

February 21, 2024

**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 2024**

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Enclosed is the PAS Dashboard Report for the month of **January 2024**.

**Continuous Monitoring – Crescent Heights, Brooks, Taber Monitoring Stations**

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

**Crescent Heights Station:**

- ◆ All analyzers and instruments at the Crescent Heights Station were greater than 90% operational for the month of January.
- ◆ There were no exceedances of the AAAQO/G in January.

**Brooks Station:**

- ◆ Extreme cold weather January 12-16, 18 and 23 caused the PM2.5 analyzer to fail to return valid readings, with an uptime of 83.9%. **Reference Number 424927.**
- ◆ There were no exceedances of the AAAQO/G in January.

**Taber Station:**

- ◆ All analyzers and instruments at the Taber Station were greater than 90% operational for the month of January.
- ◆ There were no exceedances of the AAAQO/G in January.

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

**X** *Patrick Andersen*

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Patrick Andersen, B.Sc.  
WSP AQM Data Specialist

# January 2024 Monthly Ambient Air Quality Summary

Jan-24				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 <sub>2</sub> (ppb)	172	48	8	Crescent Heights	0.2	0.0	0	0	0	2.0	Jan-11 10:00	0.6	Jan-11	99.5	Jan-17	
NO (ppb)					3.5	0.0	0			53.1	Jan-22 23:00	10.0	Jan-08	99.5	Jan-17	
NO <sub>2</sub> (ppb)	159				9.6	1.8	0			39.8	Jan-19 09:00	20.9	Jan-24	99.5	Jan-17	
NO <sub>x</sub> (ppb)					13.0	1.8				93.0	Jan-22 23:00	30.5	Jan-24	99.5	Jan-17	
O <sub>3</sub> (ppb)	76				20.7	0.3	0			38.5	Jan-27 07:00	32.8	Jan-27	99.5	Jan-17	
CO (ppm)					0.2	0.1				0.5	Jan-19 09:00	0.2	Jan-19	99.6	Jan-18	
CO 8-Hour (ppm)	5				-	0.1	0			0.3	Jan-19 13:00	-	-	100.0	-	
THC (ppm)					2.3	2.0				5.4	Jan-14 05:00	2.8	Jan-14	99.6	Jan-16	
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	80	29			5.1	0.2	0	0		24.6	Jan-19 10:00	17.2	Jan-19	100.0	Jan-17	
ET (°C)					-10.3	-40.1				15.8	Jan-30 15:00	10.7	Jan-30	100.0	-	
RH (%)					81.1	44.5				100.1	Jan-29 04:00	99.1	Jan-04	100.0	-	
GSR (W/m <sup>2</sup> )					55.6	0.0				384.5	Jan-31 13:00	83.6	Jan-31	100.0	-	
WSPD (km/h)					3.3	0.0				35.6	Jan-09 12:00	17.0	Jan-27	98.9	-	
WDIR					W									98.9	-	

Pollutant (units)	Analyzer			Notes
	Make		Model	
SO <sub>2</sub>	TEI		43i	Manual span checks performed January 3 and 16.
NO/NO <sub>2</sub> /NO <sub>x</sub>	TEI		42i	Manual span checks performed January 3 and 16.
O <sub>3</sub>	TECO		49i	Manual span checks performed January 3 and 16.
CO	TEI		48i-TLE	Manual span checks performed January 3 and 16.
THC	TECO		51C-LT	Manual span check performed January 3.
PM <sub>2.5</sub>	SHARP		5030	
ET/RH	RMYoung		41382VC	
GSR	EPPLEY			
WS/WD	RMYoung		5305-10	

