



# **Peace Airshed Zone Association**

## **Ambient Air Monitoring Network Summary**

**Ambient Air Quality Monitoring Program**

**Monthly Report**

**January 2025**

February 28, 2025

**Alberta Environment and Protected Areas**

11th Floor, Oxbridge Place  
9820-106 Street  
Edmonton Alberta T5K 2J6

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

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Please find enclosed the PAZA Ambient Air Quality Monitoring Network Report for the month of January 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 January 2025 were submitted to the ETS data system.

**Table A. PAZA members with Facility Operating Approvals**

<b>Company</b>	<b>Facility</b>	<b>LSD</b>	<b>EPEA Approval No.</b>
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
	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 SO<sub>2</sub> passives above 30day SO<sub>2</sub> AAAQO (11ppb)
- There was one industrial dustfall above the monthly AAAQG (158mg/100cm<sup>2</sup>/30d)
- There were 4 readings above the 24hr PM<sub>2.5</sub> AAAQO, 25 readings above the 1hr PM<sub>2.5</sub> AAAQG for the month

**One-hr readings above the PM<sub>2.5</sub> AAAQO (80µg/m<sup>3</sup>) recorded as follows:**

Site	reference	Pollutant	Date	From MST	To MST	Average µg/m <sup>3</sup>	WS km/hr	WD degrees
Fox Creek	<b>436940</b>	PM <sub>2.5</sub>	18-Jan-25	11:00	12:00	148.7	7.4	137
Fox Creek	<b>436940</b>	PM <sub>2.5</sub>	18-Jan-25	12:00	13:00	222.7	6.7	139
Fox Creek	<b>436940</b>	PM <sub>2.5</sub>	18-Jan-25	16:00	17:00	132.3	5.2	146
Fox Creek	<b>436940</b>	PM <sub>2.5</sub>	18-Jan-25	17:00	18:00	171.3	6.0	158
Fox Creek	<b>436940</b>	PM <sub>2.5</sub>	18-Jan-25	18:00	19:00	114.5	5.1	162
Fox Creek	<b>436940</b>	PM <sub>2.5</sub>	18-Jan-25	19:00	20:00	148.1	4.7	160
Fox Creek	<b>436940</b>	PM <sub>2.5</sub>	18-Jan-25	20:00	21:00	172.0	3.8	171
Fox Creek	<b>436940</b>	PM <sub>2.5</sub>	18-Jan-25	21:00	22:00	117.7	3.7	160
Fox Creek	<b>437148</b>	PM <sub>2.5</sub>	25-Jan-25	19:00	20:00	424.4	1.5	156
Fox Creek	<b>437148</b>	PM <sub>2.5</sub>	25-Jan-25	20:00	21:00	530.5	2.1	160
Fox Creek	<b>437148</b>	PM <sub>2.5</sub>	25-Jan-25	21:00	22:00	492.2	3.5	160
Fox Creek	<b>437148</b>	PM <sub>2.5</sub>	25-Jan-25	22:00	23:00	194.5	2.3	177
Fox Creek	<b>437168</b>	PM <sub>2.5</sub>	26-Jan-25	23:00	00:00	199.1	3.3	185
Fox Creek	<b>437168</b>	PM <sub>2.5</sub>	26-Jan-25	00:00	01:00	345.7	3.0	184
Fox Creek	<b>437168</b>	PM <sub>2.5</sub>	26-Jan-25	01:00	02:00	252.9	3.9	196
Fox Creek	<b>437168</b>	PM <sub>2.5</sub>	26-Jan-25	02:00	03:00	530.0	5.4	226
Fox Creek	<b>437168</b>	PM <sub>2.5</sub>	26-Jan-25	03:00	04:00	225.0	5.8	215
Fox Creek	<b>437168</b>	PM <sub>2.5</sub>	26-Jan-25	07:00	08:00	82.8	4.3	175
Fox Creek	<b>437192</b>	PM <sub>2.5</sub>	27-Jan-25	08:00	09:00	95.1	1.6	215
Fox Creek	<b>437192</b>	PM <sub>2.5</sub>	27-Jan-25	09:00	10:00	307.8	5.3	194
Fox Creek	<b>437266</b>	PM <sub>2.5</sub>	28-Jan-25	05:00	06:00	145.9	1.1	152
Fox Creek	<b>437266</b>	PM <sub>2.5</sub>	28-Jan-25	06:00	07:00	222.4	1.1	168
Fox Creek	<b>437266</b>	PM <sub>2.5</sub>	28-Jan-25	07:00	08:00	169.6	1.1	154
Fox Creek	<b>437266</b>	PM <sub>2.5</sub>	28-Jan-25	08:00	09:00	154.6	1.2	182
Fox Creek	<b>437266</b>	PM <sub>2.5</sub>	28-Jan-25	09:00	10:00	85.5	1.0	216

**24-hr readings above the PM<sub>2.5</sub> AAAQO (29µg/m<sup>3</sup>) recorded as follows:**

Site	reference	Pollutant	Date	Average µg/m <sup>3</sup>	WS km/hr	WD degrees
Fox Creek	<b>436940</b>	PM <sub>2.5</sub>	18-Jan-25	63.7	4.1	162
Fox Creek	<b>437148</b>	PM <sub>2.5</sub>	25-Jan-25	82.6	4.8	256
Fox Creek	<b>437168</b>	PM <sub>2.5</sub>	26-Jan-25	79.8	5.5	266
Fox Creek	<b>437266</b>	PM <sub>2.5</sub>	28-Jan-25	38.9	5.2	303

**Readings above the industrial dustfall monthly AAAQG (158mg/100cm<sup>2</sup>/30d) recorded as:**

Site	reference	Pollutant	Date	Average mg/100cm <sup>2</sup> /30d
Milner Pipeline	<b>438054</b>	Total Dustfall	January 2025	163.4

Reading above the SO<sub>2</sub> monthly AAAQO (11ppb) recorded as:

Site	reference	Pollutant	Date	Average ppb
Kakwa 3	<b>438055</b>	SO <sub>2</sub> Passive	January 2025	21.1

### Operational times less than 90 percent

- The THC analyzer at Henry Pirker failed, attempts to repair was not successful, the analyzer was then removed (s/n:1151980005) and spare installed (s/n:0722DR0790), with Jan 3 as the install calibration; then on Jan 19 the THC analyzer flatlined due to pump failure, Jan 31 pump was sourced and analyzer repaired but left to stabilize and calibrated Feb 1, this resulted in <75% uptime for month (49.9% operational uptime). Reference #438053
- All other 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 January 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 January:

- Eight SO<sub>2</sub> duplicates located at Wanham, Gold Creek, Henry Pirker, East Prairie, Duvernay 4, Kakwa 4, Milner Powerline, Jayar1 Plant
  - RPD ranging from 8% to 164% (two fails at Wanham (0.0 and 0.1ppb results) and Gold Creek 0.0 and 0.0ppb results))
- No O<sub>3</sub> duplicate due to sample missing when collection occurred
- Seven NO<sub>2</sub> duplicates at Eaglesham, Grande Prairie I, Sunset House, Little Smoky, Kakwa 3, Milner Pipeline, Jayar4 7-8 or 8-8 Pad
  - RPD ranging from 0% to 200% (two fails at Eaglesham (0.1 and 0.0ppb results) and Grande Prairie, Pinnacle 0.0 and 5.6 ppb results))
- Four H<sub>2</sub>S duplicates at Duvernay 4, Girouxville 3, Kakwa 1, Jayar5 Camp
  - RPD ranging from 10% to 29% (no fails)

### Dustfall Monitoring

- Five Stations collected Total Dustfall and Fixed Dustfall
- Total dustfall ranged from 12.6 to 163.4 mg/100cm<sup>2</sup>/30day
  - Milner Pipeline was >158 (AAAQG), at 163.4 mg/100cm<sup>2</sup>/30day (ref#438054)
- RPD was 14 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.



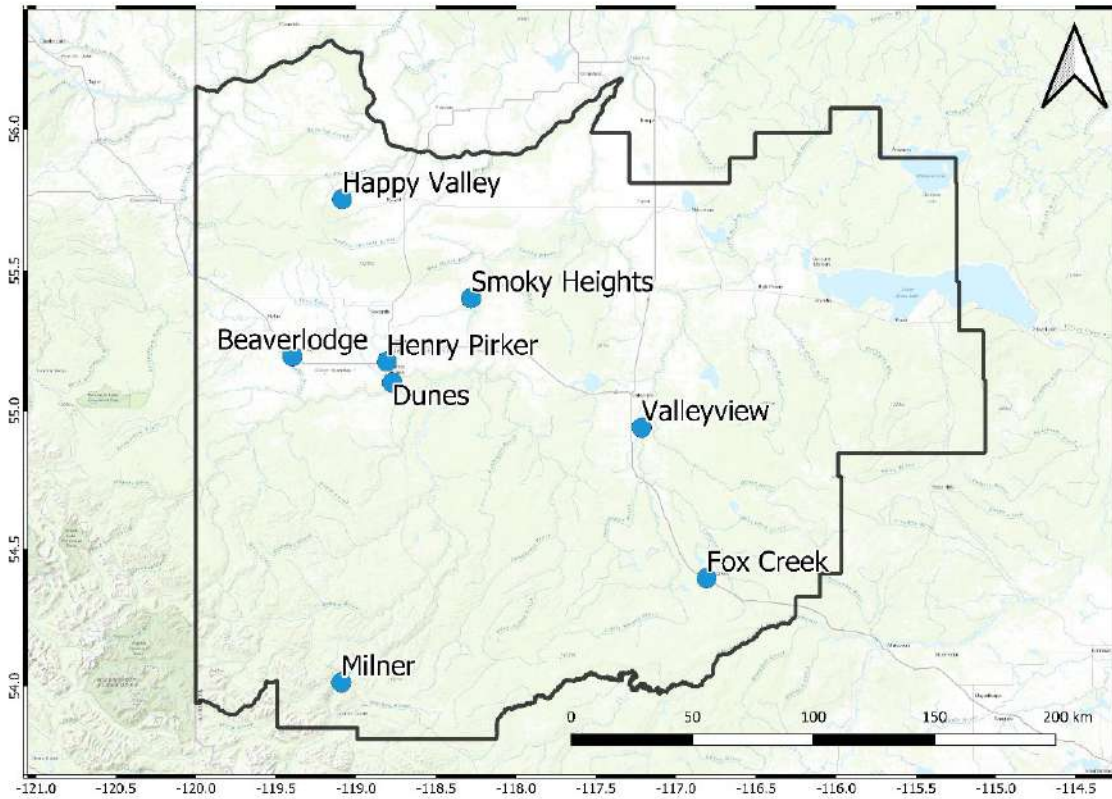
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Program Manager

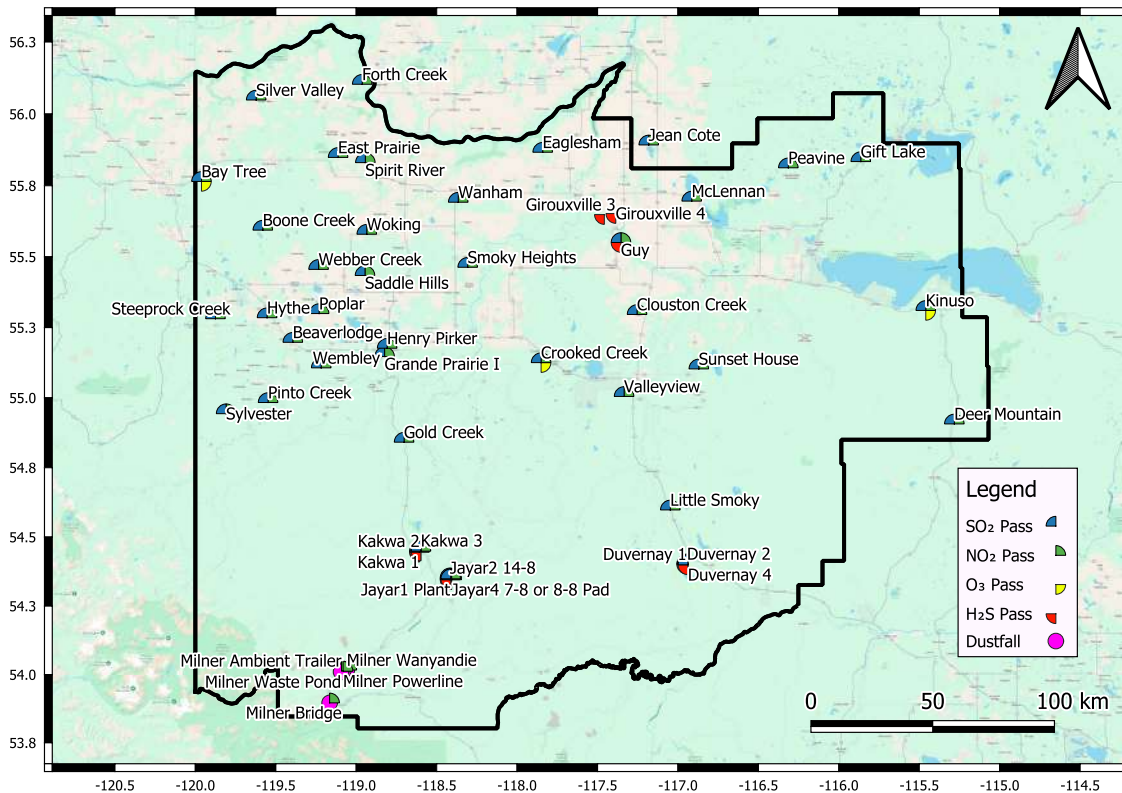
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## PAZA Continuous Monitoring Station Locations



## PAZA Passive Monitoring Station Locations





# 1 January 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 - January 2025 Beaverlodge Station Report

Parameter	January				1-hour			24-hour			Exceedance				Calibration Date	
	Average	Minimum	Valid	Operational	Max	Objective	Max Day and Time	Max	Objective	Max Day	1hr	8hr	24hr	30d		
NO (ppb)	0.7	0.0	95.0%	100.0%	38.2	-	Jan-06 13:00	8.0	-	Jan-06	-	-	-	-	Jan 08, 2025	
NO <sub>2</sub> (ppb)	4.7	0.4	95.0%	100.0%	30.0	159	Jan-20 06:00	13.1	-	Jan-09	0	-	-	-	Jan 08, 2025	
NO <sub>x</sub> (ppb)	5.4	0.4	95.0%	100.0%	56.0	-	Jan-06 13:00	20.8	-	Jan-06	-	-	-	-	Jan 08, 2025	
O <sub>3</sub> (ppb)	32.2	1.2	95.3%	100.0%	45.1	76	Jan-27 18:00	41.8	-	Jan-13	0	-	-	-	Jan 08, 2025	
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	3.7	0.1	99.9%	100.0%	37.2	80	Jan-24 23:00	13.7	29	Jan-05	0	-	0	-	Jan 08, 2025	
SO <sub>2</sub> (ppb)	0.7	0.0	95.3%	100.0%	10.0	172	Jan-19 15:00	3.7	48	Jan-19	0	-	0	0	Jan 21, 2025	
	<b>Average</b>	<b>Minimum</b>	<b>Valid</b>	<b>Operational</b>	<b>Maximum</b>											
Temp (°C)	-5.8	-25.5	95.8%	95.8%	7.8	<div style="border: 1px solid black; padding: 5px;"> <b>Note:</b> Valid hours must be greater than 75%                      Operational hours must be greater than 90%                 </div>										
RH (%)	67.0	31.2	100.0%	100.0%	99.6											
WS (km/hr)	11.7	0.1	98.9%	98.9%	47.1											
WD (deg)	270	0.0	98.9%	98.9%	359.7	Average Wind Direction		270	W							

**Update Summary:**

Parameter	Make	Model	Equipment summary
NO/NO <sub>2</sub> /NO <sub>x</sub>	Thermo	42iQ	No Operational issues noted
O <sub>3</sub>	Thermo	49iQ	No Operational issues noted
PM <sub>2.5</sub>	API	T640	No Operational issues noted
SO <sub>2</sub>	Thermo	43i-TLE	No Operational issues noted
Met Equip	MetOne	50.5	For ET, daily drop removed every day 04:21-04:43 (31hrs); Jan 16, 8hrs removed due to extreme readings

## 1.2 Dunes Air Monitoring Station

PAZA - January 2025 Dunes Station Report

Parameter	January				30min / 1-hour			24-hour			Exceedance				Calibration Date	
	Average	Minimum	Valid	Operational	Max	Objective	Max Day and Time	Max	Objective	Max Day	1hr	8hr	24hr	30d		
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	4.1	0.0	99.7%	100.0%	50.7	80	Jan-12 00:00	15.3	29	Jan-03	0	-	0	-	Jan-09-2025	
SO <sub>2</sub> (ppb)	0.4	0.0	95.4%	100.0%	4.4	172	Jan-12 16:00	1.0	48	Jan-06	0	-	0	0	Jan-09-2025	
TRS (ppb)	0.4	0.1	90.7%	95.3%	2.8	5	Jan-03 09:30	1.1	3	Jan-09	0	-	0	-	Jan-09-2025	
	<b>Average</b>	<b>Minimum</b>	<b>Valid</b>	<b>Operational</b>	<b>Maximum</b>											
Temp (°C)	-6.3	-29.5	100.0%	100.0%	10.6	<div style="border: 1px solid black; padding: 5px;"> <b>Note:</b> Valid hours must be greater than 75%                      Operational hours must be greater than 90%                 </div>										
RH (%)	65.6	18.8	100.0%	100.0%	99.9											
WS (km/hr)	4.5	0.0	100.0%	100.0%	15.9											
WD (deg)	281	0.5	100.0%	100.0%	358.6	Average Wind Direction		281	W							

**Update Summary:**

Parameter	Make	Model	Equipment summary
PM <sub>2.5</sub>	Thermo	SHARP 5030	No Operational issues noted during the month
SO <sub>2</sub>	Thermo	43i	No Operational issues noted during the month
TRS	Thermo	43i	Jan 17 failed span, due to failed internal pump, additional calibration performed once pump rebuilt, data removed to last good span (Jan 16) upto the second calibration (noted as maintenance), 31hrs removed, 4hrs maintenance
Met Equip	Gil/RMYoung	MetPak/RMY86004	No Operational issues noted during the month

### 1.3 Grande Prairie - Henry Pirker Air Monitoring Station

PAZA - January 2025 Henry Pirker Station Report

Parameter	January				1-hour			8-hour / 24-hour			Exceedance				Calibration Date	
	Average	Minimum	Valid	Operational	Max	Objective	Max Day and Time	Max	Objective	Max Day	1hr	8hr	24hr	30d		
NO (ppb)	6.0	0.0	91.0%	95.8%	109.8	-	Jan-07 13:00	47.7	-	Jan-06	-	-	-	-	Jan 09, 2025	
NO <sub>2</sub> (ppb)	12.2	1.2	91.0%	95.8%	49.6	159	Jan-07 17:00	30.5	-	Jan-07	0	-	-	-	Jan 09, 2025	
NO <sub>x</sub> (ppb)	18.4	1.2	91.0%	95.8%	159.4	-	Jan-07 13:00	74.9	-	Jan-06	-	-	-	-	Jan 09, 2025	
O <sub>3</sub> (ppb)	25.0	0.4	95.2%	99.9%	44.1	76	Jan-20 19:00	40.0	-	Jan-27	0	-	-	-	Jan 10, 2025	
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	5.1	0.1	99.9%	100.0%	30.4	80	Jan-06 13:00	20.2	29	Jan-06	0	-	0	-	Jan 10, 2025	
SO <sub>2</sub> (ppb)	0.2	0.0	95.2%	99.9%	3.9	172	Jan-20 10:00	0.8	48	Jan-20	0	-	0	0	Jan 10, 2025	
H <sub>2</sub> S (ppb)	0.3	0.0	95.0%	99.9%	2.9	10	Jan-20 10:00	0.8	3	Jan-20	0	-	0	-	Jan 07, 2025	
CH <sub>4</sub> (ppm)	-	1.8	47.0%	49.9%	4.8	-	Jan-15 09:00	2.8	-	Jan-07	-	-	-	-	Jan 31, 2025	
THC (ppm)	-	1.8	47.0%	49.9%	4.9	-	Jan-15 09:00	2.9	-	Jan-07	-	-	-	-	Jan 31, 2025	
NMHC (ppm)	-	0.0	47.0%	49.9%	0.3	-	Jan-15 09:00	0.1	-	Jan-07	-	-	-	-	Jan 31, 2025	
CO (ppm)	0.2	0.0	91.1%	95.6%	0.8	13	Jan-22 09:00	0.4	5	Jan-06	0	0	-	-	Jan 07, 2025	
	<b>Average</b>	<b>Minimum</b>	<b>Valid</b>	<b>Operational</b>	<b>Maximum</b>											
Temp (°C)	-6.9	-30.9	99.9%	99.9%	8.4	<div style="border: 1px solid black; padding: 5px;"> <b>Note:</b> Valid hours must be greater than 75%                      Operational hours must be greater than 90%                 </div>										Dec 12, 2024
RH (%)	64.5	31.2	99.9%	99.9%	87.0											Dec 12, 2024
SR (W/m <sup>2</sup> )	22.6	0.0	99.9%	99.9%	227.7											Dec 12, 2024
WS (km/hr)	8.4	0.1	99.9%	99.9%	36.0											Dec 12, 2024
WD (deg)	268	0.4	99.9%	99.9%	358.5	<div style="border: 1px solid black; padding: 2px;">                         Average Wind Direction      268      W                     </div>										Dec 12, 2024

**Update Summary:**

Parameter	Make	Model	Equipment summary
NO/NO <sub>2</sub> /NO <sub>x</sub>	Thermo	42i	Jan 2, signal drop, 1hr removed; Jan 9 calibration, p3 failed during removal calibration, data removed to morning span (4.4%), 8hrs removed; analyzer left to stabilize over night following repairs (drier replacement), install calibration Jan 10 (5hrs maintenance, 17hrs removed due to stabilizing overnight)
O <sub>3</sub>	TECO	49i	Jan 2, signal drop, 1hr removed
PM <sub>2.5</sub>	API	T640	No operational issues noted during the month
SO <sub>2</sub>	Thermo	43i-TLE	Jan 2, signal drop, 1hr removed
H <sub>2</sub> S	TEI	450i	Jan 2, signal drop, 1hr removed
THC/CH <sub>4</sub> /NMHC	TEI	55i	Dec 30 analyzer failed, attempts of repairs Jan1, not successful, Jan 2 analyzer removed (s/n:1151980005) and spare installed (s/n:0722DR0790) (3hrs maintenance); Jan 3 install calibration (data from Jan 1 to install calibration invalid, 60hrs; Jan 19 analyzer flatlined due to pump failure, Jan 31 pump was sourced and analyzer repaired (4hrs maintenance), equipment left overnight to calibrate on Feb 1; data invalid between Jan 19 span and maintenance (298hrs); <75% uptime for month (reference #438053)
CO	Thermo	48i-TLE	Jan 2 data dropped and was unstable, Jan 3 span fail resulted in a manual AIC check later on Jan 3, check was ok (2%), however due to unstable readings data was removed back to Jan 2 span (32hrs removed, 1hr maintenance)
Met Equip	MetOne	50.5	Jan 2, signal drop, 1hr removed

### 1.4 Smoky Heights Air Monitoring Station

PAZA - January 2025 Smoky Heights Station Report

Parameter	January				30min / 1-hour			24-hour			Exceedance				Calibration Date	
	Average	Minimum	Valid	Operational	Max	Objective	Max Day and Time	Max	Objective	Max Day	1hr	8hr	24hr	30d		
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	3.6	0.0	98.7%	98.8%	77.0	80	Jan-16 05:00	14.9	29	Jan-06	0	-	0	-	Jan 16, 2025	
SO <sub>2</sub> (ppb)	0.5	0.0	94.5%	98.9%	5.6	172	Jan-08 12:00	1.5	48	Jan-08	0	-	0	0	Jan 15, 2025	
TRS (ppb)	0.2	0.0	94.1%	98.9%	1.6	5	Jan-24 19:00	0.4	3	Jan-06	0	-	0	-	Jan 16, 2025	
	<b>Average</b>	<b>Minimum</b>	<b>Valid</b>	<b>Operational</b>	<b>Maximum</b>											
Temp (°C)	-7.7	-33.3	98.9%	98.9%	5.5	<div style="border: 1px solid black; padding: 5px;"> <b>Note:</b> Valid hours must be greater than 75%                      Operational hours must be greater than 90%                 </div>										Oct 10, 2024
WS (km/hr)	15.3	0.2	98.9%	98.9%	85.6											Oct 10, 2024
WD (deg)	263	0.2	98.9%	98.9%	359.7	<div style="border: 1px solid black; padding: 2px;">                         Average Wind Direction      263      WNW                     </div>										Oct 10, 2024

**Update Summary:**

Parameter	Make	Model	Equipment summary
PM <sub>2.5</sub>	Sharp	5030	Jan 3, loss of data signal (1hr); Jan 14, power failure (4hrs); Jan 15 power failure (4hrs)
SO <sub>2</sub>	TECO	43i	Jan 14, power failure (4hrs); Jan 15 power failure (4hrs)
TRS	TEI	43i APSAA	Jan 14, power failure (4hrs); Jan 15 power failure (4hrs)
Met Equip	MetOne	50.5	Jan 14, power failure (4hrs); Jan 15 power failure (4hrs)

## 1.5 Valleyview Air Monitoring Station

### PAZA - January 2025 Valleyview Station Report

Parameter	January				1-hour			24-hour			Exceedance				Calibration Date
	Average	Minimum	Valid	Operational	Max	Objective	Max Day and Time	Max	Objective	Max Day	1hr	8hr	24hr	30d	
SO <sub>2</sub> (ppb)	0.1	0.0	95.3%	100.0%	2.1	172	Jan-04 06:00	0.7	48	Jan-04	0	-	0	0	Jan 03, 2025
H <sub>2</sub> S (ppb)	0.1	0.0	95.0%	100.0%	0.6	10	Jan-04 04:00	0.3	3	Jan-04	0	-	0	-	Jan 03, 2025
	<b>Average</b>	<b>Minimum</b>	<b>Valid</b>	<b>Operational</b>	<b>Maximum</b>										
Temp (°C)	-6.4	-33.0	100.0%	100.0%	11.0	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>Note: Valid hours must be greater than 75%</b>  <b>Operational hours must be greater than 90%</b> </div> <div style="border: 1px solid black; padding: 5px;"> <b>Average Wind Direction</b>      273    NW         </div>									
RH (%)	73.4	24.8	100.0%	100.0%	100.2										
WS (km/hr)	5.2	0.2	100.0%	100.0%	19.5										
WD (deg)	273	0.4	100.0%	100.0%	359.8										

#### Update Summary:

Parameter	Make	Model	Equipment summary
SO <sub>2</sub>	TEI	43i-APSCB	No operational issues noted during the month
H <sub>2</sub> S	TEI	450i-APHAA / 43C	Jan 3 failed span, due to low temperatures, calibration performed as found ran twice, came in at <7%, no data removed
Met Equip	RMYoung	RMY86004	No operational issues noted during the month

## 1.6 Fox Creek Air Monitoring Station

### PAZA - January 2025 Fox Creek Station Report

Parameter	January				1-hour			8-hour / 24-hour			Exceedance				Calibration Date
	Average	Minimum	Valid	Operational	Max	Objective	Max Day and Time	Max	Objective	Max Day	1hr	8hr	24hr	30d	
NO (ppb)	12.0	0.0	93.7%	98.7%	102.7	-	Jan-28 08:00	45.9	-	Jan-06	-	-	-	-	Jan 13, 2025
NO <sub>2</sub> (ppb)	13.0	0.3	93.7%	98.7%	49.3	159	Jan-20 17:00	22.6	-	Jan-09	0	-	-	-	Jan 13, 2025
NO <sub>x</sub> (ppb)	25.2	0.5	93.7%	98.7%	141.4	-	Jan-10 08:00	68.3	-	Jan-06	-	-	-	-	Jan 13, 2025
O <sub>3</sub> (ppb)	23.1	0.5	88.5%	93.0%	47.9	76	Jan-27 18:00	36.7	-	Jan-21	0	-	-	-	Jan 25, 2025
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	14.4	0.1	98.7%	98.8%	530.5	80	Jan-25 21:00	82.6	29	Jan-25	25	-	4	-	Jan 14, 2025
SO <sub>2</sub> (ppb)	0.5	0.0	94.2%	98.9%	7.2	172	Jan-07 19:00	2.0	48	Jan-07	0	-	0	0	Jan 14, 2025
H <sub>2</sub> S (ppb)	0.3	0.0	94.1%	98.9%	1.2	10	Jan-28 08:00	0.6	3	Jan-06	0	-	0	-	Jan 14, 2025
	<b>Average</b>	<b>Minimum</b>	<b>Valid</b>	<b>Operational</b>	<b>Maximum</b>										
Temp (°C)	-5.1	-26.5	99.1%	99.1%	11.5	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>Note: Valid hours must be greater than 75%</b>  <b>Operational hours must be greater than 90%</b> </div> <div style="border: 1px solid black; padding: 5px;"> <b>Average Wind Direction</b>      275    W         </div>									
WS (km/hr)	6.5	0.3	97.7%	97.7%	24.5										
WD (deg)	275	0.4	97.7%	97.7%	359.6										

#### Update Summary:

Parameter	Make	Model	Equipment summary
NO/NO <sub>2</sub> /NO <sub>x</sub>	Thermo	42IQ	Jan 15, power failure (6hrs); Jan 20, power failure (2hrs); Jan 25, ran NOx GPT for O3 reference points (2hrs maintenance)
O <sub>3</sub>	TECO	49I	Jan 15, power failure (6hrs); Jan 20, power failure (2hrs), followed by poor recovery, 4 additional hrs removed; Jan 25 failed span, calibration check performed was <6% (3hrs maintenance), due to unstable readings data was removed from the maintenance calibration to last good span (Jan 24), 37hrs removed
PM <sub>2.5</sub>	API	T640	Jan 15, power failure (6hrs); Jan 20, power failure (2hrs) and unstable data removed (1hr); Jan 18-28 localized burning resulted in 4x24hr readings above AAAQO and 25x1hr readings above AAAQG
SO <sub>2</sub>	TEI	43I-TLE	Jan 15, power failure (6hrs); Jan 20, power failure (2hrs)
H <sub>2</sub> S	TEI	450i	Jan 15, power failure (6hrs); Jan 20, power failure (2hrs)
Met Equip	MetOne	50.5	Jan 15, power failure (5hrs); Jan 20, power failure (2hrs); Jan 28-29, frozen wind sensor, 12hrs removed

## 1.7 Happy Valley Air Monitoring Station

PAZA - January 2025 Happy Valley Station Report

Parameter	January			30min / 1-hour				24-hour		Exceedance				Calibration Date	
	Average	Minimum	Valid	Operational	Max	Objective	ix Day and Time	Max	Objective	Max Day	1hr	8hr	24hr		30d
NO (ppb)	0.4	0.0	94.6%	99.6%	29.2	-	Jan-06 14:00	5.9	-	Jan-06	-	-	-	-	Jan 13, 2025
NO <sub>2</sub> (ppb)	2.2	0.4	94.6%	99.6%	21.0	159	Jan-06 17:00	9.5	-	Jan-06	0	-	-	-	Jan 13, 2025
NO <sub>x</sub> (ppb)	2.6	0.4	94.6%	99.6%	45.1	-	Jan-06 14:00	15.5	-	Jan-06	-	-	-	-	Jan 13, 2025
O <sub>3</sub> (ppb)	34.7	3.2	94.9%	99.6%	47.4	76	Jan-07 05:00	45.0	-	Jan-07	0	-	-	-	Jan 13, 2025
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	2.8	0.1	99.5%	99.6%	45.9	80	Jan-04 17:00	12.6	29	Jan-04	0	-	0	-	Jan 13, 2025
SO <sub>2</sub> (ppb)	0.3	0.0	94.9%	99.6%	4.1	172	Jan-18 07:00	1.0	48	Jan-18	0	-	0	0	Jan 13, 2025
TRS (ppb)	0.4	0.0	94.2%	98.9%	1.9	5	Jan-06 12:00	0.5	3	Jan-06	0	-	0	-	Jan 20, 2025
THC (ppm)	2.1	1.8	95.0%	99.6%	2.9	-	Jan-19 22:00	2.3	-	Jan-06	-	-	-	-	Jan 14, 2025
	<b>Average</b>	<b>Minimum</b>	<b>Valid</b>	<b>Operational</b>	<b>Maximum</b>										
Temp (°C)	-6.3	-28.8	99.7%	99.7%	9.1	<b>Note: Valid hours must be greater than 75%</b> <b>Operational hours must be greater than 90%</b> Average Wind Direction      262      W									
WS (km/hr)	17.3	0.2	99.7%	99.7%	53.2										
WD (deg)	262	0.8	99.7%	99.7%	359.4										

**Update Summary:**

Parameter	Make	Model	Equipment summary
NO/NO <sub>2</sub> /NO <sub>x</sub>	TEI	42i	Jan 21, communication loss, 3hrs of data removed
O <sub>3</sub>	TEI	49i	Jan 21, communication loss, 3hrs of data removed
PM <sub>2.5</sub>	API	T640	Jan 21, communication loss, 3hrs of data removed
SO <sub>2</sub>	TEI	43i	Jan 21, communication loss, 3hrs of data removed
TRS	TEI	43i	Jan 20 span fail, calibration check performed showed no issue, 1hr removed from span, 4hrs maintenance (2nd calibration in month); Jan 21, communication loss, 3hrs of data removed
THC	TEI	55i / 51li-LT	Jan 21, communication loss, 3hrs of data removed
Met Equip	MetOne	50.5	Jan 21, communication loss, 2hrs of data removed

## 1.8 Milner Air Monitoring Station

PAZA - January 2025 Milner Station Report

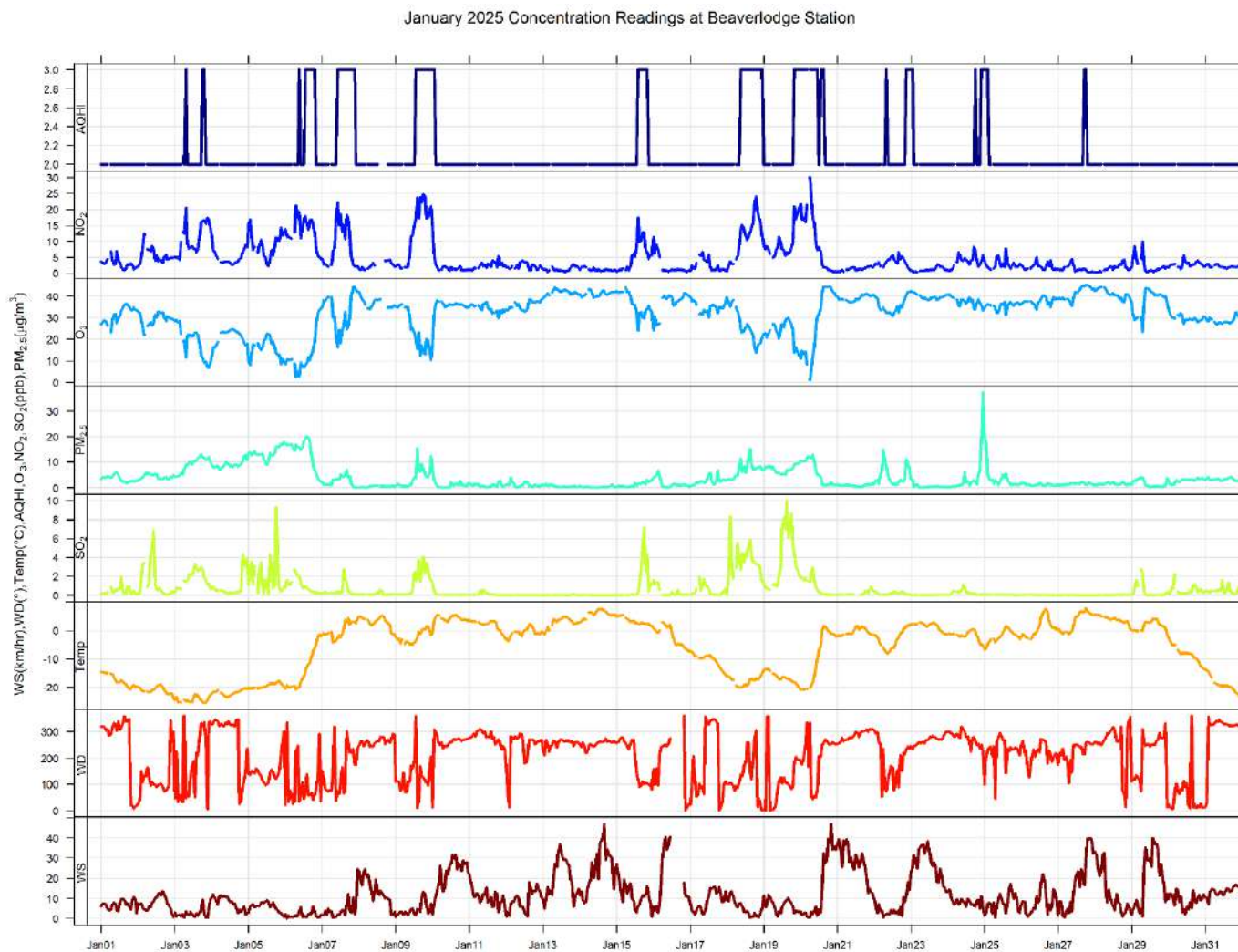
Parameter	January			1-hour			24-hour		Exceedance				Calibration Date		
	Average	Minimum	Valid	Operational	Max	Objective	Max Day and Time	Max	Objective	Max Day	1hr	8hr		24hr	30d
NO (ppb)	0.9	0.0	95.2%	100.0%	25.1	-	Jan-06 02:00	7.7	-	Jan-05	-	-	-	-	Jan 23, 2025
NO <sub>2</sub> (ppb)	3.9	0.0	95.2%	100.0%	25.1	159	Jan-19 20:00	13.5	-	Jan-05	0	-	-	-	Jan 23, 2025
NO <sub>x</sub> (ppb)	4.9	0.0	95.2%	100.0%	45.1	-	Jan-06 02:00	21.4	-	Jan-05	-	-	-	-	Jan 23, 2025
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	3.5	0.1	99.9%	100.0%	50.3	80	Jan-31 02:00	12.2	29	Jan-05	0	-	0	-	Jan 23, 2025
	<b>Average</b>	<b>Minimum</b>	<b>Valid</b>	<b>Operational</b>	<b>Maximum</b>										
WS (km/hr)	10.9	0.1	100.0%	100.0%	36.0	<b>Note: Valid hours must be greater than 75%</b> <b>Operational hours must be greater than 90%</b> Average Wind Direction      263      W									
WD (deg)	263	1.5	100.0%	100.0%	358.8										

**Update Summary:**

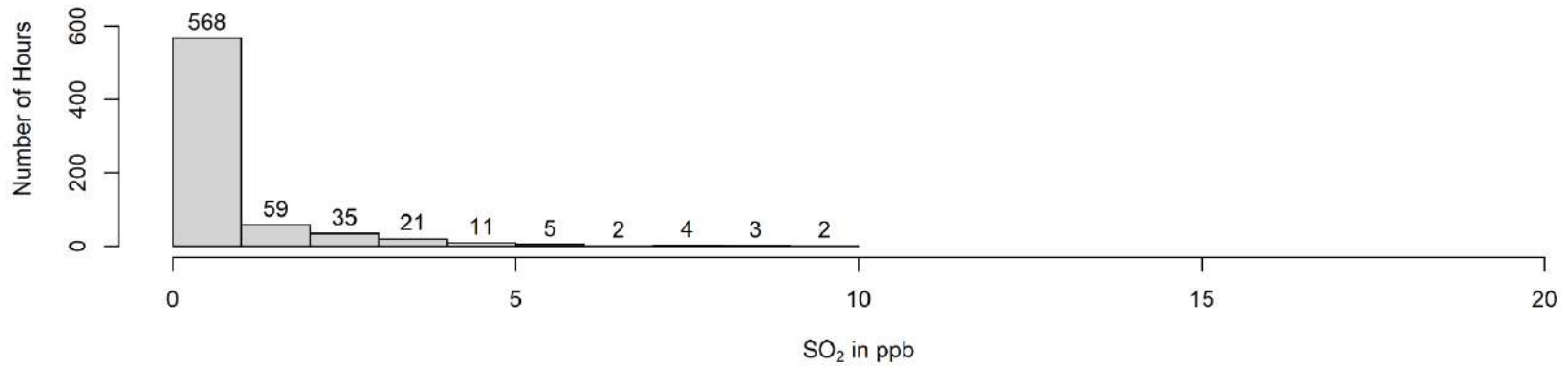
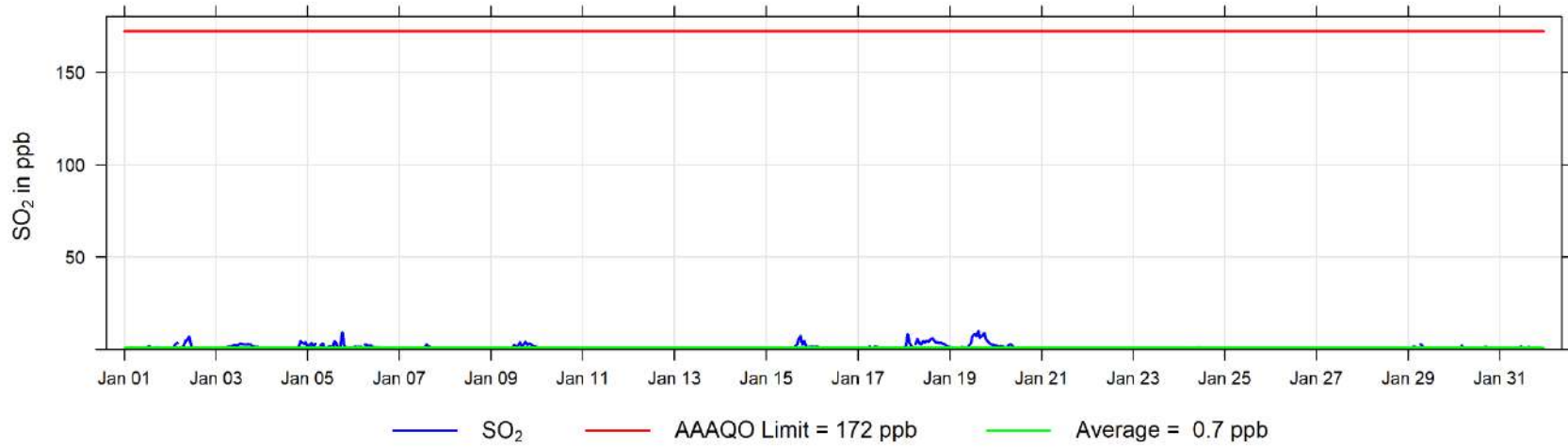
Parameter	Make	Model	Equipment summary
NO/NO <sub>2</sub> /NO <sub>x</sub>	Thermo	42i	No Operational issues noted
PM <sub>2.5</sub>	API	T640	No Operational issues noted
Met Equip	MetOne	50.5	No Operational issues noted

## 2 Beaverlodge Charts

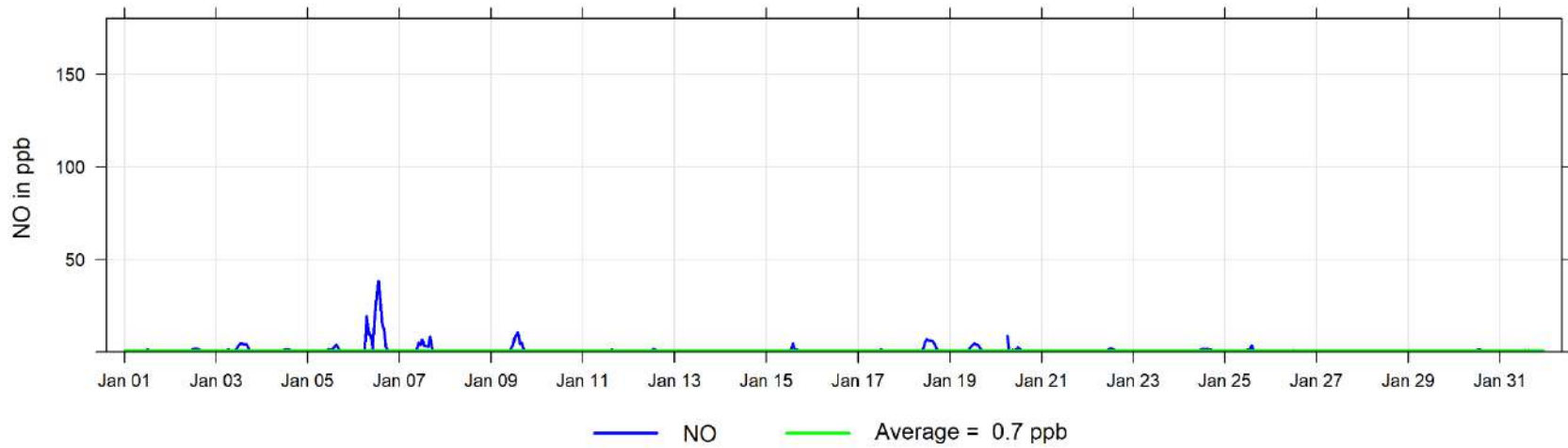
The following pages include the charts and histograms for Beaverlodge Station



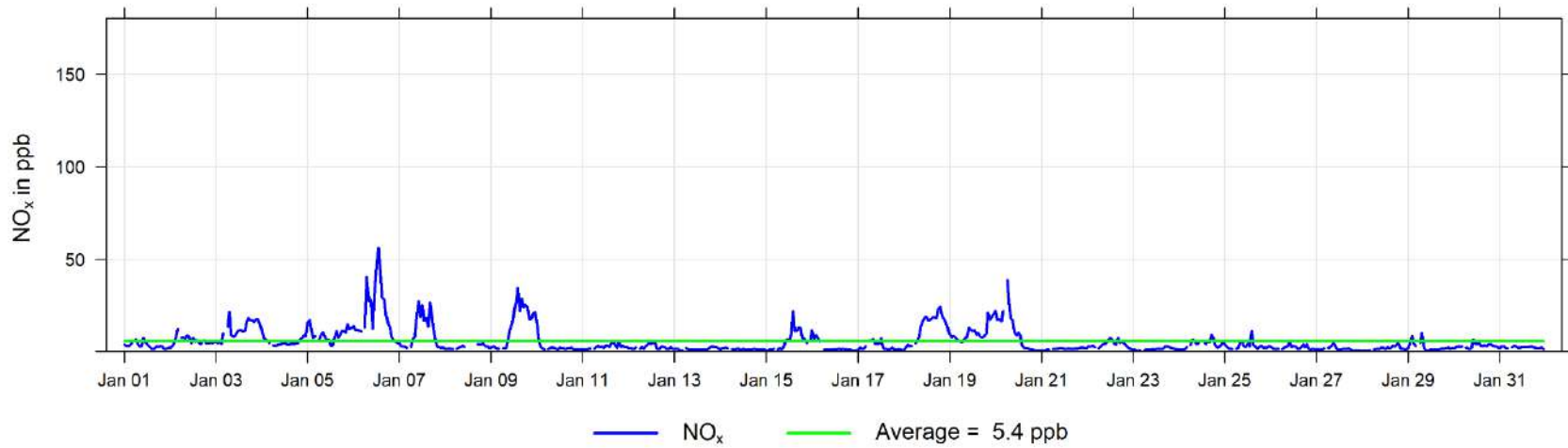
January 2025 Hourly Concentration Readings of SO<sub>2</sub> (in ppb) at Beaverlodge



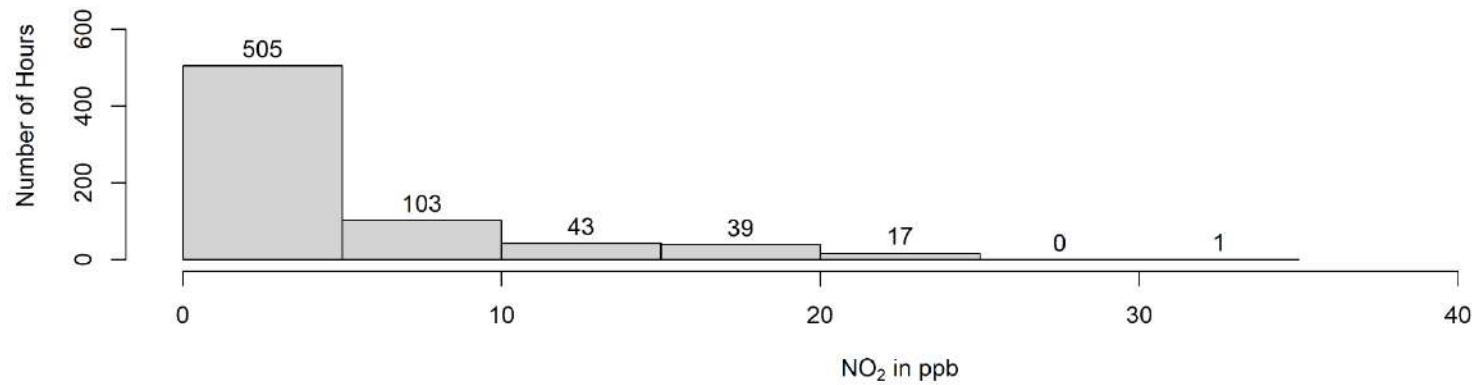
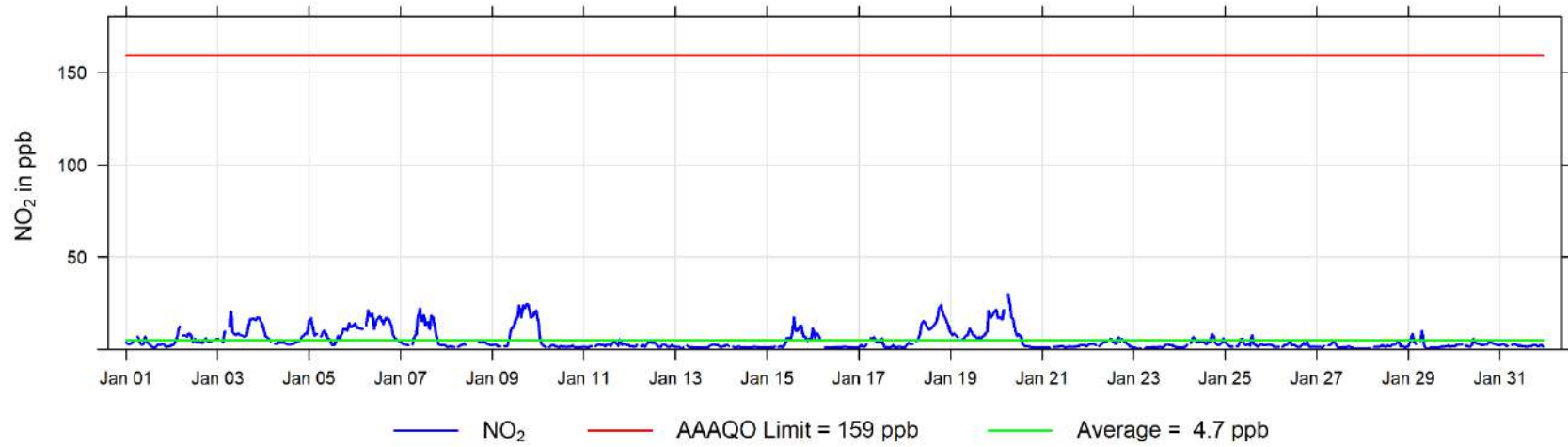
January 2025 Hourly Concentration Readings of NO (in ppb) at Beaverlodge



January 2025 Hourly Concentration Readings of NO<sub>x</sub> (in ppb) at Beaverlodge

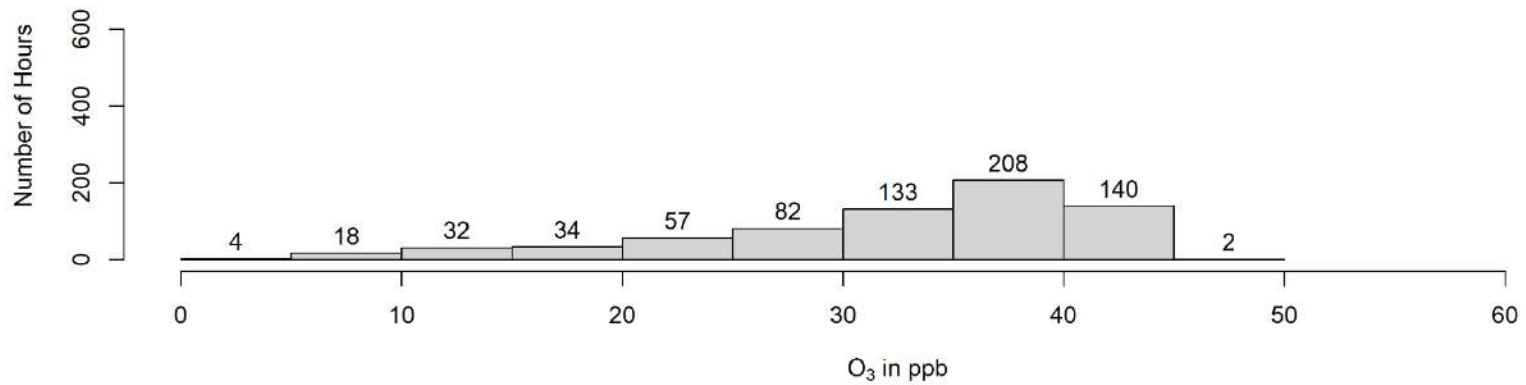


January 2025 Hourly Concentration Readings of NO<sub>2</sub> (in ppb) at Beaverlodge

