

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 – July 2025

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

Continuous Monitoring – Crescent Heights, Brooks – Meadowplace, 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:

The PM_{2.5} analyzer at Raymond returned an uptime of 86.7% in July due to power outages, extended periods of instability after returning to service after the power outages and troubleshooting and maintenance. **Reference #444264.**

AAAQO/G Exceedance Summary:

There were 44 exceedances of the 1-hour and 7 exceedances of the 24-hour AAAQO/G for PM_{2.5} (80/29 µg/m³) in July. All exceedances are attributed to wildfire smoke.

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)	
Brooks - Meadowplace	14-Jul-25	16:00	17:00	211	NE	15.4	*
Brooks - Meadowplace	14-Jul-25	17:00	18:00	194	NNE	8.6	*
Crescent Heights	14-Jul-25	17:00	18:00	81	NE	17.8	*
Brooks - Meadowplace	14-Jul-25	18:00	19:00	176	NNE	5.7	*
Crescent Heights	14-Jul-25	18:00	19:00	184	NNE	10.4	*
Brooks - Meadowplace	14-Jul-25	19:00	20:00	145	N	7.4	*
Crescent Heights	14-Jul-25	19:00	20:00	190	NNE	8.8	*
Crescent Heights	14-Jul-25	20:00	21:00	165	N	10.1	*
Crescent Heights	14-Jul-25	21:00	22:00	162	N	9.2	*
Raymond (Airpointer)	14-Jul-25	21:00	22:00	87	NNE	7.9	*
Crescent Heights	14-Jul-25	22:00	23:00	174	N	9.5	*
Raymond (Airpointer)	14-Jul-25	22:00	23:00	90	NNE	4.2	*
Crescent Heights	14-Jul-25	23:00	00:00	150	N	8.5	*
Raymond (Airpointer)	14-Jul-25	23:00	00:00	104	NNW	2.1	*
Crescent Heights	15-Jul-25	08:00	09:00	112	ENE	12.3	*
Crescent Heights	15-Jul-25	09:00	10:00	185	ENE	11.1	*
Crescent Heights	15-Jul-25	10:00	11:00	120	NE	14.8	*
Crescent Heights	15-Jul-25	12:00	13:00	82	NE	12.7	*
Brooks - Meadowplace	16-Jul-25	08:00	09:00	85	S	18.2	*

Station Name	Date	Start Time	End Time	1-Hour PM _{2.5} Concentration	Wind Direction	Wind Speed	Reference Number
Brooks - Meadowplace	16-Jul-25	09:00	10:00	91	S	20.2	*
Crescent Heights	16-Jul-25	09:00	10:00	81	SE	3.0	*
Crescent Heights	22-Jul-25	11:00	12:00	89	NNE	15.9	*
Crescent Heights	22-Jul-25	12:00	13:00	89	NNE	20.0	*
Brooks - Meadowplace	22-Jul-25	17:00	18:00	96	NNE	14.3	*

Station Name	Date	24-Hour PM _{2.5} Concentration (µg/m ³)	Wind Direction	Wind Speed (km/h)	Reference Number
Brooks - Meadowplace	14-Jul-25	41	NNE	11.1	443129
Crescent Heights	14-Jul-25	48	NE	13.0	443130
Crescent Heights	15-Jul-25	64	ENE	7.0	443130
Brooks - Meadowplace	16-Jul-25	38	SSE	13.5	443129
Crescent Heights	16-Jul-25	38	SSE	6.4	443130
Brooks - Meadowplace	22-Jul-25	37	NNE	3.9	443129
Crescent Heights	22-Jul-25	45	NE	12.3	443130

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

June 2025 Monthly Ambient Air Quality Summary

Jul-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	0.3	Jul-13 10:00	0.1	Jul-25	99.6	Jul-24
NO (ppb)					0.7	0.0				9.4	Jul-13 03:00	1.3	Jul-22	99.9	Jul-23
NO ₂ (ppb)	159				2.1	0.0	0			16.9	Jul-23 22:00	3.6	Jul-24	99.9	Jul-23
NO _x (ppb)					2.8	0.0				24.9	Jul-13 03:00	5.0	Jul-24	99.9	Jul-23
O ₃ (ppb)	76				30.6	3.9	0			59.2	Jul-02 12:00	42.0	Jul-02	99.9	Jul-24
CO (ppm)					0.2	0.1				1.0	Jul-14 23:00	0.5	Jul-22	99.7	Jul-23
CO 8-Hour (ppm)	5				-	0.1	0			0.7	Jul-15 01:00	-	-	100.0	-
THC (ppm)					2.1	2.0				7.0	Jul-31 07:00	2.3	Jul-31	99.9	Jul-23
PM _{2.5} (µg/m ³)	80	29			12.8	1.2	14	4		189.7	Jul-14 20:00	63.9	Jul-15	99.9	Jul-23
ET (°C)					20.2	6.6				35.2	Jul-02 13:00	27.7	Jul-02	99.9	-
RH (%)					62.3	14.5				100.0	Jul-06 02:00	100.0	Jul-22	99.9	-
GSR (W/m ²)					254.9	0.0				968.0	Jul-31 13:00	365.5	Jul-01	99.9	-
WSPD (km/h)					0.9	0.3				31.3	Jul-09 22:00	14.6	Jul-09	99.9	08/11/24
WDIR					NNE									99.9	

