



Peace Airshed Zone Association

Ambient Air Monitoring Network Summary

Ambient Air Quality Monitoring Program

Monthly Report

June 2024

July 31, 2024

Alberta Environment and Protected Areas

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

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

Please find enclosed the PAZA Ambient Air Quality Monitoring Network Report for the month of June 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 June 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
Longview Oil Corp.	Sunset House	06-22-070-20-W5	00138884-01-00
Milner Power Limited Partnership	H.R. Milner thermal electric power plant	SE-15-058-08-W6	00009814-03-03
NorthRiver Midstream Inc.	Fourth Creek	16-11-082-09-W6	00000263-01-00
	Gordondale	11-26-079-09-W6	00011495-01-01
	Pouce Coupe/Bonanza	03-23-080-13-W6	00070203-01-01
Pembina Pipeline Corporation	Kakwa River	08-13-063-05 W6	00335342-01-00
Penn West Petroleum Ltd.	Tangent	13-29-080-23-W5	00001746-02-00
	Pouce Coupe	16-07-078-11-W6	00000614-01-00
Petrus Resources	Rycroft	08-25-077-06-W6	00011351-02-00
	Spirit River	08-34-077-06-W6	00011096-02-00
Strathcona Resources Ltd.	Jayar Sour Gas Processing Plant	06-08-062-03 W6	03612040-00-00
Suncor Energy Inc.	Progress	07-22-078-09-W6	00011428-02-00
Tidewater Midstream and Infrastructure Ltd.	Pipestone Sour Gas Plant	NW-35-70-9 W6	00403309-00-00
Veresen Energy	Hythe Brainard	11-18-074-12-W6	00010910-02-00
Weyerhaeuser Canada	Grande Prairie Pulp and Wood Plant	01-14-070-05-W6	00000113-02-00

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

There were 2 readings above guidelines as follows:

Readings above the SO₂ monthly AAAQO (11ppb) recorded as:

Site	reference	Pollutant	Date	Average ppb
Kakwa 3	430670	SO ₂ Passive	June 2024	11.2

Readings above the residential dustfall monthly AAAQG (53mg/100cm²/30d) recorded as:

Site	reference	Pollutant	Date	Average mg/100cm ² /30d
Milner Wanyandie	430669	Total Dustfall	June 2024	59.4

Operational times less than 90 percent

All instruments 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
 - **Notes from lab:**
 - **Duvernay 1 duplicate was missing for SO₂**
 - **Guy NO₂ was damaged and not analyzed**
 - **Sunset House NO₂ was damaged and not analyzed**

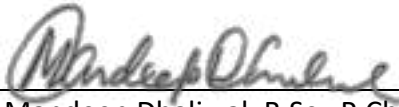
There were 18 duplicates sampled in the month of June (Duvernay 1 duplicate was missing):

- Seven SO₂ duplicates located at Wanham, Wembley, Clouston Creek, McLennan, Kakwa 2, Milner Ambient Trailer, Jayar5 Camp
 - RPD ranging from 6% to 74% with 1 fail (Wanham (0.2 and 0.1 ppb) also the sample at Milner Ambient Trailer was not compared (0.1 and <0.1 ppb)
 - **Kakwa 3 result was 11.2ppb, >11ppb (SO₂ monthly AAAQO)**
- One O₃ duplicate located at Kinuso
 - RPD 16% (no fails)
- Seven NO₂ duplicates at Webber Creek, Poplar, Jean Cote, Crooked Creek, Kakwa 4, Milner Wanyandie, Jayar3 Bone Yard
 - RPD ranging from 4% to 22% (no fails)
- Four H₂S duplicates at Duvernay 1, Girouxville 3, Kakwa 1, Jayar2 14-8
 - RPD ranging from 0% to 22% (no fails)

Dustfall Monitoring

- Five Stations collected Total Dustfall and Fixed Dustfall
- Total dustfall ranged from 23.3 to 91.1 mg/100cm²/30day
 - o Milner Wanyandie site was 59.4, >53 mg/100cm²/30day (residential and recreational AAAQG)
- RPD ranged from 2% to 6% (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.

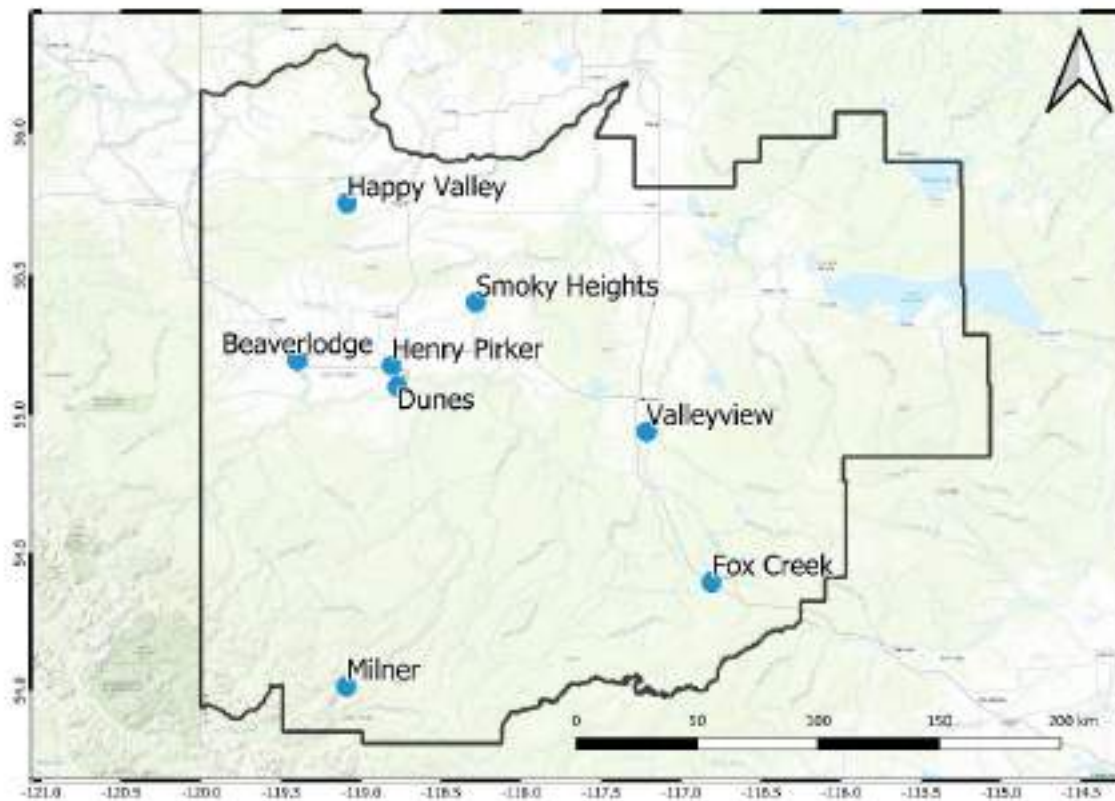


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Program Manager

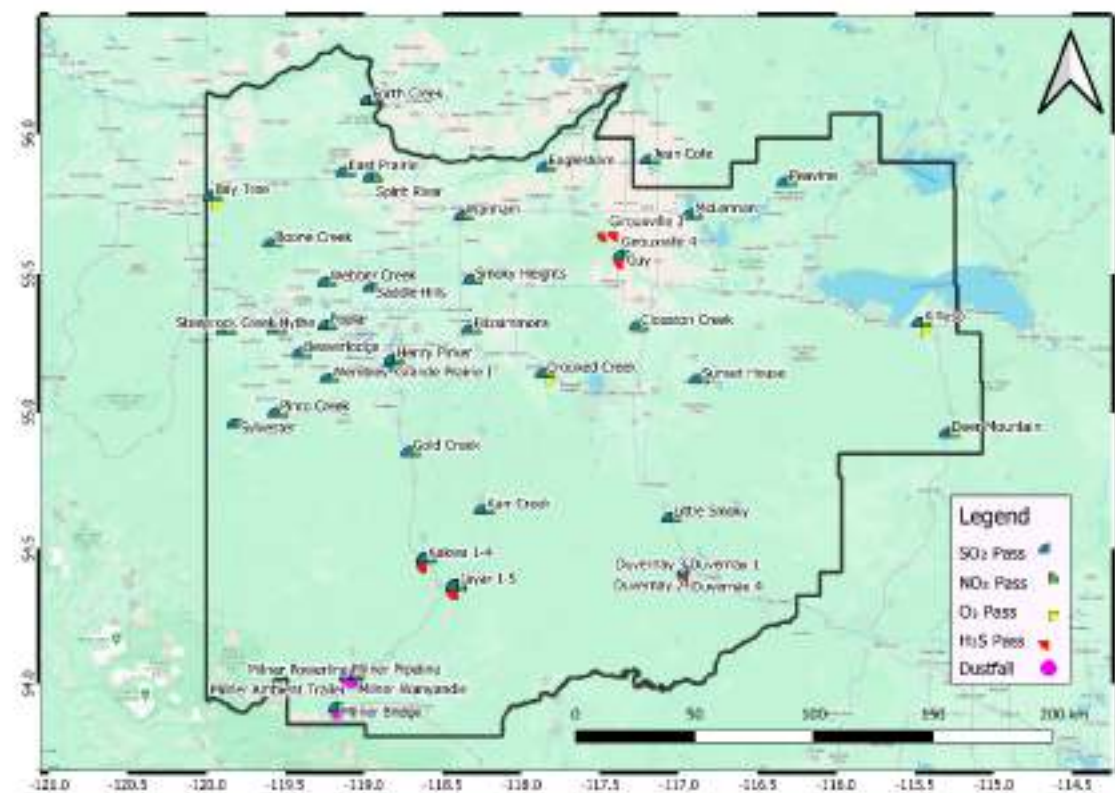
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PAZA Continuous Monitoring Station Locations



PAZA Passive Monitoring Station Locations



1 June 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 - June 2024 Beaverlodge Station Report

Parameter	June				Max	1-hour		Max	24-hour		Max Day	Exceedance				Calibration Date
	Average	Minimum	Valid	Operational		Objective	Max Day and Time		Objective	Max Day		1hr	8hr	24hr	30d	
NO (ppb)	0.5	0.0	95.0%	100.0%	7.1	-	Jun-10 07:00	0.9	-	Jun-10	-	-	-	-	Jun 05, 2024	
NO ₂ (ppb)	2.4	0.3	95.0%	100.0%	14.1	150	Jun-20 06:00	5.5	-	Jun-20	0	-	-	-	Jun 05, 2024	
NO _x (ppb)	2.7	0.3	95.0%	100.0%	17.5	-	Jun-20 06:00	6.2	-	Jun-20	-	-	-	-	Jun 05, 2024	
O ₃ (ppb)	29.7	4.5	95.4%	100.0%	54.3	75	Jun-21 19:00	58.7	-	Jun-22	0	-	-	-	Jun 05, 2024	
PM ₁₀ (µg/m³)	4.0	0.4	99.6%	100.0%	13.0	80	Jun-22 05:00	8.6	25	Jun-23	0	-	0	-	Jun 05, 2024	
SO ₂ (ppb)	0.5	0.0	95.3%	100.0%	65.8	172	Jun-22 13:00	5.7	48	Jun-22	0	-	0	0	Jun 04, 2024	
Note: Valid hours must be greater than 75% Operational hours must be greater than 90%																
Average	15.1	5.5	95.7%	99.7%	25.0											
Temp (°C)	15.1	5.5	95.7%	99.7%	25.0											
RH (%)	60.1	18.0	100.0%	100.0%	99.9											
WS (mm/hr)	11.5	0.5	100.0%	100.0%	42.5											
WD (deg)	273	0.2	100.0%	100.0%	359.0											
Average Wind Direction										273	W					

Update Summary:

Parameter	Make	Model	Equipment summary
NO/NO ₂ /NO _x	Thermo	42iQ	No Operational issues noted during the month
O ₃	Thermo	89iQ	No Operational issues noted during the month
PM ₁₀	API	T640	No Operational issues noted during the month
SO ₂	Thermo	43i-TLE	No Operational issues noted during the month
Met Equip	MetOne	50.5	For ET, daily drop removed every day 04:21-04:45 (30hrs). June 22 additional 1hr removed

1.2 Dunes Air Monitoring Station

PAZA - June 2024 Dunes Station Report

Parameter	June		Valid	Operational	Max	1-hour		Max	24-hour		Exceedance				Calibration Date
	Average	Minimum				Objective	Max Day and Time		Objective	Max Day	1hr	8hr	24hr	30d	
PM ₁₀ (µg/m ³)	4.0	0.0	98.3%	98.0%	59.4	80	Jun-25 19:00	10.5	29	Jun-22	0	-	0	-	Jun-11-2024
SO ₂ (ppb)	0.5	0.0	95.3%	100.0%	6.6	172	Jun-04 13:00	1.0	48	Jun-29	0	-	0	0	Jun-11-2024
TRS (ppb)	0.5	0.0	95.3%	100.0%	6.3	10	Jun-01 08:00	0.6	3	Jun-01	0	-	0	-	Jun-11-2024
	Average	Minimum	Valid	Operational	Maximum	Note: Valid hours must be greater than 75% Operational hours must be greater than 90%									
Temp (°C)	15.5	1.4	100.0%	100.0%	28.5										
RH (%)	59.8	15.8	100.0%	100.0%	99.9										
WS (mm/hr)	4.3	0.1	100.0%	100.0%	13.3										
WD (deg)	276	1.8	100.0%	100.0%	359.6	Average Wind Direction276W									

Update Summary:

Parameter	Make	Model	Equipment summary
PM ₁₀	Thermo	SHARP 5030	June 12, 2024 the SHARP had an error for flow & tape being stuck, maintenance performed to clear flow and reset the tape (5hrs removed, 1hr maintenance)
SO ₂	Thermo	43i	No Operational issues noted during the month
TRS	Thermo	43i	No Operational issues noted during the month
Met Equip	54/RMYYoung	MetPak/RMY96004	No Operational issues noted during the month

1.3 Grande Prairie - Henry Pirkler Air Monitoring Station

PAZA - June 2024 Henry Pirkler Station Report

Parameter	June				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)	0.6	0.0	95.0%	100.0%	18.1	-	Jun-18 07:00	3.0	-	Jun-18	-	-	-	-	Jun 03, 2024
NO ₂ (ppb)	4.1	0.7	95.0%	100.0%	23.7	159	Jun-14 01:00	8.2	-	Jun-20	0	-	-	-	Jun 03, 2024
NO _x (ppb)	5.0	0.8	95.0%	100.0%	39.1	-	Jun-20 05:00	10.9	-	Jun-20	-	-	-	-	Jun 03, 2024
O ₃ (ppb)	29.2	1.0	95.3%	100.0%	56.1	76	Jun-21 18:00	40.9	-	Jun-22	0	-	-	-	Jun 03, 2024
PM _{2.5} (µg/m ³)	4.4	0.5	99.7%	100.0%	20.0	80	Jun-22 10:00	10.2	25	Jun-23	0	-	0	-	Jun 03, 2024
SO ₂ (ppb)	0.2	0.0	95.3%	100.0%	10.9	172	Jun-04 12:00	0.8	48	Jun-04	0	-	0	0	Jun 03, 2024
H ₂ S (ppb)	0.1	0.0	95.3%	100.0%	1.0	30	Jun-26 22:00	0.2	5	Jun-06	0	-	0	-	Jun 03, 2024
CH ₄ (ppm)	2.2	2.0	95.3%	100.0%	3.1	-	Jun-21 07:00	2.5	-	Jun-23	-	-	-	-	Jun 04, 2024
THC (ppm)	2.2	2.0	95.3%	100.0%	3.1	-	Jun-21 07:00	2.5	-	Jun-23	-	-	-	-	Jun 04, 2024
MMHC (ppm)	0.0	0.0	95.3%	100.0%	0.0	-	Jun-29 16:00	0.0	-	Jun-29	-	-	-	-	Jun 04, 2024
CO (ppm)	0.1	0.1	95.3%	100.0%	0.2	33	Jun-03 11:00	0.2	5	Jun-23	0	0	-	-	Jun 04, 2024
Average Minimum Valid Operational Maximum															
Temp (°C)	14.6	2.8	100.0%	100.0%	29.5	Note: Valid hours must be greater than 75% Operational hours must be greater than 90%									May 23, 2024
RH (%)	55.5	13.8	100.0%	100.0%	88.6										May 23, 2024
SR (W/m ²)	296.1	0.0	100.0%	100.0%	820.4										May 23, 2024
WS (km/hr)	6.1	0.1	100.0%	100.0%	22.5										May 23, 2024
WD (deg)	239	0.0	100.0%	100.0%	359.4	Average Wind Direction 239 WSW									May 23, 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 /MMHC	TEI	55i	No operational issues noted during the month
CO	Thermo	48i-TLE	No operational issues noted during the month
Met Equip	MetDri	50.5	No operational issues noted during the month

1.4 Smoky Heights Air Monitoring Station

PAZA - June 2024 Smoky Heights Station Report

June 2024 Summary Performance and Compliance Report																
Parameter	June				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/m³)	6.0	0.5	99.6%	99.9%	35.8	80	Jun-25 18:00	14.9	29	Jun-29	0	-	0	-	Jun 20, 2024	
SO ₂ (ppb)	0.2	0.0	95.3%	100.0%	3.5	172	Jun-15 04:00	0.5	48	Jun-12	0	-	0	0	Jun 20, 2024	
TRS (ppb)	0.1	0.0	95.3%	100.0%	0.8	30	Jun-01 09:00	0.3	3	Jun-03	0	-	0	-	Jun 20, 2024	
	Average	Minimum	Valid	Operational	Maximum											
Temp (°C)	13.5	1.0	100.0%	100.0%	28.4											
WS (km/hr)	11.1	0.5	100.0%	100.0%	45.8											
WD (deg)	272	0.2	100.0%	100.0%	358.5											
Note: Valid hours must be greater than 75%																
Operational hours must be greater than 50%																
Average Wind Direction									272	WNW						

Update Summary:

Parameter	Make	Model	Equipment summary
PM _{2.5}	Sharp	5030	Following calibration June 20, 2024 a large spike occurred and was removed from data as not valid (1hr)
SO ₂	TECO	43i	No operational issues noted during the month
TRS	TEI	43i-APSAA	No operational issues noted during the month
Met Equip	MetOne	50.5	No operational issues noted during the month

1.5 Valleyview Air Monitoring Station

PAZA - June 2024 Valleyview Station Report

Parameter	June				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)	0.1	0.0	95.3%	100.0%	1.4	172	Jun-02 09:00	0.2	48	Jun-02	0	-	0	0	Jun 10, 2024
H ₂ S (ppb)	0.1	0.0	95.3%	100.0%	1.3	10	Jun-26 22:00	0.3	3	Jun-07	0	-	0	-	Jun 10, 2024
	Average	Minimum	Valid	Operational	Maximum	Note: Valid hours must be greater than 75% Operational hours must be greater than 50%									
Temp (°C)	13.3	0.4	100.0%	100.0%	28.0										
RH (%)	67.2	16.1	100.0%	100.0%	100.1										
WS (km/hr)	4.1	0.1	100.0%	100.0%	15.0										
WD (deg)	286	0.8	100.0%	100.0%	390.0	Average Wind Direction		286	NW						

Update Summary:

Parameter	Make	Model	Equipment summary
SO ₂	TEI	431-A75CB	No operational issues noted during the month
H ₂ S	TEI	450-APH4A / 43C	No operational issues noted during the month
Met Equip	RMYoung	RMFB900S	No operational issues noted during the month

1.6 Fox Creek Air Monitoring Station

PAZA - June 2024 Fox Creek Station Report

Parameter	June				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)	2.0	0.0	95.1%	100.0%	30.4	-	Jun-26 05:00	5.2	-	Jun-26	-	-	-	-	Jun 25, 2024
NO ₂ (ppb)	3.4	0.0	95.1%	100.0%	23.1	150	Jun-25 05:00	6.1	-	Jun-23	0	-	-	-	Jun 25, 2024
NO _x (ppb)	5.6	0.1	95.1%	100.0%	34.4	-	Jun-26 06:00	9.5	-	Jun-26	-	-	-	-	Jun 25, 2024
O ₃ (ppb)	27.8	0.1	95.4%	100.0%	53.4	78	Jun-20 17:00	58.8	-	Jun-22	0	-	-	-	Jun 25, 2024
PM _{2.5} (µg/m ³)	4.2	0.4	99.7%	100.0%	13.0	80	Jun-22 20:00	9.0	25	Jun-28	0	-	0	-	Jun 26, 2024
NO ₂ (ppb)	0.2	0.0	95.4%	100.0%	5.9	172	Jun-05 06:00	1.1	48	Jun-05	0	-	0	0	Jun 26, 2024
H ₂ S (ppb)	0.1	0.0	89.0%	91.8%	0.5	10	Jun-28 04:00	0.3	3	Jun-26	0	-	0	-	Jun 26, 2024
	Average	Minimum	Valid	Operational	Maximum	Note: Valid hours must be greater than 75% Operational hours must be greater than 50%									
Temp (°C)	12.7	1.3	99.7%	100.0%	27.8										
WS (km/hr)	6.5	0.1	99.7%	100.0%	19.4										
WD (deg)	284	0.2	99.7%	100.0%	390.6	Average Wind Direction		284	WNW						

Update Summary:

Parameter	Make	Model	Equipment summary
NO/NO ₂ /NO _x	Thermo	42IQ	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	TEI	431-TLE	No Operational issues noted during the month
H ₂ S	TEI	450I	June 29-30 the H2S span came in low, believed to be output voltage shift, data removed to end of June (45hrs)
Met Equip	MettDra	50.5	No Operational issues noted during the month

1.7 Happy Valley Air Monitoring Station

PAZA - June 2024 Happy Valley Station Report

Parameter	June				1-hour			24-hour			Exceedance				Calibration																																																
	Average	Minimum	Valid	Operational	Max	Objective	Max Day and Time	Max	Objective	Max Day	1hr	8hr	24hr	30d	Date																																																
NO (ppb)	2.1	0.0	95.1%	100.0%	74.5	-	Jun-10 05:00	7.3	-	Jun-10	-	-	-	-	Jun 18, 2024																																																
NO ₂ (ppb)	3.3	0.3	95.1%	100.0%	22.4	150	Jun-05 03:00	7.4	-	Jun-05	0	-	-	-	Jun 18, 2024																																																
NO _x (ppb)	4.4	0.3	95.1%	100.0%	83.8	-	Jun-10 05:00	12.7	-	Jun-05	-	-	-	-	Jun 18, 2024																																																
O ₃ (ppb)	26.6	0.0	95.4%	100.0%	51.9	78	Jun-20 15:00	58.7	-	Jun-19	0	-	-	-	Jun 18, 2024																																																
PM _{2.5} (µg/m ³)	4.3	0.5	99.0%	100.0%	42.9	80	Jun-25 06:00	8.8	29	Jun-21	0	-	0	-	Jun 17, 2024																																																
SO ₂ (ppb)	0.5	0.0	95.4%	100.0%	3.6	172	Jun-22 04:00	1.0	48	Jun-22	0	-	0	0	Jun 18, 2024																																																
TRS (ppb)	0.4	0.1	95.1%	100.0%	0.6	38	Jun-21 21:00	0.5	3	Jun-20	0	-	0	-	Jun 17, 2024																																																
THC (ppm)	2.0	1.8	95.1%	100.0%	3.3	-	Jun-17 12:00	2.1	-	Jun-17	-	-	-	-	Jun 17, 2024																																																
<table><tr><th>Average</th><th>Minimum</th><th>Valid</th><th>Operational</th><th>Maximum</th></tr><tr><td>Temp (°C)</td><td>12.8</td><td>1.0</td><td>100.0%</td><td>100.0%</td><td>26.5</td></tr><tr><td>WS (km/hr)</td><td>10.0</td><td>0.0</td><td>100.0%</td><td>100.0%</td><td>31.8</td></tr><tr><td>WD (deg)</td><td>254</td><td>0.5</td><td>100.0%</td><td>100.0%</td><td>359.5</td></tr></table>																Average	Minimum	Valid	Operational	Maximum	Temp (°C)	12.8	1.0	100.0%	100.0%	26.5	WS (km/hr)	10.0	0.0	100.0%	100.0%	31.8	WD (deg)	254	0.5	100.0%	100.0%	359.5																									
Average	Minimum	Valid	Operational	Maximum																																																											
Temp (°C)	12.8	1.0	100.0%	100.0%	26.5																																																										
WS (km/hr)	10.0	0.0	100.0%	100.0%	31.8																																																										
WD (deg)	254	0.5	100.0%	100.0%	359.5																																																										
<table><tr><td colspan="2">Note:</td><td colspan="14">Valid hours must be greater than 75%</td></tr><tr><td colspan="2"></td><td colspan="14">Operational hours must be greater than 50%</td></tr><tr><td colspan="2">Average Wind Direction</td><td colspan="14">254 WSW</td></tr></table>																Note:		Valid hours must be greater than 75%																Operational hours must be greater than 50%														Average Wind Direction		254 WSW													
Note:		Valid hours must be greater than 75%																																																													
		Operational hours must be greater than 50%																																																													
Average Wind Direction		254 WSW																																																													

Update Summary:

Parameter	Make	Model	Equipment summary
NO/NO ₂ /NO _x	TEI	43i	No operational issues noted during the month
O ₃	TEI	45i	No operational issues noted during the month
PM _{2.5}	API	T640	No operational issues noted during the month
SO ₂	TEI	43i	No operational issues noted during the month
TRS	TEI	43i	No operational issues noted during the month
THC	TEI	55i / S11-LT	No operational issues noted during the month
Met Equip	MetOne	50.5	No operational issues noted during the month

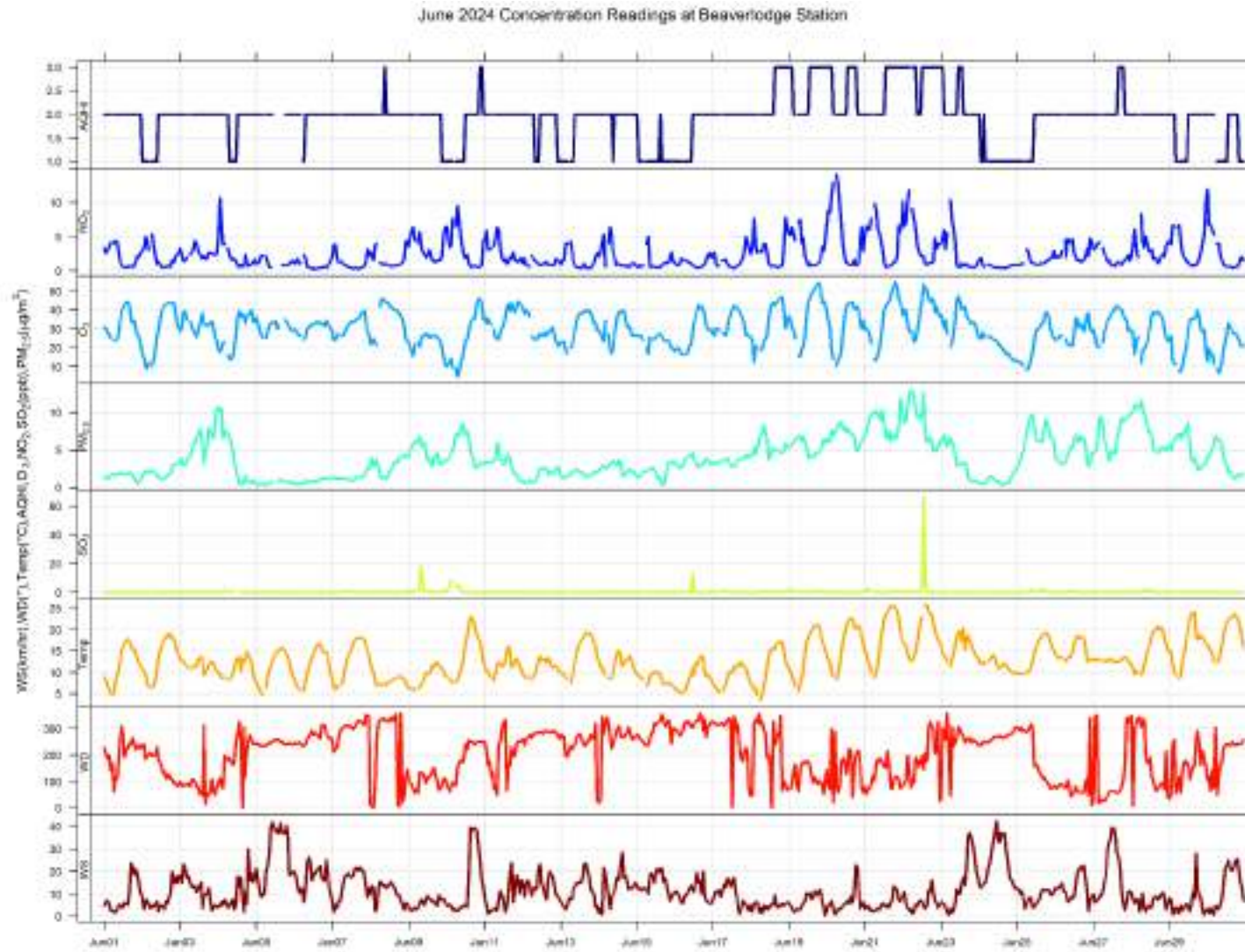
1.8 Milner Air Monitoring Station

PAZA - June 2024 Milner Station Report

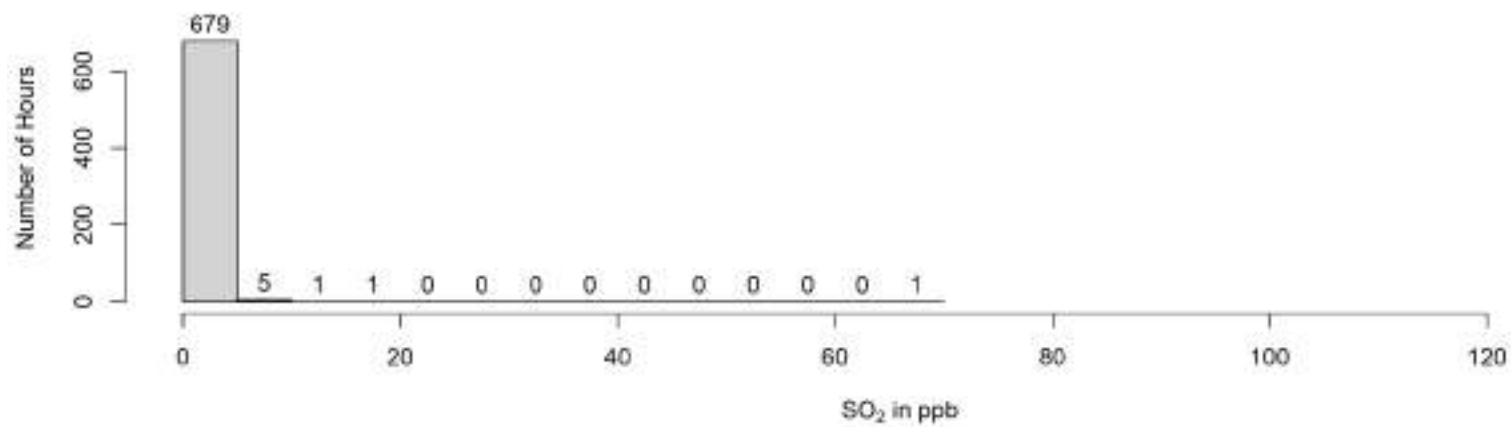
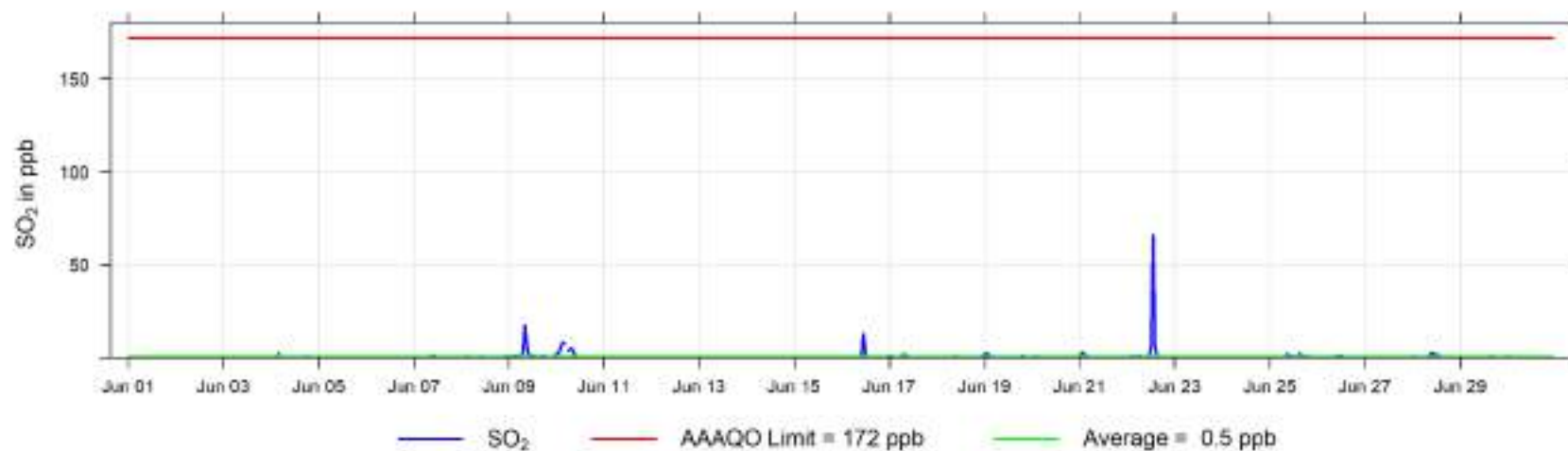
June 2024 Ambient Station Report															
Parameter	June				1-hour			24-hour			Exceedance				Calibration
	Average	Minimum	Valid	Operational	Max	Objective	Max Day and Time	Max	Objective	Max Day	1hr	8hr	24hr	30d	Date
NO (ppb)	0.6	0.0	94.9%	99.7%	24.1	-	Jun-01 06:00	3.4	-	Jun-02	-	-	-	-	Jun 12, 2024
NO ₂ (ppb)	3.9	0.0	94.8%	99.7%	14.7	150	Jun-01 06:00	3.3	-	Jun-13	0	-	-	-	Jun 12, 2024
NO _x (ppb)	2.6	0.0	94.9%	99.7%	39.0	-	Jun-01 06:00	6.0	-	Jun-02	-	-	-	-	Jun 12, 2024
PM _{2.5} (µg/m ³)	3.6	0.2	99.2%	99.7%	26.9	80	Jun-22 23:00	7.9	29	Jun-23	0	-	0	-	Jun 12, 2024
	Average	Minimum	Valid	Operational	Maximum										
WS (km/hr)	5.6	0.1	99.6%	99.7%	23.2	Note: Valid hours must be greater than 75% Operational hours must be greater than 50%									
WD (deg)	244	0.2	99.6%	99.7%	359.7										
						Average Wind Direction		244 WSW							
Update Summary:															
Parameter	Make		Model		Equipment summary										
NO/NO ₂ /NO _x	Thermo		42i		June 27 power failure (2hrs)										
PM _{2.5}	API		T640		June 27 power failure (2hrs)										
Met Equip	MetOne		50.5		June 12 calibration (1hr); June 27 power failure (2hrs)										

2 Beaverlodge Charts

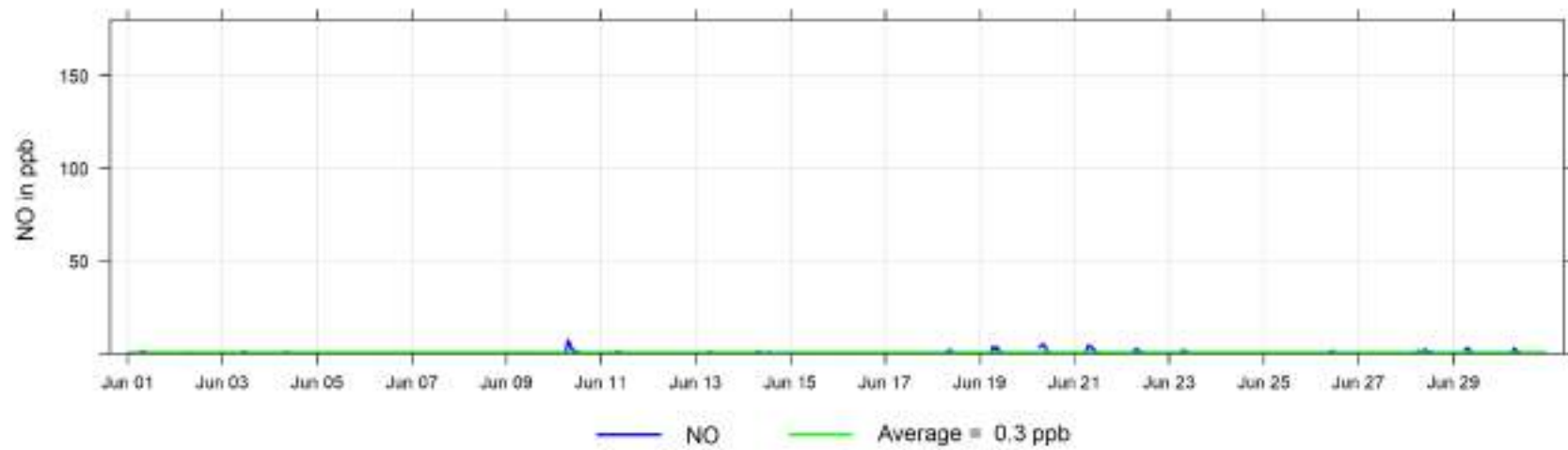
The following pages include the charts and histograms for Beaverlodge Station



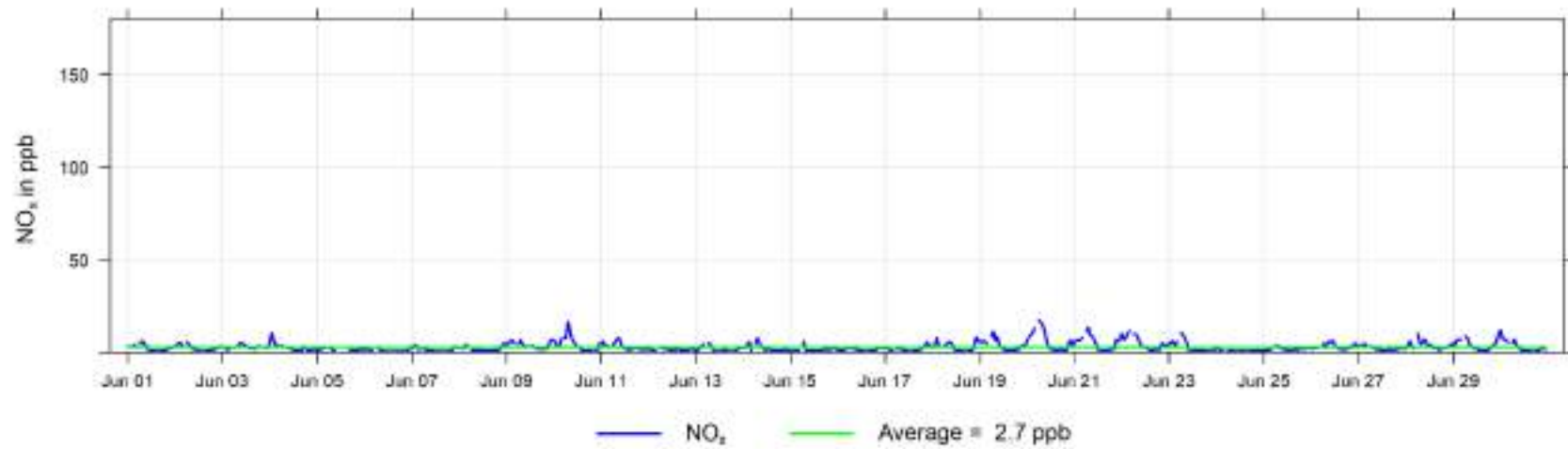
June 2024 Hourly Concentration Readings of SO₂ (in ppb) at Beaverlodge



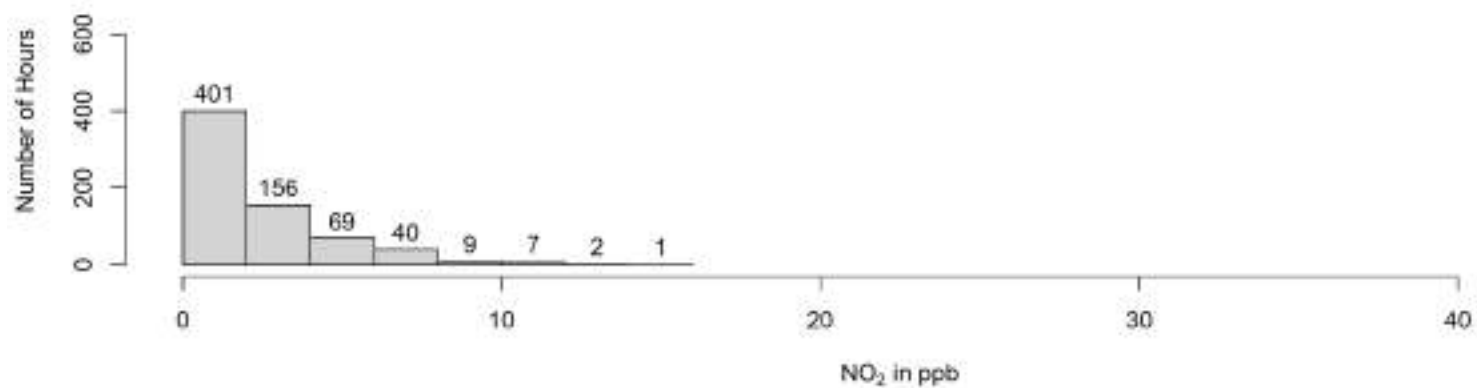
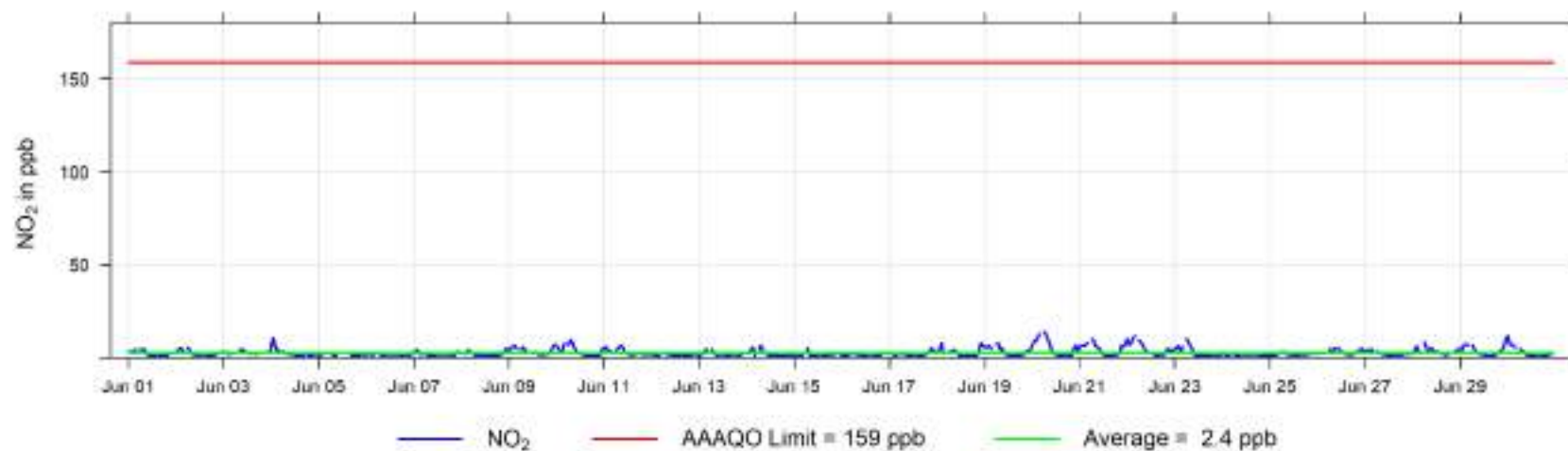
June 2024 Hourly Concentration Readings of NO (in ppb) at Beaverlodge



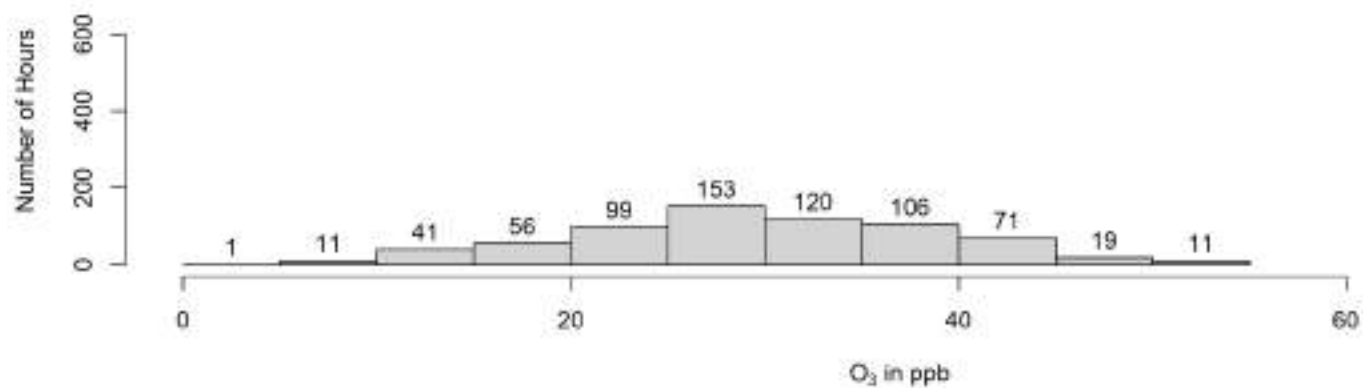
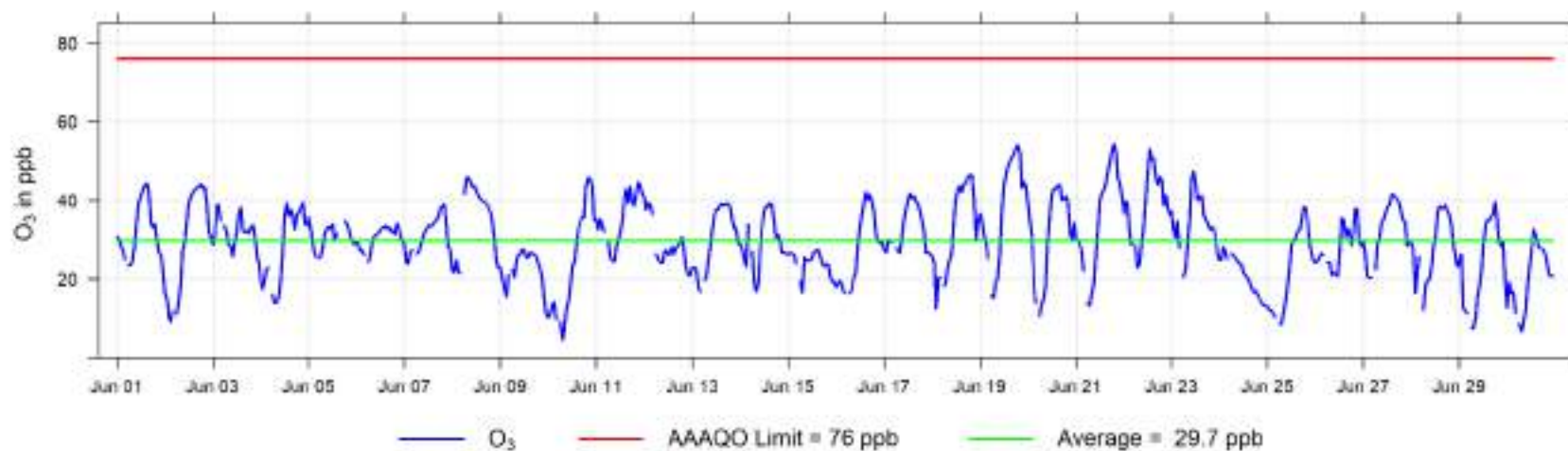
June 2024 Hourly Concentration Readings of NO_x (in ppb) at Beaverlodge



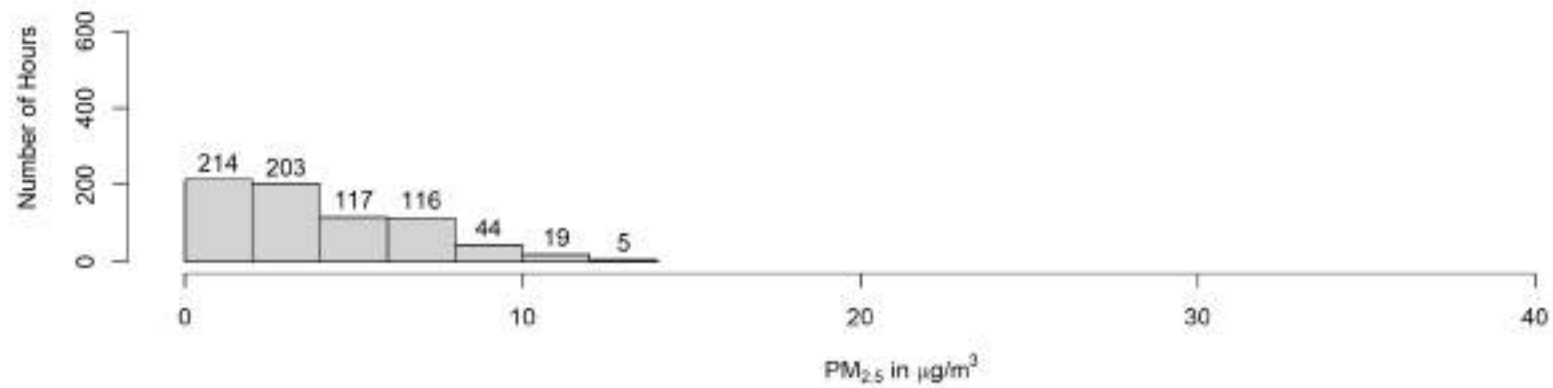
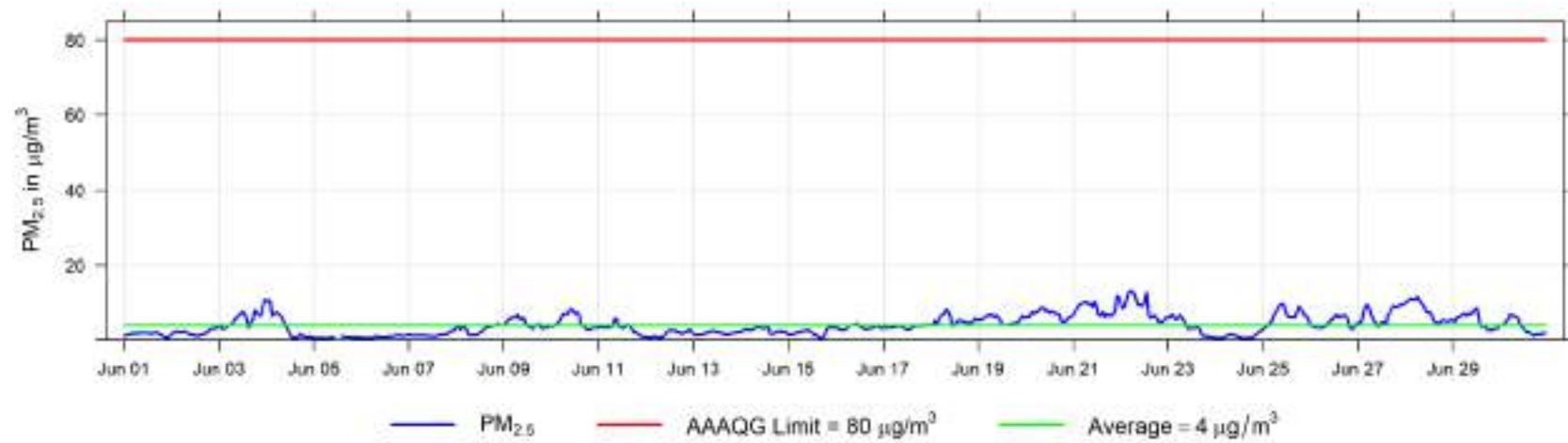
June 2024 Hourly Concentration Readings of NO₂ (in ppb) at Beaverlodge