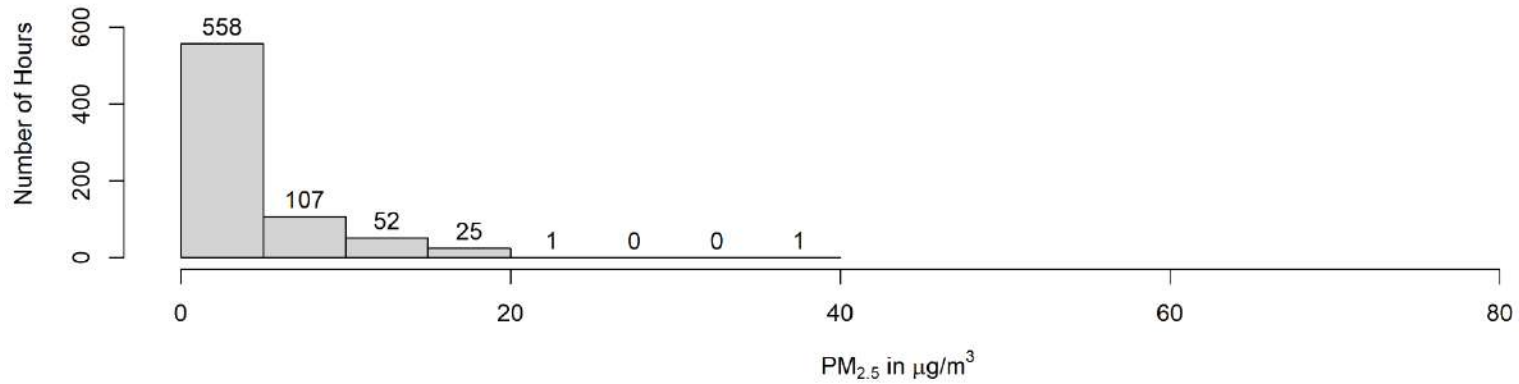
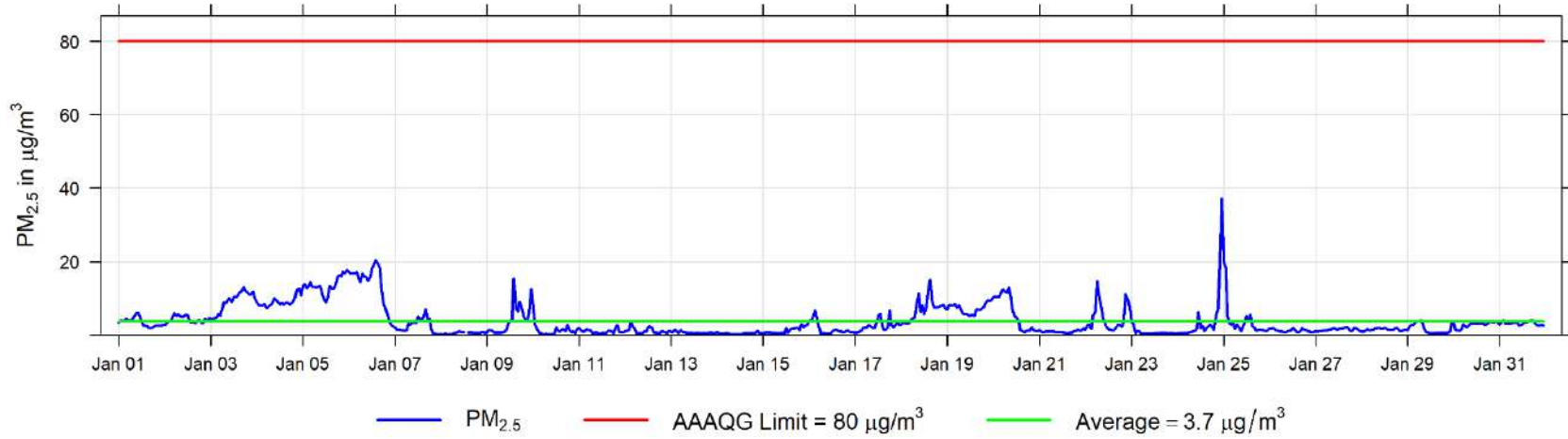




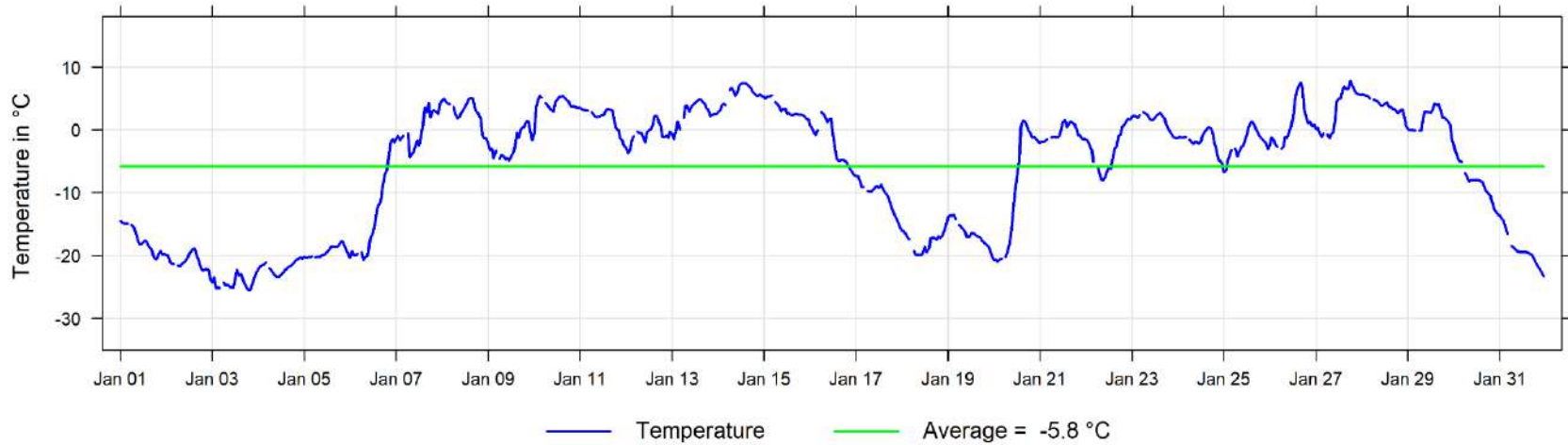
January 2025 Hourly Concentration Readings of O<sub>3</sub> (in ppb) at Beaverlodge



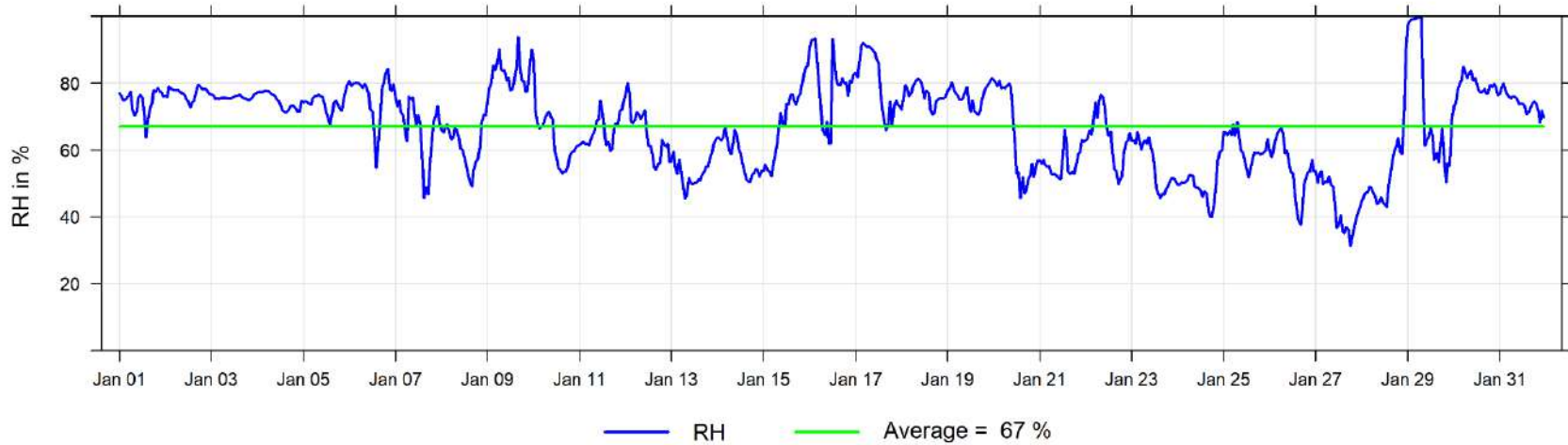
January 2025 Hourly Concentration Readings of PM<sub>2.5</sub> in  $\mu\text{g}/\text{m}^3$  at Beaverlodge



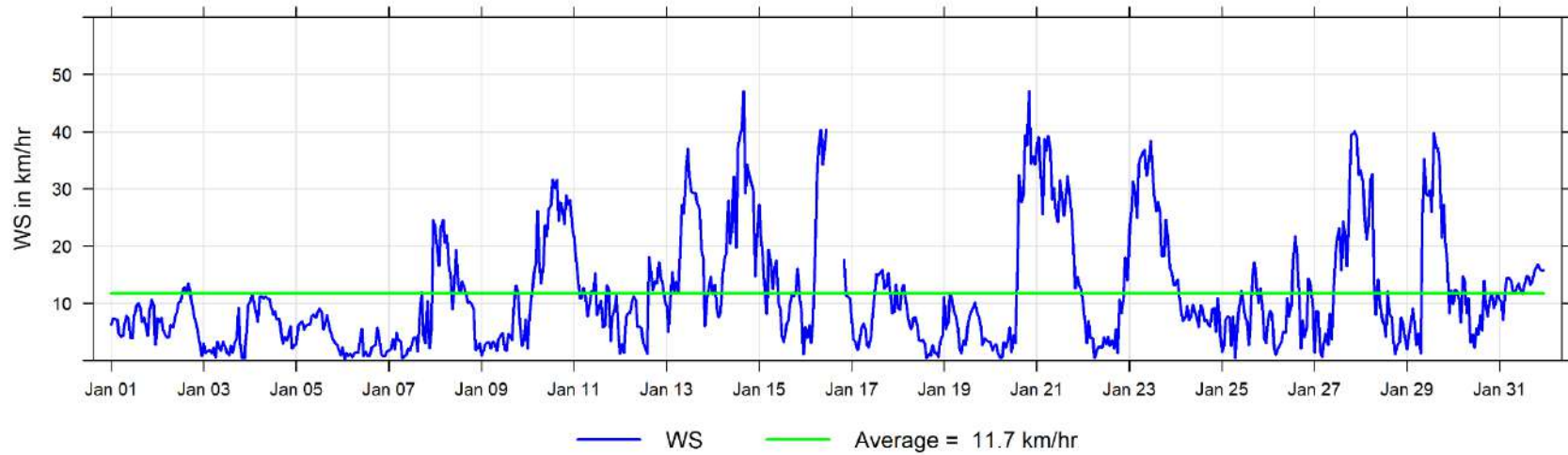
January 2025 Hourly Temperature Readings (in °C) at Beaverlodge



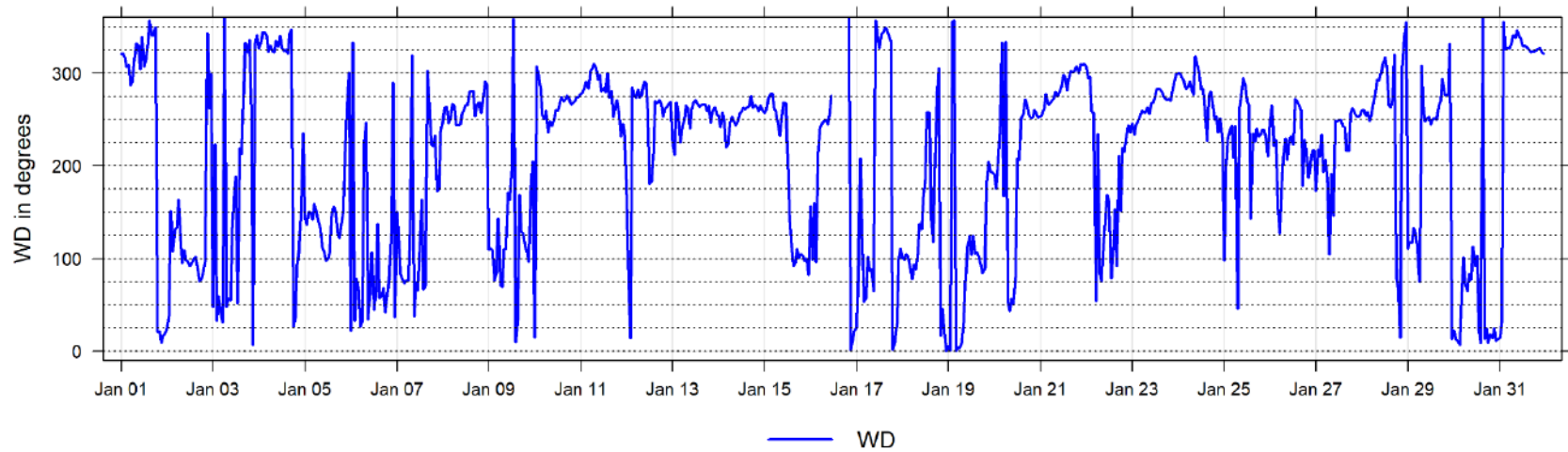
January 2025 Hourly Readings of Relative Humidity (in %) at Beaverlodge



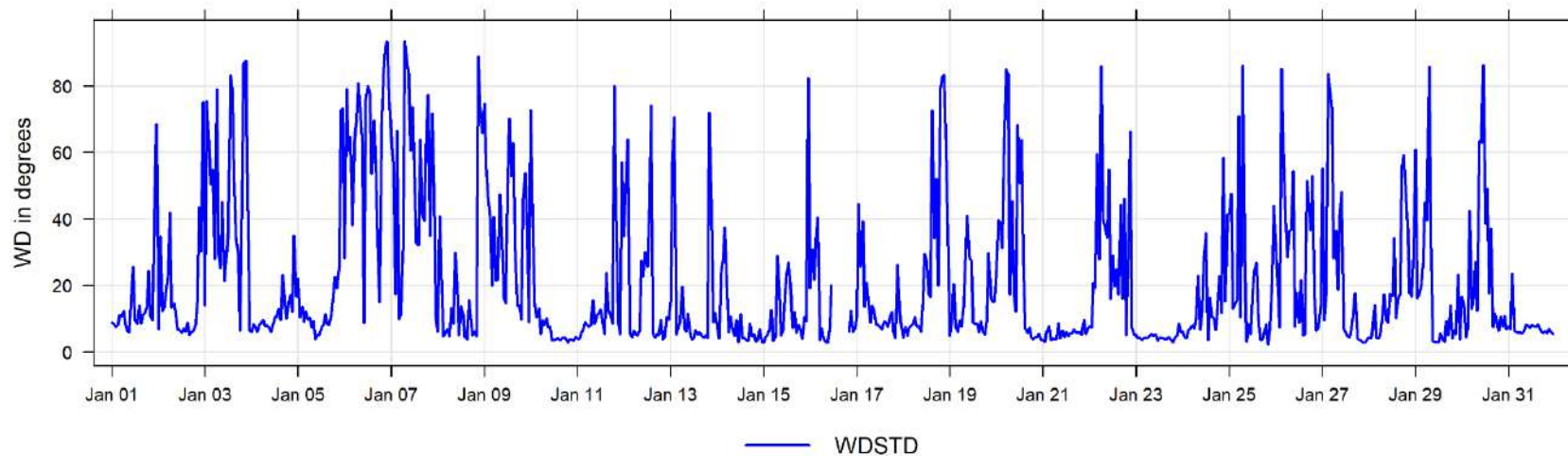
January 2025 Hourly Readings of Wind Speed (in km/hr) at Beaverlodge

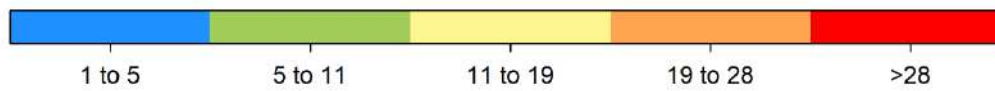
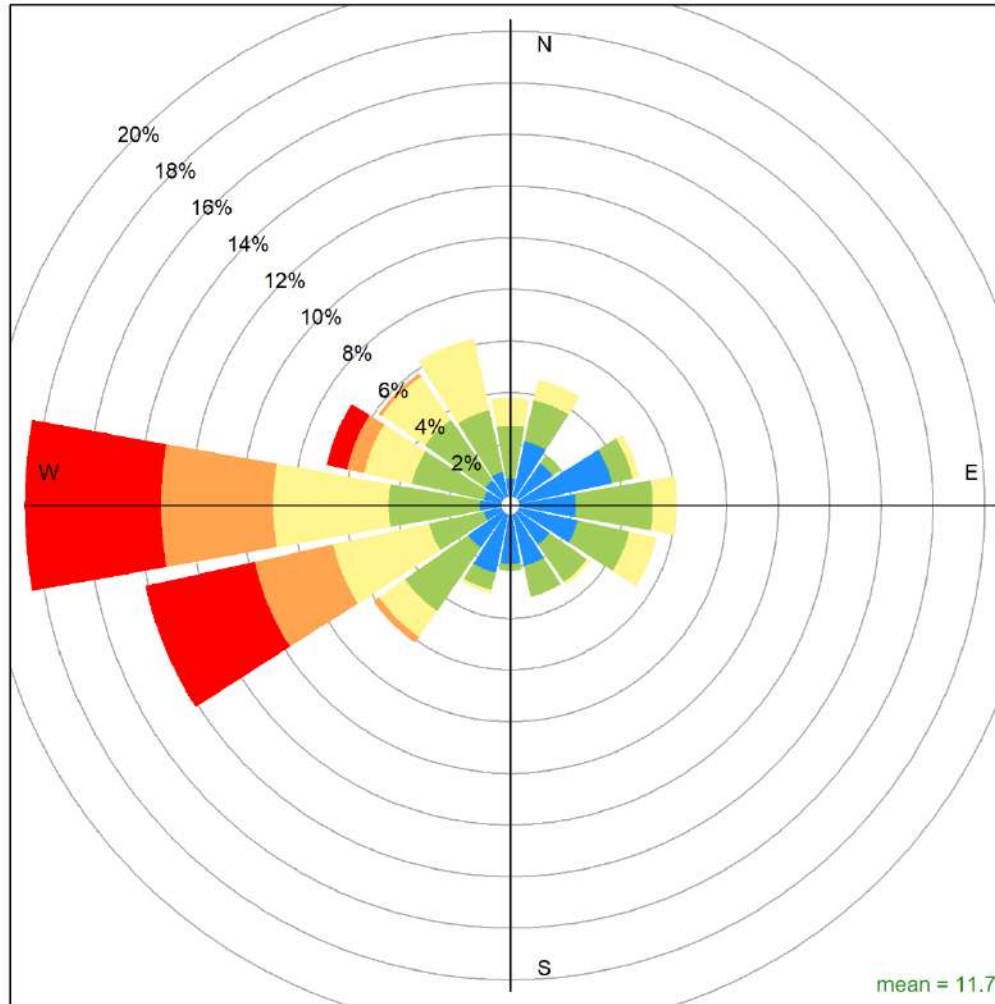


January 2025 Hourly Readings of Wind Direction (in degrees) at Beaverlodge



January 2025 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Beaverlodge



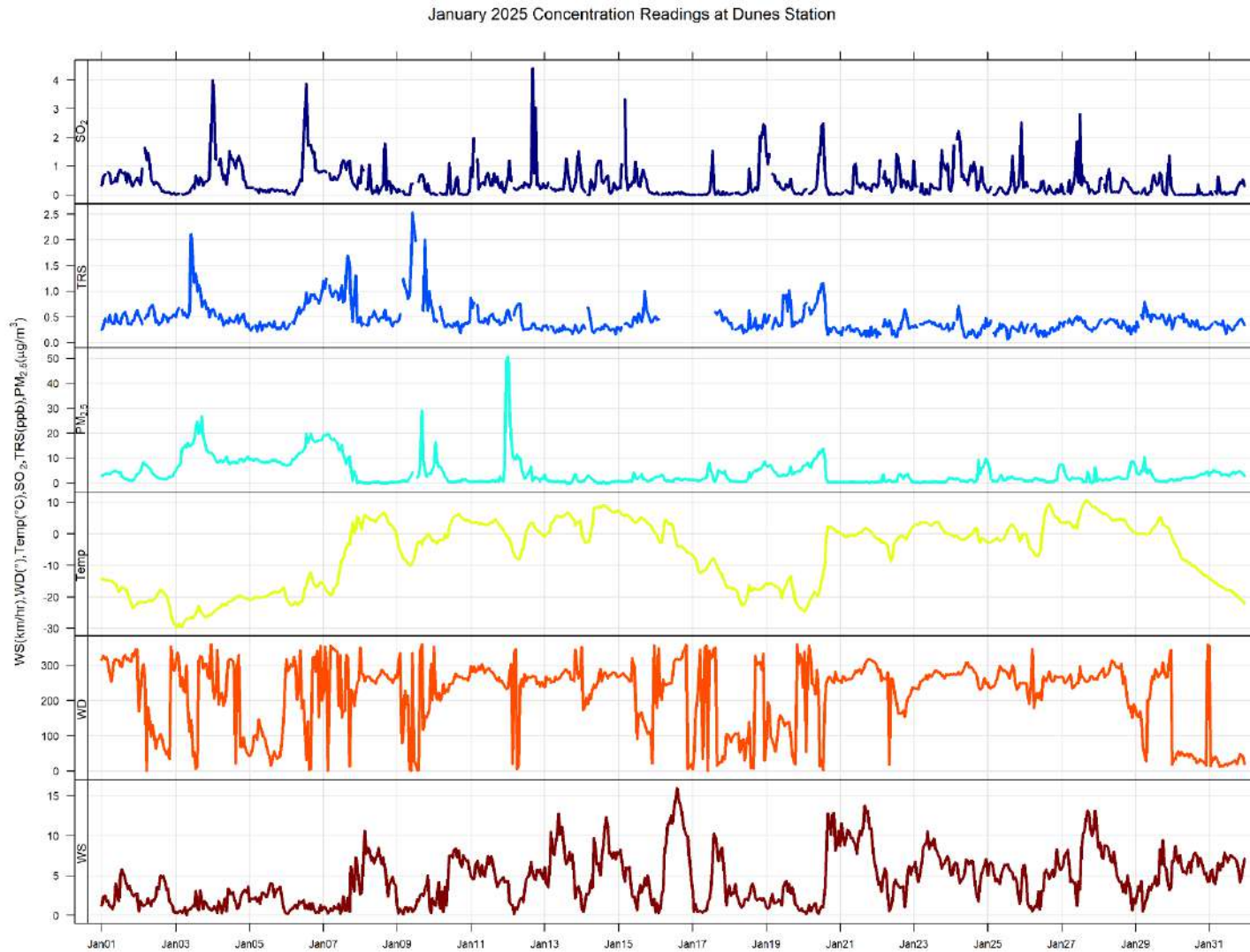


Beaverlodge January 2025 Wind Rose, wind speed in km/hr

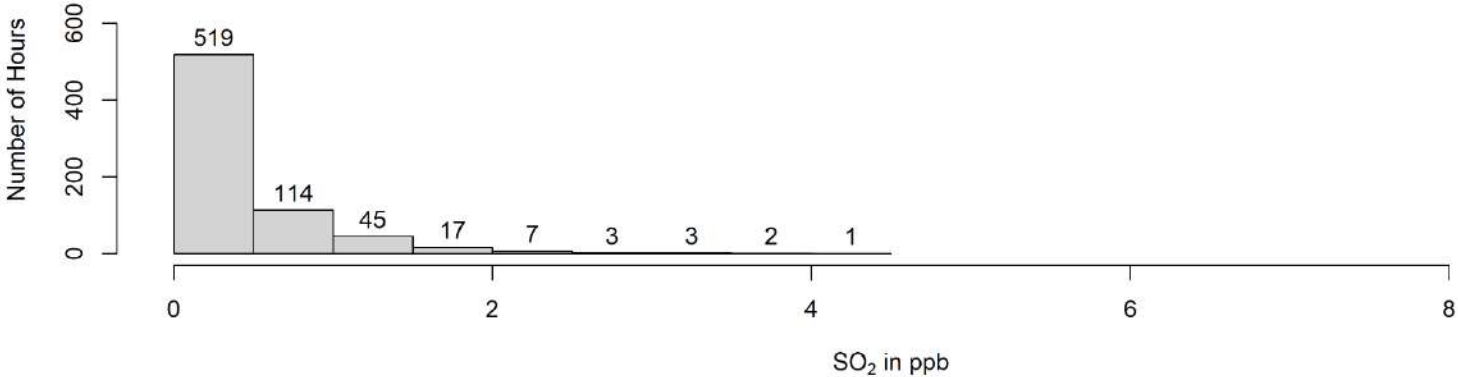
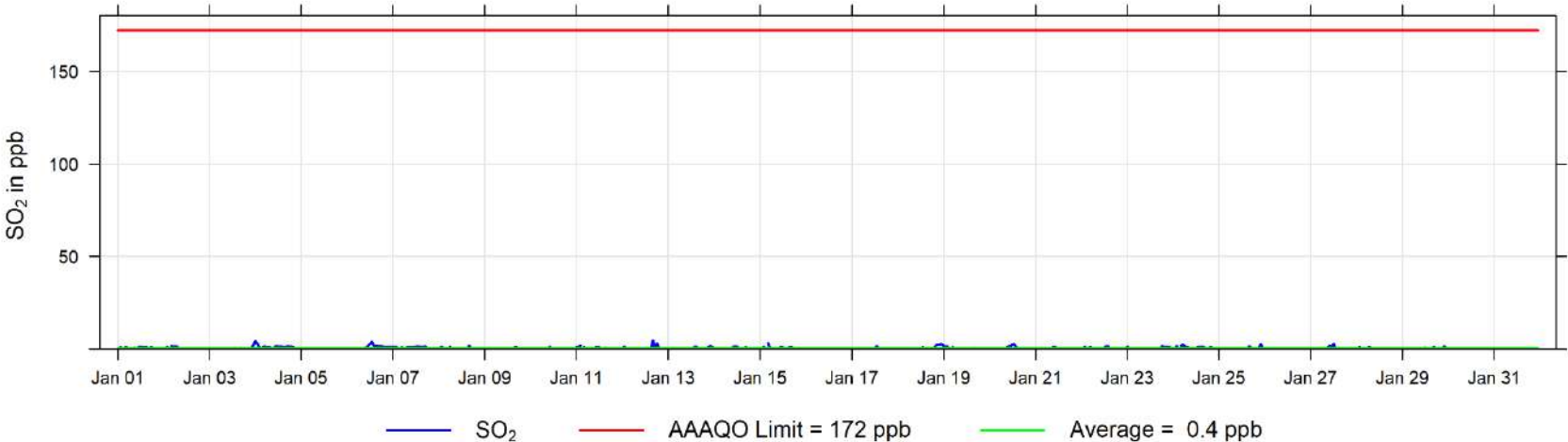
**Calms (<1km/hr) = 3.7 %**

### 3 Dunes Charts

The following pages include the charts and histograms for Dunes Station

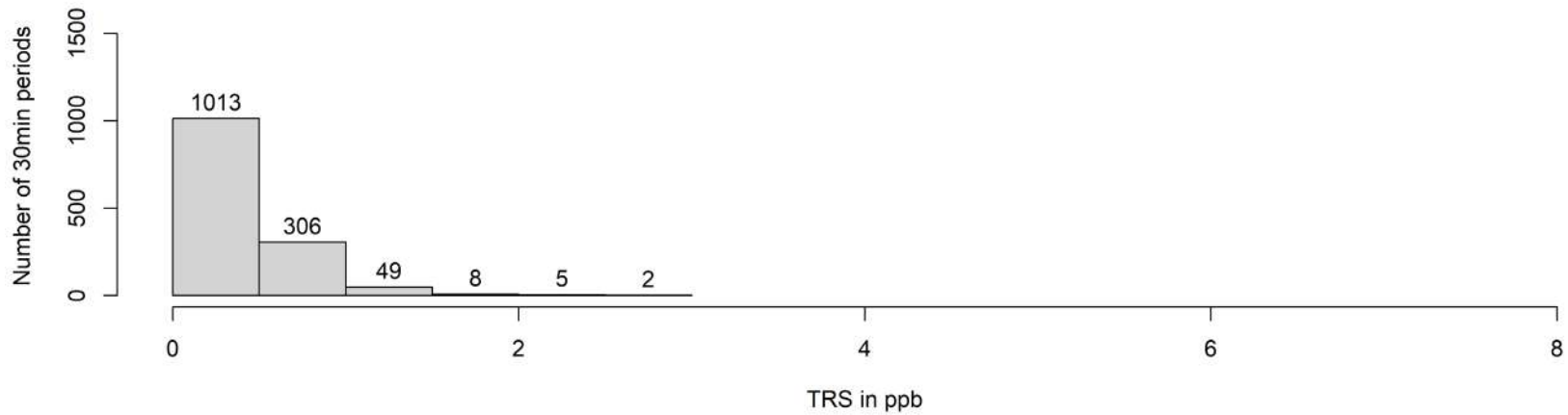
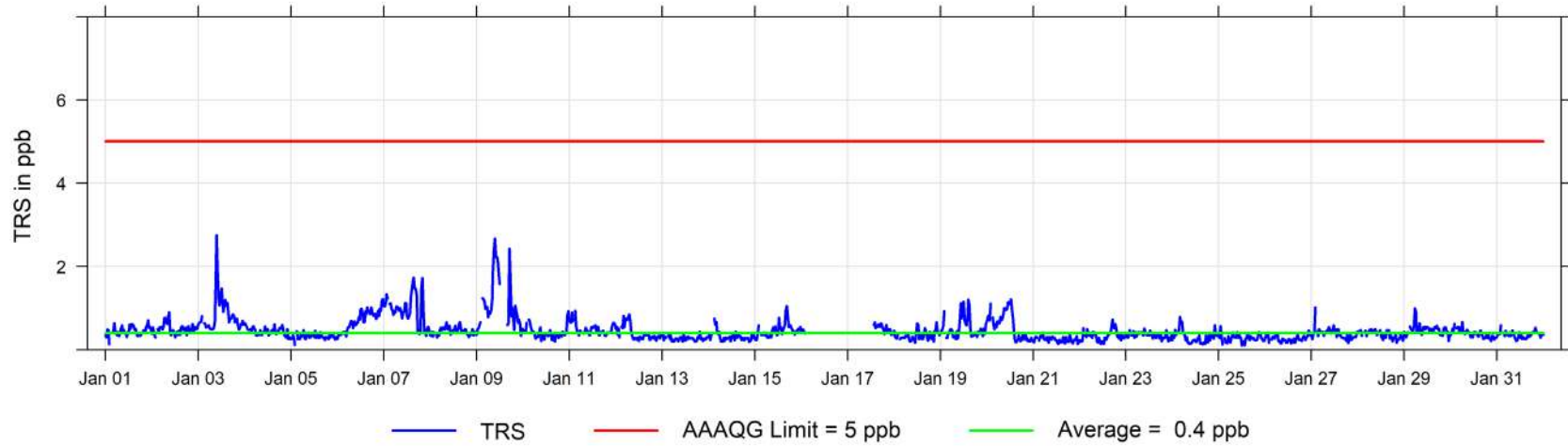


January 2025 Hourly Concentration Readings of SO<sub>2</sub> (in ppb) at Dunes

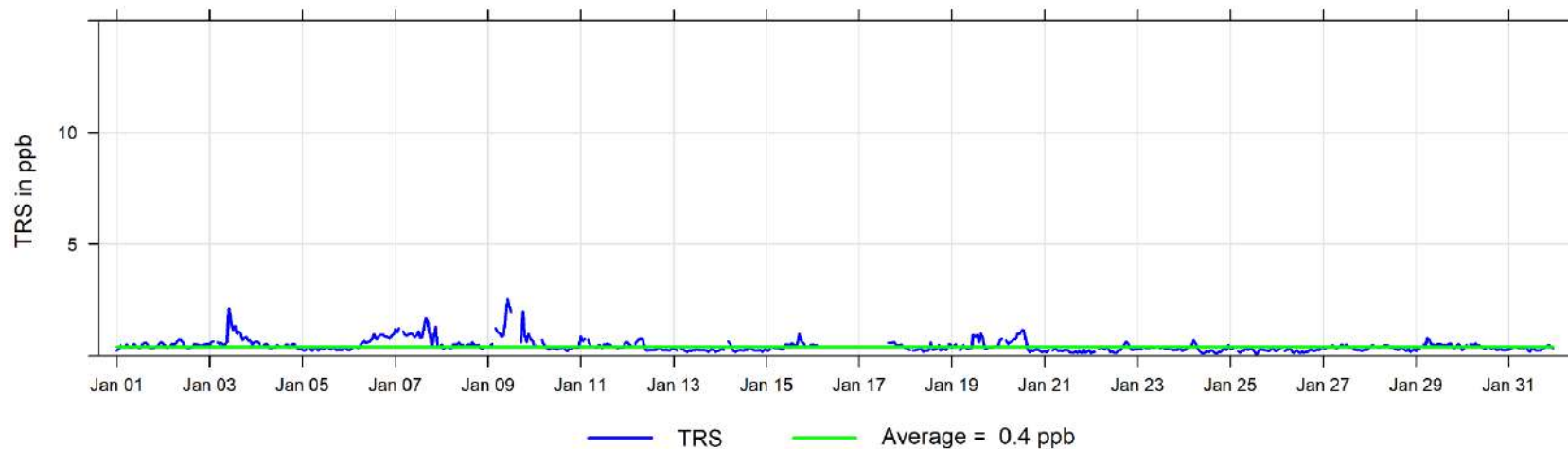




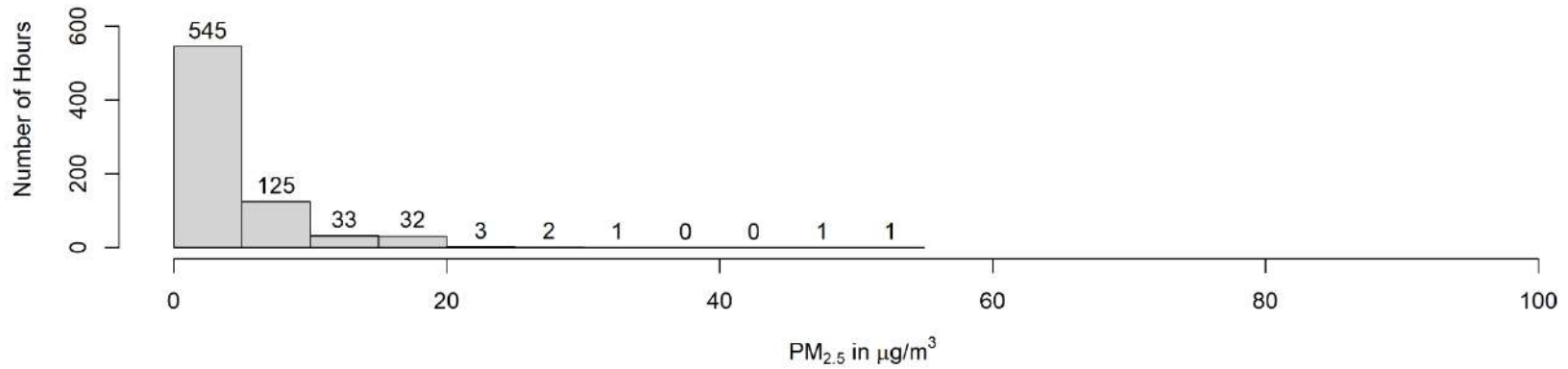
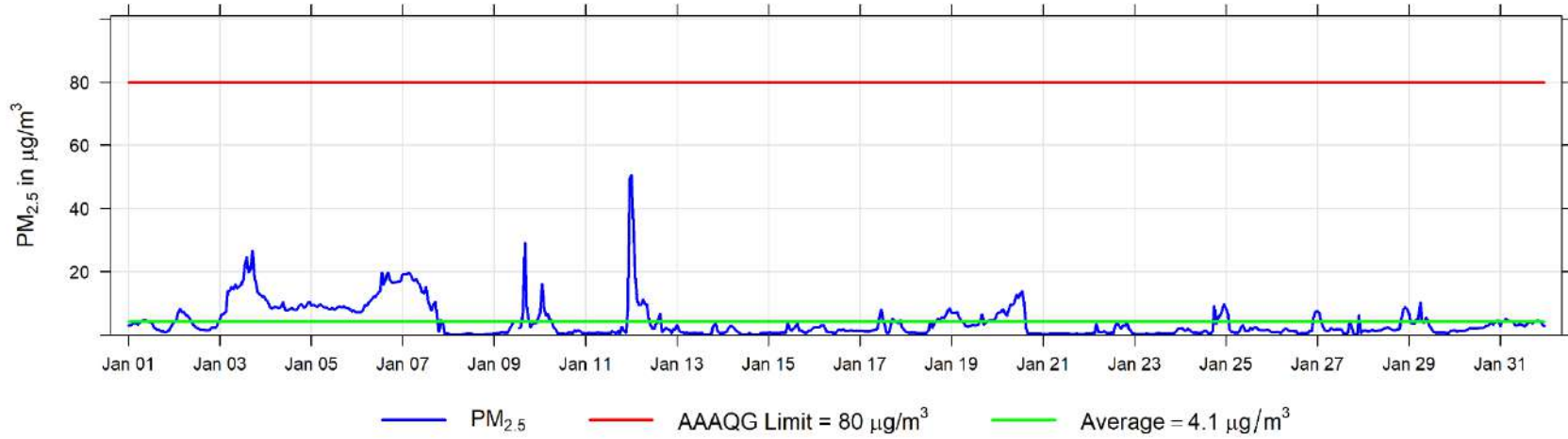
January 2025 30 min Concentration Readings of TRS (in ppb) at Dunes



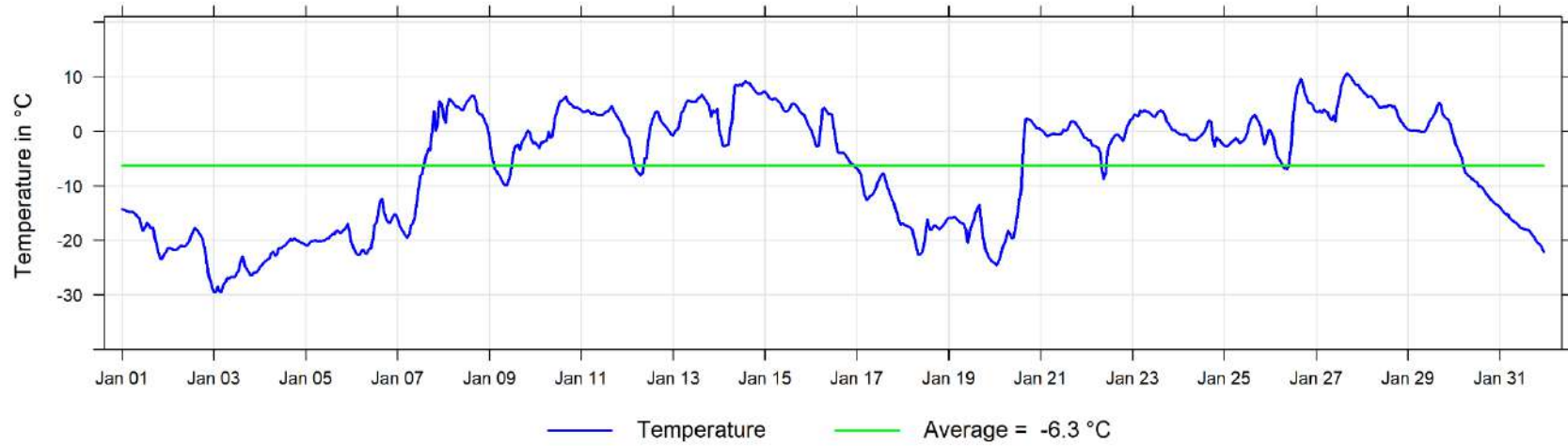
January 2025 Hourly Concentration Readings of TRS (in ppb) at Dunes



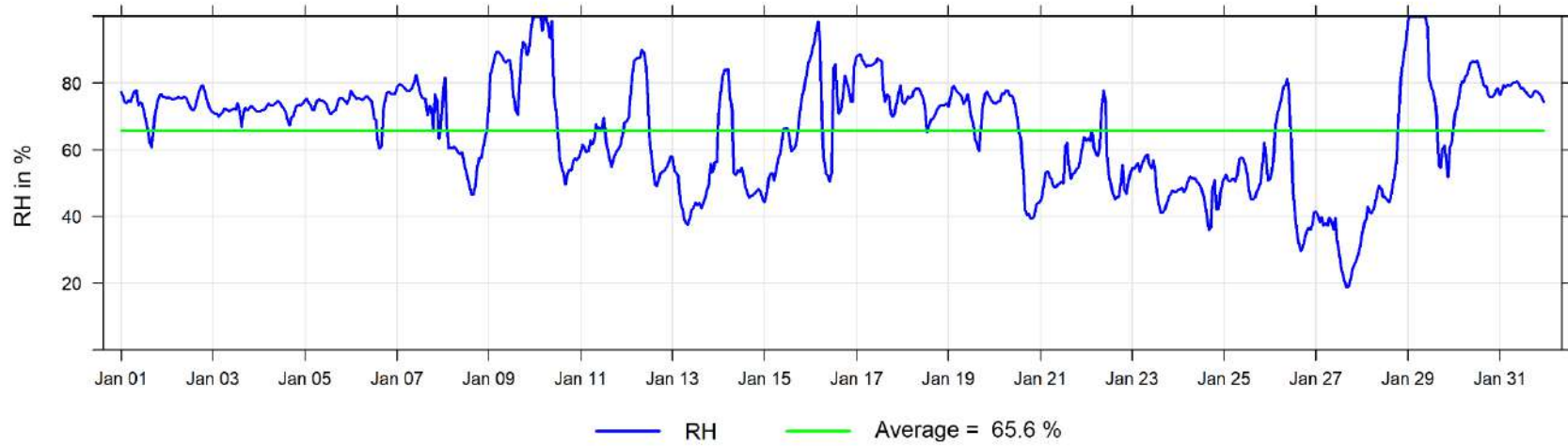
January 2025 Hourly Concentration Readings of PM<sub>2.5</sub> in  $\mu\text{g}/\text{m}^3$  at Dunes



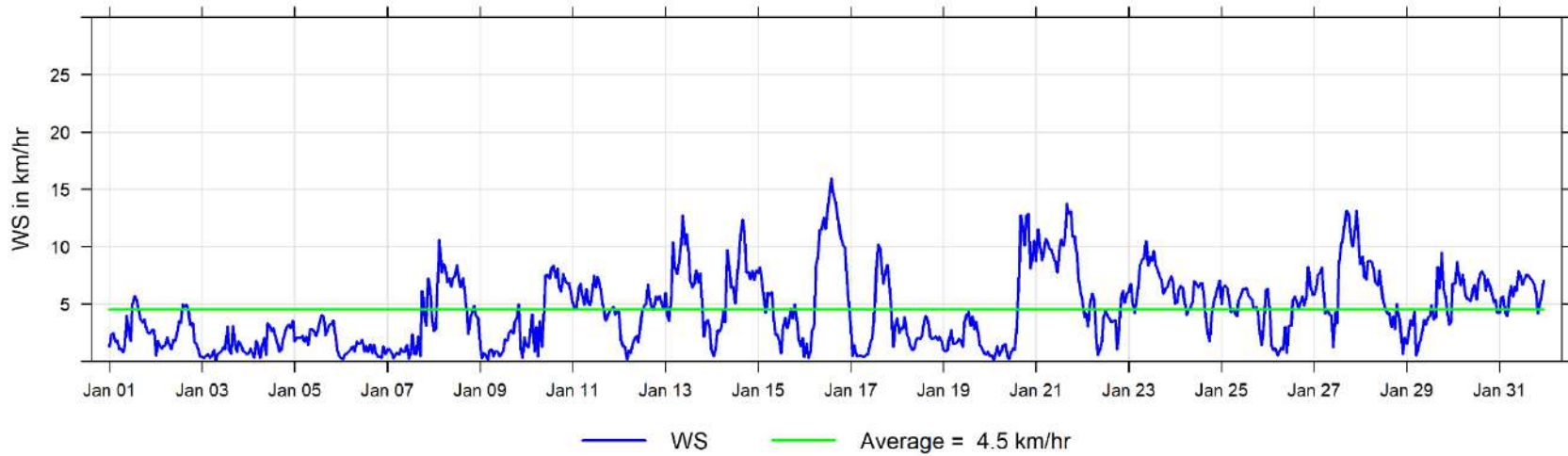
January 2025 Hourly Temperature Readings (in °C) at Dunes



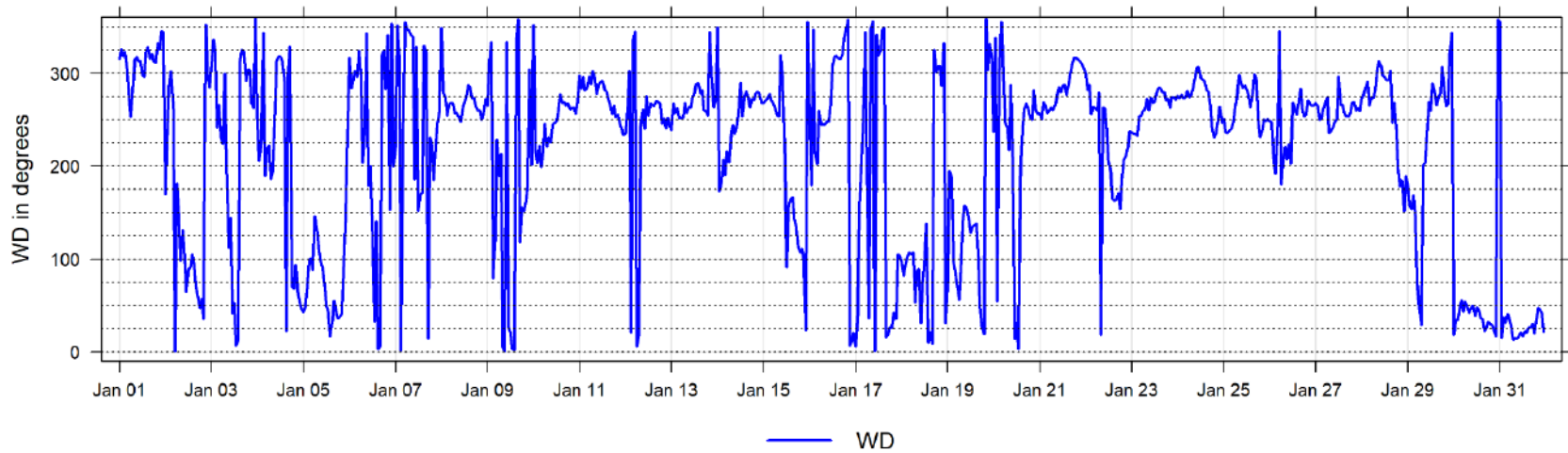
January 2025 Hourly Readings of Relative Humidity (in %) at Dunes



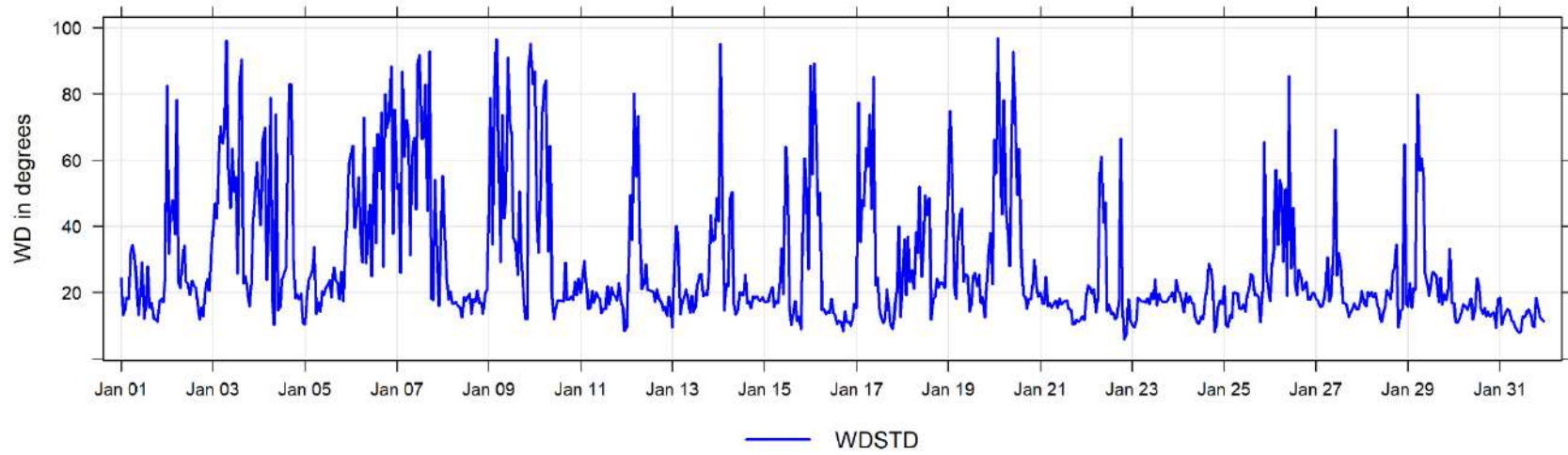
January 2025 Hourly Readings of Wind Speed (in km/hr) at Dunes

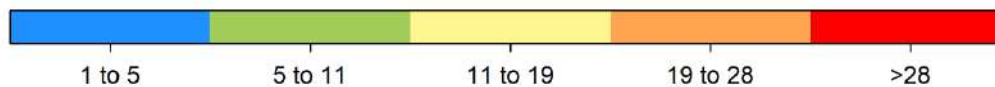
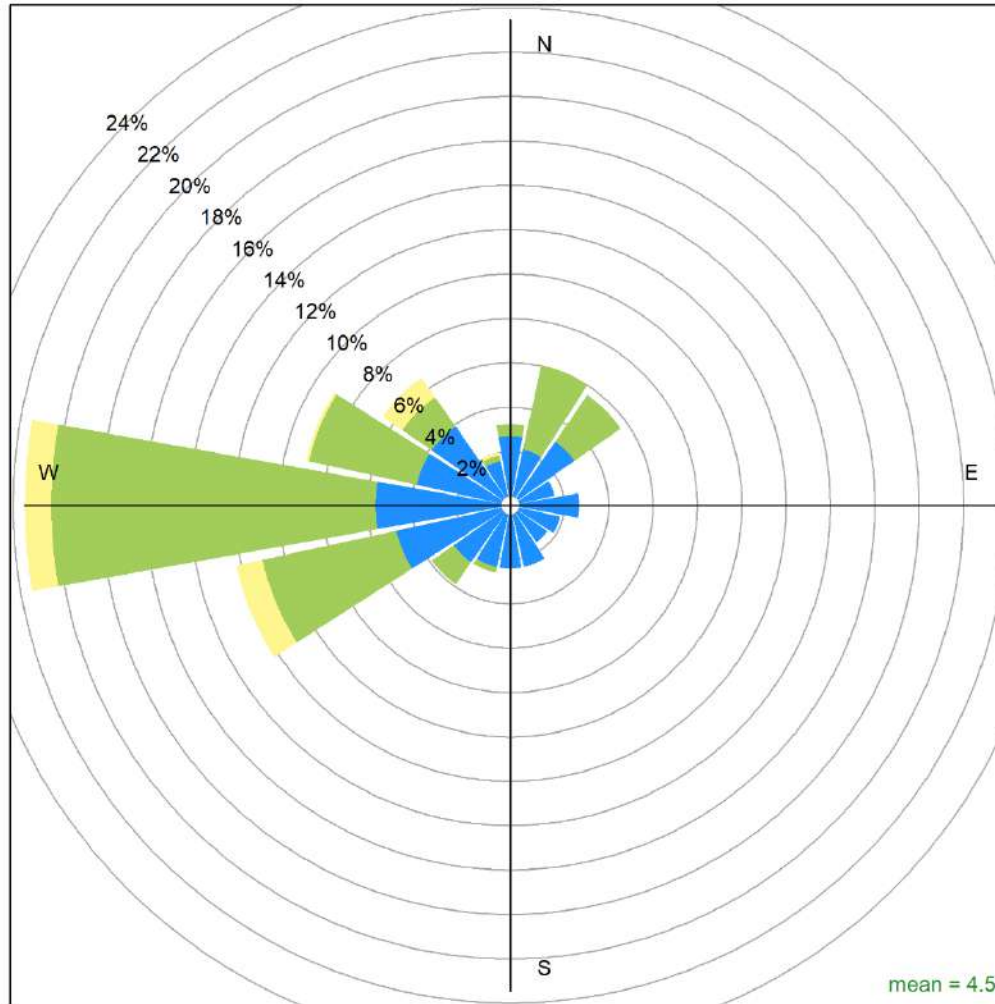