Pollutant (units)	Analyzer			Notes
	Make		Model	
SO ₂	TEI		43i-TLE	Logger offline for 1 hour July 11 for updates.
NO/NO ₂ /NO _x	TEI		42i	Manual span check July 23.
O ₃	TECO		49i	
CO	TEI		48i-TLE	Manual span check July 24.
THC	TECO		51C-LT	
PM _{2.5}	API		T640	Routine maintenance performed June 24-25.
ET/RH	RMYoung		41382VC	
GSR	Pyranometer		PY45774	
WS/WD	RMYoung		5305	

Jul-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	0.2	0.0				8.5	Jul-23 04:00	1.2	Jul-23	99.9	Jul-28
NO ₂ (ppb)	159				2.3	0.2	0			12.8	Jul-13 00:00	3.8	Jul-06	99.9	Jul-28
NO _x (ppb)					2.5	0.0				13.7	Jul-23 04:00	4.0	Jul-06	99.9	Jul-28
O ₃ (ppb)	76				29.1	0.9	0			56.6	Jul-31 18:00	41.1	Jul-02	99.9	Jul-28
PM _{2.5} (µg/m ³)	80	29			12.0	1.5	7	3		211.1	Jul-14 17:00	41.0	Jul-14	99.9	Jul-28
ET (°C)					18.0	6.0				33.1	Jul-02 17:00	24.6	Jul-02	99.9	-
RH (%)					71.9	21.0				100.0	Jul-14 05:00	99.0	Jul-22	99.9	-
WSPD (km/h)					1.6	0.0				29.5	Jul-03 20:00	13.5	Jul-02	99.9	27/11/24
WDIR					NNE									99.9	

Pollutant (units)	Analyzer			Notes
	Make		Model	
NO/NO ₂ /NO _x	TEI		42iQ	Logger offline for 1 hour July 11 for updates.
O ₃	TEI		49iQ	
PM _{2.5}	API		T640	
ET/RH	CS		HC2-S3	
WS/WD	RMYoung		5305	

Jul-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	0.6	0.0				7.3	Jul-11 17:00	1.4	Jul-11	100.0	Jul-29
NO ₂ (ppb)	159				1.7	0.0	0			7.2	Jul-18 05:00	2.4	Jul-11	100.0	Jul-29
NO _x (ppb)					2.3	0.0				10.6	Jul-11 17:00	3.8	Jul-11	100.0	Jul-29
O ₃ (ppb)	76				28.9	4.3	0			52.6	Jul-02 15:00	38.3	Jul-02	99.2	Jul-30
PM _{2.5} (µg/m ³)	80	29			6.8	1.2	0	0		37.3	Jul-14 16:00	26.1	Jul-16	100.0	Jul-30
ET (°C)					17.5	7.4				32.4	Jul-02 16:00	23.2	Jul-02	100.0	-
RH (%)					65.9	24.9				98.0	Jul-21 07:00	89.7	Jul-20	100.0	-
WSPD (km/h)					0.9	0.0				14.8	Jul-02 14:00	7.3	Jul-16	100.0	-
WDIR					ESE										100.0