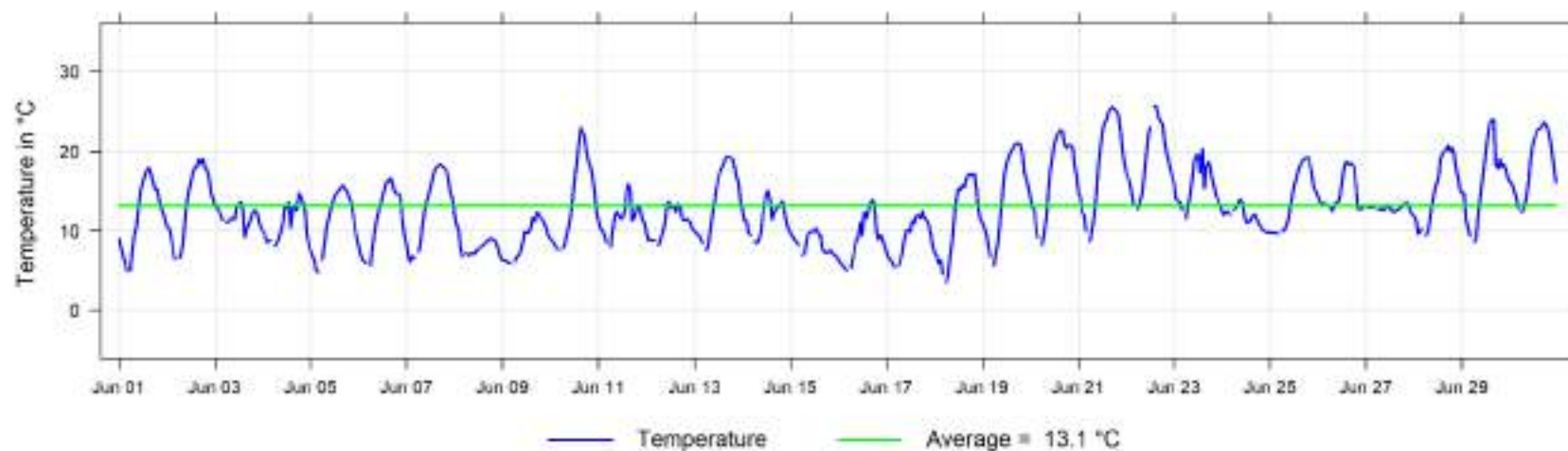
June 2024 Hourly Concentration Readings of O₃ (in ppb) at Beaverlodge



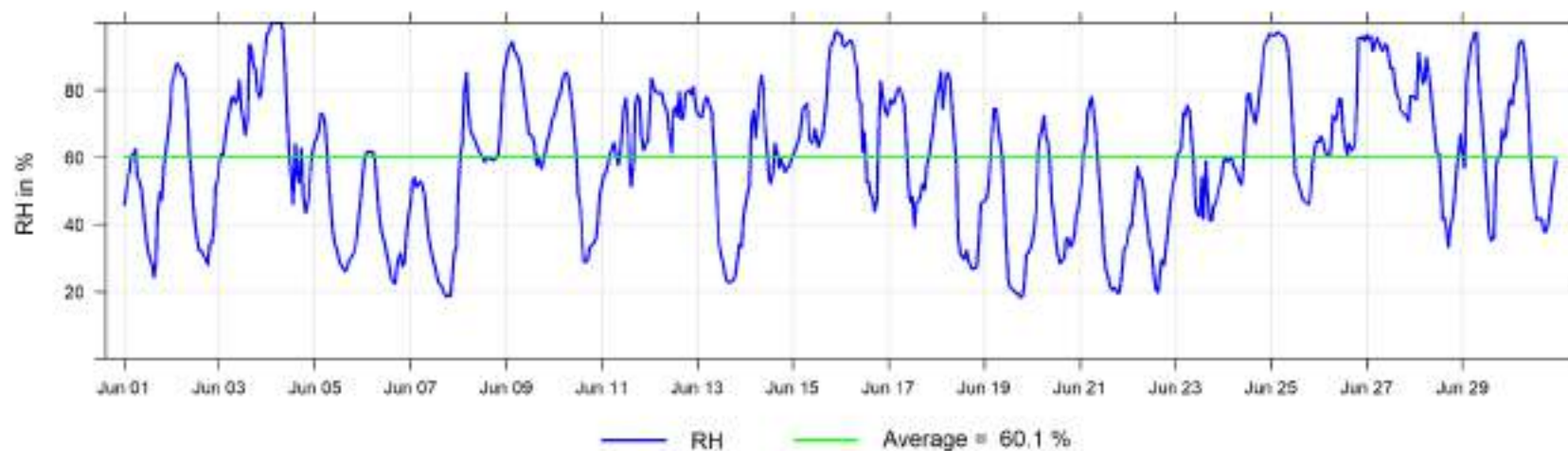
June 2024 Hourly Concentration Readings of PM_{2.5} in $\mu\text{g}/\text{m}^3$ at Beaverlodge



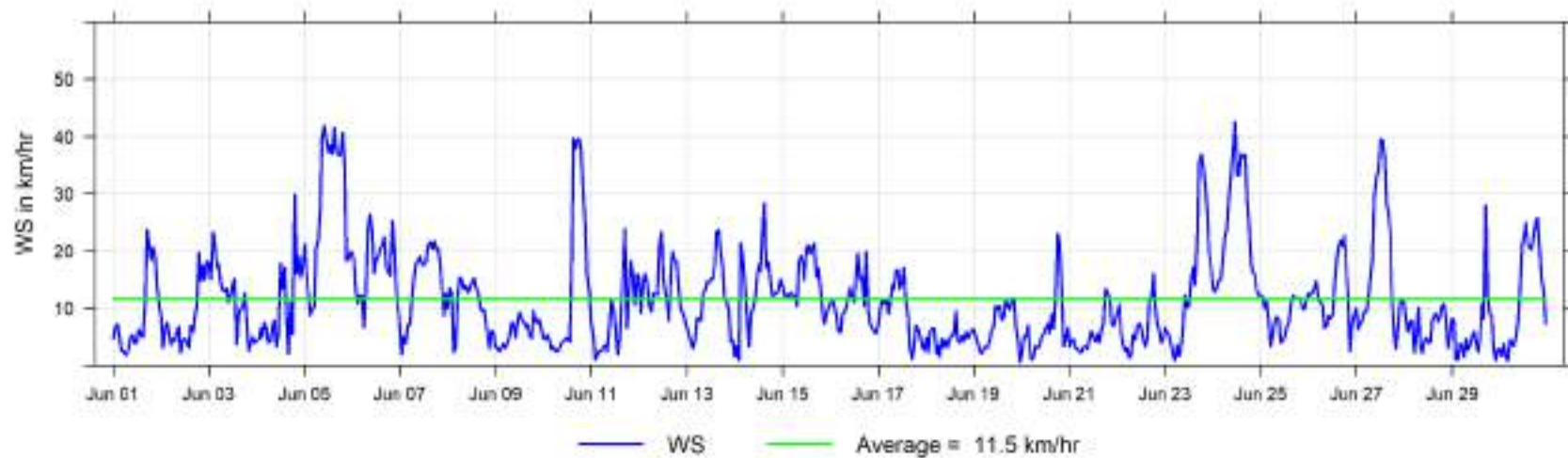
June 2024 Hourly Temperature Readings (in °C) at Beaverlodge



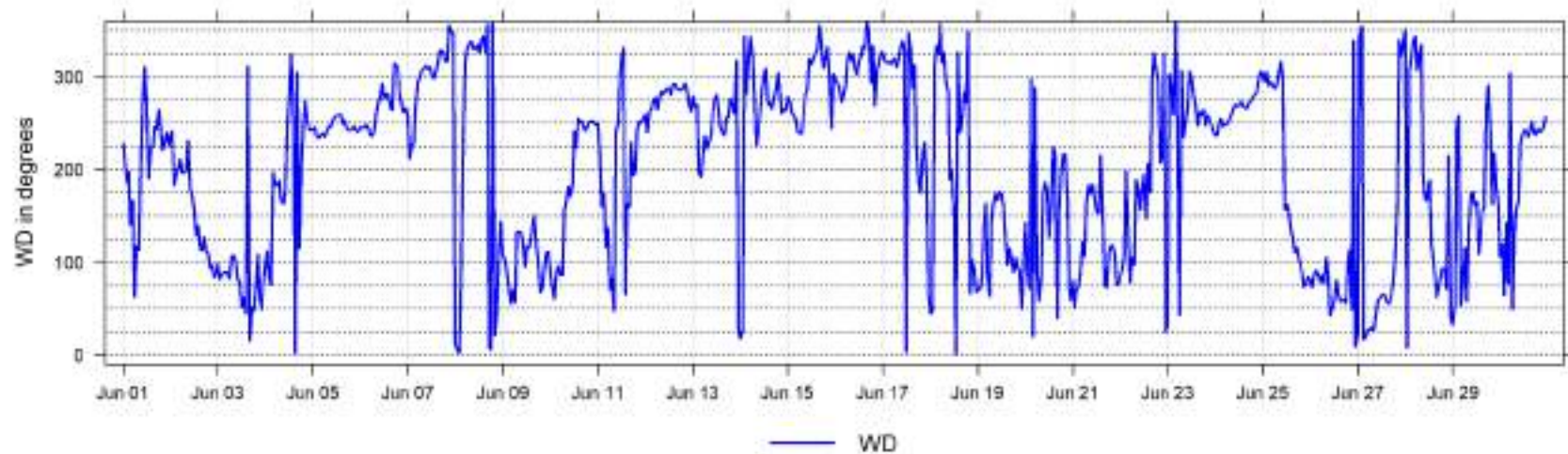
June 2024 Hourly Readings of Relative Humidity (in %) at Beaverlodge



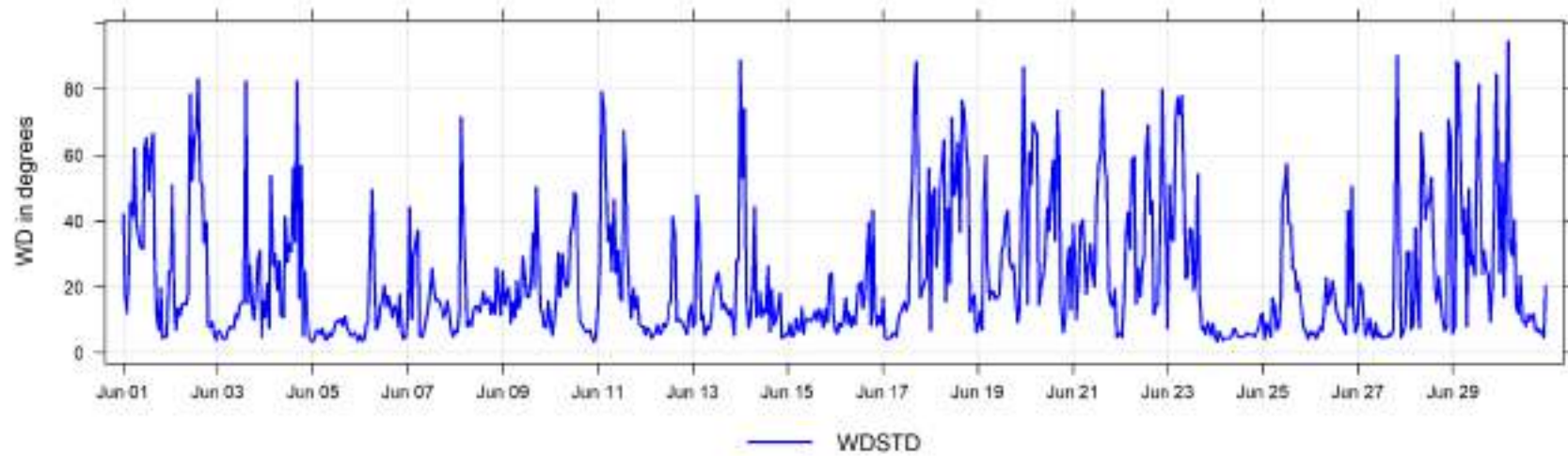
June 2024 Hourly Readings of Wind Speed (in km/hr) at Beaverlodge

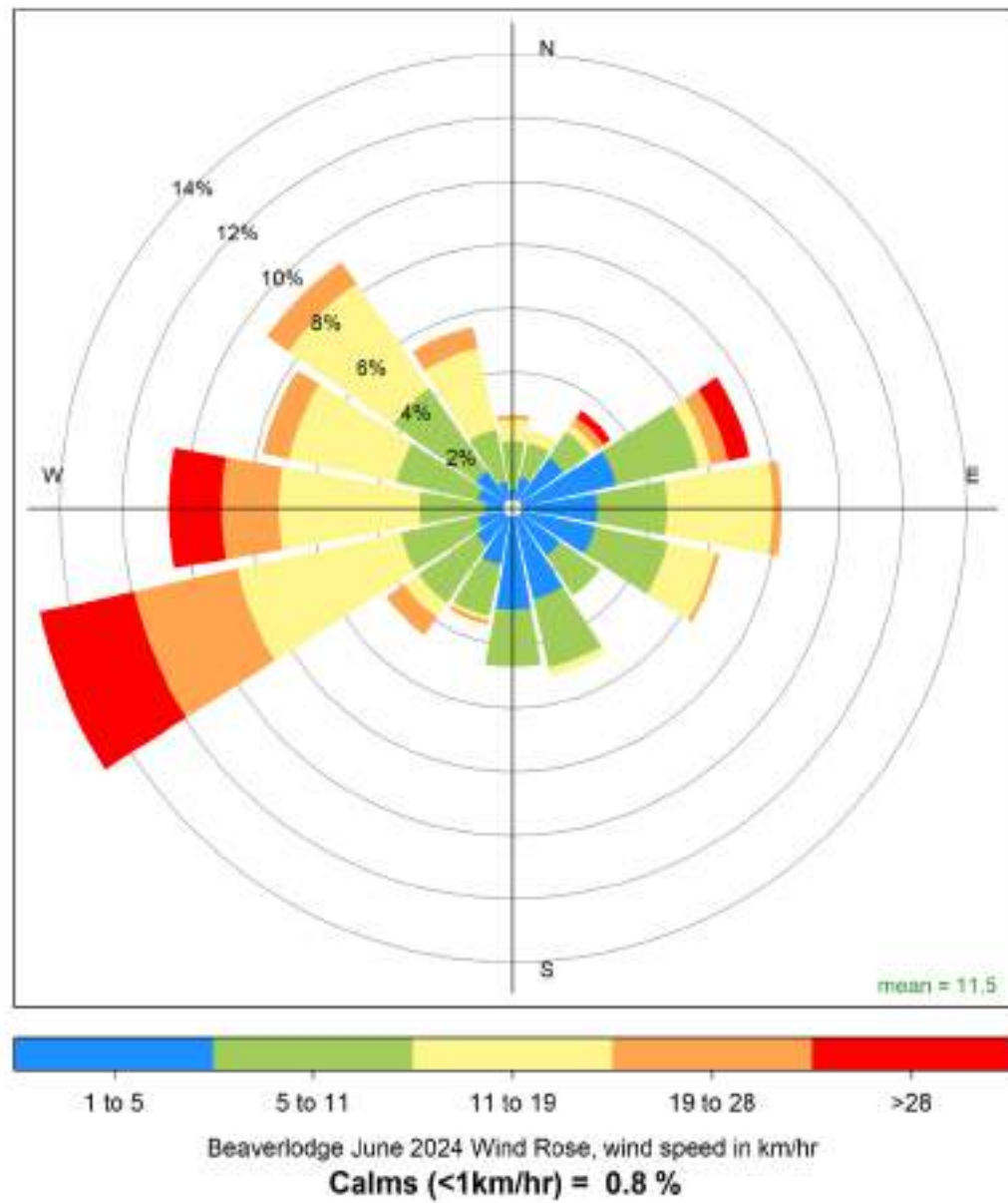


June 2024 Hourly Readings of Wind Direction (in degrees) at Beaverlodge



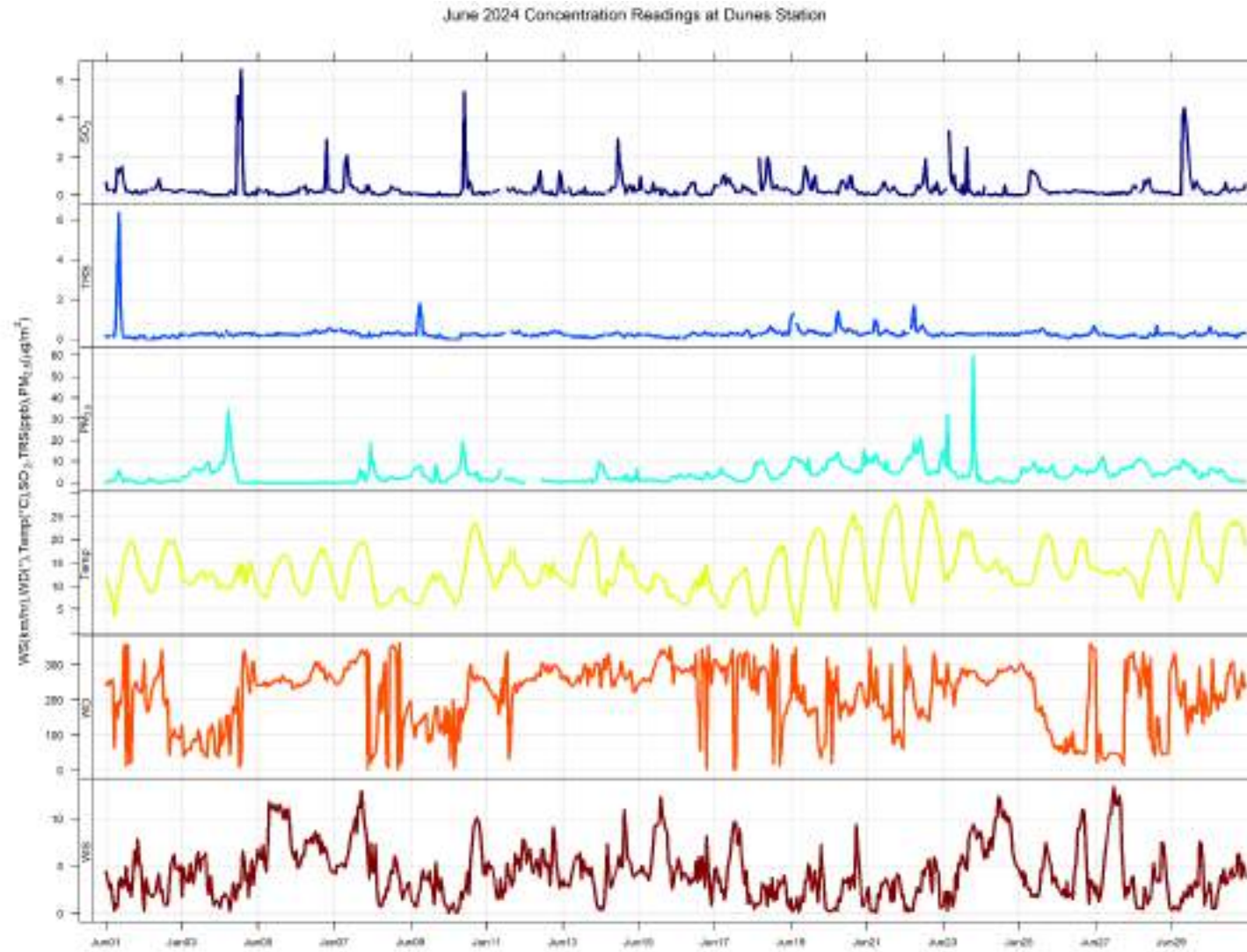
June 2024 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Beaverlodge



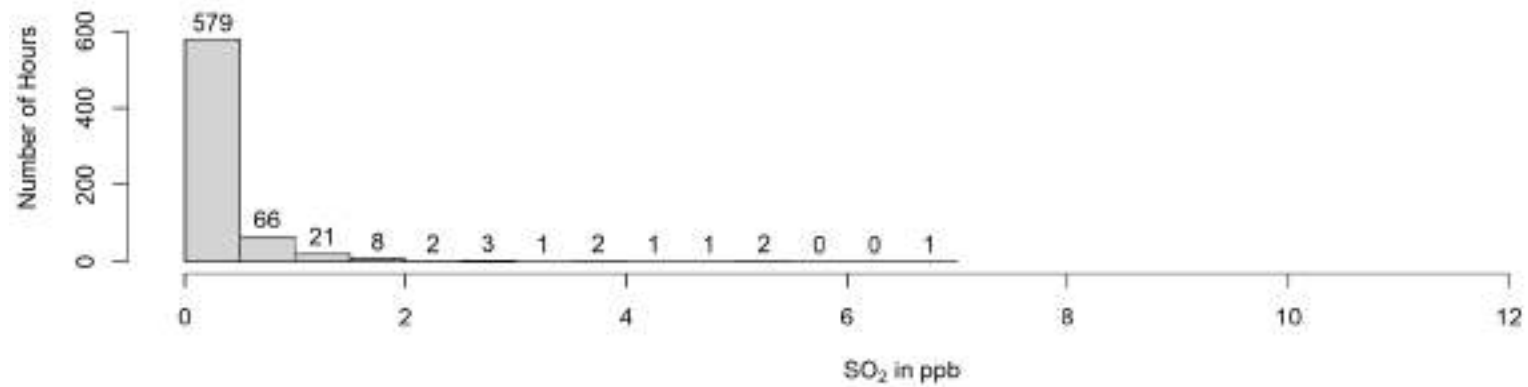
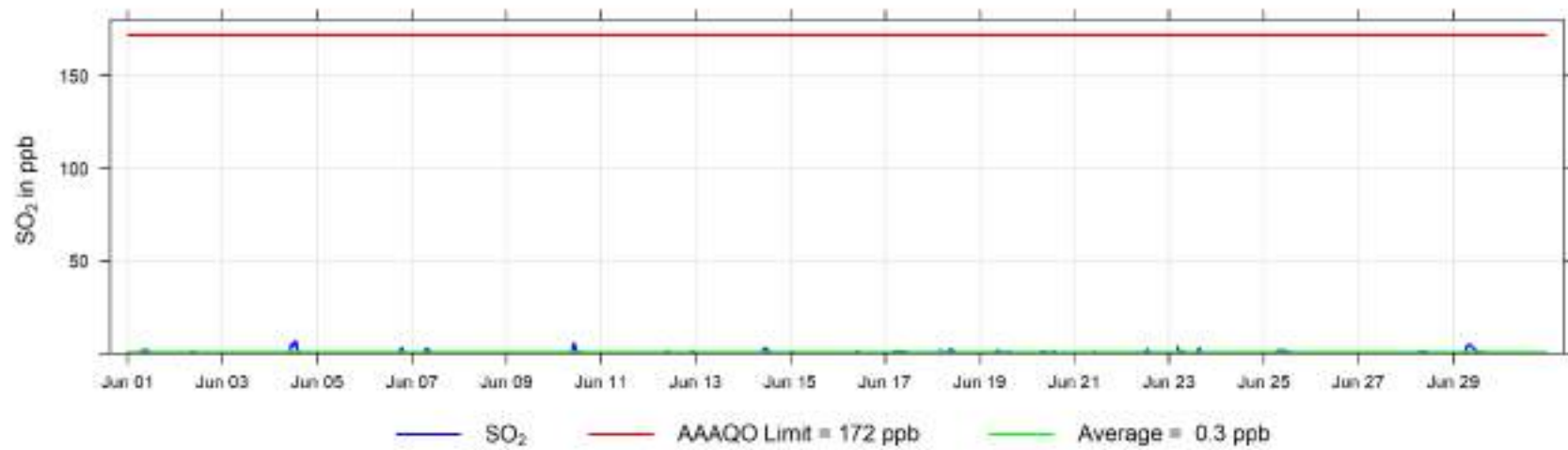


3 Dunes Charts

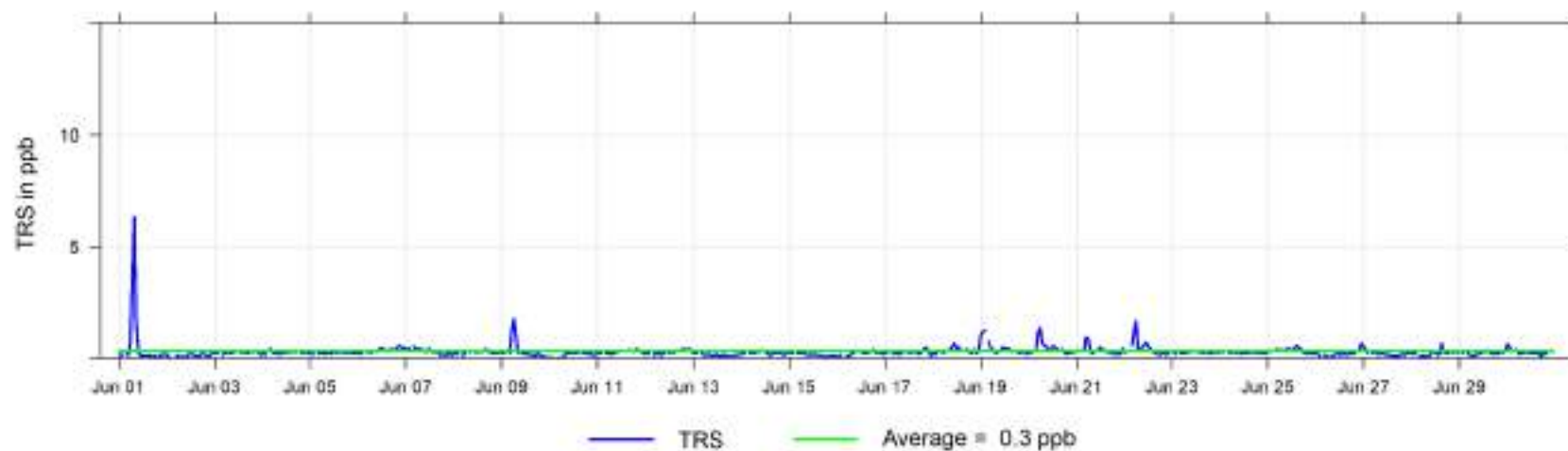
The following pages include the charts and histograms for Dunes Station



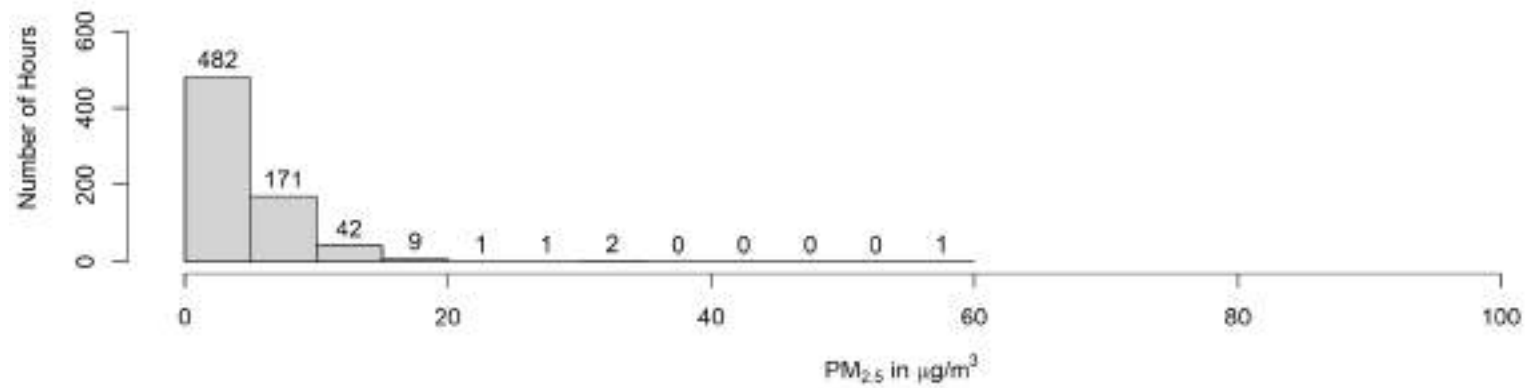
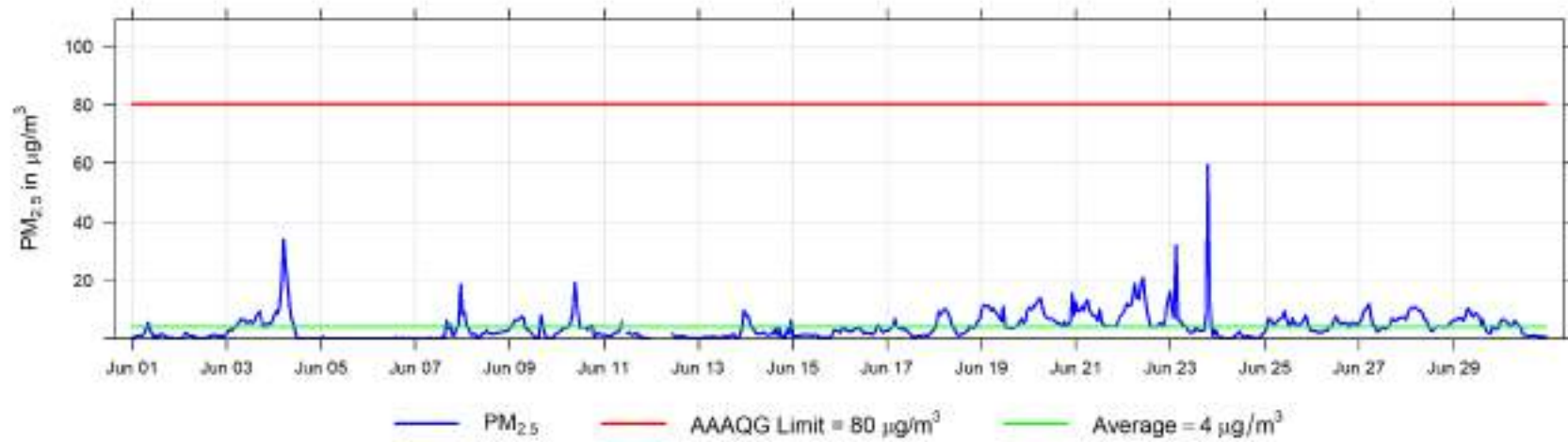
June 2024 Hourly Concentration Readings of SO₂ (in ppb) at Dunes



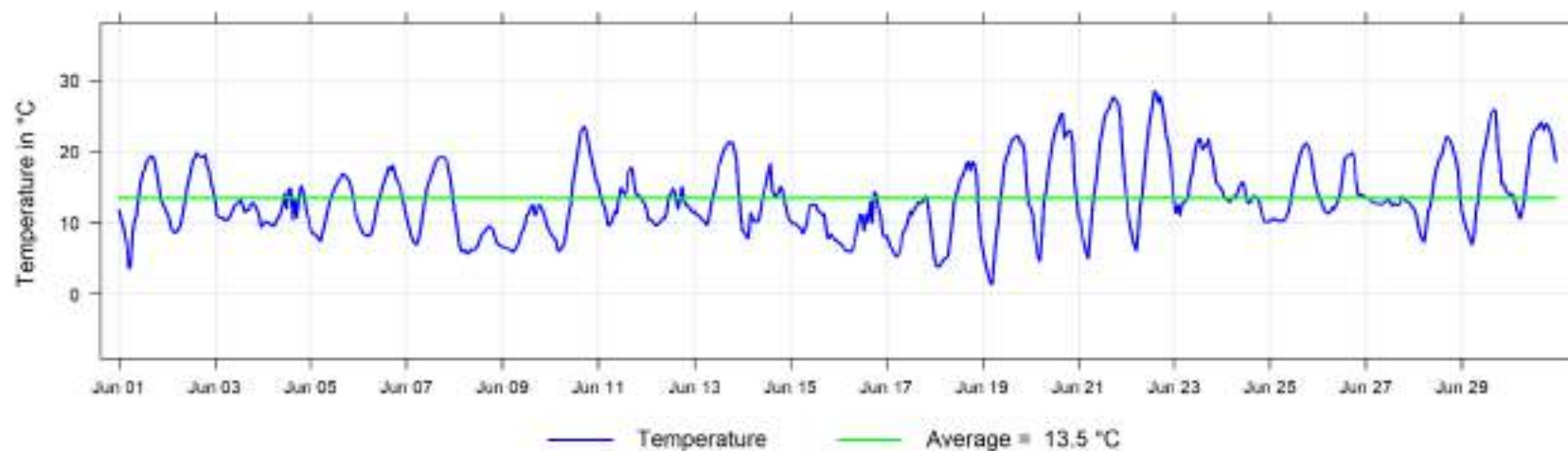
June 2024 Hourly Concentration Readings of TRS (in ppb) at Dunes



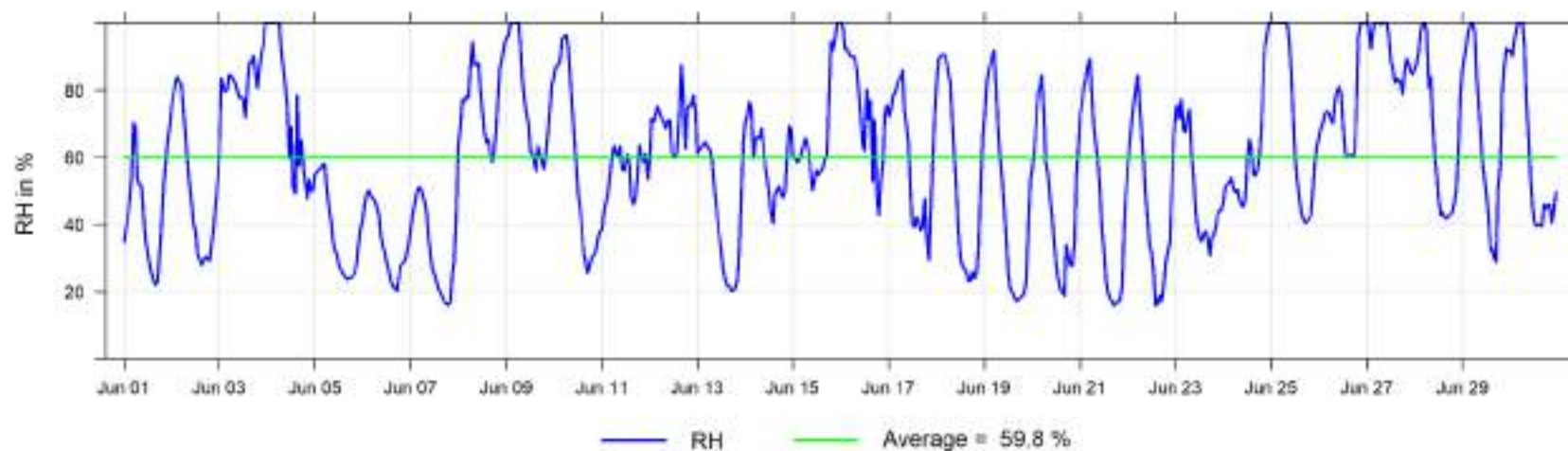
June 2024 Hourly Concentration Readings of PM_{2.5} in $\mu\text{g}/\text{m}^3$ at Dunes



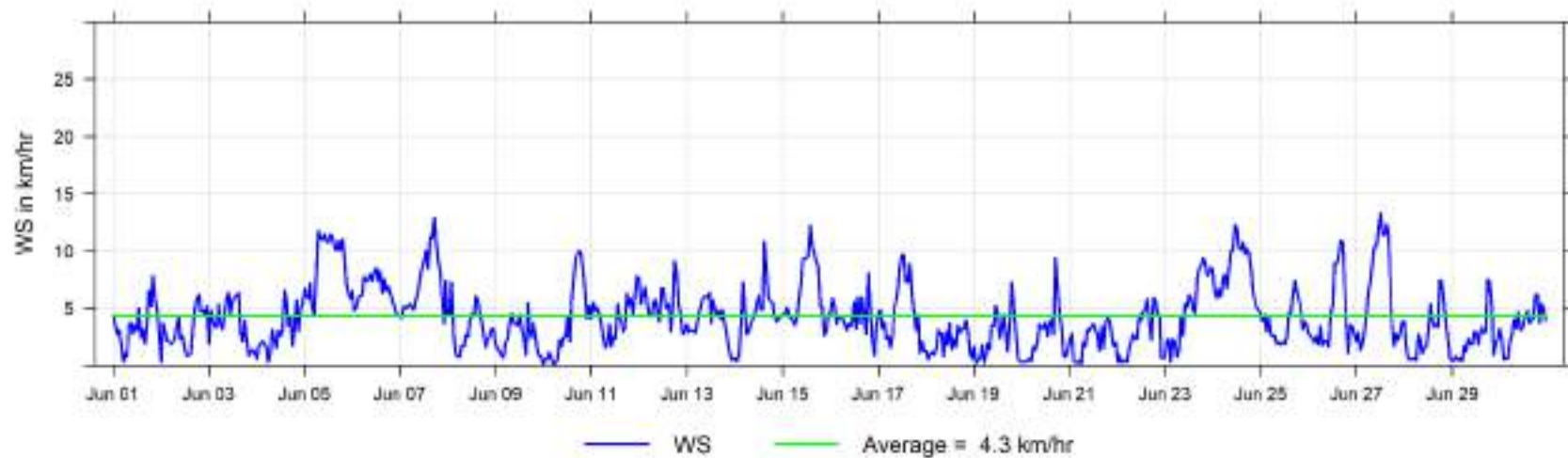
June 2024 Hourly Temperature Readings (in °C) at Dunes



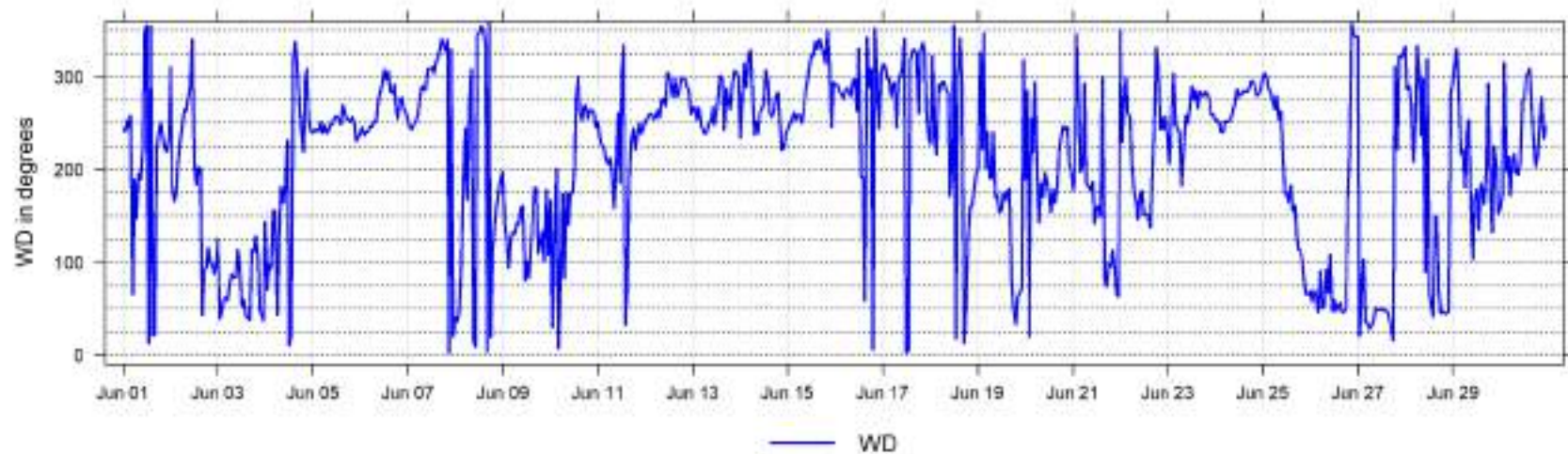
June 2024 Hourly Readings of Relative Humidity (in %) at Dunes



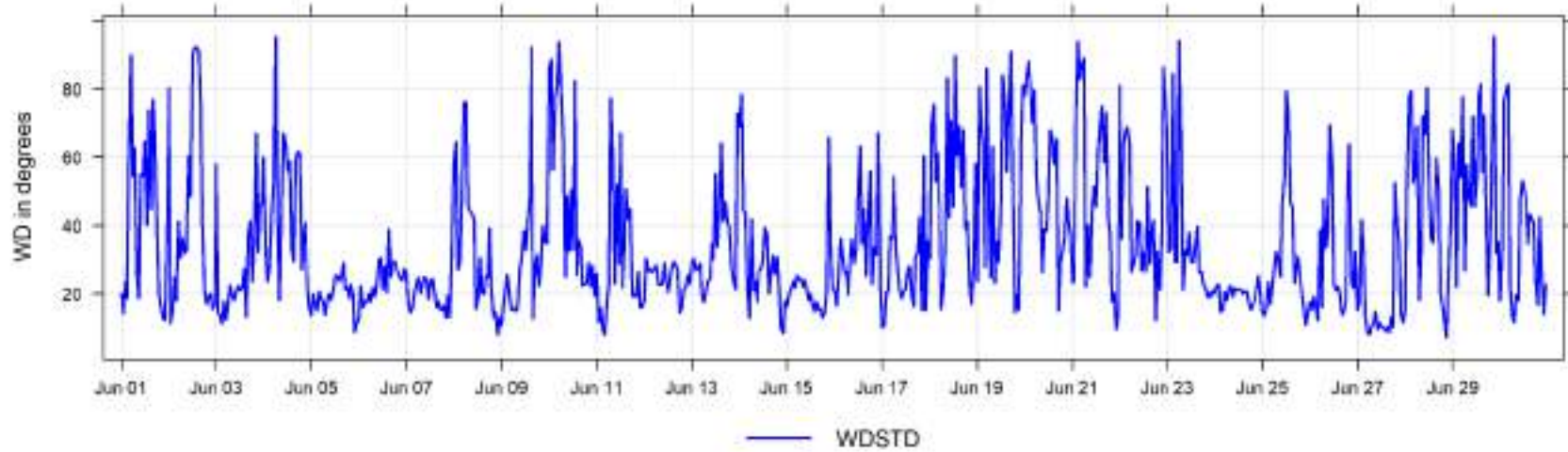
June 2024 Hourly Readings of Wind Speed (in km/hr) at Dunes

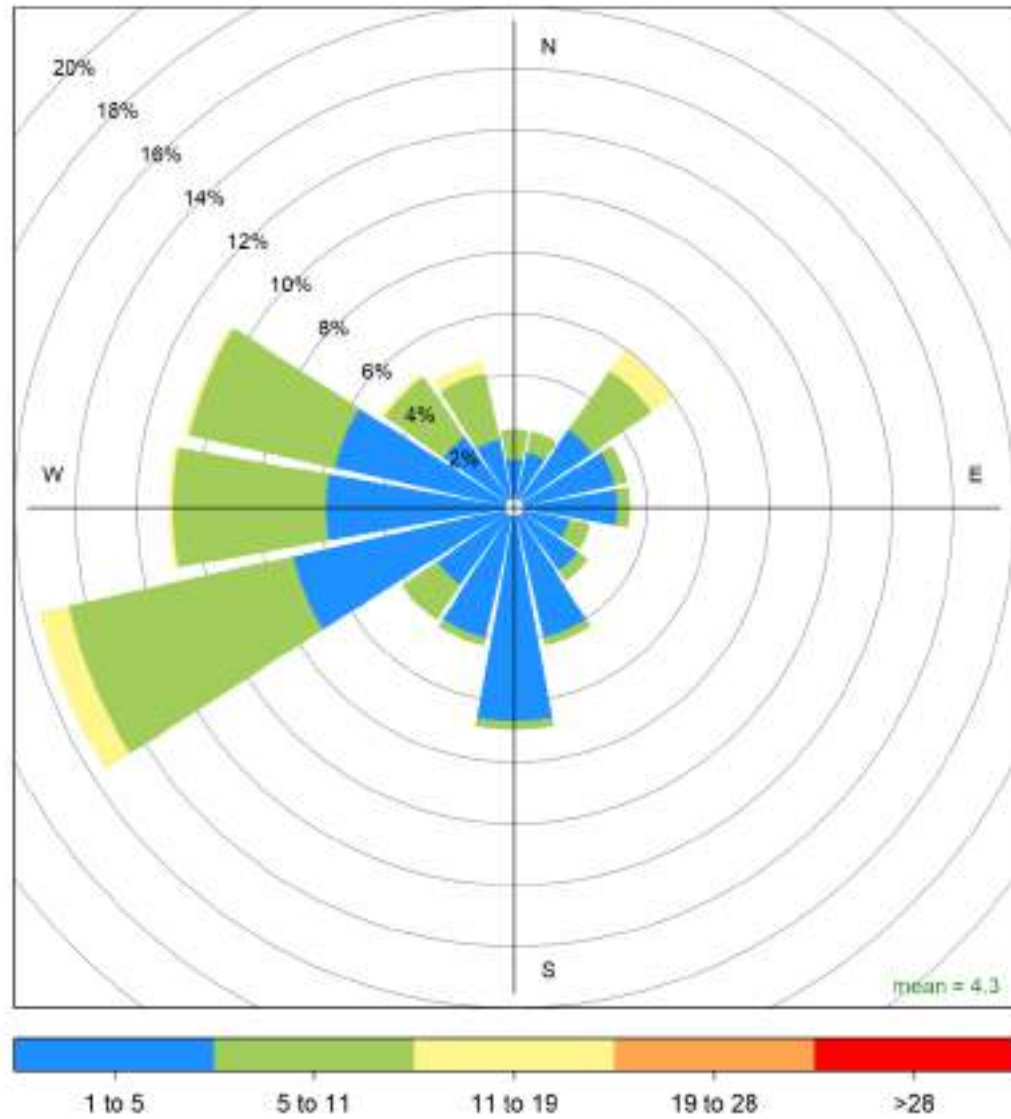


June 2024 Hourly Readings of Wind Direction (in degrees) at Dunes



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





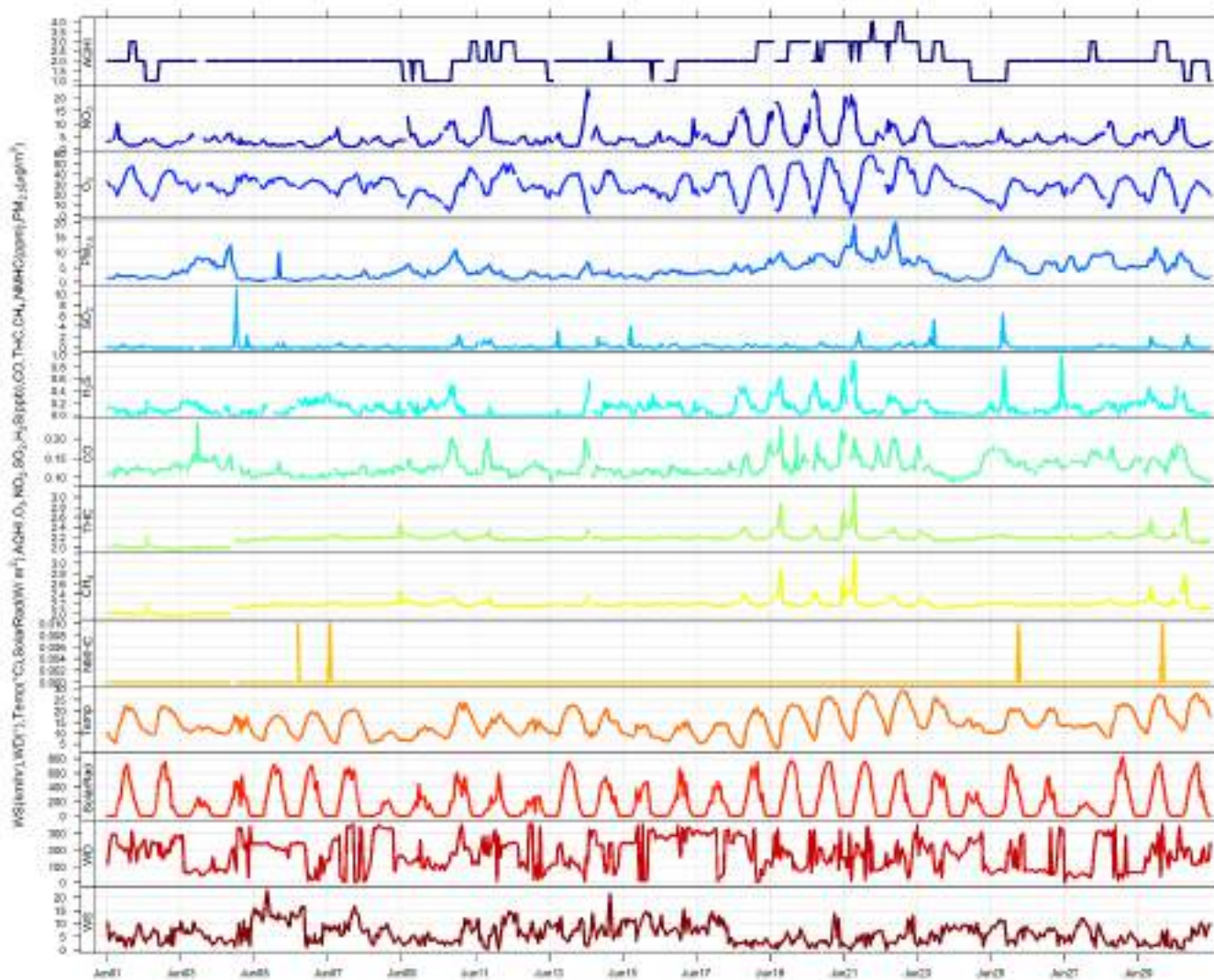
Dunes June 2024 Wind Rose, wind speed in km/hr

