

February 20, 2025

Lorna Morishita

Executive Director of Palliser Airshed Society
PO Box 23121 Medicine Hat Mall
Medicine Hat AB T1B 4C7

RE: Palliser Airshed Society (PAS) Ambient Air Monitoring Report – January 2025

Enclosed is the PAS Dashboard Report for the month of **January 2025**.

Continuous Monitoring – Crescent Heights, Brooks, Brooks – Meadow Place, Taber and Hanna Airpointer Monitoring Stations

Included in this report are: Monthly Air Monitoring Summary Table, Station Issue Summary, Station Summary Graphs and Station Wind Roses.

Continuous Monitoring Instrumentation Uptime Summary:

There were no uptimes less than 90% in January.

AAAQO/G Exceedance Summary:

There was 1 exceedance of the 1-hour PM_{2.5} AAAQG (80 µg/m³) in January.

Station Name	Date	Start Time	End Time	1-Hour PM _{2.5} Concentration	Wind Direction	Wind Speed	Reference Number
		(MST)	(MST)	(µg/m ³)		(km/h)	
Hanna (Airpointer)	19-Jan-25	04:00	05:00	147	WNW	0.2	437860

If you have any questions, please contact the WSP office at 780.401.1356.



Patrick Andersen, B.Sc.
WSP AQM Data Specialist



Lenin Flores
Project Manager

January 2025 Monthly Ambient Air Quality Summary

Jan-25 Palliser Airshed Society										Maximum Recorded Values						
Pollutant (units)		Objectives		Station	Monthly Average	1-Hour Minimum	Exceedence			1-hr		24-hr / 8-hr		Operational Time (%)	Calibration Date	
		1-hr	24-hr				30-day	1-hr	24-hr	30-day	Conc	Day	Conc			Day
SO ₂ (ppb)	172	48	8	Crescent Heights	0.1	0.0	0	0	0	0.9	Jan-20 00:00	0.4	Jan-06	99.9	Jan-10	
NO (ppb)					2.4	0.0					79.7	Jan-07 02:00	9.7	Jan-07	99.6	Jan-15
NO ₂ (ppb)	159				9.0	0.7	0				41.7	Jan-29 21:00	21.3	Jan-29	99.6	Jan-15
NO _x (ppb)					11.4	0.8					114.0	Jan-07 02:00	29.0	Jan-29	99.6	Jan-15
O ₃ (ppb)	76				29.0	0.6	0				45.6	Jan-16 19:00	37.9	Jan-26	99.9	Jan-15
CO (ppm)					0.2	0.1					0.3	Jan-29 00:00	0.2	Jan-29	99.9	Jan-10
CO 8-Hour (ppm)	5				-	0.1	0				0.3	Jan-29 01:00	-	-	100.0	-
THC (ppm)					2.4	2.0					2.9	Jan-07 04:00	2.8	Jan-19	99.9	Jan-10
PM _{2.5} (µg/m ³)	80	29			5.0	0.5	0	0			23.9	Jan-07 04:00	13.4	Jan-06	99.9	Jan-10
ET (°C)					-6.2	-27.8					8.5	Jan-16 14:00	3.4	Jan-16	99.9	-
RH (%)					81.2	39.7					100.0	Jan-05 03:00	99.2	Jan-12	99.9	-
GSR (W/m ²)					49.0	0.0					384.1	Jan-29 12:00	82.5	Jan-26	99.9	-
WSPD (km/h)					5.3	0.3					33.3	Jan-17 06:00	16.9	Jan-17	99.9	08/11/24
WDIR					W										99.9	

Pollutant (units)	Analyzer			Notes
	Make		Model	
SO ₂	TEI		43i-TLE	Data logger failed to capture 1 hour of data January 20.
NO/NO ₂ /NO _x	TEI		42i	Manual span checks January 8 and 10.
O ₃	TECO		49i	
CO	TEI		48i-TLE	
THC	TECO		51C-LT	
PM _{2.5}	API		T640	
ET/RH	RMYoung		41382VC	
GSR	Pyranometer		PY45774	
WS/WD	RMYoung		5305	

