



Peace Airshed Zone Association

Ambient Air Monitoring Network Summary

Ambient Air Quality Monitoring Program

Monthly Report

January 2023

January 31, 2023

Alberta Environment and Parks

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

Subject: **Peace Airshed Zone Association (PAZA)**
January 2023 Ambient Air Quality Monitoring Report

Please find enclosed the PAZA Ambient Air Quality Monitoring Network Report for the month of January 2023.

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, Donnelly, Poplar-Portable and Milner.
Detailed Summaries are included in the report

Calibration and Data Submission:

Monthly report, hourly data and calibration reports for January 2023 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
	Ante Creek	02-26-068-25-W5	00266694-00-00
	Gordondale	02-26-068-25-W5	00287474-00-00
Apache Canada Ltd.	House Mountain	01-08-070-10-W5	00010137-02-02
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
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:

The follow is a summary of the concentrations in exceedance of AAAQG and AAAQO:

1-hr readings above the PM_{2.5} AAAQG (80 µg/m³) was recorded as:

Reference Number	Site	Date	From MST	To MST	Hour average (µg/m ³)	WS km/hr	WD degrees
408633	Beaverlodge	2023-01-13	01:00	02:00	258.0	10.5	24
408633	Beaverlodge	2023-01-13	02:00	03:00	84.7	5.1	229
408386	Milner	2023-01-06	09:00	10:00	100.0	1.2	37
408386	Milner	2023-01-06	11:00	12:00	176.8	5.7	270
408386	Milner	2023-01-06	12:00	13:00	132.2	6.4	244
408387	Milner	2023-01-07	11:00	12:00	105.9	0.38	247.92
408421	Milner	2023-01-08	03:00	04:00	81.7	2.5	266

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

Reference Number	Site	Date	Day average (µg/m ³)	WS km/hr	WD degrees
408633	Beaverlodge	2023-01-13	32.4	1.9	145
408386	Milner	2023-01-06	36.2	4.1	274
408387	Milner	2023-01-07	37.8	1.4	280
408510	Henry Pirker	2023-01-10	34.7	2.1	344
408634	Henry Pirker	2023-01-13	34.0	3.1	83
408661	Henry Pirker	2023-01-14	39.4	2.1	310
408704	Henry Pirker	2023-01-15	33.7	2.4	10
408748	Henry Pirker	2023-01-16	29.4	1.7	179
408811	Henry Pirker	2023-01-17	40.7	1.7	275

There were also two dustfall readings above the AAAQG

- Pipeline site at 285.8 mg/100cm²/30day which is greater than the commercial level of 158 mg/100cm²/30day (reference number 409992)
- Wanyandie site at 54.7 mg/100cm²/30day which is greater than the residential / recreational level of 53 mg/100cm²/30day (reference number 409993)

Operational times less than 90 percent:

Poplar wind head froze resulting in 88% operational hours (91 hours removed during data review), reference number 409990.

Donnelly wind head froze resulting in 79% operational hours (161 hours removed during data review), reference number 409991.

Air Incidents

Regionally there was elevated particulate readings in the early part of January, primarily due to low winds and low ceiling, trapping particulate closer to ground level.

Deviations from Authorized Monitoring Methods

None were reported

Passive Monitoring

- 49 Stations throughout the PAZA zone
 - Passive sample analyses were performed by Bureau Veritas Laboratories
- There were 18 duplicates sampled in the month of January.
 - The duplicate H₂S at Girouxville 4 was collected after two months of exposure, due to site being inaccessible.
- Seven SO₂ duplicates located at Pinto Creek, Forth Creek, Deer Mountain, Sunset House, Duvernay 3, Jayar2 14-8, Milner Powerline; RPD ranging from 0% to 16% (no fails)
- One O₃ duplicate located at Crooked Creek; RPD 11% (no fails)
- Six NO₂ duplicates at Sylvester, Guy, Spirit River, Fitzsimmons, Jayar3 Bone Yard, Milner Pipeline; RPD ranging from 0% to 28% (no fails)
- Four H₂S duplicates, Duvernay 3, Girouxville 3, Girouxville 4, Jayar4 7-8 or 8-8 Pad; RPD 7% to 42% (no fails)
 - The duplicate at Girouxville 4 was collected after two months, as it was not able to collect last month with site being inaccessible.
- There were no exceedances of the AAAQOs for all monitored parameters at any of the passive monitoring stations during this month.

Dustfall Monitoring

- Five Stations collected Total Dustfall and Fixed Dustfall
- There was one duplicate sampled collected for each in the month of January.
 - RPD ranged from 6% to 12%
- Total dustfall ranged from 10.7 to 285.8 mg/100cm²/30day.
- There were two readings above the AAAQG during the month.
 - Pipeline site at 285.8 > 158 mg/100cm²/30day - 409992
 - Wanyandie site at 54.7 > 53 mg/100cm²/30day - 409993

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.

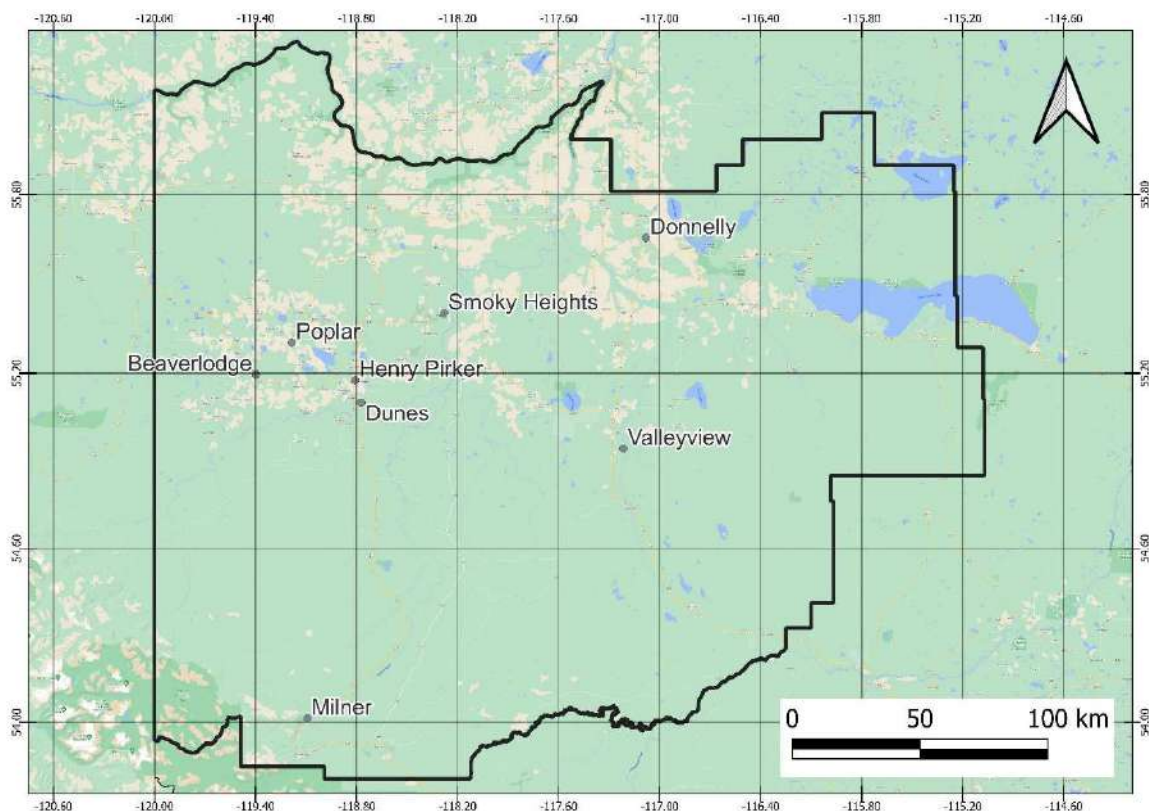


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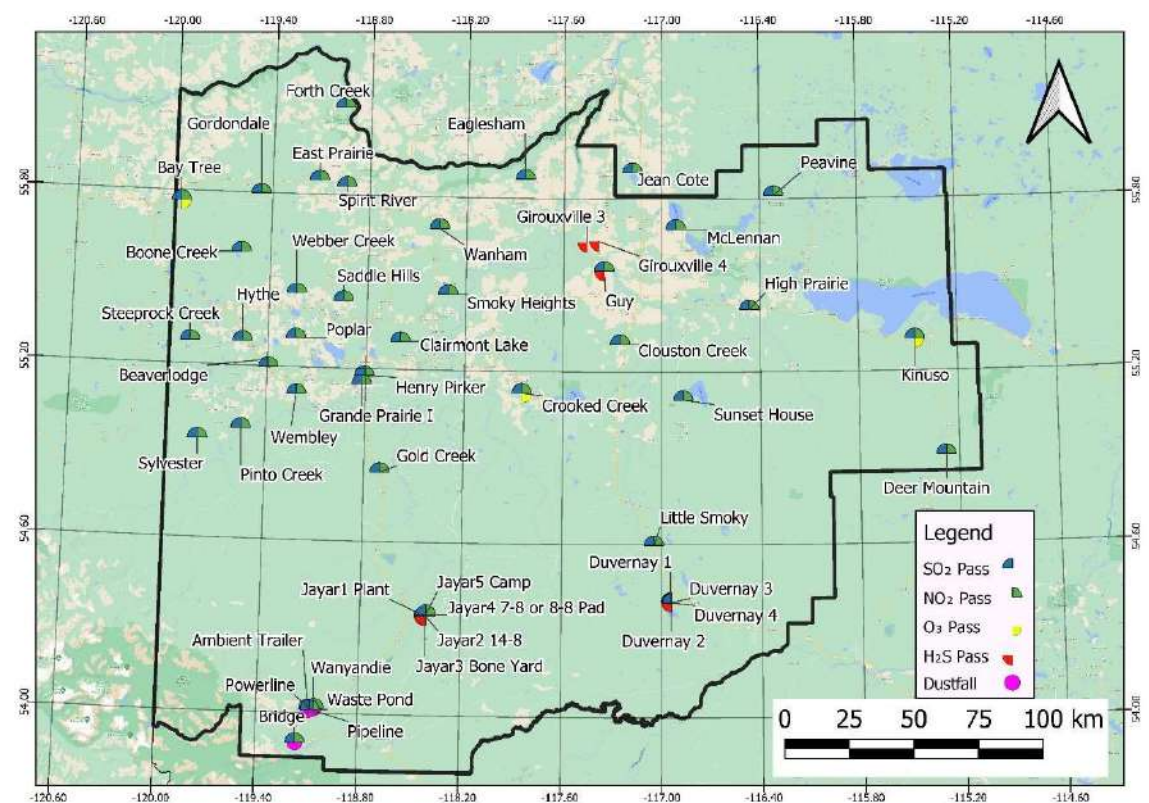
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PAZA Continuous Monitoring Station Locations



PAZA Passive Monitoring Station Locations



1 December Monthly Station Summaries

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

1.1 Beaverlodge Air Monitoring Station

PAZA - January 2023 Beaverlodge Station Report

Parameter	January			Operational	Max	1-hour		24-hour		Exceedance				Calibration	
	Average	Minimum	Valid			Objective	Max Day and Time	Max	Objective	Max Day	1hr	8hr	24hr	30d	Date
NO (ppb)	4.5	0.0	95.0%	100.0%	56.6	-	Jan-06 12:00	23.0	-	Jan-18	0	-	-	-	Jan 04, 2023
NO ₂ (ppb)	10.6	0.4	95.0%	100.0%	35.2	159	Jan-07 19:00	22.2	-	Jan-18	0	-	-	-	Jan 04, 2023
NO _x (ppb)	15.1	0.4	95.0%	100.0%	83.3	-	Jan-06 12:00	45.2	-	Jan-18	-	-	-	-	Jan 04, 2023
O ₃ (ppb)	20.8	0.0	95.3%	100.0%	42.3	76	Jan-29 16:00	38.9	-	Jan-20	0	-	-	-	Jan 04, 2023
PM _{2.5} (µg/m³)	9.5	0.2	99.6%	100.0%	258.0	80	Jan-13 02:00	32.4	29	Jan-13	2	-	1	-	Jan 03, 2023
SO ₂ (ppb)	1.5	0.0	95.3%	100.0%	14.4	172	Jan-10 21:00	5.2	48	Jan-14	0	-	0	0	Jan 03, 2023
	Average	Minimum	Valid	Operational	Maximum	<div>Note: Valid hours must be greater than 75% Operational hours must be greater than 90%</div>									
Temp (°C)	-5.9	-22.1	100.0%	100.0%	7.8										
RH (%)	78.0	40.1	100.0%	100.0%	96.7										
WS (km/hr)	8.5	0.1	95.0%	95.0%	52.7										
WD (deg)	278	0.9	95.0%	95.0%	359.8	<div>Average Wind Direction278W</div>									

Update Summary:

Parameter	Make	Model	Equipment summary
NO/NO ₂ /NO _x	Thermo	42i	No Operational issues noted
O ₃	Thermo	49iQ	No Operational issues noted
PM _{2.5}	Sharp	5030	No Operational issues noted; 2x1hr AAAQG + 1x24hr AAAQO
SO ₂	Thermo	43i-TLE	No Operational issues noted
Met Equip	MetOne	50.5	Wind head frozen Jan 11-12, 37hrs removed

1.2 Dunes Air Monitoring Station

PAZA - January 2023 Dunes Station Report

Parameter	January				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
PM _{2.5} (µg/m³)	10.0	0.0	99.7%	100.0%	43.0	80	Jan-14 06:00	27.3	29	Jan-12	0	-	0	-	Jan-23-2023
SO ₂ (ppb)	0.6	0.0	95.3%	100.0%	9.9	172	Jan-19 17:00	1.5	48	Jan-15	0	-	0	0	Jan-23-2023
TRS (ppb)	0.6	0.0	95.3%	100.0%	7.1	-	Jan-08 09:00	1.8	-	Jan-01	-	-	-	-	Jan-23-2023
	Average	Minimum	Valid	Operational	Maximum	<div>Note: Valid hours must be greater than 75% Operational hours must be greater than 90%</div>									
Temp (°C)	-7.7	-24.1	100.0%	100.0%	9.3										
RH (%)	76.1	40.9	100.0%	100.0%	93.5										
WS (km/hr)	3.0	0.0	100.0%	100.0%	13.3										
WD (deg)	279	1.9	100.0%	100.0%	359.5	<div>Average Wind Direction279W</div>									

Update Summary:

Parameter	Make	Model	Equipment summary
PM _{2.5}	Thermo	TEOM AB	No Operational issues noted
SO ₂	TECO	43i	No Operational issues noted
TRS	TECO	43C	No Operational issues noted
Met Equip	Gil/RMYoung	MetPak/RMY86004	No Operational issues noted

1.3 Grande Prairie - Henry Pirker Air Monitoring Station

PAZA - January 2023 Henry Pirker Station Report

AAR - January 2023 Henry F. Miller Station Report																
Parameter	January				Operational	1-hour			8-hour / 24-hour			Exceedance				Calibration
	Average	Minimum	Valid	Max		Objective	Max Day and Time	Max	Objective	Max Day	1hr	8hr	24hr	30d	Date	
NO (ppb)	25.7	0.0	95.0%	100.0%	150.9	-	Jan-07 19:00	70.4	-	Jan-09	-	-	-	-	Jan 11, 2023	
NO ₂ (ppb)	21.8	1.1	95.0%	100.0%	53.9	159	Jan-01 15:00	38.0	-	Jan-08	0	-	-	-	Jan 11, 2023	
NO _x (ppb)	47.8	1.2	95.0%	100.0%	203.4	-	Jan-07 19:00	108.2	-	Jan-09	-	-	-	-	Jan 11, 2023	
O ₃ (ppb)	13.0	0.0	95.3%	100.0%	41.1	76	Jan-27 01:00	32.5	-	Jan-20	0	-	-	-	Jan 11, 2023	
PM _{2.5} (µg/m³)	16.2	0.2	99.7%	100.0%	57.4	80	Jan-15 07:00	40.7	29	Jan-17	0	-	6	-	Jan 17, 2023	
SO ₂ (ppb)	0.7	0.0	95.2%	100.0%	15.1	172	Jan-12 23:00	2.9	48	Jan-12	0	-	0	0	Jan 11, 2023	
H ₂ S (ppb)	0.7	0.0	95.2%	100.0%	2.3	10	Jan-04 10:00	1.4	3	Jan-07	0	-	0	-	Jan 17, 2023	
CH ₄ (ppm)	2.5	2.0	95.3%	100.0%	3.9	-	Jan-04 07:00	3.0	-	Jan-08	-	-	-	-	Jan 12, 2023	
THC (ppm)	2.7	2.0	95.3%	100.0%	4.6	-	Jan-04 07:00	3.6	-	Jan-09	-	-	-	-	Jan 12, 2023	
NMHC (ppm)	0.2	0.0	95.3%	100.0%	1.0	-	Jan-18 02:00	0.7	-	Jan-09	-	-	-	-	Jan 12, 2023	
CO (ppm)	0.4	0.1	95.3%	100.0%	1.3	13	Jan-02 19:00	0.6	5	Jan-01	0	0	-	-	Jan 12, 2023	
	Average	Minimum	Valid	Operational	Maximum											
Temp (°C)	-7.7	-21.9	100.0%	100.0%	7.4	Note: Valid hours must be greater than 75% Operational hours must be greater than 90%										
RH (%)	70.7	42.4	100.0%	100.0%	83.9											
SR (W/m²)	19.4	0.0	100.0%	100.0%	207.9											
WS (km/hr)	5.3	0.0	100.0%	100.0%	35.1											
WD (deg)	268	1.4	100.0%	100.0%	357.1	Average Wind Direction 268 W										

Update Summary:

Parameter	Make	Model	Equipment summary
NO/NO ₂ /NO _x	Thermo	42IQ	No Operational issues noted
O ₃	TECO	49I	No Operational issues noted
PM _{2.5}	API	T640	No Operational issues noted; six readings above the 24hr AAAQO
SO ₂	TEI	43I-TLE	No Operational issues noted
H ₂ S	TEI	450i	No Operational issues noted
THC/CH ₄ /NMHC	TEI	55i	No Operational issues noted
CO	TEI	48I-TLE	No Operational issues noted
Met Equip	MetOne	50.5	No Operational issues noted

1.4 Smoky Heights Air Monitoring Station

PAZA - January 2023 Smoky Heights Station Report

AA - January 2023 Smoky Heights Station Report															
Parameter	January			Operational	Max	1-hour		24-hour			Exceedance				Calibration Date
	Average	Minimum	Valid			Objective	Max Day and Time	Max	Objective	Max Day	1hr	8hr	24hr	30d	
PM _{2.5} (µg/m³)	9.0	0.0	99.9%	100.0%	39.2	80	Jan-11 10:00	23.3	29	Jan-11	0	-	0	-	Jan 12, 2023
SO ₂ (ppb)	0.7	0.0	95.2%	100.0%	4.9	172	Jan-24 00:00	1.5	48	Jan-22	0	-	0	0	Jan 12, 2023
TRS (ppb)	0.4	0.0	86.6%	91.1%	3.4	-	Jan-07 19:00	1.0	-	Jan-03	-	-	-	-	Jan 12, 2023
	Average	Minimum	Valid	Operational	Maximum										
Temp (°C)	-8.1	-24.3	100.0%	100.0%	5.8	<div>Note: Valid hours must be greater than 75% Operational hours must be greater than 90%</div>									
WS (km/hr)	11.6	0.2	100.0%	100.0%	51.0										
WD (deg)	254	0.2	100.0%	100.0%	357.8	Average Wind Direction 254 WNW									

Update Summary:

Parameter	Make	Model	Equipment summary
PM _{2.5}	Sharp	5030	No Operational issues noted
SO ₂	TECO	43i	No Operational issues noted
TRS	TEI	43I APSAA	Removal Cal due to span fail, data removed Jan 25-27 (48hrs), oxidizer maintenance Jan 26-27 (18hrs)
Met Equip	MetOne	50.5	No Operational issues noted

1.5 Valleyview Air Monitoring Station

PAZA - January 2023 Valleyview Station Report

AER - January 2023 Valleyview Station Report																
Parameter	January			Operational	Max	1-hour		Max	24-hour		Exceedance				Calibration Date	
	Average	Minimum	Valid			Objective	Max Day and Time		Objective	Max Day	1hr	8hr	24hr	30d		
SO ₂ (ppb)	0.2	0.0	95.3%	100.0%	2.5	172	Jan-22 19:00	0.4	48	Jan-11	0	-	0	0	Jan 31, 2023	
H ₂ S (ppb)	0.3	0.0	95.3%	100.0%	1.0	10	Jan-04 01:00	0.5	3	Jan-03	0	-	0	-	Jan 31, 2023	
	Average	Minimum	Valid	Operational	Maximum											
Temp (°C)	-8.0	-25.3	100.0%	100.0%	9.7	<div>Note: Valid hours must be greater than 75% Operational hours must be greater than 90%</div>										
RH (%)	82.4	48.1	100.0%	100.0%	97.2											
WS (km/hr)	3.4	0.1	100.0%	100.0%	20.8	<div>Average Wind Direction271NW</div>										
WD (deg)	271	0.0	100.0%	100.0%	359.7											

Update Summary:

Parameter	Make	Model	Equipment summary
SO ₂	TEI	43i-APSCB	No Operational issues noted
H ₂ S	TEI	450i-APHAA / 43C	No Operational issues noted
Met Equip	RMYoung	RM86004	No Operational issues noted

1.6 Donnelly Air Monitoring Station

PAZA - January 2023 Donnelly Station Report

AEA - January 2023 Dornier Station Report																	
Parameter	January			Operational	Max	1-hour			Max	24-hour			Exceedance				Calibration Date
	Average	Minimum	Valid			Objective	Max Day and Time	Objective		Max Day	1hr	8hr	24hr	30d			
SO ₂ (ppb)	0.2	0.0	88.6%	93.2%	1.7	172	Jan-19 14:00	0.5	48	Jan-25	0	-	0	0		Jan 16, 2023	
H ₂ S (ppb)	0.1	0.0	88.6%	93.2%	3.1	10	Jan-19 14:00	0.3	3	Jan-15	0	-	0	-		Jan 16, 2023	
	Average	Minimum	Valid	Operational	Maximum												
Temp (°C)	-7.1	-21.8	92.3%	92.8%	5.6												
WS (km/hr)	8.5	0.0	78.4%	78.7%	38.8												
WD (deg)	210	0.0	78.4%	78.7%	355.8												
<div>Note: Valid hours must be greater than 75%</div> <div>Operational hours must be greater than 90%</div>																	
Average Wind Direction									210 SSW								

Update Summary:

Parameter	Make	Model	Equipment summary
SO ₂	Teco	43i	Power supply failure, Jan 17-18; data loss + Jan 21, 31 (51hrs removed)
H ₂ S	Thermo	45C	Power supply failure, Jan 17-18; data loss + Jan 21, 31 (51hrs removed)
Met Equip	RMYoung	5103	Head froze resulting in maintenance and 161hrs removed (Jan 11-31), 79% operation, 78% valid

1.7 Poplar Air Monitoring Station

PAZA - January 2023 Poplar Station Report

AEA - January 2023 Optical Station Report																
Parameter	January		Valid	Operational	Max	1-hour		Max	24-hour		Exceedance				Calibration	
	Average	Minimum				Objective	Max Day and Time		Objective	Max Day	1hr	8hr	24hr	30d	Date	
NO (ppb)	4.0	0.0	94.2%	99.2%	51.3	-	Jan-17 18:00	22.6	-	Jan-17	-	-	-	-	Jan 05, 2023	
NO ₂ (ppb)	11.5	0.5	94.2%	99.2%	33.9	159	Jan-02 01:00	22.0	-	Jan-05	0	-	-	-	Jan 05, 2023	
NO _x (ppb)	15.7	0.6	94.2%	99.2%	79.5	-	Jan-17 18:00	44.0	-	Jan-17	-	-	-	-	Jan 05, 2023	
O ₃ (ppb)	20.2	0.1	95.3%	100.0%	42.9	76	Jan-19 19:00	41.1	-	Jan-19	0	-	-	-	Jan 05, 2023	
PM _{2.5} (µg/m³)	7.1	0.0	89.8%	90.2%	37.5	80	Jan-10 19:00	22.2	29	Jan-14	0	-	0	-	Jan 09, 2023	
SO ₂ (ppb)	1.5	0.0	95.2%	100.0%	12.4	172	Jan-11 20:00	6.0	48	Jan-12	0	-	0	0	Jan 05, 2023	
TRS (ppb)	0.8	0.2	90.6%	95.0%	6.4	-	Jan-20 17:00	1.5	-	Jan-08	-	-	-	-	Jan 09, 2023	
CH ₄ (ppm)	removed Dec 12, 2022															
THC (ppm)	2.9	2.1	95.3%	100.0%	8.1	-	Jan-09 23:00	4.2	-	Jan-09	-	-	-	-	Jan 09, 2023	
NMHC (ppm)	removed Dec 12, 2022															
	Average	Minimum	Valid	Operational	Maximum											
Temp (°C)	-8.3	-24.1	100.0%	100.0%	6.2	<div>Note: Valid hours must be greater than 75%</div> <div>Operational hours must be greater than 90%</div>										
WS (km/hr)	12.2	0.2	87.7%	87.7%	52.5											
WD (deg)	284	1.6	87.7%	87.7%	360.0	<div>Average Wind Direction</div> <div>284 WNW</div>										

Update Summary:

Parameter	Make	Model	Equipment summary
NO/NO ₂ /NO _x	TEI	42i	No Operational issues noted
O ₃	TEI	49i	No Operational issues noted
PM _{2.5}	Thermo	TEOM AB	Data cycling; negative drift (73hrs removed); Jan 22 maintenance to replace sample filter
SO ₂	TEI	43i	No Operational issues noted
TRS	TEI	43i	Jan 9 calibration fail, maintenance to replace oxidizer, 28hrs invalid, 9rs maintenance
THC	TEI	55i / 51ii-LT	CH ₄ , NMHC not in service
Met Equip	MetOne	50.5	Invalid Jan1 to 06:00; freezing conditions on wind head Jan 11-12, 15-16, 18 resulted in 91hrs removed

1.8 Milner Air Monitoring Station

PAZA - January 2023 Milner Station Report

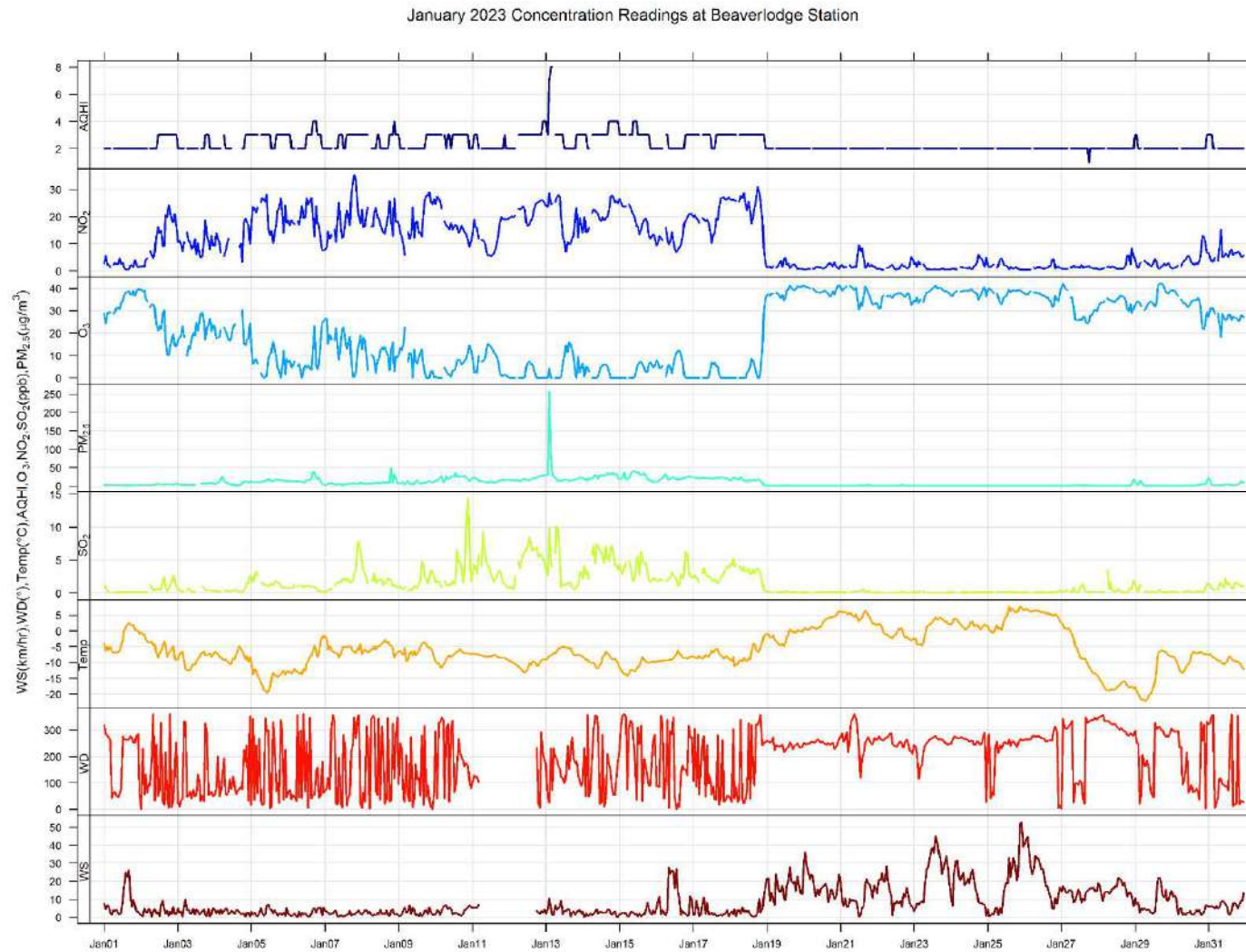
Parameter	January				1-hour			24-hour			Exceedance				Calibration Date
	Average	Minimum	Valid	Operational	Max	Objective	Max Day and Time	Max	Objective	Max Day	1hr	8hr	24hr	30d	
NO (ppb)	2.9	0.0	89.1%	93.8%	50.2	-	Jan-15 04:00	15.9	-	Jan-15	-	-	-	-	Jan 19, 2023
NO ₂ (ppb)	7.5	0.0	89.1%	93.8%	30.5	159	Jan-08 00:00	16.7	-	Jan-17	0	-	-	-	Jan 19, 2023
NO _x (ppb)	10.4	0.0	89.1%	93.8%	72.6	-	Jan-15 04:00	31.7	-	Jan-17	-	-	-	-	Jan 19, 2023
PM _{2.5} (µg/m ³)	6.2	0.0	92.8%	93.4%	176.8	80	Jan-06 12:00	37.8	29	Jan-07	5	-	2	-	Jan 19, 2023
<div> <div>Average</div> <div>Minimum</div> <div>Valid</div> <div>Operational</div> <div>Maximum</div> </div>															
WS (km/hr)	7.4	0.0	93.8%	93.8%	29.4	<div> <div>Note:</div> <div>Valid hours must be greater than 75%</div> <div>Operational hours must be greater than 90%</div> </div>									
WD (deg)	265	1.0	93.8%	93.8%	357.3										
Average Wind Direction									265	W					

Update Summary:

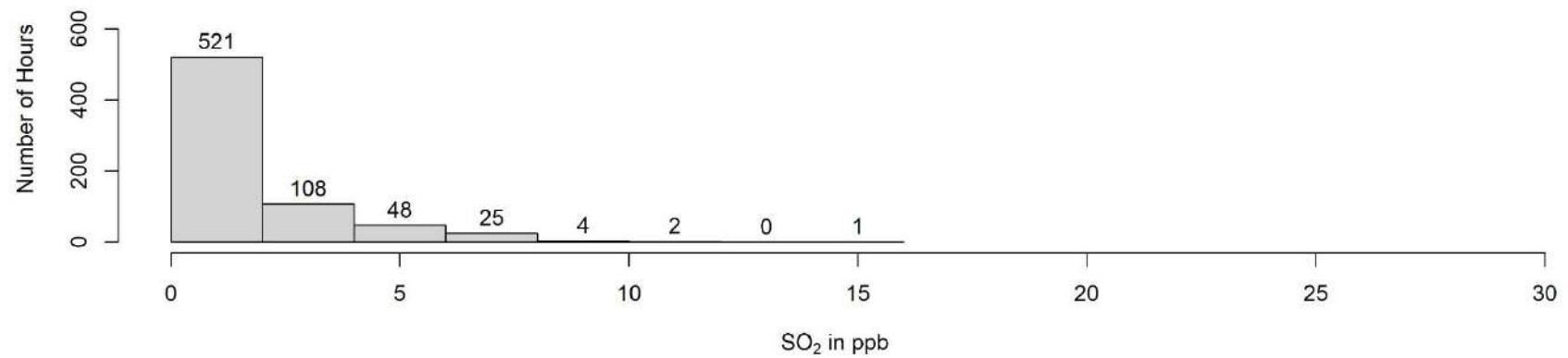
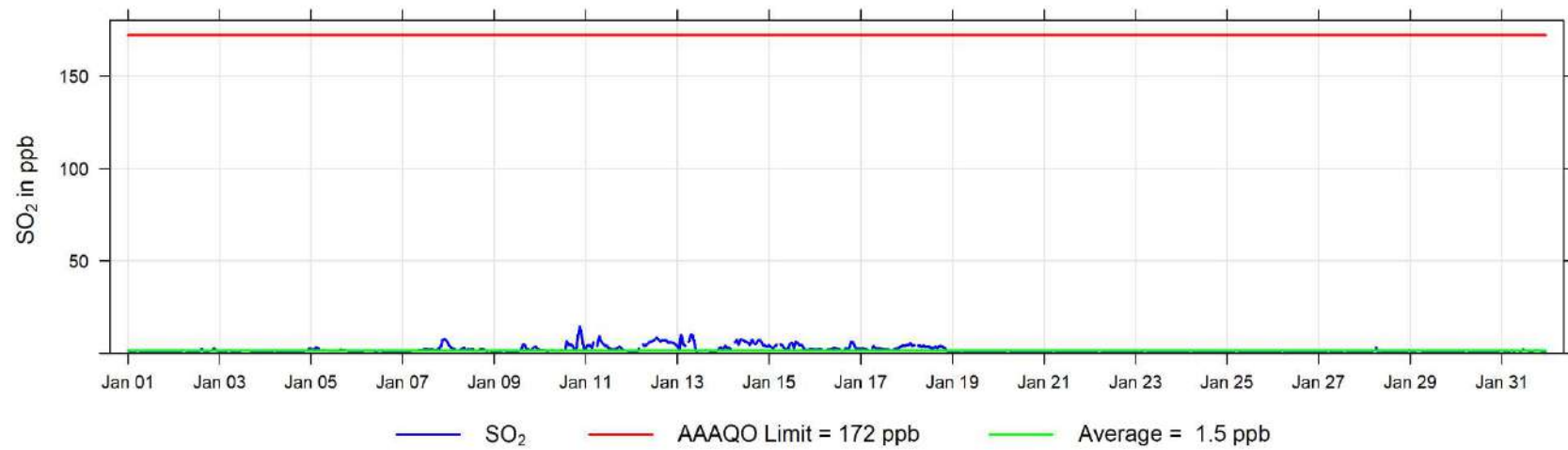
Parameter	Make	Model	Equipment summary
NO/NO ₂ /NO _x	Thermo	42i	DAS failure, Jan 23-25 (46hrs removed)
PM _{2.5}	TEOM	AB	DAS failure, Jan 23-25 (46hrs); 3 hours of data <-3 removed; 5hrsx1hr>AAAQG + 2x24hr>AAAQO
Met Equip	MetOne	50.5	DAS failure, Jan 23-25 (46hrs removed)

2 Beaverlodge Charts

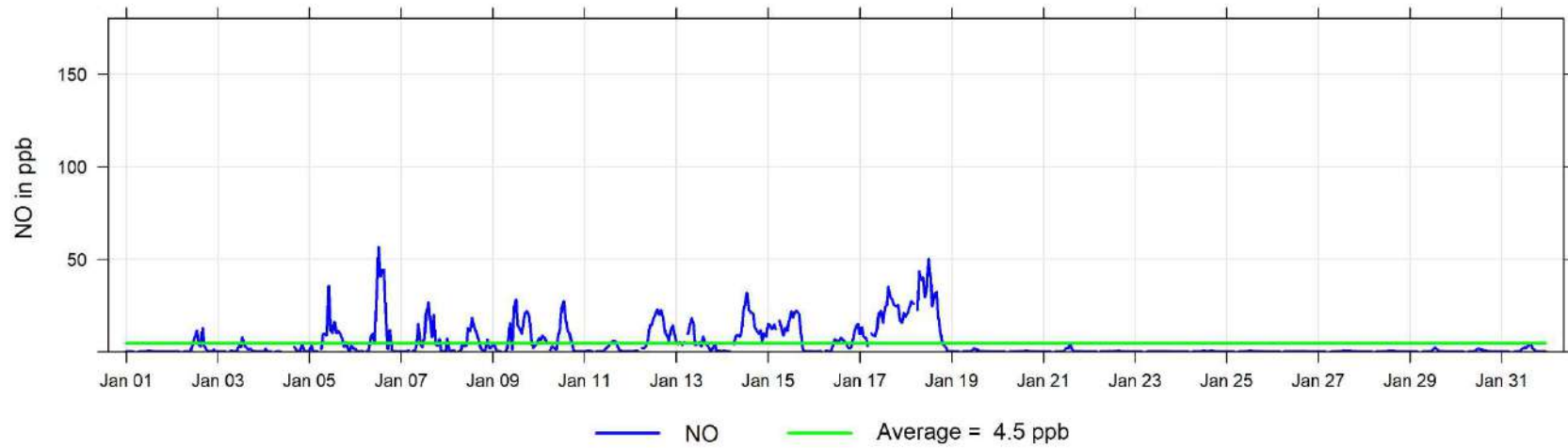
The following pages include the charts and histograms for Beaverlodge Station



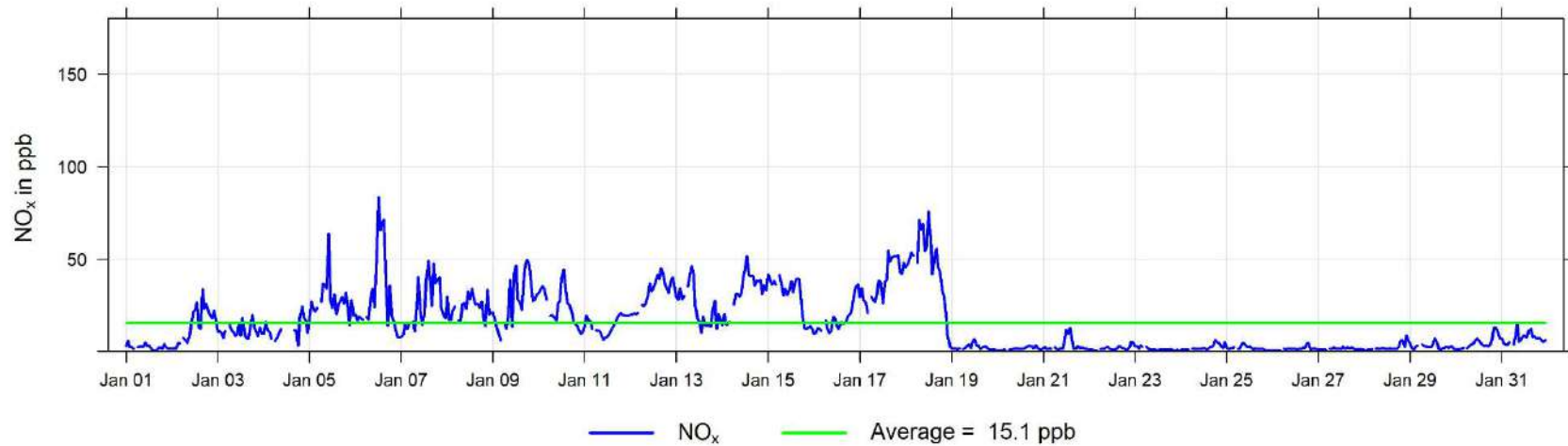
January 2023 Hourly Concentration Readings of SO₂ (in ppb) at Beaverlodge



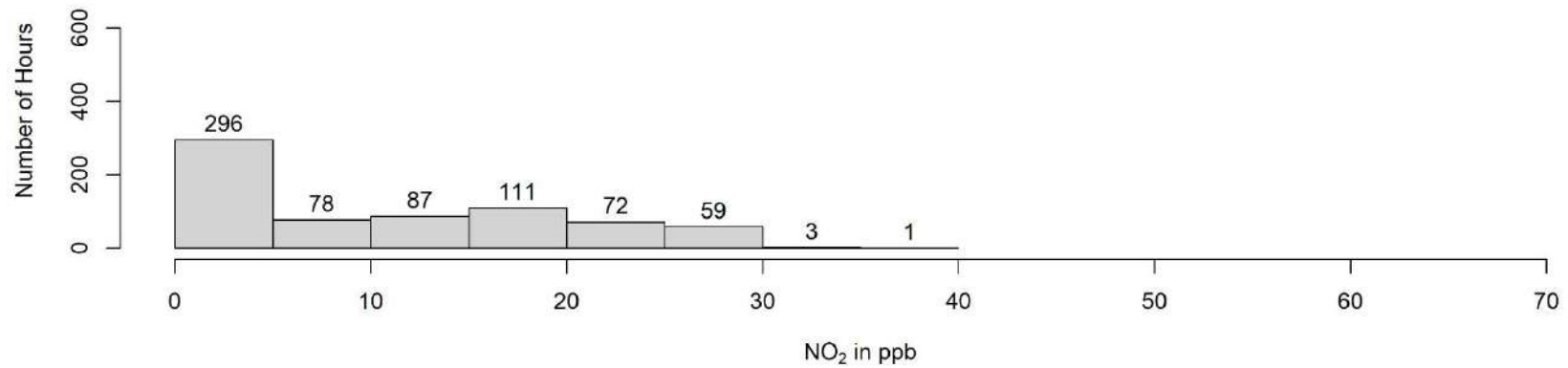
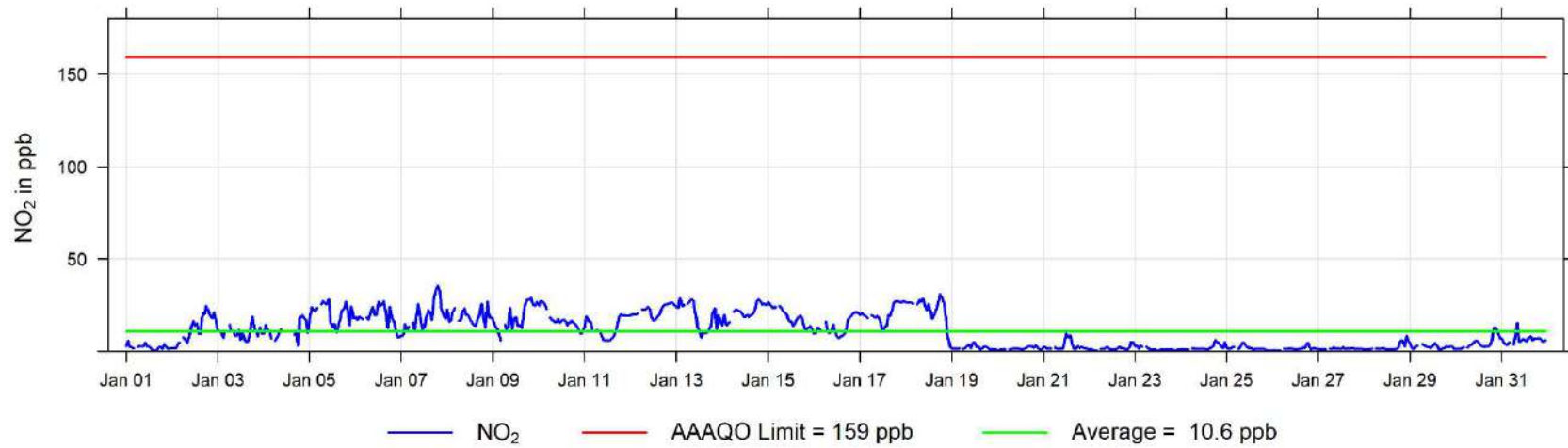
January 2023 Hourly Concentration Readings of NO (in ppb) at Beaverlodge



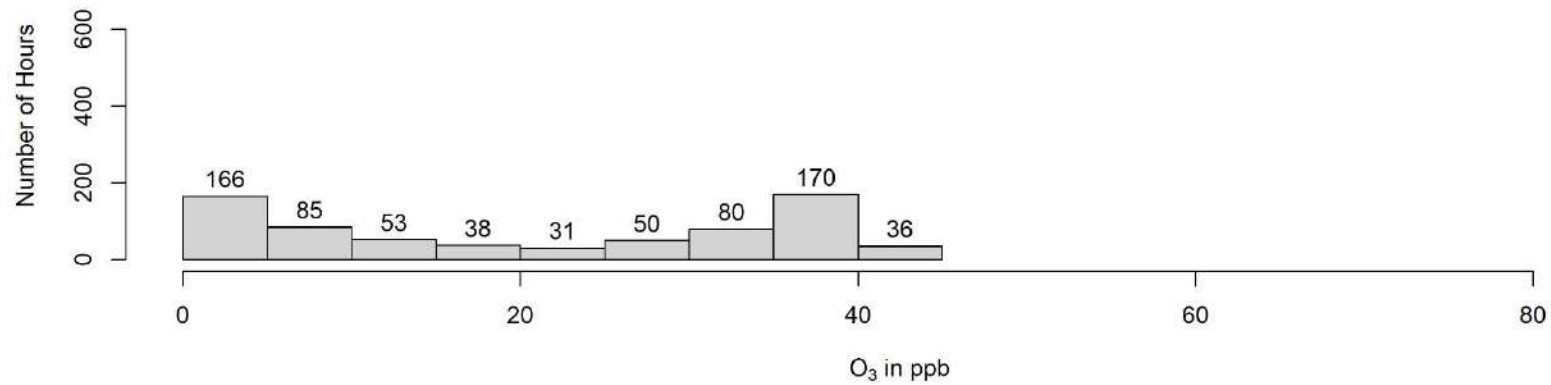
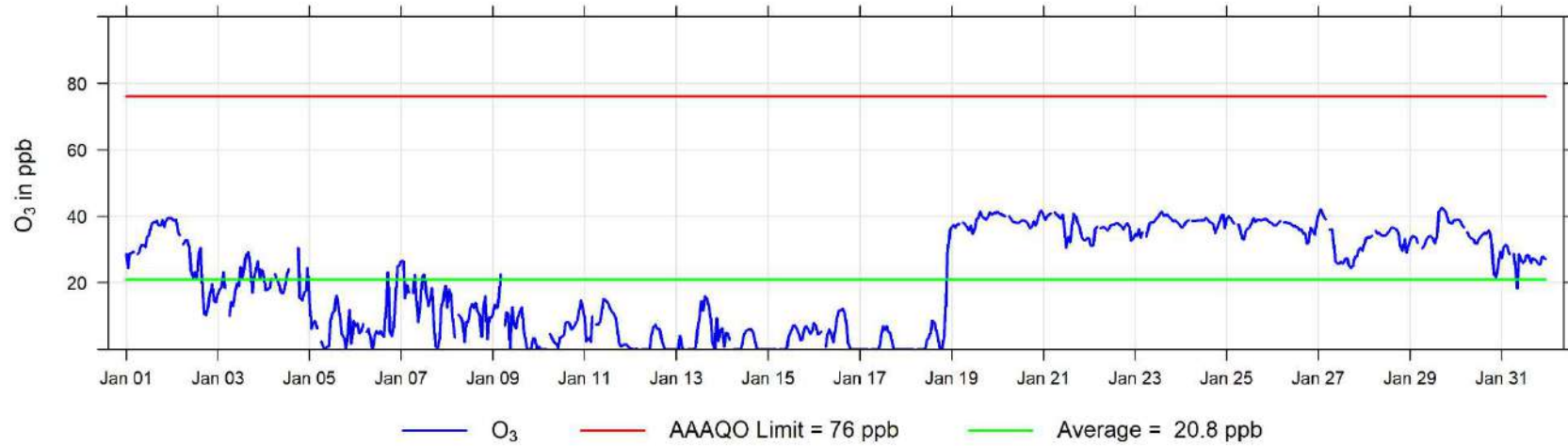
January 2023 Hourly Concentration Readings of NO_x (in ppb) at Beaverlodge