Calms (<1km/hr) = 11.4 %

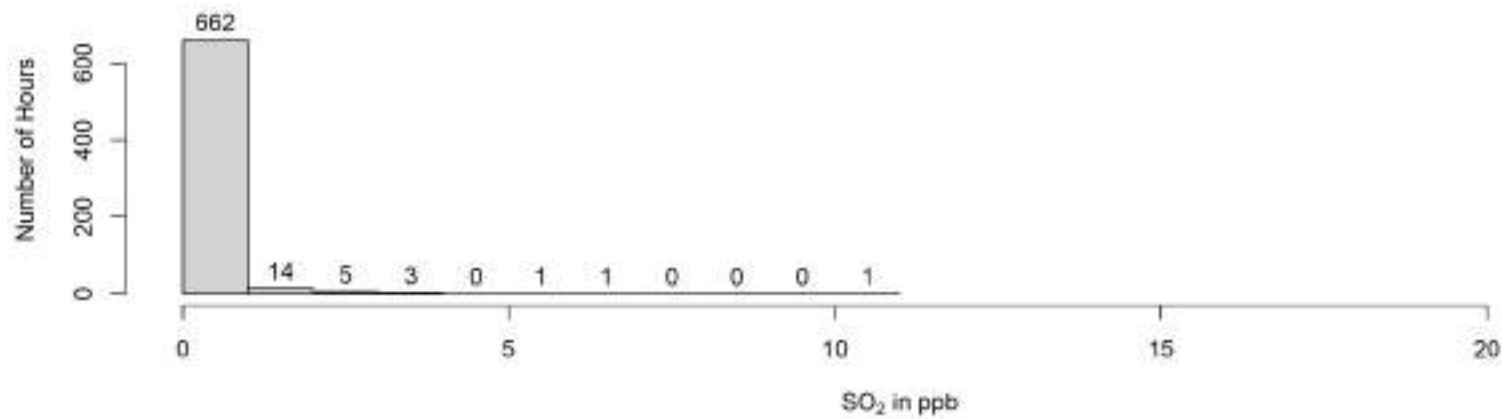
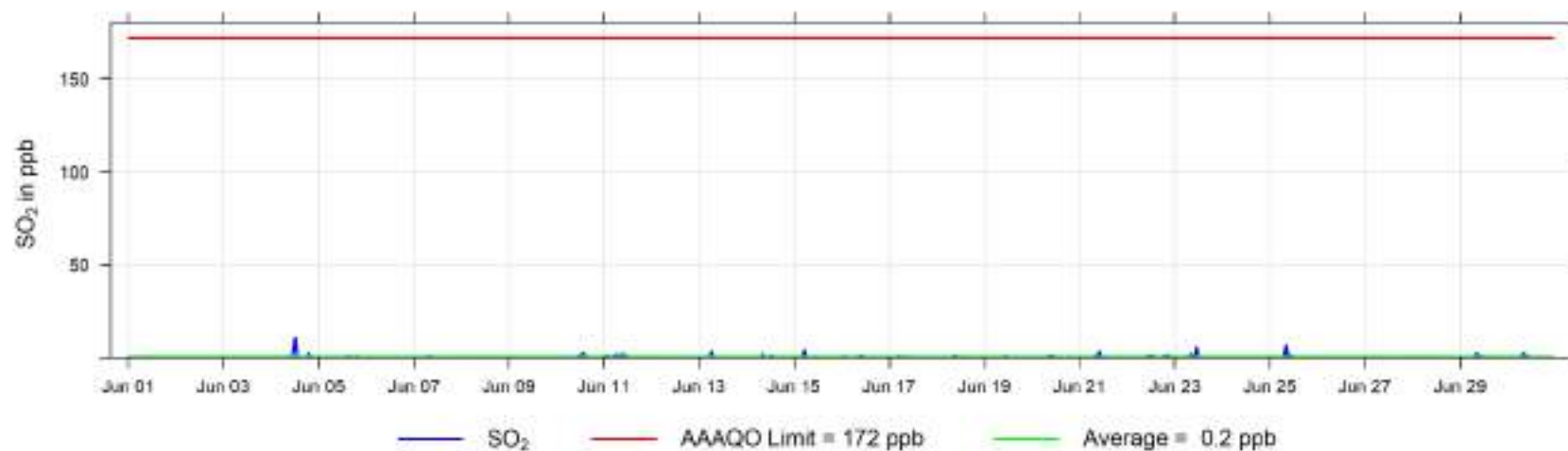
4 Grande Prairie - Henry Pirker Charts

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

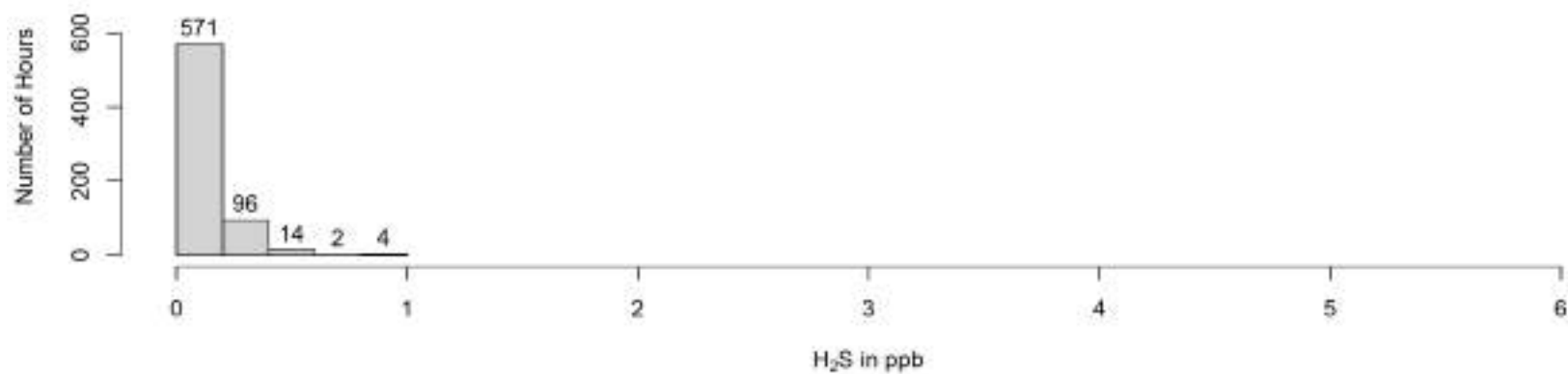
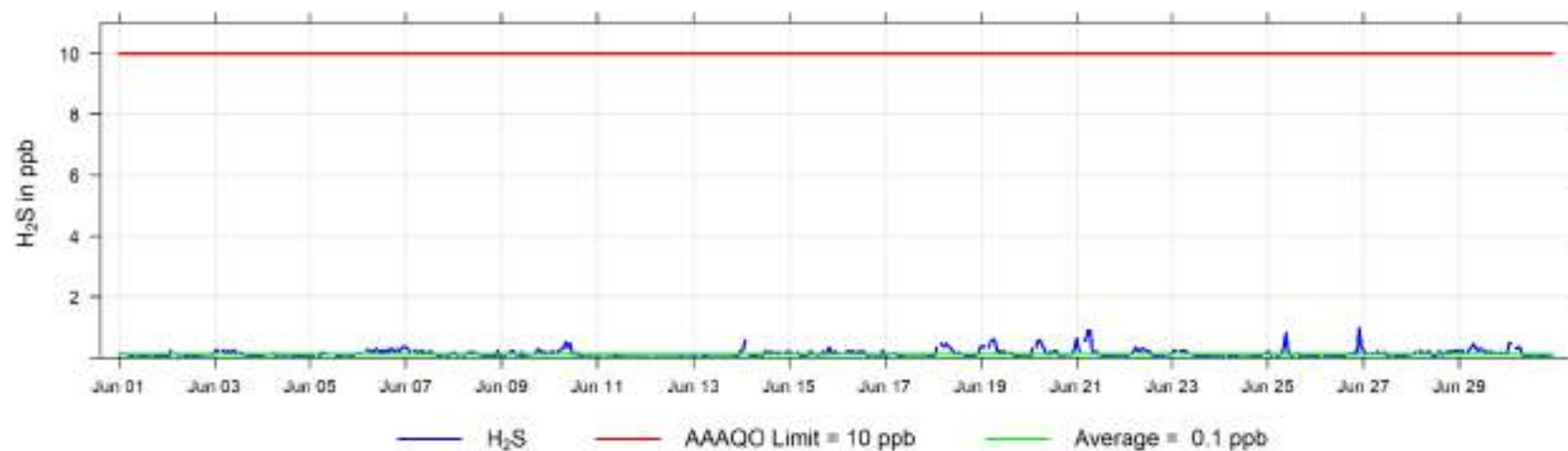
June 2024 Concentration Readings at Henry Pirker Station



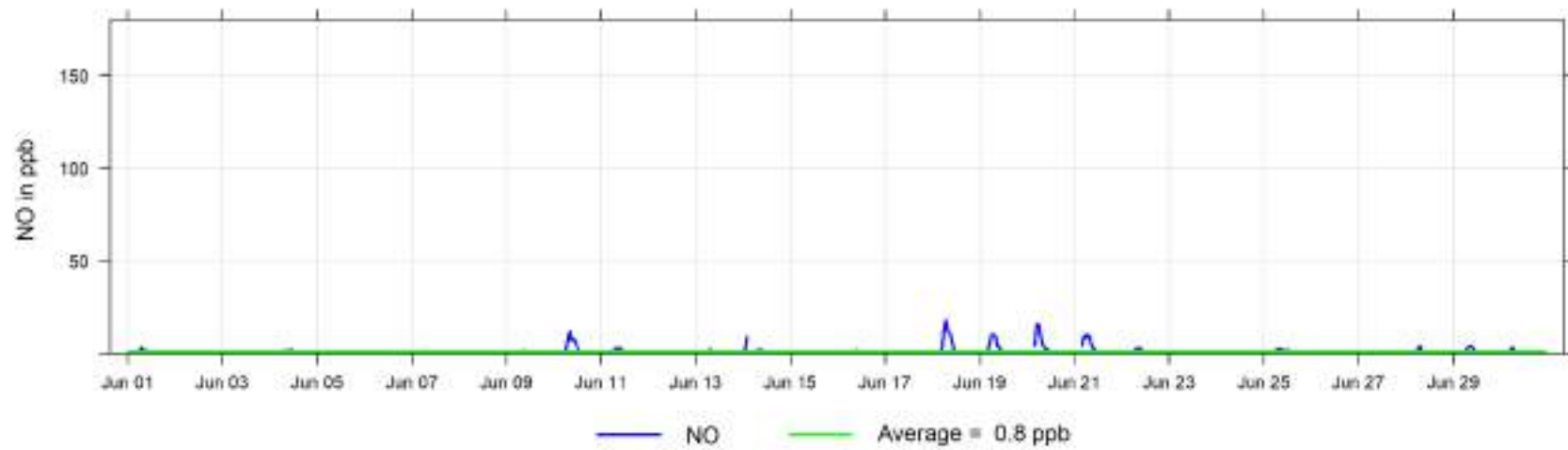
June 2024 Hourly Concentration Readings of SO₂ (in ppb) at Henry Pirker



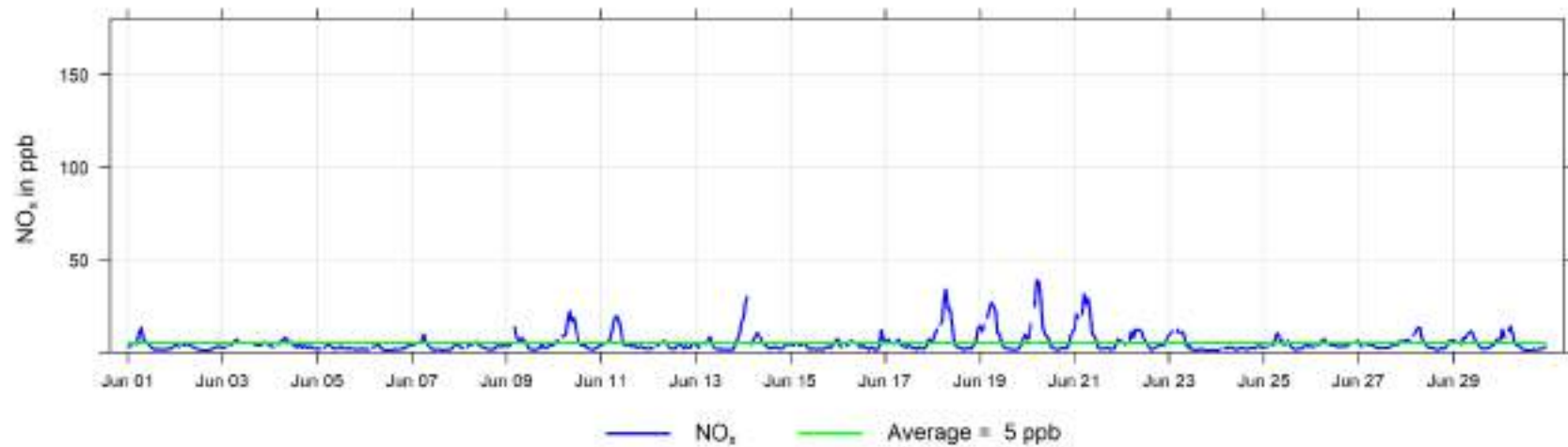
June 2024 Hourly Concentration Readings of H₂S (in ppb) at Henry Pirker



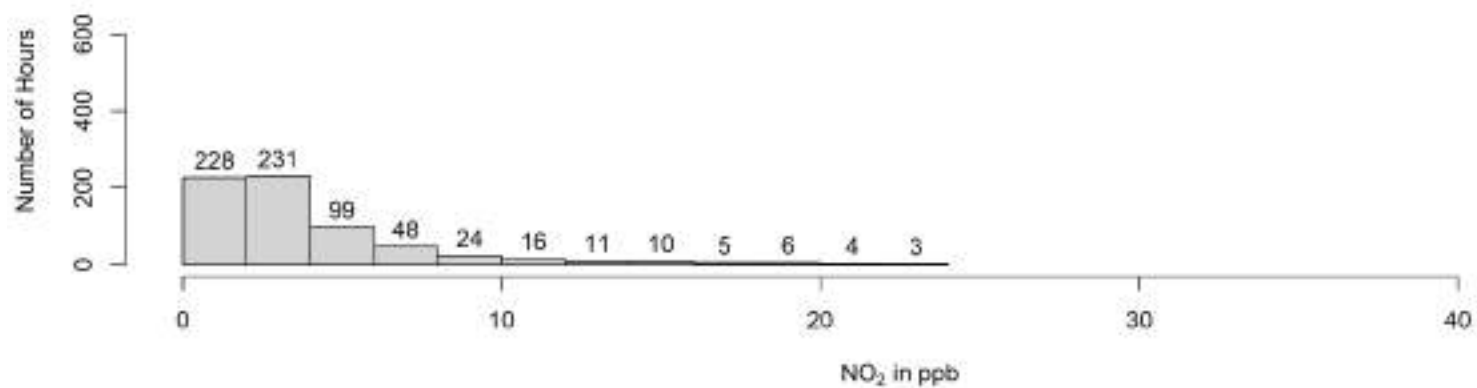
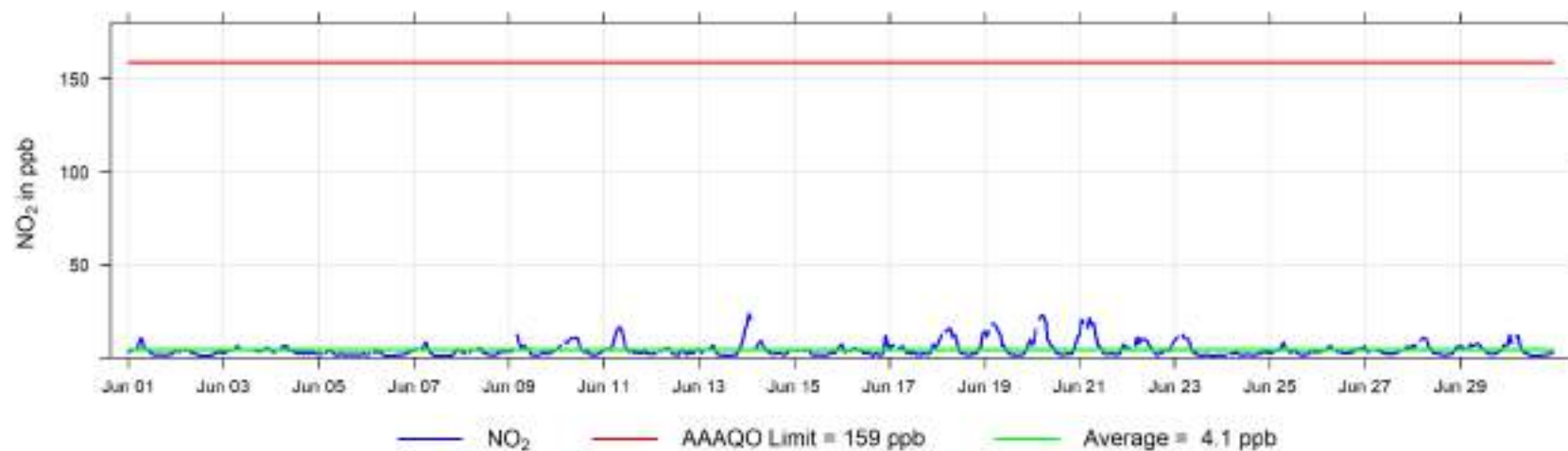
June 2024 Hourly Concentration Readings of NO (in ppb) at Henry Pirker



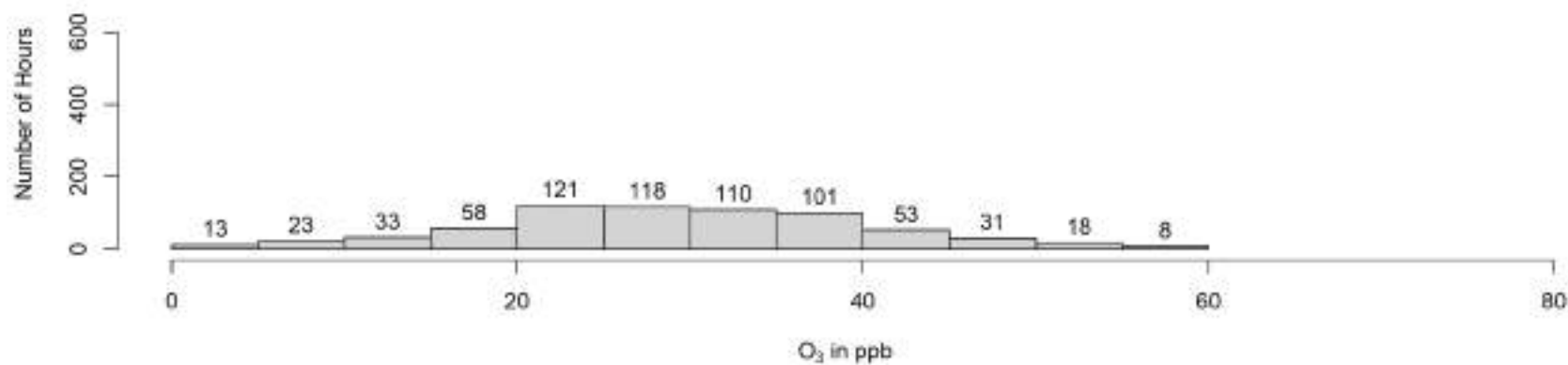
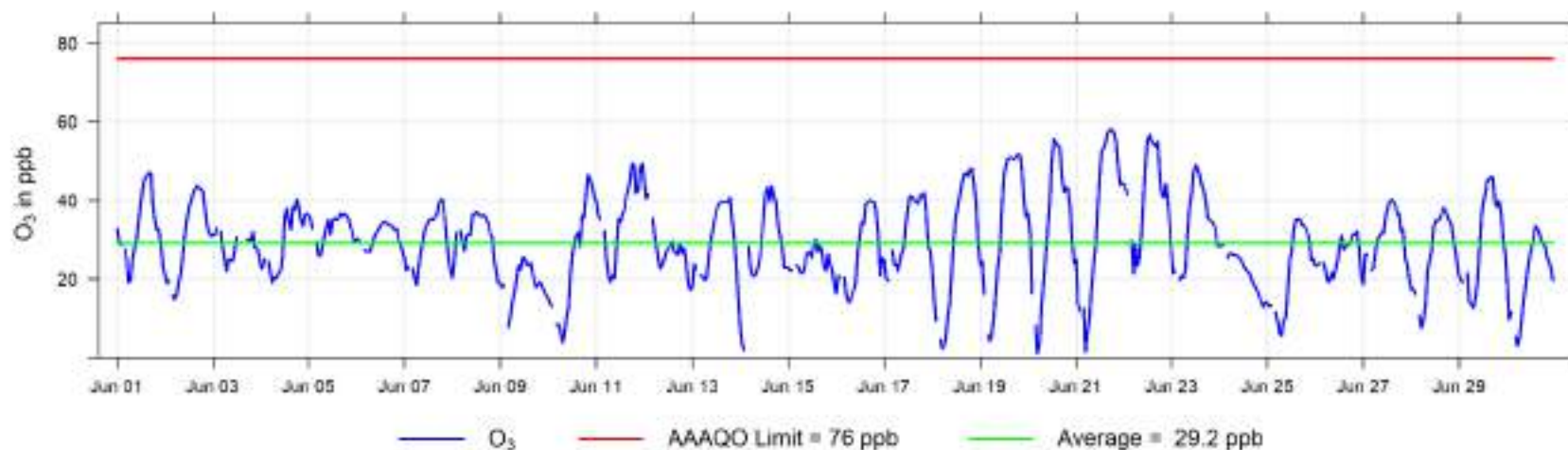
June 2024 Hourly Concentration Readings of NO_x (in ppb) at Henry Pirker



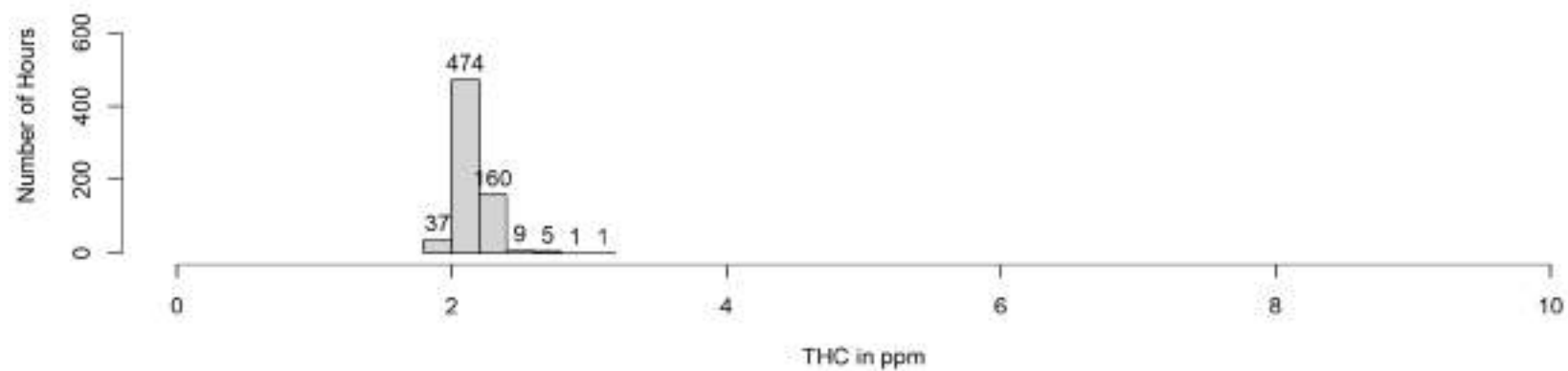
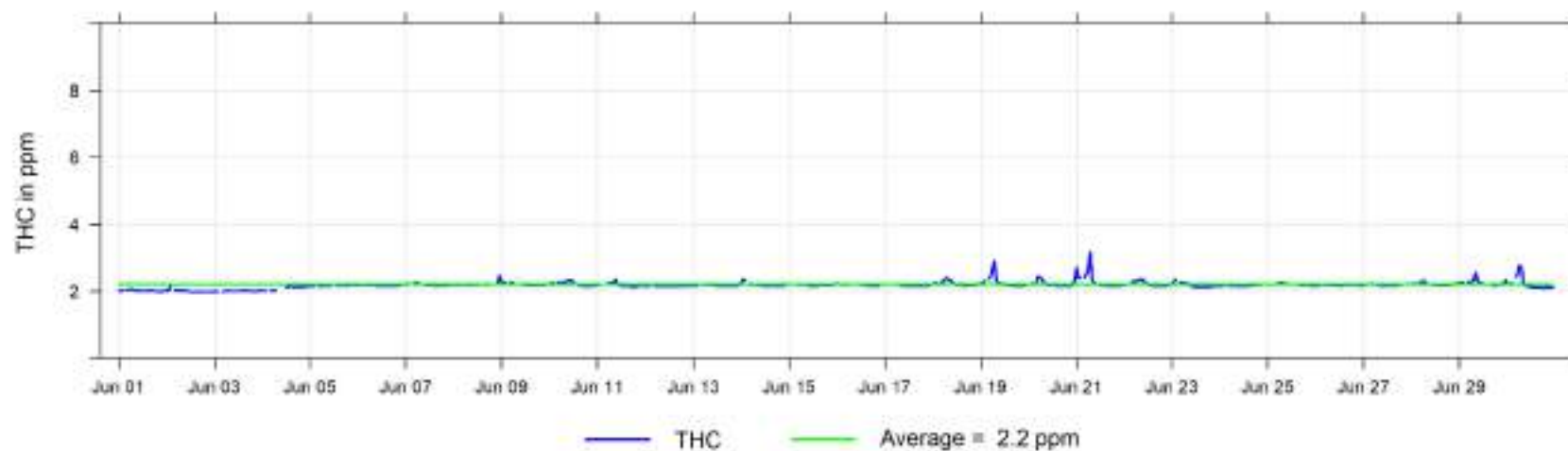
June 2024 Hourly Concentration Readings of NO₂ (in ppb) at Henry Pirker



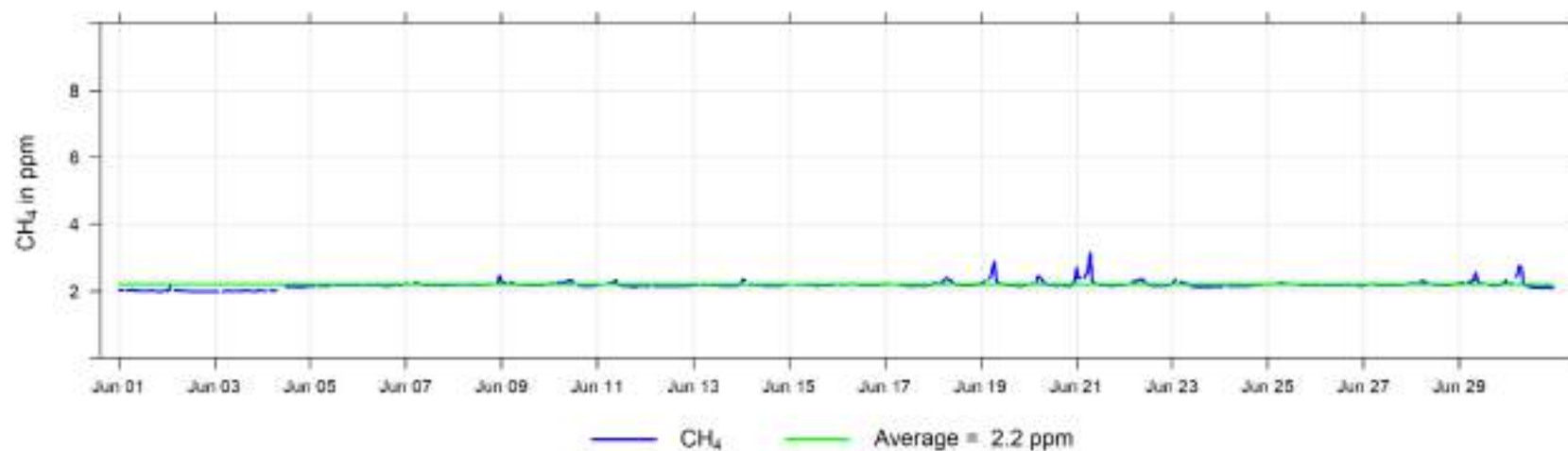
June 2024 Hourly Concentration Readings of O₃ (in ppb) at Henry Pirker



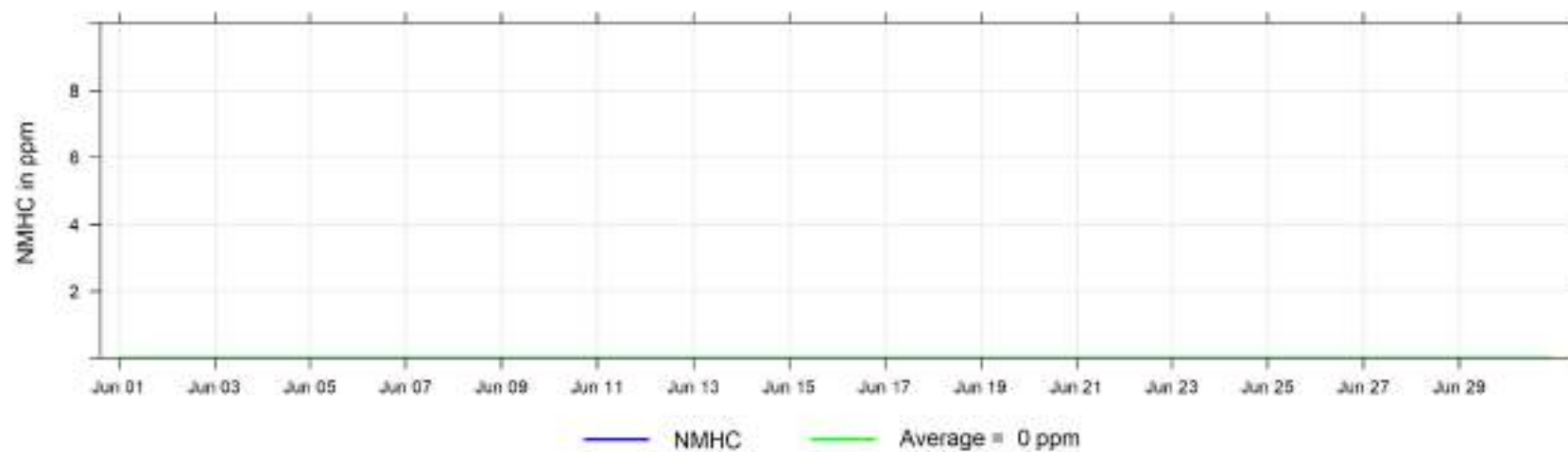
June 2024 Hourly Concentration Readings of THC (in ppm) at Henry Pirker



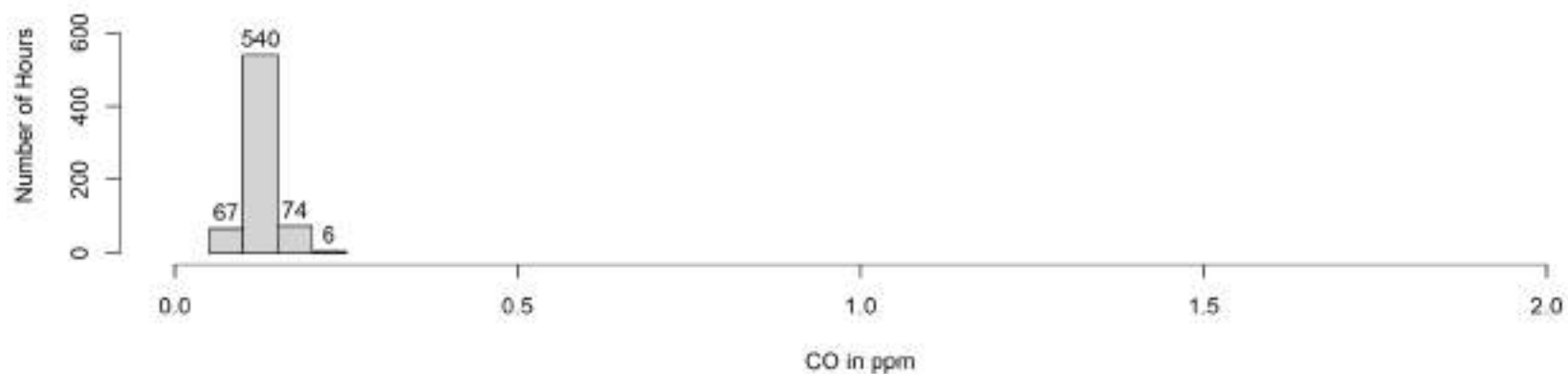
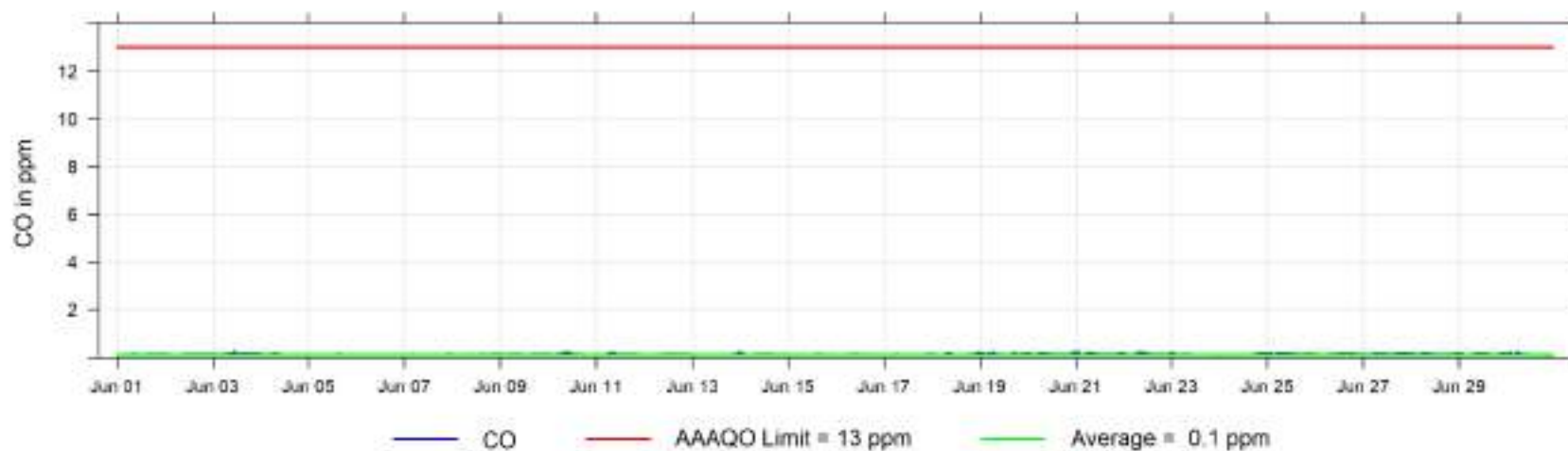
June 2024 Hourly Concentration Readings of CH₄ (in ppm) at Henry Pirker



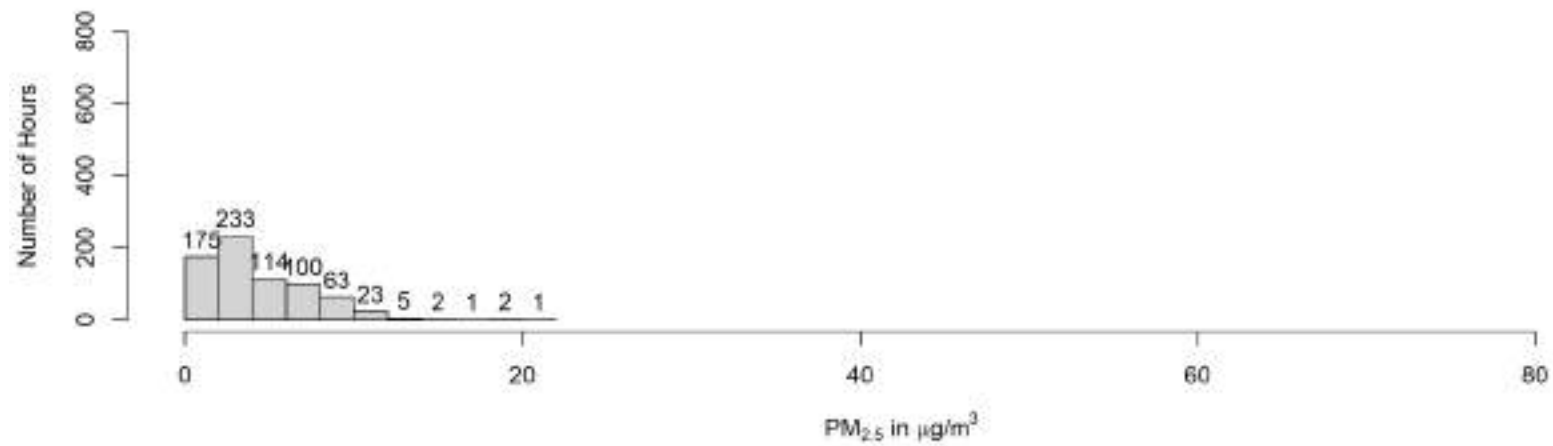
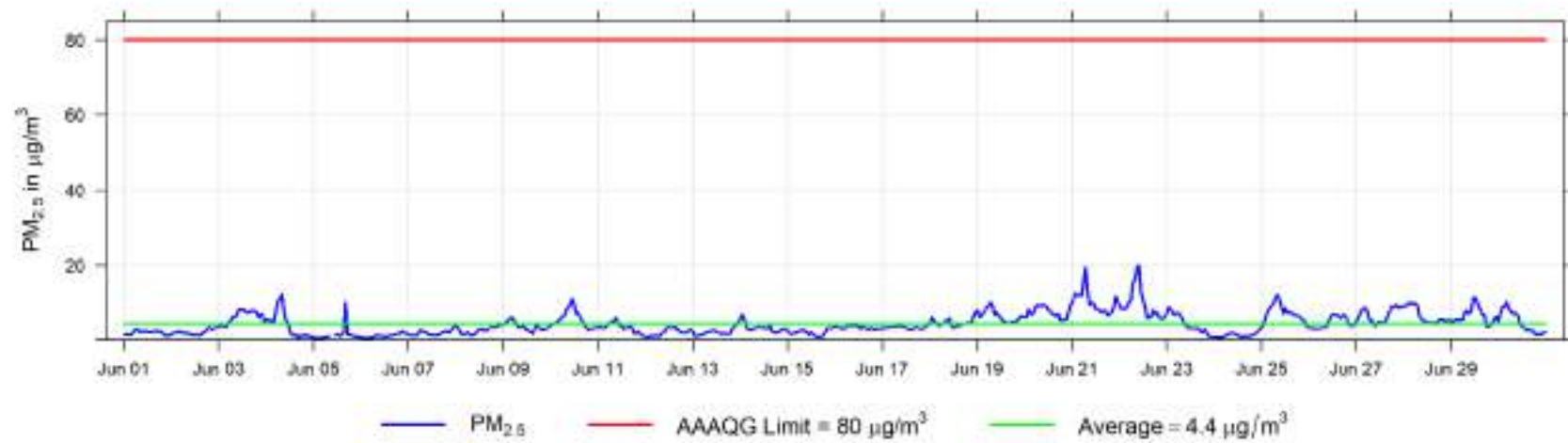
June 2024 Hourly Concentration Readings of NMHC (in ppm) at Henry Pirker



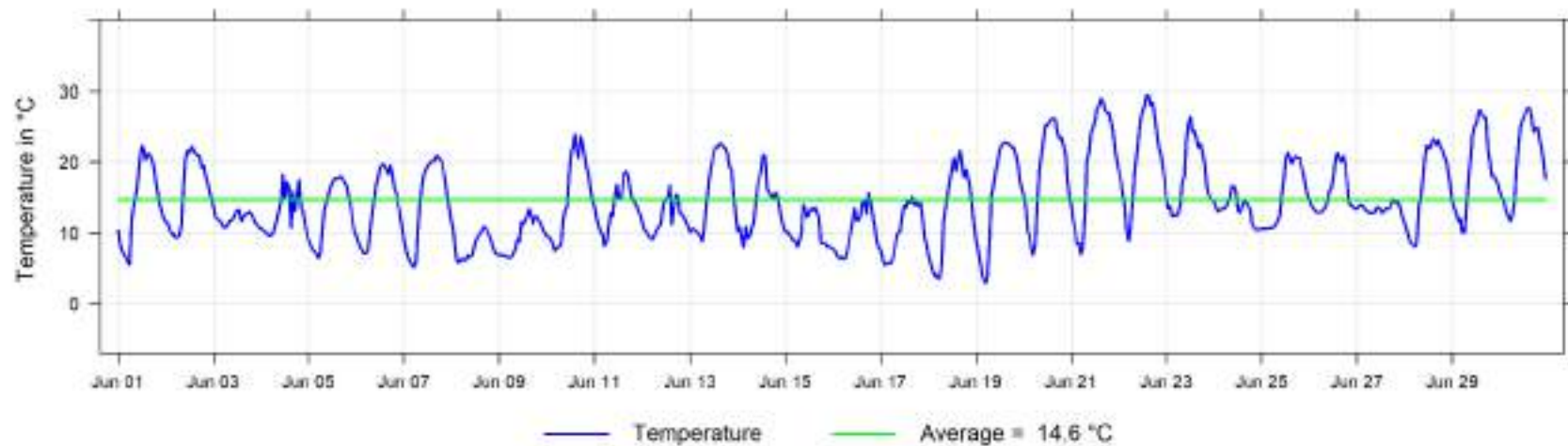
June 2024 Hourly Concentration Readings of CO (in ppm) at Henry Pirkner



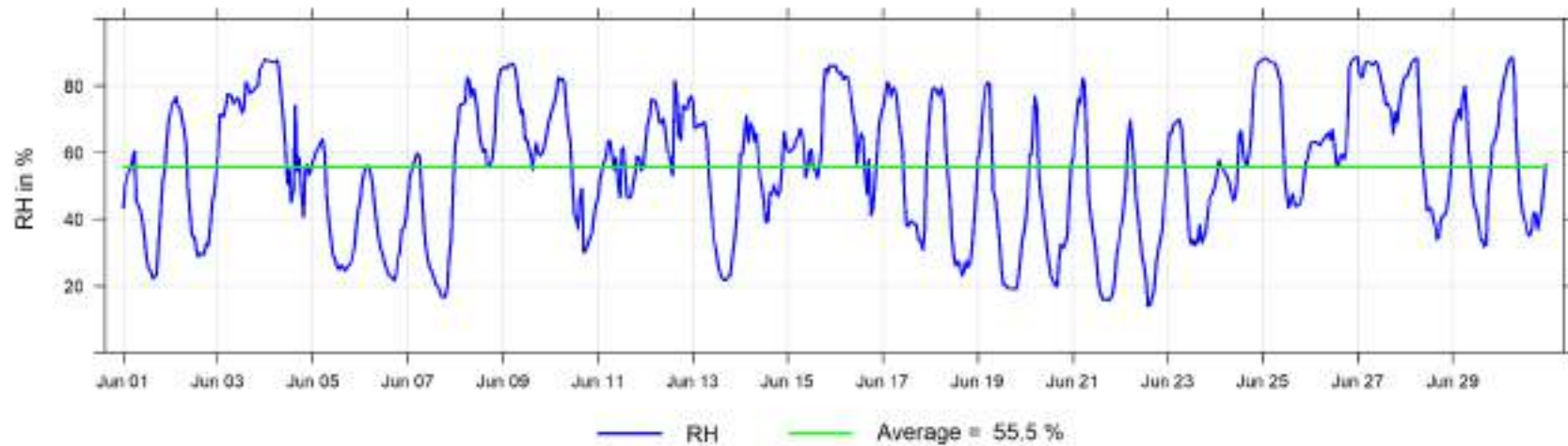
June 2024 Hourly Concentration Readings of PM_{2.5} in $\mu\text{g}/\text{m}^3$ at Henry Pirker



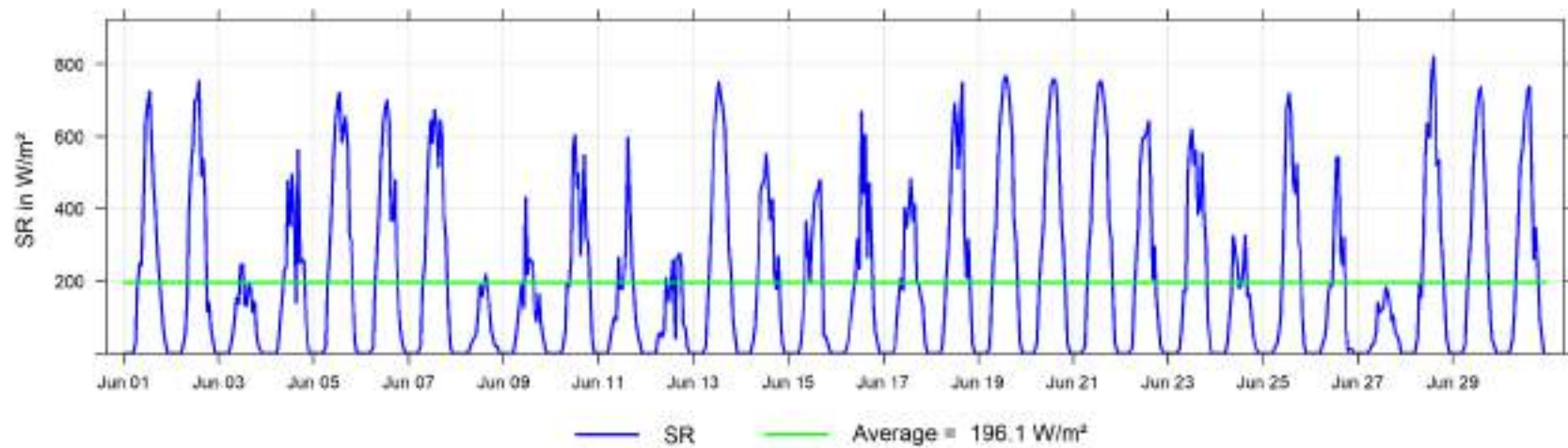
June 2024 Hourly Temperature Readings (in °C) at Henry Pirker



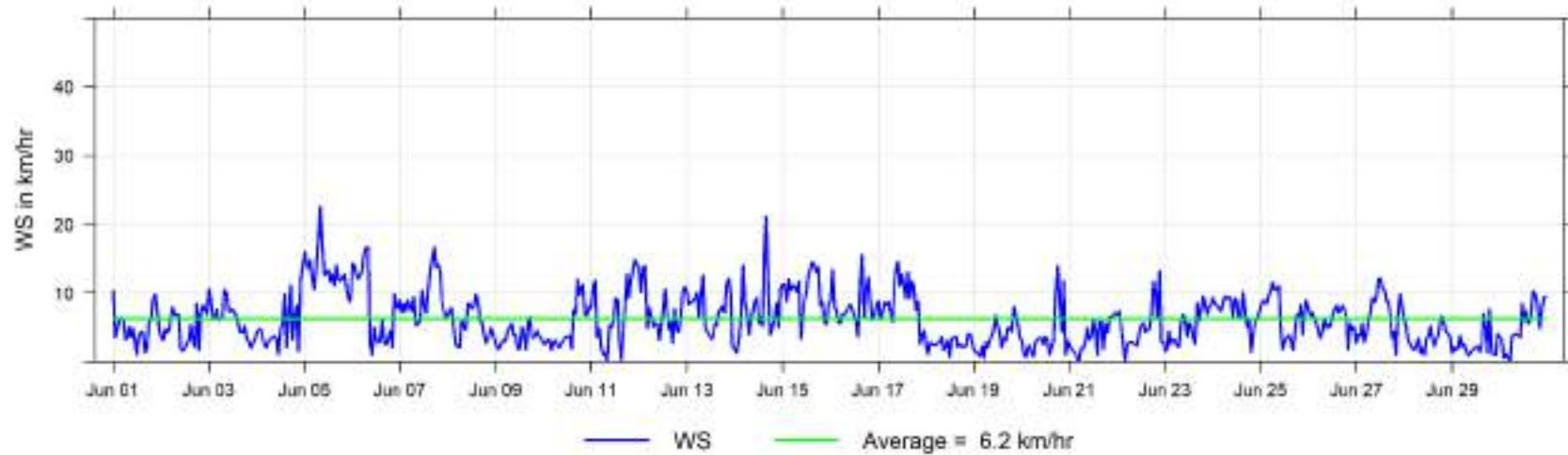
June 2024 Hourly Readings of Relative Humidity (in %) at Henry Pirker



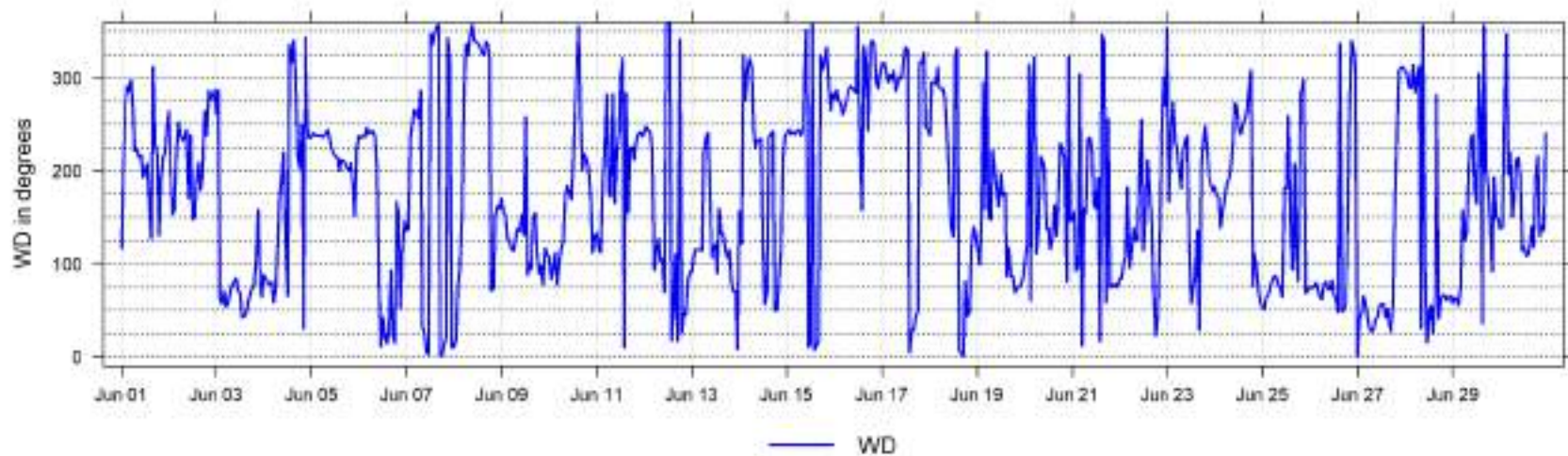
June 2024 Hourly Readings of Solar Radiation (in W/m^2) at Henry Pirker



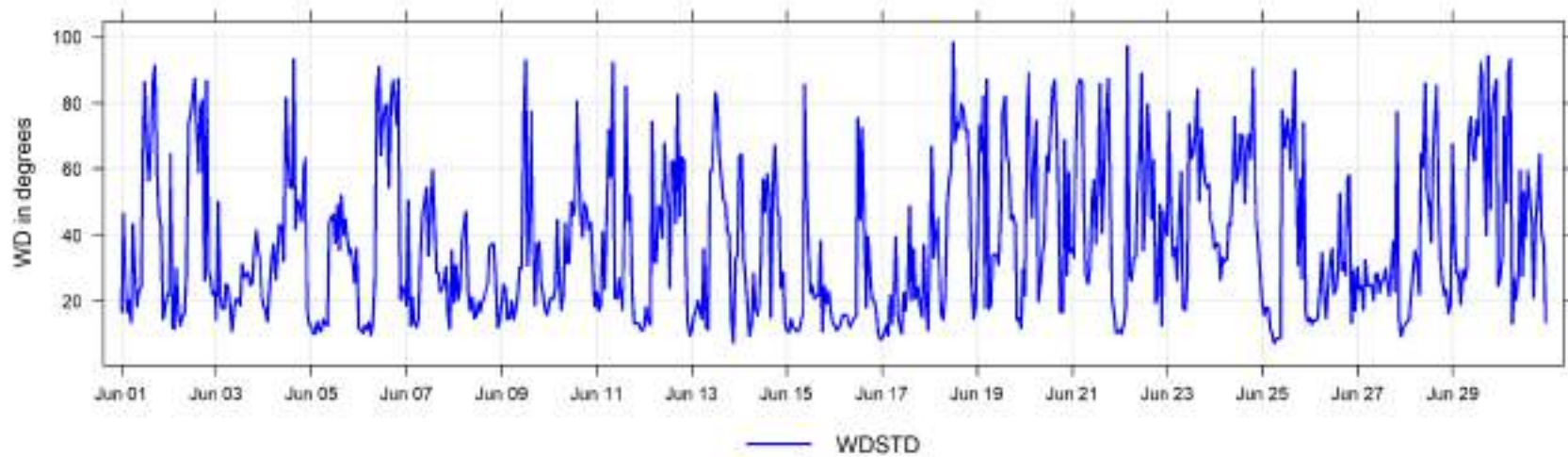
June 2024 Hourly Readings of Wind Speed (in km/hr) at Henry Pirker