Jan-25 Palliser Airshed Society					Maximum Recorded Values										
Pollutant (units)	Objectives			Station	Monthly Average	1-Hour Minimum	Exceedence			1-hr		24-hr / 8-hr		Operational Time (%)	Calibration Date
	1-hr	24-hr	30-day				1-hr	24-hr	30-day	Conc	Day	Conc	Day		
NO (ppb)				Brooks Meadowplace	0.9	0.0				19.8	Jan-15 10:00	3.2	Jan-29	100.0	Jan-23
NO ₂ (ppb)	159				6.5	0.5	0			27.0	Jan-29 02:00	14.6	Jan-29	100.0	Jan-23
NO _x (ppb)					7.3	0.0				40.3	Jan-15 10:00	17.8	Jan-29	100.0	Jan-23
O ₃ (ppb)	76				27.0	0.5	0			47.6	Jan-16 18:00	37.8	Jan-21	100.0	Jan-23
PM _{2.5} (µg/m³)	80	29			6.4	0.4	0	0		42.1	Jan-06 21:00	25.2	Jan-06	100.0	Jan-23
ET (°C)					-7.0	-29.7				7.8	Jan-15 13:00	2.8	Jan-27	100.0	-
RH (%)					76.9	39.2				99.8	Jan-11 22:00	92.8	Jan-31	100.0	-
WSPD (km/h)					3.8	0.4				43.4	Jan-17 01:00	19.4	Jan-24	100.0	27/11/24
WDIR					WNW										100.0

Pollutant (units)	Analyzer			Notes
	Make		Model	
NO/NO ₂ /NO _x	TEI		42iQ	Analyzer maintenance January 22, allowed to stabilize and calibrated January 23.
O ₃	TEI		49iQ	
PM _{2.5}	API		T640	
ET/RH	CS		HC2-S3	
WS/WD	RMYoung		5305	

Jan-25				Palliser Airshed Society					Maximum Recorded Values						
Pollutant (units)		Objectives		Station	Monthly Average	1-Hour Minimum	Exceedence		1-hr		24-hr / 8-hr				
		1-hr	24-hr				30-day	1-hr	24-hr	30-day	Conc	Day			Conc
NO (ppb)					3.4	0.0				69.2	Jan-14 09:00	9.2	Jan-14	98.5	Jan-16
NO ₂ (ppb)		159			7.7	1.0	0			55.8	Jan-14 09:00	15.6	Jan-14	98.5	Jan-16
NO _x (ppb)					11.0	1.0				125.0	Jan-14 09:00	24.9	Jan-14	98.5	Jan-16
O ₃ (ppb)		76			28.6	0.0	0			40.9	Jan-16 20:00	37.8	Jan-24	98.4	Jan-16
PM _{2.5} (µg/m ³)		80	29		4.9	0.0	1	0		147.3	Jan-19 05:00	18.6	Jan-06	100.0	Jan-16
ET (°C)					-8.6	-31.4				5.0	Jan-16 11:00	1.9	Jan-28	99.9	-
RH (%)					77.3	46.8				95.1	Jan-11 00:00	90.3	Jan-22	99.9	-
WSPD (km/h)					1.1	0.0				15.2	Jan-16 23:00	7.2	Jan-16	99.9	-
WDIR					NW									99.9	-