Jan-24				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)				Taber	3.0	0.0				42.4	Jan-08 12:00	12.2	Jan-08	100.0	Jan-09	
NO <sub>2</sub> (ppb)	159				5.6	0.6	0			29.5	Jan-18 18:00	12.8	Jan-18	100.0	Jan-09	
NO <sub>x</sub> (ppb)					9.3	0.6				59.7	Jan-08 12:00	22.8	Jan-08	100.0	Jan-09	
O <sub>3</sub> (ppb)	76				25.4	1.3	0			40.6	Jan-27 06:00	35.9	Jan-26	100.0	Jan-09	
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	80	29			5.7	0.0	0	0		34.7	Jan-18 23:00	20.4	Jan-22	99.9	Jan-30	
ET (°C)					-8.8	-39.4				14.2	Jan-31 15:00	10.1	Jan-30	100.0	-	
RH (%)					76.4	38.8				100.0	Jan-02 08:00	89.8	Jan-02	100.0	-	
WSPD (km/h)					4.4	0.0				31.7	Jan-28 04:00	15.0	Jan-28	100.0	-	
WDIR					WSW									100.0	-	

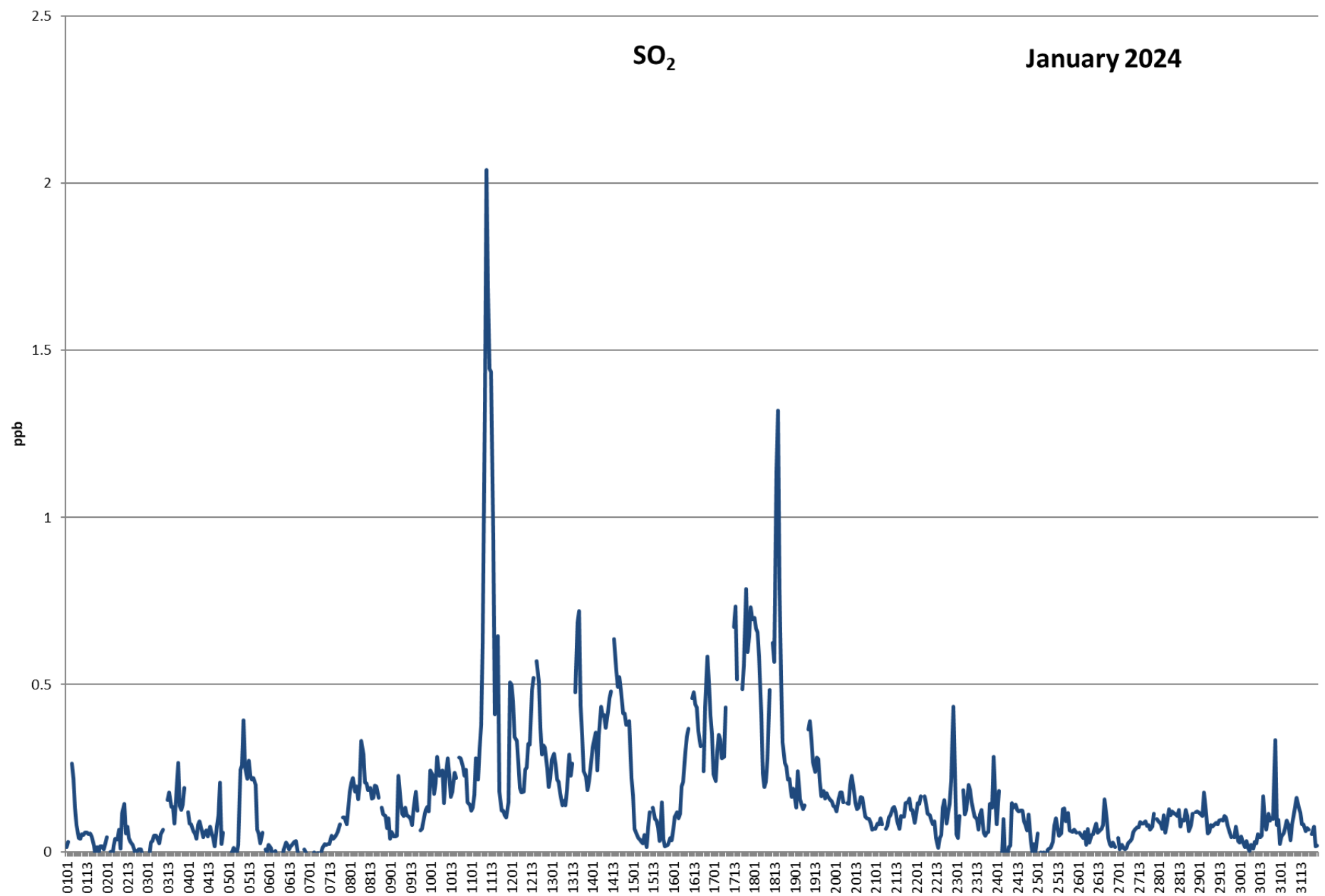
Pollutant (units)	Analyzer			Notes
	Make		Model	
NO/NO <sub>2</sub> /NO <sub>x</sub>	API		42i	
O <sub>3</sub>	API		T400	
PM <sub>2.5</sub>	SHARP		5030	Analyzer failed to return valid readings January 9.
ET/RH	Vaisala		WXT520	
WS/WD	Vaisala		WXT520	

