

8 Smoky Heights Key Parameters - Continuous Monitoring Data - 2025 Summary

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Smoky Heights Station	Parameter	Average	Maximum Values			Operational Time (%)	Valid Time (%)	Readings above AAAQO & AAAQG						
			24-hr	Date	1-hr			Date	30-min	1-hr	8-hr	24-hr	30-d	Annual
			Sulphur Dioxide SO ₂ measured in ppb	0.4	2.7			Dec 11	19.6	Jun 05 01:00	99.3%	94.6%	-	0
Total Reduced Sulphur TRS measured in ppb	0.2	0.8	Aug 27	4.6	Aug 29 06:00	99.2%	94.4%	2	-	-	-	-	-	
Particulate Matter PM _{2.5} measured in µg/m ³	8.1	158.4	Jun 10	322.6	Nov 20 00:00	97.8%	97.5%	-	85	-	19	-	-	

2025 Daily Concentration Readings at Smoky Heights



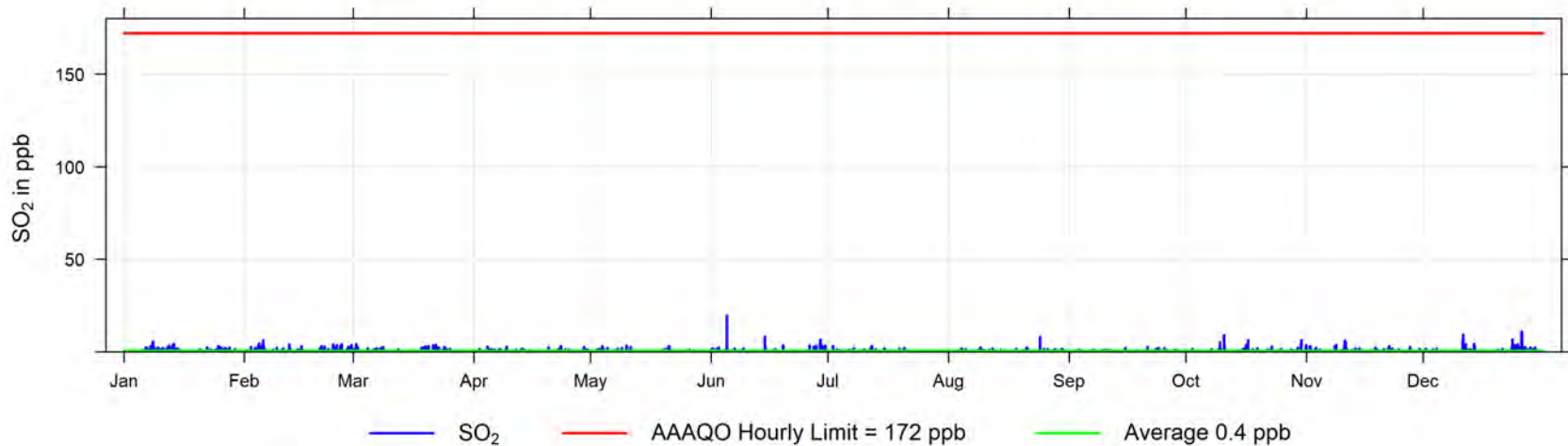
8.1 Sulphur Dioxide (SO₂) - Smoky Heights 2025 Summary

Sulphur Dioxide (SO₂) Frequency Distribution at Smoky Heights

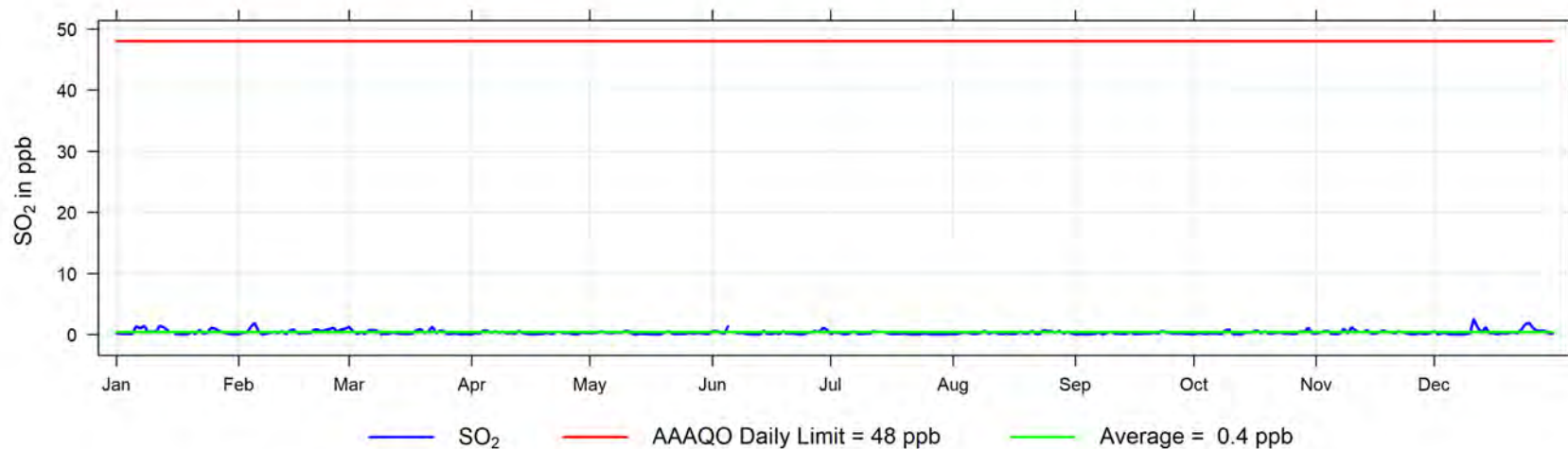
Month	Valid Hours	% of Readings in Concentration Range						Monthly Average (ppb)	MAXIMUM VALUES				Operational time (%)	Valid time (%)	Reportable Incidents		
		0 to 1 (ppb)	1 to 5 (ppb)	5 to 10 (ppb)	10 to 57 (ppb)	57 to 172 (ppb)	> 172 (ppb)		24-hr (ppb)	Date	1-hr (ppb)	Date			30-d 11 ppb	24-hr 48 ppb	1-hr 172 ppb
January 2025	703	82.1%	17.8%	0.1%	0.0%	0.0%	0.0%	0.5	1.5	Jan 08	5.6	Jan 08 12:00	98.9%	94.5%	0	0	0
February 2025	640	83.8%	15.9%	0.3%	0.0%	0.0%	0.0%	0.6	2.0	Feb 05	6.3	Feb 05 19:00	100.0%	95.2%	0	0	0
March 2025	709	89.1%	10.9%	0.0%	0.0%	0.0%	0.0%	0.4	1.3	Mar 01	4.3	Mar 01 18:00	100.0%	95.3%	0	0	0
April 2025	684	93.0%	7.0%	0.0%	0.0%	0.0%	0.0%	0.3	0.7	Apr 04	3.0	Apr 23 08:00	100.0%	95.0%	0	0	0
May 2025	705	95.5%	4.5%	0.0%	0.0%	0.0%	0.0%	0.2	0.6	May 10	3.3	May 10 07:00	99.6%	94.8%	0	0	0
June 2025	677	93.2%	6.2%	0.4%	0.1%	0.0%	0.0%	0.3	1.3	Jun 05	19.6	Jun 05 01:00	98.6%	94.0%	0	0	0
July 2025	675	96.7%	3.3%	0.0%	0.0%	0.0%	0.0%	0.2	0.6	Jul 12	3.1	Jul 02 08:00	95.2%	90.7%	0	0	0
August 2025	707	93.4%	6.5%	0.1%	0.0%	0.0%	0.0%	0.3	0.7	Aug 24	8.1	Aug 24 13:00	99.9%	95.0%	0	0	0
September 2025	685	96.2%	3.8%	0.0%	0.0%	0.0%	0.0%	0.2	0.7	Sep 23	2.5	Sep 21 04:00	99.9%	95.1%	0	0	0
October 2025	704	93.9%	5.5%	0.6%	0.0%	0.0%	0.0%	0.3	1.1	Oct 30	8.9	Oct 10 21:00	99.3%	94.6%	0	0	0
November 2025	686	92.4%	7.3%	0.3%	0.0%	0.0%	0.0%	0.4	1.3	Nov 10	6.0	Nov 10 21:00	100.0%	95.3%	0	0	0
December 2025	709	84.3%	15.0%	0.6%	0.1%	0.0%	0.0%	0.5	2.7	Dec 11	10.8	Dec 26 09:00	100.0%	95.3%	0	0	0
Annual	8284	91.1%	8.6%	0.2%	0.0%	0.0%	0.0%	0.4	2.7	MAXIMUM VALUES		99.3%	94.6%	0	0	0	

AAAQO Objectives: Annual: 8ppb, 30-Day: 11ppb, 24-Hr: 48ppb, 1-Hr: 172ppb

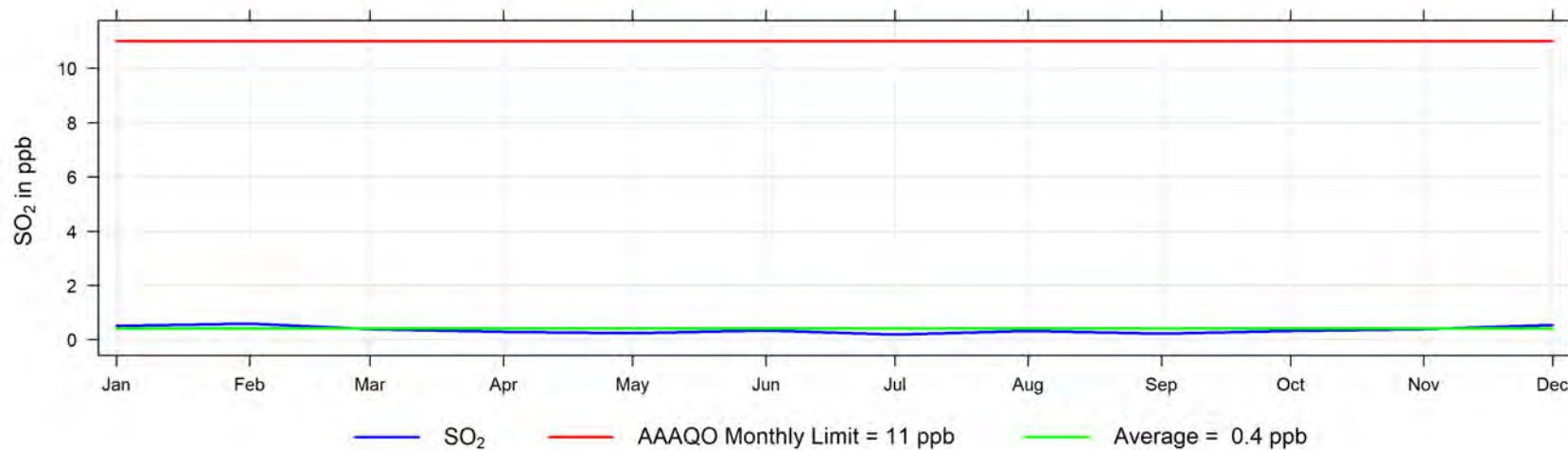
2025 Hourly Concentration Readings of SO₂ (in ppb) at Smoky Heights

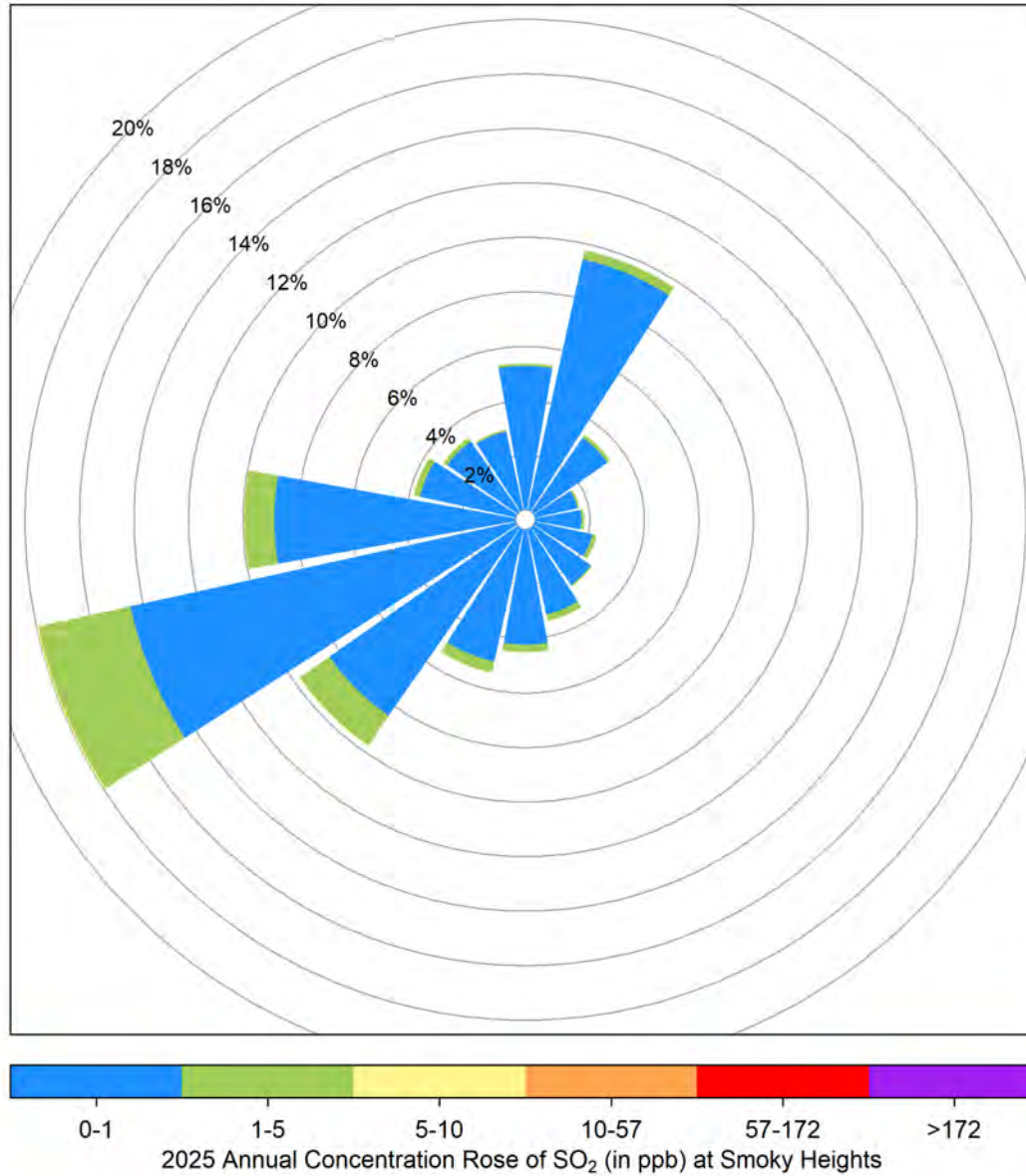


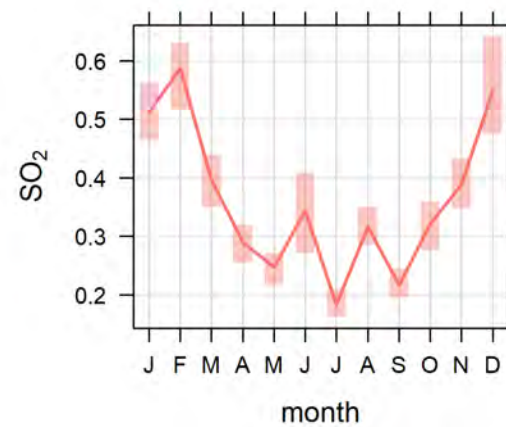
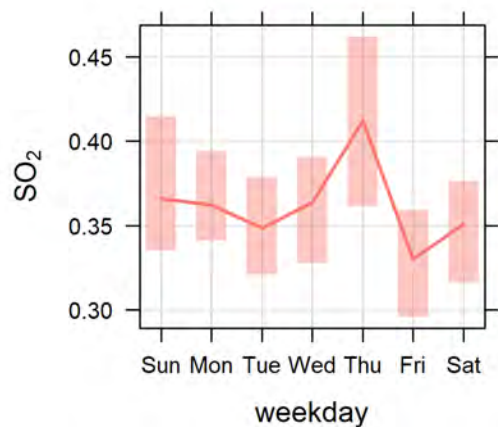
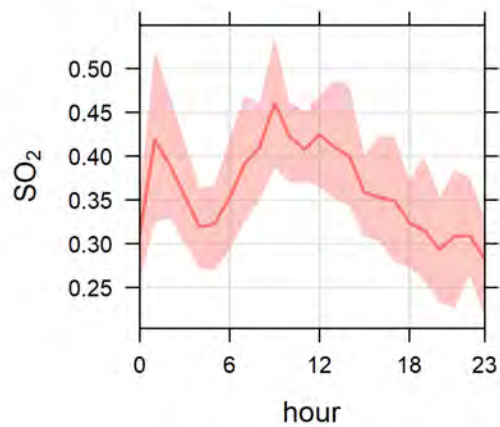
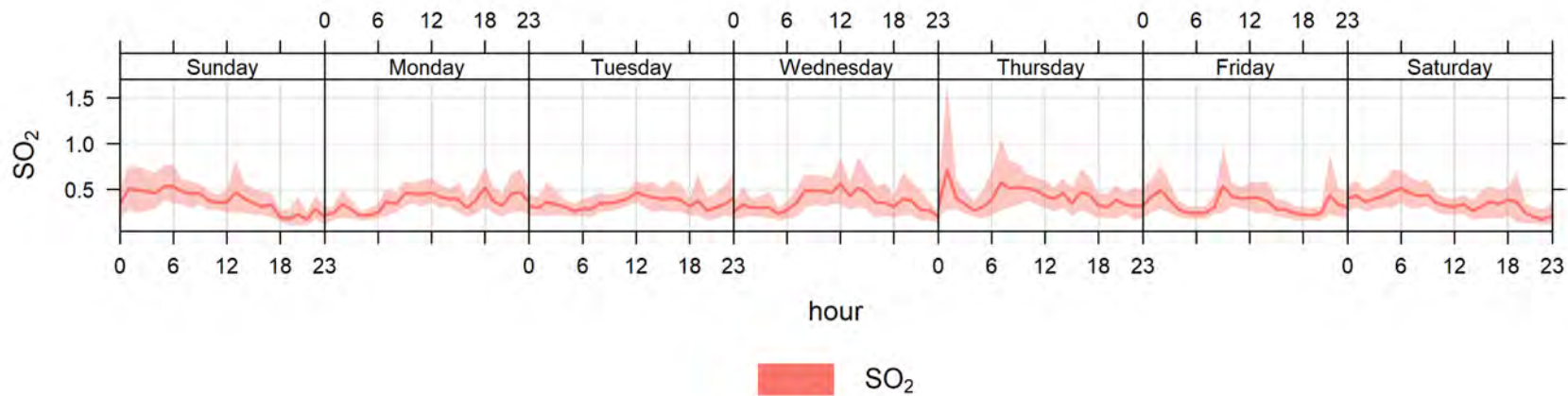
2025 Daily Concentration Readings of SO₂ (in ppb) at Smoky Heights



2025 Monthly Concentration Readings of SO₂ (in ppb) at Smoky Heights

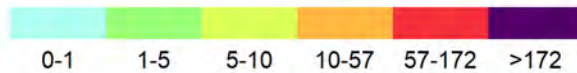
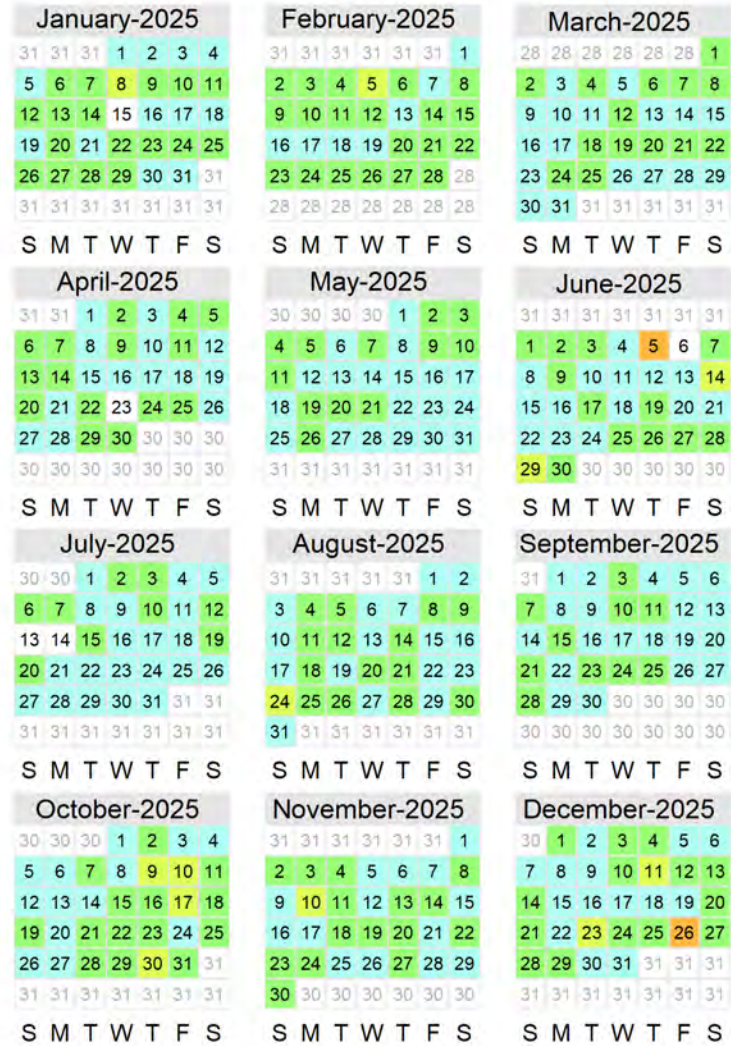






mean and 95% confidence interval in mean

Hourly Maximum SO₂ (in ppb) for 2025 at Smoky Heights



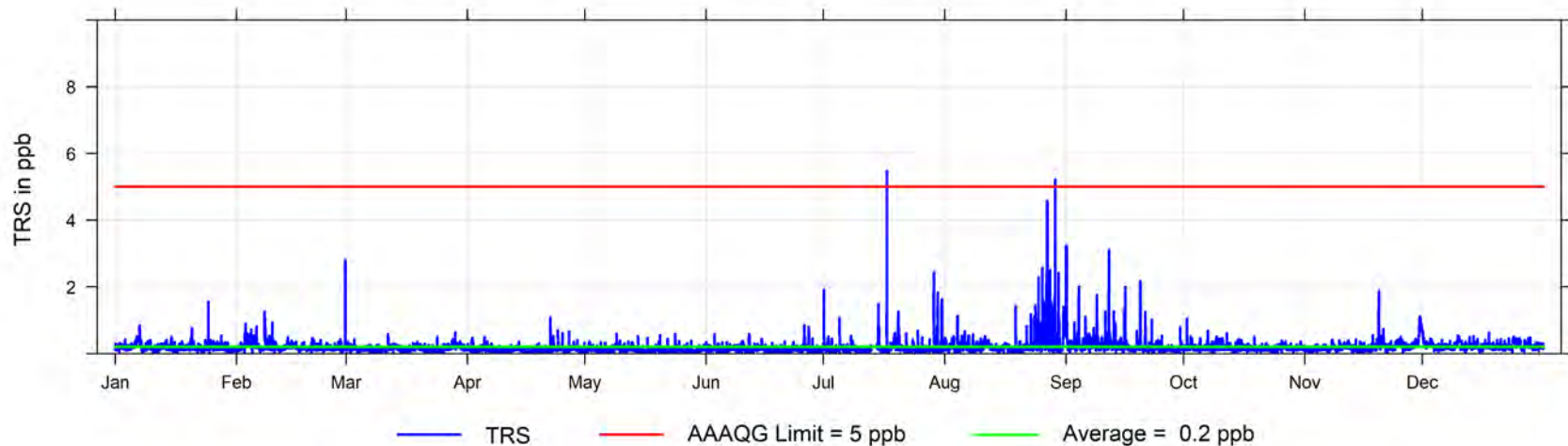
8.2 Total Reduced Sulphur (TRS) - Smoky Heights 2025 Summary

Total Reduced Sulphur (TRS) Frequency Distribution at Smoky Heights

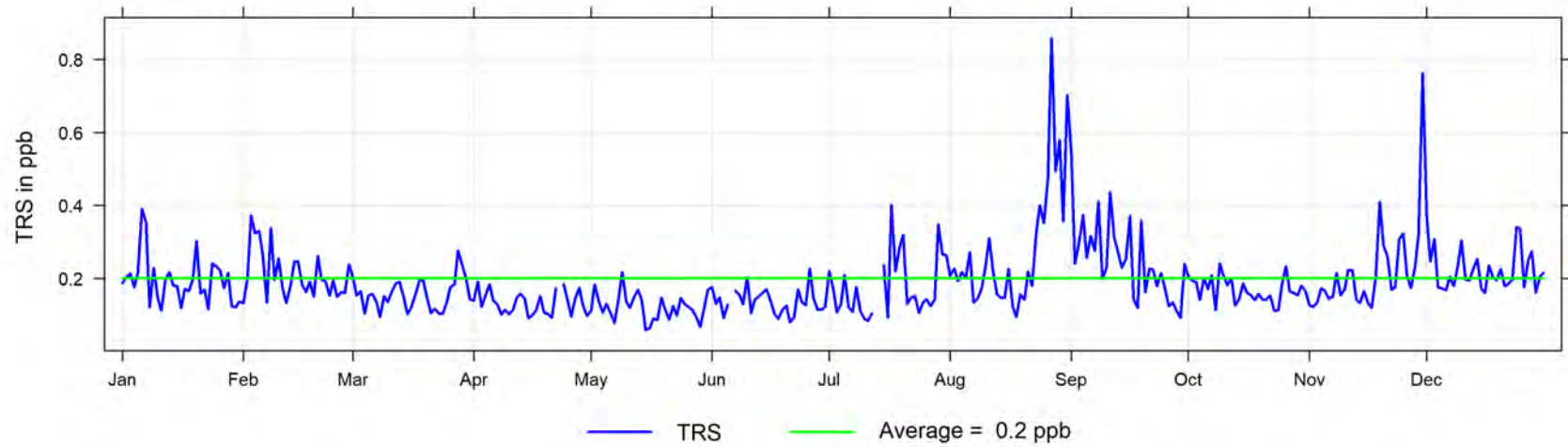
Month	Valid Hours	% of Readings in Concentration Range						Monthly Average (ppb)	MAXIMUM VALUES				Operational time (%)	Valid time (%)	e-Report 30min 5 ppb
		0 to 1 (ppb)	1 to 3 (ppb)	3 to 5 (ppb)	5 to 8 (ppb)	8 to 10 (ppb)	> 10 (ppb)		24-hr (ppb)	Date	1-hr (ppb)	Date			
January 2025	700	99.9%	0.1%	0.0%	0.0%	0.0%	0.0%	0.2	0.4	Jan 06	1.1	Jan 24 20:00	98.9%	94.1%	0
February 2025	640	99.8%	0.2%	0.0%	0.0%	0.0%	0.0%	0.2	0.4	Feb 03	1.8	Feb 28 20:00	100.0%	95.2%	0
March 2025	709	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1	0.3	Mar 28	0.5	Mar 28 23:00	100.0%	95.3%	0
April 2025	683	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1	0.2	Apr 24	0.9	Apr 22 06:00	100.0%	94.9%	0
May 2025	704	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1	0.2	May 09	0.6	May 09 04:00	99.6%	94.6%	0
June 2025	673	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1	0.2	Jun 26	0.7	Jun 27 07:00	98.3%	93.5%	0
July 2025	674	98.1%	1.8%	0.1%	0.0%	0.0%	0.0%	0.1	0.4	Jul 17	3.8	Jul 17 06:00	95.2%	90.6%	1
August 2025	706	95.5%	4.2%	0.3%	0.0%	0.0%	0.0%	0.3	0.8	Aug 27	4.6	Aug 29 06:00	99.7%	94.9%	1
September 2025	680	97.9%	2.1%	0.0%	0.0%	0.0%	0.0%	0.2	0.5	Sep 01	2.7	Sep 01 01:00	99.2%	94.4%	0
October 2025	704	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1	0.2	Oct 26	0.7	Oct 01 23:00	99.3%	94.6%	0
November 2025	685	99.1%	0.9%	0.0%	0.0%	0.0%	0.0%	0.2	0.8	Nov 30	1.7	Nov 20 00:00	100.0%	95.1%	0
December 2025	708	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2	0.4	Dec 01	0.7	Dec 01 02:00	100.0%	95.2%	0
Annual	8266	99.2%	0.8%	0.0%	0.0%	0.0%	0.0%	0.2	0.8	MAXIMUM VALUES		99.2%	94.4%	2	

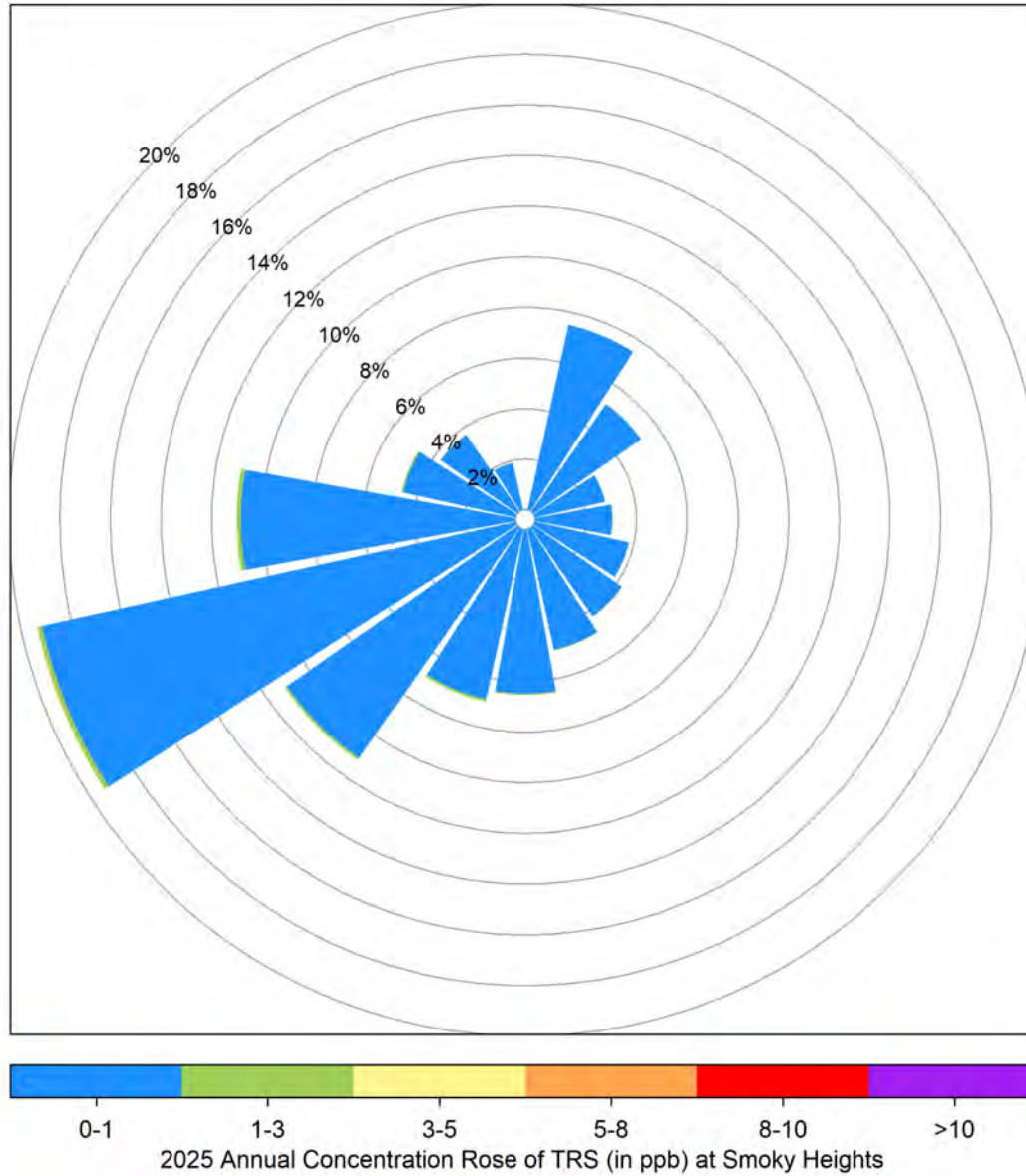
AAAQG TRS: 30-min: 5ppb

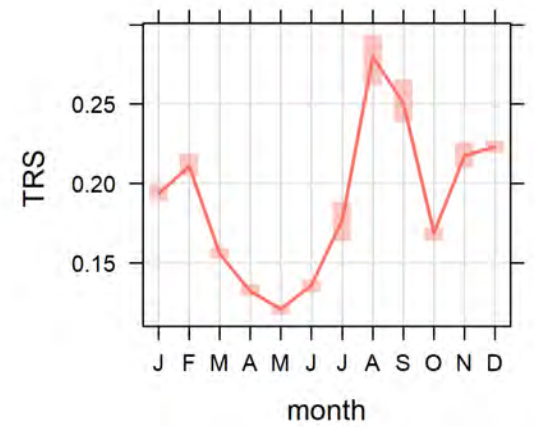
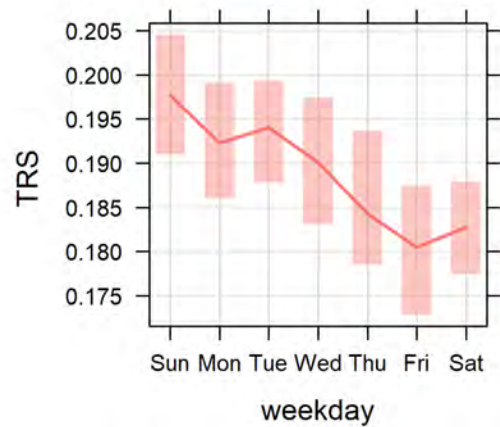
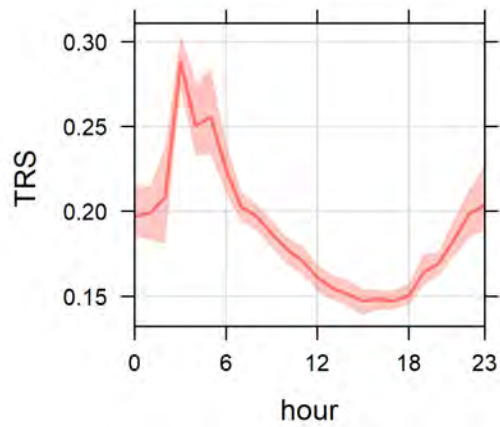
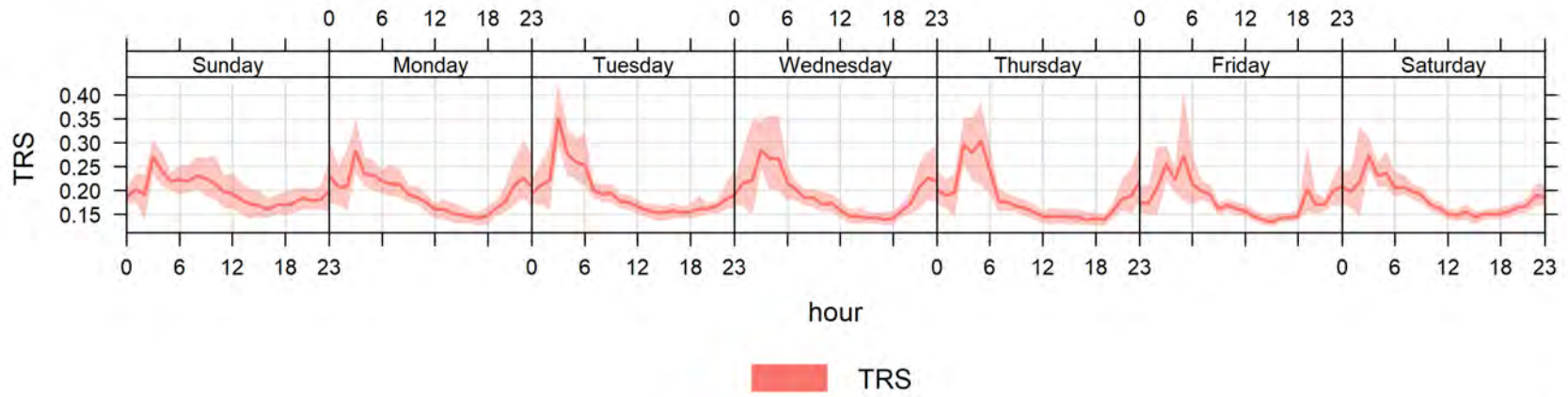
2025 30 min Concentration Readings of TRS (in ppb) at Smoky Heights



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

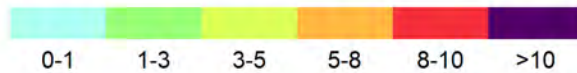
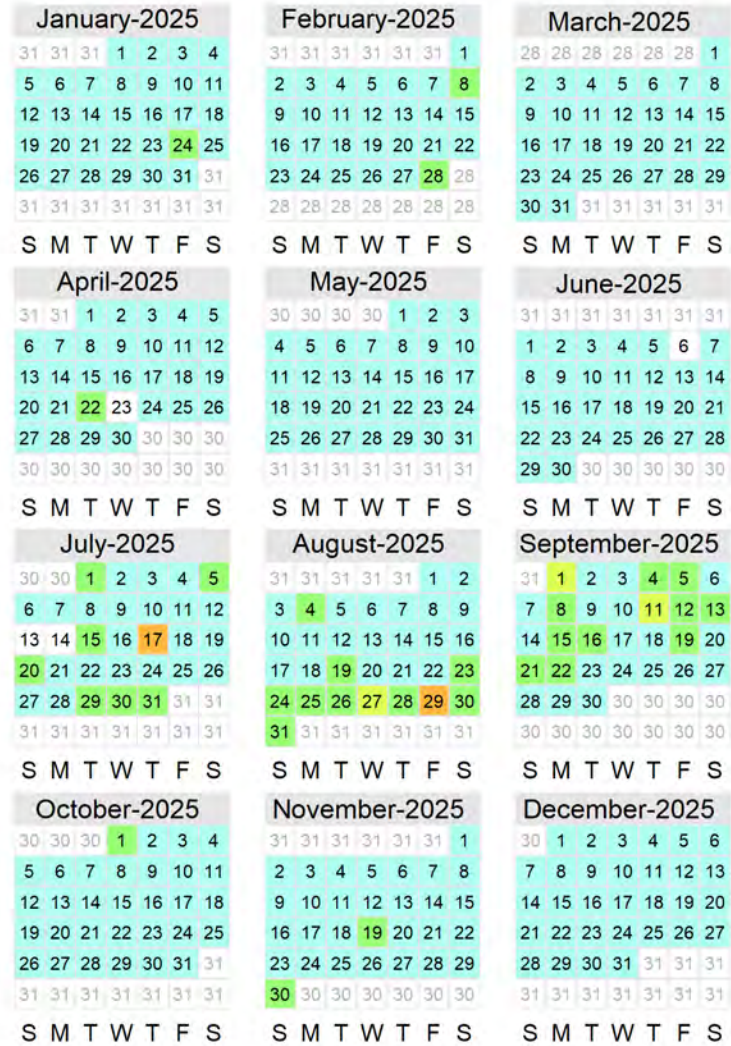






mean and 95% confidence interval in mean

Hourly Maximum TRS (in ppb) for 2025 at Smoky Heights



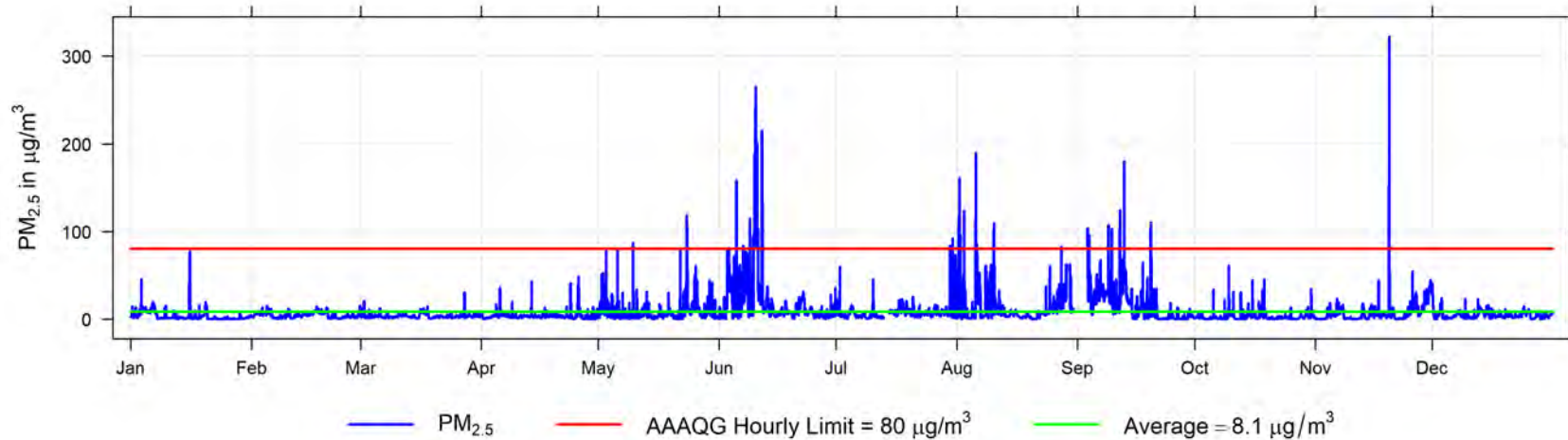
8.3 Particulate Matter (PM_{2.5}) - Smoky Heights 2025 Summary

Particulate Matter (PM_{2.5}) Frequency Distribution at Smoky Heights

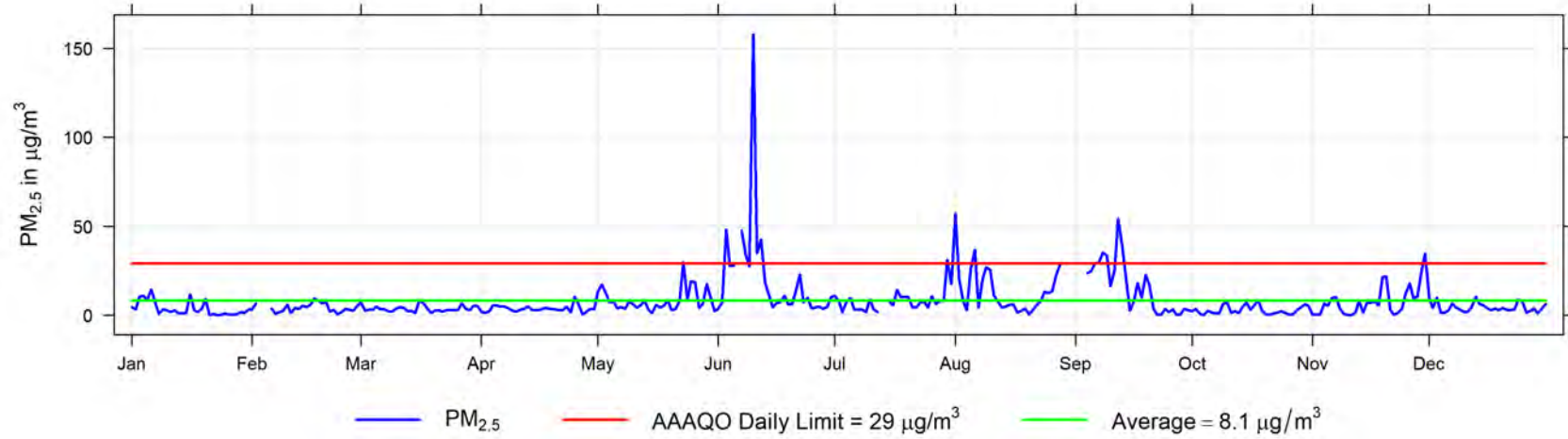
Month	Valid Hours	% of Readings in Concentration Range						Monthly Average (µg/m ³)	MAXIMUM VALUES				Operational time (%)	Valid time (%)	Reportable Incidents	
		0 to 5 (µg/m ³)	5 to 15 (µg/m ³)	15 to 30 (µg/m ³)	30 to 50 (µg/m ³)	50 to 80 (µg/m ³)	> 80 (µg/m ³)		24-hr (µg/m ³)	Date	1-hr (µg/m ³)	Date			24-hr 29 µg/m ³	1-hr 80 µg/m ³
January 2025	734	77.7%	18.5%	3.3%	0.3%	0.3%	0.0%	3.6	14.9	Jan 06	77.0	Jan 16 05:00	98.8%	98.7%	0	0
February 2025	640	62.3%	37.3%	0.3%	0.0%	0.0%	0.0%	4.2	9.3	Feb 17	15.6	Feb 04 23:00	95.5%	95.2%	0	0
March 2025	742	79.0%	20.4%	0.5%	0.1%	0.0%	0.0%	3.6	8.3	Mar 16	30.7	Mar 27 16:00	100.0%	99.7%	0	0
April 2025	717	84.7%	13.7%	0.7%	1.0%	0.0%	0.0%	3.5	11.0	Apr 25	48.9	Apr 25 22:00	100.0%	99.6%	0	0
May 2025	740	52.4%	33.6%	9.1%	3.2%	1.1%	0.5%	8.4	30.0	May 23	118.8	May 23 17:00	99.6%	99.5%	1	4
June 2025	710	30.6%	36.1%	15.8%	7.9%	3.8%	5.9%	21.1	158.4	Jun 10	265.3	Jun 10 10:00	98.9%	98.6%	7	42
July 2025	710	44.5%	45.8%	6.8%	1.5%	1.1%	0.3%	7.8	30.7	Jul 30	92.1	Jul 30 22:00	95.4%	95.4%	1	2
August 2025	693	40.7%	36.1%	10.1%	7.2%	3.2%	2.7%	14.0	58.8	Aug 01	190.0	Aug 05 21:00	93.6%	93.2%	3	19
September 2025	661	41.5%	16.8%	22.2%	12.0%	5.4%	2.1%	16.7	55.0	Sep 12	180.0	Sep 12 22:00	92.1%	91.8%	5	14
October 2025	738	83.6%	14.0%	1.4%	0.9%	0.1%	0.0%	2.8	8.4	Oct 18	61.0	Oct 09 19:00	99.5%	99.2%	0	0
November 2025	717	56.3%	29.6%	9.1%	4.2%	0.3%	0.6%	7.9	35.1	Nov 30	322.6	Nov 20 00:00	100.0%	99.6%	2	4
December 2025	743	69.4%	28.1%	2.2%	0.3%	0.0%	0.0%	4.3	10.4	Dec 13	40.5	Dec 01 02:00	100.0%	99.9%	0	0
Annual	8545	60.2%	27.5%	6.8%	3.2%	1.3%	1.0%	8.1	158.4	Jun 10	322.6	Nov 20 00:00	97.8%	97.5%	19	85

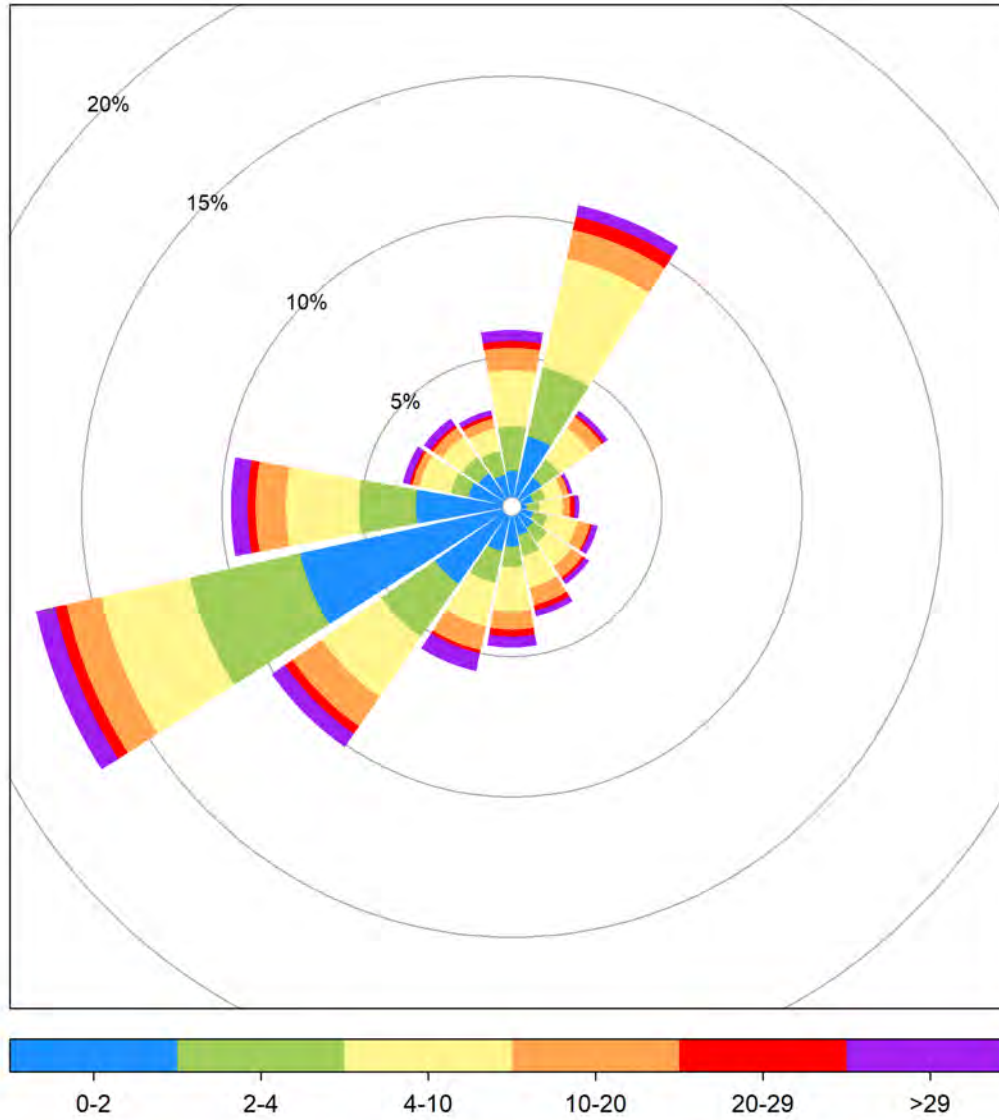
AAAQO Objectives: 24-Hr: 29 µg/m³, AAAQO Guideline: 1-Hr: 80 µg/m³

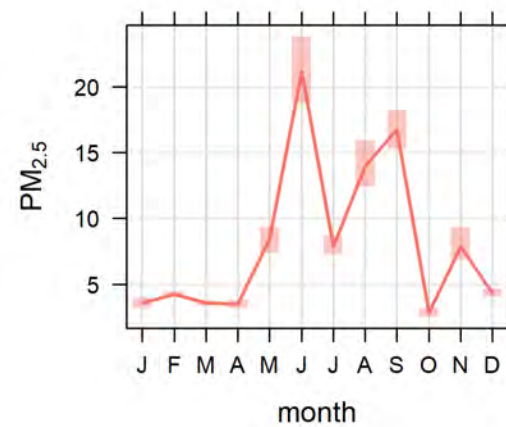
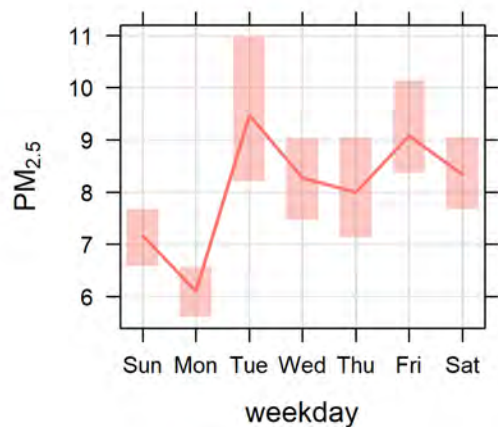
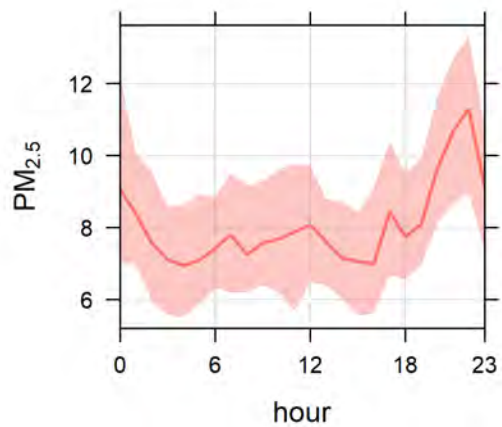
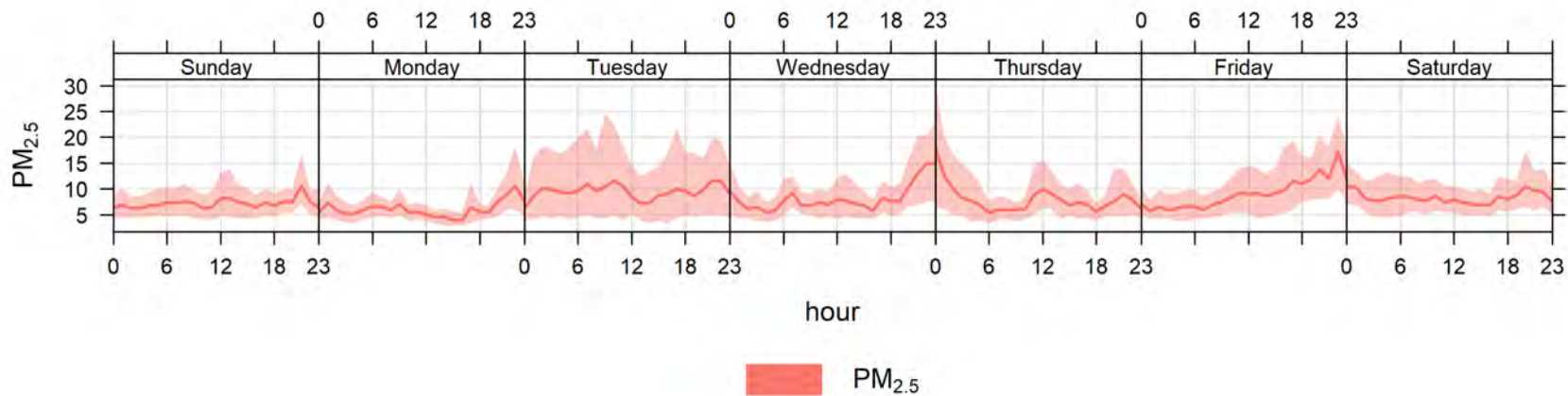
2025 Hourly Concentration Readings of PM_{2.5} in µg/m³ at Smoky Heights