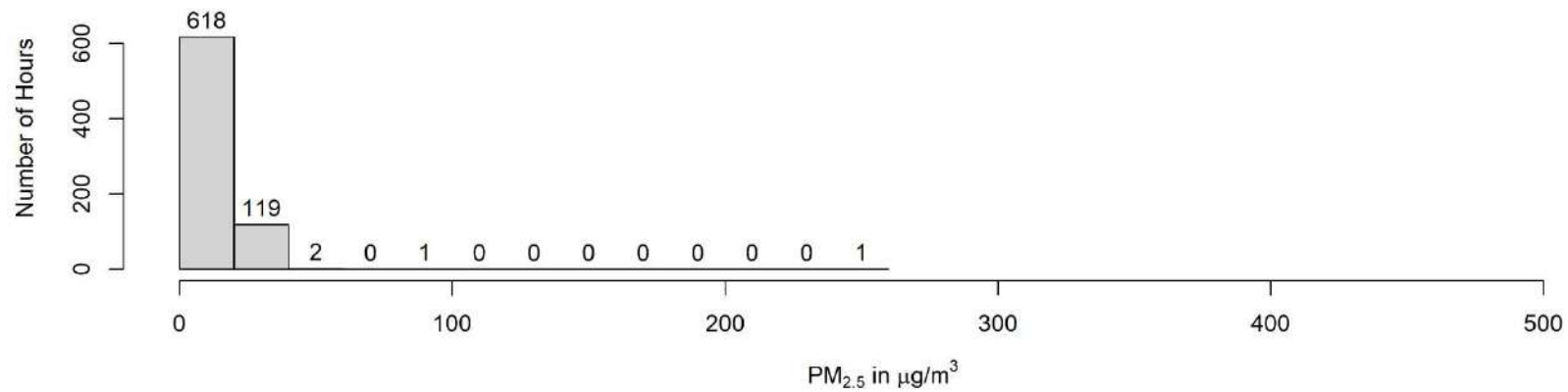
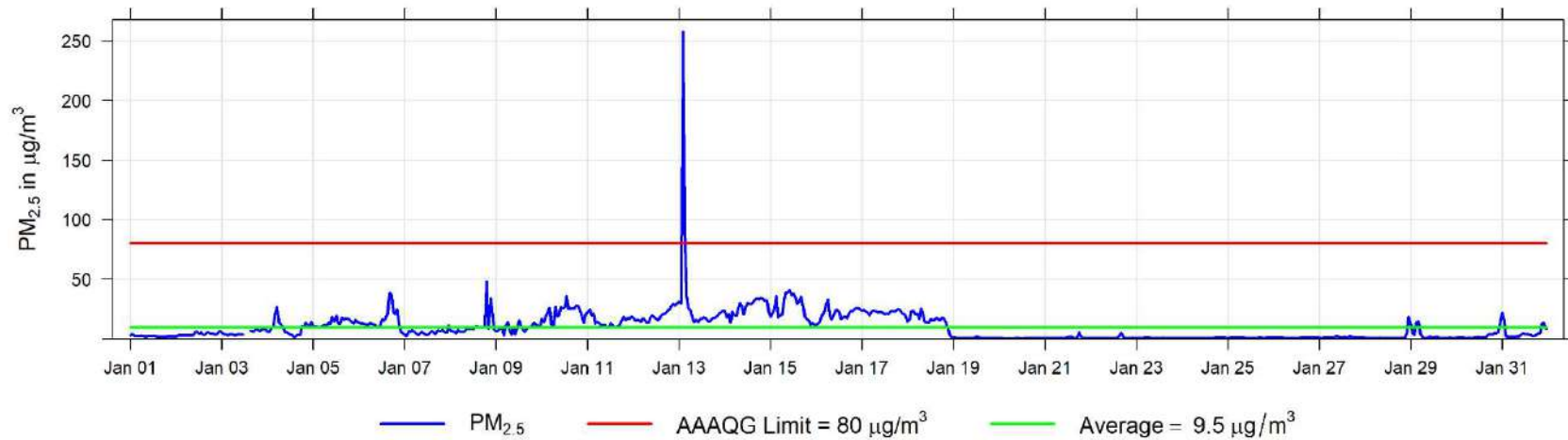
January 2023 Hourly Concentration Readings of NO₂ (in ppb) at Beaverlodge



January 2023 Hourly Concentration Readings of O₃ (in ppb) at Beaverlodge



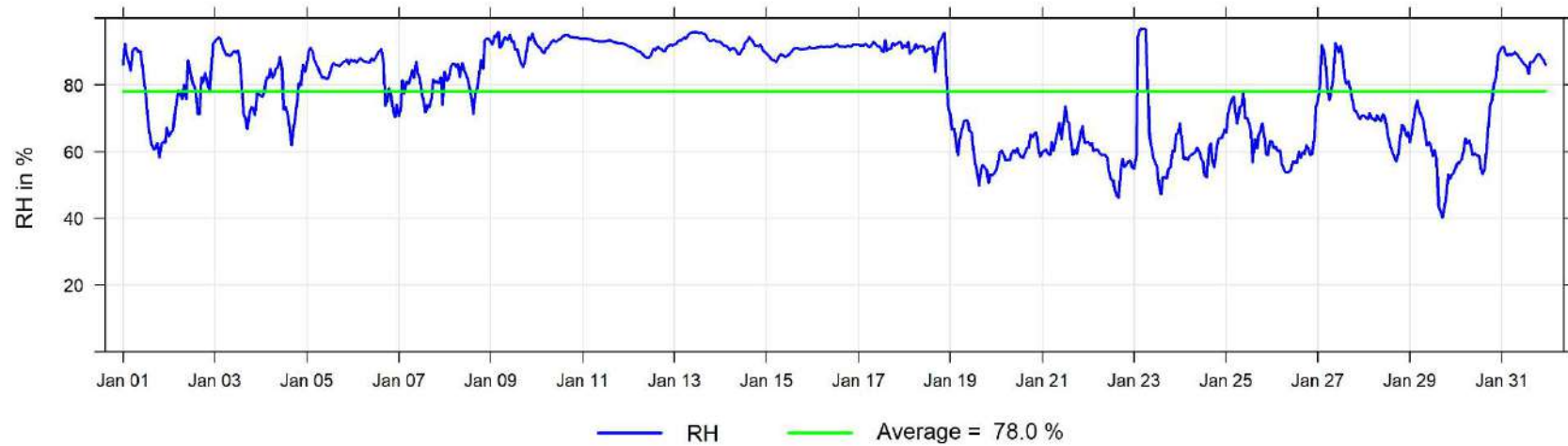
January 2023 Hourly Concentration Readings of PM_{2.5} in µg/m³ at Beaverlodge



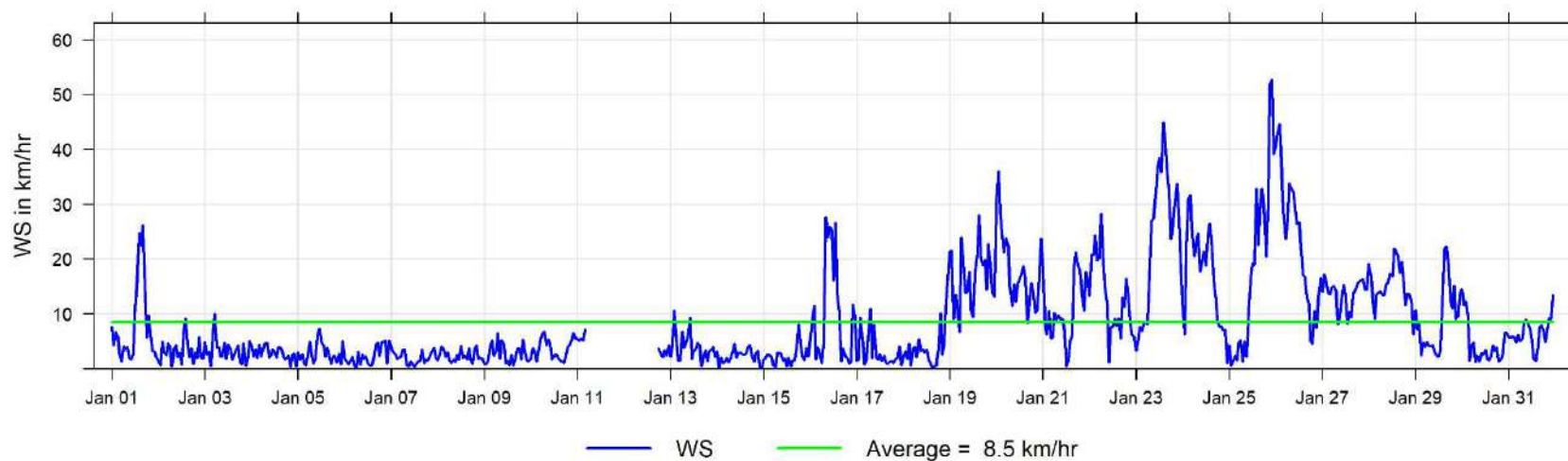
January 2023 Hourly Temperature Readings (in °C) at Beaverlodge



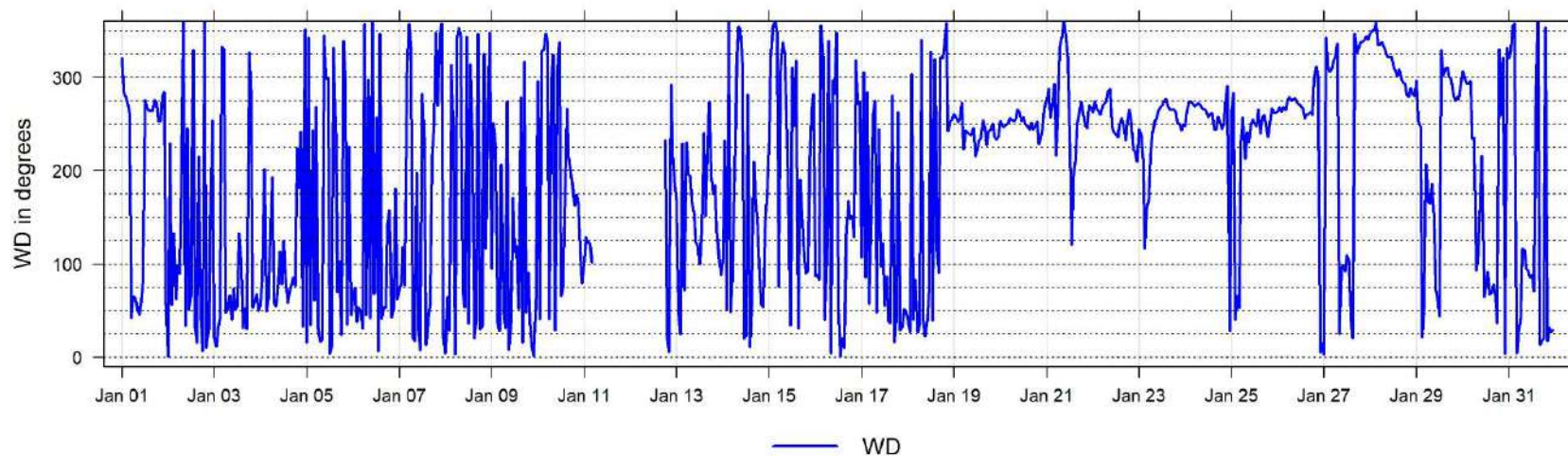
January 2023 Hourly Readings of Relative Humidity (in %) at Beaverlodge



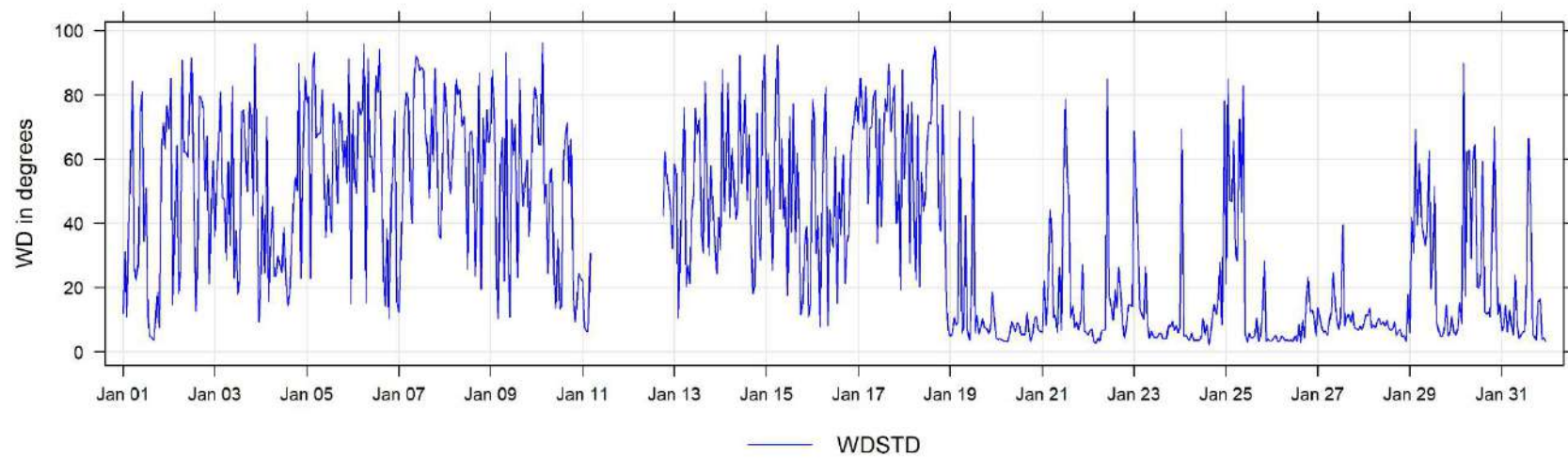
January 2023 Hourly Readings of Wind Speed (in km/hr) at Beaverlodge

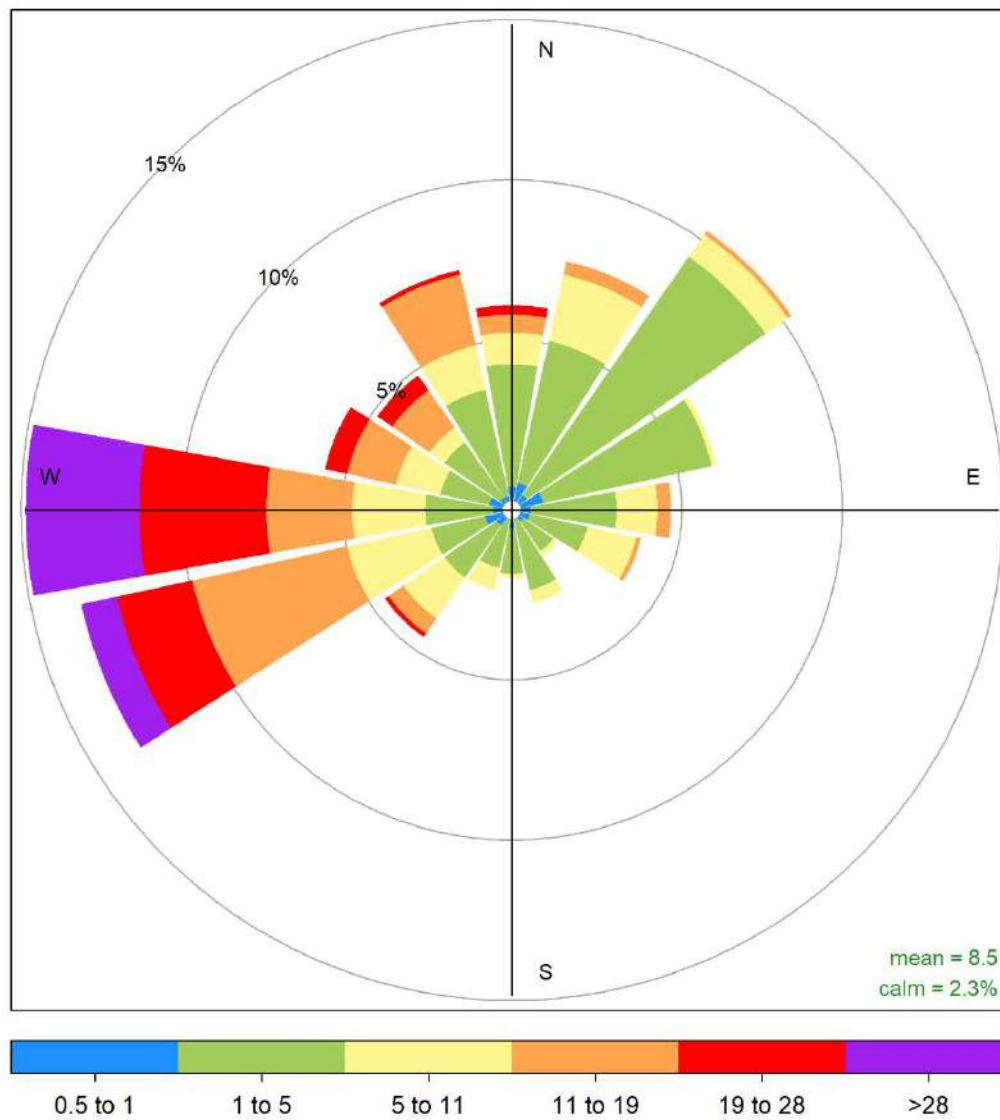


January 2023 Hourly Readings of Wind Direction (in degrees) at Beaverlodge



January 2023 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Beaverlodge

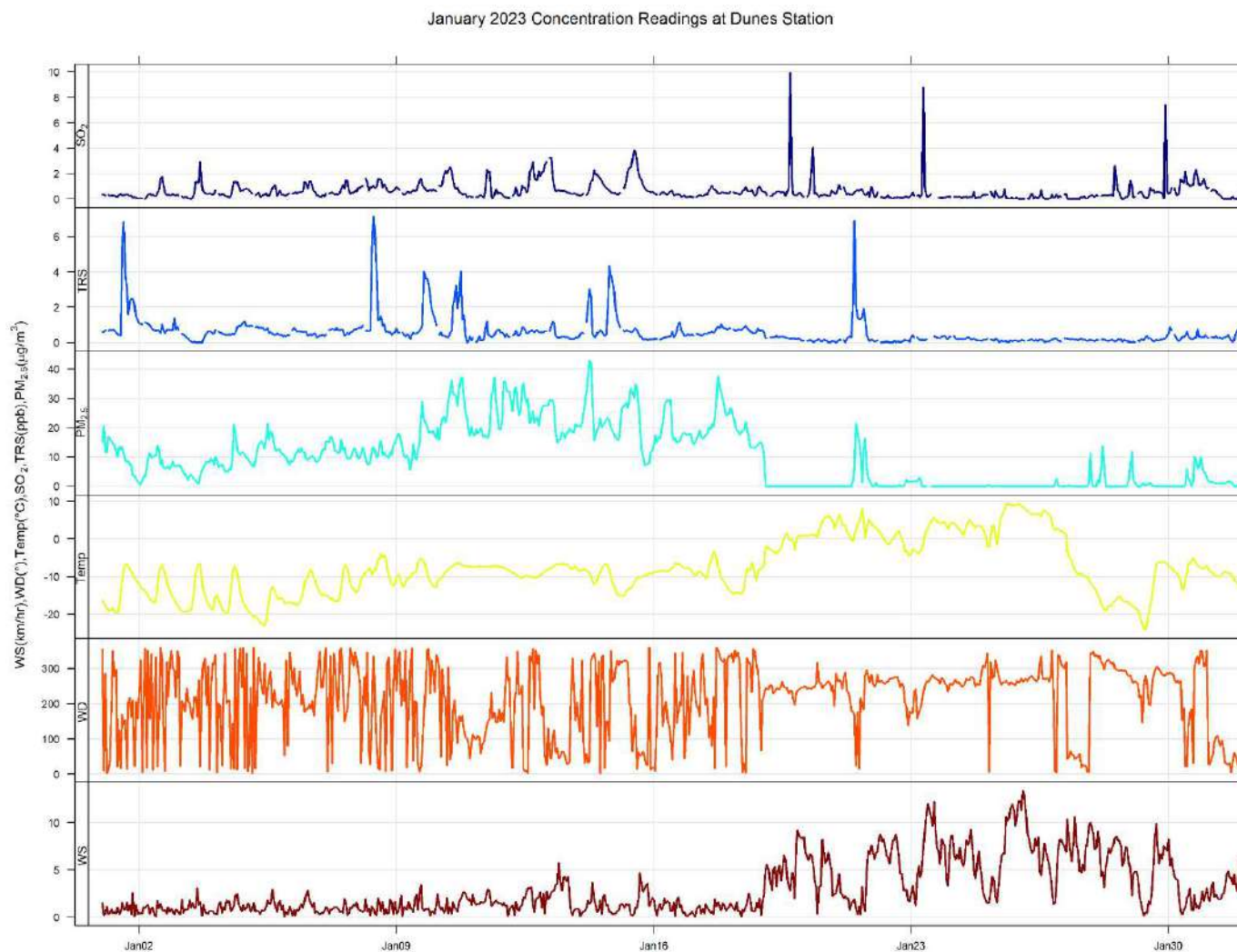




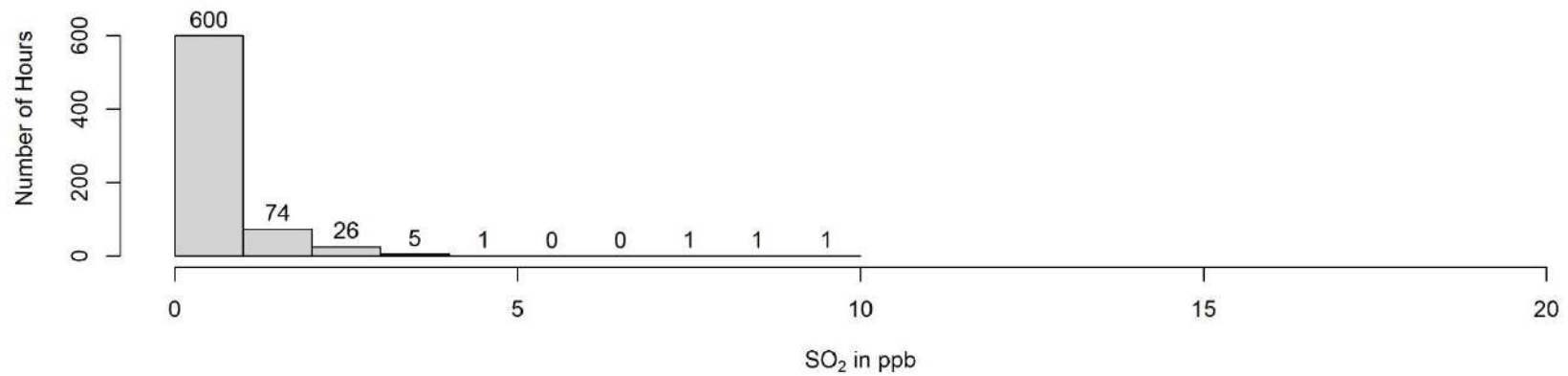
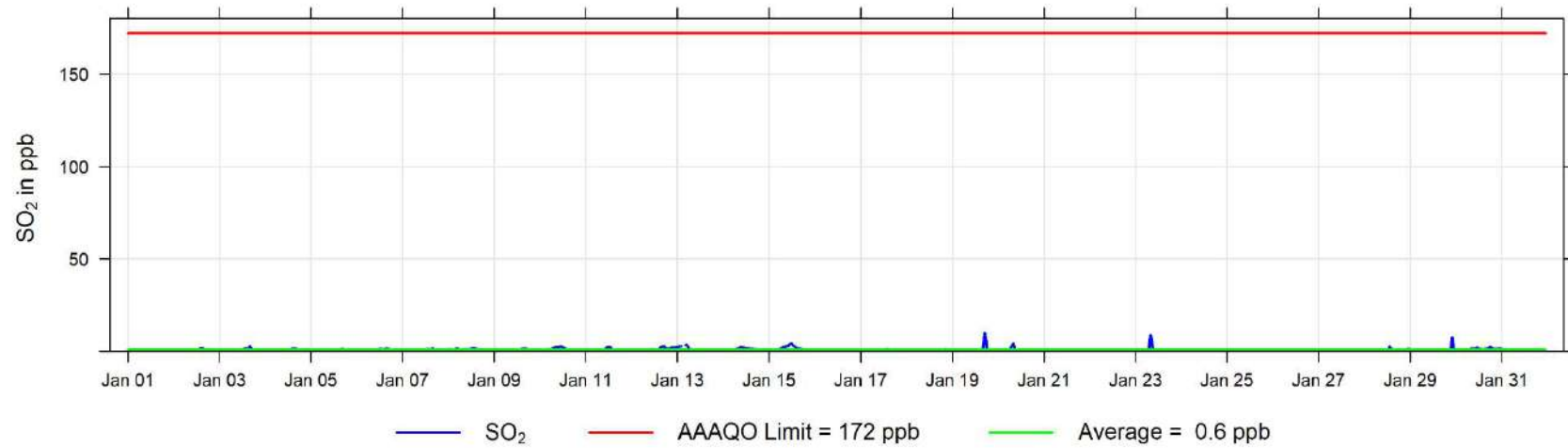
Beaverlodge January 2023 Wind Rose, wind speed in km/hr
Frequency of counts by wind direction (%)

3 Dunes Charts

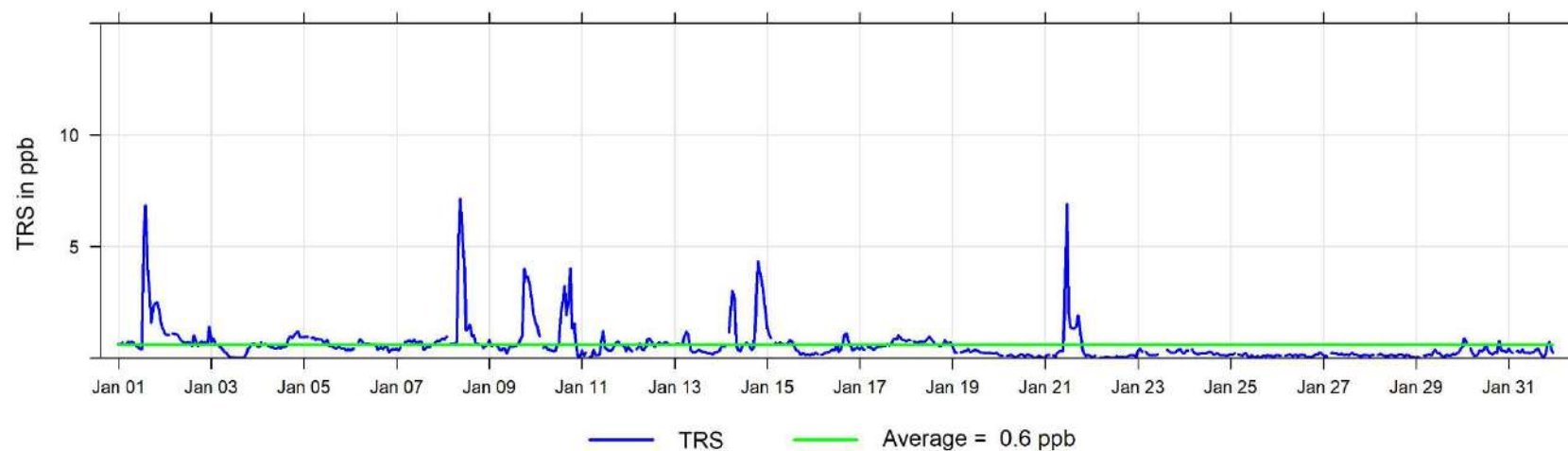
The following pages include the charts and histograms for Dunes Station



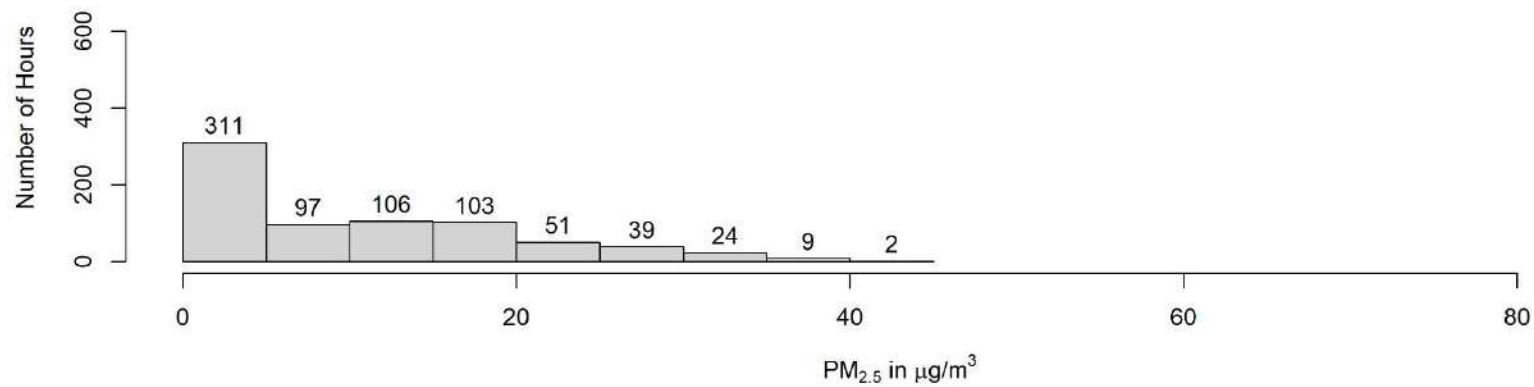
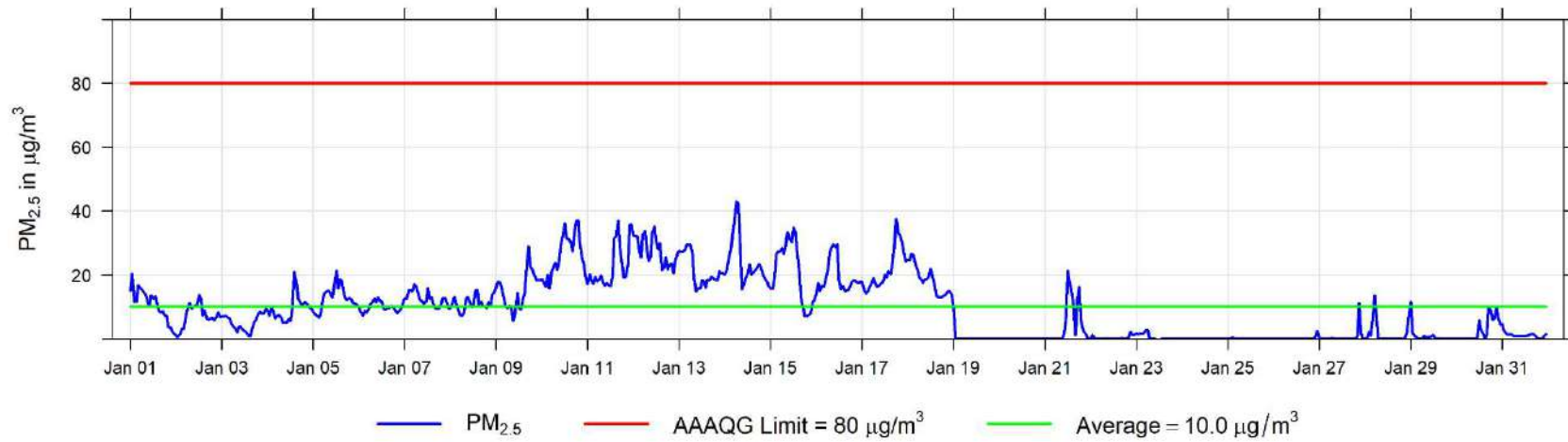
January 2023 Hourly Concentration Readings of SO₂ (in ppb) at Dunes



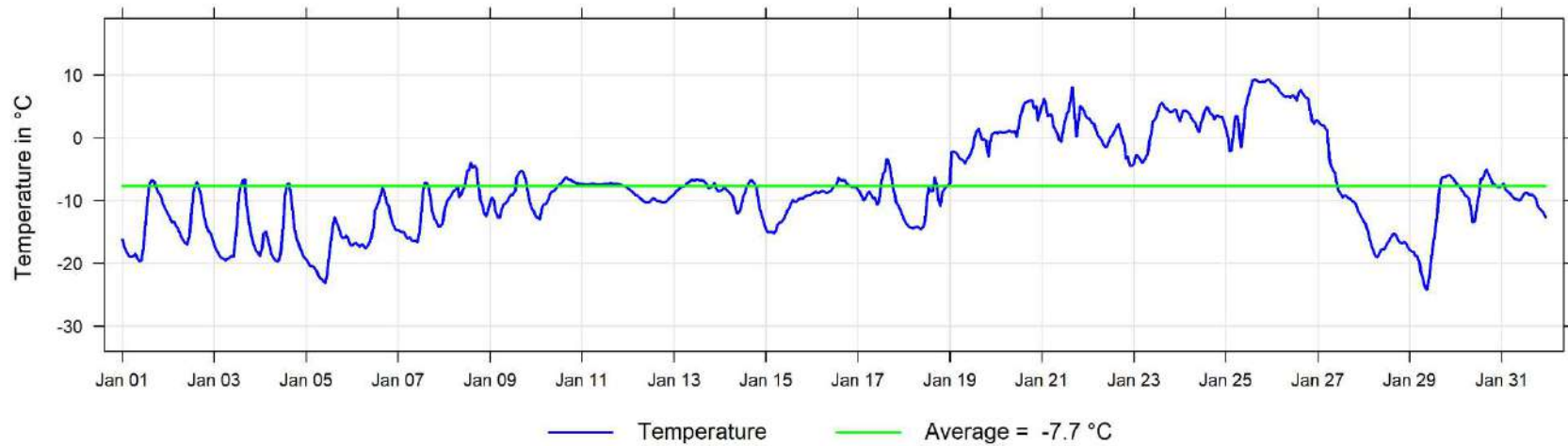
January 2023 Hourly Concentration Readings of TRS (in ppb) at Dunes



January 2023 Hourly Concentration Readings of PM_{2.5} in $\mu\text{g}/\text{m}^3$ at Dunes



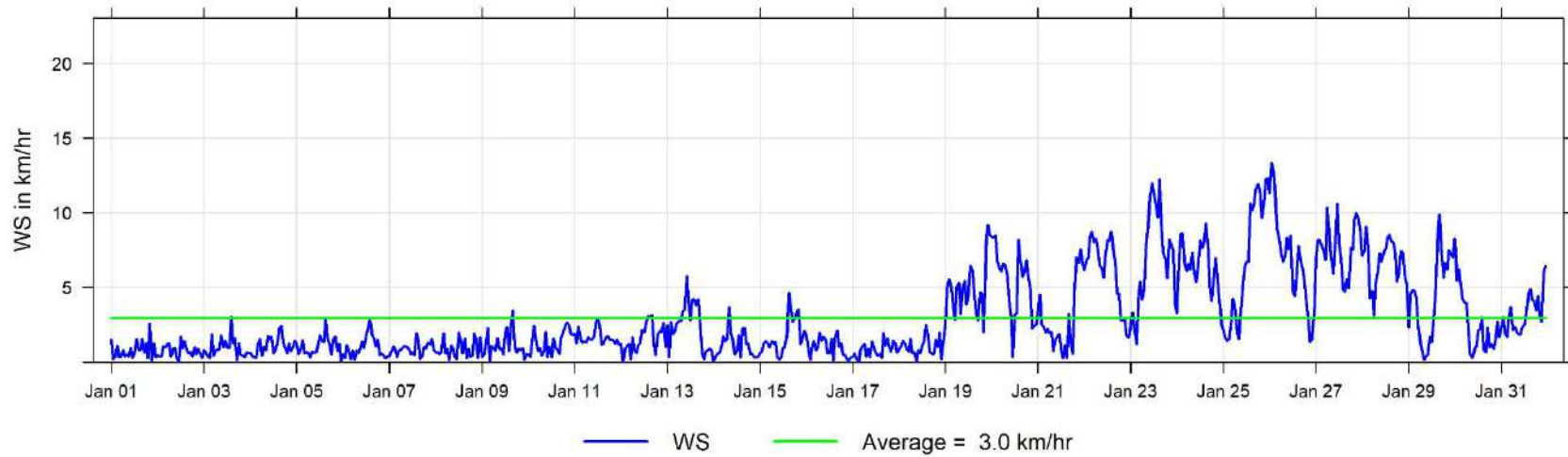
January 2023 Hourly Temperature Readings (in °C) at Dunes



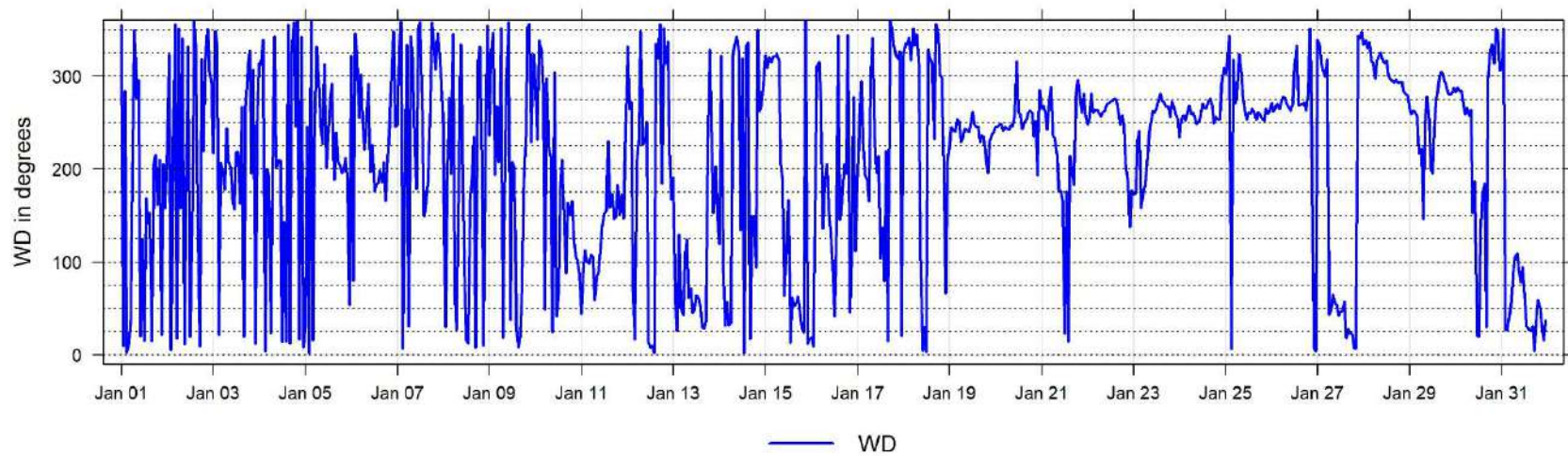
January 2023 Hourly Readings of Relative Humidity (in %) at Dunes



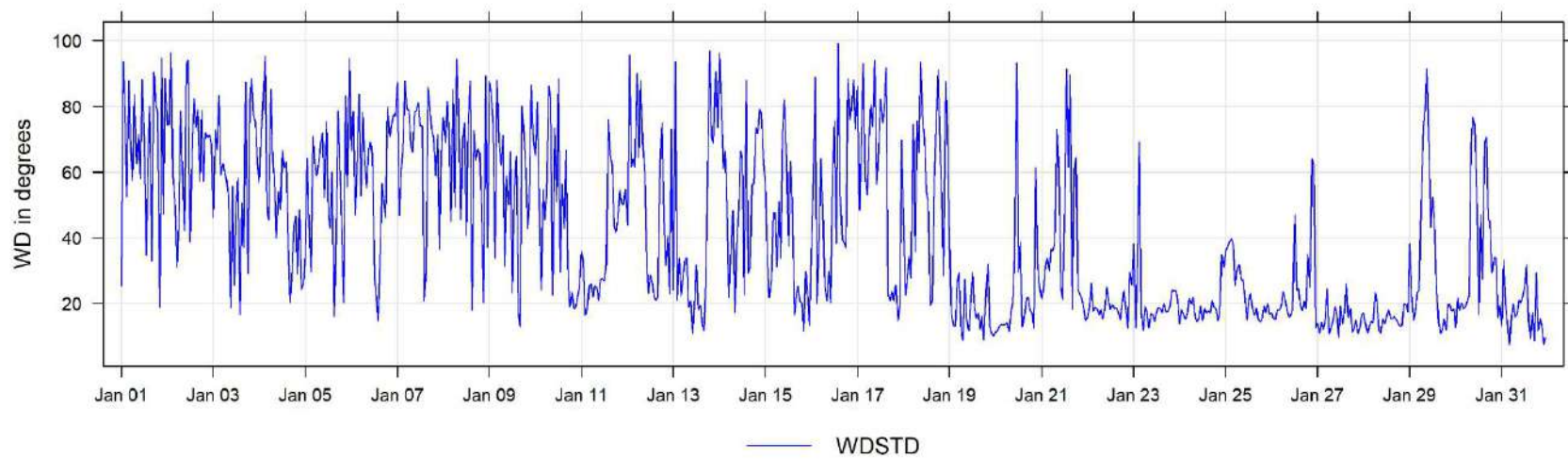
January 2023 Hourly Readings of Wind Speed (in km/hr) at Dunes