Jan-24		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	2.3	0.0				42.0	Jan-23 10:00	10.0	Jan-24	100.0	Jan-03
NO <sub>2</sub> (ppb)	159				6.8	0.0	0			28.6	Jan-23 18:00	15.6	Jan-23	100.0	Jan-03
NO <sub>x</sub> (ppb)					9.0	0.0				65.5	Jan-23 10:00	25.4	Jan-23	100.0	Jan-03
O <sub>3</sub> (ppb)	76				18.9	0.0	0			39.5	Jan-28 07:00	30.4	Jan-21	100.0	Jan-03
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	80	29			6.9	0.0	0	0		46.4	Jan-24 09:00	23.3	Jan-24	83.9	Jan-08
ET (°C)					-12.2	-41.2				10.3	Jan-31 15:00	6.6	Jan-30	100.0	-
RH (%)					71.6	50.5				86.6	Jan-02 05:00	85.4	Jan-02	100.0	-
WSPD (km/h)					1.3	0.3				26.7	Jan-09 19:00	18.5	Jan-11	100.0	-
WDIR					NW									100.0	-

Pollutant (units)	Analyzer			Notes
	Make		Model	
NO/NO <sub>2</sub> /NO <sub>x</sub>	API		42i	
O <sub>3</sub>	API		T400	
PM <sub>2.5</sub>	SHARP		5030	Analyzer malfunctioned during cold weather, failing to return valid data January 12-16, 18 and 23.
ET/RH	Vaisala		WXT520	
WS/WD	Vaisala		WXT520	