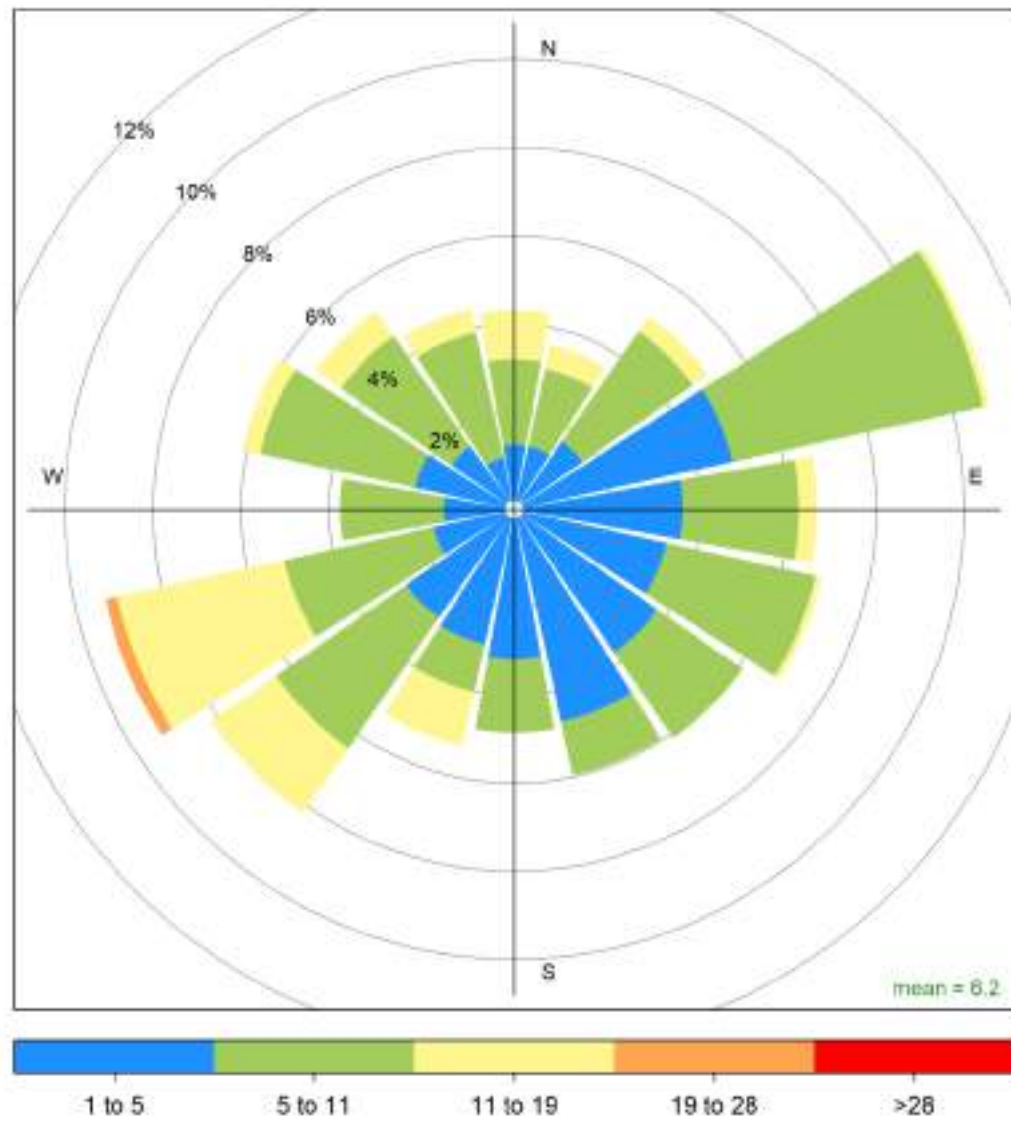


June 2024 Hourly Readings of Wind Direction (in degrees) at Henry Pirker



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

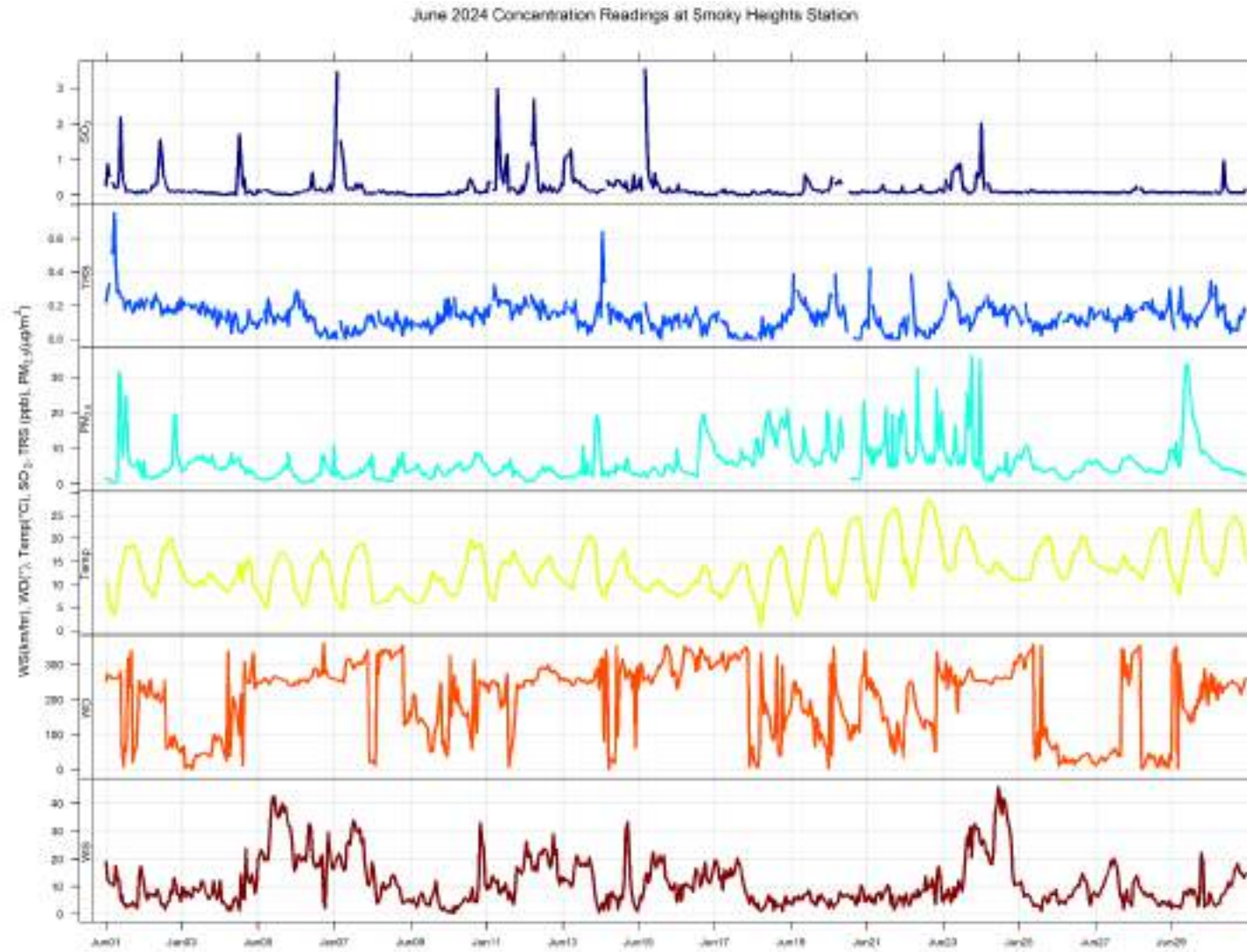




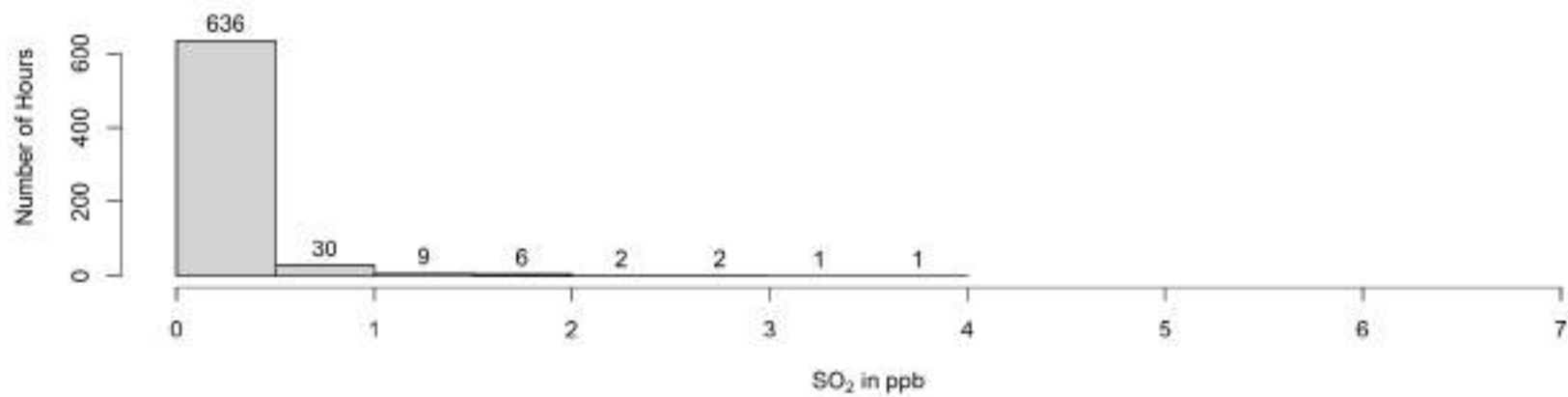
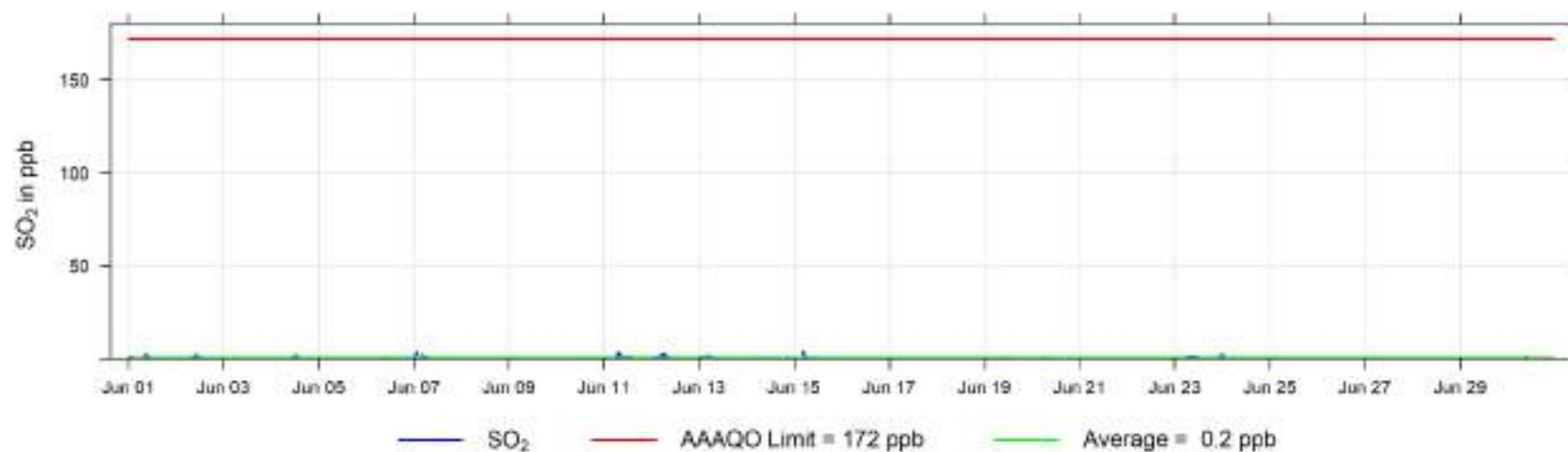
Henry Pirker June 2024 Wind Rose, wind speed in km/hr
Calms (<1km/hr) = 3.1 %

5 Smoky Heights Charts

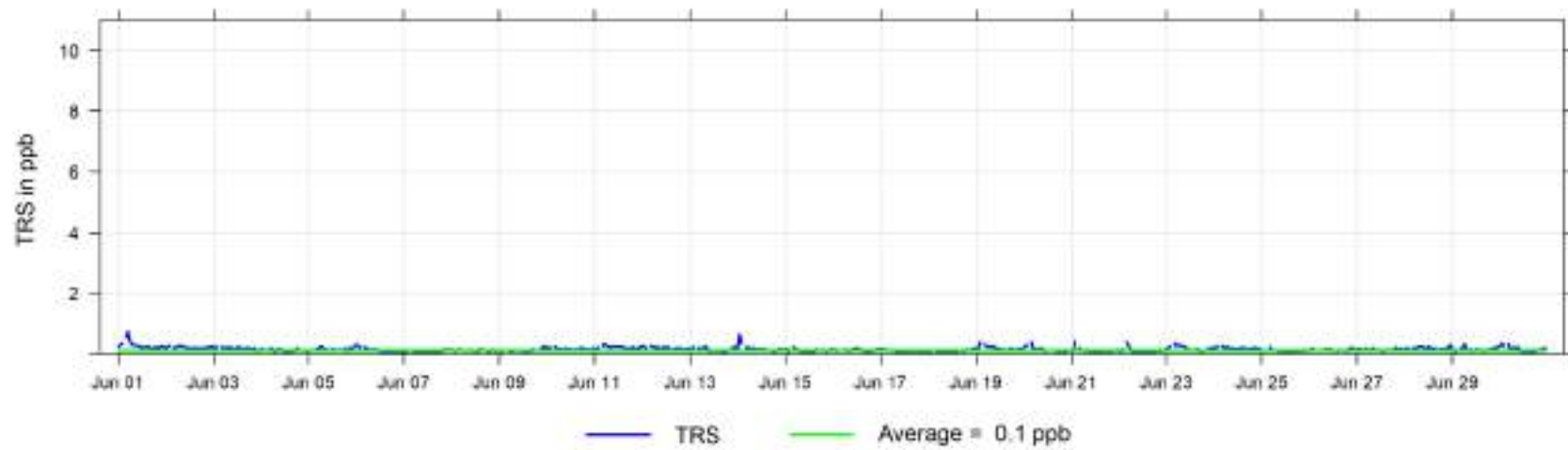
The following pages include the charts and histograms for Smoky Heights Station



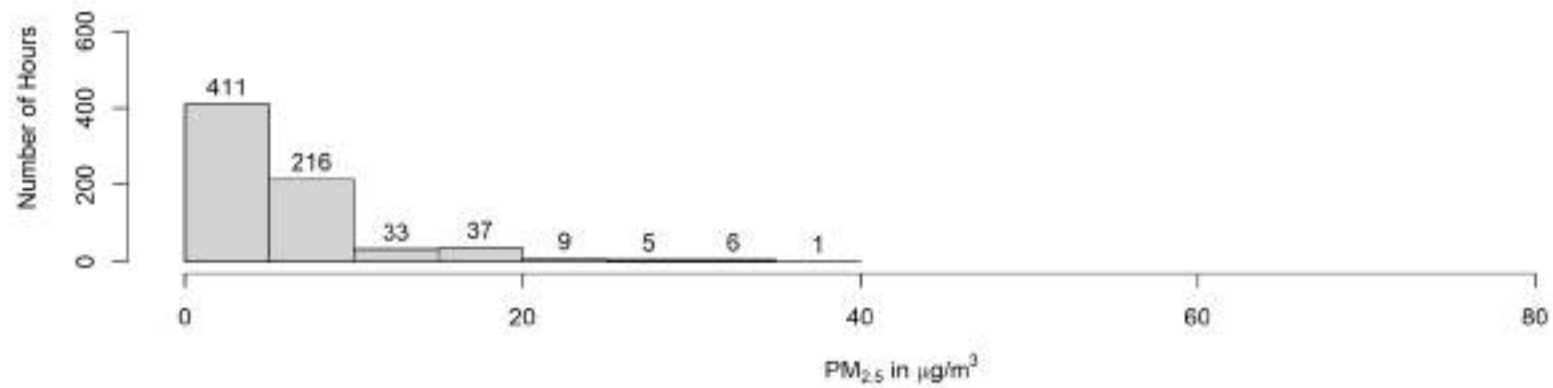
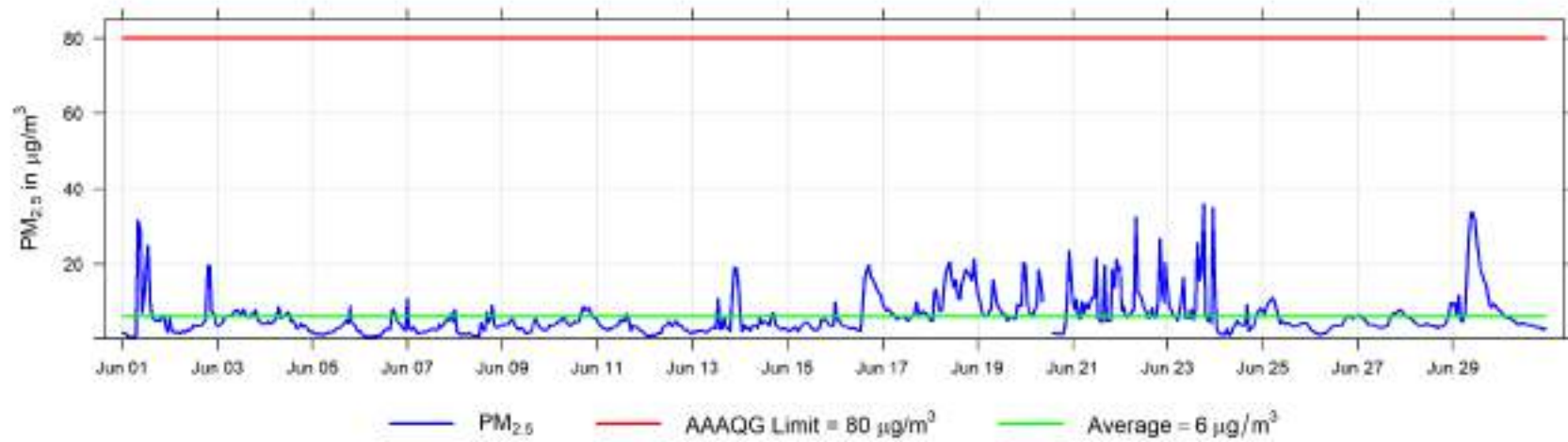
June 2024 Hourly Concentration Readings of SO₂ (in ppb) at Smoky Heights



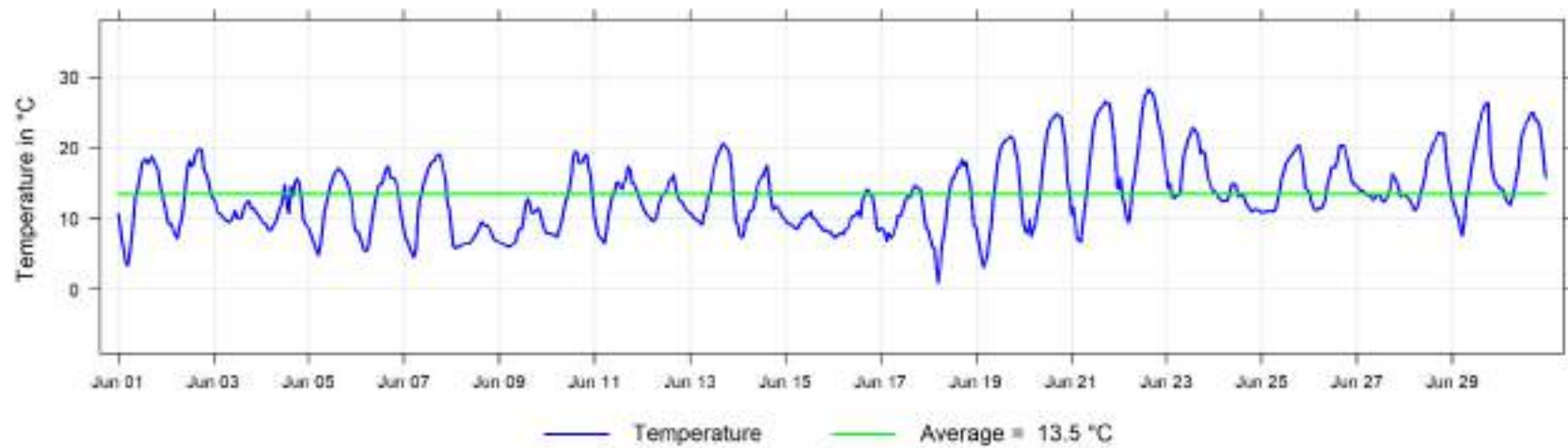
June 2024 Hourly Concentration Readings of TRS (in ppb) at Smoky Heights



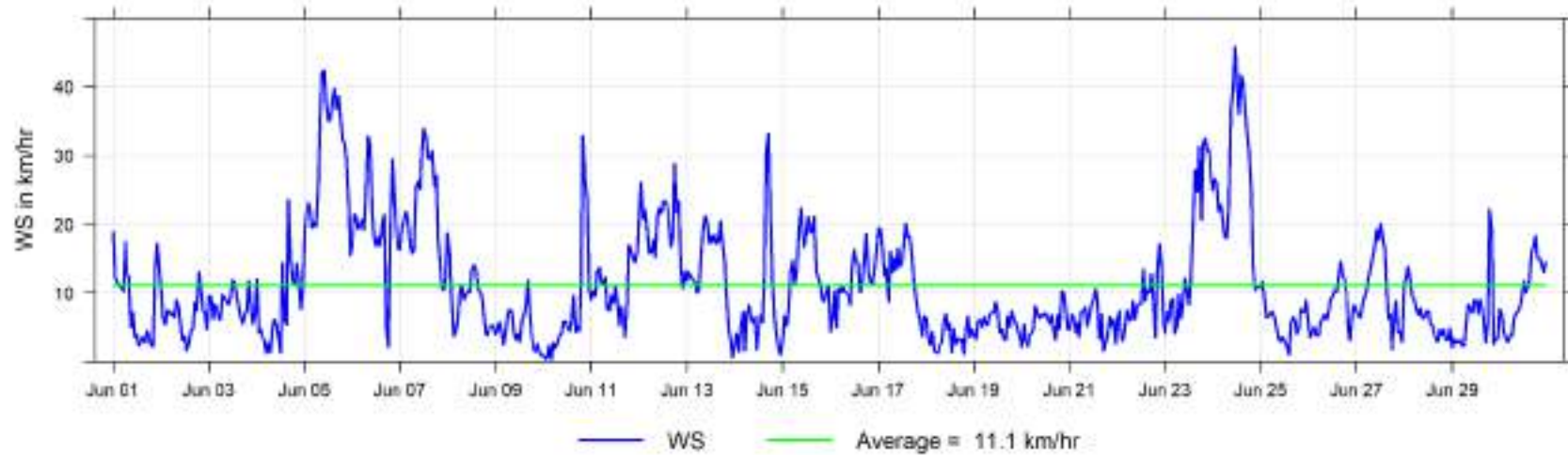
June 2024 Hourly Concentration Readings of $PM_{2.5}$ in $\mu g/m^3$ at Smoky Heights



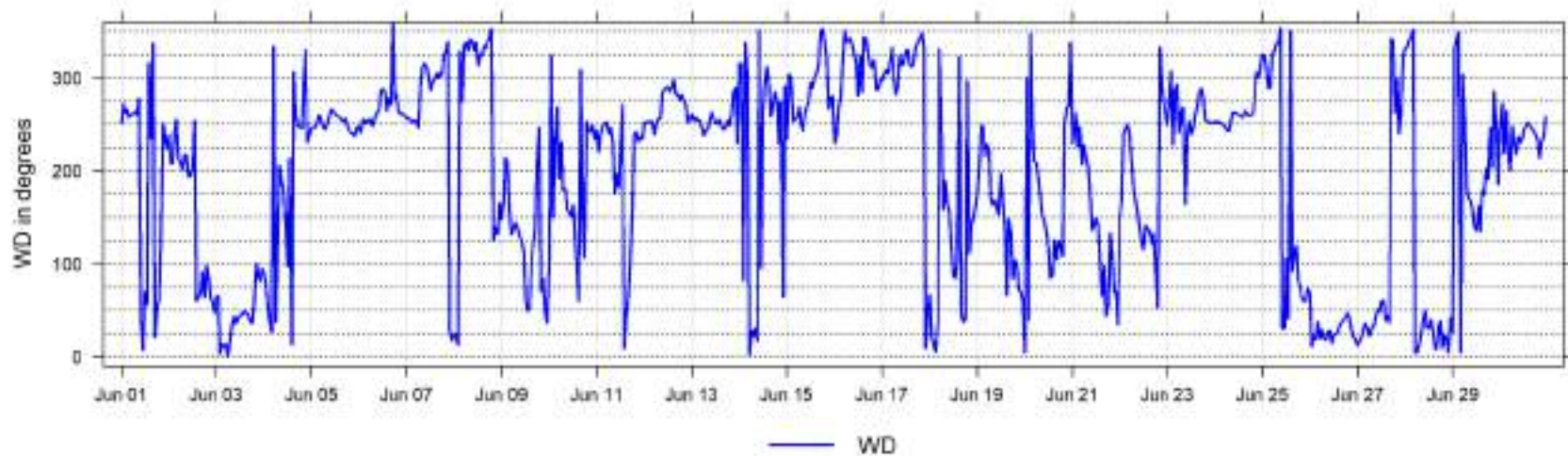
June 2024 Hourly Temperature Readings (in °C) at Smoky Heights



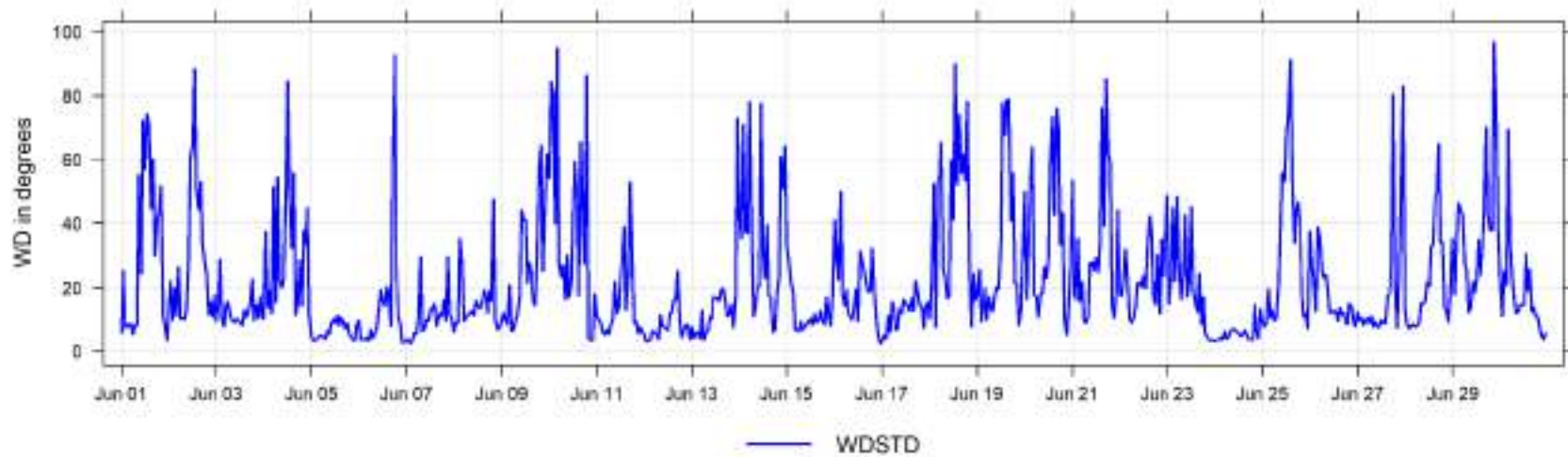
June 2024 Hourly Readings of Wind Speed (in km/hr) at Smoky Heights

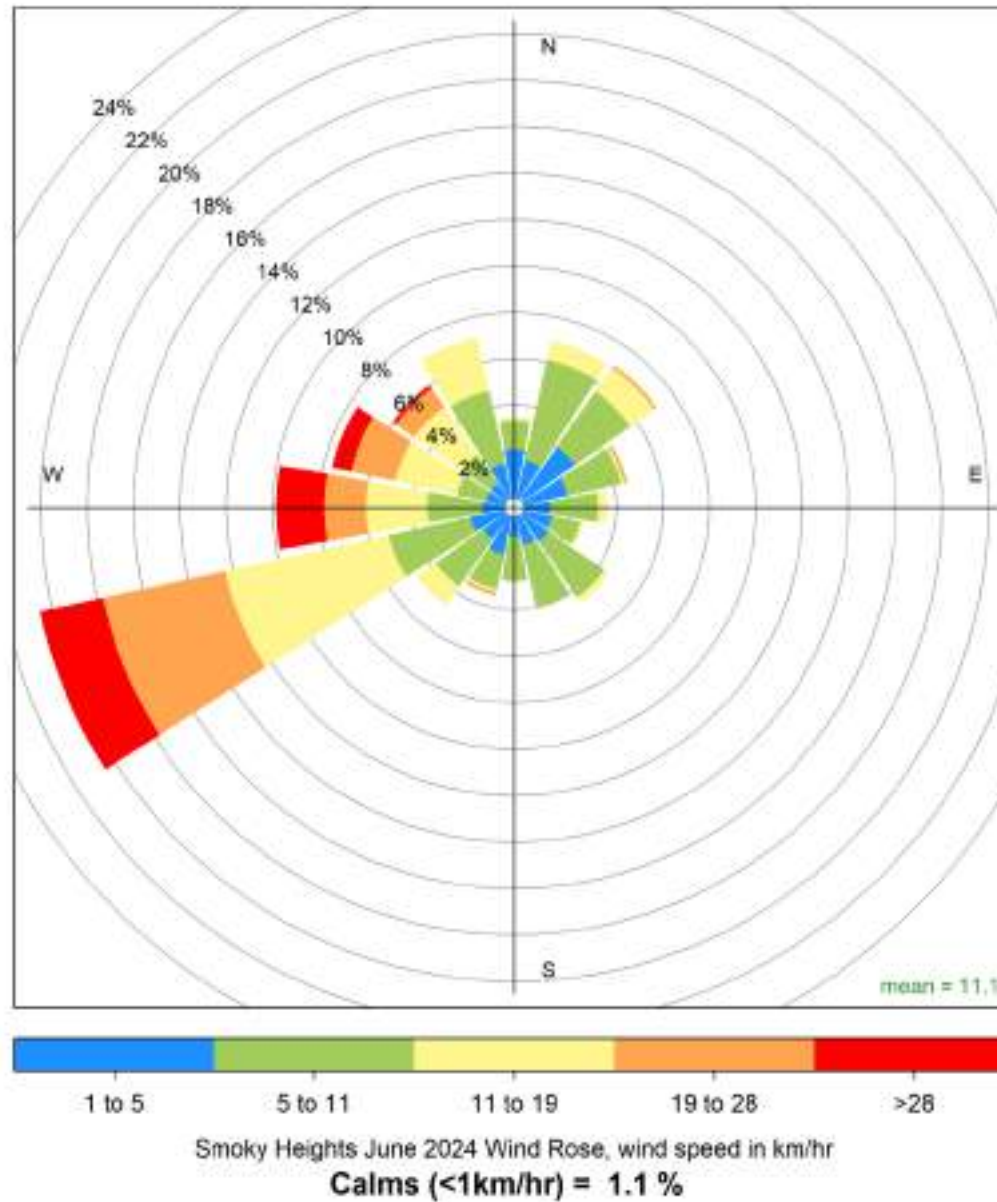


June 2024 Hourly Readings of Wind Direction (in degrees) at Smoky Heights



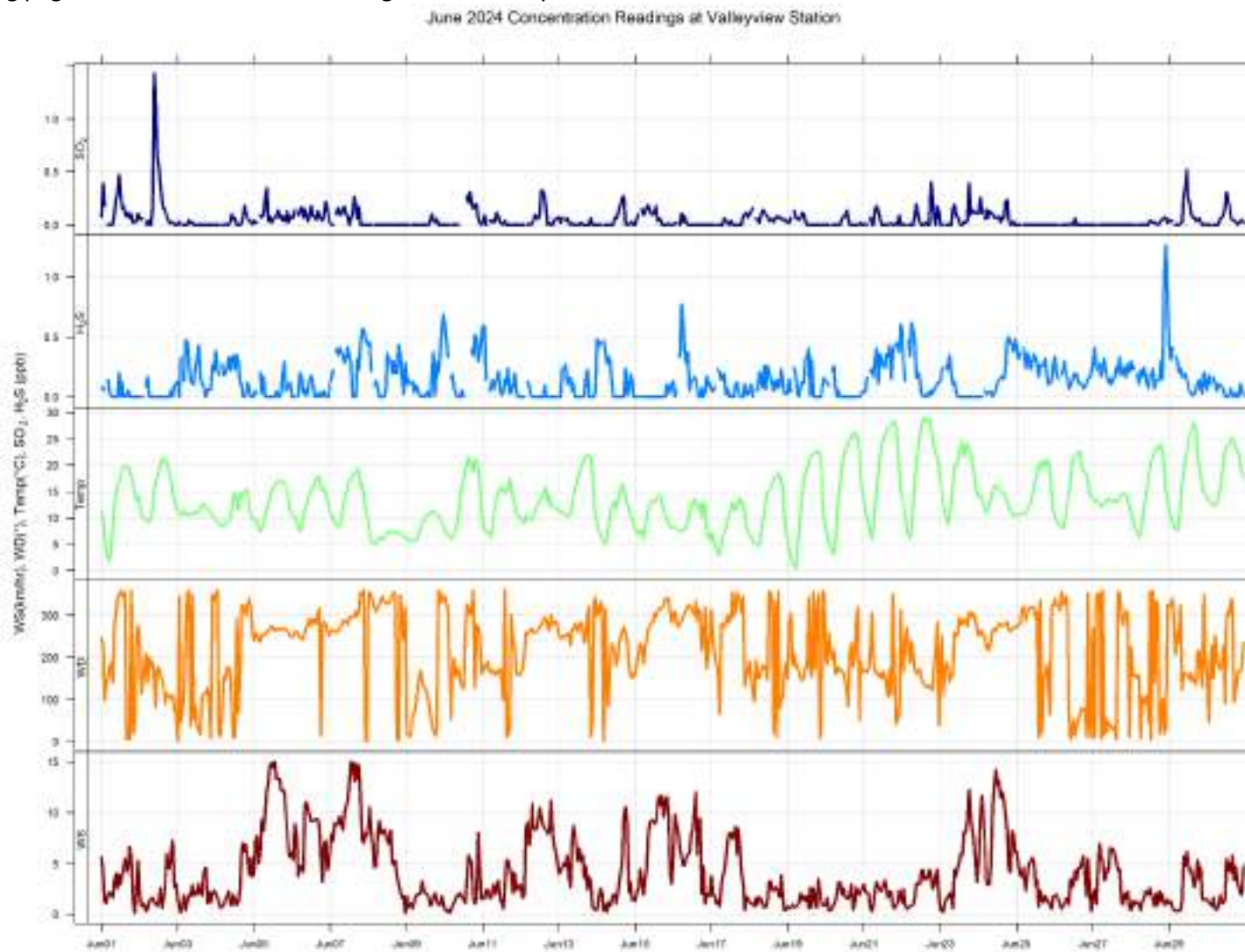
June 2024 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Smoky Heights



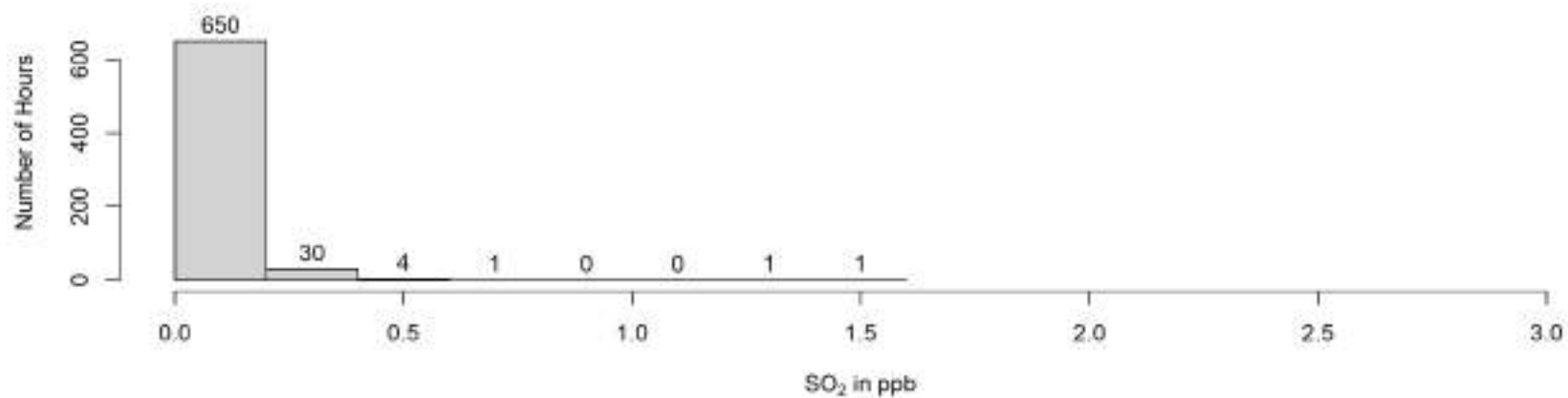
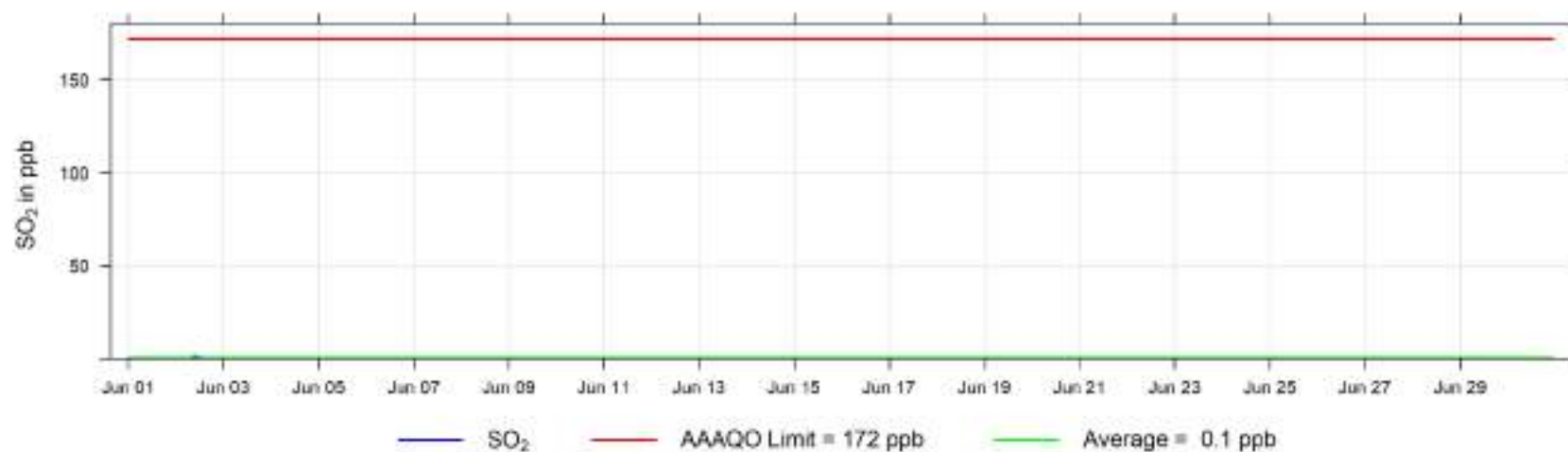


6 Valleyview Charts

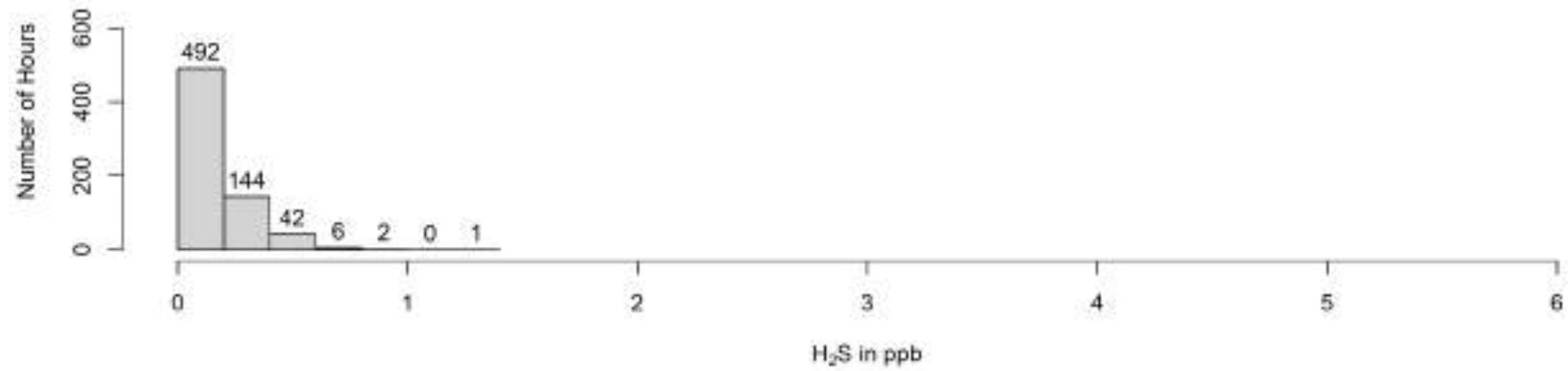
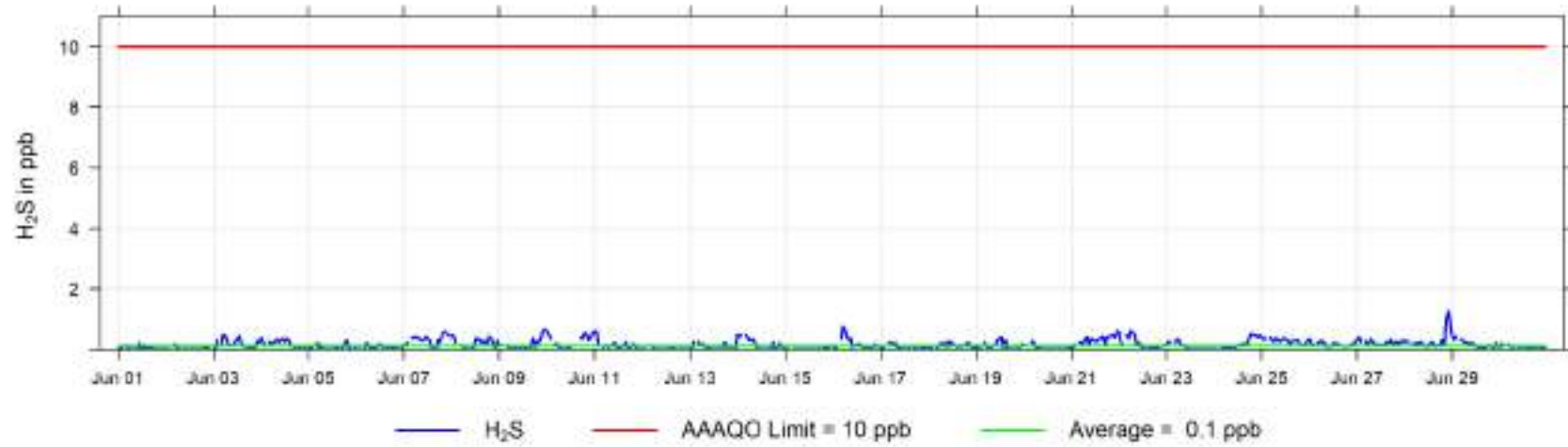
The following pages include the charts and histograms for Valleyview Station



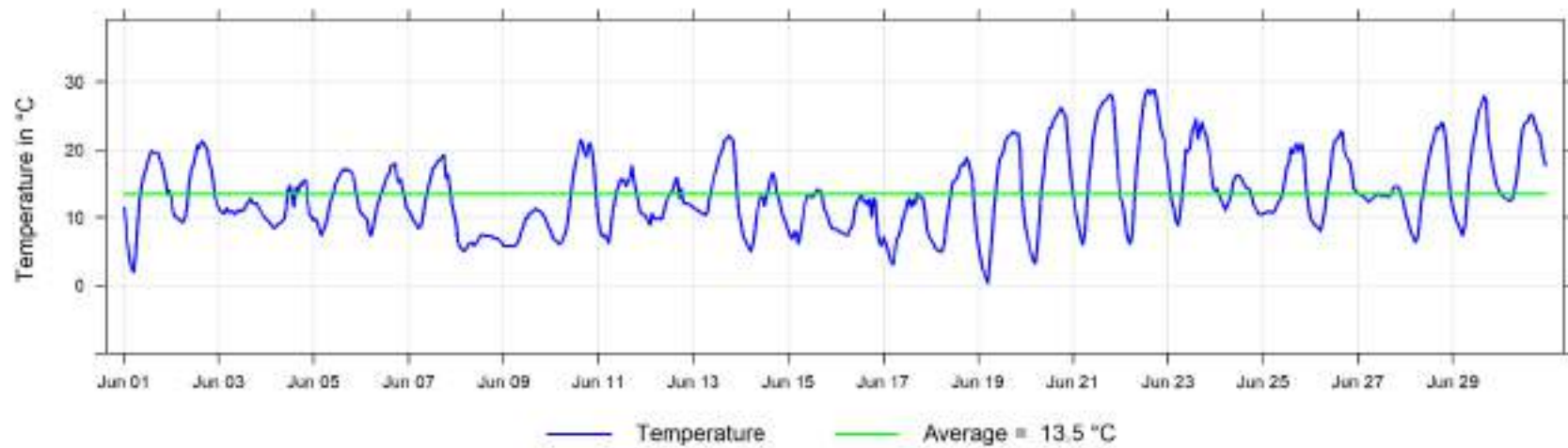
June 2024 Hourly Concentration Readings of SO₂ (in ppb) at Valleyview



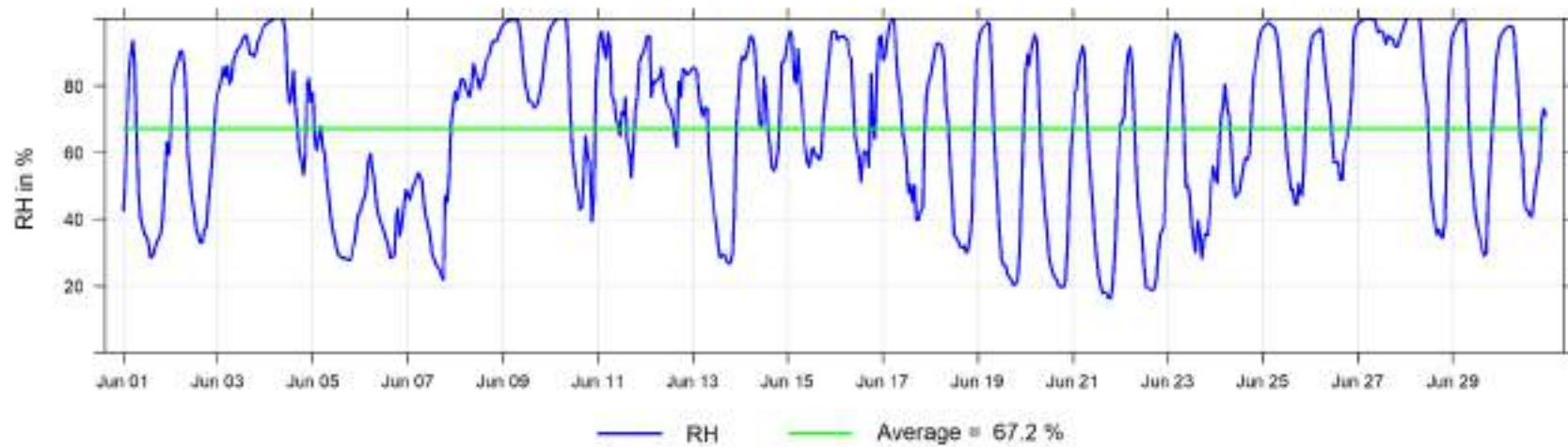
June 2024 Hourly Concentration Readings of H₂S (in ppb) at Valleyview



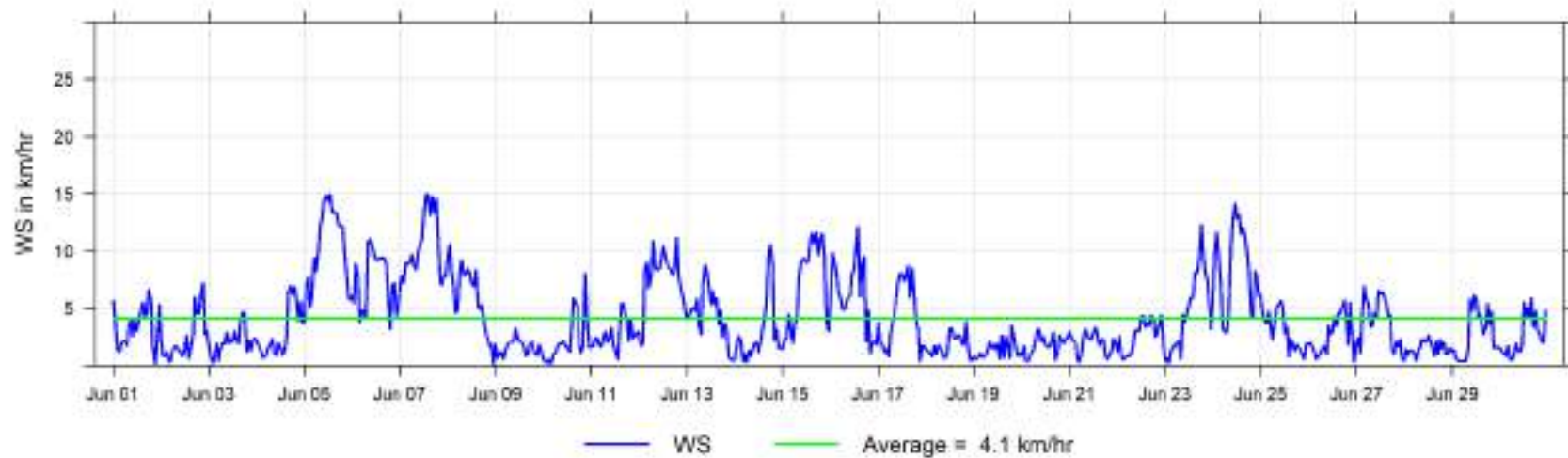
June 2024 Hourly Temperature Readings (in °C) at Valleyview