January 2025 Hourly Readings of Wind Direction (in degrees) at Dunes



January 2025 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Dunes





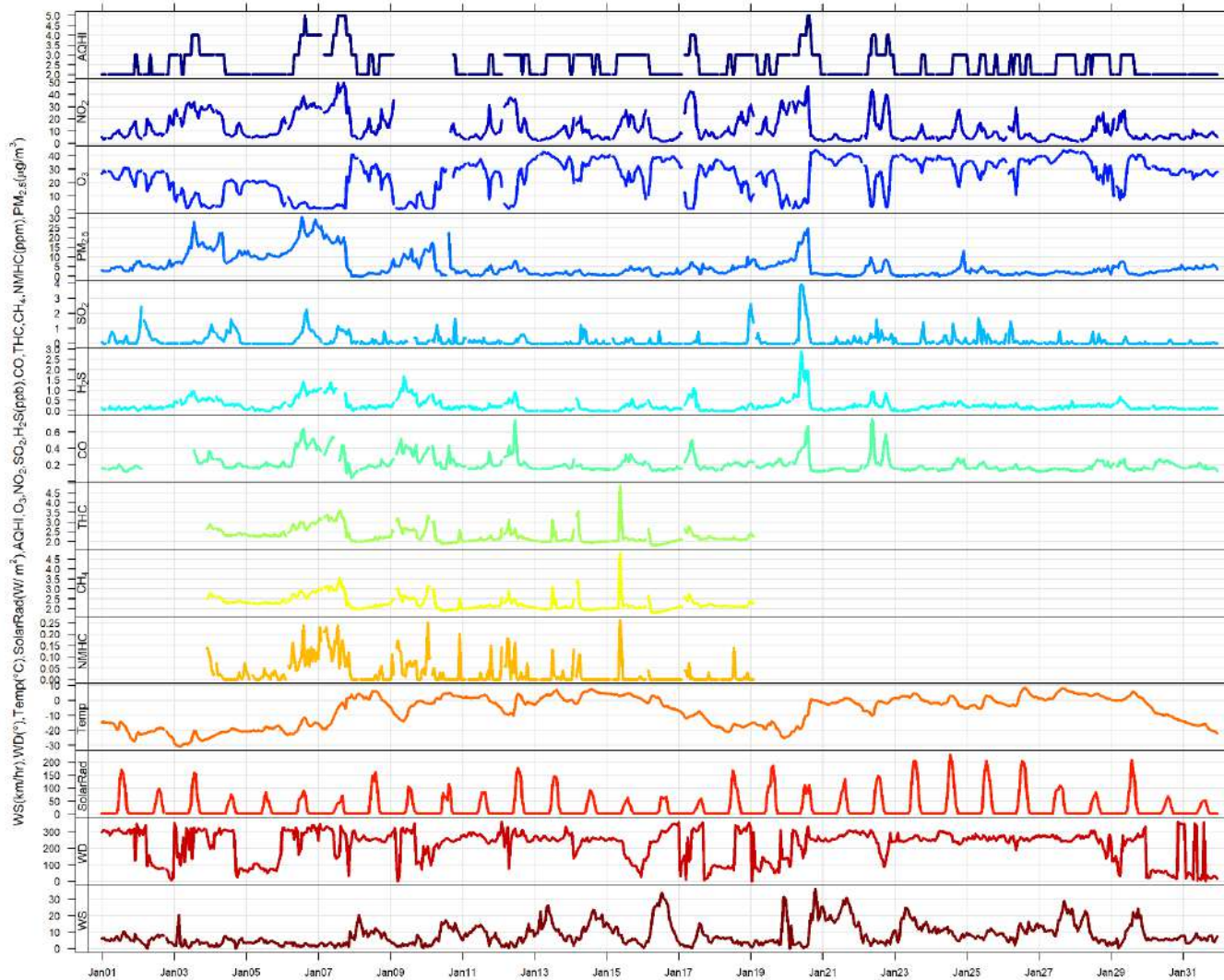
Dunes January 2025 Wind Rose, wind speed in km/hr

**Calms (<1km/hr) = 14.5 %**

## 4 Grande Prairie - Henry Pirker Charts

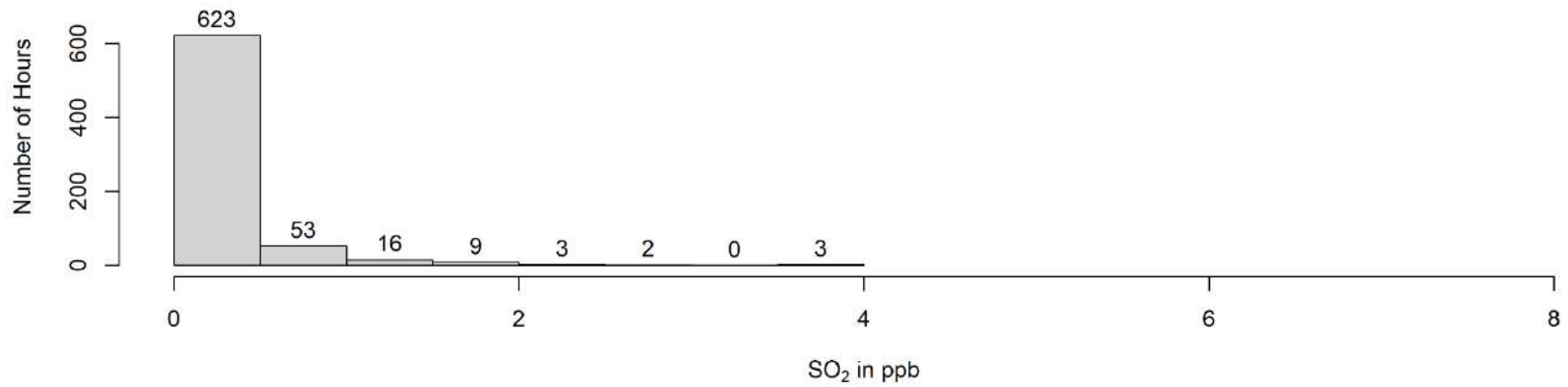
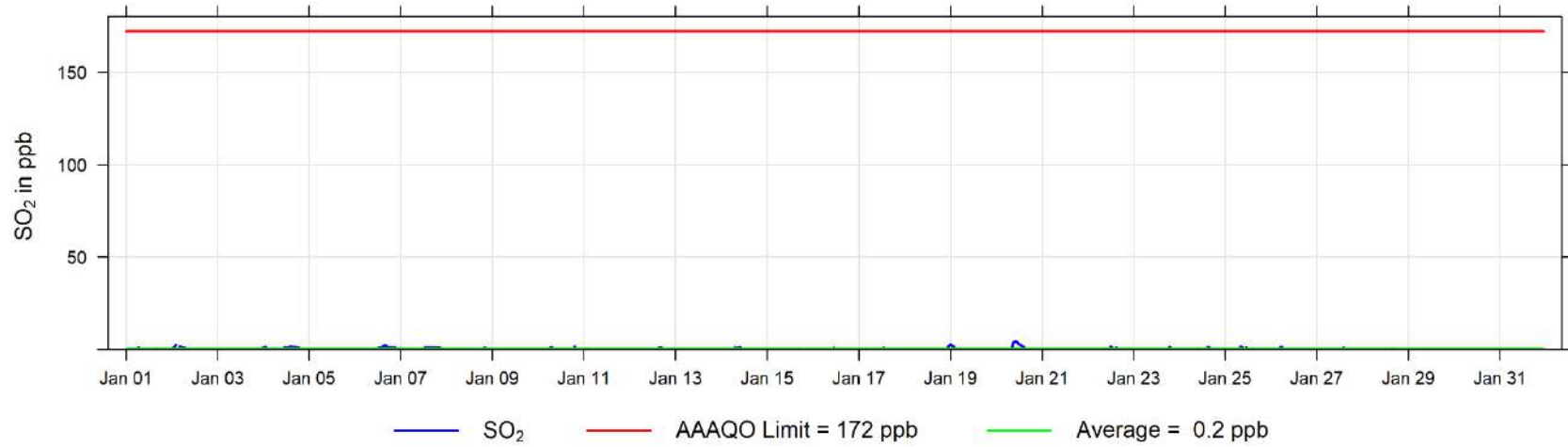
The following pages include the charts and histograms for Henry Pirker Station in Grande Prairie

January 2025 Concentration Readings at Henry Pirker Station

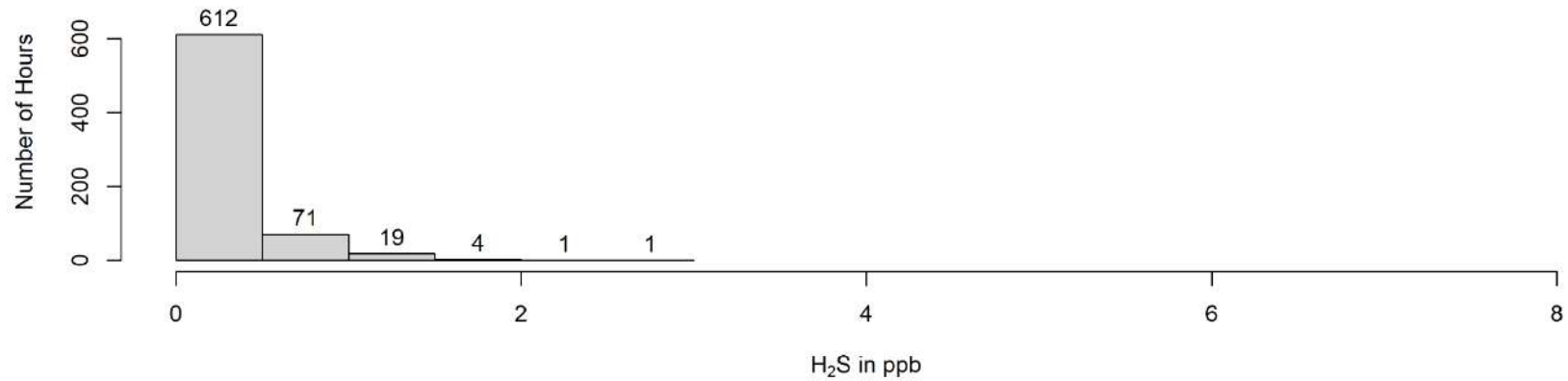
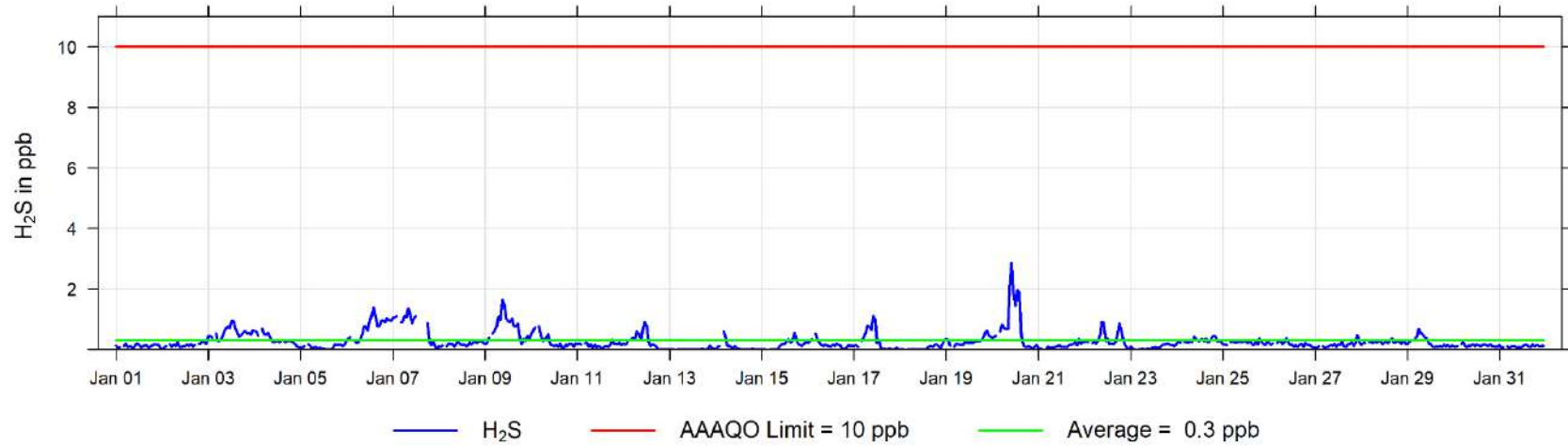




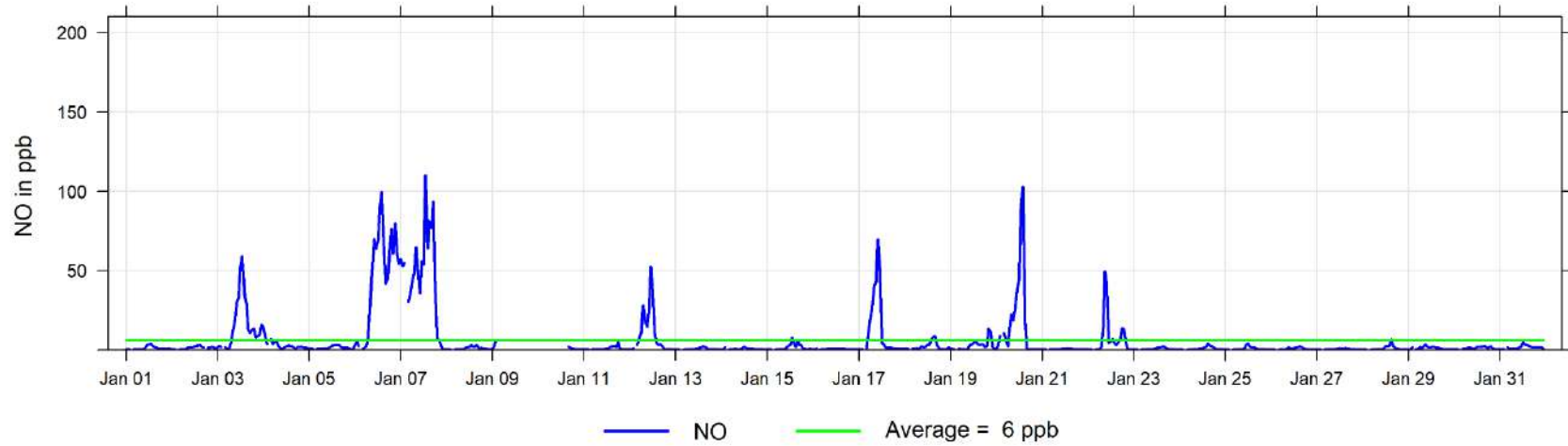
January 2025 Hourly Concentration Readings of SO<sub>2</sub> (in ppb) at Henry Pirker



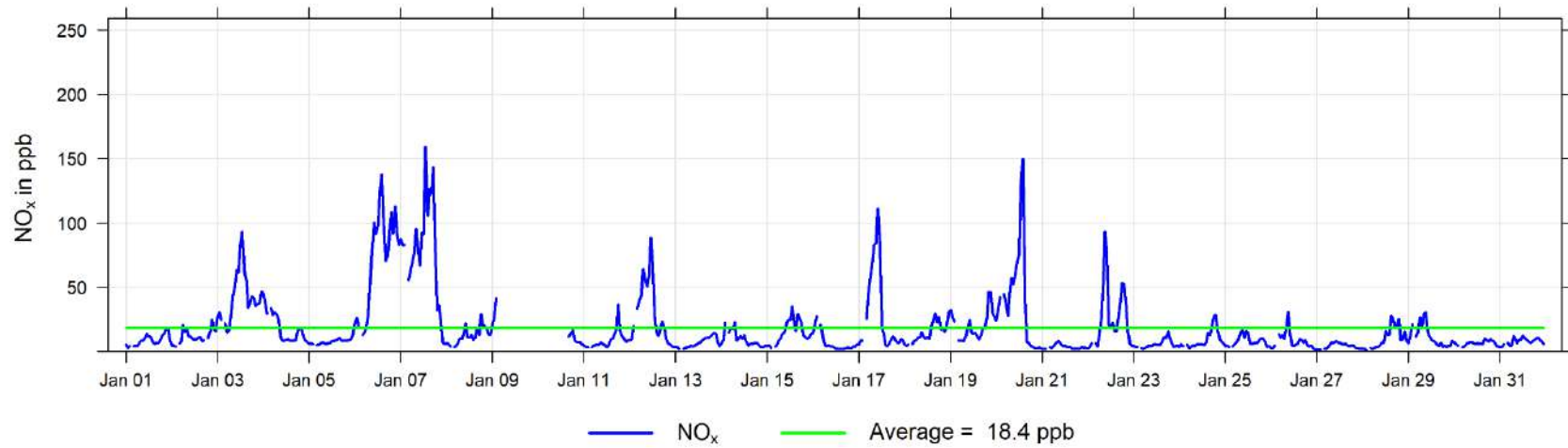
January 2025 Hourly Concentration Readings of H<sub>2</sub>S (in ppb) at Henry Pirker



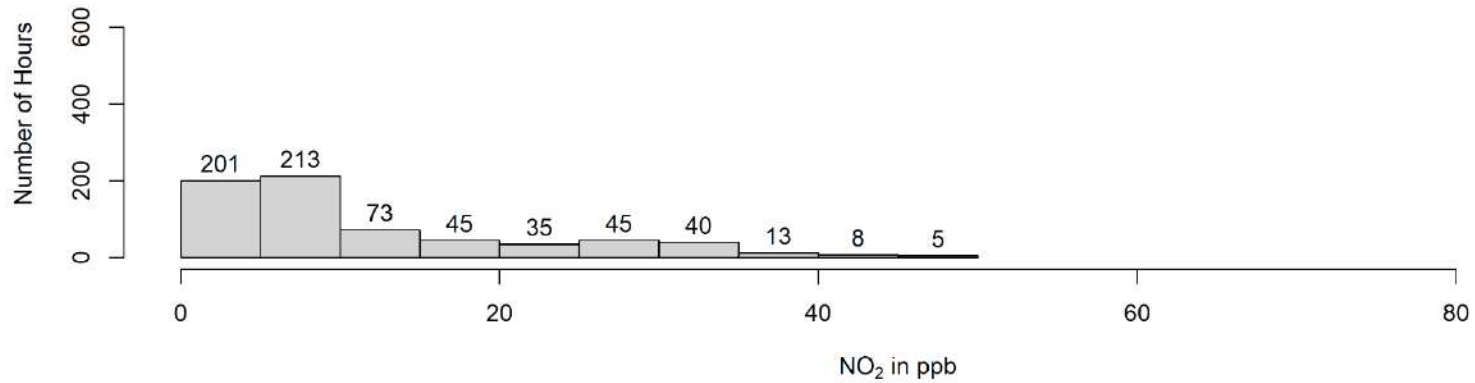
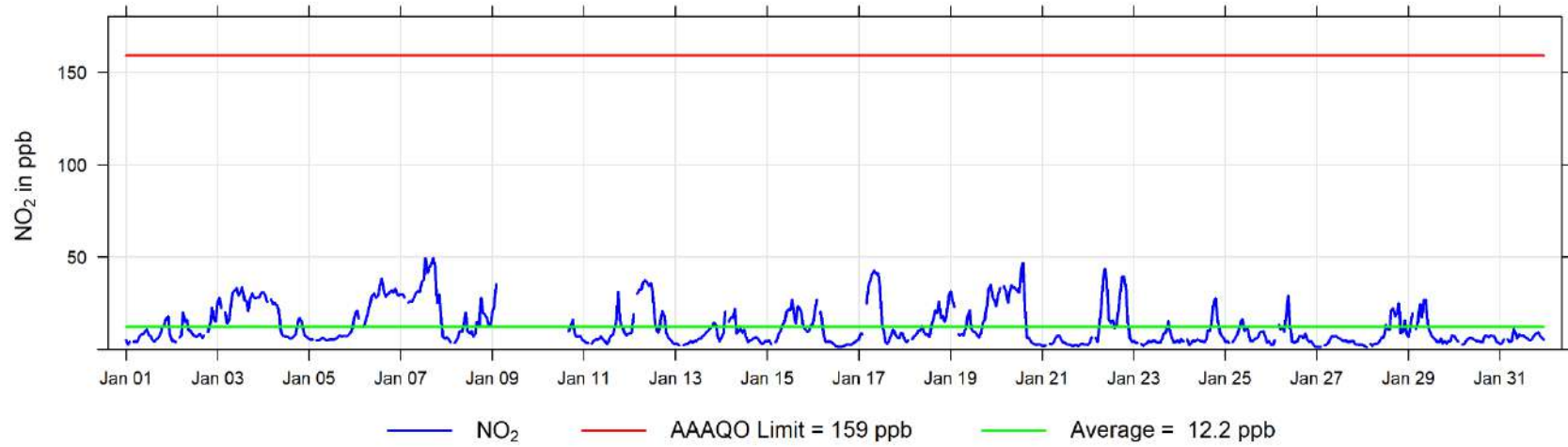
January 2025 Hourly Concentration Readings of NO (in ppb) at Henry Pirker



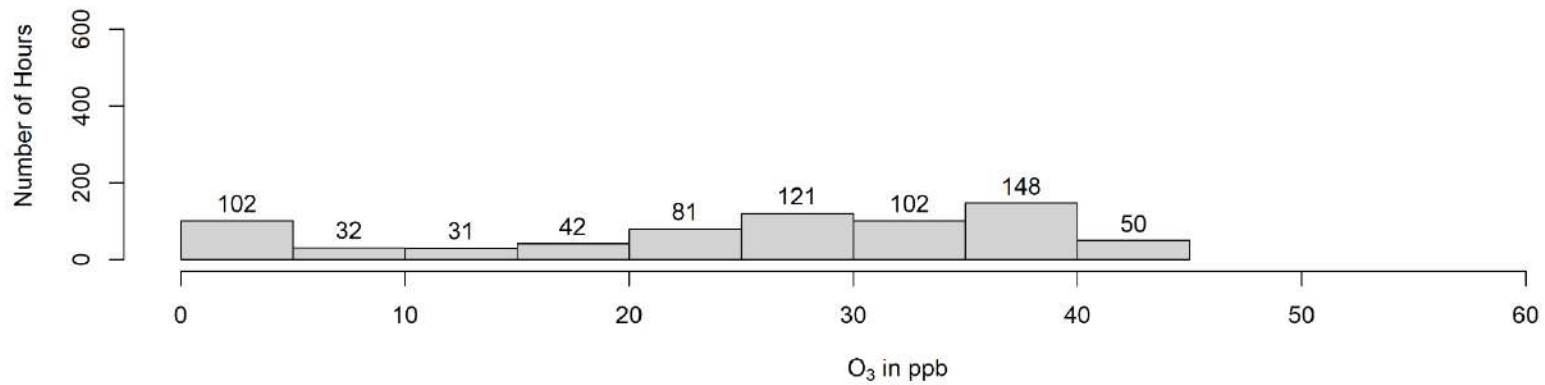
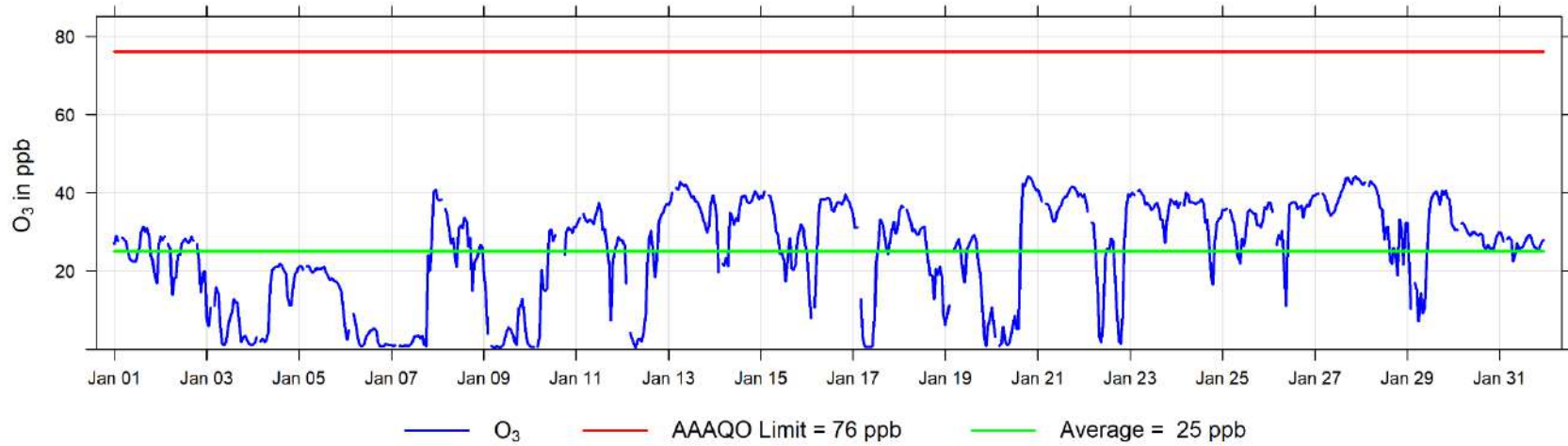
January 2025 Hourly Concentration Readings of NO<sub>x</sub> (in ppb) at Henry Pirker



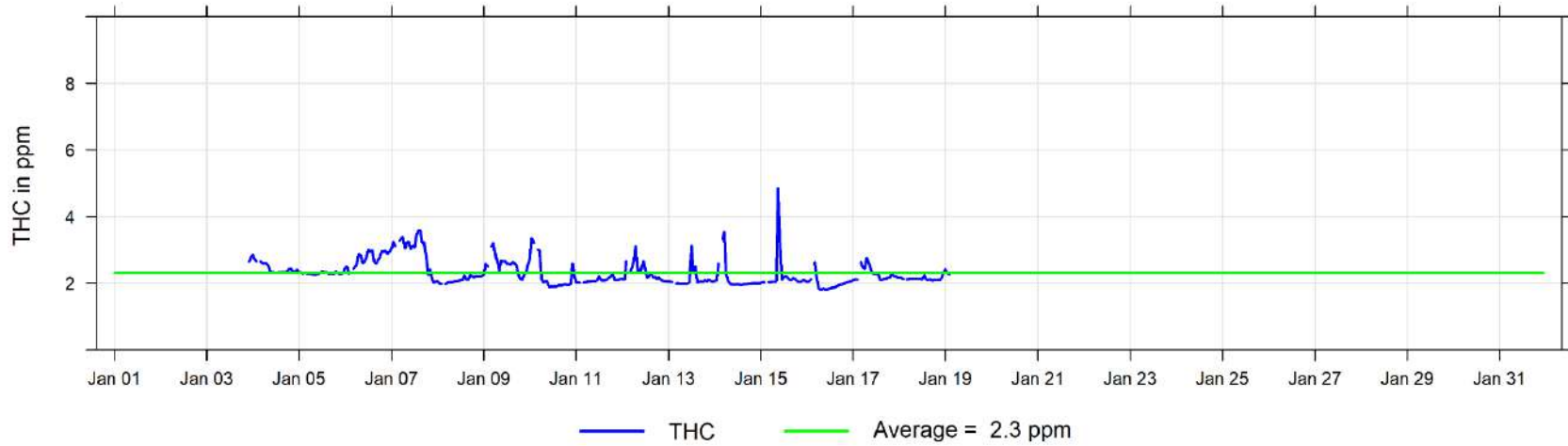
January 2025 Hourly Concentration Readings of NO<sub>2</sub> (in ppb) at Henry Pirker



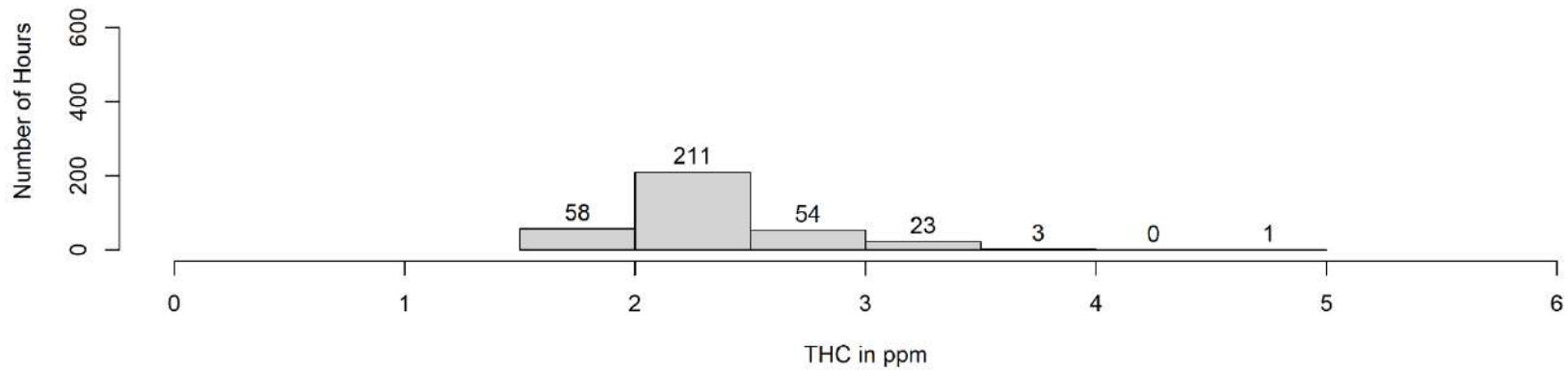
January 2025 Hourly Concentration Readings of O<sub>3</sub> (in ppb) at Henry Pirker



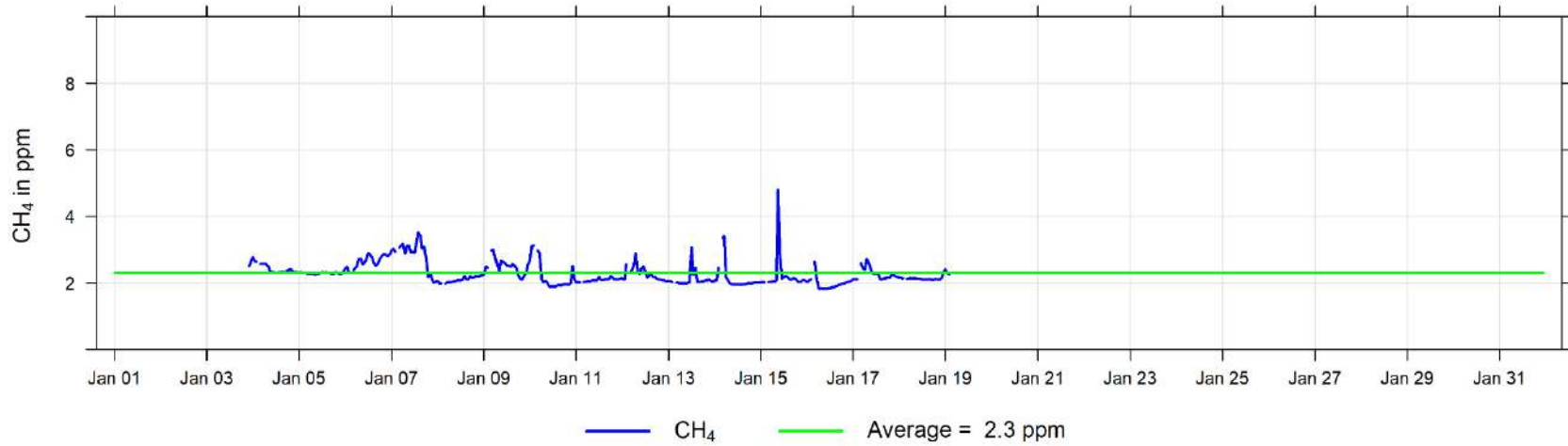
January 2025 Hourly Concentration Readings of THC (in ppm) at Henry Pirker



**Note average is shown for reference but not valid**

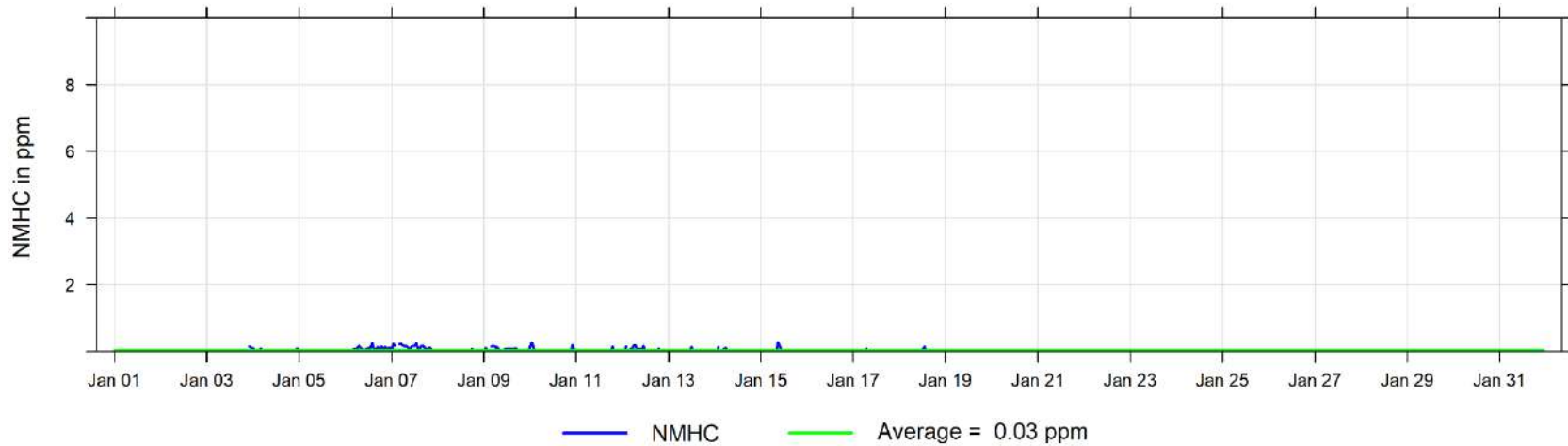


January 2025 Hourly Concentration Readings of CH<sub>4</sub> (in ppm) at Henry Pirker



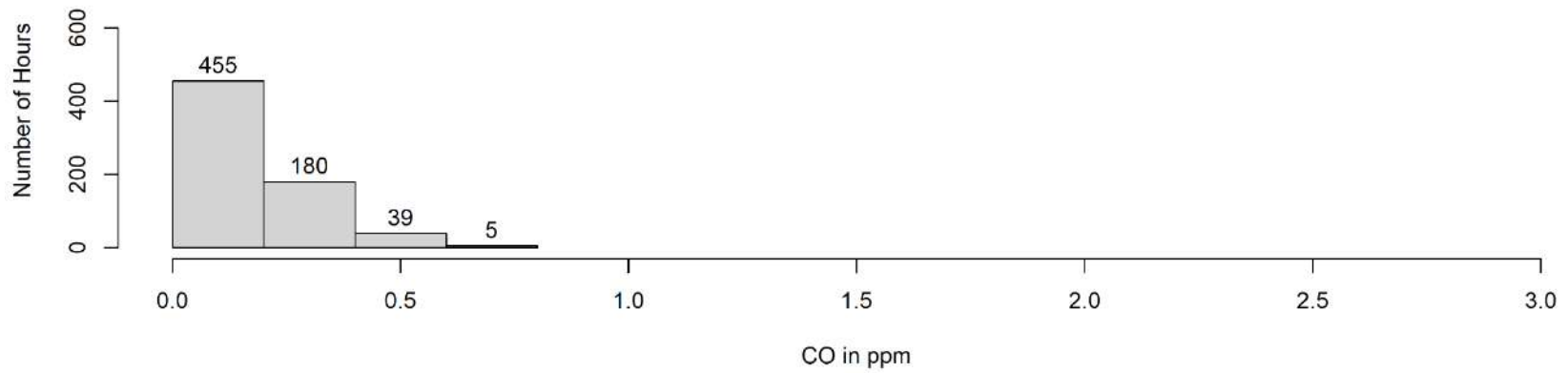
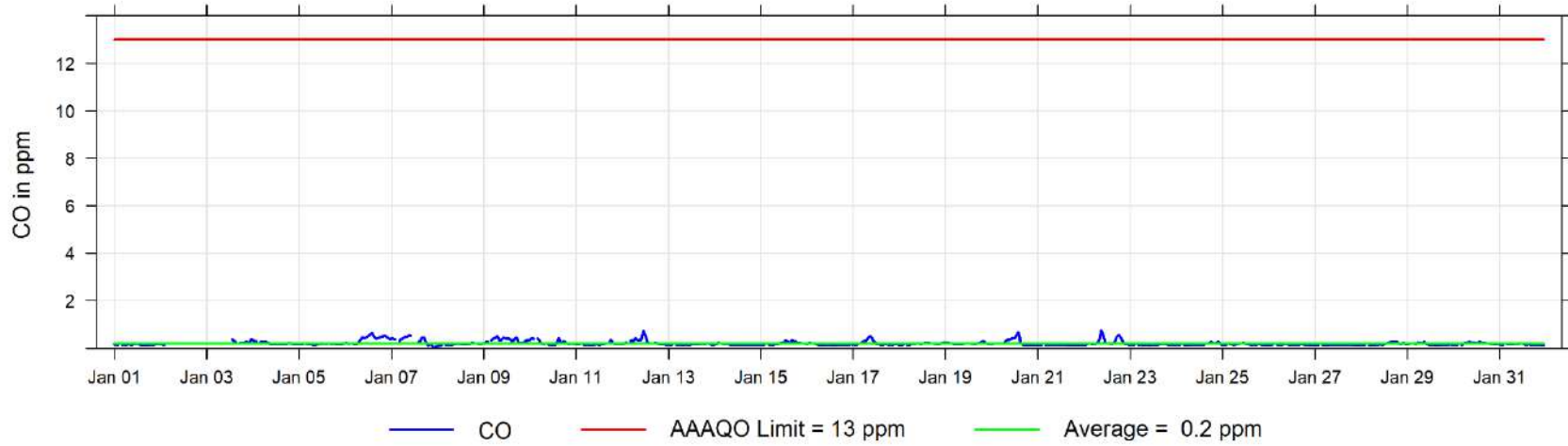
**Note average is shown for reference but not valid**

January 2025 Hourly Concentration Readings of NMHC (in ppm) at Henry Pirker



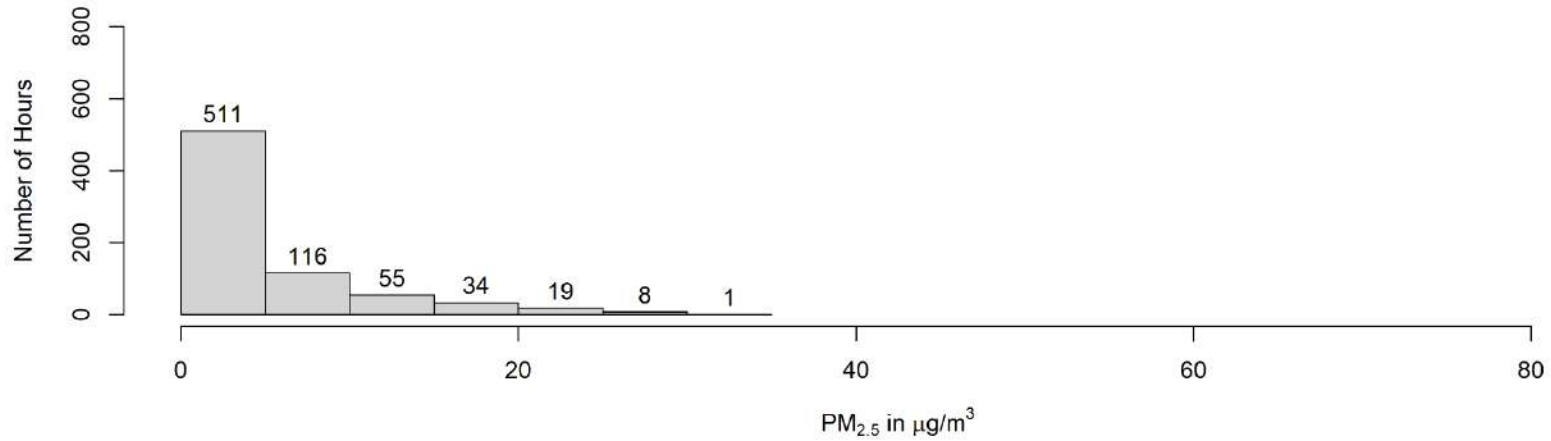
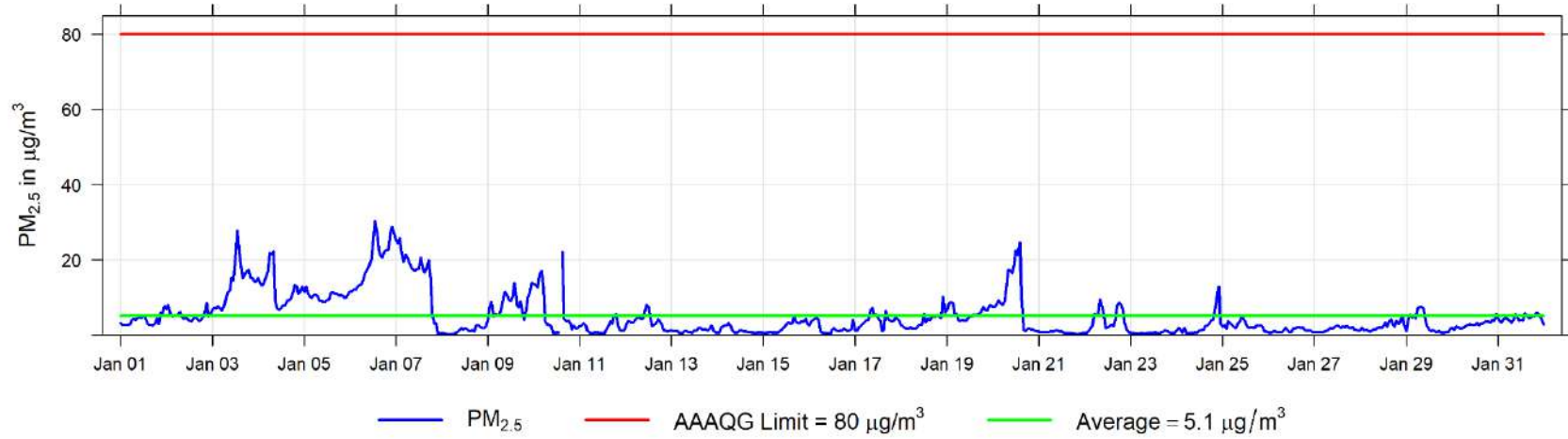
**Note average is shown for reference but not valid**

January 2025 Hourly Concentration Readings of CO (in ppm) at Henry Pirker

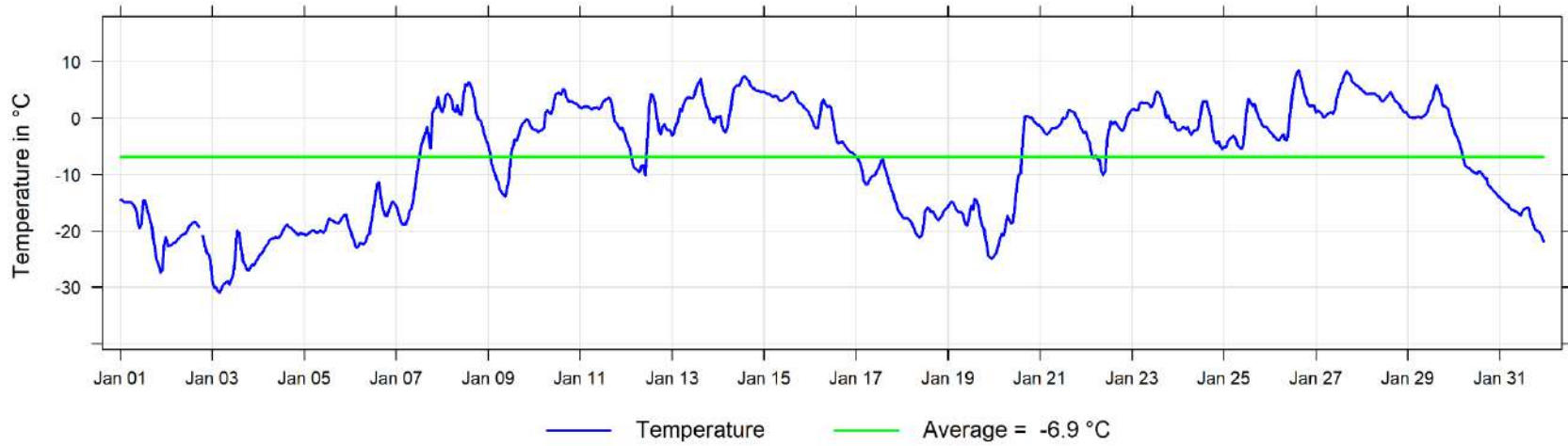




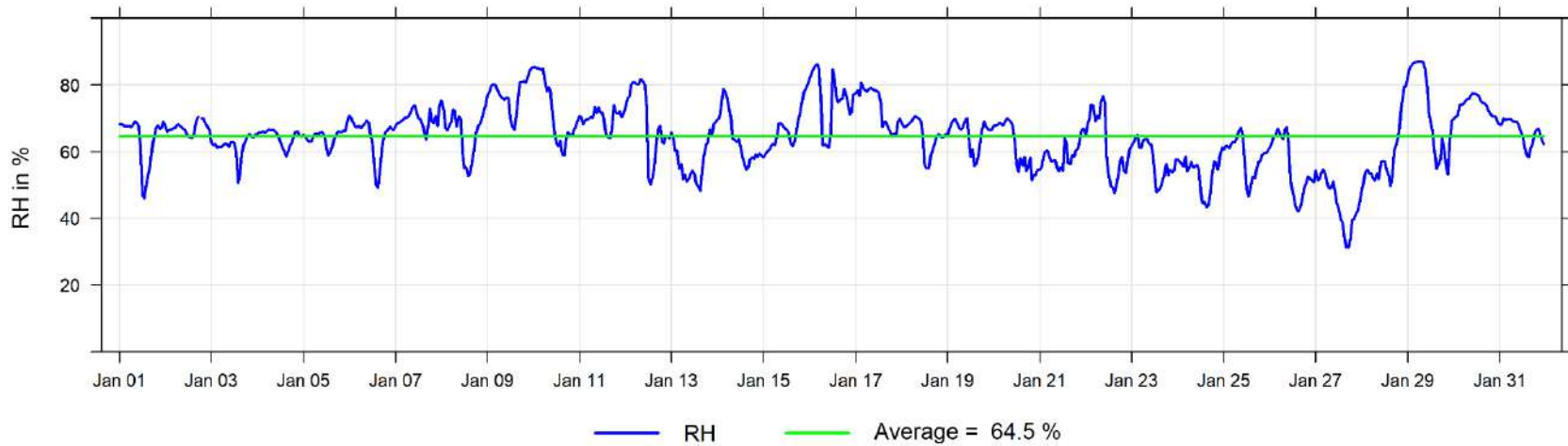
January 2025 Hourly Concentration Readings of PM<sub>2.5</sub> in  $\mu\text{g}/\text{m}^3$  at Henry Pirker



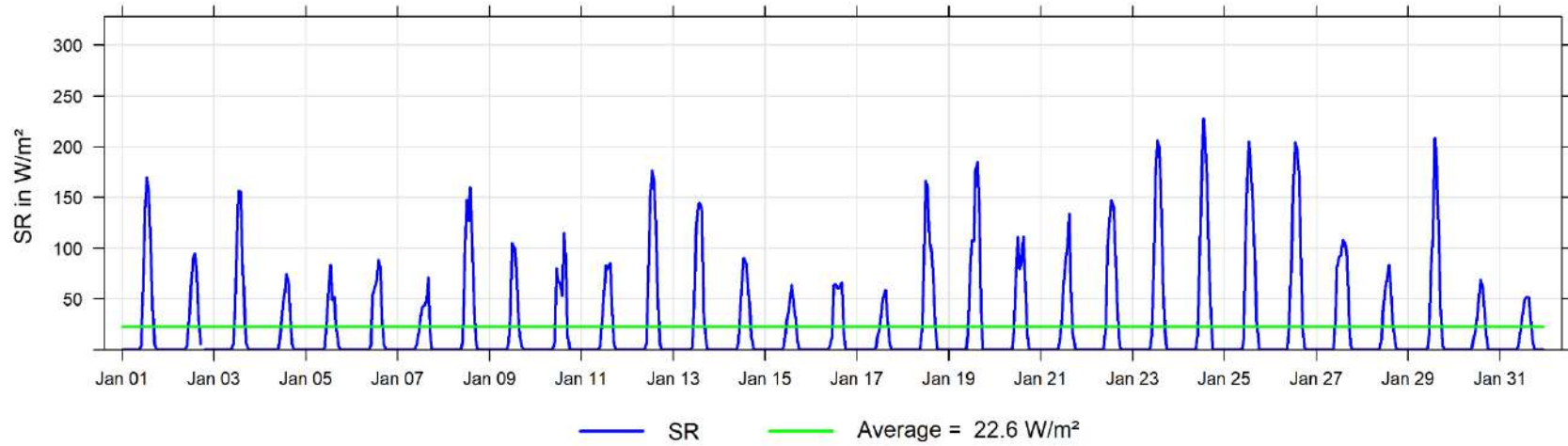
January 2025 Hourly Temperature Readings (in °C) at Henry Pirker



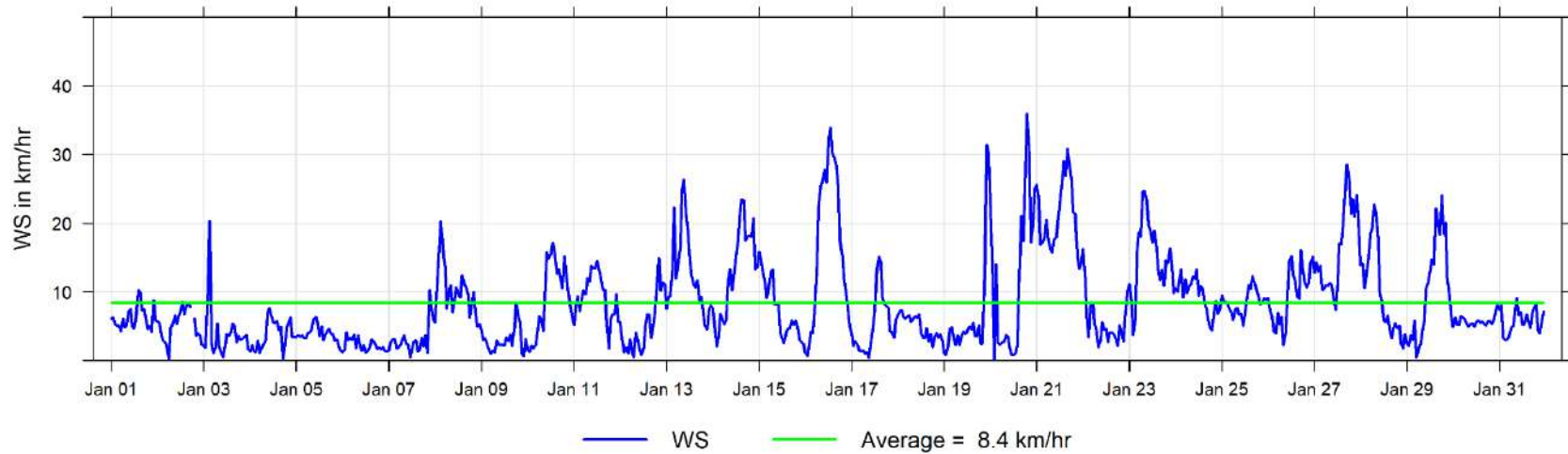
January 2025 Hourly Readings of Relative Humidity (in %) at Henry Pirker



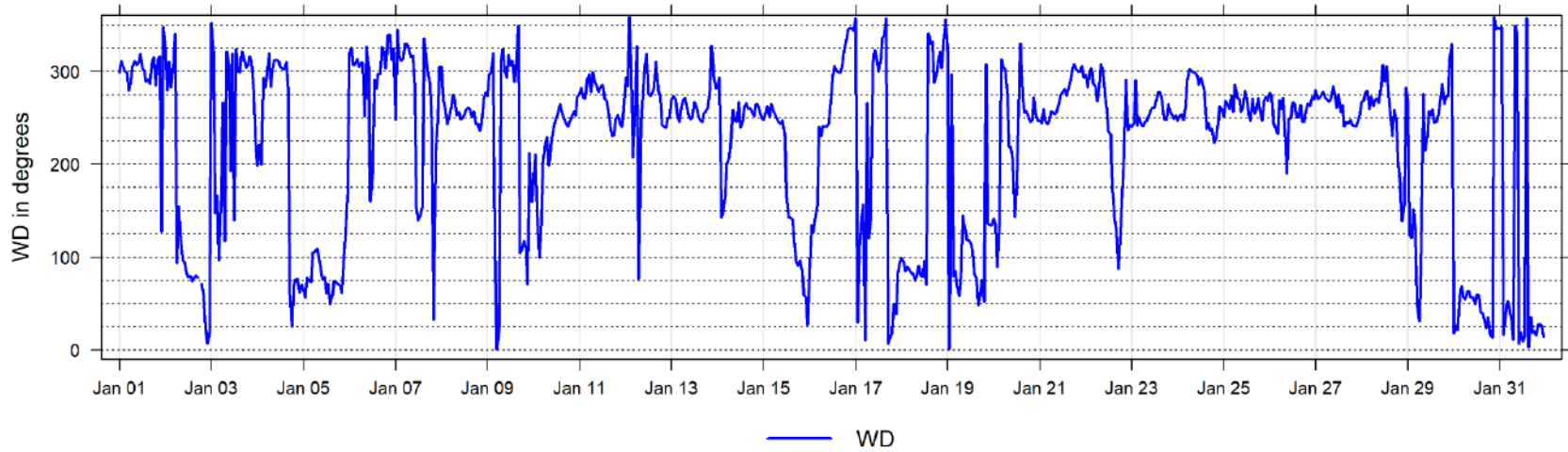
January 2025 Hourly Readings of Solar Radiation (in W/m<sup>2</sup>) at Henry Pirker



