



Peace Airshed Zone Association

Ambient Air Monitoring Network Summary

Ambient Air Quality Monitoring Program

Monthly Report

June 2023

July 31, 2023

Alberta Environment and Parks

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

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

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

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

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Program Manager
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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 June 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:

- 189 PM_{2.5} 1hr readings above AAAQG and 43 PM_{2.5} 24hr readings above AAAQO

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

Reference Number	Site	Date	From MST	To MST	Average (µg/m ³)	WS km/hr	WD degrees
414464	Beaverlodge	June 7, 2023	14:00	15:00	85.3	17.1	302
414464	Beaverlodge	June 7, 2023	15:00	16:00	90.9	12.1	331
414464	Beaverlodge	June 10, 2023	03:00	04:00	301.7	6.9	300
414464	Beaverlodge	June 10, 2023	04:00	05:00	243.6	7.4	257
414464	Beaverlodge	June 10, 2023	05:00	06:00	274.6	1.7	345
414464	Beaverlodge	June 10, 2023	06:00	07:00	206.7	1.7	189
414786	Beaverlodge	June 12, 2023	06:00	07:00	152.3	2.4	58
414786	Beaverlodge	June 12, 2023	07:00	08:00	147.2	1.9	65
414786	Beaverlodge	June 12, 2023	16:00	17:00	118.1	11.1	288
414786	Beaverlodge	June 13, 2023	00:00	01:00	82.0	2.5	79
414786	Beaverlodge	June 14, 2023	10:00	11:00	283.8	21.7	321
414786	Beaverlodge	June 14, 2023	11:00	12:00	330.1	16.3	331
414786	Beaverlodge	June 14, 2023	12:00	13:00	333.9	15.9	312
414786	Beaverlodge	June 14, 2023	13:00	14:00	298.1	15.1	308
414786	Beaverlodge	June 14, 2023	14:00	15:00	174.3	11.3	307
414786	Beaverlodge	June 14, 2023	15:00	16:00	134.5	8.6	323
414465	Dunes	June 9, 2023	00:00	01:00	101.8	3.0	67
414465	Dunes	June 10, 2023	14:00	15:00	80.4	6.7	294
414465	Dunes	June 10, 2023	15:00	16:00	88.0	7.3	304
414465	Dunes	June 10, 2023	16:00	17:00	126.5	6.3	310
414465	Dunes	June 11, 2023	11:00	12:00	88.9	5.6	246
414465	Dunes	June 11, 2023	12:00	13:00	94.6	4.9	254
414790	Dunes	June 12, 2023	17:00	18:00	90.7	5.1	327
414790	Dunes	June 12, 2023	18:00	19:00	91.1	3.6	322
414790	Dunes	June 12, 2023	20:00	21:00	81.9	1.4	159
414790	Dunes	June 12, 2023	21:00	22:00	93.1	0.4	240
414790	Dunes	June 12, 2023	22:00	23:00	112.1	0.8	209
414790	Dunes	June 13, 2023	23:00	00:00	100.1	1.0	184
414790	Dunes	June 13, 2023	00:00	01:00	117.0	1.3	172
414790	Dunes	June 13, 2023	01:00	02:00	97.2	1.0	185
414790	Dunes	June 13, 2023	02:00	03:00	90.5	0.7	338
414790	Dunes	June 13, 2023	03:00	04:00	86.4	0.8	220
414790	Dunes	June 13, 2023	04:00	05:00	85.9	1.3	154
414790	Dunes	June 13, 2023	05:00	06:00	82.5	1.3	309
414790	Dunes	June 13, 2023	06:00	07:00	81.3	2.2	321
414790	Dunes	June 13, 2023	07:00	08:00	89.9	4.3	334
414790	Dunes	June 14, 2023	07:00	08:00	91.1	5.2	296
414790	Dunes	June 14, 2023	08:00	09:00	150.6	5.4	305
414790	Dunes	June 14, 2023	09:00	10:00	186.6	4.9	319
414790	Dunes	June 14, 2023	10:00	11:00	222.9	7.0	321
414790	Dunes	June 14, 2023	11:00	12:00	192.2	8.2	332
414790	Dunes	June 14, 2023	12:00	13:00	111.9	6.0	341
414790	Dunes	June 14, 2023	13:00	14:00	189.6	5.8	303
414790	Dunes	June 14, 2023	14:00	15:00	217.1	7.0	317
414790	Dunes	June 14, 2023	15:00	16:00	197.9	5.8	305
414790	Dunes	June 14, 2023	16:00	17:00	174.9	4.2	290
414790	Dunes	June 14, 2023	17:00	18:00	91.4	6.4	330
414466	Henry Pirker	June 7, 2023	14:00	15:00	104.1	10.0	285

Reference Number	Site	Date	From MST	To MST	Average ($\mu\text{g}/\text{m}^3$)	WS km/hr	WD degrees
414466	Henry Pirker	June 7, 2023	15:00	16:00	118.7	11.0	308
414466	Henry Pirker	June 7, 2023	16:00	17:00	111.2	8.4	340
414466	Henry Pirker	June 7, 2023	17:00	18:00	94.6	7.2	326
414466	Henry Pirker	June 8, 2023	07:00	08:00	81.9	4.6	69
414466	Henry Pirker	June 9, 2023	06:00	07:00	81.8	9.8	80
414466	Henry Pirker	June 9, 2023	18:00	19:00	105.2	9.2	112
414466	Henry Pirker	June 10, 2023	03:00	04:00	92.4	5.3	252
414466	Henry Pirker	June 10, 2023	04:00	05:00	148.0	6.5	237
414466	Henry Pirker	June 10, 2023	05:00	06:00	93.9	7.9	247
414466	Henry Pirker	June 10, 2023	06:00	07:00	193.3	6.8	239
414466	Henry Pirker	June 10, 2023	14:00	15:00	135.8	13.9	279
414466	Henry Pirker	June 10, 2023	15:00	16:00	126.0	16.3	287
414466	Henry Pirker	June 10, 2023	16:00	17:00	155.6	15.4	296
414466	Henry Pirker	June 11, 2023	11:00	12:00	87.3	8.8	267
414466	Henry Pirker	June 11, 2023	12:00	13:00	114.7	8.9	279
414466	Henry Pirker	June 11, 2023	13:00	14:00	114.8	10.2	288
414466	Henry Pirker	June 11, 2023	14:00	15:00	106.0	12.1	308
414466	Henry Pirker	June 11, 2023	15:00	16:00	95.6	12.1	292
414466	Henry Pirker	June 11, 2023	16:00	17:00	107.0	8.8	301
414466	Henry Pirker	June 11, 2023	17:00	18:00	118.7	7.4	313
414466	Henry Pirker	June 11, 2023	18:00	19:00	122.9	5.4	317
414466	Henry Pirker	June 11, 2023	19:00	20:00	124.0	1.7	293
414466	Henry Pirker	June 11, 2023	20:00	21:00	128.4	2.8	75
414466	Henry Pirker	June 11, 2023	21:00	22:00	123.1	3.0	111
414466	Henry Pirker	June 11, 2023	22:00	23:00	127.5	1.4	88
414788	Henry Pirker	June 12, 2023	23:00	00:00	109.3	2.9	158
414788	Henry Pirker	June 12, 2023	00:00	01:00	91.0	2.3	176
414788	Henry Pirker	June 12, 2023	01:00	02:00	112.5	1.0	87
414788	Henry Pirker	June 12, 2023	02:00	03:00	122.1	0.4	162
414788	Henry Pirker	June 12, 2023	03:00	04:00	118.1	0.8	348
414788	Henry Pirker	June 12, 2023	04:00	05:00	118.5	2.6	285
414788	Henry Pirker	June 12, 2023	05:00	06:00	114.6	2.5	287
414788	Henry Pirker	June 12, 2023	06:00	07:00	110.7	2.3	295
414788	Henry Pirker	June 12, 2023	14:00	15:00	131.2	12.4	294
414788	Henry Pirker	June 12, 2023	15:00	16:00	85.1	12.0	288
414788	Henry Pirker	June 12, 2023	16:00	17:00	132.1	10.0	289
414788	Henry Pirker	June 12, 2023	17:00	18:00	133.4	8.1	303
414788	Henry Pirker	June 12, 2023	18:00	19:00	131.0	8.0	307
414788	Henry Pirker	June 12, 2023	19:00	20:00	136.7	5.5	320
414788	Henry Pirker	June 12, 2023	20:00	21:00	158.6	1.0	253
414788	Henry Pirker	June 12, 2023	21:00	22:00	162.6	2.4	152
414788	Henry Pirker	June 12, 2023	22:00	23:00	171.0	2.2	130
414788	Henry Pirker	June 13, 2023	23:00	00:00	164.0	2.4	112
414788	Henry Pirker	June 13, 2023	00:00	01:00	164.6	2.7	119
414788	Henry Pirker	June 13, 2023	01:00	02:00	150.1	2.7	142
414788	Henry Pirker	June 13, 2023	02:00	03:00	149.9	1.8	159
414788	Henry Pirker	June 13, 2023	03:00	04:00	154.3	1.7	294
414788	Henry Pirker	June 13, 2023	04:00	05:00	138.5	2.8	351
414788	Henry Pirker	June 13, 2023	05:00	06:00	127.5	7.3	325
414788	Henry Pirker	June 13, 2023	06:00	07:00	141.5	7.0	312
414788	Henry Pirker	June 13, 2023	07:00	08:00	123.3	11.8	310
414788	Henry Pirker	June 13, 2023	19:00	20:00	81.2	8.9	310
414788	Henry Pirker	June 14, 2023	04:00	05:00	81.0	9.9	305
414788	Henry Pirker	June 14, 2023	05:00	06:00	87.2	11.7	291

Reference Number	Site	Date	From MST	To MST	Average ($\mu\text{g}/\text{m}^3$)	WS km/hr	WD degrees
414788	Henry Pirker	June 14, 2023	06:00	07:00	150.8	14.4	287
414788	Henry Pirker	June 14, 2023	07:00	08:00	214.2	12.7	288
414788	Henry Pirker	June 14, 2023	08:00	09:00	280.0	12.7	305
414788	Henry Pirker	June 14, 2023	09:00	10:00	304.8	14.3	306
414788	Henry Pirker	June 14, 2023	10:00	11:00	339.6	15.1	311
414788	Henry Pirker	June 14, 2023	11:00	12:00	252.2	14.2	329
414788	Henry Pirker	June 14, 2023	12:00	13:00	219.8	11.0	306
414788	Henry Pirker	June 14, 2023	13:00	14:00	299.5	13.5	299
414788	Henry Pirker	June 14, 2023	14:00	15:00	302.3	14.5	305
414788	Henry Pirker	June 14, 2023	15:00	16:00	292.4	11.4	292
414788	Henry Pirker	June 14, 2023	16:00	17:00	233.7	10.7	295
414788	Henry Pirker	June 14, 2023	17:00	18:00	107.3	15.2	305
414788	Henry Pirker	June 14, 2023	20:00	21:00	86.1	10.9	303
414788	Henry Pirker	June 14, 2023	21:00	22:00	104.5	9.6	300
414788	Henry Pirker	June 14, 2023	22:00	23:00	104.2	8.9	300
414788	Henry Pirker	June 15, 2023	23:00	00:00	97.7	6.8	293
414788	Henry Pirker	June 15, 2023	00:00	01:00	83.5	4.9	276
414788	Henry Pirker	June 15, 2023	06:00	07:00	80.8	2.8	221
414788	Henry Pirker	June 15, 2023	07:00	08:00	86.4	4.1	232
415137	Milner	June 14, 2023	15:00	16:00	86.8	2.4	244
415137	Milner	June 14, 2023	16:00	17:00	86.3	3.2	242
415137	Milner	June 14, 2023	17:00	18:00	83.1	5.7	243
414467	Poplar	June 7, 2023	10:00	11:00	143.7	13.3	306
414467	Poplar	June 7, 2023	11:00	12:00	141.1	14.1	266
414467	Poplar	June 7, 2023	12:00	13:00	114.4	16.9	261
414467	Poplar	June 9, 2023	23:00	00:00	139.8	16.2	90
414467	Poplar	June 9, 2023	00:00	01:00	125.5	18.3	90
414467	Poplar	June 10, 2023	04:00	05:00	142.4	11.0	289
414467	Poplar	June 10, 2023	05:00	06:00	175.9	12.7	276
414467	Poplar	June 10, 2023	06:00	07:00	263.7	9.8	280
414467	Poplar	June 10, 2023	07:00	08:00	175.9	12.2	275
414467	Poplar	June 10, 2023	15:00	16:00	105.3	22.1	297
414467	Poplar	June 11, 2023	21:00	22:00	102.7	5.7	93
414467	Poplar	June 11, 2023	22:00	23:00	101.8	1.3	241
414787	Poplar	June 12, 2023	23:00	00:00	83.6	2.6	268
414787	Poplar	June 12, 2023	00:00	01:00	91.7	6.8	326
414787	Poplar	June 12, 2023	08:00	09:00	91.5	3.4	122
414787	Poplar	June 13, 2023	06:00	07:00	159.0	19.0	328
414787	Poplar	June 14, 2023	07:00	08:00	115.4	21.0	313
414787	Poplar	June 14, 2023	08:00	09:00	145.5	21.6	314
414787	Poplar	June 14, 2023	09:00	10:00	173.8	23.2	324
414787	Poplar	June 14, 2023	10:00	11:00	172.0	21.9	331
414787	Poplar	June 14, 2023	11:00	12:00	155.4	20.9	331
414787	Poplar	June 14, 2023	12:00	13:00	160.8	20.3	317
414787	Poplar	June 14, 2023	15:00	16:00	134.2	12.4	310
414787	Poplar	June 15, 2023	13:00	14:00	94.4	6.0	243
414787	Poplar	June 15, 2023	14:00	15:00	83.5	3.0	189
414468	Smoky Heights	June 7, 2023	09:00	10:00	98.4	8.5	265
414468	Smoky Heights	June 7, 2023	12:00	13:00	100.6	16.3	237
414468	Smoky Heights	June 8, 2023	05:00	06:00	96.4	7.6	15
414468	Smoky Heights	June 8, 2023	06:00	07:00	92.1	8.5	23
414468	Smoky Heights	June 10, 2023	08:00	09:00	114.0	14.5	241
414468	Smoky Heights	June 10, 2023	09:00	10:00	253.6	16.2	234
414468	Smoky Heights	June 10, 2023	10:00	11:00	182.8	16.7	229

Reference Number	Site	Date	From MST	To MST	Average ($\mu\text{g}/\text{m}^3$)	WS km/hr	WD degrees
414468	Smoky Heights	June 10, 2023	11:00	12:00	115.3	18.6	236
414468	Smoky Heights	June 10, 2023	12:00	13:00	102.3	19.7	242
414468	Smoky Heights	June 10, 2023	16:00	17:00	130.5	16.8	287
414468	Smoky Heights	June 10, 2023	17:00	18:00	219.8	14.5	306
414468	Smoky Heights	June 10, 2023	18:00	19:00	129.2	5.6	295
414468	Smoky Heights	June 10, 2023	19:00	20:00	102.3	6.8	296
414468	Smoky Heights	June 11, 2023	18:00	19:00	128.7	7.7	306
414468	Smoky Heights	June 11, 2023	19:00	20:00	139.4	3.7	313
414468	Smoky Heights	June 11, 2023	20:00	21:00	133.9	2.4	259
414468	Smoky Heights	June 11, 2023	21:00	22:00	116.0	3.5	318
414468	Smoky Heights	June 11, 2023	22:00	23:00	105.0	3.8	277
414791	Smoky Heights	June 12, 2023	23:00	00:00	91.5	4.4	348
414791	Smoky Heights	June 12, 2023	03:00	04:00	87.3	4.5	359
414791	Smoky Heights	June 12, 2023	04:00	05:00	100.5	5.0	13
414791	Smoky Heights	June 12, 2023	05:00	06:00	104.4	2.1	40
414791	Smoky Heights	June 12, 2023	06:00	07:00	87.8	3.3	124
414791	Smoky Heights	June 12, 2023	20:00	21:00	80.7	2.9	195
414791	Smoky Heights	June 13, 2023	06:00	07:00	85.0	4.5	25
414791	Smoky Heights	June 13, 2023	21:00	22:00	104.0	10.9	338
414791	Smoky Heights	June 14, 2023	11:00	12:00	229.2	12.4	329
414791	Smoky Heights	June 14, 2023	12:00	13:00	183.9	13.4	330
414791	Smoky Heights	June 14, 2023	13:00	14:00	192.5	18.2	315
414791	Smoky Heights	June 14, 2023	14:00	15:00	251.6	22.1	311
414791	Smoky Heights	June 14, 2023	15:00	16:00	133.2	15.5	326
414791	Smoky Heights	June 14, 2023	16:00	17:00	133.3	16.9	315
414791	Smoky Heights	June 14, 2023	17:00	18:00	126.5	17.1	305
414791	Smoky Heights	June 14, 2023	22:00	23:00	81.1	18.0	310
414791	Smoky Heights	June 15, 2023	23:00	00:00	90.9	17.9	312
414791	Smoky Heights	June 15, 2023	00:00	01:00	99.5	17.2	313
414791	Smoky Heights	June 15, 2023	01:00	02:00	100.0	11.3	313
414791	Smoky Heights	June 15, 2023	02:00	03:00	93.2	12.5	311
414791	Smoky Heights	June 15, 2023	03:00	04:00	87.7	13.8	314
414791	Smoky Heights	June 15, 2023	04:00	05:00	86.6	10.5	318

24-hr readings above the daily PM_{2.5} AAAQO (29 $\mu\text{g}/\text{m}^3$) as:

Reference Number	Site	Date	Day average ($\mu\text{g}/\text{m}^3$)	WS km/hr	WD degrees
414464	Beaverlodge	June 8, 2023	35.8	14.6	86
414464	Beaverlodge	June 9, 2023	49.0	11.6	96
414786	Beaverlodge	June 12, 2023	59.6	6.4	295
414786	Beaverlodge	June 15, 2023	33.6	7.9	146
415436	Beaverlodge	June 25, 2023	29.9	5.6	67
414465	Dunes	June 7, 2023	33.8	4.3	310
414465	Dunes	June 8, 2023	42.6	4.7	79
414465	Dunes	June 9, 2023	47.0	4.2	100
414465	Dunes	June 10, 2023	38.3	4.6	275
414465	Dunes	June 11, 2023	38.6	2.9	275
414790	Dunes	June 12, 2023	51.5	2.9	270
414790	Dunes	June 13, 2023	41.5	3.5	328
414790	Dunes	June 14, 2023	101.5	5.3	316
414790	Dunes	June 15, 2023	38.0	3.3	213
414466	Henry Pirker	June 7, 2023	43.2	6.3	290
414466	Henry Pirker	June 8, 2023	58.6	7.4	70

Reference Number	Site	Date	Day average ($\mu\text{g}/\text{m}^3$)	WS km/hr	WD degrees
414466	Henry Pirker	June 9, 2023	64.7	8.8	85
414466	Henry Pirker	June 10, 2023	74.0	10.1	266
414466	Henry Pirker	June 11, 2023	71.0	6.2	276
414788	Henry Pirker	June 12, 2023	100.0	5.2	276
414788	Henry Pirker	June 13, 2023	69.2	7.0	312
414788	Henry Pirker	June 14, 2023	164.1	11.5	304
414788	Henry Pirker	June 15, 2023	67.1	5.4	224
415437	Henry Pirker	June 25, 2023	36.3	4.2	34
415137	Milner	June 14, 2023	43.5	4.3	256
415789	Milner	June 28, 2023	29.2	2.8	251
414467	Poplar	June 7, 2023	37.8	10.6	281
414467	Poplar	June 8, 2023	33.5	15.3	98
414467	Poplar	June 9, 2023	48.1	15.9	110
414467	Poplar	June 10, 2023	71.9	15.6	285
414467	Poplar	June 11, 2023	42.0	10.3	286
414787	Poplar	June 12, 2023	60.7	7.0	286
414787	Poplar	June 14, 2023	74.6	17.7	316
414787	Poplar	June 15, 2023	42.7	9.0	262
414280	Smoky Heights	June 3, 2023	33.3	14.5	110
414468	Smoky Heights	June 7, 2023	38.1	9.0	247
414468	Smoky Heights	June 8, 2023	52.1	9.7	45
414468	Smoky Heights	June 9, 2023	41.1	9.3	68
414468	Smoky Heights	June 10, 2023	87.3	12.1	249
414468	Smoky Heights	June 11, 2023	49.8	9.4	263
414791	Smoky Heights	June 12, 2023	52.0	7.2	239
414791	Smoky Heights	June 13, 2023	45.1	8.0	325
414791	Smoky Heights	June 15, 2023	43.4	8.9	278

Sulphur Dioxide passive at Kakwa 3 was recorded at 12.0 ppb, above the 30d SO₂ AAAQO (11 ppb), reference 417241.

Operational times less than 90 percent:

- Poplar CH₄/NMHC are not in operation.
- Smoky Heights TRS was <90% (78%) due to analyzer issues (417204)
- Poplar PM_{2.5} was <90% (89%) due to negative drifting and maintenance (417205)
- All other instruments were in operation >90% during the month.

Air Incidents

Wildfires resulted in elevated particulate and ozone throughout the month.

Deviations from Authorized Monitoring Methods

None were reported.

Passive Monitoring

- 53 Stations throughout the PAZA zone
 - Passive sample analyses were performed by Bureau Veritas Laboratories
- The following notes were recorded:
 - At Duvernay site 2 and 3, No access at beginning of June so these are May Samples that are collected (two months exposure time)
 - At Spirit River tractor hit pole and bent it. repaired.
- There were 20 duplicates sampled in the month of June.
- Eight SO₂ duplicates located at Boone Creek, Saddle Hills, Crooked Creek, Deer Mountain, Duvernay 1, Kakwa 1, Milner Ambient Trailer, Jayar4 7-8 or 8-8 Pad
 - RPD ranging from 0% to 18% (no fails, Milner Ambient Trailer was <0.1ppb)
- One O₃ duplicate located at Kinuso
 - RPD 0% (no fails)
- Seven NO₂ duplicates at Webber Creek, Wanham, Fitzsimmons, Kinuso, Kakwa 4, Milner Bridge, Jayar3 Bone Yard
 - RPD ranging from 0% to 19% (no fails)
- Four H₂S duplicates, Girouxville 4, Duvernay 1, Kakwa 3, Jayar5 Camp
 - RPD 0% to 41% (no fails)
- There was one exceedance of the 30d AAAQO for SO₂ at Kakwa 3.

Dustfall Monitoring

- Five Stations collected Total Dustfall and Fixed Dustfall
- There was one duplicate sampled collected for each in the month of June.
 - RPD ranged from 11% to 13%
- Total dustfall ranged from 22.3 to 126.3 mg/100cm²/30day.
- There were no readings above the AAAQG during the month.

I certify that I have reviewed and verified this report and that the information is complete, accurate and representative of the monitoring results, reporting timeframe and the specified analysis, summarization, and reporting requirements.

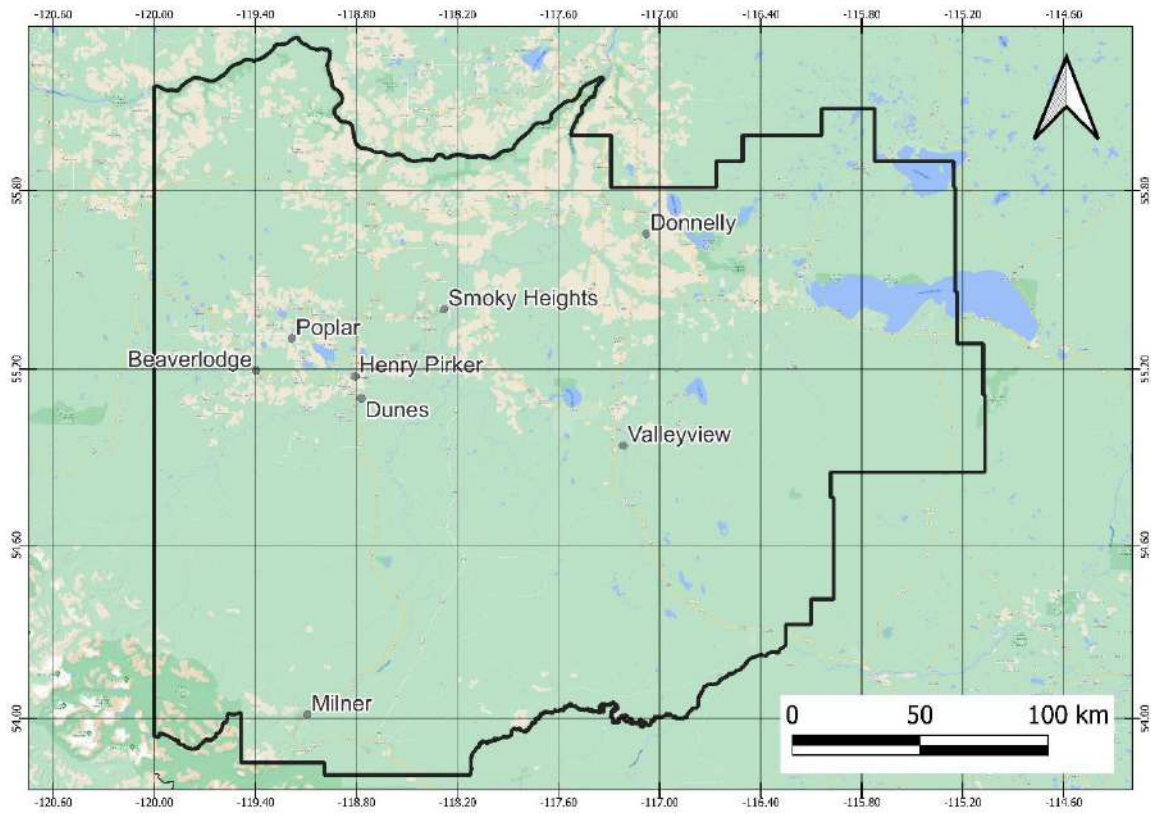


Mandeep Dhaliwal, B.Sc., P.Chem.
Program Manager

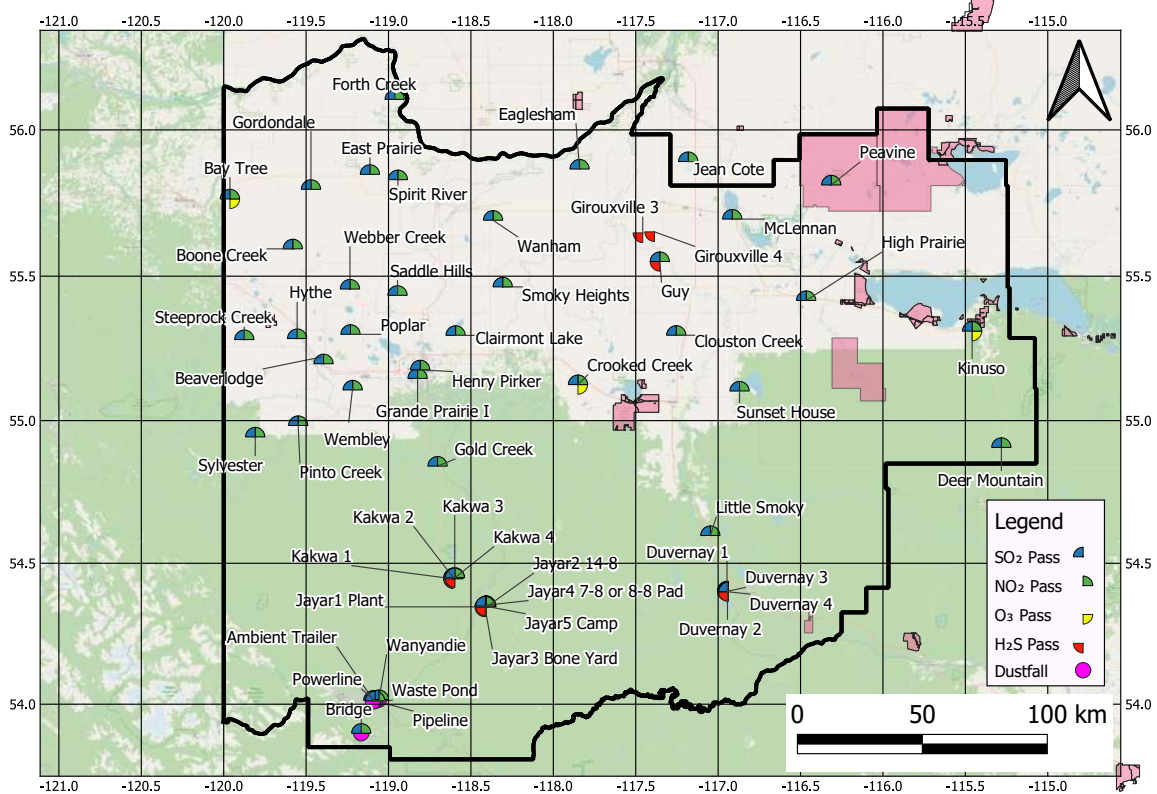
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PAZA Continuous Monitoring Station Locations



PAZA Passive Monitoring Station Locations



1 June 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 - June 2023 Beaverlodge Station Report

Parameter	June				Max	1-hour		24-hour			Exceedance				Calibration Date																													
	Average	Minimum	Valid	Operational		Objective	Max Day and Time	Max	Objective	Max Day	1hr	8hr	24hr	30d																														
NO (ppb)	0.4	0.0	94.5%	99.7%	16.9	-	Jun-08 07:00	1.4	-	Jun-08	-	-	-	-	Jun 14, 2023																													
NO ₂ (ppb)	3.2	0.3	94.5%	99.7%	18.9	159	Jun-08 07:00	5.8	-	Jun-09	0	-	-	-	Jun 14, 2023																													
NO _x (ppb)	3.5	0.3	94.5%	99.7%	35.8	-	Jun-08 07:00	6.8	-	Jun-08	-	-	-	-	Jun 14, 2023																													
O ₃ (ppb)	33.2	6.2	95.0%	99.6%	72.1	76	Jun-09 17:00	52.1	-	Jun-03	0	-	-	-	Jun 14, 2023																													
PM _{2.5} (µg/m ³)	21.6	0.2	92.6%	92.9%	333.9	80	Jun-14 13:00	59.6	29	Jun-12	16	-	5	-	Jun 11, 2023																													
SO ₂ (ppb)	0.4	0.0	95.0%	99.7%	4.8	172	Jun-09 20:00	0.9	48	Jun-09	0	-	0	0	Jun 20, 2023																													
<table border="1"> <thead> <tr> <th>Average</th> <th>Minimum</th> <th>Valid</th> <th>Operational</th> <th>Maximum</th> </tr> </thead> <tbody> <tr> <td>Temp (°C)</td> <td>16.2</td> <td>3.9</td> <td>99.7%</td> <td>99.7%</td> <td>28.4</td> </tr> <tr> <td>RH (%)</td> <td>54.8</td> <td>15.0</td> <td>99.7%</td> <td>99.7%</td> <td>99.6</td> </tr> <tr> <td>WS (km/hr)</td> <td>10.8</td> <td>0.0</td> <td>99.7%</td> <td>99.7%</td> <td>44.9</td> </tr> <tr> <td>WD (deg)</td> <td>286</td> <td>0.3</td> <td>99.7%</td> <td>99.7%</td> <td>359.9</td> </tr> </tbody> </table>																Average	Minimum	Valid	Operational	Maximum	Temp (°C)	16.2	3.9	99.7%	99.7%	28.4	RH (%)	54.8	15.0	99.7%	99.7%	99.6	WS (km/hr)	10.8	0.0	99.7%	99.7%	44.9	WD (deg)	286	0.3	99.7%	99.7%	359.9
Average	Minimum	Valid	Operational	Maximum																																								
Temp (°C)	16.2	3.9	99.7%	99.7%	28.4																																							
RH (%)	54.8	15.0	99.7%	99.7%	99.6																																							
WS (km/hr)	10.8	0.0	99.7%	99.7%	44.9																																							
WD (deg)	286	0.3	99.7%	99.7%	359.9																																							
<p>Note: Valid hours must be greater than 75% Operational hours must be greater than 90%</p>																																												
<p>Average Wind Direction: 286 WNW</p>																																												

Update Summary:

Parameter	Make	Model	Equipment summary
NO/NO ₂ /NO _x	Thermo	42i	June 11 communications failure, 2hrs removed
O ₃	Thermo	49iQ	June 10 zero/span removed; June 11 communications failure, 2hrs removed
PM _{2.5}	Sharp	5030	Data flatlined (50hrs); maintenance (1hr); 16hrs above AAAQG + 5 days above AAAQO due to wildfires
SO ₂	Thermo	43i-TLE	June 11 communications failure, 2hrs removed
Met Equip	MetOne	50.5	June 11 communications failure, 2hrs removed

1.2 Dunes Air Monitoring Station

PAZA - June 2023 Dunes Station Report

Parameter	June				Max	1-hour		24-hour			Exceedance				Calibration Date																													
	Average	Minimum	Valid	Operational		Objective	Max Day and Time	Max	Objective	Max Day	1hr	8hr	24hr	30d																														
PM _{2.5} (µg/m ³)	21.4	0.0	99.6%	100.0%	222.9	80	Jun-14 11:00	101.5	29	Jun-14	31	-	9	-	Jun-22-2023																													
SO ₂ (ppb)	0.5	0.0	95.1%	100.0%	10.0	172	Jun-16 21:00	1.5	48	Jun-21	0	-	0	0	Jun-22-2023																													
TRS (ppb)	0.3	0.0	93.6%	98.8%	1.7	-	Jun-02 08:00	0.6	-	Jun-08	-	-	-	-	Jun-21-2023																													
<table border="1"> <thead> <tr> <th>Average</th> <th>Minimum</th> <th>Valid</th> <th>Operational</th> <th>Maximum</th> </tr> </thead> <tbody> <tr> <td>Temp (°C)</td> <td>16.7</td> <td>2.4</td> <td>99.7%</td> <td>100.0%</td> <td>30.6</td> </tr> <tr> <td>RH (%)</td> <td>56.1</td> <td>12.2</td> <td>99.7%</td> <td>100.0%</td> <td>99.9</td> </tr> <tr> <td>WS (km/hr)</td> <td>4.3</td> <td>0.1</td> <td>99.7%</td> <td>100.0%</td> <td>18.7</td> </tr> <tr> <td>WD (deg)</td> <td>290</td> <td>0.5</td> <td>99.7%</td> <td>100.0%</td> <td>358.1</td> </tr> </tbody> </table>																Average	Minimum	Valid	Operational	Maximum	Temp (°C)	16.7	2.4	99.7%	100.0%	30.6	RH (%)	56.1	12.2	99.7%	100.0%	99.9	WS (km/hr)	4.3	0.1	99.7%	100.0%	18.7	WD (deg)	290	0.5	99.7%	100.0%	358.1
Average	Minimum	Valid	Operational	Maximum																																								
Temp (°C)	16.7	2.4	99.7%	100.0%	30.6																																							
RH (%)	56.1	12.2	99.7%	100.0%	99.9																																							
WS (km/hr)	4.3	0.1	99.7%	100.0%	18.7																																							
WD (deg)	290	0.5	99.7%	100.0%	358.1																																							
<p>Note: Valid hours must be greater than 75% Operational hours must be greater than 90%</p>																																												
<p>Average Wind Direction: 290 WNW</p>																																												

Update Summary:

Parameter	Make	Model	Equipment summary
PM _{2.5}	Thermo	TEOM AB	No operational issues noted; 31hrs above AAAQG + 9 days above AAAQO due to wildfires
SO ₂	TECO	43i	No Operational issues noted
TRS	TECO	43C	TRS removal calibration failed (9hrs removed to good span), replaced SOX scrubber and thermocouple
Met Equip	Gil/RMYoung	MetPak/RMY86004	No Operational issues noted during the month

1.3 Grande Prairie - Henry Pirker Air Monitoring Station

PAZA - June 2023 Henry Pirker 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)	2.2	0.0	95.0%	100.0%	28.7	-	Jun-05 09:00	6.6	-	Jun-05	-	-	-	-	Jun 14, 2023
NO ₂ (ppb)	6.4	1.0	95.0%	100.0%	27.6	159	Jun-04 12:00	9.9	-	Jun-05	0	-	-	-	Jun 14, 2023
NO _x (ppb)	8.6	1.2	95.0%	100.0%	47.4	-	Jun-05 09:00	16.6	-	Jun-05	-	-	-	-	Jun 14, 2023
O ₃ (ppb)	31.6	1.9	95.3%	100.0%	68.5	76	Jun-09 16:00	53.7	-	Jun-03	0	-	-	-	Jun 15, 2023
PM _{2.5} (µg/m ³)	34.5	1.6	99.3%	100.0%	339.6	80	Jun-14 11:00	164.1	29	Jun-14	74	-	10	-	Jun 25, 2023
SO ₂ (ppb)	0.5	0.0	90.6%	95.8%	15.6	172	Jun-24 09:00	1.5	48	Jun-28	0	-	0	0	Jun 14, 2023
H ₂ S (ppb)	0.2	0.0	95.1%	100.0%	1.1	10	Jun-23 07:00	0.3	3	Jun-14	0	-	0	-	Jun 15, 2023
CH ₄ (ppm)	2.1	1.8	86.1%	90.6%	2.7	-	Jun-22 05:00	2.2	-	Jun-12	-	-	-	-	Jun 01, 2023
THC (ppm)	2.1	1.8	86.1%	90.6%	2.8	-	Jun-22 05:00	2.2	-	Jun-12	-	-	-	-	Jun 01, 2023
NMHC (ppm)	0.0	0.0	86.1%	90.6%	0.2	-	Jun-13 07:00	0.0	-	Jun-13	-	-	-	-	Jun 01, 2023
CO (ppm)	0.3	0.1	95.3%	100.0%	2.1	13	Jun-14 11:00	1.0	5	Jun-14	0	0	-	-	Jun 01, 2023
	Average	Minimum	Valid	Operational	Maximum										
Temp (°C)	18.0	3.9	100.0%	100.0%	31.0	<div style="border: 1px solid black; padding: 5px;"> Note: Valid hours must be greater than 75% Operational hours must be greater than 90% </div>									
RH (%)	52.4	12.2	100.0%	100.0%	89.7										
SR (W/m ²)	212.8	0.0	100.0%	100.0%	767.3										
WS (km/hr)	7.7	0.4	100.0%	100.0%	28.3										
WD (deg)	277	12.4	100.0%	100.0%	355.1	<div style="border: 1px solid black; padding: 2px;"> Average Wind Direction 277 W </div>									

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; 74 hrs above AAAQG + 10 days above AAAQO due to wildfires
SO ₂	TEI	43I-TLE	Analyzer failure, installed spare unit (s/n: 1170050145); 21hrs removed, 9hrs maintenance
H ₂ S	TEI	450i	No Operational issues noted
THC/CH ₄ /NMHC	TEI	55i	Analyzer failure, removed 55i (s/n:1134650658), installed spare 55i; 52hrs removed, 16hrs maintenance
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 - June 2023 Smoky Heights 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	
PM _{2.5} (µg/m ³)	24.0	0.3	98.2%	98.6%	253.6	80	Jun-10 10:00	87.3	29	Jun-10	40	-	9	-	Jun 19, 2023
SO ₂ (ppb)	0.3	0.0	94.0%	98.6%	4.5	172	Jun-21 04:00	0.7	48	Jun-10	0	-	0	0	Jun 19, 2023
TRS (ppb)	-	0.0	74.1%	78.5%	1.4	-	Jun-24 18:00	0.3	-	Jun-25	-	-	-	-	Jun 11, 2023
	Average	Minimum	Valid	Operational	Maximum										
Temp (°C)	15.6	4.2	98.6%	98.6%	30.9	<div style="border: 1px solid black; padding: 5px;"> Note: Valid hours must be greater than 75% Operational hours must be greater than 90% </div>									
WS (km/hr)	10.6	0.4	98.6%	98.6%	46.5										
WD (deg)	264	0.1	98.6%	98.6%	359.9	<div style="border: 1px solid black; padding: 2px;"> Average Wind Direction 264 WNW </div>									

Update Summary:

Parameter	Make	Model	Equipment summary
PM _{2.5}	Sharp	5030	Power failure (10hrs); 40hrs above AAAQG + 9 days above AAAQO due to wildfires
SO ₂	TECO	43i	Power failure (10hrs)
TRS	TEI	43I APSAA	Power failure (10hrs); 20hrs maint; 125hrs removed due to failed spans and removal calibrations, <75%
Met Equip	MetOne	50.5	Power failure (10hrs)

1.5 Valleyview Air Monitoring Station

PAZA - June 2023 Valleyview Station Report

Parameter	June			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	
SO ₂ (ppb)	0.1	0.0	95.1%	100.0%	2.3	172	Jun-29 17:00	0.3	48	Jun-10	0	-	0	0	Jun 21, 2023
H ₂ S (ppb)	0.2	0.0	95.1%	100.0%	7.9	10	Jun-09 14:00	0.4	3	Jun-09	0	-	0	-	Jun 21, 2023
	Average	Minimum	Valid	Operational	Maximum										
Temp (°C)	16.9	2.3	99.7%	100.0%	32.4	<div style="border: 1px solid black; padding: 5px;"> Note: Valid hours must be greater than 75% Operational hours must be greater than 90% </div>									
RH (%)	66.2	17.5	99.7%	100.0%	100.2										
WS (km/hr)	3.9	0.0	99.7%	100.0%	16.7										
WD (deg)	303	0.1	99.7%	100.0%	359.9										
Average Wind Direction										303	NW				

Update Summary:

Parameter	Make	Model	Equipment summary
SO ₂	TEI	43i-APSCB	No Operational issues noted
H ₂ S	TEI	450i-APHA / 43C	No Operational issues noted
Met Equip	RMYoung	RMYS6004	No Operational issues noted

1.6 Donnelly Air Monitoring Station

PAZA - June 2023 Donnelly Station Report

Parameter	June			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	
SO ₂ (ppb)	0.1	0.0	94.2%	98.6%	1.9	172	Jun-17 05:00	0.4	48	Jun-10	0	-	0	0	Jun 08, 2023
H ₂ S (ppb)	0.1	0.0	94.2%	98.6%	1.4	10	Jun-08 01:00	0.4	3	Jun-13	0	-	0	-	Jun 08, 2023
	Average	Minimum	Valid	Operational	Maximum										
Temp (°C)	16.8	4.8	99.3%	99.3%	28.6	<div style="border: 1px solid black; padding: 5px;"> Note: Valid hours must be greater than 75% Operational hours must be greater than 90% </div>									
WS (km/hr)	9.7	0.3	99.3%	99.3%	31.7										
WD (deg)	247	0.3	99.3%	99.3%	359.6										
Average Wind Direction															

Update Summary:

Parameter	Make	Model	Equipment summary
SO ₂	Teco	43i	Communications failure (8hrs); Power failure (2hrs)
H ₂ S	Thermo	45C	Communications failure (8hrs); Power failure (2hrs)
Met Equip	RMYoung	5103	Communications failure (5hrs)

1.7 Poplar Air Monitoring Station

PAZA - June 2023 Poplar Station Report

Parameter	June			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	
NO (ppb)	1.0	0.0	94.2%	99.4%	27.6	-	Jun-12 07:00	5.6	-	Jun-12	-	-	-	-	Jun 06, 2023
NO ₂ (ppb)	4.8	0.2	94.2%	99.4%	25.4	159	Jun-08 04:00	10.4	-	Jun-12	0	-	-	-	Jun 06, 2023
NO _x (ppb)	5.8	0.3	94.2%	99.4%	47.8	-	Jun-12 07:00	16.1	-	Jun-12	-	-	-	-	Jun 06, 2023
O ₃ (ppb)	30.4	1.1	94.7%	99.4%	67.9	76	Jun-09 17:00	50.3	-	Jun-03	0	-	-	-	Jun 07, 2023
PM _{2.5} (µg/m ³)	21.3	0.0	89.5%	89.6%	263.7	80	Jun-10 07:00	74.6	29	Jun-14	25	-	8	-	Jun 10, 2023
SO ₂ (ppb)	0.8	0.0	94.3%	99.3%	14.7	172	Jun-17 18:00	2.6	48	Jun-21	0	-	0	0	Jun 06, 2023
TRS (ppb)	0.2	0.0	89.6%	94.0%	7.2	-	Jun-26 19:00	0.8	-	Jun-26	-	-	-	-	Jun 23, 2023
CH ₄ (ppm)	removed Dec 12, 2022														
THC (ppm)	2.2	1.8	89.7%	94.3%	3.7	-	Jun-07 22:00	2.4	-	Jun-08	-	-	-	-	Jun 10, 2023
NMHC (ppm)	removed Dec 12, 2022														
	Average	Minimum	Valid	Operational	Maximum										
Temp (°C)	15.8	2.6	99.4%	99.4%	29.7	<div style="border: 1px solid black; padding: 5px;"> Note: Valid hours must be greater than 75% Operational hours must be greater than 90% </div>									
WS (km/hr)	12.7	0.1	99.4%	99.4%	41.6										
WD (deg)	291	0.4	99.4%	99.4%	359.5										
Average Wind Direction															

Update Summary:

Parameter	Make	Model	Equipment summary
NO/NO ₂ /NO _x	TEI	42i	Power failure (4hrs)
O ₃	TEI	49i	Power failure (4hrs)
PM _{2.5}	Thermo	TEOM AB	Power failure (4hrs); Maint. (4hrs); negative drift (67hrs); 25hrs above AAAQG + 8 days above AAAQG; <90%
SO ₂	TEI	43i	Power failure (4hrs); daily zero removed June 4 (1hr)
TRS	TEI	43i	Power failure (4hrs); zero removed June 4 (1hr); span failed June 23, maint. (6hrs), removed (32hrs)
THC	TEI	55i / 51ii-LT	CH ₄ , NMHC not in service; Power failure (4hrs); span failed, June 10, maint. (5hrs), removed (32hrs)
Met Equip	MetOne	50.5	Power failure (4hrs)

1.8 Milner Air Monitoring Station

PAZA - June 2023 Milner 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	
NO (ppb)	0.4	0.0	95.0%	100.0%	7.5	-	Jun-27 06:00	1.4	-	Jun-27	-	-	-	-	Jun 12, 2023
NO ₂ (ppb)	1.1	0.0	95.0%	100.0%	13.2	159	Jun-18 10:00	3.7	-	Jun-18	0	-	-	-	Jun 12, 2023
NO _x (ppb)	1.6	0.0	95.0%	100.0%	18.0	-	Jun-18 10:00	4.1	-	Jun-18	-	-	-	-	Jun 12, 2023
PM _{2.5} (µg/m ³)	8.4	0.0	92.2%	92.8%	86.8	80	Jun-14 16:00	43.5	29	Jun-14	3	-	2	-	Jun 12, 2023
	Average	Minimum	Valid	Operational	Maximum										
WS (km/hr)	4.5	0.0	100.0%	100.0%	22.3	<div style="border: 1px solid black; padding: 5px;"> <p>Note: Valid hours must be greater than 75%</p> <p>Operational hours must be greater than 90%</p> </div>									
WD (deg)	250	0.8	100.0%	100.0%	359.9										
Average Wind Direction		250		WSW											

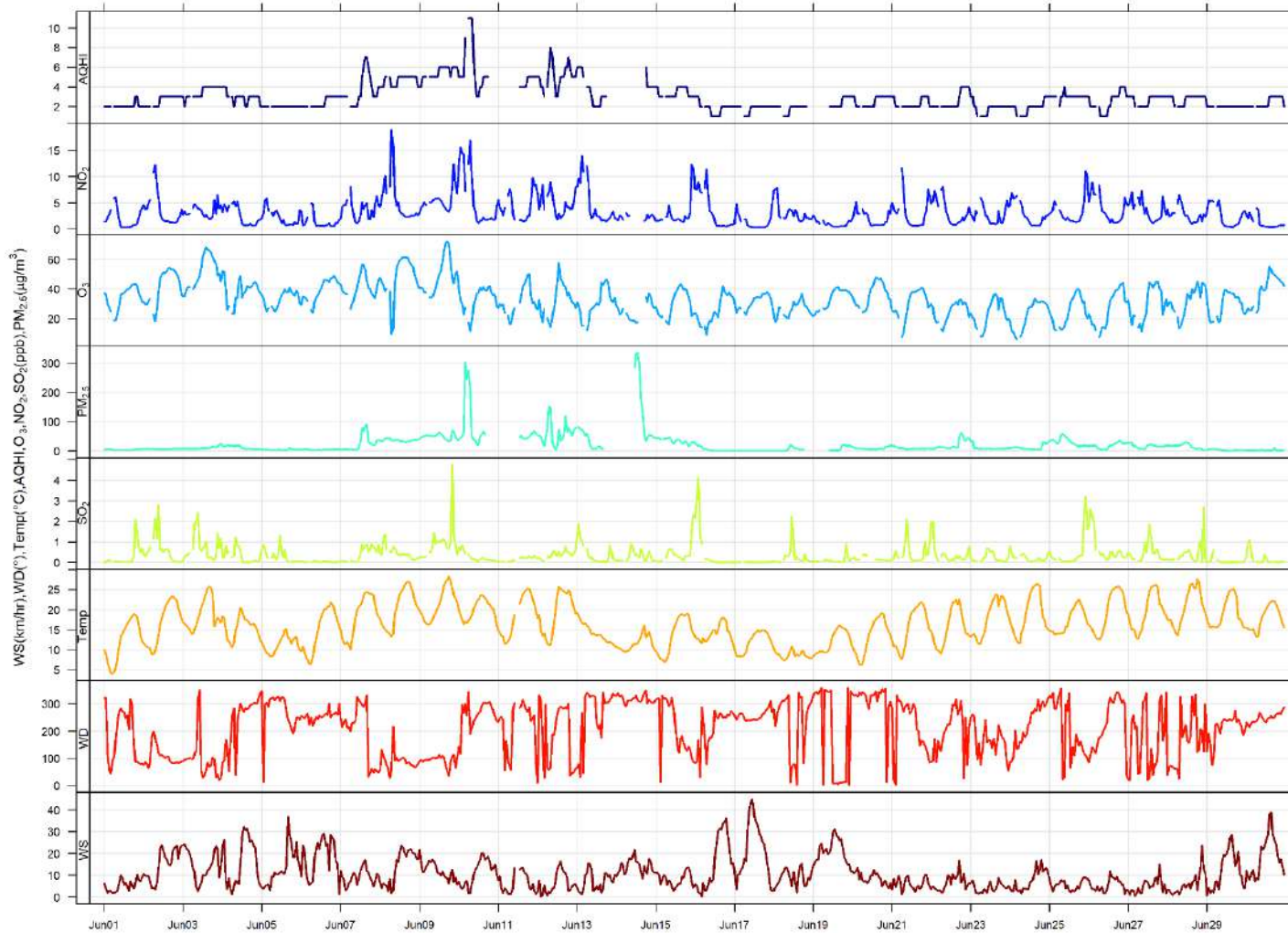
Update Summary:

Parameter	Make	Model	Equipment summary
NO/NO ₂ /NO _x	Thermo	42i	No Operational issues noted
PM _{2.5}	TEOM	AB	Excessive negative drift (50hrs); 3hrs above AAAQG + 2 days above AAAQO;
Met Equip	MetOne	50.5	No Operational issues noted

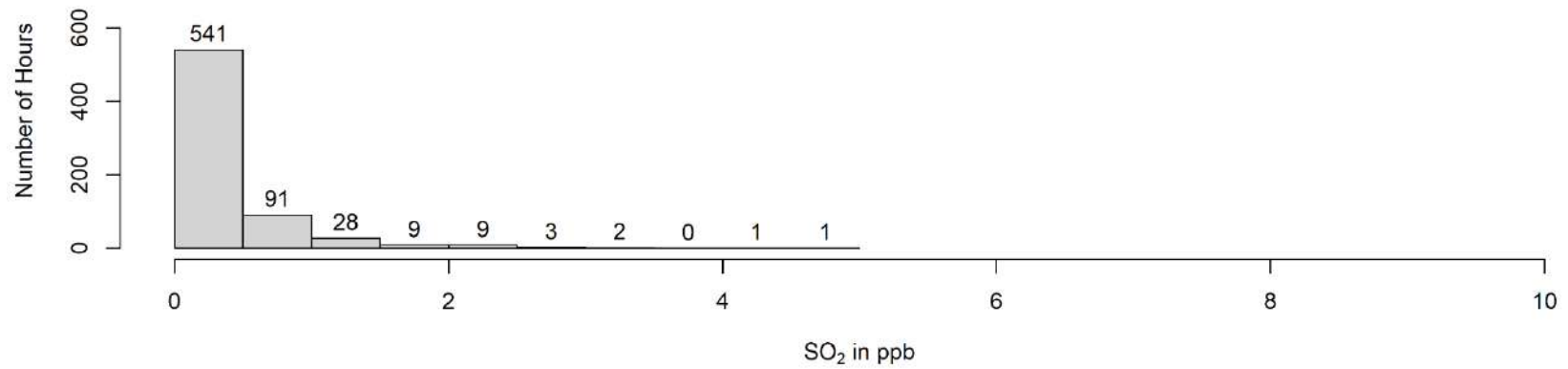
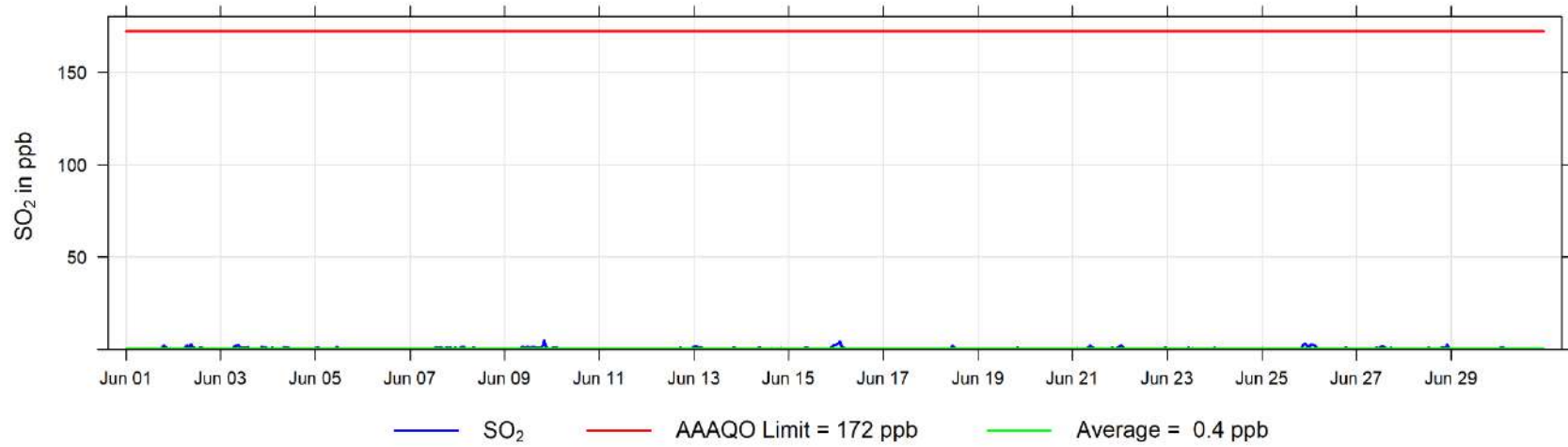
2 Beaverlodge Charts

The following pages include the charts and histograms for Beaverlodge Station

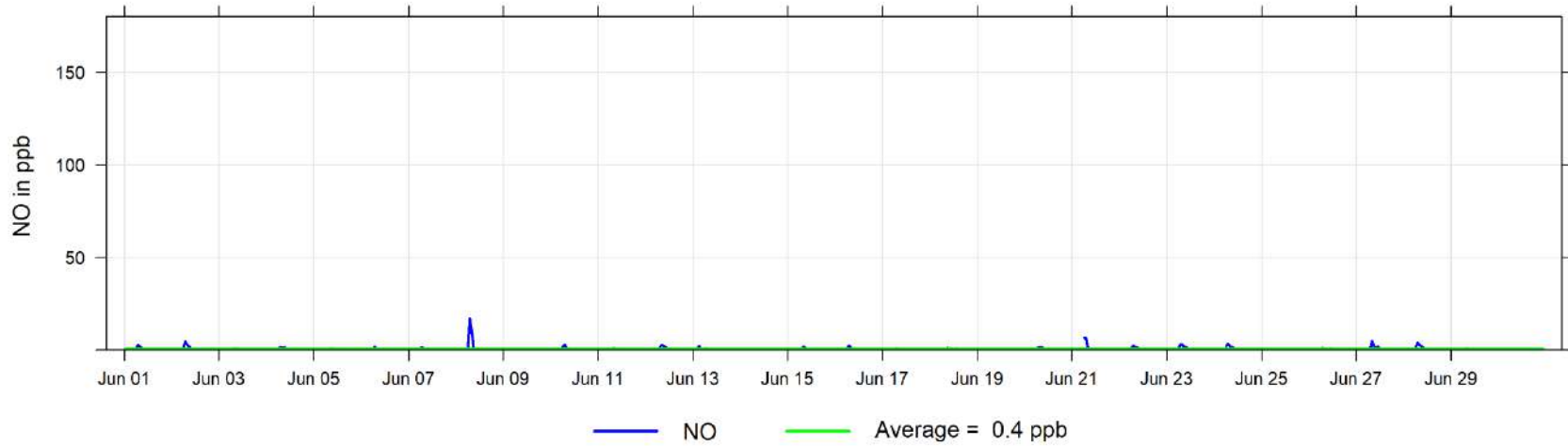
June 2023 Concentration Readings at Beaverlodge Station



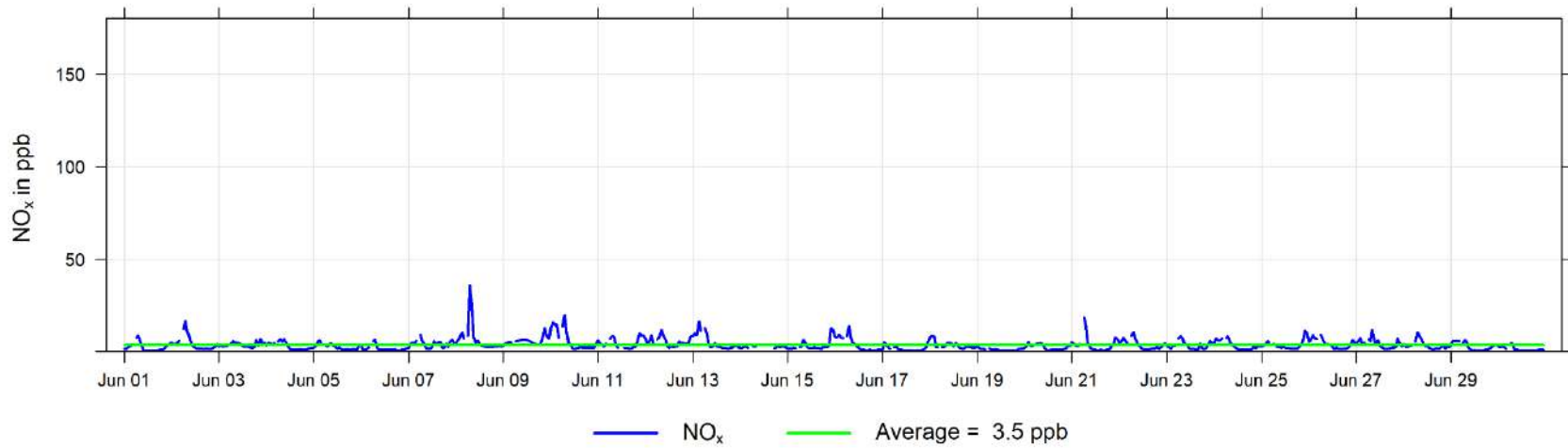
June 2023 Hourly Concentration Readings of SO₂ (in ppb) at Beaverlodge



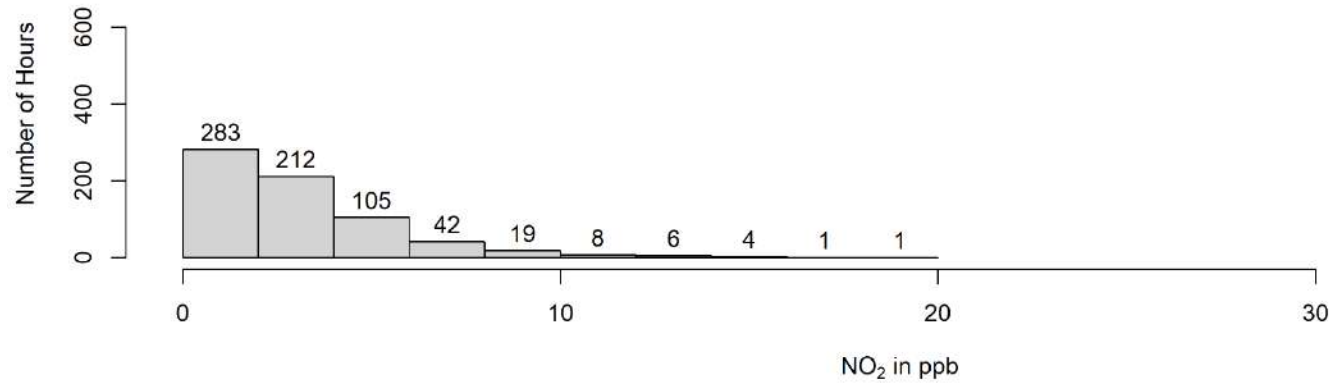
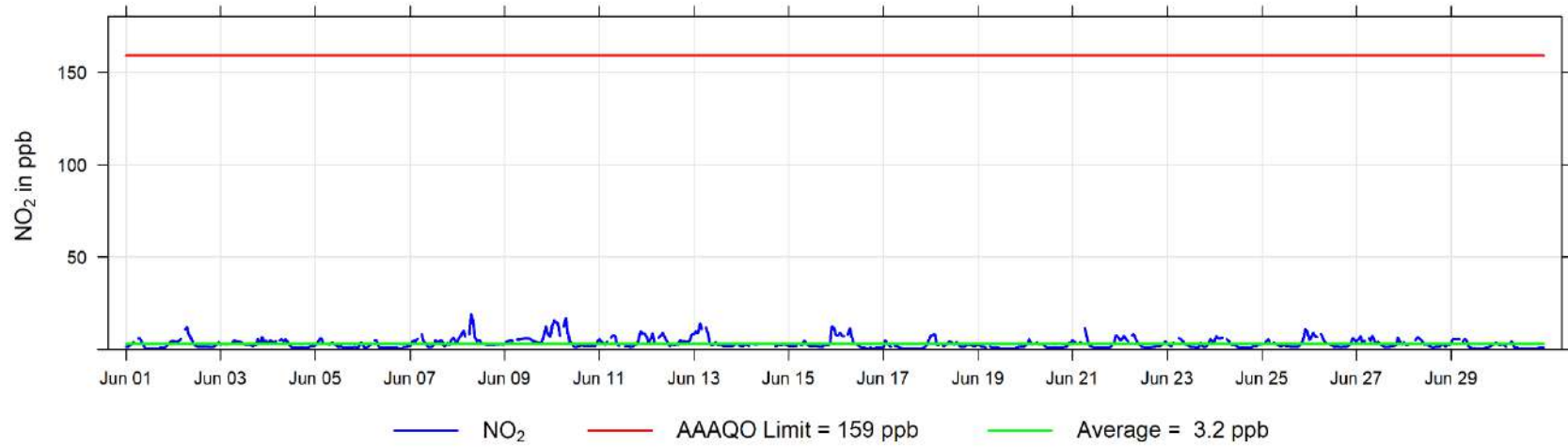
June 2023 Hourly Concentration Readings of NO (in ppb) at Beaverlodge



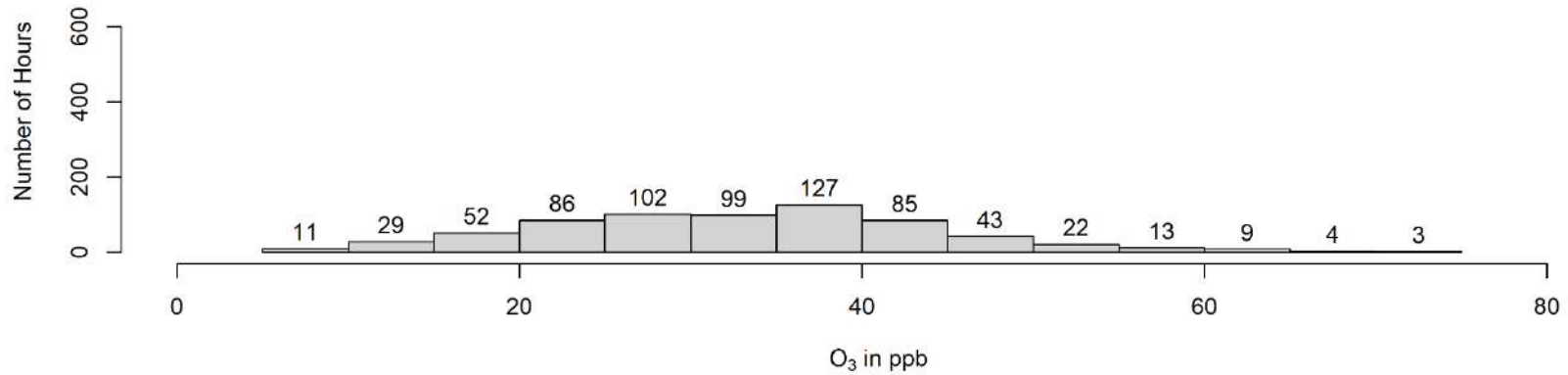
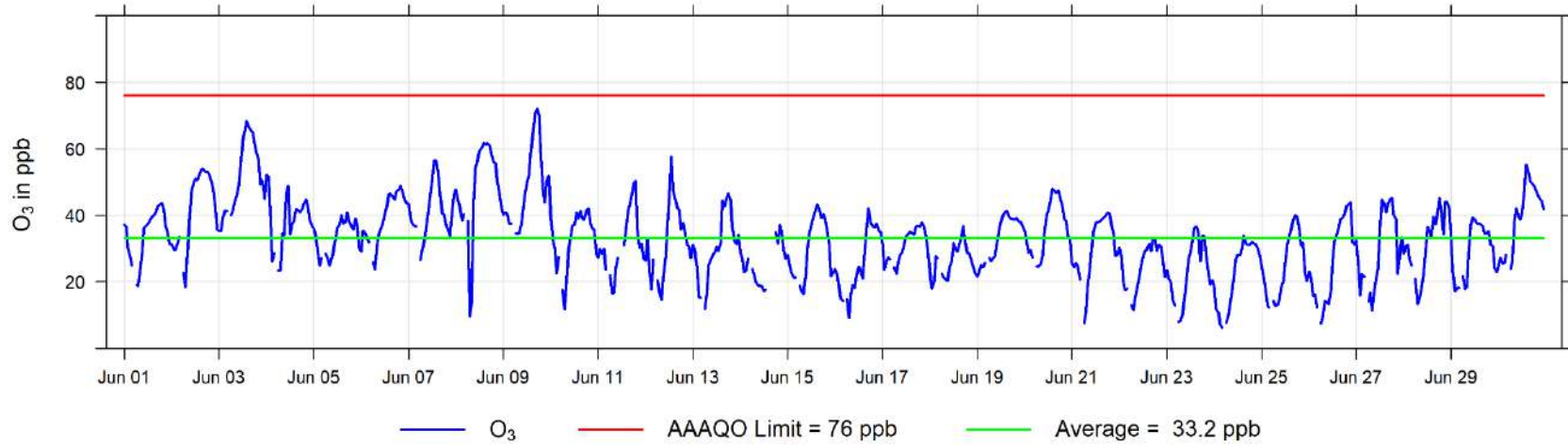
June 2023 Hourly Concentration Readings of NO_x (in ppb) at Beaverlodge



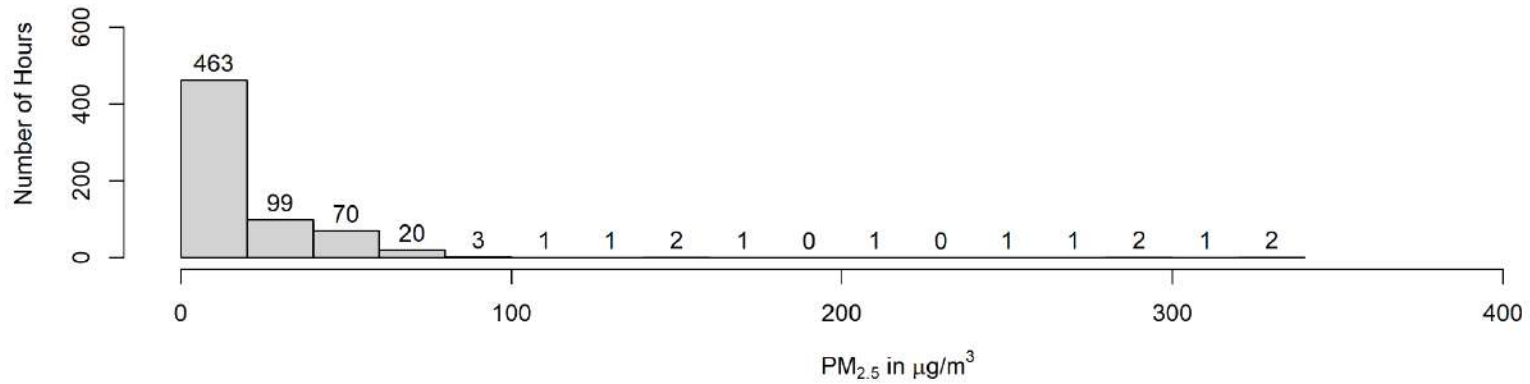
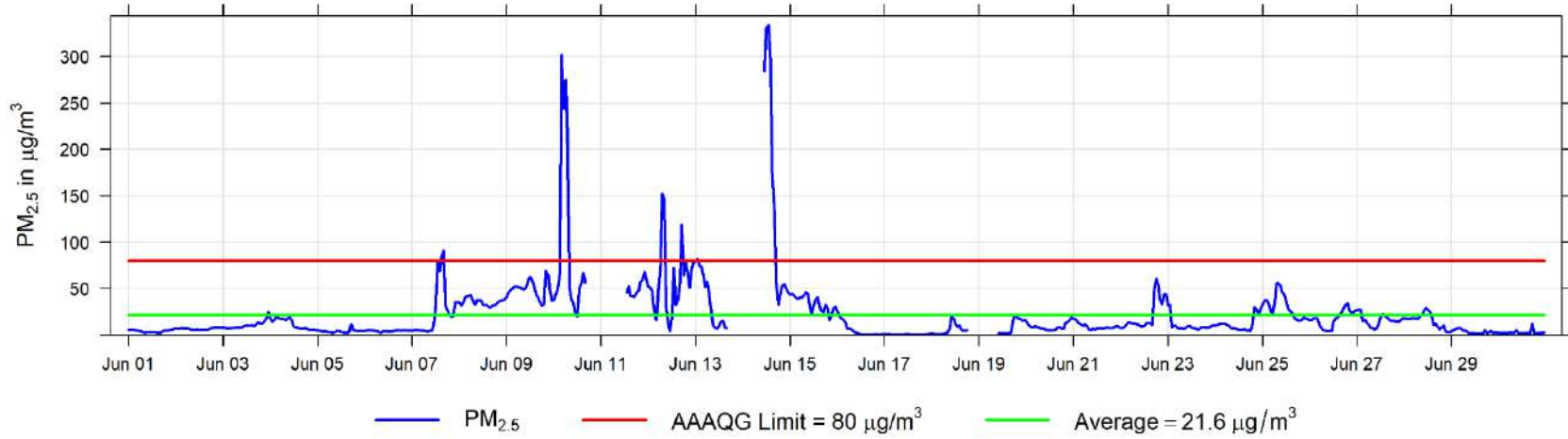
June 2023 Hourly Concentration Readings of NO₂ (in ppb) at Beaverlodge



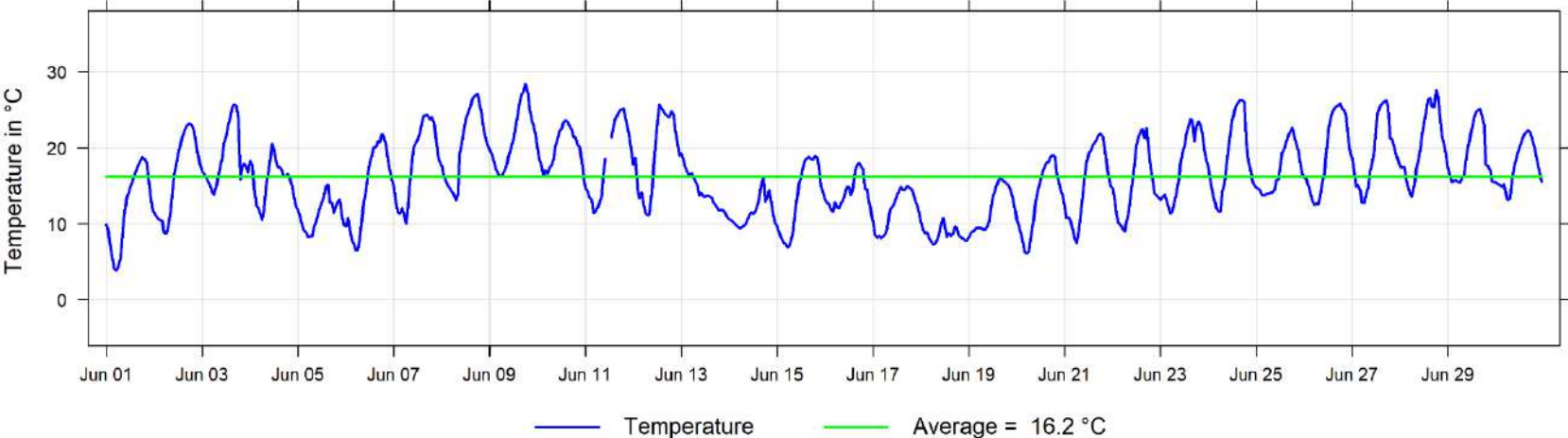
June 2023 Hourly Concentration Readings of O₃ (in ppb) at Beaverlodge



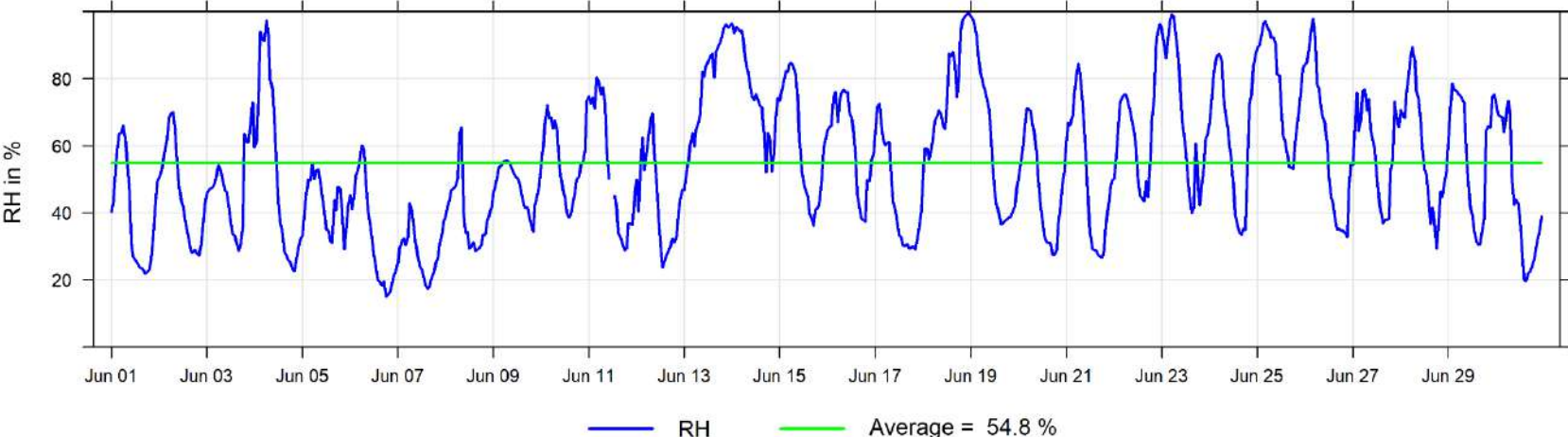
June 2023 Hourly Concentration Readings of PM_{2.5} in $\mu\text{g}/\text{m}^3$ at Beaverlodge



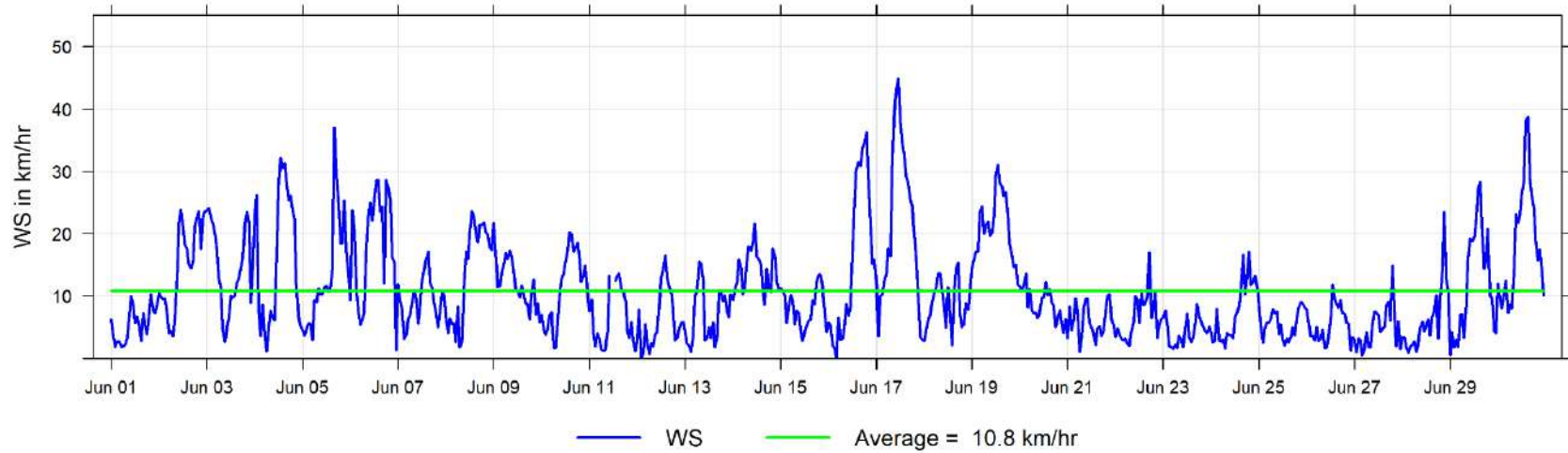
June 2023 Hourly Temperature Readings (in °C) at Beaverlodge



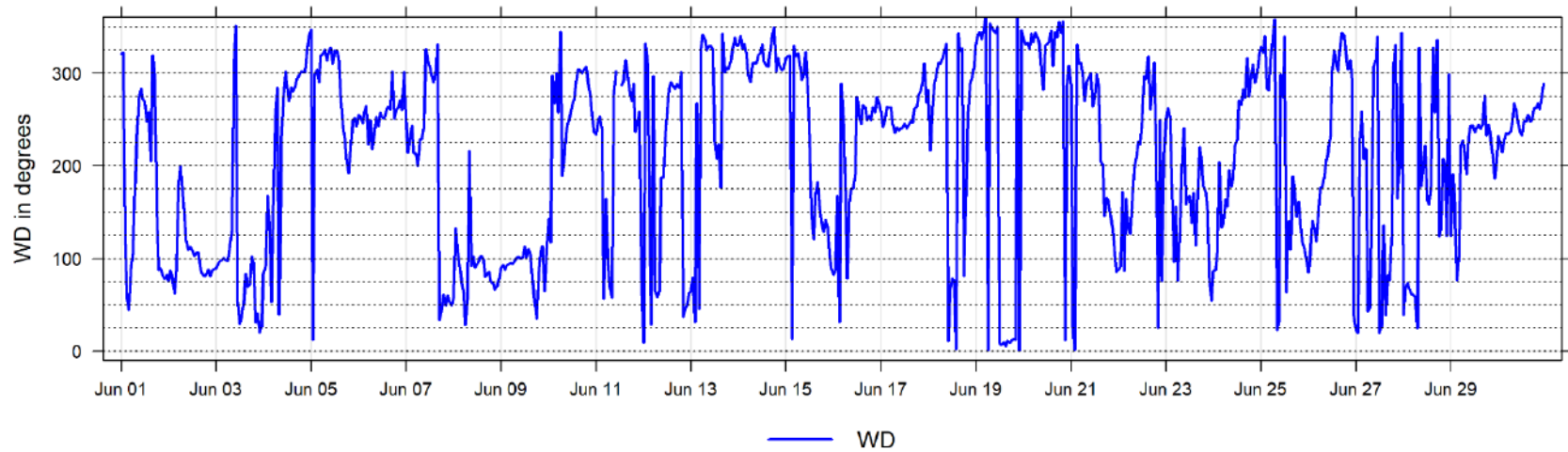
June 2023 Hourly Readings of Relative Humidity (in %) at Beaverlodge



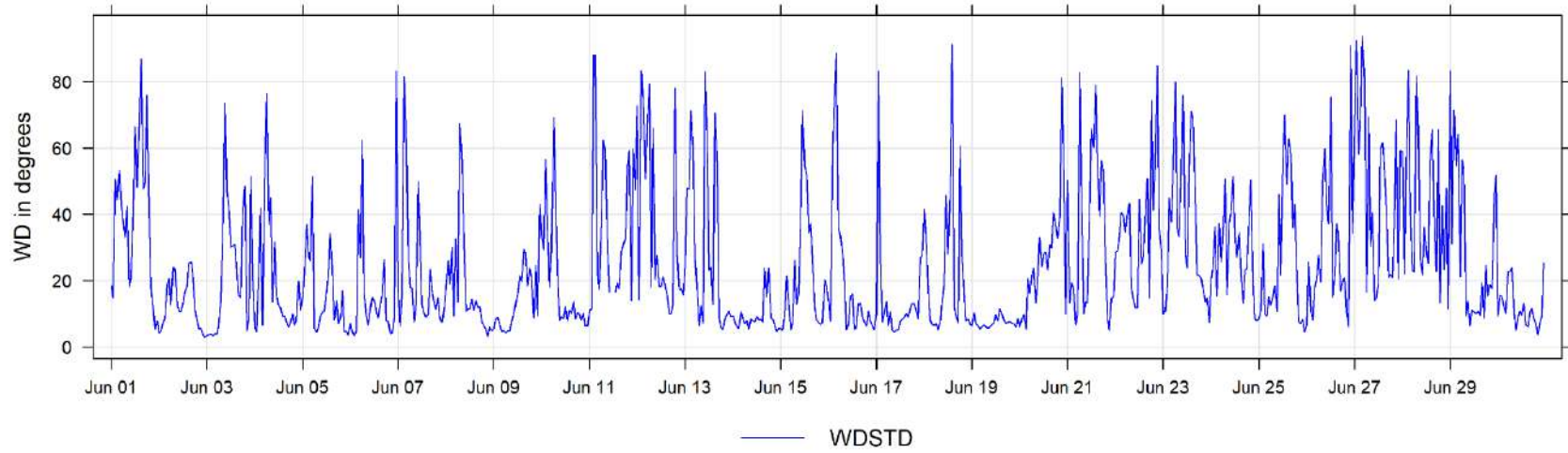
June 2023 Hourly Readings of Wind Speed (in km/hr) at Beaverlodge

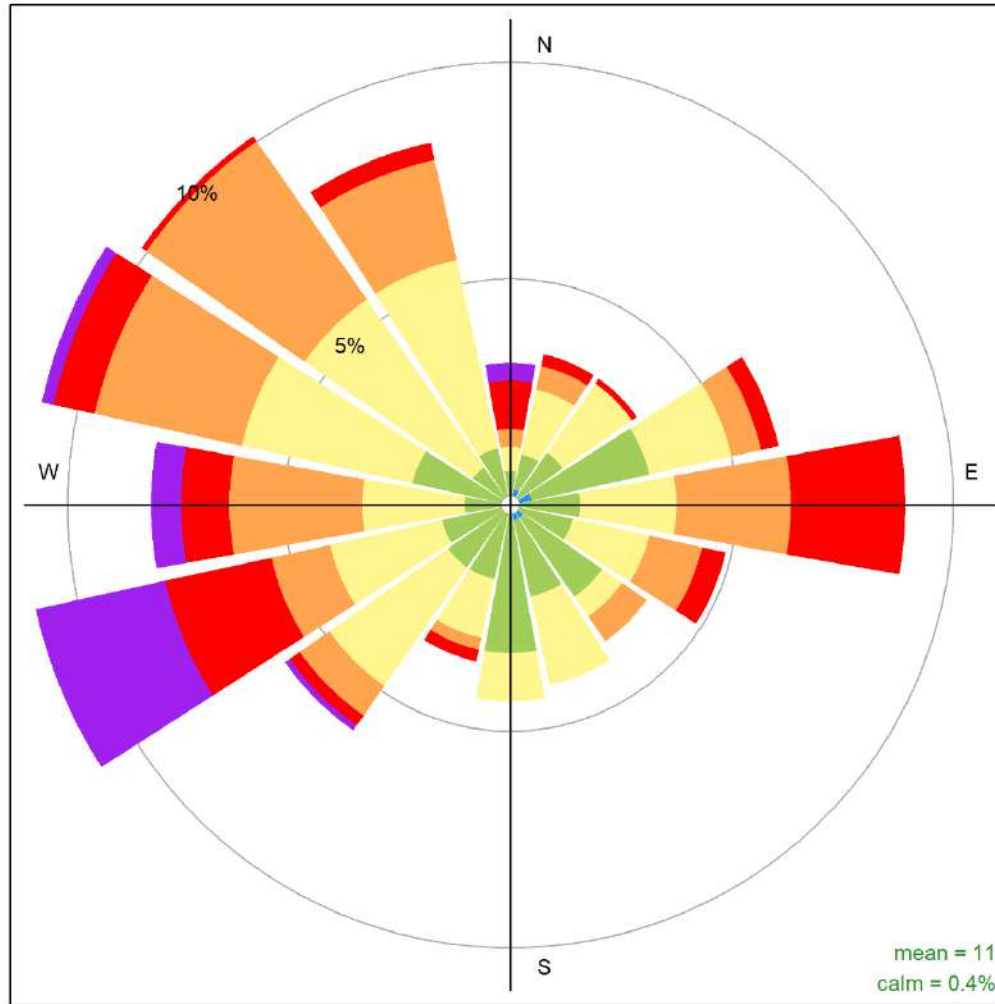


June 2023 Hourly Readings of Wind Direction (in degrees) at Beaverlodge



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

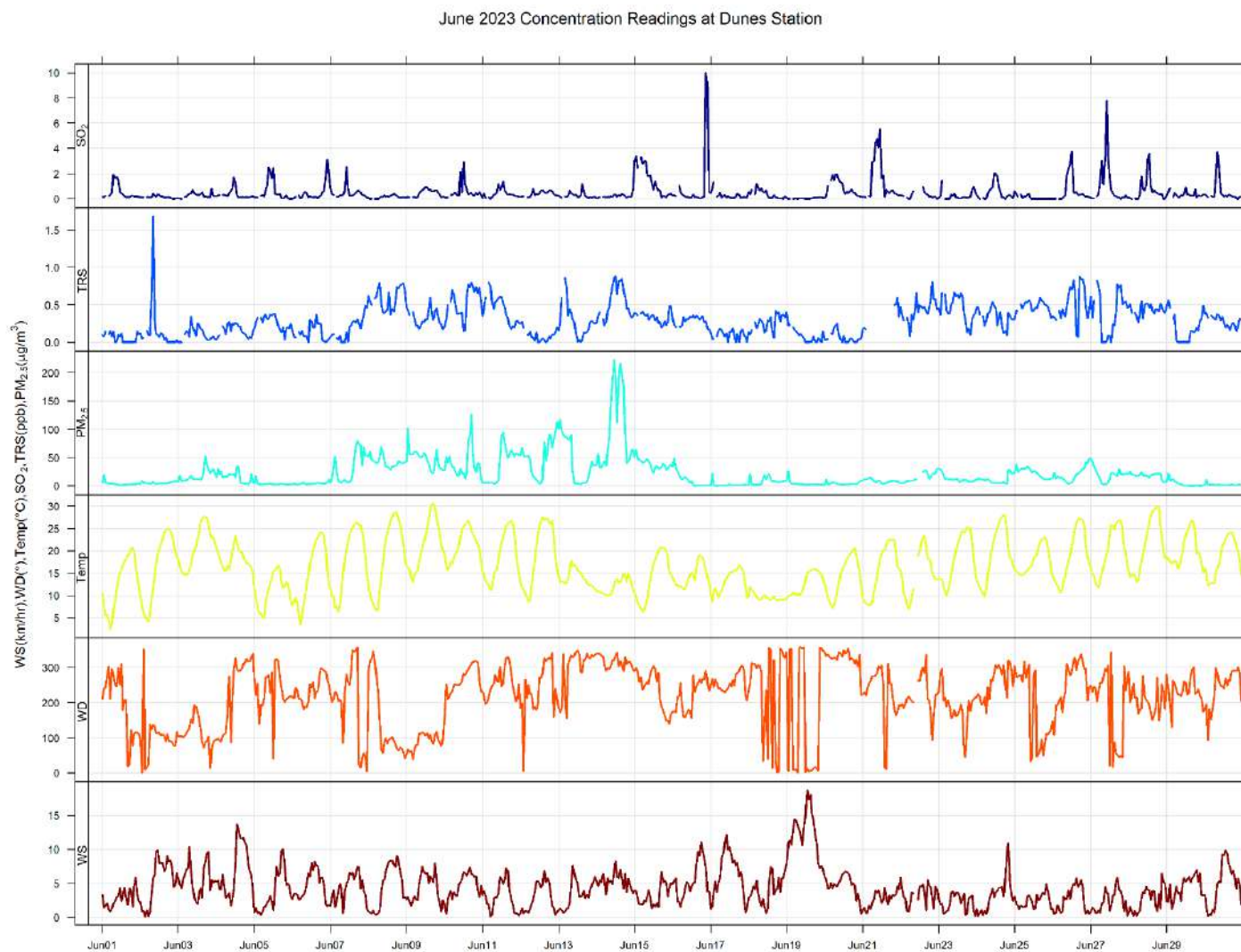




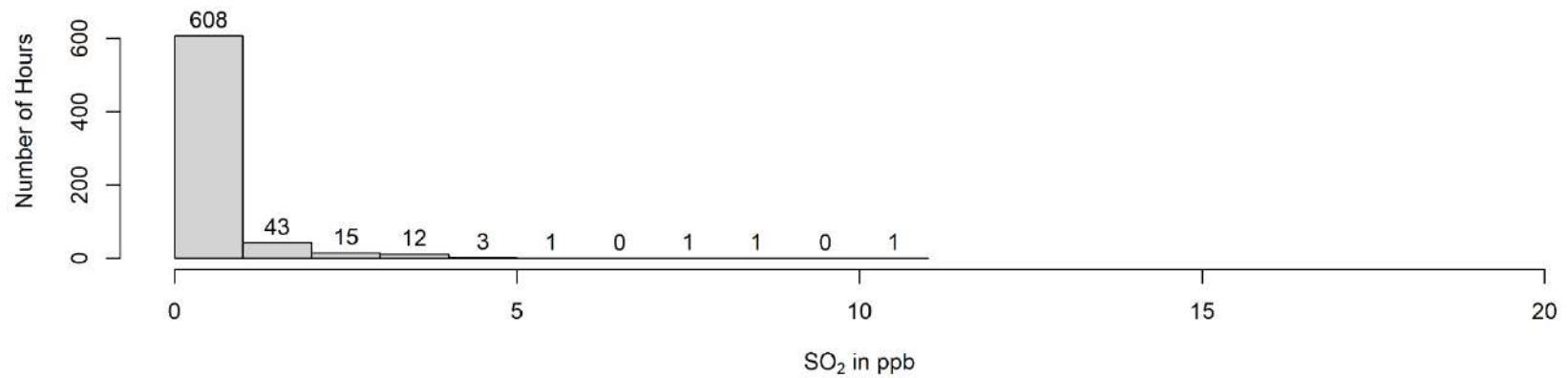
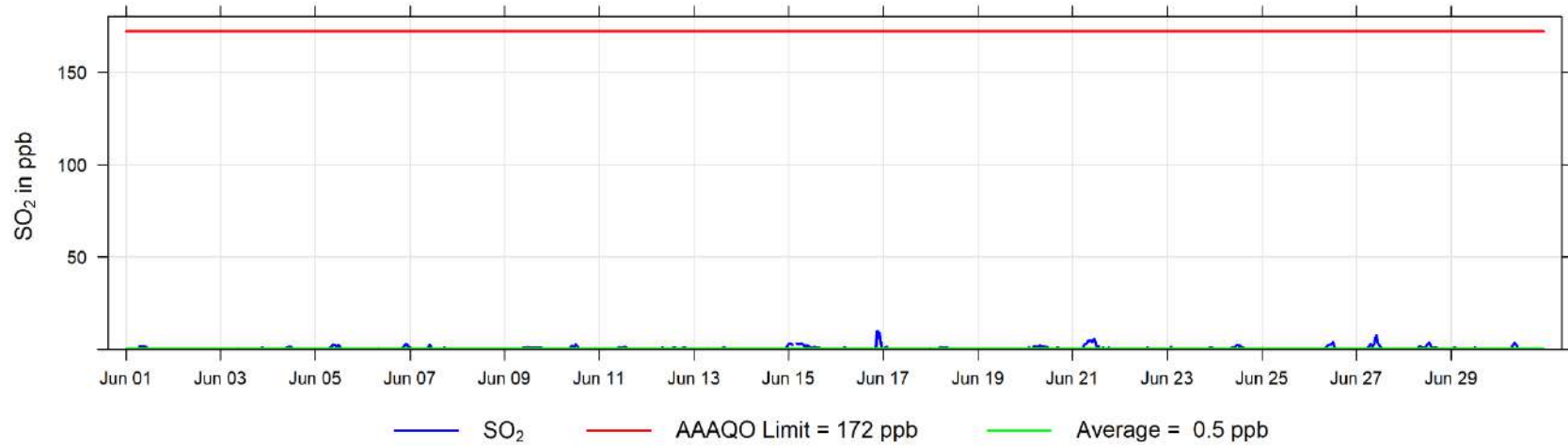
Beaverlodge June 2023 Wind Rose, wind speed in km/hr
Frequency of counts by wind direction (%)

3 Dunes Charts

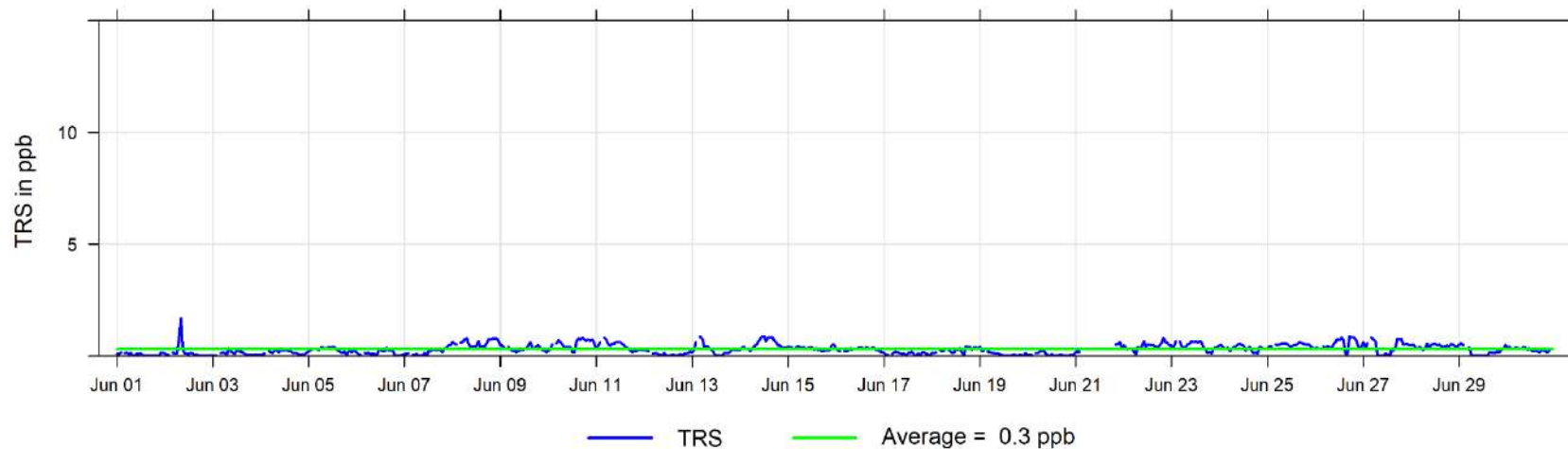
The following pages include the charts and histograms for Dunes Station



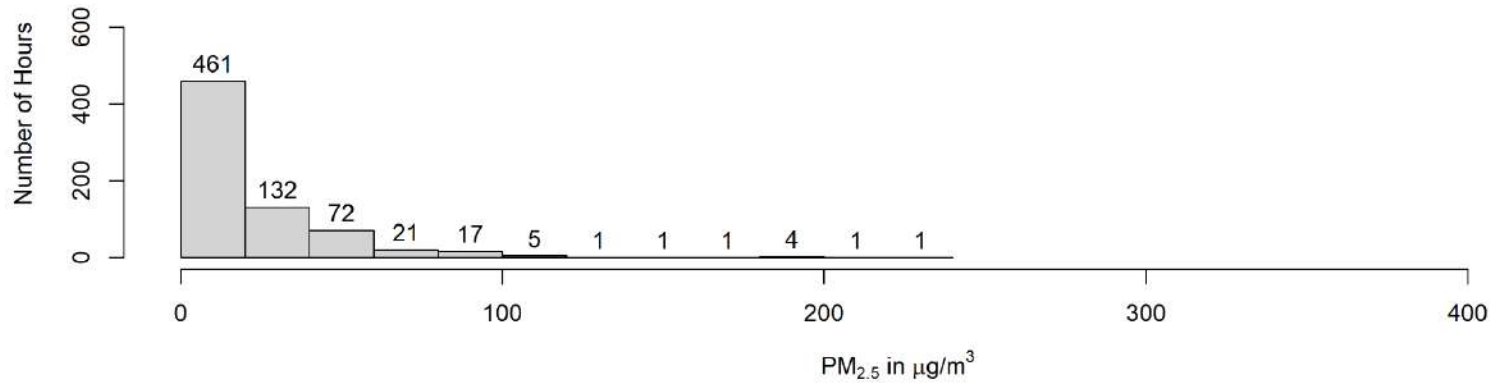
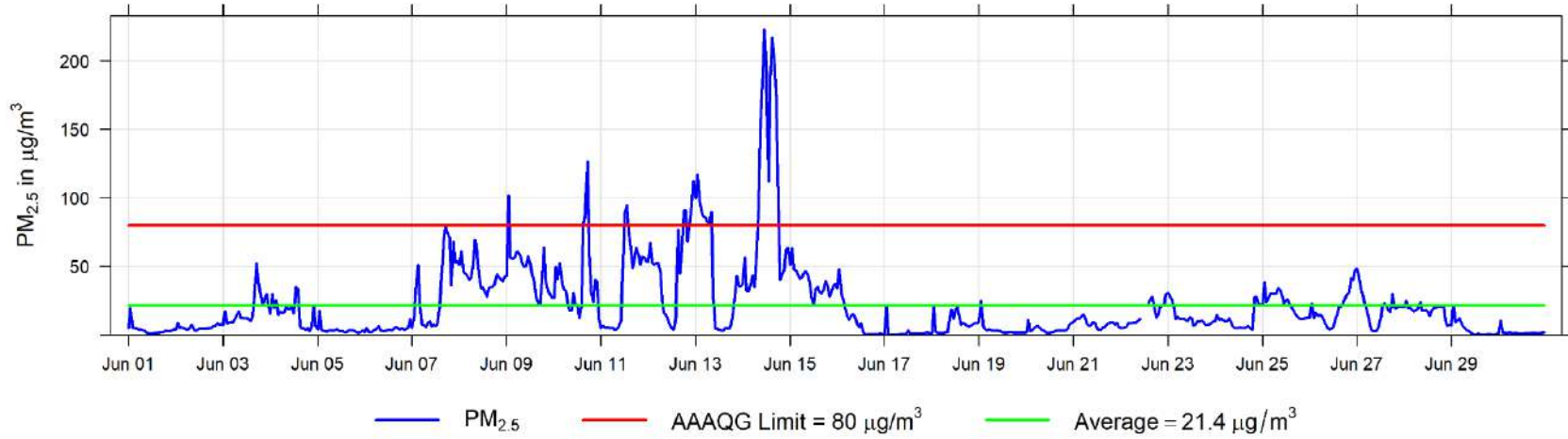
June 2023 Hourly Concentration Readings of SO₂ (in ppb) at Dunes