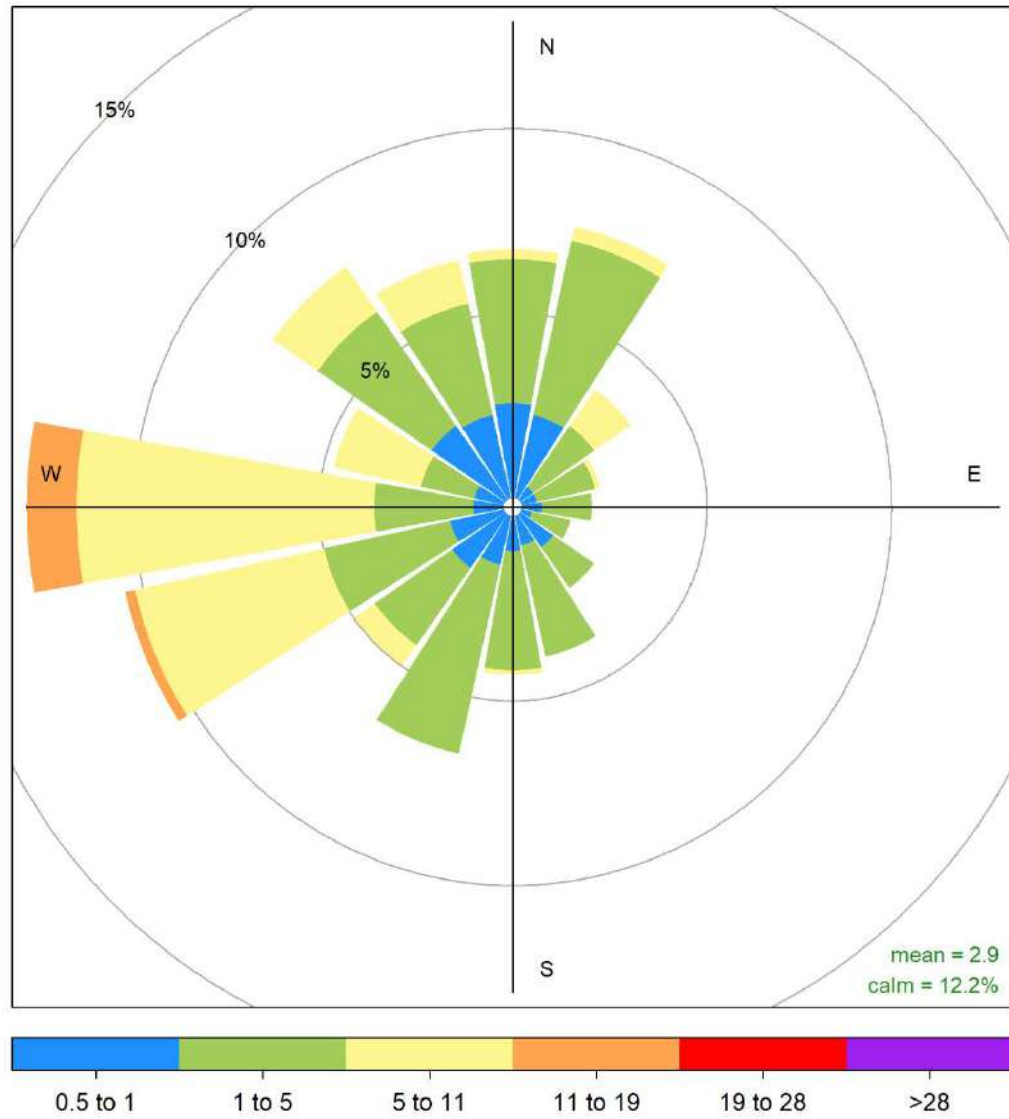


January 2023 Hourly Readings of Wind Direction (in degrees) at Dunes



January 2023 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Dunes

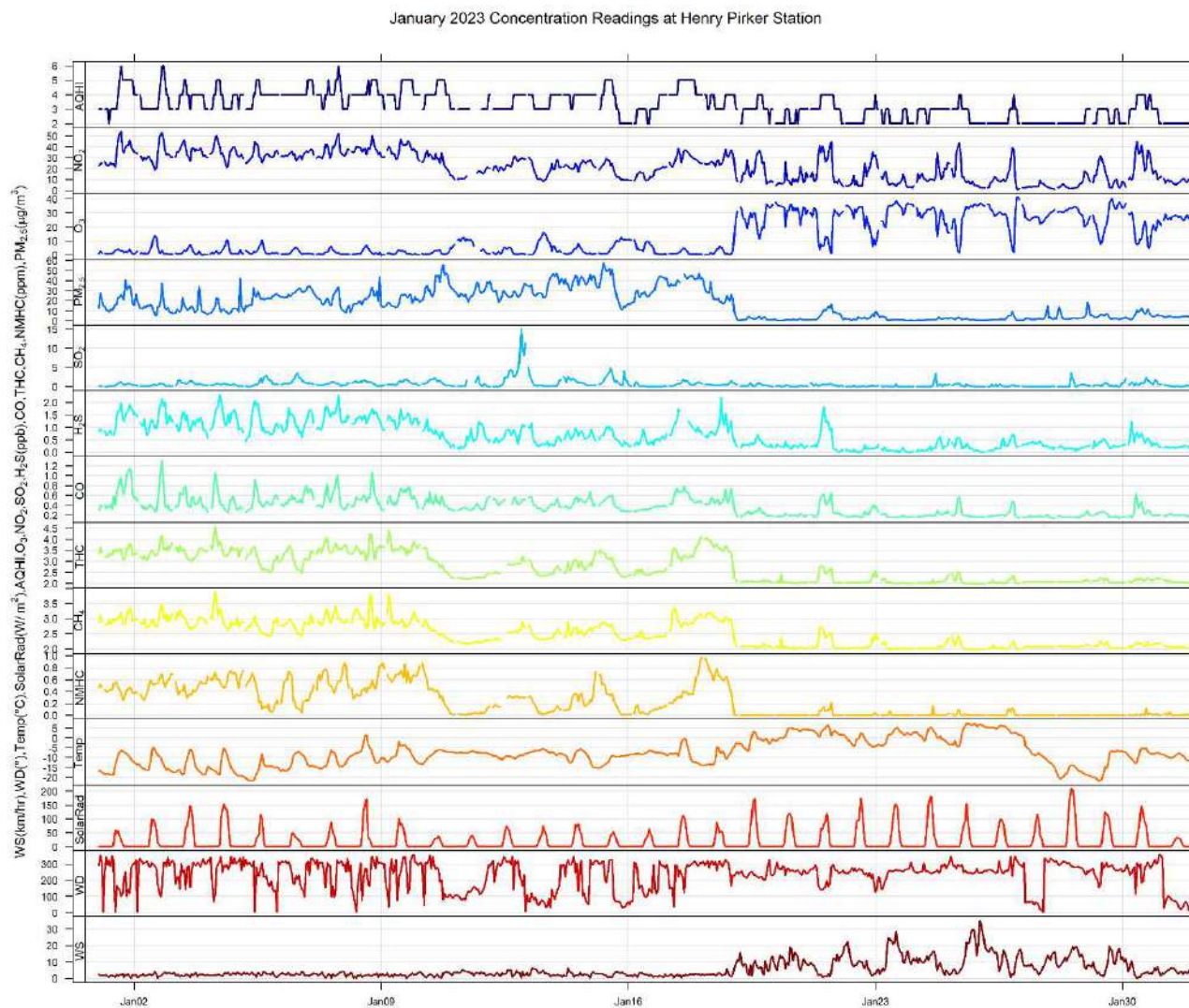




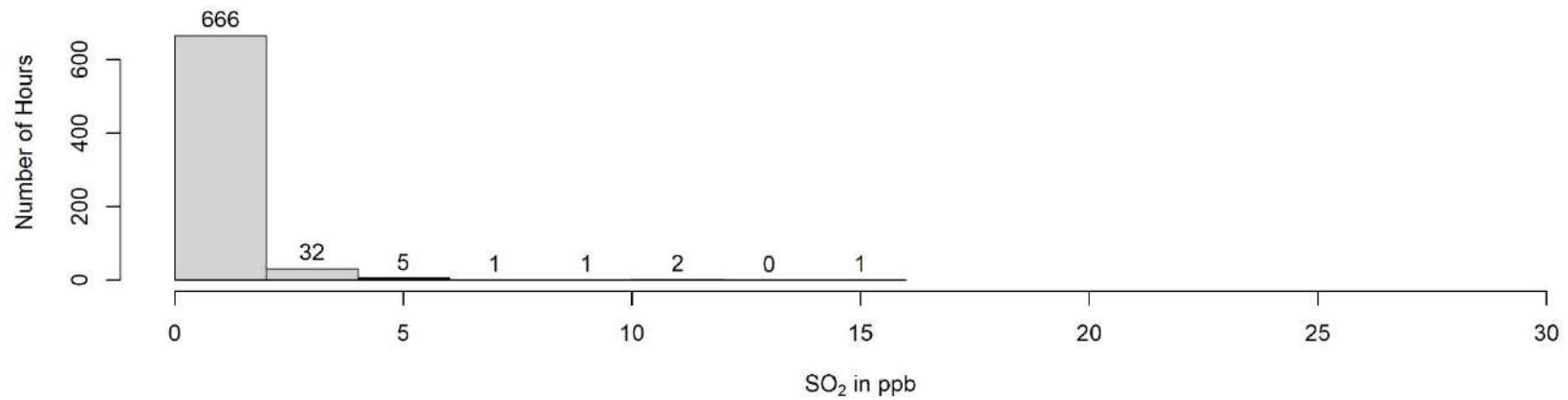
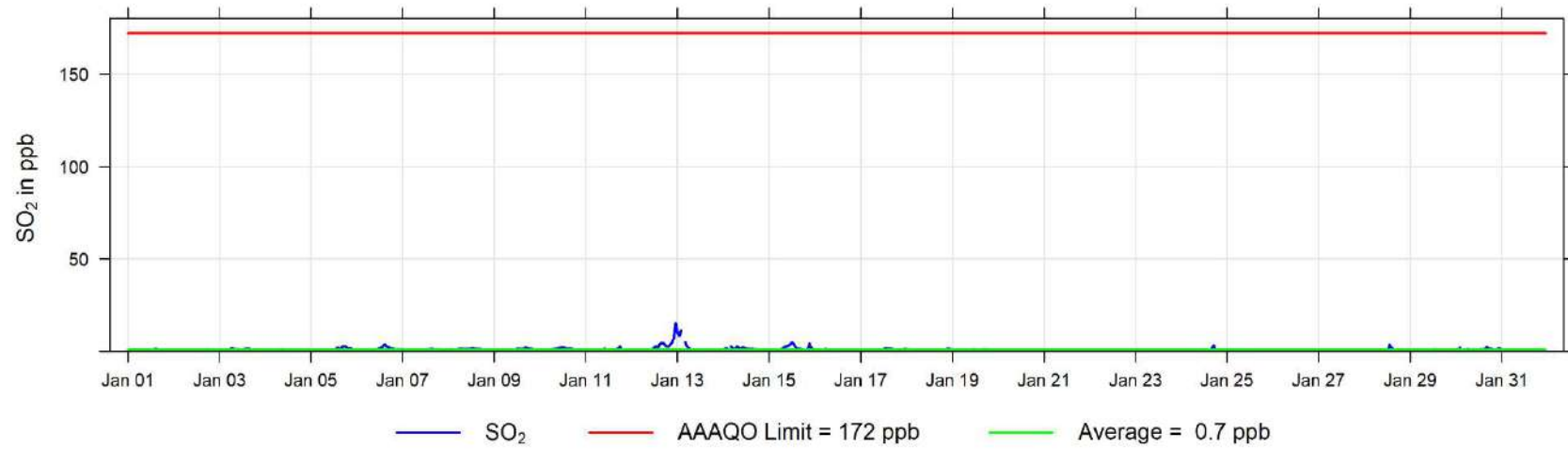
Dunes January 2023 Wind Rose, wind speed in km/hr
Frequency of counts by wind direction (%)

4 Grande Prairie - Henry Pirker Charts

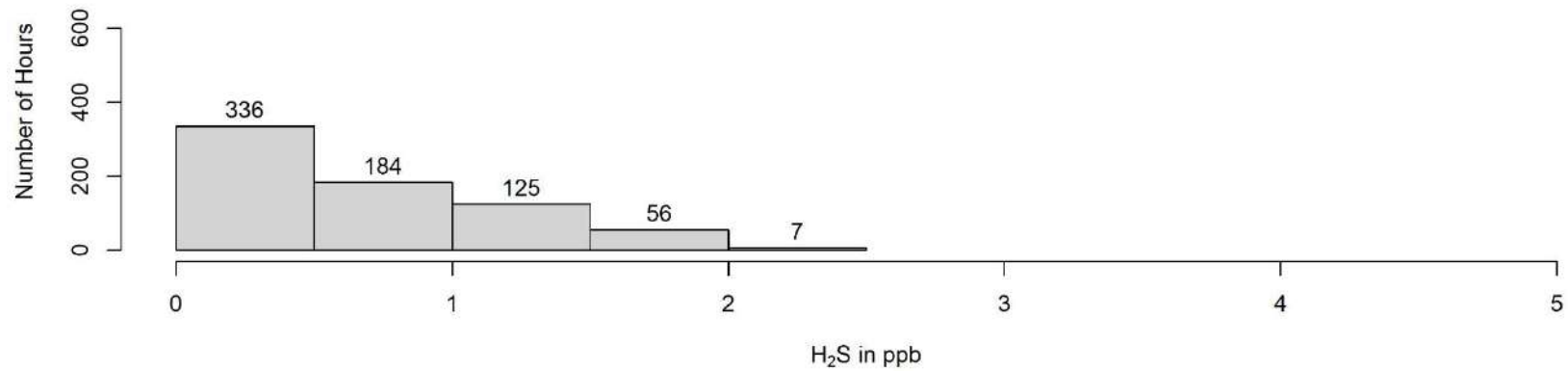
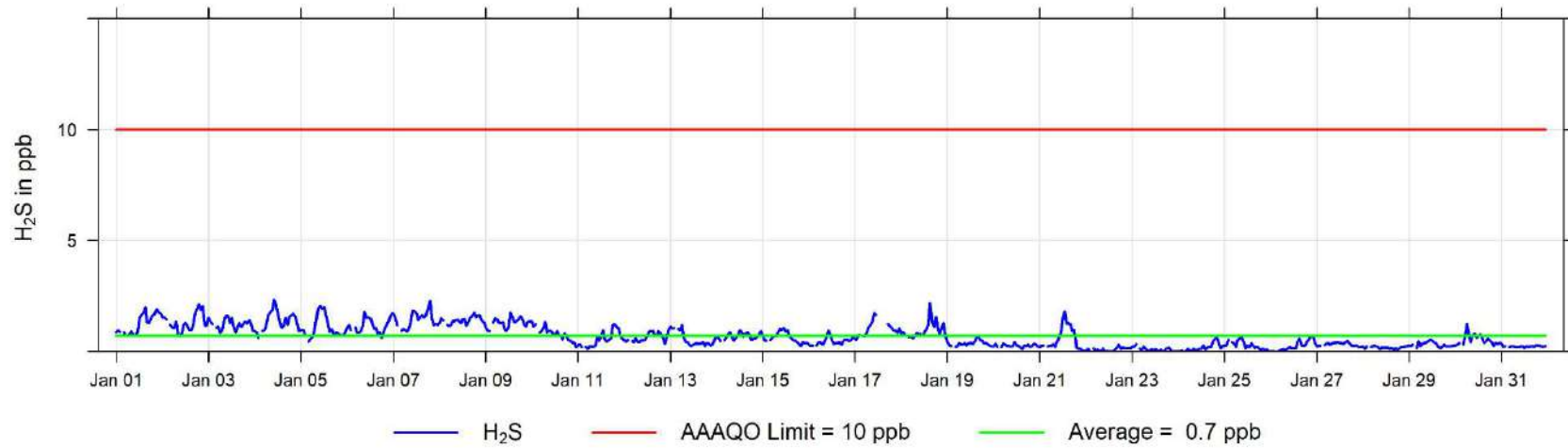
The following pages include the charts and histograms for Henry Pirker Station in Grande Prairie



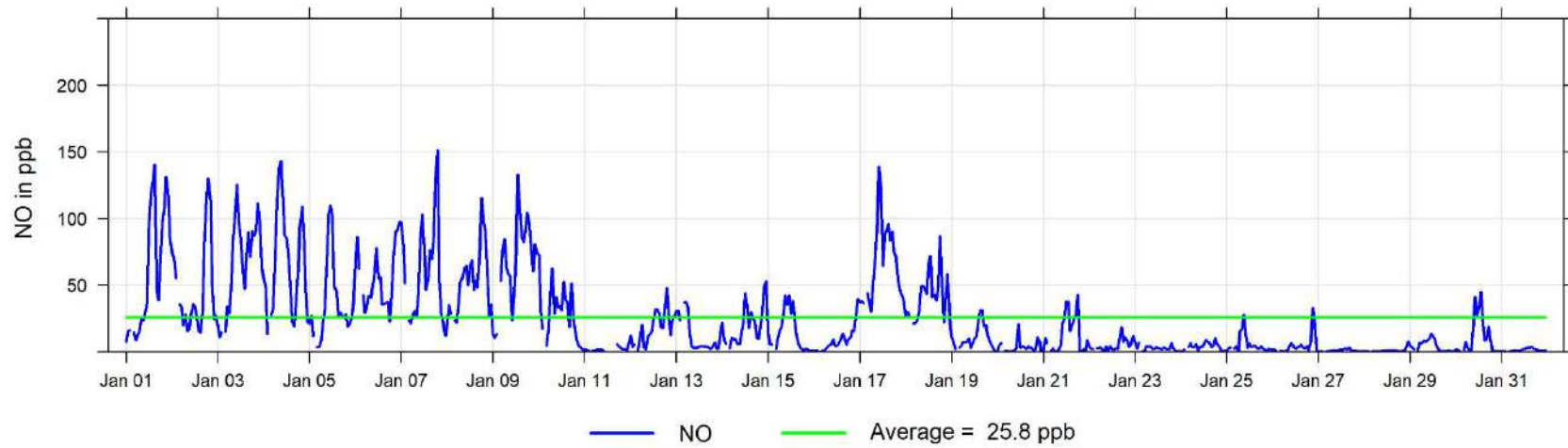
January 2023 Hourly Concentration Readings of SO₂ (in ppb) at Henry Pirker



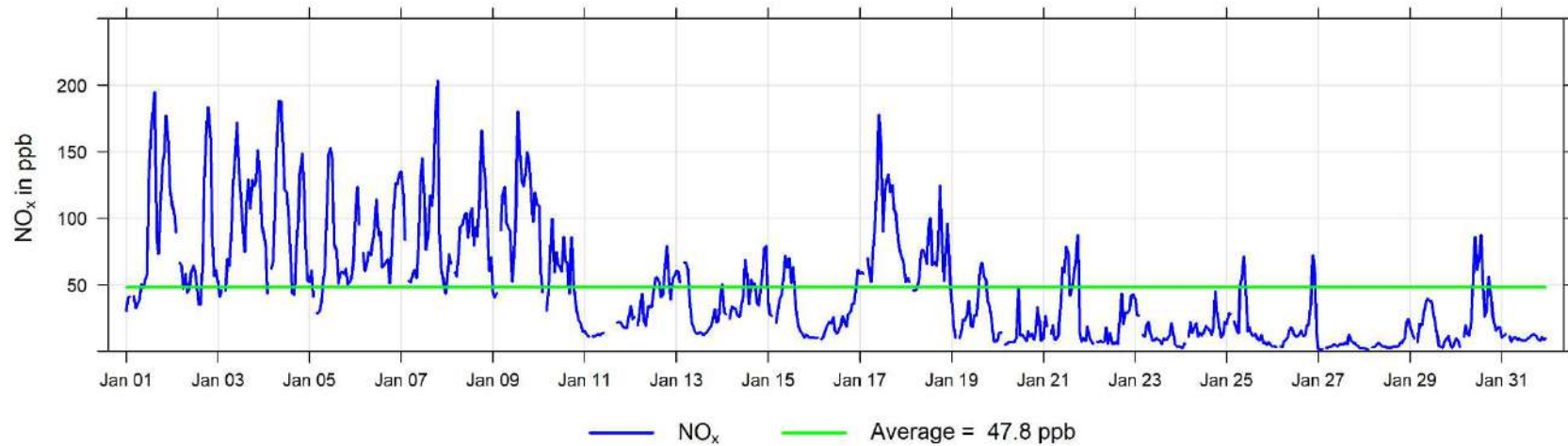
January 2023 Hourly Concentration Readings of H₂S (in ppb) at Henry Pirker



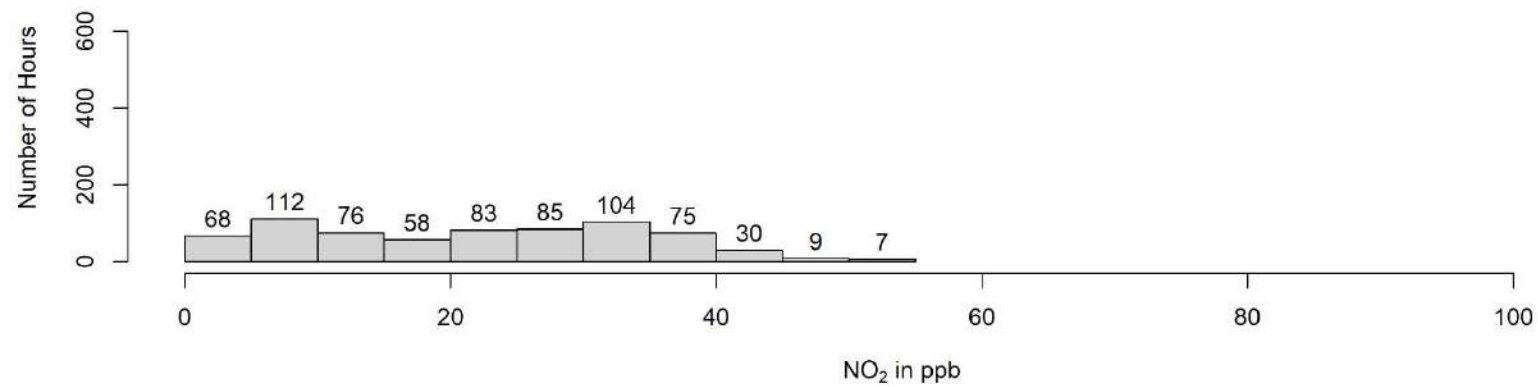
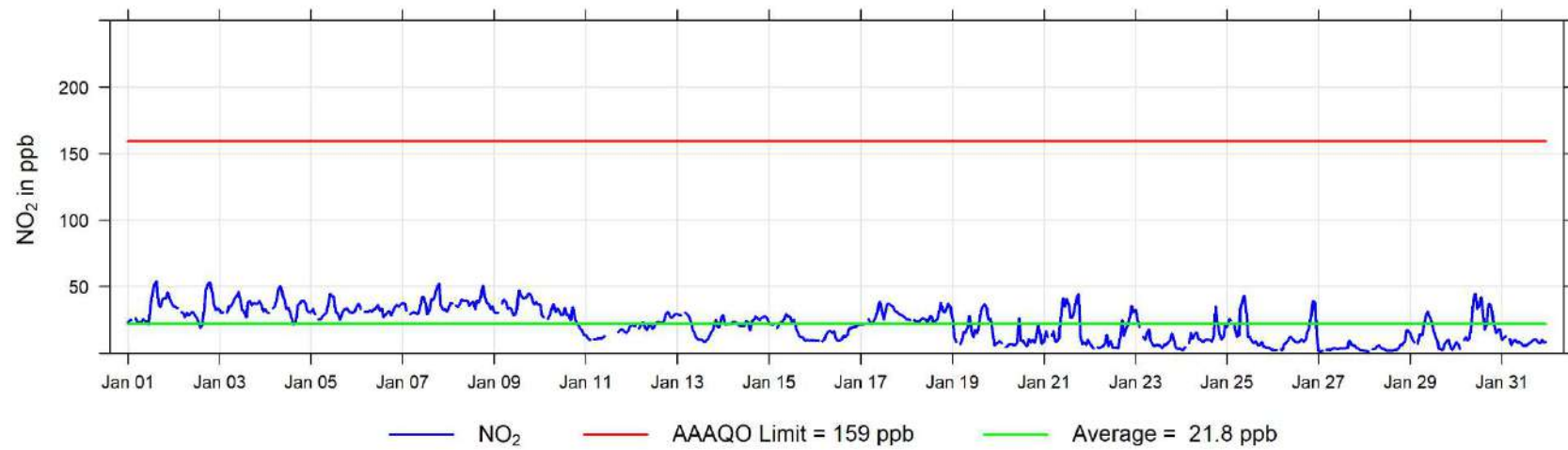
January 2023 Hourly Concentration Readings of NO (in ppb) at Henry Pirker



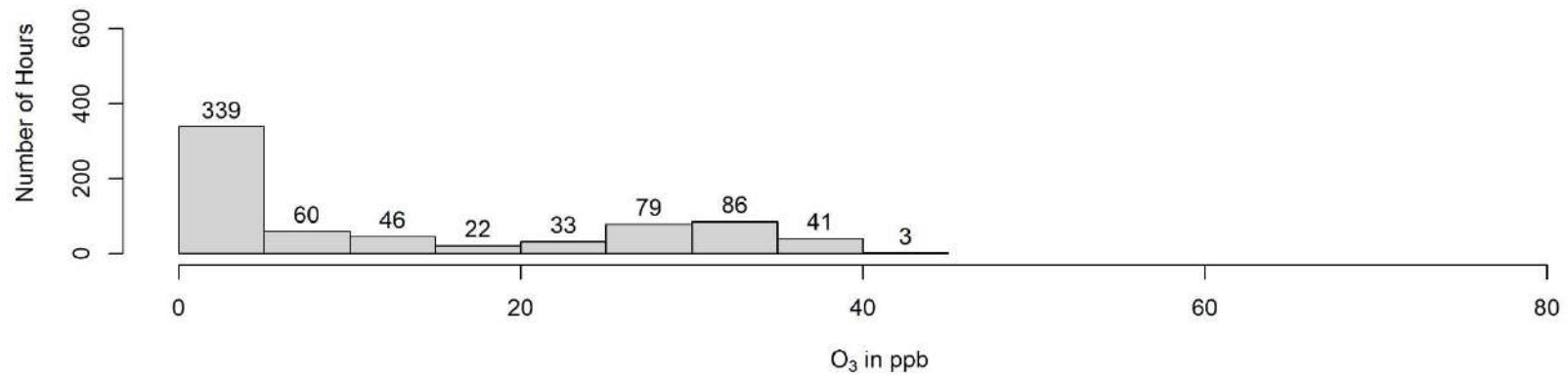
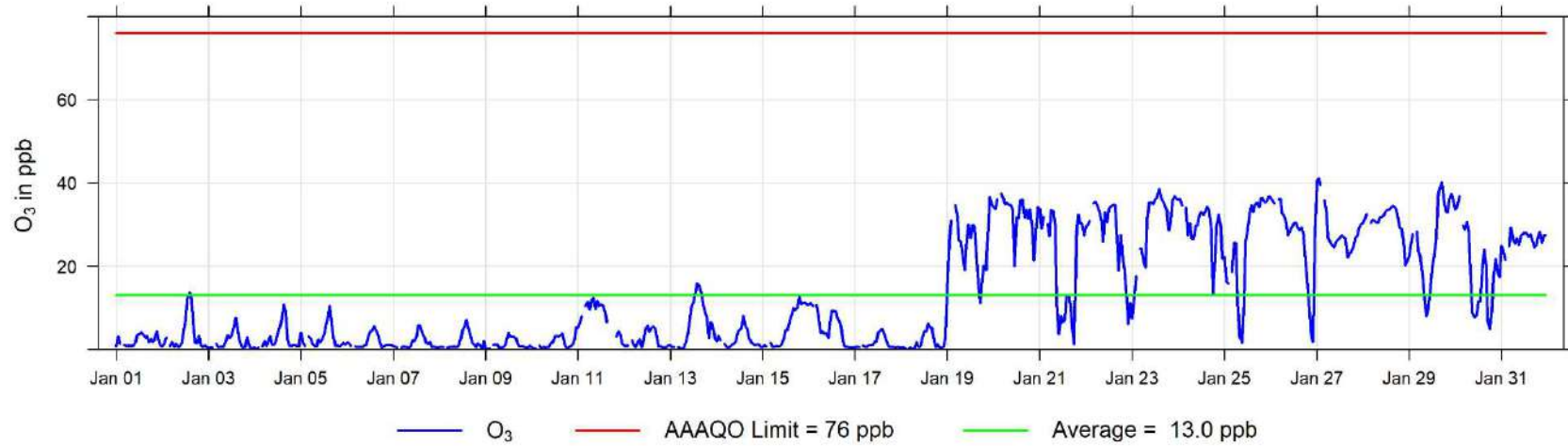
January 2023 Hourly Concentration Readings of NO_x (in ppb) at Henry Pirker



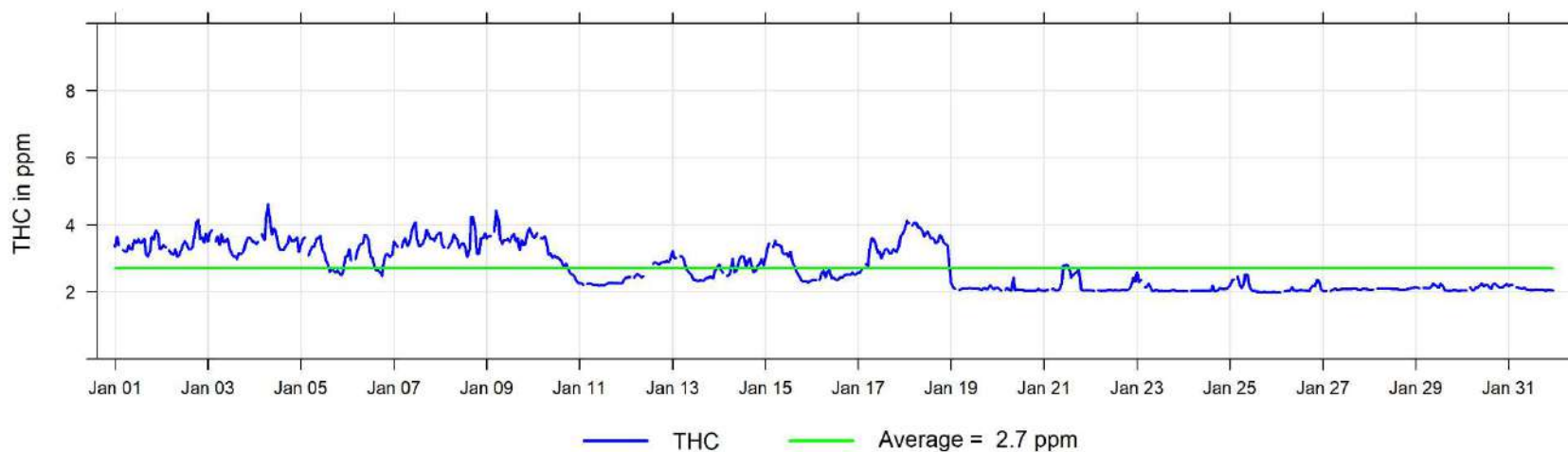
January 2023 Hourly Concentration Readings of NO₂ (in ppb) at Henry Pirker



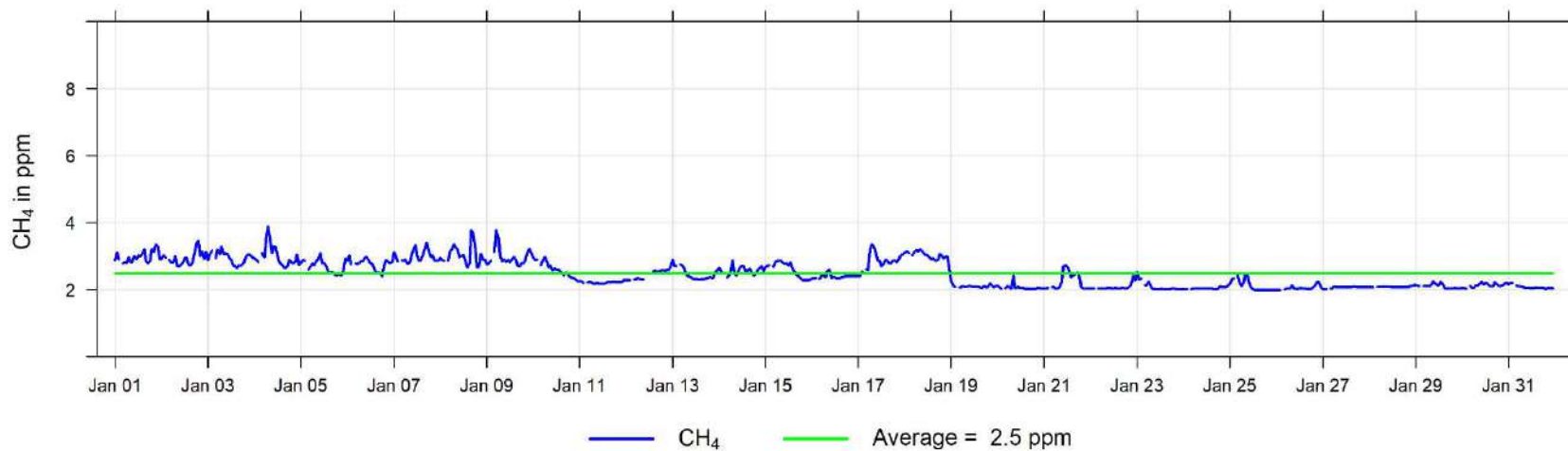
January 2023 Hourly Concentration Readings of O₃ (in ppb) at Henry Pirker



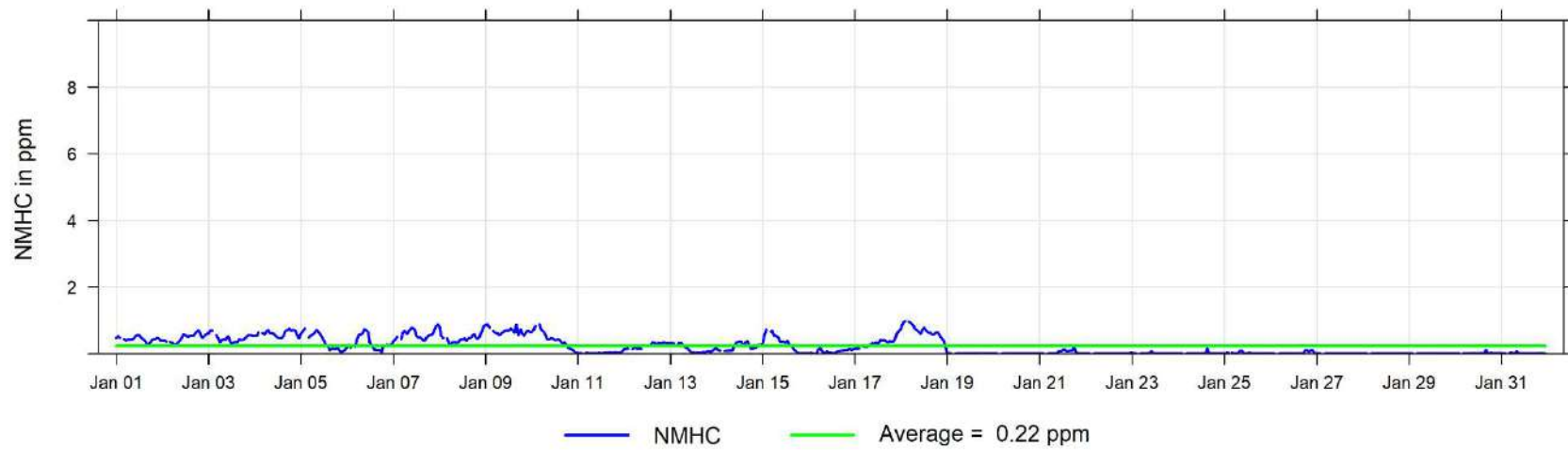
January 2023 Hourly Concentration Readings of THC (in ppm) at Henry Pirker



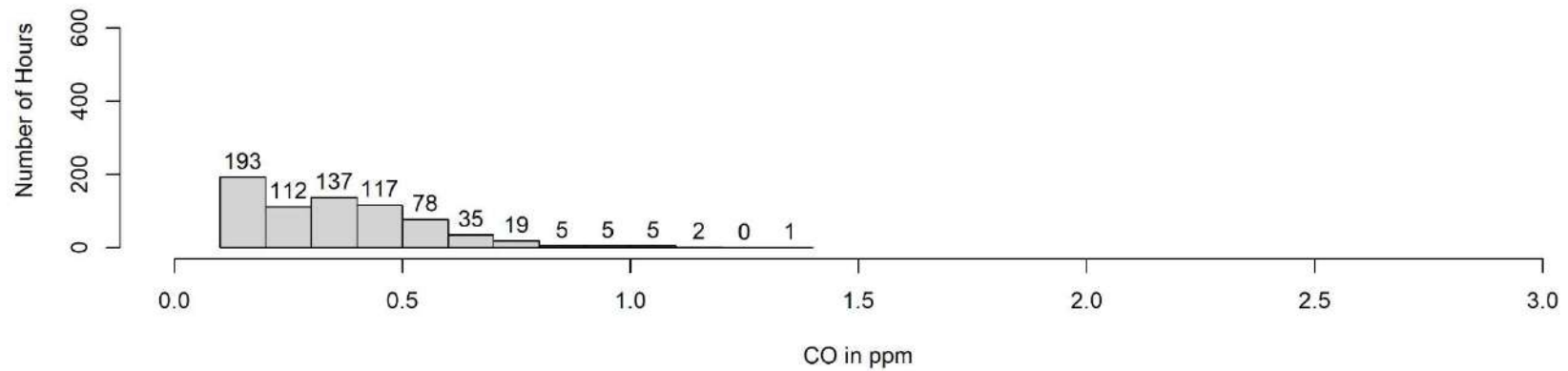
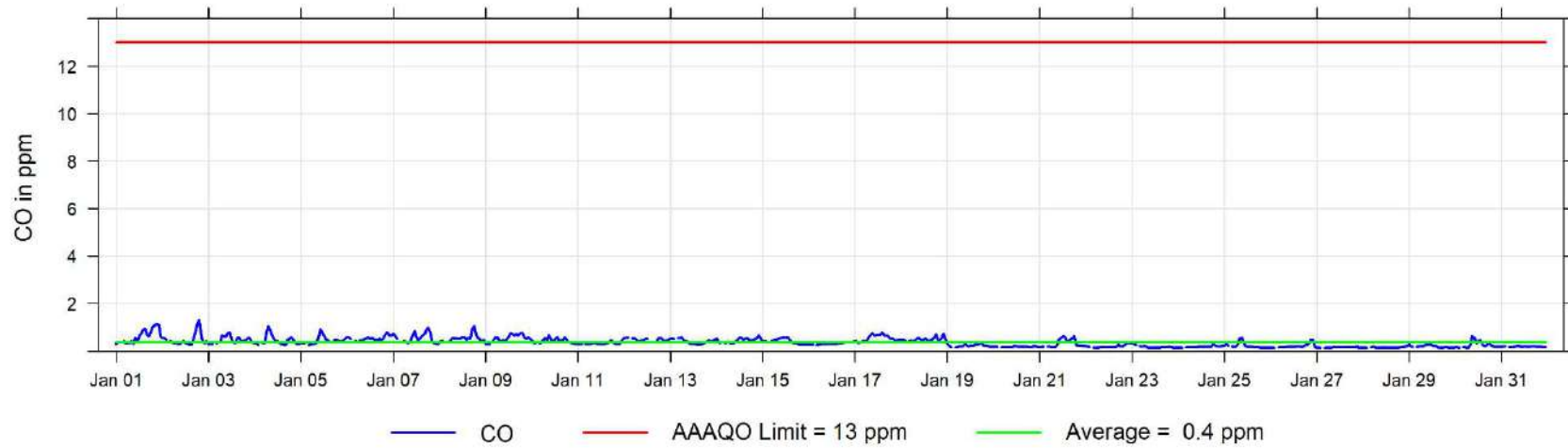
January 2023 Hourly Concentration Readings of CH₄ (in ppm) at Henry Pirker



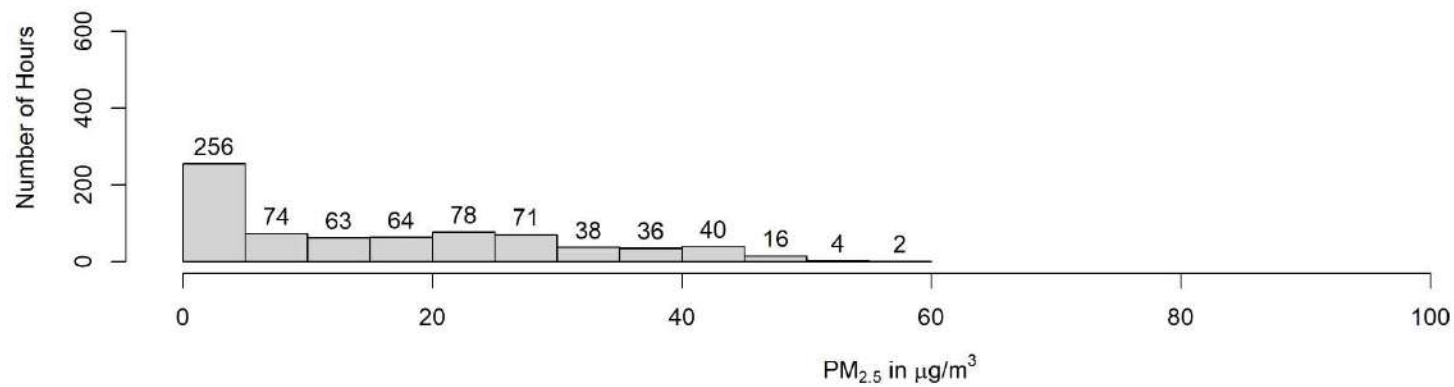
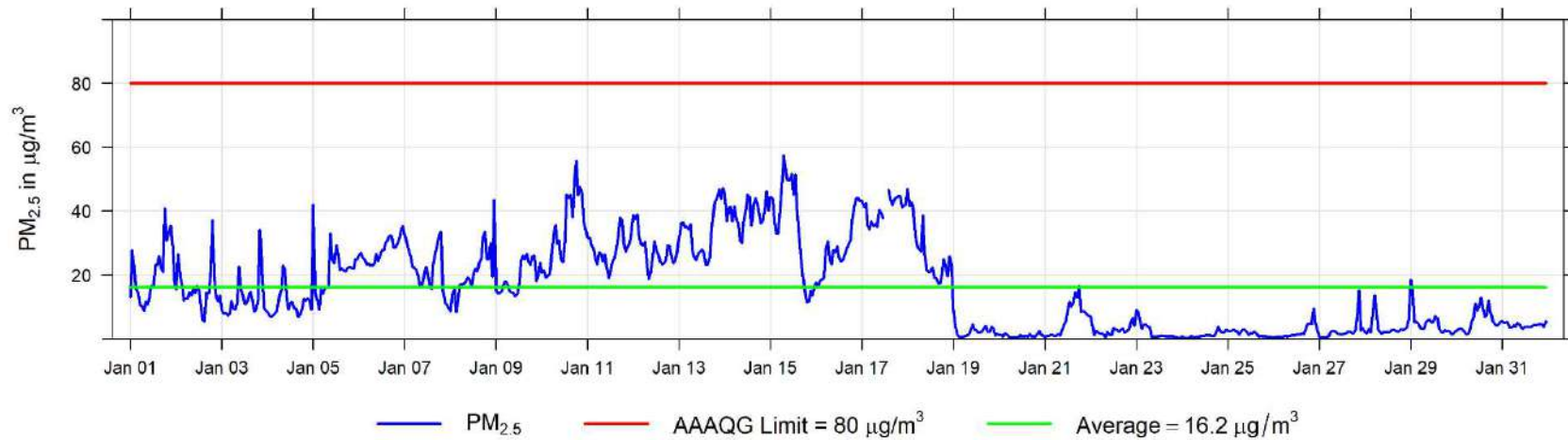
January 2023 Hourly Concentration Readings of NMHC (in ppm) at Henry Pirker



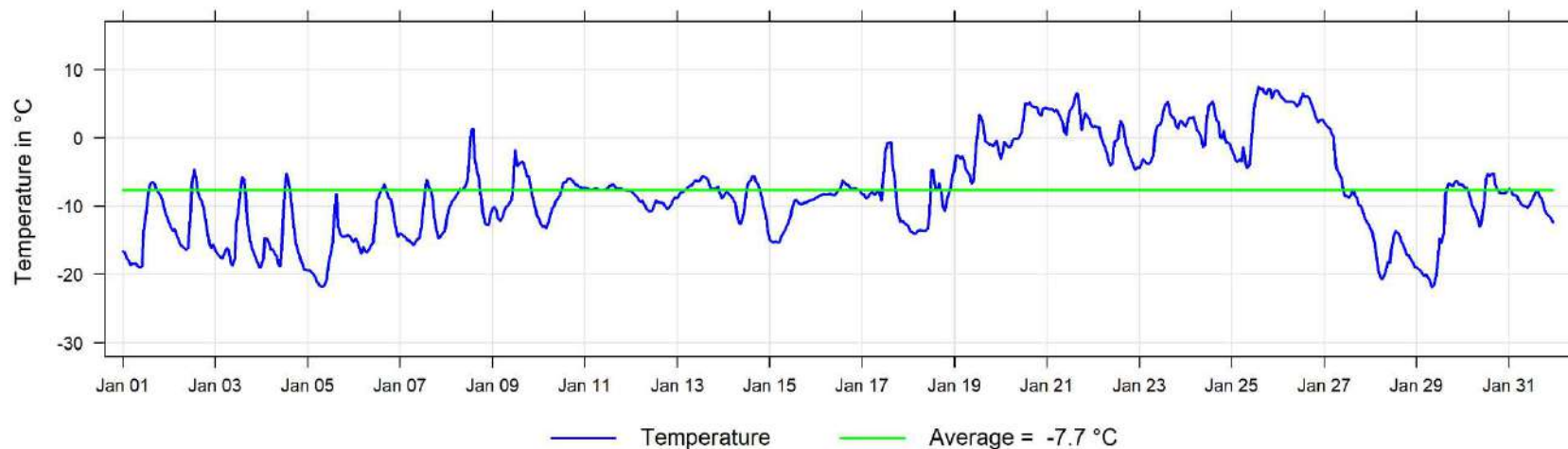
January 2023 Hourly Concentration Readings of CO (in ppm) at Henry Pirker



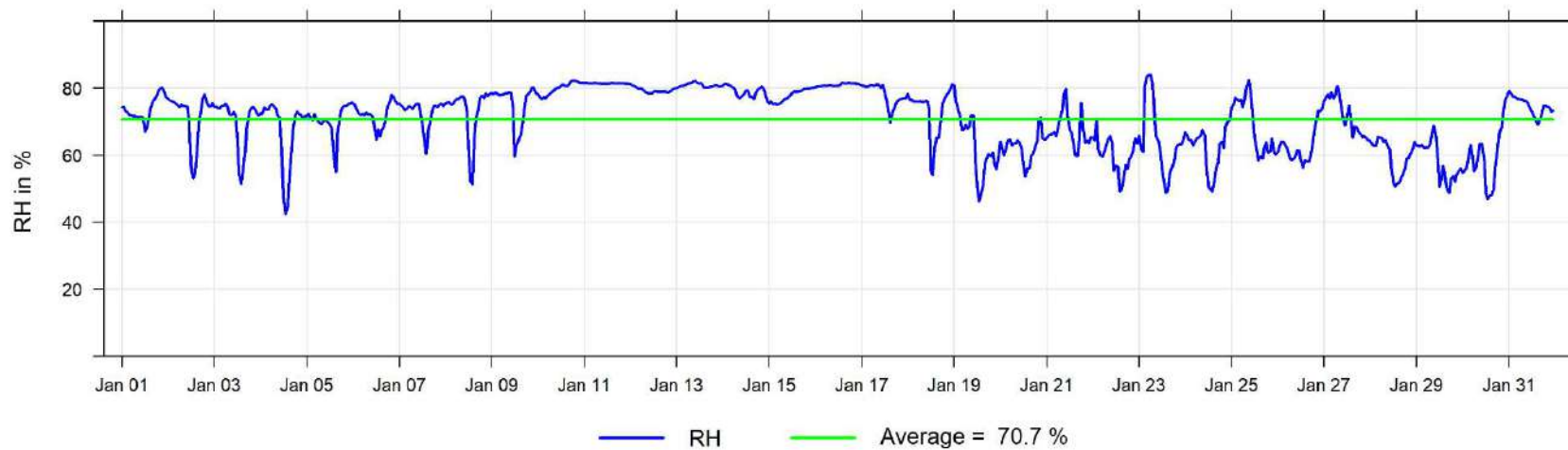
January 2023 Hourly Concentration Readings of PM_{2.5} in $\mu\text{g}/\text{m}^3$ at Henry Pirker



