

March 25, 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 – February 2025

Enclosed is the PAS Dashboard Report for the month of **February 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 February.

AAAQO/G Exceedance Summary:

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

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

X *Patrick Andersen*

Patrick Andersen, B.Sc.
WSP AQM Data Specialist

X



Lenin Flores
Project Manager

February 2025 Monthly Ambient Air Quality Summary

Feb-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	0.7	Feb-14 17:00	0.3	Feb-14	94.8	Feb-04
NO (ppb)					2.5	0.0				40.8	Feb-18 09:00	7.8	Feb-18	99.9	Feb-12
NO ₂ (ppb)	159				9.5	1.3	0			39.0	Feb-12 01:00	19.6	Feb-17	99.9	Feb-12
NO _x (ppb)					12.1	1.4				71.9	Feb-18 09:00	27.2	Feb-18	99.9	Feb-12
O ₃ (ppb)	76				30.7	2.4	0			46.7	Feb-24 06:00	40.4	Feb-22	100.0	Feb-12
CO (ppm)					0.2	0.1				0.4	Feb-12 11:00	0.2	Feb-12	99.9	Feb-12
CO 8-Hour (ppm)	5				-	0.1	0			0.3	Feb-12 13:00	-	-	100.0	-
THC (ppm)					2.5	2.0				3.5	Feb-19 23:00	2.7	Feb-19	100.0	Feb-12
PM _{2.5} (µg/m ³)	80	29			5.9	0.2	0	0		34.2	Feb-08 18:00	13.5	Feb-08	100.0	Feb-12
ET (°C)					-13.4	-33.4				16.2	Feb-27 15:00	8.7	Feb-27	100.0	-
RH (%)					73.5	29.7				100.0	Feb-01 03:00	91.9	Feb-07	100.0	-
GSR (W/m ²)					102.8	0.0				563.9	Feb-23 13:00	151.6	Feb-28	100.0	-
WSPD (km/h)					4.2	0.0				33.8	Feb-27 11:00	16.1	Feb-23	100.0	08/11/24
WDIR					W									100.0	

Pollutant (units)	Analyzer			Notes
	Make		Model	
SO ₂	TEI		43i-TLE	Sample pump failed February 3-4, repaired and analyzer calibrated. Data invalidated back to last good span February 3.
				Manual span check February 12.
NO/NO ₂ /NO _x	TEI		42i	Manual span check February 4.
O ₃	TECO		49i	
CO	TEI		48i-TLE	Manual span check February 4.
THC	TECO		51C-LT	
PM _{2.5}	API		T640	
ET/RH	RMYoung		41382VC	
GSR	Pyranometer		PY45774	
WS/WD	RMYoung		5305	

Feb-25				Palliser Airshed Society									Maximum Recorded Values					
Pollutant (units)	Objectives			Station	Monthly Average	1-Hour Minimum	Exceedence			Conc	Day	Conc	Day	Operational Time (%)	Calibration Date			
	1-hr	24-hr	30-day				1-hr	24-hr	30-day									
NO (ppb)				Brooks Meadowplace	1.2	0.0				28.4	Feb-18 10:00	5.4	Feb-18	100.0	Feb-11			
NO ₂ (ppb)	159				6.3	0.6	0			37.7	Feb-13 07:00	13.5	Feb-16	100.0	Feb-11			
NO _x (ppb)					7.5	0.3				61.3	Feb-16 08:00	18.1	Feb-16	100.0	Feb-11			
O ₃ (ppb)	76				29.8	0.0	0			46.3	Feb-25 15:00	38.7	Feb-22	100.0	Feb-11			
PM _{2.5} (µg/m³)	80	29			6.6	0.3	0	0		50.8	Feb-15 07:00	16.9	Feb-08	100.0	Feb-12			
ET (°C)					-13.9	-33.8				15.9	Feb-27 16:00	7.7	Feb-27	100.0	-			
RH (%)					73.2	29.7				99.4	Feb-26 00:00	85.1	Feb-07	100.0	-			
WSPD (km/h)					1.9	0.2				37.8	Feb-27 09:00	26.0	Feb-19	100.0	27/11/24			
WDIR					WNW										100.0			

