



Peace Airshed Zone Association

Ambient Air Monitoring Network Summary

Ambient Air Quality Monitoring Program

Monthly Report

December 2024

January 31, 2025

Alberta Environment and Protected Areas

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

Subject: **Peace Airshed Zone Association (PAZA)**
December 2024 Ambient Air Quality Monitoring Report

Please find enclosed the PAZA Ambient Air Quality Monitoring Network Report for the month of December 2024.

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 December 2024 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
	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 were four readings above the 30min TRS AAAQG

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

Site	Pollutant	Date	From MST	To MST	Average Ppb	WS km/hr	WD degrees
Dunes	TRS	12-Dec-24	17:00	17:30	6.1	0.7	16
Happy Valley	TRS	10-Dec-24	21:00	21:30	21.7	3.4	13
Happy Valley	TRS	10-Dec-24	21:30	22:00	6.8	1.1	161
Happy Valley	TRS	18-Dec-24	19:00	19:30	5.8	1.0	325

- There were three readings above the 24hr PM_{2.5} AAAQO, 14 readings above the 1hr PM_{2.5} AAAQO for the month

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

Site	reference	Pollutant	Date	From MST	To MST	Average µg/m ³	WS km/hr	WD degrees
Fox Creek	436123	PM _{2.5}	13-Dec-24	20:00	21:00	91.1	2.6	156
Milner	436262	PM _{2.5}	18-Dec-24	04:00	05:00	92.1	2.8	82
Milner	436262	PM _{2.5}	18-Dec-24	05:00	06:00	99.9	4.2	71
Milner	436284	PM _{2.5}	19-Dec-24	09:00	10:00	88.4	6.1	47
Milner	436284	PM _{2.5}	19-Dec-24	10:00	11:00	98.6	4.8	44
Milner	436284	PM _{2.5}	19-Dec-24	11:00	12:00	103.4	4.9	69
Milner	436284	PM _{2.5}	19-Dec-24	12:00	13:00	99.4	2.5	78
Milner	436284	PM _{2.5}	19-Dec-24	13:00	14:00	102.4	1.1	158
Milner	436284	PM _{2.5}	19-Dec-24	14:00	15:00	117.0	1.9	224
Milner	436284	PM _{2.5}	19-Dec-24	15:00	16:00	119.4	1.9	221
Milner	436284	PM _{2.5}	19-Dec-24	16:00	17:00	111.7	7.1	265
Milner	436284	PM _{2.5}	19-Dec-24	17:00	18:00	98.9	8.5	267
Milner	436284	PM _{2.5}	19-Dec-24	18:00	19:00	92.4	3.3	253
Milner	436284	PM _{2.5}	19-Dec-24	19:00	20:00	105.1	2.3	254

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

Site	reference	Pollutant	Date	Average µg/m ³	WS km/hr	WD degrees
Fox Creek	436082	PM _{2.5}	12-Dec-24	30.7	7.1	148
Milner	436262	PM _{2.5}	18-Dec-24	33.4	3.5	77
Milner	436284	PM _{2.5}	19-Dec-24	71.4	3.4	321

Operational times less than 90 percent

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

Air Incidents

None were reported.

Deviations from Authorized Monitoring Methods

None were reported.

Passive Monitoring

- 52 Stations throughout the PAZA zone
 - Passive sample analyses were performed by Bureau Veritas Laboratories

There were 19 duplicates sampled in the month of December:

- Eight SO₂ duplicates located at Forth Creek, Eaglesham, Pinto Creek, Clouston Creek, Duvernay 4, Kakwa 2, Milner Wanyandie, Jayar3 Bone Yard
 - RPD ranging from 3% to 68% (two fails at Forth Creek (0.1 and 0.2ppb results) and Milner Wanyandie 0.2 and 0.4ppb results))
- One O₃ duplicate located at Kinuso
 - RPD 7% (no fails)
- Seven NO₂ duplicates at Boone Creek, Beaverlodge, Jean Cote, Peavine, Kakwa 4, Ambient Trailer, Jayar5 Camp
 - RPD ranging from 3% to 27% (no fails)
- Three H₂S duplicates at Duvernay 4, Kakwa 1, Jayar1 Plant
 - RPD ranging from 0% to 22% (no fails)

Dustfall Monitoring

- Five Stations collected Total Dustfall and Fixed Dustfall
- Total dustfall ranged from 15.3 to 90.4 mg/100cm²/30day
- RPD was 0 to 9% (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.

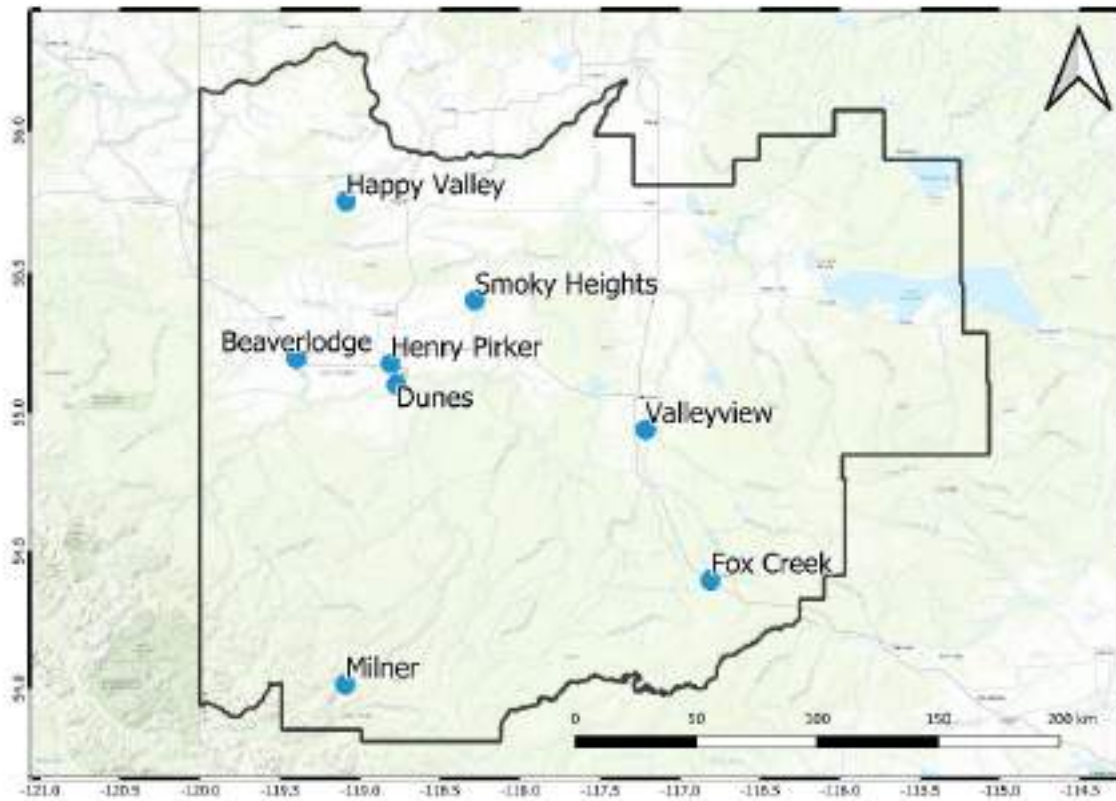


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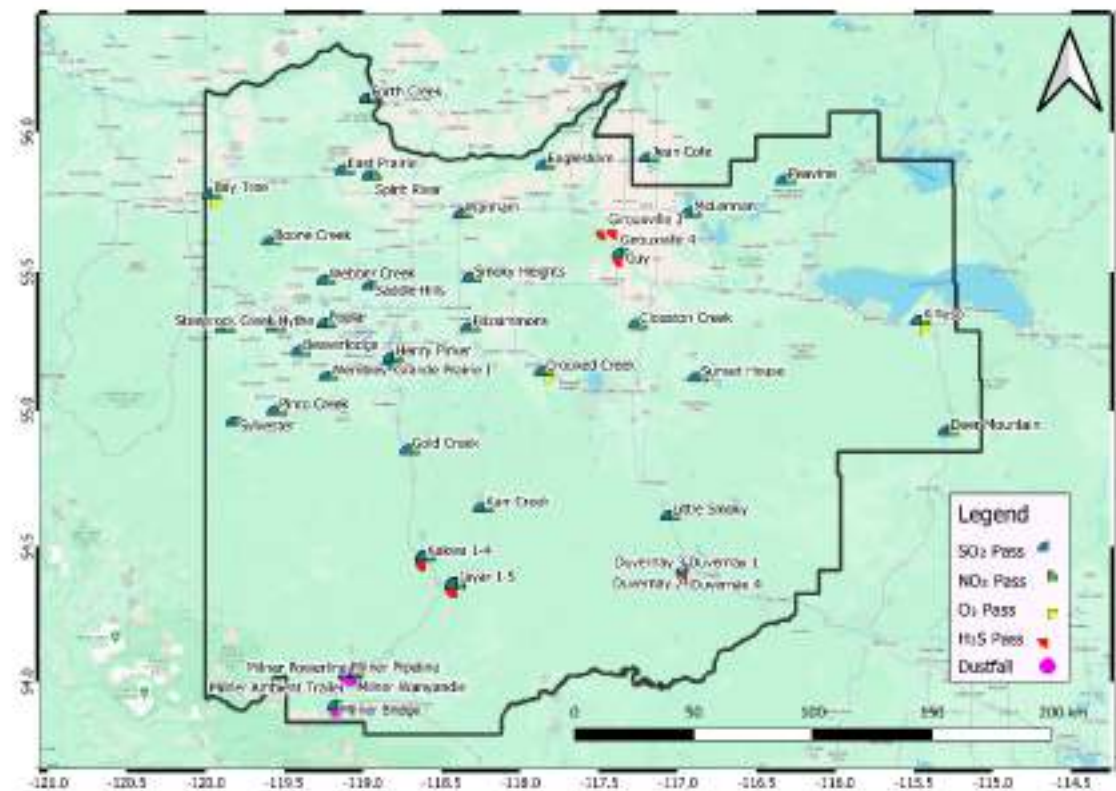
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PAZA Continuous Monitoring Station Locations



PAZA Passive Monitoring Station Locations



1 December 2024 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 - December 2024 Beaverlodge Station Report

Parameter	December				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)	1.8	0.0	93.4%	98.1%	40.0	-	Dec-12 21:00	33.5	-	Dec-12	-	-	-	-	Dec-17, 2024
NO ₂ (ppb)	7.4	0.4	93.4%	98.1%	32.4	150	Dec-11 21:00	22.4	-	Dec-12	0	-	-	-	Dec-17, 2024
NO _x (ppb)	9.2	0.4	93.4%	98.1%	65.4	-	Dec-13 21:00	35.9	-	Dec-12	-	-	-	-	Dec-17, 2024
O ₃ (ppb)	22.8	0.0	95.4%	100.0%	42.1	78	Dec-24 18:00	35.7	-	Dec-25	0	-	-	-	Dec-02, 2024
PM _{2.5} (µg/m ³)	5.8	0.1	99.9%	100.0%	35.4	80	Dec-12 23:00	20.6	20	Dec-12	0	-	0	-	Dec-06, 2024
SO ₂ (ppb)	0.9	0.0	94.5%	99.2%	9.9	172	Dec-10 04:00	2.8	48	Dec-10	0	-	0	0	Dec-06, 2024
Average	Minimum	Valid	Operational	Maximum											
Temp (°C)	-7.2	-25.1	95.8%	95.0%	8.4	Note: Valid hours must be greater than 75% Operational hours must be greater than 90%									
RH (%)	78.7	47.3	100.0%	100.0%	99.7										
WS (km/hr)	7.7	0.1	100.0%	100.0%	43.2	Average Wind Direction: 293 WNW									
WD (deg)	293	0.0	100.0%	100.0%	357.6										

Update Summary:

Parameter	Make	Model	Equipment summary
NO/NO ₂ /NO _x	Thermo	42IQ	Dec 17 failed spare, data removed to second calibration on Dec 17, as found 1.3% (9hrs), second monthly calibration flagged as maintenance (5hrs)
O ₃	Thermo	49IQ	No Operational issues noted
PM _{2.5}	API	T640	No Operational issues noted
SO ₂	Thermo	43-TLE	Dec 17, maintenance on nitrogen resistor in 8hrs removed
Met Equip	MetOne	50.5	For ET, daily drop removed every day 04:21-04:41 (33hrs)

1.2 Dunes Air Monitoring Station

PAZA - December 2024 Dunes Station Report

Parameter	December				10min / 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 _{2.5} (µg/m ³)	5.5	0.0	97.3%	97.7%	30.6	80	Dec-21 16:00	33.2	29	Dec-21	0	-	0	-	Dec-10-2024
SO ₂ (ppb)	0.6	0.0	93.2%	97.7%	8.5	172	Dec-02 14:00	2.2	48	Dec-18	0	-	0	0	Dec-10-2024
TRS (ppb)	0.6	0.0	93.2%	97.7%	6.1	3	Dec-12 17:00	1.1	3	Dec-22	1	-	0	-	Dec-10-2024
Average	Minimum	Valid	Operational	Maximum											
Temp (°C)	-0.2	-20.4	97.7%	97.7%	7.0	Note: Valid hours must be greater than 75% Operational hours must be greater than 90%									
RH (%)	80.2	30.7	97.7%	97.7%	99.9										
WS (km/hr)	2.5	0.0	97.7%	97.7%	10.7	Average Wind Direction: 290 WNW									
WD (deg)	290	1.5	97.7%	97.7%	359.1										

Update Summary:

Parameter	Make	Model	Equipment summary
PM _{2.5}	Thermo	SHARP 5030	Dec 11-12, communications failure due to loss of power at data logger, 17hrs removed
SO ₂	Thermo	43i	Dec 11-12, communications failure due to loss of power at data logger, 17hrs removed
TRS	Thermo	43i	Dec 11-12, communications failure due to loss of power at data logger, 17hrs removed. 1x 10min TRS above 44406
Met Equip	GI/RMYoung	MetPak/RM96004	Dec 11-12, communications failure due to loss of power at data logger, 17hrs removed

1.3 Grande Prairie - Henry Pirker Air Monitoring Station

PAZA - December 2024 Henry Pirker Station Report

Parameter	December				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	3rd		
NO (ppb)	13.0	0.0	94.9%	100.0%	130.5	-	Dec-20 19:00	44.2	-	Dec-12	-	-	-	-	Dec 09, 2024	
NO ₂ (ppb)	17.4	1.4	94.9%	100.0%	42.1	150	Dec-15 07:00	32.1	-	Dec-13	0	-	-	-	Dec 09, 2024	
NO _x (ppb)	30.5	1.5	94.0%	100.0%	193.0	-	Dec-20 19:00	76.4	-	Dec-15	-	-	-	-	Dec 09, 2024	
O ₃ (ppb)	13.4	0.2	95.3%	100.0%	36.7	76	Dec-05 02:00	27.4	-	Dec-25	0	-	-	-	Dec 09, 2024	
PM _{2.5} (µg/m ³)	8.8	0.1	99.7%	100.0%	40.3	80	Dec-15 03:00	24.5	29	Dec-21	0	-	0	-	Dec 10, 2024	
SO ₂ (ppb)	0.3	0.0	95.3%	100.0%	9.3	172	Dec-02 13:00	2.5	48	Dec-02	0	-	0	0	Dec 10, 2024	
H ₂ S (ppb)	0.4	0.0	95.3%	100.0%	1.8	10	Dec-21 11:00	0.9	3	Dec-21	0	-	0	-	Dec 10, 2024	
CH ₄ (ppm)	2.3	1.9	89.4%	94.0%	4.0	-	Dec-13 04:00	2.8	-	Dec-22	-	-	-	-	Dec 04, 2024	
THC (ppm)	2.3	1.9	89.4%	94.0%	4.0	-	Dec-13 04:00	2.8	-	Dec-22	-	-	-	-	Dec 04, 2024	
NMHC (ppm)	0.0	0.0	89.4%	94.0%	0.2	-	Dec-07 19:00	0.0	-	Dec-07	-	-	-	-	Dec 04, 2024	
CO (ppm)	0.1	0.0	95.4%	100.0%	0.6	13	Dec-21 08:00	0.2	3	Dec-21	0	0	-	-	Dec 04, 2024	
Average	Minimum	Valid	Operational	Maximum												
Temp (°C)	-8.9	-27.9	99.6%	99.0%	7.1	Note: Valid hours must be greater than 75% Operational hours must be greater than 90%										Dec 12, 2024
RH (%)	72.2	41.9	95.6%	99.0%	87.0											Dec 12, 2024
SR (W/m ²)	12.2	0.0	99.6%	99.0%	385.5											Dec 12, 2024
WS (km/hr)	5.4	0.2	92.6%	89.0%	30.8											Dec 12, 2024
WD (deg)	274	0.2	99.6%	99.0%	359.7	Average Wind Direction		274	W							Dec 12, 2024

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 ₂ S	TEI	450i	No operational issues noted during the month
THC/CH ₄ /NMHC	TEI	55i	Dec 30 analyser failed, data removed from last good span, Dec 30, 45hrs removed to end of month
CO	Thermo	48i-TLE	No operational issues noted during the month
Met Equip	MetOne	50.5	Dec 12, wind flattened, mat tower lowered, and unit replaced (SN11770) with (SN11788), maintenance, 3hrs removed

1.4 Smoky Heights Air Monitoring Station

PAZA - December 2024 Smoky Heights Station Report

Parameter	December				10min / 1-hour			24-hour			Exceedance				Calibration Date	
	Average	Minimum	Valid	Operational	Max	Objective	Max Day and Time	Max	Objective	Max Day	1hr	8hr	24hr	3rd		
PM _{2.5} (µg/m ³)	6.2	0.0	99.6%	100.0%	50.8	80	Dec-15 22:00	18.6	29	Dec-12	0	-	0	-	Dec 11, 2024	
SO ₂ (ppb)	0.4	0.0	95.4%	100.0%	4.9	172	Dec-25 21:00	1.1	48	Dec-21	0	-	0	0	Dec 11, 2024	
TRG (ppb)	0.2	0.0	95.3%	100.0%	0.9	5	Dec-13 15:00	0.3	3	Dec-13	0	-	0	-	Dec 11, 2024	
Average	Minimum	Valid	Operational	Maximum												
Temp (°C)	-9.5	-29.5	100.0%	100.0%	6.4	Note: Valid hours must be greater than 75% Operational hours must be greater than 90%										Oct 10, 2024
WS (km/hr)	9.7	0.3	92.5%	92.5%	41.2											Oct 10, 2024
WD (deg)	260	0.5	92.5%	92.5%	357.9	Average Wind Direction		260	WNW							Oct 10, 2024

Update Summary:

Parameter	Make	Model	Equipment summary
PM _{2.5}	Sharp	5030	No Operational issues noted during the month
SO ₂	TECO	43i	No Operational issues noted during the month
TRG	TEI	43i/APSAA	No Operational issues noted during the month
Met Equip	MetOne	50.5	Dec 29-31, 56hrs removed due to invalid wind speed drift

1.5 Valleyview Air Monitoring Station

PAZA - December 2024 Valleyview Station Report

Parameter	December				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 ₂ (ppb)	0.2	0.0	95.5%	100.0%	3.6	172	Dec-16 23:00	1.0	48	Dec-19	0	-	0	0	Dec-05, 2024
H ₂ S (ppb)	0.2	0.0	95.5%	100.0%	3.5	10	Dec-21 20:00	0.5	3	Dec-21	0	-	0	-	Dec-05, 2024
	Average	Minimum	Valid	Operational	Maximum										
Temp (°C)	-8.6	-51.2	100.0%	100.0%	8.9	<div style="border: 1px solid black; padding: 5px;"> Note: Valid hours must be greater than 75% Operational hours must be greater than 90% </div>									
RH (%)	88.2	46.4	100.0%	100.0%	301.1										
WS (km/hr)	2.8	0.2	100.0%	100.0%	11.2										
WD (deg)	221	0.0	100.0%	100.0%	359.7										
Average Wind Direction								221	NW						

Update Summary:

Parameter	Make	Model	Equipment summary
SO ₂	TEI	431-AP5CB	No operational issues noted during the month
H ₂ S	TEI	450-APHA4 / 43C	Dec 1, spin dropped due to extremely cold (-31C), no data removed
Met Equip	RMYoung	RMFB6004	No operational issues noted during the month

1.6 Fox Creek Air Monitoring Station

PAZA - December 2024 Fox Creek Station Report

Parameter	December				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)	17.4	0.0	95.2%	100.0%	336.2	-	Dec-20 18:00	48.6	-	Dec-20	-	-	-	-	Dec-11, 2024
NO ₂ (ppb)	11.9	0.0	95.2%	100.0%	36.7	159	Dec-26 08:00	21.3	-	Dec-20	0	-	-	-	Dec-11, 2024
NO _x (ppb)	29.6	0.2	95.2%	100.0%	399.0	-	Dec-20 18:00	68.0	-	Dec-20	-	-	-	-	Dec-11, 2024
O ₃ (ppb)	34.3	0.0	95.4%	100.0%	29.7	76	Dec-25 06:00	31.5	-	Dec-25	0	-	-	-	Dec-11, 2024
PM _{2.5} (µg/m ³)	8.2	0.1	99.7%	100.0%	80.1	80	Dec-13 21:00	30.7	29	Dec-12	1	-	1	-	Dec-11, 2024
SO ₂ (ppb)	0.5	0.0	95.4%	100.0%	4.0	172	Dec-09 13:00	0.8	48	Dec-18	0	-	0	0	Dec-11, 2024
H ₂ S (ppb)	0.3	0.0	95.2%	100.0%	1.0	10	Dec-29 13:00	0.5	3	Dec-28	0	-	0	-	Dec-12, 2024
	Average	Minimum	Valid	Operational	Maximum										
Temp (°C)	-6.5	-26.7	100.0%	100.0%	9.4	<div style="border: 1px solid black; padding: 5px;"> Note: Valid hours must be greater than 75% Operational hours must be greater than 90% </div>									
WS (km/hr)	5.0	0.1	100.0%	100.0%	18.4										
WD (deg)	173	1.8	100.0%	100.0%	359.0										
Average Wind Direction					173										

Update Summary:

Parameter	Make	Model	Equipment summary
NO/NO ₂ /NO _x	Thermo	42IQ	No operational issues noted in the month
O ₃	TECO	491	No operational issues noted in the month
PM _{2.5}	API	T640	No operational issues noted in the month; Dec-12, 1x24hr reading above AAQO; Dec-13, 1x1hr reading above AAQO
SO ₂	TEI	431-TLE	No operational issues noted in the month
H ₂ S	TEI	450i	No operational issues noted in the month
Met Equip	MetOne	50.5	No operational issues noted in the month

1.7 Happy Valley Air Monitoring Station

PAZA - December 2024 Happy Valley Station Report

Parameter	December			30min / 1-hour				24-hour		Exceedance				Calibration Date	
	Average	Minimum	Valid	Operational	Max	Objective	Max Day and Time	Max	Objective	Max Day	1hr	8hr	14hr		30d
NO (ppb)	0.4	0.0	95.2%	100.0%	21.9	-	Dec-21 11:00	2.9	-	Dec-21	-	-	-	Dec-09, 2024	
NO ₂ (ppb)	3.3	0.6	93.2%	100.0%	24.2	159	Dec-21 11:00	30.7	-	Dec-21	0	-	-	Dec-09, 2024	
NO _x (ppb)	3.8	0.7	93.2%	100.0%	46.3	-	Dec-21 11:00	33.7	-	Dec-21	-	-	-	Dec-09, 2024	
O ₃ (ppb)	27.0	0.8	95.3%	100.0%	40.6	76	Dec-25 22:00	38.0	-	Dec-25	0	-	-	Dec-09, 2024	
PM _{2.5} (µg/m ³)	3.8	0.1	99.0%	100.0%	34.3	80	Dec-21 09:00	33.4	29	Dec-12	0	-	0	Dec-03, 2024	
SO ₂ (ppb)	0.5	0.0	95.3%	100.0%	4.5	172	Dec-10 15:00	1.2	48	Dec-28	0	-	0	Dec-09, 2024	
TRB (ppb)	0.4	0.1	95.3%	100.0%	23.7	5	Dec-10 23:30	1.0	3	Dec-10	1	-	0	Dec-03, 2024	
THC (ppm)	2.2	2.0	88.6%	92.9%	4.6	-	Dec-10 22:00	2.9	-	Dec-21	-	-	-	Dec-23, 2024	
Average	Minimum	Valid	Operational	Maximum											
Temp (°C)	-8.4	-32.8	100.0%	100.0%	8.0	Note: Valid hours must be greater than 75% Operational hours must be greater than 90% Average Wind Direction: 253 WSW									
WS (km/hr)	12.6	0.2	100.0%	100.0%	43.7										
WD (deg)	253	2.5	100.0%	100.0%	358.2										

Update Summary:

Parameter	Make	Model	Equipment summary
NO/NO ₂ /NO _x	TEI	42i	No operational issues during the month
O ₃	TEI	43i	No operational issues during the month
PM _{2.5}	API	T640	No operational issues during the month
SO ₂	TEI	43i	No operational issues during the month
TRB	TEI	43i	No operational issues during the month; 3x30min readings above AAQOC
THC	TEI	55i / 510-LT	Dec 13, second calibration performed due to span 12% low, as found cause in leak (data removed to span and calibration flagged as maintenance, 38hrs); Dec 23, third calibration performed, due to span 50% low, zero air was leaking pressure due to 4-way release valve, data removed to previous day span (39 hrs removed)
Met Equip	MetOne	50.5	No operational issues during the month

1.8 Milner Air Monitoring Station

PAZA - December 2024 Milner Station Report

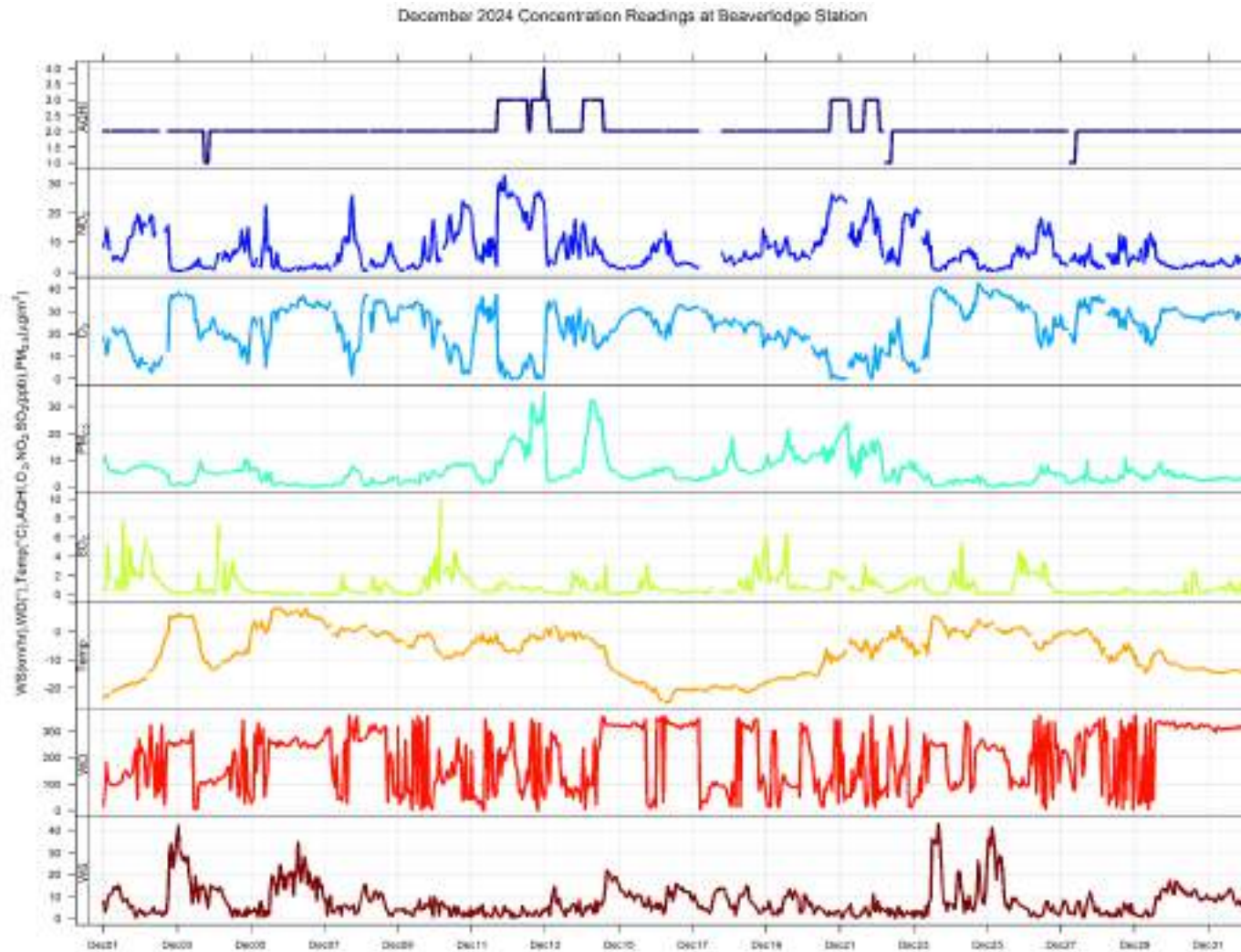
Parameter	December			1-hour				24-hour		Exceedance				Calibration Date	
	Average	Minimum	Valid	Operational	Max	Objective	Max Day and Time	Max	Objective	Max Day	1hr	8hr	14hr		30d
NO (ppb)	1.6	0.0	94.2%	96.1%	52.0	-	Dec-29 06:00	34.3	-	Dec-29	-	-	-	Dec-16, 2024	
NO ₂ (ppb)	5.3	0.0	94.2%	96.1%	25.1	159	Dec-29 06:00	33.5	-	Dec-29	0	-	-	Dec-16, 2024	
NO _x (ppb)	6.8	0.0	94.2%	96.1%	77.0	-	Dec-29 06:00	27.8	-	Dec-29	-	-	-	Dec-16, 2024	
PM _{2.5} (µg/m ³)	8.1	0.1	98.8%	96.1%	109.8	80	Dec-19 16:00	73.4	29	Dec-19	11	-	2	Dec-16, 2024	
Average	Minimum	Valid	Operational	Maximum											
WS (km/hr)	6.8	0.1	99.2%	96.2%	33.5	Note: Valid hours must be greater than 75% Operational hours must be greater than 90% Average Wind Direction: 263 W									
WD (deg)	262	6.6	99.2%	96.2%	359.2										

Update Summary:

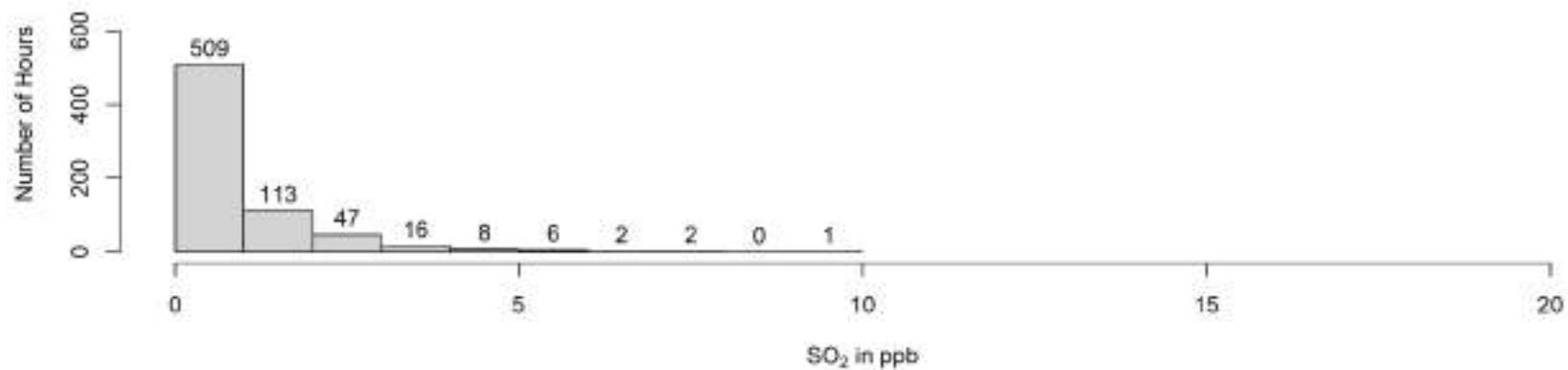
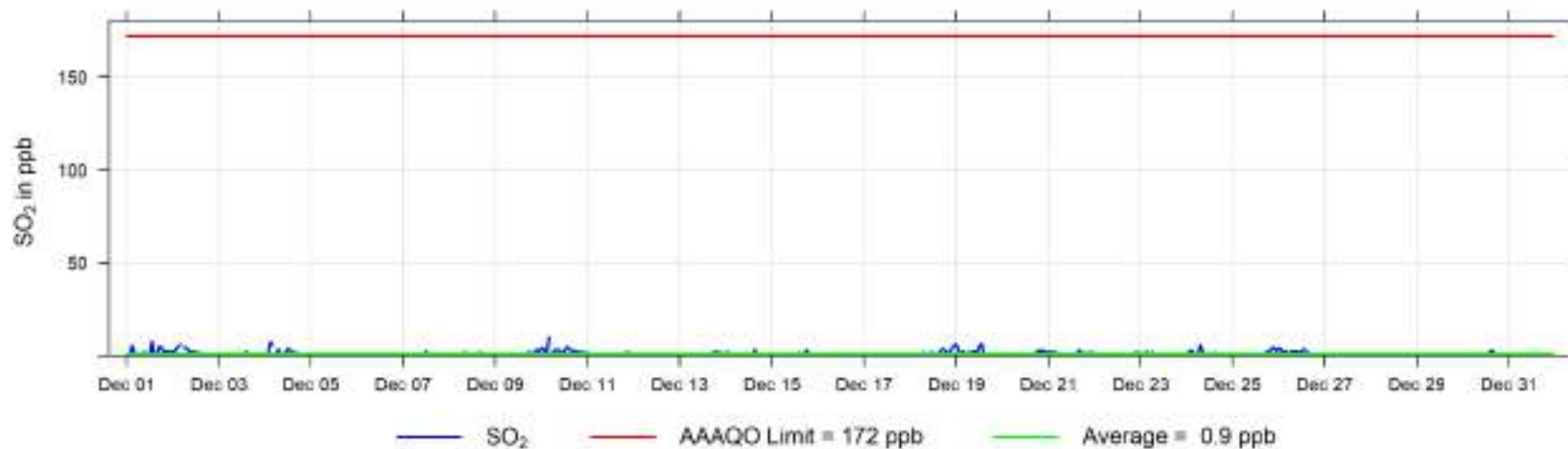
Parameter	Make	Model	Equipment summary
NO/NO ₂ /NO _x	Thermo	42i	Dec 7-8, power failure, 7hrs removed
PM _{2.5}	API	T640	Dec 7-8, power failure, 7hrs removed; Dec 18-19, 2x24hr reading above AAQOC and 13x1hr reading above AAQOC
Met Equip	MetOne	50.5	Dec 7-8, power failure, 6hrs removed

2 Beaverlodge Charts

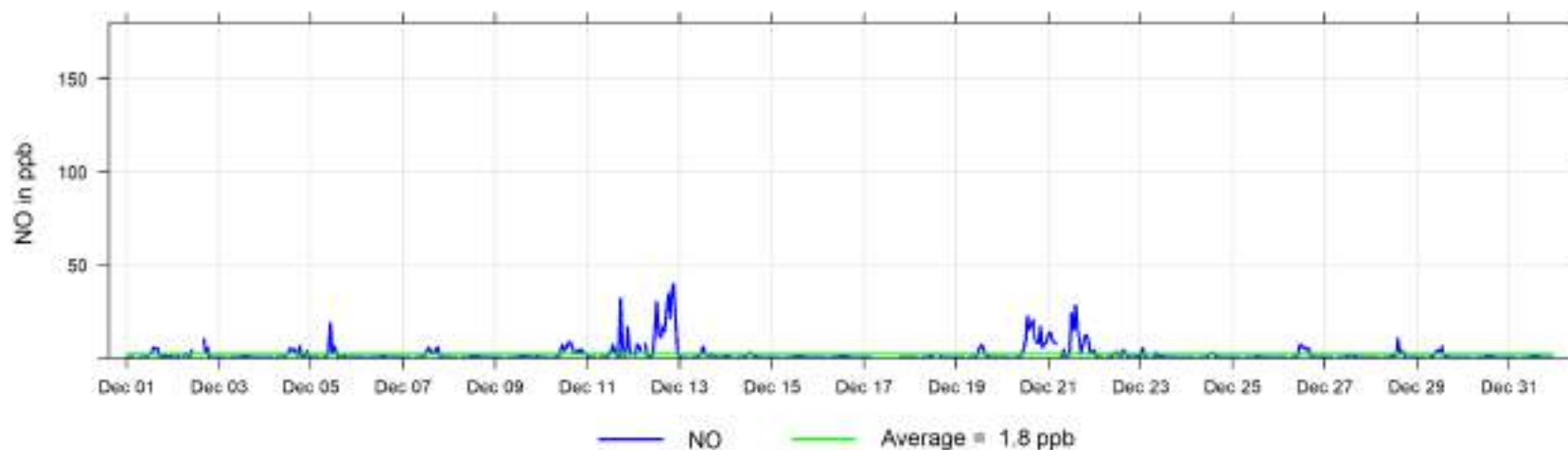
The following pages include the charts and histograms for Beaverlodge Station



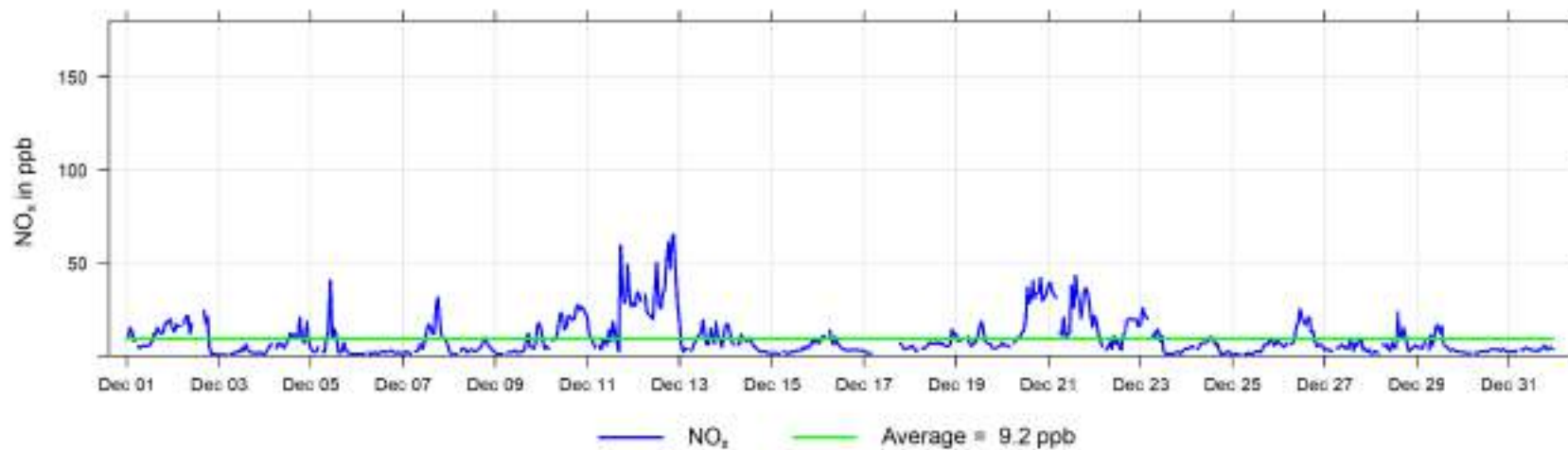
December 2024 Hourly Concentration Readings of SO₂ (in ppb) at Beaverlodge



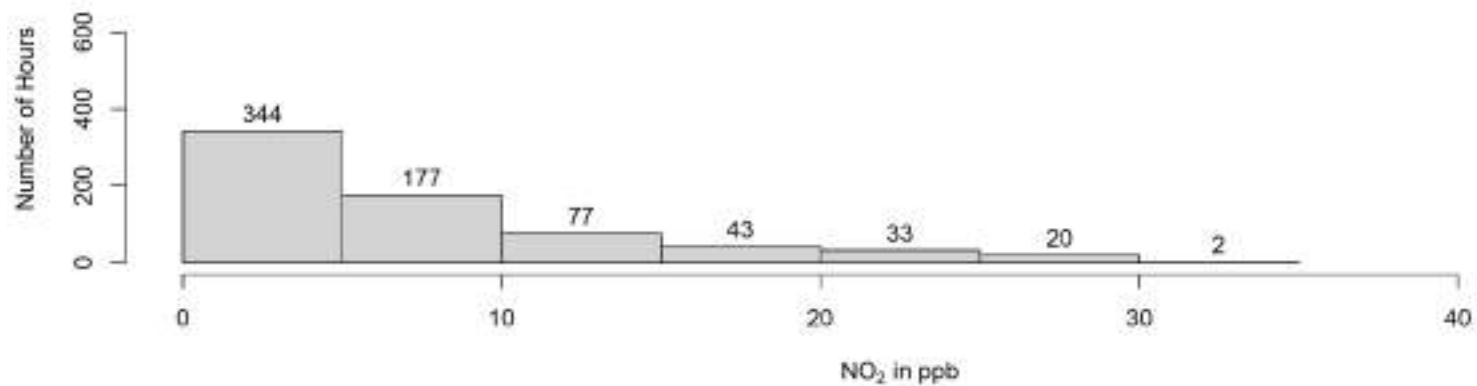
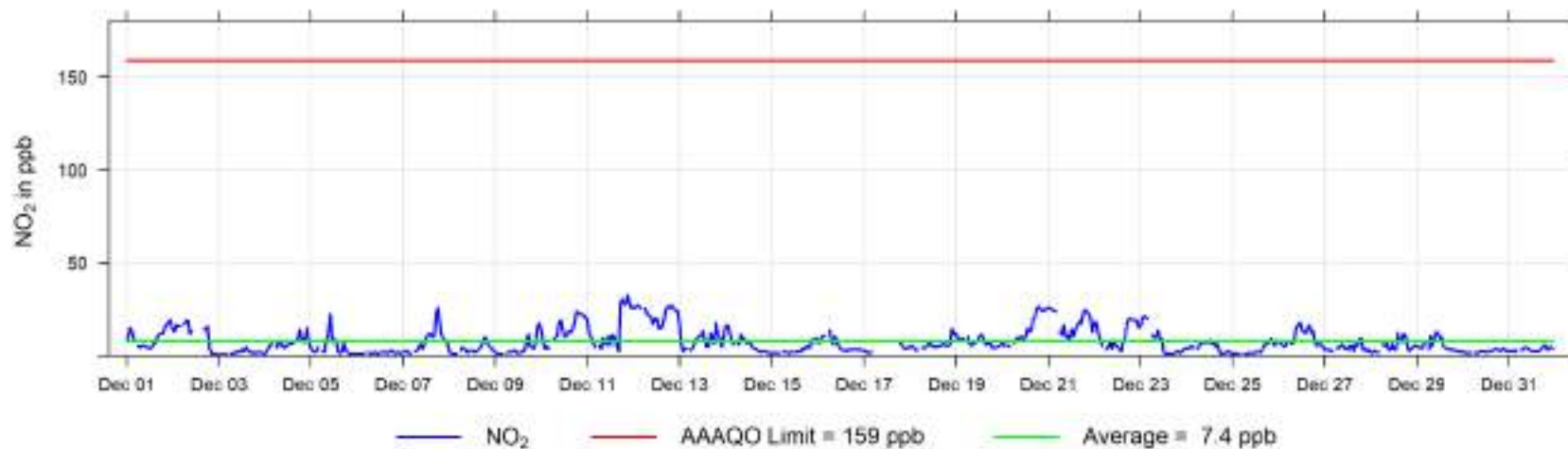
December 2024 Hourly Concentration Readings of NO (in ppb) at Beaverlodge



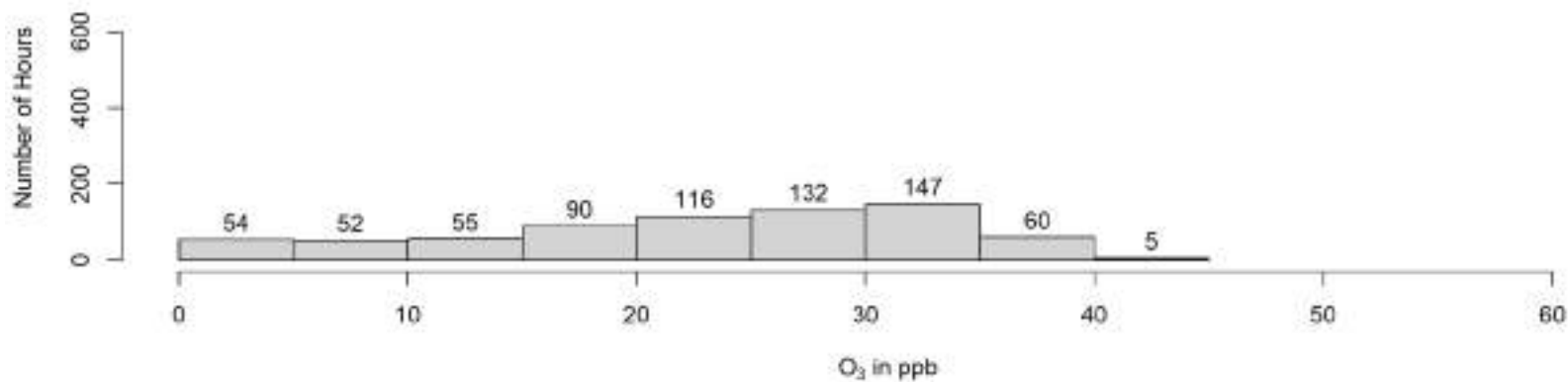
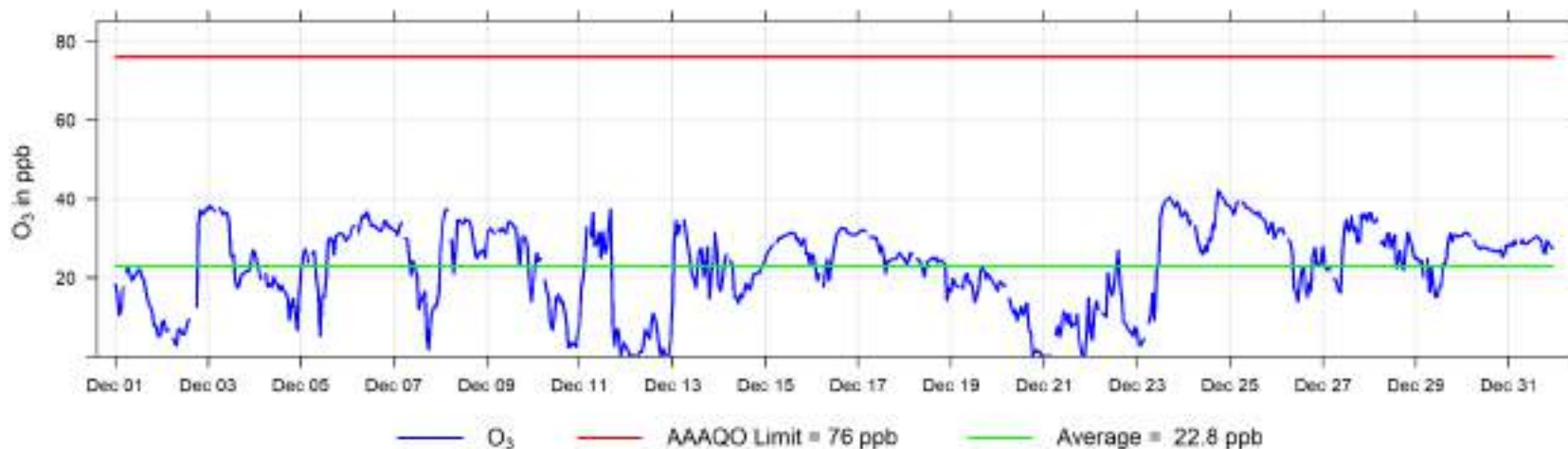
December 2024 Hourly Concentration Readings of NO_x (in ppb) at Beaverlodge