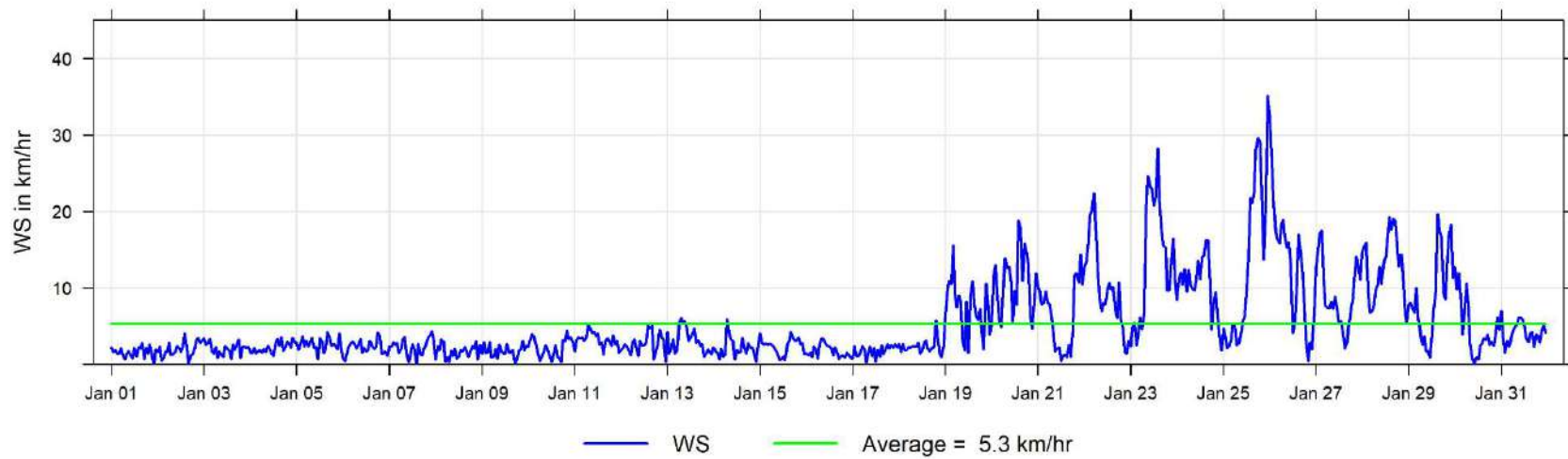
January 2023 Hourly Temperature Readings (in °C) at Henry Pirker



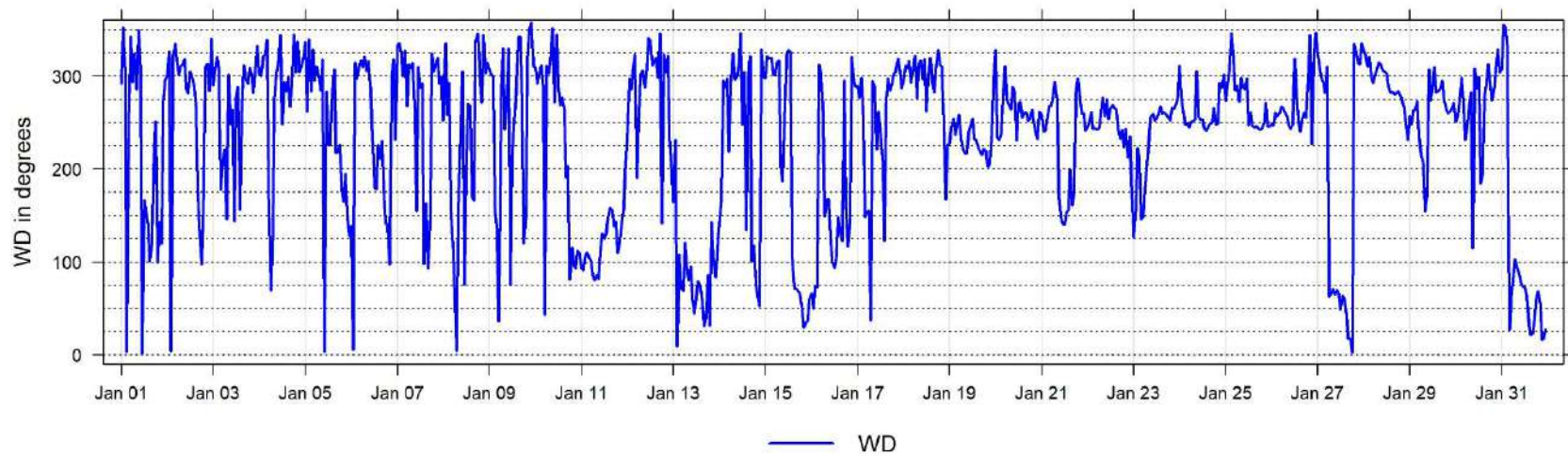
January 2023 Hourly Readings of Relative Humidity (in %) at Henry Pirker



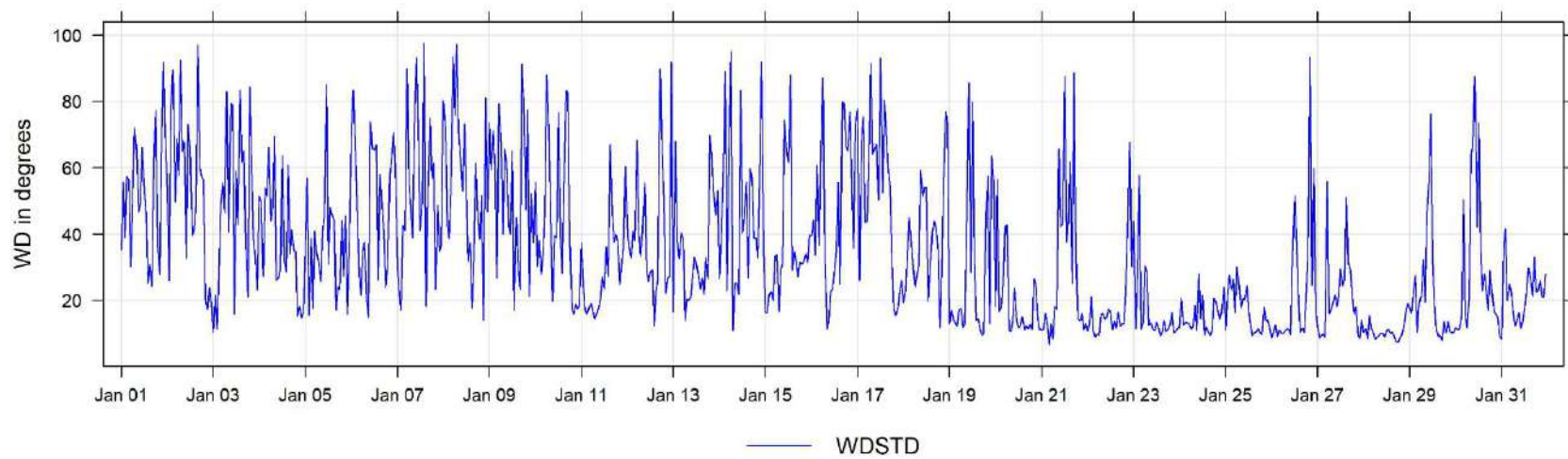
January 2023 Hourly Readings of Wind Speed (in km/hr) at Henry Pirker

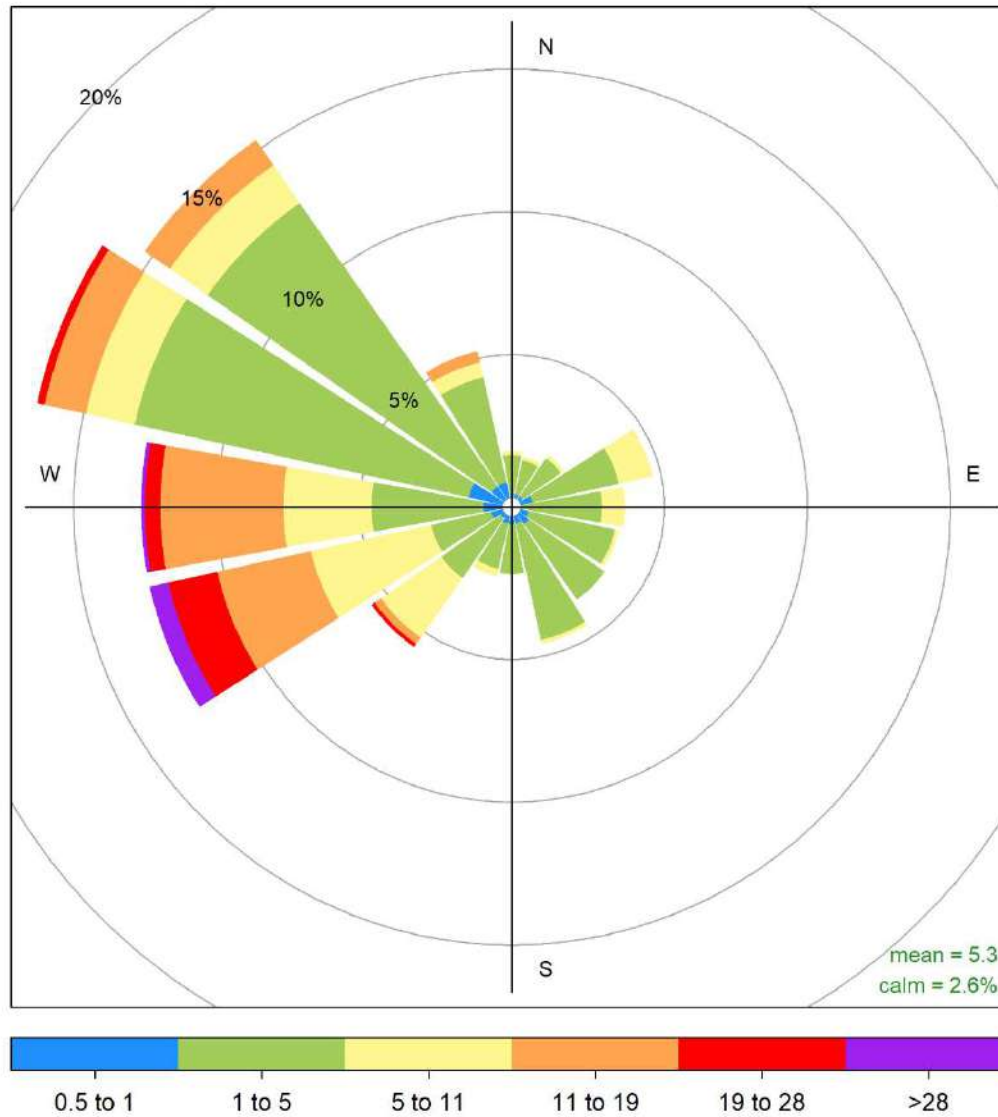


January 2023 Hourly Readings of Wind Direction (in degrees) at Henry Pirker



January 2023 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Henry Pirker

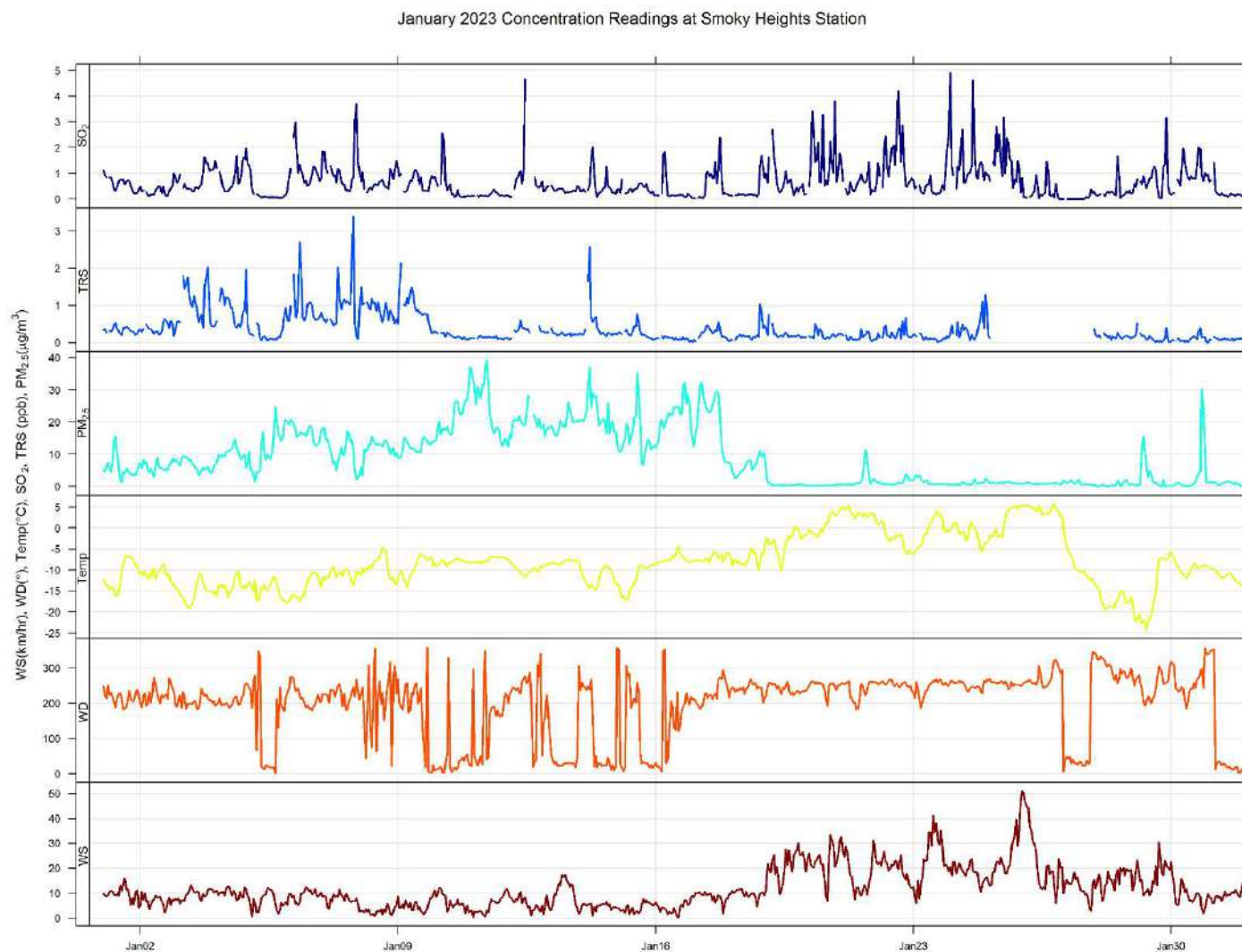




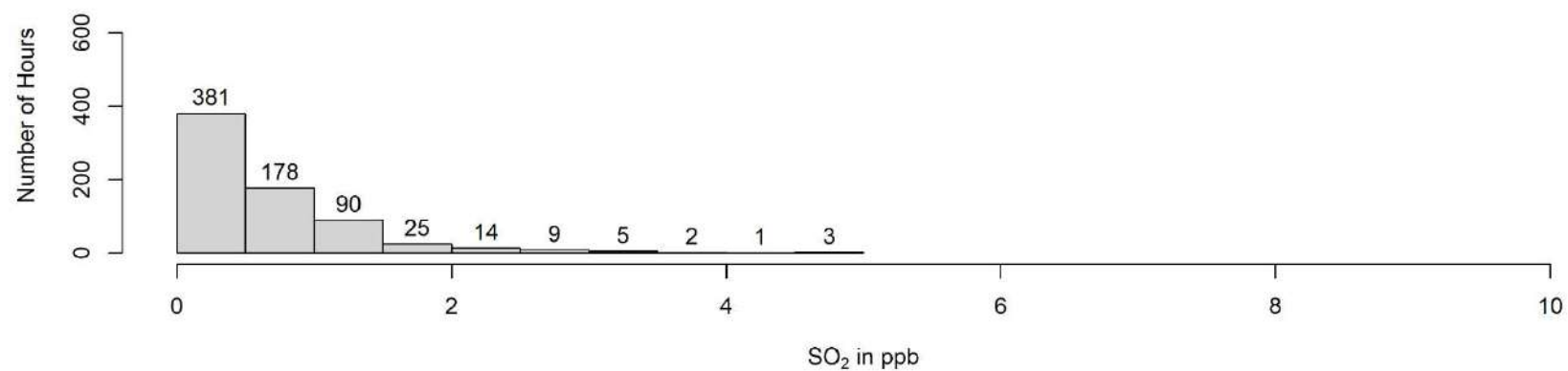
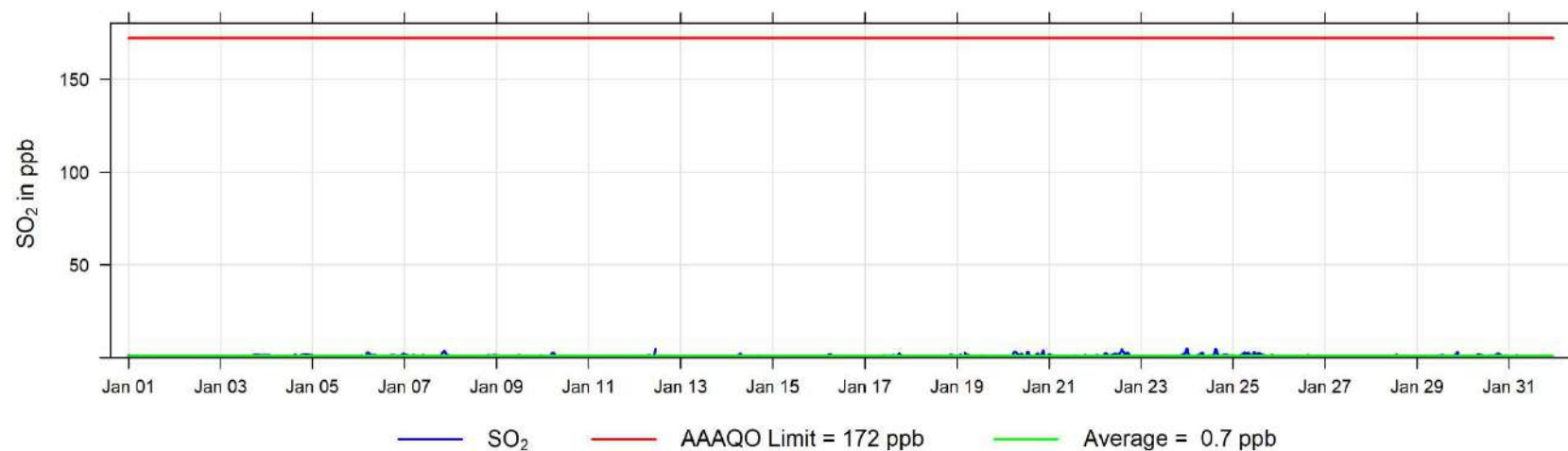
Henry Pirker January 2023 Wind Rose, wind speed in km/hr
Frequency of counts by wind direction (%)

5 Smoky Heights Charts

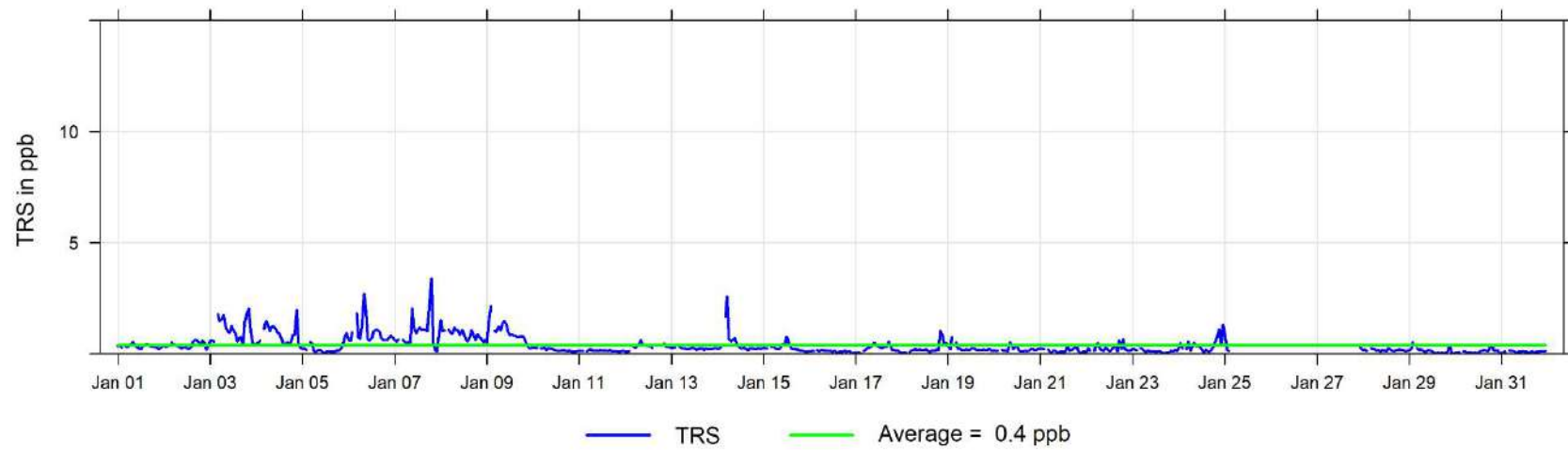
The following pages include the charts and histograms for Smoky Heights Station



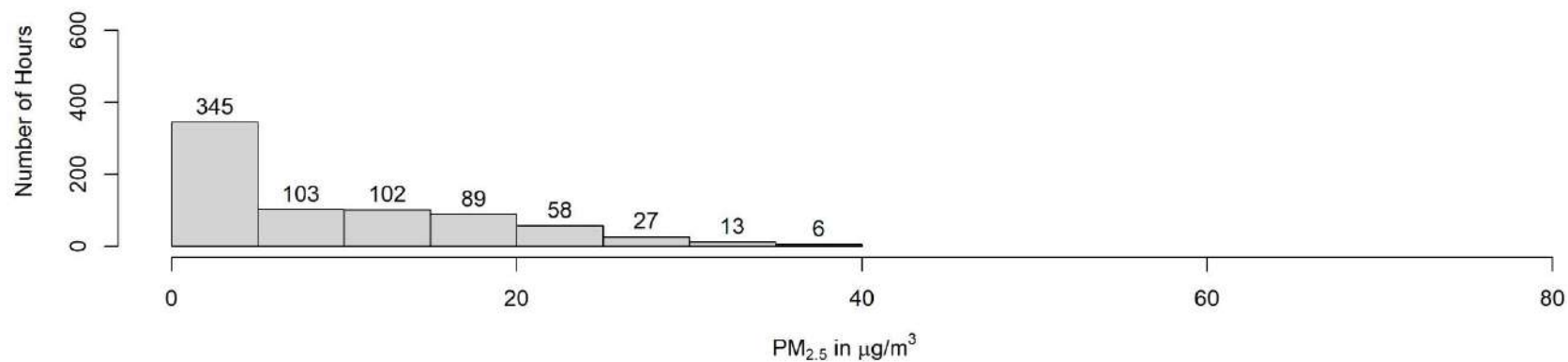
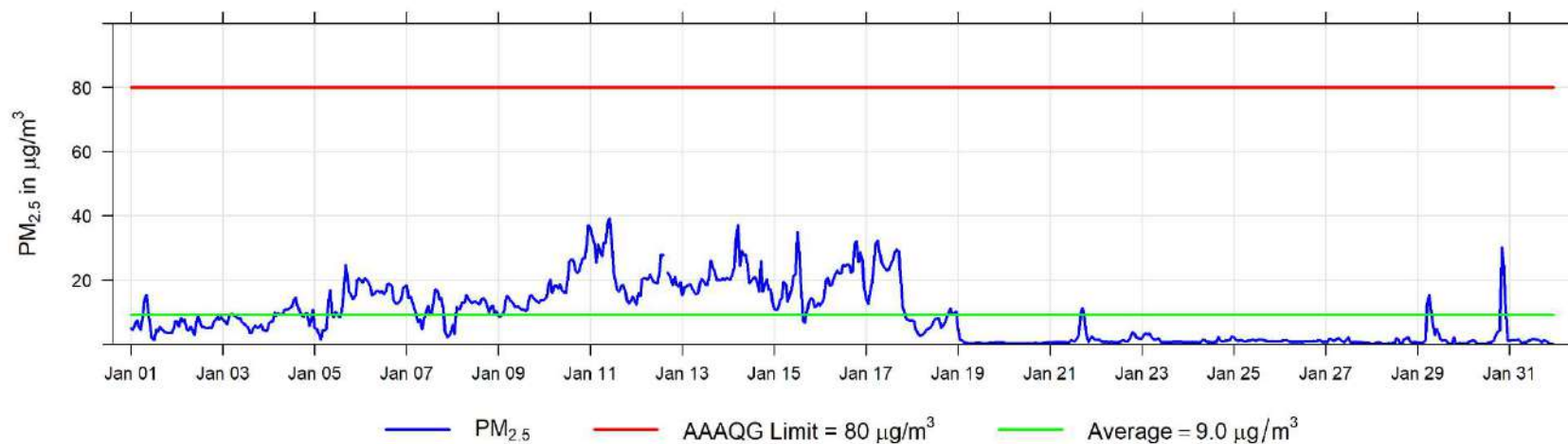
January 2023 Hourly Concentration Readings of SO₂ (in ppb) at Smoky Heights



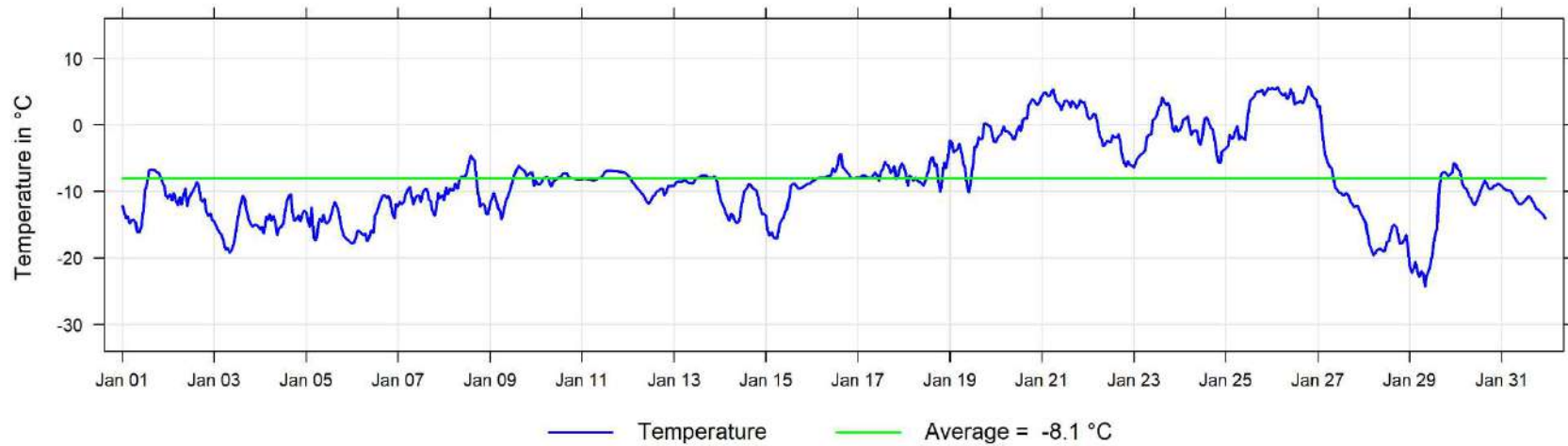
January 2023 Hourly Concentration Readings of TRS (in ppb) at Smoky Heights



January 2023 Hourly Concentration Readings of PM_{2.5} in $\mu\text{g}/\text{m}^3$ at Smoky Heights



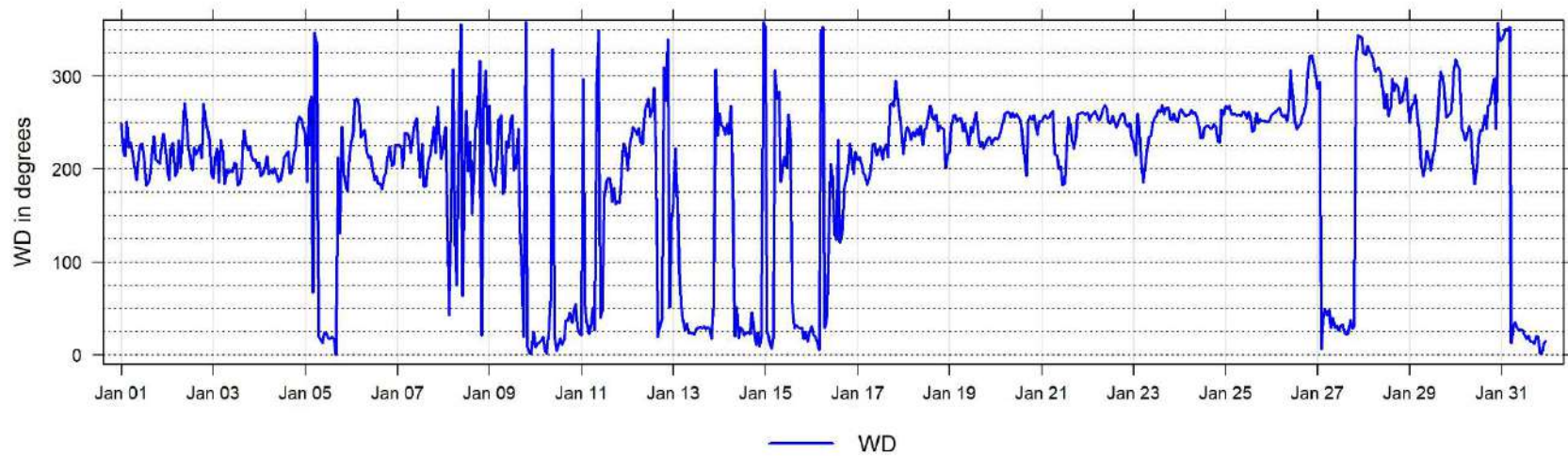
January 2023 Hourly Temperature Readings (in °C) at Smoky Heights



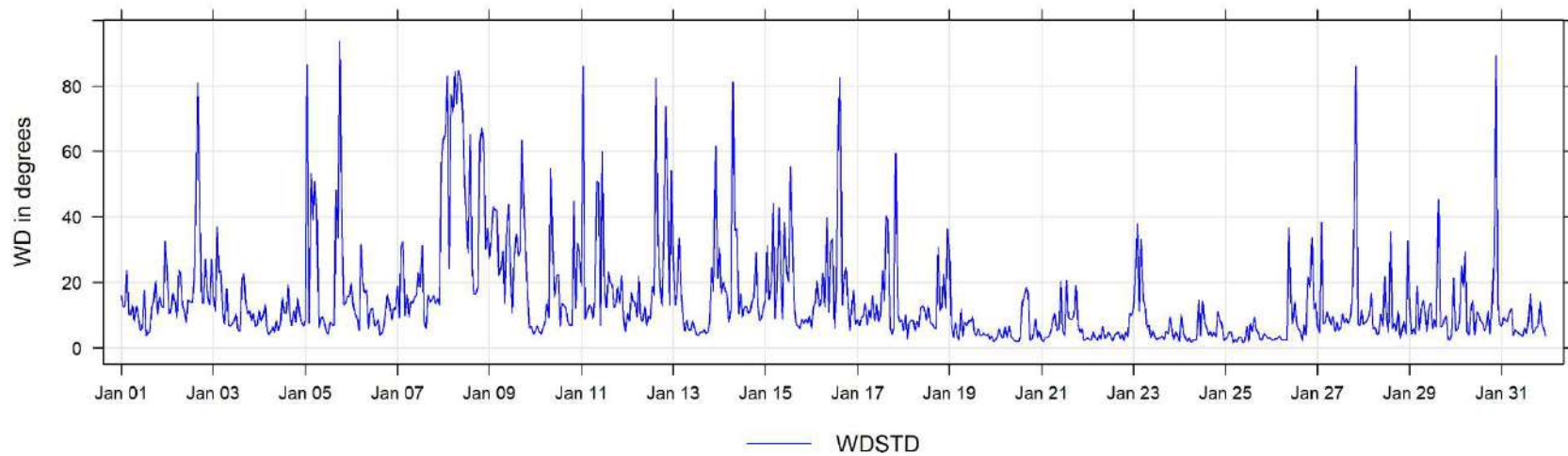
January 2023 Hourly Readings of Wind Speed (in km/hr) at Smoky Heights

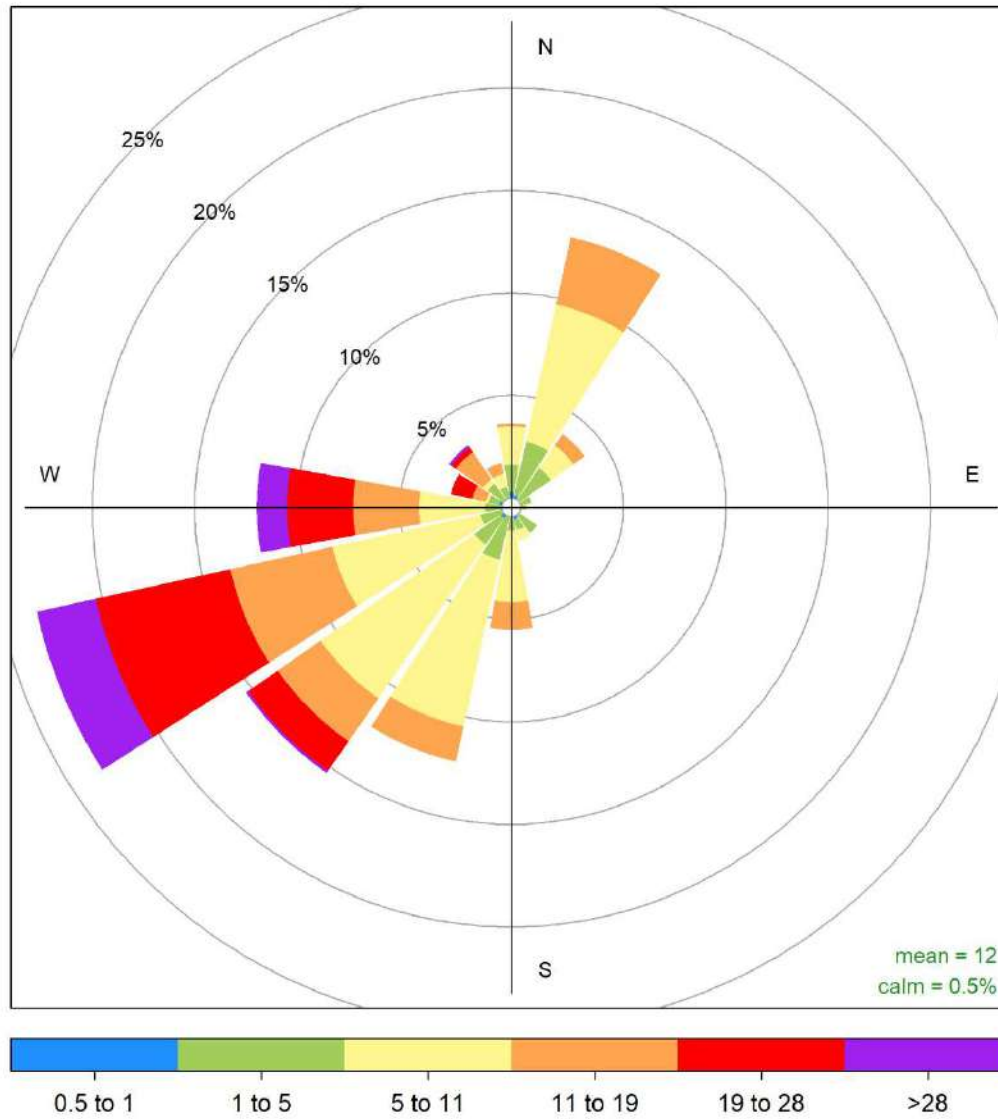


January 2023 Hourly Readings of Wind Direction (in degrees) at Smoky Heights



January 2023 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Smoky Heights

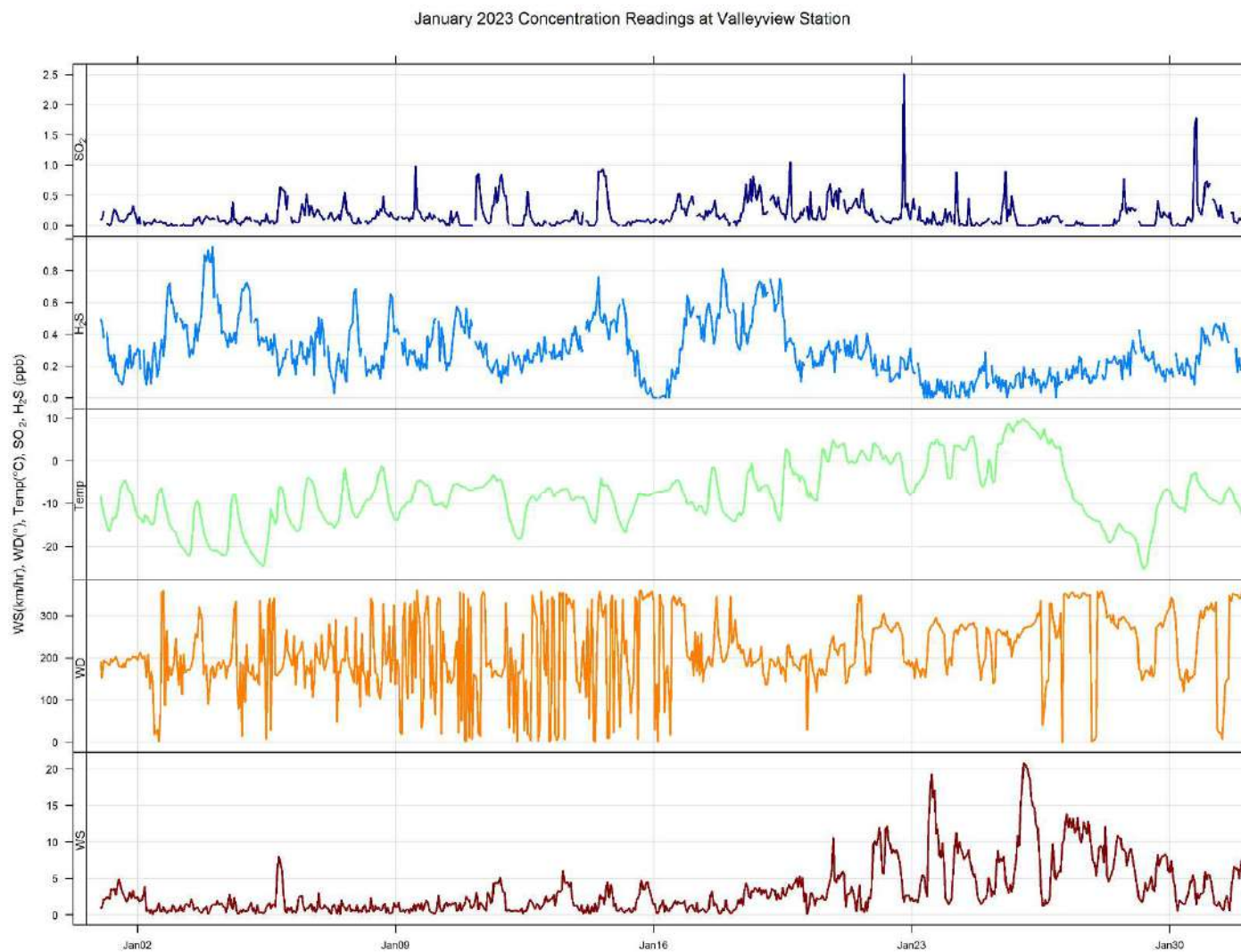




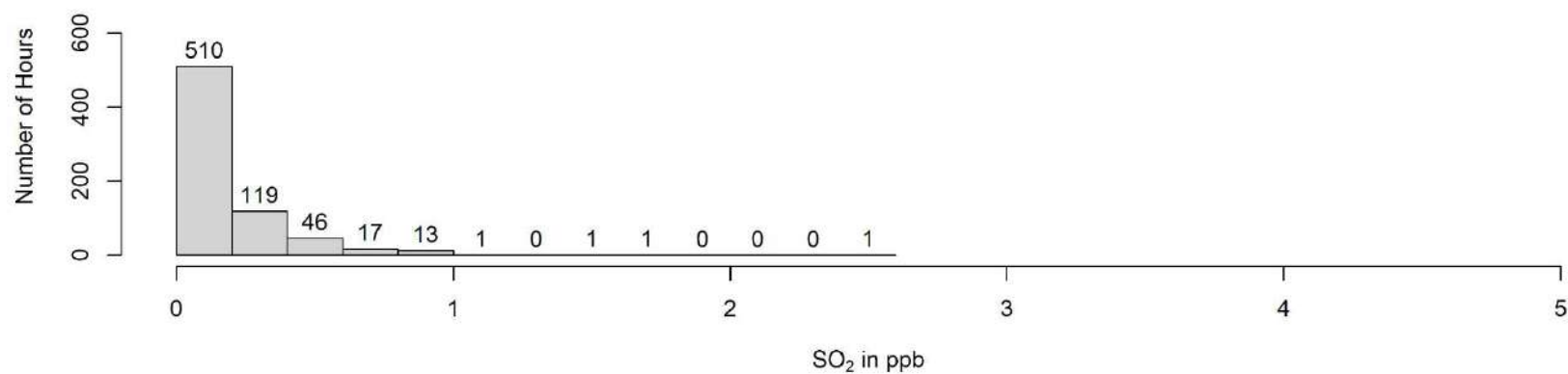
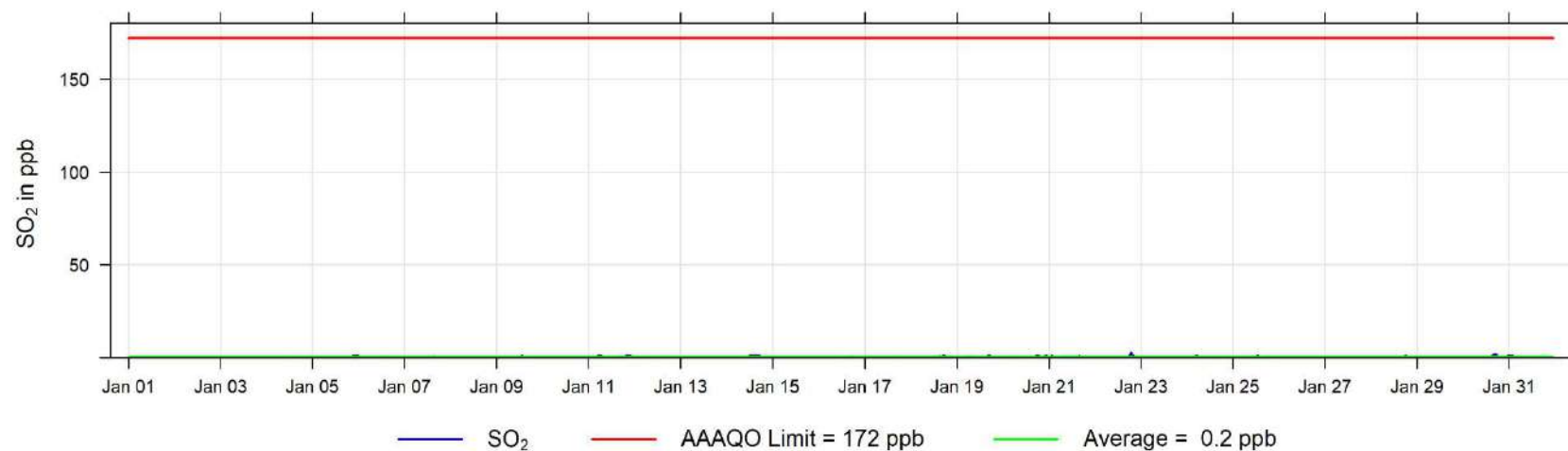
Smoky Heights January 2023 Wind Rose, wind speed in km/hr
Frequency of counts by wind direction (%)

6 Valleyview Charts

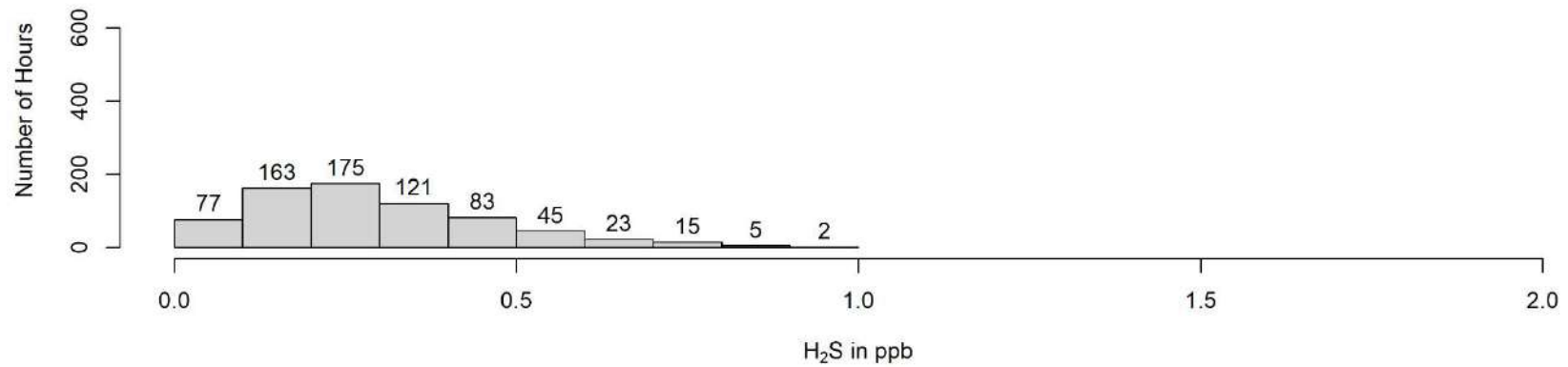
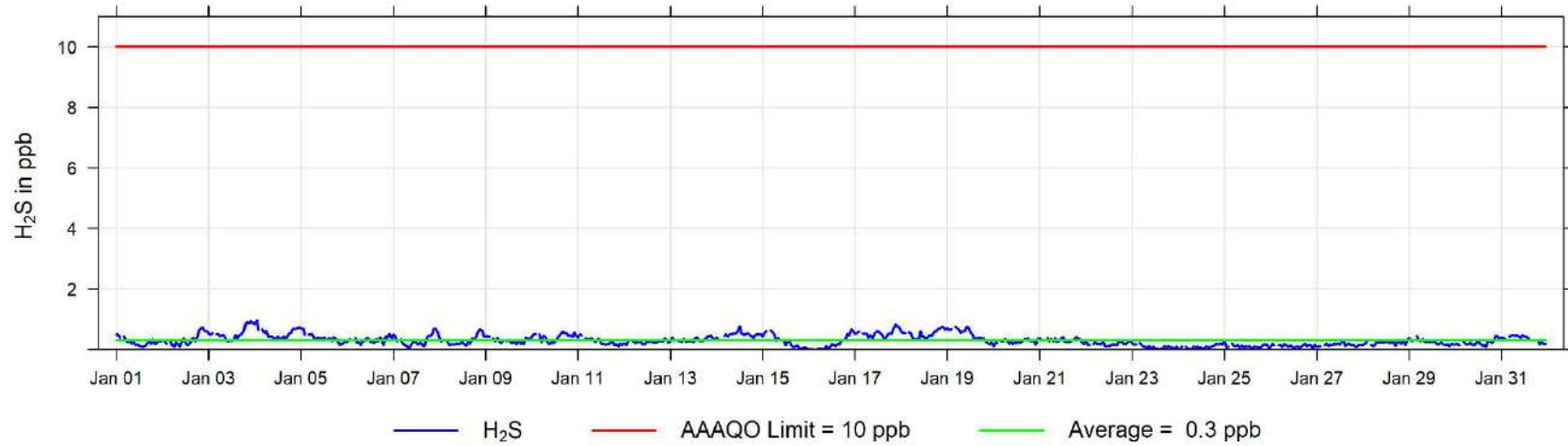
The following pages include the charts and histograms for Valleyview Station