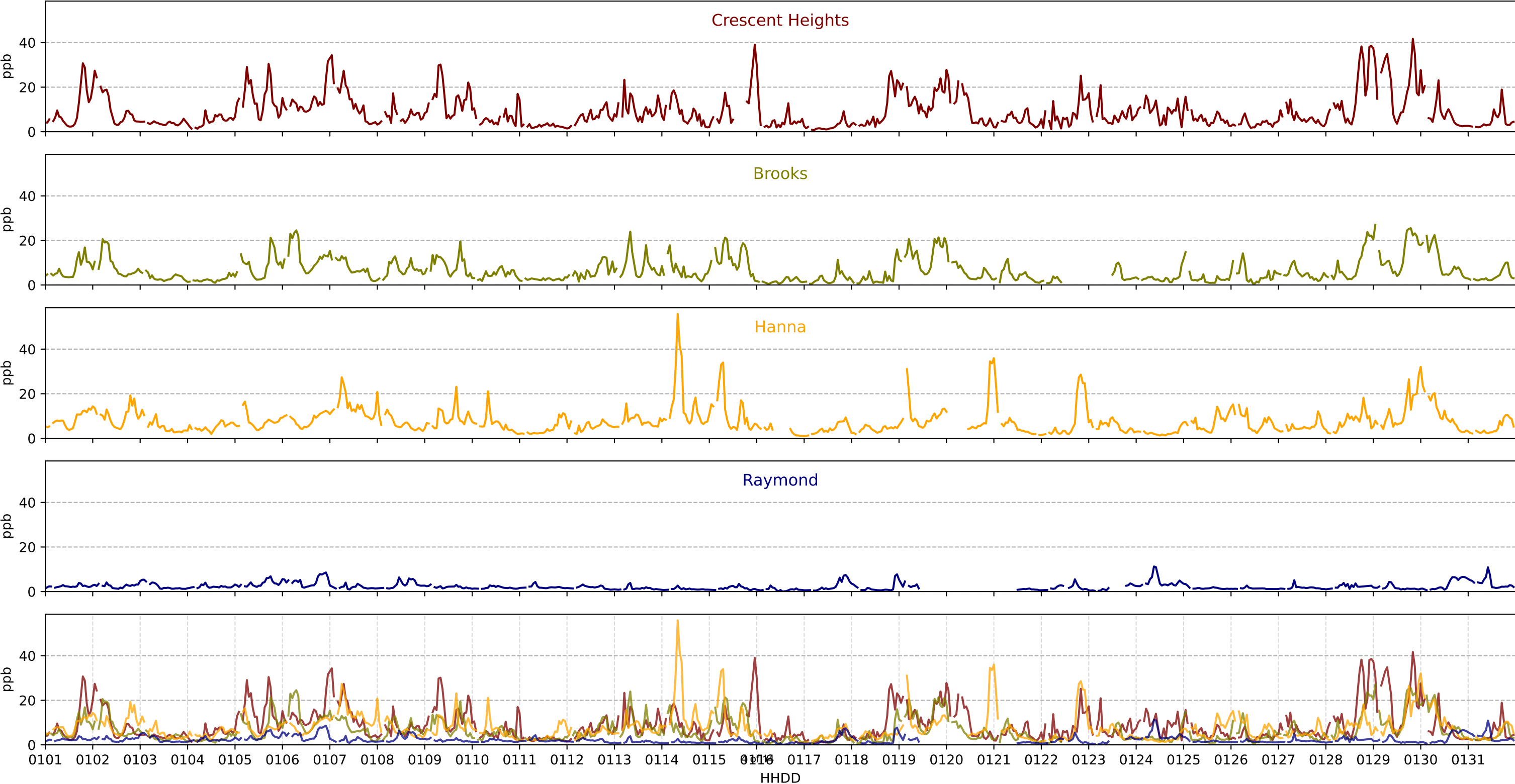
Pollutant (units)	Analyzer			Notes
	Make		Model	
NO/NO ₂ /NO _x	Airpointer API		200e	Station power outage invalidated 1 hour January 21.
O ₃	Airpointer API		400e	Analyzer failed to return data to data logger for 10 hours on January 20.
PM _{2.5}	Sharp		5030	Analyzer failed to return data to data logger for 10 hours on January 20.
ET/RH	CS		HC2-S3	
WS/WD	RMYoung		5305	