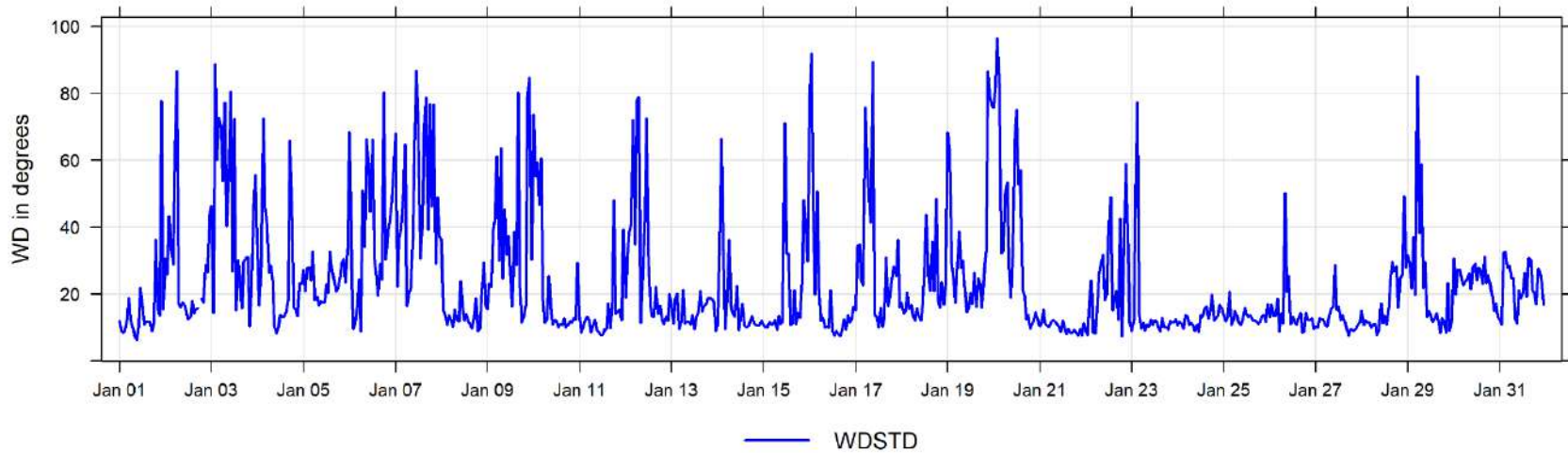
January 2025 Hourly Readings of Wind Speed (in km/hr) at Henry Pirker

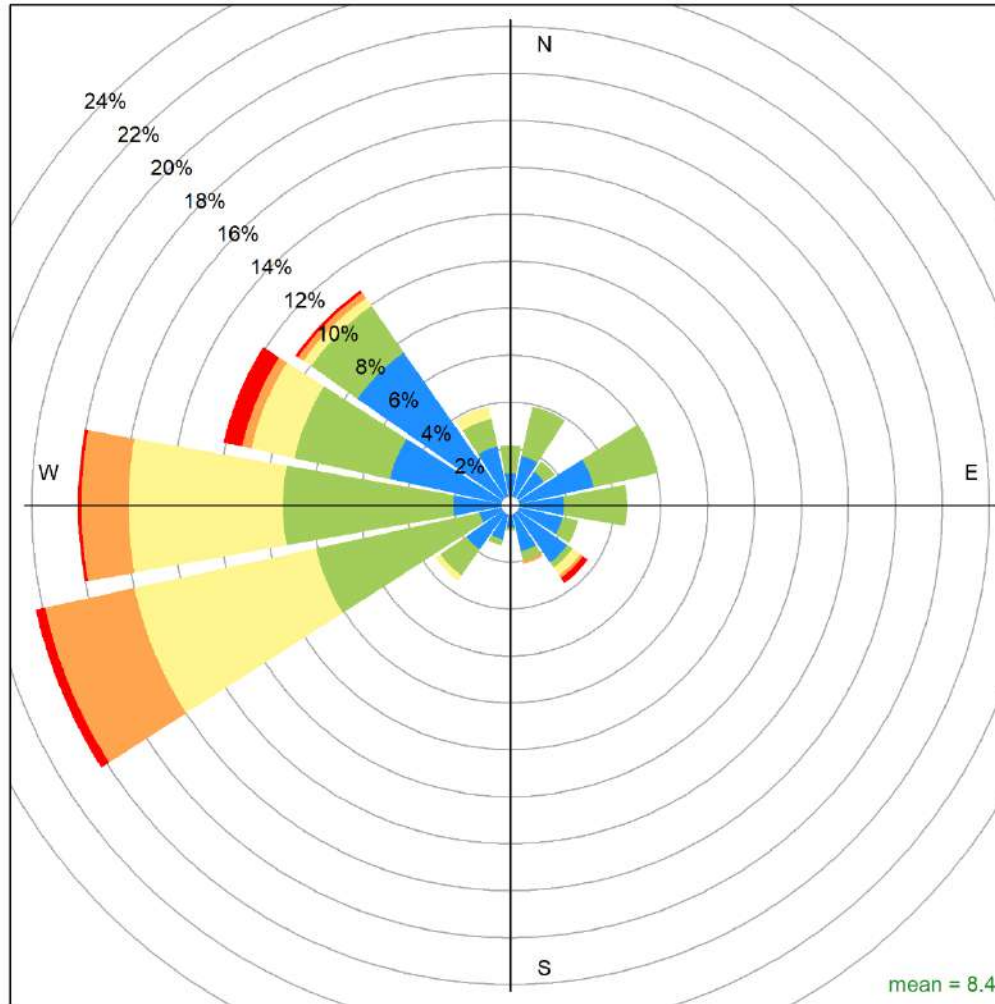


January 2025 Hourly Readings of Wind Direction (in degrees) at Henry Pirker



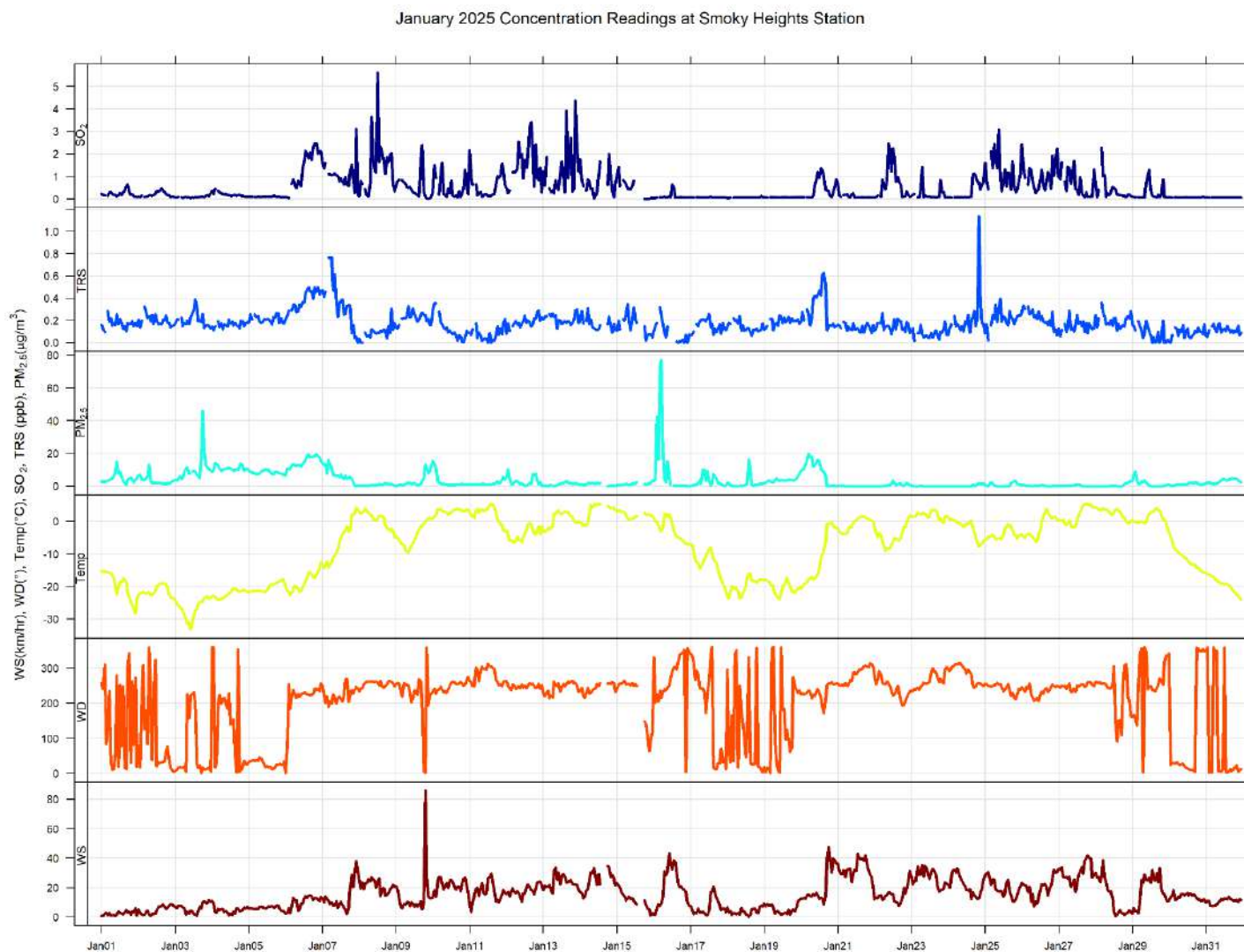
January 2025 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Henry Pirker



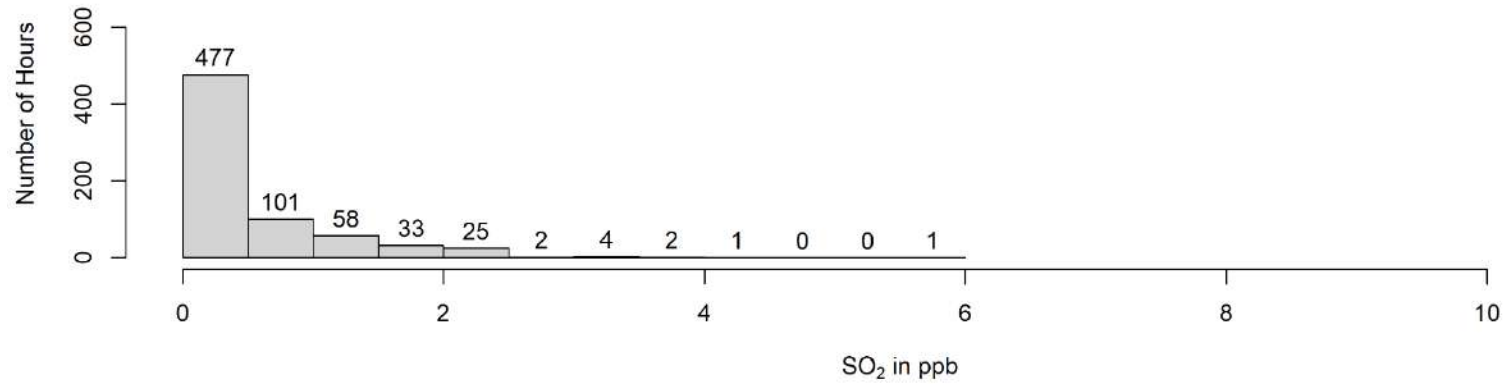
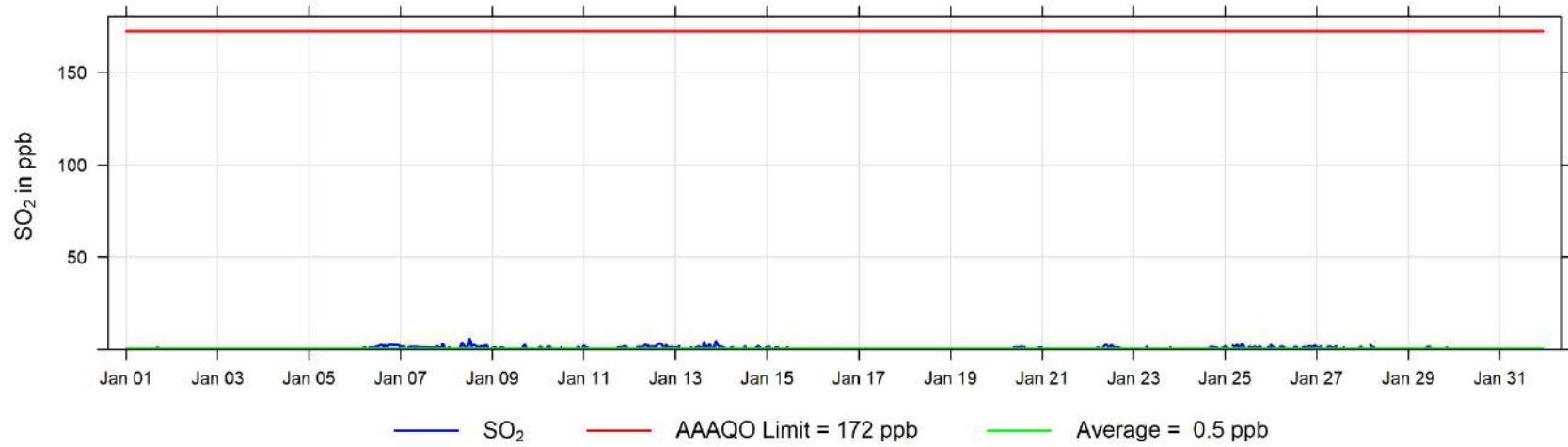


## 5 Smoky Heights Charts

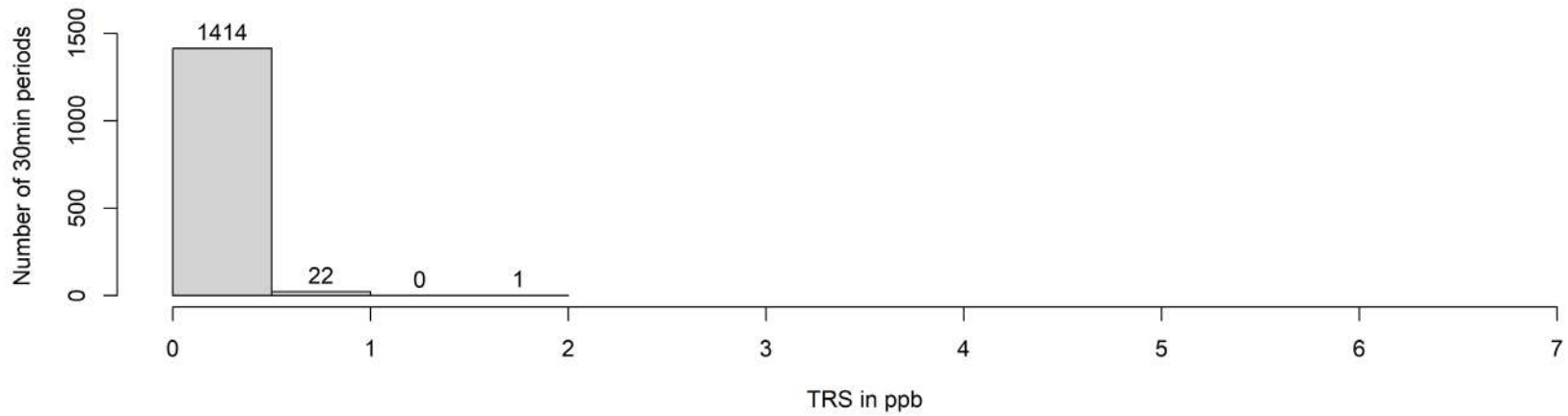
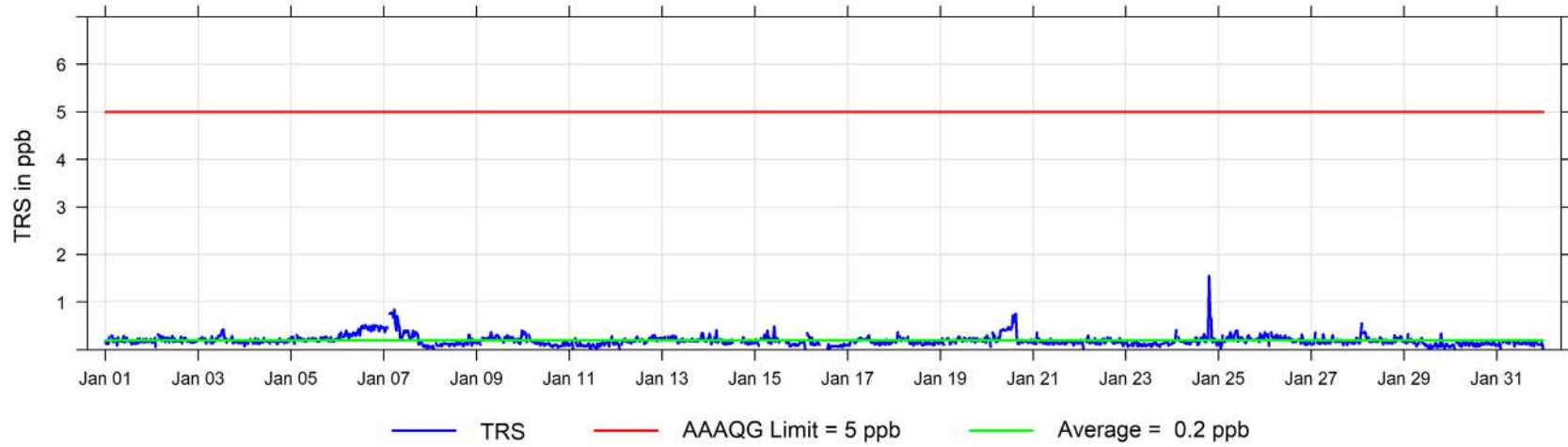
The following pages include the charts and histograms for Smoky Heights Station



January 2025 Hourly Concentration Readings of SO<sub>2</sub> (in ppb) at Smoky Heights

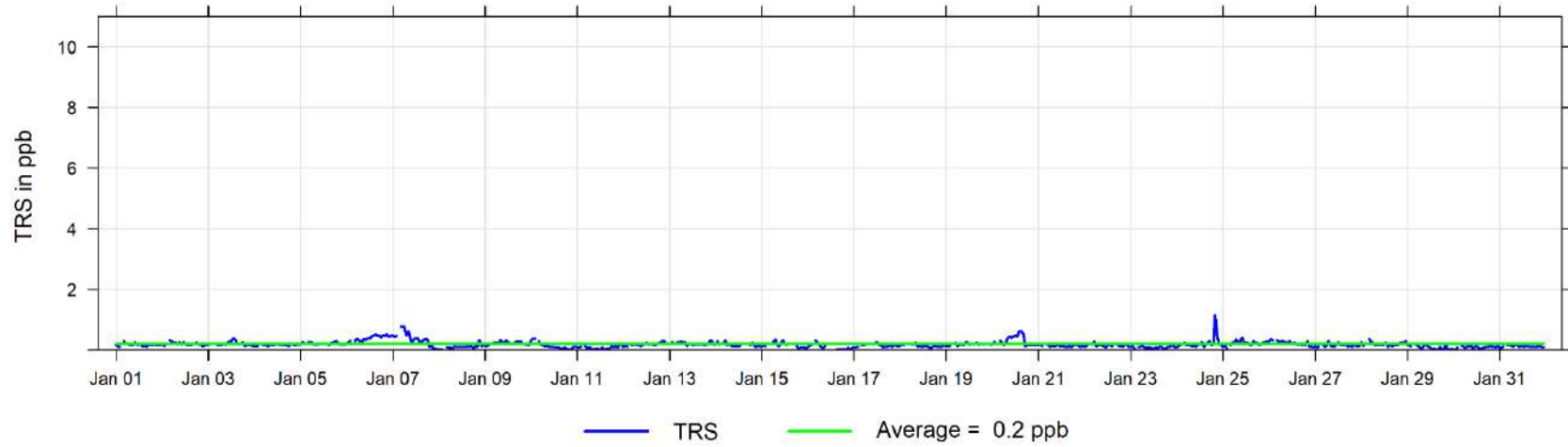


January 2025 30 min Concentration Readings of TRS (in ppb) at Smoky Heights

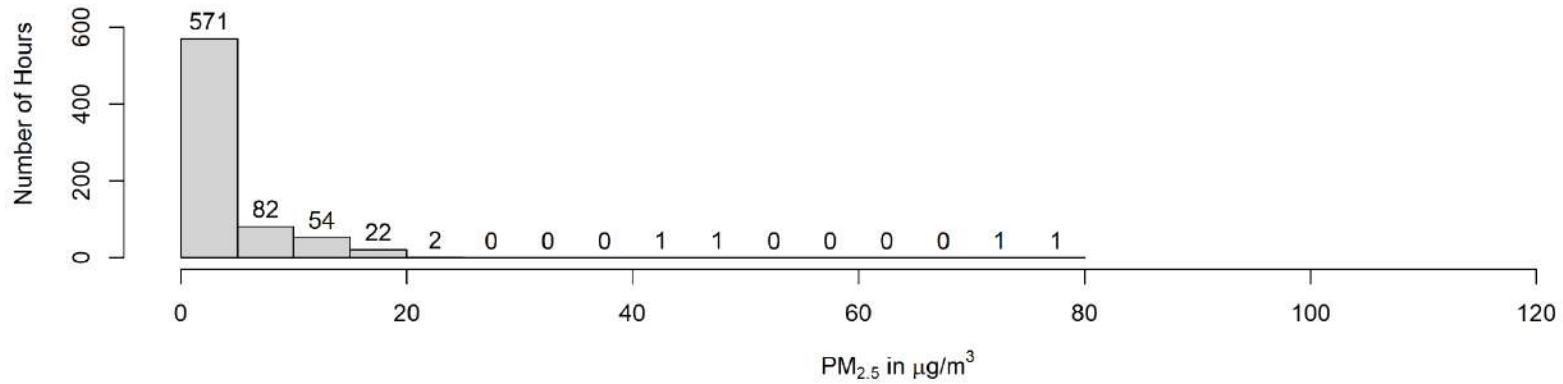
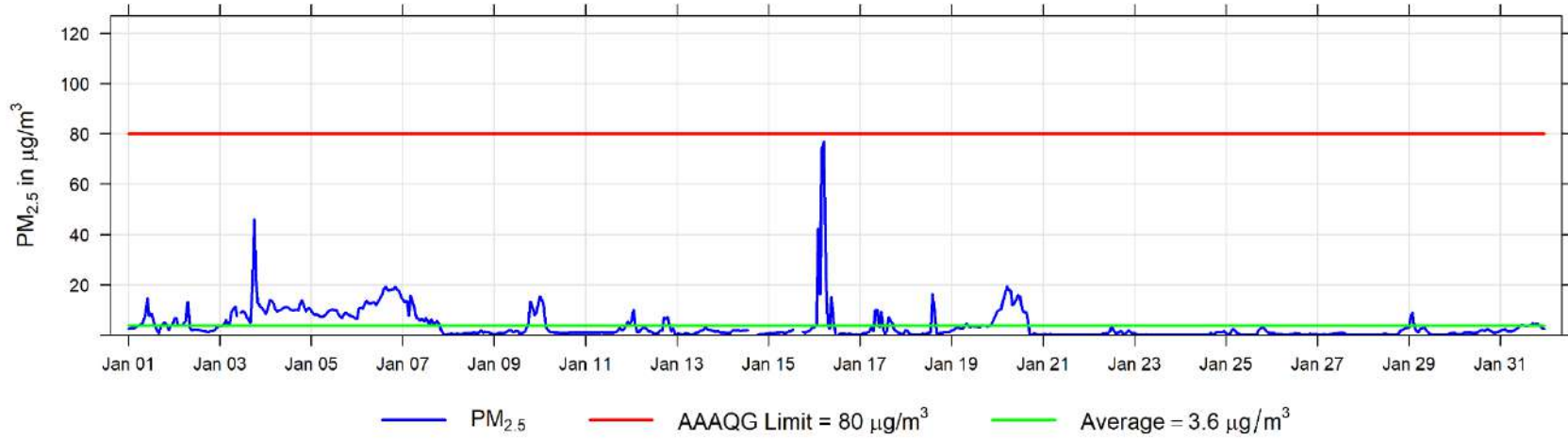




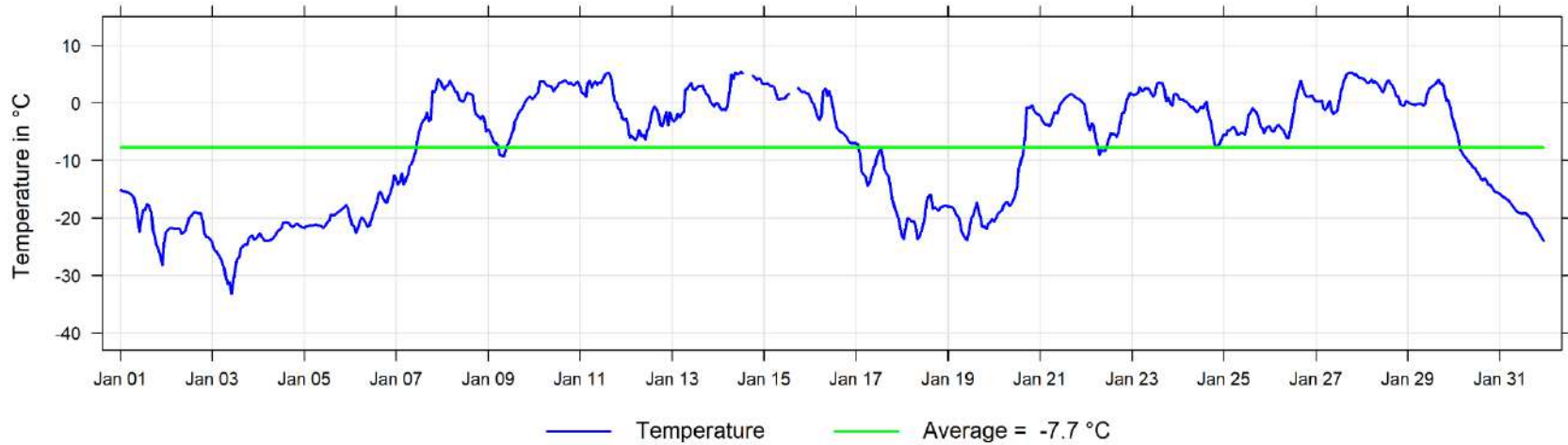
January 2025 Hourly Concentration Readings of TRS (in ppb) at Smoky Heights



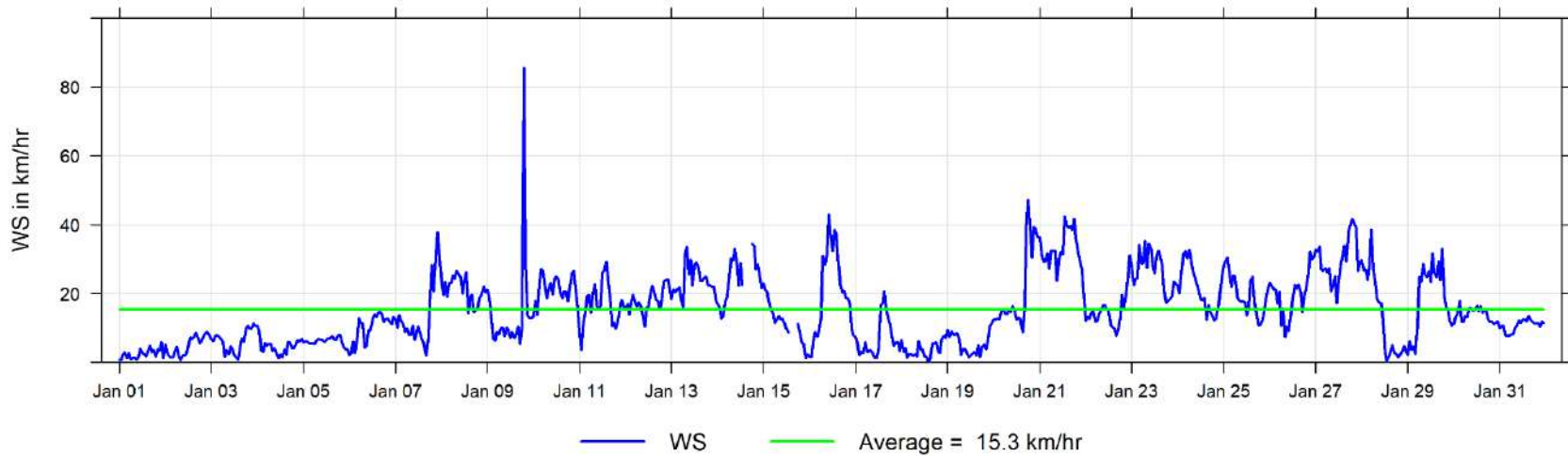
January 2025 Hourly Concentration Readings of PM<sub>2.5</sub> in  $\mu\text{g}/\text{m}^3$  at Smoky Heights



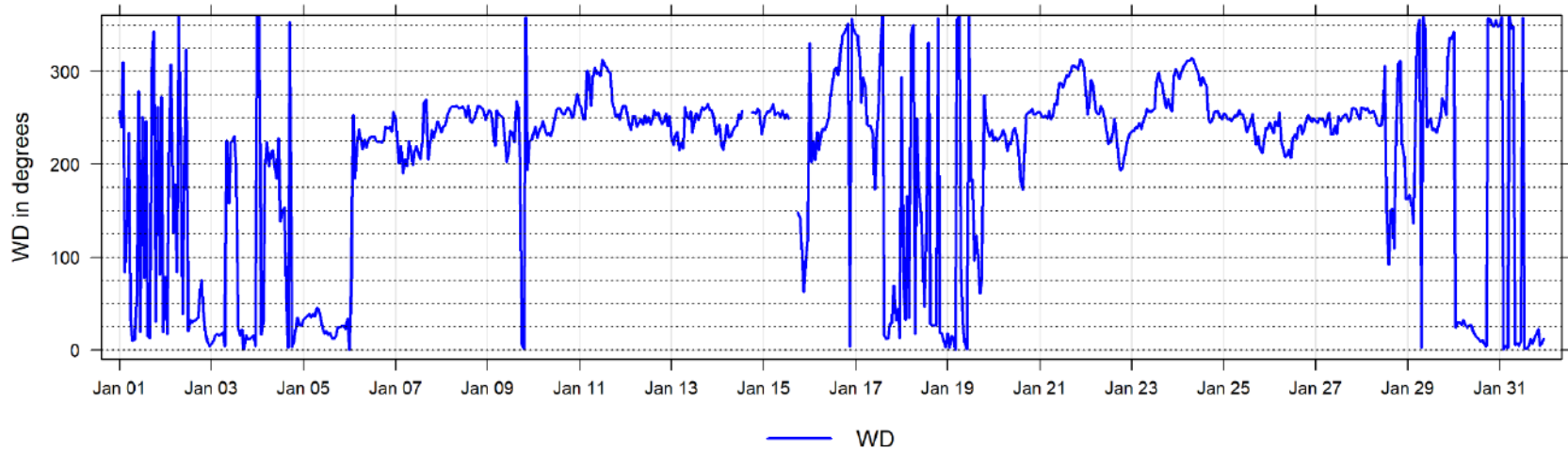
January 2025 Hourly Temperature Readings (in °C) at Smoky Heights



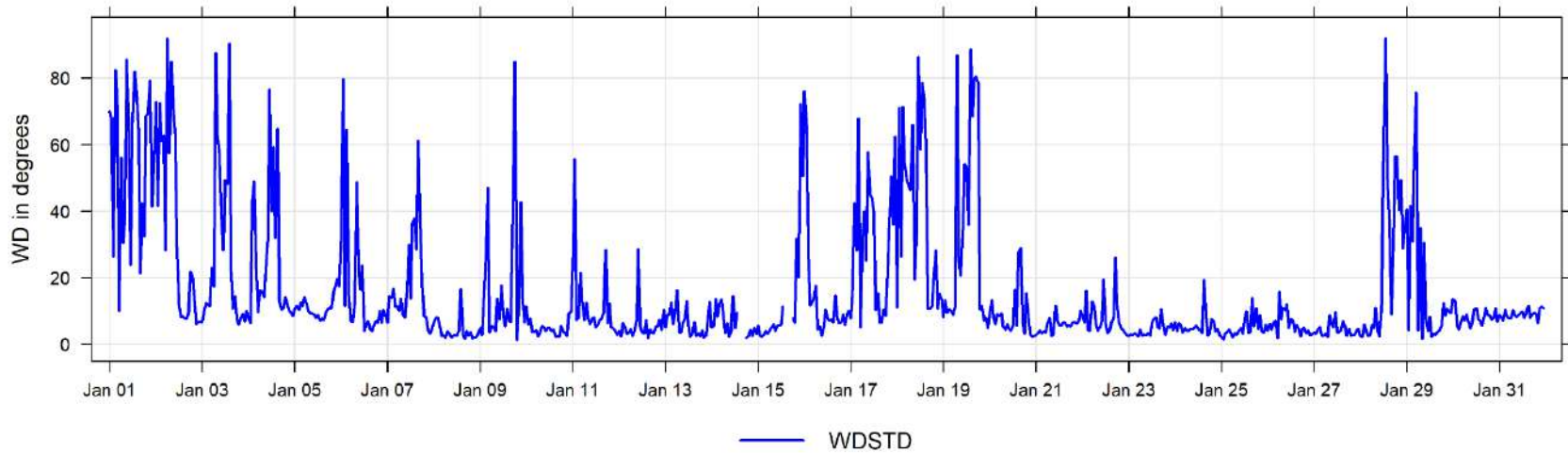
January 2025 Hourly Readings of Wind Speed (in km/hr) at Smoky Heights

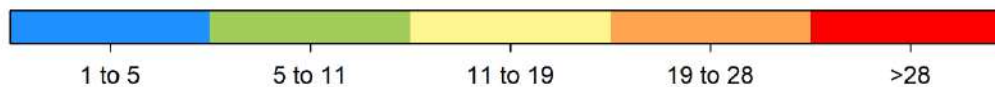
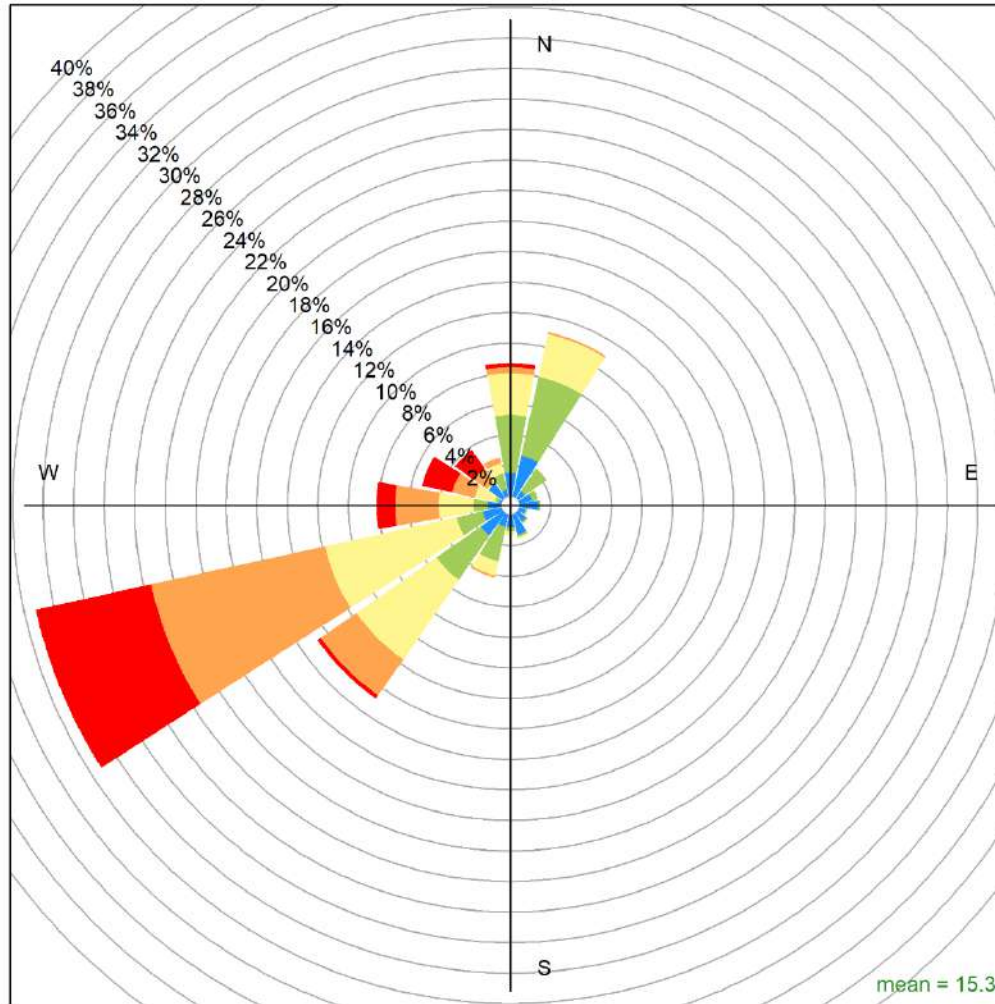


January 2025 Hourly Readings of Wind Direction (in degrees) at Smoky Heights



January 2025 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Smoky Heights

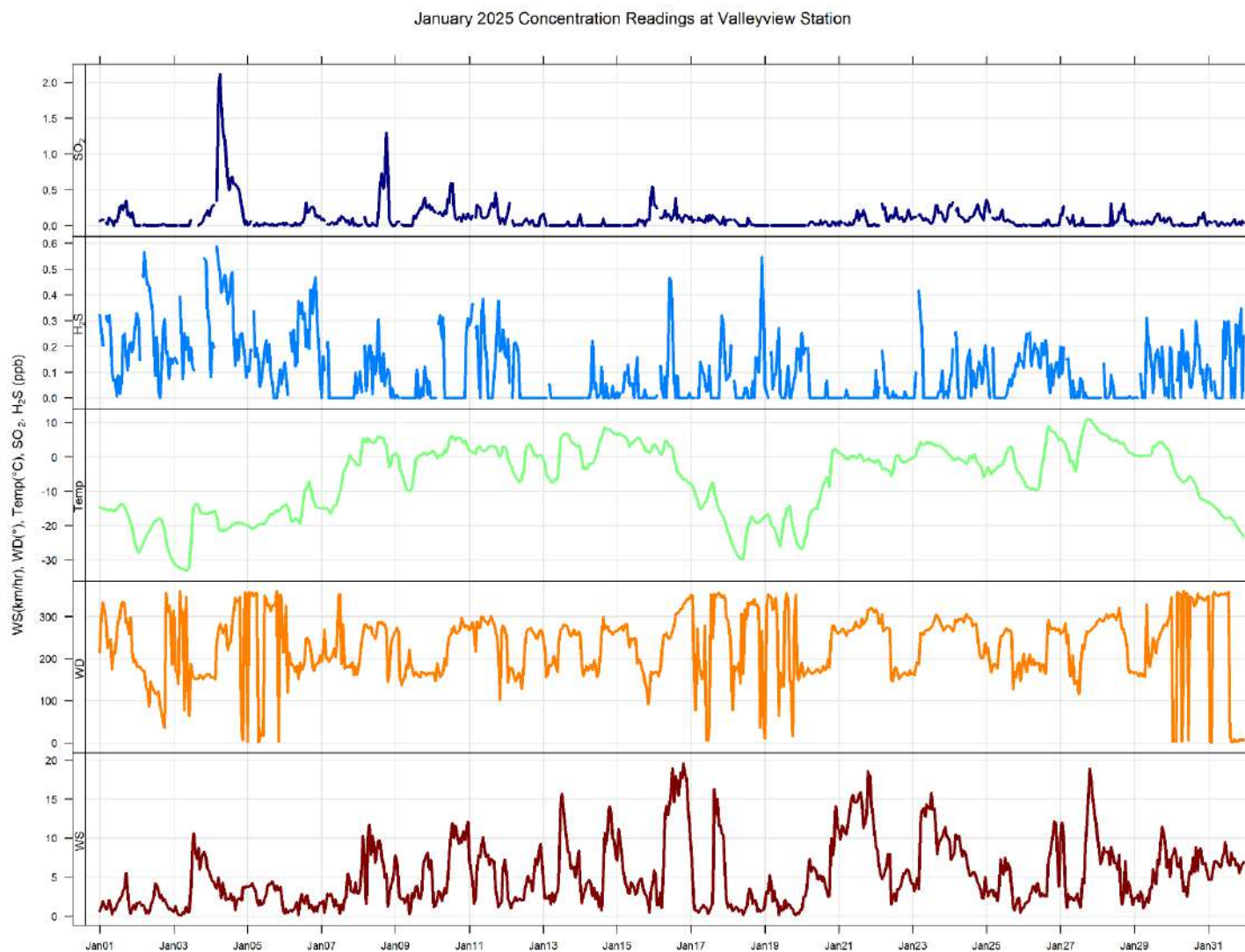




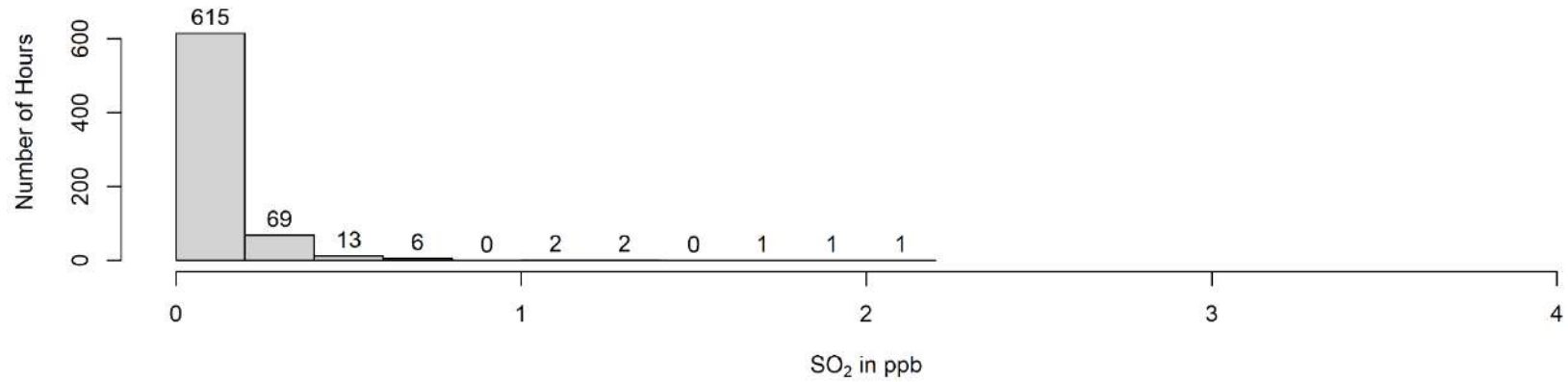
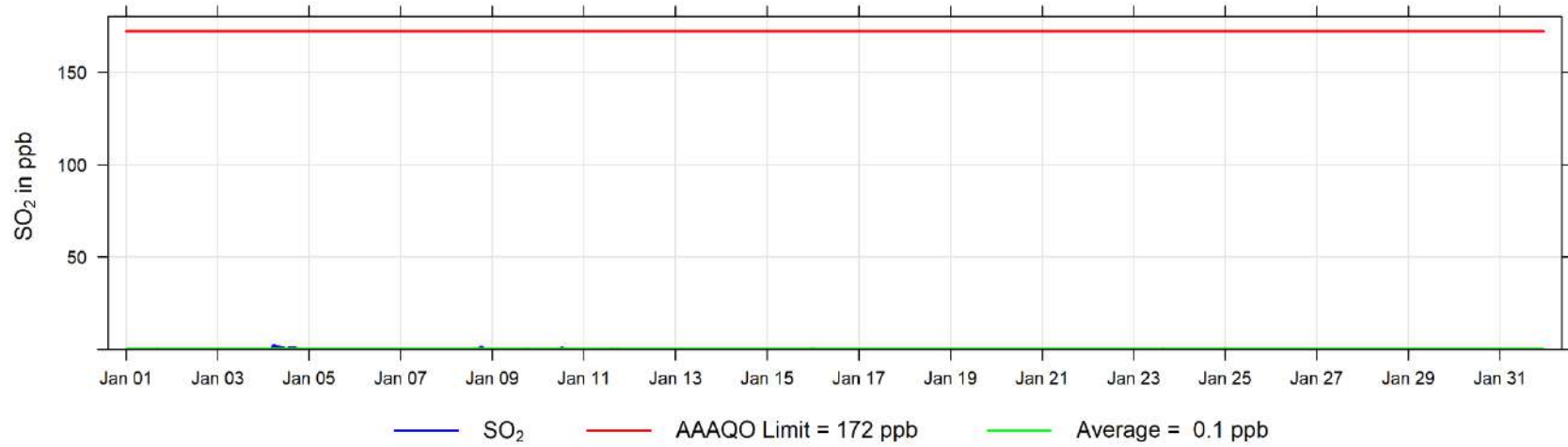
Smoky Heights January 2025 Wind Rose, wind speed in km/hr  
**Calms (<1km/hr) = 1.1 %**

## 6 Valleyview Charts

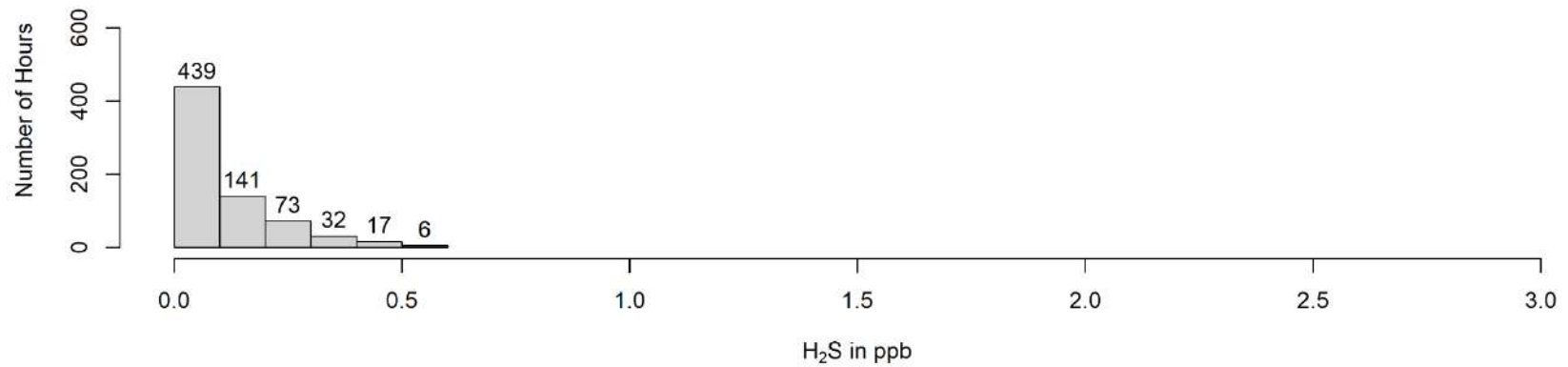
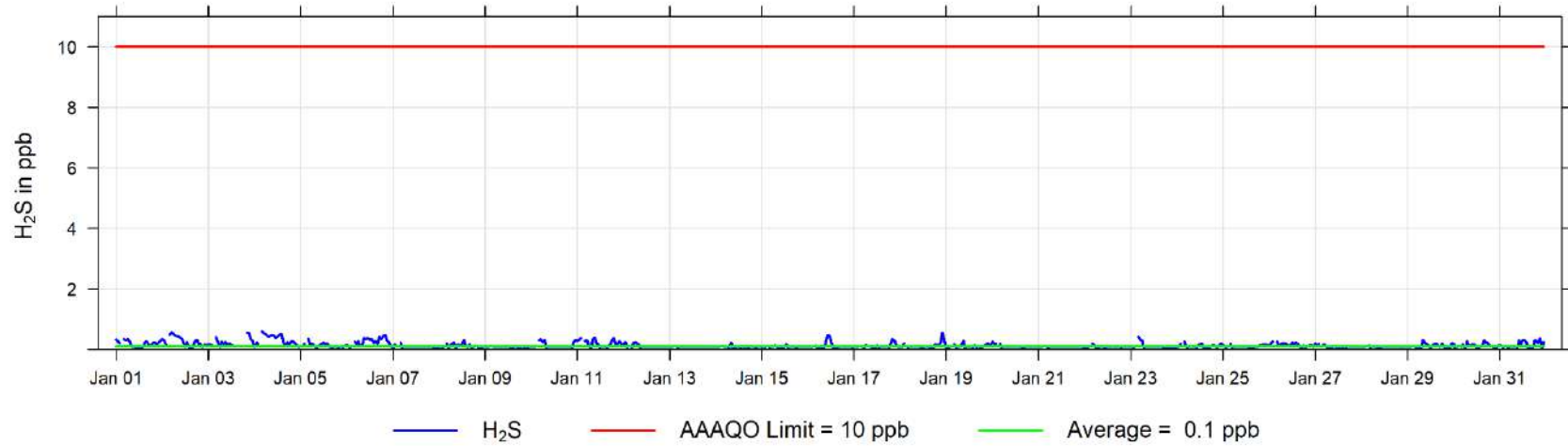
The following pages include the charts and histograms for Valleyview Station



January 2025 Hourly Concentration Readings of SO<sub>2</sub> (in ppb) at Valleyview

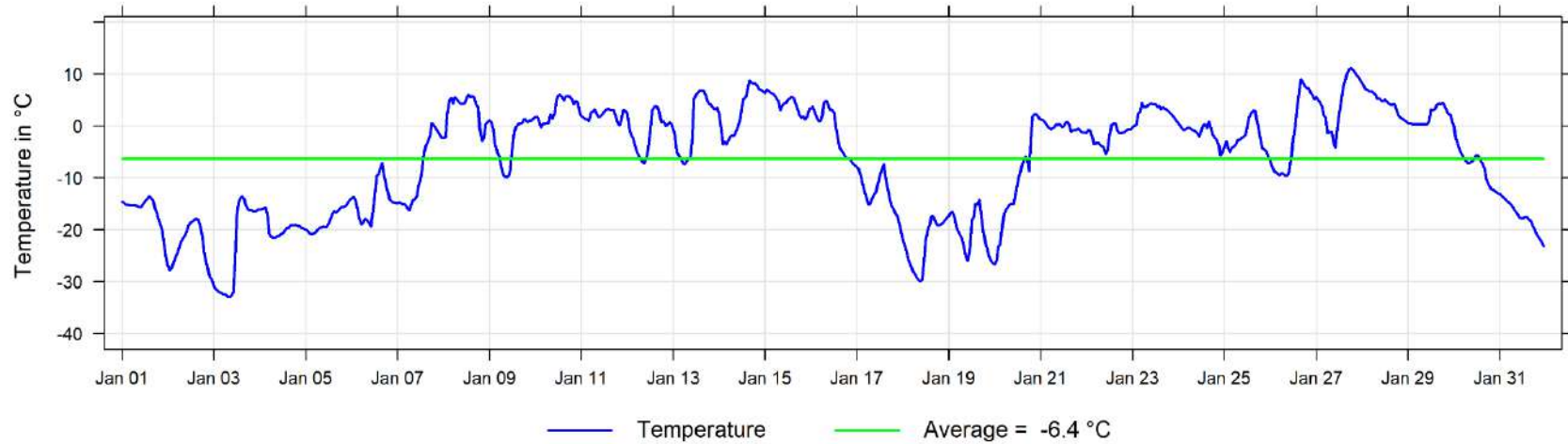


January 2025 Hourly Concentration Readings of H<sub>2</sub>S (in ppb) at Valleyview

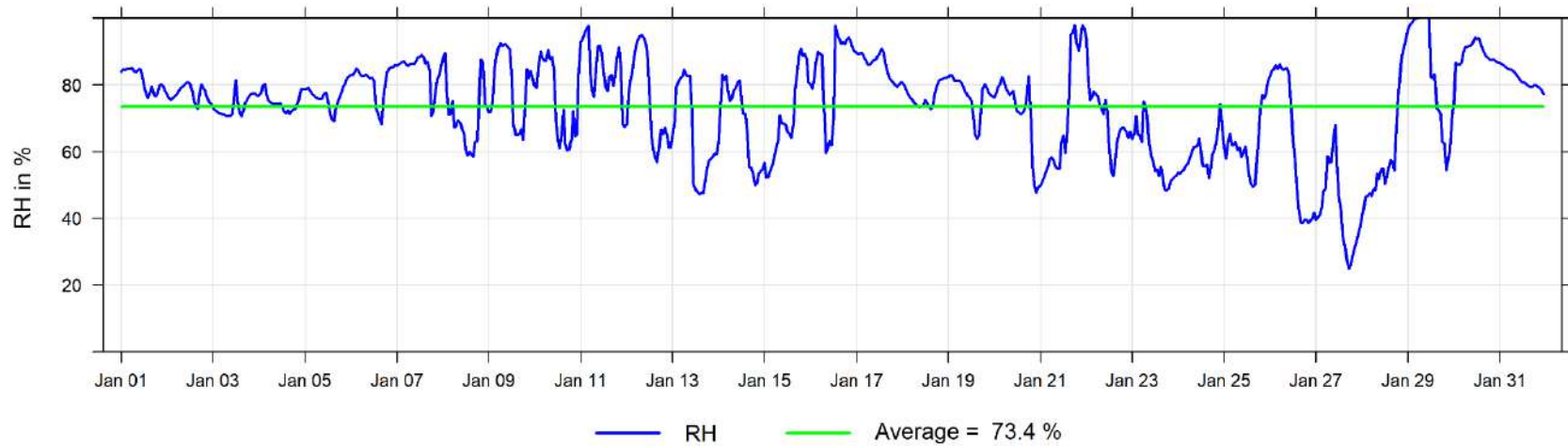




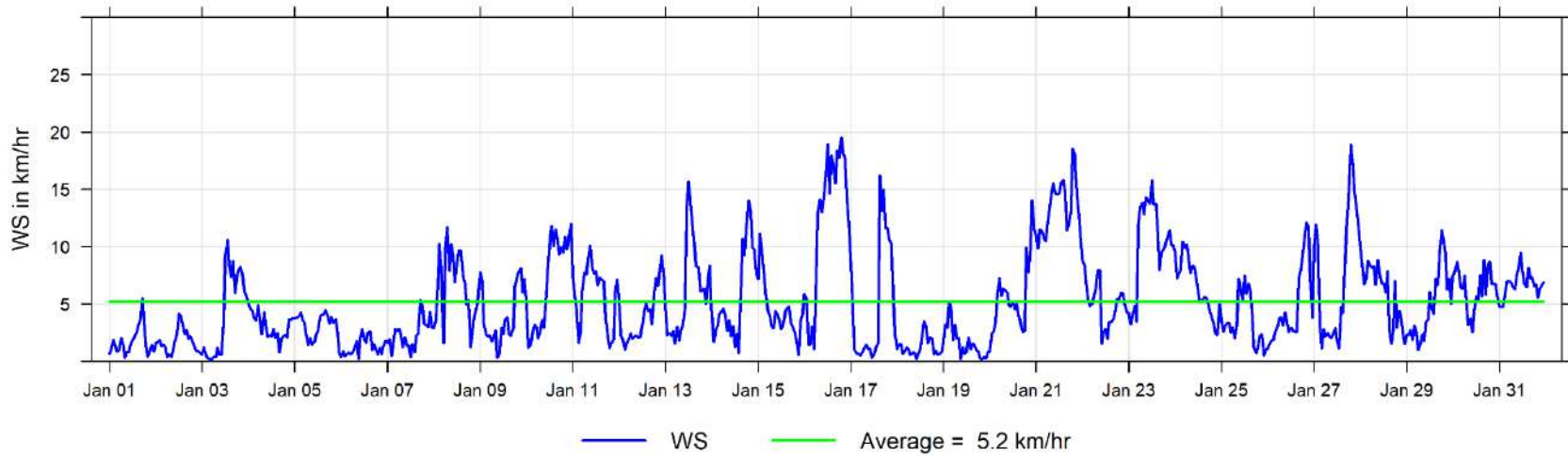
January 2025 Hourly Temperature Readings (in °C) at Valleyview