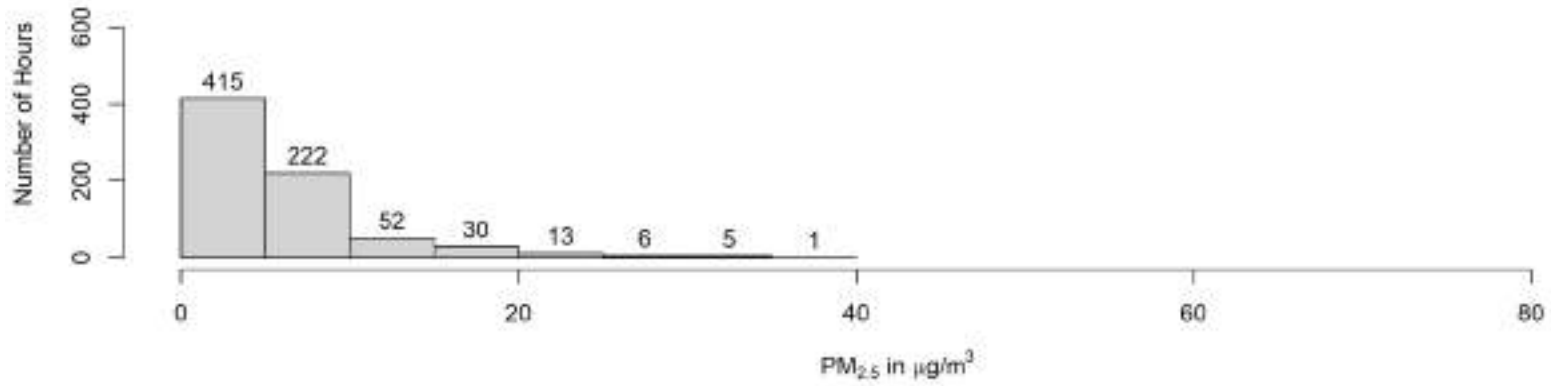
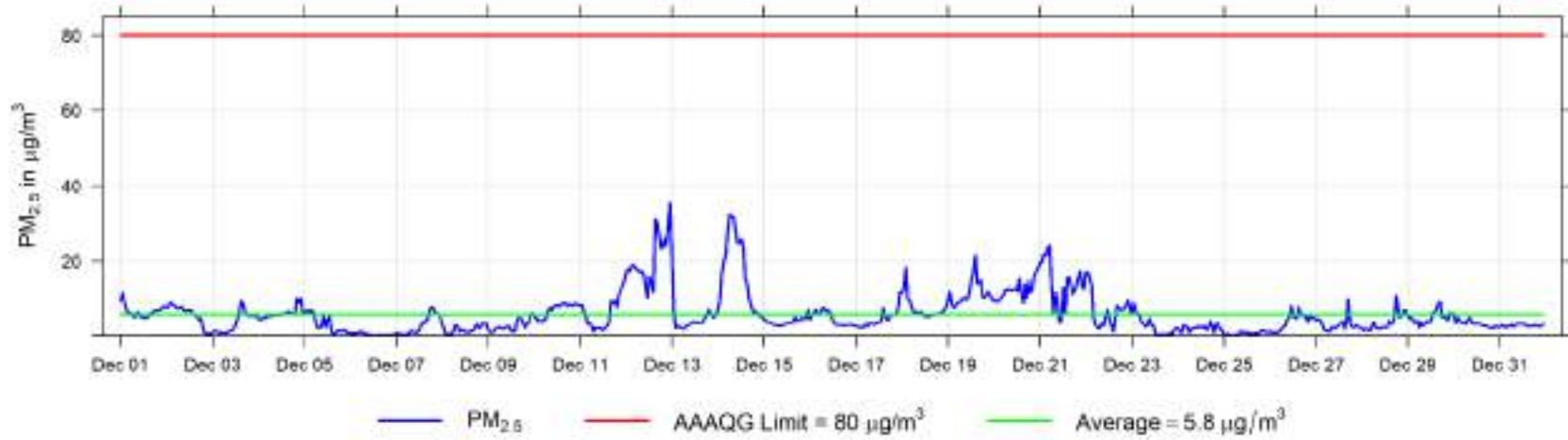
December 2024 Hourly Concentration Readings of NO₂ (in ppb) at Beaverlodge



December 2024 Hourly Concentration Readings of O₃ (in ppb) at Beaverlodge



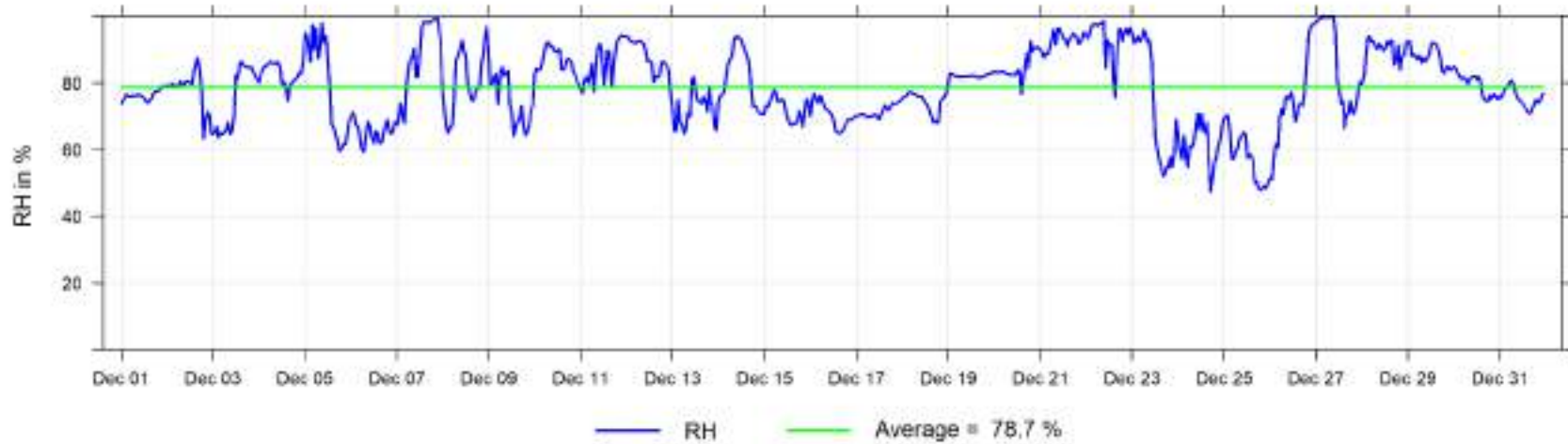
December 2024 Hourly Concentration Readings of PM_{2.5} in $\mu\text{g}/\text{m}^3$ at Beaverlodge



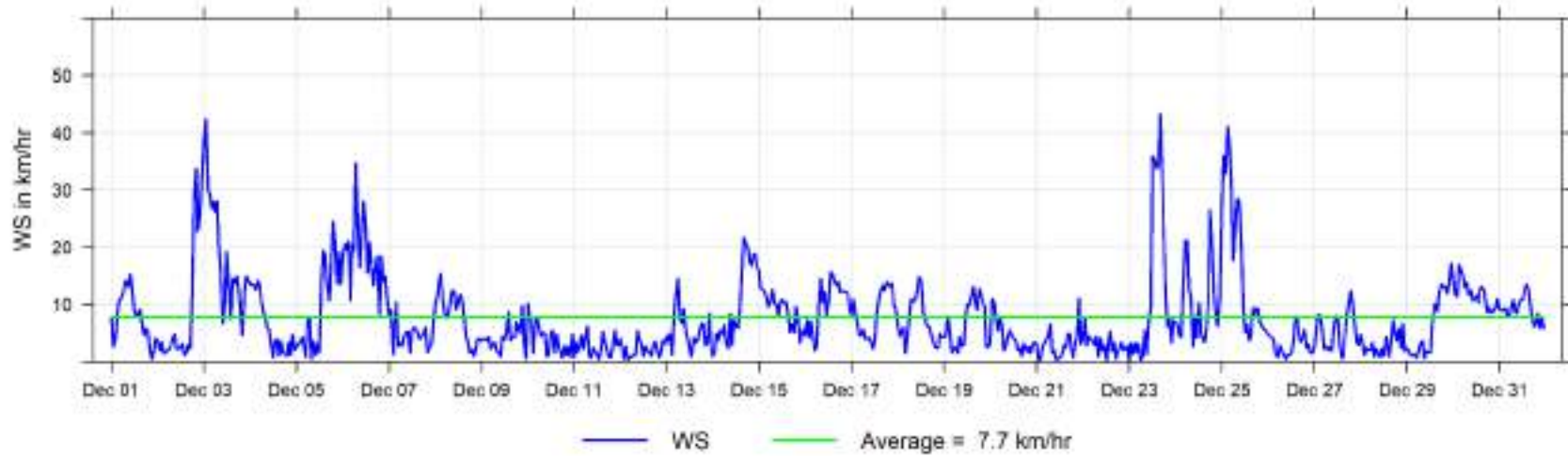
December 2024 Hourly Temperature Readings (in °C) at Beaverlodge



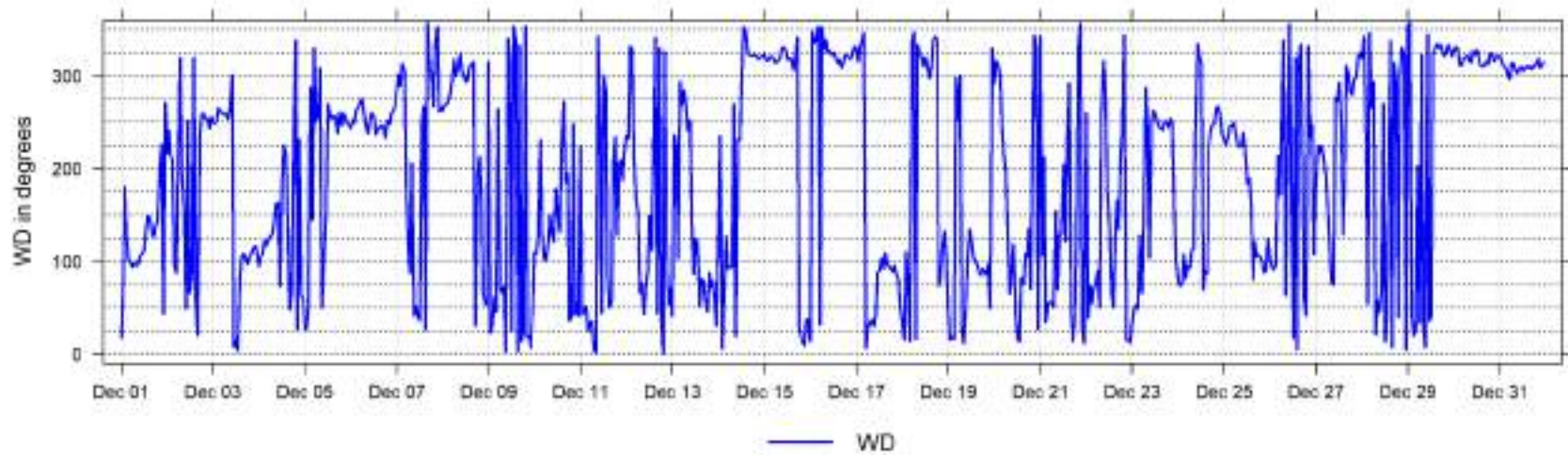
December 2024 Hourly Readings of Relative Humidity (in %) at Beaverlodge



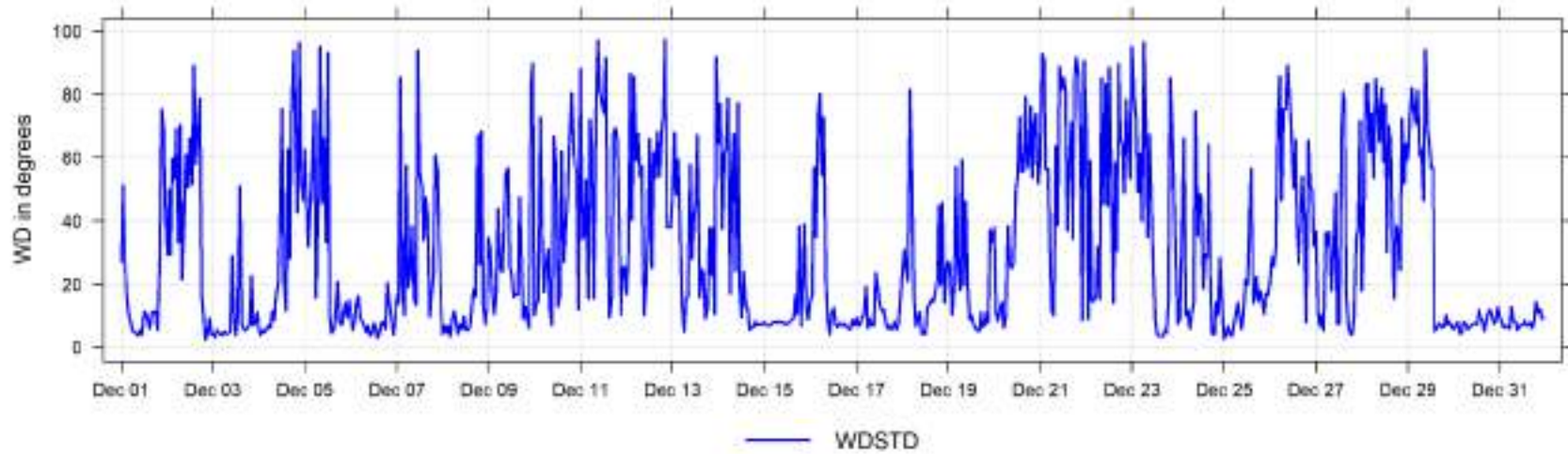
December 2024 Hourly Readings of Wind Speed (in km/hr) at Beaverlodge

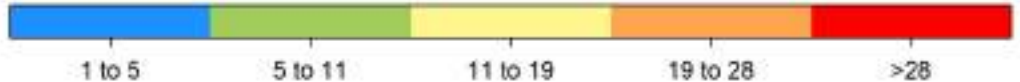
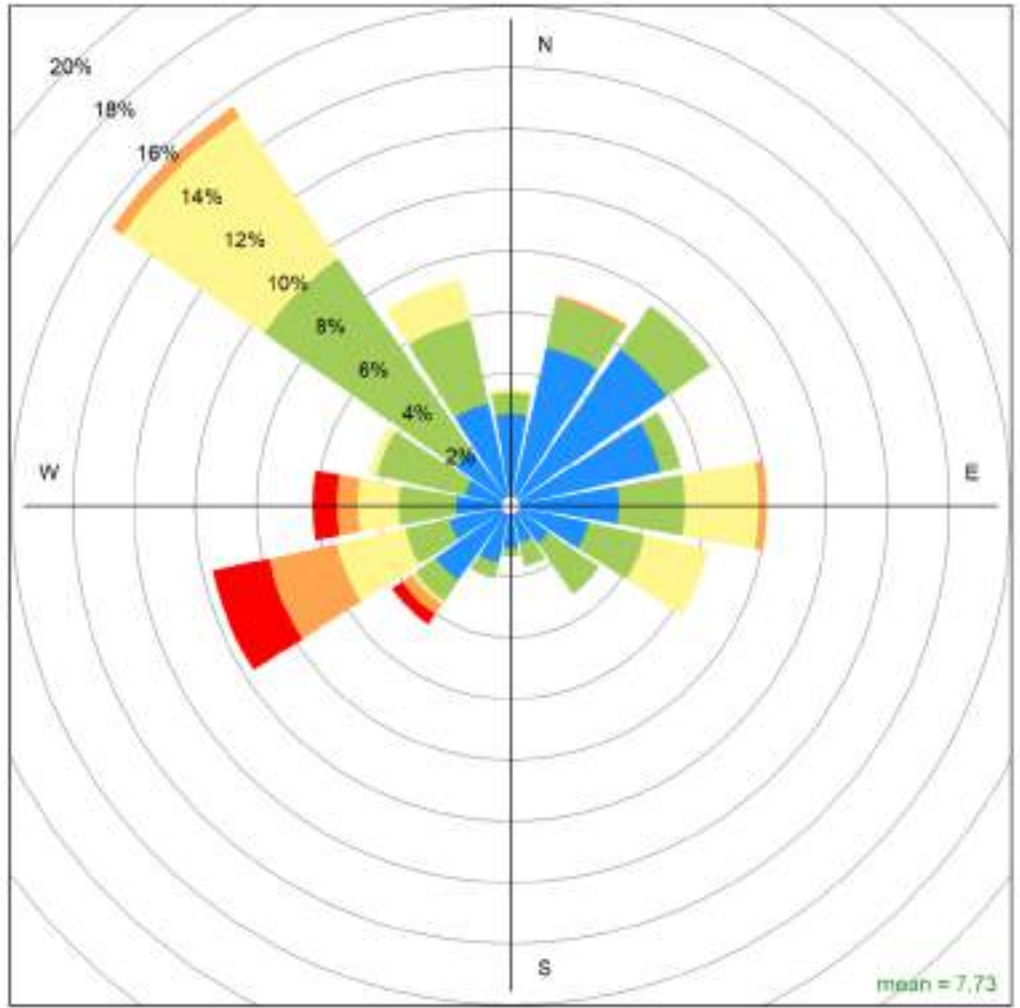


December 2024 Hourly Readings of Wind Direction (in degrees) at Beaverlodge



December 2024 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Beaverlodge

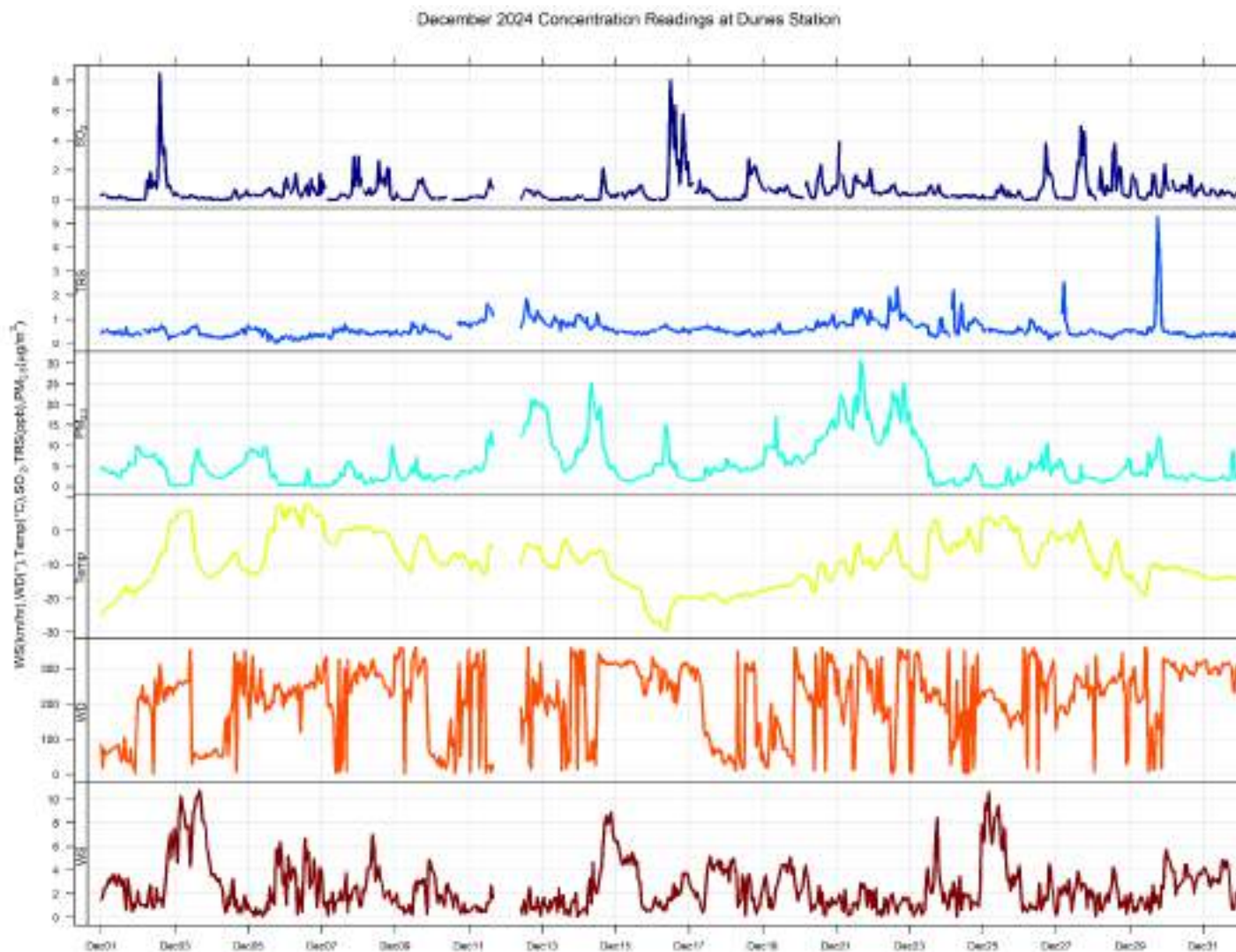




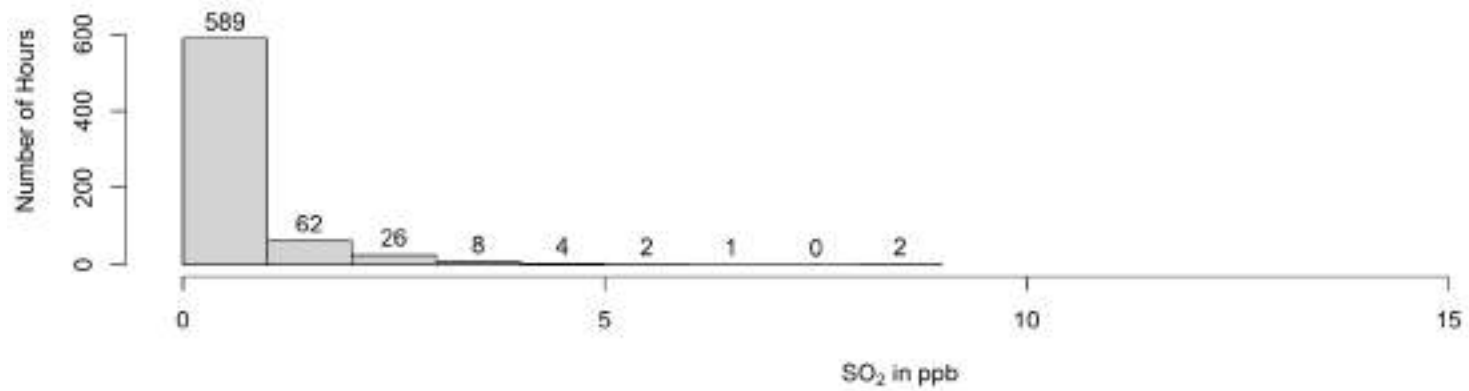
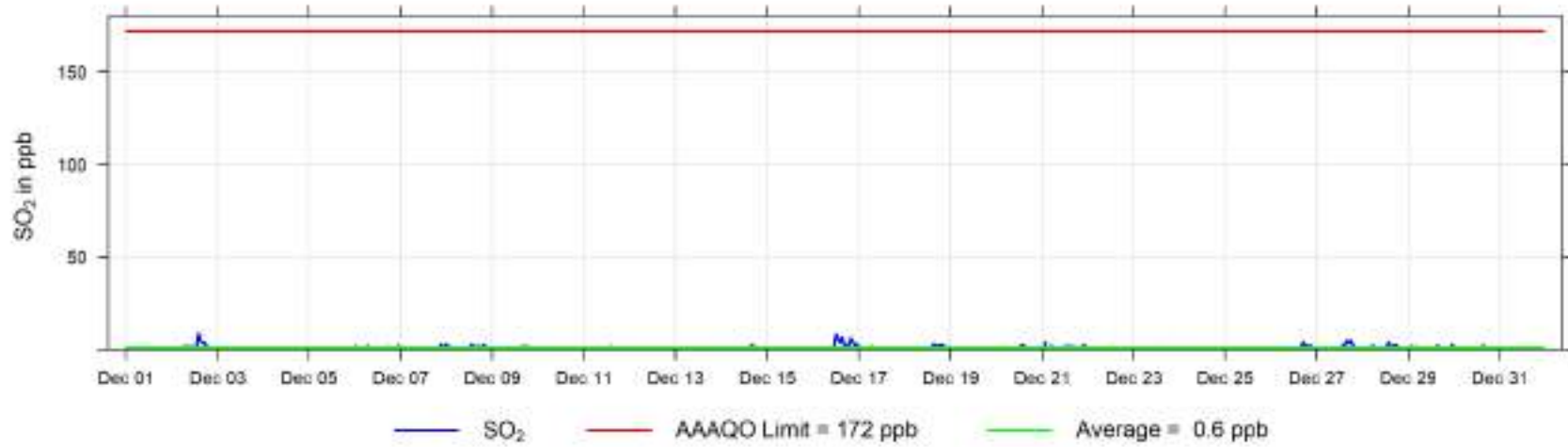
Beaverlodge December 2024 Wind Rose, wind speed in km/hr
Calms (<1km/hr) = 6.4 %

3 Dunes Charts

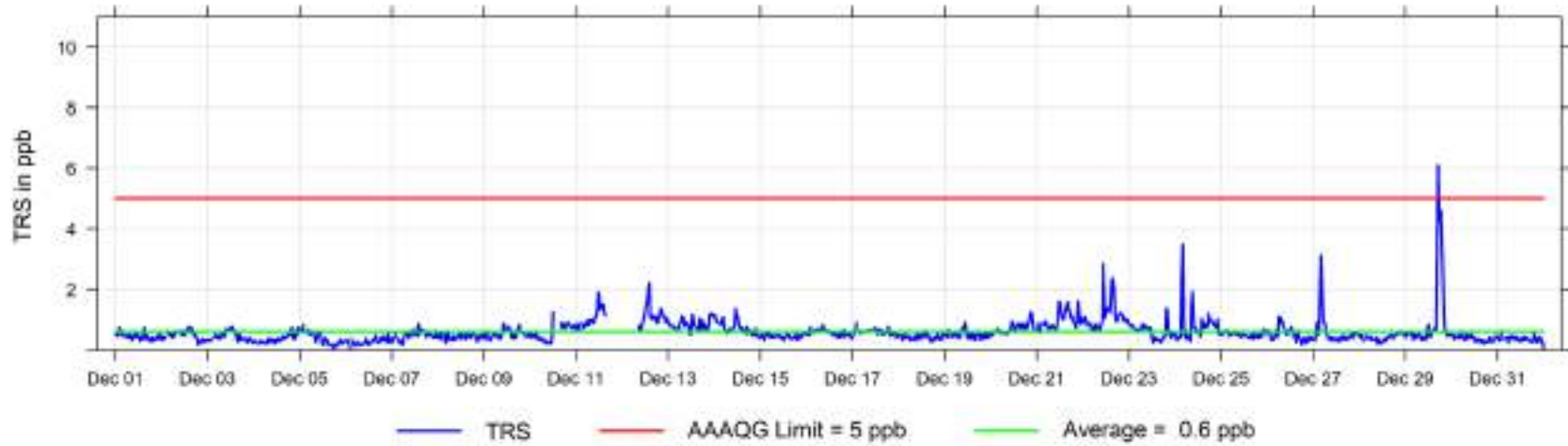
The following pages include the charts and histograms for Dunes Station



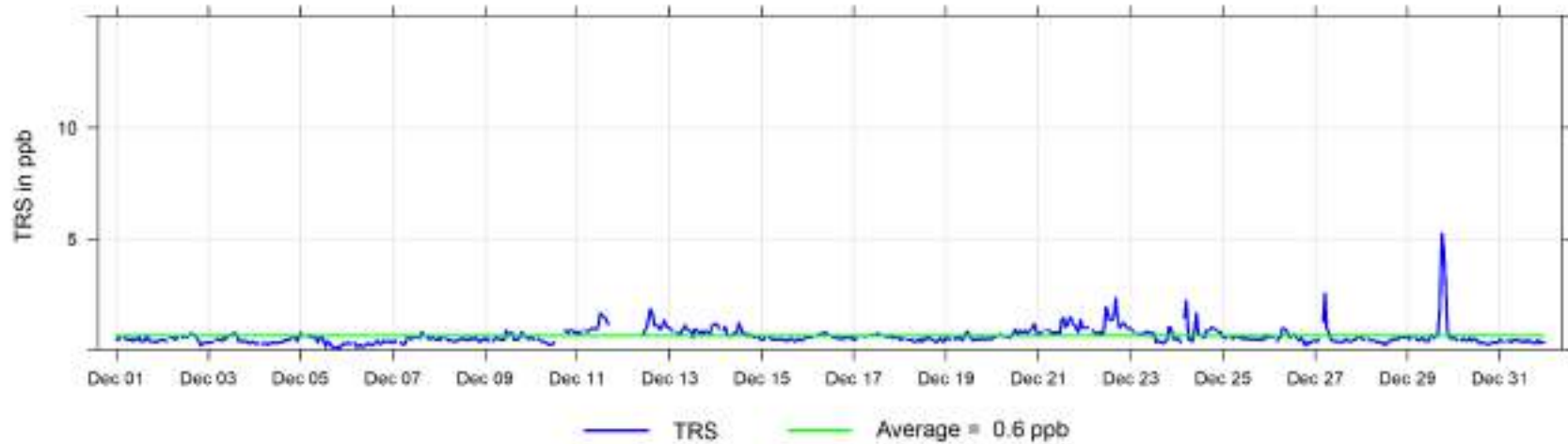
December 2024 Hourly Concentration Readings of SO₂ (in ppb) at Dunes

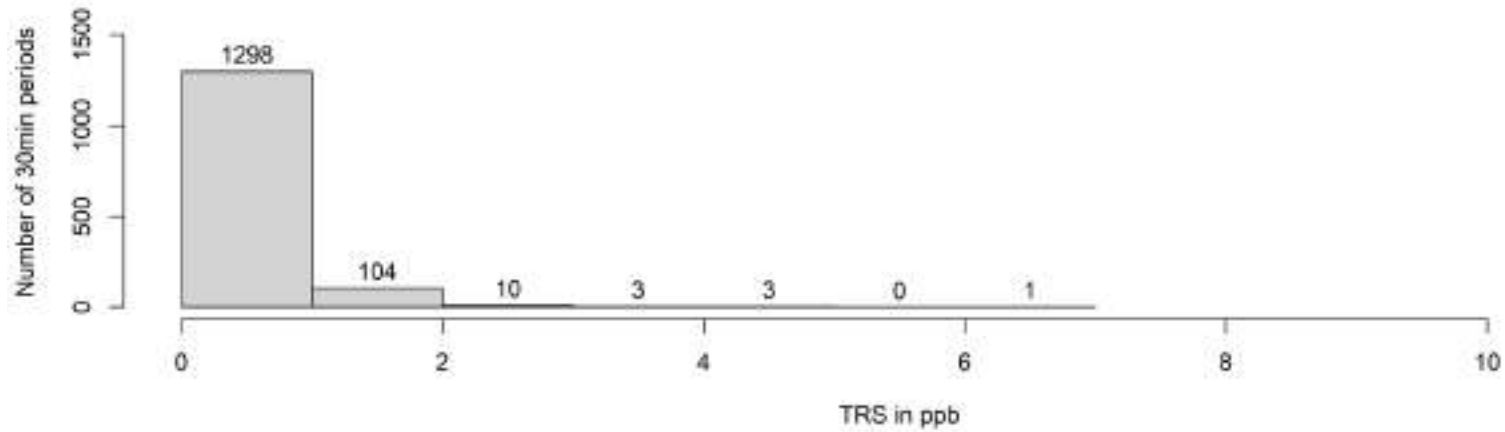


December 2024 30 min Concentration Readings of TRS (in ppb) at Dunes

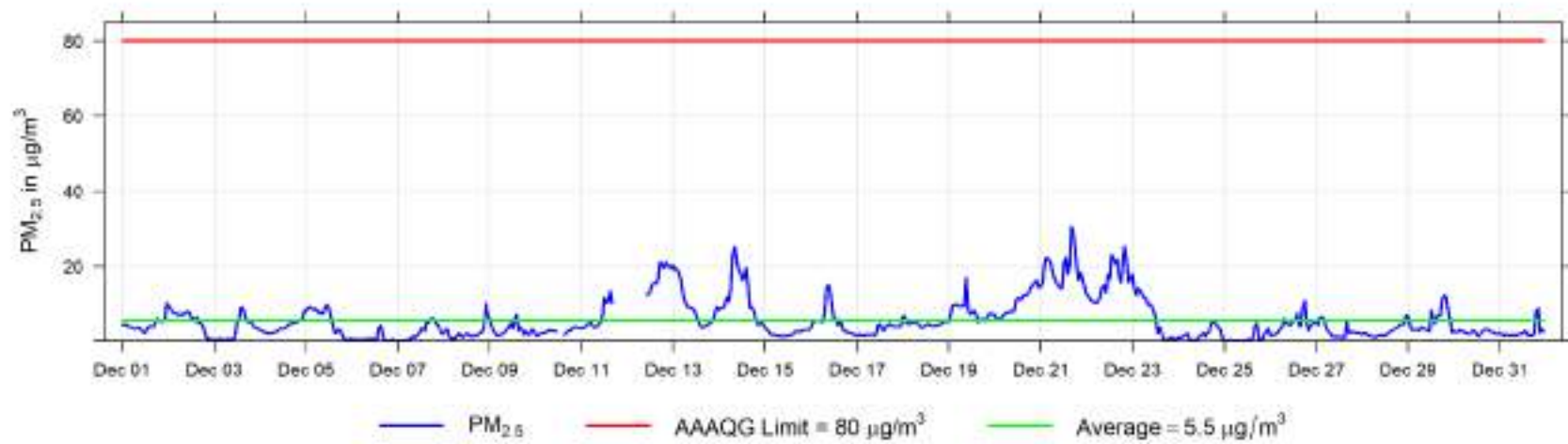


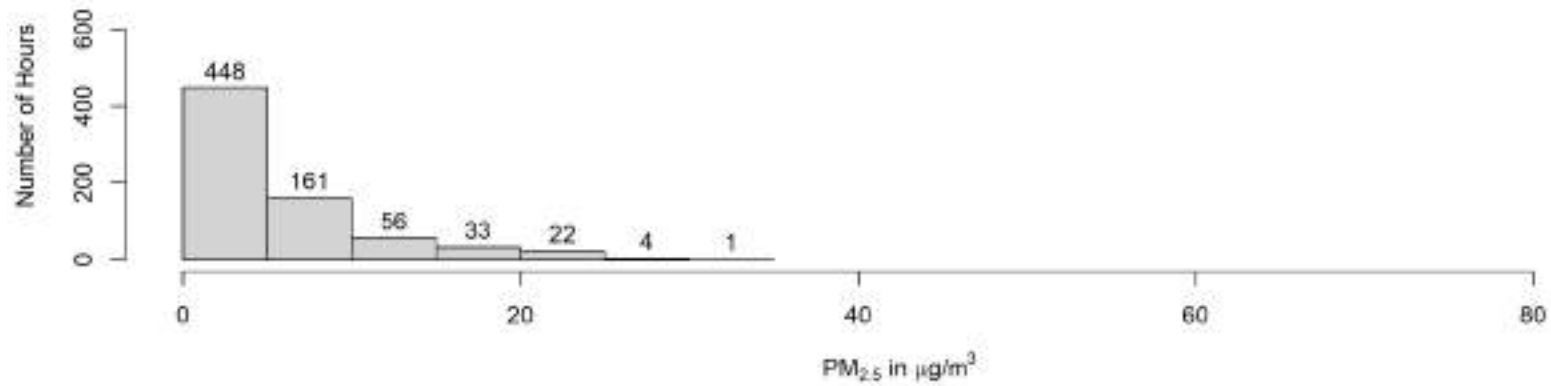
December 2024 Hourly Concentration Readings of TRS (in ppb) at Dunes



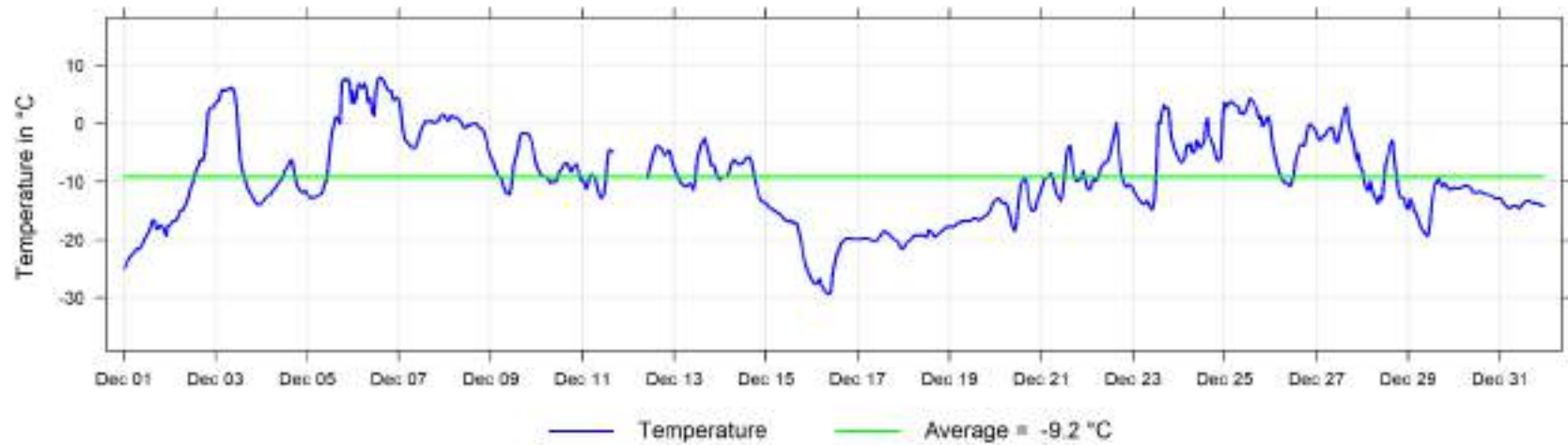


December 2024 Hourly Concentration Readings of PM_{2.5} in $\mu\text{g}/\text{m}^3$ at Dunes

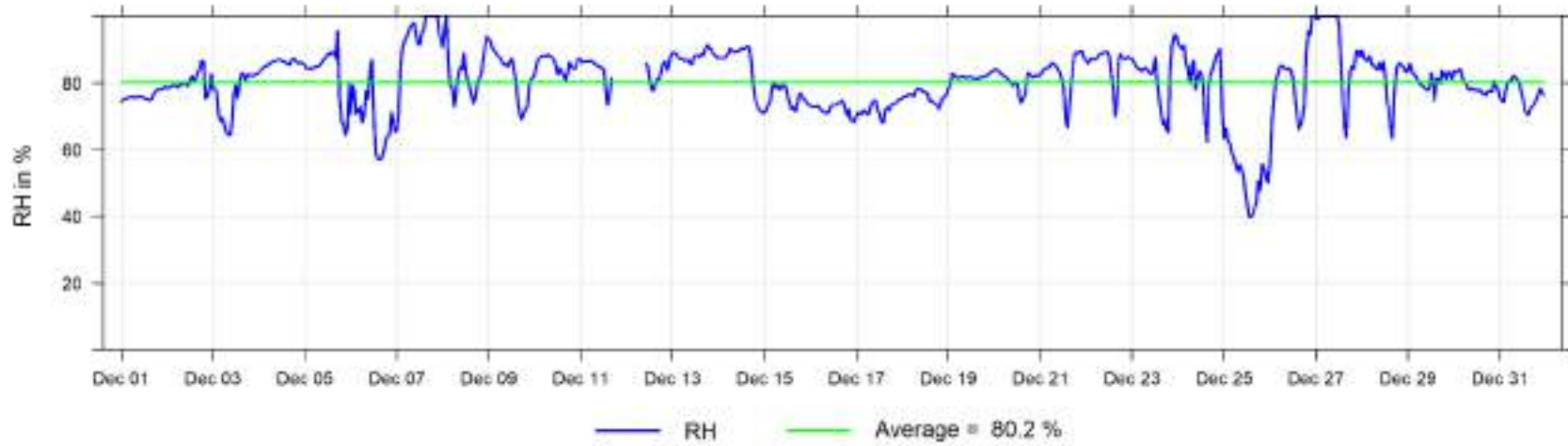




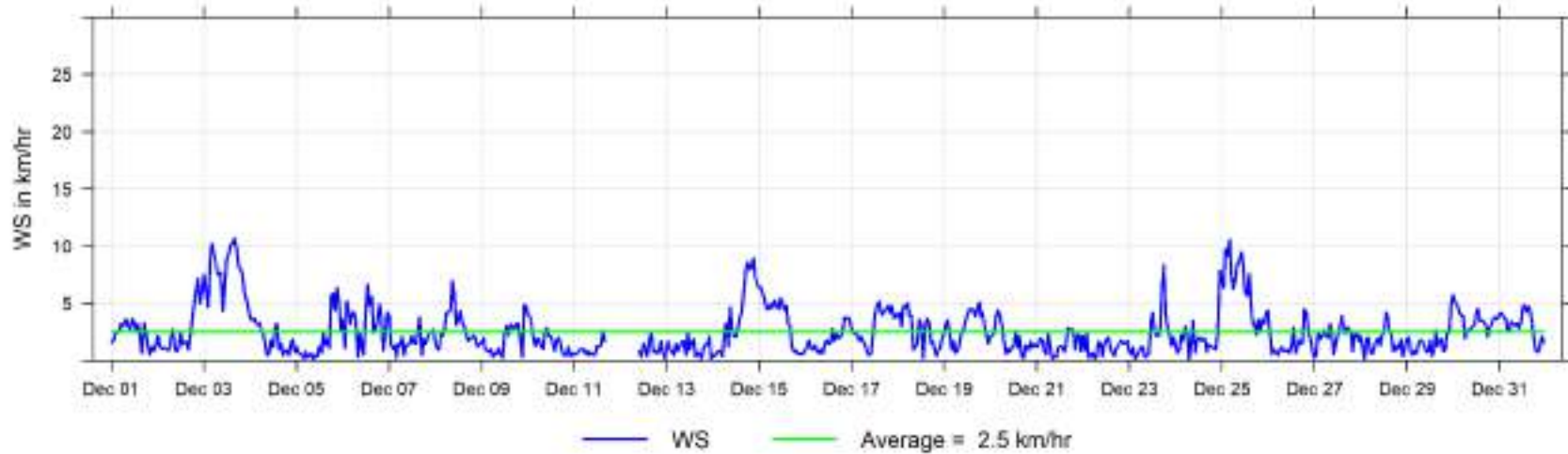
December 2024 Hourly Temperature Readings (in °C) at Dunes



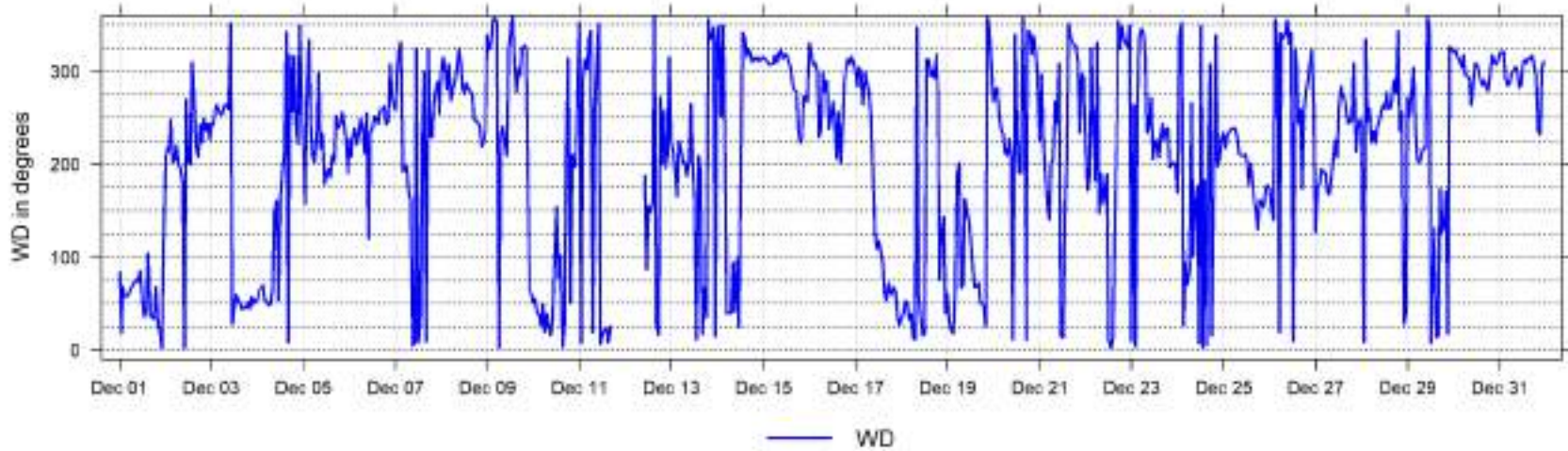
December 2024 Hourly Readings of Relative Humidity (in %) at Dunes



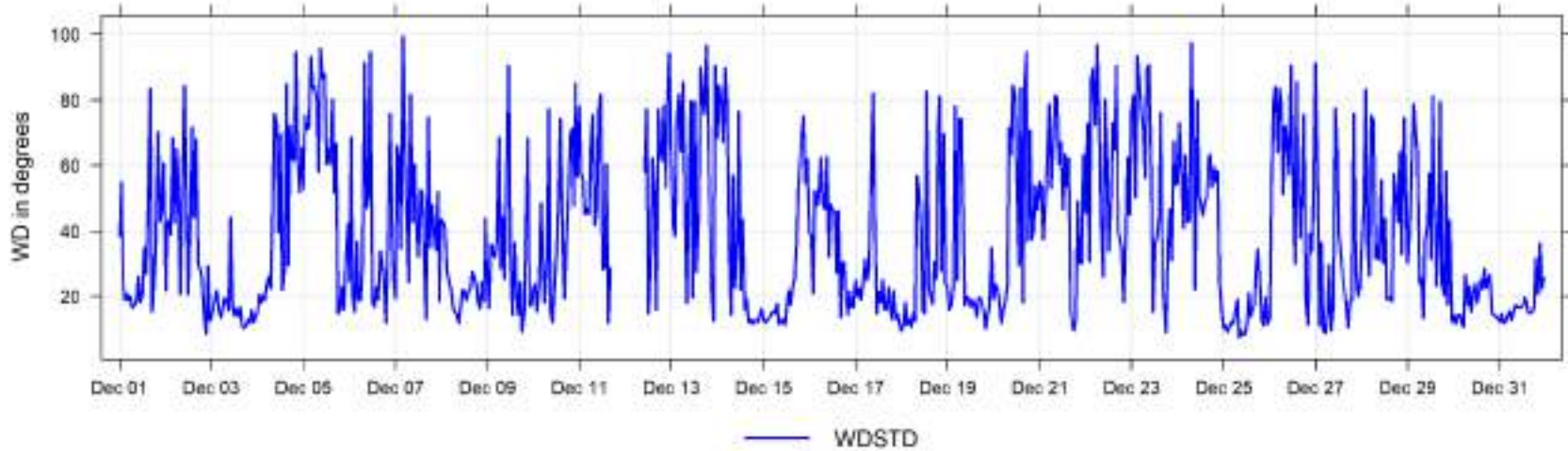
December 2024 Hourly Readings of Wind Speed (in km/hr) at Dunes

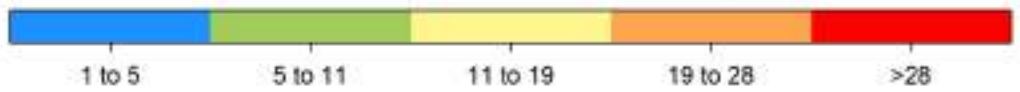
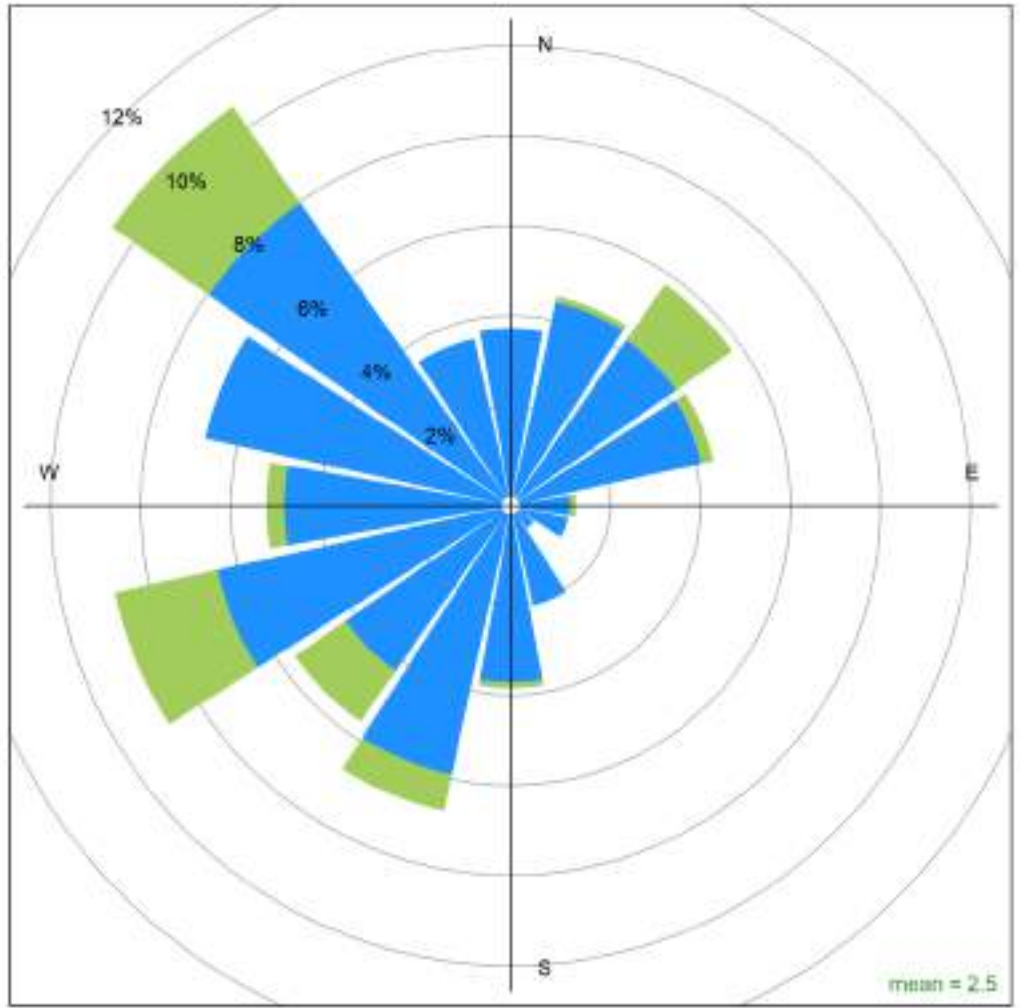