2025 Daily Concentration Readings of PM_{2.5} in $\mu\text{g}/\text{m}^3$ at Smoky Heights

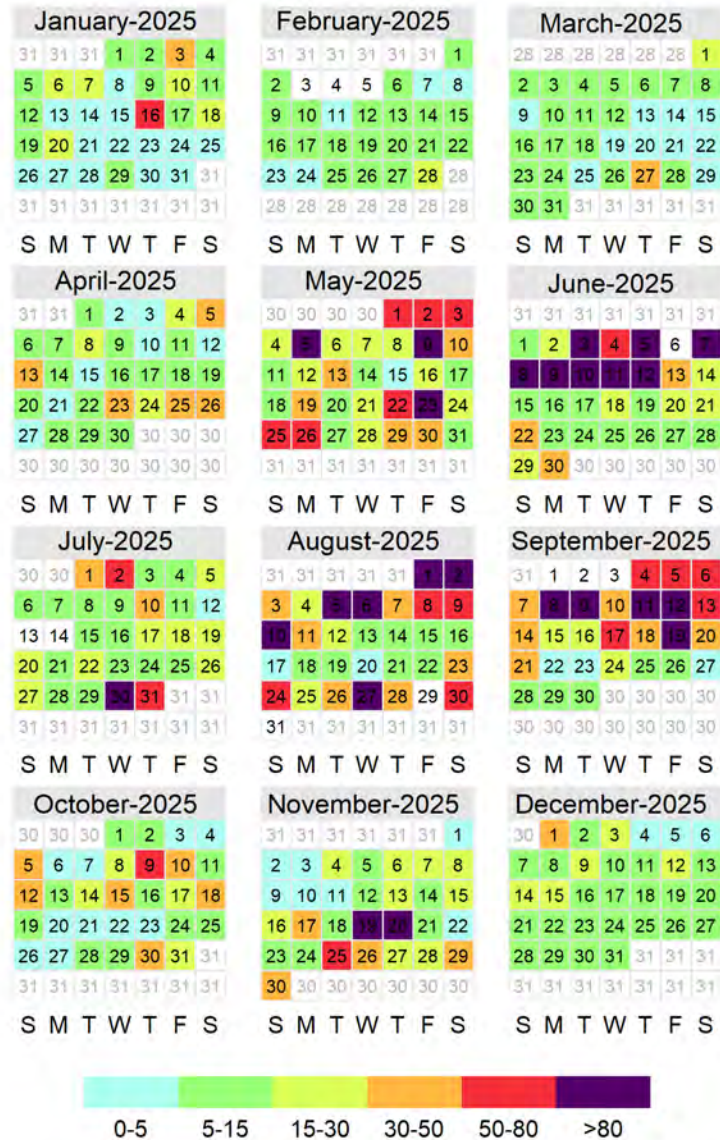






mean and 95% confidence interval in mean

Hourly Maximum PM_{2.5} (in µg/m³) for 2025 at Smoky Heights

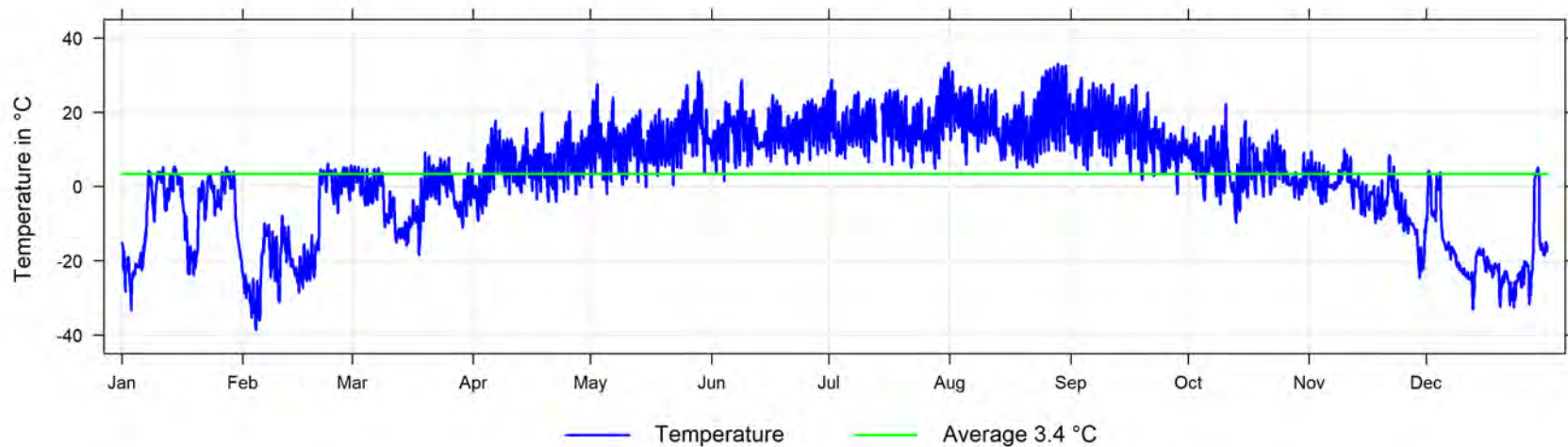


8.4 Temperature (ET) - Smoky Heights 2025 Summary

Temperature (ET) Frequency Distribution at Smoky Heights

Month	Valid Hours	Monthly Average (°C)	Maximum Values			Minimum Values			Operational time (%)	Valid time (%)			
			24-hr (°C)	Date	1-hr (°C)	Date	24-hr (°C)	Date			1-hr (°C)	Date	
January 2025	736	-7.7	3.1	Jan 10	5.5	Jan 14 12:00	-26.7	Jan 03	-33.3	Jan 03 10:00	98.9%	98.9%	
February 2025	672	-14.5	3.0	Feb 27	6.2	Feb 22 19:00	-32.8	Feb 04	-38.7	Feb 04 09:00	100.0%	100.0%	
March 2025	744	-3.1	3.2	Mar 02	9.3	Mar 19 15:00	-13.2	Mar 12	-18.5	Mar 18 04:00	100.0%	100.0%	
April 2025	720	5.8	12.0	Apr 25	20.3	Apr 25 16:00	-3.2	Apr 02	-9.3	Apr 02 06:00	100.0%	100.0%	
May 2025	741	12.8	21.5	May 28	30.9	May 28 17:00	8.2	May 15	-2.0	May 05 06:00	99.6%	99.6%	
June 2025	712	14.7	19.1	Jun 08	28.8	Jun 08 18:00	10.6	Jun 01	1.5	Jun 04 05:00	98.9%	98.9%	
July 2025	714	16.8	24.0	Jul 31	33.4	Jul 31 15:00	12.3	Jul 25	4.8	Jul 28 06:00	96.0%	96.0%	
August 2025	741	17.8	22.8	Aug 30	33.0	Aug 28 17:00	11.8	Aug 21	5.1	Aug 18 06:00	100.0%	99.6%	
September 2025	720	14.3	20.4	Sep 03	29.3	Sep 03 16:00	6.5	Sep 28	-2.0	Sep 28 07:00	100.0%	100.0%	
October 2025	740	4.7	9.6	Oct 07	22.3	Oct 10 17:00	-2.0	Oct 13	-9.7	Oct 13 08:00	99.5%	99.5%	
November 2025	720	-3.2	6.0	Nov 10	10.1	Nov 09 23:00	-21.1	Nov 29	-24.6	Nov 29 08:00	100.0%	100.0%	
December 2025	744	-18.4	2.6	Dec 29	5.1	Dec 29 14:00	-28.5	Dec 23	-33.0	Dec 12 23:00	100.0%	100.0%	
		AVERAGE	MAXIMUM VALUES			MINIMUM VALUES							
		8704	3.4	24.0	Jul 31	33.4	Jul 31 15:00	-32.8	Feb 04	-38.7	Feb 04 09:00	99.4%	99.4%

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

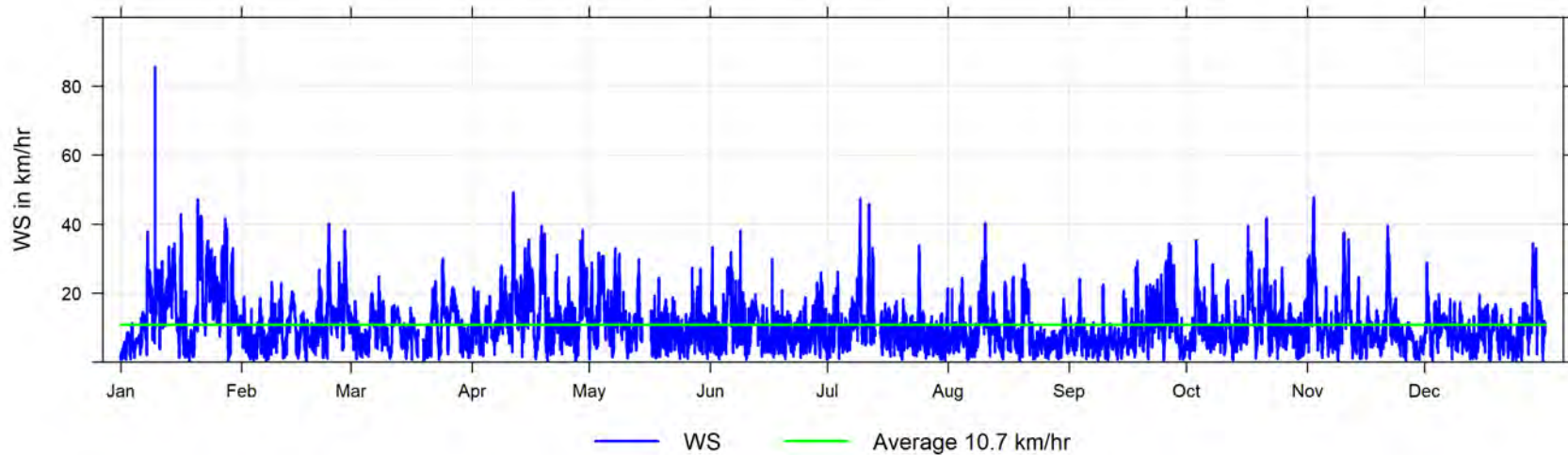


8.5 Wind Speed and Wind Direction (WS and WD) - Smoky Heights 2025 Summary

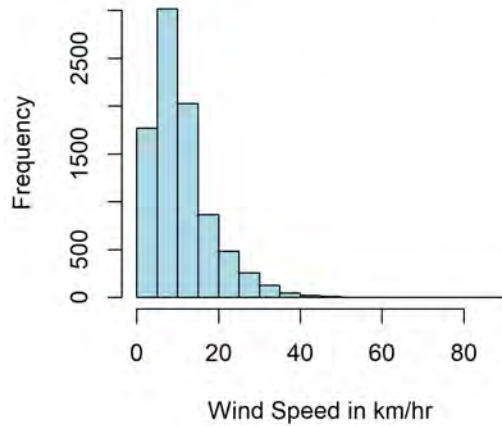
Wind Speed Frequency Distribution at Smoky Heights

Month	Valid Hours	% of Readings in Concentration Range						Monthly Average (km/hr)	MAXIMUM VALUES				Operational time (%)	Valid time (%)
		Calm	0.5 to 5 (km/hr)	5 to 11 (km/hr)	11 to 19 (km/hr)	19 to 28 (km/hr)	>28 (km/hr)		24-hr (km/hr)	Date	1-hr (km/hr)	Date		
January 2025	736	0.3%	17.0%	22.0%	26.6%	21.1%	13.0%	15.4	31.6	Jan 21	85.6	Jan 09 19:00	98.9%	98.9%
February 2025	672	0.4%	22.2%	39.0%	30.1%	5.2%	3.1%	10.3	24.7	Feb 23	40.2	Feb 23 08:00	100.0%	100.0%
March 2025	715	0.1%	22.0%	39.7%	32.6%	5.2%	0.4%	9.7	18.9	Mar 24	30.0	Mar 24 12:00	96.1%	96.1%
April 2025	720	0.3%	10.6%	33.3%	31.4%	17.8%	6.7%	14.0	28.8	Apr 11	49.1	Apr 11 14:00	100.0%	100.0%
May 2025	689	0.0%	16.8%	40.2%	30.3%	10.0%	2.6%	11.0	22.6	May 04	33.0	May 07 16:00	92.6%	92.6%
June 2025	712	0.0%	20.4%	47.5%	25.3%	6.2%	0.7%	9.7	18.4	Jun 05	38.1	Jun 08 18:00	98.9%	98.9%
July 2025	714	0.1%	22.8%	46.1%	22.7%	5.5%	2.8%	9.7	22.2	Jul 09	47.5	Jul 09 11:00	96.0%	96.0%
August 2025	741	0.4%	27.8%	48.9%	14.0%	7.7%	1.2%	8.7	19.4	Aug 09	40.3	Aug 10 12:00	100.0%	99.6%
September 2025	720	0.1%	27.9%	44.4%	17.9%	7.9%	1.7%	9.1	19.8	Sep 27	34.4	Sep 26 13:00	100.0%	100.0%
October 2025	740	0.0%	17.0%	42.3%	27.4%	10.4%	2.8%	11.1	23.0	Oct 21	41.8	Oct 21 13:00	99.5%	99.5%
November 2025	720	0.3%	19.4%	46.7%	20.3%	8.3%	5.0%	10.7	29.2	Nov 02	47.8	Nov 02 15:00	100.0%	100.0%
December 2025	744	0.7%	19.4%	45.4%	30.0%	3.1%	1.5%	9.6	21.8	Dec 29	34.4	Dec 28 18:00	100.0%	100.0%
Annual	8623	0.2%	20.3%	41.3%	25.7%	9.0%	3.5%	10.7	31.6	Jan 21	85.6	Jan 09 19:00	98.5%	98.5%

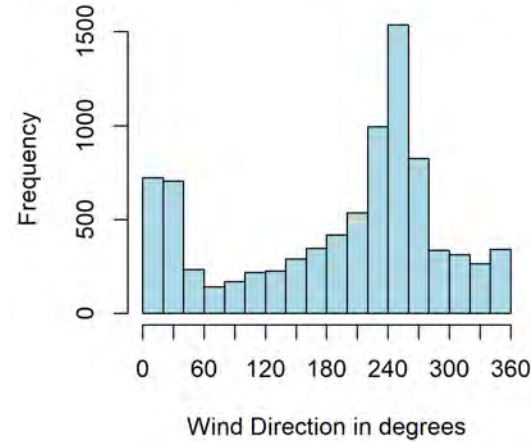
2025 Hourly Readings of Wind Speed (in km/hr) at Smoky Heights



2025 Wind Speed Histogram

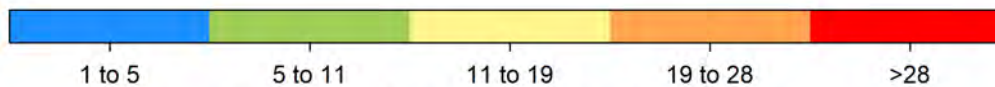
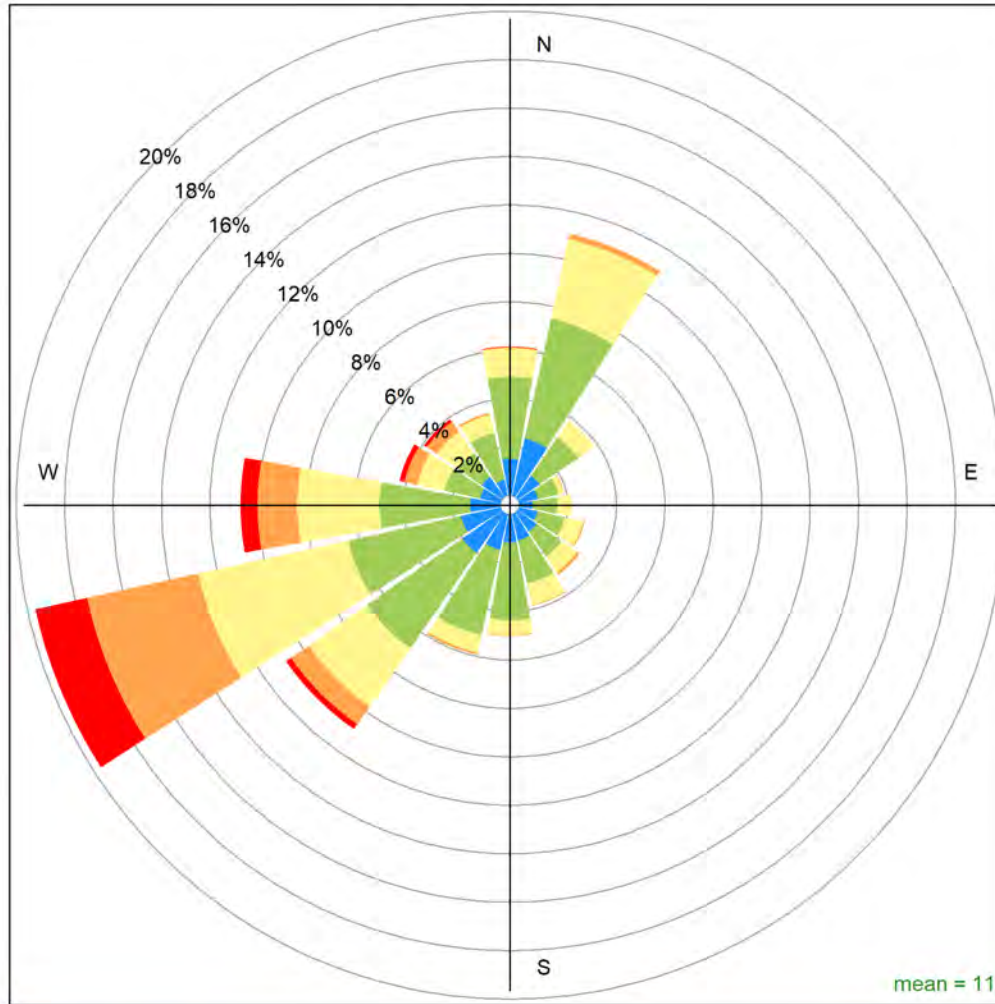


2025 Wind Direction Histogram



Wind Speed and Wind Direction Frequency Distribution at Smoky Heights

Direction	Number of Readings	% of wind speed range						Total %
		Calm (<0.5 (km/hr)	0.5 to 5 (km/hr)	5 to 11 (km/hr)	11 to 19 (km/hr)	19 to 28 (km/hr)	>28 (km/hr)	
N	535	0.0%	1.6%	3.4%	1.2%	0.0%	0.0%	6.2%
NNE	961	0.0%	2.5%	5.1%	3.4%	0.2%	0.0%	11.1%
NE	340	0.0%	1.2%	1.9%	0.8%	0.0%	0.0%	3.9%
ENE	168	0.0%	0.8%	0.9%	0.2%	0.0%	0.0%	1.9%
E	188	0.0%	0.6%	1.0%	0.6%	0.0%	0.0%	2.2%
ESE	245	0.0%	0.8%	1.2%	0.8%	0.1%	0.0%	2.8%
SE	272	0.0%	1.0%	1.3%	0.8%	0.1%	0.0%	3.2%
SSE	348	0.1%	1.2%	1.8%	0.9%	0.0%	0.0%	4.0%
S	439	0.0%	1.2%	3.2%	0.6%	0.0%	0.0%	5.1%
SSW	520	0.0%	1.6%	3.6%	0.7%	0.1%	0.0%	6.0%
SW	942	0.0%	2.0%	4.8%	2.9%	0.9%	0.2%	10.9%
WSW	1703	0.0%	1.7%	4.8%	6.3%	4.7%	2.2%	19.7%
W	932	0.0%	1.3%	3.7%	3.4%	1.6%	0.7%	10.8%
WNW	376	0.0%	1.0%	1.5%	1.2%	0.5%	0.2%	4.4%
NW	347	0.0%	1.1%	1.2%	1.1%	0.5%	0.1%	4.0%
NNW	307	0.0%	0.7%	2.0%	0.8%	0.1%	0.0%	3.6%
Total	8623	0.2%	20.3%	41.3%	25.7%	9.1%	3.5%	100.0%

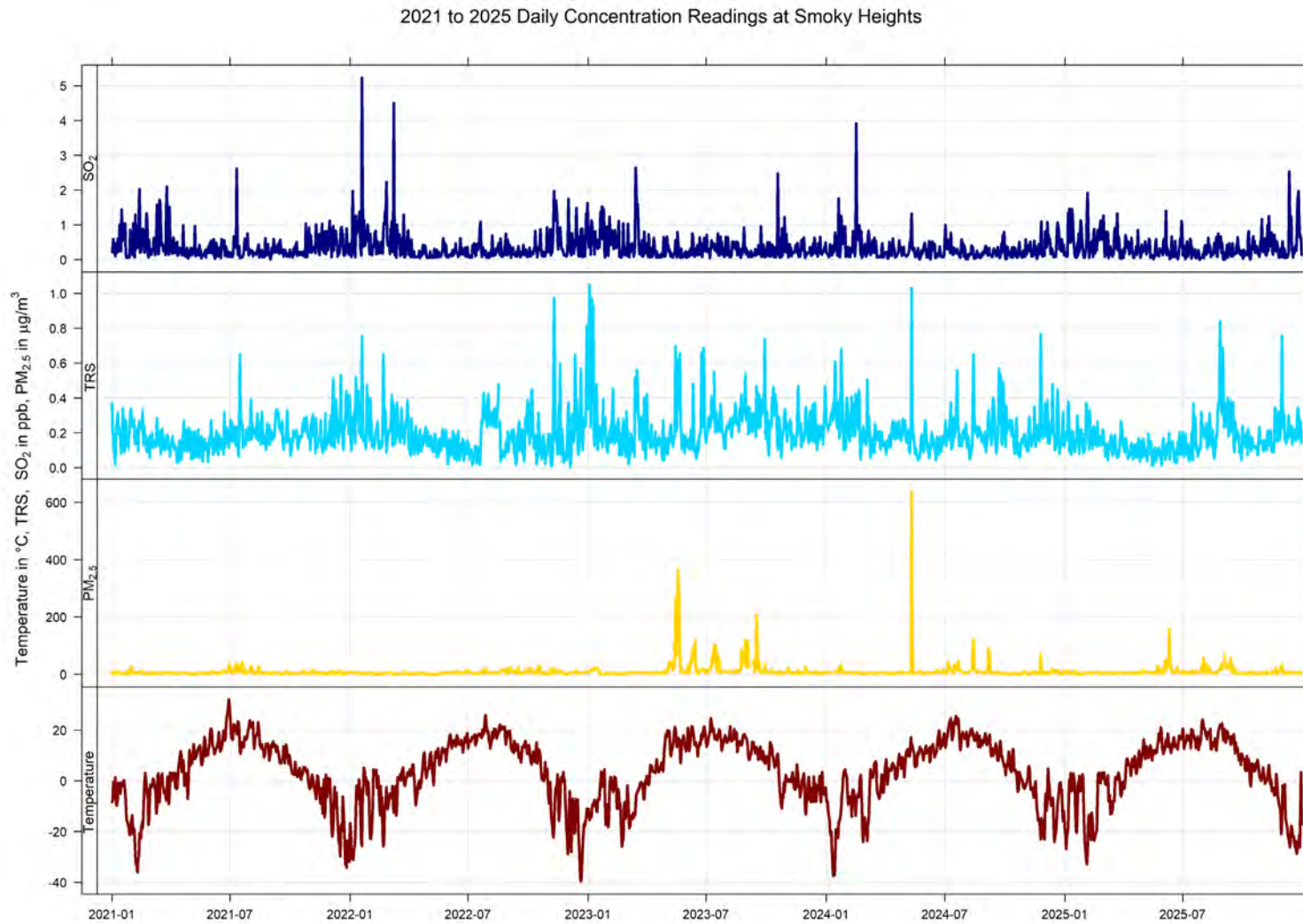


Smoky Heights 2025 Wind Rose, wind speed in km/hr

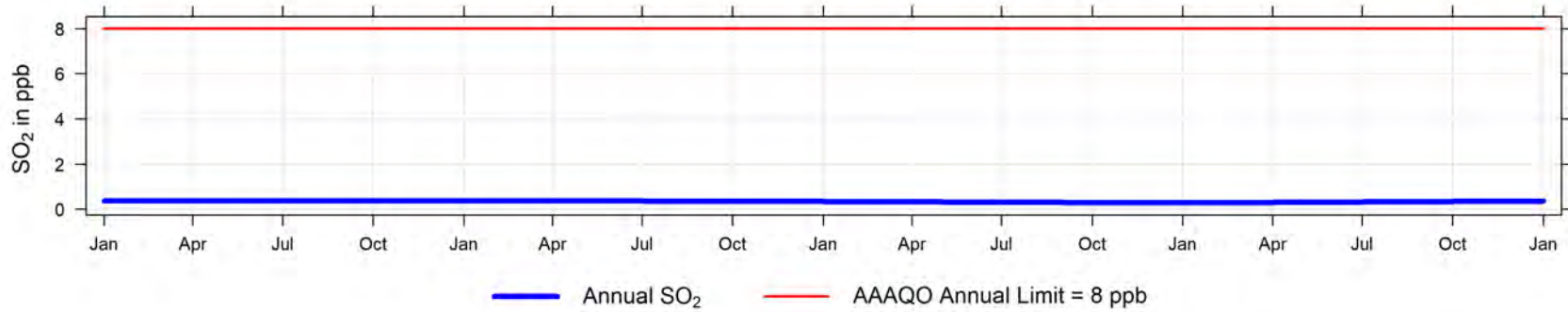
Calms (<1km/hr) = 1.2 %

8.6 Smoky Heights Annual Trends, 2021 to 2025

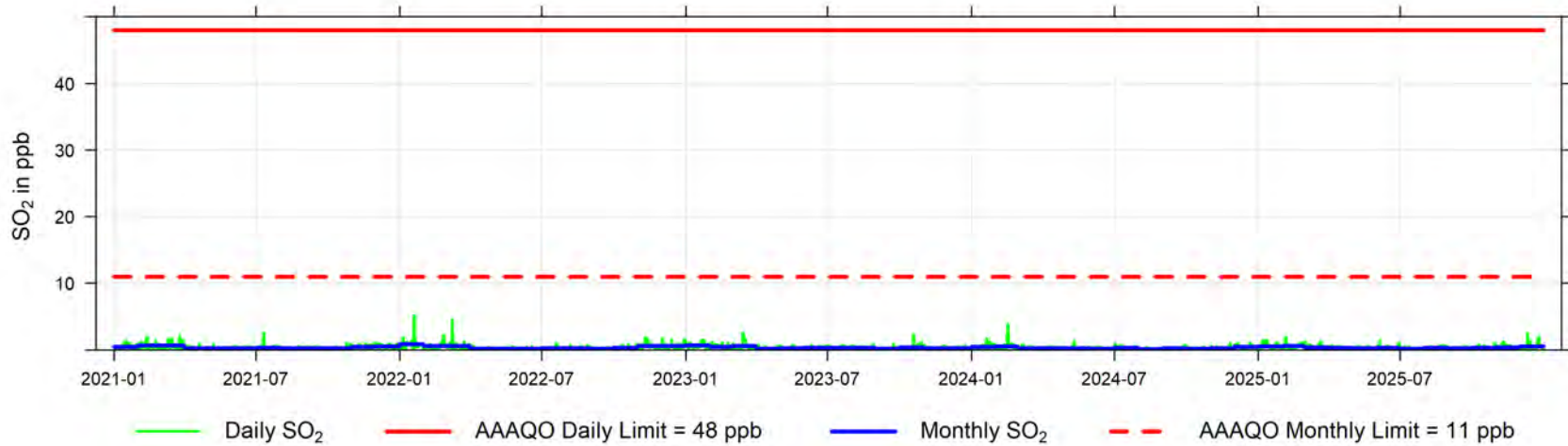
The following pages include historical annual charts collected between 2021 and 2025 at the Smoky Heights Station.



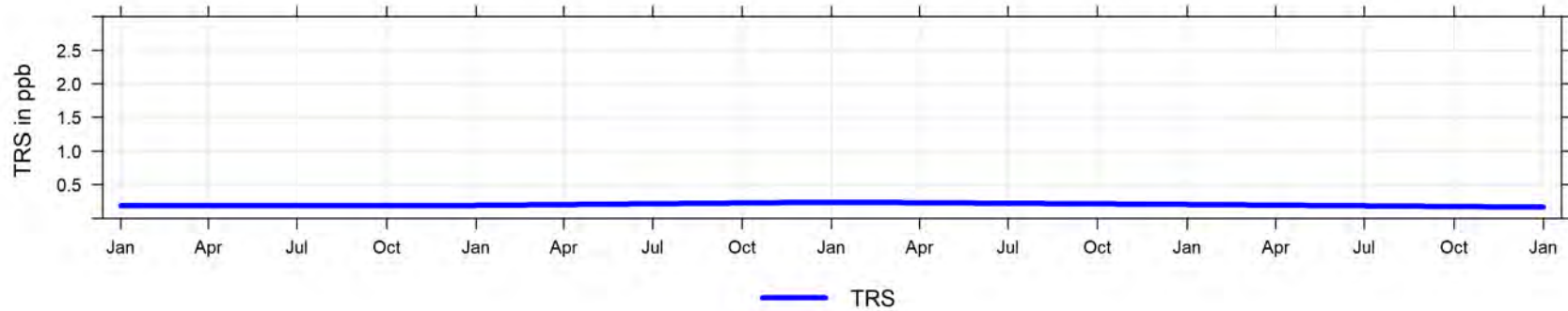
Years 2021 to 2025 Annual Concentration Readings of SO₂ (in ppb) at Smoky Heights



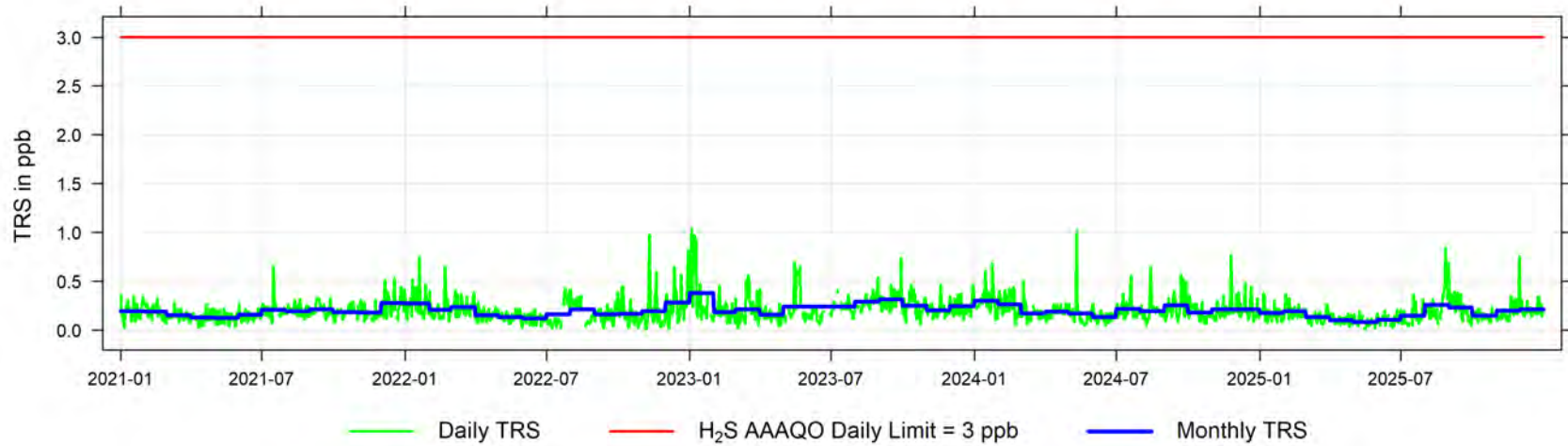
Years 2021 to 2025 Concentration Readings of SO₂ (in ppb) at Smoky Heights



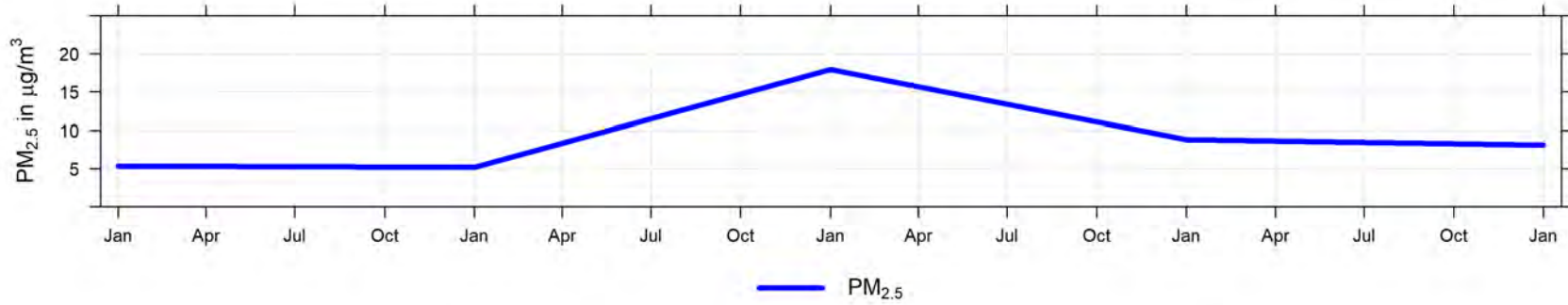
Years 2025 Annual Concentration Readings of TRS (in ppb) at Smoky Heights



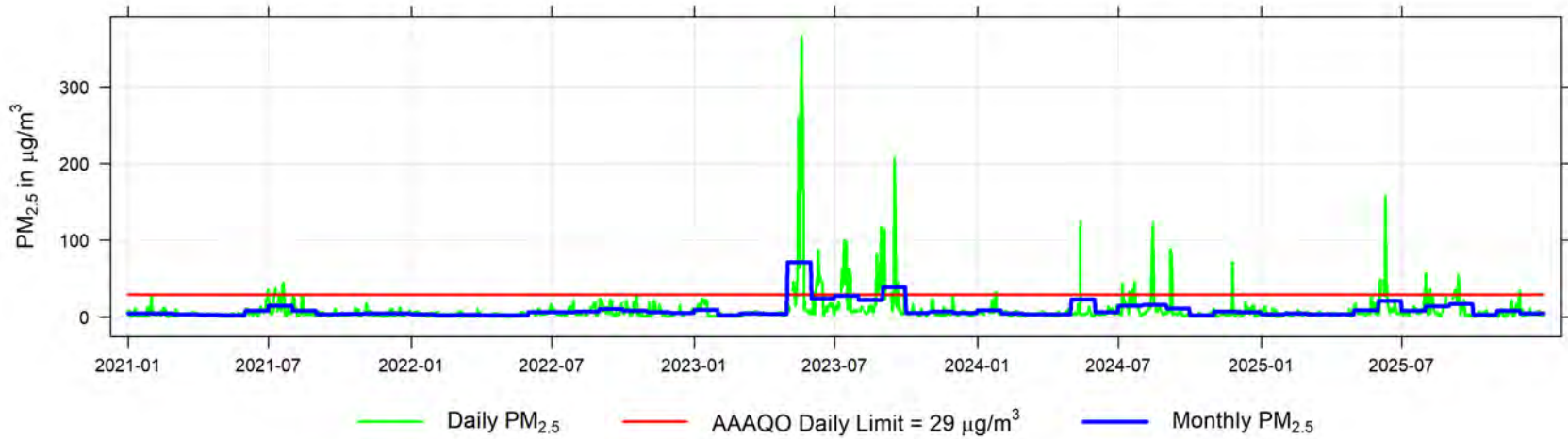
Years 2021 to 2025 Concentration Readings of TRS (in ppb) at Smoky Heights



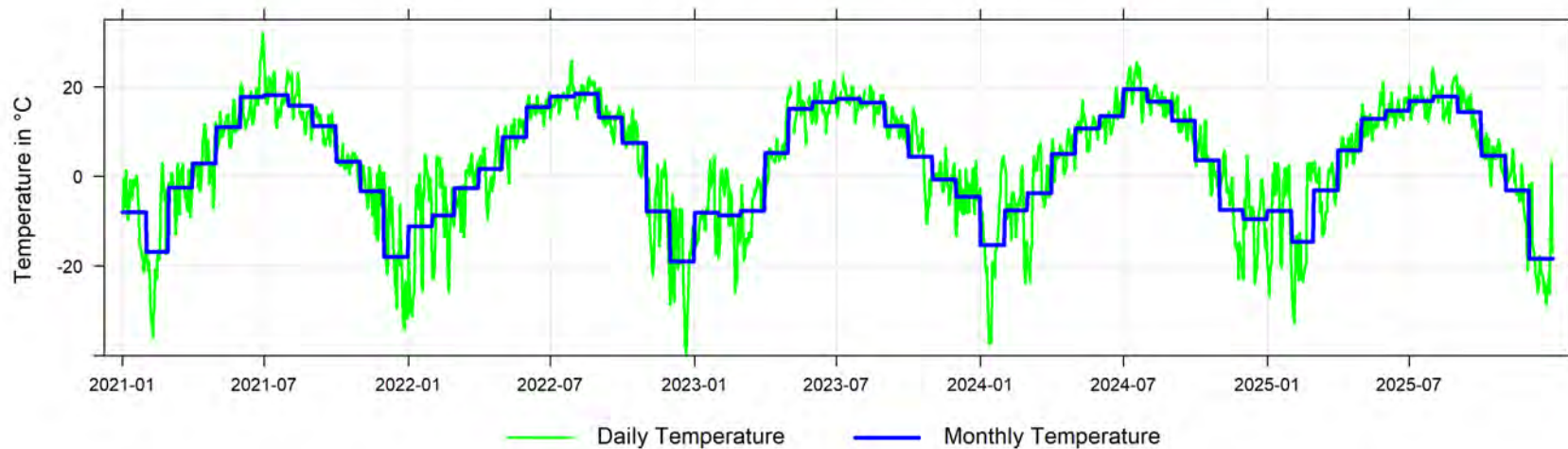
2021 to 2025 Annual Concentration Readings of PM_{2.5} in µg/m³ at Smoky Heights



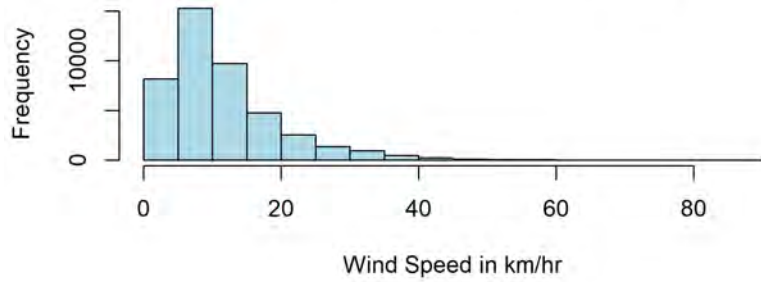
Years 2021 to 2025 Concentration Readings of PM_{2.5} in µg/m³ at Smoky Heights



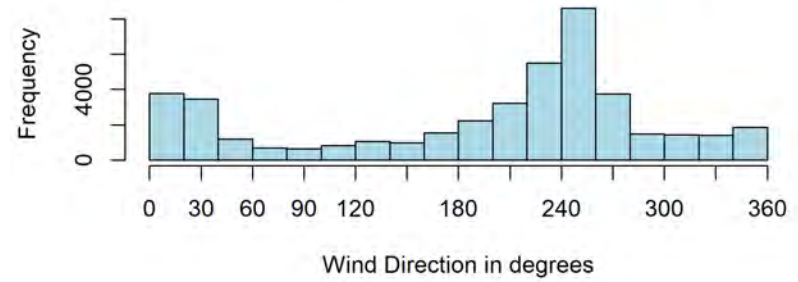
Years 2021 to 2025 Temperature Readings (in °C) at Smoky Heights



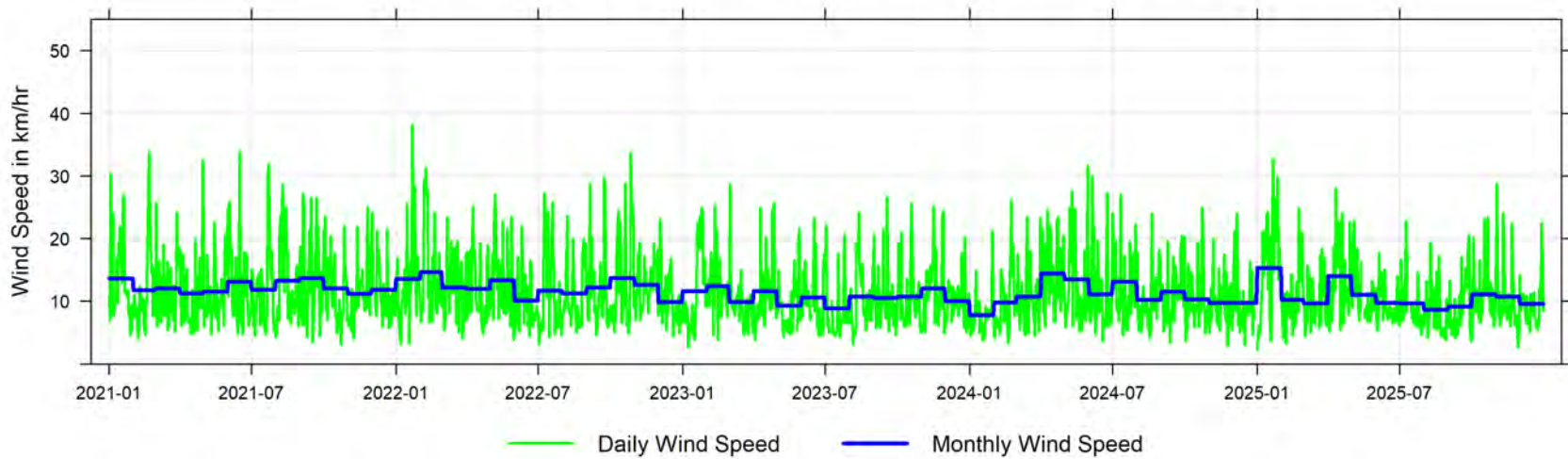
Years 2021 to 2025 Wind Speed Histogram

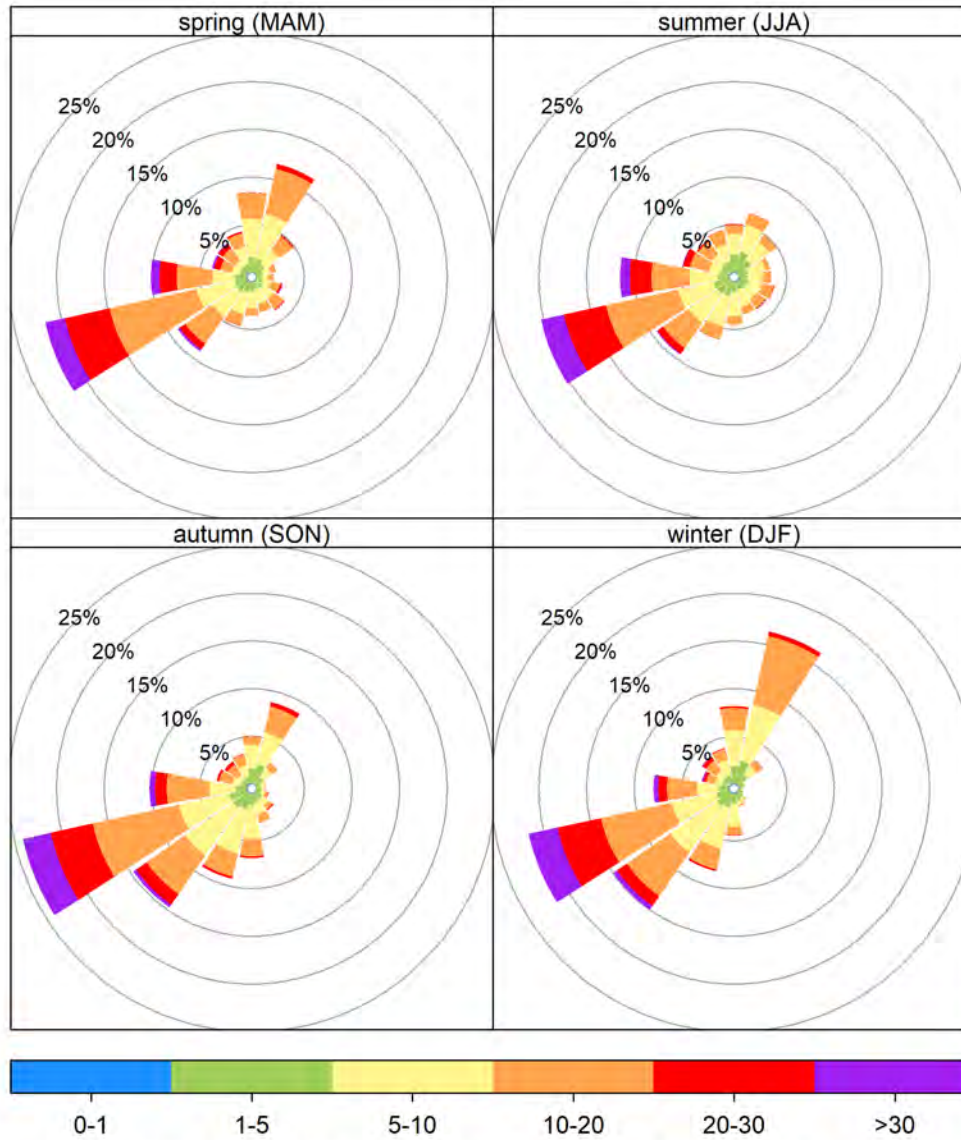


Years 2021 to 2025 Wind Direction Histogram

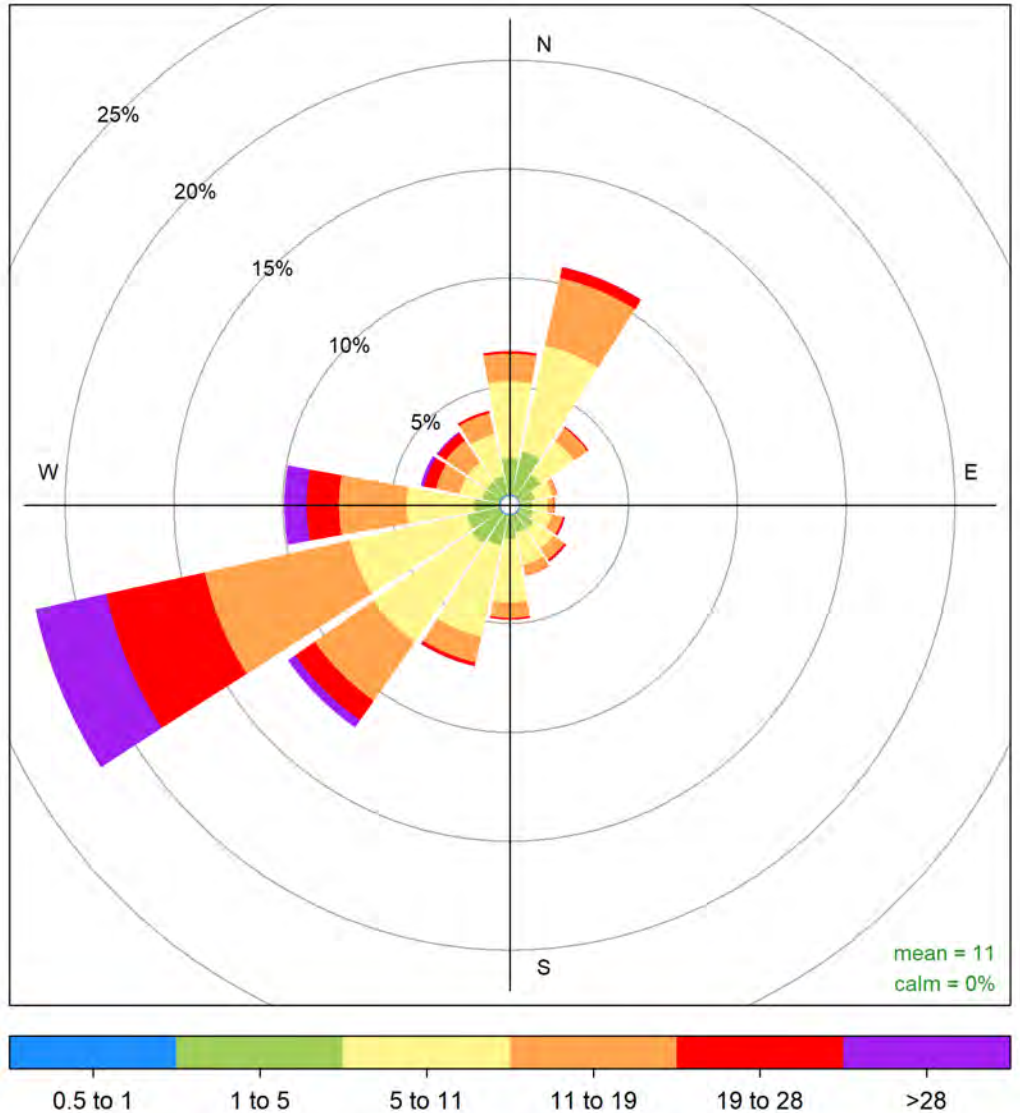


Years 2021 to 2025 Wind Speed Readings (in km/hr) at Smoky Heights





Smoky Heights 2021 to 2025 Seasonal Wind Rose, wind speed in km/hr



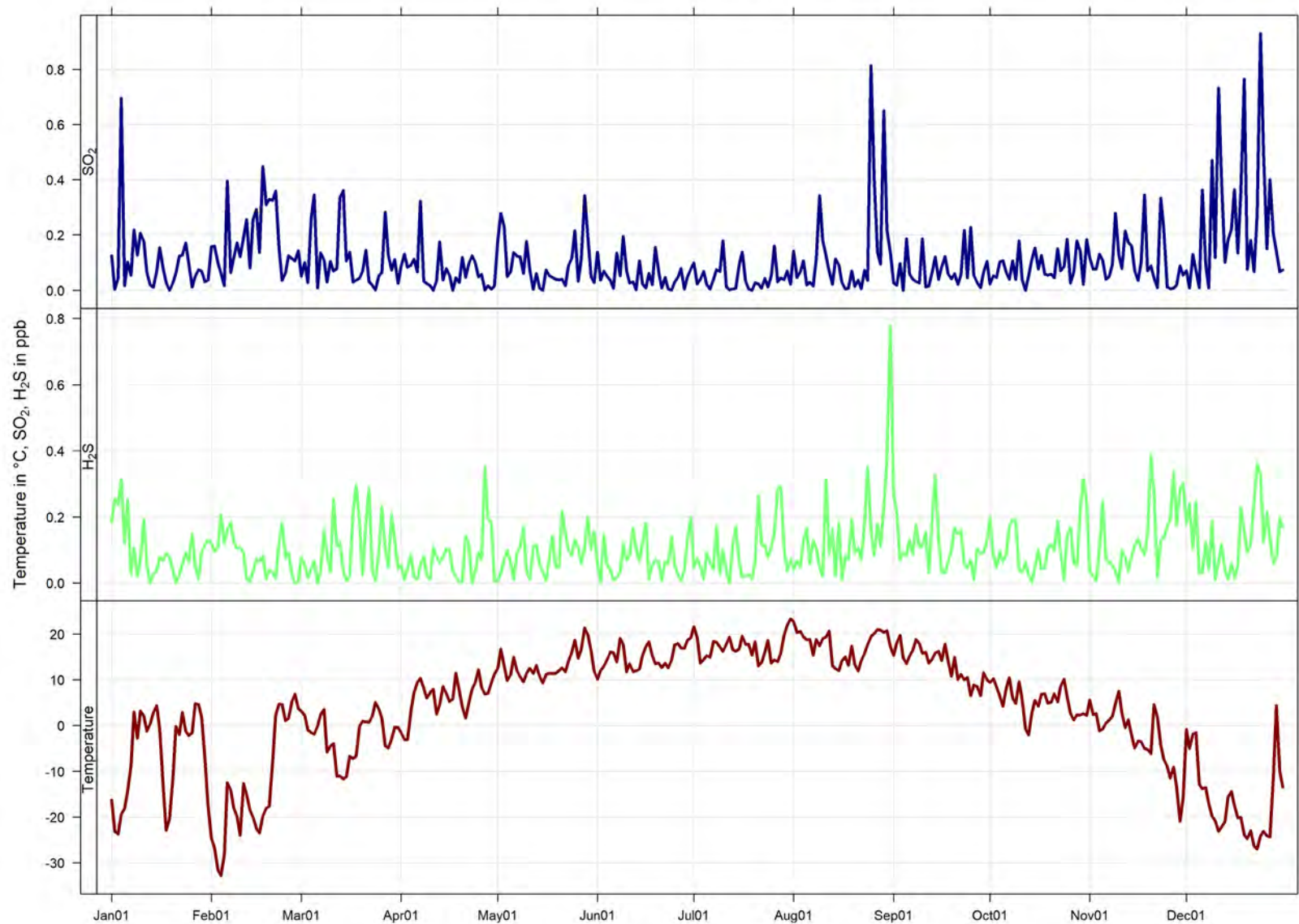
Smoky Heights 2021 to 2025 Wind Rose, wind speed in km/hr
Frequency of counts by wind direction (%)

9 Valleyview Key Parameters - Continuous Monitoring Data - 2025 Summary

Valleyview Key Parameters - Continuous Monitoring Data - 2025 Summary

Valleyview Station	Parameter	Average	Maximum Values			Operational Time (%)	Valid Time (%)	Readings above AAAQO & AAAQG				
			24-hr	Date	1-hr			Date	1-hr	24-hr	30-d	Annual
			Sulphur Dioxide SO ₂ measured in ppb	0.1	0.9			Dec 24	5.4	Aug 25 13:00	100.0%	95.3%
Hydrogen Sulphide H ₂ S measured in ppb	0.1	0.8	Aug 31	1.5	Aug 31 11:00	99.9%	95.1%	0	0	-	-	