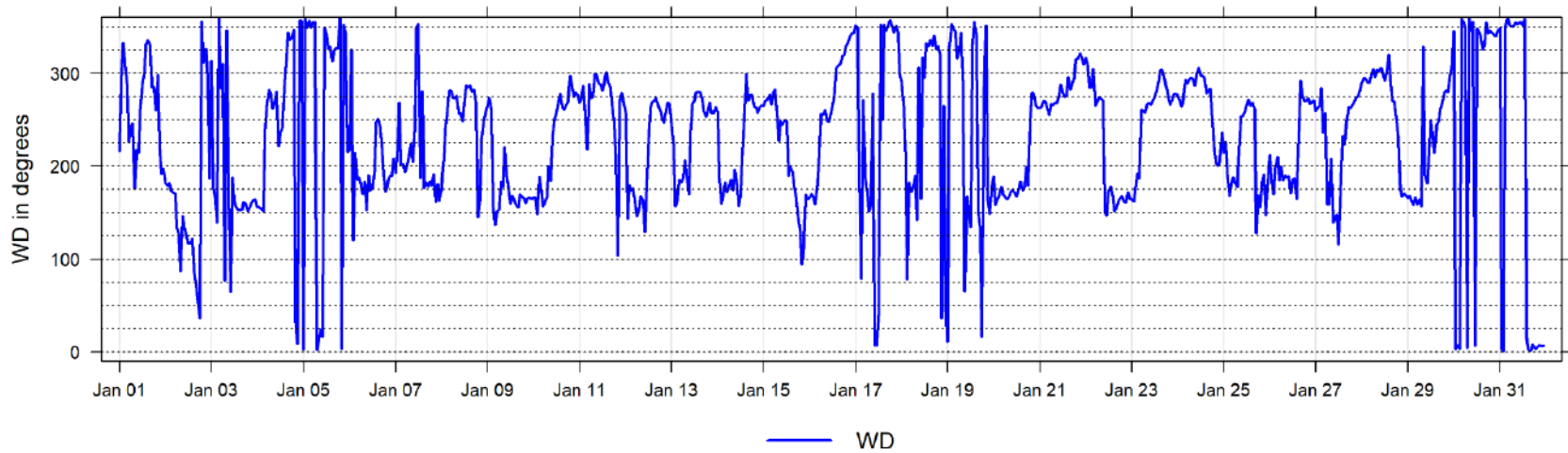
January 2025 Hourly Readings of Relative Humidity (in %) at Valleyview



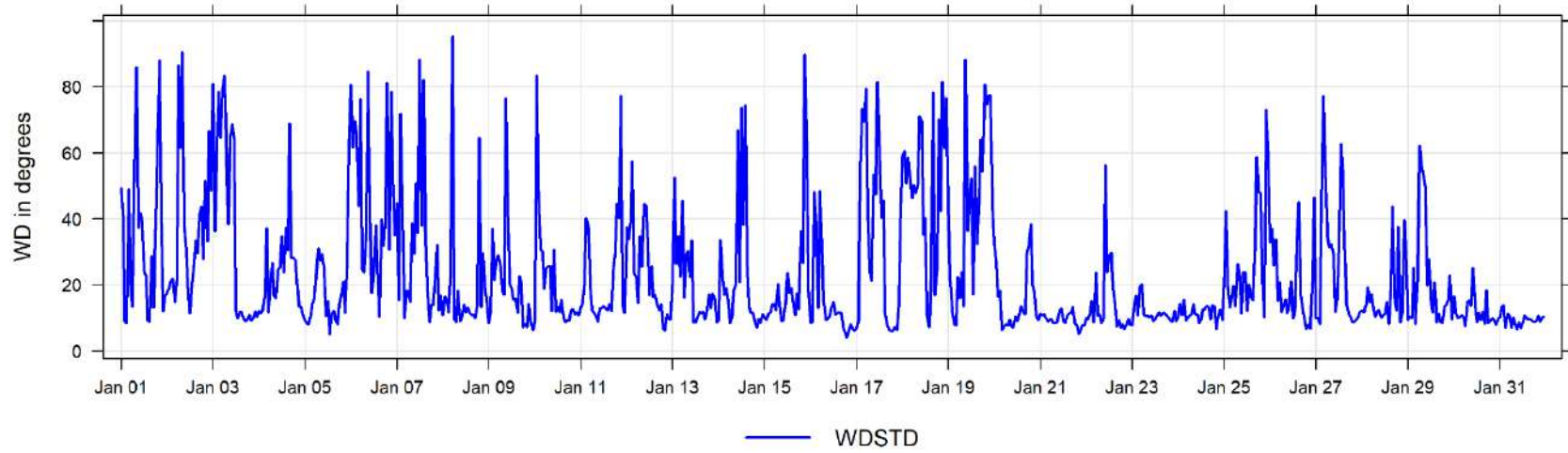
January 2025 Hourly Readings of Wind Speed (in km/hr) at Valleyview

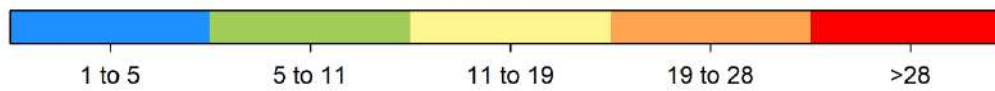
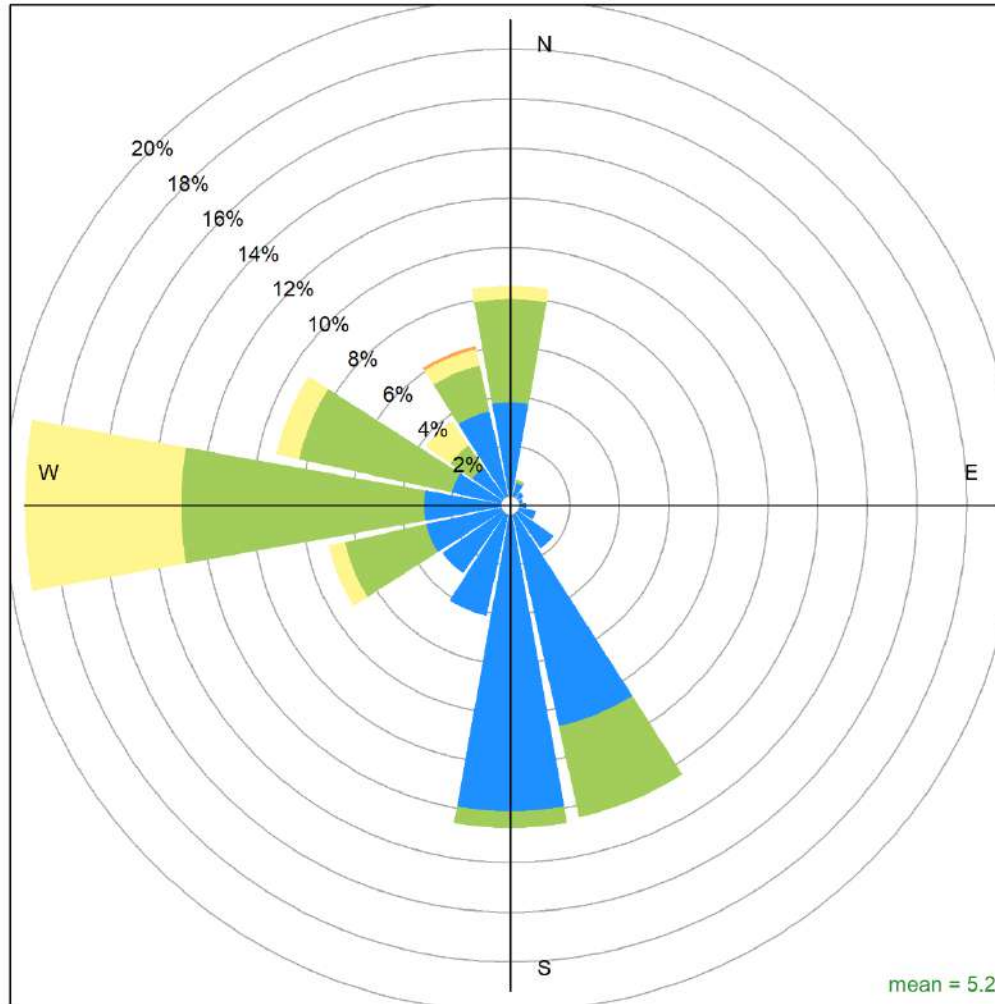


January 2025 Hourly Readings of Wind Direction (in degrees) at Valleyview



January 2025 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Valleyview





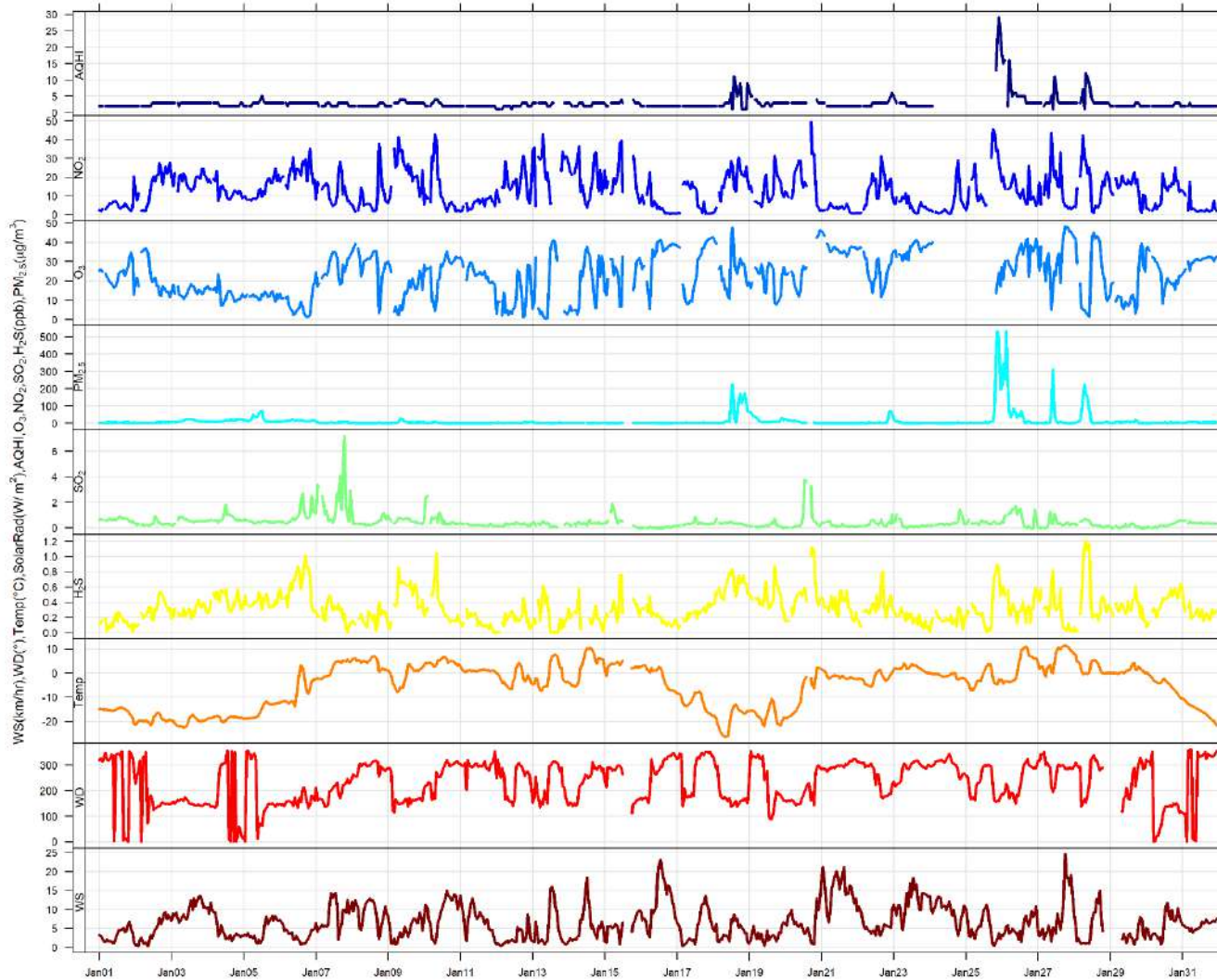
Valleyview January 2025 Wind Rose, wind speed in km/hr

**Calms (<1km/hr) = 10.1 %**

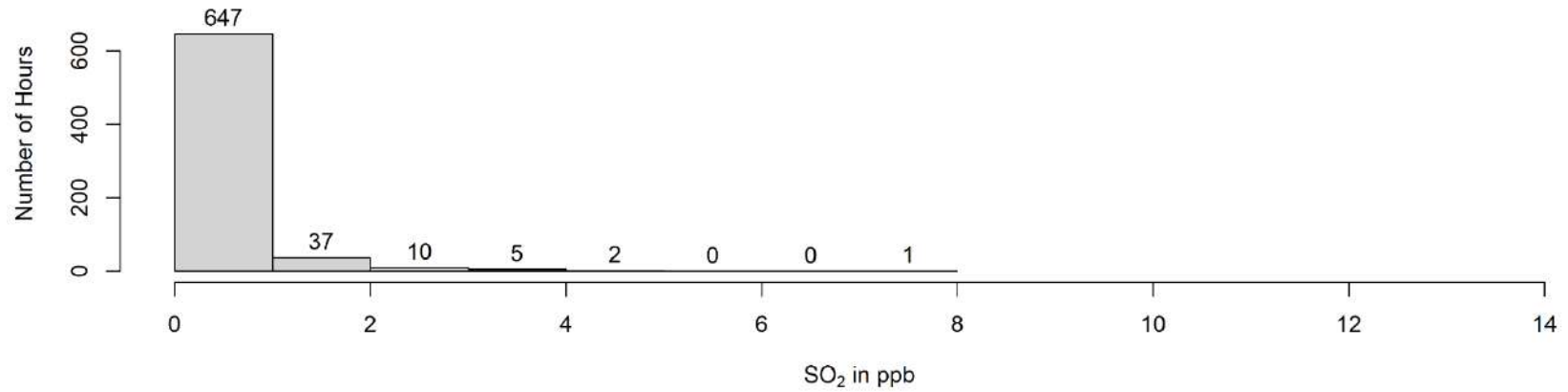
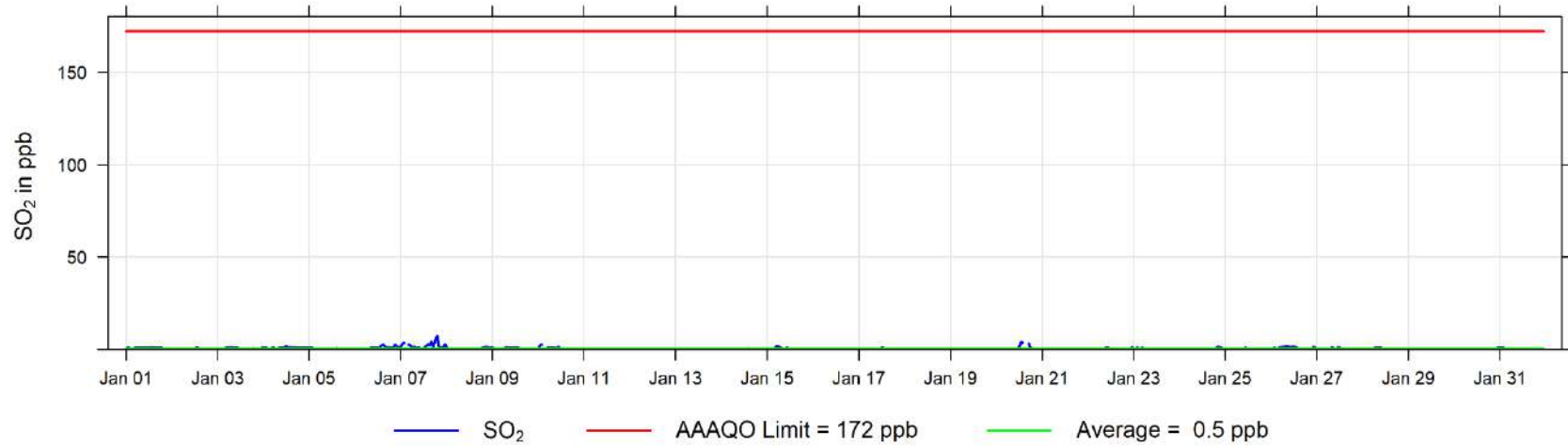
## 7 Fox Creek Charts

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

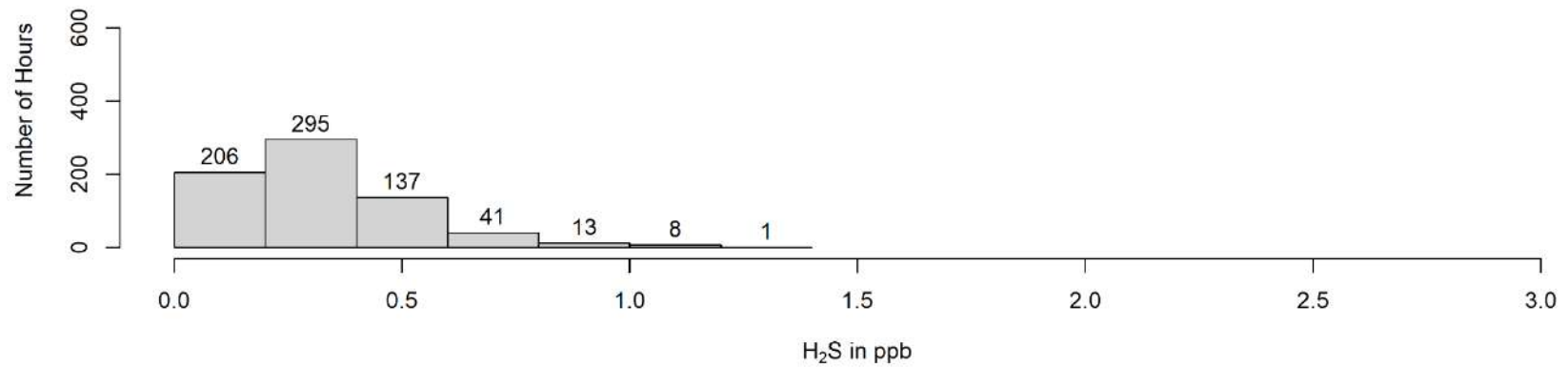
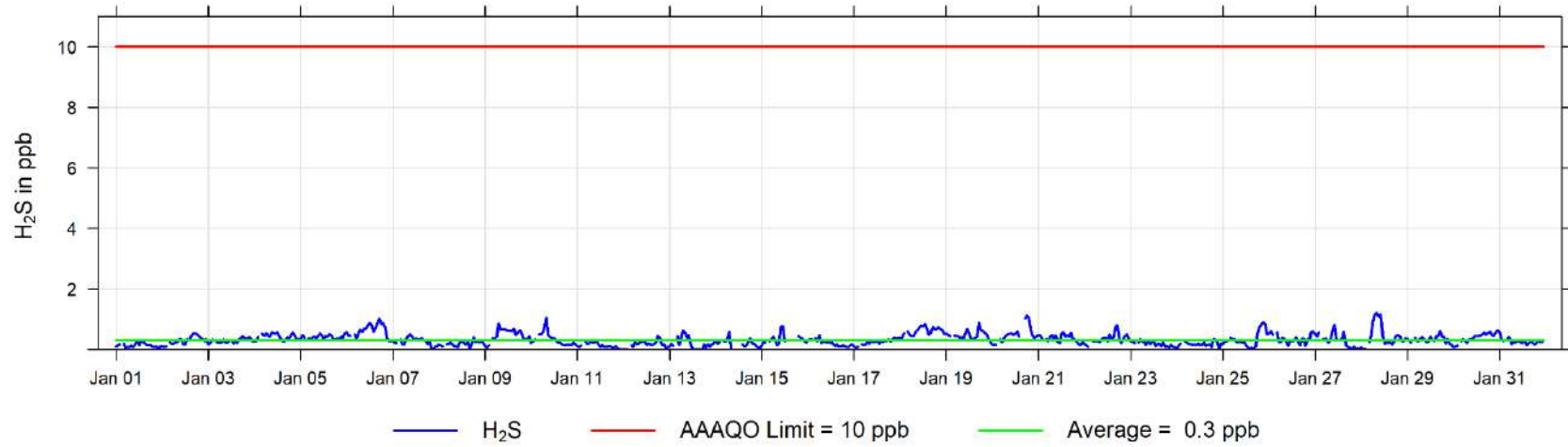
January 2025 Concentration Readings at Fox Creek Station



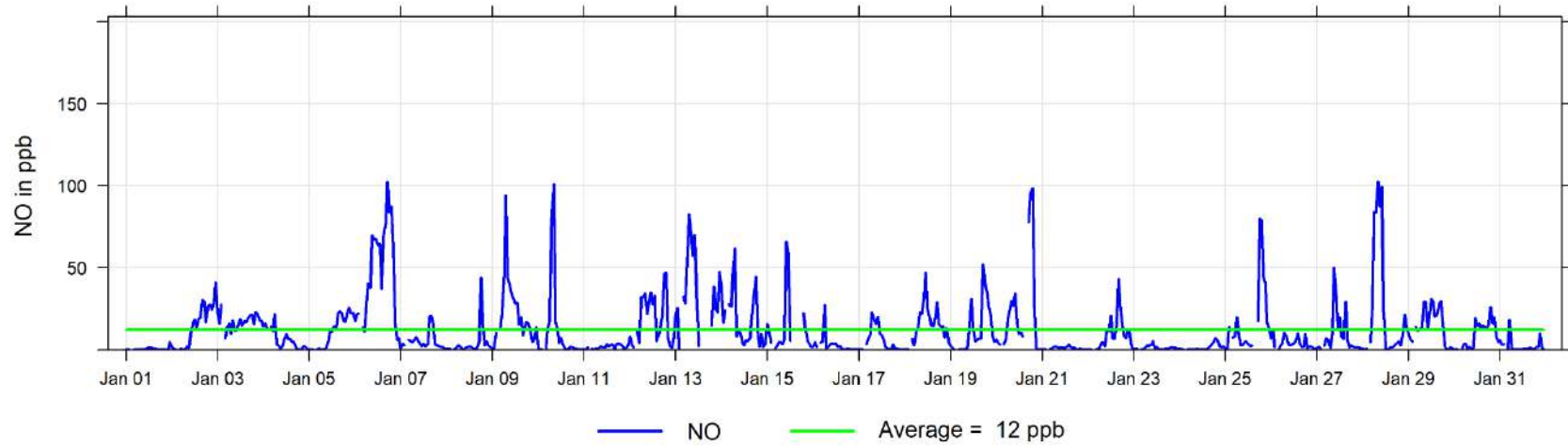
January 2025 Hourly Concentration Readings of SO<sub>2</sub> (in ppb) at Fox Creek



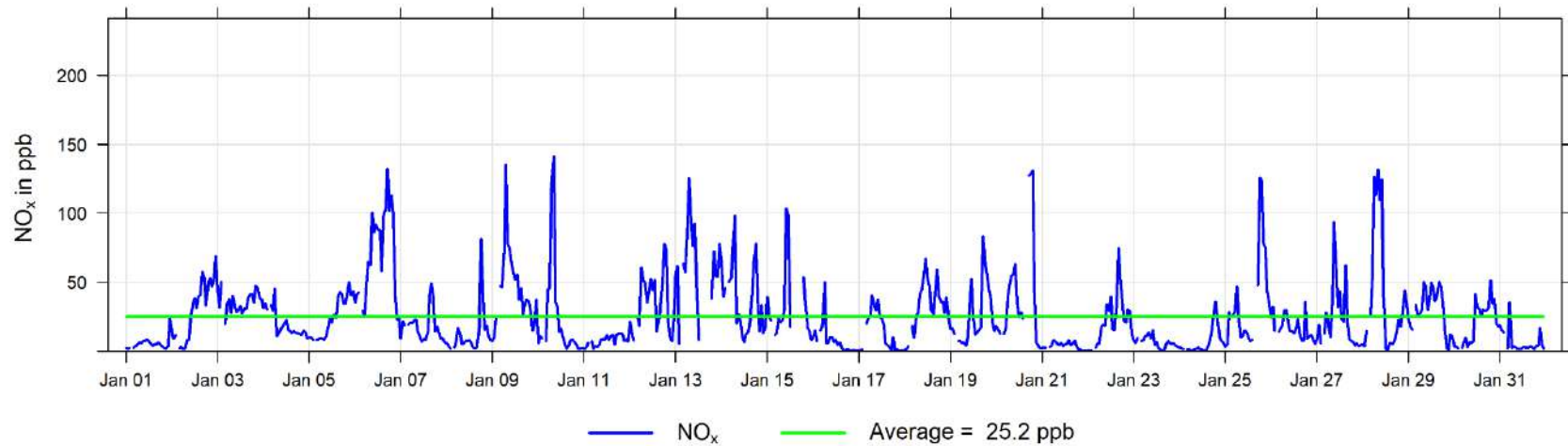
January 2025 Hourly Concentration Readings of H<sub>2</sub>S (in ppb) at Fox Creek



January 2025 Hourly Concentration Readings of NO (in ppb) at Fox Creek

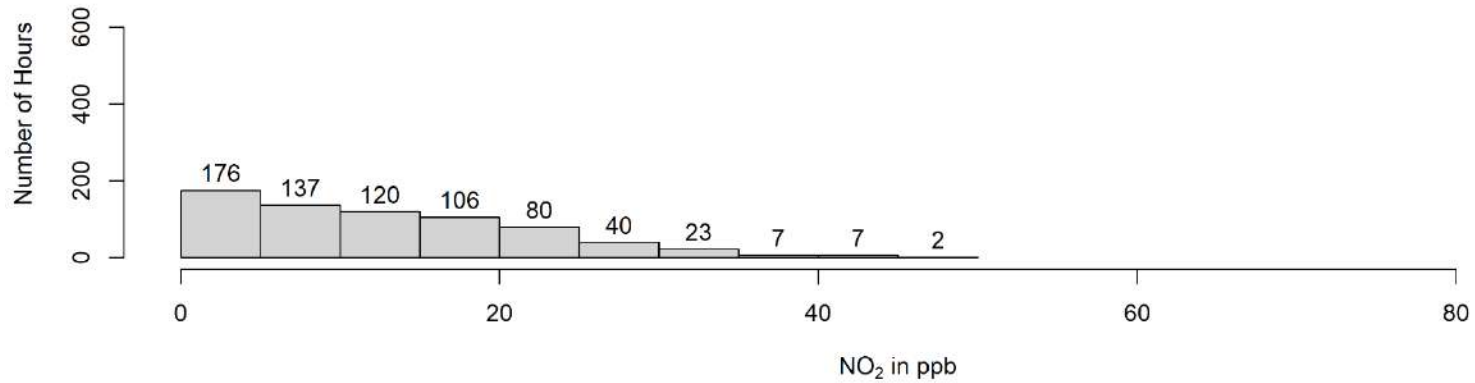
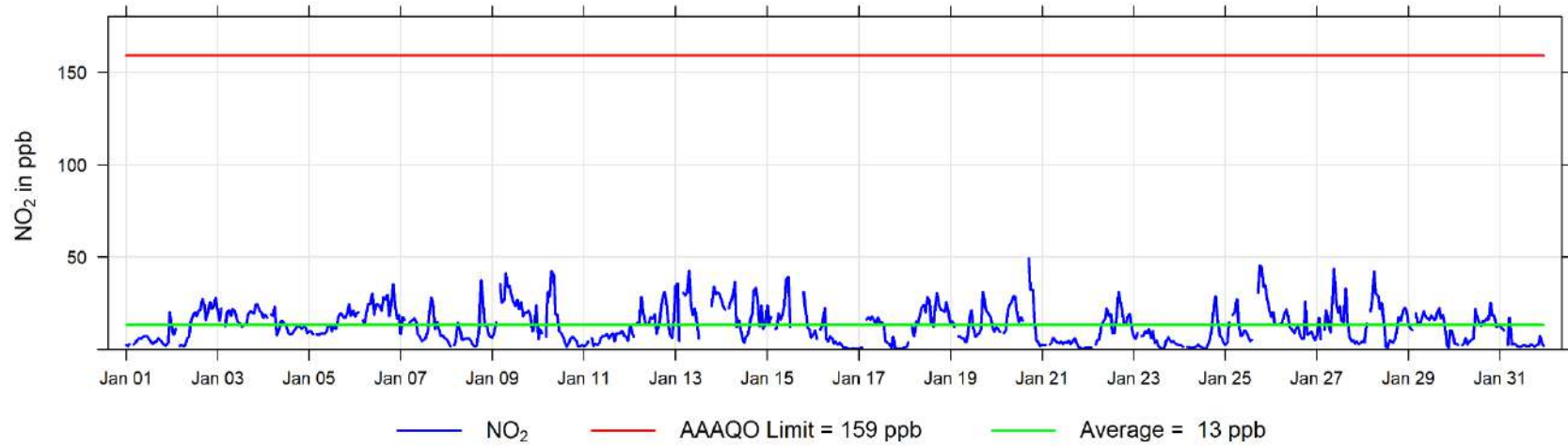


January 2025 Hourly Concentration Readings of NO<sub>x</sub> (in ppb) at Fox Creek

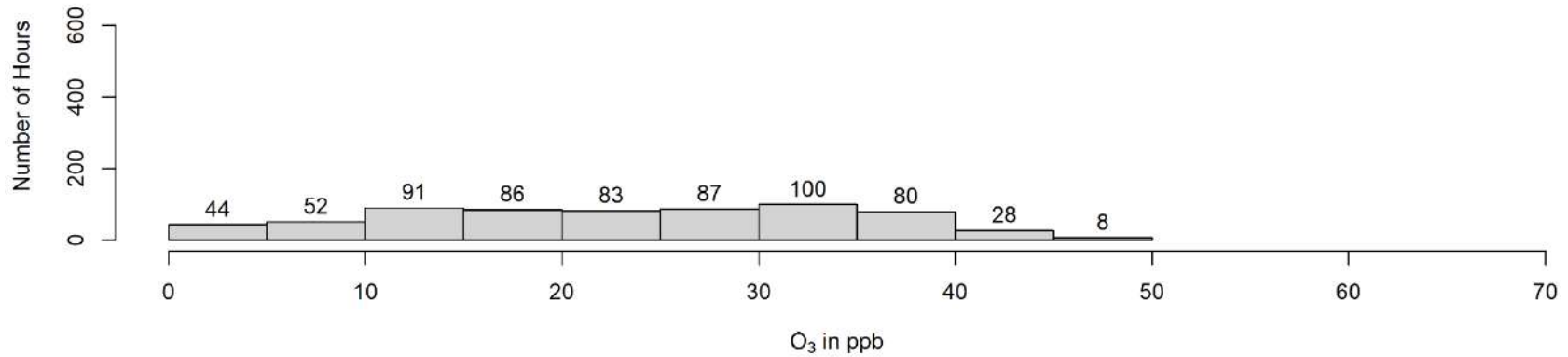
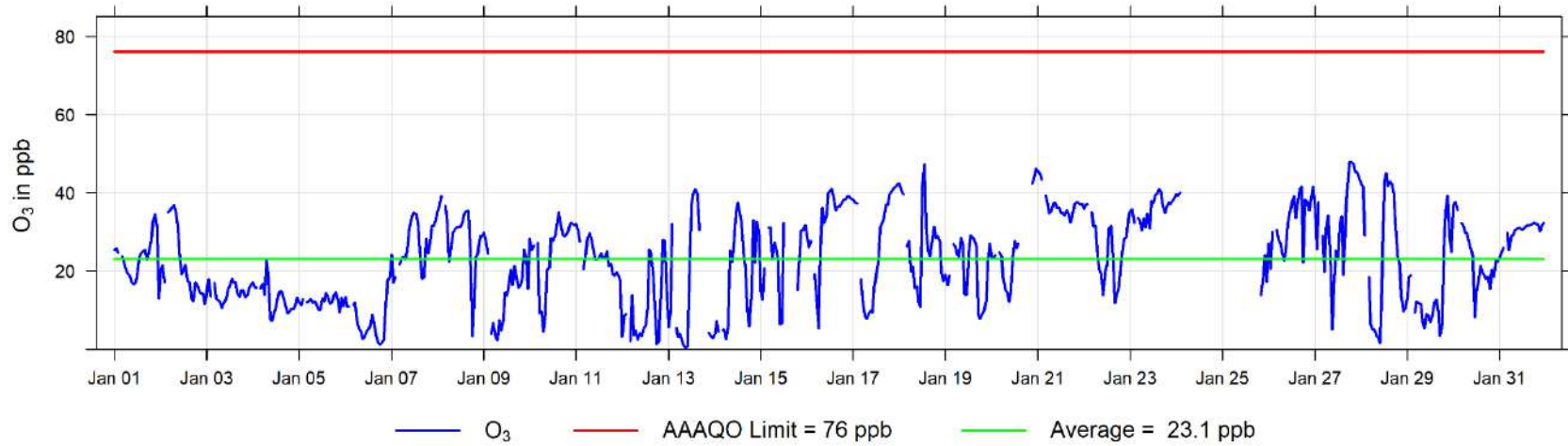




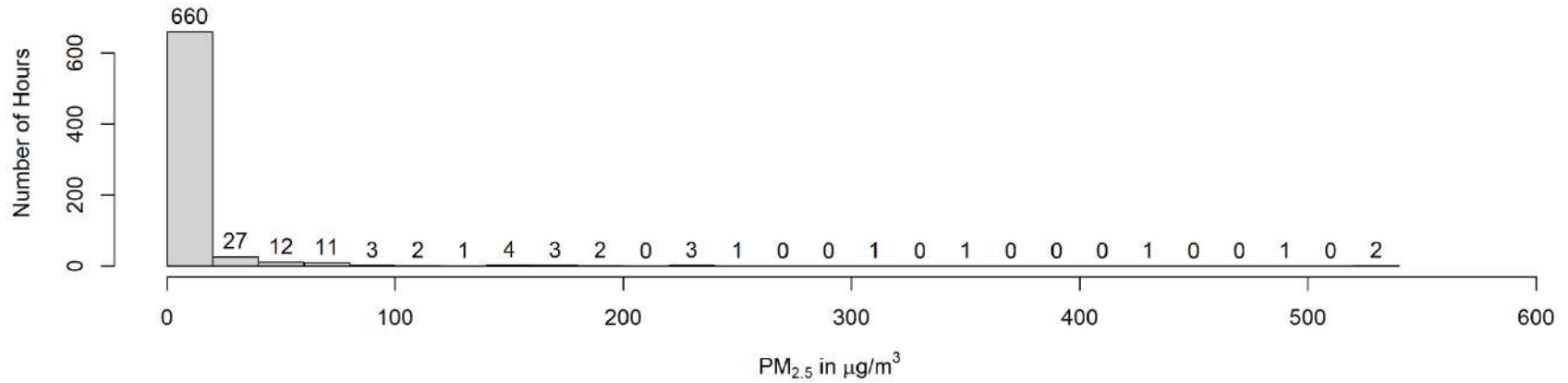
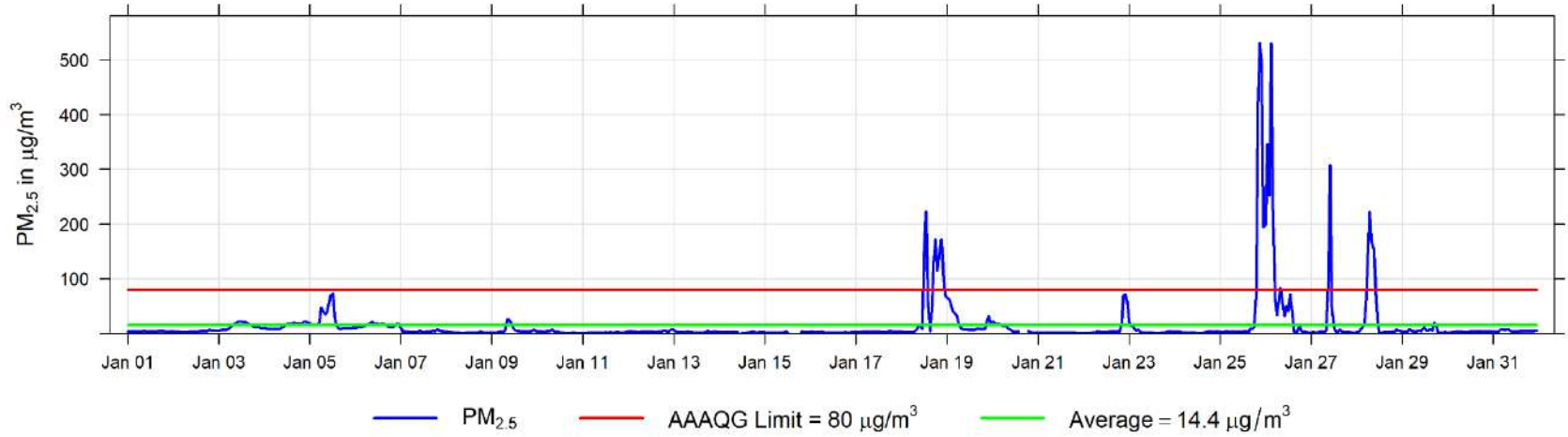
January 2025 Hourly Concentration Readings of NO<sub>2</sub> (in ppb) at Fox Creek



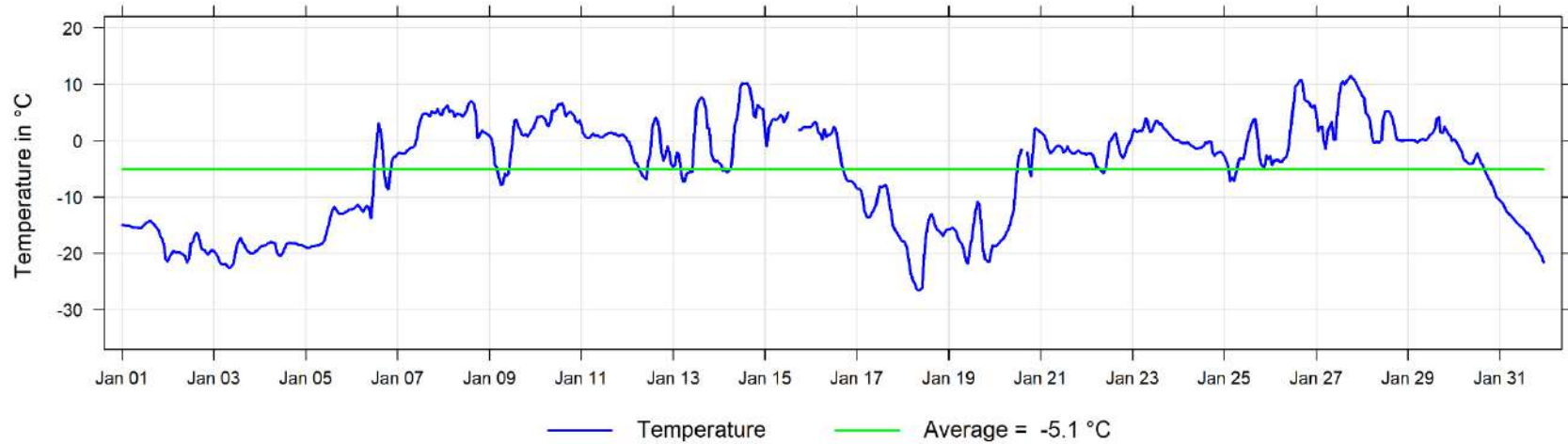
January 2025 Hourly Concentration Readings of O<sub>3</sub> (in ppb) at Fox Creek



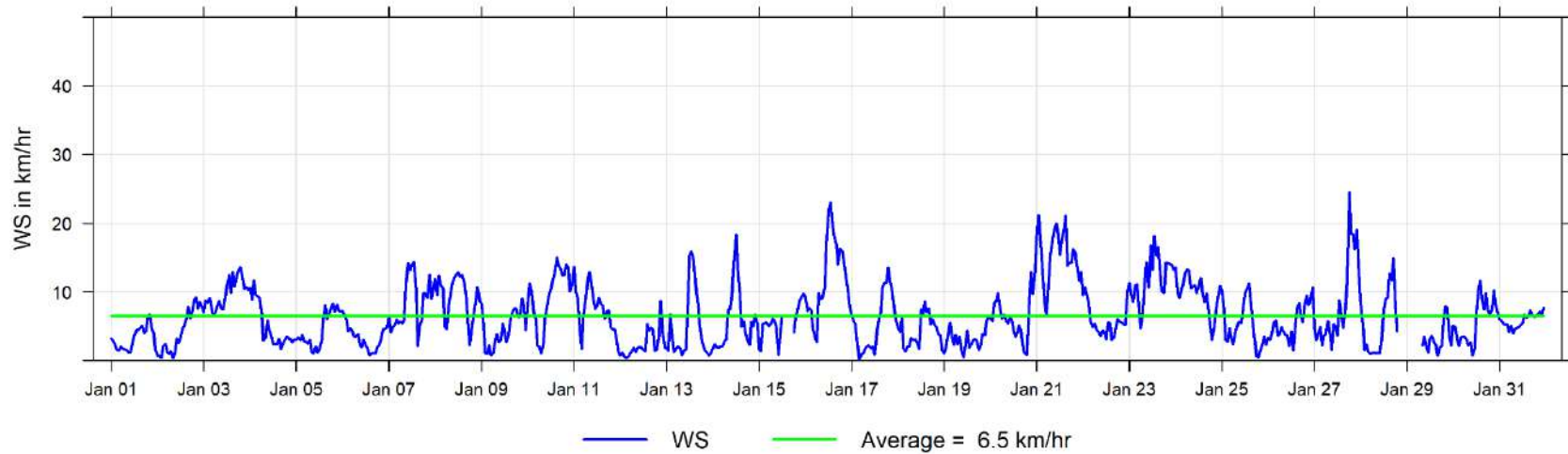
January 2025 Hourly Concentration Readings of PM<sub>2.5</sub> in  $\mu\text{g}/\text{m}^3$  at Fox Creek



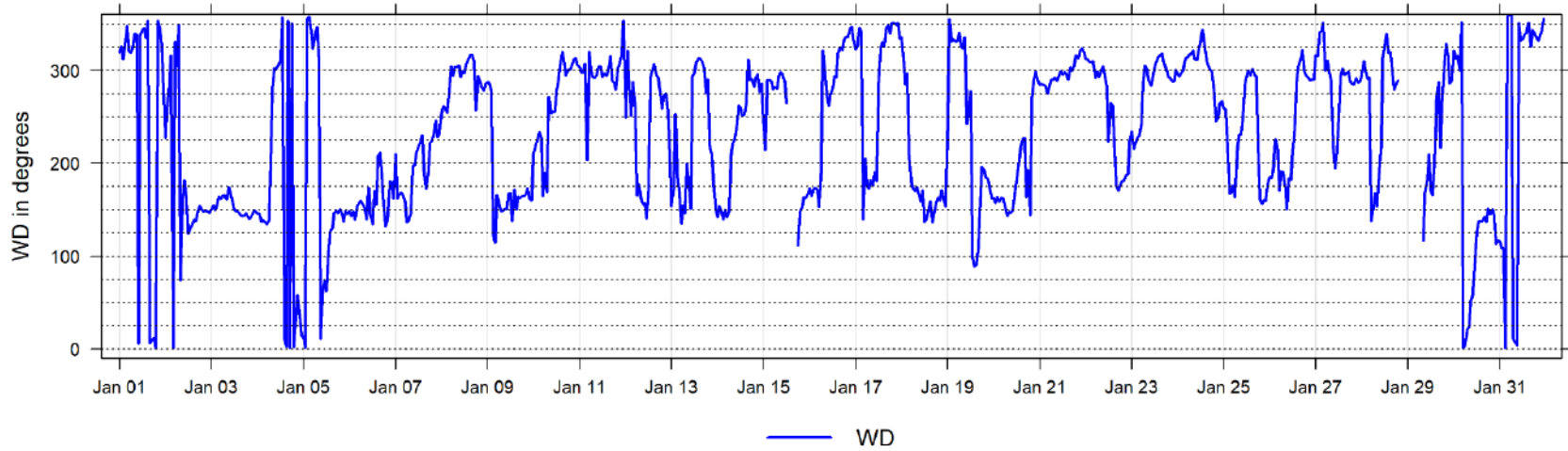
January 2025 Hourly Temperature Readings (in °C) at Fox Creek



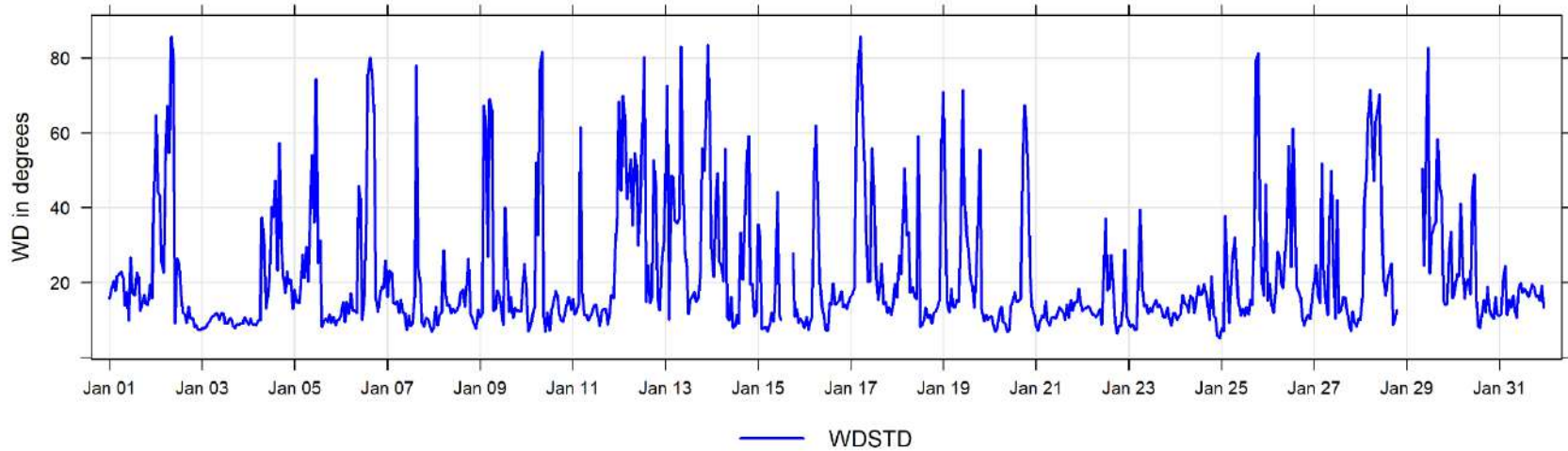
January 2025 Hourly Readings of Wind Speed (in km/hr) at Fox Creek

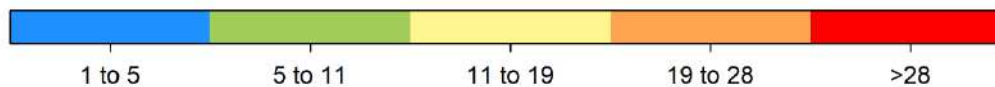
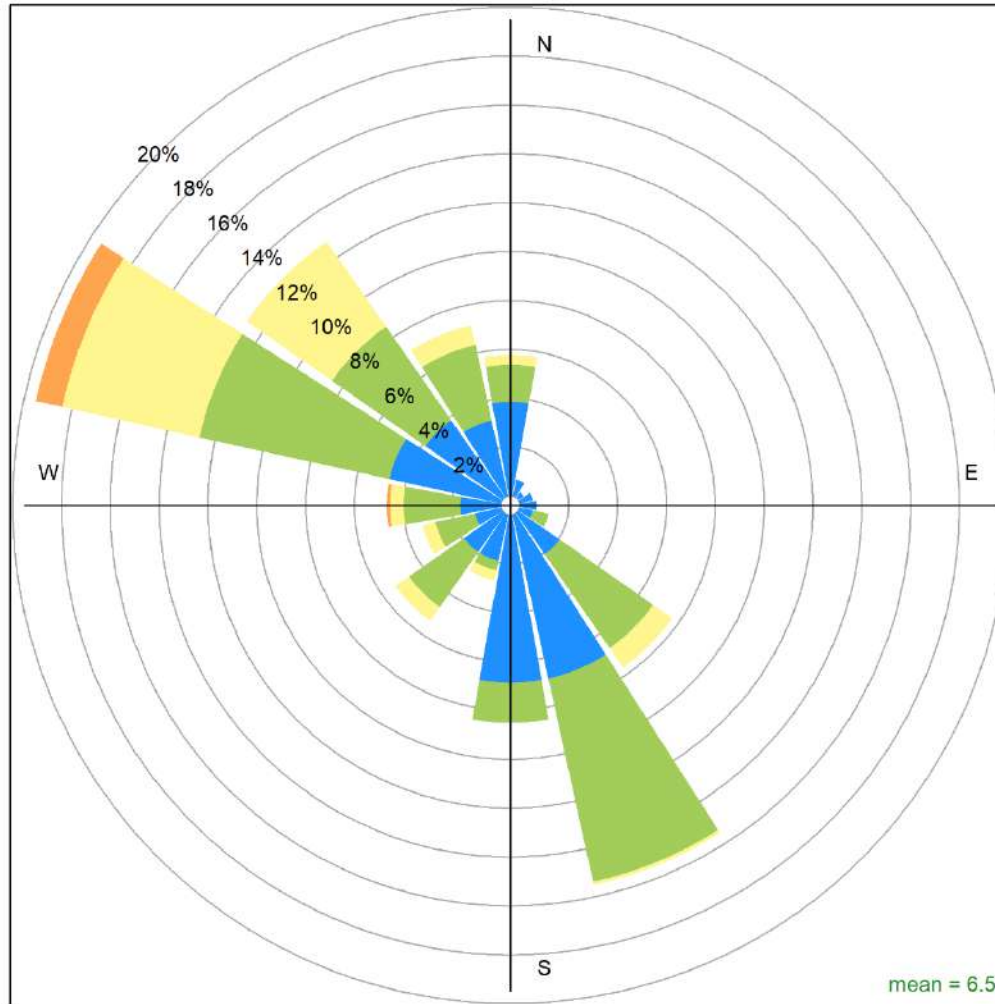


January 2025 Hourly Readings of Wind Direction (in degrees) at Fox Creek



January 2025 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Fox Creek



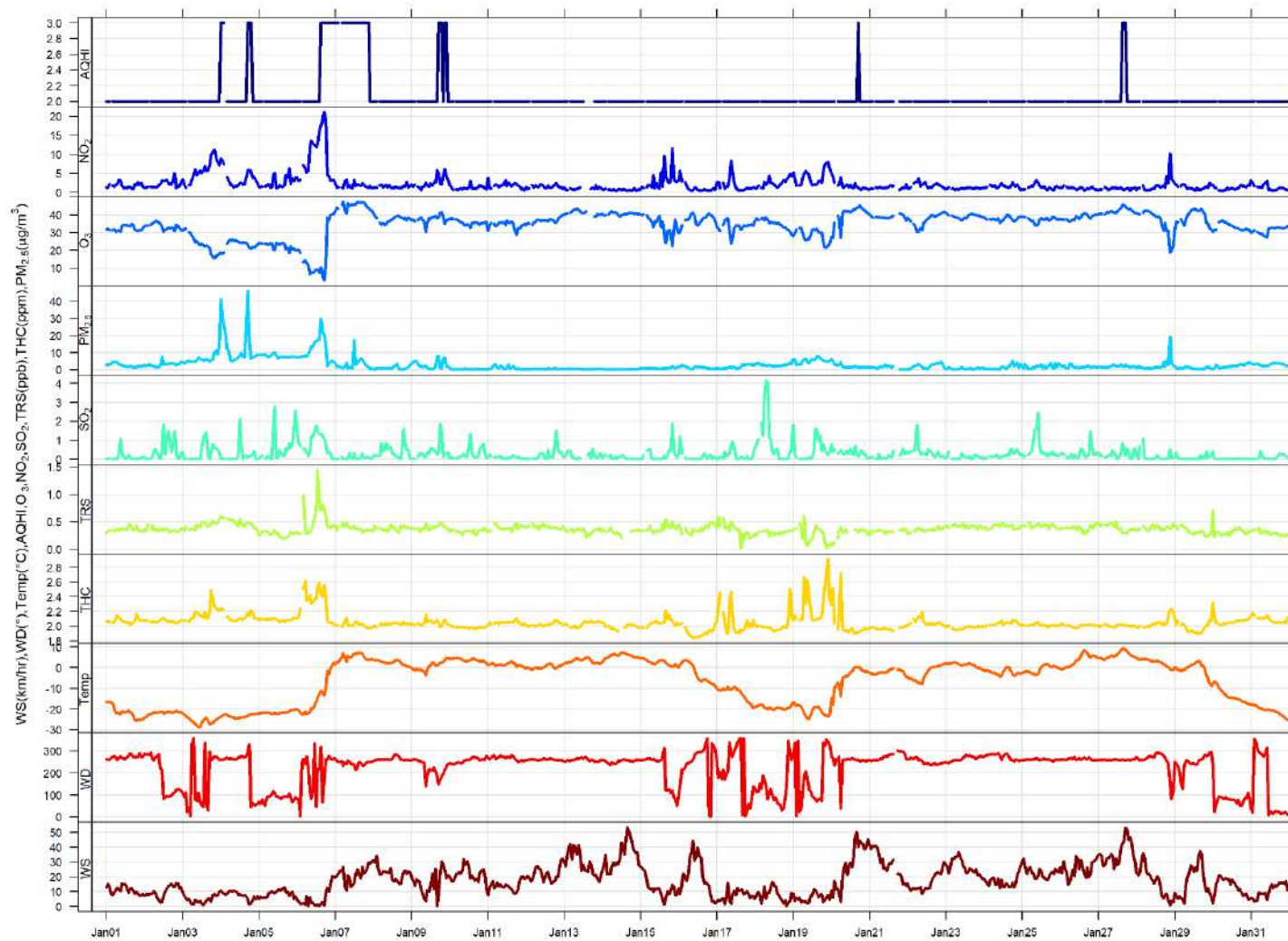


Fox Creek January 2025 Wind Rose, wind speed in km/hr  
**Calms (<1km/hr) = 3.6 %**