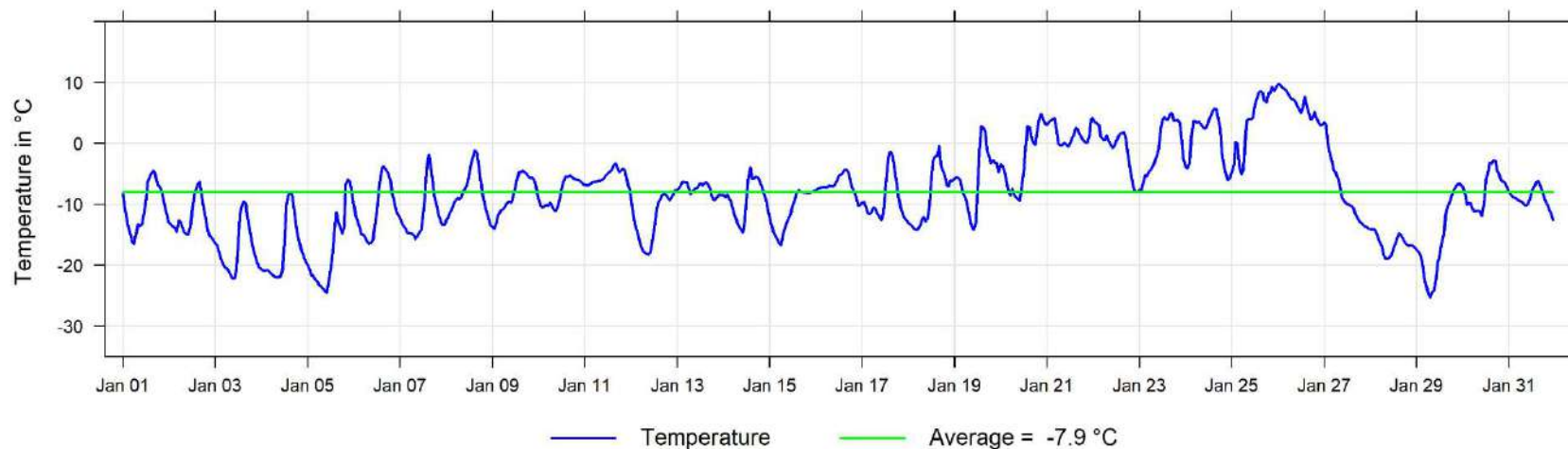
January 2023 Hourly Concentration Readings of SO₂ (in ppb) at Valleyview



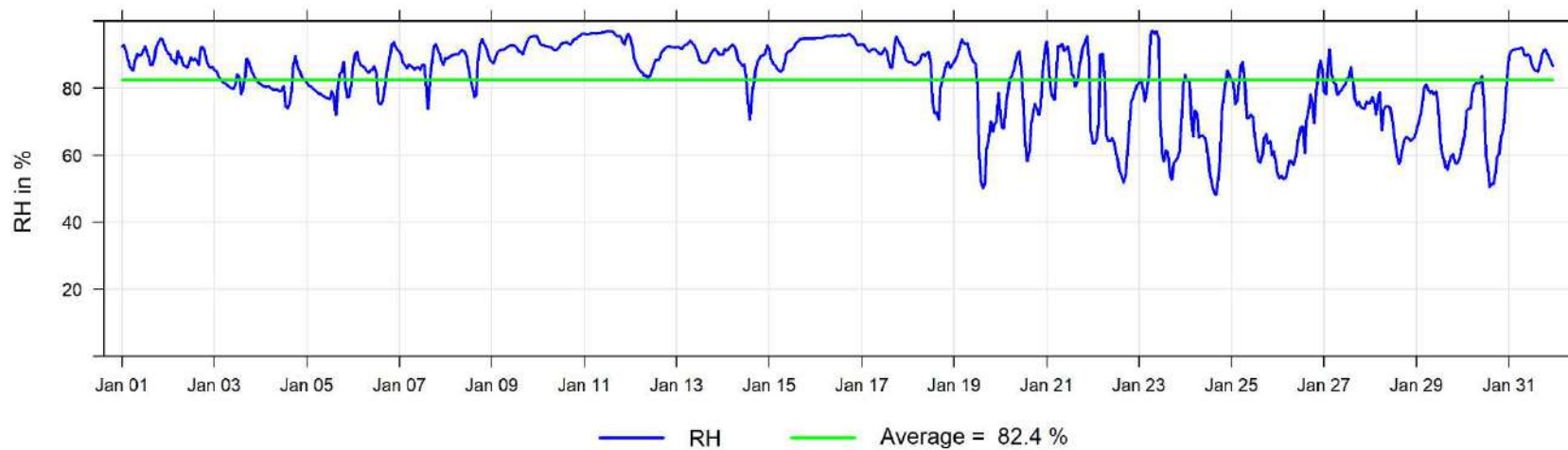
January 2023 Hourly Concentration Readings of H₂S (in ppb) at Valleyview



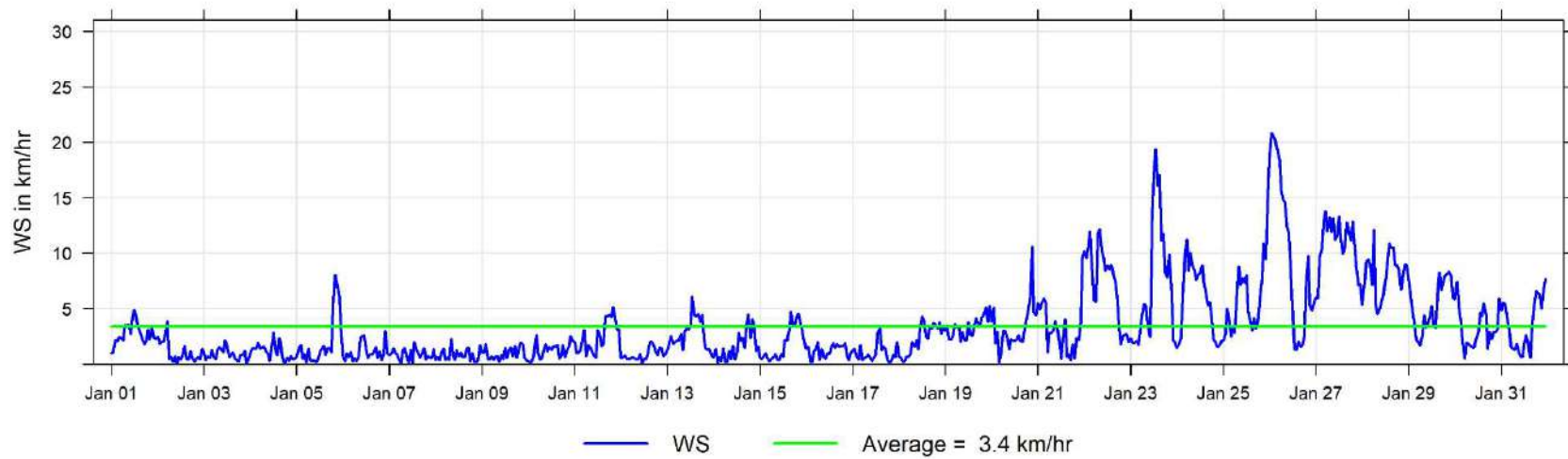
January 2023 Hourly Temperature Readings (in °C) at Valleyview



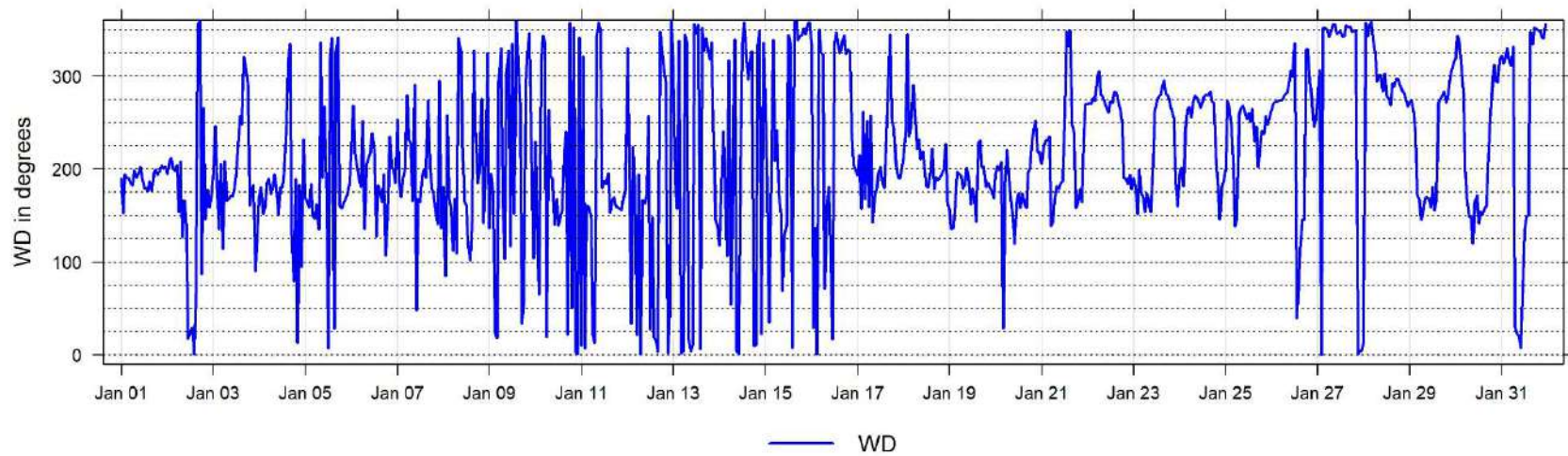
January 2023 Hourly Readings of Relative Humidity (in %) at Valleyview



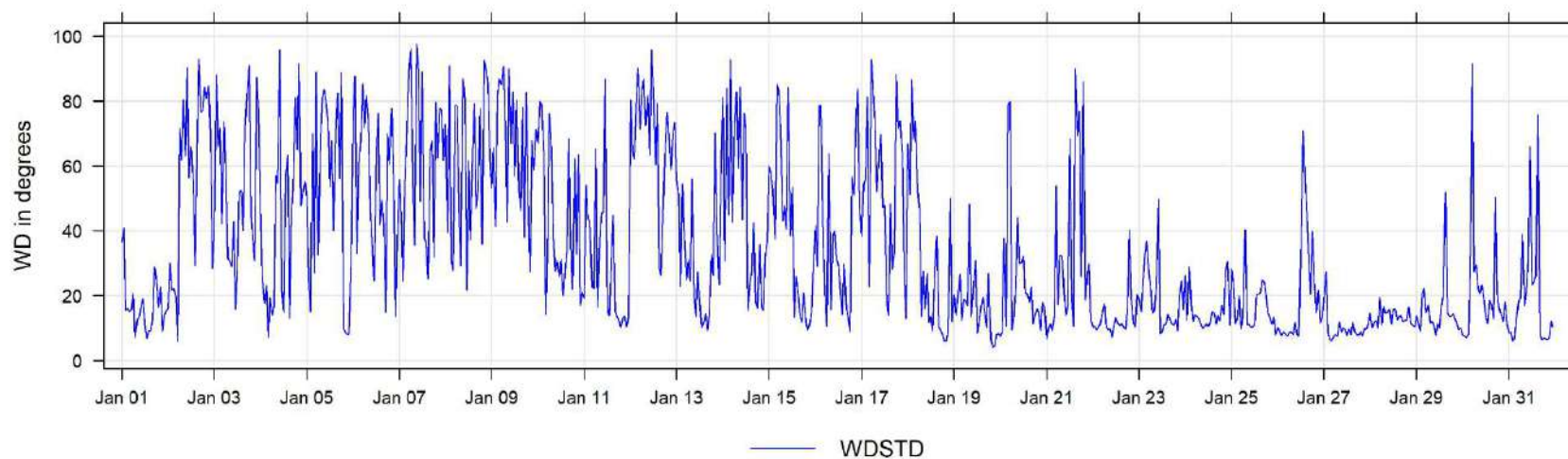
January 2023 Hourly Readings of Wind Speed (in km/hr) at Valleyview

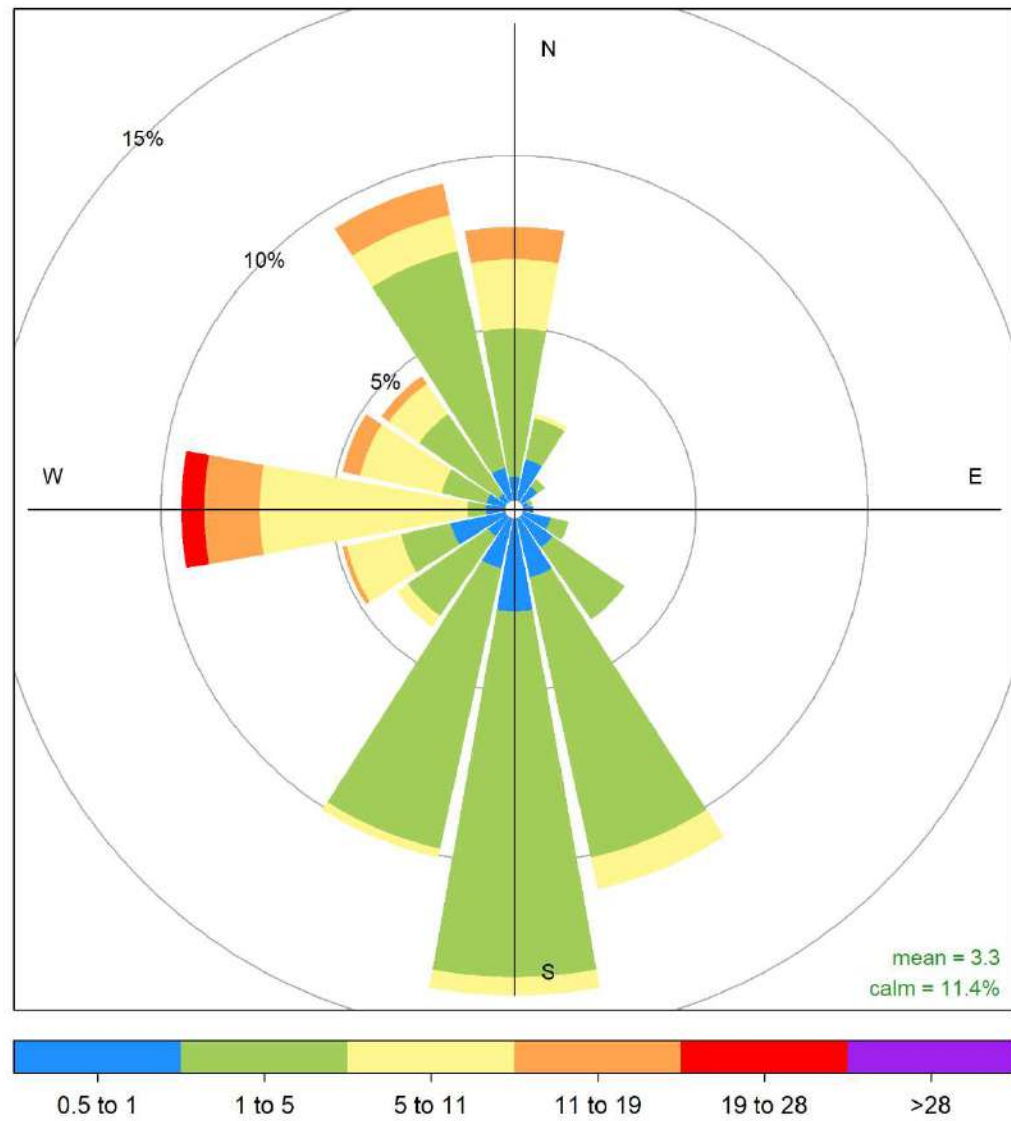


January 2023 Hourly Readings of Wind Direction (in degrees) at Valleyview



January 2023 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Valleyview

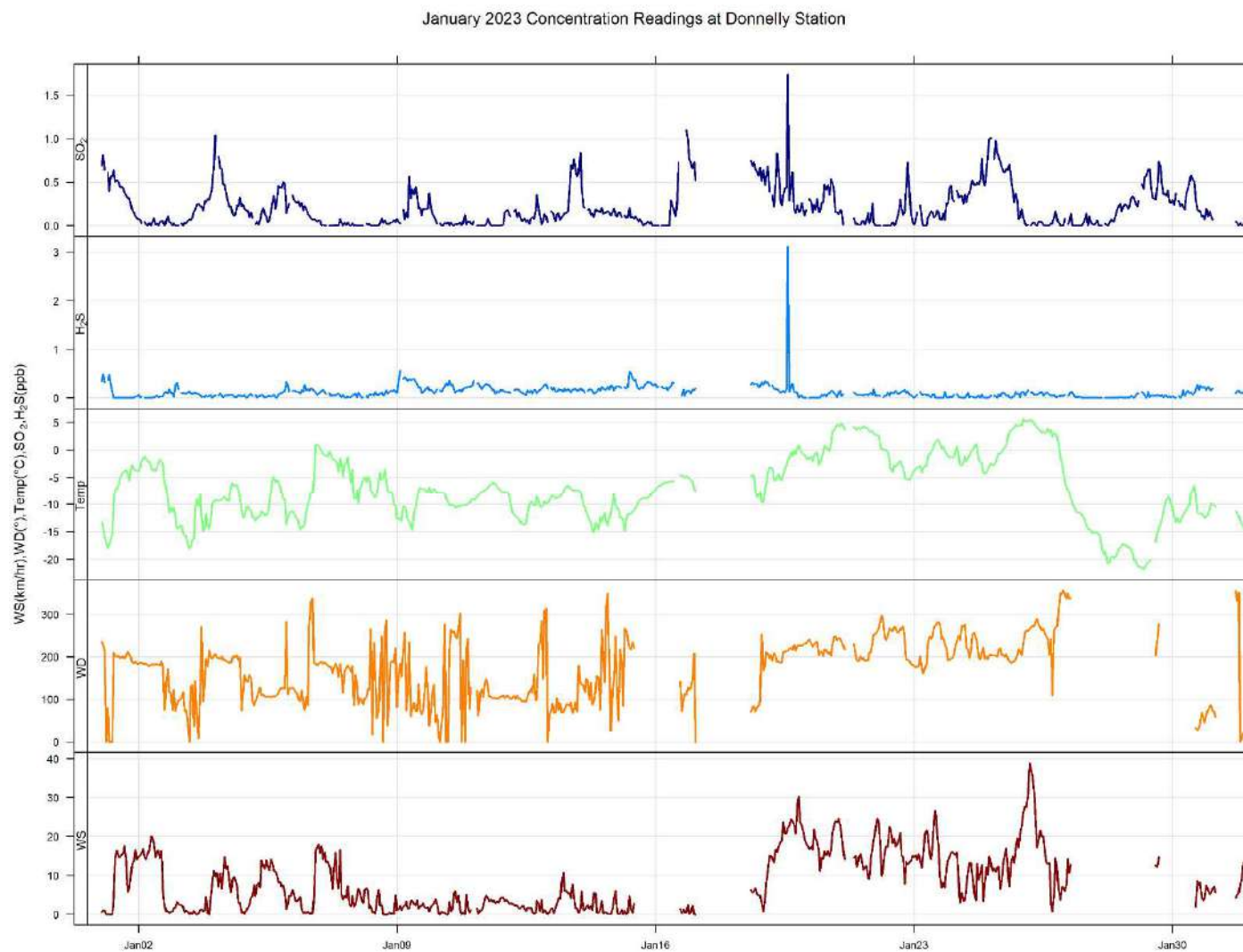




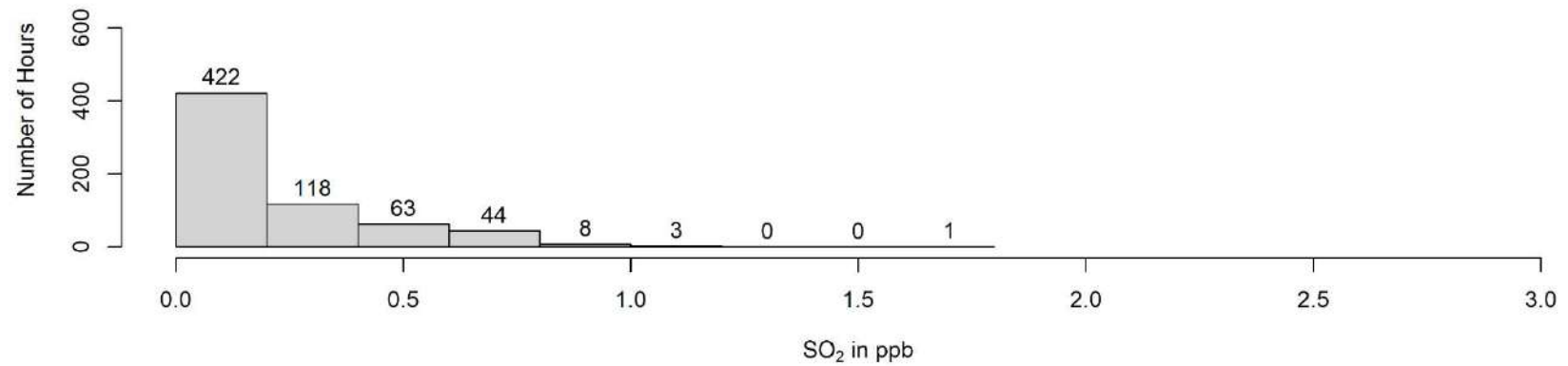
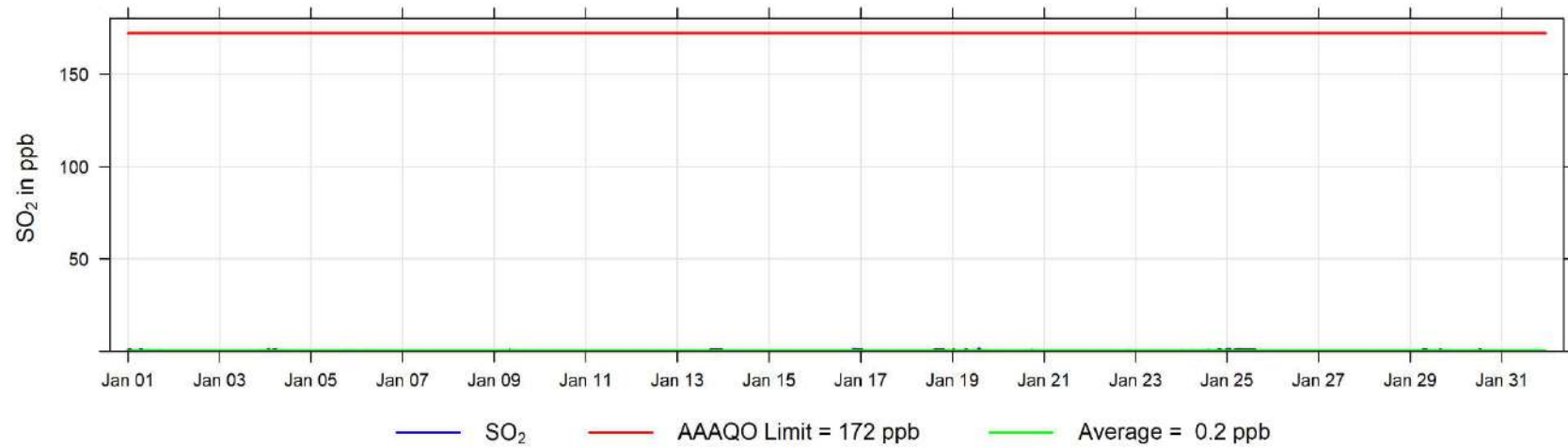
Valleyview January 2023 Wind Rose, wind speed in km/hr
Frequency of counts by wind direction (%)

7 Donnelly Charts

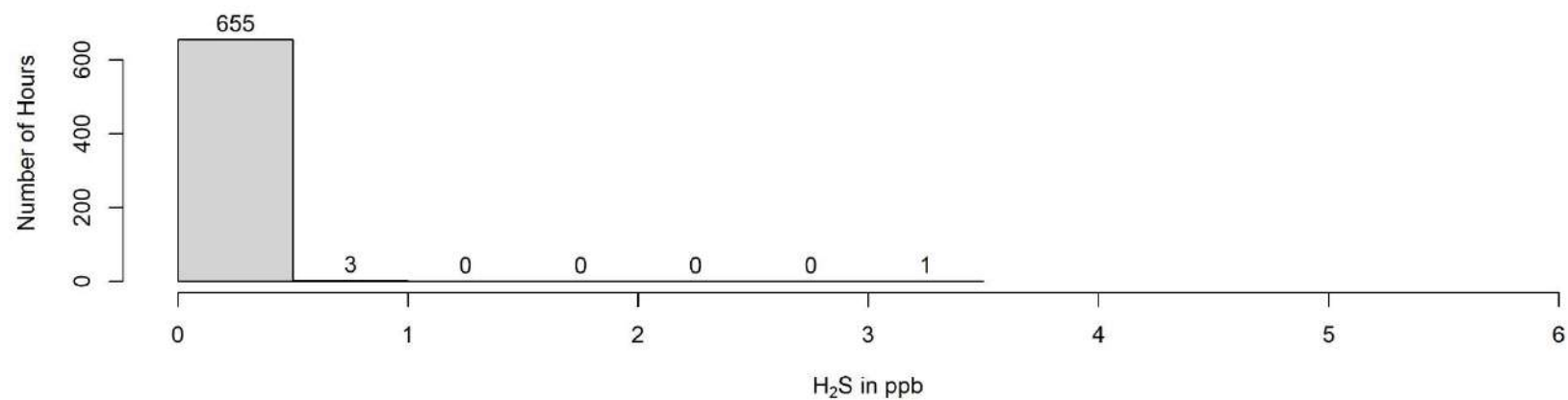
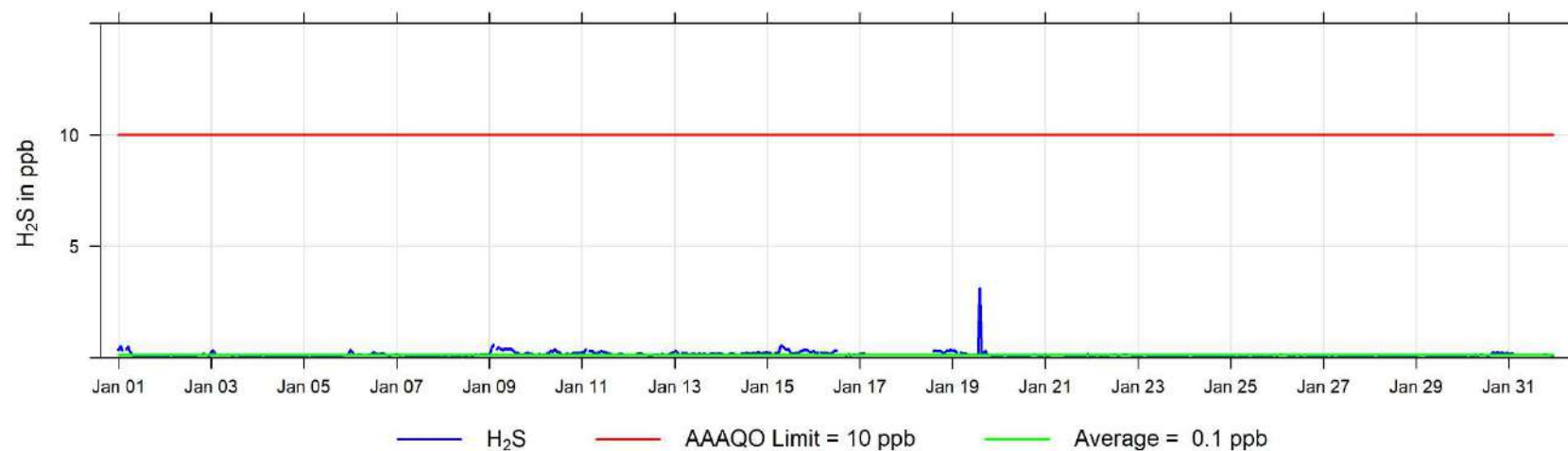
The following pages include the charts and histograms for Donnelly Station



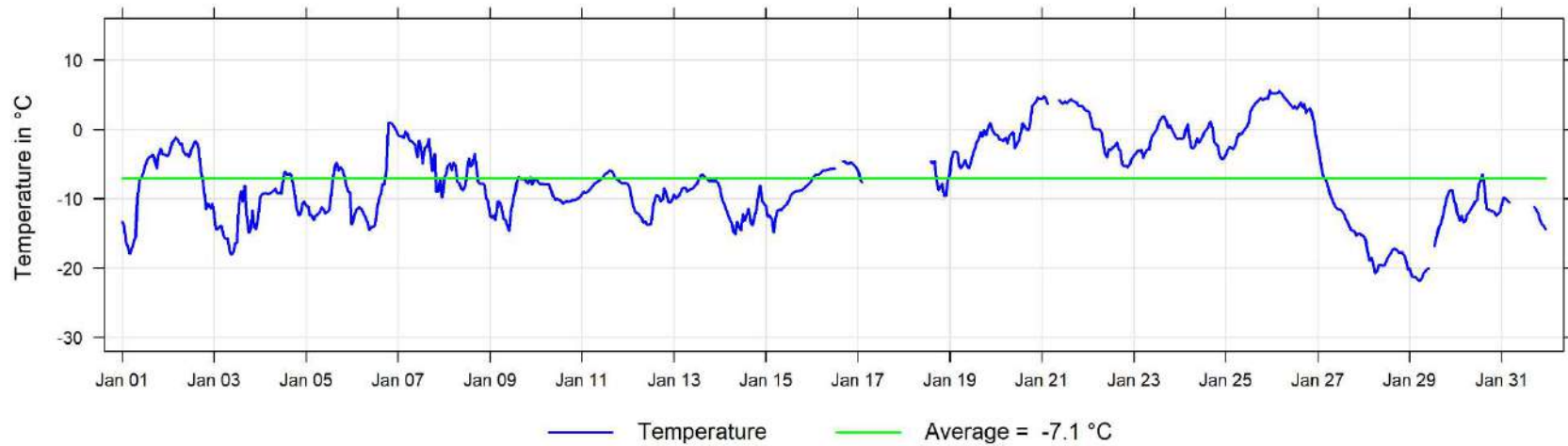
January 2023 Hourly Concentration Readings of SO₂ (in ppb) at Donnelly



January 2023 Hourly Concentration Readings of H₂S (in ppb) at Donnelly



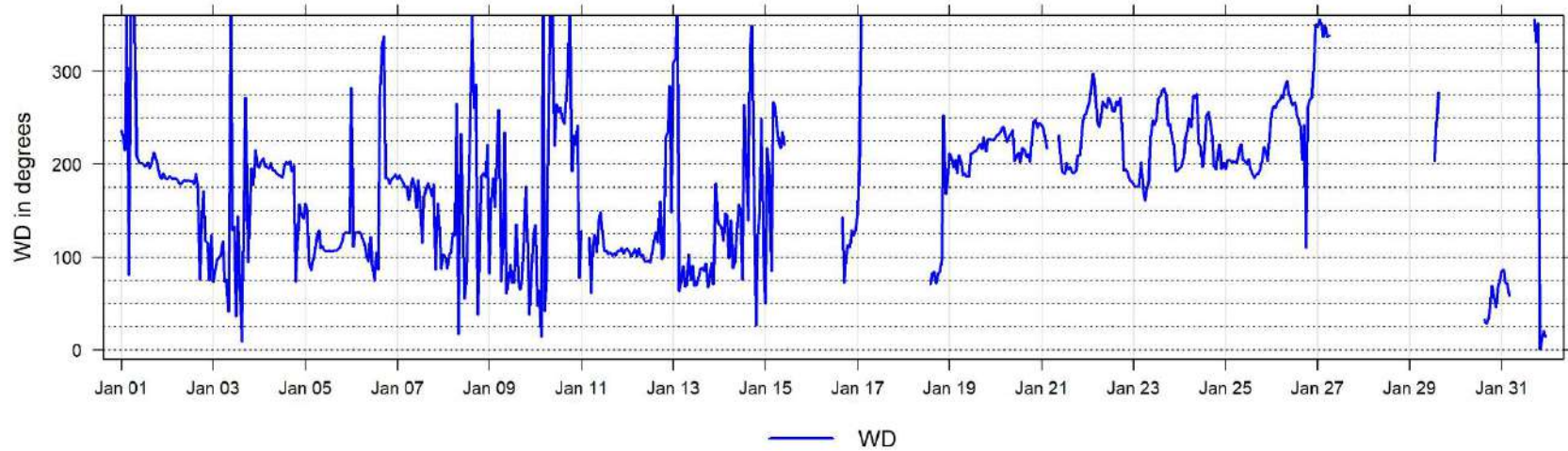
January 2023 Hourly Temperature Readings (in °C) at Donnelly



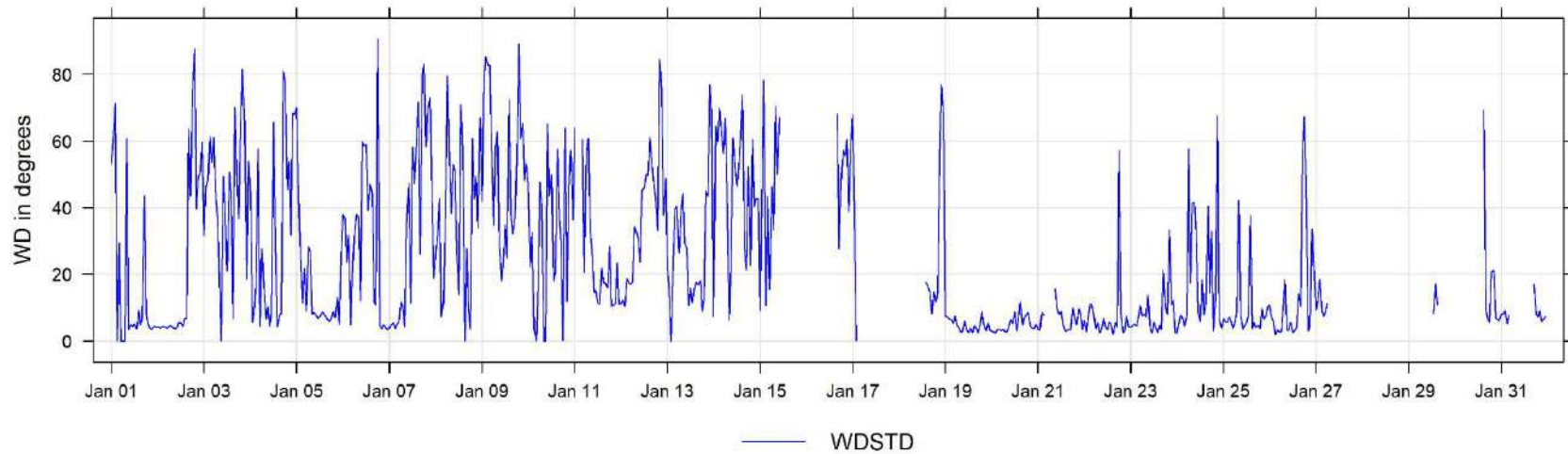
January 2023 Hourly Readings of Wind Speed (in km/hr) at Donnelly

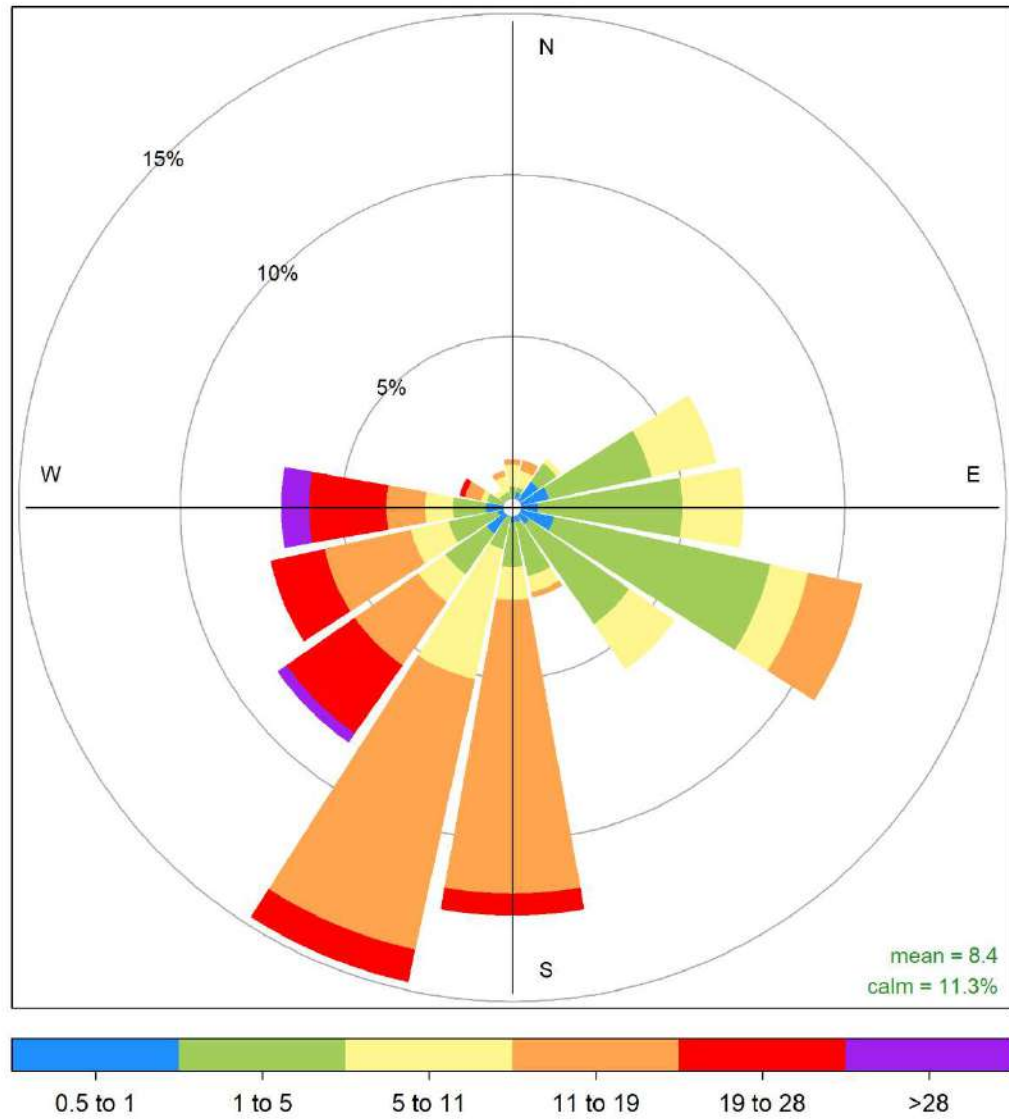


January 2023 Hourly Readings of Wind Direction (in degrees) at Donnelly



January 2023 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Donnelly

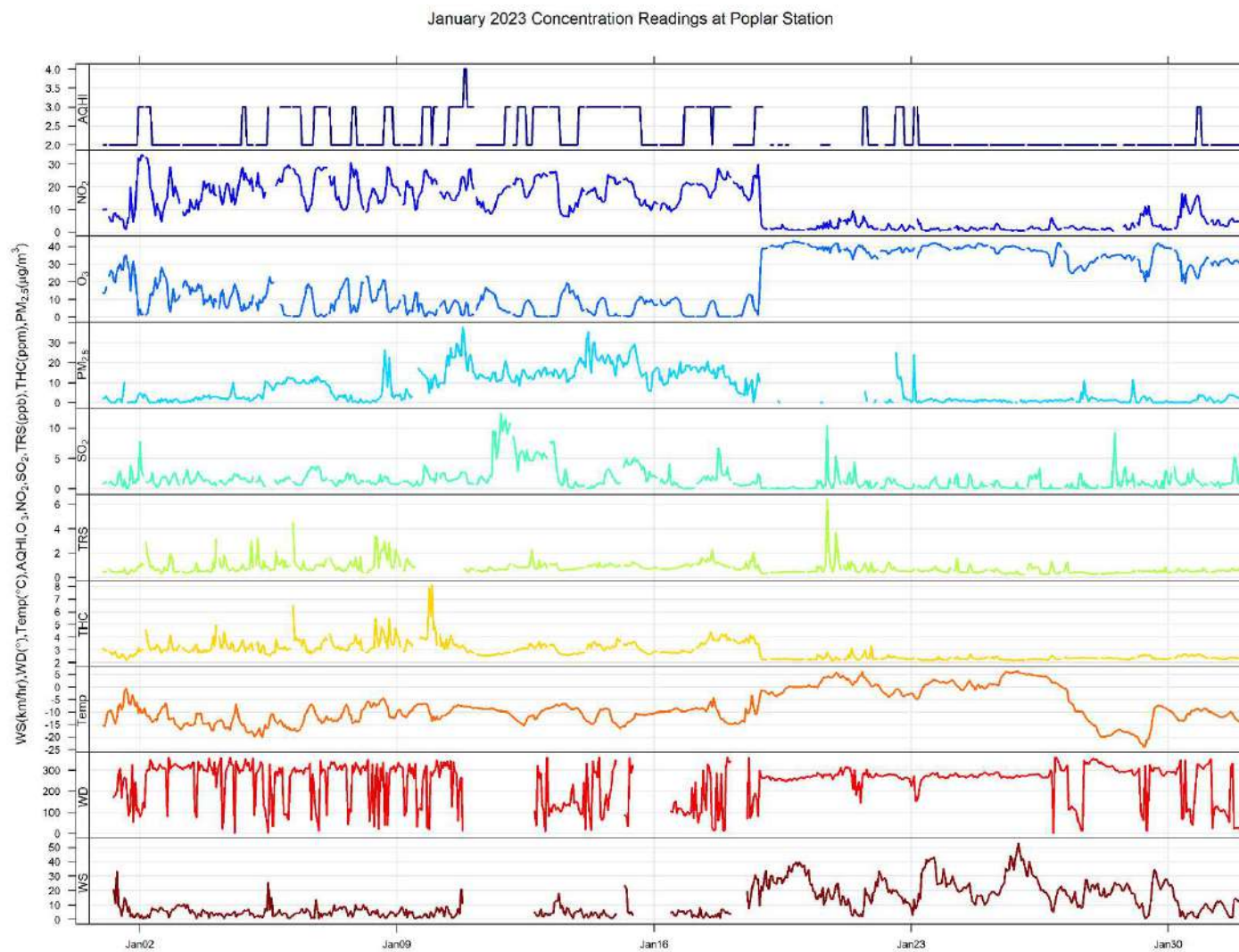




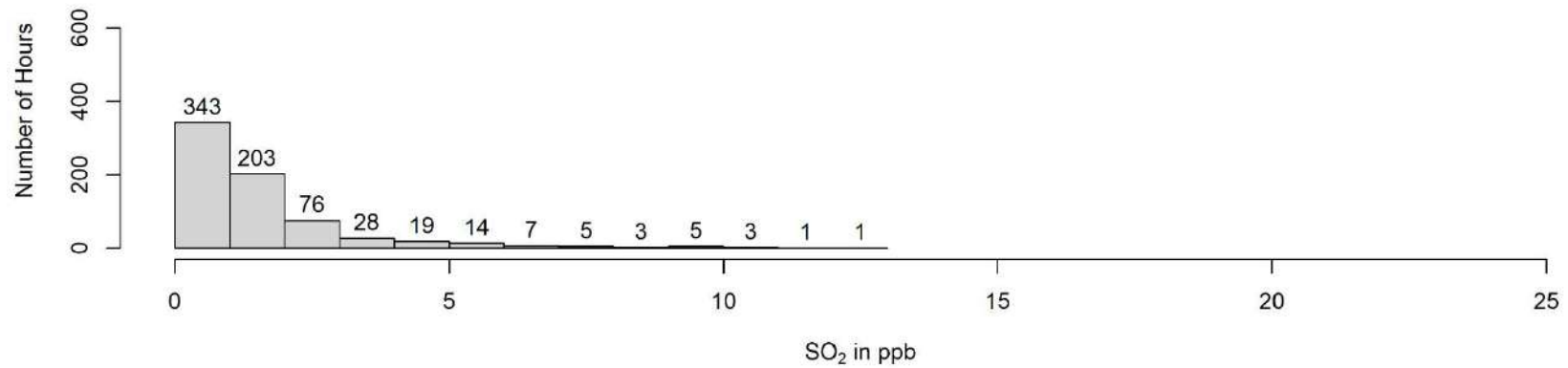
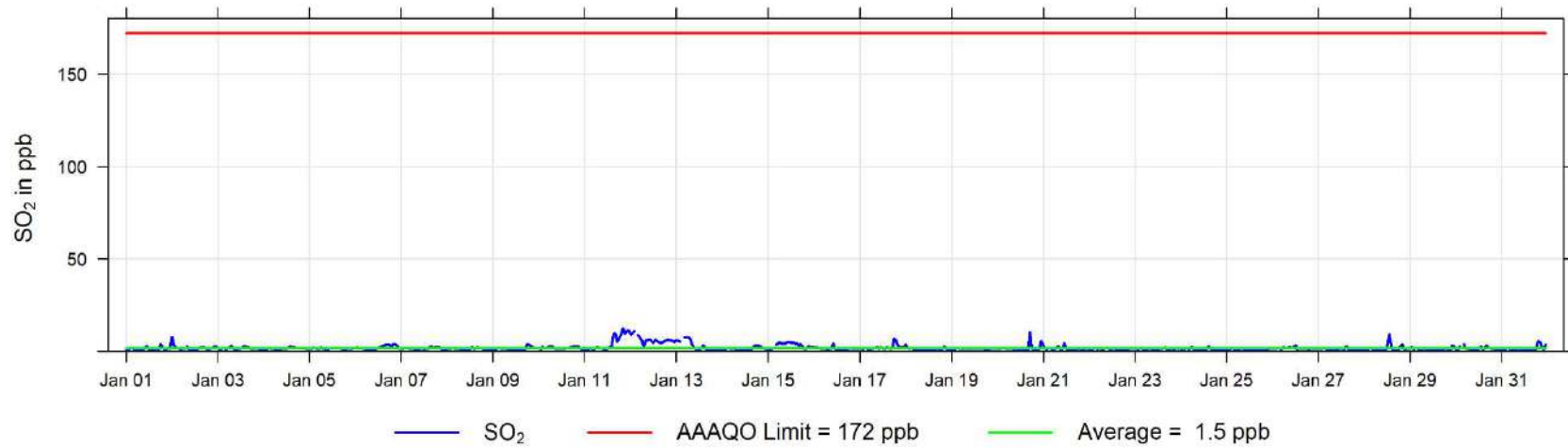
Donnelly January 2023 Wind Rose, wind speed in km/hr
Frequency of counts by wind direction (%)