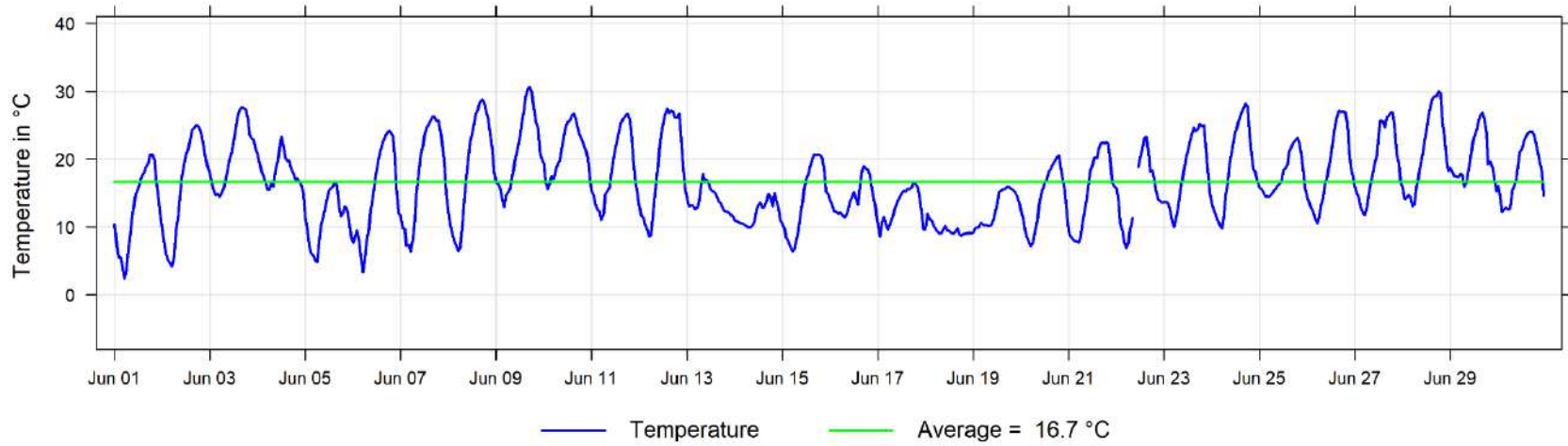
June 2023 Hourly Concentration Readings of TRS (in ppb) at Dunes



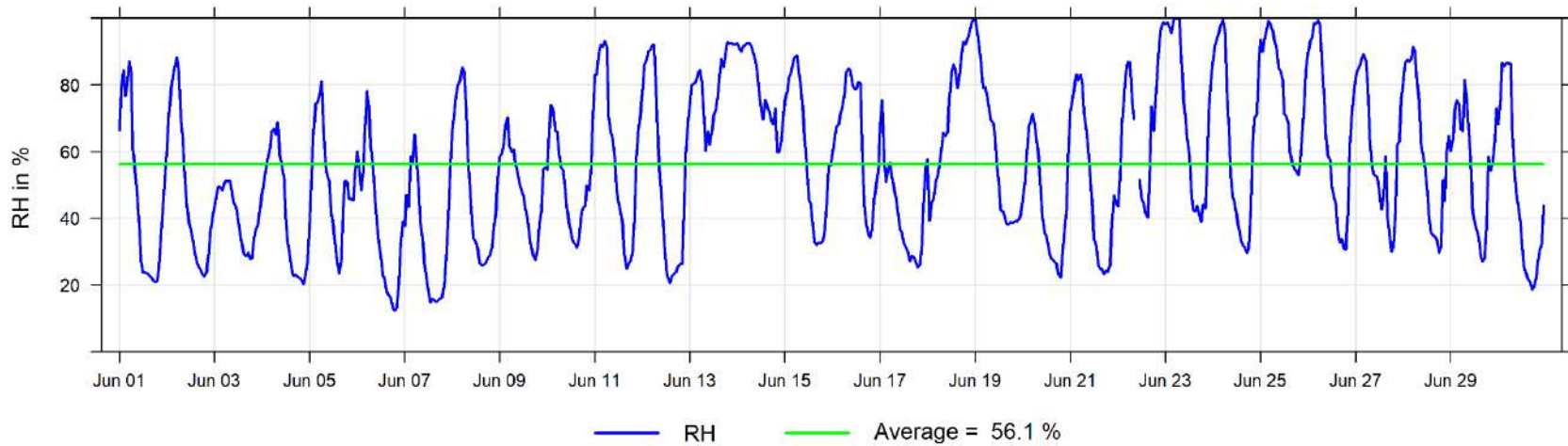
June 2023 Hourly Concentration Readings of PM_{2.5} in $\mu\text{g}/\text{m}^3$ at Dunes



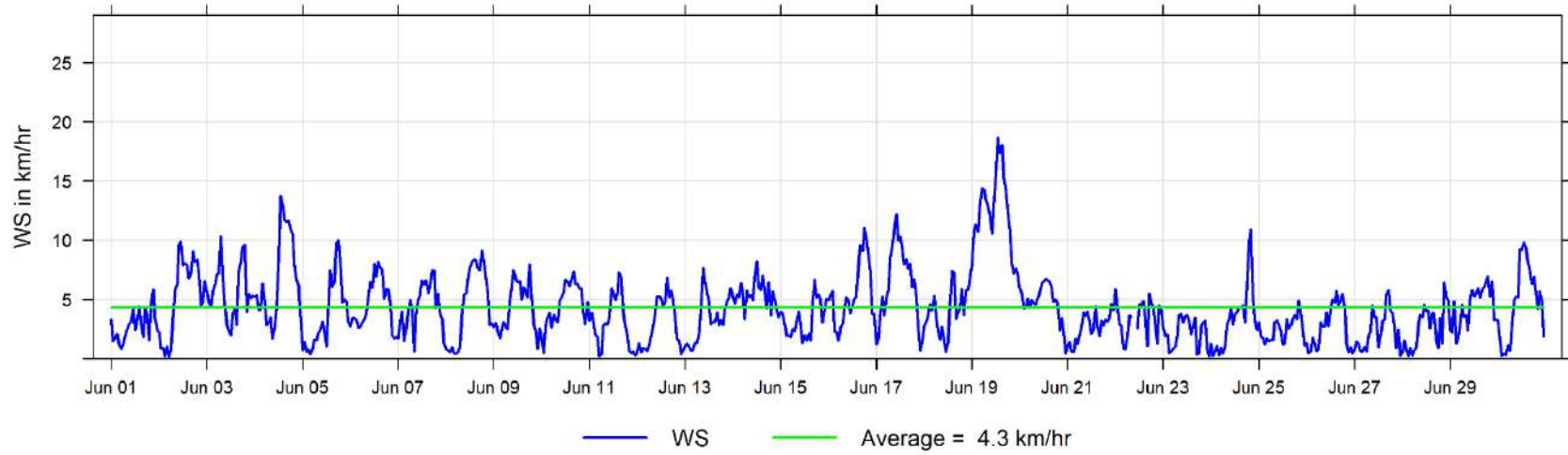
June 2023 Hourly Temperature Readings (in °C) at Dunes



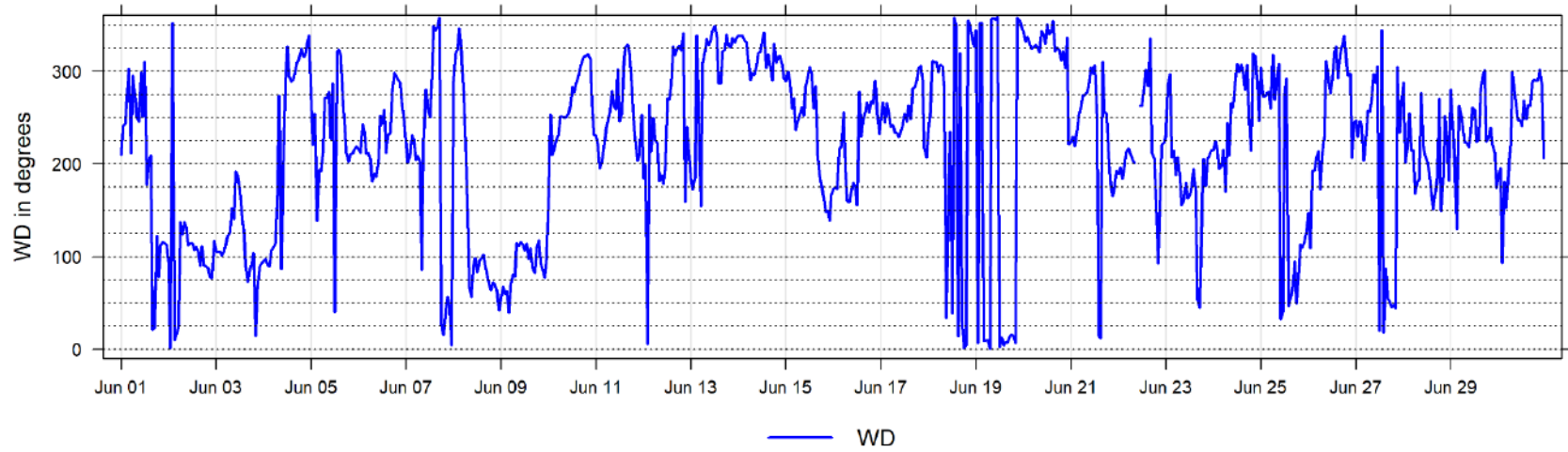
June 2023 Hourly Readings of Relative Humidity (in %) at Dunes



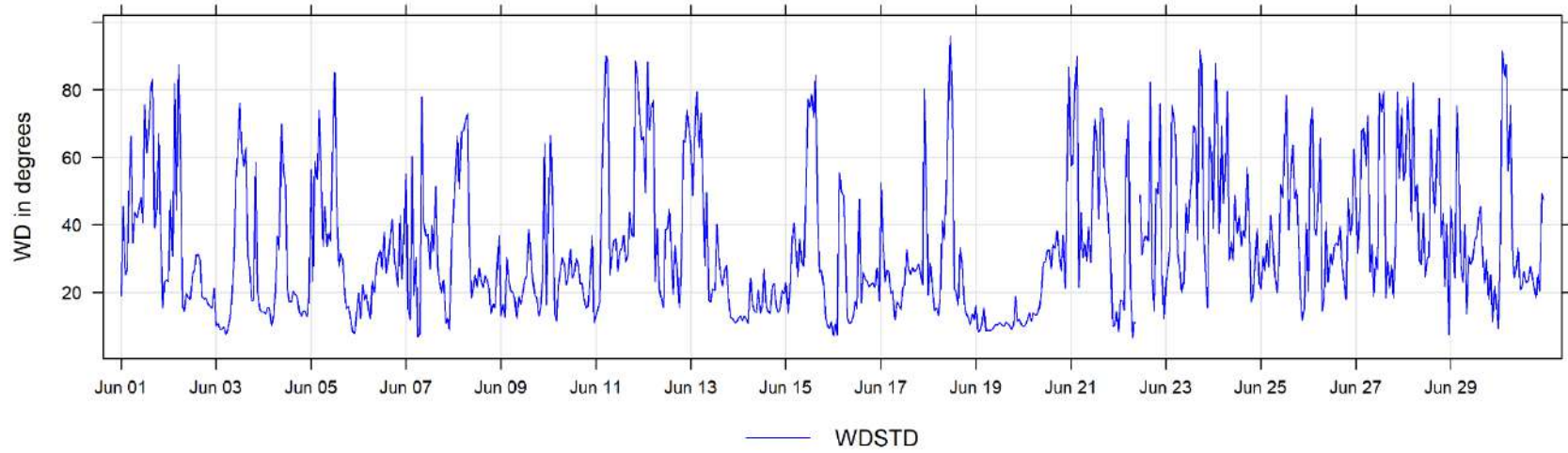
June 2023 Hourly Readings of Wind Speed (in km/hr) at Dunes

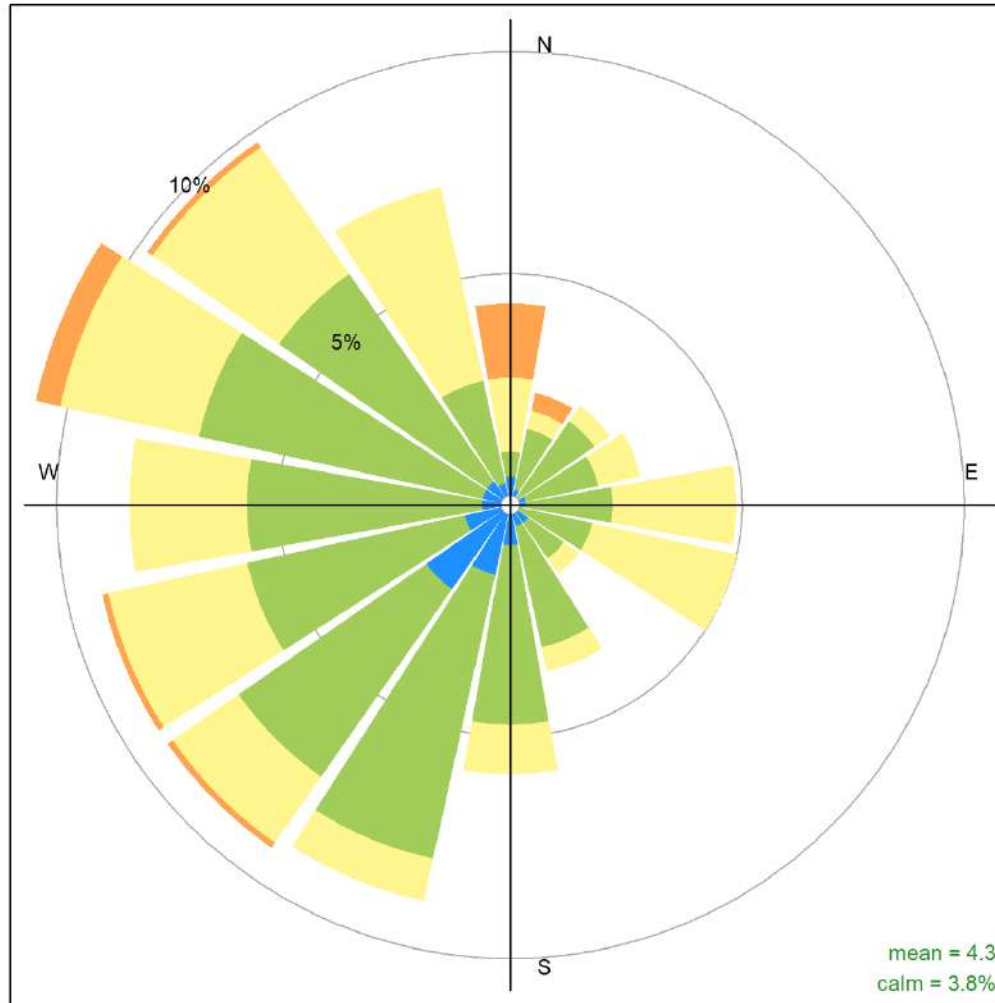


June 2023 Hourly Readings of Wind Direction (in degrees) at Dunes



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



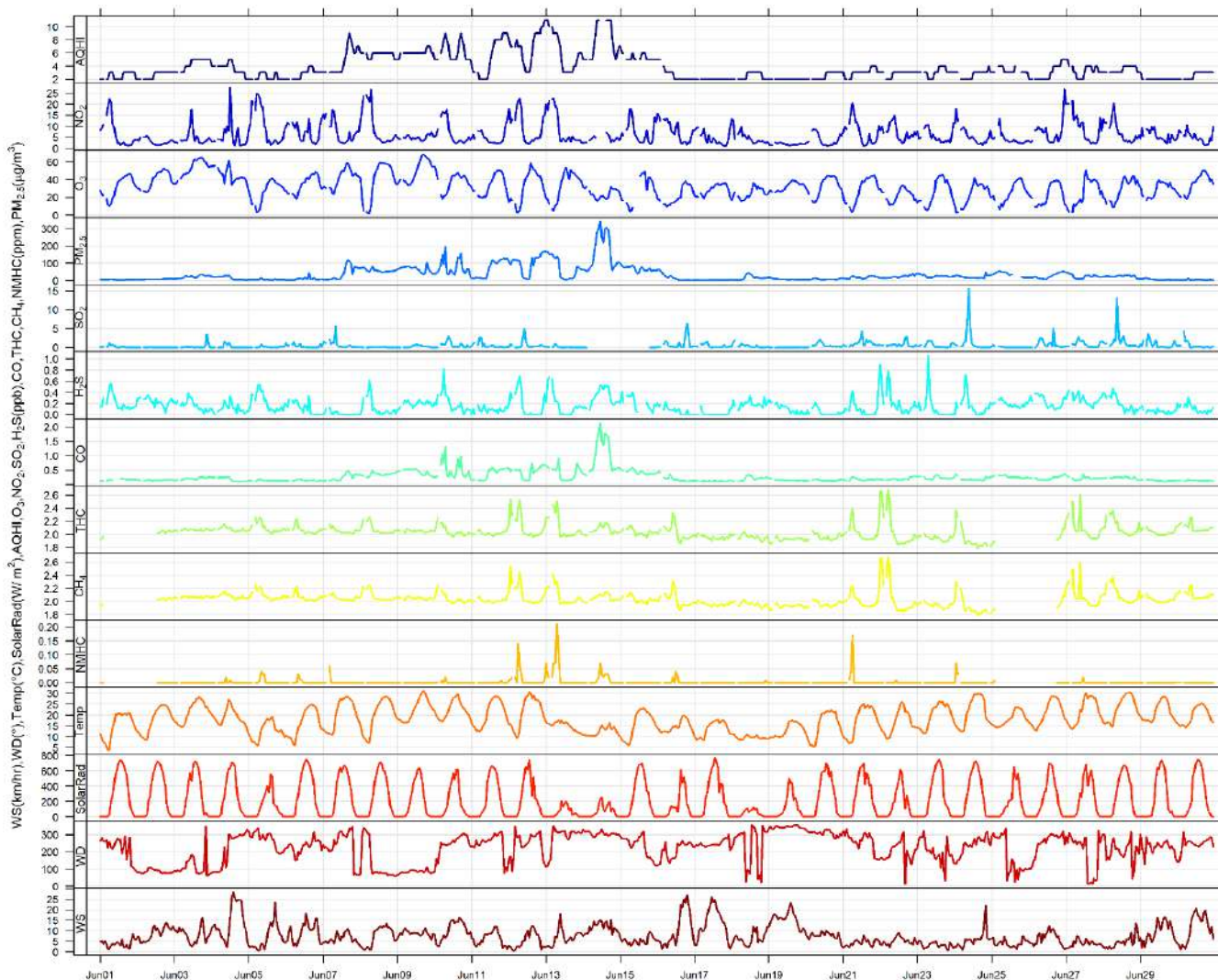


Dunes June 2023 Wind Rose, wind speed in km/hr
Frequency of counts by wind direction (%)

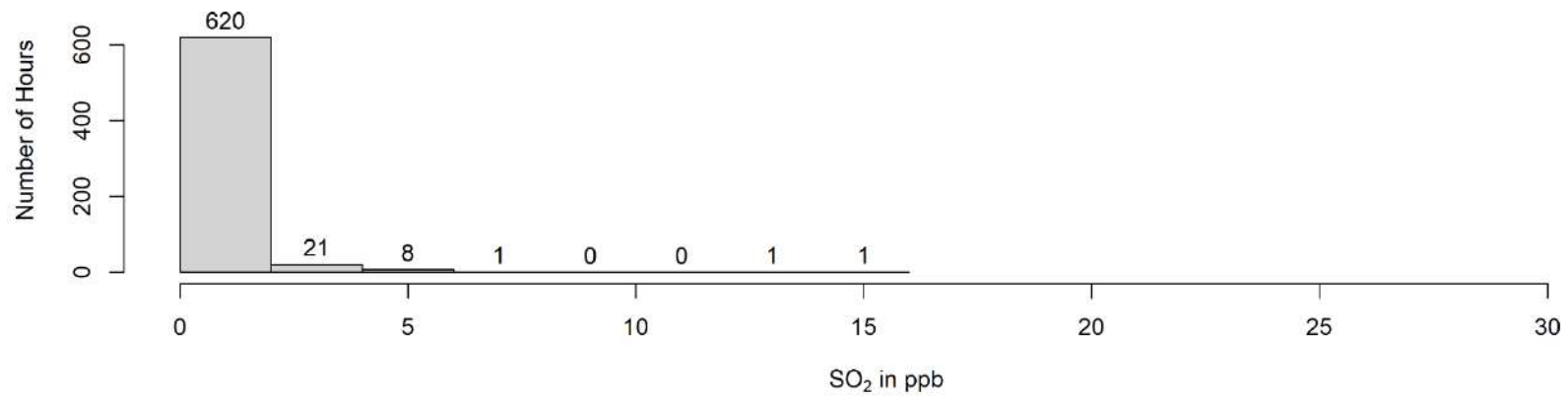
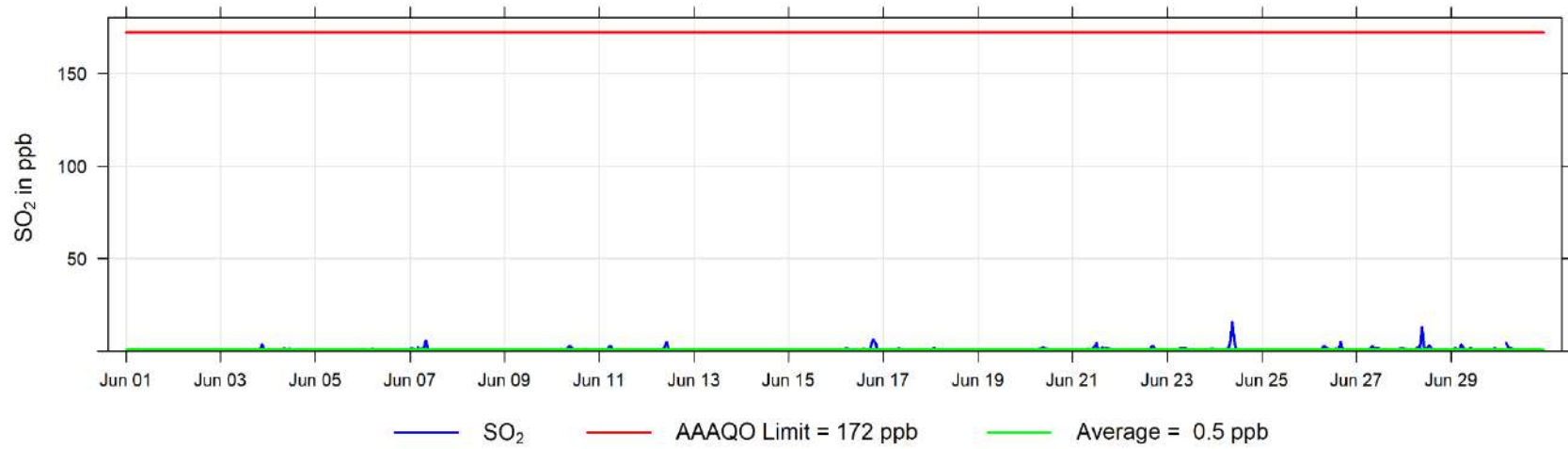
4 Grande Prairie - Henry Pirker Charts

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

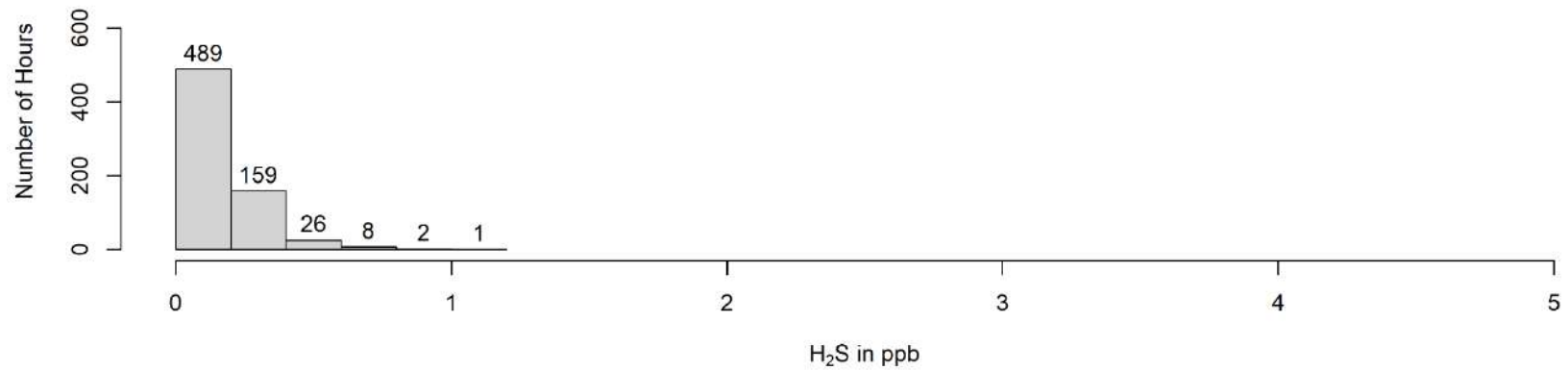
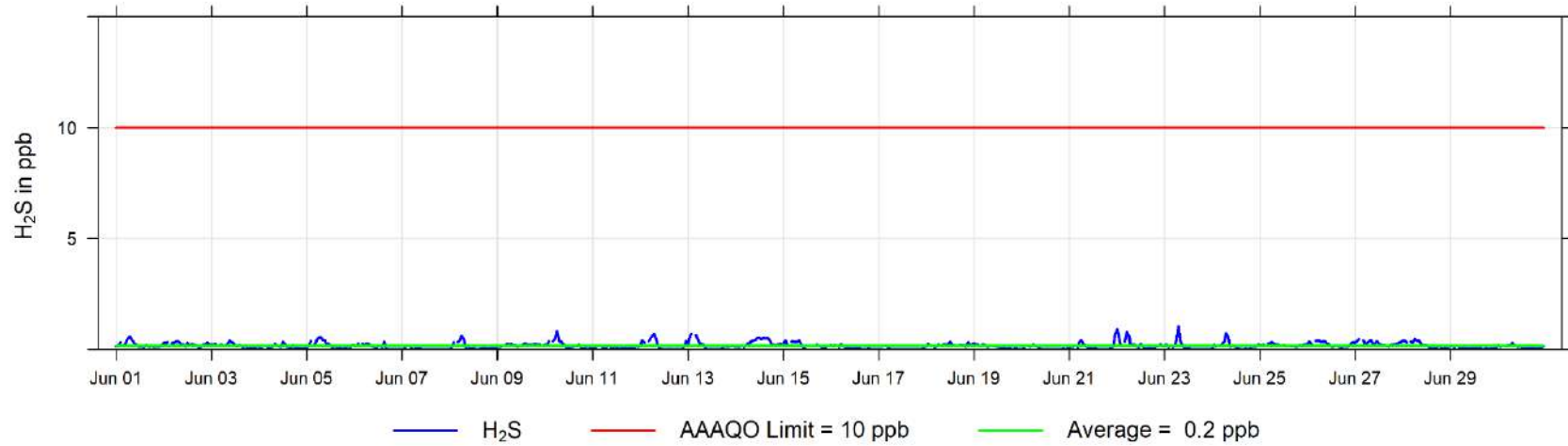
June 2023 Concentration Readings at Henry Pirker Station



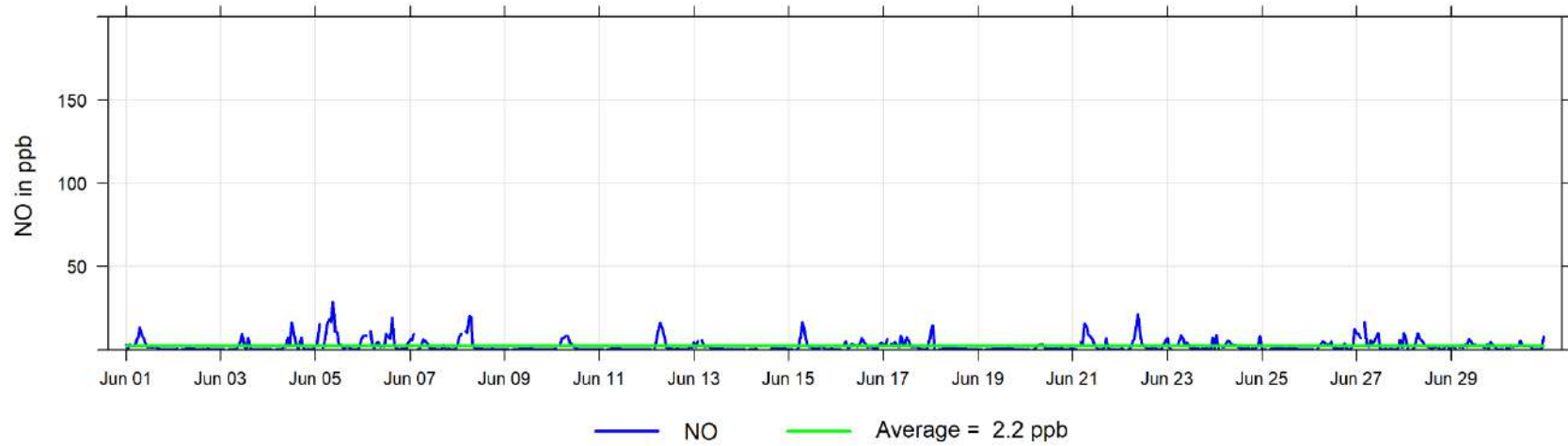
June 2023 Hourly Concentration Readings of SO₂ (in ppb) at Henry Pirker



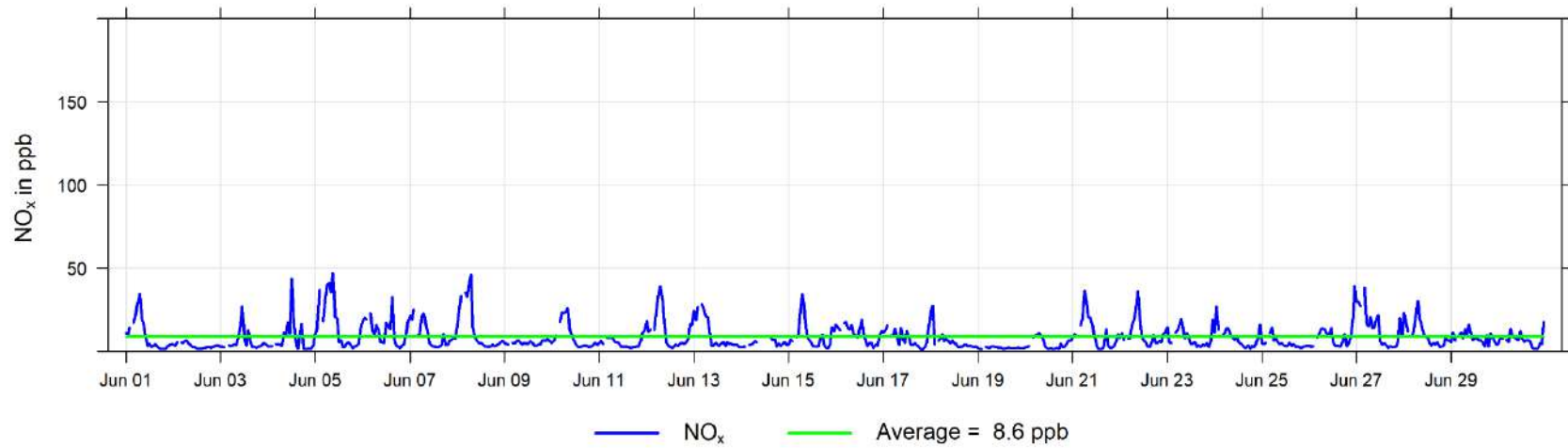
June 2023 Hourly Concentration Readings of H₂S (in ppb) at Henry Pirker



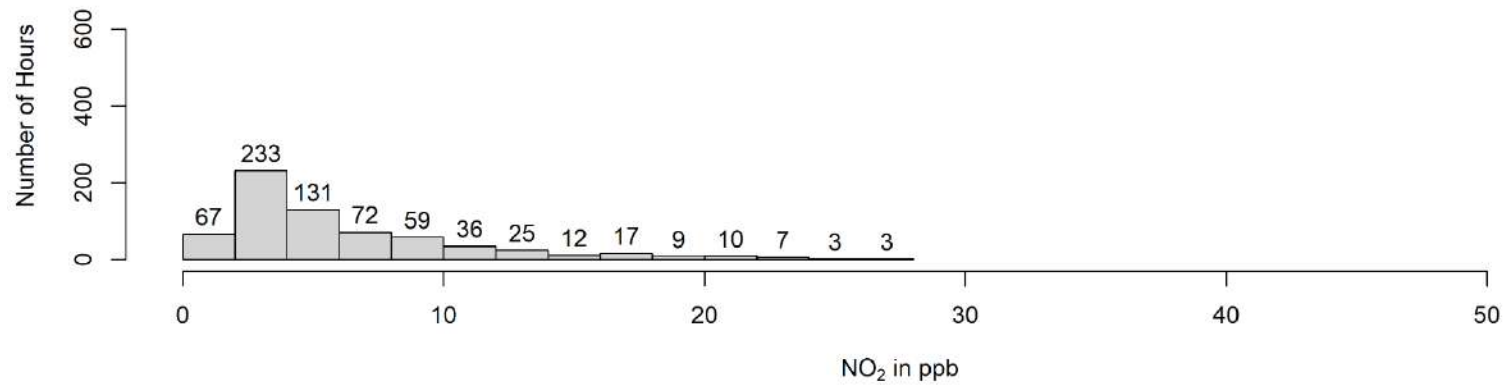
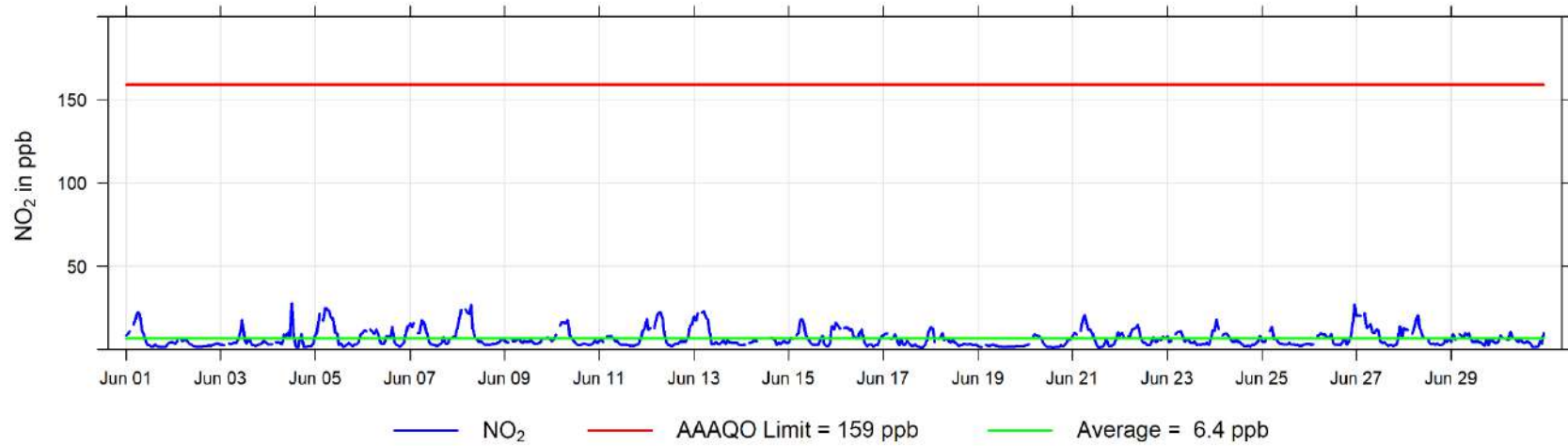
June 2023 Hourly Concentration Readings of NO (in ppb) at Henry Pirker



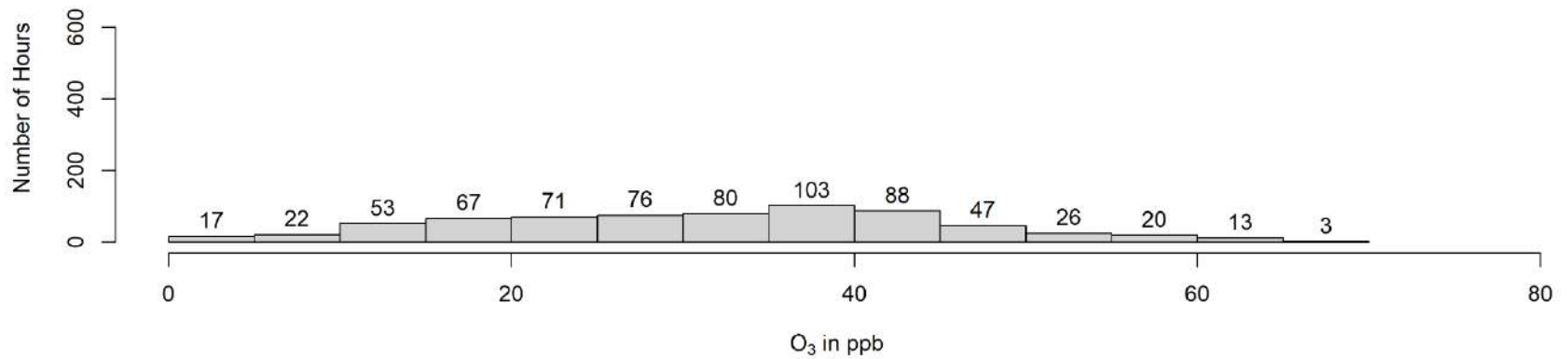
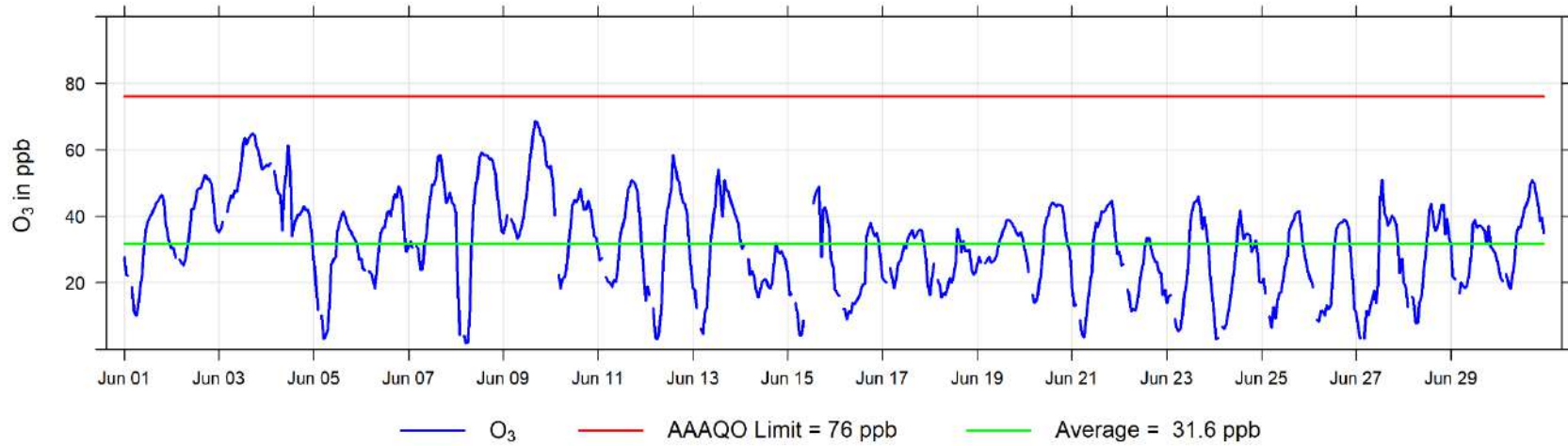
June 2023 Hourly Concentration Readings of NO_x (in ppb) at Henry Pirker



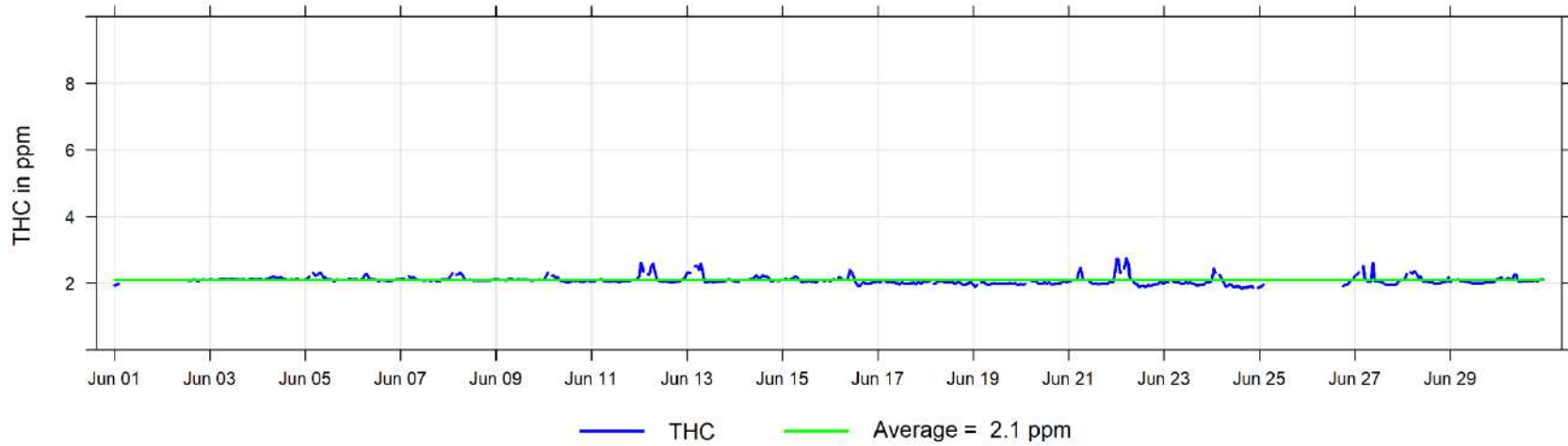
June 2023 Hourly Concentration Readings of NO₂ (in ppb) at Henry Pirker



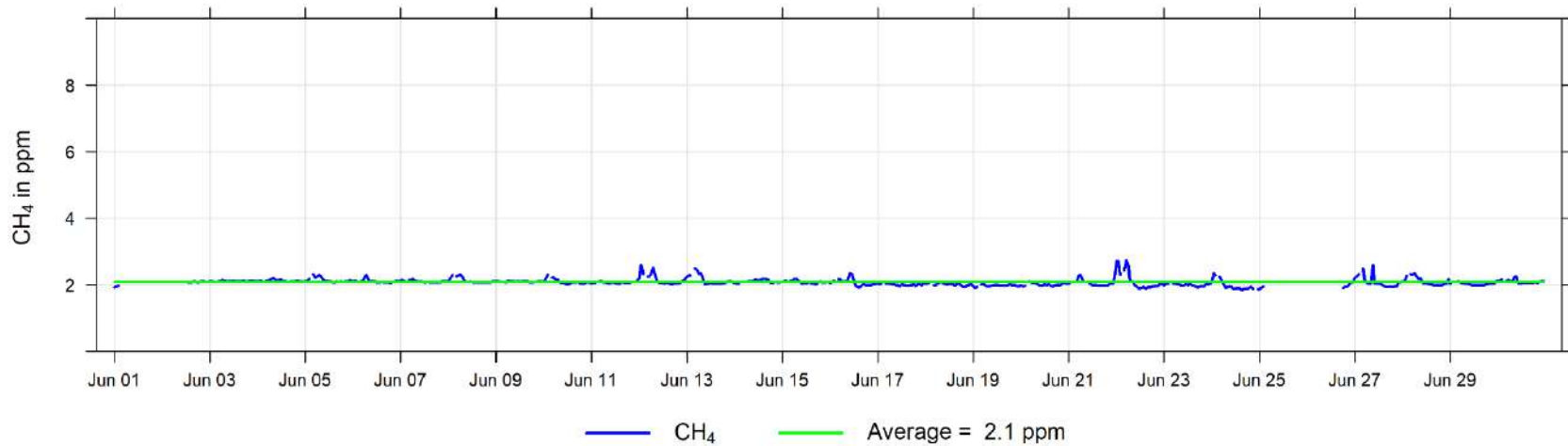
June 2023 Hourly Concentration Readings of O₃ (in ppb) at Henry Pirker



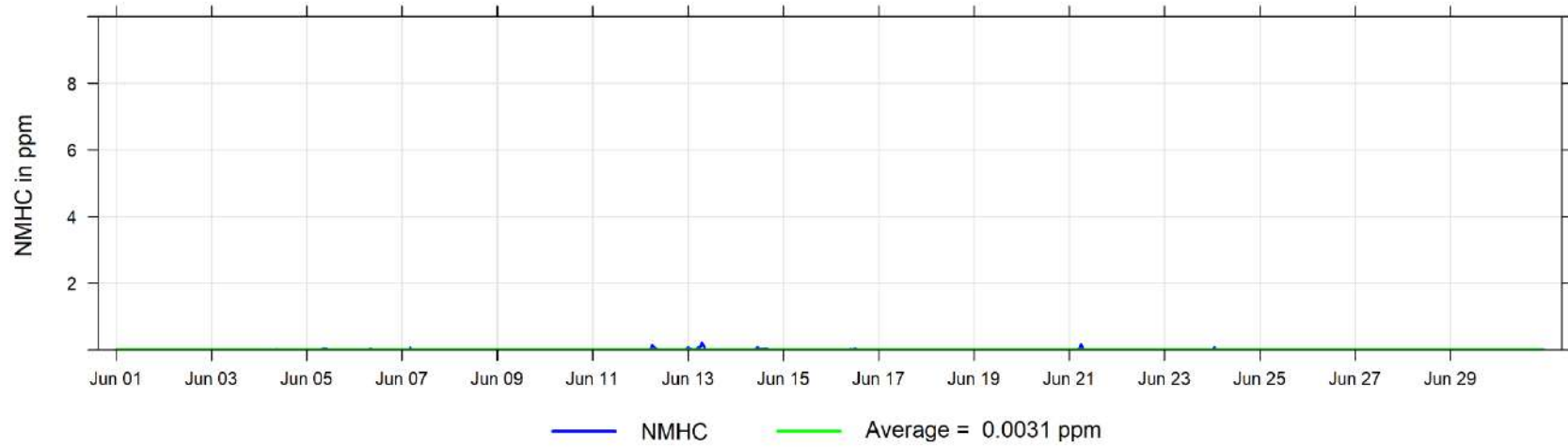
June 2023 Hourly Concentration Readings of THC (in ppm) at Henry Pirker



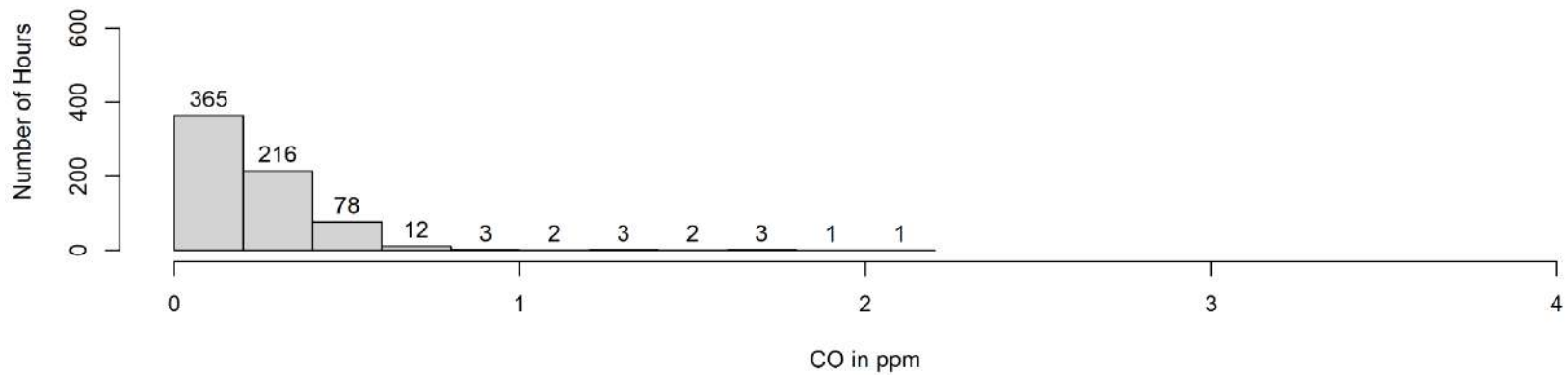
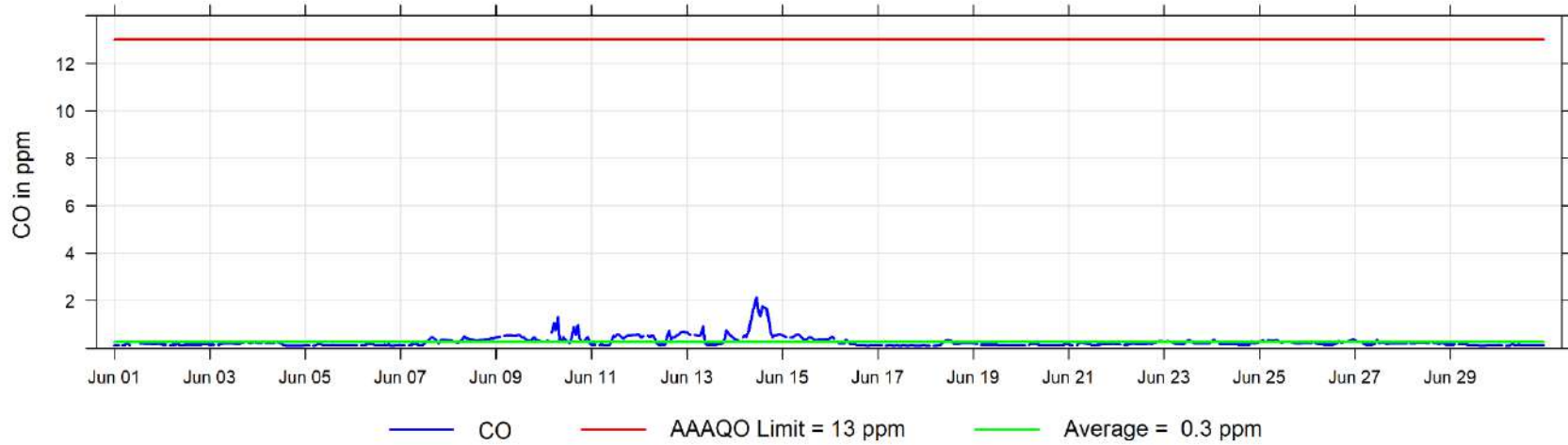
June 2023 Hourly Concentration Readings of CH₄ (in ppm) at Henry Pirker



