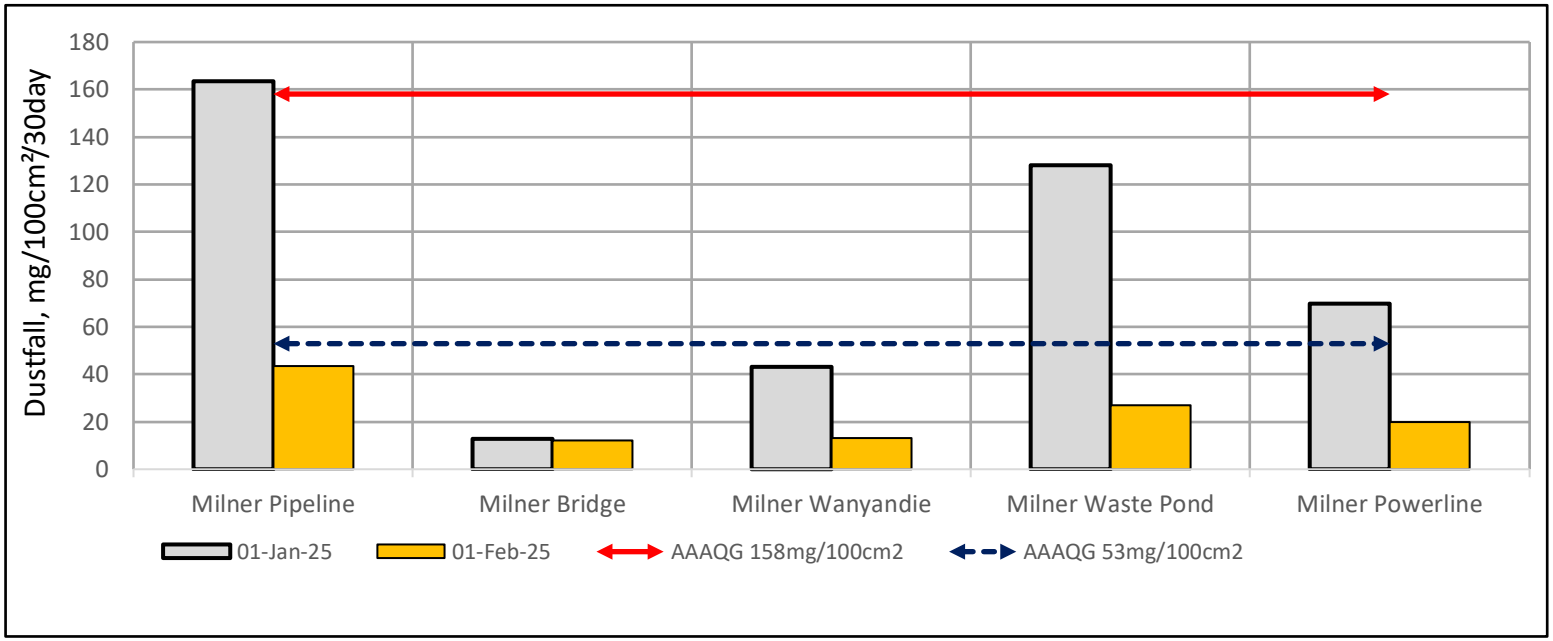

O3 Monthly Average (units in ppb)
41.9
37.9
42.9
56.25
55.75
55.25
54.75
54.25
53.75
-120.25
-119.25
-118.25
-117.25
-116.25
-115.25
Hines Creek
Peace River
Grimshaw
Berwyn
Fairview
Bluesky
Nampa
Harmon Valley
Silver Valley
Dunvegan
Gordondale
Spirit River
Rycroft
Eaglesham
Warsham
Watino
Girouxville
Father
McLennan
Peerless
Salt Prairie
Grouard
High Prairie
Enilda
Joussard
Sexsmith
Hythe
Beaverlodge
Fairmont
Bezanson
Grande Prairie
Wembley
Elmworth
Valleyview
Sunset House
Little Smoky
Fox Creek
Swan Hills
Lone Pine
Windfall
Whitecourt
Blue Ridge
Mayerthorpe
Shining Bank
Kakwa Wildland Provincial Park
Grande Cache
Muskeg River


H2S Monthly Average (units in ppb)
56.25
55.75
55.25
54.75
54.25
53.75
-120.25
-119.25
-118.25
-117.25
-116.25
-115.25
0.3
0.2
0.1
0.1
0.2
0.1
0.4
0.1
0.2
0.2
0.2
0.2
Grande Prairie
Kakwa Wildland Provincial Park
Peace River
Fairview
Dunvegan
Spirit River
Rycroft
Eaglesham
Watino
McLennan
Salt Prairie
Grouard
High Prairie
Enilda
Joussard
Driftpile
Kinuso
Sexsmith
Hythe
Beaverlodge
Wembley
Elmworth
Crooked Creek
Sturgeon Heights
Valleyview
Sunset House
Grande Cache
Muskeg River
Whitecourt
Blue Ridge
Mayerthorpe
Lone Pine
Windfall
Shining Bank

12 Dustfall Monitoring Data - update

Milner Dustfall Samples February 2025

Exposure Month	Year	Sample	Total Dustfall (30 day) mg/100cm²/30day	Fixed Dustfall (30 day) mg/100cm²/30day	Exposure days	Field Notes
February	2025	Milner Pipeline	43.5	11.3	28	
February	2025	Milner Bridge	12.2	27.0	28	
February	2025	Milner Wanyandie	13.0	6.1	28	
February	2025	Milner Waste Pond	27.0	9.6	28	
February	2025	Milner Powerline	20.0	7.0	28	
February	2025	Milner Powerline Dup	23.5	5.2	28	RPD, 16% / 30%



End of Report

Peace Airshed Zone Association

Peace Airshed Zone Association

Ambient Air Monitoring Report

February 2025