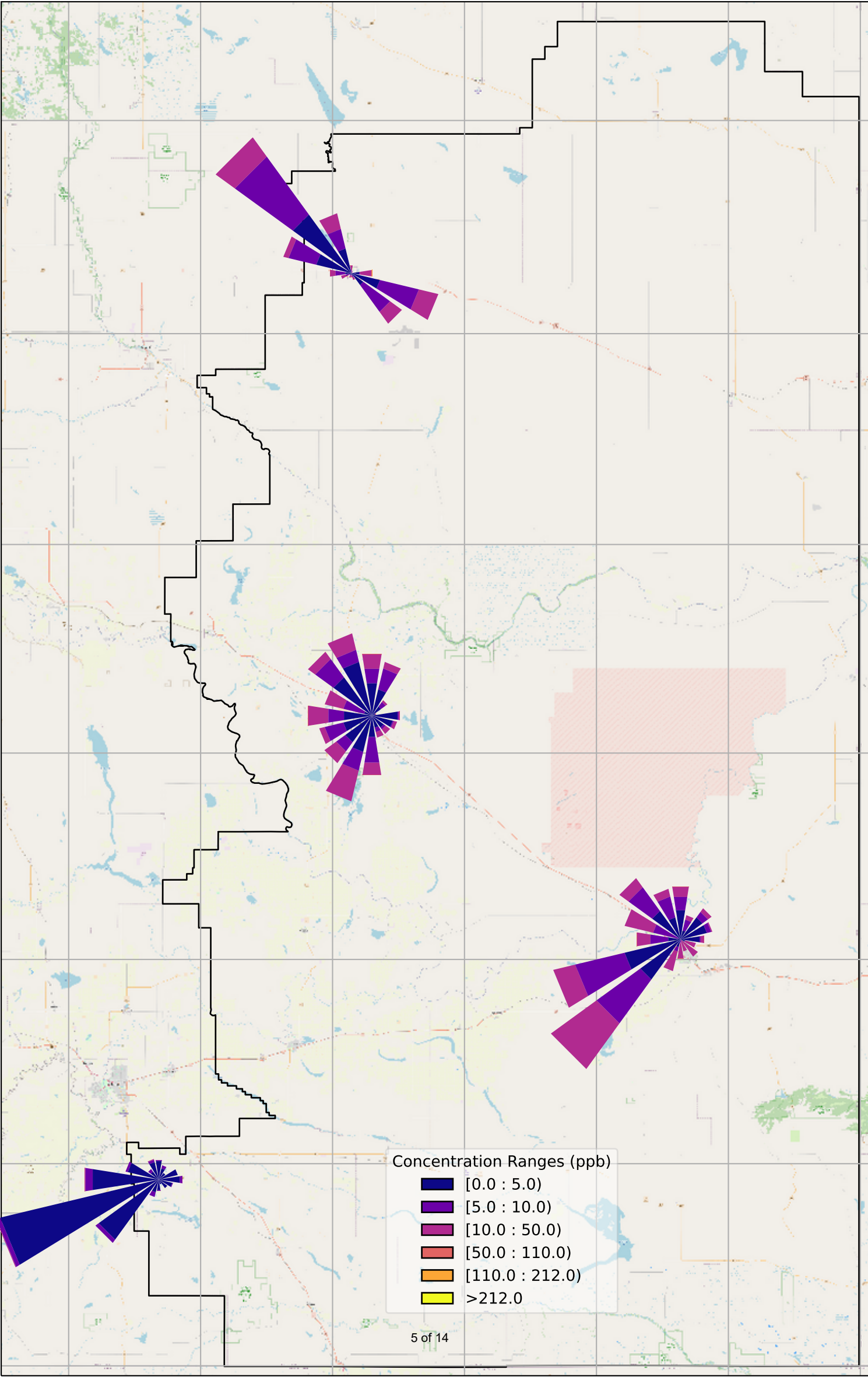
Jan-25				Palliser Airshed Society					Maximum Recorded Values						
Pollutant (units)		Objectives		Station	Monthly Average	1-Hour Minimum	Exceedence		1-hr		24-hr / 8-hr		Operational Time (%)	Calibration Date	
		1-hr	24-hr				30-day	1-hr	24-hr	30-day	Conc	Day			Conc
NO (ppb)				Raymond Airpointer	0.2	0.0				6.7	Jan-31 11:00	0.6	Jan-05	93.2	Jan-23
NO ₂ (ppb)	159				2.3	0.0	0			11.3	Jan-24 10:00	4.7	Jan-06	93.2	Jan-23
NO _x (ppb)					2.5	0.3				17.6	Jan-31 11:00	5.1	Jan-06	93.2	Jan-23
O ₃ (ppb)	76				31.8	3.7	0			44.5	Jan-08 04:00	39.4	Jan-07	93.2	Jan-23
PM _{2.5} (µg/m³)	80	29			5.2	0.0	0	0		28.3	Jan-06 22:00	14.3	Jan-06	92.7	Jan-23
ET (°C)					-3.7	-21.4				12.4	Jan-29 15:00	6.2	Jan-29	93.6	-
RH (%)					68.8	17.6				100.0	Jan-01 01:00	92.7	Jan-01	93.6	-
WSPD (km/h)					2.1	0.0				10.2	Jan-10 07:00	5.0	Jan-10	93.6	-
WDIR					WSW									93.6	-