December 2024 Hourly Readings of Wind Direction (in degrees) at Dunes



December 2024 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Dunes



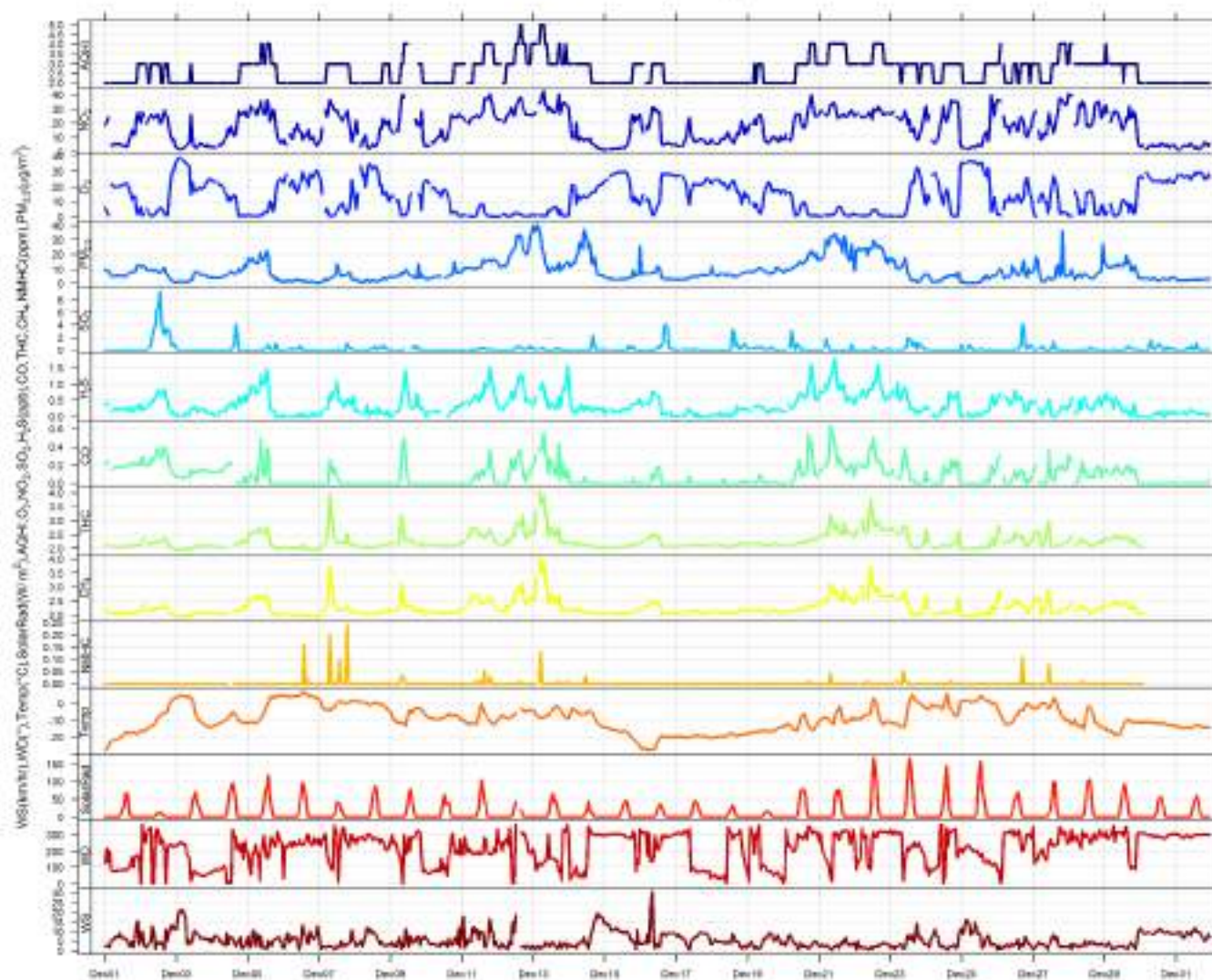


Dunes December 2024 Wind Rose, wind speed in km/hr
Calms (<1km/hr) = 25.7 %

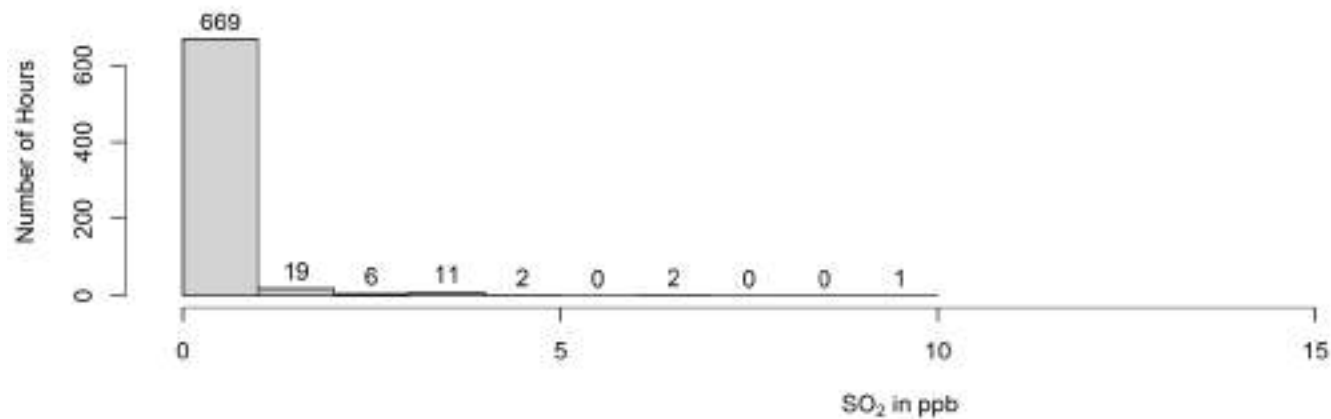
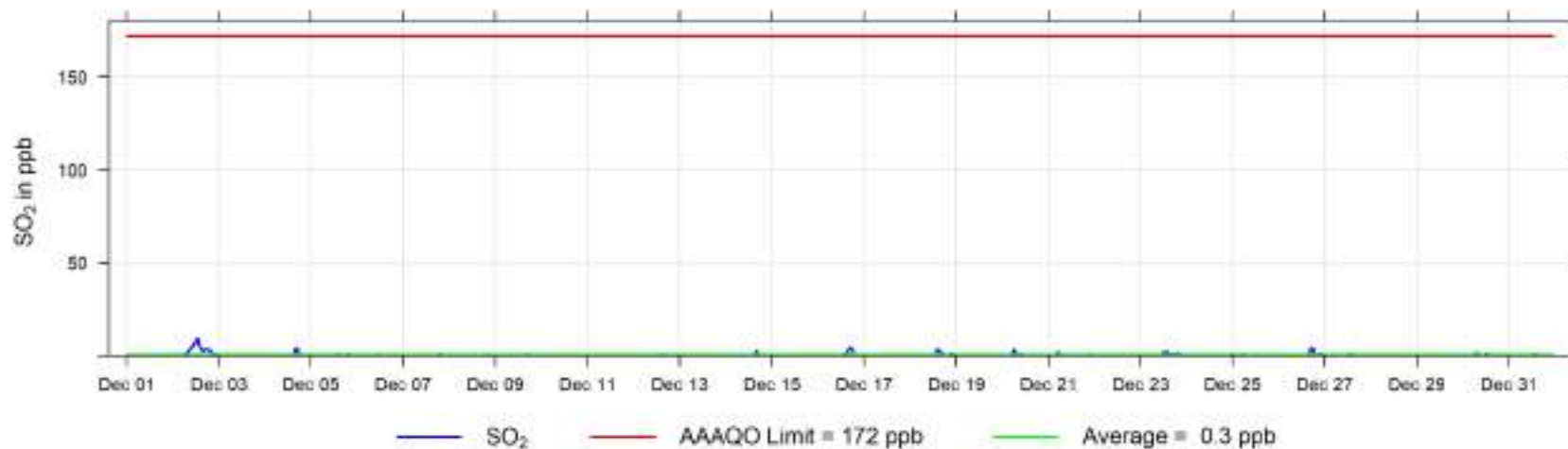
4 Grande Prairie - Henry Pirker Charts

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

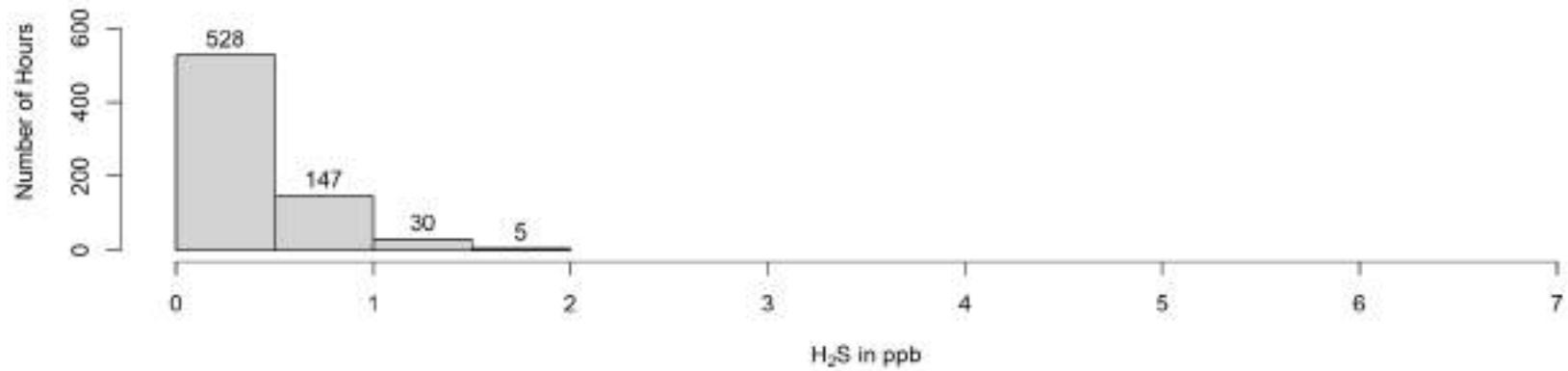
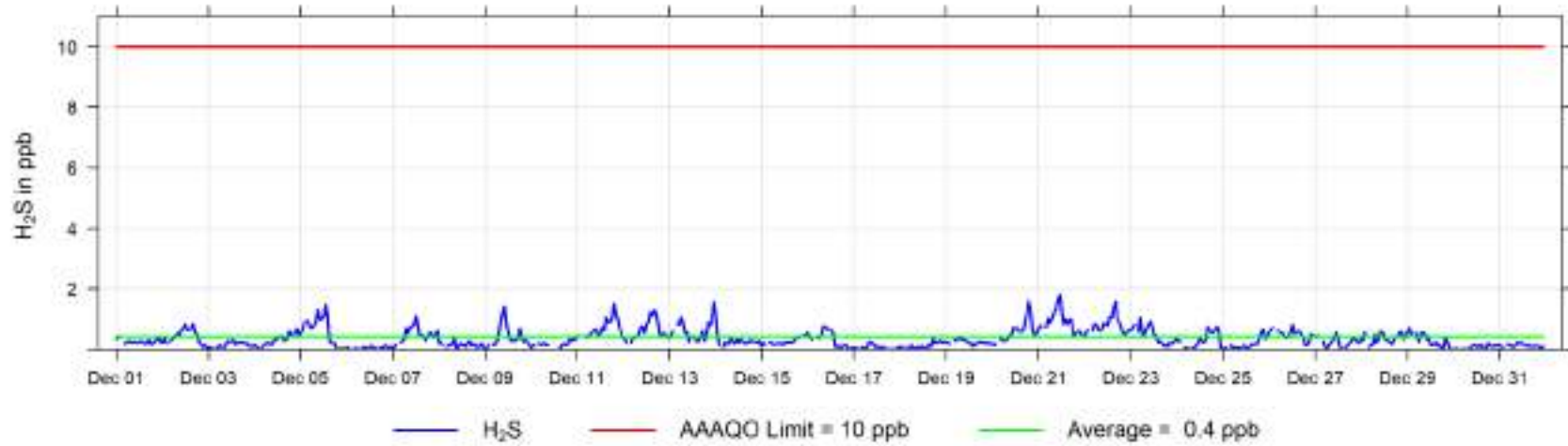
December 2024 Concentration Readings at Henry Pirker Station



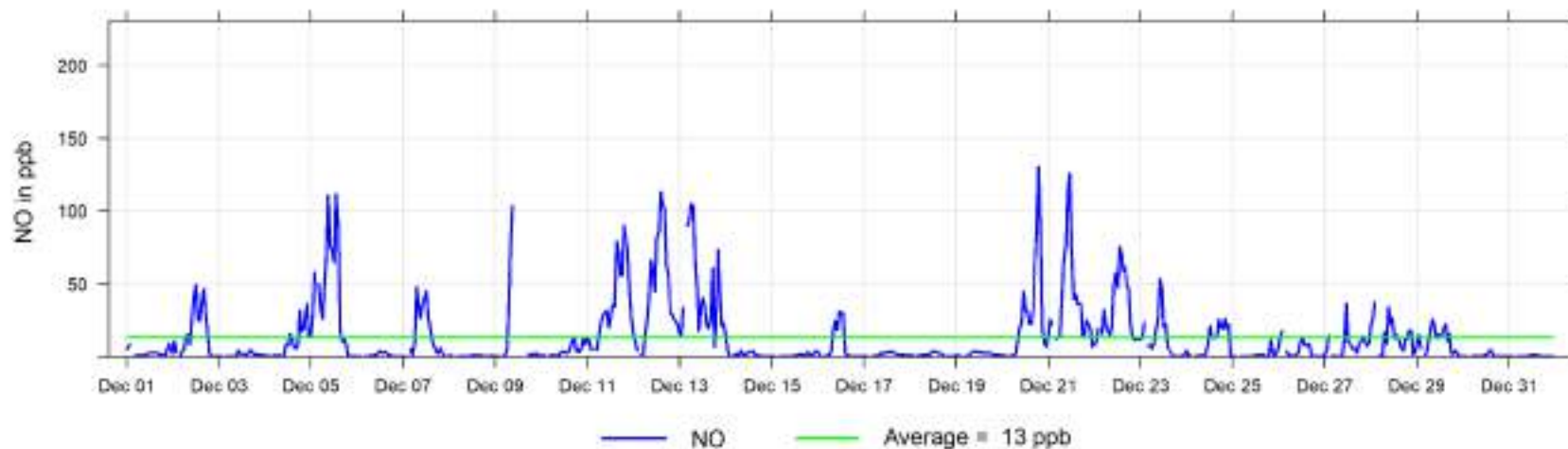
December 2024 Hourly Concentration Readings of SO₂ (in ppb) at Henry Pirker



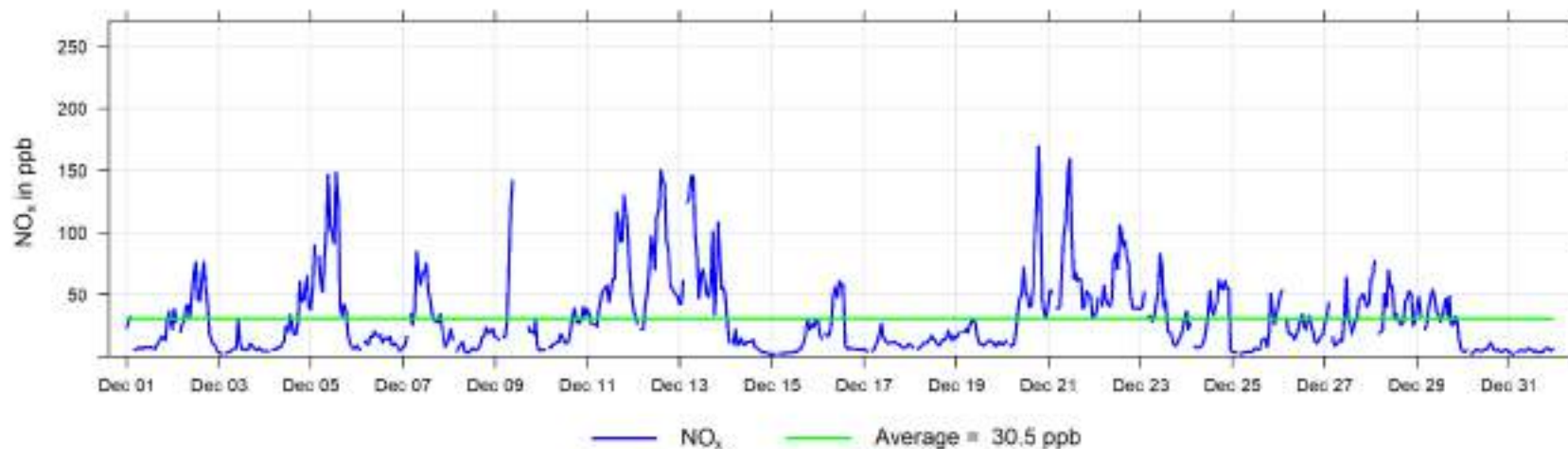
December 2024 Hourly Concentration Readings of H₂S (in ppb) at Henry Pirker



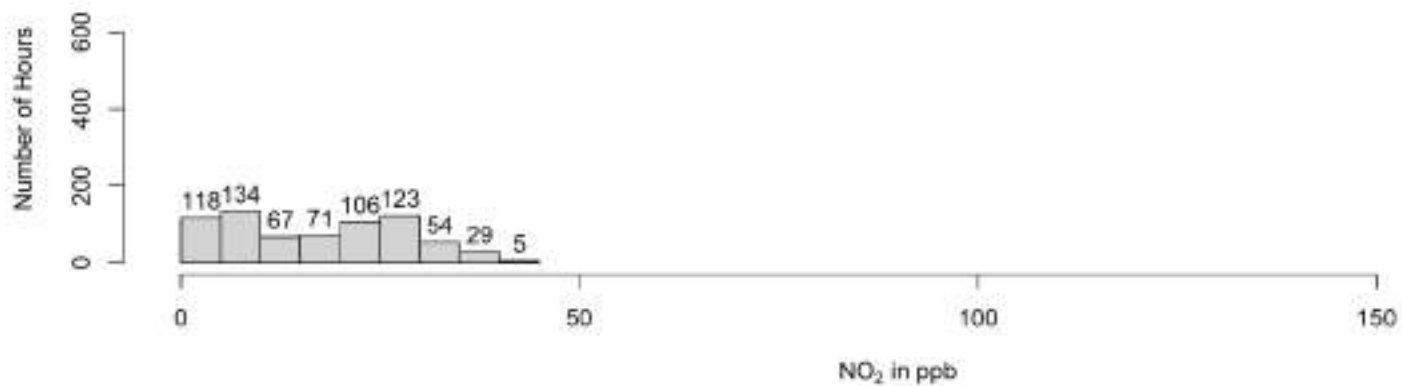
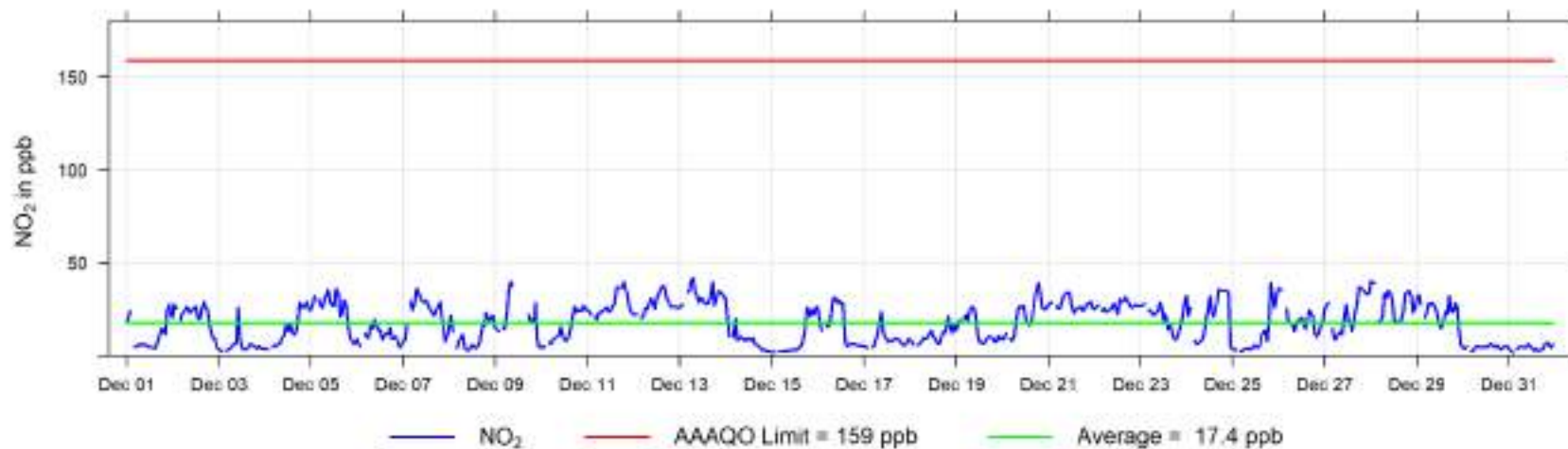
December 2024 Hourly Concentration Readings of NO (in ppb) at Henry Pirker



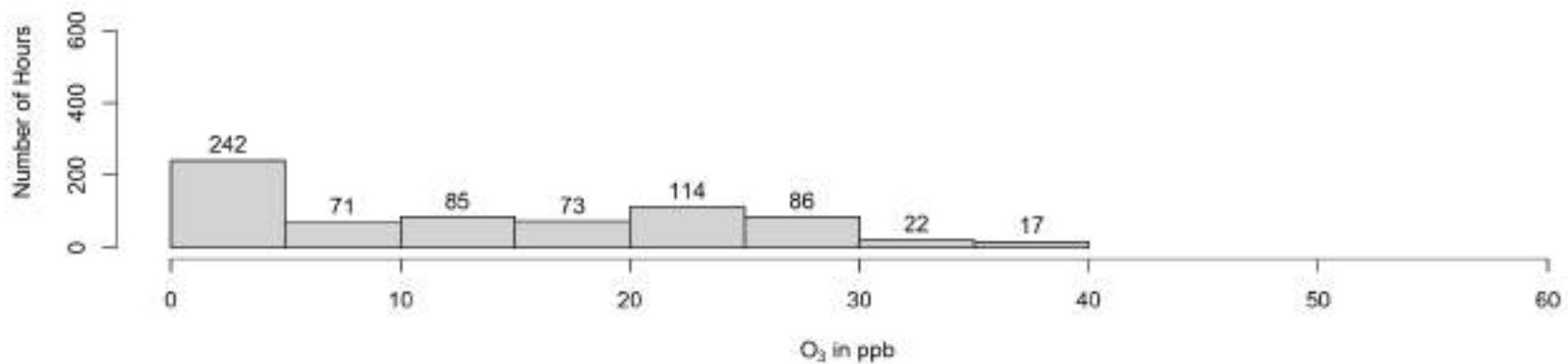
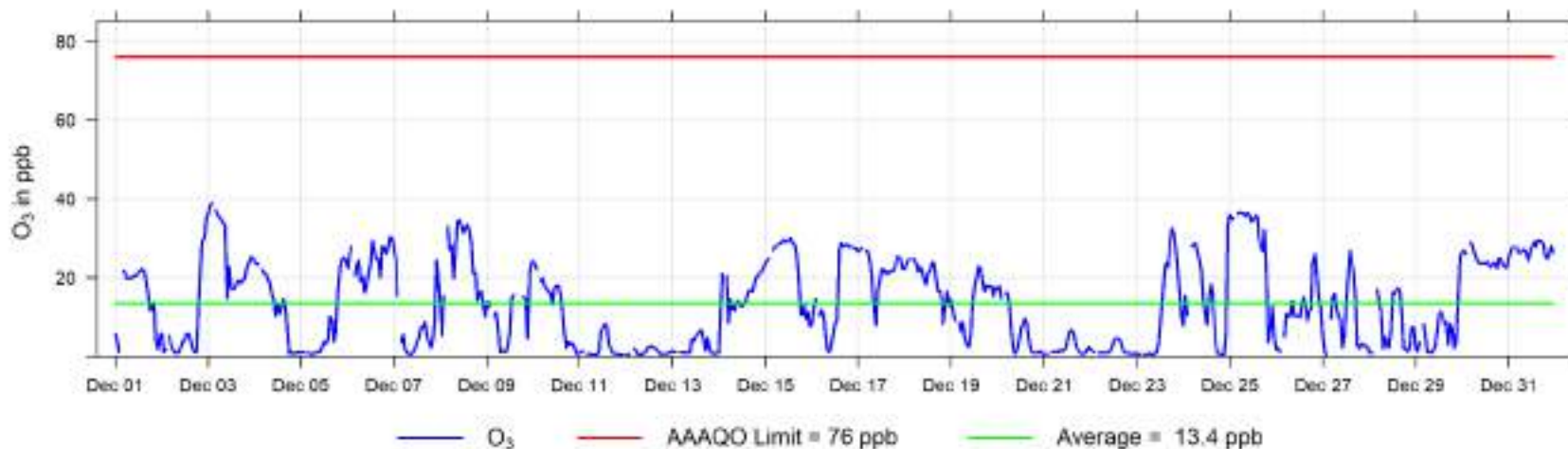
December 2024 Hourly Concentration Readings of NO_x (in ppb) at Henry Pirker



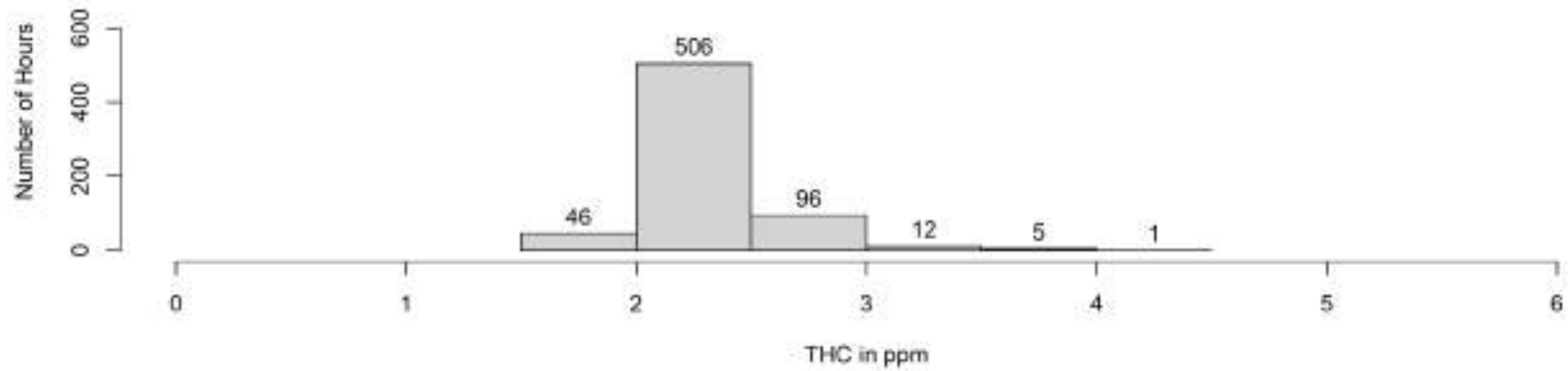
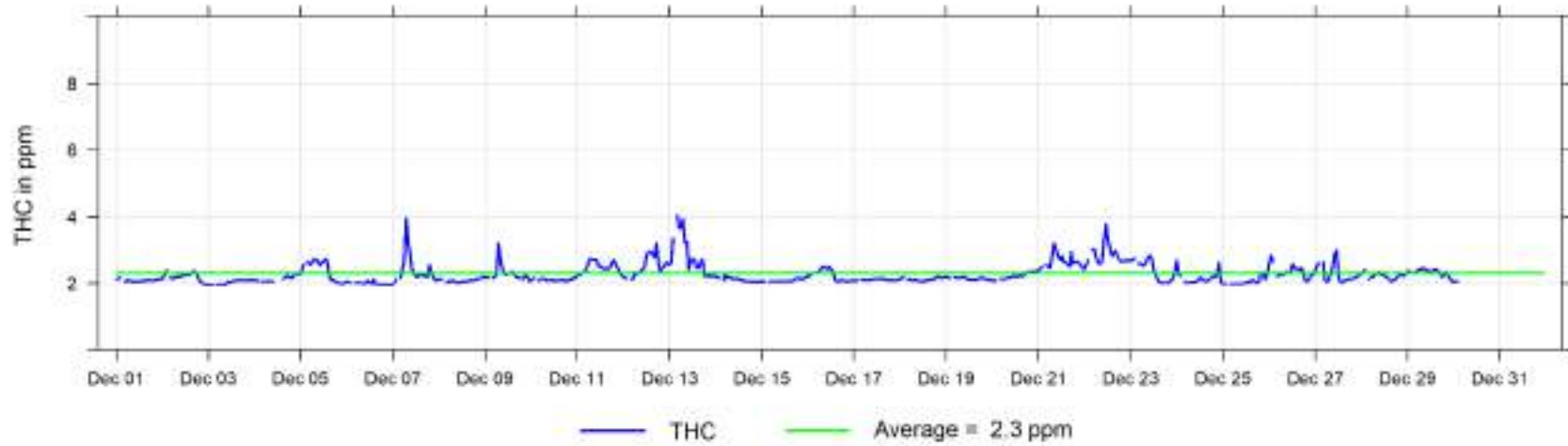
December 2024 Hourly Concentration Readings of NO₂ (in ppb) at Henry Pirker



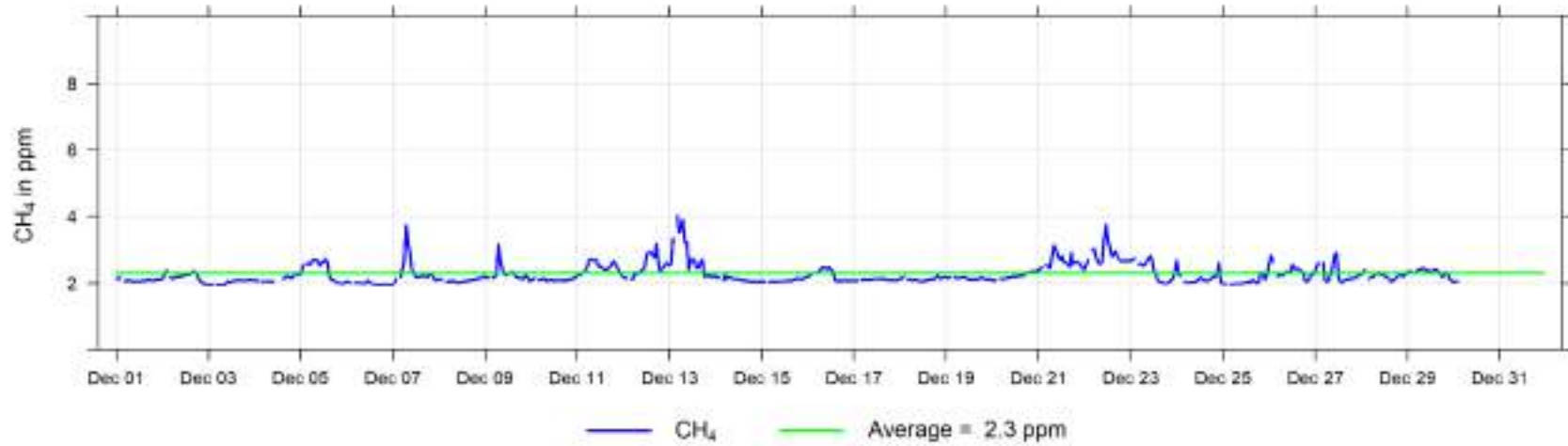
December 2024 Hourly Concentration Readings of O₃ (in ppb) at Henry Pirker



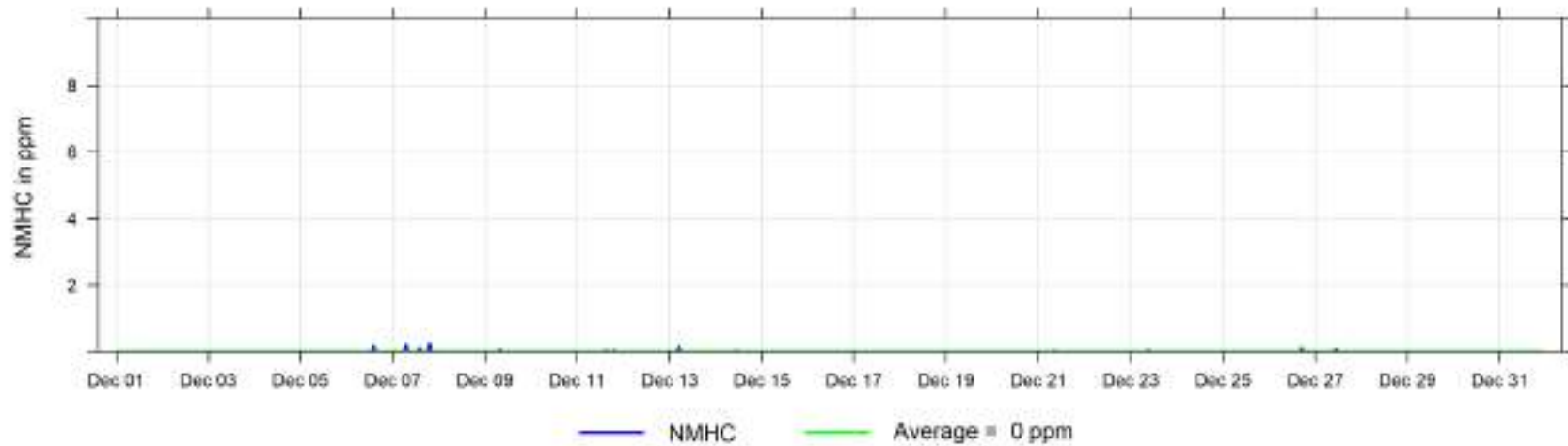
December 2024 Hourly Concentration Readings of THC (in ppm) at Henry Pirker



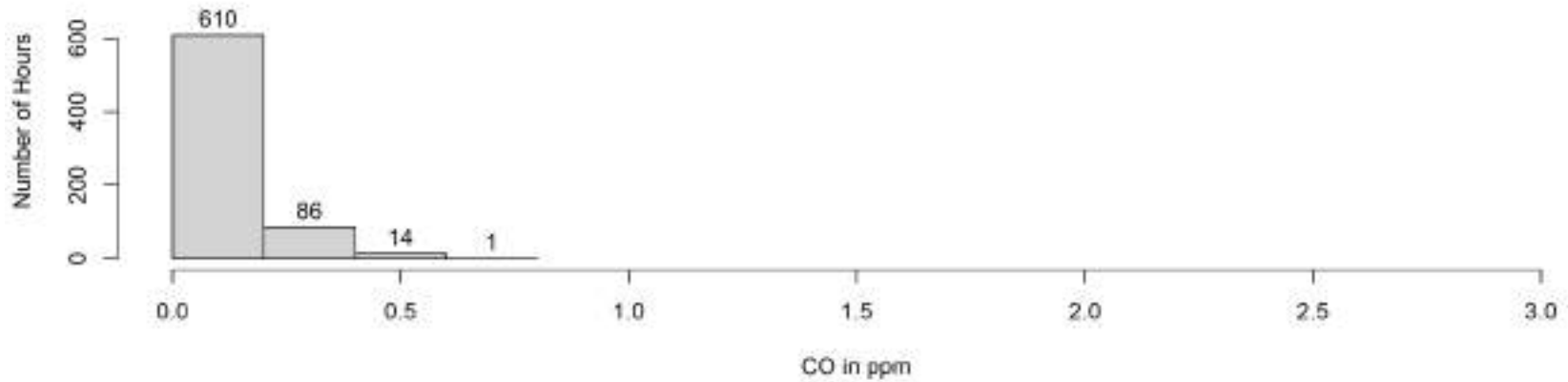
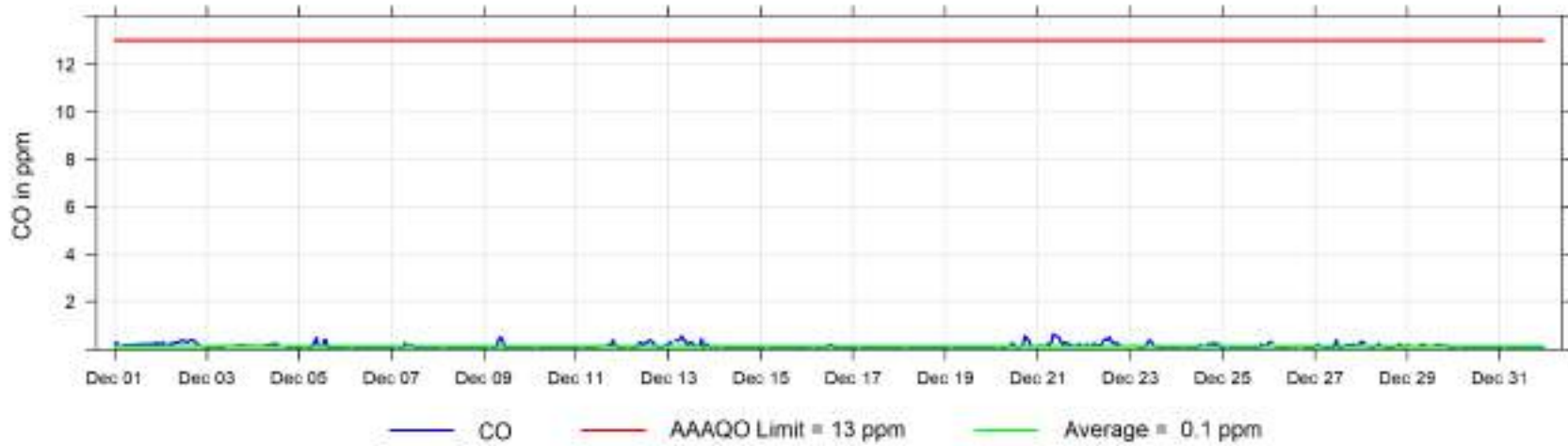
December 2024 Hourly Concentration Readings of CH₄ (in ppm) at Henry Pirker



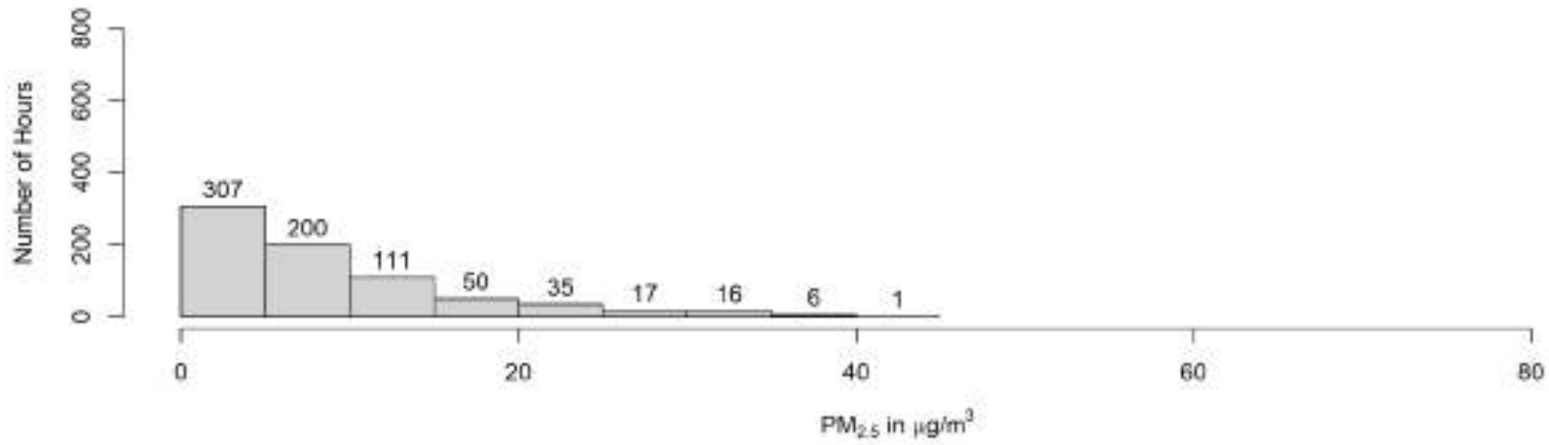
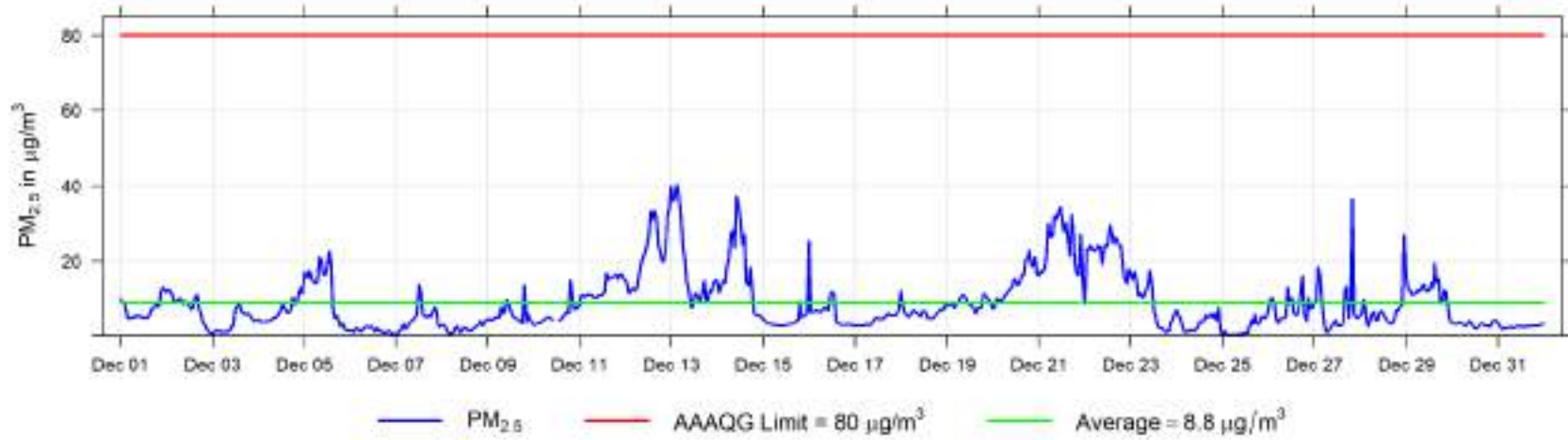
December 2024 Hourly Concentration Readings of NMHC (in ppm) at Henry Pirker



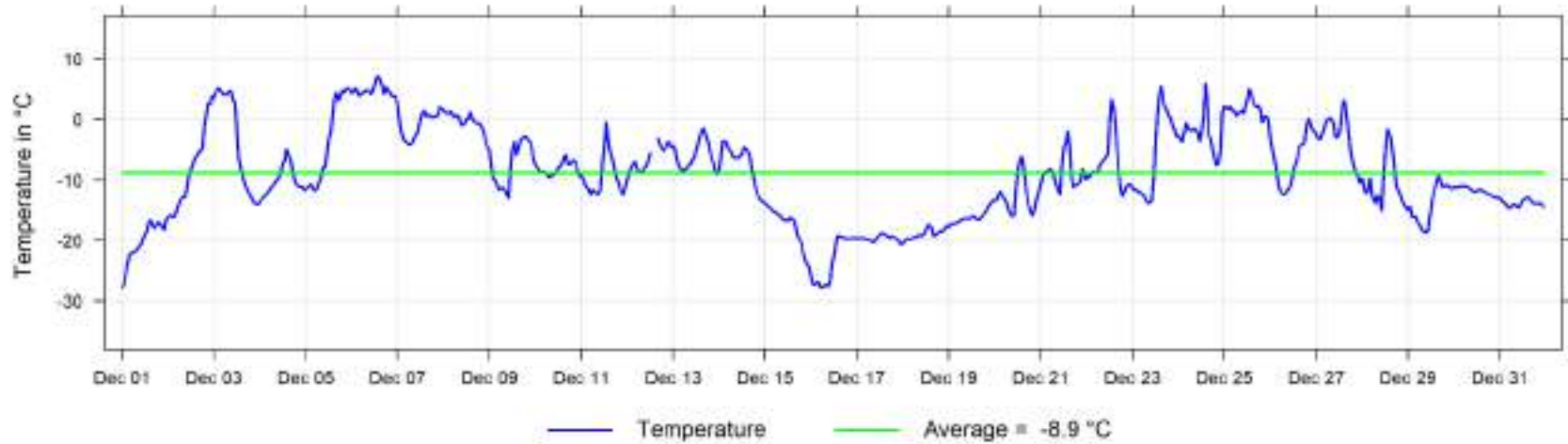
December 2024 Hourly Concentration Readings of CO (in ppm) at Henry Pirker



December 2024 Hourly Concentration Readings of PM_{2.5} in $\mu\text{g}/\text{m}^3$ at Henry Pirker



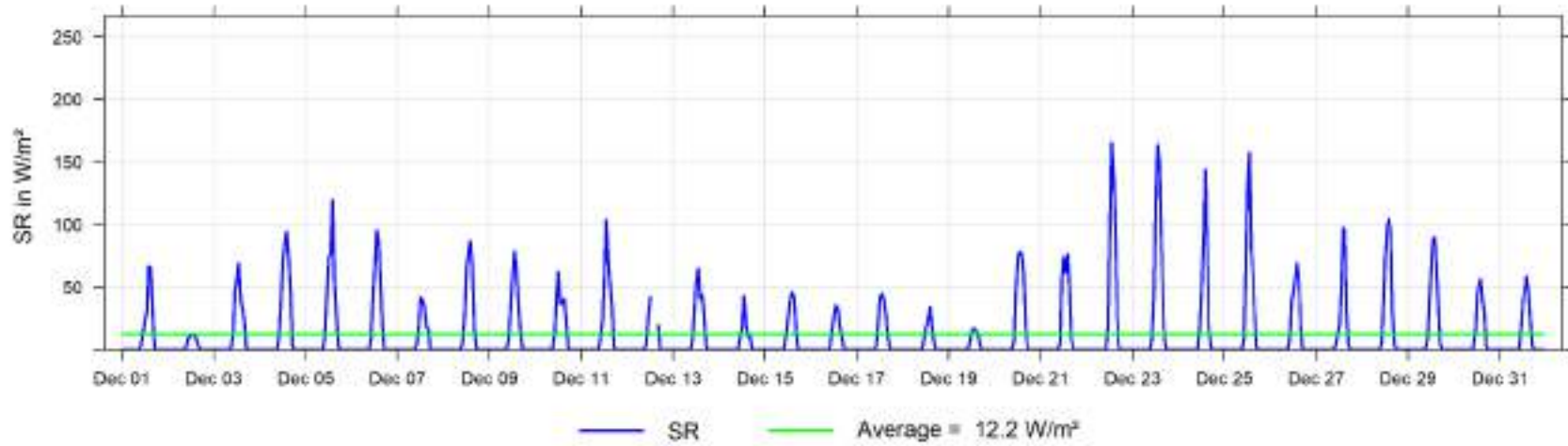
December 2024 Hourly Temperature Readings (in °C) at Henry Pirker



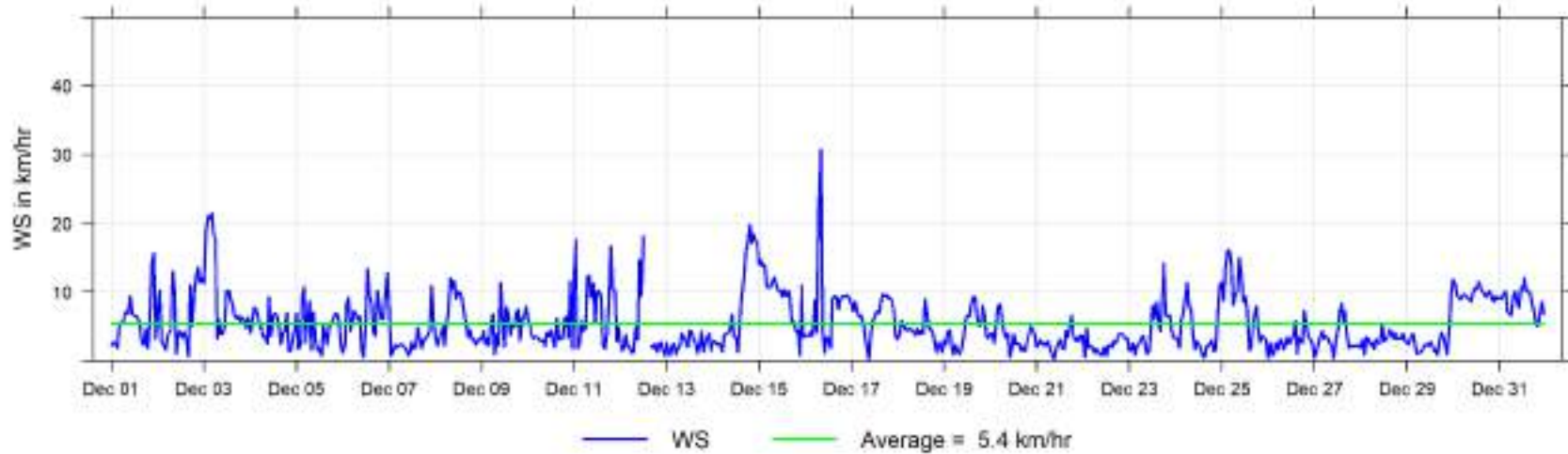
December 2024 Hourly Readings of Relative Humidity (in %) at Henry Pirker



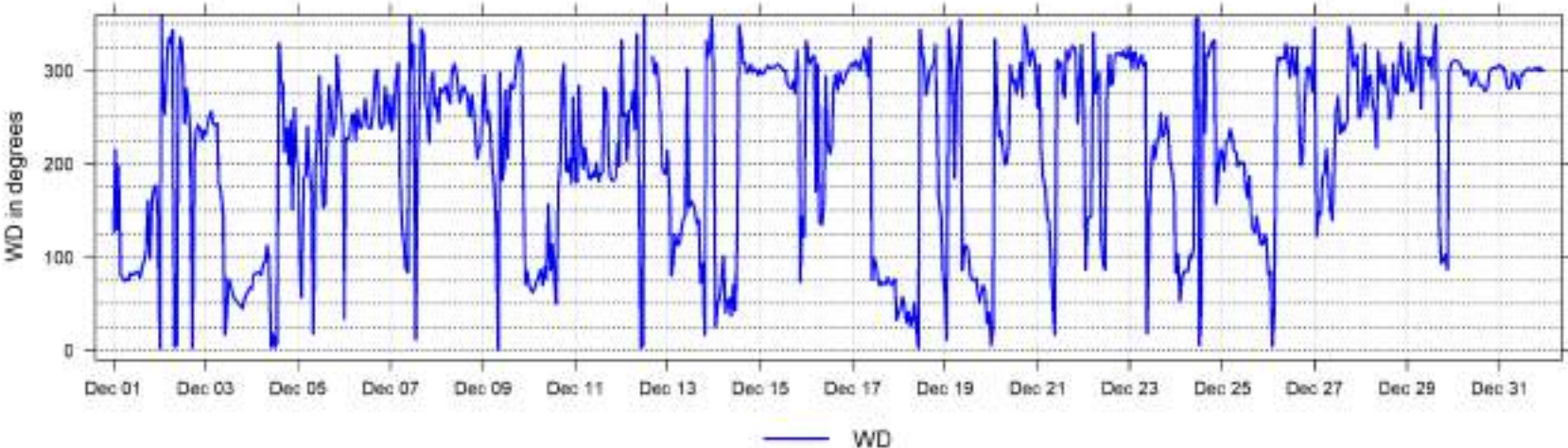
December 2024 Hourly Readings of Solar Radiation (in W/m²) at Henry Pirker