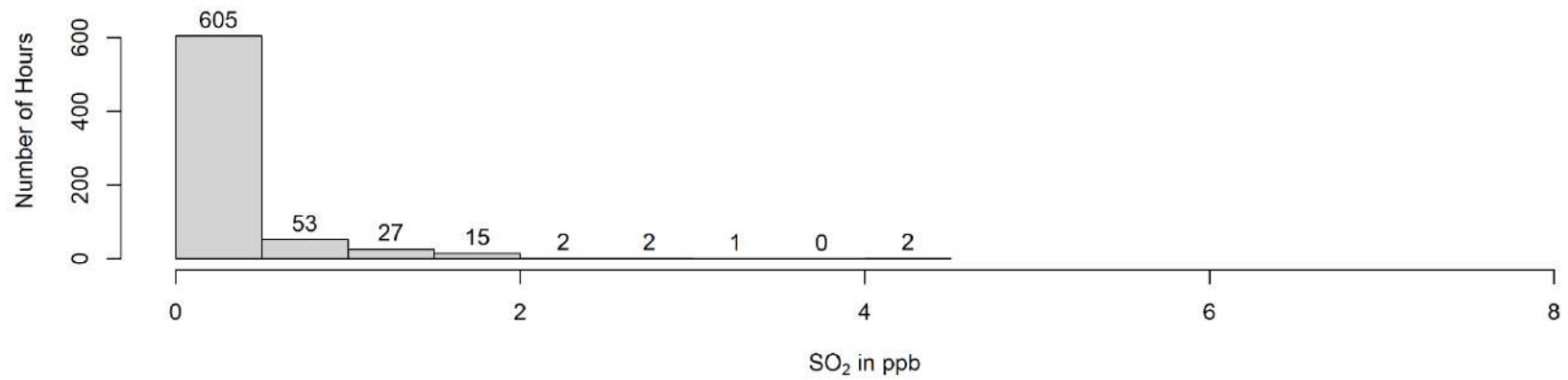
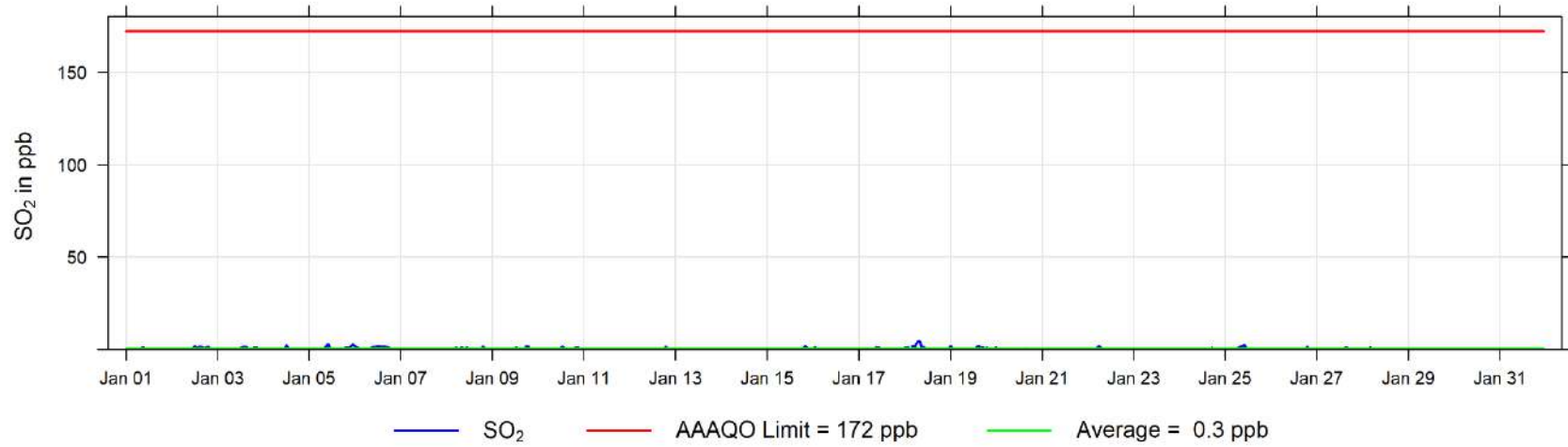
## 8 Happy Valley (Portable) Charts

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

January 2025 Concentration Readings at Happy Valley Station

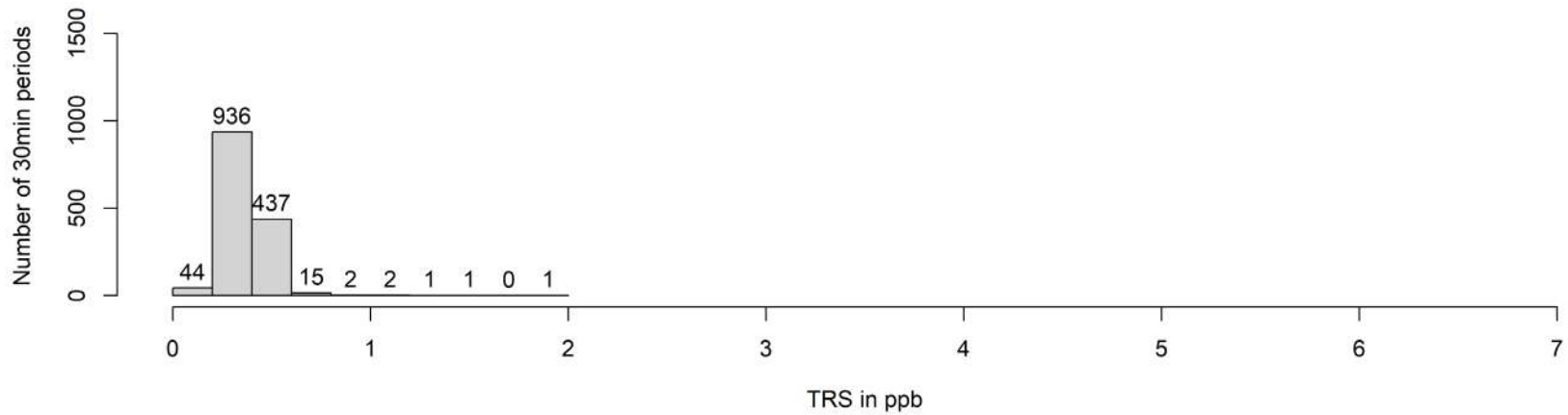
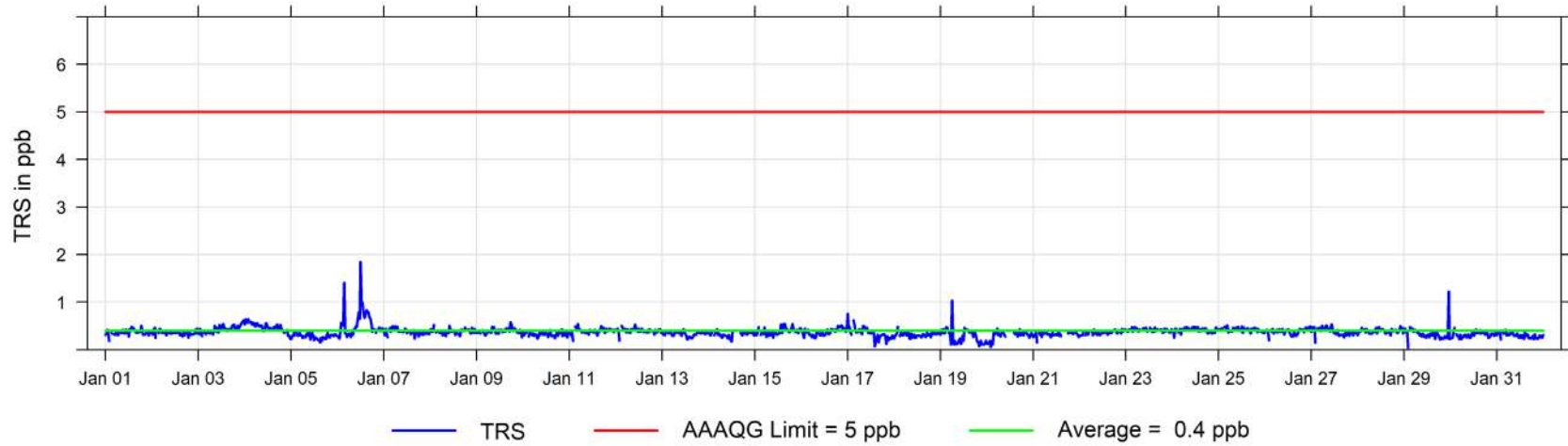


January 2025 Hourly Concentration Readings of SO<sub>2</sub> (in ppb) at Happy Valley

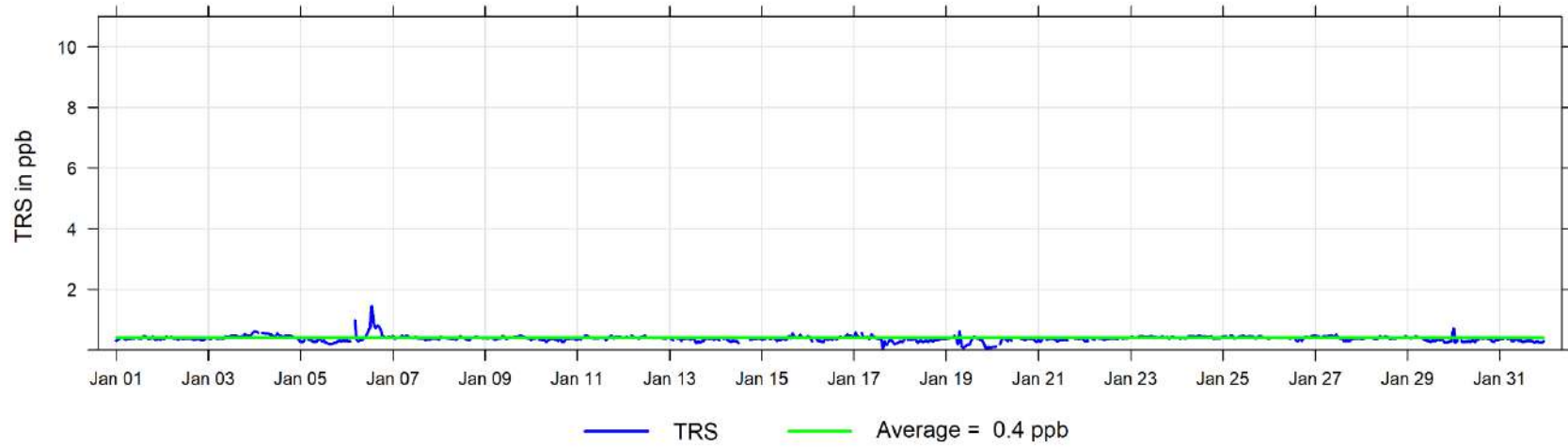




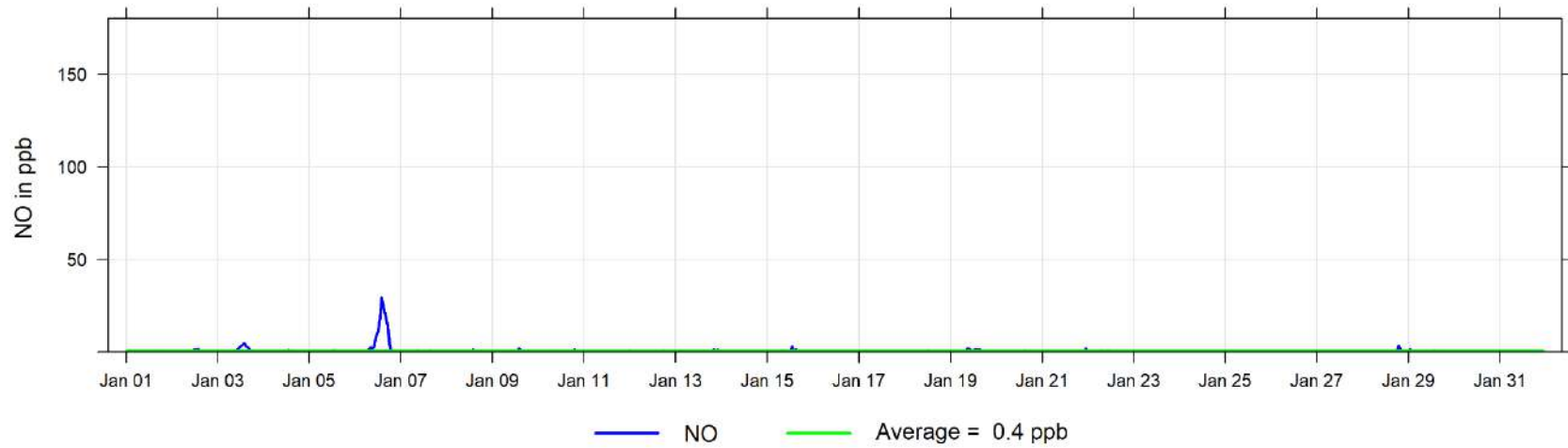
January 2025 30 min Concentration Readings of TRS (in ppb) at Happy Valley



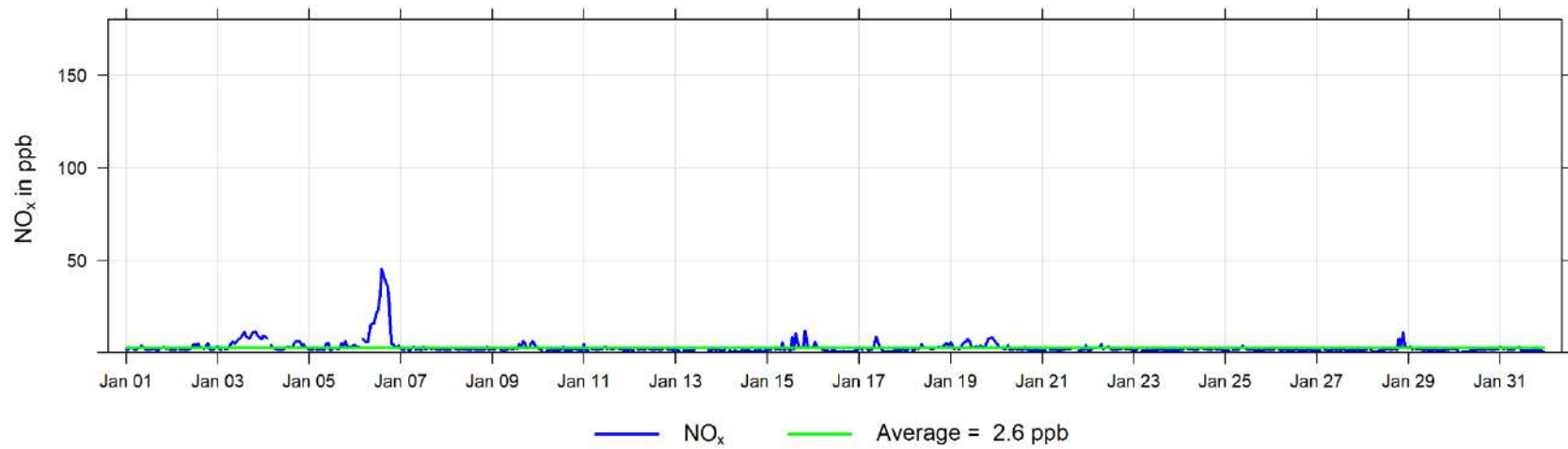
January 2025 Hourly Concentration Readings of TRS (in ppb) at Happy Valley



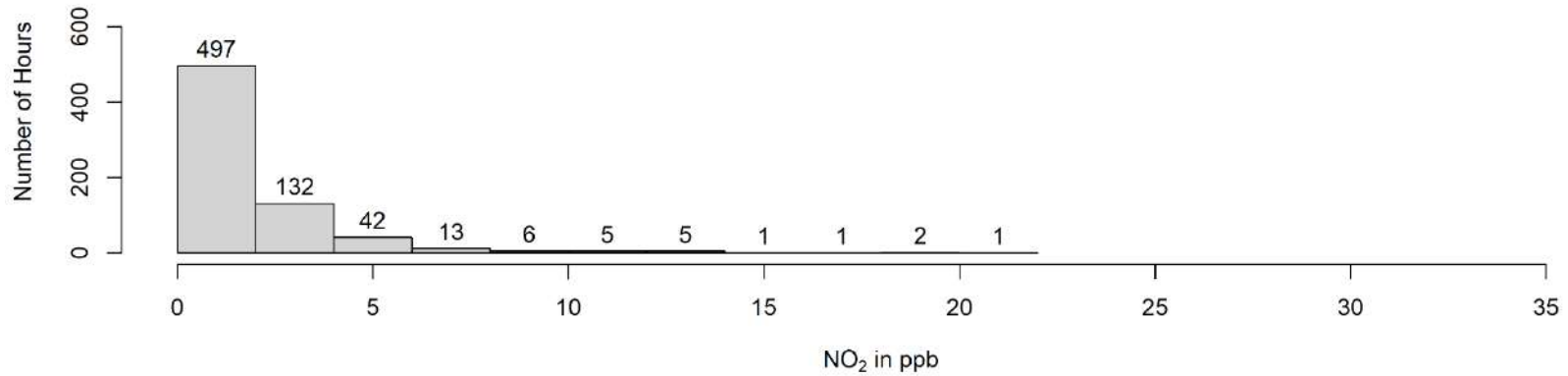
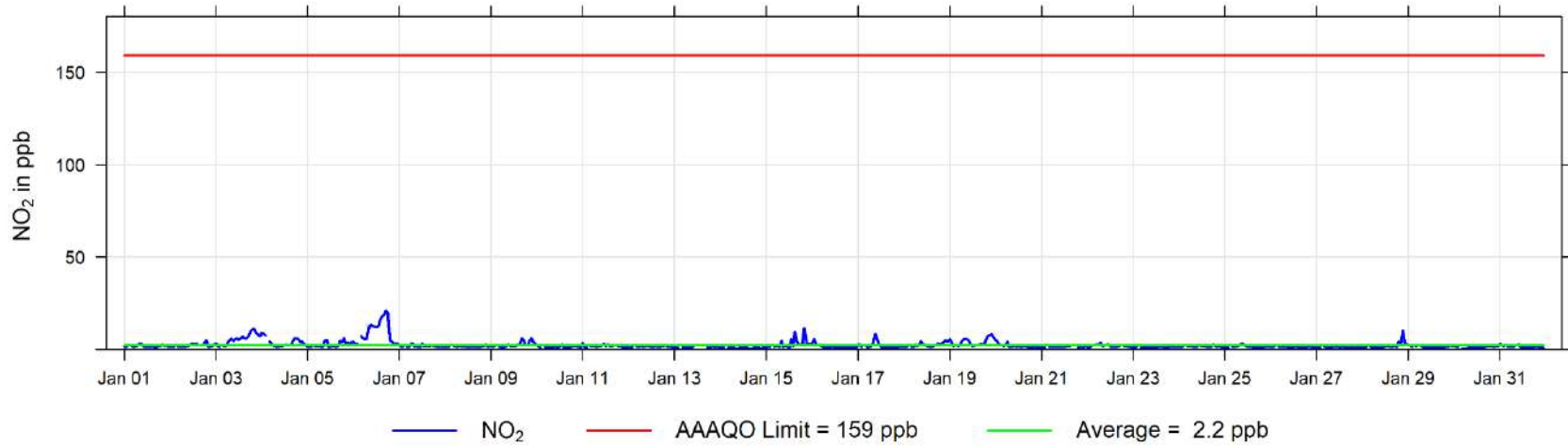
January 2025 Hourly Concentration Readings of NO (in ppb) at Happy Valley



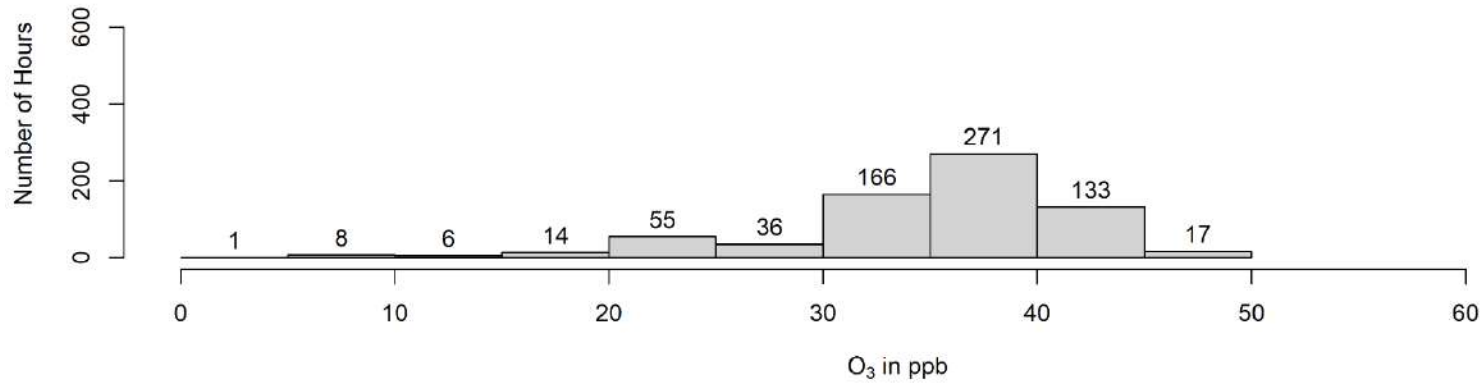
January 2025 Hourly Concentration Readings of NO<sub>x</sub> (in ppb) at Happy Valley



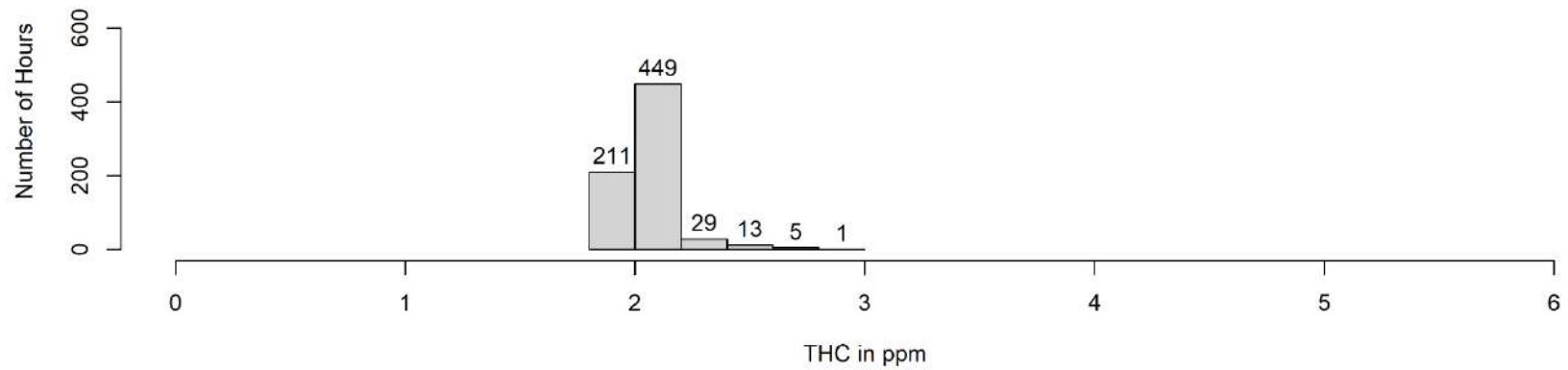
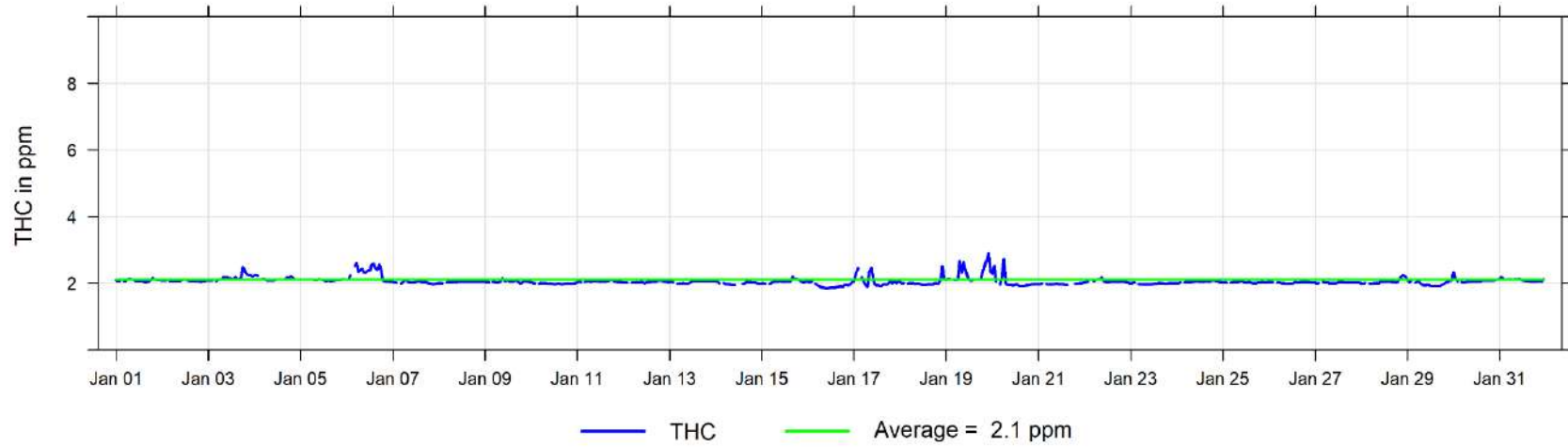
January 2025 Hourly Concentration Readings of NO<sub>2</sub> (in ppb) at Happy Valley



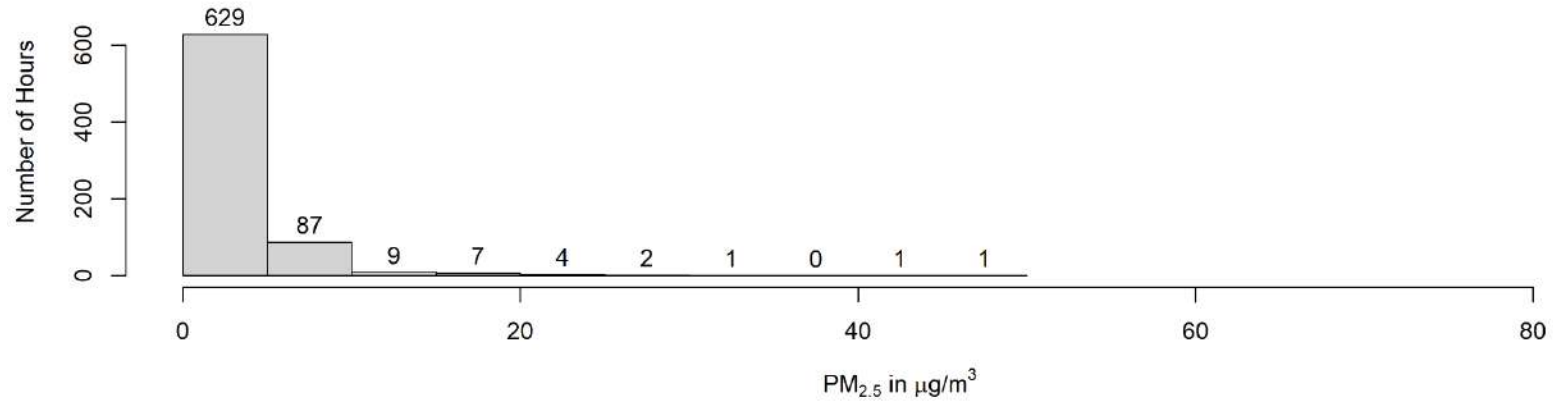
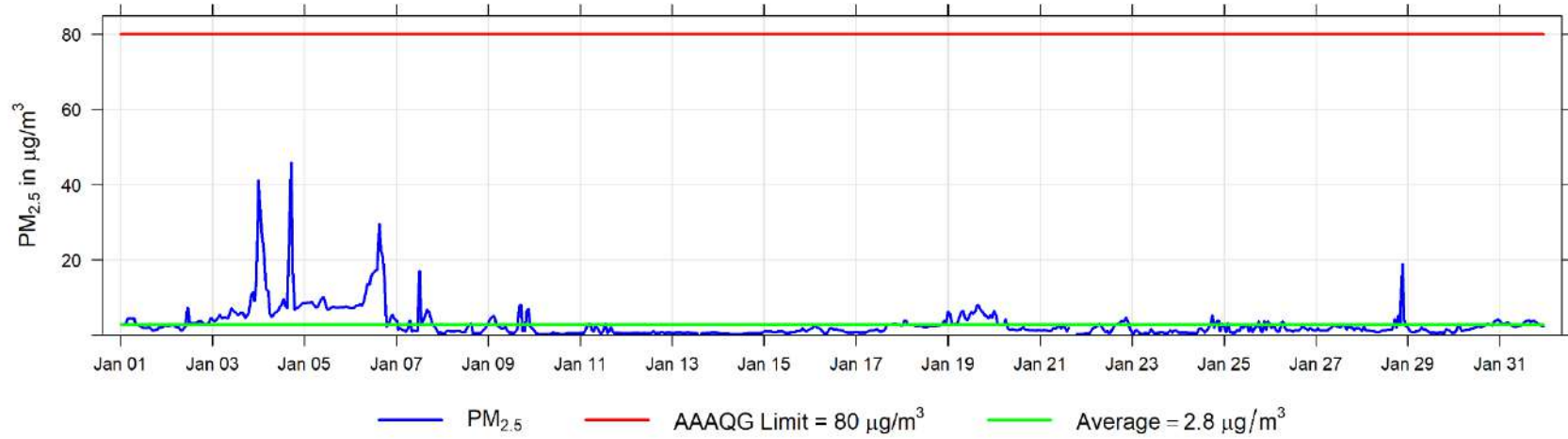
January 2025 Hourly Concentration Readings of O<sub>3</sub> (in ppb) at Happy Valley



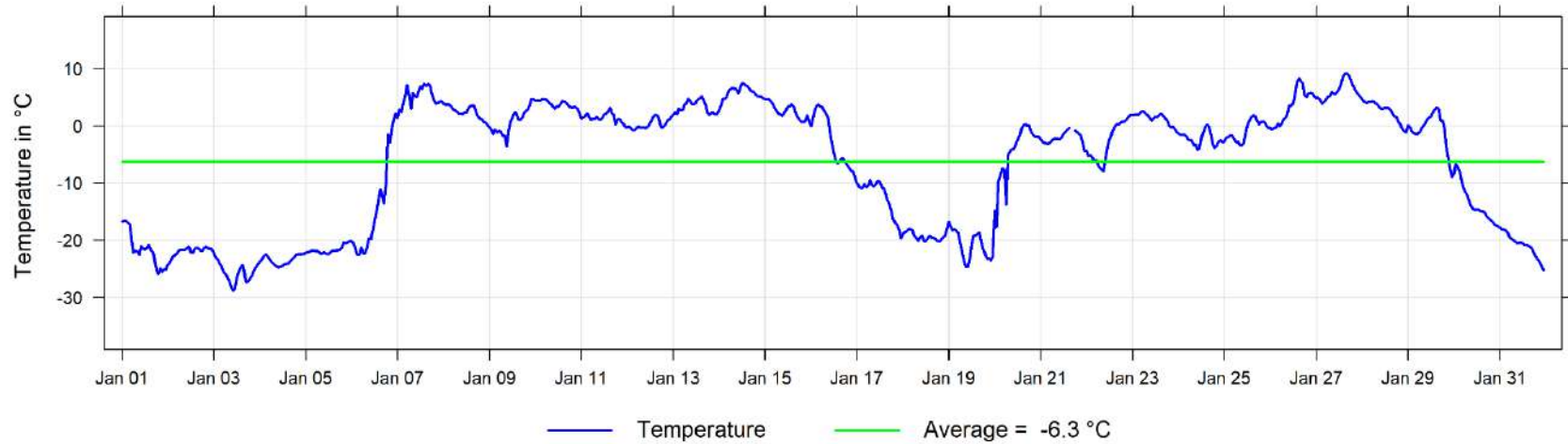
January 2025 Hourly Concentration Readings of THC (in ppm) at Happy Valley



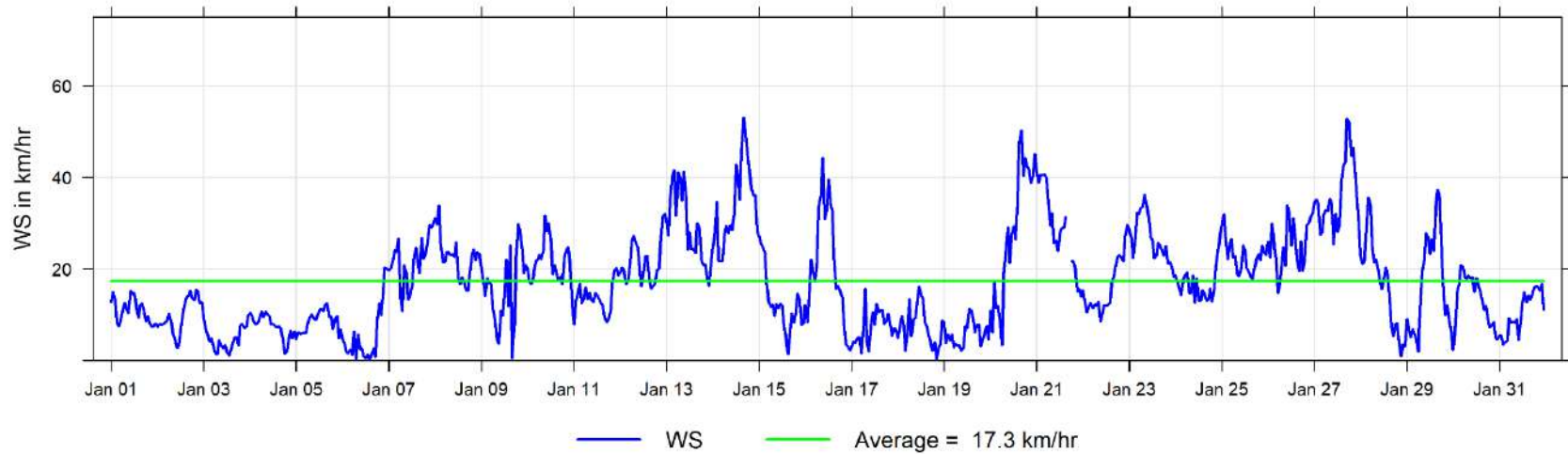
January 2025 Hourly Concentration Readings of PM<sub>2.5</sub> in  $\mu\text{g}/\text{m}^3$  at Happy Valley



January 2025 Hourly Temperature Readings (in °C) at Happy Valley

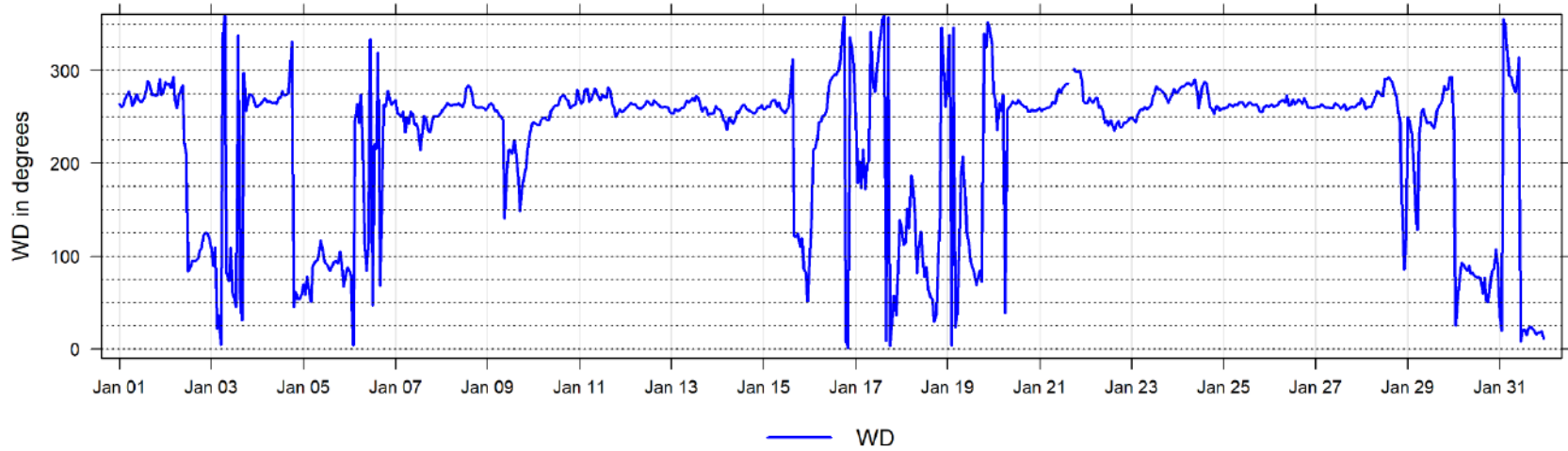


January 2025 Hourly Readings of Wind Speed (in km/hr) at Happy Valley

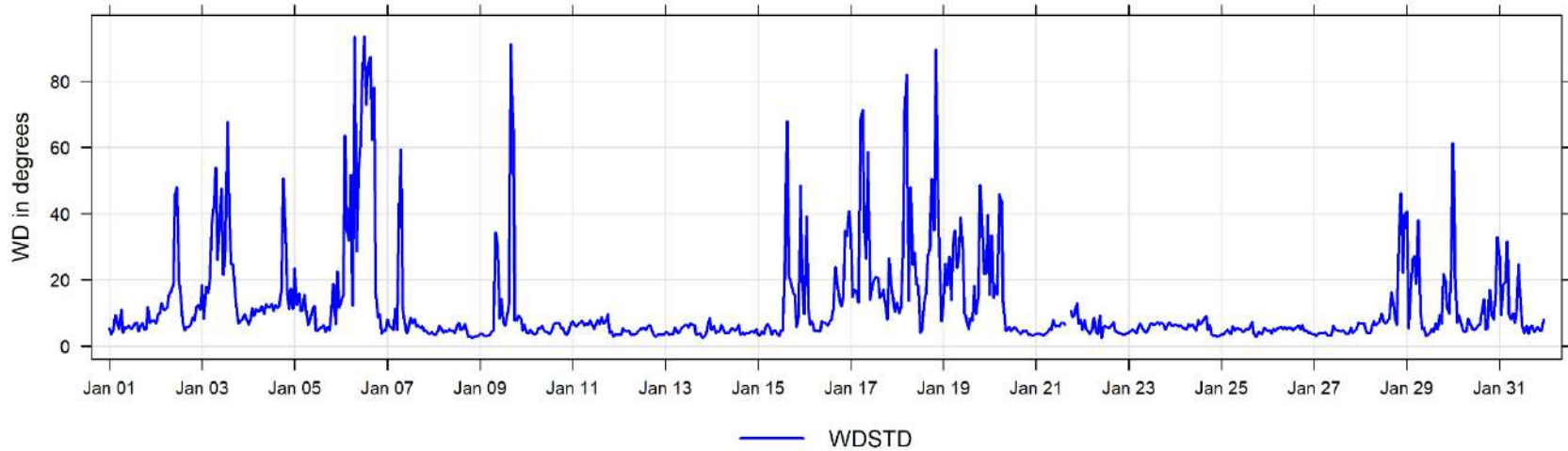


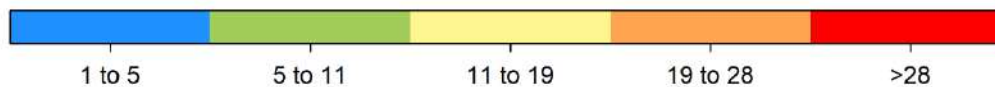
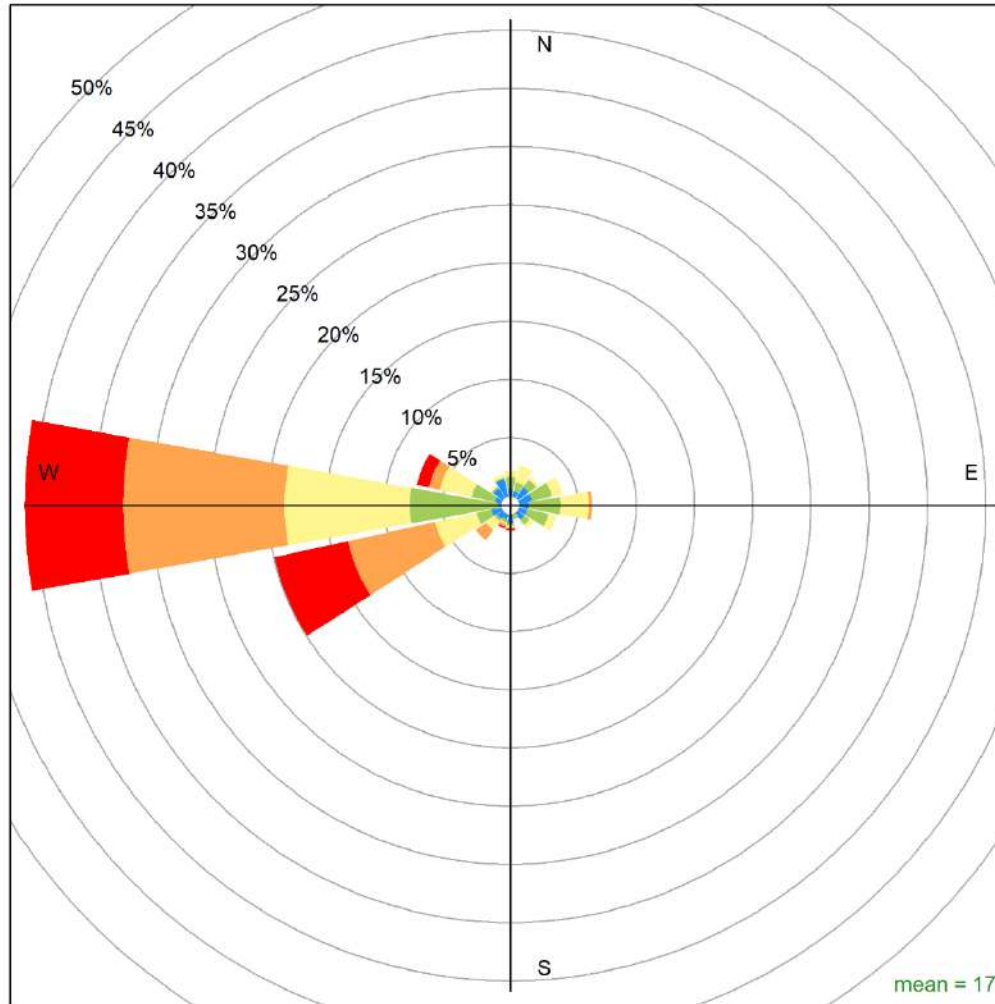


January 2025 Hourly Readings of Wind Direction (in degrees) at Happy Valley



January 2025 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Happy Valley



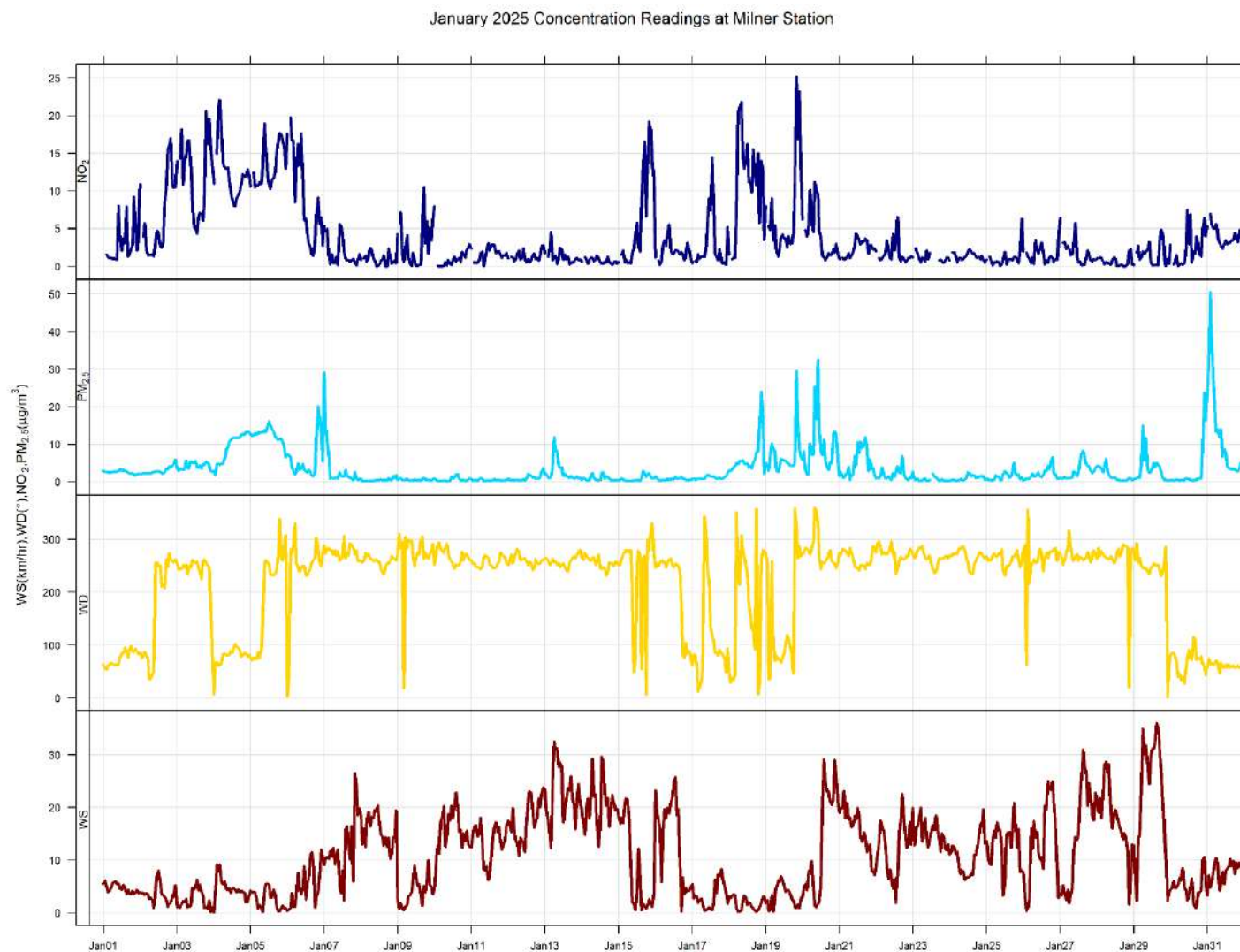


Happy Valley January 2025 Wind Rose, wind speed in km/hr

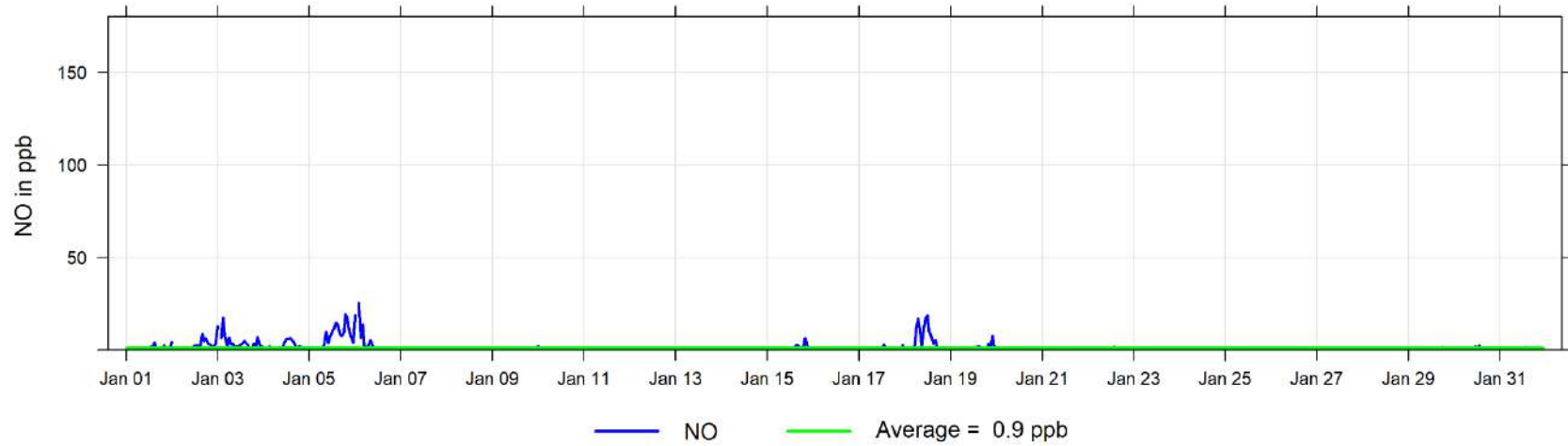
**Calms (<1km/hr) = 1.1 %**

## 9 Milner Charts

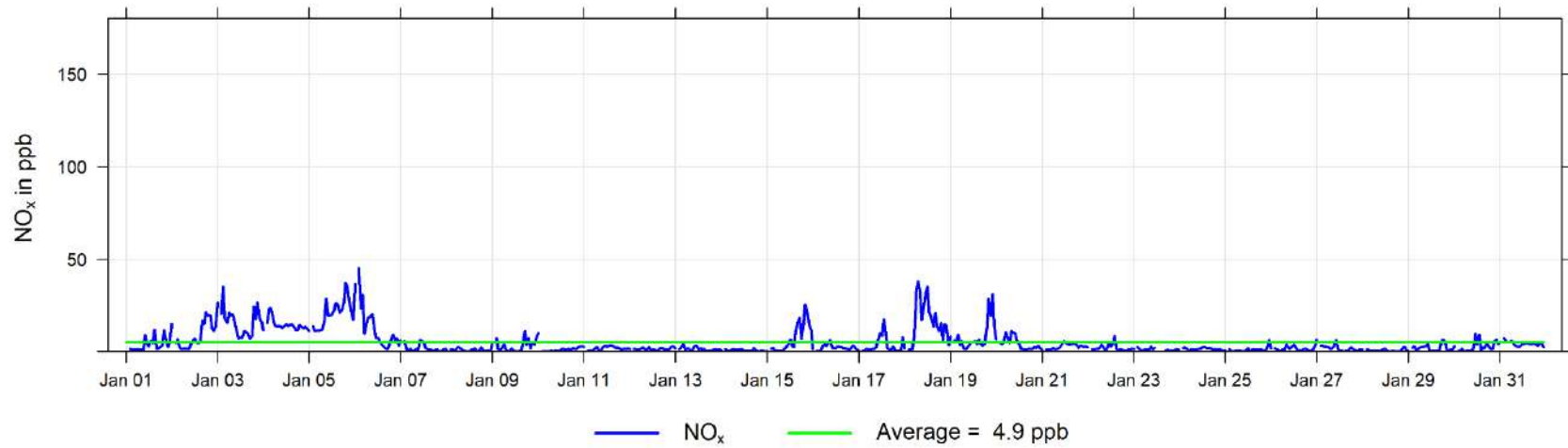
The following pages include the charts and histograms for Milner Station