8 Poplar (Portable) Charts

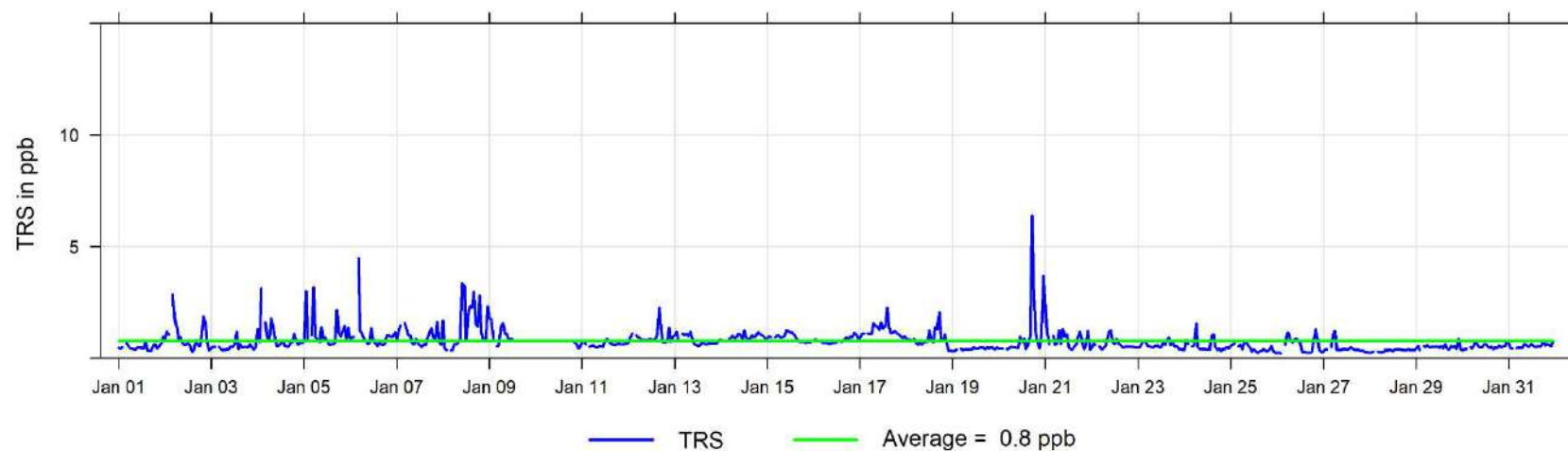
The following pages include the charts and histograms for Poplar Portable Station



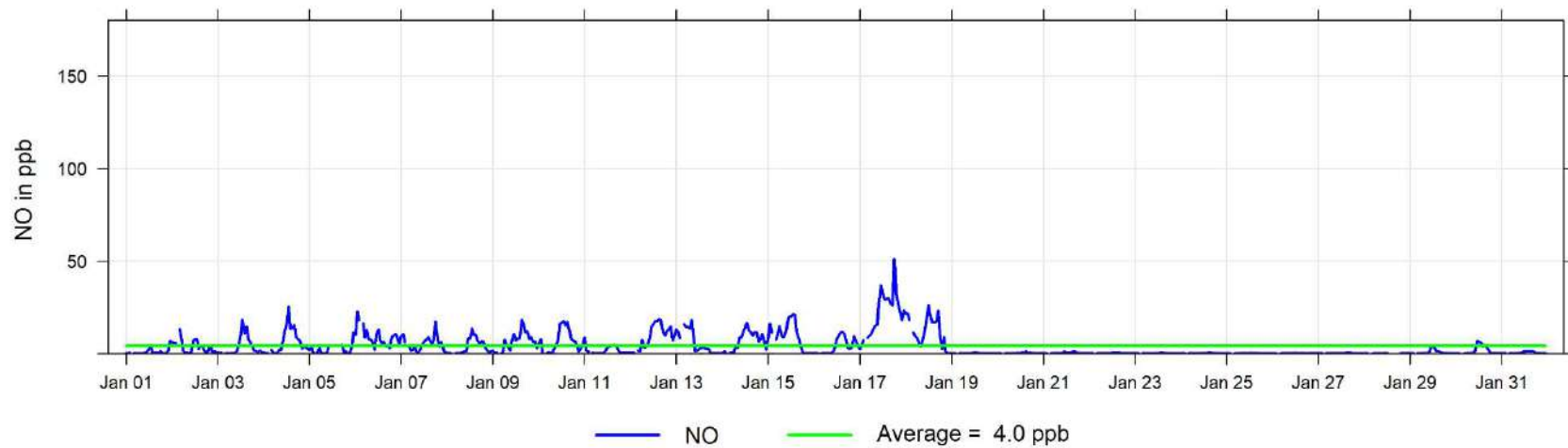
January 2023 Hourly Concentration Readings of SO₂ (in ppb) at Poplar



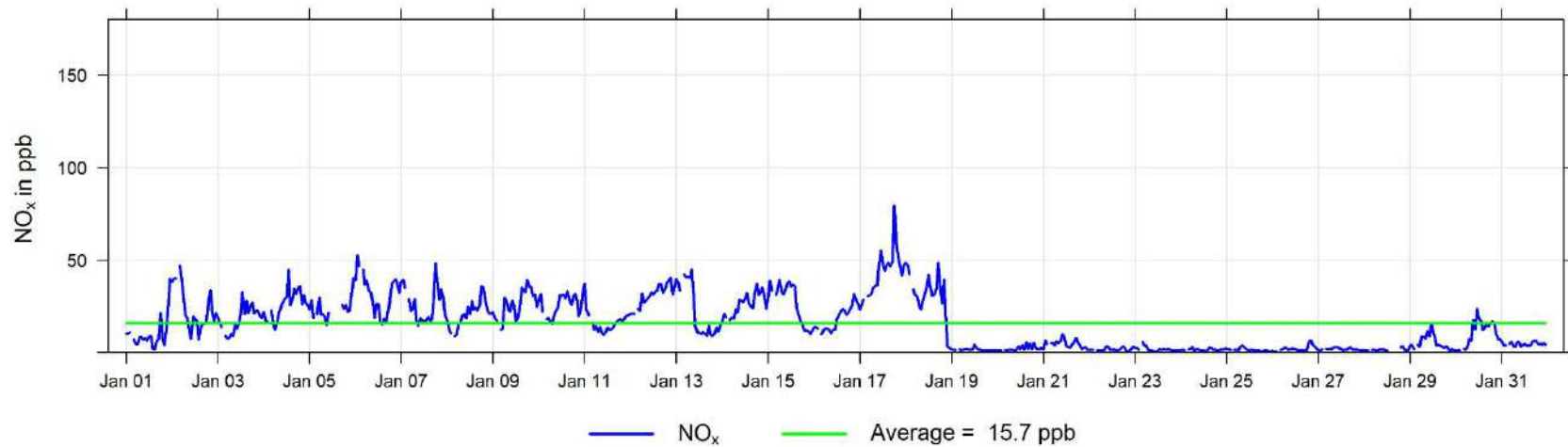
January 2023 Hourly Concentration Readings of TRS (in ppb) at Poplar



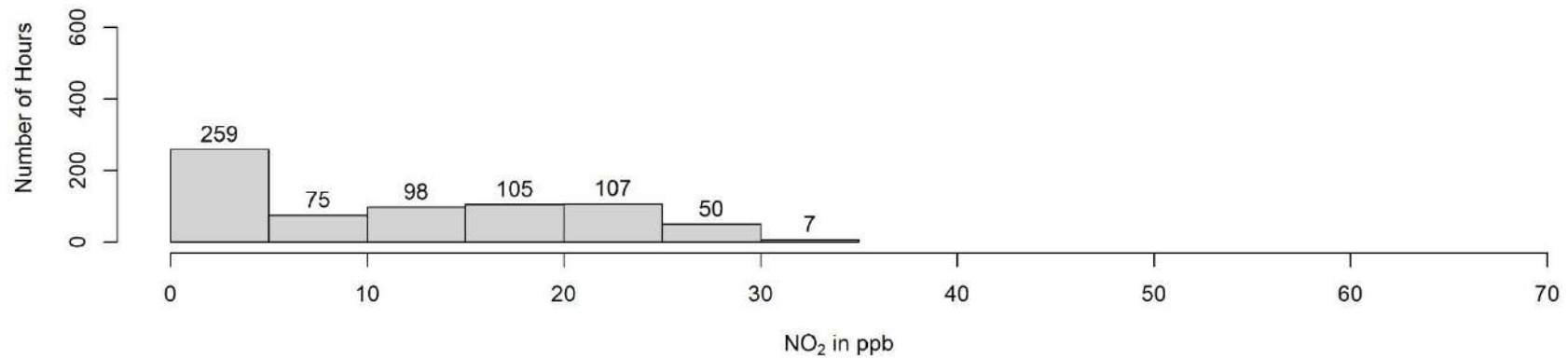
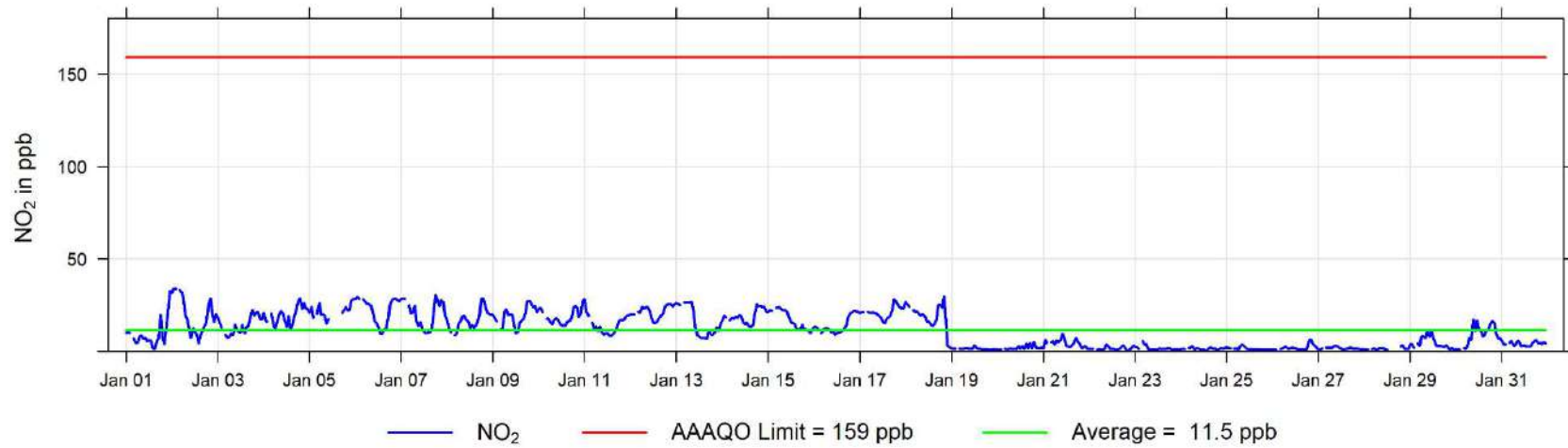
January 2023 Hourly Concentration Readings of NO (in ppb) at Poplar



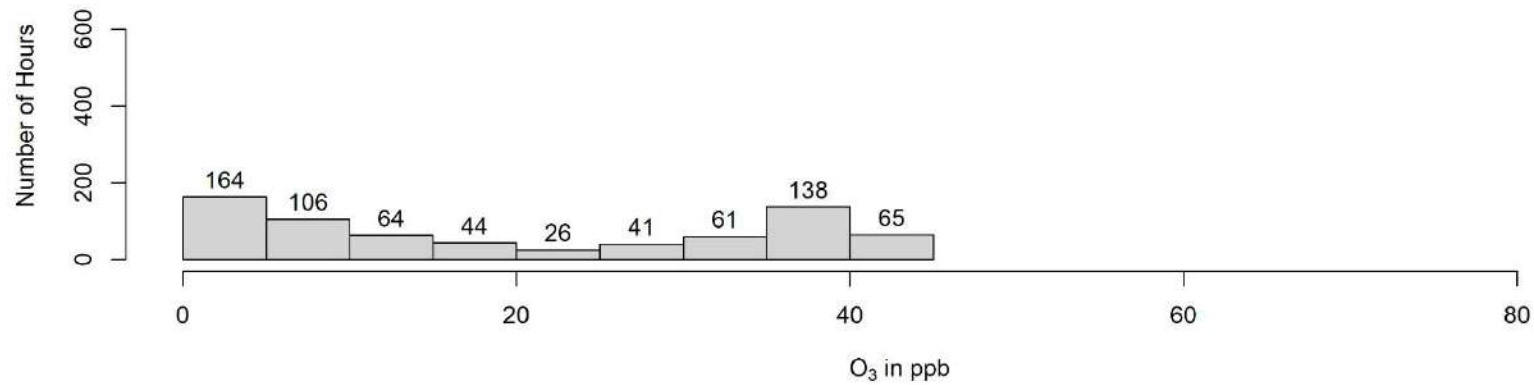
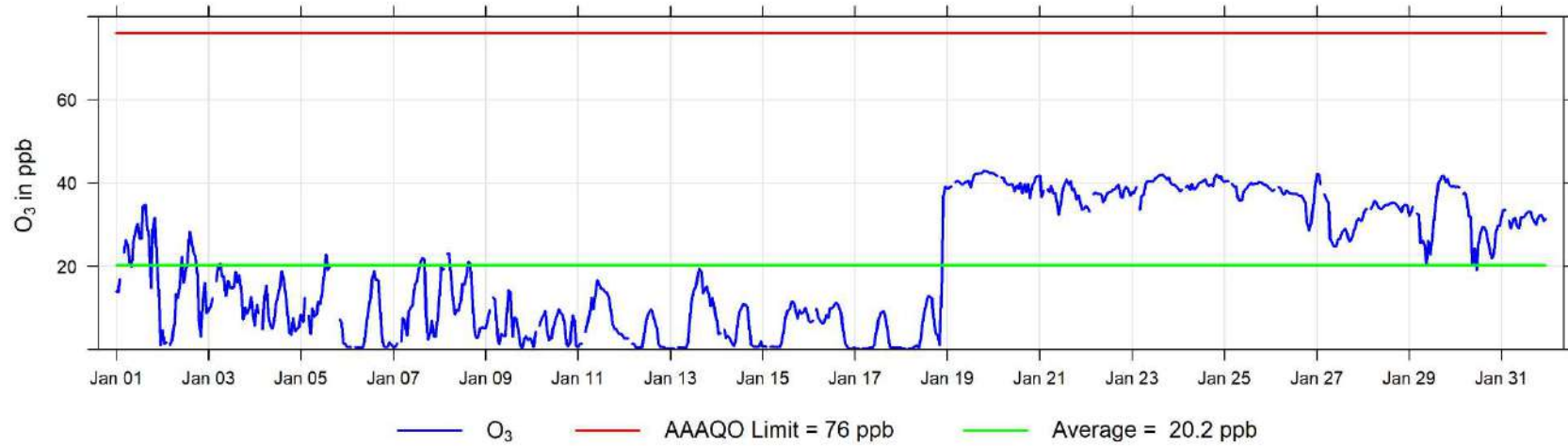
January 2023 Hourly Concentration Readings of NO_x (in ppb) at Poplar



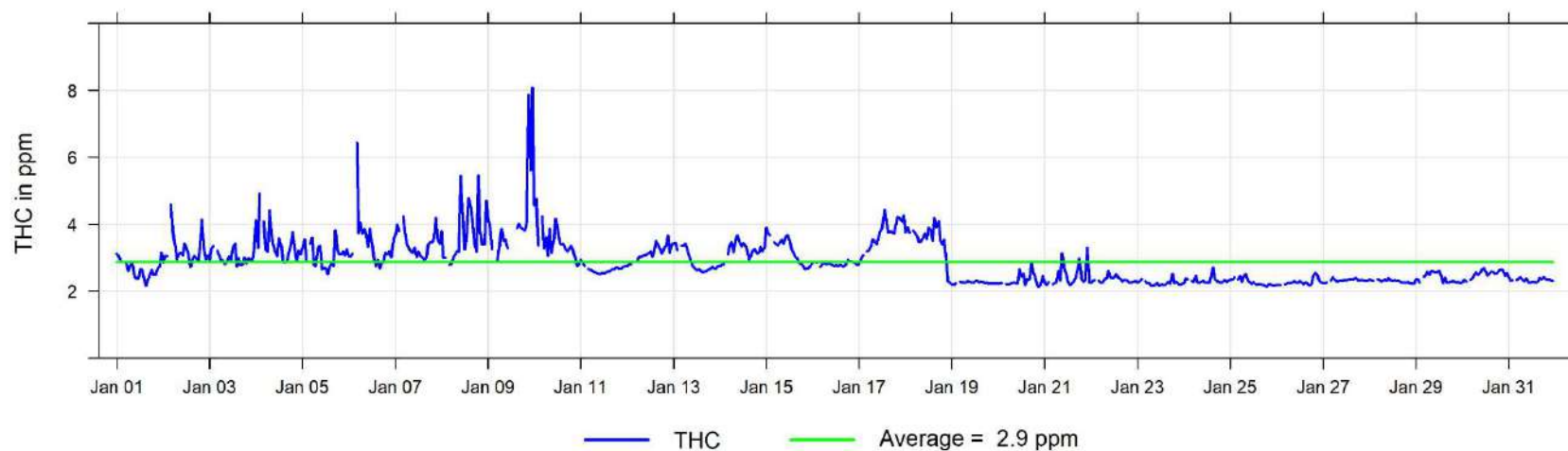
January 2023 Hourly Concentration Readings of NO₂ (in ppb) at Poplar



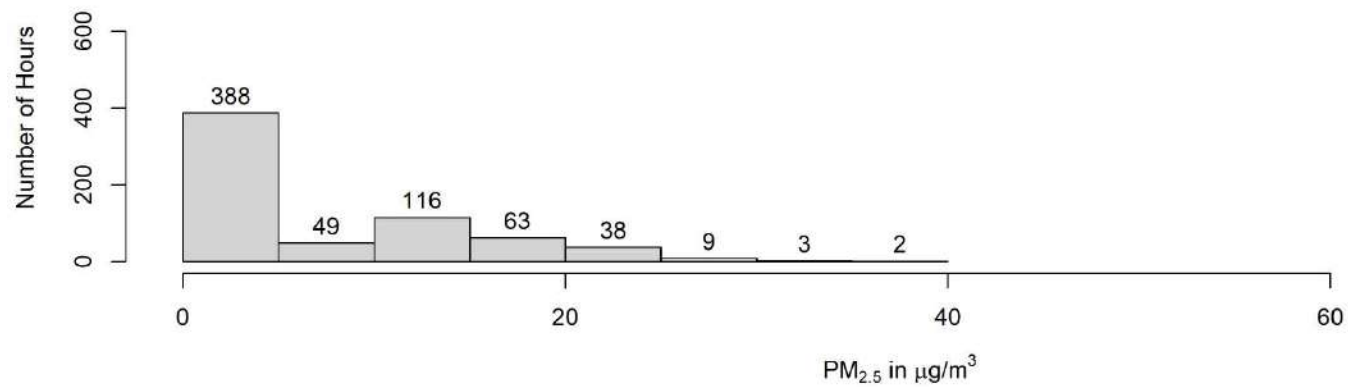
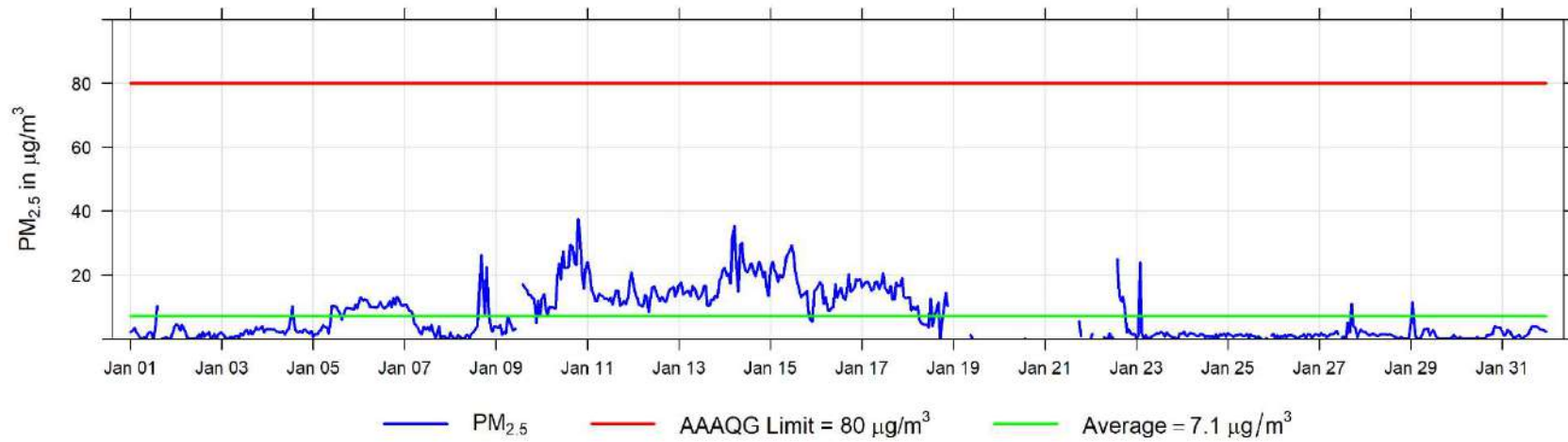
January 2023 Hourly Concentration Readings of O₃ (in ppb) at Poplar



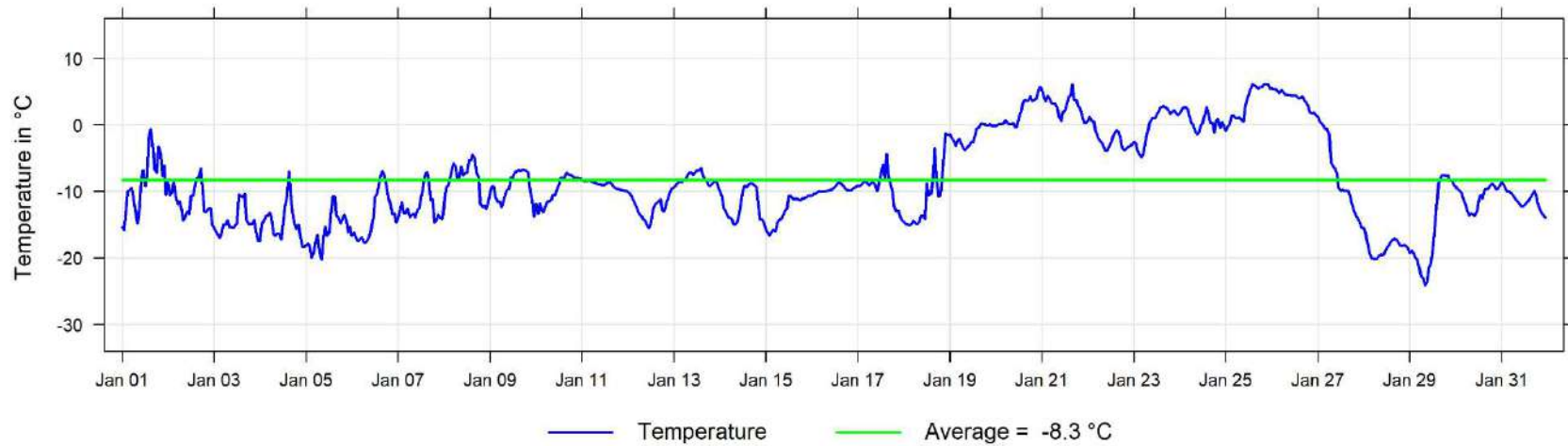
January 2023 Hourly Concentration Readings of THC (in ppm) at Poplar



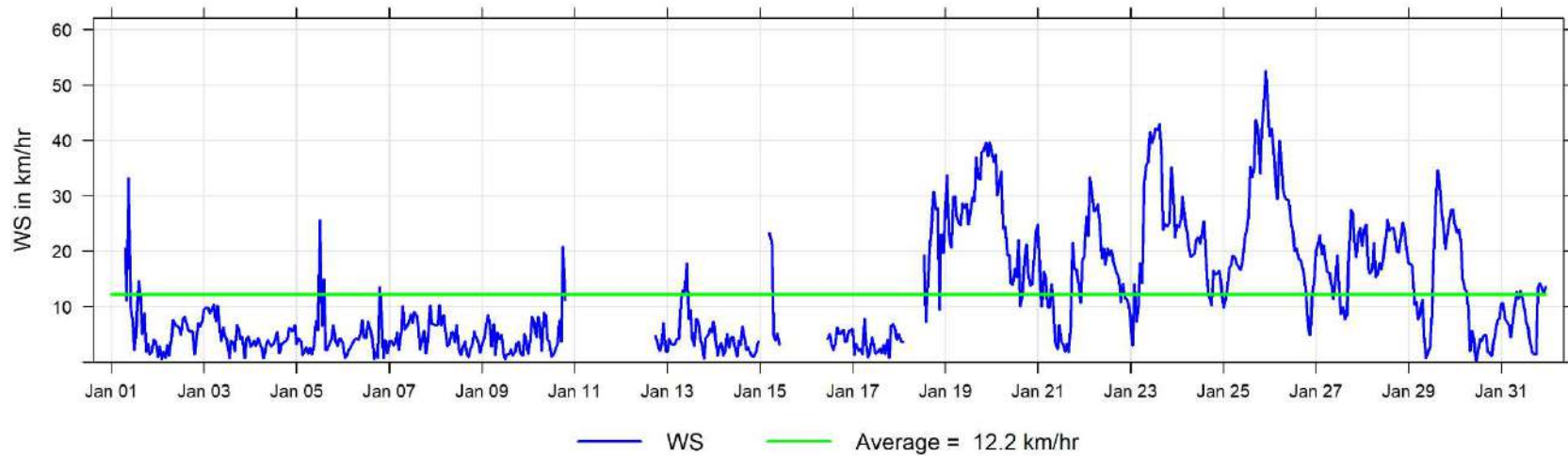
January 2023 Hourly Concentration Readings of PM_{2.5} in $\mu\text{g}/\text{m}^3$ at Poplar



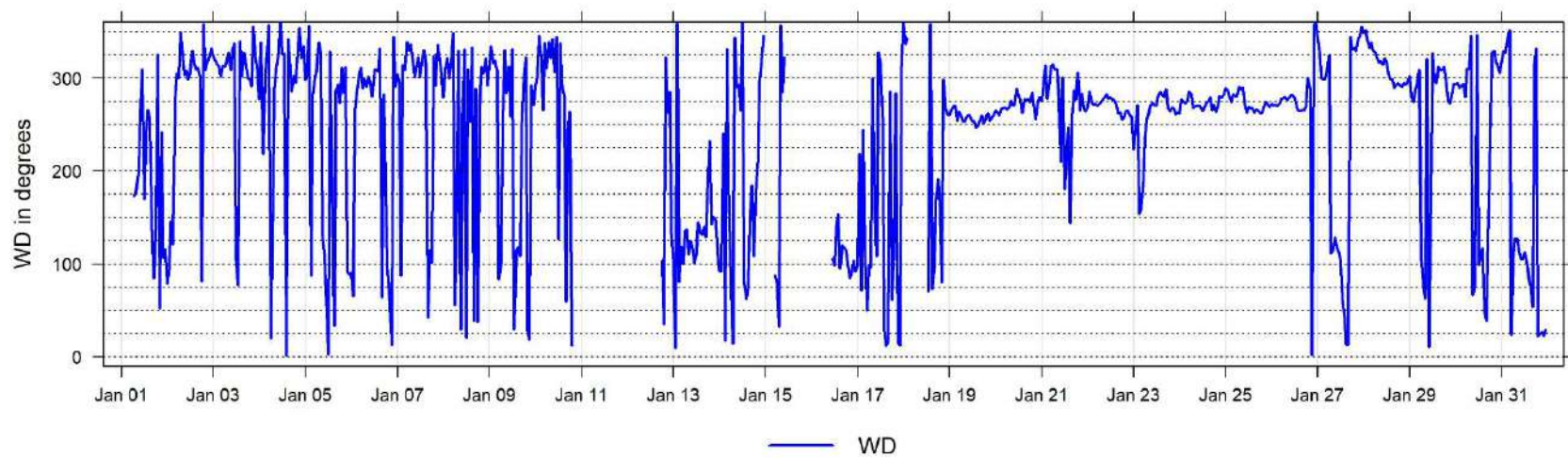
January 2023 Hourly Temperature Readings (in °C) at Poplar



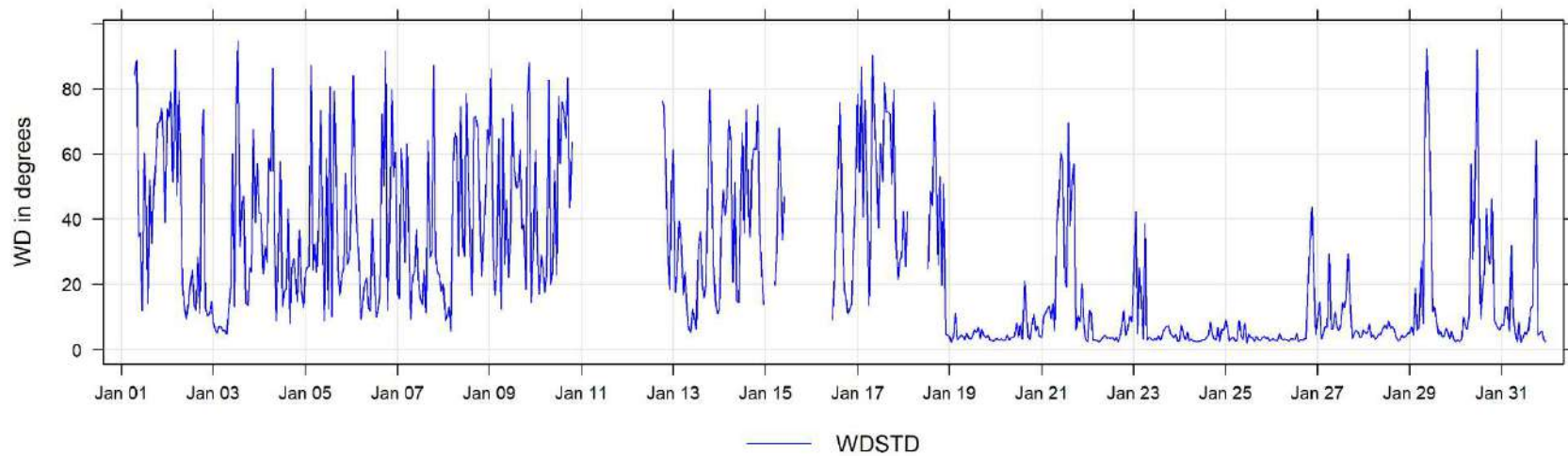
January 2023 Hourly Readings of Wind Speed (in km/hr) at Poplar

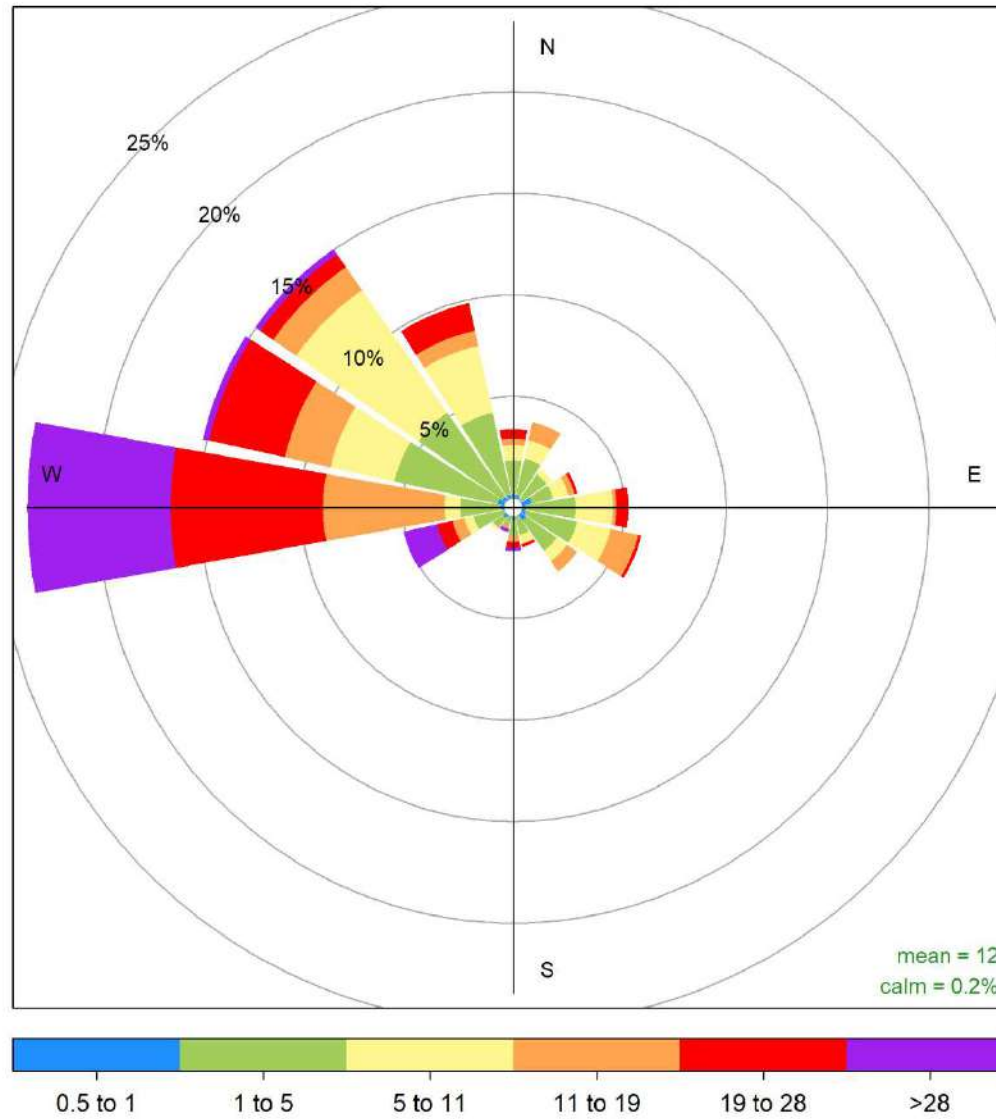


January 2023 Hourly Readings of Wind Direction (in degrees) at Poplar



January 2023 Hourly Readings of Wind Direction Standard Deviation (in degrees) at Poplar

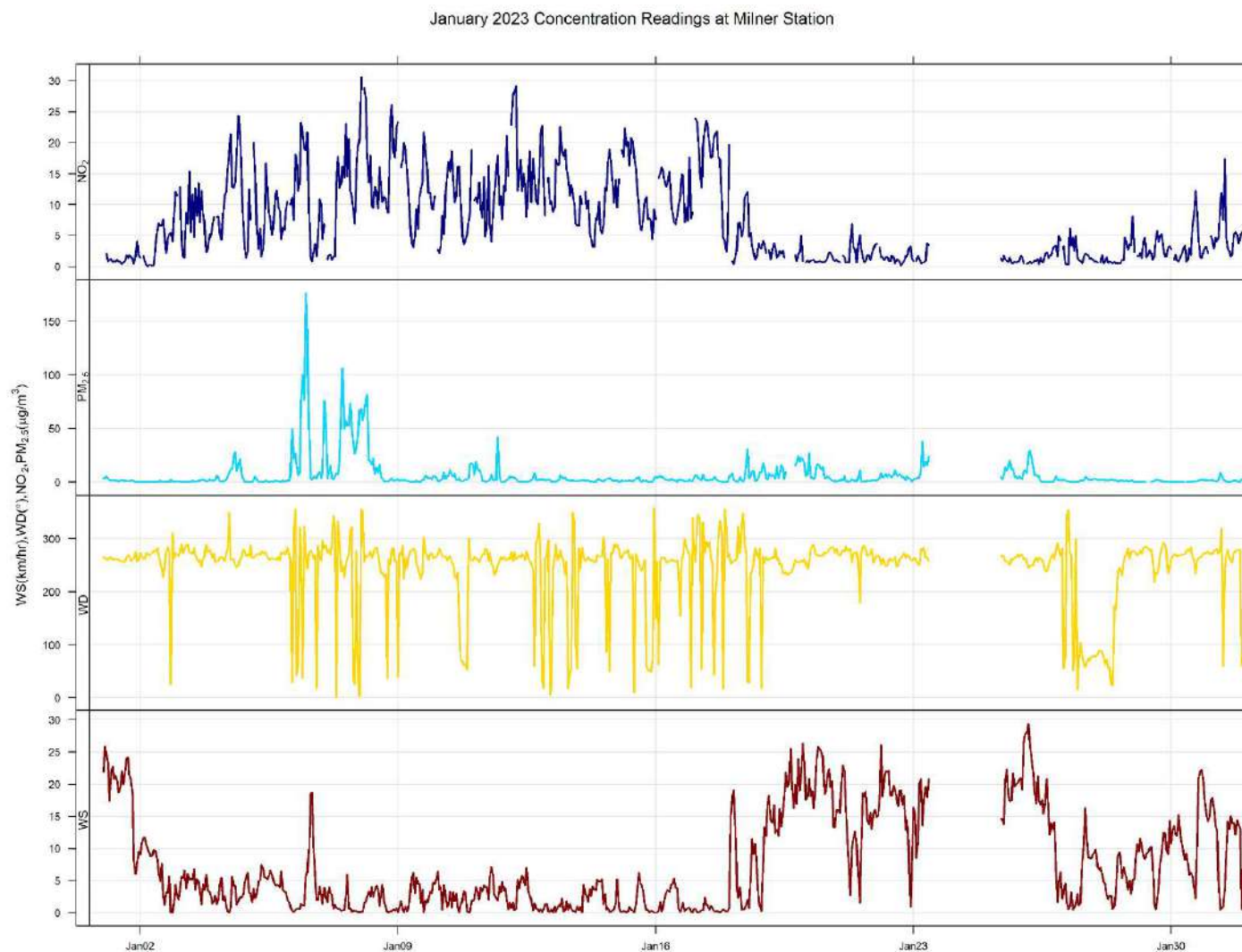




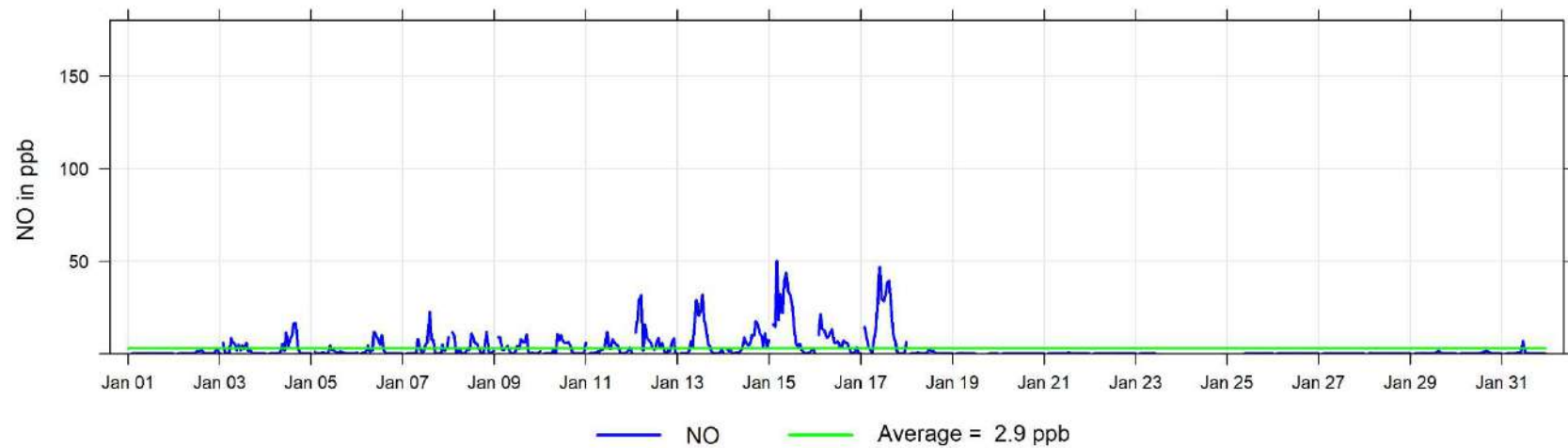
Poplar January 2023 Wind Rose, wind speed in km/hr
Frequency of counts by wind direction (%)

9 Milner Charts

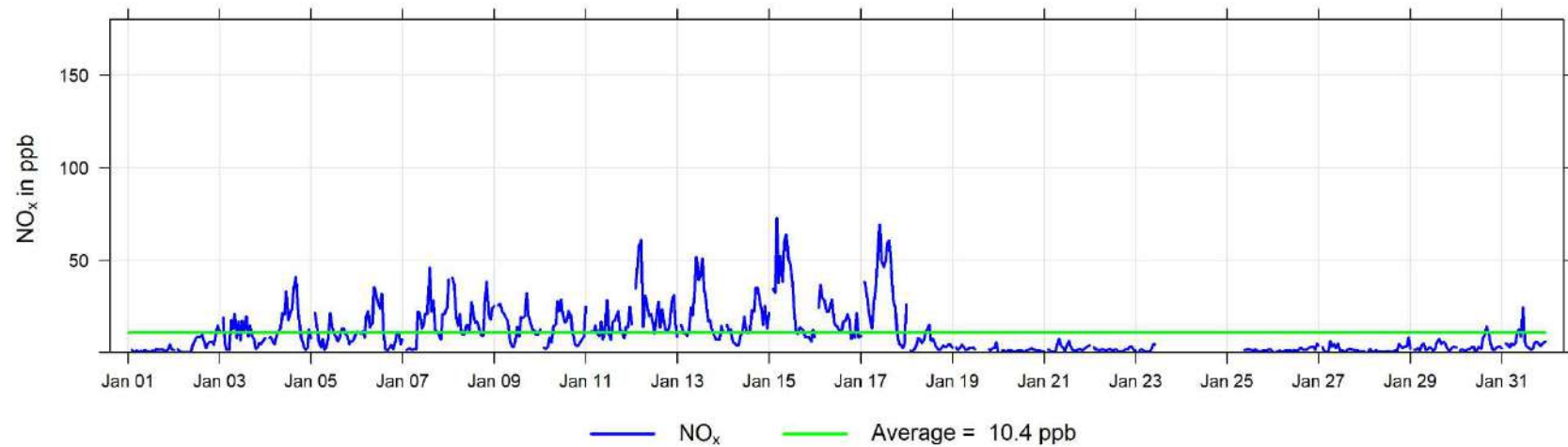
The following pages include the charts and histograms for Poplar Portable Station



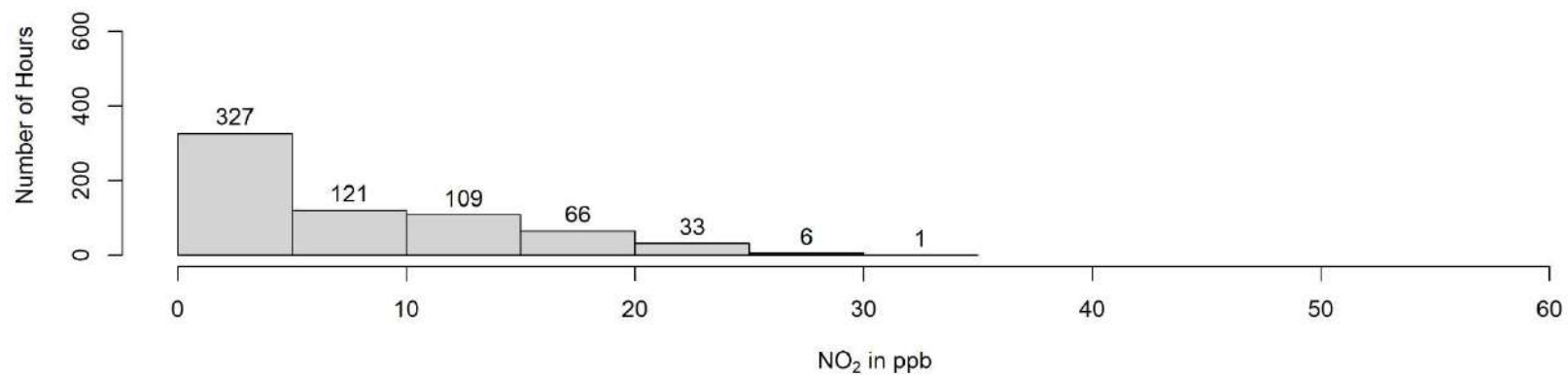
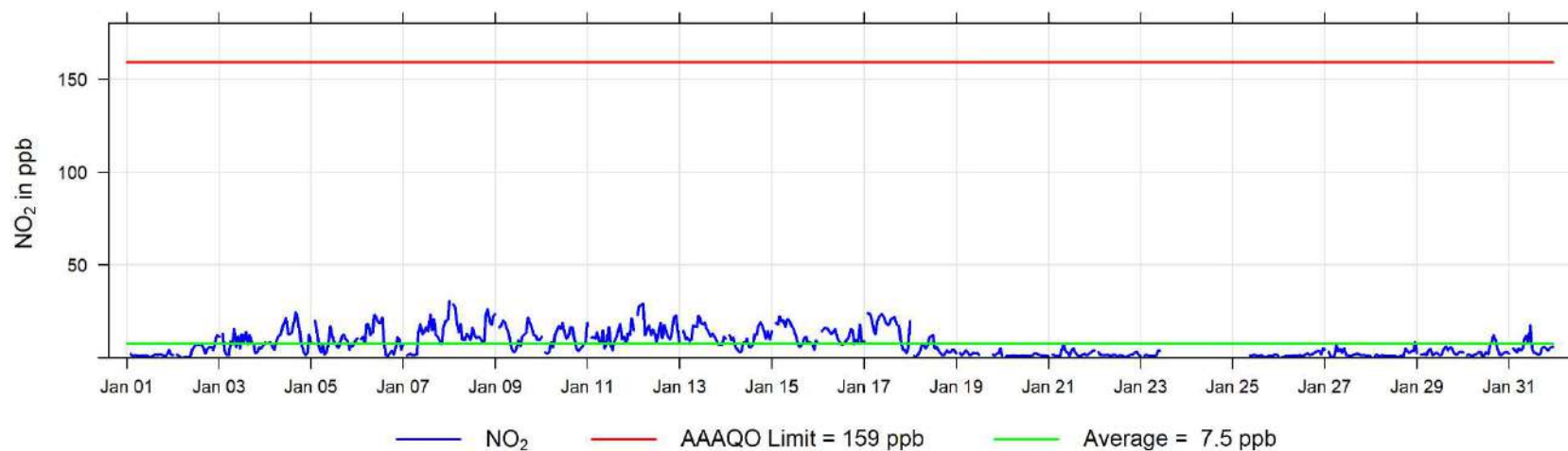
January 2023 Hourly Concentration Readings of NO (in ppb) at Milner



