

April 18, 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 – March 2025

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

Continuous Monitoring – Crescent Heights, Brooks – Meadow Place, Hanna and Raymond 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 March.

AAAQO/G Exceedance Summary:

There were no exceedances of the AAAQO/G in March.

If you have any questions, please contact the WSP office at 403-519-8480.

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Patrick Andersen

Patrick Andersen, B.Sc.
WSP AQM Data Specialist

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Lenin Flores
Project Manager

March 2025 Monthly Ambient Air Quality Summary

Mar-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	0.0	0.0	0	0	0	1.0	Mar-05 08:00	0.2	Mar-05	99.9	Mar-13
NO (ppb)					1.6	0.0				40.1	Mar-02 07:00	7.2	Mar-01	99.9	Mar-12
NO ₂ (ppb)	159				5.2	0.5	0			29.7	Mar-01 23:00	13.4	Mar-01	99.9	Mar-12
NO _x (ppb)					6.8	0.6				64.8	Mar-02 07:00	20.6	Mar-01	99.9	Mar-12
O ₃ (ppb)	76				29.5	0.5	0			48.1	Mar-23 15:00	41.5	Mar-26	99.9	Mar-12
CO (ppm)					0.2	0.1				0.5	Mar-12 09:00	0.2	Mar-01	99.7	Mar-12
CO 8-Hour (ppm)	5				-	0.1	0			0.3	Mar-12 12:00	-	-	100.0	-
THC (ppm)					2.3	2.0				4.1	Mar-04 04:00	2.4	Mar-18	99.9	Mar-12
PM _{2.5} (µg/m ³)	80	29			5.1	0.5	0	0		22.5	Mar-06 09:00	10.4	Mar-06	99.9	Mar-12
ET (°C)					2.3	-12.0				14.7	Mar-25 15:00	9.5	Mar-09	99.9	-
RH (%)					70.6	17.9				100.0	Mar-01 07:00	98.5	Mar-03	99.9	-
GSR (W/m ²)					136.0	0.0				697.3	Mar-19 13:00	204.8	Mar-21	99.9	-
WSPD (km/h)					1.2	0.4				36.1	Mar-09 13:00	20.7	Mar-09	99.9	08/11/24
WDIR					NW									99.9	

Pollutant (units)	Analyzer			Notes
	Make		Model	
SO ₂	TEI		43i-TLE	Data logger offline for 1 hour March 24 for updates.
				Routine maintenance performed March 12, analyzer allowed to stabilize and calibrated March 13.
NO/NO ₂ /NO _x	TEI		42i	
O ₃	TECO		49i	
CO	TEI		48i-TLE	Manual span check March 13.
THC	TECO		51C-LT	
PM _{2.5}	API		T640	
ET/RH	RMYoung		41382VC	
GSR	Pyranometer		PY45774	
WS/WD	RMYoung		5305	

Mar-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	0.7	0.0				28.1	Mar-11 08:00	6.4	Mar-02	99.9	Mar-04
NO ₂ (ppb)	159				3.7	0.2	0			24.1	Mar-25 05:00	9.9	Mar-06	99.9	Mar-04
NO _x (ppb)					4.4	0.1				44.5	Mar-02 08:00	13.7	Mar-02	99.9	Mar-04
O ₃ (ppb)	76				27.9	0.0	0			49.2	Mar-26 13:00	37.0	Mar-09	99.9	Mar-04
PM _{2.5} (µg/m ³)	80	29			5.9	0.5	0	0		32.9	Mar-06 09:00	18.4	Mar-06	99.9	Mar-04
ET (°C)					0.5	-12.4				14.5	Mar-09 16:00	8.3	Mar-09	99.9	-
RH (%)					76.5	20.5				100.0	Mar-02 01:00	94.7	Mar-16	99.9	-
WSPD (km/h)					1.2	0.3				31.8	Mar-09 14:00	19.3	Mar-09	99.9	27/11/24
WDIR					NNE									99.9	

Pollutant (units)	Analyzer			Notes
	Make		Model	
NO/NO ₂ /NO _x	TEI		42iQ	Data logger offline for 1 hour March 24 for updates.
O ₃	TEI		49iQ	
PM _{2.5}	API		T640	
ET/RH	CS		HC2-S3	
WS/WD	RMYoung		5305	