Pollutant (units)	Analyzer			Notes
	Make		Model	
NO/NO ₂ /NO _x	TEI		42iQ	
O ₃	TEI		49iQ	
PM _{2.5}	API		T640	
ET/RH	CS		HC2-S3	
WS/WD	RMYoung		5305	

Feb-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	Day		
NO (ppb)				Hanna Airpointer	3.8	0.0				23.4	Feb-21 08:00	8.6	Feb-04	99.1	Feb-24
NO ₂ (ppb)	159				8.1	1.4	0			38.9	Feb-21 08:00	19.2	Feb-21	99.1	Feb-24
NO _x (ppb)					12.0	2.5				62.3	Feb-21 08:00	24.8	Feb-21	99.1	Feb-24
O ₃ (ppb)	76				29.4	2.3	0			46.1	Feb-27 14:00	39.1	Feb-27	99.4	Feb-24
PM _{2.5} (µg/m ³)	80	29			4.9	0.0	0	0		46.2	Feb-06 22:00	13.2	Feb-21	93.3	Feb-13
ET (°C)					-15.8	-35.0				8.5	Feb-27 12:00	4.4	Feb-27	99.7	-
RH (%)					72.7	42.9				91.0	Feb-01 01:00	80.1	Feb-07	99.7	-
WSPD (km/h)					0.0	0.0				15.8	Feb-27 11:00	11.3	Feb-19	99.7	-
WDIR					ENE									99.7	-

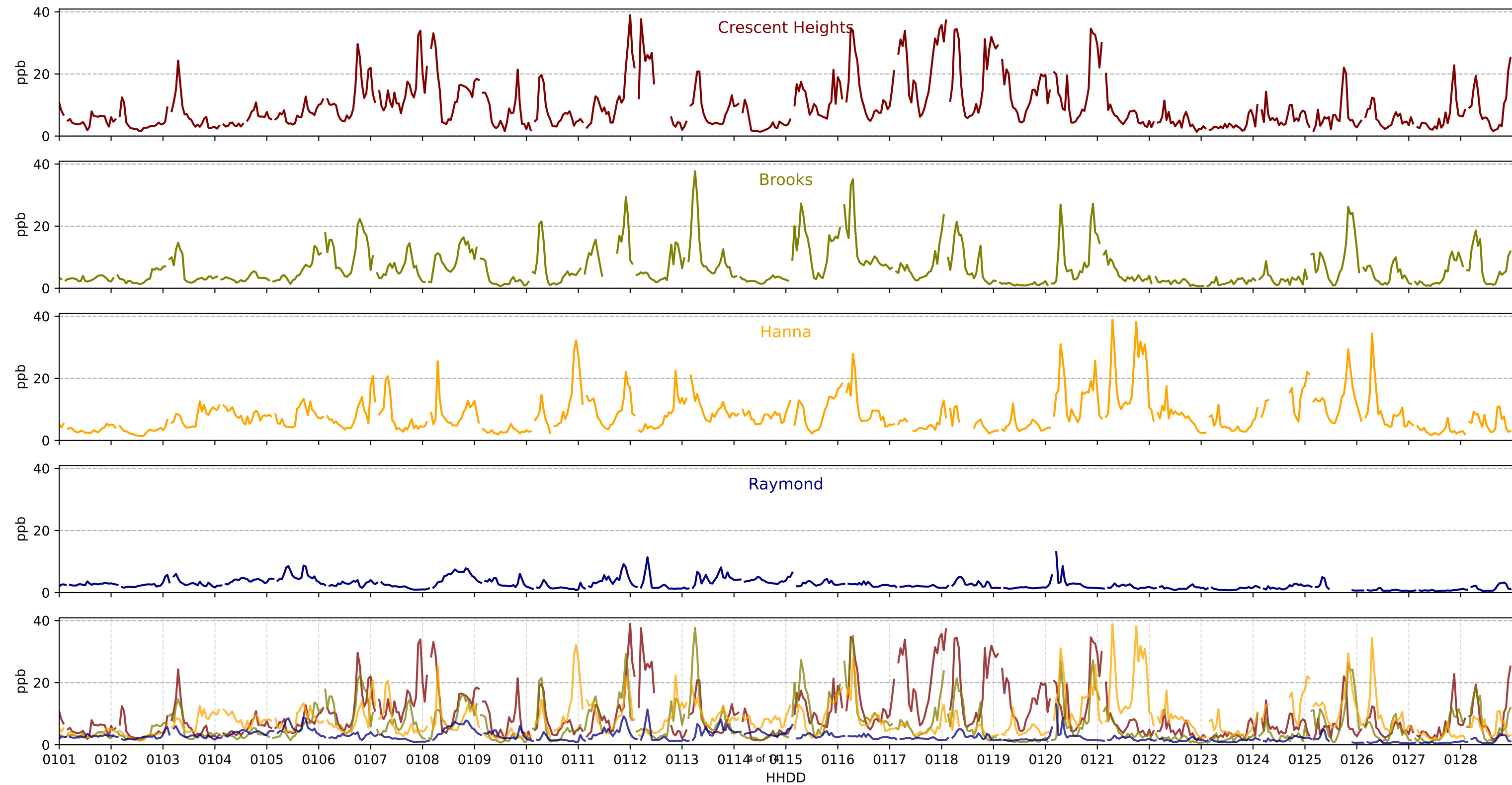
Pollutant (units)	Analyzer			Notes
	Make		Model	
NO/NO ₂ /NO _x	Airpointer API		200e	Station power outage invalidated 2-3 hours February 18.
O ₃	Airpointer API		400e	Manual span checks February 10, 17 and 18.
PM _{2.5}	Sharp		5030	Manual span check February 15.
ET/RH	CS		HC2-S3	Sample pump failed February 11, replaced February 13.
WS/WD	RMYoung		5305	