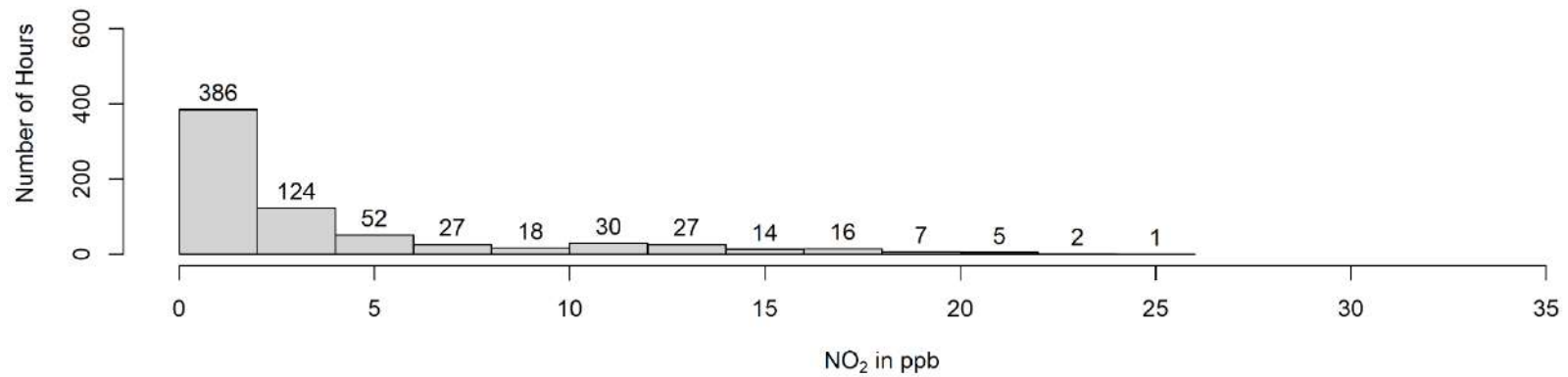
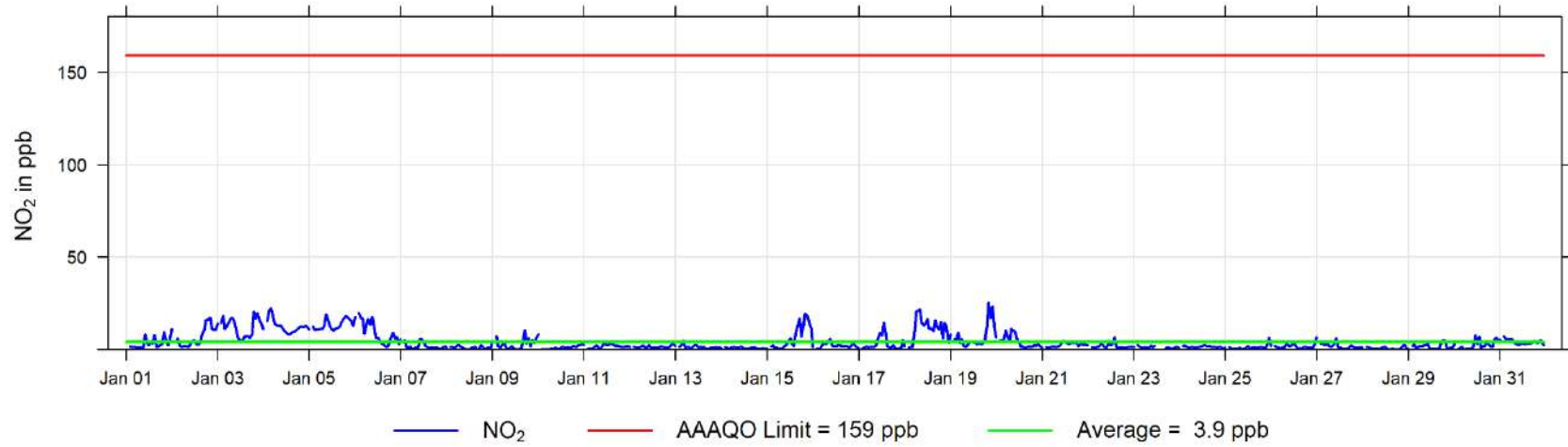
January 2025 Hourly Concentration Readings of NO (in ppb) at Milner



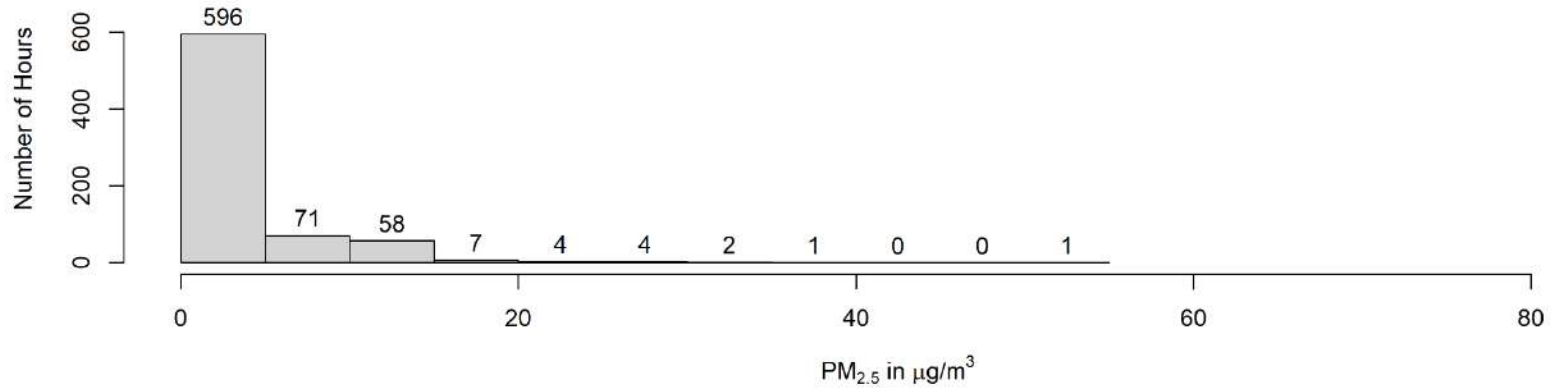
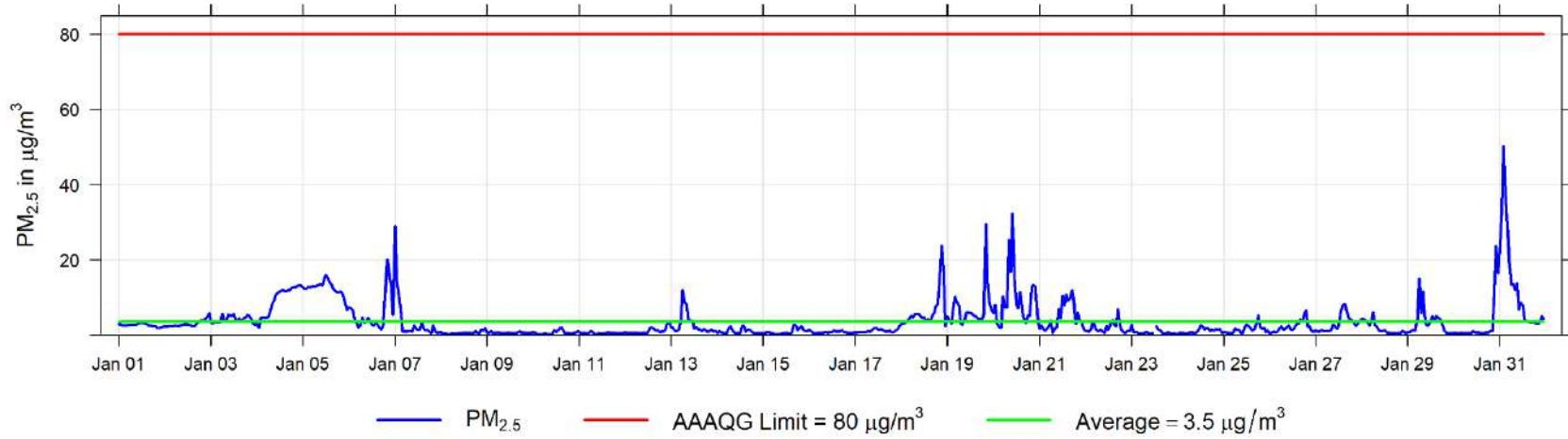
January 2025 Hourly Concentration Readings of NO<sub>x</sub> (in ppb) at Milner



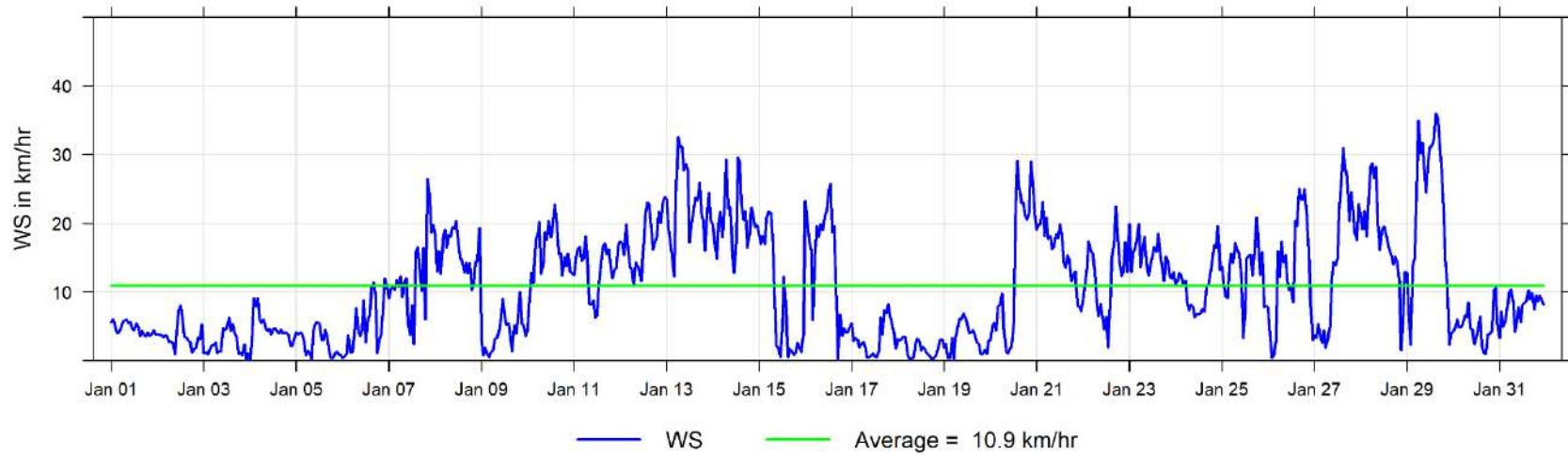
January 2025 Hourly Concentration Readings of NO<sub>2</sub> (in ppb) at Milner



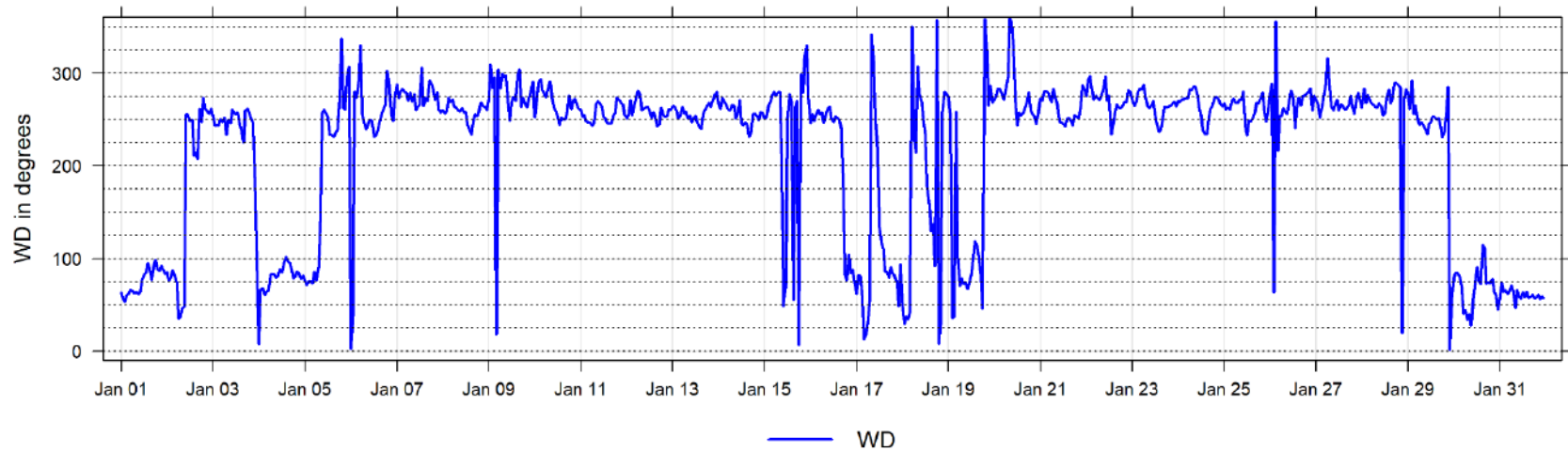
January 2025 Hourly Concentration Readings of PM<sub>2.5</sub> in  $\mu\text{g}/\text{m}^3$  at Milner



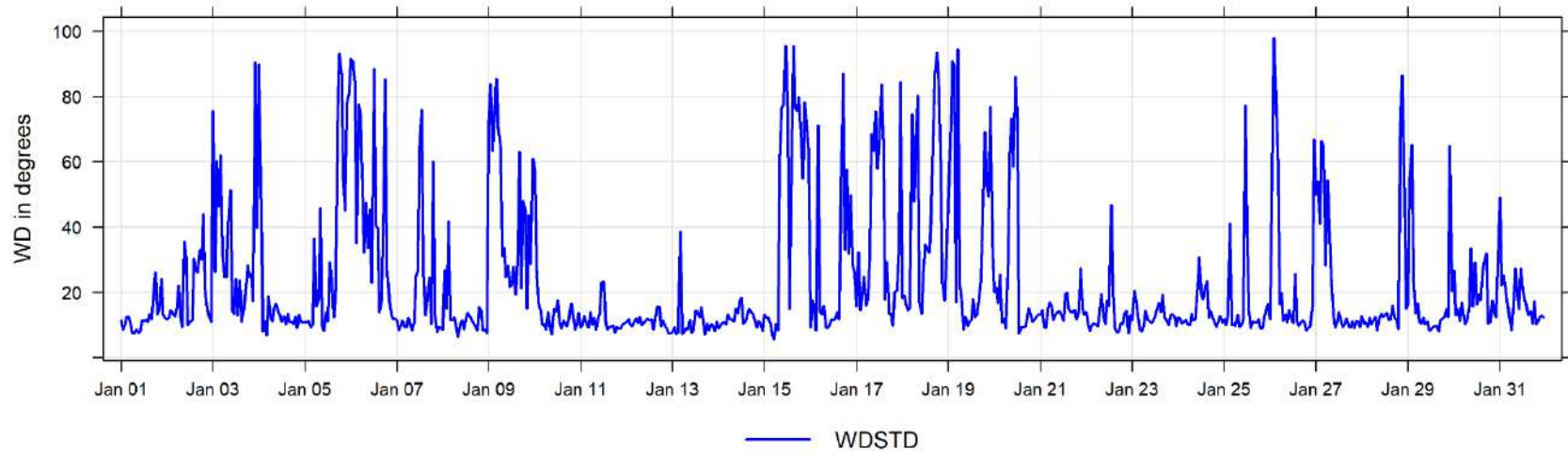
January 2025 Hourly Readings of Wind Speed (in km/hr) at Milner



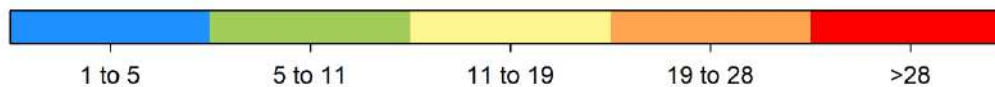
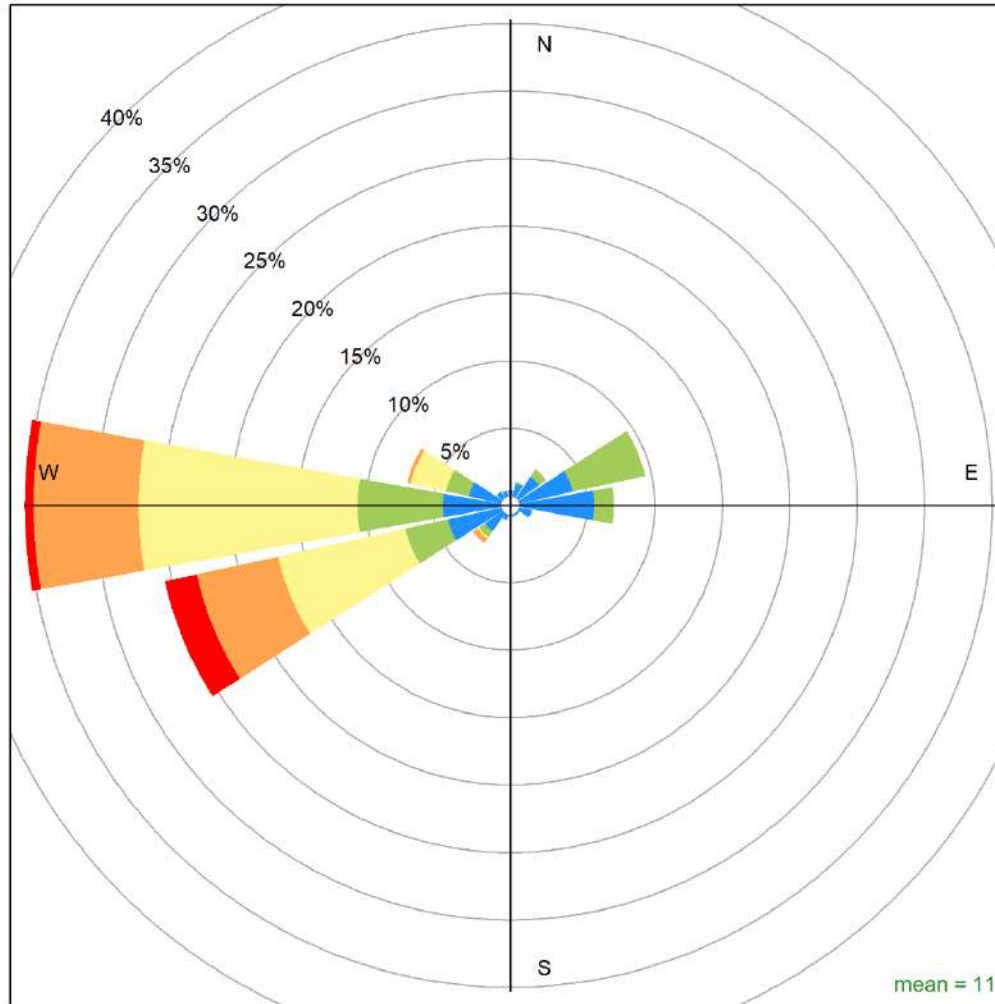
January 2025 Hourly Readings of Wind Direction (in degrees) at Milner



January 2025 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Milner



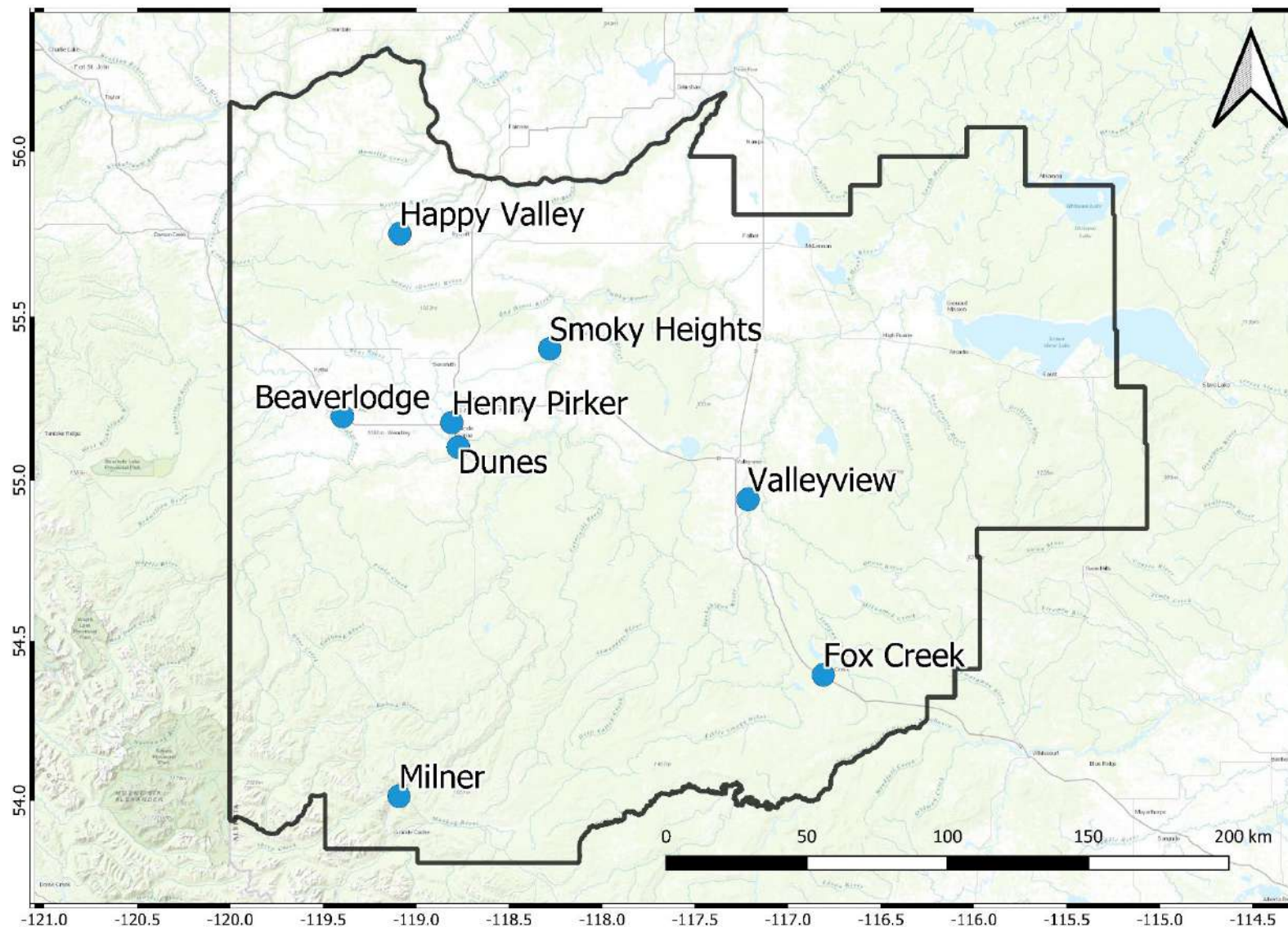




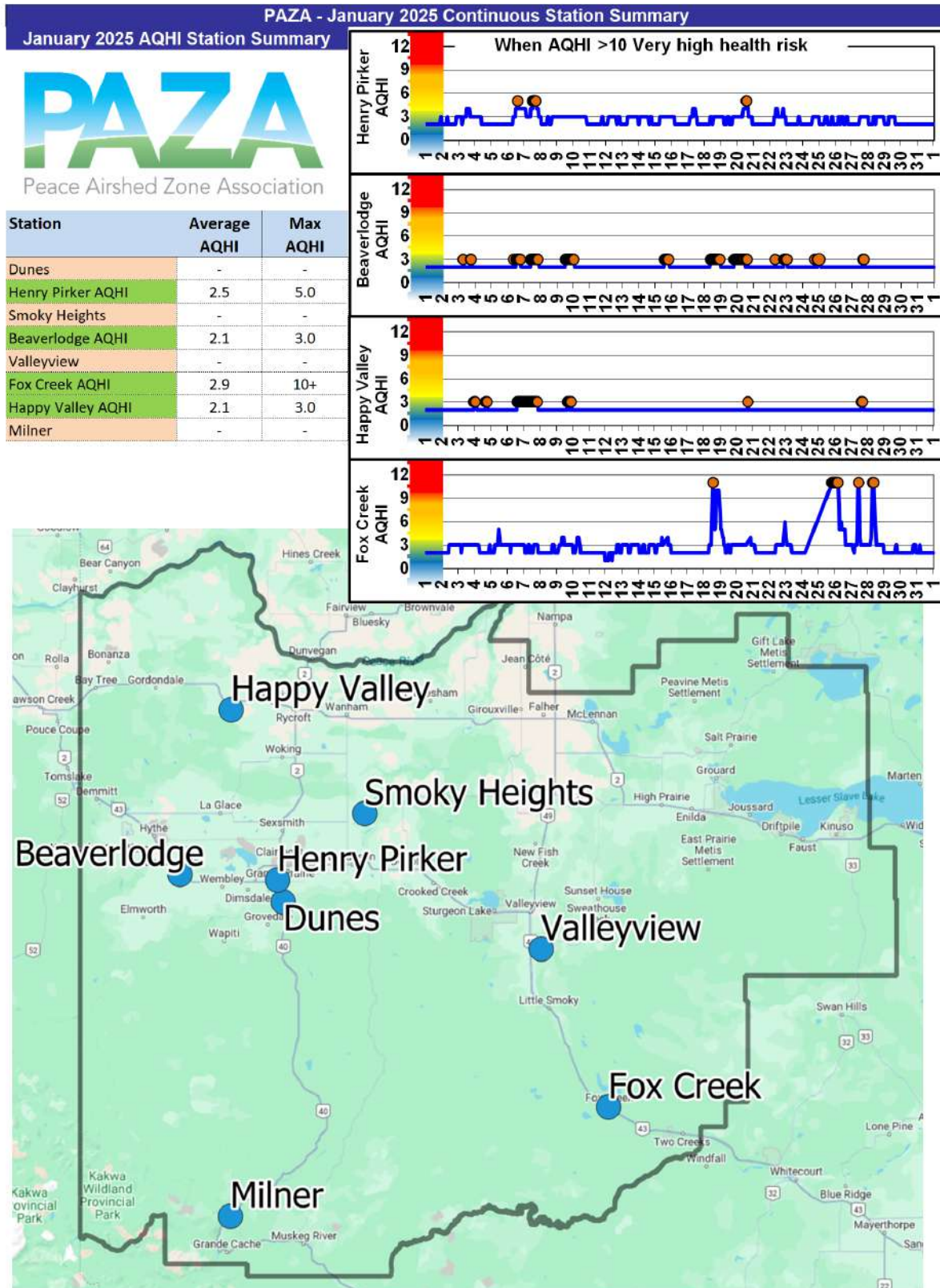
Milner January 2025 Wind Rose, wind speed in km/hr

**Calms (<1km/hr) = 6.2 %**

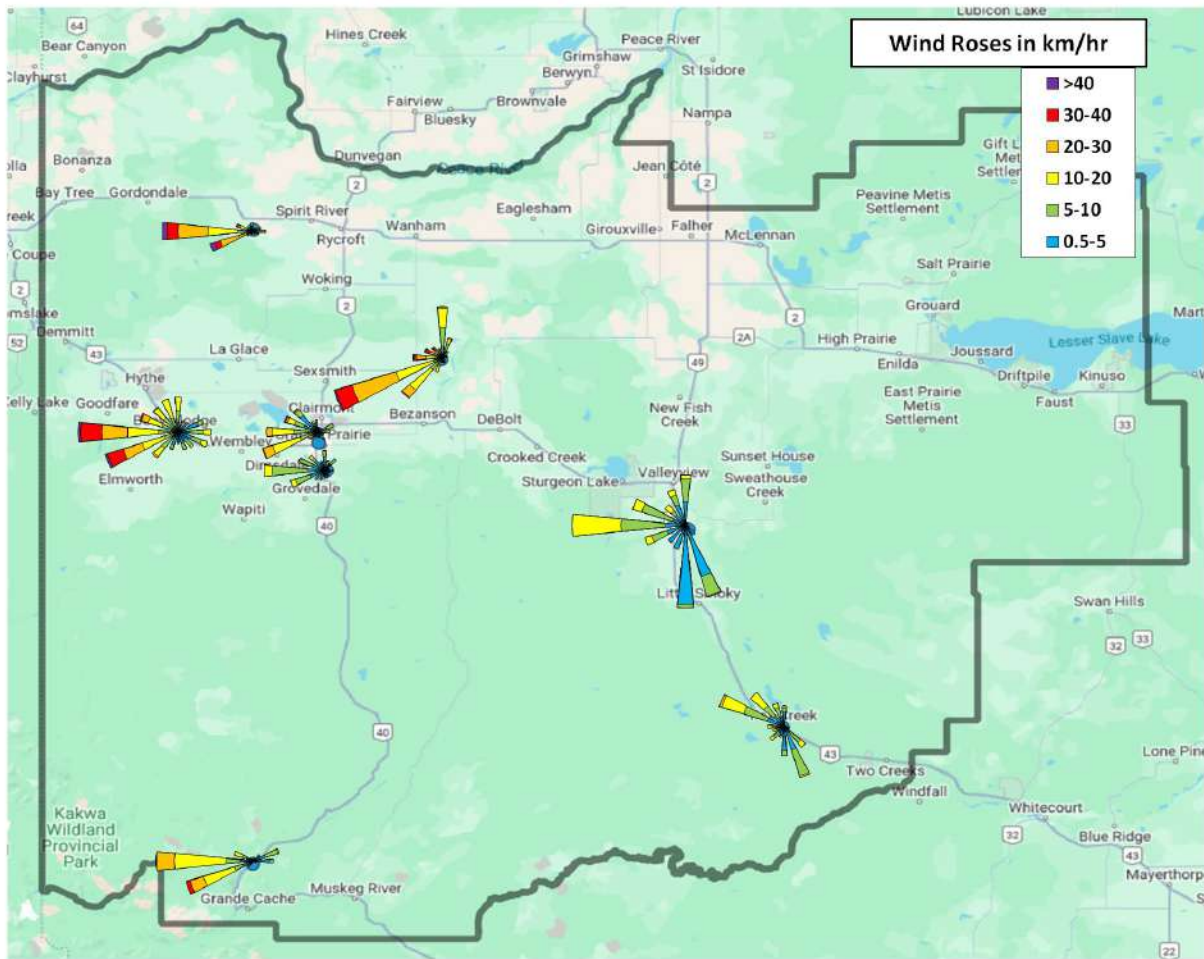
## 10 Concentration Summaries and Roses for PAZA



## 10.1 Air Quality Health Index (AQHI) Plots

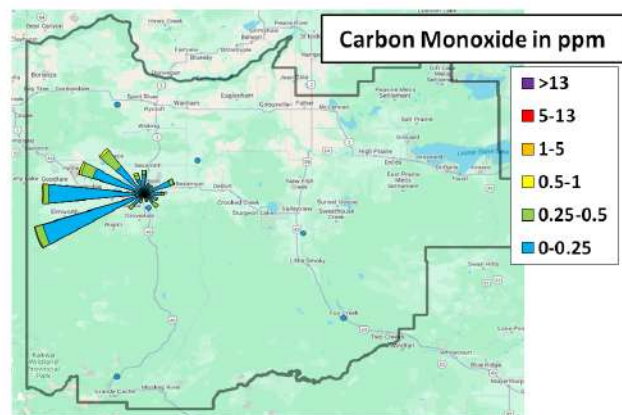
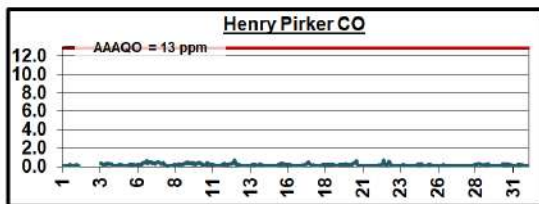


## 10.2 Wind Roses



## 10.3 Carbon Monoxide (CO) Plots

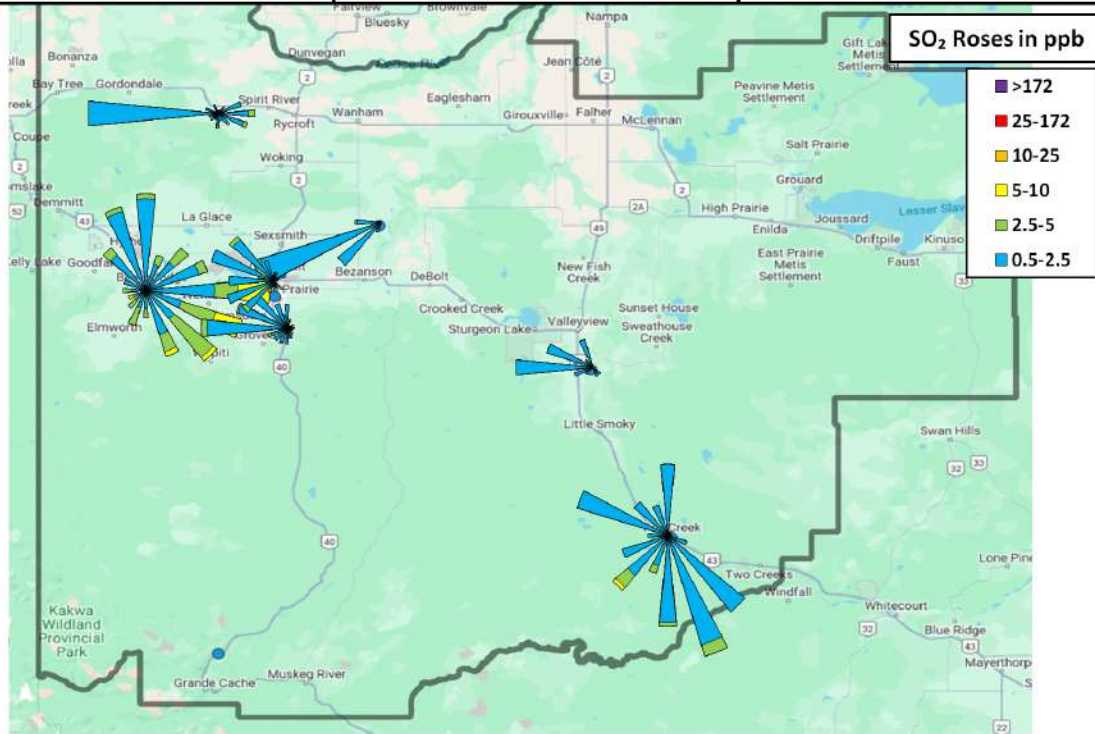
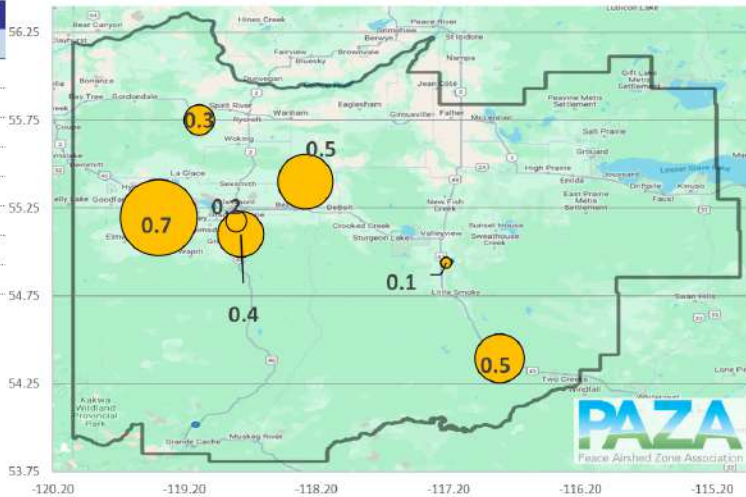
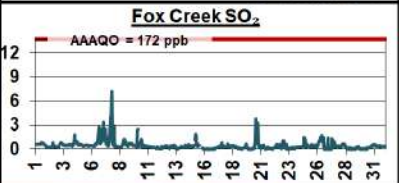
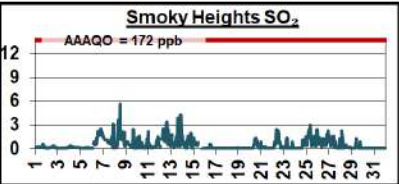
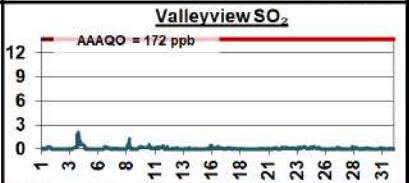
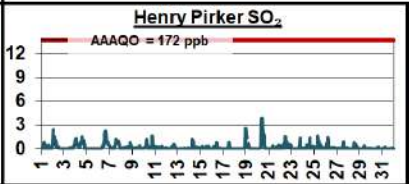
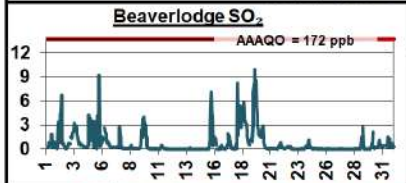
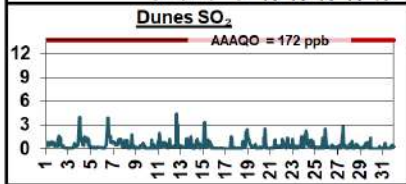
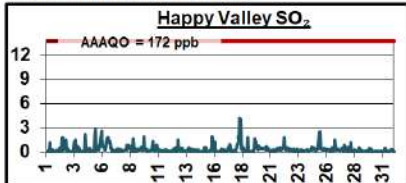
January 2025 CO Station Summary		
Station	Avg (ppm)	Max (ppm)
Henry Pirkler CO	0.21	0.76



## 10.4 Sulphur Dioxide (SO<sub>2</sub>) Plots

January 2025 SO <sub>2</sub> Station Summary		
Station	Avg (ppb)	Max (ppb)
Dunes SO <sub>2</sub>	0.4	4.4
Henry Pirker SO <sub>2</sub>	0.2	3.9
Smoky Heights SO <sub>2</sub>	0.5	5.6
Beaverlodge SO <sub>2</sub>	0.7	10.0
Valleyview SO <sub>2</sub>	0.1	2.1
Fox Creek SO <sub>2</sub>	0.5	7.2
Happy Valley SO <sub>2</sub>	0.3	4.1
Milner SO <sub>2</sub>	-	-

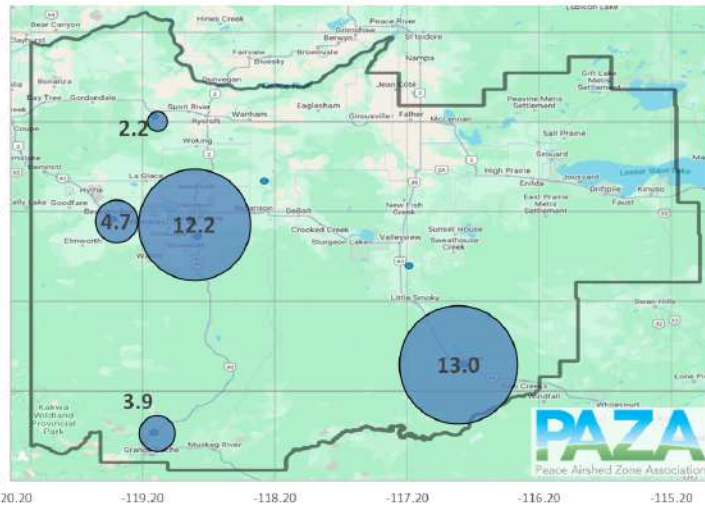
### Sulphur Dioxide in ppb



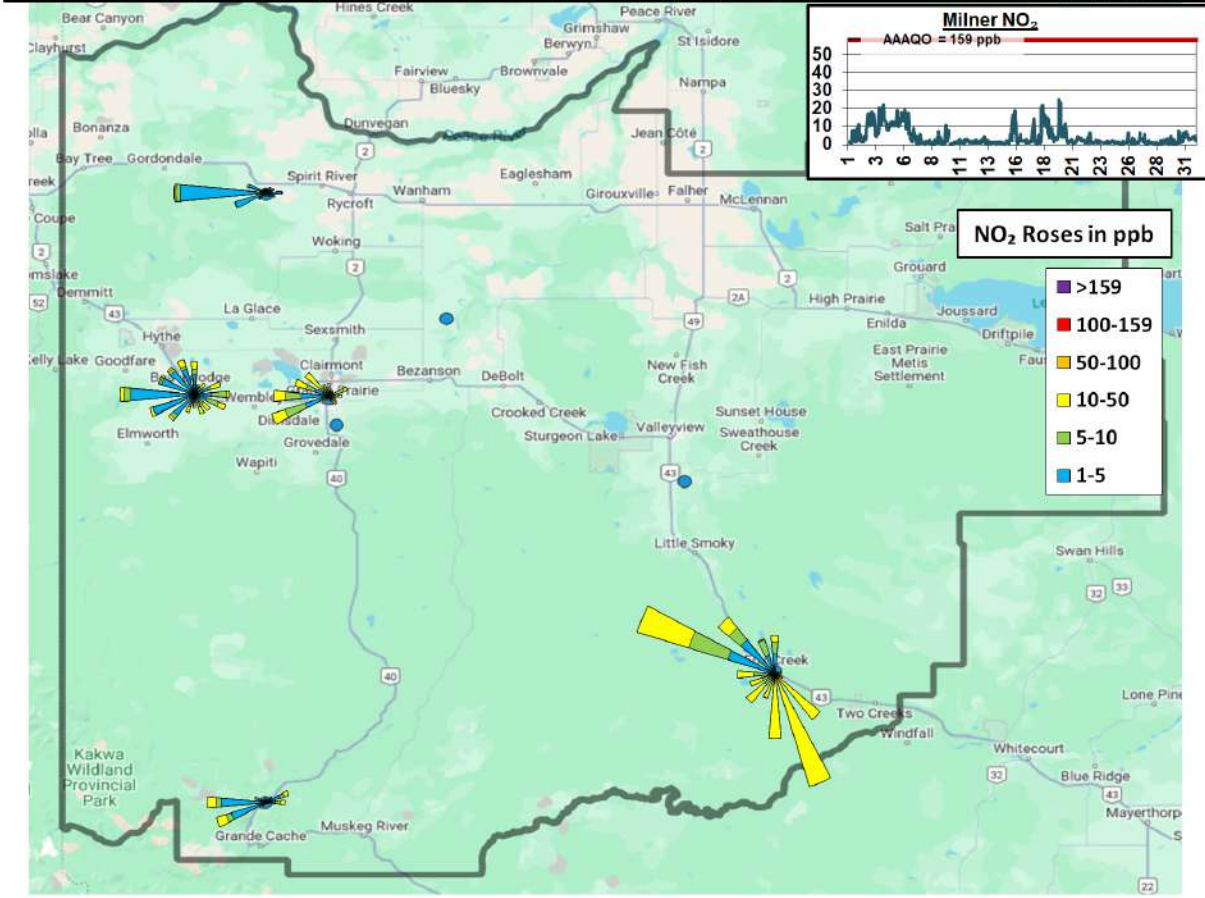
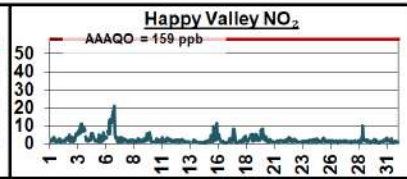
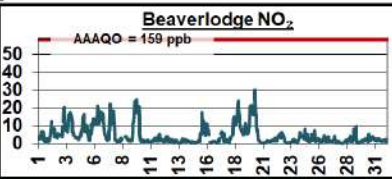
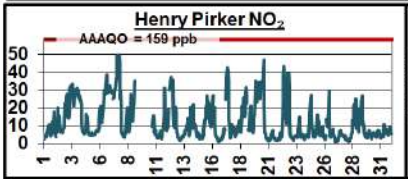
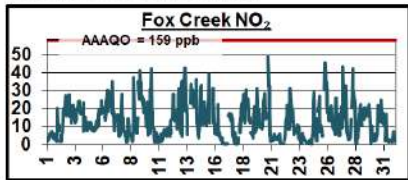
# 10.5 Nitrogen Dioxide (NO<sub>2</sub>) Plots

January 2025 NO<sub>2</sub> Station Summary

Station	Avg (ppb)	Max (ppb)
Dunes NO <sub>2</sub>	-	-
Henry Pirker NO <sub>2</sub>	12.2	49.6
Smoky Heights NO <sub>2</sub>	-	-
Beaverlodge NO <sub>2</sub>	4.7	30.0
Valleyview NO <sub>2</sub>	-	-
Fox Creek NO <sub>2</sub>	13.0	49.3
Happy Valley NO <sub>2</sub>	2.2	21.0
Milner NO <sub>2</sub>	3.9	25.1



Nitrogen Dioxide in ppb

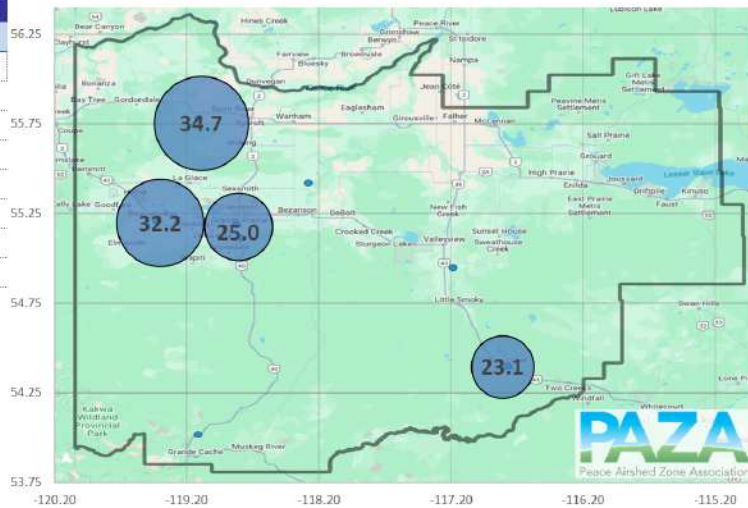


NO<sub>2</sub> Roses in ppb

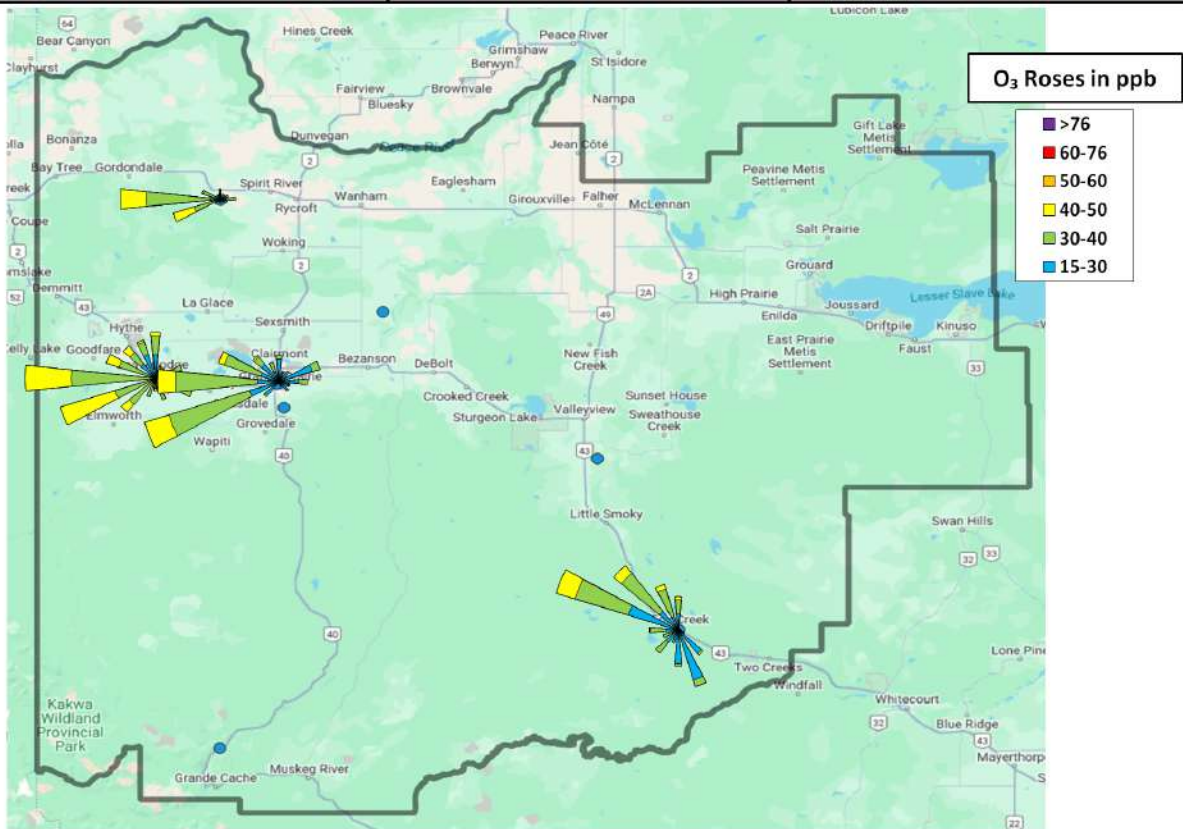
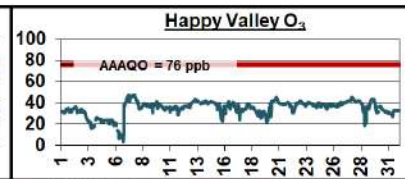
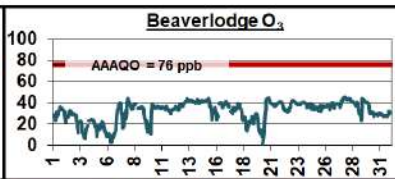
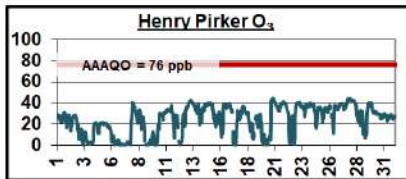
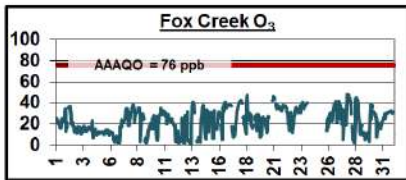
- >159
- 100-159
- 50-100
- 10-50
- 5-10
- 1-5

## 10.6 Ozone (O<sub>3</sub>) Plots

January 2025 O <sub>3</sub> Station Summary		
Station	Avg (ppb)	Max (ppb)
Dunes O <sub>3</sub>	-	-
Henry Pirker O <sub>3</sub>	25.0	44.1
Smoky Heights O <sub>3</sub>	-	-
Beaverlodge O <sub>3</sub>	32.2	45.1
Valleyview O <sub>3</sub>	-	-
Fox Creek O <sub>3</sub>	23.1	47.9
Happy Valley O <sub>3</sub>	34.7	47.4
Milner O <sub>3</sub>	-	-



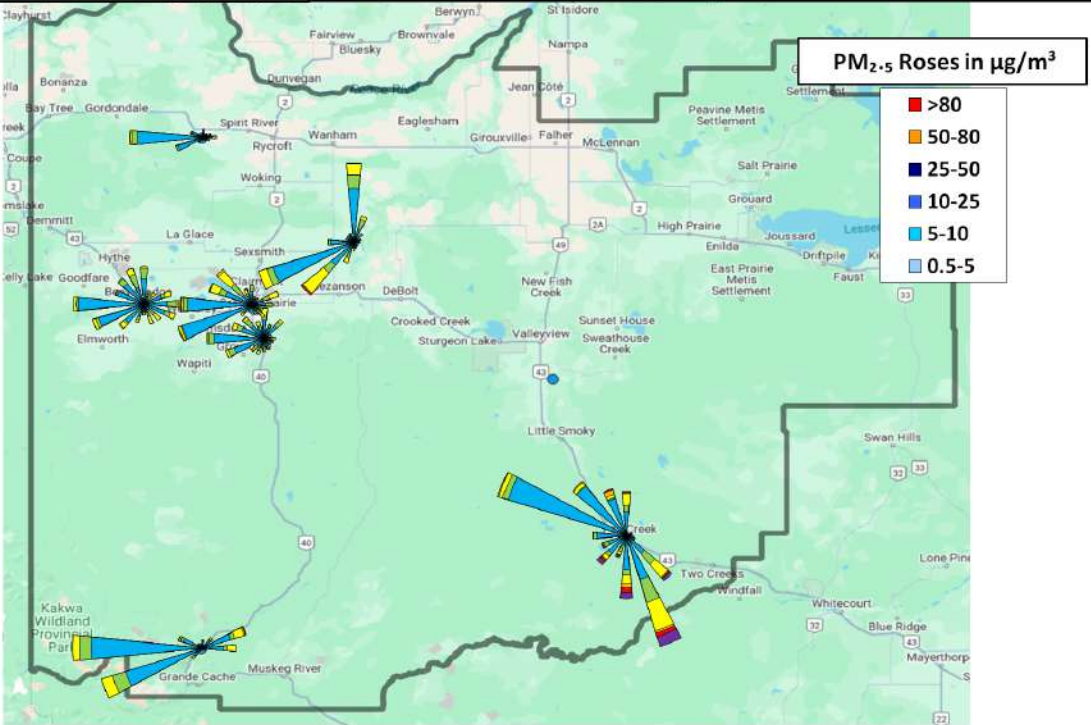
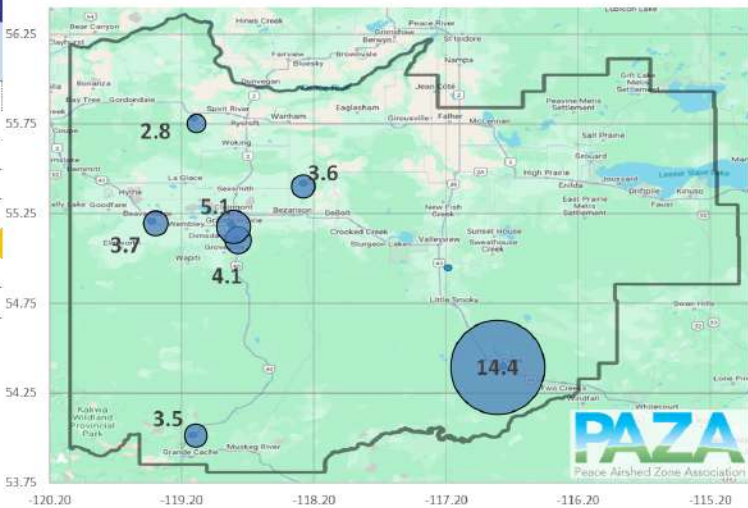
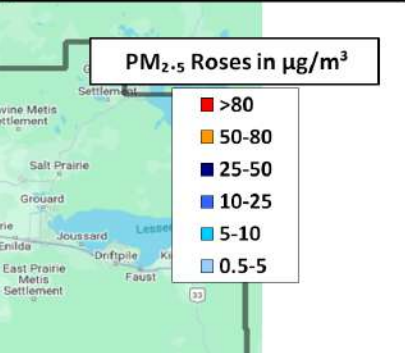
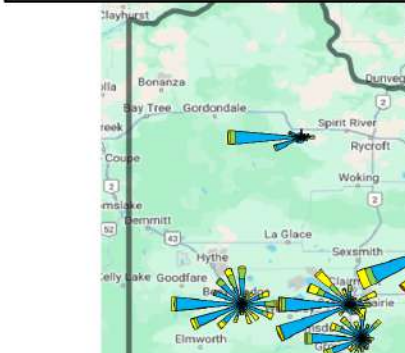
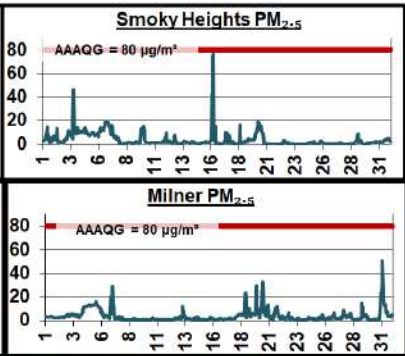
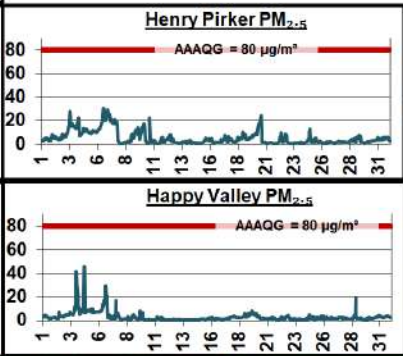
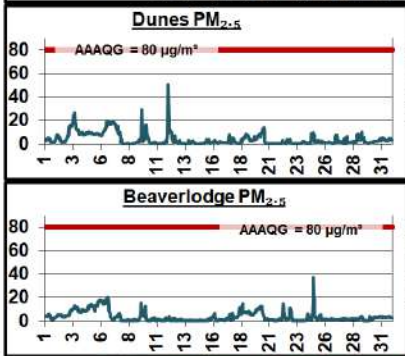
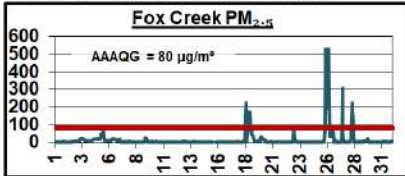
Ozone in ppb