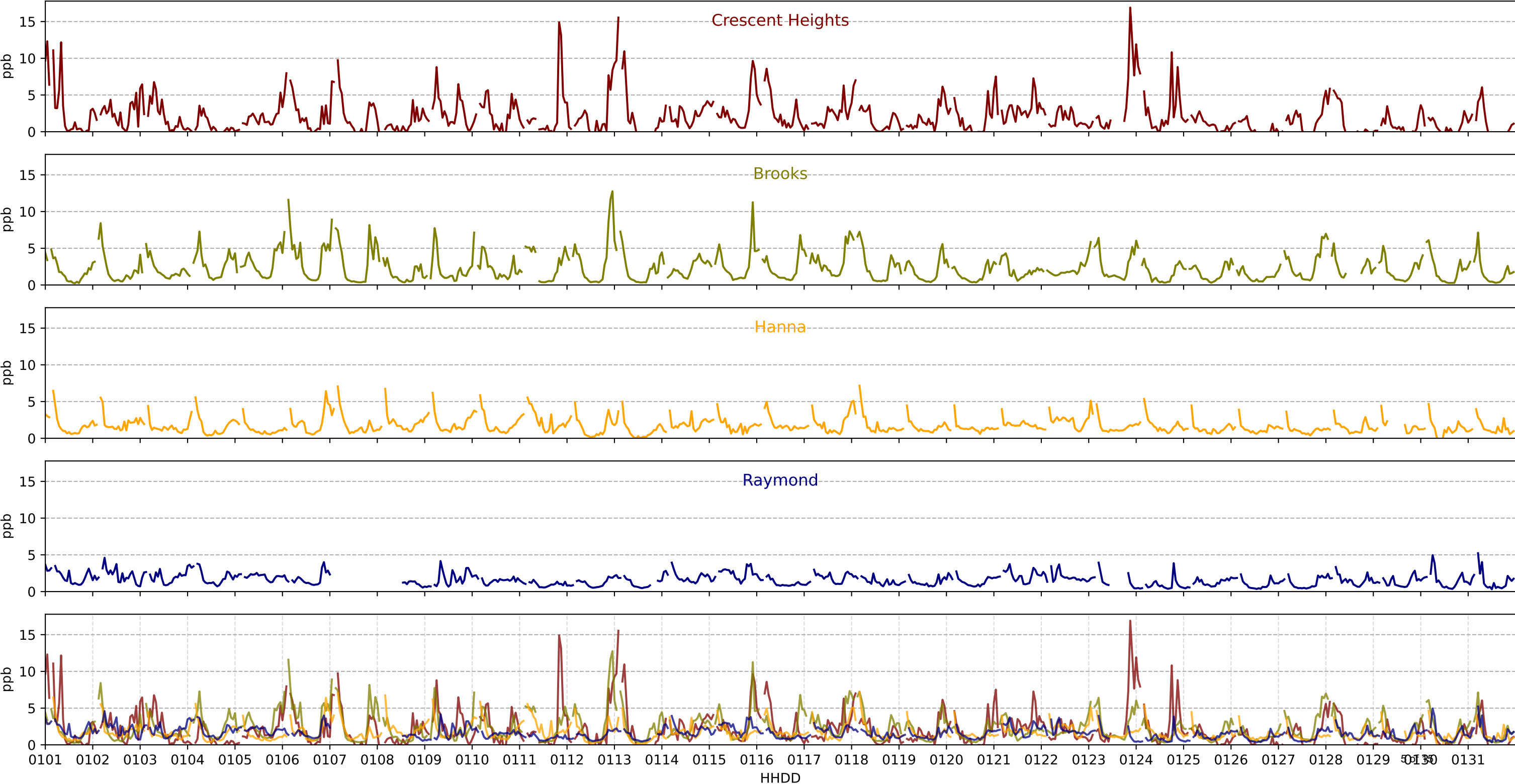
Pollutant (units)	Analyzer			Notes
	Make		Model	
NO/NO ₂ /NO _x	Airpointer API		200e	
O ₃	Airpointer API		400e	Analyzer offline during July 29 NO _x calibration.
PM _{2.5}	Sharp		5030	
ET/RH	CS		HC2-S3	
WS/WD	RMYoung		5305	