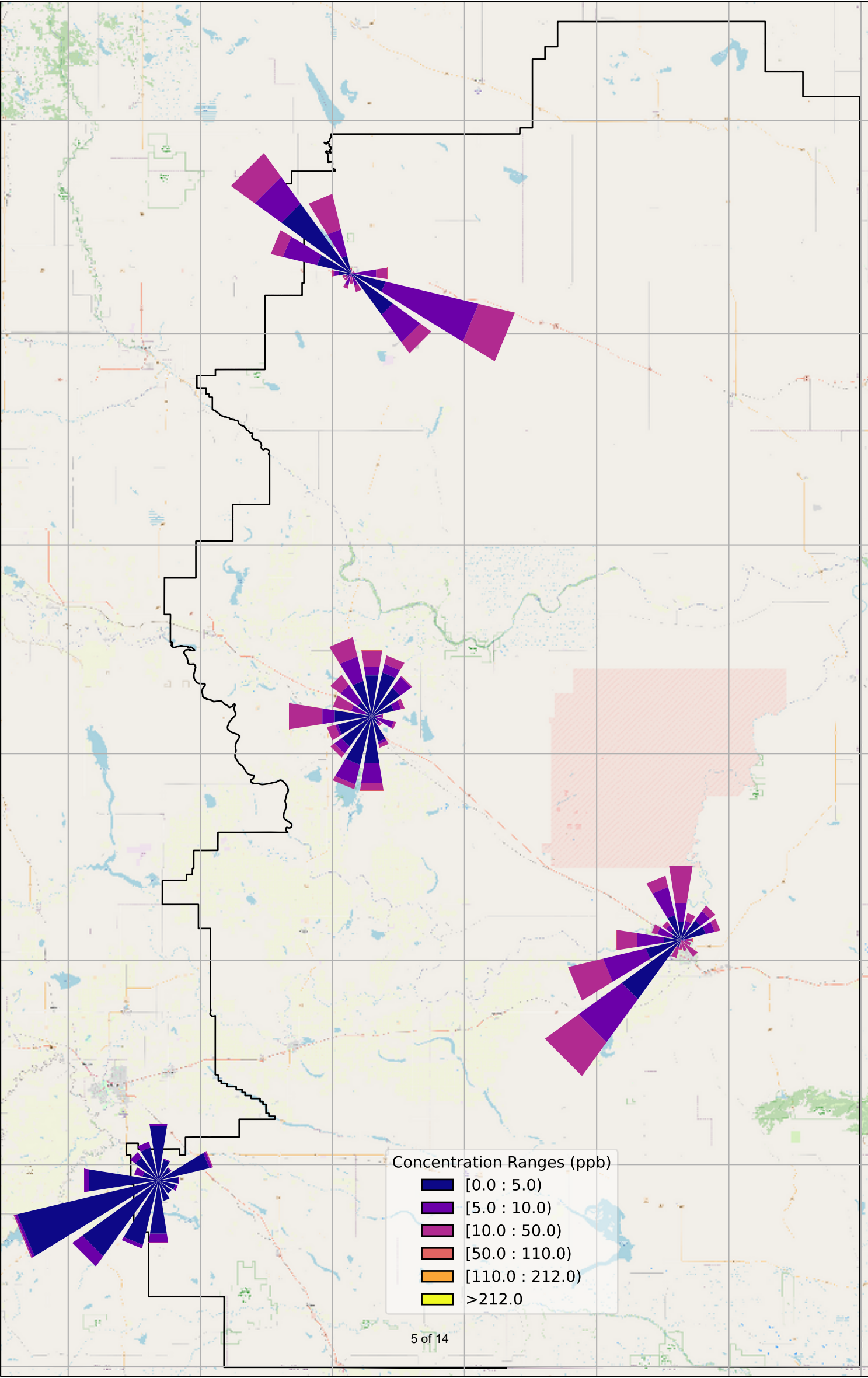
Feb-25 Palliser Airshed Society										Maximum Recorded Values					
Pollutant (units)	Objectives			Station	Monthly Average	1-Hour Minimum	Exceedence			1-hr		24-hr / 8-hr			
	1-hr	24-hr	30-day				1-hr	24-hr	30-day	Conc	Day	Conc	Day		
NO (ppb)				Raymond Airpointer	0.2	0.0				2.0	Feb-05 11:00	0.4	Feb-05	100.0	Feb-25
NO ₂ (ppb)	159				2.6	0.4	0			13.0	Feb-20 06:00	5.4	Feb-05	100.0	Feb-25
NO _x (ppb)					2.8	0.5				13.4	Feb-20 06:00	5.8	Feb-05	100.0	Feb-25
O ₃ (ppb)	76				32.7	15.8	0			46.0	Feb-28 15:00	40.7	Feb-27	100.0	Feb-25
PM _{2.5} (µg/m³)	80	29			5.0	0.0	0	0		27.4	Feb-08 19:00	13.2	Feb-09	100.0	Feb-25
ET (°C)					-11.1	-29.5				15.2	Feb-27 13:00	9.3	Feb-27	100.0	-
RH (%)					68.6	24.1				100.0	Feb-01 04:00	90.9	Feb-01	100.0	-
WSPD (km/h)					1.5	0.0				9.9	Feb-22 12:00	6.2	Feb-23	100.0	-
WDIR					WSW										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	Vaisala		WXT520	
WS/WD	Vaisala		WXT520	