Mar-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)				Hanna Airpointer	2.2	0.0				19.9	Mar-08 08:00	4.6	Mar-15	100.0	Mar-26
NO ₂ (ppb)	159				5.1	0.9	0			31.0	Mar-08 08:00	11.2	Mar-02	100.0	Mar-26
NO _x (ppb)					7.3	1.1				50.9	Mar-08 08:00	15.2	Mar-02	100.0	Mar-26
O ₃ (ppb)	76				30.6	2.9	0			46.5	Mar-20 16:00	35.7	Mar-01	100.0	Mar-26
PM _{2.5} (µg/m ³)	80	29			4.3	0.8	0	0		23.8	Mar-02 18:00	9.0	Mar-18	100.0	Mar-26
ET (°C)					-1.6	-16.1				11.6	Mar-24 16:00	5.5	Mar-26	100.0	-
RH (%)					74.9	29.8				96.6	Mar-13 16:00	94.2	Mar-13	100.0	-
WSPD (km/h)					1.2	0.0				12.6	Mar-09 15:00	6.4	Mar-31	100.0	-
WDIR					ESE									100.0	-

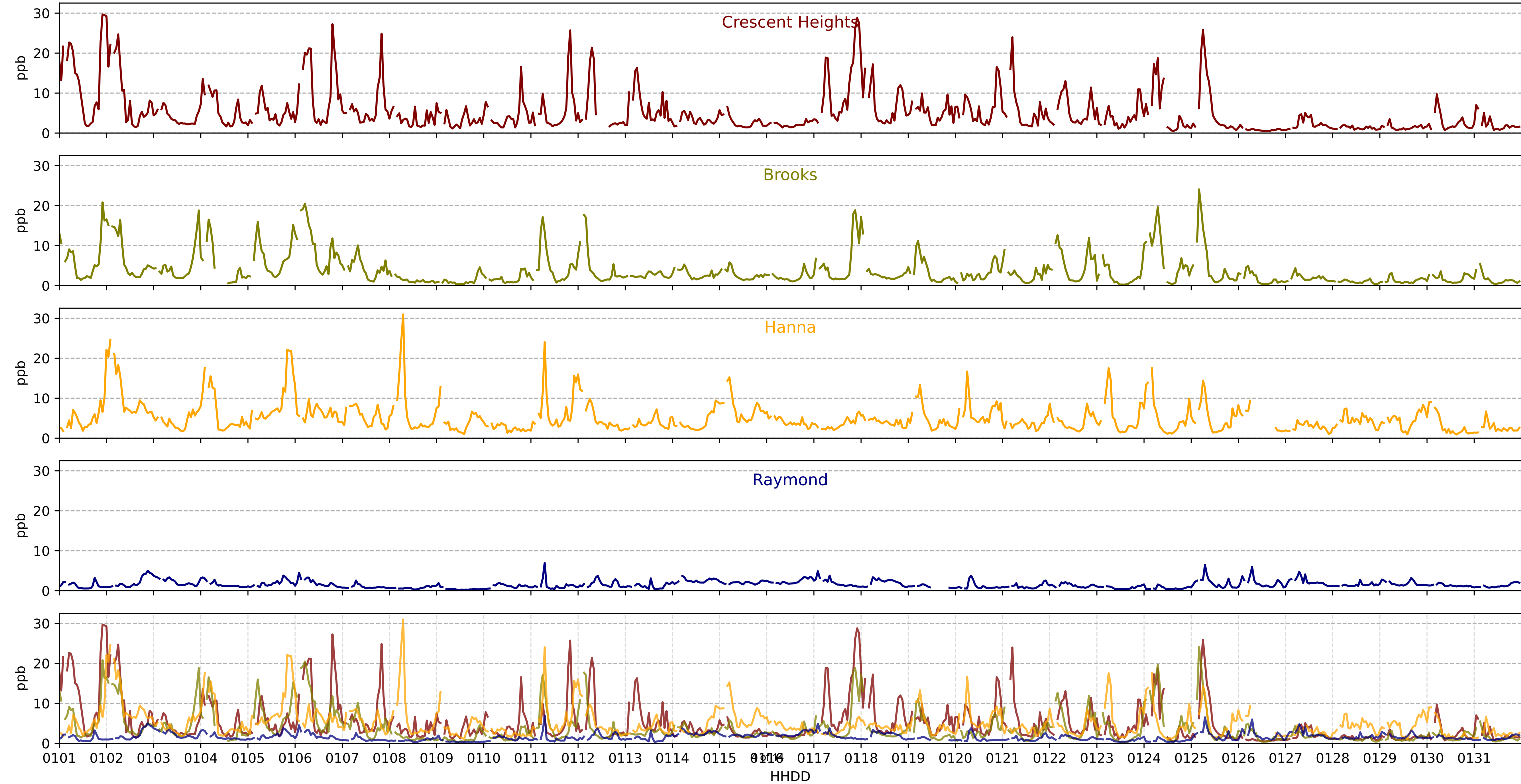
Pollutant (units)	Analyzer			Notes
	Make		Model	
NO/NO ₂ /NO _x	Airpointer API		200e	
O ₃	Airpointer API		400e	
PM _{2.5}	Sharp		5030	
ET/RH	CS		HC2-S3	
WSWD	RMYoung		5305	