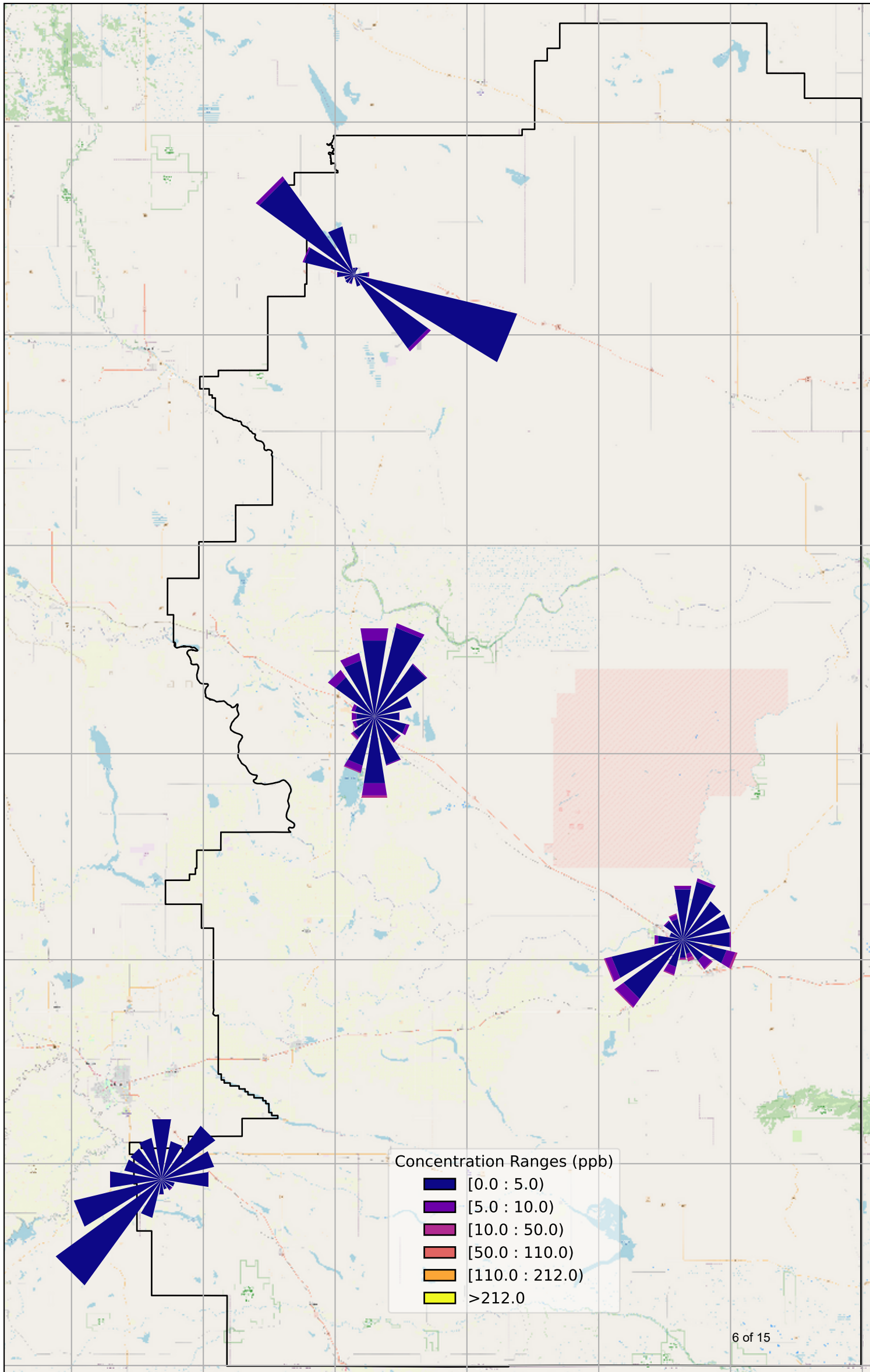
Jul-25 Palliser Airshed Society										Maximum Recorded Values					
Pollutant (units)	Objectives			Station	Monthly Average	1-Hour Minimum	Exceedence			1-hr		24-hr / 8-hr			
	1-hr	24-hr	30-day				1-hr	24-hr	30-day	Conc	Day	Conc	Day		
NO (ppb)				Raymond Airpointer	0.3	0.0				11.6	Jul-31 06:00	1.0	Jul-31	94.8	Jul-23
NO ₂ (ppb)	159				1.6	0.3	0			5.2	Jul-31 06:00	2.4	Jul-15	94.8	Jul-23
NO _x (ppb)					1.9	0.4				16.8	Jul-31 06:00	2.9	Jul-15	94.8	Jul-23
O ₃ (ppb)	76				24.3	3.2	0			46.5	Jul-29 14:00	33.1	Jul-25	94.9	Jul-23
PM _{2.5} (µg/m ³)	80	29			8.3	0.8	3	0		103.6	Jul-15 00:00	20.8	Jul-15	86.7	Jul-24
ET (°C)					17.5	5.9				32.7	Jul-02 16:00	23.4	Jul-02	94.9	-
RH (%)					70.7	22.1				100.0	Jul-14 04:00	97.9	Jul-22	94.9	-
WSPD (km/h)					1.8	0.1				18.8	Jul-10 14:00	11.6	Jul-24	94.9	-
WDIR					WNW										94.9