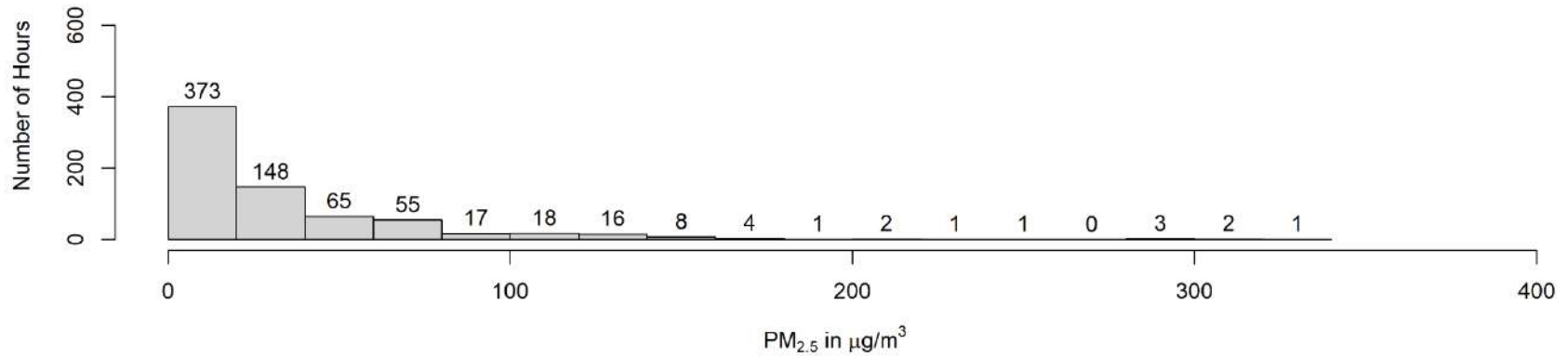
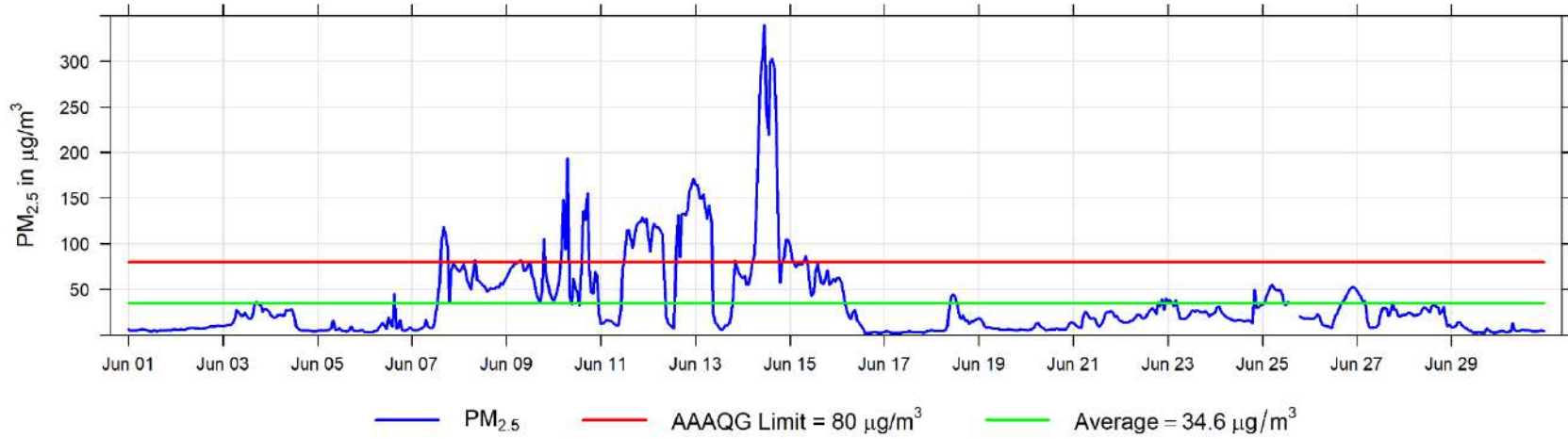
June 2023 Hourly Concentration Readings of NMHC (in ppm) at Henry Pirker



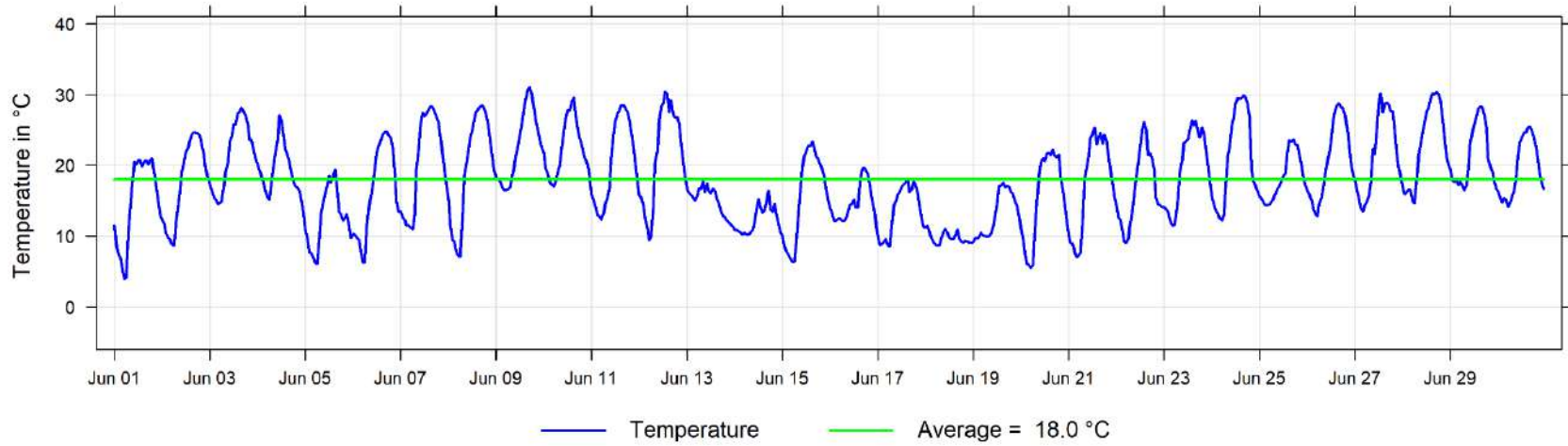
June 2023 Hourly Concentration Readings of CO (in ppm) at Henry Pirker



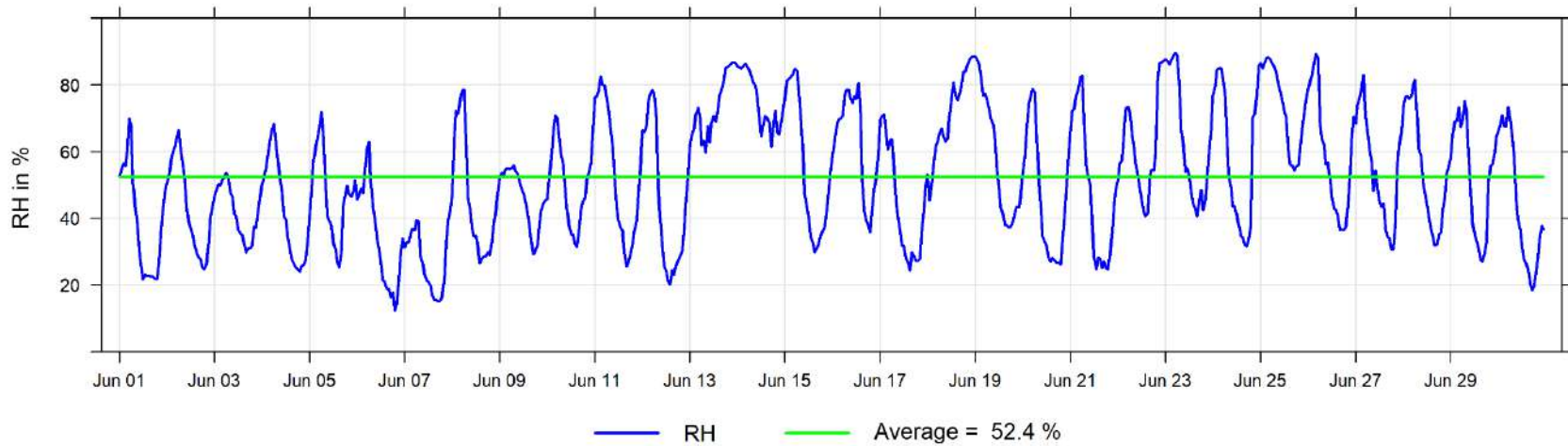
June 2023 Hourly Concentration Readings of PM_{2.5} in $\mu\text{g}/\text{m}^3$ at Henry Pirker



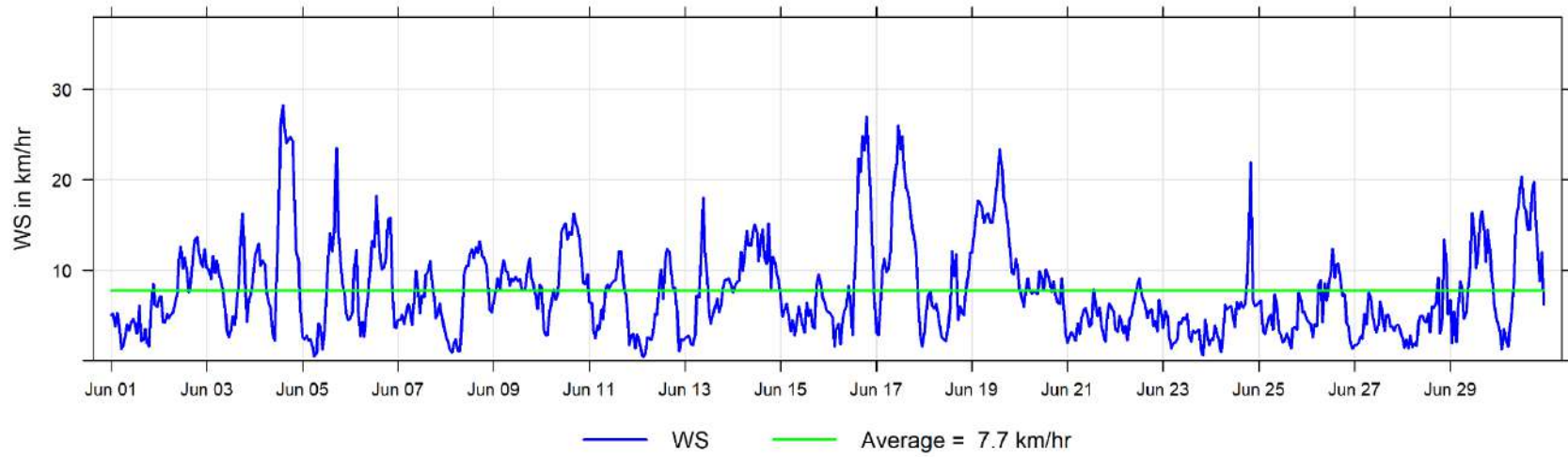
June 2023 Hourly Temperature Readings (in °C) at Henry Pirker



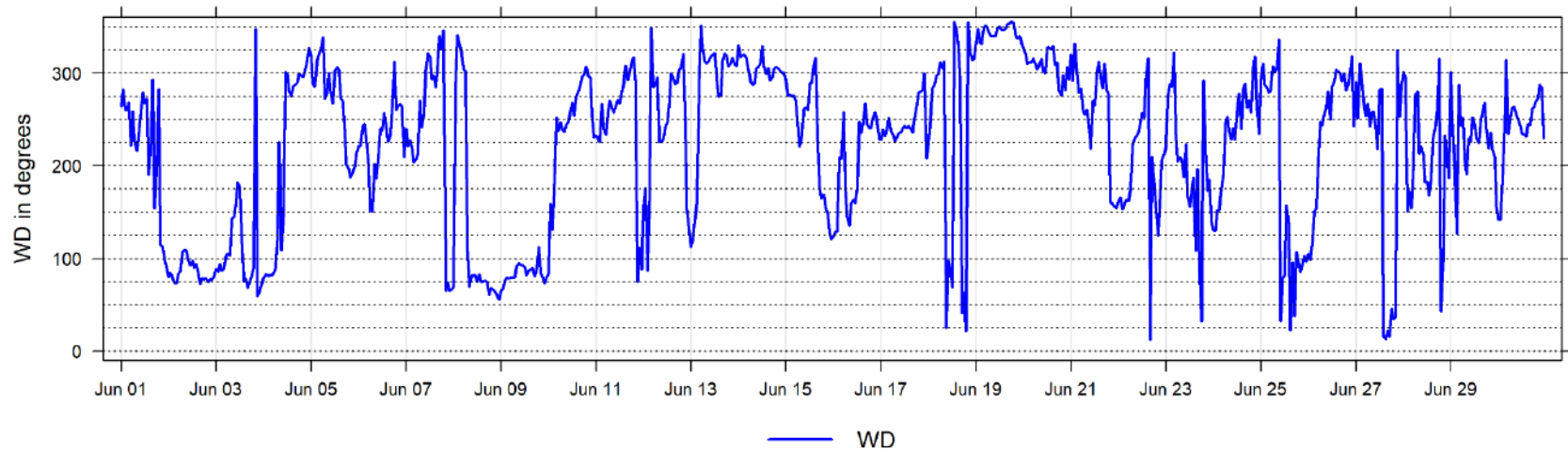
June 2023 Hourly Readings of Relative Humidity (in %) at Henry Pirker



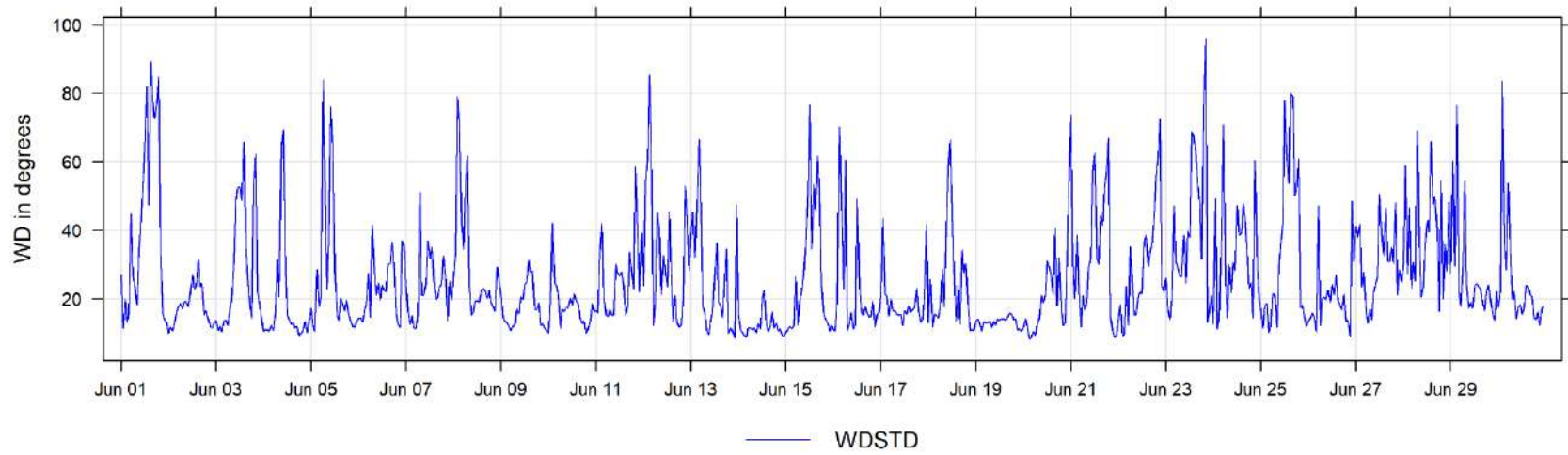
June 2023 Hourly Readings of Wind Speed (in km/hr) at Henry Pirker

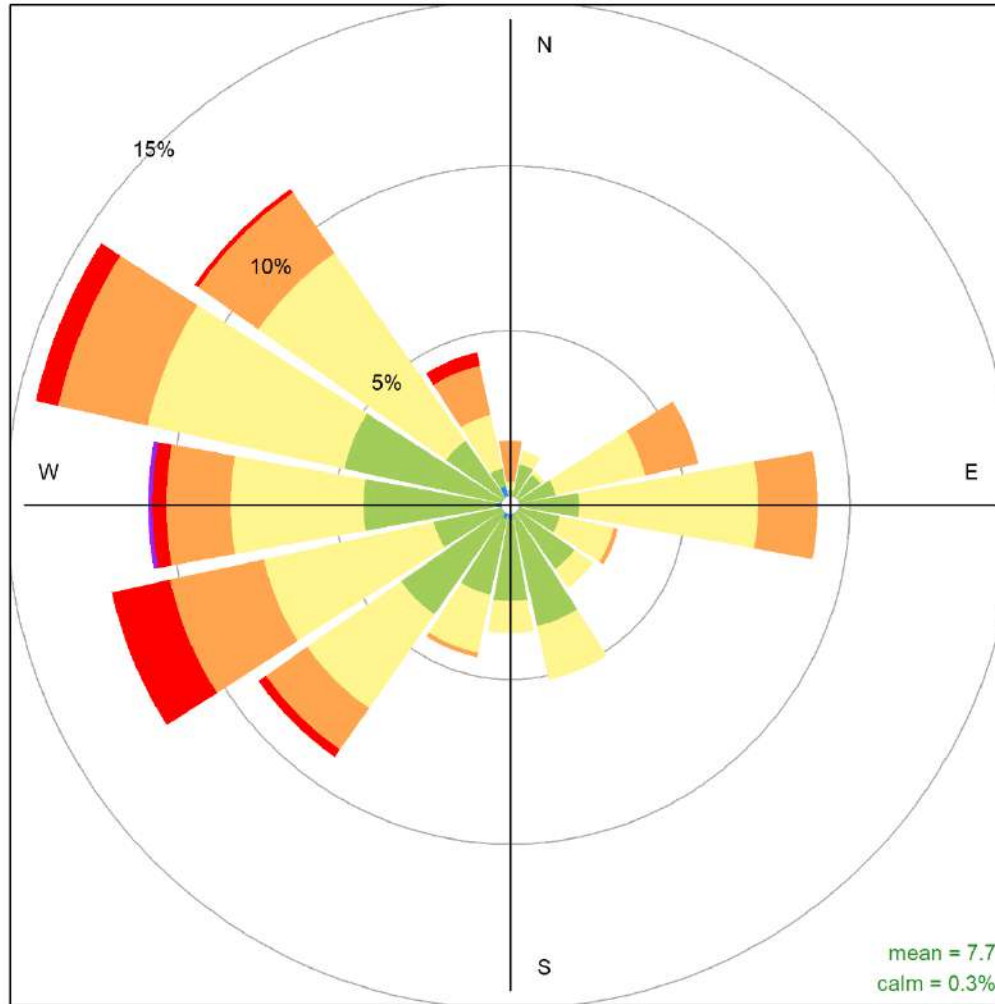


June 2023 Hourly Readings of Wind Direction (in degrees) at Henry Pirker



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



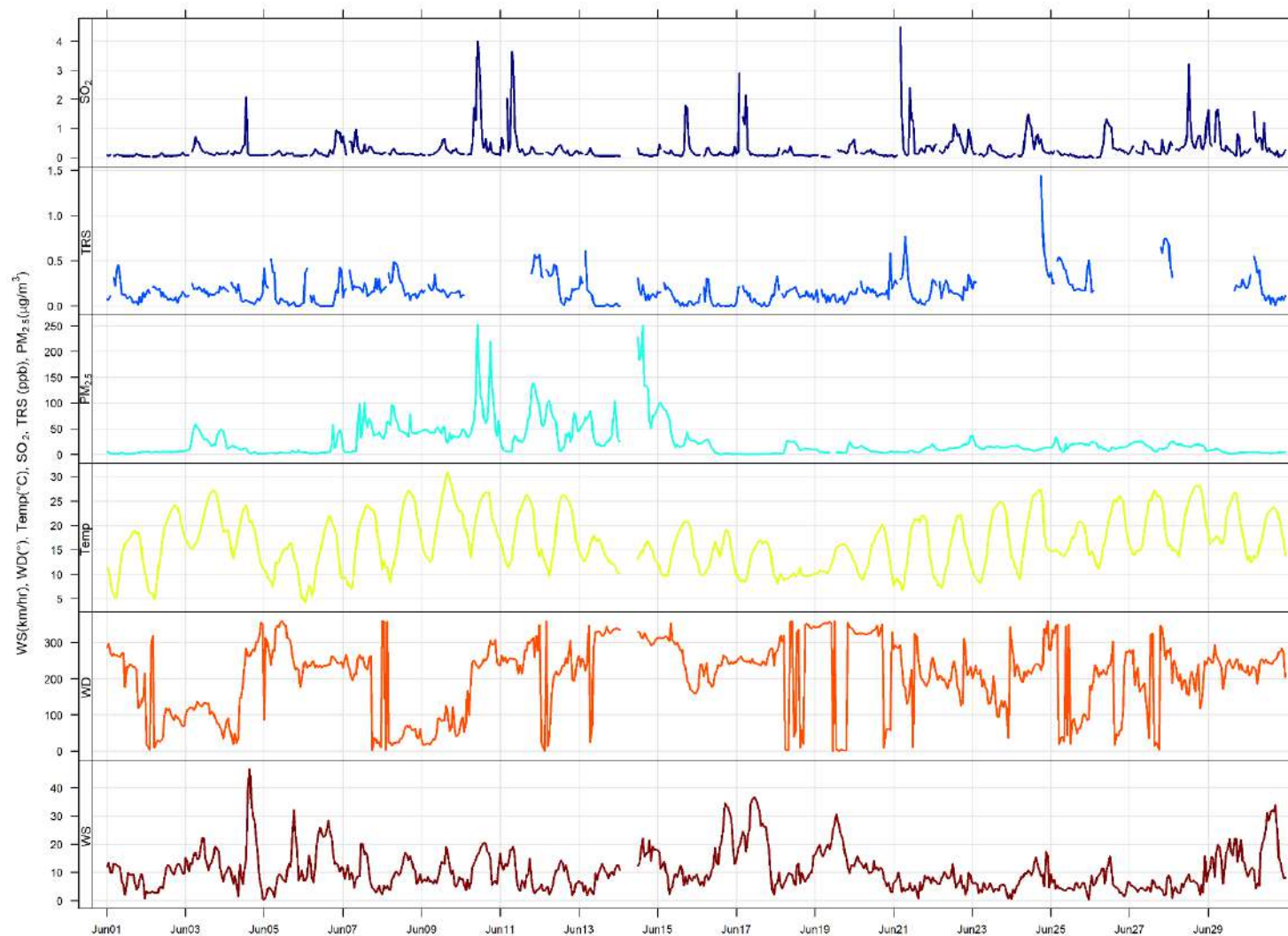


Henry Pirker June 2023 Wind Rose, wind speed in km/hr
Frequency of counts by wind direction (%)

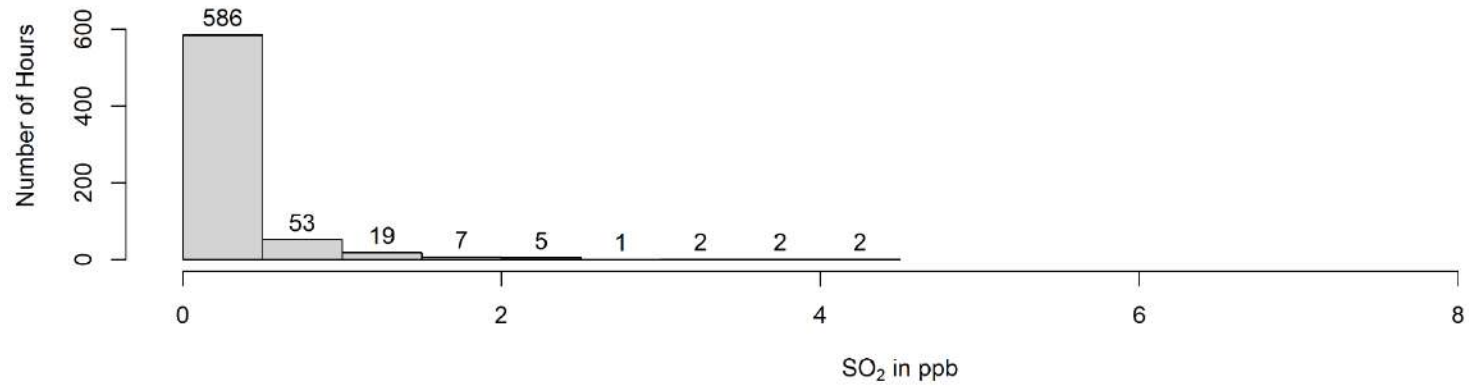
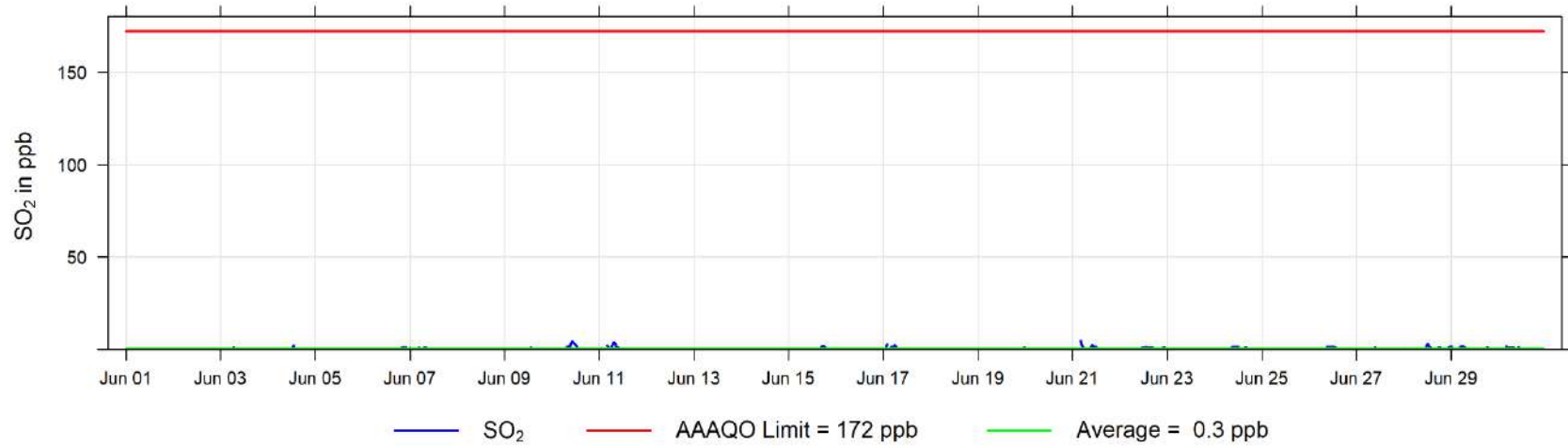
5 Smoky Heights Charts

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

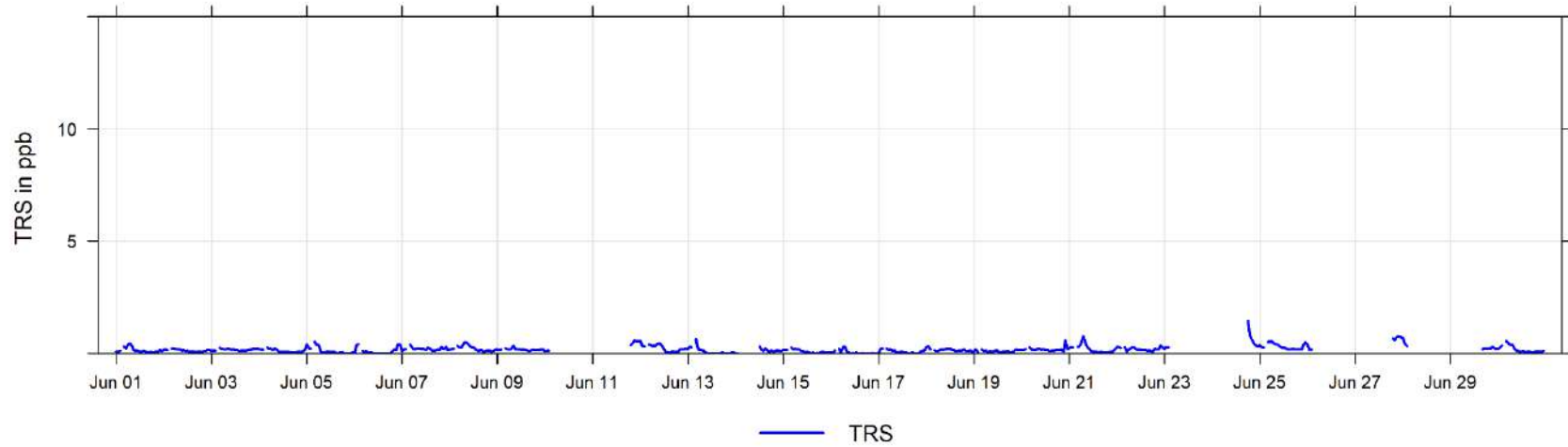
June 2023 Concentration Readings at Smoky Heights Station



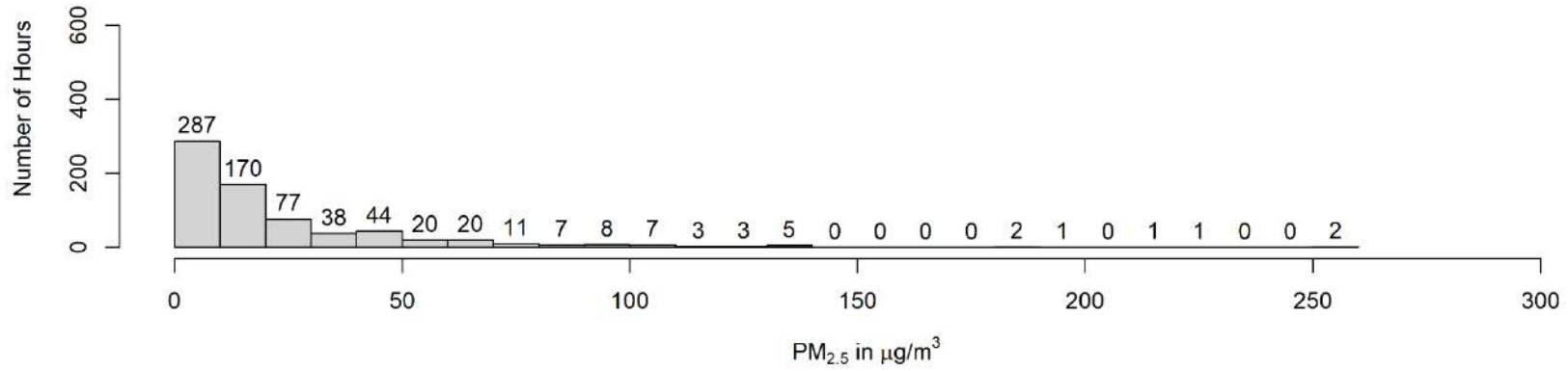
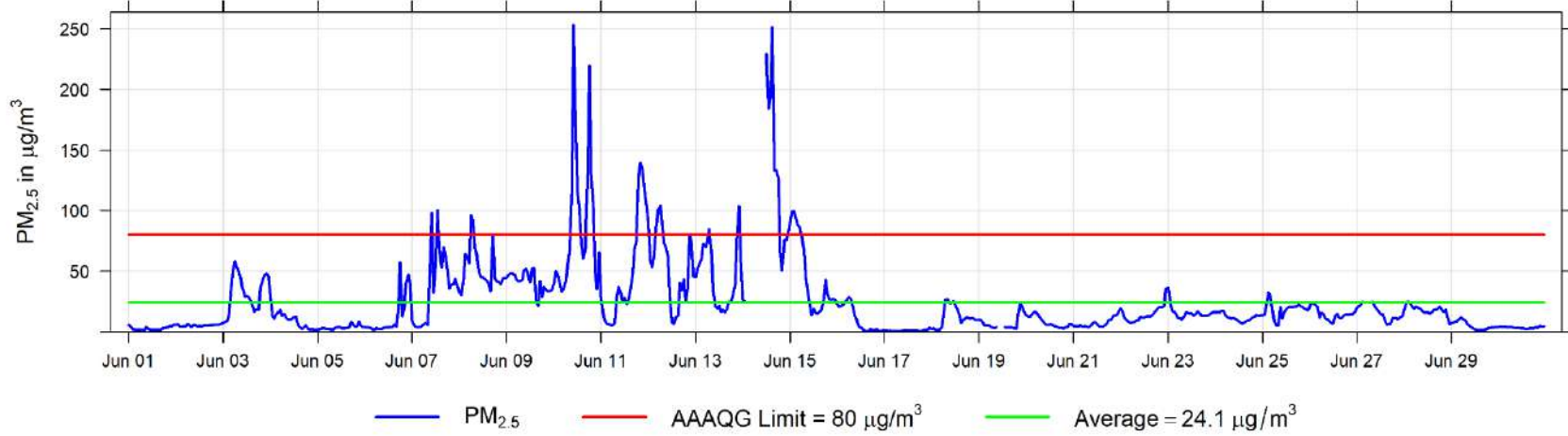
June 2023 Hourly Concentration Readings of SO₂ (in ppb) at Smoky Heights



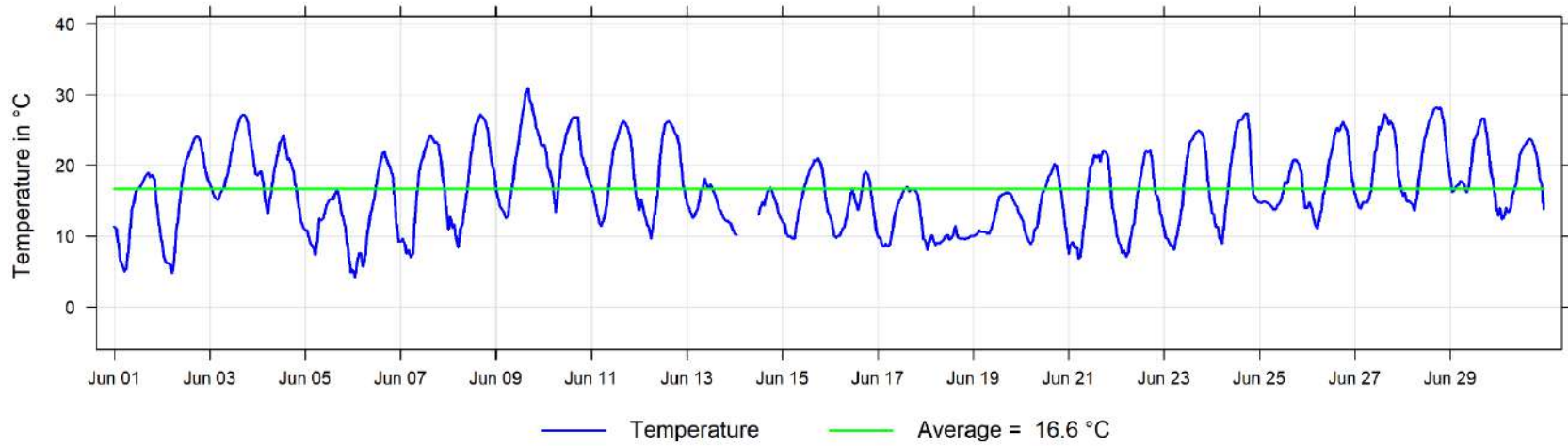
June 2023 Hourly Concentration Readings of TRS (in ppb) at Smoky Heights



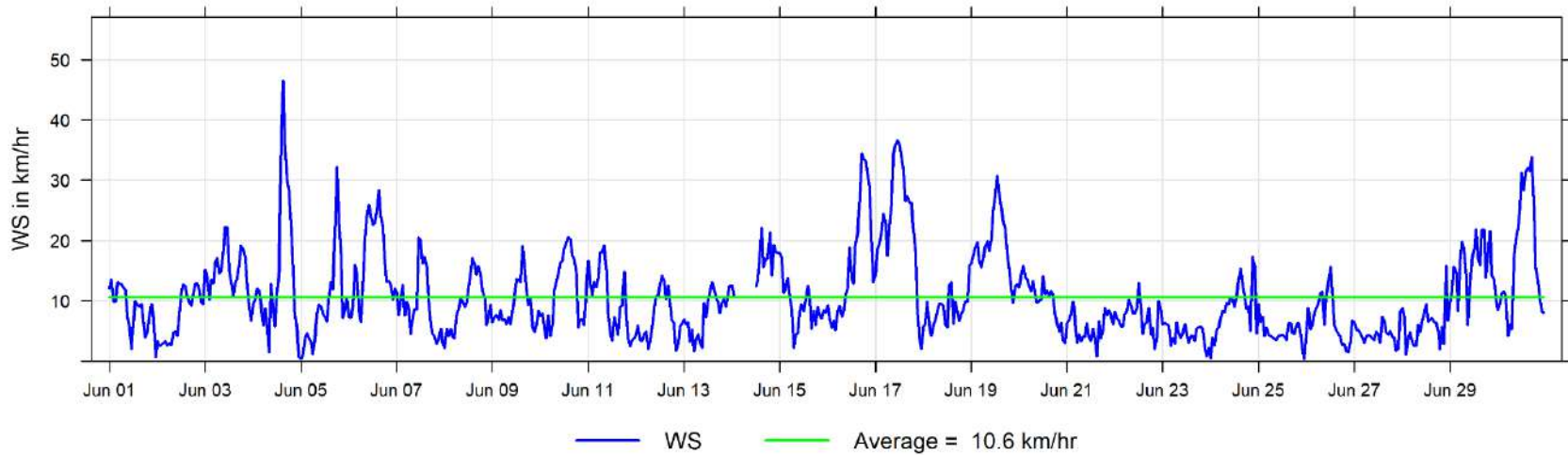
June 2023 Hourly Concentration Readings of PM_{2.5} in $\mu\text{g}/\text{m}^3$ at Smoky Heights



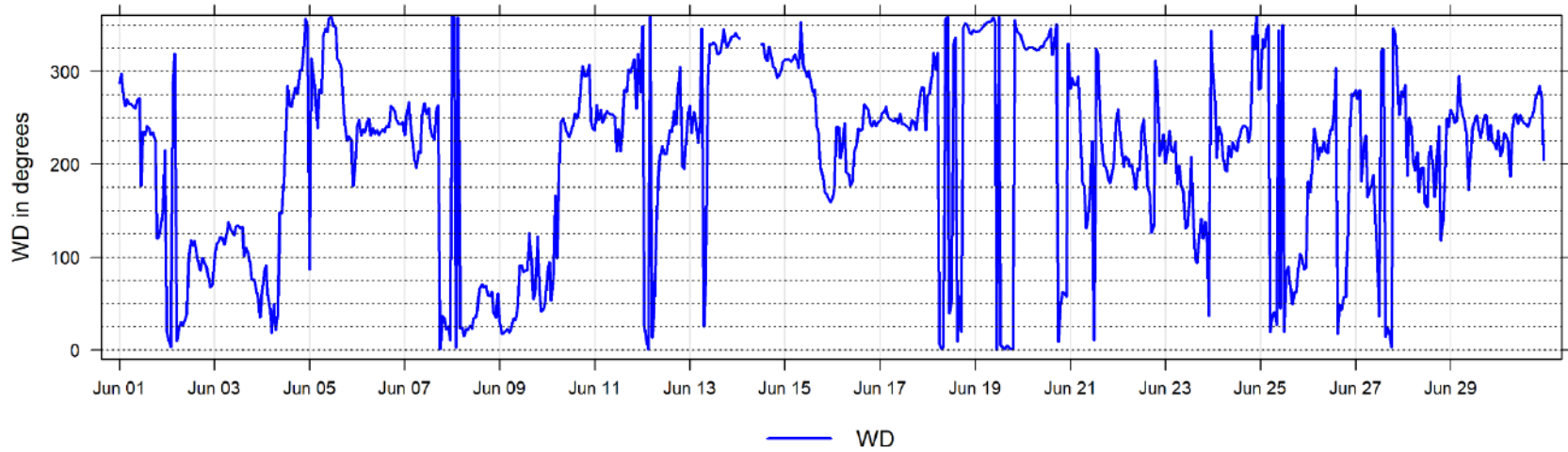
June 2023 Hourly Temperature Readings (in °C) at Smoky Heights



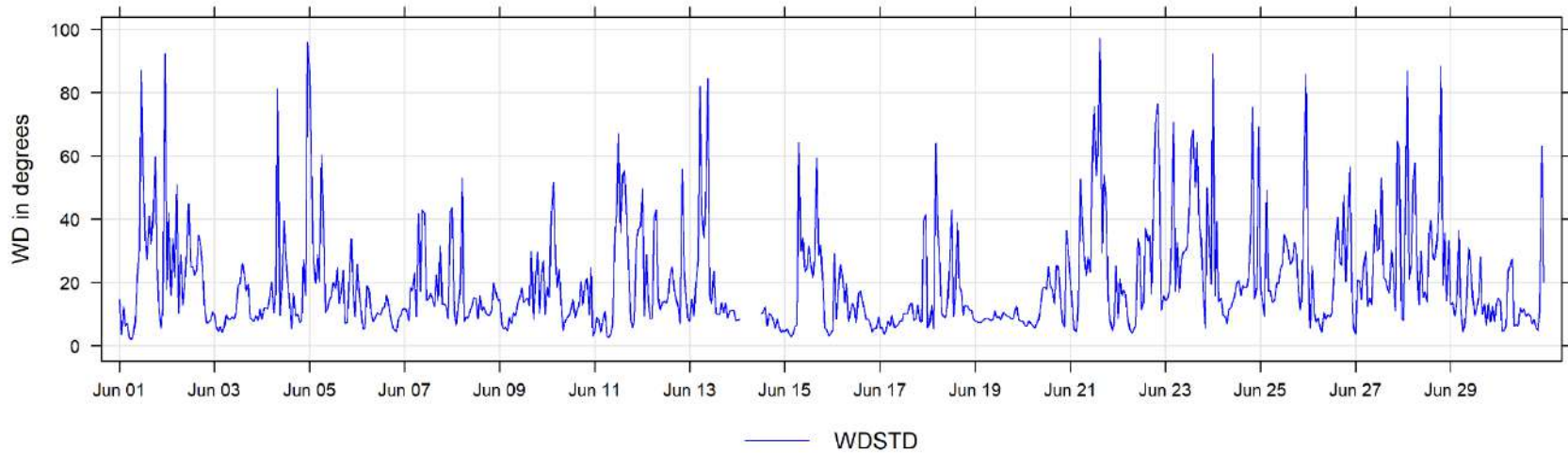
June 2023 Hourly Readings of Wind Speed (in km/hr) at Smoky Heights

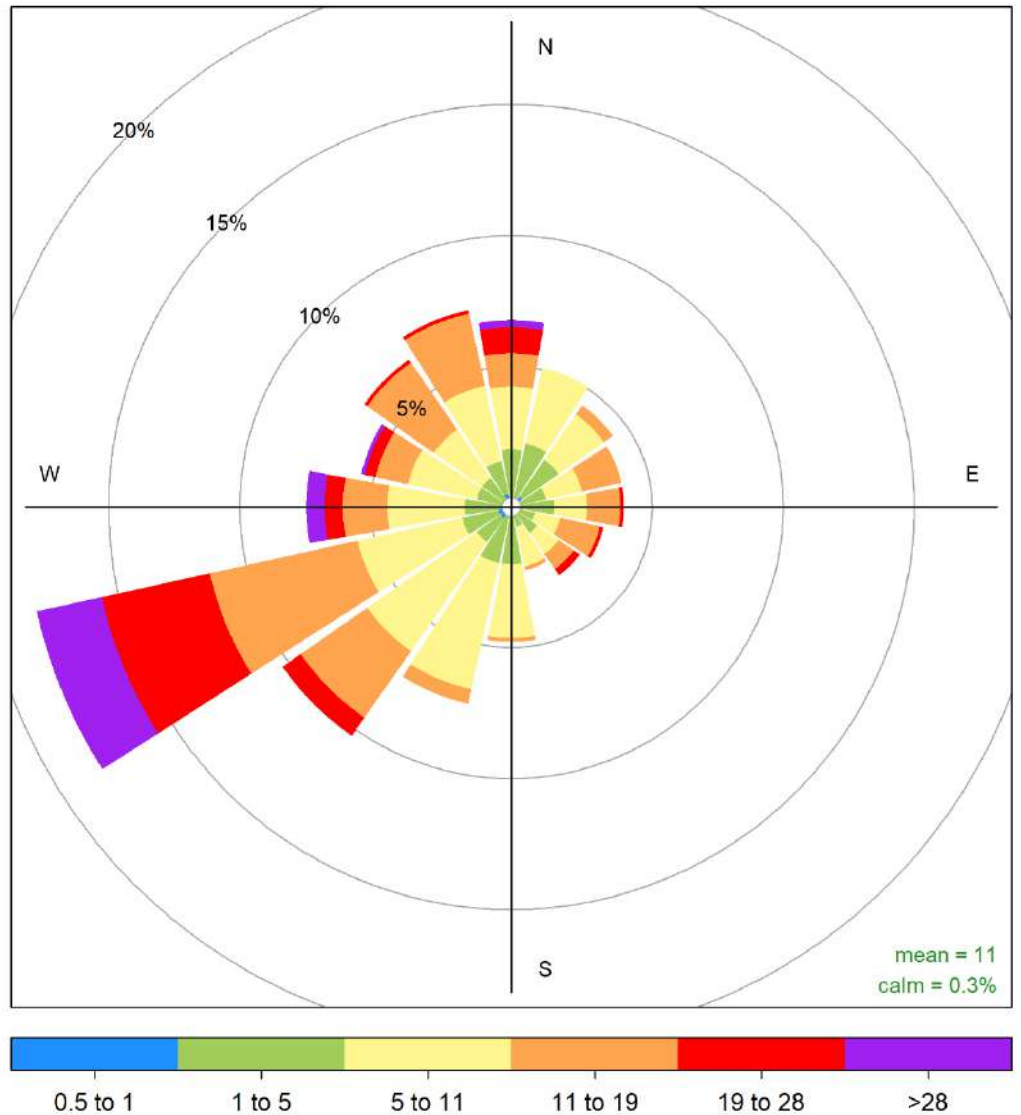


June 2023 Hourly Readings of Wind Direction (in degrees) at Smoky Heights



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



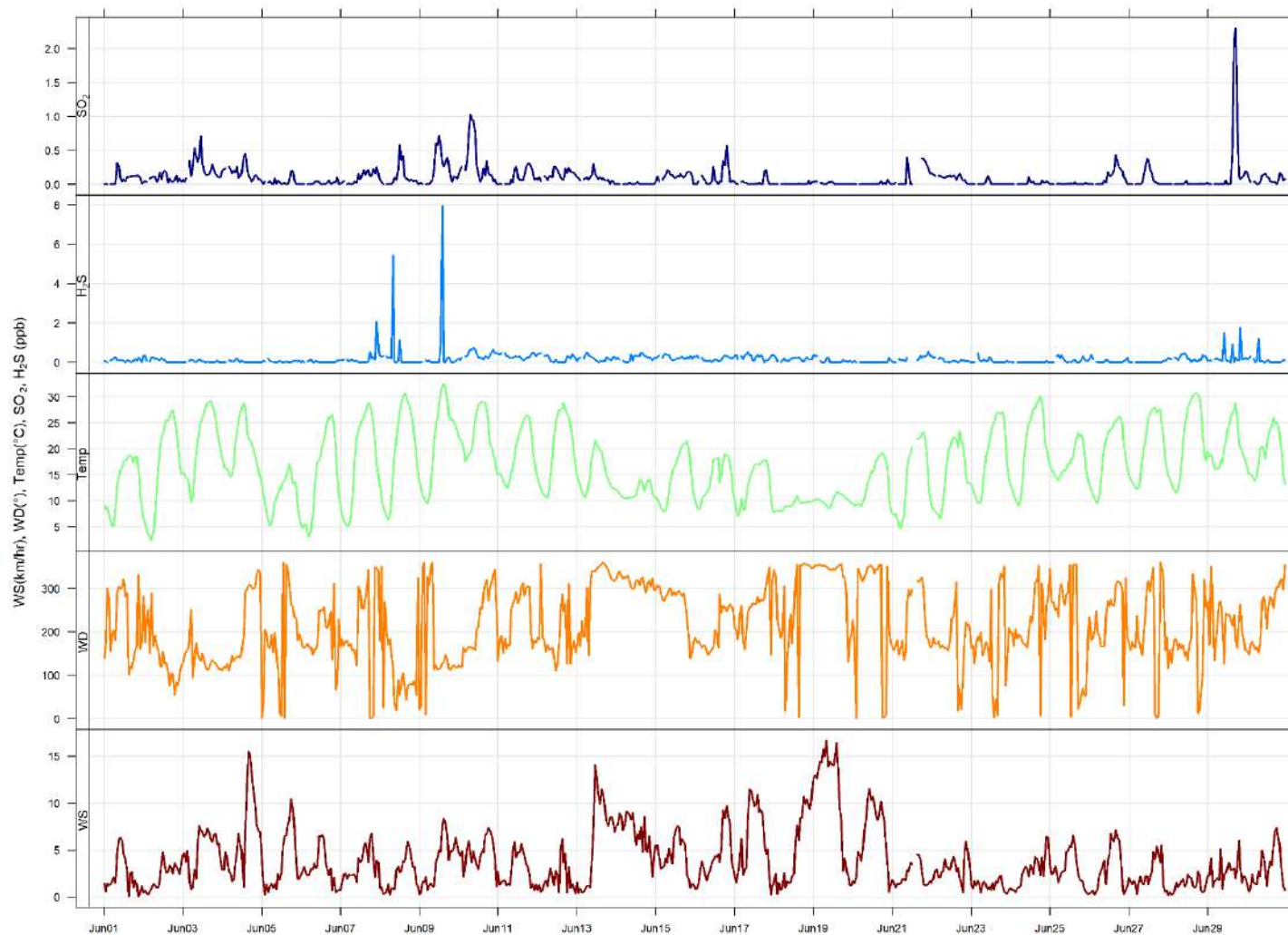


Smoky Heights June 2023 Wind Rose, wind speed in km/hr
Frequency of counts by wind direction (%)