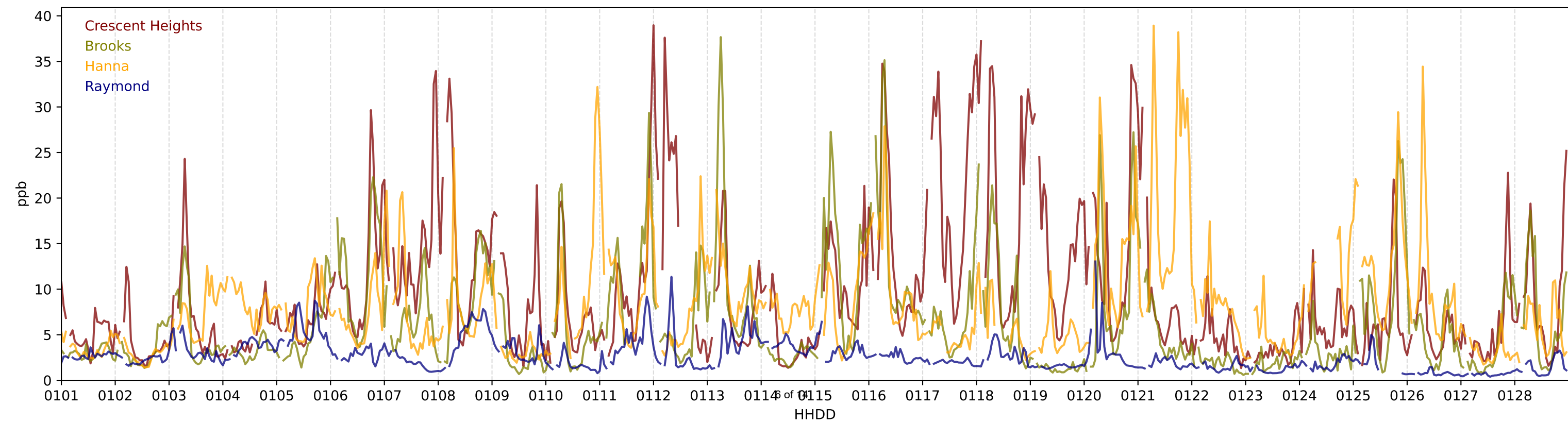
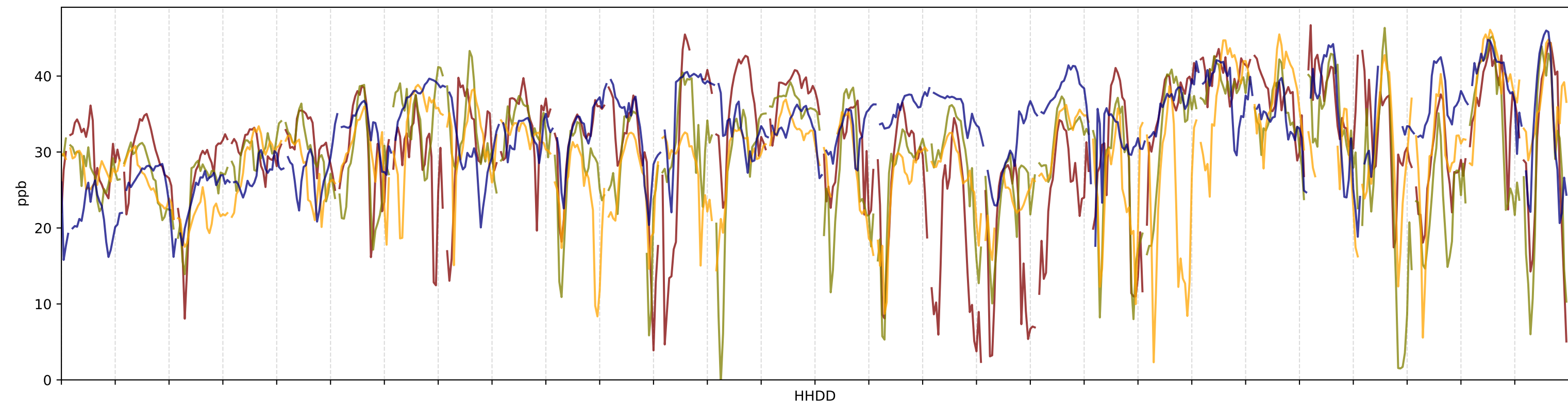
February 2025 NO₂