2025 Daily Concentration Readings at Valleyview



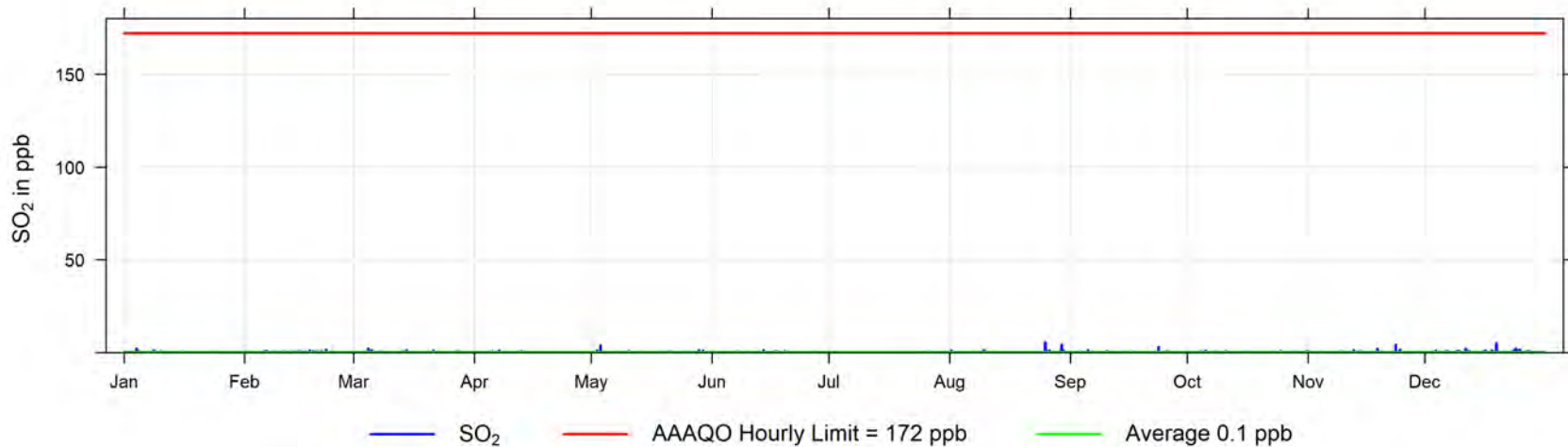
9.1 Sulphur Dioxide (SO₂) - Valleyview 2025 Summary

Sulphur Dioxide (SO₂) Frequency Distribution at Valleyview

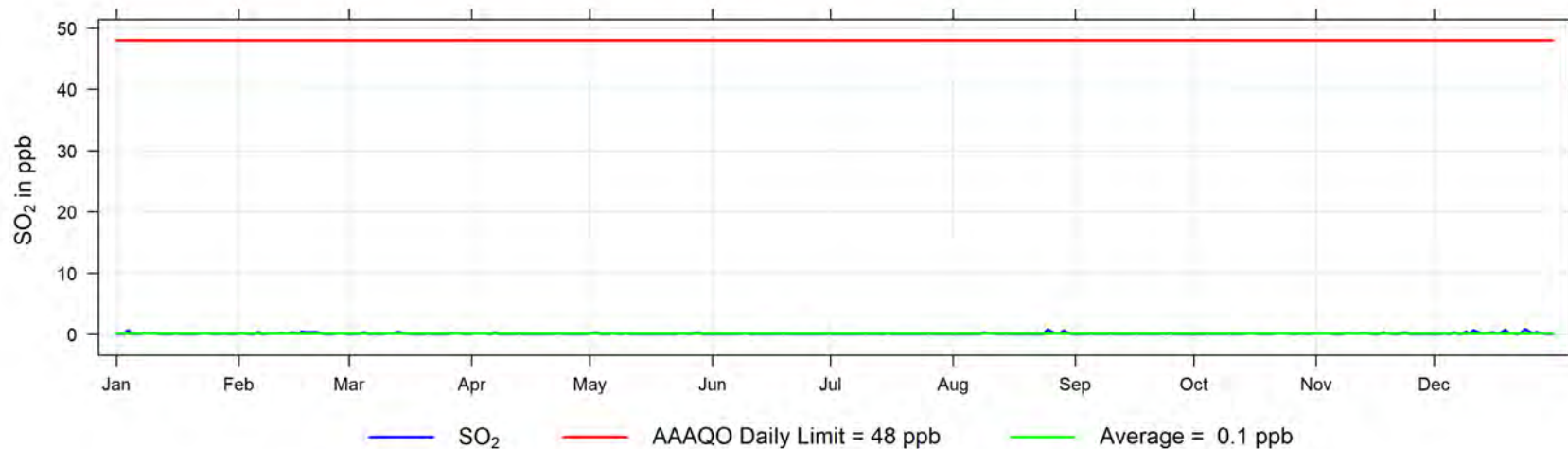
Month	Valid Hours	% of Readings in Concentration Range						Monthly Average (ppb)	MAXIMUM VALUES				Operational time (%)	Valid time (%)	Reportable Incidents		
		0 to 1 (ppb)	1 to 5 (ppb)	5 to 10 (ppb)	10 to 57 (ppb)	57 to 172 (ppb)	> 172 (ppb)		24-hr (ppb)	Date	1-hr (ppb)	Date			30-d 11 ppb	24-hr 48 ppb	1-hr 172 ppb
January 2025	709	99.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.1	0.7	Jan 04	2.1	Jan 04 06:00	100.0%	95.3%	0	0	0
February 2025	641	99.5%	0.5%	0.0%	0.0%	0.0%	0.0%	0.2	0.4	Feb 17	1.6	Feb 21 22:00	100.0%	95.4%	0	0	0
March 2025	710	98.9%	1.1%	0.0%	0.0%	0.0%	0.0%	0.1	0.4	Mar 14	2.2	Mar 04 17:00	100.0%	95.4%	0	0	0
April 2025	685	99.9%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1	0.3	Apr 07	1.1	Apr 07 10:00	100.0%	95.1%	0	0	0
May 2025	709	99.2%	0.8%	0.0%	0.0%	0.0%	0.0%	0.1	0.3	May 28	3.8	May 03 10:00	99.9%	95.3%	0	0	0
June 2025	687	99.9%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1	0.2	Jun 09	1.4	Jun 14 04:00	100.0%	95.4%	0	0	0
July 2025	708	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.2	Jul 10	0.6	Jul 26 09:00	99.7%	95.2%	0	0	0
August 2025	709	97.9%	2.0%	0.1%	0.0%	0.0%	0.0%	0.1	0.8	Aug 25	5.4	Aug 25 13:00	100.0%	95.3%	0	0	0
September 2025	687	99.7%	0.3%	0.0%	0.0%	0.0%	0.0%	0.1	0.2	Sep 25	3.1	Sep 23 15:00	100.0%	95.4%	0	0	0
October 2025	709	99.9%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1	0.2	Oct 31	1.2	Oct 05 16:00	100.0%	95.3%	0	0	0
November 2025	687	98.8%	1.2%	0.0%	0.0%	0.0%	0.0%	0.1	0.3	Nov 18	4.3	Nov 23 14:00	100.0%	95.4%	0	0	0
December 2025	710	95.4%	4.6%	0.0%	0.0%	0.0%	0.0%	0.2	0.9	Dec 24	4.9	Dec 19 10:00	100.0%	95.4%	0	0	0
Annual	8351	99.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.1	0.9	MAXIMUM VALUES		100.0%	95.3%	0	0	0	

AAAQO Objectives: Annual: 8ppb, 30-Day: 11ppb, 24-Hr: 48ppb, 1-Hr: 172ppb

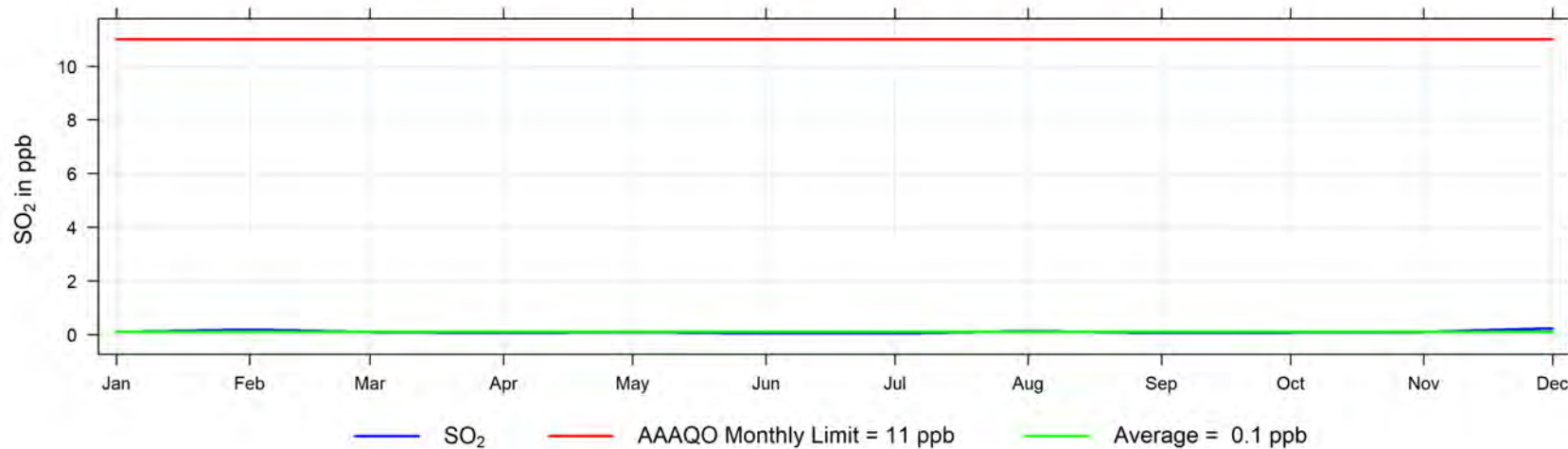
2025 Hourly Concentration Readings of SO₂ (in ppb) at Valleyview

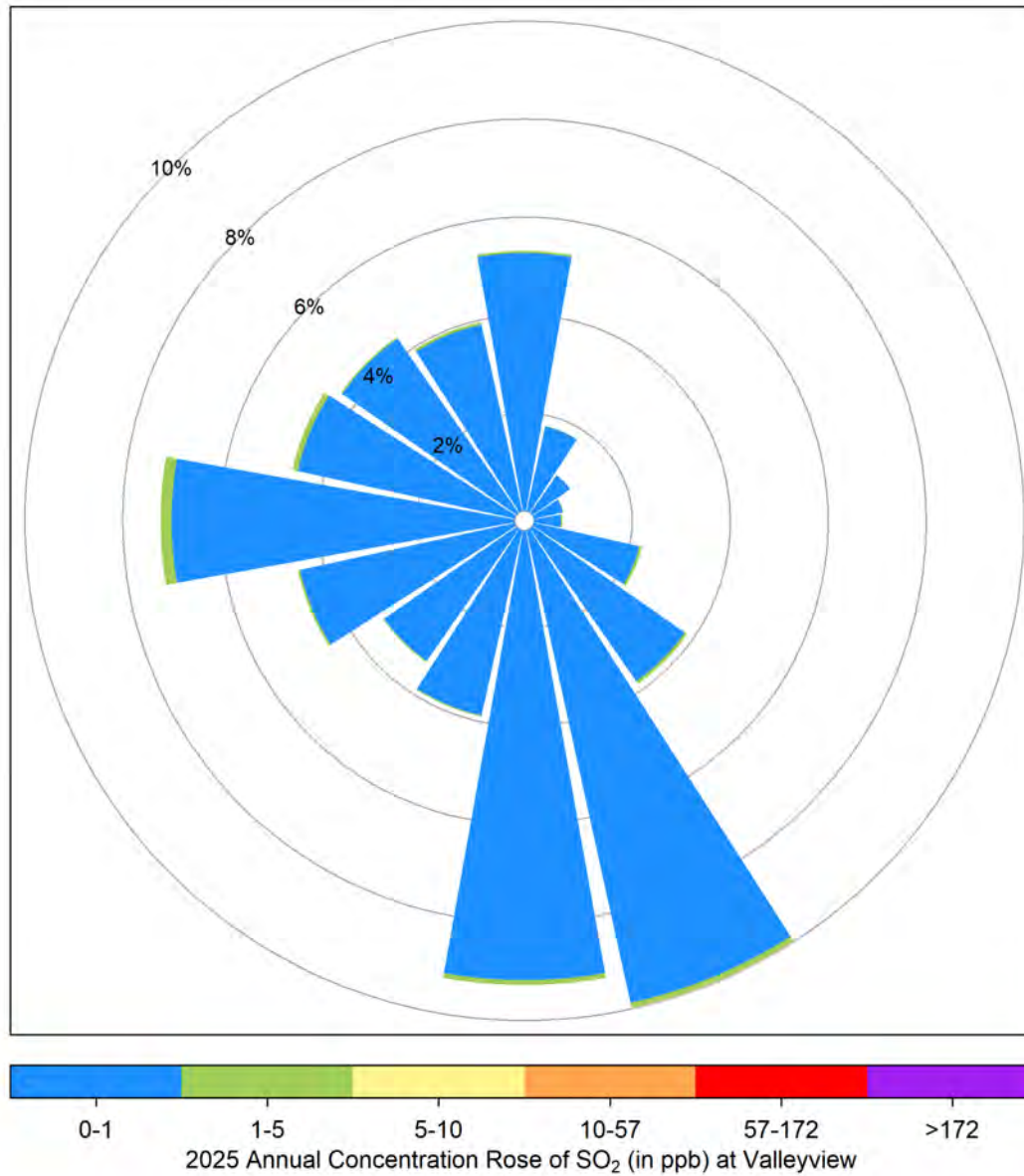


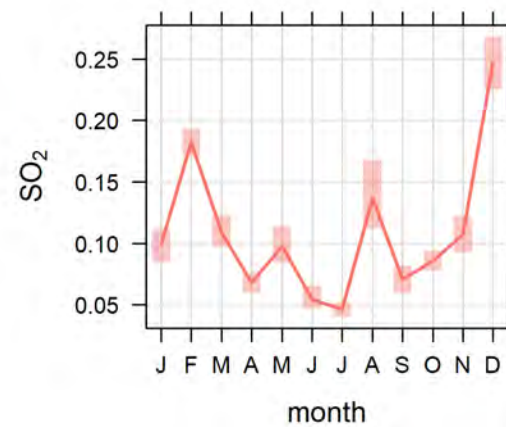
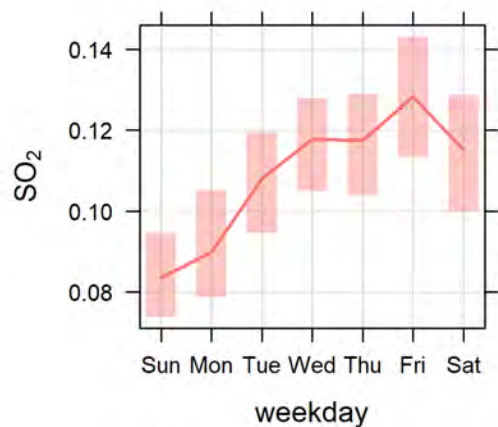
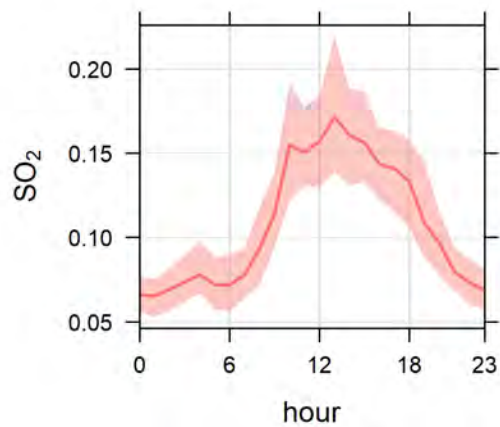
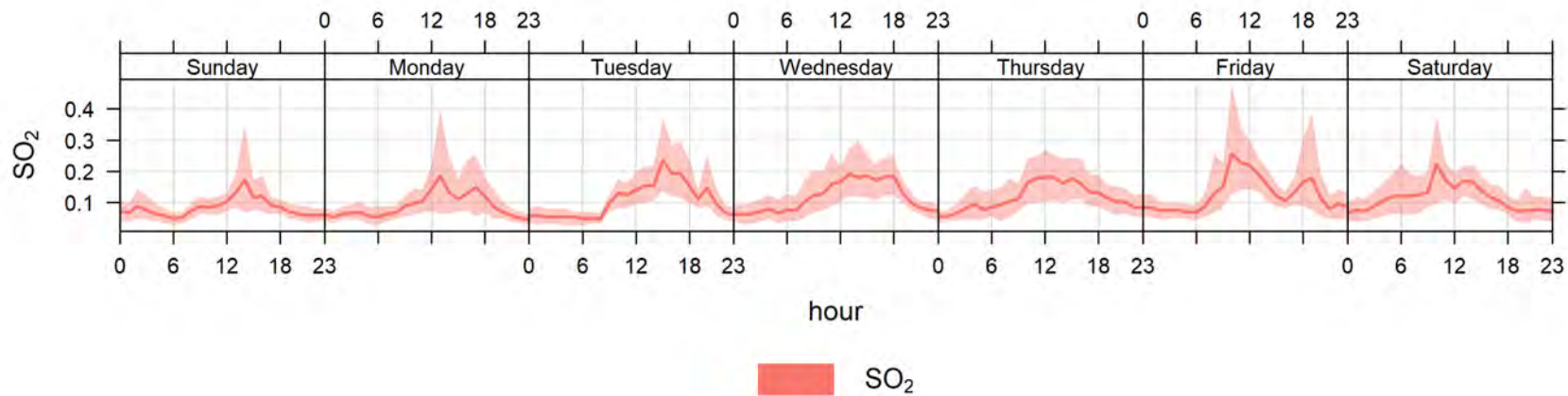
2025 Daily Concentration Readings of SO₂ (in ppb) at Valleyview



2025 Monthly Concentration Readings of SO₂ (in ppb) at Valleyview

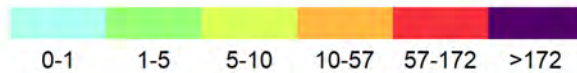
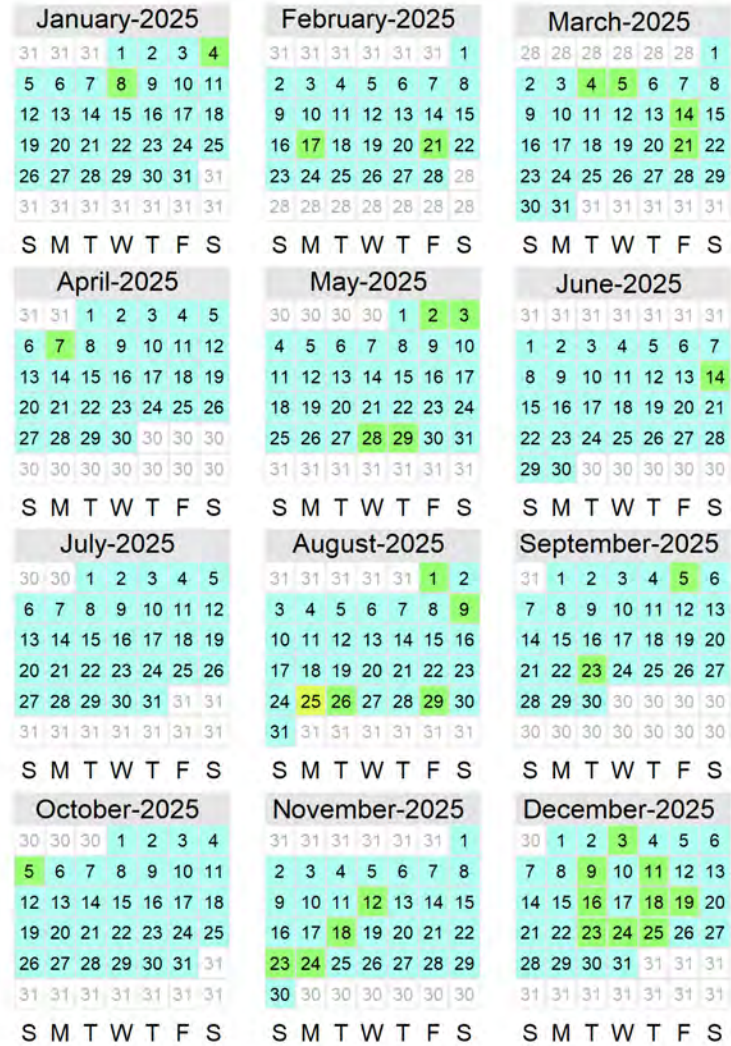






mean and 95% confidence interval in mean

Hourly Maximum SO₂ (in ppb) for 2025 at Valleyview



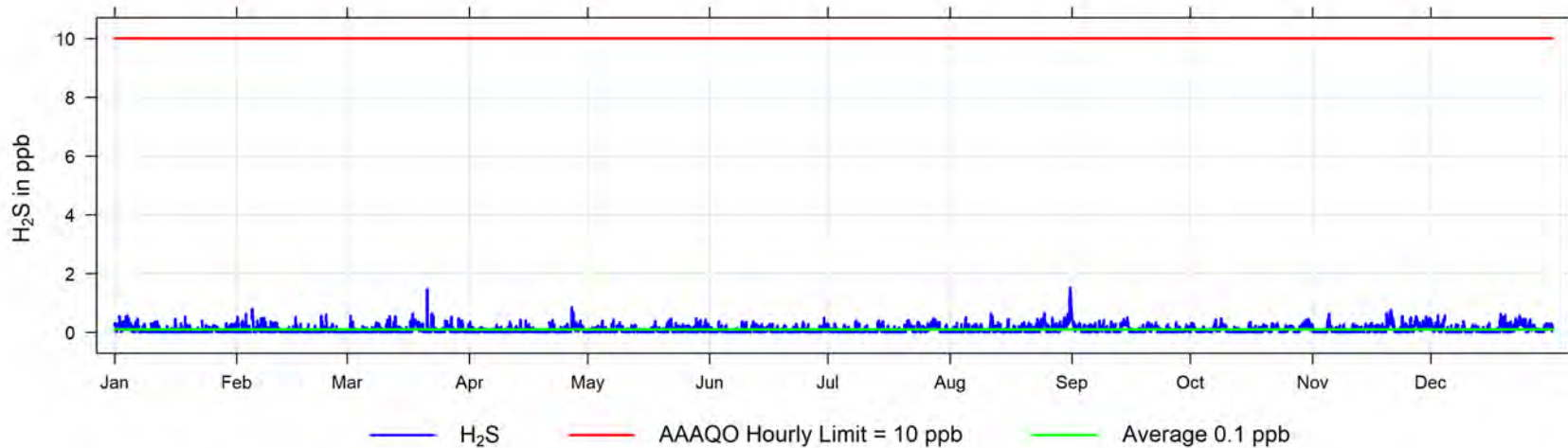
9.2 Hydrogen Sulphide (H₂S) - Valleyview 2025 Summary

Hydrogen Sulphide (H₂S) Frequency Distribution at Valleyview

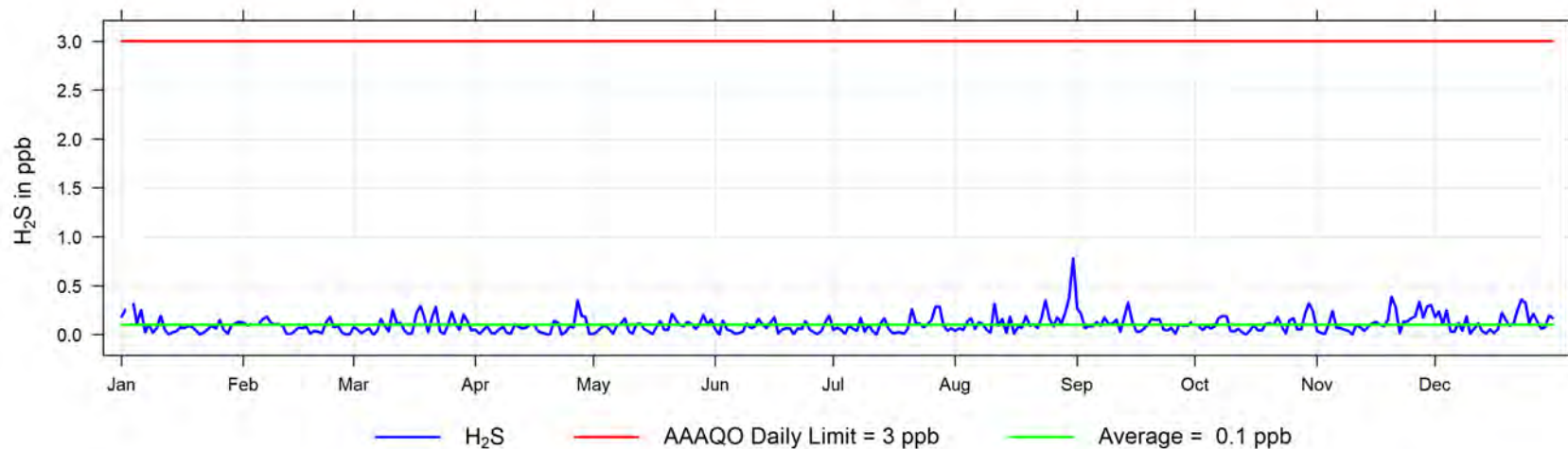
Month	Valid Hours	% of Readings in Concentration Range						Monthly Average (ppb)	MAXIMUM VALUES				Operational time (%)	Valid time (%)	Reportable Incidents		
		0 to 1 (ppb)	1 to 3 (ppb)	3 to 5 (ppb)	5 to 8 (ppb)	8 to 10 (ppb)	> 10 (ppb)		24-hr (ppb)	Date	1-hr (ppb)	Date			24-hr 3 ppb	1-hr 10 ppb	
January 2025	707	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1	0.3	Jan 04	0.6	Jan 04 04:00	100.0%	95.0%	0	0	
February 2025	636	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1	0.2	Feb 23	0.8	Feb 04 22:00	99.7%	94.6%	0	0	
March 2025	708	99.7%	0.3%	0.0%	0.0%	0.0%	0.0%	0.1	0.3	Mar 18	1.5	Mar 21 08:00	100.0%	95.2%	0	0	
April 2025	685	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1	0.3	Apr 27	0.9	Apr 27 00:00	100.0%	95.1%	0	0	
May 2025	707	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1	0.2	May 21	0.5	May 28 15:00	99.9%	95.0%	0	0	
June 2025	686	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1	0.2	Jun 30	0.5	Jun 30 01:00	100.0%	95.3%	0	0	
July 2025	707	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.3	Jul 27	0.5	Jul 27 22:00	99.7%	95.0%	0	0	
August 2025	709	99.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.2	0.8	Aug 31	1.5	Aug 31 11:00	100.0%	95.3%	0	0	
September 2025	686	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1	0.3	Sep 14	0.5	Sep 15 00:00	100.0%	95.3%	0	0	
October 2025	707	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1	0.3	Oct 30	0.5	Oct 08 20:00	100.0%	95.0%	0	0	
November 2025	686	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1	0.4	Nov 20	0.8	Nov 20 22:00	100.0%	95.3%	0	0	
December 2025	709	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1	0.4	Dec 23	0.6	Dec 18 18:00	100.0%	95.3%	0	0	
Annual	8333	99.9%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1	0.8	MAXIMUM VALUES		1.5	Aug 31 11:00	99.9%	95.1%	0	0

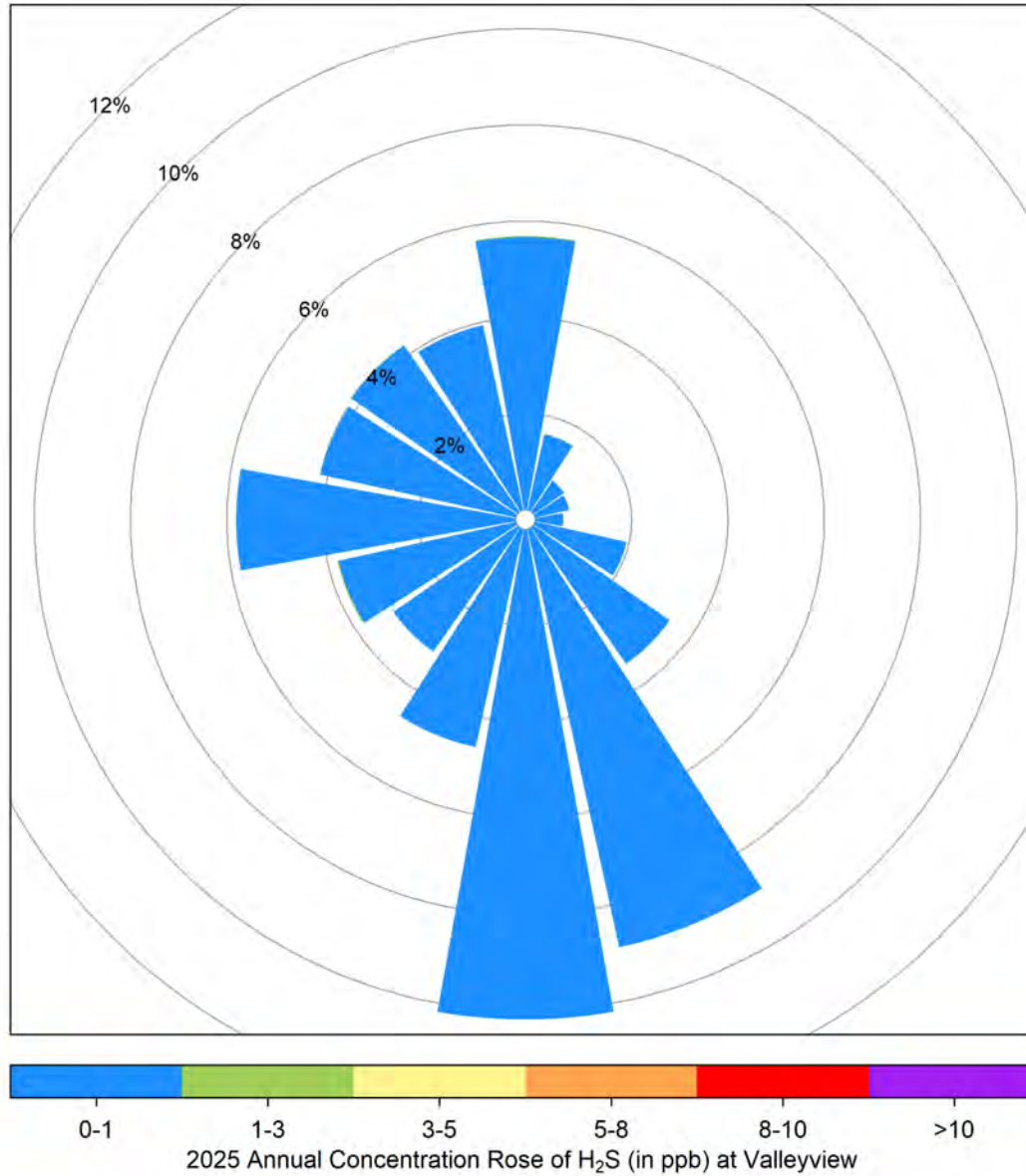
AAAQO Objectives: 24-Hr: 3ppb, 1-Hr: 10ppb

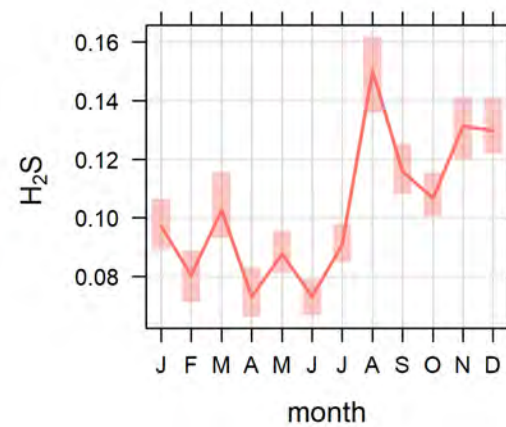
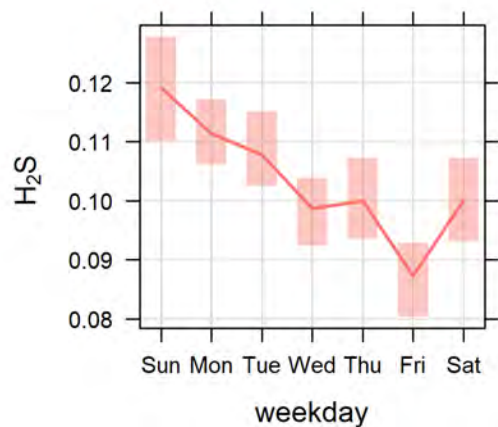
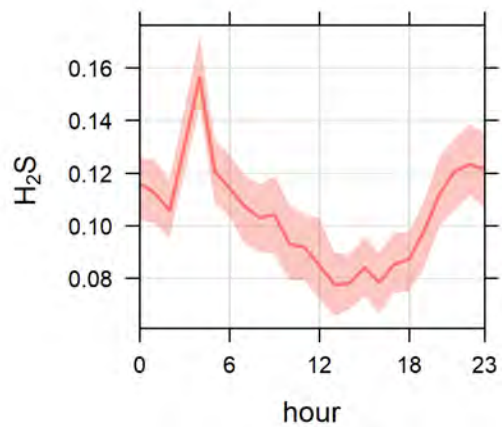
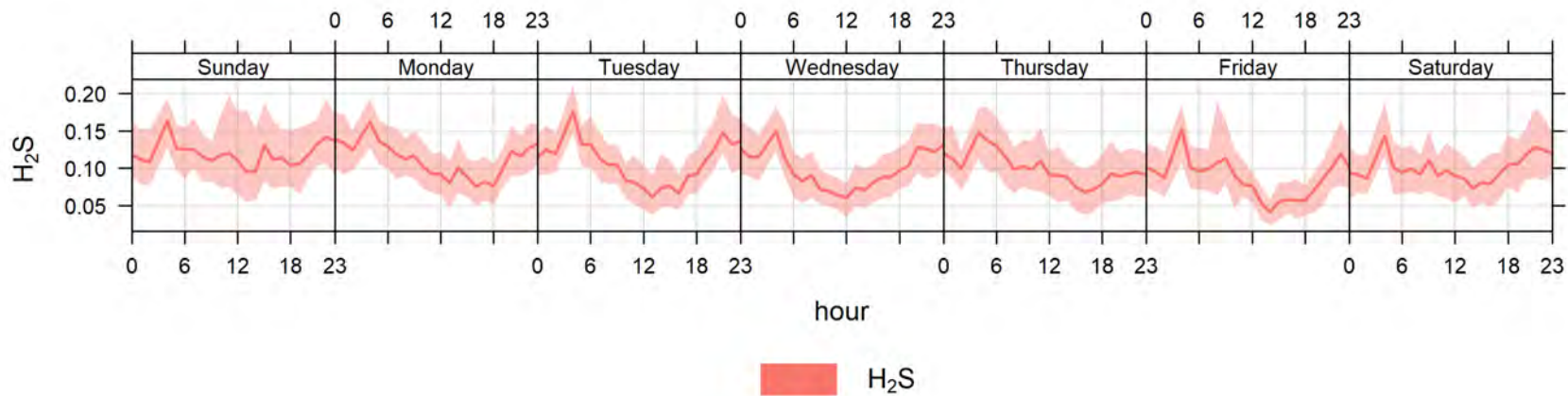
2025 Hourly Concentration Readings of H₂S (in ppb) at Valleyview



2025 Daily Concentration Readings of H₂S (in ppb) at Valleyview

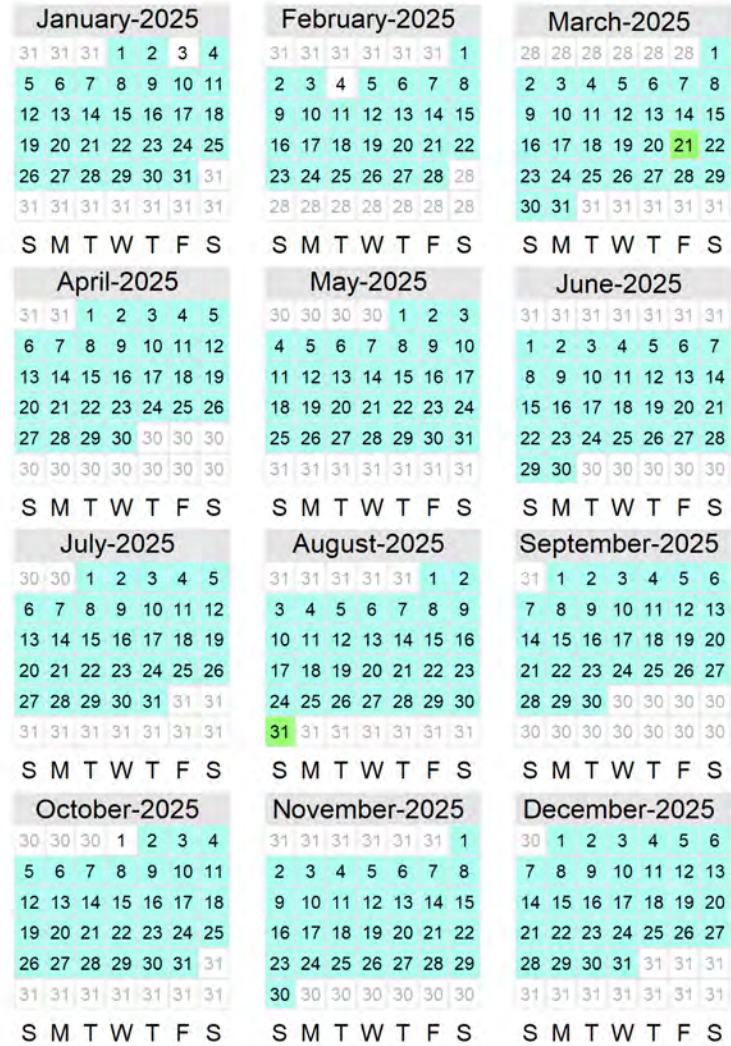






mean and 95% confidence interval in mean

Hourly Maximum H₂S (in ppb) for 2025 at Valleyview

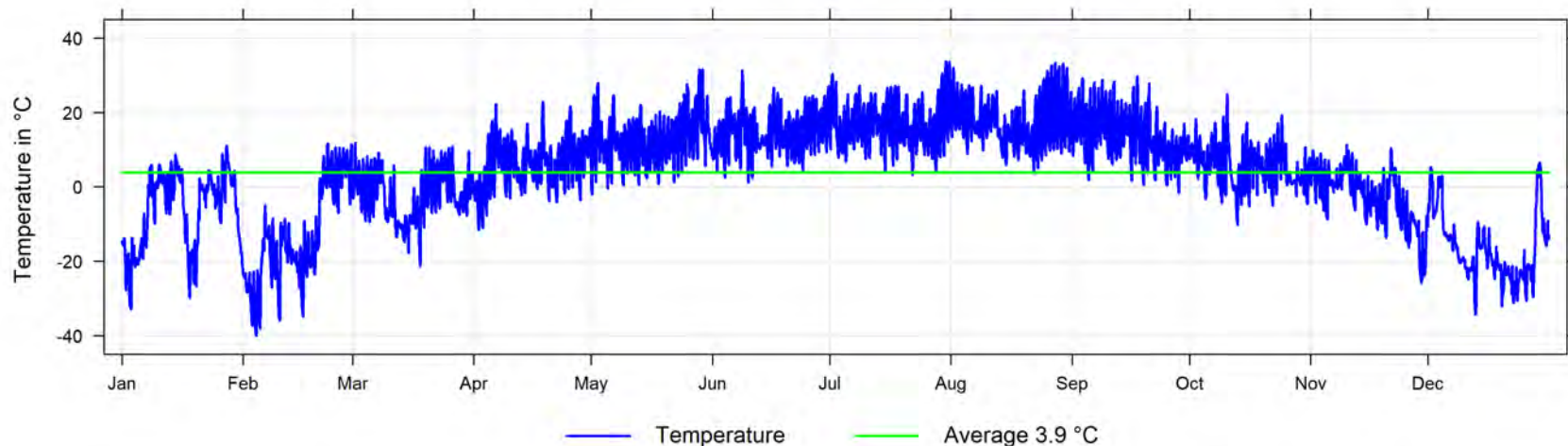


9.3 Temperature (ET) - Valleyview 2025 Summary

Temperature (ET) Frequency Distribution at Valleyview

Month	Valid Hours	Monthly Average (°C)	Maximum Values			Minimum Values			Operational time (%)	Valid time (%)			
			24-hr (°C)	Date	1-hr (°C)	Date	24-hr (°C)	Date			1-hr (°C)	Date	
January 2025	744	-6.4	4.9	Jan 27	11.0	Jan 27 18:00	-23.3	Jan 02	-33.0	Jan 03 08:00	100.0%	100.0%	
February 2025	672	-13.5	6.7	Feb 27	11.6	Feb 22 16:00	-32.8	Feb 04	-40.0	Feb 04 09:00	100.0%	100.0%	
March 2025	744	-2.3	5.0	Mar 24	12.0	Mar 01 16:00	-11.6	Mar 14	-21.3	Mar 18 07:00	100.0%	100.0%	
April 2025	720	6.2	12.0	Apr 25	22.9	Apr 18 15:00	-3.1	Apr 02	-11.5	Apr 02 06:00	100.0%	100.0%	
May 2025	743	13.2	21.7	May 28	31.6	May 29 12:00	9.3	May 15	-2.0	May 01 06:00	99.9%	99.9%	
June 2025	720	14.9	19.6	Jun 08	31.3	Jun 08 16:00	10.1	Jun 01	1.2	Jun 10 05:00	100.0%	100.0%	
July 2025	744	17.0	23.4	Jul 31	33.7	Jul 30 18:00	12.7	Jul 21	3.2	Jul 22 05:00	100.0%	100.0%	
August 2025	744	17.4	22.6	Aug 01	33.5	Aug 27 17:00	11.8	Aug 21	3.6	Aug 22 06:00	100.0%	100.0%	
September 2025	720	13.6	19.7	Sep 03	29.8	Sep 17 16:00	6.5	Sep 28	-1.7	Sep 28 07:00	100.0%	100.0%	
October 2025	744	5.4	10.3	Oct 07	25.0	Oct 10 16:00	-1.8	Oct 13	-10.2	Oct 13 07:00	100.0%	100.0%	
November 2025	720	-2.9	7.3	Nov 10	11.3	Nov 10 05:00	-20.9	Nov 29	-25.9	Nov 29 09:00	100.0%	100.0%	
December 2025	744	-16.5	4.1	Dec 29	6.5	Dec 29 15:00	-26.9	Dec 23	-34.4	Dec 13 05:00	100.0%	100.0%	
		AVERAGE	MAXIMUM VALUES			MINIMUM VALUES							
		8759	3.9	23.4	Jul 31	33.7	Jul 30 18:00	-32.8	Feb 04	-40.0	Feb 04 09:00	100.0%	100.0%

2025 Hourly Temperature Readings (in °C) at Valleyview

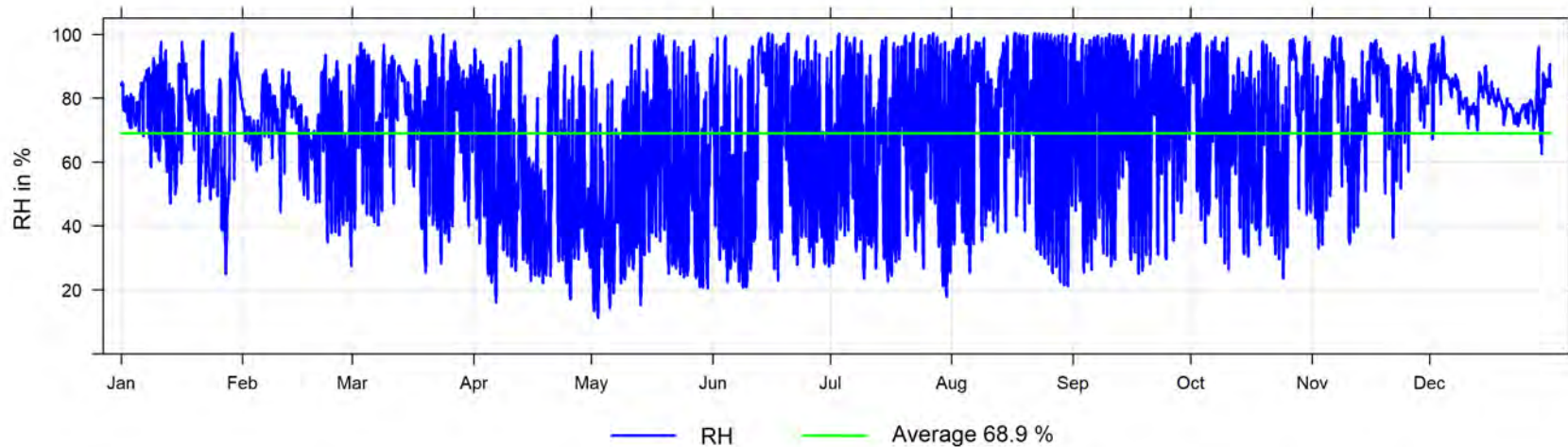


9.4 Relative Humidity (RH) - Valleyview 2025 Summary

Relative Humidity (RH) Frequency Distribution at Valleyview

Month	Valid Hours	Monthly Average (%)	Maximum Values				Operational time (%)	Valid time (%)	
			24-hr (%)	Date	1-hr (%)	Date			
January 2025	744	73.4	89.5	Jan 30	100.2	Jan 29 10:00	100.0%	100.0%	
February 2025	672	69.7	83.9	Feb 06	93.6	Feb 22 04:00	100.0%	100.0%	
March 2025	744	73.1	88.9	Mar 27	99.9	Mar 24 05:00	100.0%	100.0%	
April 2025	720	53.7	89.5	Apr 21	99.6	Apr 22 02:00	100.0%	100.0%	
May 2025	743	53.9	80.7	May 31	100.0	May 18 06:00	99.9%	99.9%	
June 2025	720	62.3	94.7	Jun 13	100.3	Jun 15 06:00	100.0%	100.0%	
July 2025	744	65.2	85.6	Jul 19	100.3	Jul 22 05:00	100.0%	100.0%	
August 2025	744	73.0	93.6	Aug 07	100.3	Aug 17 03:00	100.0%	100.0%	
September 2025	720	73.6	88.7	Sep 21	100.3	Sep 01 07:00	100.0%	100.0%	
October 2025	744	70.9	94.4	Oct 01	100.3	Oct 02 09:00	100.0%	100.0%	
November 2025	720	76.8	96.3	Nov 06	99.4	Nov 06 09:00	100.0%	100.0%	
December 2025	744	80.6	93.3	Dec 04	99.2	Dec 04 08:00	100.0%	100.0%	
		AVERAGE	MAXIMUM VALUES						
		8759	68.9	96.3	Nov 06	100.3	Jun 15 06:00	100.0%	100.0%

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

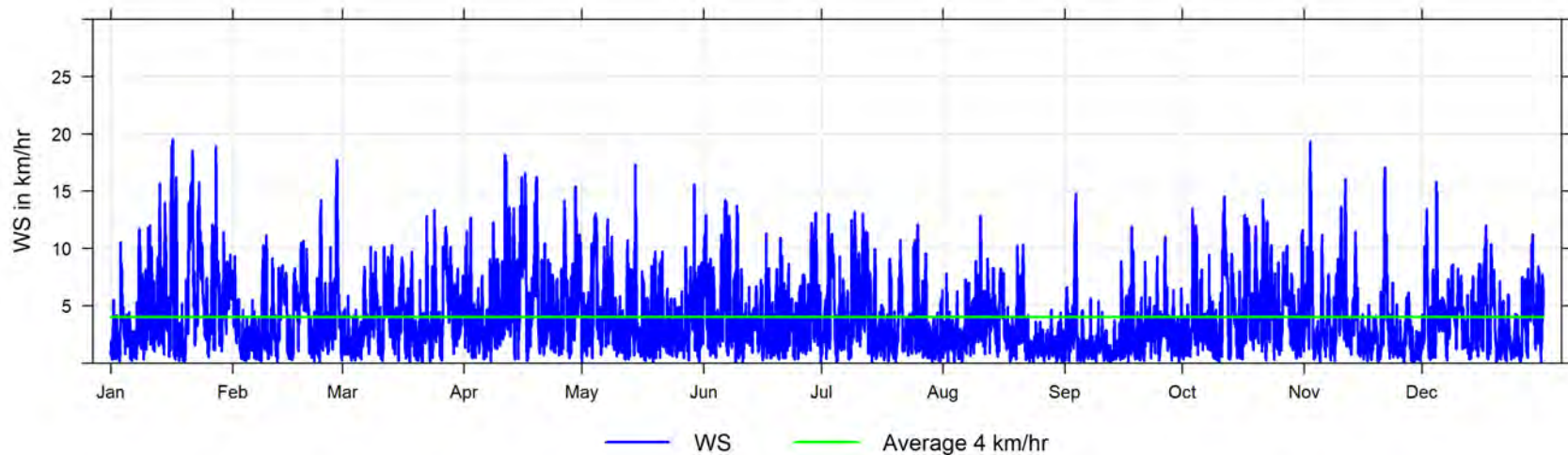


9.5 Wind Speed and Wind Direction (WS and WD) - Valleyview 2025 Summary

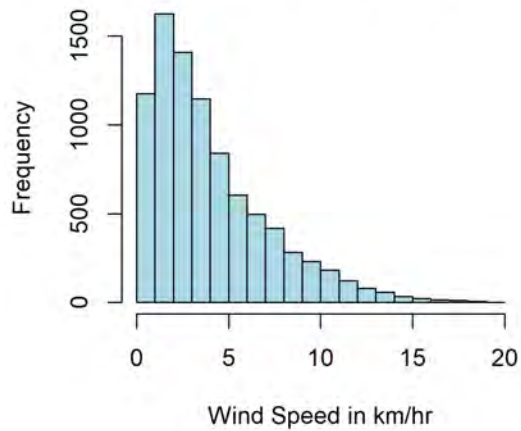
Wind Speed Frequency Distribution at Valleyview

Month	Valid Hours	Calm	% of Readings in Concentration Range					Monthly Average (km/hr)	24-hr (km/hr)	MAXIMUM VALUES			Operational time (%)	Valid time (%)
			0.5 to 5 (km/hr)	5 to 11 (km/hr)	11 to 19 (km/hr)	19 to 28 (km/hr)	>28 (km/hr)			Date	1-hr (km/hr)	Date		
January 2025	744	3.4%	55.0%	31.2%	10.3%	0.1%	0.0%	5.2	13.3	Jan 21	19.5	Jan 16 19:00	100.0%	100.0%
February 2025	672	6.0%	60.4%	30.7%	3.0%	0.0%	0.0%	4.0	9.7	Feb 27	17.7	Feb 27 14:00	100.0%	100.0%
March 2025	744	3.9%	67.9%	27.3%	0.9%	0.0%	0.0%	3.9	8.7	Mar 27	13.4	Mar 24 11:00	100.0%	100.0%
April 2025	720	1.9%	55.7%	31.4%	11.0%	0.0%	0.0%	5.4	10.3	Apr 19	18.2	Apr 11 11:00	100.0%	100.0%
May 2025	743	2.4%	66.8%	27.7%	3.1%	0.0%	0.0%	4.1	10.1	May 04	17.3	May 14 16:00	99.9%	99.9%
June 2025	720	2.8%	64.9%	27.8%	4.6%	0.0%	0.0%	4.3	8.6	Jun 06	14.2	Jun 06 12:00	100.0%	100.0%
July 2025	744	4.7%	68.8%	24.3%	2.2%	0.0%	0.0%	3.8	7.9	Jul 12	13.2	Jul 09 13:00	100.0%	100.0%
August 2025	744	4.7%	81.0%	14.0%	0.3%	0.0%	0.0%	2.8	5.4	Aug 10	12.8	Aug 10 14:00	100.0%	100.0%
September 2025	720	8.1%	81.4%	8.8%	1.8%	0.0%	0.0%	2.6	7.8	Sep 03	14.8	Sep 03 22:00	100.0%	100.0%
October 2025	744	2.8%	59.5%	32.0%	5.6%	0.0%	0.0%	4.6	9.8	Oct 11	14.6	Oct 11 16:00	100.0%	100.0%
November 2025	720	6.3%	71.4%	18.5%	3.8%	0.1%	0.0%	3.5	9.1	Nov 21	19.3	Nov 02 15:00	100.0%	100.0%
December 2025	744	4.4%	63.8%	30.2%	1.5%	0.0%	0.0%	4.0	6.2	Dec 10	15.8	Dec 04 17:00	100.0%	100.0%
Annual	8759	4.3%	66.4%	25.3%	4.0%	0.0%	0.0%	4.0	MAXIMUM VALUES			100.0%	100.0%	

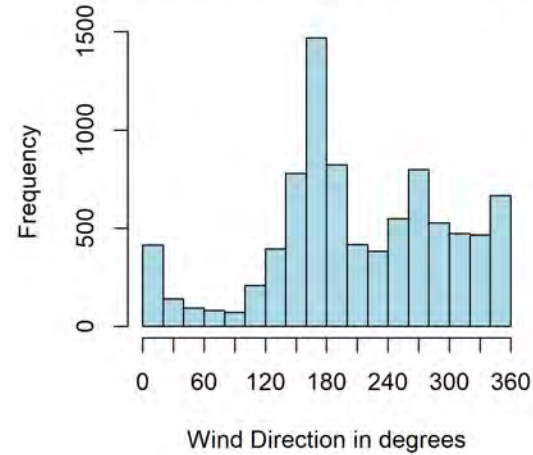
2025 Hourly Readings of Wind Speed (in km/hr) at Valleyview



2025 Wind Speed Histogram

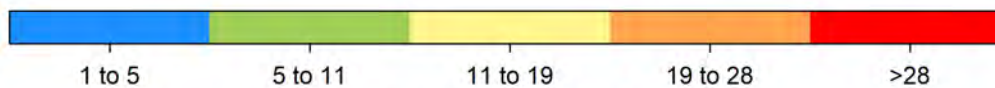
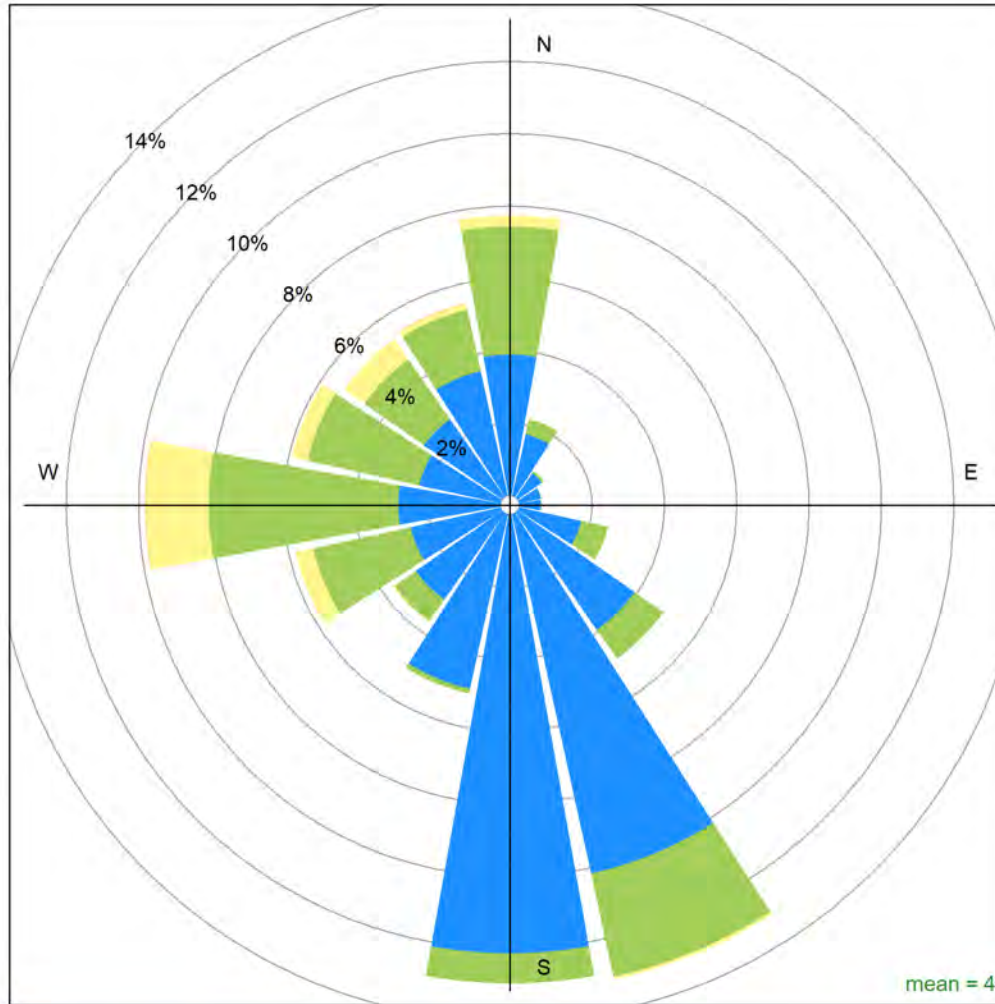