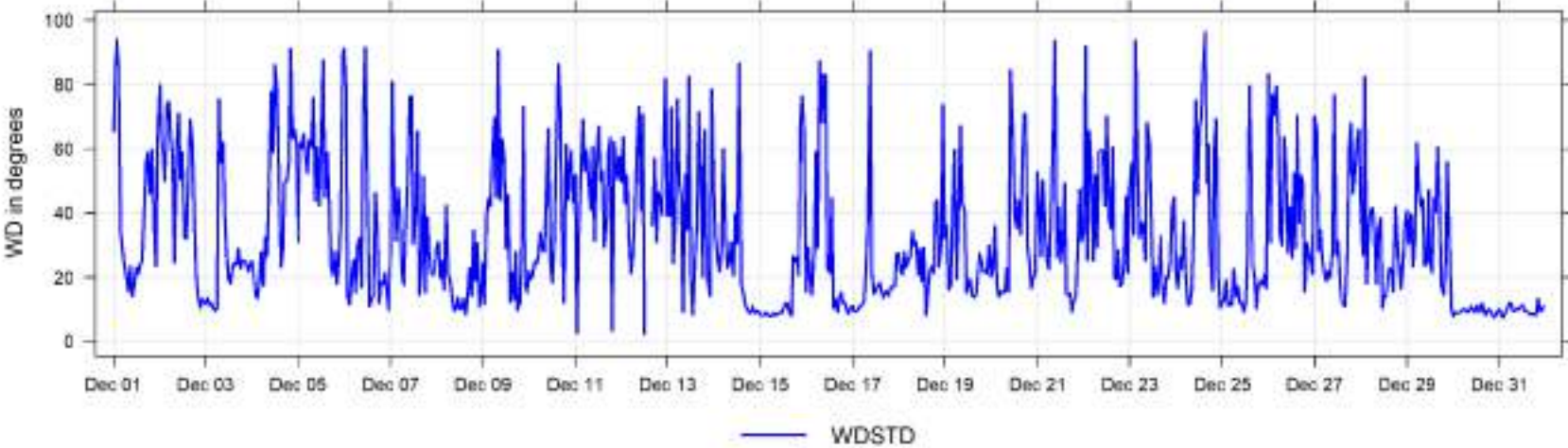
December 2024 Hourly Readings of Wind Speed (in km/hr) at Henry Pirker

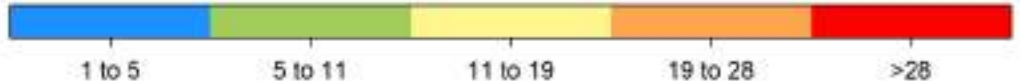
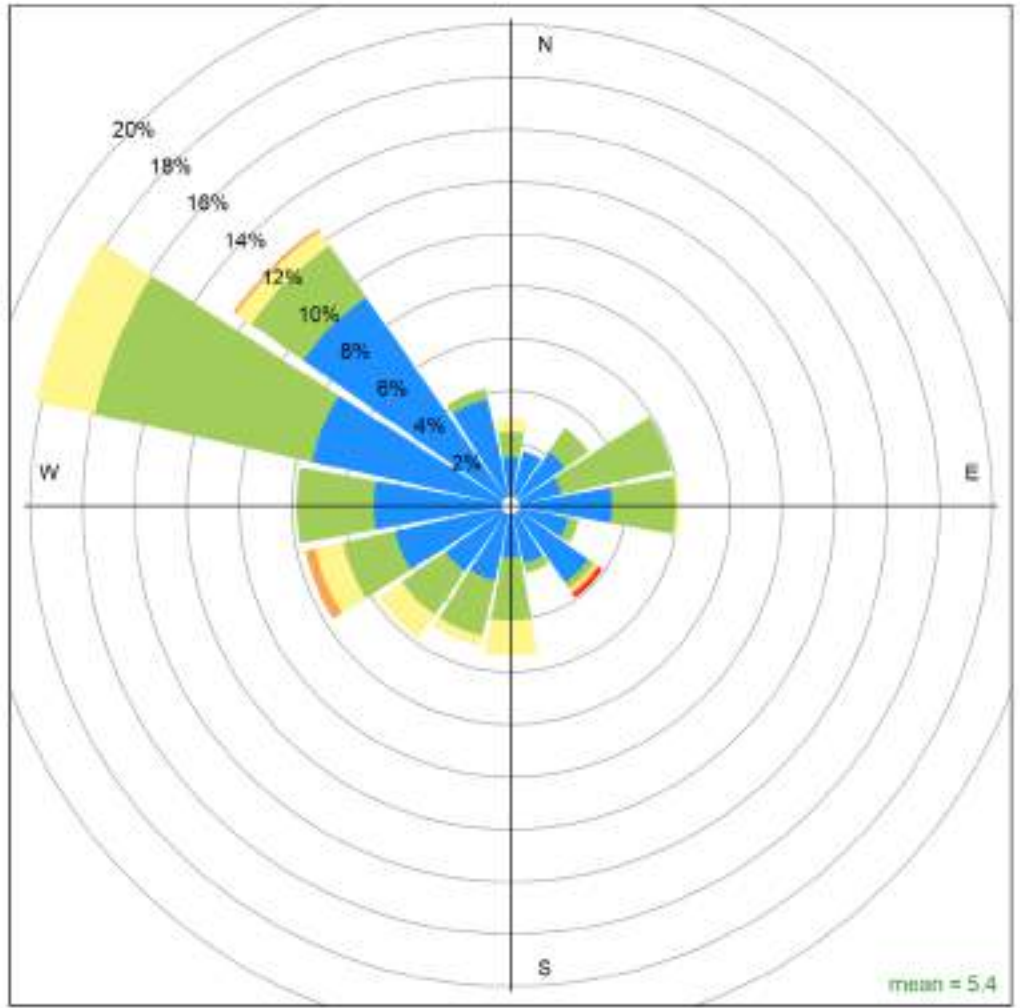


December 2024 Hourly Readings of Wind Direction (in degrees) at Henry Pirker



December 2024 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Henry Pirker

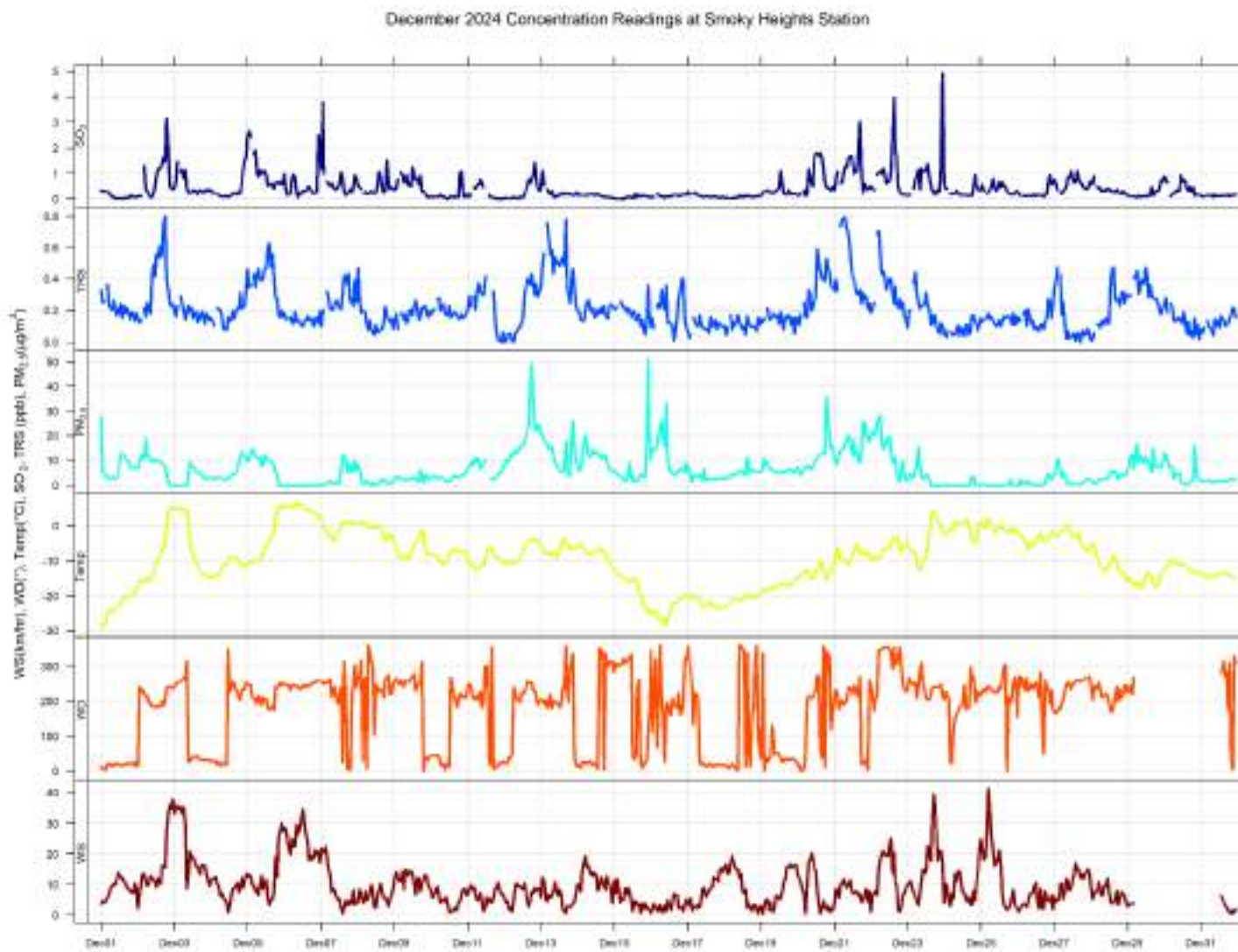




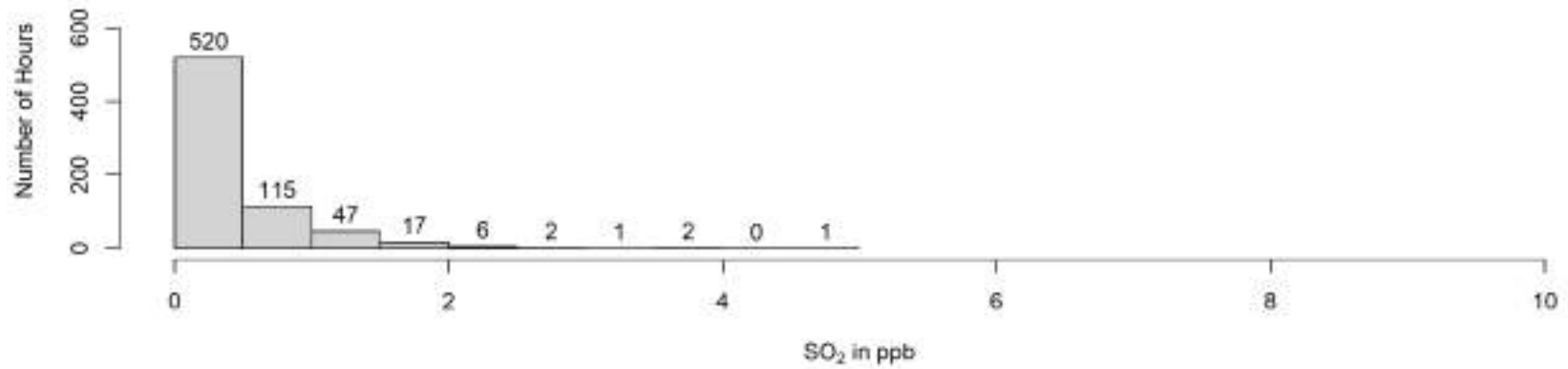
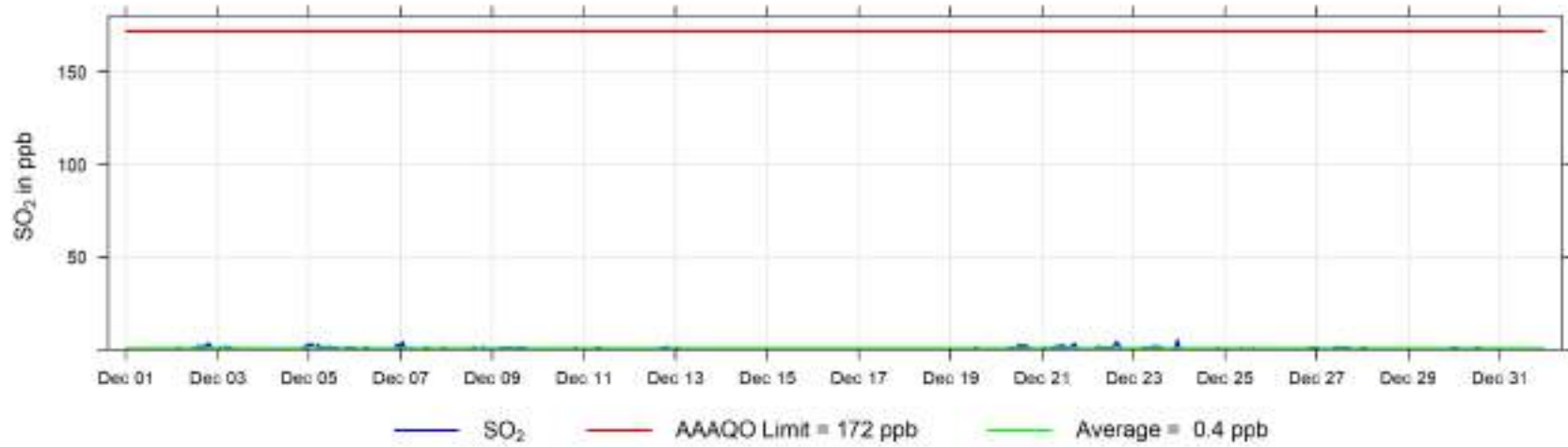
Henry Pirker December 2024 Wind Rose, wind speed in km/hr
Calms (<1km/hr) = 4.7 %

5 Smoky Heights Charts

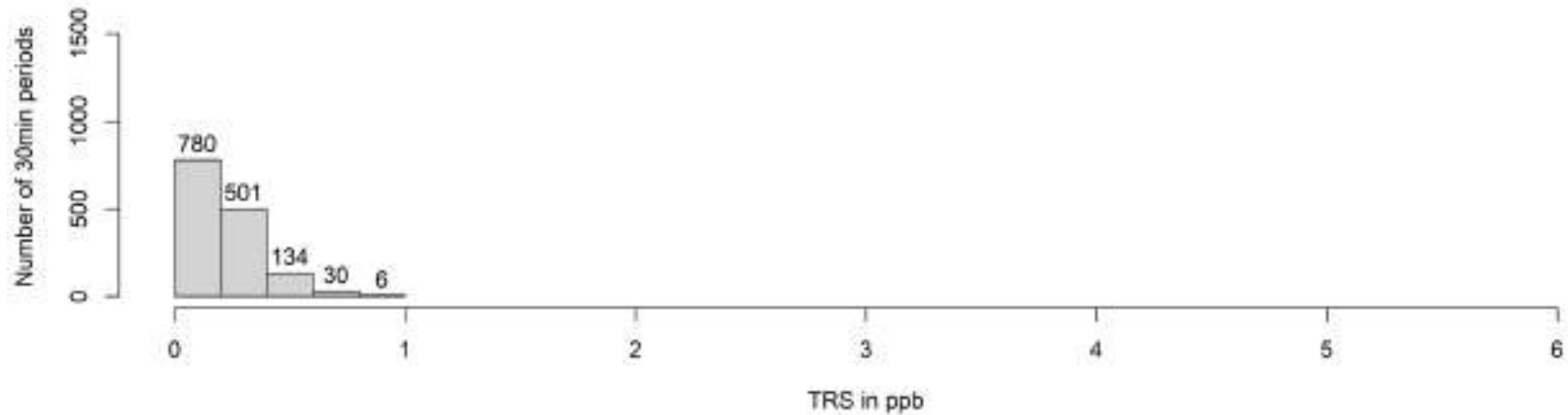
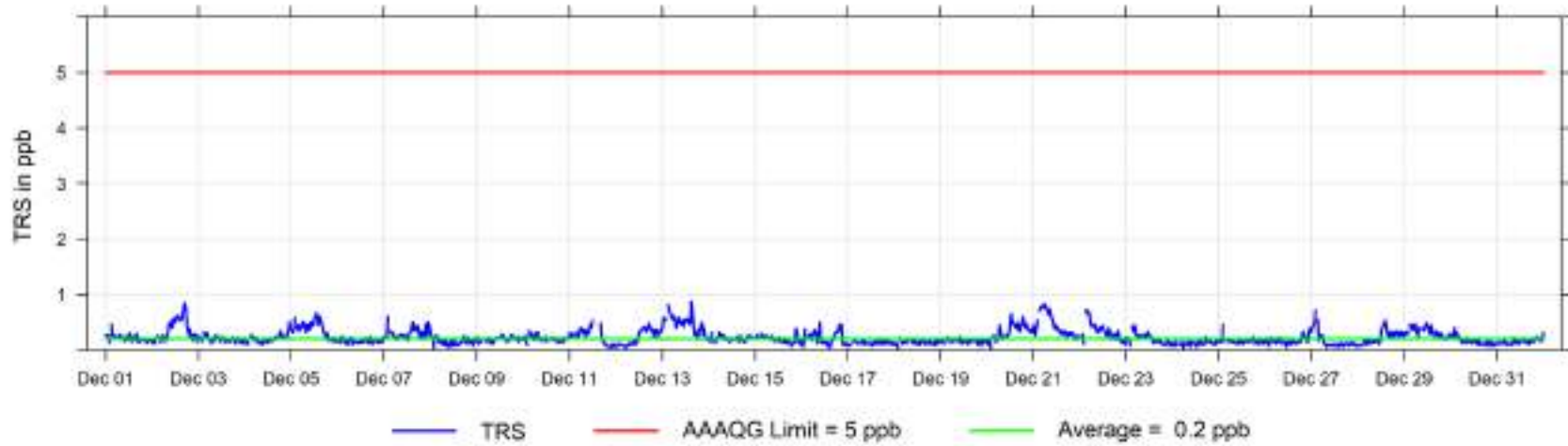
The following pages include the charts and histograms for Smoky Heights Station



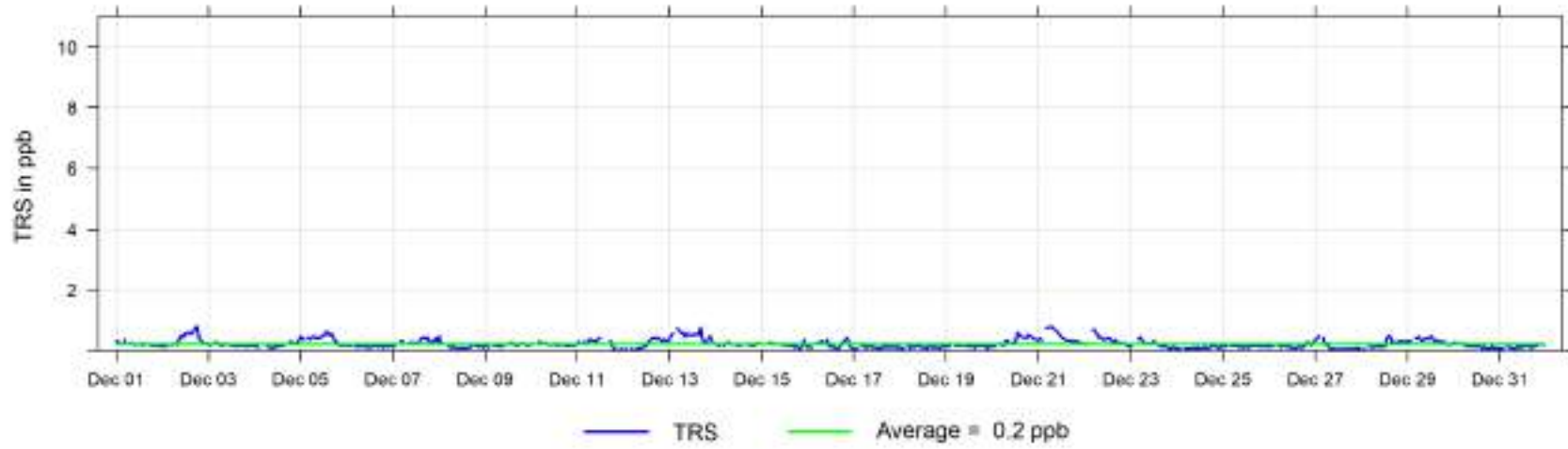
December 2024 Hourly Concentration Readings of SO₂ (in ppb) at Smoky Heights



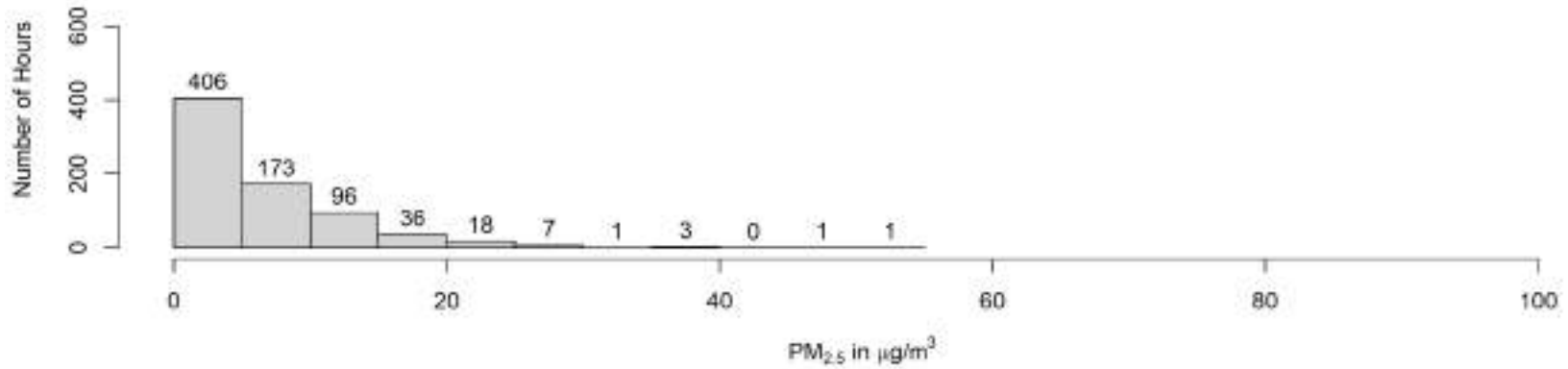
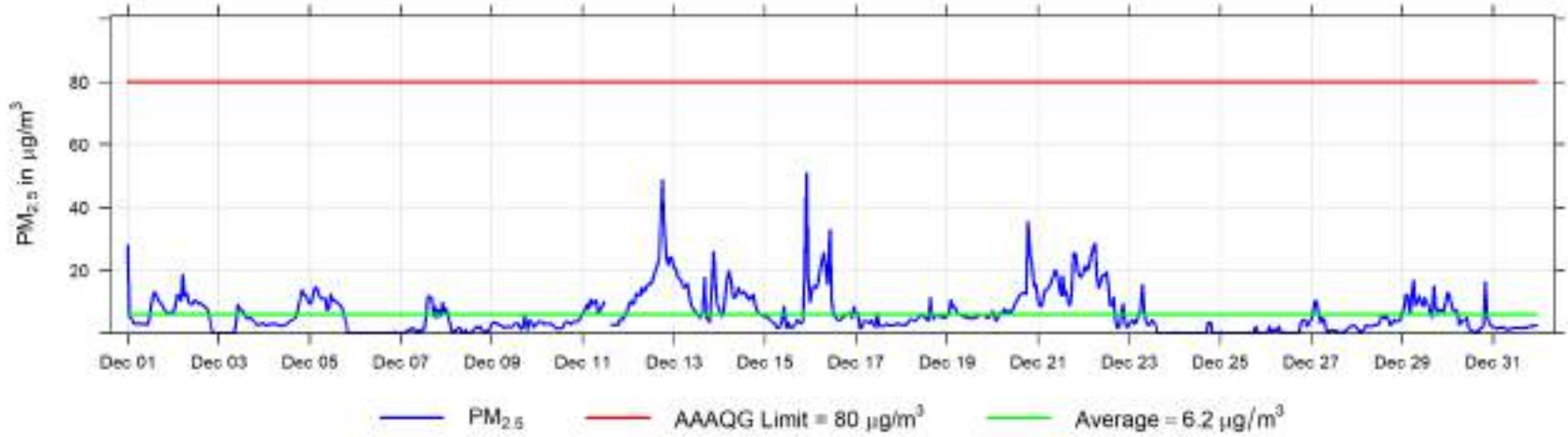
December 2024 30 min Concentration Readings of TRS (in ppb) at Smoky Heights



December 2024 Hourly Concentration Readings of TRS (in ppb) at Smoky Heights



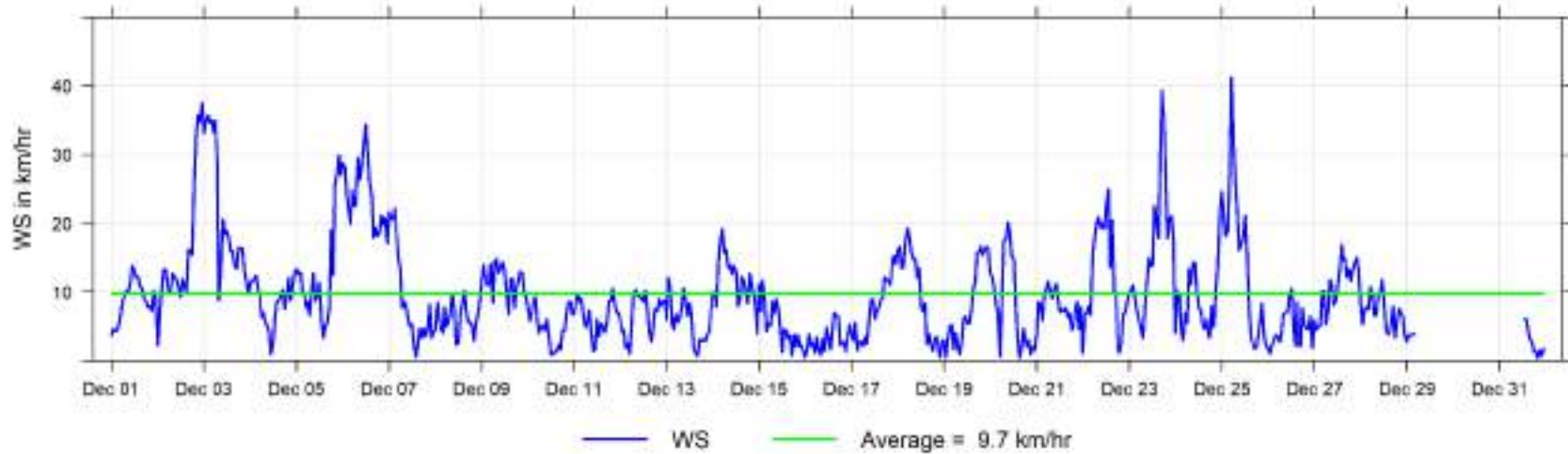
December 2024 Hourly Concentration Readings of PM_{2.5} in $\mu\text{g}/\text{m}^3$ at Smoky Heights



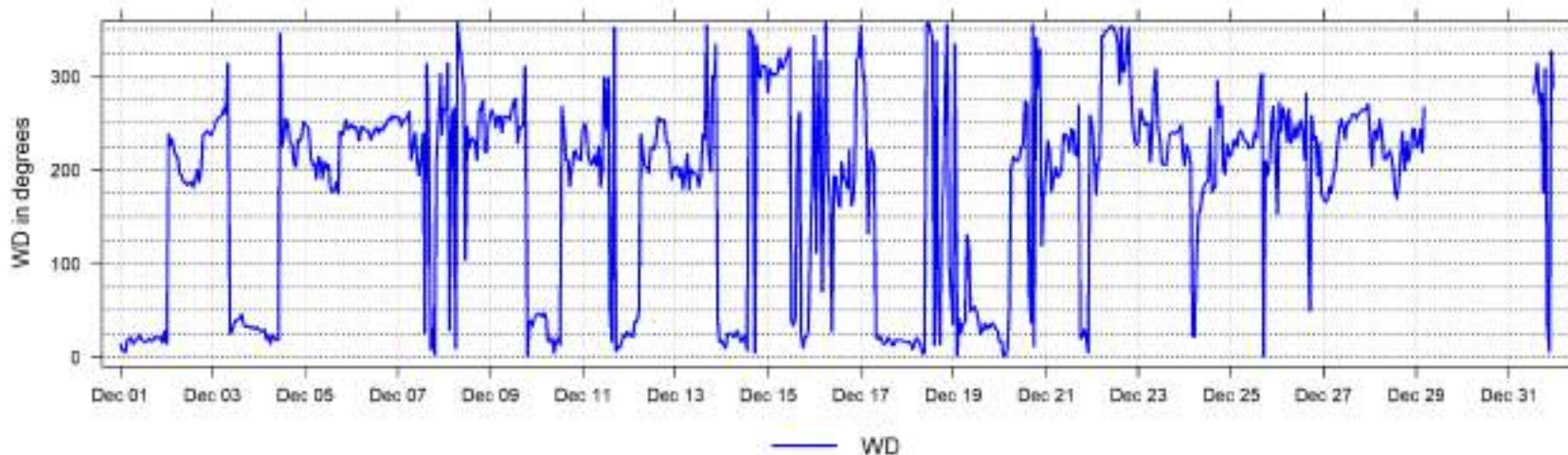
December 2024 Hourly Temperature Readings (in °C) at Smoky Heights



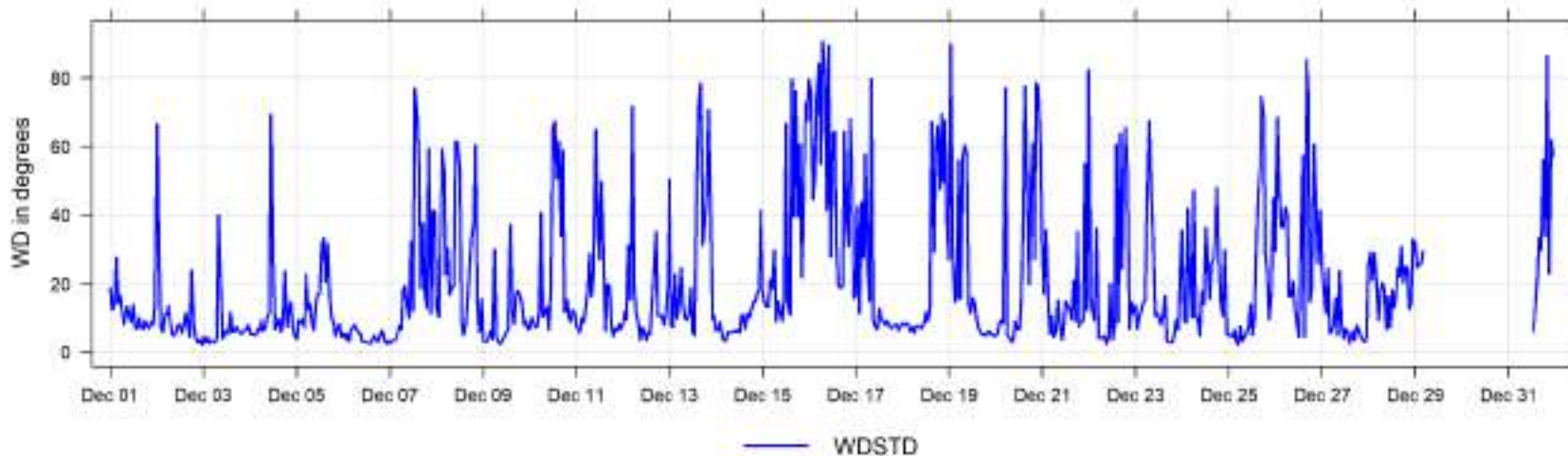
December 2024 Hourly Readings of Wind Speed (in km/hr) at Smoky Heights

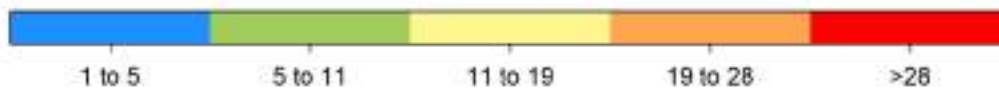
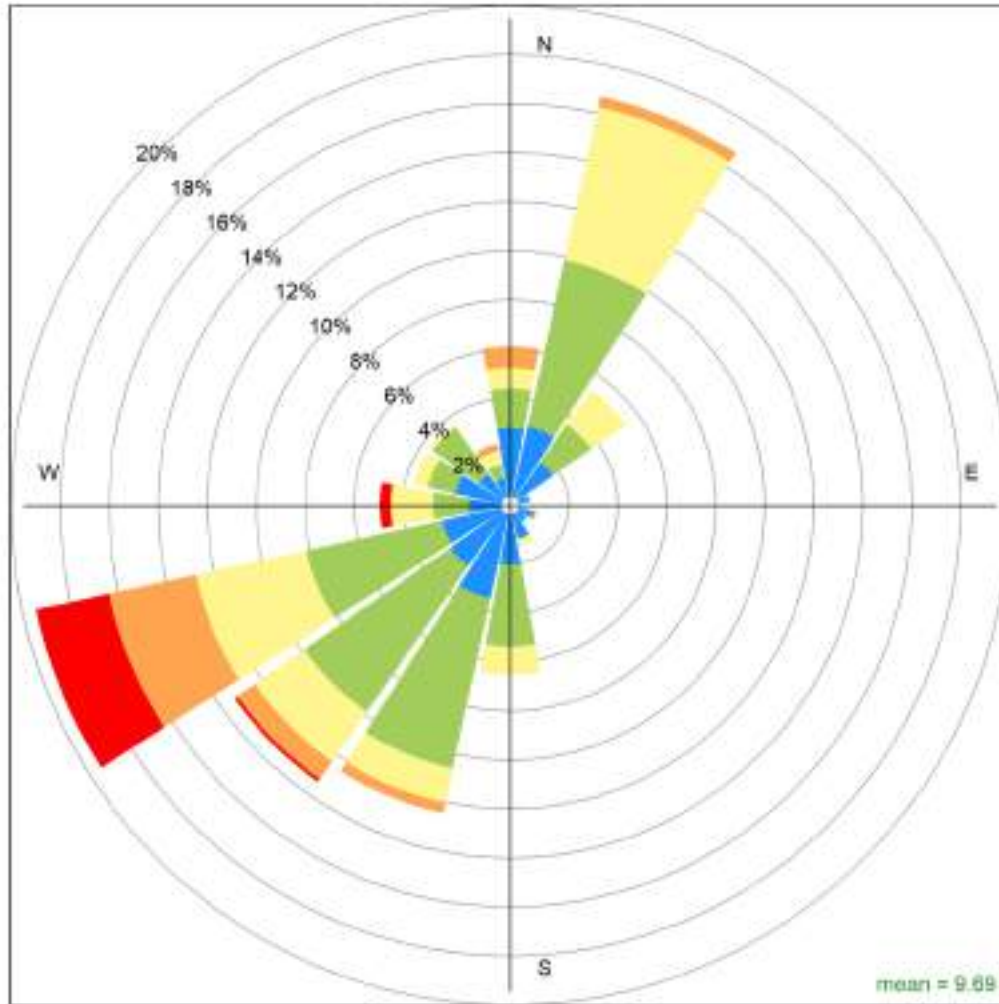


December 2024 Hourly Readings of Wind Direction (in degrees) at Smoky Heights



December 2024 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Smoky Heights



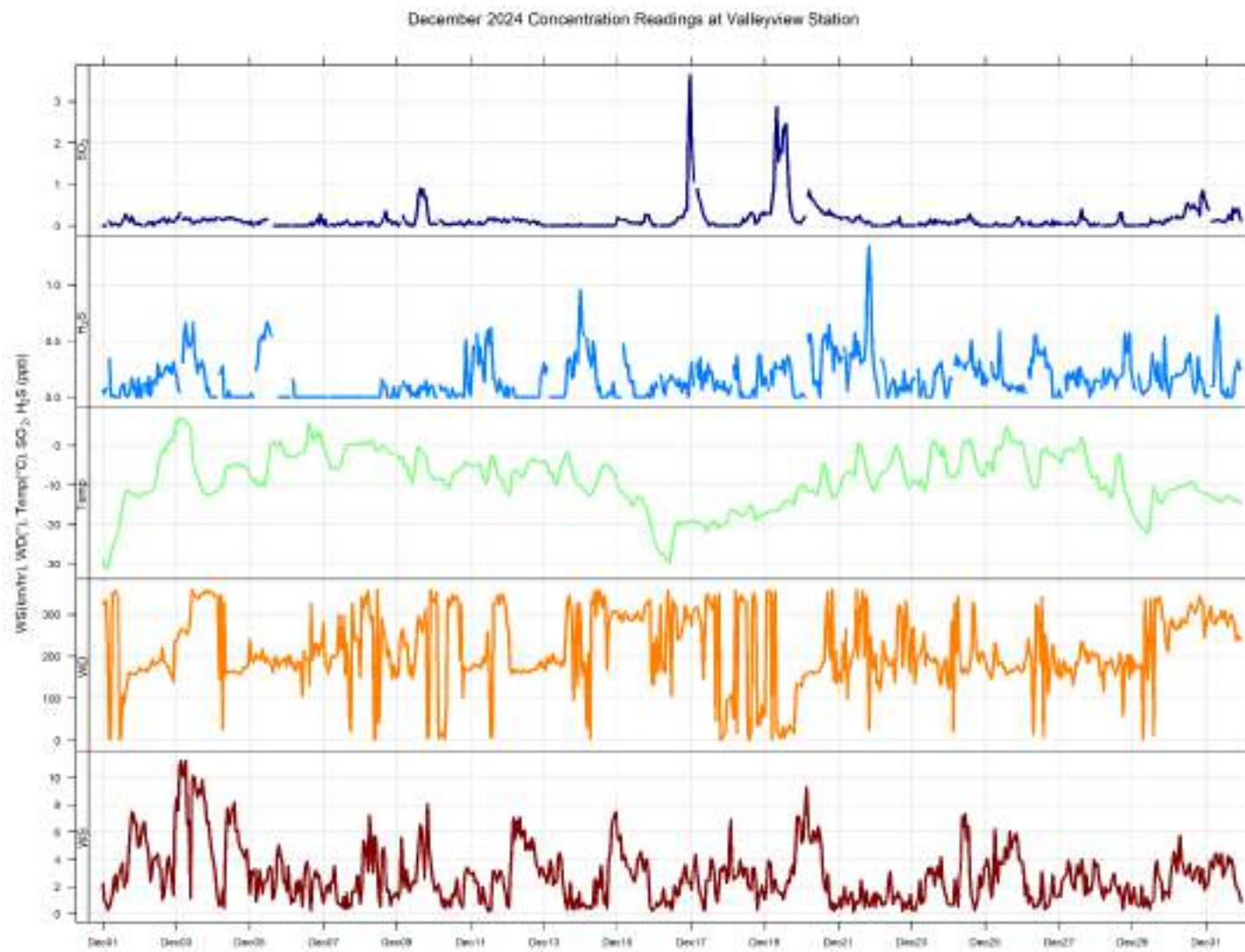


Smoky Heights December 2024 Wind Rose, wind speed in km/hr

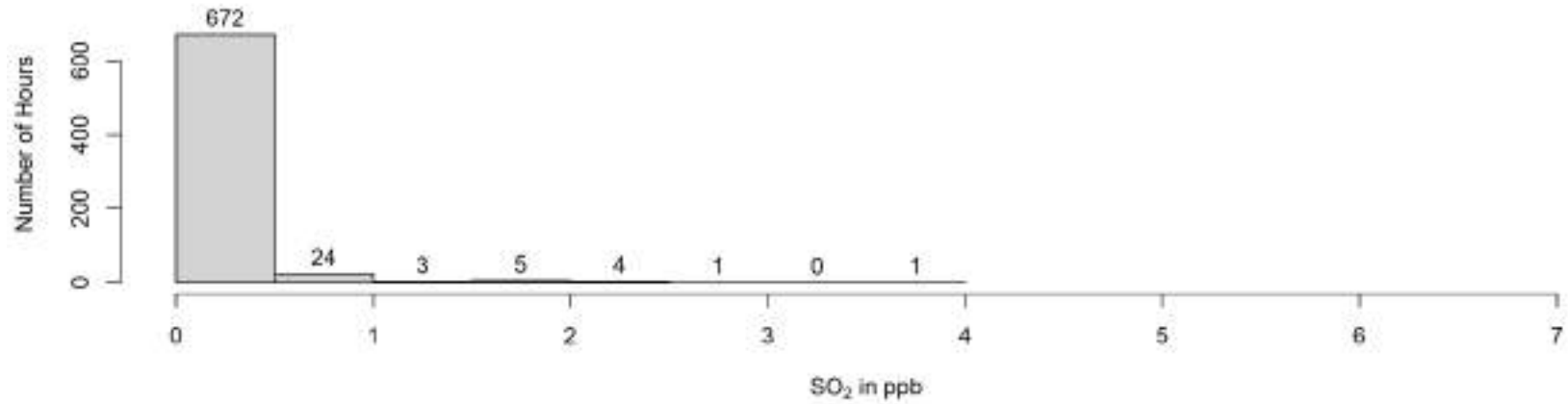
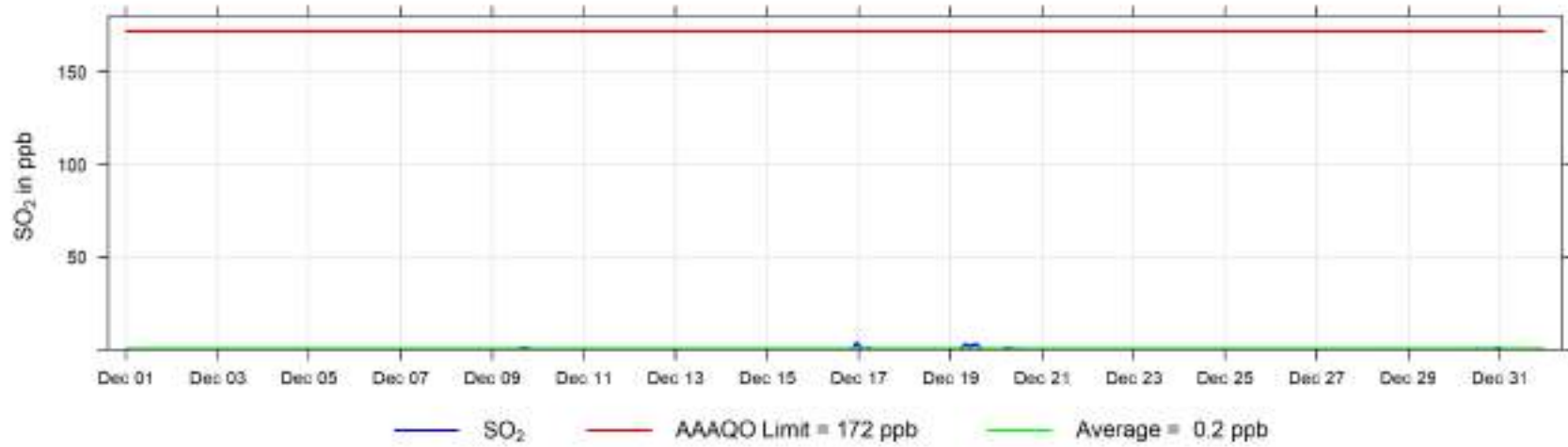
Calms (<1km/hr) = 2.8 %

6 Valleyview Charts

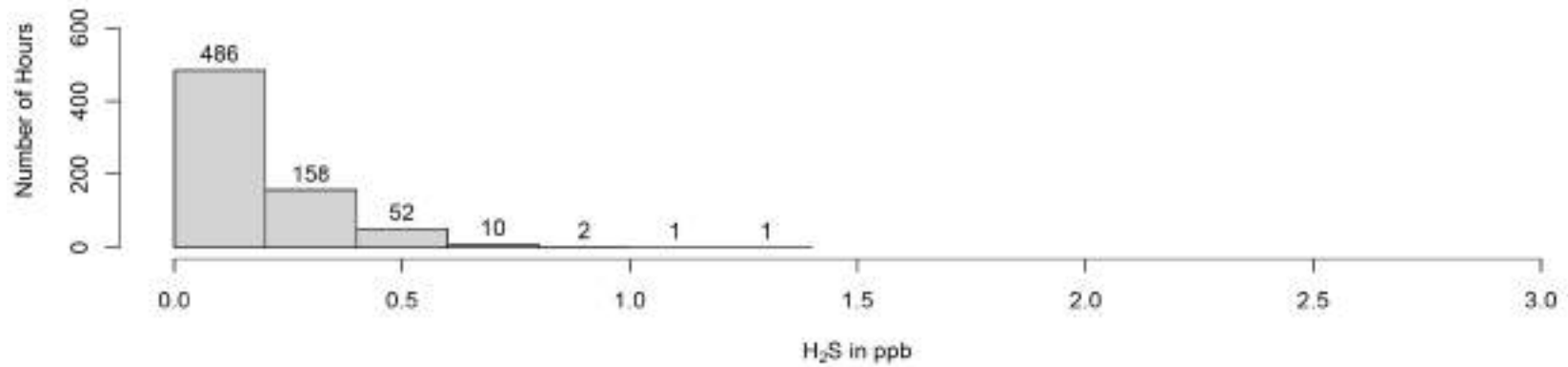
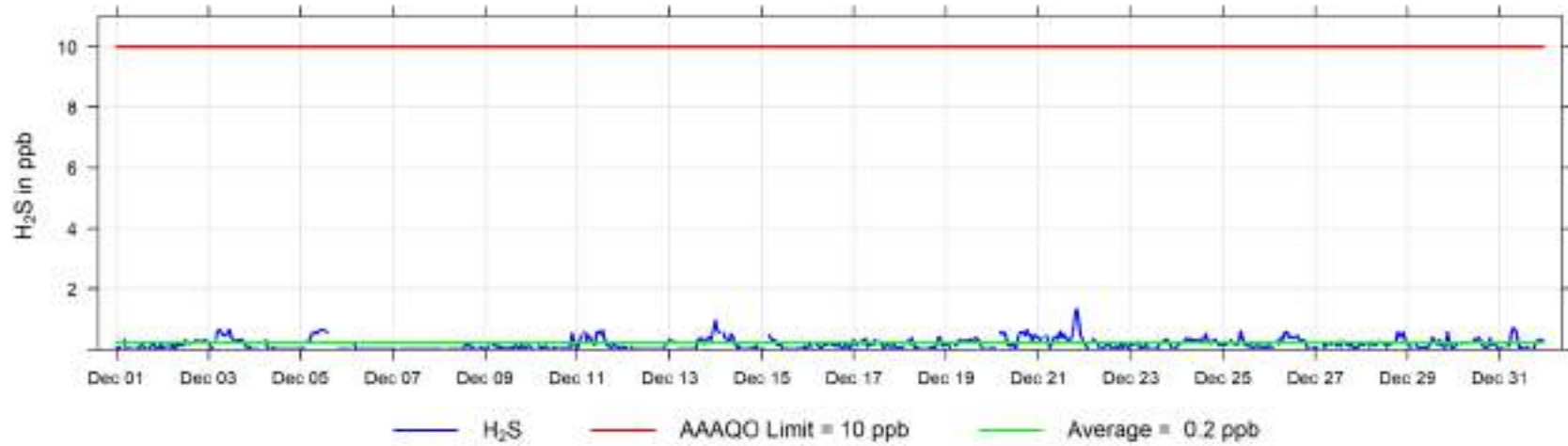
The following pages include the charts and histograms for Valleyview Station



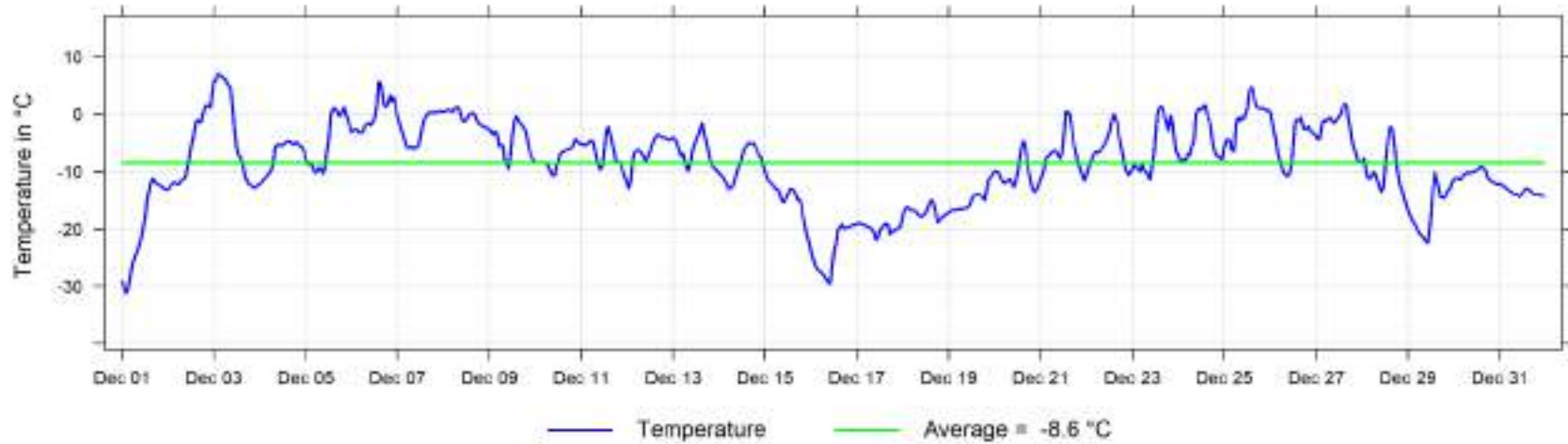
December 2024 Hourly Concentration Readings of SO₂ (in ppb) at Valleyview