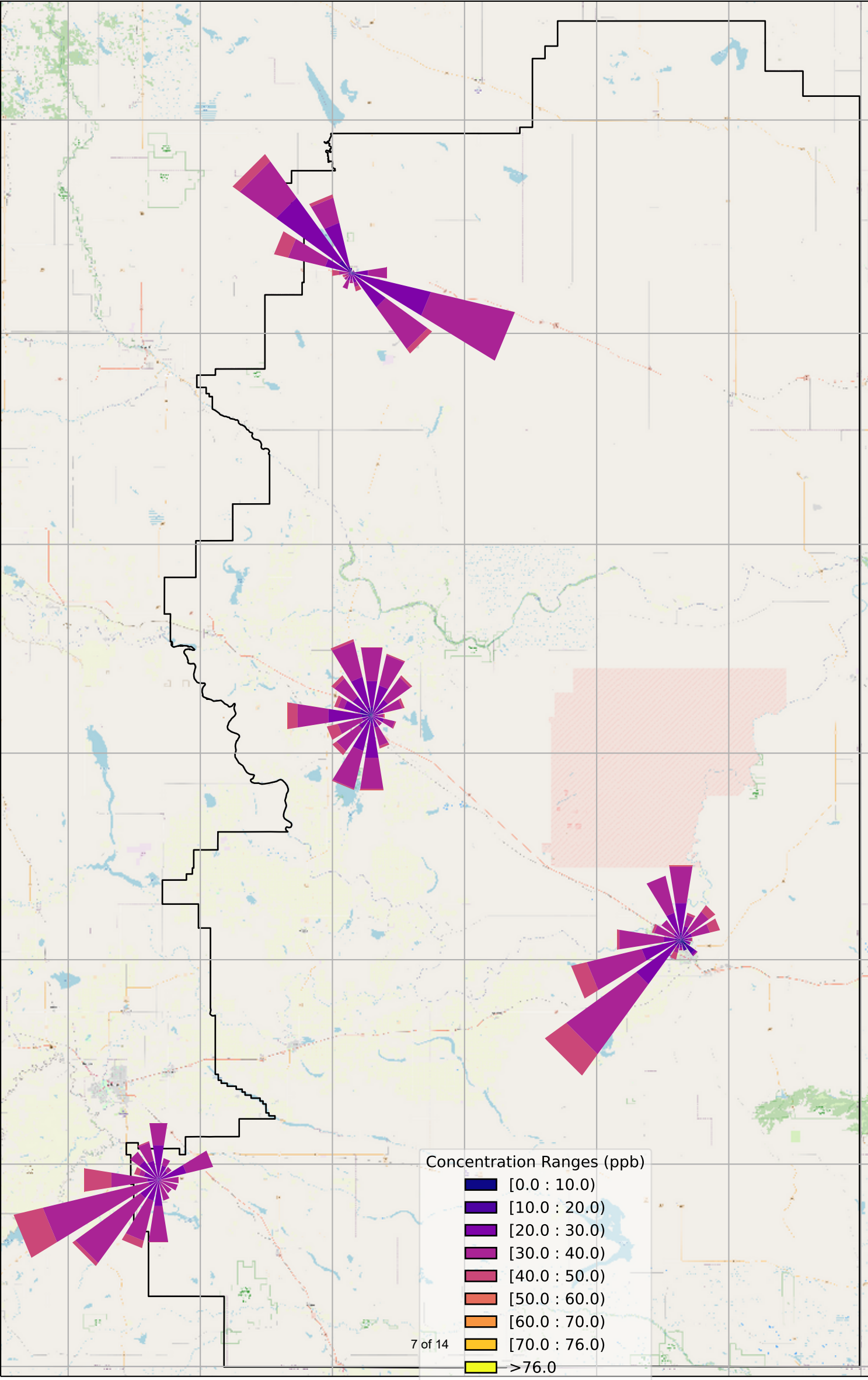
NO₂ AAAQO = 172 ppb





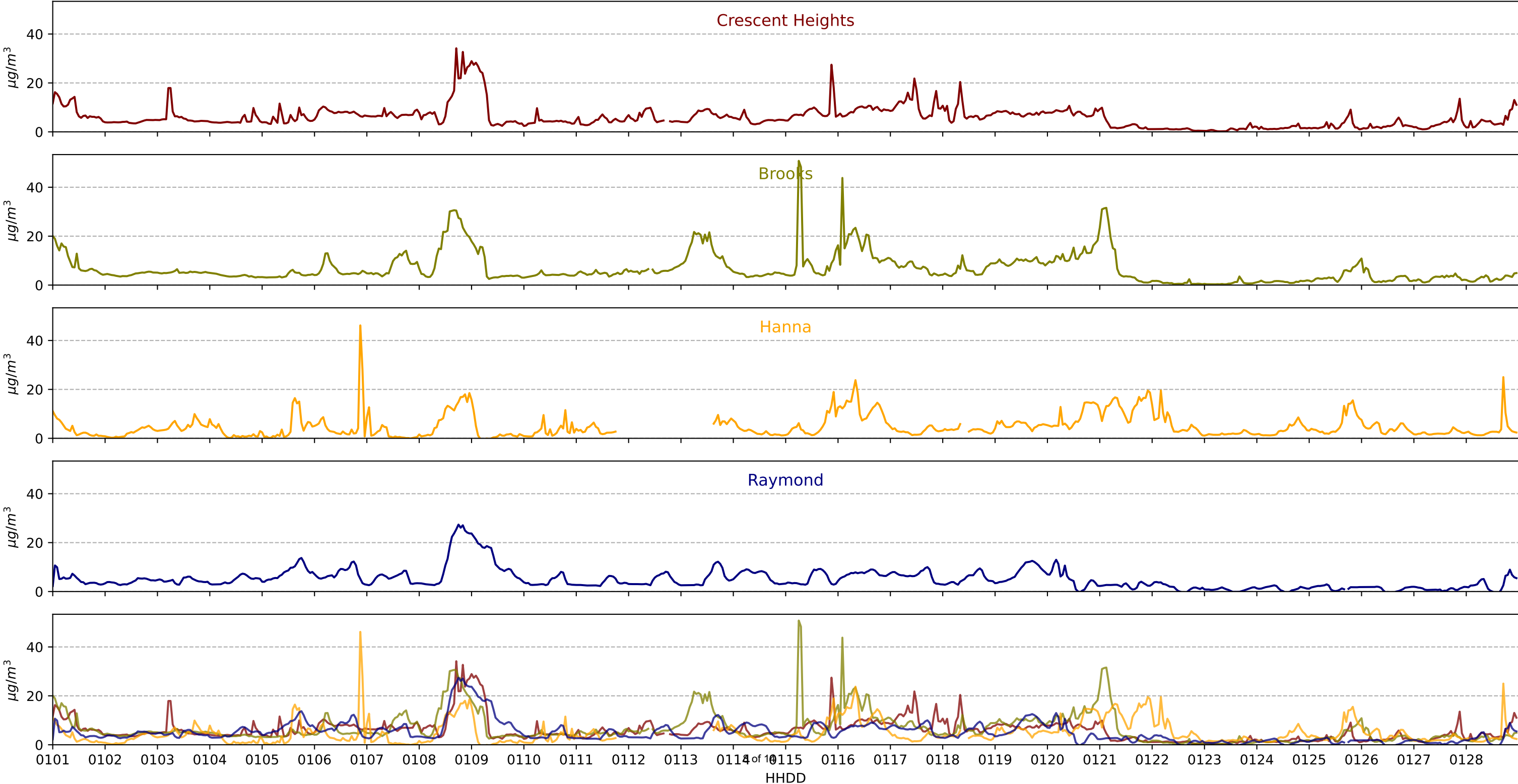