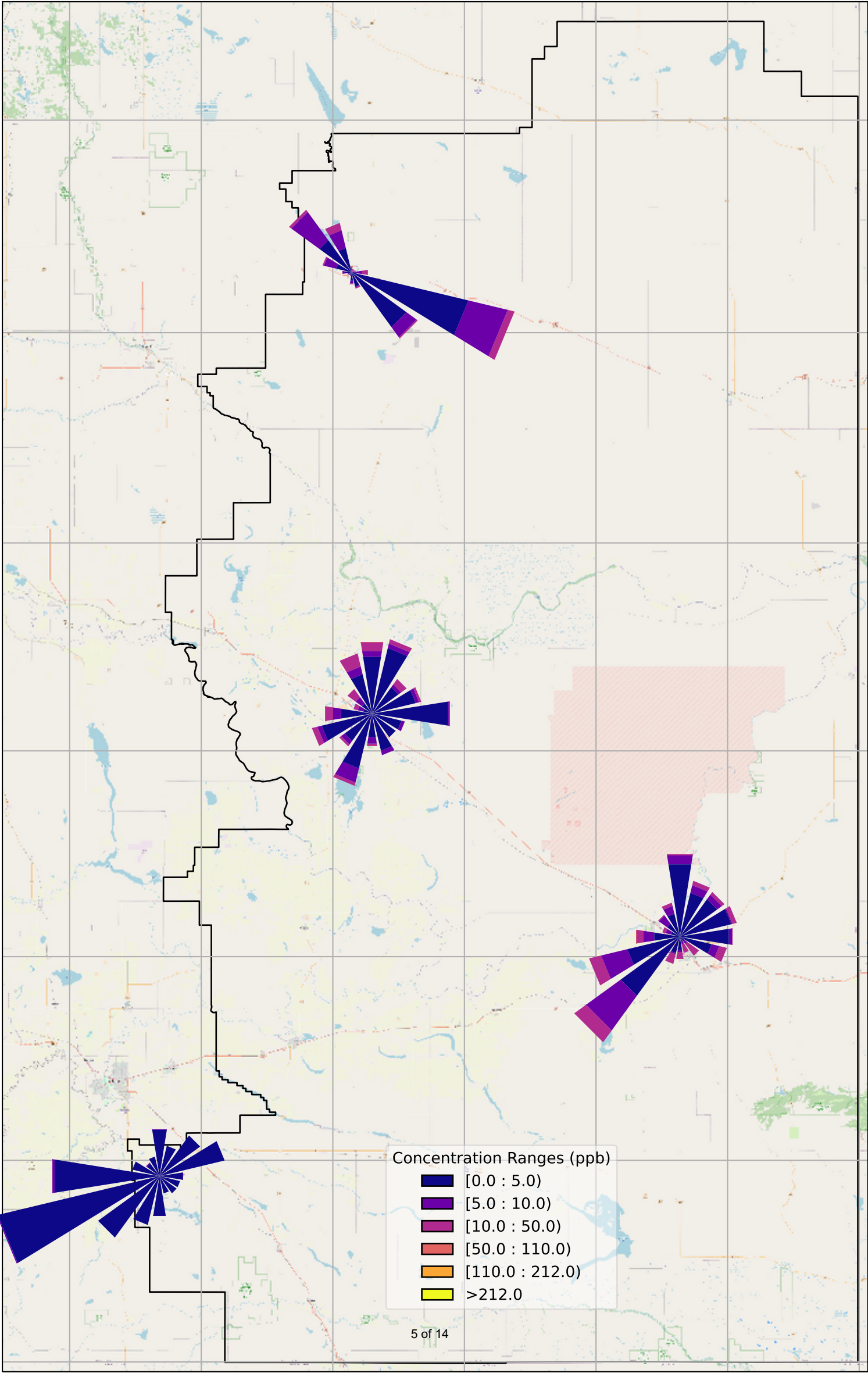
Mar-25				Palliser Airshed Society					Maximum Recorded Values						
Pollutant (units)		Objectives		Station	Monthly Average	1-Hour Minimum	Exceedence		1-hr		24-hr / 8-hr		Operational Time (%)	Calibration Date	
		1-hr	24-hr				30-day	1-hr	24-hr	30-day	Conc	Day			Conc
NO (ppb)					0.2	0.0				4.1	Mar-26 08:00	0.5	Mar-27	100.0	Mar-19
NO ₂ (ppb)		159			1.5	0.2	0			7.0	Mar-11 08:00	2.5	Mar-14	100.0	Mar-19
NO _x (ppb)					1.7	0.3				10.1	Mar-26 08:00	2.8	Mar-14	100.0	Mar-19
O ₃ (ppb)		76		Raymond Airpointer	32.4	11.4	0			53.2	Mar-01 15:00	42.2	Mar-22	100.0	Mar-19
PM _{2.5} (µg/m ³)		80	29		4.7	0.0	0	0		20.8	Mar-02 19:00	8.6	Mar-02	96.4	Mar-20
ET (°C)					2.2	-9.6				17.2	Mar-01 16:00	11.4	Mar-24	100.0	-
RH (%)					65.5	15.5				100.0	Mar-03 12:00	96.3	Mar-16	100.0	-
WSPD (km/h)					1.5	0.1				11.4	Mar-09 14:00	6.4	Mar-09	100.0	-
WDIR					W										100.0