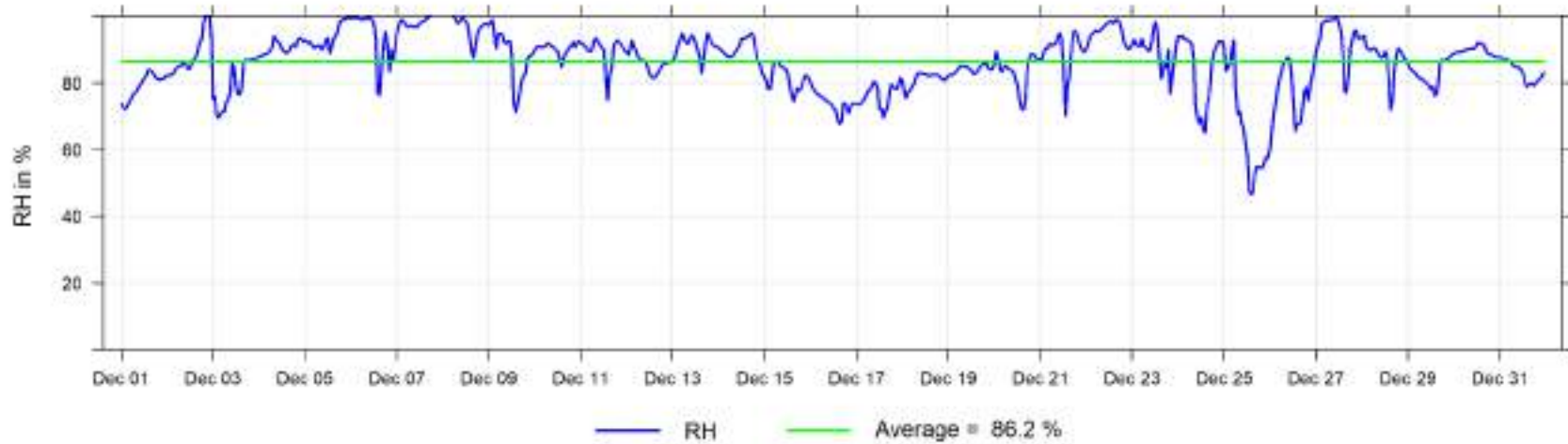
December 2024 Hourly Concentration Readings of H₂S (in ppb) at Valleyview



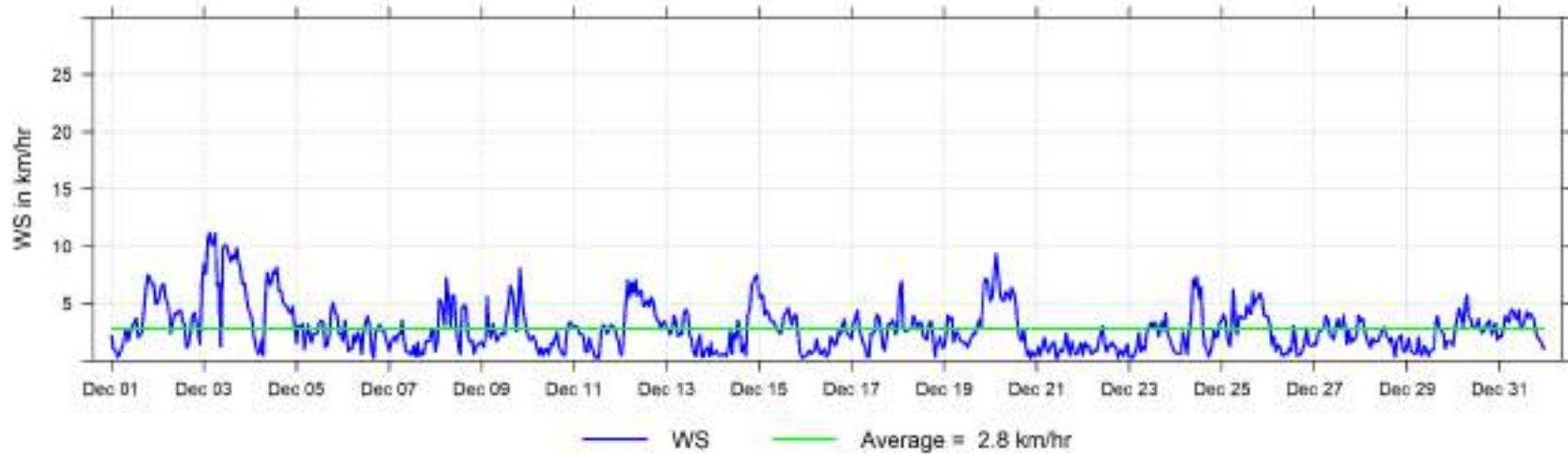
December 2024 Hourly Temperature Readings (in °C) at Valleyview



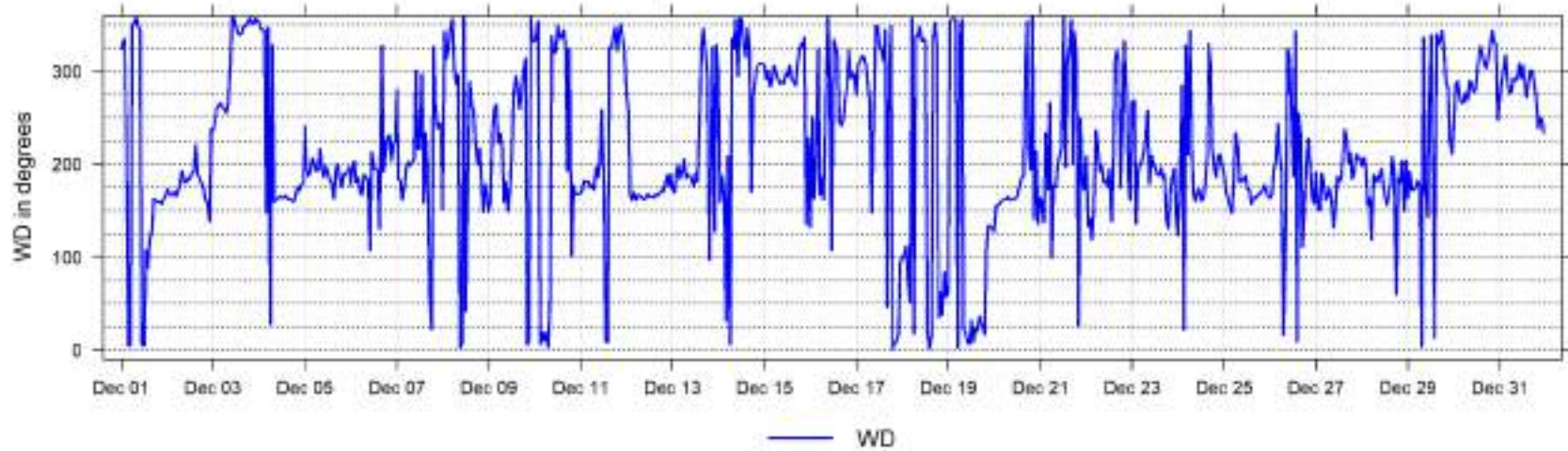
December 2024 Hourly Readings of Relative Humidity (in %) at Valleyview



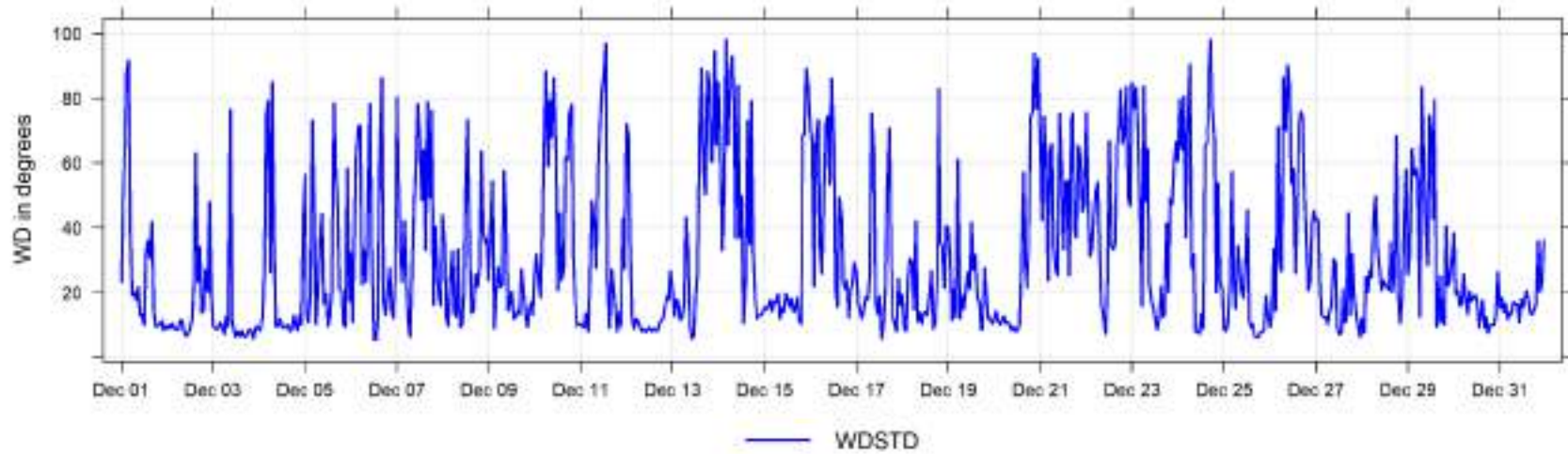
December 2024 Hourly Readings of Wind Speed (in km/hr) at Valleyview

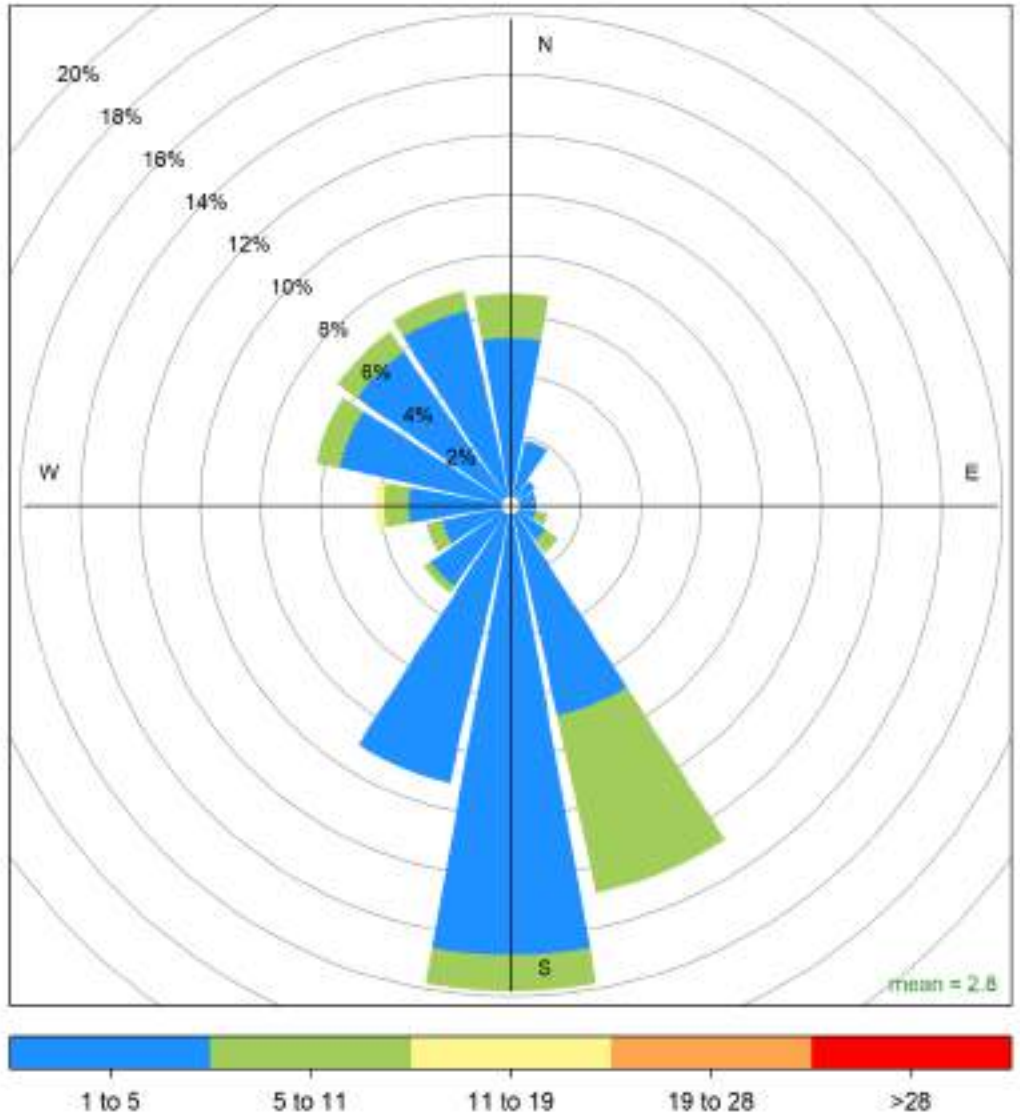


December 2024 Hourly Readings of Wind Direction (in degrees) at Valleyview



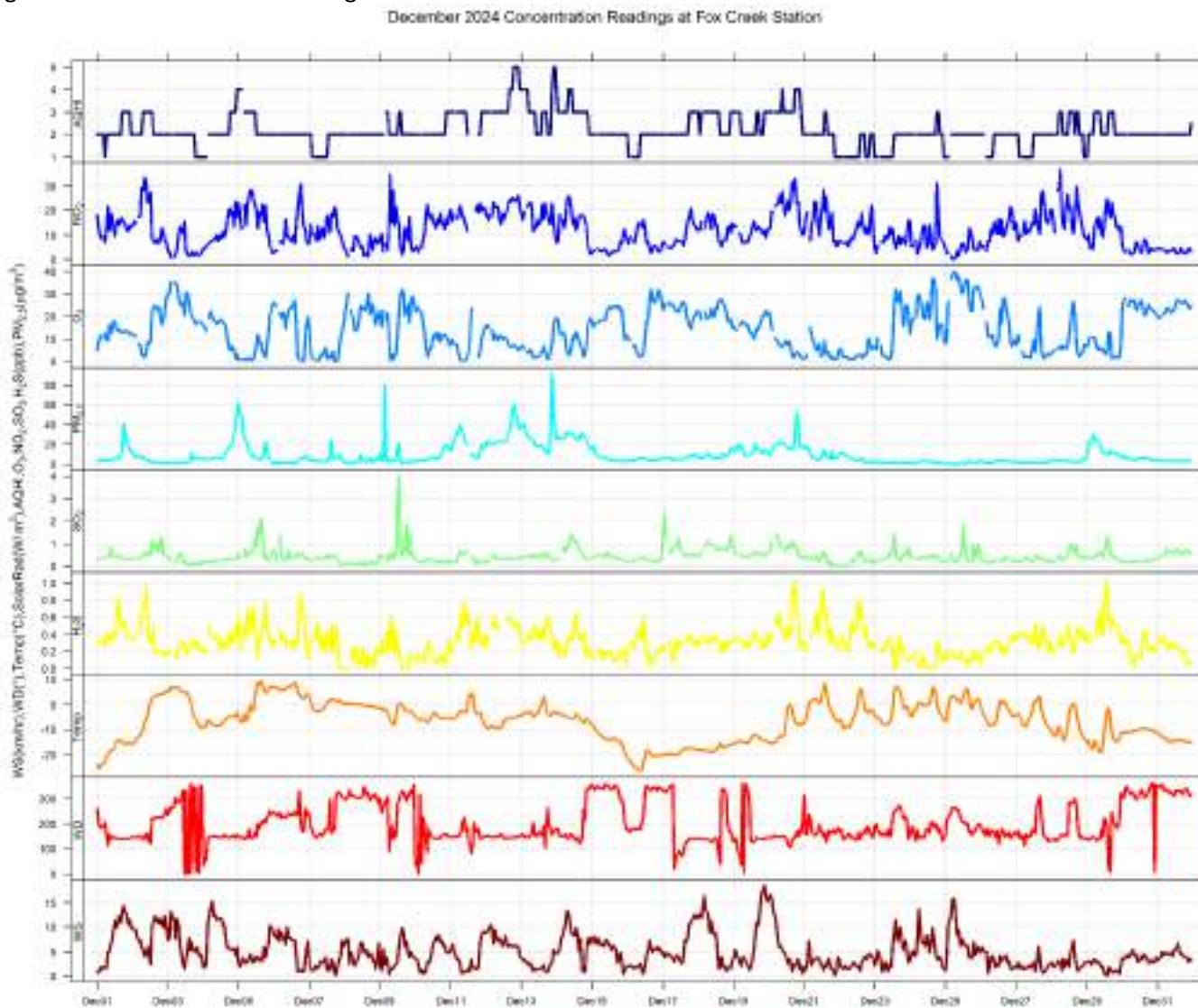
December 2024 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Valleyview



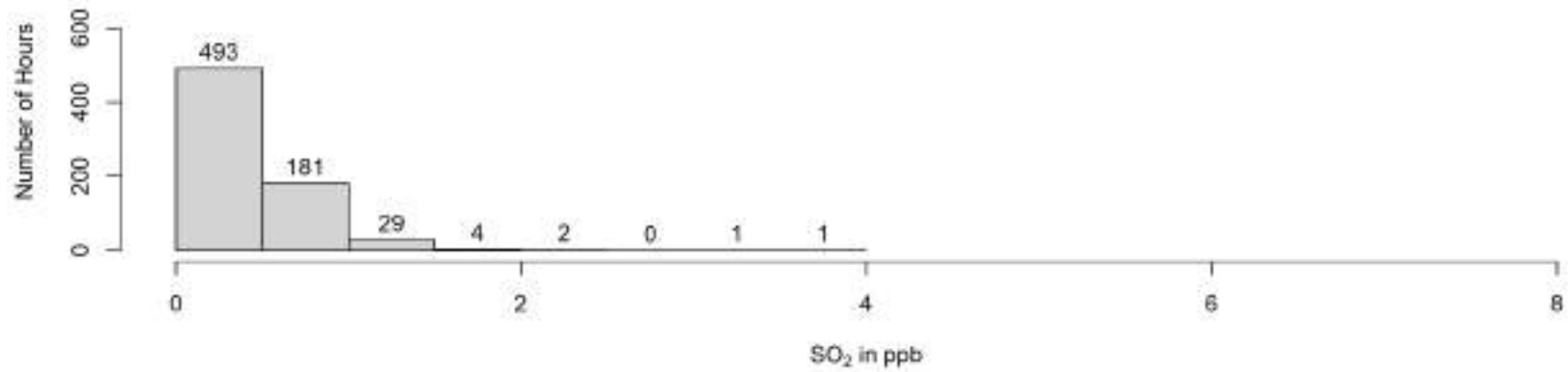
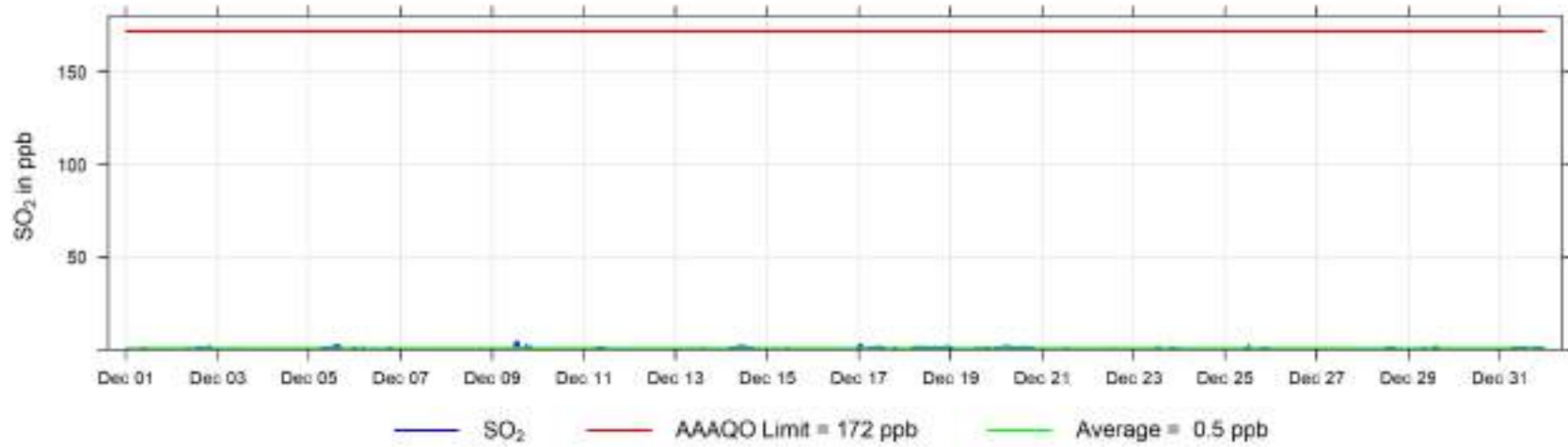


7 Fox Creek Charts

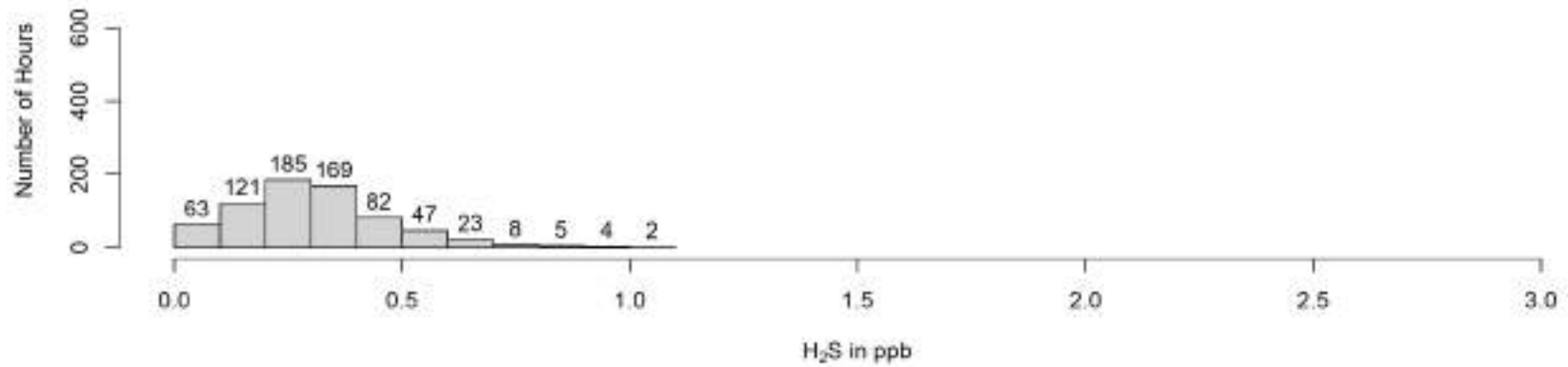
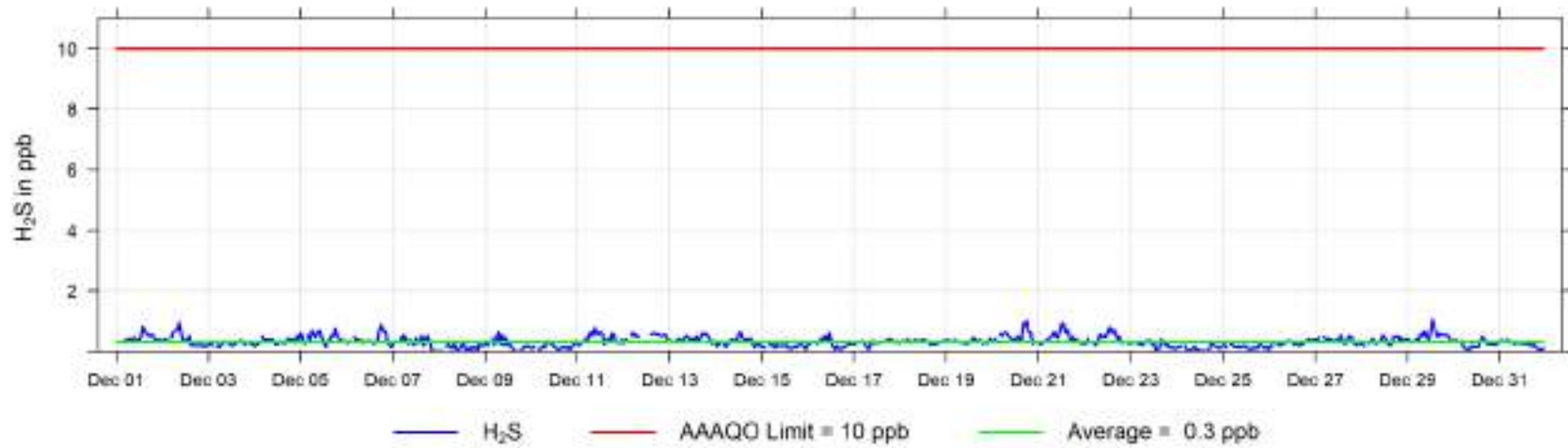
The following pages include the charts and histograms for Fox Creek Station



December 2024 Hourly Concentration Readings of SO₂ (in ppb) at Fox Creek



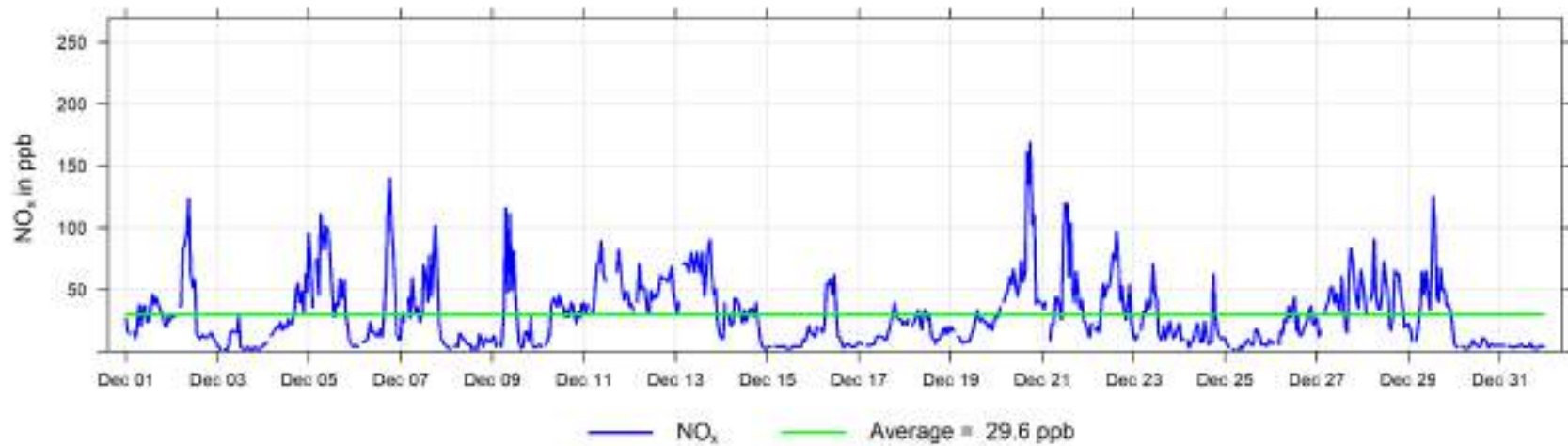
December 2024 Hourly Concentration Readings of H₂S (in ppb) at Fox Creek



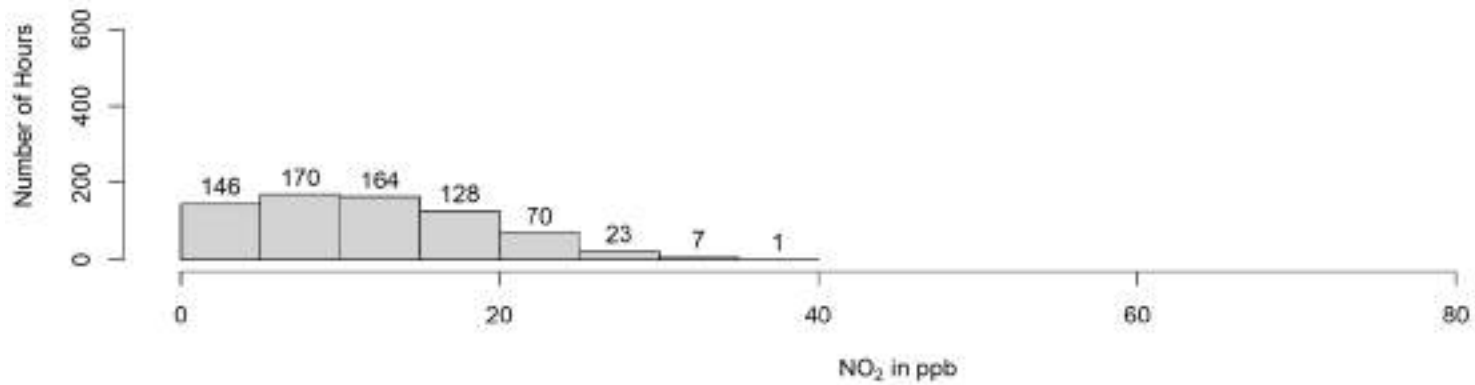
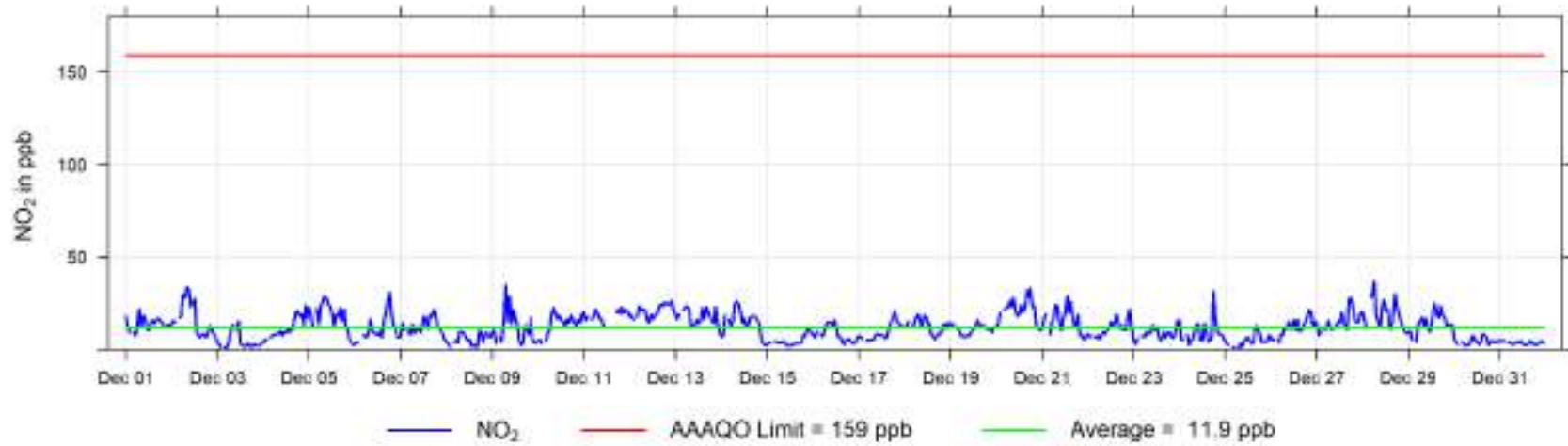
December 2024 Hourly Concentration Readings of NO (in ppb) at Fox Creek



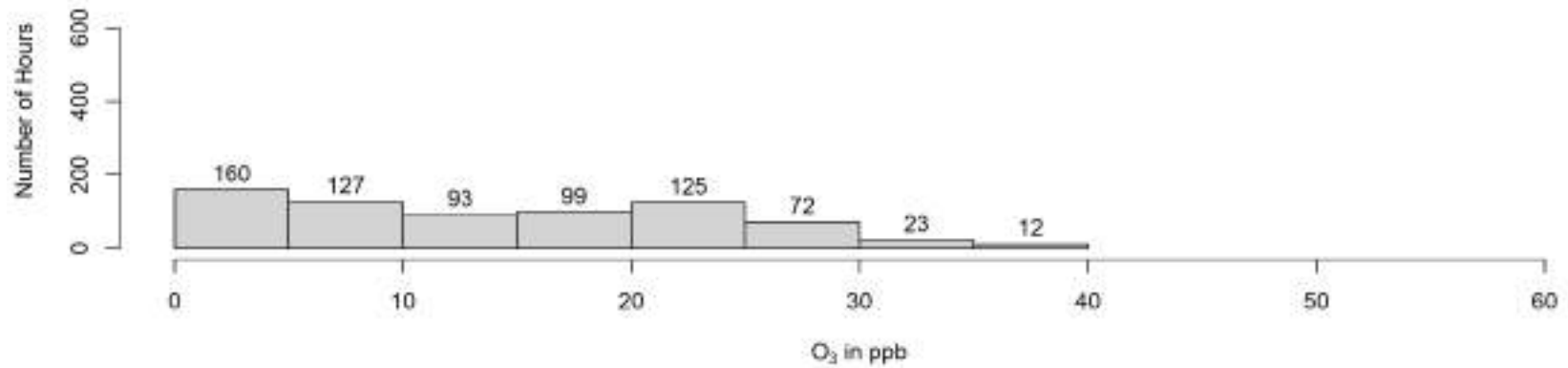
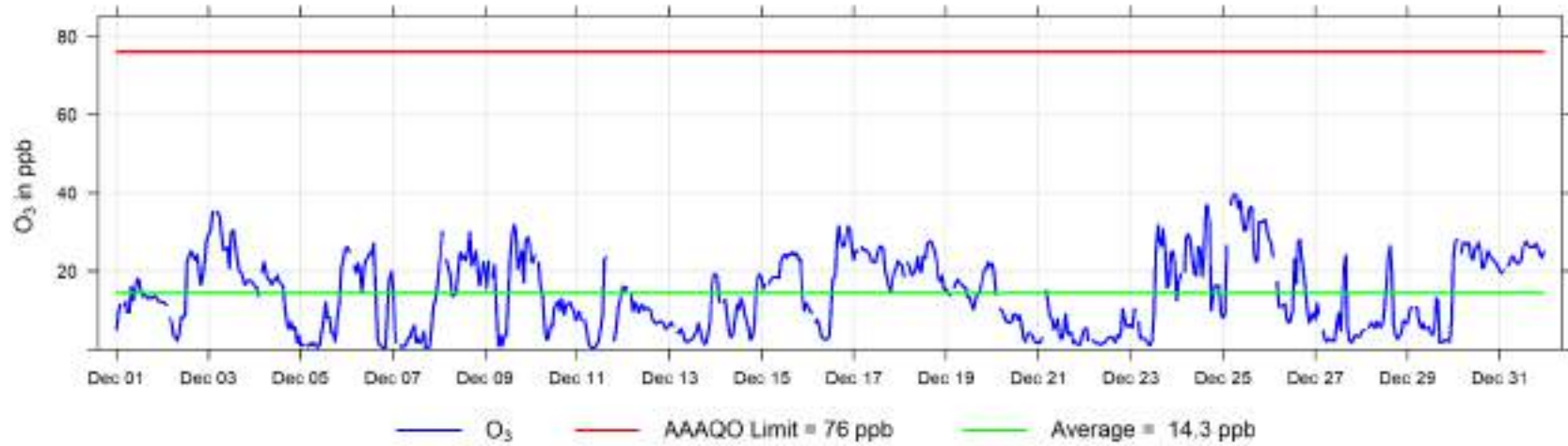
December 2024 Hourly Concentration Readings of NO_x (in ppb) at Fox Creek



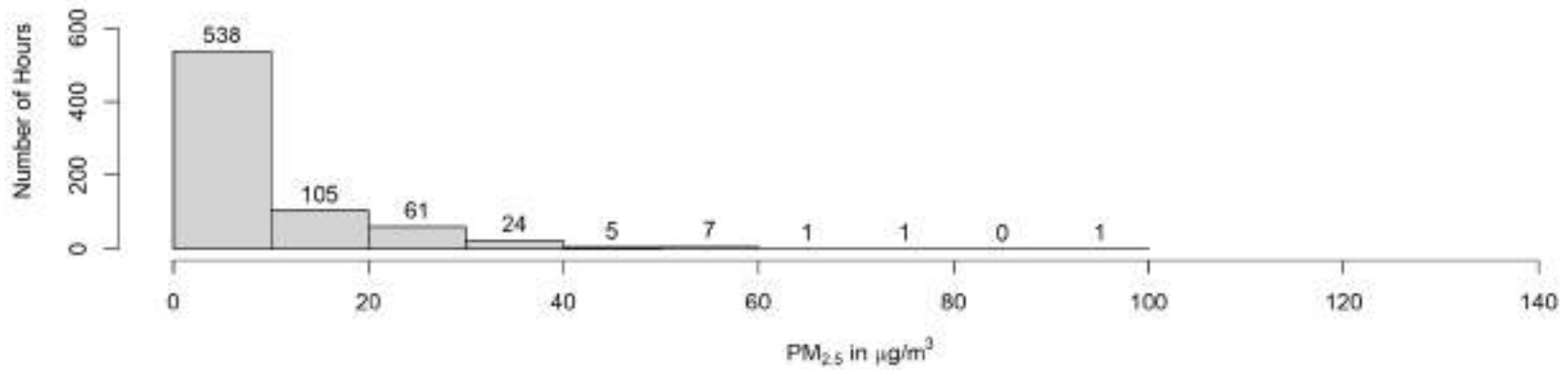
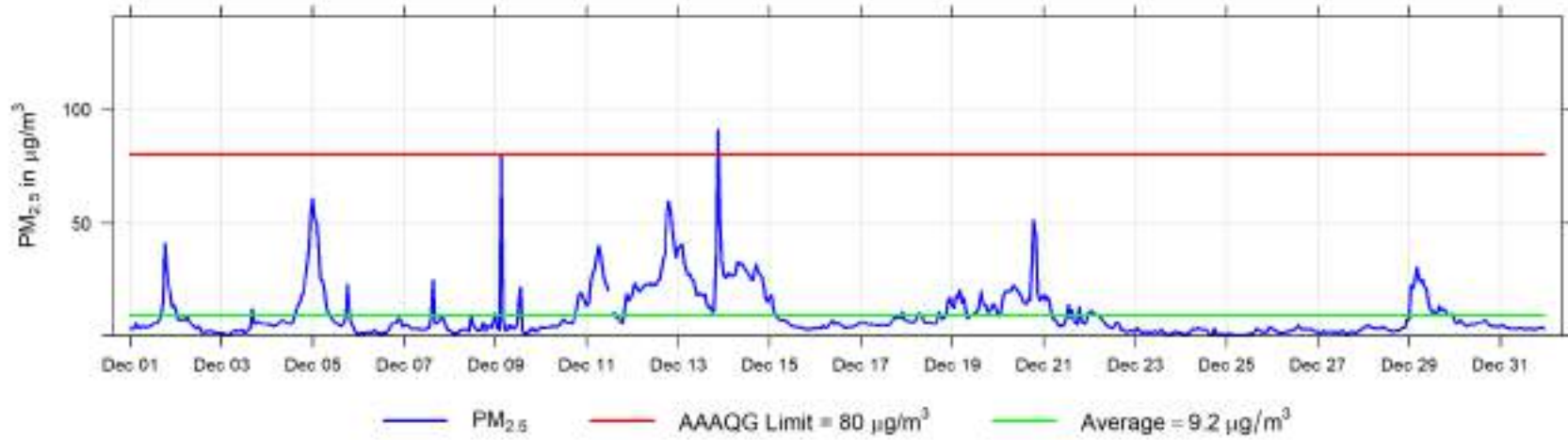
December 2024 Hourly Concentration Readings of NO₂ (in ppb) at Fox Creek



December 2024 Hourly Concentration Readings of O₃ (in ppb) at Fox Creek



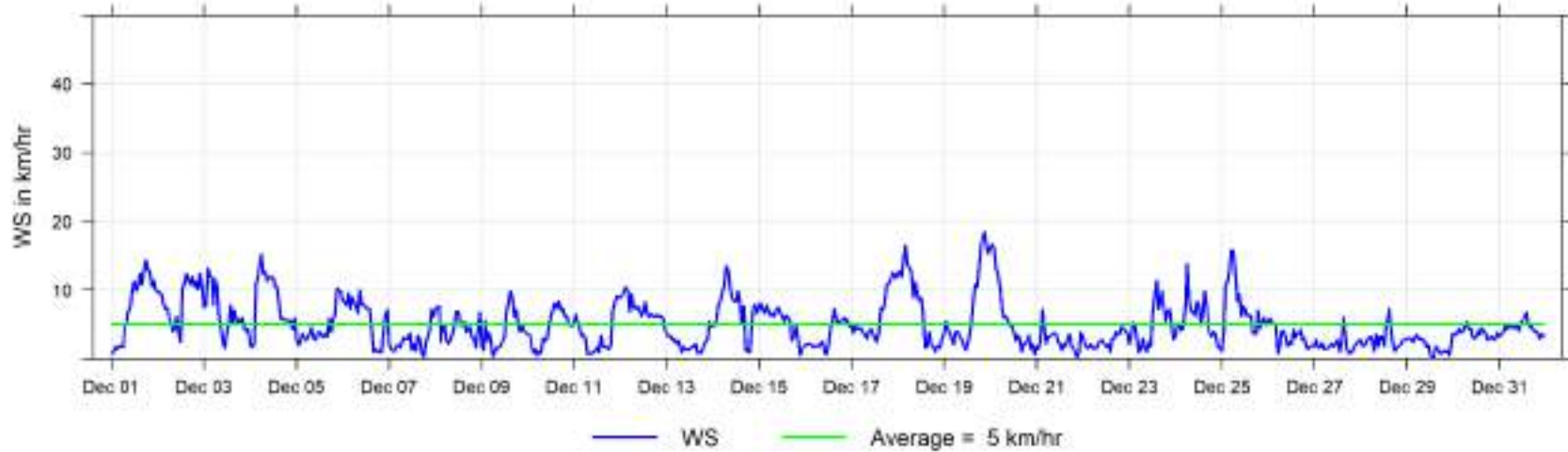
December 2024 Hourly Concentration Readings of PM_{2.5} in $\mu\text{g}/\text{m}^3$ at Fox Creek



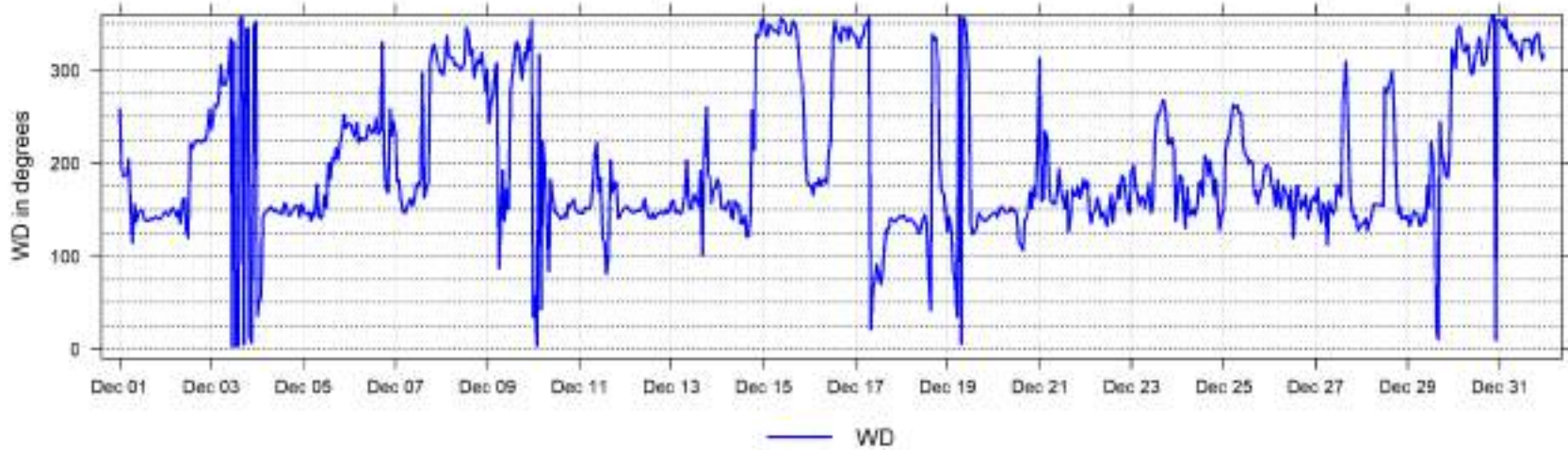
December 2024 Hourly Temperature Readings (in °C) at Fox Creek



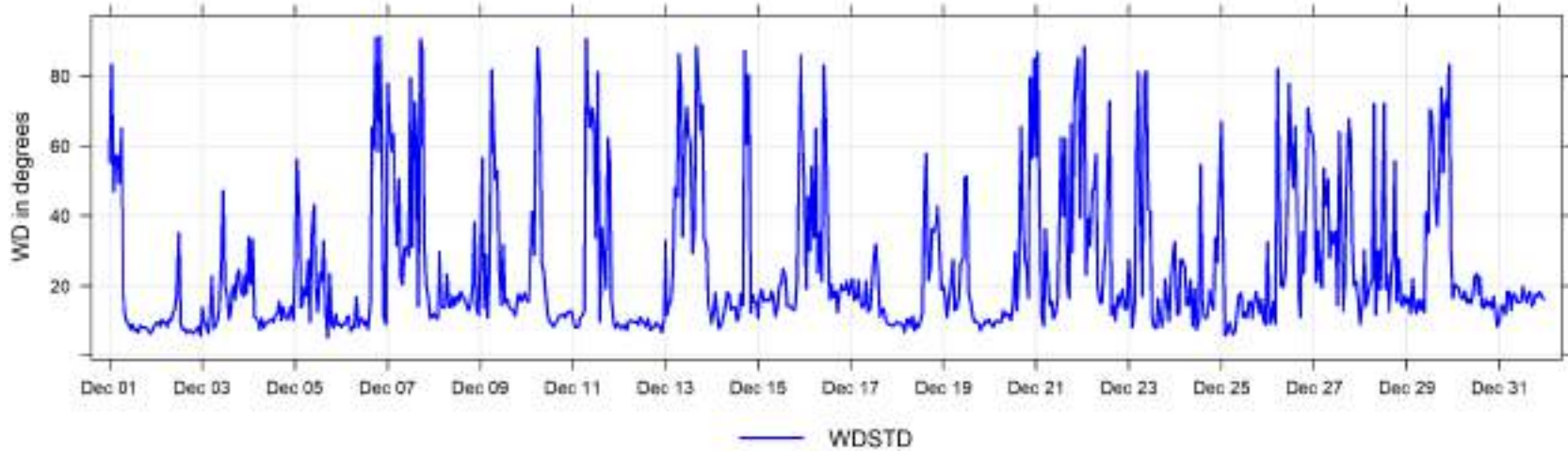
December 2024 Hourly Readings of Wind Speed (in km/hr) at Fox Creek

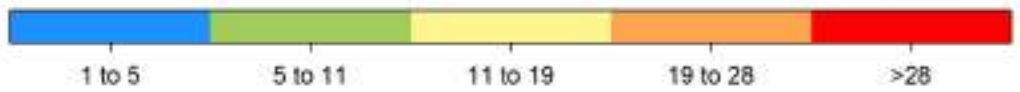
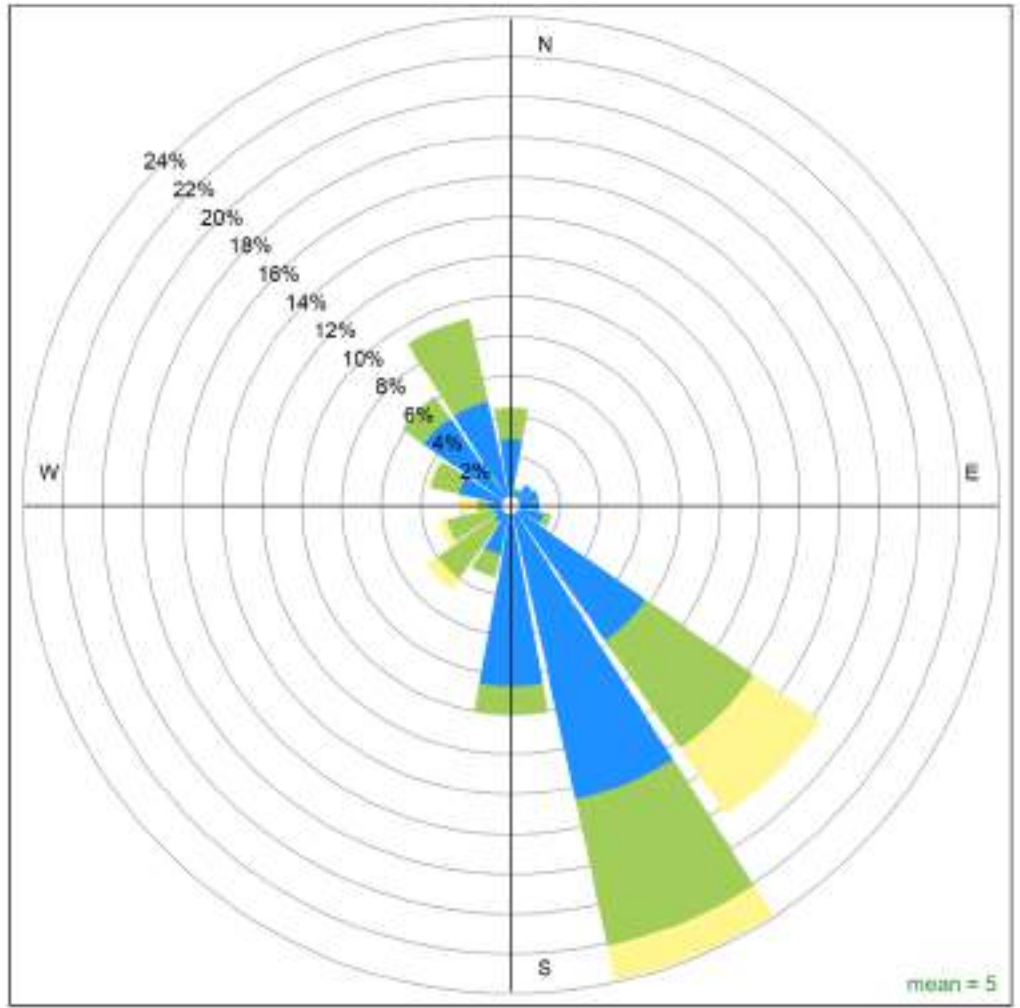