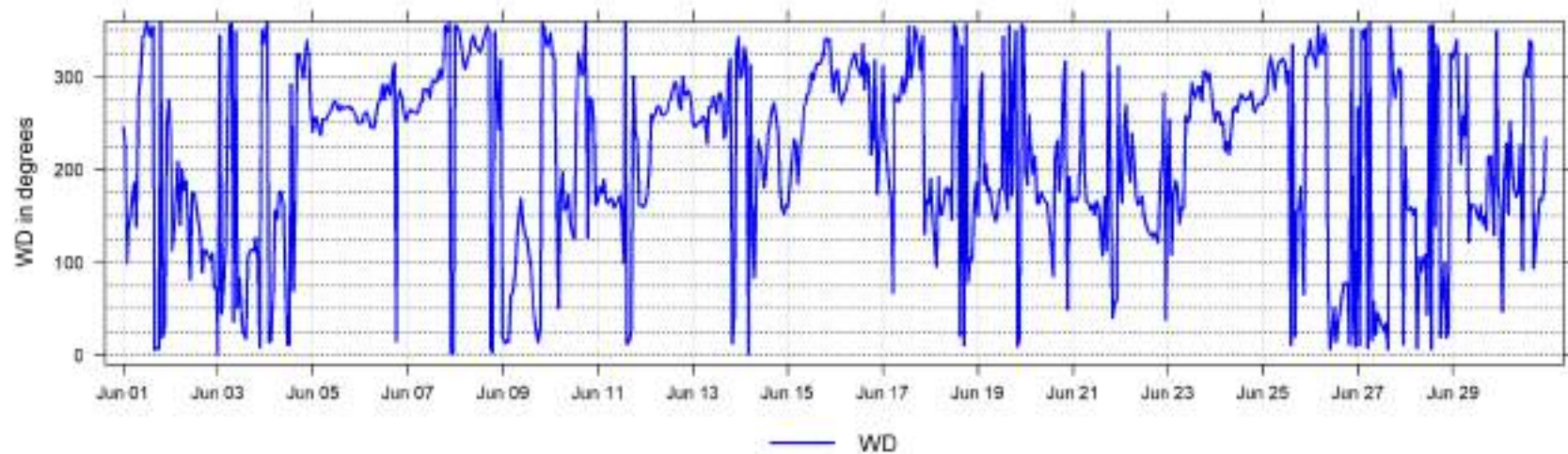
June 2024 Hourly Readings of Relative Humidity (in %) at Valleyview



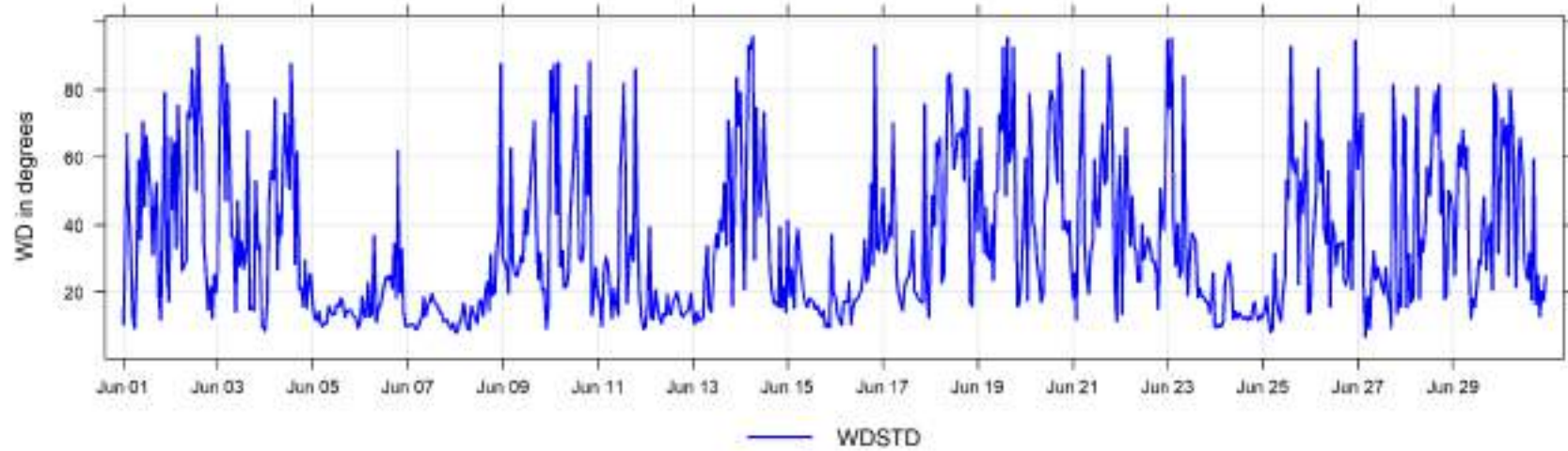
June 2024 Hourly Readings of Wind Speed (in km/hr) at Valleyview

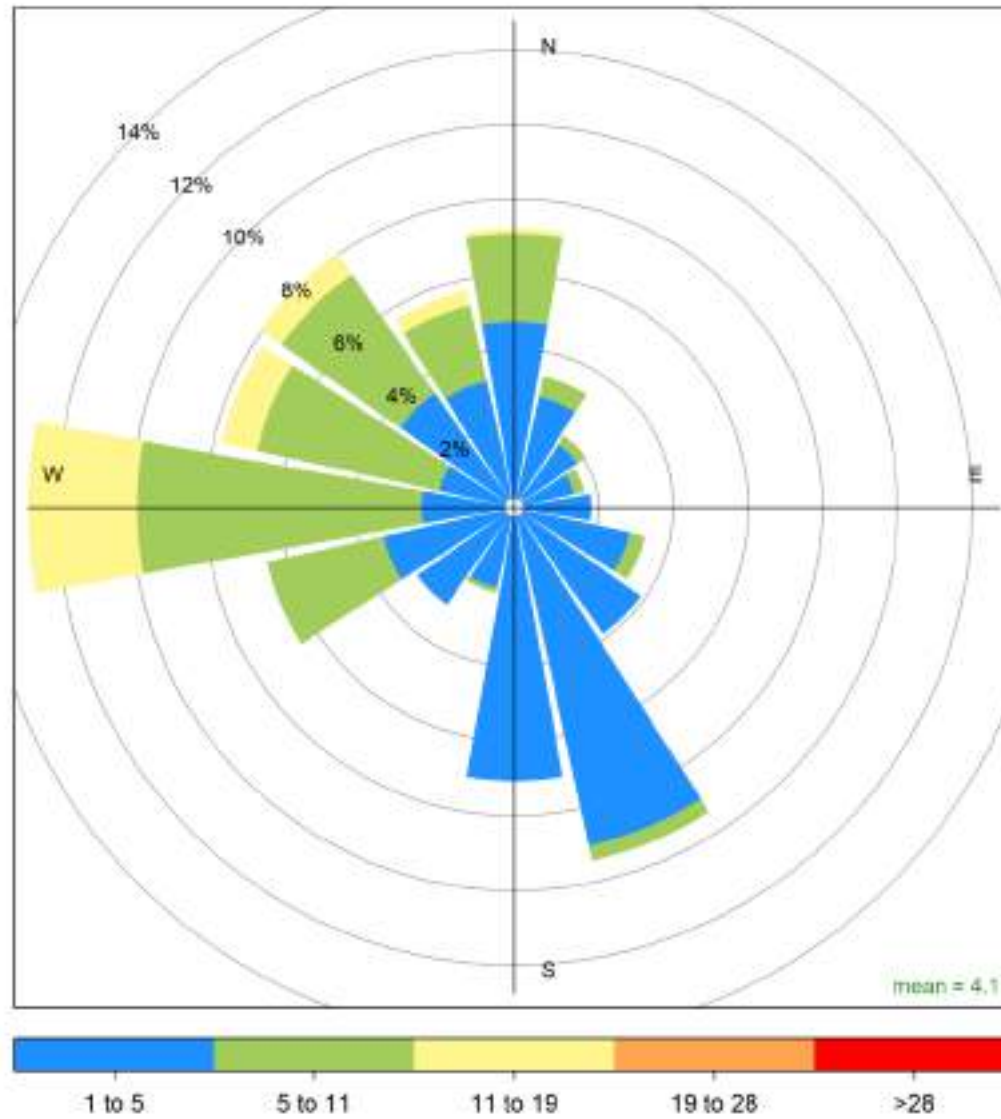


June 2024 Hourly Readings of Wind Direction (in degrees) at Valleyview



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





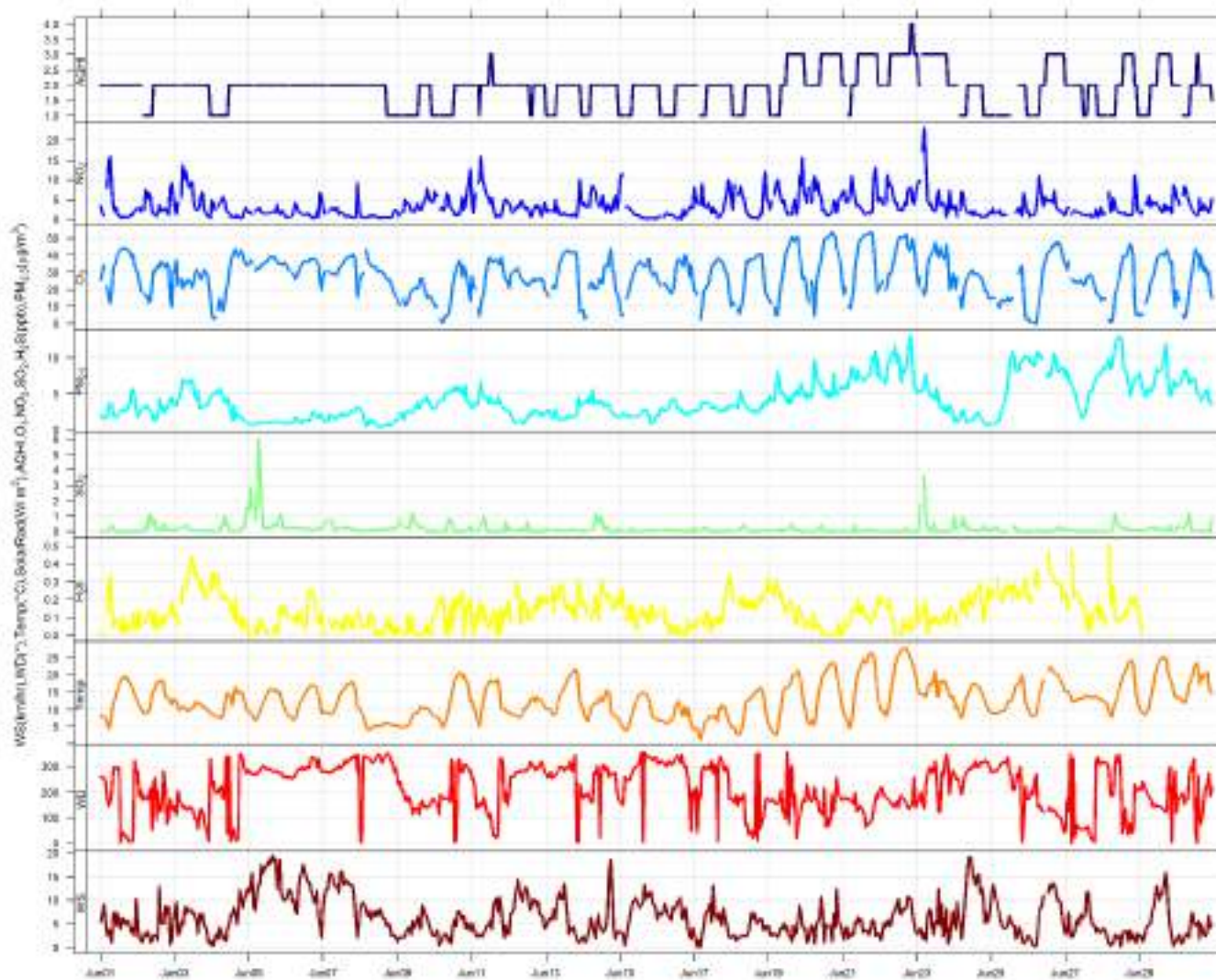
Valleyview June 2024 Wind Rose, wind speed in km/hr

Calms (<1km/hr) = 14.4 %

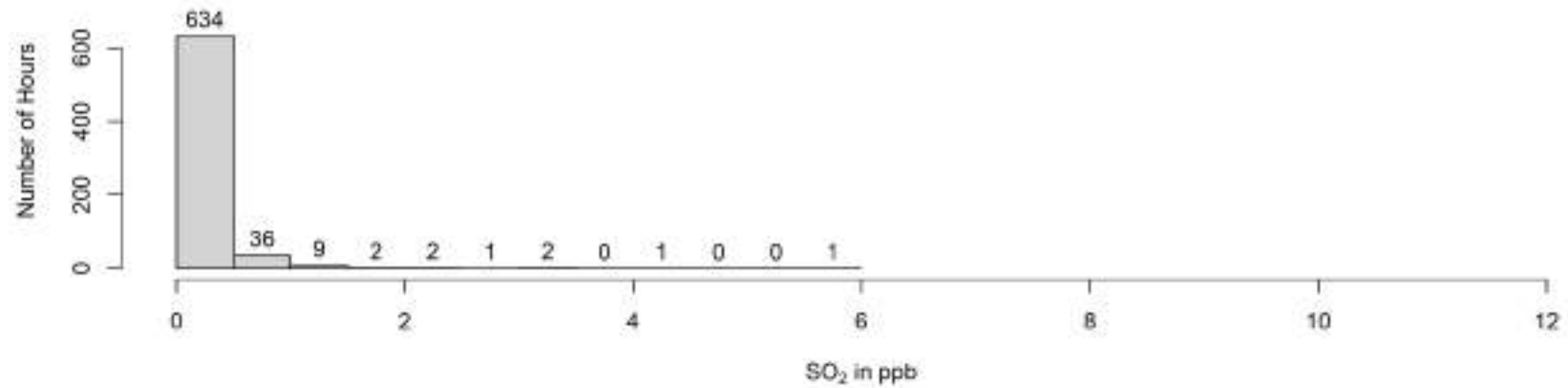
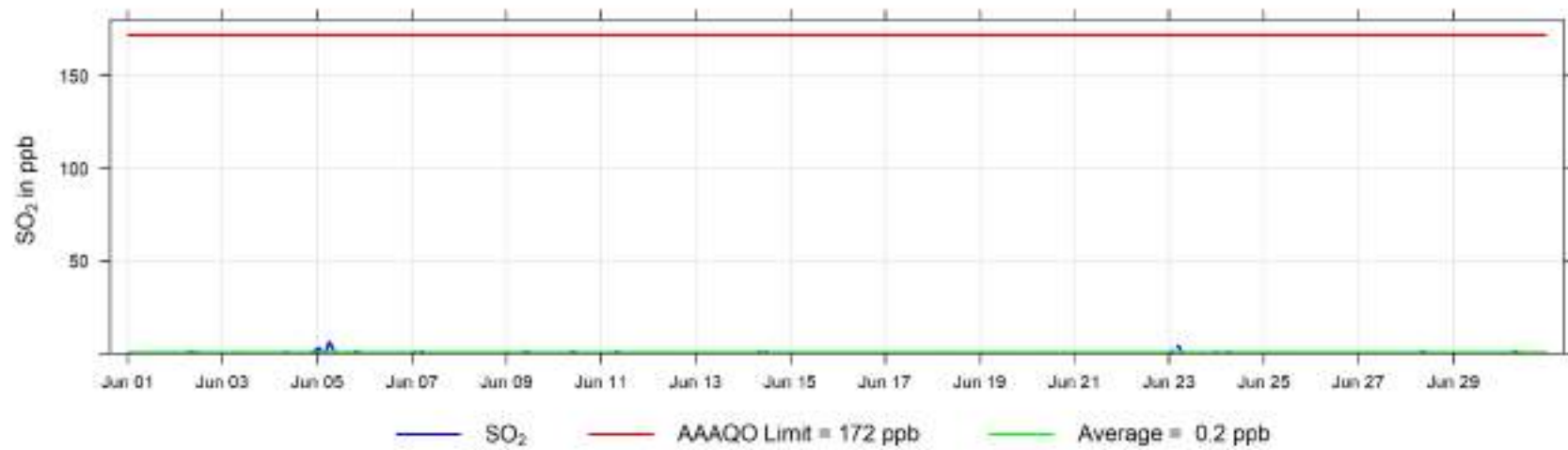
7 Fox Creek Charts

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

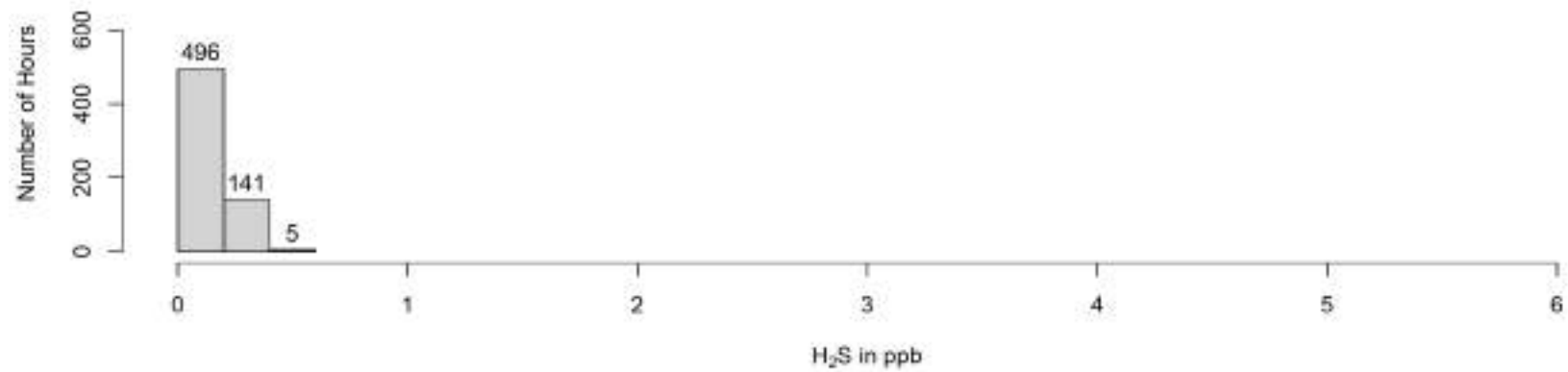
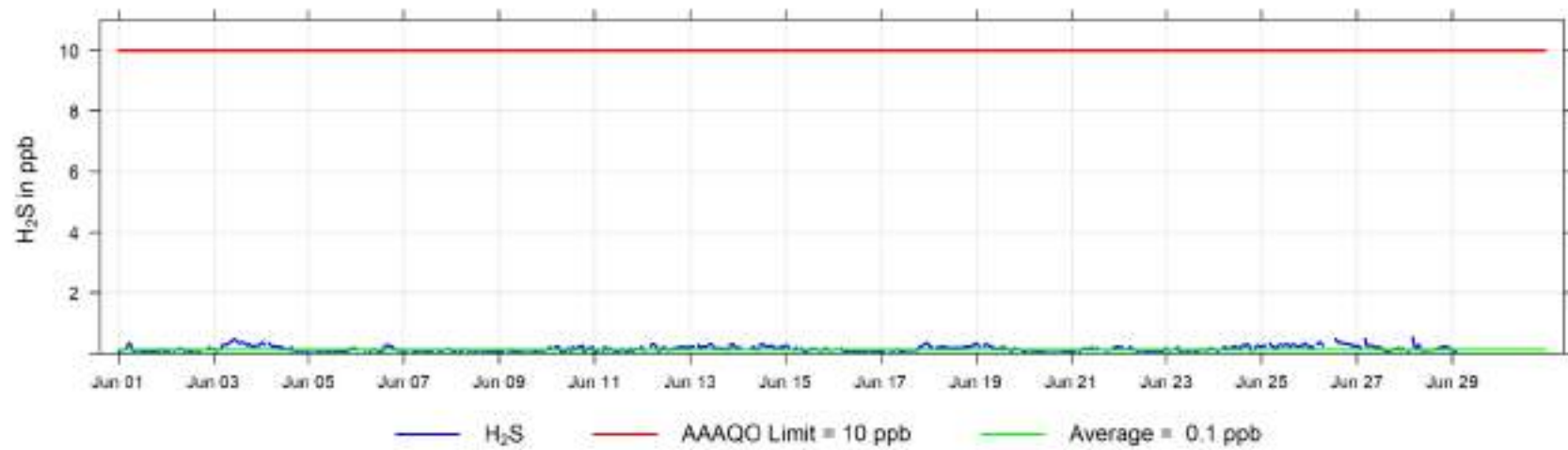
June 2024 Concentration Readings at Fox Creek Station



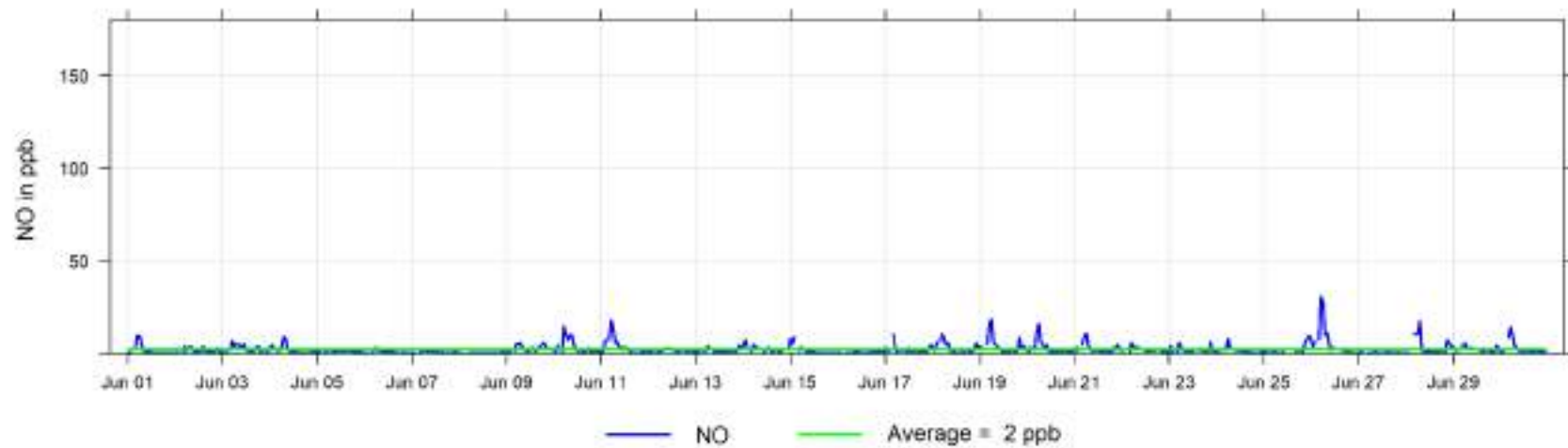
June 2024 Hourly Concentration Readings of SO₂ (in ppb) at Fox Creek



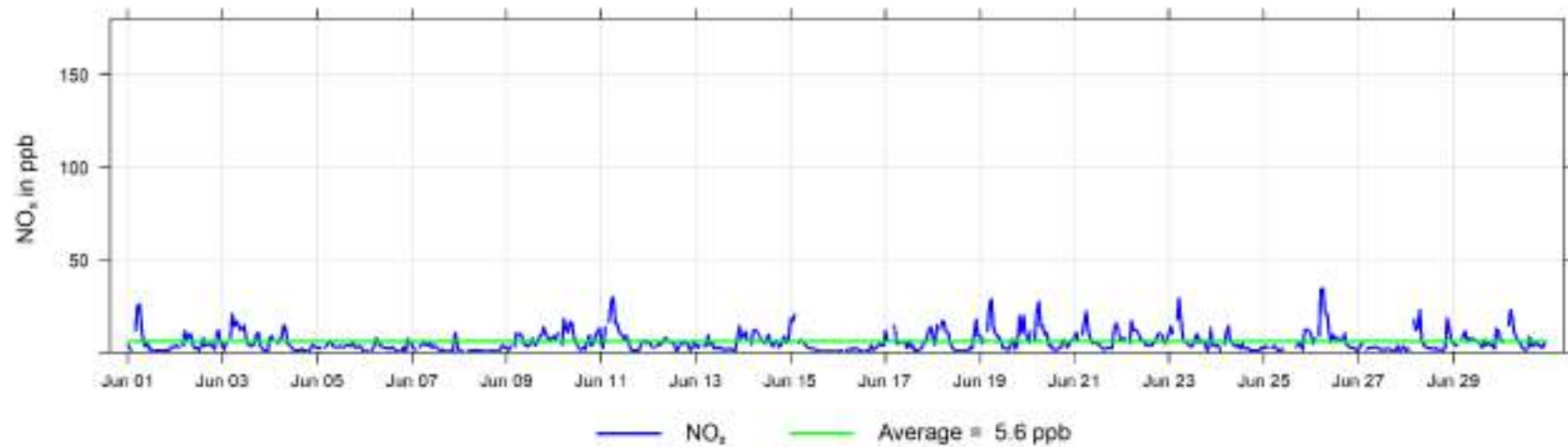
June 2024 Hourly Concentration Readings of H₂S (in ppb) at Fox Creek



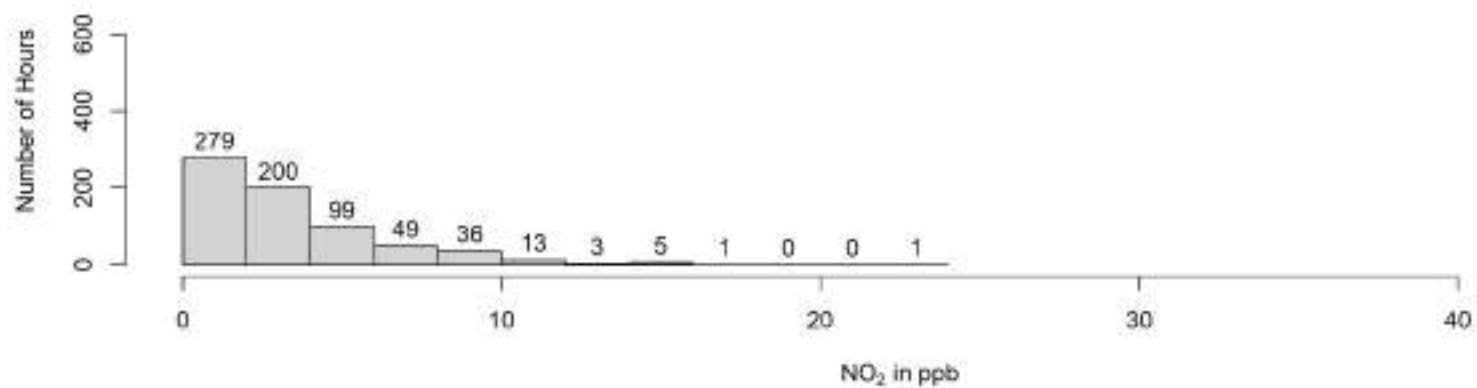
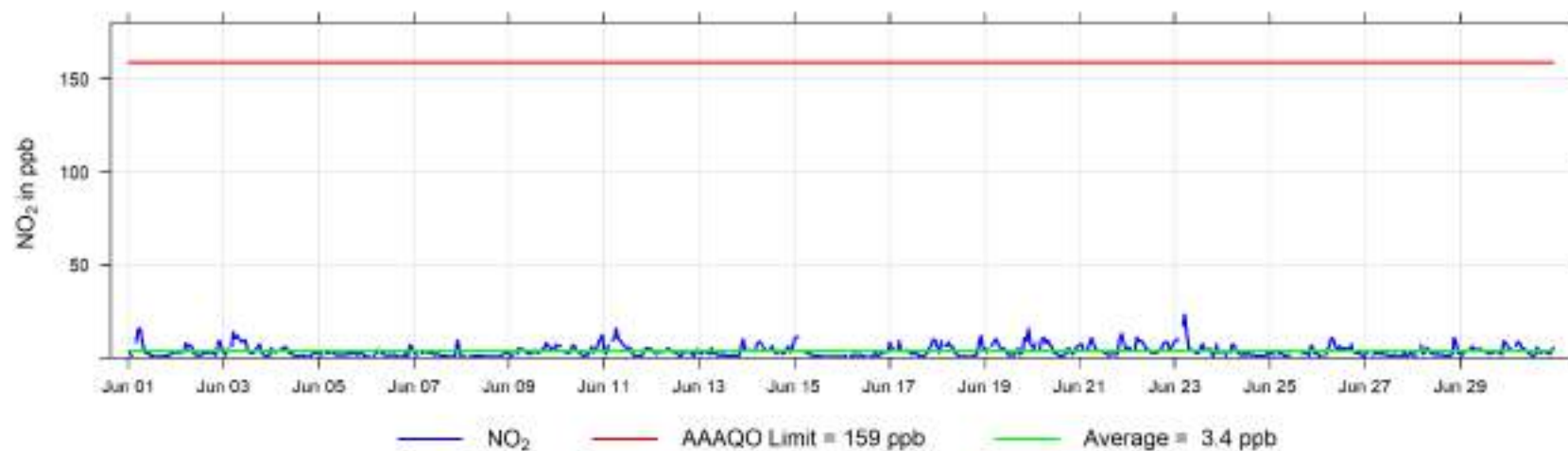
June 2024 Hourly Concentration Readings of NO (in ppb) at Fox Creek



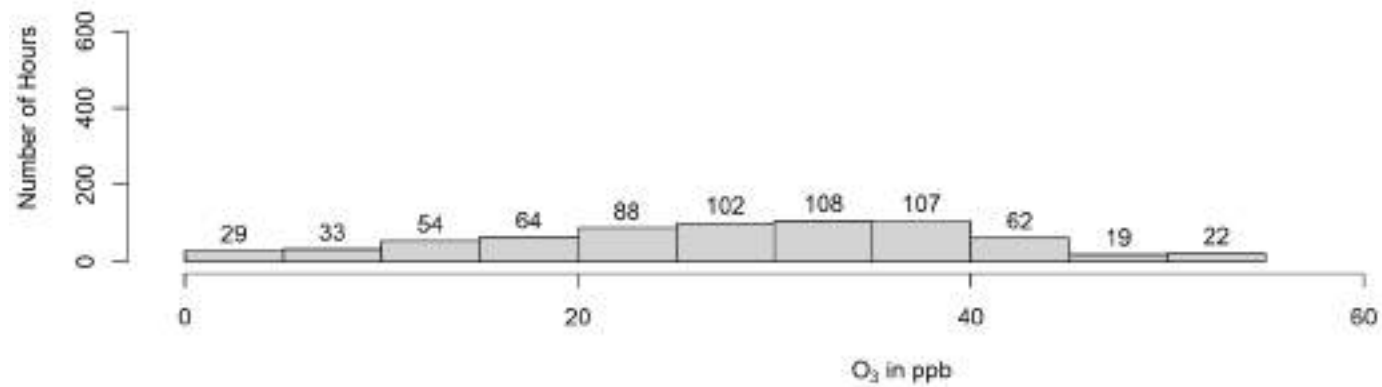
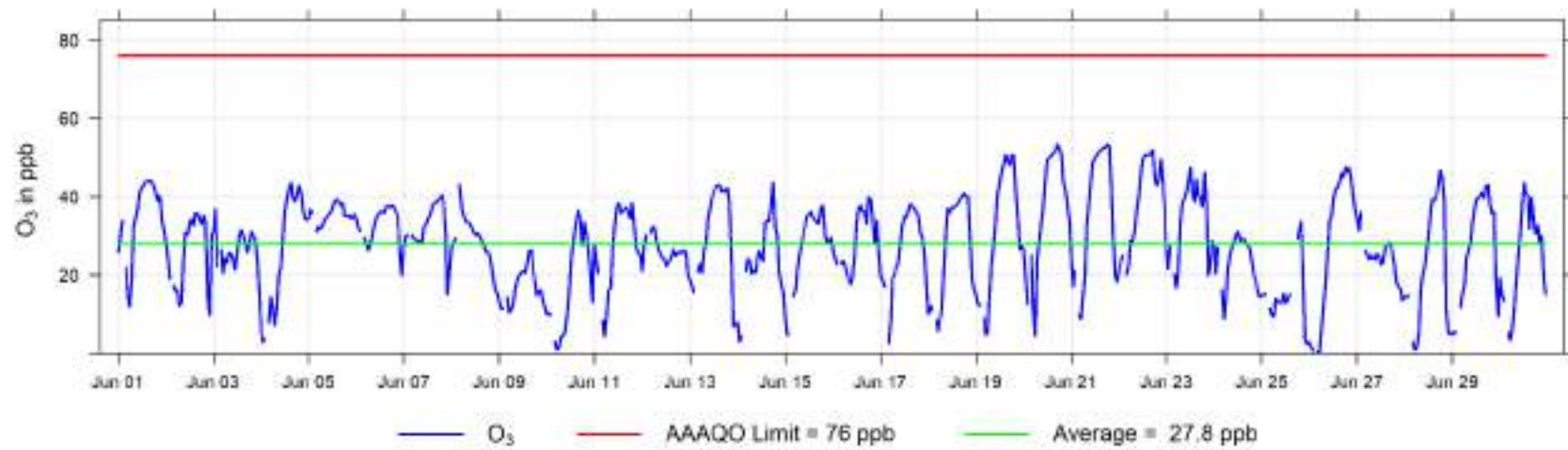
June 2024 Hourly Concentration Readings of NO_x (in ppb) at Fox Creek



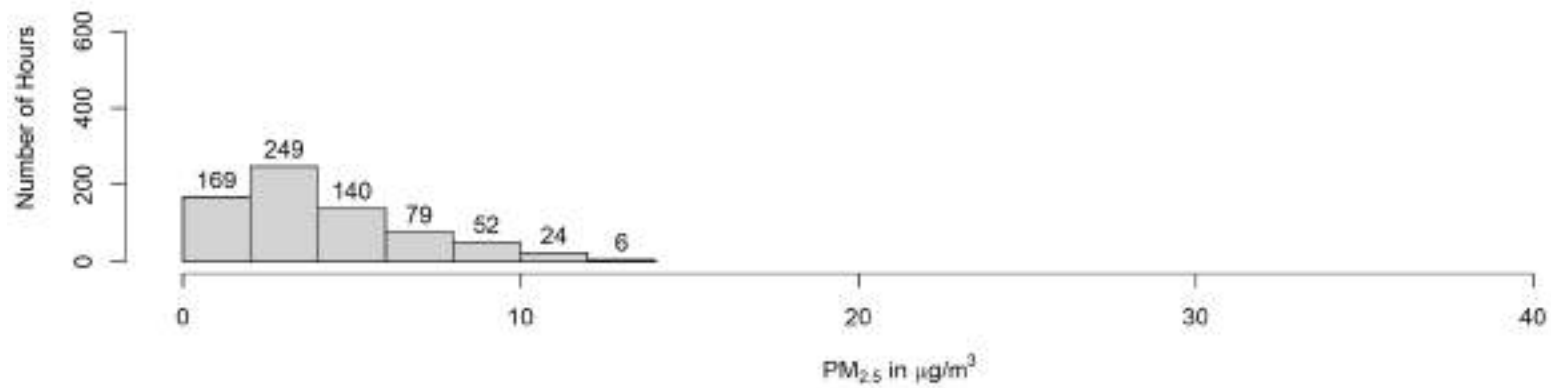
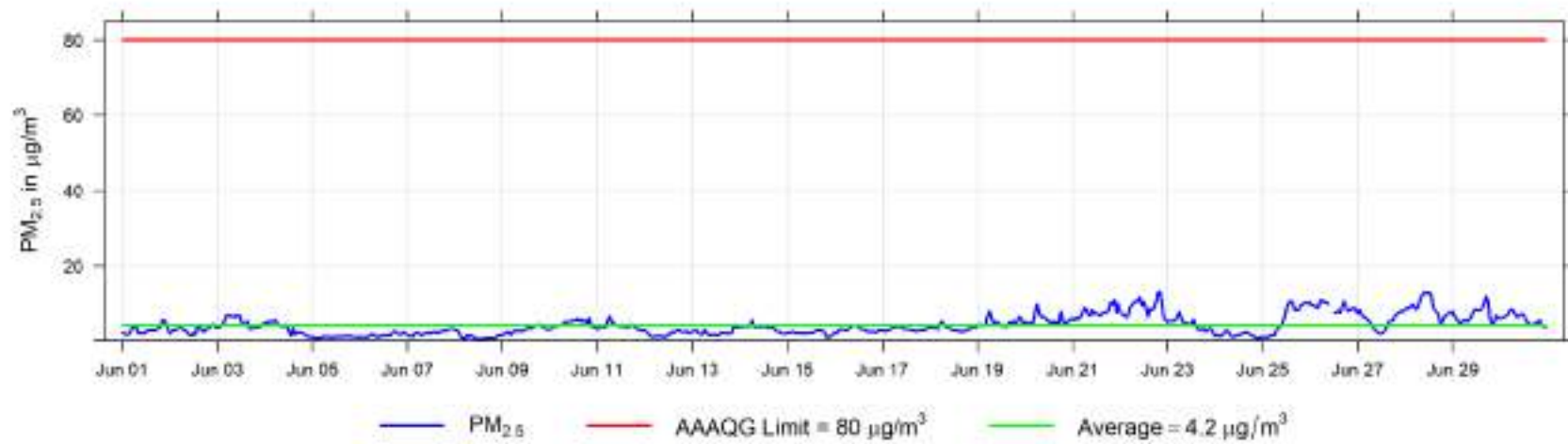
June 2024 Hourly Concentration Readings of NO₂ (in ppb) at Fox Creek



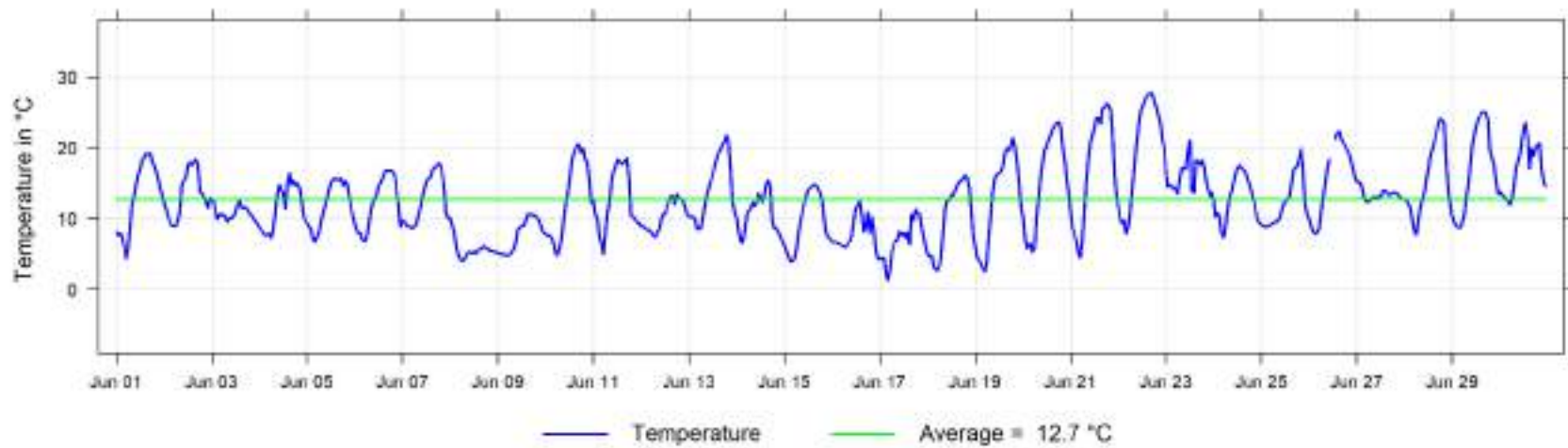
June 2024 Hourly Concentration Readings of O₃ (in ppb) at Fox Creek



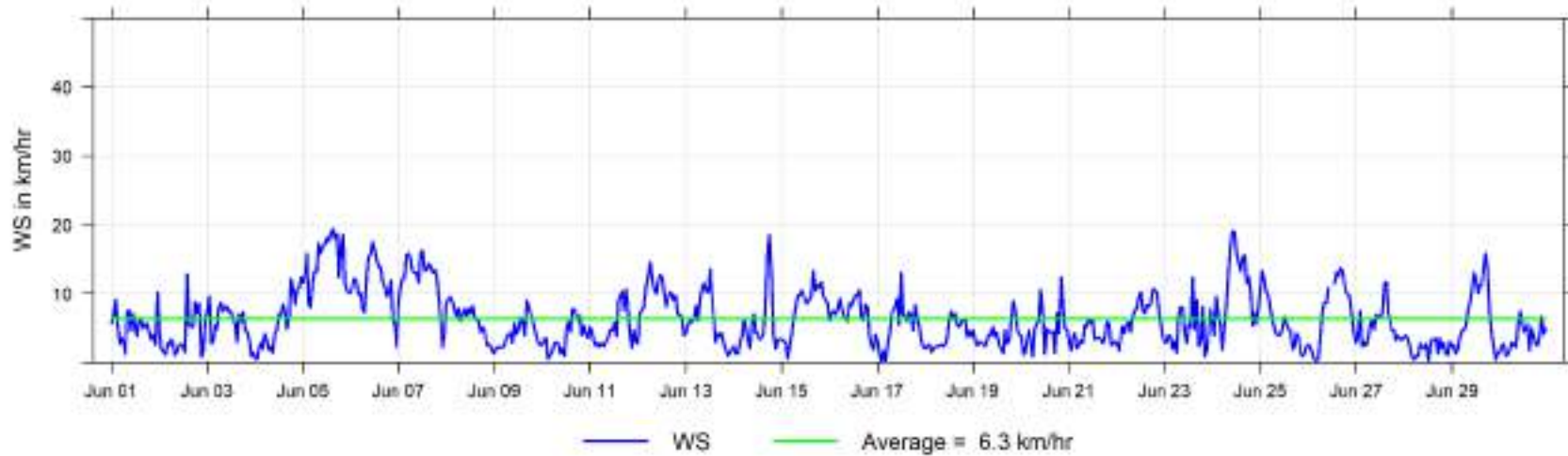
June 2024 Hourly Concentration Readings of PM_{2.5} in $\mu\text{g}/\text{m}^3$ at Fox Creek



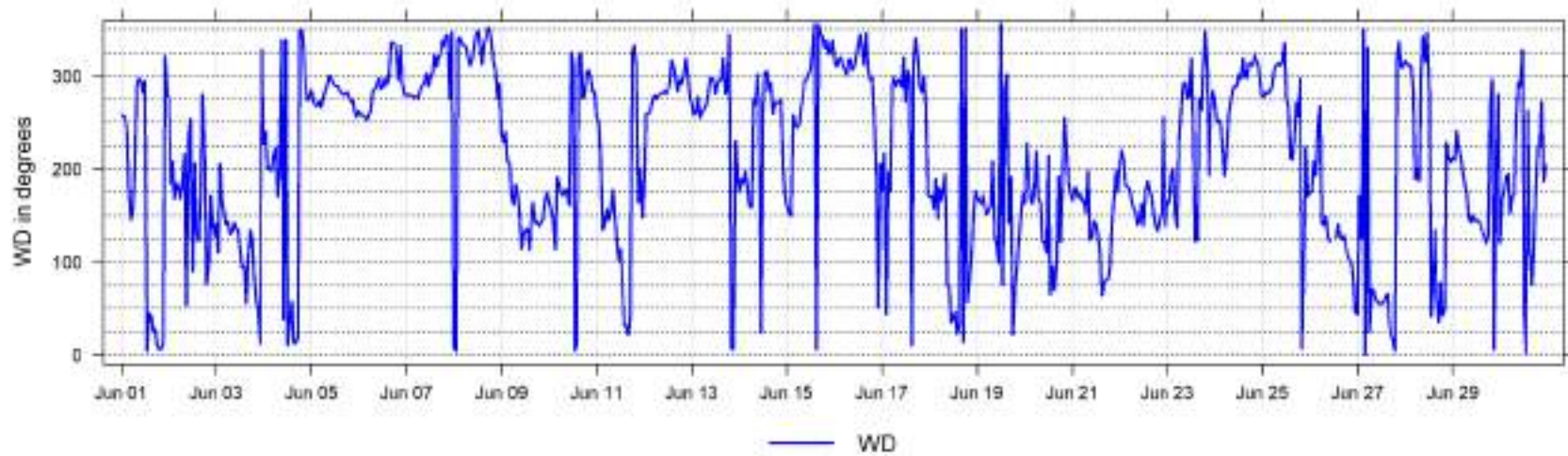
June 2024 Hourly Temperature Readings (in °C) at Fox Creek



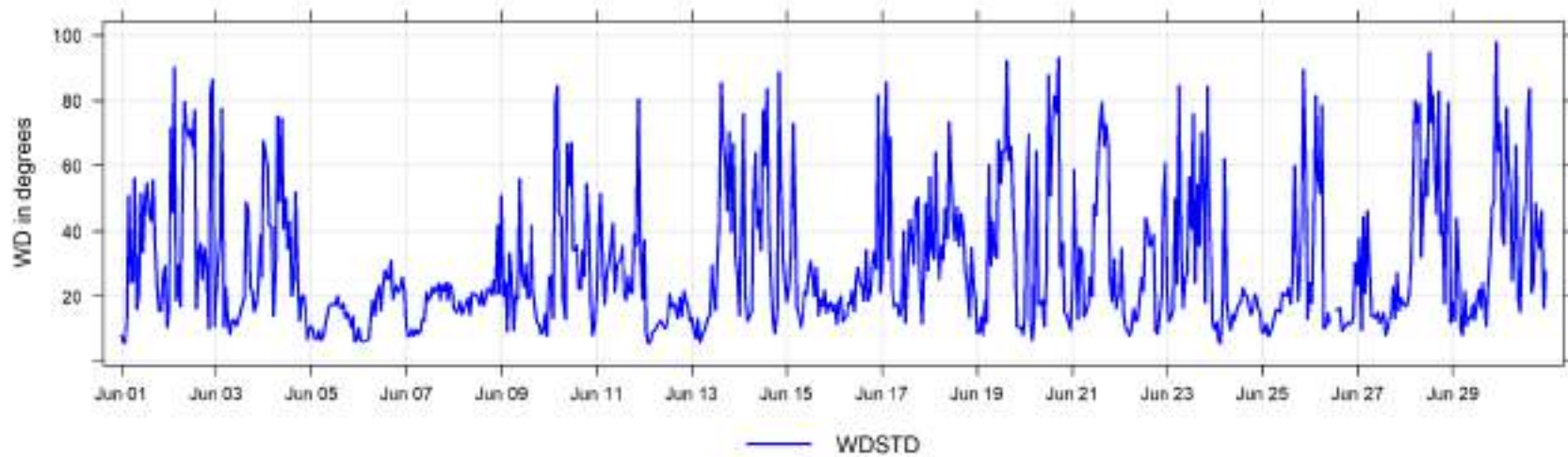
June 2024 Hourly Readings of Wind Speed (in km/hr) at Fox Creek