2025 Wind Direction Histogram



Wind Speed and Wind Direction Frequency Distribution at Valleyview

Direction	Number of Readings	% of wind speed range						Total %
		Calm (<0.5) (km/hr)	0.5 to 5 (km/hr)	5 to 11 (km/hr)	11 to 19 (km/hr)	19 to 28 (km/hr)	>28 (km/hr)	
N	728	0.3%	4.2%	3.5%	0.3%	0.0%	0.0%	8.3%
NNE	227	0.2%	2.0%	0.4%	0.0%	0.0%	0.0%	2.6%
NE	114	0.1%	1.1%	0.1%	0.0%	0.0%	0.0%	1.3%
ENE	95	0.2%	0.9%	0.0%	0.0%	0.0%	0.0%	1.1%
E	77	0.1%	0.7%	0.0%	0.0%	0.0%	0.0%	0.9%
ESE	267	0.3%	2.0%	0.8%	0.0%	0.0%	0.0%	3.0%
SE	507	0.3%	4.5%	1.0%	0.0%	0.0%	0.0%	5.8%
SSE	1281	0.4%	11.2%	2.9%	0.1%	0.0%	0.0%	14.6%
S	1341	0.4%	14.0%	0.8%	0.0%	0.0%	0.0%	15.3%
SSW	585	0.4%	6.2%	0.1%	0.0%	0.0%	0.0%	6.7%
SW	414	0.4%	3.6%	0.7%	0.0%	0.0%	0.0%	4.7%
WSW	564	0.3%	2.9%	2.8%	0.5%	0.0%	0.0%	6.4%
W	907	0.2%	3.2%	5.2%	1.7%	0.0%	0.0%	10.4%
WNW	565	0.1%	2.7%	3.2%	0.4%	0.0%	0.0%	6.4%
NW	554	0.3%	3.3%	2.0%	0.7%	0.0%	0.0%	6.3%
NNW	534	0.2%	3.9%	1.7%	0.2%	0.0%	0.0%	6.1%
Total	8760	4.3%	66.4%	25.3%	4.0%	0.0%	0.0%	100.0%



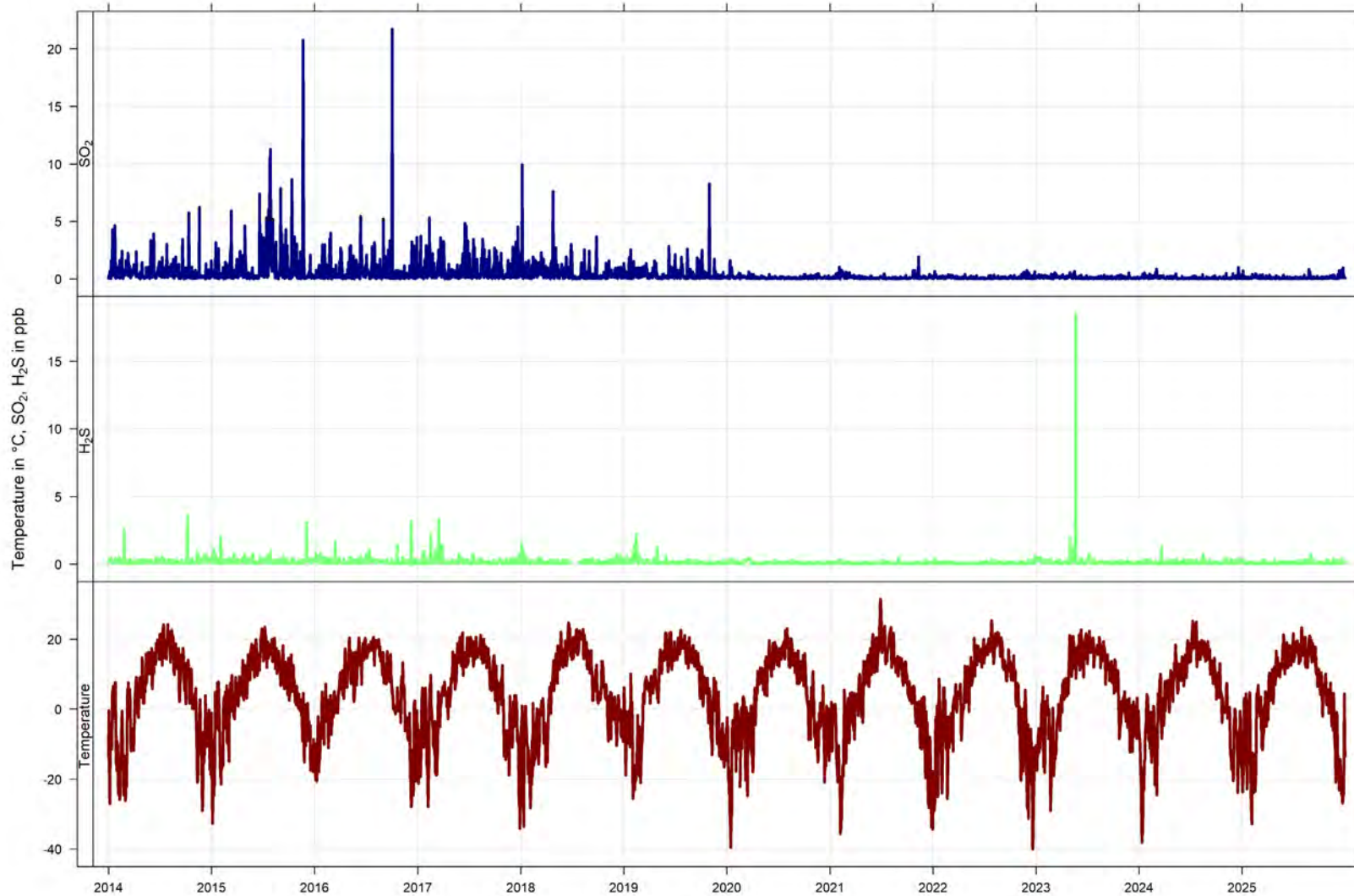
Valleyview 2025 Wind Rose, wind speed in km/hr

Calms (<1km/hr) = 13.4 %

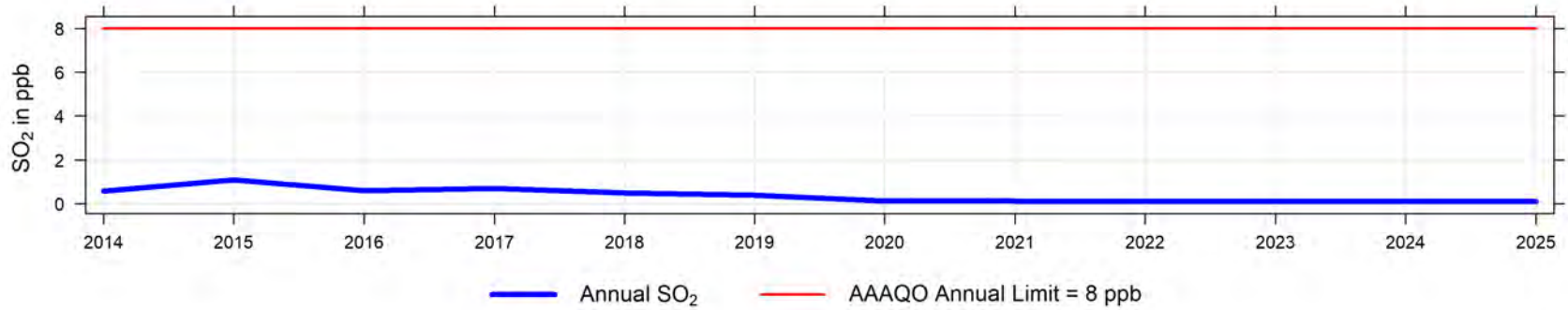
9.6 Valleyview Annual Trends, 2014 to 2025

The following pages include historical annual charts collected between 2014 and 2025 at the Valleyview Station.

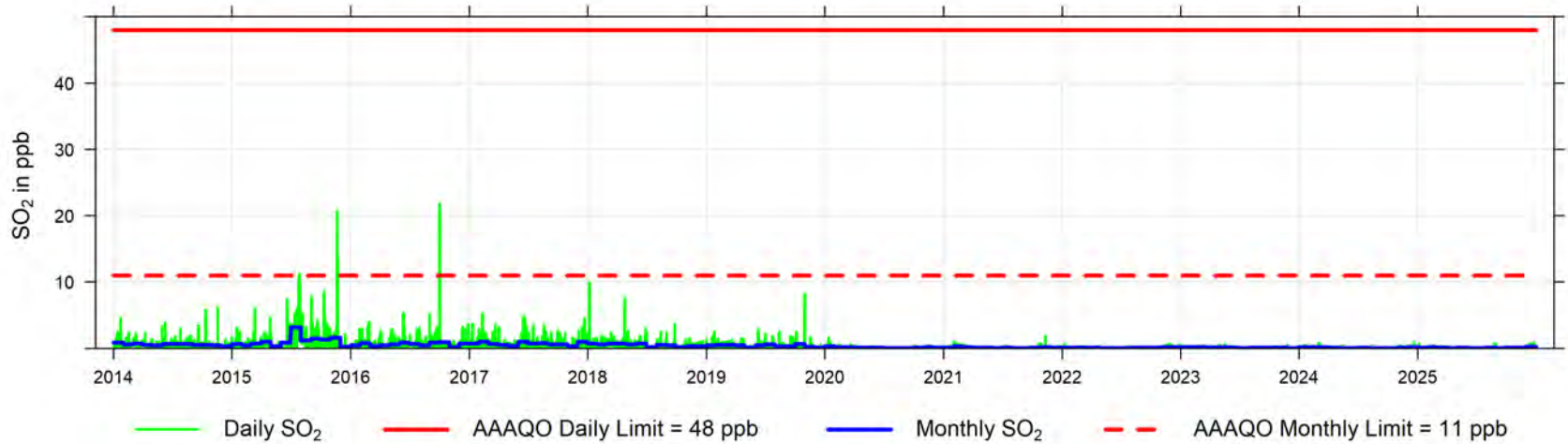
2014 to 2025 Daily Concentration Readings at Valleyview



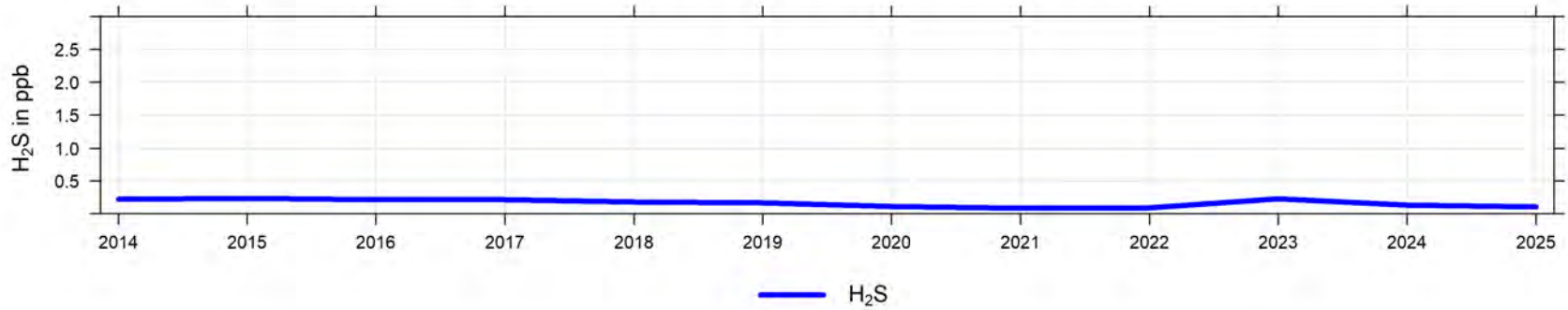
Years 2014 to 2025 Annual Concentration Readings of SO₂ (in ppb) at Valleyview



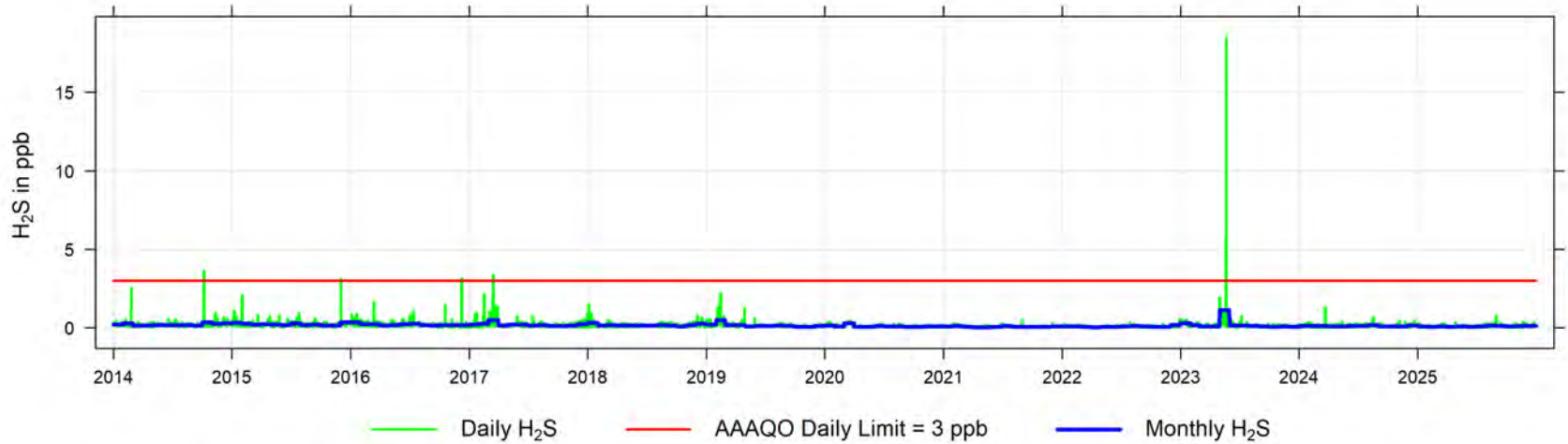
Years 2014 to 2025 Concentration Readings of SO₂ (in ppb) at Valleyview



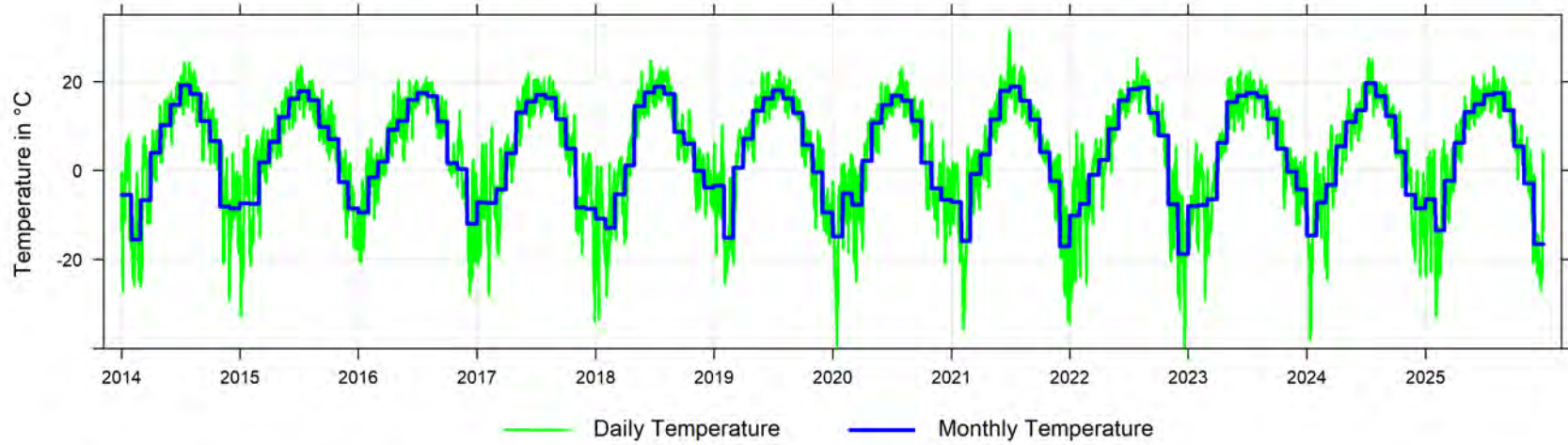
Years 2014 to 2025 Annual Concentration Readings of H₂S (in ppb) at Valleyview



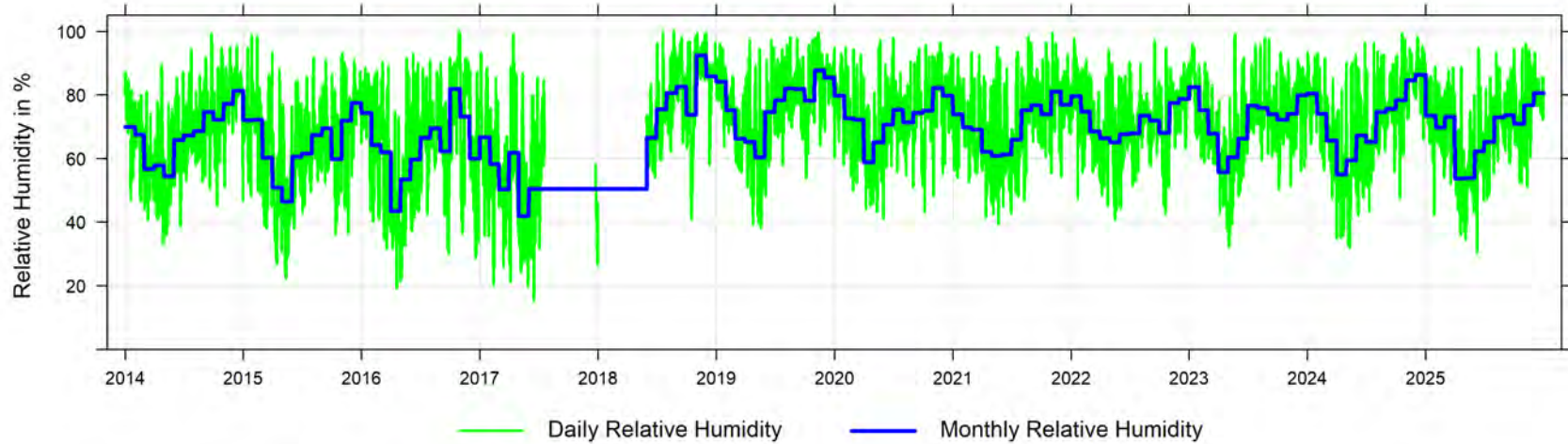
Years 2014 to 2025 Concentration Readings of H₂S (in ppb) at Valleyview



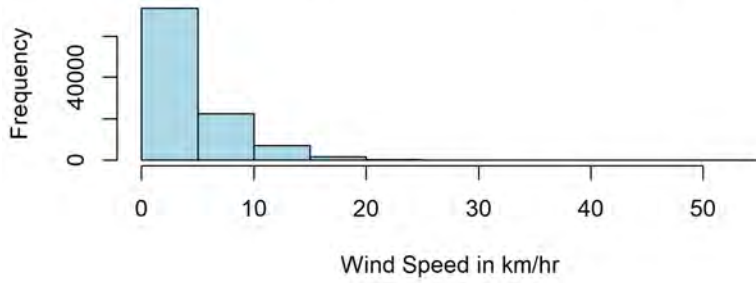
Years 2014 to 2025 Temperature Readings (in °C) at Valleyview



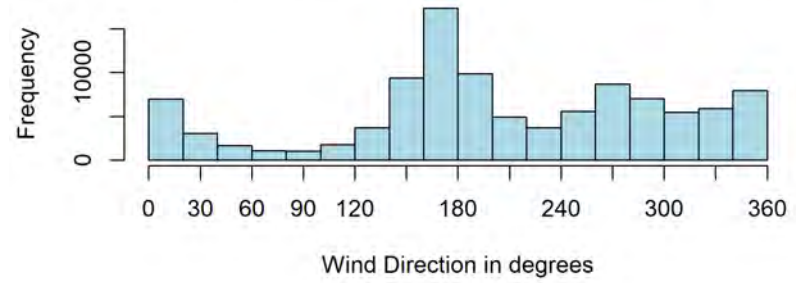
Years 2014 to 2025 Relative Humidity Readings (in %) at Valleyview



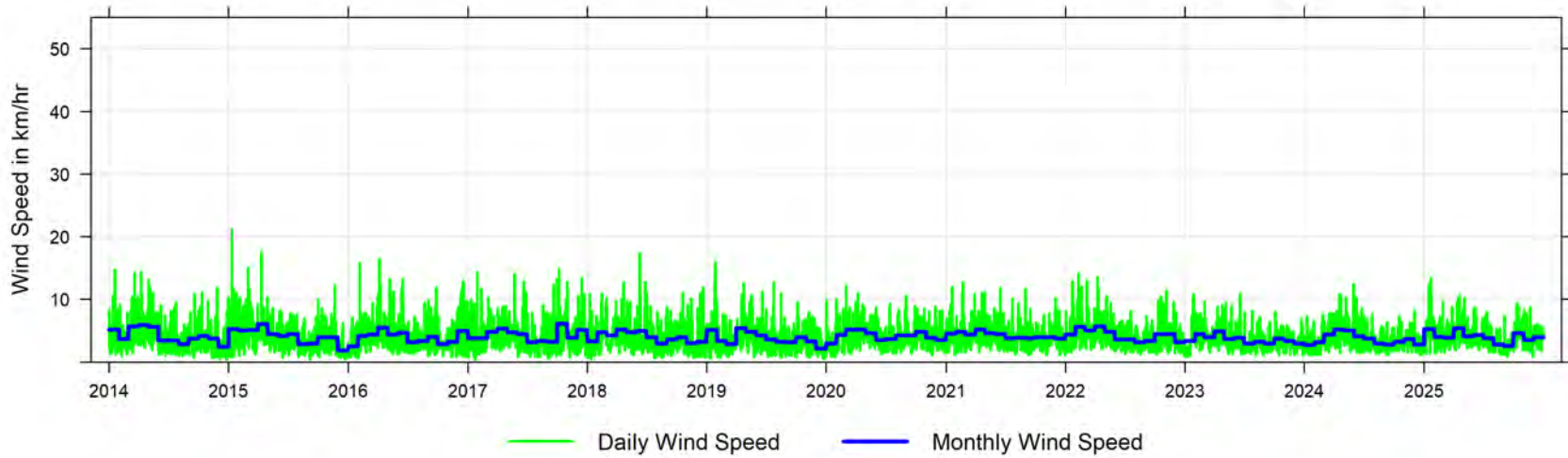
Years 2014 to 2025 Wind Speed Histogram

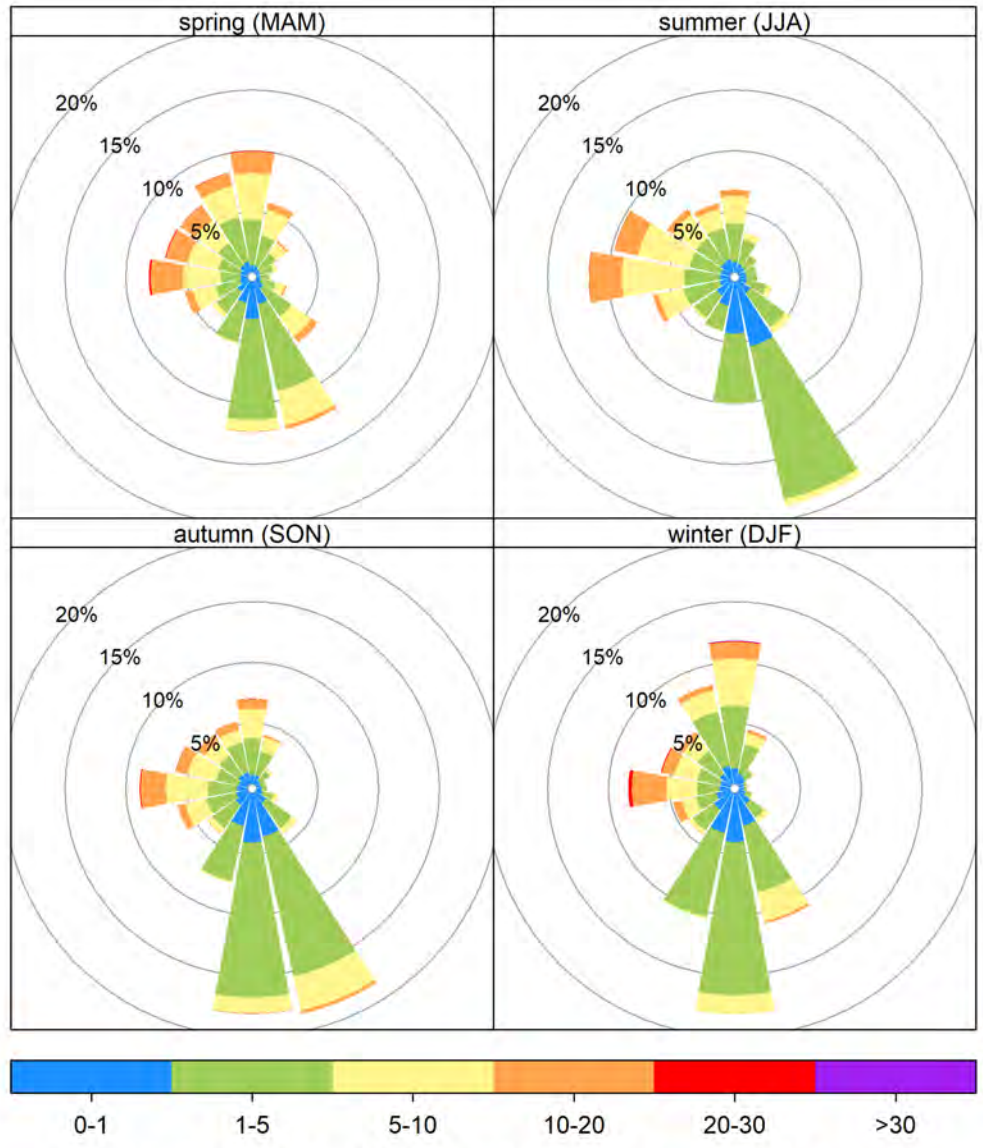


Years 2014 to 2025 Wind Direction Histogram

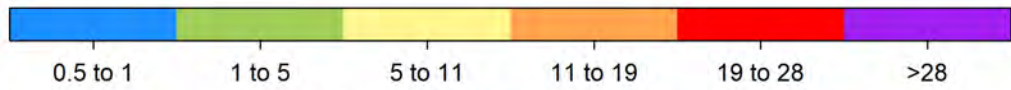
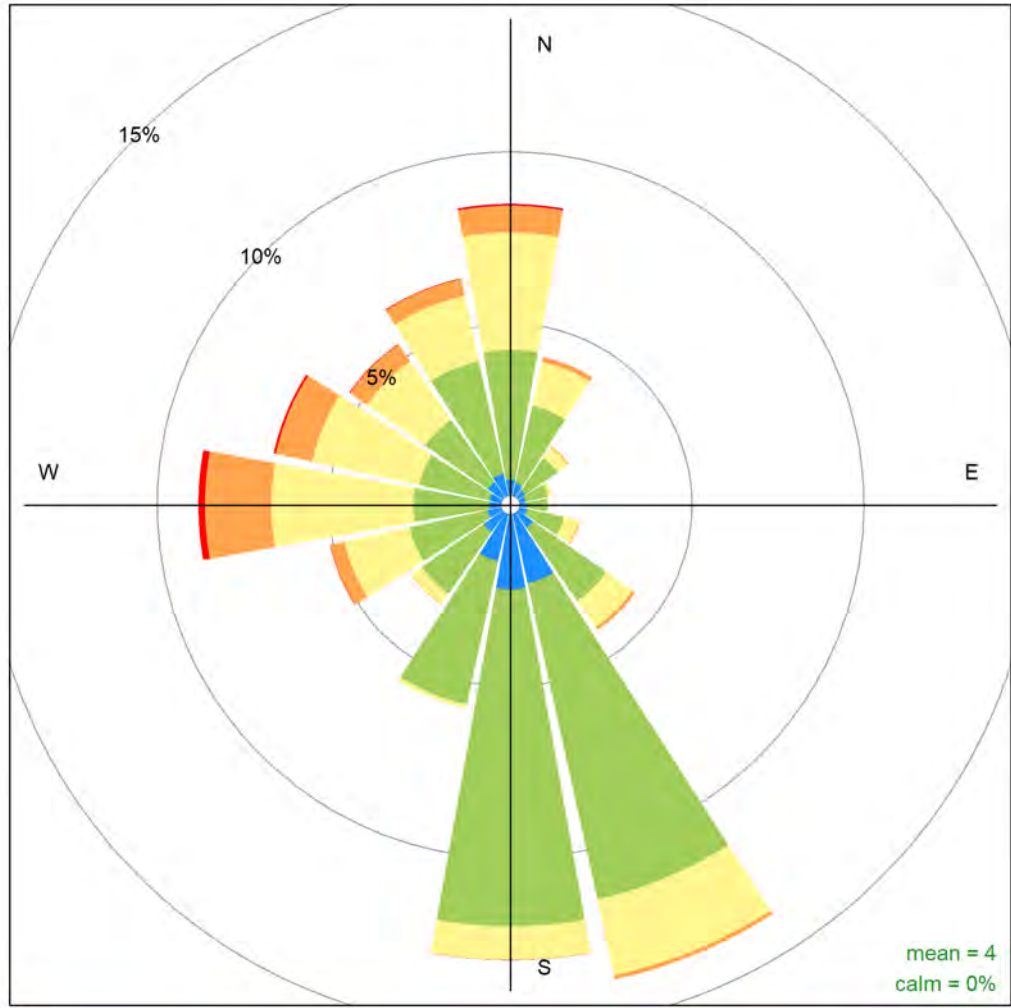


Years 2014 to 2025 Wind Speed Readings (in km/hr) at Valleyview





Valleyview 2014 to 2025 Seasonal Wind Rose, wind speed in km/hr



Valleyview 2014 to 2025 Wind Rose, wind speed in km/hr
Frequency of counts by wind direction (%)

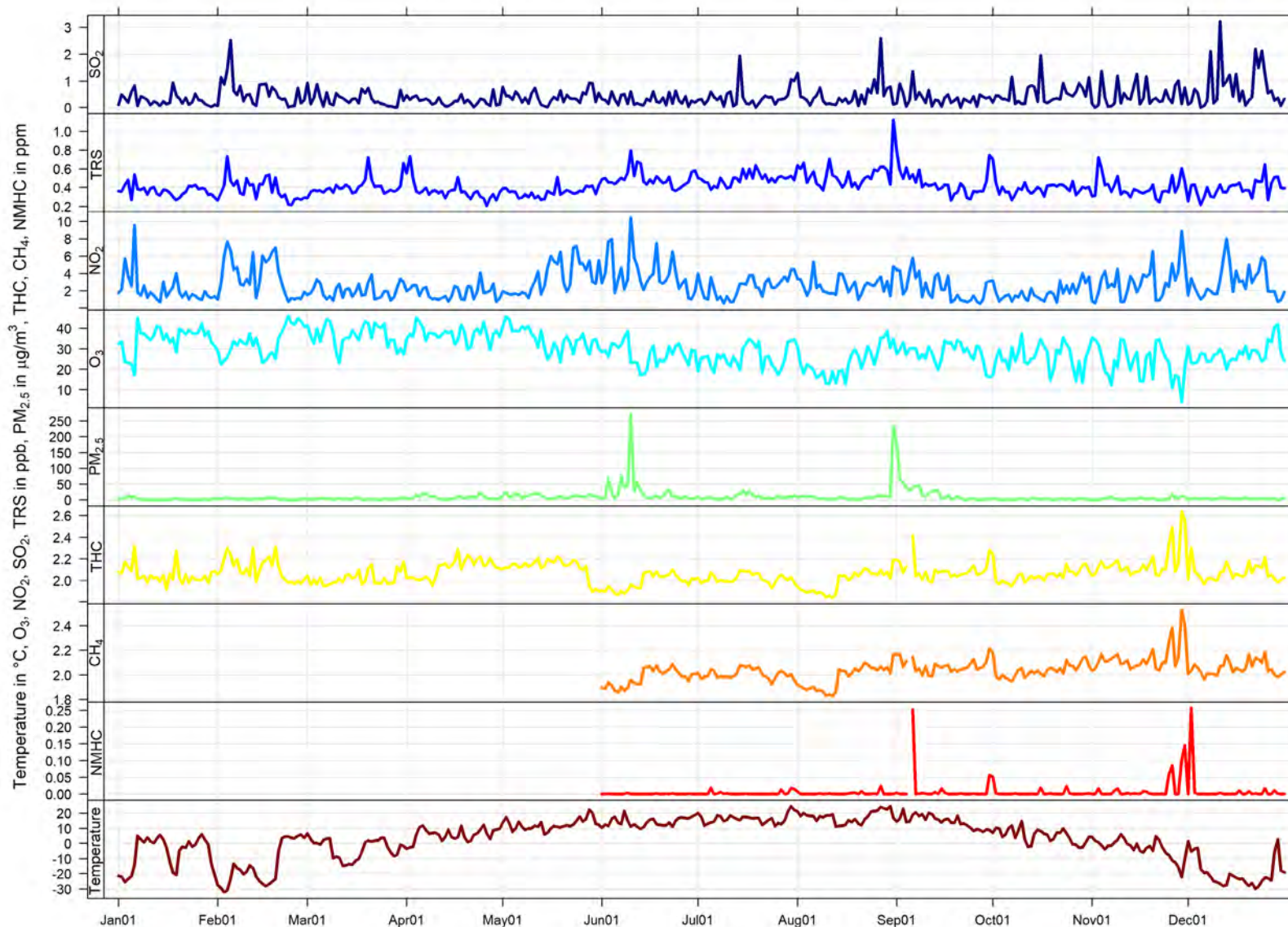
10 Happy Valley Key Parameters - Continuous Monitoring Data - 2025 Summary

Happy Valley Key Parameters - Continuous Monitoring Data - 2025 Summary

Parameter	Average	Maximum Values				Operational Time (%)	Valid Time (%)	Readings above AAAQO & AAAQG					
		24-hr	Date	1-hr	Date			30-min	1-hr	8-hr	24-hr	30-d	Annual
Sulphur Dioxide SO ₂ measured in ppb	0.4	3.2	Dec 11	27.4	Dec 08 13:00	99.7%	94.9%	-	0	-	0	0	0
Total Reduced Sulphur TRS measured in ppb	0.4	1.1	Aug 31	5.3	Mar 20 21:00	99.6%	94.8%	7	-	-	-	-	-
Nitrogen Dioxide NO ₂ measured in ppb	2.7	10.5	Jun 10	25.6	Jun 03 01:00	98.9%	94.0%	-	0	-	-	-	0
Nitrogen Oxides NO _x measured in ppb	3.2	15.5	Jan 06	57.4	May 28 06:00	98.9%	94.0%	-	-	-	-	-	-
Nitric Oxide NO measured in ppb	0.5	6.3	May 19	38.5	May 28 06:00	98.9%	94.0%	-	-	-	-	-	-
Ozone O ₃ measured in ppb	29.8	46.2	May 02	61.4	Aug 29 13:00	99.1%	94.5%	-	0	-	-	-	-
Total Hydrocarbons THC measured in ppm	2.06	2.6	Nov 29	7.7	Dec 02 15:00	97.7%	93.0%	-	-	-	-	-	-
Methane CH ₄ measured in ppm	2.04	2.5	Nov 29	3.6	Nov 29 06:00	96.7%	53.7%	-	-	-	-	-	-
Non Methane Hydrocarbons NMHC measured in ppm	0.01	0.3	Dec 02	5.6	Dec 02 15:00	96.7%	53.7%	-	-	-	-	-	-
Particulate Matter PM _{2.5} measured in µg/m ³	9.8	266.8	Jun 10	596.9	Jun 10 09:00	99.9%	99.7%	-	130	-	19	-	-

If valid time is <75% then average is not valid, shown for reference only

2025 Daily Concentration Readings at Happy Valley



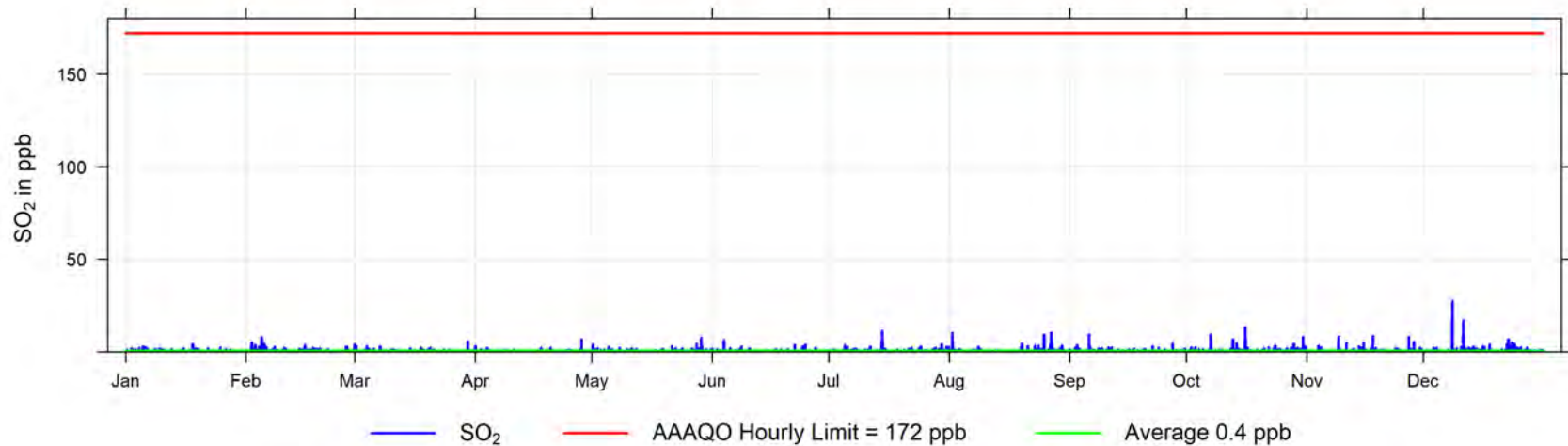
10.2 Sulphur Dioxide (SO₂) - Happy Valley 2025 Summary

Sulphur Dioxide (SO₂) Frequency Distribution at Happy Valley

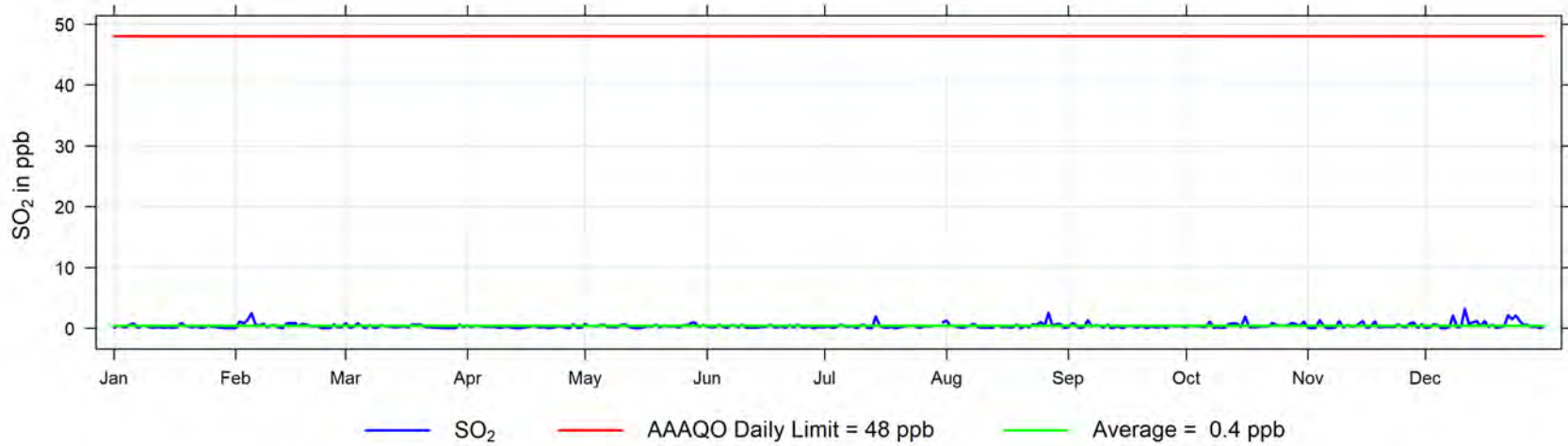
Month	Valid Hours	% of Readings in Concentration Range						Monthly Average (ppb)	MAXIMUM VALUES				Operational time (%)	Valid time (%)	Reportable Incidents		
		0 to 1 (ppb)	1 to 5 (ppb)	5 to 10 (ppb)	10 to 57 (ppb)	57 to 172 (ppb)	> 172 (ppb)		24-hr (ppb)	Date	1-hr (ppb)	Date			30-d 11 ppb	24-hr 48 ppb	1-hr 172 ppb
January 2025	706	93.1%	6.9%	0.0%	0.0%	0.0%	0.0%	0.3	1.0	Jan 18	4.2	Jan 18 07:00	99.6%	94.9%	0	0	0
February 2025	640	83.0%	16.7%	0.3%	0.0%	0.0%	0.0%	0.6	2.4	Feb 05	7.7	Feb 05 01:00	100.0%	95.2%	0	0	0
March 2025	707	94.6%	5.2%	0.1%	0.0%	0.0%	0.0%	0.3	0.9	Mar 04	5.5	Mar 30 02:00	99.7%	95.0%	0	0	0
April 2025	686	97.7%	2.2%	0.1%	0.0%	0.0%	0.0%	0.2	0.7	Apr 28	6.9	Apr 28 09:00	100.0%	95.3%	0	0	0
May 2025	710	91.1%	8.7%	0.1%	0.0%	0.0%	0.0%	0.4	0.9	May 29	7.4	May 29 04:00	100.0%	95.4%	0	0	0
June 2025	686	95.3%	4.5%	0.1%	0.0%	0.0%	0.0%	0.3	0.7	Jun 24	6.2	Jun 04 01:00	100.0%	95.3%	0	0	0
July 2025	696	92.5%	6.8%	0.6%	0.1%	0.0%	0.0%	0.4	1.9	Jul 14	11.4	Jul 14 18:00	98.3%	93.6%	0	0	0
August 2025	703	90.8%	8.3%	0.6%	0.4%	0.0%	0.0%	0.5	2.6	Aug 27	10.2	Aug 27 05:00	99.6%	94.5%	0	0	0
September 2025	685	93.3%	6.6%	0.1%	0.0%	0.0%	0.0%	0.3	0.9	Sep 02	9.5	Sep 06 00:00	99.9%	95.1%	0	0	0
October 2025	708	88.6%	10.5%	0.8%	0.1%	0.0%	0.0%	0.5	1.9	Oct 16	13.5	Oct 16 05:00	100.0%	95.2%	0	0	0
November 2025	683	88.6%	10.4%	1.0%	0.0%	0.0%	0.0%	0.5	1.3	Nov 04	8.5	Nov 18 02:00	99.7%	94.9%	0	0	0
December 2025	702	79.8%	18.8%	0.9%	0.6%	0.0%	0.0%	0.8	3.2	Dec 11	27.4	Dec 08 13:00	99.1%	94.4%	0	0	0
Annual	8312	90.7%	8.8%	0.4%	0.1%	0.0%	0.0%	0.4	3.2	Dec 11	27.4	Dec 08 13:00	99.7%	94.9%	0	0	0

AAAQO Objectives: Annual: 8ppb, 30-Day: 11ppb, 24-Hr: 48ppb, 1-Hr: 172ppb

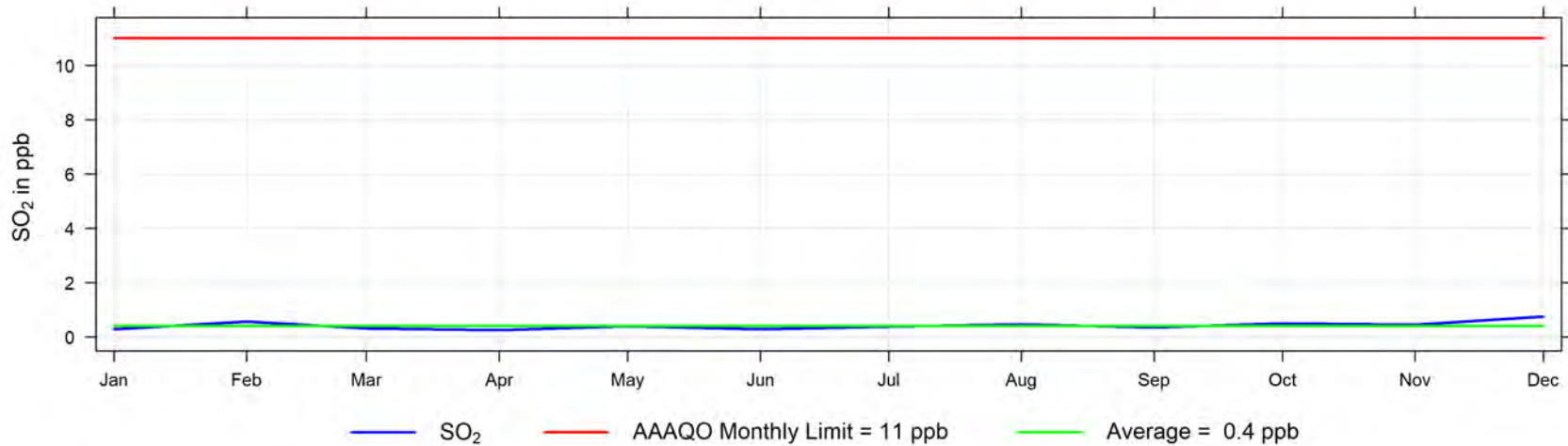
2025 Hourly Concentration Readings of SO₂ (in ppb) at Happy Valley

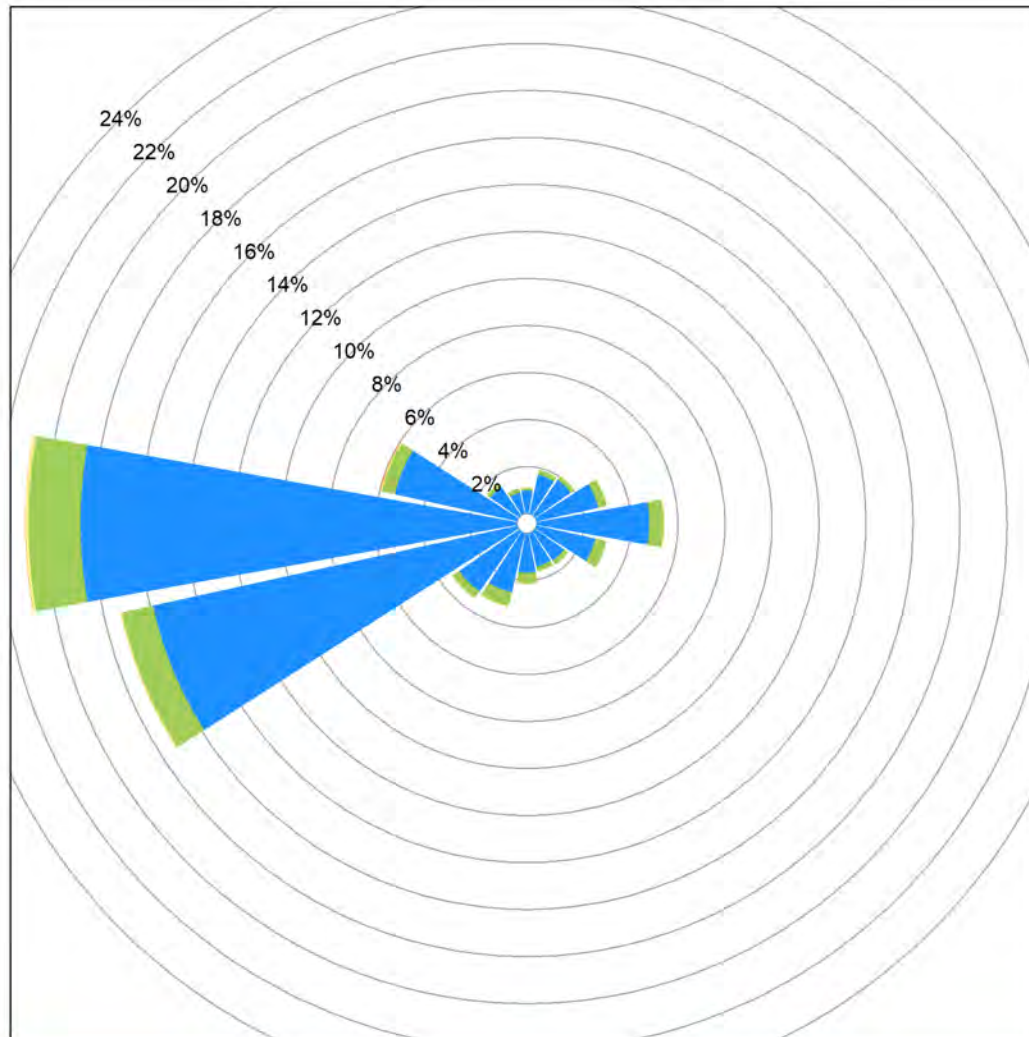


2025 Daily Concentration Readings of SO₂ (in ppb) at Happy Valley

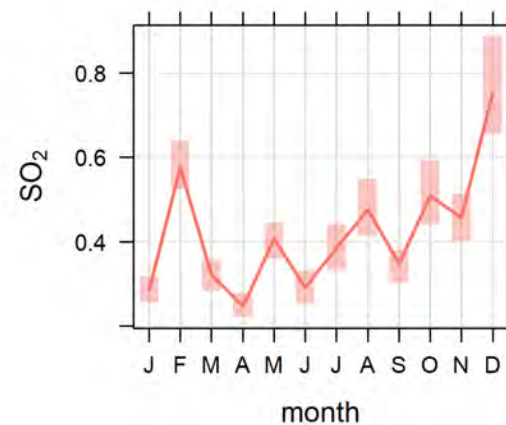
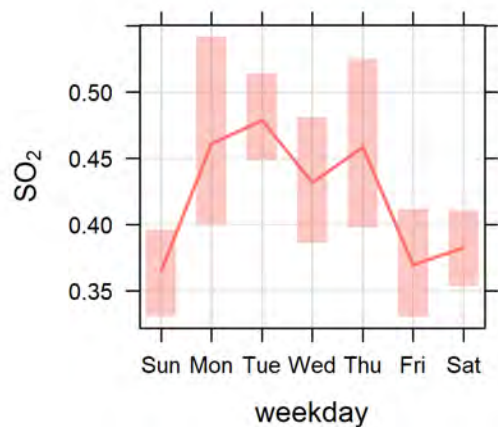
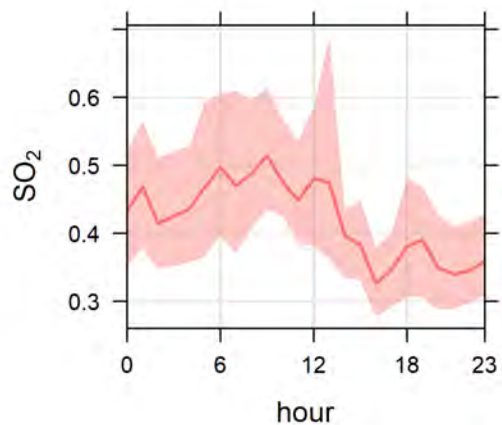
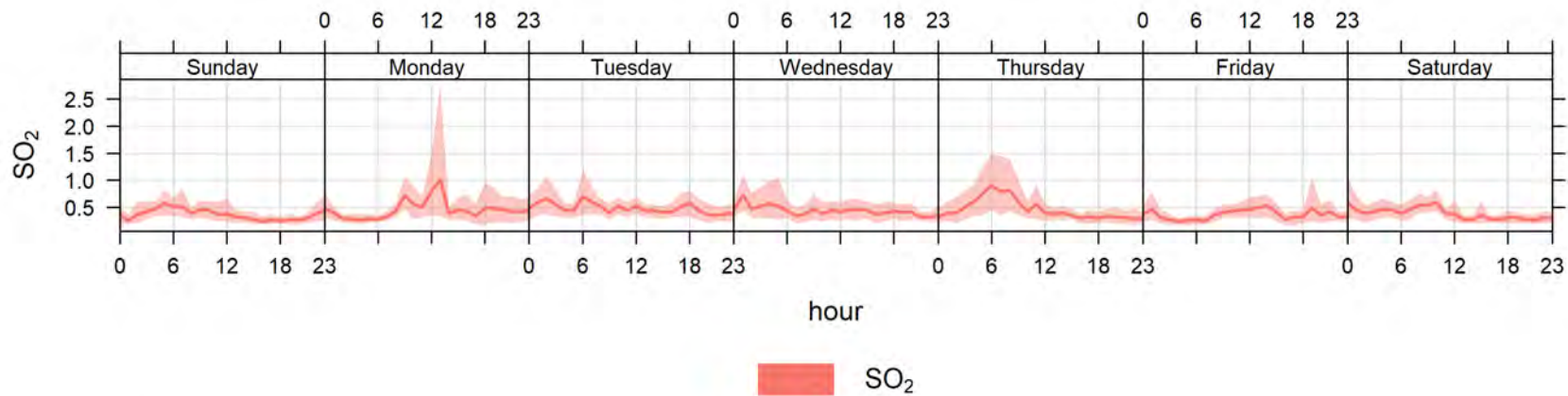