December 2024 Hourly Readings of Wind Direction (in degrees) at Fox Creek



December 2024 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Fox Creek





Fox Creek December 2024 Wind Rose, wind speed in km/hr

Calms (<1km/hr) = 6.3 %

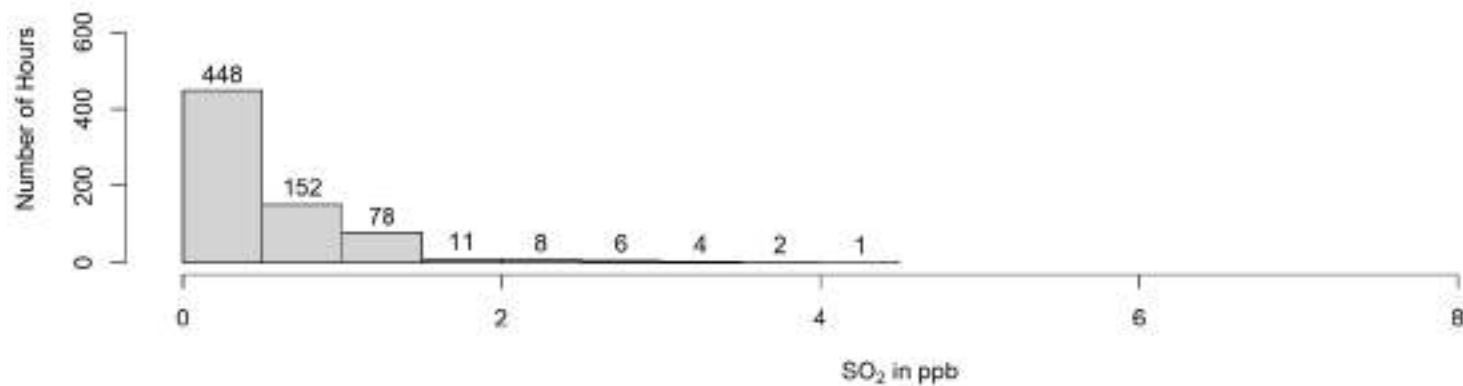
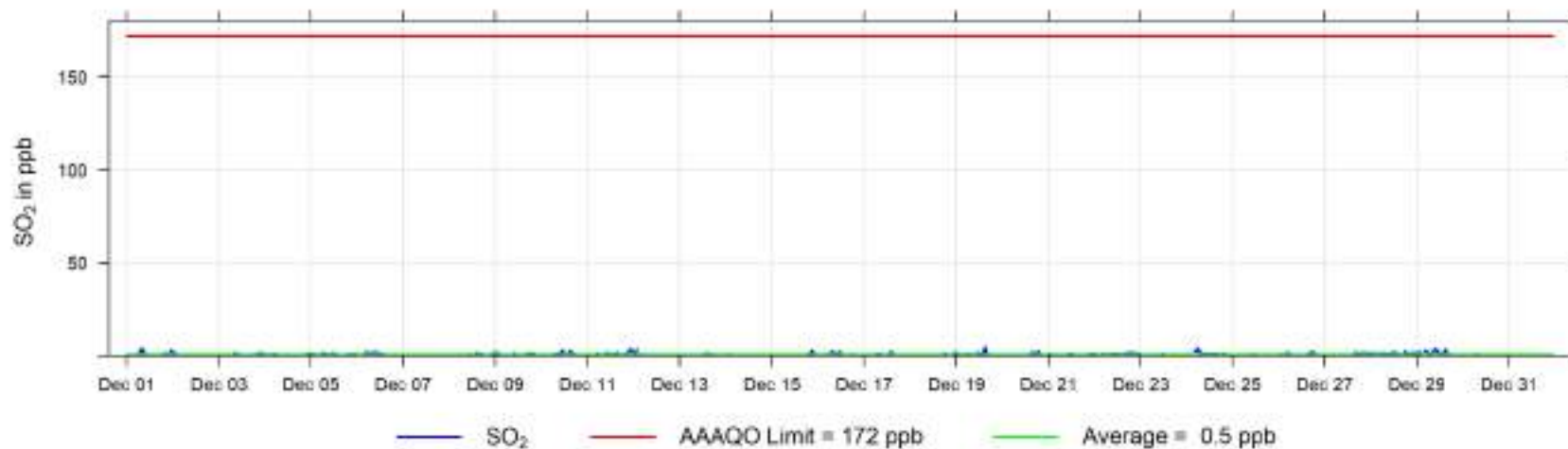
8 Happy Valley (Portable) Charts

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

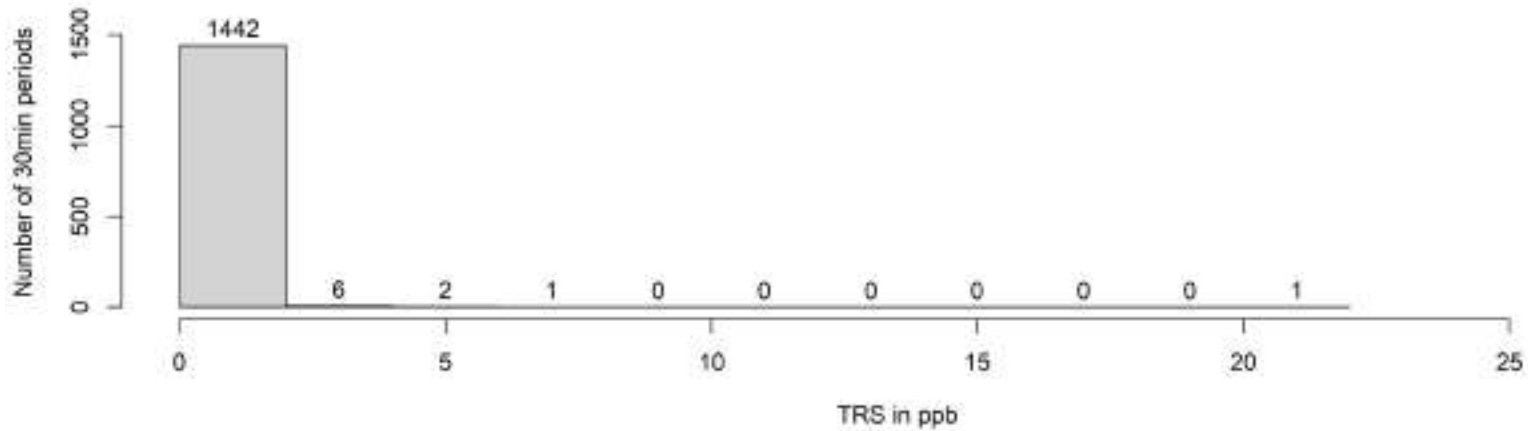
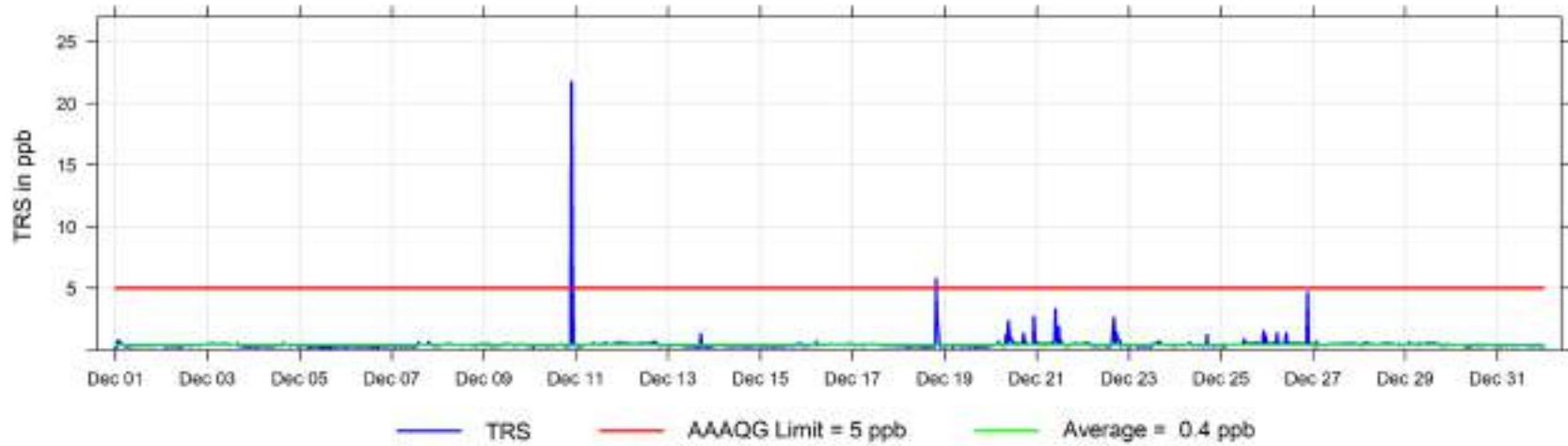
December 2024 Concentration Readings at Happy Valley Station



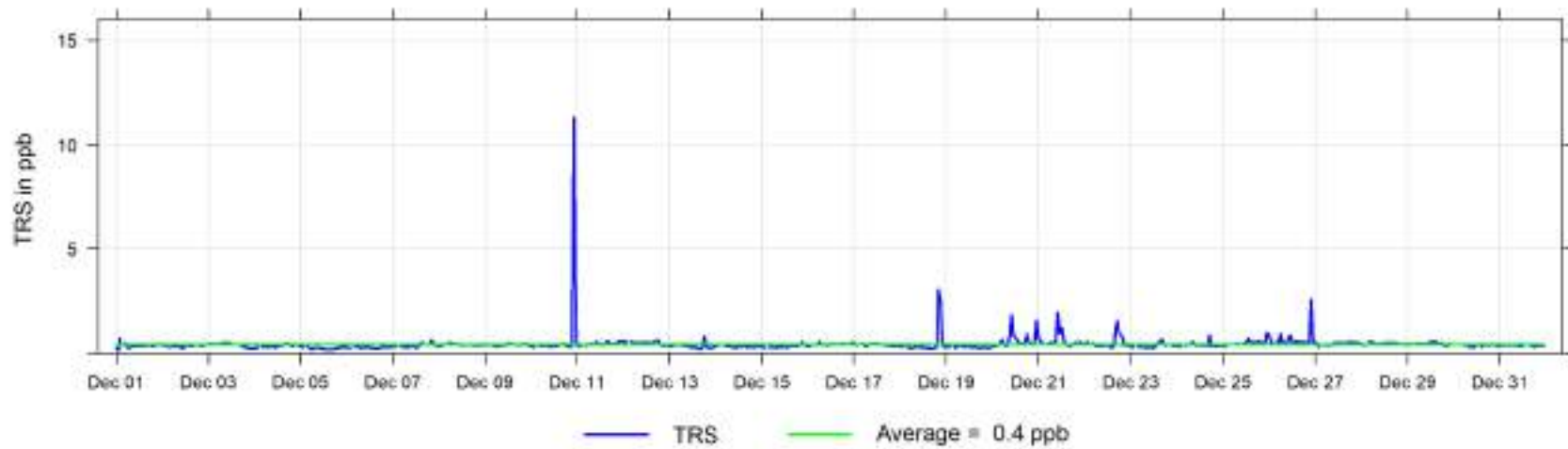
December 2024 Hourly Concentration Readings of SO₂ (in ppb) at Happy Valley



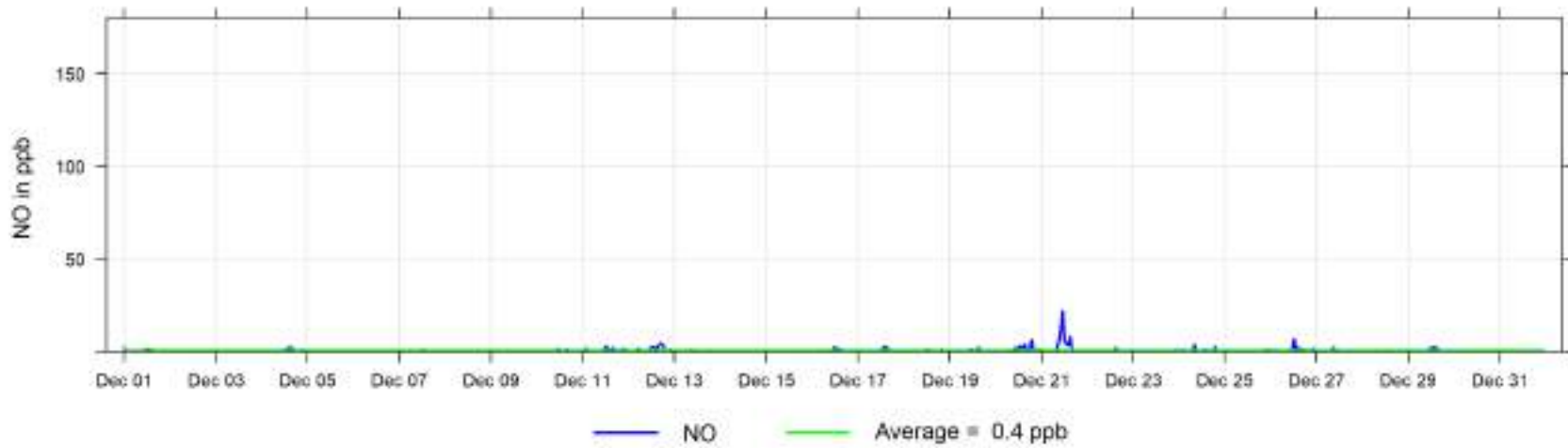
December 2024 30 min Concentration Readings of TRS (in ppb) at Happy Valley



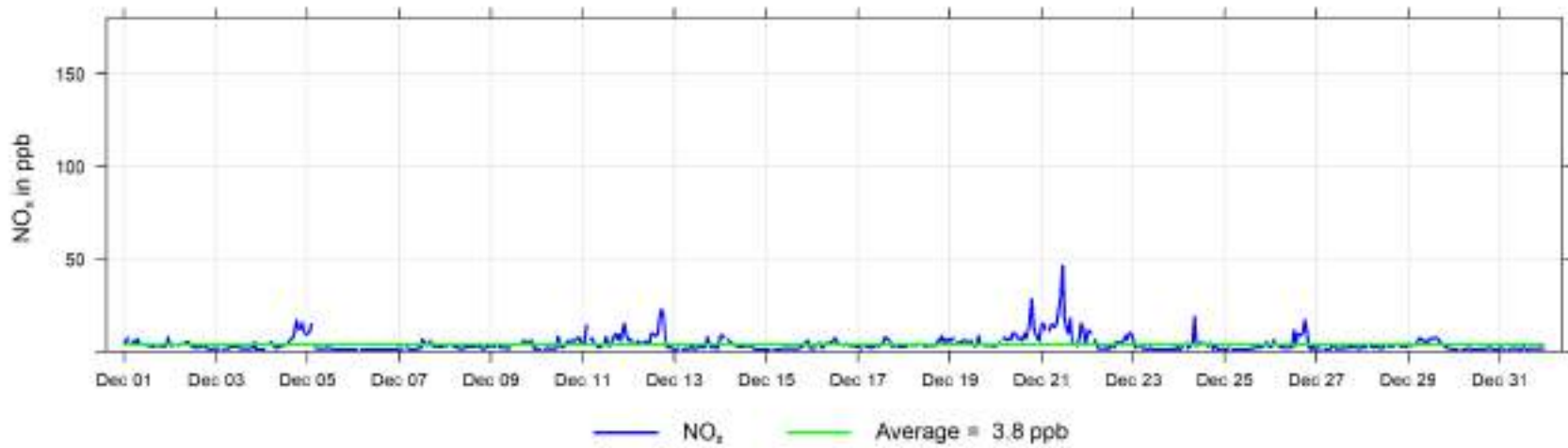
December 2024 Hourly Concentration Readings of TRS (in ppb) at Happy Valley



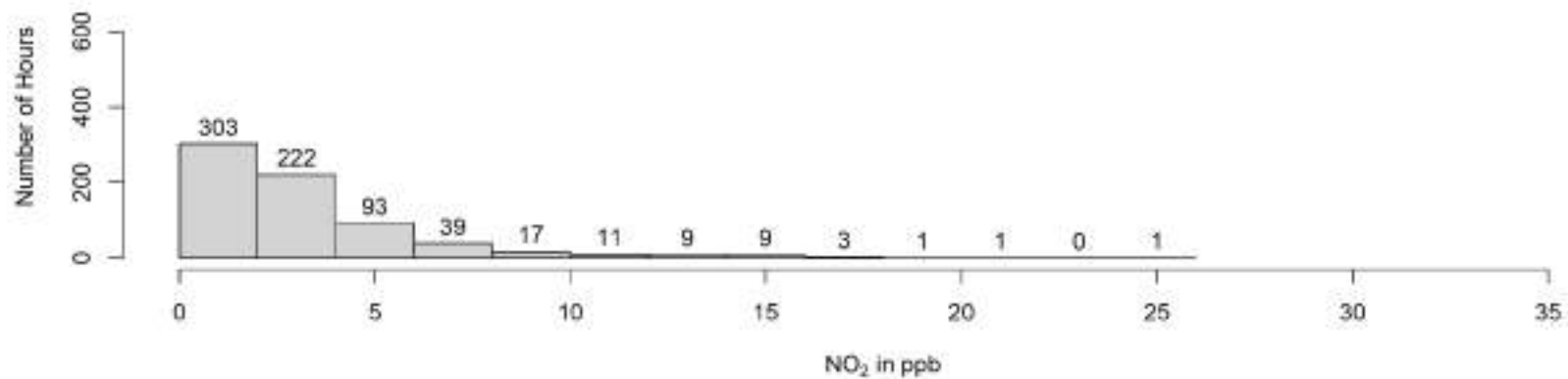
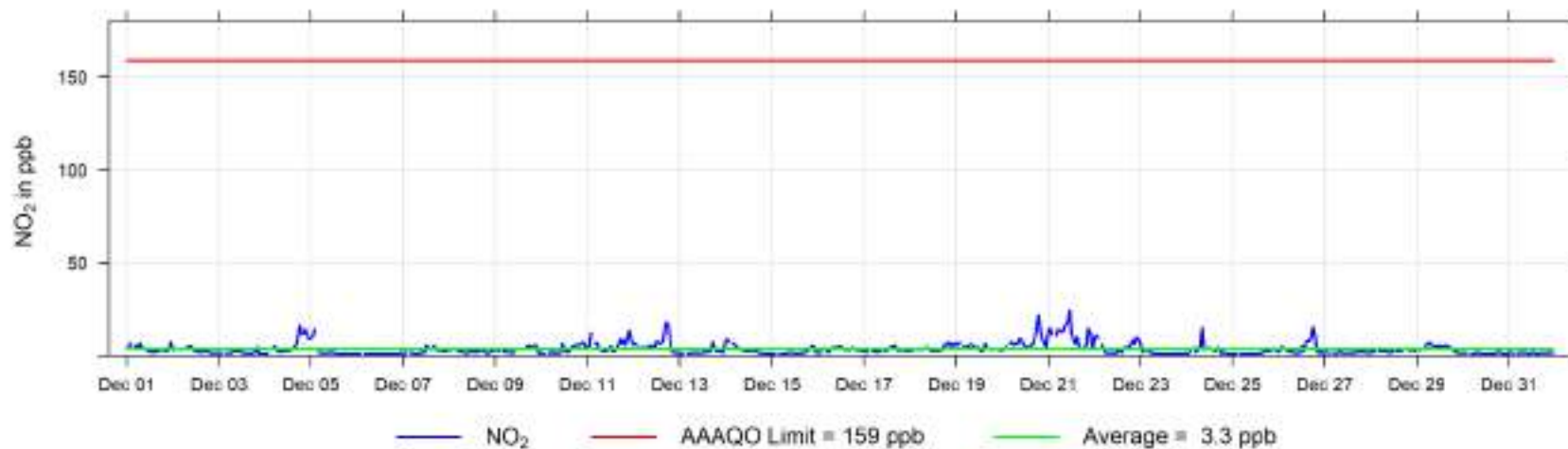
December 2024 Hourly Concentration Readings of NO (in ppb) at Happy Valley



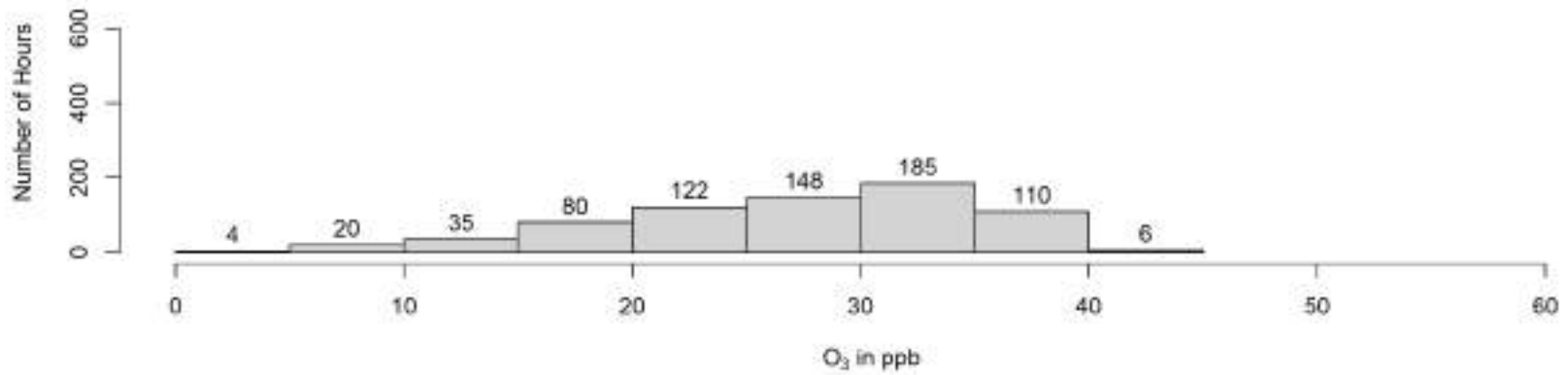
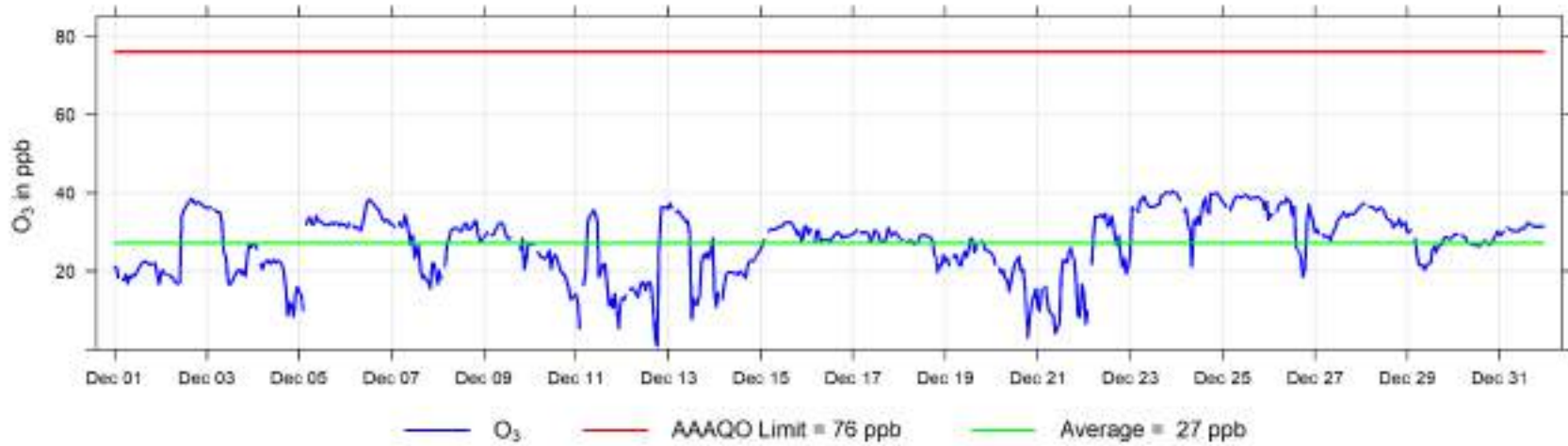
December 2024 Hourly Concentration Readings of NO_x (in ppb) at Happy Valley



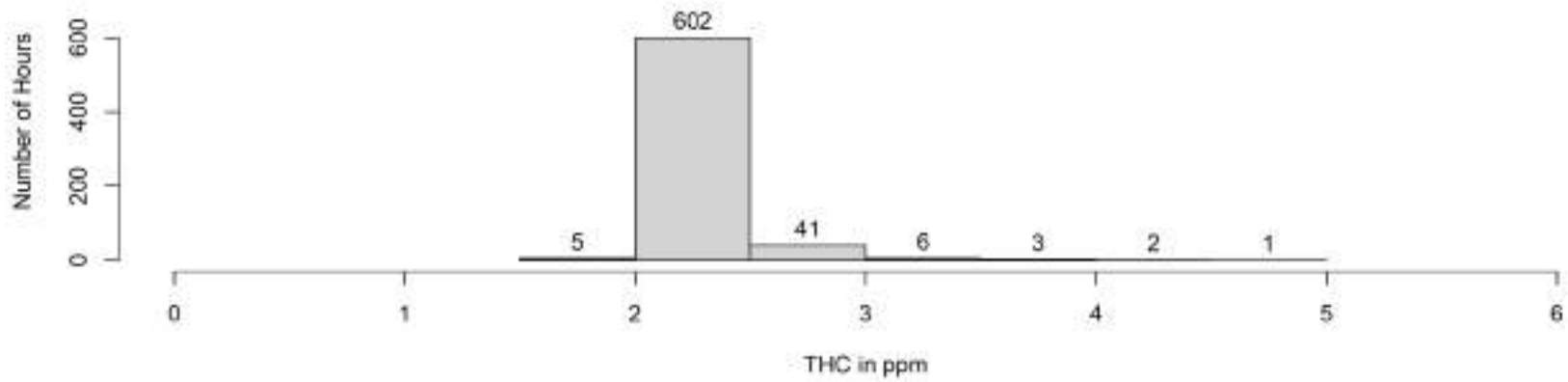
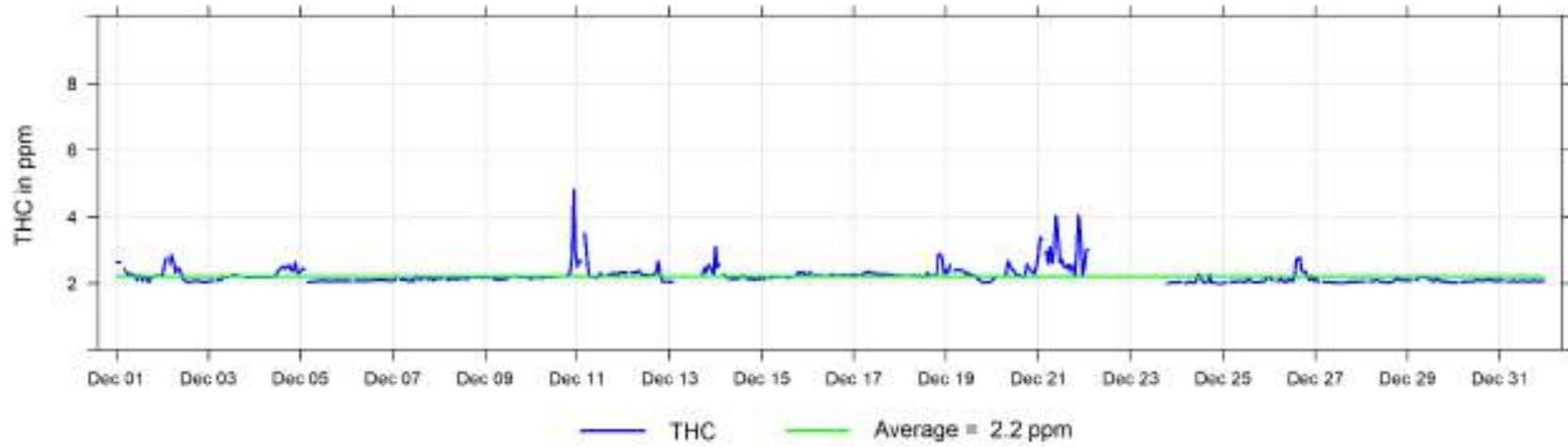
December 2024 Hourly Concentration Readings of NO₂ (in ppb) at Happy Valley



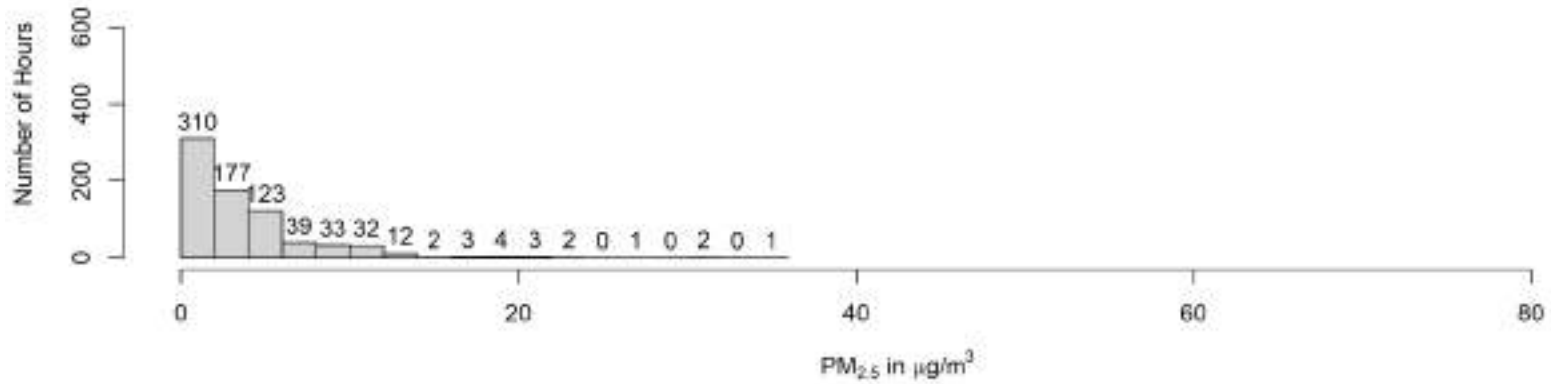
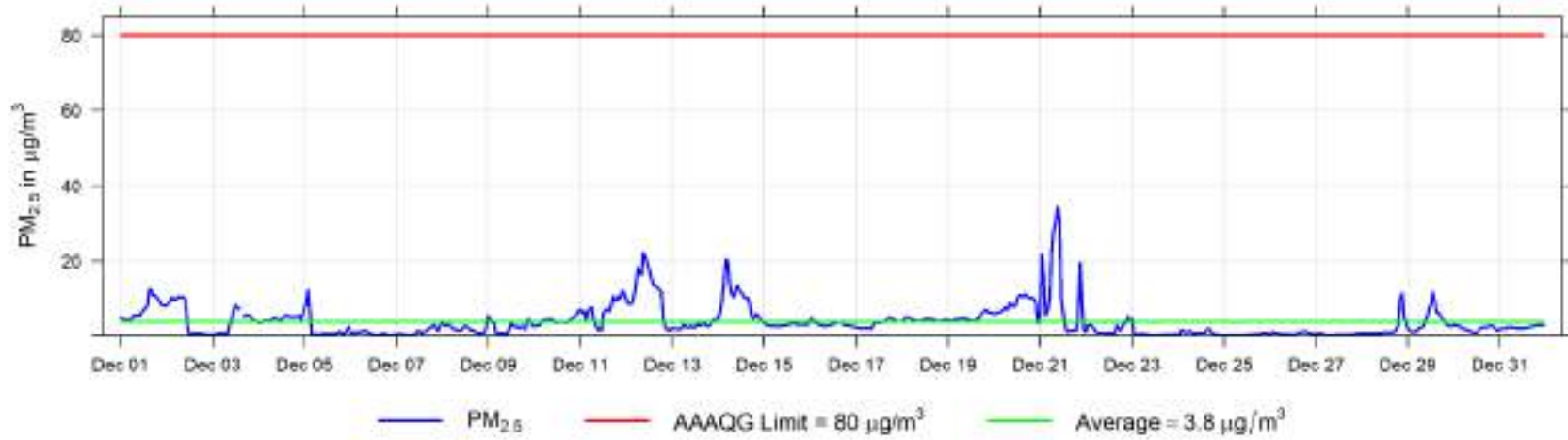
December 2024 Hourly Concentration Readings of O₃ (in ppb) at Happy Valley



December 2024 Hourly Concentration Readings of THC (in ppm) at Happy Valley



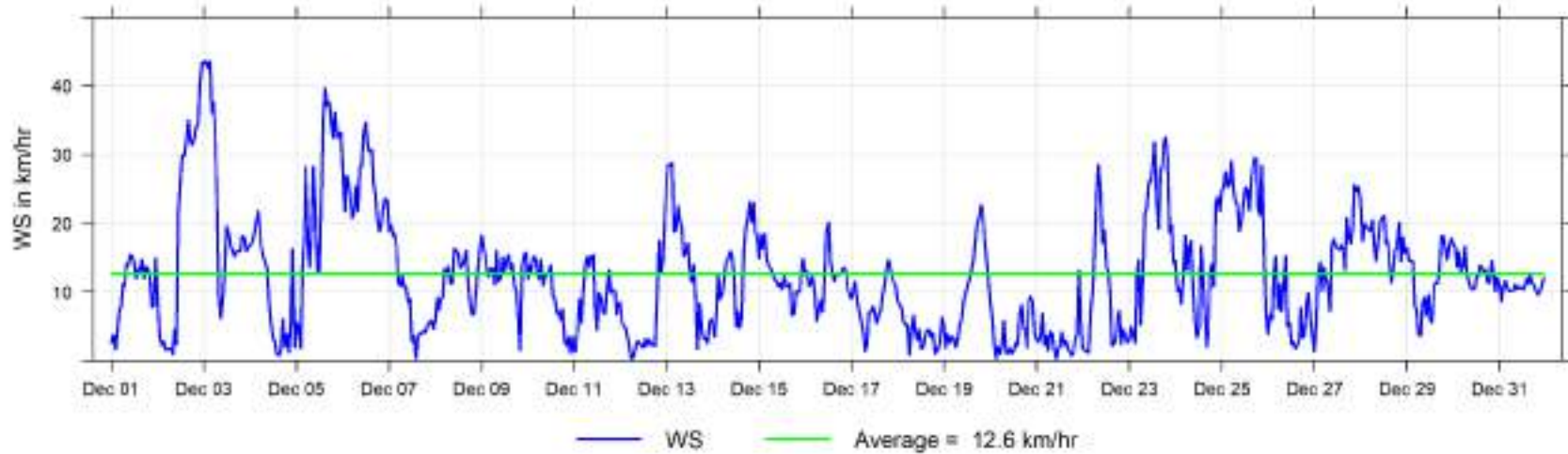
December 2024 Hourly Concentration Readings of PM_{2.5} in $\mu\text{g}/\text{m}^3$ at Happy Valley



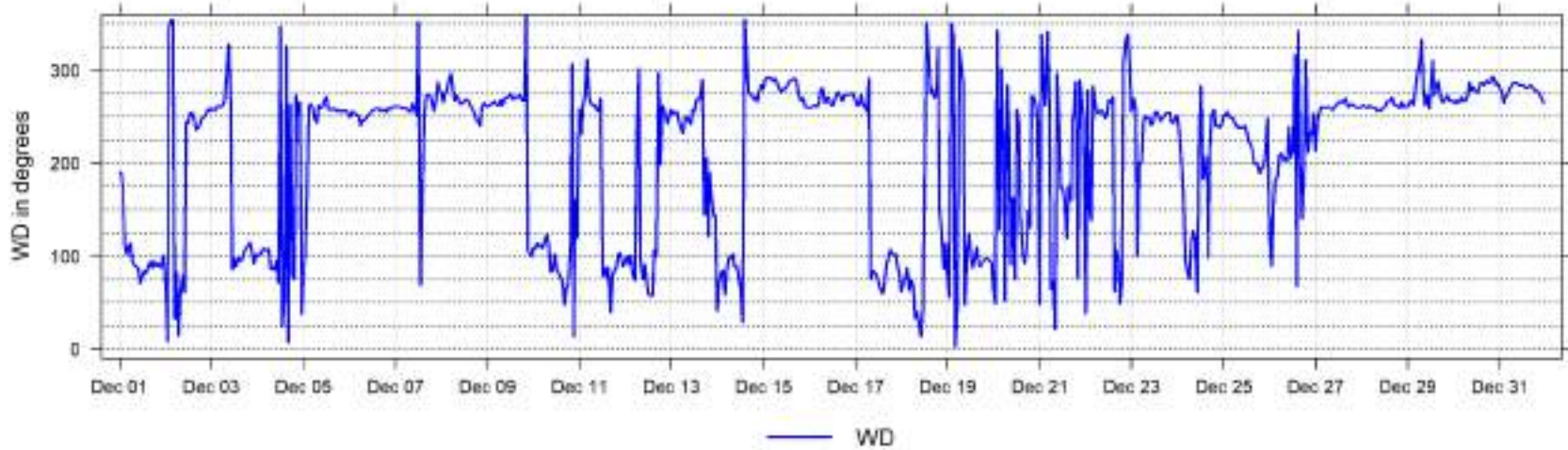
December 2024 Hourly Temperature Readings (in °C) at Happy Valley



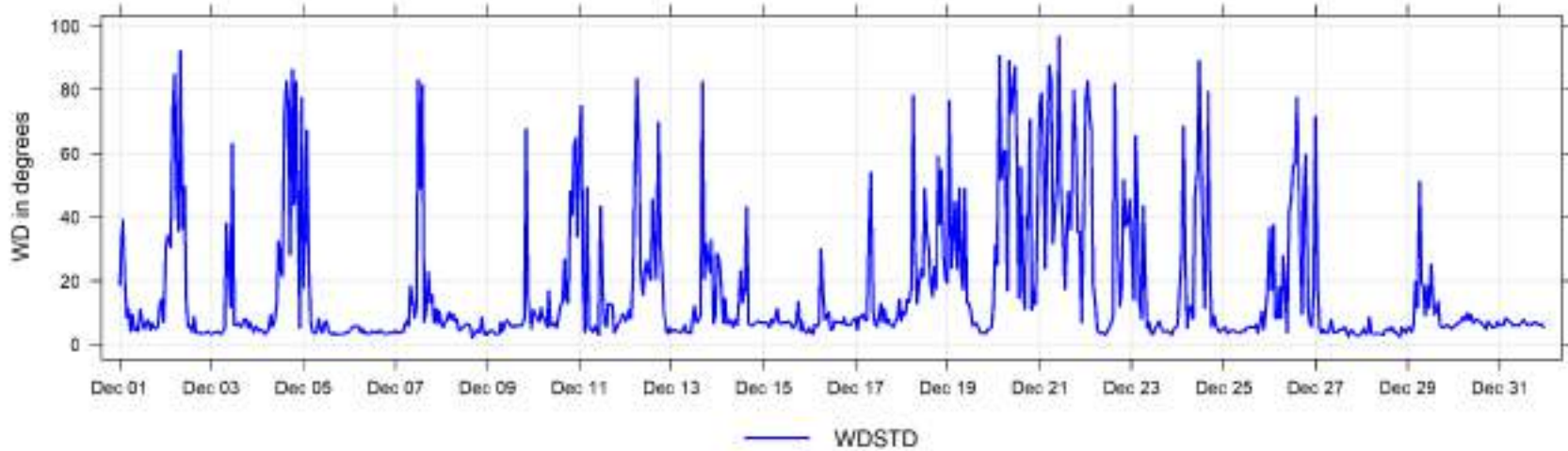
December 2024 Hourly Readings of Wind Speed (in km/hr) at Happy Valley

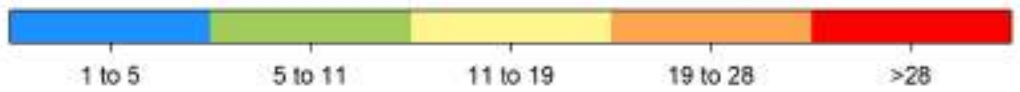
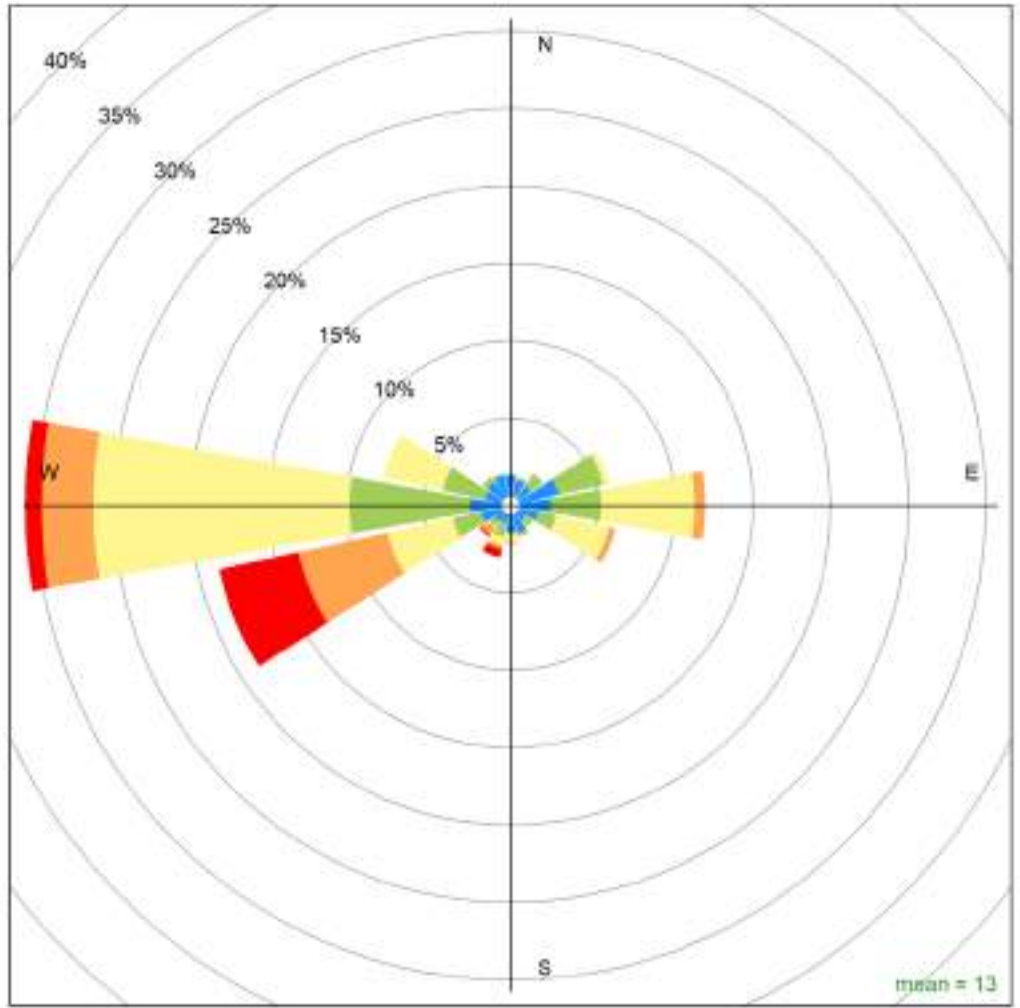


December 2024 Hourly Readings of Wind Direction (in degrees) at Happy Valley



December 2024 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Happy Valley

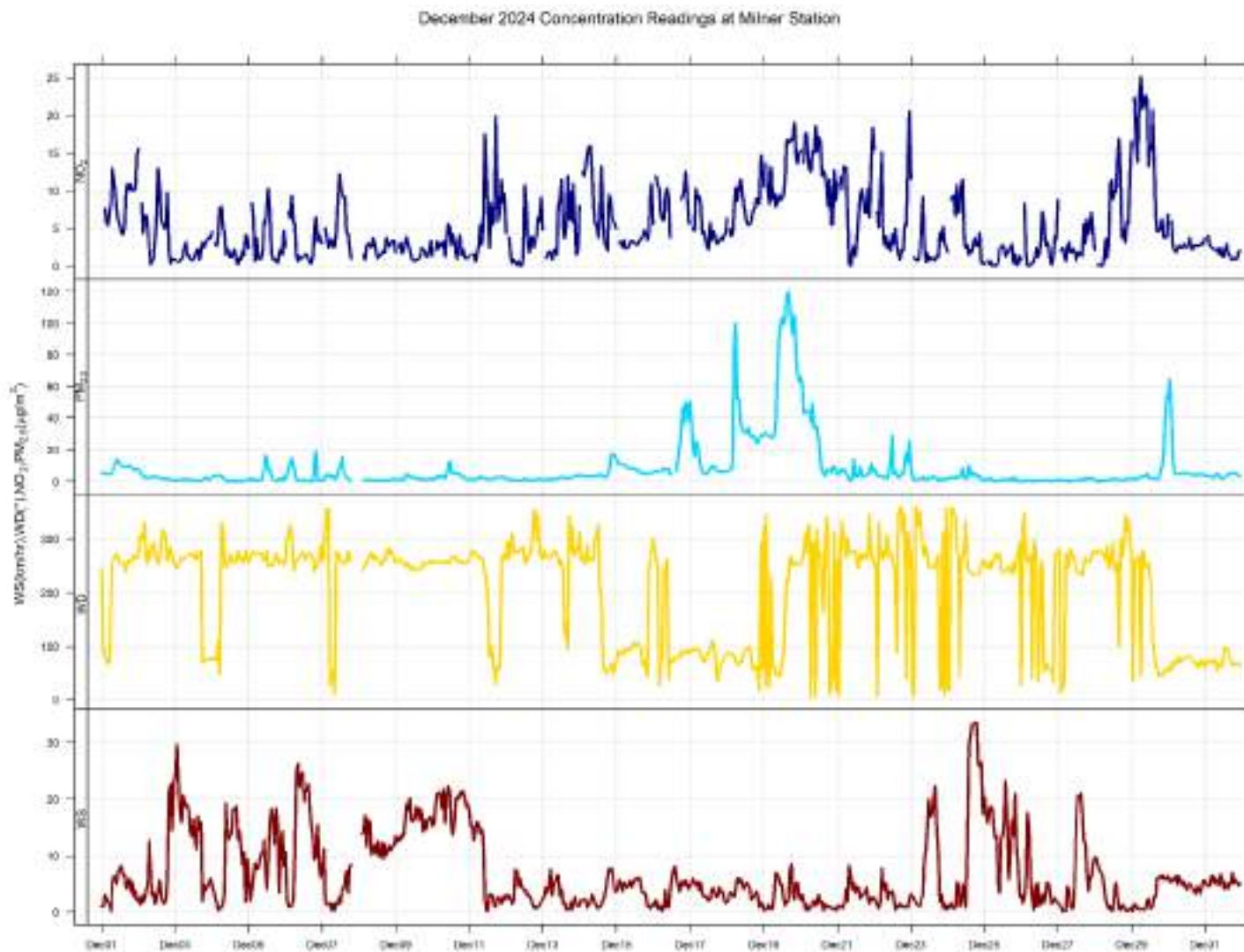




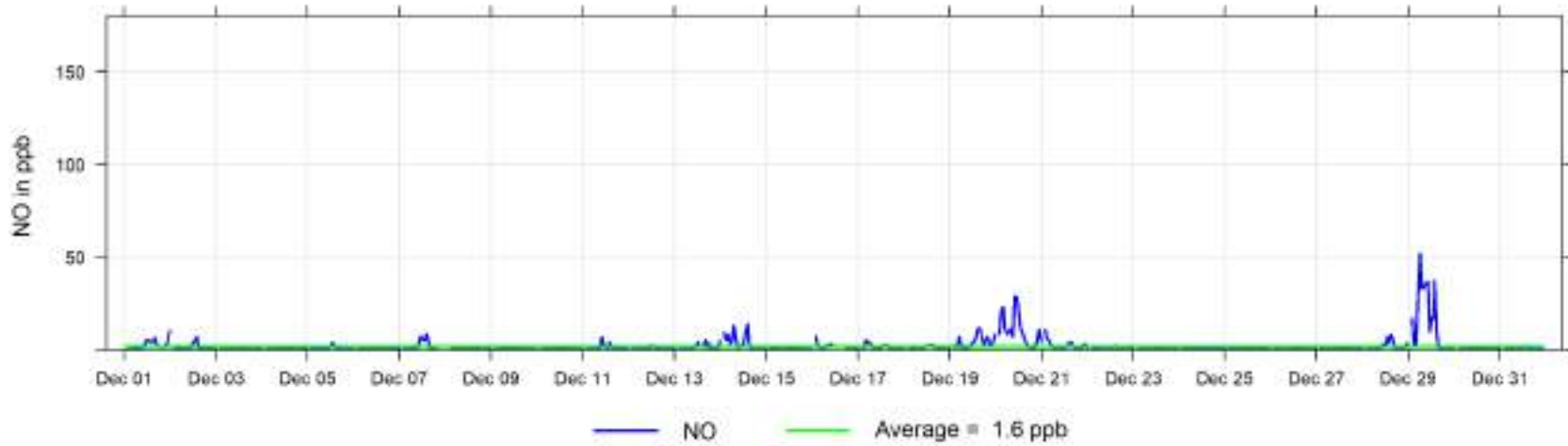
Happy Valley December 2024 Wind Rose, wind speed in km/hr
Calms (<1km/hr) = 1.9 %