Pollutant (units)	Analyzer			Notes
	Make		Model	
NO/NO ₂ /NO _x	Airpointer API		200e	Station power outages July 7-8 and 13.
O ₃	Airpointer API		400e	
PM _{2.5}	Sharp		5030	Analyzer required extended stabilization to return valid readings after July 7-8 and 13 power outages. Troubleshooting and maintenance performed July 23-24 due to poor analyzer response to calibration July 23.
ET/RH	Vaisala		WXT520	
WS/WD	Vaisala		WXT520	

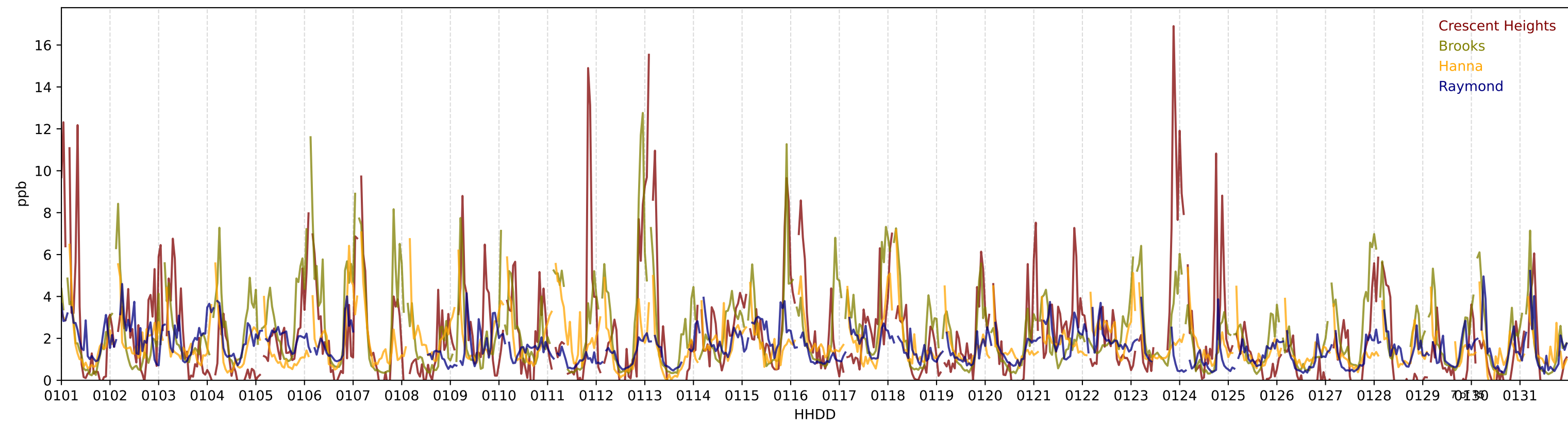
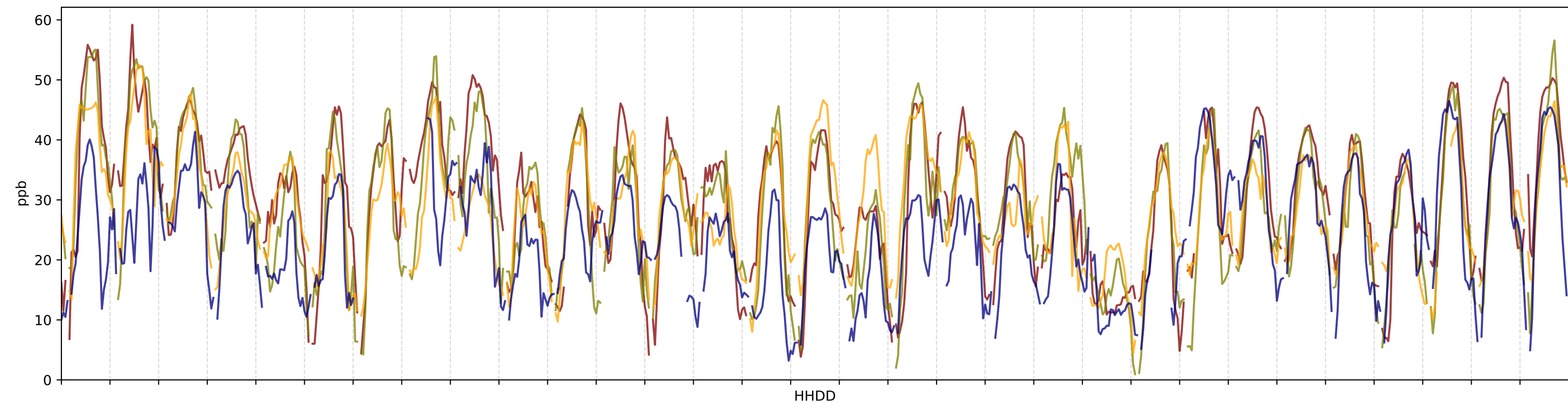
July 2025 NO₂