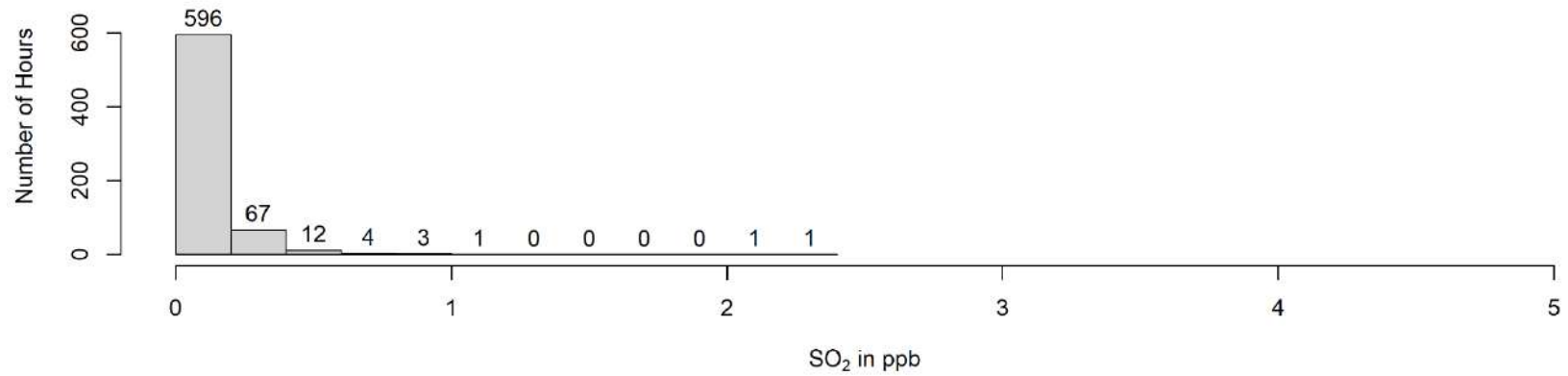
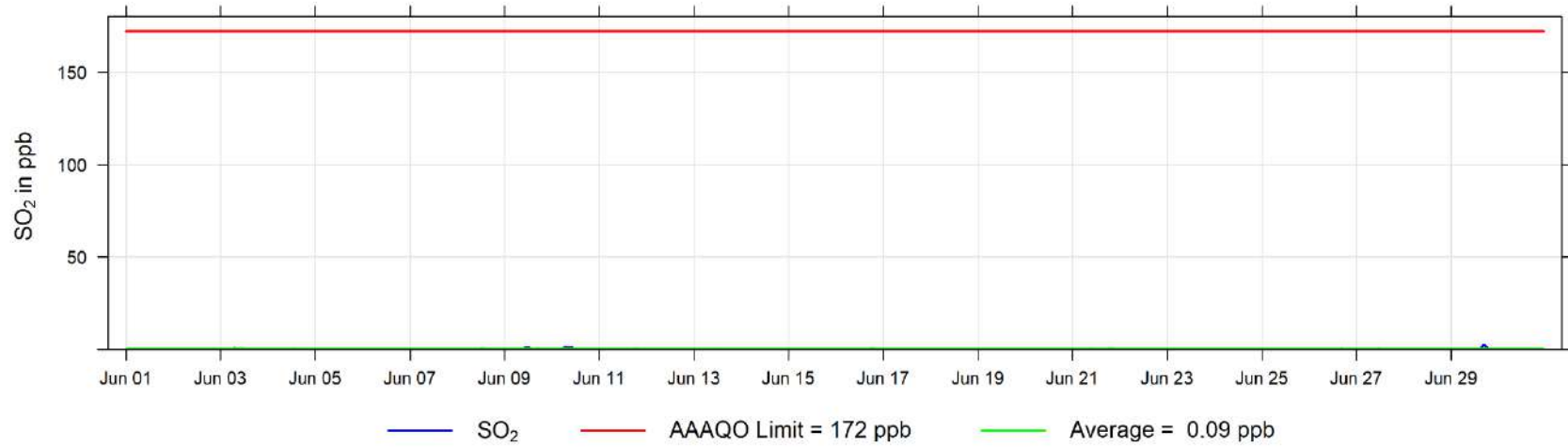
6 Valleyview Charts

The following pages include the charts and histograms for Valleyview Station

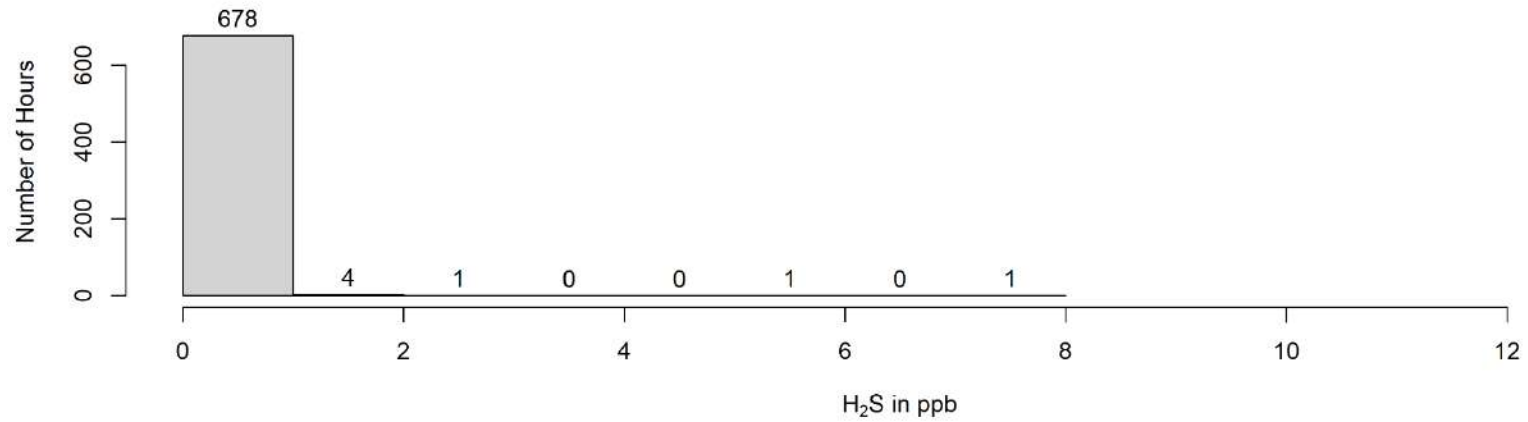
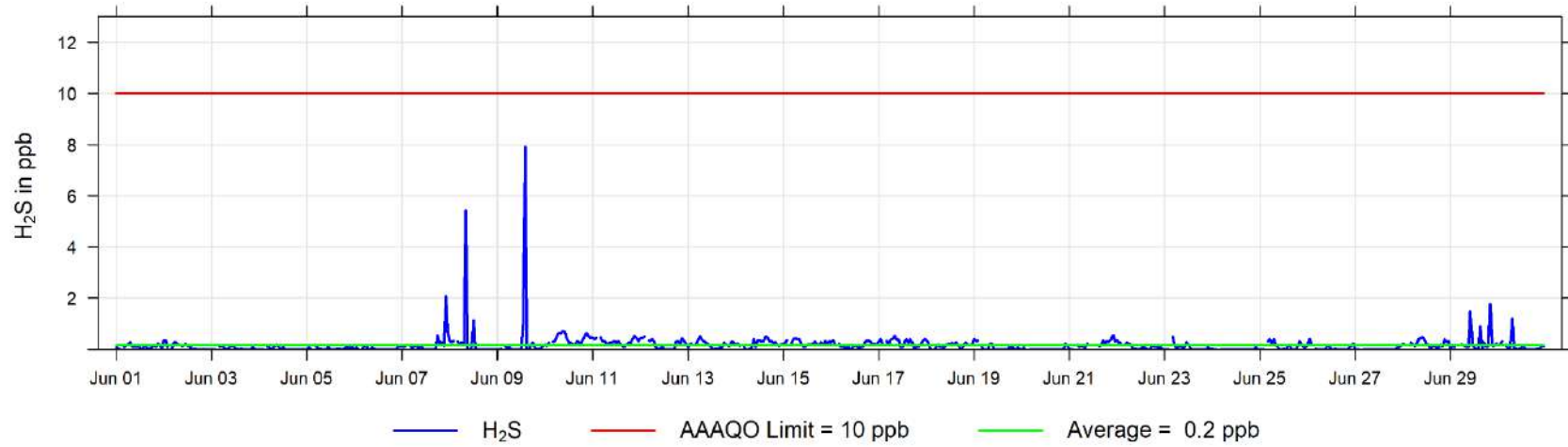
June 2023 Concentration Readings at Valleyview Station



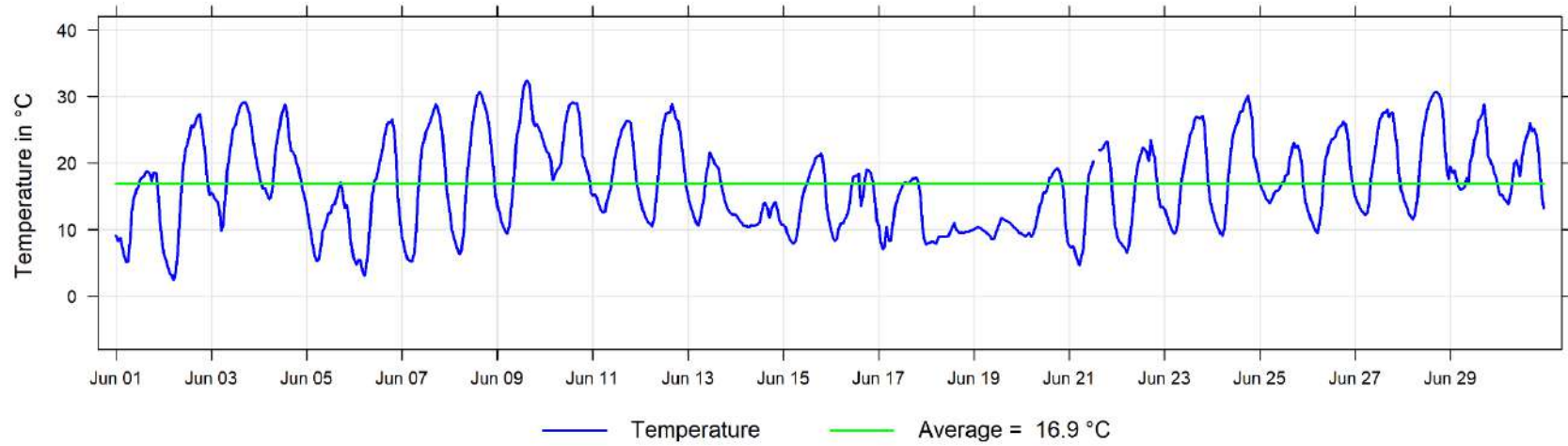
June 2023 Hourly Concentration Readings of SO₂ (in ppb) at Valleyview



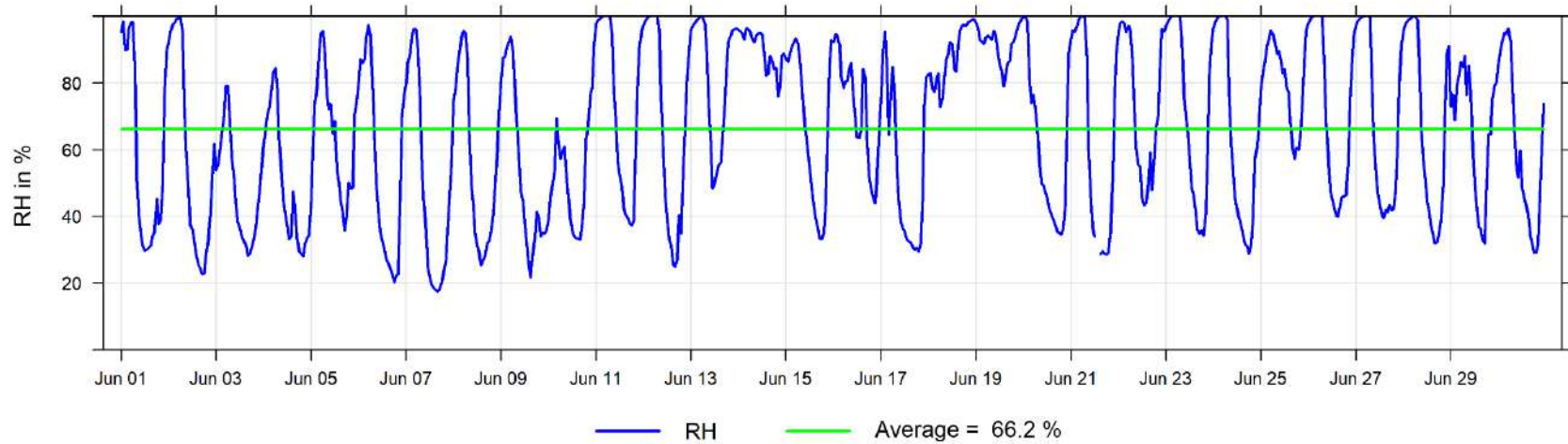
June 2023 Hourly Concentration Readings of H₂S (in ppb) at Valleyview



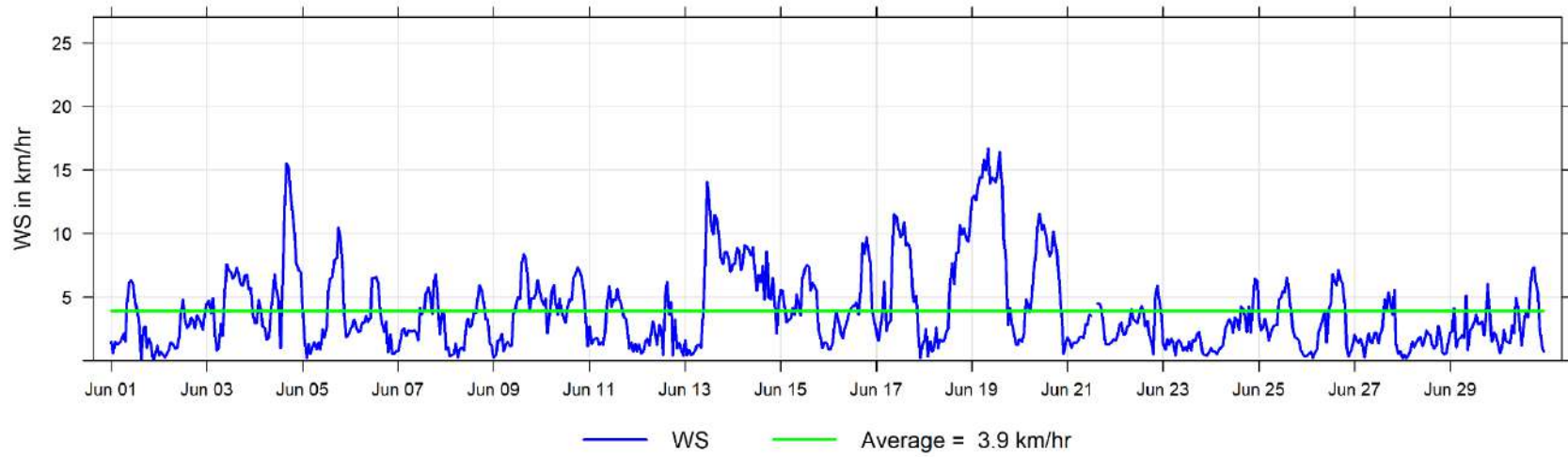
June 2023 Hourly Temperature Readings (in °C) at Valleyview



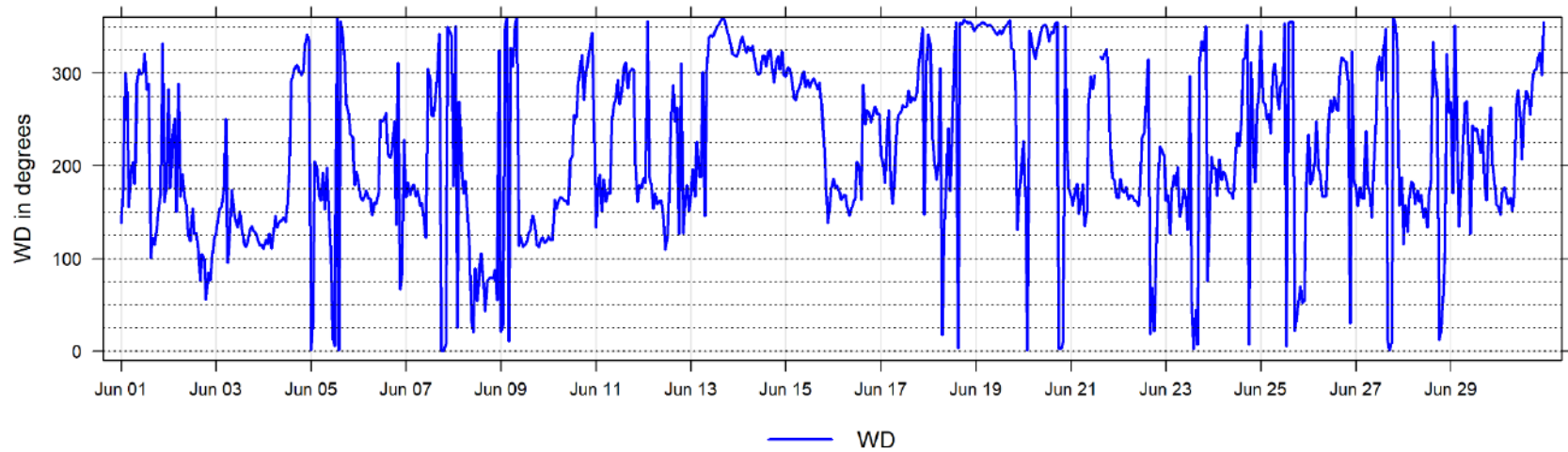
June 2023 Hourly Readings of Relative Humidity (in %) at Valleyview



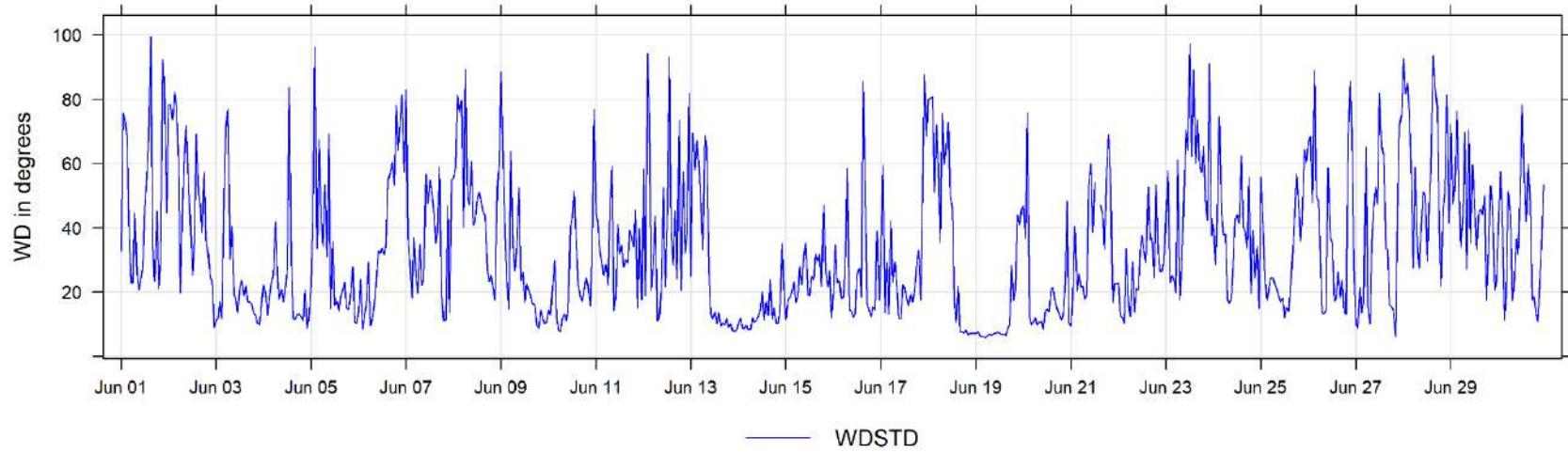
June 2023 Hourly Readings of Wind Speed (in km/hr) at Valleyview

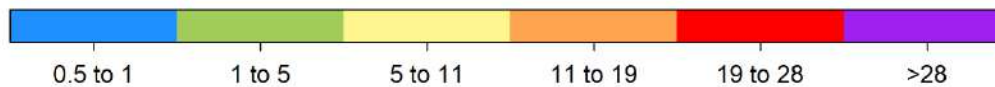
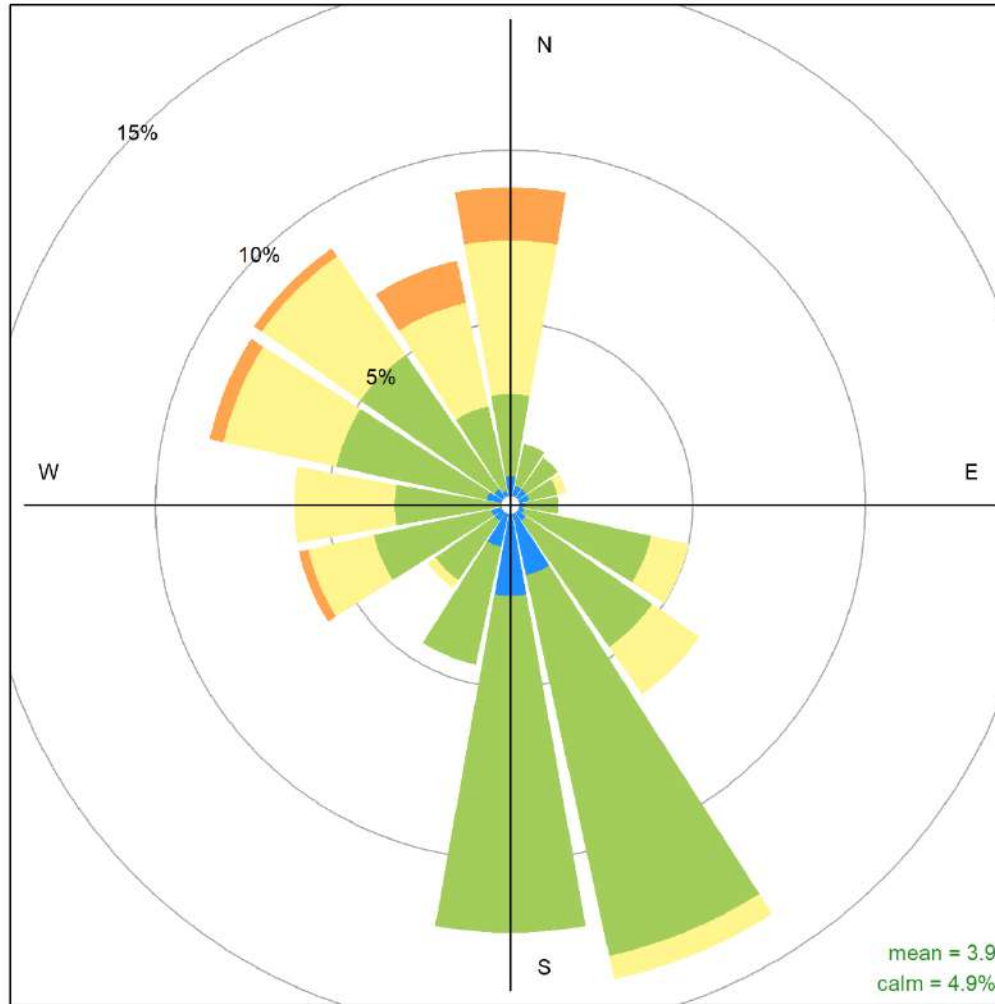


June 2023 Hourly Readings of Wind Direction (in degrees) at Valleyview



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



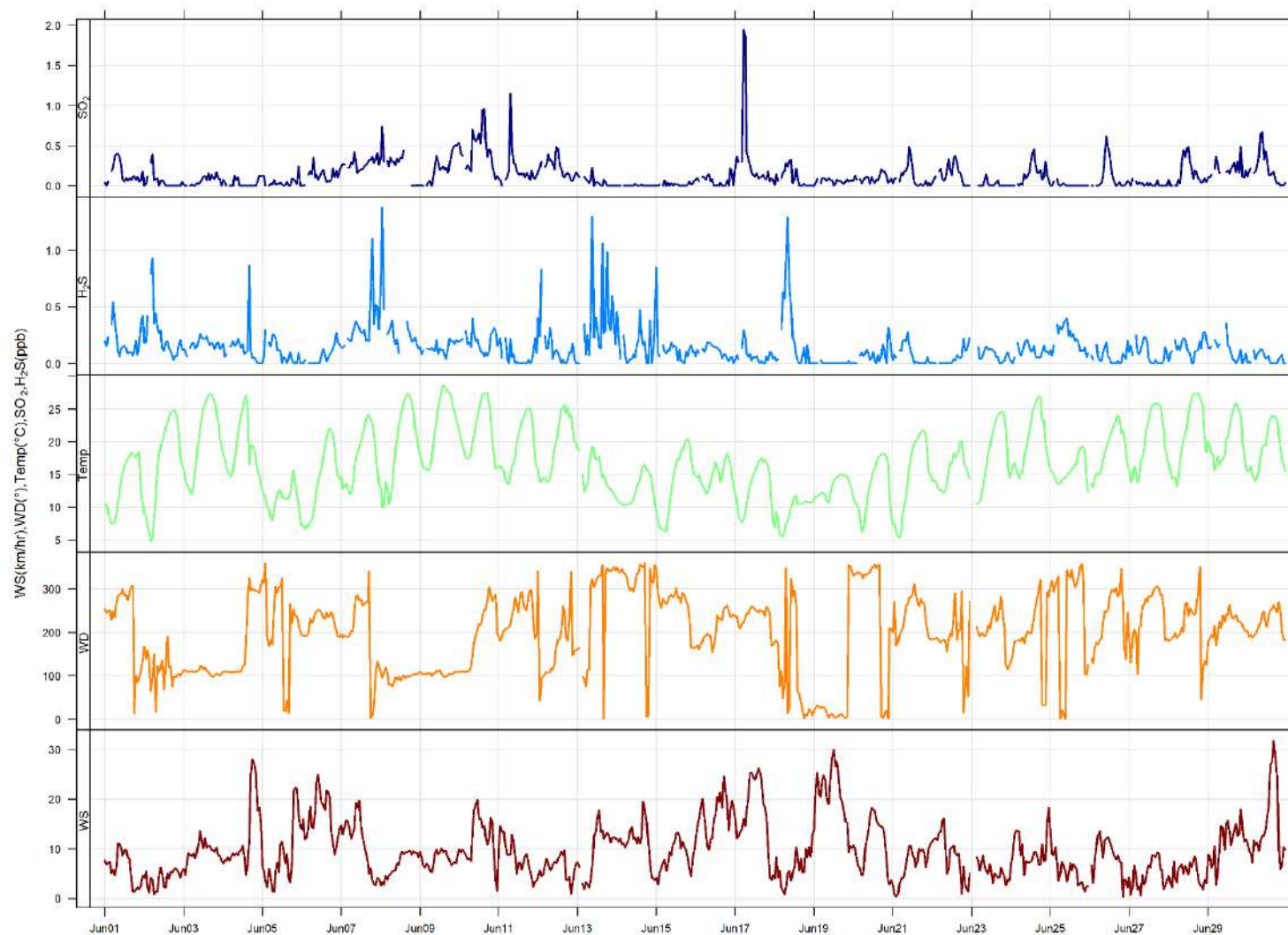


Valleyview June 2023 Wind Rose, wind speed in km/hr
 Frequency of counts by wind direction (%)

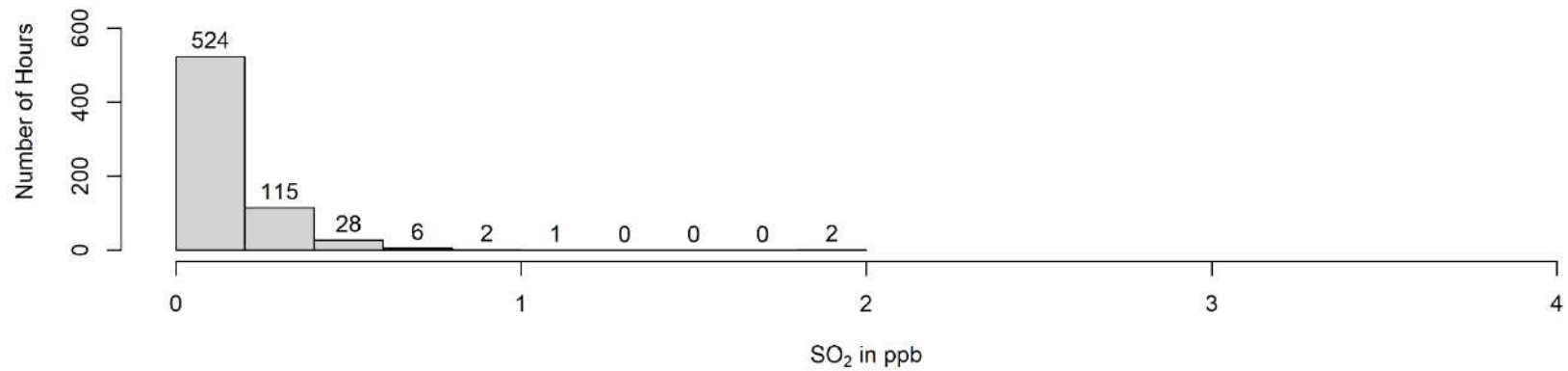
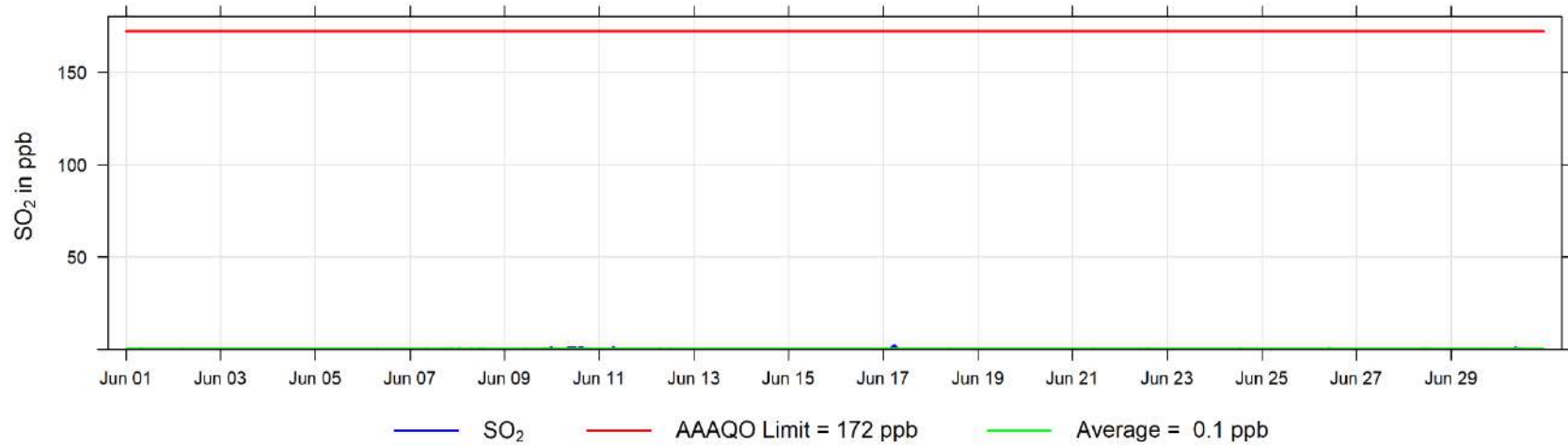
7 Donnelly Charts

The following pages include the charts and histograms for Donnelly Station

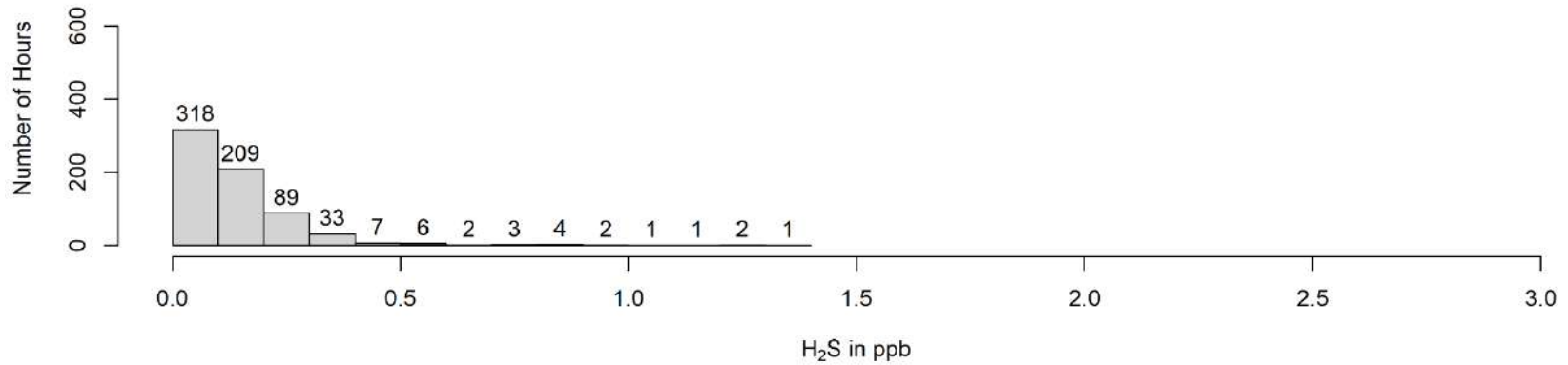
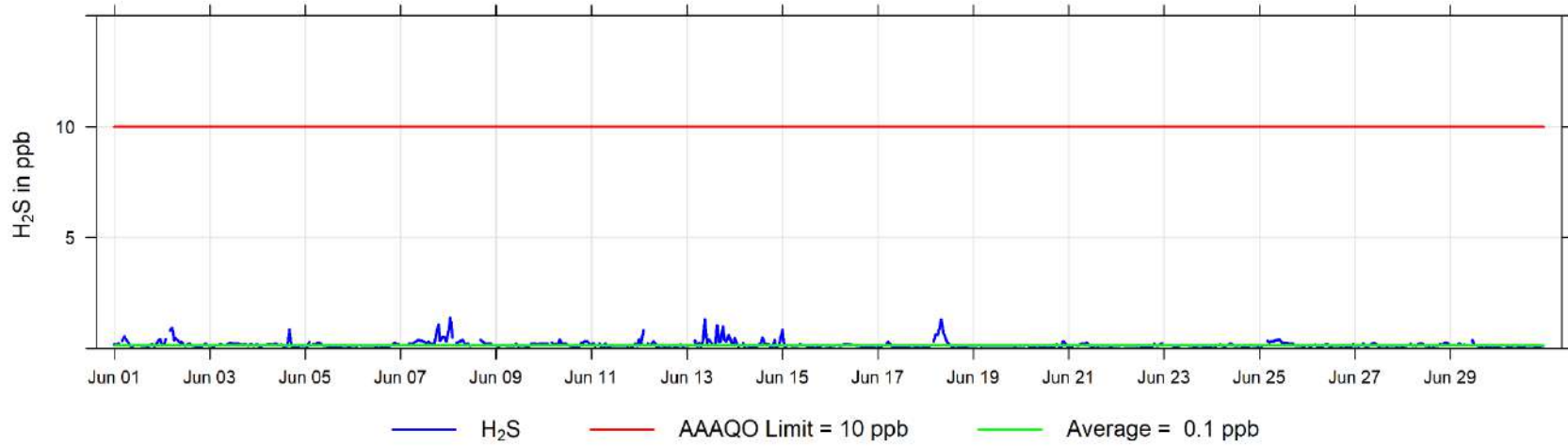
June 2023 Concentration Readings at Donnelly Station



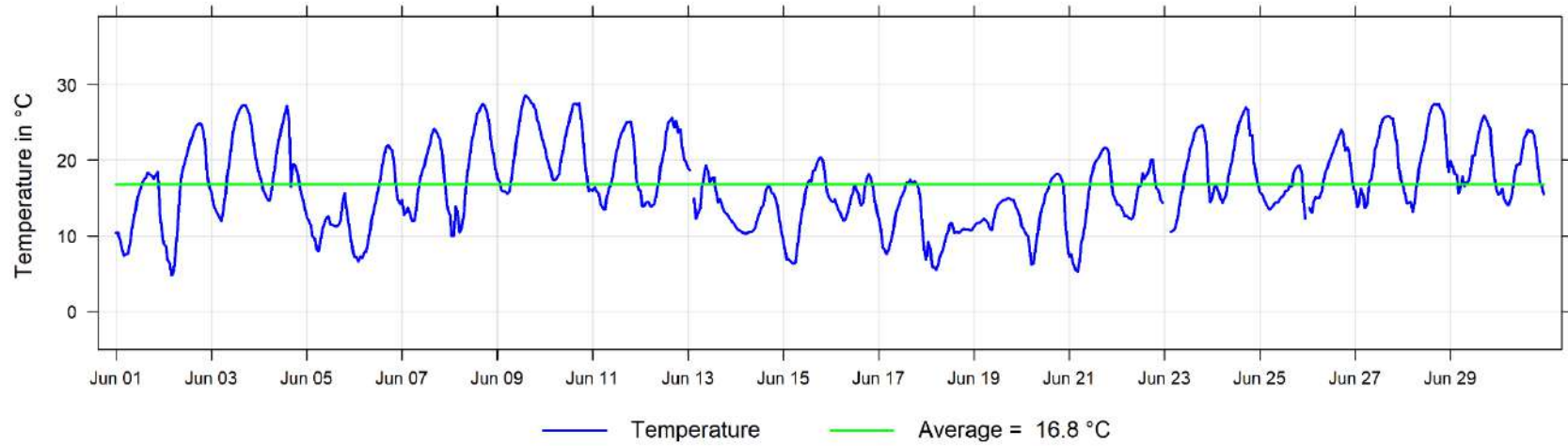
June 2023 Hourly Concentration Readings of SO₂ (in ppb) at Donnelly



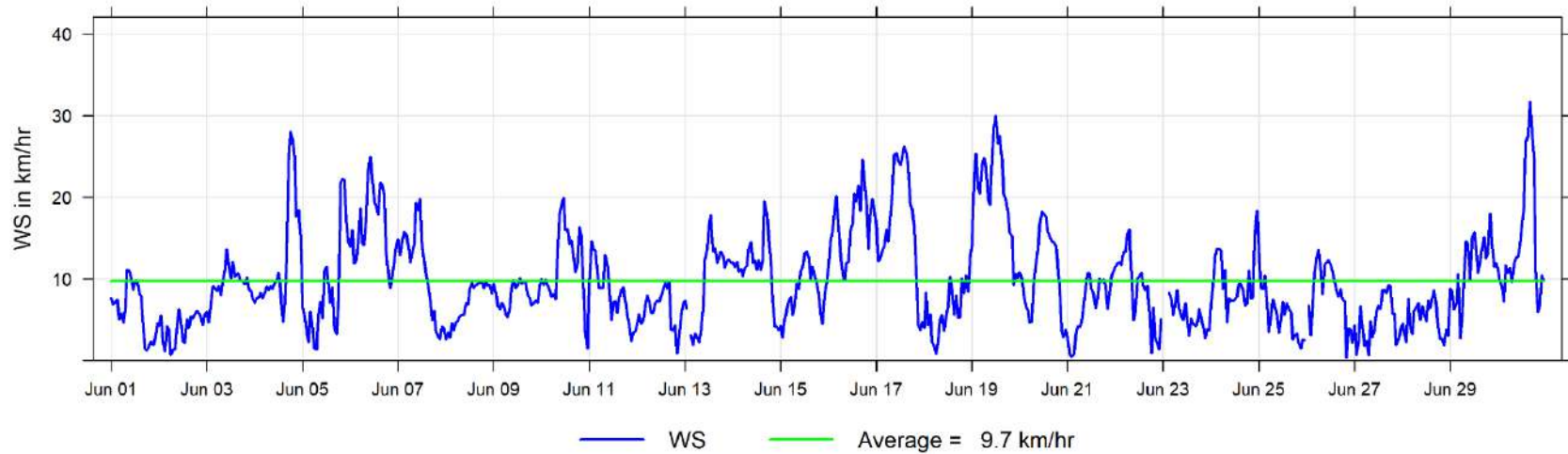
June 2023 Hourly Concentration Readings of H₂S (in ppb) at Donnelly



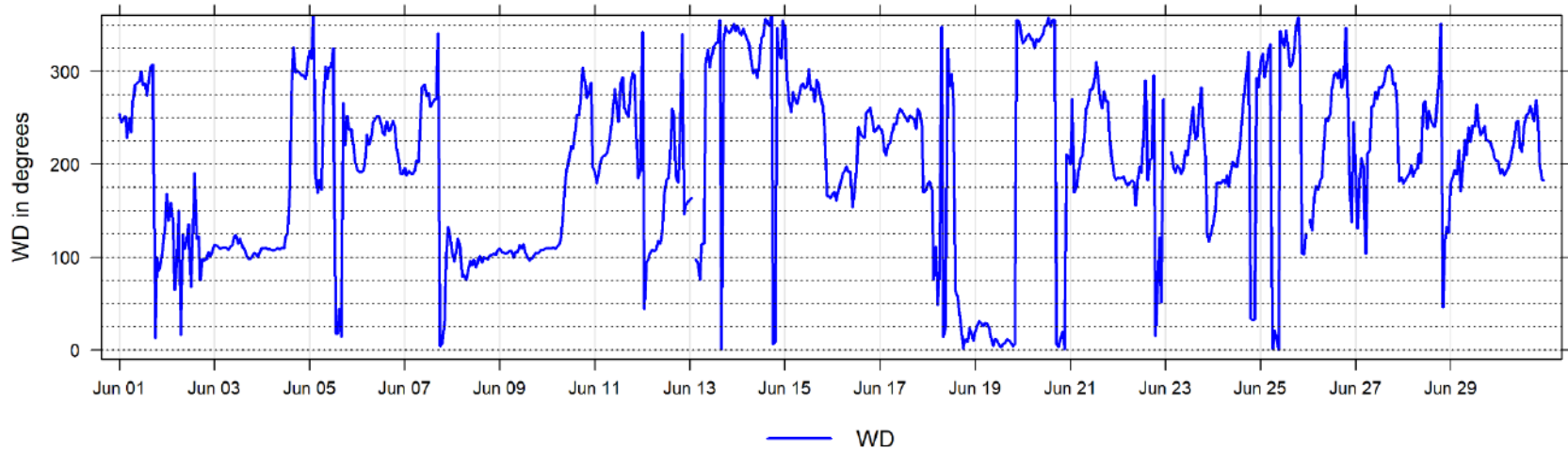
June 2023 Hourly Temperature Readings (in °C) at Donnelly



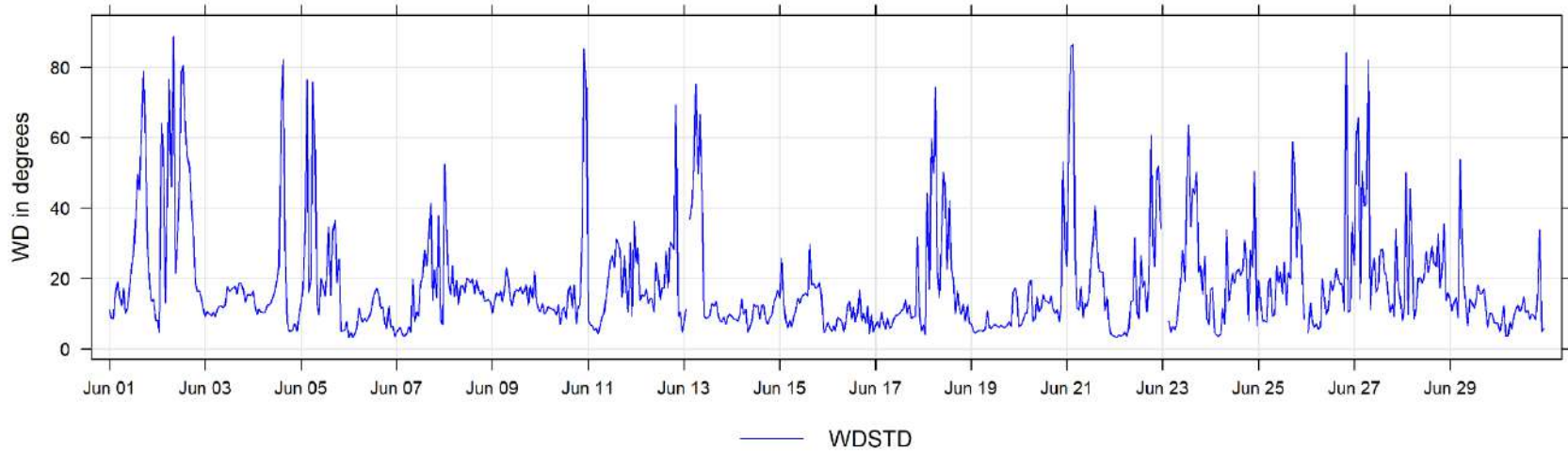
June 2023 Hourly Readings of Wind Speed (in km/hr) at Donnelly

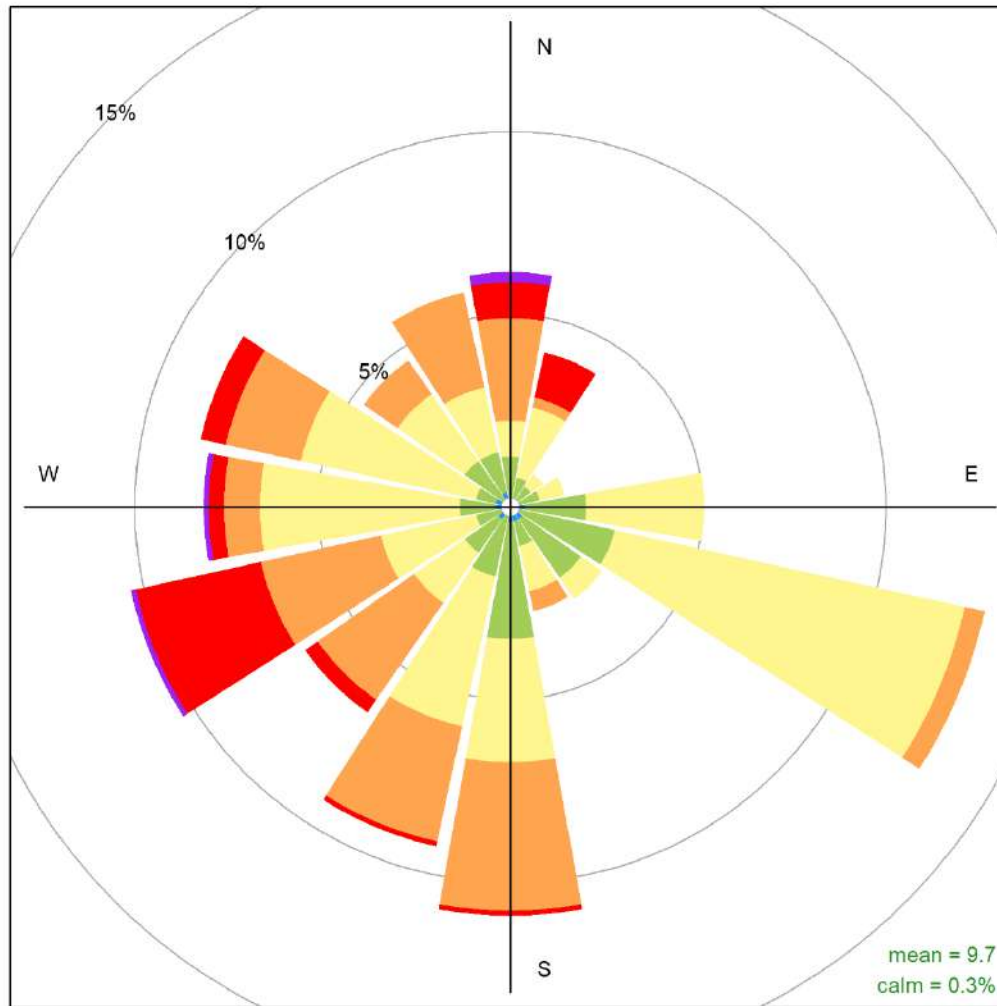


June 2023 Hourly Readings of Wind Direction (in degrees) at Donnelly



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



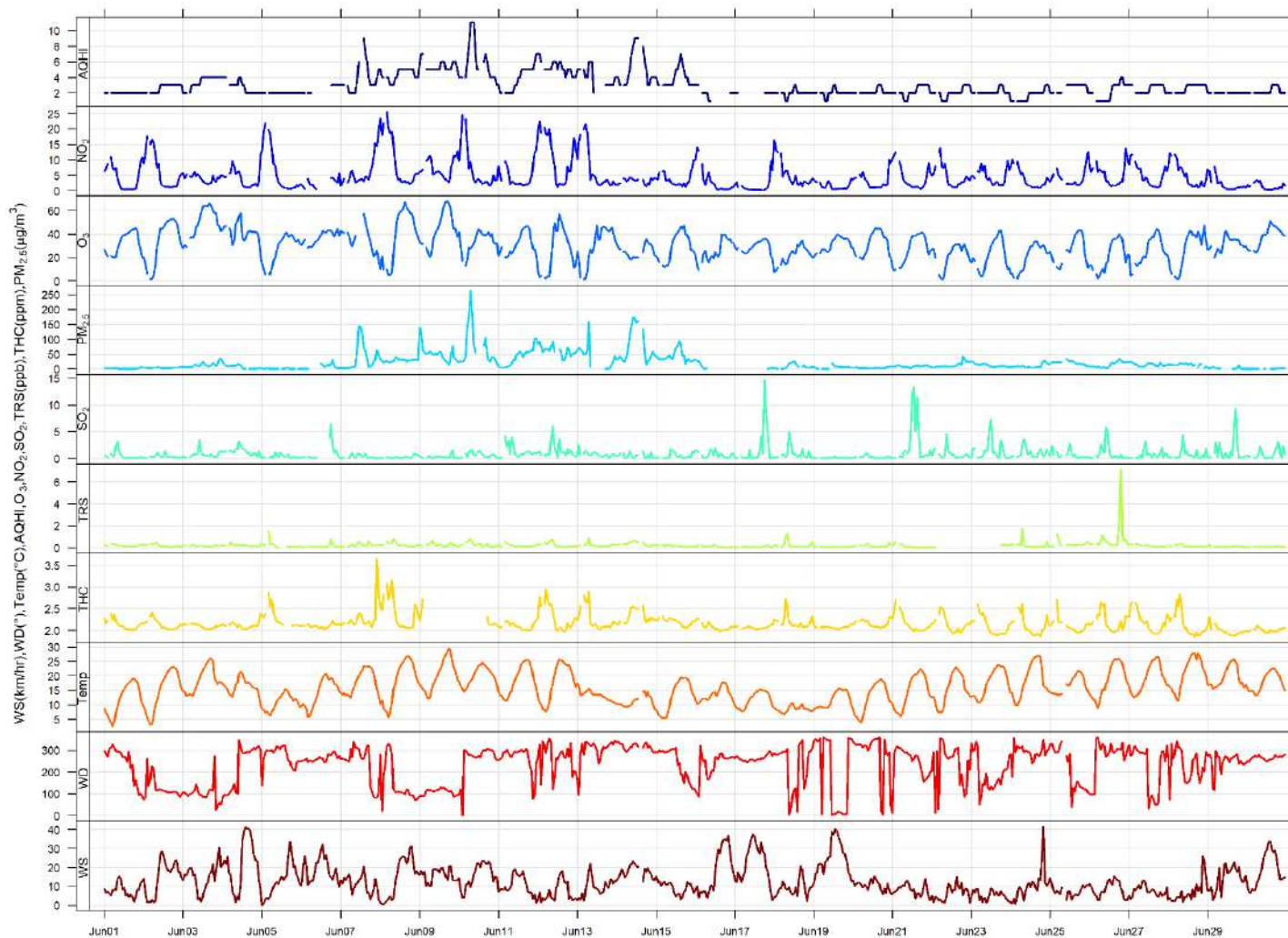


Donnelly June 2023 Wind Rose, wind speed in km/hr
Frequency of counts by wind direction (%)