Pollutant (units)	Analyzer			Notes
	Make		Model	
NO/NO ₂ /NO _x	Airpointer API		200e	
O ₃	Airpointer API		400e	
PM _{2.5}	Sharp		5030	Internal membrane failed March 19, troubleshooting performed during calibration visit. Replacement analyzer installed and calibrated March 20.
ET/RH	Vaisala		WXT520	
WSWD	Vaisala		WXT520	

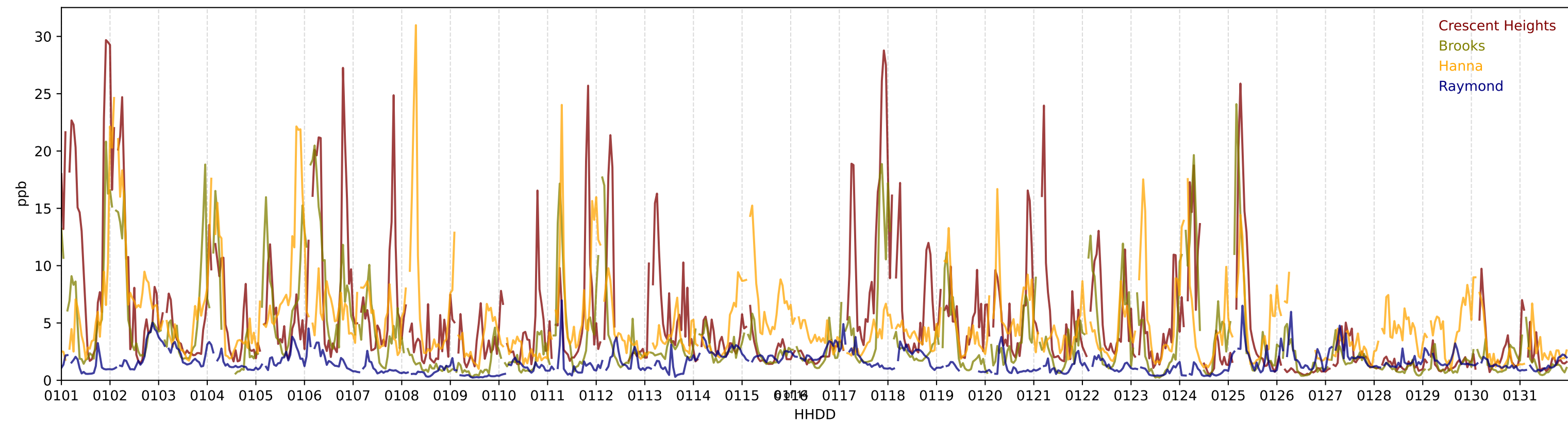
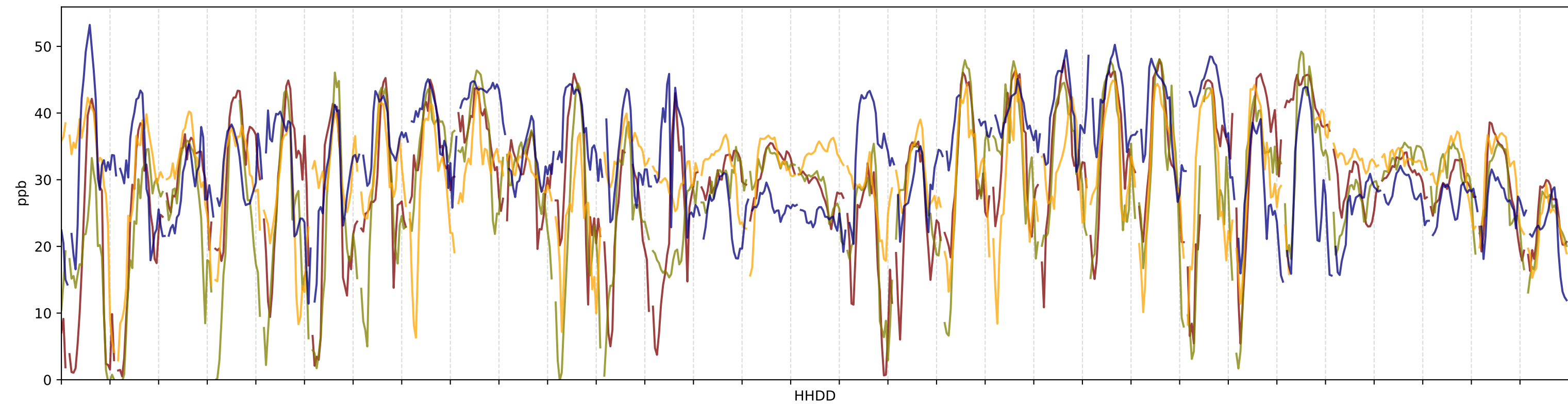
March 2025 NO₂