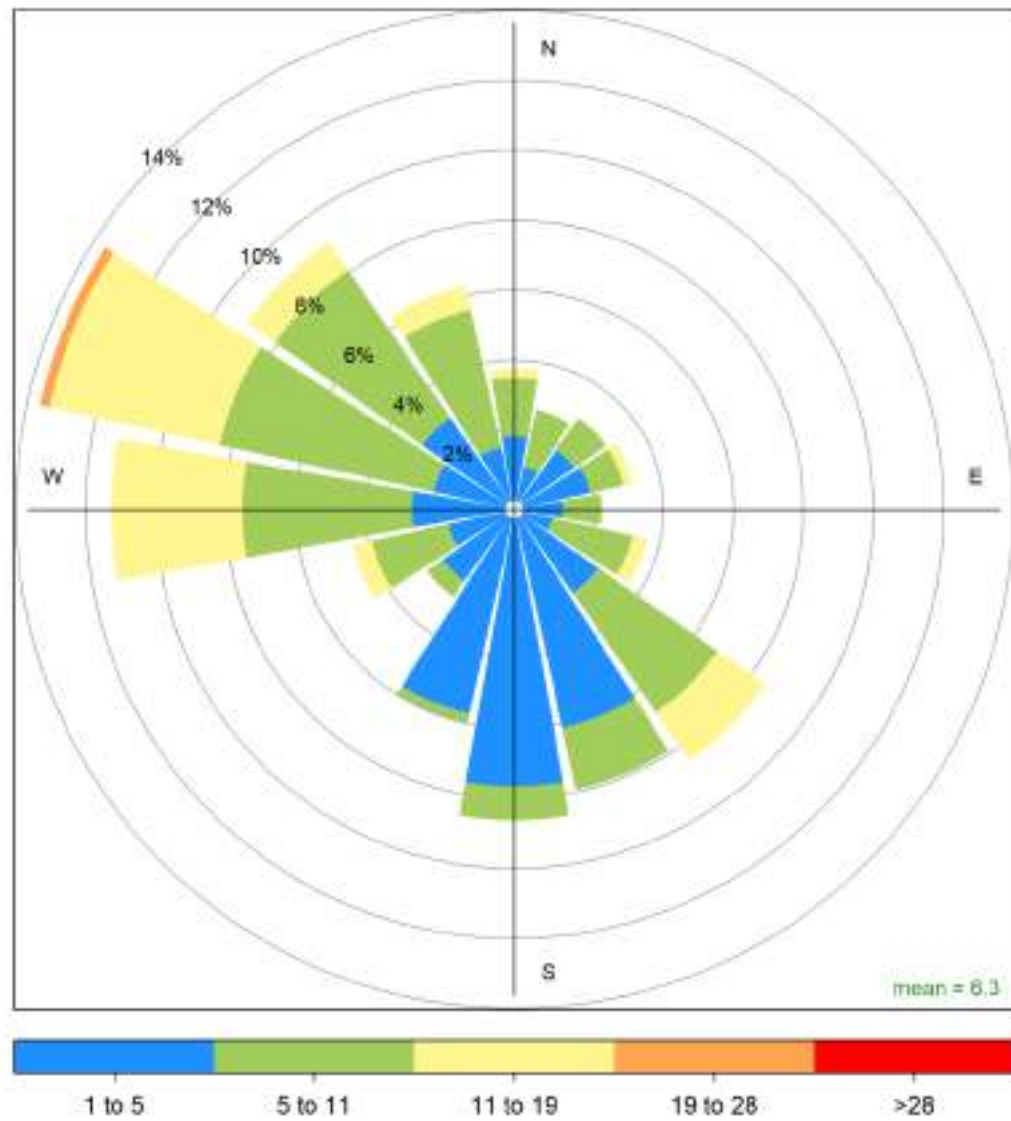


June 2024 Hourly Readings of Wind Direction (in degrees) at Fox Creek



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



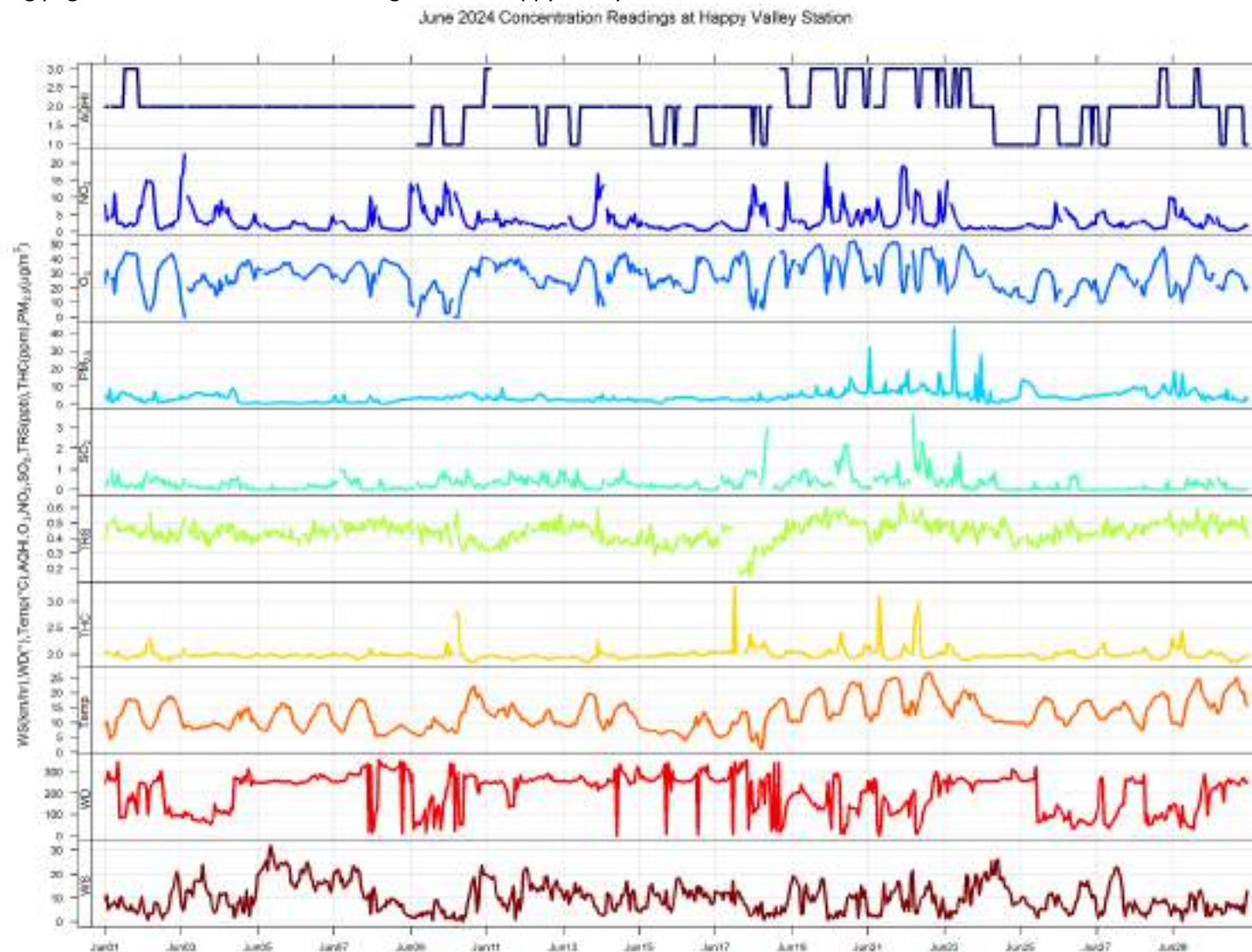


Fox Creek June 2024 Wind Rose, wind speed in km/hr

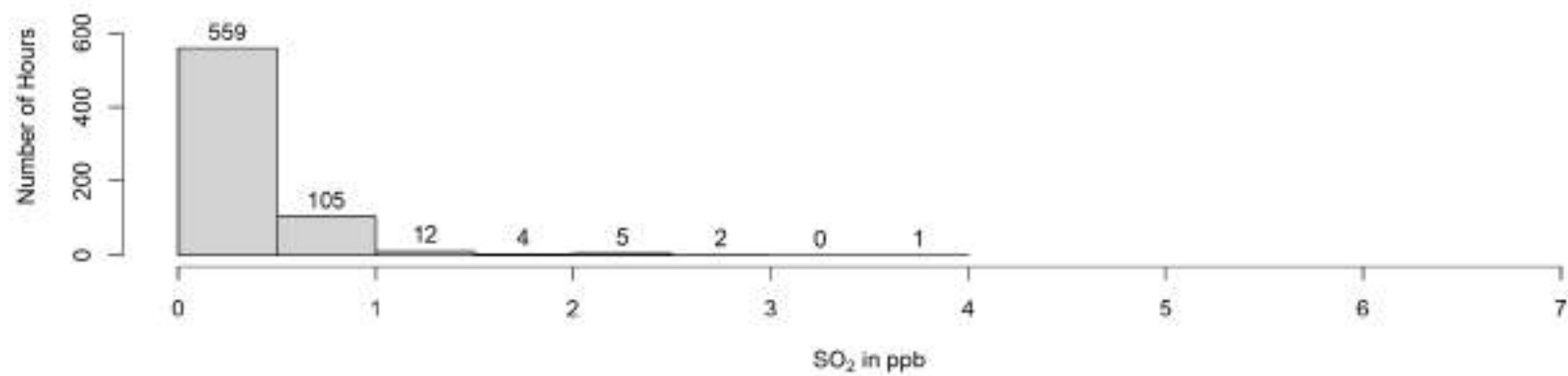
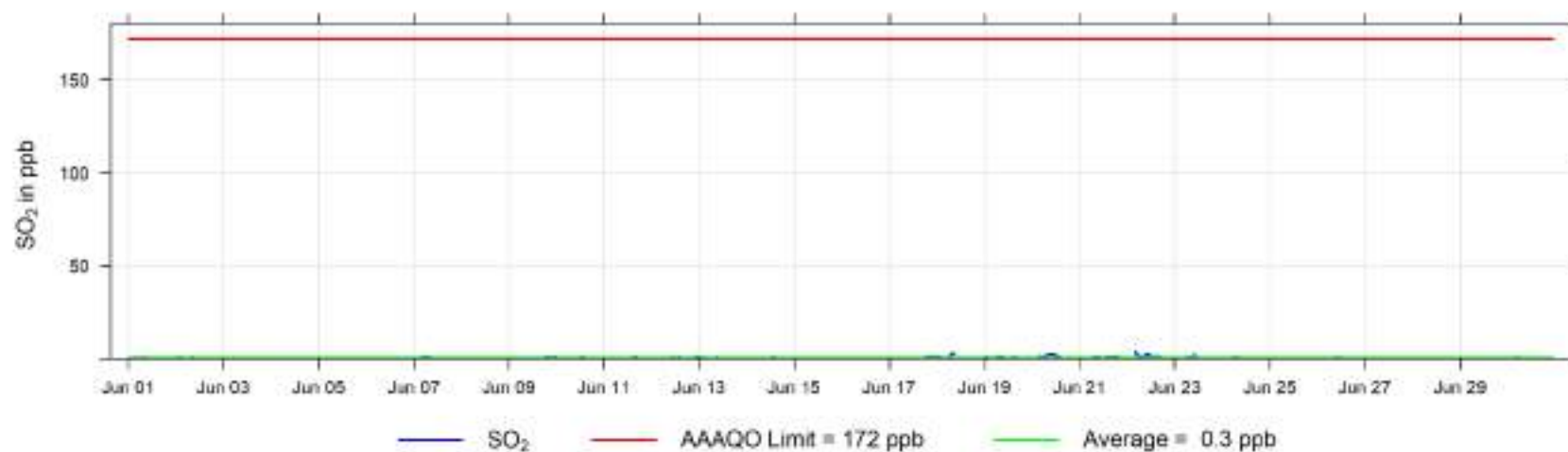
Calms (<1km/hr) = 3.2 %

8 Happy Valley (Portable) Charts

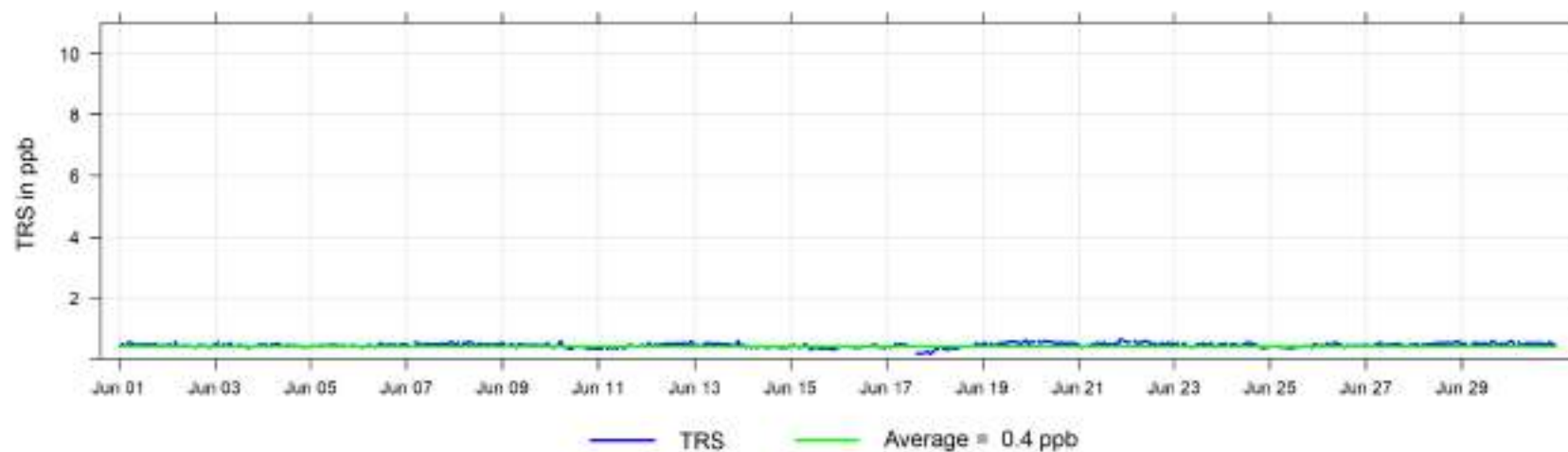
The following pages include the charts and histograms for Happy Valley Portable Station



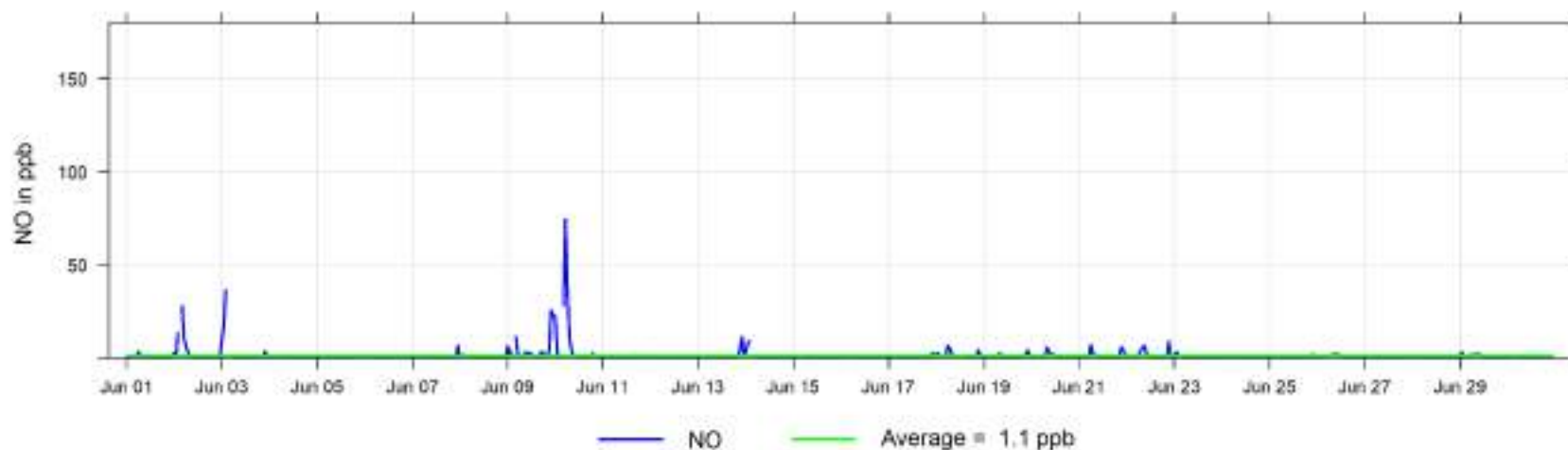
June 2024 Hourly Concentration Readings of SO₂ (in ppb) at Happy Valley



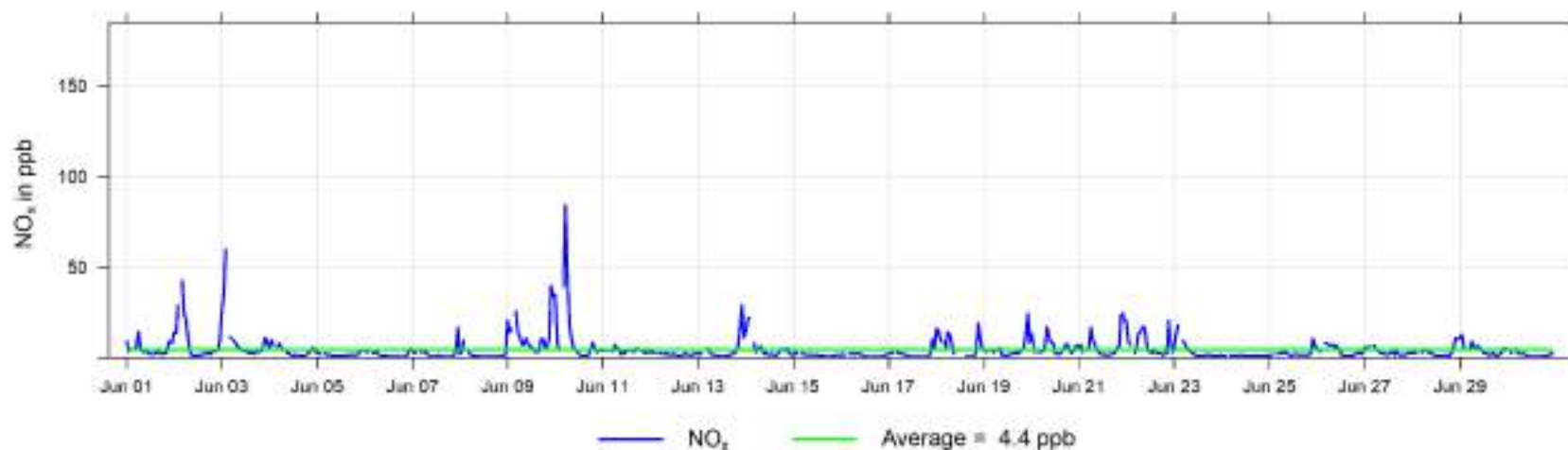
June 2024 Hourly Concentration Readings of TRS (in ppb) at Happy Valley



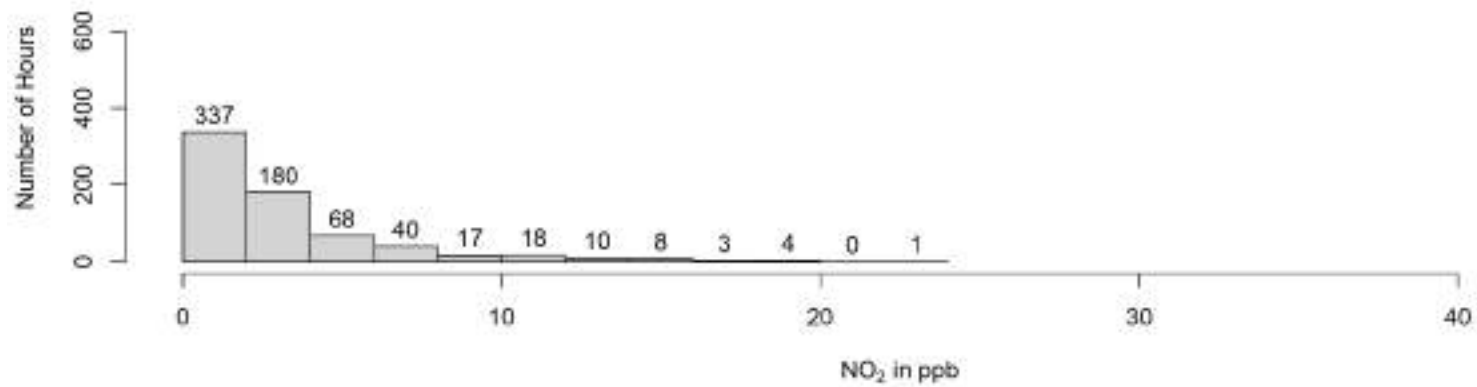
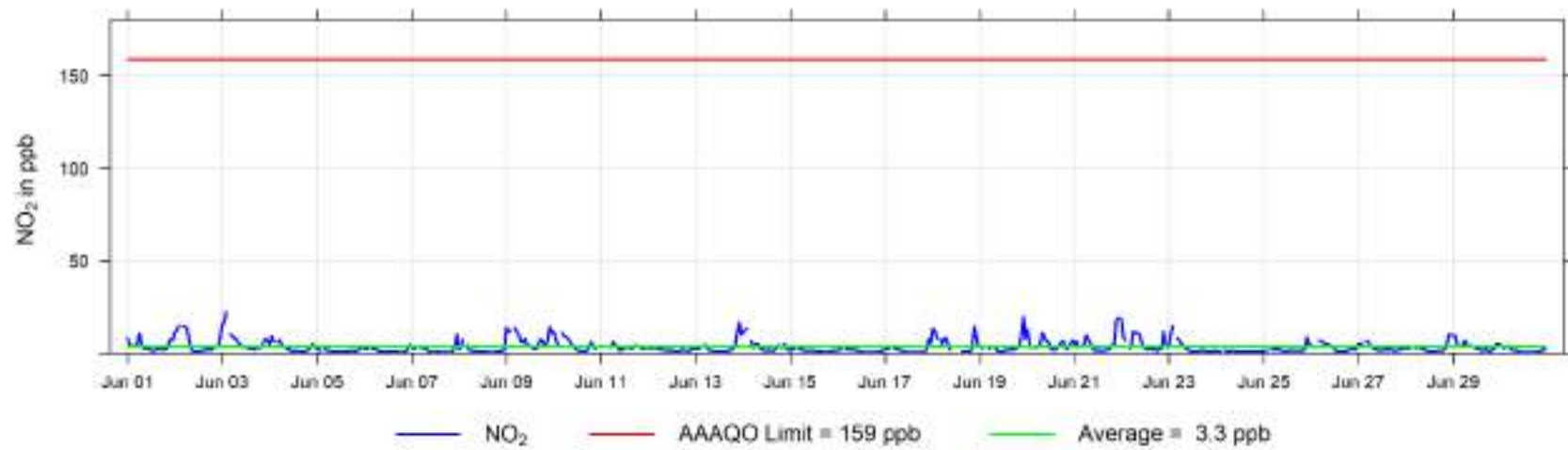
June 2024 Hourly Concentration Readings of NO (in ppb) at Happy Valley



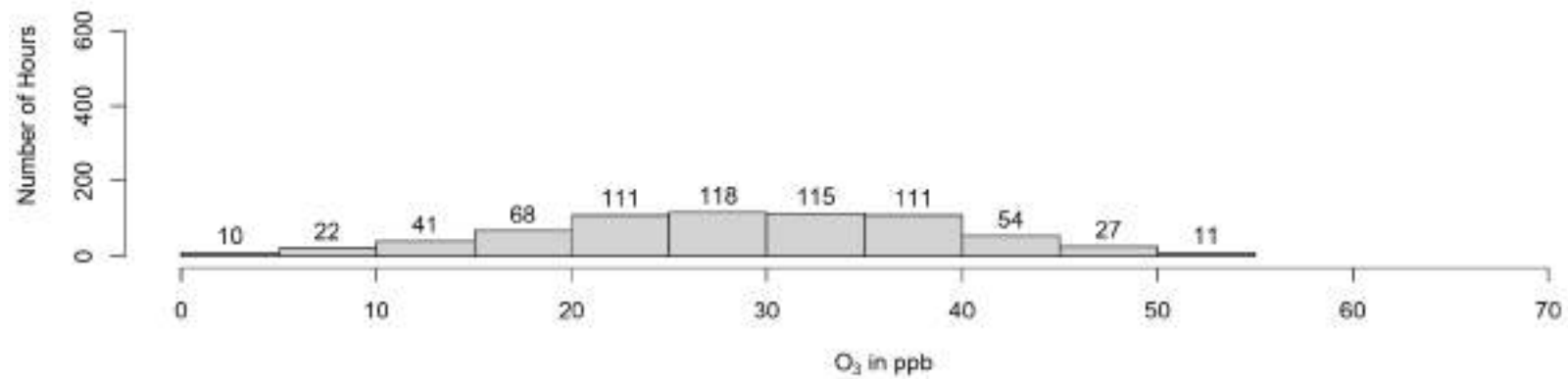
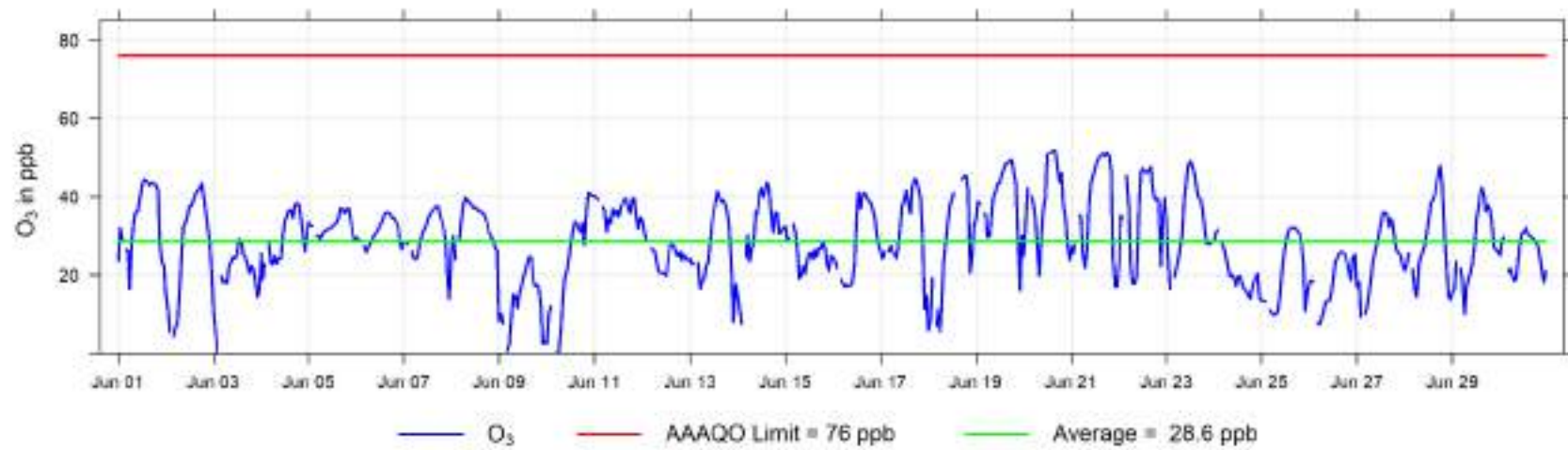
June 2024 Hourly Concentration Readings of NO_x (in ppb) at Happy Valley



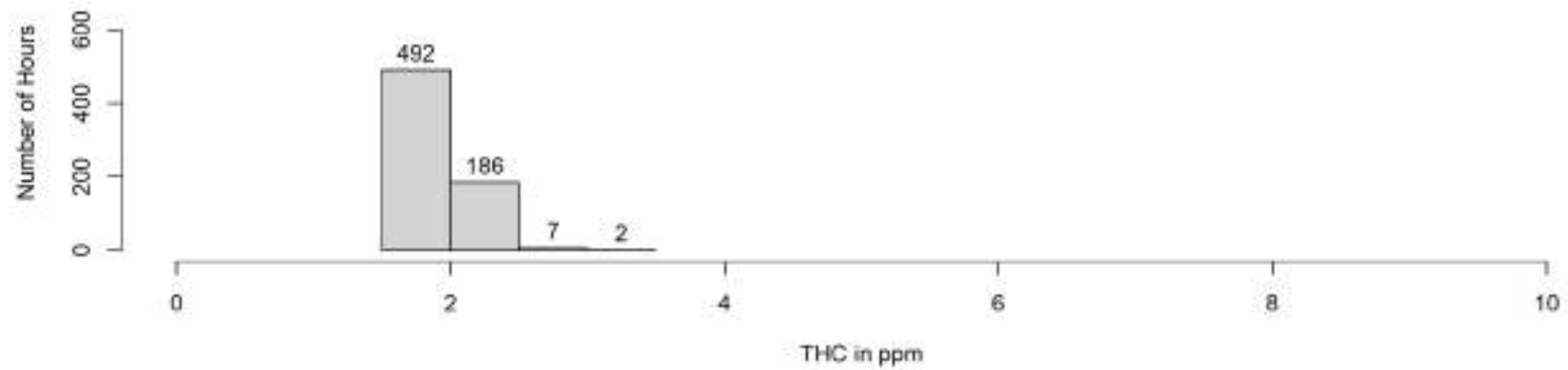
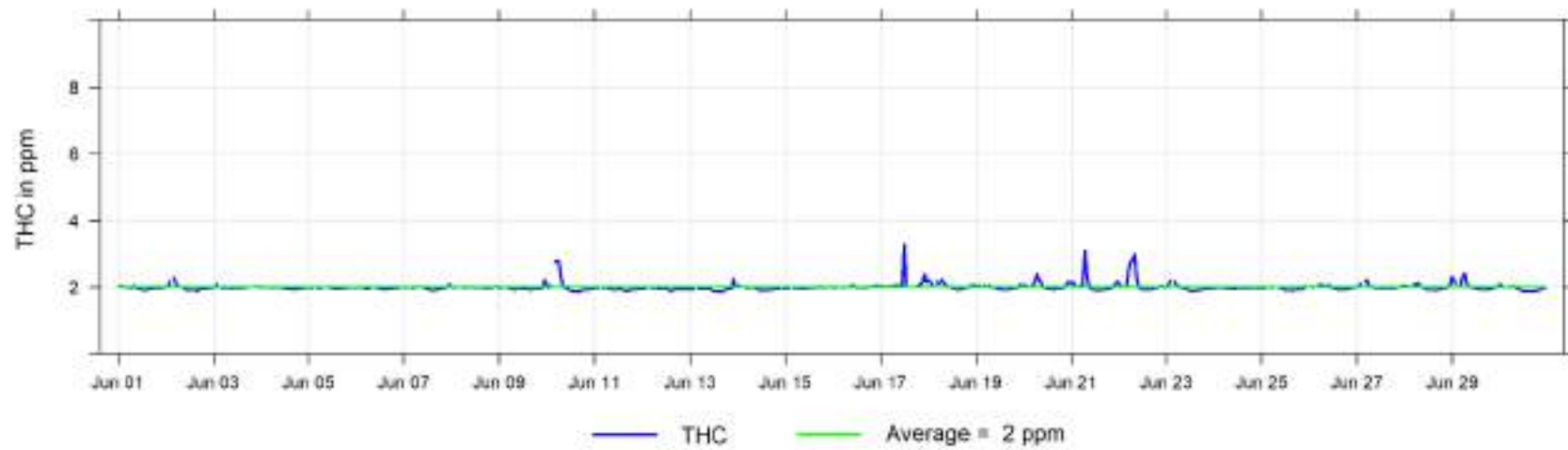
June 2024 Hourly Concentration Readings of NO₂ (in ppb) at Happy Valley



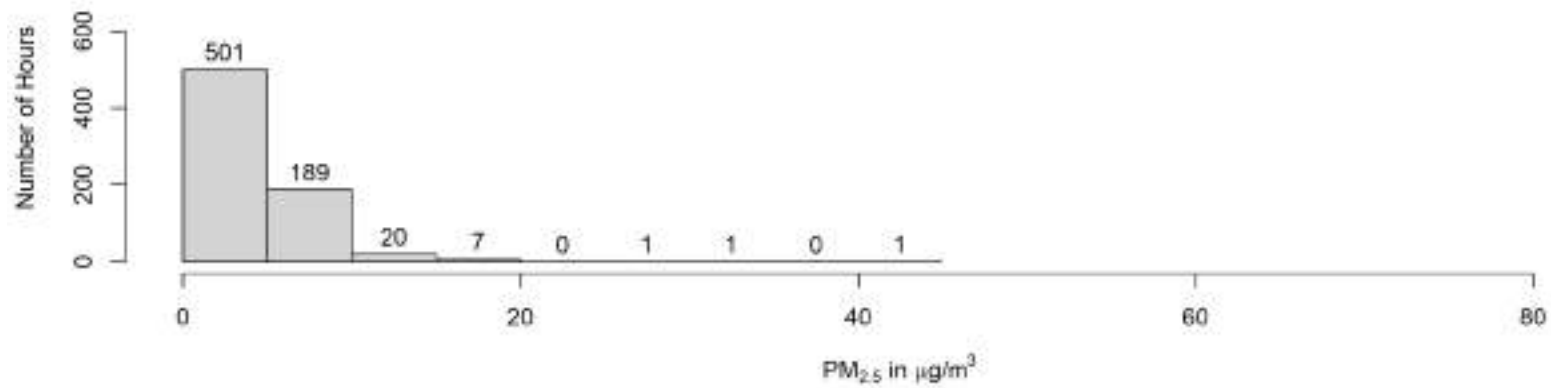
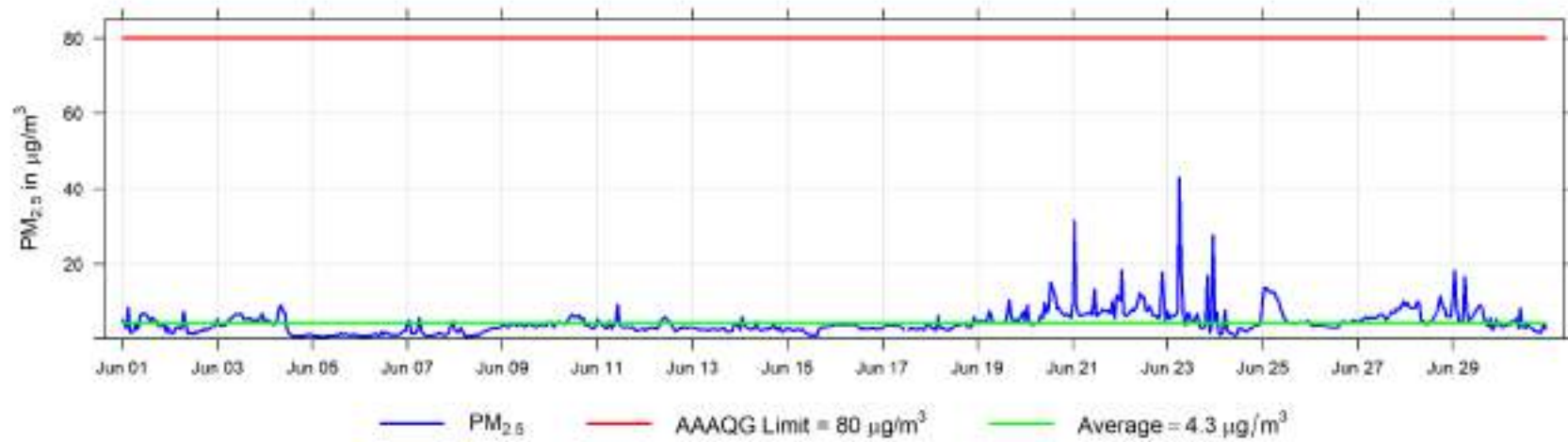
June 2024 Hourly Concentration Readings of O₃ (in ppb) at Happy Valley



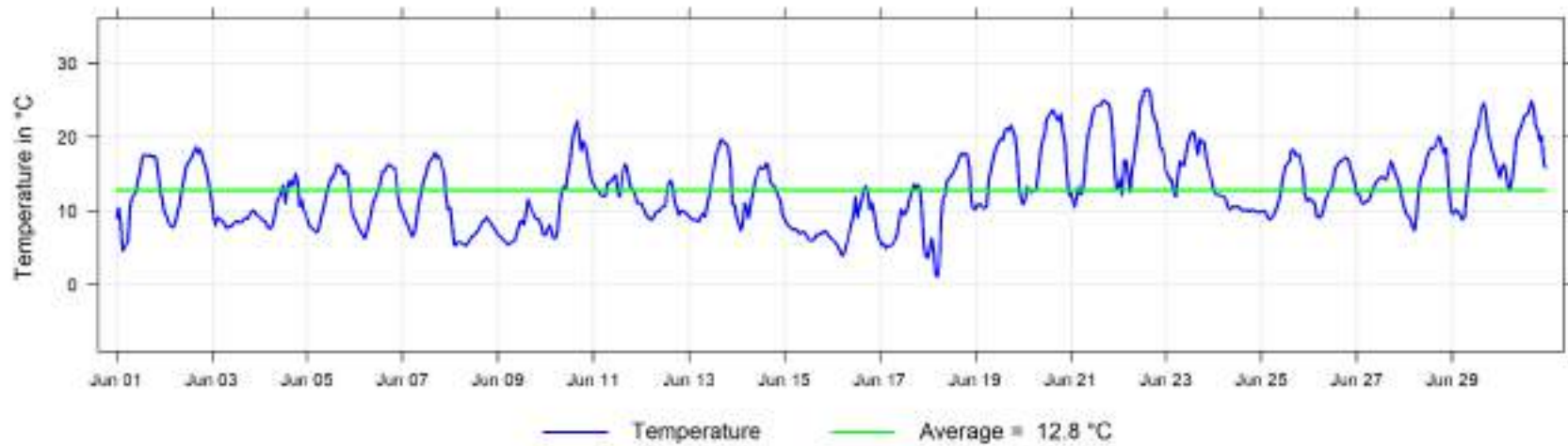
June 2024 Hourly Concentration Readings of THC (in ppm) at Happy Valley



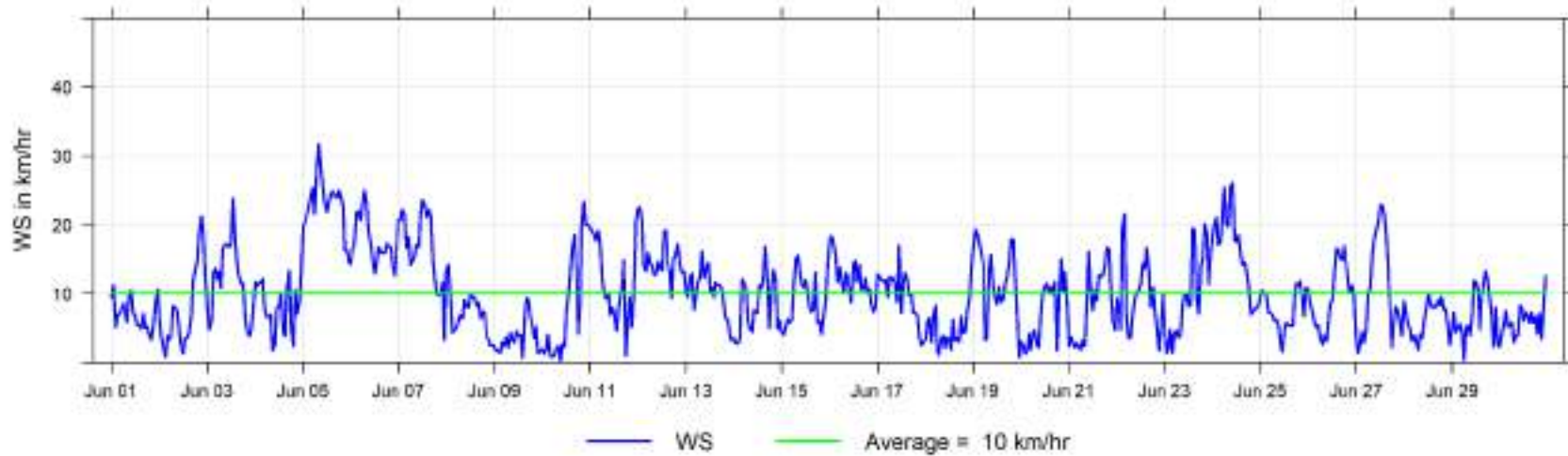
June 2024 Hourly Concentration Readings of PM_{2.5} in $\mu\text{g}/\text{m}^3$ at Happy Valley



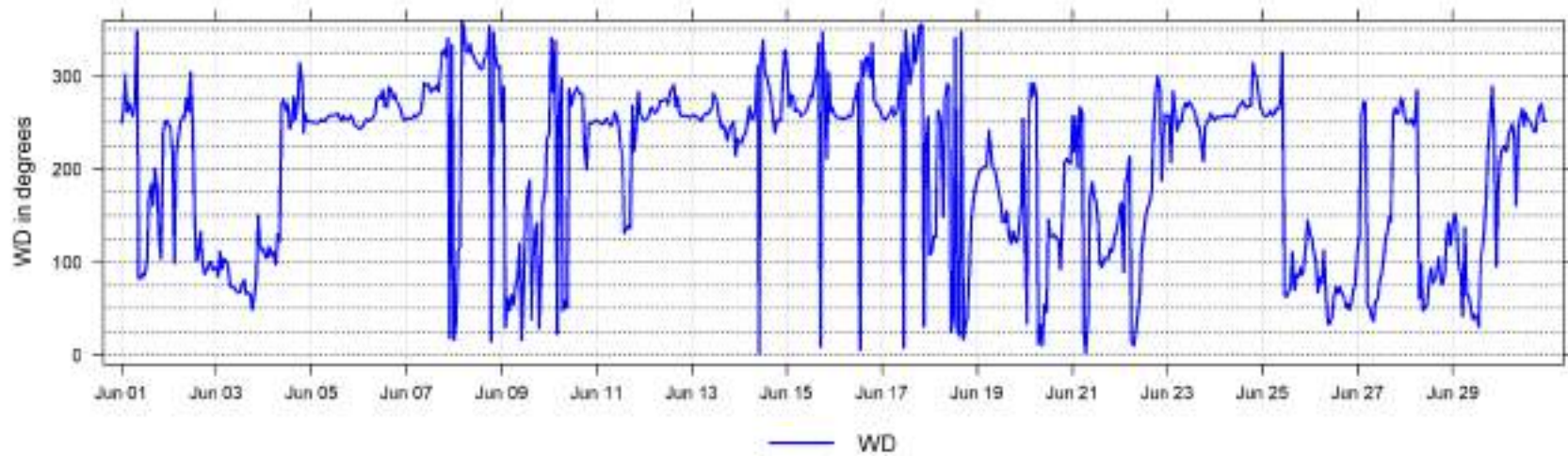
June 2024 Hourly Temperature Readings (in °C) at Happy Valley



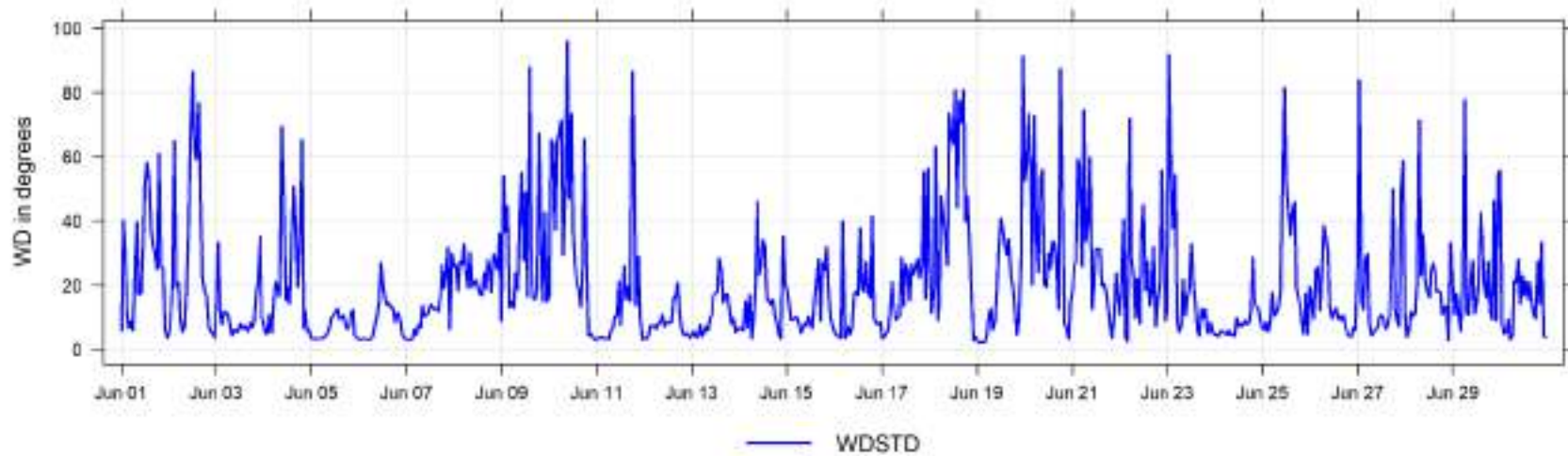
June 2024 Hourly Readings of Wind Speed (in km/hr) at Happy Valley

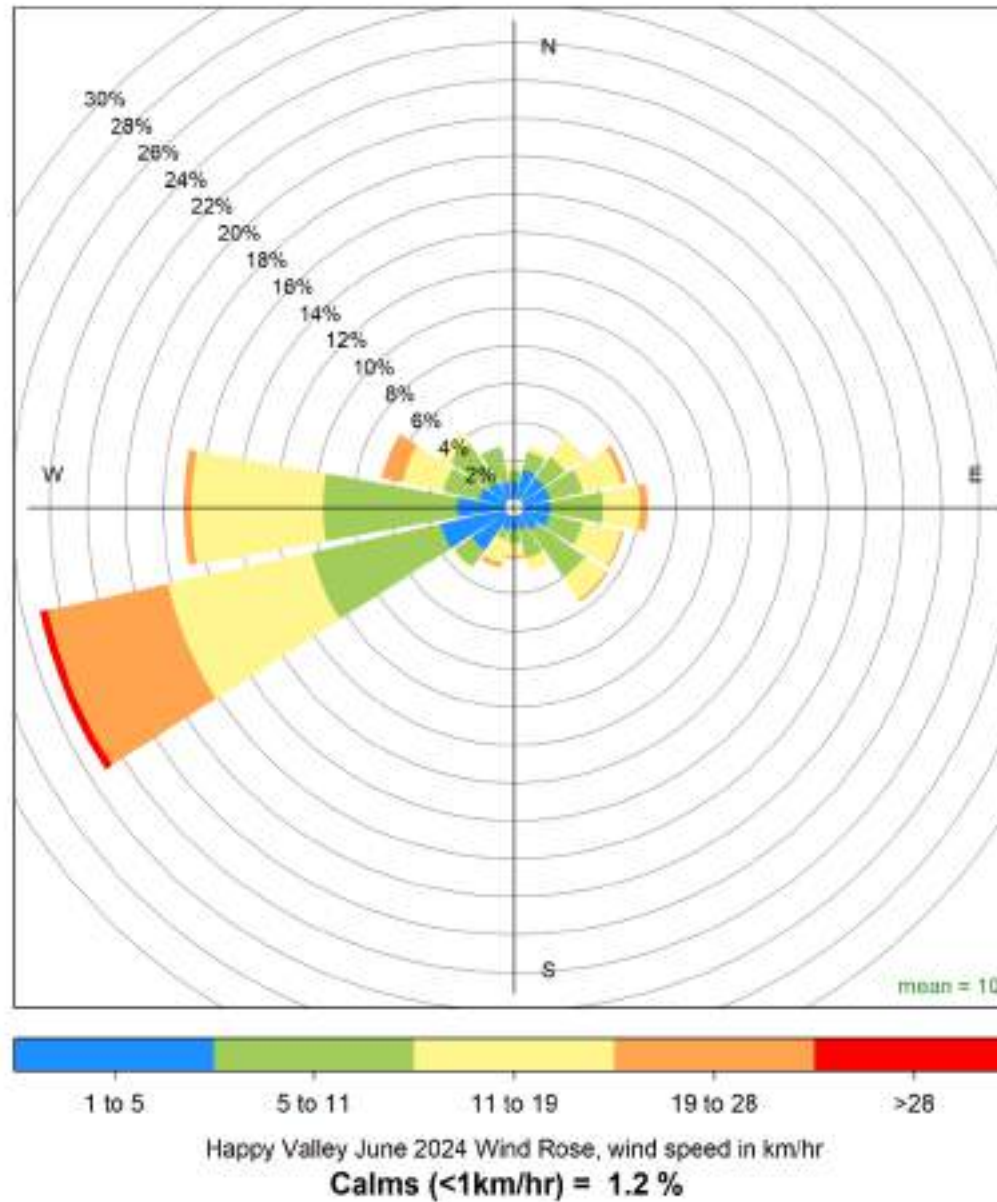


June 2024 Hourly Readings of Wind Direction (in degrees) at Happy Valley



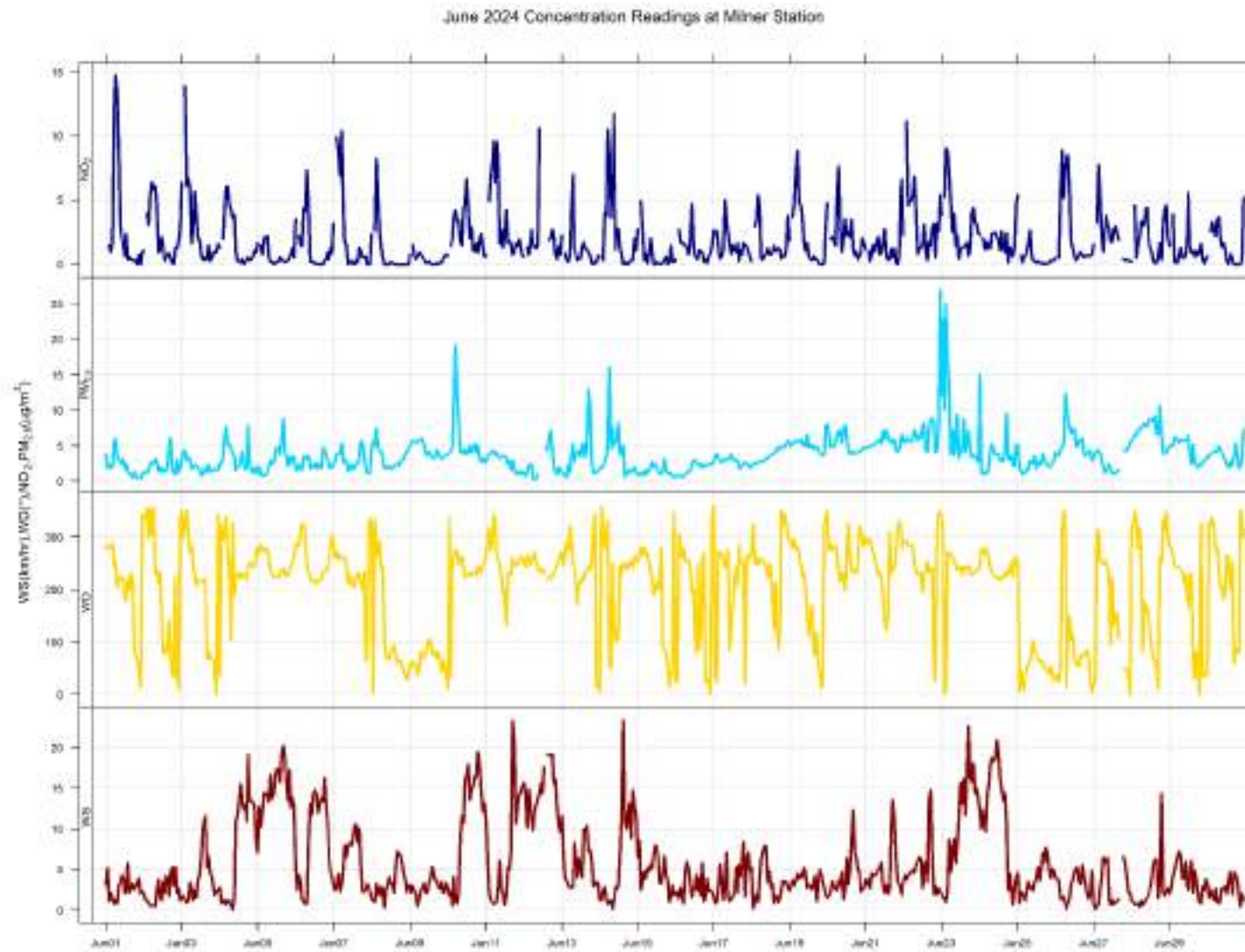
June 2024 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Happy Valley



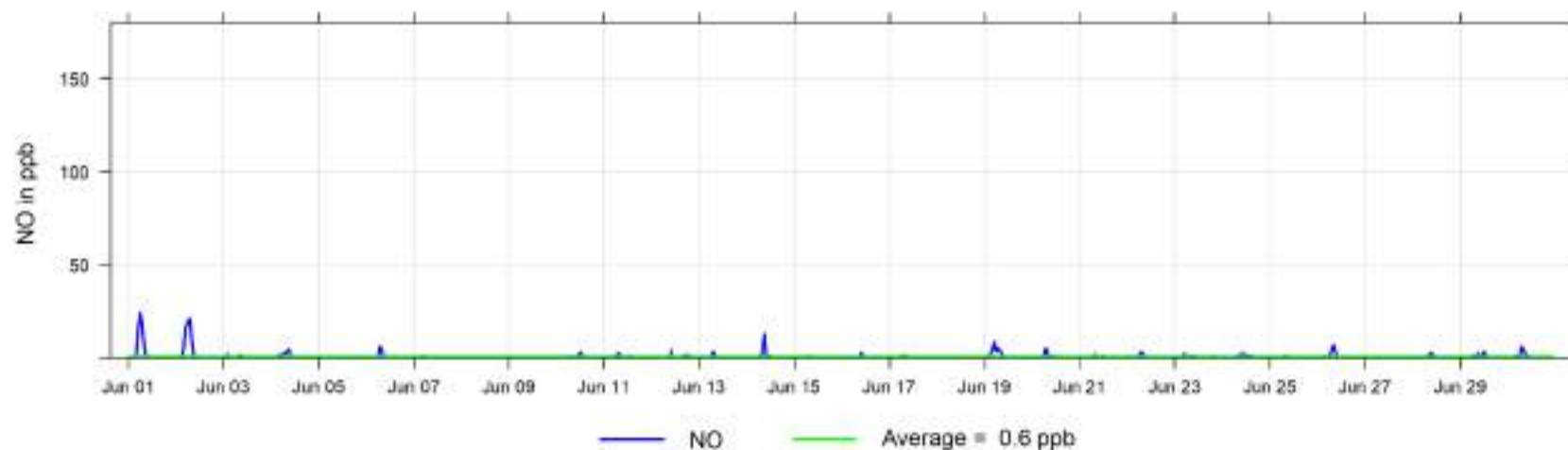


9 Milner Charts

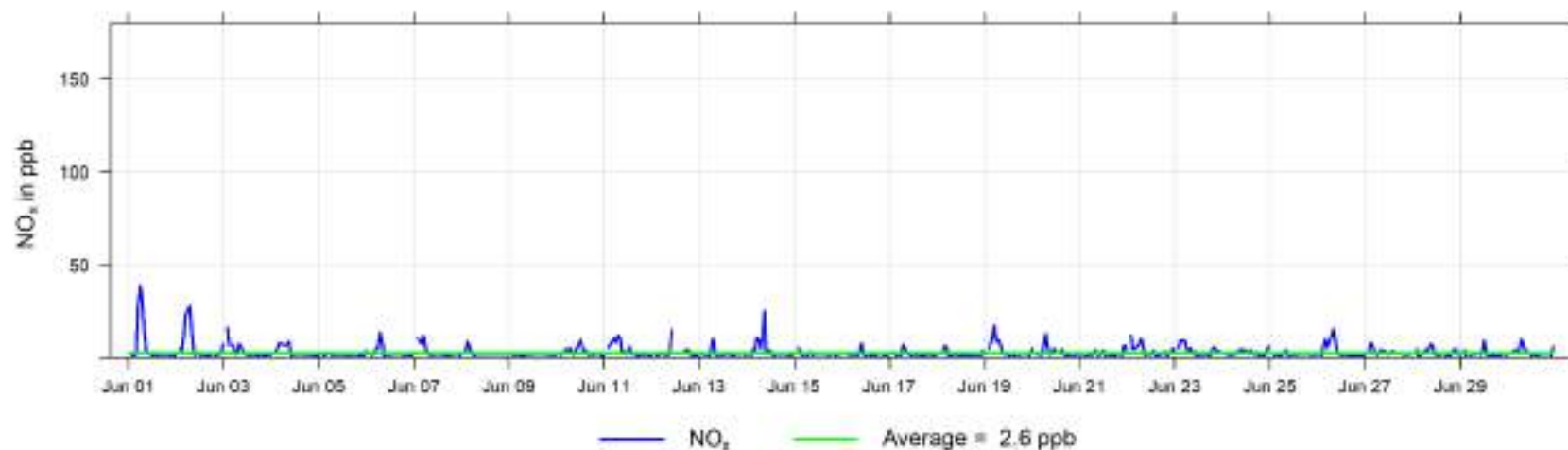
The following pages include the charts and histograms for Milner Station