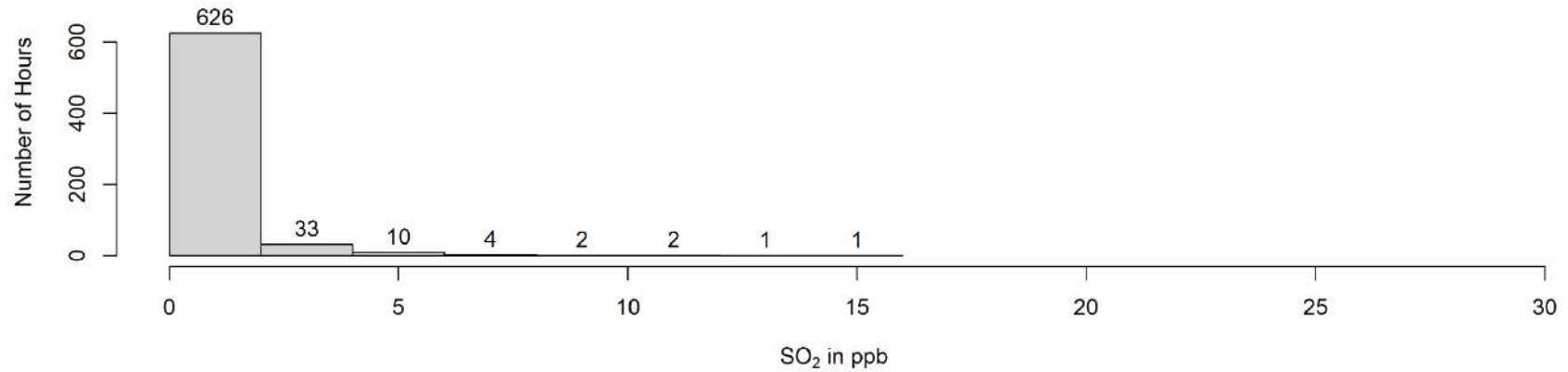
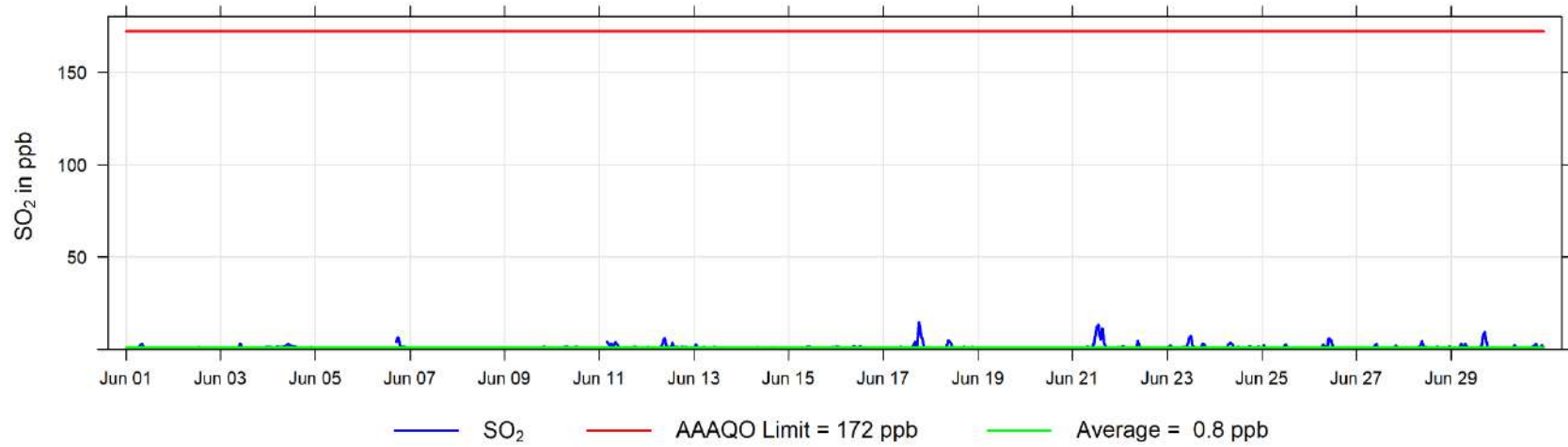
8 Poplar (Portable) Charts

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

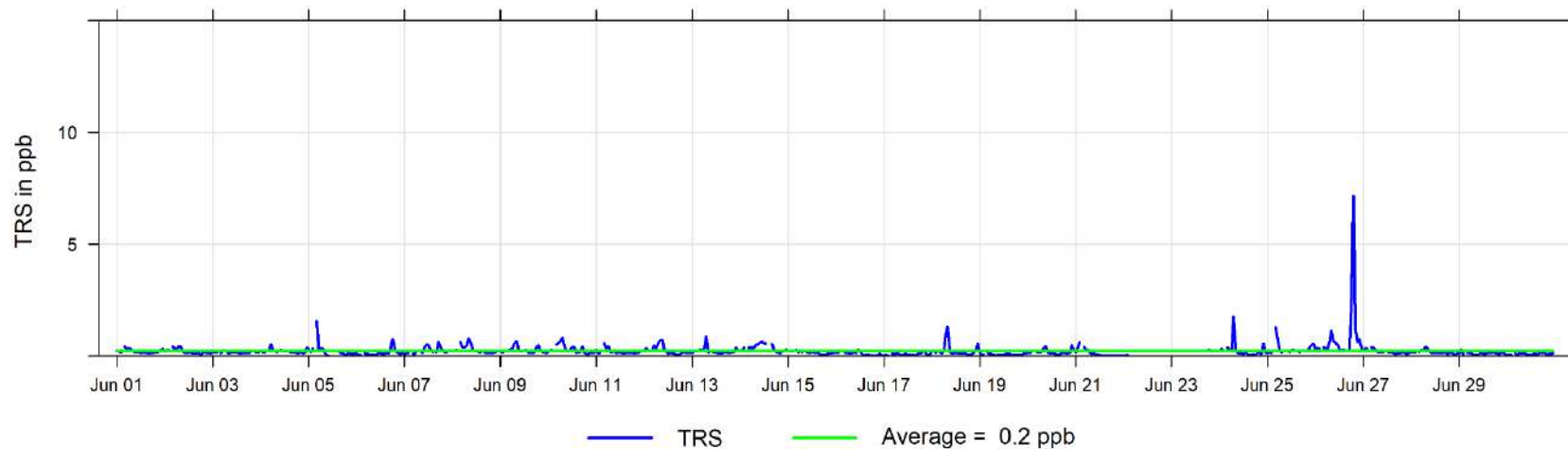
June 2023 Concentration Readings at Poplar Station



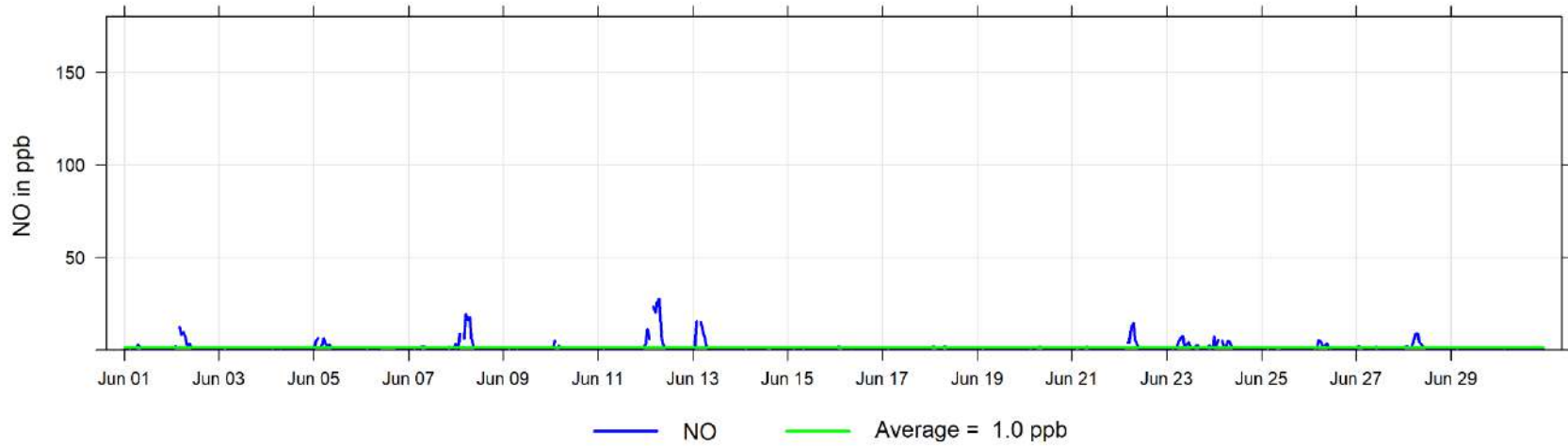
June 2023 Hourly Concentration Readings of SO₂ (in ppb) at Poplar



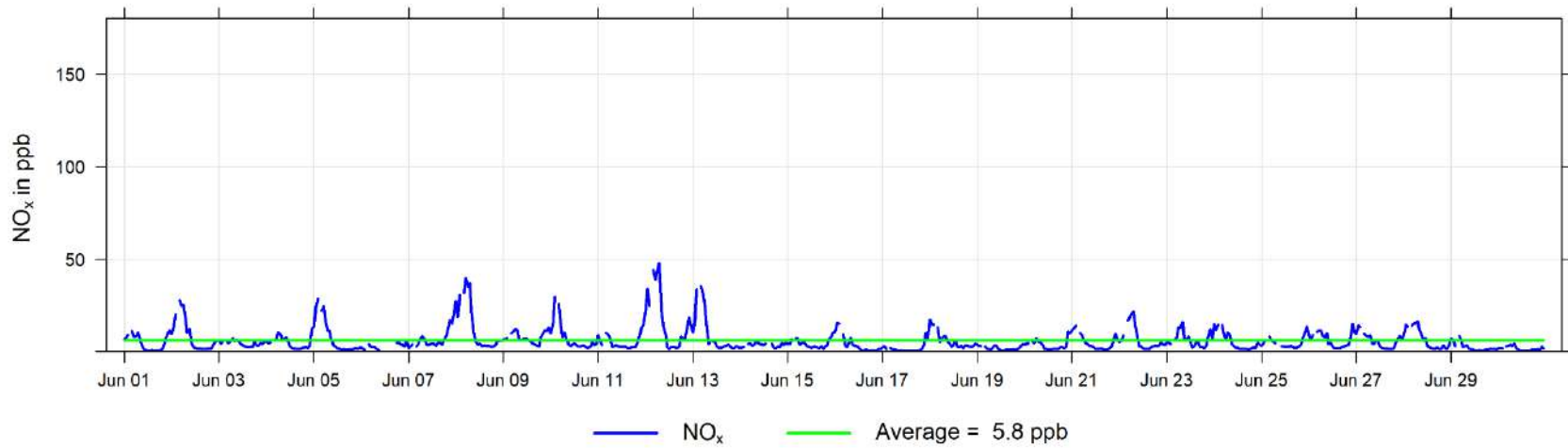
June 2023 Hourly Concentration Readings of TRS (in ppb) at Poplar



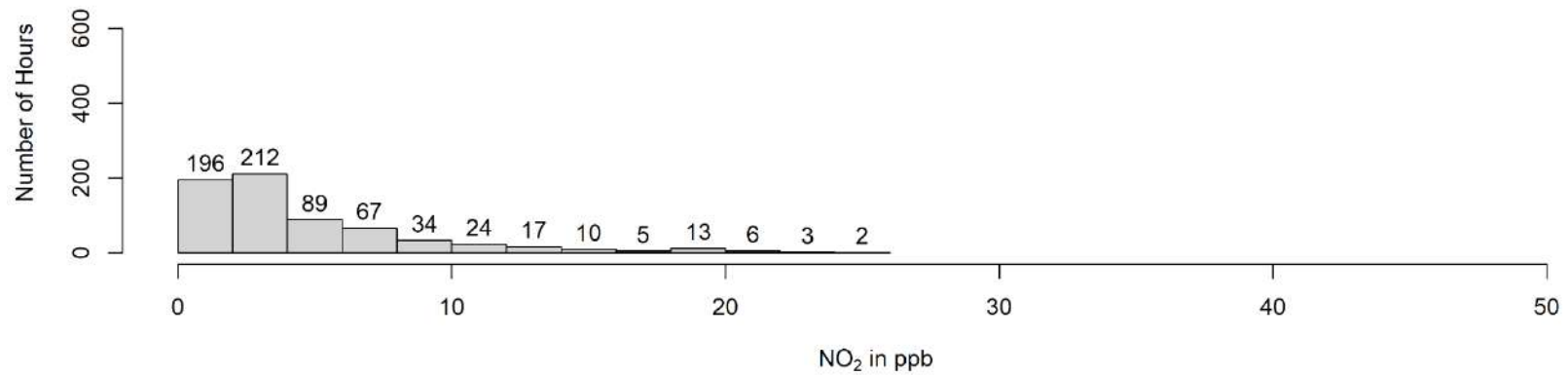
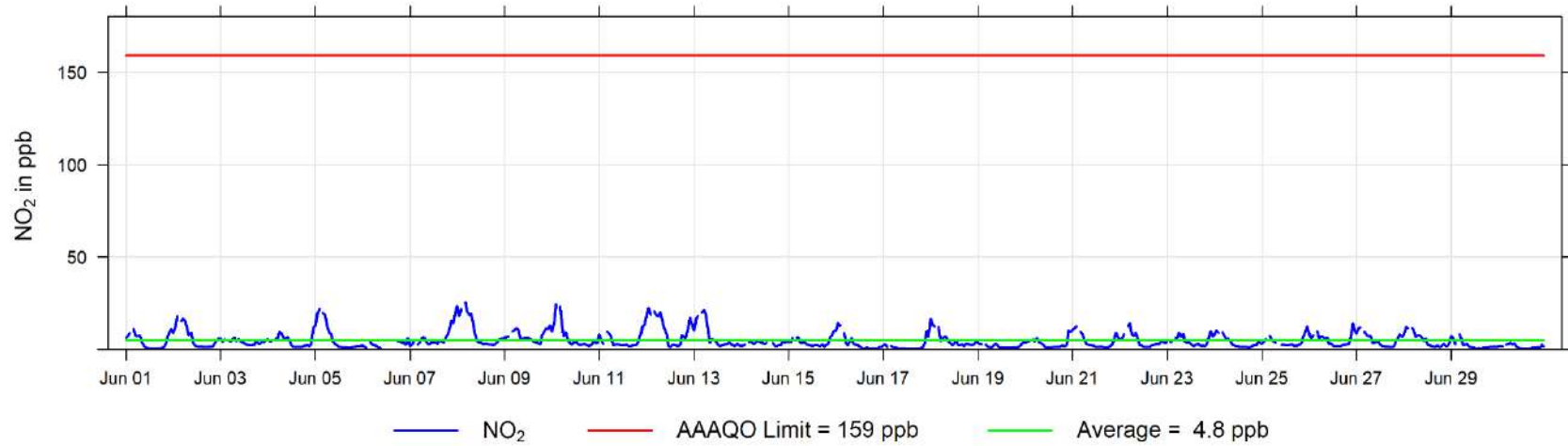
June 2023 Hourly Concentration Readings of NO (in ppb) at Poplar



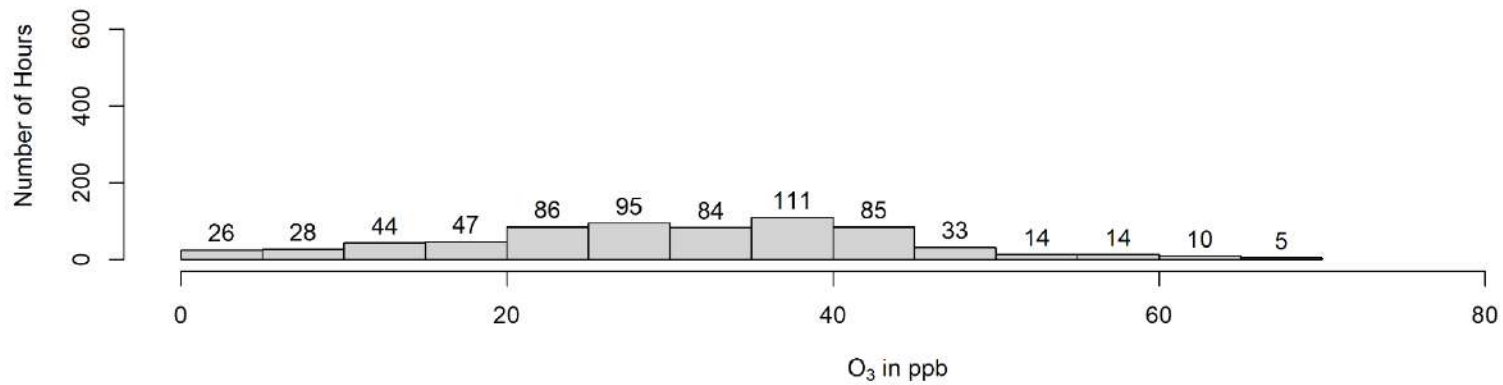
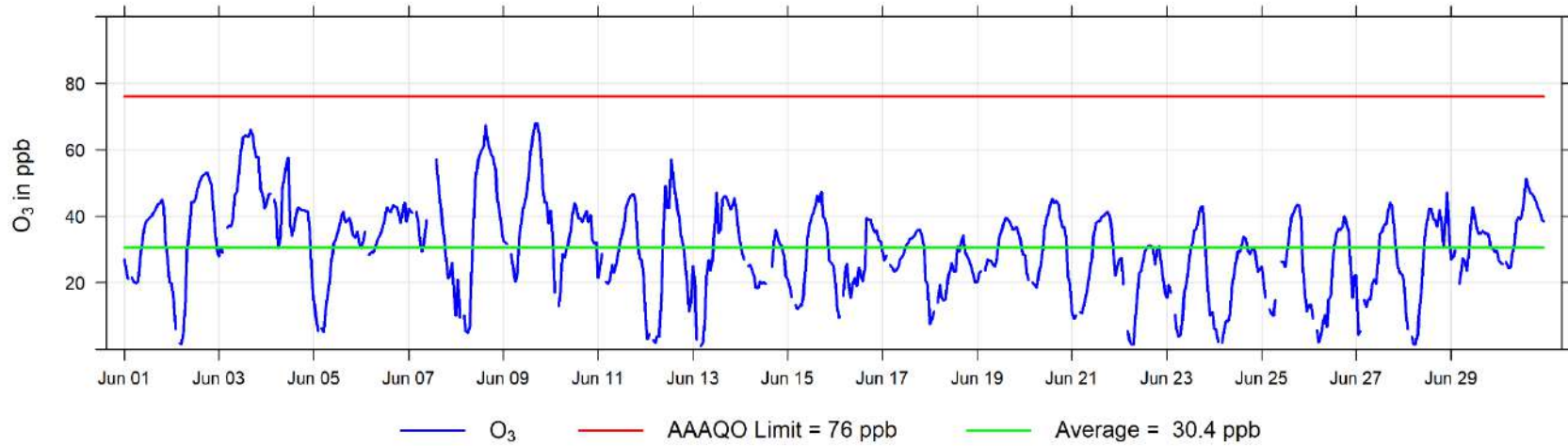
June 2023 Hourly Concentration Readings of NO_x (in ppb) at Poplar



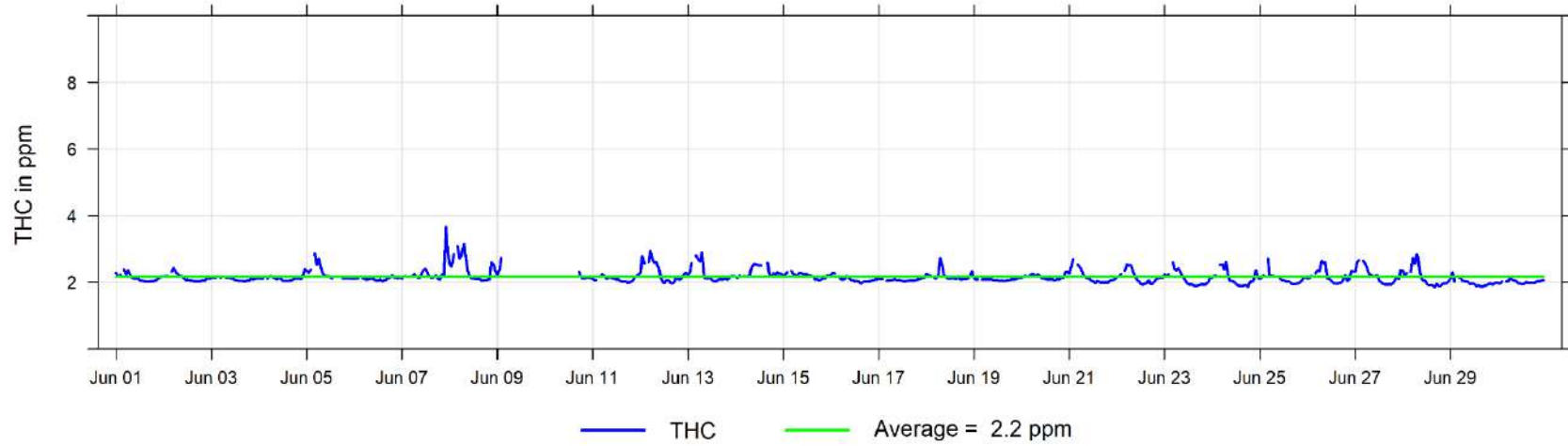
June 2023 Hourly Concentration Readings of NO₂ (in ppb) at Poplar



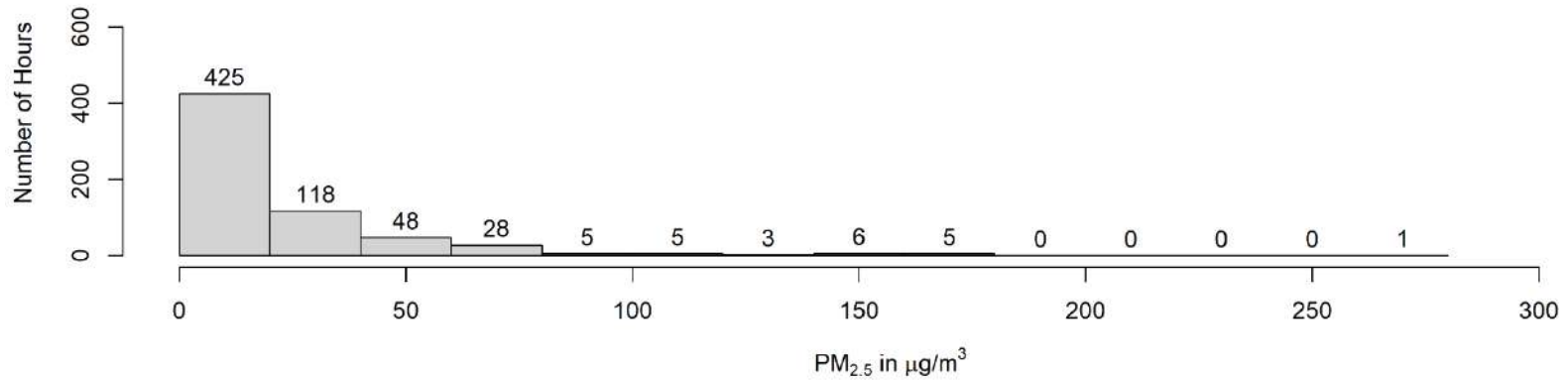
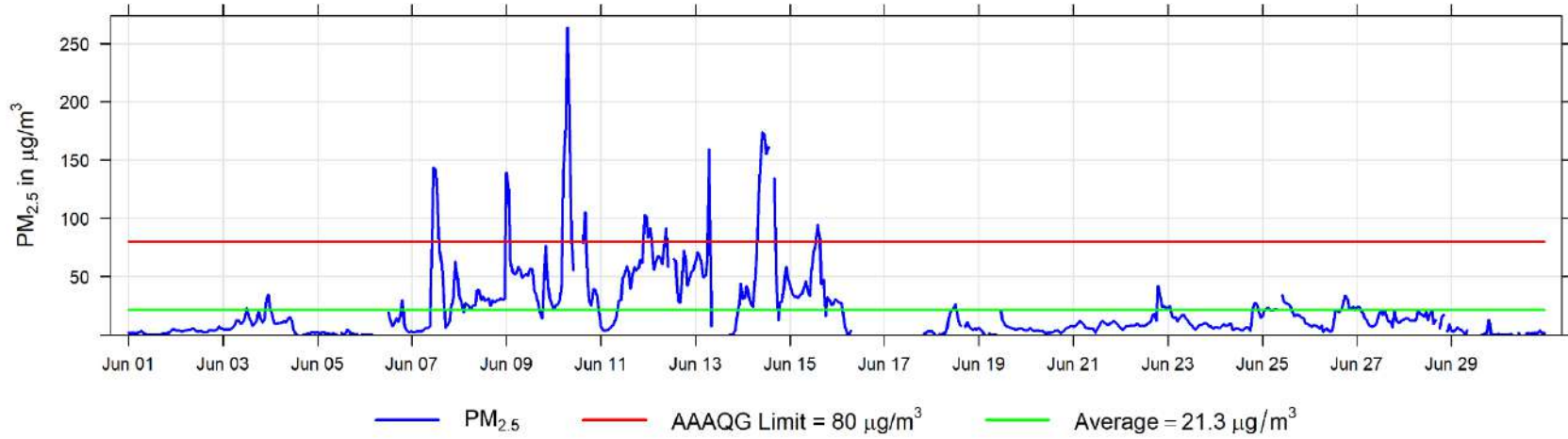
June 2023 Hourly Concentration Readings of O₃ (in ppb) at Poplar



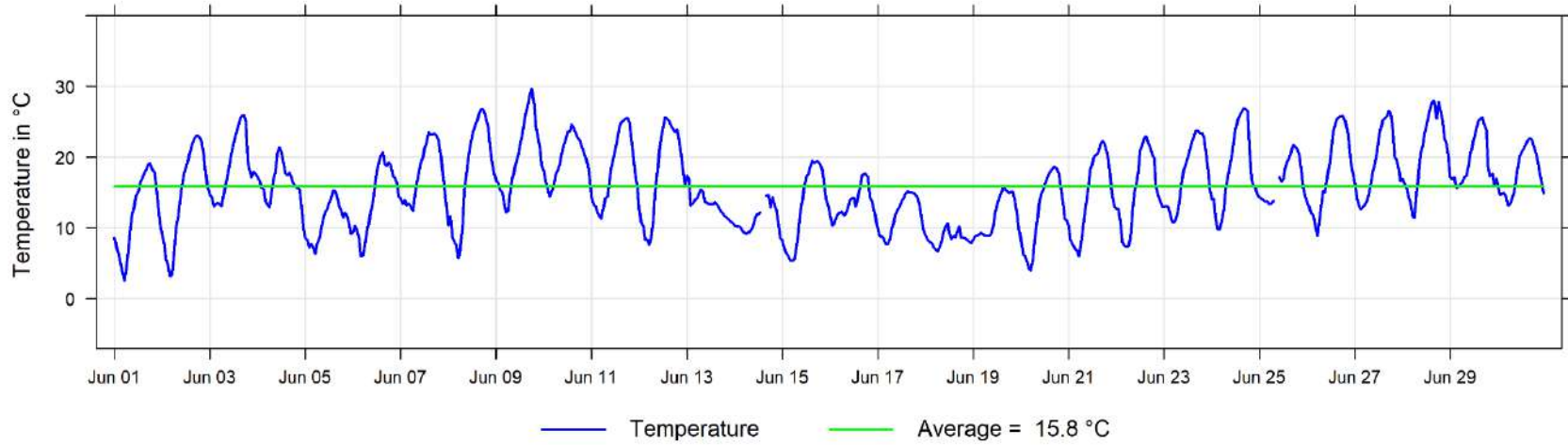
June 2023 Hourly Concentration Readings of THC (in ppm) at Poplar



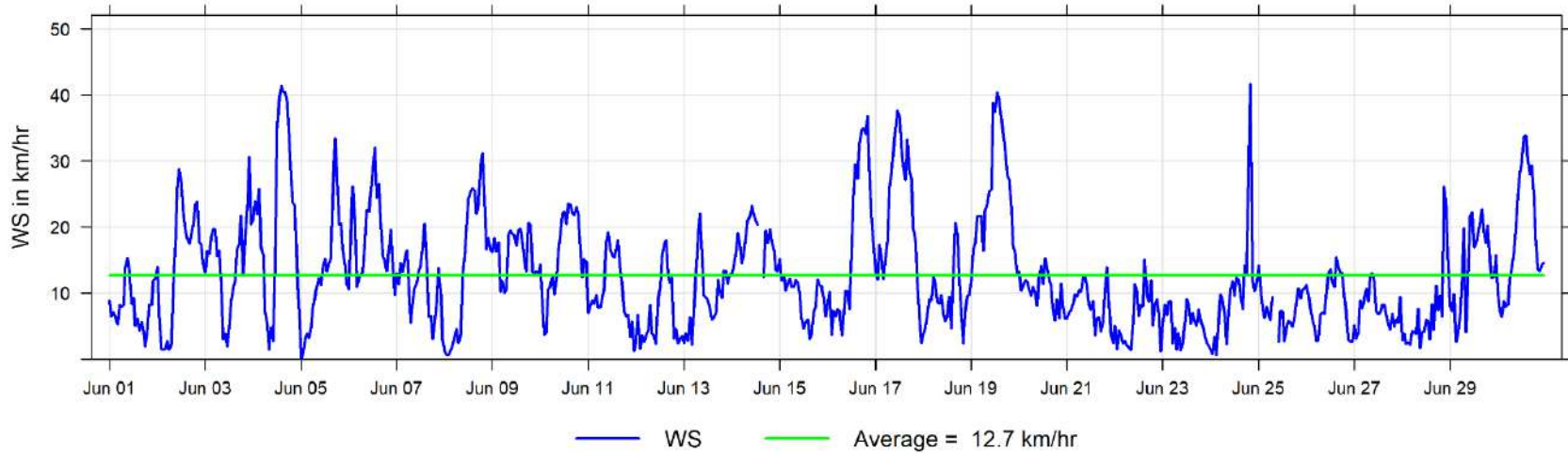
June 2023 Hourly Concentration Readings of PM_{2.5} in $\mu\text{g}/\text{m}^3$ at Poplar



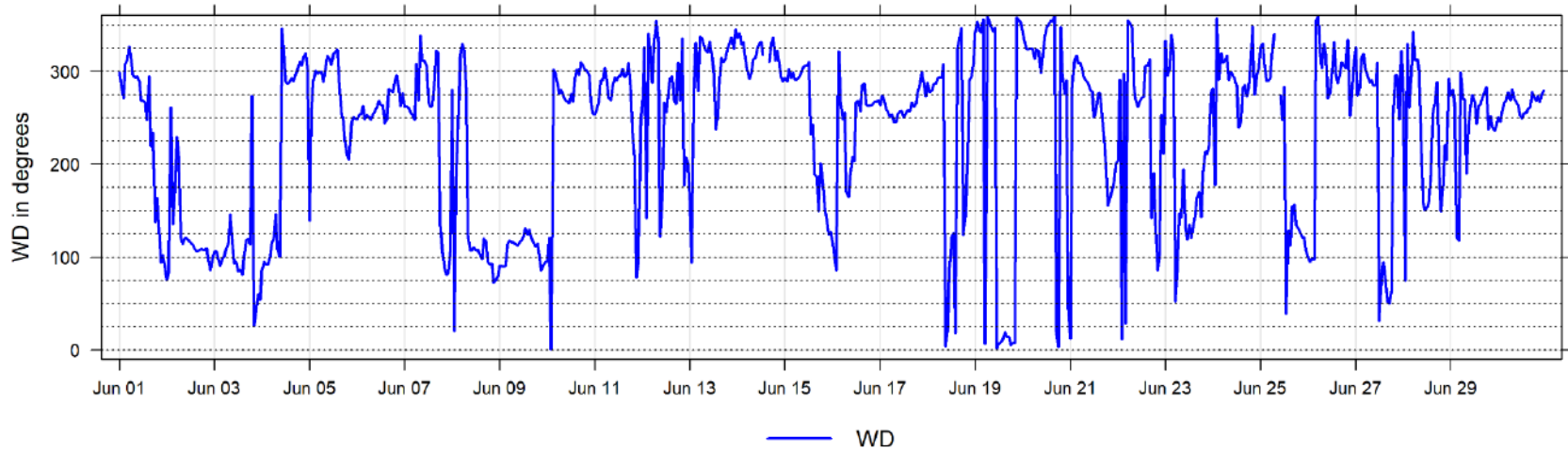
June 2023 Hourly Temperature Readings (in °C) at Poplar



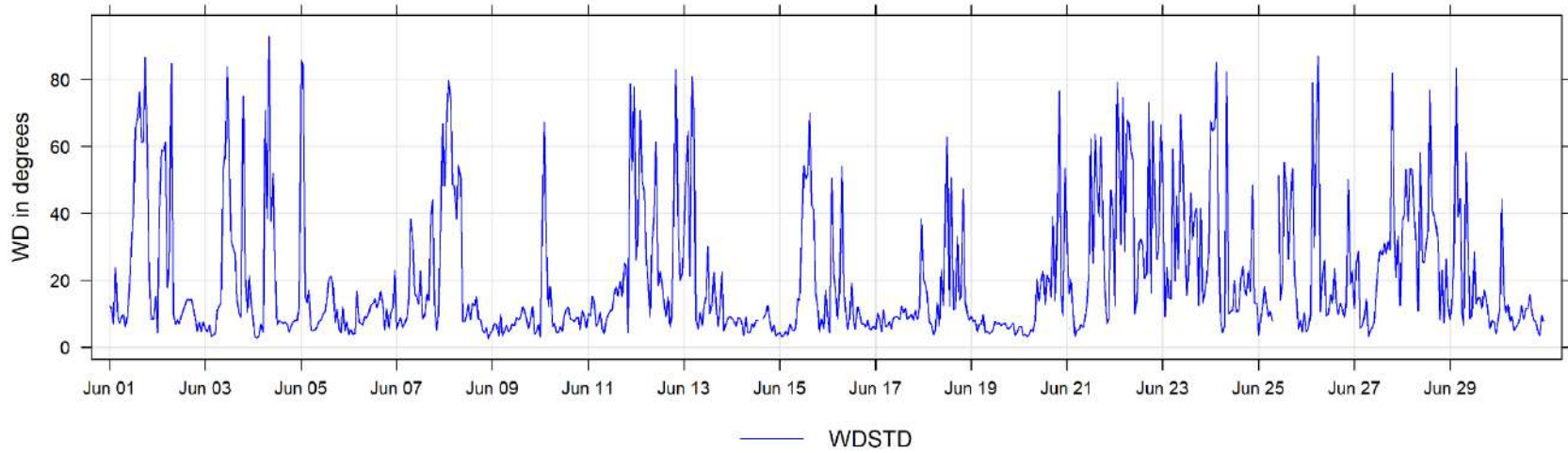
June 2023 Hourly Readings of Wind Speed (in km/hr) at Poplar

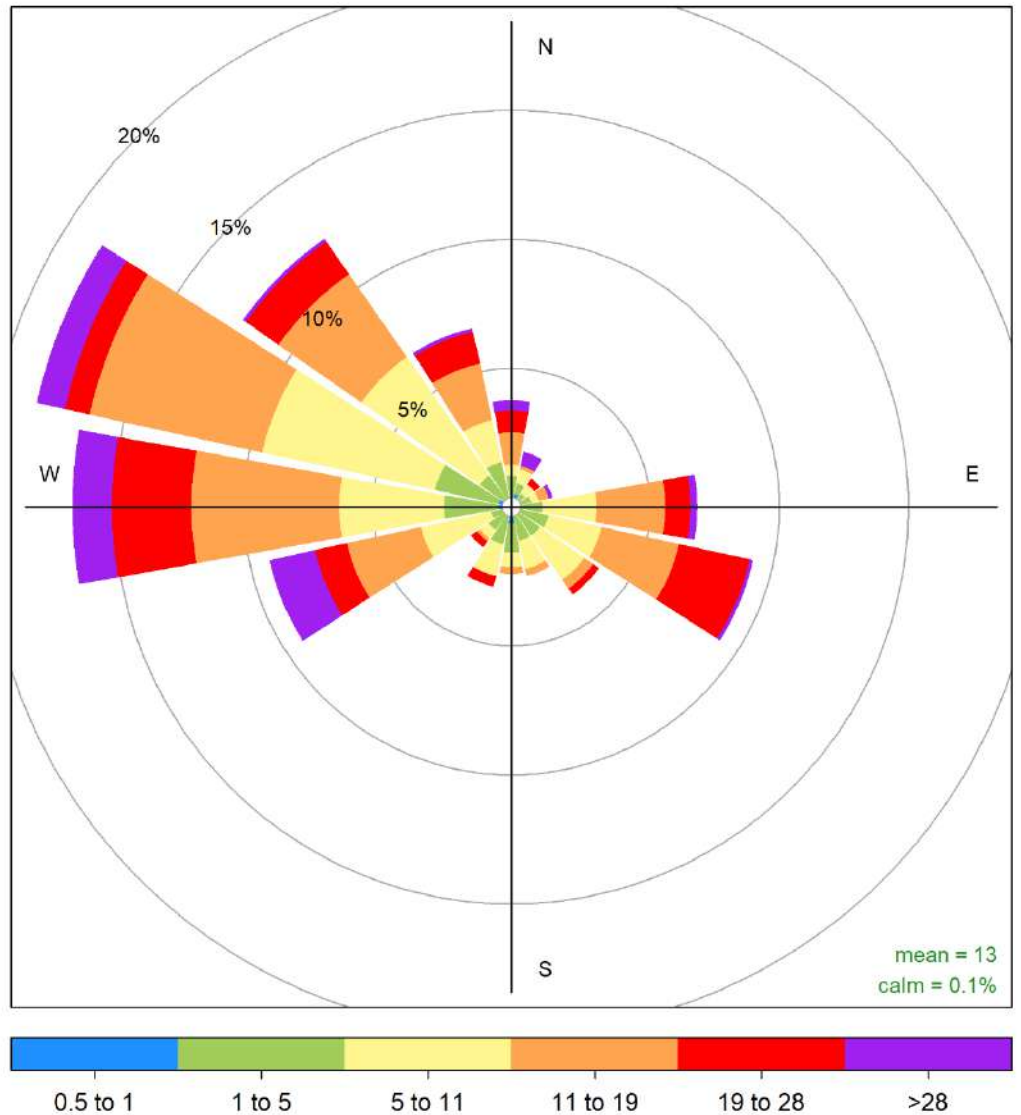


June 2023 Hourly Readings of Wind Direction (in degrees) at Poplar



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



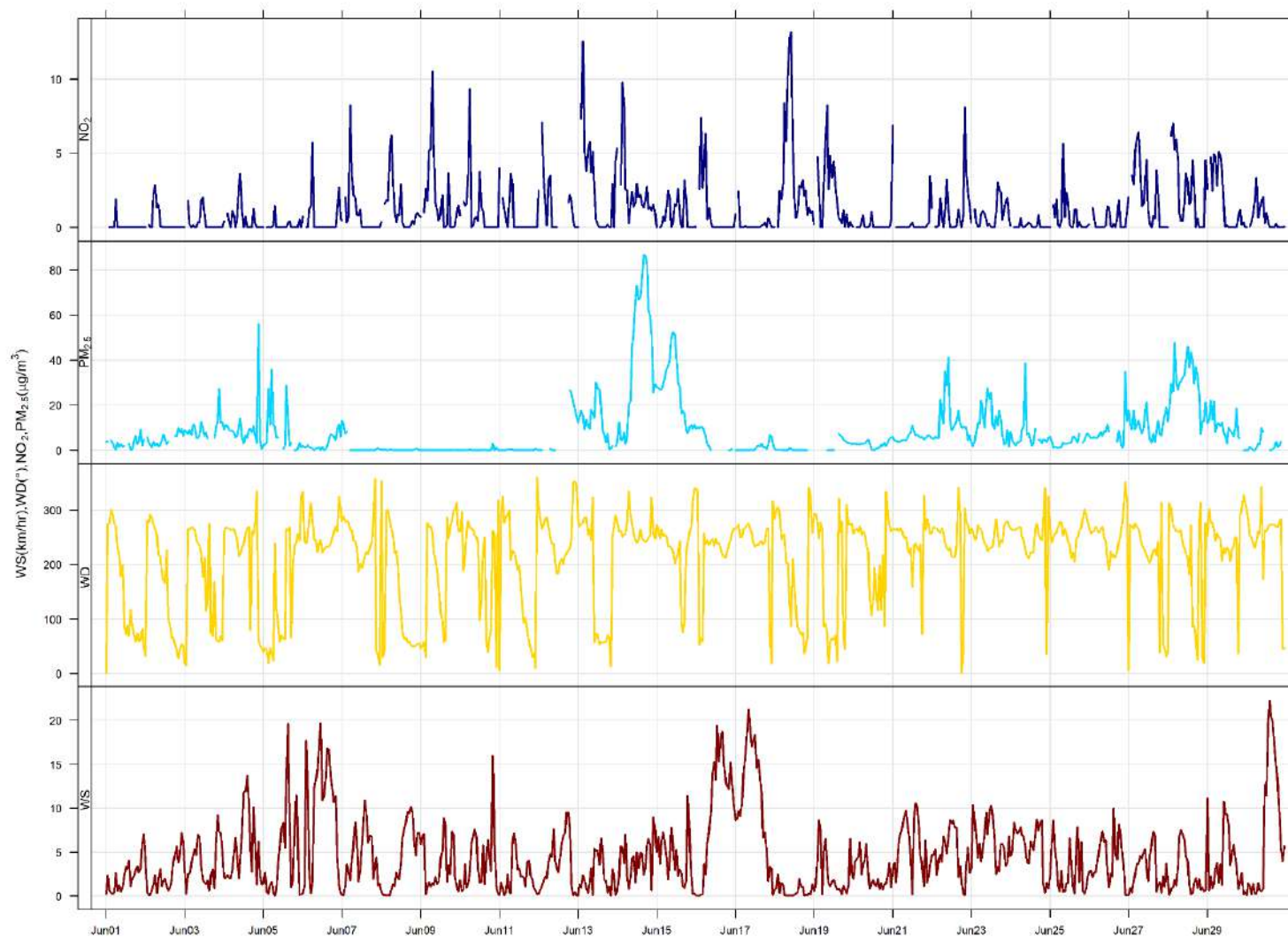


Poplar June 2023 Wind Rose, wind speed in km/hr
Frequency of counts by wind direction (%)

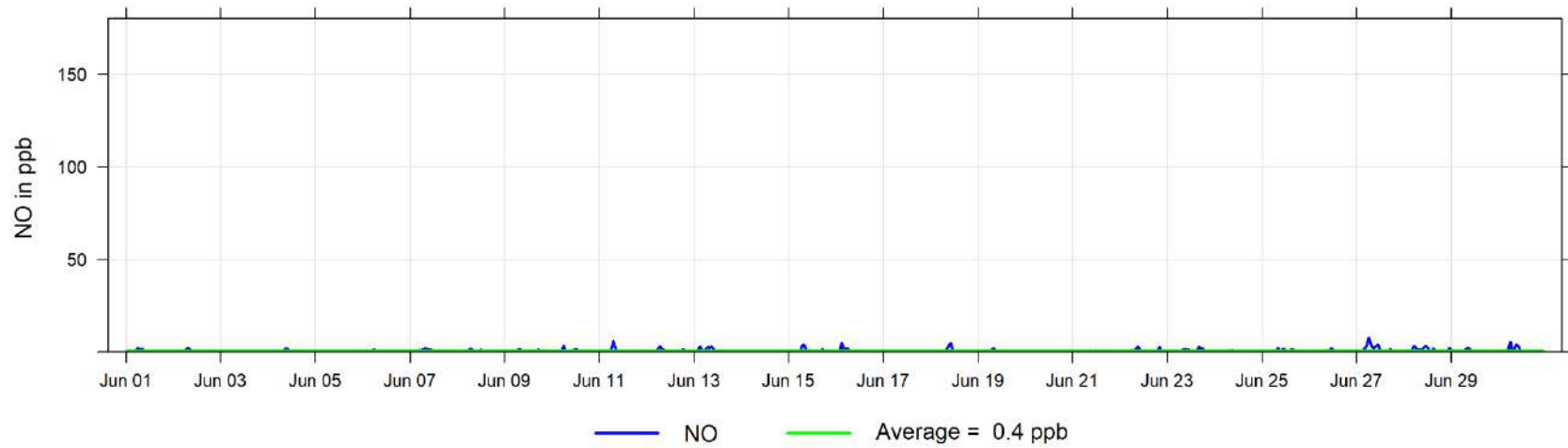
9 Milner Charts

The following pages include the charts and histograms for Milner Station

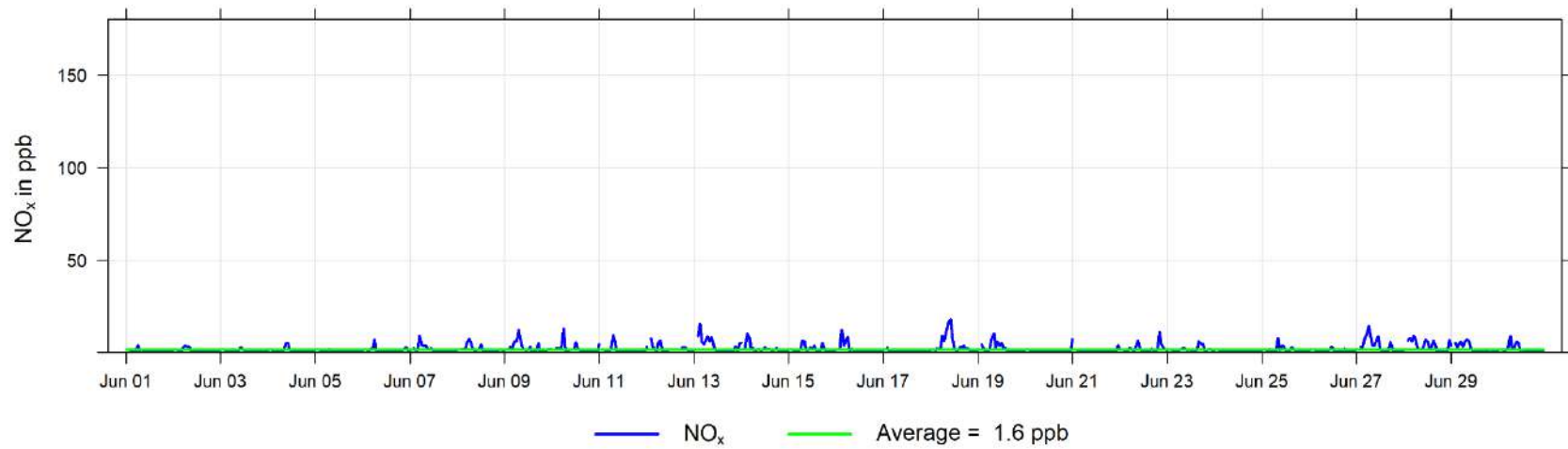
June 2023 Concentration Readings at Milner Station



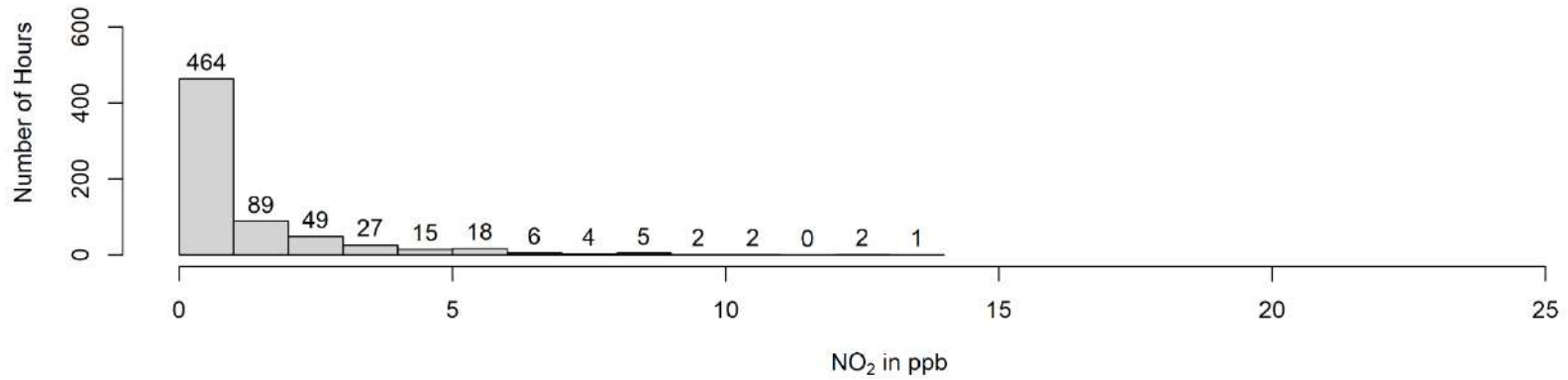
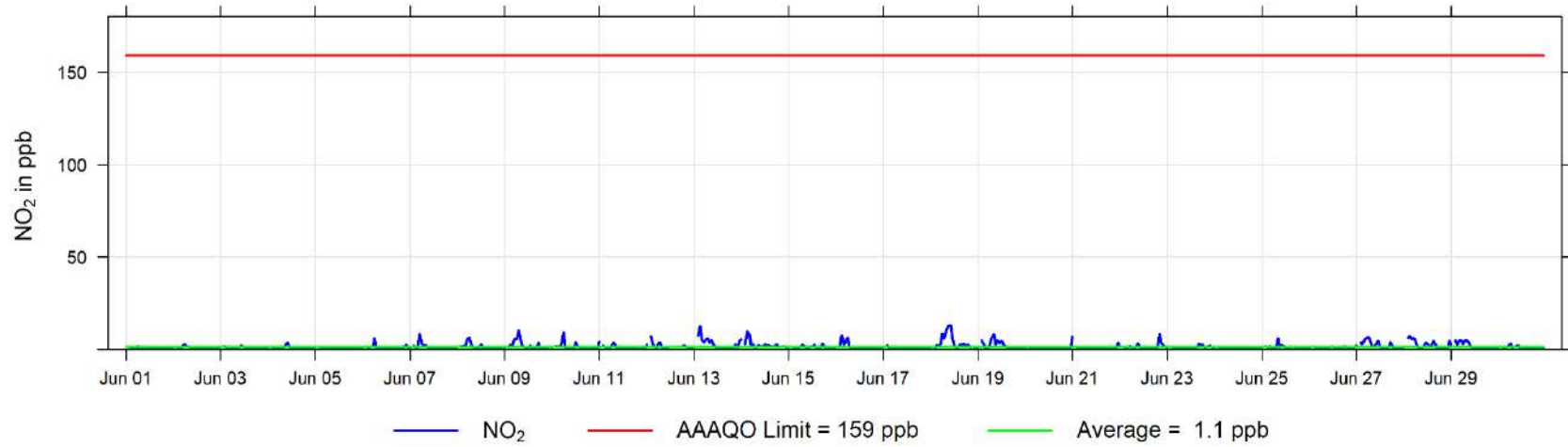
June 2023 Hourly Concentration Readings of NO (in ppb) at Milner