Pollutant (units)	Analyzer			Notes
	Make		Model	
NO/NO ₂ /NO _x	Airpointer API		200e	Station power outage January 19-21 and 22.
O ₃	Airpointer API		400e	
PM _{2.5}	Sharp		5030	Sample tape failed December 7, analyzer returned to service December 9.
ET/RH	Vaisala		WXT520	
WS/WD	Vaisala		WXT520	

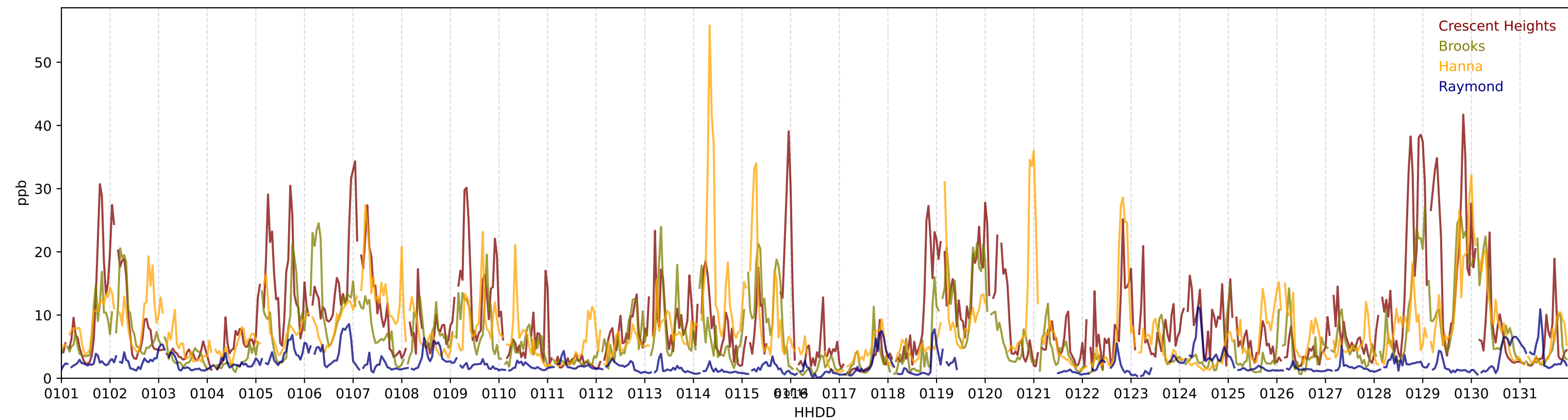
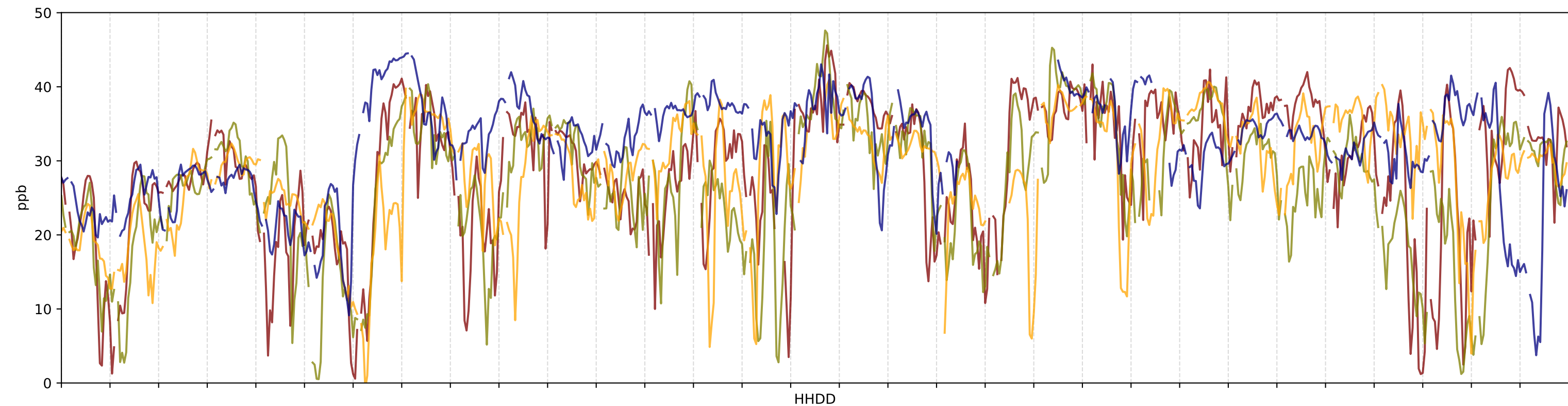
January 2025 NO₂