9 Milner Charts

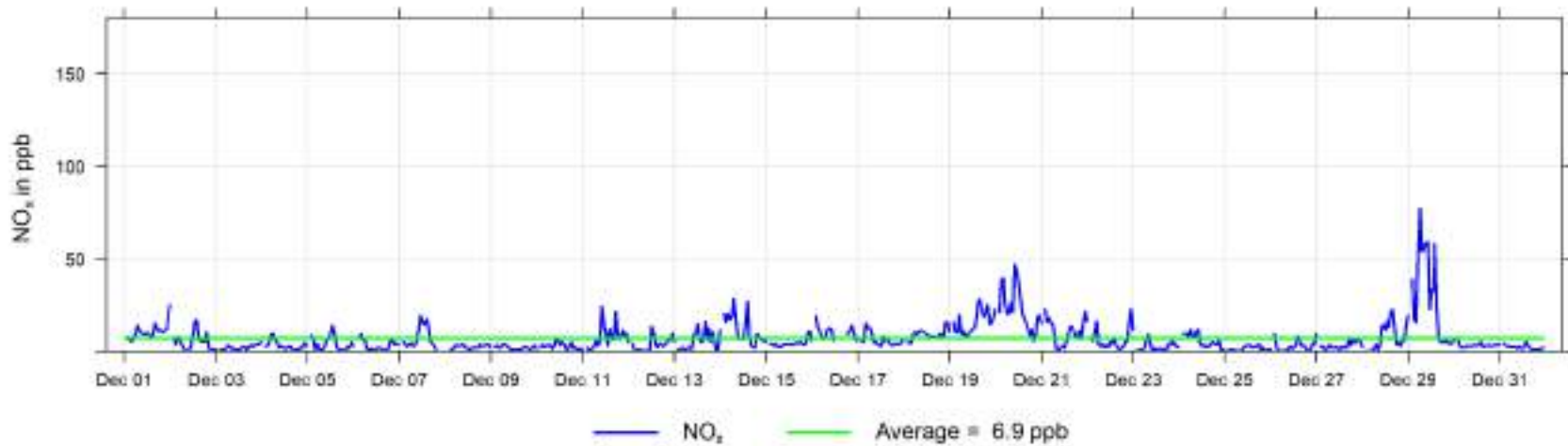
The following pages include the charts and histograms for Milner Station



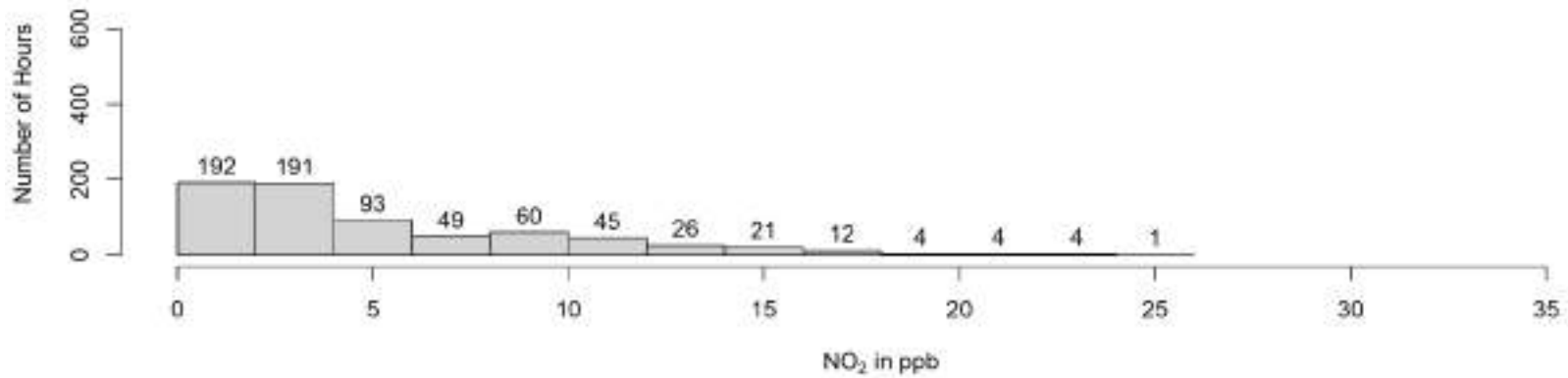
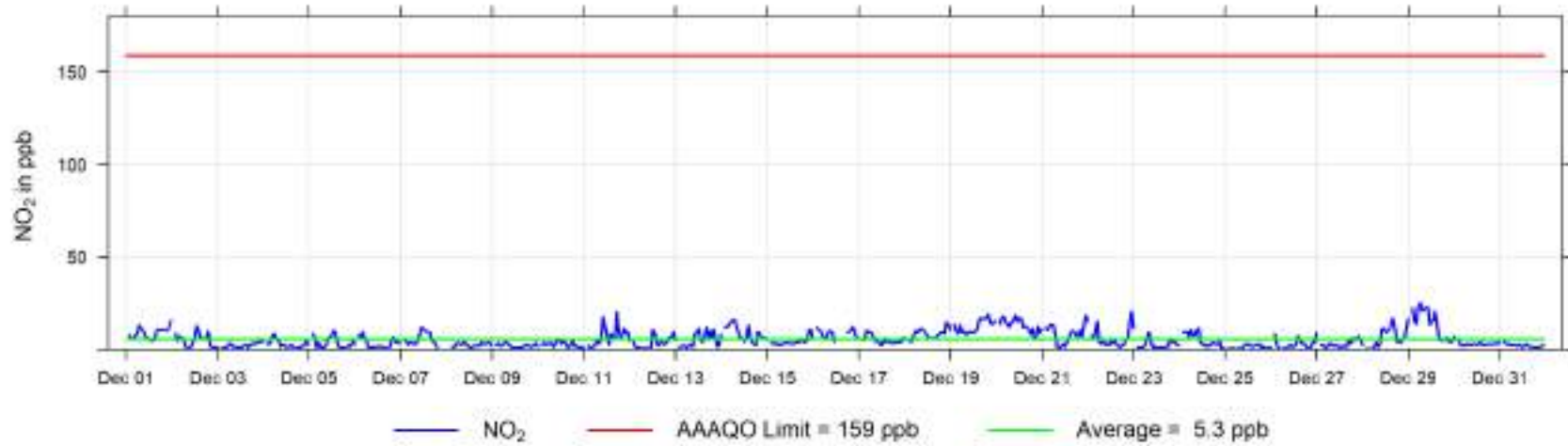
December 2024 Hourly Concentration Readings of NO (in ppb) at Milner



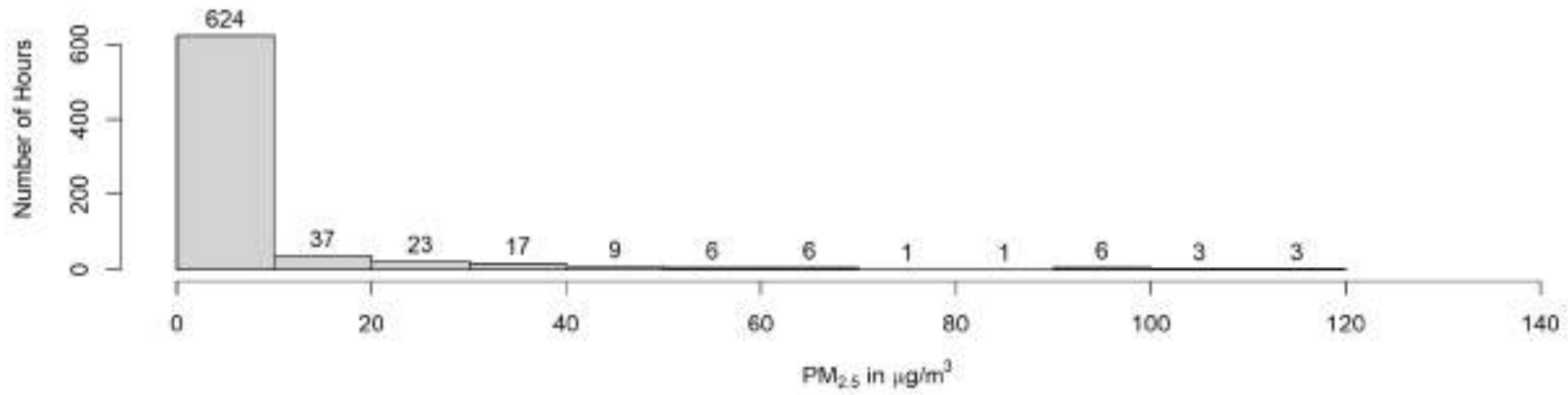
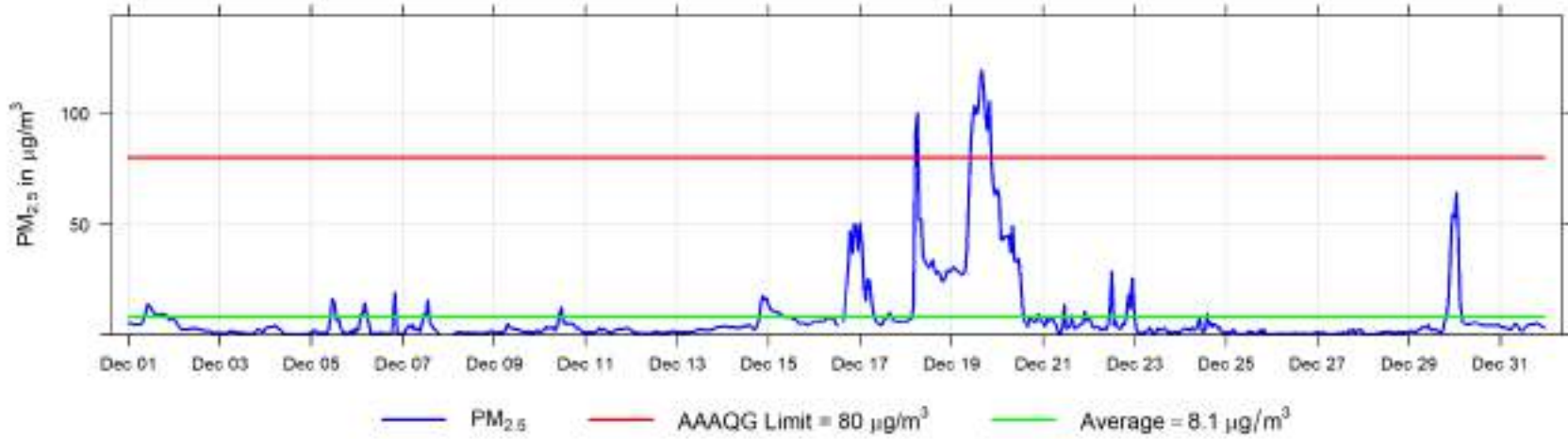
December 2024 Hourly Concentration Readings of NO_x (in ppb) at Milner



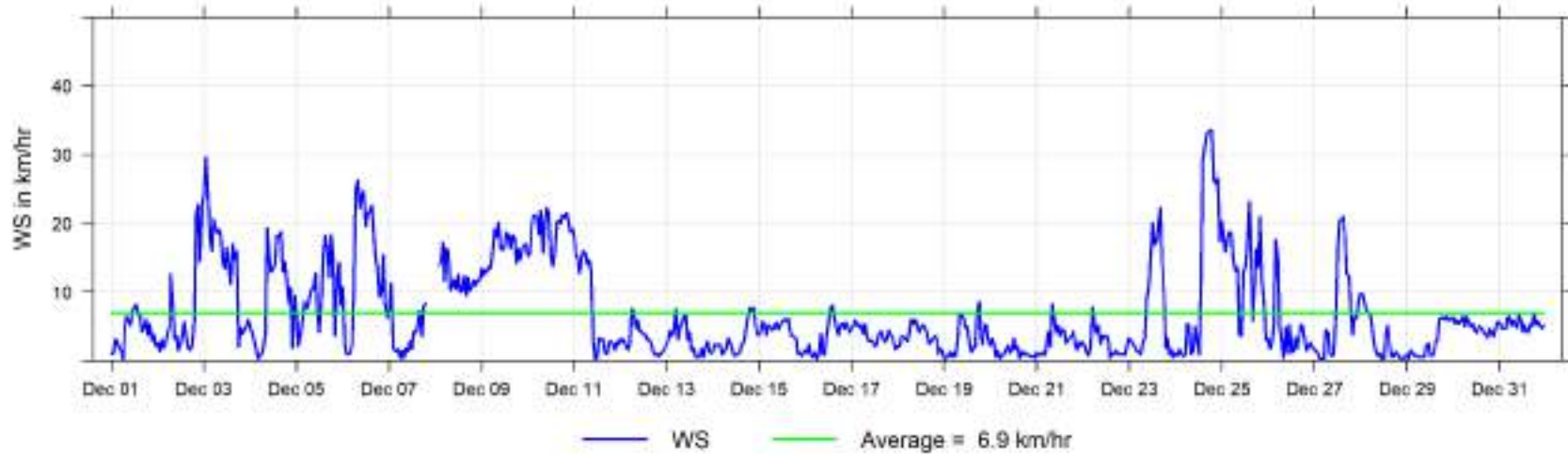
December 2024 Hourly Concentration Readings of NO₂ (in ppb) at Milner



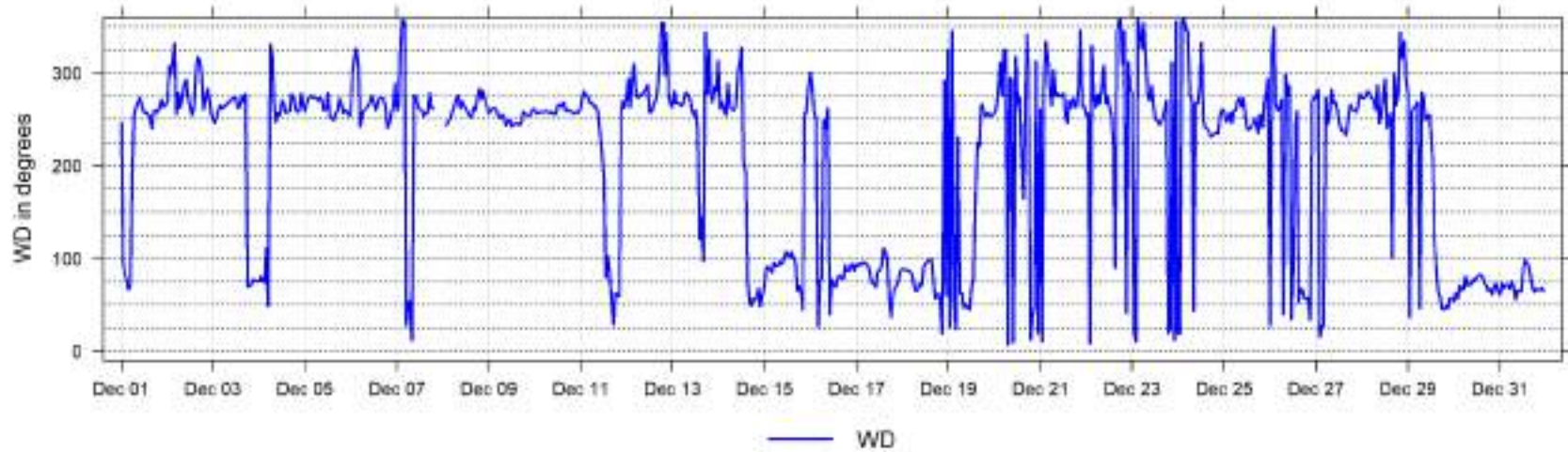
December 2024 Hourly Concentration Readings of PM_{2.5} in $\mu\text{g}/\text{m}^3$ at Milner



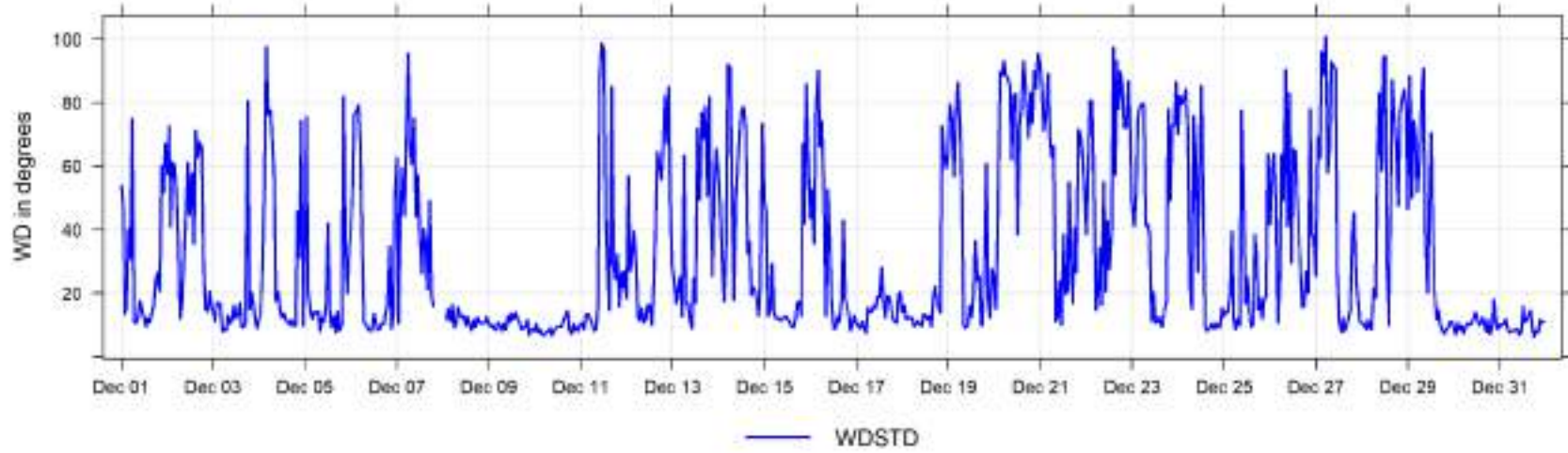
December 2024 Hourly Readings of Wind Speed (in km/hr) at Milner

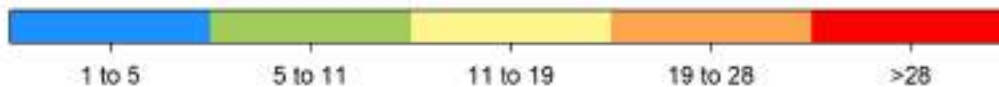
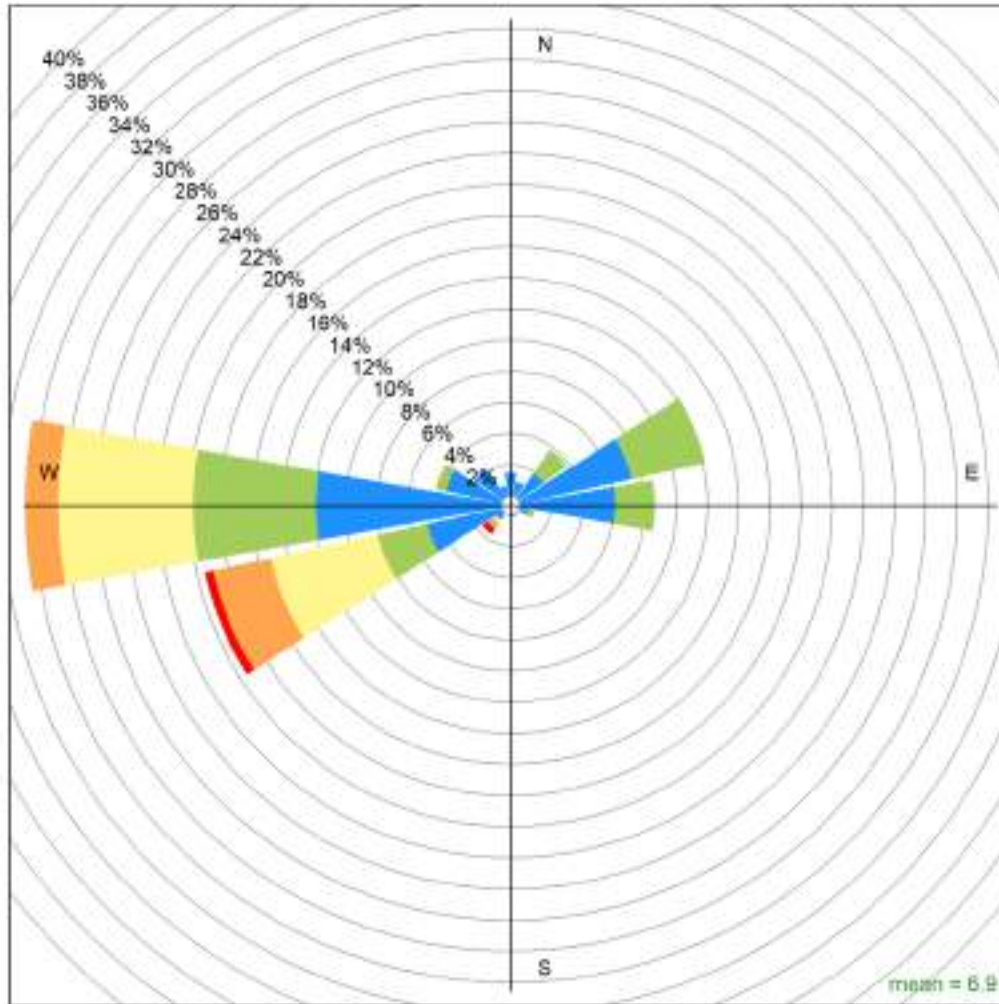


December 2024 Hourly Readings of Wind Direction (in degrees) at Milner



December 2024 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Milner

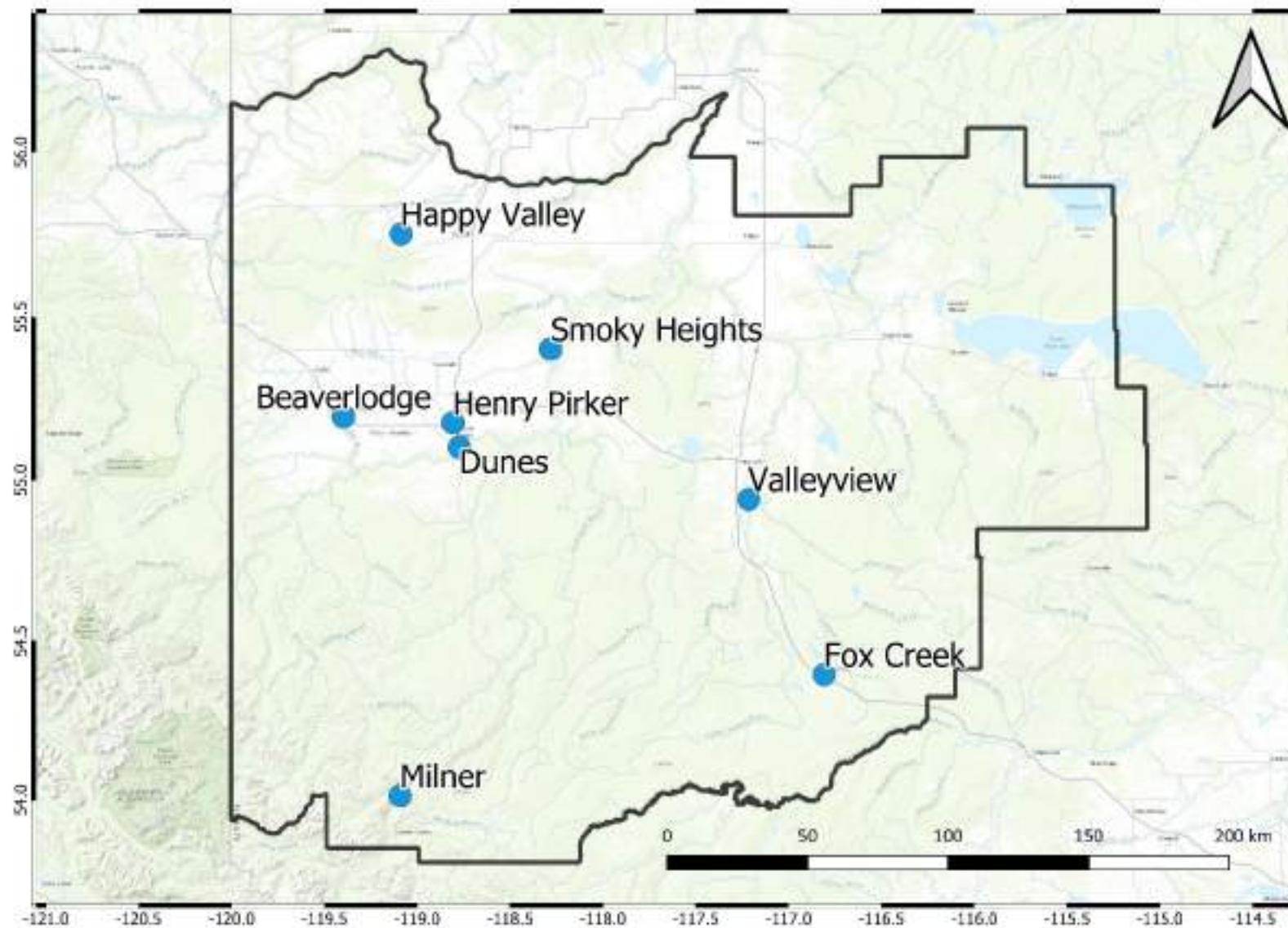




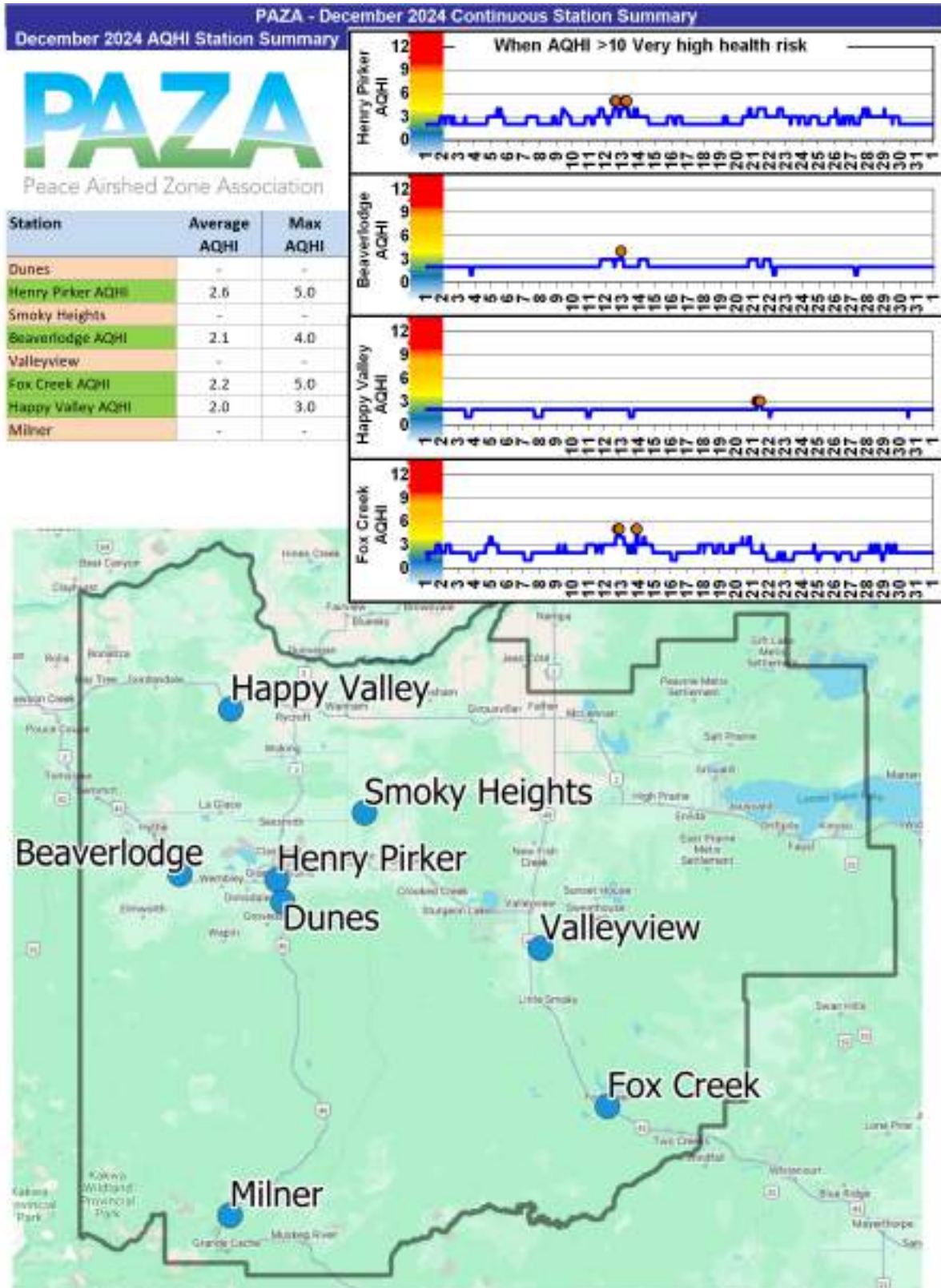
Milner December 2024 Wind Rose, wind speed in km/hr

Calms (<1km/hr) = 12.9 %

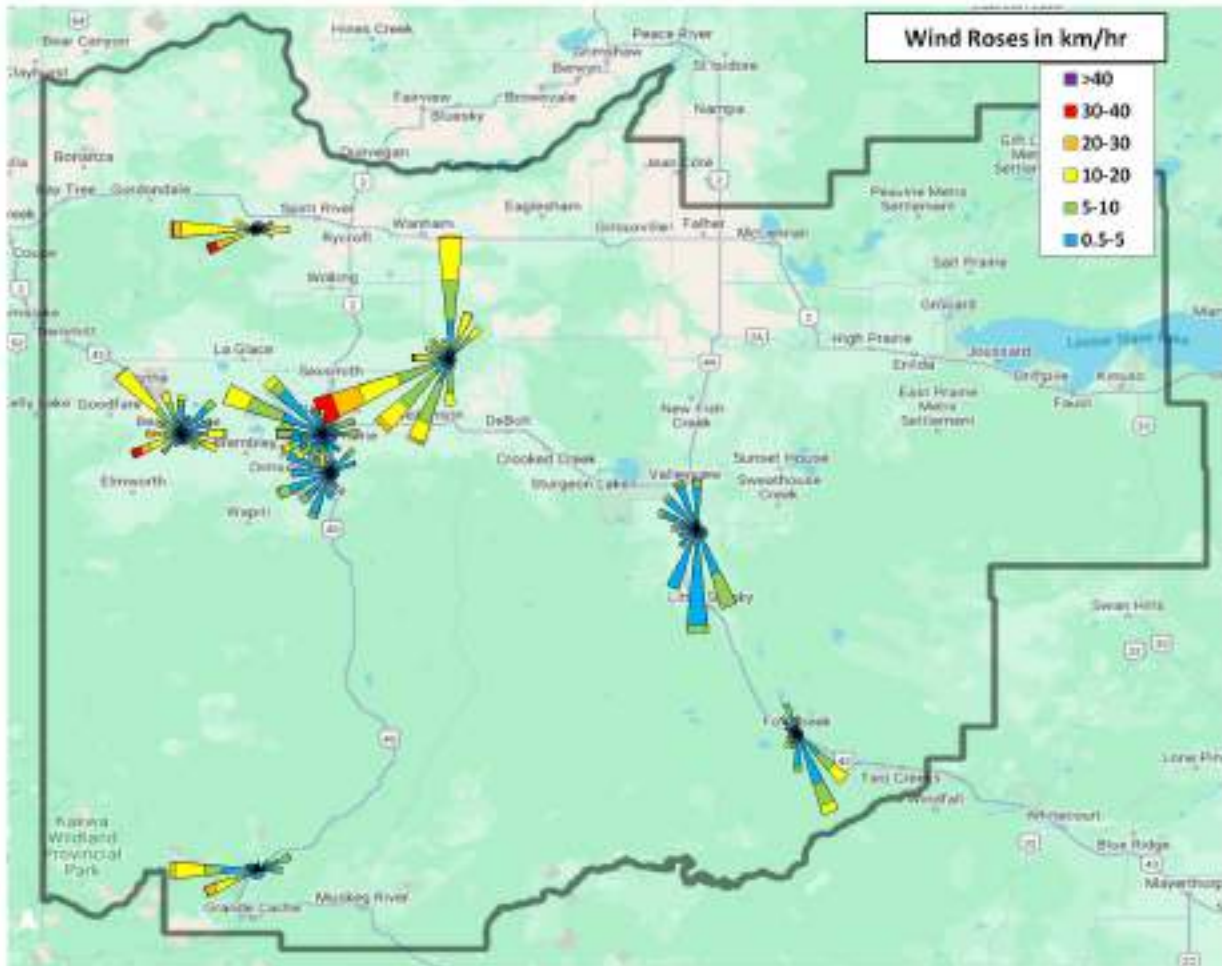
10 Concentration Summaries and Roses for PAZA



10.1 Air Quality Health Index (AQHI) Plots



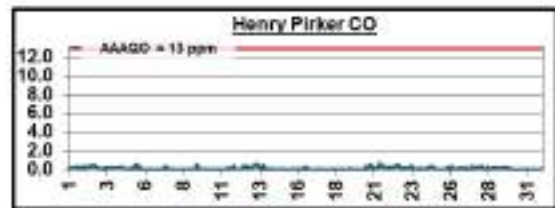
10.2 Wind Roses



10.3 Carbon Monoxide (CO) Plots

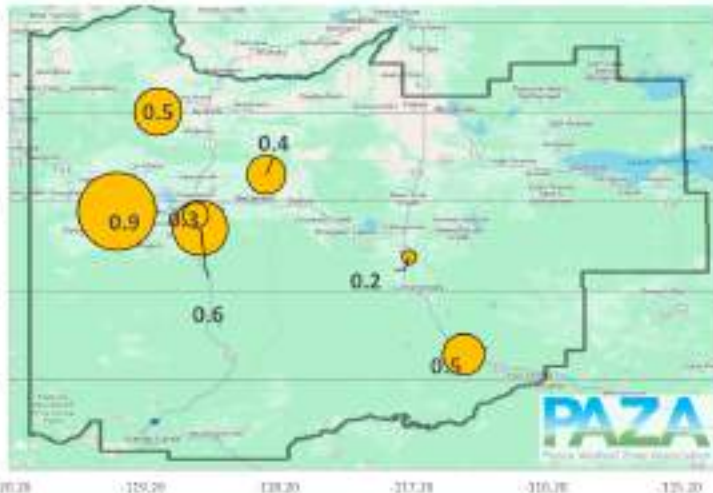
December 2024 CO Station Summary

Station	Avg (ppm)	Max (ppm)
Henry Pirker CO	0.09	0.64

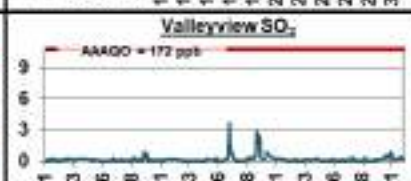
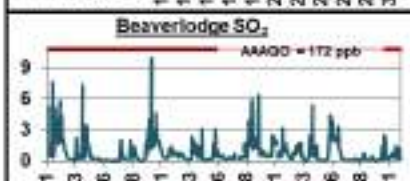
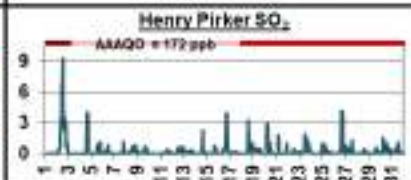
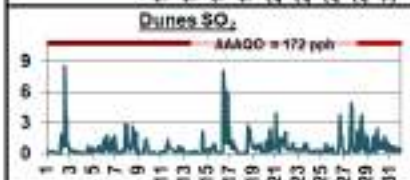
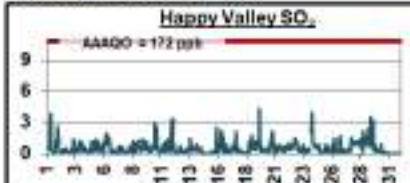


10.4 Sulphur Dioxide (SO₂) Plots

December 2024 SO ₂ Station Summary		
Station	Avg (ppb)	Max (ppb)
Dunes SO ₂	0.6	8.5
Henry Pirker SO ₂	0.3	9.3
Smoky Heights SO ₂	0.4	4.9
Beaverlodge SO ₂	0.9	9.9
Valleyview SO ₂	0.2	3.6
Fox Creek SO ₂	0.5	4.0
Happy Valley SO ₂	0.5	4.3
Milner SO ₂	-	-



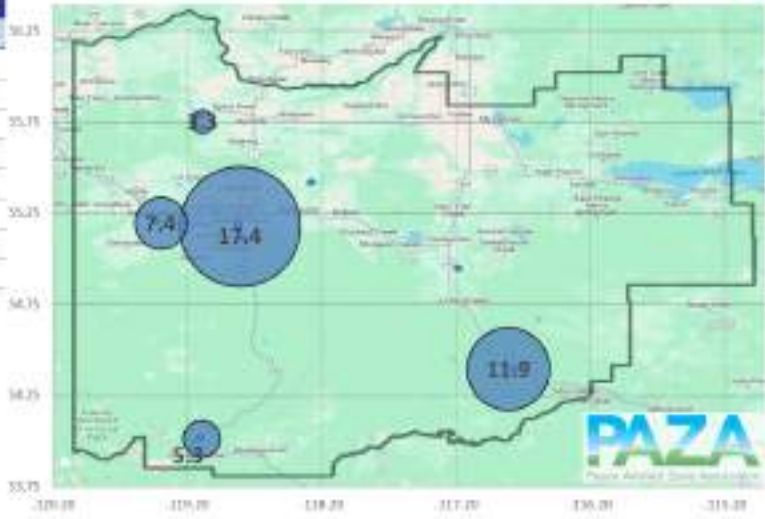
Sulphur Dioxide in ppb



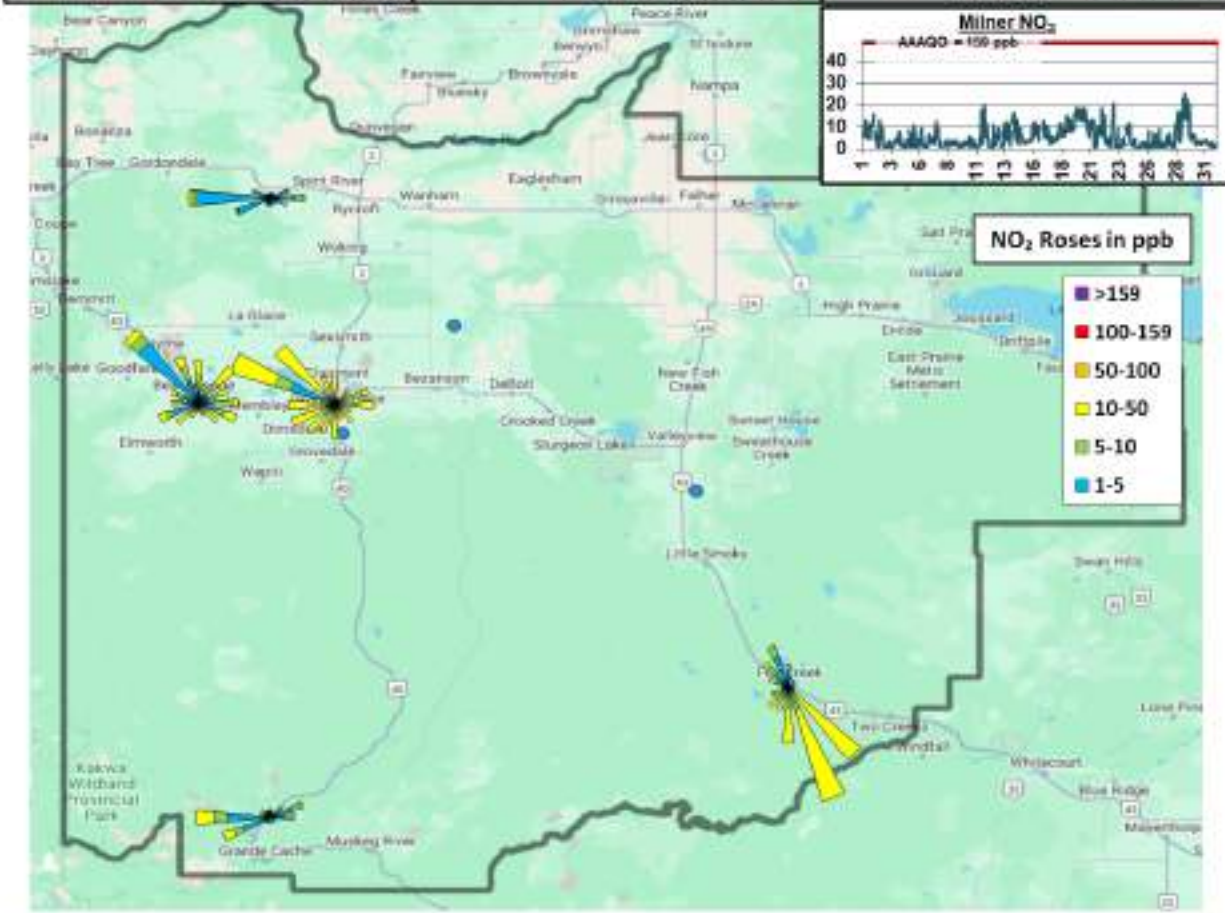
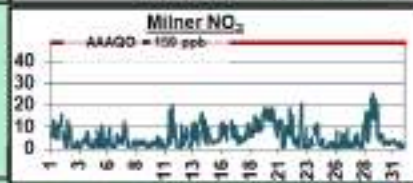
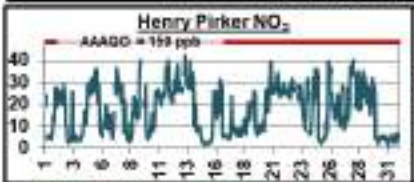
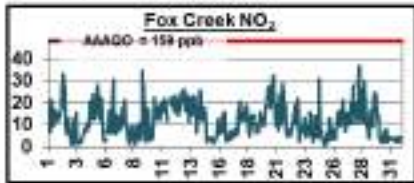
10.5 Nitrogen Dioxide (NO₂) Plots

December 2024 NO₂ Station Summary

Station	Avg (ppb)	Max (ppb)
Dunes NO ₂	-	-
Henry Pirkler NO ₂	17.4	42.1
Smoky Heights NO ₂	-	-
Beaverlodge NO ₂	7.4	32.4
Valleyview NO ₂	-	-
Fox Creek NO ₂	11.9	36.7
Happy Valley NO ₂	3.3	24.2
Milner NO ₂	5.3	25.1

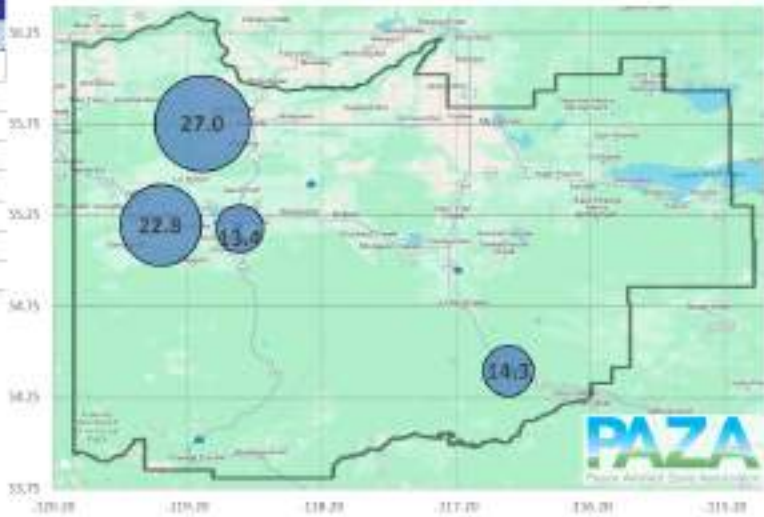


Nitrogen Dioxide in ppb

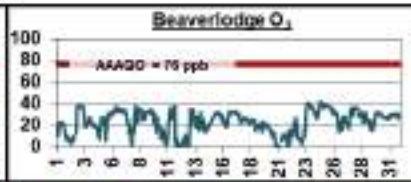
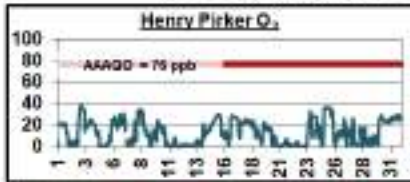


10.6 Ozone (O₃) Plots

December 2024 O ₃ Station Summary		
Station	Avg (ppb)	Max (ppb)
Dunes O ₃	-	-
Henry Pirkler O ₃	13.4	38.7
Smoky Heights O ₃	-	-
Beaverlodge O ₃	22.8	42.1
Valleyview O ₃	-	-
Fox Creek O ₃	14.3	39.7
Happy Valley O ₃	27.0	40.6
Milner O ₃	-	-



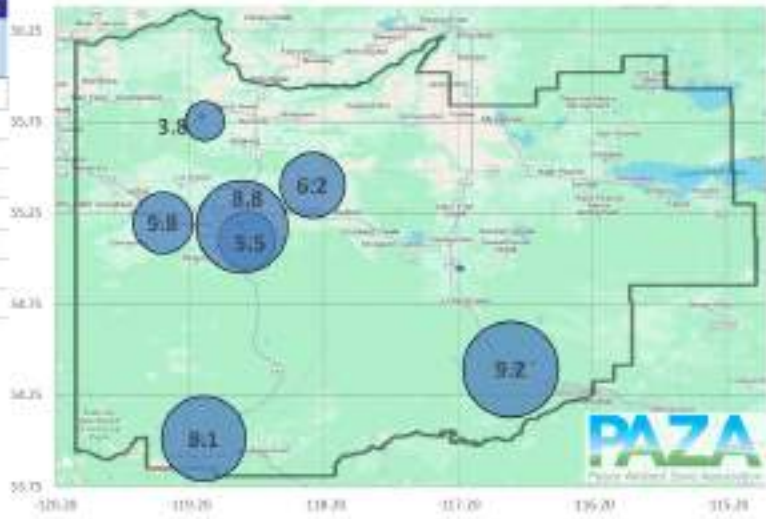
Ozone in ppb



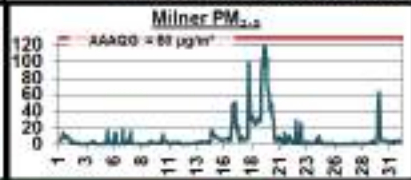
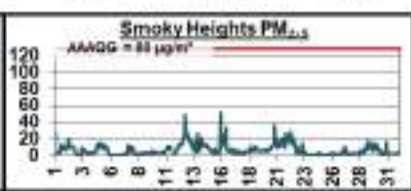
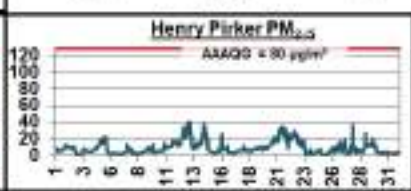
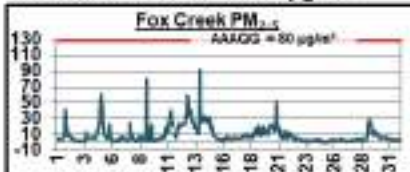
10.7 Fine Particulate Matter (PM_{2.5}) Plots

December 2024 PM_{2.5} Station Summary

Station	Avg µg/m ³	Max µg/m ³
Dunes PM _{2.5}	5.5	30.6
Henry Pirkler PM _{2.5}	8.8	40.3
Smoky Heights PM _{2.5}	6.2	50.8
Beaverlodge PM _{2.5}	5.8	35.4
Valleyview PM _{2.5}	-	-
Fox Creek PM _{2.5}	9.2	91.1
Happy Valley PM _{2.5}	3.8	34.3
Milner PM _{2.5}	8.1	119.4



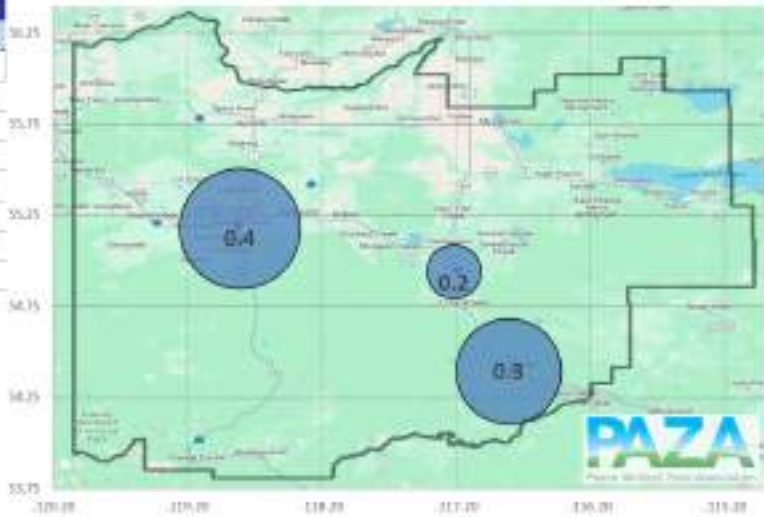
Fine Particulate Matter in µg/m³



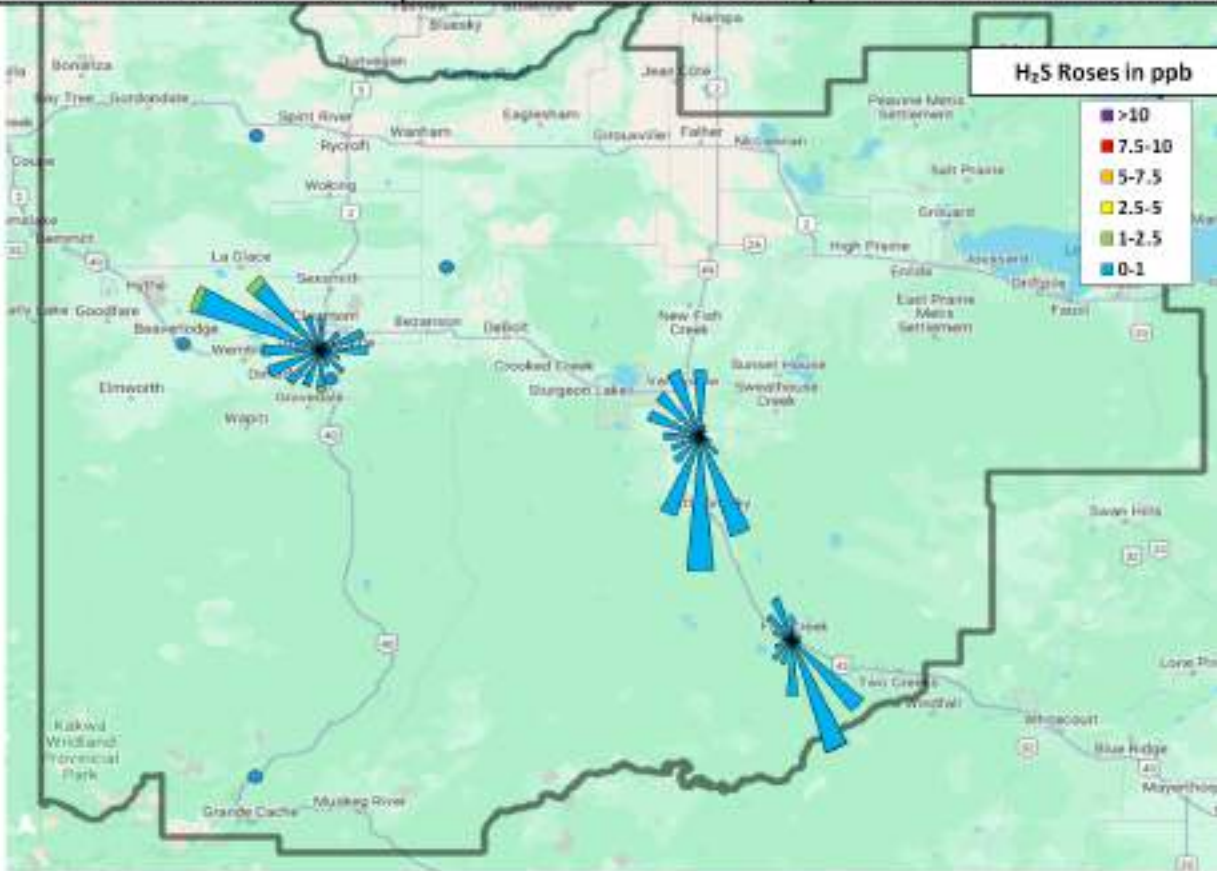
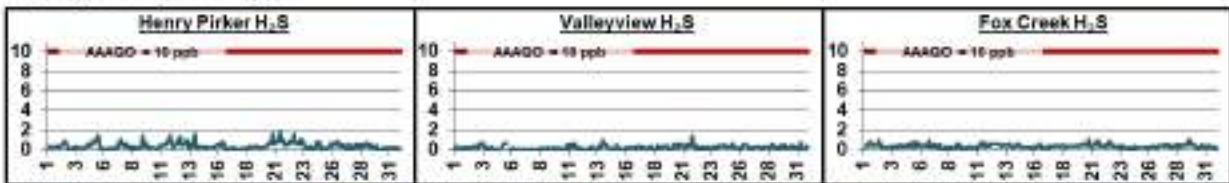
10.8 Hydrogen Sulphide (H₂S) Plots