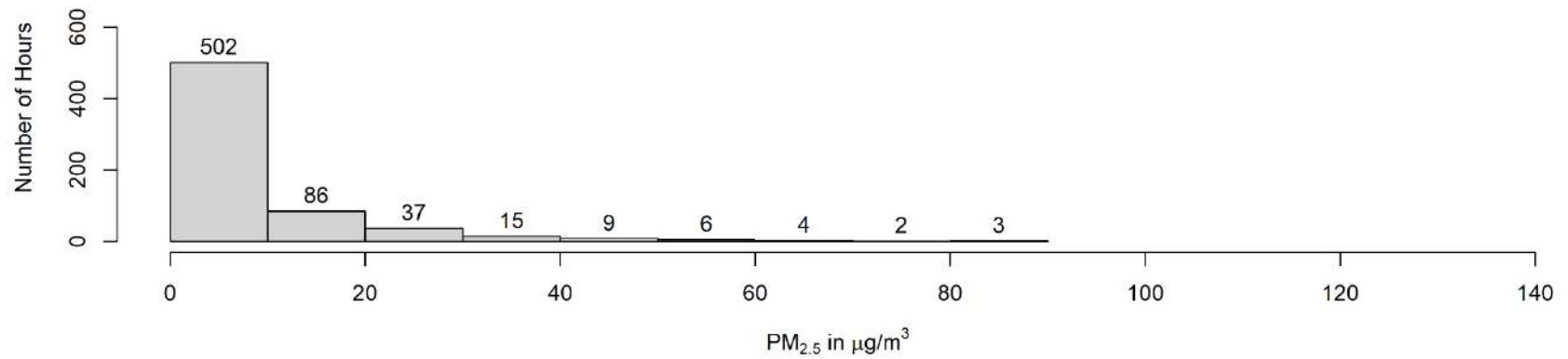
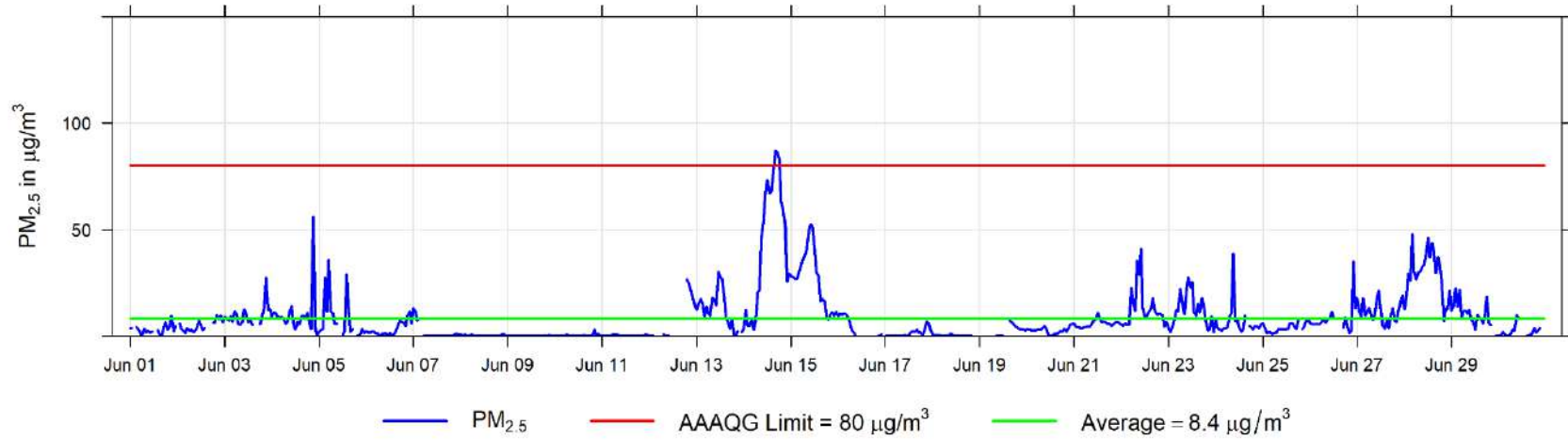
June 2023 Hourly Concentration Readings of NO_x (in ppb) at Milner



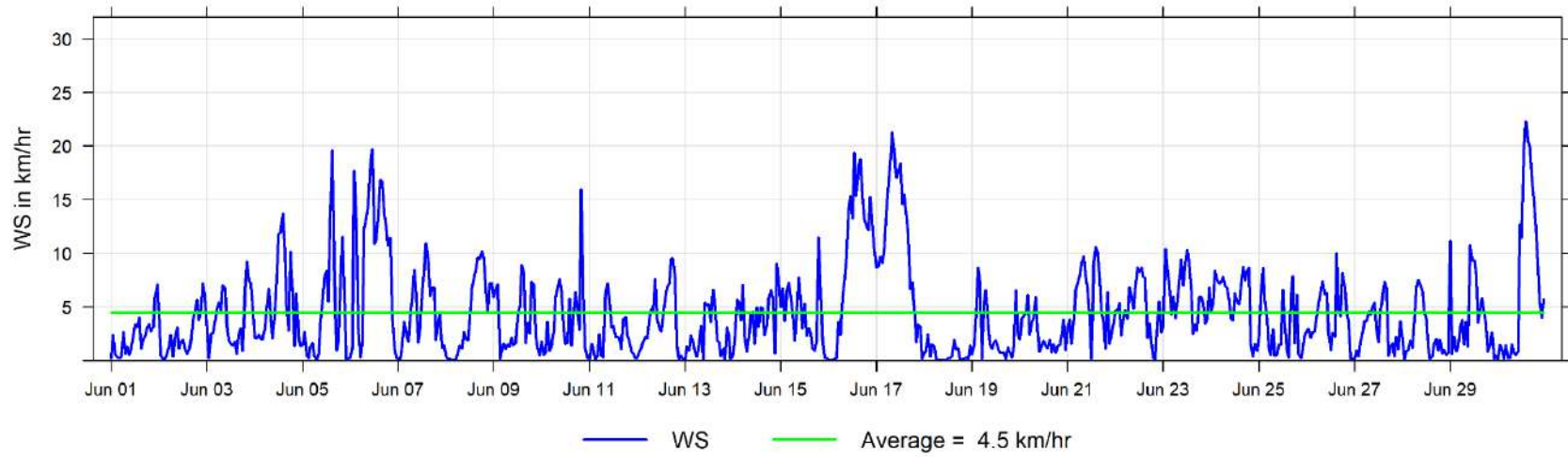
June 2023 Hourly Concentration Readings of NO₂ (in ppb) at Milner



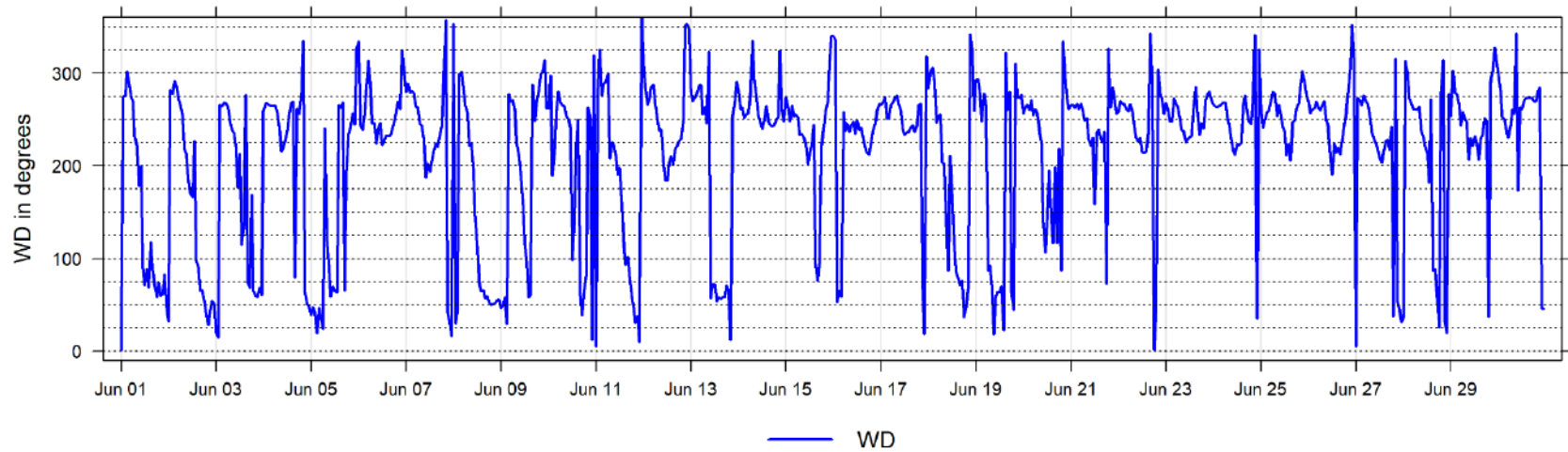
June 2023 Hourly Concentration Readings of PM_{2.5} in $\mu\text{g}/\text{m}^3$ at Milner

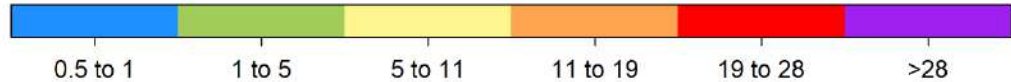
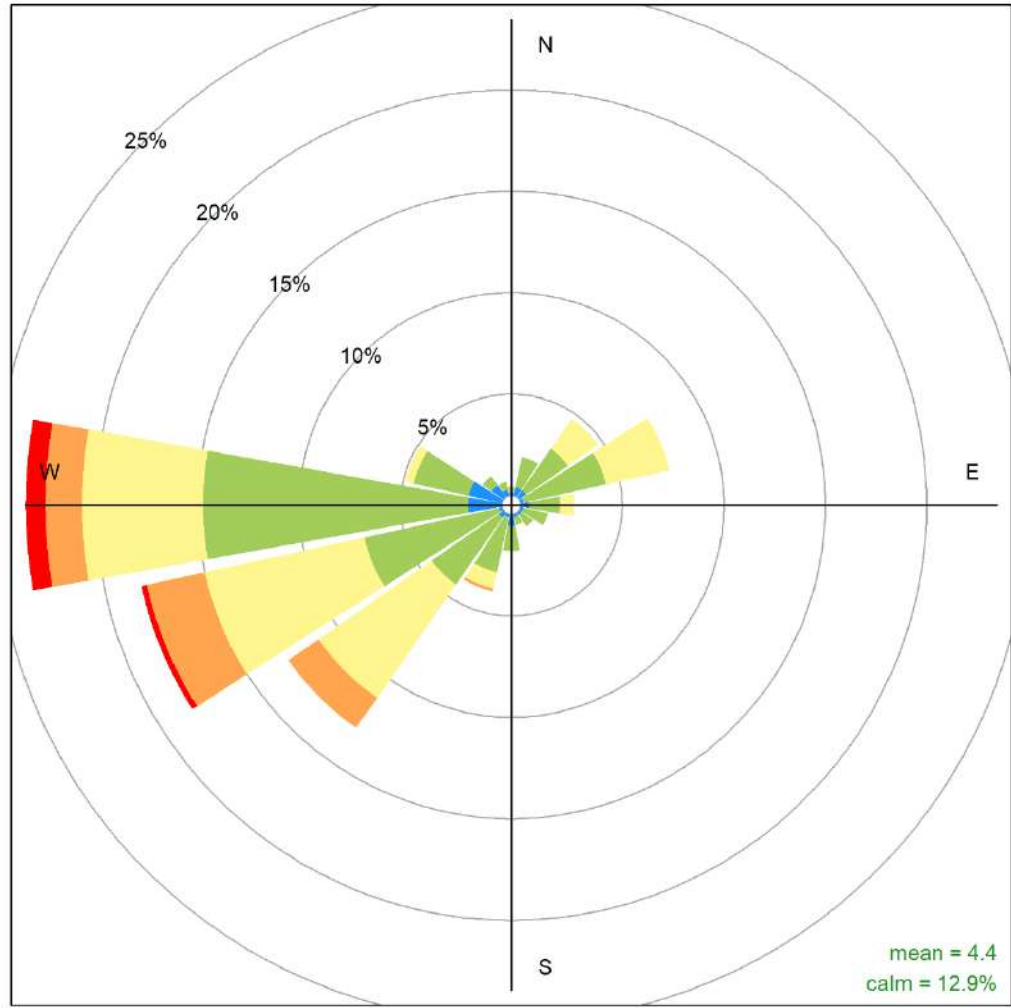


June 2023 Hourly Readings of Wind Speed (in km/hr) at Milner



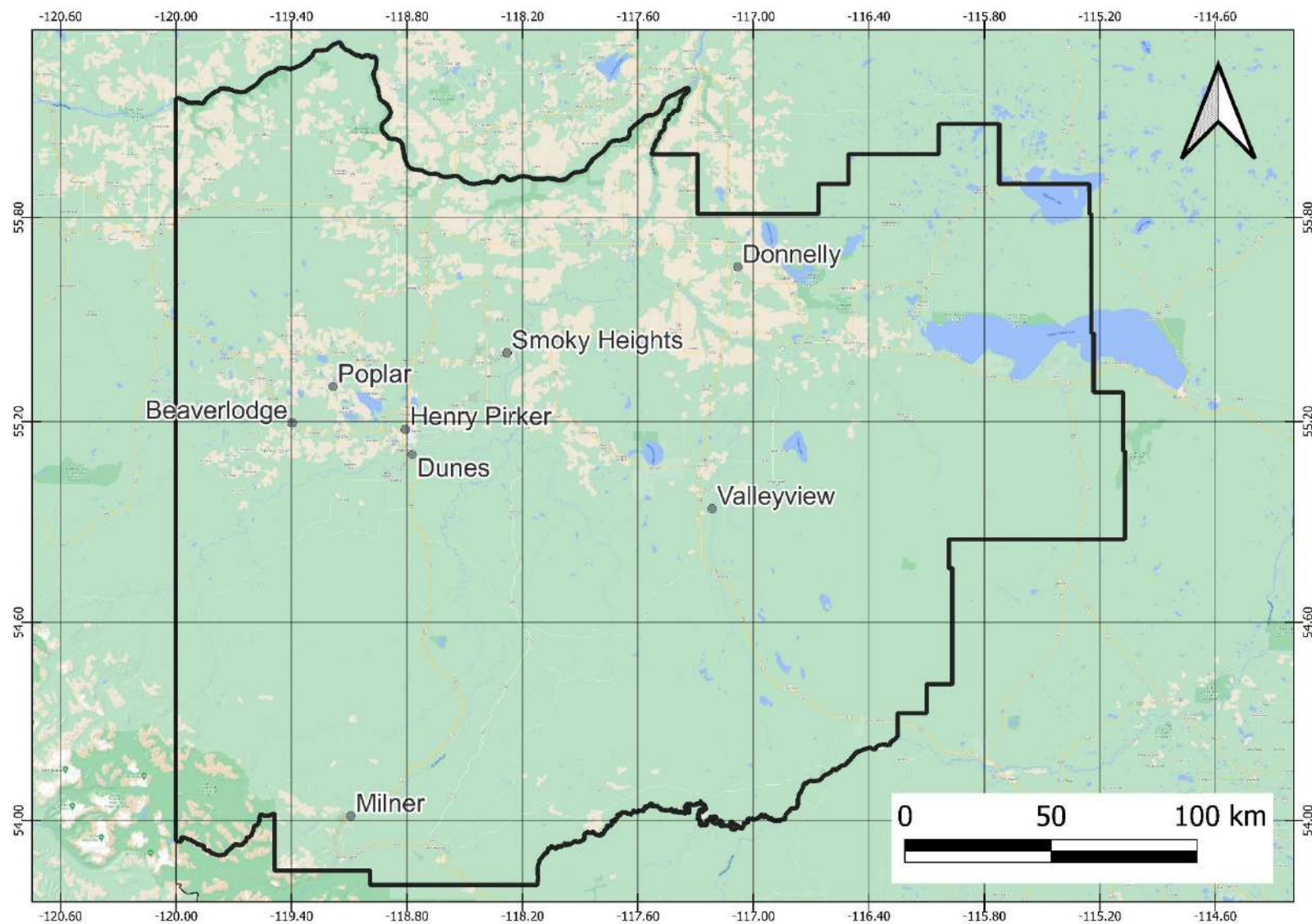
June 2023 Hourly Readings of Wind Direction (in degrees) at Milner



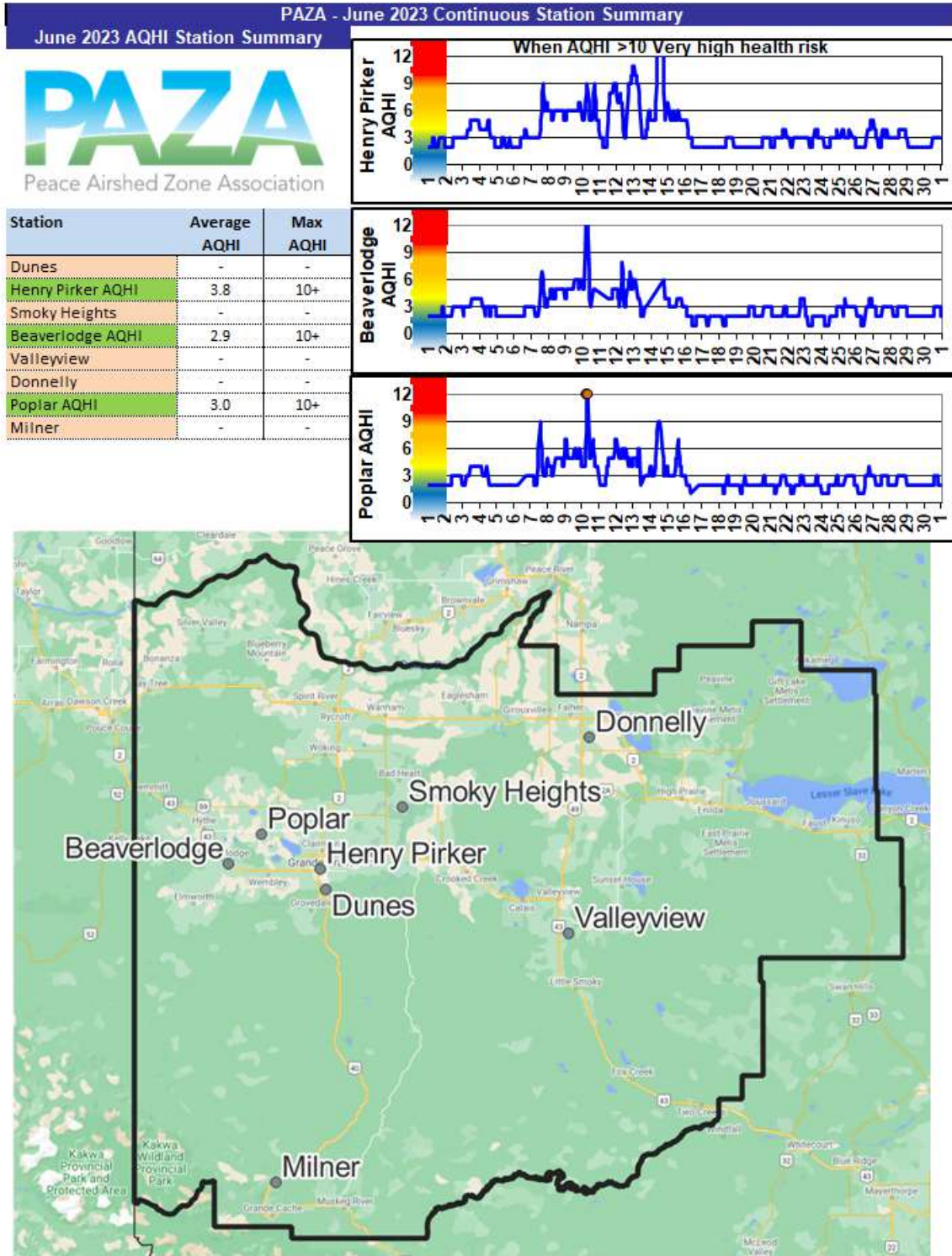


Milner June 2023 Wind Rose, wind speed in km/hr
Frequency of counts by wind direction (%)

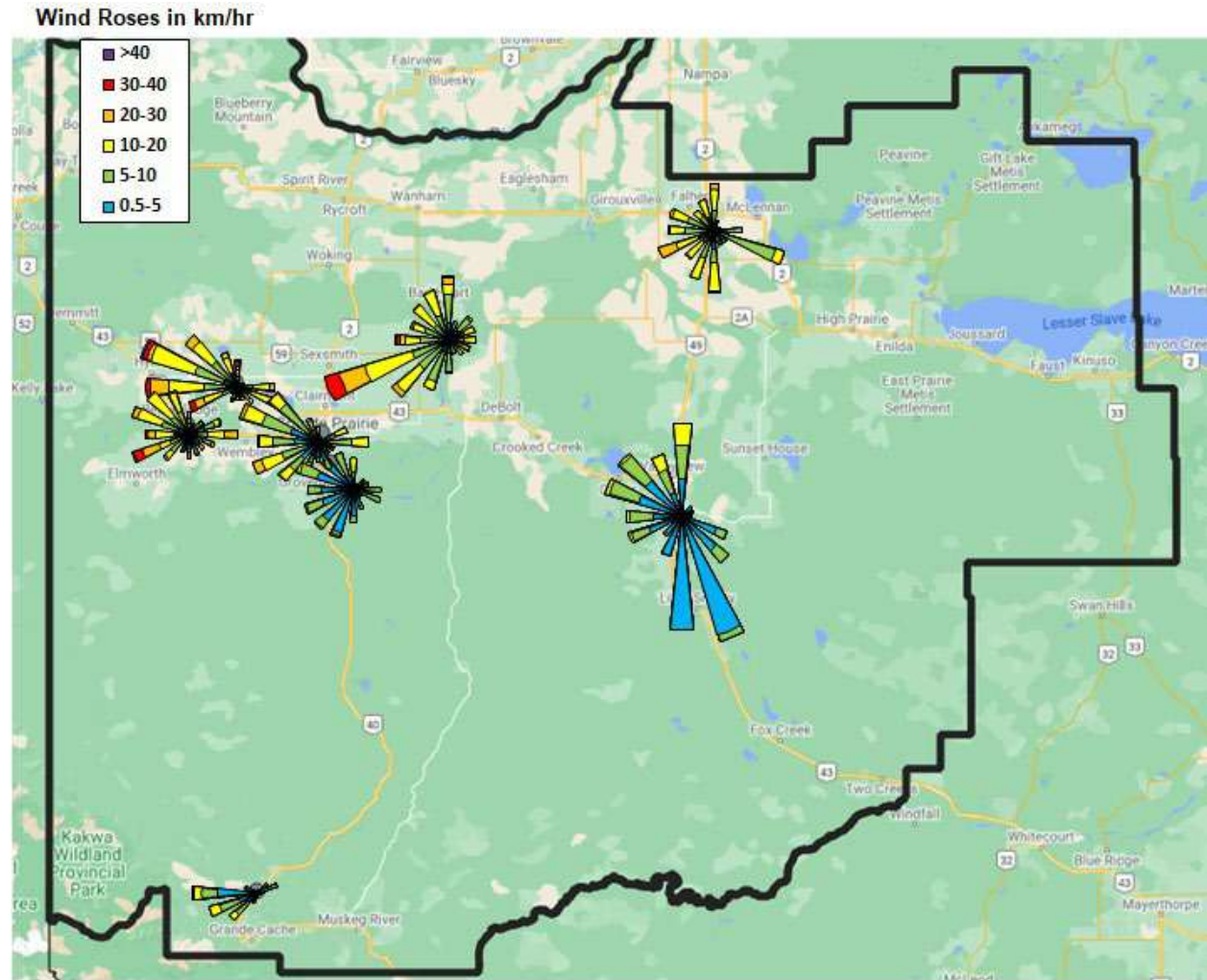
10 Concentration Summaries and Roses for PAZA



10.1 Air Quality Health Index (AQHI) Plots



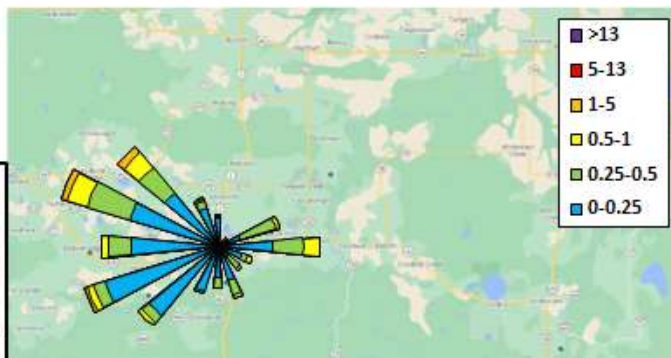
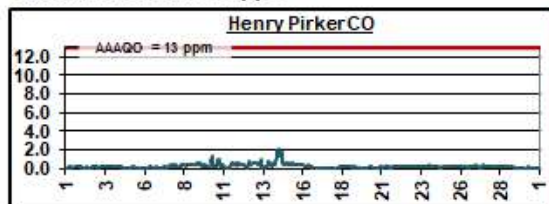
10.2 Wind Roses



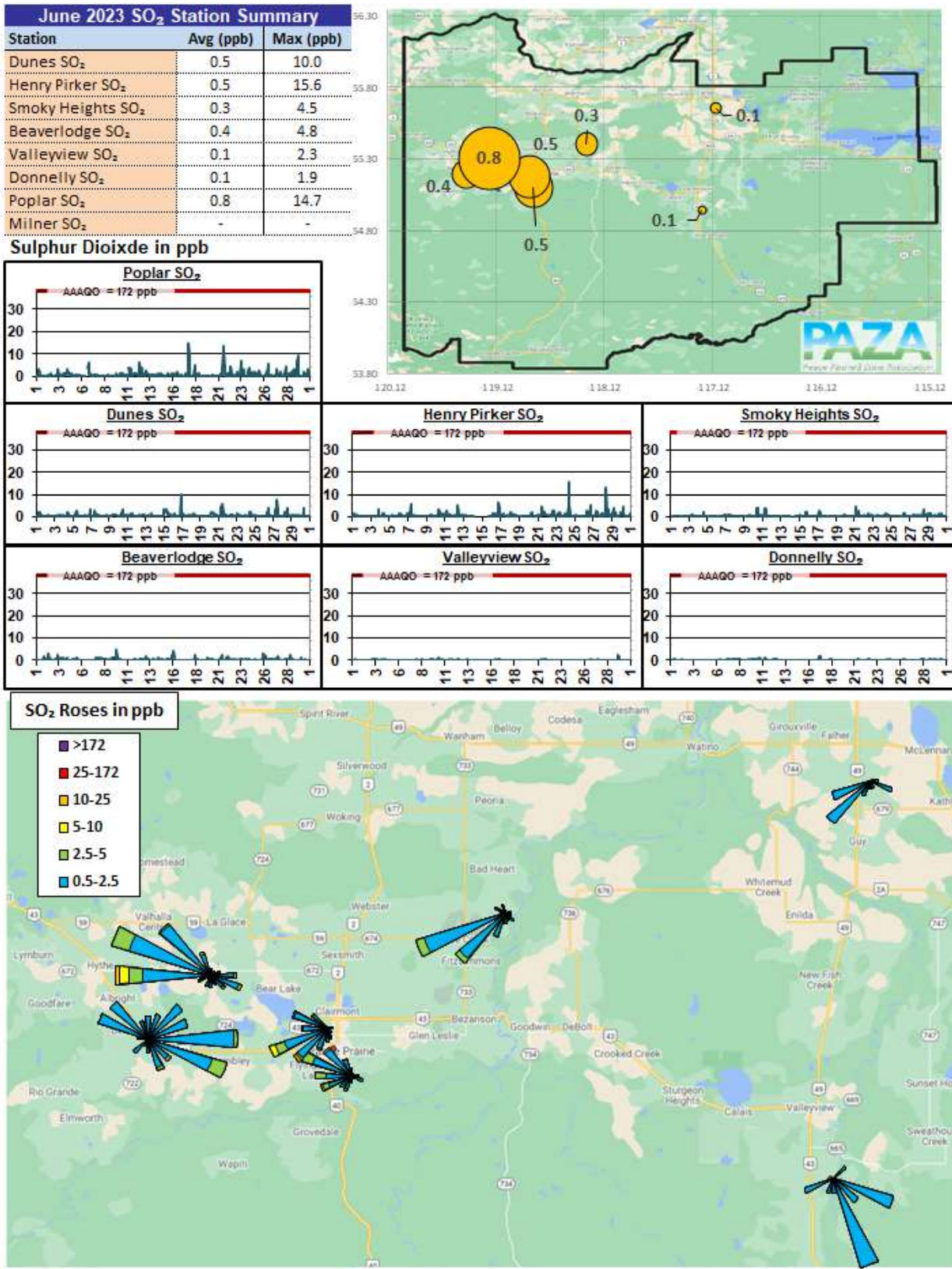
10.3 Carbon Monoxide (CO) Plots

June 2023 CO Station Summary		
Station	Avg (ppm)	Max (ppm)
Henry Pirker CO	0.26	2.15

Carbon Monoxide in ppm



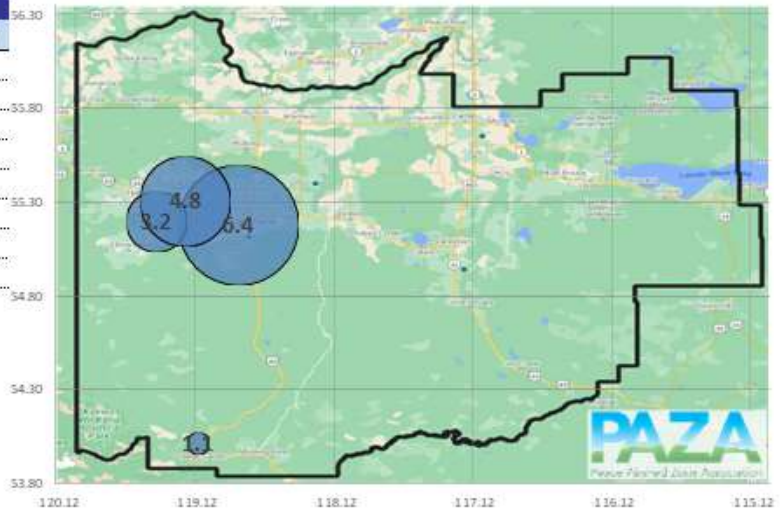
10.4 Sulphur Dioxide (SO₂) Plots



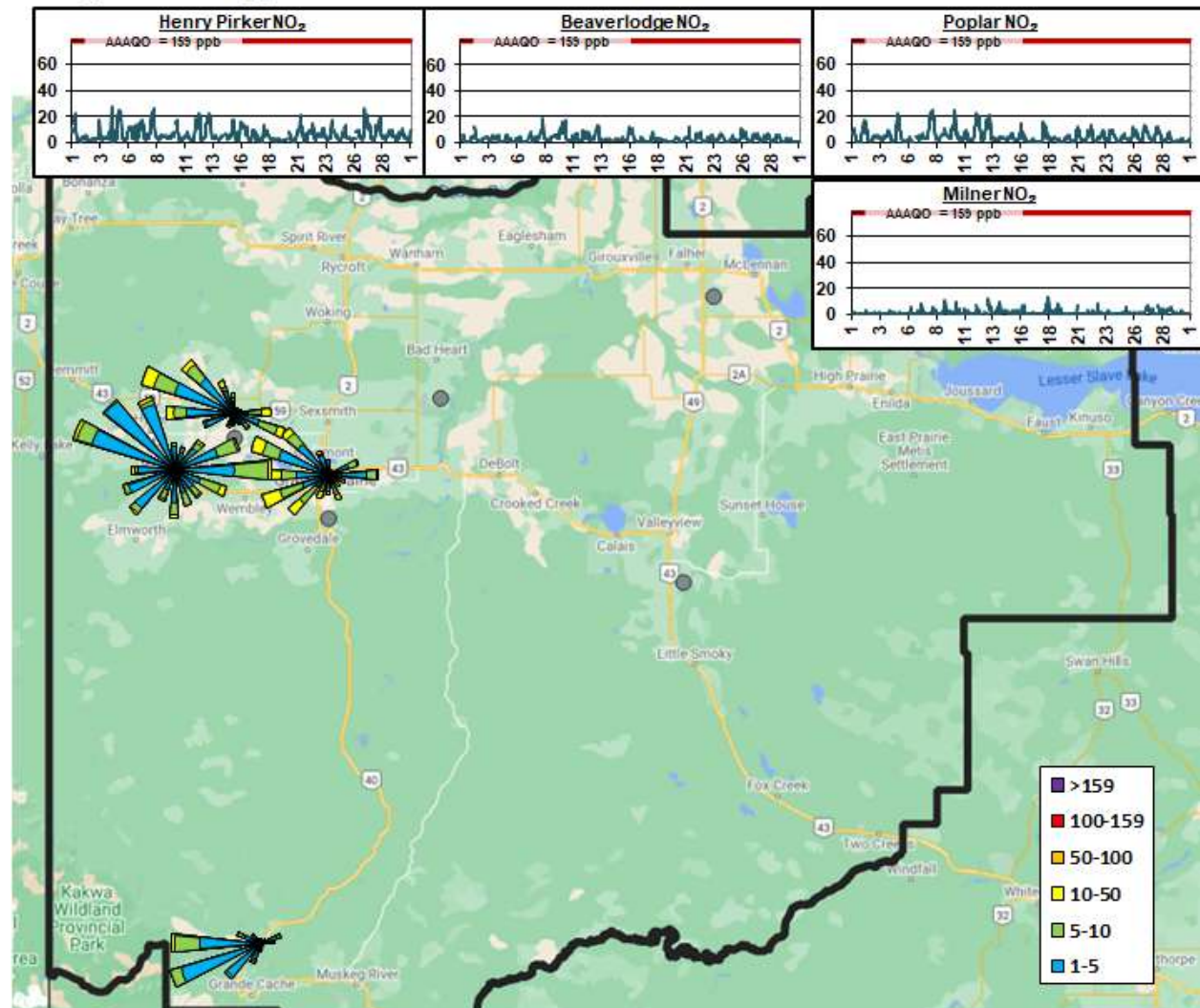
10.5 Nitrogen Dioxide (NO₂) Plots

June 2023 NO₂ Station Summary

Station	Avg (ppb)	Max (ppb)
Dunes NO ₂	-	-
Henry Pirker NO ₂	6.4	27.6
Smoky Heights NO ₂	-	-
Beaverlodge NO ₂	3.2	18.9
Valleyview NO ₂	-	-
Donnelly NO ₂	-	-
Poplar NO ₂	4.8	25.4
Milner NO ₂	1.1	13.2

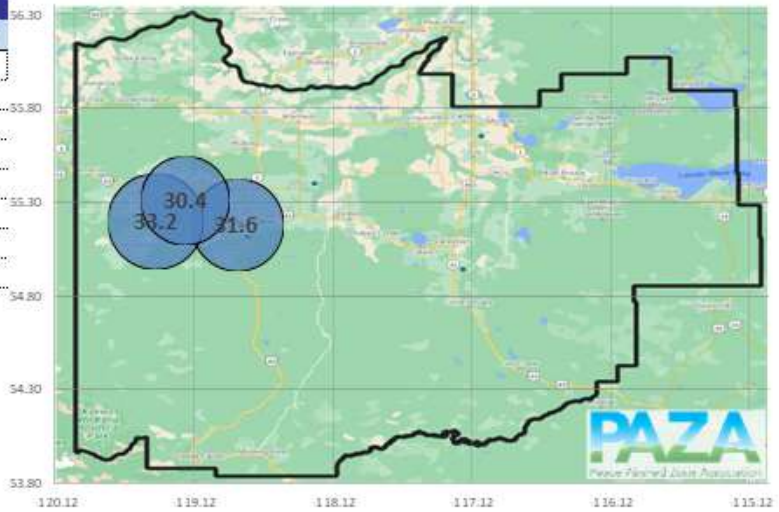


Nitrogen Dioxide in ppb

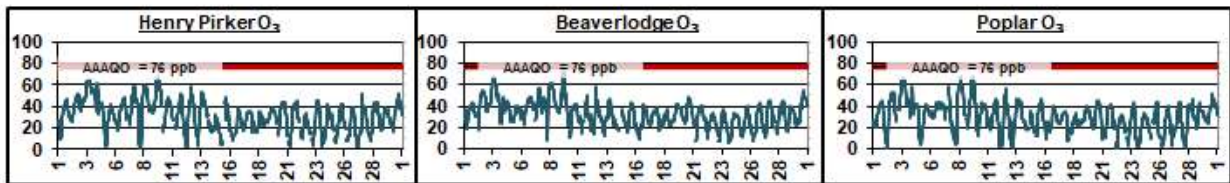


10.6 Ozone (O₃) Plots

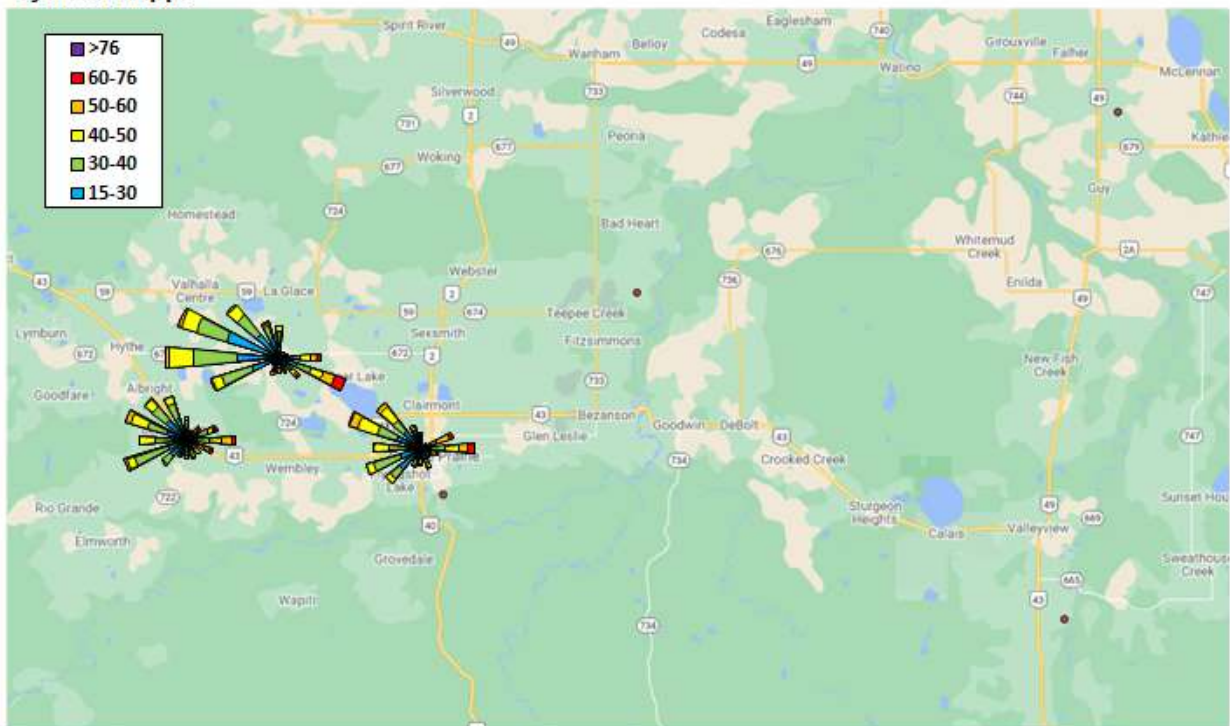
June 2023 O ₃ Station Summary		
Station	Avg (ppb)	Max (ppb)
Dunes O ₃	-	-
Henry Pirker O ₃	31.6	68.5
Smoky Heights O ₃	-	-
Beaverlodge O ₃	33.2	72.1
Valleyview O ₃	-	-
Donnelly O ₃	-	-
Poplar O ₃	30.4	67.9
Milner O ₃	-	-



Ozone in ppb

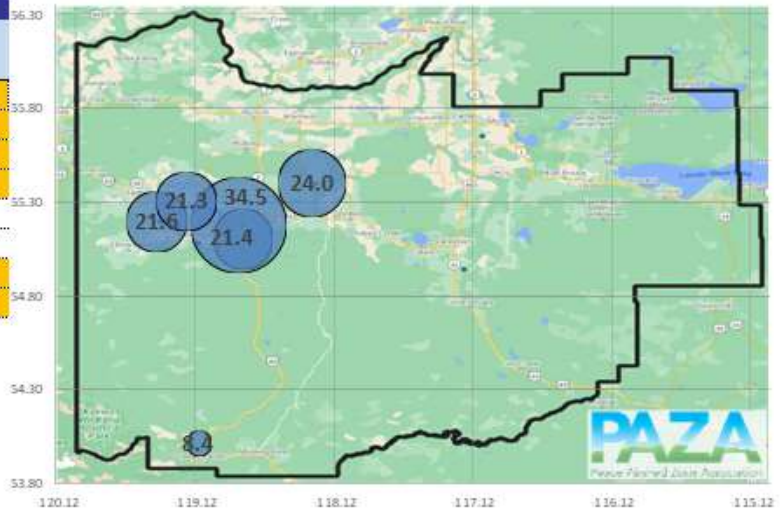


O₃ Roses in ppb

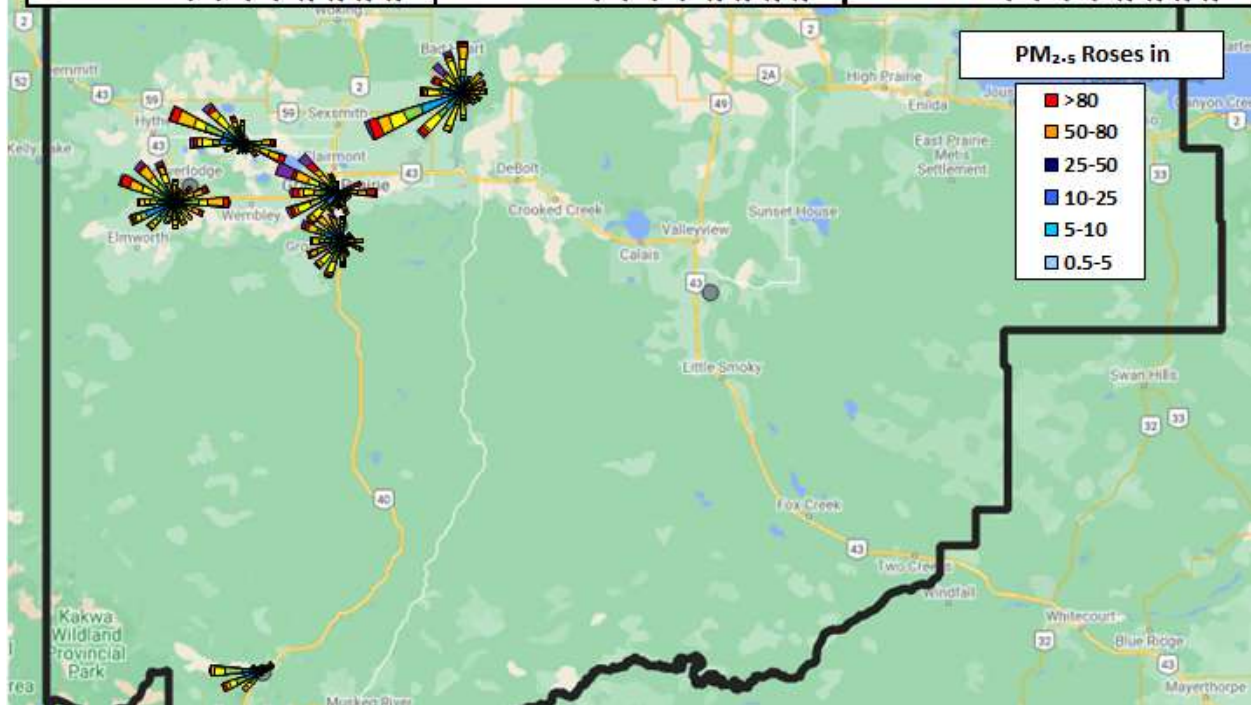
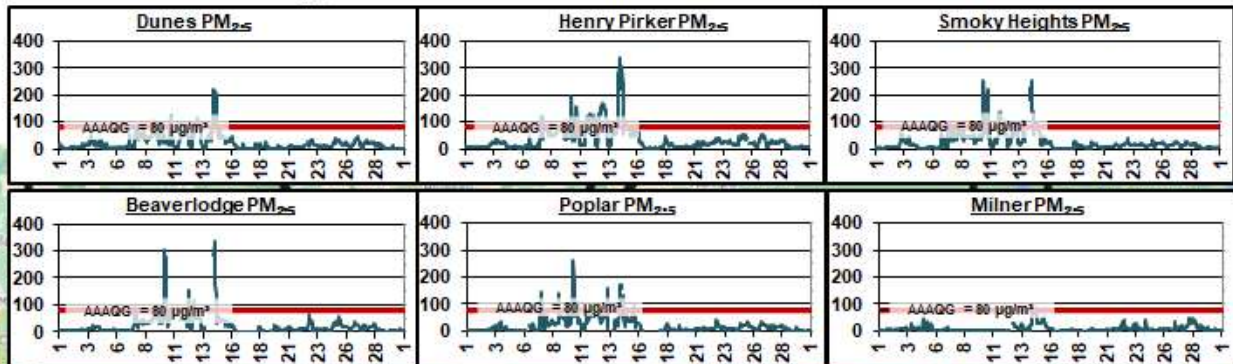


10.7 Fine Particulate Matter (PM_{2.5}) Plots

June 2023 PM _{2.5} Station Summary		
Station	Avg µg/m ³	Max µg/m ³
Dunes PM _{2.5}	21.4	222.9
Henry Pirker PM _{2.5}	34.5	339.6
Smoky Heights PM _{2.5}	24.0	253.6
Beaverlodge PM _{2.5}	21.6	333.9
Valleyview PM _{2.5}	-	-
Donnelly PM _{2.5}	-	-
Poplar PM _{2.5}	21.3	263.7
Milner PM _{2.5}	8.4	86.8

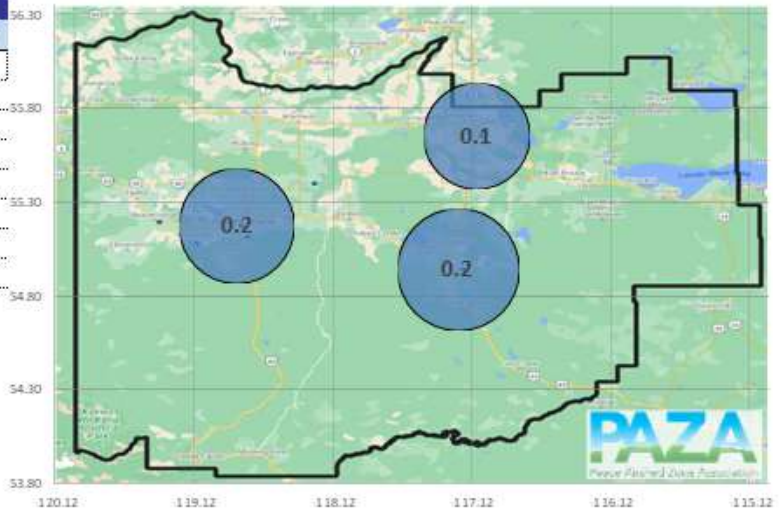


Fine Particulate Matter in µg/m³

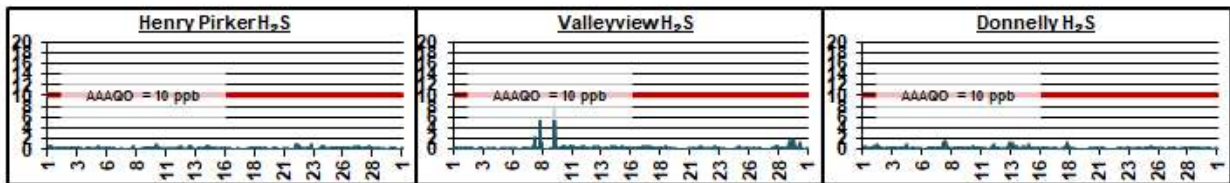


10.8 Hydrogen Sulphide (H₂S) Plots

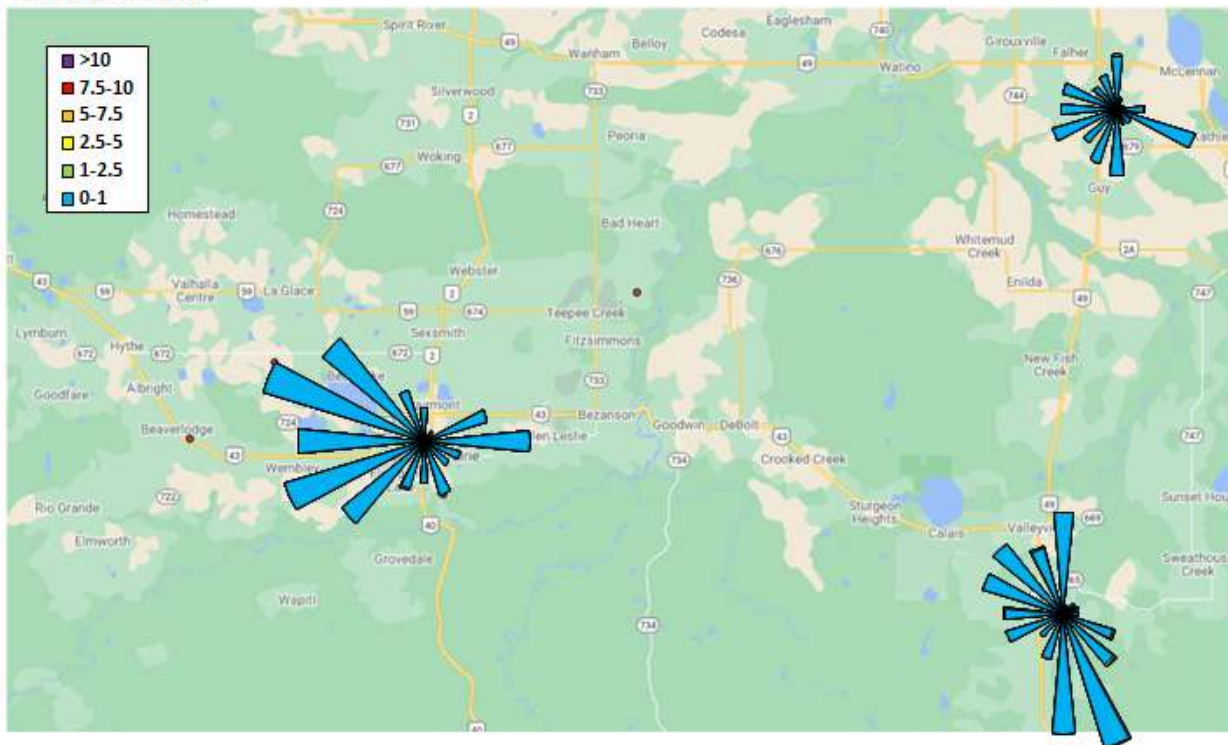
June 2023 H ₂ S Station Summary		
Station	Avg (ppb)	Max (ppb)
Dunes H ₂ S	-	-
Henry Pirker H ₂ S	0.2	1.1
Smoky Heights H ₂ S	-	-
Beaverlodge H ₂ S	-	-
Valleyview H ₂ S	0.2	7.9
Donnelly H ₂ S	0.1	1.4
Poplar H ₂ S	-	-
Milner H ₂ S	-	-