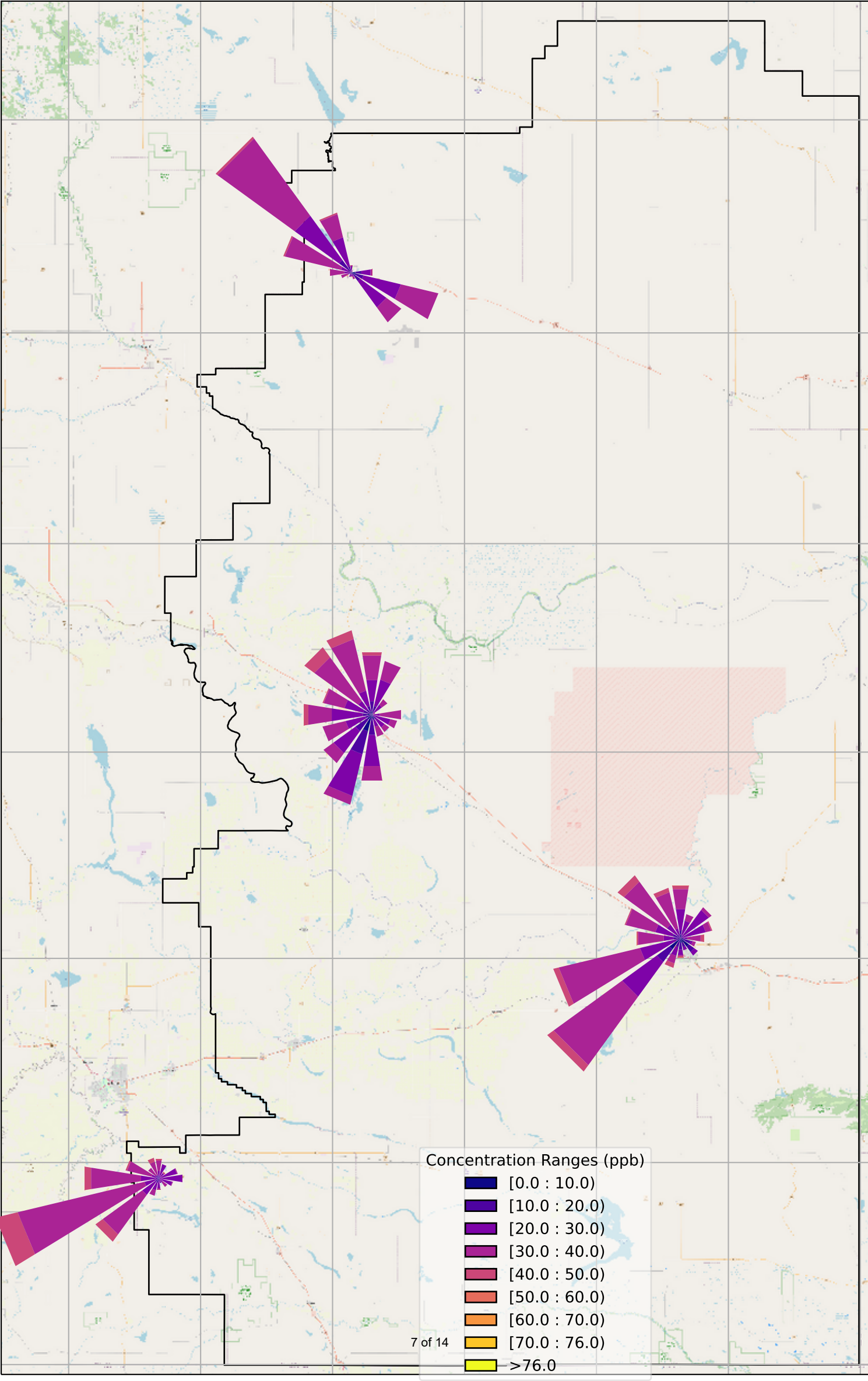
NO₂ AAAQO = 172 pbb





January 2025 O₃ vs NO₂





January 2025 PM_{2.5}