December 2024 H₂S Station Summary

Station	Avg (ppb)	Max (ppb)
Dunes H ₂ S	-	-
Henry Pirkler H ₂ S	0.4	1.8
Smoky Heights H ₂ S	-	-
Beaverlodge H ₂ S	-	-
Valleyview H ₂ S	0.2	1.3
Fox Creek H ₂ S	0.3	1.0
Happy Valley H ₂ S	-	-
Milner H ₂ S	-	-

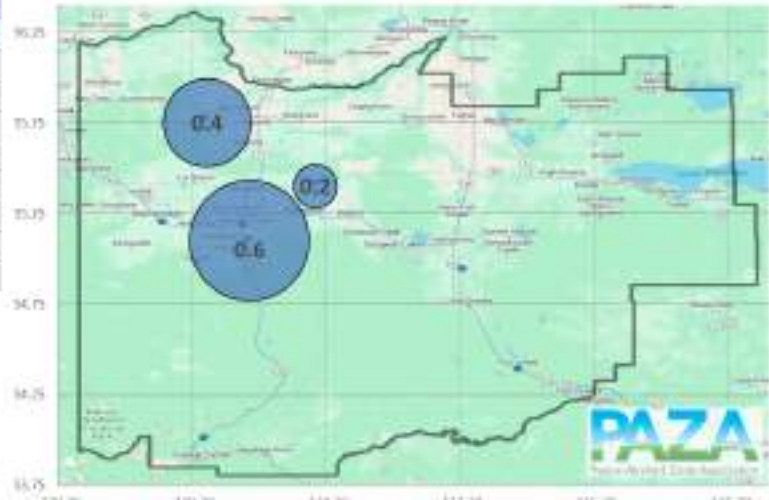


Hydrogen Sulphide in ppb

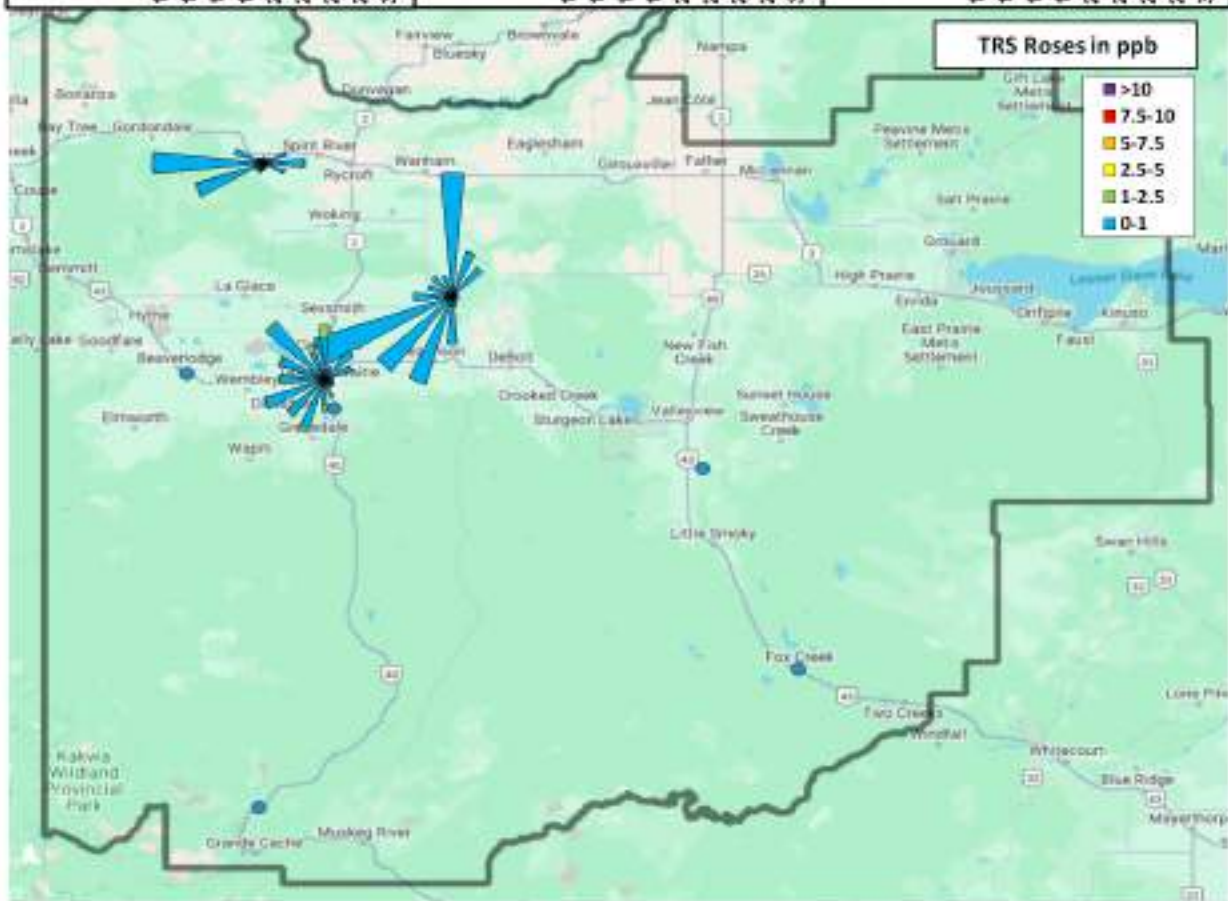
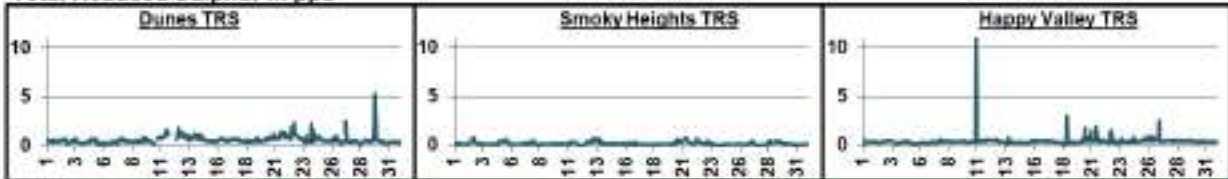


10.9 Total Reduced Sulphur (TRS) Plots

December 2024 TRS Station Summary		
Station	Avg (ppb)	Max (ppb)
Dunes TRS	0.6	5.2
Henry Pirker TRS	-	-
Smoky Heights TRS	0.2	0.8
Beaverlodge TRS	-	-
Valleyview TRS	-	-
Fox Creek TRS	-	-
Happy Valley TRS	0.4	11.3
Milner TRS	-	-



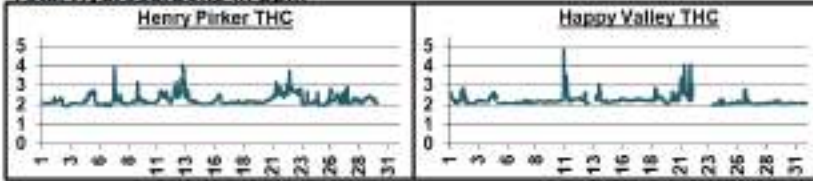
Total Reduced Sulphur in ppb



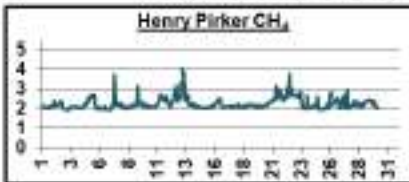
10.10 Total Hydrocarbon (THC) Plots

December 2024 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 Pirkler THC	2.3	4.0	2.3	4.0	0.00	0.24
Smoky Heights THC	-	-	-	-	-	-
Beaverlodge THC	-	-	-	-	-	-
Valleyview THC	-	-	-	-	-	-
Fox Creek THC	-	-	-	-	-	-
Happy Valley THC	2.2	4.8	-	-	-	-

Total Hydrocarbons in ppm



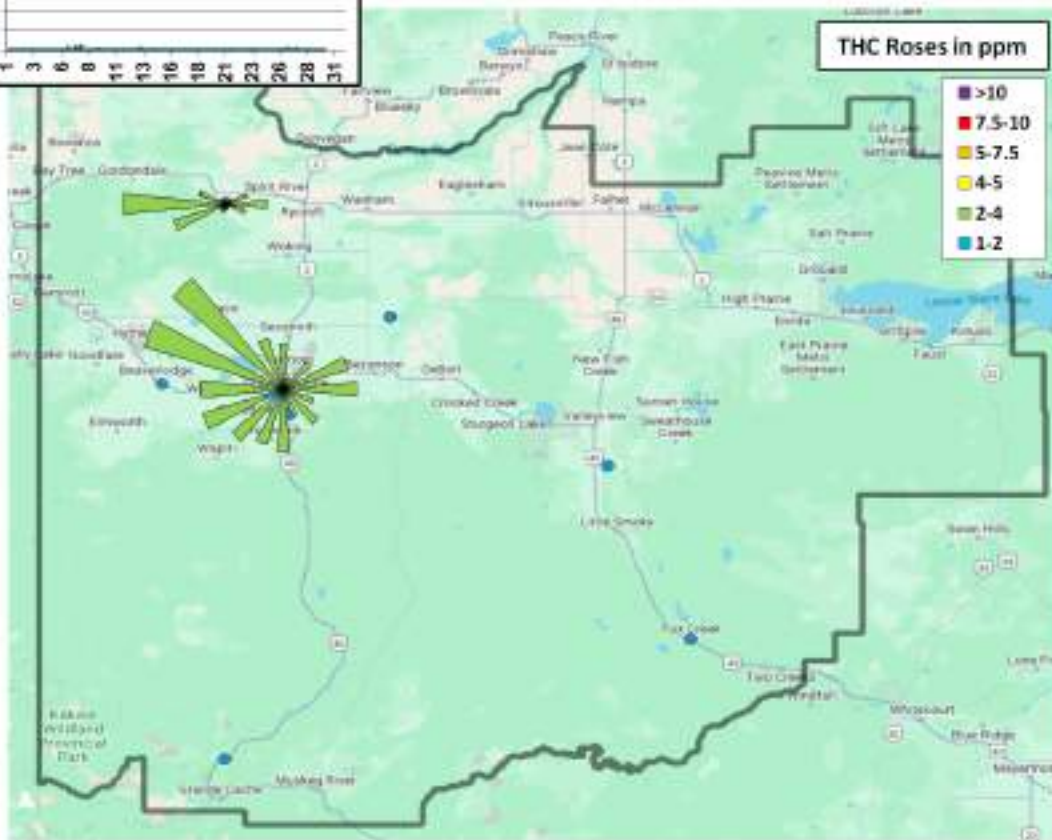
Total Hydrocarbons (THC)



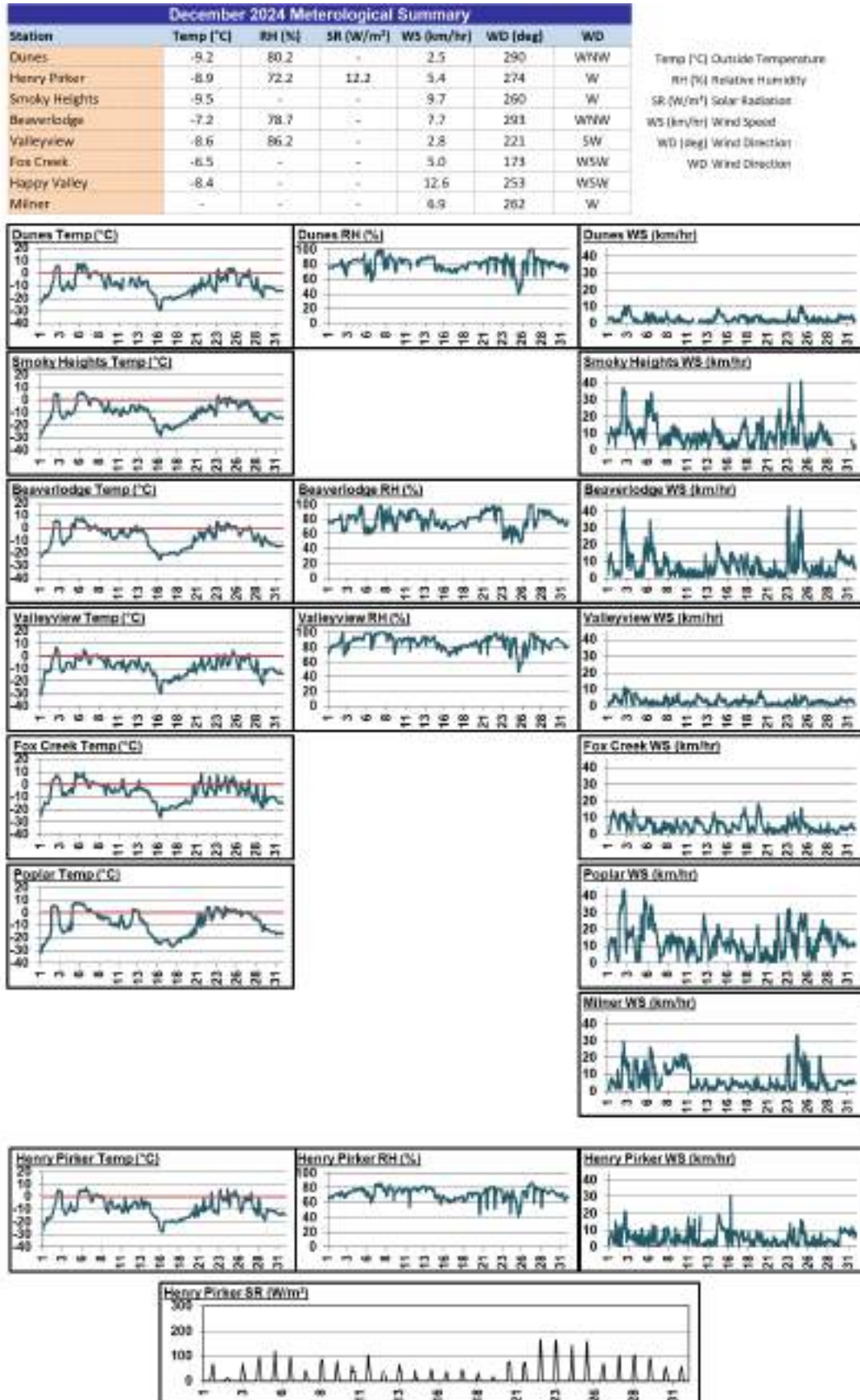
Methane (CH₄)



Non-Methane Hydrocarbons (NMHC)



10.11 Meteorology Summary



11 Passive Monitoring Data

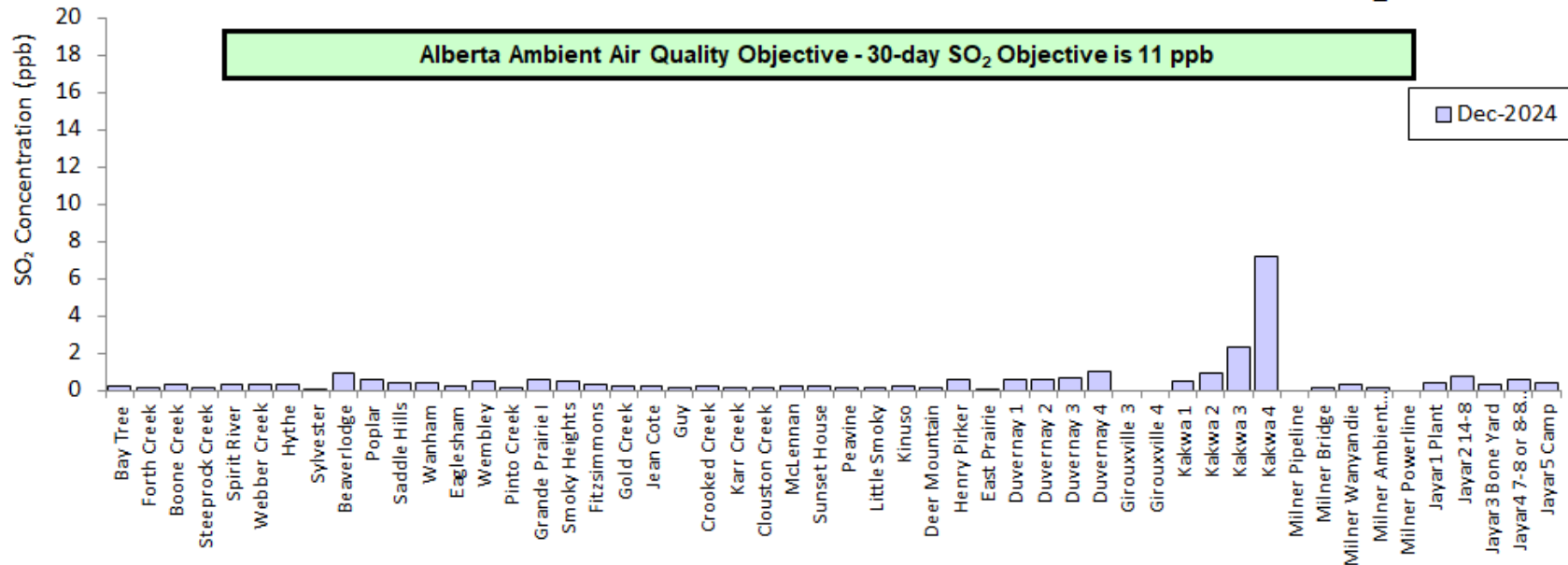
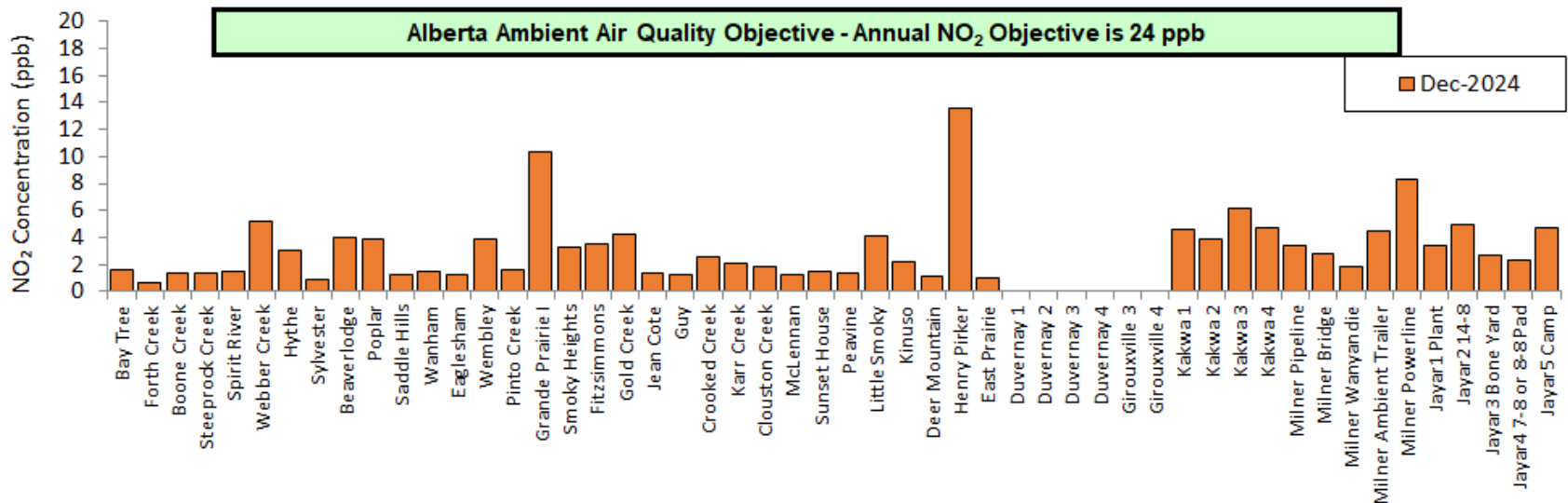
Peace Airshed Zone Association - PAZA Passive Stations for December 2024

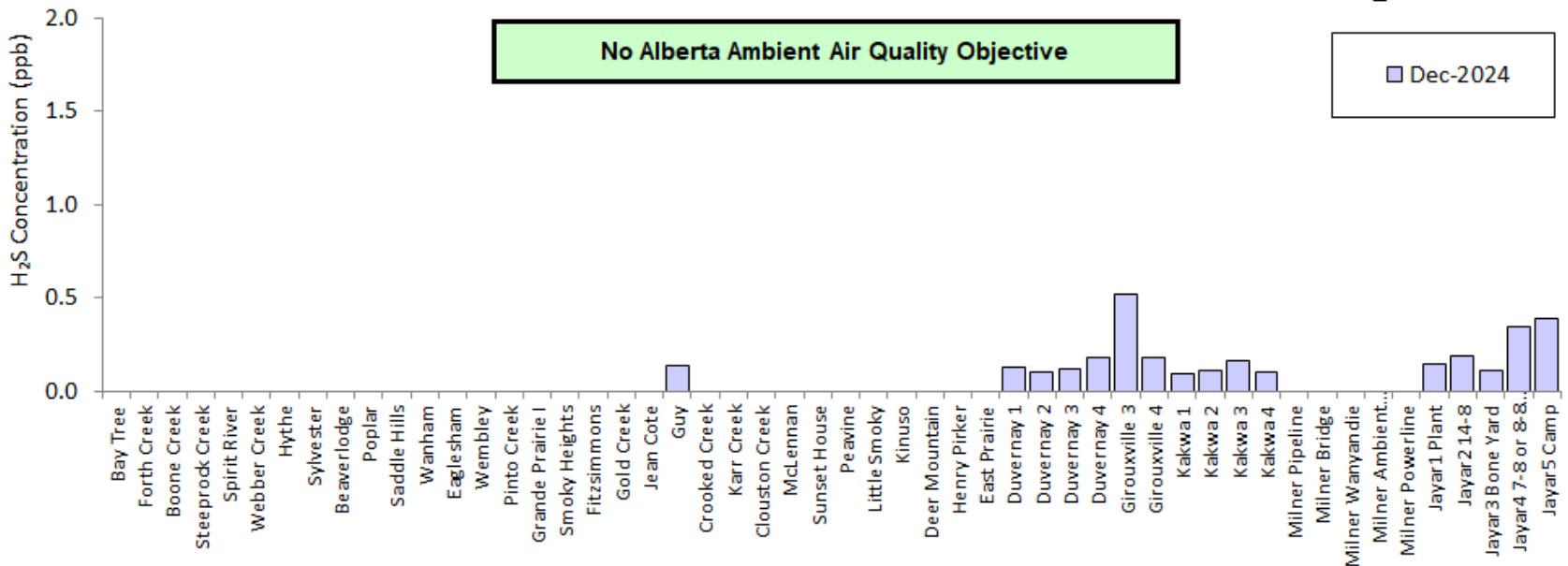
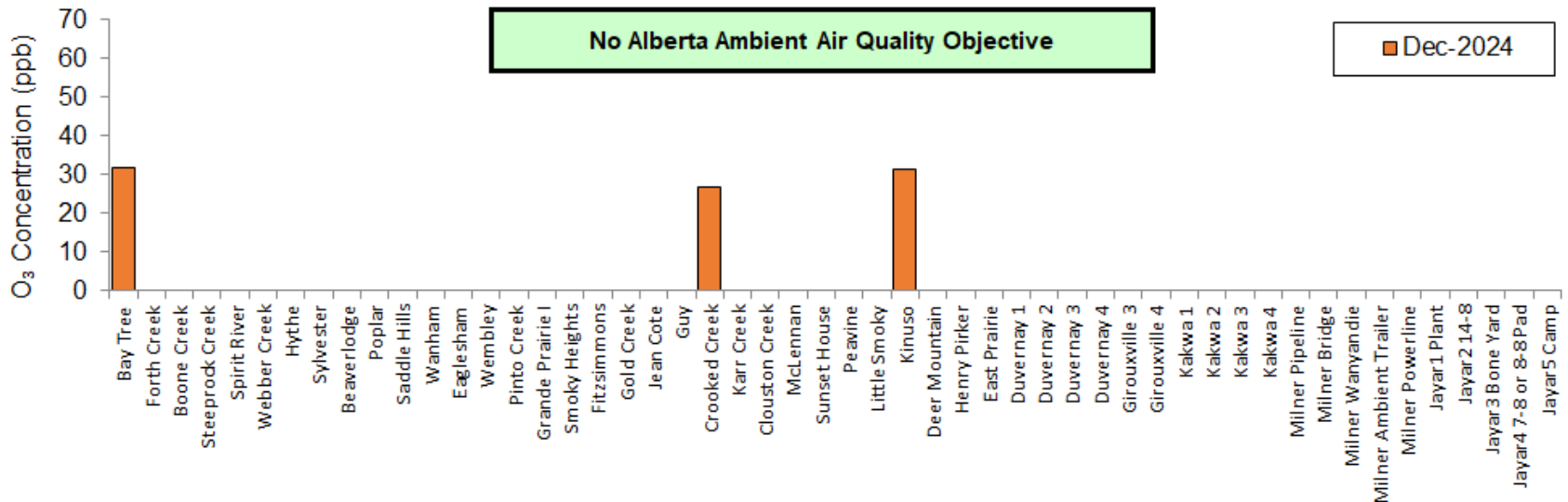
Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	LSD
Duplicates						
2a	Bay Tree		30.8			13-16-078-13 W6M
2b	Bay Tree		33.3			
3a	Forth Creek	0.1				04-13-082-07 W6M
3b	Forth Creek	0.2				
5a	Boone Creek			1.3		01-23-076-11 W6M
5b	Boone Creek			1.4		
16a	Beaverlodge			4.5		15-36-071-10 W6M
16b	Beaverlodge			3.4		
18a	Saddle Hills					04-25-074-07 W6M
18b	Saddle Hills					
21a	Eaglesham	0.2				16-21-079-25 W5M
21b	Eaglesham	0.2				
25a	Pinto Creek	0.1				04-24-069-11 W6M
25b	Pinto Creek	0.2				
35a	Jean Cote			1.4		12-35-079-21 W5M
35b	Jean Cote			1.2		
39a	Clouston Creek	0.1				12-01-073-22 W5M
39b	Clouston Creek	0.1				
44a	Peavine			1.4		03-05-079-15 W5M
44b	Peavine			1.3		
D4a	Duvernay 4	1.1			0.18	04-33-062-20 W5M
D4b	Duvernay 4	0.9			0.18	
K4a	Kakwa 4			5.3		06-18-063-04 W6M
K4b	Kakwa 4			4.2		
K2a	Kakwa 2	1.0				08-13-063-05 W6M
K2b	Kakwa 2	0.9				
K1a	Kakwa 1				0.08	01-13-063-05 W6M
K1b	Kakwa 1				0.10	
M9Ba	Ambient Trailer			4.1		#N/A
M9Bb	Ambient Trailer			4.9		
M7a	Milner Wanyandie	0.2				11-13-058-08 W6M
M7b	Milner Wanyandie	0.4				
J5Da	Jayar5 Camp			5.2		11-08-062-03 W6M
J5Db	Jayar5 Camp			4.3		
J3Da	Jayar3 Bone Yard	0.3				14-08-062-03 W6M
J3Db	Jayar3 Bone Yard	0.4				
J1Da	Jayar1 Plant				0.15	06-08-062-03 W6M
J1Db	Jayar1 Plant				0.15	

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	LSD
2	Bay Tree	0.2	32.1	1.6	-	13-16-078-13 W6M
3	Forth Creek	0.1	-	0.6	-	04-13-082-07 W6M
5	Boone Creek	0.3	-	1.4	-	01-23-076-11 W6M
7	Steeprock Creek	0.2	-	1.3	-	09-35-072-13 W6M
9	Spirit River	0.3	-	1.4	-	08-12-079-07 W6M
11	Webber Creek	0.3	-	5.2	-	09-36-074-09 W6M
12	Hythe	0.3	-	3.0	-	14-36-072-11 W6M
14	Sylvester	0.1	-	0.9	-	08-06-069-12 W6M
16	Beaverlodge	0.9	-	4.0	-	15-36-071-10 W6M
17	Poplar	0.6	-	3.8	-	13-06-073-08 W6M
18	Saddle Hills	0.4	-	1.2	-	04-25-074-07 W6M
19	Wanham	0.4	-	1.5	-	16-22-077-03 W6M
21	Eaglesham	0.2	-	1.3	-	16-21-079-25 W5M
24	Wembley	0.5	-	3.9	-	12-31-070-08 W6M
25	Pinto Creek	0.2	-	1.6	-	04-24-069-11 W6M
27	Grande Prairie I	0.6	-	10.3	-	08-15-071-06 W6M
29	Smoky Heights	0.4	-	3.3	-	04-06-075-02 W6M
30	Fitzsimmons	0.3	-	3.5	-	15-36-072-03 W6M
32	Gold Creek	0.3	-	4.2	-	06-33-067-05 W6M
35	Jean Cote	0.2	-	1.3	-	12-35-079-21 W5M
36	Guy	0.1	-	1.3	0.1	03-04-076-22 W5M
37	Crooked Creek	0.2	26.9	2.6	-	16-01-071-26 W5M
38	Karr Creek	0.1	-	2.0	-	10-16-065-02 W6M
39	Clouston Creek	0.1	-	1.8	-	12-01-073-22 W5M
40	McLennan	0.2	-	1.2	-	03-29-077-19 W5M
42	Sunset House	0.2	-	1.5	-	05-32-070-19 W5M
44	Peavine	0.1	-	1.4	-	03-05-079-15 W5M
46	Little Smoky	0.2	-	4.1	-	12-01-065-21 W5M
47	Kinuso	0.2	31.5	2.2	-	12-10-073-10 W5M
48	Deer Mountain	0.1	-	1.1	-	15-22-068-09 W5M
49	Henry Pirker	0.5	-	13.5	-	17-26-071-06 W6M
50	East Prairie	0.1	-	1.0	-	11-13-079-08 W6M
D1	Duvernay 1	0.5	-	-	0.12	04-33-062-20 W5M
D2	Duvernay 2	0.6	-	-	0.11	04-33-062-20 W5M
D3	Duvernay 3	0.7	-	-	0.12	04-33-062-20 W5M
D4	Duvernay 4	1.0	-	-	0.18	04-33-062-20 W5M
G3	Girouxville 3	-	-	-	0.52	14-02-077-23 W5M
G4	Girouxville 4	-	-	-	0.18	04-08-077-22 W5M
K1	Kakwa 1	0.5	-	4.6	0.09	01-13-063-05 W6M
K2	Kakwa 2	1.0	-	3.9	0.11	08-13-063-05 W6M
K3	Kakwa 3	2.3	-	6.2	0.16	12-18-063-04 W6M
K4	Kakwa 4	7.2	-	4.8	0.10	06-18-063-04 W6M
M1	Milner Pipeline	<0.1	-	3.4	-	12-14-058-08 W6M
M2	Milner Bridge	0.1	-	2.8	-	08-06-057-08 W6M
M3	Milner Wanyandie	0.3	-	1.8	-	11-13-058-08 W6M
M4	Milner Ambient Trailer	0.1	-	4.5	-	09-15-058-08 W6M
M5	Milner Powerline	<0.1	-	8.3	-	06-14-058-08 W6M
J1	Jayar1 Plant	0.4	-	3.4	0.15	06-08-062-03 W6M
J2	Jayar2 14-8	0.7	-	4.9	0.19	07-08-062-03 W6M
J3	Jayar3 Bone Yard	0.4	-	2.7	0.11	14-08-062-03 W6M
J4	Jayar4 7-8 or 8-8 Pad	0.6	-	2.3	0.35	10-08-062-03 W6M
J5	Jayar5 Camp	0.4	-	4.8	0.39	11-08-062-03 W6M

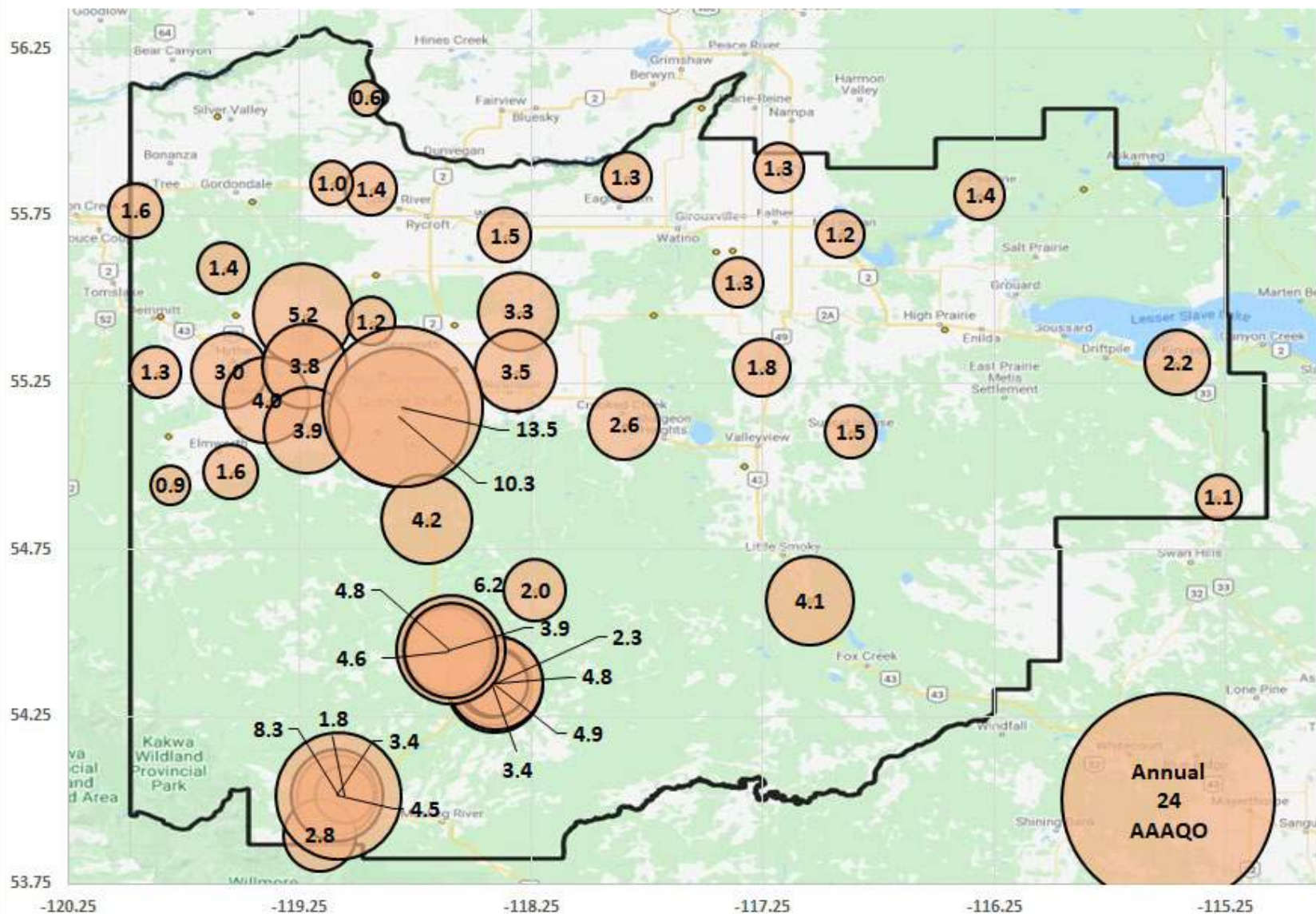
Passive Summary for December 2024

Stats	Sulphur Dioxide SO ₂ ppb	Ozone O ₃ ppb	Nitrogen Dioxide NO ₂ ppb	Hydrogen Sulphide H ₂ S ppb
Passive Summary for December 2024 (PAZA)				
Mean	0.5	30.1	3.2	0.2
Standard Deviation	1.0	2.8	2.5	0.1
Minimum	0.1	26.9	0.6	0.1
Maximum	7.2 Kakwa 4 (#K4)	32.1 Bay Tree (#2)	13.5 Henry Pirker (#49)	0.5 Girouxville 3 (#G3)
Continuous and Passive Monitoring Comparison				
PAZA Beaverlodge Station	0.9	22.8	7.4	-
Beaverlodge Passive (#16)	0.9	-	4.0	-
PAZA Henry Pirker Station	0.3	13.4	17.4	0.4
Henry Pirker passive (#49)	0.5	-	13.5	-
Milner Station	-	-	5.3	-
Milner passive	0.1	-	4.5	-

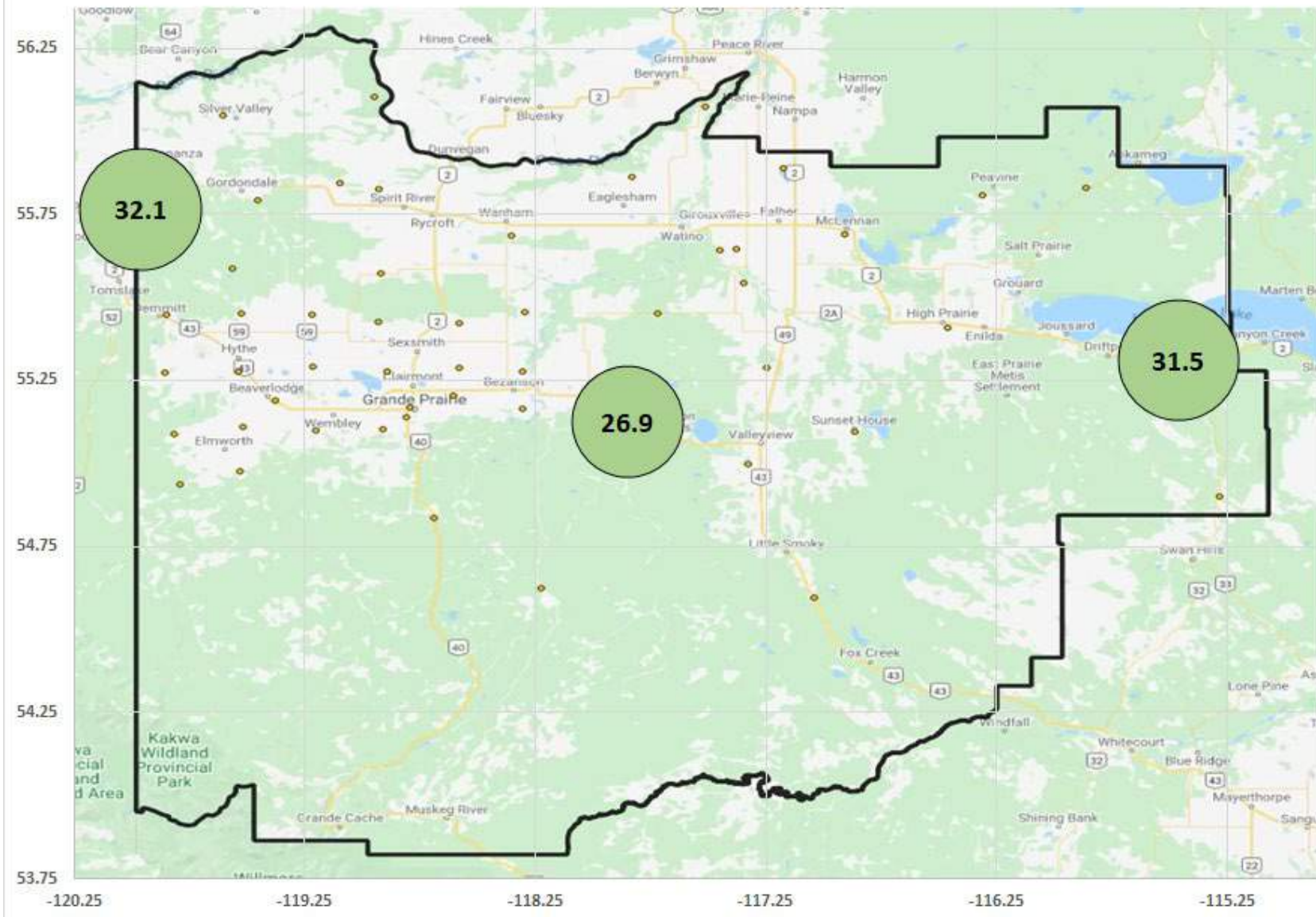




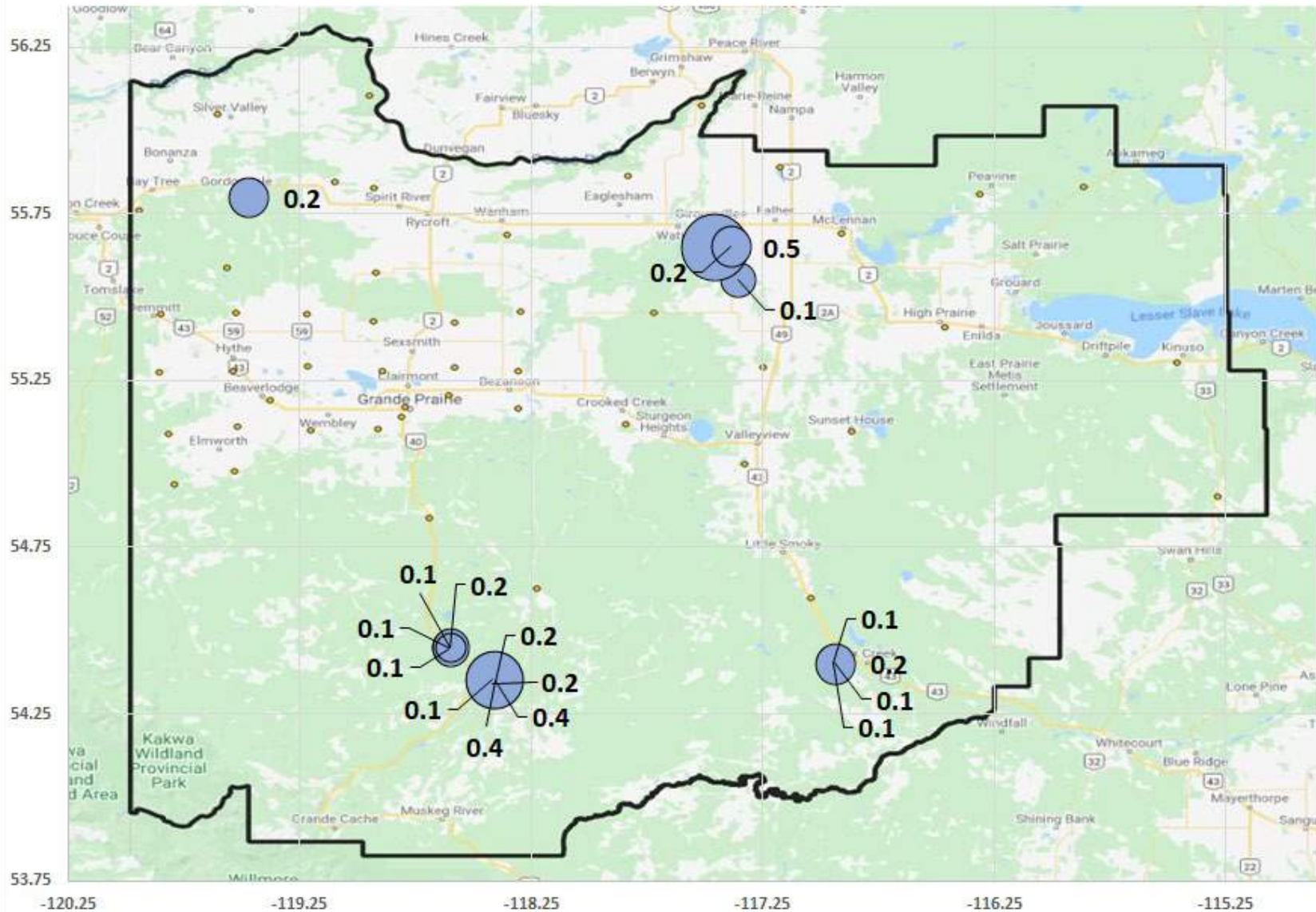
NO₂ Monthly Average (units in ppb)



O₃ Monthly Average (units in ppb)



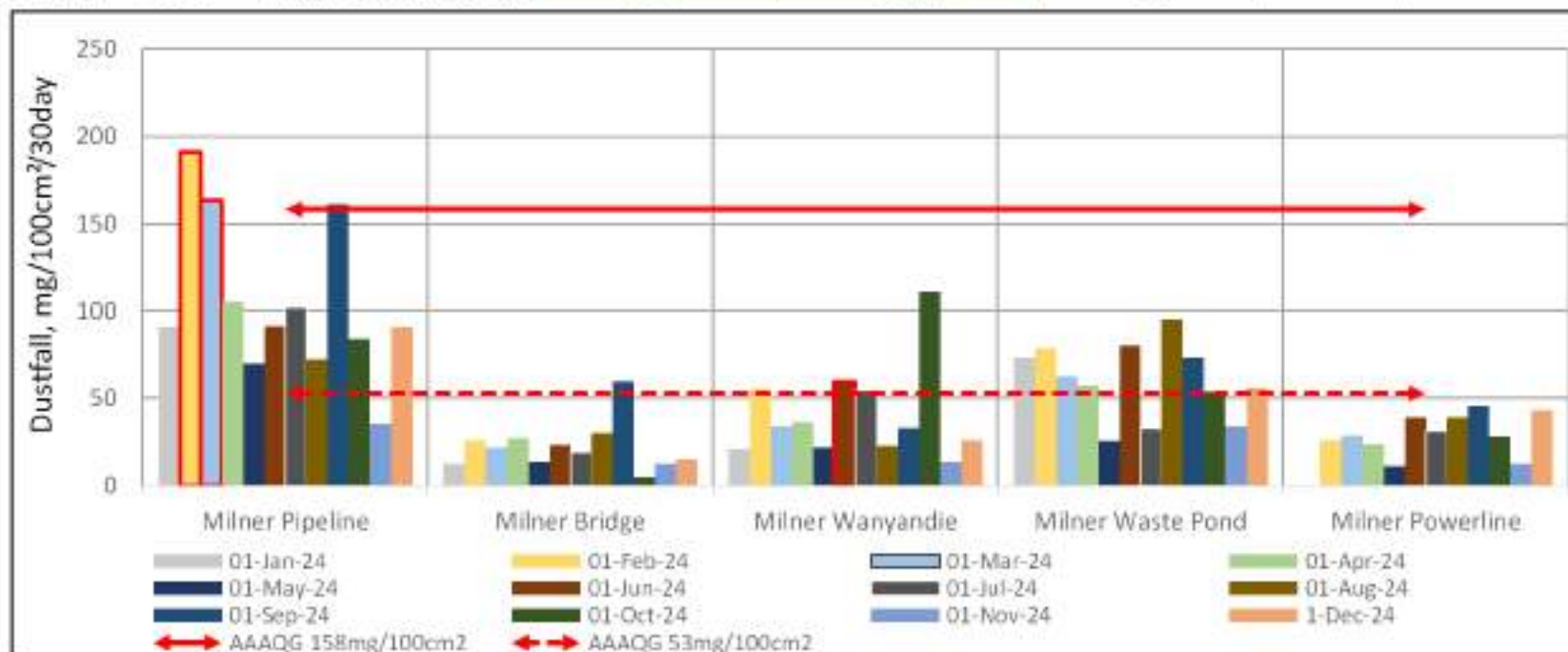
H₂S Monthly Average (units in ppb)



12 Dustfall Monitoring Data - update

Milner Dustfall Samples December 2024

Exposure Month	Year	Sample	Total Dustfall (30 day) mg/100cm ² /30day	Fixed Dustfall (30 day) mg/100cm ² /30day	Exposure days	Field Notes
December	2024	Milner Pipeline	90.4	39.3	31	
December	2024	Milner Bridge	15.3	11.9	31	
December	2024	Milner Wanyandie	25.7	18.3	31	
December	2024	Milner Waste Pond	55.8	27.5	31	
December	2024	Milner Powerline	43.2	24.4	31	
December	2024	Milner Powerline Dup	39.3	24.4	31	RPD, 9% / 0%



End of Report



Peace Airshed Zone Association

Ambient Air Monitoring Report

December 2024