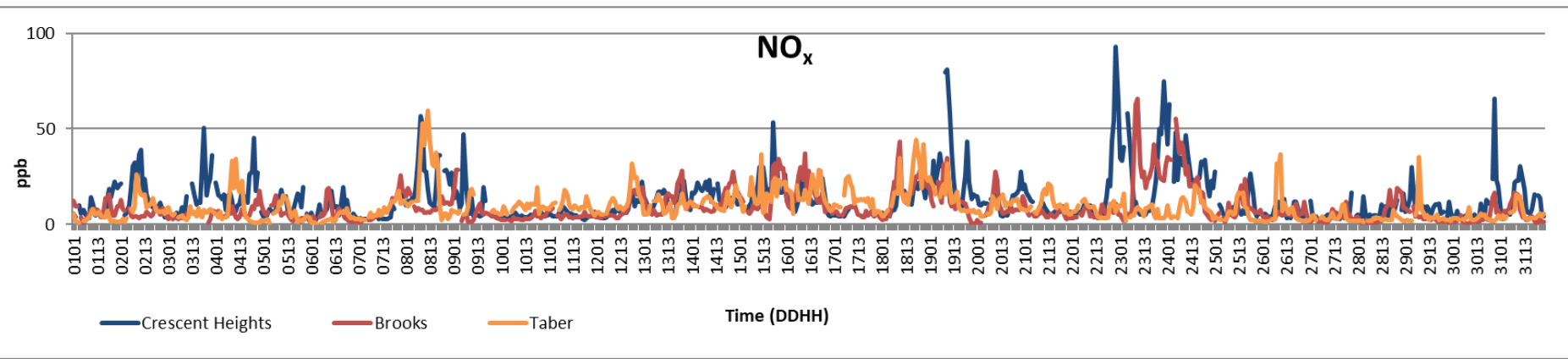
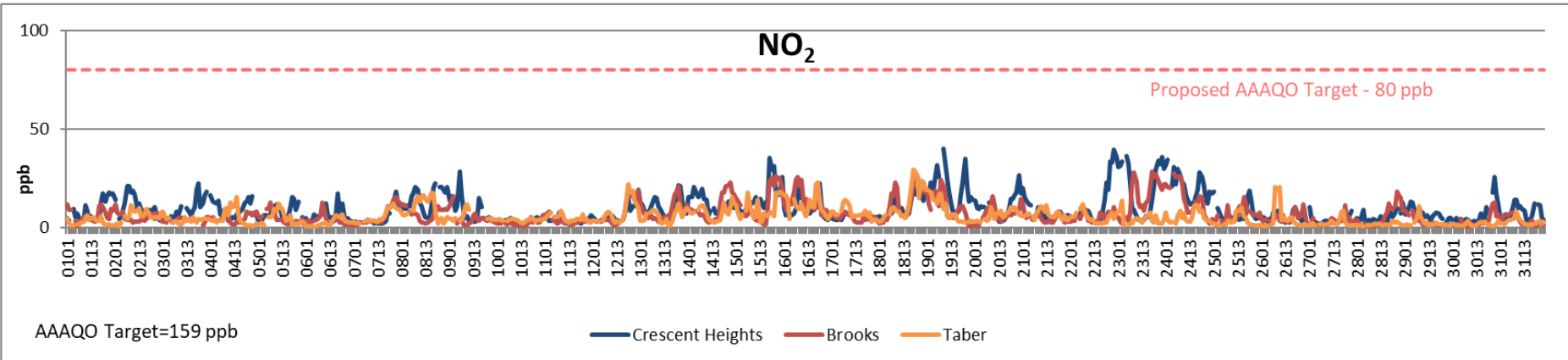
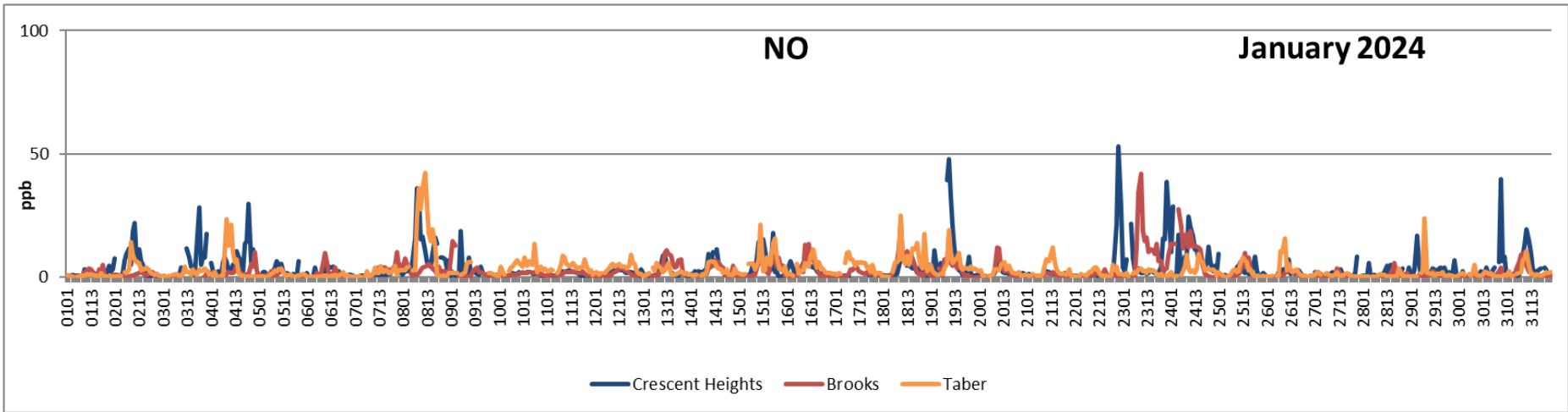
SO<sub>2</sub>