PM_{2.5} AAAQG = 80 $\mu\text{g}/\text{m}^3$

Crescent Heights

Brooks

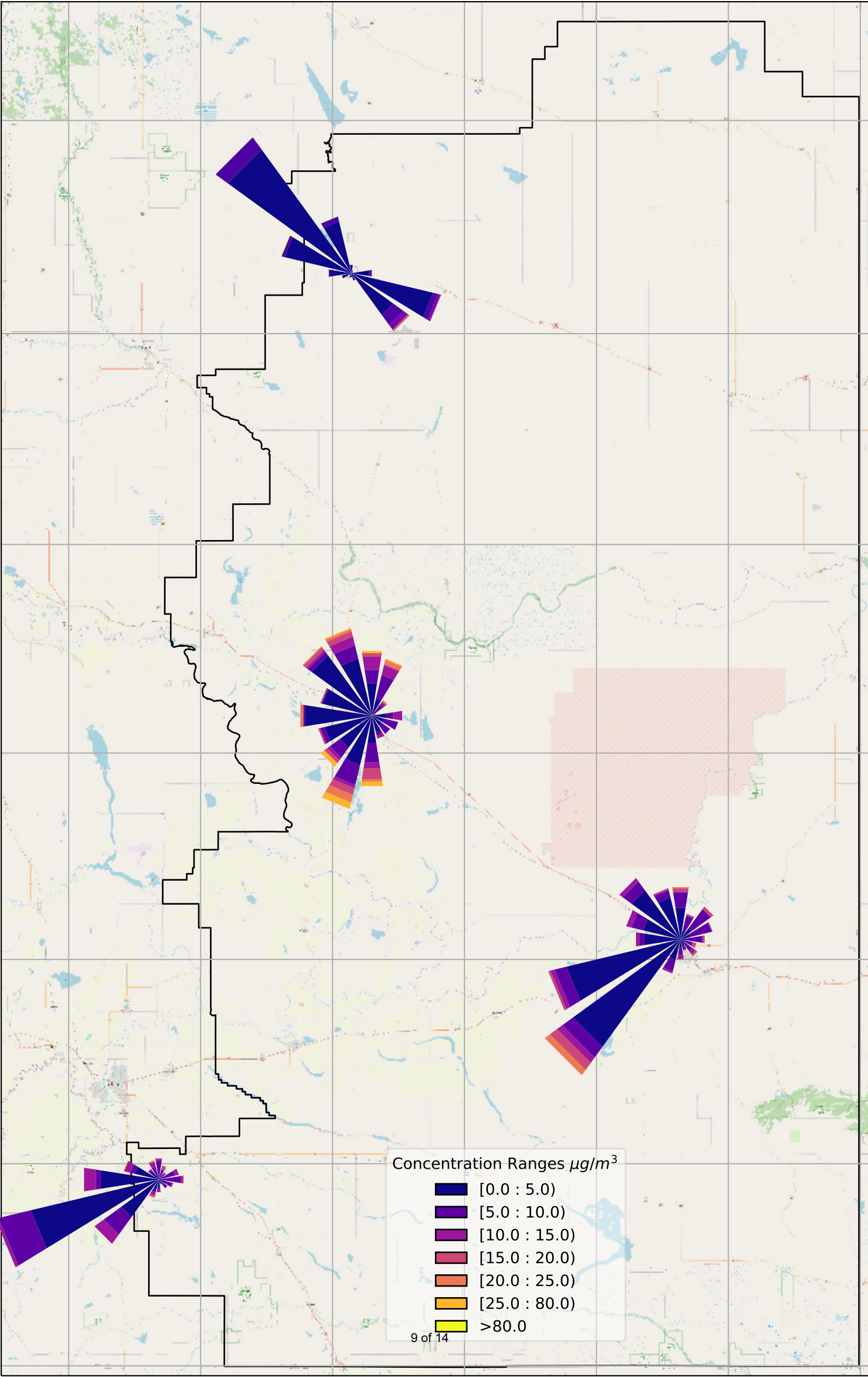
Hanna

Raymond