2025 Monthly Concentration Readings of SO₂ (in ppb) at Happy Valley



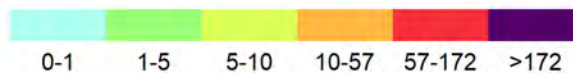
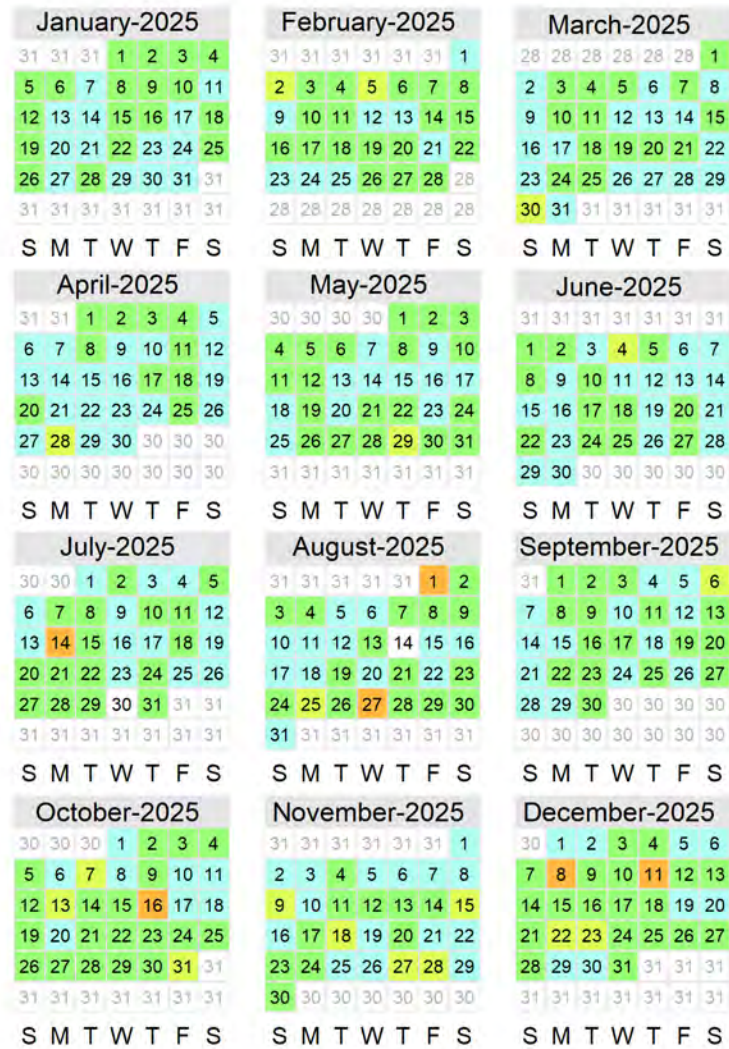


0-1 1-5 5-10 10-57 57-172 >172
 2025 Annual Concentration Rose of SO₂ (in ppb) at Happy Valley



mean and 95% confidence interval in mean

Hourly Maximum SO₂ (in ppb) for 2025 at Happy Valley



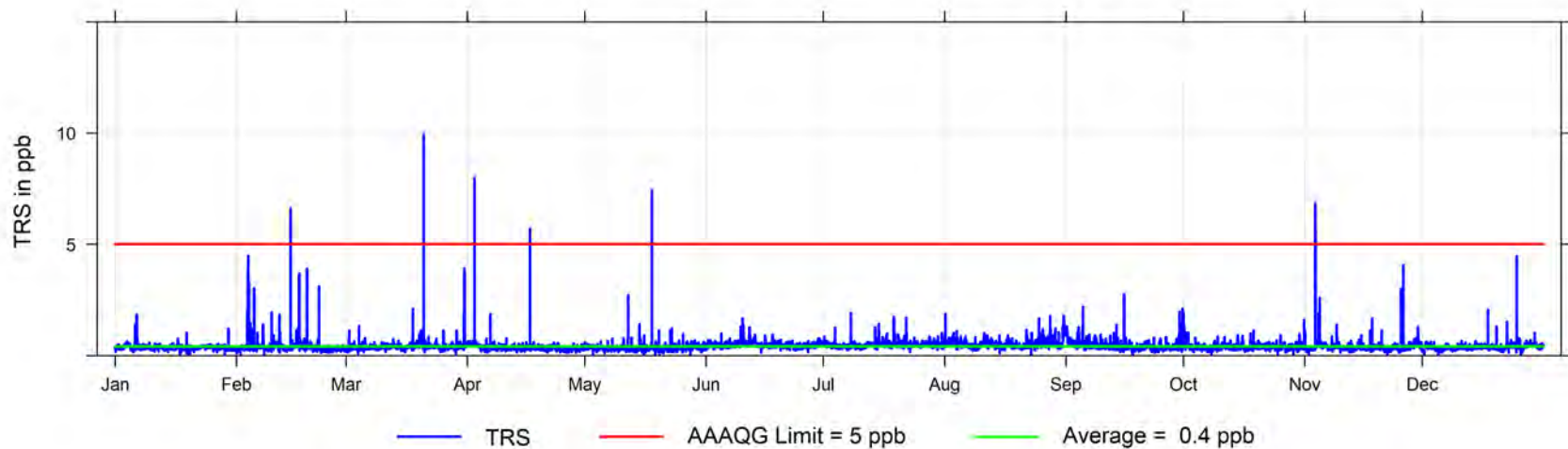
10.3 Total Reduced Sulphur (TRS) - Happy Valley 2025 Summary

Total Reduced Sulphur (TRS) Frequency Distribution at Happy Valley

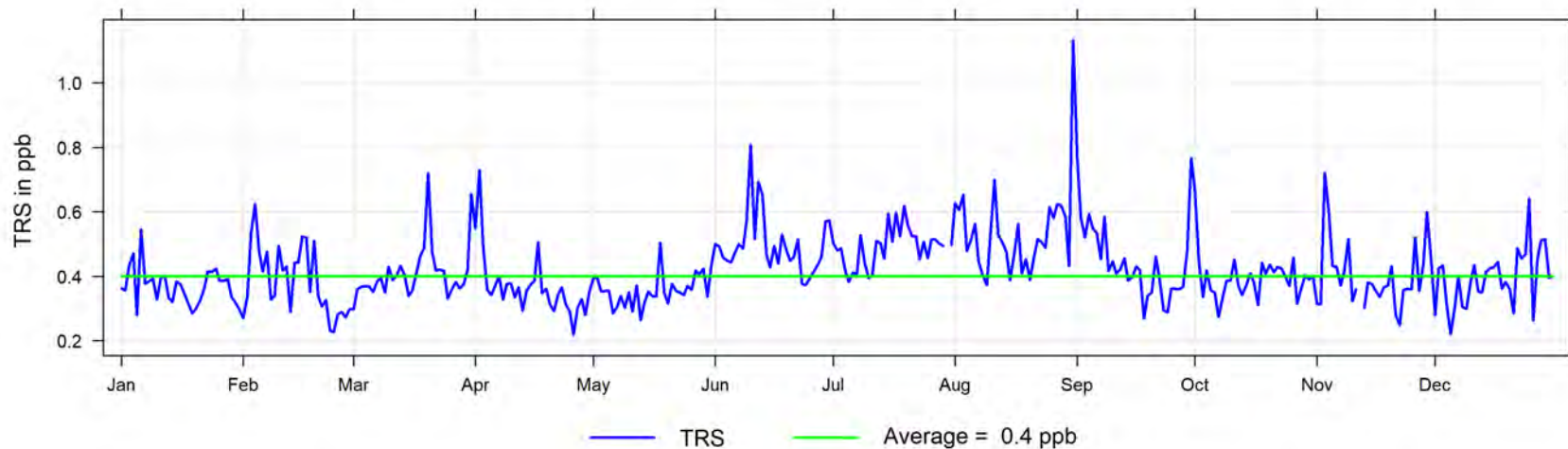
Month	Valid Hours	% of Readings in Concentration Range						Monthly Average (ppb)	MAXIMUM VALUES				Operational time (%)	Valid time (%)	e-Report 30min 5 ppb		
		0 to 1 (ppb)	1 to 3 (ppb)	3 to 5 (ppb)	5 to 8 (ppb)	8 to 10 (ppb)	> 10 (ppb)		24-hr (ppb)	Date	1-hr (ppb)	Date					
January 2025	701	99.9%	0.1%	0.0%	0.0%	0.0%	0.0%	0.4	0.5	Jan 06	1.4	Jan 06 13:00	98.9%	94.2%	0		
February 2025	641	98.0%	1.9%	0.2%	0.0%	0.0%	0.0%	0.4	0.6	Feb 04	3.5	Feb 14 21:00	100.0%	95.4%	1		
March 2025	707	99.3%	0.4%	0.1%	0.1%	0.0%	0.0%	0.4	0.7	Mar 20	5.3	Mar 20 21:00	99.7%	95.0%	1		
April 2025	686	99.6%	0.1%	0.3%	0.0%	0.0%	0.0%	0.4	0.7	Apr 02	4.9	Apr 02 21:00	100.0%	95.3%	2		
May 2025	708	99.7%	0.1%	0.1%	0.0%	0.0%	0.0%	0.4	0.5	May 18	4.1	May 18 04:00	100.0%	95.2%	1		
June 2025	686	99.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.5	0.8	Jun 10	1.5	Jun 10 09:00	100.0%	95.3%	0		
July 2025	696	99.3%	0.7%	0.0%	0.0%	0.0%	0.0%	0.5	0.6	Jul 19	1.4	Jul 19 01:00	98.3%	93.6%	0		
August 2025	705	96.6%	3.4%	0.0%	0.0%	0.0%	0.0%	0.5	1.1	Aug 31	1.8	Aug 31 10:00	99.6%	94.8%	0		
September 2025	685	97.7%	2.3%	0.0%	0.0%	0.0%	0.0%	0.4	0.8	Sep 30	1.9	Sep 30 20:00	99.9%	95.1%	0		
October 2025	709	99.4%	0.6%	0.0%	0.0%	0.0%	0.0%	0.4	0.7	Oct 01	1.5	Oct 01 02:00	100.0%	95.3%	0		
November 2025	681	98.8%	0.7%	0.4%	0.0%	0.0%	0.0%	0.4	0.7	Nov 03	4.4	Nov 03 18:00	99.7%	94.6%	2		
December 2025	703	99.6%	0.4%	0.0%	0.0%	0.0%	0.0%	0.4	0.7	Dec 25	2.5	Dec 25 04:00	99.1%	94.5%	0		
Annual	8308	98.9%	1.0%	0.1%	0.0%	0.0%	0.0%	0.4	1.1	MAXIMUM VALUES		Aug 31	5.3	Mar 20 21:00	99.6%	94.8%	7

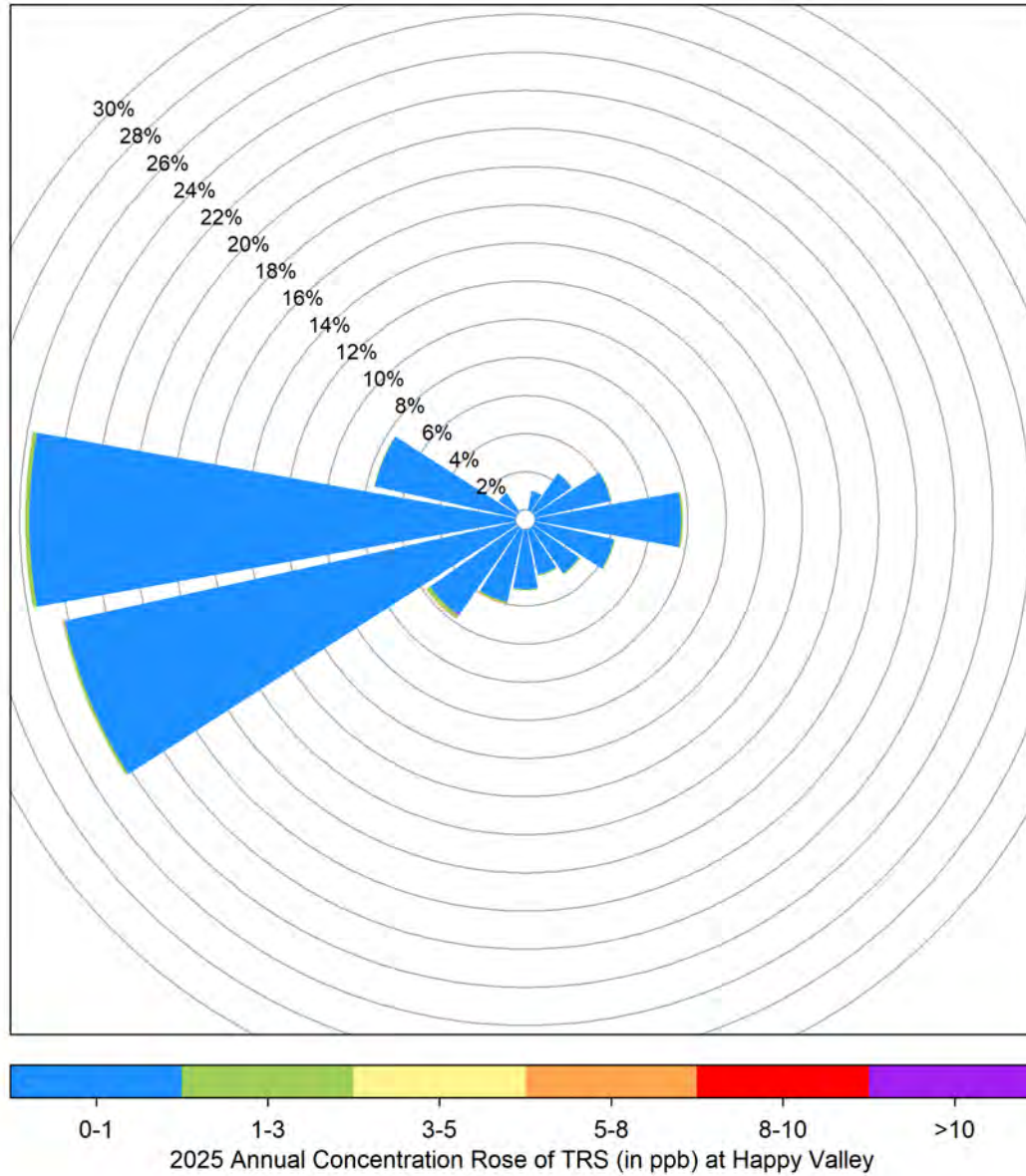
AAAQO H₂S Objectives: 24-Hr: 3ppb, 1-Hr: 10ppb

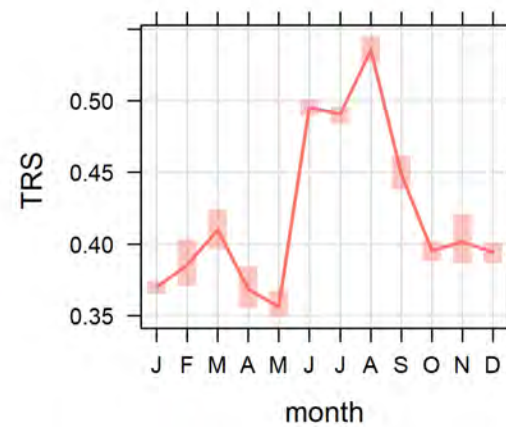
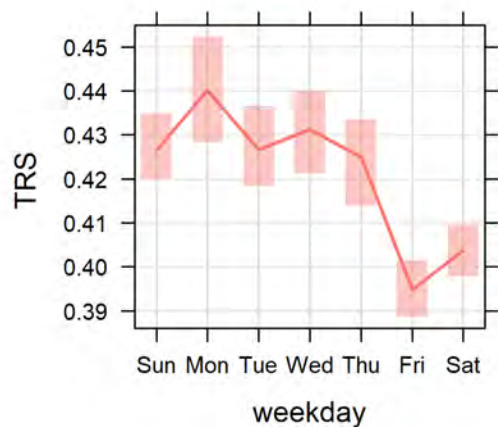
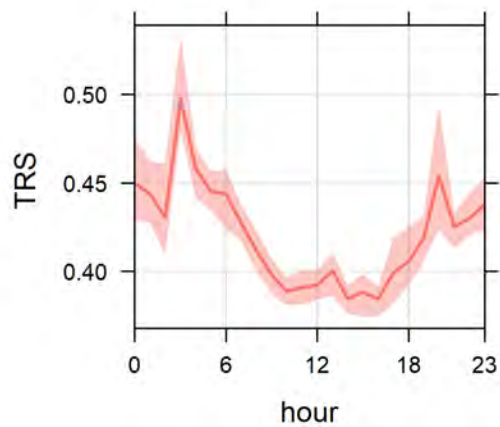
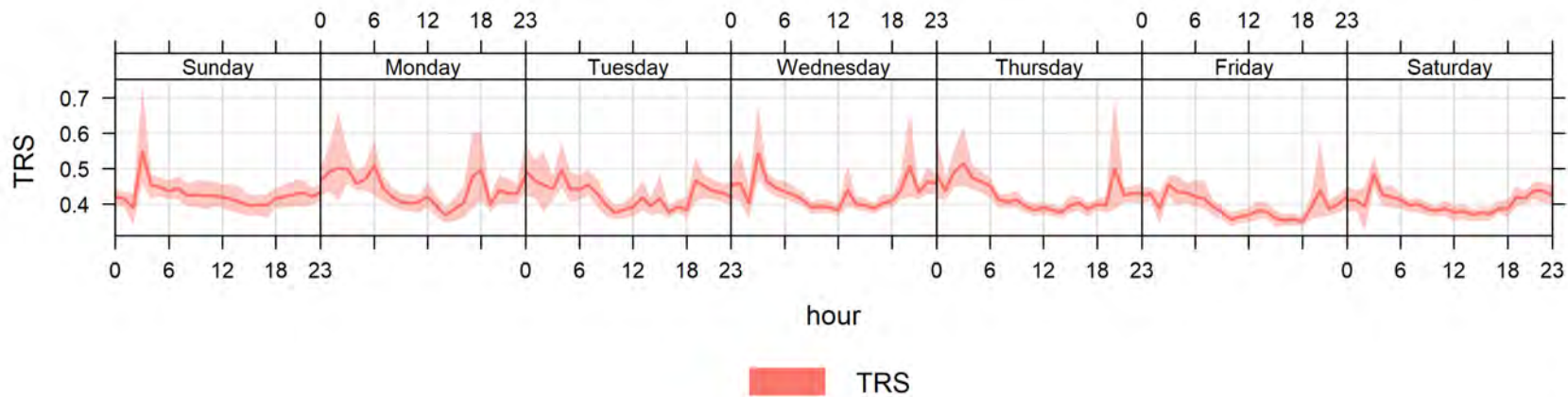
2025 30 min Concentration Readings of TRS (in ppb) at Happy Valley



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

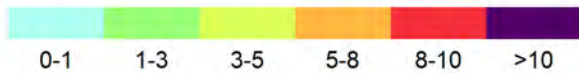
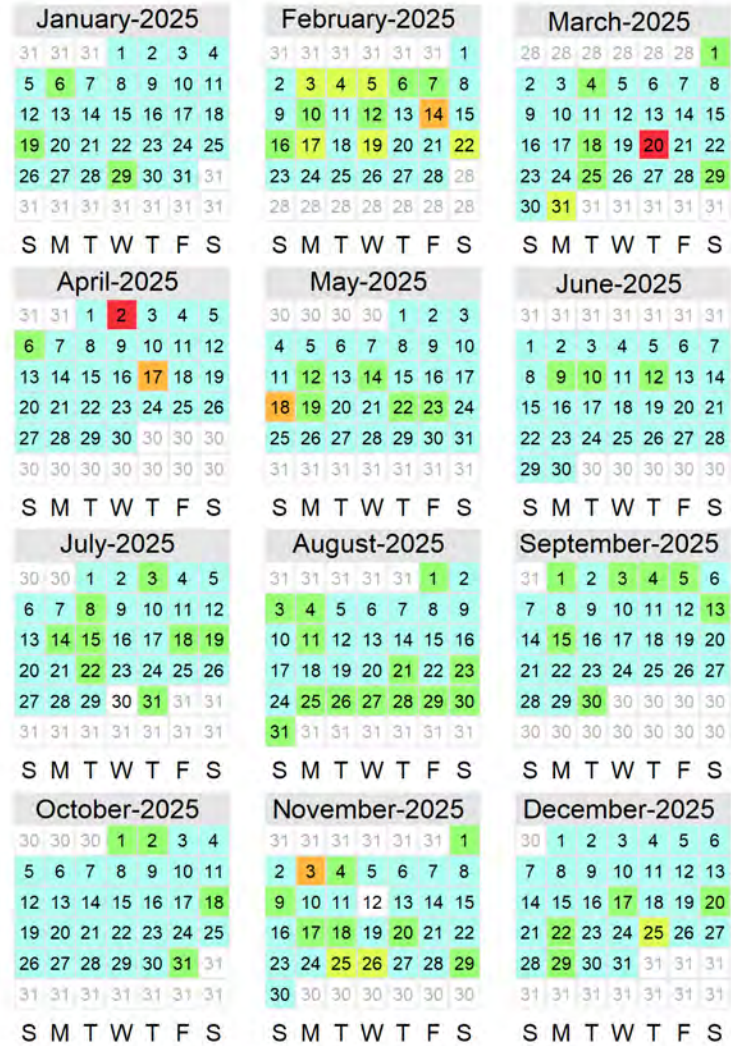






mean and 95% confidence interval in mean

Hourly Maximum TRS (in ppb) for 2025 at Happy Valley



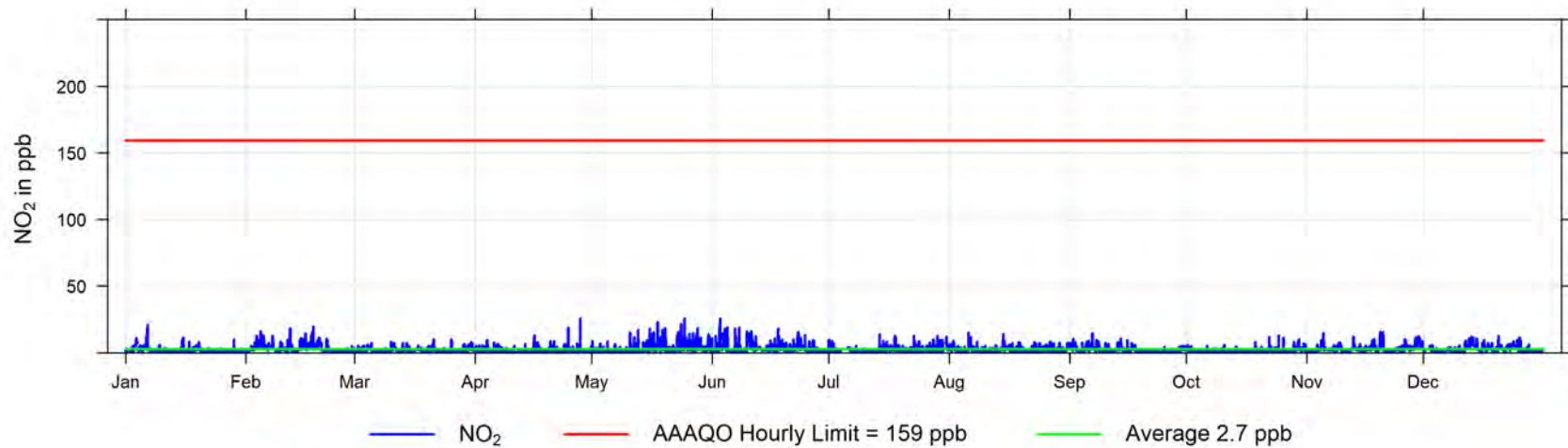
10.4 Nitrogen Dioxide (NO₂) - Happy Valley 2025 Summary

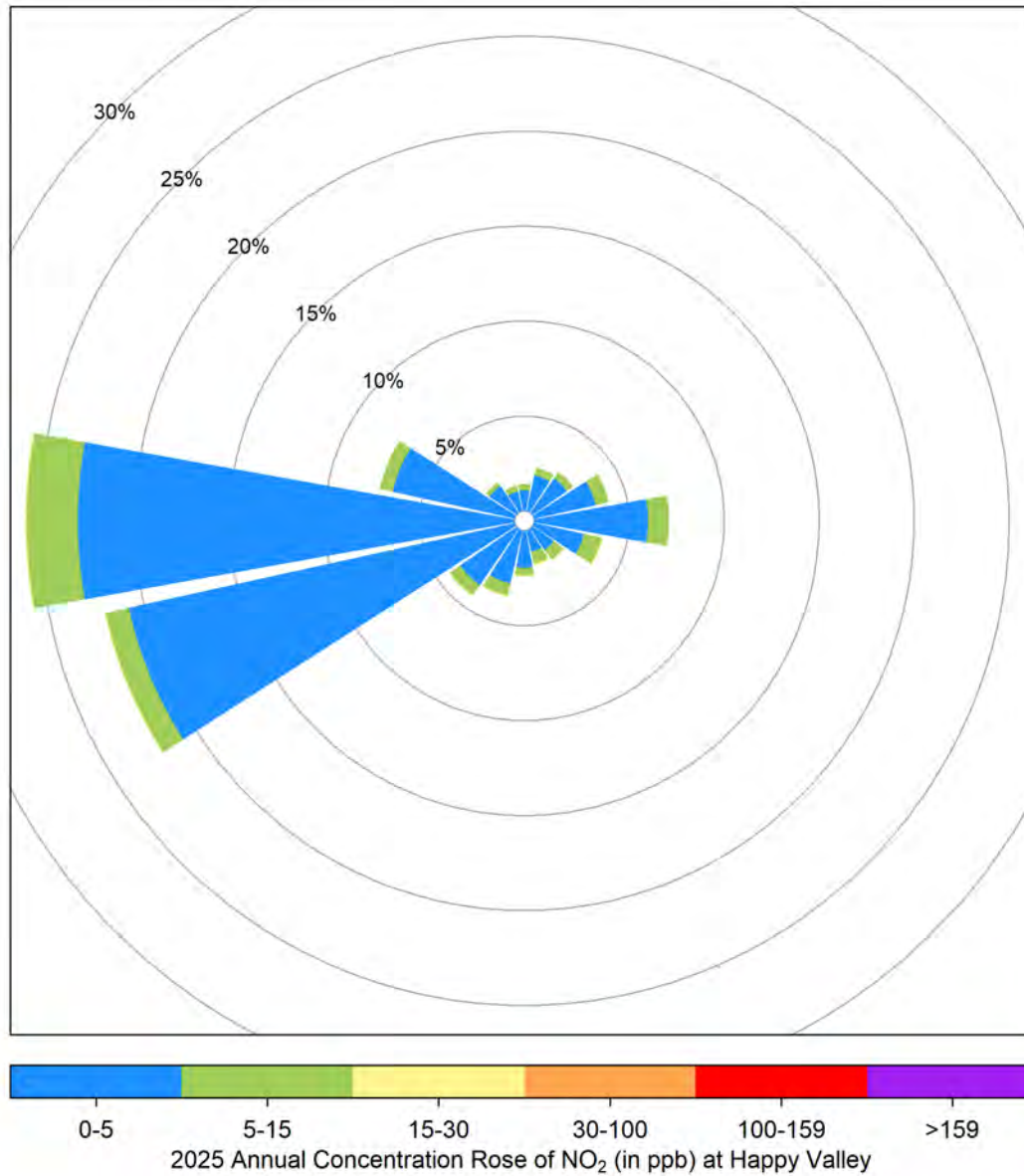
Nitrogen Dioxide (NO₂) Frequency Distribution at Happy Valley

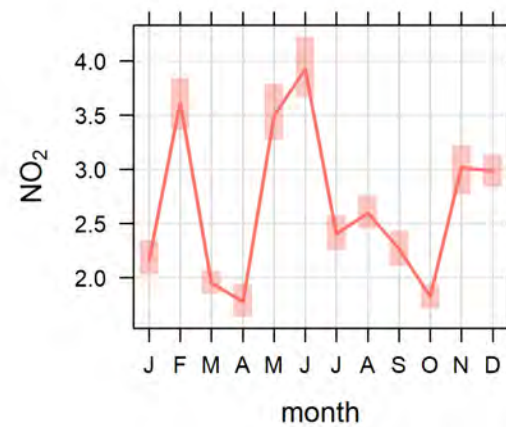
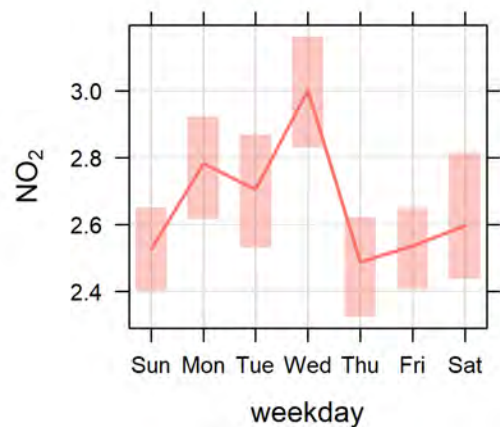
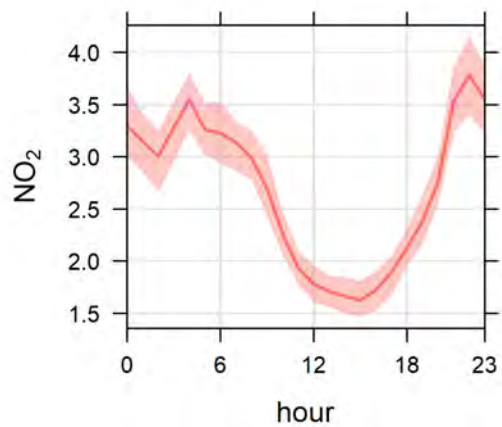
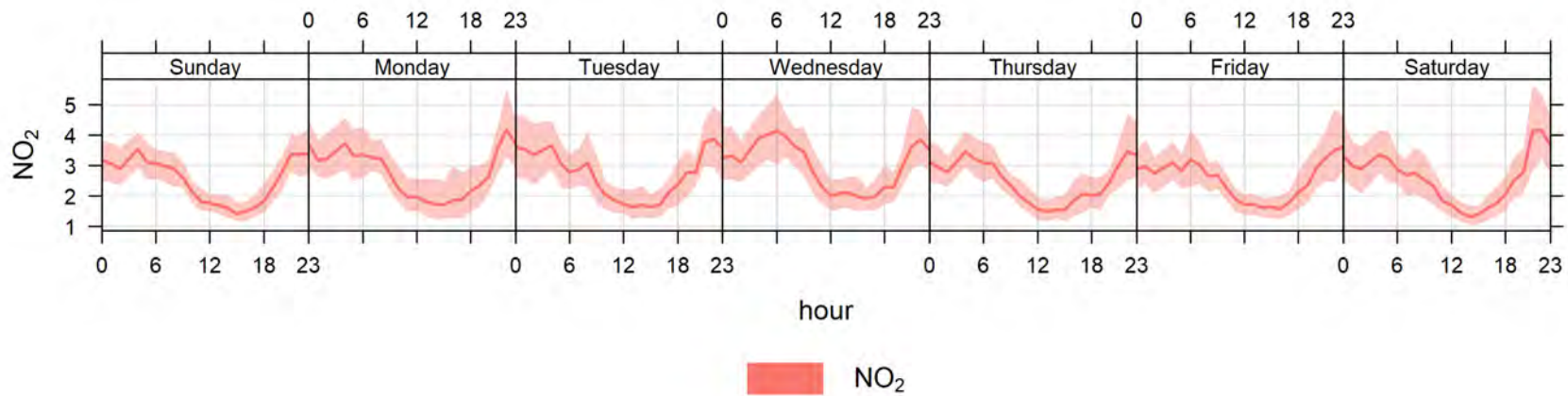
Month	Valid Hours	% of Readings in Concentration Range						Monthly Average (ppb)	MAXIMUM VALUES				Operational time (%)	Valid time (%)	Reportable Incidents 1-hr 159 ppb
		0 to 5 (ppb)	5 to 15 (ppb)	15 to 30 (ppb)	30 to 100 (ppb)	100 to 159 (ppb)	> 159 (ppb)		24-hr (ppb)	Date	1-hr (ppb)	Date			
January 2025	704	92.0%	7.2%	0.7%	0.0%	0.0%	0.0%	2.2	9.5	Jan 06	21.0	Jan 06 17:00	99.6%	94.6%	0
February 2025	639	74.5%	24.9%	0.6%	0.0%	0.0%	0.0%	3.6	7.4	Feb 04	19.4	Feb 18 08:00	100.0%	95.1%	0
March 2025	702	95.2%	4.8%	0.0%	0.0%	0.0%	0.0%	2.0	3.8	Mar 21	10.2	Mar 25 21:00	99.2%	94.4%	0
April 2025	685	93.6%	6.0%	0.4%	0.0%	0.0%	0.0%	1.8	3.9	Apr 24	25.5	Apr 28 00:00	100.0%	95.1%	0
May 2025	709	78.4%	19.5%	2.1%	0.0%	0.0%	0.0%	3.5	7.4	May 23	25.5	May 24 21:00	100.0%	95.3%	0
June 2025	683	76.1%	20.9%	2.9%	0.0%	0.0%	0.0%	3.9	10.5	Jun 10	25.6	Jun 03 01:00	99.7%	94.9%	0
July 2025	658	88.8%	11.2%	0.0%	0.0%	0.0%	0.0%	2.4	4.5	Jul 31	13.7	Jul 14 01:00	93.2%	88.4%	0
August 2025	701	88.3%	11.6%	0.1%	0.0%	0.0%	0.0%	2.6	5.0	Aug 06	15.2	Aug 05 23:00	99.3%	94.2%	0
September 2025	684	89.5%	10.5%	0.0%	0.0%	0.0%	0.0%	2.3	6.0	Sep 06	14.6	Sep 06 21:00	99.9%	95.0%	0
October 2025	707	95.0%	5.0%	0.0%	0.0%	0.0%	0.0%	1.8	4.4	Oct 29	13.1	Oct 24 20:00	100.0%	95.0%	0
November 2025	678	83.8%	15.9%	0.3%	0.0%	0.0%	0.0%	3.0	9.1	Nov 29	15.7	Nov 19 22:00	99.7%	94.2%	0
December 2025	680	81.2%	18.8%	0.0%	0.0%	0.0%	0.0%	3.0	8.2	Dec 13	12.7	Dec 20 09:00	96.2%	91.4%	0
Annual	8230	86.4%	13.0%	0.6%	0.0%	0.0%	0.0%	2.7	MAXIMUM VALUES				98.9%	94.0%	0

AAAQO Objectives: Annual: 24ppb, 1-Hr: 159ppb

2025 Hourly Concentration Readings of NO₂ (in ppb) at Happy Valley

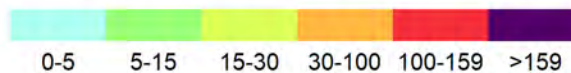
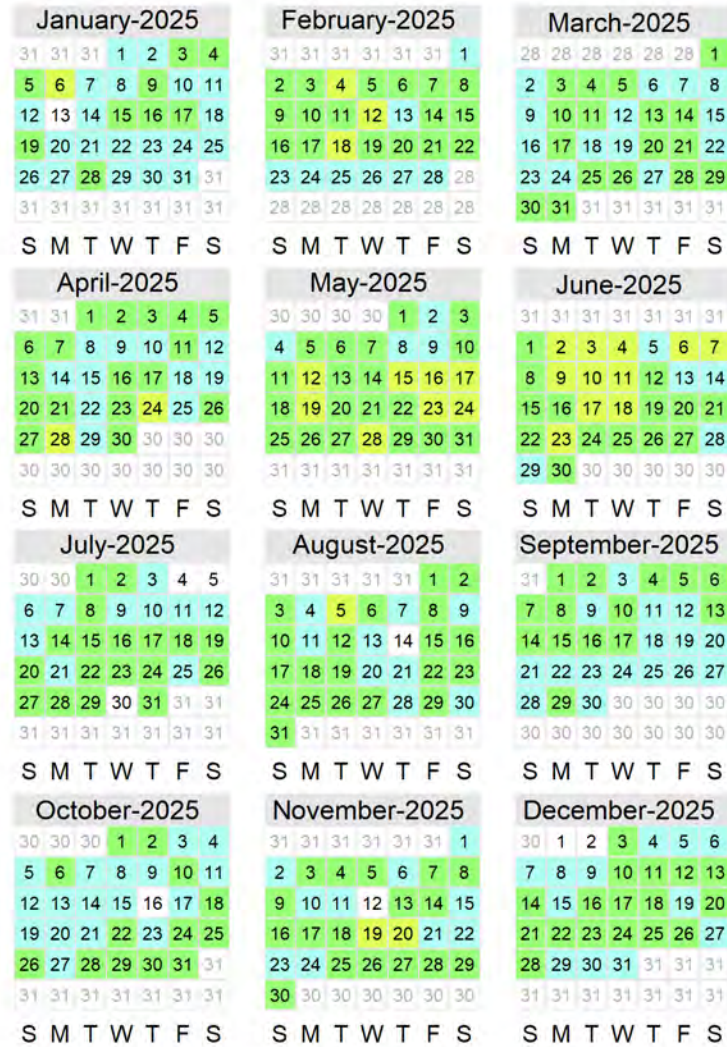






mean and 95% confidence interval in mean

Hourly Maximum NO₂ (in ppb) for 2025 at Happy Valley



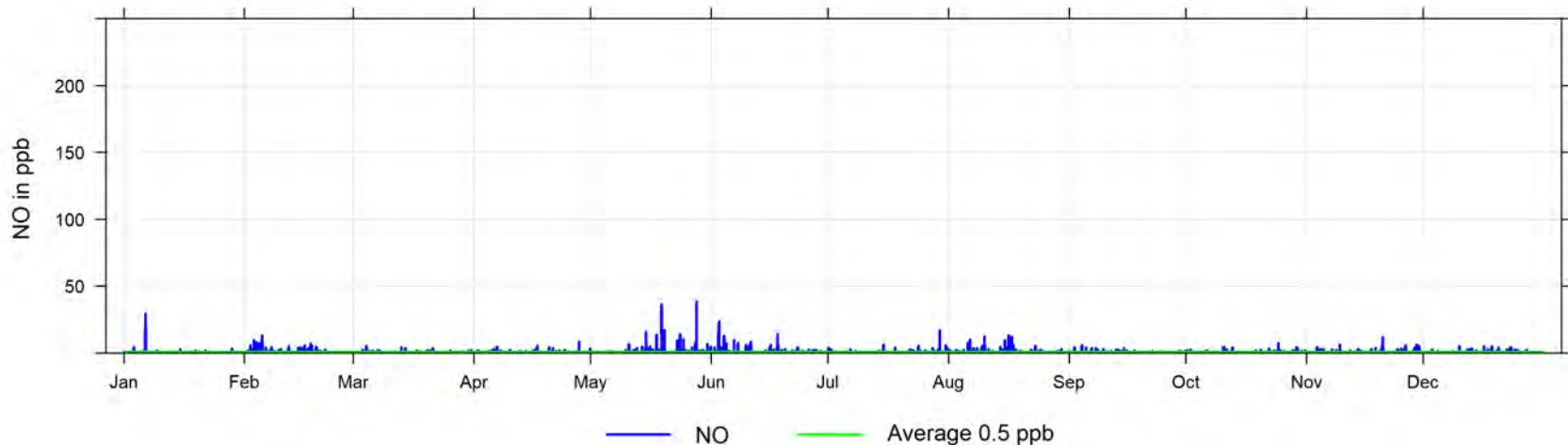
10.5 Nitric Oxide (NO) - Happy Valley 2025 Summary

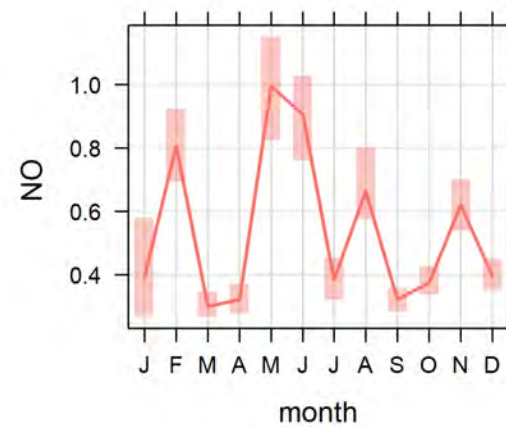
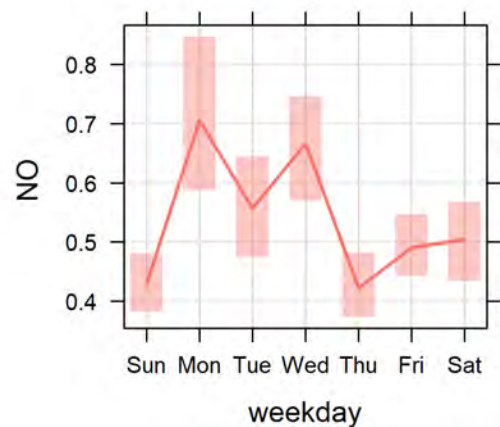
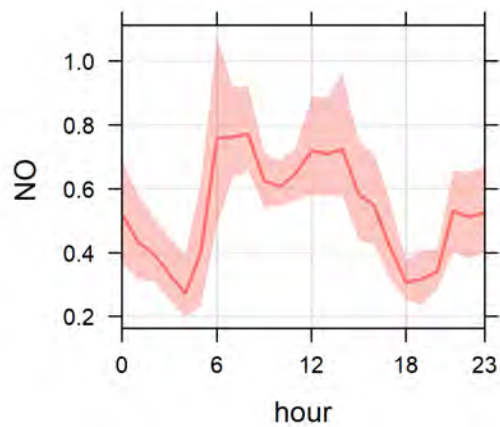
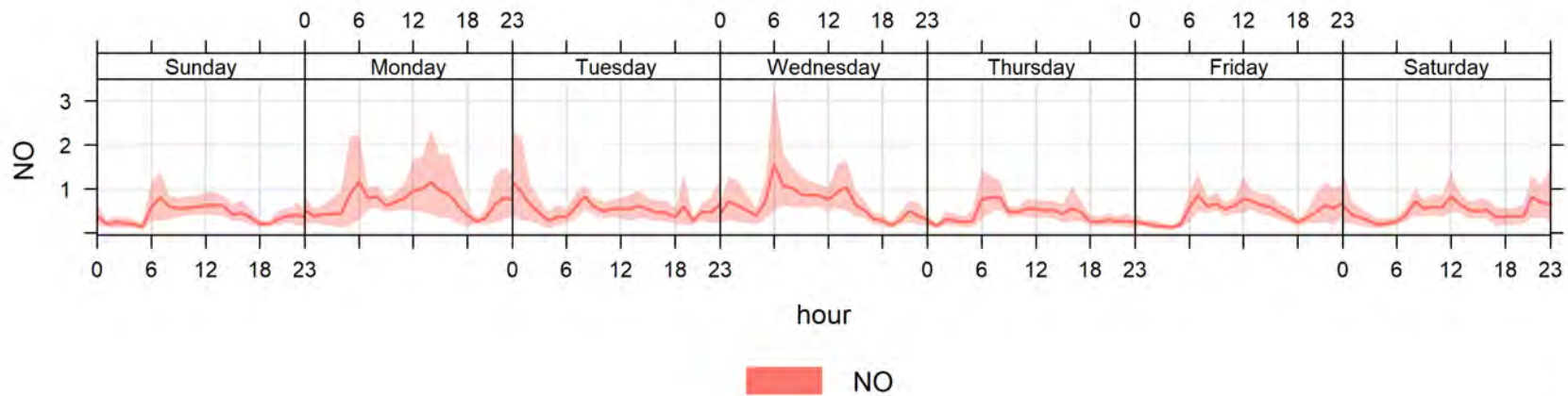
Nitric Oxide (NO) Frequency Distribution at Happy Valley

Month	Valid Hours	% of Readings in Concentration Range						Monthly Average (ppb)	MAXIMUM VALUES				Operational time (%)	Valid time (%)
		0 to 5 (ppb)	5 to 15 (ppb)	15 to 30 (ppb)	30 to 100 (ppb)	100 to 159 (ppb)	> 159 (ppb)		24-hr (ppb)	Date	1-hr (ppb)	Date		
January 2025	704	99.0%	0.4%	0.6%	0.0%	0.0%	0.0%	0.4	5.9	Jan 06	29.2	Jan 06 14:00	99.6%	94.6%
February 2025	639	97.7%	2.3%	0.0%	0.0%	0.0%	0.0%	0.8	2.3	Feb 03	13.2	Feb 05 14:00	100.0%	95.1%
March 2025	702	99.9%	0.1%	0.0%	0.0%	0.0%	0.0%	0.3	0.8	Mar 21	5.2	Mar 04 09:00	99.2%	94.4%
April 2025	685	99.7%	0.3%	0.0%	0.0%	0.0%	0.0%	0.3	0.7	Apr 27	8.3	Apr 28 00:00	100.0%	95.1%
May 2025	709	97.0%	2.1%	0.4%	0.4%	0.0%	0.0%	1.0	6.3	May 19	38.5	May 28 06:00	100.0%	95.3%
June 2025	683	96.3%	3.2%	0.4%	0.0%	0.0%	0.0%	0.9	3.9	Jun 04	23.5	Jun 03 01:00	99.7%	94.9%
July 2025	658	99.4%	0.5%	0.2%	0.0%	0.0%	0.0%	0.4	1.1	Jul 29	16.7	Jul 29 19:00	93.2%	88.4%
August 2025	701	97.4%	2.6%	0.0%	0.0%	0.0%	0.0%	0.7	2.1	Aug 06	13.2	Aug 16 12:00	99.3%	94.2%
September 2025	684	99.9%	0.1%	0.0%	0.0%	0.0%	0.0%	0.3	0.8	Sep 02	5.7	Sep 04 07:00	99.9%	95.0%
October 2025	707	99.9%	0.1%	0.0%	0.0%	0.0%	0.0%	0.4	1.0	Oct 29	7.5	Oct 24 20:00	100.0%	95.0%
November 2025	678	98.4%	1.6%	0.0%	0.0%	0.0%	0.0%	0.6	3.2	Nov 29	11.9	Nov 20 16:00	99.7%	94.2%
December 2025	680	99.7%	0.3%	0.0%	0.0%	0.0%	0.0%	0.4	1.0	Dec 23	5.1	Dec 16 17:00	96.2%	91.4%
Annual	8230	98.7%	1.1%	0.1%	0.0%	0.0%	0.0%	0.5	6.3	May 19	38.5	May 28 06:00	98.9%	94.0%

AAAQO Objectives: none

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





mean and 95% confidence interval in mean

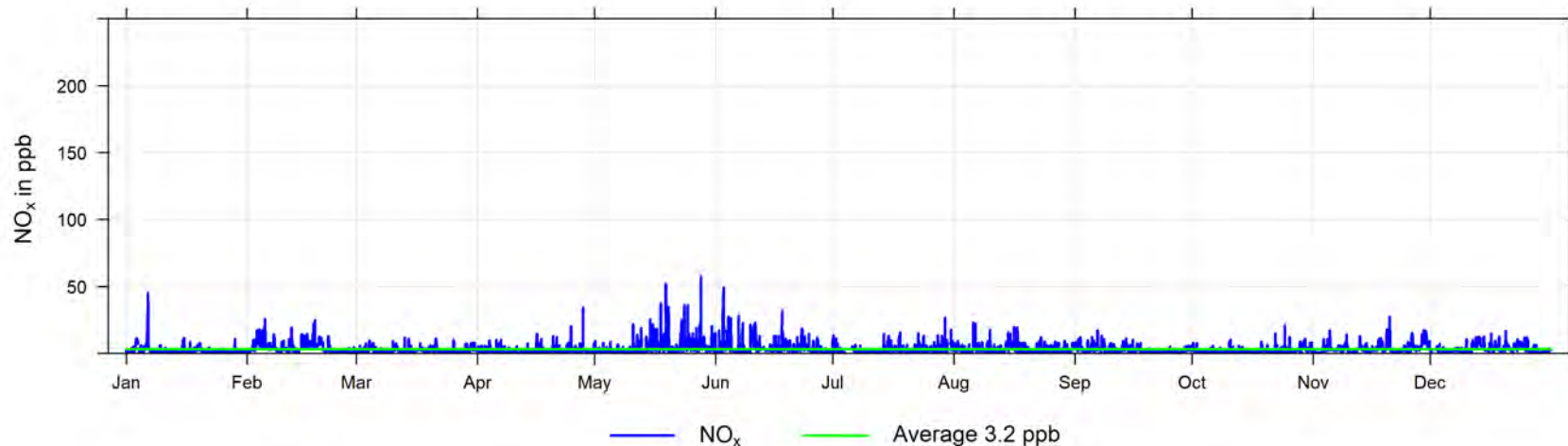
10.6 Oxides of Nitrogen (NO_x) - Happy Valley 2025 Summary

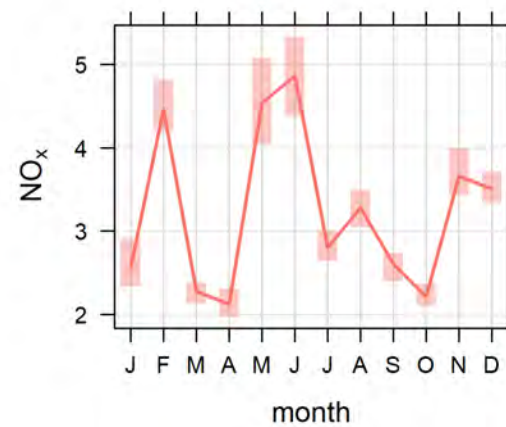
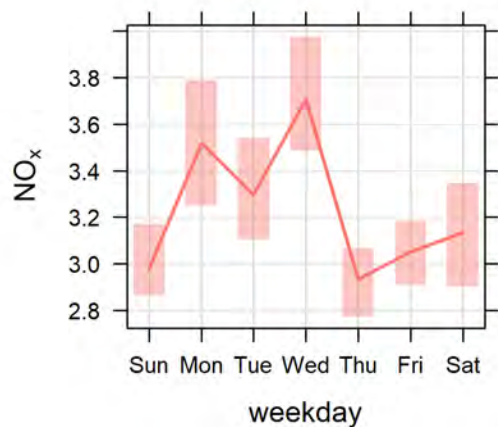
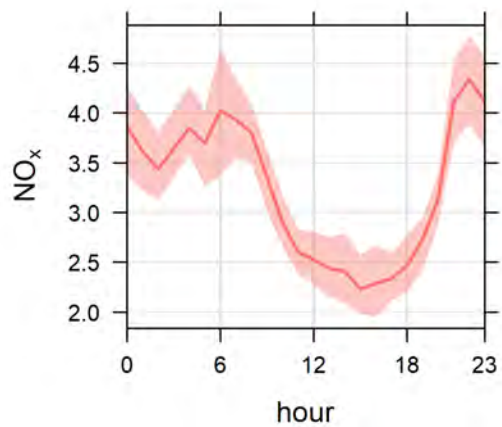
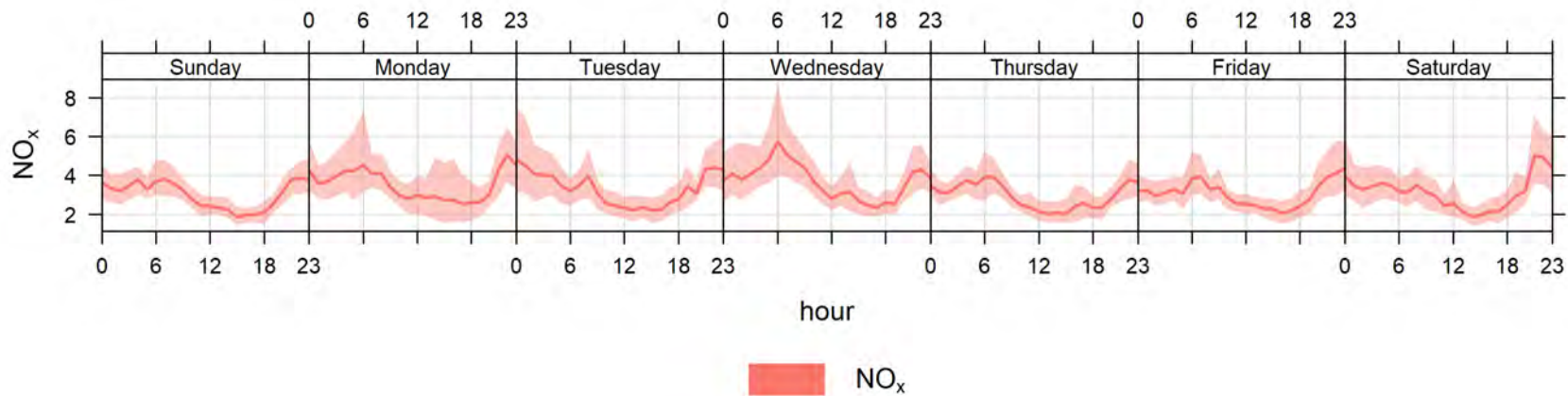
Nitrogen Oxides (NO_x) Frequency Distribution at Happy Valley

Month	Valid Hours	% of Readings in Concentration Range						Monthly Average (ppb)	MAXIMUM VALUES				Operational time (%)	Valid time (%)
		0 to 5 (ppb)	5 to 15 (ppb)	15 to 30 (ppb)	30 to 100 (ppb)	100 to 159 (ppb)	> 159 (ppb)		24-hr (ppb)	Date	1-hr (ppb)	Date		
January 2025	704	91.3%	7.2%	0.9%	0.6%	0.0%	0.0%	2.6	15.5	Jan 06	45.1	Jan 06 14:00	99.6%	94.6%
February 2025	639	65.9%	32.1%	2.0%	0.0%	0.0%	0.0%	4.5	9.7	Feb 04	25.7	Feb 05 14:00	100.0%	95.1%
March 2025	702	92.6%	7.4%	0.0%	0.0%	0.0%	0.0%	2.3	4.7	Mar 21	11.8	Mar 13 08:00	99.2%	94.4%
April 2025	685	91.5%	8.0%	0.3%	0.1%	0.0%	0.0%	2.1	4.5	Apr 24	34.2	Apr 28 00:00	100.0%	95.1%
May 2025	709	72.9%	22.1%	3.8%	1.1%	0.0%	0.0%	4.5	13.1	May 19	57.4	May 28 06:00	100.0%	95.3%
June 2025	683	70.3%	23.1%	6.0%	0.6%	0.0%	0.0%	4.9	12.2	Jun 10	49.3	Jun 03 01:00	99.7%	94.9%
July 2025	658	85.7%	13.7%	0.6%	0.0%	0.0%	0.0%	2.8	5.5	Jul 31	26.5	Jul 29 19:00	93.2%	88.4%
August 2025	701	81.2%	17.7%	1.1%	0.0%	0.0%	0.0%	3.3	7.2	Aug 06	23.2	Aug 05 23:00	99.3%	94.2%
September 2025	684	85.2%	14.5%	0.3%	0.0%	0.0%	0.0%	2.6	6.5	Sep 06	17.3	Sep 06 19:00	99.9%	95.0%
October 2025	707	92.8%	6.9%	0.3%	0.0%	0.0%	0.0%	2.2	5.4	Oct 29	21.0	Oct 24 20:00	100.0%	95.0%
November 2025	678	78.2%	20.1%	1.8%	0.0%	0.0%	0.0%	3.7	12.3	Nov 29	27.6	Nov 20 16:00	99.7%	94.2%
December 2025	680	76.3%	23.5%	0.1%	0.0%	0.0%	0.0%	3.5	9.1	Dec 13	16.9	Dec 20 09:00	96.2%	91.4%
Annual	8230	82.0%	16.4%	1.4%	0.2%	0.0%	0.0%	3.2	MAXIMUM VALUES				98.9%	94.0%