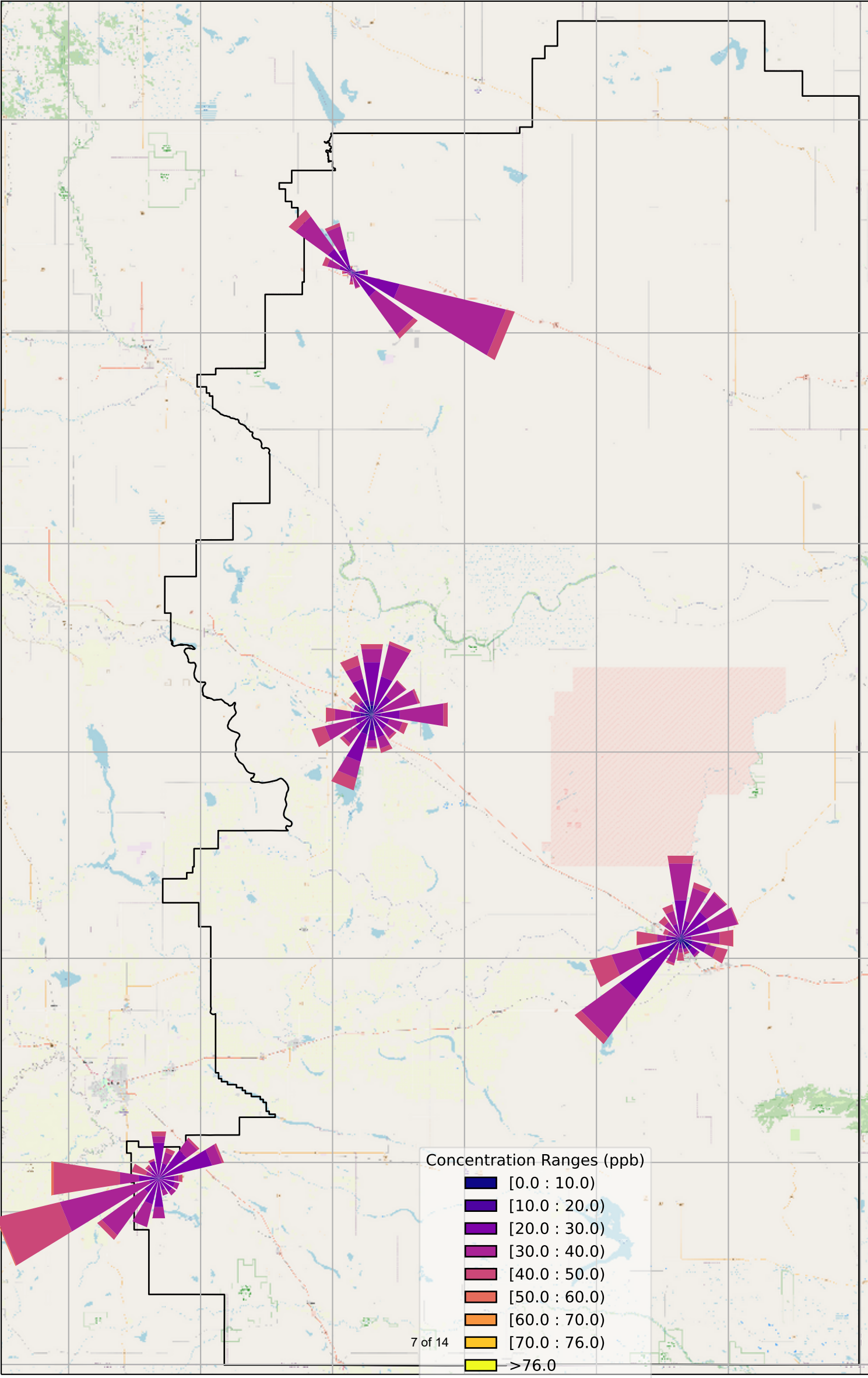
NO₂ AAAQO = 172 ppb





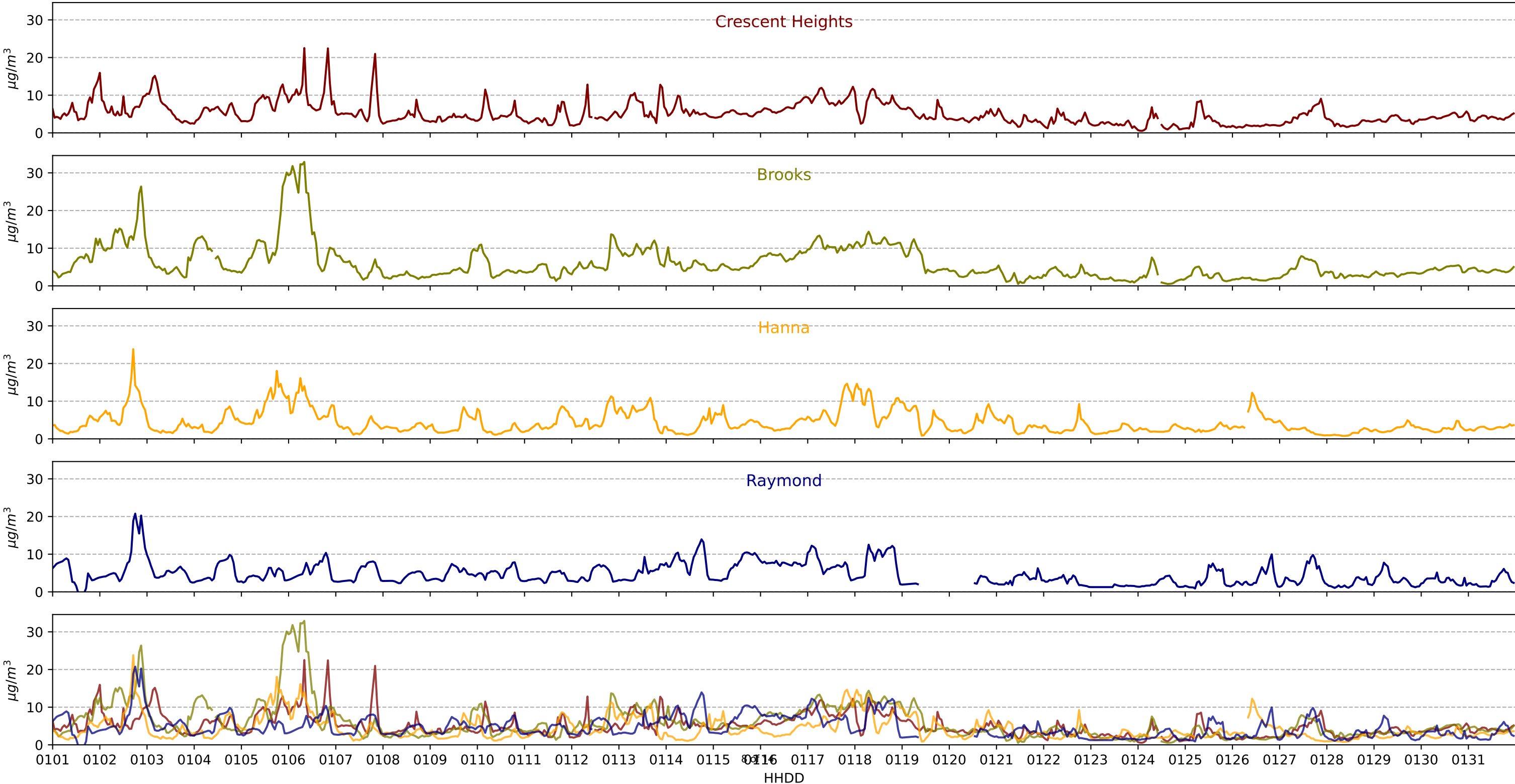