Hydrogen Sulphide in ppb

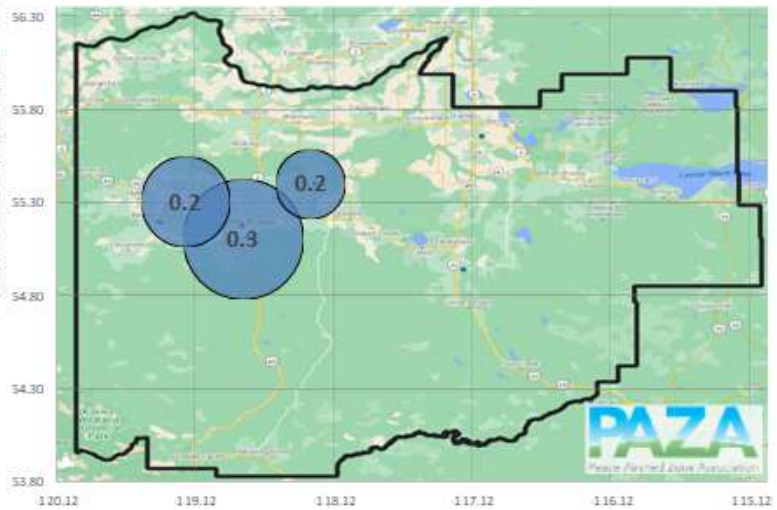


H₂S Roses in ppb

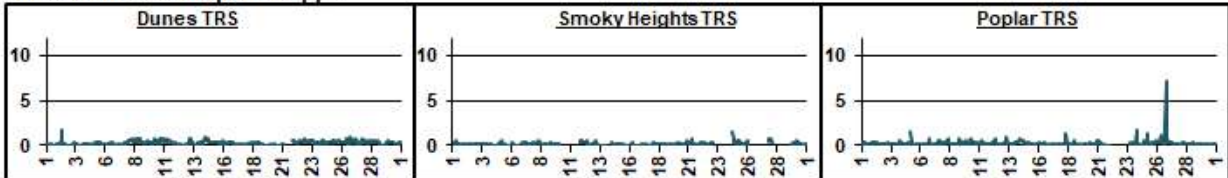


10.9 Total Reduced Sulphur (TRS) Plots

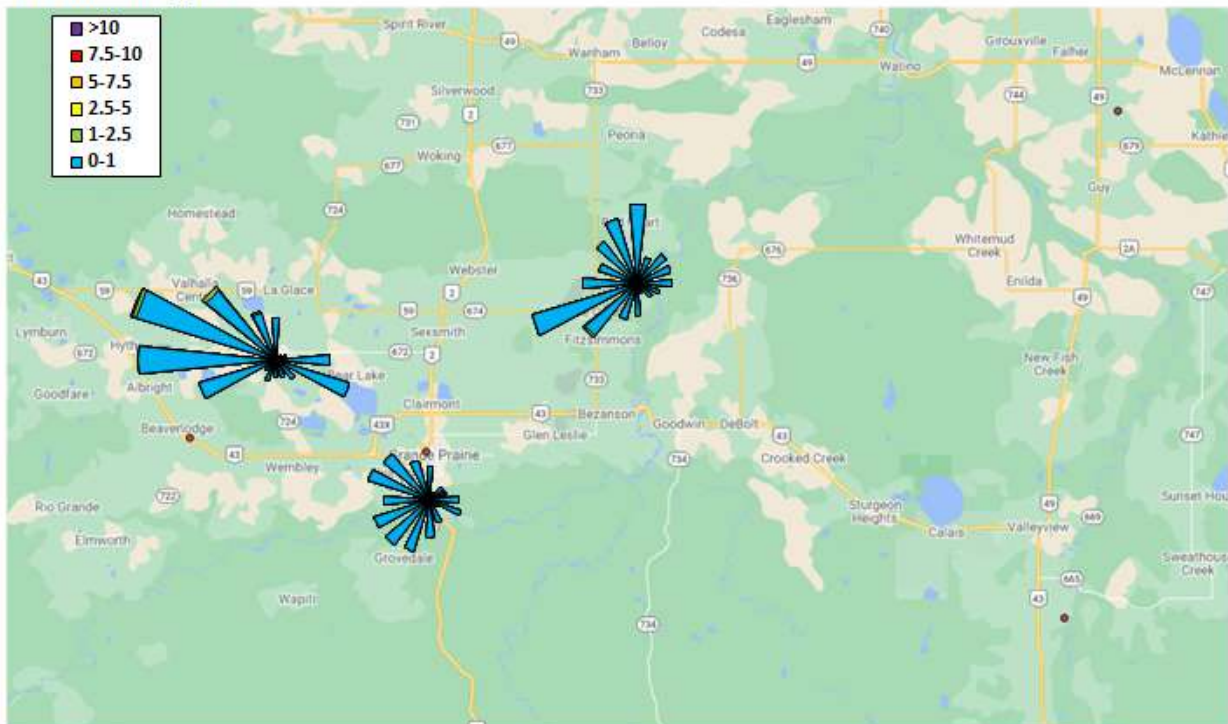
June 2023 TRS Station Summary		
Station	Avg (ppb)	Max (ppb)
Dunes TRS	0.3	1.7
Henry Pirkler TRS	-	-
Smoky Heights TRS	0.2	1.4
Beaverlodge TRS	-	-
Valleyview TRS	-	-
Donnelly TRS	-	-
Poplar TRS	0.2	7.2
Milner TRS	-	-



Total Reduced Sulphur in ppb



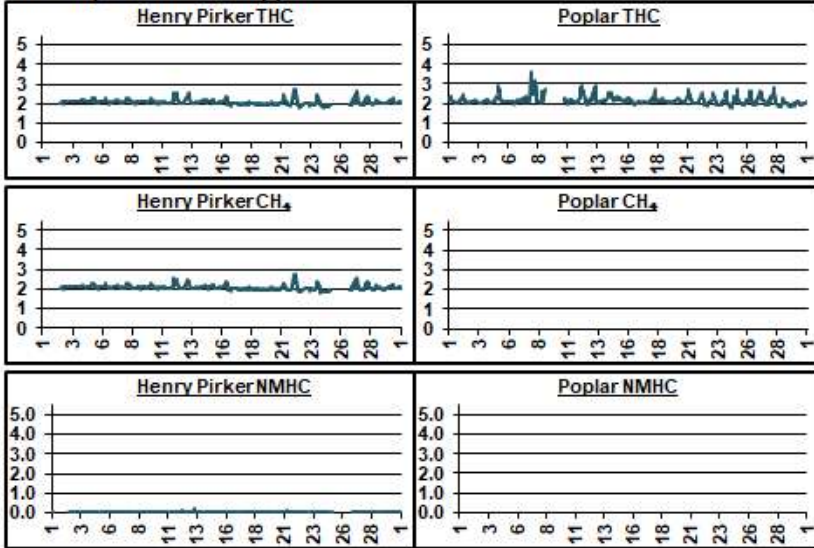
TRS Roses in ppb



10.10 Total Hydrocarbon (THC) Plots

June 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	2.1	2.8	2.1	2.7	0.0	0.2
Smoky Heights THC	-	-	-	-	-	-
Beaverlodge THC	-	-	-	-	-	-
Valleyview THC	-	-	-	-	-	-
Donnelly THC	-	-	-	-	-	-
Poplar THC	2.2	3.7	-	-	-	-

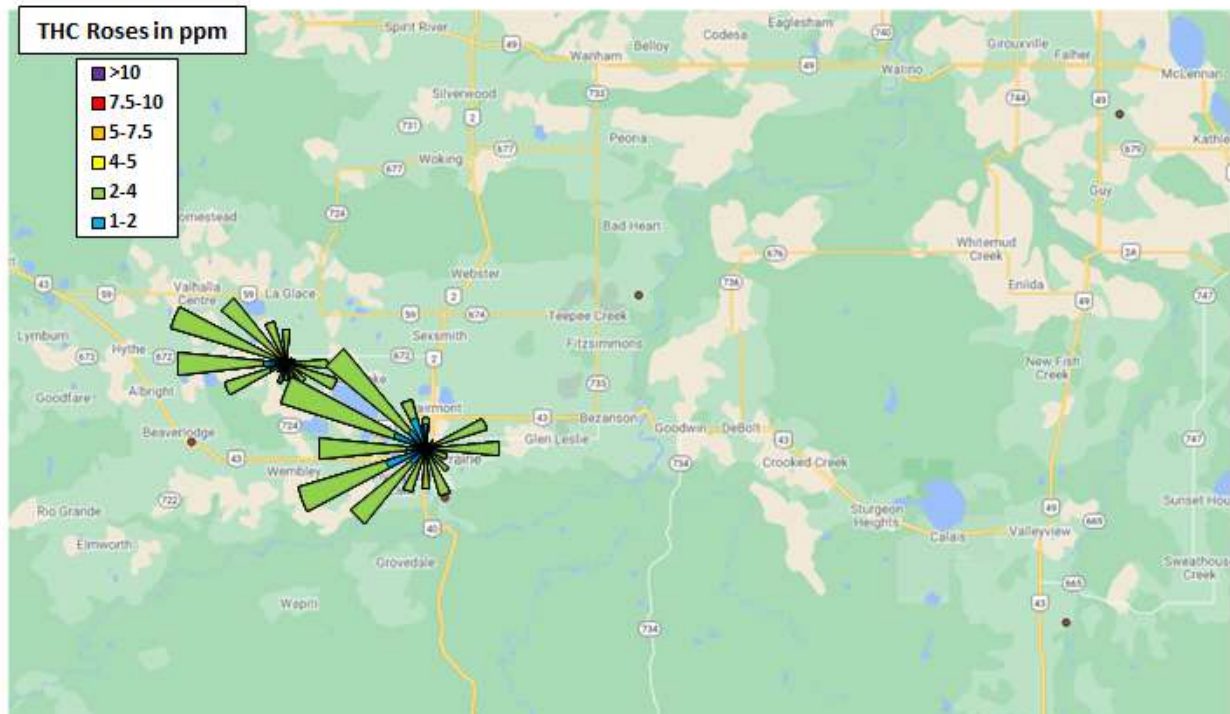
Total Hydrocarbons in ppm



Total Hydrocarbons (THC)

Methane (CH₄)

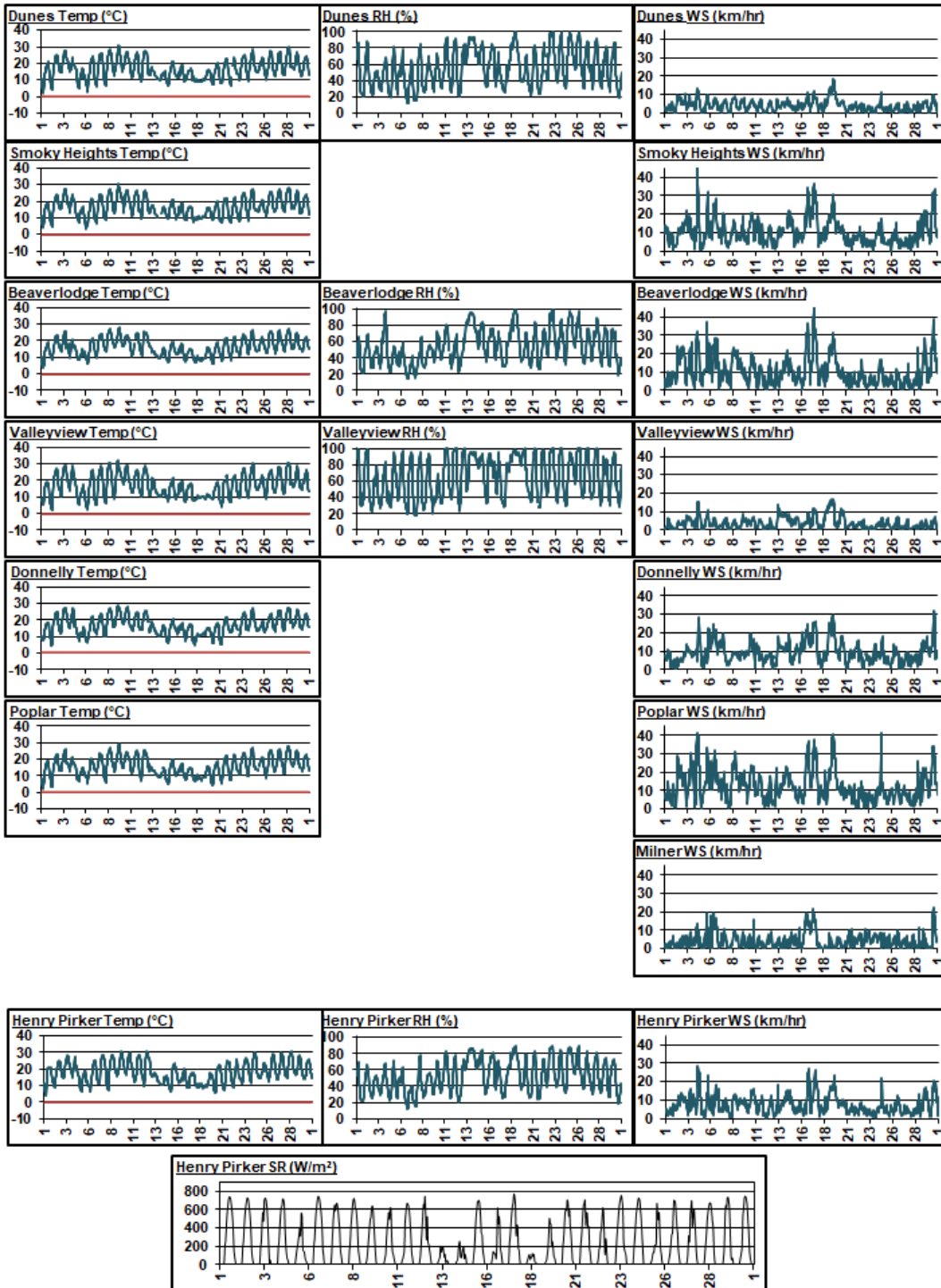
Non-Methane Hydrocarbons (NMHC)



10.11 Meteorology Summary

June 2023 Meteorological Summary						
Station	Temp (°C)	RH (%)	SR (W/m ²)	WS (km/hr)	WD (deg)	WD
Dunes	16.7	56.1	-	4.3	290	WNW
Henry Pirker	18.0	52.4	212.8	7.7	277	W
Smoky Heights	16.6	-	-	10.6	264	W
Beaverlodge	16.2	54.8	-	10.8	286	WNW
Valleyview	16.9	66.2	-	3.9	303	WNW
Donnelly	16.8	-	-	9.7	247	WSW
Poplar	15.8	-	-	12.7	291	WNW
Milner	-	-	-	4.5	250	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 2023

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	LSD
Duplicates						
5a	Boone Creek	0.3				01-23-076-11 W6M
5b	Boone Creek	0.3				
11a	Webber Creek			2.1		09-36-074-09 W6M
11b	Webber Creek			2.0		
18a	Saddle Hills	0.3				04-25-074-07 W6M
18b	Saddle Hills	0.3				
19a	Wanham			1.0		16-22-077-03 W6M
19b	Wanham			0.9		
30a	Fitzsimmons			0.8		15-36-072-03 W6M
30b	Fitzsimmons			0.8		
37a	Crooked Creek	0.2				16-01-071-26 W5M
37b	Crooked Creek	0.2				
47a	Kinuso		27.5	0.5		12-10-073-10 W5M
47b	Kinuso		27.5	0.5		
48a	Deer Mountain	0.1				15-22-068-09 W5M
48b	Deer Mountain	0.1				
G4a	Girouxville 4				0.62	04-08-077-22 W5M
G4b	Girouxville 4				0.53	
D1a	Duvernay 1	0.2			0.09	
D1b	Duvernay 1	0.3			0.13	
K1a	Kakwa 1	0.3				01-13-063-05 W6M
K1b	Kakwa 1	0.3				
K3a	Kakwa 3				0.06	12-18-063-04 W6M
K3b	Kakwa 3				0.08	
K4a	Kakwa 4			3.4		06-18-063-04 W6M
K4b	Kakwa 4			2.8		
M9Ba	Milner Ambient Trailer	0.1				09-15-058-08 W6M
M9Bb	Milner Ambient Trailer	<0.1				
M5a	Milner Bridge			0.4		08-06-057-08 W6M
M5b	Milner Bridge			0.4		
J3a	Jayar3 Bone Yard			1.5		14-08-062-03 W6M
J3b	Jayar3 Bone Yard			1.8		
J4a	Jayar4 7-8 or 8-8 Pad	0.6				10-08-062-03 W6M
J4b	Jayar4 7-8 or 8-8 Pad	0.7				
J5a	Jayar5 Camp				0.14	11-08-062-03 W6M
J5b	Jayar5 Camp				0.14	

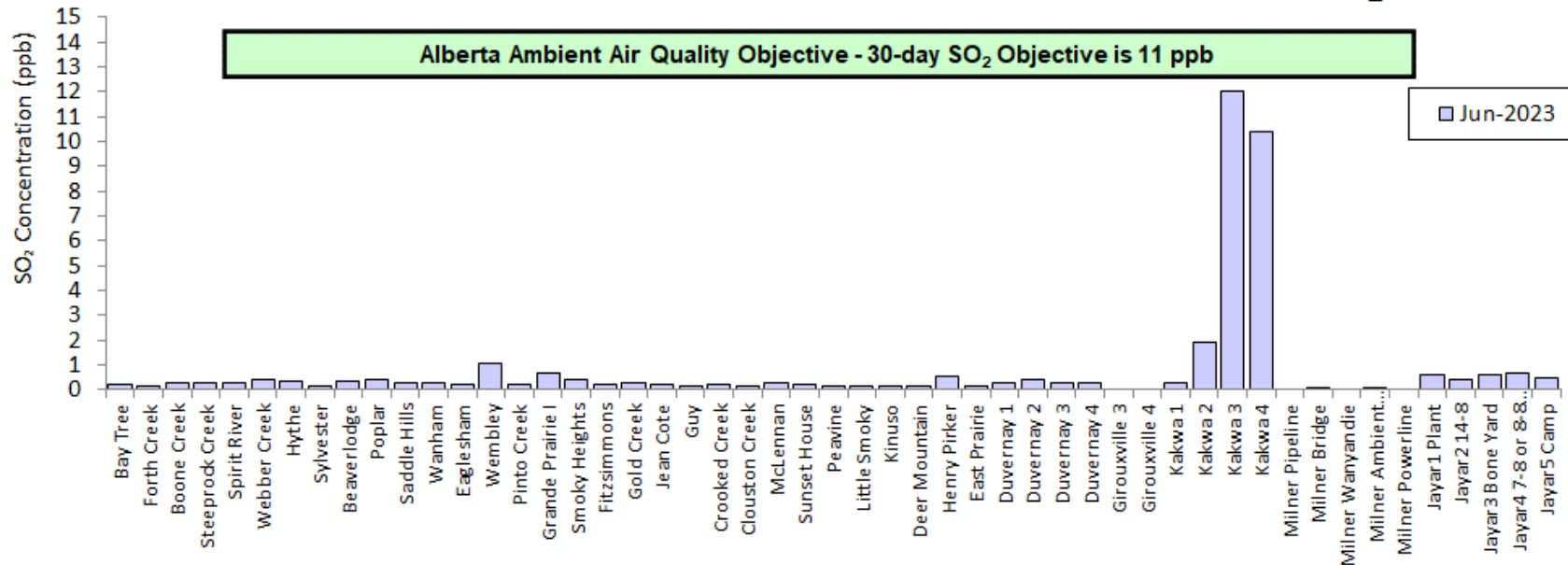
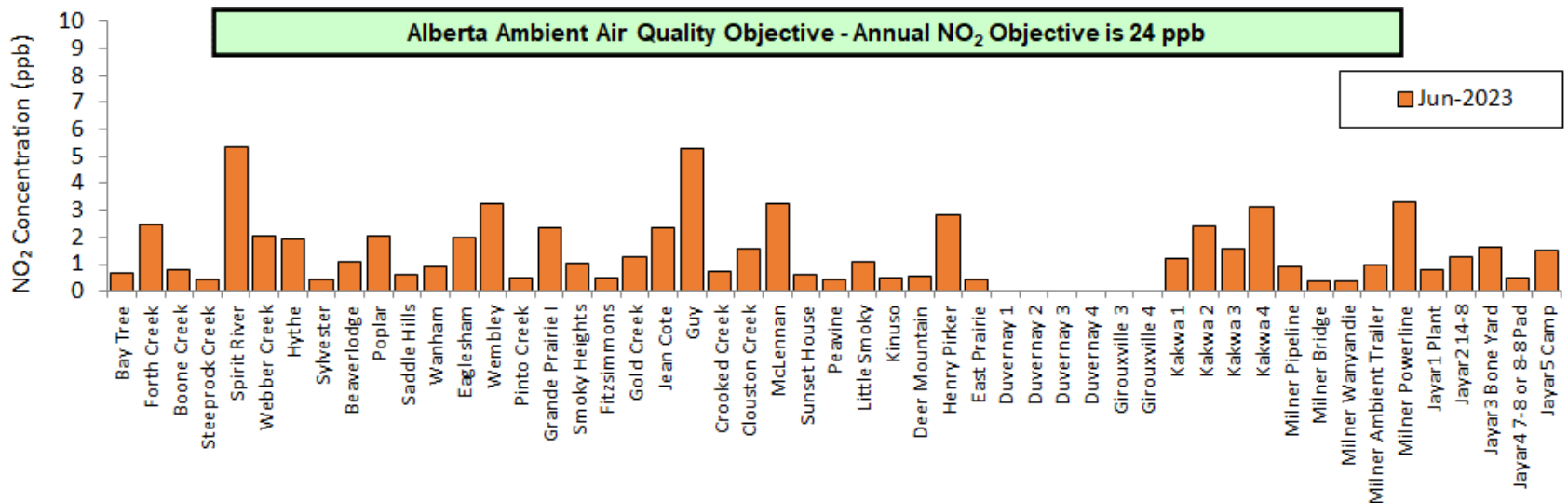
Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	H2S ppb	LSD
2	Bay Tree	0.2	31.7	0.7	-	13-16-078-13 W6M
3	Forth Creek	0.2	-	2.5	-	04-13-082-07 W6M
5	Boone Creek	0.3	-	0.8	-	01-23-076-11 W6M
7	Steepprock Creek	0.3	-	0.4	-	09-35-072-13 W6M
9	Spirit River	0.3	-	5.3	-	08-12-079-07 W6M
11	Webber Creek	0.4	-	2.1	-	09-36-074-09 W6M
12	Hythe	0.4	-	1.9	-	14-36-072-11 W6M
14	Sylvester	0.2	-	0.5	-	08-06-069-12 W6M
16	Beaverlodge	0.4	-	1.1	-	15-36-071-10 W6M
17	Poplar	0.4	-	2.0	-	13-06-073-08 W6M
18	Saddle Hills	0.3	-	0.6	-	04-25-074-07 W6M
19	Wanham	0.3	-	0.9	-	16-22-077-03 W6M
21	Eaglesham	0.2	-	2.0	-	16-21-079-25 W5M
24	Wembley	1.1	-	3.2	-	12-31-070-08 W6M
25	Pinto Creek	0.2	-	0.5	-	04-24-069-11 W6M
27	Grande Prairie I	0.7	-	2.3	-	08-15-071-06 W6M
29	Smoky Heights	0.4	-	1.1	-	04-06-075-02 W6M
30	Fitzsimmons	0.2	-	0.5	-	15-36-072-03 W6M
32	Gold Creek	0.3	-	1.3	-	06-33-067-05 W6M
35	Jean Cote	0.2	-	2.3	-	12-35-079-21 W5M
36	Guy	0.2	-	5.3	0.26	03-04-076-22 W5M
37	Crooked Creek	0.2	30.4	0.7	-	16-01-071-26 W5M
39	Clouston Creek	0.2	-	1.6	-	12-01-073-22 W5M
40	McLennan	0.3	-	3.3	-	03-29-077-19 W5M
42	Sunset House	0.2	-	0.6	-	05-32-070-19 W5M
44	Peavine	0.1	-	0.4	-	03-05-079-15 W5M
46	Little Smoky	0.2	-	1.1	-	12-01-065-21 W5M
47	Kinuso	0.1	27.5	0.5	-	12-10-073-10 W5M
48	Deer Mountain	0.1	-	0.5	-	15-22-068-09 W5M
49	Henry Pirker	0.6	-	2.8	-	17-26-071-06 W6M
50	East Prairie	0.2	-	0.4	-	11-13-079-08 W6M
D1	Duvernay 1	0.3	-	-	0.11	04-33-062-20 W5M
D2	Duvernay 2	0.4	-	-	0.13	04-33-062-20 W5M
D3	Duvernay 3	0.3	-	-	0.14	04-33-062-20 W5M
D4	Duvernay 4	0.3	-	-	0.12	04-33-062-20 W5M
G3	Girouxville 3	-	-	-	0.59	14-02-077-23 W5M
G4	Girouxville 4	-	-	-	0.57	04-08-077-22 W5M
K1	Kakwa 1	0.3	-	1.2	0.05	01-13-063-05 W6M
K2	Kakwa 2	1.9	-	2.4	0.05	08-13-063-05 W6M
K3	Kakwa 3	12.0	-	1.6	0.07	12-18-063-04 W6M
K4	Kakwa 4	10.4	-	3.1	0.09	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	-	0.4	-	11-13-058-08 W6M
M4	Milner Ambient Trailer	0.1	-	1.0	-	09-15-058-08 W6M
M5	Milner Powerline	<0.1	-	3.3	-	06-14-058-08 W6M
J1	Jayar1 Plant	0.6	-	0.8	0.08	06-08-062-03 W6M
J2	Jayar2 14-8	0.4	-	1.3	0.11	07-08-062-03 W6M
J3	Jayar3 Bone Yard	0.6	-	1.7	0.07	14-08-062-03 W6M
J4	Jayar4 7-8 or 8-8 Pad	0.7	-	0.5	0.14	10-08-062-03 W6M
J5	Jayar5 Camp	0.5	-	1.5	0.14	11-08-062-03 W6M

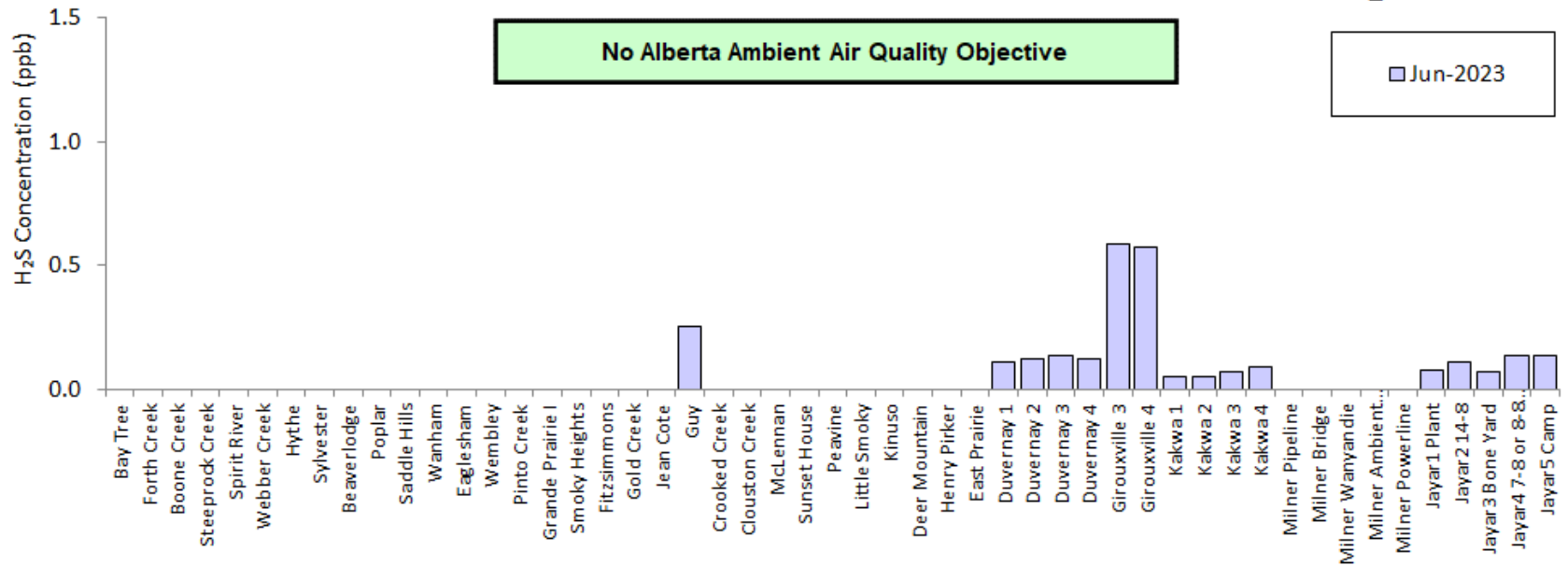
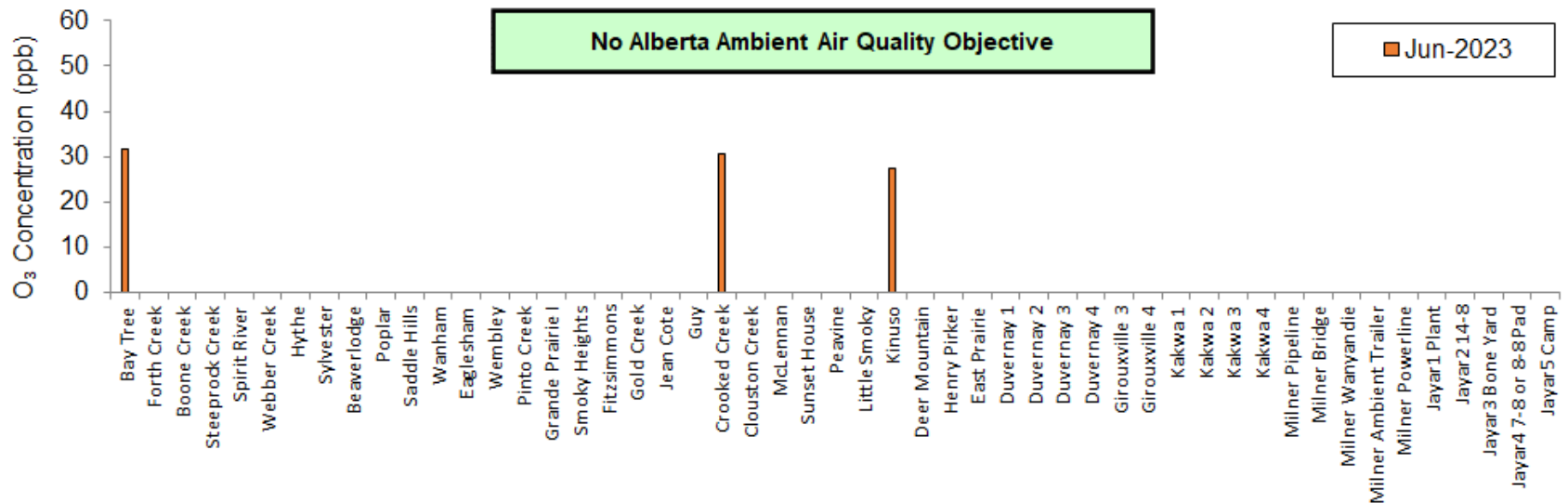
Passive Summary for June 2023

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

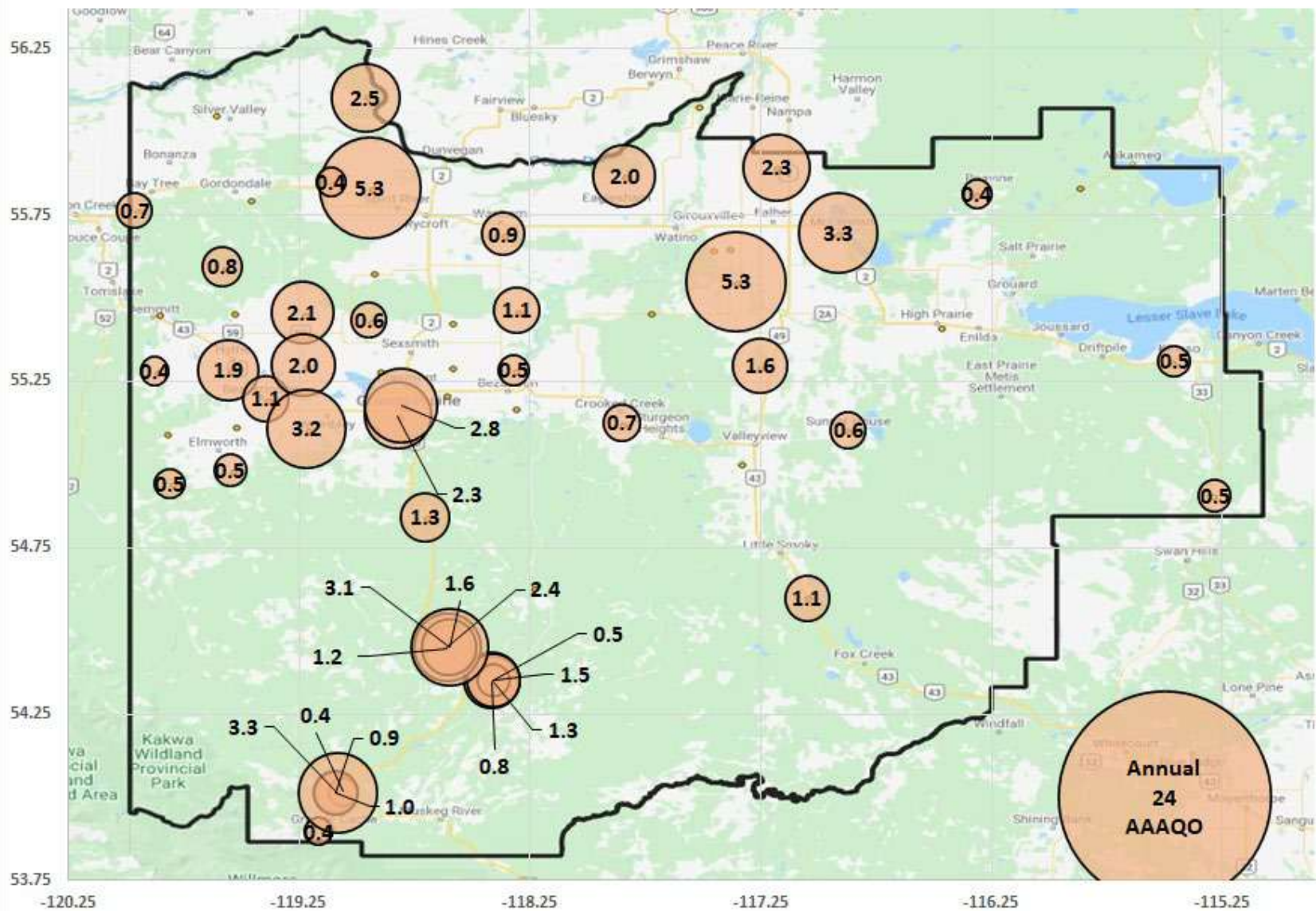
Passive Summary for June 2023 (PAZA)				
Mean	0.8	29.9	1.5	0.2
Standard Deviation	2.3	2.1	1.2	0.2
Minimum	0.1	27.5	0.4	0.1
Maximum	Milner Bridge (#M2)	Kinuso (#47)	Milner Bridge (#M2)	Kakwa 1 (#K1)
	12.0 Kakwa 3 (#K3)	31.7 Bay Tree (#2)	5.3 Spirit River (#9)	0.6 Girouxville 3 (#G3)

Continuous and Passive Monitoring Comparision				
PAZA Beaverlodge Station	0.4	33.2	3.2	-
Beaverlodge Passive (#16)	0.4	-	1.1	-
PAZA Henry Pirker Station	0.5	31.6	6.4	0.2
Henry Pirker passive (#49)	0.6	-	2.8	-
Milner Station	-	-	1.1	-
Milner passive (M4)	0.1	-	1.0	-

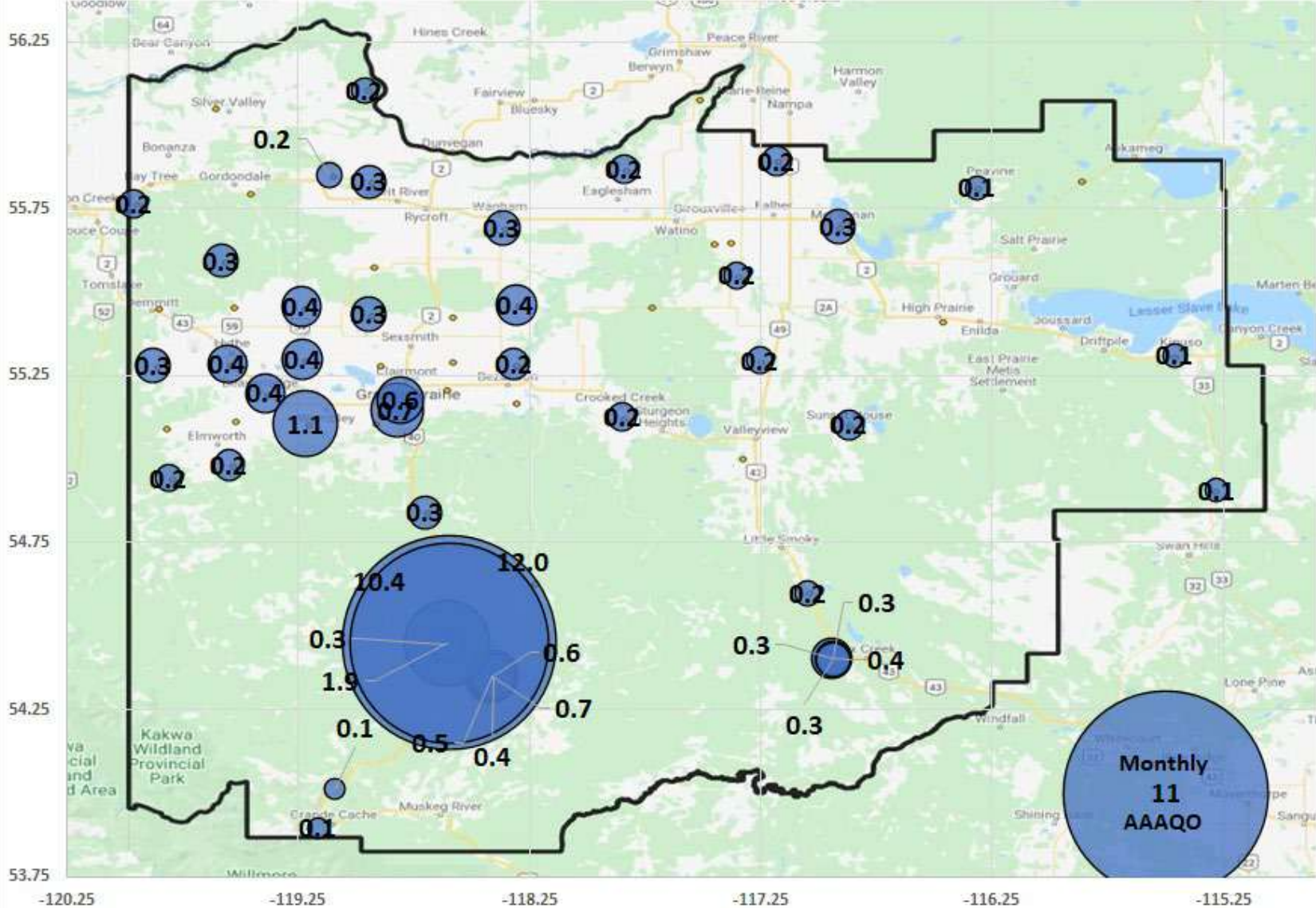




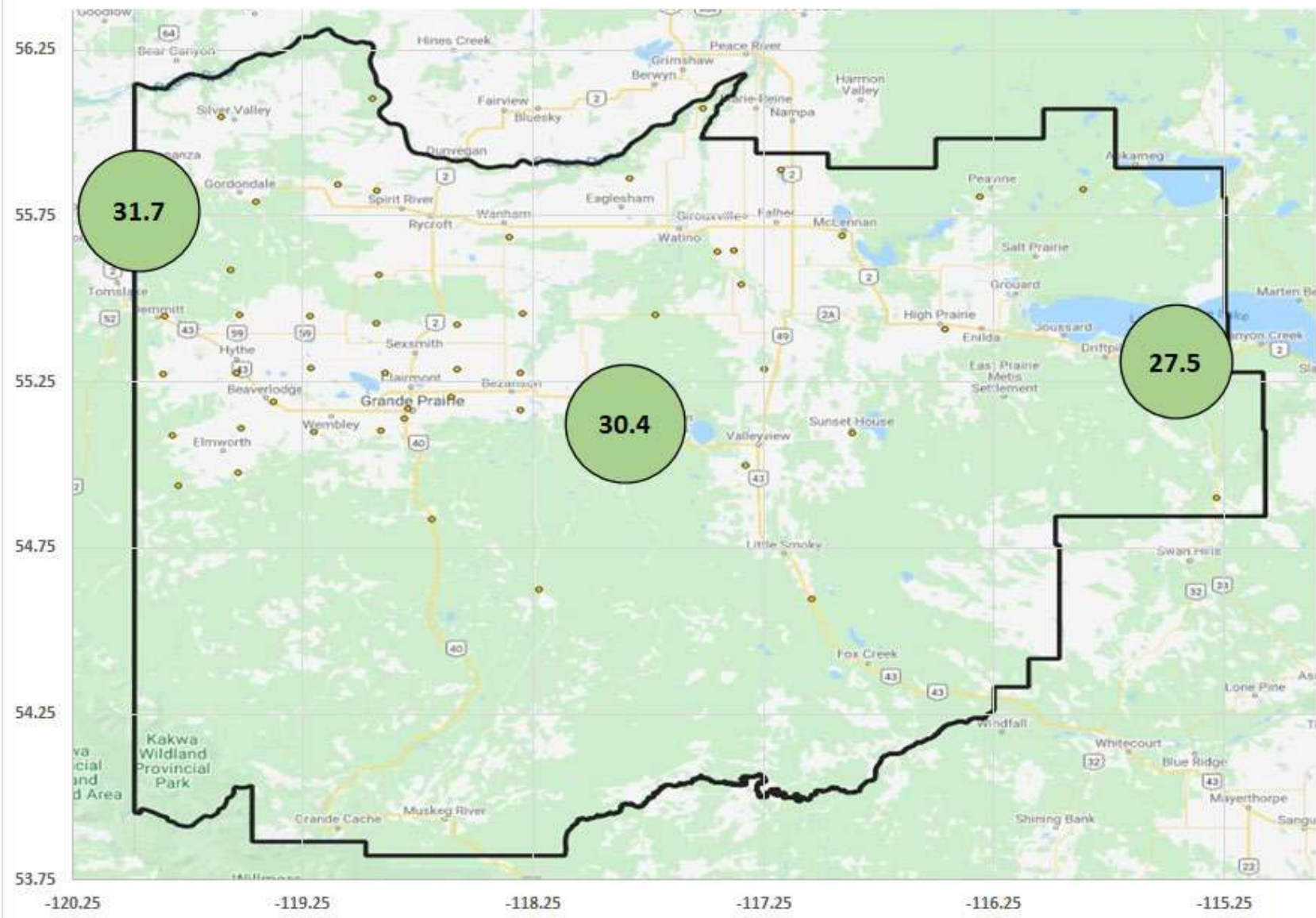
NO₂ Monthly Average (units in ppb)



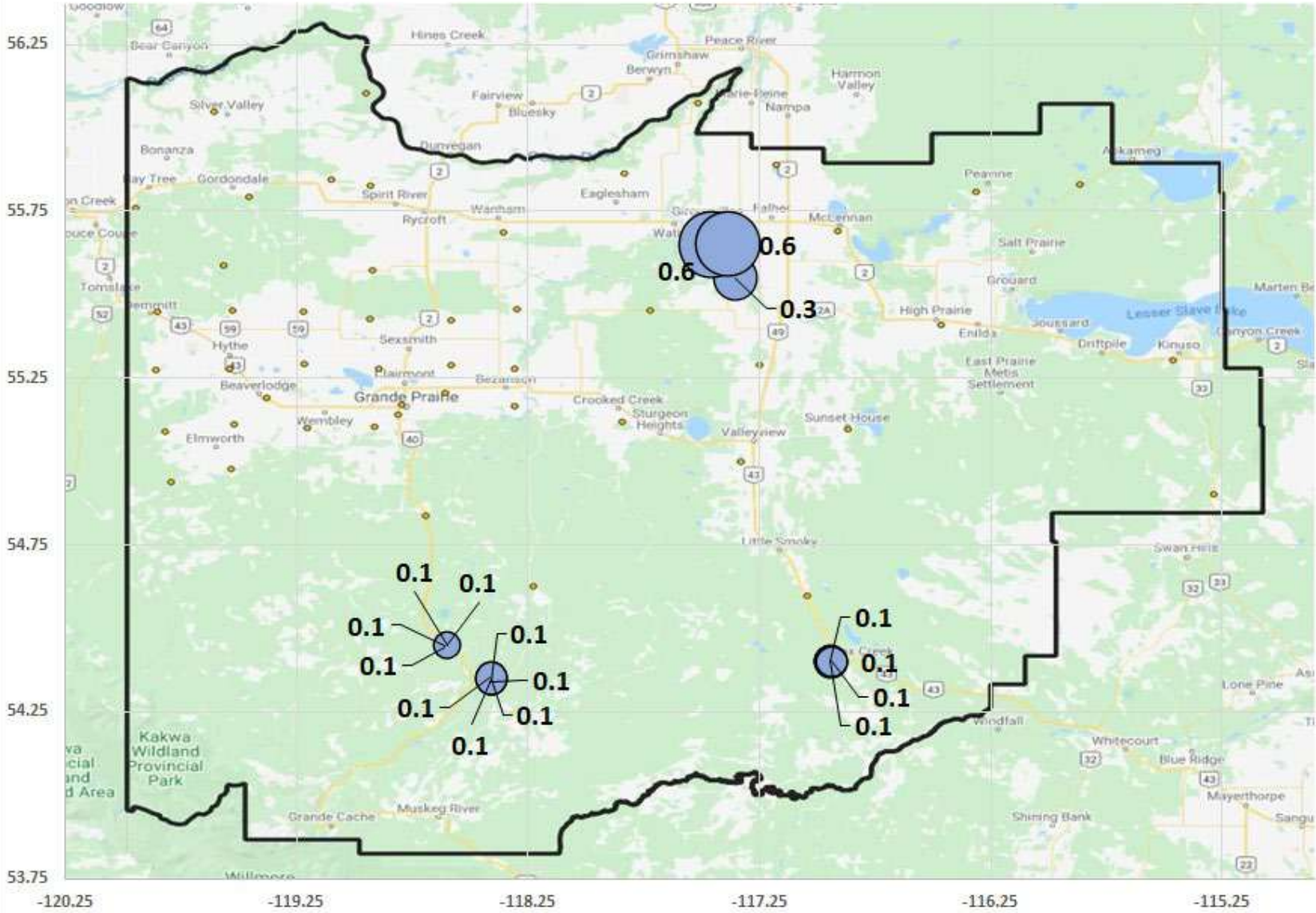
SO₂ Monthly Average (units in ppb)



O₃ Monthly Average (units in ppb)



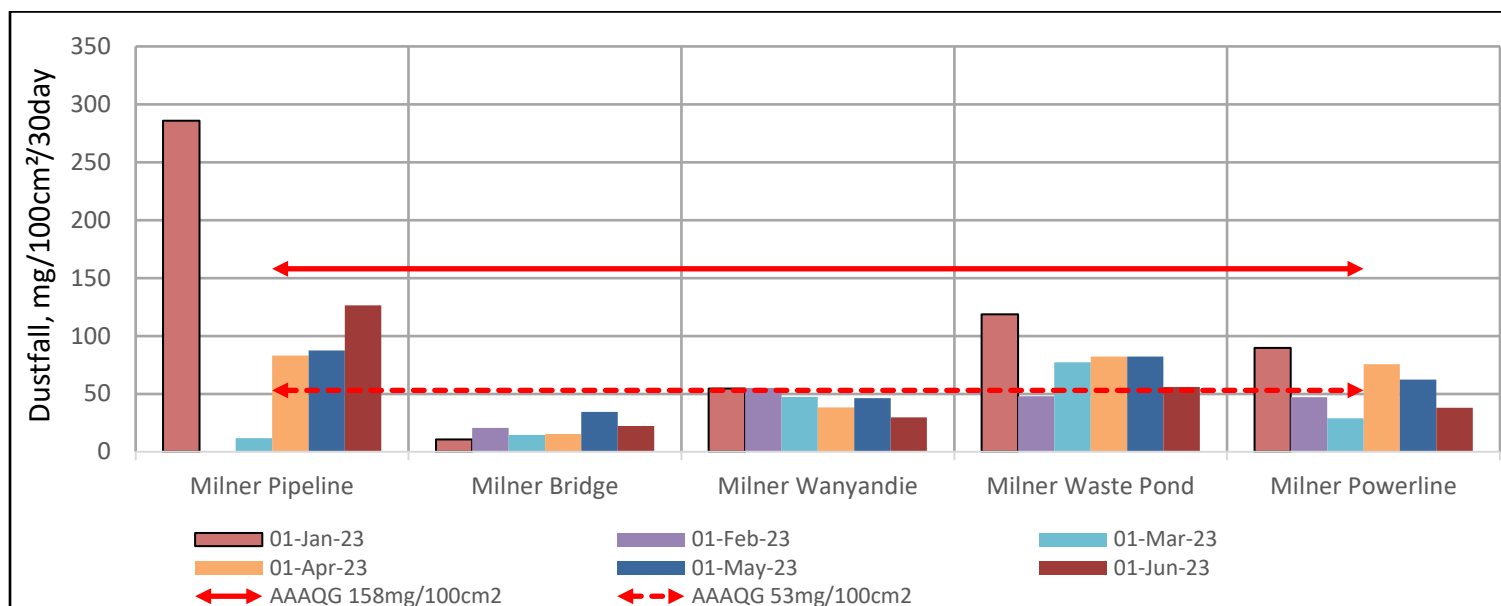
H₂S Monthly Average (units in ppb)



12 Dustfall Monitoring Data

Milner Dustfall Samples June 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
June	2023	Milner Pipeline	126.3	48.8	29	
June	2023	Milner Bridge	22.3	11.1	29	
June	2023	Milner Wanyandie	29.6	13.7	29	
June	2023	Milner Waste Pond	56.0	18.1	29	
June	2023	Milner Powerline	37.9	11.5	29	
June	2023	Milner Powerline Dup	42.2	13.1	29	RPD= 11% / 13%



End of Report



Peace Airshed Zone Association Ambient Air Monitoring Report

June 2023