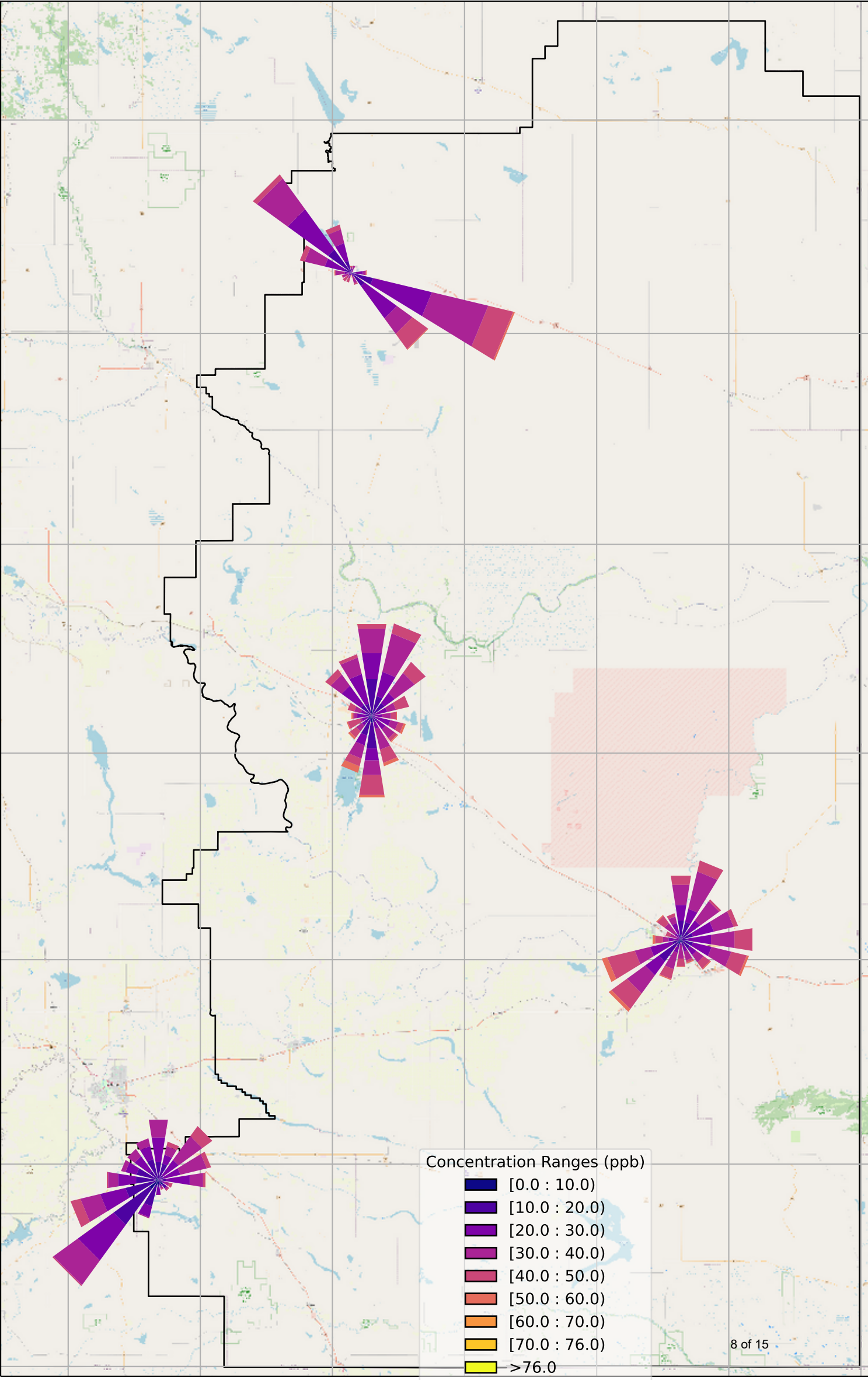
NO₂ AAAQO = 172 ppb





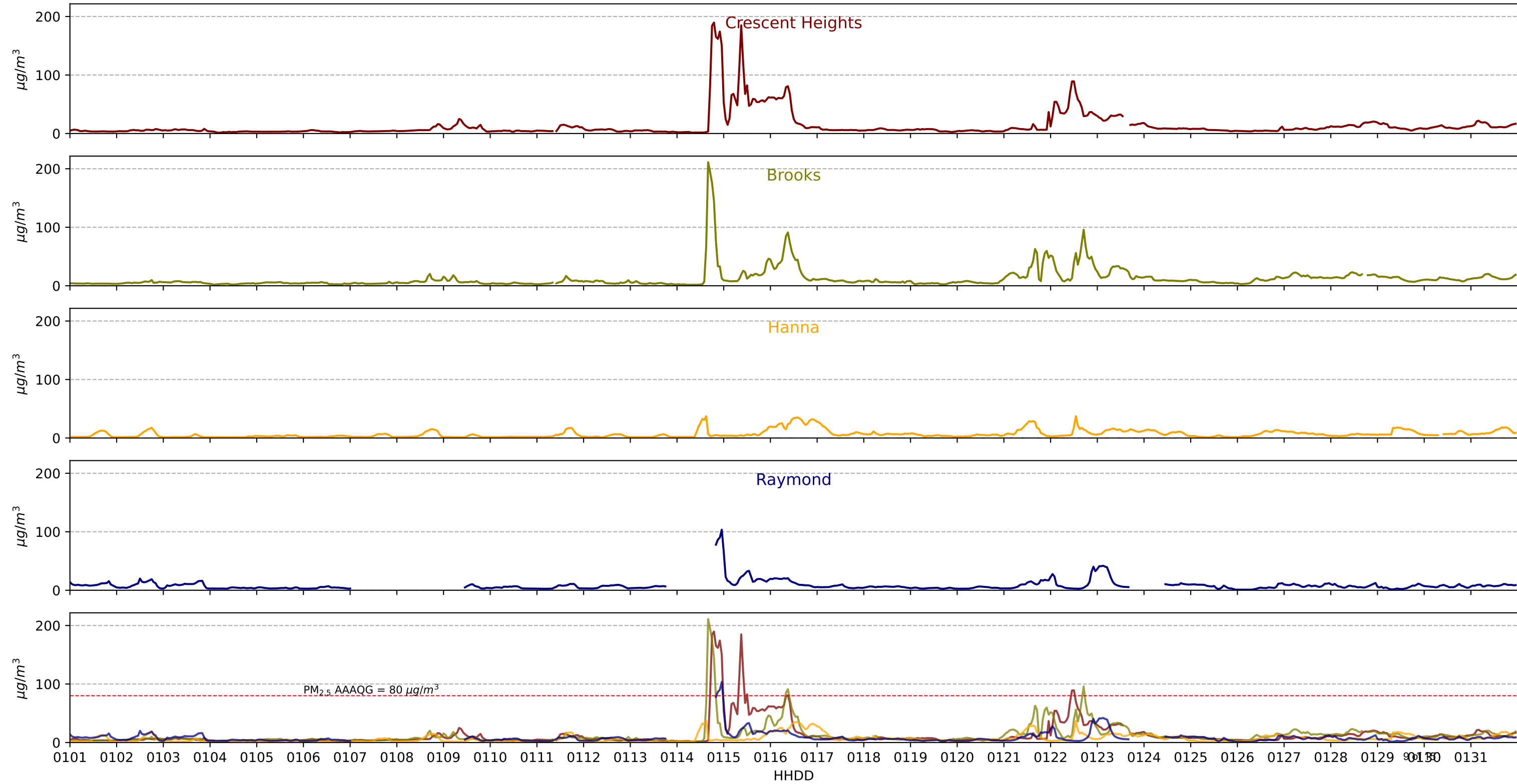