AAAQO Objectives: none

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





mean and 95% confidence interval in mean

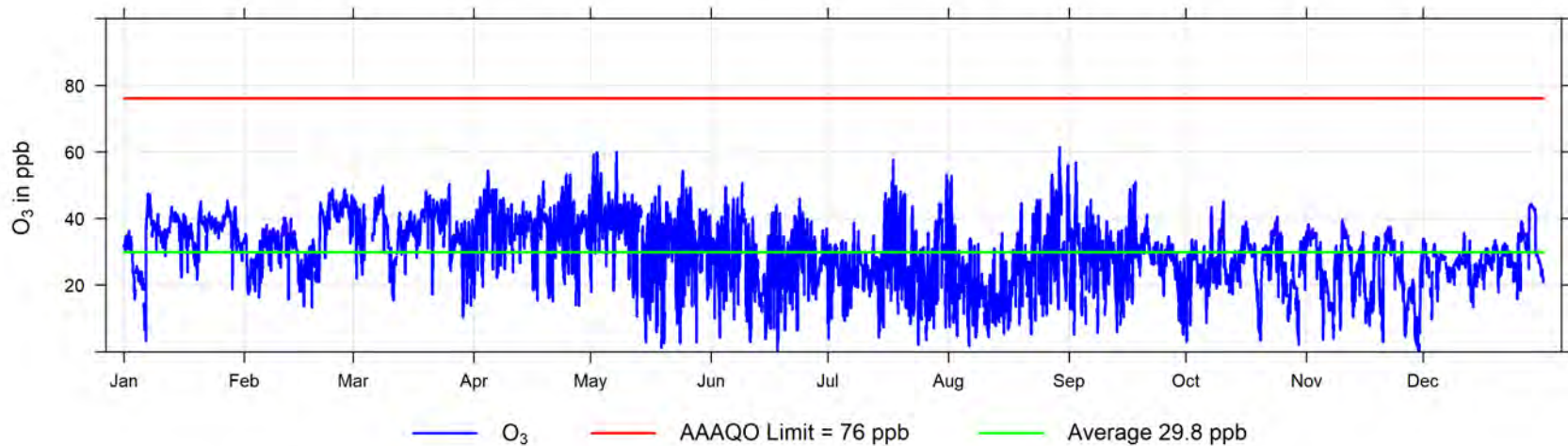
10.7 Ozone (O₃) - Happy Valley 2025 Summary

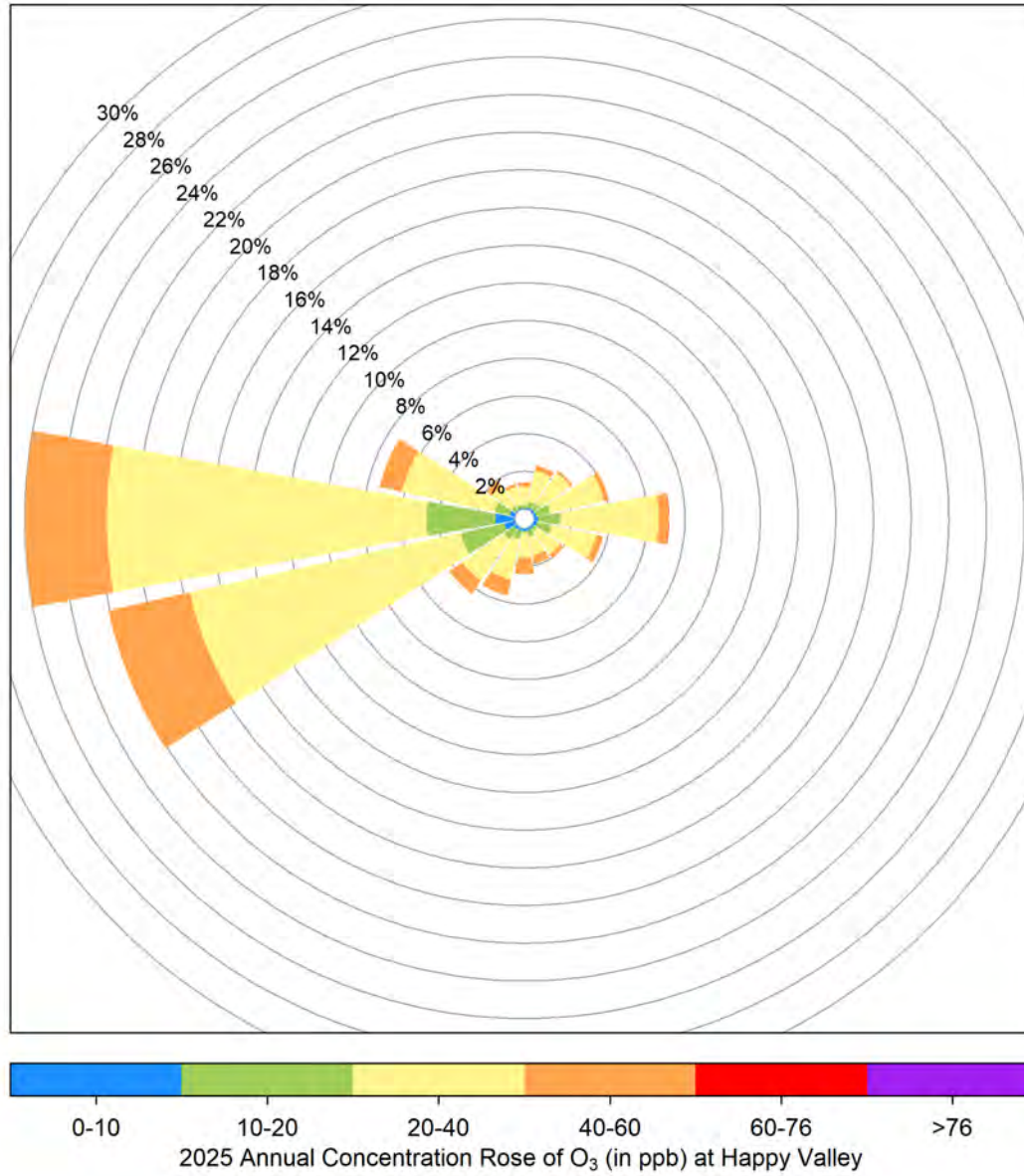
Ozone (O₃) Frequency Distribution at Happy Valley

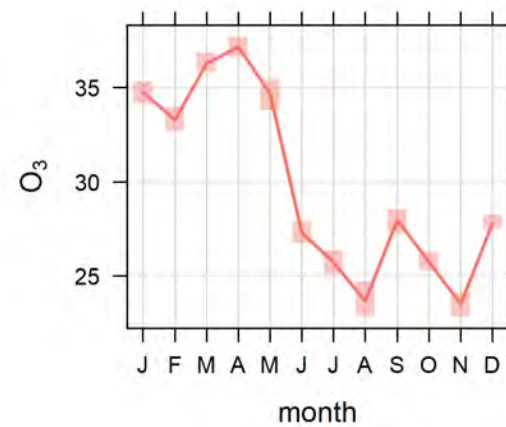
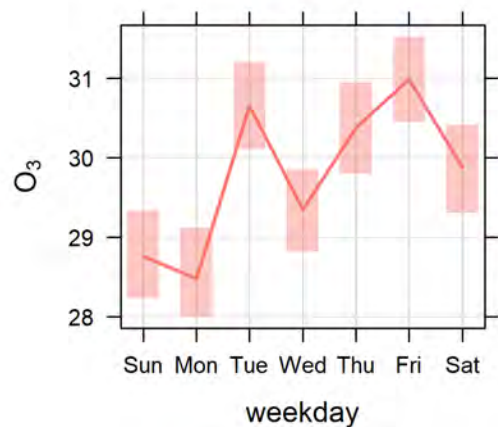
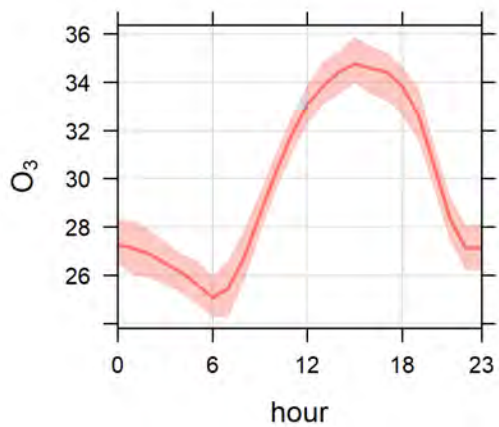
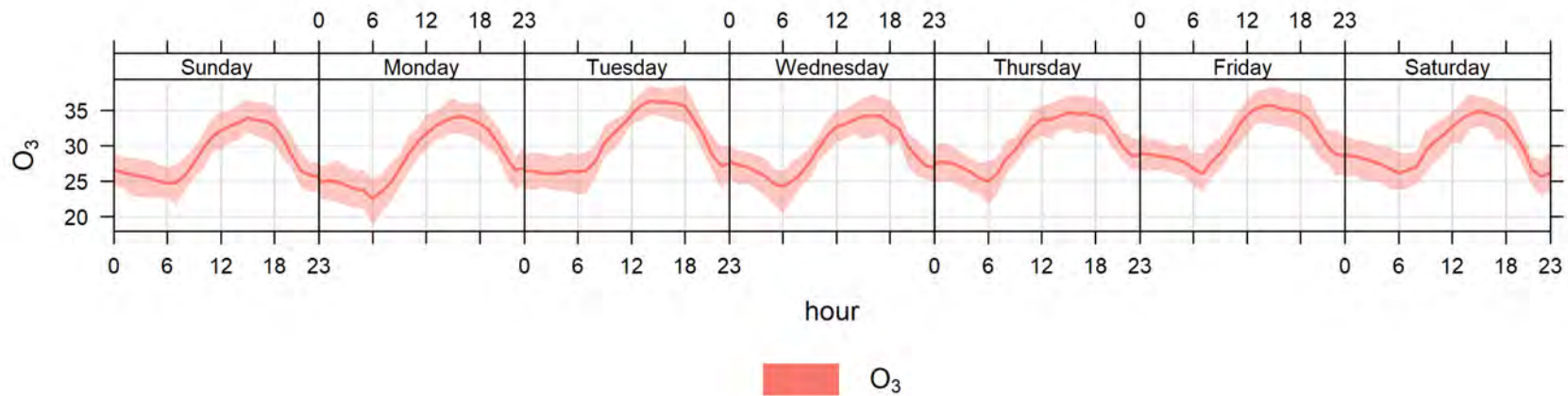
Month	Valid Hours	% of Readings in Concentration Range						Monthly Average (ppb)	MAXIMUM VALUES				Operational time (%)	Valid time (%)	Reportable Incidents 1-hr 76 ppb
		0 to 10 (ppb)	10 to 20 (ppb)	20 to 40 (ppb)	40 to 60 (ppb)	60 to 76 (ppb)	> 76 (ppb)		24-hr (ppb)	Date	1-hr (ppb)	Date			
January 2025	706	1.3%	2.8%	74.6%	21.2%	0.0%	0.0%	34.7	45.0	Jan 07	47.4	Jan 07 05:00	99.6%	94.9%	0
February 2025	641	0.0%	4.5%	69.3%	26.2%	0.0%	0.0%	33.3	46.1	Feb 23	48.9	Feb 23 15:00	100.0%	95.4%	0
March 2025	665	0.0%	3.3%	60.8%	35.9%	0.0%	0.0%	36.3	44.5	Mar 07	50.3	Mar 25 17:00	93.8%	89.4%	0
April 2025	687	0.0%	4.1%	58.5%	37.4%	0.0%	0.0%	37.1	45.5	Apr 04	54.4	Apr 04 15:00	100.0%	95.4%	0
May 2025	709	2.8%	8.0%	55.1%	34.0%	0.0%	0.0%	34.7	46.2	May 02	60.0	May 07 16:00	100.0%	95.3%	0
June 2025	686	5.7%	19.1%	64.6%	10.6%	0.0%	0.0%	27.3	36.6	Jun 09	50.6	Jun 08 23:00	100.0%	95.3%	0
July 2025	696	4.9%	23.1%	62.4%	9.6%	0.0%	0.0%	25.7	34.8	Jul 17	57.7	Jul 17 19:00	98.3%	93.6%	0
August 2025	704	10.1%	32.8%	47.0%	9.8%	0.3%	0.0%	23.7	39.4	Aug 29	61.4	Aug 29 13:00	99.2%	94.6%	0
September 2025	686	3.2%	14.7%	76.2%	5.8%	0.0%	0.0%	27.9	34.7	Sep 20	56.9	Sep 02 17:00	99.9%	95.3%	0
October 2025	709	5.4%	14.7%	77.7%	2.3%	0.0%	0.0%	25.8	37.2	Oct 10	45.1	Oct 10 16:00	100.0%	95.3%	0
November 2025	685	8.6%	27.7%	63.6%	0.0%	0.0%	0.0%	23.5	35.3	Nov 01	39.6	Nov 10 06:00	99.7%	95.1%	0
December 2025	699	0.1%	6.2%	88.3%	5.4%	0.0%	0.0%	27.8	41.5	Dec 29	44.4	Dec 28 20:00	98.4%	94.0%	0
Annual	8273	3.5%	13.4%	66.5%	16.5%	0.0%	0.0%	29.8	MAXIMUM VALUES				99.1%	94.5%	0

AAAQO Objectives: 1-Hr: 76ppb

2025 Hourly Concentration Readings of O₃ (in ppb) at Happy Valley

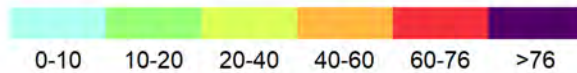
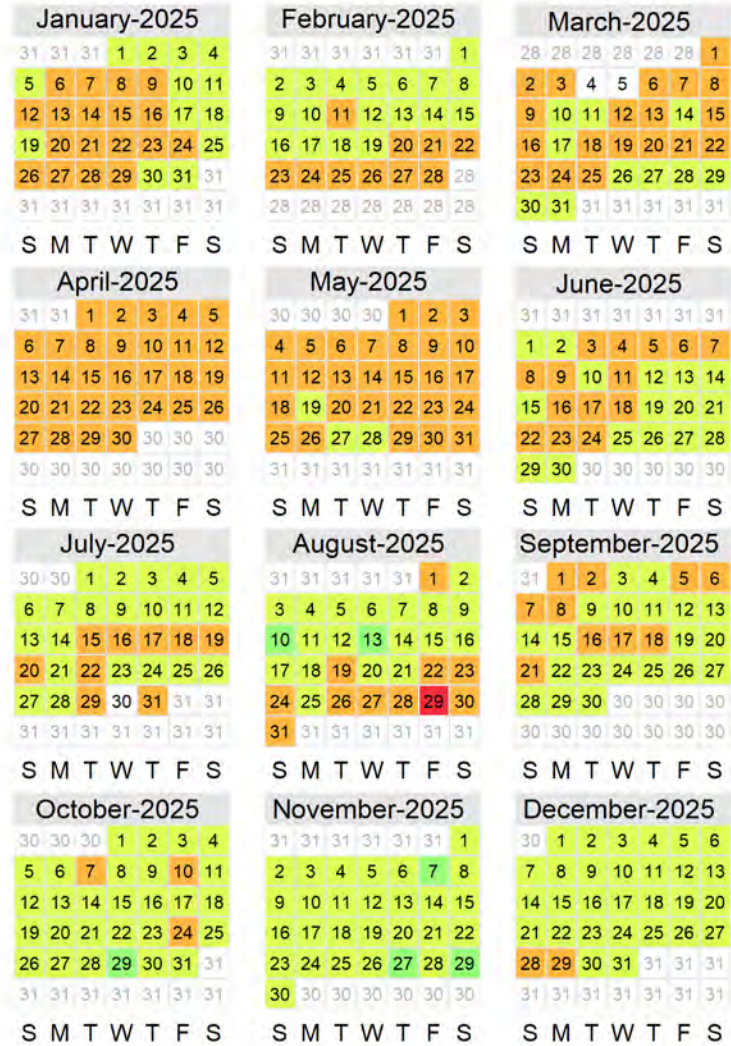






mean and 95% confidence interval in mean

Hourly Maximum O₃ (in ppb) for 2025 at Happy Valley



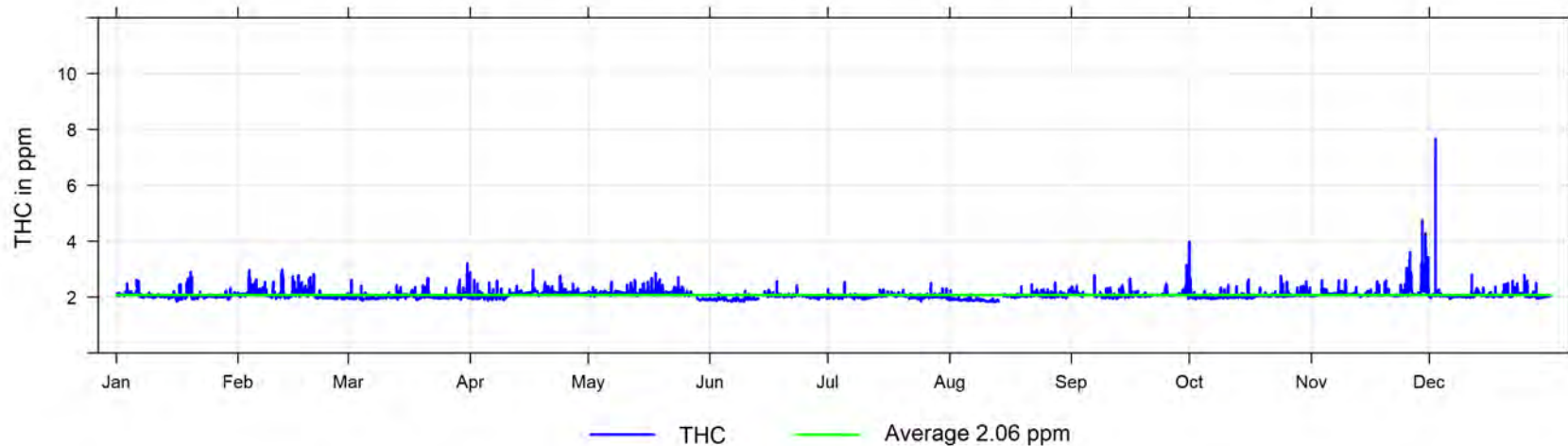
10.8 Total Hydrocarbons (THC) - Happy Valley 2025 Summary

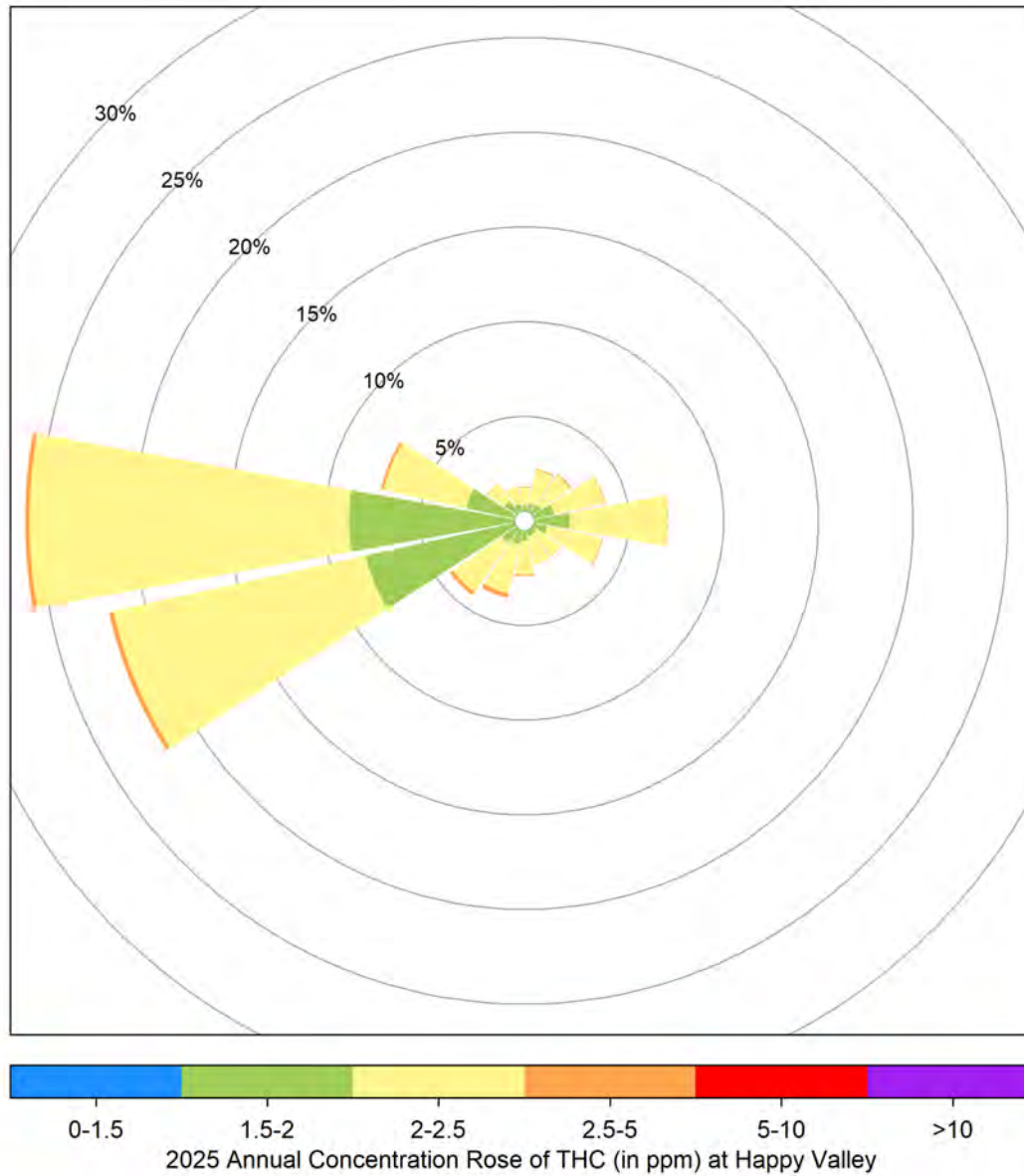
Total Hydrocarbons (THC) Frequency Distribution at Happy Valley

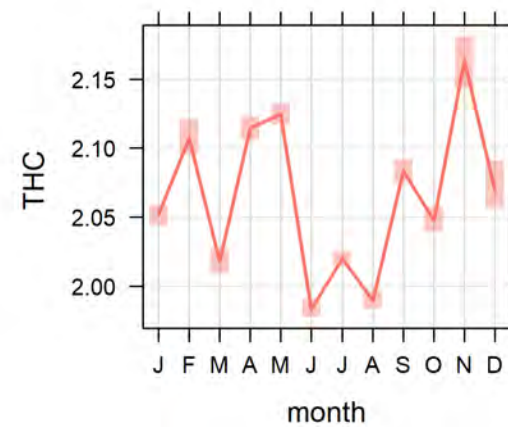
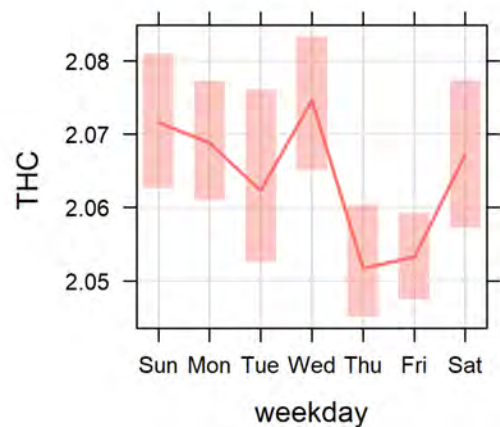
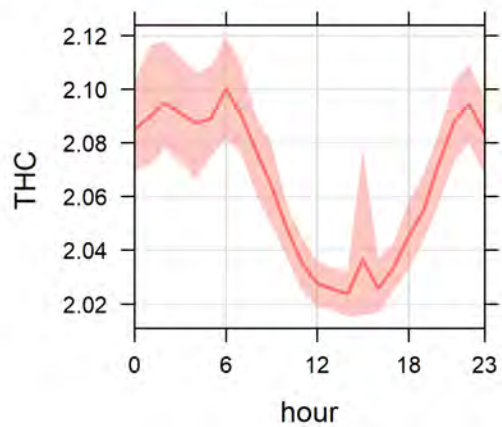
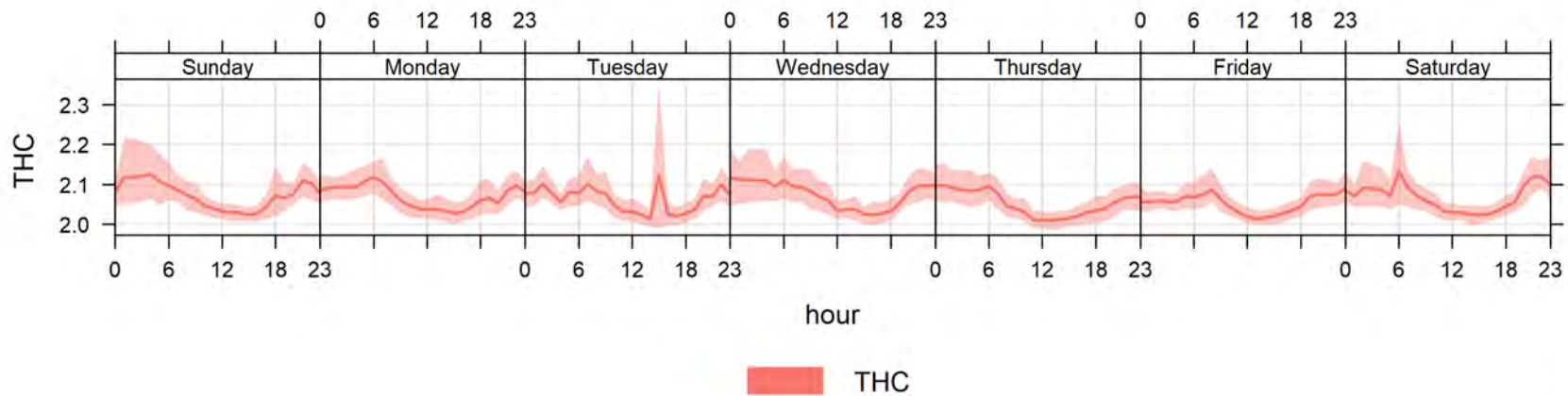
Month	Valid Hours	% of Readings in Concentration Range						Monthly Average (ppm)	MAXIMUM VALUES				Operational time (%)	Valid time (%)
		0 to 1.5 (ppm)	1.5 to 2 (ppm)	2 to 2.5 (ppm)	2.5 to 5 (ppm)	5 to 10 (ppm)	> 10 (ppm)		24-hr (ppm)	Date	1-hr (ppm)	Date		
January 2025	707	0.0%	29.8%	68.5%	1.7%	0.0%	0.0%	2.05	2.3	Jan 06	2.9	Jan 19 22:00	99.6%	95.0%
February 2025	641	0.0%	24.2%	72.1%	3.7%	0.0%	0.0%	2.11	2.3	Feb 19	3.0	Feb 12 06:00	100.0%	95.4%
March 2025	706	0.0%	60.6%	38.1%	1.3%	0.0%	0.0%	2.02	2.2	Mar 31	3.2	Mar 31 07:00	99.7%	94.9%
April 2025	687	0.0%	20.4%	78.0%	1.6%	0.0%	0.0%	2.11	2.3	Apr 17	3.0	Apr 17 01:00	100.0%	95.4%
May 2025	682	0.0%	11.1%	87.1%	1.8%	0.0%	0.0%	2.12	2.2	May 18	2.9	May 18 04:00	96.5%	91.7%
June 2025	643	0.0%	52.9%	47.0%	0.2%	0.0%	0.0%	1.98	2.1	Jun 23	2.6	Jun 18 01:00	93.9%	89.3%
July 2025	687	0.0%	43.5%	56.3%	0.1%	0.0%	0.0%	2.02	2.1	Jul 14	2.5	Jul 05 07:00	97.0%	92.3%
August 2025	677	0.0%	51.3%	48.6%	0.1%	0.0%	0.0%	1.99	2.2	Aug 31	2.5	Aug 27 20:00	95.8%	91.0%
September 2025	630	0.0%	13.7%	84.6%	1.7%	0.0%	0.0%	2.09	2.4	Sep 30	4.0	Oct 01 00:00	92.5%	87.5%
October 2025	708	0.0%	37.7%	60.9%	1.4%	0.0%	0.0%	2.04	2.2	Oct 01	3.3	Oct 01 02:00	99.9%	95.2%
November 2025	683	0.0%	0.4%	93.7%	5.9%	0.0%	0.0%	2.16	2.6	Nov 29	4.8	Nov 29 06:00	99.4%	94.9%
December 2025	698	0.0%	18.9%	80.2%	0.7%	0.1%	0.0%	2.07	2.3	Dec 02	7.7	Dec 02 15:00	98.5%	93.8%
Annual	8149	0.0%	30.4%	67.9%	1.7%	0.0%	0.0%	2.06	2.6	Nov 29	7.7	Dec 02 15:00	97.7%	93.0%

AAAQO Objectives: none

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

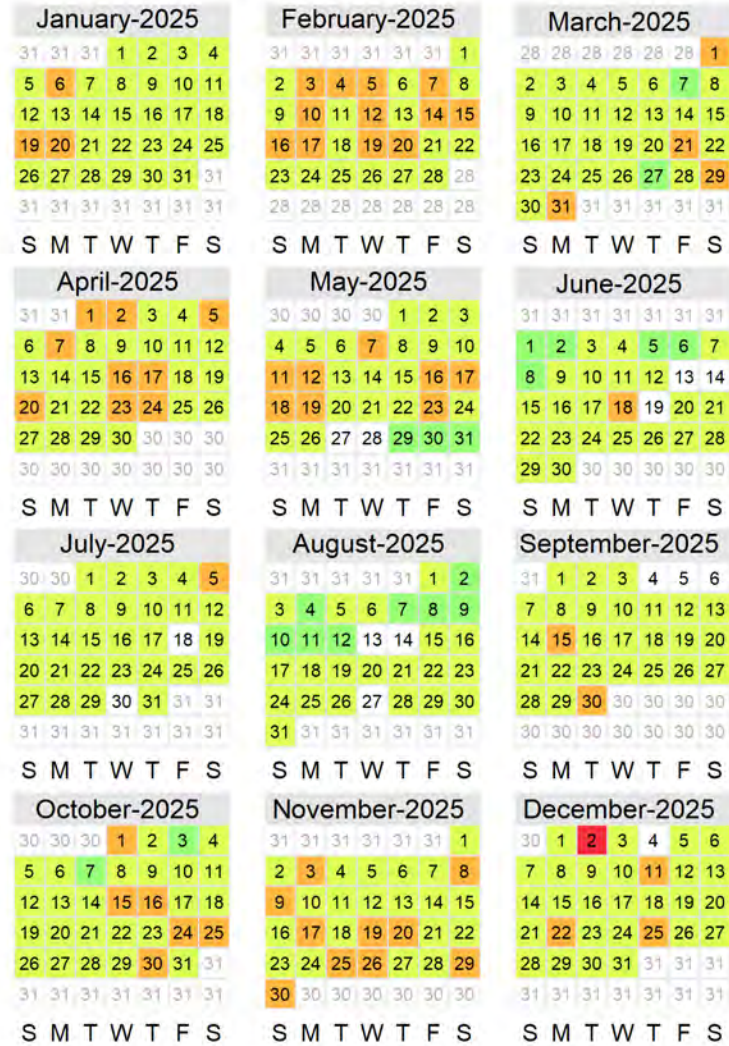






mean and 95% confidence interval in mean

Hourly Maximum THC (in ppm) for 2025 at Happy Valley



10.9 Methane (CH₄) - Happy Valley 2025 Summary

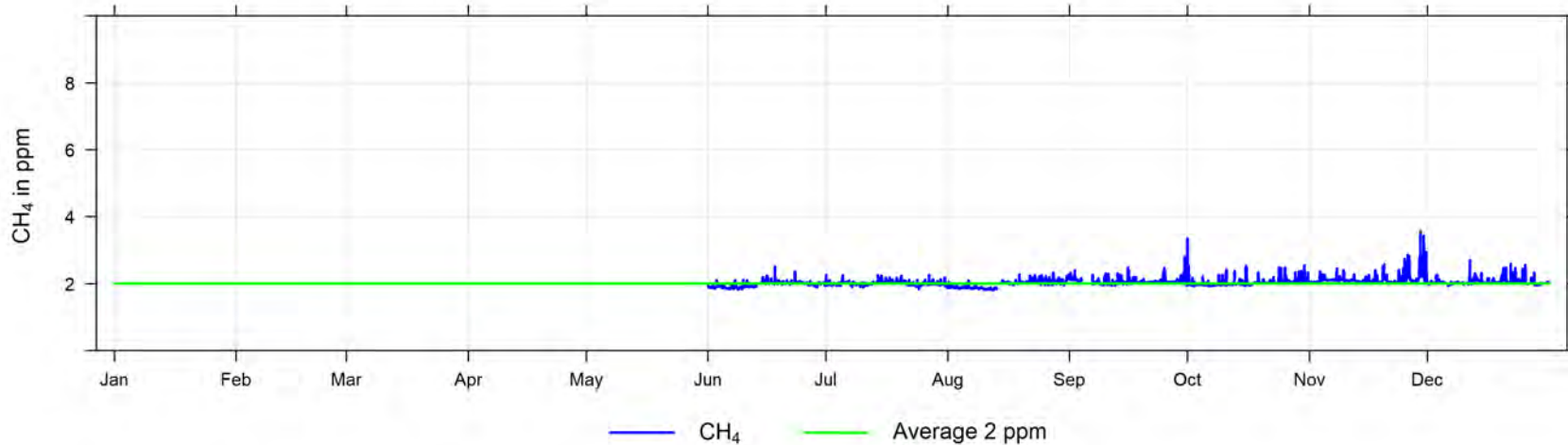
Methane (CH₄) Frequency Distribution at Happy Valley

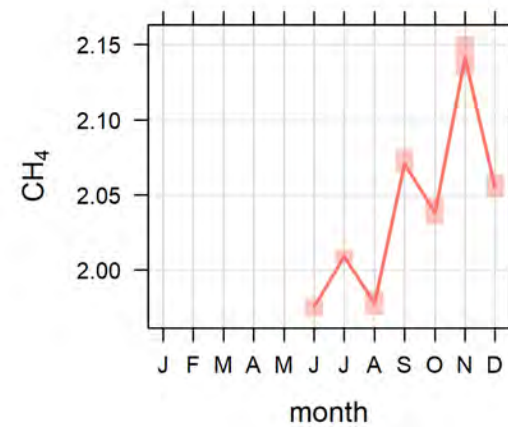
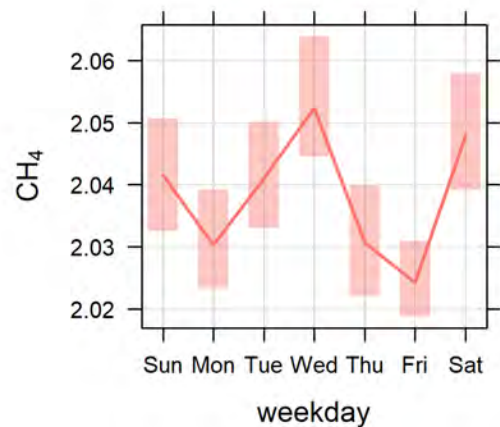
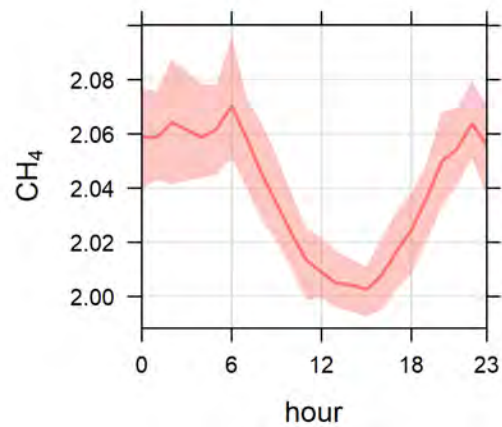
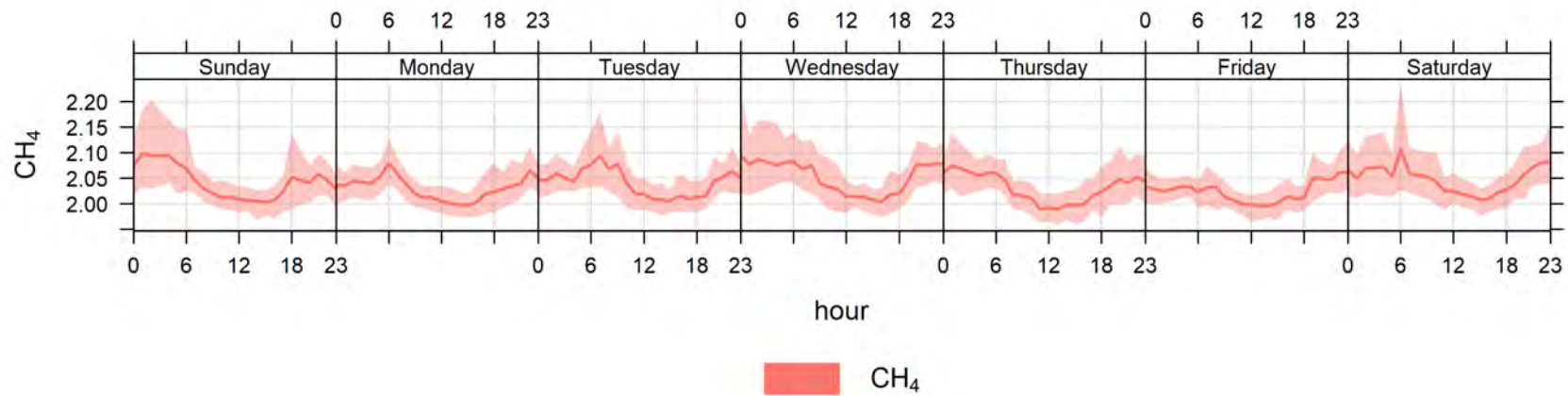
Month	Valid Hours	% of Readings in Concentration Range						Monthly Average (ppm)	MAXIMUM VALUES				Operational time (%)	Valid time (%)
		0 to 1.5 (ppm)	1.5 to 2 (ppm)	2 to 2.5 (ppm)	2.5 to 5 (ppm)	5 to 10 (ppm)	> 10 (ppm)		24-hr (ppm)	Date	1-hr (ppm)	Date		
January 2025														
February 2025														
March 2025														
April 2025														
May 2025														
June 2025	643	0.0%	57.4%	42.5%	0.2%	0.0%	0.0%	1.98	2.1	Jun 23	2.5	Jun 18 01:00	93.9%	89.3%
July 2025	687	0.0%	49.3%	50.7%	0.0%	0.0%	0.0%	2.01	2.1	Jul 14	2.3	Jul 01 02:00	97.0%	92.3%
August 2025	677	0.0%	54.4%	45.6%	0.0%	0.0%	0.0%	1.98	2.2	Aug 31	2.3	Aug 27 20:00	95.8%	91.0%
September 2025	630	0.0%	15.2%	84.1%	0.6%	0.0%	0.0%	2.07	2.3	Sep 30	3.4	Oct 01 00:00	92.5%	87.5%
October 2025	708	0.0%	39.7%	59.6%	0.7%	0.0%	0.0%	2.04	2.1	Oct 29	2.9	Oct 01 02:00	99.9%	95.2%
November 2025	683	0.0%	0.4%	94.7%	4.8%	0.0%	0.0%	2.14	2.5	Nov 29	3.6	Nov 29 06:00	99.4%	94.9%
December 2025	263	0.0%	21.8%	77.7%	0.6%	0.0%	0.0%	2.06	2.2	Dec 25	2.7	Dec 11 20:00	98.5%	93.8%
Annual	4291	0.0%	34.0%	65.0%	1.0%	0.0%	0.0%	2.04	2.5	Nov 29	3.6	Nov 29 06:00	96.7%	53.7%

AAAQO Objectives: none

If valid time is <75% then average is not valid, shown for reference only

2025 Hourly Concentration Readings of CH₄ (in ppm) at Happy Valley





mean and 95% confidence interval in mean

10.10 Nonmethane Hydrocarbon (NMHC) - Happy Valley 2025 Summary

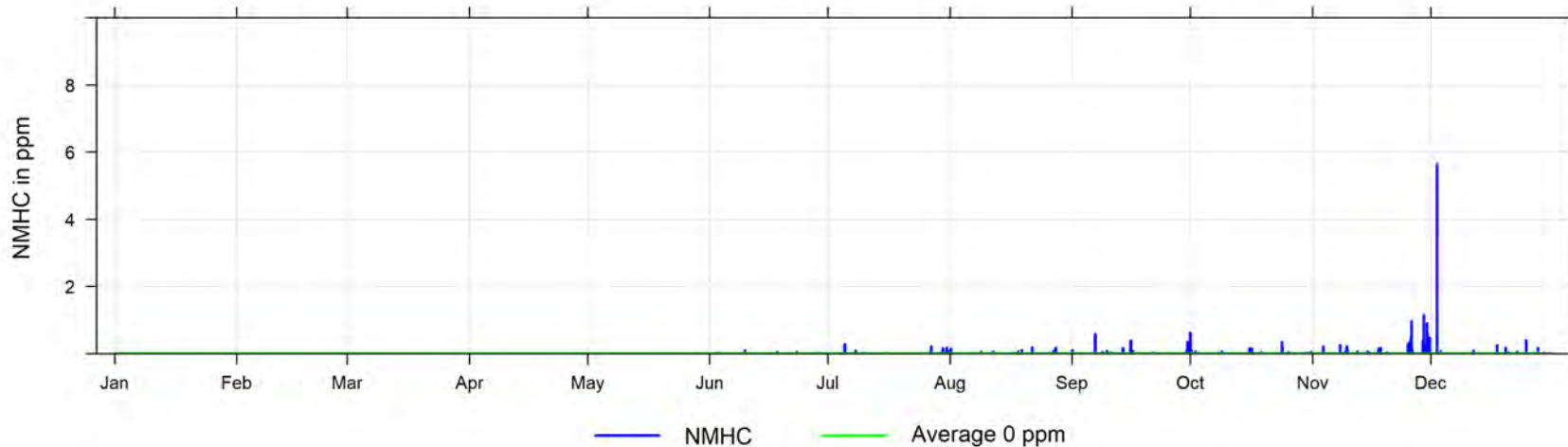
Nonmethane Hydrocarbons (NMHC) Frequency Distribution at Happy Valley

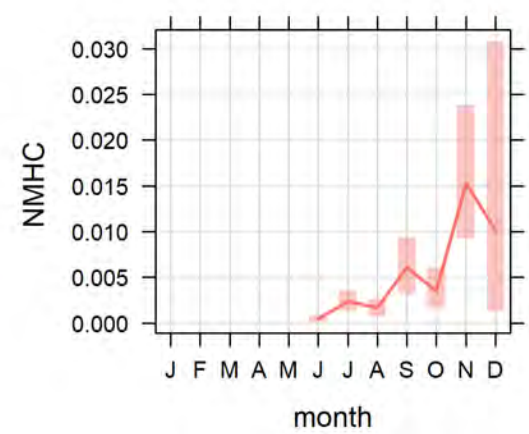
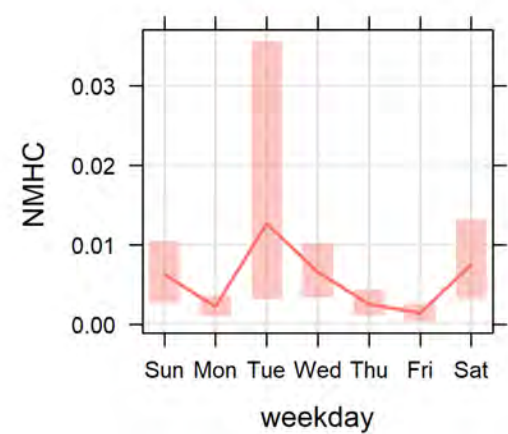
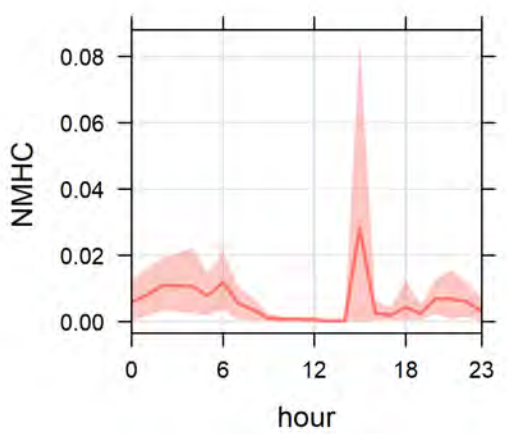
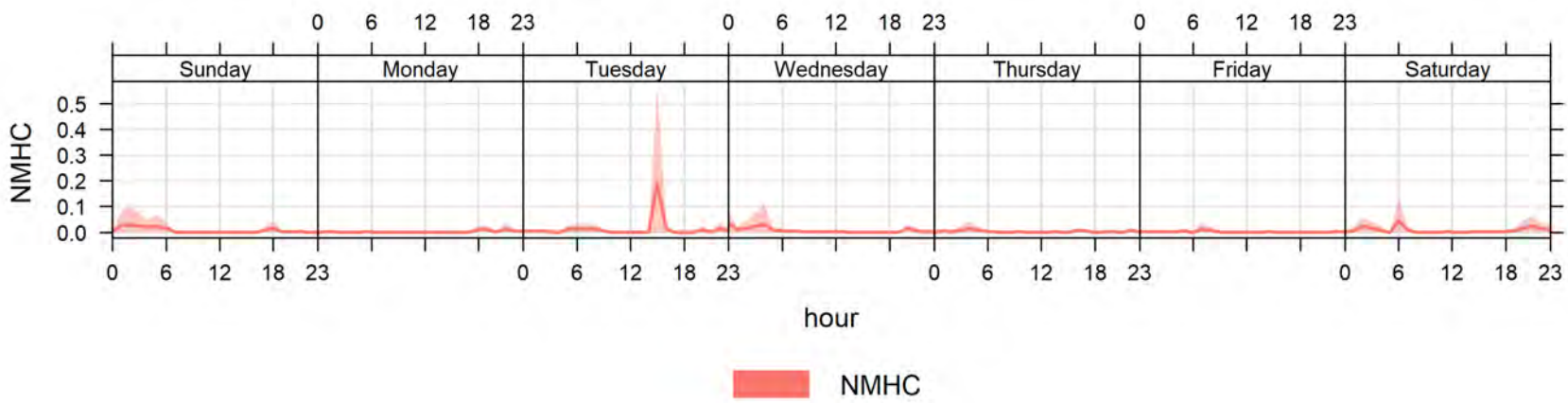
Month	Valid Hours	% of Readings in Concentration Range						Monthly Average (ppm)	MAXIMUM VALUES				Operational time (%)	Valid time (%)
		0 to 0.25 (ppm)	0.25 to 0.5 (ppm)	0.5 to 0.75 (ppm)	0.75 to 1 (ppm)	1 to 2 (ppm)	>2 (ppm)		24-hr (ppm)	Date	1-hr (ppm)	Date		
January 2025														
February 2025														
March 2025														
April 2025														
May 2025														
June 2025	643	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00	0.0	Jun 09	0.1	Jun 09 22:00	93.9%	89.3%
July 2025	687	99.9%	0.1%	0.0%	0.0%	0.0%	0.0%	0.00	0.0	Jul 05	0.3	Jul 05 07:00	97.0%	92.3%
August 2025	677	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00	0.0	Aug 21	0.2	Aug 21 22:00	95.8%	91.0%
September 2025	630	98.9%	0.8%	0.3%	0.0%	0.0%	0.0%	0.01	0.1	Sep 30	0.6	Oct 01 00:00	92.5%	87.5%
October 2025	708	99.7%	0.3%	0.0%	0.0%	0.0%	0.0%	0.00	0.0	Oct 01	0.4	Oct 01 02:00	99.9%	95.2%
November 2025	683	98.1%	1.2%	0.1%	0.4%	0.1%	0.0%	0.02	0.1	Nov 30	1.2	Nov 29 06:00	99.4%	94.9%
December 2025	698	99.7%	0.1%	0.0%	0.0%	0.0%	0.1%	0.01	0.3	Dec 02	5.6	Dec 02 15:00	98.5%	93.8%
Annual	4726	99.5%	0.4%	0.1%	0.1%	0.0%	0.0%	0.01	0.3	Dec 02	5.6	Dec 02 15:00	96.7%	53.7%

AAAQO Objectives: none

If valid time is <75% then average is not valid, shown for reference only

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





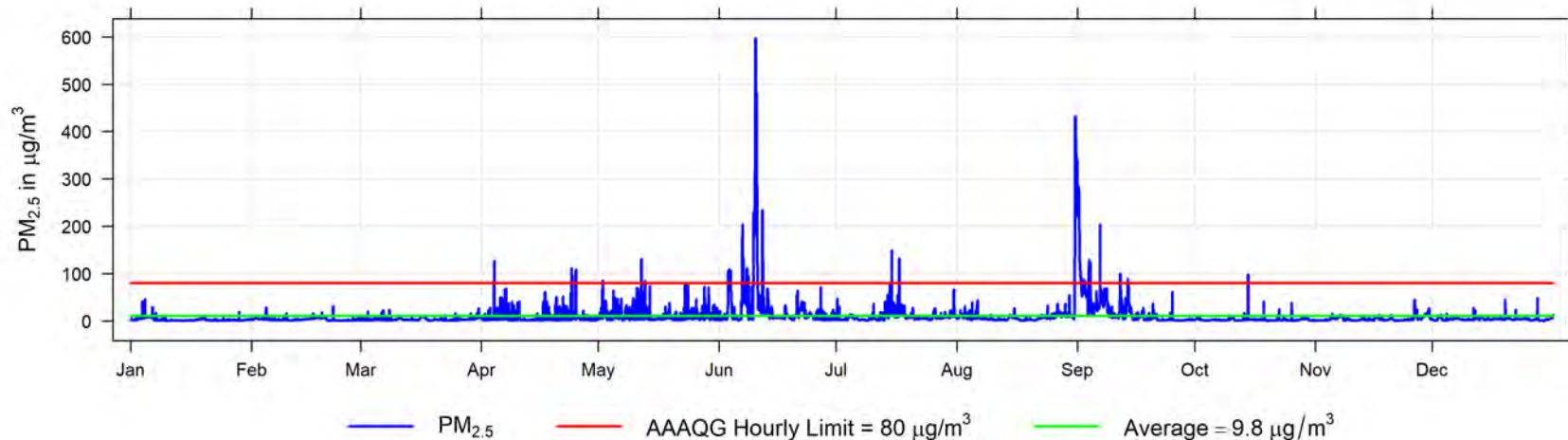
mean and 95% confidence interval in mean

10.11 Particulate Matter (PM_{2.5}) - Happy Valley 2025 Summary

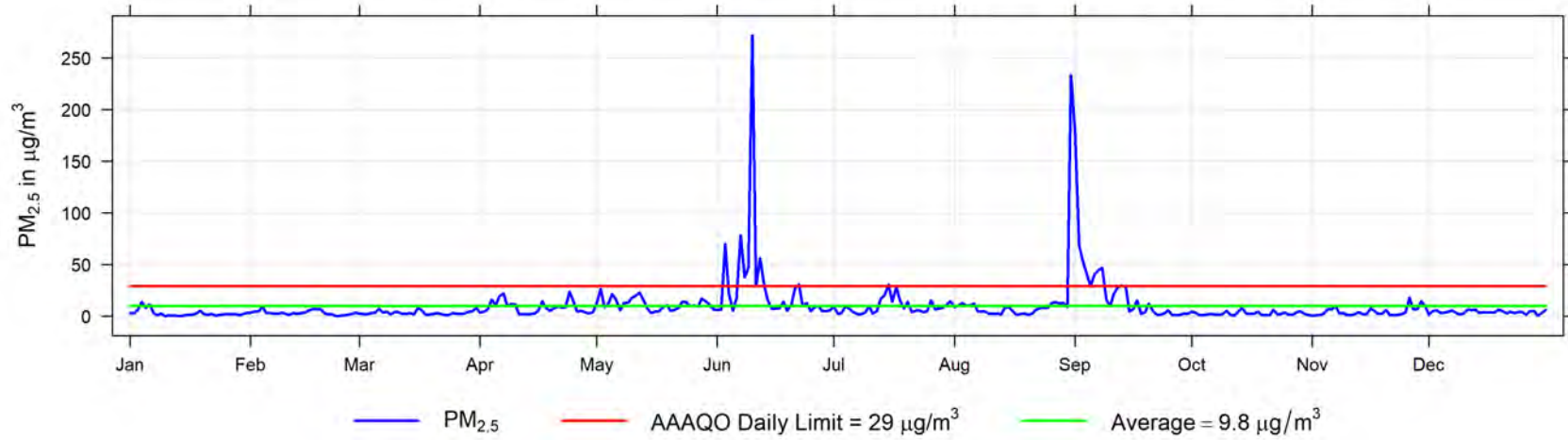
Particulate Matter (PM_{2.5}) Frequency Distribution at Happy Valley