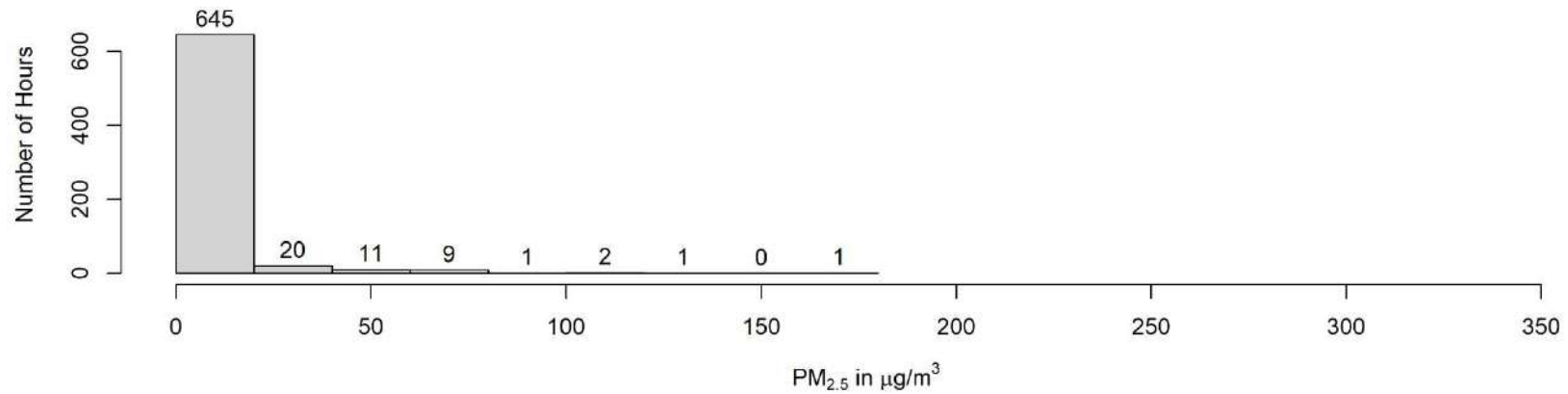
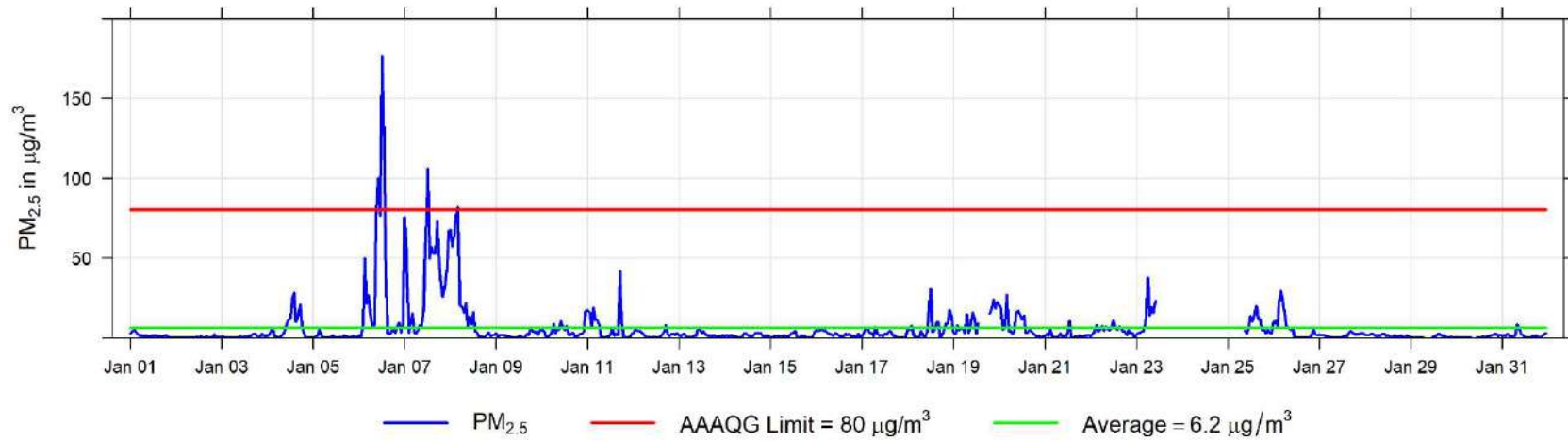
January 2023 Hourly Concentration Readings of NO_x (in ppb) at Milner



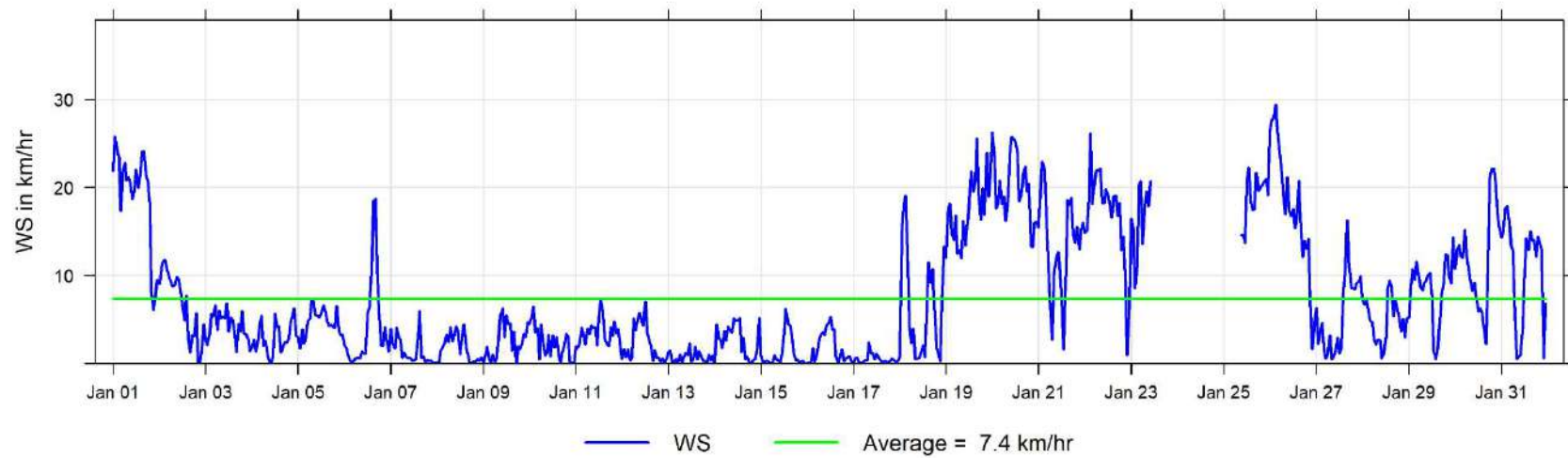
January 2023 Hourly Concentration Readings of NO₂ (in ppb) at Milner



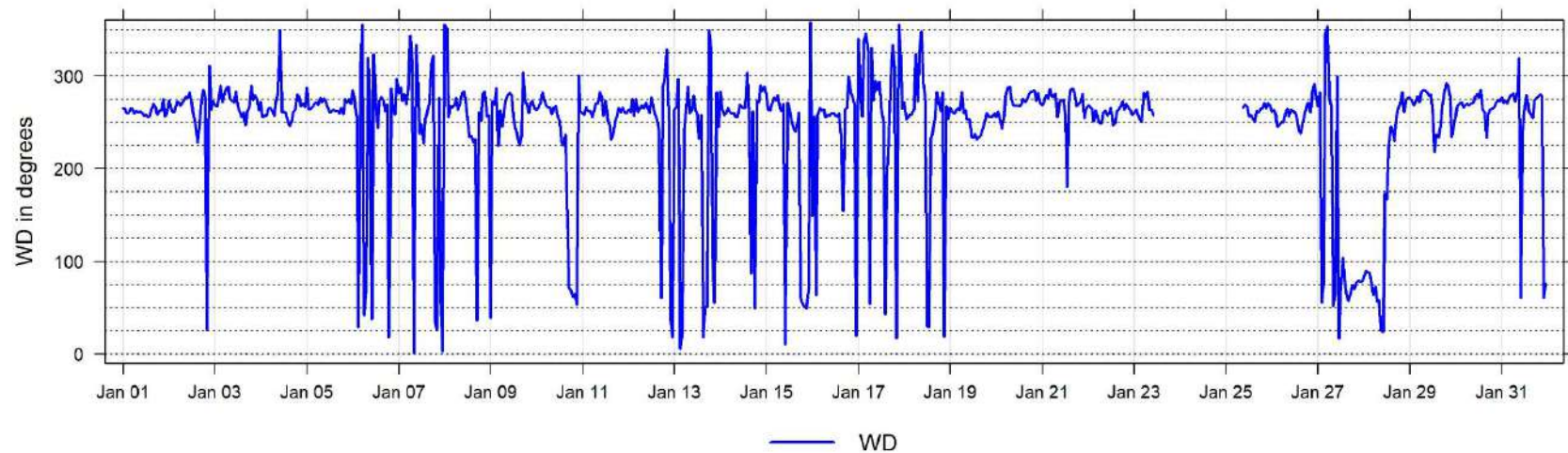
January 2023 Hourly Concentration Readings of PM_{2.5} in µg/m³ at Milner

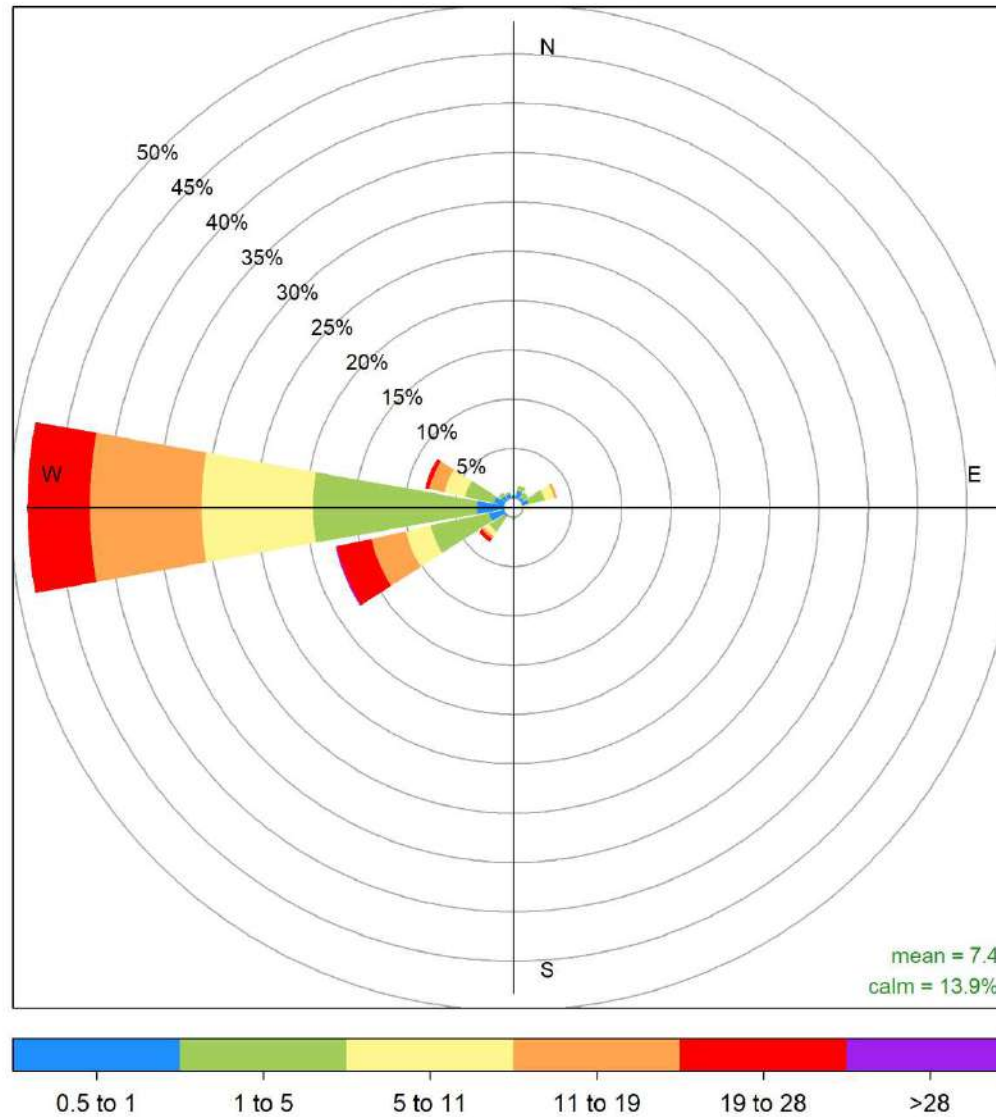


January 2023 Hourly Readings of Wind Speed (in km/hr) at Milner



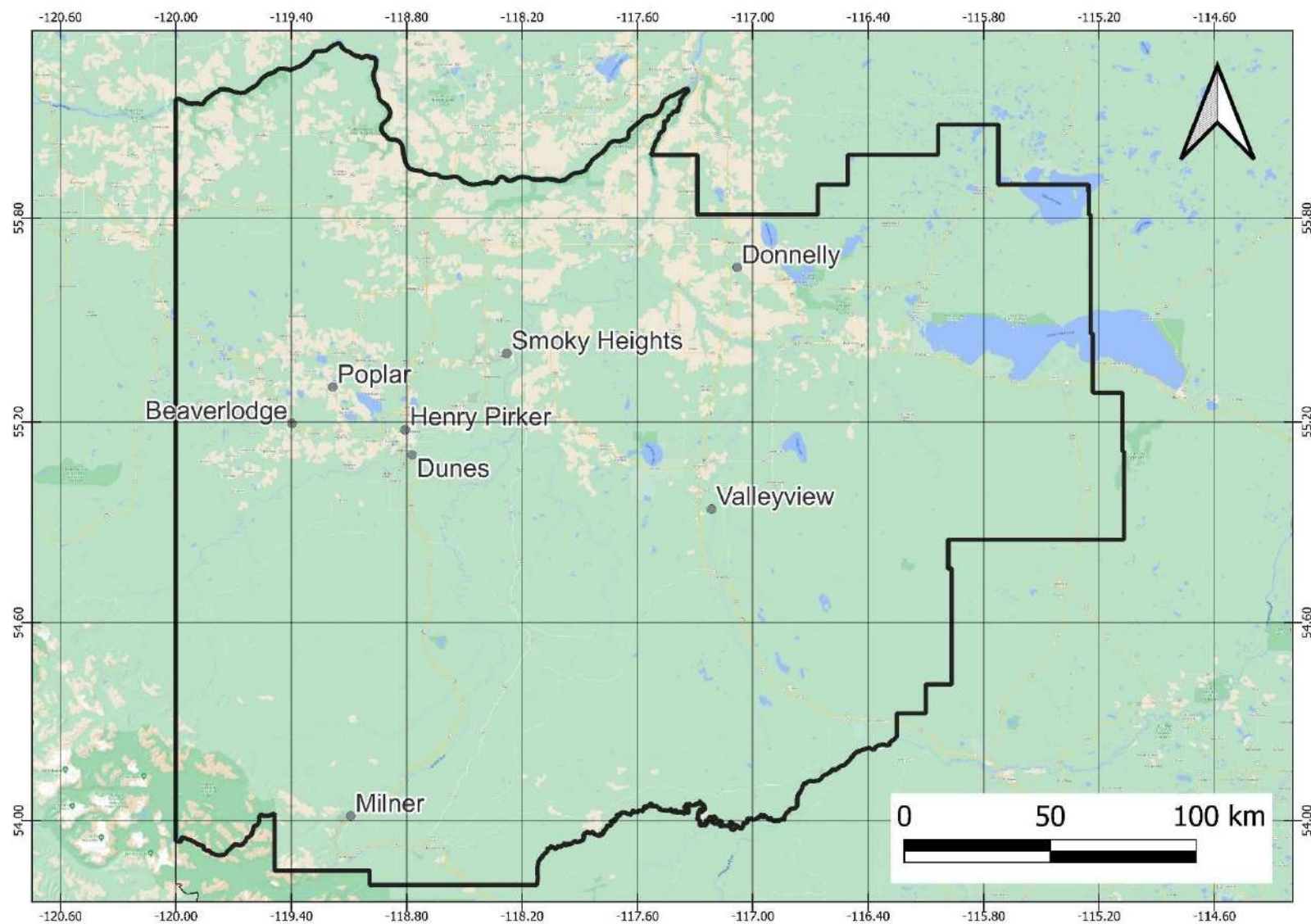
January 2023 Hourly Readings of Wind Direction (in degrees) at Milner



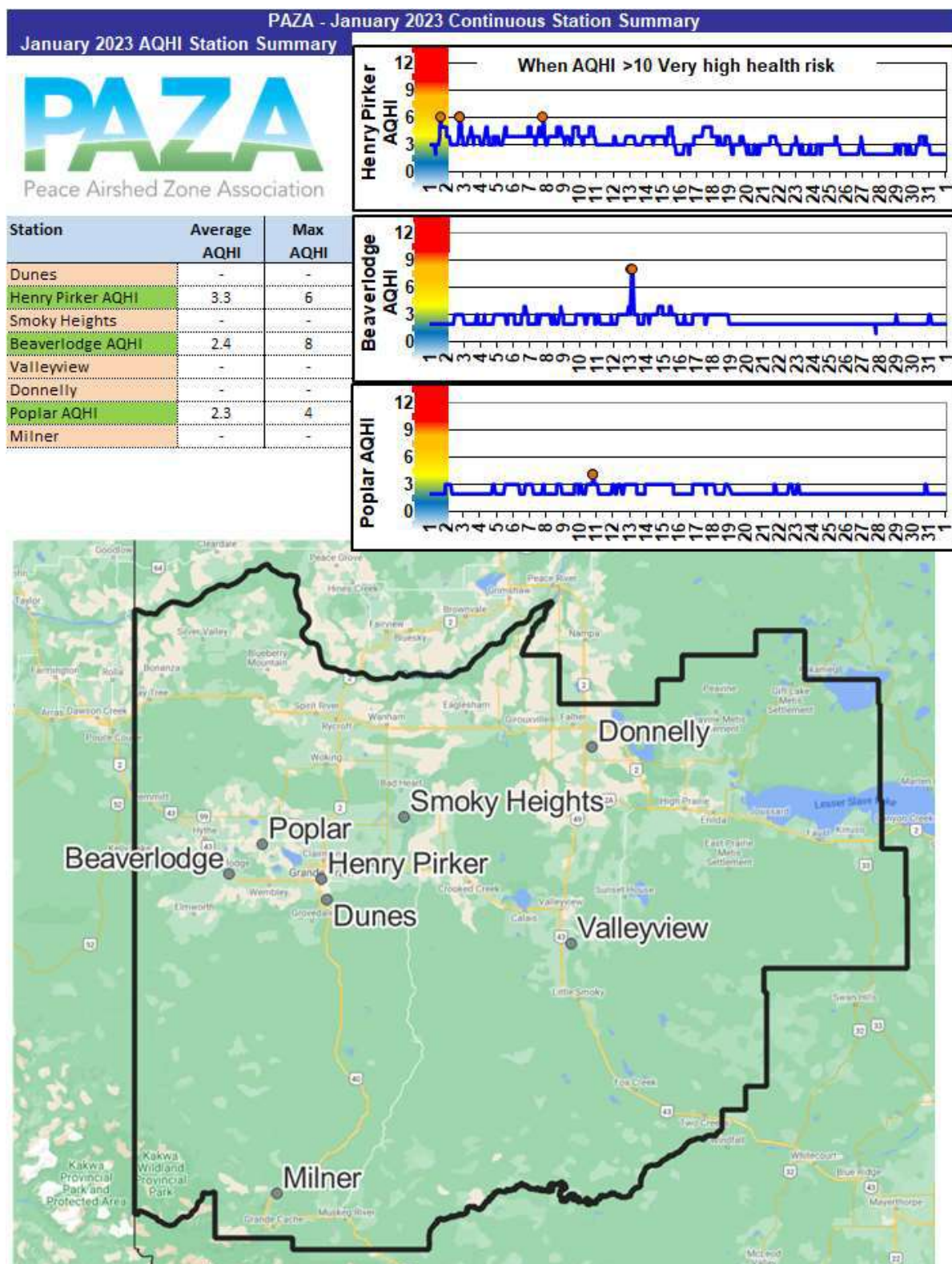


Milner January 2023 Wind Rose, wind speed in km/hr
Frequency of counts by wind direction (%)

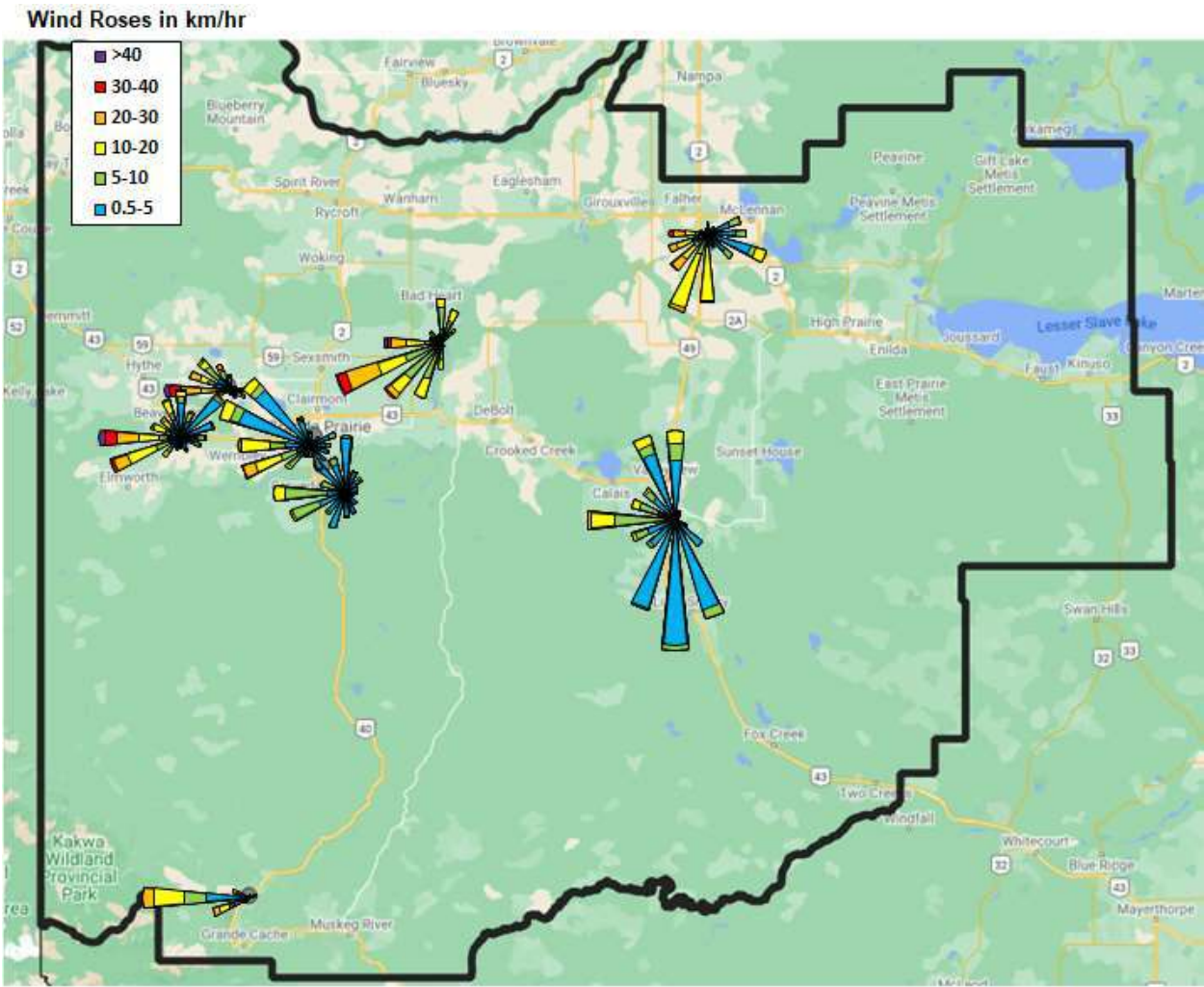
10 Concentration Summaries and Roses for PAZA



10.1 Air Quality Health Index (AQHI) Plots



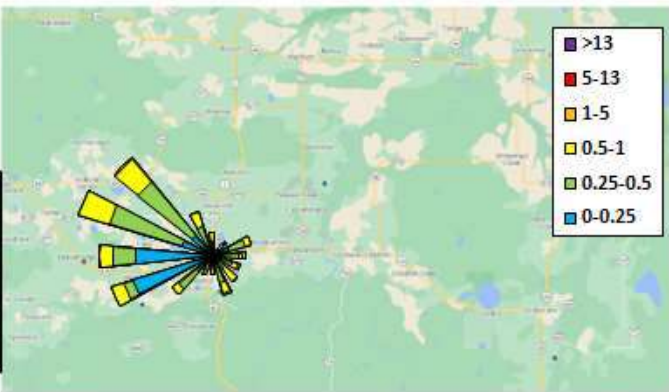
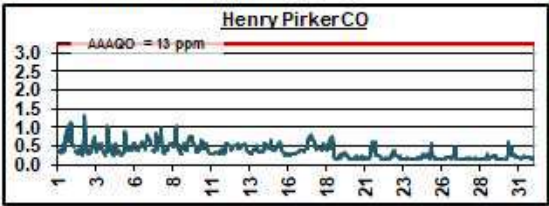
10.2 Wind Roses



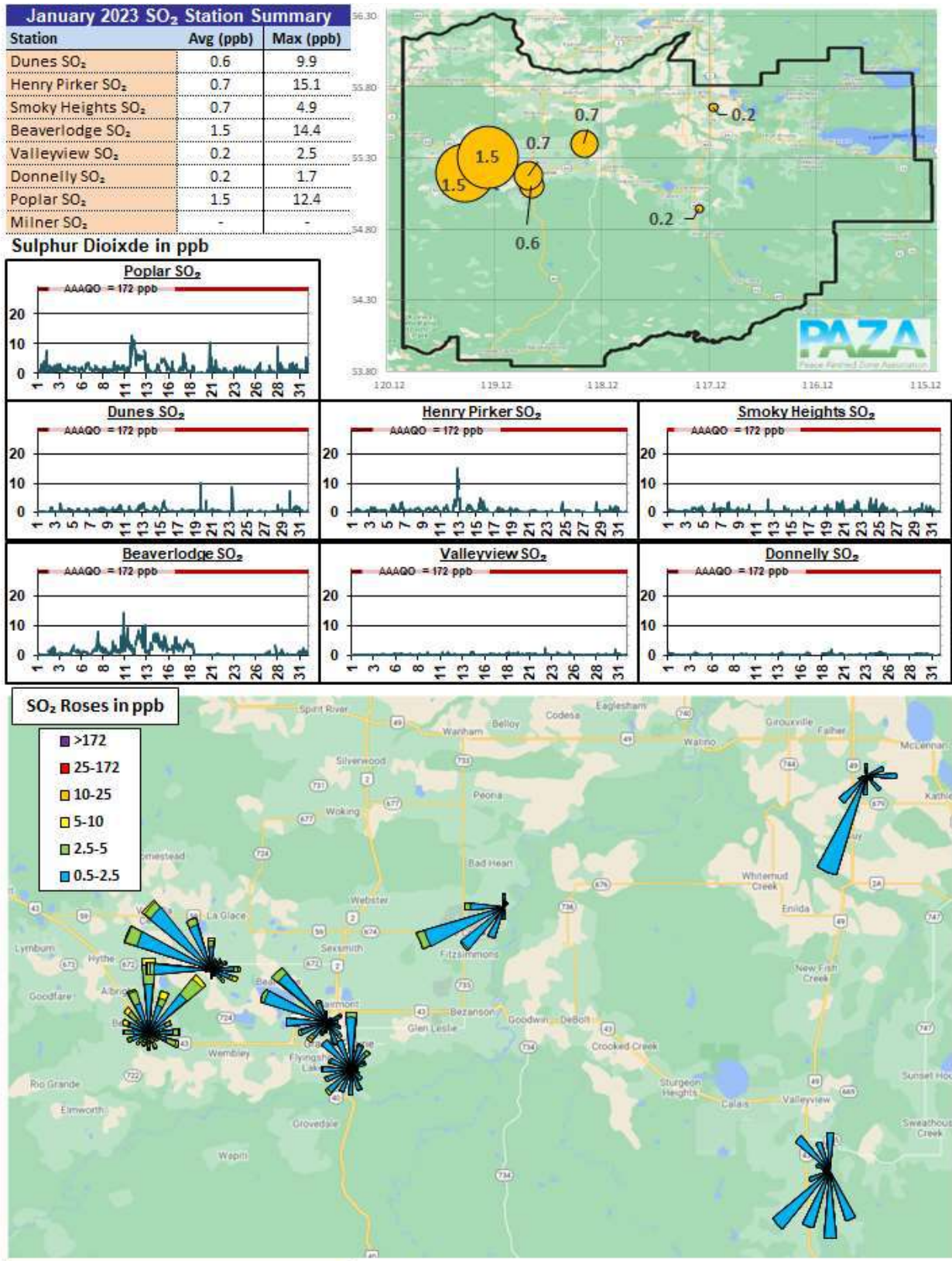
10.3 Carbon Monoxide (CO) Plots

January 2023 CO Station Summary		
Station	Avg (ppm)	Max (ppm)
Henry Pirker CO	0.37	1.31

Carbon Monoxide in ppm



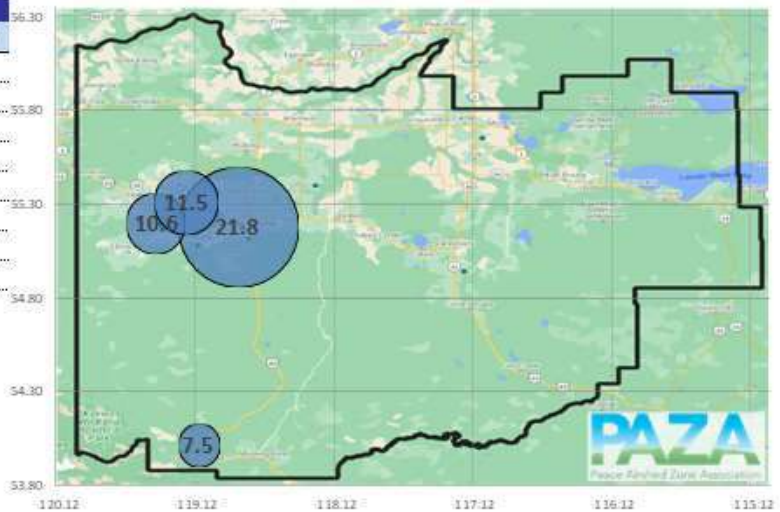
10.4 Sulphur Dioxide (SO₂) Plots



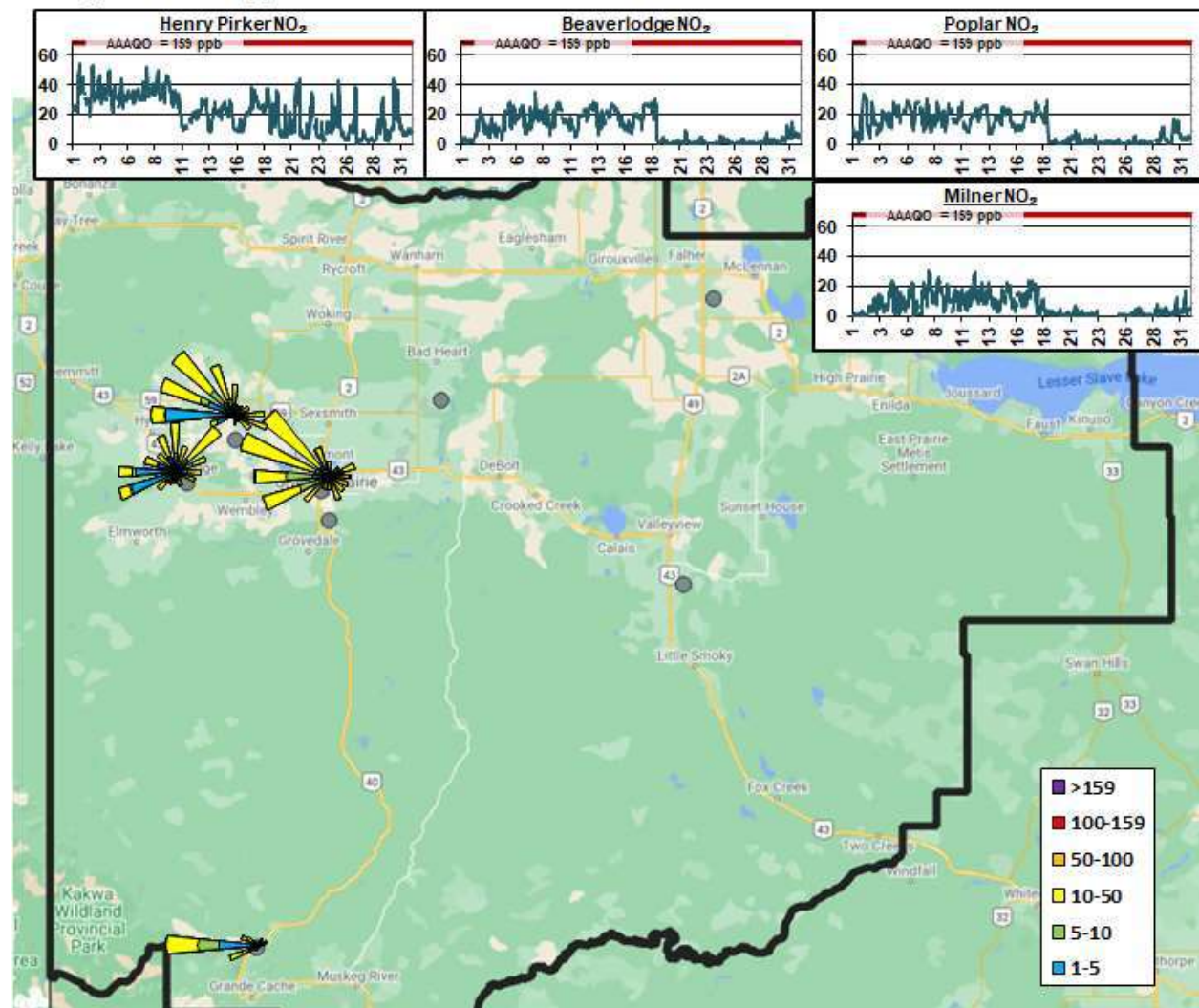
10.5 Nitrogen Dioxide (NO₂) Plots

January 2023 NO₂ Station Summary

Station	Avg (ppb)	Max (ppb)
Dunes NO ₂	-	-
Henry Pirker NO ₂	21.8	53.9
Smoky Heights NO ₂	-	-
Beaverlodge NO ₂	10.6	35.2
Valleyview NO ₂	-	-
Donnelly NO ₂	-	-
Poplar NO ₂	11.5	33.9
Milner NO ₂	7.5	30.5

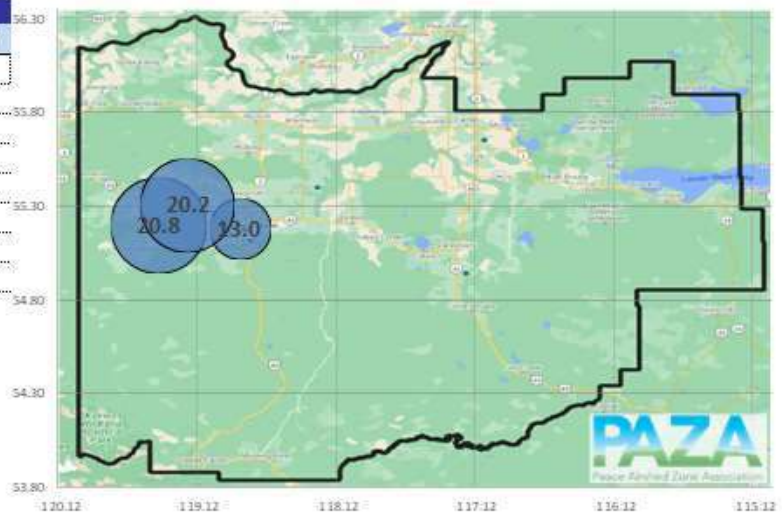


Nitrogen Dioxide in ppb

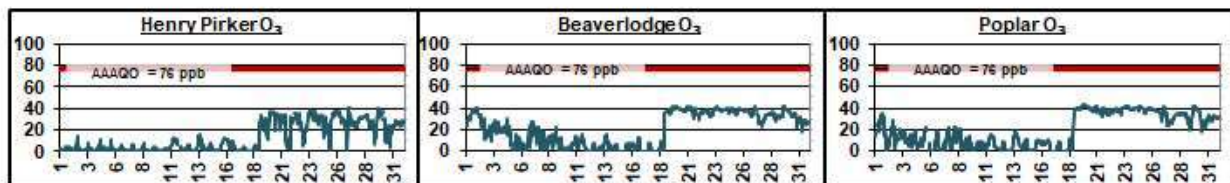


10.6 Ozone (O₃) Plots

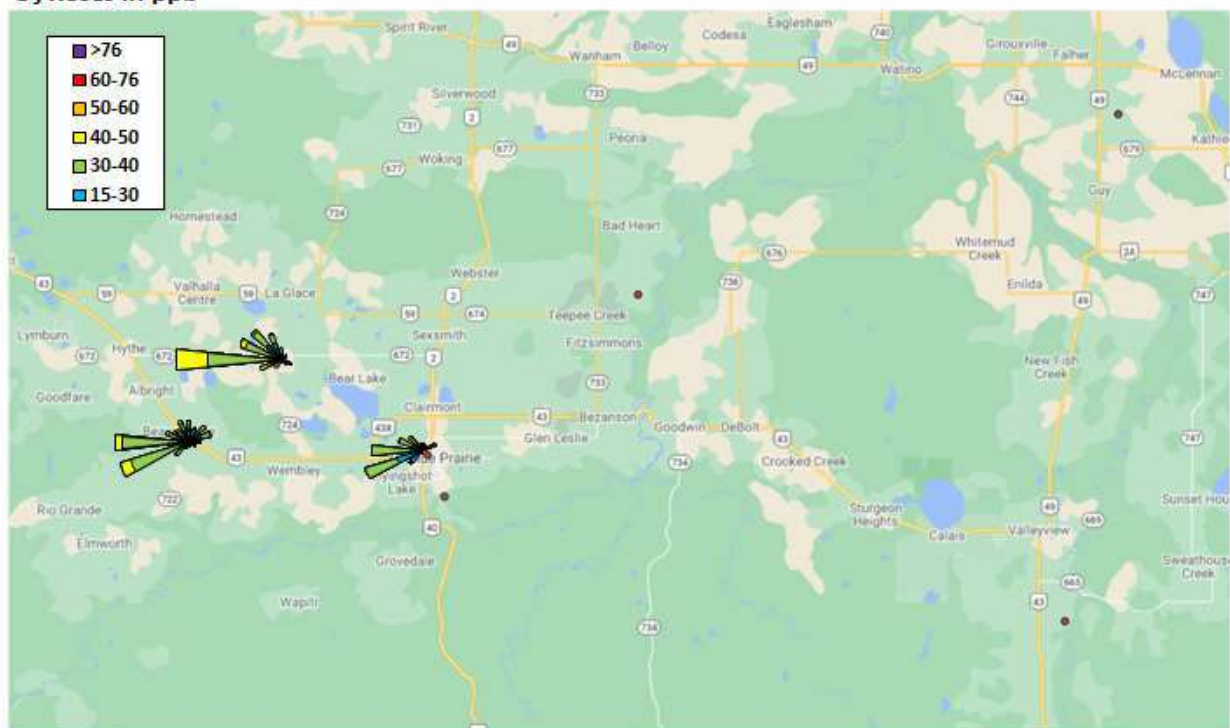
January 2023 O ₃ Station Summary		
Station	Avg (ppb)	Max (ppb)
Dunes O ₃	-	-
Henry Pirkar O ₃	13.0	41.1
Smoky Heights O ₃	-	-
Beaverlodge O ₃	20.8	42.3
Valleyview O ₃	-	-
Donnelly O ₃	-	-
Poplar O ₃	20.2	42.9
Milner O ₃	-	-



Ozone in ppb



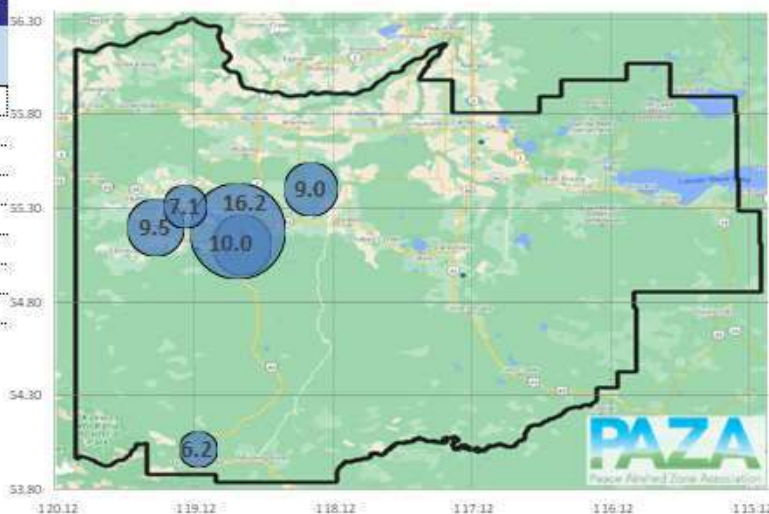
O₃ Roses in ppb



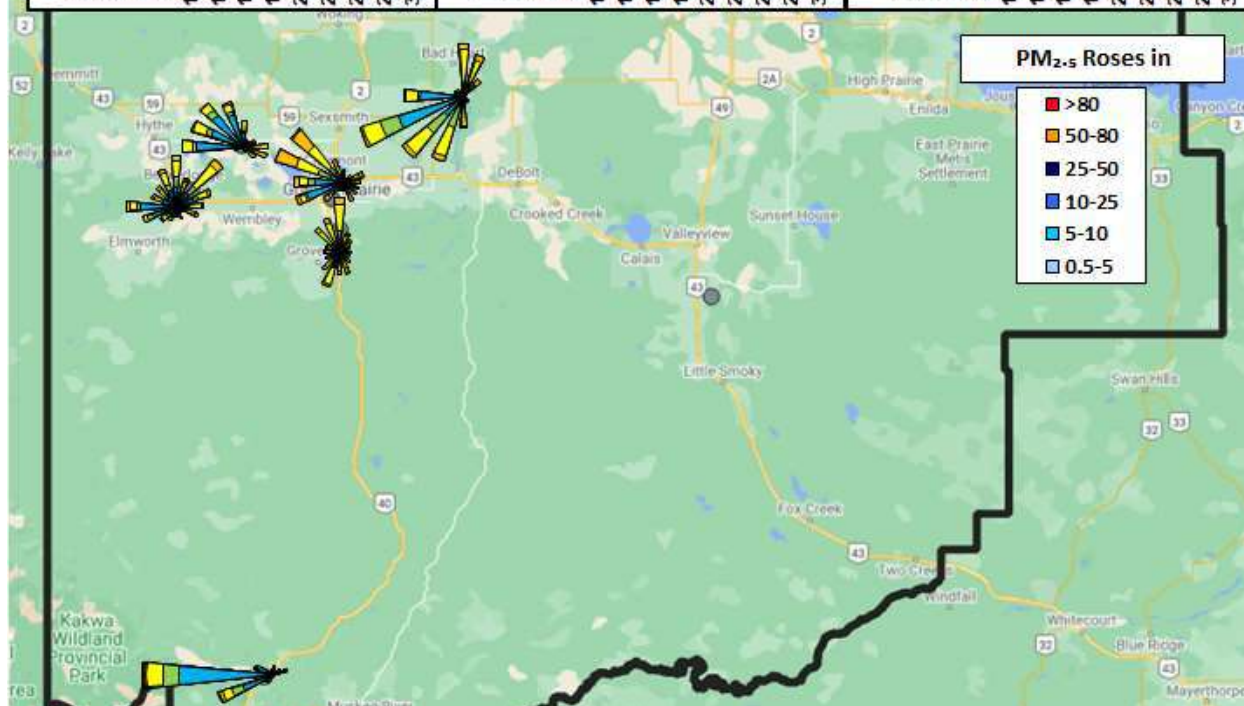
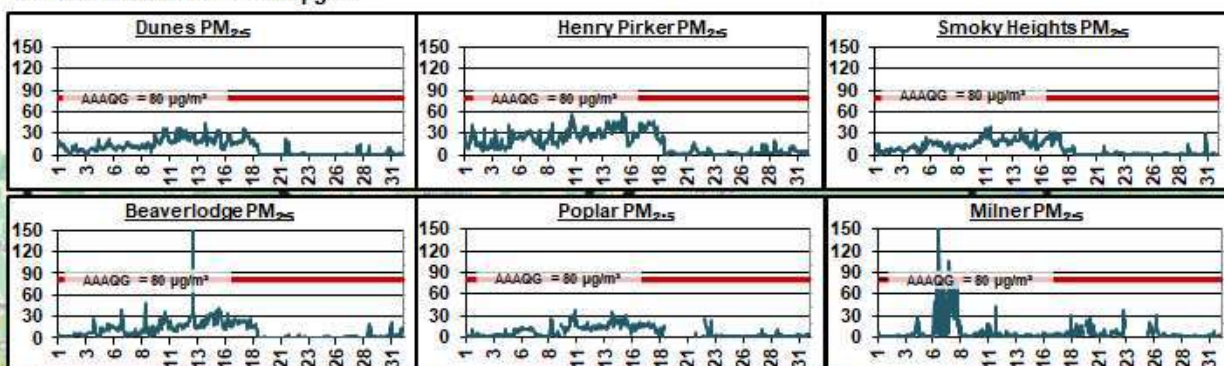
10.7 Fine Particulate Matter (PM_{2.5}) Plots