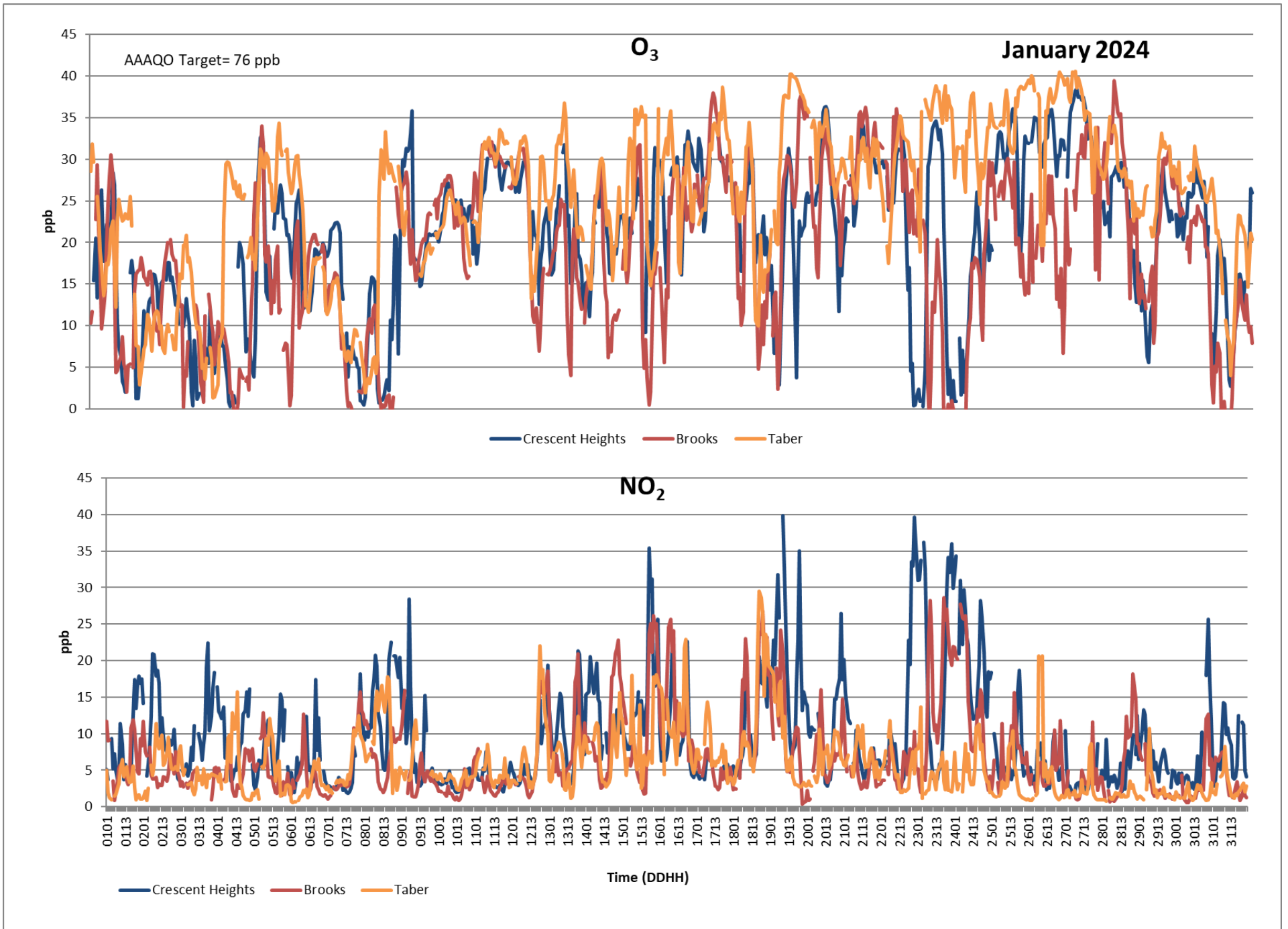
January 2024



AAAQO Target= 172 ppb

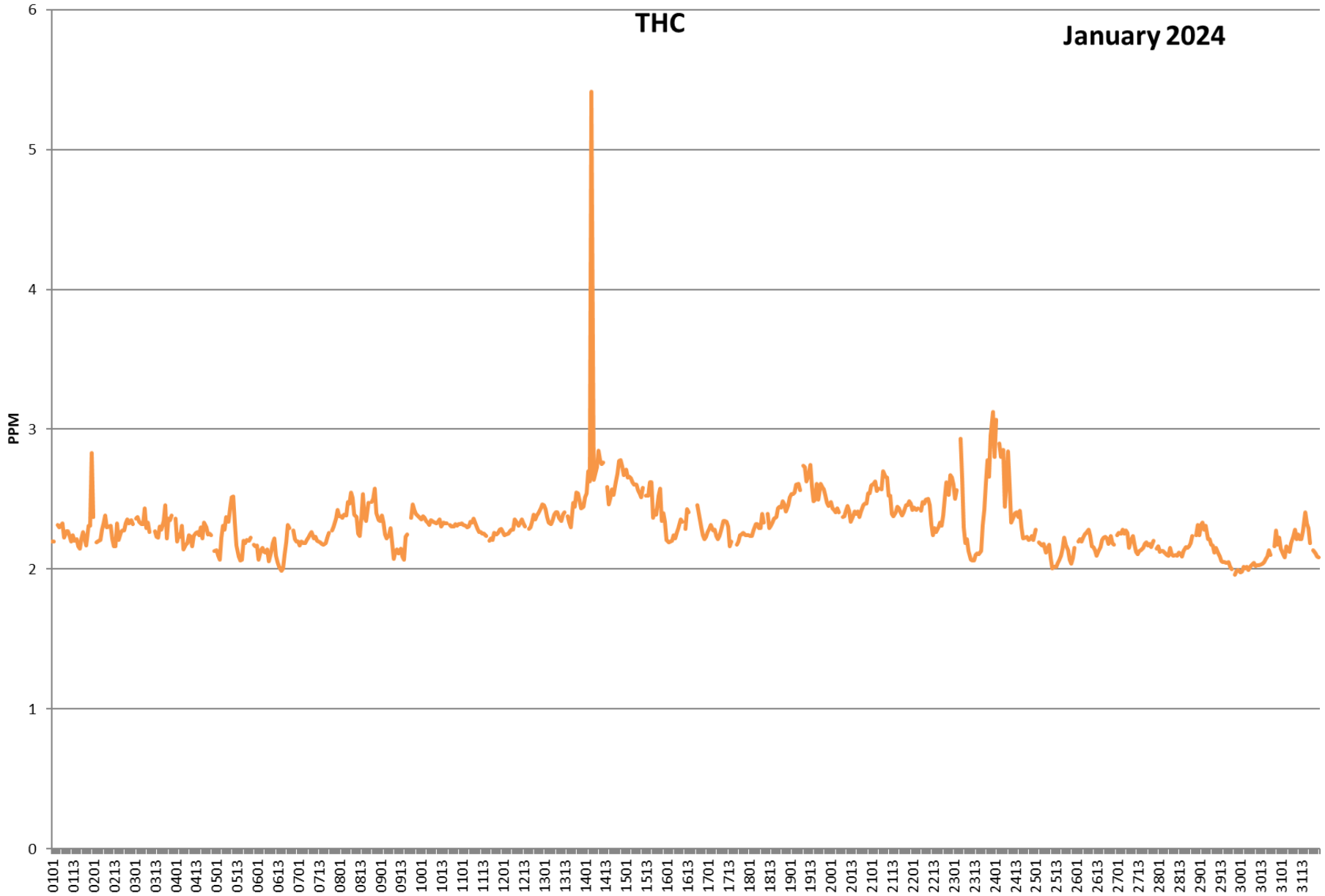