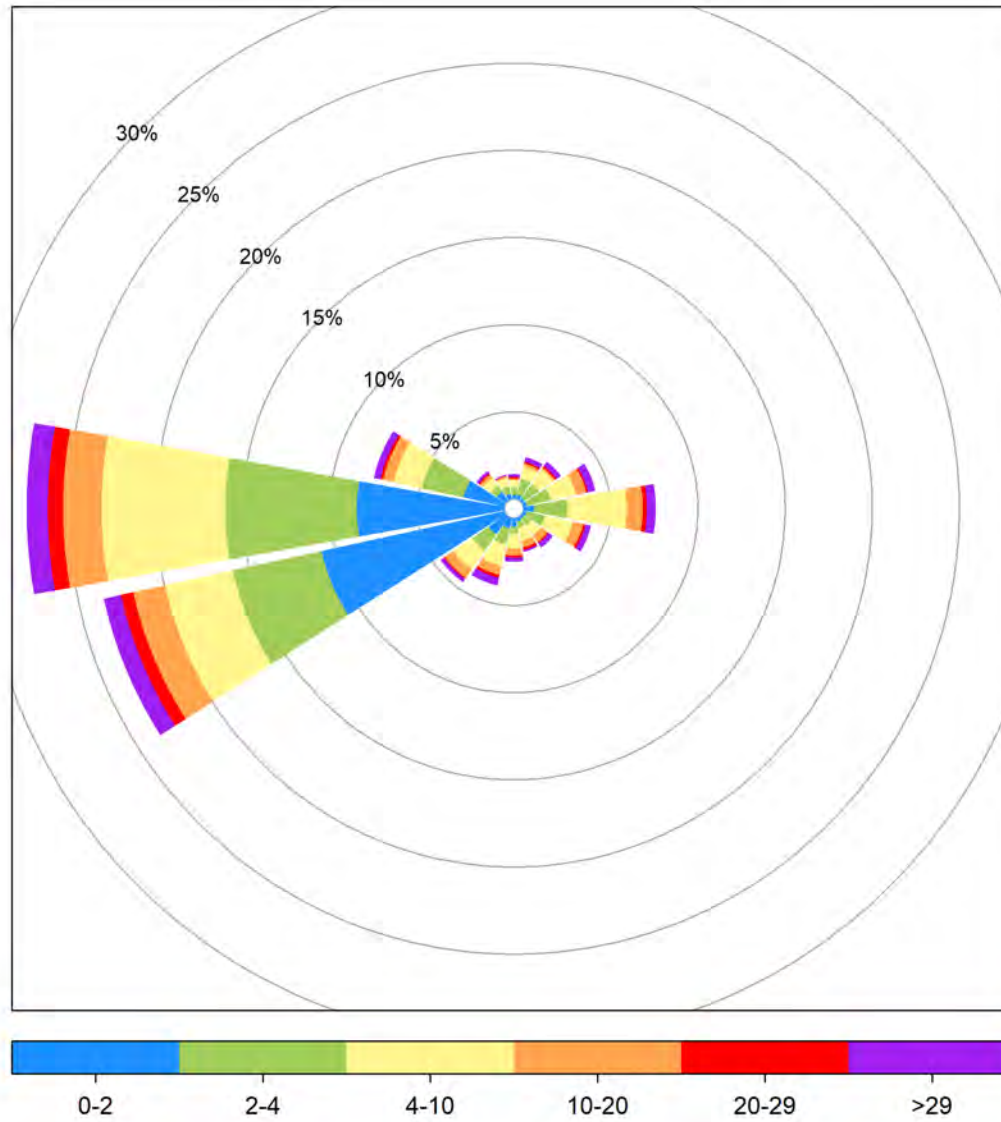
Month	Valid Hours	% of Readings in Concentration Range						Monthly Average (µg/m ³)	MAXIMUM VALUES				Operational time (%)	Valid time (%)	Reportable Incidents	
		0 to 5 (µg/m ³)	5 to 15 (µg/m ³)	15 to 30 (µg/m ³)	30 to 50 (µg/m ³)	50 to 80 (µg/m ³)	> 80 (µg/m ³)		24-hr (µg/m ³)	Date	1-hr (µg/m ³)	Date			24-hr 29 µg/m ³	1-hr 80 µg/m ³
January 2025	740	84.9%	13.0%	1.8%	0.4%	0.0%	0.0%	2.8	12.6	Jan 04	45.9	Jan 04 17:00	99.6%	99.5%	0	0
February 2025	671	80.0%	18.2%	1.6%	0.1%	0.0%	0.0%	3.3	9.3	Feb 04	31.6	Feb 21 23:00	100.0%	99.9%	0	0
March 2025	743	81.4%	17.2%	1.3%	0.0%	0.0%	0.0%	3.4	8.1	Mar 16	26.4	Mar 31 07:00	100.0%	99.9%	0	0
April 2025	719	60.8%	24.5%	8.5%	4.3%	1.3%	0.7%	8.5	24.2	Apr 24	127.3	Apr 04 07:00	100.0%	99.9%	0	5
May 2025	742	34.0%	43.8%	14.2%	5.7%	2.0%	0.4%	12.0	25.0	May 02	130.9	May 12 02:00	100.0%	99.7%	0	3
June 2025	719	25.3%	38.7%	15.7%	7.4%	4.3%	8.6%	28.8	266.8	Jun 10	596.9	Jun 10 09:00	100.0%	99.9%	8	62
July 2025	743	39.8%	43.6%	12.1%	3.2%	0.9%	0.3%	9.5	30.4	Jul 15	148.7	Jul 15 07:00	100.0%	99.9%	1	2
August 2025	742	45.1%	44.5%	6.5%	1.2%	0.3%	2.4%	14.7	242.6	Aug 31	432.0	Aug 31 10:00	100.0%	99.7%	1	18
September 2025	718	42.6%	18.2%	13.8%	11.0%	8.9%	5.4%	23.3	170.6	Sep 01	282.8	Sep 01 07:00	100.0%	99.7%	9	39
October 2025	743	89.9%	9.0%	0.5%	0.4%	0.0%	0.1%	2.7	8.3	Oct 14	97.6	Oct 14 18:00	100.0%	99.9%	0	1
November 2025	719	69.7%	25.2%	4.5%	0.7%	0.0%	0.0%	4.5	18.8	Nov 26	44.7	Nov 26 11:00	100.0%	99.9%	0	0
December 2025	736	78.0%	20.0%	1.6%	0.4%	0.0%	0.0%	4.1	7.4	Dec 11	48.3	Dec 28 00:00	99.2%	98.9%	0	0
Annual	8735	61.0%	26.3%	6.8%	2.9%	1.5%	1.5%	9.8	266.8	Jun 10	596.9	Jun 10 09:00	99.9%	99.7%	19	130

2025 Hourly Concentration Readings of PM_{2.5} in µg/m³ at Happy Valley

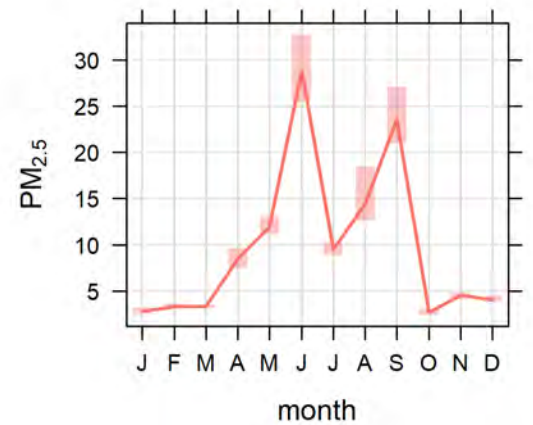
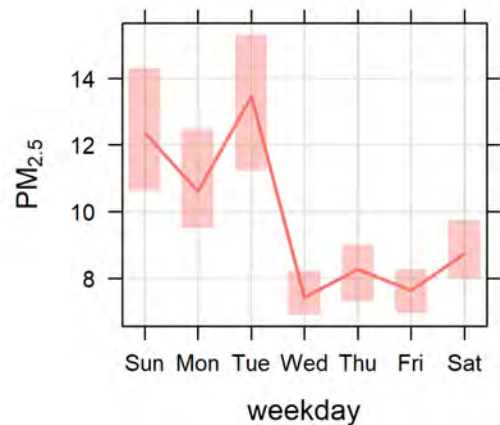
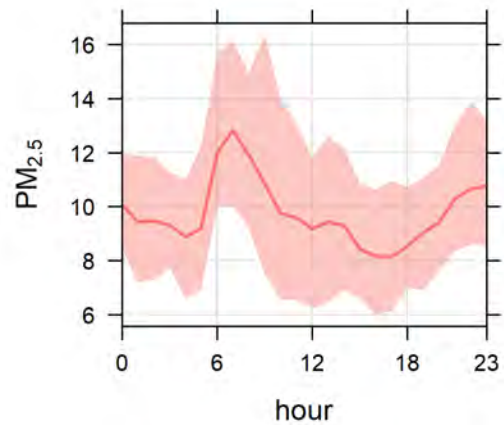
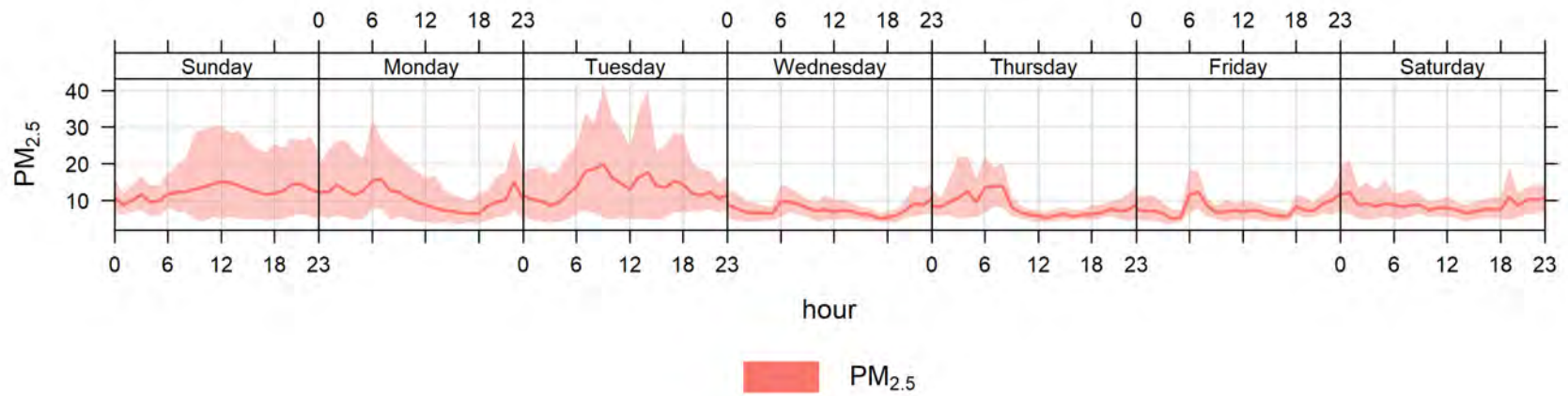


2025 Daily Concentration Readings of PM_{2.5} in µg/m³ at Happy Valley



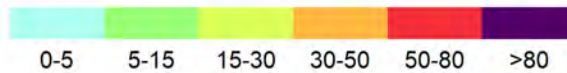
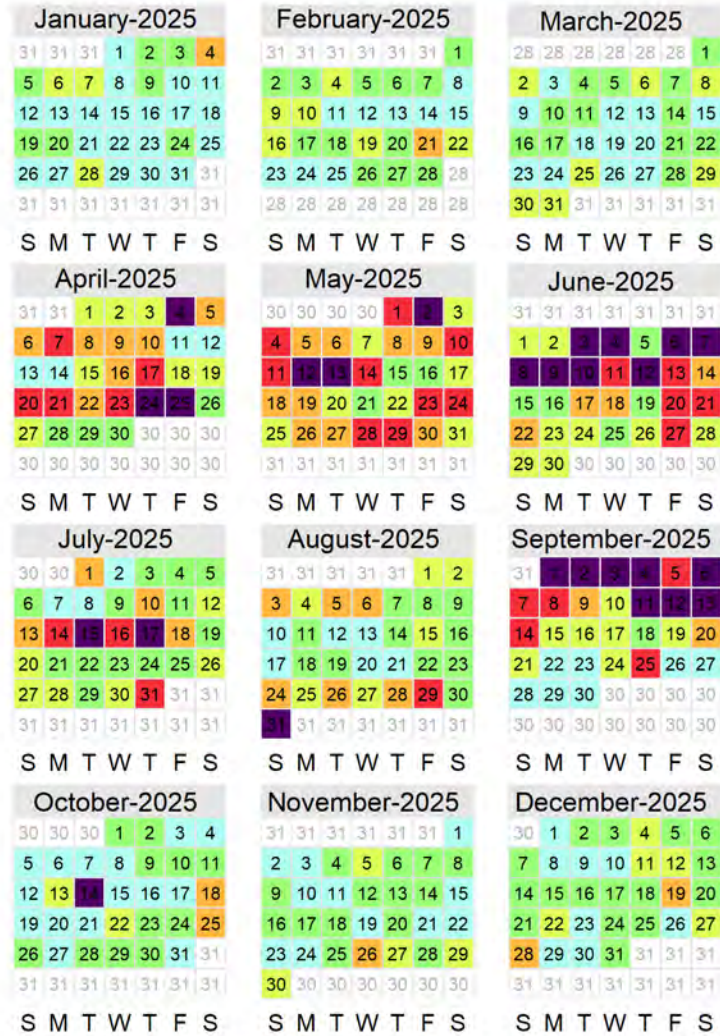


2025 Annual Concentration Readings of PM_{2.5} in µg/m³ at Happy Valley



mean and 95% confidence interval in mean

Hourly Maximum PM_{2.5} (in µg/m³) for 2025 at Happy Valley

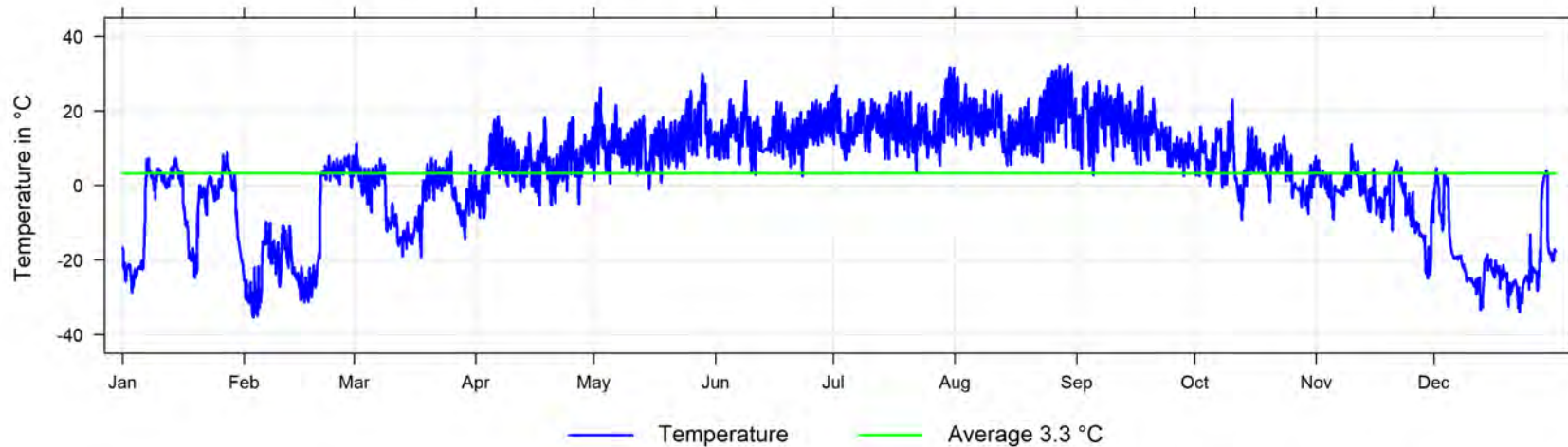


10.12 Temperature (ET) - Happy Valley 2025 Summary

Temperature (ET) Frequency Distribution at Happy Valley

Month	Valid Hours	Monthly Average (°C)	Maximum Values				Minimum Values				Operational time (%)	Valid time (%)	
			24-hr (°C)	Date	1-hr (°C)	Date	24-hr (°C)	Date	1-hr (°C)	Date			
January 2025	742	-6.3	6.1	Jan 27	9.1	Jan 27 16:00	-25.7	Jan 03	-28.8	Jan 03 10:00	99.7%	99.7%	
February 2025	672	-14.6	5.7	Feb 27	8.1	Feb 27 15:00	-32.3	Feb 03	-35.5	Feb 03 09:00	100.0%	100.0%	
March 2025	744	-3.5	6.5	Mar 01	11.3	Mar 01 15:00	-15.0	Mar 12	-19.2	Mar 18 01:00	100.0%	100.0%	
April 2025	720	5.7	12.0	Apr 25	18.6	Apr 06 16:00	-3.9	Apr 01	-8.8	Apr 03 03:00	100.0%	100.0%	
May 2025	744	12.4	22.7	May 28	30.0	May 28 16:00	5.5	May 14	-1.1	May 15 05:00	100.0%	100.0%	
June 2025	720	14.1	21.6	Jun 08	28.1	Jun 08 17:00	9.5	Jun 13	2.4	Jun 23 05:00	100.0%	100.0%	
July 2025	744	16.2	24.4	Jul 30	31.6	Jul 30 17:00	11.3	Jul 25	3.9	Jul 22 05:00	100.0%	100.0%	
August 2025	744	17.6	24.1	Aug 30	32.4	Aug 29 16:00	10.8	Aug 13	5.4	Aug 14 06:00	100.0%	100.0%	
September 2025	720	14.5	22.4	Sep 03	28.0	Sep 06 17:00	7.6	Sep 28	2.6	Sep 28 07:00	100.0%	100.0%	
October 2025	744	5.0	14.7	Oct 10	23.0	Oct 10 15:00	-2.9	Oct 28	-9.3	Oct 13 01:00	100.0%	100.0%	
November 2025	720	-3.3	5.7	Nov 10	11.0	Nov 09 23:00	-22.1	Nov 29	-24.9	Nov 29 10:00	100.0%	100.0%	
December 2025	738	-19.7	1.8	Dec 29	4.7	Dec 01 15:00	-30.2	Dec 22	-34.1	Dec 22 19:00	99.2%	99.2%	
		AVERAGE	MAXIMUM VALUES				MINIMUM VALUES						
		8752	3.3	24.4	Jul 30	32.4	Aug 29 16:00	-32.3	Feb 03	-35.5	Feb 03 09:00	99.9%	99.9%

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

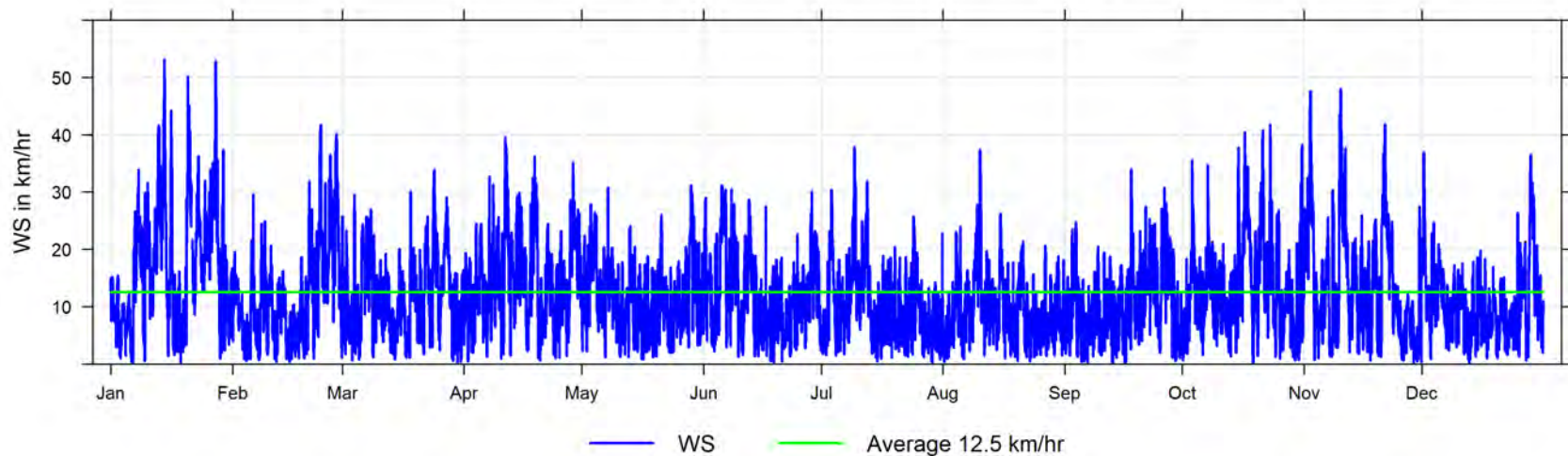


10.13 Wind Speed and Wind Direction (WS and WD) - Happy Valley 2025 Summary

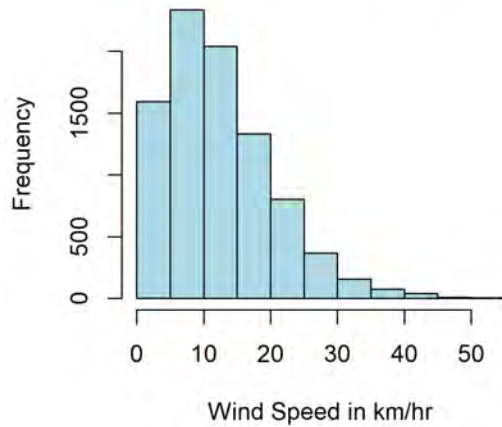
Wind Speed Frequency Distribution at Happy Valley

Month	Valid Hours	Calm	% of Readings in Concentration Range					Monthly Average (km/hr)	24-hr (km/hr)	MAXIMUM VALUES			Operational time (%)	Valid time (%)
			0.5 to 5 (km/hr)	5 to 11 (km/hr)	11 to 19 (km/hr)	19 to 28 (km/hr)	>28 (km/hr)			Date	1-hr (km/hr)	Date		
January 2025	742	0.7%	11.3%	22.0%	25.5%	24.3%	16.3%	17.3	35.8	Jan 27	53.2	Jan 14 16:00	99.7%	99.7%
February 2025	672	0.3%	23.8%	28.9%	27.7%	13.4%	6.0%	12.0	29.6	Feb 27	41.7	Feb 23 12:00	100.0%	100.0%
March 2025	744	0.4%	16.3%	30.4%	35.1%	16.5%	1.3%	12.1	23.8	Mar 27	33.9	Mar 24 10:00	100.0%	100.0%
April 2025	720	0.1%	8.5%	24.6%	35.4%	25.8%	5.6%	15.2	26.4	Apr 11	39.5	Apr 11 12:00	100.0%	100.0%
May 2025	744	0.0%	15.9%	34.5%	37.8%	11.0%	0.8%	11.5	20.2	May 04	31.2	May 28 20:00	100.0%	100.0%
June 2025	720	0.3%	16.9%	33.2%	31.8%	15.6%	2.2%	12.1	22.2	Jun 05	31.1	Jun 05 15:00	100.0%	100.0%
July 2025	744	0.5%	23.5%	36.8%	29.0%	8.2%	1.9%	10.3	24.7	Jul 09	37.8	Jul 09 10:00	100.0%	100.0%
August 2025	744	0.3%	24.2%	42.6%	26.5%	5.6%	0.8%	9.5	19.1	Aug 10	37.4	Aug 10 11:00	100.0%	100.0%
September 2025	720	1.0%	22.2%	31.3%	34.7%	10.1%	0.7%	10.7	20.0	Sep 26	34.0	Sep 18 00:00	100.0%	100.0%
October 2025	744	0.1%	13.3%	28.2%	35.2%	15.7%	7.4%	13.9	27.3	Oct 17	41.8	Oct 23 09:00	100.0%	100.0%
November 2025	720	0.4%	20.0%	24.6%	25.7%	19.6%	9.7%	14.3	34.6	Nov 10	47.9	Nov 10 08:00	100.0%	100.0%
December 2025	738	0.1%	18.6%	39.8%	32.4%	6.8%	2.3%	10.6	22.3	Dec 01	36.9	Dec 01 12:00	99.2%	99.2%
Annual	8752	0.4%	17.9%	31.4%	31.4%	14.4%	4.6%	12.5	35.8	MAXIMUM VALUES			99.9%	99.9%

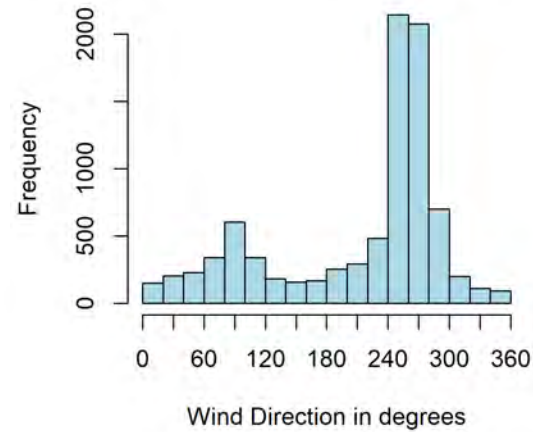
2025 Hourly Readings of Wind Speed (in km/hr) at Happy Valley



2025 Wind Speed Histogram

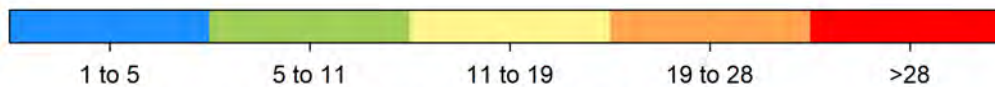
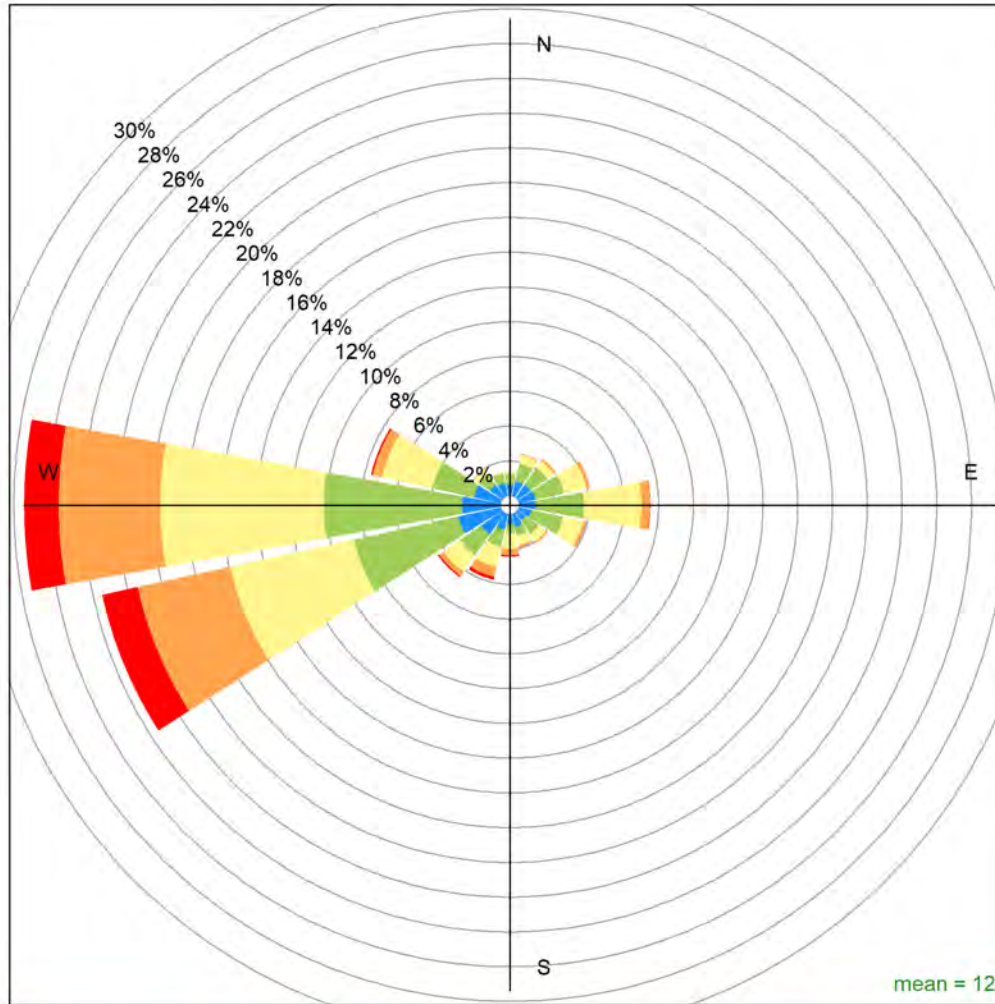


2025 Wind Direction Histogram



Wind Speed and Wind Direction Frequency Distribution at Happy Valley

Direction	Number of Readings	% of wind speed range						Total %
		Calm (<0.5 (km/hr)	0.5 to 5 (km/hr)	5 to 11 (km/hr)	11 to 19 (km/hr)	19 to 28 (km/hr)	>28 (km/hr)	
N	125	0.0%	0.6%	0.6%	0.2%	0.0%	0.0%	1.4%
NNE	217	0.0%	0.9%	1.0%	0.5%	0.1%	0.0%	2.5%
NE	240	0.0%	0.9%	1.2%	0.5%	0.1%	0.0%	2.7%
ENE	372	0.1%	1.0%	1.7%	1.3%	0.2%	0.0%	4.3%
E	668	0.0%	1.0%	2.8%	3.3%	0.5%	0.0%	7.6%
ESE	350	0.0%	0.8%	1.9%	1.2%	0.2%	0.0%	4.0%
SE	192	0.0%	0.6%	1.0%	0.5%	0.1%	0.0%	2.2%
SSE	176	0.0%	0.8%	0.5%	0.6%	0.1%	0.0%	2.0%
S	220	0.0%	0.6%	0.5%	0.9%	0.4%	0.1%	2.5%
SSW	347	0.0%	1.0%	1.0%	1.2%	0.6%	0.2%	4.0%
SW	401	0.0%	1.5%	1.4%	1.2%	0.3%	0.1%	4.6%
WSW	2060	0.0%	2.5%	6.1%	7.3%	5.5%	2.1%	23.5%
W	2402	0.0%	2.3%	8.0%	9.4%	5.9%	2.0%	27.4%
WNW	674	0.0%	1.6%	2.5%	3.0%	0.5%	0.1%	7.7%
NW	181	0.0%	0.9%	0.8%	0.3%	0.0%	0.0%	2.1%
NNW	127	0.0%	0.8%	0.6%	0.1%	0.0%	0.0%	1.5%
Total	8752	0.4%	17.8%	31.5%	31.4%	14.4%	4.6%	100.0%

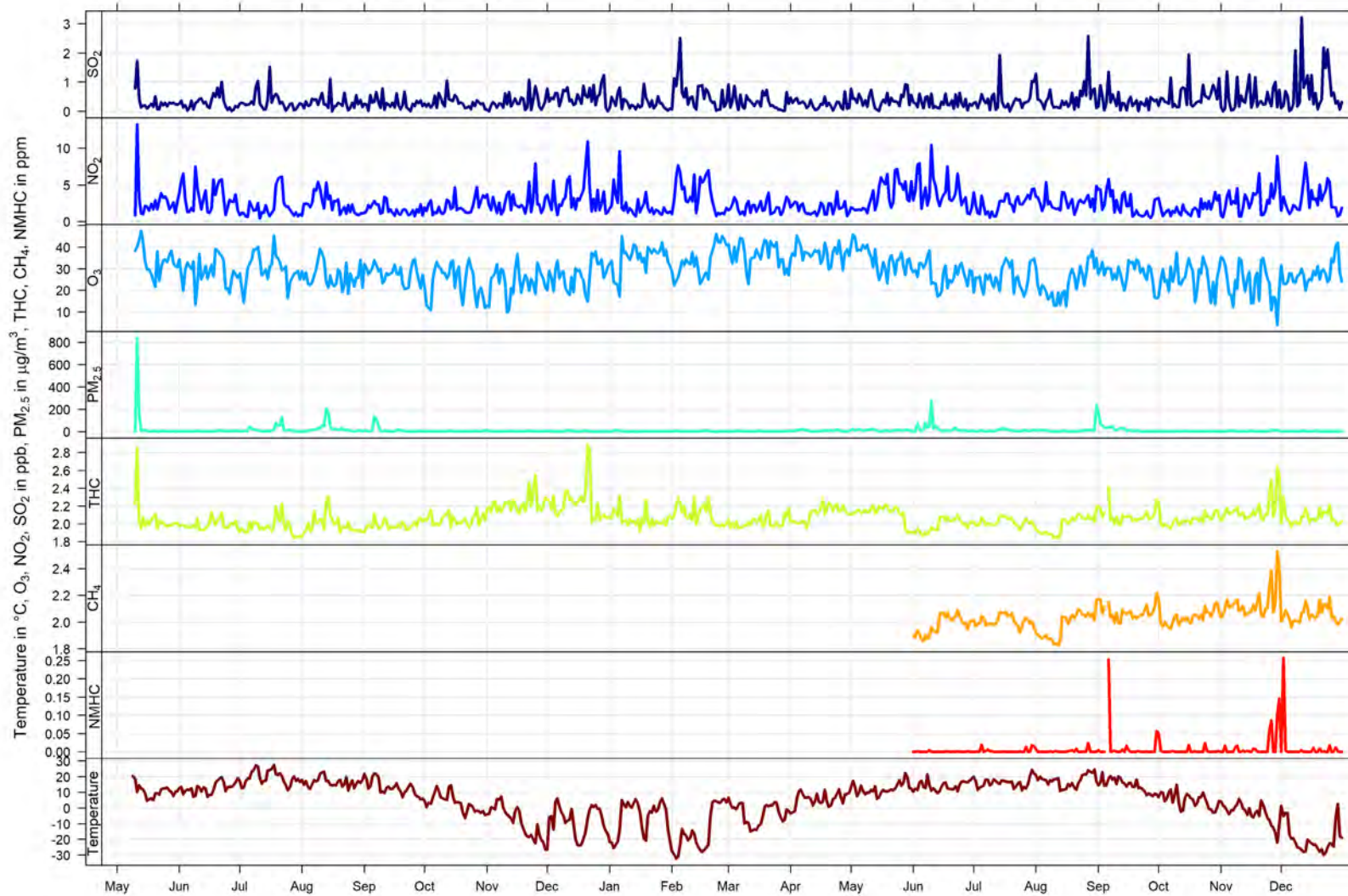


Happy Valley 2025 Wind Rose, wind speed in km/hr
Calms (<1km/hr) = 1.1 %

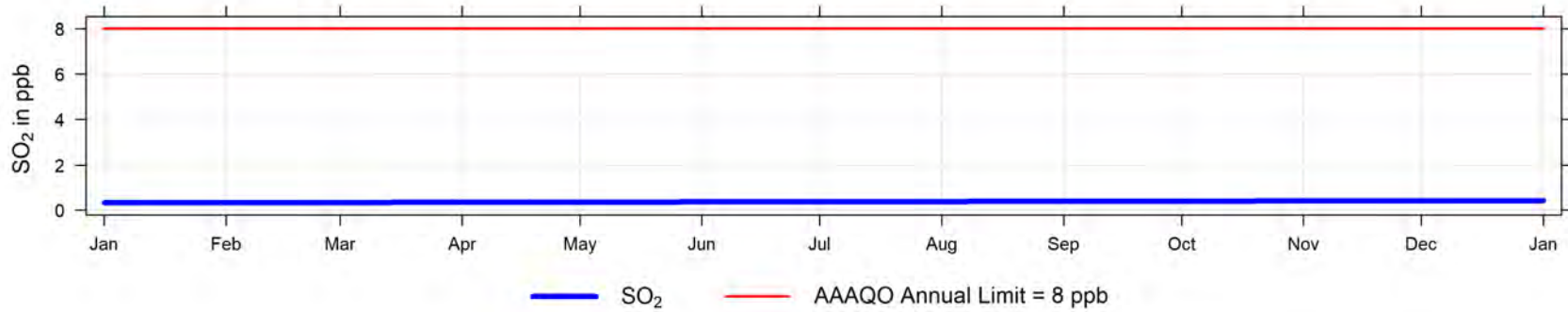
10.14 Happy Valley Annual Trends, 2024 to 2025

The following pages include historical annual charts collected between 2024 and 2025 at the Happy Valley Station.

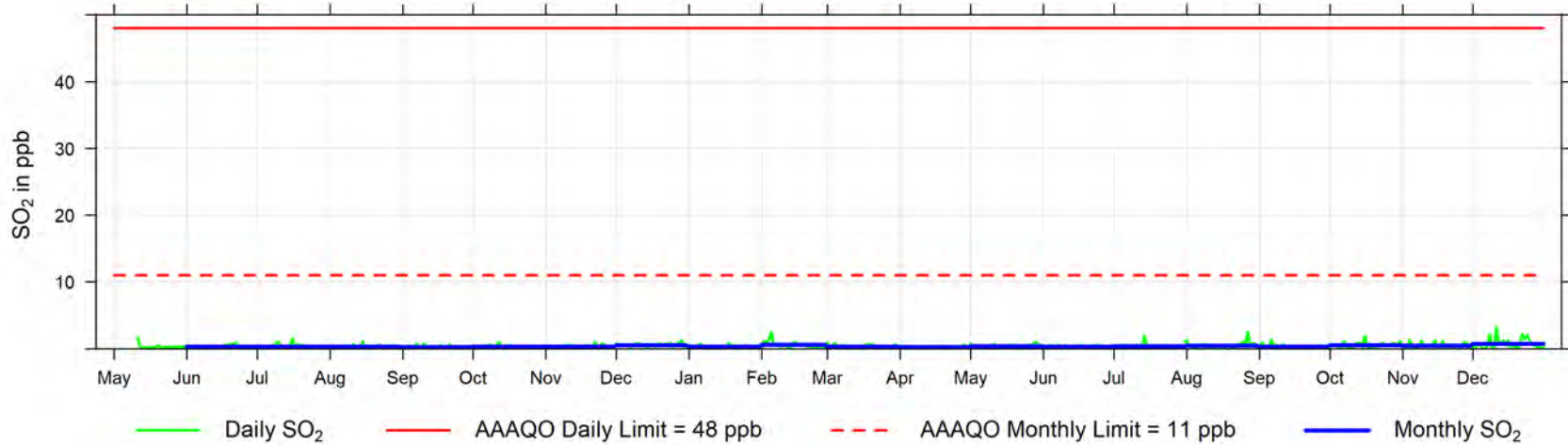
2024 to 2025 Daily Concentration Readings at Happy Valley



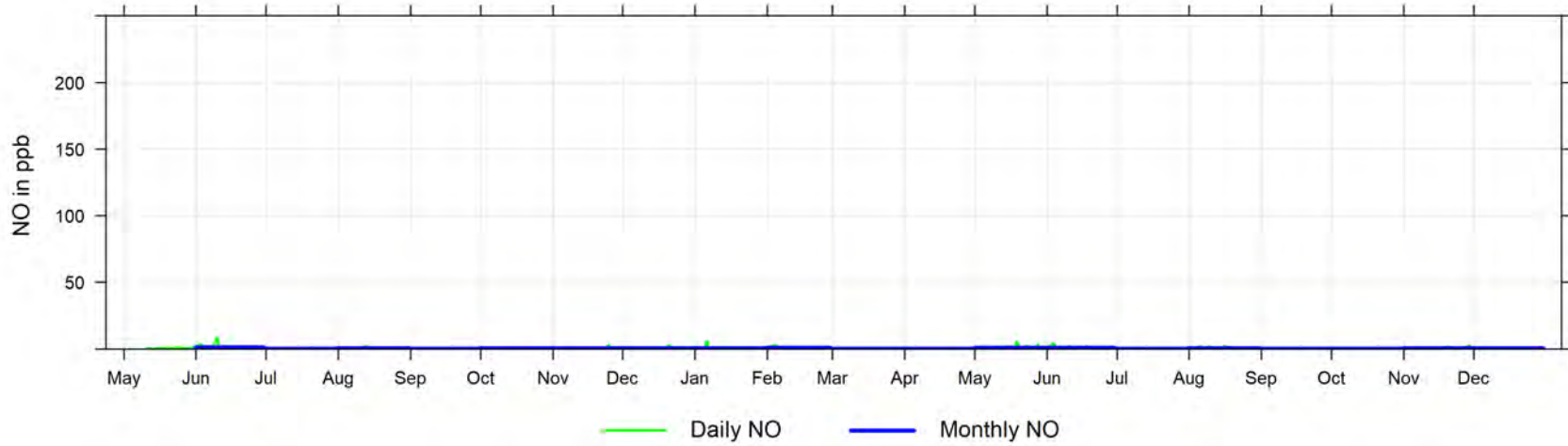
Years 2024 to 2025 Annual Concentration Readings of SO₂ (in ppb) at Happy Valley



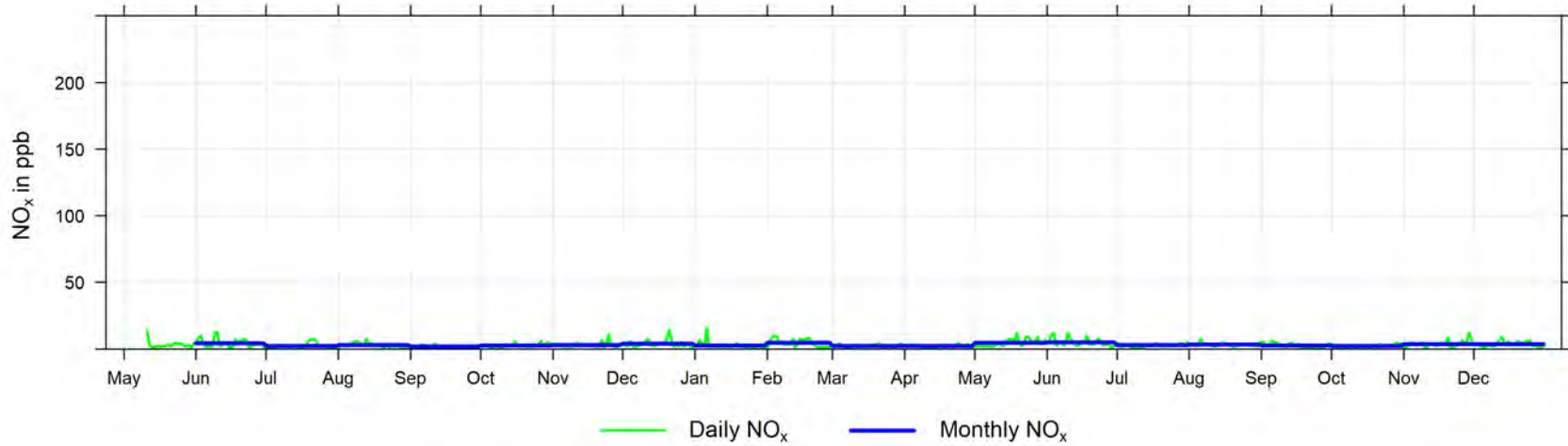
Years 2024 to 2025 Concentration Readings of SO₂ (in ppb) at Happy Valley



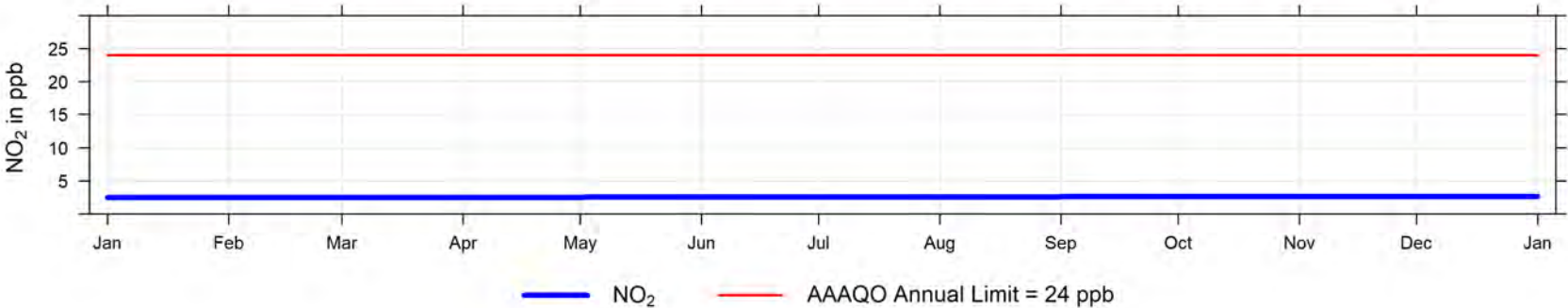
Years 2024 to 2025 Concentration Readings of NO (in ppb) at Happy Valley



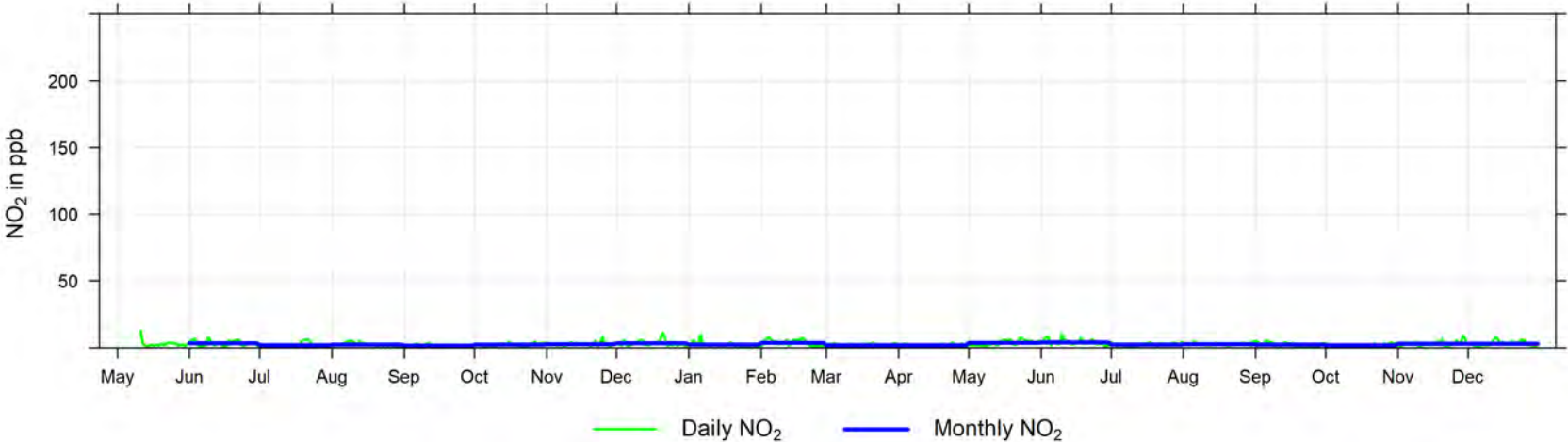
Years 2024 to 2025 Concentration Readings of NO_x (in ppb) at Happy Valley



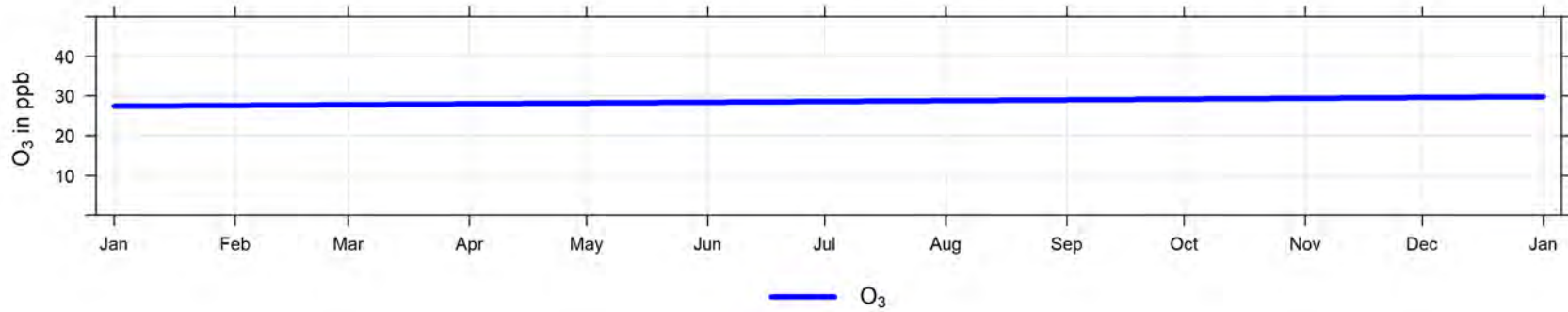
Years 2024 to 2025 Annual Concentration Readings of NO₂ (in ppb) at Happy Valley



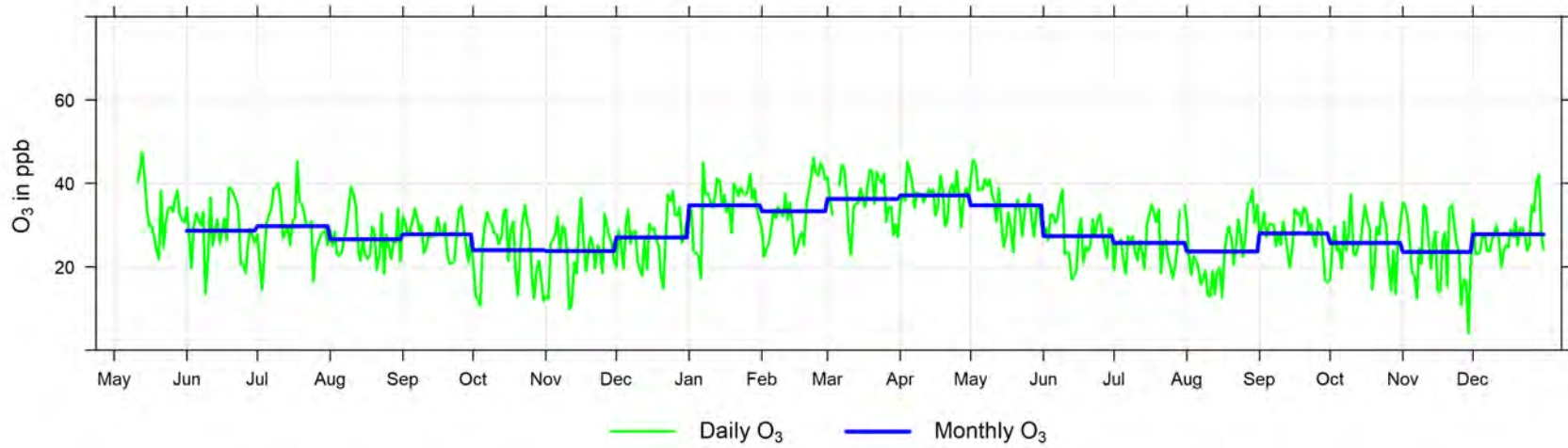
Years 2024 to 2025 Concentration Readings of NO₂ (in ppb) at Happy Valley



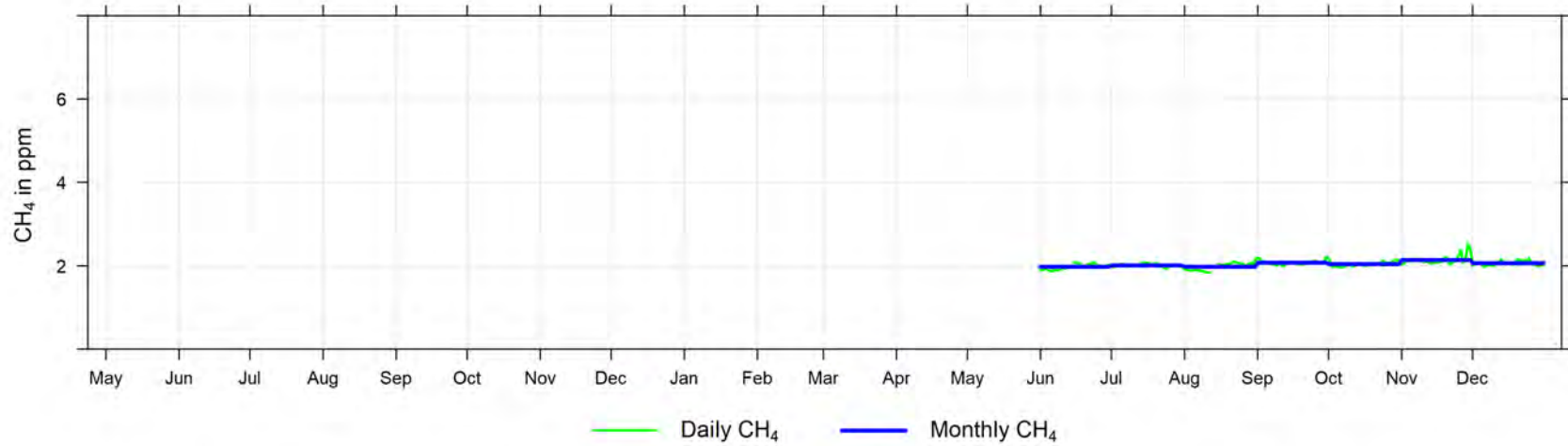
Years 2024 to 2025 Annual Concentration Readings of O₃ (in ppb) at Happy Valley



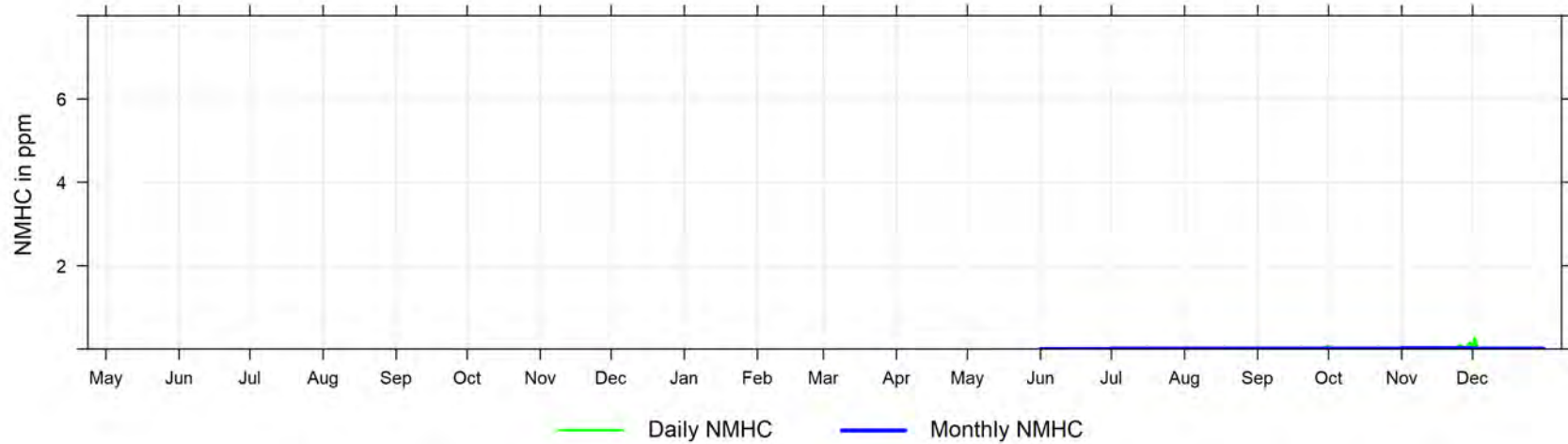
Years 2024 to 2025 Concentration Readings of O₃ (in ppb) at Happy Valley