January 2023 PM_{2.5} Station Summary

Station	Avg µg/m ³	Max µg/m ³
Dunes PM _{2.5}	10.0	43.0
Henry Pirker PM _{2.5}	16.2	57.4
Smoky Heights PM _{2.5}	9.0	39.2
Beaverlodge PM _{2.5}	9.5	258.0
Valleyview PM _{2.5}	-	-
Donnelly PM _{2.5}	-	-
Poplar PM _{2.5}	7.1	37.5
Milner PM _{2.5}	6.2	176.8

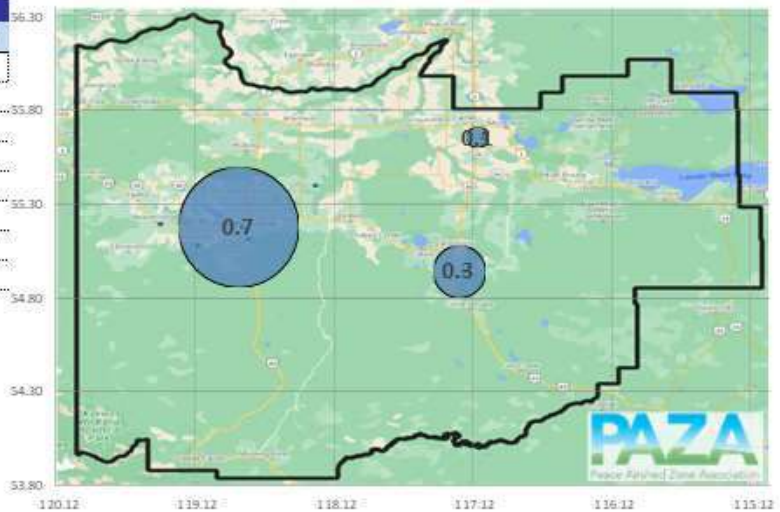


Fine Particulate Matter in µg/m³

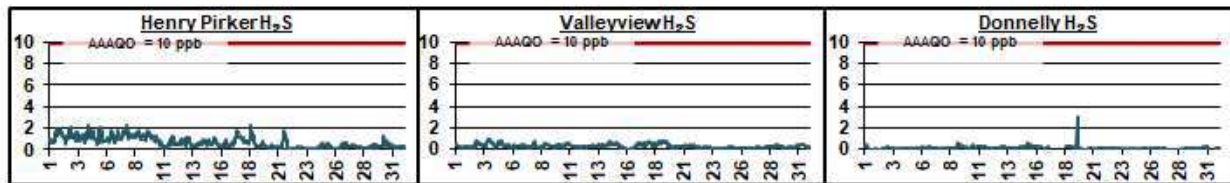


10.8 Hydrogen Sulphide (H₂S) Plots

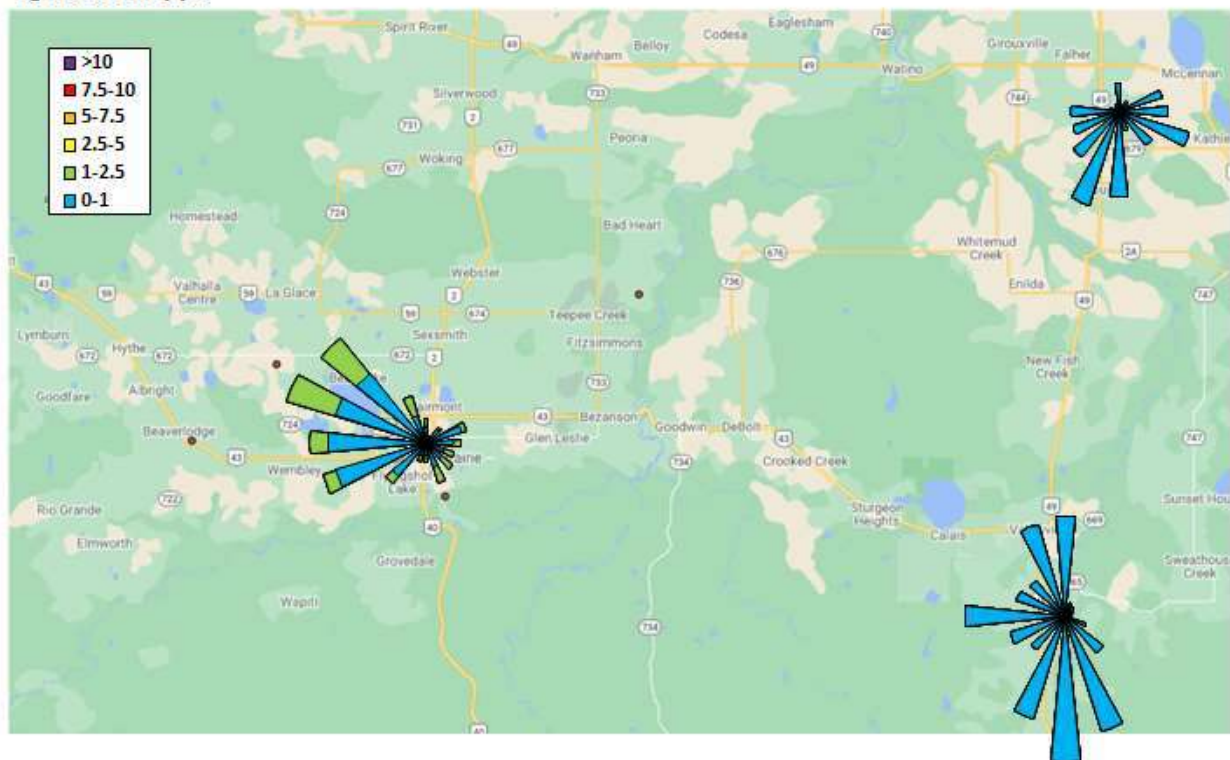
January 2023 H ₂ S Station Summary		
Station	Avg (ppb)	Max (ppb)
Dunes H ₂ S	-	-
Henry Pirker H ₂ S	0.7	2.3
Smoky Heights H ₂ S	-	-
Beaverlodge H ₂ S	-	-
Valleyview H ₂ S	0.3	1.0
Donnelly H ₂ S	0.1	3.1
Poplar H ₂ S	-	-
Milner H ₂ S	-	-



Hydrogen Sulphide in ppb

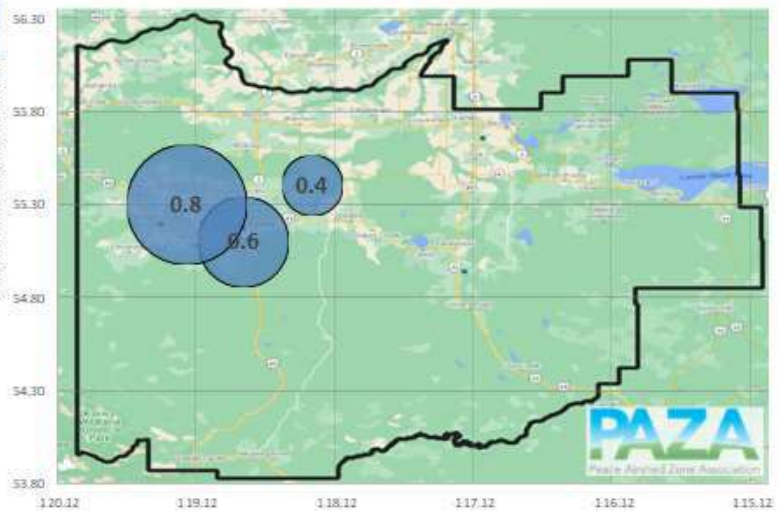


H₂S Roses in ppb

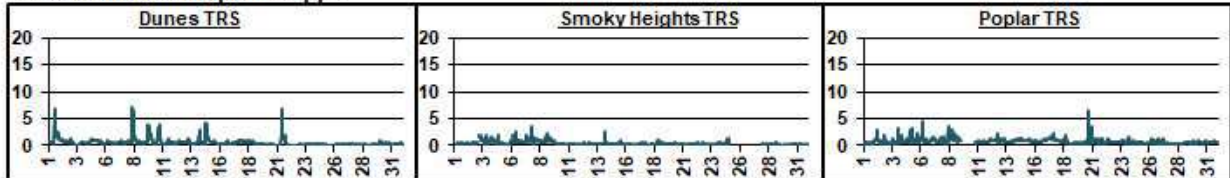


10.9 Total Reduced Sulphur (TRS) Plots

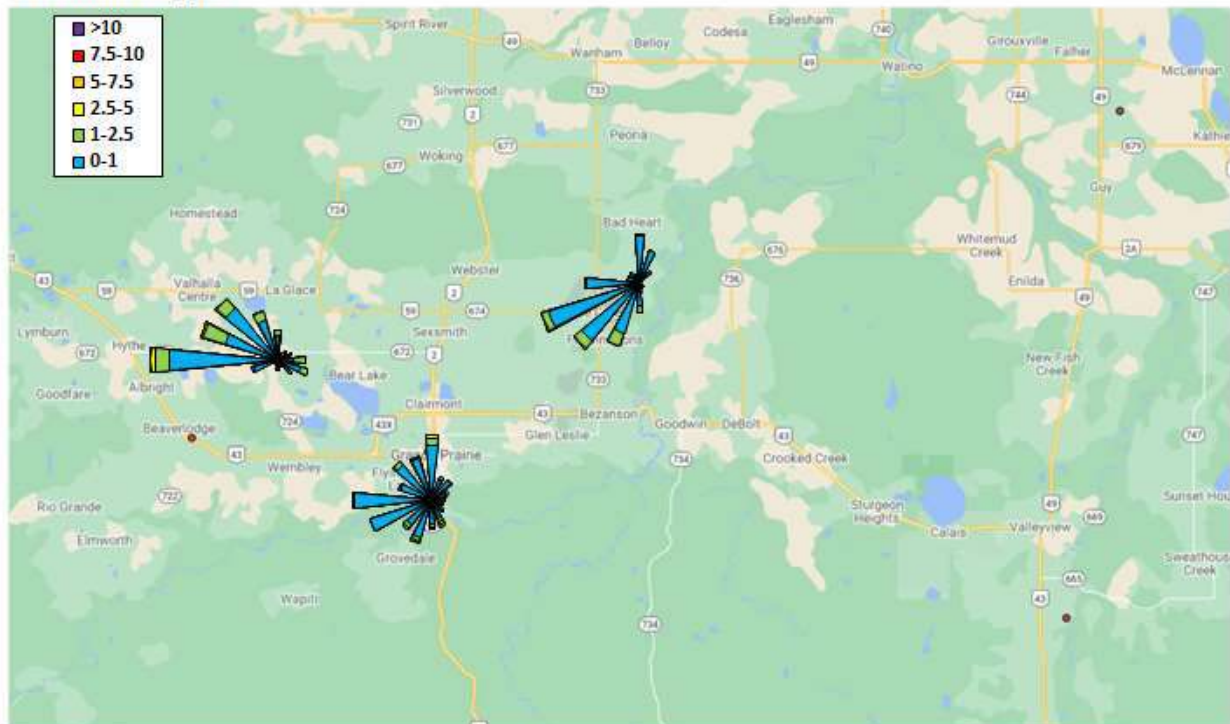
January 2023 TRS Station Summary		
Station	Avg (ppb)	Max (ppb)
Dunes TRS	0.6	7.1
Henry Pirkler TRS	-	-
Smoky Heights TRS	0.4	3.4
Beaverlodge TRS	-	-
Valleyview TRS	-	-
Donnelly TRS	-	-
Poplar TRS	0.8	6.4
Milner TRS	-	-



Total Reduced Sulphur in ppb



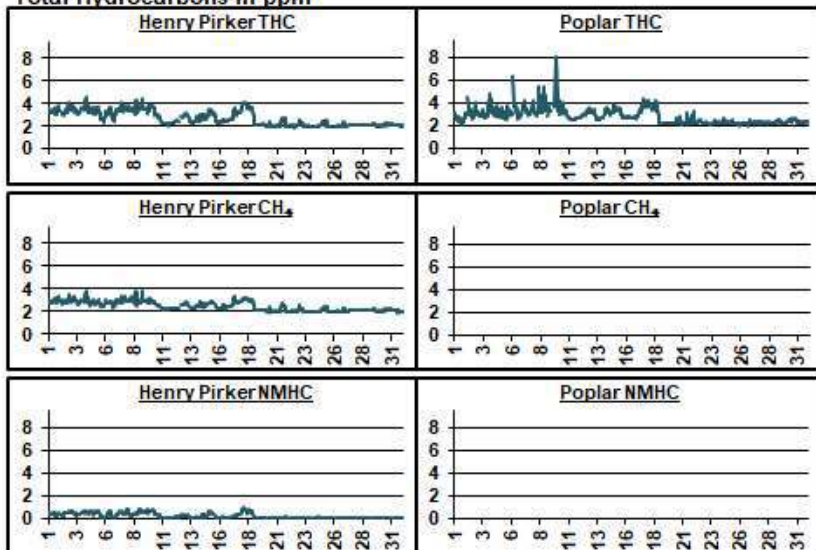
TRS Roses in ppb



10.10 Total Hydrocarbon (THC) Plots

January 2023 THC Station Summary						
Station	Total Hydrocarbons		Methane		Non-Methane HCs	
	Avg (ppm)	Max (ppm)	Avg (ppm)	Max (ppm)	Avg (ppm)	Max (ppm)
Dunes THC	-	-	-	-	-	-
Henry Pirker THC	2.7	4.6	2.5	3.9	0.2	1.0
Smoky Heights THC	-	-	-	-	-	-
Beaverlodge THC	-	-	-	-	-	-
Valleyview THC	-	-	-	-	-	-
Donnelly THC	-	-	-	-	-	-
Poplar THC	2.9	8.1	-	-	-	-

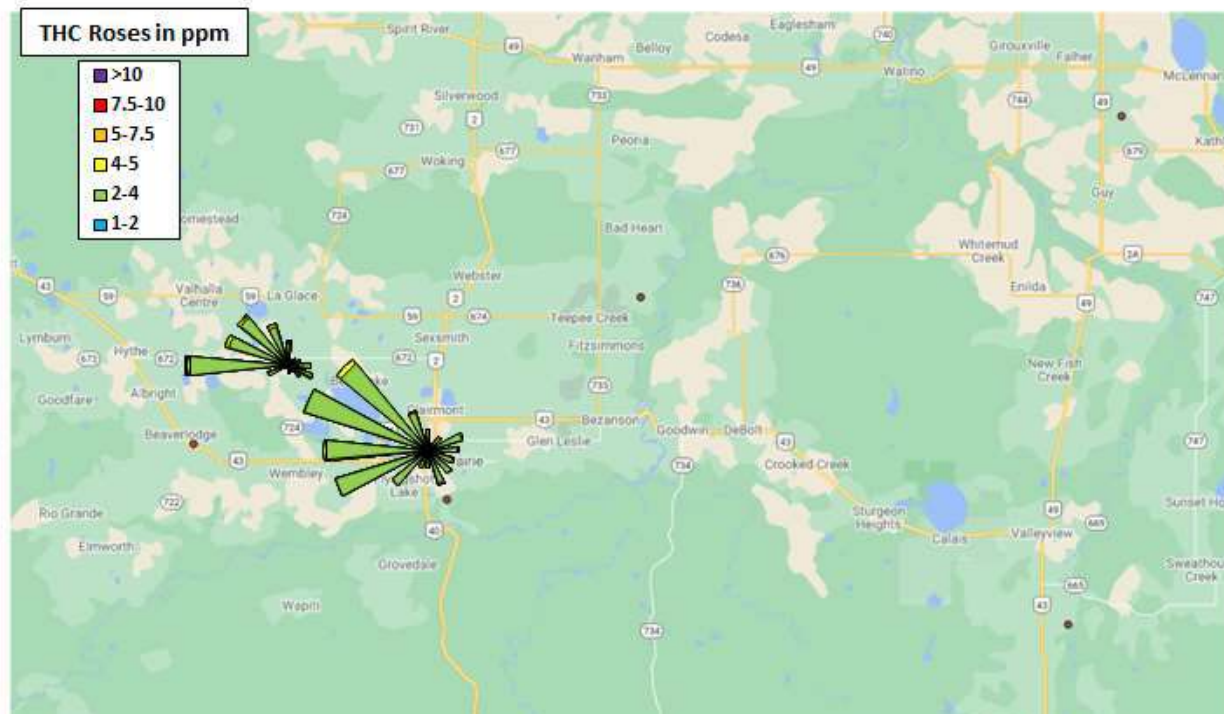
Total Hydrocarbons in ppm



Total Hydrocarbons (THC)

Methane (CH₄)

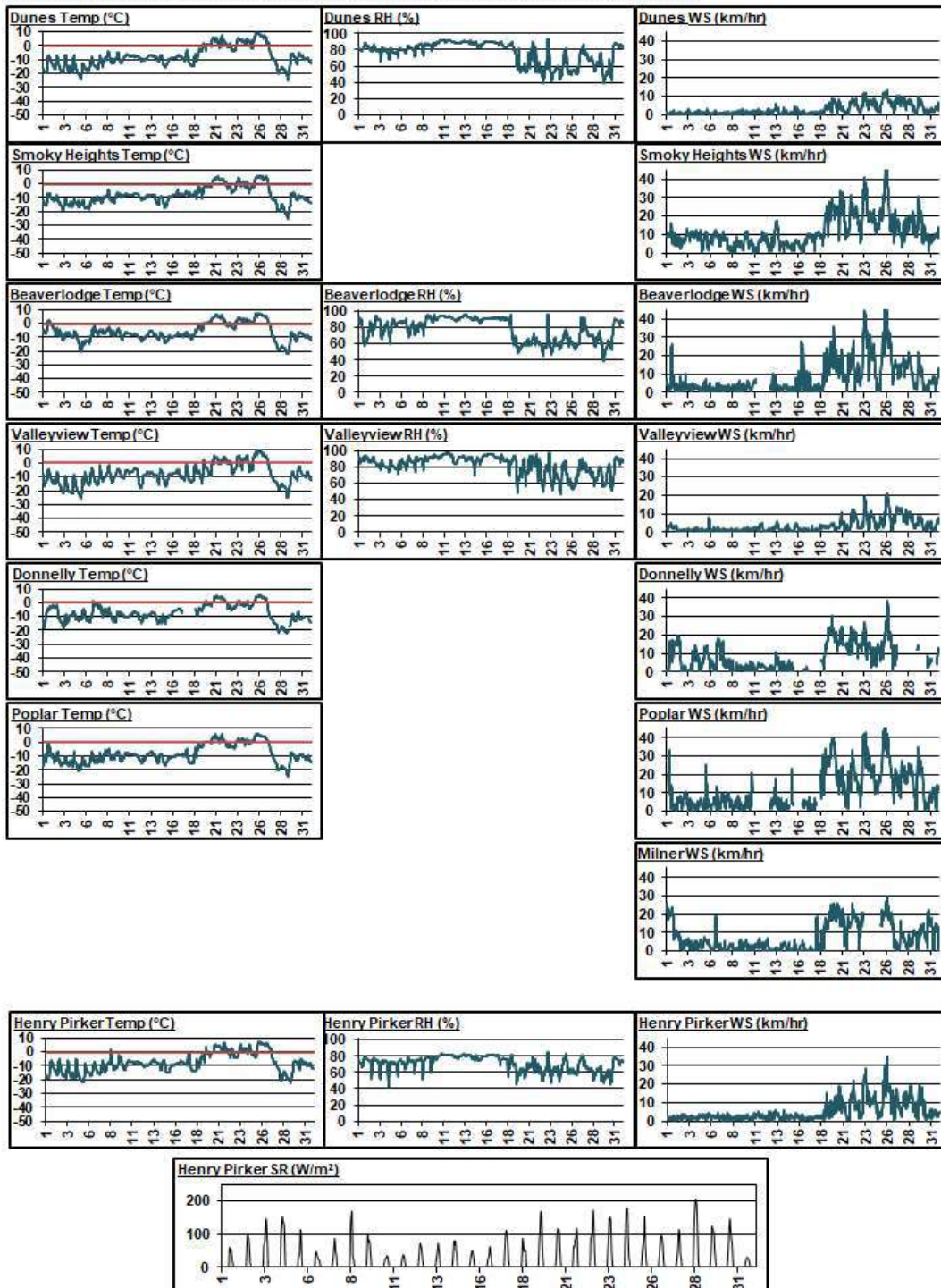
Non-Methane Hydrocarbons (NMHC)



10.11 Meteorology Summary

January 2023 Meterological Summary						
Station	Temp (°C)	RH (%)	SR (W/m ²)	WS (km/hr)	WD (deg)	WD
Dunes	-7.7	76.1	-	3.0	279	W
Henry Pirkner	-7.7	70.7	19.4	5.3	268	W
Smoky Heights	-8.1	-	-	11.6	254	WSW
Beaverlodge	-5.9	78.0	-	8.5	278	W
Valleyview	-8.0	82.4	-	3.4	271	W
Donnelly	-7.1	-	-	8.5	210	SSW
Poplar	-8.3	-	-	12.2	284	WNW
Milner	-	-	-	7.4	264	W

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



11 Passive Monitoring Data

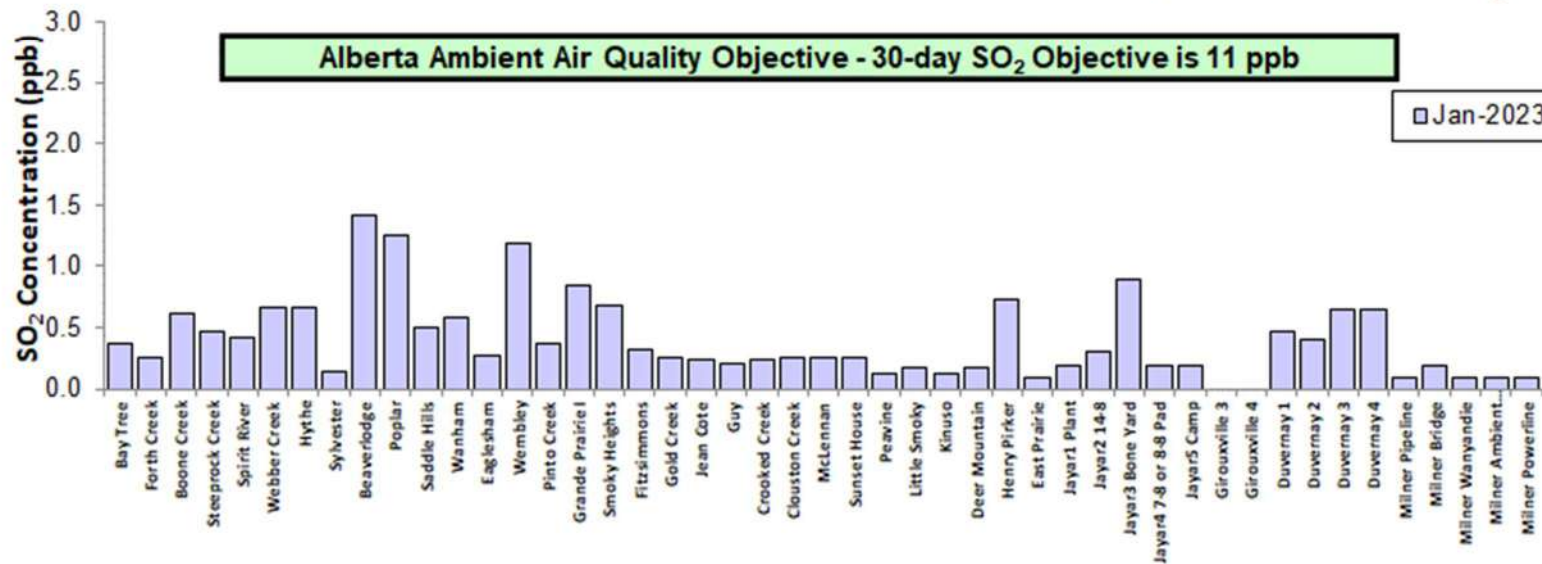
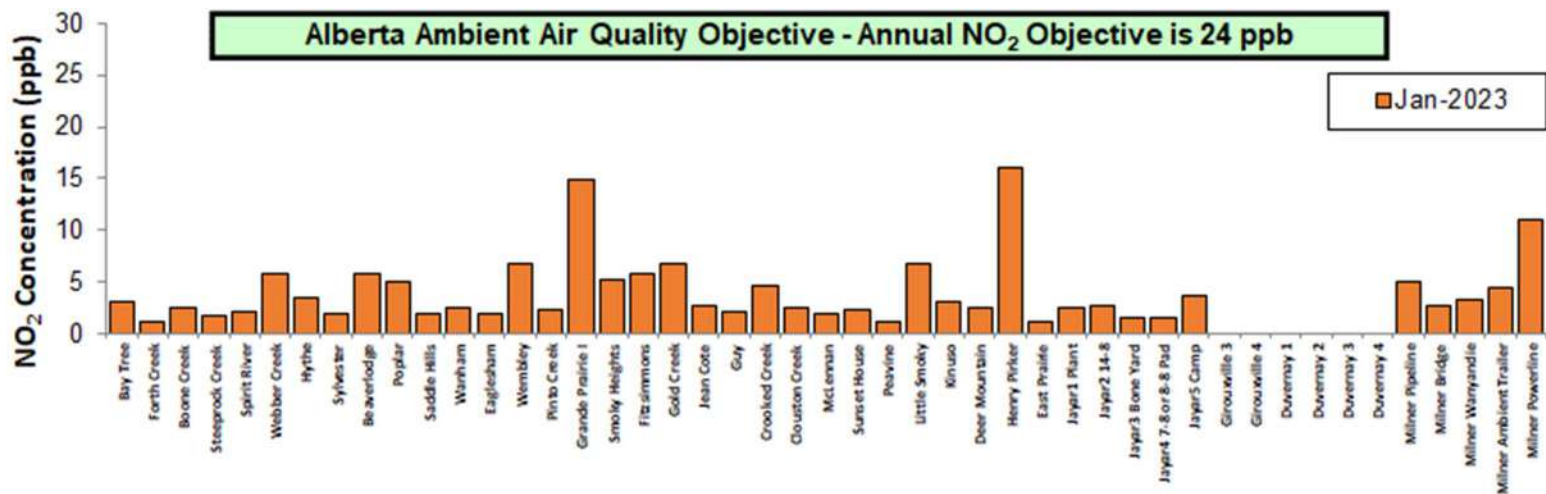
Peace Airshed Zone Association - PAZA Passive Stations for January 2023

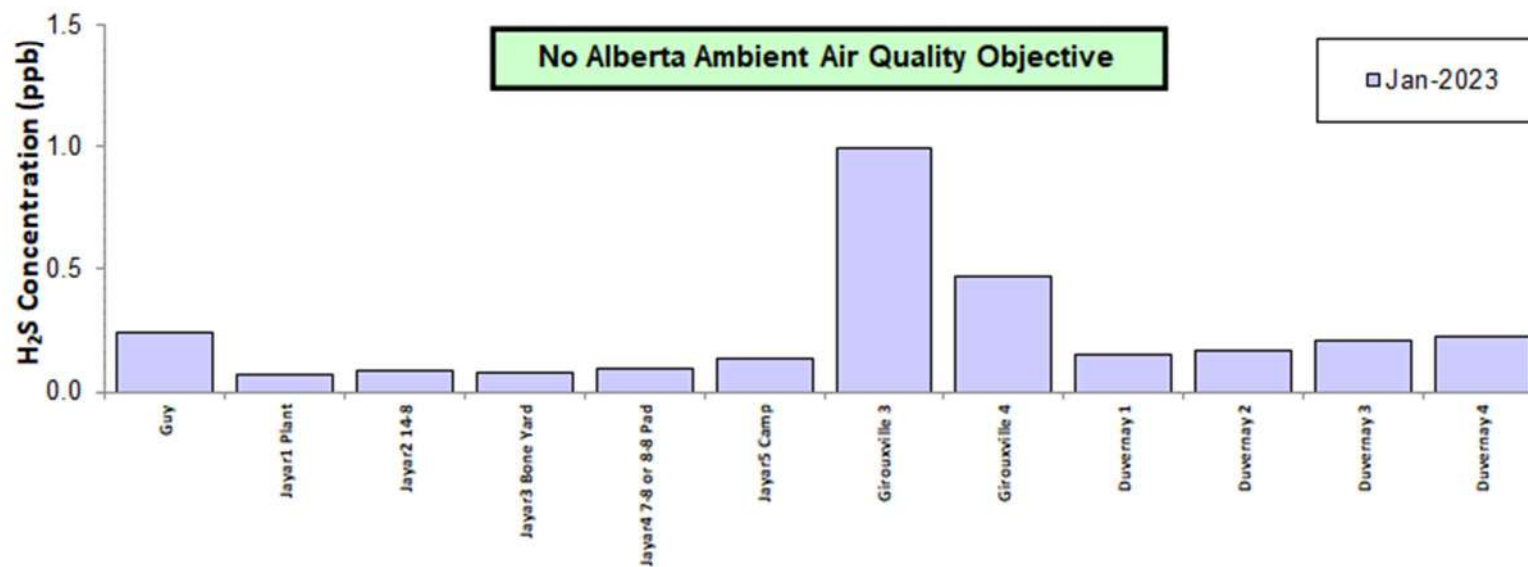
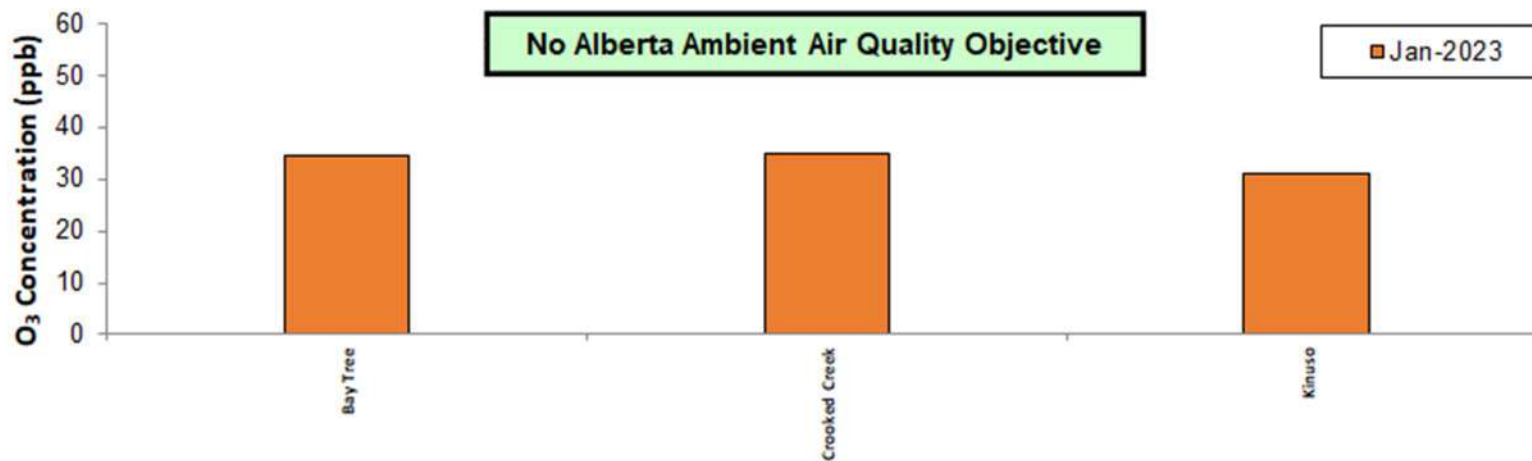
Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	LSD
Duplicates						
3a	Forth Creek	0.3				04-13-082-07 W6M
3b	Forth Creek	0.3				
9a	Spirit River			2.0		08-12-079-07 W6M
9b	Spirit River			2.0		
14a	Sylvester			1.8		08-06-069-12 W6M
14b	Sylvester			1.8		
25a	Pinto Creek	0.4				04-24-069-11 W6M
25b	Pinto Creek	0.4				
30a	Fitzsimmons			5.8		15-36-072-03 W6M
30b	Fitzsimmons			5.8		
36a	Guy			2.4		03-04-076-22 W5M
36b	Guy			1.8		
37a	Crooked Creek		36.9			16-01-071-26 W5M
37b	Crooked Creek		33.2			
42a	Sunset House	0.3				05-32-070-19 W5M
42b	Sunset House	0.2				
48a	Deer Mountain	0.2				15-22-068-09 W5M
48b	Deer Mountain	0.2				
D3a	Duvernay 3	0.6			0.26	04-33-062-20 W5M
D3b	Duvernay 3	0.6			0.17	
G3a	Girouxville 3				0.93	14-02-077-23 W5M
G3b	Girouxville 3				1.06	
G4a	Girouxville 4				0.49	04-08-077-22 W5M
G4b	Girouxville 4				0.46	
J2a	Jayar2 14-8	0.3				07-08-062-03 W6M
J2b	Jayar2 14-8	0.3				
J3a	Jayar3 Bone Yard			1.6		14-08-062-03 W6M
J3b	Jayar3 Bone Yard			1.6		
J4a	Jayar4 7-8 or 8-8 Pad				0.1	10-08-062-03 W6M
J4b	Jayar4 7-8 or 8-8 Pad				0.1	
M9a	Pipeline			4.8		12-14-058-08 W6M
M9b	Pipeline			5.2		
M10a	Powerline	0.1				06-14-058-08 W6M
M10b	Powerline	0.1				

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	LSD
2	Bay Tree	0.4	34.5	3.1	-	13-16-078-13 W6M
3	Forth Creek	0.3	-	1.2	-	04-13-082-07 W6M
5	Boone Creek	0.6	-	2.5	-	01-23-076-11 W6M
7	Steepprock Creek	0.5	-	1.8	-	09-35-072-13 W6M
9	Spirit River	0.4	-	2.0	-	08-12-079-07 W6M
11	Webber Creek	0.7	-	5.9	-	09-36-074-09 W6M
12	Hythe	0.7	-	3.4	-	14-36-072-11 W6M
14	Sylvester	0.1	-	1.8	-	08-06-069-12 W6M
16	Beaverlodge	1.4	-	5.9	-	15-36-071-10 W6M
17	Poplar	1.3	-	5.1	-	13-06-073-08 W6M
18	Saddle Hills	0.5	-	2.0	-	04-25-074-07 W6M
19	Wanham	0.6	-	2.4	-	16-22-077-03 W6M
21	Eaglesham	0.3	-	1.8	-	16-21-079-25 W5M
24	Wembley	1.2	-	6.7	-	12-31-070-08 W6M
25	Pinto Creek	0.4	-	2.3	-	04-24-069-11 W6M
27	Grande Prairie I	0.8	-	14.9	-	08-15-071-06 W6M
29	Smoky Heights	0.7	-	5.2	-	04-06-075-02 W6M
30	Fitzsimmons	0.3	-	5.8	-	15-36-072-03 W6M
32	Gold Creek	0.3	-	6.7	-	06-33-067-05 W6M
35	Jean Cote	0.2	-	2.7	-	12-35-079-21 W5M
36	Guy	0.2	-	2.1	0.2	03-04-076-22 W5M
37	Crooked Creek	0.2	35.1	4.6	-	16-01-071-26 W5M
39	Clouston Creek	0.3	-	2.6	-	12-01-073-22 W5M
40	McLennan	0.3	-	1.9	-	03-29-077-19 W5M
42	Sunset House	0.3	-	2.2	-	05-32-070-19 W5M
44	Peavine	0.1	-	1.2	-	03-05-079-15 W5M
46	Little Smoky	0.2	-	6.7	-	12-01-065-21 W5M
47	Kinuso	0.1	31.1	3.1	-	12-10-073-10 W5M
48	Deer Mountain	0.2	-	2.5	-	15-22-068-09 W5M
49	Henry Pirkner	0.7	-	16.1	-	17-26-071-06 W6M
50	East Prairie	0.1	-	1.2	-	11-13-079-08 W6M
57	Jayar1 Plant	0.2	-	2.4	0.07	06-08-062-03 W6M
58	Jayar2 14-8	0.3	-	2.7	0.09	07-08-062-03 W6M
59	Jayar3 Bone Yard	0.9	-	1.6	0.08	14-08-062-03 W6M
60	Jayar4 7-8 or 8-8 Pad	0.2	-	1.6	0.10	10-08-062-03 W6M
61	Jayar5 Camp	0.2	-	3.6	0.14	11-08-062-03 W6M
G3	Girouxville 3	-	-	-	1.00	14-02-077-23 W5M
G4	Girouxville 4	-	-	-	0.47	04-08-077-22 W5M
D1	Duvernay 1	0.5	-	-	0.15	04-33-062-20 W5M
D2	Duvernay 2	0.4	-	-	0.17	04-33-062-20 W5M
D3	Duvernay 3	0.6	-	-	0.21	04-33-062-20 W5M
D4	Duvernay 4	0.6	-	-	0.23	04-33-062-20 W5M
M1	Pipeline	0.1	-	5.0	-	12-14-058-08 W6M
M2	Bridge	0.2	-	2.6	-	08-06-057-08 W6M
M3	Wanyandie	0.1	-	3.3	-	11-13-058-08 W6M
M4	Ambient Trailer	0.1	-	4.5	-	09-15-058-08 W6M
M5	Powerline	0.1	-	11.0	-	06-14-058-08 W6M

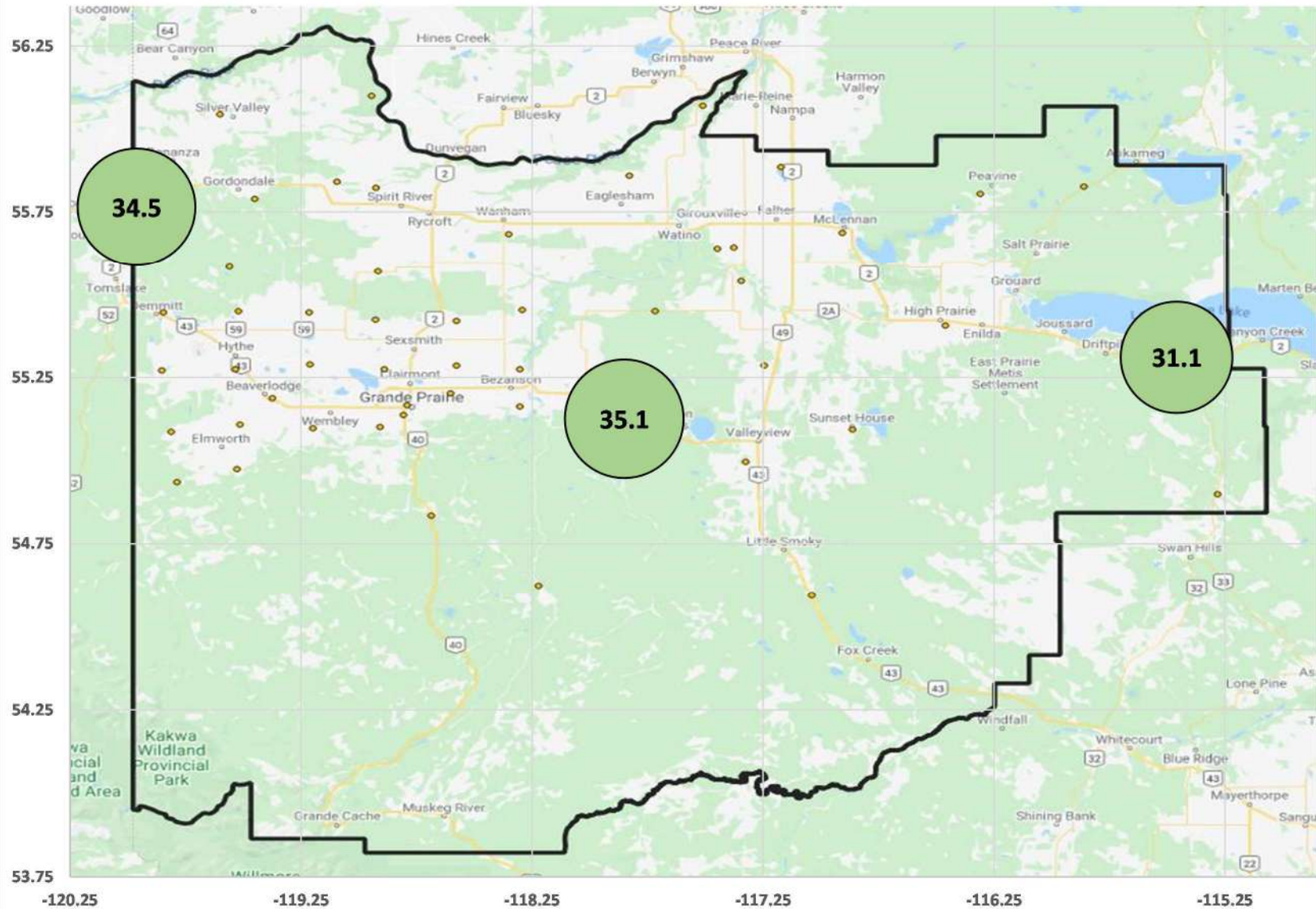
Passive Summary for January 2023

Stats	Sulphur Dioxide SO ₂	Ozone O ₃	Nitrogen Dioxide NO ₂	Hydrogen Sulphide H ₂ S
	ppb	ppb	ppb	ppb
Passive Summary for January 2023 (PAZA)				
Mean	0.4	33.5	4.0	0.2
Standard Deviation	0.3	2.1	3.3	0.3
Minimum	0.1	31.1	1.2	0.1
	East Prairie (#50)	Kinuso (#47)	Forth Creek (#3)	Jayar1 Plant (#57)
Maximum	1.4	35.1	16.1	1.0
	Beaverlodge (#16)	Crooked Creek (#37)	Henry Pirker (#49)	Girouxville 3 (#G3)
Continuous and Passive Monitoring Comparision				
PAZA Beaverlodge Station	1.5	20.8	10.6	-
Beaverlodge Passive (#16)	1.4	-	5.9	-
PAZA Henry Pirker Station	0.7	13.0	21.8	0.7
Henry Pirker passive (#49)	0.7	-	16.1	-
Milner Station	-	-	7.5	-
Henry Pirker passive (#49)	0.1	-	4.5	-

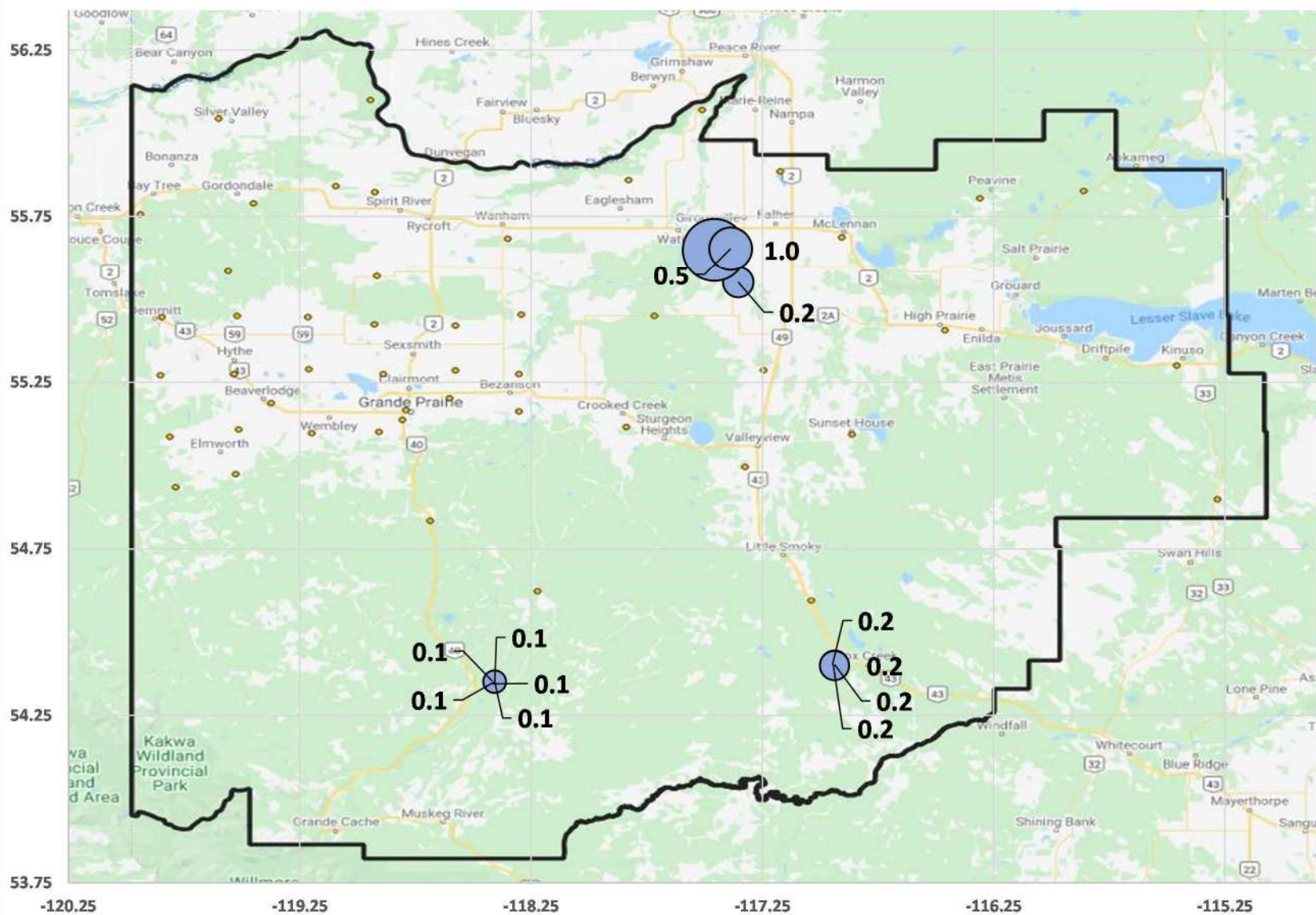




O₃ Monthly Average (units in ppb)



H₂S Monthly Average (units in ppb)



12 Dustfall Monitoring Data

Milner Dustfall Samples January 2023

Exposure Month	Year	Sample	Total Dustfall (30 day) mg/100cm ² /30day	Fixed Dustfall (30 day) mg/100cm ² /30day	Exposure days	Field Notes
January	2023	Milner Pipeline	285.8	40.5	31	Above limit (158)
January	2023	Milner Bridge	10.7	2.1	31	
January	2023	Milner Wanyandie	54.7	9.2	31	Above limit (53)
January	2023	Milner Waste Pond	118.7	15.6	31	
January	2023	Milner Powerline	89.6	12.8	31	
January	2023	Milner Powerline Dup	95.3	11.4	31	RPD= 6% / 12%



End of Report



Peace Airshed Zone Association

Ambient Air Monitoring Report

January 2023