February 2025 O₃ vs NO₂

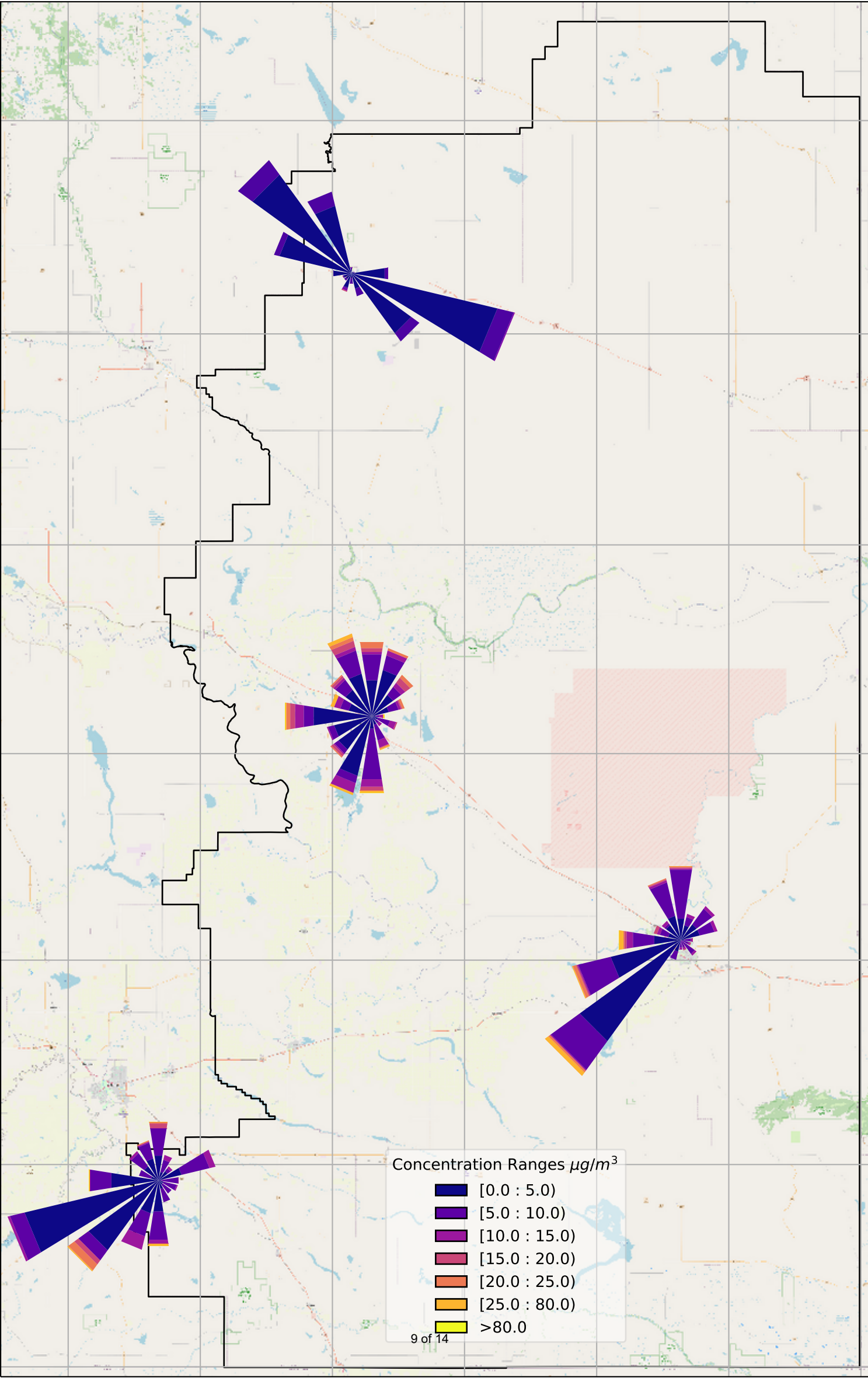




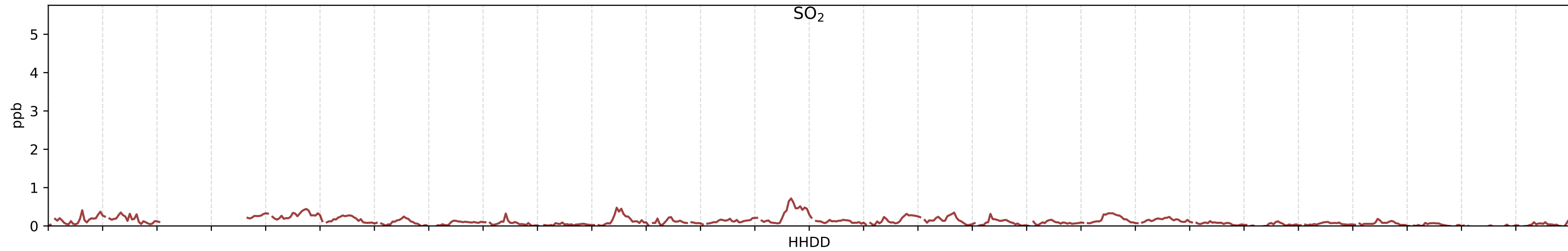
February 2025 PM_{2.5}

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





SO₂ AAAQO = 172 ppb



CO AAAQO = 13 ppm