— Crescent Heights





THC

January 2024

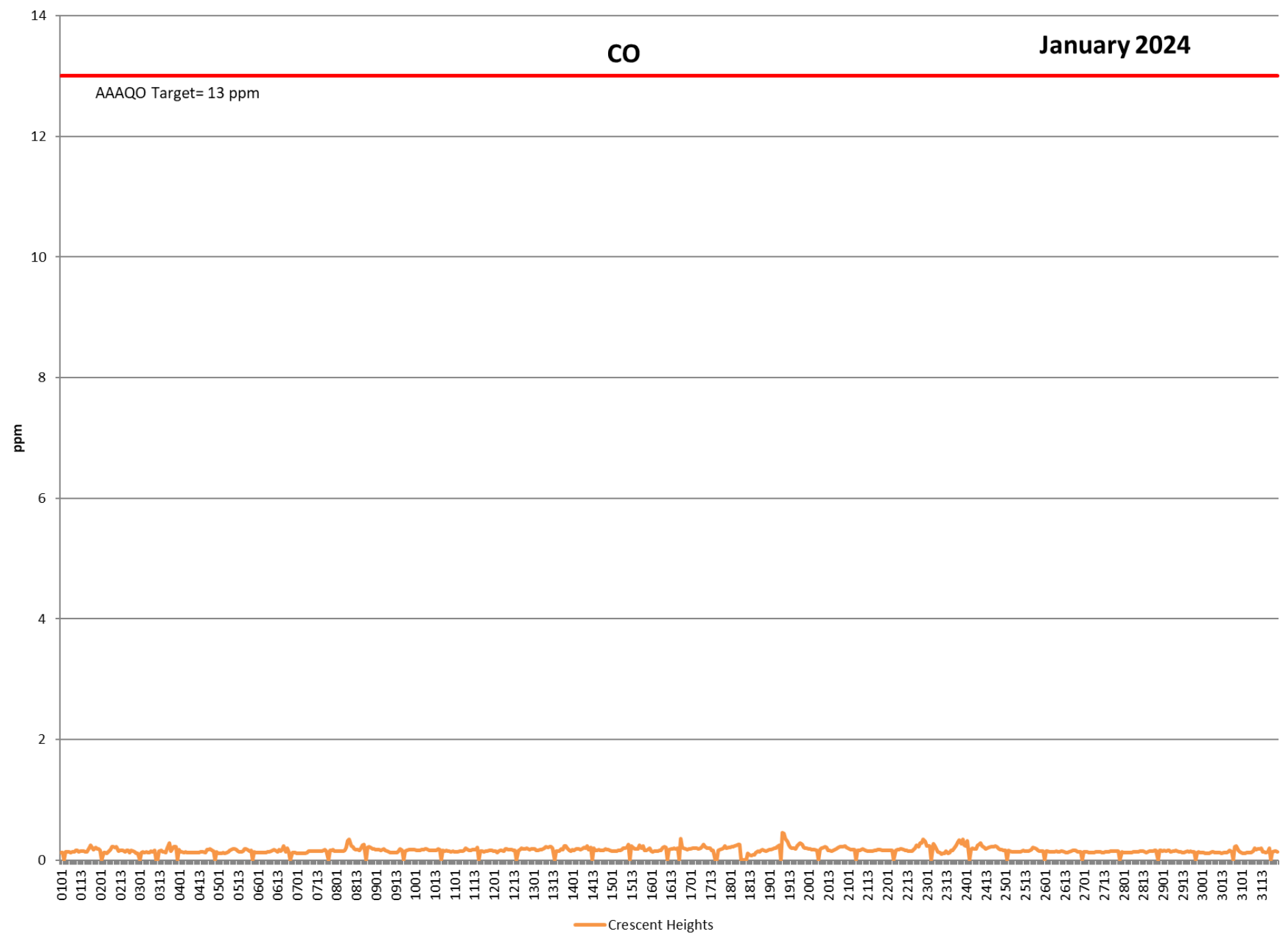


— Crescent Heights

# CO

January 2024

AAAQO Target= 13 ppm





# PM<sub>2.5</sub>

January 2024

AAAQO Target= 80  $\mu\text{g}/\text{m}^3$