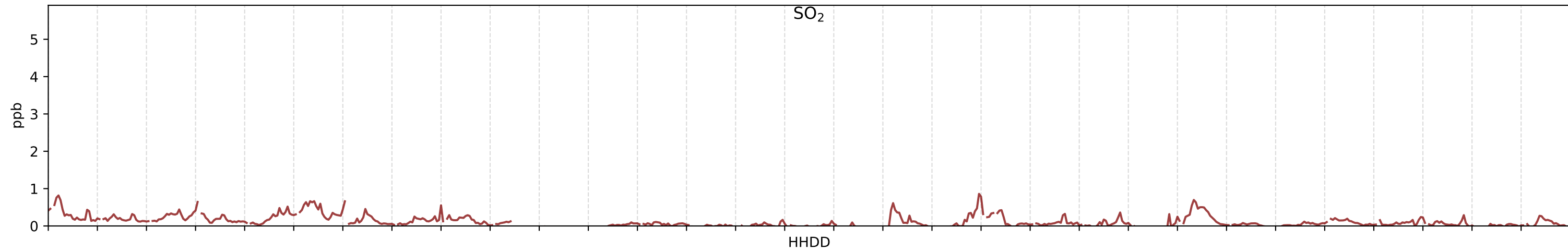
PM_{2.5} AAAQG = 80 $\mu\text{g}/\text{m}^3$

HHDD





SO₂ AAAQO = 172 ppb



CO AAAQO = 13 ppm