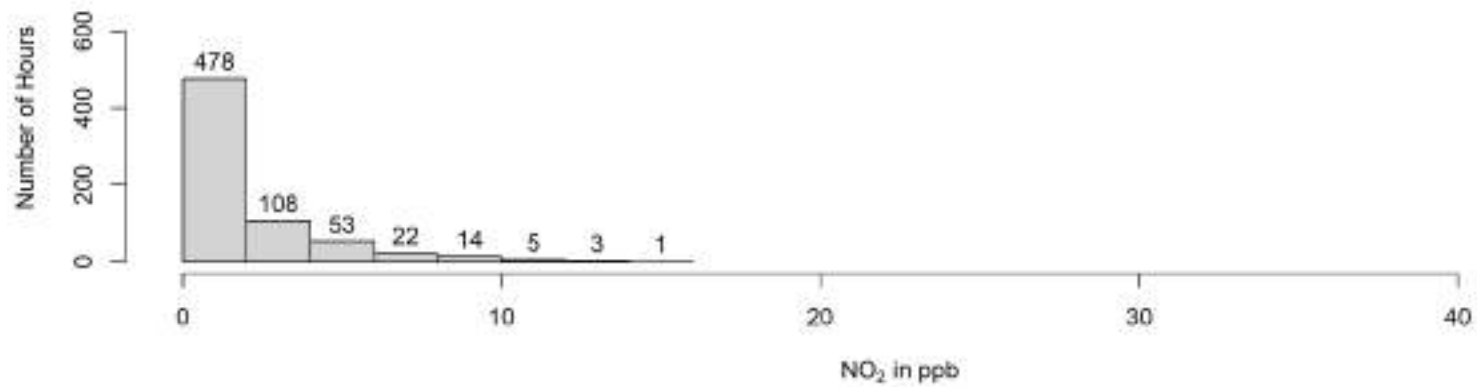
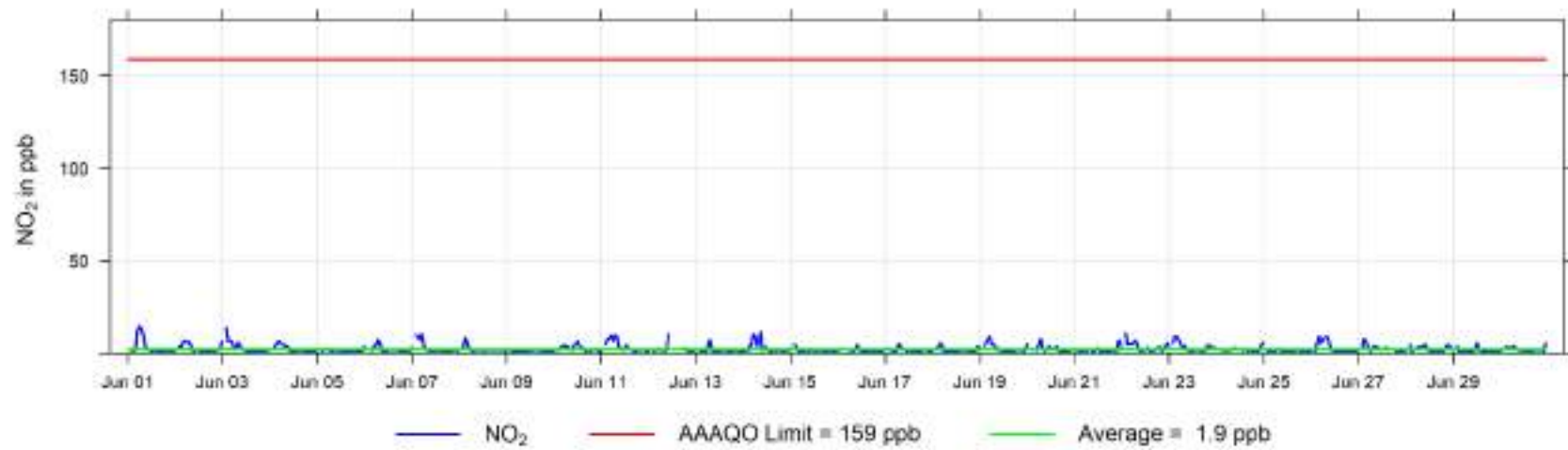
June 2024 Hourly Concentration Readings of NO (in ppb) at Milner



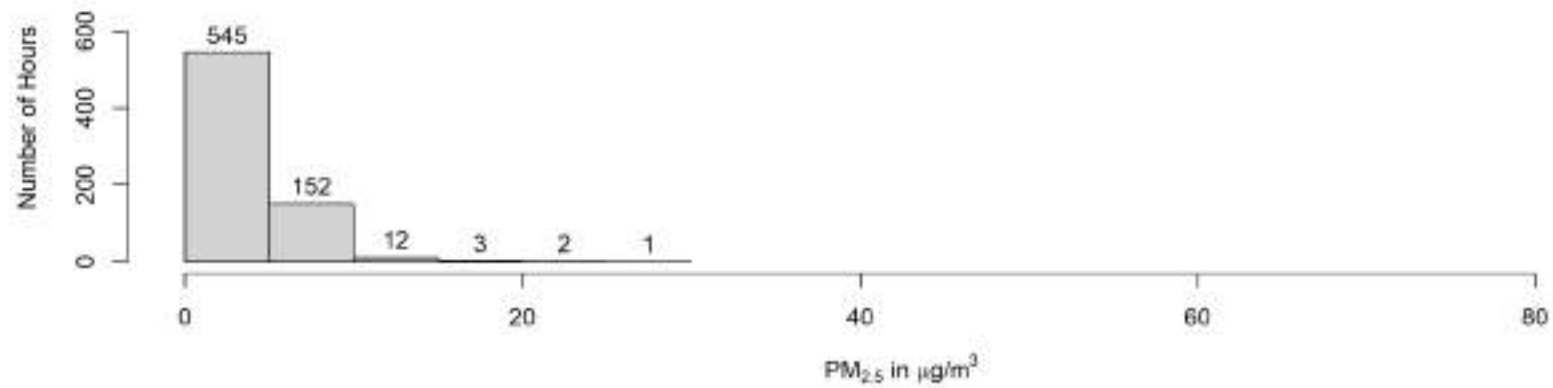
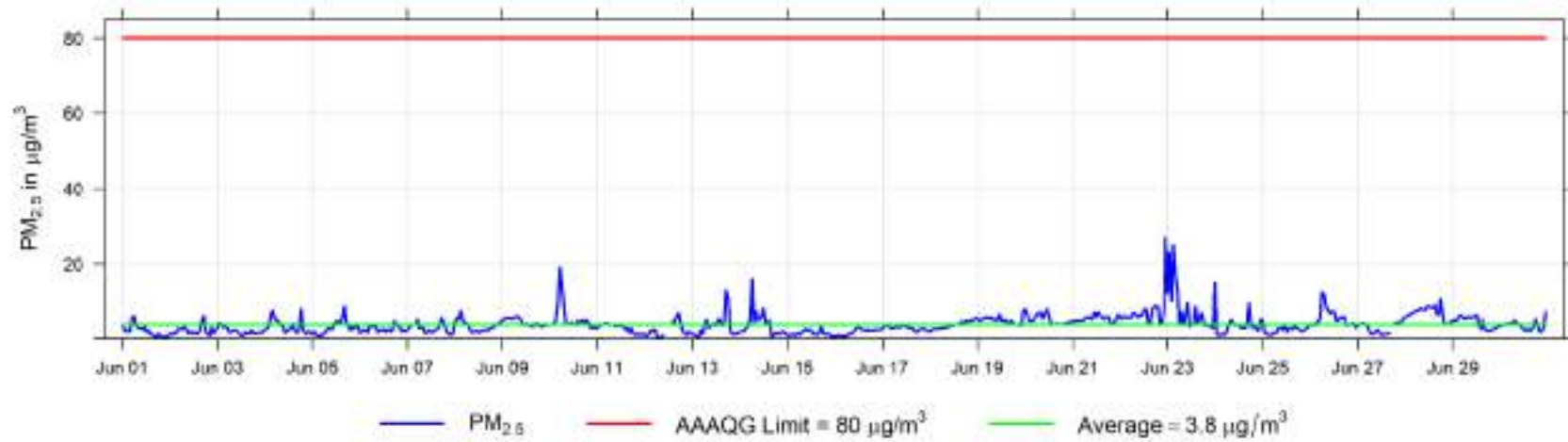
June 2024 Hourly Concentration Readings of NO_x (in ppb) at Milner



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



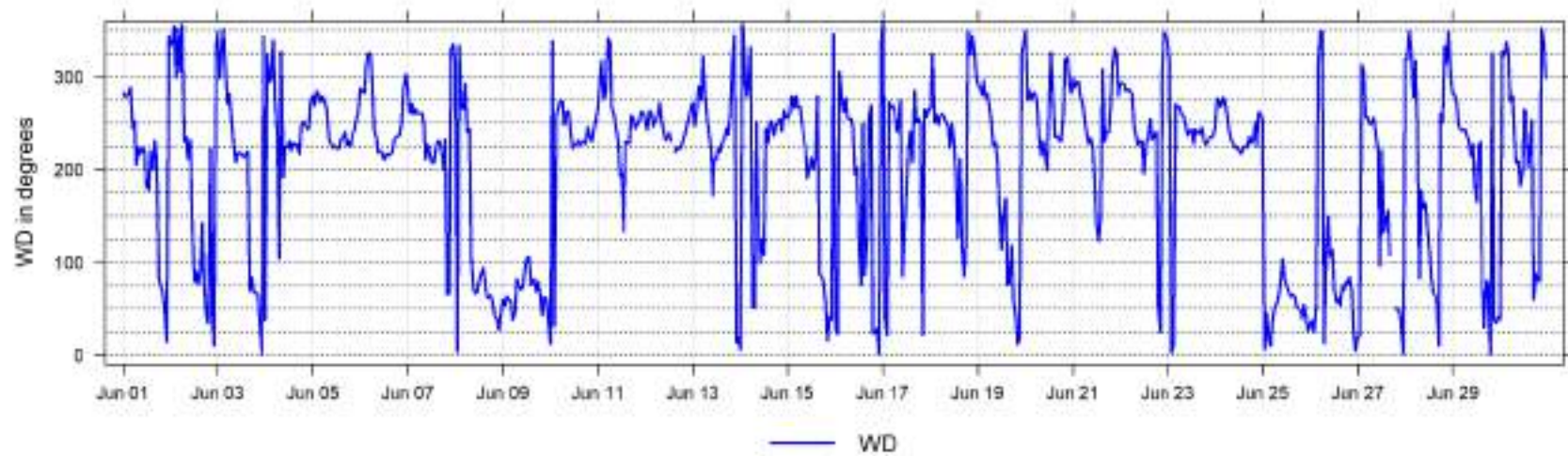
June 2024 Hourly Concentration Readings of PM_{2.5} in $\mu\text{g}/\text{m}^3$ at Milner



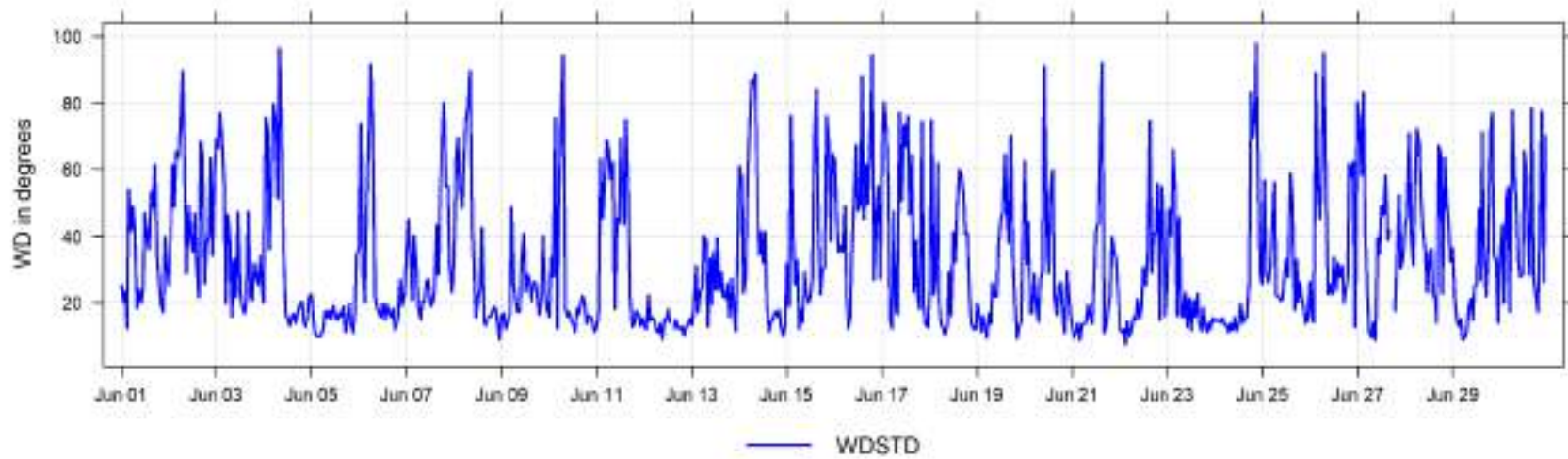
June 2024 Hourly Readings of Wind Speed (in km/hr) at Milner

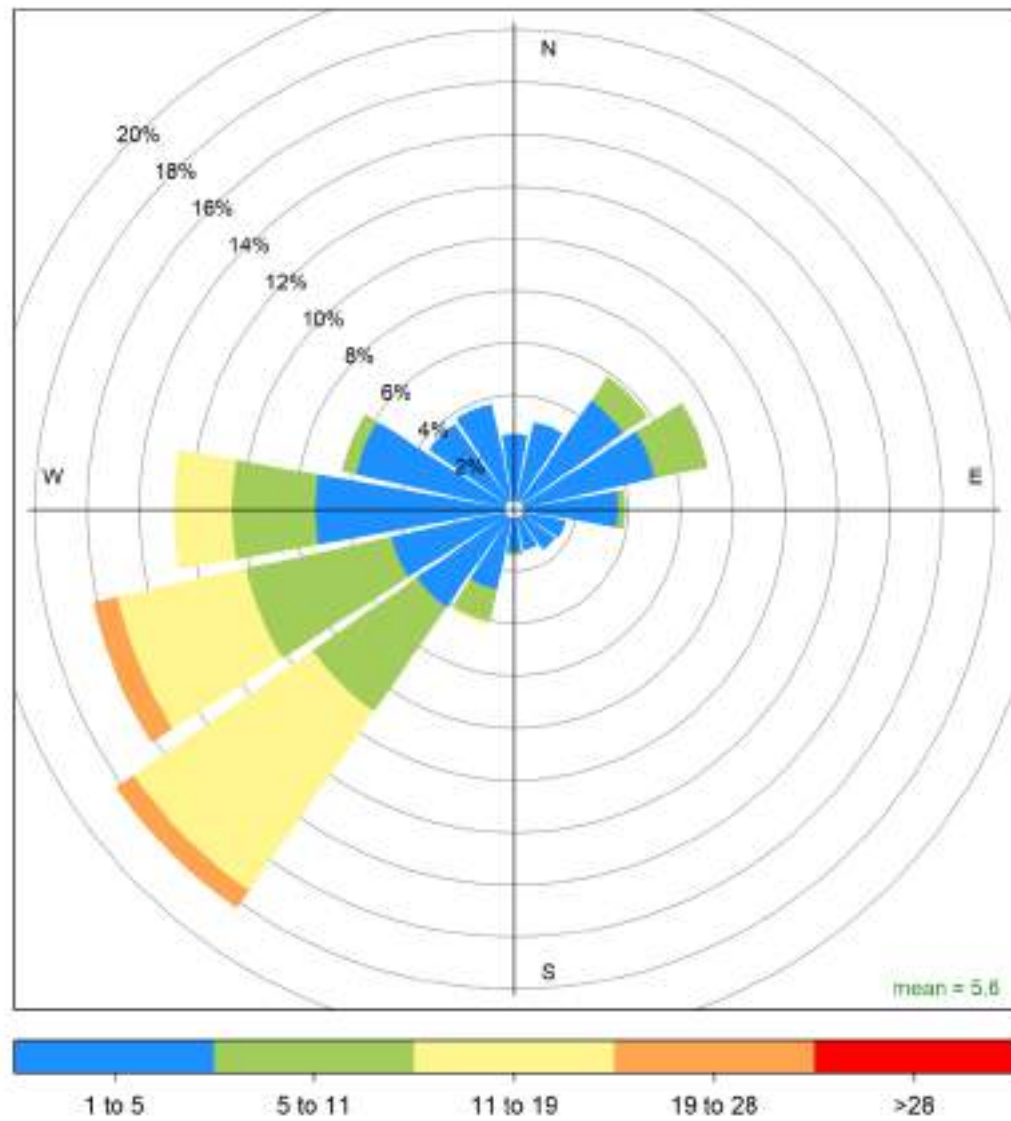


June 2024 Hourly Readings of Wind Direction (in degrees) at Milner



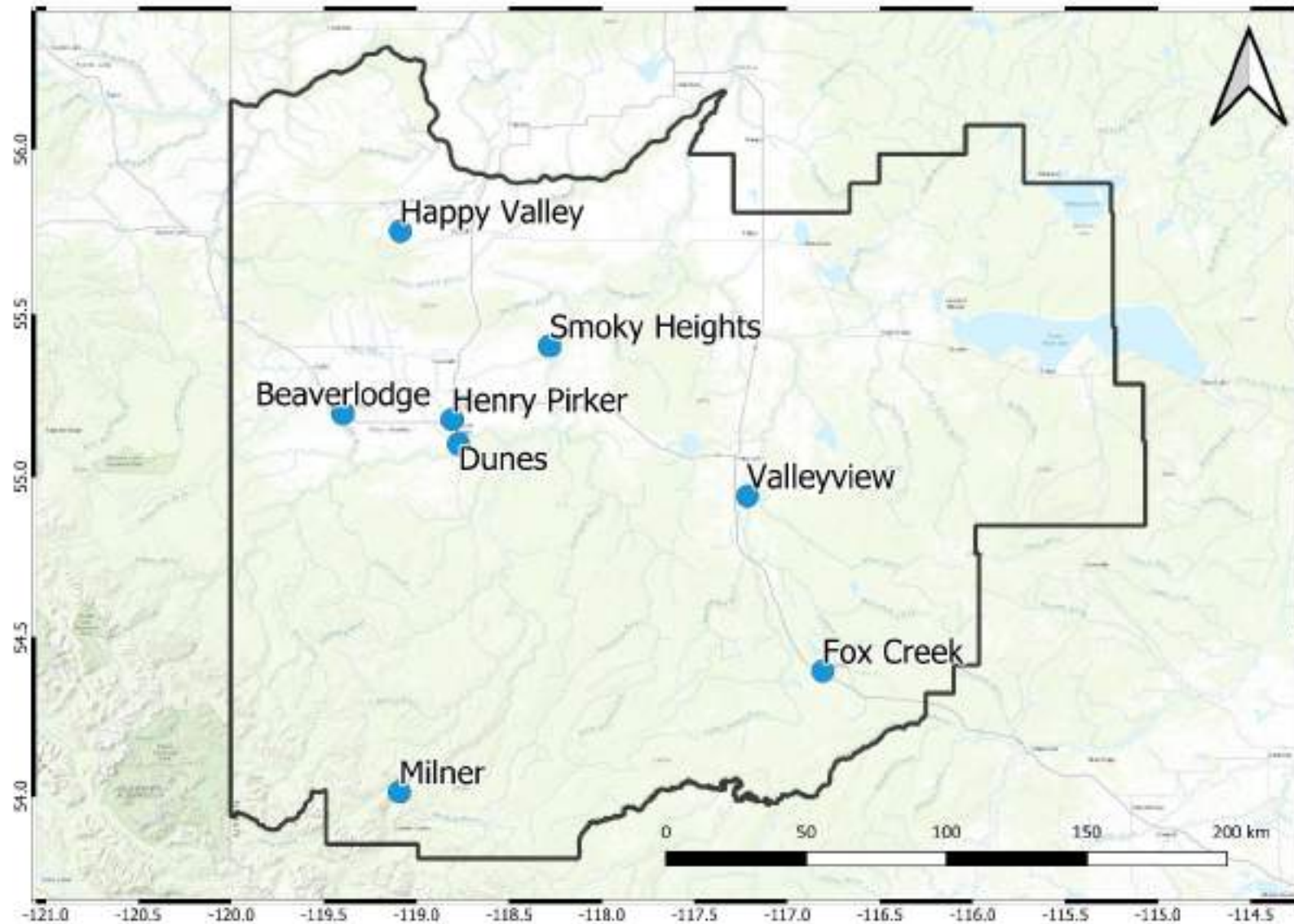
June 2024 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Milner



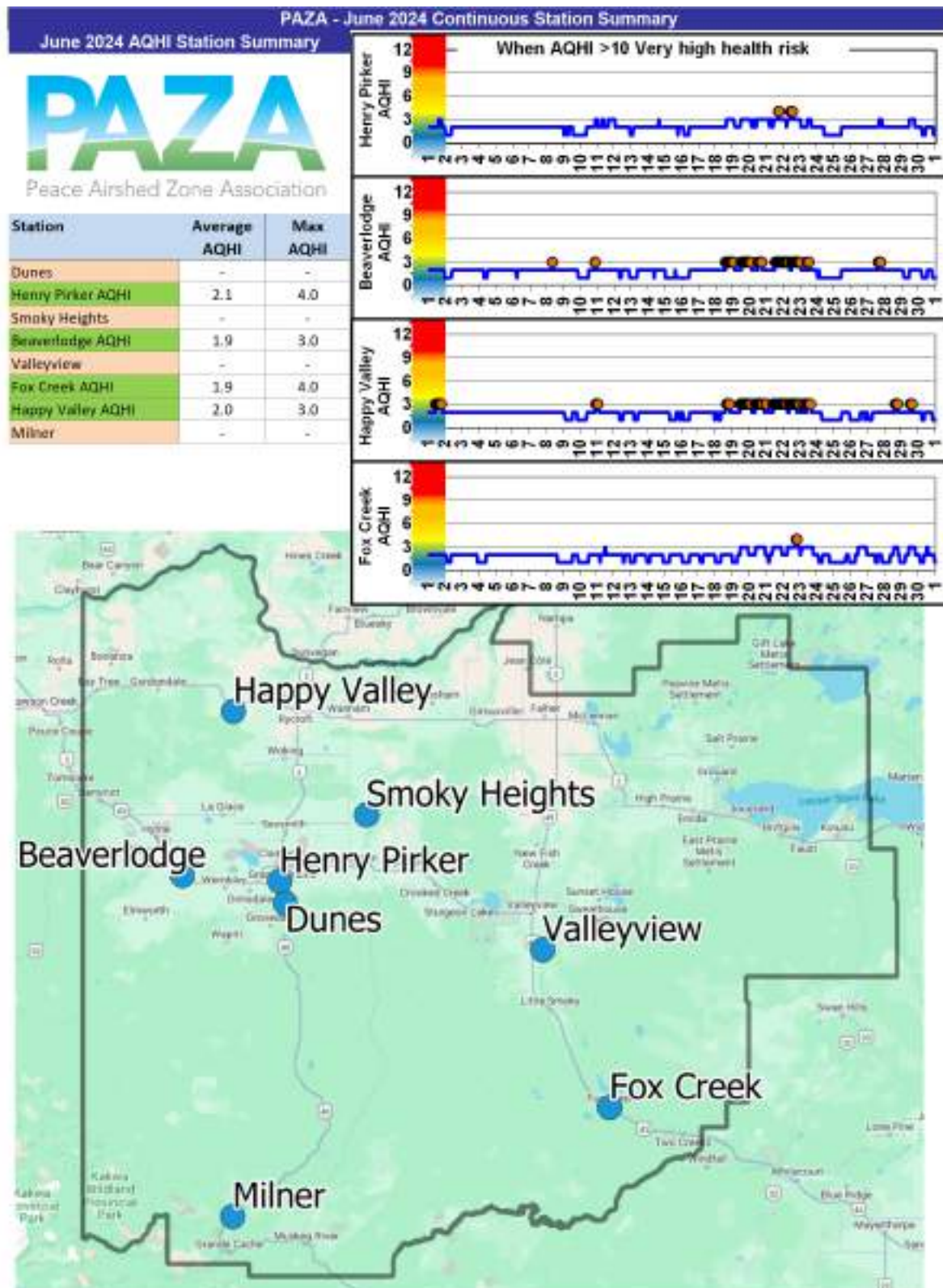


Milner June 2024 Wind Rose, wind speed in km/hr
Calms (<1km/hr) = 6.5 %

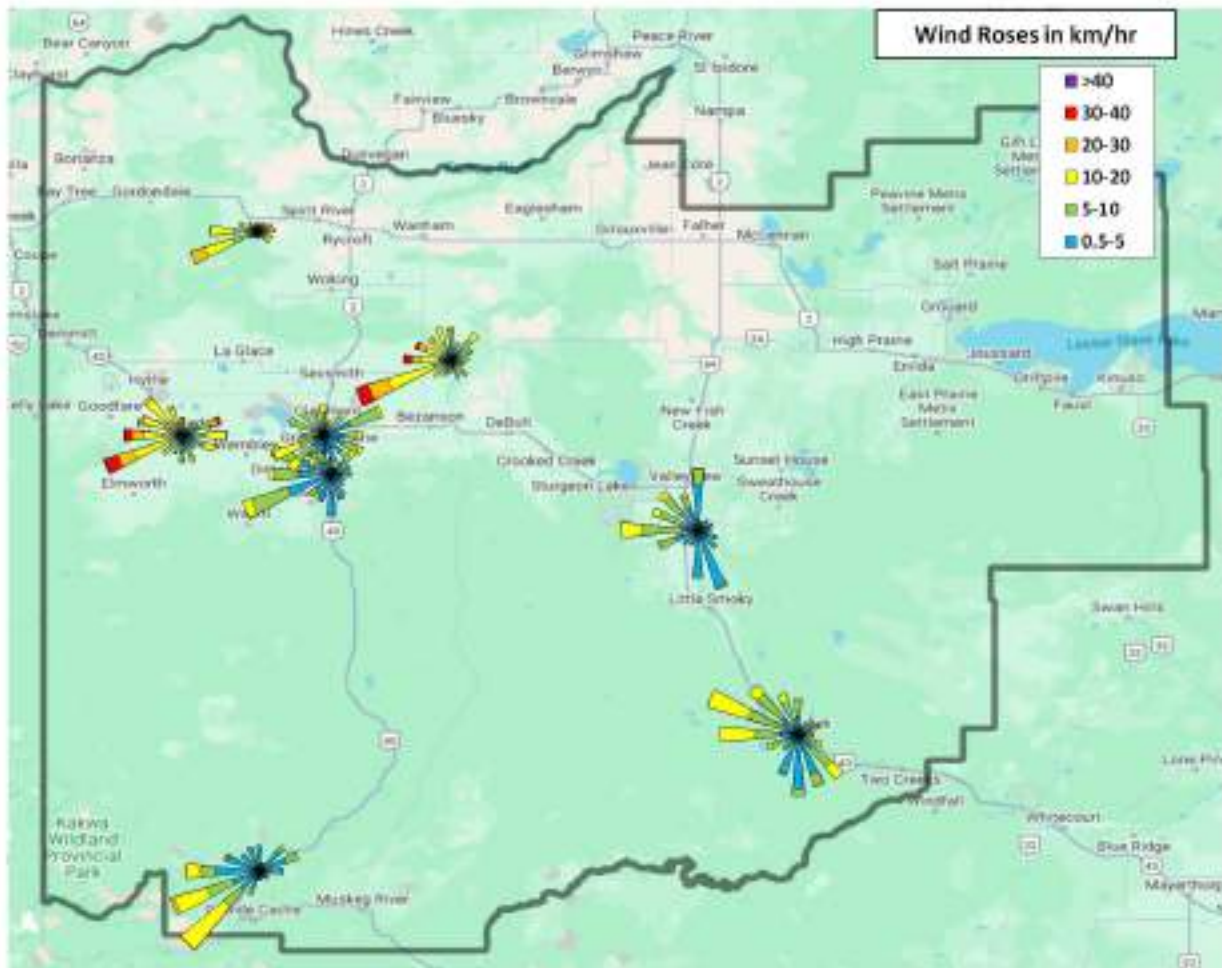
10 Concentration Summaries and Roses for PAZA



10.1 Air Quality Health Index (AQHI) Plots

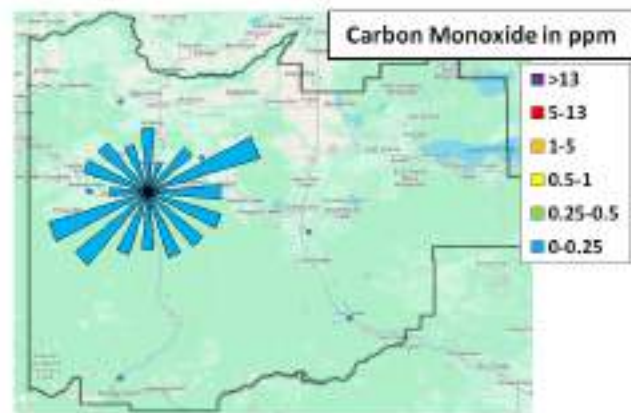


10.2 Wind Roses

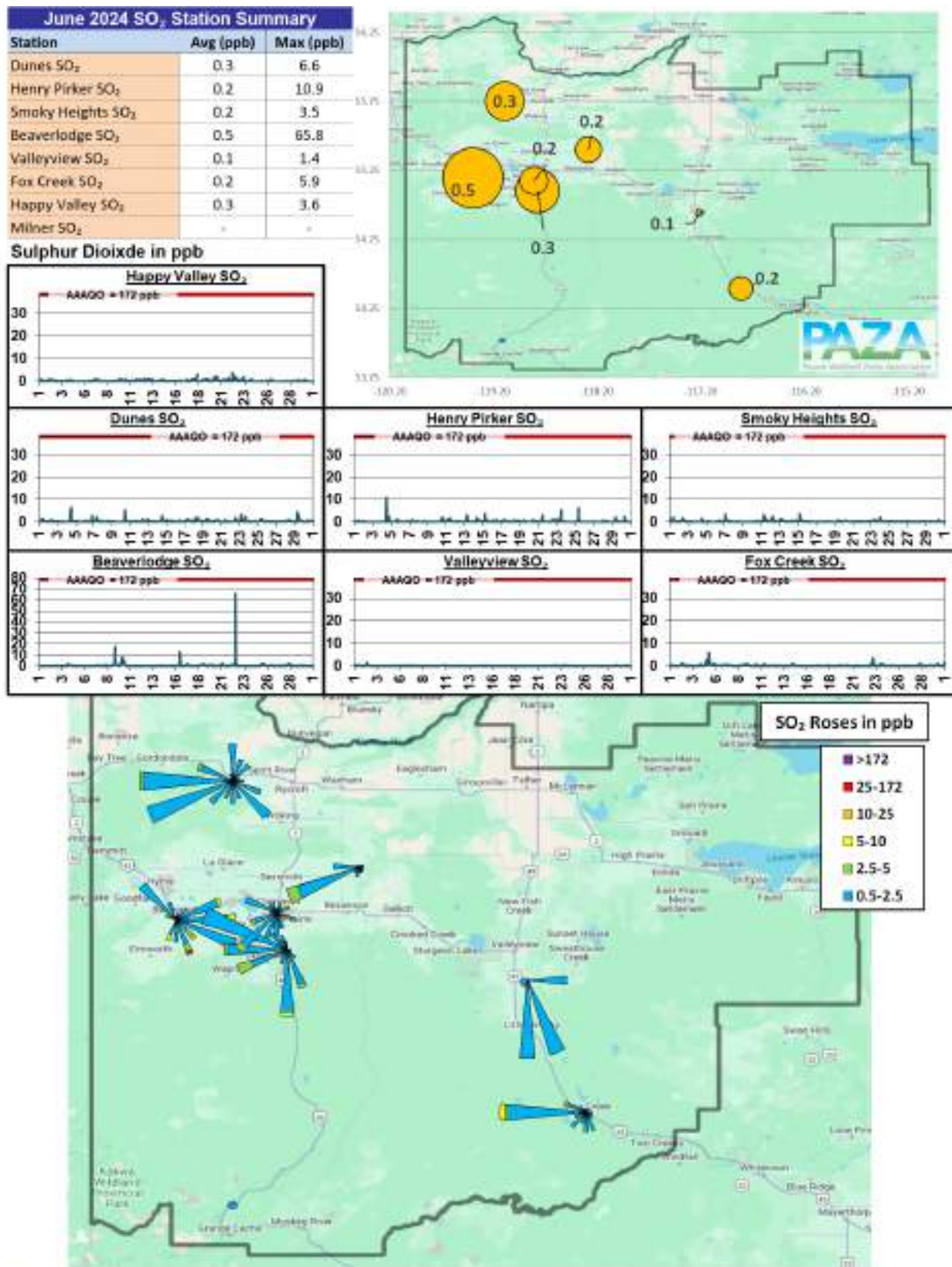


10.3 Carbon Monoxide (CO) Plots

June 2024 CO Station Summary		
Station	Avg (ppm)	Max (ppm)
Henry Pirker CO	0.13	0.24

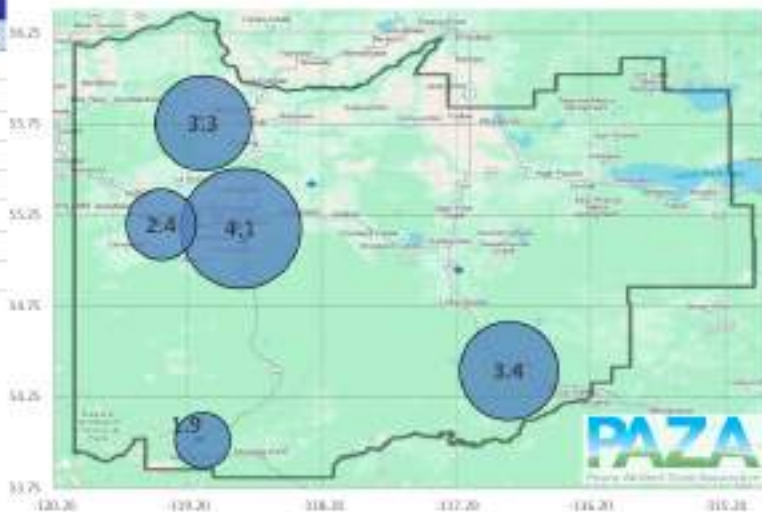


10.4 Sulphur Dioxide (SO₂) Plots

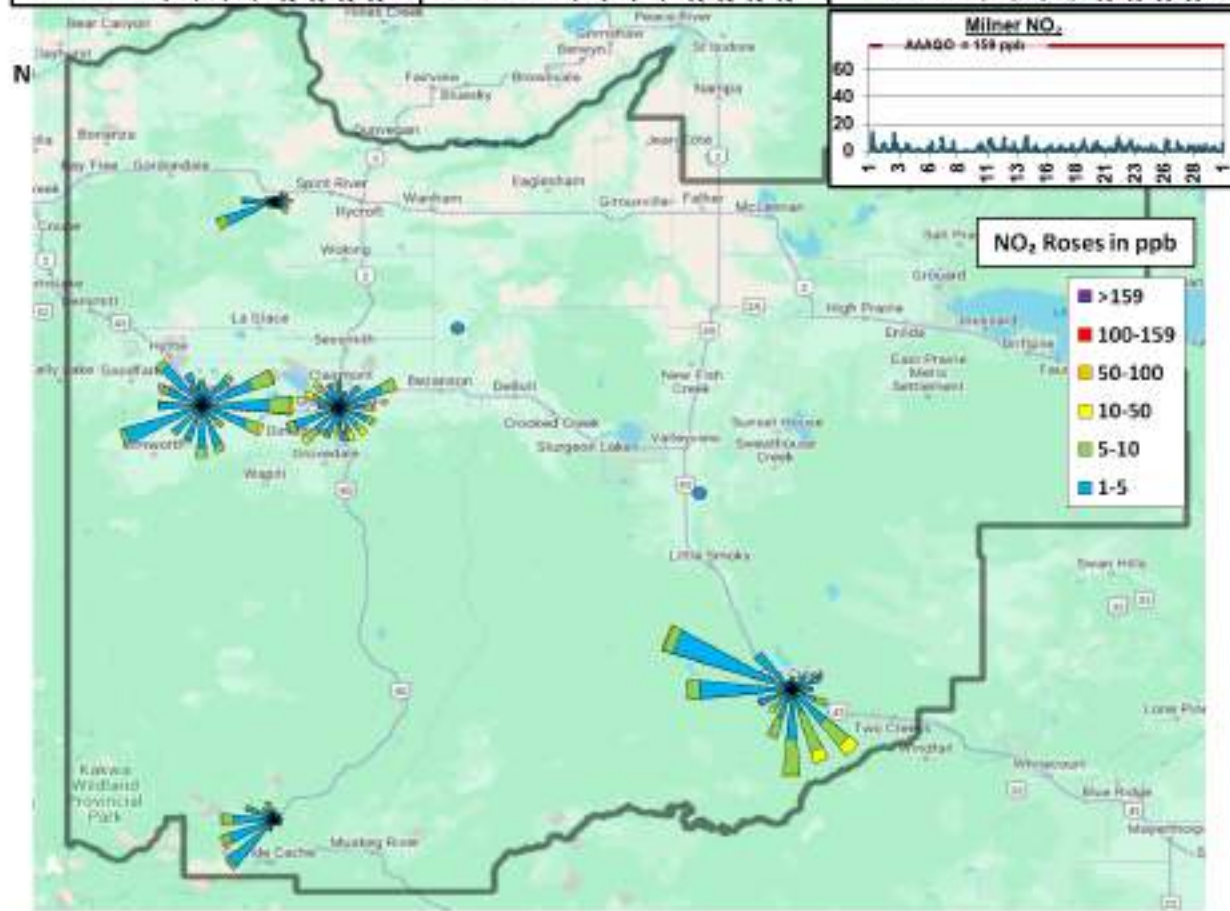
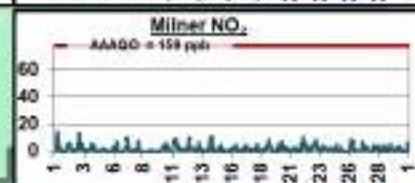
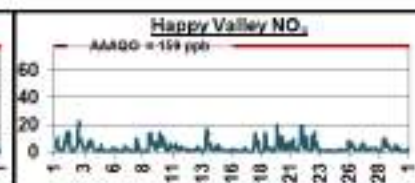
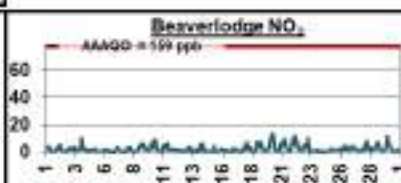
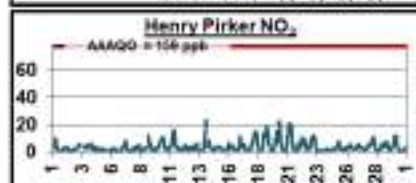
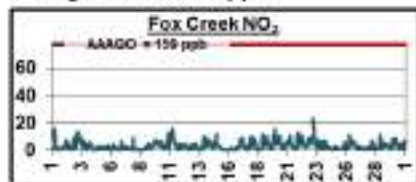


10.5 Nitrogen Dioxide (NO₂) Plots

June 2024 NO ₂ Station Summary		
Station	Avg (ppb)	Max (ppb)
Dunes NO ₂	-	-
Henry Pirkler NO ₂	4.1	23.7
Smoky Heights NO ₂	-	-
Beaverlodge NO ₂	2.4	14.1
Valleyview NO ₂	-	-
Fox Creek NO ₂	3.4	23.1
Happy Valley NO ₂	3.3	22.4
Milner NO ₂	1.9	14.7

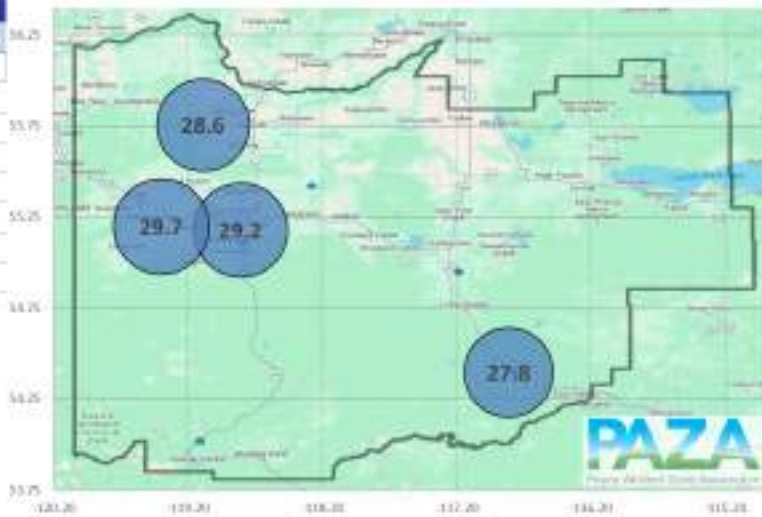


Nitrogen Dioxide in ppb

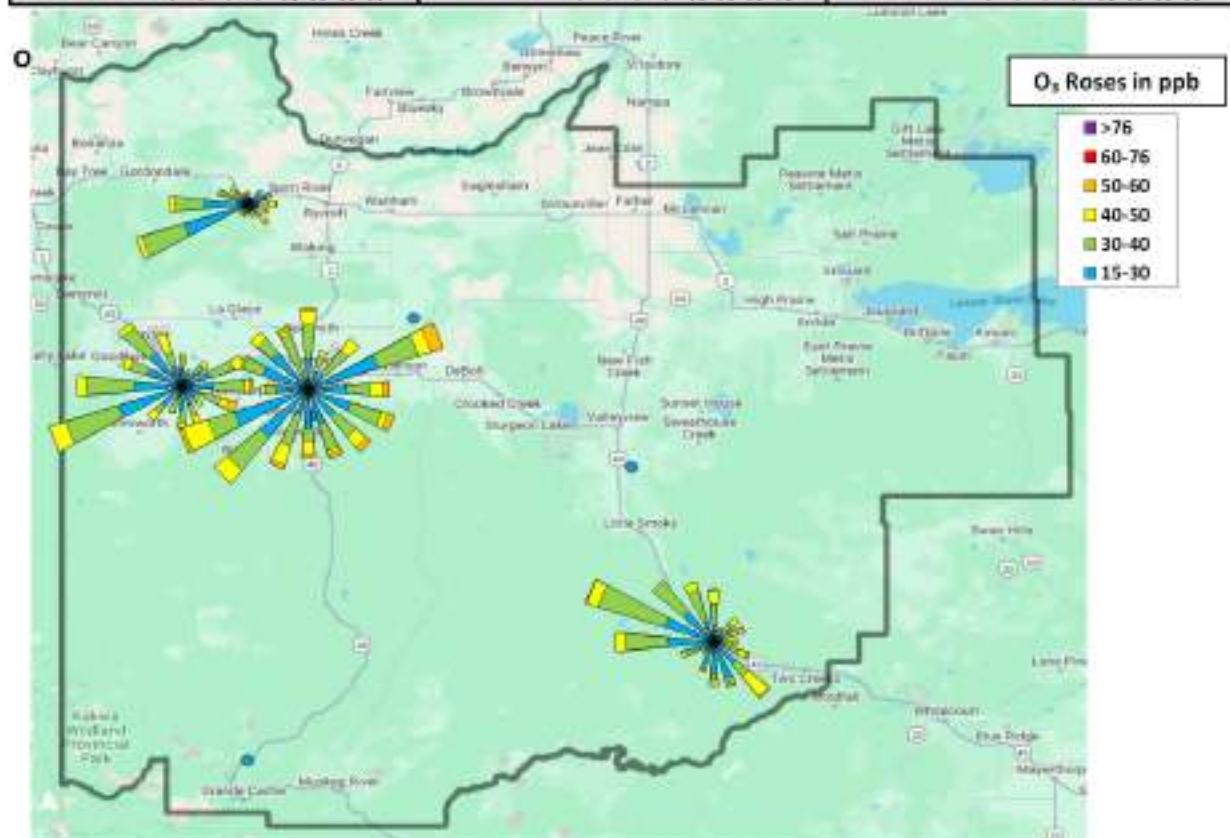
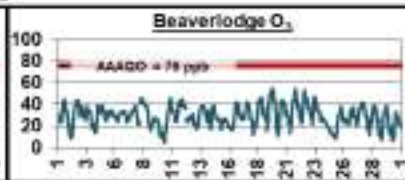
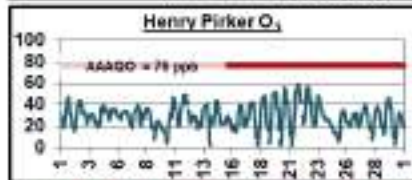
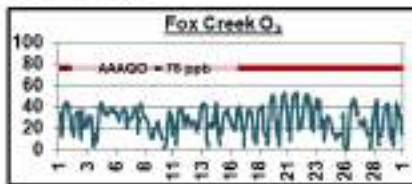


10.6 Ozone (O₃) Plots

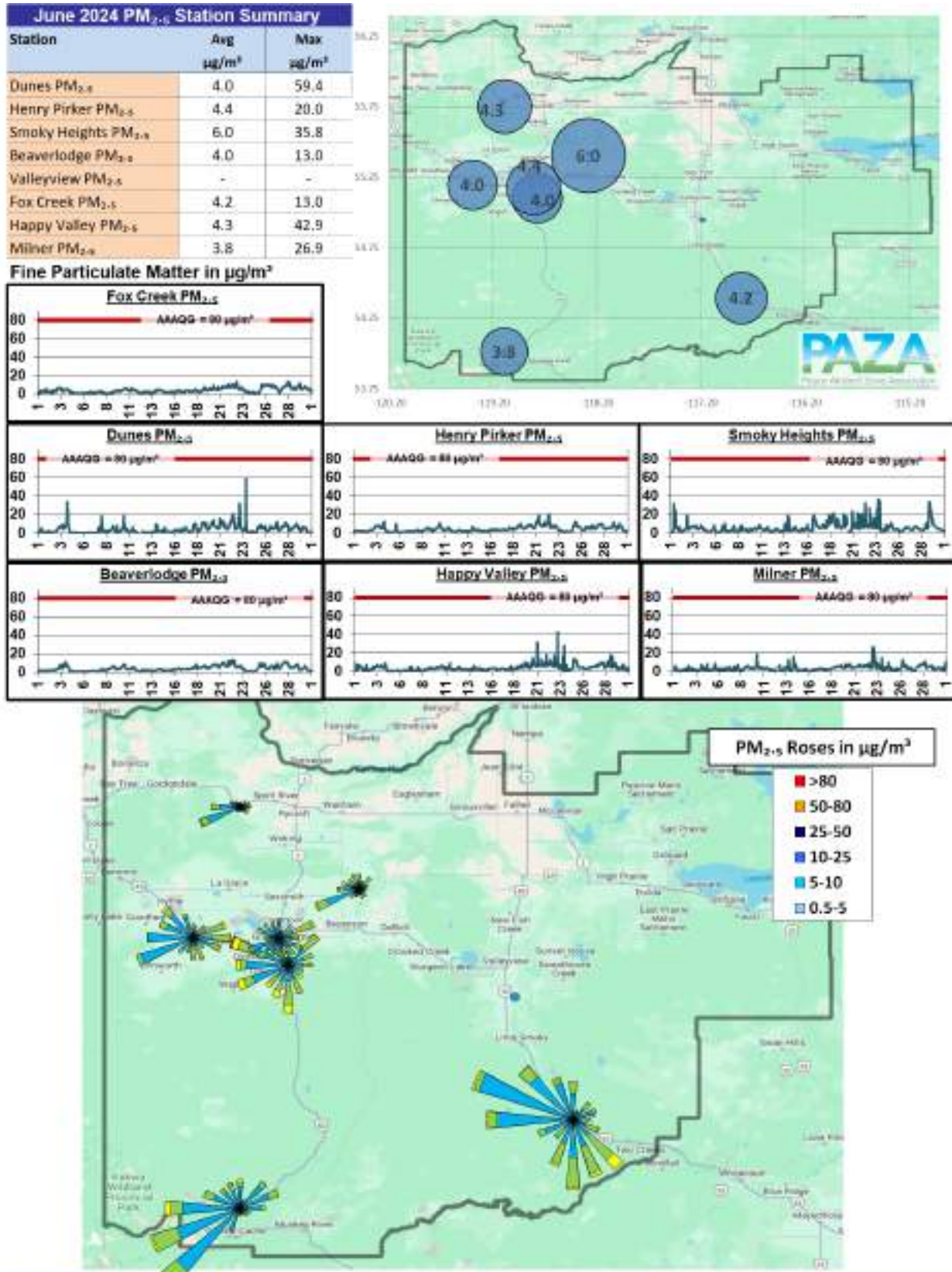
June 2024 O ₃ Station Summary		
Station	Avg (ppb)	Max (ppb)
Dunes O ₃	-	-
Henry Pirkler O ₃	29.2	58.1
Smoky Heights O ₃	-	-
Beaverlodge O ₃	29.7	54.3
Valleyview O ₃	-	-
Fox Creek O ₃	27.8	53.4
Happy Valley O ₃	28.6	51.9
Milner O ₃	-	-