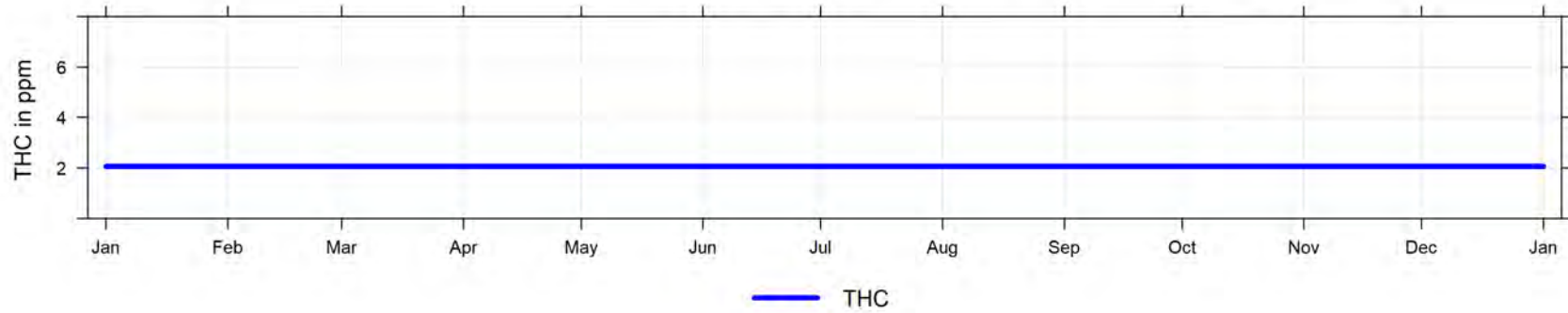
Years 2024 to 2025 Concentration Readings of CH₄ (in ppm) at Happy Valley



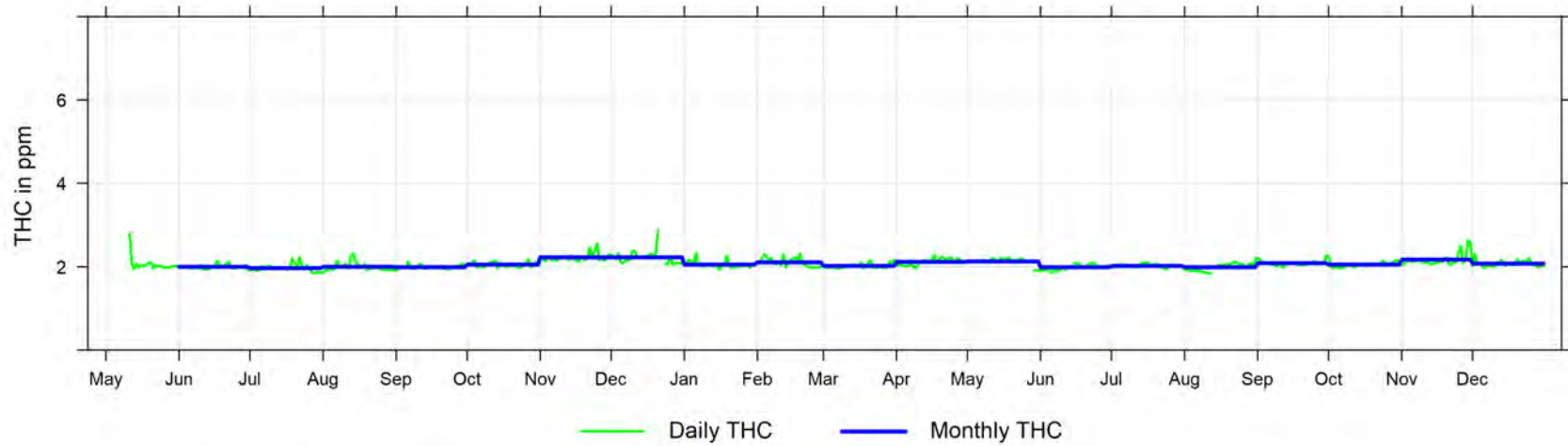
Years 2024 to 2025 Concentration Readings of NMHC (in ppm) at Happy Valley



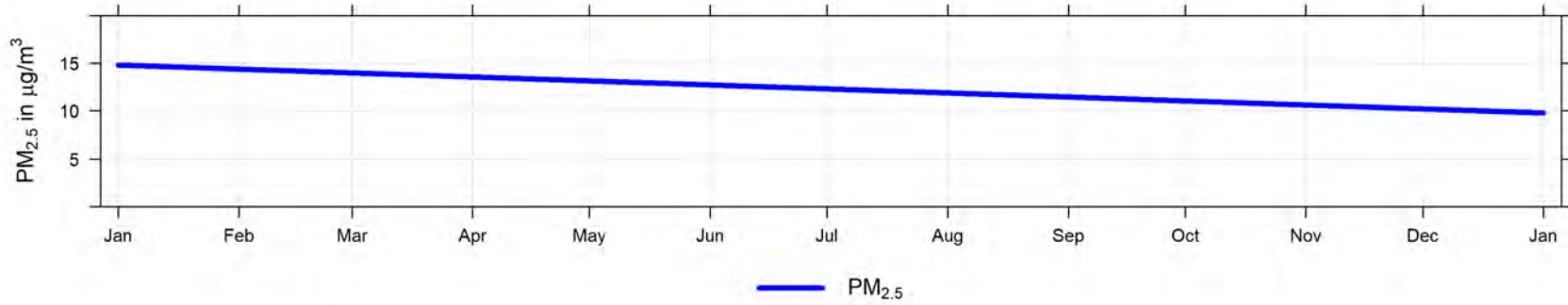
Years 2025 Annual Concentration Readings of THC (in ppm) at Happy Valley



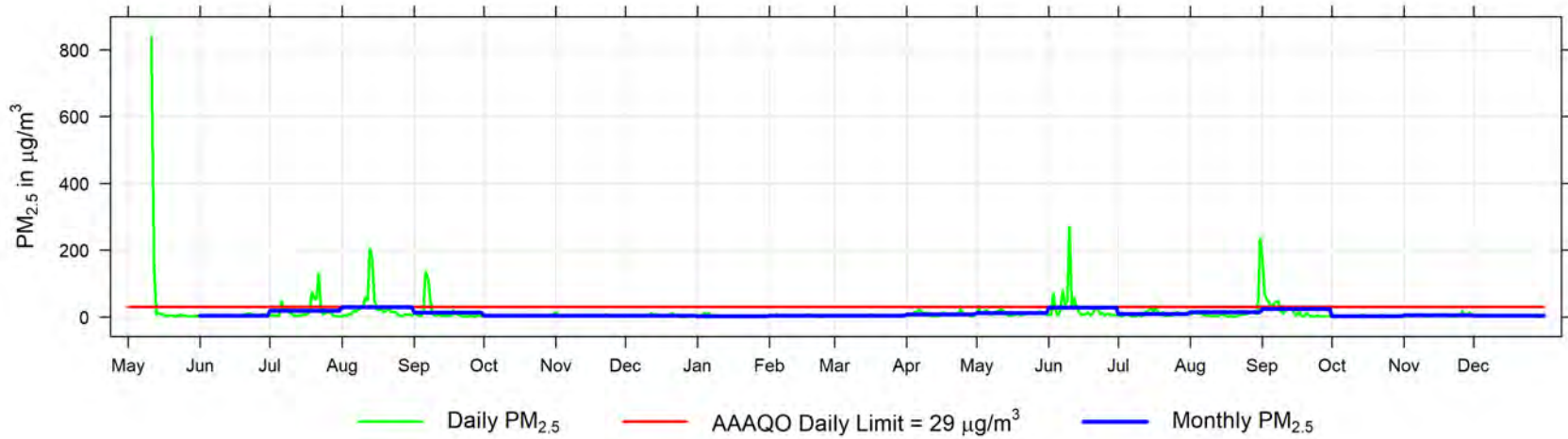
Years 2024 to 2025 Concentration Readings of THC (in ppm) at Happy Valley



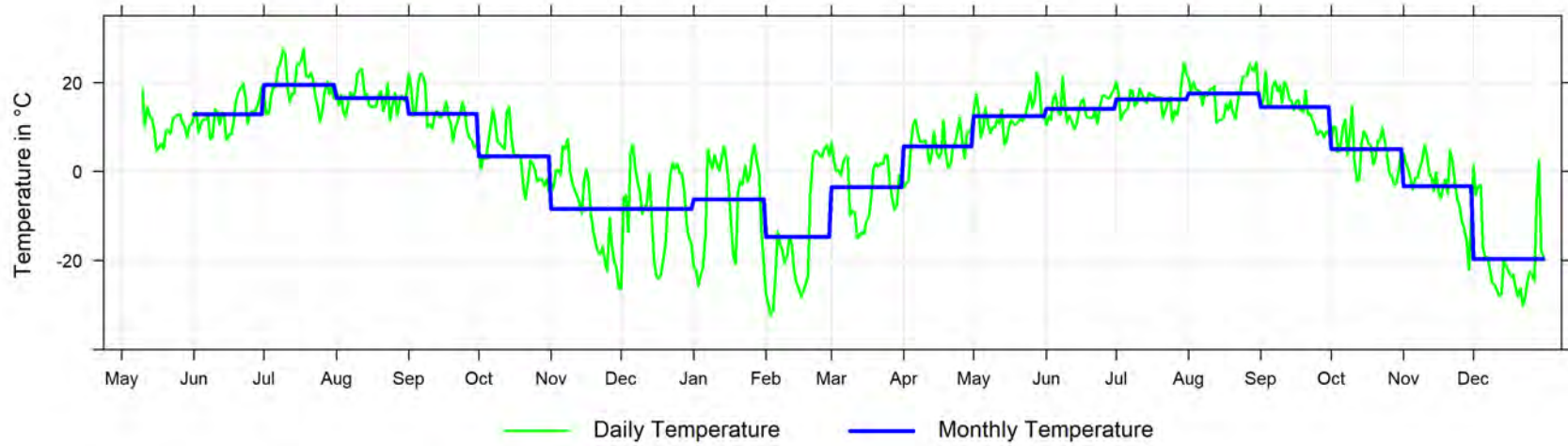
2024 to 2025 Annual Concentration Readings of PM_{2.5} in µg/m³ at Happy Valley



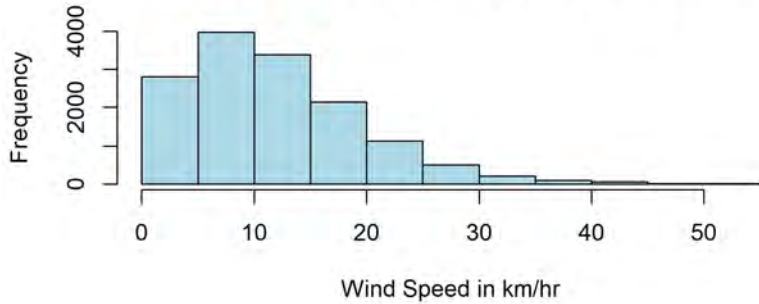
Years 2024 to 2025 Concentration Readings of PM_{2.5} in µg/m³ at Happy Valley



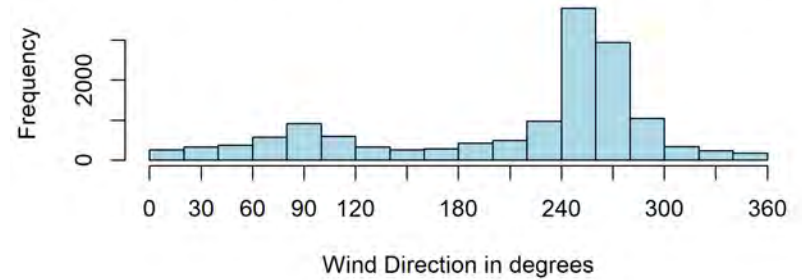
Years 2024 to 2025 Temperature Readings (in °C) at Happy Valley



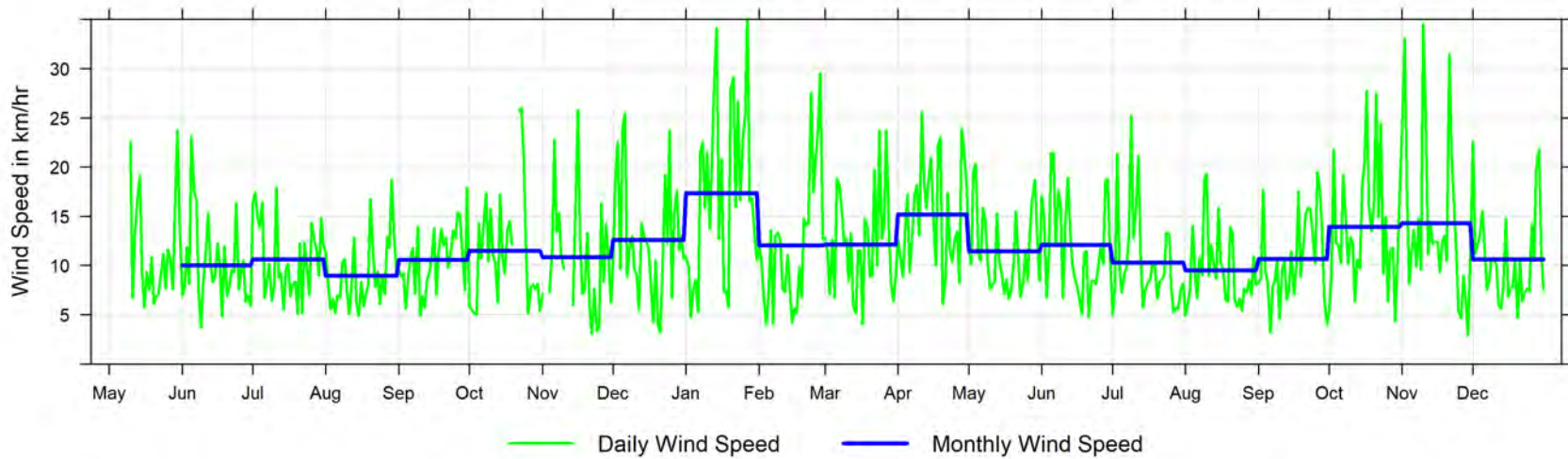
Years 2024 to 2025 Wind Speed Histogram

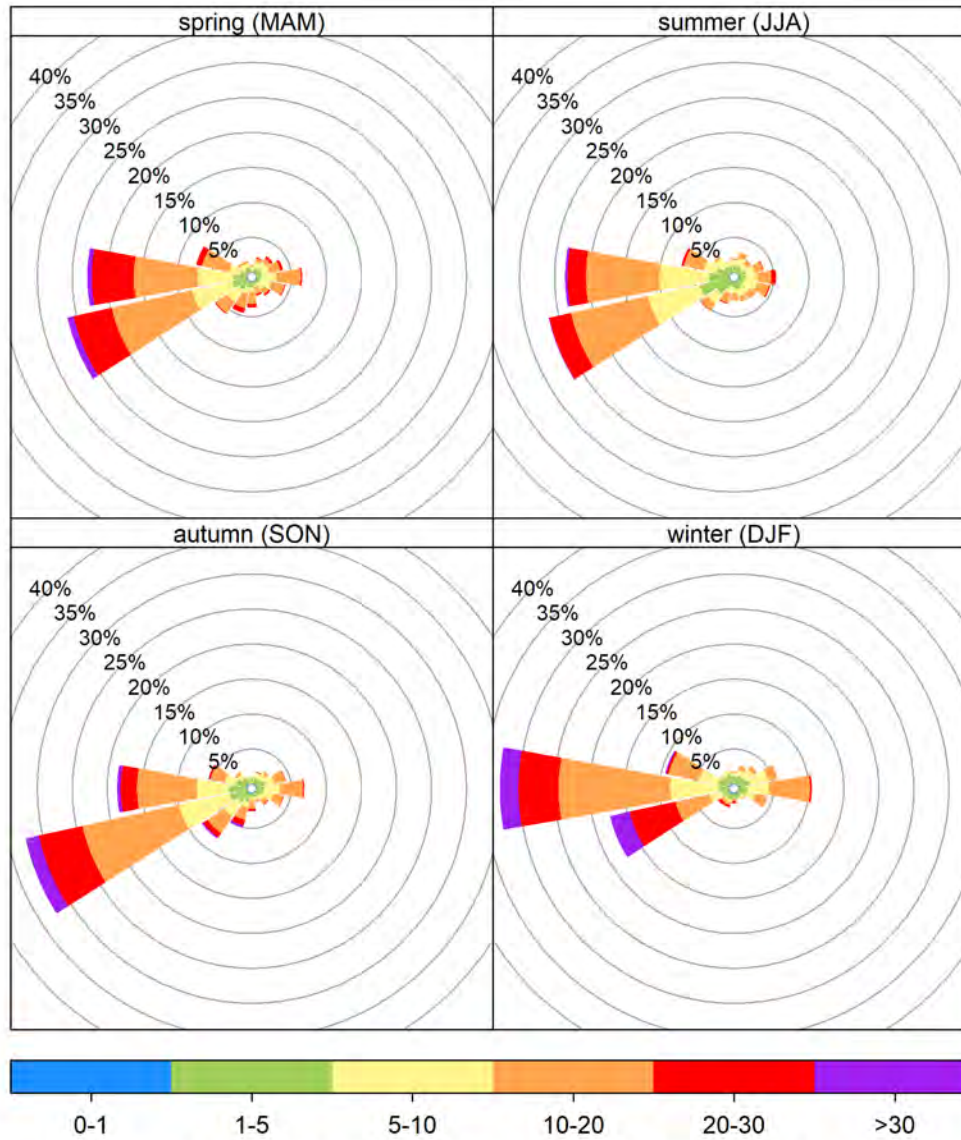


Years 2024 to 2025 Wind Direction Histogram

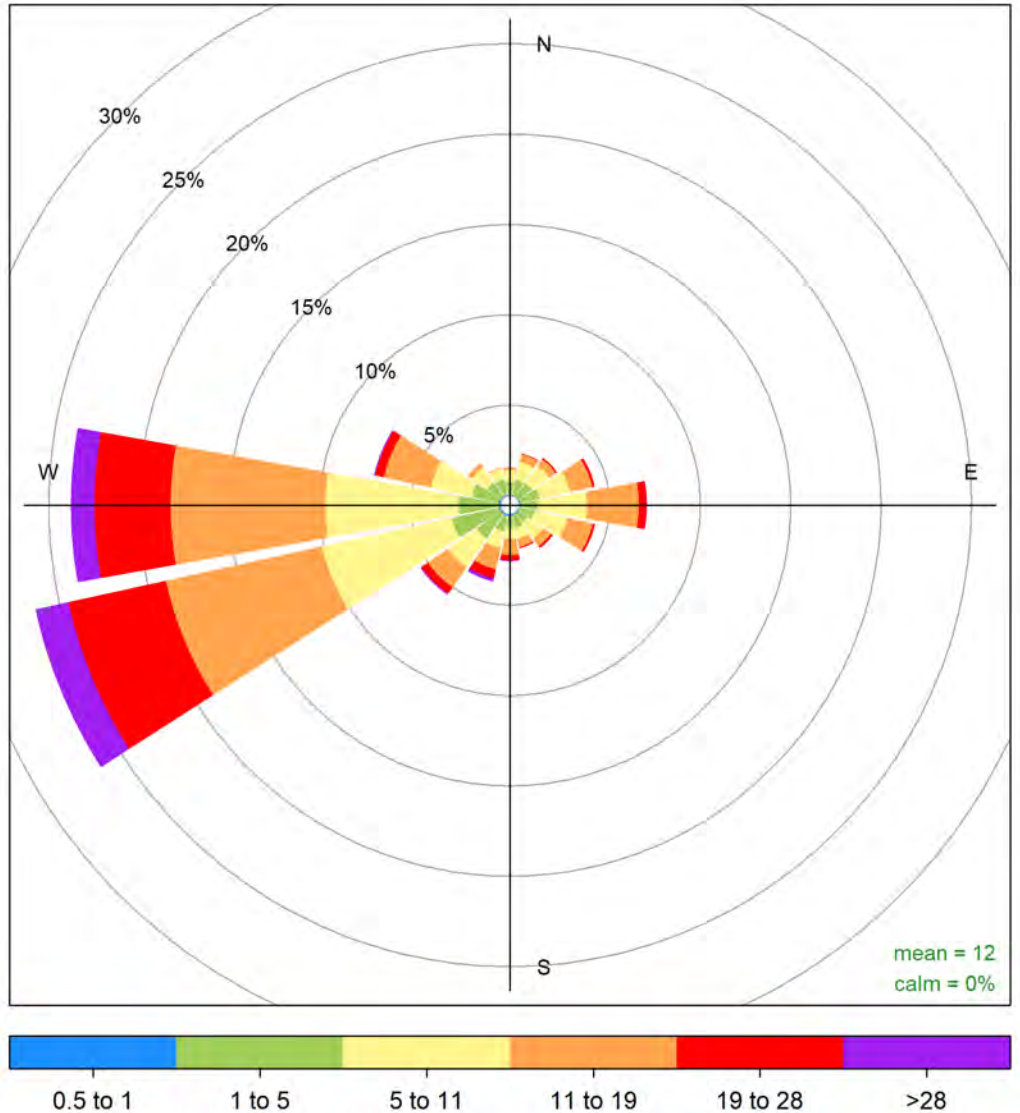


Years 2024 to 2025 Wind Speed Readings (in km/hr) at Happy Valley





Happy Valley 2024 to 2025 Seasonal Wind Rose, wind speed in km/hr



Happy Valley 2024 to 2025 Wind Rose, wind speed in km/hr
Frequency of counts by wind direction (%)

11 Passive Monitoring Data - 2025 Summary

Samples that are listed as **NA** are missing due to filter damage, accessibility and not collected; samples that are listed **BDL** are below detection limit of the passive monitoring.

11.1 O₃ Monitoring Passive Data - 2025 Summary

Ozone (O₃) passive summaries for 2025 are tabulated as follows:

O ₃ in ppb	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
Bay Tree	40.8	41.9	39.0	45.2	31.9	29.4	28.1	26.3	29.1	33.5	31.1	36.9
Crooked Creek	41.1	37.9	39.7	36.3	32.9	35.6	35.6	25.5	19.6	30.5	23.3	37.9
Kinuso	41.9	42.9	44.6	41.2	36.3	38.8	24.1	24.4	27.4	30.4	26.2	31.6

36 passive ozone samples collected over 12 months at 3 sites in PAZA

- Minimum annual average was 33.0ppb collected at Crooked Creek
- Maximum annual average was 34.4ppb collected at Bay Tree
- Maximum overall monthly average was 45.2ppb at Bay Tree in April 2025

11.2 H₂S Monitoring Passive Data - 2025 Summary

Hydrogen Sulphide (H₂S) passive summaries for 2025 are tabulated as follows:

H ₂ S in ppb	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
Guy	0.13	NA	0.11	0.11	0.09	NA	0.13	0.12	0.19	0.15	0.27	0.25
Jayar1 Plant	0.13	0.17	0.16	BDL	0.03	0.11	0.13	BDL	0.07	0.05	0.08	0.23
Jayar2 14-8	0.36	0.14	0.14	BDL	NA	0.12	0.09	0.19	0.11	0.22	0.25	0.28
Jayar3 Bone Yard	0.27	0.12	0.09	BDL	NA	0.10	0.12	BDL	0.03	0.12	0.32	0.17
Jayar4 7-8 or 8-8 Pad	0.14	0.14	0.06	BDL	NA	0.13	0.07	0.02	BDL	0.04	0.09	0.20
Jayar5 Camp	0.68	0.38	0.24	0.36	0.26	0.30	0.32	0.17	0.24	0.45	0.48	0.37
Girouville 3	0.24	NA	0.34	0.35	0.35	NA	NA	NA	0.49	0.35	0.47	NA
Girouville 4	0.31	NA	0.22	0.32	0.33	0.61	0.35	0.32	0.41	0.32	0.17	0.28
Duvernay 1	0.06	0.21	0.09	0.05	0.04	0.10	0.13	0.10	0.21	0.08	0.10	0.20
Duvernay 2	0.06	0.19	0.09	NA	0.03	0.08	0.16	0.07	0.23	0.11	0.22	0.22
Duvernay 3	0.13	0.19	0.12	0.02	0.07	0.19	0.23	0.13	0.29	0.37	0.19	0.34
Duvernay 4	0.18	0.22	0.17	0.07	BDL	0.21	0.25	0.14	0.28	0.23	0.15	0.30
Kakwa 1	0.11	BDL	0.07	BDL	0.04	0.08	0.07	BDL	0.06	0.05	0.04	0.11
Kakwa 2	0.09	0.11	0.07	BDL	0.06	0.20	0.30	0.12	0.27	0.12	0.06	0.14
Kakwa 3	0.31	0.22	0.41	0.34	0.31	0.32	0.33	0.51	0.24	0.13	0.17	0.18
Kakwa 4	0.23	0.30	0.07	0.16	0.24	0.32	0.44	0.42	0.20	0.13	0.09	0.24
Gordondale	NA	NA	NA	0.38	NA	0.48	NA	NA	NA	NA	NA	NA

204 passive hydrogen sulphide samples collected over 12 months (177 verified readings) at 17 sites in PAZA

- Minimum annual average was 0.07ppb collected at Kakwa1
- Maximum annual average was 0.37ppb collected at Girouville 3
- Maximum overall monthly average was 0.68ppb at Jayar5 Camp in January 2025

11.3 NO₂ Monitoring Data - 2025 Summary

Nitrogen Dioxide (NO₂) passive summaries for 2025 are tabulated as follows:

NO ₂ in ppb	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24
Bay Tree	0.4	0.4	0.5	0.1	0.2	0.5	0.4	0.4	0.6	0.6	1.5	1.8
Beaverlodge	1.9	4.0	1.5	0.5	0.9	1.1	1.3	1.0	1.6	2.2	4.1	5.3
Boone Creek	0.7	0.2	0.4	0.4	NA	0.8	0.7	0.7	0.8	1.2	1.7	2.2
Clouston Creek	0.4	0.4	0.4	0.2	2.2	2.0	1.0	1.1	1.9	0.7	2.1	1.3
Crooked Creek	6.5	1.3	0.4	0.4	1.1	1.2	0.7	0.7	0.6	1.0	2.3	2.2
Deer Mountain	0.6	BDL	0.2	BDL	NA	NA	0.3	0.3	0.4	0.7	1.2	1.3
Eaglesham	BDL	BDL	0.2	0.1	2.4	4.4	NA	0.8	NA	0.8	1.1	1.0
East Prairie	BDL	BDL	0.1	BDL	0.2	0.2	0.2	0.3	0.3	0.6	0.7	0.9
Forth Creek	BDL	BDL	0.2	0.2	1.6	2.6	1.3	2.2	0.7	1.0	1.0	0.7
Gift Lake	1.6	2.0	1.0	0.8	0.8	1.0	0.8	0.7	1.1	1.2	2.1	1.8
Gold Creek	3.1	3.3	2.0	1.0	1.2	1.0	0.9	1.2	1.8	3.0	5.1	3.9
Grande Prairie I	2.8	9.8	NA	3.1	2.2	1.9	2.1	2.0	3.4	5.8	8.3	10.7
Guy	0.2	BDL	0.3	0.2	2.9	NA	2.2	1.8	1.2	0.7	1.3	1.2
Henry Pirker	7.2	9.8	NA	1.7	1.7	1.5	1.6	2.1	3.8	5.8	10.3	8.0
Hythe	0.8	0.9	0.5	0.4	1.5	1.8	1.5	1.2	1.4	1.4	2.3	2.7
Jayar1 Plant	2.5	1.7	1.1	0.8	1.0	0.9	0.8	0.7	1.1	3.3	4.0	4.3
Jayar2 14-8	9.0	2.3	1.0	1.9	2.2	1.1	0.8	1.1	1.6	4.7	4.2	5.5
Jayar3 Bone Yard	4.1	3.8	0.7	1.2	1.1	0.7	0.6	0.6	0.8	3.0	3.0	3.2
Jayar4 7-8 or 8-8 Pad	2.1	1.8	0.5	1.2	0.9	1.1	0.8	0.9	0.9	3.7	9.6	5.7
Jayar5 Camp	9.5	NA	4.1	9.1	5.7	3.9	2.1	1.7	1.4	6.7	5.6	5.7
Jean Cote	0.6	BDL	0.3	0.5	2.9	NA	1.7	1.8	1.4	1.1	1.5	1.0
Kakwa 1	1.6	2.8	1.1	0.8	0.8	1.0	1.2	1.0	1.3	3.1	3.2	4.9
Kakwa 2	1.8	2.1	0.5	0.7	1.1	1.8	1.6	2.0	1.8	2.7	5.5	4.0
Kakwa 3	4.1	4.4	1.1	2.3	1.6	1.9	1.9	1.8	2.9	3.9	5.3	4.4
Kakwa 4	4.4	3.3	1.6	3.6	2.2	3.5	2.8	3.0	2.8	3.3	4.1	6.0
Kinuso	0.6	BDL	0.3	1.1	0.3	0.3	0.2	0.3	0.5	0.5	1.4	1.6
Little Smoky	2.4	2.1	1.5	1.4	1.1	0.9	0.9	1.0	1.9	2.1	4.4	3.1
McLennan	0.4	BDL	0.1	0.6	2.5	3.7	1.2	1.6	1.0	0.9	1.4	1.3
Milner Ambient Trailer	1.9	2.7	1.8	0.7	0.8	0.7	0.7	0.9	1.3	1.4	2.9	5.7
Milner Bridge	2.2	2.1	1.3	0.4	0.5	0.6	0.4	0.4	0.9	1.1	2.1	2.9
Milner Pipeline	2.0	2.8	1.6	0.8	0.8	0.6	0.5	0.7	1.1	1.2	3.3	3.7
Milner Powerline	4.7	6.4	2.4	1.9	2.3	1.5	0.9	0.9	1.3	1.2	3.0	5.0
Milner Wanyandie	1.0	1.1	0.6	0.2	0.3	0.2	0.3	NA	0.4	0.5	1.4	4.8
Peavine	0.4	BDL	0.3	0.3	0.4	0.4	NA	0.4	0.4	1.0	1.4	1.2
Pinto Creek	0.3	0.4	0.4	0.2	0.3	0.7	0.7	0.6	0.6	0.8	1.4	2.3
Poplar	1.8	1.5	1.6	1.2	1.8	1.9	1.6	1.9	2.2	2.0	4.1	3.2
Saddle Hills	0.4	BDL	0.1	0.3	0.4	0.5	0.4	0.5	0.7	0.9	1.4	1.3

NO ₂ in ppb	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24
Silver Valley	0.2	0.7	0.5	0.3	0.8	1.1	0.7	0.9	0.9	1.0	1.6	1.4
Smoky Heights	1.2	1.1	0.7	0.4	0.9	1.2	0.8	1.0	1.0	1.4	2.9	1.9
Spirit River	0.9	0.3	0.5	0.6	4.5	5.0	1.9	1.5	1.2	1.0	1.5	1.5
Steepprock Creek	BDL	BDL	0.3	BDL	0.2	0.7	0.4	0.3	0.4	0.4	1.3	2.0
Sunset House	0.6	BDL	0.2	1.0	0.3	0.5	0.4	0.5	0.6	0.6	1.4	1.2
Sylvester	0.1	BDL	0.2	BDL	0.1	0.3	0.3	0.3	0.3	0.4	1.0	2.1
Valleyview	0.5	0.3	0.5	0.3	0.5	0.6	0.6	0.6	1.1	1.0	2.2	2.0
Wanham	0.3	BDL	0.3	0.1	0.6	1.2	0.6	0.6	0.6	0.8	1.5	1.3
Webber Creek	2.4	2.5	1.1	0.9	1.5	1.8	1.3	1.2	1.6	1.9	2.9	2.3
Wembley	1.8	2.2	1.5	1.2	1.8	1.9	2.2	2.2	2.0	2.4	4.5	6.2
Woking	0.6	0.3	0.3	0.3	0.8	1.1	0.9	0.8	0.8	0.9	1.8	1.3

576 passive nitrogen dioxide samples collected over 12 months (542 verified readings) at 48 sites in PAZA

- Minimum annual average was 0.4ppb collected at East Prairie
- Maximum annual average was 5.0ppb collected at Jayar5 Camp
- Maximum overall monthly value was 10.7ppb at Grande Prairie in December 2025

11.4 SO₂ Monitoring Data - 2025 Summary

Sulphur Dioxide (SO₂) passive summaries for 2025 are tabulated as follows:

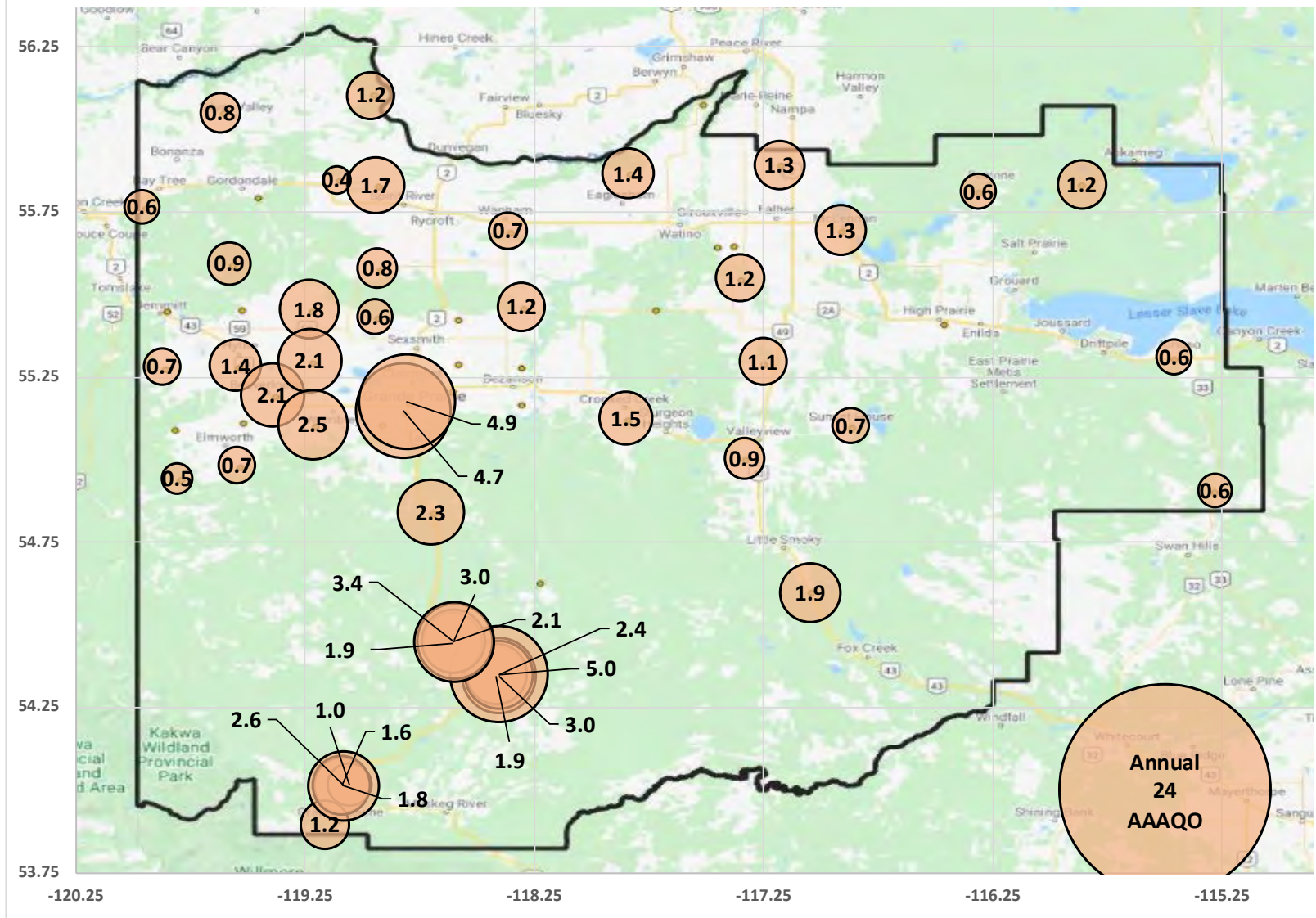
SO ₂ in ppb	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
Bay Tree	BDL	BDL	0.3	0.2	0.2	0.1	0.2	0.1	0.2	0.3	BDL	0.4
Beaverlodge	0.4	0.9	1.0	0.4	0.3	0.4	0.4	0.5	0.4	0.4	0.2	1.9
Boone Creek	0.2	0.4	0.4	0.3	0.5	0.4	0.3	0.3	0.4	0.5	1.1	0.9
Clouston Creek	BDL	BDL	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2
Crooked Creek	BDL	0.1	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.2	BDL	0.4
Deer Mountain	BDL	BDL	0.1	0.1	NA	NA	0.1	0.2	0.1	0.1	BDL	0.2
Duvernay 1	0.1	0.2	0.4	0.2	0.4	0.3	0.6	0.6	0.9	0.5	BDL	1.9
Duvernay 2	0.2	0.2	0.4	NA	0.4	0.2	0.5	0.5	0.5	0.5	BDL	1.7
Duvernay 3	0.5	0.3	0.7	1.2	0.5	0.8	0.8	0.9	0.9	1.9	0.2	1.2
Duvernay 4	0.8	0.4	0.8	1.0	0.5	1.0	0.7	1.3	0.9	1.2	0.4	2.5
Eaglesham	BDL	BDL	0.2	0.2	0.3	0.3	NA	0.1	NA	0.4	BDL	0.2
East Prairie	BDL	BDL	0.2	0.1	0.3	0.1	0.1	0.1	0.1	0.2	BDL	0.2
Forth Creek	BDL	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	BDL	0.4
Gift Lake	BDL	BDL	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	BDL	0.1
Gold Creek	0.2	0.2	0.4	0.3	0.3	0.1	0.3	0.5	0.3	0.3	BDL	0.9
Grande Prairie I	0.2	0.8	NA	0.4	0.4	0.3	0.4	0.4	0.5	0.8	0.8	1.5
Guy	BDL	0.1	0.2	0.2	0.2	NA	0.1	0.1	0.1	0.3	BDL	0.3
Henry Pirker	0.2	0.5	NA	0.3	0.4	0.3	0.3	0.3	0.5	0.5	0.1	1.2
Hythe	0.2	0.3	0.5	0.1	0.3	0.2	0.2	0.2	0.4	0.2	0.6	2.2

SO ₂ in ppb	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
Jayar1 Plant	0.4	0.4	0.6	0.3	0.3	0.6	0.6	0.5	0.4	BDL	0.3	1.3
Jayar2 14-8	1.1	0.4	0.5	0.8	0.6	0.5	0.5	0.8	0.6	0.7	1.5	1.5
Jayar3 Bone Yard	1.6	1.2	1.0	2.3	1.0	1.5	1.0	0.7	0.6	0.8	1.4	1.5
Jayar4 7-8 or 8-8 Pad	1.0	0.5	0.6	1.0	0.4	0.7	0.6	0.8	0.3	0.8	0.7	1.5
Jayar5 Camp	0.8	0.4	0.5	0.9	0.6	0.7	0.6	0.6	0.3	0.3	1.3	0.9
Jean Cote	BDL	0.1	0.2	0.1	0.2	0.1	0.2	0.2	0.3	0.3	BDL	0.3
Kakwa 1	0.3	0.4	0.9	0.3	0.3	0.6	0.3	0.2	0.4	0.2	0.2	1.0
Kakwa 2	0.9	1.4	3.3	0.8	2.6	9.0	4.4	1.4	4.5	0.6	0.5	1.2
Kakwa 3	21.1	5.7	12.4	35.8	16.6	36.0	21.8	31.7	3.1	6.2	3.0	6.8
Kakwa 4	6.2	6.1	10.0	13.7	12.3	19.9	12.9	11.1	4.3	5.7	3.2	8.3
Kinuso	BDL	BDL	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	BDL	0.2
Little Smoky	BDL	BDL	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	BDL	0.4
McLennan	BDL	0.1	0.2	0.4	0.2	0.2	0.2	0.3	0.3	0.2	BDL	0.3
Milner Ambient Trailer	BDL	0.2	0.1	0.1	0.1	0.1	0.1	BDL	BDL	BDL	0.3	0.5
Milner Bridge	BDL	0.2	0.1	BDL	NA	BDL	BDL	0.1	BDL	BDL	0.9	0.7
Milner Pipeline	BDL	0.2	0.2	BDL	NA	0.1	0.1	BDL	BDL	BDL	0.4	0.5
Milner Powerline	BDL	0.2	0.2	BDL	NA	BDL	0.2	BDL	BDL	BDL	0.1	0.6
Milner Wanyandie	BDL	0.2	0.2	BDL	NA	0.1	BDL	NA	BDL	BDL	0.3	0.3
Peavine	BDL	BDL	0.2	0.1	0.3	0.2	0.1	0.1	0.1	0.2	BDL	0.2
Pinto Creek	BDL	0.2	0.3	0.1	0.2	0.2	0.1	0.1	0.1	0.1	BDL	1.1
Poplar	0.1	0.6	0.8	0.3	0.3	0.5	0.6	0.4	0.4	0.8	2.8	3.4
Saddle Hills	0.2	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4	BDL	0.5
Silver Valley	BDL	0.2	0.2	0.2	0.4	0.2	0.3	0.2	0.3	0.2	BDL	0.4
Smoky Heights	0.3	0.6	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.5	BDL	0.5
Spirit River	BDL	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.4	0.5	0.3	1.1
Steeprock Creek	BDL	0.2	0.3	0.1	0.2	0.3	0.2	0.1	0.2	0.2	BDL	1.8
Sunset House	BDL	0.1	0.2	0.2	0.2	0.1	0.2	NA	0.2	0.5	BDL	0.5
Sylvester	BDL	BDL	0.2	BDL	0.1	0.1	0.1	0.1	0.1	0.1	BDL	1.1
Valleyview	BDL	0.1	0.2	0.2	0.3	0.1	0.1	NA	NA	0.2	BDL	0.4
Wanham	0.1	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.4	0.5	0.1	0.6
Webber Creek	0.1	0.3	0.4	0.4	0.3	0.3	0.2	0.3	0.3	0.4	0.1	0.7
Wembley	0.4	0.5	0.5	0.4	0.4	0.4	0.5	0.4	0.4	0.5	BDL	1.6
Woking	0.1	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.9	0.2	0.7

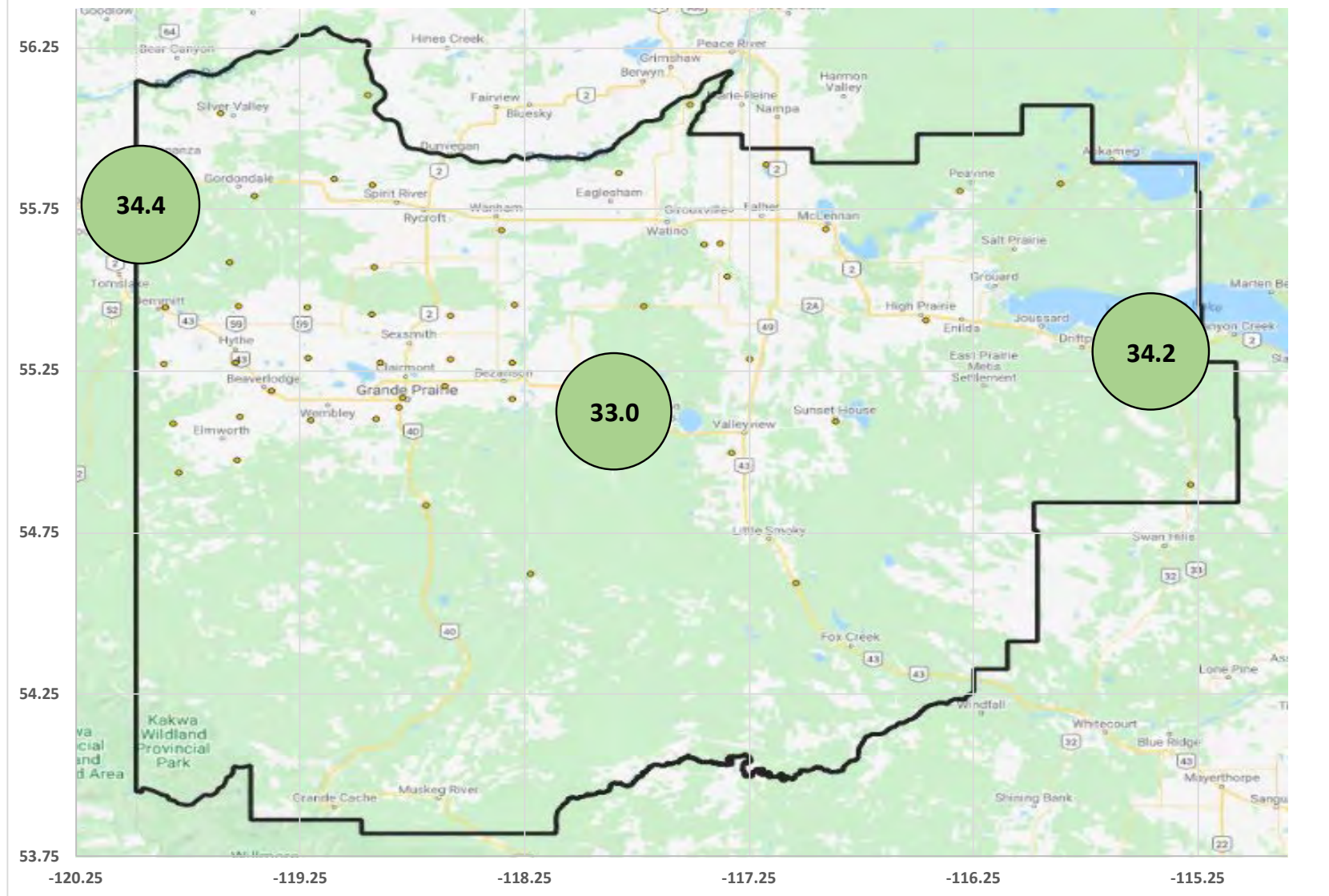
624 passive sulphur dioxide samples collected over 12 months (525 verified readings) at 52 sites in PAZA

- Minimum annual average was 0.1ppb collected at Gift Lake
- Maximum annual average was 16.7ppb collected at Kakwa 3
 - Kakwa 3 + Kakwa 4 annual averages were 16.7 and 9.5 respectively, both above the annual AAAQO for SO₂ (8ppb)
 - Kakwa 3 + Kakwa 4 monthly averages were above 11ppb (AAAQO) for 12months in 2025
- Maximum overall monthly average was 36.0ppb in June 2025 at Kakwa 3 (7 months exceeded the monthly AAAQO for SO₂ (11ppb) at Kakwa 3)

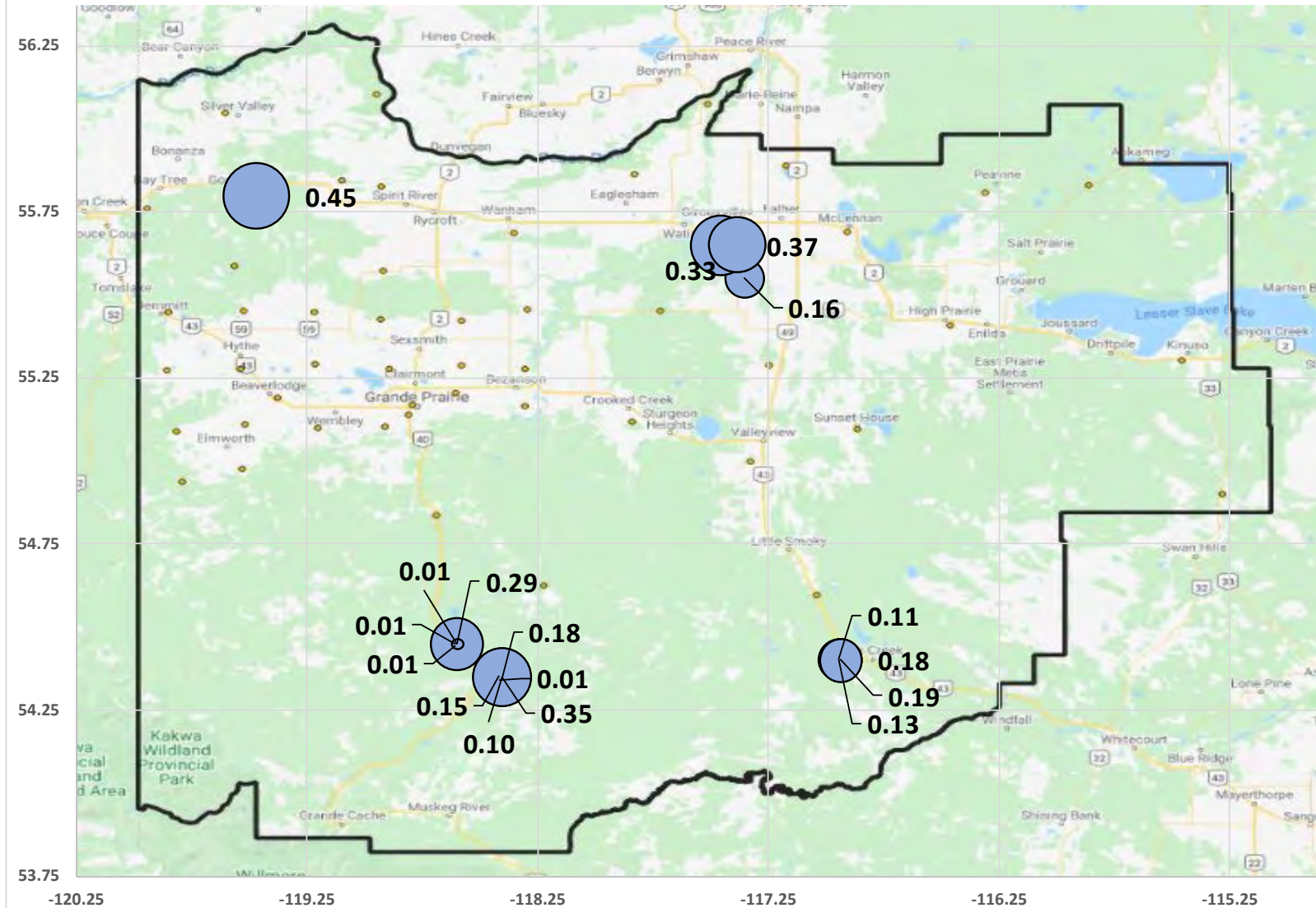
NO₂ 2025 Annual Average (units in ppb)



O₃ 2025 Annual Average (units in ppb)



H₂S 2025 Annual Average (units in ppb)



12 Dustfall Monitoring Data - 2025 Summary

Dustfall summaries for 2025 are tabulated as follows:

Dustfall in mg/100cm ² /30day	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
Milner Pipeline	163.4	43.5	54.4	110	99.2	129.9	143.1	NA	121.8	102.5	271.3	91
Milner Bridge	12.6	12.2	10.4	3.4	23.5	42.2	97.4	25.2	79.7	34	22.7	10.3
Milner Wanyandie	43.2	13	9.3	34.4	33.1	47.1	22.3	34.1	70.6	30.8	42.8	45.2
Milner Waste Pond	128.1	27	22.2	30.2	30.4	43	91.3	26.8	NA	43.7	148.7	68.6
Milner Powerline	69.9	20	16.5	26.9	27	30.9	37.3	26	45.8	42.8	114.2	36.8

Note:

AAAQG for residential and recreation areas = 53 mg/100cm²/30day

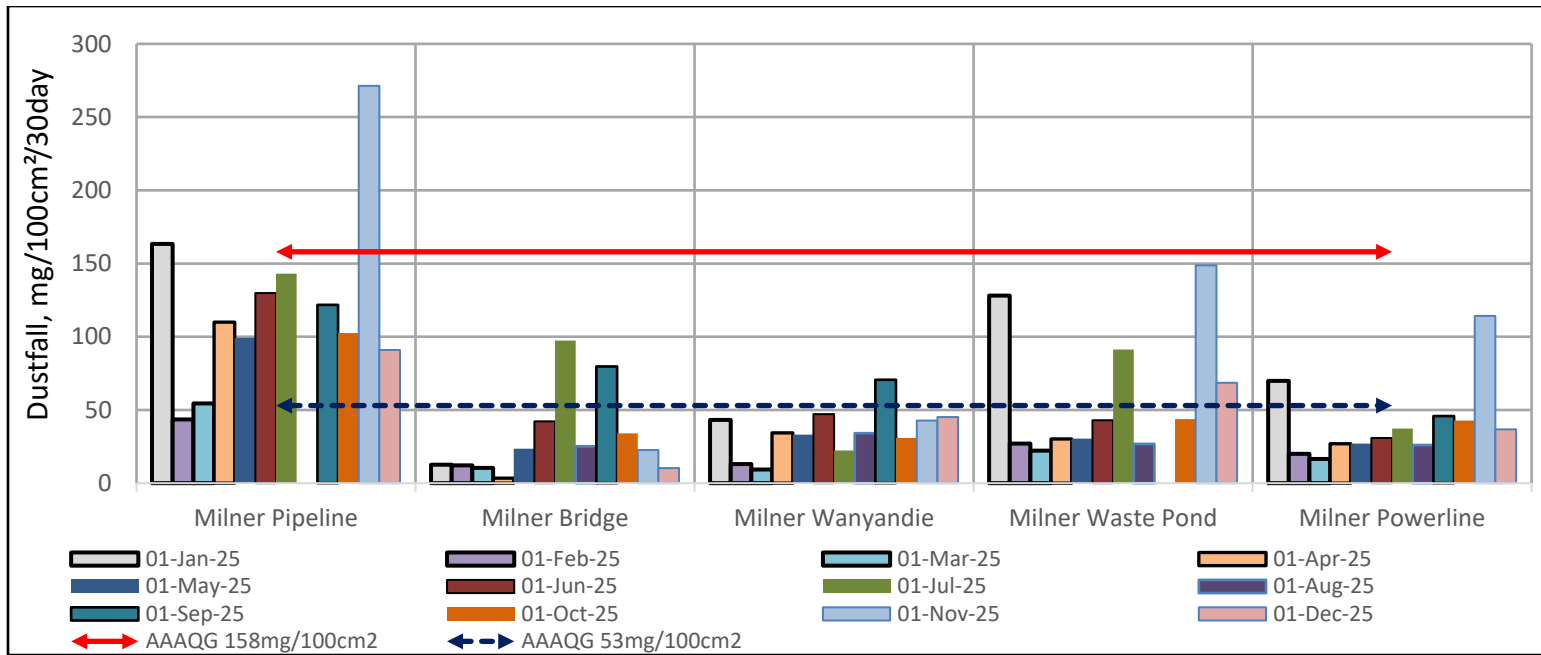
AAAQG for commercial and industrial areas = 158 mg/100cm²/30day

Wanyandie site compared to residential and recreation areas, all other sites compared to commercial and industrial areas

59 dustfall samples collected over 12 months at 5 sites in PAZA

- Minimum annual average was 3.4 mg/100cm²/30day collected at Milner Bridge
- Maximum annual average was 120.9 mg/100cm²/30day collected at Milner Pipeline
- Maximum monthly average was 271.3 mg/100cm²/30day collected at Milner Pipeline in November 2025

There were three monthly events above the AAAQGs for dustfall, one was based on the residential and recreational area and two based on the commercial and industrial area during 2025 (noted in highlight of table).



End of Report



Peace Airshed Zone Association

Ambient Annual Air Monitoring Report

2025 Annual