## 10.7 Fine Particulate Matter (PM<sub>2.5</sub>) Plots

January 2025 PM <sub>2.5</sub> Station Summary		
Station	Avg µg/m <sup>3</sup>	Max µg/m <sup>3</sup>
Dunes PM <sub>2.5</sub>	4.1	50.7
Henry Pirker PM <sub>2.5</sub>	5.1	30.4
Smoky Heights PM <sub>2.5</sub>	3.6	77.0
Beaverlodge PM <sub>2.5</sub>	3.7	37.2
Valleyview PM <sub>2.5</sub>	-	-
Fox Creek PM <sub>2.5</sub>	14.4	530.5
Happy Valley PM <sub>2.5</sub>	2.8	45.9
Milner PM <sub>2.5</sub>	3.5	50.3

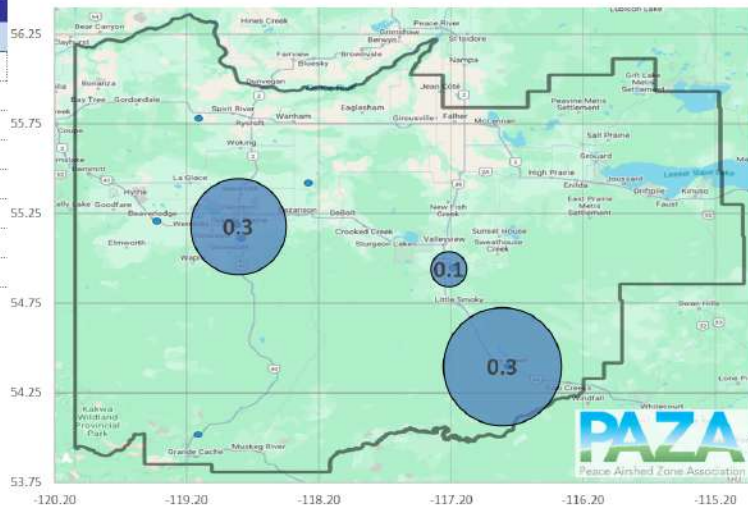
Fine Particulate Matter in µg/m<sup>3</sup>



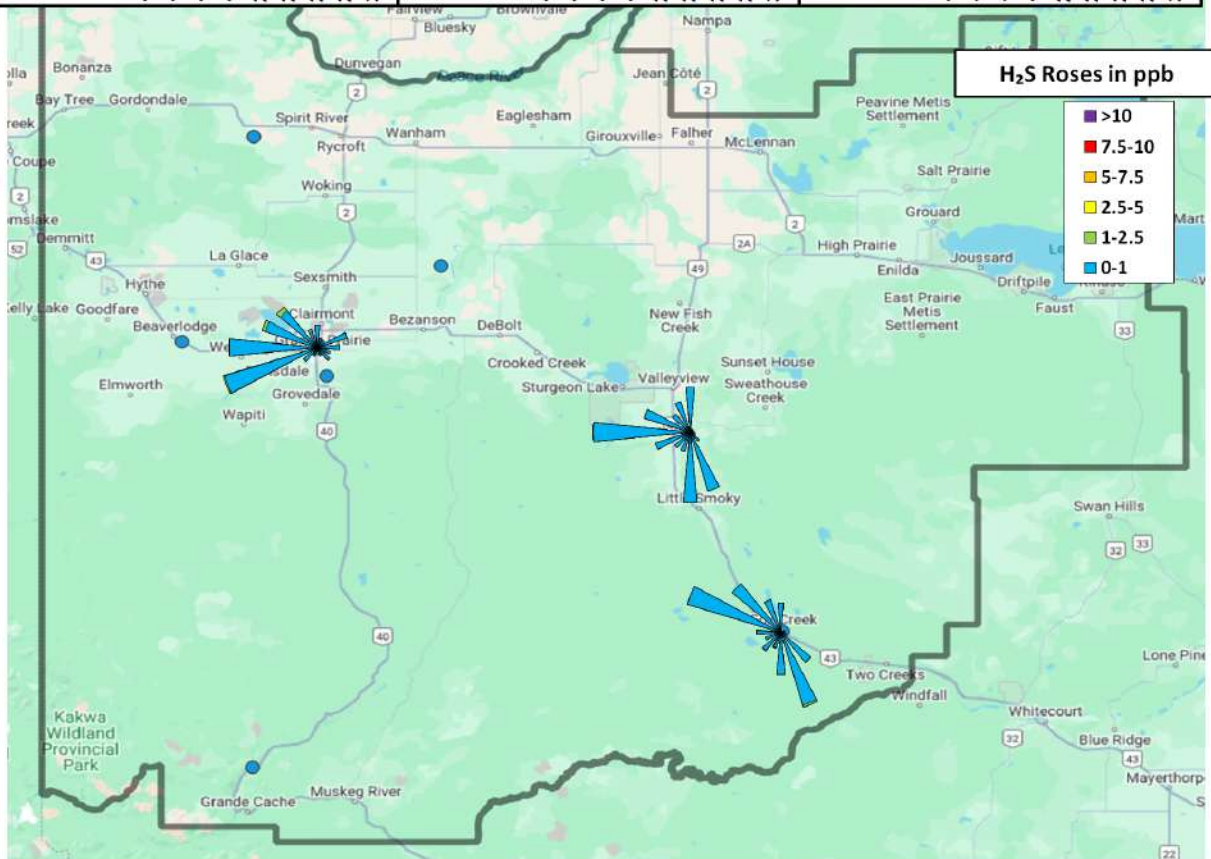
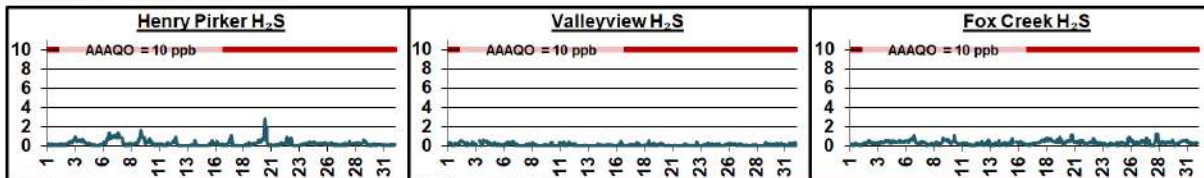


## 10.8 Hydrogen Sulphide (H<sub>2</sub>S) Plots

January 2025 H <sub>2</sub> S Station Summary		
Station	Avg (ppb)	Max (ppb)
Dunes H <sub>2</sub> S	-	-
Henry Pirkler H <sub>2</sub> S	0.3	2.9
Smoky Heights H <sub>2</sub> S	-	-
Beaverlodge H <sub>2</sub> S	-	-
Valleyview H <sub>2</sub> S	0.1	0.6
Fox Creek H <sub>2</sub> S	0.3	1.2
Happy Valley H <sub>2</sub> S	-	-
Milner H <sub>2</sub> S	-	-

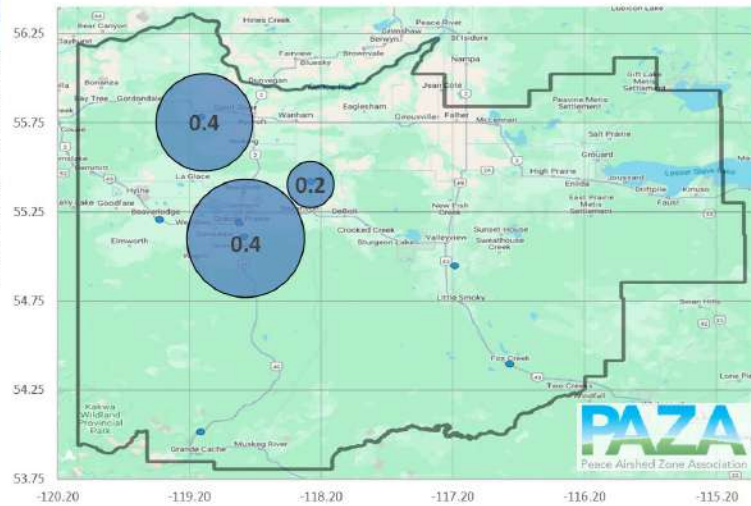


Hydrogen Sulphide in ppb

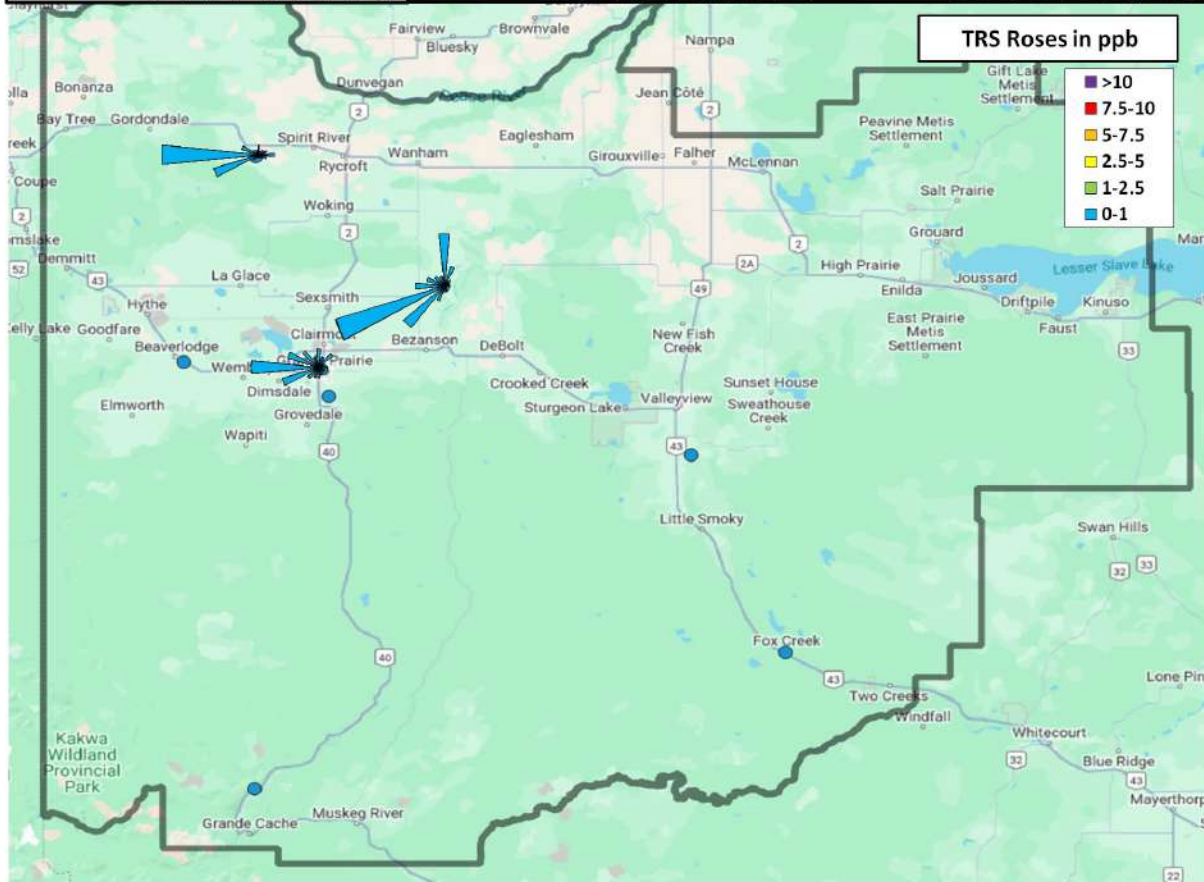
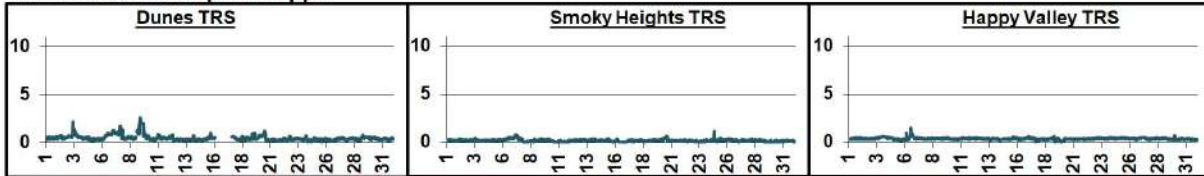


## 10.9 Total Reduced Sulphur (TRS) Plots

January 2025 TRS Station Summary		
Station	Avg (ppb)	Max (ppb)
Dunes TRS	0.4	2.5
Henry Pirker TRS	-	-
Smoky Heights TRS	0.2	1.1
Beaverlodge TRS	-	-
Valleyview TRS	-	-
Fox Creek TRS	-	-
Happy Valley TRS	0.4	1.4
Milner TRS	-	-



Total Reduced Sulphur in ppb



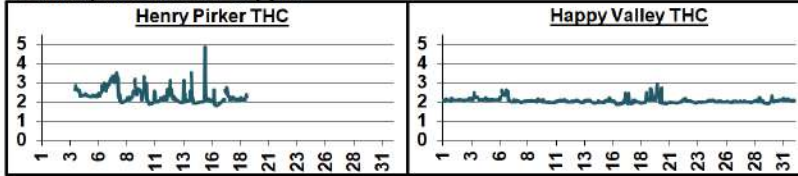
## 10.10 Total Hydrocarbon (THC) Plots

January 2025 THC Station Summary

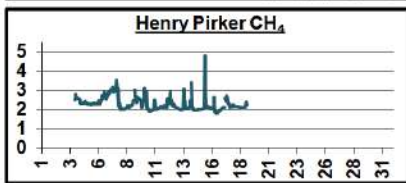
Station	Total Hydrocarbons		Methane		Non-Methane HCs	
	Avg (ppm)	Max (ppm)	Avg (ppm)	Max (ppm)	Avg (ppm)	Max (ppm)
Dunes THC	-	-	-	-	-	-
Henry Pirker THC	2.3	4.9	2.3	4.8	0.03	0.26
Smoky Heights THC	-	-	-	-	-	-
Beaverlodge THC	-	-	-	-	-	-
Valleyview THC	-	-	-	-	-	-
Fox Creek THC	-	-	-	-	-	-
Happy Valley THC	2.1	2.9	-	-	-	-

Note Averages are not valid due to <75% uptime

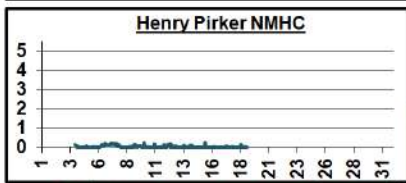
Total Hydrocarbons in ppm



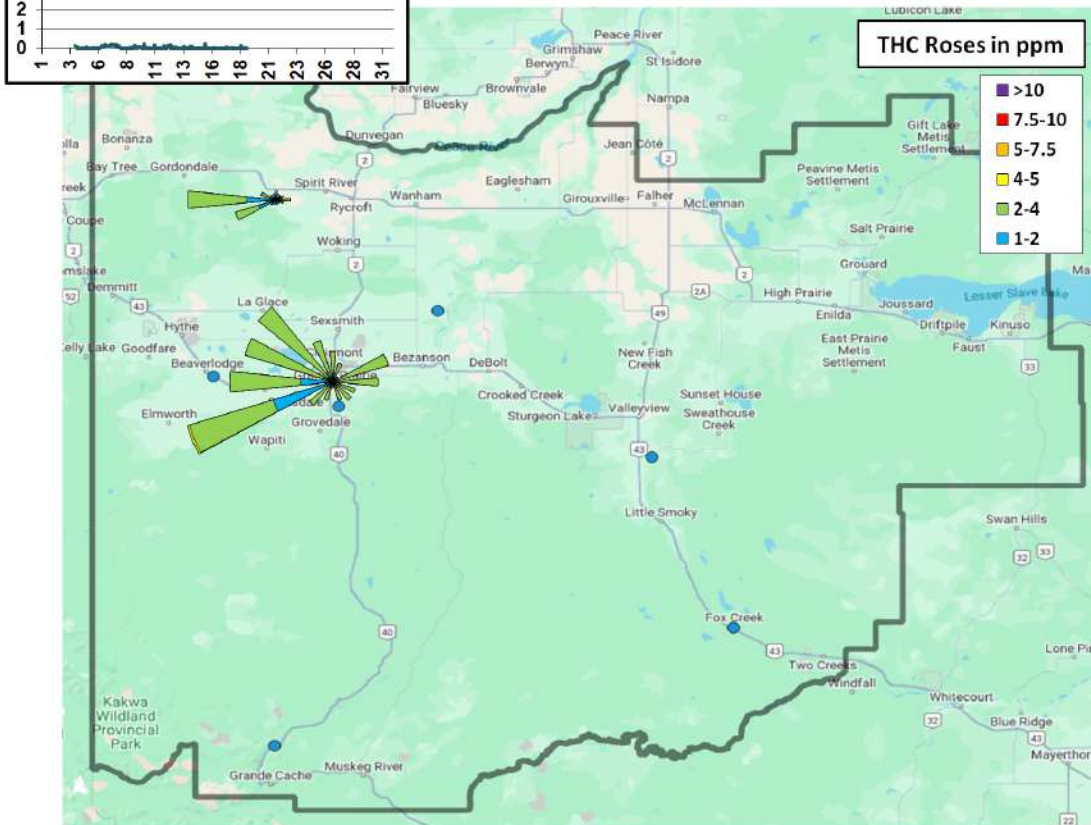
Total Hydrocarbons (THC)



Methane (CH<sub>4</sub>)



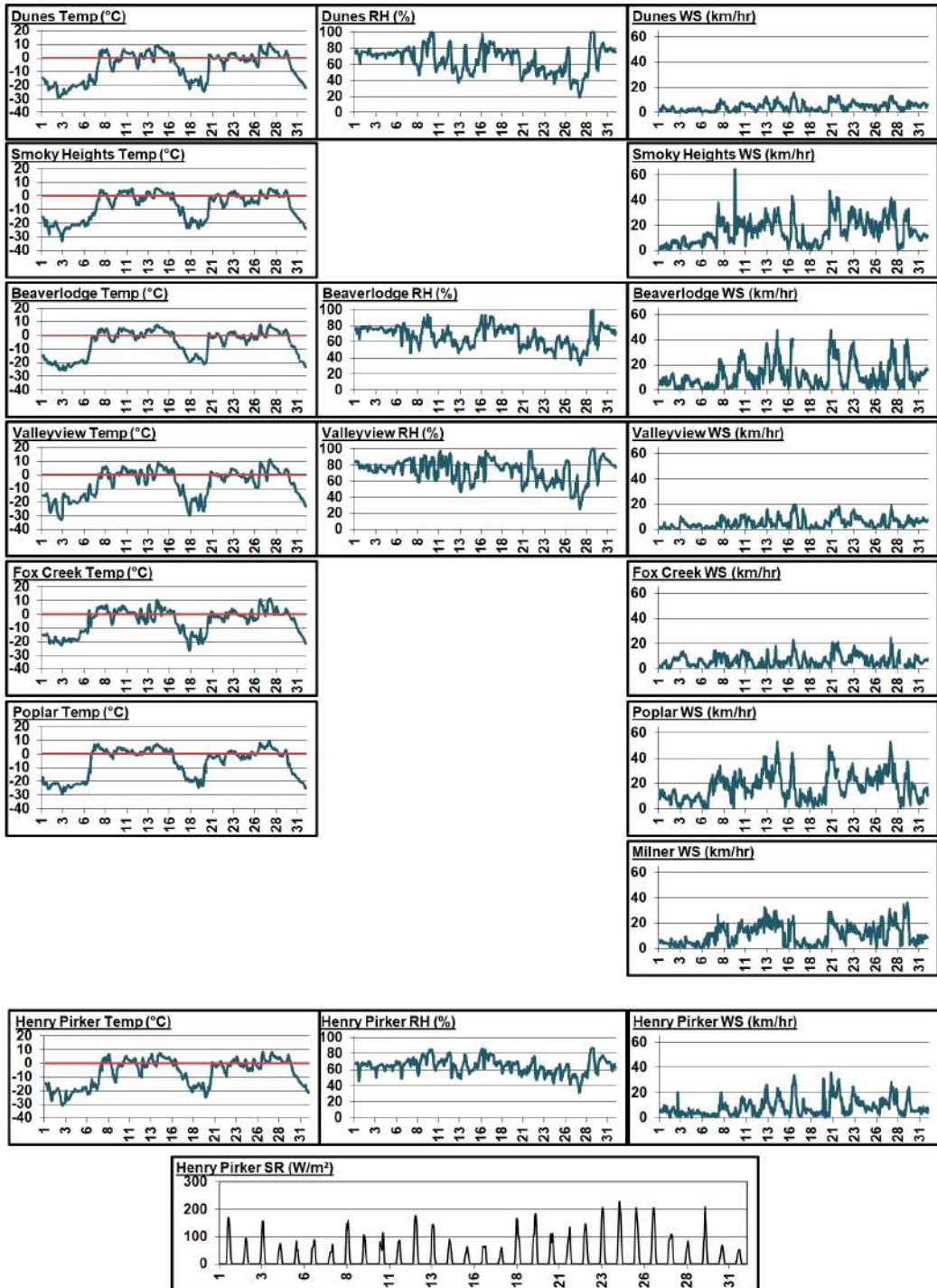
Non-Methane Hydrocarbons (NMHC)



# 10.11 Meteorology Summary

January 2025 Meteorological Summary						
Station	Temp (°C)	RH (%)	SR (W/m <sup>2</sup> )	WS (km/hr)	WD (deg)	WD
Dunes	-6.3	65.6	-	4.5	281	W
Henry Pirker	-6.9	64.5	22.6	8.4	268	W
Smoky Heights	-7.7	-	-	15.3	263	W
Beaverlodge	-5.8	67.0	-	11.7	270	W
Valleyview	-6.4	73.4	-	5.2	273	W
Fox Creek	-5.1	-	-	6.5	275	WSW
Happy Valley	-6.3	-	-	17.3	262	W
Milner	-	-	-	10.9	263	W

Temp (°C) Outside Temperature  
 RH (%) Relative Humidity  
 SR (W/m<sup>2</sup>) 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 January 2025

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	LSD
<b>Duplicates</b>						
19a	Wanham	0.0				16-22-077-03 W6M
19b	Wanham	0.1				
21a	Eaglesham			0.1		16-21-079-25 W5M
21b	Eaglesham			0.0		
27a	Grande Prairie I			0.0		08-15-071-06 W6M
27b	Grande Prairie I			5.6		
32a	Gold Creek	0.0				06-33-067-05 W6M
32b	Gold Creek	0.0				
37a	Crooked Creek					16-01-071-26 W5M
37b	Crooked Creek					
42a	Sunset House			0.5		05-32-070-19 W5M
42b	Sunset House			0.8		
46a	Little Smoky			2.4		12-01-065-21 W5M
46b	Little Smoky			2.4		
49a	Henry Pirker	0.2				17-26-071-06 W6M
49b	Henry Pirker	0.2				
50a	East Prairie	0.0				11-13-079-08 W6M
50b	East Prairie	0.0				
D4a	Duvernay 4	0.8			0.16	04-33-062-20 W5M
D4b	Duvernay 4	0.7			0.20	
G3a	Girouxville 3				0.23	14-02-077-23 W5M
G3b	Girouxville 3				0.26	
K3a	Kakwa 3			3.7		12-18-063-04 W6M
K3b	Kakwa 3			4.4		
K4a	Kakwa 4	6.4				06-18-063-04 W6M
K4b	Kakwa 4	5.9				
K1a	Kakwa 1				0.09	01-13-063-05 W6M
K1b	Kakwa 1				0.12	
M9Aa	Milner Pipeline			2.0		12-14-058-08 W6M
M9Ab	Milner Pipeline			1.9		
M10a	Milner Powerline	<0.1				06-14-058-08 W6M
M10b	Milner Powerline	<0.1				
J4Da	Jayar4 7-8 or 8-8 Pad			2.2		10-08-062-03 W6M
J4Db	Jayar4 7-8 or 8-8 Pad			2.0		
J1Da	Jayar1 Plant	0.4				06-08-062-03 W6M
J1Db	Jayar1 Plant	0.3				
J5Da	Jayar5 Camp				0.64	11-08-062-03 W6M
J5Db	Jayar5 Camp				0.71	

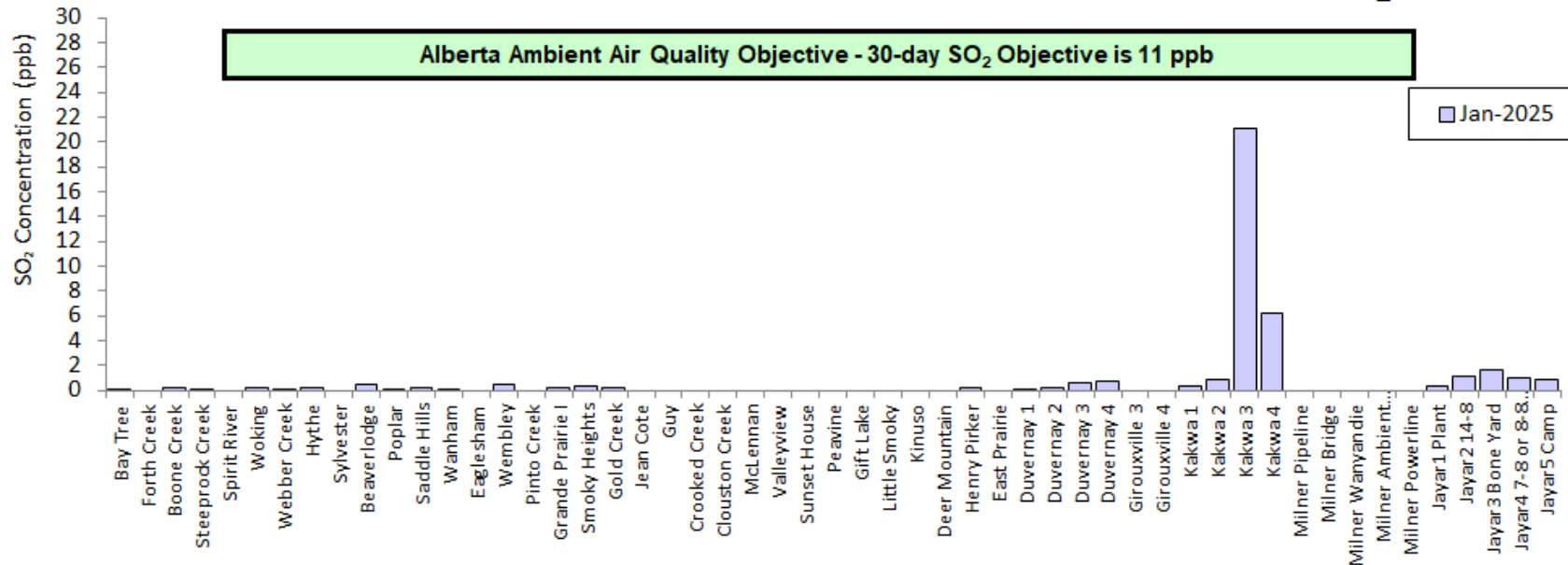
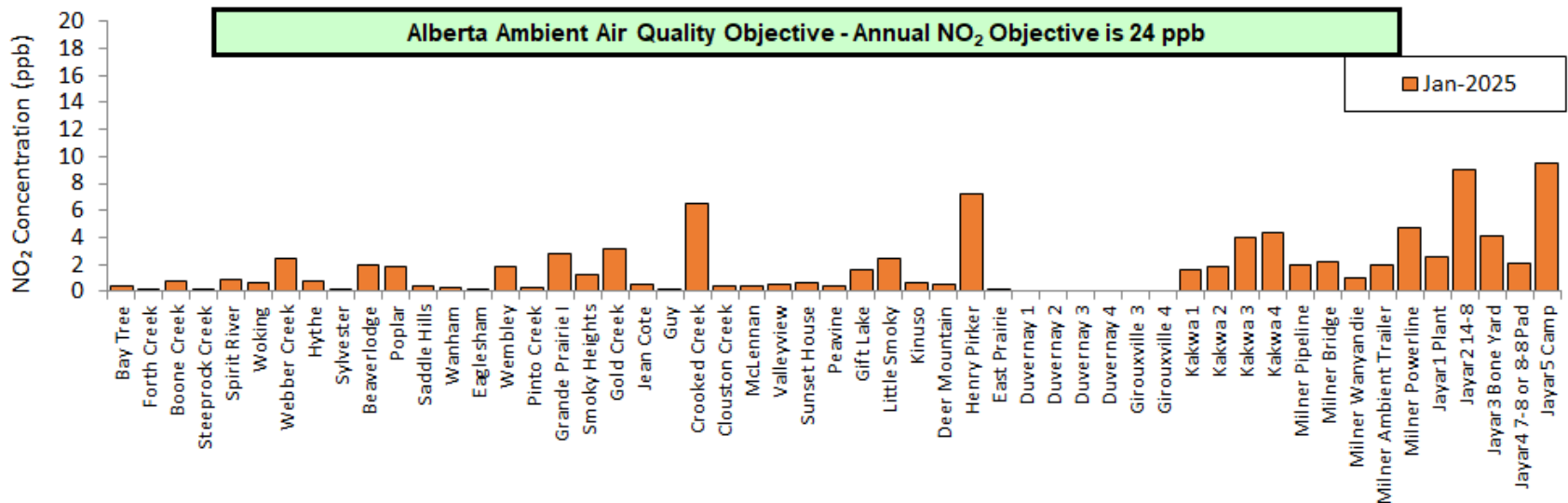
Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	LSD
1	Silver Valley	0.0	-	0.2	-	08-27-081-11 W6M
2	Bay Tree	0.0	40.8	0.4	-	13-16-078-13 W6M
3	Forth Creek	0.0	-	0.0	-	04-13-082-07 W6M
5	Boone Creek	0.2	-	0.7	-	01-23-076-11 W6M
7	Steeprock Creek	0.0	-	0.0	-	09-35-072-13 W6M
9	Spirit River	0.0	-	0.9	-	08-12-079-07 W6M
10	Woking	0.1	-	0.6	-	01-13-076-07 W6M
11	Webber Creek	0.1	-	2.4	-	09-36-074-09 W6M
12	Hythe	0.2	-	0.8	-	14-36-072-11 W6M
14	Sylvester	0.0	-	0.1	-	08-06-069-12 W6M
16	Beaverlodge	0.4	-	1.9	-	15-36-071-10 W6M
17	Poplar	0.1	-	1.8	-	13-06-073-08 W6M
18	Saddle Hills	0.2	-	0.4	-	04-25-074-07 W6M
19	Wanham	0.1	-	0.3	-	16-22-077-03 W6M
21	Eaglesham	0.0	-	0.0	-	16-21-079-25 W5M
24	Wembley	0.4	-	1.8	-	12-31-070-08 W6M
25	Pinto Creek	0.0	-	0.3	-	04-24-069-11 W6M
27	Grande Prairie I	0.2	-	2.8	-	08-15-071-06 W6M
29	Smoky Heights	0.3	-	1.2	-	04-06-075-02 W6M
32	Gold Creek	0.2	-	3.1	-	06-33-067-05 W6M
35	Jean Cote	0.0	-	0.6	-	12-35-079-21 W5M
36	Guy	0.0	-	0.2	0.1	03-04-076-22 W5M
37	Crooked Creek	0.0	41.1	6.5	-	16-01-071-26 W5M
39	Clouston Creek	0.0	-	0.4	-	12-01-073-22 W5M
40	McLennan	0.0	-	0.4	-	03-29-077-19 W5M
41	Valleyview	0.0	-	0.5	-	09-30-069-22 W5M
42	Sunset House	0.0	-	0.6	-	05-32-070-19 W5M
44	Peavine	0.0	-	0.4	-	03-05-079-15 W5M
45	Gift Lake	0.0	-	1.6	-	10-07-079-12 W5M
46	Little Smoky	0.0	-	2.4	-	12-01-065-21 W5M
47	Kinuso	0.0	41.9	0.6	-	12-10-073-10 W5M
48	Deer Mountain	0.0	-	0.6	-	15-22-068-09 W5M
49	Henry Pirker	0.2	-	7.2	-	17-26-071-06 W6M
50	East Prairie	0.0	-	0.0	-	11-13-079-08 W6M
D1	Duvernay 1	0.1	-	-	0.06	04-33-062-20 W5M
D2	Duvernay 2	0.2	-	-	0.06	04-33-062-20 W5M
D3	Duvernay 3	0.5	-	-	0.13	04-33-062-20 W5M
D4	Duvernay 4	0.8	-	-	0.18	04-33-062-20 W5M
G3	Girouxville 3	-	-	-	0.24	14-02-077-23 W5M
G4	Girouxville 4	-	-	-	0.31	04-08-077-22 W5M
K1	Kakwa 1	0.3	-	1.6	0.11	01-13-063-05 W6M
K2	Kakwa 2	0.9	-	1.8	0.09	08-13-063-05 W6M
K3	Kakwa 3	21.1	-	4.1	0.31	12-18-063-04 W6M
K4	Kakwa 4	6.2	-	4.4	0.23	06-18-063-04 W6M
M1	Milner Pipeline	<0.1	-	2.0	-	12-14-058-08 W6M
M2	Milner Bridge	<0.1	-	2.2	-	08-06-057-08 W6M
M3	Milner Wanyandie	<0.1	-	1.0	-	11-13-058-08 W6M
M4	Milner Ambient Trailer	<0.1	-	1.9	-	09-15-058-08 W6M
M5	Milner Powerline	<0.1	-	4.7	-	06-14-058-08 W6M
J1	Jayar1 Plant	0.4	-	2.5	0.13	06-08-062-03 W6M
J2	Jayar2 14-8	1.1	-	9.0	0.36	07-08-062-03 W6M
J3	Jayar3 Bone Yard	1.6	-	4.1	0.27	14-08-062-03 W6M
J4	Jayar4 7-8 or 8-8 Pad	1.0	-	2.1	0.14	10-08-062-03 W6M
J5	Jayar5 Camp	0.8	-	9.5	0.68	11-08-062-03 W6M

### Passive Summary for January 2025

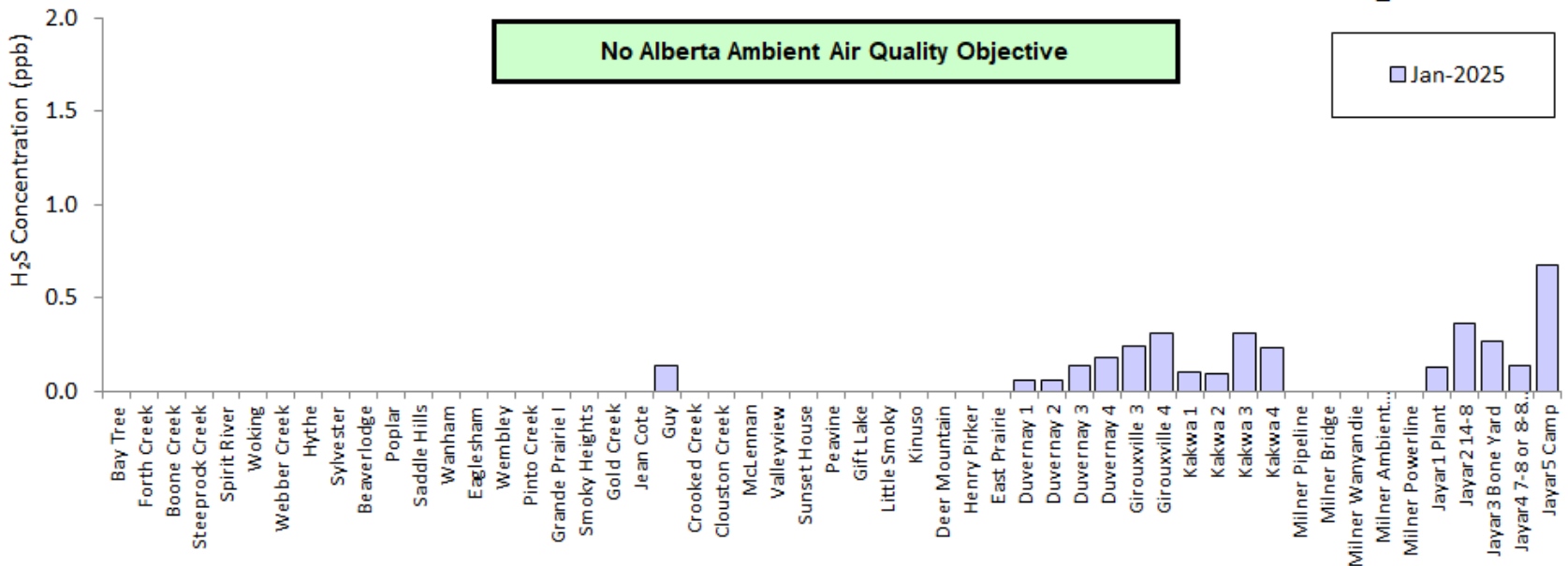
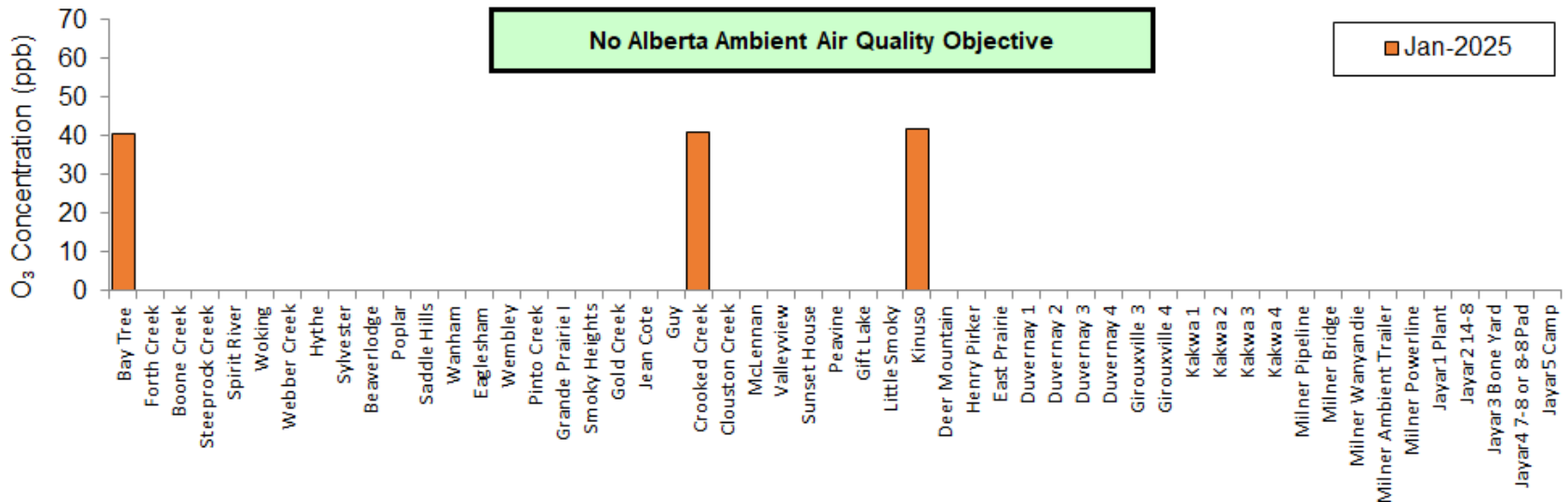
Stats	Sulphur Dioxide SO <sub>2</sub> ppb	Ozone O <sub>3</sub> ppb	Nitrogen Dioxide NO <sub>2</sub> ppb	Hydrogen Sulphide H <sub>2</sub> S ppb
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Passive Summary for January 2025 (PAZA)				
<b>Mean</b>	0.8	41.2	1.9	0.2
<b>Standard Deviation</b>	3.2	0.6	2.3	0.2
<b>Minimum</b>	0.0	40.8	0.0	0.1
	Silver Valley (#1)	Bay Tree (#2)	Forth Creek (#3)	Duvernay 2 (#D2)
<b>Maximum</b>	21.1	41.9	9.5	0.7
	Kakwa 3 (#K3)	Kinuso (#47)	Jayar5 Camp (#J5)	Jayar5 Camp (#J5)

Continuous and Passive Monitoring Comparison				
<b>PAZA Beaverlodge Station</b>	<b>0.7</b>	<b>32.2</b>	<b>4.7</b>	<b>-</b>
<b>Beaverlodge Passive (#16)</b>	<b>0.4</b>	<b>-</b>	<b>1.9</b>	<b>-</b>
<b>PAZA Henry Pirker Station</b>	<b>0.2</b>	<b>25.0</b>	<b>12.2</b>	<b>0.3</b>
<b>Henry Pirker passive (#49)</b>	<b>0.2</b>	<b>-</b>	<b>7.2</b>	<b>-</b>
<b>Milner Station</b>	<b>-</b>	<b>-</b>	<b>3.9</b>	<b>-</b>
<b>Milner passive</b>	<b>&lt;0.1</b>	<b>-</b>	<b>1.9</b>	<b>-</b>



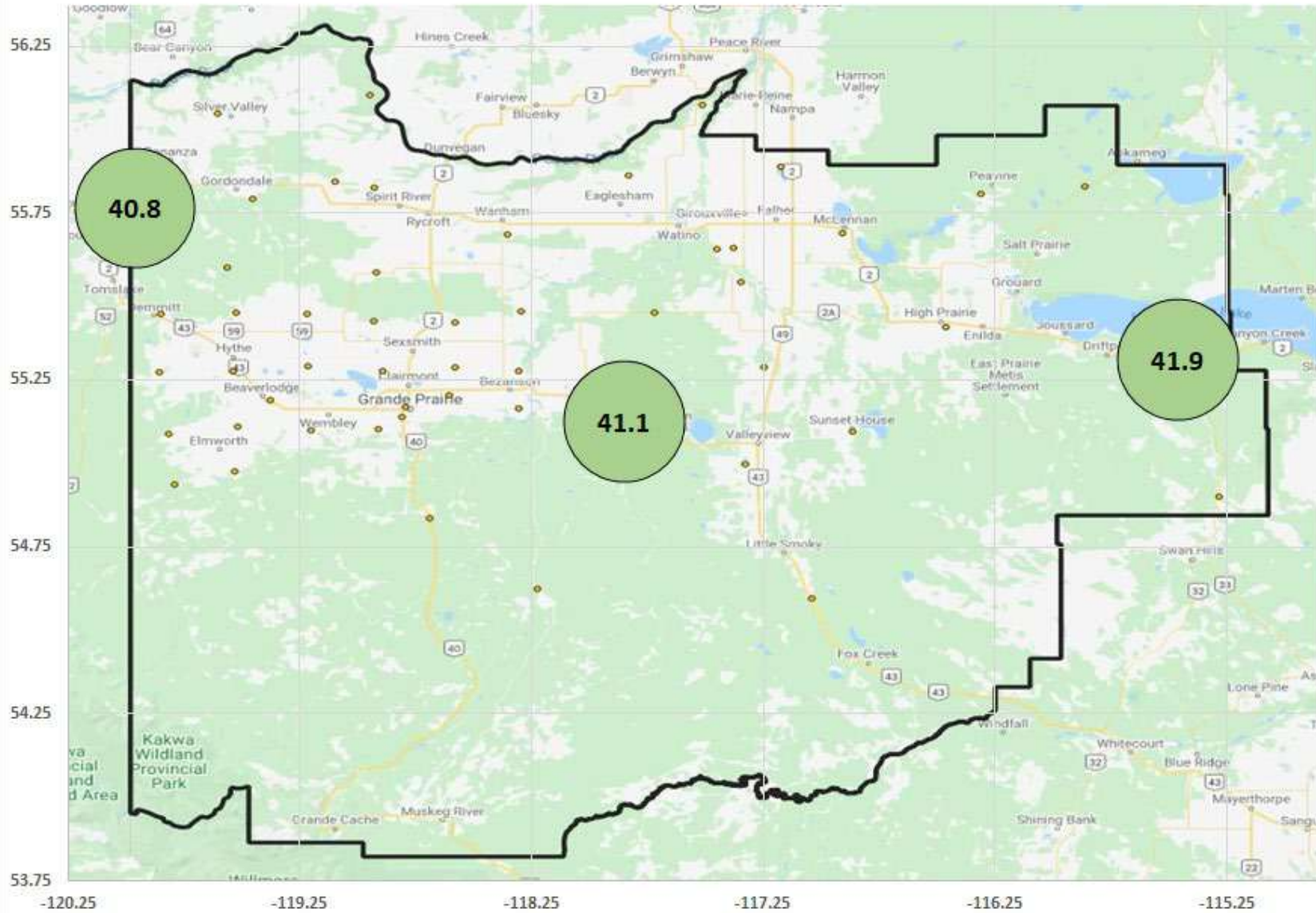




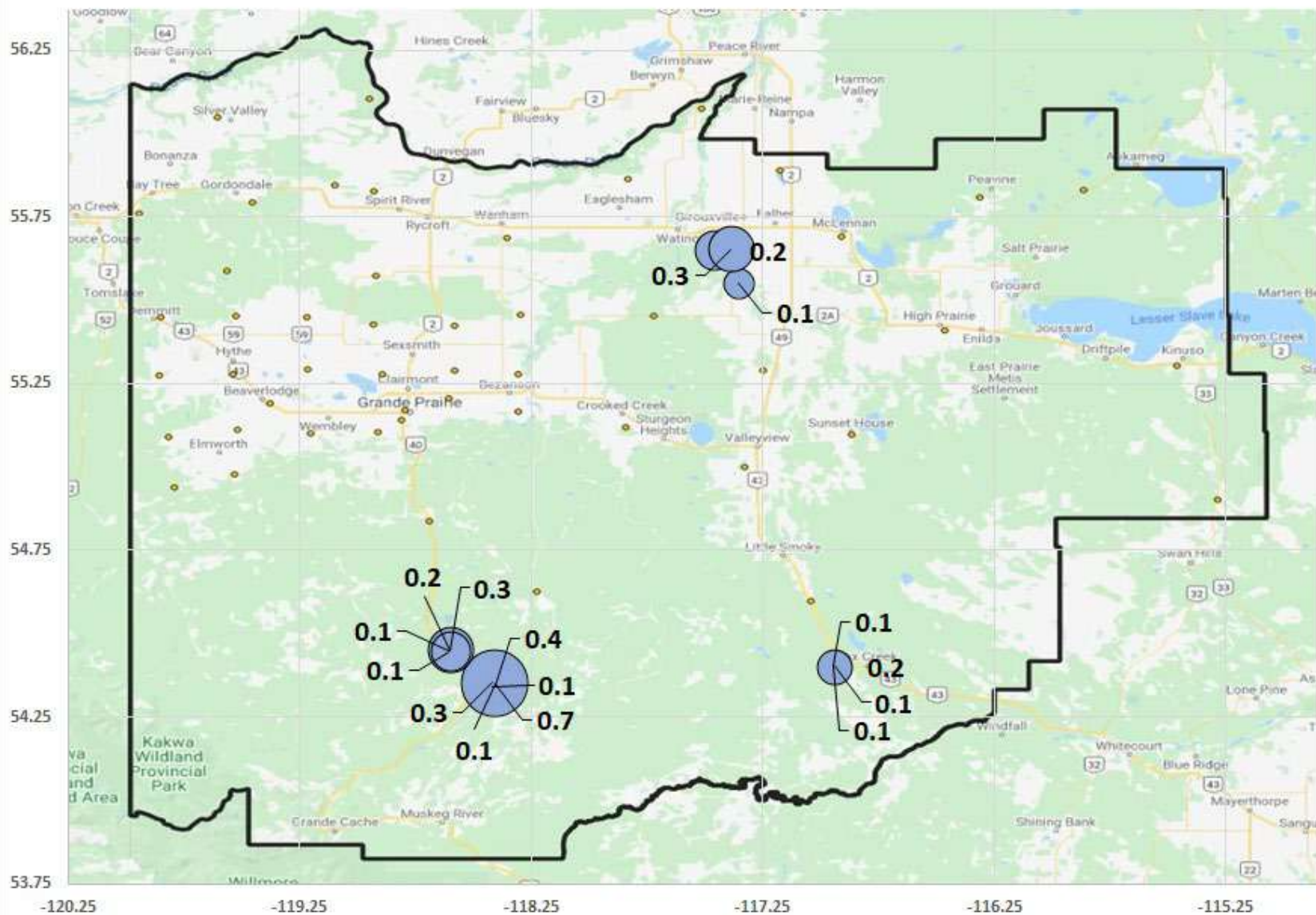




### O<sub>3</sub> Monthly Average (units in ppb)



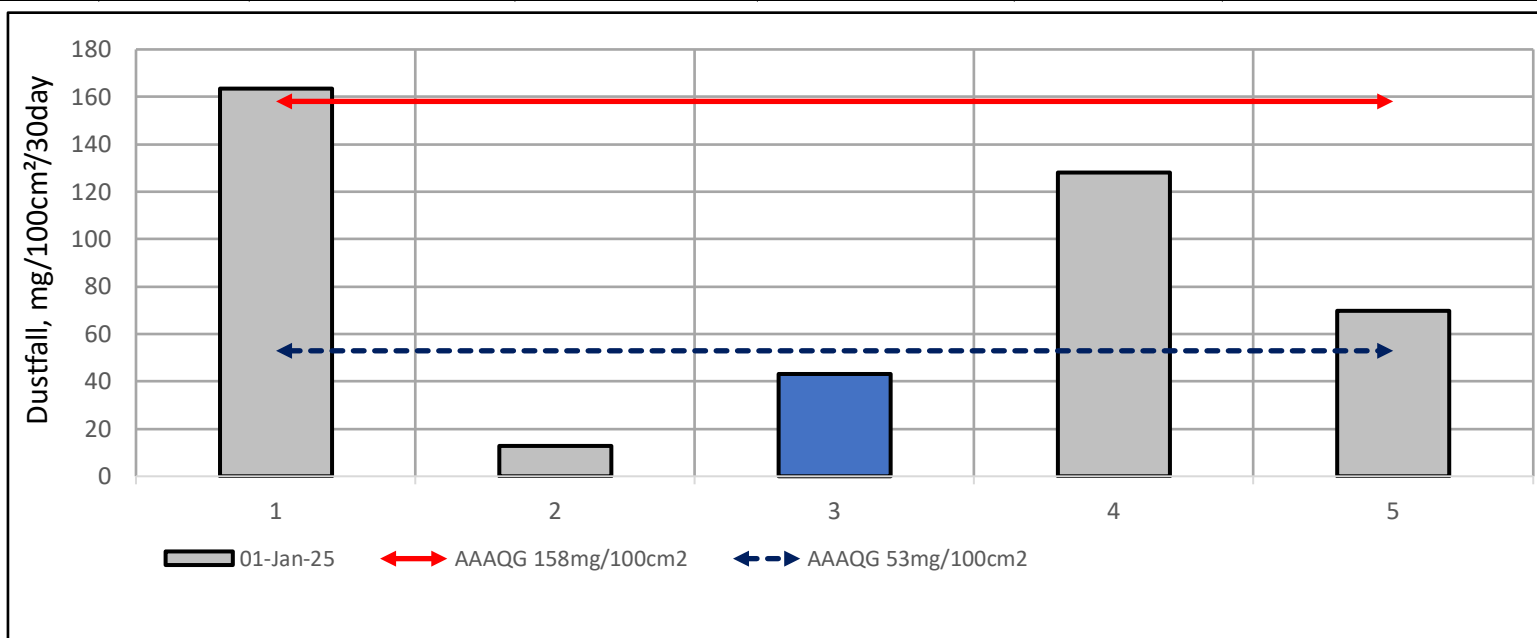
### H<sub>2</sub>S Monthly Average (units in ppb)



## 12 Dustfall Monitoring Data - update

Milner Dustfall Samples January 2025

Exposure Month	Year	Sample	Total Dustfall (30 day) mg/100cm <sup>2</sup> /30day	Fixed Dustfall (30 day) mg/100cm <sup>2</sup> /30day	Exposure days	Field Notes
January	2025	Milner Pipeline	163.4	47.9	31	>158 ref#438054
January	2025	Milner Bridge	12.6	8.6	31	
January	2025	Milner Wanyandie	43.2	17.3	31	
January	2025	Milner Waste Pond	128.1	37.7	31	
January	2025	Milner Powerline	69.9	24.4	31	
January	2025	Milner Powerline Dup	51.9	21.2	31	RPD, 30% / 14%



## End of Report



# Peace Airshed Zone Association

## Ambient Air Monitoring Report

January 2025