March 2025 O₃ vs NO₂

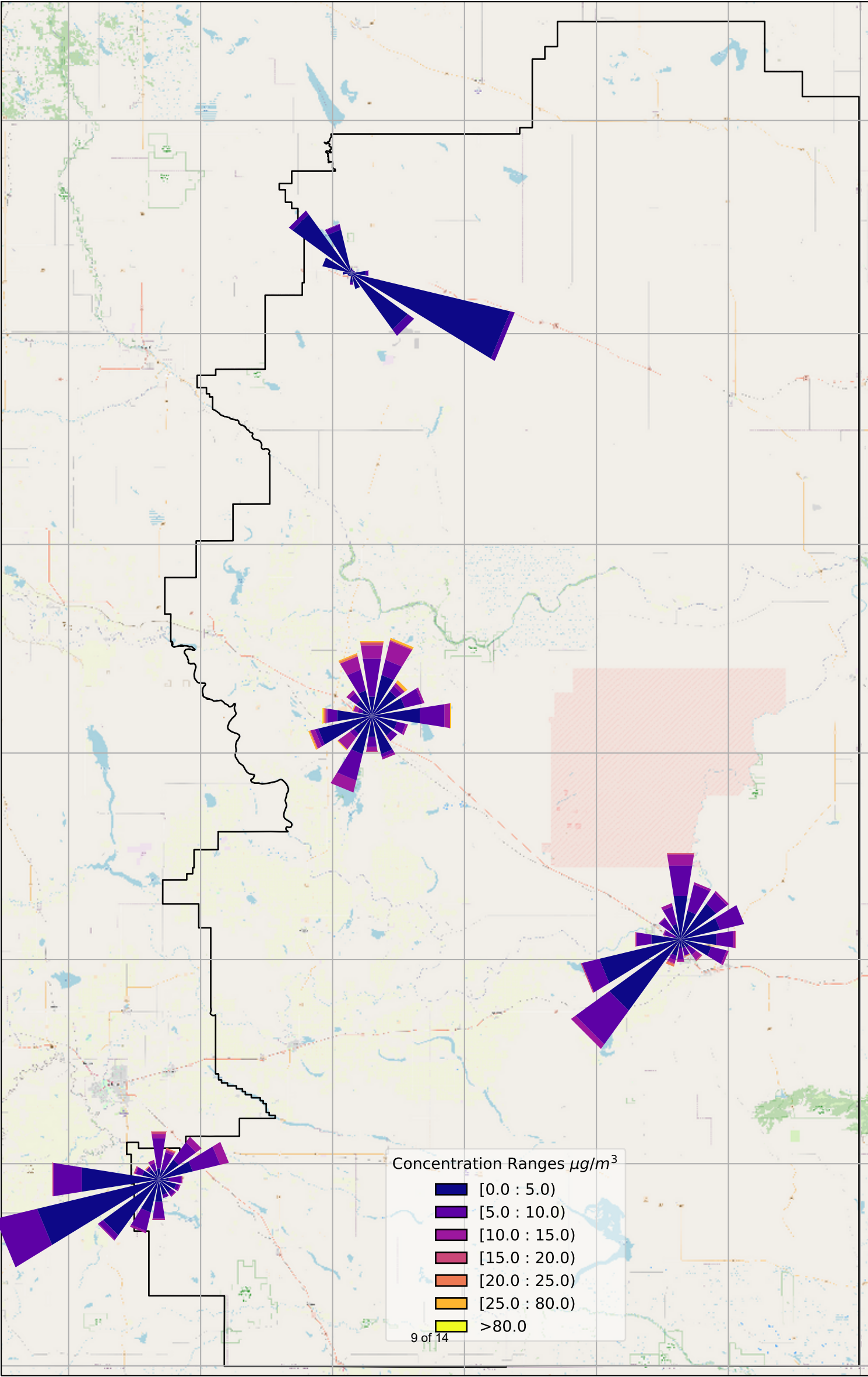




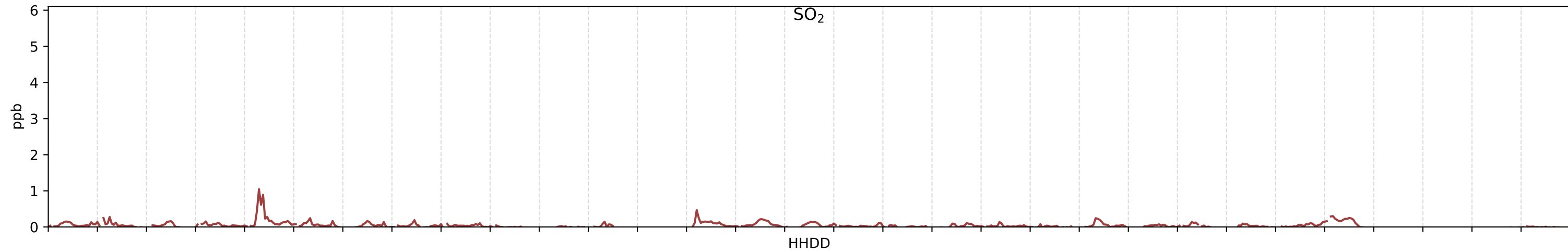
March 2025 PM_{2.5}

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





SO₂ AAAQO = 172 ppb



CO AAAQO = 13 ppm