Ozone in ppb

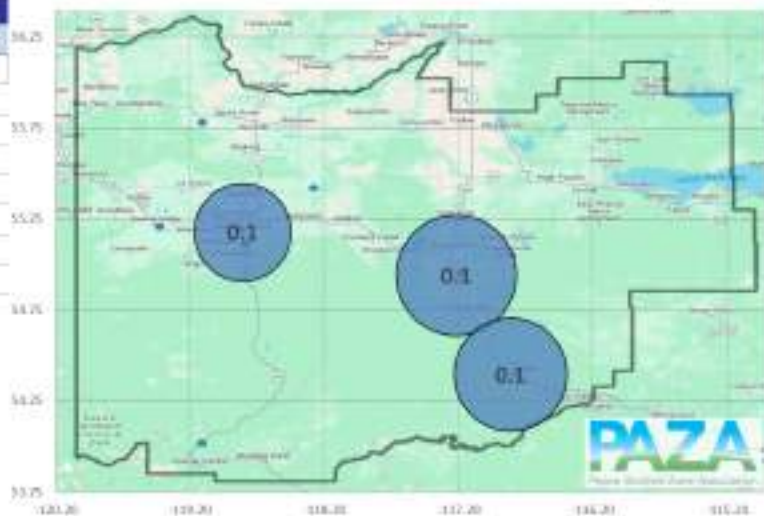


10.7 Fine Particulate Matter (PM_{2.5}) Plots

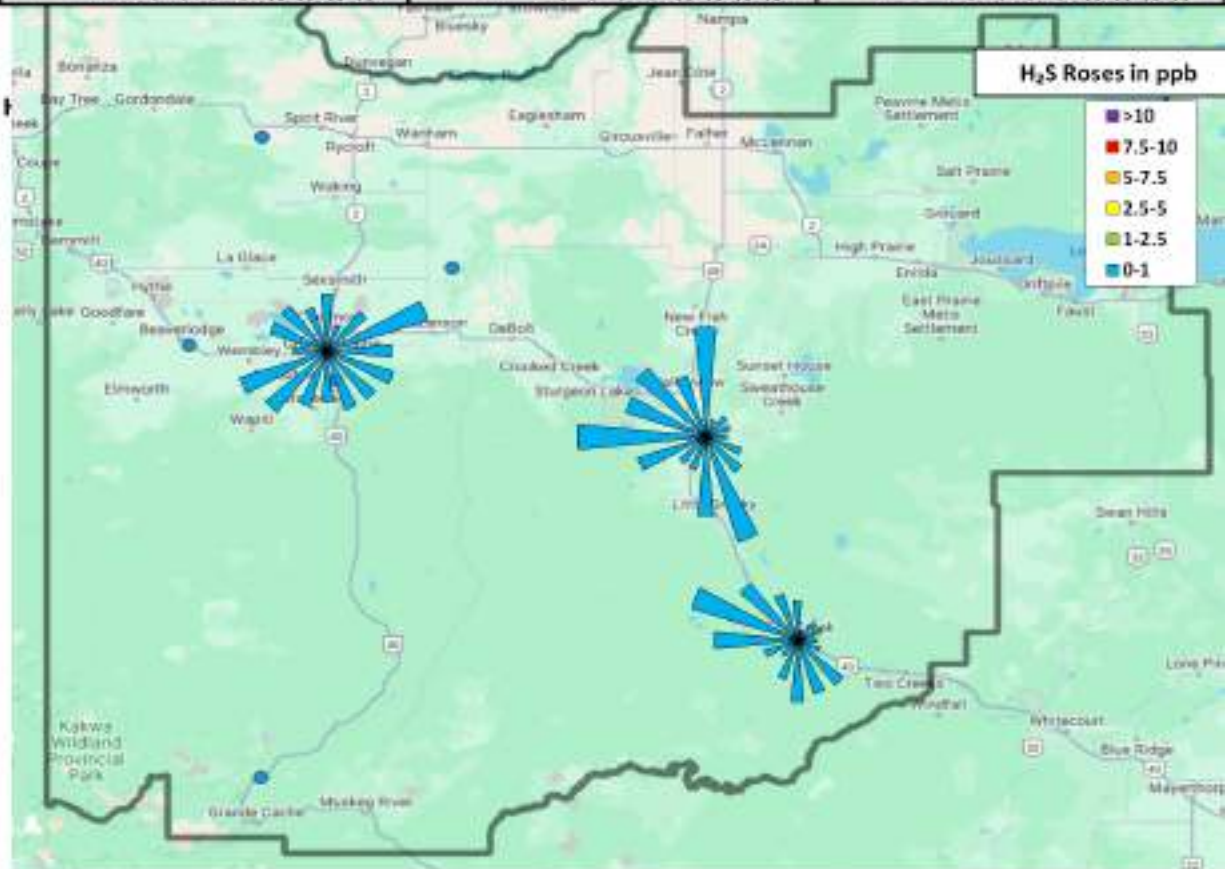
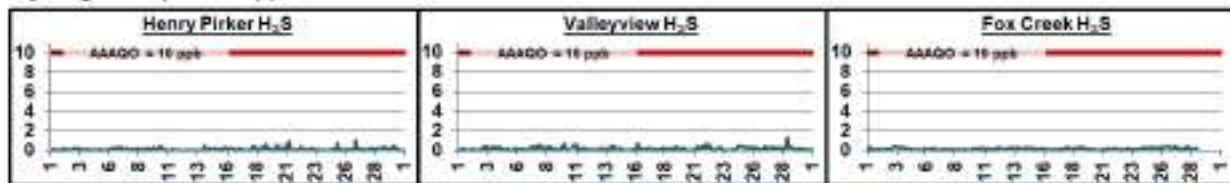


10.8 Hydrogen Sulphide (H₂S) Plots

June 2024 H ₂ S Station Summary		
Station	Avg (ppb)	Max (ppb)
Dunes H ₂ S	-	-
Henry Pirkler H ₂ S	0.1	1.0
Smoky Heights H ₂ S	-	-
Beaverlodge H ₂ S	-	-
Valleyview H ₂ S	0.1	1.3
Fox Creek H ₂ S	0.1	0.5
Happy Valley H ₂ S	-	-
Milner H ₂ S	-	-

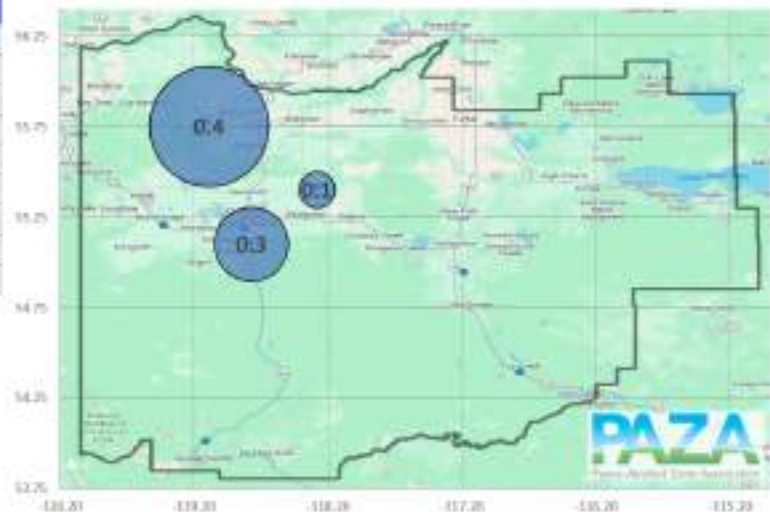


Hydrogen Sulphide in ppb

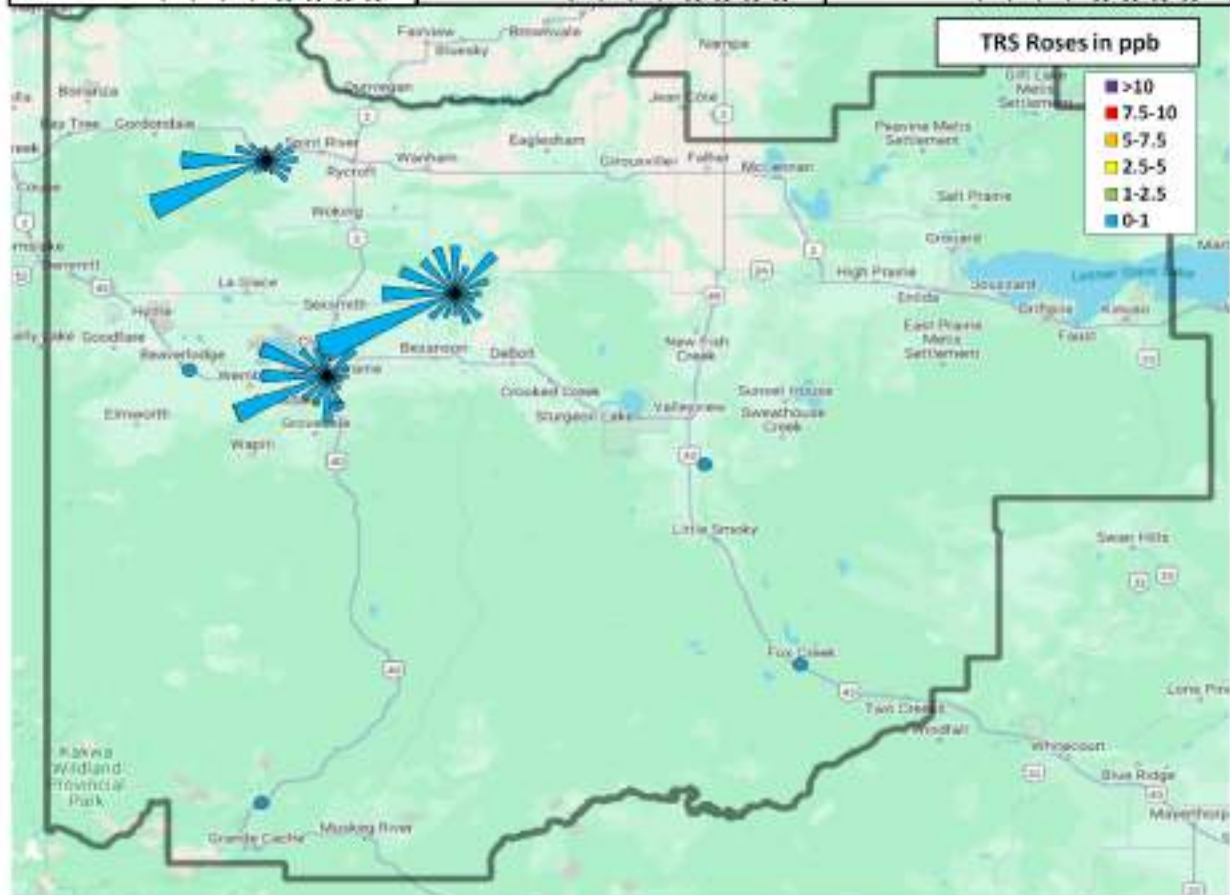
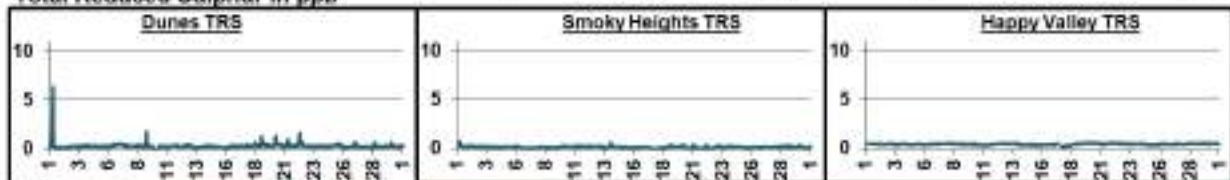


10.9 Total Reduced Sulphur (TRS) Plots

June 2024 TRS Station Summary		
Station	Avg (ppb)	Max (ppb)
Dunes TRS	0.3	6.3
Henry Pirkie TRS	-	-
Smoky Heights TRS	0.1	0.8
Beaverlodge TRS	-	-
Valleyview TRS	-	-
Fox Creek TRS	-	-
Happy Valley TRS	0.4	0.6
Milner TRS	-	-



Total Reduced Sulphur in ppb

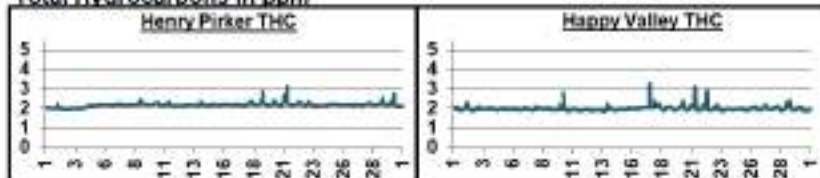


10.10 Total Hydrocarbon (THC) Plots

June 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	2.2	3.1	2.2	3.1	0.00	0.01
Smoky Heights THC	-	-	-	-	-	-
Beaverlodge THC	-	-	-	-	-	-
Valleyview THC	-	-	-	-	-	-
Fox Creek THC	-	-	-	-	-	-
Happy Valley THC	2.0	3.3	-	-	-	-

Total Hydrocarbons in ppm



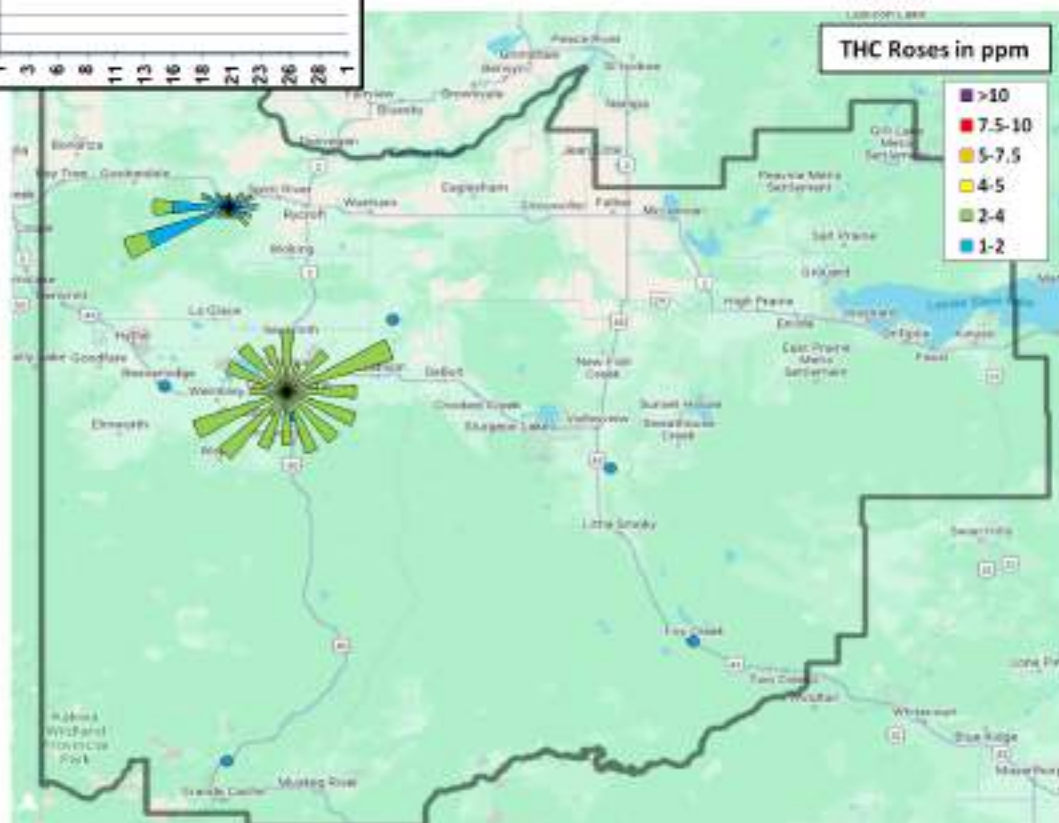
Total Hydrocarbons (THC)



Methane (CH₄)



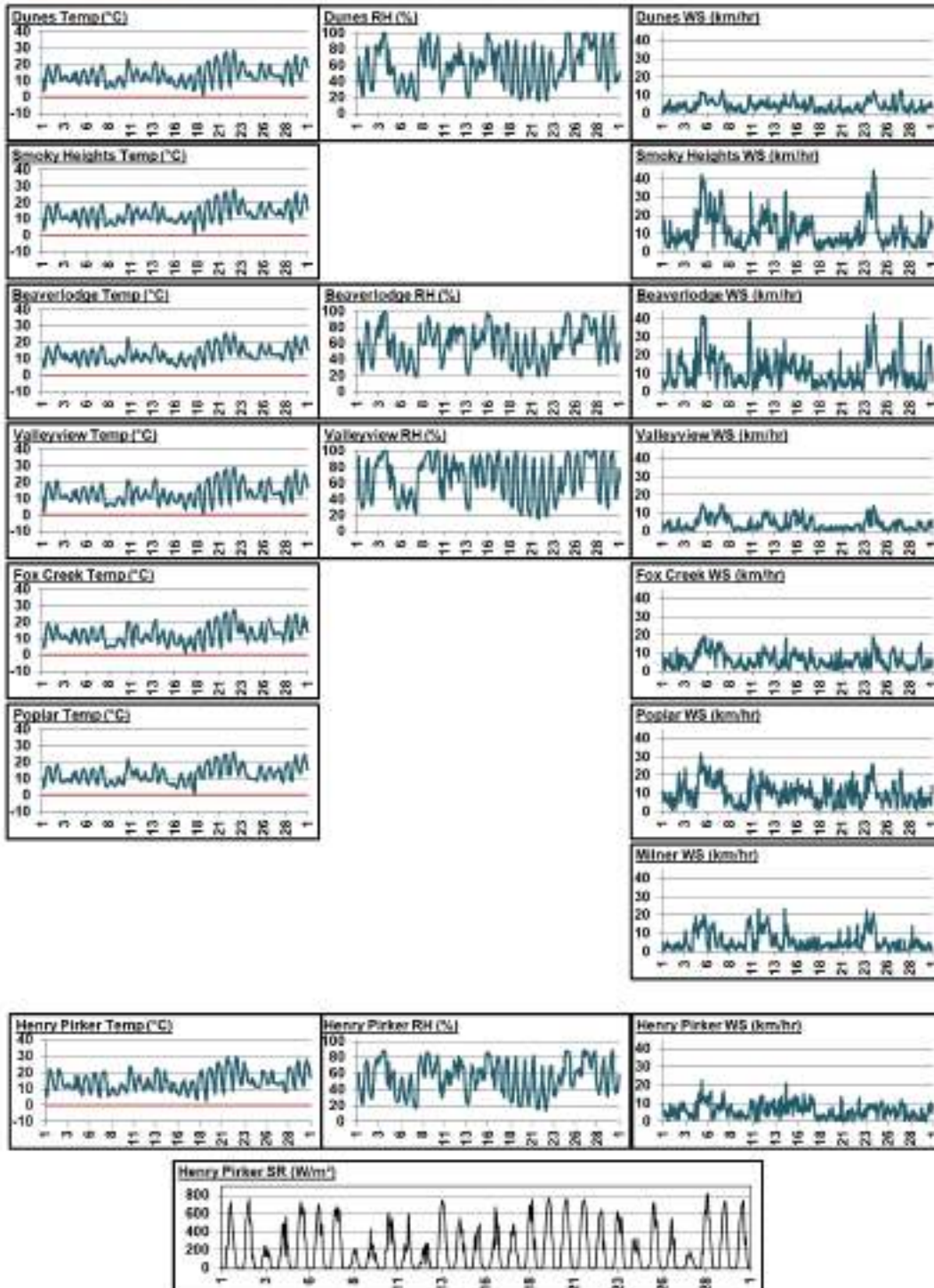
Non-Methane Hydrocarbons (NMHC)



10.11 Meteorology Summary

June 2024 Meteorological Summary						
Station	Temp (°C)	RH (%)	SR (W/m ²)	WS (km/hr)	WD (deg)	WD
Dunes	13.5	59.8	-	4.3	276	W
Henry Parker	14.6	55.5	196.1	6.2	239	WSW
Smoky Heights	13.5	-	-	11.1	272	W
Beaverlodge	13.1	60.1	-	11.5	273	W
Valleyview	13.5	67.2	-	4.1	286	WNW
Fox Creek	12.7	-	-	6.5	284	WSW
Happy Valley	12.8	-	-	10.0	254	WSW
Milner	-	-	-	5.6	204	WSW

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



11 Passive Monitoring Data

Peace Airshed Zone Association - PAZA Passive Stations for June 2024

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	LSD
Duplicates						
11a	Webber Creek			1.8		09-36-074-09 W6M
11b	Webber Creek			1.8		
17a	Poplar			2.2		13-06-073-08 W6M
17b	Poplar			2.0		
19a	Wanham	0.2				16-22-077-03 W6M
19b	Wanham	0.1				
24a	Wembley	0.3				12-31-070-08 W6M
24b	Wembley	0.3				
35a	Jean Cote			1.9		12-35-079-21 W5M
35b	Jean Cote			2.0		
37a	Crooked Creek			0.9		16-01-071-26 W5M
37b	Crooked Creek			0.9		
39a	Clouston Creek	0.2				12-01-073-22 W5M
39b	Clouston Creek	0.2				
40a	McLennan	0.1				03-29-077-19 W5M
40b	McLennan	0.1				
47a	Kinuso		29.7			12-10-073-10 W5M
47b	Kinuso		34.8			
D1a	Duvernay 1				0.05	04-33-062-20 W5M
D1b	Duvernay 1				0.06	
G3a	Girouxville 3				0.60	14-02-077-23 W5M
G3b	Girouxville 3				0.62	
K4a	Kakwa 4			2.4		06-18-063-04 W6M
K4b	Kakwa 4			2.2		
K2a	Kakwa 2	3.2				08-13-063-05 W6M
K2b	Kakwa 2	3.4				
K1a	Kakwa 1				0.05	01-13-063-05 W6M
K1b	Kakwa 1				0.04	
M7a	Milner Wanyandie			0.4		11-13-058-08 W6M
M7b	Milner Wanyandie			0.5		
M9Ba	Milner Ambient Trailer	0.1				09-15-058-08 W6M
M9Bb	Milner Ambient Trailer	<0.1				
J3a	Jayar3 Bone Yard			0.7		14-08-062-03 W6M
J3b	Jayar3 Bone Yard			0.6		
J5a	Jayar5 Camp	0.7				11-08-062-03 W6M
J5b	Jayar5 Camp	0.8				
J2a	Jayar2 14-8				0.06	07-08-062-03 W6M
J2b	Jayar2 14-8				0.06	

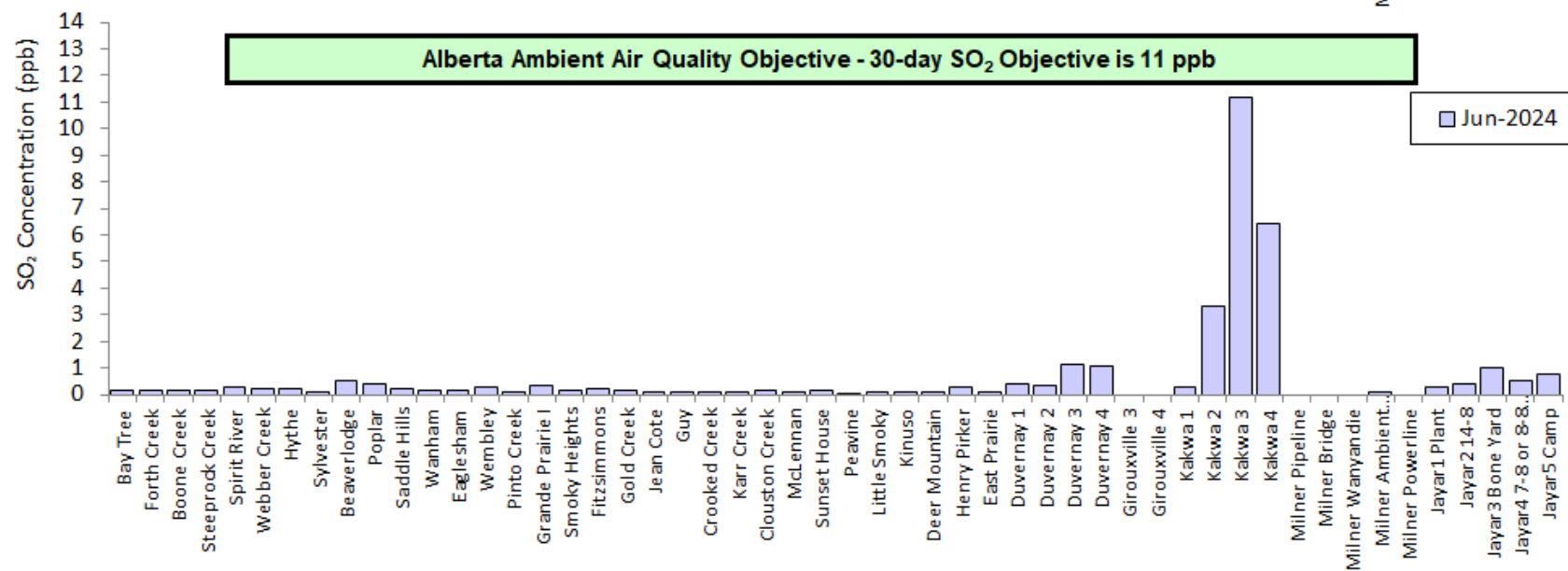
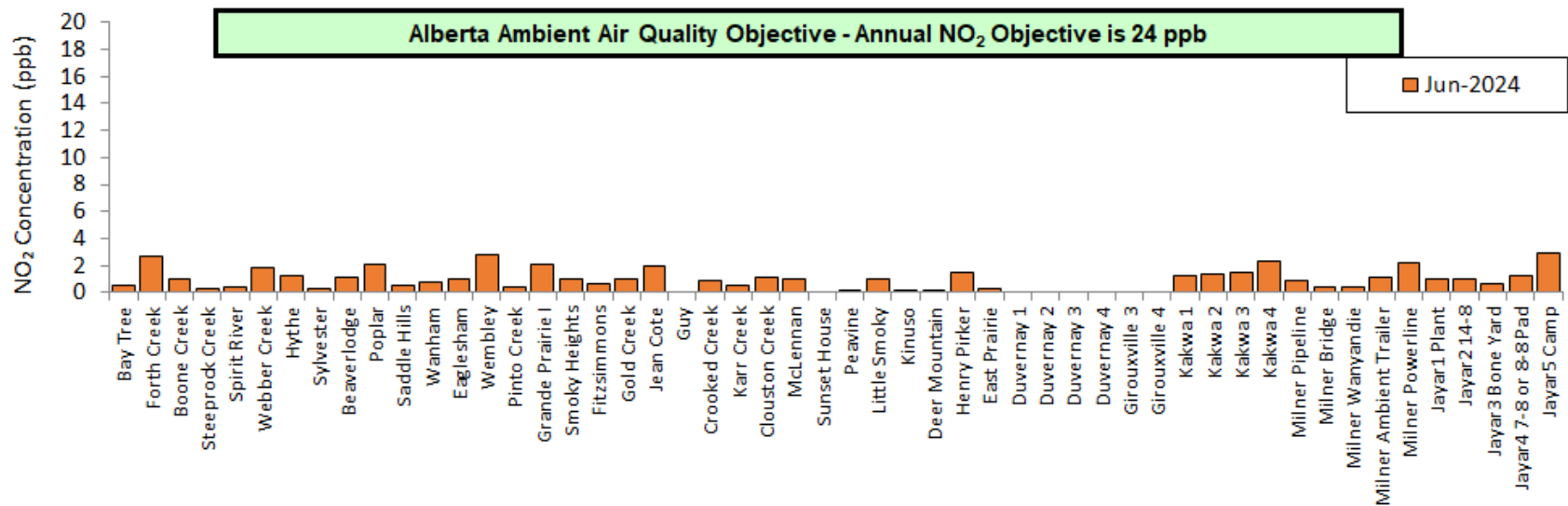
Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	LSD
2	Bay Tree	0.1	30.8	0.5	-	13-16-078-13 W6M
3	Forth Creek	0.2	-	2.7	-	04-13-082-07 W6M
5	Boone Creek	0.2	-	1.0	-	01-23-076-11 W6M
7	Steeprock Creek	0.2	-	0.3	-	09-35-072-13 W6M
9	Spirit River	0.3	-	0.4	-	08-12-079-07 W6M
11	Webber Creek	0.2	-	1.8	-	09-36-074-09 W6M
12	Hythe	0.2	-	1.3	-	14-36-072-11 W6M
14	Sylvester	0.1	-	0.2	-	08-06-069-12 W6M
16	Beaverlodge	0.5	-	1.1	-	15-36-071-10 W6M
17	Poplar	0.4	-	2.1	-	13-06-073-08 W6M
18	Saddle Hills	0.2	-	0.5	-	04-25-074-07 W6M
19	Wanham	0.2	-	0.8	-	16-22-077-03 W6M
21	Eaglesham	0.1	-	1.0	-	16-21-079-25 W5M
24	Wembley	0.3	-	2.8	-	12-31-070-08 W6M
25	Pinto Creek	0.1	-	0.5	-	04-24-069-11 W6M
27	Grande Prairie I	0.4	-	2.0	-	08-15-071-06 W6M
29	Smoky Heights	0.2	-	1.0	-	04-06-075-02 W6M
30	Fitzsimmons	0.2	-	0.7	-	15-36-072-03 W6M
32	Gold Creek	0.2	-	1.0	-	06-33-067-05 W6M
35	Jean Cote	0.1	-	1.9	-	12-35-079-21 W5M
36	Guy	0.1	-	Broken	0.1	03-04-076-22 W5M
37	Crooked Creek	0.1	33.3	0.9	-	16-01-071-26 W5M
38	Karr Creek	0.1	-	0.5	-	10-16-065-02 W6M
39	Clouston Creek	0.2	-	1.1	-	12-01-073-22 W5M
40	McLennan	0.1	-	1.0	-	03-29-077-19 W5M
42	Sunset House	0.1	-	Broken	-	05-32-070-19 W5M
44	Peavine	0.0	-	0.2	-	03-05-079-15 W5M
46	Little Smoky	0.1	-	1.0	-	12-01-065-21 W5M
47	Kinuso	0.1	32.2	0.2	-	12-10-073-10 W5M
48	Deer Mountain	0.1	-	0.2	-	15-22-068-09 W5M
49	Henry Pirker	0.3	-	1.4	-	17-26-071-06 W6M
50	East Prairie	0.1	-	0.3	-	11-13-079-08 W6M
D1	Duvernay 1	0.4	-	-	0.06	04-33-062-20 W5M
D2	Duvernay 2	0.4	-	-	0.06	04-33-062-20 W5M
D3	Duvernay 3	1.2	-	-	0.05	04-33-062-20 W5M
D4	Duvernay 4	1.1	-	-	0.06	04-33-062-20 W5M
G3	Girouxville 3	-	-	-	0.61	14-02-077-23 W5M
G4	Girouxville 4	-	-	-	0.25	04-08-077-22 W5M
K1	Kakwa 1	0.3	-	1.2	0.05	01-13-063-05 W6M
K2	Kakwa 2	3.3	-	1.3	0.07	08-13-063-05 W6M
K3	Kakwa 3	11.2	-	1.5	0.11	12-18-063-04 W6M
K4	Kakwa 4	6.4	-	2.3	0.07	06-18-063-04 W6M
M1	Milner Pipeline	<0.1	-	0.9	-	12-14-058-08 W6M
M2	Milner Bridge	<0.1	-	0.4	-	08-06-057-08 W6M
M3	Milner Wanyandie	<0.1	-	0.5	-	11-13-058-08 W6M
M4	Milner Ambient Trailer	0.1	-	1.1	-	09-15-058-08 W6M
M5	Milner Powerline	<0.1	-	2.2	-	06-14-058-08 W6M
J1	Jayar1 Plant	0.3	-	1.0	0.08	06-08-062-03 W6M
J2	Jayar2 14-8	0.4	-	1.0	0.06	07-08-062-03 W6M
J3	Jayar3 Bone Yard	1.0	-	0.7	0.06	14-08-062-03 W6M
J4	Jayar4 7-8 or 8-8 Pad	0.5	-	1.2	0.08	10-08-062-03 W6M
J5	Jayar5 Camp	0.8	-	2.9	0.25	11-08-062-03 W6M

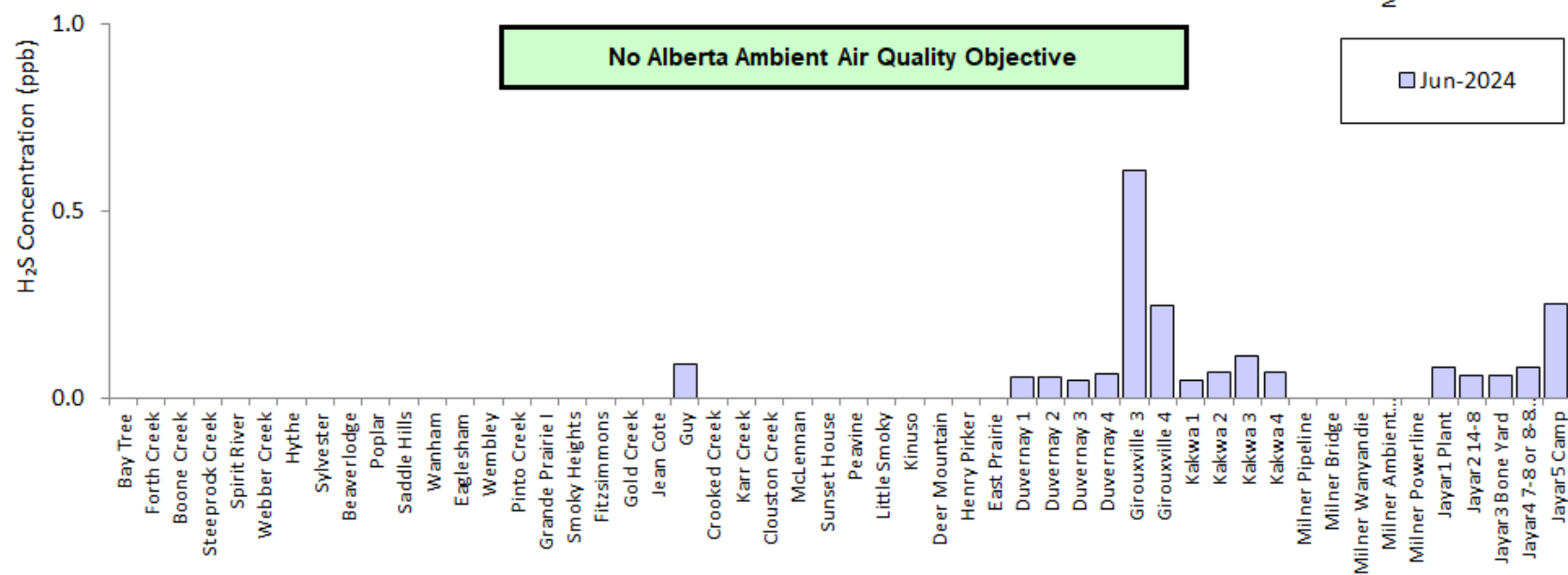
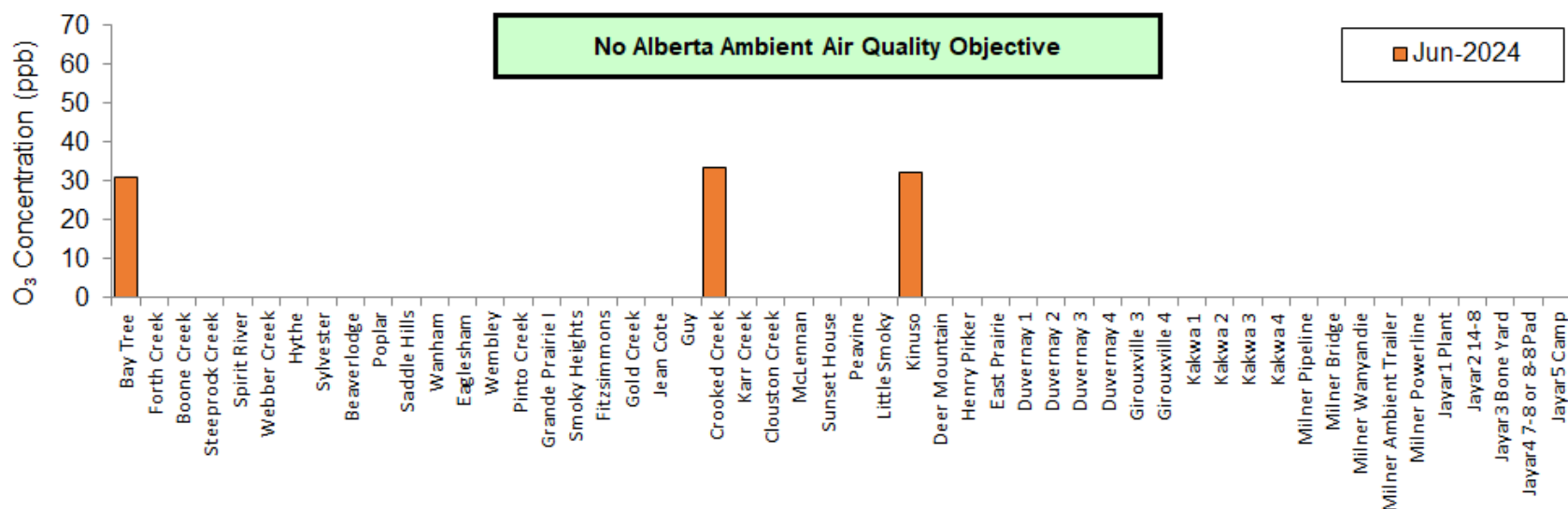
Passive Summary for June 2024

Stats	Sulphur Dioxide SO ₂	Ozone O ₃	Nitrogen Dioxide NO ₂	Hydrogen Sulphide H ₂ S
	ppb	ppb	ppb	ppb

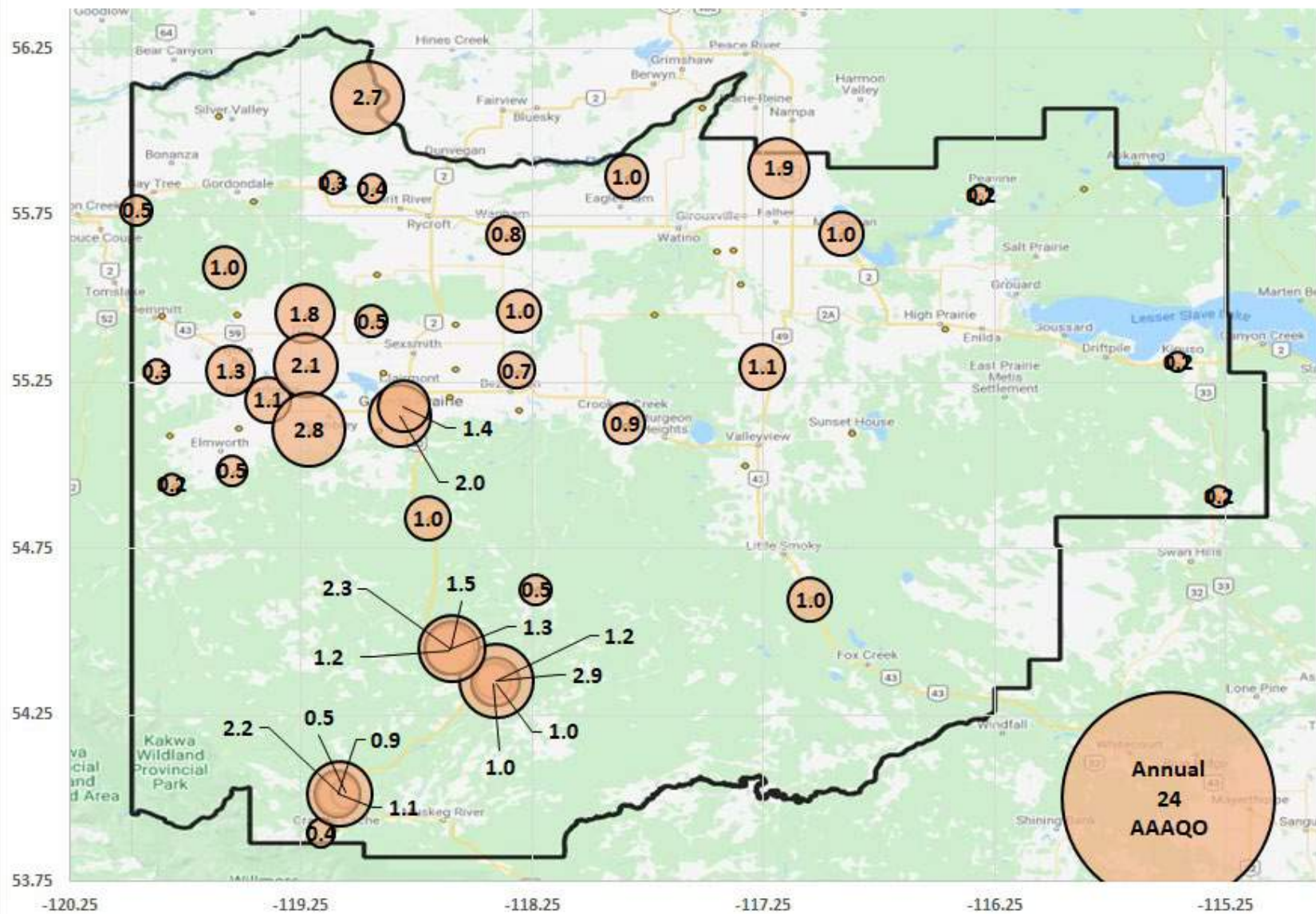
Passive Summary for May 2024 (PAZA)				
Mean	0.7	32.1	1.1	0.1
Standard Deviation	1.9	1.3	0.7	0.1
Minimum	0.0	30.8	0.2	0.0
	Peavine (#44)	Bay Tree (#2)	Kinuso (#47)	Kakwa 1 (#K1)
Maximum	11.2	33.3	2.9	0.6
	Kakwa 3 (#K3)	Crooked Creek (#37)	Jayar5 Camp (#J5)	Girouxville 3 (#G3)

Continuous and Passive Monitoring Comparison				
PAZA Beaverlodge Station	0.5	29.7	2.4	-
Beaverlodge Passive (#16)	0.5	-	1.1	-
PAZA Henry Pirker Station	0.2	29.2	4.1	0.1
Henry Pirker passive (#49)	0.3	-	1.4	-
Milner Station	-	-	1.9	-
Milner passive	0.1	-	1.1	-

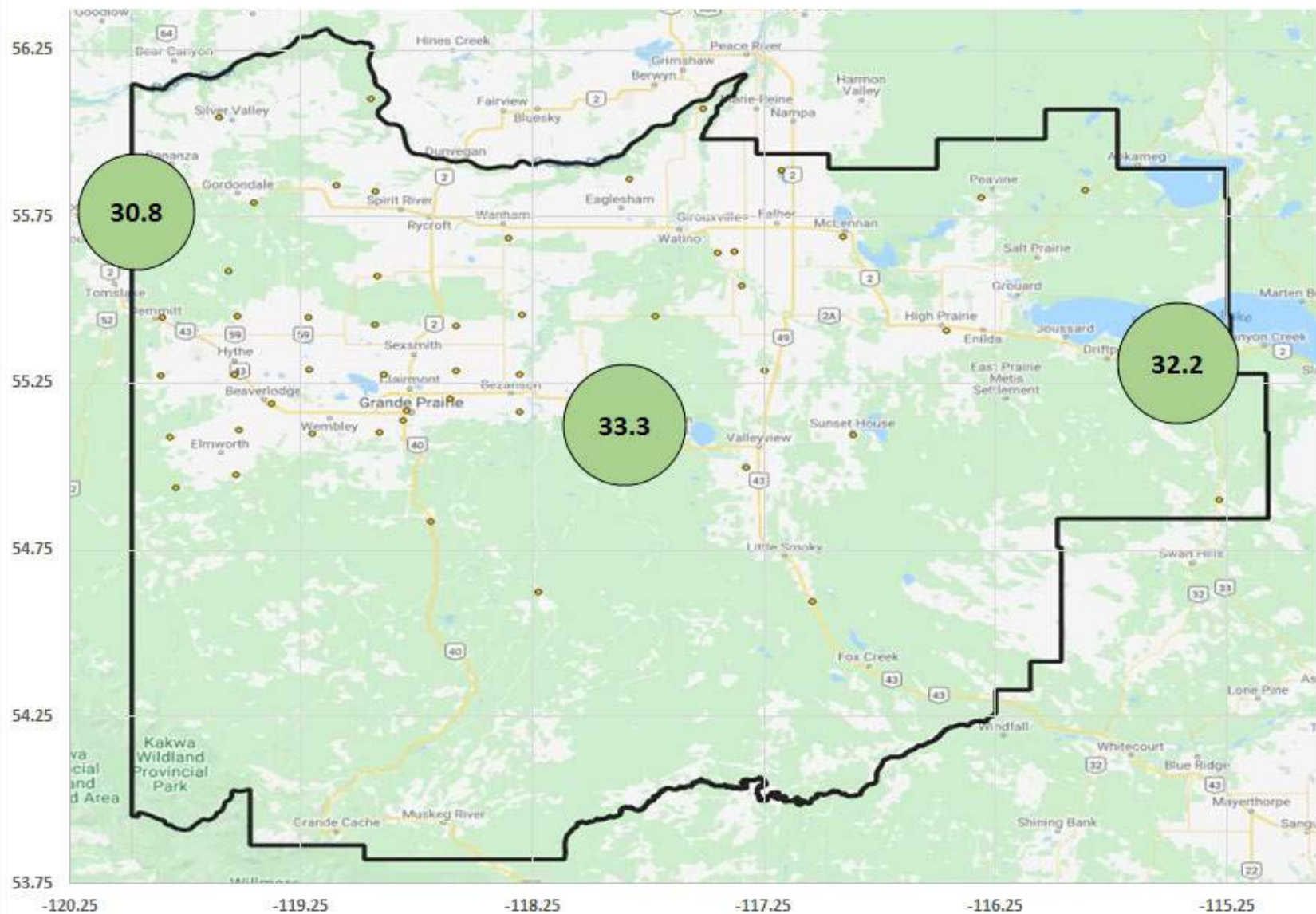




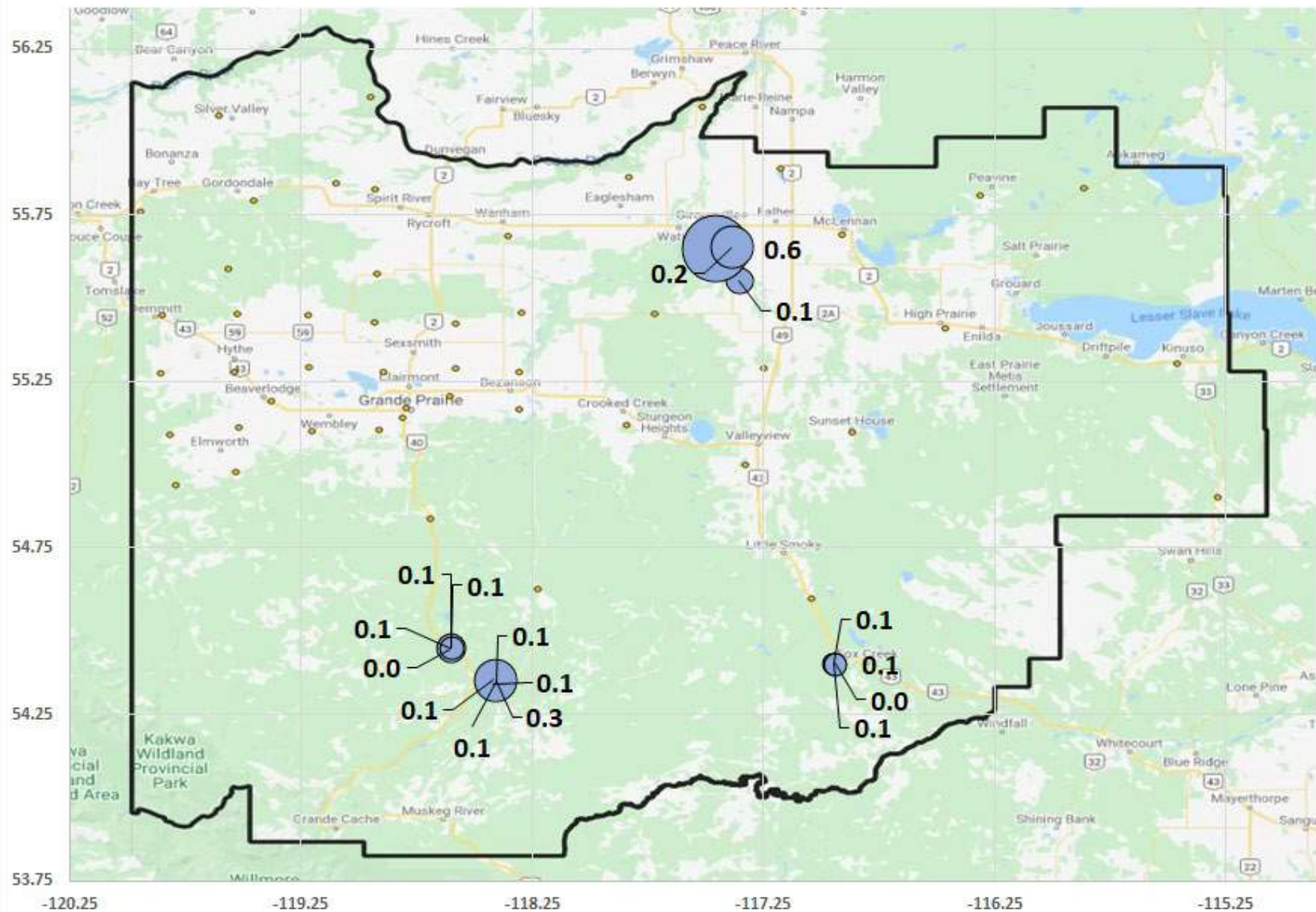
NO₂ Monthly Average (units in ppb)



O₃ Monthly Average (units in ppb)



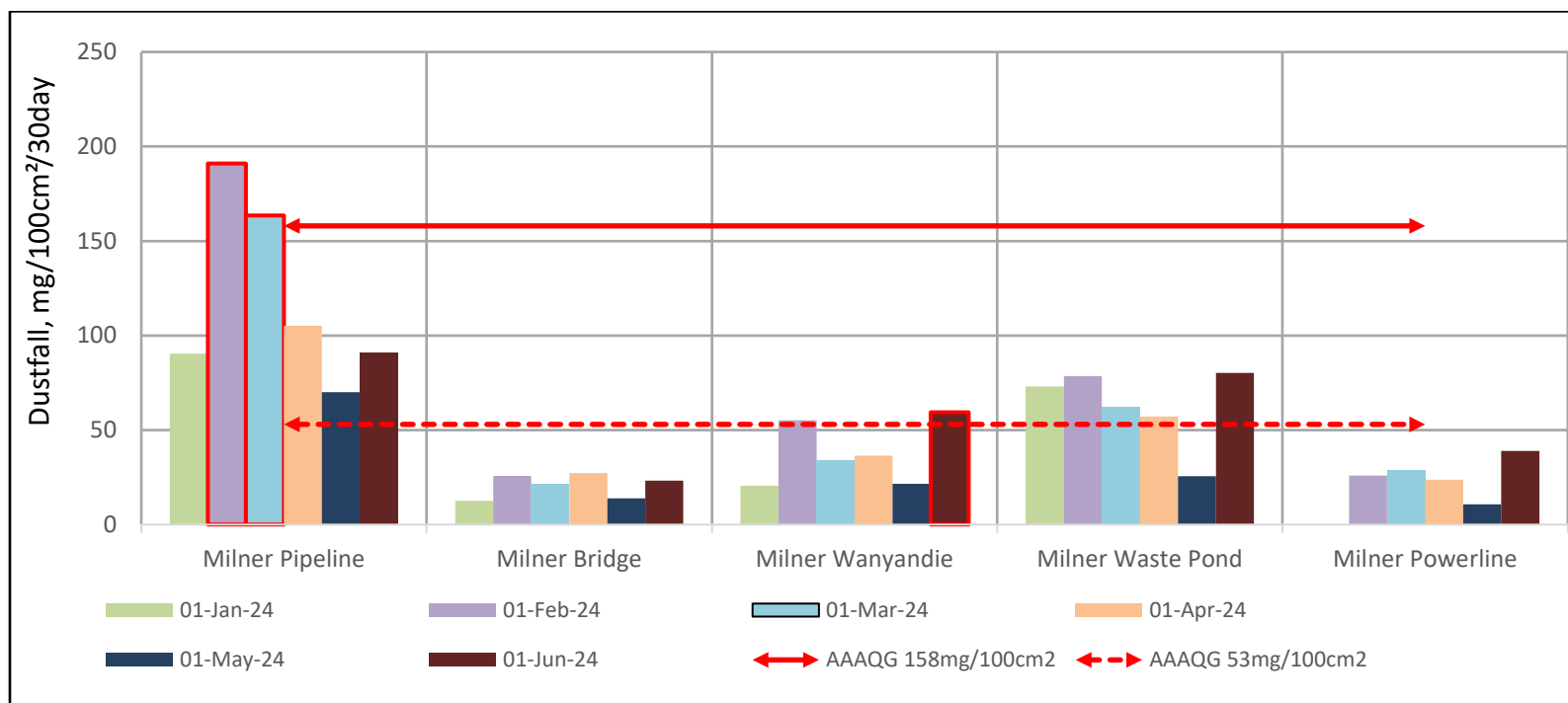
H₂S Monthly Average (units in ppb)



12 Dustfall Monitoring Data

Milner Dustfall Samples June 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
June	2024	Milner Pipeline	91.1	38.4	28	
June	2024	Milner Bridge	23.3	15.3	28	
June	2024	Milner Wanyandie	59.4	5.9	28	>53mg/100cm ² ; ref#430669
June	2024	Milner Waste Pond	80.2	35.6	28	
June	2024	Milner Powerline	39.0	15.8	28	
June	2024	Milner Powerline Dup	39.9	16.7	28	RPD, 2% / 6%



End of Report



Peace Airshed Zone Association

Ambient Air Monitoring Report

June 2024