July 2025 O₃ vs NO₂

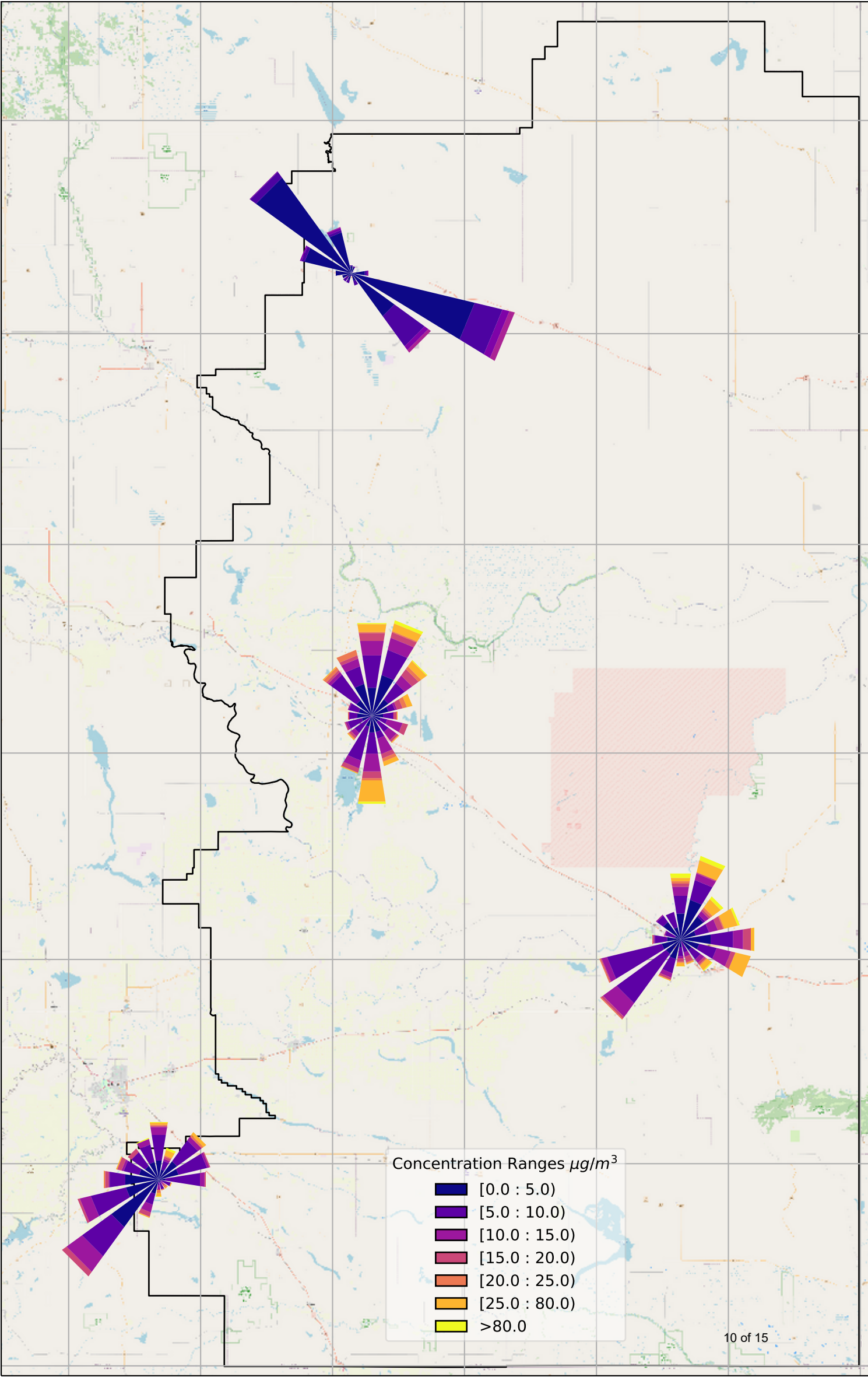




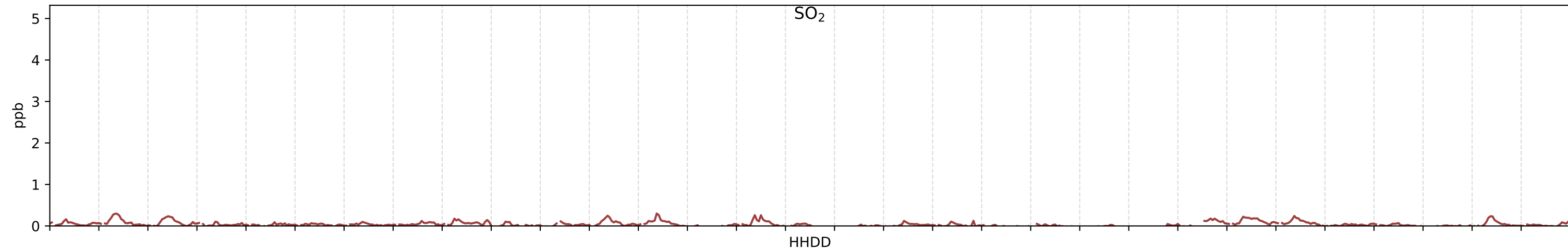
July 2025 PM_{2.5}

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





SO₂ AAAQO = 172 ppb



CO AAAQO = 13 ppm

